Pantheon Report

Generated at 2018-03-14 18:39:26 (UTC).
Data path: GCE Sydney Ethernet (local) → GCE Tokyo 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).

Git summary:
branch: master @ f12c42a2c63fdd9a862eefa0468859bf379b6623
third_party/calibrated_koho @ 3cb73c0d1c0322cddf4ae446ea37a522e53227db50
  M datagrump/sender.cc
third_party/fillp @ 828bbf95fd4941149b5cc90f281d1c69ae1a5c6
third_party/genericCC @ 9249ae53d875475c4d88ca1443d28df70bff6c4a2
third_party/indigo @ a9b2060d39e4d4a2e8987e893e3eca2a6c7c0db9
third_party/indigo-1-layer-128-unit @ 3ae9e4e4230db7484501f82ce8b377695f2f66d
third_party/indigo-1-layer-32-unit @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/indigo-1-layer-no-calib @ 1f3a7f75b41135ed5b540c0f3505939528e2a5f
third_party/indigo-no-calib @ 7224f2202e8a044d8306fa0b983ad84360c53d89
third_party/koho_cc @ f0f2e693303ae82ea808e6928eacff1083681
  M datagrump/sender.cc
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ fb1053193c2861da659ba9013db26744ccfcf993
third_party/pcc @ 1afcc958fa0d66d18b623c091a55fe872b4981e1
  M receiver/src/buffer.h
  M receiver/src/core.cpp
  M sender/src/buffer.h
  M sender/src/core.cpp
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3ff42
third_party/scream @ c3370df7bd17265a79ae34e016ad23f5965885
third_party/sourdough @ f1a14bffe749737437f61b1ae6b302b67cde681
third_party/sprout @ 6f2e3ee6e088d91066a9f023df375ee2665089ce
  M src/examples/cellsim.cc
  M src/examples/sproutbt2.cc
  M src/network/sproutcomm.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
  M src/verus.hpp
  M tools/plot.py
third_party/vivace @ 7a4ba531e75b4a6f66f5c4580192120401784ce3
third_party/webrtc @ a488197dd041ace68a42849b2540ad34825f42
test from GCE Sydney Ethernet to GCE Tokyo Ethernet, 10 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)
<table>
<thead>
<tr>
<th>scheme</th>
<th># runs</th>
<th>mean avg tput (Mbit/s)</th>
<th>mean 95th-%ile delay (ms)</th>
<th>mean loss rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>flow 1</td>
<td>flow 2</td>
<td>flow 3</td>
</tr>
<tr>
<td>TCP BBR</td>
<td>10</td>
<td>215.58</td>
<td>210.65</td>
<td>204.50</td>
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<td>TCP Cubic</td>
<td>10</td>
<td>192.74</td>
<td>191.53</td>
<td>103.08</td>
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<td>LEDBAT</td>
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<td>32.16</td>
<td>21.37</td>
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<td>122.08</td>
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<td>34.58</td>
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<td>75.11</td>
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<td>627.50</td>
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<td>209.42</td>
<td>115.46</td>
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<td>250.61</td>
<td>142.11</td>
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<td>Vivace-LTE</td>
<td>10</td>
<td>266.26</td>
<td>240.99</td>
<td>185.88</td>
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</tbody>
</table>
Run 1: Statistics of TCP BBR

Start at: 2018-03-14 10:10:07
End at: 2018-03-14 10:10:37

# Below is generated by plot.py at 2018-03-14 16:00:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 423.27 Mbit/s
95th percentile per-packet one-way delay: 64.173 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 216.71 Mbit/s
95th percentile per-packet one-way delay: 63.043 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 204.27 Mbit/s
95th percentile per-packet one-way delay: 63.642 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 212.86 Mbit/s
95th percentile per-packet one-way delay: 67.824 ms
Loss rate: 0.19%
Run 1: Report of TCP BBR — Data Link
Run 2: Statistics of TCP BBR

Start at: 2018-03-14 10:27:39
End at: 2018-03-14 10:28:09

# Below is generated by plot.py at 2018-03-14 16:00:16
# Datalink statistics
-- Total of 3 flows:
 Average throughput: 419.03 Mbit/s
 95th percentile per-packet one-way delay: 63.530 ms
 Loss rate: 0.00%
-- Flow 1:
 Average throughput: 212.63 Mbit/s
 95th percentile per-packet one-way delay: 61.464 ms
 Loss rate: 0.00%
-- Flow 2:
 Average throughput: 210.12 Mbit/s
 95th percentile per-packet one-way delay: 63.490 ms
 Loss rate: 0.00%
-- Flow 3:
 Average throughput: 200.23 Mbit/s
 95th percentile per-packet one-way delay: 67.142 ms
 Loss rate: 0.00%
Run 2: Report of TCP BBR — Data Link

![Throughput Graph](image1)

![Delay Graph](image2)

Legend:
- Flow 1 ingress: mean 212.66 Mbit/s
- Flow 1 egress: mean 212.63 Mbit/s
- Flow 2 ingress: mean 210.16 Mbit/s
- Flow 2 egress: mean 210.12 Mbit/s
- Flow 3 ingress: mean 290.29 Mbit/s
- Flow 3 egress: mean 290.23 Mbit/s

Legend:
- Flow 1: 95th percentile 61.46 ms
- Flow 2: 95th percentile 63.49 ms
- Flow 3: 95th percentile 67.14 ms
Run 3: Statistics of TCP BBR

Start at: 2018-03-14 10:45:04
End at: 2018-03-14 10:45:34

# Below is generated by plot.py at 2018-03-14 16:00:23
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 427.98 Mbit/s
  95th percentile per-packet one-way delay: 61.826 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 219.17 Mbit/s
  95th percentile per-packet one-way delay: 60.605 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 214.65 Mbit/s
  95th percentile per-packet one-way delay: 62.173 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 198.79 Mbit/s
  95th percentile per-packet one-way delay: 63.386 ms
  Loss rate: 0.00%
Run 3: Report of TCP BBR — Data Link
Run 4: Statistics of TCP BBR

Start at: 2018-03-14 11:02:10
End at: 2018-03-14 11:02:40

# Below is generated by plot.py at 2018-03-14 16:00:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 433.55 Mbit/s
95th percentile per-packet one-way delay: 65.656 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 219.02 Mbit/s
95th percentile per-packet one-way delay: 65.343 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 217.12 Mbit/s
95th percentile per-packet one-way delay: 65.916 ms
Loss rate: 0.13%
-- Flow 3:
Average throughput: 212.07 Mbit/s
95th percentile per-packet one-way delay: 65.749 ms
Loss rate: 0.00%
Run 4: Report of TCP BBR — Data Link

![Data Link Throughput Chart](chart1.png)

- Flow 1 ingress (mean 219.12 Mbits/s)
- Flow 1 egress (mean 219.02 Mbits/s)
- Flow 2 ingress (mean 217.68 Mbits/s)
- Flow 2 egress (mean 217.12 Mbits/s)
- Flow 3 ingress (mean 212.17 Mbits/s)
- Flow 3 egress (mean 212.07 Mbits/s)

![Data Link Per-packet One Way Delay Chart](chart2.png)

- Flow 1 (95th percentile 65.34 ms)
- Flow 2 (95th percentile 65.92 ms)
- Flow 3 (95th percentile 65.75 ms)
Run 5: Statistics of TCP BBR

Start at: 2018-03-14 11:19:27
End at: 2018-03-14 11:19:57

# Below is generated by plot.py at 2018-03-14 16:00:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 422.19 Mbit/s
95th percentile per-packet one-way delay: 64.225 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 215.08 Mbit/s
95th percentile per-packet one-way delay: 63.955 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 208.25 Mbit/s
95th percentile per-packet one-way delay: 64.403 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 206.39 Mbit/s
95th percentile per-packet one-way delay: 64.489 ms
Loss rate: 0.05%
Run 5: Report of TCP BBR — Data Link

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

Flow 1 ingress (mean 215.13 Mbit/s) — Flow 1 egress (mean 215.08 Mbit/s)
Flow 2 ingress (mean 208.34 Mbit/s) — Flow 2 egress (mean 208.25 Mbit/s)
Flow 3 ingress (mean 206.53 Mbit/s) — Flow 3 egress (mean 206.39 Mbit/s)

Flow 1 (95th percentile 63.95 ms) — Flow 2 (95th percentile 64.40 ms) — Flow 3 (95th percentile 64.49 ms)
Run 6: Statistics of TCP BBR

Start at: 2018-03-14 11:36:36
End at: 2018-03-14 11:37:06

# Below is generated by plot.py at 2018-03-14 16:00:35
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 424.70 Mbit/s
  95th percentile per-packet one-way delay: 64.774 ms
  Loss rate: 0.01%
-- Flow 1:
  Average throughput: 215.23 Mbit/s
  95th percentile per-packet one-way delay: 62.574 ms
  Loss rate: 0.01%
-- Flow 2:
  Average throughput: 210.89 Mbit/s
  95th percentile per-packet one-way delay: 65.048 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 208.31 Mbit/s
  95th percentile per-packet one-way delay: 67.364 ms
  Loss rate: 0.02%
Run 6: Report of TCP BBR — Data Link

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

*Flow 1 ingress (mean 215.24 Mbps)*
*Flow 1 egress (mean 215.23 Mbps)*
*Flow 2 ingress (mean 210.90 Mbps)*
*Flow 2 egress (mean 210.89 Mbps)*
*Flow 3 ingress (mean 208.36 Mbps)*
*Flow 3 egress (mean 208.31 Mbps)*

*Flow 1 (95th percentile 62.57 ms)*
*Flow 2 (95th percentile 65.05 ms)*
*Flow 3 (95th percentile 67.36 ms)*
Run 7: Statistics of TCP BBR

Start at: 2018-03-14 11:53:56
End at: 2018-03-14 11:54:26

# Below is generated by plot.py at 2018-03-14 16:00:35
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 414.44 Mbit/s
  95th percentile per-packet one-way delay: 63.228 ms
  Loss rate: 0.02%
-- Flow 1:
  Average throughput: 206.79 Mbit/s
  95th percentile per-packet one-way delay: 62.956 ms
  Loss rate: 0.02%
-- Flow 2:
  Average throughput: 211.70 Mbit/s
  95th percentile per-packet one-way delay: 63.779 ms
  Loss rate: 0.03%
-- Flow 3:
  Average throughput: 201.27 Mbit/s
  95th percentile per-packet one-way delay: 62.830 ms
  Loss rate: 0.00%
Run 7: Report of TCP BBR — Data Link

![Graph of Throughput vs Time](image)

- Flow 1 ingress (mean 206.83 Mbit/s)
- Flow 1 egress (mean 206.79 Mbit/s)
- Flow 2 ingress (mean 211.74 Mbit/s)
- Flow 2 egress (mean 211.70 Mbit/s)
- Flow 3 ingress (mean 201.36 Mbit/s)
- Flow 3 egress (mean 201.27 Mbit/s)

![Graph of Per-packet one-way delay vs Time](image)

- Flow 1 (95th percentile 62.96 ms)
- Flow 2 (95th percentile 63.78 ms)
- Flow 3 (95th percentile 62.83 ms)
Run 8: Statistics of TCP BBR

Start at: 2018-03-14 12:11:17
End at: 2018-03-14 12:11:47

# Below is generated by plot.py at 2018-03-14 16:00:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 416.07 Mbit/s
95th percentile per-packet one-way delay: 64.177 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 217.67 Mbit/s
95th percentile per-packet one-way delay: 63.791 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 201.77 Mbit/s
95th percentile per-packet one-way delay: 65.278 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 193.20 Mbit/s
95th percentile per-packet one-way delay: 63.506 ms
Loss rate: 0.11%
Run 8: Report of TCP BBR — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 217.74 Mbps)
Flow 1 egress (mean 217.67 Mbps)
Flow 2 ingress (mean 201.92 Mbps)
Flow 2 egress (mean 201.77 Mbps)
Flow 3 ingress (mean 193.47 Mbps)
Flow 3 egress (mean 193.20 Mbps)

Per-packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 63.79 ms)
Flow 2 (95th percentile 65.28 ms)
Flow 3 (95th percentile 65.51 ms)
Run 9: Statistics of TCP BBR

Start at: 2018-03-14 12:28:38
End at: 2018-03-14 12:29:08

# Below is generated by plot.py at 2018-03-14 16:09:16
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 426.06 Mbit/s
  95th percentile per-packet one-way delay: 65.722 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 216.54 Mbit/s
  95th percentile per-packet one-way delay: 64.361 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 213.28 Mbit/s
  95th percentile per-packet one-way delay: 64.880 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 203.63 Mbit/s
  95th percentile per-packet one-way delay: 69.607 ms
  Loss rate: 0.00%
Run 9: Report of TCP BBR — Data Link

![Graph 1: Throughput vs Time]

- Flow 1 ingress (mean 216.54 Mbit/s)
- Flow 1 egress (mean 216.54 Mbit/s)
- Flow 2 ingress (mean 213.27 Mbit/s)
- Flow 2 egress (mean 213.28 Mbit/s)
- Flow 3 ingress (mean 203.68 Mbit/s)
- Flow 3 egress (mean 203.63 Mbit/s)

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

- Flow 1 (95th percentile 64.36 ms)
- Flow 2 (95th percentile 64.88 ms)
- Flow 3 (95th percentile 69.61 ms)
Run 10: Statistics of TCP BBR

Start at: 2018-03-14 12:45:50
End at: 2018-03-14 12:46:20

# Below is generated by plot.py at 2018-03-14 16:09:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 428.82 Mbit/s
95th percentile per-packet one-way delay: 60.560 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 216.96 Mbit/s
95th percentile per-packet one-way delay: 60.530 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 214.48 Mbit/s
95th percentile per-packet one-way delay: 60.766 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 208.28 Mbit/s
95th percentile per-packet one-way delay: 60.369 ms
Loss rate: 0.01%
Run 10: Report of TCP BBR — Data Link

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

- Flow 1 ingress (mean 216.95 Mbit/s)
- Flow 1 egress (mean 216.96 Mbit/s)
- Flow 2 ingress (mean 214.45 Mbit/s)
- Flow 2 egress (mean 214.48 Mbit/s)
- Flow 3 ingress (mean 208.23 Mbit/s)
- Flow 3 egress (mean 208.28 Mbit/s)

![Graph showing per-packet one-way delays for different flows.]
Run 1: Statistics of TCP Cubic

Start at: 2018-03-14 09:57:37
End at: 2018-03-14 09:58:07

# Below is generated by plot.py at 2018-03-14 16:09:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 419.81 Mbit/s
95th percentile per-packet one-way delay: 71.948 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 219.66 Mbit/s
95th percentile per-packet one-way delay: 68.314 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 199.79 Mbit/s
95th percentile per-packet one-way delay: 71.937 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 202.59 Mbit/s
95th percentile per-packet one-way delay: 86.086 ms
Loss rate: 0.00%
Run 2: Statistics of TCP Cubic

Start at: 2018-03-14 10:14:37
End at: 2018-03-14 10:15:07

# Below is generated by plot.py at 2018-03-14 16:09:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 364.13 Mbit/s
  95th percentile per-packet one-way delay: 61.771 ms
  Loss rate: 0.02%
-- Flow 1:
  Average throughput: 212.13 Mbit/s
  95th percentile per-packet one-way delay: 62.433 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 122.02 Mbit/s
  95th percentile per-packet one-way delay: 57.819 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 213.61 Mbit/s
  95th percentile per-packet one-way delay: 62.420 ms
  Loss rate: 0.08%
Run 2: Report of TCP Cubic — Data Link
Run 3: Statistics of TCP Cubic

Start at: 2018-03-14 10:32:18
End at: 2018-03-14 10:32:48

# Below is generated by plot.py at 2018-03-14 16:09:30
# Datalink statistics
-- Total of 3 flows:
   Average throughput: 336.15 Mbit/s
   95th percentile per-packet one-way delay: 62.053 ms
   Loss rate: 0.00%
-- Flow 1:
   Average throughput: 176.62 Mbit/s
   95th percentile per-packet one-way delay: 62.320 ms
   Loss rate: 0.00%
-- Flow 2:
   Average throughput: 145.35 Mbit/s
   95th percentile per-packet one-way delay: 62.054 ms
   Loss rate: 0.01%
-- Flow 3:
   Average throughput: 190.25 Mbit/s
   95th percentile per-packet one-way delay: 60.987 ms
   Loss rate: 0.00%
Run 3: Report of TCP Cubic — Data Link
Run 4: Statistics of TCP Cubic

Start at: 2018-03-14 10:49:31
End at: 2018-03-14 10:50:01

# Below is generated by plot.py at 2018-03-14 16:09:31
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 321.01 Mbit/s
  95th percentile per-packet one-way delay: 60.872 ms
  Loss rate: 0.03%
-- Flow 1:
  Average throughput: 181.33 Mbit/s
  95th percentile per-packet one-way delay: 58.724 ms
  Loss rate: 0.05%
-- Flow 2:
  Average throughput: 207.29 Mbit/s
  95th percentile per-packet one-way delay: 62.661 ms
  Loss rate: 0.01%
-- Flow 3:
  Average throughput: 4.99 Mbit/s
  95th percentile per-packet one-way delay: 54.243 ms
  Loss rate: 0.19%
Run 4: Report of TCP Cubic — Data Link

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

- Flow 1 ingress (mean 181.41 Mbit/s) vs. Flow 1 egress (mean 181.33 Mbit/s)
- Flow 2 ingress (mean 207.28 Mbit/s) vs. Flow 2 egress (mean 207.29 Mbit/s)
- Flow 3 ingress (mean 5.90 Mbit/s) vs. Flow 3 egress (mean 4.99 Mbit/s)
Run 5: Statistics of TCP Cubic

Start at: 2018-03-14 11:06:41
End at: 2018-03-14 11:07:11

# Below is generated by plot.py at 2018-03-14 16:09:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 360.67 Mbit/s
95th percentile per-packet one-way delay: 61.916 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 219.53 Mbit/s
95th percentile per-packet one-way delay: 61.359 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 209.60 Mbit/s
95th percentile per-packet one-way delay: 62.773 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 5.06 Mbit/s
95th percentile per-packet one-way delay: 57.776 ms
Loss rate: 0.12%
Run 5: Report of TCP Cubic — Data Link

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

- Flow 1 ingress (mean 219.62 Mbit/s)
- Flow 1 egress (mean 219.53 Mbit/s)
- Flow 2 ingress (mean 209.55 Mbit/s)
- Flow 2 egress (mean 209.60 Mbit/s)
- Flow 3 ingress (mean 5.07 Mbit/s)
- Flow 3 egress (mean 5.06 Mbit/s)
Run 6: Statistics of TCP Cubic

Start at: 2018-03-14 11:23:55
End at: 2018-03-14 11:24:25

# Below is generated by plot.py at 2018-03-14 16:09:31
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 361.44 Mbit/s
  95th percentile per-packet one-way delay: 62.609 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 214.13 Mbit/s
  95th percentile per-packet one-way delay: 62.282 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 218.34 Mbit/s
  95th percentile per-packet one-way delay: 62.996 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 5.75 Mbit/s
  95th percentile per-packet one-way delay: 59.533 ms
  Loss rate: 0.04%
Run 6: Report of TCP Cubic — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 214.11 Mbps)  Flow 1 egress (mean 214.33 Mbps)
Flow 2 ingress (mean 218.37 Mbps)  Flow 2 egress (mean 218.34 Mbps)
Flow 3 ingress (mean 5.75 Mbps)    Flow 3 egress (mean 5.75 Mbps)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 62.28 ms)  Flow 2 (95th percentile 63.00 ms)  Flow 3 (95th percentile 59.53 ms)
Run 7: Statistics of TCP Cubic

Start at: 2018-03-14 11:41:05  
End at: 2018-03-14 11:41:35

# Below is generated by plot.py at 2018-03-14 16:14:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 340.67 Mbit/s
95th percentile per-packet one-way delay: 62.722 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 143.10 Mbit/s
95th percentile per-packet one-way delay: 61.366 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 204.81 Mbit/s
95th percentile per-packet one-way delay: 63.701 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 184.56 Mbit/s
95th percentile per-packet one-way delay: 63.468 ms
Loss rate: 0.00%
Run 7: Report of TCP Cubic — Data Link

---

**Throughput (Mbps)**

- **Flow 1 ingress** (mean 143.14 Mbps)
- **Flow 1 egress** (mean 143.10 Mbps)
- **Flow 2 ingress** (mean 204.88 Mbps)
- **Flow 2 egress** (mean 204.81 Mbps)
- **Flow 3 ingress** (mean 194.57 Mbps)
- **Flow 3 egress** (mean 184.56 Mbps)

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

- **Flow 1** (95th percentile 61.37 ms)
- **Flow 2** (95th percentile 63.70 ms)
- **Flow 3** (95th percentile 63.47 ms)
Run 8: Statistics of TCP Cubic

Start at: 2018-03-14 11:58:29
End at: 2018-03-14 11:58:59

# Below is generated by plot.py at 2018-03-14 16:15:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 360.06 Mbit/s
95th percentile per-packet one-way delay: 63.315 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 225.07 Mbit/s
95th percentile per-packet one-way delay: 63.251 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 200.44 Mbit/s
95th percentile per-packet one-way delay: 63.488 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 4.58 Mbit/s
95th percentile per-packet one-way delay: 57.560 ms
Loss rate: 0.26%
Run 8: Report of TCP Cubic — Data Link

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

- Flow 1 ingress (mean 225.21 Mbps)
- Flow 1 egress (mean 223.07 Mbps)
- Flow 2 ingress (mean 200.47 Mbps)
- Flow 2 egress (mean 200.44 Mbps)
- Flow 3 ingress (mean 4.59 Mbps)
- Flow 3 egress (mean 4.58 Mbps)

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

- Flow 1 (95th percentile 63.25 ms)
- Flow 2 (95th percentile 63.49 ms)
- Flow 3 (95th percentile 57.56 ms)
Run 9: Statistics of TCP Cubic

Start at: 2018-03-14 12:15:49
End at: 2018-03-14 12:16:19

# Below is generated by plot.py at 2018-03-14 16:16:07
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 369.99 Mbit/s
  95th percentile per-packet one-way delay: 64.924 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 220.65 Mbit/s
  95th percentile per-packet one-way delay: 63.724 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 222.35 Mbit/s
  95th percentile per-packet one-way delay: 66.226 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 4.45 Mbit/s
  95th percentile per-packet one-way delay: 56.558 ms
  Loss rate: 0.27%
Run 9: Report of TCP Cubic — Data Link

![Graph of TCP Cubic Data Link]

- Flow 1 ingress (mean 220.67 Mbit/s)
- Flow 1 egress (mean 220.65 Mbit/s)
- Flow 2 ingress (mean 222.39 Mbit/s)
- Flow 2 egress (mean 222.35 Mbit/s)
- Flow 3 ingress (mean 4.46 Mbit/s)
- Flow 3 egress (mean 4.45 Mbit/s)

![Graph of Per-packet one way delay]

- Flow 1 (95th percentile 63.72 ms)
- Flow 2 (95th percentile 66.23 ms)
- Flow 3 (95th percentile 56.56 ms)
Run 10: Statistics of TCP Cubic

Start at: 2018-03-14 12:33:12
End at: 2018-03-14 12:33:42

# Below is generated by plot.py at 2018-03-14 16:16:07
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 308.67 Mbit/s
  95th percentile per-packet one-way delay: 62.910 ms
  Loss rate: 0.02%
-- Flow 1:
  Average throughput: 115.14 Mbit/s
  95th percentile per-packet one-way delay: 57.321 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 185.27 Mbit/s
  95th percentile per-packet one-way delay: 63.179 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 214.91 Mbit/s
  95th percentile per-packet one-way delay: 66.713 ms
  Loss rate: 0.08%
Run 10: Report of TCP Cubic — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 115.16 Mbps)
  - Flow 1 egress (mean 115.14 Mbps)
  - Flow 2 ingress (mean 185.32 Mbps)
  - Flow 2 egress (mean 185.27 Mbps)
  - Flow 3 ingress (mean 215.16 Mbps)
  - Flow 3 egress (mean 214.91 Mbps)

- **Per-packet one-way delay (ms):**
  - Flow 1 (95th percentile 57.32 ms)
  - Flow 2 (95th percentile 63.18 ms)
  - Flow 3 (95th percentile 66.71 ms)
Run 1: Statistics of LEDBAT

Start at: 2018-03-14 10:01:30
End at: 2018-03-14 10:02:00

# Below is generated by plot.py at 2018-03-14 16:16:07
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 51.32 Mbit/s
  95th percentile per-packet one-way delay: 52.359 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 34.51 Mbit/s
  95th percentile per-packet one-way delay: 52.498 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 19.91 Mbit/s
  95th percentile per-packet one-way delay: 52.096 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 10.84 Mbit/s
  95th percentile per-packet one-way delay: 51.861 ms
  Loss rate: 0.00%
Run 1: Report of LEDBAT — Data Link

![Graph of throughput over time with different colored lines representing different flows and their ingress and egress data rates.](image1)

![Graph of per-packet round-trip delay over time with different colored markers representing different flows and their 95th percentile delays.](image2)
Run 2: Statistics of LEDBAT

Start at: 2018-03-14 10:18:52
End at: 2018-03-14 10:19:22

# Below is generated by plot.py at 2018-03-14 16:16:07
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 46.64 Mbit/s
  95th percentile per-packet one-way delay: 52.422 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 27.73 Mbit/s
  95th percentile per-packet one-way delay: 52.514 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 22.72 Mbit/s
  95th percentile per-packet one-way delay: 52.284 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 11.51 Mbit/s
  95th percentile per-packet one-way delay: 52.214 ms
  Loss rate: 0.00%
Run 2: Report of LEDBAT — Data Link

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

<table>
<thead>
<tr>
<th>Flow</th>
<th>Ingress (mean)</th>
<th>Egress (mean)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow 1</td>
<td>27.73 Mbit/s</td>
<td>27.73 Mbit/s</td>
</tr>
<tr>
<td>Flow 2</td>
<td>22.72 Mbit/s</td>
<td>22.72 Mbit/s</td>
</tr>
<tr>
<td>Flow 3</td>
<td>11.51 Mbit/s</td>
<td>11.51 Mbit/s</td>
</tr>
</tbody>
</table>

![Graph showing packet delay for each flow.](image-url)

<table>
<thead>
<tr>
<th>Flow</th>
<th>95th percentile (ms)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow 1</td>
<td>52.51 ms</td>
</tr>
<tr>
<td>Flow 2</td>
<td>52.28 ms</td>
</tr>
<tr>
<td>Flow 3</td>
<td>52.21 ms</td>
</tr>
</tbody>
</table>
Run 3: Statistics of LEDBAT

Start at: 2018-03-14 10:36:28
End at: 2018-03-14 10:36:58

# Below is generated by plot.py at 2018-03-14 16:16:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 51.61 Mbit/s
95th percentile per-packet one-way delay: 52.371 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 33.21 Mbit/s
95th percentile per-packet one-way delay: 52.369 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 22.61 Mbit/s
95th percentile per-packet one-way delay: 52.426 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 10.38 Mbit/s
95th percentile per-packet one-way delay: 52.029 ms
Loss rate: 0.00%
Run 3: Report of LEDBAT — Data Link

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

- Flow 1 ingress (mean 33.20 Mbit/s)
- Flow 1 egress (mean 33.21 Mbit/s)
- Flow 2 ingress (mean 22.61 Mbit/s)
- Flow 2 egress (mean 22.61 Mbit/s)
- Flow 3 ingress (mean 10.38 Mbit/s)
- Flow 3 egress (mean 10.38 Mbit/s)

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

- Flow 1 (95th percentile 52.37 ms)
- Flow 2 (95th percentile 52.43 ms)
- Flow 3 (95th percentile 52.03 ms)
Run 4: Statistics of LEDBAT

Start at: 2018-03-14 10:53:31
End at: 2018-03-14 10:54:01

# Below is generated by plot.py at 2018-03-14 16:16:07
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 50.06 Mbit/s
  95th percentile per-packet one-way delay: 52.704 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 32.02 Mbit/s
  95th percentile per-packet one-way delay: 52.887 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 21.64 Mbit/s
  95th percentile per-packet one-way delay: 52.419 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 11.04 Mbit/s
  95th percentile per-packet one-way delay: 51.927 ms
  Loss rate: 0.00%
Run 4: Report of LEDBAT — Data Link

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

- Flow 1 ingress (mean 32.02 Mbit/s)
- Flow 1 egress (mean 32.02 Mbit/s)
- Flow 2 ingress (mean 21.64 Mbit/s)
- Flow 2 egress (mean 21.64 Mbit/s)
- Flow 3 ingress (mean 11.04 Mbit/s)
- Flow 3 egress (mean 11.04 Mbit/s)
Run 5: Statistics of LEDBAT

Start at: 2018-03-14 11:10:49
End at: 2018-03-14 11:11:19

# Below is generated by plot.py at 2018-03-14 16:16:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 49.35 Mbit/s
95th percentile per-packet one-way delay: 52.355 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 34.27 Mbit/s
95th percentile per-packet one-way delay: 52.493 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 17.25 Mbit/s
95th percentile per-packet one-way delay: 52.136 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 11.06 Mbit/s
95th percentile per-packet one-way delay: 52.541 ms
Loss rate: 0.00%
Run 5: Report of LEDBAT — Data Link

---

**Graph 1:**

- **X-axis:** Time (s)
- **Y-axis:** Throughput (Mbps)
- **Legend:**
  - Blue dashed line: Flow 1 ingress (mean 34.27 Mbps)
  - Blue solid line: Flow 1 egress (mean 34.27 Mbps)
  - Green dashed line: Flow 2 ingress (mean 17.23 Mbps)
  - Green solid line: Flow 2 egress (mean 17.25 Mbps)
  - Red dashed line: Flow 3 ingress (mean 11.06 Mbps)
  - Red solid line: Flow 3 egress (mean 11.06 Mbps)

**Graph 2:**

- **X-axis:** Time (s)
- **Y-axis:** Per packet one way delay (ms)
- **Legend:**
  - Blue line: Flow 1 (95th percentile 52.49 ms)
  - Green line: Flow 2 (95th percentile 52.14 ms)
  - Red line: Flow 3 (95th percentile 52.54 ms)
Run 6: Statistics of LEDBAT

Start at: 2018-03-14 11:28:07
End at: 2018-03-14 11:28:37

# Below is generated by plot.py at 2018-03-14 16:16:07
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 50.62 Mbit/s
  95th percentile per-packet one-way delay: 52.652 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 32.74 Mbit/s
  95th percentile per-packet one-way delay: 52.782 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 21.73 Mbit/s
  95th percentile per-packet one-way delay: 52.389 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 10.54 Mbit/s
  95th percentile per-packet one-way delay: 51.912 ms
  Loss rate: 0.00%
Run 6: Report of LEDBAT — Data Link
Run 7: Statistics of LEDBAT

Start at: 2018-03-14 11:45:20
End at: 2018-03-14 11:45:50

# Below is generated by plot.py at 2018-03-14 16:16:07
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 47.24 Mbit/s
  95th percentile per-packet one-way delay: 52.605 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 29.61 Mbit/s
  95th percentile per-packet one-way delay: 52.695 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 21.29 Mbit/s
  95th percentile per-packet one-way delay: 52.641 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 10.60 Mbit/s
  95th percentile per-packet one-way delay: 51.722 ms
  Loss rate: 0.00%
Run 7: Report of LEDBAT — Data Link

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

- Flow 1 ingress (mean 29.62 Mbit/s)
- Flow 1 egress (mean 29.61 Mbit/s)
- Flow 2 ingress (mean 21.29 Mbit/s)
- Flow 2 egress (mean 21.29 Mbit/s)
- Flow 3 ingress (mean 10.59 Mbit/s)
- Flow 3 egress (mean 10.60 Mbit/s)

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

- Flow 1 (95th percentile 52.70 ms)
- Flow 2 (95th percentile 52.64 ms)
- Flow 3 (95th percentile 51.72 ms)
Run 8: Statistics of LEDBAT

Start at: 2018-03-14 12:02:37
End at: 2018-03-14 12:03:07

# Below is generated by plot.py at 2018-03-14 16:16:07
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 49.44 Mbit/s
  95th percentile per-packet one-way delay: 52.432 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 31.15 Mbit/s
  95th percentile per-packet one-way delay: 52.247 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 21.80 Mbit/s
  95th percentile per-packet one-way delay: 53.019 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 11.69 Mbit/s
  95th percentile per-packet one-way delay: 52.623 ms
  Loss rate: 0.00%
Run 8: Report of LEDBAT — Data Link

![Graph 1: Throughput over time showing different flow rates.

Graph 2: Per packet one-way delay over time showing variability.

Legend:
- Flow 1 ingress (mean 31.15 Mbit/s)
- Flow 1 egress (mean 31.15 Mbit/s)
- Flow 2 ingress (mean 21.80 Mbit/s)
- Flow 2 egress (mean 21.80 Mbit/s)
- Flow 3 ingress (mean 11.69 Mbit/s)
- Flow 3 egress (mean 11.69 Mbit/s)
Run 9: Statistics of LEDBAT

Start at: 2018-03-14 12:20:05
End at: 2018-03-14 12:20:35

# Below is generated by plot.py at 2018-03-14 16:16:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 53.14 Mbit/s
95th percentile per-packet one-way delay: 52.773 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 34.73 Mbit/s
95th percentile per-packet one-way delay: 52.906 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 22.52 Mbit/s
95th percentile per-packet one-way delay: 52.773 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 10.39 Mbit/s
95th percentile per-packet one-way delay: 51.994 ms
Loss rate: 0.00%
Run 9: Report of LEDBAT — Data Link

![Graph showing throughput and round-trip delay over time for different flows.](image-url)
Run 10: Statistics of LEDBAT

Start at: 2018-03-14 12:37:13
End at: 2018-03-14 12:37:43

# Below is generated by plot.py at 2018-03-14 16:16:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 50.05 Mbit/s
95th percentile per-packet one-way delay: 54.691 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 31.60 Mbit/s
95th percentile per-packet one-way delay: 54.807 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 22.22 Mbit/s
95th percentile per-packet one-way delay: 54.488 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 11.25 Mbit/s
95th percentile per-packet one-way delay: 51.638 ms
Loss rate: 0.00%
Run 10: Report of LEDBAT — Data Link

![Graph of Throughput and Packet Delay](image-url)
Run 1: Statistics of PCC

Start at: 2018-03-14 10:09:08
End at: 2018-03-14 10:09:38

# Below is generated by plot.py at 2018-03-14 16:23:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 521.30 Mbit/s
95th percentile per-packet one-way delay: 295.870 ms
Loss rate: 7.32%
-- Flow 1:
Average throughput: 425.72 Mbit/s
95th percentile per-packet one-way delay: 304.328 ms
Loss rate: 8.78%
-- Flow 2:
Average throughput: 128.30 Mbit/s
95th percentile per-packet one-way delay: 163.936 ms
Loss rate: 0.17%
-- Flow 3:
Average throughput: 31.13 Mbit/s
95th percentile per-packet one-way delay: 164.854 ms
Loss rate: 0.27%
Run 1: Report of PCC — Data Link

![Graph showing throughput and packet delay over time for different flows.]
Run 2: Statistics of PCC

Start at: 2018-03-14 10:26:35
End at: 2018-03-14 10:27:05

# Below is generated by plot.py at 2018-03-14 16:25:15
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 585.18 Mbit/s
  95th percentile per-packet one-way delay: 246.329 ms
  Loss rate: 2.28%
-- Flow 1:
  Average throughput: 541.11 Mbit/s
  95th percentile per-packet one-way delay: 246.695 ms
  Loss rate: 2.38%
-- Flow 2:
  Average throughput: 65.31 Mbit/s
  95th percentile per-packet one-way delay: 162.965 ms
  Loss rate: 0.99%
-- Flow 3:
  Average throughput: 2.08 Mbit/s
  95th percentile per-packet one-way delay: 163.133 ms
  Loss rate: 1.79%
Run 2: Report of PCC — Data Link
Run 3: Statistics of PCC

Start at: 2018-03-14 10:44:04
End at: 2018-03-14 10:44:34

# Below is generated by plot.py at 2018-03-14 16:25:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 573.84 Mbit/s
95th percentile per-packet one-way delay: 209.128 ms
Loss rate: 3.31%
-- Flow 1:
Average throughput: 476.58 Mbit/s
95th percentile per-packet one-way delay: 217.711 ms
Loss rate: 3.69%
-- Flow 2:
Average throughput: 130.73 Mbit/s
95th percentile per-packet one-way delay: 164.918 ms
Loss rate: 1.34%
-- Flow 3:
Average throughput: 31.84 Mbit/s
95th percentile per-packet one-way delay: 165.603 ms
Loss rate: 2.25%
Run 3: Report of PCC — Data Link

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

- Flow 1 ingress (mean 494.83 Mbit/s)
- Flow 1 egress (mean 476.58 Mbit/s)
- Flow 2 ingress (mean 132.48 Mbit/s)
- Flow 2 egress (mean 130.73 Mbit/s)
- Flow 3 ingress (mean 32.59 Mbit/s)
- Flow 3 egress (mean 31.84 Mbit/s)

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

- Flow 1 (95th percentile 217.71 ms)
- Flow 2 (95th percentile 164.92 ms)
- Flow 3 (95th percentile 165.60 ms)
Run 4: Statistics of PCC

Start at: 2018-03-14 11:01:10
End at: 2018-03-14 11:01:40

# Below is generated by plot.py at 2018-03-14 16:25:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 561.47 Mbit/s
95th percentile per-packet one-way delay: 215.920 ms
Loss rate: 2.41%
-- Flow 1:
Average throughput: 448.89 Mbit/s
95th percentile per-packet one-way delay: 225.317 ms
Loss rate: 2.92%
-- Flow 2:
Average throughput: 138.96 Mbit/s
95th percentile per-packet one-way delay: 160.729 ms
Loss rate: 0.25%
-- Flow 3:
Average throughput: 61.42 Mbit/s
95th percentile per-packet one-way delay: 162.521 ms
Loss rate: 0.47%
Run 4: Report of PCC — Data Link

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

![Graph 2: Pre-packet one-way delay over Time](image)

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Run 5: Statistics of PCC

Start at: 2018-03-14 11:18:27
End at: 2018-03-14 11:18:57

# Below is generated by plot.py at 2018-03-14 16:27:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 554.79 Mbit/s
95th percentile per-packet one-way delay: 186.050 ms
Loss rate: 2.27%
-- Flow 1:
Average throughput: 465.20 Mbit/s
95th percentile per-packet one-way delay: 189.295 ms
Loss rate: 2.65%
-- Flow 2:
Average throughput: 102.50 Mbit/s
95th percentile per-packet one-way delay: 155.979 ms
Loss rate: 0.25%
-- Flow 3:
Average throughput: 65.31 Mbit/s
95th percentile per-packet one-way delay: 158.834 ms
Loss rate: 0.32%
Run 5: Report of PCC — Data Link
Run 6: Statistics of PCC

Start at: 2018-03-14 11:35:36
End at: 2018-03-14 11:36:06

# Below is generated by plot.py at 2018-03-14 16:28:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 572.85 Mbit/s
95th percentile per-packet one-way delay: 231.914 ms
Loss rate: 2.08%
-- Flow 1:
Average throughput: 481.71 Mbit/s
95th percentile per-packet one-way delay: 238.529 ms
Loss rate: 2.24%
-- Flow 2:
Average throughput: 129.21 Mbit/s
95th percentile per-packet one-way delay: 170.349 ms
Loss rate: 1.15%
-- Flow 3:
Average throughput: 15.98 Mbit/s
95th percentile per-packet one-way delay: 171.092 ms
Loss rate: 2.10%
Run 6: Report of PCC — Data Link

![Graph showing data link throughputs and delays](image)

Legend:
- Flow 1 ingress (mean 492.77 Mbit/s)
- Flow 1 egress (mean 481.71 Mbit/s)
- Flow 2 ingress (mean 136.72 Mbit/s)
- Flow 2 egress (mean 129.21 Mbit/s)
- Flow 3 ingress (mean 16.32 Mbit/s)
- Flow 3 egress (mean 15.98 Mbit/s)

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

Legend:
- Flow 1 (95th percentile 238.53 ms)
- Flow 2 (95th percentile 170.35 ms)
- Flow 3 (95th percentile 171.09 ms)
Run 7: Statistics of PCC

Start at: 2018-03-14 11:52:55
End at: 2018-03-14 11:53:25

# Below is generated by plot.py at 2018-03-14 16:28:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 573.35 Mbit/s
95th percentile per-packet one-way delay: 201.559 ms
Loss rate: 2.44%
-- Flow 1:
Average throughput: 465.74 Mbit/s
95th percentile per-packet one-way delay: 211.935 ms
Loss rate: 2.96%
-- Flow 2:
Average throughput: 145.60 Mbit/s
95th percentile per-packet one-way delay: 123.249 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 32.84 Mbit/s
95th percentile per-packet one-way delay: 79.075 ms
Loss rate: 0.22%
Run 7: Report of PCC — Data Link
Run 8: Statistics of PCC

Start at: 2018-03-14 12:10:17
End at: 2018-03-14 12:10:47

# Below is generated by plot.py at 2018-03-14 16:29:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 564.95 Mbit/s
95th percentile per-packet one-way delay: 175.900 ms
Loss rate: 1.03%
-- Flow 1:
Average throughput: 469.27 Mbit/s
95th percentile per-packet one-way delay: 179.284 ms
Loss rate: 1.23%
-- Flow 2:
Average throughput: 139.72 Mbit/s
95th percentile per-packet one-way delay: 148.641 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 8.50 Mbit/s
95th percentile per-packet one-way delay: 151.125 ms
Loss rate: 0.07%
Run 8: Report of PCC — Data Link

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

- Flow 1 ingress (mean 475.17 Mbit/s)
- Flow 1 egress (mean 469.27 Mbit/s)
- Flow 2 ingress (mean 139.79 Mbit/s)
- Flow 2 egress (mean 139.72 Mbit/s)
- Flow 3 ingress (mean 8.49 Mbit/s)
- Flow 3 egress (mean 8.50 Mbit/s)
Run 9: Statistics of PCC

Start at: 2018-03-14 12:27:37
End at: 2018-03-14 12:28:07

# Below is generated by plot.py at 2018-03-14 16:37:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 566.41 Mbit/s
95th percentile per-packet one-way delay: 243.510 ms
Loss rate: 5.04%
-- Flow 1:
Average throughput: 457.48 Mbit/s
95th percentile per-packet one-way delay: 249.518 ms
Loss rate: 6.12%
-- Flow 2:
Average throughput: 133.15 Mbit/s
95th percentile per-packet one-way delay: 159.529 ms
Loss rate: 0.29%
-- Flow 3:
Average throughput: 62.15 Mbit/s
95th percentile per-packet one-way delay: 96.730 ms
Loss rate: 0.04%
Run 9: Report of PCC — Data Link

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

- Flow 1 ingress (mean 487.29 Mbit/s)
- Flow 1 egress (mean 457.48 Mbit/s)
- Flow 2 ingress (mean 133.33 Mbit/s)
- Flow 2 egress (mean 133.33 Mbit/s)
- Flow 3 ingress (mean 62.15 Mbit/s)
- Flow 3 egress (mean 62.15 Mbit/s)

![Graph 2: One-Way Delay vs Time (ms)](image2)

- Flow 1 (95th percentile 249.52 ms)
- Flow 2 (95th percentile 159.53 ms)
- Flow 3 (95th percentile 96.73 ms)
Run 10: Statistics of PCC

Start at: 2018-03-14 12:44:49
End at: 2018-03-14 12:45:19

# Below is generated by plot.py at 2018-03-14 16:38:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 554.46 Mbit/s
95th percentile per-packet one-way delay: 246.877 ms
Loss rate: 7.51%
-- Flow 1:
Average throughput: 447.03 Mbit/s
95th percentile per-packet one-way delay: 264.546 ms
Loss rate: 7.83%
-- Flow 2:
Average throughput: 107.27 Mbit/s
95th percentile per-packet one-way delay: 171.829 ms
Loss rate: 4.87%
-- Flow 3:
Average throughput: 109.73 Mbit/s
95th percentile per-packet one-way delay: 176.079 ms
Loss rate: 8.56%
Run 10: Report of PCC — Data Link

![Throughput Graph](image1)

![Delay Graph](image2)
Run 1: Statistics of QUIC Cubic

Start at: 2018-03-14 09:58:38
End at: 2018-03-14 09:59:08

# Below is generated by plot.py at 2018-03-14 16:38:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 28.25 Mbit/s
95th percentile per-packet one-way delay: 53.562 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 50.414 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 34.05 Mbit/s
95th percentile per-packet one-way delay: 53.577 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 17.37 Mbit/s
95th percentile per-packet one-way delay: 50.331 ms
Loss rate: 0.00%
Run 1: Report of QUIC Cubic — Data Link
Run 2: Statistics of QUIC Cubic

Start at: 2018-03-14 10:15:35
End at: 2018-03-14 10:16:05

# Below is generated by plot.py at 2018-03-14 16:38:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 72.69 Mbit/s
95th percentile per-packet one-way delay: 53.184 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 47.62 Mbit/s
95th percentile per-packet one-way delay: 50.547 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 27.36 Mbit/s
95th percentile per-packet one-way delay: 50.707 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 21.19 Mbit/s
95th percentile per-packet one-way delay: 53.343 ms
Loss rate: 0.01%
Run 2: Report of QUIC Cubic — Data Link

![Graph showing throughput and per-packet round-trip delay over time for different flows and ingress/egress conditions, with annotations for 95th percentile values for each.]
run 3: statistics of quic cubic

start at: 2018-03-14 10:33:14
end at: 2018-03-14 10:33:44

# below is generated by plot.py at 2018-03-14 16:38:11
# datalink statistics
-- total of 3 flows:
average throughput: 73.91 mbit/s
95th percentile per-packet one-way delay: 52.934 ms
loss rate: 0.00%
-- flow 1:
average throughput: 43.70 mbit/s
95th percentile per-packet one-way delay: 50.219 ms
loss rate: 0.00%
-- flow 2:
average throughput: 37.84 mbit/s
95th percentile per-packet one-way delay: 50.516 ms
loss rate: 0.00%
-- flow 3:
average throughput: 15.65 mbit/s
95th percentile per-packet one-way delay: 53.172 ms
loss rate: 0.00%
Run 3: Report of QUIC Cubic — Data Link

![Graph showing throughput and packet delay for different flows over time](image-url)
Run 4: Statistics of QUIC Cubic

Start at: 2018-03-14 10:50:26
End at: 2018-03-14 10:50:56

# Below is generated by plot.py at 2018-03-14 16:38:11
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 77.54 Mbit/s
  95th percentile per-packet one-way delay: 53.113 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 45.85 Mbit/s
  95th percentile per-packet one-way delay: 53.165 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 35.15 Mbit/s
  95th percentile per-packet one-way delay: 49.983 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 25.65 Mbit/s
  95th percentile per-packet one-way delay: 50.185 ms
  Loss rate: 0.00%
Run 4: Report of QUIC Cubic — Data Link

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

- Flow 1 ingress (mean 45.85 Mbit/s)
- Flow 1 egress (mean 45.85 Mbit/s)
- Flow 2 ingress (mean 35.15 Mbit/s)
- Flow 2 egress (mean 35.15 Mbit/s)
- Flow 3 ingress (mean 25.65 Mbit/s)
- Flow 3 egress (mean 25.65 Mbit/s)

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

- Flow 1 (95th percentile 53.16 ms)
- Flow 2 (95th percentile 49.98 ms)
- Flow 3 (95th percentile 50.19 ms)
Run 5: Statistics of QUIC Cubic

Start at: 2018-03-14 11:07:38
End at: 2018-03-14 11:08:08

# Below is generated by plot.py at 2018-03-14 16:38:11
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 71.30 Mbit/s
  95th percentile per-packet one-way delay: 53.645 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 38.02 Mbit/s
  95th percentile per-packet one-way delay: 53.692 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 35.32 Mbit/s
  95th percentile per-packet one-way delay: 50.716 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 30.21 Mbit/s
  95th percentile per-packet one-way delay: 53.229 ms
  Loss rate: 0.00%
Run 5: Report of QUIC Cubic — Data Link
Run 6: Statistics of QUIC Cubic

Start at: 2018-03-14 11:24:53
End at: 2018-03-14 11:25:23

# Below is generated by plot.py at 2018-03-14 16:38:11
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 67.83 Mbit/s
  95th percentile per-packet one-way delay: 53.652 ms
  Loss rate: 0.00%
  -- Flow 1:
    Average throughput: 46.08 Mbit/s
    95th percentile per-packet one-way delay: 53.539 ms
    Loss rate: 0.00%
  -- Flow 2:
    Average throughput: 25.23 Mbit/s
    95th percentile per-packet one-way delay: 53.715 ms
    Loss rate: 0.00%
  -- Flow 3:
    Average throughput: 16.13 Mbit/s
    95th percentile per-packet one-way delay: 53.640 ms
    Loss rate: 0.00%
Run 6: Report of QUIC Cubic — Data Link

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**Graphs:**

1. **Throughput Graph:**
   - X-axis: Time (s)
   - Y-axis: Throughput (Mbit/s)
   - Legend:
     - Flow 1 ingress (mean 46.09 Mbit/s)
     - Flow 1 egress (mean 46.08 Mbit/s)
     - Flow 2 ingress (mean 25.23 Mbit/s)
     - Flow 2 egress (mean 25.23 Mbit/s)
     - Flow 3 ingress (mean 16.13 Mbit/s)
     - Flow 3 egress (mean 16.13 Mbit/s)

2. **Per-packet end-to-end delay Graph:**
   - X-axis: Time (s)
   - Y-axis: Per-packet end-to-end delay (ms)
   - Legend:
     - Flow 1 (95th percentile 53.54 ms)
     - Flow 2 (95th percentile 53.72 ms)
     - Flow 3 (95th percentile 53.64 ms)
Run 7: Statistics of QUIC Cubic

Start at: 2018-03-14 11:42:02
End at: 2018-03-14 11:42:32

# Below is generated by plot.py at 2018-03-14 16:38:11
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 87.84 Mbit/s
  95th percentile per-packet one-way delay: 53.353 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 43.49 Mbit/s
  95th percentile per-packet one-way delay: 53.341 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 58.63 Mbit/s
  95th percentile per-packet one-way delay: 50.115 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 16.65 Mbit/s
  95th percentile per-packet one-way delay: 53.680 ms
  Loss rate: 0.00%
Run 7: Report of QUIC Cubic — Data Link

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

- **Flow 1 ingress** (mean 43.49 Mbit/s)
- **Flow 1 egress** (mean 43.49 Mbit/s)
- **Flow 2 ingress** (mean 58.63 Mbit/s)
- **Flow 2 egress** (mean 58.63 Mbit/s)
- **Flow 3 ingress** (mean 16.65 Mbit/s)
- **Flow 3 egress** (mean 16.65 Mbit/s)

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

- **Flow 1 (95th percentile 53.34 ms)**
- **Flow 2 (95th percentile 50.12 ms)**
- **Flow 3 (95th percentile 53.68 ms)**
Run 8: Statistics of QUIC Cubic

Start at: 2018-03-14 11:59:26
End at: 2018-03-14 11:59:56

# Below is generated by plot.py at 2018-03-14 16:38:11
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 74.29 Mbit/s
  95th percentile per-packet one-way delay: 53.865 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 49.10 Mbit/s
  95th percentile per-packet one-way delay: 53.890 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 30.74 Mbit/s
  95th percentile per-packet one-way delay: 50.352 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 14.75 Mbit/s
  95th percentile per-packet one-way delay: 51.072 ms
  Loss rate: 0.00%
Run 8: Report of QUIC Cubic — Data Link

![Graphs showing throughput and per-packet round trip time](image-url)

- **Throughput (kbps):**
  - Flow 1 ingress (mean 49.10 Mbit/s)
  - Flow 1 egress (mean 49.10 Mbit/s)
  - Flow 2 ingress (mean 30.74 Mbit/s)
  - Flow 2 egress (mean 30.74 Mbit/s)
  - Flow 3 ingress (mean 14.74 Mbit/s)
  - Flow 3 egress (mean 14.75 Mbit/s)

- **Per-packet round trip time (ms):**
  - Flow 1 (95th percentile 53.89 ms)
  - Flow 2 (95th percentile 50.35 ms)
  - Flow 3 (95th percentile 51.07 ms)
Run 9: Statistics of QUIC Cubic

Start at: 2018-03-14 12:16:47
End at: 2018-03-14 12:17:17

# Below is generated by plot.py at 2018-03-14 16:38:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.44 Mbit/s
95th percentile per-packet one-way delay: 53.823 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 69.48 Mbit/s
95th percentile per-packet one-way delay: 50.821 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 30.05 Mbit/s
95th percentile per-packet one-way delay: 53.918 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 15.39 Mbit/s
95th percentile per-packet one-way delay: 53.871 ms
Loss rate: 0.00%
Run 9: Report of QUIC Cubic — Data Link
Run 10: Statistics of QUIC Cubic

Start at: 2018-03-14 12:34:07
End at: 2018-03-14 12:34:37

# Below is generated by plot.py at 2018-03-14 16:38:11
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 68.62 Mbit/s
  95th percentile per-packet one-way delay: 53.827 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 40.48 Mbit/s
  95th percentile per-packet one-way delay: 50.740 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 31.45 Mbit/s
  95th percentile per-packet one-way delay: 53.903 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 22.32 Mbit/s
  95th percentile per-packet one-way delay: 53.838 ms
  Loss rate: 0.00%
Run 10: Report of QUIC Cubic — Data Link

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

- **Throughput (Mbps)**: 
  - Flow 1 ingress (mean 40.48 Mbps) 
  - Flow 1 egress (mean 40.48 Mbps) 
  - Flow 2 ingress (mean 31.45 Mbps) 
  - Flow 2 egress (mean 31.45 Mbps) 
  - Flow 3 ingress (mean 22.33 Mbps) 
  - Flow 3 egress (mean 22.32 Mbps)

- **Per-packet one-way delay (ms)**: 
  - Flow 1 (95th percentile 50.74 ms) 
  - Flow 2 (95th percentile 53.90 ms) 
  - Flow 3 (95th percentile 53.84 ms)
Run 1: Statistics of SCReAM

Start at: 2018-03-14 10:02:13
End at: 2018-03-14 10:02:43

# Below is generated by plot.py at 2018-03-14 16:38:11
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 53.457 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 53.425 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 53.479 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 53.411 ms
  Loss rate: 0.00%
Run 2: Statistics of SCReAM

Start at: 2018-03-14 10:19:34
End at: 2018-03-14 10:20:04

# Below is generated by plot.py at 2018-03-14 16:38:11
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 54.004 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 54.031 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 53.809 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 53.445 ms
  Loss rate: 0.00%
Run 3: Statistics of SCReAM

Start at: 2018-03-14 10:37:10
End at: 2018-03-14 10:37:40

# Below is generated by plot.py at 2018-03-14 16:38:11
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 53.257 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 53.194 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 53.462 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 50.117 ms
  Loss rate: 0.00%
Run 3: Report of SCReAM — Data Link
Run 4: Statistics of SCReAM

Start at: 2018-03-14 10:54:14
End at: 2018-03-14 10:54:44

# Below is generated by plot.py at 2018-03-14 16:38:11
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 53.555 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 53.332 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 53.588 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 53.442 ms
  Loss rate: 0.00%
Run 4: Report of SCReAM — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 0.21 Mbps)
Flow 1 egress (mean 0.21 Mbps)
Flow 2 ingress (mean 0.21 Mbps)
Flow 2 egress (mean 0.21 Mbps)
Flow 3 ingress (mean 0.22 Mbps)
Flow 3 egress (mean 0.22 Mbps)

Delay (ms)

Time (s)

Flow 1 (95th percentile 53.33 ms)
Flow 2 (95th percentile 53.59 ms)
Flow 3 (95th percentile 53.44 ms)
Run 5: Statistics of SCReAM

Start at: 2018-03-14 11:11:31
End at: 2018-03-14 11:12:01

# Below is generated by plot.py at 2018-03-14 16:38:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 53.556 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 53.572 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.239 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.588 ms
Loss rate: 0.00%
Run 5: Report of SCReAM — Data Link
Run 6: Statistics of SCReAM

Start at: 2018-03-14 11:28:49
End at: 2018-03-14 11:29:19

# Below is generated by plot.py at 2018-03-14 16:38:11
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 53.140 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 53.163 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 50.360 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 50.370 ms
  Loss rate: 0.00%
Run 6: Report of SCReAM — Data Link
Run 7: Statistics of SCReAM

Start at: 2018-03-14 11:46:02
End at: 2018-03-14 11:46:32

# Below is generated by plot.py at 2018-03-14 16:38:11
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 53.328 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 53.360 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 50.965 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 50.435 ms
  Loss rate: 0.00%
Run 7: Report of SCReAM — Data Link
Run 8: Statistics of SCReAM

Start at: 2018-03-14 12:03:20
End at: 2018-03-14 12:03:50

# Below is generated by plot.py at 2018-03-14 16:38:11
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 54.163 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 53.515 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 54.202 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 50.694 ms
  Loss rate: 0.00%
Run 8: Report of SCReAM — Data Link

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

- Flow 1 ingress (mean 0.22 Mb/s)
- Flow 1 egress (mean 0.22 Mb/s)
- Flow 2 ingress (mean 0.22 Mb/s)
- Flow 2 egress (mean 0.22 Mb/s)
- Flow 3 ingress (mean 0.22 Mb/s)
- Flow 3 egress (mean 0.22 Mb/s)
Run 9: Statistics of SCReAM

Start at: 2018-03-14 12:20:47
End at: 2018-03-14 12:21:17

# Below is generated by plot.py at 2018-03-14 16:38:11
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 54.028 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 50.701 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 54.075 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 53.553 ms
  Loss rate: 0.00%
Run 9: Report of SCReAM — Data Link

![Graph 1: Throughput (Mbps)]

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

Legend:
- Flow 1 ingress (mean 0.21 Mbps)
- Flow 1 egress (mean 0.21 Mbps)
- Flow 2 ingress (mean 0.21 Mbps)
- Flow 2 egress (mean 0.21 Mbps)
- Flow 3 ingress (mean 0.22 Mbps)
- Flow 3 egress (mean 0.22 Mbps)
Run 10: Statistics of SCReAM

Start at: 2018-03-14 12:37:55
End at: 2018-03-14 12:38:25

# Below is generated by plot.py at 2018-03-14 16:38:11
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.42 Mbit/s
  95th percentile per-packet one-way delay: 54.172 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 54.198 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 53.568 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 54.005 ms
  Loss rate: 0.00%
Run 10: Report of SCReAM — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 0.21 Mbit/s)  Flow 1 egress (mean 0.21 Mbit/s)
Flow 2 ingress (mean 0.21 Mbit/s)  Flow 2 egress (mean 0.21 Mbit/s)
Flow 3 ingress (mean 0.22 Mbit/s)  Flow 3 egress (mean 0.22 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 54.20 ms)  Flow 2 (95th percentile 53.57 ms)  Flow 3 (95th percentile 54.01 ms)
Run 1: Statistics of WebRTC media

Start at: 2018-03-14 10:00:06
End at: 2018-03-14 10:00:37

# Below is generated by plot.py at 2018-03-14 16:38:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.36 Mbit/s
95th percentile per-packet one-way delay: 53.808 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 2.28 Mbit/s
95th percentile per-packet one-way delay: 50.312 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.47 Mbit/s
95th percentile per-packet one-way delay: 53.867 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.63 Mbit/s
95th percentile per-packet one-way delay: 50.714 ms
Loss rate: 0.05%
Run 1: Report of WebRTC media — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 2.28 Mbit/s)
Flow 1 egress (mean 2.28 Mbit/s)
Flow 2 ingress (mean 1.47 Mbit/s)
Flow 2 egress (mean 1.47 Mbit/s)
Flow 3 ingress (mean 0.63 Mbit/s)
Flow 3 egress (mean 0.63 Mbit/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 50.31 ms)
Flow 2 (95th percentile 53.67 ms)
Flow 3 (95th percentile 50.71 ms)
Run 2: Statistics of WebRTC media

Start at: 2018-03-14 10:17:08
End at: 2018-03-14 10:17:38

# Below is generated by plot.py at 2018-03-14 16:38:11
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 4.40 Mbit/s
  95th percentile per-packet one-way delay: 53.782 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 2.30 Mbit/s
  95th percentile per-packet one-way delay: 53.821 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 1.46 Mbit/s
  95th percentile per-packet one-way delay: 53.368 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.65 Mbit/s
  95th percentile per-packet one-way delay: 50.645 ms
  Loss rate: 0.00%
Run 2: Report of WebRTC media — Data Link

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

- Flow 1 ingress (mean 2.30 Mbps)
- Flow 1 egress (mean 2.30 Mbps)
- Flow 2 ingress (mean 1.46 Mbps)
- Flow 2 egress (mean 1.46 Mbps)
- Flow 3 ingress (mean 0.65 Mbps)
- Flow 3 egress (mean 0.65 Mbps)

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

- Flow 1 (95th percentile 53.82 ms)
- Flow 2 (95th percentile 53.37 ms)
- Flow 3 (95th percentile 50.65 ms)
Run 3: Statistics of WebRTC media

Start at: 2018-03-14 10:34:49
End at: 2018-03-14 10:35:19

# Below is generated by plot.py at 2018-03-14 16:38:11
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 4.35 Mbit/s
  95th percentile per-packet one-way delay: 53.236 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 2.28 Mbit/s
  95th percentile per-packet one-way delay: 53.195 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 1.46 Mbit/s
  95th percentile per-packet one-way delay: 50.731 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.64 Mbit/s
  95th percentile per-packet one-way delay: 53.526 ms
  Loss rate: 0.00%
Run 3: Report of WebRTC media — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 2.28 Mbps)
  - Flow 1 egress (mean 2.28 Mbps)
  - Flow 2 ingress (mean 1.46 Mbps)
  - Flow 2 egress (mean 1.46 Mbps)
  - Flow 3 ingress (mean 0.64 Mbps)
  - Flow 3 egress (mean 0.64 Mbps)

- **Packet delay (ms):**
  - Flow 1 (95th percentile 53.20 ms)
  - Flow 2 (95th percentile 50.73 ms)
  - Flow 3 (95th percentile 53.53 ms)
Run 4: Statistics of WebRTC media

Start at: 2018-03-14 10:52:03
End at: 2018-03-14 10:52:33

# Below is generated by plot.py at 2018-03-14 16:38:11
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 4.36 Mbit/s
  95th percentile per-packet one-way delay: 53.261 ms
  Loss rate: 0.01%
-- Flow 1:
  Average throughput: 2.28 Mbit/s
  95th percentile per-packet one-way delay: 53.277 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 1.45 Mbit/s
  95th percentile per-packet one-way delay: 53.251 ms
  Loss rate: 0.02%
-- Flow 3:
  Average throughput: 0.64 Mbit/s
  95th percentile per-packet one-way delay: 50.396 ms
  Loss rate: 0.00%
Run 4: Report of WebRTC media — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 2.28 Mbit/s)
Flow 1 egress (mean 2.28 Mbit/s)
Flow 2 ingress (mean 1.45 Mbit/s)
Flow 2 egress (mean 1.45 Mbit/s)
Flow 3 ingress (mean 0.64 Mbit/s)
Flow 3 egress (mean 0.64 Mbit/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 53.28 ms)
Flow 2 (95th percentile 53.25 ms)
Flow 3 (95th percentile 50.40 ms)
Run 5: Statistics of WebRTC media

Start at: 2018-03-14 11:09:11
End at: 2018-03-14 11:09:41

# Below is generated by plot.py at 2018-03-14 16:38:11
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 4.39 Mbit/s
  95th percentile per-packet one-way delay: 53.687 ms
  Loss rate: 0.01%
-- Flow 1:
  Average throughput: 2.29 Mbit/s
  95th percentile per-packet one-way delay: 53.633 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 1.48 Mbit/s
  95th percentile per-packet one-way delay: 50.877 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.64 Mbit/s
  95th percentile per-packet one-way delay: 53.832 ms
  Loss rate: 0.05%
Run 5: Report of WebRTC media — Data Link

![Graphs showing throughput and per-packet one-way delay](image_url)
Run 6: Statistics of WebRTC media

Start at: 2018-03-14 11:26:34
End at: 2018-03-14 11:27:04

# Below is generated by plot.py at 2018-03-14 16:38:11
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 4.35 Mbit/s
  95th percentile per-packet one-way delay: 53.775 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 2.27 Mbit/s
  95th percentile per-packet one-way delay: 53.806 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 1.46 Mbit/s
  95th percentile per-packet one-way delay: 53.720 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.64 Mbit/s
  95th percentile per-packet one-way delay: 50.456 ms
  Loss rate: 0.00%
Run 6: Report of WebRTC media — Data Link

![Graph of throughput over time with legend showing different flows and their ingress and egress mean rates.]

![Graph of per packet one-way delay over time with legend showing different flows and their 95th percentile delay.]

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Run 7: Statistics of WebRTC media

Start at: 2018-03-14 11:43:38
End at: 2018-03-14 11:44:08

# Below is generated by plot.py at 2018-03-14 16:38:11
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 4.35 Mbit/s
  95th percentile per-packet one-way delay: 53.833 ms
  Loss rate: 0.01%
-- Flow 1:
  Average throughput: 2.27 Mbit/s
  95th percentile per-packet one-way delay: 53.723 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 1.46 Mbit/s
  95th percentile per-packet one-way delay: 53.894 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.64 Mbit/s
  95th percentile per-packet one-way delay: 50.591 ms
  Loss rate: 0.04%
Run 7: Report of WebRTC media — Data Link
Run 8: Statistics of WebRTC media

Start at: 2018-03-14 12:00:59
End at: 2018-03-14 12:01:29

# Below is generated by plot.py at 2018-03-14 16:38:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.35 Mbit/s
95th percentile per-packet one-way delay: 53.535 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 2.27 Mbit/s
95th percentile per-packet one-way delay: 53.536 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 1.47 Mbit/s
95th percentile per-packet one-way delay: 50.646 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.63 Mbit/s
95th percentile per-packet one-way delay: 53.613 ms
Loss rate: 0.00%
Run 8: Report of WebRTC media — Data Link

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

- Flow 1 ingress (mean 2.27 Mbps)
- Flow 1 egress (mean 2.27 Mbps)
- Flow 2 ingress (mean 1.47 Mbps)
- Flow 2 egress (mean 1.47 Mbps)
- Flow 3 ingress (mean 0.63 Mbps)
- Flow 3 egress (mean 0.63 Mbps)

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

- Flow 1 (95th percentile 53.54 ms)
- Flow 2 (95th percentile 50.65 ms)
- Flow 3 (95th percentile 53.61 ms)
Run 9: Statistics of WebRTC media

Start at: 2018-03-14 12:18:31
End at: 2018-03-14 12:19:01

# Below is generated by plot.py at 2018-03-14 16:38:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.37 Mbit/s
95th percentile per-packet one-way delay: 54.071 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.28 Mbit/s
95th percentile per-packet one-way delay: 51.108 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.46 Mbit/s
95th percentile per-packet one-way delay: 54.059 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.64 Mbit/s
95th percentile per-packet one-way delay: 54.157 ms
Loss rate: 0.00%
Run 9: Report of WebRTC media — Data Link

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

- Flow 1 ingress (mean 2.28 Mbit/s)
- Flow 1 egress (mean 2.28 Mbit/s)
- Flow 2 ingress (mean 1.46 Mbit/s)
- Flow 2 egress (mean 1.46 Mbit/s)
- Flow 3 ingress (mean 0.64 Mbit/s)
- Flow 3 egress (mean 0.64 Mbit/s)
Run 10: Statistics of WebRTC media

Start at: 2018-03-14 12:35:40
End at: 2018-03-14 12:36:10

# Below is generated by plot.py at 2018-03-14 16:38:11
# Datalink statistics
-- Total of 3 flows:
 Average throughput: 4.33 Mbit/s
  95th percentile per-packet one-way delay: 54.032 ms
 Loss rate: 0.00%
-- Flow 1:
 Average throughput: 2.27 Mbit/s
  95th percentile per-packet one-way delay: 50.736 ms
 Loss rate: 0.00%
-- Flow 2:
 Average throughput: 1.45 Mbit/s
  95th percentile per-packet one-way delay: 53.896 ms
 Loss rate: 0.00%
-- Flow 3:
 Average throughput: 0.63 Mbit/s
  95th percentile per-packet one-way delay: 54.135 ms
 Loss rate: 0.00%
Run 10: Report of WebRTC media — Data Link
Run 1: Statistics of Sprout

Start at: 2018-03-14 10:03:59
End at: 2018-03-14 10:04:29

# Below is generated by plot.py at 2018-03-14 16:38:11
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 15.34 Mbit/s
  95th percentile per-packet one-way delay: 51.913 ms
  Loss rate: 0.18%
-- Flow 1:
  Average throughput: 7.85 Mbit/s
  95th percentile per-packet one-way delay: 52.124 ms
  Loss rate: 0.21%
-- Flow 2:
  Average throughput: 7.51 Mbit/s
  95th percentile per-packet one-way delay: 51.592 ms
  Loss rate: 0.22%
-- Flow 3:
  Average throughput: 7.56 Mbit/s
  95th percentile per-packet one-way delay: 53.185 ms
  Loss rate: 0.00%
Run 1: Report of Sprout — Data Link

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

- Flow 1 ingress (mean 7.87 Mbps)
- Flow 1 egress (mean 7.85 Mbps)
- Flow 2 ingress (mean 7.53 Mbps)
- Flow 2 egress (mean 7.51 Mbps)
- Flow 3 ingress (mean 7.56 Mbps)
- Flow 3 egress (mean 7.56 Mbps)

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

- Flow 1 (95th percentile 52.12 ms)
- Flow 2 (95th percentile 51.59 ms)
- Flow 3 (95th percentile 53.19 ms)
Run 2: Statistics of Sprout

Start at: 2018-03-14 10:21:24
End at: 2018-03-14 10:21:54

# Below is generated by plot.py at 2018-03-14 16:38:11
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 15.41 Mbit/s
  95th percentile per-packet one-way delay: 51.579 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 7.81 Mbit/s
  95th percentile per-packet one-way delay: 51.669 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 7.82 Mbit/s
  95th percentile per-packet one-way delay: 51.502 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 7.29 Mbit/s
  95th percentile per-packet one-way delay: 51.593 ms
  Loss rate: 0.00%
Run 2: Report of Sprout — Data Link

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

- Flow 1 ingress (mean 7.81 Mbit/s)
- Flow 1 egress (mean 7.81 Mbit/s)
- Flow 2 ingress (mean 7.82 Mbit/s)
- Flow 2 egress (mean 7.82 Mbit/s)
- Flow 3 ingress (mean 7.29 Mbit/s)
- Flow 3 egress (mean 7.29 Mbit/s)

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

- Flow 1 (95th percentile 51.67 ms)
- Flow 2 (95th percentile 51.50 ms)
- Flow 3 (95th percentile 51.59 ms)
Run 3: Statistics of Sprout

Start at: 2018-03-14 10:38:57
End at: 2018-03-14 10:39:27

# Below is generated by plot.py at 2018-03-14 16:38:11
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 15.36 Mbit/s
  95th percentile per-packet one-way delay: 51.879 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 7.86 Mbit/s
  95th percentile per-packet one-way delay: 52.286 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 7.75 Mbit/s
  95th percentile per-packet one-way delay: 51.732 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 7.15 Mbit/s
  95th percentile per-packet one-way delay: 51.498 ms
  Loss rate: 0.00%
Run 3: Report of Sprout — Data Link

![Graph showing throughput and delay over time for different data flow examples.](image-url)
Run 4: Statistics of Sprout

Start at: 2018-03-14 10:56:00
End at: 2018-03-14 10:56:30

# Below is generated by plot.py at 2018-03-14 16:38:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.62 Mbit/s
95th percentile per-packet one-way delay: 51.578 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 7.92 Mbit/s
95th percentile per-packet one-way delay: 51.617 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 7.81 Mbit/s
95th percentile per-packet one-way delay: 51.663 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 7.62 Mbit/s
95th percentile per-packet one-way delay: 51.249 ms
Loss rate: 0.00%
Run 4: Report of Sprout — Data Link
Run 5: Statistics of Sprout

Start at: 2018-03-14 11:13:20
End at: 2018-03-14 11:13:50

# Below is generated by plot.py at 2018-03-14 16:38:11
# Datalink statistics
  -- Total of 3 flows:
    Average throughput: 15.46 Mbit/s
    95th percentile per-packet one-way delay: 51.449 ms
    Loss rate: 0.00%
  -- Flow 1:
    Average throughput: 7.83 Mbit/s
    95th percentile per-packet one-way delay: 51.515 ms
    Loss rate: 0.00%
  -- Flow 2:
    Average throughput: 7.82 Mbit/s
    95th percentile per-packet one-way delay: 51.429 ms
    Loss rate: 0.00%
  -- Flow 3:
    Average throughput: 7.41 Mbit/s
    95th percentile per-packet one-way delay: 51.316 ms
    Loss rate: 0.00%
Run 5: Report of Sprout — Data Link

![Graph 1: Throughput (Mbps)]

- Flow 1 ingress (mean 7.83 Mbps)
- Flow 1 egress (mean 7.83 Mbps)
- Flow 2 ingress (mean 7.82 Mbps)
- Flow 2 egress (mean 7.82 Mbps)
- Flow 3 ingress (mean 7.41 Mbps)
- Flow 3 egress (mean 7.41 Mbps)

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

- Flow 1 (95th percentile 51.52 ms)
- Flow 2 (95th percentile 51.43 ms)
- Flow 3 (95th percentile 51.32 ms)
Run 6: Statistics of Sprout

Start at: 2018-03-14 11:30:33
End at: 2018-03-14 11:31:03

# Below is generated by plot.py at 2018-03-14 16:38:11
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 15.37 Mbit/s
  95th percentile per-packet one-way delay: 51.824 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 7.80 Mbit/s
  95th percentile per-packet one-way delay: 52.129 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 7.63 Mbit/s
  95th percentile per-packet one-way delay: 51.641 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 7.58 Mbit/s
  95th percentile per-packet one-way delay: 51.982 ms
  Loss rate: 0.00%
Run 6: Report of Sprout — Data Link

**Graph 1:**
- **Y-axis:** Throughput (Mbps)
- **X-axis:** Time (s)
- Lines represent:
  - Flow 1 ingress (mean 7.80 Mbps)
  - Flow 1 egress (mean 7.80 Mbps)
  - Flow 2 ingress (mean 7.63 Mbps)
  - Flow 2 egress (mean 7.63 Mbps)
  - Flow 3 ingress (mean 7.56 Mbps)
  - Flow 3 egress (mean 7.56 Mbps)

**Graph 2:**
- **Y-axis:** Per packet one way delay (ms)
- **X-axis:** Time (s)
- Lines indicate:
  - Flow 1 (95th percentile 52.13 ms)
  - Flow 2 (95th percentile 51.64 ms)
  - Flow 3 (95th percentile 51.98 ms)
Run 7: Statistics of Sprout

Start at: 2018-03-14 11:47:49
End at: 2018-03-14 11:48:19

# Below is generated by plot.py at 2018-03-14 16:38:11
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 15.47 Mbit/s
  95th percentile per-packet one-way delay: 51.706 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 7.89 Mbit/s
  95th percentile per-packet one-way delay: 51.591 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 7.71 Mbit/s
  95th percentile per-packet one-way delay: 52.463 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 7.45 Mbit/s
  95th percentile per-packet one-way delay: 51.711 ms
  Loss rate: 0.00%
Run 7: Report of Sprout — Data Link

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

**Throughput (Mbps):**
- Flow 1 ingress (mean 7.89 Mbps)
- Flow 1 egress (mean 7.89 Mbps)
- Flow 2 ingress (mean 7.71 Mbps)
- Flow 2 egress (mean 7.71 Mbps)
- Flow 3 ingress (mean 7.46 Mbps)
- Flow 3 egress (mean 7.45 Mbps)

**Packet Delay (ms):**
- Flow 1 (95th percentile 51.59 ms)
- Flow 2 (95th percentile 52.46 ms)
- Flow 3 (95th percentile 51.71 ms)
Run 8: Statistics of Sprout

Start at: 2018-03-14 12:05:09
End at: 2018-03-14 12:05:39

# Below is generated by plot.py at 2018-03-14 16:38:11
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 15.44 Mbit/s
  95th percentile per-packet one-way delay: 51.741 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 7.84 Mbit/s
  95th percentile per-packet one-way delay: 51.804 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 7.77 Mbit/s
  95th percentile per-packet one-way delay: 51.769 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 7.39 Mbit/s
  95th percentile per-packet one-way delay: 51.593 ms
  Loss rate: 0.00%
Run 8: Report of Sprout — Data Link
Run 9: Statistics of Sprout

Start at: 2018-03-14 12:22:31
End at: 2018-03-14 12:23:01

# Below is generated by plot.py at 2018-03-14 16:38:11
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 15.57 Mbit/s
  95th percentile per-packet one-way delay: 54.676 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 7.97 Mbit/s
  95th percentile per-packet one-way delay: 54.776 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 7.66 Mbit/s
  95th percentile per-packet one-way delay: 54.601 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 7.58 Mbit/s
  95th percentile per-packet one-way delay: 51.860 ms
  Loss rate: 0.00%
Run 9: Report of Sprout — Data Link

![Throughput (Mbps)](chart1)

- **Flow 1 ingress (mean 7.97 Mbps)**
- **Flow 1 egress (mean 7.97 Mbps)**
- **Flow 2 ingress (mean 7.66 Mbps)**
- **Flow 2 egress (mean 7.66 Mbps)**
- **Flow 3 ingress (mean 7.58 Mbps)**
- **Flow 3 egress (mean 7.58 Mbps)**

![Per packet one way latency (ms)](chart2)

- **Flow 1 (95th percentile 54.78 ms)**
- **Flow 2 (95th percentile 54.60 ms)**
- **Flow 3 (95th percentile 51.86 ms)**

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Run 10: Statistics of Sprout

Start at: 2018-03-14 12:39:41
End at: 2018-03-14 12:40:11

# Below is generated by plot.py at 2018-03-14 16:38:11
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 15.60 Mbit/s
  95th percentile per-packet one-way delay: 51.688 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 7.95 Mbit/s
  95th percentile per-packet one-way delay: 51.571 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 7.77 Mbit/s
  95th percentile per-packet one-way delay: 52.154 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 7.57 Mbit/s
  95th percentile per-packet one-way delay: 52.825 ms
  Loss rate: 0.00%
Run 10: Report of Sprout — Data Link

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

- Flow 1 ingress (mean 7.95 Mbps)
- Flow 1 egress (mean 7.95 Mbps)
- Flow 2 ingress (mean 7.77 Mbps)
- Flow 2 egress (mean 7.77 Mbps)
- Flow 3 ingress (mean 7.57 Mbps)
- Flow 3 egress (mean 7.57 Mbps)

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

- Flow 1 (95th percentile 51.57 ms)
- Flow 2 (95th percentile 52.15 ms)
- Flow 3 (95th percentile 52.83 ms)
Run 1: Statistics of TaoVA-100x

Start at: 2018-03-14 10:00:46
End at: 2018-03-14 10:01:16

# Below is generated by plot.py at 2018-03-14 16:38:11
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 48.05 Mbit/s
  95th percentile per-packet one-way delay: 53.719 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 33.67 Mbit/s
  95th percentile per-packet one-way delay: 54.429 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 14.74 Mbit/s
  95th percentile per-packet one-way delay: 53.408 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 13.90 Mbit/s
  95th percentile per-packet one-way delay: 53.304 ms
  Loss rate: 0.00%
Run 1: Report of TaoVA-100x — Data Link
Run 2: Statistics of TaoVA-100x

Start at: 2018-03-14 10:17:48
End at: 2018-03-14 10:18:18

# Below is generated by plot.py at 2018-03-14 16:43:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 279.03 Mbit/s
95th percentile per-packet one-way delay: 59.976 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 149.67 Mbit/s
95th percentile per-packet one-way delay: 53.724 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 187.53 Mbit/s
95th percentile per-packet one-way delay: 62.769 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 13.58 Mbit/s
95th percentile per-packet one-way delay: 54.355 ms
Loss rate: 0.00%
Run 2: Report of TaoVA-100x — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 149.67 Mbit/s)
Flow 1 egress (mean 149.67 Mbit/s)
Flow 2 ingress (mean 187.50 Mbit/s)
Flow 2 egress (mean 187.53 Mbit/s)
Flow 3 ingress (mean 13.57 Mbit/s)
Flow 3 egress (mean 13.58 Mbit/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 53.72 ms)
Flow 2 (95th percentile 62.77 ms)
Flow 3 (95th percentile 54.35 ms)
Run 3: Statistics of TaoVA-100x

Start at: 2018-03-14 10:35:29
End at: 2018-03-14 10:35:59

# Below is generated by plot.py at 2018-03-14 16:43:07
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 218.12 Mbit/s
  95th percentile per-packet one-way delay: 63.248 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 165.12 Mbit/s
  95th percentile per-packet one-way delay: 65.187 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 13.07 Mbit/s
  95th percentile per-packet one-way delay: 53.876 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 133.52 Mbit/s
  95th percentile per-packet one-way delay: 53.539 ms
  Loss rate: 0.00%
Run 3: Report of TaoVA-100x — Data Link

![Graph showing throughput and packet loss over time for flows 1 to 3.](image_url)
Run 4: Statistics of TaoVA-100x

Start at: 2018-03-14 10:52:43
End at: 2018-03-14 10:53:13

# Below is generated by plot.py at 2018-03-14 16:43:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 102.74 Mbit/s
95th percentile per-packet one-way delay: 57.276 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 28.66 Mbit/s
95th percentile per-packet one-way delay: 53.347 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 54.84 Mbit/s
95th percentile per-packet one-way delay: 67.227 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 113.34 Mbit/s
95th percentile per-packet one-way delay: 53.193 ms
Loss rate: 0.00%
Run 4: Report of TaoVA-100x — Data Link
Run 5: Statistics of TaoVA-100x

Start at: 2018-03-14 11:09:51
End at: 2018-03-14 11:10:21

# Below is generated by plot.py at 2018-03-14 16:43:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 211.58 Mbit/s
95th percentile per-packet one-way delay: 57.987 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 124.73 Mbit/s
95th percentile per-packet one-way delay: 58.657 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 25.66 Mbit/s
95th percentile per-packet one-way delay: 61.333 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 210.39 Mbit/s
95th percentile per-packet one-way delay: 56.791 ms
Loss rate: 0.00%
Run 5: Report of TaoVA-100x — Data Link

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

Legend:
- Flow 1 ingress (mean 124.73 Mbit/s) [Blue dashed line]
- Flow 1 egress (mean 124.73 Mbit/s) [Blue solid line]
- Flow 2 ingress (mean 25.66 Mbit/s) [Green dashed line]
- Flow 2 egress (mean 25.66 Mbit/s) [Green solid line]
- Flow 3 ingress (mean 210.39 Mbit/s) [Red dashed line]
- Flow 3 egress (mean 210.39 Mbit/s) [Red solid line]
Run 6: Statistics of TaoVA-100x

Start at: 2018-03-14 11:27:14
End at: 2018-03-14 11:27:44

# Below is generated by plot.py at 2018-03-14 16:43:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 151.89 Mbit/s
95th percentile per-packet one-way delay: 61.340 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 138.34 Mbit/s
95th percentile per-packet one-way delay: 61.743 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 13.22 Mbit/s
95th percentile per-packet one-way delay: 53.937 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 14.32 Mbit/s
95th percentile per-packet one-way delay: 54.503 ms
Loss rate: 0.00%
Run 7: Statistics of TaoVA-100x

Start at: 2018-03-14 11:44:18
End at: 2018-03-14 11:44:48

# Below is generated by plot.py at 2018-03-14 16:43:53
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 250.86 Mbit/s
  95th percentile per-packet one-way delay: 70.101 ms
  Loss rate: 0.01%
-- Flow 1:
  Average throughput: 86.90 Mbit/s
  95th percentile per-packet one-way delay: 57.240 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 170.37 Mbit/s
  95th percentile per-packet one-way delay: 70.686 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 152.26 Mbit/s
  95th percentile per-packet one-way delay: 84.063 ms
  Loss rate: 0.03%
Run 7: Report of TaoVA-100x — Data Link

---

**Throughput (Mbps)**

- **Flow 1 ingress (mean 86.90 Mbps)**
- **Flow 1 egress (mean 86.90 Mbps)**
- **Flow 2 ingress (mean 170.37 Mbps)**
- **Flow 2 egress (mean 170.37 Mbps)**
- **Flow 3 ingress (mean 152.34 Mbps)**
- **Flow 3 egress (mean 152.26 Mbps)**

---

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

- **Flow 1 (95th percentile 57.24 ms)**
- **Flow 2 (95th percentile 70.49 ms)**
- **Flow 3 (95th percentile 84.06 ms)**
Run 8: Statistics of TaoVA-100x

Start at: 2018-03-14 12:01:39
End at: 2018-03-14 12:02:09

# Below is generated by plot.py at 2018-03-14 16:45:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 222.10 Mbit/s
95th percentile per-packet one-way delay: 68.523 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 170.22 Mbit/s
95th percentile per-packet one-way delay: 68.784 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 36.49 Mbit/s
95th percentile per-packet one-way delay: 54.230 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 153.93 Mbit/s
95th percentile per-packet one-way delay: 67.377 ms
Loss rate: 0.00%
Run 8: Report of TaoVA-100x — Data Link

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

- **Flow 1 Ingress (mean 170.22 Mbit/s)**
- **Flow 1 Egress (mean 170.22 Mbit/s)**
- **Flow 2 Ingress (mean 36.59 Mbit/s)**
- **Flow 2 Egress (mean 36.49 Mbit/s)**
- **Flow 3 Ingress (mean 153.89 Mbit/s)**
- **Flow 3 Egress (mean 153.93 Mbit/s)**

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

- **Flow 1 (95th percentile 68.78 ms)**
- **Flow 2 (95th percentile 54.23 ms)**
- **Flow 3 (95th percentile 67.38 ms)**

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Run 9: Statistics of TaoVA-100x

Start at: 2018-03-14 12:19:11
End at: 2018-03-14 12:19:41

# Below is generated by plot.py at 2018-03-14 16:45:03
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 162.07 Mbit/s
  95th percentile per-packet one-way delay: 58.374 ms
  Loss rate: 0.01%
-- Flow 1:
  Average throughput: 9.65 Mbit/s
  95th percentile per-packet one-way delay: 54.144 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 112.32 Mbit/s
  95th percentile per-packet one-way delay: 61.059 ms
  Loss rate: 0.01%
-- Flow 3:
  Average throughput: 233.71 Mbit/s
  95th percentile per-packet one-way delay: 54.670 ms
  Loss rate: 0.00%
Run 9: Report of TaoVA-100x — Data Link
Run 10: Statistics of TaoVA-100x

Start at: 2018-03-14 12:36:20
End at: 2018-03-14 12:36:50

# Below is generated by plot.py at 2018-03-14 16:45:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 148.89 Mbit/s
95th percentile per-packet one-way delay: 56.353 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 23.96 Mbit/s
95th percentile per-packet one-way delay: 53.964 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 122.87 Mbit/s
95th percentile per-packet one-way delay: 57.692 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 158.40 Mbit/s
95th percentile per-packet one-way delay: 56.236 ms
Loss rate: 0.00%
Run 10: Report of TaoVA-100x — Data Link

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

- **Flow 1 ingress (mean 23.96 Mbit/s)**
- **Flow 1 egress (mean 23.96 Mbit/s)**
- **Flow 2 ingress (mean 122.89 Mbit/s)**
- **Flow 2 egress (mean 122.87 Mbit/s)**
- **Flow 3 ingress (mean 158.86 Mbit/s)**
- **Flow 3 egress (mean 158.40 Mbit/s)**
Run 1: Statistics of TCP Vegas

Start at: 2018-03-14 09:59:19
End at: 2018-03-14 09:59:49

# Below is generated by plot.py at 2018-03-14 16:45:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 156.37 Mbit/s
95th percentile per-packet one-way delay: 60.582 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 125.69 Mbit/s
95th percentile per-packet one-way delay: 61.000 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 10.29 Mbit/s
95th percentile per-packet one-way delay: 51.555 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 72.18 Mbit/s
95th percentile per-packet one-way delay: 53.309 ms
Loss rate: 0.00%
Run 1: Report of TCP Vegas — Data Link

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

- Blue dashed line: Flow 1 ingress (mean 125.69 Mbit/s)
- Blue solid line: Flow 1 egress (mean 125.69 Mbit/s)
- Green dashed line: Flow 2 ingress (mean 10.29 Mbit/s)
- Green solid line: Flow 2 egress (mean 10.29 Mbit/s)
- Red dashed line: Flow 3 ingress (mean 72.18 Mbit/s)
- Red solid line: Flow 3 egress (mean 72.18 Mbit/s)

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

- Blue filled circle: Flow 1 (95th percentile 61.00 ms)
- Green filled circle: Flow 2 (95th percentile 51.55 ms)
- Red filled circle: Flow 3 (95th percentile 53.31 ms)

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Run 2: Statistics of TCP Vegas

Start at: 2018-03-14 10:16:18
End at: 2018-03-14 10:16:48

# Below is generated by plot.py at 2018-03-14 16:45:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 199.72 Mbit/s
95th percentile per-packet one-way delay: 52.387 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 99.83 Mbit/s
95th percentile per-packet one-way delay: 52.210 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 147.09 Mbit/s
95th percentile per-packet one-way delay: 52.536 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 6.14 Mbit/s
95th percentile per-packet one-way delay: 51.376 ms
Loss rate: 0.12%
Run 2: Report of TCP Vegas — Data Link

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

- **Flow 1 Ingress (mean 99.83 Mbit/s)**
- **Flow 1 Egress (mean 99.83 Mbit/s)**
- **Flow 2 Ingress (mean 147.07 Mbit/s)**
- **Flow 2 Egress (mean 147.09 Mbit/s)**
- **Flow 3 Ingress (mean 6.15 Mbit/s)**
- **Flow 3 Egress (mean 6.14 Mbit/s)**

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

- **Flow 1 (95th percentile 52.21 ms)**
- **Flow 2 (95th percentile 52.54 ms)**
- **Flow 3 (95th percentile 51.38 ms)**
Run 3: Statistics of TCP Vegas

Start at: 2018-03-14 10:33:57
End at: 2018-03-14 10:34:27

# Below is generated by plot.py at 2018-03-14 16:46:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 252.01 Mbit/s
95th percentile per-packet one-way delay: 62.481 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 199.52 Mbit/s
95th percentile per-packet one-way delay: 63.374 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 71.78 Mbit/s
95th percentile per-packet one-way delay: 56.442 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 14.14 Mbit/s
95th percentile per-packet one-way delay: 54.315 ms
Loss rate: 0.35%
Run 3: Report of TCP Vegas — Data Link

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

- Flow 1 ingress (mean 199.56 Mbit/s)
- Flow 1 egress (mean 199.52 Mbit/s)
- Flow 2 ingress (mean 71.77 Mbit/s)
- Flow 2 egress (mean 71.78 Mbit/s)
- Flow 3 ingress (mean 14.18 Mbit/s)
- Flow 3 egress (mean 14.14 Mbit/s)
Run 4: Statistics of TCP Vegas

Start at: 2018-03-14 10:51:10
End at: 2018-03-14 10:51:40

# Below is generated by plot.py at 2018-03-14 16:48:19
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 287.44 Mbit/s
  95th percentile per-packet one-way delay: 51.820 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 184.91 Mbit/s
  95th percentile per-packet one-way delay: 52.167 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 151.13 Mbit/s
  95th percentile per-packet one-way delay: 51.461 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 5.79 Mbit/s
  95th percentile per-packet one-way delay: 51.320 ms
  Loss rate: 0.06%
Run 4: Report of TCP Vegas — Data Link

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

- **Flow 1 ing (mean 184.91 Mbit/s)**
- **Flow 1 egress (mean 184.91 Mbit/s)**
- **Flow 2 ing (mean 151.11 Mbit/s)**
- **Flow 2 egress (mean 151.33 Mbit/s)**
- **Flow 3 ing (mean 5.79 Mbit/s)**
- **Flow 3 egress (mean 5.79 Mbit/s)**

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

- **Flow 1 (95th percentile 52.17 ms)**
- **Flow 2 (95th percentile 51.46 ms)**
- **Flow 3 (95th percentile 51.32 ms)**
Run 5: Statistics of TCP Vegas

Start at: 2018-03-14 11:08:21
End at: 2018-03-14 11:08:51

# Below is generated by plot.py at 2018-03-14 16:48:19
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 199.83 Mbit/s
  95th percentile per-packet one-way delay: 53.188 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 139.29 Mbit/s
  95th percentile per-packet one-way delay: 52.886 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 56.59 Mbit/s
  95th percentile per-packet one-way delay: 54.299 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 69.06 Mbit/s
  95th percentile per-packet one-way delay: 53.850 ms
  Loss rate: 0.00%
Run 5: Report of TCP Vegas — Data Link

**Throughput (Mbps):**
- Flow 1 ingress (mean 139.29 Mbps)
- Flow 1 egress (mean 139.29 Mbps)
- Flow 2 ingress (mean 56.58 Mbps)
- Flow 2 egress (mean 56.59 Mbps)
- Flow 3 ingress (mean 69.04 Mbps)
- Flow 3 egress (mean 69.06 Mbps)

**Per-packet one-way delay (ms):**
- Flow 1 (95th percentile 52.89 ms)
- Flow 2 (95th percentile 54.30 ms)
- Flow 3 (95th percentile 53.85 ms)
Run 6: Statistics of TCP Vegas

Start at: 2018-03-14 11:25:36
End at: 2018-03-14 11:26:06

# Below is generated by plot.py at 2018-03-14 16:51:50
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 369.93 Mbit/s
  95th percentile per-packet one-way delay: 63.593 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 219.70 Mbit/s
  95th percentile per-packet one-way delay: 62.471 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 223.06 Mbit/s
  95th percentile per-packet one-way delay: 65.193 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 5.23 Mbit/s
  95th percentile per-packet one-way delay: 58.754 ms
  Loss rate: 0.12%
Run 6: Report of TCP Vegas — Data Link
Run 7: Statistics of TCP Vegas

Start at: 2018-03-14 11:42:47
End at: 2018-03-14 11:43:17

# Below is generated by plot.py at 2018-03-14 16:51:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 233.45 Mbit/s
95th percentile per-packet one-way delay: 60.577 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 224.32 Mbit/s
95th percentile per-packet one-way delay: 60.669 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 11.25 Mbit/s
95th percentile per-packet one-way delay: 53.590 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 5.42 Mbit/s
95th percentile per-packet one-way delay: 53.374 ms
Loss rate: 0.18%
Run 7: Report of TCP Vegas — Data Link

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**Throughput (Mbps)**

- **Flow 1 ingress (mean 224.32 Mbps)**
- **Flow 1 egress (mean 224.32 Mbps)**
- **Flow 2 ingress (mean 11.26 Mbps)**
- **Flow 2 egress (mean 11.25 Mbps)**
- **Flow 3 ingress (mean 5.42 Mbps)**
- **Flow 3 egress (mean 5.42 Mbps)**

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**Packet drop delay (ms)**

- **Flow 1 (95th percentile 60.67 ms)**
- **Flow 2 (95th percentile 53.59 ms)**
- **Flow 3 (95th percentile 53.37 ms)**
Run 8: Statistics of TCP Vegas

Start at: 2018-03-14 12:00:10
End at: 2018-03-14 12:00:40

# Below is generated by plot.py at 2018-03-14 16:51:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 195.12 Mbit/s
95th percentile per-packet one-way delay: 53.157 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 118.39 Mbit/s
95th percentile per-packet one-way delay: 52.956 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 80.83 Mbit/s
95th percentile per-packet one-way delay: 53.643 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 69.04 Mbit/s
95th percentile per-packet one-way delay: 53.016 ms
Loss rate: 0.00%
Run 8: Report of TCP Vegas — Data Link
Run 9: Statistics of TCP Vegas

Start at: 2018-03-14 12:17:32
End at: 2018-03-14 12:18:02

# Below is generated by plot.py at 2018-03-14 16:53:09
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 389.41 Mbit/s
  95th percentile per-packet one-way delay: 65.480 ms
  Loss rate: 0.03%
-- Flow 1:
  Average throughput: 219.14 Mbit/s
  95th percentile per-packet one-way delay: 64.887 ms
  Loss rate: 0.06%
-- Flow 2:
  Average throughput: 220.53 Mbit/s
  95th percentile per-packet one-way delay: 66.331 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 70.58 Mbit/s
  95th percentile per-packet one-way delay: 57.418 ms
  Loss rate: 0.00%
Run 9: Report of TCP Vegas — Data Link

![Graph showing throughput and per-packet one-way delay over time for Flow 1, Flow 2, and Flow 3. Flow 1 has a mean ingress of 219.28 Mbit/s and egress of 219.14 Mbit/s. Flow 2 has a mean ingress of 220.56 Mbit/s and egress of 220.53 Mbit/s. Flow 3 has a mean ingress of 70.59 Mbit/s and egress of 70.58 Mbit/s. Per-packet one-way delay for Flow 1 has a 95th percentile of 64.89 ms, Flow 2 has a 95th percentile of 66.33 ms, and Flow 3 has a 95th percentile of 57.42 ms.]
Run 10: Statistics of TCP Vegas

Start at: 2018-03-14 12:34:51
End at: 2018-03-14 12:35:21

# Below is generated by plot.py at 2018-03-14 16:53:09
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 202.67 Mbit/s
  95th percentile per-packet one-way delay: 55.266 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 147.83 Mbit/s
  95th percentile per-packet one-way delay: 55.507 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 52.23 Mbit/s
  95th percentile per-packet one-way delay: 54.791 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 60.60 Mbit/s
  95th percentile per-packet one-way delay: 53.351 ms
  Loss rate: 0.00%
Run 10: Report of TCP Vegas — Data Link

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

- Flow 1 ingress (mean 147.82 Mbit/s)
- Flow 1 egress (mean 147.83 Mbit/s)
- Flow 2 ingress (mean 52.23 Mbit/s)
- Flow 2 egress (mean 52.23 Mbit/s)
- Flow 3 ingress (mean 60.58 Mbit/s)
- Flow 3 egress (mean 60.60 Mbit/s)

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

- Flow 1 (95th percentile 55.51 ms)
- Flow 2 (95th percentile 54.79 ms)
- Flow 3 (95th percentile 53.35 ms)
Run 1: Statistics of Verus

Start at: 2018-03-14 10:08:08
End at: 2018-03-14 10:08:38

# Below is generated by plot.py at 2018-03-14 16:53:09
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 309.06 Mbit/s
  95th percentile per-packet one-way delay: 153.743 ms
  Loss rate: 0.60%
-- Flow 1:
  Average throughput: 172.77 Mbit/s
  95th percentile per-packet one-way delay: 143.900 ms
  Loss rate: 1.07%
-- Flow 2:
  Average throughput: 139.83 Mbit/s
  95th percentile per-packet one-way delay: 172.254 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 133.94 Mbit/s
  95th percentile per-packet one-way delay: 135.610 ms
  Loss rate: 0.00%
Run 1: Report of Verus — Data Link

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

- Flow 1 ingress (mean 174.65 Mbit/s)
- Flow 1 egress (mean 172.77 Mbit/s)
- Flow 2 ingress (mean 140.01 Mbit/s)
- Flow 2 egress (mean 139.63 Mbit/s)
- Flow 3 ingress (mean 134.62 Mbit/s)
- Flow 3 egress (mean 133.94 Mbit/s)

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

- Flow 1 (95th percentile 143.90 ms)
- Flow 2 (95th percentile 172.25 ms)
- Flow 3 (95th percentile 135.61 ms)
Run 2: Statistics of Verus

Start at: 2018-03-14 10:25:29
End at: 2018-03-14 10:26:00

# Below is generated by plot.py at 2018-03-14 16:55:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 351.34 Mbit/s
95th percentile per-packet one-way delay: 162.163 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 192.28 Mbit/s
95th percentile per-packet one-way delay: 125.044 ms
Loss rate: 0.87%
-- Flow 2:
Average throughput: 154.24 Mbit/s
95th percentile per-packet one-way delay: 138.242 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 171.76 Mbit/s
95th percentile per-packet one-way delay: 266.861 ms
Loss rate: 0.83%
Run 2: Report of Verus — Data Link
Run 3: Statistics of Verus

Start at: 2018-03-14 10:43:02
End at: 2018-03-14 10:43:32

# Below is generated by plot.py at 2018-03-14 16:56:09
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 355.31 Mbit/s
  95th percentile per-packet one-way delay: 126.159 ms
  Loss rate: 0.07%
-- Flow 1:
  Average throughput: 194.66 Mbit/s
  95th percentile per-packet one-way delay: 136.535 ms
  Loss rate: 0.10%
-- Flow 2:
  Average throughput: 171.58 Mbit/s
  95th percentile per-packet one-way delay: 112.853 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 141.43 Mbit/s
  95th percentile per-packet one-way delay: 119.637 ms
  Loss rate: 0.11%
Run 3: Report of Verus — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 195.61 Mbit/s)  Flow 1 egress (mean 194.66 Mbit/s)
Flow 2 ingress (mean 171.63 Mbit/s)  Flow 2 egress (mean 171.58 Mbit/s)
Flow 3 ingress (mean 141.59 Mbit/s)  Flow 3 egress (mean 141.43 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 136.53 ms)  Flow 2 (95th percentile 112.85 ms)  Flow 3 (95th percentile 119.64 ms)
Run 4: Statistics of Verus

Start at: 2018-03-14 11:00:07
End at: 2018-03-14 11:00:37

# Below is generated by plot.py at 2018-03-14 16:57:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 367.70 Mbit/s
95th percentile per-packet one-way delay: 131.161 ms
Loss rate: 1.76%
-- Flow 1:
Average throughput: 209.83 Mbit/s
95th percentile per-packet one-way delay: 139.114 ms
Loss rate: 3.03%
-- Flow 2:
Average throughput: 150.97 Mbit/s
95th percentile per-packet one-way delay: 126.593 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 177.14 Mbit/s
95th percentile per-packet one-way delay: 129.986 ms
Loss rate: 0.05%
Run 4: Report of Verus — Data Link
Run 5: Statistics of Verus

Start at: 2018-03-14 11:17:27
End at: 2018-03-14 11:17:57

# Below is generated by plot.py at 2018-03-14 16:57:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 308.70 Mbit/s
95th percentile per-packet one-way delay: 155.977 ms
Loss rate: 1.07%
-- Flow 1:
Average throughput: 152.52 Mbit/s
95th percentile per-packet one-way delay: 170.694 ms
Loss rate: 1.34%
-- Flow 2:
Average throughput: 190.89 Mbit/s
95th percentile per-packet one-way delay: 139.593 ms
Loss rate: 0.98%
-- Flow 3:
Average throughput: 89.20 Mbit/s
95th percentile per-packet one-way delay: 117.069 ms
Loss rate: 0.00%
Run 5: Report of Verus — Data Link

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

- Flow 1 ingress (mean 154.61 Mbps)
- Flow 1 egress (mean 152.52 Mbps)
- Flow 2 ingress (mean 192.78 Mbps)
- Flow 2 egress (mean 190.89 Mbps)
- Flow 3 ingress (mean 89.20 Mbps)
- Flow 3 egress (mean 89.20 Mbps)

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

- Flow 1 (95th percentile 170.69 ms)
- Flow 2 (95th percentile 139.59 ms)
- Flow 3 (95th percentile 117.07 ms)
Run 6: Statistics of Verus

Start at: 2018-03-14 11:34:35
End at: 2018-03-14 11:35:05

# Below is generated by plot.py at 2018-03-14 16:57:00
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 323.33 Mbit/s
  95th percentile per-packet one-way delay: 170.006 ms
  Loss rate: 0.29%
-- Flow 1:
  Average throughput: 186.56 Mbit/s
  95th percentile per-packet one-way delay: 126.366 ms
  Loss rate: 0.21%
-- Flow 2:
  Average throughput: 165.97 Mbit/s
  95th percentile per-packet one-way delay: 201.453 ms
  Loss rate: 0.47%
-- Flow 3:
  Average throughput: 80.63 Mbit/s
  95th percentile per-packet one-way delay: 100.250 ms
  Loss rate: 0.16%
Run 6: Report of Verus — Data Link

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

Start at: 2018-03-14 11:51:53
End at: 2018-03-14 11:52:23

# Below is generated by plot.py at 2018-03-14 17:00:19
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 358.62 Mbit/s
  95th percentile per-packet one-way delay: 180.796 ms
  Loss rate: 0.71%
-- Flow 1:
  Average throughput: 205.91 Mbit/s
  95th percentile per-packet one-way delay: 198.108 ms
  Loss rate: 1.13%
-- Flow 2:
  Average throughput: 176.79 Mbit/s
  95th percentile per-packet one-way delay: 124.651 ms
  Loss rate: 0.01%
-- Flow 3:
  Average throughput: 109.23 Mbit/s
  95th percentile per-packet one-way delay: 118.539 ms
  Loss rate: 0.54%
Run 7: Report of Verus — Data Link
Run 8: Statistics of Verus

Start at: 2018-03-14 12:09:18
End at: 2018-03-14 12:09:48

# Below is generated by plot.py at 2018-03-14 17:00:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 299.83 Mbit/s
95th percentile per-packet one-way delay: 203.846 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 189.72 Mbit/s
95th percentile per-packet one-way delay: 207.842 ms
Loss rate: 0.93%
-- Flow 2:
Average throughput: 135.29 Mbit/s
95th percentile per-packet one-way delay: 198.623 ms
Loss rate: 0.38%
-- Flow 3:
Average throughput: 62.24 Mbit/s
95th percentile per-packet one-way delay: 159.322 ms
Loss rate: 0.18%
Run 8: Report of Verus — Data Link

[Graph showing throughput over time for different flows with legends indicating mean throughput rates for ingress and egress.]
Run 9: Statistics of Verus

Start at: 2018-03-14 12:26:35
End at: 2018-03-14 12:27:05

# Below is generated by plot.py at 2018-03-14 17:01:06
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 338.14 Mbit/s
  95th percentile per-packet one-way delay: 119.560 ms
  Loss rate: 0.65%
-- Flow 1:
  Average throughput: 189.78 Mbit/s
  95th percentile per-packet one-way delay: 129.394 ms
  Loss rate: 1.10%
-- Flow 2:
  Average throughput: 159.48 Mbit/s
  95th percentile per-packet one-way delay: 112.709 ms
  Loss rate: 0.09%
-- Flow 3:
  Average throughput: 130.16 Mbit/s
  95th percentile per-packet one-way delay: 120.615 ms
  Loss rate: 0.01%
Run 9: Report of Verus — Data Link

![Graph of Throughput vs Time]

- Flow 1 ingress (mean 191.89 Mbps)
- Flow 1 egress (mean 189.78 Mbps)
- Flow 2 ingress (mean 159.63 Mbps)
- Flow 2 egress (mean 159.48 Mbps)
- Flow 3 ingress (mean 130.24 Mbps)
- Flow 3 egress (mean 130.16 Mbps)

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

- Flow 1 (95th percentile 129.39 ms)
- Flow 2 (95th percentile 112.71 ms)
- Flow 3 (95th percentile 120.61 ms)
Run 10: Statistics of Verus

Start at: 2018-03-14 12:43:50  
End at: 2018-03-14 12:44:20  

# Below is generated by plot.py at 2018-03-14 17:02:29  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 295.74 Mbit/s  
95th percentile per-packet one-way delay: 127.524 ms  
Loss rate: 0.36%  
-- Flow 1:  
Average throughput: 171.82 Mbit/s  
95th percentile per-packet one-way delay: 111.208 ms  
Loss rate: 0.38%  
-- Flow 2:  
Average throughput: 136.14 Mbit/s  
95th percentile per-packet one-way delay: 221.725 ms  
Loss rate: 0.45%  
-- Flow 3:  
Average throughput: 102.88 Mbit/s  
95th percentile per-packet one-way delay: 108.226 ms  
Loss rate: 0.00%
Run 10: Report of Verus — Data Link

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

- Flow 1 ingress (mean 172.48 Mbps)
- Flow 1 egress (mean 171.82 Mbps)
- Flow 2 ingress (mean 136.76 Mbps)
- Flow 2 egress (mean 136.16 Mbps)
- Flow 3 ingress (mean 102.88 Mbps)
- Flow 3 egress (mean 102.88 Mbps)

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

- Flow 1 (95th percentile 111.21 ms)
- Flow 2 (95th percentile 221.72 ms)
- Flow 3 (95th percentile 108.23 ms)
Run 1: Statistics of Copa

Start at: 2018-03-14 10:12:11
End at: 2018-03-14 10:12:41

# Below is generated by plot.py at 2018-03-14 17:02:33
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 154.36 Mbit/s
  95th percentile per-packet one-way delay: 53.702 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 82.33 Mbit/s
  95th percentile per-packet one-way delay: 53.770 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 81.70 Mbit/s
  95th percentile per-packet one-way delay: 53.667 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 53.14 Mbit/s
  95th percentile per-packet one-way delay: 53.561 ms
  Loss rate: 0.00%
Run 1: Report of Copa — Data Link

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

- Flow 1 ingress (mean 82.34 Mbit/s)
- Flow 1 egress (mean 82.33 Mbit/s)
- Flow 2 ingress (mean 81.69 Mbit/s)
- Flow 2 egress (mean 81.70 Mbit/s)
- Flow 3 ingress (mean 53.13 Mbit/s)
- Flow 3 egress (mean 53.14 Mbit/s)

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

- Flow 1 (95th percentile 53.77 ms)
- Flow 2 (95th percentile 53.67 ms)
- Flow 3 (95th percentile 53.56 ms)
Run 2: Statistics of Copa

Start at: 2018-03-14 10:29:51
End at: 2018-03-14 10:30:21

# Below is generated by plot.py at 2018-03-14 17:02:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 154.54 Mbit/s
95th percentile per-packet one-way delay: 53.689 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 75.48 Mbit/s
95th percentile per-packet one-way delay: 50.814 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 70.09 Mbit/s
95th percentile per-packet one-way delay: 53.857 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 97.78 Mbit/s
95th percentile per-packet one-way delay: 50.757 ms
Loss rate: 0.00%
Run 2: Report of Copa — Data Link

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

Legend:
- Blue dashed line: Flow 1 ingress (mean 75.48 Mbit/s)
- Blue line: Flow 1 egress (mean 75.48 Mbit/s)
- Green dashed line: Flow 2 ingress (mean 70.08 Mbit/s)
- Green line: Flow 2 egress (mean 70.09 Mbit/s)
- Red dashed line: Flow 3 ingress (mean 97.77 Mbit/s)
- Red line: Flow 3 egress (mean 97.78 Mbit/s)
Run 3: Statistics of Copa

Start at: 2018-03-14 10:47:07
End at: 2018-03-14 10:47:37

# Below is generated by plot.py at 2018-03-14 17:03:35
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 167.62 Mbit/s
  95th percentile per-packet one-way delay: 53.259 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 89.06 Mbit/s
  95th percentile per-packet one-way delay: 50.655 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 80.36 Mbit/s
  95th percentile per-packet one-way delay: 53.400 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 75.38 Mbit/s
  95th percentile per-packet one-way delay: 53.083 ms
  Loss rate: 0.00%
Run 3: Report of Copa — Data Link
Run 4: Statistics of Copa

Start at: 2018-03-14 11:04:16
End at: 2018-03-14 11:04:46

# Below is generated by plot.py at 2018-03-14 17:03:37
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 154.12 Mbit/s
  95th percentile per-packet one-way delay: 53.249 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 75.50 Mbit/s
  95th percentile per-packet one-way delay: 53.329 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 78.06 Mbit/s
  95th percentile per-packet one-way delay: 50.571 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 80.52 Mbit/s
  95th percentile per-packet one-way delay: 50.391 ms
  Loss rate: 0.00%
Run 4: Report of Copa — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 75.50 Mbps)
  - Flow 1 egress (mean 75.50 Mbps)
  - Flow 2 ingress (mean 78.06 Mbps)
  - Flow 2 egress (mean 78.06 Mbps)
  - Flow 3 ingress (mean 80.52 Mbps)
  - Flow 3 egress (mean 80.52 Mbps)

- **Packet one-way delay (ms):**
  - Flow 1 (95th percentile 53.33 ms)
  - Flow 2 (95th percentile 50.57 ms)
  - Flow 3 (95th percentile 50.39 ms)
Run 5: Statistics of Copa

Start at: 2018-03-14 11:21:31
End at: 2018-03-14 11:22:01

# Below is generated by plot.py at 2018-03-14 17:06:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 151.06 Mbit/s
95th percentile per-packet one-way delay: 53.495 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 66.84 Mbit/s
95th percentile per-packet one-way delay: 53.595 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 88.16 Mbit/s
95th percentile per-packet one-way delay: 50.667 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 76.93 Mbit/s
95th percentile per-packet one-way delay: 50.664 ms
Loss rate: 0.00%
Run 5: Report of Copa — Data Link

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

Flow 1 ingress (mean 66.84 Mbit/s) | Flow 1 egress (mean 66.84 Mbit/s)
Flow 2 ingress (mean 88.17 Mbit/s) | Flow 2 egress (mean 88.16 Mbit/s)
Flow 3 ingress (mean 76.94 Mbit/s) | Flow 3 egress (mean 76.93 Mbit/s)

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

Flow 1 (95th percentile 53.59 ms) | Flow 2 (95th percentile 50.67 ms) | Flow 3 (95th percentile 50.66 ms)
Run 6: Statistics of Copa

Start at: 2018-03-14 11:38:39
End at: 2018-03-14 11:39:09

# Below is generated by plot.py at 2018-03-14 17:06:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 151.87 Mbit/s
95th percentile per-packet one-way delay: 53.545 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 75.56 Mbit/s
95th percentile per-packet one-way delay: 53.483 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 80.35 Mbit/s
95th percentile per-packet one-way delay: 50.619 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 68.89 Mbit/s
95th percentile per-packet one-way delay: 53.733 ms
Loss rate: 0.00%
Run 6: Report of Copa — Data Link
Run 7: Statistics of Copa

Start at: 2018-03-14 11:56:04
End at: 2018-03-14 11:56:34

# Below is generated by plot.py at 2018-03-14 17:07:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 154.17 Mbit/s
95th percentile per-packet one-way delay: 53.731 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 76.05 Mbit/s
95th percentile per-packet one-way delay: 53.503 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 70.43 Mbit/s
95th percentile per-packet one-way delay: 53.695 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 93.93 Mbit/s
95th percentile per-packet one-way delay: 53.786 ms
Loss rate: 0.00%
Run 7: Report of Copa — Data Link

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

![Graph 2: RTT vs Time](image2)

Legend:
- Flow 1 ingress (mean 76.05 Mbit/s)
- Flow 1 egress (mean 76.05 Mbit/s)
- Flow 2 ingress (mean 70.44 Mbit/s)
- Flow 2 egress (mean 70.43 Mbit/s)
- Flow 3 ingress (mean 93.93 Mbit/s)
- Flow 3 egress (mean 93.93 Mbit/s)

Legend:
- Flow 1 (95th percentile 53.50 ms)
- Flow 2 (95th percentile 53.70 ms)
- Flow 3 (95th percentile 53.79 ms)
Run 8: Statistics of Copa

Start at: 2018-03-14 12:13:22
End at: 2018-03-14 12:13:52

# Below is generated by plot.py at 2018-03-14 17:09:42
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 178.14 Mbit/s
  95th percentile per-packet one-way delay: 54.048 ms
  Loss rate: 0.01%
-- Flow 1:
  Average throughput: 98.80 Mbit/s
  95th percentile per-packet one-way delay: 54.072 ms
  Loss rate: 0.01%
-- Flow 2:
  Average throughput: 76.19 Mbit/s
  95th percentile per-packet one-way delay: 51.173 ms
  Loss rate: 0.01%
-- Flow 3:
  Average throughput: 86.25 Mbit/s
  95th percentile per-packet one-way delay: 54.082 ms
  Loss rate: 0.02%
Run 8: Report of Copa — Data Link

[Graphs showing throughput and packet delay over time for different flows, with annotations for each flow's ingress and egress rates and 95th percentile delay values.]
Run 9: Statistics of Copa

Start at: 2018-03-14 12:30:47
End at: 2018-03-14 12:31:17

# Below is generated by plot.py at 2018-03-14 17:09:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 152.72 Mbit/s
95th percentile per-packet one-way delay: 53.145 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 74.71 Mbit/s
95th percentile per-packet one-way delay: 50.754 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 81.88 Mbit/s
95th percentile per-packet one-way delay: 53.194 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 70.93 Mbit/s
95th percentile per-packet one-way delay: 52.862 ms
Loss rate: 0.00%
Run 9: Report of Copa — Data Link

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

- Flow 1 ingress (mean 74.70 Mbit/s)
- Flow 1 egress (mean 74.71 Mbit/s)
- Flow 2 ingress (mean 81.89 Mbit/s)
- Flow 2 egress (mean 81.88 Mbit/s)
- Flow 3 ingress (mean 70.90 Mbit/s)
- Flow 3 egress (mean 70.93 Mbit/s)

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

- Flow 1 (95th percentile 50.75 ms)
- Flow 2 (95th percentile 53.19 ms)
- Flow 3 (95th percentile 52.86 ms)
Run 10: Statistics of Copa

Start at: 2018-03-14 12:47:54
End at: 2018-03-14 12:48:24

# Below is generated by plot.py at 2018-03-14 17:09:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 148.73 Mbit/s
95th percentile per-packet one-way delay: 51.118 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 66.45 Mbit/s
95th percentile per-packet one-way delay: 51.258 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 79.34 Mbit/s
95th percentile per-packet one-way delay: 50.723 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 89.07 Mbit/s
95th percentile per-packet one-way delay: 50.653 ms
Loss rate: 0.00%
Run 10: Report of Copa — Data Link

![Graphs showing throughput and per-packet one-way delay over time for flows 1, 2, and 3 with mean values and 95th percentiles provided.]

Flow 1 ingress (mean 66.44 Mbit/s)  Flow 1 egress (mean 66.45 Mbit/s)
Flow 2 ingress (mean 79.34 Mbit/s)  Flow 2 egress (mean 79.34 Mbit/s)
Flow 3 ingress (mean 89.07 Mbit/s)  Flow 3 egress (mean 89.07 Mbit/s)
Flow 1 (95th percentile 51.26 ms)  Flow 2 (95th percentile 50.72 ms)  Flow 3 (95th percentile 50.65 ms)
Run 1: Statistics of FillP

Start at: 2018-03-14 09:56:08
End at: 2018-03-14 09:56:38

# Below is generated by plot.py at 2018-03-14 17:36:17
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1304.21 Mbit/s
  95th percentile per-packet one-way delay: 172.389 ms
  Loss rate: 15.12%
-- Flow 1:
  Average throughput: 670.43 Mbit/s
  95th percentile per-packet one-way delay: 175.087 ms
  Loss rate: 14.91%
-- Flow 2:
  Average throughput: 667.76 Mbit/s
  95th percentile per-packet one-way delay: 161.382 ms
  Loss rate: 14.02%
-- Flow 3:
  Average throughput: 570.01 Mbit/s
  95th percentile per-packet one-way delay: 180.150 ms
  Loss rate: 18.34%
Run 1: Report of FillP — Data Link

![Graph 1: Throughput vs Time]

- **Flow 1 Ingress** (mean 787.82 Mbps)
- **Flow 1 Egress** (mean 670.43 Mbps)
- **Flow 2 Ingress** (mean 776.59 Mbps)
- **Flow 2 Egress** (mean 667.76 Mbps)
- **Flow 3 Ingress** (mean 697.78 Mbps)
- **Flow 3 Egress** (mean 570.03 Mbps)

![Graph 2: One-way delay vs Time]

- **Flow 1 (95th percentile)** 175.09 ms
- **Flow 2 (95th percentile)** 161.38 ms
- **Flow 3 (95th percentile)** 180.15 ms
Run 2: Statistics of FillP

Start at: 2018-03-14 10:13:08
End at: 2018-03-14 10:13:38

# Below is generated by plot.py at 2018-03-14 17:36:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1187.36 Mbit/s
95th percentile per-packet one-way delay: 311.059 ms
Loss rate: 14.95%
-- Flow 1:
Average throughput: 617.68 Mbit/s
95th percentile per-packet one-way delay: 312.659 ms
Loss rate: 14.85%
-- Flow 2:
Average throughput: 591.01 Mbit/s
95th percentile per-packet one-way delay: 318.016 ms
Loss rate: 13.28%
-- Flow 3:
Average throughput: 532.42 Mbit/s
95th percentile per-packet one-way delay: 206.277 ms
Loss rate: 18.82%
Run 2: Report of FillP — Data Link
Run 3: Statistics of FILLP

Start at: 2018-03-14 10:30:47
End at: 2018-03-14 10:31:17

# Below is generated by plot.py at 2018-03-14 17:39:37
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1322.68 Mbit/s
  95th percentile per-packet one-way delay: 184.069 ms
  Loss rate: 15.42%
-- Flow 1:
  Average throughput: 655.39 Mbit/s
  95th percentile per-packet one-way delay: 186.190 ms
  Loss rate: 16.10%
-- Flow 2:
  Average throughput: 662.58 Mbit/s
  95th percentile per-packet one-way delay: 167.331 ms
  Loss rate: 15.56%
-- Flow 3:
  Average throughput: 683.40 Mbit/s
  95th percentile per-packet one-way delay: 210.781 ms
  Loss rate: 13.08%
Run 3: Report of FillP — Data Link

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

- Flow 1 Ingress (mean 781.19 Mb/s) vs Flow 1 Egress (mean 655.39 Mb/s)
- Flow 2 Ingress (mean 784.70 Mb/s) vs Flow 2 Egress (mean 662.58 Mb/s)
- Flow 3 Ingress (mean 786.03 Mb/s) vs Flow 3 Egress (mean 683.40 Mb/s)

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

- Flow 1 (95th percentile 186.19 ms) vs Flow 2 (95th percentile 167.33 ms) vs Flow 3 (95th percentile 210.78 ms)
Run 4: Statistics of FillP

Start at: 2018-03-14 10:48:03
End at: 2018-03-14 10:48:33

# Below is generated by plot.py at 2018-03-14 17:39:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1225.88 Mbit/s
95th percentile per-packet one-way delay: 287.258 ms
Loss rate: 15.78%
-- Flow 1:
Average throughput: 626.14 Mbit/s
95th percentile per-packet one-way delay: 296.121 ms
Loss rate: 15.37%
-- Flow 2:
Average throughput: 624.80 Mbit/s
95th percentile per-packet one-way delay: 188.395 ms
Loss rate: 16.47%
-- Flow 3:
Average throughput: 556.17 Mbit/s
95th percentile per-packet one-way delay: 296.429 ms
Loss rate: 15.58%
Run 4: Report of FillP — Data Link

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

- Flow 1 ingress (mean 739.90 Mbit/s)
- Flow 1 egress (mean 626.14 Mbit/s)
- Flow 2 ingress (mean 748.03 Mbit/s)
- Flow 2 egress (mean 624.80 Mbit/s)
- Flow 3 ingress (mean 656.72 Mbit/s)
- Flow 3 egress (mean 556.17 Mbit/s)

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

- Flow 1 (95th percentile 296.12 ms)
- Flow 2 (95th percentile 188.40 ms)
- Flow 3 (95th percentile 296.43 ms)
Run 5: Statistics of FillP

Start at: 2018-03-14 11:05:13
End at: 2018-03-14 11:05:43

# Below is generated by plot.py at 2018-03-14 17:39:37
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1233.23 Mbit/s
  95th percentile per-packet one-way delay: 186.303 ms
  Loss rate: 16.96%
  -- Flow 1:
  Average throughput: 650.98 Mbit/s
  95th percentile per-packet one-way delay: 176.175 ms
  Loss rate: 14.97%
  -- Flow 2:
  Average throughput: 567.82 Mbit/s
  95th percentile per-packet one-way delay: 209.225 ms
  Loss rate: 19.85%
  -- Flow 3:
  Average throughput: 626.75 Mbit/s
  95th percentile per-packet one-way delay: 182.947 ms
  Loss rate: 17.65%
Run 5: Report of FillP — Data Link

![Graph](image-url)
Run 6: Statistics of FillP

Start at: 2018-03-14 11:22:26
End at: 2018-03-14 11:22:56

# Below is generated by plot.py at 2018-03-14 17:39:37
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1073.11 Mbit/s
  95th percentile per-packet one-way delay: 384.148 ms
  Loss rate: 15.93%
-- Flow 1:
  Average throughput: 611.46 Mbit/s
  95th percentile per-packet one-way delay: 319.825 ms
  Loss rate: 13.57%
-- Flow 2:
  Average throughput: 501.53 Mbit/s
  95th percentile per-packet one-way delay: 415.417 ms
  Loss rate: 18.08%
-- Flow 3:
  Average throughput: 388.90 Mbit/s
  95th percentile per-packet one-way delay: 425.961 ms
  Loss rate: 20.84%
Run 6: Report of FillP — Data Link

---

**Graph 1:**
Throughput (Mbps/s) vs. Time (s)
- Flow 1 Ingress (mean 710.89 Mbps)
- Flow 1 Egress (mean 611.46 Mbps)
- Flow 2 Ingress (mean 616.62 Mbps)
- Flow 2 Egress (mean 503.53 Mbps)
- Flow 3 Ingress (mean 487.41 Mbps)
- Flow 3 Egress (mean 388.90 Mbps)

**Graph 2:**
Packet delivery rate vs. Time (s)
- Flow 1 (95th percentile 319.82 ms)
- Flow 2 (95th percentile 415.42 ms)
- Flow 3 (95th percentile 425.96 ms)
Run 7: Statistics of FillP

Start at: 2018-03-14 11:39:34
End at: 2018-03-14 11:40:04

# Below is generated by plot.py at 2018-03-14 17:42:37
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1349.98 Mbit/s
  95th percentile per-packet one-way delay: 282.208 ms
  Loss rate: 12.80%
-- Flow 1:
  Average throughput: 720.67 Mbit/s
  95th percentile per-packet one-way delay: 168.479 ms
  Loss rate: 12.30%
-- Flow 2:
  Average throughput: 645.02 Mbit/s
  95th percentile per-packet one-way delay: 322.583 ms
  Loss rate: 14.04%
-- Flow 3:
  Average throughput: 604.19 Mbit/s
  95th percentile per-packet one-way delay: 286.213 ms
  Loss rate: 11.85%
Run 7: Report of FillP — Data Link
Run 8: Statistics of FillP

Start at: 2018-03-14 11:56:58
End at: 2018-03-14 11:57:28

# Below is generated by plot.py at 2018-03-14 17:44:42
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1339.29 Mbit/s
  95th percentile per-packet one-way delay: 170.116 ms
  Loss rate: 16.14%
-- Flow 1:
  Average throughput: 702.54 Mbit/s
  95th percentile per-packet one-way delay: 152.242 ms
  Loss rate: 14.35%
-- Flow 2:
  Average throughput: 669.76 Mbit/s
  95th percentile per-packet one-way delay: 189.135 ms
  Loss rate: 17.16%
-- Flow 3:
  Average throughput: 576.55 Mbit/s
  95th percentile per-packet one-way delay: 174.551 ms
  Loss rate: 19.98%
Run 8: Report of FillP — Data Link

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

- **Flow 1 Ingress (mean 820.19 Mbit/s)**
- **Flow 1 Egress (mean 702.54 Mbit/s)**
- **Flow 2 Ingress (mean 808.45 Mbit/s)**
- **Flow 2 Egress (mean 669.76 Mbit/s)**
- **Flow 3 Ingress (mean 720.58 Mbit/s)**
- **Flow 3 Egress (mean 576.55 Mbit/s)**

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

- **Flow 1 (95th percentile 152.24 ms)**
- **Flow 2 (95th percentile 189.13 ms)**
- **Flow 3 (95th percentile 174.55 ms)**
Run 9: Statistics of FillP

Start at: 2018-03-14 12:14:18
End at: 2018-03-14 12:14:48

# Below is generated by plot.py at 2018-03-14 18:07:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1311.86 Mbit/s
  95th percentile per-packet one-way delay: 290.317 ms
  Loss rate: 14.74%
-- Flow 1:
  Average throughput: 672.46 Mbit/s
  95th percentile per-packet one-way delay: 188.400 ms
  Loss rate: 15.93%
-- Flow 2:
  Average throughput: 681.98 Mbit/s
  95th percentile per-packet one-way delay: 310.266 ms
  Loss rate: 11.83%
-- Flow 3:
  Average throughput: 559.62 Mbit/s
  95th percentile per-packet one-way delay: 298.733 ms
  Loss rate: 17.23%
Run 9: Report of FillP — Data Link

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

Throughput (Mbps):

- Flow 1 ingress (mean 800.16 Mbps)
- Flow 2 ingress (mean 773.90 Mbps)
- Flow 3 ingress (mean 676.82 Mbps)

Throughput (Mbps):

- Flow 1 egress (mean 672.46 Mbps)
- Flow 2 egress (mean 683.98 Mbps)
- Flow 3 egress (mean 559.62 Mbps)

Per-packet one-way delay (ms):

- Flow 1 (95th percentile 188.40 ms)
- Flow 2 (95th percentile 310.27 ms)
- Flow 3 (95th percentile 296.73 ms)
Run 10: Statistics of FillP

Start at: 2018-03-14 12:31:42
End at: 2018-03-14 12:32:12

# Below is generated by plot.py at 2018-03-14 18:10:27
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1319.34 Mbit/s
  95th percentile per-packet one-way delay: 181.591 ms
  Loss rate: 14.83%
-- Flow 1:
  Average throughput: 685.22 Mbit/s
  95th percentile per-packet one-way delay: 177.044 ms
  Loss rate: 12.95%
-- Flow 2:
  Average throughput: 662.72 Mbit/s
  95th percentile per-packet one-way delay: 184.644 ms
  Loss rate: 14.55%
-- Flow 3:
  Average throughput: 584.67 Mbit/s
  95th percentile per-packet one-way delay: 206.292 ms
  Loss rate: 21.46%
Run 10: Report of FillIP — Data Link
Run 1: Statistics of Indigo-1-32

Start at: 2018-03-14 10:11:08
End at: 2018-03-14 10:11:38

# Below is generated by plot.py at 2018-03-14 18:10:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 348.97 Mbit/s
95th percentile per-packet one-way delay: 58.981 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 174.91 Mbit/s
95th percentile per-packet one-way delay: 54.112 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 179.88 Mbit/s
95th percentile per-packet one-way delay: 59.853 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 169.92 Mbit/s
95th percentile per-packet one-way delay: 68.042 ms
Loss rate: 0.00%
Run 1: Report of Indigo-1-32 — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 174.91 Mbps)
Flow 1 egress (mean 174.91 Mbps)
Flow 2 ingress (mean 179.57 Mbps)
Flow 2 egress (mean 179.88 Mbps)
Flow 3 ingress (mean 169.91 Mbps)
Flow 3 egress (mean 169.92 Mbps)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 54.11 ms)
Flow 2 (95th percentile 59.85 ms)
Flow 3 (95th percentile 68.04 ms)
Run 2: Statistics of Indigo-1-32

Start at: 2018-03-14 10:28:43
End at: 2018-03-14 10:29:13

# Below is generated by plot.py at 2018-03-14 18:10:27
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 346.50 Mbit/s
  95th percentile per-packet one-way delay: 53.396 ms
  Loss rate: 0.00%
  -- Flow 1:
    Average throughput: 182.94 Mbit/s
    95th percentile per-packet one-way delay: 53.815 ms
    Loss rate: 0.00%
  -- Flow 2:
    Average throughput: 169.30 Mbit/s
    95th percentile per-packet one-way delay: 53.729 ms
    Loss rate: 0.01%
  -- Flow 3:
    Average throughput: 158.54 Mbit/s
    95th percentile per-packet one-way delay: 51.774 ms
    Loss rate: 0.00%
Run 2: Report of Indigo-1-32 — Data Link
Run 3: Statistics of Indigo-1-32

Start at: 2018-03-14 10:46:05
End at: 2018-03-14 10:46:35

# Below is generated by plot.py at 2018-03-14 18:10:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 358.76 Mbit/s
95th percentile per-packet one-way delay: 57.326 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 185.58 Mbit/s
95th percentile per-packet one-way delay: 57.461 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 185.14 Mbit/s
95th percentile per-packet one-way delay: 60.351 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 156.19 Mbit/s
95th percentile per-packet one-way delay: 52.266 ms
Loss rate: 0.00%
Run 3: Report of Indigo-1-32 — Data Link

![Graph showing throughput and per-packet service delay](image-url)
Run 4: Statistics of Indigo-1-32

Start at: 2018-03-14 11:03:12
End at: 2018-03-14 11:03:42

# Below is generated by plot.py at 2018-03-14 18:10:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 374.27 Mbit/s
95th percentile per-packet one-way delay: 59.056 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 198.56 Mbit/s
95th percentile per-packet one-way delay: 59.712 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 180.44 Mbit/s
95th percentile per-packet one-way delay: 61.396 ms
Loss rate: 0.20%
-- Flow 3:
Average throughput: 173.46 Mbit/s
95th percentile per-packet one-way delay: 52.633 ms
Loss rate: 0.00%
Run 4: Report of Indigo-1-32 — Data Link

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

- **Throughput**:
  - Flow 1 ingress (mean 198.62 Mbit/s)
  - Flow 1 egress (mean 198.56 Mbit/s)
  - Flow 2 ingress (mean 181.23 Mbit/s)
  - Flow 2 egress (mean 180.44 Mbit/s)
  - Flow 3 ingress (mean 173.46 Mbit/s)
  - Flow 3 egress (mean 173.46 Mbit/s)

- **Per-packet one-way delay**: Flow 1 (95th percentile 59.71 ms), Flow 2 (95th percentile 61.40 ms), Flow 3 (95th percentile 52.63 ms)
Run 5: Statistics of Indigo-1-32

Start at: 2018-03-14 11:20:27
End at: 2018-03-14 11:20:57

# Below is generated by plot.py at 2018-03-14 18:10:27
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 396.64 Mbit/s
  95th percentile per-packet one-way delay: 58.818 ms
  Loss rate: 0.03%
-- Flow 1:
  Average throughput: 211.17 Mbit/s
  95th percentile per-packet one-way delay: 56.052 ms
  Loss rate: 0.06%
-- Flow 2:
  Average throughput: 194.40 Mbit/s
  95th percentile per-packet one-way delay: 68.454 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 174.43 Mbit/s
  95th percentile per-packet one-way delay: 52.281 ms
  Loss rate: 0.00%
Run 5: Report of Indigo-1-32 — Data Link

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

- Flow 1 ingress (mean 211.29 Mbit/s)
- Flow 1 egress (mean 211.17 Mbit/s)
- Flow 2 ingress (mean 194.40 Mbit/s)
- Flow 2 egress (mean 194.40 Mbit/s)
- Flow 3 ingress (mean 174.37 Mbit/s)
- Flow 3 egress (mean 174.43 Mbit/s)

- Flow 1 (95th percentile 56.05 ms)
- Flow 2 (95th percentile 68.45 ms)
- Flow 3 (95th percentile 52.28 ms)
Run 6: Statistics of Indigo-1-32

Start at: 2018-03-14 11:37:36
End at: 2018-03-14 11:38:06

# Below is generated by plot.py at 2018-03-14 18:10:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 360.57 Mbit/s
95th percentile per-packet one-way delay: 60.609 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 185.84 Mbit/s
95th percentile per-packet one-way delay: 57.305 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 185.07 Mbit/s
95th percentile per-packet one-way delay: 65.317 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 159.92 Mbit/s
95th percentile per-packet one-way delay: 54.935 ms
Loss rate: 0.00%
Run 6: Report of Indigo-1-32 — Data Link

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

- Flow 1 ingress (mean 185.90 Mbit/s)
- Flow 1 egress (mean 185.84 Mbit/s)
- Flow 2 ingress (mean 185.06 Mbit/s)
- Flow 2 egress (mean 185.07 Mbit/s)
- Flow 3 ingress (mean 159.93 Mbit/s)
- Flow 3 egress (mean 159.92 Mbit/s)

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

- Flow 1 (95th percentile 57.30 ms)
- Flow 2 (95th percentile 65.32 ms)
- Flow 3 (95th percentile 54.94 ms)
Run 7: Statistics of Indigo-1-32

Start at: 2018-03-14 11:54:57
End at: 2018-03-14 11:55:27

# Below is generated by plot.py at 2018-03-14 18:10:27
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 361.75 Mbit/s
  95th percentile per-packet one-way delay: 60.514 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 189.99 Mbit/s
  95th percentile per-packet one-way delay: 58.134 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 179.79 Mbit/s
  95th percentile per-packet one-way delay: 70.240 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 164.63 Mbit/s
  95th percentile per-packet one-way delay: 52.309 ms
  Loss rate: 0.00%
Run 7: Report of Indigo-1-32 — Data Link

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

![Graph 2: Per-packet one-way delay (ms) vs Time (s)]
Run 8: Statistics of Indigo-1-32

Start at: 2018-03-14 12:12:17
End at: 2018-03-14 12:12:47

# Below is generated by plot.py at 2018-03-14 18:10:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 391.27 Mbit/s
95th percentile per-packet one-way delay: 67.219 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 211.08 Mbit/s
95th percentile per-packet one-way delay: 58.829 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 188.97 Mbit/s
95th percentile per-packet one-way delay: 72.090 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 170.82 Mbit/s
95th percentile per-packet one-way delay: 70.936 ms
Loss rate: 0.00%
Run 8: Report of Indigo-1-32 — Data Link

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

- Flow 1 ingress (mean 211.08 Mbit/s)
- Flow 1 egress (mean 211.08 Mbit/s)
- Flow 2 ingress (mean 189.06 Mbit/s)
- Flow 2 egress (mean 188.97 Mbit/s)
- Flow 3 ingress (mean 170.81 Mbit/s)
- Flow 3 egress (mean 170.62 Mbit/s)

Per packet one way delay (ms)

- Flow 1 (95th percentile 58.83 ms)
- Flow 2 (95th percentile 72.09 ms)
- Flow 3 (95th percentile 70.94 ms)
Run 9: Statistics of Indigo-1-32

Start at: 2018-03-14 12:29:38
End at: 2018-03-14 12:30:08

# Below is generated by plot.py at 2018-03-14 18:10:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 371.75 Mbit/s
95th percentile per-packet one-way delay: 58.423 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 206.50 Mbit/s
95th percentile per-packet one-way delay: 55.864 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 173.64 Mbit/s
95th percentile per-packet one-way delay: 60.542 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 156.00 Mbit/s
95th percentile per-packet one-way delay: 62.224 ms
Loss rate: 0.26%
Run 9: Report of Indigo-1-32 — Data Link
Run 10: Statistics of Indigo-1-32

Start at: 2018-03-14 12:46:51
End at: 2018-03-14 12:47:21

# Below is generated by plot.py at 2018-03-14 18:10:27
# Datalink statistics
-- Total of 3 flows:
    Average throughput: 331.42 Mbit/s
    95th percentile per-packet one-way delay: 55.017 ms
    Loss rate: 0.00%
-- Flow 1:
    Average throughput: 178.59 Mbit/s
    95th percentile per-packet one-way delay: 54.638 ms
    Loss rate: 0.00%
-- Flow 2:
    Average throughput: 158.26 Mbit/s
    95th percentile per-packet one-way delay: 56.608 ms
    Loss rate: 0.00%
-- Flow 3:
    Average throughput: 147.65 Mbit/s
    95th percentile per-packet one-way delay: 54.218 ms
    Loss rate: 0.00%
Run 10: Report of Indigo-1-32 — Data Link
Run 1: Statistics of Vivace-latency

Start at: 2018-03-14 10:02:52
End at: 2018-03-14 10:03:22

# Below is generated by plot.py at 2018-03-14 18:10:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 405.71 Mbit/s
95th percentile per-packet one-way delay: 54.837 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 228.52 Mbit/s
95th percentile per-packet one-way delay: 53.769 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 220.14 Mbit/s
95th percentile per-packet one-way delay: 55.833 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 93.09 Mbit/s
95th percentile per-packet one-way delay: 54.381 ms
Loss rate: 0.02%
Run 1: Report of Vivace-latency — Data Link
Run 2: Statistics of Vivace-latency

Start at: 2018-03-14 10:20:14
End at: 2018-03-14 10:20:44

# Below is generated by plot.py at 2018-03-14 18:10:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 439.01 Mbit/s
95th percentile per-packet one-way delay: 65.788 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 241.54 Mbit/s
95th percentile per-packet one-way delay: 107.027 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 220.05 Mbit/s
95th percentile per-packet one-way delay: 54.375 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 155.69 Mbit/s
95th percentile per-packet one-way delay: 61.571 ms
Loss rate: 0.01%
Run 2: Report of Vivace-latency — Data Link
Run 3: Statistics of Vivace-latency

Start at: 2018-03-14 10:37:50
End at: 2018-03-14 10:38:20

# Below is generated by plot.py at 2018-03-14 18:10:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 418.31 Mbit/s
95th percentile per-packet one-way delay: 62.290 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 229.63 Mbit/s
95th percentile per-packet one-way delay: 92.286 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 193.82 Mbit/s
95th percentile per-packet one-way delay: 55.091 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 181.91 Mbit/s
95th percentile per-packet one-way delay: 53.341 ms
Loss rate: 0.00%
Run 3: Report of Vivace-latency — Data Link

![Graph of Throughput and Per-packet one-way delay for flows in Run 3.]

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

- Flow 1 ingress (mean 230.43 MB/s)
- Flow 1 egress (mean 229.63 MB/s)
- Flow 2 ingress (mean 193.84 MB/s)
- Flow 2 egress (mean 193.82 MB/s)
- Flow 3 ingress (mean 181.95 MB/s)
- Flow 3 egress (mean 181.91 MB/s)

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

- Flow 1 (95th percentile 92.29 ms)
- Flow 2 (95th percentile 55.09 ms)
- Flow 3 (95th percentile 53.34 ms)
Run 4: Statistics of Vivace-latency

Start at: 2018-03-14 10:54:53
End at: 2018-03-14 10:55:23

# Below is generated by plot.py at 2018-03-14 18:10:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 402.68 Mbit/s
95th percentile per-packet one-way delay: 84.423 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 254.63 Mbit/s
95th percentile per-packet one-way delay: 102.841 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 191.91 Mbit/s
95th percentile per-packet one-way delay: 62.810 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 62.42 Mbit/s
95th percentile per-packet one-way delay: 53.522 ms
Loss rate: 0.00%
Run 4: Report of Vivace-latency — Data Link
Run 5: Statistics of Vivace-latency

Start at: 2018-03-14 11:12:11
End at: 2018-03-14 11:12:41

# Below is generated by plot.py at 2018-03-14 18:10:27
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 443.21 Mbit/s
  95th percentile per-packet one-way delay: 59.246 ms
  Loss rate: 0.03%
-- Flow 1:
  Average throughput: 245.93 Mbit/s
  95th percentile per-packet one-way delay: 65.854 ms
  Loss rate: 0.04%
-- Flow 2:
  Average throughput: 213.64 Mbit/s
  95th percentile per-packet one-way delay: 58.546 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 168.32 Mbit/s
  95th percentile per-packet one-way delay: 55.969 ms
  Loss rate: 0.03%
Run 5: Report of Vivace-latency — Data Link

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**Graph 1:**
- **Throughput (Mbps):**
  - **Flow 1 ingress (mean 246.15 Mbps):** Dotted blue line
  - **Flow 1 egress (mean 245.93 Mbps):** Solid blue line
  - **Flow 2 ingress (mean 213.64 Mbps):** Dotted green line
  - **Flow 2 egress (mean 213.64 Mbps):** Solid green line
  - **Flow 3 ingress (mean 168.33 Mbps):** Dotted red line
  - **Flow 3 egress (mean 168.32 Mbps):** Solid red line

**Graph 2:**
- **Per-packet one-way delay (ms):**
  - **Flow 1 (95th percentile 65.85 ms):** Dotted blue line
  - **Flow 2 (95th percentile 58.55 ms):** Solid blue line
  - **Flow 3 (95th percentile 55.97 ms):** Dotted green line

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Run 6: Statistics of Vivace-latency

Start at: 2018-03-14 11:29:28
End at: 2018-03-14 11:29:58

# Below is generated by plot.py at 2018-03-14 18:10:27
# Datalink statistics
-- Total of 3 flows:
 Average throughput: 369.49 Mbit/s
 95th percentile per-packet one-way delay: 85.395 ms
 Loss rate: 0.02%
-- Flow 1:
 Average throughput: 219.14 Mbit/s
 95th percentile per-packet one-way delay: 101.263 ms
 Loss rate: 0.01%
-- Flow 2:
 Average throughput: 199.48 Mbit/s
 95th percentile per-packet one-way delay: 58.453 ms
 Loss rate: 0.04%
-- Flow 3:
 Average throughput: 54.01 Mbit/s
 95th percentile per-packet one-way delay: 53.818 ms
 Loss rate: 0.02%
Run 6: Report of Vivace-latency — Data Link
Run 7: Statistics of Vivace-latency

Start at: 2018-03-14 11:46:41
End at: 2018-03-14 11:47:11

# Below is generated by plot.py at 2018-03-14 18:11:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 418.30 Mbit/s
95th percentile per-packet one-way delay: 55.606 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 231.45 Mbit/s
95th percentile per-packet one-way delay: 56.861 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 212.28 Mbit/s
95th percentile per-packet one-way delay: 54.350 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 139.21 Mbit/s
95th percentile per-packet one-way delay: 67.220 ms
Loss rate: 0.00%
Run 7: Report of Vivace-latency — Data Link
Run 8: Statistics of Vivace-latency

Start at: 2018-03-14 12:03:59
End at: 2018-03-14 12:04:29

# Below is generated by plot.py at 2018-03-14 18:12:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 426.72 Mbit/s
95th percentile per-packet one-way delay: 58.733 ms
Loss rate: 0.13%

-- Flow 1:
Average throughput: 238.37 Mbit/s
95th percentile per-packet one-way delay: 57.668 ms
Loss rate: 0.24%

-- Flow 2:
Average throughput: 204.16 Mbit/s
95th percentile per-packet one-way delay: 59.218 ms
Loss rate: 0.00%

-- Flow 3:
Average throughput: 159.97 Mbit/s
95th percentile per-packet one-way delay: 115.169 ms
Loss rate: 0.00%
Run 8: Report of Vivace-latency — Data Link
Run 9: Statistics of Vivace-latency

Start at: 2018-03-14 12:21:27  
End at: 2018-03-14 12:21:57

# Below is generated by plot.py at 2018-03-14 18:12:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 364.80 Mbit/s
95th percentile per-packet one-way delay: 110.074 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 184.62 Mbit/s
95th percentile per-packet one-way delay: 146.731 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 222.99 Mbit/s
95th percentile per-packet one-way delay: 73.110 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 96.62 Mbit/s
95th percentile per-packet one-way delay: 51.914 ms
Loss rate: 0.00%
Run 9: Report of Vivace-latency — Data Link

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

Legend:
- Flow 1 ingress (mean 184.62 Mbit/s)
- Flow 1 egress (mean 184.62 Mbit/s)
- Flow 2 ingress (mean 223.02 Mbit/s)
- Flow 2 egress (mean 222.99 Mbit/s)
- Flow 3 ingress (mean 96.57 Mbit/s)
- Flow 3 egress (mean 96.62 Mbit/s)
Run 10: Statistics of Vivace-latency

Start at: 2018-03-14 12:38:35
End at: 2018-03-14 12:39:05

# Below is generated by plot.py at 2018-03-14 18:13:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 402.14 Mbit/s
95th percentile per-packet one-way delay: 67.741 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 244.50 Mbit/s
95th percentile per-packet one-way delay: 63.577 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 215.70 Mbit/s
95th percentile per-packet one-way delay: 71.375 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 43.36 Mbit/s
95th percentile per-packet one-way delay: 51.030 ms
Loss rate: 0.00%
Run 10: Report of Vivace-latency — Data Link

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

- Flow 1 ingress (mean 244.47 Mbit/s)
- Flow 1 egress (mean 244.50 Mbit/s)
- Flow 2 ingress (mean 215.72 Mbit/s)
- Flow 2 egress (mean 215.70 Mbit/s)
- Flow 3 ingress (mean 43.36 Mbit/s)
- Flow 3 egress (mean 43.36 Mbit/s)
Run 1: Statistics of Vivace-loss

Start at: 2018-03-14 10:06:55
End at: 2018-03-14 10:07:25

# Below is generated by plot.py at 2018-03-14 18:16:59
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 505.21 Mbit/s
  95th percentile per-packet one-way delay: 272.626 ms
  Loss rate: 3.99%
-- Flow 1:
  Average throughput: 282.56 Mbit/s
  95th percentile per-packet one-way delay: 242.354 ms
  Loss rate: 1.23%
-- Flow 2:
  Average throughput: 276.08 Mbit/s
  95th percentile per-packet one-way delay: 297.111 ms
  Loss rate: 8.70%
-- Flow 3:
  Average throughput: 118.83 Mbit/s
  95th percentile per-packet one-way delay: 168.780 ms
  Loss rate: 0.00%
Run 1: Report of Vivace-loss — Data Link

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

Legend:
- Flow 1 ingress (mean 286.22 Mbit/s)
- Flow 1 egress (mean 282.56 Mbit/s)
- Flow 2 ingress (mean 302.64 Mbit/s)
- Flow 2 egress (mean 276.08 Mbit/s)
- Flow 3 ingress (mean 118.82 Mbit/s)
- Flow 3 egress (mean 118.83 Mbit/s)
Run 2: Statistics of Vivace-loss

Start at: 2018-03-14 10:24:17
End at: 2018-03-14 10:24:47

# Below is generated by plot.py at 2018-03-14 18:16:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 468.34 Mbit/s
95th percentile per-packet one-way delay: 269.002 ms
Loss rate: 4.22%
-- Flow 1:
Average throughput: 272.88 Mbit/s
95th percentile per-packet one-way delay: 297.348 ms
Loss rate: 5.00%
-- Flow 2:
Average throughput: 231.29 Mbit/s
95th percentile per-packet one-way delay: 257.871 ms
Loss rate: 3.92%
-- Flow 3:
Average throughput: 126.54 Mbit/s
95th percentile per-packet one-way delay: 162.649 ms
Loss rate: 0.00%
Run 2: Report of Vivace-loss — Data Link
Run 3: Statistics of Vivace-loss

Start at: 2018-03-14 10:41:50
End at: 2018-03-14 10:42:20

# Below is generated by plot.py at 2018-03-14 18:19:26
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 471.46 Mbit/s
  95th percentile per-packet one-way delay: 262.208 ms
  Loss rate: 4.13%
-- Flow 1:
  Average throughput: 292.73 Mbit/s
  95th percentile per-packet one-way delay: 264.113 ms
  Loss rate: 3.41%
-- Flow 2:
  Average throughput: 209.74 Mbit/s
  95th percentile per-packet one-way delay: 256.229 ms
  Loss rate: 5.18%
-- Flow 3:
  Average throughput: 119.40 Mbit/s
  95th percentile per-packet one-way delay: 223.643 ms
  Loss rate: 5.65%
Run 3: Report of Vivace-loss — Data Link

![Graph showing throughput and per-packet one-way delay for different flows over time. The graphs display the mean throughput and egress data for each flow, with specific values for flow 1 and flow 2.]

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Run 4: Statistics of Vivace-loss

Start at: 2018-03-14 10:58:55
End at: 2018-03-14 10:59:25

# Below is generated by plot.py at 2018-03-14 18:21:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 482.73 Mbit/s
95th percentile per-packet one-way delay: 254.031 ms
Loss rate: 2.48%
-- Flow 1:
Average throughput: 244.24 Mbit/s
95th percentile per-packet one-way delay: 259.983 ms
Loss rate: 2.01%
-- Flow 2:
Average throughput: 299.68 Mbit/s
95th percentile per-packet one-way delay: 251.384 ms
Loss rate: 2.32%
-- Flow 3:
Average throughput: 119.54 Mbit/s
95th percentile per-packet one-way delay: 266.984 ms
Loss rate: 6.07%
Run 4: Report of Vivace-loss — Data Link
Run 5: Statistics of Vivace-loss

Start at: 2018-03-14 11:16:13
End at: 2018-03-14 11:16:43

# Below is generated by plot.py at 2018-03-14 18:23:35
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 514.28 Mbit/s
  95th percentile per-packet one-way delay: 233.613 ms
  Loss rate: 2.04%
-- Flow 1:
  Average throughput: 303.78 Mbit/s
  95th percentile per-packet one-way delay: 241.090 ms
  Loss rate: 0.84%
-- Flow 2:
  Average throughput: 284.73 Mbit/s
  95th percentile per-packet one-way delay: 206.932 ms
  Loss rate: 1.62%
-- Flow 3:
  Average throughput: 64.69 Mbit/s
  95th percentile per-packet one-way delay: 329.804 ms
  Loss rate: 19.20%
Run 5: Report of Vivace-loss — Data Link
Run 6: Statistics of Vivace-loss

Start at: 2018-03-14 11:33:24
End at: 2018-03-14 11:33:54

# Below is generated by plot.py at 2018-03-14 18:23:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 465.18 Mbit/s
95th percentile per-packet one-way delay: 267.300 ms
Loss rate: 3.74%
-- Flow 1:
Average throughput: 262.01 Mbit/s
95th percentile per-packet one-way delay: 273.751 ms
Loss rate: 4.51%
-- Flow 2:
Average throughput: 266.10 Mbit/s
95th percentile per-packet one-way delay: 229.075 ms
Loss rate: 0.70%
-- Flow 3:
Average throughput: 79.97 Mbit/s
95th percentile per-packet one-way delay: 349.470 ms
Loss rate: 14.45%
Run 6: Report of Vivace-loss — Data Link

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**Throughput (Mbps)**

- Flow 1 ingress (mean 274.35 Mbps)
- Flow 1 egress (mean 262.01 Mbps)
- Flow 2 ingress (mean 267.99 Mbps)
- Flow 2 egress (mean 266.30 Mbps)
- Flow 3 ingress (mean 93.45 Mbps)
- Flow 3 egress (mean 79.97 Mbps)

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

- Flow 1 (95th percentile 273.75 ms)
- Flow 2 (95th percentile 229.07 ms)
- Flow 3 (95th percentile 349.47 ms)
Run 7: Statistics of Vivace-loss

Start at: 2018-03-14 11:50:38
End at: 2018-03-14 11:51:08

# Below is generated by plot.py at 2018-03-14 18:24:28
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 504.50 Mbit/s
  95th percentile per-packet one-way delay: 312.121 ms
  Loss rate: 7.10%
  -- Flow 1:
  Average throughput: 266.78 Mbit/s
  95th percentile per-packet one-way delay: 306.286 ms
  Loss rate: 6.13%
  -- Flow 2:
  Average throughput: 258.31 Mbit/s
  95th percentile per-packet one-way delay: 320.027 ms
  Loss rate: 6.37%
  -- Flow 3:
  Average throughput: 201.02 Mbit/s
  95th percentile per-packet one-way delay: 286.138 ms
  Loss rate: 12.57%
Run 7: Report of Vivace-loss — Data Link

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

Legend:
- Flow 1 ingress (mean 284.25 Mbit/s)
- Flow 1 egress (mean 266.78 Mbit/s)
- Flow 2 ingress (mean 275.89 Mbit/s)
- Flow 2 egress (mean 258.31 Mbit/s)
- Flow 3 ingress (mean 229.92 Mbit/s)
- Flow 3 egress (mean 201.02 Mbit/s)

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

Legend:
- Flow 1 (95th percentile 306.29 ms)
- Flow 2 (95th percentile 320.03 ms)
- Flow 3 (95th percentile 286.14 ms)
Run 8: Statistics of Vivace-loss

Start at: 2018-03-14 12:08:03
End at: 2018-03-14 12:08:33

# Below is generated by plot.py at 2018-03-14 18:25:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 525.46 Mbit/s
95th percentile per-packet one-way delay: 290.737 ms
Loss rate: 5.18%
-- Flow 1:
Average throughput: 321.08 Mbit/s
95th percentile per-packet one-way delay: 252.240 ms
Loss rate: 2.95%
-- Flow 2:
Average throughput: 220.44 Mbit/s
95th percentile per-packet one-way delay: 316.357 ms
Loss rate: 4.73%
-- Flow 3:
Average throughput: 175.97 Mbit/s
95th percentile per-packet one-way delay: 324.094 ms
Loss rate: 16.79%
Run 8: Report of Vivace-loss — Data Link

![Graph of throughput and packet delay over time for three flows.](image-url)
Run 9: Statistics of Vivace-loss

Start at: 2018-03-14 12:25:25
End at: 2018-03-14 12:25:55

# Below is generated by plot.py at 2018-03-14 18:27:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 437.46 Mbit/s
95th percentile per-packet one-way delay: 268.166 ms
Loss rate: 3.78%
-- Flow 1:
Average throughput: 238.32 Mbit/s
95th percentile per-packet one-way delay: 277.644 ms
Loss rate: 1.94%
-- Flow 2:
Average throughput: 182.65 Mbit/s
95th percentile per-packet one-way delay: 235.793 ms
Loss rate: 9.03%
-- Flow 3:
Average throughput: 236.16 Mbit/s
95th percentile per-packet one-way delay: 223.033 ms
Loss rate: 0.56%
Run 9: Report of Vivace-loss — Data Link

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

- Flow 1 ingress (mean 243.02 Mbit/s)
- Flow 1 egress (mean 238.32 Mbit/s)
- Flow 2 ingress (mean 200.78 Mbit/s)
- Flow 2 egress (mean 182.05 Mbit/s)
- Flow 3 ingress (mean 237.46 Mbit/s)
- Flow 3 egress (mean 236.16 Mbit/s)

![Graph showing ping delay for different flows.](image)

- Flow 1 (95th percentile 277.64 ms)
- Flow 2 (95th percentile 235.79 ms)
- Flow 3 (95th percentile 223.03 ms)
Run 10: Statistics of Vivace-loss

Start at: 2018-03-14 12:42:33
End at: 2018-03-14 12:43:03

# Below is generated by plot.py at 2018-03-14 18:30:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 547.60 Mbit/s
95th percentile per-packet one-way delay: 266.134 ms
Loss rate: 2.92%
-- Flow 1:
Average throughput: 304.49 Mbit/s
95th percentile per-packet one-way delay: 284.514 ms
Loss rate: 3.74%
-- Flow 2:
Average throughput: 277.07 Mbit/s
95th percentile per-packet one-way delay: 242.869 ms
Loss rate: 1.81%
-- Flow 3:
Average throughput: 178.94 Mbit/s
95th percentile per-packet one-way delay: 246.837 ms
Loss rate: 2.02%
Run 1: Statistics of Vivace-LTE

Start at: 2018-03-14 10:04:39
End at: 2018-03-14 10:05:09

# Below is generated by plot.py at 2018-03-14 18:32:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 529.64 Mbit/s
95th percentile per-packet one-way delay: 101.453 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 289.23 Mbit/s
95th percentile per-packet one-way delay: 70.429 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 269.61 Mbit/s
95th percentile per-packet one-way delay: 111.346 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 185.99 Mbit/s
95th percentile per-packet one-way delay: 93.551 ms
Loss rate: 0.00%
Run 1: Report of Vivace-LTE — Data Link
Run 2: Statistics of Vivace-LTE

Start at: 2018-03-14 10:22:04
End at: 2018-03-14 10:22:34

# Below is generated by plot.py at 2018-03-14 18:33:43
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 474.81 Mbit/s
  95th percentile per-packet one-way delay: 187.661 ms
  Loss rate: 1.17%
-- Flow 1:
  Average throughput: 272.68 Mbit/s
  95th percentile per-packet one-way delay: 256.707 ms
  Loss rate: 1.99%
-- Flow 2:
  Average throughput: 219.91 Mbit/s
  95th percentile per-packet one-way delay: 82.828 ms
  Loss rate: 0.03%
-- Flow 3:
  Average throughput: 169.96 Mbit/s
  95th percentile per-packet one-way delay: 106.368 ms
  Loss rate: 0.05%
Run 2: Report of Vivace-LTE — Data Link

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

- Flow 1 ingress (mean 278.18 Mb/s)
- Flow 1 egress (mean 272.68 Mb/s)
- Flow 2 ingress (mean 219.95 Mb/s)
- Flow 2 egress (mean 219.91 Mb/s)
- Flow 3 ingress (mean 170.06 Mb/s)
- Flow 3 egress (mean 169.96 Mb/s)

- Flow 1 (95th percentile 256.71 ms)
- Flow 2 (95th percentile 82.83 ms)
- Flow 3 (95th percentile 106.37 ms)
Run 3: Statistics of Vivace-LTE

Start at: 2018-03-14 10:39:37
End at: 2018-03-14 10:40:07

# Below is generated by plot.py at 2018-03-14 18:35:15
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 478.97 Mbit/s
  95th percentile per-packet one-way delay: 247.365 ms
  Loss rate: 0.41%
-- Flow 1:
  Average throughput: 255.97 Mbit/s
  95th percentile per-packet one-way delay: 259.855 ms
  Loss rate: 0.56%
-- Flow 2:
  Average throughput: 251.55 Mbit/s
  95th percentile per-packet one-way delay: 243.177 ms
  Loss rate: 0.31%
-- Flow 3:
  Average throughput: 169.44 Mbit/s
  95th percentile per-packet one-way delay: 60.407 ms
  Loss rate: 0.00%
Run 3: Report of Vivace-LTE — Data Link

Throughput vs Time (s)

- Flow 1 ingress (mean 257.44 Mbit/s)
- Flow 1 egress (mean 255.97 Mbit/s)
- Flow 2 ingress (mean 232.35 Mbit/s)
- Flow 2 egress (mean 251.35 Mbit/s)
- Flow 3 ingress (mean 169.50 Mbit/s)
- Flow 3 egress (mean 169.44 Mbit/s)

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

- Flow 1 (95th percentile 259.86 ms)
- Flow 2 (95th percentile 243.18 ms)
- Flow 3 (95th percentile 60.41 ms)
Run 4: Statistics of Vivace-LTE

Start at: 2018-03-14 10:56:40
End at: 2018-03-14 10:57:10

# Below is generated by plot.py at 2018-03-14 18:36:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 529.25 Mbit/s
95th percentile per-packet one-way delay: 214.017 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 302.57 Mbit/s
95th percentile per-packet one-way delay: 180.004 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 212.32 Mbit/s
95th percentile per-packet one-way delay: 61.216 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 260.64 Mbit/s
95th percentile per-packet one-way delay: 250.262 ms
Loss rate: 4.54%
Run 4: Report of Vivace-LTE — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 303.65 Mbps)
  - Flow 1 egress (mean 302.57 Mbps)
  - Flow 2 ingress (mean 212.42 Mbps)
  - Flow 2 egress (mean 212.32 Mbps)
  - Flow 3 ingress (mean 273.09 Mbps)
  - Flow 3 egress (mean 260.64 Mbps)

- **Packet one-way delay (ms):**
  - Flow 1 (95th percentile 180.00 ms)
  - Flow 2 (95th percentile 61.22 ms)
  - Flow 3 (95th percentile 250.26 ms)
Run 5: Statistics of Vivace-LTE

Start at: 2018-03-14 11:14:00
End at: 2018-03-14 11:14:30

# Below is generated by plot.py at 2018-03-14 18:36:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 485.61 Mbit/s
95th percentile per-packet one-way delay: 134.334 ms
Loss rate: 1.06%
-- Flow 1:
Average throughput: 244.58 Mbit/s
95th percentile per-packet one-way delay: 192.097 ms
Loss rate: 2.07%
-- Flow 2:
Average throughput: 282.10 Mbit/s
95th percentile per-packet one-way delay: 103.146 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 162.52 Mbit/s
95th percentile per-packet one-way delay: 65.620 ms
Loss rate: 0.07%
Run 5: Report of Vivace-LTE — Data Link

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

**Throughput (Mbps)**

- **Flow 1 ingress (mean 249.76 Mbps)**
- **Flow 1 egress (mean 244.58 Mbps)**
- **Flow 2 ingress (mean 282.15 Mbps)**
- **Flow 2 egress (mean 282.10 Mbps)**
- **Flow 3 ingress (mean 162.65 Mbps)**
- **Flow 3 egress (mean 162.52 Mbps)**

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

- **Flow 1 (95th percentile 192.10 ms)**
- **Flow 2 (95th percentile 103.15 ms)**
- **Flow 3 (95th percentile 65.62 ms)**
Run 6: Statistics of Vivace-LTE

Start at: 2018-03-14 11:31:13
End at: 2018-03-14 11:31:43

# Below is generated by plot.py at 2018-03-14 18:36:31
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 441.28 Mbit/s
  95th percentile per-packet one-way delay: 292.346 ms
  Loss rate: 1.81%
-- Flow 1:
  Average throughput: 242.17 Mbit/s
  95th percentile per-packet one-way delay: 291.180 ms
  Loss rate: 1.86%
-- Flow 2:
  Average throughput: 217.43 Mbit/s
  95th percentile per-packet one-way delay: 357.749 ms
  Loss rate: 2.38%
-- Flow 3:
  Average throughput: 165.70 Mbit/s
  95th percentile per-packet one-way delay: 72.444 ms
  Loss rate: 0.00%
Run 6: Report of Vivace-LTE — Data Link

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

![Graph 2: Per-packet one-way delay vs Time](image2)
Run 7: Statistics of Vivace-LTE

Start at: 2018-03-14 11:48:29
End at: 2018-03-14 11:48:59

# Below is generated by plot.py at 2018-03-14 18:37:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 436.37 Mbit/s
95th percentile per-packet one-way delay: 203.517 ms
Loss rate: 1.03%
-- Flow 1:
Average throughput: 244.63 Mbit/s
95th percentile per-packet one-way delay: 185.869 ms
Loss rate: 1.66%
-- Flow 2:
Average throughput: 204.97 Mbit/s
95th percentile per-packet one-way delay: 178.826 ms
Loss rate: 0.32%
-- Flow 3:
Average throughput: 168.60 Mbit/s
95th percentile per-packet one-way delay: 285.188 ms
Loss rate: 0.00%
Run 7: Report of Vivace-LTE — Data Link

[Graph showing throughput and delay over time for different flows.]
Run 8: Statistics of Vivace-LTE

Start at: 2018-03-14 12:05:49
End at: 2018-03-14 12:06:19

# Below is generated by plot.py at 2018-03-14 18:38:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 514.93 Mbit/s
95th percentile per-packet one-way delay: 264.224 ms
Loss rate: 1.30%
-- Flow 1:
Average throughput: 301.41 Mbit/s
95th percentile per-packet one-way delay: 279.102 ms
Loss rate: 2.17%
-- Flow 2:
Average throughput: 238.83 Mbit/s
95th percentile per-packet one-way delay: 123.237 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 166.47 Mbit/s
95th percentile per-packet one-way delay: 187.244 ms
Loss rate: 0.00%
Run 8: Report of Vivace-LTE — Data Link

Throughput (Mbit/s)

Time (s)

Per-packet one-way delay (ms)

Time (s)
Run 9: Statistics of Vivace-LTE

Start at: 2018-03-14 12:23:11
End at: 2018-03-14 12:23:41

# Below is generated by plot.py at 2018-03-14 18:39:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 524.19 Mbit/s
95th percentile per-packet one-way delay: 172.642 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 287.97 Mbit/s
95th percentile per-packet one-way delay: 115.820 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 232.19 Mbit/s
95th percentile per-packet one-way delay: 229.638 ms
Loss rate: 0.38%
-- Flow 3:
Average throughput: 248.67 Mbit/s
95th percentile per-packet one-way delay: 173.322 ms
Loss rate: 0.00%
Run 10: Statistics of Vivace-LTE

Start at: 2018-03-14 12:40:22
End at: 2018-03-14 12:40:52

# Below is generated by plot.py at 2018-03-14 18:39:22
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 461.12 Mbit/s
  95th percentile per-packet one-way delay: 141.748 ms
  Loss rate: 0.15%
-- Flow 1:
  Average throughput: 221.39 Mbit/s
  95th percentile per-packet one-way delay: 118.227 ms
  Loss rate: 0.03%
-- Flow 2:
  Average throughput: 280.98 Mbit/s
  95th percentile per-packet one-way delay: 213.612 ms
  Loss rate: 0.33%
-- Flow 3:
  Average throughput: 160.82 Mbit/s
  95th percentile per-packet one-way delay: 70.217 ms
  Loss rate: 0.06%
Run 10: Report of Vivace-LTE — Data Link

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

- Flow 1 ingress (mean 221.43 Mbit/s)
- Flow 1 egress (mean 221.39 Mbit/s)
- Flow 2 ingress (mean 281.92 Mbit/s)
- Flow 2 egress (mean 280.98 Mbit/s)
- Flow 3 ingress (mean 160.87 Mbit/s)
- Flow 3 egress (mean 160.62 Mbit/s)

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

- Flow 1 (95th percentile 118.23 ms)
- Flow 2 (95th percentile 213.61 ms)
- Flow 3 (95th percentile 70.22 ms)