Pantheon Report

Generated at 2018-04-18 17:14:19 (UTC).
Data path: GCE Tokyo Ethernet (remote) → GCE Sydney Ethernet (local).
Repeated the test of 16 congestion control schemes 10 times.
Each test lasted for 30 seconds running 3 flows with 10-second interval between two flows.
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).
Tested BBR with qdisc of Fair Queuing (fq), and other schemes with the default Linux qdisc (pfifo_fast).

Git summary:
branch: master @ b3d6e7098641364fd3a292656a51aa81e316d0b4
third_party/calibrated_koho @ 3cb73c0d1c0322cddf44e37a522e53227db50
M datagrump/sender.cc
third_party/fillp @ 11f8c46a2bf1dc797253db7e8ca04076272b2a44
third_party/genericCC @ d223989828276fa83a807da6e0341d0c7b89aec
third_party/indigo @ a9b206d39e4da2e8987e893e3eca2a6c7cd0ab9
third_party/indigo-1-layer-128-unit @ 3ae9e4e4230db748450f82ce8b377695f2f66d
third_party/indigo-1-layer-32-unit @ 2601c92e4aa9d58d38dc46f3e0edc9f90c77e64d
third_party/indigo-1-layer-32-unit-no-calib @ 1f5a7f75b41135ed5b540cd3509593528e2a5f
third_party/indigo-no-calib @ 7224f2202e8a044d8306fa0b983ad84360c53d89
third_party/koho_cc @ f0f2e693303ae82ea08e6928eac4f1083a68b1
M datagrump/sender.cc
third_party/libutp @ b3465b942e2826f2b17eaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ fb1053193c2861da659ba9013db26744ccfcf993
third_party/pcc @ 1afcc958fa0d66d18b623c091a55f8e872b4981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8ac0d8f2b924eb24f974ab
third_party/proto-quick @ 77961f1a82733a86b42f1bc8143ebc97f5f3cf42
third_party/scream @ c3707f6d7bd17265a79ae3b34e4016ad23f5965885
third_party/sourdough @ f1a14bffe749737437f61b1eae03b0b267dce681
third_party/sprout @ 6f2e6e6088d91066a9f023df375eee2665089ce
M src/examples/cellsim.cc
M src/examples/sproutbt2.cc
M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
M src/verus.hpp
M tools/plot.py
third_party/vivace @ 7a4ba531e75b4a6f66f5c4580192120401784ce3
third_party/webrtc @ f271183af822ee5d0031620f4beb38a6ec5581
test from GCE Tokyo Ethernet to GCE Sydney Ethernet, 10 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)

![Graph showing performance metrics for different network schemes](image-url)
<table>
<thead>
<tr>
<th>Scheme</th>
<th># Runs</th>
<th>Mean Avg Tput (Mbit/s)</th>
<th>Mean 95th-%ile Delay (ms)</th>
<th>Mean Loss Rate (%)</th>
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<tr>
<td>TCP BBR</td>
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<td>152.96</td>
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<td>PCC-Allegro</td>
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<td>54.14</td>
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<td>SCReAM</td>
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<td>0.22</td>
<td>0.22</td>
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<td>WebRTC media</td>
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<td>0.06</td>
<td>0.06</td>
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<td>Sprout</td>
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<td>7.90</td>
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<td>TaoVA-100x</td>
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<td>132.58</td>
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<td>108.03</td>
<td>73.76</td>
<td>74.25</td>
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<td>FillP</td>
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<td>695.50</td>
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<td>Indigo-1-32</td>
<td>10</td>
<td>176.80</td>
<td>159.19</td>
<td>138.22</td>
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<tr>
<td>PCC-Vivace</td>
<td>10</td>
<td>261.27</td>
<td>224.97</td>
<td>94.09</td>
</tr>
<tr>
<td>PCC-Expr</td>
<td>10</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>
Run 1: Statistics of TCP BBR

Start at: 2018-04-18 10:17:21
End at: 2018-04-18 10:17:51

# Below is generated by plot.py at 2018-04-18 15:41:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 402.39 Mbit/s
95th percentile per-packet one-way delay: 72.029 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 211.07 Mbit/s
95th percentile per-packet one-way delay: 69.767 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 198.99 Mbit/s
95th percentile per-packet one-way delay: 72.283 ms
Loss rate: 0.55%
-- Flow 3:
Average throughput: 180.15 Mbit/s
95th percentile per-packet one-way delay: 75.308 ms
Loss rate: 1.23%
Run 1: Report of TCP BBR — Data Link
Run 2: Statistics of TCP BBR

Start at: 2018-04-18 10:32:12
End at: 2018-04-18 10:32:42

# Below is generated by plot.py at 2018-04-18 15:41:26
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 387.47 Mbit/s
  95th percentile per-packet one-way delay: 83.100 ms
  Loss rate: 0.58%
-- Flow 1:
  Average throughput: 205.44 Mbit/s
  95th percentile per-packet one-way delay: 81.497 ms
  Loss rate: 0.36%
-- Flow 2:
  Average throughput: 191.68 Mbit/s
  95th percentile per-packet one-way delay: 83.098 ms
  Loss rate: 0.59%
-- Flow 3:
  Average throughput: 165.81 Mbit/s
  95th percentile per-packet one-way delay: 87.871 ms
  Loss rate: 1.40%
Run 2: Report of TCP BBR — Data Link
Run 3: Statistics of TCP BBR

Start at: 2018-04-18 10:47:42
End at: 2018-04-18 10:48:12

# Below is generated by plot.py at 2018-04-18 15:41:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 397.08 Mbit/s
95th percentile per-packet one-way delay: 75.716 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 210.65 Mbit/s
95th percentile per-packet one-way delay: 73.726 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 194.62 Mbit/s
95th percentile per-packet one-way delay: 75.707 ms
Loss rate: 0.57%
-- Flow 3:
Average throughput: 173.19 Mbit/s
95th percentile per-packet one-way delay: 80.562 ms
Loss rate: 1.29%
Run 3: Report of TCP BBR — Data Link

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

![Graph of Per-packet one way delay (ms)](image2)
Run 4: Statistics of TCP BBR

Start at: 2018-04-18 11:03:13
End at: 2018-04-18 11:03:43

# Below is generated by plot.py at 2018-04-18 15:41:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 394.45 Mbit/s
95th percentile per-packet one-way delay: 82.682 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 205.30 Mbit/s
95th percentile per-packet one-way delay: 79.860 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 193.97 Mbit/s
95th percentile per-packet one-way delay: 82.847 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 182.93 Mbit/s
95th percentile per-packet one-way delay: 93.154 ms
Loss rate: 1.29%
Run 4: Report of TCP BBR — Data Link

![Graph showing network performance metrics over time, with annotations for throughput and per-packet one-way delay.

Throughput (Mbps)

- Flow 1 ingress (mean 205.39 Mbps)
- Flow 1 egress (mean 205.30 Mbps)
- Flow 2 ingress (mean 194.18 Mbps)
- Flow 2 egress (mean 193.97 Mbps)
- Flow 3 ingress (mean 183.38 Mbps)
- Flow 3 egress (mean 182.92 Mbps)

Per-packet one-way delay (ms)

- Flow 1 (95th percentile 79.96 ms)
- Flow 2 (95th percentile 82.85 ms)
- Flow 3 (95th percentile 93.15 ms)
Run 5: Statistics of TCP BBR

End at: 2018-04-18 11:18:58

# Below is generated by plot.py at 2018-04-18 15:41:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 381.85 Mbit/s
95th percentile per-packet one-way delay: 89.374 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 202.36 Mbit/s
95th percentile per-packet one-way delay: 87.610 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 191.46 Mbit/s
95th percentile per-packet one-way delay: 89.535 ms
Loss rate: 0.60%
-- Flow 3:
Average throughput: 158.72 Mbit/s
95th percentile per-packet one-way delay: 91.440 ms
Loss rate: 1.57%
Run 5: Report of TCP BBR — Data Link

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

- Flow 1 ingress (mean 202.47 Mbit/s)
- Flow 1 egress (mean 202.36 Mbit/s)
- Flow 2 ingress (mean 191.65 Mbit/s)
- Flow 2 egress (mean 191.46 Mbit/s)
- Flow 3 ingress (mean 158.62 Mbit/s)
- Flow 3 egress (mean 158.72 Mbit/s)
Run 6: Statistics of TCP BBR

Start at: 2018-04-18 11:33:37
End at: 2018-04-18 11:34:07

# Below is generated by plot.py at 2018-04-18 15:41:26
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 389.16 Mbit/s
  95th percentile per-packet one-way delay: 93.223 ms
  Loss rate: 0.54%
-- Flow 1:
  Average throughput: 205.01 Mbit/s
  95th percentile per-packet one-way delay: 90.007 ms
  Loss rate: 0.38%
-- Flow 2:
  Average throughput: 191.34 Mbit/s
  95th percentile per-packet one-way delay: 92.775 ms
  Loss rate: 0.47%
-- Flow 3:
  Average throughput: 173.16 Mbit/s
  95th percentile per-packet one-way delay: 97.299 ms
  Loss rate: 1.30%
Run 6: Report of TCP BBR — Data Link
Run 7: Statistics of TCP BBR

Start at: 2018-04-18 11:49:18
End at: 2018-04-18 11:49:48

# Below is generated by plot.py at 2018-04-18 15:41:26
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 383.71 Mbit/s
  95th percentile per-packet one-way delay: 78.728 ms
  Loss rate: 0.60%
-- Flow 1:
  Average throughput: 200.57 Mbit/s
  95th percentile per-packet one-way delay: 77.116 ms
  Loss rate: 0.37%
-- Flow 2:
  Average throughput: 192.22 Mbit/s
  95th percentile per-packet one-way delay: 79.167 ms
  Loss rate: 0.59%
-- Flow 3:
  Average throughput: 167.99 Mbit/s
  95th percentile per-packet one-way delay: 81.928 ms
  Loss rate: 1.40%
Run 7: Report of TCP BBR — Data Link

[Graphs showing throughput and packet per-second mean delay over time for different flows, with mean values and 95th percentiles provided for each.]
Run 8: Statistics of TCP BBR

Start at: 2018-04-18 12:04:15
End at: 2018-04-18 12:04:45

# Below is generated by plot.py at 2018-04-18 15:41:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 384.66 Mbit/s
95th percentile per-packet one-way delay: 101.229 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 202.17 Mbit/s
95th percentile per-packet one-way delay: 97.196 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 189.16 Mbit/s
95th percentile per-packet one-way delay: 101.390 ms
Loss rate: 0.37%
-- Flow 3:
Average throughput: 173.69 Mbit/s
95th percentile per-packet one-way delay: 106.108 ms
Loss rate: 1.22%
Run 9: Statistics of TCP BBR

Start at: 2018-04-18 12:19:19
End at: 2018-04-18 12:19:49

# Below is generated by plot.py at 2018-04-18 15:47:28
# Datalink statistics
    Total of 3 flows:
    Average throughput: 387.50 Mbit/s
    95th percentile per-packet one-way delay: 87.994 ms
    Loss rate: 0.55%
    -- Flow 1:
    Average throughput: 206.37 Mbit/s
    95th percentile per-packet one-way delay: 84.112 ms
    Loss rate: 0.37%
    -- Flow 2:
    Average throughput: 188.95 Mbit/s
    95th percentile per-packet one-way delay: 87.867 ms
    Loss rate: 0.53%
    -- Flow 3:
    Average throughput: 168.63 Mbit/s
    95th percentile per-packet one-way delay: 91.846 ms
    Loss rate: 1.27%
Run 9: Report of TCP BBR — Data Link

![Graph showing throughput and per-packet one-way delay over time for three flows (Flow 1, Flow 2, Flow 3).]
Run 10: Statistics of TCP BBR

Start at: 2018-04-18 12:34:42
End at: 2018-04-18 12:35:12

# Below is generated by plot.py at 2018-04-18 15:47:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 382.31 Mbit/s
95th percentile per-packet one-way delay: 87.835 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 202.80 Mbit/s
95th percentile per-packet one-way delay: 85.819 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 187.13 Mbit/s
95th percentile per-packet one-way delay: 88.253 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 167.56 Mbit/s
95th percentile per-packet one-way delay: 89.850 ms
Loss rate: 1.38%
Run 10: Report of TCP BBR — Data Link
Run 1: Statistics of TCP Cubic

Start at: 2018-04-18 10:15:27
End at: 2018-04-18 10:15:57

# Below is generated by plot.py at 2018-04-18 15:47:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 250.05 Mbit/s
95th percentile per-packet one-way delay: 53.201 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 168.38 Mbit/s
95th percentile per-packet one-way delay: 53.064 ms
Loss rate: 0.22%
-- Flow 2:
Average throughput: 120.30 Mbit/s
95th percentile per-packet one-way delay: 53.417 ms
Loss rate: 0.73%
-- Flow 3:
Average throughput: 5.28 Mbit/s
95th percentile per-packet one-way delay: 53.984 ms
Loss rate: 3.54%
Run 1: Report of TCP Cubic — Data Link

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

- Flow 1 ingress (mean 168.17 Mbit/s)
- Flow 1 egress (mean 168.38 Mbit/s)
- Flow 2 ingress (mean 120.56 Mbit/s)
- Flow 2 egress (mean 120.39 Mbit/s)
- Flow 3 ingress (mean 5.42 Mbit/s)
- Flow 3 egress (mean 5.28 Mbit/s)

- Flow 1 (95th percentile 53.06 ms)
- Flow 2 (95th percentile 53.42 ms)
- Flow 3 (95th percentile 53.98 ms)
Run 2: Statistics of TCP Cubic

Start at: 2018-04-18 10:30:21
End at: 2018-04-18 10:30:51

# Below is generated by plot.py at 2018-04-18 15:47:28
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 227.77 Mbit/s
  95th percentile per-packet one-way delay: 55.097 ms
  Loss rate: 0.50%
-- Flow 1:
  Average throughput: 135.79 Mbit/s
  95th percentile per-packet one-way delay: 55.612 ms
  Loss rate: 0.36%
-- Flow 2:
  Average throughput: 135.86 Mbit/s
  95th percentile per-packet one-way delay: 54.595 ms
  Loss rate: 0.65%
-- Flow 3:
  Average throughput: 5.11 Mbit/s
  95th percentile per-packet one-way delay: 54.903 ms
  Loss rate: 3.99%
Run 2: Report of TCP Cubic — Data Link

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

- Flow 1 ingress (mean 135.83 Mbps)
- Flow 1 egress (mean 135.79 Mbps)
- Flow 2 ingress (mean 136.03 Mbps)
- Flow 2 egress (mean 135.86 Mbps)
- Flow 3 ingress (mean 5.26 Mbps)
- Flow 3 egress (mean 5.11 Mbps)

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

- Flow 1 (95th percentile 55.61 ms)
- Flow 2 (95th percentile 54.59 ms)
- Flow 3 (95th percentile 54.90 ms)
Run 3: Statistics of TCP Cubic

Start at: 2018-04-18 10:45:48
End at: 2018-04-18 10:46:18

# Below is generated by plot.py at 2018-04-18 15:47:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 256.64 Mbit/s
95th percentile per-packet one-way delay: 57.492 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 142.57 Mbit/s
95th percentile per-packet one-way delay: 58.005 ms
Loss rate: 0.57%
-- Flow 2:
Average throughput: 111.48 Mbit/s
95th percentile per-packet one-way delay: 55.908 ms
Loss rate: 0.77%
-- Flow 3:
Average throughput: 121.76 Mbit/s
95th percentile per-packet one-way delay: 57.759 ms
Loss rate: 1.20%
Run 3: Report of TCP Cubic — Data Link
Run 4: Statistics of TCP Cubic

Start at: 2018-04-18 11:01:16
End at: 2018-04-18 11:01:46

# Below is generated by plot.py at 2018-04-18 15:47:28
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 304.59 Mbit/s
  95th percentile per-packet one-way delay: 58.743 ms
  Loss rate: 0.53%
-- Flow 1:
  Average throughput: 160.06 Mbit/s
  95th percentile per-packet one-way delay: 57.132 ms
  Loss rate: 0.32%
-- Flow 2:
  Average throughput: 146.59 Mbit/s
  95th percentile per-packet one-way delay: 59.607 ms
  Loss rate: 0.54%
-- Flow 3:
  Average throughput: 143.07 Mbit/s
  95th percentile per-packet one-way delay: 60.885 ms
  Loss rate: 1.23%
Run 4: Report of TCP Cubic — Data Link

[Graph showing throughput and packet round-trip delay over time for different flows]
Run 5: Statistics of TCP Cubic

Start at: 2018-04-18 11:16:35
End at: 2018-04-18 11:17:05

# Below is generated by plot.py at 2018-04-18 15:47:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 253.39 Mbit/s
95th percentile per-packet one-way delay: 58.077 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 159.50 Mbit/s
95th percentile per-packet one-way delay: 57.867 ms
Loss rate: 0.50%
-- Flow 2:
Average throughput: 138.75 Mbit/s
95th percentile per-packet one-way delay: 58.304 ms
Loss rate: 0.68%
-- Flow 3:
Average throughput: 5.12 Mbit/s
95th percentile per-packet one-way delay: 58.219 ms
Loss rate: 3.66%
Run 5: Report of TCP Cubic — Data Link
Run 6: Statistics of TCP Cubic

Start at: 2018-04-18 11:31:42
End at: 2018-04-18 11:32:12

# Below is generated by plot.py at 2018-04-18 15:47:28
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 277.77 Mbit/s
  95th percentile per-packet one-way delay: 56.664 ms
  Loss rate: 0.54%
  -- Flow 1:
  Average throughput: 141.10 Mbit/s
  95th percentile per-packet one-way delay: 56.456 ms
  Loss rate: 0.36%
  -- Flow 2:
  Average throughput: 152.20 Mbit/s
  95th percentile per-packet one-way delay: 56.470 ms
  Loss rate: 0.55%
  -- Flow 3:
  Average throughput: 107.94 Mbit/s
  95th percentile per-packet one-way delay: 58.294 ms
  Loss rate: 1.22%
Run 7: Statistics of TCP Cubic

End at: 2018-04-18 11:47:53

# Below is generated by plot.py at 2018-04-18 15:49:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 270.08 Mbit/s
95th percentile per-packet one-way delay: 57.504 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 149.38 Mbit/s
95th percentile per-packet one-way delay: 57.045 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 119.03 Mbit/s
95th percentile per-packet one-way delay: 58.231 ms
Loss rate: 0.73%
-- Flow 3:
Average throughput: 126.55 Mbit/s
95th percentile per-packet one-way delay: 57.180 ms
Loss rate: 1.12%
Run 7: Report of TCP Cubic — Data Link
Run 8: Statistics of TCP Cubic

Start at: 2018-04-18 12:02:21
End at: 2018-04-18 12:02:51

# Below is generated by plot.py at 2018-04-18 15:49:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 269.89 Mbit/s
95th percentile per-packet one-way delay: 61.443 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 164.47 Mbit/s
95th percentile per-packet one-way delay: 60.871 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 156.10 Mbit/s
95th percentile per-packet one-way delay: 62.213 ms
Loss rate: 0.47%
-- Flow 3:
Average throughput: 5.09 Mbit/s
95th percentile per-packet one-way delay: 61.545 ms
Loss rate: 3.64%
Run 8: Report of TCP Cubic — Data Link
Run 9: Statistics of TCP Cubic

Start at: 2018-04-18 12:17:26
End at: 2018-04-18 12:17:56

# Below is generated by plot.py at 2018-04-18 15:49:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 219.79 Mbit/s
95th percentile per-packet one-way delay: 58.383 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 149.56 Mbit/s
95th percentile per-packet one-way delay: 56.961 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 53.03 Mbit/s
95th percentile per-packet one-way delay: 60.616 ms
Loss rate: 2.30%
-- Flow 3:
Average throughput: 106.18 Mbit/s
95th percentile per-packet one-way delay: 60.189 ms
Loss rate: 1.15%
Run 9: Report of TCP Cubic — Data Link
Run 10: Statistics of TCP Cubic

Start at: 2018-04-18 12:32:46
End at: 2018-04-18 12:33:16

# Below is generated by plot.py at 2018-04-18 15:50:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 296.44 Mbit/s
95th percentile per-packet one-way delay: 59.178 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 158.80 Mbit/s
95th percentile per-packet one-way delay: 57.951 ms
Loss rate: 0.29%
-- Flow 2:
Average throughput: 135.37 Mbit/s
95th percentile per-packet one-way delay: 59.053 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 144.97 Mbit/s
95th percentile per-packet one-way delay: 61.156 ms
Loss rate: 1.23%
Run 10: Report of TCP Cubic — Data Link
Run 1: Statistics of LEDBAT

End at: 2018-04-18 10:20:58

# Below is generated by plot.py at 2018-04-18 15:50:28
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 52.62 Mbit/s
  95th percentile per-packet one-way delay: 51.789 ms
  Loss rate: 0.87%
-- Flow 1:
  Average throughput: 35.14 Mbit/s
  95th percentile per-packet one-way delay: 51.930 ms
  Loss rate: 0.67%
-- Flow 2:
  Average throughput: 21.64 Mbit/s
  95th percentile per-packet one-way delay: 51.619 ms
  Loss rate: 1.05%
-- Flow 3:
  Average throughput: 9.49 Mbit/s
  95th percentile per-packet one-way delay: 50.995 ms
  Loss rate: 2.24%
Run 1: Report of LEDBAT — Data Link

---

**Throughput (Mbps/s)**

- **Flow 1 ingress (mean 35.26 Mbps/s)**
- **Flow 1 egress (mean 35.14 Mbps/s)**
- **Flow 2 ingress (mean 21.75 Mbps/s)**
- **Flow 2 egress (mean 21.64 Mbps/s)**
- **Flow 3 ingress (mean 9.60 Mbps/s)**
- **Flow 3 egress (mean 9.49 Mbps/s)**

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

- **Flow 1 (95th percentile 51.93 ms)**
- **Flow 2 (95th percentile 51.62 ms)**
- **Flow 3 (95th percentile 50.99 ms)**

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Run 2: Statistics of LEDBAT

Start at: 2018-04-18 10:35:19
End at: 2018-04-18 10:35:49

# Below is generated by plot.py at 2018-04-18 15:50:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 50.62 Mbit/s
95th percentile per-packet one-way delay: 51.737 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 33.21 Mbit/s
95th percentile per-packet one-way delay: 51.860 ms
Loss rate: 0.69%
-- Flow 2:
Average throughput: 22.26 Mbit/s
95th percentile per-packet one-way delay: 51.442 ms
Loss rate: 1.03%
-- Flow 3:
Average throughput: 8.06 Mbit/s
95th percentile per-packet one-way delay: 52.099 ms
Loss rate: 2.43%
Run 2: Report of LEDBAT — Data Link

![Graph of throughput over time for different flows]

- **Flow 1 ingress** (mean 33.32 Mbit/s)
- **Flow 1 egress** (mean 33.21 Mbit/s)
- **Flow 2 ingress** (mean 22.37 Mbit/s)
- **Flow 2 egress** (mean 22.26 Mbit/s)
- **Flow 3 ingress** (mean 8.17 Mbit/s)
- **Flow 3 egress** (mean 8.06 Mbit/s)

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

- **Flow 1** (95th percentile 51.86 ms)
- **Flow 2** (95th percentile 51.44 ms)
- **Flow 3** (95th percentile 52.10 ms)
Run 3: Statistics of LEDBAT

Start at: 2018-04-18 10:50:47
End at: 2018-04-18 10:51:17

# Below is generated by plot.py at 2018-04-18 15:50:28
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 54.14 Mbit/s
  95th percentile per-packet one-way delay: 51.796 ms
  Loss rate: 0.86%
-- Flow 1:
  Average throughput: 34.92 Mbit/s
  95th percentile per-packet one-way delay: 51.562 ms
  Loss rate: 0.67%
-- Flow 2:
  Average throughput: 23.44 Mbit/s
  95th percentile per-packet one-way delay: 52.343 ms
  Loss rate: 1.00%
-- Flow 3:
  Average throughput: 11.12 Mbit/s
  95th percentile per-packet one-way delay: 52.052 ms
  Loss rate: 2.08%
Run 3: Report of LEDBAT — Data Link

![Graph showing throughput and per-packet round trip delay over time for different flows.]
Run 4: Statistics of LEDBAT

Start at: 2018-04-18 11:06:20
End at: 2018-04-18 11:06:50

# Below is generated by plot.py at 2018-04-18 15:50:28
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 51.52 Mbit/s
  95th percentile per-packet one-way delay: 51.648 ms
  Loss rate: 0.86%
-- Flow 1:
  Average throughput: 33.79 Mbit/s
  95th percentile per-packet one-way delay: 51.506 ms
  Loss rate: 0.66%
-- Flow 2:
  Average throughput: 21.50 Mbit/s
  95th percentile per-packet one-way delay: 52.099 ms
  Loss rate: 1.04%
-- Flow 3:
  Average throughput: 10.46 Mbit/s
  95th percentile per-packet one-way delay: 51.150 ms
  Loss rate: 2.15%
Run 4: Report of LEDBAT — Data Link

![Graph 1: Throughput vs. Time]

- **Flow 1 Ingress** (mean 33.90 Mbit/s)
- **Flow 1 Egress** (mean 33.79 Mbit/s)
- **Flow 2 Ingress** (mean 21.62 Mbit/s)
- **Flow 2 Egress** (mean 21.50 Mbit/s)
- **Flow 3 Ingress** (mean 10.57 Mbit/s)
- **Flow 3 Egress** (mean 10.46 Mbit/s)

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

- **Flow 1** (95th percentile 51.51 ms)
- **Flow 2** (95th percentile 52.10 ms)
- **Flow 3** (95th percentile 51.15 ms)

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Run 5: Statistics of LEDBAT

Start at: 2018-04-18 11:21:34

# Below is generated by plot.py at 2018-04-18 15:50:28
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 52.56 Mbit/s
  95th percentile per-packet one-way delay: 51.874 ms
  Loss rate: 0.88%
-- Flow 1:
  Average throughput: 34.05 Mbit/s
  95th percentile per-packet one-way delay: 52.137 ms
  Loss rate: 0.68%
-- Flow 2:
  Average throughput: 22.11 Mbit/s
  95th percentile per-packet one-way delay: 51.547 ms
  Loss rate: 1.04%
-- Flow 3:
  Average throughput: 11.61 Mbit/s
  95th percentile per-packet one-way delay: 51.038 ms
  Loss rate: 2.04%
Run 5: Report of LEDBAT — Data Link

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

![Graph 2: Per-Packet Round Trip Time vs. Time](Diagram)
Run 6: Statistics of LEDBAT

Start at: 2018-04-18 11:36:47
End at: 2018-04-18 11:37:17

# Below is generated by plot.py at 2018-04-18 15:50:28
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 54.43 Mbit/s
  95th percentile per-packet one-way delay: 51.549 ms
  Loss rate: 0.86%
-- Flow 1:
  Average throughput: 35.42 Mbit/s
  95th percentile per-packet one-way delay: 51.649 ms
  Loss rate: 0.67%
-- Flow 2:
  Average throughput: 23.32 Mbit/s
  95th percentile per-packet one-way delay: 51.107 ms
  Loss rate: 1.02%
-- Flow 3:
  Average throughput: 10.80 Mbit/s
  95th percentile per-packet one-way delay: 51.918 ms
  Loss rate: 2.11%
Run 6: Report of LEDBAT — Data Link

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

- Flow 1 ingress (mean 35.53 Mbps/s)
- Flow 1 egress (mean 35.42 Mbps/s)
- Flow 2 ingress (mean 23.44 Mbps/s)
- Flow 2 egress (mean 23.32 Mbps/s)
- Flow 3 ingress (mean 10.92 Mbps/s)
- Flow 3 egress (mean 10.80 Mbps/s)

![Graph 2: Per-packet One-Way Delay (ms)]

- Flow 1 (95th percentile 51.65 ms)
- Flow 2 (95th percentile 51.11 ms)
- Flow 3 (95th percentile 51.92 ms)
Run 7: Statistics of LEDBAT

Start at: 2018-04-18 11:52:24
End at: 2018-04-18 11:52:54

# Below is generated by plot.py at 2018-04-18 15:50:28
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 48.29 Mbit/s
  95th percentile per-packet one-way delay: 51.769 ms
  Loss rate: 0.91%
-- Flow 1:
  Average throughput: 33.33 Mbit/s
  95th percentile per-packet one-way delay: 51.774 ms
  Loss rate: 0.69%
-- Flow 2:
  Average throughput: 17.16 Mbit/s
  95th percentile per-packet one-way delay: 51.524 ms
  Loss rate: 1.18%
-- Flow 3:
  Average throughput: 10.89 Mbit/s
  95th percentile per-packet one-way delay: 52.174 ms
  Loss rate: 2.11%
Run 7: Report of LEDBAT — Data Link
Run 8: Statistics of LEDBAT

Start at: 2018-04-18 12:07:18
End at: 2018-04-18 12:07:48

# Below is generated by plot.py at 2018-04-18 15:50:28
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 50.95 Mbit/s
  95th percentile per-packet one-way delay: 51.286 ms
  Loss rate: 0.89%
-- Flow 1:
  Average throughput: 33.12 Mbit/s
  95th percentile per-packet one-way delay: 51.286 ms
  Loss rate: 0.68%
-- Flow 2:
  Average throughput: 21.68 Mbit/s
  95th percentile per-packet one-way delay: 51.186 ms
  Loss rate: 1.05%
-- Flow 3:
  Average throughput: 10.58 Mbit/s
  95th percentile per-packet one-way delay: 51.944 ms
  Loss rate: 2.14%
Run 8: Report of LEDBAT — Data Link

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

- Flow 1 ingress (mean 33.24 Mbit/s)
- Flow 1 egress (mean 33.12 Mbit/s)
- Flow 2 ingress (mean 21.79 Mbit/s)
- Flow 2 egress (mean 21.68 Mbit/s)
- Flow 3 ingress (mean 10.70 Mbit/s)
- Flow 3 egress (mean 10.58 Mbit/s)

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

- Flow 1 (95th percentile 51.29 ms)
- Flow 2 (95th percentile 51.19 ms)
- Flow 3 (95th percentile 51.94 ms)
Run 9: Statistics of LEDBAT


# Below is generated by plot.py at 2018-04-18 15:50:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 53.42 Mbit/s
95th percentile per-packet one-way delay: 51.791 ms
Loss rate: 0.87%
-- Flow 1:
Average throughput: 34.72 Mbit/s
95th percentile per-packet one-way delay: 51.927 ms
Loss rate: 0.67%
-- Flow 2:
Average throughput: 22.70 Mbit/s
95th percentile per-packet one-way delay: 51.583 ms
Loss rate: 1.03%
-- Flow 3:
Average throughput: 11.05 Mbit/s
95th percentile per-packet one-way delay: 51.151 ms
Loss rate: 2.09%
Run 9: Report of LEDBAT — Data Link

![Graph](image_url)

**Throughput (Mbps)**

- **Flow 1 ingress** (mean 34.84 Mbps)
- **Flow 1 egress** (mean 34.72 Mbps)
- **Flow 2 ingress** (mean 22.81 Mbps)
- **Flow 2 egress** (mean 22.70 Mbps)
- **Flow 3 ingress** (mean 11.17 Mbps)
- **Flow 3 egress** (mean 11.05 Mbps)

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

- **Flow 1** (95th percentile 51.93 ms)
- **Flow 2** (95th percentile 51.58 ms)
- **Flow 3** (95th percentile 51.15 ms)
Run 10: Statistics of LEDBAT

Start at: 2018-04-18 12:37:45
End at: 2018-04-18 12:38:15

# Below is generated by plot.py at 2018-04-18 15:50:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 51.16 Mbit/s
95th percentile per-packet one-way delay: 51.602 ms
Loss rate: 0.89%
-- Flow 1:
Average throughput: 32.77 Mbit/s
95th percentile per-packet one-way delay: 51.591 ms
Loss rate: 0.69%
-- Flow 2:
Average throughput: 22.30 Mbit/s
95th percentile per-packet one-way delay: 51.664 ms
Loss rate: 1.03%
-- Flow 3:
Average throughput: 10.92 Mbit/s
95th percentile per-packet one-way delay: 51.428 ms
Loss rate: 2.11%
Run 10: Report of LEDBAT — Data Link

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

- **Flow 1 ingress** (mean 32.88 Mbit/s)
- **Flow 1 egress** (mean 32.77 Mbit/s)
- **Flow 2 ingress** (mean 22.41 Mbit/s)
- **Flow 2 egress** (mean 22.30 Mbit/s)
- **Flow 3 ingress** (mean 11.04 Mbit/s)
- **Flow 3 egress** (mean 10.92 Mbit/s)

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

- **Flow 1** (95th percentile 51.59 ms)
- **Flow 2** (95th percentile 51.66 ms)
- **Flow 3** (95th percentile 51.43 ms)
Run 1: Statistics of PCC-Allegro

End at: 2018-04-18 10:24:00

# Below is generated by plot.py at 2018-04-18 15:56:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 474.46 Mbit/s
95th percentile per-packet one-way delay: 177.000 ms
Loss rate: 2.13%
-- Flow 1:
Average throughput: 467.56 Mbit/s
95th percentile per-packet one-way delay: 178.167 ms
Loss rate: 2.13%
-- Flow 2:
Average throughput: 2.27 Mbit/s
95th percentile per-packet one-way delay: 171.587 ms
Loss rate: 1.63%
-- Flow 3:
Average throughput: 16.49 Mbit/s
95th percentile per-packet one-way delay: 171.069 ms
Loss rate: 2.87%
Run 1: Report of PCC-Allegro — Data Link
Run 2: Statistics of PCC-Allegro

Start at: 2018-04-18 10:38:49
End at: 2018-04-18 10:39:19

# Below is generated by plot.py at 2018-04-18 15:57:12
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 490.91 Mbit/s
  95th percentile per-packet one-way delay: 174.877 ms
  Loss rate: 0.61%
-- Flow 1:
  Average throughput: 469.14 Mbit/s
  95th percentile per-packet one-way delay: 174.968 ms
  Loss rate: 0.59%
-- Flow 2:
  Average throughput: 2.49 Mbit/s
  95th percentile per-packet one-way delay: 175.232 ms
  Loss rate: 1.39%
-- Flow 3:
  Average throughput: 61.52 Mbit/s
  95th percentile per-packet one-way delay: 91.137 ms
  Loss rate: 1.07%
Run 2: Report of PCC-Allegro — Data Link
Run 3: Statistics of PCC-Allegro

Start at: 2018-04-18 10:54:17
End at: 2018-04-18 10:54:47

# Below is generated by plot.py at 2018-04-18 15:57:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 480.04 Mbit/s
95th percentile per-packet one-way delay: 174.109 ms
Loss rate: 2.10%
-- Flow 1:
Average throughput: 438.40 Mbit/s
95th percentile per-packet one-way delay: 174.316 ms
Loss rate: 2.08%
-- Flow 2:
Average throughput: 60.78 Mbit/s
95th percentile per-packet one-way delay: 173.090 ms
Loss rate: 2.29%
-- Flow 3:
Average throughput: 4.49 Mbit/s
95th percentile per-packet one-way delay: 165.713 ms
Loss rate: 2.89%
Run 3: Report of PCC-Allegro — Data Link

![Graph of Throughput vs. Time](image1)

- Flow 1 ingress (mean 446.20 Mbit/s)
- Flow 1 egress (mean 438.40 Mbit/s)
- Flow 2 ingress (mean 61.99 Mbit/s)
- Flow 2 egress (mean 60.78 Mbit/s)
- Flow 3 ingress (mean 4.58 Mbit/s)
- Flow 3 egress (mean 4.49 Mbit/s)

![Graph of Per-packet delivery delay vs. Time](image2)

- Flow 1 (95th percentile 174.32 ms)
- Flow 2 (95th percentile 173.09 ms)
- Flow 3 (95th percentile 165.71 ms)
Run 4: Statistics of PCC-Allegro

Start at: 2018-04-18 11:09:36
End at: 2018-04-18 11:10:06

# Below is generated by plot.py at 2018-04-18 15:57:33
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 475.77 Mbit/s
  95th percentile per-packet one-way delay: 166.116 ms
  Loss rate: 0.83%
-- Flow 1:
  Average throughput: 398.92 Mbit/s
  95th percentile per-packet one-way delay: 166.279 ms
  Loss rate: 0.81%
-- Flow 2:
  Average throughput: 84.41 Mbit/s
  95th percentile per-packet one-way delay: 165.795 ms
  Loss rate: 0.90%
-- Flow 3:
  Average throughput: 63.85 Mbit/s
  95th percentile per-packet one-way delay: 125.421 ms
  Loss rate: 1.14%
Run 4: Report of PCC-Allegro — Data Link

![Data Link Throughput Graph]

- Flow 1 ingress (mean 400.73 Mbit/s)
- Flow 1 egress (mean 398.92 Mbit/s)
- Flow 2 ingress (mean 84.72 Mbit/s)
- Flow 2 egress (mean 84.41 Mbit/s)
- Flow 3 ingress (mean 63.98 Mbit/s)
- Flow 3 egress (mean 63.85 Mbit/s)

![Data Link Delay Graph]

- Flow 1 (95th percentile 166.28 ms)
- Flow 2 (95th percentile 165.79 ms)
- Flow 3 (95th percentile 125.42 ms)
Run 5: Statistics of PCC-Allegro

Start at: 2018-04-18 11:24:48
End at: 2018-04-18 11:25:18

# Below is generated by plot.py at 2018-04-18 15:57:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 447.98 Mbit/s
95th percentile per-packet one-way delay: 173.823 ms
Loss rate: 0.74%
-- Flow 1:
Average throughput: 406.46 Mbit/s
95th percentile per-packet one-way delay: 174.661 ms
Loss rate: 0.67%
-- Flow 2:
Average throughput: 32.71 Mbit/s
95th percentile per-packet one-way delay: 175.494 ms
Loss rate: 0.97%
-- Flow 3:
Average throughput: 60.76 Mbit/s
95th percentile per-packet one-way delay: 117.276 ms
Loss rate: 1.80%
Run 5: Report of PCC-Allegro — Data Link

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

- **Flow 1**: Mean throughput is 407.82 Mbit/s, mean egress is 406.46 Mbit/s.
- **Flow 2**: Mean throughput is 32.66 Mbit/s, mean egress is 32.71 Mbit/s.
- **Flow 3**: Mean throughput is 61.24 Mbit/s, mean egress is 60.76 Mbit/s.

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

- **Flow 1**: 95th percentile delay is 174.66 ms.
- **Flow 2**: 95th percentile delay is 175.49 ms.
- **Flow 3**: 95th percentile delay is 117.28 ms.
Run 6: Statistics of PCC-Allegro

Start at: 2018-04-18 11:40:27
End at: 2018-04-18 11:40:57

# Below is generated by plot.py at 2018-04-18 15:57:47
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 482.31 Mbit/s
  95th percentile per-packet one-way delay: 171.220 ms
  Loss rate: 2.91%
-- Flow 1:
  Average throughput: 368.09 Mbit/s
  95th percentile per-packet one-way delay: 170.240 ms
  Loss rate: 2.52%
-- Flow 2:
  Average throughput: 143.49 Mbit/s
  95th percentile per-packet one-way delay: 171.548 ms
  Loss rate: 3.82%
-- Flow 3:
  Average throughput: 58.25 Mbit/s
  95th percentile per-packet one-way delay: 172.686 ms
  Loss rate: 5.76%
Run 6: Report of PCC-Allegro — Data Link

![Graph of Throughput and Per-Packet端-to-端 Delay](image-url)
Run 7: Statistics of PCC-Allegro


# Below is generated by plot.py at 2018-04-18 15:57:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 455.66 Mbit/s
95th percentile per-packet one-way delay: 170.733 ms
Loss rate: 1.45%
-- Flow 1:
Average throughput: 451.15 Mbit/s
95th percentile per-packet one-way delay: 170.809 ms
Loss rate: 1.46%
-- Flow 2:
Average throughput: 4.76 Mbit/s
95th percentile per-packet one-way delay: 163.516 ms
Loss rate: 0.84%
-- Flow 3:
Average throughput: 4.25 Mbit/s
95th percentile per-packet one-way delay: 174.040 ms
Loss rate: 1.32%
Run 7: Report of PCC-Allegro — Data Link
Run 8: Statistics of PCC-Allegro

Start at: 2018-04-18 12:10:31
End at: 2018-04-18 12:11:01

# Below is generated by plot.py at 2018-04-18 15:59:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 470.52 Mbit/s
95th percentile per-packet one-way delay: 179.200 ms
Loss rate: 2.01%
-- Flow 1:
Average throughput: 404.31 Mbit/s
95th percentile per-packet one-way delay: 179.675 ms
Loss rate: 2.02%
-- Flow 2:
Average throughput: 70.20 Mbit/s
95th percentile per-packet one-way delay: 173.820 ms
Loss rate: 1.67%
-- Flow 3:
Average throughput: 60.42 Mbit/s
95th percentile per-packet one-way delay: 181.304 ms
Loss rate: 2.49%
Run 8: Report of PCC-Allegro — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 411.22 Mbit/s)
Flow 1 egress (mean 404.31 Mbit/s)
Flow 2 ingress (mean 71.02 Mbit/s)
Flow 2 egress (mean 70.20 Mbit/s)
Flow 3 ingress (mean 61.33 Mbit/s)
Flow 3 egress (mean 60.42 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 179.68 ms)
Flow 2 (95th percentile 173.82 ms)
Flow 3 (95th percentile 181.30 ms)
Run 9: Statistics of PCC-Allegro

Start at: 2018-04-18 12:25:49
End at: 2018-04-18 12:26:19

# Below is generated by plot.py at 2018-04-18 16:04:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 444.31 Mbit/s
95th percentile per-packet one-way delay: 176.787 ms
Loss rate: 1.22%
-- Flow 1:
Average throughput: 434.98 Mbit/s
95th percentile per-packet one-way delay: 176.882 ms
Loss rate: 1.22%
-- Flow 2:
Average throughput: 5.95 Mbit/s
95th percentile per-packet one-way delay: 171.260 ms
Loss rate: 1.13%
-- Flow 3:
Average throughput: 16.62 Mbit/s
95th percentile per-packet one-way delay: 93.708 ms
Loss rate: 1.17%
Run 9: Report of PCC-Allegro — Data Link

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

- Flow 1 ingress (mean 438.80 Mbit/s)
- Flow 1 egress (mean 434.98 Mbit/s)
- Flow 2 ingress (mean 5.98 Mbit/s)
- Flow 2 egress (mean 5.95 Mbit/s)
- Flow 3 ingress (mean 16.63 Mbit/s)
- Flow 3 egress (mean 16.62 Mbit/s)

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

- Flow 1 (95th percentile 176.88 ms)
- Flow 2 (95th percentile 171.26 ms)
- Flow 3 (95th percentile 93.71 ms)
Run 10: Statistics of PCC-Allegro

End at: 2018-04-18 12:41:44

# Below is generated by plot.py at 2018-04-18 16:05:23
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 478.84 Mbit/s
  95th percentile per-packet one-way delay: 177.152 ms
  Loss rate: 6.67%
-- Flow 1:
  Average throughput: 408.23 Mbit/s
  95th percentile per-packet one-way delay: 177.153 ms
  Loss rate: 6.62%
-- Flow 2:
  Average throughput: 105.45 Mbit/s
  95th percentile per-packet one-way delay: 177.140 ms
  Loss rate: 6.91%
-- Flow 3:
  Average throughput: 1.90 Mbit/s
  95th percentile per-packet one-way delay: 177.653 ms
  Loss rate: 10.12%
Run 10: Report of PCC-Allegro — Data Link

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

- Flow 1 ingress (mean 435.65 Mbit/s)
- Flow 2 ingress (mean 112.69 Mbit/s)
- Flow 3 ingress (mean 2.99 Mbit/s)

- Flow 1 egress (mean 408.23 Mbit/s)
- Flow 2 egress (mean 105.45 Mbit/s)
- Flow 3 egress (mean 1.90 Mbit/s)
Run 1: Statistics of QUIC Cubic

End at: 2018-04-18 10:23:16

# Below is generated by plot.py at 2018-04-18 16:05:23
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 88.70 Mbit/s
  95th percentile per-packet one-way delay: 53.572 ms
  Loss rate: 0.68%
-- Flow 1:
  Average throughput: 50.01 Mbit/s
  95th percentile per-packet one-way delay: 50.116 ms
  Loss rate: 0.59%
-- Flow 2:
  Average throughput: 50.07 Mbit/s
  95th percentile per-packet one-way delay: 50.151 ms
  Loss rate: 0.86%
-- Flow 3:
  Average throughput: 16.79 Mbit/s
  95th percentile per-packet one-way delay: 53.776 ms
  Loss rate: 0.39%
Run 1: Report of QUIC Cubic — Data Link
Run 2: Statistics of QUIC Cubic

Start at: 2018-04-18 10:38:04
End at: 2018-04-18 10:38:34

# Below is generated by plot.py at 2018-04-18 16:05:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 103.43 Mbit/s
95th percentile per-packet one-way delay: 53.635 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 58.32 Mbit/s
95th percentile per-packet one-way delay: 53.663 ms
Loss rate: 0.49%
-- Flow 2:
Average throughput: 38.97 Mbit/s
95th percentile per-packet one-way delay: 50.278 ms
Loss rate: 0.89%
-- Flow 3:
Average throughput: 58.86 Mbit/s
95th percentile per-packet one-way delay: 50.243 ms
Loss rate: 1.06%
Run 2: Report of QUIC Cubic — Data Link
Run 3: Statistics of QUIC Cubic

End at: 2018-04-18 10:54:02

# Below is generated by plot.py at 2018-04-18 16:05:23
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 111.09 Mbit/s
  95th percentile per-packet one-way delay: 53.603 ms
  Loss rate: 0.64%
-- Flow 1:
  Average throughput: 76.30 Mbit/s
  95th percentile per-packet one-way delay: 53.609 ms
  Loss rate: 0.34%
-- Flow 2:
  Average throughput: 42.30 Mbit/s
  95th percentile per-packet one-way delay: 53.587 ms
  Loss rate: 0.82%
-- Flow 3:
  Average throughput: 20.61 Mbit/s
  95th percentile per-packet one-way delay: 53.592 ms
  Loss rate: 3.13%
Run 3: Report of QUIC Cubic — Data Link
Run 4: Statistics of QUIC Cubic

Start at: 2018-04-18 11:08:52
End at: 2018-04-18 11:09:22

# Below is generated by plot.py at 2018-04-18 16:05:23
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 73.20 Mbit/s
  95th percentile per-packet one-way delay: 53.583 ms
  Loss rate: 0.68%
-- Flow 1:
  Average throughput: 38.26 Mbit/s
  95th percentile per-packet one-way delay: 50.109 ms
  Loss rate: 0.71%
-- Flow 2:
  Average throughput: 39.94 Mbit/s
  95th percentile per-packet one-way delay: 49.952 ms
  Loss rate: 0.73%
-- Flow 3:
  Average throughput: 25.82 Mbit/s
  95th percentile per-packet one-way delay: 53.703 ms
  Loss rate: 0.42%
Run 4: Report of QUIC Cubic — Data Link

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

![Graph 2: Packet Latency vs Time](image2)
Run 5: Statistics of QUIC Cubic

Start at: 2018-04-18 11:24:03
End at: 2018-04-18 11:24:33

# Below is generated by plot.py at 2018-04-18 16:05:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 100.14 Mbit/s
95th percentile per-packet one-way delay: 53.763 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 51.54 Mbit/s
95th percentile per-packet one-way delay: 53.655 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 46.66 Mbit/s
95th percentile per-packet one-way delay: 53.802 ms
Loss rate: 1.07%
-- Flow 3:
Average throughput: 53.97 Mbit/s
95th percentile per-packet one-way delay: 49.956 ms
Loss rate: 0.20%
Run 5: Report of QUIC Cubic — Data Link
Run 6: Statistics of QUIC Cubic

Start at: 2018-04-18 11:39:42
End at: 2018-04-18 11:40:12

# Below is generated by plot.py at 2018-04-18 16:05:23
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 97.49 Mbit/s
  95th percentile per-packet one-way delay: 53.291 ms
  Loss rate: 0.70%
-- Flow 1:
  Average throughput: 48.10 Mbit/s
  95th percentile per-packet one-way delay: 53.320 ms
  Loss rate: 0.43%
-- Flow 2:
  Average throughput: 48.24 Mbit/s
  95th percentile per-packet one-way delay: 49.930 ms
  Loss rate: 0.84%
-- Flow 3:
  Average throughput: 53.19 Mbit/s
  95th percentile per-packet one-way delay: 50.251 ms
  Loss rate: 1.22%
Run 6: Report of QUIC Cubic — Data Link

Throughput (Mb/s)

Time (s)

Flow 1 ingress (mean 48.14 Mb/s)
Flow 1 egress (mean 48.10 Mb/s)
Flow 2 ingress (mean 48.39 Mb/s)
Flow 2 egress (mean 48.24 Mb/s)
Flow 3 ingress (mean 53.29 Mb/s)
Flow 3 egress (mean 53.19 Mb/s)

Per packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 53.32 ms)
Flow 2 (95th percentile 49.93 ms)
Flow 3 (95th percentile 56.25 ms)
Run 7: Statistics of QUIC Cubic

Start at: 2018-04-18 11:54:43

# Below is generated by plot.py at 2018-04-18 16:05:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 98.58 Mbit/s
95th percentile per-packet one-way delay: 53.502 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 53.85 Mbit/s
95th percentile per-packet one-way delay: 49.920 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 43.89 Mbit/s
95th percentile per-packet one-way delay: 53.557 ms
Loss rate: 0.74%
-- Flow 3:
Average throughput: 47.76 Mbit/s
95th percentile per-packet one-way delay: 53.264 ms
Loss rate: 1.42%
Run 7: Report of QUIC Cubic — Data Link
Run 8: Statistics of QUIC Cubic

Start at: 2018-04-18 12:09:45
End at: 2018-04-18 12:10:15

# Below is generated by plot.py at 2018-04-18 16:05:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 108.10 Mbit/s
95th percentile per-packet one-way delay: 53.553 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 71.83 Mbit/s
95th percentile per-packet one-way delay: 49.924 ms
Loss rate: 0.29%
-- Flow 2:
Average throughput: 42.10 Mbit/s
95th percentile per-packet one-way delay: 53.615 ms
Loss rate: 0.80%
-- Flow 3:
Average throughput: 25.55 Mbit/s
95th percentile per-packet one-way delay: 50.049 ms
Loss rate: 2.42%
Run 8: Report of QUIC Cubic — Data Link

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

- Flow 1 ingress (mean 71.81 Mbit/s)
- Flow 1 egress (mean 71.83 Mbit/s)
- Flow 2 ingress (mean 42.21 Mbit/s)
- Flow 2 egress (mean 42.10 Mbit/s)
- Flow 3 ingress (mean 25.91 Mbit/s)
- Flow 3 egress (mean 25.55 Mbit/s)
Run 9: Statistics of QUIC Cubic

Start at: 2018-04-18 12:25:04
End at: 2018-04-18 12:25:34

# Below is generated by plot.py at 2018-04-18 16:05:23
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 103.94 Mbit/s
  95th percentile per-packet one-way delay: 50.370 ms
  Loss rate: 0.49%
-- Flow 1:
  Average throughput: 45.85 Mbit/s
  95th percentile per-packet one-way delay: 50.079 ms
  Loss rate: 0.56%
-- Flow 2:
  Average throughput: 61.11 Mbit/s
  95th percentile per-packet one-way delay: 50.035 ms
  Loss rate: 0.08%
-- Flow 3:
  Average throughput: 53.70 Mbit/s
  95th percentile per-packet one-way delay: 50.471 ms
  Loss rate: 1.25%
Run 10: Statistics of QUIC Cubic

Start at: 2018-04-18 12:40:29
End at: 2018-04-18 12:40:59

# Below is generated by plot.py at 2018-04-18 16:05:23
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 104.51 Mbit/s
  95th percentile per-packet one-way delay: 53.885 ms
  Loss rate: 0.31%
  -- Flow 1:
  Average throughput: 47.29 Mbit/s
  95th percentile per-packet one-way delay: 53.921 ms
  Loss rate: 0.08%
  -- Flow 2:
  Average throughput: 59.06 Mbit/s
  95th percentile per-packet one-way delay: 50.137 ms
  Loss rate: 0.09%
  -- Flow 3:
  Average throughput: 55.18 Mbit/s
  95th percentile per-packet one-way delay: 50.411 ms
  Loss rate: 1.41%
Run 10: Report of QUIC Cubic — Data Link
Run 1: Statistics of SCReAM

End at: 2018-04-18 10:29:03

# Below is generated by plot.py at 2018-04-18 16:05:23
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 53.103 ms
  Loss rate: 0.45%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 50.076 ms
  Loss rate: 0.25%
-- Flow 2:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 53.125 ms
  Loss rate: 0.43%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 50.071 ms
  Loss rate: 1.11%
Run 1: Report of SCReAM — Data Link
Run 2: Statistics of SCReAM

End at: 2018-04-18 10:44:27

# Below is generated by plot.py at 2018-04-18 16:05:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 53.887 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.900 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.551 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 53.683 ms
Loss rate: 1.11%
Run 2: Report of SCReAM — Data Link
Run 3: Statistics of SCReAM

Start at: 2018-04-18 10:59:25

# Below is generated by plot.py at 2018-04-18 16:05:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 50.537 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.008 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.565 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.017 ms
Loss rate: 1.11%
Run 3: Report of SCReAM — Data Link

![Throughput Graph]

Throughput (Mbps)

Time (s)

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

![Per-packet-seq-wait Graph]

Per-packet-seq-wait (ms)

Time (s)

Flow 1 (95th percentile 50.01 ms) - Flow 2 (95th percentile 50.56 ms) - Flow 3 (95th percentile 50.02 ms)
Run 4: Statistics of SCReAM

Start at: 2018-04-18 11:14:47
End at: 2018-04-18 11:15:17

# Below is generated by plot.py at 2018-04-18 16:05:23
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 53.105 ms
  Loss rate: 0.45%
-- Flow 1:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 50.001 ms
  Loss rate: 0.25%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 50.082 ms
  Loss rate: 0.43%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 53.155 ms
  Loss rate: 1.11%
Run 4: Report of SCReAM — Data Link

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**Throughput (Mb/s)**

- Flow 1 ingress (mean 0.21 Mb/s)
- Flow 1 egress (mean 0.21 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)

**Delay (ms)**

- Flow 1 (95th percentile 50.00 ms)
- Flow 2 (95th percentile 50.08 ms)
- Flow 3 (95th percentile 53.16 ms)
Run 5: Statistics of SCReAM

End at: 2018-04-18 11:30:23

# Below is generated by plot.py at 2018-04-18 16:05:23
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 53.312 ms
  Loss rate: 0.45%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 50.064 ms
  Loss rate: 0.25%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 50.138 ms
  Loss rate: 0.43%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 53.374 ms
  Loss rate: 1.10%
Run 5: Report of SCReAM — Data Link
Run 6: Statistics of SCReAM

Start at: 2018-04-18 11:45:33
End at: 2018-04-18 11:46:03

# Below is generated by plot.py at 2018-04-18 16:05:23
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 53.497 ms
  Loss rate: 0.46%
-- Flow 1:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 53.509 ms
  Loss rate: 0.25%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 50.468 ms
  Loss rate: 0.42%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 50.352 ms
  Loss rate: 1.11%
Run 6: Report of SCReAM — Data Link
Run 7: Statistics of SCReAM

Start at: 2018-04-18 12:00:33
End at: 2018-04-18 12:01:03

# Below is generated by plot.py at 2018-04-18 16:05:23
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 53.602 ms
  Loss rate: 0.45%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 50.374 ms
  Loss rate: 0.25%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 50.387 ms
  Loss rate: 0.42%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 53.663 ms
  Loss rate: 1.11%
Run 8: Statistics of SCReAM

Start at: 2018-04-18 12:15:34
End at: 2018-04-18 12:16:04

# Below is generated by plot.py at 2018-04-18 16:05:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 53.140 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.509 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.440 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 53.179 ms
Loss rate: 1.11%
Run 8: Report of SCReAM — Data Link

![Diagram](image1)

![Diagram](image2)
Run 9: Statistics of SCReAM

Start at: 2018-04-18 12:30:54
End at: 2018-04-18 12:31:24

# Below is generated by plot.py at 2018-04-18 16:05:23
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 53.814 ms
  Loss rate: 0.52%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 50.514 ms
  Loss rate: 0.25%
-- Flow 2:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 53.845 ms
  Loss rate: 0.63%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 53.487 ms
  Loss rate: 1.10%
Run 9: Report of SCReAM — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 0.22 Mbps)  Flow 1 egress (mean 0.22 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)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 50.51 ms)  Flow 2 (95th percentile 53.84 ms)  Flow 3 (95th percentile 53.49 ms)
Run 10: Statistics of SCReAM

Start at: 2018-04-18 12:46:16
End at: 2018-04-18 12:46:46

# Below is generated by plot.py at 2018-04-18 16:05:23
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 53.830 ms
  Loss rate: 0.45%
-- Flow 1:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 50.208 ms
  Loss rate: 0.25%
-- Flow 2:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 50.353 ms
  Loss rate: 0.43%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 53.881 ms
  Loss rate: 1.10%
Run 10: Report of SCReAM — Data Link
Run 1: Statistics of WebRTC media

Start at: 2018-04-18 10:19:49
End at: 2018-04-18 10:20:19

# Below is generated by plot.py at 2018-04-18 16:05:23
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.17 Mbit/s
  95th percentile per-packet one-way delay: 53.510 ms
  Loss rate: 0.05%
-- Flow 1:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 53.537 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 53.204 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 50.401 ms
  Loss rate: 0.16%
Run 1: Report of WebRTC media — Data Link

Throughput (Mbit/s)

Time (s)

0  5  10  15  20  25  30

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

Per-packet round trip delay (ms)

Time (s)

0  5  10  15  20  25  30

Flow 1 (95th percentile 53.54 ms)  Flow 2 (95th percentile 53.20 ms)  Flow 3 (95th percentile 50.40 ms)
Run 2: Statistics of WebRTC media

Start at: 2018-04-18 10:34:40
End at: 2018-04-18 10:35:10

# Below is generated by plot.py at 2018-04-18 16:05:23
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.17 Mbit/s
  95th percentile per-packet one-way delay: 53.801 ms
  Loss rate: 0.09%
-- Flow 1:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 53.740 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 50.358 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 53.829 ms
  Loss rate: 0.28%
Run 2: Report of WebRTC media — Data Link

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

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

Start at: 2018-04-18 10:50:08
End at: 2018-04-18 10:50:38

# Below is generated by plot.py at 2018-04-18 16:05:23
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.17 Mbit/s
  95th percentile per-packet one-way delay: 53.771 ms
  Loss rate: 0.09%
-- Flow 1:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 50.470 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 53.789 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 53.691 ms
  Loss rate: 0.28%
Run 3: Report of WebRTC media — Data Link
Run 4: Statistics of WebRTC media

Start at: 2018-04-18 11:05:41
End at: 2018-04-18 11:06:11

# Below is generated by plot.py at 2018-04-18 16:05:23
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.17 Mbit/s
  95th percentile per-packet one-way delay: 53.797 ms
  Loss rate: 0.05%
-- Flow 1:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 50.401 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 50.355 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 53.843 ms
  Loss rate: 0.16%
Run 4: Report of WebRTC media — Data Link
Run 5: Statistics of WebRTC media

End at: 2018-04-18 11:21:25

# Below is generated by plot.py at 2018-04-18 16:05:23
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.17 Mbit/s
  95th percentile per-packet one-way delay: 53.656 ms
  Loss rate: 0.05%
-- Flow 1:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 53.695 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 50.287 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 53.661 ms
  Loss rate: 0.16%
Run 5: Report of WebRTC media — Data Link
Run 6: Statistics of WebRTC media

Start at: 2018-04-18 11:36:08
End at: 2018-04-18 11:36:38

# Below is generated by plot.py at 2018-04-18 16:05:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 53.678 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 53.711 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 53.331 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 53.492 ms
Loss rate: 0.23%
Run 6: Report of WebRTC media — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 0.06 Mbps)
Flow 1 egress (mean 0.06 Mbps)
Flow 2 ingress (mean 0.06 Mbps)
Flow 2 egress (mean 0.06 Mbps)
Flow 3 ingress (mean 0.05 Mbps)
Flow 3 egress (mean 0.05 Mbps)

Per packet one way delay [ms]

Time (s)

Flow 1 (95th percentile 53.71 ms)
Flow 2 (95th percentile 53.33 ms)
Flow 3 (95th percentile 53.49 ms)
Run 7: Statistics of WebRTC media

Start at: 2018-04-18 11:51:45
End at: 2018-04-18 11:52:15

# Below is generated by plot.py at 2018-04-18 16:05:23
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.17 Mbit/s
  95th percentile per-packet one-way delay: 50.524 ms
  Loss rate: 0.05%
-- Flow 1:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 50.547 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 50.111 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 50.163 ms
  Loss rate: 0.16%
Run 7: Report of WebRTC media — Data Link
Run 8: Statistics of WebRTC media

Start at: 2018-04-18 12:06:39
End at: 2018-04-18 12:07:09

# Below is generated by plot.py at 2018-04-18 16:05:23
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.17 Mbit/s
  95th percentile per-packet one-way delay: 53.608 ms
  Loss rate: 0.05%
-- Flow 1:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 53.324 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 53.632 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 50.494 ms
  Loss rate: 0.16%
Run 8: Report of WebRTC media — Data Link

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**Throughput (Mb/s)**

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

---

**Per-packet round trip delay (ms)**

- Flow 1 (95th percentile 53.32 ms)
- Flow 2 (95th percentile 53.63 ms)
- Flow 3 (95th percentile 50.49 ms)
Run 9: Statistics of WebRTC media


# Below is generated by plot.py at 2018-04-18 16:05:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 50.443 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 50.476 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 50.413 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 50.378 ms
Loss rate: 0.16%
Run 9: Report of WebRTC media — Data Link

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

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

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

- Flow 1 (95th percentile 50.48 ms)
- Flow 2 (95th percentile 50.41 ms)
- Flow 3 (95th percentile 50.38 ms)
Run 10: Statistics of WebRTC media

Start at: 2018-04-18 12:37:06
End at: 2018-04-18 12:37:36

# Below is generated by plot.py at 2018-04-18 16:05:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 50.689 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 50.396 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 50.380 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 50.731 ms
Loss rate: 0.16%
Run 10: Report of WebRTC media — Data Link
Run 1: Statistics of Sprout

Start at: 2018-04-18 10:25:05
End at: 2018-04-18 10:25:35

# Below is generated by plot.py at 2018-04-18 16:05:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.41 Mbit/s
95th percentile per-packet one-way delay: 51.696 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 7.76 Mbit/s
95th percentile per-packet one-way delay: 51.797 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 7.89 Mbit/s
95th percentile per-packet one-way delay: 51.484 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 7.42 Mbit/s
95th percentile per-packet one-way delay: 51.481 ms
Loss rate: 1.32%
Run 1: Report of Sprout — Data Link
Run 2: Statistics of Sprout

Start at: 2018-04-18 10:40:25
End at: 2018-04-18 10:40:55

# Below is generated by plot.py at 2018-04-18 16:05:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.61 Mbit/s
95th percentile per-packet one-way delay: 52.087 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 7.98 Mbit/s
95th percentile per-packet one-way delay: 51.767 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 7.72 Mbit/s
95th percentile per-packet one-way delay: 52.278 ms
Loss rate: 0.59%
-- Flow 3:
Average throughput: 7.67 Mbit/s
95th percentile per-packet one-way delay: 52.196 ms
Loss rate: 1.32%
Run 2: Report of Sprout — Data Link

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

- Blue dashed line: Flow 1 ingress (mean 7.98 Mbps/s)
- Blue solid line: Flow 1 egress (mean 7.98 Mbps/s)
- Green dashed line: Flow 2 ingress (mean 7.74 Mbps/s)
- Green solid line: Flow 2 egress (mean 7.72 Mbps/s)
- Red dashed line: Flow 3 ingress (mean 7.68 Mbps/s)
- Red solid line: Flow 3 egress (mean 7.67 Mbps/s)

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

- Blue line: Flow 1 (95th percentile 51.77 ms)
- Green line: Flow 2 (95th percentile 52.28 ms)
- Red line: Flow 3 (95th percentile 52.20 ms)
Run 3: Statistics of Sprout

Start at: 2018-04-18 10:55:54
End at: 2018-04-18 10:56:24

# Below is generated by plot.py at 2018-04-18 16:05:23
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 15.59 Mbit/s
  95th percentile per-packet one-way delay: 51.495 ms
  Loss rate: 0.07%
-- Flow 1:
  Average throughput: 8.01 Mbit/s
  95th percentile per-packet one-way delay: 51.280 ms
  Loss rate: 0.07%
-- Flow 2:
  Average throughput: 7.70 Mbit/s
  95th percentile per-packet one-way delay: 51.872 ms
  Loss rate: 0.03%
-- Flow 3:
  Average throughput: 7.54 Mbit/s
  95th percentile per-packet one-way delay: 52.776 ms
  Loss rate: 0.18%
Run 3: Report of Sprout — Data Link

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

- Flow 1 ingress (mean 7.99 Mbps/s)
- Flow 1 egress (mean 8.01 Mbps/s)
- Flow 2 ingress (mean 7.86 Mbps/s)
- Flow 2 egress (mean 7.70 Mbps/s)
- Flow 3 ingress (mean 7.50 Mbps/s)
- Flow 3 egress (mean 7.34 Mbps/s)

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

- Flow 1 (95th percentile 51.28 ms)
- Flow 2 (95th percentile 51.87 ms)
- Flow 3 (95th percentile 52.78 ms)
Run 4: Statistics of Sprout

Start at: 2018-04-18 11:11:11
End at: 2018-04-18 11:11:41

# Below is generated by plot.py at 2018-04-18 16:05:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.59 Mbit/s
95th percentile per-packet one-way delay: 51.235 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 7.91 Mbit/s
95th percentile per-packet one-way delay: 51.075 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 7.84 Mbit/s
95th percentile per-packet one-way delay: 51.595 ms
Loss rate: 0.65%
-- Flow 3:
Average throughput: 7.58 Mbit/s
95th percentile per-packet one-way delay: 52.645 ms
Loss rate: 1.01%
Run 4: Report of Sprout — Data Link

![Graph showing throughput over time for different flows with various colors and line types representing ingress and egress data.]

![Graph showing per-packet one-way delay over time for different flows with various colors and line types representing 95th percentile values.]
Run 5: Statistics of Sprout

Start at: 2018-04-18 11:26:23
End at: 2018-04-18 11:26:53

# Below is generated by plot.py at 2018-04-18 16:05:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.48 Mbit/s
95th percentile per-packet one-way delay: 51.154 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 7.81 Mbit/s
95th percentile per-packet one-way delay: 51.306 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 7.85 Mbit/s
95th percentile per-packet one-way delay: 51.103 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 7.52 Mbit/s
95th percentile per-packet one-way delay: 51.060 ms
Loss rate: 1.32%
Run 5: Report of Sprout — Data Link
Run 6: Statistics of Sprout

Start at: 2018-04-18 11:42:03
End at: 2018-04-18 11:42:33

# Below is generated by plot.py at 2018-04-18 16:05:23
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 15.43 Mbit/s
  95th percentile per-packet one-way delay: 51.063 ms
  Loss rate: 0.49%
  -- Flow 1:
  Average throughput: 7.81 Mbit/s
  95th percentile per-packet one-way delay: 51.073 ms
  Loss rate: 0.35%
  -- Flow 2:
  Average throughput: 7.76 Mbit/s
  95th percentile per-packet one-way delay: 51.009 ms
  Loss rate: 0.33%
  -- Flow 3:
  Average throughput: 7.57 Mbit/s
  95th percentile per-packet one-way delay: 51.121 ms
  Loss rate: 1.27%
Run 6: Report of Sprout — Data Link
Run 7: Statistics of Sprout

Start at: 2018-04-18 11:57:02
End at: 2018-04-18 11:57:32

# Below is generated by plot.py at 2018-04-18 16:05:24
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 15.34 Mbit/s
  95th percentile per-packet one-way delay: 51.095 ms
  Loss rate: 0.25%
-- Flow 1:
  Average throughput: 7.91 Mbit/s
  95th percentile per-packet one-way delay: 50.990 ms
  Loss rate: 0.41%
-- Flow 2:
  Average throughput: 7.48 Mbit/s
  95th percentile per-packet one-way delay: 52.116 ms
  Loss rate: 0.02%
-- Flow 3:
  Average throughput: 7.53 Mbit/s
  95th percentile per-packet one-way delay: 51.208 ms
  Loss rate: 0.21%
Run 7: Report of Sprout — Data Link

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

*Legend for graphs:
- Flow 1 ingress (mean 7.91 Mbit/s)
- Flow 1 egress (mean 7.91 Mbit/s)
- Flow 2 ingress (mean 7.45 Mbit/s)
- Flow 2 egress (mean 7.48 Mbit/s)
- Flow 3 ingress (mean 7.49 Mbit/s)
- Flow 3 egress (mean 7.33 Mbit/s)
Run 8: Statistics of Sprout

Start at: 2018-04-18 12:12:06
End at: 2018-04-18 12:12:36

# Below is generated by plot.py at 2018-04-18 16:05:24
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 15.52 Mbit/s
  95th percentile per-packet one-way delay: 51.105 ms
  Loss rate: 0.63%
-- Flow 1:
  Average throughput: 7.95 Mbit/s
  95th percentile per-packet one-way delay: 51.055 ms
  Loss rate: 0.42%
-- Flow 2:
  Average throughput: 7.68 Mbit/s
  95th percentile per-packet one-way delay: 51.330 ms
  Loss rate: 0.66%
-- Flow 3:
  Average throughput: 7.56 Mbit/s
  95th percentile per-packet one-way delay: 51.068 ms
  Loss rate: 1.27%
Run 8: Report of Sprout — Data Link
Run 9: Statistics of Sprout

End at: 2018-04-18 12:27:54

# Below is generated by plot.py at 2018-04-18 16:05:24
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 15.60 Mbit/s
  95th percentile per-packet one-way delay: 51.289 ms
  Loss rate: 0.09%
-- Flow 1:
  Average throughput: 7.91 Mbit/s
  95th percentile per-packet one-way delay: 51.474 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 7.86 Mbit/s
  95th percentile per-packet one-way delay: 51.189 ms
  Loss rate: 0.13%
-- Flow 3:
  Average throughput: 7.55 Mbit/s
  95th percentile per-packet one-way delay: 51.369 ms
  Loss rate: 0.29%
Run 9: Report of Sprout — Data Link

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

Flow 1 ingress (mean 7.88 Mbit/s) 
Flow 1 egress (mean 7.91 Mbit/s) 
Flow 2 ingress (mean 7.84 Mbit/s) 
Flow 2 egress (mean 7.86 Mbit/s) 
Flow 3 ingress (mean 7.51 Mbit/s) 
Flow 3 egress (mean 7.55 Mbit/s)
Run 10: Statistics of Sprout

End at: 2018-04-18 12:43:21

# Below is generated by plot.py at 2018-04-18 16:05:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.64 Mbit/s
95th percentile per-packet one-way delay: 51.542 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 7.91 Mbit/s
95th percentile per-packet one-way delay: 51.469 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 7.87 Mbit/s
95th percentile per-packet one-way delay: 51.787 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 7.67 Mbit/s
95th percentile per-packet one-way delay: 51.507 ms
Loss rate: 1.29%
Run 10: Report of Sprout — Data Link

[Graph showing throughput and packet delay over time for different flows with legends indicating mean throughput and 95th percentile delay.]
Run 1: Statistics of TaoVA-100x

End at: 2018-04-18 10:21:41
Run 1: Report of TaoVA-100x — Data Link

![Graph of throughput and packet delay over time for three flows.](image-url)
Run 2: Statistics of TaoVA-100x

Start at: 2018-04-18 10:36:02
End at: 2018-04-18 10:36:32

# Below is generated by plot.py at 2018-04-18 16:11:07
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 316.31 Mbit/s
  95th percentile per-packet one-way delay: 56.042 ms
  Loss rate: 0.37%
-- Flow 1:
  Average throughput: 195.26 Mbit/s
  95th percentile per-packet one-way delay: 53.951 ms
  Loss rate: 0.02%
-- Flow 2:
  Average throughput: 116.88 Mbit/s
  95th percentile per-packet one-way delay: 61.638 ms
  Loss rate: 0.31%
-- Flow 3:
  Average throughput: 131.67 Mbit/s
  95th percentile per-packet one-way delay: 53.533 ms
  Loss rate: 2.04%
Run 2: Report of TaoVA-100x — Data Link
Run 3: Statistics of TaoVA-100x

Start at: 2018-04-18 10:51:29
End at: 2018-04-18 10:51:59

# Below is generated by plot.py at 2018-04-18 16:11:07
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 307.44 Mbit/s
  95th percentile per-packet one-way delay: 52.225 ms
  Loss rate: 0.50%
-- Flow 1:
  Average throughput: 227.51 Mbit/s
  95th percentile per-packet one-way delay: 50.694 ms
  Loss rate: 0.37%
-- Flow 2:
  Average throughput: 16.06 Mbit/s
  95th percentile per-packet one-way delay: 53.777 ms
  Loss rate: 0.45%
-- Flow 3:
  Average throughput: 210.31 Mbit/s
  95th percentile per-packet one-way delay: 57.004 ms
  Loss rate: 0.94%
Run 3: Report of TaoVA-100x — Data Link

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

- Flow 1 ingress (mean 227.59 Mbit/s)
- Flow 1 egress (mean 227.51 Mbit/s)
- Flow 2 ingress (mean 16.05 Mbit/s)
- Flow 2 egress (mean 16.06 Mbit/s)
- Flow 3 ingress (mean 210.15 Mbit/s)
- Flow 3 egress (mean 210.31 Mbit/s)
Run 4: Statistics of TaoVA-100x

Start at: 2018-04-18 11:07:03
End at: 2018-04-18 11:07:33

# Below is generated by plot.py at 2018-04-18 16:11:07
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 269.70 Mbit/s
  95th percentile per-packet one-way delay: 53.627 ms
  Loss rate: 0.31%
-- Flow 1:
  Average throughput: 240.92 Mbit/s
  95th percentile per-packet one-way delay: 53.577 ms
  Loss rate: 0.31%
-- Flow 2:
  Average throughput: 25.82 Mbit/s
  95th percentile per-packet one-way delay: 53.609 ms
  Loss rate: 0.28%
-- Flow 3:
  Average throughput: 35.37 Mbit/s
  95th percentile per-packet one-way delay: 53.801 ms
  Loss rate: 0.41%
Run 4: Report of TaoVA-100x — Data Link

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

- Flow 1 ingress (mean 240.85 Mbit/s)
- Flow 1 egress (mean 240.92 Mbit/s)
- Flow 2 ingress (mean 25.76 Mbit/s)
- Flow 2 egress (mean 25.82 Mbit/s)
- Flow 3 ingress (mean 35.14 Mbit/s)
- Flow 3 egress (mean 35.37 Mbit/s)

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

- Flow 1 (95th percentile 53.58 ms)
- Flow 2 (95th percentile 53.61 ms)
- Flow 3 (95th percentile 53.80 ms)
Run 5: Statistics of TaoVA-100x


# Below is generated by plot.py at 2018-04-18 16:11:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 155.58 Mbit/s
95th percentile per-packet one-way delay: 53.965 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 34.94 Mbit/s
95th percentile per-packet one-way delay: 53.543 ms
Loss rate: 0.85%
-- Flow 2:
Average throughput: 75.09 Mbit/s
95th percentile per-packet one-way delay: 55.308 ms
Loss rate: 0.75%
-- Flow 3:
Average throughput: 216.51 Mbit/s
95th percentile per-packet one-way delay: 54.990 ms
Loss rate: 0.55%
Run 5: Report of TaoVA-100x — Data Link

![Graph showing throughput and per-packet one way delay for flows 1, 2, and 3 over time.](image)
Run 6: Statistics of TaoVA-100x

Start at: 2018-04-18 11:37:30
End at: 2018-04-18 11:38:00

# Below is generated by plot.py at 2018-04-18 16:11:07
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 286.79 Mbit/s
  95th percentile per-packet one-way delay: 57.369 ms
  Loss rate: 0.42%
-- Flow 1:
  Average throughput: 125.50 Mbit/s
  95th percentile per-packet one-way delay: 53.043 ms
  Loss rate: 0.25%
-- Flow 2:
  Average throughput: 227.74 Mbit/s
  95th percentile per-packet one-way delay: 59.460 ms
  Loss rate: 0.56%
-- Flow 3:
  Average throughput: 30.24 Mbit/s
  95th percentile per-packet one-way delay: 59.201 ms
  Loss rate: 0.40%
Run 6: Report of TaoVA-100x — Data Link

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

- Flow 1 ingress (mean 125.38 Mb/s) vs. egress (mean 125.50 Mb/s)
- Flow 2 ingress (mean 227.82 Mb/s) vs. egress (mean 227.74 Mb/s)
- Flow 3 ingress (mean 30.04 Mb/s) vs. egress (mean 30.24 Mb/s)

![Graph showing per-packet one-way delay over time for flows 1, 2, and 3.]

- Flow 1 (95th percentile 53.04 ms)
- Flow 2 (95th percentile 59.46 ms)
- Flow 3 (95th percentile 59.20 ms)
Run 7: Statistics of TaoVA-100x

Start at: 2018-04-18 11:53:07
End at: 2018-04-18 11:53:37

# Below is generated by plot.py at 2018-04-18 16:11:07
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 42.54 Mbit/s
  95th percentile per-packet one-way delay: 53.883 ms
  Loss rate: 0.22%
-- Flow 1:
  Average throughput: 89.75 Mbit/s
  95th percentile per-packet one-way delay: 53.973 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 22.34 Mbit/s
  95th percentile per-packet one-way delay: 53.469 ms
  Loss rate: 0.32%
-- Flow 3:
  Average throughput: 13.89 Mbit/s
  95th percentile per-packet one-way delay: 53.482 ms
  Loss rate: 1.04%
Run 7: Report of TaoVA-100x — Data Link

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

- Flow 1 ingress (mean 89.74 Mbit/s)
- Flow 1 egress (mean 89.75 Mbit/s)
- Flow 2 ingress (mean 22.30 Mbit/s)
- Flow 2 egress (mean 22.34 Mbit/s)
- Flow 3 ingress (mean 13.89 Mbit/s)
- Flow 3 egress (mean 13.89 Mbit/s)
Run 8: Statistics of TaoVA-100x

Start at: 2018-04-18 12:08:01
End at: 2018-04-18 12:08:31

# Below is generated by plot.py at 2018-04-18 16:11:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 116.32 Mbit/s
95th percentile per-packet one-way delay: 54.291 ms
Loss rate: 0.81%
-- Flow 1:
Average throughput: 19.26 Mbit/s
95th percentile per-packet one-way delay: 54.044 ms
Loss rate: 0.24%
-- Flow 2:
Average throughput: 92.02 Mbit/s
95th percentile per-packet one-way delay: 55.398 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 224.49 Mbit/s
95th percentile per-packet one-way delay: 50.517 ms
Loss rate: 1.20%
Run 8: Report of TaoVA-100x — Data Link
Run 9: Statistics of TaoVA-100x

Start at: 2018-04-18 12:23:10
End at: 2018-04-18 12:23:40

# Below is generated by plot.py at 2018-04-18 16:12:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 237.21 Mbit/s
95th percentile per-packet one-way delay: 53.903 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 114.90 Mbit/s
95th percentile per-packet one-way delay: 54.009 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 220.58 Mbit/s
95th percentile per-packet one-way delay: 51.198 ms
Loss rate: 0.47%
-- Flow 3:
Average throughput: 204.83 Mbit/s
95th percentile per-packet one-way delay: 54.498 ms
Loss rate: 1.20%
Run 9: Report of TaoVA-100x — Data Link
Run 10: Statistics of TaoVA-100x

End at: 2018-04-18 12:38:58

# Below is generated by plot.py at 2018-04-18 16:15:37
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 312.56 Mbit/s
  95th percentile per-packet one-way delay: 53.433 ms
  Loss rate: 0.38%
-- Flow 1:
  Average throughput: 145.17 Mbit/s
  95th percentile per-packet one-way delay: 51.477 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 211.11 Mbit/s
  95th percentile per-packet one-way delay: 55.635 ms
  Loss rate: 0.61%
-- Flow 3:
  Average throughput: 103.73 Mbit/s
  95th percentile per-packet one-way delay: 53.451 ms
  Loss rate: 1.00%

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Run 10: Report of TaoVA-100x — Data Link

![通过量随时间变化的图表](chart1.png)

- **Flow 1 ingress** (mean 145.19 Mbit/s)
- **Flow 1 egress** (mean 145.17 Mbit/s)
- **Flow 2 ingress** (mean 211.18 Mbit/s)
- **Flow 2 egress** (mean 211.11 Mbit/s)
- **Flow 3 ingress** (mean 103.53 Mbit/s)
- **Flow 3 egress** (mean 103.73 Mbit/s)

![数据包延迟随时间变化的图表](chart2.png)

- **Flow 1** (95th percentile 51.48 ms)
- **Flow 2** (95th percentile 55.63 ms)
- **Flow 3** (95th percentile 53.45 ms)
Run 1: Statistics of TCP Vegas

End at: 2018-04-18 10:28:17

# Below is generated by plot.py at 2018-04-18 16:15:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 140.80 Mbit/s
95th percentile per-packet one-way delay: 51.504 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 67.94 Mbit/s
95th percentile per-packet one-way delay: 51.384 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 78.66 Mbit/s
95th percentile per-packet one-way delay: 51.969 ms
Loss rate: 0.48%
-- Flow 3:
Average throughput: 62.50 Mbit/s
95th percentile per-packet one-way delay: 50.544 ms
Loss rate: 1.02%
Run 1: Report of TCP Vegas — Data Link
Run 2: Statistics of TCP Vegas

Start at: 2018-04-18 10:43:06
End at: 2018-04-18 10:43:36

# Below is generated by plot.py at 2018-04-18 16:15:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 229.51 Mbit/s
95th percentile per-packet one-way delay: 52.208 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 72.55 Mbit/s
95th percentile per-packet one-way delay: 52.413 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 187.70 Mbit/s
95th percentile per-packet one-way delay: 52.124 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 97.67 Mbit/s
95th percentile per-packet one-way delay: 52.219 ms
Loss rate: 1.11%
Run 2: Report of TCP Vegas — Data Link
Run 3: Statistics of TCP Vegas

Start at: 2018-04-18 10:58:36
End at: 2018-04-18 10:59:06

# Below is generated by plot.py at 2018-04-18 16:15:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 182.72 Mbit/s
95th percentile per-packet one-way delay: 51.376 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 65.06 Mbit/s
95th percentile per-packet one-way delay: 51.496 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 174.15 Mbit/s
95th percentile per-packet one-way delay: 51.320 ms
Loss rate: 0.57%
-- Flow 3:
Average throughput: 5.74 Mbit/s
95th percentile per-packet one-way delay: 50.900 ms
Loss rate: 2.14%
Run 3: Report of TCP Vegas — Data Link

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

- Flow 1 ingress (mean 65.05 Mbit/s)
- Flow 1 egress (mean 65.06 Mbit/s)
- Flow 2 ingress (mean 174.23 Mbit/s)
- Flow 2 egress (mean 174.13 Mbit/s)
- Flow 3 ingress (mean 5.81 Mbit/s)
- Flow 3 egress (mean 5.74 Mbit/s)
Run 4: Statistics of TCP Vegas

End at: 2018-04-18 11:14:25

# Below is generated by plot.py at 2018-04-18 16:15:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 220.56 Mbit/s
95th percentile per-packet one-way delay: 57.825 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 107.35 Mbit/s
95th percentile per-packet one-way delay: 57.913 ms
Loss rate: 0.19%
-- Flow 2:
Average throughput: 111.76 Mbit/s
95th percentile per-packet one-way delay: 56.026 ms
Loss rate: 0.51%
-- Flow 3:
Average throughput: 118.24 Mbit/s
95th percentile per-packet one-way delay: 58.751 ms
Loss rate: 0.60%
Run 4: Report of TCP Vegas — Data Link
Run 5: Statistics of TCP Vegas

Start at: 2018-04-18 11:29:03
End at: 2018-04-18 11:29:33

# Below is generated by plot.py at 2018-04-18 16:15:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 206.53 Mbit/s
95th percentile per-packet one-way delay: 55.059 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 67.18 Mbit/s
95th percentile per-packet one-way delay: 57.528 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 172.28 Mbit/s
95th percentile per-packet one-way delay: 51.452 ms
Loss rate: 0.51%
-- Flow 3:
Average throughput: 75.70 Mbit/s
95th percentile per-packet one-way delay: 52.790 ms
Loss rate: 1.14%
Run 5: Report of TCP Vegas — Data Link
Run 6: Statistics of TCP Vegas

Start at: 2018-04-18 11:44:45
End at: 2018-04-18 11:45:15

# Below is generated by plot.py at 2018-04-18 16:15:37
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 152.44 Mbit/s
  95th percentile per-packet one-way delay: 54.815 ms
  Loss rate: 0.57%
-- Flow 1:
  Average throughput: 78.00 Mbit/s
  95th percentile per-packet one-way delay: 53.653 ms
  Loss rate: 0.40%
-- Flow 2:
  Average throughput: 56.05 Mbit/s
  95th percentile per-packet one-way delay: 56.721 ms
  Loss rate: 0.42%
-- Flow 3:
  Average throughput: 113.15 Mbit/s
  95th percentile per-packet one-way delay: 54.639 ms
  Loss rate: 1.09%
Run 6: Report of TCP Vegas — Data Link

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

- Flow 1 (ingress mean 78.05 Mbit/s, egress mean 78.00 Mbit/s)
- Flow 2 (ingress mean 56.00 Mbit/s, egress mean 56.05 Mbit/s)
- Flow 3 (ingress mean 113.17 Mbit/s, egress mean 113.15 Mbit/s)

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

- Flow 1 (95th percentile 53.65 ms)
- Flow 2 (95th percentile 56.72 ms)
- Flow 3 (95th percentile 54.64 ms)
Run 7: Statistics of TCP Vegas

Start at: 2018-04-18 11:59:43
End at: 2018-04-18 12:00:13

# Below is generated by plot.py at 2018-04-18 16:15:37
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 191.83 Mbit/s
  95th percentile per-packet one-way delay: 51.431 ms
  Loss rate: 0.54%
-- Flow 1:
  Average throughput: 65.10 Mbit/s
  95th percentile per-packet one-way delay: 51.237 ms
  Loss rate: 0.35%
-- Flow 2:
  Average throughput: 156.05 Mbit/s
  95th percentile per-packet one-way delay: 51.343 ms
  Loss rate: 0.51%
-- Flow 3:
  Average throughput: 70.02 Mbit/s
  95th percentile per-packet one-way delay: 53.057 ms
  Loss rate: 1.15%
Run 7: Report of TCP Vegas — Data Link

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

Legend:
- Flow 1 ingress (mean 65.10 Mbit/s)
- Flow 1 egress (mean 65.10 Mbit/s)
- Flow 2 ingress (mean 156.08 Mbit/s)
- Flow 2 egress (mean 156.05 Mbit/s)
- Flow 3 ingress (mean 70.09 Mbit/s)
- Flow 3 egress (mean 70.02 Mbit/s)
Run 8: Statistics of TCP Vegas

End at: 2018-04-18 12:15:17

# Below is generated by plot.py at 2018-04-18 16:15:37
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 142.42 Mbit/s
  95th percentile per-packet one-way delay: 52.518 ms
  Loss rate: 0.55%
-- Flow 1:
  Average throughput: 75.65 Mbit/s
  95th percentile per-packet one-way delay: 52.636 ms
  Loss rate: 0.40%
-- Flow 2:
  Average throughput: 66.14 Mbit/s
  95th percentile per-packet one-way delay: 52.102 ms
  Loss rate: 0.51%
-- Flow 3:
  Average throughput: 69.30 Mbit/s
  95th percentile per-packet one-way delay: 52.613 ms
  Loss rate: 1.14%
Run 8: Report of TCP Vegas — Data Link

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

**Throughput (Mbps)**
- Flow 1 ingress (mean 75.69 Mbps)
- Flow 1 egress (mean 75.65 Mbps)
- Flow 2 ingress (mean 66.13 Mbps)
- Flow 2 egress (mean 66.14 Mbps)
- Flow 3 ingress (mean 69.37 Mbps)
- Flow 3 egress (mean 69.30 Mbps)

**Per-packet one-way delay (ms)**
- Flow 1 (95th percentile 52.64 ms)
- Flow 2 (95th percentile 52.10 ms)
- Flow 3 (95th percentile 52.61 ms)
Run 9: Statistics of TCP Vegas

Start at: 2018-04-18 12:30:05
End at: 2018-04-18 12:30:35

# Below is generated by plot.py at 2018-04-18 16:15:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 185.85 Mbit/s
95th percentile per-packet one-way delay: 57.432 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 80.42 Mbit/s
95th percentile per-packet one-way delay: 55.674 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 95.70 Mbit/s
95th percentile per-packet one-way delay: 58.693 ms
Loss rate: 0.31%
-- Flow 3:
Average throughput: 126.87 Mbit/s
95th percentile per-packet one-way delay: 52.887 ms
Loss rate: 1.13%
Run 9: Report of TCP Vegas — Data Link

![Throughput Graph]

![Per-packet one way delay Graph]
Run 10: Statistics of TCP Vegas

Start at: 2018-04-18 12:45:30
End at: 2018-04-18 12:46:00

# Below is generated by plot.py at 2018-04-18 16:15:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 135.75 Mbit/s
95th percentile per-packet one-way delay: 52.149 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 63.09 Mbit/s
95th percentile per-packet one-way delay: 51.796 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 73.34 Mbit/s
95th percentile per-packet one-way delay: 52.743 ms
Loss rate: 0.52%
-- Flow 3:
Average throughput: 72.75 Mbit/s
95th percentile per-packet one-way delay: 51.889 ms
Loss rate: 1.00%
Run 1: Statistics of Verus

Start at: 2018-04-18 10:26:46
End at: 2018-04-18 10:27:16

# Below is generated by plot.py at 2018-04-18 16:19:08
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 323.78 Mbit/s
  95th percentile per-packet one-way delay: 148.776 ms
  Loss rate: 1.15%
-- Flow 1:
  Average throughput: 223.31 Mbit/s
  95th percentile per-packet one-way delay: 155.694 ms
  Loss rate: 1.17%
-- Flow 2:
  Average throughput: 130.14 Mbit/s
  95th percentile per-packet one-way delay: 128.570 ms
  Loss rate: 0.97%
-- Flow 3:
  Average throughput: 42.57 Mbit/s
  95th percentile per-packet one-way delay: 107.253 ms
  Loss rate: 1.95%
Run 1: Report of Verus — Data Link

![Graph of Throughput and Delays](image)

- Flow 1 ingress (mean 226.72 Mbit/s)
- Flow 1 egress (mean 223.31 Mbit/s)
- Flow 2 ingress (mean 130.71 Mbit/s)
- Flow 2 egress (mean 130.34 Mbit/s)
- Flow 3 ingress (mean 42.88 Mbit/s)
- Flow 3 egress (mean 42.57 Mbit/s)

![Graph of Per-packet Delay](image)

- Flow 1 (95th percentile 155.69 ms)
- Flow 2 (95th percentile 128.57 ms)
- Flow 3 (95th percentile 107.25 ms)

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Run 2: Statistics of Verus

Start at: 2018-04-18 10:42:06
End at: 2018-04-18 10:42:36

# Below is generated by plot.py at 2018-04-18 16:19:08
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 306.80 Mbit/s
  95th percentile per-packet one-way delay: 126.269 ms
  Loss rate: 0.90%
-- Flow 1:
  Average throughput: 178.08 Mbit/s
  95th percentile per-packet one-way delay: 108.010 ms
  Loss rate: 0.43%
-- Flow 2:
  Average throughput: 140.43 Mbit/s
  95th percentile per-packet one-way delay: 144.564 ms
  Loss rate: 1.21%
-- Flow 3:
  Average throughput: 108.83 Mbit/s
  95th percentile per-packet one-way delay: 135.927 ms
  Loss rate: 2.39%
Run 2: Report of Verus — Data Link

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

**Throughput:**
- Flow 1 ingress: mean 178.23 Mbit/s
- Flow 1 egress: mean 178.08 Mbit/s
- Flow 2 ingress: mean 140.97 Mbit/s
- Flow 2 egress: mean 140.43 Mbit/s
- Flow 3 ingress: mean 110.34 Mbit/s
- Flow 3 egress: mean 108.83 Mbit/s

**Latency:**
- Flow 1 (95th percentile): 108.01 ms
- Flow 2 (95th percentile): 144.56 ms
- Flow 3 (95th percentile): 135.93 ms
Run 3: Statistics of Verus

Start at: 2018-04-18 10:57:35
End at: 2018-04-18 10:58:05

# Below is generated by plot.py at 2018-04-18 16:19:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 320.41 Mbit/s
95th percentile per-packet one-way delay: 101.057 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 170.29 Mbit/s
95th percentile per-packet one-way delay: 102.449 ms
Loss rate: 0.23%
-- Flow 2:
Average throughput: 156.34 Mbit/s
95th percentile per-packet one-way delay: 103.850 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 142.80 Mbit/s
95th percentile per-packet one-way delay: 94.383 ms
Loss rate: 0.40%
Run 3: Report of Verus — Data Link

![Graph of throughput and delay over time for three flows: Flow 1 ingress (mean 170.20 Mbit/s), Flow 1 egress (mean 170.29 Mbit/s), Flow 2 ingress (mean 155.75 Mbit/s), Flow 2 egress (mean 156.36 Mbit/s), Flow 3 ingress (mean 140.43 Mbit/s), Flow 3 egress (mean 142.89 Mbit/s).]

![Graph of per-packet one-way delay over time for three flows: Flow 1 (95th percentile 102.45 ms), Flow 2 (95th percentile 103.85 ms), Flow 3 (95th percentile 94.38 ms).]
Run 4: Statistics of Verus

Start at: 2018-04-18 11:12:52

# Below is generated by plot.py at 2018-04-18 16:20:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 350.69 Mbit/s
95th percentile per-packet one-way delay: 201.036 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 204.37 Mbit/s
95th percentile per-packet one-way delay: 137.462 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 189.56 Mbit/s
95th percentile per-packet one-way delay: 243.645 ms
Loss rate: 1.72%
-- Flow 3:
Average throughput: 62.64 Mbit/s
95th percentile per-packet one-way delay: 146.338 ms
Loss rate: 0.49%
Run 4: Report of Verus — Data Link

![Throughput Graph](image1)

![Delay Graph](image2)
Run 5: Statistics of Verus

Start at: 2018-04-18 11:28:03
End at: 2018-04-18 11:28:33

# Below is generated by plot.py at 2018-04-18 16:20:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 295.23 Mbit/s
95th percentile per-packet one-way delay: 110.043 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 157.16 Mbit/s
95th percentile per-packet one-way delay: 102.024 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 145.72 Mbit/s
95th percentile per-packet one-way delay: 117.377 ms
Loss rate: 0.49%
-- Flow 3:
Average throughput: 124.98 Mbit/s
95th percentile per-packet one-way delay: 134.521 ms
Loss rate: 1.53%
Run 6: Statistics of Verus

Start at: 2018-04-18 11:43:44
End at: 2018-04-18 11:44:14

# Below is generated by plot.py at 2018-04-18 16:20:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 313.45 Mbit/s
95th percentile per-packet one-way delay: 142.390 ms
Loss rate: 1.14%
-- Flow 1:
Average throughput: 200.94 Mbit/s
95th percentile per-packet one-way delay: 161.695 ms
Loss rate: 1.37%
-- Flow 2:
Average throughput: 125.48 Mbit/s
95th percentile per-packet one-way delay: 124.005 ms
Loss rate: 0.28%
-- Flow 3:
Average throughput: 90.02 Mbit/s
95th percentile per-packet one-way delay: 124.923 ms
Loss rate: 1.93%
Run 6: Report of Verus — Data Link
Run 7: Statistics of Verus

Start at: 2018-04-18 11:58:43
End at: 2018-04-18 11:59:13

# Below is generated by plot.py at 2018-04-18 16:20:31
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 298.66 Mbit/s
  95th percentile per-packet one-way delay: 124.113 ms
  Loss rate: 0.92%
-- Flow 1:
  Average throughput: 180.07 Mbit/s
  95th percentile per-packet one-way delay: 116.650 ms
  Loss rate: 0.68%
-- Flow 2:
  Average throughput: 126.61 Mbit/s
  95th percentile per-packet one-way delay: 139.182 ms
  Loss rate: 0.86%
-- Flow 3:
  Average throughput: 104.81 Mbit/s
  95th percentile per-packet one-way delay: 131.954 ms
  Loss rate: 2.35%
Run 7: Report of Verus — Data Link

![Graph showing network performance metrics for different flows over time]

- Flow 1 ingress (mean 180.69 Mbit/s)
- Flow 1 egress (mean 180.07 Mbit/s)
- Flow 2 ingress (mean 127.06 Mbit/s)
- Flow 2 egress (mean 126.61 Mbit/s)
- Flow 3 ingress (mean 106.24 Mbit/s)
- Flow 3 egress (mean 104.81 Mbit/s)

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

- Flow 1 (95th percentile 116.65 ms)
- Flow 2 (95th percentile 139.18 ms)
- Flow 3 (95th percentile 131.95 ms)
Run 8: Statistics of Verus

End at: 2018-04-18 12:14:17

# Below is generated by plot.py at 2018-04-18 16:21:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 322.01 Mbit/s
95th percentile per-packet one-way delay: 179.737 ms
Loss rate: 1.42%
-- Flow 1:
Average throughput: 174.53 Mbit/s
95th percentile per-packet one-way delay: 131.697 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 190.06 Mbit/s
95th percentile per-packet one-way delay: 216.085 ms
Loss rate: 2.36%
-- Flow 3:
Average throughput: 67.94 Mbit/s
95th percentile per-packet one-way delay: 216.285 ms
Loss rate: 5.07%
Run 8: Report of Verus — Data Link
Run 9: Statistics of Verus

Start at: 2018-04-18 12:29:05
End at: 2018-04-18 12:29:35

# Below is generated by plot.py at 2018-04-18 16:24:25
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 318.96 Mbit/s
  95th percentile per-packet one-way delay: 190.849 ms
  Loss rate: 0.99%
-- Flow 1:
  Average throughput: 235.74 Mbit/s
  95th percentile per-packet one-way delay: 198.177 ms
  Loss rate: 0.70%
-- Flow 2:
  Average throughput: 91.79 Mbit/s
  95th percentile per-packet one-way delay: 137.589 ms
  Loss rate: 1.79%
-- Flow 3:
  Average throughput: 68.15 Mbit/s
  95th percentile per-packet one-way delay: 164.508 ms
  Loss rate: 1.85%
Run 9: Report of Verus — Data Link

![Graph 1: Throughput (Mbps)](image1)
![Graph 2: Per-packet one-way delay (ms)](image2)
Run 10: Statistics of Verus

Start at: 2018-04-18 12:44:32
End at: 2018-04-18 12:45:02

# Below is generated by plot.py at 2018-04-18 16:24:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 282.47 Mbit/s
95th percentile per-packet one-way delay: 203.721 ms
Loss rate: 1.18%
-- Flow 1:
Average throughput: 205.86 Mbit/s
95th percentile per-packet one-way delay: 190.999 ms
Loss rate: 0.91%
-- Flow 2:
Average throughput: 70.04 Mbit/s
95th percentile per-packet one-way delay: 271.516 ms
Loss rate: 1.44%
-- Flow 3:
Average throughput: 91.64 Mbit/s
95th percentile per-packet one-way delay: 141.349 ms
Loss rate: 2.65%
Run 10: Report of Verus — Data Link

![Graph 1: Throughput (Mbps)]

- Flow 1 ingress (mean 207.83 Mbit/s)
- Flow 1 egress (mean 205.86 Mbit/s)
- Flow 2 ingress (mean 79.09 Mbit/s)
- Flow 2 egress (mean 70.04 Mbit/s)
- Flow 3 ingress (mean 93.14 Mbit/s)
- Flow 3 egress (mean 91.64 Mbit/s)

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

- Flow 1 (95th percentile 191.00 ms)
- Flow 2 (95th percentile 271.52 ms)
- Flow 3 (95th percentile 141.35 ms)
Run 1: Statistics of Copa

Start at: 2018-04-18 10:21:54

# Below is generated by plot.py at 2018-04-18 16:24:25
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 152.81 Mbit/s
  95th percentile per-packet one-way delay: 53.927 ms
  Loss rate: 0.46%
-- Flow 1:
  Average throughput: 82.42 Mbit/s
  95th percentile per-packet one-way delay: 53.972 ms
  Loss rate: 0.32%
-- Flow 2:
  Average throughput: 83.30 Mbit/s
  95th percentile per-packet one-way delay: 50.417 ms
  Loss rate: 0.47%
-- Flow 3:
  Average throughput: 45.67 Mbit/s
  95th percentile per-packet one-way delay: 53.858 ms
  Loss rate: 1.20%
Run 1: Report of Copa — Data Link

![Graph showing network performance metrics](image)

- Flow 1 ingress (mean 82.40 Mbit/s)
- Flow 1 egress (mean 82.42 Mbit/s)
- Flow 2 ingress (mean 85.27 Mbit/s)
- Flow 2 egress (mean 83.30 Mbit/s)
- Flow 3 ingress (mean 45.74 Mbit/s)
- Flow 3 egress (mean 45.67 Mbit/s)

![Graph showing packet delay](image)

- Flow 1 (95th percentile 53.97 ms)
- Flow 2 (95th percentile 50.42 ms)
- Flow 3 (95th percentile 53.86 ms)

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Run 2: Statistics of Copa

Start at: 2018-04-18 10:37:09
End at: 2018-04-18 10:37:39

# Below is generated by plot.py at 2018-04-18 16:25:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 203.43 Mbit/s
95th percentile per-packet one-way delay: 53.283 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 110.57 Mbit/s
95th percentile per-packet one-way delay: 53.324 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 93.94 Mbit/s
95th percentile per-packet one-way delay: 50.006 ms
Loss rate: 0.41%
-- Flow 3:
Average throughput: 92.35 Mbit/s
95th percentile per-packet one-way delay: 50.299 ms
Loss rate: 0.79%
Run 2: Report of Copa — Data Link

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Graph 1: Throughput vs. Time
- **Flow 1 ingress** (mean 110.64 Mbit/s)
- **Flow 1 egress** (mean 110.57 Mbit/s)
- **Flow 2 ingress** (mean 93.63 Mbit/s)
- **Flow 2 egress** (mean 93.94 Mbit/s)
- **Flow 3 ingress** (mean 92.11 Mbit/s)
- **Flow 3 egress** (mean 92.35 Mbit/s)

Graph 2: Per-Packet One-Way Delay vs. Time
- **Flow 1** (95th percentile 53.32 ms)
- **Flow 2** (95th percentile 90.01 ms)
- **Flow 3** (95th percentile 59.30 ms)

---
Run 3: Statistics of Copa

Start at: 2018-04-18 10:52:37
End at: 2018-04-18 10:53:07

# Below is generated by plot.py at 2018-04-18 16:25:43
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 175.76 Mbit/s
  95th percentile per-packet one-way delay: 53.360 ms
  Loss rate: 0.45%
-- Flow 1:
  Average throughput: 85.21 Mbit/s
  95th percentile per-packet one-way delay: 53.462 ms
  Loss rate: 0.27%
-- Flow 2:
  Average throughput: 96.51 Mbit/s
  95th percentile per-packet one-way delay: 50.155 ms
  Loss rate: 0.46%
-- Flow 3:
  Average throughput: 80.34 Mbit/s
  95th percentile per-packet one-way delay: 50.188 ms
  Loss rate: 1.02%
Run 3: Report of Copa — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 85.14 Mbps)
  - Flow 1 egress (mean 85.21 Mbps)
  - Flow 2 ingress (mean 96.47 Mbps)
  - Flow 2 egress (mean 96.51 Mbps)
  - Flow 3 ingress (mean 80.38 Mbps)
  - Flow 3 egress (mean 80.34 Mbps)

- **Per-packet one-way delay (ms):**
  - Flow 1 (95th percentile 53.46 ms)
  - Flow 2 (95th percentile 50.16 ms)
  - Flow 3 (95th percentile 50.19 ms)
Run 4: Statistics of Copa

Start at: 2018-04-18 11:08:06
End at: 2018-04-18 11:08:36

# Below is generated by plot.py at 2018-04-18 16:25:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 100.90 Mbit/s
95th percentile per-packet one-way delay: 53.735 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 5.05 Mbit/s
95th percentile per-packet one-way delay: 53.598 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 99.84 Mbit/s
95th percentile per-packet one-way delay: 53.659 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 89.54 Mbit/s
95th percentile per-packet one-way delay: 53.829 ms
Loss rate: 1.39%
Run 4: Report of Copa — Data Link
Run 5: Statistics of Copa

Start at: 2018-04-18 11:23:10
End at: 2018-04-18 11:23:40

# Below is generated by plot.py at 2018-04-18 16:25:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 174.09 Mbit/s
95th percentile per-packet one-way delay: 53.346 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 101.91 Mbit/s
95th percentile per-packet one-way delay: 53.277 ms
Loss rate: 0.50%
-- Flow 2:
Average throughput: 58.24 Mbit/s
95th percentile per-packet one-way delay: 53.543 ms
Loss rate: 0.80%
-- Flow 3:
Average throughput: 101.78 Mbit/s
95th percentile per-packet one-way delay: 50.300 ms
Loss rate: 0.76%
Run 5: Report of Copa — Data Link

[Graph 1] Throughput vs. Time

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

Legend:
- Flow 1 ingress (mean 102.06 Mbit/s)
- Flow 1 egress (mean 101.91 Mbit/s)
- Flow 2 ingress (mean 58.40 Mbit/s)
- Flow 2 egress (mean 58.24 Mbit/s)
- Flow 3 ingress (mean 101.50 Mbit/s)
- Flow 3 egress (mean 101.78 Mbit/s)

Legend:
- Flow 1 (95th percentile 53.28 ms)
- Flow 2 (95th percentile 53.54 ms)
- Flow 3 (95th percentile 56.30 ms)
Run 6: Statistics of Copa

Start at: 2018-04-18 11:38:35
End at: 2018-04-18 11:39:05

# Below is generated by plot.py at 2018-04-18 16:33:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 348.28 Mbit/s
95th percentile per-packet one-way delay: 256.974 ms
Loss rate: 30.92%
-- Flow 1:
Average throughput: 347.65 Mbit/s
95th percentile per-packet one-way delay: 256.998 ms
Loss rate: 30.95%
-- Flow 2:
Average throughput: 0.78 Mbit/s
95th percentile per-packet one-way delay: 180.073 ms
Loss rate: 5.69%
-- Flow 3:
Average throughput: 0.35 Mbit/s
95th percentile per-packet one-way delay: 188.705 ms
Loss rate: 17.21%
Run 6: Report of Copa — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 504.32 Mbps)
  - Flow 1 egress (mean 347.65 Mbps)
  - Flow 2 ingress (mean 0.82 Mbps)
  - Flow 2 egress (mean 0.78 Mbps)
  - Flow 3 ingress (mean 0.42 Mbps)
  - Flow 3 egress (mean 0.35 Mbps)

- **Packet Delay (ms):**
  - Flow 1 (95th percentile 257.00 ms)
  - Flow 2 (95th percentile 180.07 ms)
  - Flow 3 (95th percentile 180.71 ms)
Run 7: Statistics of Copa

Start at: 2018-04-18 11:53:49
End at: 2018-04-18 11:54:19

# Below is generated by plot.py at 2018-04-18 16:33:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 178.86 Mbit/s
95th percentile per-packet one-way delay: 53.551 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 98.50 Mbit/s
95th percentile per-packet one-way delay: 53.579 ms
Loss rate: 0.28%
-- Flow 2:
Average throughput: 80.87 Mbit/s
95th percentile per-packet one-way delay: 50.066 ms
Loss rate: 0.46%
-- Flow 3:
Average throughput: 80.96 Mbit/s
95th percentile per-packet one-way delay: 50.246 ms
Loss rate: 0.92%
Run 7: Report of Copa — Data Link

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

- Flow 1 ingress (mean 98.54 Mbit/s)
- Flow 1 egress (mean 98.50 Mbit/s)
- Flow 2 ingress (mean 80.82 Mbit/s)
- Flow 2 egress (mean 80.87 Mbit/s)
- Flow 3 ingress (mean 80.87 Mbit/s)
- Flow 3 egress (mean 80.96 Mbit/s)

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

- Flow 1 (95th percentile delay 53.58 ms)
- Flow 2 (95th percentile delay 50.07 ms)
- Flow 3 (95th percentile delay 50.25 ms)
Run 8: Statistics of Copa

Start at: 2018-04-18 12:08:50
End at: 2018-04-18 12:09:20

# Below is generated by plot.py at 2018-04-18 16:33:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 167.37 Mbit/s
95th percentile per-packet one-way delay: 50.208 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 86.78 Mbit/s
95th percentile per-packet one-way delay: 50.094 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 77.70 Mbit/s
95th percentile per-packet one-way delay: 50.250 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 87.91 Mbit/s
95th percentile per-packet one-way delay: 50.000 ms
Loss rate: 0.89%
Run 8: Report of Copa — Data Link

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

- **Throughput (Mbps)**
  - Flow 1 ingress (mean 86.75 Mbps)
  - Flow 1 egress (mean 86.78 Mbps)
  - Flow 2 ingress (mean 77.74 Mbps)
  - Flow 2 egress (mean 77.70 Mbps)
  - Flow 3 ingress (mean 87.78 Mbps)
  - Flow 3 egress (mean 87.90 Mbps)

- **Per-packet one-way delay (ms)**
  - Flow 1 (95th percentile 50.09 ms)
  - Flow 2 (95th percentile 50.25 ms)
  - Flow 3 (95th percentile 50.00 ms)
Run 9: Statistics of Copa

Start at: 2018-04-18 12:24:10
End at: 2018-04-18 12:24:40

# Below is generated by plot.py at 2018-04-18 16:33:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 154.13 Mbit/s
95th percentile per-packet one-way delay: 50.306 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 81.67 Mbit/s
95th percentile per-packet one-way delay: 50.264 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 75.05 Mbit/s
95th percentile per-packet one-way delay: 50.171 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 68.64 Mbit/s
95th percentile per-packet one-way delay: 50.453 ms
Loss rate: 1.31%
Run 9: Report of Copa — Data Link

![Graph showing network traffic](image)

- Flow 1 ingress (mean 81.71 Mbit/s)
- Flow 1 egress (mean 81.67 Mbit/s)
- Flow 2 ingress (mean 74.97 Mbit/s)
- Flow 2 egress (mean 75.05 Mbit/s)
- Flow 3 ingress (mean 68.83 Mbit/s)
- Flow 3 egress (mean 68.64 Mbit/s)

![Graph showing packet delay](image)

- Flow 1 (95th percentile 50.26 ms)
- Flow 2 (95th percentile 50.17 ms)
- Flow 3 (95th percentile 50.45 ms)
Run 10: Statistics of Copa

End at: 2018-04-18 12:40:05

# Below is generated by plot.py at 2018-04-18 16:33:12
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 159.27 Mbit/s
  95th percentile per-packet one-way delay: 53.959 ms
  Loss rate: 0.43%
-- Flow 1:
  Average throughput: 80.59 Mbit/s
  95th percentile per-packet one-way delay: 50.788 ms
  Loss rate: 0.25%
-- Flow 2:
  Average throughput: 71.36 Mbit/s
  95th percentile per-packet one-way delay: 54.081 ms
  Loss rate: 0.51%
-- Flow 3:
  Average throughput: 94.94 Mbit/s
  95th percentile per-packet one-way delay: 50.157 ms
  Loss rate: 0.76%
Run 10: Report of Copa — Data Link
Run 1: Statistics of FillP

Start at: 2018-04-18 10:18:21
End at: 2018-04-18 10:18:51

# Below is generated by plot.py at 2018-04-18 16:47:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1319.15 Mbit/s
95th percentile per-packet one-way delay: 213.785 ms
Loss rate: 6.68%
-- Flow 1:
Average throughput: 643.83 Mbit/s
95th percentile per-packet one-way delay: 195.698 ms
Loss rate: 8.02%
-- Flow 2:
Average throughput: 709.51 Mbit/s
95th percentile per-packet one-way delay: 236.556 ms
Loss rate: 4.33%
-- Flow 3:
Average throughput: 624.45 Mbit/s
95th percentile per-packet one-way delay: 156.460 ms
Loss rate: 7.64%
Run 1: Report of FillP — Data Link

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

- Flow 1 Ingress (mean 697.54 Mb/s)
- Flow 1 Egress (mean 643.83 Mb/s)
- Flow 2 Ingress (mean 737.64 Mb/s)
- Flow 2 Egress (mean 709.51 Mb/s)
- Flow 3 Ingress (mean 668.78 Mb/s)
- Flow 3 Egress (mean 624.45 Mb/s)

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

- Flow 1 (95th percentile 195.70 ms)
- Flow 2 (95th percentile 236.56 ms)
- Flow 3 (95th percentile 156.46 ms)
Run 2: Statistics of FillP

Start at: 2018-04-18 10:33:11
End at: 2018-04-18 10:33:41

# Below is generated by plot.py at 2018-04-18 16:49:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1330.89 Mbit/s
95th percentile per-packet one-way delay: 187.937 ms
Loss rate: 8.18%
-- Flow 1:
Average throughput: 761.89 Mbit/s
95th percentile per-packet one-way delay: 159.108 ms
Loss rate: 5.67%
-- Flow 2:
Average throughput: 596.45 Mbit/s
95th percentile per-packet one-way delay: 197.669 ms
Loss rate: 11.14%
-- Flow 3:
Average throughput: 525.41 Mbit/s
95th percentile per-packet one-way delay: 193.587 ms
Loss rate: 11.75%
Run 2: Report of FillP — Data Link

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

- Flow 1 Ingress (mean 804.93 Mbit/s)
- Flow 1 Egress (mean 761.89 Mbit/s)
- Flow 2 Ingress (mean 667.59 Mbit/s)
- Flow 2 Egress (mean 596.45 Mbit/s)
- Flow 3 Ingress (mean 589.01 Mbit/s)
- Flow 3 Egress (mean 525.41 Mbit/s)
Run 3: Statistics of FillP

Start at: 2018-04-18 10:48:42
End at: 2018-04-18 10:49:12

# Below is generated by plot.py at 2018-04-18 16:49:40
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1220.51 Mbit/s
  95th percentile per-packet one-way delay: 272.145 ms
  Loss rate: 4.31%
-- Flow 1:
  Average throughput: 609.16 Mbit/s
  95th percentile per-packet one-way delay: 238.754 ms
  Loss rate: 3.86%
-- Flow 2:
  Average throughput: 622.35 Mbit/s
  95th percentile per-packet one-way delay: 284.445 ms
  Loss rate: 5.85%
-- Flow 3:
  Average throughput: 603.11 Mbit/s
  95th percentile per-packet one-way delay: 195.672 ms
  Loss rate: 2.36%
Run 3: Report of FillP — Data Link

[Graph showing throughput and delay over time for different flows with specific mean and 95th percentile values indicated for each.]
Run 4: Statistics of FillP

Start at: 2018-04-18 11:04:12
End at: 2018-04-18 11:04:43

# Below is generated by plot.py at 2018-04-18 16:52:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1346.87 Mbit/s
95th percentile per-packet one-way delay: 166.504 ms
Loss rate: 5.75%
-- Flow 1:
Average throughput: 772.11 Mbit/s
95th percentile per-packet one-way delay: 154.739 ms
Loss rate: 4.20%
-- Flow 2:
Average throughput: 576.74 Mbit/s
95th percentile per-packet one-way delay: 170.884 ms
Loss rate: 6.56%
-- Flow 3:
Average throughput: 582.80 Mbit/s
95th percentile per-packet one-way delay: 173.828 ms
Loss rate: 10.01%
Run 4: Report of FillP — Data Link

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

- Flow 1 Ingress (mean 803.10 Mb/s)
- Flow 1 Egress (mean 772.11 Mb/s)
- Flow 2 Ingress (mean 613.90 Mb/s)
- Flow 2 Egress (mean 576.74 Mb/s)
- Flow 3 Ingress (mean 640.57 Mb/s)
- Flow 3 Egress (mean 582.80 Mb/s)

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

- Flow 1 95th percentile 154.74 ms
- Flow 2 95th percentile 170.88 ms
- Flow 3 95th percentile 173.83 ms

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Run 5: Statistics of FillP

Start at: 2018-04-18 11:19:27
End at: 2018-04-18 11:19:57

# Below is generated by plot.py at 2018-04-18 16:52:23
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1313.02 Mbit/s
  95th percentile per-packet one-way delay: 181.436 ms
  Loss rate: 5.93%
-- Flow 1:
  Average throughput: 751.72 Mbit/s
  95th percentile per-packet one-way delay: 166.445 ms
  Loss rate: 6.36%
-- Flow 2:
  Average throughput: 672.29 Mbit/s
  95th percentile per-packet one-way delay: 254.550 ms
  Loss rate: 5.37%
-- Flow 3:
  Average throughput: 349.24 Mbit/s
  95th percentile per-packet one-way delay: 173.439 ms
  Loss rate: 5.23%
Run 5: Report of FillP — Data Link

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

Throughput (Mbps):
- Flow 1 Ingress (mean 799.96 Mbps)
- Flow 1 Egress (mean 751.72 Mbps)
- Flow 2 Ingress (mean 706.79 Mbps)
- Flow 2 Egress (mean 672.29 Mbps)
- Flow 3 Ingress (mean 365.04 Mbps)
- Flow 3 Egress (mean 349.24 Mbps)

Per-packet delay (ms):
- Flow 1 (95th percentile 166.44 ms)
- Flow 2 (95th percentile 254.55 ms)
- Flow 3 (95th percentile 171.44 ms)
Run 6: Statistics of FillP

Start at: 2018-04-18 11:34:36
End at: 2018-04-18 11:35:06

# Below is generated by plot.py at 2018-04-18 16:54:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1406.63 Mbit/s
95th percentile per-packet one-way delay: 187.974 ms
Loss rate: 7.06%
-- Flow 1:
Average throughput: 741.15 Mbit/s
95th percentile per-packet one-way delay: 198.970 ms
Loss rate: 6.45%
-- Flow 2:
Average throughput: 701.32 Mbit/s
95th percentile per-packet one-way delay: 155.495 ms
Loss rate: 6.78%
-- Flow 3:
Average throughput: 608.08 Mbit/s
95th percentile per-packet one-way delay: 187.495 ms
Loss rate: 9.91%
Run 6: Report of FillP — Data Link

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

- Flow 1 Ingress (mean 789.40 Mbps)
- Flow 1 Egress (mean 741.15 Mbps)
- Flow 2 Ingress (mean 748.35 Mbps)
- Flow 2 Egress (mean 703.32 Mbps)
- Flow 3 Ingress (mean 667.55 Mbps)
- Flow 3 Egress (mean 608.08 Mbps)

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

- Flow 1 (95th percentile 198.97 ms)
- Flow 2 (95th percentile 155.50 ms)
- Flow 3 (95th percentile 187.50 ms)
Run 7: Statistics of FillP

Start at: 2018-04-18 11:50:16
End at: 2018-04-18 11:50:46

# Below is generated by plot.py at 2018-04-18 16:54:17
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1334.34 Mbit/s
  95th percentile per-packet one-way delay: 169.062 ms
  Loss rate: 5.93%
-- Flow 1:
  Average throughput: 703.86 Mbit/s
  95th percentile per-packet one-way delay: 145.911 ms
  Loss rate: 3.87%
-- Flow 2:
  Average throughput: 676.64 Mbit/s
  95th percentile per-packet one-way delay: 196.230 ms
  Loss rate: 7.94%
-- Flow 3:
  Average throughput: 550.97 Mbit/s
  95th percentile per-packet one-way delay: 165.236 ms
  Loss rate: 8.64%
Run 7: Report of FillP — Data Link

Throughput (MB/s)

Time (s)

Flow 1 Ingress (mean 729.71 MB/s)  Flow 1 Egress (mean 703.86 MB/s)
Flow 2 Ingress (mean 731.25 MB/s)  Flow 2 Egress (mean 676.64 MB/s)
Flow 3 Ingress (mean 596.72 MB/s)  Flow 3 Egress (mean 550.97 MB/s)

Packet Processing Delay (ms)

Time (s)

Flow 1 (95th percentile 145.91 ms)  Flow 2 (95th percentile 196.23 ms)  Flow 3 (95th percentile 165.24 ms)
Run 8: Statistics of FillP

Start at: 2018-04-18 12:05:15
End at: 2018-04-18 12:05:45

# Below is generated by plot.py at 2018-04-18 16:55:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1126.70 Mbit/s
95th percentile per-packet one-way delay: 225.105 ms
Loss rate: 3.69%
-- Flow 1:
Average throughput: 539.03 Mbit/s
95th percentile per-packet one-way delay: 261.496 ms
Loss rate: 2.47%
-- Flow 2:
Average throughput: 596.83 Mbit/s
95th percentile per-packet one-way delay: 200.607 ms
Loss rate: 1.26%
-- Flow 3:
Average throughput: 581.37 Mbit/s
95th percentile per-packet one-way delay: 183.960 ms
Loss rate: 11.32%
Run 8: Report of FillP — Data Link

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**Figure 1:** Throughput (Mbps)
- Flow 1 ingress (mean 550.85 Mbps)
- Flow 1 egress (mean 539.03 Mbps)
- Flow 2 ingress (mean 601.31 Mbps)
- Flow 2 egress (mean 596.83 Mbps)
- Flow 3 ingress (mean 648.41 Mbps)
- Flow 3 egress (mean 581.37 Mbps)

**Figure 2:** Packet one-way delay (ms)
- Flow 1 (95th percentile 261.50 ms)
- Flow 2 (95th percentile 200.61 ms)
- Flow 3 (95th percentile 183.96 ms)
Run 9: Statistics of FillP

Start at: 2018-04-18 12:20:18
End at: 2018-04-18 12:20:48

# Below is generated by plot.py at 2018-04-18 17:12:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1348.33 Mbit/s
95th percentile per-packet one-way delay: 188.660 ms
Loss rate: 5.81%
-- Flow 1:
Average throughput: 705.19 Mbit/s
95th percentile per-packet one-way delay: 164.599 ms
Loss rate: 4.17%
-- Flow 2:
Average throughput: 654.68 Mbit/s
95th percentile per-packet one-way delay: 210.662 ms
Loss rate: 7.59%
-- Flow 3:
Average throughput: 633.66 Mbit/s
95th percentile per-packet one-way delay: 151.999 ms
Loss rate: 7.43%
Run 9: Report of FillP — Data Link

Throughput (Mb/s)

Flow 1 ingress (mean 733.20 Mb/ss) — Flow 1 egress (mean 705.19 Mb/ss)
Flow 2 ingress (mean 704.73 Mb/ss) — Flow 2 egress (mean 654.68 Mb/ss)
Flow 3 ingress (mean 677.30 Mb/ss) — Flow 3 egress (mean 633.66 Mb/ss)

Per packet one way delay (ms)

Flow 1 (95th percentile 164.60 ms) — Flow 2 (95th percentile 210.66 ms) — Flow 3 (95th percentile 152.00 ms)
Run 10: Statistics of FillP

Start at: 2018-04-18 12:35:41
End at: 2018-04-18 12:36:11

# Below is generated by plot.py at 2018-04-18 17:12:32
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1231.32 Mbit/s
  95th percentile per-packet one-way delay: 191.180 ms
  Loss rate: 7.89%
-- Flow 1:
  Average throughput: 727.11 Mbit/s
  95th percentile per-packet one-way delay: 173.119 ms
  Loss rate: 5.80%
-- Flow 2:
  Average throughput: 659.56 Mbit/s
  95th percentile per-packet one-way delay: 215.031 ms
  Loss rate: 10.55%
-- Flow 3:
  Average throughput: 201.09 Mbit/s
  95th percentile per-packet one-way delay: 186.583 ms
  Loss rate: 11.95%
Run 10: Report of FillIP — Data Link

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

Throughput (Mbits/s)

Time (s)

Flow 1 ingress (mean 769.30 Mbits/s)  
Flow 1 egress (mean 727.11 Mbits/s)  
Flow 2 ingress (mean 733.48 Mbits/s)  
Flow 2 egress (mean 659.56 Mbits/s)  
Flow 3 ingress (mean 225.91 Mbits/s)  
Flow 3 egress (mean 201.09 Mbits/s)

Packet delay (ms)

Time (s)

Flow 1 (95th percentile 173.12 ms)  
Flow 2 (95th percentile 215.03 ms)  
Flow 3 (95th percentile 186.58 ms)
Run 1: Statistics of Indigo-1-32

Start at: 2018-04-18 10:16:20
End at: 2018-04-18 10:16:50

# Below is generated by plot.py at 2018-04-18 17:12:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 322.03 Mbit/s
95th percentile per-packet one-way delay: 51.279 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 167.43 Mbit/s
95th percentile per-packet one-way delay: 50.987 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 161.90 Mbit/s
95th percentile per-packet one-way delay: 51.468 ms
Loss rate: 0.45%
-- Flow 3:
Average throughput: 145.67 Mbit/s
95th percentile per-packet one-way delay: 51.594 ms
Loss rate: 1.16%
Run 1: Report of Indigo-1-32 — Data Link
Run 2: Statistics of Indigo-1-32

Start at: 2018-04-18 10:31:11
End at: 2018-04-18 10:31:41

# Below is generated by plot.py at 2018-04-18 17:12:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 327.67 Mbit/s
95th percentile per-packet one-way delay: 52.495 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 177.50 Mbit/s
95th percentile per-packet one-way delay: 51.985 ms
Loss rate: 0.28%
-- Flow 2:
Average throughput: 162.37 Mbit/s
95th percentile per-packet one-way delay: 52.656 ms
Loss rate: 0.49%
-- Flow 3:
Average throughput: 131.79 Mbit/s
95th percentile per-packet one-way delay: 53.449 ms
Loss rate: 1.19%
Run 2: Report of Indigo-1-32 — Data Link
Run 3: Statistics of Indigo-1-32

End at: 2018-04-18 10:47:11

# Below is generated by plot.py at 2018-04-18 17:12:32
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 324.17 Mbit/s
  95th percentile per-packet one-way delay: 51.398 ms
  Loss rate: 0.52%
-- Flow 1:
  Average throughput: 180.64 Mbit/s
  95th percentile per-packet one-way delay: 51.218 ms
  Loss rate: 0.29%
-- Flow 2:
  Average throughput: 149.34 Mbit/s
  95th percentile per-packet one-way delay: 51.486 ms
  Loss rate: 0.58%
-- Flow 3:
  Average throughput: 137.32 Mbit/s
  95th percentile per-packet one-way delay: 51.802 ms
  Loss rate: 1.25%
Run 3: Report of Indigo-1-32 — Data Link
Run 4: Statistics of Indigo-1-32

Start at: 2018-04-18 11:02:11
End at: 2018-04-18 11:02:41

# Below is generated by plot.py at 2018-04-18 17:12:32
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 330.81 Mbit/s
  95th percentile per-packet one-way delay: 52.003 ms
  Loss rate: 0.46%
-- Flow 1:
  Average throughput: 179.19 Mbit/s
  95th percentile per-packet one-way delay: 51.841 ms
  Loss rate: 0.30%
-- Flow 2:
  Average throughput: 161.31 Mbit/s
  95th percentile per-packet one-way delay: 51.969 ms
  Loss rate: 0.45%
-- Flow 3:
  Average throughput: 138.37 Mbit/s
  95th percentile per-packet one-way delay: 52.341 ms
  Loss rate: 1.08%
Run 4: Report of Indigo-1-32 — Data Link

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

![Graph 2: Per-packet one-way delay vs Time](image2)
Run 5: Statistics of Indigo-1-32

Start at: 2018-04-18 11:17:27  
End at: 2018-04-18 11:17:57

# Below is generated by plot.py at 2018-04-18 17:12:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 330.13 Mbit/s
95th percentile per-packet one-way delay: 52.066 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 183.34 Mbit/s
95th percentile per-packet one-way delay: 51.762 ms
Loss rate: 0.24%
-- Flow 2:
Average throughput: 151.82 Mbit/s
95th percentile per-packet one-way delay: 52.187 ms
Loss rate: 0.54%
-- Flow 3:
Average throughput: 142.00 Mbit/s
95th percentile per-packet one-way delay: 52.528 ms
Loss rate: 0.92%
Run 5: Report of Indigo-1-32 — Data Link

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

- Flow 1 ingress (mean 183.16 Mbps)
- Flow 1 egress (mean 183.34 Mbps)
- Flow 2 ingress (mean 151.86 Mbps)
- Flow 2 egress (mean 151.82 Mbps)
- Flow 3 ingress (mean 141.84 Mbps)
- Flow 3 egress (mean 142.00 Mbps)

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

- Flow 1 (95th percentile 51.76 ms)
- Flow 2 (95th percentile 52.19 ms)
- Flow 3 (95th percentile 52.53 ms)
Run 6: Statistics of Indigo-1-32

Start at: 2018-04-18 11:32:36
End at: 2018-04-18 11:33:06

# Below is generated by plot.py at 2018-04-18 17:12:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 324.99 Mbit/s
95th percentile per-packet one-way delay: 51.779 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 173.44 Mbit/s
95th percentile per-packet one-way delay: 51.454 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 161.33 Mbit/s
95th percentile per-packet one-way delay: 52.212 ms
Loss rate: 0.50%
-- Flow 3:
Average throughput: 137.05 Mbit/s
95th percentile per-packet one-way delay: 51.744 ms
Loss rate: 1.16%
Run 6: Report of Indigo-1-32 — Data Link

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**Graph 1:**
- **Y-axis:** Throughput (Mbps)
- **X-axis:** Time (s)
- **Legend:**
  - Flow 1 ingress (mean 173.48 Mbps)
  - Flow 1 egress (mean 173.44 Mbps)
  - Flow 2 ingress (mean 161.79 Mbps)
  - Flow 2 egress (mean 161.33 Mbps)
  - Flow 3 ingress (mean 137.27 Mbps)
  - Flow 3 egress (mean 137.05 Mbps)

**Graph 2:**
- **Y-axis:** Per packet one-way delay (ms)
- **X-axis:** Time (s)
- **Legend:**
  - Flow 1 (95th percentile 51.45 ms)
  - Flow 2 (95th percentile 52.21 ms)
  - Flow 3 (95th percentile 51.74 ms)
Run 7: Statistics of Indigo-1-32

End at: 2018-04-18 11:48:46

# Below is generated by plot.py at 2018-04-18 17:12:32
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 326.74 Mbit/s
  95th percentile per-packet one-way delay: 58.228 ms
  Loss rate: 0.42%
-- Flow 1:
  Average throughput: 172.42 Mbit/s
  95th percentile per-packet one-way delay: 55.933 ms
  Loss rate: 0.23%
-- Flow 2:
  Average throughput: 164.59 Mbit/s
  95th percentile per-packet one-way delay: 58.419 ms
  Loss rate: 0.52%
-- Flow 3:
  Average throughput: 140.99 Mbit/s
  95th percentile per-packet one-way delay: 64.598 ms
  Loss rate: 0.91%
Run 7: Report of Indigo-1-32 — Data Link

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

- **Flow 1** (mean 172.21 Mbit/s)
- **Flow 2** (mean 164.58 Mbit/s)
- **Flow 3** (mean 140.81 Mbit/s)
Run 8: Statistics of Indigo-1-32

Start at: 2018-04-18 12:03:14
End at: 2018-04-18 12:03:44

# Below is generated by plot.py at 2018-04-18 17:12:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 332.71 Mbit/s
95th percentile per-packet one-way delay: 56.559 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 179.99 Mbit/s
95th percentile per-packet one-way delay: 55.698 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 163.90 Mbit/s
95th percentile per-packet one-way delay: 56.777 ms
Loss rate: 0.47%
-- Flow 3:
Average throughput: 137.12 Mbit/s
95th percentile per-packet one-way delay: 57.644 ms
Loss rate: 1.12%
Run 8: Report of Indigo-1-32 — Data Link

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

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

- Flow 1 ingress (mean 179.93 Mbit/s)
- Flow 1 egress (mean 179.99 Mbit/s)
- Flow 2 ingress (mean 163.82 Mbit/s)
- Flow 2 egress (mean 163.90 Mbit/s)
- Flow 3 ingress (mean 137.32 Mbit/s)
- Flow 3 egress (mean 137.12 Mbit/s)

Flow 1 (95th percentile 55.70 ms)
Flow 2 (95th percentile 56.78 ms)
Flow 3 (95th percentile 57.64 ms)
Run 9: Statistics of Indigo-1-32

Start at: 2018-04-18 12:18:17
End at: 2018-04-18 12:18:47

# Below is generated by plot.py at 2018-04-18 17:12:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 330.66 Mbit/s
95th percentile per-packet one-way delay: 54.552 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 180.99 Mbit/s
95th percentile per-packet one-way delay: 52.640 ms
Loss rate: 0.29%
-- Flow 2:
Average throughput: 160.73 Mbit/s
95th percentile per-packet one-way delay: 55.141 ms
Loss rate: 0.44%
-- Flow 3:
Average throughput: 132.92 Mbit/s
95th percentile per-packet one-way delay: 58.751 ms
Loss rate: 1.15%
Run 9: Report of Indigo-1-32 — Data Link
Run 10: Statistics of Indigo-1-32

Start at: 2018-04-18 12:33:41
End at: 2018-04-18 12:34:11

# Below is generated by plot.py at 2018-04-18 17:12:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 320.34 Mbit/s
95th percentile per-packet one-way delay: 68.259 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 173.05 Mbit/s
95th percentile per-packet one-way delay: 61.677 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 154.56 Mbit/s
95th percentile per-packet one-way delay: 69.300 ms
Loss rate: 0.53%
-- Flow 3:
Average throughput: 139.01 Mbit/s
95th percentile per-packet one-way delay: 72.066 ms
Loss rate: 1.16%
Run 10: Report of Indigo-1-32 — Data Link

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

Legend:
- Flow 1 ingress (mean 172.98 Mbit/s)
- Flow 1 egress (mean 173.05 Mbit/s)
- Flow 2 ingress (mean 154.57 Mbit/s)
- Flow 2 egress (mean 154.56 Mbit/s)
- Flow 3 ingress (mean 139.13 Mbit/s)
- Flow 3 egress (mean 139.01 Mbit/s)
Run 1: Statistics of PCC-Vivace

Start at: 2018-04-18 10:29:12
End at: 2018-04-18 10:29:42

# Below is generated by plot.py at 2018-04-18 17:12:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 410.10 Mbit/s
95th percentile per-packet one-way delay: 53.171 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 259.23 Mbit/s
95th percentile per-packet one-way delay: 51.033 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 203.10 Mbit/s
95th percentile per-packet one-way delay: 50.958 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 49.45 Mbit/s
95th percentile per-packet one-way delay: 53.577 ms
Loss rate: 1.55%
Run 1: Report of PCC-Vivace — Data Link

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**Throughput (Mbps)**

- Flow 1 ingress (mean 259.35 Mbps)
- Flow 1 egress (mean 259.23 Mbps)
- Flow 2 ingress (mean 203.21 Mbps)
- Flow 2 egress (mean 203.10 Mbps)
- Flow 3 ingress (mean 49.70 Mbps)
- Flow 3 egress (mean 49.45 Mbps)

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

- Flow 1 (95th percentile 51.03 ms)
- Flow 2 (95th percentile 50.96 ms)
- Flow 3 (95th percentile 53.58 ms)
Run 2: Statistics of PCC-Vivace

Start at: 2018-04-18 10:44:37
End at: 2018-04-18 10:45:07

# Below is generated by plot.py at 2018-04-18 17:12:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 448.19 Mbit/s
95th percentile per-packet one-way delay: 54.486 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 249.66 Mbit/s
95th percentile per-packet one-way delay: 55.734 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 243.24 Mbit/s
95th percentile per-packet one-way delay: 51.882 ms
Loss rate: 0.59%
-- Flow 3:
Average throughput: 113.58 Mbit/s
95th percentile per-packet one-way delay: 50.753 ms
Loss rate: 1.04%
Run 2: Report of PCC-Vivace — Data Link
Run 3: Statistics of PCC-Vivace

Start at: 2018-04-18 11:00:04
End at: 2018-04-18 11:00:34

# Below is generated by plot.py at 2018-04-18 17:12:33
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 466.24 Mbit/s
  95th percentile per-packet one-way delay: 85.712 ms
  Loss rate: 0.49%
-- Flow 1:
  Average throughput: 305.27 Mbit/s
  95th percentile per-packet one-way delay: 93.229 ms
  Loss rate: 0.37%
-- Flow 2:
  Average throughput: 235.39 Mbit/s
  95th percentile per-packet one-way delay: 53.869 ms
  Loss rate: 0.67%
-- Flow 3:
  Average throughput: 14.87 Mbit/s
  95th percentile per-packet one-way delay: 53.331 ms
  Loss rate: 2.39%
Run 3: Report of PCC-Vivace — Data Link

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

- Flow 1 ingress (mean 305.38 Mbps)
- Flow 1 egress (mean 305.27 Mbps)
- Flow 2 ingress (mean 235.74 Mbps)
- Flow 2 egress (mean 235.59 Mbps)
- Flow 3 ingress (mean 15.08 Mbps)
- Flow 3 egress (mean 14.87 Mbps)

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

- Flow 1 (95th percentile 93.23 ms)
- Flow 2 (95th percentile 53.87 ms)
- Flow 3 (95th percentile 53.33 ms)
Run 4: Statistics of PCC-Vivace

Start at: 2018-04-18 11:15:26
End at: 2018-04-18 11:15:56

# Below is generated by plot.py at 2018-04-18 17:12:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 425.48 Mbit/s
95th percentile per-packet one-way delay: 52.804 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 256.94 Mbit/s
95th percentile per-packet one-way delay: 53.705 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 228.00 Mbit/s
95th percentile per-packet one-way delay: 51.797 ms
Loss rate: 0.65%
-- Flow 3:
Average throughput: 52.77 Mbit/s
95th percentile per-packet one-way delay: 50.588 ms
Loss rate: 2.11%
Run 4: Report of PCC-Vivace — Data Link

![Graph showing throughput and per-packet one-way delay over time]
Run 5: Statistics of PCC-Vivace

Start at: 2018-04-18 11:30:32
End at: 2018-04-18 11:31:02

# Below is generated by plot.py at 2018-04-18 17:12:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 426.03 Mbit/s
95th percentile per-packet one-way delay: 57.041 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 219.95 Mbit/s
95th percentile per-packet one-way delay: 52.950 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 236.17 Mbit/s
95th percentile per-packet one-way delay: 60.219 ms
Loss rate: 0.65%
-- Flow 3:
Average throughput: 152.27 Mbit/s
95th percentile per-packet one-way delay: 54.864 ms
Loss rate: 1.12%
Run 5: Report of PCC-Vivace — Data Link
Run 6: Statistics of PCC-Vivace

Start at: 2018-04-18 11:46:12
End at: 2018-04-18 11:46:42

# Below is generated by plot.py at 2018-04-18 17:12:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 440.57 Mbit/s
95th percentile per-packet one-way delay: 92.546 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 283.89 Mbit/s
95th percentile per-packet one-way delay: 125.010 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 211.21 Mbit/s
95th percentile per-packet one-way delay: 50.780 ms
Loss rate: 0.50%
-- Flow 3:
Average throughput: 50.68 Mbit/s
95th percentile per-packet one-way delay: 50.405 ms
Loss rate: 2.02%
Run 7: Statistics of PCC-Vivace

Start at: 2018-04-18 12:01:12
End at: 2018-04-18 12:01:42

# Below is generated by plot.py at 2018-04-18 17:13:19
# Datalink statistics
# Total of 3 flows:
Average throughput: 418.20 Mbit/s
95th percentile per-packet one-way delay: 54.919 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 250.64 Mbit/s
95th percentile per-packet one-way delay: 53.460 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 240.72 Mbit/s
95th percentile per-packet one-way delay: 59.543 ms
Loss rate: 0.54%
-- Flow 3:
Average throughput: 24.10 Mbit/s
95th percentile per-packet one-way delay: 54.467 ms
Loss rate: 1.83%
Run 7: Report of PCC-Vivace — Data Link
Run 8: Statistics of PCC-Vivace

End at: 2018-04-18 12:16:43

# Below is generated by plot.py at 2018-04-18 17:13:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 461.48 Mbit/s
95th percentile per-packet one-way delay: 54.369 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 264.87 Mbit/s
95th percentile per-packet one-way delay: 51.433 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 217.80 Mbit/s
95th percentile per-packet one-way delay: 55.120 ms
Loss rate: 0.48%
-- Flow 3:
Average throughput: 159.57 Mbit/s
95th percentile per-packet one-way delay: 55.276 ms
Loss rate: 1.30%
Run 8: Report of PCC-Vivace — Data Link

![Graph showing data link performance metrics for Flow 1, Flow 2, and Flow 3.]
Run 9: Statistics of PCC-Vivace

Start at: 2018-04-18 12:31:34
End at: 2018-04-18 12:32:04

# Below is generated by plot.py at 2018-04-18 17:14:09
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 469.70 Mbit/s
  95th percentile per-packet one-way delay: 54.656 ms
  Loss rate: 0.49%
-- Flow 1:
  Average throughput: 279.22 Mbit/s
  95th percentile per-packet one-way delay: 54.879 ms
  Loss rate: 0.28%
-- Flow 2:
  Average throughput: 201.84 Mbit/s
  95th percentile per-packet one-way delay: 51.116 ms
  Loss rate: 0.54%
-- Flow 3:
  Average throughput: 174.06 Mbit/s
  95th percentile per-packet one-way delay: 55.309 ms
  Loss rate: 1.38%
Run 9: Report of PCC-Vivace — Data Link

![Throughput Graph](image1)

![Per-packet one way delay Graph](image2)
Run 10: Statistics of PCC-Vivace

Start at: 2018-04-18 12:46:56
End at: 2018-04-18 12:47:26

# Below is generated by plot.py at 2018-04-18 17:14:15
# Datalink statistics

-- Total of 3 flows:
Average throughput: 445.92 Mbit/s
95th percentile per-packet one-way delay: 51.561 ms
Loss rate: 0.50%

-- Flow 1:
Average throughput: 243.04 Mbit/s
95th percentile per-packet one-way delay: 51.012 ms
Loss rate: 0.36%

-- Flow 2:
Average throughput: 232.21 Mbit/s
95th percentile per-packet one-way delay: 52.352 ms
Loss rate: 0.55%

-- Flow 3:
Average throughput: 149.55 Mbit/s
95th percentile per-packet one-way delay: 51.719 ms
Loss rate: 1.01%
Run 10: Report of PCC-Vivace — Data Link
Run 1: Statistics of PCC-Expr

Start at: 2018-04-18 10:24:26
End at: 2018-04-18 10:24:56
Run 1: Report of PCC-Expr — Data Link

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Run 2: Statistics of PCC-Expr

Start at: 2018-04-18 10:39:46
End at: 2018-04-18 10:40:16
Run 2: Report of PCC-Expr — Data Link

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Run 3: Statistics of PCC-Expr

Run 3: Report of PCC-Expr — Data Link

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Run 4: Statistics of PCC-Expr

Start at: 2018-04-18 11:10:32
End at: 2018-04-18 11:11:02
Run 4: Report of PCC-Expr — Data Link

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Run 5: Statistics of PCC-Expr

Start at: 2018-04-18 11:25:43
End at: 2018-04-18 11:26:13
Run 5: Report of PCC-Expr — Data Link

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Run 6: Statistics of PCC-Expr

Start at: 2018-04-18 11:41:24
End at: 2018-04-18 11:41:54
Run 6: Report of PCC-Expr — Data Link

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Run 7: Statistics of PCC-Expr

Start at: 2018-04-18 11:56:23
End at: 2018-04-18 11:56:53
Run 7: Report of PCC-Expr — Data Link

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Run 8: Statistics of PCC-Expr

Start at: 2018-04-18 12:11:27
End at: 2018-04-18 12:11:57
Run 8: Report of PCC-Expr — Data Link

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Run 9: Statistics of PCC-Expr

Start at: 2018-04-18 12:26:45
End at: 2018-04-18 12:27:15
Run 9: Report of PCC-Expr — Data Link

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Run 10: Statistics of PCC-Expr

Start at: 2018-04-18 12:42:12
End at: 2018-04-18 12:42:42
Run 10: Report of PCC-Expr — Data Link

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