Pantheon Report

Generated at 2018-02-05 03:02:16 (UTC).
Data path: AWS California 2 Ethernet (local) → Mexico Ethernet (remote).
Repeated the test of 17 congestion control schemes 10 times.
Each test lasted for 30 seconds running 3 flows with 10-second interval between two flows.
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).
Tested BBR with qdisc of Fair Queuing (fq), and other schemes with the default Linux qdisc (pfifo_fast).
NTP offsets were measured against time.stanford.edu and have been applied to correct the timestamps in logs.

Git summary:
branch: master @ 70217998b3c9a7166a95460a70c0854d1326e100
third_party/calibrated_koho @ 3cb73c0d1c03222cdfae446ea37a522e53227db50
M datagrump/sender.cc
third_party/fillp @ fb9c9ab842e5614ad52911a76fb9bd1c1b0dca86
third_party/genericCC @ 80b516c448f79f56e9675f7177b69c622f07da8
third_party/indigo @ a9b2060d3e4da2e8987e893e3eca2a6c7cd0a9b
third_party/indigo-1-layer-128-unit @ 3ae9e4ef4230db7484501f82ce88b377695f2f66d
third_party/indigo-1-layer-32-unit @ 2601c92e4aa9d58d38d4dfe0edc8f90e77e64d
third_party/indigo-1-layer-32-unit-no-calib @ 1f3a7f75b41135ed5b540c0fd3505939528e2a5f
third_party/pantheon-tunnel @ fb1053193c2861da659ba9013db26744ccfcf993
third_party/pcc @ 1afc958f0a0d66d18b623c091a55f8c872b4981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ec978f3cfe42
third_party/scream @ c3370fd7bd17225a79eb34e016a23f5965888
third_party/sourdough @ f1a14bffe749737437f61b1ae9eb30b267cde681
third_party/sprout @ 6f2e66e0889d1066e9f0233f3753ee2665089ce
M src/examples/cellsim.cc
M src/examples/sproutbt2.cc
M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a26121a49af2629562939f9a494
M src/verus.hpp
M tools/plot.py
third_party/vivace @ 7a4ba531e75b4a6f66f5c458019212041784ce3
third_party/webRTC @ a488197dd041ace68a42849b2540ad834825f42
test from AWS California 2 Ethernet to Mexico 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>61.00</td>
<td>36.73</td>
<td>29.69</td>
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<tr>
<td>TCP Cubic</td>
<td>10</td>
<td>51.01</td>
<td>34.90</td>
<td>35.66</td>
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<td>LEDBAT</td>
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<td>31.87</td>
<td>25.68</td>
<td>19.29</td>
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<td>80.50</td>
<td>8.50</td>
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<td>QUIC Cubic</td>
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<td>55.17</td>
<td>31.60</td>
<td>26.17</td>
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<td>WebRTC media</td>
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<td>1.55</td>
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<td>Sprout</td>
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<td>TaoVA-100x</td>
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<td>38.85</td>
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<td>TCP Vegas</td>
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<td>31.51</td>
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<td>Verus</td>
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<td>40.73</td>
<td>25.39</td>
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<td>Copa</td>
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<td>FillP</td>
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<td>37.43</td>
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<td>31.51</td>
<td>33.39</td>
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<tr>
<td>Vivace-latency</td>
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<td>60.35</td>
<td>22.43</td>
<td>13.31</td>
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<td>Vivace-loss</td>
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<td>56.59</td>
<td>29.83</td>
<td>20.84</td>
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<td>Vivace-LTE</td>
<td>10</td>
<td>61.87</td>
<td>23.00</td>
<td>21.46</td>
</tr>
</tbody>
</table>
Run 1: Statistics of TCP BBR

Start at: 2018-02-04 22:03:44
End at: 2018-02-04 22:04:14
Local clock offset: -0.084 ms
Remote clock offset: -6.508 ms

# Below is generated by plot.py at 2018-02-05 02:36:28
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 95.60 Mbit/s
  95th percentile per-packet one-way delay: 67.005 ms
  Loss rate: 5.90%
-- Flow 1:
  Average throughput: 63.79 Mbit/s
  95th percentile per-packet one-way delay: 65.955 ms
  Loss rate: 4.84%
-- Flow 2:
  Average throughput: 32.86 Mbit/s
  95th percentile per-packet one-way delay: 68.189 ms
  Loss rate: 7.85%
-- Flow 3:
  Average throughput: 30.04 Mbit/s
  95th percentile per-packet one-way delay: 68.009 ms
  Loss rate: 8.20%
Run 1: Report of TCP BBR — Data Link

![Graph showing throughput and per-packet one-way delay over time for different flows. The graphs depict the performance metrics for flows 1, 2, and 3, with specific throughput and delay values indicated for each flow.]
Run 2: Statistics of TCP BBR

Start at: 2018-02-04 22:29:11
End at: 2018-02-04 22:29:41
Local clock offset: -0.283 ms
Remote clock offset: -7.106 ms

# Below is generated by plot.py at 2018-02-05 02:36:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.48 Mbit/s
95th percentile per-packet one-way delay: 66.504 ms
Loss rate: 7.04%
-- Flow 1:
Average throughput: 54.70 Mbit/s
95th percentile per-packet one-way delay: 64.939 ms
Loss rate: 5.24%
-- Flow 2:
Average throughput: 46.27 Mbit/s
95th percentile per-packet one-way delay: 67.774 ms
Loss rate: 9.57%
-- Flow 3:
Average throughput: 29.95 Mbit/s
95th percentile per-packet one-way delay: 68.234 ms
Loss rate: 8.67%
Run 2: Report of TCP BBR — Data Link

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**Throughput (Mbps)**

- Flow 1 ingress (mean 57.78 Mbps)
- Flow 1 egress (mean 54.70 Mbps)
- Flow 2 ingress (mean 51.24 Mbps)
- Flow 2 egress (mean 46.27 Mbps)
- Flow 3 ingress (mean 32.86 Mbps)
- Flow 3 egress (mean 29.95 Mbps)

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

- Flow 1 (95th percentile 64.94 ms)
- Flow 2 (95th percentile 67.77 ms)
- Flow 3 (95th percentile 68.23 ms)
Run 3: Statistics of TCP BBR

Local clock offset: -0.278 ms
Remote clock offset: -8.103 ms

# Below is generated by plot.py at 2018-02-05 02:36:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.15 Mbit/s
95th percentile per-packet one-way delay: 66.325 ms
Loss rate: 7.01%
-- Flow 1:
Average throughput: 61.04 Mbit/s
95th percentile per-packet one-way delay: 65.596 ms
Loss rate: 5.31%
-- Flow 2:
Average throughput: 38.05 Mbit/s
95th percentile per-packet one-way delay: 67.067 ms
Loss rate: 10.42%
-- Flow 3:
Average throughput: 26.41 Mbit/s
95th percentile per-packet one-way delay: 68.020 ms
Loss rate: 8.40%
Run 3: Report of TCP BBR — Data Link
Run 4: Statistics of TCP BBR

End at: 2018-02-04 23:22:02
Local clock offset: -0.079 ms
Remote clock offset: -9.137 ms

# Below is generated by plot.py at 2018-02-05 02:36:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.68 Mbit/s
95th percentile per-packet one-way delay: 66.090 ms
Loss rate: 5.60%
-- Flow 1:
Average throughput: 56.64 Mbit/s
95th percentile per-packet one-way delay: 64.224 ms
Loss rate: 4.55%
-- Flow 2:
Average throughput: 43.98 Mbit/s
95th percentile per-packet one-way delay: 67.201 ms
Loss rate: 7.16%
-- Flow 3:
Average throughput: 29.40 Mbit/s
95th percentile per-packet one-way delay: 68.818 ms
Loss rate: 6.87%
Run 4: Report of TCP BBR — Data Link

[Graph showing network traffic and packet delay]
Run 5: Statistics of TCP BBR

Start at: 2018-02-04 23:48:03
End at: 2018-02-04 23:48:33
Local clock offset: 0.346 ms
Remote clock offset: -8.356 ms

# Below is generated by plot.py at 2018-02-05 02:36:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.46 Mbit/s
95th percentile per-packet one-way delay: 67.083 ms
Loss rate: 6.76%
-- Flow 1:
Average throughput: 57.25 Mbit/s
95th percentile per-packet one-way delay: 65.262 ms
Loss rate: 5.29%
-- Flow 2:
Average throughput: 43.87 Mbit/s
95th percentile per-packet one-way delay: 68.306 ms
Loss rate: 9.11%
-- Flow 3:
Average throughput: 27.13 Mbit/s
95th percentile per-packet one-way delay: 68.207 ms
Loss rate: 8.09%
Run 5: Report of TCP BBR — Data Link

![Graph showing throughput over time]

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

Legend:
- Flow 1 ingress (mean 60.51 Mbit/s)
- Flow 1 egress (mean 57.25 Mbit/s)
- Flow 2 ingress (mean 48.32 Mbit/s)
- Flow 2 egress (mean 43.87 Mbit/s)
- Flow 3 ingress (mean 29.52 Mbit/s)
- Flow 3 egress (mean 27.13 Mbit/s)

Legend:
- Flow 1 (95th percentile 65.26 ms)
- Flow 2 (95th percentile 68.31 ms)
- Flow 3 (95th percentile 68.21 ms)
Run 6: Statistics of TCP BBR

Start at: 2018-02-05 00:14:07
End at: 2018-02-05 00:14:37
Local clock offset: 0.577 ms
Remote clock offset: -7.037 ms

# Below is generated by plot.py at 2018-02-05 02:36:31
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 95.55 Mbit/s
  95th percentile per-packet one-way delay: 66.608 ms
  Loss rate: 6.59%
-- Flow 1:
  Average throughput: 52.90 Mbit/s
  95th percentile per-packet one-way delay: 65.196 ms
  Loss rate: 5.05%
-- Flow 2:
  Average throughput: 44.15 Mbit/s
  95th percentile per-packet one-way delay: 67.733 ms
  Loss rate: 9.17%
-- Flow 3:
  Average throughput: 39.96 Mbit/s
  95th percentile per-packet one-way delay: 66.982 ms
  Loss rate: 6.73%
Run 6: Report of TCP BBR — Data Link
Run 7: Statistics of TCP BBR

Start at: 2018-02-05 00:40:55
End at: 2018-02-05 00:41:25
Local clock offset: 0.991 ms
Remote clock offset: -7.727 ms

# Below is generated by plot.py at 2018-02-05 02:36:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.06 Mbit/s
95th percentile per-packet one-way delay: 63.883 ms
Loss rate: 5.25%
-- Flow 1:
Average throughput: 67.31 Mbit/s
95th percentile per-packet one-way delay: 63.135 ms
Loss rate: 4.58%
-- Flow 2:
Average throughput: 29.07 Mbit/s
95th percentile per-packet one-way delay: 64.923 ms
Loss rate: 6.79%
-- Flow 3:
Average throughput: 25.33 Mbit/s
95th percentile per-packet one-way delay: 65.640 ms
Loss rate: 6.96%
Run 7: Report of TCP BBR — Data Link

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

Legend:
- Flow 1 ingress (mean 70.57 Mbit/s)
- Flow 1 egress (mean 67.31 Mbit/s)
- Flow 2 ingress (mean 31.20 Mbit/s)
- Flow 2 egress (mean 29.07 Mbit/s)
- Flow 3 ingress (mean 27.22 Mbit/s)
- Flow 3 egress (mean 25.33 Mbit/s)

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

Legend:
- Flow 1 (95th percentile 63.13 ms)
- Flow 2 (95th percentile 64.92 ms)
- Flow 3 (95th percentile 65.64 ms)
Run 8: Statistics of TCP BBR

Start at: 2018-02-05 01:07:40
End at: 2018-02-05 01:08:10
Local clock offset: 1.107 ms
Remote clock offset: -6.134 ms

# Below is generated by plot.py at 2018-02-05 02:36:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.30 Mbit/s
95th percentile per-packet one-way delay: 60.692 ms
Loss rate: 4.07%
-- Flow 1:
Average throughput: 63.98 Mbit/s
95th percentile per-packet one-way delay: 57.873 ms
Loss rate: 3.33%
-- Flow 2:
Average throughput: 27.37 Mbit/s
95th percentile per-packet one-way delay: 61.738 ms
Loss rate: 4.59%
-- Flow 3:
Average throughput: 36.39 Mbit/s
95th percentile per-packet one-way delay: 63.917 ms
Loss rate: 7.07%
Run 8: Report of TCP BBR — Data Link
Run 9: Statistics of TCP BBR

Start at: 2018-02-05 01:34:09
End at: 2018-02-05 01:34:39
Local clock offset: 1.225 ms
Remote clock offset: -3.767 ms

# Below is generated by plot.py at 2018-02-05 02:37:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.52 Mbit/s
95th percentile per-packet one-way delay: 66.206 ms
Loss rate: 5.40%
-- Flow 1:
Average throughput: 64.07 Mbit/s
95th percentile per-packet one-way delay: 65.407 ms
Loss rate: 4.49%
-- Flow 2:
Average throughput: 36.08 Mbit/s
95th percentile per-packet one-way delay: 67.243 ms
Loss rate: 6.80%
-- Flow 3:
Average throughput: 22.34 Mbit/s
95th percentile per-packet one-way delay: 66.767 ms
Loss rate: 8.42%
Run 9: Report of TCP BBR — Data Link
Run 10: Statistics of TCP BBR

Start at: 2018-02-05 02:00:35  
End at: 2018-02-05 02:01:05  
Local clock offset: 1.246 ms  
Remote clock offset: -3.913 ms

# Below is generated by plot.py at 2018-02-05 02:37:54  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.27 Mbit/s  
95th percentile per-packet one-way delay: 65.474 ms  
Loss rate: 4.24%  
-- Flow 1:  
Average throughput: 68.33 Mbit/s  
95th percentile per-packet one-way delay: 64.949 ms  
Loss rate: 3.90%  
-- Flow 2:  
Average throughput: 25.57 Mbit/s  
95th percentile per-packet one-way delay: 66.422 ms  
Loss rate: 5.07%  
-- Flow 3:  
Average throughput: 29.95 Mbit/s  
95th percentile per-packet one-way delay: 66.426 ms  
Loss rate: 5.10%
Run 10: Report of TCP BBR — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 71.10 Mbps)
  - Flow 1 egress (mean 68.33 Mbps)
  - Flow 2 ingress (mean 26.91 Mbps)
  - Flow 2 egress (mean 25.57 Mbps)
  - Flow 3 ingress (mean 31.55 Mbps)
  - Flow 3 egress (mean 29.95 Mbps)

- **Per-packet end-to-end delay (ms):**
  - Flow 1 (95th percentile 64.95 ms)
  - Flow 2 (95th percentile 66.42 ms)
  - Flow 3 (95th percentile 66.43 ms)
Run 1: Statistics of TCP Cubic

Start at: 2018-02-04 21:47:57
End at: 2018-02-04 21:48:28
Local clock offset: 0.202 ms
Remote clock offset: -7.983 ms

# Below is generated by plot.py at 2018-02-05 02:37:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.79 Mbit/s
95th percentile per-packet one-way delay: 64.102 ms
Loss rate: 0.97%
-- Flow 1:
Average throughput: 57.74 Mbit/s
95th percentile per-packet one-way delay: 63.130 ms
Loss rate: 0.72%
-- Flow 2:
Average throughput: 29.57 Mbit/s
95th percentile per-packet one-way delay: 65.356 ms
Loss rate: 1.66%
-- Flow 3:
Average throughput: 19.20 Mbit/s
95th percentile per-packet one-way delay: 65.008 ms
Loss rate: 0.99%
Run 1: Report of TCP Cubic — Data Link

Throughput (Mbps):

- Flow 1 ingress (mean 58.16 Mbps)
- Flow 1 egress (mean 57.74 Mbps)
- Flow 2 ingress (mean 30.07 Mbps)
- Flow 2 egress (mean 29.57 Mbps)
- Flow 3 ingress (mean 19.34 Mbps)
- Flow 3 egress (mean 19.20 Mbps)

Per packet one way delay (ms):

- Flow 1 (95th percentile 63.13 ms)
- Flow 2 (95th percentile 65.36 ms)
- Flow 3 (95th percentile 65.01 ms)
Run 2: Statistics of TCP Cubic

Local clock offset: -0.126 ms
Remote clock offset: -6.044 ms

# Below is generated by plot.py at 2018-02-05 02:37:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.58 Mbit/s
95th percentile per-packet one-way delay: 66.229 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 61.39 Mbit/s
95th percentile per-packet one-way delay: 65.459 ms
Loss rate: 0.71%
-- Flow 2:
Average throughput: 39.20 Mbit/s
95th percentile per-packet one-way delay: 67.855 ms
Loss rate: 0.49%
-- Flow 3:
Average throughput: 21.39 Mbit/s
95th percentile per-packet one-way delay: 65.059 ms
Loss rate: 0.55%
Run 2: Report of TCP Cubic — Data Link
Run 3: Statistics of TCP Cubic

Start at: 2018-02-04 22:38:57
End at: 2018-02-04 22:39:27
Local clock offset: -0.292 ms
Remote clock offset: -7.325 ms

# Below is generated by plot.py at 2018-02-05 02:37:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.27 Mbit/s
95th percentile per-packet one-way delay: 63.281 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 57.34 Mbit/s
95th percentile per-packet one-way delay: 64.747 ms
Loss rate: 0.46%
-- Flow 2:
Average throughput: 41.26 Mbit/s
95th percentile per-packet one-way delay: 62.279 ms
Loss rate: 0.32%
-- Flow 3:
Average throughput: 34.44 Mbit/s
95th percentile per-packet one-way delay: 62.705 ms
Loss rate: 0.54%
Run 3: Report of TCP Cubic — Data Link
Run 4: Statistics of TCP Cubic

Start at: 2018-02-04 23:05:11
End at: 2018-02-04 23:05:41
Local clock offset: -0.289 ms
Remote clock offset: -8.144 ms

# Below is generated by plot.py at 2018-02-05 02:37:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 63.83 Mbit/s
95th percentile per-packet one-way delay: 61.634 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 47.63 Mbit/s
95th percentile per-packet one-way delay: 62.610 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 12.62 Mbit/s
95th percentile per-packet one-way delay: 38.796 ms
Loss rate: 0.30%
-- Flow 3:
Average throughput: 23.52 Mbit/s
95th percentile per-packet one-way delay: 47.496 ms
Loss rate: 1.95%
Run 4: Report of TCP Cubic — Data Link
Run 5: Statistics of TCP Cubic

Start at: 2018-02-04 23:31:31
End at: 2018-02-04 23:32:01
Local clock offset: 0.044 ms
Remote clock offset: -11.262 ms

# Below is generated by plot.py at 2018-02-05 02:37:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.97 Mbit/s
95th percentile per-packet one-way delay: 63.296 ms
Loss rate: 0.81%
-- Flow 1:
Average throughput: 43.11 Mbit/s
95th percentile per-packet one-way delay: 57.901 ms
Loss rate: 0.74%
-- Flow 2:
Average throughput: 39.54 Mbit/s
95th percentile per-packet one-way delay: 60.594 ms
Loss rate: 0.71%
-- Flow 3:
Average throughput: 58.80 Mbit/s
95th percentile per-packet one-way delay: 66.256 ms
Loss rate: 1.11%
Run 5: Report of TCP Cubic — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 43.43 Mbps)  Flow 2 ingress (mean 39.82 Mbps)
Flow 1 egress (mean 43.11 Mbps)  Flow 2 egress (mean 39.54 Mbps)
Flow 3 ingress (mean 59.46 Mbps)  Flow 3 egress (mean 58.80 Mbps)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 57.90 ms)  Flow 2 (95th percentile 60.59 ms)  Flow 3 (95th percentile 66.26 ms)
Run 6: Statistics of TCP Cubic

Start at: 2018-02-04 23:58:04
End at: 2018-02-04 23:58:34
Local clock offset: 0.467 ms
Remote clock offset: -7.355 ms

# Below is generated by plot.py at 2018-02-05 02:37:55
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 85.29 Mbit/s
  95th percentile per-packet one-way delay: 55.630 ms
  Loss rate: 0.50%
-- Flow 1:
  Average throughput: 45.65 Mbit/s
  95th percentile per-packet one-way delay: 55.393 ms
  Loss rate: 0.66%
-- Flow 2:
  Average throughput: 41.94 Mbit/s
  95th percentile per-packet one-way delay: 57.855 ms
  Loss rate: 0.32%
-- Flow 3:
  Average throughput: 35.30 Mbit/s
  95th percentile per-packet one-way delay: 45.876 ms
  Loss rate: 0.31%
Run 6: Report of TCP Cubic — Data Link

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

- Flow 1 ingress (mean 45.96 Mbit/s)
- Flow 1 egress (mean 45.65 Mbit/s)
- Flow 2 ingress (mean 42.68 Mbit/s)
- Flow 2 egress (mean 41.94 Mbit/s)
- Flow 3 ingress (mean 35.41 Mbit/s)
- Flow 3 egress (mean 35.30 Mbit/s)

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

- Flow 1 (95th percentile 55.39 ms)
- Flow 2 (95th percentile 57.85 ms)
- Flow 3 (95th percentile 45.88 ms)
Run 7: Statistics of TCP Cubic

Start at: 2018-02-05 00:24:06
End at: 2018-02-05 00:24:36
Local clock offset: 0.771 ms
Remote clock offset: -6.456 ms

# Below is generated by plot.py at 2018-02-05 02:38:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 73.97 Mbit/s
95th percentile per-packet one-way delay: 58.017 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 37.73 Mbit/s
95th percentile per-packet one-way delay: 58.304 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 33.17 Mbit/s
95th percentile per-packet one-way delay: 48.237 ms
Loss rate: 0.36%
-- Flow 3:
Average throughput: 42.61 Mbit/s
95th percentile per-packet one-way delay: 59.735 ms
Loss rate: 1.40%
Run 7: Report of TCP Cubic — Data Link

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

Start at: 2018-02-05 00:51:16
End at: 2018-02-05 00:51:46
Local clock offset: 0.998 ms
Remote clock offset: -4.268 ms

# Below is generated by plot.py at 2018-02-05 02:38:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 82.82 Mbit/s
95th percentile per-packet one-way delay: 67.891 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 45.11 Mbit/s
95th percentile per-packet one-way delay: 67.786 ms
Loss rate: 1.08%
-- Flow 2:
Average throughput: 25.83 Mbit/s
95th percentile per-packet one-way delay: 65.928 ms
Loss rate: 0.80%
-- Flow 3:
Average throughput: 61.84 Mbit/s
95th percentile per-packet one-way delay: 68.796 ms
Loss rate: 1.21%
Run 8: Report of TCP Cubic — Data Link

![Graph of Throughput vs Time]

- Flow 1 ing: mean 45.60 Mbps
- Flow 1 egress: mean 45.11 Mbps
- Flow 2 ing: mean 26.64 Mbps
- Flow 2 egress: mean 25.83 Mbps
- Flow 3 ing: mean 62.60 Mbps
- Flow 3 egress: mean 61.84 Mbps

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

- Flow 1 95th percentile 67.79 ms
- Flow 2 95th percentile 65.93 ms
- Flow 3 95th percentile 68.80 ms
Run 9: Statistics of TCP Cubic

Start at: 2018-02-05 01:17:54
End at: 2018-02-05 01:18:24
Local clock offset: 1.102 ms
Remote clock offset: -3.675 ms

# Below is generated by plot.py at 2018-02-05 02:39:09
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 95.30 Mbit/s
  95th percentile per-packet one-way delay: 63.474 ms
  Loss rate: 0.56%
-- Flow 1:
  Average throughput: 55.18 Mbit/s
  95th percentile per-packet one-way delay: 64.284 ms
  Loss rate: 0.62%
-- Flow 2:
  Average throughput: 40.40 Mbit/s
  95th percentile per-packet one-way delay: 61.576 ms
  Loss rate: 0.38%
-- Flow 3:
  Average throughput: 39.79 Mbit/s
  95th percentile per-packet one-way delay: 62.315 ms
  Loss rate: 0.67%
Run 9: Report of TCP Cubic — Data Link

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

- Flow 1 ingress (mean 55.55 Mbit/s)
- Flow 1 egress (mean 55.18 Mbit/s)
- Flow 2 ingress (mean 40.58 Mbit/s)
- Flow 2 egress (mean 40.40 Mbit/s)
- Flow 3 ingress (mean 40.11 Mbit/s)
- Flow 3 egress (mean 39.79 Mbit/s)

- Flow 1 (95th percentile 64.28 ms)
- Flow 2 (95th percentile 61.58 ms)
- Flow 3 (95th percentile 62.31 ms)
Run 10: Statistics of TCP Cubic

Start at: 2018-02-05 01:44:13
End at: 2018-02-05 01:44:43
Local clock offset: 1.306 ms
Remote clock offset: -3.731 ms

# Below is generated by plot.py at 2018-02-05 02:39:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.94 Mbit/s
95th percentile per-packet one-way delay: 68.016 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 59.20 Mbit/s
95th percentile per-packet one-way delay: 67.611 ms
Loss rate: 0.85%
-- Flow 2:
Average throughput: 45.44 Mbit/s
95th percentile per-packet one-way delay: 68.136 ms
Loss rate: 0.58%
-- Flow 3:
Average throughput: 19.66 Mbit/s
95th percentile per-packet one-way delay: 68.391 ms
Loss rate: 0.85%
Run 10: Report of TCP Cubic — Data Link

![Graph 1: Throughput (Mbps)]

- **Flow 1 ingress** (mean 59.70 Mbps)
- **Flow 1 egress** (mean 59.20 Mbps)
- **Flow 2 ingress** (mean 45.69 Mbps)
- **Flow 2 egress** (mean 45.44 Mbps)
- **Flow 3 ingress** (mean 19.78 Mbps)
- **Flow 3 egress** (mean 19.66 Mbps)

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

- **Flow 1** (95th percentile 67.61 ms)
- **Flow 2** (95th percentile 68.14 ms)
- **Flow 3** (95th percentile 68.39 ms)
Run 1: Statistics of LEDBAT

Start at: 2018-02-04 21:55:00
End at: 2018-02-04 21:55:30
Local clock offset: -0.019 ms
Remote clock offset: -8.317 ms

# Below is generated by plot.py at 2018-02-05 02:39:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 54.21 Mbit/s
95th percentile per-packet one-way delay: 53.560 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 30.81 Mbit/s
95th percentile per-packet one-way delay: 49.468 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 25.38 Mbit/s
95th percentile per-packet one-way delay: 54.603 ms
Loss rate: 0.21%
-- Flow 3:
Average throughput: 19.66 Mbit/s
95th percentile per-packet one-way delay: 56.374 ms
Loss rate: 0.33%
Run 1: Report of LEDBAT — Data Link

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

- Flow 1 ingress (mean 30.86 Mbps/s)
- Flow 1 egress (mean 30.81 Mbps/s)
- Flow 2 ingress (mean 25.43 Mbps/s)
- Flow 2 egress (mean 25.38 Mbps/s)
- Flow 3 ingress (mean 19.73 Mbps/s)
- Flow 3 egress (mean 19.66 Mbps/s)

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

- Flow 1 (95th percentile 49.47 ms)
- Flow 2 (95th percentile 54.60 ms)
- Flow 3 (95th percentile 56.37 ms)
Run 2: Statistics of LEDBAT

Start at: 2018-02-04 22:20:39  
End at: 2018-02-04 22:21:09  
Local clock offset: -0.303 ms  
Remote clock offset: -6.313 ms

# Below is generated by plot.py at 2018-02-05 02:39:11
# Datalink statistics
   -- Total of 3 flows:
      Average throughput: 66.44 Mbit/s
      95th percentile per-packet one-way delay: 58.164 ms
      Loss rate: 0.08%
   -- Flow 1:
      Average throughput: 39.79 Mbit/s
      95th percentile per-packet one-way delay: 57.427 ms
      Loss rate: 0.06%
   -- Flow 2:
      Average throughput: 29.39 Mbit/s
      95th percentile per-packet one-way delay: 59.231 ms
      Loss rate: 0.09%
   -- Flow 3:
      Average throughput: 21.43 Mbit/s
      95th percentile per-packet one-way delay: 57.019 ms
      Loss rate: 0.15%
Run 2: Report of LEDBAT — Data Link

![Graph 1: Throughput (Mbps)]

*Flow 1 ingress (mean 39.84 Mbps)*
*Flow 1 egress (mean 39.79 Mbps)*
*Flow 2 ingress (mean 29.45 Mbps)*
*Flow 2 egress (mean 29.39 Mbps)*
*Flow 3 ingress (mean 21.46 Mbps)*
*Flow 3 egress (mean 21.43 Mbps)*

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

*Flow 1 (95th percentile 57.43 ms)*
*Flow 2 (95th percentile 59.23 ms)*
*Flow 3 (95th percentile 57.02 ms)*
Run 3: Statistics of LEDBAT

End at: 2018-02-04 22:46:53
Local clock offset: -0.312 ms
Remote clock offset: -7.199 ms

# Below is generated by plot.py at 2018-02-05 02:39:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 58.50 Mbit/s
95th percentile per-packet one-way delay: 65.139 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 32.88 Mbit/s
95th percentile per-packet one-way delay: 64.203 ms
Loss rate: 0.28%
-- Flow 2:
Average throughput: 25.79 Mbit/s
95th percentile per-packet one-way delay: 65.913 ms
Loss rate: 0.37%
-- Flow 3:
Average throughput: 25.55 Mbit/s
95th percentile per-packet one-way delay: 65.125 ms
Loss rate: 0.04%
Run 3: Report of LEDBAT — Data Link

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

- **Flow 1 ingress (mean 32.95 Mbit/s)**
- **Flow 1 egress (mean 32.88 Mbit/s)**
- **Flow 2 ingress (mean 25.88 Mbit/s)**
- **Flow 2 egress (mean 25.79 Mbit/s)**
- **Flow 3 ingress (mean 25.57 Mbit/s)**
- **Flow 3 egress (mean 25.55 Mbit/s)**

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

- **Flow 1 (95th percentile 64.20 ms)**
- **Flow 2 (95th percentile 65.91 ms)**
- **Flow 3 (95th percentile 65.12 ms)**
Run 4: Statistics of LEDBAT

Start at: 2018-02-04 23:12:37
End at: 2018-02-04 23:13:07
Local clock offset: -0.229 ms
Remote clock offset: -8.926 ms

# Below is generated by plot.py at 2018-02-05 02:39:11
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 56.42 Mbit/s
  95th percentile per-packet one-way delay: 61.011 ms
  Loss rate: 0.11%
-- Flow 1:
  Average throughput: 30.44 Mbit/s
  95th percentile per-packet one-way delay: 60.032 ms
  Loss rate: 0.11%
-- Flow 2:
  Average throughput: 33.90 Mbit/s
  95th percentile per-packet one-way delay: 63.284 ms
  Loss rate: 0.09%
-- Flow 3:
  Average throughput: 10.32 Mbit/s
  95th percentile per-packet one-way delay: 58.988 ms
  Loss rate: 0.27%
Run 4: Report of LEDBAT — Data Link
Run 5: Statistics of LEDBAT

Start at: 2018-02-04 23:39:02
End at: 2018-02-04 23:39:32
Local clock offset: 0.091 ms
Remote clock offset: -10.948 ms

# Below is generated by plot.py at 2018-02-05 02:39:34
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 66.79 Mbit/s
  95th percentile per-packet one-way delay: 50.298 ms
  Loss rate: 0.09%
-- Flow 1:
  Average throughput: 39.32 Mbit/s
  95th percentile per-packet one-way delay: 41.112 ms
  Loss rate: 0.09%
-- Flow 2:
  Average throughput: 25.88 Mbit/s
  95th percentile per-packet one-way delay: 51.407 ms
  Loss rate: 0.12%
-- Flow 3:
  Average throughput: 30.86 Mbit/s
  95th percentile per-packet one-way delay: 54.895 ms
  Loss rate: 0.00%
Run 5: Report of LEDBAT — Data Link

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

- **Flow 1 ingress** (mean 39.39 Mbps) (dashed blue)
- **Flow 1 egress** (mean 39.32 Mbps) (solid blue)
- **Flow 2 ingress** (mean 25.95 Mbps) (dashed green)
- **Flow 2 egress** (mean 25.88 Mbps) (solid green)
- **Flow 3 ingress** (mean 30.95 Mbps) (dashed red)
- **Flow 3 egress** (mean 30.86 Mbps) (solid red)

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

- **Flow 1** (95th percentile 41.11 ms) (blue dotted)
- **Flow 2** (95th percentile 51.41 ms) (green dotted)
- **Flow 3** (95th percentile 54.90 ms) (red dotted)
Run 6: Statistics of LEDBAT

Start at: 2018-02-05 00:05:21
End at: 2018-02-05 00:05:51
Local clock offset: 0.486 ms
Remote clock offset: -7.563 ms

# Below is generated by plot.py at 2018-02-05 02:39:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 47.93 Mbit/s
95th percentile per-packet one-way delay: 38.433 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 29.12 Mbit/s
95th percentile per-packet one-way delay: 38.578 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 19.33 Mbit/s
95th percentile per-packet one-way delay: 38.893 ms
Loss rate: 0.37%
-- Flow 3:
Average throughput: 17.94 Mbit/s
95th percentile per-packet one-way delay: 34.400 ms
Loss rate: 0.19%
Run 6: Report of LEDBAT — Data Link

![Graph of throughput over time](image1)

- Flow 1 ingress (mean 29.15 Mbit/s)
- Flow 1 egress (mean 29.12 Mbit/s)
- Flow 2 ingress (mean 19.40 Mbit/s)
- Flow 2 egress (mean 19.33 Mbit/s)
- Flow 3 ingress (mean 17.97 Mbit/s)
- Flow 3 egress (mean 17.94 Mbit/s)

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

- Flow 1 (95th percentile 38.58 ms)
- Flow 2 (95th percentile 38.89 ms)
- Flow 3 (95th percentile 34.40 ms)
Run 7: Statistics of LEDBAT

Start at: 2018-02-05 00:31:41
End at: 2018-02-05 00:32:11
Local clock offset: 0.858 ms
Remote clock offset: -6.262 ms

# Below is generated by plot.py at 2018-02-05 02:39:39
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 55.78 Mbit/s
  95th percentile per-packet one-way delay: 43.473 ms
  Loss rate: 0.21%
-- Flow 1:
  Average throughput: 34.68 Mbit/s
  95th percentile per-packet one-way delay: 43.029 ms
  Loss rate: 0.14%
-- Flow 2:
  Average throughput: 24.07 Mbit/s
  95th percentile per-packet one-way delay: 43.672 ms
  Loss rate: 0.31%
-- Flow 3:
  Average throughput: 15.30 Mbit/s
  95th percentile per-packet one-way delay: 46.194 ms
  Loss rate: 0.30%
Run 7: Report of LEDBAT — Data Link
Run 8: Statistics of LEDBAT

Start at: 2018-02-05 00:58:46
End at: 2018-02-05 00:59:16
Local clock offset: 1.011 ms
Remote clock offset: -4.285 ms

# Below is generated by plot.py at 2018-02-05 02:39:39
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 46.99 Mbit/s
  95th percentile per-packet one-way delay: 49.334 ms
  Loss rate: 0.16%
-- Flow 1:
  Average throughput: 25.38 Mbit/s
  95th percentile per-packet one-way delay: 47.046 ms
  Loss rate: 0.15%
-- Flow 2:
  Average throughput: 21.51 Mbit/s
  95th percentile per-packet one-way delay: 47.732 ms
  Loss rate: 0.19%
-- Flow 3:
  Average throughput: 22.01 Mbit/s
  95th percentile per-packet one-way delay: 52.920 ms
  Loss rate: 0.12%
Run 8: Report of LEDBAT — Data Link

![Graph of Throughput vs Time}

- **Flow 1 ingress (mean 25.42 Mbit/s)**
- **Flow 1 egress (mean 25.38 Mbit/s)**
- **Flow 2 ingress (mean 21.35 Mbit/s)**
- **Flow 2 egress (mean 21.51 Mbit/s)**
- **Flow 3 ingress (mean 22.04 Mbit/s)**
- **Flow 3 egress (mean 22.01 Mbit/s)**

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

- **Flow 1 (95th percentile 47.05 ms)**
- **Flow 2 (95th percentile 47.73 ms)**
- **Flow 3 (95th percentile 52.92 ms)**
Run 9: Statistics of LEDBAT

Start at: 2018-02-05 01:25:24
End at: 2018-02-05 01:25:54
Local clock offset: 1.182 ms
Remote clock offset: -3.466 ms

# Below is generated by plot.py at 2018-02-05 02:39:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 41.29 Mbit/s
95th percentile per-packet one-way delay: 66.589 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 21.61 Mbit/s
95th percentile per-packet one-way delay: 65.181 ms
Loss rate: 0.60%
-- Flow 2:
Average throughput: 23.96 Mbit/s
95th percentile per-packet one-way delay: 67.133 ms
Loss rate: 0.15%
-- Flow 3:
Average throughput: 11.31 Mbit/s
95th percentile per-packet one-way delay: 67.767 ms
Loss rate: 0.57%
Run 9: Report of LEDBAT — Data Link

[Graph showing throughput and per-packet end-to-end delay over time for different flows.

Legend:
- Flow 1 ingress (mean 21.74 Mbit/s)
- Flow 1 egress (mean 21.61 Mbit/s)
- Flow 2 ingress (mean 24.00 Mbit/s)
- Flow 2 egress (mean 23.96 Mbit/s)
- Flow 3 ingress (mean 11.37 Mbit/s)
- Flow 3 egress (mean 11.31 Mbit/s)
Run 10: Statistics of LEDBAT

Start at: 2018-02-05 01:51:36
End at: 2018-02-05 01:52:06
Local clock offset: 1.298 ms
Remote clock offset: -3.311 ms

# Below is generated by plot.py at 2018-02-05 02:39:50
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 59.16 Mbit/s
  95th percentile per-packet one-way delay: 52.595 ms
  Loss rate: 0.14%
-- Flow 1:
  Average throughput: 34.65 Mbit/s
  95th percentile per-packet one-way delay: 51.147 ms
  Loss rate: 0.11%
-- Flow 2:
  Average throughput: 27.63 Mbit/s
  95th percentile per-packet one-way delay: 53.320 ms
  Loss rate: 0.09%
-- Flow 3:
  Average throughput: 18.49 Mbit/s
  95th percentile per-packet one-way delay: 53.830 ms
  Loss rate: 0.40%
Run 10: Report of LEDBAT — Data Link
Run 1: Statistics of PCC

Start at: 2018-02-04 22:07:56
End at: 2018-02-04 22:08:26
Local clock offset: -0.045 ms
Remote clock offset: -5.988 ms

# Below is generated by plot.py at 2018-02-05 02:40:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.52 Mbit/s
95th percentile per-packet one-way delay: 66.286 ms
Loss rate: 4.08%

-- Flow 1:
Average throughput: 84.01 Mbit/s
95th percentile per-packet one-way delay: 65.357 ms
Loss rate: 3.60%

-- Flow 2:
Average throughput: 4.08 Mbit/s
95th percentile per-packet one-way delay: 68.140 ms
Loss rate: 6.37%

-- Flow 3:
Average throughput: 14.55 Mbit/s
95th percentile per-packet one-way delay: 69.955 ms
Loss rate: 10.69%
Run 1: Report of PCC — Data Link

[Graph showing throughput over time for different flows]
Run 2: Statistics of PCC

Start at: 2018-02-04 22:33:18
End at: 2018-02-04 22:33:48
Local clock offset: -0.328 ms
Remote clock offset: -6.701 ms

# Below is generated by plot.py at 2018-02-05 02:40:39
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 91.10 Mbit/s
  95th percentile per-packet one-way delay: 47.002 ms
  Loss rate: 1.04%
-- Flow 1:
  Average throughput: 86.21 Mbit/s
  95th percentile per-packet one-way delay: 46.312 ms
  Loss rate: 1.07%
-- Flow 2:
  Average throughput: 4.77 Mbit/s
  95th percentile per-packet one-way delay: 54.776 ms
  Loss rate: 0.52%
-- Flow 3:
  Average throughput: 5.22 Mbit/s
  95th percentile per-packet one-way delay: 50.521 ms
  Loss rate: 0.57%
Run 2: Report of PCC — Data Link

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

- Flow 2 ingress (mean 87.14 Mbit/s)
- Flow 2 egress (mean 86.21 Mbit/s)
- Flow 3 ingress (mean 4.60 Mbit/s)
- Flow 3 egress (mean 4.77 Mbit/s)
- Flow 3 ingress (mean 5.25 Mbit/s)
- Flow 3 egress (mean 5.22 Mbit/s)

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

- Flow 1 (95th percentile 46.31 ms)
- Flow 2 (95th percentile 54.78 ms)
- Flow 3 (95th percentile 50.52 ms)
Run 3: Statistics of PCC

Start at: 2018-02-04 22:59:26
End at: 2018-02-04 22:59:56
Local clock offset: -0.298 ms
Remote clock offset: -7.789 ms

# Below is generated by plot.py at 2018-02-05 02:40:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.50 Mbit/s
95th percentile per-packet one-way delay: 68.828 ms
Loss rate: 12.70%
-- Flow 1:
Average throughput: 81.62 Mbit/s
95th percentile per-packet one-way delay: 68.661 ms
Loss rate: 12.14%
-- Flow 2:
Average throughput: 14.01 Mbit/s
95th percentile per-packet one-way delay: 69.750 ms
Loss rate: 17.03%
-- Flow 3:
Average throughput: 1.71 Mbit/s
95th percentile per-packet one-way delay: 69.113 ms
Loss rate: 18.36%
Run 3: Report of PCC — Data Link

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

- Flow 1 ingress (mean 92.94 Mbit/s)
- Flow 1 egress (mean 81.62 Mbit/s)
- Flow 2 ingress (mean 16.89 Mbit/s)
- Flow 2 egress (mean 14.01 Mbit/s)
- Flow 3 ingress (mean 2.10 Mbit/s)
- Flow 3 egress (mean 1.71 Mbit/s)

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

- Flow 1 (95th percentile 68.66 ms)
- Flow 2 (95th percentile 69.75 ms)
- Flow 3 (95th percentile 69.11 ms)
Run 4: Statistics of PCC

Start at: 2018-02-04 23:25:51
End at: 2018-02-04 23:26:21
Local clock offset: -0.038 ms
Remote clock offset: -9.28 ms

# Below is generated by plot.py at 2018-02-05 02:40:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.98 Mbit/s
95th percentile per-packet one-way delay: 61.692 ms
Loss rate: 2.69%
-- Flow 1:
Average throughput: 76.53 Mbit/s
95th percentile per-packet one-way delay: 61.428 ms
Loss rate: 2.76%
-- Flow 2:
Average throughput: 17.46 Mbit/s
95th percentile per-packet one-way delay: 62.757 ms
Loss rate: 2.81%
-- Flow 3:
Average throughput: 8.63 Mbit/s
95th percentile per-packet one-way delay: 58.674 ms
Loss rate: 0.25%
Run 4: Report of PCC — Data Link

Graphs showing throughput (Mbps) and per-packet one-way delay (ms) for different flows.
Run 5: Statistics of PCC

Start at: 2018-02-04 23:52:24
End at: 2018-02-04 23:52:54
Local clock offset: 0.411 ms
Remote clock offset: -8.116 ms

# Below is generated by plot.py at 2018-02-05 02:41:00
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 90.56 Mbit/s
  95th percentile per-packet one-way delay: 63.605 ms
  Loss rate: 3.67%
-- Flow 1:
  Average throughput: 82.52 Mbit/s
  95th percentile per-packet one-way delay: 62.532 ms
  Loss rate: 3.36%
-- Flow 2:
  Average throughput: 5.25 Mbit/s
  95th percentile per-packet one-way delay: 65.469 ms
  Loss rate: 4.16%
-- Flow 3:
  Average throughput: 13.96 Mbit/s
  95th percentile per-packet one-way delay: 68.036 ms
  Loss rate: 8.63%
Run 5: Report of PCC — Data Link

![Graph of Throughput and Delay](image)

Time (s) vs Throughput (Mbps)
- **Flow 1 ingress** (mean 85.39 Mbps)
- **Flow 1 egress** (mean 82.52 Mbps)
- **Flow 2 ingress** (mean 5.40 Mbps)
- **Flow 2 egress** (mean 5.25 Mbps)
- **Flow 3 ingress** (mean 15.28 Mbps)
- **Flow 3 egress** (mean 13.96 Mbps)

Time (s) vs Delay (ms)
- **Flow 1** (95th percentile 62.53 ms)
- **Flow 2** (95th percentile 65.47 ms)
- **Flow 3** (95th percentile 68.04 ms)
Run 6: Statistics of PCC

Start at: 2018-02-05 00:18:28
End at: 2018-02-05 00:18:58
Local clock offset: 0.636 ms
Remote clock offset: -8.842 ms

# Below is generated by plot.py at 2018-02-05 02:41:01
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 91.62 Mbit/s
  95th percentile per-packet one-way delay: 55.631 ms
  Loss rate: 0.92%
-- Flow 1:
  Average throughput: 83.57 Mbit/s
  95th percentile per-packet one-way delay: 55.352 ms
  Loss rate: 0.96%
-- Flow 2:
  Average throughput: 9.92 Mbit/s
  95th percentile per-packet one-way delay: 56.468 ms
  Loss rate: 0.48%
-- Flow 3:
  Average throughput: 4.43 Mbit/s
  95th percentile per-packet one-way delay: 61.857 ms
  Loss rate: 0.64%
Run 6: Report of PCC — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 84.38 Mbit/s)
Flow 1 egress (mean 83.57 Mbit/s)
Flow 2 ingress (mean 9.97 Mbit/s)
Flow 2 egress (mean 9.92 Mbit/s)
Flow 3 ingress (mean 4.46 Mbit/s)
Flow 3 egress (mean 4.43 Mbit/s)

Per packet end-to-end delay (ms)

Time (s)

Flow 1 (95th percentile 55.35 ms)
Flow 2 (95th percentile 56.47 ms)
Flow 3 (95th percentile 61.86 ms)
Run 7: Statistics of PCC

Start at: 2018-02-05 00:45:25
End at: 2018-02-05 00:45:55
Local clock offset: 0.892 ms
Remote clock offset: -5.182 ms

# Below is generated by plot.py at 2018-02-05 02:41:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.19 Mbit/s
95th percentile per-packet one-way delay: 68.725 ms
Loss rate: 7.83%
-- Flow 1:
Average throughput: 83.55 Mbit/s
95th percentile per-packet one-way delay: 68.650 ms
Loss rate: 7.69%
-- Flow 2:
Average throughput: 7.52 Mbit/s
95th percentile per-packet one-way delay: 69.578 ms
Loss rate: 9.87%
-- Flow 3:
Average throughput: 1.94 Mbit/s
95th percentile per-packet one-way delay: 67.694 ms
Loss rate: 9.45%
Run 7: Report of PCC — Data Link

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

![Graph 2: Per-packet one-way delay (ms)](image2)
Run 8: Statistics of PCC

Start at: 2018-02-05 01:12:07
End at: 2018-02-05 01:12:37
Local clock offset: 1.052 ms
Remote clock offset: -6.01 ms

# Below is generated by plot.py at 2018-02-05 02:41:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.89 Mbit/s
95th percentile per-packet one-way delay: 63.946 ms
Loss rate: 9.28%
-- Flow 1:
Average throughput: 73.49 Mbit/s
95th percentile per-packet one-way delay: 62.547 ms
Loss rate: 7.39%
-- Flow 2:
Average throughput: 7.83 Mbit/s
95th percentile per-packet one-way delay: 64.959 ms
Loss rate: 10.53%
-- Flow 3:
Average throughput: 27.90 Mbit/s
95th percentile per-packet one-way delay: 66.928 ms
Loss rate: 21.44%
Run 8: Report of PCC — Data Link

Graph showing throughput and per-packet round-trip delay over time for different flows.
Run 9: Statistics of PCC

Start at: 2018-02-05 01:38:32
End at: 2018-02-05 01:39:02
Local clock offset: 1.287 ms
Remote clock offset: -5.872 ms

# Below is generated by plot.py at 2018-02-05 02:41:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.82 Mbit/s
95th percentile per-packet one-way delay: 60.746 ms
Loss rate: 2.87%
-- Flow 1:
Average throughput: 78.00 Mbit/s
95th percentile per-packet one-way delay: 60.569 ms
Loss rate: 2.93%
-- Flow 2:
Average throughput: 9.24 Mbit/s
95th percentile per-packet one-way delay: 62.269 ms
Loss rate: 3.04%
-- Flow 3:
Average throughput: 17.25 Mbit/s
95th percentile per-packet one-way delay: 60.897 ms
Loss rate: 1.88%
Run 9: Report of PCC — Data Link

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

- **Flow 1 ingress** (mean 80.35 Mbit/s)
- **Flow 1 egress** (mean 78.00 Mbit/s)
- **Flow 2 ingress** (mean 9.53 Mbit/s)
- **Flow 2 egress** (mean 9.24 Mbit/s)
- **Flow 3 ingress** (mean 17.58 Mbit/s)
- **Flow 3 egress** (mean 17.25 Mbit/s)

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

- **Flow 1 (95th percentile 60.57 ms)**
- **Flow 2 (95th percentile 62.27 ms)**
- **Flow 3 (95th percentile 66.90 ms)**
Run 10: Statistics of PCC

Start at: 2018-02-05 02:04:56
End at: 2018-02-05 02:05:26
Local clock offset: 1.158 ms
Remote clock offset: -6.02 ms

# Below is generated by plot.py at 2018-02-05 02:41:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 81.56 Mbit/s
95th percentile per-packet one-way delay: 54.473 ms
Loss rate: 1.07%
-- Flow 1:
Average throughput: 75.52 Mbit/s
95th percentile per-packet one-way delay: 53.725 ms
Loss rate: 1.12%
-- Flow 2:
Average throughput: 4.94 Mbit/s
95th percentile per-packet one-way delay: 56.730 ms
Loss rate: 0.33%
-- Flow 3:
Average throughput: 8.36 Mbit/s
95th percentile per-packet one-way delay: 61.472 ms
Loss rate: 0.35%
Run 10: Report of PCC — Data Link

---

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

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

---

<table>
<thead>
<tr>
<th>Flow 1 ingress (mean 76.38 Mbps)</th>
<th>Flow 1 egress (mean 75.52 Mbps)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow 2 ingress (mean 4.96 Mbps)</td>
<td>Flow 2 egress (mean 4.94 Mbps)</td>
</tr>
<tr>
<td>Flow 3 ingress (mean 8.39 Mbps)</td>
<td>Flow 3 egress (mean 8.36 Mbps)</td>
</tr>
</tbody>
</table>

---

Flow 1 (95th percentile 53.73 ms)  Flow 2 (95th percentile 56.73 ms)  Flow 3 (95th percentile 61.47 ms)
Run 1: Statistics of QUIC Cubic

Start at: 2018-02-04 22:00:47
End at: 2018-02-04 22:01:17
Local clock offset: 0.044 ms
Remote clock offset: -8.534 ms

# Below is generated by plot.py at 2018-02-05 02:42:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.35 Mbit/s
95th percentile per-packet one-way delay: 62.790 ms
Loss rate: 1.23%
-- Flow 1:
Average throughput: 53.96 Mbit/s
95th percentile per-packet one-way delay: 61.853 ms
Loss rate: 1.33%
-- Flow 2:
Average throughput: 30.86 Mbit/s
95th percentile per-packet one-way delay: 62.920 ms
Loss rate: 1.17%
-- Flow 3:
Average throughput: 32.92 Mbit/s
95th percentile per-packet one-way delay: 64.014 ms
Loss rate: 0.81%
Run 1: Report of QUIC Cubic — Data Link
Run 2: Statistics of QUIC Cubic

Start at: 2018-02-04 22:26:21
End at: 2018-02-04 22:26:51
Local clock offset: -0.281 ms
Remote clock offset: -6.928 ms

# Below is generated by plot.py at 2018-02-05 02:42:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.96 Mbit/s
95th percentile per-packet one-way delay: 65.223 ms
Loss rate: 1.03%
-- Flow 1:
Average throughput: 62.96 Mbit/s
95th percentile per-packet one-way delay: 65.258 ms
Loss rate: 1.28%
-- Flow 2:
Average throughput: 25.45 Mbit/s
95th percentile per-packet one-way delay: 65.577 ms
Loss rate: 0.36%
-- Flow 3:
Average throughput: 15.46 Mbit/s
95th percentile per-packet one-way delay: 58.326 ms
Loss rate: 0.19%
Run 2: Report of QUIC Cubic — Data Link
Run 3: Statistics of QUIC Cubic

Start at: 2018-02-04 22:52:17
End at: 2018-02-04 22:52:47
Local clock offset: -0.298 ms
Remote clock offset: -7.982 ms

# Below is generated by plot.py at 2018-02-05 02:42:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 81.70 Mbit/s
95th percentile per-packet one-way delay: 62.620 ms
Loss rate: 2.54%
-- Flow 1:
Average throughput: 46.23 Mbit/s
95th percentile per-packet one-way delay: 61.615 ms
Loss rate: 1.86%
-- Flow 2:
Average throughput: 44.29 Mbit/s
95th percentile per-packet one-way delay: 62.868 ms
Loss rate: 4.07%
-- Flow 3:
Average throughput: 18.35 Mbit/s
95th percentile per-packet one-way delay: 65.161 ms
Loss rate: 0.06%
Run 3: Report of QUIC Cubic — Data Link

![Graph of Throughput vs Time](image1)

- **Flow 1 ingress** (mean 47.15 Mbit/s)
- **Flow 1 egress** (mean 46.23 Mbit/s)
- **Flow 2 ingress** (mean 46.26 Mbit/s)
- **Flow 2 egress** (mean 44.29 Mbit/s)
- **Flow 3 ingress** (mean 18.40 Mbit/s)
- **Flow 3 egress** (mean 18.35 Mbit/s)

![Graph of Per-microsecond one-way delay vs Time](image2)

- **Flow 1** (95th percentile 61.62 ms)
- **Flow 2** (95th percentile 62.87 ms)
- **Flow 3** (95th percentile 65.16 ms)
Run 4: Statistics of QUIC Cubic

Start at: 2018-02-04 23:18:37
End at: 2018-02-04 23:19:07
Local clock offset: -0.149 ms
Remote clock offset: -8.678 ms

# Below is generated by plot.py at 2018-02-05 02:42:26
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 87.47 Mbit/s
  95th percentile per-packet one-way delay: 63.993 ms
  Loss rate: 1.70%
-- Flow 1:
  Average throughput: 56.13 Mbit/s
  95th percentile per-packet one-way delay: 63.696 ms
  Loss rate: 1.91%
-- Flow 2:
  Average throughput: 40.91 Mbit/s
  95th percentile per-packet one-way delay: 64.355 ms
  Loss rate: 1.45%
-- Flow 3:
  Average throughput: 12.82 Mbit/s
  95th percentile per-packet one-way delay: 64.659 ms
  Loss rate: 0.54%
Run 4: Report of QUIC Cubic — Data Link
Run 5: Statistics of QUIC Cubic

Start at: 2018-02-04 23:45:01
End at: 2018-02-04 23:45:31
Local clock offset: 0.297 ms
Remote clock offset: -8.524 ms

# Below is generated by plot.py at 2018-02-05 02:42:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.33 Mbit/s
95th percentile per-packet one-way delay: 66.362 ms
Loss rate: 1.30%
-- Flow 1:
Average throughput: 58.69 Mbit/s
95th percentile per-packet one-way delay: 66.095 ms
Loss rate: 1.56%
-- Flow 2:
Average throughput: 29.02 Mbit/s
95th percentile per-packet one-way delay: 67.022 ms
Loss rate: 0.77%
-- Flow 3:
Average throughput: 19.30 Mbit/s
95th percentile per-packet one-way delay: 64.527 ms
Loss rate: 0.56%
Run 5: Report of QUIC Cubic — Data Link

![Graph 1]

![Graph 2]
Run 6: Statistics of QUIC Cubic

Start at: 2018-02-05 00:11:11
End at: 2018-02-05 00:11:41
Local clock offset: 0.557 ms
Remote clock offset: -9.248 ms

# Below is generated by plot.py at 2018-02-05 02:42:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.24 Mbit/s
95th percentile per-packet one-way delay: 64.254 ms
Loss rate: 1.88%
-- Flow 1:
Average throughput: 49.73 Mbit/s
95th percentile per-packet one-way delay: 63.206 ms
Loss rate: 1.20%
-- Flow 2:
Average throughput: 41.85 Mbit/s
95th percentile per-packet one-way delay: 65.063 ms
Loss rate: 3.12%
-- Flow 3:
Average throughput: 29.55 Mbit/s
95th percentile per-packet one-way delay: 64.358 ms
Loss rate: 1.71%
Run 6: Report of QUIC Cubic — Data Link
Run 7: Statistics of QUIC Cubic

Start at: 2018-02-05 00:37:41
End at: 2018-02-05 00:38:11
Local clock offset: 0.941 ms
Remote clock offset: -5.302 ms

# Below is generated by plot.py at 2018-02-05 02:43:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 82.21 Mbit/s
95th percentile per-packet one-way delay: 56.232 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 42.23 Mbit/s
95th percentile per-packet one-way delay: 48.661 ms
Loss rate: 0.73%
-- Flow 2:
Average throughput: 34.75 Mbit/s
95th percentile per-packet one-way delay: 56.575 ms
Loss rate: 1.35%
-- Flow 3:
Average throughput: 51.33 Mbit/s
95th percentile per-packet one-way delay: 60.191 ms
Loss rate: 0.42%
Run 7: Report of QUIC Cubic — Data Link

![Graph 1: Throughput (Mbps)]

![Graph 2: Packet round trip delay (ms)]
Run 8: Statistics of QUIC Cubic

Start at: 2018-02-05 01:04:38
End at: 2018-02-05 01:05:08
Local clock offset: 1.066 ms
Remote clock offset: -4.016 ms

# Below is generated by plot.py at 2018-02-05 02:43:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.30 Mbit/s
95th percentile per-packet one-way delay: 65.999 ms
Loss rate: 2.05%
-- Flow 1:
Average throughput: 56.99 Mbit/s
95th percentile per-packet one-way delay: 66.095 ms
Loss rate: 1.95%
-- Flow 2:
Average throughput: 22.58 Mbit/s
95th percentile per-packet one-way delay: 67.009 ms
Loss rate: 1.37%
-- Flow 3:
Average throughput: 34.62 Mbit/s
95th percentile per-packet one-way delay: 59.043 ms
Loss rate: 3.43%
Run 8: Report of QUIC Cubic — Data Link
Run 9: Statistics of QUIC Cubic

Start at: 2018-02-05 01:31:19
End at: 2018-02-05 01:31:49
Local clock offset: 1.315 ms
Remote clock offset: -3.725 ms

# Below is generated by plot.py at 2018-02-05 02:43:56
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 86.35 Mbit/s
  95th percentile per-packet one-way delay: 65.423 ms
  Loss rate: 1.40%
-- Flow 1:
  Average throughput: 63.06 Mbit/s
  95th percentile per-packet one-way delay: 64.448 ms
  Loss rate: 1.59%
-- Flow 2:
  Average throughput: 25.79 Mbit/s
  95th percentile per-packet one-way delay: 66.386 ms
  Loss rate: 0.93%
-- Flow 3:
  Average throughput: 18.82 Mbit/s
  95th percentile per-packet one-way delay: 66.745 ms
  Loss rate: 0.69%
Run 9: Report of QUIC Cubic — Data Link
Run 10: Statistics of QUIC Cubic

Start at: 2018-02-05 01:57:34
End at: 2018-02-05 01:58:04
Local clock offset: 1.256 ms
Remote clock offset: -3.789 ms

# Below is generated by plot.py at 2018-02-05 02:43:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.70 Mbit/s
95th percentile per-packet one-way delay: 63.770 ms
Loss rate: 1.33%
-- Flow 1:
Average throughput: 61.69 Mbit/s
95th percentile per-packet one-way delay: 64.101 ms
Loss rate: 1.50%
-- Flow 2:
Average throughput: 20.51 Mbit/s
95th percentile per-packet one-way delay: 63.173 ms
Loss rate: 0.70%
-- Flow 3:
Average throughput: 28.57 Mbit/s
95th percentile per-packet one-way delay: 62.093 ms
Loss rate: 1.14%
Run 10: Report of QUIC Cubic — Data Link

![Throughput Graph]

- Flow 1 ingress (mean 62.69 Mbit/s)
- Flow 1 egress (mean 61.69 Mbit/s)
- Flow 2 ingress (mean 20.68 Mbit/s)
- Flow 2 egress (mean 20.51 Mbit/s)
- Flow 3 ingress (mean 26.94 Mbit/s)
- Flow 3 egress (mean 28.57 Mbit/s)

![Delay Graph]

- Flow 1 (95th percentile 64.10 ms)
- Flow 2 (95th percentile 63.37 ms)
- Flow 3 (95th percentile 62.09 ms)
Run 1: Statistics of SCReAM

Start at: 2018-02-04 22:05:12
End at: 2018-02-04 22:05:42
Local clock offset: -0.042 ms
Remote clock offset: -6.442 ms

# Below is generated by plot.py at 2018-02-05 02:43:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 30.632 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 29.977 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 30.649 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 30.638 ms
Loss rate: 0.00%
Run 1: Report of SCReAM — Data Link
Run 2: Statistics of SCReAM

Start at: 2018-02-04 22:30:34
End at: 2018-02-04 22:31:04
Local clock offset: -0.299 ms
Remote clock offset: -7.126 ms

# Below is generated by plot.py at 2018-02-05 02:43:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 30.577 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 30.584 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 29.899 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 30.578 ms
Loss rate: 0.00%
Run 2: Report of SCReAM — Data Link
Run 3: Statistics of SCReAM

Start at: 2018-02-04 22:56:39
End at: 2018-02-04 22:57:09
Local clock offset: -0.376 ms
Remote clock offset: -10.272 ms

# Below is generated by plot.py at 2018-02-05 02:43:56
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.40 Mbit/s
  95th percentile per-packet one-way delay: 28.590 ms
  Loss rate: 0.15%
-- Flow 1:
  Average throughput: 0.20 Mbit/s
  95th percentile per-packet one-way delay: 28.571 ms
  Loss rate: 0.16%
-- Flow 2:
  Average throughput: 0.19 Mbit/s
  95th percentile per-packet one-way delay: 27.889 ms
  Loss rate: 0.24%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 28.635 ms
  Loss rate: 0.00%
Run 3: Report of SCReAM — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 0.20 Mbps)  |  Flow 1 egress (mean 0.20 Mbps)
Flow 2 ingress (mean 0.19 Mbps)  |  Flow 2 egress (mean 0.19 Mbps)
Flow 3 ingress (mean 0.22 Mbps)  |  Flow 3 egress (mean 0.22 Mbps)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 28.57 ms)  |  Flow 2 (95th percentile 27.89 ms)  |  Flow 3 (95th percentile 28.64 ms)
Run 4: Statistics of SCReAM

Start at: 2018-02-04 23:23:03
End at: 2018-02-04 23:23:33
Local clock offset: -0.175 ms
Remote clock offset: -9.254 ms

# Below is generated by plot.py at 2018-02-05 02:43:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 30.685 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 30.004 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 30.729 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 30.692 ms
Loss rate: 0.00%
Run 4: Report of SCReAM — Data Link

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

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

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

- **Flow 1 (95th percentile 30.00 ms)**
- **Flow 2 (95th percentile 30.73 ms)**
- **Flow 3 (95th percentile 30.69 ms)**
Run 5: Statistics of SCReAM

End at: 2018-02-04 23:50:02
Local clock offset: 0.279 ms
Remote clock offset: -8.371 ms

# Below is generated by plot.py at 2018-02-05 02:43:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 30.639 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 30.652 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 29.965 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 29.966 ms
Loss rate: 0.00%
Run 5: Report of SCReAM — Data Link

Throughput (Mb/s)

Time (s)

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

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 30.65 ms)
Flow 2 (95th percentile 29.96 ms)
Flow 3 (95th percentile 29.97 ms)
Run 6: Statistics of SCReAM

Start at: 2018-02-05 00:15:36
End at: 2018-02-05 00:16:06
Local clock offset: 0.6 ms
Remote clock offset: -9.132 ms

# Below is generated by plot.py at 2018-02-05 02:43:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.41 Mbit/s
95th percentile per-packet one-way delay: 28.596 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 28.574 ms
Loss rate: 0.27%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 28.577 ms
Loss rate: 0.22%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 29.902 ms
Loss rate: 0.00%
Run 6: Report of SCReAM — Data Link
Run 7: Statistics of SCReAM

Start at: 2018-02-05 00:42:31
End at: 2018-02-05 00:43:01
Local clock offset: 0.882 ms
Remote clock offset: -7.518 ms

# Below is generated by plot.py at 2018-02-05 02:43:56
# Datalink statistics
-- Total of 3 flows:
 Average throughput: 0.44 Mbit/s
 95th percentile per-packet one-way delay: 28.648 ms
 Loss rate: 0.00%
-- Flow 1:
 Average throughput: 0.22 Mbit/s
 95th percentile per-packet one-way delay: 28.668 ms
 Loss rate: 0.00%
-- Flow 2:
 Average throughput: 0.22 Mbit/s
 95th percentile per-packet one-way delay: 27.964 ms
 Loss rate: 0.00%
-- Flow 3:
 Average throughput: 0.22 Mbit/s
 95th percentile per-packet one-way delay: 27.968 ms
 Loss rate: 0.00%
Run 7: Report of SCReAM — Data Link

![Diagram of network throughput and packet delay over time for three different flows, labeled Flow 1, Flow 2, and Flow 3. The throughput is measured in Mbps and range from 0.18 to 0.26 Mbps. The packet delay is measured in ms and range from 28 to 38 ms. The graphs show the fluctuations in throughput and delay for each flow over a 30-second period.]
Run 8: Statistics of SCReAM

Start at: 2018-02-05 01:09:09
End at: 2018-02-05 01:09:39
Local clock offset: 1.103 ms
Remote clock offset: -3.355 ms

# Below is generated by plot.py at 2018-02-05 02:43:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 31.154 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 30.500 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 31.181 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 31.145 ms
Loss rate: 0.35%
Run 8: Report of SCReAM — Data Link

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

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

- Flow 1 (95th percentile 30.5 ms) vs Flow 2 (95th percentile 31.18 ms) vs Flow 3 (95th percentile 31.14 ms)
Run 9: Statistics of SCReAM

Start at: 2018-02-05 01:35:43
End at: 2018-02-05 01:36:13
Local clock offset: 1.313 ms
Remote clock offset: -3.713 ms

# Below is generated by plot.py at 2018-02-05 02:43:56
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.44 Mbit/s
  95th percentile per-packet one-way delay: 30.627 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 29.981 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 30.648 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 29.966 ms
  Loss rate: 0.00%
Run 9: Report of SCReAM — Data Link
Run 10: Statistics of SCReAM

Start at: 2018-02-05 02:02:05
End at: 2018-02-05 02:02:35
Local clock offset: 1.243 ms
Remote clock offset: -5.981 ms

# Below is generated by plot.py at 2018-02-05 02:43:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 28.529 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 27.856 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 28.579 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 27.772 ms
Loss rate: 0.00%
Run 10: Report of SCReAM — Data Link

Throughput (Mbps)

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

Per packet one-way delay (ms)

- Flow 1 (95th percentile 27.86 ms)
- Flow 2 (95th percentile 28.58 ms)
- Flow 3 (95th percentile 27.77 ms)
Run 1: Statistics of WebRTC media

Start at: 2018-02-04 22:10:44
End at: 2018-02-04 22:11:14
Local clock offset: -0.085 ms
Remote clock offset: -6.491 ms

# Below is generated by plot.py at 2018-02-05 02:43:56
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 4.24 Mbit/s
  95th percentile per-packet one-way delay: 31.137 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 2.23 Mbit/s
  95th percentile per-packet one-way delay: 31.221 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 1.44 Mbit/s
  95th percentile per-packet one-way delay: 30.609 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.61 Mbit/s
  95th percentile per-packet one-way delay: 30.862 ms
  Loss rate: 0.00%
Run 1: Report of WebRTC media — Data Link
Run 2: Statistics of WebRTC media

Start at: 2018-02-04 22:36:16
End at: 2018-02-04 22:36:46
Local clock offset: -0.309 ms
Remote clock offset: -9.409 ms

# Below is generated by plot.py at 2018-02-05 02:43:56
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 4.56 Mbit/s
  95th percentile per-packet one-way delay: 29.002 ms
  Loss rate: 0.05%
-- Flow 1:
  Average throughput: 2.60 Mbit/s
  95th percentile per-packet one-way delay: 29.025 ms
  Loss rate: 0.08%
-- Flow 2:
  Average throughput: 1.37 Mbit/s
  95th percentile per-packet one-way delay: 28.234 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.61 Mbit/s
  95th percentile per-packet one-way delay: 29.191 ms
  Loss rate: 0.00%
Run 2: Report of WebRTC media — Data Link

![Graph 1: Throughput (Mbps)]

- **Flow 1 ingress** (mean 2.60 Mbps)
- **Flow 1 egress** (mean 2.60 Mbps)
- **Flow 2 ingress** (mean 1.37 Mbps)
- **Flow 2 egress** (mean 1.37 Mbps)
- **Flow 3 ingress** (mean 0.61 Mbps)
- **Flow 3 egress** (mean 0.61 Mbps)

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

- **Flow 1** (95th percentile 29.02 ms)
- **Flow 2** (95th percentile 28.23 ms)
- **Flow 3** (95th percentile 29.19 ms)
Run 3: Statistics of WebRTC media

Start at: 2018-02-04 23:02:26
End at: 2018-02-04 23:02:56
Local clock offset: -0.411 ms
Remote clock offset: -8.472 ms

# Below is generated by plot.py at 2018-02-05 02:43:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.31 Mbit/s
95th percentile per-packet one-way delay: 31.178 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.28 Mbit/s
95th percentile per-packet one-way delay: 31.279 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.45 Mbit/s
95th percentile per-packet one-way delay: 30.586 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.61 Mbit/s
95th percentile per-packet one-way delay: 30.732 ms
Loss rate: 0.00%
Run 3: Report of WebRTC media — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 2.28 Mbit/s)  Flow 2 ingress (mean 1.45 Mbit/s)
Flow 1 egress (mean 2.28 Mbit/s)  Flow 2 egress (mean 1.45 Mbit/s)
Flow 3 ingress (mean 0.61 Mbit/s)  Flow 3 egress (mean 0.61 Mbit/s)

Per packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 31.28 ms)  Flow 2 (95th percentile 30.59 ms)  Flow 3 (95th percentile 30.73 ms)
Run 4: Statistics of WebRTC media

Start at: 2018-02-04 23:28:46
End at: 2018-02-04 23:29:16
Local clock offset: -0.083 ms
Remote clock offset: -8.734 ms

# Below is generated by plot.py at 2018-02-05 02:43:56
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 4.49 Mbit/s
  95th percentile per-packet one-way delay: 31.666 ms
  Loss rate: 0.07%
-- Flow 1:
  Average throughput: 2.27 Mbit/s
  95th percentile per-packet one-way delay: 31.759 ms
  Loss rate: 0.03%
-- Flow 2:
  Average throughput: 1.53 Mbit/s
  95th percentile per-packet one-way delay: 31.128 ms
  Loss rate: 0.10%
-- Flow 3:
  Average throughput: 0.71 Mbit/s
  95th percentile per-packet one-way delay: 31.338 ms
  Loss rate: 0.16%
Run 4: Report of WebRTC media — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 2.27 Mbps) — Flow 1 egress (mean 2.27 Mbps)
Flow 2 ingress (mean 1.55 Mbps) — Flow 2 egress (mean 1.55 Mbps)
Flow 3 ingress (mean 0.71 Mbps) — Flow 3 egress (mean 0.71 Mbps)

Per-packet one-way delay [ms]

Time (s)

Flow 1 (95th percentile 31.76 ms) — Flow 2 (95th percentile 31.13 ms) — Flow 3 (95th percentile 31.34 ms)
Run 5: Statistics of WebRTC media

End at: 2018-02-04 23:55:54
Local clock offset: 0.425 ms
Remote clock offset: -8.02 ms

# Below is generated by plot.py at 2018-02-05 02:43:56
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 4.42 Mbit/s
  95th percentile per-packet one-way delay: 30.710 ms
  Loss rate: 0.02%
-- Flow 1:
  Average throughput: 2.26 Mbit/s
  95th percentile per-packet one-way delay: 30.691 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 1.45 Mbit/s
  95th percentile per-packet one-way delay: 30.738 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.73 Mbit/s
  95th percentile per-packet one-way delay: 30.741 ms
  Loss rate: 0.12%
Run 5: Report of WebRTC media — Data Link
Run 6: Statistics of WebRTC media

Start at: 2018-02-05 00:21:20
End at: 2018-02-05 00:21:50
Local clock offset: 0.728 ms
Remote clock offset: -6.382 ms

# Below is generated by plot.py at 2018-02-05 02:43:56
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 4.62 Mbit/s
  95th percentile per-packet one-way delay: 31.475 ms
  Loss rate: 0.03%
-- Flow 1:
  Average throughput: 2.59 Mbit/s
  95th percentile per-packet one-way delay: 31.550 ms
  Loss rate: 0.05%
-- Flow 2:
  Average throughput: 1.44 Mbit/s
  95th percentile per-packet one-way delay: 30.887 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.61 Mbit/s
  95th percentile per-packet one-way delay: 31.079 ms
  Loss rate: 0.00%
Run 6: Report of WebRTC media — Data Link

![Graph of throughput over time for different flows]

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 2.59 Mbit/s)
Flow 1 egress (mean 2.59 Mbit/s)
Flow 2 ingress (mean 1.44 Mbit/s)
Flow 2 egress (mean 1.44 Mbit/s)
Flow 3 ingress (mean 0.61 Mbit/s)
Flow 3 egress (mean 0.61 Mbit/s)

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

Per packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 31.55 ms)
Flow 2 (95th percentile 30.89 ms)
Flow 3 (95th percentile 31.08 ms)
Run 7: Statistics of WebRTC media

Start at: 2018-02-05 00:48:30
End at: 2018-02-05 00:49:00
Local clock offset: 1.018 ms
Remote clock offset: -5.049 ms

# Below is generated by plot.py at 2018-02-05 02:43:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.43 Mbit/s
95th percentile per-packet one-way delay: 30.976 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 2.33 Mbit/s
95th percentile per-packet one-way delay: 30.436 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 1.45 Mbit/s
95th percentile per-packet one-way delay: 31.149 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 0.66 Mbit/s
95th percentile per-packet one-way delay: 30.746 ms
Loss rate: 0.09%
Run 7: Report of WebRTC media — Data Link

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

Throughput (Mbit/s)

- Flow 1 ingress (mean 2.33 Mbit/s)
- Flow 1 egress (mean 2.33 Mbit/s)
- Flow 2 ingress (mean 1.45 Mbit/s)
- Flow 2 egress (mean 1.45 Mbit/s)
- Flow 3 ingress (mean 0.66 Mbit/s)
- Flow 3 egress (mean 0.66 Mbit/s)

Per packet one way delay [ms]

- Flow 1 (95th percentile 30.44 ms)
- Flow 2 (95th percentile 31.15 ms)
- Flow 3 (95th percentile 30.75 ms)
Run 8: Statistics of WebRTC media

Start at: 2018-02-05 01:15:06
End at: 2018-02-05 01:15:36
Local clock offset: 1.176 ms
Remote clock offset: -3.813 ms

# Below is generated by plot.py at 2018-02-05 02:43:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 5.10 Mbit/s
95th percentile per-packet one-way delay: 31.365 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 2.59 Mbit/s
95th percentile per-packet one-way delay: 31.295 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 1.92 Mbit/s
95th percentile per-packet one-way delay: 31.535 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 0.60 Mbit/s
95th percentile per-packet one-way delay: 30.691 ms
Loss rate: 0.00%
Run 8: Report of WebRTC media — Data Link

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

- Flow 1 ingress (mean 2.59 Mb/s)
- Flow 1 egress (mean 2.59 Mb/s)
- Flow 2 ingress (mean 1.93 Mb/s)
- Flow 2 egress (mean 1.92 Mb/s)
- Flow 3 ingress (mean 0.60 Mb/s)
- Flow 3 egress (mean 0.60 Mb/s)

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

- Flow 1 (95th percentile 31.30 ms)
- Flow 2 (95th percentile 31.54 ms)
- Flow 3 (95th percentile 30.69 ms)
Run 9: Statistics of WebRTC media

Start at: 2018-02-05 01:41:30
End at: 2018-02-05 01:42:00
Local clock offset: 1.225 ms
Remote clock offset: -3.671 ms

# Below is generated by plot.py at 2018-02-05 02:43:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.82 Mbit/s
95th percentile per-packet one-way delay: 30.725 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 2.50 Mbit/s
95th percentile per-packet one-way delay: 30.702 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 1.71 Mbit/s
95th percentile per-packet one-way delay: 30.730 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 0.63 Mbit/s
95th percentile per-packet one-way delay: 30.899 ms
Loss rate: 0.19%
Run 9: Report of WebRTC media — Data Link
Run 10: Statistics of WebRTC media

Start at: 2018-02-05 02:08:02
End at: 2018-02-05 02:08:32
Local clock offset: 1.226 ms
Remote clock offset: -3.95 ms

# Below is generated by plot.py at 2018-02-05 02:43:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.92 Mbit/s
95th percentile per-packet one-way delay: 31.341 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 2.52 Mbit/s
95th percentile per-packet one-way delay: 31.432 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 1.71 Mbit/s
95th percentile per-packet one-way delay: 30.973 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 0.70 Mbit/s
95th percentile per-packet one-way delay: 31.141 ms
Loss rate: 0.21%
Run 10: Report of WebRTC media — Data Link

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

- Flow 1 ingress (mean 2.52 Mbit/s)
- Flow 1 egress (mean 2.52 Mbit/s)
- Flow 2 ingress (mean 1.71 Mbit/s)
- Flow 2 egress (mean 1.71 Mbit/s)
- Flow 3 ingress (mean 0.70 Mbit/s)
- Flow 3 egress (mean 0.70 Mbit/s)

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

- Flow 1 (95th percentile 31.43 ms)
- Flow 2 (95th percentile 30.97 ms)
- Flow 3 (95th percentile 31.14 ms)
Run 1: Statistics of Sprout

Start at: 2018-02-04 21:49:21
End at: 2018-02-04 21:49:51
Local clock offset: 0.106 ms
Remote clock offset: -5.378 ms

# Below is generated by plot.py at 2018-02-05 02:43:56
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 31.28 Mbit/s
  95th percentile per-packet one-way delay: 34.916 ms
  Loss rate: 0.01%
-- Flow 1:
  Average throughput: 15.83 Mbit/s
  95th percentile per-packet one-way delay: 34.567 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 15.47 Mbit/s
  95th percentile per-packet one-way delay: 35.499 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 15.62 Mbit/s
  95th percentile per-packet one-way delay: 34.526 ms
  Loss rate: 0.07%
Run 1: Report of Sprout — Data Link

[Graph showing throughput over time for different flows]

[Graph showing per-packet one-way delay over time for different flows]
Run 2: Statistics of Sprout

Start at: 2018-02-04 22:14:55
End at: 2018-02-04 22:15:25
Local clock offset: -0.142 ms
Remote clock offset: -6.549 ms

# Below is generated by plot.py at 2018-02-05 02:43:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 30.94 Mbit/s
95th percentile per-packet one-way delay: 34.506 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 15.83 Mbit/s
95th percentile per-packet one-way delay: 33.645 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 15.09 Mbit/s
95th percentile per-packet one-way delay: 35.414 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 15.35 Mbit/s
95th percentile per-packet one-way delay: 35.143 ms
Loss rate: 0.22%
Run 2: Report of Sprout — Data Link

Throughput (Mbit/s) vs Time (s)

Flow 1 ingress (mean 15.84 Mbit/s)  
Flow 1 egress (mean 15.83 Mbit/s)  
Flow 2 ingress (mean 15.11 Mbit/s)  
Flow 2 egress (mean 15.09 Mbit/s)  
Flow 3 ingress (mean 15.39 Mbit/s)  
Flow 3 egress (mean 15.35 Mbit/s)

Packet round trip delay (ms) vs Time (s)

Flow 1 (95th percentile 33.65 ms)  
Flow 2 (95th percentile 35.41 ms)  
Flow 3 (95th percentile 35.14 ms)
Run 3: Statistics of Sprout

Start at: 2018-02-04 22:40:24
End at: 2018-02-04 22:40:54
Local clock offset: -0.32 ms
Remote clock offset: -7.353 ms

# Below is generated by plot.py at 2018-02-05 02:43:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 31.01 Mbit/s
95th percentile per-packet one-way delay: 34.793 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 15.75 Mbit/s
95th percentile per-packet one-way delay: 34.030 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 15.42 Mbit/s
95th percentile per-packet one-way delay: 35.394 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 15.17 Mbit/s
95th percentile per-packet one-way delay: 35.826 ms
Loss rate: 0.15%
Run 3: Report of Sprout — Data Link

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

- Flow 1 ingress (mean 15.78 Mbit/s)
- Flow 1 egress (mean 15.75 Mbit/s)
- Flow 2 ingress (mean 15.45 Mbit/s)
- Flow 2 egress (mean 15.42 Mbit/s)
- Flow 3 ingress (mean 15.20 Mbit/s)
- Flow 3 egress (mean 15.17 Mbit/s)

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

- Flow 1 (95th percentile 34.03 ms)
- Flow 2 (95th percentile 35.39 ms)
- Flow 3 (95th percentile 35.83 ms)
Run 4: Statistics of Sprout

Start at: 2018-02-04 23:06:35
End at: 2018-02-04 23:07:05
Local clock offset: -0.319 ms
Remote clock offset: -10.668 ms

# Below is generated by plot.py at 2018-02-05 02:43:56
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 29.91 Mbit/s
  95th percentile per-packet one-way delay: 32.894 ms
  Loss rate: 0.08%
-- Flow 1:
  Average throughput: 15.29 Mbit/s
  95th percentile per-packet one-way delay: 32.018 ms
  Loss rate: 0.07%
-- Flow 2:
  Average throughput: 14.57 Mbit/s
  95th percentile per-packet one-way delay: 33.920 ms
  Loss rate: 0.11%
-- Flow 3:
  Average throughput: 14.93 Mbit/s
  95th percentile per-packet one-way delay: 32.767 ms
  Loss rate: 0.04%
Run 4: Report of Sprout — Data Link

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

- Flow 1 ingress (mean 15.30 Mbit/s)
- Flow 1 egress (mean 15.29 Mbit/s)
- Flow 2 ingress (mean 14.38 Mbit/s)
- Flow 2 egress (mean 14.57 Mbit/s)
- Flow 3 ingress (mean 14.94 Mbit/s)
- Flow 3 egress (mean 14.93 Mbit/s)

Per packet one way delay [ms] vs. Time (s)

- Flow 1 (95th percentile 32.02 ms)
- Flow 2 (95th percentile 33.92 ms)
- Flow 3 (95th percentile 32.77 ms)
Run 5: Statistics of Sprout

Start at: 2018-02-04 23:32:59
End at: 2018-02-04 23:33:29
Local clock offset: 0.081 ms
Remote clock offset: -9.008 ms

# Below is generated by plot.py at 2018-02-05 02:43:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 30.28 Mbit/s
95th percentile per-packet one-way delay: 35.542 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 15.36 Mbit/s
95th percentile per-packet one-way delay: 35.091 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 14.98 Mbit/s
95th percentile per-packet one-way delay: 36.507 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 14.98 Mbit/s
95th percentile per-packet one-way delay: 34.516 ms
Loss rate: 0.00%
Run 5: Report of Sprout — Data Link
Run 6: Statistics of Sprout

Start at: 2018-02-04 23:59:29
End at: 2018-02-04 23:59:59
Local clock offset: 0.499 ms
Remote clock offset: -7.748 ms

# Below is generated by plot.py at 2018-02-05 02:44:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 29.83 Mbit/s
95th percentile per-packet one-way delay: 35.466 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 15.40 Mbit/s
95th percentile per-packet one-way delay: 34.449 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 14.91 Mbit/s
95th percentile per-packet one-way delay: 35.504 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 13.65 Mbit/s
95th percentile per-packet one-way delay: 36.793 ms
Loss rate: 0.18%
Run 7: Statistics of Sprout

Start at: 2018-02-05 00:25:33
End at: 2018-02-05 00:26:03
Local clock offset: 0.709 ms
Remote clock offset: -6.652 ms

# Below is generated by plot.py at 2018-02-05 02:44:03
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 29.90 Mbit/s
  95th percentile per-packet one-way delay: 36.461 ms
  Loss rate: 0.08%
-- Flow 1:
  Average throughput: 14.92 Mbit/s
  95th percentile per-packet one-way delay: 36.767 ms
  Loss rate: 0.06%
-- Flow 2:
  Average throughput: 15.42 Mbit/s
  95th percentile per-packet one-way delay: 34.307 ms
  Loss rate: 0.03%
-- Flow 3:
  Average throughput: 14.30 Mbit/s
  95th percentile per-packet one-way delay: 39.205 ms
  Loss rate: 0.21%
Run 7: Report of Sprout — Data Link

![Graph 1: Throughput (Mbps)]

- Flow 1 ingress (mean 14.94 Mbps)
- Flow 1 egress (mean 14.92 Mbps)
- Flow 2 ingress (mean 15.43 Mbps)
- Flow 2 egress (mean 15.42 Mbps)
- Flow 3 ingress (mean 14.33 Mbps)
- Flow 3 egress (mean 14.30 Mbps)

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

- Flow 1 (95th percentile 36.77 ms)
- Flow 2 (95th percentile 34.31 ms)
- Flow 3 (95th percentile 39.20 ms)
Run 8: Statistics of Sprout

Start at: 2018-02-05 00:52:49
End at: 2018-02-05 00:53:19
Local clock offset: 0.913 ms
Remote clock offset: -4.764 ms

# Below is generated by plot.py at 2018-02-05 02:44:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 29.37 Mbit/s
95th percentile per-packet one-way delay: 36.451 ms
Loss rate: 0.09%

-- Flow 1:
Average throughput: 14.95 Mbit/s
95th percentile per-packet one-way delay: 36.584 ms
Loss rate: 0.08%

-- Flow 2:
Average throughput: 14.63 Mbit/s
95th percentile per-packet one-way delay: 36.339 ms
Loss rate: 0.07%

-- Flow 3:
Average throughput: 14.21 Mbit/s
95th percentile per-packet one-way delay: 36.452 ms
Loss rate: 0.16%
Run 9: Statistics of Sprout

Start at: 2018-02-05 01:19:22
End at: 2018-02-05 01:19:52
Local clock offset: 1.205 ms
Remote clock offset: -3.226 ms

# Below is generated by plot.py at 2018-02-05 02:44:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 29.41 Mbit/s
95th percentile per-packet one-way delay: 36.653 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 15.18 Mbit/s
95th percentile per-packet one-way delay: 34.405 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 14.41 Mbit/s
95th percentile per-packet one-way delay: 37.357 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 14.05 Mbit/s
95th percentile per-packet one-way delay: 38.741 ms
Loss rate: 0.00%
Run 9: Report of Sprout — Data Link

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

**Throughput (Mbps)**
- Flow 1 Ingress (mean 15.19 Mbps)
- Flow 1 Egress (mean 15.18 Mbps)
- Flow 2 Ingress (mean 14.41 Mbps)
- Flow 2 Egress (mean 14.41 Mbps)
- Flow 3 Ingress (mean 14.05 Mbps)
- Flow 3 Egress (mean 14.05 Mbps)

**Per-packet end-to-end delay (ms)**
- Flow 1 (95th percentile 34.41 ms)
- Flow 2 (95th percentile 37.36 ms)
- Flow 3 (95th percentile 38.74 ms)
Run 10: Statistics of Sprout

Start at: 2018-02-05 01:45:42
End at: 2018-02-05 01:46:12
Local clock offset: 1.296 ms
Remote clock offset: -3.317 ms

# Below is generated by plot.py at 2018-02-05 02:44:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 29.95 Mbit/s
95th percentile per-packet one-way delay: 36.102 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 15.16 Mbit/s
95th percentile per-packet one-way delay: 35.499 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 14.90 Mbit/s
95th percentile per-packet one-way delay: 37.338 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 14.78 Mbit/s
95th percentile per-packet one-way delay: 35.339 ms
Loss rate: 0.00%
Run 10: Report of Sprout — Data Link
Run 1: Statistics of TaoVA-100x

Start at: 2018-02-04 21:52:07
End at: 2018-02-04 21:52:37
Local clock offset: 0.124 ms
Remote clock offset: -5.531 ms

# Below is generated by plot.py at 2018-02-05 02:46:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.71 Mbit/s
95th percentile per-packet one-way delay: 67.822 ms
Loss rate: 18.09%
-- Flow 1:
Average throughput: 50.92 Mbit/s
95th percentile per-packet one-way delay: 66.789 ms
Loss rate: 14.11%
-- Flow 2:
Average throughput: 38.30 Mbit/s
95th percentile per-packet one-way delay: 67.496 ms
Loss rate: 24.93%
-- Flow 3:
Average throughput: 31.04 Mbit/s
95th percentile per-packet one-way delay: 68.367 ms
Loss rate: 18.39%
Run 1: Report of TaoVA-100x — Data Link

Graphs showing throughput and per packet one-way delay over time for different flows.
Run 2: Statistics of TaoVA-100x

Start at: 2018-02-04 22:17:42
End at: 2018-02-04 22:18:12
Local clock offset: -0.176 ms
Remote clock offset: -6.123 ms

# Below is generated by plot.py at 2018-02-05 02:46:26
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 88.08 Mbit/s
  95th percentile per-packet one-way delay: 66.821 ms
  Loss rate: 19.71%
-- Flow 1:
  Average throughput: 53.57 Mbit/s
  95th percentile per-packet one-way delay: 64.366 ms
  Loss rate: 15.54%
-- Flow 2:
  Average throughput: 39.42 Mbit/s
  95th percentile per-packet one-way delay: 67.051 ms
  Loss rate: 27.03%
-- Flow 3:
  Average throughput: 24.83 Mbit/s
  95th percentile per-packet one-way delay: 67.467 ms
  Loss rate: 19.81%
Run 2: Report of TaoVA-100x — Data Link

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

- Flow 1 ingress (mean 63.50 Mb/s)
- Flow 1 egress (mean 53.57 Mb/s)
- Flow 2 ingress (mean 54.11 Mb/s)
- Flow 2 egress (mean 39.42 Mb/s)
- Flow 3 ingress (mean 31.09 Mb/s)
- Flow 3 egress (mean 24.63 Mb/s)

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

- Flow 1 (95th percentile 64.37 ms)
- Flow 2 (95th percentile 67.05 ms)
- Flow 3 (95th percentile 67.47 ms)
Run 3: Statistics of TaoVA-100x

Start at: 2018-02-04 22:43:18
End at: 2018-02-04 22:43:48
Local clock offset: -0.328 ms
Remote clock offset: -7.589 ms

# Below is generated by plot.py at 2018-02-05 02:46:26
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 84.42 Mbit/s
  95th percentile per-packet one-way delay: 66.521 ms
  Loss rate: 19.59%
-- Flow 1:
  Average throughput: 49.82 Mbit/s
  95th percentile per-packet one-way delay: 64.789 ms
  Loss rate: 15.72%
-- Flow 2:
  Average throughput: 39.78 Mbit/s
  95th percentile per-packet one-way delay: 66.510 ms
  Loss rate: 26.20%
-- Flow 3:
  Average throughput: 30.64 Mbit/s
  95th percentile per-packet one-way delay: 66.859 ms
  Loss rate: 18.71%
Run 3: Report of TaoVA-100x — Data Link

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

- **Flow 1 Ingress (mean 59.13 Mbps/s)**
- **Flow 1 Egress (mean 49.82 Mbps/s)**
- **Flow 2 Ingress (mean 53.90 Mbps/s)**
- **Flow 2 Egress (mean 39.78 Mbps/s)**
- **Flow 3 Ingress (mean 30.12 Mbps/s)**
- **Flow 3 Egress (mean 30.64 Mbps/s)**

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

- **Flow 1 (95th percentile 64.79 ms)**
- **Flow 2 (95th percentile 66.51 ms)**
- **Flow 3 (95th percentile 66.86 ms)**
Run 4: Statistics of TaoVA-100x

Start at: 2018-02-04 23:09:25
End at: 2018-02-04 23:09:55
Local clock offset: -0.295 ms
Remote clock offset: -8.728 ms

# Below is generated by plot.py at 2018-02-05 02:46:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.65 Mbit/s
95th percentile per-packet one-way delay: 66.633 ms
Loss rate: 18.16%
-- Flow 1:
Average throughput: 51.08 Mbit/s
95th percentile per-packet one-way delay: 64.771 ms
Loss rate: 14.45%
-- Flow 2:
Average throughput: 37.80 Mbit/s
95th percentile per-packet one-way delay: 67.411 ms
Loss rate: 24.82%
-- Flow 3:
Average throughput: 31.39 Mbit/s
95th percentile per-packet one-way delay: 67.040 ms
Loss rate: 18.07%
Run 4: Report of TaoVA-100x — Data Link

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

- **Flow 1 ingress (mean 59.71 Mbit/s)**
- **Flow 1 egress (mean 51.08 Mbit/s)**
- **Flow 2 ingress (mean 50.28 Mbit/s)**
- **Flow 2 egress (mean 37.80 Mbit/s)**
- **Flow 3 ingress (mean 38.22 Mbit/s)**
- **Flow 3 egress (mean 31.39 Mbit/s)**

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

- **Flow 1 (95th percentile 64.77 ms)**
- **Flow 2 (95th percentile 67.41 ms)**
- **Flow 3 (95th percentile 67.04 ms)**
Run 5: Statistics of TaoVA-100x

Start at: 2018-02-04 23:35:48
End at: 2018-02-04 23:36:18
Local clock offset: 0.115 ms
Remote clock offset: -8.521 ms

# Below is generated by plot.py at 2018-02-05 02:46:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.67 Mbit/s
95th percentile per-packet one-way delay: 67.096 ms
Loss rate: 18.46%
-- Flow 1:
Average throughput: 52.86 Mbit/s
95th percentile per-packet one-way delay: 65.890 ms
Loss rate: 14.57%
-- Flow 2:
Average throughput: 39.70 Mbit/s
95th percentile per-packet one-way delay: 67.091 ms
Loss rate: 25.32%
-- Flow 3:
Average throughput: 25.13 Mbit/s
95th percentile per-packet one-way delay: 67.305 ms
Loss rate: 18.24%
Run 5: Report of TaoVA-100x — Data Link

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

Start at: 2018-02-05 00:02:18
End at: 2018-02-05 00:02:48
Local clock offset: 0.437 ms
Remote clock offset: -7.176 ms

# Below is generated by plot.py at 2018-02-05 02:46:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.50 Mbit/s
95th percentile per-packet one-way delay: 68.102 ms
Loss rate: 18.07%
-- Flow 1:
Average throughput: 53.17 Mbit/s
95th percentile per-packet one-way delay: 66.049 ms
Loss rate: 13.99%
-- Flow 2:
Average throughput: 39.18 Mbit/s
95th percentile per-packet one-way delay: 68.199 ms
Loss rate: 25.06%
-- Flow 3:
Average throughput: 24.80 Mbit/s
95th percentile per-packet one-way delay: 68.448 ms
Loss rate: 18.90%
Run 6: Report of TaoVA-100x — Data Link
Run 7: Statistics of TaoVA-100x

Start at: 2018-02-05 00:28:30
End at: 2018-02-05 00:29:00
Local clock offset: 0.797 ms
Remote clock offset: -5.987 ms

# Below is generated by plot.py at 2018-02-05 02:46:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 87.90 Mbit/s
  95th percentile per-packet one-way delay: 67.133 ms
  Loss rate: 17.73%
-- Flow 1:
  Average throughput: 52.25 Mbit/s
  95th percentile per-packet one-way delay: 65.371 ms
  Loss rate: 13.81%
-- Flow 2:
  Average throughput: 37.61 Mbit/s
  95th percentile per-packet one-way delay: 67.136 ms
  Loss rate: 25.08%
-- Flow 3:
  Average throughput: 31.96 Mbit/s
  95th percentile per-packet one-way delay: 68.303 ms
  Loss rate: 17.06%
Run 7: Report of TaoVA-100x — Data Link
Run 8: Statistics of TaoVA-100x

Start at: 2018-02-05 00:55:43
End at: 2018-02-05 00:56:13
Local clock offset: 0.901 ms
Remote clock offset: -6.529 ms

# Below is generated by plot.py at 2018-02-05 02:46:34
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 87.18 Mbit/s
  95th percentile per-packet one-way delay: 64.463 ms
  Loss rate: 18.95%
-- Flow 1:
  Average throughput: 52.54 Mbit/s
  95th percentile per-packet one-way delay: 62.697 ms
  Loss rate: 15.33%
-- Flow 2:
  Average throughput: 39.44 Mbit/s
  95th percentile per-packet one-way delay: 65.239 ms
  Loss rate: 25.62%
-- Flow 3:
  Average throughput: 25.28 Mbit/s
  95th percentile per-packet one-way delay: 65.089 ms
  Loss rate: 17.86%
Run 9: Statistics of TaoVA-100x

Start at: 2018-02-05 01:22:17
End at: 2018-02-05 01:22:47
Local clock offset: 1.257 ms
Remote clock offset: -3.58 ms

# Below is generated by plot.py at 2018-02-05 02:48:51
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 85.63 Mbit/s
  95th percentile per-packet one-way delay: 66.359 ms
  Loss rate: 19.64%
-- Flow 1:
  Average throughput: 51.04 Mbit/s
  95th percentile per-packet one-way delay: 64.454 ms
  Loss rate: 15.77%
-- Flow 2:
  Average throughput: 39.29 Mbit/s
  95th percentile per-packet one-way delay: 66.462 ms
  Loss rate: 26.74%
-- Flow 3:
  Average throughput: 31.78 Mbit/s
  95th percentile per-packet one-way delay: 66.792 ms
  Loss rate: 17.79%
Run 9: Report of TaoVA-100x — Data Link

[Graphs showing throughput and packet delay over time for different flows, with annotations for each flow's mean throughput and 95th percentile delay.]
Run 10: Statistics of TaoVA-100x

Start at: 2018-02-05 01:48:33
End at: 2018-02-05 01:49:03
Local clock offset: 1.319 ms
Remote clock offset: -3.796 ms

# Below is generated by plot.py at 2018-02-05 02:48:53
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 87.38 Mbit/s
  95th percentile per-packet one-way delay: 66.580 ms
  Loss rate: 17.63%
-- Flow 1:
  Average throughput: 51.66 Mbit/s
  95th percentile per-packet one-way delay: 65.627 ms
  Loss rate: 13.70%
-- Flow 2:
  Average throughput: 38.01 Mbit/s
  95th percentile per-packet one-way delay: 66.588 ms
  Loss rate: 24.60%
-- Flow 3:
  Average throughput: 31.41 Mbit/s
  95th percentile per-packet one-way delay: 66.894 ms
  Loss rate: 17.75%
Run 10: Report of TaoVA-100x — Data Link

Data Link Throughput and Delay for Flows 1, 2, and 3
Run 1: Statistics of TCP Vegas

Start at: 2018-02-04 21:46:31
End at: 2018-02-04 21:47:01
Local clock offset: 0.108 ms
Remote clock offset: -5.872 ms

# Below is generated by plot.py at 2018-02-05 02:48:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.03 Mbit/s
95th percentile per-packet one-way delay: 56.992 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 27.50 Mbit/s
95th percentile per-packet one-way delay: 54.131 ms
Loss rate: 1.11%
-- Flow 2:
Average throughput: 62.36 Mbit/s
95th percentile per-packet one-way delay: 58.033 ms
Loss rate: 0.71%
-- Flow 3:
Average throughput: 42.23 Mbit/s
95th percentile per-packet one-way delay: 55.079 ms
Loss rate: 0.16%
Run 1: Report of TCP Vegas — Data Link

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**Graph 1:**
- **Throughput (Mbps):**
  - Flow 1 ingress (mean 27.81 Mbps)
  - Flow 1 egress (mean 27.50 Mbps)
  - Flow 2 ingress (mean 62.81 Mbps)
  - Flow 2 egress (mean 62.36 Mbps)
  - Flow 3 ingress (mean 42.30 Mbps)
  - Flow 3 egress (mean 42.23 Mbps)

**Graph 2:**
- **Per-packet one-way delay (ms):**
  - Flow 1 (95th percentile 54.13 ms)
  - Flow 2 (95th percentile 58.03 ms)
  - Flow 3 (95th percentile 55.08 ms)
Run 2: Statistics of TCP Vegas

Start at: 2018-02-04 22:12:03
End at: 2018-02-04 22:12:33
Local clock offset: -0.115 ms
Remote clock offset: -6.066 ms

# Below is generated by plot.py at 2018-02-05 02:48:53
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 76.39 Mbit/s
  95th percentile per-packet one-way delay: 55.894 ms
  Loss rate: 1.09%
-- Flow 1:
  Average throughput: 40.49 Mbit/s
  95th percentile per-packet one-way delay: 54.056 ms
  Loss rate: 0.82%
-- Flow 2:
  Average throughput: 34.79 Mbit/s
  95th percentile per-packet one-way delay: 56.598 ms
  Loss rate: 2.12%
-- Flow 3:
  Average throughput: 38.36 Mbit/s
  95th percentile per-packet one-way delay: 58.347 ms
  Loss rate: 0.02%
Run 2: Report of TCP Vegas — Data Link

Throughput (Mbit/s)

Time (s)

- Flow 1 ingress (mean 40.83 Mbit/s)
- Flow 1 egress (mean 40.49 Mbit/s)
- Flow 2 ingress (mean 35.54 Mbit/s)
- Flow 2 egress (mean 34.79 Mbit/s)
- Flow 3 ingress (mean 38.37 Mbit/s)
- Flow 3 egress (mean 38.36 Mbit/s)

Per packet one-way delay (ms)

Time (s)

- Flow 1 (95th percentile 54.06 ms)
- Flow 2 (95th percentile 56.60 ms)
- Flow 3 (95th percentile 58.35 ms)
Run 3: Statistics of TCP Vegas

Start at: 2018-02-04 22:37:34
End at: 2018-02-04 22:38:04
Local clock offset: -0.311 ms
Remote clock offset: -9.295 ms

# Below is generated by plot.py at 2018-02-05 02:48:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.12 Mbit/s
95th percentile per-packet one-way delay: 50.191 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 52.28 Mbit/s
95th percentile per-packet one-way delay: 50.714 ms
Loss rate: 0.56%
-- Flow 2:
Average throughput: 27.91 Mbit/s
95th percentile per-packet one-way delay: 41.405 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 21.90 Mbit/s
95th percentile per-packet one-way delay: 33.909 ms
Loss rate: 0.09%
Run 3: Report of TCP Vegas — Data Link

![Graph of throughput and per-packet one-way delay for flows 1, 2, and 3](image)

- **Throughput (Mbps):**
  - **Flow 1 ingress (mean 52.57 Mbps):**
  - **Flow 1 egress (mean 52.28 Mbps):**
  - **Flow 2 ingress (mean 27.92 Mbps):**
  - **Flow 2 egress (mean 27.91 Mbps):**
  - **Flow 3 ingress (mean 21.92 Mbps):**
  - **Flow 3 egress (mean 21.90 Mbps):**

- **Per-packet one-way delay (ms):**
  - **Flow 1 (95th percentile 50.71 ms):**
  - **Flow 2 (95th percentile 41.41 ms):**
  - **Flow 3 (95th percentile 33.91 ms):**
Run 4: Statistics of TCP Vegas

Start at: 2018-02-04 23:03:45
End at: 2018-02-04 23:04:15
Local clock offset: -0.326 ms
Remote clock offset: -7.983 ms

# Below is generated by plot.py at 2018-02-05 02:48:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.78 Mbit/s
95th percentile per-packet one-way delay: 55.748 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 48.78 Mbit/s
95th percentile per-packet one-way delay: 54.263 ms
Loss rate: 0.63%
-- Flow 2:
Average throughput: 27.34 Mbit/s
95th percentile per-packet one-way delay: 56.212 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 29.54 Mbit/s
95th percentile per-packet one-way delay: 59.368 ms
Loss rate: 0.22%
Run 4: Report of TCP Vegas — Data Link
Run 5: Statistics of TCP Vegas

Start at: 2018-02-04 23:30:05
End at: 2018-02-04 23:30:35
Local clock offset: 0.043 ms
Remote clock offset: -9.08 ms

# Below is generated by plot.py at 2018-02-05 02:48:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 53.23 Mbit/s
95th percentile per-packet one-way delay: 53.493 ms
Loss rate: 1.77%
-- Flow 1:
Average throughput: 28.57 Mbit/s
95th percentile per-packet one-way delay: 53.314 ms
Loss rate: 1.53%
-- Flow 2:
Average throughput: 24.29 Mbit/s
95th percentile per-packet one-way delay: 54.002 ms
Loss rate: 1.37%
-- Flow 3:
Average throughput: 25.62 Mbit/s
95th percentile per-packet one-way delay: 41.764 ms
Loss rate: 3.34%
Run 5: Report of TCP Vegas — Data Link
Run 6: Statistics of TCP Vegas

Start at: 2018-02-04 23:56:42
End at: 2018-02-04 23:57:12
Local clock offset: 0.473 ms
Remote clock offset: -7.528 ms

# Below is generated by plot.py at 2018-02-05 02:48:53
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 52.25 Mbit/s
  95th percentile per-packet one-way delay: 34.658 ms
  Loss rate: 0.10%
-- Flow 1:
  Average throughput: 23.76 Mbit/s
  95th percentile per-packet one-way delay: 34.340 ms
  Loss rate: 0.10%
-- Flow 2:
  Average throughput: 20.59 Mbit/s
  95th percentile per-packet one-way delay: 34.203 ms
  Loss rate: 0.13%
-- Flow 3:
  Average throughput: 44.53 Mbit/s
  95th percentile per-packet one-way delay: 35.125 ms
  Loss rate: 0.07%
Run 6: Report of TCP Vegas — Data Link
Run 7: Statistics of TCP Vegas

Start at: 2018-02-05 00:22:38
End at: 2018-02-05 00:23:08
Local clock offset: 0.665 ms
Remote clock offset: -6.197 ms

# Below is generated by plot.py at 2018-02-05 02:48:53
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 68.01 Mbit/s
  95th percentile per-packet one-way delay: 65.514 ms
  Loss rate: 1.26%
-- Flow 1:
  Average throughput: 32.44 Mbit/s
  95th percentile per-packet one-way delay: 53.228 ms
  Loss rate: 1.10%
-- Flow 2:
  Average throughput: 40.75 Mbit/s
  95th percentile per-packet one-way delay: 66.928 ms
  Loss rate: 1.18%
-- Flow 3:
  Average throughput: 25.50 Mbit/s
  95th percentile per-packet one-way delay: 39.297 ms
  Loss rate: 2.06%

196
Run 7: Report of TCP Vegas — Data Link

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

Legend:
- Flow 1 ingress (mean 32.80 Mbit/s)
- Flow 1 egress (mean 32.44 Mbit/s)
- Flow 2 ingress (mean 41.19 Mbit/s)
- Flow 2 egress (mean 40.75 Mbit/s)
- Flow 3 ingress (mean 26.04 Mbit/s)
- Flow 3 egress (mean 25.50 Mbit/s)
Run 8: Statistics of TCP Vegas

Start at: 2018-02-05 00:49:48
End at: 2018-02-05 00:50:18
Local clock offset: 1.013 ms
Remote clock offset: -4.374 ms

# Below is generated by plot.py at 2018-02-05 02:48:53
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 55.81 Mbit/s
  95th percentile per-packet one-way delay: 42.149 ms
  Loss rate: 0.76%
-- Flow 1:
  Average throughput: 37.94 Mbit/s
  95th percentile per-packet one-way delay: 47.834 ms
  Loss rate: 0.85%
-- Flow 2:
  Average throughput: 12.36 Mbit/s
  95th percentile per-packet one-way delay: 32.760 ms
  Loss rate: 0.40%
-- Flow 3:
  Average throughput: 29.06 Mbit/s
  95th percentile per-packet one-way delay: 35.896 ms
  Loss rate: 0.72%
Run 8: Report of TCP Vegas — Data Link
Run 9: Statistics of TCP Vegas

Start at: 2018-02-05 01:16:26
End at: 2018-02-05 01:16:56
Local clock offset: 1.186 ms
Remote clock offset: -3.292 ms

# Below is generated by plot.py at 2018-02-05 02:48:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 64.33 Mbit/s
95th percentile per-packet one-way delay: 51.157 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 37.50 Mbit/s
95th percentile per-packet one-way delay: 51.927 ms
Loss rate: 1.02%
-- Flow 2:
Average throughput: 28.35 Mbit/s
95th percentile per-packet one-way delay: 33.642 ms
Loss rate: 0.67%
-- Flow 3:
Average throughput: 23.97 Mbit/s
95th percentile per-packet one-way delay: 31.947 ms
Loss rate: 0.22%
Run 9: Report of TCP Vegas — Data Link
Run 10: Statistics of TCP Vegas

Start at: 2018-02-05 01:42:48  
End at: 2018-02-05 01:43:18  
Local clock offset: 1.306 ms  
Remote clock offset: -5.806 ms

# Below is generated by plot.py at 2018-02-05 02:48:53  
# Datalink statistics

-- Total of 3 flows:  
Average throughput: 78.56 Mbit/s  
95th percentile per-packet one-way delay: 48.115 ms  
Loss rate: 0.48%  

-- Flow 1:  
Average throughput: 47.38 Mbit/s  
95th percentile per-packet one-way delay: 48.669 ms  
Loss rate: 0.73%  

-- Flow 2:  
Average throughput: 36.34 Mbit/s  
95th percentile per-packet one-way delay: 48.165 ms  
Loss rate: 0.11%  

-- Flow 3:  
Average throughput: 21.08 Mbit/s  
95th percentile per-packet one-way delay: 34.300 ms  
Loss rate: 0.00%
Run 10: Report of TCP Vegas — Data Link

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

- Flow 1 ingress (mean 47.73 Mbit/s)
- Flow 1 egress (mean 47.38 Mbit/s)
- Flow 2 ingress (mean 36.38 Mbit/s)
- Flow 2 egress (mean 36.34 Mbit/s)
- Flow 3 ingress (mean 21.08 Mbit/s)
- Flow 3 egress (mean 21.08 Mbit/s)
Run 1: Statistics of Verus

Start at: 2018-02-04 21:56:21
End at: 2018-02-04 21:56:51
Local clock offset: 0.079 ms
Remote clock offset: -6.306 ms

# Below is generated by plot.py at 2018-02-05 02:48:53
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 54.25 Mbit/s
  95th percentile per-packet one-way delay: 69.830 ms
  Loss rate: 53.57%
-- Flow 1:
  Average throughput: 38.35 Mbit/s
  95th percentile per-packet one-way delay: 70.398 ms
  Loss rate: 58.68%
-- Flow 2:
  Average throughput: 11.80 Mbit/s
  95th percentile per-packet one-way delay: 67.698 ms
  Loss rate: 27.06%
-- Flow 3:
  Average throughput: 27.14 Mbit/s
  95th percentile per-packet one-way delay: 68.015 ms
  Loss rate: 39.36%
Run 1: Report of Verus — Data Link
Run 2: Statistics of Verus

Start at: 2018-02-04 22:22:02
Local clock offset: -0.202 ms
Remote clock offset: -6.35 ms

# Below is generated by plot.py at 2018-02-05 02:48:53
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 66.66 Mbit/s
  95th percentile per-packet one-way delay: 67.157 ms
  Loss rate: 31.74%
-- Flow 1:
  Average throughput: 31.55 Mbit/s
  95th percentile per-packet one-way delay: 67.616 ms
  Loss rate: 29.64%
-- Flow 2:
  Average throughput: 40.96 Mbit/s
  95th percentile per-packet one-way delay: 66.837 ms
  Loss rate: 34.77%
-- Flow 3:
  Average throughput: 23.81 Mbit/s
  95th percentile per-packet one-way delay: 66.362 ms
  Loss rate: 28.76%
Run 2: Report of Verus — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 44.89 Mbps)  Flow 1 egress (mean 31.55 Mbps)
Flow 2 ingress (mean 62.90 Mbps)  Flow 2 egress (mean 40.96 Mbps)
Flow 3 ingress (mean 33.49 Mbps)  Flow 3 egress (mean 23.81 Mbps)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 67.62 ms)  Flow 2 (95th percentile 66.84 ms)  Flow 3 (95th percentile 66.36 ms)
Run 3: Statistics of Verus

Start at: 2018-02-04 22:47:46
End at: 2018-02-04 22:48:16
Local clock offset: -0.271 ms
Remote clock offset: -7.172 ms

# Below is generated by plot.py at 2018-02-05 02:49:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 58.82 Mbit/s
95th percentile per-packet one-way delay: 75.056 ms
Loss rate: 70.09%
-- Flow 1:
Average throughput: 50.04 Mbit/s
95th percentile per-packet one-way delay: 76.733 ms
Loss rate: 72.52%
-- Flow 2:
Average throughput: 14.70 Mbit/s
95th percentile per-packet one-way delay: 67.657 ms
Loss rate: 39.58%
-- Flow 3:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 53.948 ms
Loss rate: 50.55%
Run 3: Report of Verus — Data Link

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

- Flow 1 ingress (mean 182.26 Mbit/s)
- Flow 1 egress (mean 50.04 Mbit/s)
- Flow 2 ingress (mean 22.65 Mbit/s)
- Flow 2 egress (mean 14.70 Mbit/s)
- Flow 3 ingress (mean 0.12 Mbit/s)
- Flow 3 egress (mean 0.07 Mbit/s)

- Flow 1 (95th percentile 76.73 ms)
- Flow 2 (95th percentile 67.66 ms)
- Flow 3 (95th percentile 53.95 ms)
Run 4: Statistics of Verus

Start at: 2018-02-04 23:14:04
End at: 2018-02-04 23:14:34
Local clock offset: -0.178 ms
Remote clock offset: -8.559 ms

# Below is generated by plot.py at 2018-02-05 02:49:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 66.11 Mbit/s
95th percentile per-packet one-way delay: 67.711 ms
Loss rate: 52.59%

-- Flow 1:
Average throughput: 44.29 Mbit/s
95th percentile per-packet one-way delay: 67.872 ms
Loss rate: 56.93%

-- Flow 2:
Average throughput: 22.21 Mbit/s
95th percentile per-packet one-way delay: 67.954 ms
Loss rate: 46.29%

-- Flow 3:
Average throughput: 22.11 Mbit/s
95th percentile per-packet one-way delay: 65.722 ms
Loss rate: 23.50%
Run 4: Report of Verus — Data Link

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

- Flow 1 Ingress (mean 102.89 Mbit/s)
- Flow 2 Ingress (mean 41.36 Mbit/s)
- Flow 3 Ingress (mean 28.87 Mbit/s)
- Flow 1 Egress (mean 44.29 Mbit/s)
- Flow 2 Egress (mean 22.21 Mbit/s)
- Flow 3 Egress (mean 22.11 Mbit/s)

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

- Flow 1 (95th percentile 67.87 ms)
- Flow 2 (95th percentile 67.95 ms)
- Flow 3 (95th percentile 65.72 ms)
Run 5: Statistics of Verus

Start at: 2018-02-04 23:40:30
End at: 2018-02-04 23:41:00
Local clock offset: 0.234 ms
Remote clock offset: -10.873 ms

# Below is generated by plot.py at 2018-02-05 02:49:43
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 68.17 Mbit/s
  95th percentile per-packet one-way delay: 65.706 ms
  Loss rate: 41.42%
-- Flow 1:
  Average throughput: 40.01 Mbit/s
  95th percentile per-packet one-way delay: 65.491 ms
  Loss rate: 40.05%
-- Flow 2:
  Average throughput: 38.53 Mbit/s
  95th percentile per-packet one-way delay: 66.263 ms
  Loss rate: 44.61%
-- Flow 3:
  Average throughput: 9.70 Mbit/s
  95th percentile per-packet one-way delay: 59.958 ms
  Loss rate: 25.05%
Run 5: Report of Verus — Data Link

[Graph showing data link throughput and packet delay over time]
Run 6: Statistics of Verus

Start at: 2018-02-05 00:06:45
End at: 2018-02-05 00:07:15
Local clock offset: 0.574 ms
Remote clock offset: -7.473 ms

# Below is generated by plot.py at 2018-02-05 02:49:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 62.03 Mbit/s
95th percentile per-packet one-way delay: 65.898 ms
Loss rate: 30.87%
-- Flow 1:
Average throughput: 38.61 Mbit/s
95th percentile per-packet one-way delay: 66.077 ms
Loss rate: 29.90%
-- Flow 2:
Average throughput: 21.21 Mbit/s
95th percentile per-packet one-way delay: 65.326 ms
Loss rate: 31.20%
-- Flow 3:
Average throughput: 30.03 Mbit/s
95th percentile per-packet one-way delay: 65.849 ms
Loss rate: 33.91%
Run 6: Report of Verus — Data Link

![Graph of throughput over time for different flows]

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

Flow 1 ingress (mean 54.98 Mbit/s) | Flow 1 egress (mean 38.61 Mbit/s)
Flow 2 ingress (mean 30.75 Mbit/s) | Flow 2 egress (mean 21.21 Mbit/s)
Flow 3 ingress (mean 45.45 Mbit/s) | Flow 3 egress (mean 30.03 Mbit/s)
Run 7: Statistics of Verus

Start at: 2018-02-05 00:33:09
End at: 2018-02-05 00:33:39
Local clock offset: 0.788 ms
Remote clock offset: -8.239 ms

# Below is generated by plot.py at 2018-02-05 02:50:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 58.62 Mbit/s
95th percentile per-packet one-way delay: 69.079 ms
Loss rate: 68.84%
-- Flow 1:
Average throughput: 35.97 Mbit/s
95th percentile per-packet one-way delay: 71.903 ms
Loss rate: 77.18%
-- Flow 2:
Average throughput: 26.50 Mbit/s
95th percentile per-packet one-way delay: 63.194 ms
Loss rate: 26.61%
-- Flow 3:
Average throughput: 19.03 Mbit/s
95th percentile per-packet one-way delay: 63.439 ms
Loss rate: 24.62%
Run 7: Report of Verus — Data Link
Run 8: Statistics of Verus

Start at: 2018-02-05 01:00:10
End at: 2018-02-05 01:00:40
Local clock offset: 1.04 ms
Remote clock offset: -6.378 ms

# Below is generated by plot.py at 2018-02-05 02:50:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 64.65 Mbit/s
95th percentile per-packet one-way delay: 64.836 ms
Loss rate: 29.39%
-- Flow 1:
Average throughput: 44.45 Mbit/s
95th percentile per-packet one-way delay: 64.653 ms
Loss rate: 29.74%
-- Flow 2:
Average throughput: 23.08 Mbit/s
95th percentile per-packet one-way delay: 65.186 ms
Loss rate: 27.02%
-- Flow 3:
Average throughput: 14.65 Mbit/s
95th percentile per-packet one-way delay: 65.341 ms
Loss rate: 33.19%
Run 8: Report of Verus — Data Link
Run 9: Statistics of Verus

Start at: 2018-02-05 01:26:46
End at: 2018-02-05 01:27:16
Local clock offset: 1.282 ms
Remote clock offset: -3.586 ms

# Below is generated by plot.py at 2018-02-05 02:50:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 66.44 Mbit/s
95th percentile per-packet one-way delay: 66.776 ms
Loss rate: 26.28%
-- Flow 1:
Average throughput: 44.70 Mbit/s
95th percentile per-packet one-way delay: 66.975 ms
Loss rate: 26.16%
-- Flow 2:
Average throughput: 22.98 Mbit/s
95th percentile per-packet one-way delay: 65.841 ms
Loss rate: 25.00%
-- Flow 3:
Average throughput: 21.85 Mbit/s
95th percentile per-packet one-way delay: 67.363 ms
Loss rate: 29.86%
Run 9: Report of Verus — Data Link

[Graphs showing network performance metrics over time, including throughput and per-packet one-way delay for different flows.]
Run 10: Statistics of Verus

Start at: 2018-02-05 01:53:00
End at: 2018-02-05 01:53:30
Local clock offset: 1.267 ms
Remote clock offset: -3.703 ms

# Below is generated by plot.py at 2018-02-05 02:50:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 61.09 Mbit/s
95th percentile per-packet one-way delay: 74.205 ms
Loss rate: 72.91%
-- Flow 1:
Average throughput: 39.31 Mbit/s
95th percentile per-packet one-way delay: 76.679 ms
Loss rate: 77.04%
-- Flow 2:
Average throughput: 31.97 Mbit/s
95th percentile per-packet one-way delay: 68.977 ms
Loss rate: 60.71%
-- Flow 3:
Average throughput: 4.62 Mbit/s
95th percentile per-packet one-way delay: 66.121 ms
Loss rate: 24.68%
Run 10: Report of Verus — Data Link

![Diagram showing network throughput and latency over time.]

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 170.91 Mbps)
  - Flow 1 egress (mean 39.31 Mbps)
  - Flow 2 ingress (mean 81.49 Mbps)
  - Flow 2 egress (mean 33.97 Mbps)
  - Flow 3 ingress (mean 3.05 Mbps)
  - Flow 3 egress (mean 4.62 Mbps)

- **Latency (ms):**
  - Flow 1 (95th percentile 76.68 ms)
  - Flow 2 (95th percentile 68.98 ms)
  - Flow 3 (95th percentile 66.12 ms)
Run 1: Statistics of Copa

Start at: 2018-02-04 22:06:29
End at: 2018-02-04 22:06:59
Local clock offset: -0.058 ms
Remote clock offset: -6.025 ms

# Below is generated by plot.py at 2018-02-05 02:51:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 72.94 Mbit/s
95th percentile per-packet one-way delay: 33.108 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 39.10 Mbit/s
95th percentile per-packet one-way delay: 32.194 ms
Loss rate: 0.15%
-- Flow 2:
Average throughput: 36.94 Mbit/s
95th percentile per-packet one-way delay: 33.565 ms
Loss rate: 0.15%
-- Flow 3:
Average throughput: 27.86 Mbit/s
95th percentile per-packet one-way delay: 35.172 ms
Loss rate: 0.22%
Run 1: Report of Copa — Data Link

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**Throughput (Mbps)**

- **Flow 1 ingress** (mean 39.16 Mbps)
- **Flow 1 egress** (mean 39.10 Mbps)
- **Flow 2 ingress** (mean 37.00 Mbps)
- **Flow 2 egress** (mean 36.94 Mbps)
- **Flow 3 ingress** (mean 27.92 Mbps)
- **Flow 3 egress** (mean 27.86 Mbps)

---

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

- **Flow 1** (95th percentile 32.19 ms)
- **Flow 2** (95th percentile 33.36 ms)
- **Flow 3** (95th percentile 35.17 ms)
Run 2: Statistics of Copa

Start at: 2018-02-04 22:31:51
End at: 2018-02-04 22:32:21
Local clock offset: -0.292 ms
Remote clock offset: -6.592 ms

# Below is generated by plot.py at 2018-02-05 02:51:37
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 73.94 Mbit/s
  95th percentile per-packet one-way delay: 34.098 ms
  Loss rate: 0.21%
-- Flow 1:
  Average throughput: 38.30 Mbit/s
  95th percentile per-packet one-way delay: 32.624 ms
  Loss rate: 0.20%
-- Flow 2:
  Average throughput: 39.54 Mbit/s
  95th percentile per-packet one-way delay: 35.448 ms
  Loss rate: 0.24%
-- Flow 3:
  Average throughput: 27.99 Mbit/s
  95th percentile per-packet one-way delay: 34.857 ms
  Loss rate: 0.19%
Run 2: Report of Copa — Data Link

![Graph 1: Throughput (Mbps)]

- **Flow 1 ingress (mean 38.37 Mbps)**
- **Flow 1 egress (mean 38.30 Mbps)**
- **Flow 2 ingress (mean 39.63 Mbps)**
- **Flow 2 egress (mean 39.54 Mbps)**
- **Flow 3 ingress (mean 28.04 Mbps)**
- **Flow 3 egress (mean 27.99 Mbps)**

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

- **Flow 1 (95th percentile 32.62 ms)**
- **Flow 2 (95th percentile 35.45 ms)**
- **Flow 3 (95th percentile 34.86 ms)**
Run 3: Statistics of Copa

Start at: 2018-02-04 22:57:56
End at: 2018-02-04 22:58:26
Local clock offset: -0.384 ms
Remote clock offset: -7.649 ms

# Below is generated by plot.py at 2018-02-05 02:51:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 73.59 Mbit/s
95th percentile per-packet one-way delay: 31.743 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 37.54 Mbit/s
95th percentile per-packet one-way delay: 31.684 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 40.67 Mbit/s
95th percentile per-packet one-way delay: 31.836 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 27.01 Mbit/s
95th percentile per-packet one-way delay: 31.658 ms
Loss rate: 0.03%
Run 3: Report of Copa — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 37.55 Mbps)
  - Flow 1 egress (mean 37.54 Mbps)
  - Flow 2 ingress (mean 40.68 Mbps)
  - Flow 2 egress (mean 40.67 Mbps)
  - Flow 3 ingress (mean 27.02 Mbps)
  - Flow 3 egress (mean 27.01 Mbps)

- **Per-packet error delay (ms):**
  - Flow 1 (95th percentile 31.68 ms)
  - Flow 2 (95th percentile 31.84 ms)
  - Flow 3 (95th percentile 31.66 ms)
Run 4: Statistics of Copa

Start at: 2018-02-04 23:24:19
End at: 2018-02-04 23:24:49
Local clock offset: -0.135 ms
Remote clock offset: -9.194 ms

# Below is generated by plot.py at 2018-02-05 02:51:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 63.61 Mbit/s
95th percentile per-packet one-way delay: 33.233 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 34.64 Mbit/s
95th percentile per-packet one-way delay: 31.837 ms
Loss rate: 0.15%
-- Flow 2:
Average throughput: 29.03 Mbit/s
95th percentile per-packet one-way delay: 33.315 ms
Loss rate: 0.24%
-- Flow 3:
Average throughput: 29.06 Mbit/s
95th percentile per-packet one-way delay: 36.270 ms
Loss rate: 0.45%
Run 4: Report of Copa — Data Link

![Graph showing throughput and per-packet one-way delay](image_url)

Legend:
- Blue: Flow 1 ingress (mean 34.69 Mbit/s)
- Blue: Flow 1 egress (mean 34.64 Mbit/s)
- Green: Flow 2 ingress (mean 29.09 Mbit/s)
- Green: Flow 2 egress (mean 29.03 Mbit/s)
- Red: Flow 3 ingress (mean 29.19 Mbit/s)
- Red: Flow 3 egress (mean 29.06 Mbit/s)

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

Legend:
- Blue: Flow 1 (95th percentile 31.84 ms)
- Green: Flow 2 (95th percentile 33.31 ms)
- Red: Flow 3 (95th percentile 36.27 ms)
Run 5: Statistics of Copa

Start at: 2018-02-04 23:50:49
End at: 2018-02-04 23:51:19
Local clock offset: 0.294 ms
Remote clock offset: -10.347 ms

# Below is generated by plot.py at 2018-02-05 02:51:45
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 72.64 Mbit/s
  95th percentile per-packet one-way delay: 31.746 ms
  Loss rate: 0.15%
-- Flow 1:
  Average throughput: 37.41 Mbit/s
  95th percentile per-packet one-way delay: 30.947 ms
  Loss rate: 0.15%
-- Flow 2:
  Average throughput: 38.20 Mbit/s
  95th percentile per-packet one-way delay: 32.225 ms
  Loss rate: 0.15%
-- Flow 3:
  Average throughput: 29.41 Mbit/s
  95th percentile per-packet one-way delay: 32.732 ms
  Loss rate: 0.12%
Run 5: Report of Copa — Data Link

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

- Flow 1 Ingress (mean 37.47 Mbps)
- Flow 1 Egress (mean 37.41 Mbps)
- Flow 2 Ingress (mean 38.26 Mbps)
- Flow 2 Egress (mean 38.20 Mbps)
- Flow 3 Ingress (mean 29.45 Mbps)
- Flow 3 Egress (mean 29.41 Mbps)

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

- Flow 1 (95th percentile 30.95 ms)
- Flow 2 (95th percentile 32.23 ms)
- Flow 3 (95th percentile 32.73 ms)
Run 6: Statistics of Copa

Start at: 2018-02-05 00:16:53
End at: 2018-02-05 00:17:23
Local clock offset: 0.684 ms
Remote clock offset: -6.927 ms

# Below is generated by plot.py at 2018-02-05 02:51:45
# Datalink statistics
-- Total of 3 flows:
   Average throughput: 68.92 Mbit/s
   95th percentile per-packet one-way delay: 32.545 ms
   Loss rate: 0.13%
-- Flow 1:
   Average throughput: 35.35 Mbit/s
   95th percentile per-packet one-way delay: 31.800 ms
   Loss rate: 0.15%
-- Flow 2:
   Average throughput: 38.57 Mbit/s
   95th percentile per-packet one-way delay: 32.367 ms
   Loss rate: 0.11%
-- Flow 3:
   Average throughput: 23.75 Mbit/s
   95th percentile per-packet one-way delay: 34.216 ms
   Loss rate: 0.14%
Run 6: Report of Copa — Data Link

[Graph showing throughput and per-packet one-way delay for different flows over time]
Run 7: Statistics of Copa

Start at: 2018-02-05 00:43:48
End at: 2018-02-05 00:44:18
Local clock offset: 1.003 ms
Remote clock offset: -7.388 ms

# Below is generated by plot.py at 2018-02-05 02:51:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 63.56 Mbit/s
95th percentile per-packet one-way delay: 35.046 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 33.24 Mbit/s
95th percentile per-packet one-way delay: 33.842 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 32.75 Mbit/s
95th percentile per-packet one-way delay: 35.669 ms
Loss rate: 0.44%
-- Flow 3:
Average throughput: 25.64 Mbit/s
95th percentile per-packet one-way delay: 35.654 ms
Loss rate: 0.69%
Run 7: Report of Copa — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 33.38 Mbps/s)
Flow 1 egress (mean 33.24 Mbps/s)
Flow 2 ingress (mean 32.89 Mbps/s)
Flow 2 egress (mean 32.75 Mbps/s)
Flow 3 ingress (mean 25.82 Mbps/s)
Flow 3 egress (mean 25.64 Mbps/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 33.84 ms)
Flow 2 (95th percentile 35.67 ms)
Flow 3 (95th percentile 35.65 ms)
Run 8: Statistics of Copa

Start at: 2018-02-05 01:10:27
End at: 2018-02-05 01:10:57
Local clock offset: 1.102 ms
Remote clock offset: -3.841 ms

# Below is generated by plot.py at 2018-02-05 02:52:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 63.84 Mbit/s
95th percentile per-packet one-way delay: 31.240 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 31.90 Mbit/s
95th percentile per-packet one-way delay: 31.131 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 32.50 Mbit/s
95th percentile per-packet one-way delay: 31.358 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 31.02 Mbit/s
95th percentile per-packet one-way delay: 31.494 ms
Loss rate: 0.00%
Run 8: Report of Copa — Data Link
Run 9: Statistics of Copa

Start at: 2018-02-05 01:37:00
End at: 2018-02-05 01:37:30
Local clock offset: 1.24 ms
Remote clock offset: -3.789 ms

# Below is generated by plot.py at 2018-02-05 02:53:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 69.62 Mbit/s
95th percentile per-packet one-way delay: 31.234 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 35.20 Mbit/s
95th percentile per-packet one-way delay: 31.122 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 34.11 Mbit/s
95th percentile per-packet one-way delay: 31.423 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 35.29 Mbit/s
95th percentile per-packet one-way delay: 31.474 ms
Loss rate: 0.06%
Run 9: Report of Copa — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 35.22 Mbit/s)
Flow 1 egress (mean 35.20 Mbit/s)
Flow 2 ingress (mean 34.13 Mbit/s)
Flow 2 egress (mean 34.11 Mbit/s)
Flow 3 ingress (mean 35.31 Mbit/s)
Flow 3 egress (mean 35.29 Mbit/s)

Per packet one way delay [ms]

Time (s)

Flow 1 (95th percentile 31.12 ms)
Flow 2 (95th percentile 31.42 ms)
Flow 3 (95th percentile 31.47 ms)
Run 10: Statistics of Copa

Start at: 2018-02-05 02:03:23
End at: 2018-02-05 02:03:53
Local clock offset: 1.146 ms
Remote clock offset: -3.95 ms

# Below is generated by plot.py at 2018-02-05 02:53:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 62.46 Mbit/s
95th percentile per-packet one-way delay: 33.564 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 32.27 Mbit/s
95th percentile per-packet one-way delay: 32.611 ms
Loss rate: 0.27%
-- Flow 2:
Average throughput: 30.30 Mbit/s
95th percentile per-packet one-way delay: 34.737 ms
Loss rate: 0.31%
-- Flow 3:
Average throughput: 30.17 Mbit/s
95th percentile per-packet one-way delay: 32.673 ms
Loss rate: 0.29%
Run 10: Report of Copa — Data Link

![Graph: Throughput vs Time](image1)

- **Flow 1 ingress (mean 32.36 Mbit/s)**
- **Flow 1 egress (mean 32.27 Mbit/s)**
- **Flow 2 ingress (mean 30.39 Mbit/s)**
- **Flow 2 egress (mean 30.30 Mbit/s)**
- **Flow 3 ingress (mean 30.25 Mbit/s)**
- **Flow 3 egress (mean 30.17 Mbit/s)**

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

- **Flow 1 (95th percentile 32.61 ms)**
- **Flow 2 (95th percentile 34.74 ms)**
- **Flow 3 (95th percentile 32.67 ms)**
Run 1: Statistics of FillP

Start at: 2018-02-04 21:50:40
End at: 2018-02-04 21:51:10
Local clock offset: 0.169 ms
Remote clock offset: -6.052 ms

# Below is generated by plot.py at 2018-02-05 02:54:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.11 Mbit/s
95th percentile per-packet one-way delay: 66.042 ms
Loss rate: 16.24%
-- Flow 1:
Average throughput: 50.98 Mbit/s
95th percentile per-packet one-way delay: 62.869 ms
Loss rate: 11.18%
-- Flow 2:
Average throughput: 38.94 Mbit/s
95th percentile per-packet one-way delay: 66.747 ms
Loss rate: 20.63%
-- Flow 3:
Average throughput: 42.78 Mbit/s
95th percentile per-packet one-way delay: 68.447 ms
Loss rate: 24.10%
Run 1: Report of FillP — Data Link

The graphs show the throughput and per-packet one-way delay for three flows (1, 2, and 3) over time. The throughput graphs illustrate the data transfer speeds, while the per-packet one-way delay graphs show the latency for each packet. The charts provide insights into the network performance and efficiency during the specified run.
Run 2: Statistics of FillP

Start at: 2018-02-04 22:16:15
End at: 2018-02-04 22:16:45
Local clock offset: -0.249 ms
Remote clock offset: -6.154 ms

# Below is generated by plot.py at 2018-02-05 02:54:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.29 Mbit/s
95th percentile per-packet one-way delay: 67.347 ms
Loss rate: 21.01%

-- Flow 1:
Average throughput: 55.12 Mbit/s
95th percentile per-packet one-way delay: 65.929 ms
Loss rate: 15.22%

-- Flow 2:
Average throughput: 34.11 Mbit/s
95th percentile per-packet one-way delay: 68.312 ms
Loss rate: 27.82%

-- Flow 3:
Average throughput: 40.57 Mbit/s
95th percentile per-packet one-way delay: 68.903 ms
Loss rate: 29.52%
Run 2: Report of FillP — Data Link

![Graph showing data link performance](image-url)

**Throughput (Mbps)**
- Flow 1 ingress (mean 65.08 Mbps)
- Flow 1 egress (mean 55.12 Mbps)
- Flow 2 ingress (mean 47.31 Mbps)
- Flow 2 egress (mean 34.11 Mbps)
- Flow 3 ingress (mean 57.66 Mbps)
- Flow 3 egress (mean 40.57 Mbps)

**Per packet one way delay (ms)**
- Flow 1 (95th percentile 65.93 ms)
- Flow 2 (95th percentile 68.33 ms)
- Flow 3 (95th percentile 68.90 ms)
Run 3: Statistics of FillP

Start at: 2018-02-04 22:41:44
End at: 2018-02-04 22:42:14
Local clock offset: -0.39 ms
Remote clock offset: -7.523 ms

# Below is generated by plot.py at 2018-02-05 02:54:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.56 Mbit/s
95th percentile per-packet one-way delay: 67.151 ms
Loss rate: 20.31%
-- Flow 1:
Average throughput: 56.87 Mbit/s
95th percentile per-packet one-way delay: 65.539 ms
Loss rate: 15.37%
-- Flow 2:
Average throughput: 34.19 Mbit/s
95th percentile per-packet one-way delay: 68.608 ms
Loss rate: 27.20%
-- Flow 3:
Average throughput: 36.67 Mbit/s
95th percentile per-packet one-way delay: 68.472 ms
Loss rate: 27.39%
Run 3: Report of FillP — Data Link

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

![Graph 2: Per-packet One-Way Delay over Time](image2)
Run 4: Statistics of FillP

Start at: 2018-02-04 23:07:55
End at: 2018-02-04 23:08:25
Local clock offset: -0.386 ms
Remote clock offset: -10.725 ms

# Below is generated by plot.py at 2018-02-05 02:54:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.33 Mbit/s
95th percentile per-packet one-way delay: 64.820 ms
Loss rate: 18.54%
-- Flow 1:
Average throughput: 53.48 Mbit/s
95th percentile per-packet one-way delay: 62.950 ms
Loss rate: 13.19%
-- Flow 2:
Average throughput: 37.72 Mbit/s
95th percentile per-packet one-way delay: 66.122 ms
Loss rate: 23.77%
-- Flow 3:
Average throughput: 38.37 Mbit/s
95th percentile per-packet one-way delay: 66.072 ms
Loss rate: 27.48%
Run 4: Report of FillP — Data Link

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

- Flow 1 ingress (mean 61.69 Mbit/s)
- Flow 1 egress (mean 53.48 Mbit/s)
- Flow 2 ingress (mean 49.58 Mbit/s)
- Flow 2 egress (mean 37.72 Mbit/s)
- Flow 3 ingress (mean 52.99 Mbit/s)
- Flow 3 egress (mean 38.37 Mbit/s)

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

- Flow 1 (95th percentile 62.95 ms)
- Flow 2 (95th percentile 66.12 ms)
- Flow 3 (95th percentile 66.07 ms)
Run 5: Statistics of FillP

Start at: 2018-02-04 23:34:18
End at: 2018-02-04 23:34:48
Local clock offset: -0.003 ms
Remote clock offset: -11.052 ms

# Below is generated by plot.py at 2018-02-05 02:54:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.59 Mbit/s
95th percentile per-packet one-way delay: 65.717 ms
Loss rate: 17.13%
-- Flow 1:
Average throughput: 54.44 Mbit/s
95th percentile per-packet one-way delay: 64.599 ms
Loss rate: 13.24%
-- Flow 2:
Average throughput: 42.16 Mbit/s
95th percentile per-packet one-way delay: 66.651 ms
Loss rate: 22.97%
-- Flow 3:
Average throughput: 27.35 Mbit/s
95th percentile per-packet one-way delay: 66.037 ms
Loss rate: 19.88%
Run 5: Report of FillP — Data Link
Run 6: Statistics of FillP

Start at: 2018-02-05 00:00:48
End at: 2018-02-05 00:01:18
Local clock offset: 0.419 ms
Remote clock offset: -7.203 ms

# Below is generated by plot.py at 2018-02-05 02:54:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.23 Mbit/s
95th percentile per-packet one-way delay: 67.652 ms
Loss rate: 18.57%
-- Flow 1:
Average throughput: 54.83 Mbit/s
95th percentile per-packet one-way delay: 66.289 ms
Loss rate: 13.48%
-- Flow 2:
Average throughput: 37.94 Mbit/s
95th percentile per-packet one-way delay: 68.415 ms
Loss rate: 25.04%
-- Flow 3:
Average throughput: 33.68 Mbit/s
95th percentile per-packet one-way delay: 69.154 ms
Loss rate: 25.51%
Run 6: Report of FillP — Data Link
Run 7: Statistics of FillP

Start at: 2018-02-05 00:26:55
End at: 2018-02-05 00:27:25
Local clock offset: 0.796 ms
Remote clock offset: -8.558 ms

# Below is generated by plot.py at 2018-02-05 02:55:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.66 Mbit/s
95th percentile per-packet one-way delay: 64.777 ms
Loss rate: 18.72%
-- Flow 1:
Average throughput: 55.50 Mbit/s
95th percentile per-packet one-way delay: 63.233 ms
Loss rate: 13.93%
-- Flow 2:
Average throughput: 36.37 Mbit/s
95th percentile per-packet one-way delay: 66.072 ms
Loss rate: 25.43%
-- Flow 3:
Average throughput: 37.18 Mbit/s
95th percentile per-packet one-way delay: 66.277 ms
Loss rate: 24.50%
Run 7: Report of FillP — Data Link

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

- **Flow 1 Ingress (mean 64.56 Mbit/s)**
- **Flow 1 Egress (mean 55.50 Mbit/s)**
- **Flow 2 Ingress (mean 48.86 Mbit/s)**
- **Flow 2 Egress (mean 36.37 Mbit/s)**
- **Flow 3 Ingress (mean 47.77 Mbit/s)**
- **Flow 3 Egress (mean 37.18 Mbit/s)**
Run 8: Statistics of FillP

Start at: 2018-02-05 00:54:09
End at: 2018-02-05 00:54:39
Local clock offset: 1.019 ms
Remote clock offset: -6.65 ms

# Below is generated by plot.py at 2018-02-05 02:55:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.76 Mbit/s
95th percentile per-packet one-way delay: 64.940 ms
Loss rate: 17.33%
-- Flow 1:
Average throughput: 56.21 Mbit/s
95th percentile per-packet one-way delay: 62.865 ms
Loss rate: 12.63%
-- Flow 2:
Average throughput: 38.28 Mbit/s
95th percentile per-packet one-way delay: 66.212 ms
Loss rate: 22.57%
-- Flow 3:
Average throughput: 27.34 Mbit/s
95th percentile per-packet one-way delay: 66.631 ms
Loss rate: 27.65%
Run 8: Report of FillP — Data Link

![Graph showing throughput and per-packet one-way delay for different flows.](image-url)
Run 9: Statistics of FillP

Start at: 2018-02-05 01:20:44
End at: 2018-02-05 01:21:14
Local clock offset: 1.117 ms
Remote clock offset: -3.252 ms

# Below is generated by plot.py at 2018-02-05 02:56:59
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 91.36 Mbit/s
  95th percentile per-packet one-way delay: 67.114 ms
  Loss rate: 18.37%
-- Flow 1:
  Average throughput: 51.81 Mbit/s
  95th percentile per-packet one-way delay: 65.092 ms
  Loss rate: 13.56%
-- Flow 2:
  Average throughput: 37.87 Mbit/s
  95th percentile per-packet one-way delay: 68.469 ms
  Loss rate: 23.85%
-- Flow 3:
  Average throughput: 43.87 Mbit/s
  95th percentile per-packet one-way delay: 68.070 ms
  Loss rate: 24.06%
Run 9: Report of FillP — Data Link

Throughput vs. Time (s)

- Flow 1 ingress (mean 60.00 Mbit/s)
- Flow 1 egress (mean 51.81 Mbit/s)
- Flow 2 ingress (mean 49.80 Mbit/s)
- Flow 2 egress (mean 37.87 Mbit/s)
- Flow 3 ingress (mean 51.02 Mbit/s)
- Flow 3 egress (mean 43.87 Mbit/s)

Delay per packet vs. Time (s)

- Flow 1 (95th percentile 65.09 ms)
- Flow 2 (95th percentile 68.47 ms)
- Flow 3 (95th percentile 66.07 ms)
Run 10: Statistics of FillP

Start at: 2018-02-05 01:47:02
End at: 2018-02-05 01:47:32
Local clock offset: 1.292 ms
Remote clock offset: -3.681 ms

# Below is generated by plot.py at 2018-02-05 02:57:06
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 91.21 Mbit/s
  95th percentile per-packet one-way delay: 66.623 ms
  Loss rate: 17.55%
-- Flow 1:
  Average throughput: 53.07 Mbit/s
  95th percentile per-packet one-way delay: 65.269 ms
  Loss rate: 12.38%
-- Flow 2:
  Average throughput: 36.77 Mbit/s
  95th percentile per-packet one-way delay: 67.366 ms
  Loss rate: 23.23%
-- Flow 3:
  Average throughput: 41.21 Mbit/s
  95th percentile per-packet one-way delay: 67.824 ms
  Loss rate: 24.80%
Run 10: Report of FillIP — Data Link

[Graphs showing throughput and per-packet one-way delay over time for different flows.]
Run 1: Statistics of Indigo-1-32

Start at: 2018-02-04 22:02:12
End at: 2018-02-04 22:02:42
Local clock offset: -0.009 ms
Remote clock offset: -8.638 ms

# Below is generated by plot.py at 2018-02-05 02:57:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.68 Mbit/s
95th percentile per-packet one-way delay: 39.245 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 65.75 Mbit/s
95th percentile per-packet one-way delay: 37.308 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 25.33 Mbit/s
95th percentile per-packet one-way delay: 39.590 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 37.13 Mbit/s
95th percentile per-packet one-way delay: 46.802 ms
Loss rate: 0.08%
Run 1: Report of Indigo-1-32 — Data Link
Run 2: Statistics of Indigo-1-32

Start at: 2018-02-04 22:27:45
End at: 2018-02-04 22:28:15
Local clock offset: -0.237 ms
Remote clock offset: -6.886 ms

# Below is generated by plot.py at 2018-02-05 02:57:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.45 Mbit/s
95th percentile per-packet one-way delay: 42.836 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 60.71 Mbit/s
95th percentile per-packet one-way delay: 41.436 ms
Loss rate: 0.29%
-- Flow 2:
Average throughput: 34.82 Mbit/s
95th percentile per-packet one-way delay: 43.613 ms
Loss rate: 0.26%
-- Flow 3:
Average throughput: 35.83 Mbit/s
95th percentile per-packet one-way delay: 45.565 ms
Loss rate: 0.48%
Run 2: Report of Indigo-1-32 — Data Link

Graph 1: Throughput vs. Time

Graph 2: Per-packet one-way delay vs. Time

Legend:
- Flow 1 ingress (mean 60.90 Mbit/s)
- Flow 1 egress (mean 60.71 Mbit/s)
- Flow 2 ingress (mean 34.92 Mbit/s)
- Flow 2 egress (mean 34.82 Mbit/s)
- Flow 3 ingress (mean 36.02 Mbit/s)
- Flow 3 egress (mean 35.83 Mbit/s)

Legend for delay:
- Flow 1 (95th percentile 41.44 ms)
- Flow 2 (95th percentile 43.61 ms)
- Flow 3 (95th percentile 45.56 ms)
Run 3: Statistics of Indigo-1-32

Start at: 2018-02-04 22:53:44
End at: 2018-02-04 22:54:14
Local clock offset: -0.282 ms
Remote clock offset: -7.931 ms

# Below is generated by plot.py at 2018-02-05 02:57:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.41 Mbit/s
95th percentile per-packet one-way delay: 40.497 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 62.47 Mbit/s
95th percentile per-packet one-way delay: 39.034 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 32.54 Mbit/s
95th percentile per-packet one-way delay: 41.204 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 31.67 Mbit/s
95th percentile per-packet one-way delay: 43.346 ms
Loss rate: 0.10%
Run 3: Report of Indigo-1-32 — Data Link
Run 4: Statistics of Indigo-1-32

Start at: 2018-02-04 23:20:04
End at: 2018-02-04 23:20:34
Local clock offset: -0.215 ms
Remote clock offset: -9.144 ms

# Below is generated by plot.py at 2018-02-05 02:57:06
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 93.62 Mbit/s
  95th percentile per-packet one-way delay: 40.406 ms
  Loss rate: 0.12%
-- Flow 1:
  Average throughput: 59.57 Mbit/s
  95th percentile per-packet one-way delay: 39.345 ms
  Loss rate: 0.16%
-- Flow 2:
  Average throughput: 38.52 Mbit/s
  95th percentile per-packet one-way delay: 40.625 ms
  Loss rate: 0.06%
-- Flow 3:
  Average throughput: 25.99 Mbit/s
  95th percentile per-packet one-way delay: 41.671 ms
  Loss rate: 0.00%
Run 4: Report of Indigo-1-32 — Data Link
Run 5: Statistics of Indigo-1-32

Start at: 2018-02-04 23:46:33
End at: 2018-02-04 23:47:03
Local clock offset: 0.229 ms
Remote clock offset: -8.109 ms

# Below is generated by plot.py at 2018-02-05 02:57:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.61 Mbit/s
95th percentile per-packet one-way delay: 40.842 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 67.93 Mbit/s
95th percentile per-packet one-way delay: 39.906 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 23.57 Mbit/s
95th percentile per-packet one-way delay: 42.026 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 30.73 Mbit/s
95th percentile per-packet one-way delay: 44.507 ms
Loss rate: 0.05%
Run 5: Report of Indigo-1-32 — Data Link

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

- Flow 1 ingress (mean 68.03 Mbps)
- Flow 1 egress (mean 67.93 Mbps)
- Flow 2 ingress (mean 23.58 Mbps)
- Flow 2 egress (mean 23.57 Mbps)
- Flow 3 ingress (mean 30.76 Mbps)
- Flow 3 egress (mean 30.73 Mbps)

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

- Flow 1 (95th percentile 39.91 ms)
- Flow 2 (95th percentile 42.03 ms)
- Flow 3 (95th percentile 44.51 ms)

273
Run 6: Statistics of Indigo-1-32

Start at: 2018-02-05 00:12:36
End at: 2018-02-05 00:13:06
Local clock offset: 0.652 ms
Remote clock offset: -9.221 ms

# Below is generated by plot.py at 2018-02-05 02:57:12
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 94.19 Mbit/s
  95th percentile per-packet one-way delay: 38.986 ms
  Loss rate: 0.32%
-- Flow 1:
  Average throughput: 61.76 Mbit/s
  95th percentile per-packet one-way delay: 37.501 ms
  Loss rate: 0.24%
-- Flow 2:
  Average throughput: 30.22 Mbit/s
  95th percentile per-packet one-way delay: 39.930 ms
  Loss rate: 0.16%
-- Flow 3:
  Average throughput: 37.80 Mbit/s
  95th percentile per-packet one-way delay: 52.496 ms
  Loss rate: 0.95%
Run 6: Report of Indigo-1-32 — Data Link

The graphs show the throughput (Mbps) and per-packet one-way delay (ms) over time for different flows in the network. The data is represented as follows:

- **Flow 1** (ingress): Mean 61.92 Mbps (blue dashed line)
- **Flow 1** (egress): Mean 61.76 Mbps (blue solid line)
- **Flow 2** (ingress): Mean 30.27 Mbps (green dashed line)
- **Flow 2** (egress): Mean 30.22 Mbps (green solid line)
- **Flow 3** (ingress): Mean 38.16 Mbps (red dashed line)
- **Flow 3** (egress): Mean 37.80 Mbps (red solid line)

The throughput graph indicates variability in data transfer rates over time, while the delay graph shows fluctuations in packet delay, which may be indicative of network congestion or other factors affecting performance.
Run 7: Statistics of Indigo-1-32

Start at: 2018-02-05 00:39:13
End at: 2018-02-05 00:39:43
Local clock offset: 0.952 ms
Remote clock offset: -7.767 ms

# Below is generated by plot.py at 2018-02-05 02:57:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.57 Mbit/s
95th percentile per-packet one-way delay: 42.894 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 58.07 Mbit/s
95th percentile per-packet one-way delay: 39.715 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 31.08 Mbit/s
95th percentile per-packet one-way delay: 43.438 ms
Loss rate: 0.16%
-- Flow 3:
Average throughput: 36.40 Mbit/s
95th percentile per-packet one-way delay: 51.818 ms
Loss rate: 1.00%
Run 7: Report of Indigo-1-32 — Data Link

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

- Flow 1 ingress (mean 58.14 Mbps)
- Flow 1 egress (mean 58.07 Mbps)
- Flow 2 ingress (mean 31.14 Mbps)
- Flow 2 egress (mean 31.08 Mbps)
- Flow 3 ingress (mean 36.78 Mbps)
- Flow 3 egress (mean 36.40 Mbps)

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

- Flow 1 (95th percentile 39.72 ms)
- Flow 2 (95th percentile 43.44 ms)
- Flow 3 (95th percentile 51.82 ms)
Run 8: Statistics of Indigo-1-32

Start at: 2018-02-05 01:06:06
End at: 2018-02-05 01:06:36
Local clock offset: 1.075 ms
Remote clock offset: -3.611 ms

# Below is generated by plot.py at 2018-02-05 02:57:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.71 Mbit/s
95th percentile per-packet one-way delay: 39.775 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 61.45 Mbit/s
95th percentile per-packet one-way delay: 38.306 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 28.61 Mbit/s
95th percentile per-packet one-way delay: 41.624 ms
Loss rate: 0.15%
-- Flow 3:
Average throughput: 34.63 Mbit/s
95th percentile per-packet one-way delay: 48.368 ms
Loss rate: 0.16%
Run 8: Report of Indigo-1-32 — Data Link

![Graph showing throughput and per-packet one-way delay over time for different flows with mean rates and 95th percentiles indicated.]

- Flow 1 ingress (mean 61.54 Mbit/s)
- Flow 1 egress (mean 61.45 Mbit/s)
- Flow 2 ingress (mean 28.66 Mbit/s)
- Flow 2 egress (mean 28.61 Mbit/s)
- Flow 3 ingress (mean 34.69 Mbit/s)
- Flow 3 egress (mean 34.63 Mbit/s)

279
Run 9: Statistics of Indigo-1-32

Start at: 2018-02-05 01:32:44
End at: 2018-02-05 01:33:14
Local clock offset: 1.204 ms
Remote clock offset: -3.749 ms

# Below is generated by plot.py at 2018-02-05 02:57:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.18 Mbit/s
95th percentile per-packet one-way delay: 42.111 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 61.15 Mbit/s
95th percentile per-packet one-way delay: 39.944 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 36.03 Mbit/s
95th percentile per-packet one-way delay: 42.570 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 31.09 Mbit/s
95th percentile per-packet one-way delay: 47.281 ms
Loss rate: 0.00%
Run 9: Report of Indigo-1-32 — Data Link

![Graph 1: Throughput (Mbps)]

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

- Flow 1 ingress (mean 61.22 Mbps)
- Flow 1 egress (mean 61.15 Mbps)
- Flow 2 ingress (mean 36.05 Mbps)
- Flow 2 egress (mean 36.03 Mbps)
- Flow 3 ingress (mean 31.09 Mbps)
- Flow 3 egress (mean 31.09 Mbps)
Run 10: Statistics of Indigo-1-32

Start at: 2018-02-05 01:59:05
End at: 2018-02-05 01:59:35
Local clock offset: 1.233 ms
Remote clock offset: -3.888 ms

# Below is generated by plot.py at 2018-02-05 02:57:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.58 Mbit/s
95th percentile per-packet one-way delay: 45.193 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 60.12 Mbit/s
95th percentile per-packet one-way delay: 42.795 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 34.39 Mbit/s
95th percentile per-packet one-way delay: 45.239 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 32.63 Mbit/s
95th percentile per-packet one-way delay: 49.043 ms
Loss rate: 0.07%
Run 10: Report of Indigo-1-32 — Data Link

![Graph of throughput and per-packet one-way delay](image-url)
Run 1: Statistics of Vivace-latency

Start at: 2018-02-04 21:59:17
End at: 2018-02-04 21:59:47
Local clock offset: 0.033 ms
Remote clock offset: -6.391 ms

# Below is generated by plot.py at 2018-02-05 02:58:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.21 Mbit/s
95th percentile per-packet one-way delay: 33.124 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 67.75 Mbit/s
95th percentile per-packet one-way delay: 32.998 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 21.90 Mbit/s
95th percentile per-packet one-way delay: 33.649 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 11.82 Mbit/s
95th percentile per-packet one-way delay: 33.618 ms
Loss rate: 0.00%
Run 1: Report of Vivace-latency — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 67.77 Mbit/s)
Flow 1 egress (mean 67.75 Mbit/s)
Flow 2 ingress (mean 21.90 Mbit/s)
Flow 2 egress (mean 21.90 Mbit/s)
Flow 3 ingress (mean 11.82 Mbit/s)
Flow 3 egress (mean 11.82 Mbit/s)

Per packet one-way delay [ms]

Time (s)

Flow 1 (95th percentile 33.00 ms)
Flow 2 (95th percentile 33.65 ms)
Flow 3 (95th percentile 33.62 ms)
Run 2: Statistics of Vivace-latency

Start at: 2018-02-04 22:24:56
End at: 2018-02-04 22:25:26
Local clock offset: -0.225 ms
Remote clock offset: -6.787 ms

# Below is generated by plot.py at 2018-02-05 02:58:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.94 Mbit/s
95th percentile per-packet one-way delay: 37.197 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 65.79 Mbit/s
95th percentile per-packet one-way delay: 37.376 ms
Loss rate: 0.28%
-- Flow 2:
Average throughput: 20.74 Mbit/s
95th percentile per-packet one-way delay: 36.065 ms
Loss rate: 0.18%
-- Flow 3:
Average throughput: 13.25 Mbit/s
95th percentile per-packet one-way delay: 37.172 ms
Loss rate: 0.18%
Run 2: Report of Vivace-latency — Data Link
Run 3: Statistics of Vivace-latency

Start at: 2018-02-04 22:50:48
End at: 2018-02-04 22:51:18
Local clock offset: -0.307 ms
Remote clock offset: -7.817 ms

# Below is generated by plot.py at 2018-02-05 02:58:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 82.09 Mbit/s
95th percentile per-packet one-way delay: 41.441 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 66.16 Mbit/s
95th percentile per-packet one-way delay: 39.401 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 17.16 Mbit/s
95th percentile per-packet one-way delay: 43.768 ms
Loss rate: 0.29%
-- Flow 3:
Average throughput: 13.74 Mbit/s
95th percentile per-packet one-way delay: 46.826 ms
Loss rate: 0.21%
Run 3: Report of Vivace-latency — Data Link
Run 4: Statistics of Vivace-latency

Start at: 2018-02-04 23:17:08
End at: 2018-02-04 23:17:38
Local clock offset: -0.229 ms
Remote clock offset: -9.23 ms

# Below is generated by plot.py at 2018-02-05 02:58:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 71.40 Mbit/s
95th percentile per-packet one-way delay: 38.831 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 56.76 Mbit/s
95th percentile per-packet one-way delay: 38.471 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 14.59 Mbit/s
95th percentile per-packet one-way delay: 41.630 ms
Loss rate: 0.13%
-- Flow 3:
Average throughput: 14.99 Mbit/s
95th percentile per-packet one-way delay: 42.249 ms
Loss rate: 0.03%
Run 4: Report of Vivace-latency — Data Link
Run 5: Statistics of Vivace-latency

Start at: 2018-02-04 23:43:33
End at: 2018-02-04 23:44:03
Local clock offset: 0.289 ms
Remote clock offset: -8.571 ms

# Below is generated by plot.py at 2018-02-05 02:58:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.69 Mbit/s
95th percentile per-packet one-way delay: 38.120 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 66.02 Mbit/s
95th percentile per-packet one-way delay: 37.956 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 16.75 Mbit/s
95th percentile per-packet one-way delay: 38.753 ms
Loss rate: 0.70%
-- Flow 3:
Average throughput: 4.63 Mbit/s
95th percentile per-packet one-way delay: 38.149 ms
Loss rate: 0.88%
Run 5: Report of Vivace-latency — Data Link
Run 6: Statistics of Vivace-latency

Start at: 2018-02-05 00:09:38
End at: 2018-02-05 00:10:08
Local clock offset: 0.627 ms
Remote clock offset: -7.199 ms

# Below is generated by plot.py at 2018-02-05 02:58:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 81.82 Mbit/s
95th percentile per-packet one-way delay: 46.136 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 58.23 Mbit/s
95th percentile per-packet one-way delay: 44.467 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 22.06 Mbit/s
95th percentile per-packet one-way delay: 50.536 ms
Loss rate: 0.13%
-- Flow 3:
Average throughput: 27.10 Mbit/s
95th percentile per-packet one-way delay: 43.021 ms
Loss rate: 0.22%
Run 6: Report of Vivace-latency — Data Link
Run 7: Statistics of Vivace-latency

Start at: 2018-02-05 00:36:13
End at: 2018-02-05 00:36:43
Local clock offset: 0.851 ms
Remote clock offset: -5.554 ms

# Below is generated by plot.py at 2018-02-05 02:58:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.70 Mbit/s
95th percentile per-packet one-way delay: 43.896 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 53.89 Mbit/s
95th percentile per-packet one-way delay: 43.271 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 32.08 Mbit/s
95th percentile per-packet one-way delay: 44.727 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 10.60 Mbit/s
95th percentile per-packet one-way delay: 44.221 ms
Loss rate: 0.01%
Run 7: Report of Vivace-latency — Data Link
Run 8: Statistics of Vivace-latency

Start at: 2018-02-05 01:03:09
End at: 2018-02-05 01:03:39
Local clock offset: 1.033 ms
Remote clock offset: -3.738 ms

# Below is generated by plot.py at 2018-02-05 02:58:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 72.88 Mbit/s
95th percentile per-packet one-way delay: 40.118 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 49.58 Mbit/s
95th percentile per-packet one-way delay: 39.878 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 27.93 Mbit/s
95th percentile per-packet one-way delay: 40.291 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 14.34 Mbit/s
95th percentile per-packet one-way delay: 40.660 ms
Loss rate: 0.16%
Run 8: Report of Vivace-latency — Data Link

![Graph of throughput and packet delay over time]

- Flow 1 Ingress (mean 49.75 Mbit/s)
- Flow 1 Egress (mean 49.58 Mbit/s)
- Flow 2 Ingress (mean 28.04 Mbit/s)
- Flow 2 Egress (mean 27.93 Mbit/s)
- Flow 3 Ingress (mean 14.37 Mbit/s)
- Flow 3 Egress (mean 14.34 Mbit/s)
Run 9: Statistics of Vivace-latency

Start at: 2018-02-05 01:29:46
End at: 2018-02-05 01:30:16
Local clock offset: 1.212 ms
Remote clock offset: -3.592 ms

# Below is generated by plot.py at 2018-02-05 02:59:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.40 Mbit/s
95th percentile per-packet one-way delay: 43.592 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 53.18 Mbit/s
95th percentile per-packet one-way delay: 47.151 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 34.52 Mbit/s
95th percentile per-packet one-way delay: 39.355 ms
Loss rate: 0.24%
-- Flow 3:
Average throughput: 9.92 Mbit/s
95th percentile per-packet one-way delay: 39.115 ms
Loss rate: 0.37%
Run 9: Report of Vivace-latency — Data Link
Run 10: Statistics of Vivace-latency

Start at: 2018-02-05 01:56:06
End at: 2018-02-05 01:56:36
Local clock offset: 1.278 ms
Remote clock offset: -3.846 ms

# Below is generated by plot.py at 2018-02-05 02:59:41
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 81.34 Mbit/s
  95th percentile per-packet one-way delay: 41.231 ms
  Loss rate: 0.11%
-- Flow 1:
  Average throughput: 66.17 Mbit/s
  95th percentile per-packet one-way delay: 40.013 ms
  Loss rate: 0.12%
-- Flow 2:
  Average throughput: 16.52 Mbit/s
  95th percentile per-packet one-way delay: 45.218 ms
  Loss rate: 0.10%
-- Flow 3:
  Average throughput: 12.71 Mbit/s
  95th percentile per-packet one-way delay: 46.472 ms
  Loss rate: 0.07%
Run 10: Report of Vivace-latency — Data Link

![Graph 1: Throughput (Mbps/s) vs Time (s) for different flows.]

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

303
Run 1: Statistics of Vivace-loss

Start at: 2018-02-04 21:53:35
End at: 2018-02-04 21:54:05
Local clock offset: 0.047 ms
Remote clock offset: -6.156 ms

# Below is generated by plot.py at 2018-02-05 02:59:52
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 84.96 Mbit/s
  95th percentile per-packet one-way delay: 64.544 ms
  Loss rate: 7.47%
-- Flow 1:
  Average throughput: 51.65 Mbit/s
  95th percentile per-packet one-way delay: 63.513 ms
  Loss rate: 7.18%
-- Flow 2:
  Average throughput: 40.97 Mbit/s
  95th percentile per-packet one-way delay: 65.521 ms
  Loss rate: 7.74%
-- Flow 3:
  Average throughput: 18.47 Mbit/s
  95th percentile per-packet one-way delay: 64.980 ms
  Loss rate: 8.68%
Run 1: Report of Vivace-loss — Data Link
Run 2: Statistics of Vivace-loss

End at: 2018-02-04 22:19:43
Local clock offset: -0.18 ms
Remote clock offset: -6.376 ms

# Below is generated by plot.py at 2018-02-05 02:59:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 81.27 Mbit/s
95th percentile per-packet one-way delay: 62.878 ms
Loss rate: 7.28%
-- Flow 1:
Average throughput: 53.98 Mbit/s
95th percentile per-packet one-way delay: 62.959 ms
Loss rate: 7.17%
-- Flow 2:
Average throughput: 28.40 Mbit/s
95th percentile per-packet one-way delay: 63.377 ms
Loss rate: 8.19%
-- Flow 3:
Average throughput: 26.25 Mbit/s
95th percentile per-packet one-way delay: 60.948 ms
Loss rate: 5.97%
Run 2: Report of Vivace-loss — Data Link

![Graph of throughput and latency over time for different flows with mean values and 95th percentile delays.]
Run 3: Statistics of Vivace-loss

Start at: 2018-02-04 22:44:51
End at: 2018-02-04 22:45:21
Local clock offset: -0.385 ms
Remote clock offset: -7.575 ms

# Below is generated by plot.py at 2018-02-05 02:59:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 80.36 Mbit/s
95th percentile per-packet one-way delay: 61.790 ms
Loss rate: 5.01%
-- Flow 1:
Average throughput: 56.74 Mbit/s
95th percentile per-packet one-way delay: 61.113 ms
Loss rate: 4.86%
-- Flow 2:
Average throughput: 23.36 Mbit/s
95th percentile per-packet one-way delay: 62.294 ms
Loss rate: 5.00%
-- Flow 3:
Average throughput: 24.55 Mbit/s
95th percentile per-packet one-way delay: 64.018 ms
Loss rate: 6.10%
Run 3: Report of Vivace-loss — Data Link

![Graph 1: Throughput (Mbit/s) over time](image1)

- Flow 1 ingress (mean 59.64 Mbit/s)
- Flow 1 egress (mean 56.74 Mbit/s)
- Flow 2 ingress (mean 24.59 Mbit/s)
- Flow 2 egress (mean 23.36 Mbit/s)
- Flow 3 ingress (mean 26.12 Mbit/s)
- Flow 3 egress (mean 24.55 Mbit/s)

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

- Flow 1 (95th percentile 61.11 ms)
- Flow 2 (95th percentile 62.29 ms)
- Flow 3 (95th percentile 64.02 ms)
Run 4: Statistics of Vivace-loss

Start at: 2018-02-04 23:11:03
End at: 2018-02-04 23:11:33
Local clock offset: -0.351 ms
Remote clock offset: -10.976 ms

# Below is generated by plot.py at 2018-02-05 02:59:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.88 Mbit/s
95th percentile per-packet one-way delay: 62.980 ms
Loss rate: 4.91%
-- Flow 1:
Average throughput: 54.60 Mbit/s
95th percentile per-packet one-way delay: 62.982 ms
Loss rate: 5.15%
-- Flow 2:
Average throughput: 30.24 Mbit/s
95th percentile per-packet one-way delay: 62.586 ms
Loss rate: 4.30%
-- Flow 3:
Average throughput: 33.87 Mbit/s
95th percentile per-packet one-way delay: 63.529 ms
Loss rate: 4.82%
Run 4: Report of Vivace-loss — Data Link
Run 5: Statistics of Vivace-loss

Start at: 2018-02-04 23:37:28
End at: 2018-02-04 23:37:58
Local clock offset: 0.066 ms
Remote clock offset: -8.379 ms

# Below is generated by plot.py at 2018-02-05 02:59:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 82.14 Mbit/s
95th percentile per-packet one-way delay: 62.612 ms
Loss rate: 6.34%
-- Flow 1:
Average throughput: 54.53 Mbit/s
95th percentile per-packet one-way delay: 62.336 ms
Loss rate: 6.15%
-- Flow 2:
Average throughput: 33.29 Mbit/s
95th percentile per-packet one-way delay: 63.117 ms
Loss rate: 6.64%
-- Flow 3:
Average throughput: 16.59 Mbit/s
95th percentile per-packet one-way delay: 62.770 ms
Loss rate: 7.01%
Run 5: Report of Vivace-loss — Data Link

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

- **Flow 1 ingress (mean 58.13 Mbit/s)**
- **Flow 1 egress (mean 54.53 Mbit/s)**
- **Flow 2 ingress (mean 35.69 Mbit/s)**
- **Flow 2 egress (mean 33.29 Mbit/s)**
- **Flow 3 ingress (mean 17.87 Mbit/s)**
- **Flow 3 egress (mean 16.59 Mbit/s)**

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

- **Flow 1 (95th percentile 62.34 ms)**
- **Flow 2 (95th percentile 63.12 ms)**
- **Flow 3 (95th percentile 62.77 ms)**

313
Run 6: Statistics of Vivace-loss

Start at: 2018-02-05 00:03:53
End at: 2018-02-05 00:04:23
Local clock offset: 0.459 ms
Remote clock offset: -7.664 ms

# Below is generated by plot.py at 2018-02-05 03:00:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.38 Mbit/s
95th percentile per-packet one-way delay: 65.741 ms
Loss rate: 5.64%
-- Flow 1:
Average throughput: 63.28 Mbit/s
95th percentile per-packet one-way delay: 66.174 ms
Loss rate: 5.06%
-- Flow 2:
Average throughput: 26.27 Mbit/s
95th percentile per-packet one-way delay: 63.390 ms
Loss rate: 6.56%
-- Flow 3:
Average throughput: 20.19 Mbit/s
95th percentile per-packet one-way delay: 65.007 ms
Loss rate: 8.62%
Run 6: Report of Vivace-loss — Data Link

![Graph showing throughput and packet error rates over time for different flows.](image-url)
Run 7: Statistics of Vivace-loss

Start at: 2018-02-05 00:30:08
End at: 2018-02-05 00:30:38
Local clock offset: 0.738 ms
Remote clock offset: -5.839 ms

# Below is generated by plot.py at 2018-02-05 03:00:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 81.85 Mbit/s
95th percentile per-packet one-way delay: 63.439 ms
Loss rate: 6.25%
-- Flow 1:
Average throughput: 57.24 Mbit/s
95th percentile per-packet one-way delay: 62.838 ms
Loss rate: 5.51%
-- Flow 2:
Average throughput: 27.53 Mbit/s
95th percentile per-packet one-way delay: 64.249 ms
Loss rate: 8.43%
-- Flow 3:
Average throughput: 19.09 Mbit/s
95th percentile per-packet one-way delay: 64.480 ms
Loss rate: 6.40%
Run 7: Report of Vivace-loss — Data Link
Run 8: Statistics of Vivace-loss

Start at: 2018-02-05 00:57:14
End at: 2018-02-05 00:57:44
Local clock offset: 1.038 ms
Remote clock offset: -6.49 ms

# Below is generated by plot.py at 2018-02-05 03:01:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.22 Mbit/s
95th percentile per-packet one-way delay: 61.672 ms
Loss rate: 5.24%
-- Flow 1:
Average throughput: 54.44 Mbit/s
95th percentile per-packet one-way delay: 61.928 ms
Loss rate: 4.96%
-- Flow 2:
Average throughput: 33.24 Mbit/s
95th percentile per-packet one-way delay: 61.424 ms
Loss rate: 5.19%
-- Flow 3:
Average throughput: 26.26 Mbit/s
95th percentile per-packet one-way delay: 60.251 ms
Loss rate: 7.06%
Run 8: Report of Vivace-loss — Data Link
Run 9: Statistics of Vivace-loss

Start at: 2018-02-05 01:23:54
End at: 2018-02-05 01:24:24
Local clock offset: 1.24 ms
Remote clock offset: -3.092 ms

# Below is generated by plot.py at 2018-02-05 03:01:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.91 Mbit/s
95th percentile per-packet one-way delay: 67.611 ms
Loss rate: 5.41%
-- Flow 1:
Average throughput: 67.61 Mbit/s
95th percentile per-packet one-way delay: 68.017 ms
Loss rate: 5.61%
-- Flow 2:
Average throughput: 25.51 Mbit/s
95th percentile per-packet one-way delay: 64.002 ms
Loss rate: 4.68%
-- Flow 3:
Average throughput: 10.22 Mbit/s
95th percentile per-packet one-way delay: 63.131 ms
Loss rate: 4.93%
Run 9: Report of Vivace-loss — Data Link

![Graph of throughput and delay over time for different flows.](image-url)
Run 10: Statistics of Vivace-loss

Start at: 2018-02-05 01:50:06
End at: 2018-02-05 01:50:36
Local clock offset: 1.278 ms
Remote clock offset: -3.73 ms

# Below is generated by plot.py at 2018-02-05 03:01:16
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 75.42 Mbit/s
  95th percentile per-packet one-way delay: 64.120 ms
  Loss rate: 6.25%
-- Flow 1:
  Average throughput: 51.85 Mbit/s
  95th percentile per-packet one-way delay: 64.160 ms
  Loss rate: 5.33%
-- Flow 2:
  Average throughput: 29.46 Mbit/s
  95th percentile per-packet one-way delay: 63.493 ms
  Loss rate: 8.04%
-- Flow 3:
  Average throughput: 12.95 Mbit/s
  95th percentile per-packet one-way delay: 65.752 ms
  Loss rate: 8.94%
Run 10: Report of Vivace-loss — Data Link

![Graph showing throughput and delay over time]

Throughput (Mbit/s)

Time (s)

- Flow 1 ingress (mean 54.78 Mbit/s)
- Flow 1 egress (mean 51.85 Mbit/s)
- Flow 2 ingress (mean 31.60 Mbit/s)
- Flow 2 egress (mean 29.46 Mbit/s)
- Flow 3 ingress (mean 14.39 Mbit/s)
- Flow 3 egress (mean 12.95 Mbit/s)

Delay (ms)

Time (s)

- Flow 1 (95th percentile 64.16 ms)
- Flow 2 (95th percentile 63.49 ms)
- Flow 3 (95th percentile 65.75 ms)
Run 1: Statistics of Vivace-LTE

Start at: 2018-02-04 22:09:18
End at: 2018-02-04 22:09:48
Local clock offset: -0.178 ms
Remote clock offset: -6.438 ms

# Below is generated by plot.py at 2018-02-05 03:01:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.91 Mbit/s
95th percentile per-packet one-way delay: 62.859 ms
Loss rate: 2.56%
-- Flow 1:
Average throughput: 59.64 Mbit/s
95th percentile per-packet one-way delay: 61.684 ms
Loss rate: 2.37%
-- Flow 2:
Average throughput: 34.65 Mbit/s
95th percentile per-packet one-way delay: 64.701 ms
Loss rate: 2.66%
-- Flow 3:
Average throughput: 18.95 Mbit/s
95th percentile per-packet one-way delay: 65.800 ms
Loss rate: 3.97%
Run 1: Report of Vivace-LTE — Data Link

![Graphs showing throughput and packet delay](image-url)
Run 2: Statistics of Vivace-LTE

Start at: 2018-02-04 22:34:45
End at: 2018-02-04 22:35:15
Local clock offset: -0.299 ms
Remote clock offset: -7.128 ms

# Below is generated by plot.py at 2018-02-05 03:01:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.39 Mbit/s
95th percentile per-packet one-way delay: 61.345 ms
Loss rate: 1.88%
-- Flow 1:
Average throughput: 57.12 Mbit/s
95th percentile per-packet one-way delay: 61.452 ms
Loss rate: 2.01%
-- Flow 2:
Average throughput: 33.90 Mbit/s
95th percentile per-packet one-way delay: 61.616 ms
Loss rate: 1.49%
-- Flow 3:
Average throughput: 20.35 Mbit/s
95th percentile per-packet one-way delay: 57.109 ms
Loss rate: 2.15%
Run 2: Report of Vivace-LTE — Data Link

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

**Throughput (Mbps)**
- **Flow 1 ingress** (mean 58.33 Mbps)
- **Flow 1 egress** (mean 57.12 Mbps)
- **Flow 2 ingress** (mean 34.45 Mbps)
- **Flow 2 egress** (mean 33.90 Mbps)
- **Flow 3 ingress** (mean 20.84 Mbps)
- **Flow 3 egress** (mean 20.35 Mbps)

**Per-packet one-way delay (ms)**
- Flow 1 (95th percentile 61.45 ms)
- Flow 2 (95th percentile 61.62 ms)
- Flow 3 (95th percentile 57.11 ms)
Run 3: Statistics of Vivace-LTE

Start at: 2018-02-04 23:00:52
End at: 2018-02-04 23:01:22
Local clock offset: -0.387 ms
Remote clock offset: -7.866 ms

# Below is generated by plot.py at 2018-02-05 03:01:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.97 Mbit/s
95th percentile per-packet one-way delay: 59.786 ms
Loss rate: 1.90%
-- Flow 1:
Average throughput: 60.08 Mbit/s
95th percentile per-packet one-way delay: 58.541 ms
Loss rate: 1.65%
-- Flow 2:
Average throughput: 26.68 Mbit/s
95th percentile per-packet one-way delay: 62.554 ms
Loss rate: 2.72%
-- Flow 3:
Average throughput: 18.67 Mbit/s
95th percentile per-packet one-way delay: 59.729 ms
Loss rate: 1.94%
Run 3: Report of Vivace-LTE — Data Link
Run 4: Statistics of Vivace-LTE

Start at: 2018-02-04 23:27:16
End at: 2018-02-04 23:27:46
Local clock offset: 0.005 ms
Remote clock offset: -8.813 ms

# Below is generated by plot.py at 2018-02-05 03:01:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 82.03 Mbit/s
95th percentile per-packet one-way delay: 59.213 ms
Loss rate: 1.82%
-- Flow 1:
Average throughput: 58.65 Mbit/s
95th percentile per-packet one-way delay: 59.009 ms
Loss rate: 2.01%
-- Flow 2:
Average throughput: 26.28 Mbit/s
95th percentile per-packet one-way delay: 59.705 ms
Loss rate: 1.53%
-- Flow 3:
Average throughput: 17.88 Mbit/s
95th percentile per-packet one-way delay: 60.295 ms
Loss rate: 0.75%
Run 4: Report of Vivace-LTE — Data Link
Run 5: Statistics of Vivace-LTE

Start at: 2018-02-04 23:53:54  
End at: 2018-02-04 23:54:24  
Local clock offset: 0.436 ms  
Remote clock offset: -7.945 ms

# Below is generated by plot.py at 2018-02-05 03:01:54  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 77.22 Mbit/s  
95th percentile per-packet one-way delay: 65.867 ms  
Loss rate: 1.61%  
-- Flow 1:  
Average throughput: 50.26 Mbit/s  
95th percentile per-packet one-way delay: 64.673 ms  
Loss rate: 1.32%  
-- Flow 2:  
Average throughput: 24.65 Mbit/s  
95th percentile per-packet one-way delay: 67.200 ms  
Loss rate: 1.89%  
-- Flow 3:  
Average throughput: 32.09 Mbit/s  
95th percentile per-packet one-way delay: 67.270 ms  
Loss rate: 2.56%
Run 5: Report of Vivace-LTE — Data Link
Run 6: Statistics of Vivace-LTE

Start at: 2018-02-05 00:19:52
End at: 2018-02-05 00:20:22
Local clock offset: 0.721 ms
Remote clock offset: -6.893 ms

# Below is generated by plot.py at 2018-02-05 03:02:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 80.13 Mbit/s
95th percentile per-packet one-way delay: 60.507 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 71.36 Mbit/s
95th percentile per-packet one-way delay: 60.377 ms
Loss rate: 0.71%
-- Flow 2:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 38.340 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 26.59 Mbit/s
95th percentile per-packet one-way delay: 60.826 ms
Loss rate: 0.79%
Run 6: Report of Vivace-LTE — Data Link

![Graphs showing throughput and per-packet one-way delay](image)

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 71.89 Mbps)
  - Flow 1 egress (mean 71.36 Mbps)
  - Flow 2 ingress (mean 0.00 Mbps)
  - Flow 2 egress (mean 0.00 Mbps)
  - Flow 3 ingress (mean 26.82 Mbps)
  - Flow 3 egress (mean 26.59 Mbps)

- **Per-packet one-way delay (ms):**
  - Flow 1 (95th percentile 60.38 ms)
  - Flow 2 (95th percentile 38.34 ms)
  - Flow 3 (95th percentile 60.83 ms)
Run 7: Statistics of Vivace-LTE

Start at: 2018-02-05 00:46:55
End at: 2018-02-05 00:47:25
Local clock offset: 0.893 ms
Remote clock offset: -5.19 ms

# Below is generated by plot.py at 2018-02-05 03:02:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.64 Mbit/s
95th percentile per-packet one-way delay: 63.219 ms
Loss rate: 1.97%
-- Flow 1:
Average throughput: 72.01 Mbit/s
95th percentile per-packet one-way delay: 62.790 ms
Loss rate: 1.90%
-- Flow 2:
Average throughput: 18.26 Mbit/s
95th percentile per-packet one-way delay: 64.361 ms
Loss rate: 1.94%
-- Flow 3:
Average throughput: 19.69 Mbit/s
95th percentile per-packet one-way delay: 64.591 ms
Loss rate: 2.79%
Run 7: Report of Vivace-LTE — Data Link

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

- **Flow 1 ingress** (mean 73.43 Mbps)
- **Flow 1 egress** (mean 72.01 Mbps)
- **Flow 2 ingress** (mean 18.62 Mbps)
- **Flow 2 egress** (mean 18.26 Mbps)
- **Flow 3 ingress** (mean 20.23 Mbps)
- **Flow 3 egress** (mean 19.69 Mbps)

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

- **Flow 1** (95th percentile 62.79 ms)
- **Flow 2** (95th percentile 64.36 ms)
- **Flow 3** (95th percentile 64.59 ms)
Run 8: Statistics of Vivace-LTE

Start at: 2018-02-05 01:13:35
End at: 2018-02-05 01:14:05
Local clock offset: 1.15 ms
Remote clock offset: -3.256 ms

# Below is generated by plot.py at 2018-02-05 03:02:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 81.25 Mbit/s
95th percentile per-packet one-way delay: 62.577 ms
Loss rate: 2.32%
-- Flow 1:
Average throughput: 61.29 Mbit/s
95th percentile per-packet one-way delay: 60.305 ms
Loss rate: 2.10%
-- Flow 2:
Average throughput: 25.58 Mbit/s
95th percentile per-packet one-way delay: 64.637 ms
Loss rate: 2.73%
-- Flow 3:
Average throughput: 8.94 Mbit/s
95th percentile per-packet one-way delay: 65.937 ms
Loss rate: 4.34%
Run 8: Report of Vivace-LTE — Data Link

[Graph showing throughput and per-packet one-way delay for different flows with specified mean rates and percentiles]
Run 9: Statistics of Vivace-LTE

Start at: 2018-02-05 01:40:00
End at: 2018-02-05 01:40:30
Local clock offset: 1.322 ms
Remote clock offset: -3.404 ms

# Below is generated by plot.py at 2018-02-05 03:02:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.49 Mbit/s
95th percentile per-packet one-way delay: 62.848 ms
Loss rate: 2.98%
-- Flow 1:
Average throughput: 61.60 Mbit/s
95th percentile per-packet one-way delay: 61.724 ms
Loss rate: 2.71%
-- Flow 2:
Average throughput: 22.96 Mbit/s
95th percentile per-packet one-way delay: 64.181 ms
Loss rate: 3.41%
-- Flow 3:
Average throughput: 23.11 Mbit/s
95th percentile per-packet one-way delay: 65.391 ms
Loss rate: 4.29%
Run 9: Report of Vivace-LTE — Data Link

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

- Flow 1 ingress: Mean 63.34 Mbit/s
- Flow 1 egress: Mean 61.60 Mbit/s
- Flow 2 ingress: Mean 23.78 Mbit/s
- Flow 2 egress: Mean 22.96 Mbit/s
- Flow 3 ingress: Mean 24.17 Mbit/s
- Flow 3 egress: Mean 23.11 Mbit/s

![Graph of packet delay for three flows.]

- Flow 1 (95th percentile: 61.72 ms)
- Flow 2 (95th percentile: 64.18 ms)
- Flow 3 (95th percentile: 65.39 ms)
Run 10: Statistics of Vivace-LTE

Start at: 2018-02-05 02:06:25
End at: 2018-02-05 02:06:55
Local clock offset: 1.217 ms
Remote clock offset: -4.036 ms

# Below is generated by plot.py at 2018-02-05 03:02:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.41 Mbit/s
95th percentile per-packet one-way delay: 64.382 ms
Loss rate: 2.53%
-- Flow 1:
Average throughput: 66.70 Mbit/s
95th percentile per-packet one-way delay: 64.163 ms
Loss rate: 2.45%
-- Flow 2:
Average throughput: 17.07 Mbit/s
95th percentile per-packet one-way delay: 64.515 ms
Loss rate: 2.55%
-- Flow 3:
Average throughput: 28.38 Mbit/s
95th percentile per-packet one-way delay: 65.237 ms
Loss rate: 3.06%
Run 10: Report of Vivace-LTE — Data Link

![Graph 1: Throughput (Mbps)](chart1)

- Flow 1 ingress (mean 68.41 Mbit/s)
- Flow 1 egress (mean 66.70 Mbit/s)
- Flow 2 ingress (mean 17.52 Mbit/s)
- Flow 2 egress (mean 17.97 Mbit/s)
- Flow 3 ingress (mean 29.32 Mbit/s)
- Flow 3 egress (mean 28.38 Mbit/s)

![Graph 2: Per packet one way delay (ms)](chart2)

- Flow 1 (95th percentile 64.16 ms)
- Flow 2 (95th percentile 64.52 ms)
- Flow 3 (95th percentile 65.24 ms)