Pantheon Report

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

Git summary:
branch: master @ f12c42a2c63fdd9a862eefa0468859bf379b6623
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
M datagrump/sender.cc
third_party/fillp @ 828bbf95fd4941149b5ccec90f281d1c69ae1a5c6
third_party/genericCC @ 9249eaa3238475c4d8cca1443d28df70bff6c4a2
third_party/indigo @ a9b2060d39e4da2e8987e893e3eca2a6c7cd0ab9
third_party/indigo-1-layer-128-unit @ 3ae9e4ef4230db7484501f82ec8b377695f2f66d
third_party/indigo-1-layer-32-unit @ 2601c92e4aa9d58d38dc4dfe5e0ecdbf90c077e64d
third_party/indigo-1-layer-32-unit-no-calib @ 1f3a7f75b41135ed5b540c0fd3505935928e2a5f
third_party/indigo-no-calib @ 7224f2202e8a044d8306fa0983ad84360c53d89
third_party/koho_cc @ f0f2e693303ae82e808e6928eac4f1083a6681
M datagrump/sender.cc
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ fb1053193c2861da659ba9013db26744ccfcf993
third_party/pcc @ 1af695bfa0d66d18b263c091a55f6c872b4981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143be978f3c4f22
third_party/scream @ c3370fd7bd17265a79aeab34e4016ad23f5965885
third_party/sourdough @ f1a14bffe749737437f61baeeeb30b267cde681
third_party/sprout @ 6f2efe6e088d91066a9f023df375eee265089ce
M src/examples/cellsim.cc
M src/examples/sproutbtk.cc
M src/network/sproutcomm.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
M src/verus.hpp
M tools/plot.py
third_party/vivace @ 7a4ba531e75b4af66f5c4580192120401784ce3
third_party/webrtc @ a488197dd041ace68a42849b2540ad834825f42
test from GCE London 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)
<table>
<thead>
<tr>
<th>scheme</th>
<th># runs</th>
<th>mean avg tput (Mbit/s)</th>
<th>mean 95th-%ile delay (ms)</th>
<th>mean loss rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>flow 1</td>
<td>flow 2</td>
<td>flow 3</td>
</tr>
<tr>
<td>TCP BBR</td>
<td>10</td>
<td>72.97</td>
<td>70.63</td>
<td>63.69</td>
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<td>TCP Cubic</td>
<td>10</td>
<td>77.57</td>
<td>56.95</td>
<td>46.17</td>
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<td>LEDBAT</td>
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<td>4.52</td>
<td>2.54</td>
<td>1.13</td>
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<td>490.87</td>
<td>100.33</td>
<td>52.51</td>
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<td>QUIC Cubic</td>
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<td>54.25</td>
<td>61.07</td>
<td>48.46</td>
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<td>WebRTC media</td>
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<td>1.29</td>
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<td>0.41</td>
<td>0.40</td>
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<td>81.30</td>
<td>86.42</td>
<td>89.34</td>
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<td>49.52</td>
<td>39.54</td>
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<td>112.23</td>
<td>111.84</td>
<td>81.36</td>
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<td>Copa</td>
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<td>62.27</td>
<td>65.78</td>
<td>65.54</td>
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<td>FillP</td>
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<td>812.23</td>
<td>774.48</td>
<td>619.33</td>
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<td>Indigo-1-32</td>
<td>10</td>
<td>151.51</td>
<td>139.88</td>
<td>139.62</td>
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<tr>
<td>Vivace-latency</td>
<td>10</td>
<td>295.39</td>
<td>234.03</td>
<td>131.44</td>
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<td>Vivace-loss</td>
<td>10</td>
<td>255.71</td>
<td>249.58</td>
<td>156.57</td>
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<td>Vivace-LTE</td>
<td>10</td>
<td>332.82</td>
<td>255.59</td>
<td>162.69</td>
</tr>
</tbody>
</table>
Run 1: Statistics of TCP BBR

Start at: 2018-03-07 13:34:36
End at: 2018-03-07 13:35:06

# Below is generated by plot.py at 2018-03-07 20:30:03
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 141.49 Mbit/s
  95th percentile per-packet one-way delay: 136.747 ms
  Loss rate: 1.57%
-- Flow 1:
  Average throughput: 73.90 Mbit/s
  95th percentile per-packet one-way delay: 136.729 ms
  Loss rate: 1.09%
-- Flow 2:
  Average throughput: 70.44 Mbit/s
  95th percentile per-packet one-way delay: 136.750 ms
  Loss rate: 1.53%
-- Flow 3:
  Average throughput: 64.12 Mbit/s
  95th percentile per-packet one-way delay: 136.794 ms
  Loss rate: 3.35%
Run 1: Report of TCP BBR — Data Link
Run 2: Statistics of TCP BBR


# Below is generated by plot.py at 2018-03-07 20:30:03
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 141.43 Mbit/s
  95th percentile per-packet one-way delay: 136.615 ms
  Loss rate: 1.59%
-- Flow 1:
  Average throughput: 74.17 Mbit/s
  95th percentile per-packet one-way delay: 136.609 ms
  Loss rate: 0.96%
-- Flow 2:
  Average throughput: 70.58 Mbit/s
  95th percentile per-packet one-way delay: 136.606 ms
  Loss rate: 1.66%
-- Flow 3:
  Average throughput: 63.07 Mbit/s
  95th percentile per-packet one-way delay: 136.655 ms
  Loss rate: 3.63%
Run 2: Report of TCP BBR — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 74.21 Mbit/s)
Flow 2 ingress (mean 70.73 Mbit/s)
Flow 3 ingress (mean 63.65 Mbit/s)
Flow 1 egress (mean 74.17 Mbit/s)
Flow 2 egress (mean 70.55 Mbit/s)
Flow 3 egress (mean 63.07 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 136.61 ms)
Flow 2 (95th percentile 136.61 ms)
Flow 3 (95th percentile 136.66 ms)
Run 3: Statistics of TCP BBR

Start at: 2018-03-07 14:15:50
End at: 2018-03-07 14:16:20

# Below is generated by plot.py at 2018-03-07 20:30:03
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 140.72 Mbit/s
  95th percentile per-packet one-way delay: 136.603 ms
  Loss rate: 1.50%
-- Flow 1:
  Average throughput: 73.20 Mbit/s
  95th percentile per-packet one-way delay: 136.606 ms
  Loss rate: 0.95%
-- Flow 2:
  Average throughput: 70.41 Mbit/s
  95th percentile per-packet one-way delay: 136.597 ms
  Loss rate: 1.52%
-- Flow 3:
  Average throughput: 64.11 Mbit/s
  95th percentile per-packet one-way delay: 136.606 ms
  Loss rate: 3.32%
Run 3: Report of TCP BBR — Data Link

Throughput (Mb/s)

Time (s)

Throughput (Mb/s)

Time (s)

Flow 1 ingress (mean 73.23 Mb/s)  Flow 1 egress (mean 73.20 Mb/s)
Flow 2 ingress (mean 70.50 Mb/s)  Flow 2 egress (mean 70.41 Mb/s)
Flow 3 ingress (mean 64.54 Mb/s)  Flow 3 egress (mean 64.11 Mb/s)

Flow 1 (95th percentile 136.61 ms)  Flow 2 (95th percentile 136.60 ms)  Flow 3 (95th percentile 136.61 ms)
Run 4: Statistics of TCP BBR

Start at: 2018-03-07 14:36:01
End at: 2018-03-07 14:36:31

# Below is generated by plot.py at 2018-03-07 20:30:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 138.51 Mbit/s
95th percentile per-packet one-way delay: 136.676 ms
Loss rate: 1.55%
-- Flow 1:
Average throughput: 71.39 Mbit/s
95th percentile per-packet one-way delay: 136.667 ms
Loss rate: 1.02%
-- Flow 2:
Average throughput: 69.85 Mbit/s
95th percentile per-packet one-way delay: 136.669 ms
Loss rate: 1.50%
-- Flow 3:
Average throughput: 64.04 Mbit/s
95th percentile per-packet one-way delay: 136.718 ms
Loss rate: 3.41%
Run 4: Report of TCP BBR — Data Link

![Graph 1: Throughput (Mbps)]

- Flow 1 ingress (mean 71.45 Mbps)
- Flow 1 egress (mean 71.39 Mbps)
- Flow 2 ingress (mean 69.94 Mbps)
- Flow 2 egress (mean 69.85 Mbps)
- Flow 3 ingress (mean 64.48 Mbps)
- Flow 3 egress (mean 64.04 Mbps)

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

- Flow 1 (95th percentile 136.67 ms)
- Flow 2 (95th percentile 136.67 ms)
- Flow 3 (95th percentile 136.72 ms)
Run 5: Statistics of TCP BBR

Start at: 2018-03-07 14:56:20
End at: 2018-03-07 14:56:50

# Below is generated by plot.py at 2018-03-07 20:30:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 141.06 Mbit/s
95th percentile per-packet one-way delay: 135.873 ms
Loss rate: 1.55%
-- Flow 1:
Average throughput: 73.87 Mbit/s
95th percentile per-packet one-way delay: 135.874 ms
Loss rate: 1.02%
-- Flow 2:
Average throughput: 70.09 Mbit/s
95th percentile per-packet one-way delay: 135.868 ms
Loss rate: 1.56%
-- Flow 3:
Average throughput: 63.78 Mbit/s
95th percentile per-packet one-way delay: 135.879 ms
Loss rate: 3.40%
Run 5: Report of TCP BBR — Data Link
Run 6: Statistics of TCP BBR

Start at: 2018-03-07 15:16:59
End at: 2018-03-07 15:17:29

# Below is generated by plot.py at 2018-03-07 20:30:03
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 140.52 Mbit/s
  95th percentile per-packet one-way delay: 135.857 ms
  Loss rate: 1.51%
-- Flow 1:
  Average throughput: 73.55 Mbit/s
  95th percentile per-packet one-way delay: 135.831 ms
  Loss rate: 0.98%
-- Flow 2:
  Average throughput: 70.06 Mbit/s
  95th percentile per-packet one-way delay: 135.873 ms
  Loss rate: 1.54%
-- Flow 3:
  Average throughput: 63.05 Mbit/s
  95th percentile per-packet one-way delay: 135.893 ms
  Loss rate: 3.32%
Run 7: Statistics of TCP BBR

Start at: 2018-03-07 15:37:42
End at: 2018-03-07 15:38:12

# Below is generated by plot.py at 2018-03-07 20:30:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 140.39 Mbit/s
95th percentile per-packet one-way delay: 135.873 ms
Loss rate: 1.56%
-- Flow 1:
Average throughput: 72.74 Mbit/s
95th percentile per-packet one-way delay: 135.855 ms
Loss rate: 0.96%
-- Flow 2:
Average throughput: 70.42 Mbit/s
95th percentile per-packet one-way delay: 135.879 ms
Loss rate: 1.51%
-- Flow 3:
Average throughput: 64.46 Mbit/s
95th percentile per-packet one-way delay: 135.920 ms
Loss rate: 3.67%
Run 7: Report of TCP BBR — Data Link

[Graph showing throughput and per-packet one-way delay over time for three flows, with labels for each flow's ingress and egress throughput and delay.]
Run 8: Statistics of TCP BBR

Start at: 2018-03-07 15:58:17
End at: 2018-03-07 15:58:47

# Below is generated by plot.py at 2018-03-07 20:30:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 140.60 Mbit/s
95th percentile per-packet one-way delay: 136.479 ms
Loss rate: 1.60%
-- Flow 1:
Average throughput: 72.27 Mbit/s
95th percentile per-packet one-way delay: 136.467 ms
Loss rate: 1.08%
-- Flow 2:
Average throughput: 71.86 Mbit/s
95th percentile per-packet one-way delay: 136.441 ms
Loss rate: 1.59%
-- Flow 3:
Average throughput: 63.83 Mbit/s
95th percentile per-packet one-way delay: 136.569 ms
Loss rate: 3.34%
Run 8: Report of TCP BBR — Data Link

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

Start at: 2018-03-07 16:18:20
End at: 2018-03-07 16:18:50

# Below is generated by plot.py at 2018-03-07 20:32:09
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 138.37 Mbit/s
  95th percentile per-packet one-way delay: 136.476 ms
  Loss rate: 1.53%
-- Flow 1:
  Average throughput: 71.34 Mbit/s
  95th percentile per-packet one-way delay: 136.453 ms
  Loss rate: 1.00%
-- Flow 2:
  Average throughput: 70.53 Mbit/s
  95th percentile per-packet one-way delay: 136.480 ms
  Loss rate: 1.52%
-- Flow 3:
  Average throughput: 62.42 Mbit/s
  95th percentile per-packet one-way delay: 136.538 ms
  Loss rate: 3.36%
Run 9: Report of TCP BBR — Data Link

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

- Flow 1 ingress (mean 71.42 Mbit/s)
- Flow 1 egress (mean 71.34 Mbit/s)
- Flow 2 ingress (mean 70.65 Mbit/s)
- Flow 2 egress (mean 70.53 Mbit/s)
- Flow 3 ingress (mean 62.82 Mbit/s)
- Flow 3 egress (mean 62.42 Mbit/s)
Run 10: Statistics of TCP BBR

Start at: 2018-03-07 16:38:30
End at: 2018-03-07 16:39:00

# Below is generated by plot.py at 2018-03-07 20:32:15
# Datalink statistics
-- Total of 3 flows:
   Average throughput: 141.83 Mbit/s
   95th percentile per-packet one-way delay: 136.389 ms
   Loss rate: 1.50%
-- Flow 1:
   Average throughput: 73.27 Mbit/s
   95th percentile per-packet one-way delay: 136.365 ms
   Loss rate: 0.97%
-- Flow 2:
   Average throughput: 72.05 Mbit/s
   95th percentile per-packet one-way delay: 136.391 ms
   Loss rate: 1.49%
-- Flow 3:
   Average throughput: 64.02 Mbit/s
   95th percentile per-packet one-way delay: 136.458 ms
   Loss rate: 3.33%
Run 1: Statistics of TCP Cubic

End at: 2018-03-07 13:49:08

# Below is generated by plot.py at 2018-03-07 20:32:15
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 143.87 Mbit/s
  95th percentile per-packet one-way delay: 148.386 ms
  Loss rate: 1.14%
-- Flow 1:
  Average throughput: 79.50 Mbit/s
  95th percentile per-packet one-way delay: 145.481 ms
  Loss rate: 0.56%
-- Flow 2:
  Average throughput: 79.92 Mbit/s
  95th percentile per-packet one-way delay: 147.610 ms
  Loss rate: 1.57%
-- Flow 3:
  Average throughput: 36.03 Mbit/s
  95th percentile per-packet one-way delay: 156.301 ms
  Loss rate: 3.05%
Run 1: Report of TCP Cubic — Data Link
Run 2: Statistics of TCP Cubic

Start at: 2018-03-07 14:09:14
End at: 2018-03-07 14:09:44

# Below is generated by plot.py at 2018-03-07 20:32:23
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 150.08 Mbit/s
  95th percentile per-packet one-way delay: 144.921 ms
  Loss rate: 1.60%
-- Flow 1:
  Average throughput: 82.94 Mbit/s
  95th percentile per-packet one-way delay: 144.646 ms
  Loss rate: 1.02%
-- Flow 2:
  Average throughput: 67.36 Mbit/s
  95th percentile per-packet one-way delay: 144.224 ms
  Loss rate: 1.66%
-- Flow 3:
  Average throughput: 70.62 Mbit/s
  95th percentile per-packet one-way delay: 146.738 ms
  Loss rate: 3.58%
Run 2: Report of TCP Cubic — Data Link
Run 3: Statistics of TCP Cubic

Start at: 2018-03-07 14:29:38
End at: 2018-03-07 14:30:08

# Below is generated by plot.py at 2018-03-07 20:32:25
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 151.41 Mbit/s
  95th percentile per-packet one-way delay: 144.209 ms
  Loss rate: 1.59%
-- Flow 1:
  Average throughput: 83.84 Mbit/s
  95th percentile per-packet one-way delay: 144.184 ms
  Loss rate: 0.99%
-- Flow 2:
  Average throughput: 67.47 Mbit/s
  95th percentile per-packet one-way delay: 143.116 ms
  Loss rate: 1.72%
-- Flow 3:
  Average throughput: 71.11 Mbit/s
  95th percentile per-packet one-way delay: 146.320 ms
  Loss rate: 3.45%
Run 3: Report of TCP Cubic — Data Link

![Throughput Graph](image)

![Delay Graph](image)

Flow 1 ingress (mean 83.91 Mbit/s)  Flow 1 egress (mean 83.84 Mbit/s)
Flow 2 ingress (mean 67.57 Mbit/s)  Flow 2 egress (mean 67.47 Mbit/s)
Flow 3 ingress (mean 71.63 Mbit/s)  Flow 3 egress (mean 71.11 Mbit/s)

Flow 1 (95th percentile 144.18 ms)  Flow 2 (95th percentile 143.12 ms)  Flow 3 (95th percentile 146.32 ms)
Run 4: Statistics of TCP Cubic

Start at: 2018-03-07 14:49:44
End at: 2018-03-07 14:50:14

# Below is generated by plot.py at 2018-03-07 20:32:38
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 158.87 Mbit/s
  95th percentile per-packet one-way delay: 143.132 ms
  Loss rate: 1.52%
-- Flow 1:
  Average throughput: 82.40 Mbit/s
  95th percentile per-packet one-way delay: 142.537 ms
  Loss rate: 0.99%
-- Flow 2:
  Average throughput: 81.14 Mbit/s
  95th percentile per-packet one-way delay: 143.819 ms
  Loss rate: 1.54%
-- Flow 3:
  Average throughput: 71.82 Mbit/s
  95th percentile per-packet one-way delay: 142.042 ms
  Loss rate: 3.31%
Run 4: Report of TCP Cubic — Data Link

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

- Flow 1 ingress (mean 82.47 Mbps)
- Flow 1 egress (mean 82.40 Mbps)
- Flow 2 ingress (mean 81.26 Mbps)
- Flow 2 egress (mean 81.14 Mbps)
- Flow 3 ingress (mean 72.26 Mbps)
- Flow 3 egress (mean 71.82 Mbps)

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

- Flow 1 (95th percentile 142.54 ms)
- Flow 2 (95th percentile 143.82 ms)
- Flow 3 (95th percentile 142.04 ms)
Run 5: Statistics of TCP Cubic

Start at: 2018-03-07 15:10:25
End at: 2018-03-07 15:10:55

# Below is generated by plot.py at 2018-03-07 20:32:38
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 147.77 Mbit/s
  95th percentile per-packet one-way delay: 144.593 ms
  Loss rate: 1.38%
-- Flow 1:
  Average throughput: 83.85 Mbit/s
  95th percentile per-packet one-way delay: 143.980 ms
  Loss rate: 0.99%
-- Flow 2:
  Average throughput: 80.56 Mbit/s
  95th percentile per-packet one-way delay: 144.283 ms
  Loss rate: 1.55%
-- Flow 3:
  Average throughput: 34.08 Mbit/s
  95th percentile per-packet one-way delay: 151.029 ms
  Loss rate: 3.47%
Run 5: Report of TCP Cubic — Data Link
Run 6: Statistics of TCP Cubic

Start at: 2018-03-07 15:31:14
End at: 2018-03-07 15:31:44

# Below is generated by plot.py at 2018-03-07 20:32:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 136.79 Mbit/s
95th percentile per-packet one-way delay: 145.629 ms
Loss rate: 1.62%
-- Flow 1:
Average throughput: 83.63 Mbit/s
95th percentile per-packet one-way delay: 144.814 ms
Loss rate: 0.98%
-- Flow 2:
Average throughput: 45.92 Mbit/s
95th percentile per-packet one-way delay: 146.987 ms
Loss rate: 1.72%
-- Flow 3:
Average throughput: 69.96 Mbit/s
95th percentile per-packet one-way delay: 150.131 ms
Loss rate: 3.76%
Run 6: Report of TCP Cubic — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 83.70 Mbps)
  - Flow 1 egress (mean 83.63 Mbps)
  - Flow 2 ingress (mean 46.64 Mbps)
  - Flow 2 egress (mean 45.92 Mbps)
  - Flow 3 ingress (mean 70.71 Mbps)
  - Flow 3 egress (mean 69.96 Mbps)

- **Per-packet one-way delay (ms):**
  - Flow 1 (95th percentile 144.81 ms)
  - Flow 2 (95th percentile 146.99 ms)
  - Flow 3 (95th percentile 150.13 ms)
Run 7: Statistics of TCP Cubic

Start at: 2018-03-07 15:51:45
End at: 2018-03-07 15:52:15

# Below is generated by plot.py at 2018-03-07 20:33:59
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 114.27 Mbit/s
  95th percentile per-packet one-way delay: 144.268 ms
  Loss rate: 1.23%
-- Flow 1:
  Average throughput: 83.77 Mbit/s
  95th percentile per-packet one-way delay: 144.427 ms
  Loss rate: 0.99%
-- Flow 2:
  Average throughput: 45.35 Mbit/s
  95th percentile per-packet one-way delay: 141.745 ms
  Loss rate: 1.73%
-- Flow 3:
  Average throughput: 1.46 Mbit/s
  95th percentile per-packet one-way delay: 141.706 ms
  Loss rate: 10.51%
Run 7: Report of TCP Cubic — Data Link

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

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

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Run 8: Statistics of TCP Cubic

Start at: 2018-03-07 16:11:50
End at: 2018-03-07 16:12:20

# Below is generated by plot.py at 2018-03-07 20:33:59
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 105.37 Mbit/s
  95th percentile per-packet one-way delay: 148.345 ms
  Loss rate: 1.67%
-- Flow 1:
  Average throughput: 55.73 Mbit/s
  95th percentile per-packet one-way delay: 148.054 ms
  Loss rate: 0.81%
-- Flow 2:
  Average throughput: 40.63 Mbit/s
  95th percentile per-packet one-way delay: 148.401 ms
  Loss rate: 1.79%
-- Flow 3:
  Average throughput: 70.11 Mbit/s
  95th percentile per-packet one-way delay: 148.810 ms
  Loss rate: 3.59%
Run 8: Report of TCP Cubic — Data Link

[Graph showing throughput over time for different flows with annotations for each flow's ingress and egress mean throughput.]

[Graph showing per-packet one-way delay over time for different flows with annotations for each flow's 95th percentile delay.]
Run 9: Statistics of TCP Cubic

Start at: 2018-03-07 16:32:01
End at: 2018-03-07 16:32:31

# Below is generated by plot.py at 2018-03-07 20:33:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 104.76 Mbit/s
95th percentile per-packet one-way delay: 141.638 ms
Loss rate: 1.26%
-- Flow 1:
Average throughput: 73.12 Mbit/s
95th percentile per-packet one-way delay: 141.646 ms
Loss rate: 1.04%
-- Flow 2:
Average throughput: 47.37 Mbit/s
95th percentile per-packet one-way delay: 141.593 ms
Loss rate: 1.68%
-- Flow 3:
Average throughput: 0.84 Mbit/s
95th percentile per-packet one-way delay: 140.823 ms
Loss rate: 12.68%
Run 9: Report of TCP Cubic — Data Link
Run 10: Statistics of TCP Cubic

Start at: 2018-03-07 16:52:34
End at: 2018-03-07 16:53:04

# Below is generated by plot.py at 2018-03-07 20:33:59
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 87.54 Mbit/s
  95th percentile per-packet one-way delay: 141.727 ms
  Loss rate: 1.79%
  -- Flow 1:
  Average throughput: 66.90 Mbit/s
  95th percentile per-packet one-way delay: 142.046 ms
  Loss rate: 0.79%
  -- Flow 2:
  Average throughput: 13.73 Mbit/s
  95th percentile per-packet one-way delay: 140.658 ms
  Loss rate: 6.57%
  -- Flow 3:
  Average throughput: 35.65 Mbit/s
  95th percentile per-packet one-way delay: 141.410 ms
  Loss rate: 3.52%
Run 10: Report of TCP Cubic — Data Link

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

- **Flow 1 ingress (mean 66.82 Mbit/s)**
- **Flow 1 egress (mean 66.90 Mbit/s)**
- **Flow 2 ingress (mean 14.49 Mbit/s)**
- **Flow 2 egress (mean 13.73 Mbit/s)**
- **Flow 3 ingress (mean 35.94 Mbit/s)**
- **Flow 3 egress (mean 35.65 Mbit/s)**

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

- **Flow 1 (95th percentile 142.05 ms)**
- **Flow 2 (95th percentile 140.66 ms)**
- **Flow 3 (95th percentile 141.41 ms)**
Run 1: Statistics of LEDBAT

Start at: 2018-03-07 13:29:54
End at: 2018-03-07 13:30:24

# Below is generated by plot.py at 2018-03-07 20:33:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 6.80 Mbit/s
95th percentile per-packet one-way delay: 137.389 ms
Loss rate: 2.16%
-- Flow 1:
Average throughput: 4.80 Mbit/s
95th percentile per-packet one-way delay: 137.433 ms
Loss rate: 1.83%
-- Flow 2:
Average throughput: 2.88 Mbit/s
95th percentile per-packet one-way delay: 137.218 ms
Loss rate: 2.89%
-- Flow 3:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 136.956 ms
Loss rate: 3.52%
Run 1: Report of LEDBAT — Data Link

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

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

Flow 1 ingress (mean 4.84 Mbit/s)  
Flow 1 egress (mean 4.80 Mbit/s)  
Flow 2 ingress (mean 2.92 Mbit/s)  
Flow 2 egress (mean 2.88 Mbit/s)  
Flow 3 ingress (mean 0.36 Mbit/s)  
Flow 3 egress (mean 0.36 Mbit/s)
Run 2: Statistics of LEDBAT

Start at: 2018-03-07 13:50:26
End at: 2018-03-07 13:50:56

# Below is generated by plot.py at 2018-03-07 20:33:59
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 7.13 Mbit/s
  95th percentile per-packet one-way delay: 137.389 ms
  Loss rate: 2.39%
-- Flow 1:
  Average throughput: 4.59 Mbit/s
  95th percentile per-packet one-way delay: 137.402 ms
  Loss rate: 1.87%
-- Flow 2:
  Average throughput: 3.10 Mbit/s
  95th percentile per-packet one-way delay: 137.000 ms
  Loss rate: 2.78%
-- Flow 3:
  Average throughput: 1.51 Mbit/s
  95th percentile per-packet one-way delay: 137.783 ms
  Loss rate: 5.58%
Run 2: Report of LEDBAT — Data Link
Run 3: Statistics of LEDBAT

Start at: 2018-03-07 14:11:02
End at: 2018-03-07 14:11:32

# Below is generated by plot.py at 2018-03-07 20:33:59
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 7.20 Mbit/s
  95th percentile per-packet one-way delay: 137.125 ms
  Loss rate: 2.37%
  -- Flow 1:
  Average throughput: 4.79 Mbit/s
  95th percentile per-packet one-way delay: 137.176 ms
  Loss rate: 1.83%
  -- Flow 2:
  Average throughput: 2.95 Mbit/s
  95th percentile per-packet one-way delay: 136.976 ms
  Loss rate: 2.85%
  -- Flow 3:
  Average throughput: 1.51 Mbit/s
  95th percentile per-packet one-way delay: 136.779 ms
  Loss rate: 5.58%
Run 3: Report of LEDBAT — Data Link

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

- **Throughput (Mbps)**
  - Flow 1 ingress (mean 4.83 Mbps/s)
  - Flow 1 egress (mean 4.79 Mbps/s)
  - Flow 2 ingress (mean 2.99 Mbps/s)
  - Flow 2 egress (mean 2.95 Mbps/s)
  - Flow 3 ingress (mean 1.35 Mbps/s)
  - Flow 3 egress (mean 1.31 Mbps/s)

- **Per-packet one-way delay (ms)**
  - Flow 1 (95th percentile 137.18 ms)
  - Flow 2 (95th percentile 136.98 ms)
  - Flow 3 (95th percentile 136.78 ms)
Run 4: Statistics of LEDBAT

Start at: 2018-03-07 14:31:26
End at: 2018-03-07 14:31:56

# Below is generated by plot.py at 2018-03-07 20:33:59
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 6.85 Mbit/s
  95th percentile per-packet one-way delay: 137.169 ms
  Loss rate: 2.41%
-- Flow 1:
  Average throughput: 4.70 Mbit/s
  95th percentile per-packet one-way delay: 137.175 ms
  Loss rate: 1.84%
-- Flow 2:
  Average throughput: 2.55 Mbit/s
  95th percentile per-packet one-way delay: 137.175 ms
  Loss rate: 3.04%
-- Flow 3:
  Average throughput: 1.52 Mbit/s
  95th percentile per-packet one-way delay: 137.084 ms
  Loss rate: 5.55%
Run 4: Report of LEDBAT — Data Link
Run 5: Statistics of LEDBAT

Start at: 2018-03-07 14:51:33
End at: 2018-03-07 14:52:03

# Below is generated by plot.py at 2018-03-07 20:33:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 5.87 Mbit/s
95th percentile per-packet one-way delay: 136.665 ms
Loss rate: 2.63%
-- Flow 1:
Average throughput: 3.85 Mbit/s
95th percentile per-packet one-way delay: 136.650 ms
Loss rate: 2.04%
-- Flow 2:
Average throughput: 2.42 Mbit/s
95th percentile per-packet one-way delay: 136.768 ms
Loss rate: 3.10%
-- Flow 3:
Average throughput: 1.36 Mbit/s
95th percentile per-packet one-way delay: 136.228 ms
Loss rate: 5.84%
Run 5: Report of LEDBAT — Data Link

![Graph showing throughput and packet round-trip delay for different flows.]
Run 6: Statistics of LEDBAT

Start at: 2018-03-07 15:12:13
End at: 2018-03-07 15:12:43

# Below is generated by plot.py at 2018-03-07 20:33:59
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 4.61 Mbit/s
  95th percentile per-packet one-way delay: 136.268 ms
  Loss rate: 1.93%
-- Flow 1:
  Average throughput: 4.37 Mbit/s
  95th percentile per-packet one-way delay: 136.273 ms
  Loss rate: 1.92%
-- Flow 2:
  Average throughput: 0.28 Mbit/s
  95th percentile per-packet one-way delay: 136.144 ms
  Loss rate: 1.64%
-- Flow 3:
  Average throughput: 0.23 Mbit/s
  95th percentile per-packet one-way delay: 135.829 ms
  Loss rate: 3.00%
Run 6: Report of LEDBAT — Data Link
Run 7: Statistics of LEDBAT

Start at: 2018-03-07 15:33:01
End at: 2018-03-07 15:33:31

# Below is generated by plot.py at 2018-03-07 20:33:59
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 6.48 Mbit/s
  95th percentile per-packet one-way delay: 136.454 ms
  Loss rate: 2.32%
-- Flow 1:
  Average throughput: 4.63 Mbit/s
  95th percentile per-packet one-way delay: 136.489 ms
  Loss rate: 1.86%
-- Flow 2:
  Average throughput: 2.60 Mbit/s
  95th percentile per-packet one-way delay: 136.325 ms
  Loss rate: 3.02%
-- Flow 3:
  Average throughput: 0.47 Mbit/s
  95th percentile per-packet one-way delay: 136.024 ms
  Loss rate: 8.02%
Run 7: Report of LEDBAT — Data Link

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

Start at: 2018-03-07 15:53:31  
End at: 2018-03-07 15:54:01

# Below is generated by plot.py at 2018-03-07 20:33:59  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 7.03 Mbit/s  
95th percentile per-packet one-way delay: 137.442 ms  
Loss rate: 2.40%  
-- Flow 1:  
Average throughput: 4.62 Mbit/s  
95th percentile per-packet one-way delay: 137.467 ms  
Loss rate: 1.86%  
-- Flow 2:  
Average throughput: 2.96 Mbit/s  
95th percentile per-packet one-way delay: 137.451 ms  
Loss rate: 2.85%  
-- Flow 3:  
Average throughput: 1.51 Mbit/s  
95th percentile per-packet one-way delay: 137.094 ms  
Loss rate: 5.51%
Run 8: Report of LEDBAT — Data Link

![Graph showing throughput and per-packet round-trip delay over time for Flow 1, Flow 2, and Flow 3.](image1)

![Graph showing throughput and per-packet round-trip delay over time for Flow 1, Flow 2, and Flow 3.](image2)
Run 9: Statistics of LEDBAT

Start at: 2018-03-07 16:13:35
End at: 2018-03-07 16:14:05

# Below is generated by plot.py at 2018-03-07 20:33:59
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 6.49 Mbit/s
  95th percentile per-packet one-way delay: 137.045 ms
  Loss rate: 2.27%
-- Flow 1:
  Average throughput: 4.09 Mbit/s
  95th percentile per-packet one-way delay: 137.129 ms
  Loss rate: 1.60%
-- Flow 2:
  Average throughput: 2.98 Mbit/s
  95th percentile per-packet one-way delay: 136.855 ms
  Loss rate: 2.83%
-- Flow 3:
  Average throughput: 1.36 Mbit/s
  95th percentile per-packet one-way delay: 136.732 ms
  Loss rate: 5.85%
Run 9: Report of LEDBAT — Data Link

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

- Flow 1 ingress (mean 4.16 Mbit/s)
- Flow 1 egress (mean 4.09 Mbit/s)
- Flow 2 ingress (mean 3.02 Mbit/s)
- Flow 2 egress (mean 2.96 Mbit/s)
- Flow 3 ingress (mean 1.40 Mbit/s)
- Flow 3 egress (mean 1.36 Mbit/s)
Run 10: Statistics of LEDBAT

Start at: 2018-03-07 16:33:47
End at: 2018-03-07 16:34:17

# Below is generated by plot.py at 2018-03-07 20:33:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 6.99 Mbit/s
95th percentile per-packet one-way delay: 137.151 ms
Loss rate: 2.39%
-- Flow 1:
Average throughput: 4.77 Mbit/s
95th percentile per-packet one-way delay: 137.203 ms
Loss rate: 1.84%
-- Flow 2:
Average throughput: 2.66 Mbit/s
95th percentile per-packet one-way delay: 136.917 ms
Loss rate: 3.00%
-- Flow 3:
Average throughput: 1.48 Mbit/s
95th percentile per-packet one-way delay: 137.139 ms
Loss rate: 5.55%
Run 10: Report of LEDBAT — Data Link

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

- **Flow 1 ingress** (mean 4.82 Mbit/s)
- **Flow 1 egress** (mean 4.77 Mbit/s)
- **Flow 2 ingress** (mean 2.70 Mbit/s)
- **Flow 2 egress** (mean 2.66 Mbit/s)
- **Flow 3 ingress** (mean 1.53 Mbit/s)
- **Flow 3 egress** (mean 1.46 Mbit/s)

![Graph showing ping delay over time for different flows.]
Run 1: Statistics of PCC

Start at: 2018-03-07 13:47:24
End at: 2018-03-07 13:47:54

# Below is generated by plot.py at 2018-03-07 20:41:54
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 582.16 Mbit/s
  95th percentile per-packet one-way delay: 241.940 ms
  Loss rate: 2.63%
-- Flow 1:
  Average throughput: 489.46 Mbit/s
  95th percentile per-packet one-way delay: 242.127 ms
  Loss rate: 2.53%
-- Flow 2:
  Average throughput: 123.76 Mbit/s
  95th percentile per-packet one-way delay: 241.454 ms
  Loss rate: 3.24%
-- Flow 3:
  Average throughput: 32.95 Mbit/s
  95th percentile per-packet one-way delay: 234.095 ms
  Loss rate: 2.65%
Run 1: Report of PCC — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 Ingress (mean 497.58 Mbps)
  - Flow 1 Egress (mean 489.46 Mbps)
  - Flow 2 Ingress (mean 126.12 Mbps)
  - Flow 2 Egress (mean 123.76 Mbps)
  - Flow 3 Ingress (mean 32.93 Mbps)
  - Flow 3 Egress (mean 32.95 Mbps)

- **Packet Delay:**
  - Flow 1 (95th percentile 242.13 ms)
  - Flow 2 (95th percentile 241.45 ms)
  - Flow 3 (95th percentile 234.09 ms)
Run 2: Statistics of PCC

Start at: 2018-03-07 14:07:59
End at: 2018-03-07 14:08:29

# Below is generated by plot.py at 2018-03-07 20:41:54
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 572.51 Mbit/s
  95th percentile per-packet one-way delay: 247.246 ms
  Loss rate: 4.29%
-- Flow 1:
  Average throughput: 493.69 Mbit/s
  95th percentile per-packet one-way delay: 247.952 ms
  Loss rate: 3.80%
-- Flow 2:
  Average throughput: 62.68 Mbit/s
  95th percentile per-packet one-way delay: 242.000 ms
  Loss rate: 4.21%
-- Flow 3:
  Average throughput: 115.69 Mbit/s
  95th percentile per-packet one-way delay: 248.649 ms
  Loss rate: 10.40%
Run 2: Report of PCC — Data Link

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

*Legend:*
- Flow 1 Ingress (mean 508.51 Mbit/s)
- Flow 1 Egress (mean 493.69 Mbit/s)
- Flow 2 Ingress (mean 64.54 Mbit/s)
- Flow 2 Egress (mean 62.68 Mbit/s)
- Flow 3 Ingress (mean 125.55 Mbit/s)
- Flow 3 Egress (mean 115.69 Mbit/s)

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

*Legend:*
- Flow 1 (95th percentile 247.95 ms)
- Flow 2 (95th percentile 242.00 ms)
- Flow 3 (95th percentile 240.65 ms)
Run 3: Statistics of PCC

Start at: 2018-03-07 14:28:24
End at: 2018-03-07 14:28:54

# Below is generated by plot.py at 2018-03-07 20:41:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 572.20 Mbit/s
95th percentile per-packet one-way delay: 250.589 ms
Loss rate: 2.88%
-- Flow 1:
Average throughput: 528.11 Mbit/s
95th percentile per-packet one-way delay: 250.771 ms
Loss rate: 2.89%
-- Flow 2:
Average throughput: 64.45 Mbit/s
95th percentile per-packet one-way delay: 249.225 ms
Loss rate: 2.62%
-- Flow 3:
Average throughput: 4.45 Mbit/s
95th percentile per-packet one-way delay: 251.525 ms
Loss rate: 3.71%
Run 3: Report of PCC — Data Link

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

- Flow 1 Ingress (mean 538.90 Mbit/s)
- Flow 1 Egress (mean 528.11 Mbit/s)
- Flow 2 Ingress (mean 65.28 Mbit/s)
- Flow 2 Egress (mean 64.45 Mbit/s)
- Flow 3 Ingress (mean 4.49 Mbit/s)
- Flow 3 Egress (mean 4.45 Mbit/s)

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

- Flow 1 (95th percentile 250.77 ms)
- Flow 2 (95th percentile 249.22 ms)
- Flow 3 (95th percentile 251.53 ms)
Run 4: Statistics of PCC

Start at: 2018-03-07 14:48:29
End at: 2018-03-07 14:48:59

# Below is generated by plot.py at 2018-03-07 20:41:58
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 576.21 Mbit/s
  95th percentile per-packet one-way delay: 244.665 ms
  Loss rate: 2.69%
-- Flow 1:
  Average throughput: 522.99 Mbit/s
  95th percentile per-packet one-way delay: 244.858 ms
  Loss rate: 2.71%
-- Flow 2:
  Average throughput: 64.76 Mbit/s
  95th percentile per-packet one-way delay: 243.498 ms
  Loss rate: 2.07%
-- Flow 3:
  Average throughput: 32.50 Mbit/s
  95th percentile per-packet one-way delay: 244.419 ms
  Loss rate: 4.23%
Run 4: Report of PCC — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 Ingress (mean 332.65 Mbps)
  - Flow 1 Egress (mean 522.99 Mbps)
  - Flow 2 Ingress (mean 65.25 Mbps)
  - Flow 2 Egress (mean 64.76 Mbps)
  - Flow 3 Ingress (mean 32.99 Mbps)
  - Flow 3 Egress (mean 32.50 Mbps)

- **Packet Delay (ms):**
  - Flow 1 (95th percentile 244.86 ms)
  - Flow 2 (95th percentile 243.50 ms)
  - Flow 3 (95th percentile 244.42 ms)
Run 5: Statistics of PCC

Start at: 2018-03-07 15:09:10
End at: 2018-03-07 15:09:40

# Below is generated by plot.py at 2018-03-07 20:42:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 573.61 Mbit/s
95th percentile per-packet one-way delay: 250.794 ms
Loss rate: 4.37%
-- Flow 1:
Average throughput: 482.06 Mbit/s
95th percentile per-packet one-way delay: 254.317 ms
Loss rate: 4.23%
-- Flow 2:
Average throughput: 123.06 Mbit/s
95th percentile per-packet one-way delay: 247.649 ms
Loss rate: 4.88%
-- Flow 3:
Average throughput: 31.32 Mbit/s
95th percentile per-packet one-way delay: 248.418 ms
Loss rate: 7.26%
Run 5: Report of PCC — Data Link

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

- **Flow 1 Ingress (mean 496.72 Mbit/s)**
- **Flow 1 Egress (mean 482.06 Mbit/s)**
- **Flow 2 Ingress (mean 127.58 Mbit/s)**
- **Flow 2 Egress (mean 123.06 Mbit/s)**
- **Flow 3 Ingress (mean 32.81 Mbit/s)**
- **Flow 3 Egress (mean 31.32 Mbit/s)**

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

- **Flow 1 (95th percentile 254.32 ms)**
- **Flow 2 (95th percentile 247.65 ms)**
- **Flow 3 (95th percentile 248.42 ms)**
Run 6: Statistics of PCC

Start at: 2018-03-07 15:30:00
End at: 2018-03-07 15:30:30

# Below is generated by plot.py at 2018-03-07 20:42:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 568.97 Mbit/s
95th percentile per-packet one-way delay: 249.344 ms
Loss rate: 4.26%
-- Flow 1:
Average throughput: 467.48 Mbit/s
95th percentile per-packet one-way delay: 249.857 ms
Loss rate: 3.97%
-- Flow 2:
Average throughput: 123.91 Mbit/s
95th percentile per-packet one-way delay: 248.562 ms
Loss rate: 4.86%
-- Flow 3:
Average throughput: 60.53 Mbit/s
95th percentile per-packet one-way delay: 248.529 ms
Loss rate: 8.67%
Run 6: Report of PCC — Data Link

Throughput (Mbps):

Flow 1 Ingress (mean 482.34 Mbps)
Flow 1 Egress (mean 467.48 Mbps)
Flow 2 Ingress (mean 128.50 Mbps)
Flow 2 Egress (mean 123.91 Mbps)
Flow 3 Ingress (mean 64.49 Mbps)
Flow 3 Egress (mean 60.53 Mbps)

Delay (ms):

Flow 1 (95th percentile 249.96 ms)
Flow 2 (95th percentile 248.56 ms)
Flow 3 (95th percentile 248.53 ms)
Run 7: Statistics of PCC

Start at: 2018-03-07 15:50:31
End at: 2018-03-07 15:51:01

# Below is generated by plot.py at 2018-03-07 20:42:54
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 561.57 Mbit/s
  95th percentile per-packet one-way delay: 250.479 ms
  Loss rate: 3.26%
-- Flow 1:
  Average throughput: 475.15 Mbit/s
  95th percentile per-packet one-way delay: 250.805 ms
  Loss rate: 3.10%
-- Flow 2:
  Average throughput: 122.76 Mbit/s
  95th percentile per-packet one-way delay: 248.935 ms
  Loss rate: 4.06%
-- Flow 3:
  Average throughput: 16.17 Mbit/s
  95th percentile per-packet one-way delay: 249.765 ms
  Loss rate: 5.35%
Run 7: Report of PCC — Data Link

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

- Flow 1 Ingress (mean 485.81 Mb/s)
- Flow 1 Egress (mean 475.15 Mb/s)
- Flow 2 Ingress (mean 126.14 Mb/s)
- Flow 2 Egress (mean 122.76 Mb/s)
- Flow 3 Ingress (mean 16.59 Mb/s)
- Flow 3 Egress (mean 16.17 Mb/s)

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

- Flow 1 (95th percentile 250.81 ms)
- Flow 2 (95th percentile 248.94 ms)
- Flow 3 (95th percentile 249.76 ms)
Run 8: Statistics of PCC

Start at: 2018-03-07 16:10:35
End at: 2018-03-07 16:11:05

# Below is generated by plot.py at 2018-03-07 20:43:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 592.14 Mbit/s
  95th percentile per-packet one-way delay: 245.064 ms
  Loss rate: 3.26%
-- Flow 1:
  Average throughput: 549.07 Mbit/s
  95th percentile per-packet one-way delay: 245.763 ms
  Loss rate: 3.28%
-- Flow 2:
  Average throughput: 62.94 Mbit/s
  95th percentile per-packet one-way delay: 242.761 ms
  Loss rate: 3.00%
-- Flow 3:
  Average throughput: 4.55 Mbit/s
  95th percentile per-packet one-way delay: 242.185 ms
  Loss rate: 3.47%
Run 8: Report of PCC — Data Link

![Data Link Throughput Graph]

![Data Link Delay Graph]
Run 9: Statistics of PCC

Start at: 2018-03-07 16:30:47
End at: 2018-03-07 16:31:17

# Below is generated by plot.py at 2018-03-07 20:51:20
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 560.30 Mbit/s
  95th percentile per-packet one-way delay: 255.429 ms
  Loss rate: 4.47%
-- Flow 1:
  Average throughput: 436.59 Mbit/s
  95th percentile per-packet one-way delay: 261.360 ms
  Loss rate: 4.12%
-- Flow 2:
  Average throughput: 131.48 Mbit/s
  95th percentile per-packet one-way delay: 240.771 ms
  Loss rate: 4.17%
-- Flow 3:
  Average throughput: 113.73 Mbit/s
  95th percentile per-packet one-way delay: 247.981 ms
  Loss rate: 9.03%
Run 9: Report of PCC — Data Link

![Graph 1](image1.png)

- Flow 1 Ingress (mean 451.14 Mbit/s)
- Flow 1 Egress (mean 436.59 Mbit/s)
- Flow 2 Ingress (mean 135.29 Mbit/s)
- Flow 2 Egress (mean 133.48 Mbit/s)
- Flow 3 Ingress (mean 121.48 Mbit/s)
- Flow 3 Egress (mean 113.73 Mbit/s)

![Graph 2](image2.png)

- Flow 1 (95th percentile 261.36 ms)
- Flow 2 (95th percentile 240.77 ms)
- Flow 3 (95th percentile 247.99 ms)
Run 10: Statistics of PCC

Start at: 2018-03-07 16:51:19
End at: 2018-03-07 16:51:49

# Below is generated by plot.py at 2018-03-07 20:51:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 582.33 Mbit/s
  95th percentile per-packet one-way delay: 249.515 ms
  Loss rate: 5.87%
-- Flow 1:
  Average throughput: 464.05 Mbit/s
  95th percentile per-packet one-way delay: 251.281 ms
  Loss rate: 5.29%
-- Flow 2:
  Average throughput: 123.53 Mbit/s
  95th percentile per-packet one-way delay: 246.386 ms
  Loss rate: 5.78%
-- Flow 3:
  Average throughput: 113.20 Mbit/s
  95th percentile per-packet one-way delay: 247.412 ms
  Loss rate: 12.82%
Run 10: Report of PCC — Data Link
Run 1: Statistics of QUIC Cubic

Start at: 2018-03-07 13:40:08
End at: 2018-03-07 13:40:38

# Below is generated by plot.py at 2018-03-07 20:51:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 55.48 Mbit/s
  95th percentile per-packet one-way delay: 136.240 ms
  Loss rate: 1.81%
  -- Flow 1:
  Average throughput: 0.04 Mbit/s
  95th percentile per-packet one-way delay: 137.828 ms
  Loss rate: 0.00%
  -- Flow 2:
  Average throughput: 61.35 Mbit/s
  95th percentile per-packet one-way delay: 136.233 ms
  Loss rate: 0.58%
  -- Flow 3:
  Average throughput: 37.98 Mbit/s
  95th percentile per-packet one-way delay: 136.553 ms
  Loss rate: 5.68%
Run 1: Report of QUIC Cubic — Data Link
Run 2: Statistics of QUIC Cubic

Start at: 2018-03-07 14:00:52  
End at: 2018-03-07 14:01:22

# Below is generated by plot.py at 2018-03-07 20:51:49  
# Datalink statistics
-- Total of 3 flows:
Average throughput: 111.14 Mbit/s
95th percentile per-packet one-way delay: 136.338 ms
Loss rate: 1.55%
-- Flow 1:
Average throughput: 59.23 Mbit/s
95th percentile per-packet one-way delay: 136.359 ms
Loss rate: 1.14%
-- Flow 2:
Average throughput: 60.18 Mbit/s
95th percentile per-packet one-way delay: 136.026 ms
Loss rate: 0.75%
-- Flow 3:
Average throughput: 37.39 Mbit/s
95th percentile per-packet one-way delay: 136.083 ms
Loss rate: 5.93%
Run 2: Report of QUIC Cubic — Data Link

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

- Flow 1 ingress (mean 59.37 Mbit/s)
- Flow 1 egress (mean 59.23 Mbit/s)
- Flow 2 ingress (mean 59.81 Mbit/s)
- Flow 2 egress (mean 60.18 Mbit/s)
- Flow 3 ingress (mean 38.66 Mbit/s)
- Flow 3 egress (mean 37.39 Mbit/s)
Run 3: Statistics of QUIC Cubic

Start at: 2018-03-07 14:21:35
End at: 2018-03-07 14:22:05

# Below is generated by plot.py at 2018-03-07 20:51:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 112.75 Mbit/s
95th percentile per-packet one-way delay: 136.403 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 61.08 Mbit/s
95th percentile per-packet one-way delay: 135.637 ms
Loss rate: 1.12%
-- Flow 2:
Average throughput: 61.12 Mbit/s
95th percentile per-packet one-way delay: 135.512 ms
Loss rate: 0.38%
-- Flow 3:
Average throughput: 34.71 Mbit/s
95th percentile per-packet one-way delay: 136.499 ms
Loss rate: 0.80%
Run 3: Report of QUIC Cubic — Data Link
Run 4: Statistics of QUIC Cubic

Start at: 2018-03-07 14:41:35
End at: 2018-03-07 14:42:05

# Below is generated by plot.py at 2018-03-07 20:51:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 115.07 Mbit/s
95th percentile per-packet one-way delay: 140.359 ms
Loss rate: 1.34%
-- Flow 1:
  Average throughput: 62.37 Mbit/s
  95th percentile per-packet one-way delay: 135.748 ms
  Loss rate: 1.18%
-- Flow 2:
  Average throughput: 61.85 Mbit/s
  95th percentile per-packet one-way delay: 140.397 ms
  Loss rate: 0.24%
-- Flow 3:
  Average throughput: 39.51 Mbit/s
  95th percentile per-packet one-way delay: 135.824 ms
  Loss rate: 5.30%
Run 4: Report of QUIC Cubic — Data Link
Run 5: Statistics of QUIC Cubic

Start at: 2018-03-07 15:01:57
End at: 2018-03-07 15:02:27

# Below is generated by plot.py at 2018-03-07 20:51:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 121.53 Mbit/s
95th percentile per-packet one-way delay: 140.640 ms
Loss rate: 1.14%
-- Flow 1:
Average throughput: 60.56 Mbit/s
95th percentile per-packet one-way delay: 136.599 ms
Loss rate: 1.09%
-- Flow 2:
Average throughput: 61.42 Mbit/s
95th percentile per-packet one-way delay: 140.685 ms
Loss rate: 0.72%
-- Flow 3:
Average throughput: 63.44 Mbit/s
95th percentile per-packet one-way delay: 136.216 ms
Loss rate: 2.09%
Run 5: Report of QUIC Cubic — Data Link
Run 6: Statistics of QUIC Cubic

Start at: 2018-03-07 15:22:51
End at: 2018-03-07 15:23:21

# Below is generated by plot.py at 2018-03-07 20:51:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 125.10 Mbit/s
95th percentile per-packet one-way delay: 135.776 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 64.62 Mbit/s
95th percentile per-packet one-way delay: 135.752 ms
Loss rate: 1.26%
-- Flow 2:
Average throughput: 61.17 Mbit/s
95th percentile per-packet one-way delay: 135.607 ms
Loss rate: 0.37%
-- Flow 3:
Average throughput: 61.91 Mbit/s
95th percentile per-packet one-way delay: 135.867 ms
Loss rate: 1.74%
Run 6: Report of QUIC Cubic — Data Link
Run 7: Statistics of QUIC Cubic

Start at: 2018-03-07 15:43:23
End at: 2018-03-07 15:43:53

# Below is generated by plot.py at 2018-03-07 20:51:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 113.61 Mbit/s
  95th percentile per-packet one-way delay: 136.204 ms
  Loss rate: 0.85%
-- Flow 1:
  Average throughput: 61.87 Mbit/s
  95th percentile per-packet one-way delay: 135.160 ms
  Loss rate: 1.14%
-- Flow 2:
  Average throughput: 61.49 Mbit/s
  95th percentile per-packet one-way delay: 136.240 ms
  Loss rate: 0.42%
-- Flow 3:
  Average throughput: 34.09 Mbit/s
  95th percentile per-packet one-way delay: 136.200 ms
  Loss rate: 0.82%
Run 7: Report of QUIC Cubic — Data Link

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

*Flow 1 ingress (mean 62.02 Mbit/s)*
*Flow 1 egress (mean 61.87 Mbit/s)*
*Flow 2 ingress (mean 60.90 Mbit/s)*
*Flow 2 egress (mean 61.49 Mbit/s)*
*Flow 3 ingress (mean 33.41 Mbit/s)*
*Flow 3 egress (mean 34.09 Mbit/s)*

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

*Flow 1 (95th percentile 135.16 ms)*
*Flow 2 (95th percentile 136.24 ms)*
*Flow 3 (95th percentile 136.20 ms)*
Run 8: Statistics of QUIC Cubic

Start at: 2018-03-07 16:03:48
End at: 2018-03-07 16:04:19

# Below is generated by plot.py at 2018-03-07 20:51:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 118.36 Mbit/s
  95th percentile per-packet one-way delay: 140.070 ms
  Loss rate: 1.44%
-- Flow 1:
  Average throughput: 58.92 Mbit/s
  95th percentile per-packet one-way delay: 136.592 ms
  Loss rate: 1.17%
-- Flow 2:
  Average throughput: 60.60 Mbit/s
  95th percentile per-packet one-way delay: 136.417 ms
  Loss rate: 0.71%
-- Flow 3:
  Average throughput: 59.76 Mbit/s
  95th percentile per-packet one-way delay: 140.158 ms
  Loss rate: 3.70%
Run 8: Report of QUIC Cubic — Data Link

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

- **Flow 1 Ingress (mean 59.07 Mbit/s)**
- **Flow 1 Egress (mean 58.92 Mbit/s)**
- **Flow 2 Ingress (mean 60.20 Mbit/s)**
- **Flow 2 Egress (mean 60.60 Mbit/s)**
- **Flow 3 Ingress (mean 60.35 Mbit/s)**
- **Flow 3 Egress (mean 59.76 Mbit/s)**

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

- **Flow 1 (95th percentile 136.59 ms)**
- **Flow 2 (95th percentile 136.42 ms)**
- **Flow 3 (95th percentile 140.16 ms)**
Run 9: Statistics of QUIC Cubic

Start at: 2018-03-07 16:23:58
End at: 2018-03-07 16:24:28

# Below is generated by plot.py at 2018-03-07 20:51:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 119.30 Mbit/s
  95th percentile per-packet one-way delay: 140.099 ms
  Loss rate: 1.29%
-- Flow 1:
  Average throughput: 60.75 Mbit/s
  95th percentile per-packet one-way delay: 135.817 ms
  Loss rate: 1.17%
-- Flow 2:
  Average throughput: 60.84 Mbit/s
  95th percentile per-packet one-way delay: 135.429 ms
  Loss rate: 0.26%
-- Flow 3:
  Average throughput: 57.73 Mbit/s
  95th percentile per-packet one-way delay: 140.173 ms
  Loss rate: 3.80%
Run 9: Report of QUIC Cubic — Data Link

[Graph showing throughput and packet delay over time for different flows]
Run 10: Statistics of QUIC Cubic

Start at: 2018-03-07 16:44:15
End at: 2018-03-07 16:44:45

# Below is generated by plot.py at 2018-03-07 20:51:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 112.01 Mbit/s
95th percentile per-packet one-way delay: 136.300 ms
Loss rate: 1.40%
-- Flow 1:
Average throughput: 53.08 Mbit/s
95th percentile per-packet one-way delay: 135.002 ms
Loss rate: 1.41%
-- Flow 2:
Average throughput: 60.67 Mbit/s
95th percentile per-packet one-way delay: 135.940 ms
Loss rate: 0.33%
-- Flow 3:
Average throughput: 58.12 Mbit/s
95th percentile per-packet one-way delay: 136.378 ms
Loss rate: 3.60%
Run 10: Report of QUIC Cubic — Data Link
Run 1: Statistics of SCReAM

Start at: 2018-03-07 13:49:36
End at: 2018-03-07 13:50:06

# Below is generated by plot.py at 2018-03-07 20:51:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 136.709 ms
  Loss rate: 1.30%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 136.082 ms
  Loss rate: 0.77%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 136.736 ms
  Loss rate: 1.42%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 136.295 ms
  Loss rate: 2.64%
Run 1: Report of SCReAM — Data Link

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

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

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

- Flow 1 (95th percentile 136.08 ms)
- Flow 2 (95th percentile 136.74 ms)
- Flow 3 (95th percentile 136.29 ms)
Run 2: Statistics of SCReAM

Start at: 2018-03-07 14:10:12
End at: 2018-03-07 14:10:42

# Below is generated by plot.py at 2018-03-07 20:51:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 140.446 ms
Loss rate: 1.30%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.545 ms
Loss rate: 0.77%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 140.442 ms
Loss rate: 1.43%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 140.485 ms
Loss rate: 2.65%
Run 3: Statistics of SCReAM

Start at: 2018-03-07 14:30:36
End at: 2018-03-07 14:31:06

# Below is generated by plot.py at 2018-03-07 20:51:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 140.380 ms
  Loss rate: 1.30%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 135.931 ms
  Loss rate: 0.77%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 140.404 ms
  Loss rate: 1.43%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 134.543 ms
  Loss rate: 2.63%
Run 3: Report of SCReAM — Data Link

![Graph showing throughput over time for different flows with various delays.](image)

- **Flow 1 ingress (mean 0.22 Mbit/s)**
- **Flow 1 egress (mean 0.22 Mbit/s)**
- **Flow 2 ingress (mean 0.22 Mbit/s)**
- **Flow 2 egress (mean 0.22 Mbit/s)**
- **Flow 3 ingress (mean 0.22 Mbit/s)**
- **Flow 3 egress (mean 0.22 Mbit/s)**
Run 4: Statistics of SCReAM

Start at: 2018-03-07 14:50:43
End at: 2018-03-07 14:51:13

# Below is generated by plot.py at 2018-03-07 20:51:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 136.486 ms
  Loss rate: 1.36%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 136.434 ms
  Loss rate: 0.89%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 135.062 ms
  Loss rate: 1.42%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 136.522 ms
  Loss rate: 2.63%
Run 4: Report of SCReAM — Data Link
Run 5: Statistics of SCReAM

Start at: 2018-03-07 15:11:23
End at: 2018-03-07 15:11:53

# Below is generated by plot.py at 2018-03-07 20:51:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 140.707 ms
Loss rate: 1.30%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.417 ms
Loss rate: 0.77%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 140.726 ms
Loss rate: 1.42%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.309 ms
Loss rate: 2.63%
Run 5: Report of SCReAM — Data Link
Run 6: Statistics of SCReAM

Start at: 2018-03-07 15:32:11
End at: 2018-03-07 15:32:41

# Below is generated by plot.py at 2018-03-07 20:51:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 136.864 ms
Loss rate: 1.30%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 135.432 ms
Loss rate: 0.77%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.890 ms
Loss rate: 1.42%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 135.860 ms
Loss rate: 2.63%
Run 6: Report of SCReAM — Data Link
Run 7: Statistics of SCReAM

Start at: 2018-03-07 15:52:41
End at: 2018-03-07 15:53:11

# Below is generated by plot.py at 2018-03-07 20:51:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 136.384 ms
  Loss rate: 1.30%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 135.836 ms
  Loss rate: 0.77%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 136.098 ms
  Loss rate: 1.42%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 136.422 ms
  Loss rate: 2.63%
Run 7: Report of SCReAM — Data Link

![Data Link Diagram](image-url)

![Data Link Diagram](image-url)
Run 8: Statistics of SCReAM

Start at: 2018-03-07 16:12:45
End at: 2018-03-07 16:13:15

# Below is generated by plot.py at 2018-03-07 20:51:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 140.747 ms
  Loss rate: 1.37%
  -- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 140.762 ms
  Loss rate: 0.91%
  -- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 136.598 ms
  Loss rate: 1.43%
  -- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 135.725 ms
  Loss rate: 2.63%
Run 8: Report of SCReAM — Data Link
Run 9: Statistics of SCReAM

Start at: 2018-03-07 16:32:57
End at: 2018-03-07 16:33:27

# Below is generated by plot.py at 2018-03-07 20:51:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 135.945 ms
  Loss rate: 1.37%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 135.966 ms
  Loss rate: 0.90%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 135.559 ms
  Loss rate: 1.42%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 135.215 ms
  Loss rate: 2.63%
Run 9: Report of SCReAM — Data Link

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

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

- **Packet Round-trip delay (ms):**
  - Flow 1 (95th percentile 135.97 ms)
  - Flow 2 (95th percentile 135.56 ms)
  - Flow 3 (95th percentile 135.22 ms)
Run 10: Statistics of SCReAM

Start at: 2018-03-07 16:53:28
End at: 2018-03-07 16:53:58

# Below is generated by plot.py at 2018-03-07 20:51:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 140.616 ms
  Loss rate: 1.37%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 140.189 ms
  Loss rate: 0.90%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 140.653 ms
  Loss rate: 1.43%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 135.100 ms
  Loss rate: 2.63%
Run 10: Report of SCReAM — Data Link

Throughput (Mbit/s)

Time (s)

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

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 140.19 ms)
Flow 2 (95th percentile 140.65 ms)
Flow 3 (95th percentile 135.10 ms)
Run 1: Statistics of WebRTC media

Start at: 2018-03-07 13:43:46
End at: 2018-03-07 13:44:16

# Below is generated by plot.py at 2018-03-07 20:51:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 4.03 Mbit/s
  95th percentile per-packet one-way delay: 136.479 ms
  Loss rate: 2.12%
-- Flow 1:
  Average throughput: 1.96 Mbit/s
  95th percentile per-packet one-way delay: 135.915 ms
  Loss rate: 1.27%
-- Flow 2:
  Average throughput: 1.55 Mbit/s
  95th percentile per-packet one-way delay: 136.468 ms
  Loss rate: 2.01%
-- Flow 3:
  Average throughput: 0.52 Mbit/s
  95th percentile per-packet one-way delay: 136.552 ms
  Loss rate: 5.53%
Run 1: Report of WebRTC media — Data Link
Run 2: Statistics of WebRTC media

Start at: 2018-03-07 14:04:27
End at: 2018-03-07 14:04:57

# Below is generated by plot.py at 2018-03-07 20:51:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 3.71 Mbit/s
  95th percentile per-packet one-way delay: 136.462 ms
  Loss rate: 1.80%
-- Flow 1:
  Average throughput: 2.05 Mbit/s
  95th percentile per-packet one-way delay: 135.593 ms
  Loss rate: 1.06%
-- Flow 2:
  Average throughput: 1.26 Mbit/s
  95th percentile per-packet one-way delay: 136.502 ms
  Loss rate: 1.93%
-- Flow 3:
  Average throughput: 0.44 Mbit/s
  95th percentile per-packet one-way delay: 136.435 ms
  Loss rate: 4.86%
Run 2: Report of WebRTC media — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress: mean 2.06 Mbps
  - Flow 2 ingress: mean 1.27 Mbps
  - Flow 3 ingress: mean 0.45 Mbps
  - Flow 1 egress: mean 2.05 Mbps
  - Flow 2 egress: mean 1.26 Mbps
  - Flow 3 egress: mean 0.44 Mbps

- **Per-packet one-way delay (ms):**
  - Flow 1: 95th percentile 133.59 ms
  - Flow 2: 95th percentile 136.50 ms
  - Flow 3: 95th percentile 136.44 ms
Run 3: Statistics of WebRTC media

Start at: 2018-03-07 14:25:00
End at: 2018-03-07 14:25:30

# Below is generated by plot.py at 2018-03-07 20:51:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 3.70 Mbit/s
  95th percentile per-packet one-way delay: 136.498 ms
  Loss rate: 1.77%
-- Flow 1:
  Average throughput: 2.05 Mbit/s
  95th percentile per-packet one-way delay: 136.405 ms
  Loss rate: 1.04%
-- Flow 2:
  Average throughput: 1.26 Mbit/s
  95th percentile per-packet one-way delay: 140.671 ms
  Loss rate: 1.96%
-- Flow 3:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 136.551 ms
  Loss rate: 4.70%
Run 3: Report of WebRTC media — Data Link

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

Flow 1 ingress (mean 2.05 Mbit/s)  Flow 1 egress (mean 2.05 Mbit/s)
Flow 2 ingress (mean 1.27 Mbit/s)  Flow 2 egress (mean 1.26 Mbit/s)
Flow 3 ingress (mean 0.45 Mbit/s)  Flow 3 egress (mean 0.43 Mbit/s)

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

Flow 1 (95th percentile 136.41 ms)  Flow 2 (95th percentile 140.67 ms)  Flow 3 (95th percentile 136.55 ms)
Run 4: Statistics of WebRTC media

Start at: 2018-03-07 14:44:58
End at: 2018-03-07 14:45:28

# Below is generated by plot.py at 2018-03-07 20:51:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 3.70 Mbit/s
  95th percentile per-packet one-way delay: 140.454 ms
  Loss rate: 1.75%
-- Flow 1:
  Average throughput: 2.04 Mbit/s
  95th percentile per-packet one-way delay: 140.457 ms
  Loss rate: 1.03%
-- Flow 2:
  Average throughput: 1.26 Mbit/s
  95th percentile per-packet one-way delay: 136.617 ms
  Loss rate: 1.90%
-- Flow 3:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 140.510 ms
  Loss rate: 4.71%
Run 4: Report of WebRTC media — Data Link

![Graph showing network performance metrics over time](image1)

- **Throughput (Mbps)**
  - Flow 1 ingress (mean 2.05 Mbit/s)
  - Flow 1 egress (mean 2.04 Mbit/s)
  - Flow 2 ingress (mean 1.27 Mbit/s)
  - Flow 2 egress (mean 1.26 Mbit/s)
  - Flow 3 ingress (mean 0.45 Mbit/s)
  - Flow 3 egress (mean 0.43 Mbit/s)

![Graph showing packet loss over time](image2)

- **Per-packet one-way delay (ms)**
  - Flow 1 (95th percentile 140.46 ms)
  - Flow 2 (95th percentile 136.62 ms)
  - Flow 3 (95th percentile 140.51 ms)
Run 5: Statistics of WebRTC media

Start at: 2018-03-07 15:05:33
End at: 2018-03-07 15:06:03

# Below is generated by plot.py at 2018-03-07 20:51:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.70 Mbit/s
95th percentile per-packet one-way delay: 140.761 ms
Loss rate: 1.71%
-- Flow 1:
Average throughput: 2.05 Mbit/s
95th percentile per-packet one-way delay: 140.763 ms
Loss rate: 0.88%
-- Flow 2:
Average throughput: 1.26 Mbit/s
95th percentile per-packet one-way delay: 135.861 ms
Loss rate: 1.71%
-- Flow 3:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 140.805 ms
Loss rate: 5.54%
Run 5: Report of WebRTC media — Data Link
Run 6: Statistics of WebRTC media

Start at: 2018-03-07 15:26:28
End at: 2018-03-07 15:26:58

# Below is generated by plot.py at 2018-03-07 20:51:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 3.71 Mbit/s
  95th percentile per-packet one-way delay: 140.459 ms
  Loss rate: 1.78%
-- Flow 1:
  Average throughput: 2.05 Mbit/s
  95th percentile per-packet one-way delay: 136.537 ms
  Loss rate: 1.05%
-- Flow 2:
  Average throughput: 1.26 Mbit/s
  95th percentile per-packet one-way delay: 140.499 ms
  Loss rate: 1.90%
-- Flow 3:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 135.630 ms
  Loss rate: 4.90%
Run 6: Report of WebRTC media — Data Link

![Graph 1: Throughput vs Time for different flows]

- Flow 1 ingress (mean 2.05 Mbit/s)
- Flow 1 egress (mean 2.05 Mbit/s)
- Flow 2 ingress (mean 1.27 Mbit/s)
- Flow 2 egress (mean 1.26 Mbit/s)
- Flow 3 ingress (mean 0.45 Mbit/s)
- Flow 3 egress (mean 0.43 Mbit/s)

![Graph 2: Packet Loss vs Time for different flows]

- Flow 1 (95th percentile 136.54 ms)
- Flow 2 (95th percentile 140.50 ms)
- Flow 3 (95th percentile 135.63 ms)
Run 7: Statistics of WebRTC media

Start at: 2018-03-07 15:47:12
End at: 2018-03-07 15:47:42

# Below is generated by plot.py at 2018-03-07 20:51:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 3.70 Mbit/s
  95th percentile per-packet one-way delay: 140.862 ms
  Loss rate: 1.80%
-- Flow 1:
  Average throughput: 2.05 Mbit/s
  95th percentile per-packet one-way delay: 140.878 ms
  Loss rate: 1.05%
-- Flow 2:
  Average throughput: 1.26 Mbit/s
  95th percentile per-packet one-way delay: 135.635 ms
  Loss rate: 1.70%
-- Flow 3:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 136.517 ms
  Loss rate: 5.61%
Run 7: Report of WebRTC media — Data Link

[Graph of throughput and RTT for different flows]

- **Flow 1** (ingress mean 2.05 Mbit/s, egress mean 2.05 Mbit/s)
- **Flow 2** (ingress mean 1.27 Mbit/s, egress mean 1.26 Mbit/s)
- **Flow 3** (ingress mean 0.46 Mbit/s, egress mean 0.43 Mbit/s)

[Graph of packet loss rate and RTT for different flows]

- **Flow 1** (95th percentile 140.88 ms)
- **Flow 2** (95th percentile 135.63 ms)
- **Flow 3** (95th percentile 136.52 ms)
Run 8: Statistics of WebRTC media

Start at: 2018-03-07 16:07:10
End at: 2018-03-07 16:07:40

# Below is generated by plot.py at 2018-03-07 20:51:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 3.69 Mbit/s
  95th percentile per-packet one-way delay: 136.343 ms
  Loss rate: 1.88%
-- Flow 1:
  Average throughput: 2.05 Mbit/s
  95th percentile per-packet one-way delay: 135.742 ms
  Loss rate: 1.05%
-- Flow 2:
  Average throughput: 1.26 Mbit/s
  95th percentile per-packet one-way delay: 136.370 ms
  Loss rate: 1.92%
-- Flow 3:
  Average throughput: 0.42 Mbit/s
  95th percentile per-packet one-way delay: 136.327 ms
  Loss rate: 5.77%
Run 8: Report of WebRTC media — Data Link

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

- **Throughput (Mbps)**
  - Flow 1 ingress (mean 2.05 Mbps)
  - Flow 1 egress (mean 2.05 Mbps)
  - Flow 2 ingress (mean 1.27 Mbps)
  - Flow 2 egress (mean 1.26 Mbps)
  - Flow 3 ingress (mean 0.44 Mbps)
  - Flow 3 egress (mean 0.42 Mbps)

- **Per-packet one-way delay (ms)**
  - Flow 1 (95th percentile 135.74 ms)
  - Flow 2 (95th percentile 136.37 ms)
  - Flow 3 (95th percentile 136.33 ms)
Run 9: Statistics of WebRTC media

Start at: 2018-03-07 16:27:21
End at: 2018-03-07 16:27:51

# Below is generated by plot.py at 2018-03-07 20:51:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 3.66 Mbit/s
  95th percentile per-packet one-way delay: 140.187 ms
  Loss rate: 1.73%
-- Flow 1:
  Average throughput: 2.03 Mbit/s
  95th percentile per-packet one-way delay: 135.507 ms
  Loss rate: 0.86%
-- Flow 2:
  Average throughput: 1.24 Mbit/s
  95th percentile per-packet one-way delay: 140.238 ms
  Loss rate: 1.73%
-- Flow 3:
  Average throughput: 0.42 Mbit/s
  95th percentile per-packet one-way delay: 136.252 ms
  Loss rate: 5.79%
Run 9: Report of WebRTC media — Data Link
Run 10: Statistics of WebRTC media

Start at: 2018-03-07 16:47:50
End at: 2018-03-07 16:48:20

# Below is generated by plot.py at 2018-03-07 20:51:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 3.68 Mbit/s
  95th percentile per-packet one-way delay: 140.211 ms
  Loss rate: 1.81%
-- Flow 1:
  Average throughput: 2.04 Mbit/s
  95th percentile per-packet one-way delay: 140.231 ms
  Loss rate: 1.08%
-- Flow 2:
  Average throughput: 1.25 Mbit/s
  95th percentile per-packet one-way delay: 135.635 ms
  Loss rate: 1.72%
-- Flow 3:
  Average throughput: 0.42 Mbit/s
  95th percentile per-packet one-way delay: 135.492 ms
  Loss rate: 5.58%
Run 10: Report of WebRTC media — Data Link

![Graph 1: Throughput (Mbps)](image1)
- Flow 1 ingress (mean 2.05 Mbps)
- Flow 1 egress (mean 2.04 Mbps)
- Flow 2 ingress (mean 1.26 Mbps)
- Flow 2 egress (mean 1.25 Mbps)
- Flow 3 ingress (mean 0.44 Mbps)
- Flow 3 egress (mean 0.42 Mbps)

![Graph 2: Per-packet one-way delay (ms)](image2)
- Flow 1 (95th percentile 140.23 ms)
- Flow 2 (95th percentile 135.63 ms)
- Flow 3 (95th percentile 135.49 ms)
Run 1: Statistics of Sprout

Start at: 2018-03-07 13:37:49
End at: 2018-03-07 13:38:19

# Below is generated by plot.py at 2018-03-07 20:51:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.90 Mbit/s
  95th percentile per-packet one-way delay: 136.724 ms
  Loss rate: 1.17%
-- Flow 1:
  Average throughput: 0.44 Mbit/s
  95th percentile per-packet one-way delay: 136.749 ms
  Loss rate: 0.79%
-- Flow 2:
  Average throughput: 0.46 Mbit/s
  95th percentile per-packet one-way delay: 136.654 ms
  Loss rate: 1.04%
-- Flow 3:
  Average throughput: 0.46 Mbit/s
  95th percentile per-packet one-way delay: 136.721 ms
  Loss rate: 2.55%
Run 1: Report of Sprout — Data Link
Run 2: Statistics of Sprout

Start at: 2018-03-07 13:58:26
End at: 2018-03-07 13:58:56

# Below is generated by plot.py at 2018-03-07 20:51:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.89 Mbit/s
  95th percentile per-packet one-way delay: 136.583 ms
  Loss rate: 1.21%
-- Flow 1:
  Average throughput: 0.41 Mbit/s
  95th percentile per-packet one-way delay: 136.579 ms
  Loss rate: 0.86%
-- Flow 2:
  Average throughput: 0.45 Mbit/s
  95th percentile per-packet one-way delay: 136.570 ms
  Loss rate: 1.43%
-- Flow 3:
  Average throughput: 0.58 Mbit/s
  95th percentile per-packet one-way delay: 136.623 ms
  Loss rate: 1.63%
Run 2: Report of Sprout — Data Link

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

Start at: 2018-03-07 14:19:09
End at: 2018-03-07 14:19:39

# Below is generated by plot.py at 2018-03-07 20:51:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.84 Mbit/s
  95th percentile per-packet one-way delay: 136.697 ms
  Loss rate: 1.37%
-- Flow 1:
  Average throughput: 0.42 Mbit/s
  95th percentile per-packet one-way delay: 136.582 ms
  Loss rate: 1.09%
-- Flow 2:
  Average throughput: 0.41 Mbit/s
  95th percentile per-packet one-way delay: 140.336 ms
  Loss rate: 1.27%
-- Flow 3:
  Average throughput: 0.46 Mbit/s
  95th percentile per-packet one-way delay: 140.362 ms
  Loss rate: 2.32%
Run 4: Statistics of Sprout

Start at: 2018-03-07 14:39:18
End at: 2018-03-07 14:39:48

# Below is generated by plot.py at 2018-03-07 20:51:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.81 Mbit/s
  95th percentile per-packet one-way delay: 140.634 ms
  Loss rate: 1.04%
-- Flow 1:
  Average throughput: 0.38 Mbit/s
  95th percentile per-packet one-way delay: 136.605 ms
  Loss rate: 0.61%
-- Flow 2:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 136.646 ms
  Loss rate: 1.07%
-- Flow 3:
  Average throughput: 0.42 Mbit/s
  95th percentile per-packet one-way delay: 140.711 ms
  Loss rate: 2.21%
Run 4: Report of Sprout — Data Link
Run 5: Statistics of Sprout

Start at: 2018-03-07 14:59:33
End at: 2018-03-07 15:00:03

# Below is generated by plot.py at 2018-03-07 20:51:49
# Datalink statistics
-- Total of 3 flows:
   Average throughput: 0.81 Mbit/s
   95th percentile per-packet one-way delay: 140.305 ms
   Loss rate: 0.98%
   -- Flow 1:
      Average throughput: 0.40 Mbit/s
      95th percentile per-packet one-way delay: 136.551 ms
      Loss rate: 1.06%
   -- Flow 2:
      Average throughput: 0.41 Mbit/s
      95th percentile per-packet one-way delay: 136.391 ms
      Loss rate: 0.05%
   -- Flow 3:
      Average throughput: 0.41 Mbit/s
      95th percentile per-packet one-way delay: 140.384 ms
      Loss rate: 2.56%
Run 5: Report of Sprout — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 0.40 Mbit/s) — Flow 1 egress (mean 0.40 Mbit/s)
Flow 2 ingress (mean 0.41 Mbit/s) — Flow 2 egress (mean 0.41 Mbit/s)
Flow 3 ingress (mean 0.41 Mbit/s) — Flow 3 egress (mean 0.41 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 136.55 ms) — Flow 2 (95th percentile 136.39 ms) — Flow 3 (95th percentile 140.38 ms)
Run 6: Statistics of Sprout

Start at: 2018-03-07 15:20:25
End at: 2018-03-07 15:20:55

# Below is generated by plot.py at 2018-03-07 20:51:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.78 Mbit/s
95th percentile per-packet one-way delay: 136.613 ms
Loss rate: 1.39%
-- Flow 1:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 136.637 ms
Loss rate: 0.88%
-- Flow 2:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 136.045 ms
Loss rate: 1.32%
-- Flow 3:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 140.318 ms
Loss rate: 3.26%
Run 6: Report of Sprout — Data Link
Run 7: Statistics of Sprout

Start at: 2018-03-07 15:40:58
End at: 2018-03-07 15:41:28

# Below is generated by plot.py at 2018-03-07 20:51:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.78 Mbit/s
  95th percentile per-packet one-way delay: 140.816 ms
  Loss rate: 1.17%
-- Flow 1:
  Average throughput: 0.38 Mbit/s
  95th percentile per-packet one-way delay: 140.816 ms
  Loss rate: 0.66%
-- Flow 2:
  Average throughput: 0.38 Mbit/s
  95th percentile per-packet one-way delay: 140.829 ms
  Loss rate: 1.38%
-- Flow 3:
  Average throughput: 0.44 Mbit/s
  95th percentile per-packet one-way delay: 135.862 ms
  Loss rate: 2.12%
Run 7: Report of Sprout — Data Link
Run 8: Statistics of Sprout

Start at: 2018-03-07 16:01:27
End at: 2018-03-07 16:01:57

# Below is generated by plot.py at 2018-03-07 20:51:49
# Datalink statistics
  -- Total of 3 flows:
    Average throughput: 0.77 Mbit/s
    95th percentile per-packet one-way delay: 140.276 ms
    Loss rate: 1.35%
    -- Flow 1:
    Average throughput: 0.43 Mbit/s
    95th percentile per-packet one-way delay: 140.278 ms
    Loss rate: 0.99%
    -- Flow 2:
    Average throughput: 0.35 Mbit/s
    95th percentile per-packet one-way delay: 140.288 ms
    Loss rate: 1.15%
    -- Flow 3:
    Average throughput: 0.34 Mbit/s
    95th percentile per-packet one-way delay: 136.475 ms
    Loss rate: 3.12%
Run 8: Report of Sprout — Data Link

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

- Flow 1 ingress (mean 0.43 Mbit/s)
- Flow 1 egress (mean 0.43 Mbit/s)
- Flow 2 ingress (mean 0.35 Mbit/s)
- Flow 2 egress (mean 0.35 Mbit/s)
- Flow 3 ingress (mean 0.34 Mbit/s)
- Flow 3 egress (mean 0.34 Mbit/s)
Run 9: Statistics of Sprout

Start at: 2018-03-07 16:21:38
End at: 2018-03-07 16:22:08

# Below is generated by plot.py at 2018-03-07 20:51:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.78 Mbit/s
  95th percentile per-packet one-way delay: 136.374 ms
  Loss rate: 1.90%
-- Flow 1:
  Average throughput: 0.44 Mbit/s
  95th percentile per-packet one-way delay: 136.387 ms
  Loss rate: 0.97%
-- Flow 2:
  Average throughput: 0.34 Mbit/s
  95th percentile per-packet one-way delay: 136.347 ms
  Loss rate: 1.86%
-- Flow 3:
  Average throughput: 0.37 Mbit/s
  95th percentile per-packet one-way delay: 136.372 ms
  Loss rate: 5.19%
Run 9: Report of Sprout — Data Link

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

- Flow 1 ingress (mean 0.44 Mbit/s)
- Flow 1 egress (mean 0.44 Mbit/s)
- Flow 2 ingress (mean 0.34 Mbit/s)
- Flow 2 egress (mean 0.34 Mbit/s)
- Flow 3 ingress (mean 0.38 Mbit/s)
- Flow 3 egress (mean 0.37 Mbit/s)

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

- Flow 1 (95th percentile 136.39 ms)
- Flow 2 (95th percentile 136.35 ms)
- Flow 3 (95th percentile 136.37 ms)
Run 10: Statistics of Sprout

Start at: 2018-03-07 16:41:51
End at: 2018-03-07 16:42:21

# Below is generated by plot.py at 2018-03-07 20:51:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.79 Mbit/s
  95th percentile per-packet one-way delay: 140.149 ms
  Loss rate: 1.32%
-- Flow 1:
  Average throughput: 0.39 Mbit/s
  95th percentile per-packet one-way delay: 140.176 ms
  Loss rate: 0.90%
-- Flow 2:
  Average throughput: 0.37 Mbit/s
  95th percentile per-packet one-way delay: 140.077 ms
  Loss rate: 1.43%
-- Flow 3:
  Average throughput: 0.48 Mbit/s
  95th percentile per-packet one-way delay: 135.551 ms
  Loss rate: 2.22%
Run 10: Report of Sprout — Data Link

Throughput (Mbit/s)

Time (s)

- Flow 1 ingress (mean 0.39 Mbit/s)
- Flow 1 egress (mean 0.39 Mbit/s)
- Flow 2 ingress (mean 0.37 Mbit/s)
- Flow 2 egress (mean 0.37 Mbit/s)
- Flow 3 ingress (mean 0.40 Mbit/s)
- Flow 3 egress (mean 0.40 Mbit/s)

End-to-end one-way delay (ms)

Time (s)

- Flow 1 (95th percentile 140.18 ms)
- Flow 2 (95th percentile 140.08 ms)
- Flow 3 (95th percentile 135.55 ms)
Run 1: Statistics of TaoVA-100x

Start at: 2018-03-07 13:42:30
End at: 2018-03-07 13:43:00

# Below is generated by plot.py at 2018-03-07 20:53:19
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 254.86 Mbit/s
  95th percentile per-packet one-way delay: 140.373 ms
  Loss rate: 0.77%
-- Flow 1:
  Average throughput: 204.97 Mbit/s
  95th percentile per-packet one-way delay: 137.388 ms
  Loss rate: 0.75%
-- Flow 2:
  Average throughput: 111.17 Mbit/s
  95th percentile per-packet one-way delay: 241.655 ms
  Loss rate: 0.67%
-- Flow 3:
  Average throughput: 12.71 Mbit/s
  95th percentile per-packet one-way delay: 136.476 ms
  Loss rate: 2.96%
Run 2: Statistics of TaoVA-100x

Start at: 2018-03-07 14:03:21
End at: 2018-03-07 14:03:51

# Below is generated by plot.py at 2018-03-07 20:53:19
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 156.59 Mbit/s
  95th percentile per-packet one-way delay: 136.407 ms
  Loss rate: 0.15%
-- Flow 1:
  Average throughput: 119.03 Mbit/s
  95th percentile per-packet one-way delay: 136.412 ms
  Loss rate: 0.06%
-- Flow 2:
  Average throughput: 52.94 Mbit/s
  95th percentile per-packet one-way delay: 136.400 ms
  Loss rate: 0.35%
-- Flow 3:
  Average throughput: 8.83 Mbit/s
  95th percentile per-packet one-way delay: 136.358 ms
  Loss rate: 1.62%
Run 2: Report of TaoVA-100x — Data Link
Run 3: Statistics of TaoVA-100x

Start at: 2018-03-07 14:24:01
End at: 2018-03-07 14:24:31

# Below is generated by plot.py at 2018-03-07 20:53:19
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 98.04 Mbit/s
  95th percentile per-packet one-way delay: 140.384 ms
  Loss rate: 2.36%
-- Flow 1:
  Average throughput: 85.50 Mbit/s
  95th percentile per-packet one-way delay: 140.344 ms
  Loss rate: 2.41%
-- Flow 2:
  Average throughput: 12.74 Mbit/s
  95th percentile per-packet one-way delay: 141.214 ms
  Loss rate: 1.44%
-- Flow 3:
  Average throughput: 12.58 Mbit/s
  95th percentile per-packet one-way delay: 136.462 ms
  Loss rate: 2.99%
Run 3: Report of TaoVA-100x — Data Link

**Throughput (Mbit/s)**

- Flow 1 ingress (mean 86.80 Mbit/s)
- Flow 2 ingress (mean 12.75 Mbit/s)
- Flow 3 ingress (mean 12.62 Mbit/s)
- Flow 1 egress (mean 85.50 Mbit/s)
- Flow 2 egress (mean 12.74 Mbit/s)
- Flow 3 egress (mean 12.58 Mbit/s)

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

- Flow 1 (95th percentile 140.34 ms)
- Flow 2 (95th percentile 141.21 ms)
- Flow 3 (95th percentile 136.46 ms)
Run 4: Statistics of TaoVA-100x

Start at: 2018-03-07 14:44:06
End at: 2018-03-07 14:44:36

# Below is generated by plot.py at 2018-03-07 20:53:19
# Datalink statistics
-- Total of 3 flows:
   Average throughput: 26.07 Mbit/s
   95th percentile per-packet one-way delay: 136.200 ms
   Loss rate: 1.37%
-- Flow 1:
   Average throughput: 13.29 Mbit/s
   95th percentile per-packet one-way delay: 136.229 ms
   Loss rate: 0.86%
-- Flow 2:
   Average throughput: 13.00 Mbit/s
   95th percentile per-packet one-way delay: 135.665 ms
   Loss rate: 1.39%
-- Flow 3:
   Average throughput: 12.78 Mbit/s
   95th percentile per-packet one-way delay: 135.667 ms
   Loss rate: 2.93%
Run 5: Statistics of TaoVA-100x

Start at: 2018-03-07 15:04:23
End at: 2018-03-07 15:04:53

# Below is generated by plot.py at 2018-03-07 20:53:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 189.28 Mbit/s
95th percentile per-packet one-way delay: 136.122 ms
Loss rate: 1.02%
-- Flow 1:
Average throughput: 169.22 Mbit/s
95th percentile per-packet one-way delay: 136.120 ms
Loss rate: 1.06%
-- Flow 2:
Average throughput: 13.30 Mbit/s
95th percentile per-packet one-way delay: 135.675 ms
Loss rate: 1.40%
-- Flow 3:
Average throughput: 122.80 Mbit/s
95th percentile per-packet one-way delay: 140.731 ms
Loss rate: 0.00%
Run 5: Report of TaoVA-100x — Data Link
Run 6: Statistics of TaoVA-100x

Start at: 2018-03-07 15:25:16
End at: 2018-03-07 15:25:46

# Below is generated by plot.py at 2018-03-07 20:53:19
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 213.99 Mbit/s
  95th percentile per-packet one-way delay: 135.879 ms
  Loss rate: 1.15%
-- Flow 1:
  Average throughput: 13.01 Mbit/s
  95th percentile per-packet one-way delay: 136.164 ms
  Loss rate: 0.95%
-- Flow 2:
  Average throughput: 214.74 Mbit/s
  95th percentile per-packet one-way delay: 135.835 ms
  Loss rate: 0.55%
-- Flow 3:
  Average throughput: 180.26 Mbit/s
  95th percentile per-packet one-way delay: 135.852 ms
  Loss rate: 2.61%
Run 6: Report of TaoVA-100x — Data Link

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

- Throughput (Mbps):
  - Flow 1 ingress (mean 13.02 Mbps)
  - Flow 1 egress (mean 13.01 Mbps)
  - Flow 2 ingress (mean 214.89 Mbps)
  - Flow 2 egress (mean 214.74 Mbps)
  - Flow 3 ingress (mean 180.03 Mbps)
  - Flow 3 egress (mean 180.26 Mbps)

- Packet delay (ms):
  - Flow 1 (95th percentile 136.16 ms)
  - Flow 2 (95th percentile 135.84 ms)
  - Flow 3 (95th percentile 135.05 ms)
Run 7: Statistics of TaoVA-100x

Start at: 2018-03-07 15:45:48
End at: 2018-03-07 15:46:18

# Below is generated by plot.py at 2018-03-07 20:56:34
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 316.60 Mbit/s
  95th percentile per-packet one-way delay: 136.577 ms
  Loss rate: 1.63%
-- Flow 1:
  Average throughput: 169.69 Mbit/s
  95th percentile per-packet one-way delay: 136.614 ms
  Loss rate: 1.48%
-- Flow 2:
  Average throughput: 215.36 Mbit/s
  95th percentile per-packet one-way delay: 136.514 ms
  Loss rate: 1.78%
-- Flow 3:
  Average throughput: 12.79 Mbit/s
  95th percentile per-packet one-way delay: 136.485 ms
  Loss rate: 2.93%
Run 7: Report of TaoVA-100x — Data Link
Run 8: Statistics of TaoVA-100x

Start at: 2018-03-07 16:06:12
End at: 2018-03-07 16:06:42

# Below is generated by plot.py at 2018-03-07 20:56:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 81.21 Mbit/s
95th percentile per-packet one-way delay: 136.547 ms
Loss rate: 2.75%
-- Flow 1:
Average throughput: 11.66 Mbit/s
95th percentile per-packet one-way delay: 136.812 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 12.99 Mbit/s
95th percentile per-packet one-way delay: 136.299 ms
Loss rate: 1.44%
-- Flow 3:
Average throughput: 187.11 Mbit/s
95th percentile per-packet one-way delay: 136.296 ms
Loss rate: 3.39%
Run 8: Report of TaoVA-100x — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 11.58 Mbit/s)
Flow 2 ingress (mean 13.00 Mbit/s)
Flow 3 ingress (mean 188.28 Mbit/s)
Flow 1 egress (mean 11.66 Mbit/s)
Flow 2 egress (mean 12.99 Mbit/s)
Flow 3 egress (mean 187.11 Mbit/s)

Per-packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 136.81 ms)
Flow 2 (95th percentile 136.30 ms)
Flow 3 (95th percentile 136.30 ms)
Run 9: Statistics of TaoVA-100x

Start at: 2018-03-07 16:26:24
End at: 2018-03-07 16:26:54

# Below is generated by plot.py at 2018-03-07 20:56:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.09 Mbit/s
95th percentile per-packet one-way delay: 140.045 ms
Loss rate: 2.53%
-- Flow 1:
Average throughput: 13.27 Mbit/s
95th percentile per-packet one-way delay: 136.210 ms
Loss rate: 0.93%
-- Flow 2:
Average throughput: 18.16 Mbit/s
95th percentile per-packet one-way delay: 140.257 ms
Loss rate: 0.60%
-- Flow 3:
Average throughput: 180.79 Mbit/s
95th percentile per-packet one-way delay: 136.216 ms
Loss rate: 3.27%
Run 9: Report of TaoVA-100x — Data Link
Run 10: Statistics of TaoVA-100x

Start at: 2018-03-07 16:46:39
End at: 2018-03-07 16:47:09

# Below is generated by plot.py at 2018-03-07 20:57:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 198.70 Mbit/s
95th percentile per-packet one-way delay: 135.500 ms
Loss rate: 2.22%
-- Flow 1:
Average throughput: 13.40 Mbit/s
95th percentile per-packet one-way delay: 135.355 ms
Loss rate: 0.93%
-- Flow 2:
Average throughput: 199.82 Mbit/s
95th percentile per-packet one-way delay: 135.513 ms
Loss rate: 1.58%
-- Flow 3:
Average throughput: 162.77 Mbit/s
95th percentile per-packet one-way delay: 135.459 ms
Loss rate: 4.08%
Run 10: Report of TaoVA-100x — Data Link
Run 1: Statistics of TCP Vegas

Start at: 2018-03-07 13:30:43

# Below is generated by plot.py at 2018-03-07 20:57:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 75.91 Mbit/s
95th percentile per-packet one-way delay: 140.181 ms
Loss rate: 1.53%
-- Flow 1:
Average throughput: 25.25 Mbit/s
95th percentile per-packet one-way delay: 139.797 ms
Loss rate: 1.02%
-- Flow 2:
Average throughput: 64.75 Mbit/s
95th percentile per-packet one-way delay: 139.656 ms
Loss rate: 1.55%
-- Flow 3:
Average throughput: 23.70 Mbit/s
95th percentile per-packet one-way delay: 152.342 ms
Loss rate: 3.12%
Run 1: Report of TCP Vegas — Data Link
Run 2: Statistics of TCP Vegas

Start at: 2018-03-07 13:51:15
End at: 2018-03-07 13:51:45

# Below is generated by plot.py at 2018-03-07 20:57:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 50.90 Mbit/s
95th percentile per-packet one-way delay: 144.279 ms
Loss rate: 1.26%
-- Flow 1:
Average throughput: 23.75 Mbit/s
95th percentile per-packet one-way delay: 141.049 ms
Loss rate: 0.93%
-- Flow 2:
Average throughput: 25.59 Mbit/s
95th percentile per-packet one-way delay: 145.110 ms
Loss rate: 1.27%
-- Flow 3:
Average throughput: 31.43 Mbit/s
95th percentile per-packet one-way delay: 146.499 ms
Loss rate: 2.00%
Run 2: Report of TCP Vegas — Data Link

![Graph 1](image1)

![Graph 2](image2)
Run 3: Statistics of TCP Vegas

Start at: 2018-03-07 14:11:52
End at: 2018-03-07 14:12:22

# Below is generated by plot.py at 2018-03-07 20:57:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 127.13 Mbit/s
95th percentile per-packet one-way delay: 143.072 ms
Loss rate: 1.66%
-- Flow 1:
Average throughput: 52.04 Mbit/s
95th percentile per-packet one-way delay: 139.747 ms
Loss rate: 0.93%
-- Flow 2:
Average throughput: 79.56 Mbit/s
95th percentile per-packet one-way delay: 143.420 ms
Loss rate: 1.53%
-- Flow 3:
Average throughput: 69.26 Mbit/s
95th percentile per-packet one-way delay: 144.071 ms
Loss rate: 3.57%
Run 3: Report of TCP Vegas — Data Link
Run 4: Statistics of TCP Vegas

Start at: 2018-03-07 14:32:16
End at: 2018-03-07 14:32:46

# Below is generated by plot.py at 2018-03-07 20:57:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.22 Mbit/s
95th percentile per-packet one-way delay: 143.668 ms
Loss rate: 1.43%
-- Flow 1:
Average throughput: 33.66 Mbit/s
95th percentile per-packet one-way delay: 139.977 ms
Loss rate: 0.97%
-- Flow 2:
Average throughput: 79.72 Mbit/s
95th percentile per-packet one-way delay: 144.083 ms
Loss rate: 1.52%
-- Flow 3:
Average throughput: 27.34 Mbit/s
95th percentile per-packet one-way delay: 144.651 ms
Loss rate: 2.58%
Run 4: Report of TCP Vegas — Data Link

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

- **Flow 1 ingress** (mean 33.68 Mbit/s)
- **Flow 1 egress** (mean 33.66 Mbit/s)
- **Flow 2 ingress** (mean 79.85 Mbit/s)
- **Flow 2 egress** (mean 79.72 Mbit/s)
- **Flow 3 ingress** (mean 27.27 Mbit/s)
- **Flow 3 egress** (mean 27.34 Mbit/s)

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

- **Flow 1** (95th percentile 139.98 ms)
- **Flow 2** (95th percentile 144.08 ms)
- **Flow 3** (95th percentile 144.65 ms)
Run 5: Statistics of TCP Vegas

Start at: 2018-03-07 14:52:23
End at: 2018-03-07 14:52:53

# Below is generated by plot.py at 2018-03-07 20:57:24
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 115.52 Mbit/s
  95th percentile per-packet one-way delay: 142.299 ms
  Loss rate: 1.63%
-- Flow 1:
  Average throughput: 62.80 Mbit/s
  95th percentile per-packet one-way delay: 137.449 ms
  Loss rate: 1.02%
-- Flow 2:
  Average throughput: 44.51 Mbit/s
  95th percentile per-packet one-way delay: 142.378 ms
  Loss rate: 1.53%
-- Flow 3:
  Average throughput: 71.56 Mbit/s
  95th percentile per-packet one-way delay: 143.642 ms
  Loss rate: 3.37%
Run 5: Report of TCP Vegas — Data Link
Run 6: Statistics of TCP Vegas

Start at: 2018-03-07 15:13:02
End at: 2018-03-07 15:13:32

# Below is generated by plot.py at 2018-03-07 20:57:24
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 71.76 Mbit/s
  95th percentile per-packet one-way delay: 139.304 ms
  Loss rate: 1.63%
-- Flow 1:
  Average throughput: 38.41 Mbit/s
  95th percentile per-packet one-way delay: 139.232 ms
  Loss rate: 0.97%
-- Flow 2:
  Average throughput: 27.78 Mbit/s
  95th percentile per-packet one-way delay: 140.066 ms
  Loss rate: 1.47%
-- Flow 3:
  Average throughput: 46.00 Mbit/s
  95th percentile per-packet one-way delay: 137.377 ms
  Loss rate: 3.46%
Run 6: Report of TCP Vegas — Data Link
Run 7: Statistics of TCP Vegas

Start at: 2018-03-07 15:33:51
End at: 2018-03-07 15:34:21

# Below is generated by plot.py at 2018-03-07 20:57:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 67.08 Mbit/s
95th percentile per-packet one-way delay: 140.763 ms
Loss rate: 1.42%
-- Flow 1:
Average throughput: 37.13 Mbit/s
95th percentile per-packet one-way delay: 139.629 ms
Loss rate: 1.00%
-- Flow 2:
Average throughput: 31.80 Mbit/s
95th percentile per-packet one-way delay: 141.582 ms
Loss rate: 1.38%
-- Flow 3:
Average throughput: 27.51 Mbit/s
95th percentile per-packet one-way delay: 141.901 ms
Loss rate: 3.21%
Run 7: Report of TCP Vegas — Data Link

![Graph of throughput and per-packet end-to-end delay over time for different flows.](image)
Run 8: Statistics of TCP Vegas

Start at: 2018-03-07 15:54:21
End at: 2018-03-07 15:54:51

# Below is generated by plot.py at 2018-03-07 20:57:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.74 Mbit/s
95th percentile per-packet one-way delay: 138.642 ms
Loss rate: 1.48%
-- Flow 1:
Average throughput: 57.77 Mbit/s
95th percentile per-packet one-way delay: 138.298 ms
Loss rate: 0.98%
-- Flow 2:
Average throughput: 27.33 Mbit/s
95th percentile per-packet one-way delay: 140.771 ms
Loss rate: 1.49%
-- Flow 3:
Average throughput: 45.73 Mbit/s
95th percentile per-packet one-way delay: 138.789 ms
Loss rate: 3.36%
Run 8: Report of TCP Vegas — Data Link

[Graph showing network throughput and packet inter-arrival delay over time for different flows.]
Run 9: Statistics of TCP Vegas

Start at: 2018-03-07 16:14:25
End at: 2018-03-07 16:14:55

# Below is generated by plot.py at 2018-03-07 20:57:24
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 80.60 Mbit/s
  95th percentile per-packet one-way delay: 139.681 ms
  Loss rate: 1.51%
-- Flow 1:
  Average throughput: 31.03 Mbit/s
  95th percentile per-packet one-way delay: 139.255 ms
  Loss rate: 0.97%
-- Flow 2:
  Average throughput: 62.40 Mbit/s
  95th percentile per-packet one-way delay: 139.671 ms
  Loss rate: 1.54%
-- Flow 3:
  Average throughput: 25.52 Mbit/s
  95th percentile per-packet one-way delay: 140.081 ms
  Loss rate: 3.34%
Run 9: Report of TCP Vegas — Data Link

**Throughput (Mbps)**

- Flow 1 ingress (mean 31.05 Mbps)
- Flow 1 egress (mean 31.03 Mbps)
- Flow 2 ingress (mean 62.52 Mbps)
- Flow 2 egress (mean 62.40 Mbps)
- Flow 3 ingress (mean 25.67 Mbps)
- Flow 3 egress (mean 25.52 Mbps)

**Round-trip time (ms)**

- Flow 1 (95th percentile 139.25 ms)
- Flow 2 (95th percentile 139.67 ms)
- Flow 3 (95th percentile 140.08 ms)
Run 10: Statistics of TCP Vegas

Start at: 2018-03-07 16:34:37
End at: 2018-03-07 16:35:07

# Below is generated by plot.py at 2018-03-07 20:57:24
# Datalink statistics
-- Total of 3 flows:
   Average throughput: 70.88 Mbit/s
   95th percentile per-packet one-way delay: 139.348 ms
   Loss rate: 1.51%
   -- Flow 1:
   Average throughput: 27.76 Mbit/s
   95th percentile per-packet one-way delay: 139.812 ms
   Loss rate: 0.99%
   -- Flow 2:
   Average throughput: 51.73 Mbit/s
   95th percentile per-packet one-way delay: 137.825 ms
   Loss rate: 1.51%
   -- Flow 3:
   Average throughput: 27.32 Mbit/s
   95th percentile per-packet one-way delay: 142.814 ms
   Loss rate: 3.07%
Run 10: Report of TCP Vegas — Data Link

![Graph of TCP Vegas data link performance with three flows showing throughput and packet delay over time.]
Run 1: Statistics of Verus

Start at: 2018-03-07 13:36:46
End at: 2018-03-07 13:37:16

# Below is generated by plot.py at 2018-03-07 20:57:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 166.11 Mbit/s
95th percentile per-packet one-way delay: 327.673 ms
Loss rate: 7.77%
-- Flow 1:
Average throughput: 86.77 Mbit/s
95th percentile per-packet one-way delay: 160.974 ms
Loss rate: 0.84%
-- Flow 2:
Average throughput: 103.72 Mbit/s
95th percentile per-packet one-way delay: 363.339 ms
Loss rate: 16.07%
-- Flow 3:
Average throughput: 33.12 Mbit/s
95th percentile per-packet one-way delay: 261.999 ms
Loss rate: 0.47%
Run 1: Report of Verus — Data Link

![Graph showing throughput and per-packet one-way delay](image_url)
Run 2: Statistics of Verus

End at: 2018-03-07 13:57:50

# Below is generated by plot.py at 2018-03-07 20:57:53
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 202.41 Mbit/s
  95th percentile per-packet one-way delay: 166.187 ms
  Loss rate: 1.73%
-- Flow 1:
  Average throughput: 68.73 Mbit/s
  95th percentile per-packet one-way delay: 150.812 ms
  Loss rate: 1.73%
-- Flow 2:
  Average throughput: 154.60 Mbit/s
  95th percentile per-packet one-way delay: 161.033 ms
  Loss rate: 0.01%
-- Flow 3:
  Average throughput: 98.76 Mbit/s
  95th percentile per-packet one-way delay: 189.541 ms
  Loss rate: 6.81%
Run 2: Report of Verus — Data Link

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

- Flow 1 ingress (mean 69.31 Mbit/s)
- Flow 1 egress (mean 68.73 Mbit/s)
- Flow 2 ingress (mean 152.49 Mbit/s)
- Flow 2 egress (mean 154.80 Mbit/s)
- Flow 3 ingress (mean 103.06 Mbit/s)
- Flow 3 egress (mean 98.76 Mbit/s)

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Run 3: Statistics of Verus

Start at: 2018-03-07 14:18:00
End at: 2018-03-07 14:18:30

# Below is generated by plot.py at 2018-03-07 20:58:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 247.87 Mbit/s
95th percentile per-packet one-way delay: 221.763 ms
Loss rate: 1.38%
-- Flow 1:
Average throughput: 103.76 Mbit/s
95th percentile per-packet one-way delay: 166.133 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 134.73 Mbit/s
95th percentile per-packet one-way delay: 221.388 ms
Loss rate: 0.37%
-- Flow 3:
Average throughput: 170.24 Mbit/s
95th percentile per-packet one-way delay: 274.888 ms
Loss rate: 5.34%
Run 3: Report of Verus — Data Link

[Graph depicting throughput and delay over time for different flows, with annotations for each flow's mean throughput and 95th percentile delay.]
Run 4: Statistics of Verus

Start at: 2018-03-07 14:38:12
End at: 2018-03-07 14:38:42

# Below is generated by plot.py at 2018-03-07 20:58:42
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 199.15 Mbit/s
  95th percentile per-packet one-way delay: 189.888 ms
  Loss rate: 1.84%
-- Flow 1:
  Average throughput: 97.17 Mbit/s
  95th percentile per-packet one-way delay: 176.480 ms
  Loss rate: 1.59%
-- Flow 2:
  Average throughput: 113.74 Mbit/s
  95th percentile per-packet one-way delay: 191.479 ms
  Loss rate: 1.00%
-- Flow 3:
  Average throughput: 84.32 Mbit/s
  95th percentile per-packet one-way delay: 200.481 ms
  Loss rate: 4.89%
Run 4: Report of Verus — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 Ingress (mean 97.81 Mbps)
  - Flow 1 Egress (mean 97.17 Mbps)
  - Flow 2 Ingress (mean 112.69 Mbps)
  - Flow 2 Egress (mean 113.74 Mbps)
  - Flow 3 Ingress (mean 86.36 Mbps)
  - Flow 3 Egress (mean 84.32 Mbps)

- **Per-packet one way delay (ms):**
  - Flow 1 (95th percentile 176.48 ms)
  - Flow 2 (95th percentile 191.48 ms)
  - Flow 3 (95th percentile 200.48 ms)
Run 5: Statistics of Verus

Start at: 2018-03-07 14:58:27
End at: 2018-03-07 14:58:57

# Below is generated by plot.py at 2018-03-07 20:58:57
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 205.74 Mbit/s
  95th percentile per-packet one-way delay: 202.936 ms
  Loss rate: 3.04%
-- Flow 1:
  Average throughput: 137.83 Mbit/s
  95th percentile per-packet one-way delay: 225.782 ms
  Loss rate: 3.74%
-- Flow 2:
  Average throughput: 68.78 Mbit/s
  95th percentile per-packet one-way delay: 160.330 ms
  Loss rate: 2.07%
-- Flow 3:
  Average throughput: 69.94 Mbit/s
  95th percentile per-packet one-way delay: 189.116 ms
  Loss rate: 0.60%
Run 5: Report of Verus — Data Link

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

Flow 1 (mean 142.63 Mbit/s)
Flow 2 (mean 69.23 Mbit/s)
Flow 3 (mean 69.42 Mbit/s)
Flow 1 ingress (mean 137.83 Mbit/s)
Flow 2 ingress (mean 68.78 Mbit/s)
Flow 3 ingress (mean 69.94 Mbit/s)
Flow 1 egress (mean 137.83 Mbit/s)
Flow 2 egress (mean 68.78 Mbit/s)
Flow 3 egress (mean 69.94 Mbit/s)

Flow 1 (95th percentile 225.78 ms)
Flow 2 (95th percentile 160.33 ms)
Flow 3 (95th percentile 189.12 ms)
Run 6: Statistics of Verus

Start at: 2018-03-07 15:19:13
End at: 2018-03-07 15:19:43

# Below is generated by plot.py at 2018-03-07 21:00:02
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 279.56 Mbit/s
  95th percentile per-packet one-way delay: 238.824 ms
  Loss rate: 2.86%
  -- Flow 1:
  Average throughput: 186.85 Mbit/s
  95th percentile per-packet one-way delay: 227.857 ms
  Loss rate: 1.34%
  -- Flow 2:
  Average throughput: 88.75 Mbit/s
  95th percentile per-packet one-way delay: 216.288 ms
  Loss rate: 5.66%
  -- Flow 3:
  Average throughput: 106.63 Mbit/s
  95th percentile per-packet one-way delay: 341.543 ms
  Loss rate: 5.99%
Run 7: Statistics of Verus

Start at: 2018-03-07 15:39:55
End at: 2018-03-07 15:40:25

# Below is generated by plot.py at 2018-03-07 21:00:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 169.45 Mbit/s
95th percentile per-packet one-way delay: 215.508 ms
Loss rate: 1.68%
-- Flow 1:
Average throughput: 123.82 Mbit/s
95th percentile per-packet one-way delay: 222.796 ms
Loss rate: 2.03%
-- Flow 2:
Average throughput: 60.14 Mbit/s
95th percentile per-packet one-way delay: 175.833 ms
Loss rate: 0.65%
-- Flow 3:
Average throughput: 19.70 Mbit/s
95th percentile per-packet one-way delay: 251.314 ms
Loss rate: 1.00%
Run 7: Report of Verus — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 126.70 Mbit/s)
Flow 2 ingress (mean 59.07 Mbit/s)
Flow 3 ingress (mean 19.35 Mbit/s)
Flow 1 egress (mean 123.82 Mbit/s)
Flow 2 egress (mean 60.14 Mbit/s)
Flow 3 egress (mean 19.70 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 222.90 ms)
Flow 2 (95th percentile 175.83 ms)
Flow 3 (95th percentile 251.31 ms)
Run 8: Statistics of Verus

Start at: 2018-03-07 16:00:24
End at: 2018-03-07 16:00:54

# Below is generated by plot.py at 2018-03-07 21:00:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 165.00 Mbit/s
95th percentile per-packet one-way delay: 152.472 ms
Loss rate: 2.07%
-- Flow 1:
Average throughput: 62.95 Mbit/s
95th percentile per-packet one-way delay: 148.506 ms
Loss rate: 2.53%
-- Flow 2:
Average throughput: 134.91 Mbit/s
95th percentile per-packet one-way delay: 153.410 ms
Loss rate: 2.01%
-- Flow 3:
Average throughput: 39.89 Mbit/s
95th percentile per-packet one-way delay: 158.684 ms
Loss rate: 0.22%
Run 8: Report of Verus — Data Link
Run 9: Statistics of Verus

Start at: 2018-03-07 16:20:30
End at: 2018-03-07 16:21:00

# Below is generated by plot.py at 2018-03-07 21:01:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 242.81 Mbit/s
95th percentile per-packet one-way delay: 219.414 ms
Loss rate: 0.68%
  -- Flow 1:
Average throughput: 160.17 Mbit/s
95th percentile per-packet one-way delay: 213.933 ms
Loss rate: 1.03%
  -- Flow 2:
Average throughput: 84.96 Mbit/s
95th percentile per-packet one-way delay: 232.078 ms
Loss rate: 0.00%
  -- Flow 3:
Average throughput: 82.95 Mbit/s
95th percentile per-packet one-way delay: 222.933 ms
Loss rate: 0.03%
Run 9: Report of Verus — Data Link

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

- **Throughput Graph**
  - Y-axis: Throughput (Mbps)
  - X-axis: Time (s)
  - Legend:
    - Flow 1 ingress (mean 160.17 Mbps)
    - Flow 1 egress (mean 160.17 Mbps)
    - Flow 2 ingress (mean 84.97 Mbps)
    - Flow 2 egress (mean 84.96 Mbps)
    - Flow 3 ingress (mean 82.66 Mbps)
    - Flow 3 egress (mean 82.95 Mbps)

- **Per-packet one-way delay Graph**
  - Y-axis: Per-packet one-way delay (ms)
  - X-axis: Time (s)
  - Legend:
    - Flow 1 (95th percentile 213.93 ms)
    - Flow 2 (95th percentile 232.08 ms)
    - Flow 3 (95th percentile 222.93 ms)
Run 10: Statistics of Verus

Start at: 2018-03-07 16:40:41
End at: 2018-03-07 16:41:11

# Below is generated by plot.py at 2018-03-07 21:01:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 244.73 Mbit/s
95th percentile per-packet one-way delay: 253.969 ms
Loss rate: 3.26%
-- Flow 1:
Average throughput: 94.26 Mbit/s
95th percentile per-packet one-way delay: 191.428 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 174.07 Mbit/s
95th percentile per-packet one-way delay: 266.479 ms
Loss rate: 1.74%
-- Flow 3:
Average throughput: 108.05 Mbit/s
95th percentile per-packet one-way delay: 348.931 ms
Loss rate: 14.14%
Run 10: Report of Verus — Data Link
Run 1: Statistics of Copa

Start at: 2018-03-07 13:31:37
End at: 2018-03-07 13:32:07

# Below is generated by plot.py at 2018-03-07 21:01:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 107.02 Mbit/s
95th percentile per-packet one-way delay: 140.376 ms
Loss rate: 2.01%
-- Flow 1:
Average throughput: 35.38 Mbit/s
95th percentile per-packet one-way delay: 136.539 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 74.66 Mbit/s
95th percentile per-packet one-way delay: 137.011 ms
Loss rate: 1.33%
-- Flow 3:
Average throughput: 67.09 Mbit/s
95th percentile per-packet one-way delay: 140.461 ms
Loss rate: 6.30%
Run 1: Report of Copa — Data Link

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

Legend:
- Flow 1 ingress (mean 35.11 Mbit/s)
- Flow 1 egress (mean 35.38 Mbit/s)
- Flow 2 ingress (mean 76.62 Mbit/s)
- Flow 2 egress (mean 74.66 Mbit/s)
- Flow 3 ingress (mean 69.61 Mbit/s)
- Flow 3 egress (mean 67.09 Mbit/s)

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

Legend:
- Flow 1 (95th percentile 136.54 ms)
- Flow 2 (95th percentile 137.01 ms)
- Flow 3 (95th percentile 140.46 ms)
Run 2: Statistics of Copa

Start at: 2018-03-07 13:52:08
End at: 2018-03-07 13:52:38

# Below is generated by plot.py at 2018-03-07 21:02:42
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 134.01 Mbit/s
  95th percentile per-packet one-way delay: 136.394 ms
  Loss rate: 1.75%
  -- Flow 1:
    Average throughput: 68.23 Mbit/s
    95th percentile per-packet one-way delay: 136.380 ms
    Loss rate: 1.15%
  -- Flow 2:
    Average throughput: 64.16 Mbit/s
    95th percentile per-packet one-way delay: 136.392 ms
    Loss rate: 1.98%
  -- Flow 3:
    Average throughput: 71.49 Mbit/s
    95th percentile per-packet one-way delay: 136.453 ms
    Loss rate: 3.07%
Run 2: Report of Copa — Data Link
Run 3: Statistics of Copa

Start at: 2018-03-07 14:12:49
End at: 2018-03-07 14:13:19

# Below is generated by plot.py at 2018-03-07 21:02:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 125.41 Mbit/s
95th percentile per-packet one-way delay: 136.459 ms
Loss rate: 1.14%
-- Flow 1:
Average throughput: 70.15 Mbit/s
95th percentile per-packet one-way delay: 136.409 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 48.66 Mbit/s
95th percentile per-packet one-way delay: 136.489 ms
Loss rate: 1.47%
-- Flow 3:
Average throughput: 70.71 Mbit/s
95th percentile per-packet one-way delay: 170.269 ms
Loss rate: 2.89%
Run 3: Report of Copa — Data Link

[Graph showing throughput and per-packet one-way delay over time for different flows with Legend:
- Flow 1 ingress (mean 69.80 Mbit/s)
- Flow 1 egress (mean 70.15 Mbit/s)
- Flow 2 ingress (mean 48.71 Mbit/s)
- Flow 2 egress (mean 48.66 Mbit/s)
- Flow 3 ingress (mean 70.82 Mbit/s)
- Flow 3 egress (mean 70.71 Mbit/s)
]
Run 4: Statistics of Copa

Start at: 2018-03-07 14:33:10
End at: 2018-03-07 14:33:40

# Below is generated by plot.py at 2018-03-07 21:02:42
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 77.37 Mbit/s
  95th percentile per-packet one-way delay: 136.862 ms
  Loss rate: 1.14%
-- Flow 1:
  Average throughput: 53.79 Mbit/s
  95th percentile per-packet one-way delay: 140.882 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 66.34 Mbit/s
  95th percentile per-packet one-way delay: 136.388 ms
  Loss rate: 1.71%
-- Flow 3:
  Average throughput: 63.49 Mbit/s
  95th percentile per-packet one-way delay: 136.404 ms
  Loss rate: 0.60%
Run 4: Report of Copa — Data Link

![Graph showing throughput and per-packet one-way delay over time for different flows with mean and 95th percentile values.]
Run 5: Statistics of Copa

Start at: 2018-03-07 14:53:19
End at: 2018-03-07 14:53:49

# Below is generated by plot.py at 2018-03-07 21:04:03
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 135.26 Mbit/s
  95th percentile per-packet one-way delay: 140.693 ms
  Loss rate: 1.20%
-- Flow 1:
  Average throughput: 66.66 Mbit/s
  95th percentile per-packet one-way delay: 136.189 ms
  Loss rate: 0.72%
-- Flow 2:
  Average throughput: 69.53 Mbit/s
  95th percentile per-packet one-way delay: 140.728 ms
  Loss rate: 2.37%
-- Flow 3:
  Average throughput: 71.13 Mbit/s
  95th percentile per-packet one-way delay: 136.386 ms
  Loss rate: 0.18%
Run 5: Report of Copa — Data Link
Run 6: Statistics of Copa

Start at: 2018-03-07 15:13:56
End at: 2018-03-07 15:14:26

# Below is generated by plot.py at 2018-03-07 21:04:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 126.11 Mbit/s
95th percentile per-packet one-way delay: 136.320 ms
Loss rate: 1.23%
-- Flow 1:
Average throughput: 55.41 Mbit/s
95th percentile per-packet one-way delay: 140.314 ms
Loss rate: 0.75%
-- Flow 2:
Average throughput: 71.11 Mbit/s
95th percentile per-packet one-way delay: 136.267 ms
Loss rate: 0.43%
-- Flow 3:
Average throughput: 72.59 Mbit/s
95th percentile per-packet one-way delay: 136.226 ms
Loss rate: 3.89%
Run 6: Report of Copa — Data Link

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

*Legend for Graph 1:
- Flow 1 ingress (mean 55.33 Mbps)
- Flow 1 egress (mean 55.41 Mbps)
- Flow 2 ingress (mean 70.44 Mbps)
- Flow 2 egress (mean 71.11 Mbps)
- Flow 3 ingress (mean 73.45 Mbps)
- Flow 3 egress (mean 72.59 Mbps)*

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

*Legend for Graph 2:
- Flow 1 (95th percentile 140.31 ms)
- Flow 2 (95th percentile 136.27 ms)
- Flow 3 (95th percentile 136.23 ms)
Run 7: Statistics of Copa

Start at: 2018-03-07 15:34:44
End at: 2018-03-07 15:35:14

# Below is generated by plot.py at 2018-03-07 21:04:03
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 88.44 Mbit/s
  95th percentile per-packet one-way delay: 135.663 ms
  Loss rate: 1.25%
-- Flow 1:
  Average throughput: 31.62 Mbit/s
  95th percentile per-packet one-way delay: 135.637 ms
  Loss rate: 0.16%
-- Flow 2:
  Average throughput: 61.92 Mbit/s
  95th percentile per-packet one-way delay: 135.643 ms
  Loss rate: 0.89%
-- Flow 3:
  Average throughput: 48.60 Mbit/s
  95th percentile per-packet one-way delay: 135.760 ms
  Loss rate: 4.26%
Run 7: Report of Copa — Data Link
Run 8: Statistics of Copa

Start at: 2018-03-07 15:55:16
End at: 2018-03-07 15:55:46

# Below is generated by plot.py at 2018-03-07 21:05:37
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 141.72 Mbit/s
  95th percentile per-packet one-way delay: 136.666 ms
  Loss rate: 1.20%
-- Flow 1:
  Average throughput: 75.90 Mbit/s
  95th percentile per-packet one-way delay: 136.707 ms
  Loss rate: 1.05%
-- Flow 2:
  Average throughput: 66.89 Mbit/s
  95th percentile per-packet one-way delay: 136.328 ms
  Loss rate: 1.81%
-- Flow 3:
  Average throughput: 66.09 Mbit/s
  95th percentile per-packet one-way delay: 136.351 ms
  Loss rate: 0.45%
Run 8: Report of Copa — Data Link
Run 9: Statistics of Copa

Start at: 2018-03-07 16:15:19
End at: 2018-03-07 16:15:49

# Below is generated by plot.py at 2018-03-07 21:05:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 133.30 Mbit/s
95th percentile per-packet one-way delay: 136.257 ms
Loss rate: 1.36%
-- Flow 1:
Average throughput: 70.37 Mbit/s
95th percentile per-packet one-way delay: 136.229 ms
Loss rate: 0.88%
-- Flow 2:
Average throughput: 61.71 Mbit/s
95th percentile per-packet one-way delay: 140.123 ms
Loss rate: 0.51%
-- Flow 3:
Average throughput: 67.84 Mbit/s
95th percentile per-packet one-way delay: 136.245 ms
Loss rate: 4.37%
Run 9: Report of Copa — Data Link

![Graph of data link performance over time with various flow rates and throughputs.](image-url)

![Graph of packet delays over time for different flows.](image-url)
Run 10: Statistics of Copa

Start at: 2018-03-07 16:35:31
End at: 2018-03-07 16:36:01

# Below is generated by plot.py at 2018-03-07 21:06:29
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 161.81 Mbit/s
  95th percentile per-packet one-way delay: 140.144 ms
  Loss rate: 1.99%
-- Flow 1:
  Average throughput: 95.24 Mbit/s
  95th percentile per-packet one-way delay: 140.172 ms
  Loss rate: 1.36%
-- Flow 2:
  Average throughput: 72.82 Mbit/s
  95th percentile per-packet one-way delay: 136.177 ms
  Loss rate: 1.58%
-- Flow 3:
  Average throughput: 56.42 Mbit/s
  95th percentile per-packet one-way delay: 140.109 ms
  Loss rate: 6.18%
Run 10: Report of Copa — Data Link

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

Start at: 2018-03-07 13:32:38
End at: 2018-03-07 13:33:08

# Below is generated by plot.py at 2018-03-07 21:28:25
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1528.91 Mbit/s
  95th percentile per-packet one-way delay: 236.531 ms
  Loss rate: 9.86%
-- Flow 1:
  Average throughput: 786.99 Mbit/s
  95th percentile per-packet one-way delay: 230.246 ms
  Loss rate: 8.84%
-- Flow 2:
  Average throughput: 778.56 Mbit/s
  95th percentile per-packet one-way delay: 234.365 ms
  Loss rate: 9.42%
-- Flow 3:
  Average throughput: 693.68 Mbit/s
  95th percentile per-packet one-way delay: 253.287 ms
  Loss rate: 14.23%
Run 1: Report of FillP — Data Link

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

- **Flow 1 Ingress** (mean 855.38 Mbit/s)
- **Flow 1 Egress** (mean 786.99 Mbit/s)
- **Flow 2 Ingress** (mean 847.63 Mbit/s)
- **Flow 2 Egress** (mean 778.56 Mbit/s)
- **Flow 3 Ingress** (mean 786.37 Mbit/s)
- **Flow 3 Egress** (mean 693.68 Mbit/s)

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

- **Flow 1** (95th percentile 230.25 ms)
- **Flow 2** (95th percentile 234.37 ms)
- **Flow 3** (95th percentile 253.29 ms)
Run 2: Statistics of FillP

Start at: 2018-03-07 13:53:12
End at: 2018-03-07 13:53:42

# Below is generated by plot.py at 2018-03-07 21:28:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1527.76 Mbit/s
95th percentile per-packet one-way delay: 342.914 ms
Loss rate: 7.23%
-- Flow 1:
Average throughput: 800.69 Mbit/s
95th percentile per-packet one-way delay: 328.406 ms
Loss rate: 5.28%
-- Flow 2:
Average throughput: 793.23 Mbit/s
95th percentile per-packet one-way delay: 316.998 ms
Loss rate: 6.36%
-- Flow 3:
Average throughput: 619.82 Mbit/s
95th percentile per-packet one-way delay: 366.918 ms
Loss rate: 16.11%
Run 2: Report of FillP — Data Link

[Graphs showing throughput and per-packet transmission delay over time for different flows.]
Run 3: Statistics of FillP

Start at: 2018-03-07 14:13:52
End at: 2018-03-07 14:14:22

# Below is generated by plot.py at 2018-03-07 21:29:48
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1513.33 Mbit/s
  95th percentile per-packet one-way delay: 332.961 ms
  Loss rate: 6.57%
-- Flow 1:
  Average throughput: 822.64 Mbit/s
  95th percentile per-packet one-way delay: 216.005 ms
  Loss rate: 5.70%
-- Flow 2:
  Average throughput: 741.34 Mbit/s
  95th percentile per-packet one-way delay: 341.653 ms
  Loss rate: 6.00%
-- Flow 3:
  Average throughput: 619.41 Mbit/s
  95th percentile per-packet one-way delay: 369.187 ms
  Loss rate: 11.25%
Run 3: Report of FillP — Data Link

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

- Flow 1 ingress (mean 884.37 Mb/s)
- Flow 1 egress (mean 822.64 Mb/s)
- Flow 2 ingress (mean 777.89 Mb/s)
- Flow 2 egress (mean 742.34 Mb/s)
- Flow 3 ingress (mean 673.25 Mb/s)
- Flow 3 egress (mean 619.41 Mb/s)
Run 4: Statistics of FillP

Start at: 2018-03-07 14:34:08
End at: 2018-03-07 14:34:38

# Below is generated by plot.py at 2018-03-07 21:29:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1445.44 Mbit/s
95th percentile per-packet one-way delay: 278.026 ms
Loss rate: 5.27%
-- Flow 1:
Average throughput: 827.14 Mbit/s
95th percentile per-packet one-way delay: 212.978 ms
Loss rate: 5.87%
-- Flow 2:
Average throughput: 820.52 Mbit/s
95th percentile per-packet one-way delay: 303.744 ms
Loss rate: 4.08%
-- Flow 3:
Average throughput: 230.81 Mbit/s
95th percentile per-packet one-way delay: 396.740 ms
Loss rate: 7.22%
Run 4: Report of FillP — Data Link

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**Throughput (Mbps)**

- **Flow 1 Ingress (mean 870.68 Mbps)**
- **Flow 1 Egress (mean 827.14 Mbps)**
- **Flow 2 Ingress (mean 843.47 Mbps)**
- **Flow 2 Egress (mean 820.52 Mbps)**
- **Flow 3 Ingress (mean 241.47 Mbps)**
- **Flow 3 Egress (mean 230.81 Mbps)**

---

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

- **Flow 1 (95th percentile 212.98 ms)**
- **Flow 2 (95th percentile 303.74 ms)**
- **Flow 3 (95th percentile 396.74 ms)**
Run 5: Statistics of FillP

Start at: 2018-03-07 14:54:22
End at: 2018-03-07 14:54:52

# Below is generated by plot.py at 2018-03-07 21:30:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1538.59 Mbit/s
95th percentile per-packet one-way delay: 272.148 ms
Loss rate: 8.80%
-- Flow 1:
Average throughput: 829.74 Mbit/s
95th percentile per-packet one-way delay: 225.376 ms
Loss rate: 7.23%
-- Flow 2:
Average throughput: 778.87 Mbit/s
95th percentile per-packet one-way delay: 300.053 ms
Loss rate: 7.82%
-- Flow 3:
Average throughput: 594.66 Mbit/s
95th percentile per-packet one-way delay: 302.47 ms
Loss rate: 17.19%
Run 5: Report of FillP — Data Link

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

- Flow 1 ingress (mean 886.18 Mb/s)
- Flow 1 egress (mean 829.74 Mb/s)
- Flow 2 ingress (mean 833.57 Mb/s)
- Flow 2 egress (mean 778.87 Mb/s)
- Flow 3 ingress (mean 698.34 Mb/s)
- Flow 3 egress (mean 594.66 Mb/s)
Run 6: Statistics of FillP

Start at: 2018-03-07 15:15:00
End at: 2018-03-07 15:15:30

# Below is generated by plot.py at 2018-03-07 21:33:48
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1606.23 Mbit/s
  95th percentile per-packet one-way delay: 244.752 ms
  Loss rate: 7.05%
-- Flow 1:
  Average throughput: 829.42 Mbit/s
  95th percentile per-packet one-way delay: 251.178 ms
  Loss rate: 4.90%
-- Flow 2:
  Average throughput: 848.22 Mbit/s
  95th percentile per-packet one-way delay: 235.071 ms
  Loss rate: 6.36%
-- Flow 3:
  Average throughput: 661.80 Mbit/s
  95th percentile per-packet one-way delay: 247.353 ms
  Loss rate: 15.98%
Run 6: Report of FillP — Data Link

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

- **Throughput (Mbps)**
  - Flow 1 ingress (mean 864.21 Mbps)
  - Flow 1 egress (mean 829.42 Mbps)
  - Flow 2 ingress (mean 893.19 Mbps)
  - Flow 2 egress (mean 848.32 Mbps)
  - Flow 3 ingress (mean 765.60 Mbps)
  - Flow 3 egress (mean 661.80 Mbps)

- **Per-packet one-way delay (ms)**
  - Flow 1 (95th percentile 251.18 ms)
  - Flow 2 (95th percentile 235.07 ms)
  - Flow 3 (95th percentile 247.35 ms)
Run 7: Statistics of FillIP

Start at: 2018-03-07 15:35:43
End at: 2018-03-07 15:36:13

# Below is generated by plot.py at 2018-03-07 21:33:48
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1570.62 Mbit/s
  95th percentile per-packet one-way delay: 239.277 ms
  Loss rate: 6.93%
-- Flow 1:
  Average throughput: 851.24 Mbit/s
  95th percentile per-packet one-way delay: 230.440 ms
  Loss rate: 4.55%
-- Flow 2:
  Average throughput: 726.90 Mbit/s
  95th percentile per-packet one-way delay: 249.787 ms
  Loss rate: 10.73%
-- Flow 3:
  Average throughput: 730.86 Mbit/s
  95th percentile per-packet one-way delay: 221.625 ms
  Loss rate: 7.19%
Run 7: Report of FillP — Data Link
Run 8: Statistics of FillP

Start at: 2018-03-07 15:56:21
End at: 2018-03-07 15:56:51

# Below is generated by plot.py at 2018-03-07 21:33:48
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1505.75 Mbit/s
  95th percentile per-packet one-way delay: 229.672 ms
  Loss rate: 5.61%
-- Flow 1:
  Average throughput: 803.39 Mbit/s
  95th percentile per-packet one-way delay: 221.370 ms
  Loss rate: 4.92%
-- Flow 2:
  Average throughput: 722.49 Mbit/s
  95th percentile per-packet one-way delay: 236.615 ms
  Loss rate: 5.63%
-- Flow 3:
  Average throughput: 690.89 Mbit/s
  95th percentile per-packet one-way delay: 239.977 ms
  Loss rate: 7.94%
Run 8: Report of FillP — Data Link

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

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

Flow 1 Ingress (mean 837.24 Mbit/s) — Flow 1 Egress (mean 803.99 Mbit/s)
Flow 2 Ingress (mean 755.05 Mbit/s) — Flow 2 Egress (mean 722.49 Mbit/s)
Flow 3 Ingress (mean 729.31 Mbit/s) — Flow 3 Egress (mean 690.89 Mbit/s)

Flow 1 (95th percentile 221.37 ms) — Flow 2 (95th percentile 236.62 ms) — Flow 3 (95th percentile 239.98 ms)
Run 9: Statistics of FillP

Start at: 2018-03-07 16:16:23
End at: 2018-03-07 16:16:53

# Below is generated by plot.py at 2018-03-07 21:56:14
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1531.77 Mbit/s
  95th percentile per-packet one-way delay: 220.393 ms
  Loss rate: 5.41%
-- Flow 1:
  Average throughput: 814.49 Mbit/s
  95th percentile per-packet one-way delay: 215.358 ms
  Loss rate: 5.04%
-- Flow 2:
  Average throughput: 768.05 Mbit/s
  95th percentile per-packet one-way delay: 231.569 ms
  Loss rate: 5.74%
-- Flow 3:
  Average throughput: 648.77 Mbit/s
  95th percentile per-packet one-way delay: 222.771 ms
  Loss rate: 6.05%
Run 9: Report of FillP — Data Link

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

- Flow 1 Ingress (mean 850.01 Mbit/s)
- Flow 1 Egress (mean 814.49 Mbit/s)
- Flow 2 Ingress (mean 803.25 Mbit/s)
- Flow 2 Egress (mean 768.05 Mbit/s)
- Flow 3 Ingress (mean 670.99 Mbit/s)
- Flow 3 Egress (mean 648.77 Mbit/s)

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

- Flow 1 (95th percentile 215.36 ms)
- Flow 2 (95th percentile 231.57 ms)
- Flow 3 (95th percentile 222.77 ms)
Run 10: Statistics of FillP

Start at: 2018-03-07 16:36:35
End at: 2018-03-07 16:37:05

# Below is generated by plot.py at 2018-03-07 21:56:14
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1491.92 Mbit/s
  95th percentile per-packet one-way delay: 229.770 ms
  Loss rate: 6.29%
-- Flow 1:
  Average throughput: 756.57 Mbit/s
  95th percentile per-packet one-way delay: 229.970 ms
  Loss rate: 6.83%
-- Flow 2:
  Average throughput: 766.65 Mbit/s
  95th percentile per-packet one-way delay: 231.334 ms
  Loss rate: 5.28%
-- Flow 3:
  Average throughput: 702.64 Mbit/s
  95th percentile per-packet one-way delay: 226.621 ms
  Loss rate: 6.69%
Run 10: Report of FillIP — Data Link

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

- Flow 1 Ingress (mean 804.62 Mbps)
- Flow 1 Egress (mean 756.57 Mbps)
- Flow 2 Ingress (mean 798.29 Mbps)
- Flow 2 Egress (mean 766.65 Mbps)
- Flow 3 Ingress (mean 732.14 Mbps)
- Flow 3 Egress (mean 702.64 Mbps)

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

- Flow 1 (95th percentile 229.97 ms)
- Flow 2 (95th percentile 231.33 ms)
- Flow 3 (95th percentile 226.62 ms)
Run 1: Statistics of Indigo-1-32

Start at: 2018-03-07 13:35:33
End at: 2018-03-07 13:36:03

# Below is generated by plot.py at 2018-03-07 21:56:14
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 304.60 Mbit/s
  95th percentile per-packet one-way delay: 138.170 ms
  Loss rate: 1.66%
-- Flow 1:
  Average throughput: 164.79 Mbit/s
  95th percentile per-packet one-way delay: 137.801 ms
  Loss rate: 1.14%
-- Flow 2:
  Average throughput: 127.18 Mbit/s
  95th percentile per-packet one-way delay: 138.086 ms
  Loss rate: 1.55%
-- Flow 3:
  Average throughput: 155.09 Mbit/s
  95th percentile per-packet one-way delay: 139.274 ms
  Loss rate: 3.45%
Run 1: Report of Indigo-1-32 — Data Link

[Graph showing throughput and per-packet one-way delay over time for flows 1, 2, and 3.]
Run 2: Statistics of Indigo-1-32

Start at: 2018-03-07 13:56:09
End at: 2018-03-07 13:56:39

# Below is generated by plot.py at 2018-03-07 21:56:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 266.92 Mbit/s
95th percentile per-packet one-way delay: 139.009 ms
Loss rate: 1.58%
-- Flow 1:
Average throughput: 134.11 Mbit/s
95th percentile per-packet one-way delay: 138.303 ms
Loss rate: 0.91%
-- Flow 2:
Average throughput: 128.52 Mbit/s
95th percentile per-packet one-way delay: 140.016 ms
Loss rate: 1.53%
-- Flow 3:
Average throughput: 149.10 Mbit/s
95th percentile per-packet one-way delay: 139.750 ms
Loss rate: 3.49%
Run 2: Report of Indigo-1-32 — Data Link

Throughput (Mbps):

- Flow 1 ingress (mean 134.11 Mbps)
- Flow 1 egress (mean 134.11 Mbps)
- Flow 2 ingress (mean 128.72 Mbps)
- Flow 2 egress (mean 128.52 Mbps)
- Flow 3 ingress (mean 150.30 Mbps)
- Flow 3 egress (mean 149.10 Mbps)

Per-packet one-way delay (ms):

- Flow 1 (95th percentile 138.30 ms)
- Flow 2 (95th percentile 140.02 ms)
- Flow 3 (95th percentile 139.75 ms)
Run 3: Statistics of Indigo-1-32

Start at: 2018-03-07 14:16:48
End at: 2018-03-07 14:17:18

# Below is generated by plot.py at 2018-03-07 21:56:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 272.68 Mbit/s
95th percentile per-packet one-way delay: 138.182 ms
Loss rate: 1.62%
-- Flow 1:
Average throughput: 137.13 Mbit/s
95th percentile per-packet one-way delay: 137.861 ms
Loss rate: 0.96%
-- Flow 2:
Average throughput: 128.26 Mbit/s
95th percentile per-packet one-way delay: 137.753 ms
Loss rate: 1.56%
-- Flow 3:
Average throughput: 158.99 Mbit/s
95th percentile per-packet one-way delay: 140.114 ms
Loss rate: 3.42%
Run 3: Report of Indigo-1-32 — Data Link

![Graph of throughput and delay](image)

**Legend:**
- Flow 1 ingress (mean 137.19 Mbit/s)
- Flow 1 egress (mean 137.13 Mbit/s)
- Flow 2 ingress (mean 128.49 Mbit/s)
- Flow 2 egress (mean 128.26 Mbit/s)
- Flow 3 ingress (mean 160.02 Mbit/s)
- Flow 3 egress (mean 158.99 Mbit/s)

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

**Legend:**
- Flow 1 (95th percentile 137.96 ms)
- Flow 2 (95th percentile 137.75 ms)
- Flow 3 (95th percentile 140.11 ms)
Run 4: Statistics of Indigo-1-32

Start at: 2018-03-07 14:36:58
End at: 2018-03-07 14:37:28

# Below is generated by plot.py at 2018-03-07 21:56:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 310.73 Mbit/s
95th percentile per-packet one-way delay: 138.325 ms
Loss rate: 1.46%
-- Flow 1:
Average throughput: 176.37 Mbit/s
95th percentile per-packet one-way delay: 137.822 ms
Loss rate: 0.88%
-- Flow 2:
Average throughput: 129.78 Mbit/s
95th percentile per-packet one-way delay: 139.008 ms
Loss rate: 1.52%
-- Flow 3:
Average throughput: 150.97 Mbit/s
95th percentile per-packet one-way delay: 139.043 ms
Loss rate: 3.39%
Run 4: Report of Indigo-1-32 — Data Link

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

Throughput (Mbps) vs. Time (s)

- Flow 1 ingress (mean 176.31 Mbps)
- Flow 1 egress (mean 176.37 Mbps)
- Flow 2 ingress (mean 129.96 Mbps)
- Flow 2 egress (mean 129.78 Mbps)
- Flow 3 ingress (mean 151.94 Mbps)
- Flow 3 egress (mean 150.97 Mbps)

Packet delay (ms) vs. Time (s)

- Flow 1 (95th percentile 137.82 ms)
- Flow 2 (95th percentile 139.01 ms)
- Flow 3 (95th percentile 139.04 ms)
Run 5: Statistics of Indigo-1-32

Start at: 2018-03-07 14:57:18
End at: 2018-03-07 14:57:48

# Below is generated by plot.py at 2018-03-07 21:56:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 254.60 Mbit/s
95th percentile per-packet one-way delay: 136.554 ms
Loss rate: 1.57%
-- Flow 1:
Average throughput: 134.46 Mbit/s
95th percentile per-packet one-way delay: 136.208 ms
Loss rate: 0.97%
-- Flow 2:
Average throughput: 129.18 Mbit/s
95th percentile per-packet one-way delay: 136.416 ms
Loss rate: 1.57%
-- Flow 3:
Average throughput: 109.82 Mbit/s
95th percentile per-packet one-way delay: 137.891 ms
Loss rate: 3.79%
Run 5: Report of Indigo-1-32 — Data Link

![Graph showing throughput and latency for different flows. The x-axis represents time in seconds, and the y-axis represents throughput in Mbps and ping latency in milliseconds. The graphs display the performance of Flow 1, Flow 2, and Flow 3 for ingress and egress traffic.]
Run 6: Statistics of Indigo-1-32

Start at: 2018-03-07 15:17:57
End at: 2018-03-07 15:18:27

# Below is generated by plot.py at 2018-03-07 21:56:14
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 334.87 Mbit/s
  95th percentile per-packet one-way delay: 138.832 ms
  Loss rate: 1.37%
  -- Flow 1:
    Average throughput: 170.59 Mbit/s
    95th percentile per-packet one-way delay: 137.011 ms
    Loss rate: 0.80%
  -- Flow 2:
    Average throughput: 174.91 Mbit/s
    95th percentile per-packet one-way delay: 140.615 ms
    Loss rate: 1.35%
  -- Flow 3:
    Average throughput: 151.36 Mbit/s
    95th percentile per-packet one-way delay: 141.246 ms
    Loss rate: 3.40%
Run 6: Report of Indigo-1-32 — Data Link

[Graphs showing throughput and one-way delay over time for different flows, each with specific mean values for ingress and egress traffic.]
Run 7: Statistics of Indigo-1-32

Start at: 2018-03-07 15:38:39
End at: 2018-03-07 15:39:09

# Below is generated by plot.py at 2018-03-07 21:56:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 330.77 Mbit/s
95th percentile per-packet one-way delay: 137.760 ms
Loss rate: 1.34%
-- Flow 1:
Average throughput: 170.95 Mbit/s
95th percentile per-packet one-way delay: 137.015 ms
Loss rate: 0.81%
-- Flow 2:
Average throughput: 168.34 Mbit/s
95th percentile per-packet one-way delay: 138.558 ms
Loss rate: 1.33%
-- Flow 3:
Average throughput: 152.63 Mbit/s
95th percentile per-packet one-way delay: 140.684 ms
Loss rate: 3.14%
Run 7: Report of Indigo-1-32 — Data Link

![Graph showing throughput and packet delay over time for different flows. The graphs depict the performance metrics of each flow, with lines indicating throughput and markers showing packet delay.](image)

- **Flow 1** (mean 170.78 Mbit/s) and (95th percentile 137.01 ms)
- **Flow 2** (mean 168.43 Mbit/s) and (95th percentile 138.56 ms)
- **Flow 3** (mean 153.16 Mbit/s) and (95th percentile 140.68 ms)
Run 8: Statistics of Indigo-1-32

Start at: 2018-03-07 15:59:15
End at: 2018-03-07 15:59:45

# Below is generated by plot.py at 2018-03-07 21:56:14
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 241.60 Mbit/s
  95th percentile per-packet one-way delay: 138.523 ms
  Loss rate: 1.56%
-- Flow 1:
  Average throughput: 124.14 Mbit/s
  95th percentile per-packet one-way delay: 138.012 ms
  Loss rate: 0.92%
-- Flow 2:
  Average throughput: 122.49 Mbit/s
  95th percentile per-packet one-way delay: 138.925 ms
  Loss rate: 1.56%
-- Flow 3:
  Average throughput: 113.42 Mbit/s
  95th percentile per-packet one-way delay: 139.099 ms
  Loss rate: 3.71%
Run 8: Report of Indigo-1-32 — Data Link
Run 9: Statistics of Indigo-1-32

Start at: 2018-03-07 16:19:17
End at: 2018-03-07 16:19:47

# Below is generated by plot.py at 2018-03-07 21:56:15
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 285.93 Mbit/s
  95th percentile per-packet one-way delay: 137.606 ms
  Loss rate: 1.44%
-- Flow 1:
  Average throughput: 131.36 Mbit/s
  95th percentile per-packet one-way delay: 137.322 ms
  Loss rate: 0.96%
-- Flow 2:
  Average throughput: 164.64 Mbit/s
  95th percentile per-packet one-way delay: 137.702 ms
  Loss rate: 1.29%
-- Flow 3:
  Average throughput: 142.38 Mbit/s
  95th percentile per-packet one-way delay: 138.196 ms
  Loss rate: 3.15%
Run 9: Report of Indigo-1-32 — Data Link

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

Legend:
- Flow 1 ingress (mean 131.41 Mbit/s)
- Flow 1 egress (mean 131.36 Mbit/s)
- Flow 2 ingress (mean 164.49 Mbit/s)
- Flow 2 egress (mean 164.64 Mbit/s)
- Flow 3 ingress (mean 142.90 Mbit/s)
- Flow 3 egress (mean 142.38 Mbit/s)
Run 10: Statistics of Indigo-1-32

Start at: 2018-03-07 16:39:28
End at: 2018-03-07 16:39:58

# Below is generated by plot.py at 2018-03-07 21:56:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 290.10 Mbit/s
95th percentile per-packet one-way delay: 137.714 ms
Loss rate: 1.38%
-- Flow 1:
Average throughput: 171.18 Mbit/s
95th percentile per-packet one-way delay: 137.088 ms
Loss rate: 0.84%
-- Flow 2:
Average throughput: 125.46 Mbit/s
95th percentile per-packet one-way delay: 137.884 ms
Loss rate: 1.53%
-- Flow 3:
Average throughput: 112.41 Mbit/s
95th percentile per-packet one-way delay: 140.162 ms
Loss rate: 3.50%
Run 10: Report of Indigo-1-32 — Data Link
Run 1: Statistics of Vivace-latency

Start at: 2018-03-07 13:41:01
End at: 2018-03-07 13:41:31

# Below is generated by plot.py at 2018-03-07 21:56:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 491.87 Mbit/s
95th percentile per-packet one-way delay: 169.347 ms
Loss rate: 2.18%
-- Flow 1:
Average throughput: 238.23 Mbit/s
95th percentile per-packet one-way delay: 139.829 ms
Loss rate: 1.56%
-- Flow 2:
Average throughput: 284.64 Mbit/s
95th percentile per-packet one-way delay: 140.296 ms
Loss rate: 1.65%
-- Flow 3:
Average throughput: 201.91 Mbit/s
95th percentile per-packet one-way delay: 241.410 ms
Loss rate: 5.83%
Run 1: Report of Vivace-latency — Data Link

![Graph of throughput and packet latency over time for different flows.](image)
Run 2: Statistics of Vivace-latency

Start at: 2018-03-07 14:01:48
End at: 2018-03-07 14:02:18

# Below is generated by plot.py at 2018-03-07 21:56:15
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 540.06 Mbit/s
  95th percentile per-packet one-way delay: 174.865 ms
  Loss rate: 1.69%
-- Flow 1:
  Average throughput: 336.11 Mbit/s
  95th percentile per-packet one-way delay: 186.304 ms
  Loss rate: 1.50%
-- Flow 2:
  Average throughput: 254.05 Mbit/s
  95th percentile per-packet one-way delay: 149.299 ms
  Loss rate: 1.25%
-- Flow 3:
  Average throughput: 111.12 Mbit/s
  95th percentile per-packet one-way delay: 146.625 ms
  Loss rate: 5.32%
Run 2: Report of Vivace-latency — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 338.12 Mbps)
  - Flow 1 egress (mean 336.11 Mbps)
  - Flow 2 ingress (mean 255.72 Mbps)
  - Flow 2 egress (mean 254.05 Mbps)
  - Flow 3 ingress (mean 114.09 Mbps)
  - Flow 3 egress (mean 111.12 Mbps)

- **Packet delay (ms):**
  - Flow 1 (95th percentile 186.30 ms)
  - Flow 2 (95th percentile 149.30 ms)
  - Flow 3 (95th percentile 146.62 ms)
Run 3: Statistics of Vivace-latency

Start at: 2018-03-07 14:22:31
End at: 2018-03-07 14:23:01

# Below is generated by plot.py at 2018-03-07 21:56:15
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 500.15 Mbit/s
  95th percentile per-packet one-way delay: 173.165 ms
  Loss rate: 1.19%
-- Flow 1:
  Average throughput: 302.11 Mbit/s
  95th percentile per-packet one-way delay: 209.889 ms
  Loss rate: 0.80%
-- Flow 2:
  Average throughput: 240.93 Mbit/s
  95th percentile per-packet one-way delay: 136.872 ms
  Loss rate: 1.08%
-- Flow 3:
  Average throughput: 119.08 Mbit/s
  95th percentile per-packet one-way delay: 137.912 ms
  Loss rate: 4.56%
Run 3: Report of Vivace-latency — Data Link
Run 4: Statistics of Vivace-latency

Start at: 2018-03-07 14:42:32
End at: 2018-03-07 14:43:02

# Below is generated by plot.py at 2018-03-07 21:56:15
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 541.47 Mbit/s
  95th percentile per-packet one-way delay: 182.058 ms
  Loss rate: 1.54%
-- Flow 1:
  Average throughput: 302.85 Mbit/s
  95th percentile per-packet one-way delay: 145.575 ms
  Loss rate: 0.64%
-- Flow 2:
  Average throughput: 305.04 Mbit/s
  95th percentile per-packet one-way delay: 197.703 ms
  Loss rate: 2.17%
-- Flow 3:
  Average throughput: 113.96 Mbit/s
  95th percentile per-packet one-way delay: 143.013 ms
  Loss rate: 5.22%
Run 4: Report of Vivace-latency — Data Link

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

- Flow 1 ingress (mean 301.95 Mbit/s)
- Flow 1 egress (mean 302.85 Mbit/s)
- Flow 2 ingress (mean 307.52 Mbit/s)
- Flow 2 egress (mean 305.04 Mbit/s)
- Flow 3 ingress (mean 116.92 Mbit/s)
- Flow 3 egress (mean 113.96 Mbit/s)

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

- Flow 1 (95th percentile 145.57 ms)
- Flow 2 (95th percentile 197.70 ms)
- Flow 3 (95th percentile 142.01 ms)
Run 5: Statistics of Vivace-latency

Start at: 2018-03-07 15:02:54
End at: 2018-03-07 15:03:24

# Below is generated by plot.py at 2018-03-07 21:56:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 491.55 Mbit/s
95th percentile per-packet one-way delay: 163.055 ms
Loss rate: 1.68%
-- Flow 1:
Average throughput: 261.88 Mbit/s
95th percentile per-packet one-way delay: 166.377 ms
Loss rate: 1.33%
-- Flow 2:
Average throughput: 282.93 Mbit/s
95th percentile per-packet one-way delay: 166.490 ms
Loss rate: 1.57%
-- Flow 3:
Average throughput: 131.51 Mbit/s
95th percentile per-packet one-way delay: 144.464 ms
Loss rate: 4.22%
Run 5: Report of Vivace-latency — Data Link
Run 6: Statistics of Vivace-latency

Start at: 2018-03-07 15:23:48
End at: 2018-03-07 15:24:18

# Below is generated by plot.py at 2018-03-07 21:56:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 476.55 Mbit/s
95th percentile per-packet one-way delay: 169.309 ms
Loss rate: 1.64%
-- Flow 1:
Average throughput: 317.83 Mbit/s
95th percentile per-packet one-way delay: 142.525 ms
Loss rate: 0.98%
-- Flow 2:
Average throughput: 185.52 Mbit/s
95th percentile per-packet one-way delay: 240.191 ms
Loss rate: 2.44%
-- Flow 3:
Average throughput: 111.54 Mbit/s
95th percentile per-packet one-way delay: 176.839 ms
Loss rate: 4.57%
Run 6: Report of Vivace-latency — Data Link
Run 7: Statistics of Vivace-latency

Start at: 2018-03-07 15:44:20
End at: 2018-03-07 15:44:50

# Below is generated by plot.py at 2018-03-07 21:56:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 478.62 Mbit/s
95th percentile per-packet one-way delay: 152.589 ms
Loss rate: 1.49%
-- Flow 1:
Average throughput: 307.62 Mbit/s
95th percentile per-packet one-way delay: 138.426 ms
Loss rate: 0.95%
-- Flow 2:
Average throughput: 186.35 Mbit/s
95th percentile per-packet one-way delay: 171.258 ms
Loss rate: 1.88%
-- Flow 3:
Average throughput: 147.87 Mbit/s
95th percentile per-packet one-way delay: 219.422 ms
Loss rate: 3.92%
Run 7: Report of Vivace-latency — Data Link
Run 8: Statistics of Vivace-latency

Start at: 2018-03-07 16:04:45
End at: 2018-03-07 16:05:15

# Below is generated by plot.py at 2018-03-07 21:56:15
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 451.80 Mbit/s
  95th percentile per-packet one-way delay: 140.289 ms
  Loss rate: 1.46%
-- Flow 1:
  Average throughput: 312.49 Mbit/s
  95th percentile per-packet one-way delay: 143.992 ms
  Loss rate: 1.03%
-- Flow 2:
  Average throughput: 179.75 Mbit/s
  95th percentile per-packet one-way delay: 136.913 ms
  Loss rate: 2.00%
-- Flow 3:
  Average throughput: 63.22 Mbit/s
  95th percentile per-packet one-way delay: 140.669 ms
  Loss rate: 4.85%
Run 8: Report of Vivace-latency — Data Link

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

- Flow 1 ingress (mean 312.85 Mbit/s)
- Flow 1 egress (mean 312.49 Mbit/s)
- Flow 2 ingress (mean 180.88 Mbit/s)
- Flow 2 egress (mean 179.75 Mbit/s)
- Flow 3 ingress (mean 64.56 Mbit/s)
- Flow 3 egress (mean 63.22 Mbit/s)

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

- Flow 1 (95th percentile 143.99 ms)
- Flow 2 (95th percentile 136.91 ms)
- Flow 3 (95th percentile 140.67 ms)
Run 9: Statistics of Vivace-latency

Start at: 2018-03-07 16:24:55
End at: 2018-03-07 16:25:25

# Below is generated by plot.py at 2018-03-07 21:56:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 483.66 Mbit/s
95th percentile per-packet one-way delay: 144.432 ms
Loss rate: 1.67%
-- Flow 1:
Average throughput: 289.77 Mbit/s
95th percentile per-packet one-way delay: 147.705 ms
Loss rate: 1.33%
-- Flow 2:
Average throughput: 234.41 Mbit/s
95th percentile per-packet one-way delay: 159.551 ms
Loss rate: 1.55%
-- Flow 3:
Average throughput: 120.54 Mbit/s
95th percentile per-packet one-way delay: 136.531 ms
Loss rate: 4.55%
Run 9: Report of Vivace-latency — Data Link

![Throughput Graph]

- Flow 1 ingress (mean 291.00 Mbit/s)
- Flow 1 egress (mean 289.77 Mbit/s)
- Flow 2 ingress (mean 234.84 Mbit/s)
- Flow 2 egress (mean 234.41 Mbit/s)
- Flow 3 ingress (mean 122.87 Mbit/s)
- Flow 3 egress (mean 120.54 Mbit/s)

![Latency Graph]

- Flow 1 (95th percentile 147.71 ms)
- Flow 2 (95th percentile 159.55 ms)
- Flow 3 (95th percentile 136.53 ms)
Run 10: Statistics of Vivace-latencc

Start at: 2018-03-07 16:45:11
End at: 2018-03-07 16:45:41

# Below is generated by plot.py at 2018-03-07 21:56:15
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 470.96 Mbit/s
  95th percentile per-packet one-way delay: 143.217 ms
  Loss rate: 1.72%
-- Flow 1:
  Average throughput: 285.00 Mbit/s
  95th percentile per-packet one-way delay: 140.524 ms
  Loss rate: 0.77%
-- Flow 2:
  Average throughput: 186.70 Mbit/s
  95th percentile per-packet one-way delay: 135.874 ms
  Loss rate: 2.00%
-- Flow 3:
  Average throughput: 193.63 Mbit/s
  95th percentile per-packet one-way delay: 196.673 ms
  Loss rate: 5.29%
Run 10: Report of Vivace-latency — Data Link

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

- Flow 1 ingress (mean 284.54 Mbit/s)
- Flow 1 egress (mean 285.00 Mbit/s)
- Flow 2 ingress (mean 187.94 Mbit/s)
- Flow 2 egress (mean 186.70 Mbit/s)
- Flow 3 ingress (mean 196.76 Mbit/s)
- Flow 3 egress (mean 193.63 Mbit/s)

![Graph 2: Ping延迟 vs Time](image)

- Flow 1 (95th percentile 140.52 ms)
- Flow 2 (95th percentile 135.87 ms)
- Flow 3 (95th percentile 196.67 ms)
Run 1: Statistics of Vivace-loss

Start at: 2018-03-07 13:45:46
End at: 2018-03-07 13:46:16

# Below is generated by plot.py at 2018-03-07 21:58:25
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 613.83 Mbit/s
  95th percentile per-packet one-way delay: 235.065 ms
  Loss rate: 1.87%
-- Flow 1:
  Average throughput: 349.99 Mbit/s
  95th percentile per-packet one-way delay: 264.032 ms
  Loss rate: 1.95%
-- Flow 2:
  Average throughput: 302.46 Mbit/s
  95th percentile per-packet one-way delay: 179.281 ms
  Loss rate: 0.15%
-- Flow 3:
  Average throughput: 197.20 Mbit/s
  95th percentile per-packet one-way delay: 264.679 ms
  Loss rate: 6.53%
Run 2: Statistics of Vivace-loss

Start at: 2018-03-07 14:06:28
End at: 2018-03-07 14:06:58

# Below is generated by plot.py at 2018-03-07 21:59:02
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 506.84 Mbit/s
  95th percentile per-packet one-way delay: 280.380 ms
  Loss rate: 4.45%
-- Flow 1:
  Average throughput: 258.78 Mbit/s
  95th percentile per-packet one-way delay: 278.627 ms
  Loss rate: 5.25%
-- Flow 2:
  Average throughput: 293.73 Mbit/s
  95th percentile per-packet one-way delay: 320.828 ms
  Loss rate: 3.47%
-- Flow 3:
  Average throughput: 170.19 Mbit/s
  95th percentile per-packet one-way delay: 161.360 ms
  Loss rate: 4.04%
Run 2: Report of Vivace-loss — Data Link

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

- **Flow 1** (mean 270.63 Mbps)
  - Ingress: 270.63 Mbps
  - Egress: 258.78 Mbps
- **Flow 2** (mean 299.57 Mbps)
  - Ingress: 299.57 Mbps
  - Egress: 293.73 Mbps
- **Flow 3** (mean 169.68 Mbps)
  - Ingress: 169.68 Mbps
  - Egress: 170.39 Mbps

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

- **Flow 1** (95th percentile 278.63 ms)
- **Flow 2** (95th percentile 320.83 ms)
- **Flow 3** (95th percentile 161.36 ms)
Run 3: Statistics of Vivace-loss

Start at: 2018-03-07 14:27:01
End at: 2018-03-07 14:27:31

# Below is generated by plot.py at 2018-03-07 22:00:34
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 394.66 Mbit/s
  95th percentile per-packet one-way delay: 282.925 ms
  Loss rate: 4.13%
-- Flow 1:
  Average throughput: 240.60 Mbit/s
  95th percentile per-packet one-way delay: 288.221 ms
  Loss rate: 4.70%
-- Flow 2:
  Average throughput: 170.69 Mbit/s
  95th percentile per-packet one-way delay: 136.581 ms
  Loss rate: 1.20%
-- Flow 3:
  Average throughput: 127.55 Mbit/s
  95th percentile per-packet one-way delay: 271.060 ms
  Loss rate: 8.39%
Run 3: Report of Vivace-loss — Data Link

![Graphs showing throughput and latency over time for different flows.](image-url)
Run 4: Statistics of Vivace-loss

Start at: 2018-03-07 14:46:59
End at: 2018-03-07 14:47:29

# Below is generated by plot.py at 2018-03-07 22:02:41
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 498.63 Mbit/s
  95th percentile per-packet one-way delay: 193.300 ms
  Loss rate: 2.39%
-- Flow 1:
  Average throughput: 253.11 Mbit/s
  95th percentile per-packet one-way delay: 241.363 ms
  Loss rate: 2.35%
-- Flow 2:
  Average throughput: 291.64 Mbit/s
  95th percentile per-packet one-way delay: 148.027 ms
  Loss rate: 2.03%
-- Flow 3:
  Average throughput: 164.84 Mbit/s
  95th percentile per-packet one-way delay: 193.360 ms
  Loss rate: 3.91%
Run 4: Report of Vivace-loss — Data Link
Run 5: Statistics of Vivace-loss

Start at: 2018-03-07 15:07:34
End at: 2018-03-07 15:08:04

# Below is generated by plot.py at 2018-03-07 22:05:14
# Datalink statistics
-- Total of 3 flows:
 Average throughput: 589.69 Mbit/s
 95th percentile per-packet one-way delay: 259.449 ms
 Loss rate: 2.08%
 -- Flow 1:
 Average throughput: 331.97 Mbit/s
 95th percentile per-packet one-way delay: 273.901 ms
 Loss rate: 2.47%
 -- Flow 2:
 Average throughput: 290.75 Mbit/s
 95th percentile per-packet one-way delay: 192.194 ms
 Loss rate: 0.00%
 -- Flow 3:
 Average throughput: 203.67 Mbit/s
 95th percentile per-packet one-way delay: 242.111 ms
 Loss rate: 5.86%
Run 5: Report of Vivace-loss — Data Link

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

- Flow 1 ingress (mean 337.28 Mbit/s)
- Flow 1 egress (mean 331.97 Mbit/s)
- Flow 2 ingress (mean 286.67 Mbit/s)
- Flow 2 egress (mean 290.75 Mbit/s)
- Flow 3 ingress (mean 210.36 Mbit/s)
- Flow 3 egress (mean 203.67 Mbit/s)

![Graph showing packet loss over time.]

- Flow 1 (95th percentile 273.90 ms)
- Flow 2 (95th percentile 192.19 ms)
- Flow 3 (95th percentile 242.11 ms)
Run 6: Statistics of Vivace-loss

Start at: 2018-03-07 15:28:30
End at: 2018-03-07 15:29:00

# Below is generated by plot.py at 2018-03-07 22:05:14
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 496.73 Mbit/s
  95th percentile per-packet one-way delay: 286.316 ms
  Loss rate: 2.96%
-- Flow 1:
  Average throughput: 263.28 Mbit/s
  95th percentile per-packet one-way delay: 291.620 ms
  Loss rate: 3.69%
-- Flow 2:
  Average throughput: 305.82 Mbit/s
  95th percentile per-packet one-way delay: 140.335 ms
  Loss rate: 2.01%
-- Flow 3:
  Average throughput: 96.51 Mbit/s
  95th percentile per-packet one-way delay: 184.339 ms
  Loss rate: 2.90%
Run 6: Report of Vivace-loss — Data Link
Run 7: Statistics of Vivace-loss

Start at: 2018-03-07 15:49:13
End at: 2018-03-07 15:49:43

# Below is generated by plot.py at 2018-03-07 22:05:14
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 330.20 Mbit/s
  95th percentile per-packet one-way delay: 287.764 ms
  Loss rate: 4.78%
-- Flow 1:
  Average throughput: 155.98 Mbit/s
  95th percentile per-packet one-way delay: 254.078 ms
  Loss rate: 3.09%
-- Flow 2:
  Average throughput: 188.31 Mbit/s
  95th percentile per-packet one-way delay: 235.688 ms
  Loss rate: 2.30%
-- Flow 3:
  Average throughput: 153.98 Mbit/s
  95th percentile per-packet one-way delay: 421.663 ms
  Loss rate: 14.86%
Run 7: Report of Vivace-loss — Data Link

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

- Flow 1 ingress (mean 159.47 Mbit/s)
- Flow 1 egress (mean 155.98 Mbit/s)
- Flow 2 ingress (mean 196.10 Mbit/s)
- Flow 2 egress (mean 188.31 Mbit/s)
- Flow 3 ingress (mean 175.75 Mbit/s)
- Flow 3 egress (mean 153.98 Mbit/s)
Run 8: Statistics of Vivace-loss

Start at: 2018-03-07 16:09:12
End at: 2018-03-07 16:09:42

# Below is generated by plot.py at 2018-03-07 22:05:14
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 405.28 Mbit/s
  95th percentile per-packet one-way delay: 216.019 ms
  Loss rate: 2.24%
-- Flow 1:
  Average throughput: 164.76 Mbit/s
  95th percentile per-packet one-way delay: 251.608 ms
  Loss rate: 2.62%
-- Flow 2:
  Average throughput: 282.38 Mbit/s
  95th percentile per-packet one-way delay: 171.713 ms
  Loss rate: 1.82%
-- Flow 3:
  Average throughput: 166.82 Mbit/s
  95th percentile per-packet one-way delay: 231.852 ms
  Loss rate: 2.58%
Run 8: Report of Vivace-loss — Data Link

Throughput (Mbps)

Flow 1 ingress (mean 167.65 Mbps)  Flow 1 egress (mean 164.76 Mbps)
Flow 2 ingress (mean 283.65 Mbps)  Flow 2 egress (mean 282.38 Mbps)
Flow 3 ingress (mean 165.99 Mbps)  Flow 3 egress (mean 166.82 Mbps)

Per-packet one-way delay (ms)

Flow 1 (95th percentile 251.61 ms)  Flow 2 (95th percentile 171.71 ms)  Flow 3 (95th percentile 231.85 ms)
Run 9: Statistics of Vivace-loss

Start at: 2018-03-07 16:29:23
End at: 2018-03-07 16:29:53

# Below is generated by plot.py at 2018-03-07 22:05:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 426.22 Mbit/s
95th percentile per-packet one-way delay: 163.792 ms
Loss rate: 1.61%
-- Flow 1:
Average throughput: 249.56 Mbit/s
95th percentile per-packet one-way delay: 231.423 ms
Loss rate: 1.72%
-- Flow 2:
Average throughput: 189.58 Mbit/s
95th percentile per-packet one-way delay: 141.039 ms
Loss rate: 1.98%
-- Flow 3:
Average throughput: 160.91 Mbit/s
95th percentile per-packet one-way delay: 146.041 ms
Loss rate: 0.14%
Run 9: Report of Vivace-loss — Data Link
Run 10: Statistics of Vivace-loss

Start at: 2018-03-07 16:49:52
End at: 2018-03-07 16:50:22

# Below is generated by plot.py at 2018-03-07 22:06:56
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 448.43 Mbit/s
  95th percentile per-packet one-way delay: 140.221 ms
  Loss rate: 1.20%
-- Flow 1:
  Average throughput: 289.10 Mbit/s
  95th percentile per-packet one-way delay: 136.824 ms
  Loss rate: 0.80%
-- Flow 2:
  Average throughput: 180.40 Mbit/s
  95th percentile per-packet one-way delay: 140.223 ms
  Loss rate: 1.00%
-- Flow 3:
  Average throughput: 124.04 Mbit/s
  95th percentile per-packet one-way delay: 141.950 ms
  Loss rate: 4.56%
Run 10: Report of Vivace-loss — Data Link

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

- Flow 1 ingress (mean 288.72 Mbps)
- Flow 1 egress (mean 289.10 Mbps)
- Flow 2 ingress (mean 179.76 Mbps)
- Flow 2 egress (mean 180.40 Mbps)
- Flow 3 ingress (mean 126.25 Mbps)
- Flow 3 egress (mean 124.04 Mbps)

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

- Flow 1 (95th percentile 136.82 ms)
- Flow 2 (95th percentile 140.22 ms)
- Flow 3 (95th percentile 141.95 ms)
Run 1: Statistics of Vivace-LTE

Start at: 2018-03-07 13:38:37
End at: 2018-03-07 13:39:07

# Below is generated by plot.py at 2018-03-07 22:09:29
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 514.91 Mbit/s
  95th percentile per-packet one-way delay: 155.211 ms
  Loss rate: 1.90%
-- Flow 1:
  Average throughput: 346.98 Mbit/s
  95th percentile per-packet one-way delay: 144.158 ms
  Loss rate: 1.03%
-- Flow 2:
  Average throughput: 188.02 Mbit/s
  95th percentile per-packet one-way delay: 152.779 ms
  Loss rate: 1.98%
-- Flow 3:
  Average throughput: 133.15 Mbit/s
  95th percentile per-packet one-way delay: 294.298 ms
  Loss rate: 8.20%
Run 1: Report of Vivace-LTE — Data Link

![Graphs showing throughput and delay](image)

- **Throughput**
  - Flow 1 ingress (mean 347.39 Mbit/s)
  - Flow 2 ingress (mean 189.18 Mbit/s)
  - Flow 3 ingress (mean 141.02 Mbit/s)
  - Flow 1 egress (mean 346.98 Mbit/s)
  - Flow 2 egress (mean 188.02 Mbit/s)
  - Flow 3 egress (mean 133.15 Mbit/s)

- **Delay**
  - Flow 1 (95th percentile 144.16 ms)
  - Flow 2 (95th percentile 152.78 ms)
  - Flow 3 (95th percentile 294.30 ms)
Run 2: Statistics of Vivace-LTE

Start at: 2018-03-07 13:59:15
End at: 2018-03-07 13:59:45

# Below is generated by plot.py at 2018-03-07 22:11:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 588.40 Mbit/s
95th percentile per-packet one-way delay: 302.202 ms
Loss rate: 2.55%
-- Flow 1:
Average throughput: 348.88 Mbit/s
95th percentile per-packet one-way delay: 191.326 ms
Loss rate: 1.10%
-- Flow 2:
Average throughput: 262.30 Mbit/s
95th percentile per-packet one-way delay: 333.825 ms
Loss rate: 4.40%
-- Flow 3:
Average throughput: 204.44 Mbit/s
95th percentile per-packet one-way delay: 186.941 ms
Loss rate: 5.05%
Run 2: Report of Vivace-LTE — Data Link

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

- Throughput (Mbps):
  - Flow 1 ingress (mean 349.54 Mbps)
  - Flow 1 egress (mean 348.88 Mbps)
  - Flow 2 ingress (mean 270.59 Mbps)
  - Flow 2 egress (mean 262.39 Mbps)
  - Flow 3 ingress (mean 299.32 Mbps)
  - Flow 3 egress (mean 294.44 Mbps)

- Packet delay (ms):
  - Flow 1 (95th percentile 191.33 ms)
  - Flow 2 (95th percentile 333.82 ms)
  - Flow 3 (95th percentile 186.94 ms)
Run 3: Statistics of Vivace-LTE

Start at: 2018-03-07 14:19:58  
End at: 2018-03-07 14:20:28

# Below is generated by plot.py at 2018-03-07 22:12:24  
# Datalink statistics
-- Total of 3 flows:
Average throughput: 587.80 Mbit/s  
95th percentile per-packet one-way delay: 237.634 ms  
Loss rate: 2.50%
-- Flow 1:
Average throughput: 341.45 Mbit/s  
95th percentile per-packet one-way delay: 237.776 ms  
Loss rate: 1.19%
-- Flow 2:
Average throughput: 307.11 Mbit/s  
95th percentile per-packet one-way delay: 196.611 ms  
Loss rate: 2.94%
-- Flow 3:
Average throughput: 133.79 Mbit/s  
95th percentile per-packet one-way delay: 308.143 ms  
Loss rate: 10.03%
Run 3: Report of Vivace-LTE — Data Link
Run 4: Statistics of Vivace-LTE

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

# Below is generated by plot.py at 2018-03-07 22:12:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 491.52 Mbit/s
95th percentile per-packet one-way delay: 217.098 ms
Loss rate: 1.65%
-- Flow 1:
Average throughput: 316.19 Mbit/s
95th percentile per-packet one-way delay: 196.841 ms
Loss rate: 1.41%
-- Flow 2:
Average throughput: 185.88 Mbit/s
95th percentile per-packet one-way delay: 142.216 ms
Loss rate: 2.03%
-- Flow 3:
Average throughput: 166.32 Mbit/s
95th percentile per-packet one-way delay: 291.412 ms
Loss rate: 2.16%
Run 4: Report of Vivace-LTE — Data Link
Run 5: Statistics of Vivace-LTE

Start at: 2018-03-07 15:00:22
End at: 2018-03-07 15:00:52

# Below is generated by plot.py at 2018-03-07 22:13:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 575.01 Mbit/s
95th percentile per-packet one-way delay: 199.955 ms
Loss rate: 1.28%
-- Flow 1:
Average throughput: 319.57 Mbit/s
95th percentile per-packet one-way delay: 148.384 ms
Loss rate: 1.01%
-- Flow 2:
Average throughput: 296.74 Mbit/s
95th percentile per-packet one-way delay: 208.308 ms
Loss rate: 1.85%
-- Flow 3:
Average throughput: 183.52 Mbit/s
95th percentile per-packet one-way delay: 254.959 ms
Loss rate: 0.80%
Run 5: Report of Vivace-LTE — Data Link

![Graph showing throughput and packet delay over time for Flow 1, Flow 2, and Flow 3. The graphs display the mean throughput and 95th percentile delay for each flow.]
Run 6: Statistics of Vivace-LTE

End at: 2018-03-07 15:21:43

# Below is generated by plot.py at 2018-03-07 22:14:11
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 598.01 Mbit/s
  95th percentile per-packet one-way delay: 196.150 ms
  Loss rate: 2.24%
-- Flow 1:
  Average throughput: 362.82 Mbit/s
  95th percentile per-packet one-way delay: 213.369 ms
  Loss rate: 2.19%
-- Flow 2:
  Average throughput: 298.57 Mbit/s
  95th percentile per-packet one-way delay: 190.510 ms
  Loss rate: 1.85%
-- Flow 3:
  Average throughput: 116.60 Mbit/s
  95th percentile per-packet one-way delay: 144.028 ms
  Loss rate: 4.72%
Run 6: Report of Vivace-LTE — Data Link

![Throughput Graph]

*Throughput in Mbps vs Time (s)*

Legend:
- Flow 1 ingress (mean 367.54 Mbps)
- Flow 1 egress (mean 362.82 Mbps)
- Flow 2 ingress (mean 300.03 Mbps)
- Flow 2 egress (mean 298.57 Mbps)
- Flow 3 ingress (mean 118.98 Mbps)
- Flow 3 egress (mean 116.60 Mbps)

![Delay Graph]

*Packet Delay vs Time (s)*

Legend:
- Flow 1 (95th percentile 213.37 ms)
- Flow 2 (95th percentile 190.51 ms)
- Flow 3 (95th percentile 144.03 ms)
Run 7: Statistics of Vivace-LTE

Start at: 2018-03-07 15:41:47
End at: 2018-03-07 15:42:17

# Below is generated by plot.py at 2018-03-07 22:14:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 576.39 Mbit/s
95th percentile per-packet one-way delay: 293.283 ms
Loss rate: 1.83%
-- Flow 1:
Average throughput: 346.41 Mbit/s
95th percentile per-packet one-way delay: 273.538 ms
Loss rate: 0.72%
-- Flow 2:
Average throughput: 263.45 Mbit/s
95th percentile per-packet one-way delay: 306.098 ms
Loss rate: 1.67%
-- Flow 3:
Average throughput: 185.34 Mbit/s
95th percentile per-packet one-way delay: 270.720 ms
Loss rate: 8.17%
Run 7: Report of Vivace-LTE — Data Link

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

- Flow 1 ingress (mean 344.79 Mbit/s)
- Flow 1 egress (mean 346.41 Mbit/s)
- Flow 2 ingress (mean 262.21 Mbit/s)
- Flow 2 egress (mean 263.45 Mbit/s)
- Flow 3 ingress (mean 196.13 Mbit/s)
- Flow 3 egress (mean 185.34 Mbit/s)

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

- Flow 1 (95th percentile 273.54 ms)
- Flow 2 (95th percentile 306.10 ms)
- Flow 3 (95th percentile 270.72 ms)
Run 8: Statistics of Vivace-LTE

Start at: 2018-03-07 16:02:16
End at: 2018-03-07 16:02:46

# Below is generated by plot.py at 2018-03-07 22:14:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 528.71 Mbit/s
95th percentile per-packet one-way delay: 155.358 ms
Loss rate: 1.62%
-- Flow 1:
Average throughput: 302.96 Mbit/s
95th percentile per-packet one-way delay: 191.076 ms
Loss rate: 1.12%
-- Flow 2:
Average throughput: 280.05 Mbit/s
95th percentile per-packet one-way delay: 139.399 ms
Loss rate: 1.78%
-- Flow 3:
Average throughput: 124.91 Mbit/s
95th percentile per-packet one-way delay: 142.123 ms
Loss rate: 4.50%
Run 8: Report of Vivace-LTE — Data Link

Throughput vs Time

- Flow 1 ingress (mean 303.55 Mbit/s)
- Flow 1 egress (mean 302.96 Mbit/s)
- Flow 2 ingress (mean 281.20 Mbit/s)
- Flow 2 egress (mean 280.05 Mbit/s)
- Flow 3 ingress (mean 127.14 Mbit/s)
- Flow 3 egress (mean 124.91 Mbit/s)

Per-packet one-way delay vs Time

- Flow 1 (95th percentile 191.08 ms)
- Flow 2 (95th percentile 139.40 ms)
- Flow 3 (95th percentile 142.12 ms)
Run 9: Statistics of Vivace-LTE

Start at: 2018-03-07 16:22:27
End at: 2018-03-07 16:22:57

# Below is generated by plot.py at 2018-03-07 22:15:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 511.45 Mbit/s
95th percentile per-packet one-way delay: 143.290 ms
Loss rate: 1.74%
-- Flow 1:
Average throughput: 315.02 Mbit/s
95th percentile per-packet one-way delay: 144.986 ms
Loss rate: 1.09%
-- Flow 2:
Average throughput: 203.36 Mbit/s
95th percentile per-packet one-way delay: 139.259 ms
Loss rate: 1.31%
-- Flow 3:
Average throughput: 191.54 Mbit/s
95th percentile per-packet one-way delay: 139.271 ms
Loss rate: 5.76%
Run 9: Report of Vivace-LTE — Data Link

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

Start at: 2018-03-07 16:42:40
End at: 2018-03-07 16:43:10

# Below is generated by plot.py at 2018-03-07 22:15:16
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 567.16 Mbit/s
  95th percentile per-packet one-way delay: 159.453 ms
  Loss rate: 1.99%
-- Flow 1:
  Average throughput: 327.94 Mbit/s
  95th percentile per-packet one-way delay: 163.954 ms
  Loss rate: 1.32%
-- Flow 2:
  Average throughput: 270.39 Mbit/s
  95th percentile per-packet one-way delay: 156.421 ms
  Loss rate: 1.93%
-- Flow 3:
  Average throughput: 187.28 Mbit/s
  95th percentile per-packet one-way delay: 152.355 ms
  Loss rate: 5.62%
Run 10: Report of Vivace-LTE — Data Link

![Throughput Graph]

![Delay Graph]

Legend:
- Flow 1 ingress (mean 329.24 Mbit/s)
- Flow 1 egress (mean 327.94 Mbit/s)
- Flow 2 ingress (mean 271.78 Mbit/s)
- Flow 2 egress (mean 270.39 Mbit/s)
- Flow 3 ingress (mean 192.71 Mbit/s)
- Flow 3 egress (mean 187.28 Mbit/s)

Legend:
- Flow 1 (95th percentile 163.95 ms)
- Flow 2 (95th percentile 156.42 ms)
- Flow 3 (95th percentile 152.35 ms)