Pantheon Report

Generated at 2018-04-25 00:31:15 (UTC).
Data path: AWS India 1 Ethernet (local) → India Ethernet (remote).
Repeated the test of 16 congestion control schemes 10 times. Each test lasted for 30 seconds running 3 flows with 10-second interval between two flows.
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).
Tested BBR with qdisc of Fair Queuing (fq), and other schemes with the default Linux qdisc (pfifo_fast).
NTP offsets were measured against nets.org.sg and have been applied to correct the timestamps in logs.

Git summary:
branch: master @ 114e807ac1bad7b85168cebf8a969063ee6c12c
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
    M datagrump/sender.cc
third_party/fillp @ 11f8c46a2bf1dc797253db7e8ca4076272b2a44
third_party/genericCC @ d223989828276fa83a807da6e0341dc0c7b89aec
third_party/indigo @ a9b2060d39e4da2e8987e893e3eca2a6c7cd0ab9
third_party/indigo-1-layer-128-unit @ 3ae9e4ef4230db7484501f82ce8b377695f2f66d
third_party/indigo-1-layer-32-unit @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/indigo-1-layer-32-unit-no-calib @ 1f3a7f75b41135ed5b540c0fd3505939528e2a5f
third_party/indigo-no-calib @ 7224f2202e8a044d8306fa0b983a84360c53d89
third_party/koho_cc @ f0f2e693303ae82ea808e6928ec4f1083a6681
    M datagrump/sender.cc
third_party/libutp @ b3465b942e2826f2b179eaaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ fb1053193c2861da659ba9013db2674accf993
third_party/pcc @ 1af9c958fa066d18b623091a55f8c872b4981e1
    M receiver/src/buffer.h
    M receiver/src/core.cpp
    M sender/src/buffer.h
    M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f56138ac08f2ab92c4eb24f974ab
third_party/proto-quic @ 77961f1a8273a86b42f1bc8143ebc978f3cffe42
third_party/scream @ c3370fd7bd17265a79e3b34e0416ad23f5965885
third_party/sourdough @ fa1a4bffe749737437f61b1eaae6b30b267cda681
third_party/sprout @ 6f2efe6e088d910666a9f023df375eee2665089ce
    M src/examples/cellsim.cc
    M src/examples/sproutbt2.cc
    M src/network/sproutconn.cc
third_party/verus @ db447ea74c6c60a261149af2629562939f9a494
    M src/verus.hpp
    M tools/plot.py
third_party/vivace @ 7a4ba531e75b4a6f66f5c4580192120401784ce3
test from AWS India 1 Ethernet to India Ethernet, 10 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)
<table>
<thead>
<tr>
<th>scheme</th>
<th># runs</th>
<th>mean avg tput (Mbit/s)</th>
<th>mean 95th-%ile delay (ms)</th>
<th>mean loss rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>flow 1</td>
<td>flow 2</td>
<td>flow 3</td>
</tr>
<tr>
<td>TCP BBR</td>
<td>10</td>
<td>52.59</td>
<td>33.39</td>
<td>28.19</td>
</tr>
<tr>
<td>TCP Cubic</td>
<td>10</td>
<td>7.77</td>
<td>7.73</td>
<td>7.33</td>
</tr>
<tr>
<td>LEDBAT</td>
<td>10</td>
<td>8.75</td>
<td>9.29</td>
<td>8.36</td>
</tr>
<tr>
<td>PCC-Allegro</td>
<td>10</td>
<td>49.80</td>
<td>12.92</td>
<td>6.53</td>
</tr>
<tr>
<td>QUIC Cubic</td>
<td>10</td>
<td>14.16</td>
<td>12.43</td>
<td>13.00</td>
</tr>
<tr>
<td>SCReAM</td>
<td>10</td>
<td>0.12</td>
<td>0.11</td>
<td>0.16</td>
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<td>WebRTC media</td>
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<td>0.06</td>
<td>0.06</td>
<td>0.05</td>
</tr>
<tr>
<td>Sprout</td>
<td>10</td>
<td>22.08</td>
<td>21.45</td>
<td>21.85</td>
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<tr>
<td>TaoVA-100x</td>
<td>10</td>
<td>54.21</td>
<td>38.09</td>
<td>31.01</td>
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<tr>
<td>TCP Vegas</td>
<td>10</td>
<td>7.83</td>
<td>7.04</td>
<td>6.94</td>
</tr>
<tr>
<td>Verus</td>
<td>10</td>
<td>39.74</td>
<td>28.37</td>
<td>16.18</td>
</tr>
<tr>
<td>Copa</td>
<td>10</td>
<td>41.41</td>
<td>37.06</td>
<td>28.35</td>
</tr>
<tr>
<td>FillP</td>
<td>10</td>
<td>40.58</td>
<td>35.85</td>
<td>51.04</td>
</tr>
<tr>
<td>Indigo-1-32</td>
<td>10</td>
<td>51.68</td>
<td>39.46</td>
<td>35.50</td>
</tr>
<tr>
<td>PCC-Vivace</td>
<td>10</td>
<td>39.43</td>
<td>22.01</td>
<td>10.91</td>
</tr>
<tr>
<td>PCC-Expr</td>
<td>0</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>
Run 1: Statistics of TCP BBR

Start at: 2018-04-24 20:38:29
End at: 2018-04-24 20:38:59
Local clock offset: 0.211 ms
Remote clock offset: -9.81 ms

# Below is generated by plot.py at 2018-04-25 00:14:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 71.06 Mbit/s
95th percentile per-packet one-way delay: 20.758 ms
Loss rate: 12.90%
-- Flow 1:
Average throughput: 51.60 Mbit/s
95th percentile per-packet one-way delay: 13.474 ms
Loss rate: 12.46%
-- Flow 2:
Average throughput: 22.52 Mbit/s
95th percentile per-packet one-way delay: 29.052 ms
Loss rate: 14.13%
-- Flow 3:
Average throughput: 13.46 Mbit/s
95th percentile per-packet one-way delay: 9.377 ms
Loss rate: 13.85%
Run 1: Report of TCP BBR — Data Link

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**Throughput (Mbps)**

```
<table>
<thead>
<tr>
<th></th>
<th>Flow 1 ingress (mean 58.94 Mbit/s)</th>
<th>Flow 1 egress (mean 51.60 Mbit/s)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Flow 2 ingress (mean 26.23 Mbit/s)</td>
<td>Flow 2 egress (mean 22.52 Mbit/s)</td>
</tr>
<tr>
<td></td>
<td>Flow 3 ingress (mean 15.63 Mbit/s)</td>
<td>Flow 3 egress (mean 13.46 Mbit/s)</td>
</tr>
</tbody>
</table>
```

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

```
|        | Flow 1 (95th percentile 13.47 ms) | Flow 2 (95th percentile 29.05 ms) | Flow 3 (95th percentile 9.38 ms) |
```

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Run 2: Statistics of TCP BBR

Start at: 2018-04-24 20:58:12
End at: 2018-04-24 20:58:42
Local clock offset: 4.763 ms
Remote clock offset: -10.533 ms

# Below is generated by plot.py at 2018-04-25 00:14:21
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 91.27 Mbit/s
  95th percentile per-packet one-way delay: 32.598 ms
  Loss rate: 7.19%
-- Flow 1:
  Average throughput: 57.82 Mbit/s
  95th percentile per-packet one-way delay: 31.620 ms
  Loss rate: 7.10%
-- Flow 2:
  Average throughput: 31.89 Mbit/s
  95th percentile per-packet one-way delay: 33.278 ms
  Loss rate: 6.97%
-- Flow 3:
  Average throughput: 36.80 Mbit/s
  95th percentile per-packet one-way delay: 34.391 ms
  Loss rate: 7.97%
Run 2: Report of TCP BBR — Data Link

![Graph 1: Throughput (Mbps) over time for different flows and ingress/egress rates]

- Flow 1 ingress (mean 62.25 Mbps)
- Flow 1 egress (mean 57.82 Mbps)
- Flow 2 ingress (mean 34.29 Mbps)
- Flow 2 egress (mean 31.89 Mbps)
- Flow 3 ingress (mean 40.00 Mbps)
- Flow 3 egress (mean 36.80 Mbps)

![Graph 2: Per packet one-way delay (ms) over time for different flows]

- Flow 1 (95th percentile 31.62 ms)
- Flow 2 (95th percentile 33.28 ms)
- Flow 3 (95th percentile 34.39 ms)
Run 3: Statistics of TCP BBR

Start at: 2018-04-24 21:17:46
End at: 2018-04-24 21:18:16
Local clock offset: 1.063 ms
Remote clock offset: -11.299 ms

# Below is generated by plot.py at 2018-04-25 00:14:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.35 Mbit/s
95th percentile per-packet one-way delay: 37.014 ms
Loss rate: 5.88%
-- Flow 1:
Average throughput: 60.00 Mbit/s
95th percentile per-packet one-way delay: 36.287 ms
Loss rate: 6.22%
-- Flow 2:
Average throughput: 33.66 Mbit/s
95th percentile per-packet one-way delay: 38.734 ms
Loss rate: 5.26%
-- Flow 3:
Average throughput: 23.96 Mbit/s
95th percentile per-packet one-way delay: 37.640 ms
Loss rate: 5.01%
Run 3: Report of TCP BBR — Data Link

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**Throughput (Mbit/s)** vs **Time (s)**

- **Flow 1 ingress** (mean 64.00 Mbit/s)
- **Flow 1 egress** (mean 60.00 Mbit/s)
- **Flow 2 ingress** (mean 35.54 Mbit/s)
- **Flow 2 egress** (mean 33.66 Mbit/s)
- **Flow 3 ingress** (mean 26.17 Mbit/s)
- **Flow 3 egress** (mean 23.96 Mbit/s)

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

- **Flow 1** (95th percentile 36.29 ms)
- **Flow 2** (95th percentile 38.73 ms)
- **Flow 3** (95th percentile 37.64 ms)
Run 4: Statistics of TCP BBR

End at: 2018-04-24 21:37:42
Local clock offset: 0.901 ms
Remote clock offset: -7.74 ms

# Below is generated by plot.py at 2018-04-25 00:14:21
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 80.91 Mbit/s
  95th percentile per-packet one-way delay: 31.757 ms
  Loss rate: 9.93%
-- Flow 1:
  Average throughput: 47.27 Mbit/s
  95th percentile per-packet one-way delay: 30.878 ms
  Loss rate: 9.65%
-- Flow 2:
  Average throughput: 30.73 Mbit/s
  95th percentile per-packet one-way delay: 36.617 ms
  Loss rate: 9.80%
-- Flow 3:
  Average throughput: 39.74 Mbit/s
  95th percentile per-packet one-way delay: 18.306 ms
  Loss rate: 11.11%
Run 4: Report of TCP BBR — Data Link

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

- Flow 1 ingress (mean 52.31 Mbit/s)
- Flow 1 egress (mean 47.27 Mbit/s)
- Flow 2 ingress (mean 34.05 Mbit/s)
- Flow 2 egress (mean 30.73 Mbit/s)
- Flow 3 ingress (mean 44.70 Mbit/s)
- Flow 3 egress (mean 39.74 Mbit/s)

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

- Flow 1 (95th percentile 30.88 ms)
- Flow 2 (95th percentile 36.62 ms)
- Flow 3 (95th percentile 18.31 ms)
Run 5: Statistics of TCP BBR

End at: 2018-04-24 21:57:18
Local clock offset: -0.463 ms
Remote clock offset: -2.766 ms

# Below is generated by plot.py at 2018-04-25 00:14:21
# Datalink statistics
-- Total of 3 flows:
   Average throughput: 80.67 Mbit/s
   95th percentile per-packet one-way delay: 29.191 ms
   Loss rate: 10.75%
-- Flow 1:
   Average throughput: 52.64 Mbit/s
   95th percentile per-packet one-way delay: 26.821 ms
   Loss rate: 10.66%
-- Flow 2:
   Average throughput: 25.09 Mbit/s
   95th percentile per-packet one-way delay: 29.595 ms
   Loss rate: 10.56%
-- Flow 3:
   Average throughput: 34.11 Mbit/s
   95th percentile per-packet one-way delay: 35.965 ms
   Loss rate: 11.43%
Run 5: Report of TCP BBR — Data Link

Throughput (Mbps):

- Flow 1 Ingress (mean 58.92 Mbps)
- Flow 1 Egress (mean 52.64 Mbps)
- Flow 2 Ingress (mean 28.05 Mbps)
- Flow 2 Egress (mean 25.09 Mbps)
- Flow 3 Ingress (mean 38.52 Mbps)
- Flow 3 Egress (mean 34.11 Mbps)

Per packet one way delay (ms):

- Flow 1 (95th percentile 26.82 ms)
- Flow 2 (95th percentile 29.59 ms)
- Flow 3 (95th percentile 35.97 ms)
Run 6: Statistics of TCP BBR

Local clock offset: -8.233 ms
Remote clock offset: -5.752 ms

# Below is generated by plot.py at 2018-04-25 00:14:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.90 Mbit/s
95th percentile per-packet one-way delay: 24.239 ms
Loss rate: 10.35%
-- Flow 1:
Average throughput: 54.83 Mbit/s
95th percentile per-packet one-way delay: 22.867 ms
Loss rate: 10.19%
-- Flow 2:
Average throughput: 40.25 Mbit/s
95th percentile per-packet one-way delay: 25.701 ms
Loss rate: 10.38%
-- Flow 3:
Average throughput: 25.09 Mbit/s
95th percentile per-packet one-way delay: 24.383 ms
Loss rate: 11.35%
Run 6: Report of TCP BBR — Data Link

[Graphs showing throughput and per-packet one-way delay over time for different flows with their corresponding mean values.]
Run 7: Statistics of TCP BBR

Start at: 2018-04-24 22:36:21
End at: 2018-04-24 22:36:51
Local clock offset: -13.687 ms
Remote clock offset: -7.637 ms

# Below is generated by plot.py at 2018-04-25 00:14:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.07 Mbit/s
95th percentile per-packet one-way delay: 34.506 ms
Loss rate: 9.34%
-- Flow 1:
Average throughput: 47.63 Mbit/s
95th percentile per-packet one-way delay: 33.984 ms
Loss rate: 9.29%
-- Flow 2:
Average throughput: 46.08 Mbit/s
95th percentile per-packet one-way delay: 35.404 ms
Loss rate: 9.26%
-- Flow 3:
Average throughput: 20.27 Mbit/s
95th percentile per-packet one-way delay: 33.500 ms
Loss rate: 10.09%
Run 7: Report of TCP BBR — Data Link

![Graphs showing throughput and packet round-trip time](image-url)
Run 8: Statistics of TCP BBR

End at: 2018-04-24 22:56:42
Local clock offset: -14.929 ms
Remote clock offset: -6.88 ms

# Below is generated by plot.py at 2018-04-25 00:14:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.26 Mbit/s
95th percentile per-packet one-way delay: 39.630 ms
Loss rate: 6.89%
-- Flow 1:
Average throughput: 56.74 Mbit/s
95th percentile per-packet one-way delay: 41.564 ms
Loss rate: 6.69%
-- Flow 2:
Average throughput: 41.04 Mbit/s
95th percentile per-packet one-way delay: 41.768 ms
Loss rate: 7.18%
-- Flow 3:
Average throughput: 21.66 Mbit/s
95th percentile per-packet one-way delay: 29.105 ms
Loss rate: 7.39%
Run 8: Report of TCP BBR — Data Link

![Diagram showing throughput and packet loss over time for different flows.](image-url)
Run 9: Statistics of TCP BBR

Start at: 2018-04-24 23:16:15
End at: 2018-04-24 23:16:45
Local clock offset: -17.523 ms
Remote clock offset: -7.278 ms

# Below is generated by plot.py at 2018-04-25 00:15:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 81.23 Mbit/s
95th percentile per-packet one-way delay: 24.110 ms
Loss rate: 10.72%
-- Flow 1:
Average throughput: 49.93 Mbit/s
95th percentile per-packet one-way delay: 22.716 ms
Loss rate: 10.96%
-- Flow 2:
Average throughput: 31.42 Mbit/s
95th percentile per-packet one-way delay: 27.056 ms
Loss rate: 10.50%
-- Flow 3:
Average throughput: 31.29 Mbit/s
95th percentile per-packet one-way delay: 23.787 ms
Loss rate: 9.98%
Run 9: Report of TCP BBR — Data Link

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

- **Throughput (Mbps)**
  - Flow 1 ingress (mean 56.08 Mbps)
  - Flow 2 ingress (mean 35.11 Mbps)
  - Flow 3 ingress (mean 34.75 Mbps)
  - Flow 1 egress (mean 49.93 Mbps)
  - Flow 2 egress (mean 31.42 Mbps)
  - Flow 3 egress (mean 31.29 Mbps)

- **Per-packet round-trip delay (ms)**
  - Flow 1 (95th percentile 22.72 ms)
  - Flow 2 (95th percentile 27.06 ms)
  - Flow 3 (95th percentile 23.79 ms)
Run 10: Statistics of TCP BBR

End at: 2018-04-24 23:36:29
Local clock offset: -3.382 ms
Remote clock offset: -7.363 ms

# Below is generated by plot.py at 2018-04-25 00:15:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.93 Mbit/s
95th percentile per-packet one-way delay: 30.826 ms
Loss rate: 11.02%
-- Flow 1:
Average throughput: 47.39 Mbit/s
95th percentile per-packet one-way delay: 28.197 ms
Loss rate: 11.12%
-- Flow 2:
Average throughput: 31.18 Mbit/s
95th percentile per-packet one-way delay: 31.064 ms
Loss rate: 11.14%
-- Flow 3:
Average throughput: 35.47 Mbit/s
95th percentile per-packet one-way delay: 37.030 ms
Loss rate: 10.37%
Run 10: Report of TCP BBR — Data Link

![Graph of Throughput](image1)

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

[Graph legend details]
Run 1: Statistics of TCP Cubic

End at: 2018-04-24 20:37:52
Local clock offset: 2.012 ms
Remote clock offset: 10.319 ms

# Below is generated by plot.py at 2018-04-25 00:15:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 6.80 Mbit/s
95th percentile per-packet one-way delay: 7.711 ms
Loss rate: 4.58%
-- Flow 1:
Average throughput: 3.64 Mbit/s
95th percentile per-packet one-way delay: 6.230 ms
Loss rate: 4.70%
-- Flow 2:
Average throughput: 2.67 Mbit/s
95th percentile per-packet one-way delay: 7.800 ms
Loss rate: 5.25%
-- Flow 3:
Average throughput: 4.17 Mbit/s
95th percentile per-packet one-way delay: 7.830 ms
Loss rate: 3.39%
Run 1: Report of TCP Cubic — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 3.82 Mbps)
Flow 1 egress (mean 3.64 Mbps)
Flow 2 ingress (mean 2.92 Mbps)
Flow 2 egress (mean 2.67 Mbps)
Flow 3 ingress (mean 4.32 Mbps)
Flow 3 egress (mean 4.17 Mbps)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 6.23 ms)
Flow 2 (95th percentile 7.80 ms)
Flow 3 (95th percentile 7.83 ms)
Run 2: Statistics of TCP Cubic

Start at: 2018-04-24 20:57:05
End at: 2018-04-24 20:57:35
Local clock offset: 4.888 ms
Remote clock offset: -11.676 ms

# Below is generated by plot.py at 2018-04-25 00:15:40
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 29.09 Mbit/s
  95th percentile per-packet one-way delay: 30.473 ms
  Loss rate: 0.42%
-- Flow 1:
  Average throughput: 15.35 Mbit/s
  95th percentile per-packet one-way delay: 16.492 ms
  Loss rate: 0.36%
-- Flow 2:
  Average throughput: 13.77 Mbit/s
  95th percentile per-packet one-way delay: 16.320 ms
  Loss rate: 0.53%
-- Flow 3:
  Average throughput: 13.81 Mbit/s
  95th percentile per-packet one-way delay: 40.770 ms
  Loss rate: 0.44%
Run 2: Report of TCP Cubic — Data Link
Run 3: Statistics of TCP Cubic

End at: 2018-04-24 21:17:09  
Local clock offset: -0.469 ms  
Remote clock offset: -11.376 ms

# Below is generated by plot.py at 2018-04-25 00:15:40
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 36.69 Mbit/s
  95th percentile per-packet one-way delay: 28.765 ms
  Loss rate: 0.59%
-- Flow 1:
  Average throughput: 18.19 Mbit/s
  95th percentile per-packet one-way delay: 9.877 ms
  Loss rate: 0.32%
-- Flow 2:
  Average throughput: 22.48 Mbit/s
  95th percentile per-packet one-way delay: 37.293 ms
  Loss rate: 0.96%
-- Flow 3:
  Average throughput: 10.64 Mbit/s
  95th percentile per-packet one-way delay: 9.345 ms
  Loss rate: 0.40%
Run 3: Report of TCP Cubic — Data Link
Run 4: Statistics of TCP Cubic

Start at: 2018-04-24 21:36:06
End at: 2018-04-24 21:36:36
Local clock offset: 0.061 ms
Remote clock offset: -7.82 ms

# Below is generated by plot.py at 2018-04-25 00:15:40
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 14.14 Mbit/s
  95th percentile per-packet one-way delay: 11.197 ms
  Loss rate: 1.64%
-- Flow 1:
  Average throughput: 6.66 Mbit/s
  95th percentile per-packet one-way delay: 10.275 ms
  Loss rate: 1.37%
-- Flow 2:
  Average throughput: 7.24 Mbit/s
  95th percentile per-packet one-way delay: 13.091 ms
  Loss rate: 1.25%
-- Flow 3:
  Average throughput: 8.01 Mbit/s
  95th percentile per-packet one-way delay: 10.892 ms
  Loss rate: 2.96%
Run 4: Report of TCP Cubic — Data Link

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

- Flow 1 ingress (mean 6.75 Mbit/s)
- Flow 1 egress (mean 6.66 Mbit/s)
- Flow 2 ingress (mean 7.33 Mbit/s)
- Flow 2 egress (mean 7.24 Mbit/s)
- Flow 3 ingress (mean 8.25 Mbit/s)
- Flow 3 egress (mean 8.01 Mbit/s)
Run 5: Statistics of TCP Cubic

End at: 2018-04-24 21:56:12
Local clock offset: -0.976 ms
Remote clock offset: -2.863 ms

# Below is generated by plot.py at 2018-04-25 00:15:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 10.21 Mbit/s
95th percentile per-packet one-way delay: 12.029 ms
Loss rate: 3.43%
-- Flow 1:
Average throughput: 5.03 Mbit/s
95th percentile per-packet one-way delay: 11.249 ms
Loss rate: 1.97%
-- Flow 2:
Average throughput: 5.17 Mbit/s
95th percentile per-packet one-way delay: 11.152 ms
Loss rate: 3.87%
-- Flow 3:
Average throughput: 5.22 Mbit/s
95th percentile per-packet one-way delay: 17.394 ms
Loss rate: 6.62%
Run 5: Report of TCP Cubic — Data Link
Run 6: Statistics of TCP Cubic

End at: 2018-04-24 22:15:46
Local clock offset: -5.82 ms
Remote clock offset: -5.763 ms

# Below is generated by plot.py at 2018-04-25 00:15:40
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 7.86 Mbit/s
  95th percentile per-packet one-way delay: 9.157 ms
  Loss rate: 4.08%
-- Flow 1:
  Average throughput: 3.89 Mbit/s
  95th percentile per-packet one-way delay: 9.269 ms
  Loss rate: 4.92%
-- Flow 2:
  Average throughput: 3.95 Mbit/s
  95th percentile per-packet one-way delay: 9.150 ms
  Loss rate: 3.07%
-- Flow 3:
  Average throughput: 4.05 Mbit/s
  95th percentile per-packet one-way delay: 7.518 ms
  Loss rate: 3.59%
Run 6: Report of TCP Cubic — Data Link
Run 7: Statistics of TCP Cubic

Start at: 2018-04-24 22:35:15
End at: 2018-04-24 22:35:45
Local clock offset: -13.262 ms
Remote clock offset: -7.097 ms

# Below is generated by plot.py at 2018-04-25 00:15:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.93 Mbit/s
95th percentile per-packet one-way delay: 10.843 ms
Loss rate: 1.54%
-- Flow 1:
Average throughput: 7.25 Mbit/s
95th percentile per-packet one-way delay: 10.937 ms
Loss rate: 2.22%
-- Flow 2:
Average throughput: 6.53 Mbit/s
95th percentile per-packet one-way delay: 10.742 ms
Loss rate: 0.71%
-- Flow 3:
Average throughput: 7.03 Mbit/s
95th percentile per-packet one-way delay: 10.848 ms
Loss rate: 0.95%
Run 7: Report of TCP Cubic — Data Link

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

Flow 1 ingress (mean 7.42 Mbit/s) Flow 1 egress (mean 7.25 Mbit/s)
Flow 2 ingress (mean 6.36 Mbit/s) Flow 2 egress (mean 6.53 Mbit/s)
Flow 3 ingress (mean 7.10 Mbit/s) Flow 3 egress (mean 7.03 Mbit/s)
Run 8: Statistics of TCP Cubic

Local clock offset: -15.381 ms
Remote clock offset: -7.349 ms

# Below is generated by plot.py at 2018-04-25 00:15:40
# Datalink statistics

-- Total of 3 flows:
Average throughput: 18.21 Mbit/s
95th percentile per-packet one-way delay: 9.589 ms
Loss rate: 1.11%

-- Flow 1:
Average throughput: 9.15 Mbit/s
95th percentile per-packet one-way delay: 8.885 ms
Loss rate: 1.04%

-- Flow 2:
Average throughput: 7.91 Mbit/s
95th percentile per-packet one-way delay: 8.096 ms
Loss rate: 1.04%

-- Flow 3:
Average throughput: 11.42 Mbit/s
95th percentile per-packet one-way delay: 12.403 ms
Loss rate: 1.37%
Run 8: Report of TCP Cubic — Data Link
Run 9: Statistics of TCP Cubic

Start at: 2018-04-24 23:15:08
End at: 2018-04-24 23:15:38
Local clock offset: -17.766 ms
Remote clock offset: -6.131 ms

# Below is generated by plot.py at 2018-04-25 00:15:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 9.09 Mbit/s
95th percentile per-packet one-way delay: 11.439 ms
Loss rate: 3.39%

-- Flow 1:
Average throughput: 4.91 Mbit/s
95th percentile per-packet one-way delay: 12.331 ms
Loss rate: 3.15%

-- Flow 2:
Average throughput: 4.30 Mbit/s
95th percentile per-packet one-way delay: 10.156 ms
Loss rate: 3.54%

-- Flow 3:
Average throughput: 4.43 Mbit/s
95th percentile per-packet one-way delay: 11.706 ms
Loss rate: 3.91%
Run 9: Report of TCP Cubic — Data Link

[Graph showing throughput and packet round-trip delay over time for different flows]
Run 10: Statistics of TCP Cubic

Start at: 2018-04-24 23:34:52
End at: 2018-04-24 23:35:22
Local clock offset: -4.638 ms
Remote clock offset: -10.004 ms

# Below is generated by plot.py at 2018-04-25 00:15:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.34 Mbit/s
95th percentile per-packet one-way delay: 8.446 ms
Loss rate: 3.26%
-- Flow 1:
Average throughput: 3.64 Mbit/s
95th percentile per-packet one-way delay: 8.443 ms
Loss rate: 2.93%
-- Flow 2:
Average throughput: 3.29 Mbit/s
95th percentile per-packet one-way delay: 8.516 ms
Loss rate: 3.76%
-- Flow 3:
Average throughput: 4.53 Mbit/s
95th percentile per-packet one-way delay: 7.446 ms
Loss rate: 3.33%
Run 10: Report of TCP Cubic — Data Link

![Graph of Throughput over Time](image1.png)

![Graph of Packet Round-trip Delay over Time](image2.png)
Run 1: Statistics of LEDBAT

Start at: 2018-04-24 20:36:15
End at: 2018-04-24 20:36:45
Local clock offset: 0.217 ms
Remote clock offset: -10.886 ms

# Below is generated by plot.py at 2018-04-25 00:15:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.77 Mbit/s
95th percentile per-packet one-way delay: 8.807 ms
Loss rate: 4.32%
-- Flow 1:
Average throughput: 3.53 Mbit/s
95th percentile per-packet one-way delay: 8.746 ms
Loss rate: 4.04%
-- Flow 2:
Average throughput: 5.14 Mbit/s
95th percentile per-packet one-way delay: 8.813 ms
Loss rate: 4.14%
-- Flow 3:
Average throughput: 3.18 Mbit/s
95th percentile per-packet one-way delay: 8.935 ms
Loss rate: 5.73%
Run 1: Report of LEDBAT — Data Link
Run 2: Statistics of LEDBAT

End at: 2018-04-24 20:56:28
Local clock offset: 4.112 ms
Remote clock offset: -12.01 ms

# Below is generated by plot.py at 2018-04-25 00:15:40
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 25.37 Mbit/s
  95th percentile per-packet one-way delay: 5.780 ms
  Loss rate: 0.92%
-- Flow 1:
  Average throughput: 13.03 Mbit/s
  95th percentile per-packet one-way delay: 5.789 ms
  Loss rate: 0.89%
-- Flow 2:
  Average throughput: 13.05 Mbit/s
  95th percentile per-packet one-way delay: 5.767 ms
  Loss rate: 0.85%
-- Flow 3:
  Average throughput: 11.66 Mbit/s
  95th percentile per-packet one-way delay: 5.780 ms
  Loss rate: 1.18%
Run 2: Report of LEDBAT — Data Link
Run 3: Statistics of LEDBAT

End at: 2018-04-24 21:16:01
Local clock offset: -0.221 ms
Remote clock offset: -11.577 ms

# Below is generated by plot.py at 2018-04-25 00:15:40
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 39.45 Mbit/s
  95th percentile per-packet one-way delay: 11.372 ms
  Loss rate: 0.42%
-- Flow 1:
  Average throughput: 21.48 Mbit/s
  95th percentile per-packet one-way delay: 11.083 ms
  Loss rate: 0.34%
-- Flow 2:
  Average throughput: 18.36 Mbit/s
  95th percentile per-packet one-way delay: 10.873 ms
  Loss rate: 0.58%
-- Flow 3:
  Average throughput: 17.34 Mbit/s
  95th percentile per-packet one-way delay: 13.580 ms
  Loss rate: 0.40%
Run 3: Report of LEDBAT — Data Link
Run 4: Statistics of LEDBAT

Start at: 2018-04-24 21:35:00
End at: 2018-04-24 21:35:30
Local clock offset: -0.7 ms
Remote clock offset: -9.381 ms

# Below is generated by plot.py at 2018-04-25 00:15:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.73 Mbit/s
95th percentile per-packet one-way delay: 10.096 ms
Loss rate: 2.28%
-- Flow 1:
Average throughput: 6.67 Mbit/s
95th percentile per-packet one-way delay: 10.023 ms
Loss rate: 2.65%
-- Flow 2:
Average throughput: 7.01 Mbit/s
95th percentile per-packet one-way delay: 10.061 ms
Loss rate: 1.93%
-- Flow 3:
Average throughput: 10.34 Mbit/s
95th percentile per-packet one-way delay: 10.501 ms
Loss rate: 1.95%
Run 4: Report of LEDBAT — Data Link

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

- Flow 1 ingress (mean 6.85 Mbps)
- Flow 1 egress (mean 6.67 Mbps)
- Flow 2 ingress (mean 7.15 Mbps)
- Flow 2 egress (mean 7.01 Mbps)
- Flow 3 ingress (mean 7.36 Mbps)
- Flow 3 egress (mean 10.34 Mbps)
Run 5: Statistics of LEDBAT

Local clock offset: 0.433 ms
Remote clock offset: -3.085 ms

# Below is generated by plot.py at 2018-04-25 00:15:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 11.89 Mbit/s
95th percentile per-packet one-way delay: 9.251 ms
Loss rate: 3.46%
-- Flow 1:
Average throughput: 6.52 Mbit/s
95th percentile per-packet one-way delay: 8.011 ms
Loss rate: 3.20%
-- Flow 2:
Average throughput: 6.62 Mbit/s
95th percentile per-packet one-way delay: 8.062 ms
Loss rate: 3.53%
-- Flow 3:
Average throughput: 3.52 Mbit/s
95th percentile per-packet one-way delay: 9.978 ms
Loss rate: 4.67%
Run 6: Statistics of LEDBAT

Local clock offset: -6.873 ms
Remote clock offset: -5.15 ms

# Below is generated by plot.py at 2018-04-25 00:15:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 10.51 Mbit/s
95th percentile per-packet one-way delay: 10.906 ms
Loss rate: 3.22%
-- Flow 1:
Average throughput: 4.58 Mbit/s
95th percentile per-packet one-way delay: 9.568 ms
Loss rate: 3.85%
-- Flow 2:
Average throughput: 5.98 Mbit/s
95th percentile per-packet one-way delay: 9.542 ms
Loss rate: 2.56%
-- Flow 3:
Average throughput: 6.28 Mbit/s
95th percentile per-packet one-way delay: 11.255 ms
Loss rate: 3.01%
Run 6: Report of LEDBAT — Data Link
Run 7: Statistics of LEDBAT

Start at: 2018-04-24 22:34:07
End at: 2018-04-24 22:34:37
Local clock offset: -11.834 ms
Remote clock offset: -7.579 ms

# Below is generated by plot.py at 2018-04-25 00:15:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.41 Mbit/s
95th percentile per-packet one-way delay: 9.208 ms
Loss rate: 3.12%
-- Flow 1:
Average throughput: 6.15 Mbit/s
95th percentile per-packet one-way delay: 9.309 ms
Loss rate: 2.72%
-- Flow 2:
Average throughput: 8.30 Mbit/s
95th percentile per-packet one-way delay: 7.965 ms
Loss rate: 3.39%
-- Flow 3:
Average throughput: 8.25 Mbit/s
95th percentile per-packet one-way delay: 9.453 ms
Loss rate: 3.48%
Run 7: Report of LEDBAT — Data Link

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

- Flow 1 ingress (mean 6.32 Mbit/s)
- Flow 1 egress (mean 6.15 Mbit/s)
- Flow 2 ingress (mean 8.39 Mbit/s)
- Flow 2 egress (mean 8.30 Mbit/s)
- Flow 3 ingress (mean 8.35 Mbit/s)
- Flow 3 egress (mean 8.25 Mbit/s)

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

- Flow 1 (95th percentile 9.31 ms)
- Flow 2 (95th percentile 7.96 ms)
- Flow 3 (95th percentile 9.45 ms)
Run 8: Statistics of LEDBAT

Local clock offset: -15.596 ms
Remote clock offset: -6.828 ms

# Below is generated by plot.py at 2018-04-25 00:15:40
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 22.70 Mbit/s
  95th percentile per-packet one-way delay: 10.993 ms
  Loss rate: 1.43%
-- Flow 1:
  Average throughput: 11.18 Mbit/s
  95th percentile per-packet one-way delay: 11.325 ms
  Loss rate: 1.15%
-- Flow 2:
  Average throughput: 13.99 Mbit/s
  95th percentile per-packet one-way delay: 10.082 ms
  Loss rate: 1.26%
-- Flow 3:
  Average throughput: 6.75 Mbit/s
  95th percentile per-packet one-way delay: 10.145 ms
  Loss rate: 3.49%
Run 8: Report of LEDBAT — Data Link
Run 9: Statistics of LEDBAT

Start at: 2018-04-24 23:14:00
End at: 2018-04-24 23:14:30
Local clock offset: -18.613 ms
Remote clock offset: -6.724 ms

# Below is generated by plot.py at 2018-04-25 00:15:40
# Datalink statistics
-- Total of 3 flows:
   Average throughput: 17.30 Mbit/s
   95th percentile per-packet one-way delay: 9.838 ms
   Loss rate: 2.24%
-- Flow 1:
   Average throughput: 8.95 Mbit/s
   95th percentile per-packet one-way delay: 9.942 ms
   Loss rate: 2.09%
-- Flow 2:
   Average throughput: 8.45 Mbit/s
   95th percentile per-packet one-way delay: 9.704 ms
   Loss rate: 2.46%
-- Flow 3:
   Average throughput: 9.14 Mbit/s
   95th percentile per-packet one-way delay: 9.810 ms
   Loss rate: 2.26%
Run 9: Report of LEDBAT — Data Link

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

- Flow 1 ingress (mean 9.14 Mbit/s)
- Flow 1 egress (mean 8.95 Mbit/s)
- Flow 2 ingress (mean 8.66 Mbit/s)
- Flow 2 egress (mean 8.45 Mbit/s)
- Flow 3 ingress (mean 9.35 Mbit/s)
- Flow 3 egress (mean 9.14 Mbit/s)
Run 10: Statistics of LEDBAT

End at: 2018-04-24 23:34:16
Local clock offset: -5.445 ms
Remote clock offset: -7.413 ms

# Below is generated by plot.py at 2018-04-25 00:15:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 11.37 Mbit/s
95th percentile per-packet one-way delay: 11.707 ms
Loss rate: 2.67%
-- Flow 1:
Average throughput: 5.38 Mbit/s
95th percentile per-packet one-way delay: 11.783 ms
Loss rate: 2.58%
-- Flow 2:
Average throughput: 5.96 Mbit/s
95th percentile per-packet one-way delay: 11.759 ms
Loss rate: 2.73%
-- Flow 3:
Average throughput: 7.16 Mbit/s
95th percentile per-packet one-way delay: 10.865 ms
Loss rate: 2.77%
Run 10: Report of LEDBAT — Data Link

![Graph 1: Throughput (Mbps)]

- Flow 1 ingress (mean 5.52 Mbps/s)
- Flow 1 egress (mean 5.38 Mbps/s)
- Flow 2 ingress (mean 5.80 Mbps/s)
- Flow 2 egress (mean 5.96 Mbps/s)
- Flow 3 ingress (mean 7.36 Mbps/s)
- Flow 3 egress (mean 7.16 Mbps/s)

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

- Flow 1 (95th percentile 11.78 ms)
- Flow 2 (95th percentile 11.76 ms)
- Flow 3 (95th percentile 10.87 ms)
Run 1: Statistics of PCC-Allegro

Local clock offset: 3.383 ms
Remote clock offset: -10.097 ms

# Below is generated by plot.py at 2018-04-25 00:15:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.92 Mbit/s
95th percentile per-packet one-way delay: 6.004 ms
Loss rate: 3.37%
-- Flow 1:
Average throughput: 11.83 Mbit/s
95th percentile per-packet one-way delay: 5.984 ms
Loss rate: 3.13%
-- Flow 2:
Average throughput: 6.24 Mbit/s
95th percentile per-packet one-way delay: 6.024 ms
Loss rate: 3.66%
-- Flow 3:
Average throughput: 2.86 Mbit/s
95th percentile per-packet one-way delay: 6.051 ms
Loss rate: 5.05%
Run 1: Report of PCC-Allegro — Data Link

[Graph showing throughput over time for different flows with corresponding mean rates.]

[Graph showing per-packet one-way delay over time for different flows with corresponding 95th percentile delays.]
Run 2: Statistics of PCC-Allegro

Start at: 2018-04-24 21:01:36
End at: 2018-04-24 21:02:06
Local clock offset: -0.69 ms
Remote clock offset: -11.722 ms

# Below is generated by plot.py at 2018-04-25 00:16:44
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 86.71 Mbit/s
  95th percentile per-packet one-way delay: 11.368 ms
  Loss rate: 6.08%
-- Flow 1:
  Average throughput: 82.94 Mbit/s
  95th percentile per-packet one-way delay: 11.361 ms
  Loss rate: 6.06%
-- Flow 2:
  Average throughput: 4.36 Mbit/s
  95th percentile per-packet one-way delay: 11.650 ms
  Loss rate: 6.43%
-- Flow 3:
  Average throughput: 2.64 Mbit/s
  95th percentile per-packet one-way delay: 10.363 ms
  Loss rate: 7.42%
Run 2: Report of PCC-Allegro — Data Link

![Graph showing network data](image)

![Graph showing packet loss](image)
Run 3: Statistics of PCC-Allegro

End at: 2018-04-24 21:21:40
Local clock offset: -0.106 ms
Remote clock offset: -11.043 ms

# Below is generated by plot.py at 2018-04-25 00:16:44
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 83.83 Mbit/s
  95th percentile per-packet one-way delay: 18.776 ms
  Loss rate: 4.63%
-- Flow 1:
  Average throughput: 75.58 Mbit/s
  95th percentile per-packet one-way delay: 18.686 ms
  Loss rate: 4.67%
-- Flow 2:
  Average throughput: 9.07 Mbit/s
  95th percentile per-packet one-way delay: 20.244 ms
  Loss rate: 4.14%
-- Flow 3:
  Average throughput: 6.75 Mbit/s
  95th percentile per-packet one-way delay: 19.284 ms
  Loss rate: 4.66%
Run 3: Report of PCC-Allegro — Data Link

![Graph of Throughput over Time]

- Flow 1 Ingress (mean 79.28 Mbit/s)
- Flow 1 Egress (mean 75.58 Mbit/s)
- Flow 2 Ingress (mean 9.46 Mbit/s)
- Flow 2 Egress (mean 9.07 Mbit/s)
- Flow 3 Ingress (mean 7.07 Mbit/s)
- Flow 3 Egress (mean 6.75 Mbit/s)

![Graph of Per Packet One-Way Delay over Time]

- Flow 1 (95th percentile 18.69 ms)
- Flow 2 (95th percentile 20.24 ms)
- Flow 3 (95th percentile 19.28 ms)

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Run 4: Statistics of PCC-Allegro

End at: 2018-04-24 21:41:06
Local clock offset: -0.291 ms
Remote clock offset: -5.405 ms

# Below is generated by plot.py at 2018-04-25 00:16:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 74.10 Mbit/s
95th percentile per-packet one-way delay: 10.675 ms
Loss rate: 7.60%
-- Flow 1:
Average throughput: 69.72 Mbit/s
95th percentile per-packet one-way delay: 10.640 ms
Loss rate: 7.62%
-- Flow 2:
Average throughput: 4.88 Mbit/s
95th percentile per-packet one-way delay: 10.748 ms
Loss rate: 7.31%
-- Flow 3:
Average throughput: 3.45 Mbit/s
95th percentile per-packet one-way delay: 12.459 ms
Loss rate: 7.03%
Run 4: Report of PCC-Allegro — Data Link

![Graph 1](image1.png)

**Graph 1:**
- **Y-axis:** Throughput (Mbps)
- **X-axis:** Time (s)
- Lines represent:
  - Flow 1 ingress (mean 75.47 Mbps)
  - Flow 1 egress (mean 69.72 Mbps)
  - Flow 2 ingress (mean 5.27 Mbps)
  - Flow 2 egress (mean 4.86 Mbps)
  - Flow 3 ingress (mean 3.71 Mbps)
  - Flow 3 egress (mean 3.45 Mbps)

![Graph 2](image2.png)

**Graph 2:**
- **Y-axis:** Per packet one way delay (ms)
- **X-axis:** Time (s)
- Points represent:
  - Flow 1 (95th percentile 10.64 ms)
  - Flow 2 (95th percentile 10.75 ms)
  - Flow 3 (95th percentile 12.46 ms)
Run 5: Statistics of PCC-Allegro

Start at: 2018-04-24 22:00:12
End at: 2018-04-24 22:00:42
Local clock offset: 0.113 ms
Remote clock offset: -2.443 ms

# Below is generated by plot.py at 2018-04-25 00:16:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 66.06 Mbit/s
95th percentile per-packet one-way delay: 9.839 ms
Loss rate: 9.61%
-- Flow 1:
Average throughput: 59.07 Mbit/s
95th percentile per-packet one-way delay: 9.848 ms
Loss rate: 9.63%
-- Flow 2:
Average throughput: 6.87 Mbit/s
95th percentile per-packet one-way delay: 8.098 ms
Loss rate: 9.13%
-- Flow 3:
Average throughput: 7.33 Mbit/s
95th percentile per-packet one-way delay: 9.996 ms
Loss rate: 9.82%
Run 5: Report of PCC-Allegro — Data Link

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

- Flow 1 ingress (mean 65.38 Mbit/s)
- Flow 1 egress (mean 59.07 Mbit/s)
- Flow 2 ingress (mean 7.56 Mbit/s)
- Flow 2 egress (mean 6.87 Mbit/s)
- Flow 3 ingress (mean 8.13 Mbit/s)
- Flow 3 egress (mean 7.33 Mbit/s)

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

- Flow 1 (95th percentile 9.85 ms)
- Flow 2 (95th percentile 8.10 ms)
- Flow 3 (95th percentile 10.00 ms)
Run 6: Statistics of PCC-Allegro

Local clock offset: -8.236 ms
Remote clock offset: -5.576 ms

# Below is generated by plot.py at 2018-04-25 00:16:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.80 Mbit/s
95th percentile per-packet one-way delay: 9.852 ms
Loss rate: 6.44%
-- Flow 1:
Average throughput: 12.61 Mbit/s
95th percentile per-packet one-way delay: 8.331 ms
Loss rate: 6.29%
-- Flow 2:
Average throughput: 2.55 Mbit/s
95th percentile per-packet one-way delay: 10.045 ms
Loss rate: 7.16%
-- Flow 3:
Average throughput: 4.54 Mbit/s
95th percentile per-packet one-way delay: 8.296 ms
Loss rate: 6.87%
Run 6: Report of PCC-Allegro — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 13.45 Mbps)
  - Flow 1 egress (mean 12.61 Mbps)
  - Flow 2 ingress (mean 2.75 Mbps)
  - Flow 2 egress (mean 2.55 Mbps)
  - Flow 3 ingress (mean 4.88 Mbps)
  - Flow 3 egress (mean 4.34 Mbps)

- **Packet Delay (ms):**
  - Flow 1 (95th percentile 8.33 ms)
  - Flow 2 (95th percentile 10.04 ms)
  - Flow 3 (95th percentile 8.30 ms)
Run 7: Statistics of PCC-Allegro

End at: 2018-04-24 22:40:18
Local clock offset: -13.912 ms
Remote clock offset: -6.89 ms

# Below is generated by plot.py at 2018-04-25 00:16:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 49.40 Mbit/s
95th percentile per-packet one-way delay: 10.769 ms
Loss rate: 10.08%
-- Flow 1:
Average throughput: 5.25 Mbit/s
95th percentile per-packet one-way delay: 10.795 ms
Loss rate: 7.94%
-- Flow 2:
Average throughput: 65.45 Mbit/s
95th percentile per-packet one-way delay: 10.766 ms
Loss rate: 10.34%
-- Flow 3:
Average throughput: 1.87 Mbit/s
95th percentile per-packet one-way delay: 9.131 ms
Loss rate: 9.62%
Run 7: Report of PCC-Allegro — Data Link

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

![Graph 2: Per packet one way delay (ms)]
Run 8: Statistics of PCC-Allegro

End at: 2018-04-24 23:00:06
Local clock offset: -15.959 ms
Remote clock offset: -7.443 ms

# Below is generated by plot.py at 2018-04-25 00:16:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.02 Mbit/s
95th percentile per-packet one-way delay: 11.933 ms
Loss rate: 5.99%
-- Flow 1:
Average throughput: 66.11 Mbit/s
95th percentile per-packet one-way delay: 11.524 ms
Loss rate: 5.93%
-- Flow 2:
Average throughput: 17.31 Mbit/s
95th percentile per-packet one-way delay: 15.053 ms
Loss rate: 6.34%
-- Flow 3:
Average throughput: 4.31 Mbit/s
95th percentile per-packet one-way delay: 9.636 ms
Loss rate: 5.93%
Run 8: Report of PCC-Allegro — Data Link

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

**Throughput (Mbps) vs. Time (s):**
- Flow 1 ingress (mean 70.27 Mbps)
- Flow 1 egress (mean 66.11 Mbps)
- Flow 2 ingress (mean 18.49 Mbps)
- Flow 2 egress (mean 17.31 Mbps)
- Flow 3 ingress (mean 4.58 Mbps)
- Flow 3 egress (mean 4.31 Mbps)

**Per-packet one-way delay (ms) vs. Time (s):**
- Flow 1 (95th percentile 11.52 ms)
- Flow 2 (95th percentile 15.05 ms)
- Flow 3 (95th percentile 9.64 ms)
Run 9: Statistics of PCC-Allegro

Start at: 2018-04-24 23:19:45
End at: 2018-04-24 23:20:15
Local clock offset: -13.599 ms
Remote clock offset: -7.402 ms

# Below is generated by plot.py at 2018-04-25 00:16:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 70.21 Mbit/s
95th percentile per-packet one-way delay: 9.883 ms
Loss rate: 7.29%
-- Flow 1:
Average throughput: 61.81 Mbit/s
95th percentile per-packet one-way delay: 9.865 ms
Loss rate: 7.18%
-- Flow 2:
Average throughput: 10.47 Mbit/s
95th percentile per-packet one-way delay: 9.997 ms
Loss rate: 7.89%
-- Flow 3:
Average throughput: 4.38 Mbit/s
95th percentile per-packet one-way delay: 9.967 ms
Loss rate: 9.22%
Run 9: Report of PCC-Allegro — Data Link

![Graph showing throughput and one-way delay for different flows over time. The legend indicates mean throughput values for each flow.]

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Run 10: Statistics of PCC-Allegro

End at: 2018-04-24 23:39:54
Local clock offset: -3.521 ms
Remote clock offset: -7.392 ms

# Below is generated by plot.py at 2018-04-25 00:16:52
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 63.38 Mbit/s
  95th percentile per-packet one-way delay: 10.504 ms
  Loss rate: 8.35%
-- Flow 1:
  Average throughput: 53.13 Mbit/s
  95th percentile per-packet one-way delay: 10.369 ms
  Loss rate: 8.16%
-- Flow 2:
  Average throughput: 1.95 Mbit/s
  95th percentile per-packet one-way delay: 9.915 ms
  Loss rate: 8.32%
-- Flow 3:
  Average throughput: 27.14 Mbit/s
  95th percentile per-packet one-way delay: 11.258 ms
  Loss rate: 9.51%
Run 10: Report of PCC-Allegro — Data Link

[Graph showing throughput and packet delay over time for different flows.]
Run 1: Statistics of QUIC Cubic

Start at: 2018-04-24 20:40:47  
End at: 2018-04-24 20:41:17  
Local clock offset: 1.695 ms  
Remote clock offset: -10.258 ms  

# Below is generated by plot.py at 2018-04-25 00:16:52  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 17.17 Mbit/s  
95th percentile per-packet one-way delay: 7.366 ms  
Loss rate: 3.72%  
-- Flow 1:  
Average throughput: 9.00 Mbit/s  
95th percentile per-packet one-way delay: 7.343 ms  
Loss rate: 3.37%  
-- Flow 2:  
Average throughput: 8.29 Mbit/s  
95th percentile per-packet one-way delay: 7.370 ms  
Loss rate: 4.04%  
-- Flow 3:  
Average throughput: 8.14 Mbit/s  
95th percentile per-packet one-way delay: 7.457 ms  
Loss rate: 4.20%
Run 1: Report of QUIC Cubic — Data Link

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

- Flow 1 ingress (mean 9.31 Mbps)
- Flow 1 egress (mean 9.00 Mbps)
- Flow 2 ingress (mean 8.64 Mbps)
- Flow 2 egress (mean 8.29 Mbps)
- Flow 3 ingress (mean 8.50 Mbps)
- Flow 3 egress (mean 8.14 Mbps)

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

- Flow 1 (95th percentile 7.34 ms)
- Flow 2 (95th percentile 7.37 ms)
- Flow 3 (95th percentile 7.46 ms)
Run 2: Statistics of QUIC Cubic

Start at: 2018-04-24 21:00:29
End at: 2018-04-24 21:00:59
Local clock offset: 5.309 ms
Remote clock offset: -11.575 ms

# Below is generated by plot.py at 2018-04-25 00:17:19
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 36.84 Mbit/s
  95th percentile per-packet one-way delay: 4.389 ms
  Loss rate: 1.38%
-- Flow 1:
  Average throughput: 19.99 Mbit/s
  95th percentile per-packet one-way delay: 4.000 ms
  Loss rate: 0.73%
-- Flow 2:
  Average throughput: 17.94 Mbit/s
  95th percentile per-packet one-way delay: 5.143 ms
  Loss rate: 2.62%
-- Flow 3:
  Average throughput: 15.09 Mbit/s
  95th percentile per-packet one-way delay: 4.543 ms
  Loss rate: 0.94%
Run 2: Report of QUIC Cubic — Data Link
Run 3: Statistics of QUIC Cubic

Start at: 2018-04-24 21:20:03
End at: 2018-04-24 21:20:33
Local clock offset: 0.488 ms
Remote clock offset: -11.486 ms

# Below is generated by plot.py at 2018-04-25 00:17:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 40.05 Mbit/s
  95th percentile per-packet one-way delay: 8.507 ms
  Loss rate: 0.56%
-- Flow 1:
  Average throughput: 22.34 Mbit/s
  95th percentile per-packet one-way delay: 8.048 ms
  Loss rate: 0.48%
-- Flow 2:
  Average throughput: 17.24 Mbit/s
  95th percentile per-packet one-way delay: 8.328 ms
  Loss rate: 0.74%
-- Flow 3:
  Average throughput: 19.10 Mbit/s
  95th percentile per-packet one-way delay: 8.868 ms
  Loss rate: 0.49%
Run 3: Report of QUIC Cubic — Data Link

[Graph 1: Throughput (Mbps) vs Time (s)
- Flow 1 ingress (mean 22.45 Mbps)
- Flow 1 egress (mean 22.34 Mbps)
- Flow 2 ingress (mean 17.37 Mbps)
- Flow 2 egress (mean 17.24 Mbps)
- Flow 3 ingress (mean 19.19 Mbps)
- Flow 3 egress (mean 19.10 Mbps)]

[Graph 2: Per-packet one-way delay (ms) vs Time (s)
- Flow 1 (95th percentile 8.05 ms)
- Flow 2 (95th percentile 8.33 ms)
- Flow 3 (95th percentile 8.87 ms)"

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Run 4: Statistics of QUIC Cubic

Local clock offset: -0.892 ms
Remote clock offset: -5.961 ms

# Below is generated by plot.py at 2018-04-25 00:17:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 31.67 Mbit/s
  95th percentile per-packet one-way delay: 10.698 ms
  Loss rate: 1.52%
-- Flow 1:
  Average throughput: 17.78 Mbit/s
  95th percentile per-packet one-way delay: 10.143 ms
  Loss rate: 1.04%
-- Flow 2:
  Average throughput: 14.09 Mbit/s
  95th percentile per-packet one-way delay: 14.512 ms
  Loss rate: 2.27%
-- Flow 3:
  Average throughput: 13.80 Mbit/s
  95th percentile per-packet one-way delay: 10.574 ms
  Loss rate: 1.82%
Run 4: Report of QUIC Cubic — Data Link

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

- Flow 1 ingress (mean 17.96 Mbit/s)
- Flow 1 egress (mean 17.78 Mbit/s)
- Flow 2 ingress (mean 14.42 Mbit/s)
- Flow 2 egress (mean 14.09 Mbit/s)
- Flow 3 ingress (mean 14.06 Mbit/s)
- Flow 3 egress (mean 13.80 Mbit/s)

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

- Flow 1 (95th percentile 10.14 ms)
- Flow 2 (95th percentile 14.51 ms)
- Flow 3 (95th percentile 10.57 ms)
Run 5: Statistics of QUIC Cubic

Local clock offset: 0.06 ms
Remote clock offset: -2.781 ms

# Below is generated by plot.py at 2018-04-25 00:17:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 18.24 Mbit/s
  95th percentile per-packet one-way delay: 9.436 ms
  Loss rate: 3.28%
-- Flow 1:
  Average throughput: 8.91 Mbit/s
  95th percentile per-packet one-way delay: 9.503 ms
  Loss rate: 3.37%
-- Flow 2:
  Average throughput: 9.91 Mbit/s
  95th percentile per-packet one-way delay: 7.742 ms
  Loss rate: 3.18%
-- Flow 3:
  Average throughput: 8.33 Mbit/s
  95th percentile per-packet one-way delay: 9.509 ms
  Loss rate: 3.22%
Run 5: Report of QUIC Cubic — Data Link

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

- Flow 1 ingress (mean 9.22 Mbps)
- Flow 1 egress (mean 8.91 Mbps)
- Flow 2 ingress (mean 10.24 Mbps)
- Flow 2 egress (mean 9.91 Mbps)
- Flow 3 ingress (mean 8.83 Mbps)
- Flow 3 egress (mean 8.33 Mbps)

![Graph showing end-to-end delay over time for different flows.]

- Flow 1 (95th percentile 9.50 ms)
- Flow 2 (95th percentile 7.74 ms)
- Flow 3 (95th percentile 9.51 ms)
Run 6: Statistics of QUIC Cubic

Local clock offset: -9.077 ms
Remote clock offset: -6.096 ms

# Below is generated by plot.py at 2018-04-25 00:17:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 21.39 Mbit/s
  95th percentile per-packet one-way delay: 10.677 ms
  Loss rate: 4.41%
-- Flow 1:
  Average throughput: 11.10 Mbit/s
  95th percentile per-packet one-way delay: 9.112 ms
  Loss rate: 3.83%
-- Flow 2:
  Average throughput: 9.89 Mbit/s
  95th percentile per-packet one-way delay: 9.673 ms
  Loss rate: 4.36%
-- Flow 3:
  Average throughput: 11.32 Mbit/s
  95th percentile per-packet one-way delay: 13.285 ms
  Loss rate: 6.19%
Run 6: Report of QUIC Cubic — Data Link
Run 7: Statistics of QUIC Cubic

Local clock offset: -12.815 ms
Remote clock offset: -6.867 ms

# Below is generated by plot.py at 2018-04-25 00:17:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.54 Mbit/s
95th percentile per-packet one-way delay: 9.632 ms
Loss rate: 2.87%
-- Flow 1:
Average throughput: 12.52 Mbit/s
95th percentile per-packet one-way delay: 8.103 ms
Loss rate: 2.49%
-- Flow 2:
Average throughput: 11.66 Mbit/s
95th percentile per-packet one-way delay: 8.168 ms
Loss rate: 2.99%
-- Flow 3:
Average throughput: 10.01 Mbit/s
95th percentile per-packet one-way delay: 9.879 ms
Loss rate: 4.05%
Run 7: Report of QUIC Cubic — Data Link
Run 8: Statistics of QUIC Cubic

Local clock offset: -15.464 ms
Remote clock offset: -7.342 ms

# Below is generated by plot.py at 2018-04-25 00:17:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 38.14 Mbit/s
95th percentile per-packet one-way delay: 9.955 ms
Loss rate: 1.27%
-- Flow 1:
Average throughput: 19.59 Mbit/s
95th percentile per-packet one-way delay: 8.259 ms
Loss rate: 0.67%
-- Flow 2:
Average throughput: 16.85 Mbit/s
95th percentile per-packet one-way delay: 10.174 ms
Loss rate: 0.91%
-- Flow 3:
Average throughput: 22.45 Mbit/s
95th percentile per-packet one-way delay: 16.079 ms
Loss rate: 3.37%
Run 8: Report of QUIC Cubic — Data Link

**Graph 1:**
- X-axis: Time (s)
- Y-axis: Throughput (Mbps)
- Legend:
  - Flow 1 ingress (mean 19.72 Mbps)
  - Flow 1 egress (mean 19.59 Mbps)
  - Flow 2 ingress (mean 17.00 Mbps)
  - Flow 2 egress (mean 16.85 Mbps)
  - Flow 3 ingress (mean 23.23 Mbps)
  - Flow 3 egress (mean 22.45 Mbps)

**Graph 2:**
- X-axis: Time (s)
- Y-axis: Packet per round trip delay (ms)
- Legend:
  - Flow 1 (95th percentile: 8.26 ms)
  - Flow 2 (95th percentile: 10.17 ms)
  - Flow 3 (95th percentile: 16.08 ms)
Run 9: Statistics of QUIC Cubic

End at: 2018-04-24 23:19:03
Local clock offset: -14.014 ms
Remote clock offset: -6.376 ms

# Below is generated by plot.py at 2018-04-25 00:17:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.96 Mbit/s
95th percentile per-packet one-way delay: 11.451 ms
Loss rate: 3.06%
-- Flow 1:
Average throughput: 9.76 Mbit/s
95th percentile per-packet one-way delay: 11.357 ms
Loss rate: 3.07%
-- Flow 2:
Average throughput: 9.93 Mbit/s
95th percentile per-packet one-way delay: 11.392 ms
Loss rate: 3.28%
-- Flow 3:
Average throughput: 11.00 Mbit/s
95th percentile per-packet one-way delay: 11.837 ms
Loss rate: 2.63%
Run 9: Report of QUIC Cubic — Data Link

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

- Flow 1 ingress (mean 10.07 Mbps)
- Flow 1 egress (mean 9.76 Mbps)
- Flow 2 ingress (mean 10.26 Mbps)
- Flow 2 egress (mean 9.93 Mbps)
- Flow 3 ingress (mean 11.29 Mbps)
- Flow 3 egress (mean 11.00 Mbps)

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

- Flow 1 (95th percentile 11.36 ms)
- Flow 2 (95th percentile 11.39 ms)
- Flow 3 (95th percentile 11.84 ms)
Run 10: Statistics of QUIC Cubic

Start at: 2018-04-24 23:38:18
Local clock offset: -3.655 ms
Remote clock offset: -7.771 ms

# Below is generated by plot.py at 2018-04-25 00:17:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.81 Mbit/s
95th percentile per-packet one-way delay: 9.737 ms
Loss rate: 4.60%
-- Flow 1:
Average throughput: 10.65 Mbit/s
95th percentile per-packet one-way delay: 9.953 ms
Loss rate: 3.63%
-- Flow 2:
Average throughput: 8.47 Mbit/s
95th percentile per-packet one-way delay: 8.801 ms
Loss rate: 3.97%
-- Flow 3:
Average throughput: 10.77 Mbit/s
95th percentile per-packet one-way delay: 11.488 ms
Loss rate: 8.37%
Run 10: Report of QUIC Cubic — Data Link

![Graph of throughput over time with legend for each flow's ingress and egress.]

![Graph of per-packet one-way delay over time with legend for each flow's 95th percentile delay.]

Flow 1 ingress (mean 11.05 Mbit/s)  Flow 1 egress (mean 10.65 Mbit/s)
Flow 2 ingress (mean 8.82 Mbit/s)  Flow 2 egress (mean 8.47 Mbit/s)
Flow 3 ingress (mean 11.75 Mbit/s)  Flow 3 egress (mean 10.77 Mbit/s)
Run 1: Statistics of SCReAM

Start at: 2018-04-24 20:44:16
End at: 2018-04-24 20:44:46
Local clock offset: -0.295 ms
Remote clock offset: -9.991 ms

# Below is generated by plot.py at 2018-04-25 00:17:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.23 Mbit/s
95th percentile per-packet one-way delay: 10.064 ms
Loss rate: 2.00%
-- Flow 1:
Average throughput: 0.10 Mbit/s
95th percentile per-packet one-way delay: 9.614 ms
Loss rate: 2.35%
-- Flow 2:
Average throughput: 0.10 Mbit/s
95th percentile per-packet one-way delay: 9.617 ms
Loss rate: 2.42%
-- Flow 3:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 10.143 ms
Loss rate: 1.07%
Run 2: Statistics of SCReAM

Start at: 2018-04-24 21:03:59
End at: 2018-04-24 21:04:29
Local clock offset: 0.671 ms
Remote clock offset: -11.335 ms

# Below is generated by plot.py at 2018-04-25 00:17:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.27 Mbit/s
95th percentile per-packet one-way delay: 8.518 ms
Loss rate: 1.01%
-- Flow 1:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 8.408 ms
Loss rate: 0.52%
-- Flow 2:
Average throughput: 0.11 Mbit/s
95th percentile per-packet one-way delay: 8.472 ms
Loss rate: 1.34%
-- Flow 3:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 9.050 ms
Loss rate: 1.88%
Run 2: Report of SCReAM — Data Link

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

- Flow 1 ingress (mean 0.14 Mbps)
- Flow 1 egress (mean 0.14 Mbps)
- Flow 2 ingress (mean 0.12 Mbps)
- Flow 2 egress (mean 0.11 Mbps)
- Flow 3 ingress (mean 0.15 Mbps)
- Flow 3 egress (mean 0.15 Mbps)

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

- Flow 1 (95th percentile 8.41 ms)
- Flow 2 (95th percentile 8.47 ms)
- Flow 3 (95th percentile 9.05 ms)
Run 3: Statistics of SCReAM

End at: 2018-04-24 21:24:02
Local clock offset: 0.031 ms
Remote clock offset: -10.66 ms

# Below is generated by plot.py at 2018-04-25 00:17:43
# Datalink statistics
-- Total of 3 flows:
 Average throughput: 0.38 Mbit/s
 95th percentile per-packet one-way delay: 9.516 ms
 Loss rate: 0.21%
-- Flow 1:
 Average throughput: 0.20 Mbit/s
 95th percentile per-packet one-way delay: 9.159 ms
 Loss rate: 0.13%
-- Flow 2:
 Average throughput: 0.19 Mbit/s
 95th percentile per-packet one-way delay: 9.559 ms
 Loss rate: 0.24%
-- Flow 3:
 Average throughput: 0.16 Mbit/s
 95th percentile per-packet one-way delay: 9.002 ms
 Loss rate: 0.47%
Run 3: Report of SCReAM — Data Link
Run 4: Statistics of SCReAM

Local clock offset: -0.702 ms
Remote clock offset: -4.839 ms

# Below is generated by plot.py at 2018-04-25 00:17:43
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.24 Mbit/s
  95th percentile per-packet one-way delay: 9.816 ms
  Loss rate: 0.84%
-- Flow 1:
  Average throughput: 0.10 Mbit/s
  95th percentile per-packet one-way delay: 9.840 ms
  Loss rate: 0.88%
-- Flow 2:
  Average throughput: 0.14 Mbit/s
  95th percentile per-packet one-way delay: 9.236 ms
  Loss rate: 0.77%
-- Flow 3:
  Average throughput: 0.14 Mbit/s
  95th percentile per-packet one-way delay: 9.838 ms
  Loss rate: 0.92%
Run 4: Report of SCReAM — Data Link

Graph 1: Throughout (Mbps):
- Flow 1 ingress (mean 0.10 Mbps)
- Flow 1 egress (mean 0.10 Mbps)
- Flow 2 ingress (mean 0.14 Mbps)
- Flow 2 egress (mean 0.14 Mbps)
- Flow 3 ingress (mean 0.14 Mbps)
- Flow 3 egress (mean 0.14 Mbps)

Graph 2: One-Way Delay (ms):
- Flow 1 (95th percentile 9.84 ms)
- Flow 2 (95th percentile 9.24 ms)
- Flow 3 (95th percentile 9.84 ms)
Run 5: Statistics of SCReAM

Start at: 2018-04-24 22:02:36
End at: 2018-04-24 22:03:06
Local clock offset: -0.565 ms
Remote clock offset: -2.298 ms

# Below is generated by plot.py at 2018-04-25 00:17:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 8.301 ms
Loss rate: 2.09%
-- Flow 1:
Average throughput: 0.10 Mbit/s
95th percentile per-packet one-way delay: 8.332 ms
Loss rate: 2.31%
-- Flow 2:
Average throughput: 0.10 Mbit/s
95th percentile per-packet one-way delay: 8.245 ms
Loss rate: 1.93%
-- Flow 3:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 8.316 ms
Loss rate: 1.88%
Run 5: Report of SCReAM — Data Link
Run 6: Statistics of SCReAM

Local clock offset: -9.223 ms
Remote clock offset: -6.618 ms

# Below is generated by plot.py at 2018-04-25 00:17:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 9.304 ms
Loss rate: 3.70%
-- Flow 1:
Average throughput: 0.09 Mbit/s
95th percentile per-packet one-way delay: 9.325 ms
Loss rate: 3.73%
-- Flow 2:
Average throughput: 0.09 Mbit/s
95th percentile per-packet one-way delay: 7.633 ms
Loss rate: 3.03%
-- Flow 3:
Average throughput: 0.10 Mbit/s
95th percentile per-packet one-way delay: 9.321 ms
Loss rate: 4.85%
Run 6: Report of SCReAM — Data Link

![Graph 1: Throughput (Mbps) over time]

- Flow 1 ingress (mean 0.09 Mbps)
- Flow 1 egress (mean 0.09 Mbps)
- Flow 2 ingress (mean 0.10 Mbps)
- Flow 2 egress (mean 0.09 Mbps)
- Flow 3 ingress (mean 0.11 Mbps)
- Flow 3 egress (mean 0.10 Mbps)

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

- Flow 1 (95th percentile 9.32 ms)
- Flow 2 (95th percentile 7.63 ms)
- Flow 3 (95th percentile 9.32 ms)
Run 7: Statistics of SCReAM

Local clock offset: -13.72 ms
Remote clock offset: -6.529 ms

# Below is generated by plot.py at 2018-04-25 00:17:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.25 Mbit/s
95th percentile per-packet one-way delay: 10.322 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 0.12 Mbit/s
95th percentile per-packet one-way delay: 8.686 ms
Loss rate: 0.52%
-- Flow 2:
Average throughput: 0.09 Mbit/s
95th percentile per-packet one-way delay: 10.321 ms
Loss rate: 1.17%
-- Flow 3:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 10.368 ms
Loss rate: 0.85%
Run 7: Report of SCReAM — Data Link

![Graph showing data link performance metrics over time for different flows.](image)

- **Flow 1 Ingress (mean 0.12 Mbit/s)**
- **Flow 1 Egress (mean 0.12 Mbit/s)**
- **Flow 2 Ingress (mean 0.09 Mbit/s)**
- **Flow 2 Egress (mean 0.09 Mbit/s)**
- **Flow 3 Ingress (mean 0.20 Mbit/s)**
- **Flow 3 Egress (mean 0.20 Mbit/s)**

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

- **Flow 1 (95th percentile 8.69 ms)**
- **Flow 2 (95th percentile 10.32 ms)**
- **Flow 3 (95th percentile 10.37 ms)**

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Run 8: Statistics of SCReAM

Start at: 2018-04-24 23:02:04
End at: 2018-04-24 23:02:34
Local clock offset: -16.598 ms
Remote clock offset: -6.592 ms

# Below is generated by plot.py at 2018-04-25 00:17:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 10.365 ms
Loss rate: 5.22%
-- Flow 1:
Average throughput: 0.09 Mbit/s
95th percentile per-packet one-way delay: 10.396 ms
Loss rate: 5.01%
-- Flow 2:
Average throughput: 0.09 Mbit/s
95th percentile per-packet one-way delay: 8.720 ms
Loss rate: 5.85%
-- Flow 3:
Average throughput: 0.11 Mbit/s
95th percentile per-packet one-way delay: 8.733 ms
Loss rate: 4.65%
Run 8: Report of SCReAM — Data Link

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

- Flow 1 ingress (mean 0.09 Mbps)
- Flow 1 egress (mean 0.09 Mbps)
- Flow 2 ingress (mean 0.10 Mbps)
- Flow 2 egress (mean 0.09 Mbps)
- Flow 3 ingress (mean 0.11 Mbps)
- Flow 3 egress (mean 0.11 Mbps)

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

- Flow 1 (95th percentile 10.40 ms)
- Flow 2 (95th percentile 8.72 ms)
- Flow 3 (95th percentile 8.73 ms)
Run 9: Statistics of SCReAM

Local clock offset: -10.235 ms
Remote clock offset: -7.891 ms

# Below is generated by plot.py at 2018-04-25 00:17:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.24 Mbit/s
95th percentile per-packet one-way delay: 9.482 ms
Loss rate: 1.01%
-- Flow 1:
Average throughput: 0.10 Mbit/s
95th percentile per-packet one-way delay: 7.857 ms
Loss rate: 1.18%
-- Flow 2:
Average throughput: 0.11 Mbit/s
95th percentile per-packet one-way delay: 7.896 ms
Loss rate: 1.77%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 9.619 ms
Loss rate: 0.00%
Run 9: Report of SCReAM — Data Link

[Graph 1: Throughput (Mb/s) vs Time (s)
Legend: Flow 1 ingress (mean 0.10 Mb/s), Flow 1 egress (mean 0.10 Mb/s), Flow 2 ingress (mean 0.11 Mb/s), Flow 2 egress (mean 0.11 Mb/s), Flow 3 ingress (mean 0.22 Mb/s), Flow 3 egress (mean 0.22 Mb/s)]

[Graph 2: Per packet one way delay (ms) vs Time (s)
Legend: Flow 1 (95th percentile 7.86 ms), Flow 2 (95th percentile 7.90 ms), Flow 3 (95th percentile 9.62 ms)]
Run 10: Statistics of SCoReAM

Local clock offset: -1.882 ms
Remote clock offset: -7.071 ms

# Below is generated by plot.py at 2018-04-25 00:17:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.32 Mbit/s
95th percentile per-packet one-way delay: 9.687 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 9.780 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 8.264 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 8.456 ms
Loss rate: 0.00%
Run 1: Statistics of WebRTC media

End at: 2018-04-24 20:40:11
Local clock offset: 2.774 ms
Remote clock offset: -10.437 ms

# Below is generated by plot.py at 2018-04-25 00:17:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 7.027 ms
Loss rate: 1.23%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 6.703 ms
Loss rate: 0.85%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 7.362 ms
Loss rate: 1.31%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 7.074 ms
Loss rate: 1.60%
Run 1: Report of WebRTC media — Data Link

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

- Flow 1 ingress (mean 0.06 Mbit/s)
- Flow 1 egress (mean 0.06 Mbit/s)
- Flow 2 ingress (mean 0.05 Mbit/s)
- Flow 2 egress (mean 0.05 Mbit/s)
- Flow 3 ingress (mean 0.05 Mbit/s)
- Flow 3 egress (mean 0.05 Mbit/s)

- Flow 1 (95th percentile 6.70 ms)
- Flow 2 (95th percentile 7.36 ms)
- Flow 3 (95th percentile 7.07 ms)
Run 2: Statistics of WebRTC media

End at: 2018-04-24 20:59:54
Local clock offset: 0.546 ms
Remote clock offset: -11.105 ms

# Below is generated by plot.py at 2018-04-25 00:17:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 11.270 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 11.357 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 10.982 ms
Loss rate: 0.78%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 11.433 ms
Loss rate: 0.13%
Run 2: Report of WebRTC media — Data Link

Throughput (Mbit/s) vs Time (s)

- Flow 1 ingress (mean 0.06 Mbit/s)
- Flow 1 egress (mean 0.06 Mbit/s)
- Flow 2 ingress (mean 0.06 Mbit/s)
- Flow 2 egress (mean 0.06 Mbit/s)
- Flow 3 ingress (mean 0.05 Mbit/s)
- Flow 3 egress (mean 0.05 Mbit/s)

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

- Flow 1 (95th percentile 11.36 ms)
- Flow 2 (95th percentile 10.98 ms)
- Flow 3 (95th percentile 11.43 ms)
Run 3: Statistics of WebRTC media

Local clock offset: -0.652 ms
Remote clock offset: -10.31 ms

# Below is generated by plot.py at 2018-04-25 00:17:43
# Datalink statistics
-- Total of 3 flows:
 Average throughput: 0.17 Mbit/s
  95th percentile per-packet one-way delay: 12.046 ms
  Loss rate: 0.07%
-- Flow 1:
 Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 12.170 ms
  Loss rate: 0.07%
-- Flow 2:
 Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 12.267 ms
  Loss rate: 0.14%
-- Flow 3:
 Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 11.773 ms
  Loss rate: 0.00%
Run 3: Report of WebRTC media — Data Link

![Graph showing data link metrics for different flows.](image-url)
Run 4: Statistics of WebRTC media

Local clock offset: -0.758 ms
Remote clock offset: -7.481 ms

# Below is generated by plot.py at 2018-04-25 00:17:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 10.728 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 10.808 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 10.938 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 10.380 ms
Loss rate: 0.00%
Run 4: Report of WebRTC media — Data Link

![Graph 1: Throttling (Mbps)]

![Graph 2: Per packet one way delay (ms)]
Run 5: Statistics of WebRTC media

Start at: 2018-04-24 21:58:01
End at: 2018-04-24 21:58:31
Local clock offset: -0.572 ms
Remote clock offset: -2.804 ms

# Below is generated by plot.py at 2018-04-25 00:17:43
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.17 Mbit/s
  95th percentile per-packet one-way delay: 11.249 ms
  Loss rate: 0.56%
-- Flow 1:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 9.955 ms
  Loss rate: 0.30%
-- Flow 2:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 11.824 ms
  Loss rate: 0.39%
-- Flow 3:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 11.502 ms
  Loss rate: 1.06%
Run 5: Report of WebRTC media — Data Link

![Graph of throughput and packet round-trip delay over time for different flows, showing variations in performance and latency.]

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 0.06 Mbps)
  - Flow 1 egress (mean 0.06 Mbps)
  - Flow 2 ingress (mean 0.06 Mbps)
  - Flow 2 egress (mean 0.06 Mbps)
  - Flow 3 ingress (mean 0.05 Mbps)
  - Flow 3 egress (mean 0.05 Mbps)

- **Per-packet round-trip delay (ms):**
  - Flow 1 (95th percentile 9.96 ms)
  - Flow 2 (95th percentile 11.82 ms)
  - Flow 3 (95th percentile 11.50 ms)
Run 6: Statistics of WebRTC media

Local clock offset: -8.474 ms
Remote clock offset: -5.899 ms

# Below is generated by plot.py at 2018-04-25 00:17:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 11.178 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 10.462 ms
Loss rate: 0.58%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 12.026 ms
Loss rate: 1.06%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 9.825 ms
Loss rate: 0.08%
Run 6: Report of WebRTC media — Data Link

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

- Flow 1 ingress (mean 0.06 Mbit/s)
- Flow 1 egress (mean 0.06 Mbit/s)
- Flow 2 ingress (mean 0.06 Mbit/s)
- Flow 2 egress (mean 0.06 Mbit/s)
- Flow 3 ingress (mean 0.05 Mbit/s)
- Flow 3 egress (mean 0.05 Mbit/s)

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

- Flow 1 (95th percentile 10.46 ms)
- Flow 2 (95th percentile 12.03 ms)
- Flow 3 (95th percentile 9.82 ms)
Run 7: Statistics of WebRTC media

End at: 2018-04-24 22:38:03
Local clock offset: -12.815 ms
Remote clock offset: -6.767 ms

# Below is generated by plot.py at 2018-04-25 00:17:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 10.795 ms
Loss rate: 6.93%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 9.890 ms
Loss rate: 0.65%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 10.122 ms
Loss rate: 16.82%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 11.712 ms
Loss rate: 0.76%
Run 7: Report of WebRTC media — Data Link

![Graph showing data link throughput and packet round trip delay over time.]

- Flow 1 ingress (mean 0.06 Mbit/s)
- Flow 1 egress (mean 0.06 Mbit/s)
- Flow 2 ingress (mean 0.07 Mbit/s)
- Flow 2 egress (mean 0.06 Mbit/s)
- Flow 3 ingress (mean 0.05 Mbit/s)
- Flow 3 egress (mean 0.05 Mbit/s)
Run 8: Statistics of WebRTC media

Local clock offset: -15.812 ms
Remote clock offset: -7.388 ms

# Below is generated by plot.py at 2018-04-25 00:17:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 10.408 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 11.202 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 9.720 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 9.473 ms
Loss rate: 0.72%
Run 8: Report of WebRTC media — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress: mean 0.06 Mbps
  - Flow 1 egress: mean 0.06 Mbps
  - Flow 2 ingress: mean 0.06 Mbps
  - Flow 2 egress: mean 0.06 Mbps
  - Flow 3 ingress: mean 0.05 Mbps
  - Flow 3 egress: mean 0.05 Mbps

- **Packet round-trip delay (ms):**
  - Flow 1 (95th percentile 11.20 ms)
  - Flow 2 (95th percentile 9.72 ms)
  - Flow 3 (95th percentile 9.47 ms)
Run 9: Statistics of WebRTC media

End at: 2018-04-24 23:17:58
Local clock offset: -15.83 ms
Remote clock offset: -7.532 ms

# Below is generated by plot.py at 2018-04-25 00:17:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 11.633 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 9.874 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 11.819 ms
Loss rate: 0.60%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 12.070 ms
Loss rate: 1.03%
Run 9: Report of WebRTC media — Data Link
Run 10: Statistics of WebRTC media

End at: 2018-04-24 23:37:42
Local clock offset: -3.692 ms
Remote clock offset: -7.731 ms

# Below is generated by plot.py at 2018-04-25 00:17:43
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.17 Mbit/s
  95th percentile per-packet one-way delay: 10.716 ms
  Loss rate: 10.16%
-- Flow 1:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 11.290 ms
  Loss rate: 1.33%
-- Flow 2:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 10.396 ms
  Loss rate: 1.10%
-- Flow 3:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 9.052 ms
  Loss rate: 25.53%
Run 10: Report of WebRTC media — Data Link

![Graphs showing throughput and packet round-trip delay over time for different flows.](image)

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 0.06 Mbit/s)
  - Flow 1 egress (mean 0.06 Mbit/s)
  - Flow 2 ingress (mean 0.06 Mbit/s)
  - Flow 2 egress (mean 0.06 Mbit/s)
  - Flow 3 ingress (mean 0.07 Mbit/s)
  - Flow 3 egress (mean 0.05 Mbit/s)

- **Packet round-trip delay (ms):**
  - Flow 1 (95th percentile 11.29 ms)
  - Flow 2 (95th percentile 10.40 ms)
  - Flow 3 (95th percentile 9.05 ms)
Run 1: Statistics of Sprout

Local clock offset: -1.086 ms
Remote clock offset: -10.212 ms

# Below is generated by plot.py at 2018-04-25 00:18:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 41.01 Mbit/s
95th percentile per-packet one-way delay: 18.431 ms
Loss rate: 8.69%
-- Flow 1:
Average throughput: 21.13 Mbit/s
95th percentile per-packet one-way delay: 16.893 ms
Loss rate: 8.21%
-- Flow 2:
Average throughput: 18.67 Mbit/s
95th percentile per-packet one-way delay: 19.949 ms
Loss rate: 12.04%
-- Flow 3:
Average throughput: 22.57 Mbit/s
95th percentile per-packet one-way delay: 16.298 ms
Loss rate: 4.02%
Run 1: Report of Sprout — Data Link

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

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

Legend:
- Flow 1 ingress (mean 23.03 Mbit/s)
- Flow 1 egress (mean 21.13 Mbit/s)
- Flow 2 ingress (mean 21.24 Mbit/s)
- Flow 2 egress (mean 18.67 Mbit/s)
- Flow 3 ingress (mean 23.53 Mbit/s)
- Flow 3 egress (mean 22.57 Mbit/s)

Legend for per-packet one-way delay:
- Flow 1 (95th percentile 16.89 ms)
- Flow 2 (95th percentile 19.95 ms)
- Flow 3 (95th percentile 16.30 ms)
Run 2: Statistics of Sprout

Start at: 2018-04-24 20:52:30
End at: 2018-04-24 20:53:00
Local clock offset: 1.091 ms
Remote clock offset: -10.819 ms

# Below is generated by plot.py at 2018-04-25 00:18:20
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 45.06 Mbit/s
  95th percentile per-packet one-way delay: 17.828 ms
  Loss rate: 3.76%
-- Flow 1:
  Average throughput: 23.17 Mbit/s
  95th percentile per-packet one-way delay: 18.142 ms
  Loss rate: 3.26%
-- Flow 2:
  Average throughput: 21.54 Mbit/s
  95th percentile per-packet one-way delay: 17.950 ms
  Loss rate: 4.96%
-- Flow 3:
  Average throughput: 22.96 Mbit/s
  95th percentile per-packet one-way delay: 16.685 ms
  Loss rate: 3.01%
Run 3: Statistics of Sprout

Start at: 2018-04-24 21:12:08
End at: 2018-04-24 21:12:38
Local clock offset: 0.294 ms
Remote clock offset: -10.185 ms

# Below is generated by plot.py at 2018-04-25 00:18:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 46.30 Mbit/s
95th percentile per-packet one-way delay: 18.324 ms
Loss rate: 2.58%
-- Flow 1:
Average throughput: 23.40 Mbit/s
95th percentile per-packet one-way delay: 18.349 ms
Loss rate: 2.25%
-- Flow 2:
Average throughput: 23.19 Mbit/s
95th percentile per-packet one-way delay: 17.480 ms
Loss rate: 2.74%
-- Flow 3:
Average throughput: 22.64 Mbit/s
95th percentile per-packet one-way delay: 19.226 ms
Loss rate: 3.27%
Run 3: Report of Sprout — Data Link

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

- Flow 1 ingress (mean 23.95 Mbps/s)
- Flow 1 egress (mean 23.40 Mbps/s)
- Flow 2 ingress (mean 23.85 Mbps/s)
- Flow 2 egress (mean 23.19 Mbps/s)
- Flow 3 ingress (mean 23.42 Mbps/s)
- Flow 3 egress (mean 22.64 Mbps/s)

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

- Flow 1 (95th percentile 18.35 ms)
- Flow 2 (95th percentile 17.48 ms)
- Flow 3 (95th percentile 19.23 ms)
Run 4: Statistics of Sprout

End at: 2018-04-24 21:32:07
Local clock offset: 0.377 ms
Remote clock offset: -10.829 ms

# Below is generated by plot.py at 2018-04-25 00:18:23
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 44.37 Mbit/s
  95th percentile per-packet one-way delay: 17.624 ms
  Loss rate: 5.11%
-- Flow 1:
  Average throughput: 22.85 Mbit/s
  95th percentile per-packet one-way delay: 17.532 ms
  Loss rate: 4.17%
-- Flow 2:
  Average throughput: 22.32 Mbit/s
  95th percentile per-packet one-way delay: 17.430 ms
  Loss rate: 5.53%
-- Flow 3:
  Average throughput: 20.36 Mbit/s
  95th percentile per-packet one-way delay: 18.256 ms
  Loss rate: 7.33%
Run 5: Statistics of Sprout

Start at: 2018-04-24 21:51:10
End at: 2018-04-24 21:51:40
Local clock offset: -0.66 ms
Remote clock offset: -3.821 ms

# Below is generated by plot.py at 2018-04-25 00:18:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 44.49 Mbit/s
95th percentile per-packet one-way delay: 17.723 ms
Loss rate: 5.27%
-- Flow 1:
Average throughput: 22.64 Mbit/s
95th percentile per-packet one-way delay: 17.970 ms
Loss rate: 4.57%
-- Flow 2:
Average throughput: 22.10 Mbit/s
95th percentile per-packet one-way delay: 15.916 ms
Loss rate: 5.61%
-- Flow 3:
Average throughput: 21.61 Mbit/s
95th percentile per-packet one-way delay: 18.703 ms
Loss rate: 6.78%
Run 5: Report of Sprout — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 23.73 Mbit/s)
Flow 1 egress (mean 22.64 Mbit/s)
Flow 2 ingress (mean 23.43 Mbit/s)
Flow 2 egress (mean 22.10 Mbit/s)
Flow 3 ingress (mean 23.19 Mbit/s)
Flow 3 egress (mean 21.61 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 17.97 ms)
Flow 2 (95th percentile 15.92 ms)
Flow 3 (95th percentile 18.70 ms)
Run 6: Statistics of Sprout

Local clock offset: -3.343 ms
Remote clock offset: -2.99 ms

# Below is generated by plot.py at 2018-04-25 00:18:23
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 42.41 Mbit/s
  95th percentile per-packet one-way delay: 18.206 ms
  Loss rate: 7.27%
-- Flow 1:
  Average throughput: 21.02 Mbit/s
  95th percentile per-packet one-way delay: 18.628 ms
  Loss rate: 7.78%
-- Flow 2:
  Average throughput: 21.99 Mbit/s
  95th percentile per-packet one-way delay: 16.121 ms
  Loss rate: 5.85%
-- Flow 3:
  Average throughput: 20.52 Mbit/s
  95th percentile per-packet one-way delay: 19.139 ms
  Loss rate: 8.66%
Run 7: Statistics of Sprout

Start at: 2018-04-24 22:30:42
Local clock offset: -10.873 ms
Remote clock offset: -6.154 ms

# Below is generated by plot.py at 2018-04-25 00:18:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 43.12 Mbit/s
95th percentile per-packet one-way delay: 16.127 ms
Loss rate: 6.45%
-- Flow 1:
Average throughput: 22.28 Mbit/s
95th percentile per-packet one-way delay: 15.105 ms
Loss rate: 5.41%
-- Flow 2:
Average throughput: 20.25 Mbit/s
95th percentile per-packet one-way delay: 16.947 ms
Loss rate: 8.88%
-- Flow 3:
Average throughput: 22.20 Mbit/s
95th percentile per-packet one-way delay: 17.001 ms
Loss rate: 4.98%
Run 8: Statistics of Sprout

Local clock offset: -14.924 ms
Remote clock offset: -7.269 ms

# Below is generated by plot.py at 2018-04-25 00:18:29
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 45.36 Mbit/s
  95th percentile per-packet one-way delay: 17.862 ms
  Loss rate: 4.03%
-- Flow 1:
  Average throughput: 22.80 Mbit/s
  95th percentile per-packet one-way delay: 17.358 ms
  Loss rate: 3.82%
-- Flow 2:
  Average throughput: 22.70 Mbit/s
  95th percentile per-packet one-way delay: 18.471 ms
  Loss rate: 4.37%
-- Flow 3:
  Average throughput: 22.59 Mbit/s
  95th percentile per-packet one-way delay: 17.852 ms
  Loss rate: 3.96%
Run 9: Statistics of Sprout

Start at: 2018-04-24 23:10:36
End at: 2018-04-24 23:11:06
Local clock offset: -17.542 ms
Remote clock offset: -7.228 ms

# Below is generated by plot.py at 2018-04-25 00:18:53
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 42.32 Mbit/s
  95th percentile per-packet one-way delay: 17.514 ms
  Loss rate: 7.93%
-- Flow 1:
  Average throughput: 21.35 Mbit/s
  95th percentile per-packet one-way delay: 16.294 ms
  Loss rate: 8.01%
-- Flow 2:
  Average throughput: 20.40 Mbit/s
  95th percentile per-packet one-way delay: 19.037 ms
  Loss rate: 9.39%
-- Flow 3:
  Average throughput: 22.46 Mbit/s
  95th percentile per-packet one-way delay: 16.166 ms
  Loss rate: 4.92%
Run 9: Report of Sprout — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 23.21 Mbit/s)
Flow 1 egress (mean 21.35 Mbit/s)
Flow 2 ingress (mean 22.31 Mbit/s)
Flow 2 egress (mean 20.40 Mbit/s)
Flow 3 ingress (mean 23.63 Mbit/s)
Flow 3 egress (mean 22.46 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 16.29 ms)
Flow 2 (95th percentile 19.04 ms)
Flow 3 (95th percentile 16.17 ms)
Run 10: Statistics of Sprout

End at: 2018-04-24 23:30:53
Local clock offset: -5.947 ms
Remote clock offset: -7.88 ms

# Below is generated by plot.py at 2018-04-25 00:18:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 41.19 Mbit/s
95th percentile per-packet one-way delay: 17.954 ms
Loss rate: 8.35%
-- Flow 1:
Average throughput: 20.18 Mbit/s
95th percentile per-packet one-way delay: 17.677 ms
Loss rate: 9.02%
-- Flow 2:
Average throughput: 21.37 Mbit/s
95th percentile per-packet one-way delay: 18.573 ms
Loss rate: 7.69%
-- Flow 3:
Average throughput: 20.58 Mbit/s
95th percentile per-packet one-way delay: 17.316 ms
Loss rate: 7.70%
Run 10: Report of Sprout — Data Link
Run 1: Statistics of TaoVA-100x

End at: 2018-04-24 20:43:29
Local clock offset: 2.987 ms
Remote clock offset: -9.557 ms

# Below is generated by plot.py at 2018-04-25 00:20:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.09 Mbit/s
95th percentile per-packet one-way delay: 38.161 ms
Loss rate: 15.68%
-- Flow 1:
Average throughput: 56.61 Mbit/s
95th percentile per-packet one-way delay: 33.585 ms
Loss rate: 13.74%
-- Flow 2:
Average throughput: 34.47 Mbit/s
95th percentile per-packet one-way delay: 39.809 ms
Loss rate: 17.65%
-- Flow 3:
Average throughput: 31.71 Mbit/s
95th percentile per-packet one-way delay: 42.497 ms
Loss rate: 21.16%
Run 1: Report of TaoVA-100x — Data Link
Run 2: Statistics of TaoVA-100x

Start at: 2018-04-24 21:02:45
End at: 2018-04-24 21:03:15
Local clock offset: 0.442 ms
Remote clock offset: -11.132 ms

# Below is generated by plot.py at 2018-04-25 00:20:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.45 Mbit/s
95th percentile per-packet one-way delay: 39.331 ms
Loss rate: 12.36%
-- Flow 1:
Average throughput: 55.08 Mbit/s
95th percentile per-packet one-way delay: 36.040 ms
Loss rate: 9.53%
-- Flow 2:
Average throughput: 38.93 Mbit/s
95th percentile per-packet one-way delay: 40.451 ms
Loss rate: 14.02%
-- Flow 3:
Average throughput: 31.49 Mbit/s
95th percentile per-packet one-way delay: 43.911 ms
Loss rate: 21.52%
Run 2: Report of TaoVA-100x — Data Link

![Graph showing throughput over time for different flows (60.89 Mbps for Flow 1 ingress, 55.08 Mbps for Flow 1 egress, 45.28 Mbps for Flow 2 ingress, 38.93 Mbps for Flow 2 egress, 40.12 Mbps for Flow 3 ingress, 31.49 Mbps for Flow 3 egress).]

![Graph showing per-packet round-trip delay (mean of 36.04 ms for Flow 1, 40.45 ms for Flow 2, 43.91 ms for Flow 3).]
Run 3: Statistics of TaoVA-100x

Local clock offset: -0.815 ms
Remote clock offset: -10.987 ms

# Below is generated by plot.py at 2018-04-25 00:20:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.52 Mbit/s
95th percentile per-packet one-way delay: 42.004 ms
Loss rate: 10.93%
-- Flow 1:
Average throughput: 55.71 Mbit/s
95th percentile per-packet one-way delay: 38.404 ms
Loss rate: 7.75%
-- Flow 2:
Average throughput: 39.40 Mbit/s
95th percentile per-packet one-way delay: 43.149 ms
Loss rate: 13.18%
-- Flow 3:
Average throughput: 31.87 Mbit/s
95th percentile per-packet one-way delay: 45.258 ms
Loss rate: 20.25%
Run 3: Report of TaoVA-100x — Data Link

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

- **Flow 1 ingress** (mean 60.45 Mb/s)
- **Flow 1 egress** (mean 55.71 Mb/s)
- **Flow 2 ingress** (mean 45.46 Mb/s)
- **Flow 2 egress** (mean 39.40 Mb/s)
- **Flow 3 ingress** (mean 39.99 Mb/s)
- **Flow 3 egress** (mean 31.87 Mb/s)

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

- **Flow 1** (95th percentile 38.40 ms)
- **Flow 2** (95th percentile 43.15 ms)
- **Flow 3** (95th percentile 45.26 ms)

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Run 4: Statistics of TaoVA-100x

Local clock offset: 0.083 ms  
Remote clock offset: -5.491 ms

# Below is generated by plot.py at 2018-04-25 00:20:57  
# Datalink statistics
  -- Total of 3 flows:  
  Average throughput: 87.77 Mbit/s  
  95th percentile per-packet one-way delay: 41.180 ms  
  Loss rate: 15.41%  
  -- Flow 1:  
  Average throughput: 54.31 Mbit/s  
  95th percentile per-packet one-way delay: 36.917 ms  
  Loss rate: 13.42%  
  -- Flow 2:  
  Average throughput: 34.45 Mbit/s  
  95th percentile per-packet one-way delay: 42.474 ms  
  Loss rate: 17.29%  
  -- Flow 3:  
  Average throughput: 31.62 Mbit/s  
  95th percentile per-packet one-way delay: 43.732 ms  
  Loss rate: 20.85%
Run 4: Report of TaoVA-100x — Data Link

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

Flow 1 ingress (mean 62.80 Mbit/s)  
Flow 1 egress (mean 54.31 Mbit/s)  
Flow 2 ingress (mean 41.73 Mbit/s)  
Flow 2 egress (mean 34.45 Mbit/s)  
Flow 3 ingress (mean 40.09 Mbit/s)  
Flow 3 egress (mean 31.62 Mbit/s)

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

Flow 1 (95th percentile 36.92 ms)  
Flow 2 (95th percentile 42.47 ms)  
Flow 3 (95th percentile 43.73 ms)
Run 5: Statistics of TaoVA-100x

Start at: 2018-04-24 22:01:21
End at: 2018-04-24 22:01:51
Local clock offset: -1.066 ms
Remote clock offset: -2.523 ms

# Below is generated by plot.py at 2018-04-25 00:20:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.40 Mbit/s
95th percentile per-packet one-way delay: 41.622 ms
Loss rate: 16.31%
-- Flow 1:
Average throughput: 53.44 Mbit/s
95th percentile per-packet one-way delay: 37.217 ms
Loss rate: 14.71%
-- Flow 2:
Average throughput: 38.29 Mbit/s
95th percentile per-packet one-way delay: 43.501 ms
Loss rate: 17.56%
-- Flow 3:
Average throughput: 31.44 Mbit/s
95th percentile per-packet one-way delay: 44.280 ms
Loss rate: 20.97%
Run 5: Report of TaoVA-100x — Data Link

![Throughput Graph]

- Flow 1 ingress (mean 62.74 Mbit/s)
- Flow 1 egress (mean 53.44 Mbit/s)
- Flow 2 ingress (mean 46.53 Mbit/s)
- Flow 2 egress (mean 38.29 Mbit/s)
- Flow 3 ingress (mean 39.92 Mbit/s)
- Flow 3 egress (mean 31.44 Mbit/s)

![Per-packet one way delay Graph]

- Flow 1 (95th percentile 37.22 ms)
- Flow 2 (95th percentile 43.50 ms)
- Flow 3 (95th percentile 44.28 ms)
Run 6: Statistics of TaoVA-100x

Local clock offset: -13.765 ms
Remote clock offset: -12.108 ms

# Below is generated by plot.py at 2018-04-25 00:21:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.88 Mbit/s
95th percentile per-packet one-way delay: 39.596 ms
Loss rate: 16.16%
-- Flow 1:
Average throughput: 53.50 Mbit/s
95th percentile per-packet one-way delay: 36.718 ms
Loss rate: 14.66%
-- Flow 2:
Average throughput: 38.77 Mbit/s
95th percentile per-packet one-way delay: 39.852 ms
Loss rate: 17.20%
-- Flow 3:
Average throughput: 31.72 Mbit/s
95th percentile per-packet one-way delay: 42.813 ms
Loss rate: 20.80%
Run 6: Report of TaoVA-100x — Data Link

Throughput (Mbit/s) vs Time (s)

- Flow 1 ingress (mean 62.75 Mbit/s)
- Flow 1 egress (mean 53.50 Mbit/s)
- Flow 2 ingress (mean 46.90 Mbit/s)
- Flow 2 egress (mean 38.77 Mbit/s)
- Flow 3 ingress (mean 40.14 Mbit/s)
- Flow 3 egress (mean 31.72 Mbit/s)

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

- Flow 1 (95th percentile 36.72 ms)
- Flow 2 (95th percentile 39.83 ms)
- Flow 3 (95th percentile 42.81 ms)
Run 7: Statistics of TaoVA-100x

End at: 2018-04-24 22:41:26
Local clock offset: -13.554 ms
Remote clock offset: -6.119 ms

# Below is generated by plot.py at 2018-04-25 00:21:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.28 Mbit/s
95th percentile per-packet one-way delay: 41.195 ms
Loss rate: 15.86%
-- Flow 1:
Average throughput: 54.21 Mbit/s
95th percentile per-packet one-way delay: 35.973 ms
Loss rate: 13.67%
-- Flow 2:
Average throughput: 38.42 Mbit/s
95th percentile per-packet one-way delay: 42.821 ms
Loss rate: 17.80%
-- Flow 3:
Average throughput: 31.59 Mbit/s
95th percentile per-packet one-way delay: 46.047 ms
Loss rate: 21.63%
Run 7: Report of TaoVA-100x — Data Link

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

- Flow 1 ingress (mean 62.84 Mbit/s)
- Flow 1 egress (mean 54.21 Mbit/s)
- Flow 2 ingress (mean 46.79 Mbit/s)
- Flow 2 egress (mean 38.42 Mbit/s)
- Flow 3 ingress (mean 40.37 Mbit/s)
- Flow 3 egress (mean 31.59 Mbit/s)

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

- Flow 1 (95th percentile 35.97 ms)
- Flow 2 (95th percentile 42.82 ms)
- Flow 3 (95th percentile 46.05 ms)
Run 8: Statistics of TaoVA-100x

Start at: 2018-04-24 23:00:46
End at: 2018-04-24 23:01:16
Local clock offset: -16.636 ms
Remote clock offset: -7.385 ms

# Below is generated by plot.py at 2018-04-25 00:21:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.53 Mbit/s
95th percentile per-packet one-way delay: 42.257 ms
Loss rate: 16.76%
-- Flow 1:
Average throughput: 53.53 Mbit/s
95th percentile per-packet one-way delay: 36.696 ms
Loss rate: 14.60%
-- Flow 2:
Average throughput: 38.29 Mbit/s
95th percentile per-packet one-way delay: 42.962 ms
Loss rate: 19.09%
-- Flow 3:
Average throughput: 31.59 Mbit/s
95th percentile per-packet one-way delay: 45.239 ms
Loss rate: 21.42%
Run 8: Report of TaoVA-100x — Data Link

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

- **Flow 1** (mean 62.73 Mbit/s)
- **Flow 2** (mean 47.38 Mbit/s)
- **Flow 3** (mean 40.30 Mbit/s)
- **Flow 1 egress** (mean 53.53 Mbit/s)
- **Flow 2 egress** (mean 38.29 Mbit/s)
- **Flow 3 egress** (mean 31.59 Mbit/s)

![Graph of packet delay over time for different flows.]
Run 9: Statistics of TaoVA-100x

Start at: 2018-04-24 23:20:54
Local clock offset: -12.22 ms
Remote clock offset: -8.133 ms

# Below is generated by plot.py at 2018-04-25 00:23:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.84 Mbit/s
95th percentile per-packet one-way delay: 40.344 ms
Loss rate: 14.34%
-- Flow 1:
Average throughput: 54.70 Mbit/s
95th percentile per-packet one-way delay: 33.846 ms
Loss rate: 12.47%
-- Flow 2:
Average throughput: 40.11 Mbit/s
95th percentile per-packet one-way delay: 41.556 ms
Loss rate: 15.57%
-- Flow 3:
Average throughput: 25.36 Mbit/s
95th percentile per-packet one-way delay: 45.884 ms
Loss rate: 21.61%
Run 9: Report of TaoVA-100x — Data Link

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**Throughput (Mbps)**

- **Flow 1 Ingress** (mean 62.50 Mbps)
- **Flow 1 Egress** (mean 54.70 Mbps)
- **Flow 2 Ingress** (mean 47.52 Mbps)
- **Flow 2 Egress** (mean 40.11 Mbps)
- **Flow 3 Ingress** (mean 32.36 Mbps)
- **Flow 3 Egress** (mean 25.36 Mbps)

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

- **Flow 1** (95th percentile 33.85 ms)
- **Flow 2** (95th percentile 41.56 ms)
- **Flow 3** (95th percentile 45.88 ms)
Run 10: Statistics of TaoVA-100x

End at: 2018-04-24 23:41:02
Local clock offset: -2.702 ms
Remote clock offset: -6.635 ms

# Below is generated by plot.py at 2018-04-25 00:23:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.96 Mbit/s
95th percentile per-packet one-way delay: 41.838 ms
Loss rate: 16.75%
-- Flow 1:
Average throughput: 50.98 Mbit/s
95th percentile per-packet one-way delay: 38.376 ms
Loss rate: 14.80%
-- Flow 2:
Average throughput: 39.73 Mbit/s
95th percentile per-packet one-way delay: 42.280 ms
Loss rate: 18.57%
-- Flow 3:
Average throughput: 31.66 Mbit/s
95th percentile per-packet one-way delay: 44.878 ms
Loss rate: 21.10%
Run 10: Report of TaoVA-100x — Data Link

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

- **Throughput (Mbps)**
  - Flow 1 ingress (mean 59.56 Mbps)
  - Flow 1 egress (mean 50.98 Mbps)
  - Flow 2 ingress (mean 48.84 Mbps)
  - Flow 2 egress (mean 39.73 Mbps)
  - Flow 3 ingress (mean 40.19 Mbps)
  - Flow 3 egress (mean 31.66 Mbps)

- **Per-packet one-way delay (ms)**
  - Flow 1 (95th percentile 38.38 ms)
  - Flow 2 (95th percentile 42.28 ms)
  - Flow 3 (95th percentile 44.88 ms)
Run 1: Statistics of TCP Vegas

Start at: 2018-04-24 20:45:22
End at: 2018-04-24 20:45:52
Local clock offset: 1.742 ms
Remote clock offset: -10.996 ms

# Below is generated by plot.py at 2018-04-25 00:23:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 9.30 Mbit/s
95th percentile per-packet one-way delay: 7.762 ms
Loss rate: 3.00%
-- Flow 1:
Average throughput: 4.14 Mbit/s
95th percentile per-packet one-way delay: 7.724 ms
Loss rate: 3.35%
-- Flow 2:
Average throughput: 4.72 Mbit/s
95th percentile per-packet one-way delay: 7.778 ms
Loss rate: 2.70%
-- Flow 3:
Average throughput: 6.08 Mbit/s
95th percentile per-packet one-way delay: 8.174 ms
Loss rate: 2.72%
Run 1: Report of TCP Vegas — Data Link
Run 2: Statistics of TCP Vegas

Start at: 2018-04-24 21:05:04
End at: 2018-04-24 21:05:34
Local clock offset: -0.235 ms
Remote clock offset: -10.894 ms

# Below is generated by plot.py at 2018-04-25 00:23:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.81 Mbit/s
95th percentile per-packet one-way delay: 10.492 ms
Loss rate: 0.56%

-- Flow 1:
Average throughput: 12.69 Mbit/s
95th percentile per-packet one-way delay: 10.565 ms
Loss rate: 0.44%

-- Flow 2:
Average throughput: 10.18 Mbit/s
95th percentile per-packet one-way delay: 10.543 ms
Loss rate: 0.76%

-- Flow 3:
Average throughput: 13.05 Mbit/s
95th percentile per-packet one-way delay: 10.402 ms
Loss rate: 0.61%
Run 2: Report of TCP Vegas — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 12.74 Mbps)
Flow 1 egress (mean 12.69 Mbps)
Flow 2 ingress (mean 10.26 Mbps)
Flow 2 egress (mean 10.18 Mbps)
Flow 3 ingress (mean 13.13 Mbps)
Flow 3 egress (mean 13.05 Mbps)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 10.56 ms)
Flow 2 (95th percentile 10.54 ms)
Flow 3 (95th percentile 10.40 ms)
Run 3: Statistics of TCP Vegas

Local clock offset: 0.555 ms
Remote clock offset: -10.575 ms

# Below is generated by plot.py at 2018-04-25 00:23:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 25.75 Mbit/s
95th percentile per-packet one-way delay: 10.018 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 14.91 Mbit/s
95th percentile per-packet one-way delay: 9.877 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 11.81 Mbit/s
95th percentile per-packet one-way delay: 25.232 ms
Loss rate: 0.55%
-- Flow 3:
Average throughput: 9.01 Mbit/s
95th percentile per-packet one-way delay: 10.321 ms
Loss rate: 0.94%
Run 3: Report of TCP Vegas — Data Link
Run 4: Statistics of TCP Vegas

Start at: 2018-04-24 21:44:03  
End at: 2018-04-24 21:44:33  
Local clock offset: 0.163 ms  
Remote clock offset: -5.102 ms  

# Below is generated by plot.py at 2018-04-25 00:23:31  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 14.75 Mbit/s  
95th percentile per-packet one-way delay: 8.469 ms  
Loss rate: 1.56%  
-- Flow 1:  
Average throughput: 7.70 Mbit/s  
95th percentile per-packet one-way delay: 8.716 ms  
Loss rate: 1.52%  
-- Flow 2:  
Average throughput: 7.92 Mbit/s  
95th percentile per-packet one-way delay: 8.226 ms  
Loss rate: 1.46%  
-- Flow 3:  
Average throughput: 5.35 Mbit/s  
95th percentile per-packet one-way delay: 8.568 ms  
Loss rate: 2.05%
Run 4: Report of TCP Vegas — Data Link

Throughput [Mbps] over time

- Flow 1 ingress (mean 7.82 Mbps)
- Flow 1 egress (mean 7.70 Mbps)
- Flow 2 ingress (mean 8.04 Mbps)
- Flow 2 egress (mean 7.92 Mbps)
- Flow 3 ingress (mean 5.46 Mbps)
- Flow 3 egress (mean 5.35 Mbps)

Packet delivery delay [ms]

- Flow 1 (95th percentile 8.72 ms)
- Flow 2 (95th percentile 8.23 ms)
- Flow 3 (95th percentile 8.57 ms)
Run 5: Statistics of TCP Vegas

End at: 2018-04-24 22:04:11
Local clock offset: -0.244 ms
Remote clock offset: -1.34 ms

# Below is generated by plot.py at 2018-04-25 00:23:31
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 9.35 Mbit/s
  95th percentile per-packet one-way delay: 10.791 ms
  Loss rate: 3.23%
-- Flow 1:
  Average throughput: 4.40 Mbit/s
  95th percentile per-packet one-way delay: 9.359 ms
  Loss rate: 3.59%
-- Flow 2:
  Average throughput: 5.01 Mbit/s
  95th percentile per-packet one-way delay: 9.335 ms
  Loss rate: 3.42%
-- Flow 3:
  Average throughput: 4.87 Mbit/s
  95th percentile per-packet one-way delay: 11.156 ms
  Loss rate: 1.82%
Run 5: Report of TCP Vegas — Data Link
Run 6: Statistics of TCP Vegas

Local clock offset: -10.501 ms
Remote clock offset: -5.784 ms

# Below is generated by plot.py at 2018-04-25 00:23:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.20 Mbit/s
95th percentile per-packet one-way delay: 11.965 ms
Loss rate: 3.22%
-- Flow 1:
Average throughput: 6.23 Mbit/s
95th percentile per-packet one-way delay: 11.795 ms
Loss rate: 1.69%
-- Flow 2:
Average throughput: 7.34 Mbit/s
95th percentile per-packet one-way delay: 21.427 ms
Loss rate: 5.78%
-- Flow 3:
Average throughput: 6.27 Mbit/s
95th percentile per-packet one-way delay: 10.290 ms
Loss rate: 1.52%
Run 6: Report of TCP Vegas — Data Link

Graph 1: Throughput over time
- Flow 1 ingress (mean 6.34 Mbit/s)
- Flow 1 egress (mean 6.23 Mbit/s)
- Flow 2 ingress (mean 7.79 Mbit/s)
- Flow 2 egress (mean 7.34 Mbit/s)
- Flow 3 ingress (mean 6.37 Mbit/s)
- Flow 3 egress (mean 6.27 Mbit/s)

Graph 2: Per-packet one way delay over time
- Flow 1 (95th percentile 11.79 ms)
- Flow 2 (95th percentile 21.43 ms)
- Flow 3 (95th percentile 10.29 ms)
Run 7: Statistics of TCP Vegas

Local clock offset: -14.216 ms
Remote clock offset: -6.425 ms

# Below is generated by plot.py at 2018-04-25 00:23:31
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 16.24 Mbit/s
  95th percentile per-packet one-way delay: 11.349 ms
  Loss rate: 0.80%
-- Flow 1:
  Average throughput: 8.78 Mbit/s
  95th percentile per-packet one-way delay: 11.323 ms
  Loss rate: 0.68%
-- Flow 2:
  Average throughput: 7.71 Mbit/s
  95th percentile per-packet one-way delay: 13.224 ms
  Loss rate: 0.82%
-- Flow 3:
  Average throughput: 7.03 Mbit/s
  95th percentile per-packet one-way delay: 9.752 ms
  Loss rate: 1.24%
Run 7: Report of TCP Vegas — Data Link
Run 8: Statistics of TCP Vegas

Start at: 2018-04-24 23:03:10
End at: 2018-04-24 23:03:40
Local clock offset: -15.977 ms
Remote clock offset: -6.052 ms

# Below is generated by plot.py at 2018-04-25 00:23:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 9.78 Mbit/s
95th percentile per-packet one-way delay: 10.750 ms
Loss rate: 2.45%
-- Flow 1:
Average throughput: 4.92 Mbit/s
95th percentile per-packet one-way delay: 10.768 ms
Loss rate: 2.64%
-- Flow 2:
Average throughput: 4.84 Mbit/s
95th percentile per-packet one-way delay: 10.741 ms
Loss rate: 2.32%
-- Flow 3:
Average throughput: 4.44 Mbit/s
95th percentile per-packet one-way delay: 10.716 ms
Loss rate: 2.16%
Run 8: Report of TCP Vegas — Data Link

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

- Flow 1 ingress (mean 4.89 Mb/s)
- Flow 1 egress (mean 4.92 Mb/s)
- Flow 2 ingress (mean 4.96 Mb/s)
- Flow 2 egress (mean 4.84 Mb/s)
- Flow 3 ingress (mean 4.54 Mb/s)
- Flow 3 egress (mean 4.44 Mb/s)
Run 9: Statistics of TCP Vegas

Local clock offset: -10.56 ms
Remote clock offset: -7.518 ms

# Below is generated by plot.py at 2018-04-25 00:23:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 10.75 Mbit/s
95th percentile per-packet one-way delay: 11.538 ms
Loss rate: 2.50%
-- Flow 1:
Average throughput: 5.40 Mbit/s
95th percentile per-packet one-way delay: 11.527 ms
Loss rate: 1.77%
-- Flow 2:
Average throughput: 5.27 Mbit/s
95th percentile per-packet one-way delay: 10.213 ms
Loss rate: 3.12%
-- Flow 3:
Average throughput: 5.56 Mbit/s
95th percentile per-packet one-way delay: 11.963 ms
Loss rate: 3.44%
Run 9: Report of TCP Vegas — Data Link

![Graph](image1)

![Graph](image2)
Run 10: Statistics of TCP Vegas

Local clock offset: -2.258 ms
Remote clock offset: -7.768 ms

# Below is generated by plot.py at 2018-04-25 00:23:31
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 15.48 Mbit/s
  95th percentile per-packet one-way delay: 20.331 ms
  Loss rate: 1.22%
-- Flow 1:
  Average throughput: 9.16 Mbit/s
  95th percentile per-packet one-way delay: 20.687 ms
  Loss rate: 0.96%
-- Flow 2:
  Average throughput: 5.64 Mbit/s
  95th percentile per-packet one-way delay: 8.745 ms
  Loss rate: 1.90%
-- Flow 3:
  Average throughput: 7.74 Mbit/s
  95th percentile per-packet one-way delay: 11.601 ms
  Loss rate: 1.16%
Run 10: Report of TCP Vegas — Data Link
Run 1: Statistics of Verus

Start at: 2018-04-24 20:30:22
End at: 2018-04-24 20:30:52
Local clock offset: -2.049 ms
Remote clock offset: -9.506 ms

# Below is generated by plot.py at 2018-04-25 00:23:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 61.11 Mbit/s
95th percentile per-packet one-way delay: 42.888 ms
Loss rate: 43.04%
-- Flow 1:
Average throughput: 41.47 Mbit/s
95th percentile per-packet one-way delay: 42.969 ms
Loss rate: 46.82%
-- Flow 2:
Average throughput: 18.55 Mbit/s
95th percentile per-packet one-way delay: 42.620 ms
Loss rate: 33.55%
-- Flow 3:
Average throughput: 22.56 Mbit/s
95th percentile per-packet one-way delay: 42.962 ms
Loss rate: 32.05%
Run 1: Report of Verus — Data Link
Run 2: Statistics of Verus

Start at: 2018-04-24 20:50:06
End at: 2018-04-24 20:50:36
Local clock offset: 3.135 ms
Remote clock offset: -10.909 ms

# Below is generated by plot.py at 2018-04-25 00:23:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 68.61 Mbit/s
95th percentile per-packet one-way delay: 39.643 ms
Loss rate: 32.02%
-- Flow 1:
Average throughput: 39.34 Mbit/s
95th percentile per-packet one-way delay: 35.904 ms
Loss rate: 19.75%
-- Flow 2:
Average throughput: 33.62 Mbit/s
95th percentile per-packet one-way delay: 42.366 ms
Loss rate: 45.35%
-- Flow 3:
Average throughput: 23.97 Mbit/s
95th percentile per-packet one-way delay: 40.480 ms
Loss rate: 36.60%
Run 2: Report of Verus — Data Link

![Graph showing throughput and per-packet one-way delay for different flows.](image-url)
Run 3: Statistics of Verus

End at: 2018-04-24 21:10:14
Local clock offset: -0.897 ms
Remote clock offset: -11.409 ms

# Below is generated by plot.py at 2018-04-25 00:23:31
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 68.77 Mbit/s
  95th percentile per-packet one-way delay: 41.975 ms
  Loss rate: 25.48%
-- Flow 1:
  Average throughput: 49.29 Mbit/s
  95th percentile per-packet one-way delay: 40.642 ms
  Loss rate: 19.65%
-- Flow 2:
  Average throughput: 25.09 Mbit/s
  95th percentile per-packet one-way delay: 45.126 ms
  Loss rate: 38.13%
-- Flow 3:
  Average throughput: 8.85 Mbit/s
  95th percentile per-packet one-way delay: 34.978 ms
  Loss rate: 29.71%
Run 3: Report of Verus — Data Link
Run 4: Statistics of Verus

End at: 2018-04-24 21:29:45
Local clock offset: 0.312 ms
Remote clock offset: -10.909 ms

# Below is generated by plot.py at 2018-04-25 00:23:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 62.94 Mbit/s
95th percentile per-packet one-way delay: 44.797 ms
Loss rate: 40.48%
-- Flow 1:
Average throughput: 27.68 Mbit/s
95th percentile per-packet one-way delay: 46.421 ms
Loss rate: 50.03%
-- Flow 2:
Average throughput: 32.87 Mbit/s
95th percentile per-packet one-way delay: 41.185 ms
Loss rate: 24.10%
-- Flow 3:
Average throughput: 45.78 Mbit/s
95th percentile per-packet one-way delay: 44.517 ms
Loss rate: 37.93%
Run 4: Report of Verus — Data Link

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

- Flow 1 ingress (mean 55.35 Mbit/s)
- Flow 1 egress (mean 27.68 Mbit/s)
- Flow 2 ingress (mean 43.31 Mbit/s)
- Flow 2 egress (mean 32.87 Mbit/s)
- Flow 3 ingress (mean 66.38 Mbit/s)
- Flow 3 egress (mean 45.78 Mbit/s)
Run 5: Statistics of Verus

Local clock offset: 0.344 ms
Remote clock offset: -2.689 ms

# Below is generated by plot.py at 2018-04-25 00:23:31
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 59.91 Mbit/s
  95th percentile per-packet one-way delay: 46.827 ms
  Loss rate: 57.76%
-- Flow 1:
  Average throughput: 32.23 Mbit/s
  95th percentile per-packet one-way delay: 47.220 ms
  Loss rate: 59.26%
-- Flow 2:
  Average throughput: 34.44 Mbit/s
  95th percentile per-packet one-way delay: 45.974 ms
  Loss rate: 54.07%
-- Flow 3:
  Average throughput: 14.83 Mbit/s
  95th percentile per-packet one-way delay: 47.456 ms
  Loss rate: 62.70%
Run 5: Report of Verus — Data Link

![Graph of network traffic and latency over time for different flows. The graphs show throughput in Mbit/s and per-packet one-way delay in ms for flows 1, 2, and 3, with mean values provided for ingress and egress.]
Run 6: Statistics of Verus

Local clock offset: -1.652 ms
Remote clock offset: -3.497 ms

# Below is generated by plot.py at 2018-04-25 00:23:31
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 62.40 Mbit/s
  95th percentile per-packet one-way delay: 42.238 ms
  Loss rate: 37.34%
-- Flow 1:
  Average throughput: 36.42 Mbit/s
  95th percentile per-packet one-way delay: 40.910 ms
  Loss rate: 32.88%
-- Flow 2:
  Average throughput: 37.12 Mbit/s
  95th percentile per-packet one-way delay: 43.445 ms
  Loss rate: 34.71%
-- Flow 3:
  Average throughput: 7.85 Mbit/s
  95th percentile per-packet one-way delay: 44.908 ms
  Loss rate: 74.33%
Run 6: Report of Verus — Data Link
Run 7: Statistics of Verus

Local clock offset: -11.87 ms
Remote clock offset: -5.904 ms

# Below is generated by plot.py at 2018-04-25 00:24:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 62.99 Mbit/s
95th percentile per-packet one-way delay: 46.901 ms
Loss rate: 56.10%
-- Flow 1:
Average throughput: 39.04 Mbit/s
95th percentile per-packet one-way delay: 45.111 ms
Loss rate: 43.48%
-- Flow 2:
Average throughput: 34.93 Mbit/s
95th percentile per-packet one-way delay: 47.921 ms
Loss rate: 60.62%
-- Flow 3:
Average throughput: 10.93 Mbit/s
95th percentile per-packet one-way delay: 49.648 ms
Loss rate: 82.40%
Run 7: Report of Verus — Data Link

![Graph showing data link performance metrics over time.](image-url)
Run 8: Statistics of Verus

Local clock offset: -14.238 ms
Remote clock offset: -6.535 ms

# Below is generated by plot.py at 2018-04-25 00:24:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 60.57 Mbit/s
95th percentile per-packet one-way delay: 45.389 ms
Loss rate: 52.84%
-- Flow 1:
Average throughput: 41.71 Mbit/s
95th percentile per-packet one-way delay: 45.100 ms
Loss rate: 54.09%
-- Flow 2:
Average throughput: 24.04 Mbit/s
95th percentile per-packet one-way delay: 45.813 ms
Loss rate: 50.12%
-- Flow 3:
Average throughput: 10.17 Mbit/s
95th percentile per-packet one-way delay: 46.365 ms
Loss rate: 48.45%
Run 8: Report of Verus — Data Link

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

- Flow 1 ingress (mean 90.87 Mbit/s)
- Flow 1 egress (mean 41.71 Mbit/s)
- Flow 2 ingress (mean 48.17 Mbit/s)
- Flow 2 egress (mean 24.04 Mbit/s)
- Flow 3 ingress (mean 17.67 Mbit/s)
- Flow 3 egress (mean 10.17 Mbit/s)
Run 9: Statistics of Verus

Start at: 2018-04-24 23:08:05
End at: 2018-04-24 23:08:35
Local clock offset: -16.972 ms
Remote clock offset: -7.072 ms

# Below is generated by plot.py at 2018-04-25 00:24:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 63.66 Mbit/s
95th percentile per-packet one-way delay: 43.530 ms
Loss rate: 45.54%
-- Flow 1:
Average throughput: 43.22 Mbit/s
95th percentile per-packet one-way delay: 41.507 ms
Loss rate: 32.57%
-- Flow 2:
Average throughput: 23.85 Mbit/s
95th percentile per-packet one-way delay: 45.331 ms
Loss rate: 63.64%
-- Flow 3:
Average throughput: 16.45 Mbit/s
95th percentile per-packet one-way delay: 45.588 ms
Loss rate: 50.12%
Run 9: Report of Verus — Data Link
Run 10: Statistics of Verus

Local clock offset: -7.216 ms
Remote clock offset: -7.481 ms

# Below is generated by plot.py at 2018-04-25 00:24:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 59.14 Mbit/s
95th percentile per-packet one-way delay: 47.956 ms
Loss rate: 64.45%
-- Flow 1:
Average throughput: 47.00 Mbit/s
95th percentile per-packet one-way delay: 48.279 ms
Loss rate: 66.14%
-- Flow 2:
Average throughput: 19.18 Mbit/s
95th percentile per-packet one-way delay: 46.641 ms
Loss rate: 56.01%
-- Flow 3:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 28.746 ms
Loss rate: 52.36%
Run 10: Report of Verus — Data Link
Run 1: Statistics of Copa

End at: 2018-04-24 20:32:08
Local clock offset: -0.311 ms
Remote clock offset: -9.72 ms

# Below is generated by plot.py at 2018-04-25 00:24:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 69.83 Mbit/s
95th percentile per-packet one-way delay: 9.371 ms
Loss rate: 12.03%
-- Flow 1:
Average throughput: 35.84 Mbit/s
95th percentile per-packet one-way delay: 9.306 ms
Loss rate: 11.58%
-- Flow 2:
Average throughput: 34.28 Mbit/s
95th percentile per-packet one-way delay: 8.122 ms
Loss rate: 12.77%
-- Flow 3:
Average throughput: 33.69 Mbit/s
95th percentile per-packet one-way delay: 9.902 ms
Loss rate: 11.92%
Run 1: Report of Copa — Data Link
Run 2: Statistics of Copa

Start at: 2018-04-24 20:51:17
End at: 2018-04-24 20:51:47
Local clock offset: 3.166 ms
Remote clock offset: -11.185 ms

# Below is generated by plot.py at 2018-04-25 00:25:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.29 Mbit/s
95th percentile per-packet one-way delay: 7.271 ms
Loss rate: 8.02%
-- Flow 1:
Average throughput: 43.72 Mbit/s
95th percentile per-packet one-way delay: 6.878 ms
Loss rate: 7.51%
-- Flow 2:
Average throughput: 36.01 Mbit/s
95th percentile per-packet one-way delay: 7.651 ms
Loss rate: 7.58%
-- Flow 3:
Average throughput: 31.93 Mbit/s
95th percentile per-packet one-way delay: 7.493 ms
Loss rate: 10.98%
Run 2: Report of Copa — Data Link

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

- Flow 1 ingress (mean 47.27 Mbps)
- Flow 1 egress (mean 43.72 Mbps)
- Flow 2 ingress (mean 38.97 Mbps)
- Flow 2 egress (mean 36.01 Mbps)
- Flow 3 ingress (mean 35.86 Mbps)
- Flow 3 egress (mean 31.93 Mbps)

![Graph 2: Packet delivery delay (ms)](image2)

- Flow 1 (95th percentile 6.88 ms)
- Flow 2 (95th percentile 7.65 ms)
- Flow 3 (95th percentile 7.48 ms)
Run 3: Statistics of Copa

End at: 2018-04-24 21:11:25  
Local clock offset: 0.944 ms  
Remote clock offset: -10.678 ms

# Below is generated by plot.py at 2018-04-25 00:25:38  
# Datalink statistics

-- Total of 3 flows:  
Average throughput: 78.36 Mbit/s  
95th percentile per-packet one-way delay: 10.545 ms  
Loss rate: 5.85%  

-- Flow 1:  
Average throughput: 43.13 Mbit/s  
95th percentile per-packet one-way delay: 10.067 ms  
Loss rate: 5.62%  

-- Flow 2:  
Average throughput: 38.89 Mbit/s  
95th percentile per-packet one-way delay: 10.890 ms  
Loss rate: 6.03%  

-- Flow 3:  
Average throughput: 28.10 Mbit/s  
95th percentile per-packet one-way delay: 10.901 ms  
Loss rate: 6.44%
Run 3: Report of Copa — Data Link

[Graph showing the throughput of multiple data flows over time with different colors representing different flows and their respective mean values in Mbit/s.]

[Graph showing the per-packet one-way delay over time with different colors representing different flows and their respective 95th percentile values in ms.]
Run 4: Statistics of Copa

Start at: 2018-04-24 21:30:24
End at: 2018-04-24 21:30:54
Local clock offset: -0.521 ms
Remote clock offset: -11.411 ms

# Below is generated by plot.py at 2018-04-25 00:25:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 75.43 Mbit/s
95th percentile per-packet one-way delay: 10.918 ms
Loss rate: 8.93%
-- Flow 1:
Average throughput: 41.15 Mbit/s
95th percentile per-packet one-way delay: 10.651 ms
Loss rate: 8.57%
-- Flow 2:
Average throughput: 34.37 Mbit/s
95th percentile per-packet one-way delay: 11.156 ms
Loss rate: 10.00%
-- Flow 3:
Average throughput: 34.31 Mbit/s
95th percentile per-packet one-way delay: 11.078 ms
Loss rate: 8.08%
Run 4: Report of Copa — Data Link
Run 5: Statistics of Copa

Local clock offset: 0.483 ms
Remote clock offset: -3.369 ms

# Below is generated by plot.py at 2018-04-25 00:26:07
# Datalink statistics
-- Total of 3 flows:
   Average throughput: 74.40 Mbit/s
   95th percentile per-packet one-way delay: 10.603 ms
   Loss rate: 10.52%
-- Flow 1:
   Average throughput: 38.65 Mbit/s
   95th percentile per-packet one-way delay: 10.473 ms
   Loss rate: 9.74%
-- Flow 2:
   Average throughput: 36.67 Mbit/s
   95th percentile per-packet one-way delay: 10.884 ms
   Loss rate: 10.68%
-- Flow 3:
   Average throughput: 34.10 Mbit/s
   95th percentile per-packet one-way delay: 10.226 ms
   Loss rate: 12.79%
Run 5: Report of Copa — Data Link

![Graph showing throughput and packet latency over time](graph.png)
Run 6: Statistics of Copa

End at: 2018-04-24 22:10:05
Local clock offset: -2.012 ms
Remote clock offset: -3.224 ms

# Below is generated by plot.py at 2018-04-25 00:26:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 70.29 Mbit/s
95th percentile per-packet one-way delay: 9.739 ms
Loss rate: 12.04%
-- Flow 1:
Average throughput: 35.32 Mbit/s
95th percentile per-packet one-way delay: 9.713 ms
Loss rate: 11.11%
-- Flow 2:
Average throughput: 36.80 Mbit/s
95th percentile per-packet one-way delay: 9.740 ms
Loss rate: 13.03%
-- Flow 3:
Average throughput: 31.56 Mbit/s
95th percentile per-packet one-way delay: 9.778 ms
Loss rate: 12.81%
Run 6: Report of Copa — Data Link

![Throughput Graph](image1)

![Per-packet One-way Delay Graph](image2)
Run 7: Statistics of Copa

Local clock offset: -10.701 ms
Remote clock offset: -7.255 ms

# Below is generated by plot.py at 2018-04-25 00:26:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.61 Mbit/s
95th percentile per-packet one-way delay: 10.299 ms
Loss rate: 7.28%
-- Flow 1:
Average throughput: 40.21 Mbit/s
95th percentile per-packet one-way delay: 10.277 ms
Loss rate: 7.65%
-- Flow 2:
Average throughput: 41.24 Mbit/s
95th percentile per-packet one-way delay: 9.104 ms
Loss rate: 7.44%
-- Flow 3:
Average throughput: 29.95 Mbit/s
95th percentile per-packet one-way delay: 11.282 ms
Loss rate: 5.27%
Run 7: Report of Copa — Data Link

---

**Throughput (Mbps)**

- **Flow 1 ingress** (mean 43.55 Mbps)
- **Flow 1 egress** (mean 40.21 Mbps)
- **Flow 2 ingress** (mean 44.37 Mbps)
- **Flow 2 egress** (mean 41.24 Mbps)
- **Flow 3 ingress** (mean 31.62 Mbps)
- **Flow 3 egress** (mean 29.95 Mbps)

**Packet one-way delay (ms)**

- **Flow 1** (95th percentile 10.28 ms)
- **Flow 2** (95th percentile 9.10 ms)
- **Flow 3** (95th percentile 11.28 ms)

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Run 8: Statistics of Copa

Local clock offset: -15.518 ms
Remote clock offset: -7.124 ms

# Below is generated by plot.py at 2018-04-25 00:26:19
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 78.45 Mbit/s
  95th percentile per-packet one-way delay: 9.904 ms
  Loss rate: 7.61%
-- Flow 1:
  Average throughput: 47.98 Mbit/s
  95th percentile per-packet one-way delay: 9.804 ms
  Loss rate: 7.74%
-- Flow 2:
  Average throughput: 45.77 Mbit/s
  95th percentile per-packet one-way delay: 10.040 ms
  Loss rate: 7.40%
-- Flow 3:
  Average throughput: 0.00 Mbit/s
  95th percentile per-packet one-way delay: 8.788 ms
  Loss rate: 50.00%
Run 8: Report of Copa — Data Link
Run 9: Statistics of Copa

Start at: 2018-04-24 23:09:18
End at: 2018-04-24 23:09:48
Local clock offset: -17.185 ms
Remote clock offset: -6.133 ms

# Below is generated by plot.py at 2018-04-25 00:27:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.61 Mbit/s
95th percentile per-packet one-way delay: 11.423 ms
Loss rate: 11.19%
-- Flow 1:
Average throughput: 42.92 Mbit/s
95th percentile per-packet one-way delay: 11.309 ms
Loss rate: 10.00%
-- Flow 2:
Average throughput: 36.03 Mbit/s
95th percentile per-packet one-way delay: 11.690 ms
Loss rate: 12.00%
-- Flow 3:
Average throughput: 32.19 Mbit/s
95th percentile per-packet one-way delay: 10.728 ms
Loss rate: 13.97%
Run 9: Report of Copa — Data Link

---

**Throughput (Mbps) vs. Time (s)**

- **Flow 1 ingress (mean 47.69 Mbps)**
- **Flow 1 egress (mean 42.92 Mbps)**
- **Flow 2 ingress (mean 40.95 Mbps)**
- **Flow 2 egress (mean 36.03 Mbps)**
- **Flow 3 ingress (mean 37.44 Mbps)**
- **Flow 3 egress (mean 32.19 Mbps)**

---

**Packet Round-trip Delay (ms) vs. Time (s)**

- **Flow 1 (95th percentile 11.31 ms)**
- **Flow 2 (95th percentile 11.69 ms)**
- **Flow 3 (95th percentile 10.73 ms)**
Run 10: Statistics of Copa

Local clock offset: -7.325 ms
Remote clock offset: -7.432 ms

# Below is generated by plot.py at 2018-04-25 00:27:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 74.68 Mbit/s
95th percentile per-packet one-way delay: 12.081 ms
Loss rate: 11.23%

-- Flow 1:
Average throughput: 45.16 Mbit/s
95th percentile per-packet one-way delay: 11.098 ms
Loss rate: 10.79%

-- Flow 2:
Average throughput: 30.55 Mbit/s
95th percentile per-packet one-way delay: 12.896 ms
Loss rate: 11.88%

-- Flow 3:
Average throughput: 27.68 Mbit/s
95th percentile per-packet one-way delay: 12.024 ms
Loss rate: 11.89%
Run 10: Report of Copa — Data Link

![Graph 1: Throughput Over Time]

![Graph 2: Per-Packet End-to-End Delay]

- **Flow 1 ingress** (mean 50.62 Mbit/s)
- **Flow 1 egress** (mean 45.16 Mbit/s)
- **Flow 2 ingress** (mean 34.67 Mbit/s)
- **Flow 2 egress** (mean 30.55 Mbit/s)
- **Flow 3 ingress** (mean 31.41 Mbit/s)
- **Flow 3 egress** (mean 27.68 Mbit/s)

- **Flow 1 (95th percentile 11.10 ms)**
- **Flow 2 (95th percentile 12.90 ms)**
- **Flow 3 (95th percentile 12.02 ms)**
Run 1: Statistics of FillP

End at: 2018-04-24 20:29:41
Local clock offset: -0.289 ms
Remote clock offset: -10.216 ms

# Below is generated by plot.py at 2018-04-25 00:27:17
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 75.10 Mbit/s
  95th percentile per-packet one-way delay: 26.931 ms
  Loss rate: 16.24%
-- Flow 1:
  Average throughput: 45.91 Mbit/s
  95th percentile per-packet one-way delay: 17.060 ms
  Loss rate: 14.26%
-- Flow 2:
  Average throughput: 21.59 Mbit/s
  95th percentile per-packet one-way delay: 33.822 ms
  Loss rate: 20.77%
-- Flow 3:
  Average throughput: 44.68 Mbit/s
  95th percentile per-packet one-way delay: 30.916 ms
  Loss rate: 17.55%
Run 1: Report of FillP — Data Link

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

**Throughput (Mbps):**
- Flow 1 ingress (mean 53.55 Mbps)
- Flow 1 egress (mean 45.91 Mbps)
- Flow 2 ingress (mean 27.26 Mbps)
- Flow 2 egress (mean 21.59 Mbps)
- Flow 3 ingress (mean 54.18 Mbps)
- Flow 3 egress (mean 44.68 Mbps)

**Per Packet One-Way Delay (ms):**
- Flow 1 (95th percentile 17.06 ms)
- Flow 2 (95th percentile 33.82 ms)
- Flow 3 (95th percentile 30.92 ms)
Run 2: Statistics of FillP

Local clock offset: 1.326 ms
Remote clock offset: -11.361 ms

# Below is generated by plot.py at 2018-04-25 00:27:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 80.44 Mbit/s
95th percentile per-packet one-way delay: 34.671 ms
Loss rate: 15.17%
-- Flow 1:
Average throughput: 29.83 Mbit/s
95th percentile per-packet one-way delay: 25.773 ms
Loss rate: 16.85%
-- Flow 2:
Average throughput: 56.06 Mbit/s
95th percentile per-packet one-way delay: 35.094 ms
Loss rate: 13.27%
-- Flow 3:
Average throughput: 40.10 Mbit/s
95th percentile per-packet one-way delay: 40.715 ms
Loss rate: 16.53%
Run 2: Report of FillP — Data Link

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

- Flow 1 ingress (mean 35.88 Mbps)
- Flow 1 egress (mean 29.83 Mbps)
- Flow 2 ingress (mean 64.65 Mbps)
- Flow 2 egress (mean 56.06 Mbps)
- Flow 3 ingress (mean 46.08 Mbps)
- Flow 3 egress (mean 40.10 Mbps)

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

- Flow 1 (95th percentile 25.77 ms)
- Flow 2 (95th percentile 35.09 ms)
- Flow 3 (95th percentile 40.72 ms)
Run 3: Statistics of FillP

End at: 2018-04-24 21:09:05
Local clock offset: 5.301 ms
Remote clock offset: -10.608 ms

# Below is generated by plot.py at 2018-04-25 00:27:27
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 79.86 Mbit/s
  95th percentile per-packet one-way delay: 26.100 ms
  Loss rate: 15.91%
-- Flow 1:
  Average throughput: 29.37 Mbit/s
  95th percentile per-packet one-way delay: 24.230 ms
  Loss rate: 16.59%
-- Flow 2:
  Average throughput: 41.61 Mbit/s
  95th percentile per-packet one-way delay: 30.266 ms
  Loss rate: 16.70%
-- Flow 3:
  Average throughput: 68.79 Mbit/s
  95th percentile per-packet one-way delay: 21.980 ms
  Loss rate: 14.02%
Run 3: Report of FillP — Data Link

![Graph showing throughput and per packet one-way delay over time]
Run 4: Statistics of FillIP

Local clock offset: -0.327 ms
Remote clock offset: -12.0 ms

# Below is generated by plot.py at 2018-04-25 00:27:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.69 Mbit/s
95th percentile per-packet one-way delay: 43.463 ms
Loss rate: 16.38%
-- Flow 1:
Average throughput: 42.85 Mbit/s
95th percentile per-packet one-way delay: 40.385 ms
Loss rate: 15.86%
-- Flow 2:
Average throughput: 42.78 Mbit/s
95th percentile per-packet one-way delay: 44.859 ms
Loss rate: 17.01%
-- Flow 3:
Average throughput: 49.40 Mbit/s
95th percentile per-packet one-way delay: 44.365 ms
Loss rate: 16.63%
Run 4: Report of FillP — Data Link

![Graph showing network performance over time]

- Flow 1 Ingress (mean 50.93 Mbit/s)
- Flow 1 Egress (mean 42.85 Mbit/s)
- Flow 2 Ingress (mean 51.36 Mbit/s)
- Flow 2 Egress (mean 42.78 Mbit/s)
- Flow 3 Ingress (mean 59.24 Mbit/s)
- Flow 3 Egress (mean 49.40 Mbit/s)

![Graph showing packet delay over time]

- Flow 1 (95th percentile 40.38 ms)
- Flow 2 (95th percentile 44.86 ms)
- Flow 3 (95th percentile 44.37 ms)
Run 5: Statistics of FillP

Local clock offset: -0.262 ms
Remote clock offset: -4.398 ms

# Below is generated by plot.py at 2018-04-25 00:27:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.85 Mbit/s
95th percentile per-packet one-way delay: 41.117 ms
Loss rate: 17.29%
-- Flow 1:
Average throughput: 45.86 Mbit/s
95th percentile per-packet one-way delay: 40.060 ms
Loss rate: 16.17%
-- Flow 2:
Average throughput: 39.07 Mbit/s
95th percentile per-packet one-way delay: 42.611 ms
Loss rate: 19.80%
-- Flow 3:
Average throughput: 45.33 Mbit/s
95th percentile per-packet one-way delay: 40.452 ms
Loss rate: 16.13%
Run 5: Report of FillP — Data Link
Run 6: Statistics of FillP

End at: 2018-04-24 22:07:46
Local clock offset: 0.628 ms
Remote clock offset: -2.62 ms

# Below is generated by plot.py at 2018-04-25 00:27:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.81 Mbit/s
95th percentile per-packet one-way delay: 33.924 ms
Loss rate: 16.39%
-- Flow 1:
Average throughput: 44.20 Mbit/s
95th percentile per-packet one-way delay: 31.542 ms
Loss rate: 13.94%
-- Flow 2:
Average throughput: 25.74 Mbit/s
95th percentile per-packet one-way delay: 41.658 ms
Loss rate: 21.68%
-- Flow 3:
Average throughput: 52.73 Mbit/s
95th percentile per-packet one-way delay: 14.977 ms
Loss rate: 16.87%
Run 6: Report of FillP — Data Link

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

![Graph 2: Per-packet one-way delay (ms)](image2)
Run 7: Statistics of FillP

Start at: 2018-04-24 22:27:02
Local clock offset: -10.216 ms
Remote clock offset: -6.193 ms

# Below is generated by plot.py at 2018-04-25 00:28:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 81.45 Mbit/s
95th percentile per-packet one-way delay: 36.241 ms
Loss rate: 16.82%
-- Flow 1:
Average throughput: 42.26 Mbit/s
95th percentile per-packet one-way delay: 34.975 ms
Loss rate: 15.60%
-- Flow 2:
Average throughput: 27.18 Mbit/s
95th percentile per-packet one-way delay: 40.259 ms
Loss rate: 21.70%
-- Flow 3:
Average throughput: 63.67 Mbit/s
95th percentile per-packet one-way delay: 23.862 ms
Loss rate: 14.72%
Run 7: Report of FillP — Data Link

![Graph showing throughput and packet delay over time for different flows with mean values given for ingress and egress.]
Run 8: Statistics of FillP

Local clock offset: -13.834 ms
Remote clock offset: -7.005 ms

# Below is generated by plot.py at 2018-04-25 00:28:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.26 Mbit/s
95th percentile per-packet one-way delay: 42.294 ms
Loss rate: 16.17%
-- Flow 1:
Average throughput: 58.18 Mbit/s
95th percentile per-packet one-way delay: 40.087 ms
Loss rate: 13.14%
-- Flow 2:
Average throughput: 25.92 Mbit/s
95th percentile per-packet one-way delay: 45.137 ms
Loss rate: 23.26%
-- Flow 3:
Average throughput: 41.76 Mbit/s
95th percentile per-packet one-way delay: 43.373 ms
Loss rate: 18.77%
Run 8: Report of FillP — Data Link
Run 9: Statistics of FillP

Start at: 2018-04-24 23:06:54
End at: 2018-04-24 23:07:24
Local clock offset: -16.583 ms
Remote clock offset: -7.201 ms

# Below is generated by plot.py at 2018-04-25 00:28:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.74 Mbit/s
95th percentile per-packet one-way delay: 33.937 ms
Loss rate: 16.27%
-- Flow 1:
Average throughput: 28.40 Mbit/s
95th percentile per-packet one-way delay: 28.417 ms
Loss rate: 16.56%
-- Flow 2:
Average throughput: 50.49 Mbit/s
95th percentile per-packet one-way delay: 34.285 ms
Loss rate: 15.23%
-- Flow 3:
Average throughput: 44.44 Mbit/s
95th percentile per-packet one-way delay: 39.926 ms
Loss rate: 18.00%
Run 9: Report of FillP — Data Link

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### Throughput (Mbps)

- **Flow 1 ingress (mean 34.04 Mbps)**
- **Flow 1 egress (mean 28.40 Mbps)**
- **Flow 2 ingress (mean 59.56 Mbps)**
- **Flow 2 egress (mean 50.49 Mbps)**
- **Flow 3 ingress (mean 54.39 Mbps)**
- **Flow 3 egress (mean 44.44 Mbps)**

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

- **Flow 1 (95th percentile 28.42 ms)**
- **Flow 2 (95th percentile 34.28 ms)**
- **Flow 3 (95th percentile 39.93 ms)**

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Run 10: Statistics of FillP

Local clock offset: -7.072 ms
Remote clock offset: -7.167 ms

# Below is generated by plot.py at 2018-04-25 00:28:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.38 Mbit/s
95th percentile per-packet one-way delay: 39.199 ms
Loss rate: 17.84%
-- Flow 1:
Average throughput: 38.98 Mbit/s
95th percentile per-packet one-way delay: 38.012 ms
Loss rate: 16.63%
-- Flow 2:
Average throughput: 28.06 Mbit/s
95th percentile per-packet one-way delay: 43.030 ms
Loss rate: 22.70%
-- Flow 3:
Average throughput: 59.53 Mbit/s
95th percentile per-packet one-way delay: 26.527 ms
Loss rate: 15.23%
Run 10: Report of FillIP — Data Link
Run 1: Statistics of Indigo-1-32

Local clock offset: 1.152 ms
Remote clock offset: -10.286 ms

# Below is generated by plot.py at 2018-04-25 00:28:46
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 85.71 Mbit/s
  95th percentile per-packet one-way delay: 16.676 ms
  Loss rate: 11.91%
  -- Flow 1:
  Average throughput: 47.01 Mbit/s
  95th percentile per-packet one-way delay: 15.665 ms
  Loss rate: 12.46%
  -- Flow 2:
  Average throughput: 38.64 Mbit/s
  95th percentile per-packet one-way delay: 16.873 ms
  Loss rate: 11.36%
  -- Flow 3:
  Average throughput: 39.90 Mbit/s
  95th percentile per-packet one-way delay: 17.833 ms
  Loss rate: 10.98%
Run 1: Report of Indigo-1-32 — Data Link
Run 2: Statistics of Indigo-1-32

Start at: 2018-04-24 21:06:12
End at: 2018-04-24 21:06:42
Local clock offset: -0.035 ms
Remote clock offset: -11.497 ms

# Below is generated by plot.py at 2018-04-25 00:29:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.31 Mbit/s
95th percentile per-packet one-way delay: 16.319 ms
Loss rate: 7.79%
-- Flow 1:
Average throughput: 47.45 Mbit/s
95th percentile per-packet one-way delay: 15.113 ms
Loss rate: 8.01%
-- Flow 2:
Average throughput: 40.56 Mbit/s
95th percentile per-packet one-way delay: 16.911 ms
Loss rate: 6.81%
-- Flow 3:
Average throughput: 42.81 Mbit/s
95th percentile per-packet one-way delay: 18.797 ms
Loss rate: 8.86%
Run 3: Statistics of Indigo-1-32

End at: 2018-04-24 21:26:14
Local clock offset: 0.43 ms
Remote clock offset: -11.689 ms

# Below is generated by plot.py at 2018-04-25 00:29:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.15 Mbit/s
95th percentile per-packet one-way delay: 15.810 ms
Loss rate: 8.44%
-- Flow 1:
Average throughput: 50.09 Mbit/s
95th percentile per-packet one-way delay: 15.402 ms
Loss rate: 8.87%
-- Flow 2:
Average throughput: 43.10 Mbit/s
95th percentile per-packet one-way delay: 16.374 ms
Loss rate: 7.45%
-- Flow 3:
Average throughput: 38.14 Mbit/s
95th percentile per-packet one-way delay: 18.492 ms
Loss rate: 8.95%
Run 3: Report of Indigo-1-32 — Data Link

---

**Throughput (Mbps)**

- **Flow 1 ingress (mean 54.97 Mbps)**
- **Flow 1 egress (mean 50.09 Mbps)**
- **Flow 2 ingress (mean 46.57 Mbps)**
- **Flow 2 egress (mean 43.10 Mbps)**
- **Flow 3 ingress (mean 41.88 Mbps)**
- **Flow 3 egress (mean 38.14 Mbps)**

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

- **Flow 1 (95th percentile 15.40 ms)**
- **Flow 2 (95th percentile 16.37 ms)**
- **Flow 3 (95th percentile 18.49 ms)**
Run 4: Statistics of Indigo-1-32

Start at: 2018-04-24 21:45:14
End at: 2018-04-24 21:45:44
Local clock offset: -0.779 ms
Remote clock offset: -5.863 ms

# Below is generated by plot.py at 2018-04-25 00:29:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.49 Mbit/s
95th percentile per-packet one-way delay: 16.317 ms
Loss rate: 13.39%
-- Flow 1:
Average throughput: 51.77 Mbit/s
95th percentile per-packet one-way delay: 15.688 ms
Loss rate: 12.71%
-- Flow 2:
Average throughput: 39.66 Mbit/s
95th percentile per-packet one-way delay: 16.817 ms
Loss rate: 14.21%
-- Flow 3:
Average throughput: 32.50 Mbit/s
95th percentile per-packet one-way delay: 18.012 ms
Loss rate: 14.58%
Run 4: Report of Indigo-1-32 — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 59.31 Mbit/s)  Flow 1 egress (mean 51.77 Mbit/s)
Flow 2 ingress (mean 46.23 Mbit/s)  Flow 2 egress (mean 39.66 Mbit/s)
Flow 3 ingress (mean 38.86 Mbit/s)  Flow 3 egress (mean 32.50 Mbit/s)

Per packet one-way delay [ms]

Time (s)

Flow 1 (95th percentile 15.69 ms)  Flow 2 (95th percentile 16.82 ms)  Flow 3 (95th percentile 18.01 ms)
Run 5: Statistics of Indigo-1-32

End at: 2018-04-24 22:05:17
Local clock offset: -0.793 ms
Remote clock offset: -1.285 ms

# Below is generated by plot.py at 2018-04-25 00:29:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.54 Mbit/s
95th percentile per-packet one-way delay: 18.600 ms
Loss rate: 10.66%
-- Flow 1:
Average throughput: 54.93 Mbit/s
95th percentile per-packet one-way delay: 18.076 ms
Loss rate: 9.91%
-- Flow 2:
Average throughput: 39.88 Mbit/s
95th percentile per-packet one-way delay: 18.698 ms
Loss rate: 11.57%
-- Flow 3:
Average throughput: 31.14 Mbit/s
95th percentile per-packet one-way delay: 18.903 ms
Loss rate: 12.26%
Run 5: Report of Indigo-1-32 — Data Link
Run 6: Statistics of Indigo-1-32

End at: 2018-04-24 22:25:03
Local clock offset: -10.055 ms
Remote clock offset: -6.948 ms

# Below is generated by plot.py at 2018-04-25 00:29:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.73 Mbit/s
95th percentile per-packet one-way delay: 16.024 ms
Loss rate: 11.25%
-- Flow 1:
Average throughput: 54.74 Mbit/s
95th percentile per-packet one-way delay: 15.810 ms
Loss rate: 10.34%
-- Flow 2:
Average throughput: 40.20 Mbit/s
95th percentile per-packet one-way delay: 16.535 ms
Loss rate: 11.31%
-- Flow 3:
Average throughput: 28.62 Mbit/s
95th percentile per-packet one-way delay: 15.472 ms
Loss rate: 16.03%
Run 6: Report of Indigo-1-32 — Data Link

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

---

Flow 1 ingress (mean 61.07 Mbit/s)  
Flow 1 egress (mean 54.74 Mbit/s)  
Flow 2 ingress (mean 55.33 Mbit/s)  
Flow 2 egress (mean 40.20 Mbit/s)  
Flow 3 ingress (mean 34.68 Mbit/s)  
Flow 3 egress (mean 28.62 Mbit/s)  

---

Flow 1 (95th percentile 15.81 ms)  
Flow 2 (95th percentile 16.54 ms)  
Flow 3 (95th percentile 15.47 ms)
Run 7: Statistics of Indigo-1-32

Local clock offset: -13.3 ms
Remote clock offset: -6.775 ms

# Below is generated by plot.py at 2018-04-25 00:30:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.10 Mbit/s
95th percentile per-packet one-way delay: 15.889 ms
Loss rate: 8.89%
-- Flow 1:
Average throughput: 55.40 Mbit/s
95th percentile per-packet one-way delay: 15.373 ms
Loss rate: 8.53%
-- Flow 2:
Average throughput: 35.16 Mbit/s
95th percentile per-packet one-way delay: 14.521 ms
Loss rate: 10.02%
-- Flow 3:
Average throughput: 40.90 Mbit/s
95th percentile per-packet one-way delay: 18.662 ms
Loss rate: 8.36%
Run 7: Report of Indigo-1-32 — Data Link
Run 8: Statistics of Indigo-1-32

Start at: 2018-04-24 23:04:16
End at: 2018-04-24 23:04:46
Local clock offset: -16.017 ms
Remote clock offset: -6.098 ms

# Below is generated by plot.py at 2018-04-25 00:30:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.94 Mbit/s
95th percentile per-packet one-way delay: 16.902 ms
Loss rate: 13.62%
-- Flow 1:
Average throughput: 53.01 Mbit/s
95th percentile per-packet one-way delay: 15.417 ms
Loss rate: 12.71%
-- Flow 2:
Average throughput: 38.66 Mbit/s
95th percentile per-packet one-way delay: 16.592 ms
Loss rate: 14.58%
-- Flow 3:
Average throughput: 29.02 Mbit/s
95th percentile per-packet one-way delay: 18.558 ms
Loss rate: 16.05%
Run 8: Report of Indigo-1-32 — Data Link

[Graph showing throughput and packet one-way delay over time for different flows with annotations for mean values]
Run 9: Statistics of Indigo-1-32

Local clock offset: -8.709 ms
Remote clock offset: -7.434 ms

# Below is generated by plot.py at 2018-04-25 00:30:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.38 Mbit/s
95th percentile per-packet one-way delay: 16.296 ms
Loss rate: 9.91%
-- Flow 1:
Average throughput: 50.54 Mbit/s
95th percentile per-packet one-way delay: 15.126 ms
Loss rate: 9.54%
-- Flow 2:
Average throughput: 38.77 Mbit/s
95th percentile per-packet one-way delay: 15.668 ms
Loss rate: 10.22%
-- Flow 3:
Average throughput: 37.04 Mbit/s
95th percentile per-packet one-way delay: 17.597 ms
Loss rate: 10.81%
Run 9: Report of Indigo-1-32 — Data Link

![Graphs showing network performance metrics over time]
Run 10: Statistics of Indigo-1-32

Start at: 2018-04-24 23:44:01
End at: 2018-04-24 23:44:31
Local clock offset: -1.597 ms
Remote clock offset: -7.216 ms

# Below is generated by plot.py at 2018-04-25 00:30:29
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 90.10 Mbit/s
  95th percentile per-packet one-way delay: 15.825 ms
  Loss rate: 11.58%
-- Flow 1:
  Average throughput: 51.87 Mbit/s
  95th percentile per-packet one-way delay: 14.323 ms
  Loss rate: 11.47%
-- Flow 2:
  Average throughput: 39.98 Mbit/s
  95th percentile per-packet one-way delay: 15.446 ms
  Loss rate: 12.10%
-- Flow 3:
  Average throughput: 34.96 Mbit/s
  95th percentile per-packet one-way delay: 17.318 ms
  Loss rate: 10.90%
Run 10: Report of Indigo-1-32 — Data Link

[Graphs showing throughput and per-packet end-to-end delay over time for different flows.]
Run 1: Statistics of PCC-Vivace

Start at: 2018-04-24 20:34:00
End at: 2018-04-24 20:34:30
Local clock offset: 0.816 ms
Remote clock offset: -9.903 ms

# Below is generated by plot.py at 2018-04-25 00:30:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 38.58 Mbit/s
95th percentile per-packet one-way delay: 8.262 ms
Loss rate: 8.65%
-- Flow 1:
Average throughput: 13.78 Mbit/s
95th percentile per-packet one-way delay: 8.347 ms
Loss rate: 8.61%
-- Flow 2:
Average throughput: 28.21 Mbit/s
95th percentile per-packet one-way delay: 6.835 ms
Loss rate: 9.16%
-- Flow 3:
Average throughput: 18.37 Mbit/s
95th percentile per-packet one-way delay: 7.023 ms
Loss rate: 7.18%
Run 1: Report of PCC-Vivace — Data Link

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

- **Throughput (Mbps)**
  - **Flow 1 ingress (mean 15.07 Mbps)**
  - **Flow 1 egress (mean 13.78 Mbps)**
  - **Flow 2 ingress (mean 31.05 Mbps)**
  - **Flow 2 egress (mean 28.21 Mbps)**
  - **Flow 3 ingress (mean 19.79 Mbps)**
  - **Flow 3 egress (mean 16.37 Mbps)**

- **Per-packet round-trip delay (ms)**
  - **Flow 1 (95th percentile 0.35 ms)**
  - **Flow 2 (95th percentile 6.83 ms)**
  - **Flow 3 (95th percentile 7.02 ms)**

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Run 2: Statistics of PCC-Vivace

End at: 2018-04-24 20:54:07
Local clock offset: 0.379 ms
Remote clock offset: -10.764 ms

# Below is generated by plot.py at 2018-04-25 00:30:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 69.06 Mbit/s
95th percentile per-packet one-way delay: 10.510 ms
Loss rate: 6.23%
-- Flow 1:
Average throughput: 55.72 Mbit/s
95th percentile per-packet one-way delay: 10.377 ms
Loss rate: 5.99%
-- Flow 2:
Average throughput: 11.87 Mbit/s
95th percentile per-packet one-way delay: 9.947 ms
Loss rate: 7.32%
-- Flow 3:
Average throughput: 16.56 Mbit/s
95th percentile per-packet one-way delay: 16.820 ms
Loss rate: 7.08%
Run 2: Report of PCC-Vivace — Data Link

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

- **Flow 1 ingress** (mean 59.29 Mbps)  -  **Flow 1 egress** (mean 55.72 Mbps)
- **Flow 2 ingress** (mean 12.80 Mbps)  -  **Flow 2 egress** (mean 11.87 Mbps)
- **Flow 3 ingress** (mean 17.80 Mbps)  -  **Flow 3 egress** (mean 16.56 Mbps)

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

- **Flow 1** (95th percentile 10.38 ms)  -  **Flow 2** (95th percentile 9.95 ms)  -  **Flow 3** (95th percentile 16.82 ms)
Run 3: Statistics of PCC-Vivace

Local clock offset: -0.812 ms
Remote clock offset: -10.827 ms

# Below is generated by plot.py at 2018-04-25 00:31:06
# Datalink statistics
    -- Total of 3 flows:
    Average throughput: 72.95 Mbit/s
    95th percentile per-packet one-way delay: 11.020 ms
    Loss rate: 4.49%
    -- Flow 1:
    Average throughput: 46.49 Mbit/s
    95th percentile per-packet one-way delay: 10.763 ms
    Loss rate: 4.16%
    -- Flow 2:
    Average throughput: 35.52 Mbit/s
    95th percentile per-packet one-way delay: 11.423 ms
    Loss rate: 5.10%
    -- Flow 3:
    Average throughput: 8.68 Mbit/s
    95th percentile per-packet one-way delay: 11.045 ms
    Loss rate: 4.78%
Run 3: Report of PCC-Vivace — Data Link

![Graph showing throughput and packet loss over time with different flow rates and standard deviations.](image)

- **Throughput**
  - Flow 1 ingress (mean 48.51 Mbit/s)
  - Flow 1 egress (mean 46.49 Mbit/s)
  - Flow 2 ingress (mean 37.43 Mbit/s)
  - Flow 2 egress (mean 35.52 Mbit/s)
  - Flow 3 ingress (mean 9.12 Mbit/s)
  - Flow 3 egress (mean 8.66 Mbit/s)

- **Packet Loss**
  - Flow 1 (95th percentile 10.76 ms)
  - Flow 2 (95th percentile 11.42 ms)
  - Flow 3 (95th percentile 11.04 ms)
Run 4: Statistics of PCC-Vivace

Local clock offset: -0.715 ms
Remote clock offset: -11.252 ms

# Below is generated by plot.py at 2018-04-25 00:31:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.49 Mbit/s
95th percentile per-packet one-way delay: 9.601 ms
Loss rate: 5.34%
-- Flow 1:
Average throughput: 62.34 Mbit/s
95th percentile per-packet one-way delay: 9.629 ms
Loss rate: 5.18%
-- Flow 2:
Average throughput: 17.33 Mbit/s
95th percentile per-packet one-way delay: 9.460 ms
Loss rate: 5.88%
-- Flow 3:
Average throughput: 11.03 Mbit/s
95th percentile per-packet one-way delay: 9.485 ms
Loss rate: 6.32%
Run 4: Report of PCC-Vivace — Data Link

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

![Graph 2: Per-packet one-way delay (ms)](image2)
Run 5: Statistics of PCC-Vivace

Local clock offset: -0.165 ms
Remote clock offset: -3.203 ms

# Below is generated by plot.py at 2018-04-25 00:31:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 60.02 Mbit/s
95th percentile per-packet one-way delay: 10.308 ms
Loss rate: 6.25%
-- Flow 1:
Average throughput: 37.44 Mbit/s
95th percentile per-packet one-way delay: 10.189 ms
Loss rate: 6.27%
-- Flow 2:
Average throughput: 29.06 Mbit/s
95th percentile per-packet one-way delay: 17.113 ms
Loss rate: 6.06%
-- Flow 3:
Average throughput: 9.89 Mbit/s
95th percentile per-packet one-way delay: 10.209 ms
Loss rate: 7.10%
Run 5: Report of PCC-Vivace — Data Link
Run 6: Statistics of PCC-Vivace

Start at: 2018-04-24 22:11:54
End at: 2018-04-24 22:12:24
Local clock offset: -5.568 ms
Remote clock offset: -5.087 ms

# Below is generated by plot.py at 2018-04-25 00:31:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 47.59 Mbit/s
95th percentile per-packet one-way delay: 8.740 ms
Loss rate: 6.45%
-- Flow 1:
Average throughput: 36.17 Mbit/s
95th percentile per-packet one-way delay: 8.749 ms
Loss rate: 6.32%
-- Flow 2:
Average throughput: 12.50 Mbit/s
95th percentile per-packet one-way delay: 8.700 ms
Loss rate: 6.64%
-- Flow 3:
Average throughput: 9.47 Mbit/s
95th percentile per-packet one-way delay: 8.683 ms
Loss rate: 7.45%
Run 6: Report of PCC-Vivace — Data Link

The diagram shows the throughput and per-packet one-way delay over time for different flows. The throughput is measured in Mbit/s, and the per-packet one-way delay is measured in milliseconds.

**Throughput (Mbit/s):**
- Flow 1 ingress (mean 38.61 Mbit/s)
- Flow 1 egress (mean 36.17 Mbit/s)
- Flow 2 ingress (mean 13.39 Mbit/s)
- Flow 2 egress (mean 12.50 Mbit/s)
- Flow 3 ingress (mean 10.23 Mbit/s)
- Flow 3 egress (mean 9.47 Mbit/s)

**Per-packet one-way delay (ms):**
- Flow 1 (95th percentile 8.75 ms)
- Flow 2 (95th percentile 8.70 ms)
- Flow 3 (95th percentile 8.68 ms)
Run 7: Statistics of PCC-Vivace

Local clock offset: -13.029 ms
Remote clock offset: -7.371 ms

# Below is generated by plot.py at 2018-04-25 00:31:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 42.52 Mbit/s
95th percentile per-packet one-way delay: 10.654 ms
Loss rate: 7.35%
-- Flow 1:
Average throughput: 26.23 Mbit/s
95th percentile per-packet one-way delay: 10.650 ms
Loss rate: 7.07%
-- Flow 2:
Average throughput: 20.28 Mbit/s
95th percentile per-packet one-way delay: 10.673 ms
Loss rate: 7.65%
-- Flow 3:
Average throughput: 8.52 Mbit/s
95th percentile per-packet one-way delay: 9.000 ms
Loss rate: 8.46%
Run 7: Report of PCC-Vivace — Data Link

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

- Flow 1 ingress (mean 28.23 Mbit/s)
- Flow 1 egress (mean 26.23 Mbit/s)
- Flow 2 ingress (mean 21.96 Mbit/s)
- Flow 2 egress (mean 20.28 Mbit/s)
- Flow 3 ingress (mean 9.31 Mbit/s)
- Flow 3 egress (mean 8.52 Mbit/s)

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

- Flow 1 (95th percentile 10.65 ms)
- Flow 2 (95th percentile 10.67 ms)
- Flow 3 (95th percentile 9.00 ms)
Run 8: Statistics of PCC-Vivace

End at: 2018-04-24 22:52:08
Local clock offset: -15.104 ms
Remote clock offset: -6.882 ms

# Below is generated by plot.py at 2018-04-25 00:31:12
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 60.88 Mbit/s
  95th percentile per-packet one-way delay: 10.269 ms
  Loss rate: 6.32%
-- Flow 1:
  Average throughput: 35.98 Mbit/s
  95th percentile per-packet one-way delay: 8.654 ms
  Loss rate: 5.91%
-- Flow 2:
  Average throughput: 29.91 Mbit/s
  95th percentile per-packet one-way delay: 10.355 ms
  Loss rate: 6.87%
-- Flow 3:
  Average throughput: 15.21 Mbit/s
  95th percentile per-packet one-way delay: 10.363 ms
  Loss rate: 7.12%
Run 8: Report of PCC-Vivace — Data Link

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

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

- **Flow 1 ingress** (mean 38.24 Mbps)
- **Flow 2 ingress** (mean 32.13 Mbps)
- **Flow 3 ingress** (mean 16.38 Mbps)
- **Flow 1 egress** (mean 35.98 Mbps)
- **Flow 2 egress** (mean 29.91 Mbps)
- **Flow 3 egress** (mean 15.21 Mbps)
Run 9: Statistics of PCC-Vivace

End at: 2018-04-24 23:12:14
Local clock offset: -17.176 ms
Remote clock offset: -7.788 ms

# Below is generated by plot.py at 2018-04-25 00:31:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 48.99 Mbit/s
95th percentile per-packet one-way delay: 8.886 ms
Loss rate: 6.87%
-- Flow 1:
Average throughput: 32.31 Mbit/s
95th percentile per-packet one-way delay: 8.917 ms
Loss rate: 6.60%
-- Flow 2:
Average throughput: 22.16 Mbit/s
95th percentile per-packet one-way delay: 7.297 ms
Loss rate: 7.28%
-- Flow 3:
Average throughput: 5.89 Mbit/s
95th percentile per-packet one-way delay: 8.966 ms
Loss rate: 8.27%
Run 9: Report of PCC-Vivace — Data Link

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

- Flow 1 ingress (mean 34.60 Mbps)
- Flow 1 egress (mean 32.31 Mbps)
- Flow 2 ingress (mean 23.91 Mbps)
- Flow 2 egress (mean 22.16 Mbps)
- Flow 3 ingress (mean 6.43 Mbps)
- Flow 3 egress (mean 5.89 Mbps)

![Another graph showing the 95th percentile delay for each flow.]

- Flow 1 (95th percentile 8.92 ms)
- Flow 2 (95th percentile 7.30 ms)
- Flow 3 (95th percentile 8.97 ms)
Run 10: Statistics of PCC-Vivace

End at: 2018-04-24 23:32:00
Local clock offset: -5.051 ms
Remote clock offset: -8.18 ms

# Below is generated by plot.py at 2018-04-25 00:31:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 58.48 Mbit/s
95th percentile per-packet one-way delay: 9.380 ms
Loss rate: 6.37%
-- Flow 1:
Average throughput: 47.86 Mbit/s
95th percentile per-packet one-way delay: 9.417 ms
Loss rate: 6.40%
-- Flow 2:
Average throughput: 13.26 Mbit/s
95th percentile per-packet one-way delay: 8.142 ms
Loss rate: 6.19%
-- Flow 3:
Average throughput: 5.47 Mbit/s
95th percentile per-packet one-way delay: 7.923 ms
Loss rate: 6.50%
Run 10: Report of PCC-Vivace — Data Link
Run 1: Statistics of PCC-Expr

Start at: 2018-04-24 20:35:09
End at: 2018-04-24 20:35:39
Local clock offset: -0.117 ms
Remote clock offset: -10.268 ms
Run 1: Report of PCC-Expr — Data Link

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Figure is missing
Run 2: Statistics of PCC-Expr

Start at: 2018-04-24 20:54:48
Local clock offset: 0.481 ms
Remote clock offset: -11.356 ms
Run 2: Report of PCC-Expr — Data Link

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Run 3: Statistics of PCC-Expr

End at: 2018-04-24 21:14:56
Local clock offset: -0.176 ms
Remote clock offset: -10.839 ms
Run 3: Report of PCC-Expr — Data Link

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Run 4: Statistics of PCC-Expr

Start at: 2018-04-24 21:33:54
End at: 2018-04-24 21:34:24
Local clock offset: 0.607 ms
Remote clock offset: -10.208 ms
Run 4: Report of PCC-Expr — Data Link

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Run 5: Statistics of PCC-Expr

End at: 2018-04-24 21:54:01
Local clock offset: -0.096 ms
Remote clock offset: -2.937 ms
Run 5: Report of PCC-Expr — Data Link

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Run 6: Statistics of PCC-Expr

Local clock offset: -5.041 ms
Remote clock offset: -5.15 ms
Run 6: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing
Run 7: Statistics of PCC-Expr

Start at: 2018-04-24 22:33:02
Local clock offset: -11.614 ms
Remote clock offset: -6.869 ms
Run 7: Report of PCC-Expr — Data Link

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Run 8: Statistics of PCC-Expr

Local clock offset: -15.226 ms
Remote clock offset: -6.822 ms
Run 8: Report of PCC-Expr — Data Link

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Run 9: Statistics of PCC-Expr

Start at: 2018-04-24 23:12:54
Local clock offset: -17.562 ms
Remote clock offset: -6.721 ms
Run 9: Report of PCC-Expr — Data Link

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Figure is missing
Run 10: Statistics of PCC-Expr

Local clock offset: -5.17 ms
Remote clock offset: -6.794 ms
Run 10: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing