Pantheon Report

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 @ f12c42a2c63fdd9a862ee0468859bf379b6623
third_party/calibrated_koho @ 3cb73c0d1c0322c3dfae446ea37a522e53227db50
M datagrump/sender.cc
third_party/fillp @ 828b9f95fd4941149b5ec90f281d1c69ae1a5c6
third_party/genericCC @ 9249eea3238475c4d8c8c941434dc827b0f6c4a2
third_party/indigo @ a9b260d39e4da2e8987e893e3eca2a6c7c0a89
third_party/indigo-1-layer-128-unit @ 3ae9e4e4f230db7484501f82ce8b37769f2f66d
third_party/indigo-1-layer-32-unit @ 2601c92e4aa9d85d38d4c0e0ecdbf90c077e64d
third_party/indigo-1-layer-32-unit-no-calib @ 1f3a7f75b41136ed5b540c0fd3505939528e2a5f
third_party/indigo-no-calib @ 7224f2202e8a044d8306fa0b983ad84360c538d9
third_party/koho_cc @ f0f2e693303ae82ea808e6928a4c4f1083a6681
M datagrump/sender.cc
third_party/libutp @ b3465b942e2826f2b17eaaab4a9060c6b7bc3c3f
third_party/pantheon-tunnel @ f1053193c2861da659ba5013db267744ccfc993
third_party/pcc @ 1af9058f30d6618b623c091a55fec872b4981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/proto-quic @ 77961f1a82733a86b242f1b8143be8b398f32f642
third_party/scream @ c3370fd7bd172655a9eb34e016ad23f5965885
third_party/sourdough @ f1a14bffe749737437f61b1eaeeb302b267d0e681
third_party/sprout @ 6f2e6f6e088d91066a9f023df3753ee2665089ce
M src/examples/cellsim.cc
M src/examples/sproutbt2.cc
M src/network/sproutconn.cc
third_party/verus @ d4b447a74c6c60a261149af262962939f9a494
M src/verus.hpp
M tools/plot.py
third_party/vivace @ 7a4ba531e75b4a6f66f5c4580192120401784ce3
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>
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<tbody>
<tr>
<td></td>
<td></td>
<td>flow 1</td>
<td>flow 2</td>
<td>flow 3</td>
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<td>30.00</td>
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<td>Vivace-LTE</td>
<td>10</td>
<td>58.54</td>
<td>26.96</td>
<td>20.42</td>
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</table>
Run 1: Statistics of TCP BBR

Start at: 2018-02-20 13:54:43
Local clock offset: 2.709 ms
Remote clock offset: -2.204 ms

# Below is generated by plot.py at 2018-02-20 18:48:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.08 Mbit/s
95th percentile per-packet one-way delay: 66.801 ms
Loss rate: 5.58%
-- Flow 1:
Average throughput: 66.74 Mbit/s
95th percentile per-packet one-way delay: 65.705 ms
Loss rate: 4.98%
-- Flow 2:
Average throughput: 33.82 Mbit/s
95th percentile per-packet one-way delay: 67.668 ms
Loss rate: 6.68%
-- Flow 3:
Average throughput: 17.54 Mbit/s
95th percentile per-packet one-way delay: 69.182 ms
Loss rate: 8.00%
Run 1: Report of TCP BBR — Data Link
Run 2: Statistics of TCP BBR

Start at: 2018-02-20 14:21:34
End at: 2018-02-20 14:22:04
Local clock offset: 1.723 ms
Remote clock offset: -0.269 ms

# Below is generated by plot.py at 2018-02-20 18:48:23
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 94.80 Mbit/s
  95th percentile per-packet one-way delay: 67.134 ms
  Loss rate: 5.62%
-- Flow 1:
  Average throughput: 66.27 Mbit/s
  95th percentile per-packet one-way delay: 66.144 ms
  Loss rate: 4.98%
-- Flow 2:
  Average throughput: 29.01 Mbit/s
  95th percentile per-packet one-way delay: 68.121 ms
  Loss rate: 6.70%
-- Flow 3:
  Average throughput: 27.77 Mbit/s
  95th percentile per-packet one-way delay: 68.876 ms
  Loss rate: 7.83%
Run 2: Report of TCP BBR — Data Link
Run 3: Statistics of TCP BBR

Start at: 2018-02-20 14:47:40
End at: 2018-02-20 14:48:10
Local clock offset: 1.564 ms
Remote clock offset: -1.435 ms

# Below is generated by plot.py at 2018-02-20 18:48:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.89 Mbit/s
95th percentile per-packet one-way delay: 68.449 ms
Loss rate: 5.46%
-- Flow 1:
Average throughput: 61.57 Mbit/s
95th percentile per-packet one-way delay: 67.319 ms
Loss rate: 4.46%
-- Flow 2:
Average throughput: 33.62 Mbit/s
95th percentile per-packet one-way delay: 68.892 ms
Loss rate: 6.78%
-- Flow 3:
Average throughput: 32.93 Mbit/s
95th percentile per-packet one-way delay: 70.706 ms
Loss rate: 8.17%
Run 3: Report of TCP BBR — Data Link

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

- **Flow 1 ingress (mean 64.50 Mbit/s)**
- **Flow 1 egress (mean 61.57 Mbit/s)**
- **Flow 2 ingress (mean 36.12 Mbit/s)**
- **Flow 2 egress (mean 33.62 Mbit/s)**
- **Flow 3 ingress (mean 35.96 Mbit/s)**
- **Flow 3 egress (mean 32.93 Mbit/s)**

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

- **Flow 1 (95th percentile 67.32 ms)**
- **Flow 2 (95th percentile 68.89 ms)**
- **Flow 3 (95th percentile 70.71 ms)**
Run 4: Statistics of TCP BBR

Start at: 2018-02-20 15:13:42
End at: 2018-02-20 15:14:12
Local clock offset: 1.255 ms
Remote clock offset: -4.629 ms

# Below is generated by plot.py at 2018-02-20 18:48:24
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 94.72 Mbit/s
  95th percentile per-packet one-way delay: 67.365 ms
  Loss rate: 5.54%
-- Flow 1:
  Average throughput: 58.96 Mbit/s
  95th percentile per-packet one-way delay: 66.267 ms
  Loss rate: 4.67%
-- Flow 2:
  Average throughput: 40.30 Mbit/s
  95th percentile per-packet one-way delay: 68.240 ms
  Loss rate: 6.69%
-- Flow 3:
  Average throughput: 26.97 Mbit/s
  95th percentile per-packet one-way delay: 68.568 ms
  Loss rate: 7.68%
Run 4: Report of TCP BBR — Data Link

**Throughput (Mb/s):**

- **Flow 1 ingress (mean 61.88 Mb/s)**
- **Flow 1 egress (mean 58.96 Mb/s)**
- **Flow 2 ingress (mean 43.21 Mb/s)**
- **Flow 2 egress (mean 40.30 Mb/s)**
- **Flow 3 ingress (mean 26.19 Mb/s)**
- **Flow 3 egress (mean 26.97 Mb/s)**

**Per packet one way delay [ms]:**

- **Flow 1 (95th percentile 66.27 ms)**
- **Flow 2 (95th percentile 68.24 ms)**
- **Flow 3 (95th percentile 68.57 ms)**
Run 5: Statistics of TCP BBR

Start at: 2018-02-20 15:39:22
End at: 2018-02-20 15:39:52
Local clock offset: 2.154 ms
Remote clock offset: -5.687 ms

# Below is generated by plot.py at 2018-02-20 18:48:24
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 94.79 Mbit/s
  95th percentile per-packet one-way delay: 67.841 ms
  Loss rate: 5.80%
-- Flow 1:
  Average throughput: 60.02 Mbit/s
  95th percentile per-packet one-way delay: 67.242 ms
  Loss rate: 4.82%
-- Flow 2:
  Average throughput: 37.86 Mbit/s
  95th percentile per-packet one-way delay: 68.662 ms
  Loss rate: 7.24%
-- Flow 3:
  Average throughput: 28.72 Mbit/s
  95th percentile per-packet one-way delay: 68.031 ms
  Loss rate: 7.92%
Run 5: Report of TCP BBR — Data Link
Run 6: Statistics of TCP BBR

Start at: 2018-02-20 16:04:22
End at: 2018-02-20 16:04:52
Local clock offset: 2.027 ms
Remote clock offset: -4.089 ms

# Below is generated by plot.py at 2018-02-20 18:48:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.75 Mbit/s
95th percentile per-packet one-way delay: 65.341 ms
Loss rate: 5.46%
-- Flow 1:
Average throughput: 67.24 Mbit/s
95th percentile per-packet one-way delay: 64.189 ms
Loss rate: 4.66%
-- Flow 2:
Average throughput: 29.36 Mbit/s
95th percentile per-packet one-way delay: 66.383 ms
Loss rate: 7.03%
-- Flow 3:
Average throughput: 24.06 Mbit/s
95th percentile per-packet one-way delay: 67.407 ms
Loss rate: 8.17%
Run 6: Report of TCP BBR — Data Link

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

- **Flow 1 ingress (mean 70.53 Mbit/s)**
- **Flow 1 egress (mean 67.24 Mbit/s)**
- **Flow 2 ingress (mean 31.57 Mbit/s)**
- **Flow 2 egress (mean 29.36 Mbit/s)**
- **Flow 3 ingress (mean 26.13 Mbit/s)**
- **Flow 3 egress (mean 24.06 Mbit/s)**

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

- **Flow 1 (95th percentile 64.19 ms)**
- **Flow 2 (95th percentile 66.38 ms)**
- **Flow 3 (95th percentile 67.41 ms)**
Run 7: Statistics of TCP BBR

Start at: 2018-02-20 16:29:18
End at: 2018-02-20 16:29:48
Local clock offset: -3.873 ms
Remote clock offset: -2.765 ms

# Below is generated by plot.py at 2018-02-20 18:48:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.17 Mbit/s
95th percentile per-packet one-way delay: 65.566 ms
Loss rate: 4.06%
-- Flow 1:
Average throughput: 61.28 Mbit/s
95th percentile per-packet one-way delay: 64.915 ms
Loss rate: 3.66%
-- Flow 2:
Average throughput: 34.71 Mbit/s
95th percentile per-packet one-way delay: 66.646 ms
Loss rate: 4.72%
-- Flow 3:
Average throughput: 29.40 Mbit/s
95th percentile per-packet one-way delay: 63.740 ms
Loss rate: 4.93%
Run 7: Report of TCP BBR — Data Link

![Graph of Throughput Over Time](image)

- **Flow 1 ingress (mean 63.67 Mbit/s)**
- **Flow 1 egress (mean 61.28 Mbit/s)**
- **Flow 2 ingress (mean 36.48 Mbit/s)**
- **Flow 2 egress (mean 34.71 Mbit/s)**
- **Flow 3 ingress (mean 30.97 Mbit/s)**
- **Flow 3 egress (mean 29.40 Mbit/s)**

![Graph of Per Packet One-Way Delay Over Time](image)

- **Flow 1 (95th percentile 64.92 ms)**
- **Flow 2 (95th percentile 66.65 ms)**
- **Flow 3 (95th percentile 61.74 ms)**
Run 8: Statistics of TCP BBR

Start at: 2018-02-20 16:58:27  
End at: 2018-02-20 16:58:57  
Local clock offset: -5.564 ms  
Remote clock offset: -8.412 ms  

# Below is generated by plot.py at 2018-02-20 18:48:24  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 94.84 Mbit/s  
95th percentile per-packet one-way delay: 67.149 ms  
Loss rate: 5.55%  
-- Flow 1:  
Average throughput: 63.87 Mbit/s  
95th percentile per-packet one-way delay: 66.004 ms  
Loss rate: 5.06%  
-- Flow 2:  
Average throughput: 35.25 Mbit/s  
95th percentile per-packet one-way delay: 68.480 ms  
Loss rate: 6.41%  
-- Flow 3:  
Average throughput: 22.58 Mbit/s  
95th percentile per-packet one-way delay: 69.194 ms  
Loss rate: 6.95%
Run 8: Report of TCP BBR — Data Link

![Graph 1: Throughput (Mbps)]

- Flow 1 ingress (mean 67.34 Mbps)
- Flow 1 egress (mean 63.87 Mbps)
- Flow 2 ingress (mean 37.73 Mbps)
- Flow 2 egress (mean 35.25 Mbps)
- Flow 3 ingress (mean 24.29 Mbps)
- Flow 3 egress (mean 22.58 Mbps)

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

- Flow 1 (95th percentile 66.00 ms)
- Flow 2 (95th percentile 68.48 ms)
- Flow 3 (95th percentile 69.19 ms)
Run 9: Statistics of TCP BBR

Start at: 2018-02-20 17:25:01
End at: 2018-02-20 17:25:31
Local clock offset: -0.081 ms
Remote clock offset: -5.985 ms

# Below is generated by plot.py at 2018-02-20 18:49:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.43 Mbit/s
95th percentile per-packet one-way delay: 67.170 ms
Loss rate: 6.54%
-- Flow 1:
Average throughput: 58.20 Mbit/s
95th percentile per-packet one-way delay: 66.689 ms
Loss rate: 5.75%
-- Flow 2:
Average throughput: 33.33 Mbit/s
95th percentile per-packet one-way delay: 68.347 ms
Loss rate: 7.61%
-- Flow 3:
Average throughput: 39.43 Mbit/s
95th percentile per-packet one-way delay: 67.441 ms
Loss rate: 8.17%
Run 9: Report of TCP BBR — Data Link
Run 10: Statistics of TCP BBR

Start at: 2018-02-20 17:52:03
End at: 2018-02-20 17:52:33
Local clock offset: -1.369 ms
Remote clock offset: -1.755 ms

# Below is generated by plot.py at 2018-02-20 18:49:44
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 93.95 Mbit/s
  95th percentile per-packet one-way delay: 63.462 ms
  Loss rate: 4.67%
-- Flow 1:
  Average throughput: 65.35 Mbit/s
  95th percentile per-packet one-way delay: 62.195 ms
  Loss rate: 3.89%
-- Flow 2:
  Average throughput: 24.92 Mbit/s
  95th percentile per-packet one-way delay: 64.156 ms
  Loss rate: 5.67%
-- Flow 3:
  Average throughput: 36.11 Mbit/s
  95th percentile per-packet one-way delay: 67.079 ms
  Loss rate: 7.39%
Run 10: Report of TCP BBR — Data Link

![Throughput Graph](image1)

![Packet Delay Graph](image2)

Flow 1: Ingress (mean 68.05 Mbit/s), Egress (mean 65.35 Mbit/s)
Flow 2: Ingress (mean 26.45 Mbit/s), Egress (mean 24.92 Mbit/s)
Flow 3: Ingress (mean 39.69 Mbit/s), Egress (mean 36.11 Mbit/s)

Flow 1: 95th percentile 62.20 ms
Flow 2: 95th percentile 64.16 ms
Flow 3: 95th percentile 67.08 ms
Run 1: Statistics of TCP Cubic

Start at: 2018-02-20 13:53:19
End at: 2018-02-20 13:53:49
Local clock offset: 2.946 ms
Remote clock offset: -2.758 ms

# Below is generated by plot.py at 2018-02-20 18:49:44
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 35.36 Mbit/s
  95th percentile per-packet one-way delay: 52.720 ms
  Loss rate: 0.34%
-- Flow 1:
  Average throughput: 16.94 Mbit/s
  95th percentile per-packet one-way delay: 48.858 ms
  Loss rate: 0.26%
-- Flow 2:
  Average throughput: 21.29 Mbit/s
  95th percentile per-packet one-way delay: 54.314 ms
  Loss rate: 0.42%
-- Flow 3:
  Average throughput: 12.84 Mbit/s
  95th percentile per-packet one-way delay: 37.740 ms
  Loss rate: 0.42%
Run 1: Report of TCP Cubic — Data Link

![Graph of throughput and per-packet one-way delays](image)
Run 2: Statistics of TCP Cubic

Start at: 2018-02-20 14:20:08
End at: 2018-02-20 14:20:38
Local clock offset: 1.773 ms
Remote clock offset: -0.192 ms

# Below is generated by plot.py at 2018-02-20 18:49:44
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 66.17 Mbit/s
  95th percentile per-packet one-way delay: 67.971 ms
  Loss rate: 1.11%
-- Flow 1:
  Average throughput: 22.55 Mbit/s
  95th percentile per-packet one-way delay: 63.440 ms
  Loss rate: 1.45%
-- Flow 2:
  Average throughput: 36.43 Mbit/s
  95th percentile per-packet one-way delay: 65.704 ms
  Loss rate: 0.88%
-- Flow 3:
  Average throughput: 58.30 Mbit/s
  95th percentile per-packet one-way delay: 69.584 ms
  Loss rate: 1.00%
Run 2: Report of TCP Cubic — Data Link

![Throughput and Delay Graphs](image_url)
Run 3: Statistics of TCP Cubic

Start at: 2018-02-20 14:46:15
End at: 2018-02-20 14:46:45
Local clock offset: 1.545 ms
Remote clock offset: -3.986 ms

# Below is generated by plot.py at 2018-02-20 18:49:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.35 Mbit/s
95th percentile per-packet one-way delay: 64.166 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 42.20 Mbit/s
95th percentile per-packet one-way delay: 58.165 ms
Loss rate: 0.71%
-- Flow 2:
Average throughput: 55.00 Mbit/s
95th percentile per-packet one-way delay: 64.679 ms
Loss rate: 0.45%
-- Flow 3:
Average throughput: 28.71 Mbit/s
95th percentile per-packet one-way delay: 66.587 ms
Loss rate: 0.79%
Run 3: Report of TCP Cubic — Data Link

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

Legend:
- Flow 1 ingress (mean 42.51 Mbit/s)
- Flow 1 egress (mean 42.20 Mbit/s)
- Flow 2 ingress (mean 55.25 Mbit/s)
- Flow 2 egress (mean 55.00 Mbit/s)
- Flow 3 ingress (mean 26.91 Mbit/s)
- Flow 3 egress (mean 28.71 Mbit/s)

Legend for packet one-way delay:
- Flow 1 (95th percentile 58.16 ms)
- Flow 2 (95th percentile 64.68 ms)
- Flow 3 (95th percentile 66.59 ms)
Run 4: Statistics of TCP Cubic

Start at: 2018-02-20 15:12:19
End at: 2018-02-20 15:12:49
Local clock offset: 1.262 ms
Remote clock offset: -4.423 ms

# Below is generated by plot.py at 2018-02-20 18:49:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 67.44 Mbit/s
95th percentile per-packet one-way delay: 43.941 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 33.72 Mbit/s
95th percentile per-packet one-way delay: 49.848 ms
Loss rate: 0.80%
-- Flow 2:
Average throughput: 32.77 Mbit/s
95th percentile per-packet one-way delay: 43.445 ms
Loss rate: 0.47%
-- Flow 3:
Average throughput: 35.87 Mbit/s
95th percentile per-packet one-way delay: 32.141 ms
Loss rate: 0.11%
Run 4: Report of TCP Cubic — Data Link

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

Legend:
- Flow 1 ingress (mean 34.00 Mbit/s)
- Flow 1 egress (mean 33.72 Mbit/s)
- Flow 2 ingress (mean 32.92 Mbit/s)
- Flow 2 egress (mean 32.77 Mbit/s)
- Flow 3 ingress (mean 35.92 Mbit/s)
- Flow 3 egress (mean 35.87 Mbit/s)

Flow 1 (95th percentile 49.85 ms)
Flow 2 (95th percentile 43.45 ms)
Flow 3 (95th percentile 32.14 ms)
Run 5: Statistics of TCP Cubic

Start at: 2018-02-20 15:38:01
End at: 2018-02-20 15:38:31
Local clock offset: 2.066 ms
Remote clock offset: -8.219 ms

# Below is generated by plot.py at 2018-02-20 18:49:44
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 76.91 Mbit/s
  95th percentile per-packet one-way delay: 55.300 ms
  Loss rate: 0.57%
-- Flow 1:
  Average throughput: 33.19 Mbit/s
  95th percentile per-packet one-way delay: 51.606 ms
  Loss rate: 0.55%
-- Flow 2:
  Average throughput: 31.95 Mbit/s
  95th percentile per-packet one-way delay: 56.154 ms
  Loss rate: 0.85%
-- Flow 3:
  Average throughput: 67.59 Mbit/s
  95th percentile per-packet one-way delay: 55.733 ms
  Loss rate: 0.34%
Run 5: Report of TCP Cubic — Data Link
Run 6: Statistics of TCP Cubic

Start at: 2018-02-20 16:03:02
End at: 2018-02-20 16:03:32
Local clock offset: 2.754 ms
Remote clock offset: -5.982 ms

# Below is generated by plot.py at 2018-02-20 18:49:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 38.41 Mbit/s
95th percentile per-packet one-way delay: 42.225 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 15.76 Mbit/s
95th percentile per-packet one-way delay: 45.139 ms
Loss rate: 0.55%
-- Flow 2:
Average throughput: 18.36 Mbit/s
95th percentile per-packet one-way delay: 37.203 ms
Loss rate: 0.59%
-- Flow 3:
Average throughput: 31.41 Mbit/s
95th percentile per-packet one-way delay: 42.891 ms
Loss rate: 0.77%
Run 6: Report of TCP Cubic — Data Link

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

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

Legend:
- Flow 1 ingress (mean 15.85 Mbit/s)
- Flow 1 egress (mean 15.76 Mbit/s)
- Flow 2 ingress (mean 18.47 Mbit/s)
- Flow 2 egress (mean 18.36 Mbit/s)
- Flow 3 ingress (mean 31.65 Mbit/s)
- Flow 3 egress (mean 31.41 Mbit/s)
Run 7: Statistics of TCP Cubic

Start at: 2018-02-20 16:27:54
End at: 2018-02-20 16:28:24
Local clock offset: -3.85 ms
Remote clock offset: -4.938 ms

# Below is generated by plot.py at 2018-02-20 18:49:50
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 65.91 Mbit/s
  95th percentile per-packet one-way delay: 52.387 ms
  Loss rate: 0.46%
-- Flow 1:
  Average throughput: 25.27 Mbit/s
  95th percentile per-packet one-way delay: 47.821 ms
  Loss rate: 0.35%
-- Flow 2:
  Average throughput: 42.29 Mbit/s
  95th percentile per-packet one-way delay: 54.680 ms
  Loss rate: 0.42%
-- Flow 3:
  Average throughput: 37.64 Mbit/s
  95th percentile per-packet one-way delay: 41.894 ms
  Loss rate: 0.75%
Run 7: Report of TCP Cubic — Data Link

![Throughput Graph](chart1)

- Blue: Flow 1 ingress (mean 25.36 Mbit/s)
- Green: Flow 1 egress (mean 25.27 Mbit/s)
- Red: Flow 2 ingress (mean 42.45 Mbit/s)
- Green: Flow 2 egress (mean 42.29 Mbit/s)
- Pink: Flow 3 ingress (mean 37.93 Mbit/s)
- Red: Flow 3 egress (mean 37.64 Mbit/s)

![Round-trip Time Graph](chart2)

- Blue: Flow 1 (95th percentile 47.82 ms)
- Green: Flow 2 (95th percentile 54.68 ms)
- Red: Flow 3 (95th percentile 41.89 ms)
Run 8: Statistics of TCP Cubic

Start at: 2018-02-20 16:57:03
End at: 2018-02-20 16:57:33
Local clock offset: -5.497 ms
Remote clock offset: -8.729 ms

# Below is generated by plot.py at 2018-02-20 18:49:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 36.51 Mbit/s
95th percentile per-packet one-way delay: 42.072 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 16.02 Mbit/s
95th percentile per-packet one-way delay: 38.453 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 21.45 Mbit/s
95th percentile per-packet one-way delay: 42.589 ms
Loss rate: 0.98%
-- Flow 3:
Average throughput: 18.72 Mbit/s
95th percentile per-packet one-way delay: 53.713 ms
Loss rate: 0.66%
Run 8: Report of TCP Cubic — Data Link
Run 9: Statistics of TCP Cubic

Start at: 2018-02-20 17:23:34
End at: 2018-02-20 17:24:04
Local clock offset: -0.512 ms
Remote clock offset: -7.102 ms

# Below is generated by plot.py at 2018-02-20 18:49:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 37.68 Mbit/s
95th percentile per-packet one-way delay: 48.403 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 15.76 Mbit/s
95th percentile per-packet one-way delay: 47.371 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 20.18 Mbit/s
95th percentile per-packet one-way delay: 54.349 ms
Loss rate: 0.78%
-- Flow 3:
Average throughput: 25.61 Mbit/s
95th percentile per-packet one-way delay: 41.187 ms
Loss rate: 1.02%
Run 9: Report of TCP Cubic — Data Link

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

- Flow 1 ingress (mean 15.83 Mbit/s)
- Flow 1 egress (mean 15.76 Mbit/s)
- Flow 2 ingress (mean 20.33 Mbit/s)
- Flow 2 egress (mean 20.18 Mbit/s)
- Flow 3 ingress (mean 25.87 Mbit/s)
- Flow 3 egress (mean 25.61 Mbit/s)

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

- Flow 1 (95th percentile 47.37 ms)
- Flow 2 (95th percentile 54.35 ms)
- Flow 3 (95th percentile 41.19 ms)
Run 10: Statistics of TCP Cubic

Start at: 2018-02-20 17:50:39
End at: 2018-02-20 17:51:09
Local clock offset: -0.819 ms
Remote clock offset: -1.879 ms

# Below is generated by plot.py at 2018-02-20 18:49:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 42.44 Mbit/s
95th percentile per-packet one-way delay: 44.022 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 18.00 Mbit/s
95th percentile per-packet one-way delay: 40.470 ms
Loss rate: 0.56%
-- Flow 2:
Average throughput: 20.32 Mbit/s
95th percentile per-packet one-way delay: 45.306 ms
Loss rate: 0.72%
-- Flow 3:
Average throughput: 32.89 Mbit/s
95th percentile per-packet one-way delay: 61.599 ms
Loss rate: 1.60%
Run 10: Report of TCP Cubic — Data Link

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

- **Flow 1 ingress** (mean 18.10 Mbit/s)
- **Flow 1 egress** (mean 18.00 Mbit/s)
- **Flow 2 ingress** (mean 20.46 Mbit/s)
- **Flow 2 egress** (mean 20.32 Mbit/s)
- **Flow 3 ingress** (mean 33.43 Mbit/s)
- **Flow 3 egress** (mean 32.89 Mbit/s)

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

- **Flow 1** (95th percentile 40.47 ms)
- **Flow 2** (95th percentile 45.31 ms)
- **Flow 3** (95th percentile 61.60 ms)
Run 1: Statistics of LEDBAT

Start at: 2018-02-20 14:11:24
End at: 2018-02-20 14:11:54
Local clock offset: 1.577 ms
Remote clock offset: -0.007 ms

# Below is generated by plot.py at 2018-02-20 18:50:25
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 60.99 Mbit/s
  95th percentile per-packet one-way delay: 58.956 ms
  Loss rate: 0.16%
-- Flow 1:
  Average throughput: 37.64 Mbit/s
  95th percentile per-packet one-way delay: 55.713 ms
  Loss rate: 0.09%
-- Flow 2:
  Average throughput: 29.01 Mbit/s
  95th percentile per-packet one-way delay: 60.949 ms
  Loss rate: 0.22%
-- Flow 3:
  Average throughput: 12.27 Mbit/s
  95th percentile per-packet one-way delay: 61.610 ms
  Loss rate: 0.48%
Run 1: Report of LEDBAT — Data Link

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

- Flow 1 ingress (mean 37.68 Mbit/s)
- Flow 1 egress (mean 37.64 Mbit/s)
- Flow 2 ingress (mean 29.05 Mbit/s)
- Flow 2 egress (mean 29.01 Mbit/s)
- Flow 3 ingress (mean 12.32 Mbit/s)
- Flow 3 egress (mean 12.27 Mbit/s)

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

- Flow 1 (95th percentile 55.71 ms)
- Flow 2 (95th percentile 60.95 ms)
- Flow 3 (95th percentile 61.61 ms)
Run 2: Statistics of LEDBAT

Start at: 2018-02-20 14:37:31
End at: 2018-02-20 14:38:01
Local clock offset: 1.349 ms
Remote clock offset: -0.835 ms

# Below is generated by plot.py at 2018-02-20 18:50:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 49.41 Mbit/s
95th percentile per-packet one-way delay: 61.125 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 23.82 Mbit/s
95th percentile per-packet one-way delay: 61.132 ms
Loss rate: 0.27%
-- Flow 2:
Average throughput: 27.49 Mbit/s
95th percentile per-packet one-way delay: 61.433 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 22.11 Mbit/s
95th percentile per-packet one-way delay: 55.950 ms
Loss rate: 0.02%
Run 2: Report of LEDBAT — Data Link
Run 3: Statistics of LEDBAT

Start at: 2018-02-20 15:03:56
End at: 2018-02-20 15:04:26
Local clock offset: 1.342 ms
Remote clock offset: -5.312 ms

# Below is generated by plot.py at 2018-02-20 18:50:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 45.56 Mbit/s
95th percentile per-packet one-way delay: 47.044 ms
Loss rate: 0.21%
-- Flow 1:
Average throughput: 24.47 Mbit/s
95th percentile per-packet one-way delay: 44.372 ms
Loss rate: 0.22%
-- Flow 2:
Average throughput: 21.93 Mbit/s
95th percentile per-packet one-way delay: 47.240 ms
Loss rate: 0.22%
-- Flow 3:
Average throughput: 19.61 Mbit/s
95th percentile per-packet one-way delay: 49.448 ms
Loss rate: 0.13%
Run 3: Report of LEDBAT — Data Link

Time (s)

Throughput (Mbit/s)

Flow 1 ingress (mean 24.53 Mbit/s)
Flow 1 egress (mean 24.47 Mbit/s)
Flow 2 ingress (mean 21.98 Mbit/s)
Flow 2 egress (mean 21.93 Mbit/s)
Flow 3 ingress (mean 19.63 Mbit/s)
Flow 3 egress (mean 19.61 Mbit/s)

Per packet one way delay (ms)

Flow 1 (95th percentile 44.37 ms)
Flow 2 (95th percentile 47.24 ms)
Flow 3 (95th percentile 49.45 ms)
Run 4: Statistics of LEDBAT

Start at: 2018-02-20 15:29:48
End at: 2018-02-20 15:30:18
Local clock offset: 1.373 ms
Remote clock offset: -8.421 ms

# Below is generated by plot.py at 2018-02-20 18:50:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 62.03 Mbit/s
95th percentile per-packet one-way delay: 50.730 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 41.51 Mbit/s
95th percentile per-packet one-way delay: 48.112 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 24.11 Mbit/s
95th percentile per-packet one-way delay: 53.660 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 13.48 Mbit/s
95th percentile per-packet one-way delay: 51.884 ms
Loss rate: 0.45%
Run 4: Report of LEDBAT — Data Link

![Graph showing throughput and latency over time for different flows with specific mean rates.]

Legend:
- Flow 1 ingress (mean 41.54 Mbit/s)
- Flow 1 egress (mean 41.51 Mbit/s)
- Flow 2 ingress (mean 24.14 Mbit/s)
- Flow 2 egress (mean 24.11 Mbit/s)
- Flow 3 ingress (mean 13.53 Mbit/s)
- Flow 3 egress (mean 13.48 Mbit/s)

![Graph showing per-packet one-way delay over time for different flows with specific 95th percentiles.]

Legend:
- Flow 1 (95th percentile 48.11 ms)
- Flow 2 (95th percentile 53.66 ms)
- Flow 3 (95th percentile 51.88 ms)
Run 5: Statistics of LEDBAT

Start at: 2018-02-20 15:54:51
End at: 2018-02-20 15:55:21
Local clock offset: 2.718 ms
Remote clock offset: -4.316 ms

# Below is generated by plot.py at 2018-02-20 18:50:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 41.55 Mbit/s
95th percentile per-packet one-way delay: 37.126 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 18.70 Mbit/s
95th percentile per-packet one-way delay: 36.434 ms
Loss rate: 0.28%
-- Flow 2:
Average throughput: 25.47 Mbit/s
95th percentile per-packet one-way delay: 36.868 ms
Loss rate: 0.13%
-- Flow 3:
Average throughput: 17.79 Mbit/s
95th percentile per-packet one-way delay: 38.646 ms
Loss rate: 0.17%
Run 5: Report of LEDBAT — Data Link

![Throughput Graph](image1)

![Per-packet one-way delay](image2)
Run 6: Statistics of LEDBAT

Start at: 2018-02-20 16:19:47
End at: 2018-02-20 16:20:17
Local clock offset: -2.845 ms
Remote clock offset: -3.203 ms

# Below is generated by plot.py at 2018-02-20 18:50:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 36.82 Mbit/s
95th percentile per-packet one-way delay: 35.022 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 19.07 Mbit/s
95th percentile per-packet one-way delay: 34.715 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 18.19 Mbit/s
95th percentile per-packet one-way delay: 35.174 ms
Loss rate: 0.41%
-- Flow 3:
Average throughput: 17.02 Mbit/s
95th percentile per-packet one-way delay: 36.374 ms
Loss rate: 0.29%
Run 6: Report of LEDBAT — Data Link

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

- Flow 1 ingress (mean 19.14 Mbit/s)
- Flow 1 egress (mean 19.07 Mbit/s)
- Flow 2 ingress (mean 18.27 Mbit/s)
- Flow 2 egress (mean 18.19 Mbit/s)
- Flow 3 ingress (mean 17.07 Mbit/s)
- Flow 3 egress (mean 17.02 Mbit/s)

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

- Flow 1 (95th percentile 34.72 ms)
- Flow 2 (95th percentile 35.17 ms)
- Flow 3 (95th percentile 36.37 ms)
Run 7: Statistics of LEDBAT

Start at: 2018-02-20 16:46:15
End at: 2018-02-20 16:46:45
Local clock offset: -5.0 ms
Remote clock offset: -3.784 ms

# Below is generated by plot.py at 2018-02-20 18:50:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 46.82 Mbit/s
95th percentile per-packet one-way delay: 64.402 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 26.61 Mbit/s
95th percentile per-packet one-way delay: 63.583 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 24.70 Mbit/s
95th percentile per-packet one-way delay: 65.228 ms
Loss rate: 0.28%
-- Flow 3:
Average throughput: 11.38 Mbit/s
95th percentile per-packet one-way delay: 64.329 ms
Loss rate: 0.37%
Run 7: Report of LEDBAT — Data Link
Run 8: Statistics of LEDBAT

Start at: 2018-02-20 17:15:00
End at: 2018-02-20 17:15:30
Local clock offset: -3.679 ms
Remote clock offset: -13.091 ms

# Below is generated by plot.py at 2018-02-20 18:50:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 26.53 Mbit/s
95th percentile per-packet one-way delay: 36.096 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 14.69 Mbit/s
95th percentile per-packet one-way delay: 35.323 ms
Loss rate: 0.54%
-- Flow 2:
Average throughput: 10.66 Mbit/s
95th percentile per-packet one-way delay: 36.638 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 14.31 Mbit/s
95th percentile per-packet one-way delay: 36.281 ms
Loss rate: 0.38%
Run 8: Report of LEDBAT — Data Link

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

- Flow 1 ingress (mean 14.77 Mbit/s)
- Flow 1 egress (mean 14.69 Mbit/s)
- Flow 2 ingress (mean 10.73 Mbit/s)
- Flow 2 egress (mean 10.66 Mbit/s)
- Flow 3 ingress (mean 14.36 Mbit/s)
- Flow 3 egress (mean 14.31 Mbit/s)
Run 9: Statistics of LEDBAT

Start at: 2018-02-20 17:41:37
End at: 2018-02-20 17:42:07
Local clock offset: 1.668 ms
Remote clock offset: -2.798 ms

# Below is generated by plot.py at 2018-02-20 18:50:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 31.34 Mbit/s
95th percentile per-packet one-way delay: 35.168 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 16.94 Mbit/s
95th percentile per-packet one-way delay: 34.799 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 15.95 Mbit/s
95th percentile per-packet one-way delay: 35.524 ms
Loss rate: 0.36%
-- Flow 3:
Average throughput: 11.40 Mbit/s
95th percentile per-packet one-way delay: 35.243 ms
Loss rate: 0.59%
Run 9: Report of LEDBAT — Data Link

Graph 1: Throughput (Mbps)
- Flow 1 ingress (mean 17.00 Mbps)
- Flow 1 egress (mean 16.94 Mbps)
- Flow 2 ingress (mean 16.01 Mbps)
- Flow 2 egress (mean 15.95 Mbps)
- Flow 3 ingress (mean 11.47 Mbps)
- Flow 3 egress (mean 11.40 Mbps)

Graph 2: Per-packet one-way delay (ms)
- Flow 1 (95th percentile 34.80 ms)
- Flow 2 (95th percentile 35.52 ms)
- Flow 3 (95th percentile 35.24 ms)
Run 10: Statistics of LEDBAT

Start at: 2018-02-20 18:09:03
End at: 2018-02-20 18:09:33
Local clock offset: -4.689 ms
Remote clock offset: -2.614 ms

# Below is generated by plot.py at 2018-02-20 18:51:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 51.85 Mbit/s
95th percentile per-packet one-way delay: 36.342 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 30.96 Mbit/s
95th percentile per-packet one-way delay: 34.865 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 23.19 Mbit/s
95th percentile per-packet one-way delay: 37.010 ms
Loss rate: 0.22%
-- Flow 3:
Average throughput: 16.48 Mbit/s
95th percentile per-packet one-way delay: 37.533 ms
Loss rate: 0.41%
Run 10: Report of LEDBAT — Data Link

![Graph showing throughput and latency over time](image)

- **Throughput (Mbps)**
  - Flow 1 ingress (mean 31.00 Mbps)
  - Flow 1 egress (mean 30.96 Mbps)
  - Flow 2 ingress (mean 23.24 Mbps)
  - Flow 2 egress (mean 23.19 Mbps)
  - Flow 3 ingress (mean 16.55 Mbps)
  - Flow 3 egress (mean 16.48 Mbps)

- **Per-packet round trip delay (ms)**
  - Flow 1 (95th percentile 34.87 ms)
  - Flow 2 (95th percentile 37.01 ms)
  - Flow 3 (95th percentile 37.53 ms)
Run 1: Statistics of PCC

Start at: 2018-02-20 14:12:51
End at: 2018-02-20 14:13:21
Local clock offset: 1.655 ms
Remote clock offset: -2.502 ms

# Below is generated by plot.py at 2018-02-20 18:51:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.90 Mbit/s
95th percentile per-packet one-way delay: 53.283 ms
Loss rate: 2.39%
-- Flow 1:
Average throughput: 75.30 Mbit/s
95th percentile per-packet one-way delay: 53.032 ms
Loss rate: 2.40%
-- Flow 2:
Average throughput: 18.18 Mbit/s
95th percentile per-packet one-way delay: 55.097 ms
Loss rate: 2.33%
-- Flow 3:
Average throughput: 7.61 Mbit/s
95th percentile per-packet one-way delay: 52.188 ms
Loss rate: 2.14%
Run 1: Report of PCC — Data Link
Run 2: Statistics of PCC

Start at: 2018-02-20 14:39:00
End at: 2018-02-20 14:39:30
Local clock offset: 1.436 ms
Remote clock offset: -1.314 ms

# Below is generated by plot.py at 2018-02-20 18:51:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.87 Mbit/s
95th percentile per-packet one-way delay: 48.008 ms
Loss rate: 1.08%
-- Flow 1:
Average throughput: 84.68 Mbit/s
95th percentile per-packet one-way delay: 46.965 ms
Loss rate: 1.05%
-- Flow 2:
Average throughput: 2.44 Mbit/s
95th percentile per-packet one-way delay: 50.543 ms
Loss rate: 0.49%
-- Flow 3:
Average throughput: 7.78 Mbit/s
95th percentile per-packet one-way delay: 57.427 ms
Loss rate: 2.38%
Run 2: Report of PCC — Data Link

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

- Flow 1 ingress (mean 85.61 Mbit/s)
- Flow 1 egress (mean 84.68 Mbit/s)
- Flow 2 ingress (mean 2.45 Mbit/s)
- Flow 2 egress (mean 2.44 Mbit/s)
- Flow 3 ingress (mean 7.97 Mbit/s)
- Flow 3 egress (mean 7.78 Mbit/s)

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

- Flow 1 (95th percentile 46.97 ms)
- Flow 2 (95th percentile 50.54 ms)
- Flow 3 (95th percentile 57.43 ms)
Run 3: Statistics of PCC

Start at: 2018-02-20 15:05:18
End at: 2018-02-20 15:05:48
Local clock offset: 1.231 ms
Remote clock offset: -3.321 ms

# Below is generated by plot.py at 2018-02-20 18:51:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.21 Mbit/s
95th percentile per-packet one-way delay: 64.464 ms
Loss rate: 2.21%
-- Flow 1:
Average throughput: 63.59 Mbit/s
95th percentile per-packet one-way delay: 64.278 ms
Loss rate: 2.01%
-- Flow 2:
Average throughput: 11.97 Mbit/s
95th percentile per-packet one-way delay: 65.069 ms
Loss rate: 2.51%
-- Flow 3:
Average throughput: 14.15 Mbit/s
95th percentile per-packet one-way delay: 65.664 ms
Loss rate: 4.42%
Run 3: Report of PCC — Data Link

![Throughput Graph](image1)

![Delay Graph](image2)
Run 4: Statistics of PCC

Start at: 2018-02-20 15:31:11
End at: 2018-02-20 15:31:41
Local clock offset: 1.509 ms
Remote clock offset: -6.549 ms

# Below is generated by plot.py at 2018-02-20 18:51:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 70.32 Mbit/s
95th percentile per-packet one-way delay: 56.430 ms
Loss rate: 1.54%
-- Flow 1:
Average throughput: 59.23 Mbit/s
95th percentile per-packet one-way delay: 55.480 ms
Loss rate: 1.37%
-- Flow 2:
Average throughput: 9.10 Mbit/s
95th percentile per-packet one-way delay: 56.777 ms
Loss rate: 1.55%
-- Flow 3:
Average throughput: 15.25 Mbit/s
95th percentile per-packet one-way delay: 60.921 ms
Loss rate: 3.46%
Run 4: Report of PCC — Data Link
Run 5: Statistics of PCC

Start at: 2018-02-20 15:56:12
End at: 2018-02-20 15:56:42
Local clock offset: 2.749 ms
Remote clock offset: -3.94 ms

# Below is generated by plot.py at 2018-02-20 18:51:47
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 70.95 Mbit/s
  95th percentile per-packet one-way delay: 49.311 ms
  Loss rate: 1.01%
-- Flow 1:
  Average throughput: 60.80 Mbit/s
  95th percentile per-packet one-way delay: 49.024 ms
  Loss rate: 0.94%
-- Flow 2:
  Average throughput: 10.83 Mbit/s
  95th percentile per-packet one-way delay: 49.753 ms
  Loss rate: 1.07%
-- Flow 3:
  Average throughput: 8.96 Mbit/s
  95th percentile per-packet one-way delay: 58.704 ms
  Loss rate: 2.40%
Run 5: Report of PCC — Data Link

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

![Graph showing network packet per-second delays over time for different flows.]

Flow 1: Ingress (mean 61.38 Mbit/s), Egress (mean 60.80 Mbit/s)
Flow 2: Ingress (mean 10.95 Mbit/s), Egress (mean 10.83 Mbit/s)
Flow 3: Ingress (mean 9.18 Mbit/s), Egress (mean 8.96 Mbit/s)

Flow 1 (95th percentile 49.02 ms), Flow 2 (95th percentile 49.75 ms), Flow 3 (95th percentile 58.70 ms)
Run 6: Statistics of PCC

Start at: 2018-02-20 16:21:07
End at: 2018-02-20 16:21:37
Local clock offset: -3.011 ms
Remote clock offset: -3.198 ms

# Below is generated by plot.py at 2018-02-20 18:51:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 81.45 Mbit/s
95th percentile per-packet one-way delay: 49.361 ms
Loss rate: 1.20%
-- Flow 1:
Average throughput: 62.24 Mbit/s
95th percentile per-packet one-way delay: 48.135 ms
Loss rate: 1.09%
-- Flow 2:
Average throughput: 24.69 Mbit/s
95th percentile per-packet one-way delay: 50.786 ms
Loss rate: 1.35%
-- Flow 3:
Average throughput: 8.48 Mbit/s
95th percentile per-packet one-way delay: 59.236 ms
Loss rate: 2.64%
Run 6: Report of PCC — Data Link

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

### Throughput (Mbps)
- Flow 1 ingress (mean 62.94 Mbps)
- Flow 1 egress (mean 62.24 Mbps)
- Flow 2 ingress (mean 25.04 Mbps)
- Flow 2 egress (mean 24.69 Mbps)
- Flow 3 ingress (mean 8.71 Mbps)
- Flow 3 egress (mean 8.48 Mbps)

### Packet Delay (ms)
- Flow 1 (95th percentile 48.13 ms)
- Flow 2 (95th percentile 50.79 ms)
- Flow 3 (95th percentile 59.24 ms)
Run 7: Statistics of PCC

Start at: 2018-02-20 16:48:03
End at: 2018-02-20 16:48:33
Local clock offset: -5.012 ms
Remote clock offset: -5.228 ms

# Below is generated by plot.py at 2018-02-20 18:51:54
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 47.16 Mbit/s
  95th percentile per-packet one-way delay: 39.148 ms
  Loss rate: 1.82%
-- Flow 1:
  Average throughput: 4.15 Mbit/s
  95th percentile per-packet one-way delay: 37.428 ms
  Loss rate: 0.74%
-- Flow 2:
  Average throughput: 63.58 Mbit/s
  95th percentile per-packet one-way delay: 39.249 ms
  Loss rate: 1.95%
-- Flow 3:
  Average throughput: 2.24 Mbit/s
  95th percentile per-packet one-way delay: 37.657 ms
  Loss rate: 0.31%
Run 7: Report of PCC — Data Link
Run 8: Statistics of PCC

Start at: 2018-02-20 17:16:20
End at: 2018-02-20 17:16:50
Local clock offset: -3.011 ms
Remote clock offset: -11.157 ms

# Below is generated by plot.py at 2018-02-20 18:52:16
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 82.51 Mbit/s
  95th percentile per-packet one-way delay: 40.811 ms
  Loss rate: 1.28%
-- Flow 1:
  Average throughput: 76.01 Mbit/s
  95th percentile per-packet one-way delay: 40.296 ms
  Loss rate: 1.31%
-- Flow 2:
  Average throughput: 5.35 Mbit/s
  95th percentile per-packet one-way delay: 41.690 ms
  Loss rate: 0.93%
-- Flow 3:
  Average throughput: 8.93 Mbit/s
  95th percentile per-packet one-way delay: 57.670 ms
  Loss rate: 0.86%
Run 8: Report of PCC — Data Link

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

- **Throughput:**
  - Flow 1 ingress (mean 77.04 Mbit/s)
  - Flow 1 egress (mean 76.01 Mbit/s)
  - Flow 2 ingress (mean 5.40 Mbit/s)
  - Flow 2 egress (mean 5.35 Mbit/s)
  - Flow 3 ingress (mean 9.01 Mbit/s)
  - Flow 3 egress (mean 8.93 Mbit/s)

- **Packet Latency:**
  - Flow 1 (95th percentile 40.30 ms)
  - Flow 2 (95th percentile 41.69 ms)
  - Flow 3 (95th percentile 57.67 ms)
Run 9: Statistics of PCC

Start at: 2018-02-20 17:43:04
End at: 2018-02-20 17:43:34
Local clock offset: 1.752 ms
Remote clock offset: -2.513 ms

# Below is generated by plot.py at 2018-02-20 18:52:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.60 Mbit/s
95th percentile per-packet one-way delay: 63.546 ms
Loss rate: 2.50%
-- Flow 1:
Average throughput: 77.12 Mbit/s
95th percentile per-packet one-way delay: 63.619 ms
Loss rate: 2.53%
-- Flow 2:
Average throughput: 8.59 Mbit/s
95th percentile per-packet one-way delay: 63.744 ms
Loss rate: 2.52%
-- Flow 3:
Average throughput: 8.41 Mbit/s
95th percentile per-packet one-way delay: 58.750 ms
Loss rate: 1.59%
Run 9: Report of PCC — Data Link

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

Legend:
- Flow 1 ingress (mean 79.12 Mbit/s)
- Flow 1 egress (mean 77.12 Mbit/s)
- Flow 2 ingress (mean 8.851 Mbit/s)
- Flow 2 egress (mean 8.59 Mbit/s)
- Flow 3 ingress (mean 8.355 Mbit/s)
- Flow 3 egress (mean 8.41 Mbit/s)

Legend for delay:
- Flow 1 (95th percentile 63.62 ms)
- Flow 2 (95th percentile 63.74 ms)
- Flow 3 (95th percentile 58.75 ms)
Run 10: Statistics of PCC

Start at: 2018-02-20 18:10:34
End at: 2018-02-20 18:11:04
Local clock offset: -4.756 ms
Remote clock offset: -3.113 ms

# Below is generated by plot.py at 2018-02-20 18:52:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.55 Mbit/s
95th percentile per-packet one-way delay: 48.272 ms
Loss rate: 1.33%
-- Flow 1:
Average throughput: 83.51 Mbit/s
95th percentile per-packet one-way delay: 48.058 ms
Loss rate: 1.35%
-- Flow 2:
Average throughput: 5.00 Mbit/s
95th percentile per-packet one-way delay: 49.728 ms
Loss rate: 0.84%
-- Flow 3:
Average throughput: 8.21 Mbit/s
95th percentile per-packet one-way delay: 55.174 ms
Loss rate: 1.17%
Run 10: Report of PCC — Data Link
Run 1: Statistics of QUIC Cubic

Start at: 2018-02-20 14:17:22
End at: 2018-02-20 14:17:52
Local clock offset: 1.741 ms
Remote clock offset: 0.309 ms

# Below is generated by plot.py at 2018-02-20 18:52:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.53 Mbit/s
95th percentile per-packet one-way delay: 67.810 ms
Loss rate: 1.96%
-- Flow 1:
Average throughput: 56.98 Mbit/s
95th percentile per-packet one-way delay: 67.323 ms
Loss rate: 2.18%
-- Flow 2:
Average throughput: 33.01 Mbit/s
95th percentile per-packet one-way delay: 68.461 ms
Loss rate: 1.47%
-- Flow 3:
Average throughput: 20.29 Mbit/s
95th percentile per-packet one-way delay: 68.258 ms
Loss rate: 1.64%
Run 1: Report of QUIC Cubic — Data Link

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

Legend:
- Flow 1 ingress (mean 58.26 Mbit/s)
- Flow 1 egress (mean 56.98 Mbit/s)
- Flow 2 ingress (mean 33.49 Mbit/s)
- Flow 2 egress (mean 33.01 Mbit/s)
- Flow 3 ingress (mean 20.58 Mbit/s)
- Flow 3 egress (mean 20.29 Mbit/s)

Per-packet one-way delay (ms) vs Time (s)
Run 2: Statistics of QUIC Cubic

Start at: 2018-02-20 14:43:32
End at: 2018-02-20 14:44:02
Local clock offset: 1.424 ms
Remote clock offset: -3.738 ms

# Below is generated by plot.py at 2018-02-20 18:53:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.49 Mbit/s
95th percentile per-packet one-way delay: 63.096 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 64.37 Mbit/s
95th percentile per-packet one-way delay: 63.008 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 28.61 Mbit/s
95th percentile per-packet one-way delay: 63.529 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 9.41 Mbit/s
95th percentile per-packet one-way delay: 61.439 ms
Loss rate: 0.20%
Run 2: Report of QUIC Cubic — Data Link
Run 3: Statistics of QUIC Cubic

Start at: 2018-02-20 15:09:37
End at: 2018-02-20 15:10:07
Local clock offset: 1.169 ms
Remote clock offset: -3.618 ms

# Below is generated by plot.py at 2018-02-20 18:53:09
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 69.30 Mbit/s
  95th percentile per-packet one-way delay: 59.789 ms
  Loss rate: 0.90%
-- Flow 1:
  Average throughput: 48.57 Mbit/s
  95th percentile per-packet one-way delay: 59.819 ms
  Loss rate: 1.05%
-- Flow 2:
  Average throughput: 18.06 Mbit/s
  95th percentile per-packet one-way delay: 58.701 ms
  Loss rate: 0.51%
-- Flow 3:
  Average throughput: 26.55 Mbit/s
  95th percentile per-packet one-way delay: 60.927 ms
  Loss rate: 0.65%
Run 3: Report of QUIC Cubic — Data Link
Run 4: Statistics of QUIC Cubic

Start at: 2018-02-20 15:35:22
End at: 2018-02-20 15:35:52
Local clock offset: 1.813 ms
Remote clock offset: -8.955 ms

# Below is generated by plot.py at 2018-02-20 18:53:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.15 Mbit/s
95th percentile per-packet one-way delay: 55.203 ms
Loss rate: 0.87%
-- Flow 1:
Average throughput: 45.36 Mbit/s
95th percentile per-packet one-way delay: 55.892 ms
Loss rate: 1.33%
-- Flow 2:
Average throughput: 37.62 Mbit/s
95th percentile per-packet one-way delay: 50.221 ms
Loss rate: 0.24%
-- Flow 3:
Average throughput: 23.61 Mbit/s
95th percentile per-packet one-way delay: 51.075 ms
Loss rate: 0.24%
Run 4: Report of QUIC Cubic — Data Link

![Graph of throughput over time for different flows, with legends for Flow 1 ingress, Flow 1 egress, Flow 2 ingress, Flow 2 egress, Flow 3 ingress, Flow 3 egress.

![Graph of per-packet one-way delay over time for different flows, with legends for Flow 1 (95th percentile 55.89 ms), Flow 2 (95th percentile 50.22 ms), Flow 3 (95th percentile 51.08 ms).]
Run 5: Statistics of QUIC Cubic

Start at: 2018-02-20 16:00:24
End at: 2018-02-20 16:00:54
Local clock offset: 2.765 ms
Remote clock offset: -6.303 ms

# Below is generated by plot.py at 2018-02-20 18:53:09

# Datalink statistics
-- Total of 3 flows:
Average throughput: 68.39 Mbit/s
95th percentile per-packet one-way delay: 53.925 ms
Loss rate: 1.44%
-- Flow 1:
Average throughput: 30.98 Mbit/s
95th percentile per-packet one-way delay: 52.784 ms
Loss rate: 1.38%
-- Flow 2:
Average throughput: 33.25 Mbit/s
95th percentile per-packet one-way delay: 61.366 ms
Loss rate: 1.31%
-- Flow 3:
Average throughput: 46.49 Mbit/s
95th percentile per-packet one-way delay: 52.621 ms
Loss rate: 1.77%
Run 5: Report of QUIC Cubic — Data Link
Run 6: Statistics of QUIC Cubic

Start at: 2018-02-20 16:25:16
End at: 2018-02-20 16:25:46
Local clock offset: -3.515 ms
Remote clock offset: -3.03 ms

# Below is generated by plot.py at 2018-02-20 18:53:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 52.98 Mbit/s
95th percentile per-packet one-way delay: 43.349 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 27.75 Mbit/s
95th percentile per-packet one-way delay: 40.492 ms
Loss rate: 0.29%
-- Flow 2:
Average throughput: 22.44 Mbit/s
95th percentile per-packet one-way delay: 43.005 ms
Loss rate: 0.46%
-- Flow 3:
Average throughput: 31.32 Mbit/s
95th percentile per-packet one-way delay: 52.925 ms
Loss rate: 0.60%
Run 6: Report of QUIC Cubic — Data Link

![Graph 1: Throughput vs Time]

- **Flow 1 ingress** (mean 27.83 Mbit/s)
- **Flow 1 egress** (mean 27.75 Mbit/s)
- **Flow 2 ingress** (mean 22.35 Mbit/s)
- **Flow 2 egress** (mean 22.44 Mbit/s)
- **Flow 3 ingress** (mean 31.51 Mbit/s)
- **Flow 3 egress** (mean 31.32 Mbit/s)

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

- **Flow 1 (95th percentile 40.49 ms)**
- **Flow 2 (95th percentile 43.01 ms)**
- **Flow 3 (95th percentile 52.92 ms)**
Run 7: Statistics of QUIC Cubic

Start at: 2018-02-20 16:54:04
End at: 2018-02-20 16:54:34
Local clock offset: -5.312 ms
Remote clock offset: -9.866 ms

# Below is generated by plot.py at 2018-02-20 18:53:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 46.15 Mbit/s
95th percentile per-packet one-way delay: 50.487 ms
Loss rate: 2.32%
-- Flow 1:
Average throughput: 22.98 Mbit/s
95th percentile per-packet one-way delay: 46.424 ms
Loss rate: 2.05%
-- Flow 2:
Average throughput: 20.66 Mbit/s
95th percentile per-packet one-way delay: 51.178 ms
Loss rate: 1.48%
-- Flow 3:
Average throughput: 28.70 Mbit/s
95th percentile per-packet one-way delay: 56.794 ms
Loss rate: 4.18%
Run 7: Report of QUIC Cubic — Data Link

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

- **Flow 1 ingress** (mean 23.46 Mbit/s)
- **Flow 1 egress** (mean 22.98 Mbit/s)
- **Flow 2 ingress** (mean 20.97 Mbit/s)
- **Flow 2 egress** (mean 20.66 Mbit/s)
- **Flow 3 ingress** (mean 29.96 Mbit/s)
- **Flow 3 egress** (mean 20.70 Mbit/s)

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

- **Flow 1** (95th percentile 46.42 ms)
- **Flow 2** (95th percentile 51.18 ms)
- **Flow 3** (95th percentile 56.79 ms)
Run 8: Statistics of QUIC Cubic

Start at: 2018-02-20 17:20:54
End at: 2018-02-20 17:21:24
Local clock offset: -1.195 ms
Remote clock offset: -10.9 ms

# Below is generated by plot.py at 2018-02-20 18:53:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 53.20 Mbit/s
95th percentile per-packet one-way delay: 36.793 ms
Loss rate: 1.18%
-- Flow 1:
Average throughput: 36.70 Mbit/s
95th percentile per-packet one-way delay: 37.981 ms
Loss rate: 1.40%
-- Flow 2:
Average throughput: 16.26 Mbit/s
95th percentile per-packet one-way delay: 35.787 ms
Loss rate: 0.67%
-- Flow 3:
Average throughput: 17.30 Mbit/s
95th percentile per-packet one-way delay: 36.130 ms
Loss rate: 0.77%
Run 8: Report of QUIC Cubic — Data Link
Run 9: Statistics of QUIC Cubic

Start at: 2018-02-20 17:47:53
End at: 2018-02-20 17:48:23
Local clock offset: 0.456 ms
Remote clock offset: -4.226 ms

# Below is generated by plot.py at 2018-02-20 18:53:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 56.31 Mbit/s
95th percentile per-packet one-way delay: 36.527 ms
Loss rate: 1.41%

-- Flow 1:
Average throughput: 33.67 Mbit/s
95th percentile per-packet one-way delay: 35.326 ms
Loss rate: 0.87%

-- Flow 2:
Average throughput: 14.78 Mbit/s
95th percentile per-packet one-way delay: 36.413 ms
Loss rate: 1.15%

-- Flow 3:
Average throughput: 38.94 Mbit/s
95th percentile per-packet one-way delay: 44.272 ms
Loss rate: 3.00%
Run 9: Report of QUIC Cubic — Data Link

![Graph 1: Throughput (Mbps)]

- Flow 1 ingress (mean 33.98 Mbit/s)
- Flow 1 egress (mean 33.67 Mbit/s)
- Flow 2 ingress (mean 14.95 Mbit/s)
- Flow 2 egress (mean 14.78 Mbit/s)
- Flow 3 ingress (mean 40.13 Mbit/s)
- Flow 3 egress (mean 30.94 Mbit/s)

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

- Flow 1 (95th percentile 35.33 ms)
- Flow 2 (95th percentile 36.41 ms)
- Flow 3 (95th percentile 44.27 ms)
Run 10: Statistics of QUIC Cubic

Start at: 2018-02-20 18:15:34
End at: 2018-02-20 18:16:04
Local clock offset: -5.353 ms
Remote clock offset: -5.373 ms

# Below is generated by plot.py at 2018-02-20 18:54:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 80.11 Mbit/s
95th percentile per-packet one-way delay: 60.540 ms
Loss rate: 0.75%

-- Flow 1:
Average throughput: 43.48 Mbit/s
95th percentile per-packet one-way delay: 56.406 ms
Loss rate: 0.58%

-- Flow 2:
Average throughput: 39.67 Mbit/s
95th percentile per-packet one-way delay: 61.249 ms
Loss rate: 1.10%

-- Flow 3:
Average throughput: 31.27 Mbit/s
95th percentile per-packet one-way delay: 63.255 ms
Loss rate: 0.55%
Run 10: Report of QUIC Cubic — Data Link
Run 1: Statistics of SCReAM

Start at: 2018-02-20 13:52:01
End at: 2018-02-20 13:52:32
Local clock offset: 3.29 ms
Remote clock offset: -2.792 ms

# Below is generated by plot.py at 2018-02-20 18:54:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 30.984 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 31.003 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 30.966 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 30.972 ms
Loss rate: 0.00%
Run 1: Report of SCReAM — Data Link

![Graph showing throughput and delay over time for different flows.](image)
Run 2: Statistics of SCReAM

Start at: 2018-02-20 14:18:50
End at: 2018-02-20 14:19:20
Local clock offset: 1.742 ms
Remote clock offset: -2.264 ms

# Below is generated by plot.py at 2018-02-20 18:54:27
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.44 Mbit/s
  95th percentile per-packet one-way delay: 28.685 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 28.726 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 28.044 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 29.682 ms
  Loss rate: 0.00%
Run 2: Report of SCReAM — Data Link

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

![Graph 2: Per-packet one-way delay (ms)](image2)
Run 3: Statistics of SCReAM

Start at: 2018-02-20 14:44:58
End at: 2018-02-20 14:45:28
Local clock offset: 1.437 ms
Remote clock offset: -1.74 ms

# Below is generated by plot.py at 2018-02-20 18:54:27
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.33 Mbit/s
  95th percentile per-packet one-way delay: 38.352 ms
  Loss rate: 0.66%
-- Flow 1:
  Average throughput: 0.14 Mbit/s
  95th percentile per-packet one-way delay: 38.761 ms
  Loss rate: 1.18%
-- Flow 2:
  Average throughput: 0.17 Mbit/s
  95th percentile per-packet one-way delay: 38.281 ms
  Loss rate: 0.47%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 37.286 ms
  Loss rate: 0.00%
Run 3: Report of SCReAM — Data Link

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

**Throughput (Mbps):**
- Flow 1 ingress (mean 0.14 Mbps)
- Flow 1 egress (mean 0.14 Mbps)
- Flow 2 ingress (mean 0.18 Mbps)
- Flow 2 egress (mean 0.17 Mbps)
- Flow 3 ingress (mean 0.22 Mbps)
- Flow 3 egress (mean 0.22 Mbps)

**Round-trip time (ms):**
- Flow 1 (95th percentile 38.76 ms)
- Flow 2 (95th percentile 38.28 ms)
- Flow 3 (95th percentile 37.29 ms)
Run 4: Statistics of SCReAM

Start at: 2018-02-20 15:11:02
End at: 2018-02-20 15:11:32
Local clock offset: 1.288 ms
Remote clock offset: -6.249 ms

# Below is generated by plot.py at 2018-02-20 18:54:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.42 Mbit/s
95th percentile per-packet one-way delay: 29.425 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 28.905 ms
Loss rate: 0.15%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 29.699 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 31.279 ms
Loss rate: 0.00%
Run 4: Report of SCReAM — Data Link
Run 5: Statistics of SCReAM

Start at: 2018-02-20 15:36:44
End at: 2018-02-20 15:37:14
Local clock offset: 2.007 ms
Remote clock offset: -8.523 ms

# Below is generated by plot.py at 2018-02-20 18:54:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 28.529 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 28.555 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 27.850 ms
Loss rate: 0.25%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 27.835 ms
Loss rate: 0.00%
Run 5: Report of SCReAM — Data Link
Run 6: Statistics of SCReAM

Start at: 2018-02-20 16:01:45
End at: 2018-02-20 16:02:15
Local clock offset: 2.906 ms
Remote clock offset: -4.064 ms

# Below is generated by plot.py at 2018-02-20 18:54:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.39 Mbit/s
95th percentile per-packet one-way delay: 30.748 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 30.779 ms
Loss rate: 0.29%
-- Flow 2:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 30.160 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 30.748 ms
Loss rate: 0.00%
Run 6: Report of SCReAM — Data Link
Run 7: Statistics of SCReAM

Start at: 2018-02-20 16:26:37
End at: 2018-02-20 16:27:07
Local clock offset: -3.742 ms
Remote clock offset: -5.06 ms

# Below is generated by plot.py at 2018-02-20 18:54:27
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.37 Mbit/s
  95th percentile per-packet one-way delay: 29.763 ms
  Loss rate: 0.32%
-- Flow 1:
  Average throughput: 0.16 Mbit/s
  95th percentile per-packet one-way delay: 29.896 ms
  Loss rate: 0.18%
-- Flow 2:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 29.023 ms
  Loss rate: 0.20%
-- Flow 3:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 31.562 ms
  Loss rate: 0.89%
Run 7: Report of SCReAM — Data Link
Run 8: Statistics of SCReAM

Start at: 2018-02-20 16:55:45
End at: 2018-02-20 16:56:15
Local clock offset: -5.386 ms
Remote clock offset: -8.429 ms

# Below is generated by plot.py at 2018-02-20 18:54:27
# Datalink statistics
-- Total of 3 flows:
 Average throughput: 0.44 Mbit/s
 95th percentile per-packet one-way delay: 33.640 ms
 Loss rate: 0.00%
-- Flow 1:
 Average throughput: 0.22 Mbit/s
 95th percentile per-packet one-way delay: 33.897 ms
 Loss rate: 0.00%
-- Flow 2:
 Average throughput: 0.22 Mbit/s
 95th percentile per-packet one-way delay: 33.629 ms
 Loss rate: 0.00%
-- Flow 3:
 Average throughput: 0.22 Mbit/s
 95th percentile per-packet one-way delay: 33.474 ms
 Loss rate: 0.00%
Run 8: Report of SCReAM — Data Link
Run 9: Statistics of SCReAM

Start at: 2018-02-20 17:22:16
End at: 2018-02-20 17:22:46
Local clock offset: -0.79 ms
Remote clock offset: -9.962 ms

# Below is generated by plot.py at 2018-02-20 18:54:27
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 31.967 ms
  Loss rate: 0.07%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 33.018 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 31.286 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 28.577 ms
  Loss rate: 0.42%
Run 9: Report of SCReAM — Data Link
Run 10: Statistics of SCReAM

Start at: 2018-02-20 17:49:21
End at: 2018-02-20 17:49:51
Local clock offset: -0.253 ms
Remote clock offset: -1.776 ms

# Below is generated by plot.py at 2018-02-20 18:54:27
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.40 Mbit/s
  95th percentile per-packet one-way delay: 32.059 ms
  Loss rate: 0.34%
-- Flow 1:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 30.781 ms
  Loss rate: 0.25%
-- Flow 2:
  Average throughput: 0.20 Mbit/s
  95th percentile per-packet one-way delay: 31.943 ms
  Loss rate: 0.20%
-- Flow 3:
  Average throughput: 0.18 Mbit/s
  95th percentile per-packet one-way delay: 34.449 ms
  Loss rate: 0.95%
Run 10: Report of SCReAM — Data Link

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

Flow 1 (95th percentile 30.78 ms)  Flow 2 (95th percentile 31.94 ms)  Flow 3 (95th percentile 34.45 ms)
Run 1: Statistics of WebRTC media

Start at: 2018-02-20 14:10:06
End at: 2018-02-20 14:10:36
Local clock offset: 1.644 ms
Remote clock offset: -0.151 ms

# Below is generated by plot.py at 2018-02-20 18:54:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 5.38 Mbit/s
95th percentile per-packet one-way delay: 37.336 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 3.01 Mbit/s
95th percentile per-packet one-way delay: 37.826 ms
Loss rate: 1.12%
-- Flow 2:
Average throughput: 1.79 Mbit/s
95th percentile per-packet one-way delay: 37.193 ms
Loss rate: 0.76%
-- Flow 3:
Average throughput: 0.60 Mbit/s
95th percentile per-packet one-way delay: 32.103 ms
Loss rate: 0.00%
Run 1: Report of WebRTC media — Data Link

![Graph showing throughput over time with different flow rates and delays]

- Flow 1 ingress (mean 3.04 Mbit/s)
- Flow 1 egress (mean 3.01 Mbit/s)
- Flow 2 ingress (mean 1.80 Mbit/s)
- Flow 2 egress (mean 1.79 Mbit/s)
- Flow 3 ingress (mean 0.60 Mbit/s)
- Flow 3 egress (mean 0.60 Mbit/s)

![Graph showing packet delay over time with 95th percentile delays]

- Flow 1 (95th percentile 37.03 ms)
- Flow 2 (95th percentile 37.19 ms)
- Flow 3 (95th percentile 32.10 ms)
Run 2: Statistics of WebRTC media

Start at: 2018-02-20 14:36:13
End at: 2018-02-20 14:36:43
Local clock offset: 1.342 ms
Remote clock offset: -3.285 ms

# Below is generated by plot.py at 2018-02-20 18:54:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.32 Mbit/s
95th percentile per-packet one-way delay: 28.870 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 2.28 Mbit/s
95th percentile per-packet one-way delay: 28.833 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.44 Mbit/s
95th percentile per-packet one-way delay: 28.923 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 0.61 Mbit/s
95th percentile per-packet one-way delay: 28.928 ms
Loss rate: 0.00%
Run 3: Statistics of WebRTC media

Start at: 2018-02-20 15:02:38
End at: 2018-02-20 15:03:08
Local clock offset: 1.374 ms
Remote clock offset: -3.074 ms

# Below is generated by plot.py at 2018-02-20 18:54:27
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 5.04 Mbit/s
  95th percentile per-packet one-way delay: 31.380 ms
  Loss rate: 0.16%
-- Flow 1:
  Average throughput: 2.72 Mbit/s
  95th percentile per-packet one-way delay: 31.511 ms
  Loss rate: 0.15%
-- Flow 2:
  Average throughput: 1.73 Mbit/s
  95th percentile per-packet one-way delay: 30.703 ms
  Loss rate: 0.22%
-- Flow 3:
  Average throughput: 0.60 Mbit/s
  95th percentile per-packet one-way delay: 31.570 ms
  Loss rate: 0.00%
Run 3: Report of WebRTC media — Data Link
Run 4: Statistics of WebRTC media

Start at: 2018-02-20 15:28:31
End at: 2018-02-20 15:29:01
Local clock offset: 1.352 ms
Remote clock offset: -5.767 ms

# Below is generated by plot.py at 2018-02-20 18:54:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.52 Mbit/s
95th percentile per-packet one-way delay: 31.389 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 2.48 Mbit/s
95th percentile per-packet one-way delay: 31.296 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 1.45 Mbit/s
95th percentile per-packet one-way delay: 31.479 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 0.61 Mbit/s
95th percentile per-packet one-way delay: 32.301 ms
Loss rate: 0.00%
Run 4: Report of WebRTC media — Data Link

![Graph of throughput vs time for different flows]

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

Legend:
- Flow 1 ingress (mean 2.48 Mbit/s)
- Flow 1 egress (mean 2.48 Mbit/s)
- Flow 2 ingress (mean 1.45 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)

Flow 1 (95th percentile 31.30 ms)
Flow 2 (95th percentile 31.48 ms)
Flow 3 (95th percentile 32.30 ms)
Run 5: Statistics of WebRTC media

Start at: 2018-02-20 15:53:33
End at: 2018-02-20 15:54:03
Local clock offset: 2.687 ms
Remote clock offset: -4.513 ms

# Below is generated by plot.py at 2018-02-20 18:54:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 5.45 Mbit/s
95th percentile per-packet one-way delay: 34.152 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 3.11 Mbit/s
95th percentile per-packet one-way delay: 34.085 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 1.76 Mbit/s
95th percentile per-packet one-way delay: 35.211 ms
Loss rate: 0.46%
-- Flow 3:
Average throughput: 0.60 Mbit/s
95th percentile per-packet one-way delay: 31.546 ms
Loss rate: 0.00%
Run 5: Report of WebRTC media — Data Link

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

![Graph showing per-packet one-way delay in ms over time for different flows.](image)
Run 6: Statistics of WebRTC media

Start at: 2018-02-20 16:18:30
End at: 2018-02-20 16:19:00
Local clock offset: -2.643 ms
Remote clock offset: -3.171 ms

# Below is generated by plot.py at 2018-02-20 18:54:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.74 Mbit/s
95th percentile per-packet one-way delay: 31.172 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 2.49 Mbit/s
95th percentile per-packet one-way delay: 30.563 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 1.67 Mbit/s
95th percentile per-packet one-way delay: 31.319 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 0.60 Mbit/s
95th percentile per-packet one-way delay: 31.387 ms
Loss rate: 0.00%
Run 7: Statistics of WebRTC media

Start at: 2018-02-20 16:44:55
End at: 2018-02-20 16:45:25
Local clock offset: -4.863 ms
Remote clock offset: -5.378 ms

# Below is generated by plot.py at 2018-02-20 18:54:27
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 5.05 Mbit/s
  95th percentile per-packet one-way delay: 31.172 ms
  Loss rate: 0.17%
-- Flow 1:
  Average throughput: 2.75 Mbit/s
  95th percentile per-packet one-way delay: 31.452 ms
  Loss rate: 0.27%
-- Flow 2:
  Average throughput: 1.73 Mbit/s
  95th percentile per-packet one-way delay: 31.223 ms
  Loss rate: 0.07%
-- Flow 3:
  Average throughput: 0.58 Mbit/s
  95th percentile per-packet one-way delay: 30.607 ms
  Loss rate: 0.00%
Run 7: Report of WebRTC media — Data Link

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

- Flow 1 ingress (mean 2.76 Mbit/s)
- Flow 1 egress (mean 2.75 Mbit/s)
- Flow 2 ingress (mean 1.73 Mbit/s)
- Flow 2 egress (mean 1.73 Mbit/s)
- Flow 3 ingress (mean 0.58 Mbit/s)
- Flow 3 egress (mean 0.58 Mbit/s)
Run 8: Statistics of WebRTC media

Start at: 2018-02-20 17:13:42
End at: 2018-02-20 17:14:12
Local clock offset: -4.544 ms
Remote clock offset: -10.873 ms

# Below is generated by plot.py at 2018-02-20 18:54:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 5.34 Mbit/s
95th percentile per-packet one-way delay: 37.494 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 2.81 Mbit/s
95th percentile per-packet one-way delay: 37.847 ms
Loss rate: 0.68%
-- Flow 2:
Average throughput: 1.95 Mbit/s
95th percentile per-packet one-way delay: 37.605 ms
Loss rate: 0.71%
-- Flow 3:
Average throughput: 0.60 Mbit/s
95th percentile per-packet one-way delay: 34.217 ms
Loss rate: 0.00%
Run 8: Report of WebRTC media — Data Link

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

- Blue line: Flow 1 ingress (mean 2.83 Mbit/s)
- Green line: Flow 2 ingress (mean 1.97 Mbit/s)
- Black line: Flow 3 ingress (mean 0.60 Mbit/s)
- Purple line: Flow 1 egress (mean 2.81 Mbit/s)
- Red line: Flow 2 egress (mean 1.95 Mbit/s)
- Pink line: Flow 3 egress (mean 0.60 Mbit/s)

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

- Blue dots: Flow 1 (95th percentile 37.85 ms)
- Green dots: Flow 2 (95th percentile 37.60 ms)
- Red dots: Flow 3 (95th percentile 34.22 ms)
Run 9: Statistics of WebRTC media

Start at: 2018-02-20 17:40:19
End at: 2018-02-20 17:40:49
Local clock offset: 1.591 ms
Remote clock offset: -4.597 ms

# Below is generated by plot.py at 2018-02-20 18:54:27
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 4.97 Mbit/s
  95th percentile per-packet one-way delay: 30.017 ms
  Loss rate: 0.09%
-- Flow 1:
  Average throughput: 2.70 Mbit/s
  95th percentile per-packet one-way delay: 30.410 ms
  Loss rate: 0.14%
-- Flow 2:
  Average throughput: 1.68 Mbit/s
  95th percentile per-packet one-way delay: 29.074 ms
  Loss rate: 0.05%
-- Flow 3:
  Average throughput: 0.60 Mbit/s
  95th percentile per-packet one-way delay: 30.942 ms
  Loss rate: 0.00%
Run 9: Report of WebRTC media — Data Link

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

![Graph 2: Per-packet one-way delay vs Time](image2)
Run 10: Statistics of WebRTC media

Start at: 2018-02-20 18:07:44
End at: 2018-02-20 18:08:14
Local clock offset: -4.436 ms
Remote clock offset: -3.113 ms

# Below is generated by plot.py at 2018-02-20 18:54:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.56 Mbit/s
95th percentile per-packet one-way delay: 31.158 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 2.30 Mbit/s
95th percentile per-packet one-way delay: 31.169 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 1.67 Mbit/s
95th percentile per-packet one-way delay: 31.117 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 0.60 Mbit/s
95th percentile per-packet one-way delay: 31.326 ms
Loss rate: 0.00%
Run 10: Report of WebRTC media — Data Link
Run 1: Statistics of Sprout

Start at: 2018-02-20 13:57:47
End at: 2018-02-20 13:58:17
Local clock offset: 2.298 ms
Remote clock offset: -2.052 ms

# Below is generated by plot.py at 2018-02-20 18:54:27
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 27.59 Mbit/s
  95th percentile per-packet one-way delay: 39.192 ms
  Loss rate: 1.91%
-- Flow 1:
  Average throughput: 14.45 Mbit/s
  95th percentile per-packet one-way delay: 37.518 ms
  Loss rate: 1.22%
-- Flow 2:
  Average throughput: 13.73 Mbit/s
  95th percentile per-packet one-way delay: 39.007 ms
  Loss rate: 2.04%
-- Flow 3:
  Average throughput: 12.14 Mbit/s
  95th percentile per-packet one-way delay: 42.142 ms
  Loss rate: 4.06%
Run 1: Report of Sprout — Data Link

---

**Throughput (Mb/s)**

- **Flow 1 Ingress** (mean 14.63 Mb/s)
- **Flow 1 Egress** (mean 14.45 Mb/s)
- **Flow 2 Ingress** (mean 14.01 Mb/s)
- **Flow 2 Egress** (mean 13.73 Mb/s)
- **Flow 3 Ingress** (mean 12.66 Mb/s)
- **Flow 3 Egress** (mean 12.14 Mb/s)

---

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

- **Flow 1** (95th percentile 37.52 ms)
- **Flow 2** (95th percentile 39.01 ms)
- **Flow 3** (95th percentile 42.14 ms)

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145
Run 2: Statistics of Sprout

Start at: 2018-02-20 14:24:23
End at: 2018-02-20 14:24:53
Local clock offset: 1.477 ms
Remote clock offset: -2.395 ms

# Below is generated by plot.py at 2018-02-20 18:54:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 30.87 Mbit/s
95th percentile per-packet one-way delay: 33.185 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 15.77 Mbit/s
95th percentile per-packet one-way delay: 32.137 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 15.26 Mbit/s
95th percentile per-packet one-way delay: 34.442 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 14.96 Mbit/s
95th percentile per-packet one-way delay: 33.666 ms
Loss rate: 0.00%
Run 2: Report of Sprout — Data Link

![Graph of data link throughput and packet round-trip times over time for different flows.]

- **Throughput (Mbps)**
  - Flow 1 ingress (mean 15.78 Mbps)
  - Flow 1 egress (mean 15.77 Mbps)
  - Flow 2 ingress (mean 15.27 Mbps)
  - Flow 2 egress (mean 15.26 Mbps)
  - Flow 3 ingress (mean 14.96 Mbps)
  - Flow 3 egress (mean 14.96 Mbps)

- **Packet round-trip time (ms)**
  - Flow 1 (95th percentile 32.14 ms)
  - Flow 2 (95th percentile 34.44 ms)
  - Flow 3 (95th percentile 33.67 ms)
Run 3: Statistics of Sprout

Start at: 2018-02-20 14:50:35
End at: 2018-02-20 14:51:05
Local clock offset: 1.619 ms
Remote clock offset: -2.167 ms

# Below is generated by plot.py at 2018-02-20 18:54:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 30.39 Mbit/s
95th percentile per-packet one-way delay: 37.078 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 15.61 Mbit/s
95th percentile per-packet one-way delay: 35.804 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 15.11 Mbit/s
95th percentile per-packet one-way delay: 38.215 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 14.28 Mbit/s
95th percentile per-packet one-way delay: 38.192 ms
Loss rate: 0.00%
Run 3: Report of Sprout — Data Link

---

**Graph 1:**
- **Throughput (Mbps):** Time (s)
- **Legend:**
  - Blue dashed line: Flow 1 ingress (mean 15.62 Mbps)
  - Blue line: Flow 1 egress (mean 15.61 Mbps)
  - Green dashed line: Flow 2 ingress (mean 15.13 Mbps)
  - Green line: Flow 2 egress (mean 15.11 Mbps)
  - Red dashed line: Flow 3 ingress (mean 14.27 Mbps)
  - Red line: Flow 3 egress (mean 14.28 Mbps)

**Graph 2:**
- **Per-packet end-to-end delay (ms):** Time (s)
- **Legend:**
  - Blue line: Flow 1 (95th percentile 35.80 ms)
  - Green line: Flow 2 (95th percentile 38.22 ms)
  - Red line: Flow 3 (95th percentile 38.19 ms)
Run 4: Statistics of Sprout

Start at: 2018-02-20 15:16:33
End at: 2018-02-20 15:17:03
Local clock offset: 1.183 ms
Remote clock offset: -6.977 ms

# Below is generated by plot.py at 2018-02-20 18:54:27
# Datalink statistics
-- Total of 3 flows:
   Average throughput: 29.85 Mbit/s
   95th percentile per-packet one-way delay: 34.622 ms
   Loss rate: 0.54%
-- Flow 1:
   Average throughput: 15.01 Mbit/s
   95th percentile per-packet one-way delay: 34.592 ms
   Loss rate: 0.44%
-- Flow 2:
   Average throughput: 15.27 Mbit/s
   95th percentile per-packet one-way delay: 34.054 ms
   Loss rate: 0.44%
-- Flow 3:
   Average throughput: 14.21 Mbit/s
   95th percentile per-packet one-way delay: 35.536 ms
   Loss rate: 1.04%
Run 4: Report of Sprout — Data Link

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

- **Flow 1 ingress** (mean 15.08 Mbit/s)
- **Flow 1 egress** (mean 15.01 Mbit/s)
- **Flow 2 ingress** (mean 15.34 Mbit/s)
- **Flow 2 egress** (mean 15.27 Mbit/s)
- **Flow 3 ingress** (mean 14.36 Mbit/s)
- **Flow 3 egress** (mean 14.21 Mbit/s)

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

- **Flow 1** (95th percentile 34.59 ms)
- **Flow 2** (95th percentile 34.05 ms)
- **Flow 3** (95th percentile 35.54 ms)

151
Run 5: Statistics of Sprout

Start at: 2018-02-20 15:42:08
End at: 2018-02-20 15:42:38
Local clock offset: 2.201 ms
Remote clock offset: -7.478 ms

# Below is generated by plot.py at 2018-02-20 18:54:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 30.34 Mbit/s
95th percentile per-packet one-way delay: 34.712 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 15.54 Mbit/s
95th percentile per-packet one-way delay: 33.410 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 15.08 Mbit/s
95th percentile per-packet one-way delay: 34.773 ms
Loss rate: 0.57%
-- Flow 3:
Average throughput: 14.46 Mbit/s
95th percentile per-packet one-way delay: 36.933 ms
Loss rate: 0.49%
Run 5: Report of Sprout — Data Link

[Graphs showing throughput and packet delay over time for different traffic flows.]
Run 6: Statistics of Sprout

Start at: 2018-02-20 16:07:05
End at: 2018-02-20 16:07:35
Local clock offset: 0.624 ms
Remote clock offset: -5.858 ms

# Below is generated by plot.py at 2018-02-20 18:54:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 30.57 Mbit/s
95th percentile per-packet one-way delay: 33.001 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 15.52 Mbit/s
95th percentile per-packet one-way delay: 31.739 ms
Loss rate: 0.23%
-- Flow 2:
Average throughput: 15.45 Mbit/s
95th percentile per-packet one-way delay: 33.312 ms
Loss rate: 0.21%
-- Flow 3:
Average throughput: 14.47 Mbit/s
95th percentile per-packet one-way delay: 34.807 ms
Loss rate: 0.24%
Run 6: Report of Sprout — Data Link

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

Flow 1 ingress (mean 15.56 Mbit/s), Flow 1 egress (mean 15.52 Mbit/s)
Flow 2 ingress (mean 15.48 Mbit/s), Flow 2 egress (mean 15.45 Mbit/s)
Flow 3 ingress (mean 14.50 Mbit/s), Flow 3 egress (mean 14.47 Mbit/s)
Run 7: Statistics of Sprout

Start at: 2018-02-20 16:32:07
End at: 2018-02-20 16:32:37
Local clock offset: -4.218 ms
Remote clock offset: -2.401 ms

# Below is generated by plot.py at 2018-02-20 18:54:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 28.08 Mbit/s
95th percentile per-packet one-way delay: 39.680 ms
Loss rate: 1.50%
-- Flow 1:
Average throughput: 14.15 Mbit/s
95th percentile per-packet one-way delay: 39.614 ms
Loss rate: 1.28%
-- Flow 2:
Average throughput: 14.21 Mbit/s
95th percentile per-packet one-way delay: 39.281 ms
Loss rate: 1.65%
-- Flow 3:
Average throughput: 13.54 Mbit/s
95th percentile per-packet one-way delay: 40.601 ms
Loss rate: 1.88%
Run 7: Report of Sprout — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 14.33 Mbit/s)  
Flow 1 egress (mean 14.15 Mbit/s)  
Flow 2 ingress (mean 14.45 Mbit/s)  
Flow 2 egress (mean 14.21 Mbit/s)  
Flow 3 ingress (mean 13.80 Mbit/s)  
Flow 3 egress (mean 13.54 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

* Flow 1 (95th percentile 39.61 ms)  
* Flow 2 (95th percentile 39.28 ms)  
* Flow 3 (95th percentile 40.60 ms)
Run 8: Statistics of Sprout

Start at: 2018-02-20 17:01:18
End at: 2018-02-20 17:01:48
Local clock offset: -5.819 ms
Remote clock offset: -8.761 ms

# Below is generated by plot.py at 2018-02-20 18:54:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 28.21 Mbit/s
95th percentile per-packet one-way delay: 38.640 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 14.30 Mbit/s
95th percentile per-packet one-way delay: 38.335 ms
Loss rate: 0.68%
-- Flow 2:
Average throughput: 14.28 Mbit/s
95th percentile per-packet one-way delay: 38.163 ms
Loss rate: 0.48%
-- Flow 3:
Average throughput: 13.34 Mbit/s
95th percentile per-packet one-way delay: 39.778 ms
Loss rate: 0.67%
Run 8: Report of Sprout — Data Link

![Graph showing throughput and packet error rates over time.](image)

- Flow 1 ingress (mean 14.40 Mbit/s)
- Flow 1 egress (mean 14.30 Mbit/s)
- Flow 2 ingress (mean 14.35 Mbit/s)
- Flow 2 egress (mean 14.28 Mbit/s)
- Flow 3 ingress (mean 13.43 Mbit/s)
- Flow 3 egress (mean 13.34 Mbit/s)

![Graph showing packet error rates over time.](image)

- Flow 1 (95th percentile 38.34 ms)
- Flow 2 (95th percentile 38.16 ms)
- Flow 3 (95th percentile 39.78 ms)
Run 9: Statistics of Sprout

Start at: 2018-02-20 17:27:52
End at: 2018-02-20 17:28:22
Local clock offset: 0.412 ms
Remote clock offset: -5.345 ms

# Below is generated by plot.py at 2018-02-20 18:54:38
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 27.81 Mbit/s
  95th percentile per-packet one-way delay: 37.275 ms
  Loss rate: 0.70%
-- Flow 1:
  Average throughput: 14.06 Mbit/s
  95th percentile per-packet one-way delay: 36.677 ms
  Loss rate: 0.52%
-- Flow 2:
  Average throughput: 14.15 Mbit/s
  95th percentile per-packet one-way delay: 37.102 ms
  Loss rate: 0.60%
-- Flow 3:
  Average throughput: 13.14 Mbit/s
  95th percentile per-packet one-way delay: 38.883 ms
  Loss rate: 1.49%
Run 9: Report of Sprout — Data Link
Run 10: Statistics of Sprout

Start at: 2018-02-20 17:54:57
End at: 2018-02-20 17:55:27
Local clock offset: -2.249 ms
Remote clock offset: -2.212 ms

# Below is generated by plot.py at 2018-02-20 18:54:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 28.61 Mbit/s
95th percentile per-packet one-way delay: 36.902 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 14.27 Mbit/s
95th percentile per-packet one-way delay: 37.485 ms
Loss rate: 0.52%
-- Flow 2:
Average throughput: 14.49 Mbit/s
95th percentile per-packet one-way delay: 36.795 ms
Loss rate: 0.34%
-- Flow 3:
Average throughput: 14.24 Mbit/s
95th percentile per-packet one-way delay: 35.192 ms
Loss rate: 0.08%
Run 10: Report of Sprout — Data Link
Run 1: Statistics of TaoVA-100x

Start at: 2018-02-20 14:15:46
End at: 2018-02-20 14:16:16
Local clock offset: 1.68 ms
Remote clock offset: -0.302 ms

# Below is generated by plot.py at 2018-02-20 18:56:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.70 Mbit/s
95th percentile per-packet one-way delay: 67.116 ms
Loss rate: 18.14%
-- Flow 1:
Average throughput: 53.28 Mbit/s
95th percentile per-packet one-way delay: 65.283 ms
Loss rate: 14.35%
-- Flow 2:
Average throughput: 39.18 Mbit/s
95th percentile per-packet one-way delay: 67.521 ms
Loss rate: 24.97%
-- Flow 3:
Average throughput: 31.42 Mbit/s
95th percentile per-packet one-way delay: 67.784 ms
Loss rate: 17.92%
Run 1: Report of TaoVA-100x — Data Link
Run 2: Statistics of TaoVA-100x

Start at: 2018-02-20 14:41:58
End at: 2018-02-20 14:42:28
Local clock offset: 1.485 ms
Remote clock offset: -1.64 ms

# Below is generated by plot.py at 2018-02-20 18:56:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.91 Mbit/s
95th percentile per-packet one-way delay: 66.765 ms
Loss rate: 18.80%
-- Flow 1:
Average throughput: 53.28 Mbit/s
95th percentile per-packet one-way delay: 65.123 ms
Loss rate: 14.90%
-- Flow 2:
Average throughput: 39.21 Mbit/s
95th percentile per-packet one-way delay: 66.719 ms
Loss rate: 26.31%
-- Flow 3:
Average throughput: 25.66 Mbit/s
95th percentile per-packet one-way delay: 67.047 ms
Loss rate: 16.68%
Run 2: Report of TaoVA-100x — Data Link
Run 3: Statistics of TaoVA-100x

Start at: 2018-02-20 15:08:07
End at: 2018-02-20 15:08:37
Local clock offset: 1.175 ms
Remote clock offset: -5.874 ms

# Below is generated by plot.py at 2018-02-20 18:56:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.20 Mbit/s
95th percentile per-packet one-way delay: 64.997 ms
Loss rate: 17.83%
-- Flow 1:
Average throughput: 53.62 Mbit/s
95th percentile per-packet one-way delay: 63.739 ms
Loss rate: 13.94%
-- Flow 2:
Average throughput: 39.47 Mbit/s
95th percentile per-packet one-way delay: 64.993 ms
Loss rate: 24.60%
-- Flow 3:
Average throughput: 24.99 Mbit/s
95th percentile per-packet one-way delay: 65.601 ms
Loss rate: 18.53%
Run 3: Report of TaoVA-100x — Data Link
Run 4: Statistics of TaoVA-100x

Start at: 2018-02-20 15:33:56
End at: 2018-02-20 15:34:26
Local clock offset: 1.806 ms
Remote clock offset: -6.746 ms

# Below is generated by plot.py at 2018-02-20 18:56:51
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 87.27 Mbit/s
  95th percentile per-packet one-way delay: 67.646 ms
  Loss rate: 17.76%
-- Flow 1:
  Average throughput: 51.54 Mbit/s
  95th percentile per-packet one-way delay: 67.258 ms
  Loss rate: 13.93%
-- Flow 2:
  Average throughput: 37.91 Mbit/s
  95th percentile per-packet one-way delay: 67.922 ms
  Loss rate: 24.68%
-- Flow 3:
  Average throughput: 31.62 Mbit/s
  95th percentile per-packet one-way delay: 67.719 ms
  Loss rate: 17.62%
Run 4: Report of TaoVA-100x — Data Link

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

- **Flow 1 ingress (mean 59.90 Mbps/s)**
- **Flow 1 egress (mean 51.54 Mbps/s)**
- **Flow 2 ingress (mean 50.34 Mbps/s)**
- **Flow 2 egress (mean 37.91 Mbps/s)**
- **Flow 3 ingress (mean 38.40 Mbps/s)**
- **Flow 3 egress (mean 31.62 Mbps/s)**

![Graph 2: Per-packet round-trip delay (ms) vs. Time (s)]

- **Flow 1 (95th percentile 67.26 ms)**
- **Flow 2 (95th percentile 67.92 ms)**
- **Flow 3 (95th percentile 67.72 ms)**

171
Run 5: Statistics of TaoVA-100x

Start at: 2018-02-20 15:58:58
End at: 2018-02-20 15:59:28
Local clock offset: 2.823 ms
Remote clock offset: -6.248 ms

# Below is generated by plot.py at 2018-02-20 18:56:52
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 86.57 Mbit/s
  95th percentile per-packet one-way delay: 64.744 ms
  Loss rate: 19.55%
-- Flow 1:
  Average throughput: 52.94 Mbit/s
  95th percentile per-packet one-way delay: 63.227 ms
  Loss rate: 15.60%
-- Flow 2:
  Average throughput: 41.28 Mbit/s
  95th percentile per-packet one-way delay: 64.780 ms
  Loss rate: 26.13%
-- Flow 3:
  Average throughput: 18.47 Mbit/s
  95th percentile per-packet one-way delay: 65.123 ms
  Loss rate: 19.95%
Run 5: Report of TaoVA-100x — Data Link
Run 6: Statistics of TaoVA-100x

Start at: 2018-02-20 16:23:50
End at: 2018-02-20 16:24:20
Local clock offset: -3.348 ms
Remote clock offset: -3.006 ms

# Below is generated by plot.py at 2018-02-20 18:56:54
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 86.37 Mbit/s
  95th percentile per-packet one-way delay: 65.732 ms
  Loss rate: 19.04%
-- Flow 1:
  Average throughput: 53.78 Mbit/s
  95th percentile per-packet one-way delay: 63.339 ms
  Loss rate: 15.33%
-- Flow 2:
  Average throughput: 29.70 Mbit/s
  95th percentile per-packet one-way delay: 66.745 ms
  Loss rate: 25.30%
-- Flow 3:
  Average throughput: 38.51 Mbit/s
  95th percentile per-packet one-way delay: 67.524 ms
  Loss rate: 23.26%
Run 6: Report of TaoVA-100x — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 63.56 Mbps)
  - Flow 1 egress (mean 53.78 Mbps)
  - Flow 2 ingress (mean 39.80 Mbps)
  - Flow 2 egress (mean 29.70 Mbps)
  - Flow 3 ingress (mean 50.28 Mbps)
  - Flow 3 egress (mean 30.51 Mbps)

- **Packet Delay (ms):**
  - Flow 1 (95th percentile 63.34 ms)
  - Flow 2 (95th percentile 66.75 ms)
  - Flow 3 (95th percentile 67.52 ms)
Run 7: Statistics of TaoVA-100x

Start at: 2018-02-20 16:52:10
End at: 2018-02-20 16:52:40
Local clock offset: -5.187 ms
Remote clock offset: -6.784 ms

# Below is generated by plot.py at 2018-02-20 18:56:59
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 86.72 Mbit/s
  95th percentile per-packet one-way delay: 67.499 ms
  Loss rate: 14.28%
-- Flow 1:
  Average throughput: 50.45 Mbit/s
  95th percentile per-packet one-way delay: 65.702 ms
  Loss rate: 10.66%
-- Flow 2:
  Average throughput: 38.68 Mbit/s
  95th percentile per-packet one-way delay: 67.803 ms
  Loss rate: 19.13%
-- Flow 3:
  Average throughput: 31.60 Mbit/s
  95th percentile per-packet one-way delay: 69.679 ms
  Loss rate: 18.16%
Run 7: Report of TaoVA-100x — Data Link
Run 8: Statistics of TaoVA-100x

Start at: 2018-02-20 17:19:16
End at: 2018-02-20 17:19:46
Local clock offset: -1.854 ms
Remote clock offset: -9.708 ms

# Below is generated by plot.py at 2018-02-20 18:57:00
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 85.46 Mbit/s
  95th percentile per-packet one-way delay: 63.704 ms
  Loss rate: 17.51%
-- Flow 1:
  Average throughput: 53.93 Mbit/s
  95th percentile per-packet one-way delay: 62.544 ms
  Loss rate: 14.42%
-- Flow 2:
  Average throughput: 43.76 Mbit/s
  95th percentile per-packet one-way delay: 65.445 ms
  Loss rate: 22.91%
-- Flow 3:
  Average throughput: 7.21 Mbit/s
  95th percentile per-packet one-way delay: 62.857 ms
  Loss rate: 14.03%
Run 9: Statistics of TaoVA-100x

Start at: 2018-02-20 17:46:06
End at: 2018-02-20 17:46:36
Local clock offset: 1.389 ms
Remote clock offset: -2.081 ms

# Below is generated by plot.py at 2018-02-20 18:59:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.91 Mbit/s
95th percentile per-packet one-way delay: 67.173 ms
Loss rate: 16.84%
-- Flow 1:
Average throughput: 52.12 Mbit/s
95th percentile per-packet one-way delay: 65.700 ms
Loss rate: 13.08%
-- Flow 2:
Average throughput: 37.94 Mbit/s
95th percentile per-packet one-way delay: 67.580 ms
Loss rate: 23.26%
-- Flow 3:
Average throughput: 31.78 Mbit/s
95th percentile per-packet one-way delay: 67.674 ms
Loss rate: 17.97%
Run 9: Report of TaoVA-100x — Data Link
Run 10: Statistics of TaoVA-100x

Start at: 2018-02-20 18:13:45
End at: 2018-02-20 18:14:15
Local clock offset: -5.09 ms
Remote clock offset: -3.047 ms

# Below is generated by plot.py at 2018-02-20 18:59:10
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 87.45 Mbit/s
  95th percentile per-packet one-way delay: 66.773 ms
  Loss rate: 18.30%
-- Flow 1:
  Average throughput: 53.29 Mbit/s
  95th percentile per-packet one-way delay: 65.006 ms
  Loss rate: 14.18%
-- Flow 2:
  Average throughput: 38.91 Mbit/s
  95th percentile per-packet one-way delay: 66.932 ms
  Loss rate: 25.58%
-- Flow 3:
  Average throughput: 31.08 Mbit/s
  95th percentile per-packet one-way delay: 68.061 ms
  Loss rate: 18.52%
Run 10: Report of TaoVA-100x — Data Link
Run 1: Statistics of TCP Vegas

Start at: 2018-02-20 13:56:18
End at: 2018-02-20 13:56:48
Local clock offset: 2.494 ms
Remote clock offset: -2.275 ms

# Below is generated by plot.py at 2018-02-20 18:59:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 48.21 Mbit/s
95th percentile per-packet one-way delay: 62.369 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 14.34 Mbit/s
95th percentile per-packet one-way delay: 38.815 ms
Loss rate: 0.27%
-- Flow 2:
Average throughput: 41.35 Mbit/s
95th percentile per-packet one-way delay: 63.424 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 19.21 Mbit/s
95th percentile per-packet one-way delay: 35.653 ms
Loss rate: 0.37%
Run 1: Report of TCP Vegas — Data Link

![Graph of TCP Vegas data link performance]

- Flow 1 ingress (mean 14.38 Mbit/s)
- Flow 1 egress (mean 14.34 Mbit/s)
- Flow 2 ingress (mean 41.39 Mbit/s)
- Flow 2 egress (mean 41.35 Mbit/s)
- Flow 3 ingress (mean 19.28 Mbit/s)
- Flow 3 egress (mean 19.21 Mbit/s)

![Graph of TCP Vegas per packet one-way delay]

- Flow 1 (95th percentile 38.81 ms)
- Flow 2 (95th percentile 63.42 ms)
- Flow 3 (95th percentile 35.65 ms)
Run 2: Statistics of TCP Vegas

Start at: 2018-02-20 14:23:01
End at: 2018-02-20 14:23:31
Local clock offset: 1.644 ms
Remote clock offset: -2.204 ms

# Below is generated by plot.py at 2018-02-20 18:59:10
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 63.50 Mbit/s
  95th percentile per-packet one-way delay: 56.399 ms
  Loss rate: 1.38%
-- Flow 1:
  Average throughput: 32.32 Mbit/s
  95th percentile per-packet one-way delay: 36.290 ms
  Loss rate: 1.71%
-- Flow 2:
  Average throughput: 40.77 Mbit/s
  95th percentile per-packet one-way delay: 57.811 ms
  Loss rate: 1.15%
-- Flow 3:
  Average throughput: 12.19 Mbit/s
  95th percentile per-packet one-way delay: 36.296 ms
  Loss rate: 0.21%
Run 2: Report of TCP Vegas — Data Link

![Graphs showing throughput and per-packet one-way delay for flows 1, 2, and 3.]

- **Flow 1**:
  - Ingress: mean 32.88 Mbit/s
  - Egress: mean 32.32 Mbit/s

- **Flow 2**:
  - Ingress: mean 41.25 Mbit/s
  - Egress: mean 40.77 Mbit/s

- **Flow 3**:
  - Ingress: mean 12.22 Mbit/s
  - Egress: mean 12.19 Mbit/s

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187
Run 3: Statistics of TCP Vegas

Start at: 2018-02-20 14:49:08
End at: 2018-02-20 14:49:38
Local clock offset: 1.494 ms
Remote clock offset: -4.044 ms

# Below is generated by plot.py at 2018-02-20 18:59:10
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 74.24 Mbit/s
  95th percentile per-packet one-way delay: 48.457 ms
  Loss rate: 0.44%
-- Flow 1:
  Average throughput: 50.56 Mbit/s
  95th percentile per-packet one-way delay: 49.104 ms
  Loss rate: 0.61%
-- Flow 2:
  Average throughput: 22.93 Mbit/s
  95th percentile per-packet one-way delay: 35.486 ms
  Loss rate: 0.13%
-- Flow 3:
  Average throughput: 25.35 Mbit/s
  95th percentile per-packet one-way delay: 35.049 ms
  Loss rate: 0.00%
Run 3: Report of TCP Vegas — Data Link

![Graph showing throughput and delay over time for three flows.](image-url)
Run 4: Statistics of TCP Vegas

Start at: 2018-02-20 15:15:09
End at: 2018-02-20 15:15:39
Local clock offset: 1.249 ms
Remote clock offset: -4.807 ms

# Below is generated by plot.py at 2018-02-20 18:59:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 57.26 Mbit/s
95th percentile per-packet one-way delay: 65.717 ms
Loss rate: 1.87%
-- Flow 1:
Average throughput: 26.24 Mbit/s
95th percentile per-packet one-way delay: 51.979 ms
Loss rate: 1.19%
-- Flow 2:
Average throughput: 24.83 Mbit/s
95th percentile per-packet one-way delay: 67.191 ms
Loss rate: 2.61%
-- Flow 3:
Average throughput: 43.75 Mbit/s
95th percentile per-packet one-way delay: 56.903 ms
Loss rate: 2.26%
Run 4: Report of TCP Vegas — Data Link

![Graph of Throughput and Delay]

**Throughput (Mbps):**
- Flow 1 ingress (mean 26.56 Mbps)
- Flow 1 egress (mean 26.24 Mbps)
- Flow 2 ingress (mean 25.49 Mbps)
- Flow 2 egress (mean 24.83 Mbps)
- Flow 3 ingress (mean 44.77 Mbps)
- Flow 3 egress (mean 43.75 Mbps)

**Delay (ms):**
- Flow 1 (95th percentile 51.98 ms)
- Flow 2 (95th percentile 67.19 ms)
- Flow 3 (95th percentile 56.90 ms)
Run 5: Statistics of TCP Vegas

Start at: 2018-02-20 15:40:47
End at: 2018-02-20 15:41:17
Local clock offset: 2.213 ms
Remote clock offset: -7.669 ms

# Below is generated by plot.py at 2018-02-20 18:59:10
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 41.21 Mbit/s
  95th percentile per-packet one-way delay: 49.027 ms
  Loss rate: 1.37%
-- Flow 1:
  Average throughput: 21.66 Mbit/s
  95th percentile per-packet one-way delay: 50.917 ms
  Loss rate: 1.58%
-- Flow 2:
  Average throughput: 18.64 Mbit/s
  95th percentile per-packet one-way delay: 35.642 ms
  Loss rate: 0.94%
-- Flow 3:
  Average throughput: 21.48 Mbit/s
  95th percentile per-packet one-way delay: 36.527 ms
  Loss rate: 1.49%
Run 5: Report of TCP Vegas — Data Link

[Diagram showing throughput and packet one-way delay over time for different flows with legend indicating mean throughput rates of each flow.]
Run 6: Statistics of TCP Vegas

Start at: 2018-02-20 16:05:44
End at: 2018-02-20 16:06:14
Local clock offset: 1.255 ms
Remote clock offset: -3.472 ms

# Below is generated by plot.py at 2018-02-20 18:59:10
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 64.92 Mbit/s
  95th percentile per-packet one-way delay: 37.706 ms
  Loss rate: 1.05%
-- Flow 1:
  Average throughput: 27.66 Mbit/s
  95th percentile per-packet one-way delay: 52.863 ms
  Loss rate: 1.57%
-- Flow 2:
  Average throughput: 29.99 Mbit/s
  95th percentile per-packet one-way delay: 33.035 ms
  Loss rate: 0.80%
-- Flow 3:
  Average throughput: 52.11 Mbit/s
  95th percentile per-packet one-way delay: 32.929 ms
  Loss rate: 0.50%
Run 6: Report of TCP Vegas — Data Link
Run 7: Statistics of TCP Vegas

Start at: 2018-02-20 16:30:47
End at: 2018-02-20 16:31:17
Local clock offset: -3.996 ms
Remote clock offset: -2.67 ms

# Below is generated by plot.py at 2018-02-20 18:59:10
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 29.26 Mbit/s
  95th percentile per-packet one-way delay: 47.227 ms
  Loss rate: 2.42%
-- Flow 1:
  Average throughput: 13.40 Mbit/s
  95th percentile per-packet one-way delay: 39.299 ms
  Loss rate: 0.94%
-- Flow 2:
  Average throughput: 13.24 Mbit/s
  95th percentile per-packet one-way delay: 52.704 ms
  Loss rate: 3.19%
-- Flow 3:
  Average throughput: 21.27 Mbit/s
  95th percentile per-packet one-way delay: 56.199 ms
  Loss rate: 4.20%
Run 7: Report of TCP Vegas — Data Link

![Chart 1: Throughput Over Time](chart1.png)

*Flow 1 ingress (mean 13.53 Mbit/s)*
*Flow 1 egress (mean 13.40 Mbit/s)*
*Flow 2 ingress (mean 13.66 Mbit/s)*
*Flow 2 egress (mean 13.24 Mbit/s)*
*Flow 3 ingress (mean 22.20 Mbit/s)*
*Flow 3 egress (mean 21.27 Mbit/s)*

![Chart 2: Per Packet One-Way Delay](chart2.png)

*Flow 1 (95th percentile 39.30 ms)*
*Flow 2 (95th percentile 52.70 ms)*
*Flow 3 (95th percentile 56.20 ms)*
Run 8: Statistics of TCP Vegas

Start at: 2018-02-20 16:59:55
End at: 2018-02-20 17:00:25
Local clock offset: -5.672 ms
Remote clock offset: -8.521 ms

# Below is generated by plot.py at 2018-02-20 18:59:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 32.97 Mbit/s
95th percentile per-packet one-way delay: 36.766 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 19.63 Mbit/s
95th percentile per-packet one-way delay: 34.618 ms
Loss rate: 0.22%
-- Flow 2:
Average throughput: 13.46 Mbit/s
95th percentile per-packet one-way delay: 39.280 ms
Loss rate: 0.82%
-- Flow 3:
Average throughput: 13.25 Mbit/s
95th percentile per-packet one-way delay: 36.463 ms
Loss rate: 0.88%
Run 8: Report of TCP Vegas — Data Link

![Graph showing throughput and delay over time for different flows.](image-url)
Run 9: Statistics of TCP Vegas

Start at: 2018-02-20 17:26:32
End at: 2018-02-20 17:27:02
Local clock offset: 0.104 ms
Remote clock offset: -7.718 ms

# Below is generated by plot.py at 2018-02-20 18:59:10
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 30.96 Mbit/s
  95th percentile per-packet one-way delay: 49.739 ms
  Loss rate: 1.40%
-- Flow 1:
  Average throughput: 15.88 Mbit/s
  95th percentile per-packet one-way delay: 46.731 ms
  Loss rate: 0.44%
-- Flow 2:
  Average throughput: 17.01 Mbit/s
  95th percentile per-packet one-way delay: 53.942 ms
  Loss rate: 3.13%
-- Flow 3:
  Average throughput: 11.35 Mbit/s
  95th percentile per-packet one-way delay: 33.482 ms
  Loss rate: 0.12%
Run 9: Report of TCP Vegas — Data Link

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

Legend:
- Flow 1 ingress (mean 15.95 Mbit/s)
- Flow 1 egress (mean 15.88 Mbit/s)
- Flow 2 ingress (mean 17.36 Mbit/s)
- Flow 2 egress (mean 17.01 Mbit/s)
- Flow 3 ingress (mean 11.36 Mbit/s)
- Flow 3 egress (mean 11.35 Mbit/s)
Run 10: Statistics of TCP Vegas

Start at: 2018-02-20 17:53:36
End at: 2018-02-20 17:54:06
Local clock offset: -1.809 ms
Remote clock offset: -2.085 ms

# Below is generated by plot.py at 2018-02-20 18:59:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 29.08 Mbit/s
95th percentile per-packet one-way delay: 52.597 ms
Loss rate: 1.15%
-- Flow 1:
Average throughput: 15.51 Mbit/s
95th percentile per-packet one-way delay: 53.342 ms
Loss rate: 1.88%
-- Flow 2:
Average throughput: 12.22 Mbit/s
95th percentile per-packet one-way delay: 35.663 ms
Loss rate: 0.32%
-- Flow 3:
Average throughput: 16.35 Mbit/s
95th percentile per-packet one-way delay: 34.781 ms
Loss rate: 0.29%
Run 10: Report of TCP Vegas — Data Link
Run 1: Statistics of Verus

Start at: 2018-02-20 14:08:38
End at: 2018-02-20 14:09:08
Local clock offset: 1.691 ms
Remote clock offset: -2.834 ms

# Below is generated by plot.py at 2018-02-20 18:59:10
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 67.70 Mbit/s
  95th percentile per-packet one-way delay: 64.890 ms
  Loss rate: 28.26%
-- Flow 1:
  Average throughput: 46.65 Mbit/s
  95th percentile per-packet one-way delay: 65.170 ms
  Loss rate: 29.55%
-- Flow 2:
  Average throughput: 23.59 Mbit/s
  95th percentile per-packet one-way delay: 64.729 ms
  Loss rate: 24.14%
-- Flow 3:
  Average throughput: 16.28 Mbit/s
  95th percentile per-packet one-way delay: 63.418 ms
  Loss rate: 28.18%
Run 1: Report of Verus — Data Link

![Graph showing throughput and per packet one way delay over time for different flows. The graphs depict the throughput in Mbps and per packet one way delay in milliseconds.]

- Flow 1 ingress (mean 66.26 Mbit/s)
- Flow 1 egress (mean 46.65 Mbit/s)
- Flow 2 ingress (mean 31.09 Mbit/s)
- Flow 2 egress (mean 23.59 Mbit/s)
- Flow 3 ingress (mean 22.72 Mbit/s)
- Flow 3 egress (mean 16.28 Mbit/s)
Run 2: Statistics of Verus

Start at: 2018-02-20 14:34:47
End at: 2018-02-20 14:35:17
Local clock offset: 1.443 ms
Remote clock offset: -0.543 ms

# Below is generated by plot.py at 2018-02-20 18:59:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 69.32 Mbit/s
95th percentile per-packet one-way delay: 71.806 ms
Loss rate: 65.92%
-- Flow 1:
Average throughput: 41.27 Mbit/s
95th percentile per-packet one-way delay: 71.723 ms
Loss rate: 64.43%
-- Flow 2:
Average throughput: 42.78 Mbit/s
95th percentile per-packet one-way delay: 71.939 ms
Loss rate: 67.91%
-- Flow 3:
Average throughput: 0.03 Mbit/s
95th percentile per-packet one-way delay: 67.685 ms
Loss rate: 63.64%
Run 2: Report of Verus — Data Link

![Graph 1: Throughput (Mbps)]

![Graph 2: Packet one way delay (ms)]
Run 3: Statistics of Verus

Start at: 2018-02-20 15:01:10  
End at: 2018-02-20 15:01:40  
Local clock offset: 1.338 ms  
Remote clock offset: -2.641 ms

# Below is generated by plot.py at 2018-02-20 18:59:32  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 59.81 Mbit/s  
95th percentile per-packet one-way delay: 70.701 ms  
Loss rate: 59.70%  
-- Flow 1:  
Average throughput: 34.13 Mbit/s  
95th percentile per-packet one-way delay: 68.047 ms  
Loss rate: 44.64%  
-- Flow 2:  
Average throughput: 29.94 Mbit/s  
95th percentile per-packet one-way delay: 76.444 ms  
Loss rate: 74.70%  
-- Flow 3:  
Average throughput: 19.15 Mbit/s  
95th percentile per-packet one-way delay: 67.049 ms  
Loss rate: 38.35%
Run 3: Report of Verus — Data Link

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

- Flow 1 ingress (mean 61.67 Mbps)
- Flow 1 egress (mean 34.13 Mbps)
- Flow 2 ingress (mean 118.44 Mbps)
- Flow 2 egress (mean 29.40 Mbps)
- Flow 3 ingress (mean 31.06 Mbps)
- Flow 3 egress (mean 19.15 Mbps)

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

- Flow 1 (95th percentile 68.05 ms)
- Flow 2 (95th percentile 76.44 ms)
- Flow 3 (95th percentile 67.05 ms)
Run 4: Statistics of Verus

Start at: 2018-02-20 15:27:02
End at: 2018-02-20 15:27:32
Local clock offset: 1.333 ms
Remote clock offset: -8.093 ms

# Below is generated by plot.py at 2018-02-20 18:59:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 70.48 Mbit/s
95th percentile per-packet one-way delay: 65.600 ms
Loss rate: 31.09%
-- Flow 1:
Average throughput: 45.21 Mbit/s
95th percentile per-packet one-way delay: 65.608 ms
Loss rate: 31.07%
-- Flow 2:
Average throughput: 28.56 Mbit/s
95th percentile per-packet one-way delay: 65.934 ms
Loss rate: 34.67%
-- Flow 3:
Average throughput: 19.77 Mbit/s
95th percentile per-packet one-way delay: 64.111 ms
Loss rate: 18.30%
Run 4: Report of Verus — Data Link

![Graph of Throughput and Packet Delay]

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 65.60 Mbit/s)
  - Flow 2 ingress (mean 43.69 Mbit/s)
  - Flow 3 ingress (mean 24.21 Mbit/s)
  - Flow 1 egress (mean 45.21 Mbit/s)
  - Flow 2 egress (mean 28.56 Mbit/s)
  - Flow 3 egress (mean 19.77 Mbit/s)

- **Packet Delay (ms):**
  - Flow 1 (95th percentile 65.61 ms)
  - Flow 2 (95th percentile 65.93 ms)
  - Flow 3 (95th percentile 64.11 ms)
Run 5: Statistics of Verus

Start at: 2018-02-20 15:52:08
End at: 2018-02-20 15:52:38
Local clock offset: 2.622 ms
Remote clock offset: -4.534 ms

# Below is generated by plot.py at 2018-02-20 18:59:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 72.39 Mbit/s
95th percentile per-packet one-way delay: 67.875 ms
Loss rate: 28.92%
-- Flow 1:
Average throughput: 56.90 Mbit/s
95th percentile per-packet one-way delay: 67.312 ms
Loss rate: 28.55%
-- Flow 2:
Average throughput: 13.60 Mbit/s
95th percentile per-packet one-way delay: 68.557 ms
Loss rate: 30.17%
-- Flow 3:
Average throughput: 19.76 Mbit/s
95th percentile per-packet one-way delay: 70.347 ms
Loss rate: 30.34%
Run 5: Report of Verus — Data Link

![Graphs showing network throughput and packet delay](image1.png)

1. **Throughput (Mbps)**:
   - Flow 1 ingress (mean 79.72 Mbps)
   - Flow 1 egress (mean 56.90 Mbps)
   - Flow 2 ingress (mean 19.41 Mbps)
   - Flow 2 egress (mean 13.60 Mbps)
   - Flow 3 ingress (mean 28.31 Mbps)
   - Flow 3 egress (mean 19.76 Mbps)

2. **Per-packet one-way delay (ms)**:
   - Flow 1 (95th percentile 67.31 ms)
   - Flow 2 (95th percentile 68.56 ms)
   - Flow 3 (95th percentile 70.35 ms)
Run 6: Statistics of Verus

Start at: 2018-02-20 16:17:07
End at: 2018-02-20 16:17:37
Local clock offset: -2.466 ms
Remote clock offset: -5.49 ms

# Below is generated by plot.py at 2018-02-20 18:59:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 61.13 Mbit/s
95th percentile per-packet one-way delay: 68.142 ms
Loss rate: 66.23%
-- Flow 1:
Average throughput: 47.18 Mbit/s
95th percentile per-packet one-way delay: 69.374 ms
Loss rate: 70.73%
-- Flow 2:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 61.812 ms
Loss rate: 58.54%
-- Flow 3:
Average throughput: 42.17 Mbit/s
95th percentile per-packet one-way delay: 63.437 ms
Loss rate: 29.62%
Run 6: Report of Verus — Data Link

![Graph of network throughput and packet delay over time for different flows, showing variability and peaking times.]

Legend for Graphs:
- Flow 1 ingress (mean 161.18 Mbit/s)
- Flow 1 egress (mean 47.18 Mbit/s)
- Flow 2 ingress (mean 0.10 Mbit/s)
- Flow 2 egress (mean 0.04 Mbit/s)
- Flow 3 ingress (mean 59.94 Mbit/s)
- Flow 3 egress (mean 42.72 Mbit/s)

![Graph of packet delay distribution for different flows, illustrating 95th percentile delays.]

Legend for Graphs:
- Flow 1 (95th percentile 69.37 ms)
- Flow 2 (95th percentile 61.81 ms)
- Flow 3 (95th percentile 61.44 ms)
Run 7: Statistics of Verus

Start at: 2018-02-20 16:43:03
End at: 2018-02-20 16:43:33
Local clock offset: -4.747 ms
Remote clock offset: -4.678 ms

# Below is generated by plot.py at 2018-02-20 19:00:00
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 63.50 Mbit/s
  95th percentile per-packet one-way delay: 66.626 ms
  Loss rate: 39.36%
-- Flow 1:
  Average throughput: 39.73 Mbit/s
  95th percentile per-packet one-way delay: 66.504 ms
  Loss rate: 39.61%
-- Flow 2:
  Average throughput: 22.62 Mbit/s
  95th percentile per-packet one-way delay: 66.804 ms
  Loss rate: 31.59%
-- Flow 3:
  Average throughput: 32.91 Mbit/s
  95th percentile per-packet one-way delay: 66.809 ms
  Loss rate: 45.90%
Run 7: Report of Verus — Data Link

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

![Graph showing packet per second and delay over time for different flows.](image2)

[Legend for graphs]

Flow 1 ingress (mean 65.84 Mbit/s)
Flow 1 egress (mean 39.73 Mbit/s)
Flow 2 ingress (mean 31.22 Mbit/s)
Flow 2 egress (mean 22.62 Mbit/s)
Flow 3 ingress (mean 60.58 Mbit/s)
Flow 3 egress (mean 32.91 Mbit/s)

Flow 1 (95th percentile 66.50 ms)
Flow 2 (95th percentile 66.80 ms)
Flow 3 (95th percentile 66.81 ms)
Run 8: Statistics of Verus

Start at: 2018-02-20 17:12:11
End at: 2018-02-20 17:12:41
Local clock offset: -5.646 ms
Remote clock offset: -12.876 ms

# Below is generated by plot.py at 2018-02-20 19:00:38
# Datalink statistics
-- Total of 3 flows:
   Average throughput: 56.61 Mbit/s
   95th percentile per-packet one-way delay: 73.613 ms
   Loss rate: 78.61%
-- Flow 1:
   Average throughput: 43.64 Mbit/s
   95th percentile per-packet one-way delay: 73.805 ms
   Loss rate: 75.52%
-- Flow 2:
   Average throughput: 19.47 Mbit/s
   95th percentile per-packet one-way delay: 73.204 ms
   Loss rate: 85.03%
-- Flow 3:
   Average throughput: 0.26 Mbit/s
   95th percentile per-packet one-way delay: 68.984 ms
   Loss rate: 51.68%
Run 9: Statistics of Verus

Start at: 2018-02-20 17:38:44
End at: 2018-02-20 17:39:14
Local clock offset: 1.554 ms
Remote clock offset: -4.988 ms

# Below is generated by plot.py at 2018-02-20 19:00:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 64.69 Mbit/s
95th percentile per-packet one-way delay: 67.968 ms
Loss rate: 48.18%
-- Flow 1:
Average throughput: 37.63 Mbit/s
95th percentile per-packet one-way delay: 66.982 ms
Loss rate: 44.66%
-- Flow 2:
Average throughput: 36.14 Mbit/s
95th percentile per-packet one-way delay: 69.304 ms
Loss rate: 54.38%
-- Flow 3:
Average throughput: 14.29 Mbit/s
95th percentile per-packet one-way delay: 69.090 ms
Loss rate: 39.95%
Run 9: Report of Verus — Data Link
Run 10: Statistics of Verus

Start at: 2018-02-20 18:06:07
End at: 2018-02-20 18:06:37
Local clock offset: -4.331 ms
Remote clock offset: -3.078 ms

# Below is generated by plot.py at 2018-02-20 19:00:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 63.22 Mbit/s
95th percentile per-packet one-way delay: 68.093 ms
Loss rate: 33.47%
-- Flow 1:
Average throughput: 39.55 Mbit/s
95th percentile per-packet one-way delay: 68.078 ms
Loss rate: 31.52%
-- Flow 2:
Average throughput: 31.65 Mbit/s
95th percentile per-packet one-way delay: 68.682 ms
Loss rate: 38.34%
-- Flow 3:
Average throughput: 12.78 Mbit/s
95th percentile per-packet one-way delay: 61.086 ms
Loss rate: 18.94%
Run 10: Report of Verus — Data Link
Run 1: Statistics of Copa

Start at: 2018-02-20 13:59:10
End at: 2018-02-20 13:59:40
Local clock offset: 2.123 ms
Remote clock offset: -1.624 ms

# Below is generated by plot.py at 2018-02-20 19:07:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.43 Mbit/s
95th percentile per-packet one-way delay: 55.152 ms
Loss rate: 89.99%
-- Flow 1:
Average throughput: 90.43 Mbit/s
95th percentile per-packet one-way delay: 55.152 ms
Loss rate: 89.99%
-- Flow 2:
Average throughput: 0.00 Mbit/s
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 49.392 ms
Loss rate: 80.00%
Run 1: Report of Copa — Data Link

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

![Graph 2: Latency vs Time](image2)
Run 2: Statistics of Copa

Start at: 2018-02-20 14:25:45
End at: 2018-02-20 14:26:15
Local clock offset: 1.55 ms
Remote clock offset: 0.278 ms

# Below is generated by plot.py at 2018-02-20 19:07:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.31 Mbit/s
95th percentile per-packet one-way delay: 39.983 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 59.10 Mbit/s
95th percentile per-packet one-way delay: 39.160 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 36.17 Mbit/s
95th percentile per-packet one-way delay: 40.898 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 21.47 Mbit/s
95th percentile per-packet one-way delay: 42.279 ms
Loss rate: 0.01%
Run 2: Report of Copa — Data Link

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

Start at: 2018-02-20 14:51:55
End at: 2018-02-20 14:52:25
Local clock offset: 1.659 ms
Remote clock offset: -2.253 ms

# Below is generated by plot.py at 2018-02-20 19:09:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.54 Mbit/s
95th percentile per-packet one-way delay: 54.761 ms
Loss rate: 91.54%
-- Flow 1:
Average throughput: 90.53 Mbit/s
95th percentile per-packet one-way delay: 54.761 ms
Loss rate: 91.54%
-- Flow 2:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 53.722 ms
Loss rate: 98.25%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 46.008 ms
Loss rate: 50.00%
Run 3: Report of Copa — Data Link
Run 4: Statistics of Copa

Start at: 2018-02-20 15:17:54
End at: 2018-02-20 15:18:24
Local clock offset: 1.212 ms
Remote clock offset: -5.086 ms

# Below is generated by plot.py at 2018-02-20 19:09:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.80 Mbit/s
95th percentile per-packet one-way delay: 55.008 ms
Loss rate: 90.60%
-- Flow 1:
Average throughput: 88.79 Mbit/s
95th percentile per-packet one-way delay: 55.008 ms
Loss rate: 90.60%
-- Flow 2:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 49.824 ms
Loss rate: 83.33%
-- Flow 3:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 50.585 ms
Loss rate: 95.23%
Run 4: Report of Copa — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 944.79 Mbps)
  - Flow 1 egress (mean 88.79 Mbps)
  - Flow 2 ingress (mean 0.00 Mbps)
  - Flow 2 egress (mean 0.00 Mbps)
  - Flow 3 ingress (mean 0.19 Mbps)
  - Flow 3 egress (mean 0.01 Mbps)

- **Delay (ms):**
  - Flow 1 (95th percentile 55.01 ms)
  - Flow 2 (95th percentile 49.82 ms)
  - Flow 3 (95th percentile 50.59 ms)
Run 5: Statistics of Copa

Start at: 2018-02-20 15:43:27
End at: 2018-02-20 15:43:57
Local clock offset: 2.333 ms
Remote clock offset: -7.276 ms

# Below is generated by plot.py at 2018-02-20 19:09:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.38 Mbit/s
95th percentile per-packet one-way delay: 36.382 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 49.04 Mbit/s
95th percentile per-packet one-way delay: 36.000 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 39.17 Mbit/s
95th percentile per-packet one-way delay: 37.457 ms
Loss rate: 0.70%
-- Flow 3:
Average throughput: 24.79 Mbit/s
95th percentile per-packet one-way delay: 43.450 ms
Loss rate: 0.74%
Run 5: Report of Copa — Data Link
Run 6: Statistics of Copa

Start at: 2018-02-20 16:08:23
End at: 2018-02-20 16:08:53
Local clock offset: -0.042 ms
Remote clock offset: -5.883 ms

# Below is generated by plot.py at 2018-02-20 19:09:43
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 90.68 Mbit/s
  95th percentile per-packet one-way delay: 53.385 ms
  Loss rate: 90.99%
-- Flow 1:
  Average throughput: 90.67 Mbit/s
  95th percentile per-packet one-way delay: 53.385 ms
  Loss rate: 90.99%
-- Flow 2:
  Average throughput: 0.74 Mbit/s
  95th percentile per-packet one-way delay: 53.230 ms
  Loss rate: 96.24%
-- Flow 3:
  Average throughput: 0.00 Mbit/s
  95th percentile per-packet one-way delay: 54.009 ms
  Loss rate: 99.92%
Run 6: Report of Copa — Data Link

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

- Flow 1 Ingress (mean 1007.39 Mbit/s)
- Flow 1 Egress (mean 90.67 Mbit/s)
- Flow 2 Ingress (mean 0.16 Mbit/s)
- Flow 2 Egress (mean 0.74 Mbit/s)
- Flow 3 Ingress (mean 0.16 Mbit/s)
- Flow 3 Egress (mean 0.00 Mbit/s)
Run 7: Statistics of Copa

Start at: 2018-02-20 16:33:26
End at: 2018-02-20 16:33:56
Local clock offset: -4.242 ms
Remote clock offset: -2.803 ms

# Below is generated by plot.py at 2018-02-20 19:09:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.34 Mbit/s
95th percentile per-packet one-way delay: 54.631 ms
Loss rate: 90.53%
-- Flow 1:
Average throughput: 85.34 Mbit/s
95th percentile per-packet one-way delay: 54.631 ms
Loss rate: 90.53%
-- Flow 2:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 52.267 ms
Loss rate: 80.00%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 42.980 ms
Loss rate: 80.00%
Run 7: Report of Copa — Data Link

![Graph showing throughput and delay over time for different flows.]
Run 8: Statistics of Copa

Start at: 2018-02-20 17:02:42
End at: 2018-02-20 17:03:12
Local clock offset: -5.846 ms
Remote clock offset: -9.265 ms

# Below is generated by plot.py at 2018-02-20 19:09:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.37 Mbit/s
95th percentile per-packet one-way delay: 55.163 ms
Loss rate: 89.34%
-- Flow 1:
Average throughput: 84.37 Mbit/s
95th percentile per-packet one-way delay: 55.163 ms
Loss rate: 89.34%
-- Flow 2:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 52.856 ms
Loss rate: 80.00%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 51.156 ms
Loss rate: 50.00%
Run 8: Report of Copa — Data Link

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

- **Flow 1 Ingress** (mean 791.75 Mbit/s)
- **Flow 1 Egress** (mean 84.37 Mbit/s)
- **Flow 2 Ingress** (mean 0.00 Mbit/s)
- **Flow 2 Egress** (mean 0.00 Mbit/s)
- **Flow 3 Ingress** (mean 0.00 Mbit/s)
- **Flow 3 Egress** (mean 0.00 Mbit/s)

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

- Flow 1 (95th percentile 55.16 ms)
- Flow 2 (95th percentile 52.86 ms)
- Flow 3 (95th percentile 51.16 ms)
Run 9: Statistics of Copa

Start at: 2018-02-20 17:29:13
End at: 2018-02-20 17:29:43
Local clock offset: 0.618 ms
Remote clock offset: -4.037 ms

# Below is generated by plot.py at 2018-02-20 19:11:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.88 Mbit/s
95th percentile per-packet one-way delay: 55.305 ms
Loss rate: 91.40%
-- Flow 1:
Average throughput: 86.88 Mbit/s
95th percentile per-packet one-way delay: 55.305 ms
Loss rate: 91.40%
-- Flow 2:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 31.149 ms
Loss rate: 88.89%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 30.482 ms
Loss rate: 75.00%
Run 9: Report of Copa — Data Link

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

- **Flow 1 Ingress** (mean 1011.43 Mbit/s)
- **Flow 1 Egress** (mean 86.36 Mbit/s)
- **Flow 2 Ingress** (mean 0.00 Mbit/s)
- **Flow 2 Egress** (mean 0.00 Mbit/s)
- **Flow 3 Ingress** (mean 0.00 Mbit/s)
- **Flow 3 Egress** (mean 0.00 Mbit/s)
Run 10: Statistics of Copa

Start at: 2018-02-20 17:56:17
End at: 2018-02-20 17:56:47
Local clock offset: -2.644 ms
Remote clock offset: -2.412 ms

# Below is generated by plot.py at 2018-02-20 19:11:11
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 89.63 Mbit/s
  95th percentile per-packet one-way delay: 57.428 ms
  Loss rate: 86.75%
-- Flow 1:
  Average throughput: 89.63 Mbit/s
  95th percentile per-packet one-way delay: 57.427 ms
  Loss rate: 86.75%
-- Flow 2:
  Average throughput: 0.00 Mbit/s
  95th percentile per-packet one-way delay: 49.052 ms
  Loss rate: 66.67%
-- Flow 3:
  Average throughput: 0.01 Mbit/s
  95th percentile per-packet one-way delay: 58.003 ms
  Loss rate: 94.46%
Run 10: Report of Copa — Data Link

Graphs showing throughput and delay over time for different flows.
Run 1: Statistics of FillP

Start at: 2018-02-20 14:05:40
End at: 2018-02-20 14:06:10
Local clock offset: 1.633 ms
Remote clock offset: -0.631 ms

# Below is generated by plot.py at 2018-02-20 19:11:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.54 Mbit/s
95th percentile per-packet one-way delay: 68.931 ms
Loss rate: 31.31%
-- Flow 1:
Average throughput: 60.18 Mbit/s
95th percentile per-packet one-way delay: 68.845 ms
Loss rate: 26.69%
-- Flow 2:
Average throughput: 31.76 Mbit/s
95th percentile per-packet one-way delay: 68.997 ms
Loss rate: 35.36%
-- Flow 3:
Average throughput: 46.10 Mbit/s
95th percentile per-packet one-way delay: 69.200 ms
Loss rate: 40.89%
Run 1: Report of FillP — Data Link
Run 2: Statistics of FillP

Start at: 2018-02-20 14:31:48
End at: 2018-02-20 14:32:18
Local clock offset: 1.448 ms
Remote clock offset: -0.792 ms

# Below is generated by plot.py at 2018-02-20 19:11:11
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 96.53 Mbit/s
  95th percentile per-packet one-way delay: 69.141 ms
  Loss rate: 30.32%
-- Flow 1:
  Average throughput: 54.40 Mbit/s
  95th percentile per-packet one-way delay: 69.114 ms
  Loss rate: 26.74%
-- Flow 2:
  Average throughput: 47.63 Mbit/s
  95th percentile per-packet one-way delay: 68.953 ms
  Loss rate: 31.31%
-- Flow 3:
  Average throughput: 31.62 Mbit/s
  95th percentile per-packet one-way delay: 69.812 ms
  Loss rate: 42.45%
Run 2: Report of FillP — Data Link

![Graph 1: Throughput (Mbps)]

- Flow 1 ingress (mean 74.25 Mbps)
- Flow 2 ingress (mean 69.26 Mbps)
- Flow 3 ingress (mean 54.87 Mbps)
- Flow 1 egress (mean 54.40 Mbps)
- Flow 2 egress (mean 47.63 Mbps)
- Flow 3 egress (mean 31.62 Mbps)

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

- Flow 1 (95th percentile 69.11 ms)
- Flow 2 (95th percentile 68.95 ms)
- Flow 3 (95th percentile 68.81 ms)
Run 3: Statistics of FillP

Start at: 2018-02-20 14:58:13
End at: 2018-02-20 14:58:43
Local clock offset: 1.408 ms
Remote clock offset: -4.63 ms

# Below is generated by plot.py at 2018-02-20 19:11:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.50 Mbit/s
95th percentile per-packet one-way delay: 68.686 ms
Loss rate: 31.14%
-- Flow 1:
Average throughput: 53.04 Mbit/s
95th percentile per-packet one-way delay: 68.447 ms
Loss rate: 27.74%
-- Flow 2:
Average throughput: 39.62 Mbit/s
95th percentile per-packet one-way delay: 69.081 ms
Loss rate: 33.06%
-- Flow 3:
Average throughput: 53.20 Mbit/s
95th percentile per-packet one-way delay: 69.087 ms
Loss rate: 37.44%
Run 3: Report of FillP — Data Link

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

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

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249
Run 4: Statistics of FillP

Start at: 2018-02-20 15:24:11
End at: 2018-02-20 15:24:41
Local clock offset: 1.241 ms
Remote clock offset: -5.285 ms

# Below is generated by plot.py at 2018-02-20 19:11:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.43 Mbit/s
95th percentile per-packet one-way delay: 70.771 ms
Loss rate: 31.00%
-- Flow 1:
Average throughput: 54.65 Mbit/s
95th percentile per-packet one-way delay: 70.729 ms
Loss rate: 27.06%
-- Flow 2:
Average throughput: 37.11 Mbit/s
95th percentile per-packet one-way delay: 70.198 ms
Loss rate: 34.59%
-- Flow 3:
Average throughput: 52.40 Mbit/s
95th percentile per-packet one-way delay: 71.617 ms
Loss rate: 36.89%
Run 4: Report of FillP — Data Link

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

- Flow 1 ingress (mean 75.00 Mbps)
- Flow 1 egress (mean 54.65 Mbps)
- Flow 2 ingress (mean 56.74 Mbps)
- Flow 2 egress (mean 37.11 Mbps)
- Flow 3 ingress (mean 81.79 Mbps)
- Flow 3 egress (mean 52.40 Mbps)

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

- Flow 1 (95th percentile 70.73 ms)
- Flow 2 (95th percentile 70.20 ms)
- Flow 3 (95th percentile 71.62 ms)
Run 5: Statistics of FillP

Start at: 2018-02-20 15:49:15
End at: 2018-02-20 15:49:45
Local clock offset: 2.535 ms
Remote clock offset: -6.761 ms

# Below is generated by plot.py at 2018-02-20 19:11:11
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 96.33 Mbit/s
  95th percentile per-packet one-way delay: 67.639 ms
  Loss rate: 30.81%
-- Flow 1:
  Average throughput: 54.83 Mbit/s
  95th percentile per-packet one-way delay: 67.435 ms
  Loss rate: 26.22%
-- Flow 2:
  Average throughput: 36.97 Mbit/s
  95th percentile per-packet one-way delay: 67.790 ms
  Loss rate: 34.86%
-- Flow 3:
  Average throughput: 51.03 Mbit/s
  95th percentile per-packet one-way delay: 68.157 ms
  Loss rate: 37.75%
Run 5: Report of FillP — Data Link
Run 6: Statistics of FillP

Start at: 2018-02-20 16:14:21
End at: 2018-02-20 16:14:51
Local clock offset: -1.841 ms
Remote clock offset: -5.49 ms

# Below is generated by plot.py at 2018-02-20 19:11:11
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 96.42 Mbit/s
  95th percentile per-packet one-way delay: 68.058 ms
  Loss rate: 30.86%
-- Flow 1:
  Average throughput: 54.23 Mbit/s
  95th percentile per-packet one-way delay: 68.163 ms
  Loss rate: 26.97%
-- Flow 2:
  Average throughput: 36.70 Mbit/s
  95th percentile per-packet one-way delay: 67.673 ms
  Loss rate: 34.00%
-- Flow 3:
  Average throughput: 53.59 Mbit/s
  95th percentile per-packet one-way delay: 68.283 ms
  Loss rate: 36.99%
Run 6: Report of FillP — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 74.35 Mbit/s)
Flow 1 egress (mean 54.23 Mbit/s)
Flow 2 ingress (mean 55.69 Mbit/s)
Flow 2 egress (mean 36.70 Mbit/s)
Flow 3 ingress (mean 85.68 Mbit/s)
Flow 3 egress (mean 53.59 Mbit/s)

Per-packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 68.16 ms)
Flow 2 (95th percentile 67.67 ms)
Flow 3 (95th percentile 68.28 ms)
Run 7: Statistics of FillP

Start at: 2018-02-20 16:39:50
End at: 2018-02-20 16:40:20
Local clock offset: -4.618 ms
Remote clock offset: -4.16 ms

# Below is generated by plot.py at 2018-02-20 19:11:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.14 Mbit/s
95th percentile per-packet one-way delay: 68.432 ms
Loss rate: 29.52%
-- Flow 1:
Average throughput: 53.53 Mbit/s
95th percentile per-packet one-way delay: 67.633 ms
Loss rate: 25.39%
-- Flow 2:
Average throughput: 42.07 Mbit/s
95th percentile per-packet one-way delay: 68.968 ms
Loss rate: 31.73%
-- Flow 3:
Average throughput: 44.12 Mbit/s
95th percentile per-packet one-way delay: 70.136 ms
Loss rate: 38.20%
Run 7: Report of FillP — Data Link

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

Legend:
- Flow 1 ingress (mean 71.83 Mbit/s)
- Flow 1 egress (mean 53.53 Mbit/s)
- Flow 2 ingress (mean 61.71 Mbit/s)
- Flow 2 egress (mean 42.07 Mbit/s)
- Flow 3 ingress (mean 71.44 Mbit/s)
- Flow 3 egress (mean 44.12 Mbit/s)
Run 8: Statistics of FillP

Start at: 2018-02-20 17:08:57
End at: 2018-02-20 17:09:27
Local clock offset: -6.181 ms
Remote clock offset: -12.267 ms

# Below is generated by plot.py at 2018-02-20 19:11:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.37 Mbit/s
95th percentile per-packet one-way delay: 66.502 ms
Loss rate: 29.75%
-- Flow 1:
Average throughput: 55.59 Mbit/s
95th percentile per-packet one-way delay: 66.148 ms
Loss rate: 25.18%
-- Flow 2:
Average throughput: 40.96 Mbit/s
95th percentile per-packet one-way delay: 66.937 ms
Loss rate: 31.02%
-- Flow 3:
Average throughput: 34.83 Mbit/s
95th percentile per-packet one-way delay: 67.191 ms
Loss rate: 43.81%
Run 8: Report of FillP — Data Link

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

- Flow 1 ingress (mean 74.32 Mbit/s)
- Flow 1 egress (mean 55.59 Mbit/s)
- Flow 2 ingress (mean 59.33 Mbit/s)
- Flow 2 egress (mean 40.96 Mbit/s)
- Flow 3 ingress (mean 61.99 Mbit/s)
- Flow 3 egress (mean 34.83 Mbit/s)

![Graph showing packet loss over time.](image)

- Flow 1 (95th percentile 66.15 ms)
- Flow 2 (95th percentile 66.94 ms)
- Flow 3 (95th percentile 67.19 ms)
Run 9: Statistics of FillP

Start at: 2018-02-20 17:35:43
End at: 2018-02-20 17:36:13
Local clock offset: 1.231 ms
Remote clock offset: -5.509 ms

# Below is generated by plot.py at 2018-02-20 19:11:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.95 Mbit/s
95th percentile per-packet one-way delay: 68.911 ms
Loss rate: 30.63%
-- Flow 1:
Average throughput: 53.18 Mbit/s
95th percentile per-packet one-way delay: 68.983 ms
Loss rate: 26.41%
-- Flow 2:
Average throughput: 45.37 Mbit/s
95th percentile per-packet one-way delay: 68.786 ms
Loss rate: 32.07%
-- Flow 3:
Average throughput: 37.89 Mbit/s
95th percentile per-packet one-way delay: 68.888 ms
Loss rate: 41.79%
Run 9: Report of FillP — Data Link

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

![Graph 2: Per-packet one-way delay (ms)](image2)
Run 10: Statistics of FillP

Start at: 2018-02-20 18:02:48
End at: 2018-02-20 18:03:18
Local clock offset: -3.798 ms
Remote clock offset: -2.399 ms

# Below is generated by plot.py at 2018-02-20 19:11:42
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 96.48 Mbit/s
  95th percentile per-packet one-way delay: 70.833 ms
  Loss rate: 31.46%
-- Flow 1:
  Average throughput: 58.45 Mbit/s
  95th percentile per-packet one-way delay: 70.900 ms
  Loss rate: 26.75%
-- Flow 2:
  Average throughput: 36.32 Mbit/s
  95th percentile per-packet one-way delay: 70.481 ms
  Loss rate: 34.57%
-- Flow 3:
  Average throughput: 42.61 Mbit/s
  95th percentile per-packet one-way delay: 71.133 ms
  Loss rate: 42.31%
Run 10: Report of FillP — Data Link
Run 1: Statistics of Indigo-1-32

Start at: 2018-02-20 14:07:05
End at: 2018-02-20 14:07:35
Local clock offset: 1.705 ms
Remote clock offset: -2.963 ms

# Below is generated by plot.py at 2018-02-20 19:11:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.08 Mbit/s
95th percentile per-packet one-way delay: 37.748 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 59.69 Mbit/s
95th percentile per-packet one-way delay: 37.507 ms
Loss rate: 0.70%
-- Flow 2:
Average throughput: 39.60 Mbit/s
95th percentile per-packet one-way delay: 39.655 ms
Loss rate: 1.16%
-- Flow 3:
Average throughput: 24.83 Mbit/s
95th percentile per-packet one-way delay: 37.830 ms
Loss rate: 1.39%
Run 1: Report of Indigo-1-32 — Data Link

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

**Throughput (Mbit/s)**
- Flow 1 ingress (mean 60.11 Mbit/s)
- Flow 1 egress (mean 59.69 Mbit/s)
- Flow 2 ingress (mean 40.07 Mbit/s)
- Flow 2 egress (mean 39.60 Mbit/s)
- Flow 3 ingress (mean 25.18 Mbit/s)
- Flow 3 egress (mean 24.83 Mbit/s)

**Per-packet one way delay (ms)**
- Flow 1 (95th percentile 37.51 ms)
- Flow 2 (95th percentile 39.66 ms)
- Flow 3 (95th percentile 37.83 ms)
Run 2: Statistics of Indigo-1-32

Start at: 2018-02-20 14:33:19
End at: 2018-02-20 14:33:49
Local clock offset: 1.433 ms
Remote clock offset: -0.927 ms

# Below is generated by plot.py at 2018-02-20 19:11:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.18 Mbit/s
95th percentile per-packet one-way delay: 44.160 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 58.79 Mbit/s
95th percentile per-packet one-way delay: 40.745 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 33.88 Mbit/s
95th percentile per-packet one-way delay: 45.289 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 36.56 Mbit/s
95th percentile per-packet one-way delay: 53.835 ms
Loss rate: 0.23%
Run 2: Report of Indigo-1-32 — Data Link
Run 3: Statistics of Indigo-1-32

Start at: 2018-02-20 14:59:36
End at: 2018-02-20 15:00:06
Local clock offset: 1.441 ms
Remote clock offset: -2.614 ms

# Below is generated by plot.py at 2018-02-20 19:12:28
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 94.72 Mbit/s
  95th percentile per-packet one-way delay: 42.138 ms
  Loss rate: 0.19%
-- Flow 1:
  Average throughput: 61.10 Mbit/s
  95th percentile per-packet one-way delay: 40.275 ms
  Loss rate: 0.17%
-- Flow 2:
  Average throughput: 31.77 Mbit/s
  95th percentile per-packet one-way delay: 43.229 ms
  Loss rate: 0.20%
-- Flow 3:
  Average throughput: 38.32 Mbit/s
  95th percentile per-packet one-way delay: 47.720 ms
  Loss rate: 0.30%
Run 3: Report of Indigo-1-32 — Data Link

Graph showing throughput and per-packet one-way delay over time for different flows.
Run 4: Statistics of Indigo-1-32

Start at: 2018-02-20 15:25:35
End at: 2018-02-20 15:26:05
Local clock offset: 1.265 ms
Remote clock offset: -7.753 ms

# Below is generated by plot.py at 2018-02-20 19:12:36
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 94.39 Mbit/s
  95th percentile per-packet one-way delay: 39.421 ms
  Loss rate: 0.54%
-- Flow 1:
  Average throughput: 60.19 Mbit/s
  95th percentile per-packet one-way delay: 38.954 ms
  Loss rate: 0.50%
-- Flow 2:
  Average throughput: 40.17 Mbit/s
  95th percentile per-packet one-way delay: 44.820 ms
  Loss rate: 0.58%
-- Flow 3:
  Average throughput: 23.16 Mbit/s
  95th percentile per-packet one-way delay: 39.199 ms
  Loss rate: 0.73%
Run 4: Report of Indigo-1-32 — Data Link
Run 5: Statistics of Indigo-1-32

Start at: 2018-02-20 15:50:39
End at: 2018-02-20 15:51:09
Local clock offset: 2.595 ms
Remote clock offset: -4.57 ms

# Below is generated by plot.py at 2018-02-20 19:12:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.30 Mbit/s
95th percentile per-packet one-way delay: 40.547 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 62.28 Mbit/s
95th percentile per-packet one-way delay: 39.946 ms
Loss rate: 0.72%
-- Flow 2:
Average throughput: 27.10 Mbit/s
95th percentile per-packet one-way delay: 40.875 ms
Loss rate: 0.45%
-- Flow 3:
Average throughput: 39.83 Mbit/s
95th percentile per-packet one-way delay: 44.338 ms
Loss rate: 0.38%
Run 5: Report of Indigo-1-32 — Data Link

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

- Flow 1 ingress (mean 62.74 Mbit/s)
- Flow 1 egress (mean 62.28 Mbit/s)
- Flow 2 ingress (mean 27.23 Mbit/s)
- Flow 2 egress (mean 27.10 Mbit/s)
- Flow 3 ingress (mean 40.00 Mbit/s)
- Flow 3 egress (mean 39.83 Mbit/s)
Run 6: Statistics of Indigo-1-32

Start at: 2018-02-20 16:15:44
End at: 2018-02-20 16:16:14
Local clock offset: -2.103 ms
Remote clock offset: -5.441 ms

# Below is generated by plot.py at 2018-02-20 19:12:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.71 Mbit/s
95th percentile per-packet one-way delay: 40.788 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 56.49 Mbit/s
95th percentile per-packet one-way delay: 39.318 ms
Loss rate: 0.68%
-- Flow 2:
Average throughput: 33.32 Mbit/s
95th percentile per-packet one-way delay: 42.039 ms
Loss rate: 0.80%
-- Flow 3:
Average throughput: 43.37 Mbit/s
95th percentile per-packet one-way delay: 43.996 ms
Loss rate: 0.36%
Run 6: Report of Indigo-1-32 — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 56.89 Mbps)
  - Flow 1 egress (mean 56.49 Mbps)
  - Flow 2 ingress (mean 33.60 Mbps)
  - Flow 2 egress (mean 33.32 Mbps)
  - Flow 3 ingress (mean 43.53 Mbps)
  - Flow 3 egress (mean 43.37 Mbps)

- **Per-packet one-way delay (ms):**
  - Flow 1 (95th percentile 39.32 ms)
  - Flow 2 (95th percentile 42.04 ms)
  - Flow 3 (95th percentile 44.00 ms)
Run 7: Statistics of Indigo-1-32

Start at: 2018-02-20 16:41:26
End at: 2018-02-20 16:41:56
Local clock offset: -4.666 ms
Remote clock offset: -4.398 ms

# Below is generated by plot.py at 2018-02-20 19:12:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 73.43 Mbit/s
95th percentile per-packet one-way delay: 37.768 ms
Loss rate: 0.94%
-- Flow 1:
Average throughput: 32.19 Mbit/s
95th percentile per-packet one-way delay: 37.364 ms
Loss rate: 0.94%
-- Flow 2:
Average throughput: 45.39 Mbit/s
95th percentile per-packet one-way delay: 37.836 ms
Loss rate: 0.82%
-- Flow 3:
Average throughput: 34.05 Mbit/s
95th percentile per-packet one-way delay: 40.308 ms
Loss rate: 1.28%
Run 7: Report of Indigo-1-32 — Data Link

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

- Flow 1 ingress (mean 32.50 Mbps)
- Flow 1 egress (mean 32.19 Mbps)
- Flow 2 ingress (mean 45.78 Mbps)
- Flow 2 egress (mean 45.39 Mbps)
- Flow 3 ingress (mean 34.50 Mbps)
- Flow 3 egress (mean 34.05 Mbps)

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

- Flow 1 (95th percentile 37.36 ms)
- Flow 2 (95th percentile 37.84 ms)
- Flow 3 (95th percentile 40.31 ms)
Run 8: Statistics of Indigo-1-32

Start at: 2018-02-20 17:10:33
End at: 2018-02-20 17:11:03
Local clock offset: -6.281 ms
Remote clock offset: -10.659 ms

# Below is generated by plot.py at 2018-02-20 19:12:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.61 Mbit/s
95th percentile per-packet one-way delay: 40.305 ms
Loss rate: 1.58%
-- Flow 1:
Average throughput: 52.15 Mbit/s
95th percentile per-packet one-way delay: 39.899 ms
Loss rate: 1.39%
-- Flow 2:
Average throughput: 40.93 Mbit/s
95th percentile per-packet one-way delay: 40.606 ms
Loss rate: 1.95%
-- Flow 3:
Average throughput: 25.35 Mbit/s
95th percentile per-packet one-way delay: 40.698 ms
Loss rate: 1.56%
Run 8: Report of Indigo-1-32 — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 52.89 Mbps)
Flow 1 egress (mean 52.15 Mbps)
Flow 2 ingress (mean 41.75 Mbps)
Flow 2 egress (mean 40.93 Mbps)
Flow 3 ingress (mean 25.75 Mbps)
Flow 3 egress (mean 25.35 Mbps)

Per packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 39.90 ms)
Flow 2 (95th percentile 40.61 ms)
Flow 3 (95th percentile 40.70 ms)
Run 9: Statistics of Indigo-1-32

Start at: 2018-02-20 17:37:13
End at: 2018-02-20 17:37:43
Local clock offset: 1.457 ms
Remote clock offset: -3.226 ms

# Below is generated by plot.py at 2018-02-20 19:12:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.47 Mbit/s
95th percentile per-packet one-way delay: 41.375 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 51.86 Mbit/s
95th percentile per-packet one-way delay: 39.859 ms
Loss rate: 0.90%
-- Flow 2:
Average throughput: 29.36 Mbit/s
95th percentile per-packet one-way delay: 40.117 ms
Loss rate: 0.71%
-- Flow 3:
Average throughput: 40.15 Mbit/s
95th percentile per-packet one-way delay: 53.159 ms
Loss rate: 0.30%
Run 10: Statistics of Indigo-1-32

Start at: 2018-02-20 18:04:26
End at: 2018-02-20 18:04:56
Local clock offset: -4.01 ms
Remote clock offset: -5.045 ms

# Below is generated by plot.py at 2018-02-20 19:13:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.56 Mbit/s
95th percentile per-packet one-way delay: 38.164 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 56.53 Mbit/s
95th percentile per-packet one-way delay: 37.369 ms
Loss rate: 0.73%
-- Flow 2:
Average throughput: 31.08 Mbit/s
95th percentile per-packet one-way delay: 38.954 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 31.85 Mbit/s
95th percentile per-packet one-way delay: 40.102 ms
Loss rate: 1.08%
Run 10: Report of Indigo-1-32 — Data Link

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

Start at: 2018-02-20 14:04:08
End at: 2018-02-20 14:04:38
Local clock offset: 1.793 ms
Remote clock offset: -3.154 ms

# Below is generated by plot.py at 2018-02-20 19:13:51
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 83.09 Mbit/s
  95th percentile per-packet one-way delay: 42.656 ms
  Loss rate: 0.12%
-- Flow 1:
  Average throughput: 60.69 Mbit/s
  95th percentile per-packet one-way delay: 42.019 ms
  Loss rate: 0.12%
-- Flow 2:
  Average throughput: 28.00 Mbit/s
  95th percentile per-packet one-way delay: 44.196 ms
  Loss rate: 0.13%
-- Flow 3:
  Average throughput: 11.51 Mbit/s
  95th percentile per-packet one-way delay: 41.799 ms
  Loss rate: 0.12%
Run 1: Report of Vivace-latency — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 60.76 Mbit/s)  Flow 1 egress (mean 60.69 Mbit/s)
Flow 2 ingress (mean 28.03 Mbit/s)  Flow 2 egress (mean 28.00 Mbit/s)
Flow 3 ingress (mean 11.51 Mbit/s)  Flow 3 egress (mean 11.51 Mbit/s)

Per-packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 42.02 ms)  Flow 2 (95th percentile 44.20 ms)  Flow 3 (95th percentile 41.80 ms)
Run 2: Statistics of Vivace-latency

Start at: 2018-02-20 14:30:16
End at: 2018-02-20 14:30:46
Local clock offset: 1.372 ms
Remote clock offset: -2.767 ms

# Below is generated by plot.py at 2018-02-20 19:14:00
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 82.60 Mbit/s
  95th percentile per-packet one-way delay: 40.713 ms
  Loss rate: 0.26%
-- Flow 1:
  Average throughput: 61.31 Mbit/s
  95th percentile per-packet one-way delay: 40.081 ms
  Loss rate: 0.28%
-- Flow 2:
  Average throughput: 27.91 Mbit/s
  95th percentile per-packet one-way delay: 41.677 ms
  Loss rate: 0.23%
-- Flow 3:
  Average throughput: 8.30 Mbit/s
  95th percentile per-packet one-way delay: 40.476 ms
  Loss rate: 0.02%
Run 2: Report of Vivace-latency — Data Link

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

- Flow 1 ingress (mean 61.50 Mbit/s)
- Flow 1 egress (mean 61.31 Mbit/s)
- Flow 2 ingress (mean 27.98 Mbit/s)
- Flow 2 egress (mean 27.91 Mbit/s)
- Flow 3 ingress (mean 8.30 Mbit/s)
- Flow 3 egress (mean 8.30 Mbit/s)
Run 3: Statistics of Vivace-latency

Start at: 2018-02-20 14:56:48
End at: 2018-02-20 14:57:18
Local clock offset: 1.559 ms
Remote clock offset: -4.561 ms

# Below is generated by plot.py at 2018-02-20 19:14:01
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 84.34 Mbit/s
  95th percentile per-packet one-way delay: 37.382 ms
  Loss rate: 0.42%
-- Flow 1:
  Average throughput: 69.90 Mbit/s
  95th percentile per-packet one-way delay: 36.450 ms
  Loss rate: 0.43%
-- Flow 2:
  Average throughput: 17.24 Mbit/s
  95th percentile per-packet one-way delay: 41.181 ms
  Loss rate: 0.43%
-- Flow 3:
  Average throughput: 9.02 Mbit/s
  95th percentile per-packet one-way delay: 44.116 ms
  Loss rate: 0.27%
Run 3: Report of Vivace-latency — Data Link
Run 4: Statistics of Vivace-latency

Start at: 2018-02-20 15:22:44
End at: 2018-02-20 15:23:14
Local clock offset: 1.319 ms
Remote clock offset: -5.526 ms

# Below is generated by plot.py at 2018-02-20 19:14:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.04 Mbit/s
95th percentile per-packet one-way delay: 46.012 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 63.16 Mbit/s
95th percentile per-packet one-way delay: 46.208 ms
Loss rate: 0.54%
-- Flow 2:
Average throughput: 25.41 Mbit/s
95th percentile per-packet one-way delay: 45.589 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 12.14 Mbit/s
95th percentile per-packet one-way delay: 44.227 ms
Loss rate: 0.16%
Run 4: Report of Vivace-latency — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 63.50 Mbps)
  - Flow 1 egress (mean 63.16 Mbps)
  - Flow 2 ingress (mean 25.51 Mbps)
  - Flow 2 egress (mean 25.41 Mbps)
  - Flow 3 ingress (mean 12.15 Mbps)
  - Flow 3 egress (mean 12.14 Mbps)

- **Per-packet one-way delay (ms):**
  - Flow 1 (95th percentile 46.21 ms)
  - Flow 2 (95th percentile 45.59 ms)
  - Flow 3 (95th percentile 44.23 ms)
Run 5: Statistics of Vivace-latency

Start at: 2018-02-20 15:47:48
End at: 2018-02-20 15:48:18
Local clock offset: 2.511 ms
Remote clock offset: -4.784 ms

# Below is generated by plot.py at 2018-02-20 19:14:13
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 83.99 Mbit/s
  95th percentile per-packet one-way delay: 38.634 ms
  Loss rate: 0.20%
  -- Flow 1:
  Average throughput: 61.08 Mbit/s
  95th percentile per-packet one-way delay: 39.115 ms
  Loss rate: 0.21%
  -- Flow 2:
  Average throughput: 28.96 Mbit/s
  95th percentile per-packet one-way delay: 38.189 ms
  Loss rate: 0.21%
  -- Flow 3:
  Average throughput: 11.11 Mbit/s
  95th percentile per-packet one-way delay: 37.750 ms
  Loss rate: 0.12%
Run 5: Report of Vivace-latency — Data Link
Run 6: Statistics of Vivace-latency

Start at: 2018-02-20 16:12:59
End at: 2018-02-20 16:13:29
Local clock offset: -1.468 ms
Remote clock offset: -3.658 ms

# Below is generated by plot.py at 2018-02-20 19:14:13

# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.62 Mbit/s
95th percentile per-packet one-way delay: 43.004 ms
Loss rate: 0.31%

-- Flow 1:
Average throughput: 57.81 Mbit/s
95th percentile per-packet one-way delay: 40.055 ms
Loss rate: 0.31%

-- Flow 2:
Average throughput: 24.26 Mbit/s
95th percentile per-packet one-way delay: 45.739 ms
Loss rate: 0.28%

-- Flow 3:
Average throughput: 14.24 Mbit/s
95th percentile per-packet one-way delay: 49.344 ms
Loss rate: 0.37%
Run 6: Report of Vivace-latency — Data Link

![Graph of Throughput over Time](image1)

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

- Flow 1 Ingress (mean 57.99 Mbit/s)
- Flow 1 Egress (mean 57.81 Mbit/s)
- Flow 2 Ingress (mean 24.32 Mbit/s)
- Flow 2 Egress (mean 24.26 Mbit/s)
- Flow 3 Ingress (mean 14.29 Mbit/s)
- Flow 3 Egress (mean 14.24 Mbit/s)
Run 7: Statistics of Vivace-latency

Start at: 2018-02-20 16:38:14
End at: 2018-02-20 16:38:44
Local clock offset: -4.553 ms
Remote clock offset: -4.693 ms

# Below is generated by plot.py at 2018-02-20 19:14:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 58.60 Mbit/s
95th percentile per-packet one-way delay: 45.668 ms
Loss rate: 0.93%
-- Flow 1:
Average throughput: 40.43 Mbit/s
95th percentile per-packet one-way delay: 45.485 ms
Loss rate: 0.92%
-- Flow 2:
Average throughput: 24.45 Mbit/s
95th percentile per-packet one-way delay: 47.148 ms
Loss rate: 0.92%
-- Flow 3:
Average throughput: 5.79 Mbit/s
95th percentile per-packet one-way delay: 43.904 ms
Loss rate: 1.19%
Run 7: Report of Vivace-latency — Data Link
Run 8: Statistics of Vivace-latency

Start at: 2018-02-20 17:07:33
End at: 2018-02-20 17:08:03
Local clock offset: -6.099 ms
Remote clock offset: -10.287 ms

# Below is generated by plot.py at 2018-02-20 19:14:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 68.16 Mbit/s
95th percentile per-packet one-way delay: 44.206 ms
Loss rate: 1.35%
-- Flow 1:
Average throughput: 60.34 Mbit/s
95th percentile per-packet one-way delay: 44.828 ms
Loss rate: 1.27%
-- Flow 2:
Average throughput: 5.38 Mbit/s
95th percentile per-packet one-way delay: 40.365 ms
Loss rate: 1.75%
-- Flow 3:
Average throughput: 12.85 Mbit/s
95th percentile per-packet one-way delay: 38.313 ms
Loss rate: 2.18%
Run 8: Report of Vivace-latency — Data Link
Run 9: Statistics of Vivace-latency

Start at: 2018-02-20 17:34:11
End at: 2018-02-20 17:34:41
Local clock offset: 1.181 ms
Remote clock offset: -3.149 ms

# Below is generated by plot.py at 2018-02-20 19:15:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.09 Mbit/s
95th percentile per-packet one-way delay: 40.133 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 60.19 Mbit/s
95th percentile per-packet one-way delay: 39.625 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 19.91 Mbit/s
95th percentile per-packet one-way delay: 44.788 ms
Loss rate: 0.36%
-- Flow 3:
Average throughput: 11.12 Mbit/s
95th percentile per-packet one-way delay: 47.263 ms
Loss rate: 0.44%
Run 9: Report of Vivace-latency — Data Link

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

![Graph 2: Per-packet one-way delay vs Time](image2)
Run 10: Statistics of Vivace-latency

Start at: 2018-02-20 18:01:22
End at: 2018-02-20 18:01:52
Local clock offset: -3.573 ms
Remote clock offset: -4.719 ms

# Below is generated by plot.py at 2018-02-20 19:15:01
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 71.69 Mbit/s
  95th percentile per-packet one-way delay: 36.634 ms
  Loss rate: 0.43%
-- Flow 1:
  Average throughput: 51.91 Mbit/s
  95th percentile per-packet one-way delay: 36.221 ms
  Loss rate: 0.44%
-- Flow 2:
  Average throughput: 23.19 Mbit/s
  95th percentile per-packet one-way delay: 37.301 ms
  Loss rate: 0.48%
-- Flow 3:
  Average throughput: 13.25 Mbit/s
  95th percentile per-packet one-way delay: 51.182 ms
  Loss rate: 0.10%
Run 10: Report of Vivace-latency — Data Link
Run 1: Statistics of Vivace-loss

Start at: 2018-02-20 14:01:05
End at: 2018-02-20 14:01:35
Local clock offset: 1.957 ms
Remote clock offset: -3.543 ms

# Below is generated by plot.py at 2018-02-20 19:15:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 75.00 Mbit/s
95th percentile per-packet one-way delay: 61.285 ms
Loss rate: 5.21%
-- Flow 1:
Average throughput: 38.70 Mbit/s
95th percentile per-packet one-way delay: 61.357 ms
Loss rate: 4.25%
-- Flow 2:
Average throughput: 51.16 Mbit/s
95th percentile per-packet one-way delay: 61.258 ms
Loss rate: 6.16%
-- Flow 3:
Average throughput: 7.08 Mbit/s
95th percentile per-packet one-way delay: 60.576 ms
Loss rate: 7.12%
Run 1: Report of Vivace-loss — Data Link

![Graph showing network performance metrics over time]
Run 2: Statistics of Vivace-loss

Start at: 2018-02-20 14:27:17
End at: 2018-02-20 14:27:47
Local clock offset: 1.505 ms
Remote clock offset: 0.025 ms

# Below is generated by plot.py at 2018-02-20 19:15:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 82.03 Mbit/s
95th percentile per-packet one-way delay: 63.783 ms
Loss rate: 6.29%
-- Flow 1:
Average throughput: 62.07 Mbit/s
95th percentile per-packet one-way delay: 63.405 ms
Loss rate: 6.43%
-- Flow 2:
Average throughput: 14.93 Mbit/s
95th percentile per-packet one-way delay: 65.207 ms
Loss rate: 7.12%
-- Flow 3:
Average throughput: 30.48 Mbit/s
95th percentile per-packet one-way delay: 64.820 ms
Loss rate: 4.56%
Run 2: Report of Vivace-loss — Data Link

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

- **Flow 1**: Ingress (mean 66.37 Mbit/s) — Egress (mean 62.07 Mbit/s)
- **Flow 2**: Ingress (mean 16.68 Mbit/s) — Egress (mean 14.93 Mbit/s)
- **Flow 3**: Ingress (mean 31.91 Mbit/s) — Egress (mean 30.46 Mbit/s)
Run 3: Statistics of Vivace-loss

Start at: 2018-02-20 14:53:56
End at: 2018-02-20 14:54:26
Local clock offset: 1.674 ms
Remote clock offset: -2.35 ms

# Below is generated by plot.py at 2018-02-20 19:15:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 82.77 Mbit/s
95th percentile per-packet one-way delay: 64.881 ms
Loss rate: 6.50%
-- Flow 1:
Average throughput: 56.51 Mbit/s
95th percentile per-packet one-way delay: 65.062 ms
Loss rate: 6.34%
-- Flow 2:
Average throughput: 23.99 Mbit/s
95th percentile per-packet one-way delay: 63.151 ms
Loss rate: 6.41%
-- Flow 3:
Average throughput: 31.33 Mbit/s
95th percentile per-packet one-way delay: 65.622 ms
Loss rate: 7.54%
Run 3: Report of Vivace-loss — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 60.35 Mbps)
  - Flow 2 ingress (mean 25.62 Mbps)
  - Flow 3 ingress (mean 33.92 Mbps)
  - Flow 1 egress (mean 56.51 Mbps)
  - Flow 2 egress (mean 23.99 Mbps)
  - Flow 3 egress (mean 31.33 Mbps)

- **Packet Delay (ms):**
  - Flow 1 (95th percentile 65.06 ms)
  - Flow 2 (95th percentile 63.15 ms)
  - Flow 3 (95th percentile 65.62 ms)
Run 4: Statistics of Vivace-loss

Start at: 2018-02-20 15:19:47
End at: 2018-02-20 15:20:17
Local clock offset: 1.213 ms
Remote clock offset: -7.403 ms

# Below is generated by plot.py at 2018-02-20 19:15:32
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 84.09 Mbit/s
  95th percentile per-packet one-way delay: 62.341 ms
  Loss rate: 6.55%
-- Flow 1:
  Average throughput: 64.57 Mbit/s
  95th percentile per-packet one-way delay: 62.727 ms
  Loss rate: 6.89%
-- Flow 2:
  Average throughput: 26.57 Mbit/s
  95th percentile per-packet one-way delay: 61.103 ms
  Loss rate: 5.25%
-- Flow 3:
  Average throughput: 5.59 Mbit/s
  95th percentile per-packet one-way delay: 62.255 ms
  Loss rate: 6.99%
Run 4: Report of Vivace-loss — Data Link

![Graph 1](chart1.png)

- Flow 1 ingress (mean 69.43 Mbit/s)
- Flow 1 egress (mean 64.57 Mbit/s)
- Flow 2 ingress (mean 29.88 Mbit/s)
- Flow 2 egress (mean 26.87 Mbit/s)
- Flow 3 ingress (mean 6.03 Mbit/s)
- Flow 3 egress (mean 5.59 Mbit/s)

![Graph 2](chart2.png)

- Flow 1 (95th percentile 62.73 ms)
- Flow 2 (95th percentile 61.10 ms)
- Flow 3 (95th percentile 62.26 ms)
Run 5: Statistics of Vivace-loss

Start at: 2018-02-20 15:44:55
End at: 2018-02-20 15:45:25
Local clock offset: 2.375 ms
Remote clock offset: -4.62 ms

# Below is generated by plot.py at 2018-02-20 19:15:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.37 Mbit/s
95th percentile per-packet one-way delay: 64.341 ms
Loss rate: 4.70%
-- Flow 1:
Average throughput: 53.91 Mbit/s
95th percentile per-packet one-way delay: 64.345 ms
Loss rate: 4.51%
-- Flow 2:
Average throughput: 22.53 Mbit/s
95th percentile per-packet one-way delay: 65.029 ms
Loss rate: 5.49%
-- Flow 3:
Average throughput: 31.71 Mbit/s
95th percentile per-packet one-way delay: 62.531 ms
Loss rate: 4.50%
Run 5: Report of Vivace-loss — Data Link
Run 6: Statistics of Vivace-loss

Start at: 2018-02-20 16:10:12
End at: 2018-02-20 16:10:42
Local clock offset: -0.634 ms
Remote clock offset: -2.768 ms

# Below is generated by plot.py at 2018-02-20 19:15:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.84 Mbit/s
95th percentile per-packet one-way delay: 66.460 ms
Loss rate: 6.71%
-- Flow 1:
Average throughput: 62.11 Mbit/s
95th percentile per-packet one-way delay: 66.669 ms
Loss rate: 6.63%
-- Flow 2:
Average throughput: 27.96 Mbit/s
95th percentile per-packet one-way delay: 65.994 ms
Loss rate: 6.54%
-- Flow 3:
Average throughput: 15.58 Mbit/s
95th percentile per-packet one-way delay: 66.230 ms
Loss rate: 8.29%
Run 6: Report of Vivace-loss — Data Link
Run 7: Statistics of Vivace-loss

Start at: 2018-02-20 16:35:16
End at: 2018-02-20 16:35:46
Local clock offset: -4.446 ms
Remote clock offset: -2.52 ms

# Below is generated by plot.py at 2018-02-20 19:16:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 80.31 Mbit/s
95th percentile per-packet one-way delay: 64.051 ms
Loss rate: 4.80%
-- Flow 1:
Average throughput: 61.20 Mbit/s
95th percentile per-packet one-way delay: 64.508 ms
Loss rate: 4.72%
-- Flow 2:
Average throughput: 23.26 Mbit/s
95th percentile per-packet one-way delay: 62.539 ms
Loss rate: 5.19%
-- Flow 3:
Average throughput: 11.11 Mbit/s
95th percentile per-packet one-way delay: 60.393 ms
Loss rate: 4.60%
Run 7: Report of Vivace-loss — Data Link
Run 8: Statistics of Vivace-loss

Start at: 2018-02-20 17:04:39
End at: 2018-02-20 17:05:09
Local clock offset: -5.938 ms
Remote clock offset: -11.833 ms

# Below is generated by plot.py at 2018-02-20 19:16:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 70.46 Mbit/s
95th percentile per-packet one-way delay: 61.978 ms
Loss rate: 4.73%
-- Flow 1:
Average throughput: 43.12 Mbit/s
95th percentile per-packet one-way delay: 61.126 ms
Loss rate: 4.03%
-- Flow 2:
Average throughput: 27.75 Mbit/s
95th percentile per-packet one-way delay: 62.074 ms
Loss rate: 5.19%
-- Flow 3:
Average throughput: 26.95 Mbit/s
95th percentile per-packet one-way delay: 65.206 ms
Loss rate: 7.11%
Run 8: Report of Vivace-loss — Data Link
Run 9: Statistics of Vivace-loss

Start at: 2018-02-20 17:31:12
End at: 2018-02-20 17:31:42
Local clock offset: 0.859 ms
Remote clock offset: -6.406 ms

# Below is generated by plot.py at 2018-02-20 19:16:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 81.74 Mbit/s
95th percentile per-packet one-way delay: 64.827 ms
Loss rate: 6.02%
-- Flow 1:
Average throughput: 58.75 Mbit/s
95th percentile per-packet one-way delay: 65.357 ms
Loss rate: 6.54%
-- Flow 2:
Average throughput: 31.35 Mbit/s
95th percentile per-packet one-way delay: 62.028 ms
Loss rate: 4.65%
-- Flow 3:
Average throughput: 6.63 Mbit/s
95th percentile per-packet one-way delay: 62.251 ms
Loss rate: 4.96%
Run 9: Report of Vivace-loss — Data Link
Run 10: Statistics of Vivace-loss

Start at: 2018-02-20 17:58:16
End at: 2018-02-20 17:58:46
Local clock offset: -2.986 ms
Remote clock offset: -1.949 ms

# Below is generated by plot.py at 2018-02-20 19:16:39
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 82.97 Mbit/s
  95th percentile per-packet one-way delay: 64.077 ms
  Loss rate: 5.21%
-- Flow 1:
  Average throughput: 50.38 Mbit/s
  95th percentile per-packet one-way delay: 64.081 ms
  Loss rate: 5.35%
-- Flow 2:
  Average throughput: 34.85 Mbit/s
  95th percentile per-packet one-way delay: 64.514 ms
  Loss rate: 4.86%
-- Flow 3:
  Average throughput: 29.40 Mbit/s
  95th percentile per-packet one-way delay: 62.994 ms
  Loss rate: 5.35%
Run 10: Report of Vivace-loss — Data Link

![Graph showing throughput and per-packet one way delay over time for different flows.](image-url)
Run 1: Statistics of Vivace-LTE

Start at: 2018-02-20 14:02:36
End at: 2018-02-20 14:03:06
Local clock offset: 1.877 ms
Remote clock offset: -3.459 ms

# Below is generated by plot.py at 2018-02-20 19:16:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.49 Mbit/s
95th percentile per-packet one-way delay: 60.337 ms
Loss rate: 2.84%
-- Flow 1:
Average throughput: 56.43 Mbit/s
95th percentile per-packet one-way delay: 59.227 ms
Loss rate: 2.82%
-- Flow 2:
Average throughput: 39.38 Mbit/s
95th percentile per-packet one-way delay: 61.280 ms
Loss rate: 2.86%
-- Flow 3:
Average throughput: 14.81 Mbit/s
95th percentile per-packet one-way delay: 63.320 ms
Loss rate: 3.02%
Run 2: Statistics of Vivace-LTE

Start at: 2018-02-20 14:28:45
End at: 2018-02-20 14:29:15
Local clock offset: 1.474 ms
Remote clock offset: 0.06 ms

# Below is generated by plot.py at 2018-02-20 19:16:51
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 81.56 Mbit/s
  95th percentile per-packet one-way delay: 61.978 ms
  Loss rate: 2.32%
-- Flow 1:
  Average throughput: 55.04 Mbit/s
  95th percentile per-packet one-way delay: 61.450 ms
  Loss rate: 2.13%
-- Flow 2:
  Average throughput: 28.24 Mbit/s
  95th percentile per-packet one-way delay: 63.669 ms
  Loss rate: 2.22%
-- Flow 3:
  Average throughput: 23.50 Mbit/s
  95th percentile per-packet one-way delay: 61.760 ms
  Loss rate: 3.86%
Run 2: Report of Vivace-LTE — Data Link

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

Throughput (Mbps)

0 5 10 15 20 25 30

0 20 40 60 80 100

Flow 1 ingress (mean 56.24 Mbps)
Flow 1 egress (mean 55.04 Mbps)
Flow 2 ingress (mean 28.88 Mbps)
Flow 2 egress (mean 28.24 Mbps)
Flow 3 ingress (mean 24.44 Mbps)
Flow 3 egress (mean 23.50 Mbps)

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

Packet one way delay (ms)

0 30 60 90 120

Flow 1 (95th percentile 61.45 ms)
Flow 2 (95th percentile 63.67 ms)
Flow 3 (95th percentile 61.76 ms)
Run 3: Statistics of Vivace-LTE

Start at: 2018-02-20 14:55:22
End at: 2018-02-20 14:55:52
Local clock offset: 1.667 ms
Remote clock offset: -4.512 ms

# Below is generated by plot.py at 2018-02-20 19:16:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.14 Mbit/s
95th percentile per-packet one-way delay: 58.249 ms
Loss rate: 2.25%
-- Flow 1:
Average throughput: 64.11 Mbit/s
95th percentile per-packet one-way delay: 57.290 ms
Loss rate: 2.27%
-- Flow 2:
Average throughput: 26.54 Mbit/s
95th percentile per-packet one-way delay: 60.817 ms
Loss rate: 2.12%
-- Flow 3:
Average throughput: 13.28 Mbit/s
95th percentile per-packet one-way delay: 60.410 ms
Loss rate: 2.59%
Run 3: Report of Vivace-LTE — Data Link

![Graphs showing throughput and per-packet round-trip time for different flows]
Run 4: Statistics of Vivace-LTE

Start at: 2018-02-20 15:21:15
End at: 2018-02-20 15:21:45
Local clock offset: 1.235 ms
Remote clock offset: -4.69 ms

# Below is generated by plot.py at 2018-02-20 19:16:56
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 85.89 Mbit/s
  95th percentile per-packet one-way delay: 63.783 ms
  Loss rate: 1.38%
-- Flow 1:
  Average throughput: 52.99 Mbit/s
  95th percentile per-packet one-way delay: 58.277 ms
  Loss rate: 1.07%
-- Flow 2:
  Average throughput: 37.93 Mbit/s
  95th percentile per-packet one-way delay: 66.575 ms
  Loss rate: 1.72%
-- Flow 3:
  Average throughput: 23.31 Mbit/s
  95th percentile per-packet one-way delay: 69.201 ms
  Loss rate: 2.46%
Run 4: Report of Vivace-LTE — Data Link

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

- Flow 1 ingress (mean 53.58 Mbit/s)
- Flow 1 egress (mean 52.99 Mbit/s)
- Flow 2 ingress (mean 38.60 Mbit/s)
- Flow 2 egress (mean 37.93 Mbit/s)
- Flow 3 ingress (mean 23.92 Mbit/s)
- Flow 3 egress (mean 23.31 Mbit/s)

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

- Flow 1 (95th percentile 58.28 ms)
- Flow 2 (95th percentile 66.58 ms)
- Flow 3 (95th percentile 69.20 ms)
Run 5: Statistics of Vivace-LTE

Start at: 2018-02-20 15:46:21
End at: 2018-02-20 15:46:51
Local clock offset: 2.348 ms
Remote clock offset: -5.053 ms

# Below is generated by plot.py at 2018-02-20 19:17:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.98 Mbit/s
95th percentile per-packet one-way delay: 63.334 ms
Loss rate: 1.82%
-- Flow 1:
Average throughput: 58.43 Mbit/s
95th percentile per-packet one-way delay: 63.195 ms
Loss rate: 1.92%
-- Flow 2:
Average throughput: 35.87 Mbit/s
95th percentile per-packet one-way delay: 63.339 ms
Loss rate: 1.52%
-- Flow 3:
Average throughput: 8.25 Mbit/s
95th percentile per-packet one-way delay: 64.532 ms
Loss rate: 2.36%
Run 5: Report of Vivace-LTE — Data Link

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

- **Flow 1**: Ingress (mean 59.59 Mbit/s), Egress (mean 58.43 Mbit/s)
- **Flow 2**: Ingress (mean 36.42 Mbit/s), Egress (mean 35.87 Mbit/s)
- **Flow 3**: Ingress (mean 8.43 Mbit/s), Egress (mean 8.25 Mbit/s)

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

- **Flow 1**: 95th percentile 63.20 ms
- **Flow 2**: 95th percentile 63.34 ms
- **Flow 3**: 95th percentile 64.53 ms
Run 6: Statistics of Vivace-LTE

Start at: 2018-02-20 16:11:35
End at: 2018-02-20 16:12:05
Local clock offset: -1.187 ms
Remote clock offset: -5.718 ms

# Below is generated by plot.py at 2018-02-20 19:17:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 89.50 Mbit/s
  95th percentile per-packet one-way delay: 61.647 ms
  Loss rate: 2.38%
  -- Flow 1:
  Average throughput: 59.87 Mbit/s
  95th percentile per-packet one-way delay: 61.055 ms
  Loss rate: 2.41%
  -- Flow 2:
  Average throughput: 33.20 Mbit/s
  95th percentile per-packet one-way delay: 62.959 ms
  Loss rate: 2.53%
  -- Flow 3:
  Average throughput: 22.92 Mbit/s
  95th percentile per-packet one-way delay: 61.833 ms
  Loss rate: 1.75%
Run 7: Statistics of Vivace-LTE

Start at: 2018-02-20 16:36:43
End at: 2018-02-20 16:37:13
Local clock offset: -4.569 ms
Remote clock offset: -2.147 ms

# Below is generated by plot.py at 2018-02-20 19:17:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.80 Mbit/s
95th percentile per-packet one-way delay: 62.253 ms
Loss rate: 2.48%
-- Flow 1:
Average throughput: 69.12 Mbit/s
95th percentile per-packet one-way delay: 63.119 ms
Loss rate: 2.63%
-- Flow 2:
Average throughput: 17.64 Mbit/s
95th percentile per-packet one-way delay: 58.046 ms
Loss rate: 1.60%
-- Flow 3:
Average throughput: 15.04 Mbit/s
95th percentile per-packet one-way delay: 60.133 ms
Loss rate: 2.41%
Run 7: Report of Vivace-LTE — Data Link

[Graph showing throughput and per-packet one-way delay for different flows across time]
Run 8: Statistics of Vivace-LTE

Start at: 2018-02-20 17:06:07
End at: 2018-02-20 17:06:37
Local clock offset: -5.994 ms
Remote clock offset: -10.3 ms

# Below is generated by plot.py at 2018-02-20 19:17:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 81.23 Mbit/s
95th percentile per-packet one-way delay: 60.212 ms
Loss rate: 2.96%
-- Flow 1:
Average throughput: 66.55 Mbit/s
95th percentile per-packet one-way delay: 57.858 ms
Loss rate: 2.86%
-- Flow 2:
Average throughput: 14.75 Mbit/s
95th percentile per-packet one-way delay: 62.901 ms
Loss rate: 2.64%
-- Flow 3:
Average throughput: 14.84 Mbit/s
95th percentile per-packet one-way delay: 67.847 ms
Loss rate: 4.94%
Run 8: Report of Vivace-LTE — Data Link

![Graph showing data link performance over time.](image)

- **Flow 1 ingress (mean 68.51 Mbit/s)**
- **Flow 1 egress (mean 66.55 Mbit/s)**
- **Flow 2 ingress (mean 15.11 Mbit/s)**
- **Flow 2 egress (mean 14.75 Mbit/s)**
- **Flow 3 ingress (mean 15.60 Mbit/s)**
- **Flow 3 egress (mean 14.84 Mbit/s)**

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

- **Flow 1 (95th percentile 57.86 ms)**
- **Flow 2 (95th percentile 62.90 ms)**
- **Flow 3 (95th percentile 67.85 ms)**
Run 9: Statistics of Vivace-LTE

Start at: 2018-02-20 17:32:38
End at: 2018-02-20 17:33:08
Local clock offset: 1.017 ms
Remote clock offset: -6.203 ms

# Below is generated by plot.py at 2018-02-20 19:17:39
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 86.55 Mbit/s
  95th percentile per-packet one-way delay: 61.731 ms
  Loss rate: 1.86%
-- Flow 1:
  Average throughput: 66.28 Mbit/s
  95th percentile per-packet one-way delay: 60.325 ms
  Loss rate: 1.43%
-- Flow 2:
  Average throughput: 9.52 Mbit/s
  95th percentile per-packet one-way delay: 62.140 ms
  Loss rate: 2.53%
-- Flow 3:
  Average throughput: 42.35 Mbit/s
  95th percentile per-packet one-way delay: 63.954 ms
  Loss rate: 3.54%
Run 9: Report of Vivace-LTE — Data Link

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**Throughput Graph:**
- **Flow 1 ingress (mean 67.30 Mbit/s)**
- **Flow 2 ingress (mean 9.78 Mbit/s)**
- **Flow 3 ingress (mean 43.89 Mbit/s)**
- **Flow 1 egress (mean 66.28 Mbit/s)**
- **Flow 2 egress (mean 9.52 Mbit/s)**
- **Flow 3 egress (mean 42.35 Mbit/s)**

**Delay Graph:**
- **Flow 1 (95th percentile 60.33 ms)**
- **Flow 2 (95th percentile 62.14 ms)**
- **Flow 3 (95th percentile 63.95 ms)**
Run 10: Statistics of Vivace-LTE

Start at: 2018-02-20 17:59:52
End at: 2018-02-20 18:00:22
Local clock offset: -3.313 ms
Remote clock offset: -2.222 ms

# Below is generated by plot.py at 2018-02-20 19:17:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 62.78 Mbit/s
95th percentile per-packet one-way delay: 62.146 ms
Loss rate: 2.58%
-- Flow 1:
Average throughput: 36.58 Mbit/s
95th percentile per-packet one-way delay: 58.165 ms
Loss rate: 1.97%
-- Flow 2:
Average throughput: 26.55 Mbit/s
95th percentile per-packet one-way delay: 62.749 ms
Loss rate: 3.21%
-- Flow 3:
Average throughput: 25.88 Mbit/s
95th percentile per-packet one-way delay: 66.161 ms
Loss rate: 3.82%
Run 10: Report of Vivace-LTE — Data Link

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