Pantheon Report

Generated at 2018-04-18 17:45:06 (UTC).
Data path: GCE London Ethernet (remote) → GCE Iowa Ethernet (local).
Repeated the test of 16 congestion control schemes 10 times. Each test lasted for 30 seconds running 3 flows with 10-second interval between two flows.
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).
Tested BBR with qdisc of Fair Queuing (fq), and other schemes with the default Linux qdisc (pfifo_fast).

Git summary:
branch: master @ b3d6e7098641364fd3a292656a51aa81e316d0b4
third_party/calibrated_koho @ 3cb73c0d1c03222dfae44e8a37a522e53227db50
M datagrump/sender.cc
third_party/fillp @ 11f8c46a2bf1dc797253db7e8ca040767272b2a44
third_party/genericCC @ d223989828276fa83a807da6e0341dc0c78b89aec
third_party/indigo @ a9b2060d39e4da2e8987e893c3eca2a6c7cd0ab9
third_party/indigo-1-layer-128-unit @ 3ae9e4ef4230db7484501f82ce8b377695f2f6d
third_party/indigo-1-layer-32-unit @ 2601c924ea9d56d38dc4dfb0e0c6bf90c77e64d
third_party/indigo-1-layer-32-unit-no-calib @ 1f3a7f75b41135ed5b540c0fd3505939528e2a5f
third_party/indigo-no-calib @ 7224f2220e8a044d8306fa0b98a38436c53d89
third_party/koho_cc @ f0f2693303ae82eaa808e692bac4f1083a6681
M datagrump/sender.cc
third_party/libutp @ b3465b942e2826f2b179ea4ba4a906ce6b7cf63cf
third_party/pantheon-tunnel @ fb1053193c2861da659ba9013db26744ccfcf993
third_party/pcc @ 1af958fa0d6618b623c091a55feca872b4981e1
M receiver/src/core.h
M receiver/src/core.cpp
M sender/src/core.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8ac0d8f92c4eb2f4974ab
third_party/proto-quic @ 77961f1a82733a6b42f1bc8143ebc978f3cf42
third_party/scream @ c3707fd7b17265a79aeb344016ed23f5965885
third_party/sourdough @ f1a14bbfe749737437f61bae6eb30b267cde681
third_party/sprout @ 6f2efe6e88d91066a9f023df375e8e2665089ce
M src/examples/cellsim.cc
M src/examples/sproutbt2.cc
M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
M src/verus.hpp
M tools/plot.py
third_party/vivace @ 7a4ba531e75b4a6f6f6f5c458a0192120401784ce3
third_party/webrtc @ f271183af822e6e5d0031620f4bebf38aed5581
test from GCE London Ethernet to GCE Iowa Ethernet, 10 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)

![Graph 1](image1)

![Graph 2](image2)
<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>TCP BBR</td>
<td>10</td>
<td>219.05 214.57 201.51</td>
<td>60.65 62.16 63.41</td>
<td>0.40 0.55 1.19</td>
</tr>
<tr>
<td>TCP Cubic</td>
<td>10</td>
<td>151.31 126.40 76.85</td>
<td>56.10 55.75 53.87</td>
<td>0.36 0.93 2.31</td>
</tr>
<tr>
<td>LEDBAT</td>
<td>10</td>
<td>27.85 23.27 10.73</td>
<td>52.08 52.04 51.91</td>
<td>0.75 1.01 2.12</td>
</tr>
<tr>
<td>PCC-Allegro</td>
<td>10</td>
<td>506.97 121.96 50.71</td>
<td>214.23 139.17 135.91</td>
<td>3.68 1.45 1.74</td>
</tr>
<tr>
<td>QUIC Cubic</td>
<td>10</td>
<td>52.96 45.66 35.22</td>
<td>50.91 50.73 50.67</td>
<td>0.41 0.68 0.95</td>
</tr>
<tr>
<td>SCReAM</td>
<td>10</td>
<td>0.22 0.22 0.22</td>
<td>51.05 51.05 50.98</td>
<td>0.32 0.57 1.07</td>
</tr>
<tr>
<td>WebRTC media</td>
<td>10</td>
<td>0.06 0.06 0.05</td>
<td>51.28 51.25 51.23</td>
<td>0.00 0.00 0.16</td>
</tr>
<tr>
<td>Sprout</td>
<td>10</td>
<td>7.95 7.87 7.57</td>
<td>51.73 51.75 51.55</td>
<td>0.39 0.47 0.80</td>
</tr>
<tr>
<td>TaoVA-100x</td>
<td>10</td>
<td>198.32 184.91 169.50</td>
<td>57.98 62.75 64.07</td>
<td>0.23 0.53 1.08</td>
</tr>
<tr>
<td>TCP Vegas</td>
<td>10</td>
<td>128.04 86.58 49.80</td>
<td>53.46 52.77 51.76</td>
<td>0.27 0.49 1.49</td>
</tr>
<tr>
<td>Verus</td>
<td>10</td>
<td>189.19 160.21 111.10</td>
<td>142.65 156.88 145.56</td>
<td>0.68 2.33 2.50</td>
</tr>
<tr>
<td>Copa</td>
<td>10</td>
<td>69.19 74.97 75.42</td>
<td>51.03 50.95 50.74</td>
<td>0.27 0.53 1.09</td>
</tr>
<tr>
<td>FillP</td>
<td>10</td>
<td>656.77 616.70 578.09</td>
<td>198.48 195.03 191.44</td>
<td>5.62 6.20 11.18</td>
</tr>
<tr>
<td>Indigo-I-32</td>
<td>10</td>
<td>203.18 185.11 169.62</td>
<td>55.10 56.64 54.30</td>
<td>0.34 0.55 1.17</td>
</tr>
<tr>
<td>PCC-Vivace</td>
<td>10</td>
<td>264.75 227.31 98.04</td>
<td>86.26 90.46 51.45</td>
<td>0.35 0.68 1.32</td>
</tr>
<tr>
<td>PCC-Expr</td>
<td>0</td>
<td>N/A N/A N/A</td>
<td>N/A N/A N/A</td>
<td>N/A N/A N/A</td>
</tr>
</tbody>
</table>
Run 1: Statistics of TCP BBR

Start at: 2018-04-18 10:18:35
End at: 2018-04-18 10:19:05

# Below is generated by plot.py at 2018-04-18 15:49:37
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 430.24 Mbit/s
  95th percentile per-packet one-way delay: 57.200 ms
  Loss rate: 0.59%
-- Flow 1:
  Average throughput: 219.61 Mbit/s
  95th percentile per-packet one-way delay: 56.182 ms
  Loss rate: 0.39%
-- Flow 2:
  Average throughput: 217.03 Mbit/s
  95th percentile per-packet one-way delay: 57.189 ms
  Loss rate: 0.57%
-- Flow 3:
  Average throughput: 201.69 Mbit/s
  95th percentile per-packet one-way delay: 58.879 ms
  Loss rate: 1.27%
Run 1: Report of TCP BBR — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 219.73 Mbps) — Flow 1 egress (mean 219.61 Mbps)
Flow 2 ingress (mean 217.18 Mbps) — Flow 2 egress (mean 217.03 Mbps)
Flow 3 ingress (mean 202.20 Mbps) — Flow 3 egress (mean 201.69 Mbps)

Per-packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 56.18 ms) — Flow 2 (95th percentile 57.19 ms) — Flow 3 (95th percentile 58.88 ms)
Run 2: Statistics of TCP BBR

Start at: 2018-04-18 10:34:25
End at: 2018-04-18 10:34:55

# Below is generated by plot.py at 2018-04-18 15:49:37
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 430.86 Mbit/s
  95th percentile per-packet one-way delay: 63.895 ms
  Loss rate: 0.54%
-- Flow 1:
  Average throughput: 220.76 Mbit/s
  95th percentile per-packet one-way delay: 62.815 ms
  Loss rate: 0.38%
-- Flow 2:
  Average throughput: 213.99 Mbit/s
  95th percentile per-packet one-way delay: 64.213 ms
  Loss rate: 0.50%
-- Flow 3:
  Average throughput: 206.42 Mbit/s
  95th percentile per-packet one-way delay: 65.383 ms
  Loss rate: 1.16%
Run 2: Report of TCP BBR — Data Link
Run 3: Statistics of TCP BBR

Start at: 2018-04-18 10:50:10
End at: 2018-04-18 10:50:40

# Below is generated by plot.py at 2018-04-18 15:49:37
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 422.70 Mbit/s
  95th percentile per-packet one-way delay: 56.611 ms
  Loss rate: 0.71%
-- Flow 1:
  Average throughput: 214.40 Mbit/s
  95th percentile per-packet one-way delay: 57.763 ms
  Loss rate: 0.65%
-- Flow 2:
  Average throughput: 215.25 Mbit/s
  95th percentile per-packet one-way delay: 56.305 ms
  Loss rate: 0.55%
-- Flow 3:
  Average throughput: 198.42 Mbit/s
  95th percentile per-packet one-way delay: 55.324 ms
  Loss rate: 1.23%
Run 4: Statistics of TCP BBR

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

# Below is generated by plot.py at 2018-04-18 15:49:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 430.48 Mbit/s
95th percentile per-packet one-way delay: 61.249 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 220.91 Mbit/s
95th percentile per-packet one-way delay: 60.124 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 214.26 Mbit/s
95th percentile per-packet one-way delay: 61.705 ms
Loss rate: 0.53%
-- Flow 3:
Average throughput: 203.73 Mbit/s
95th percentile per-packet one-way delay: 62.392 ms
Loss rate: 1.22%
Run 4: Report of TCP BBR — Data Link

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

- Flow 1 (ingress mean 221.09 Mbit/s, egress mean 220.91 Mbit/s)
- Flow 2 (ingress mean 214.32 Mbit/s, egress mean 214.26 Mbit/s)
- Flow 3 (ingress mean 204.00 Mbit/s, egress mean 203.73 Mbit/s)

- Flow 1 (95th percentile 60.12 ms)
- Flow 2 (95th percentile 61.70 ms)
- Flow 3 (95th percentile 62.39 ms)
Run 5: Statistics of TCP BBR

Start at: 2018-04-18 11:22:05

# Below is generated by plot.py at 2018-04-18 15:49:37
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 429.61 Mbit/s
  95th percentile per-packet one-way delay: 66.452 ms
  Loss rate: 0.55%
-- Flow 1:
  Average throughput: 218.86 Mbit/s
  95th percentile per-packet one-way delay: 61.813 ms
  Loss rate: 0.38%
-- Flow 2:
  Average throughput: 215.46 Mbit/s
  95th percentile per-packet one-way delay: 66.234 ms
  Loss rate: 0.54%
-- Flow 3:
  Average throughput: 205.90 Mbit/s
  95th percentile per-packet one-way delay: 69.511 ms
  Loss rate: 1.13%
Run 5: Report of TCP BBR — Data Link
Run 6: Statistics of TCP BBR

Start at: 2018-04-18 11:37:50
End at: 2018-04-18 11:38:20

# Below is generated by plot.py at 2018-04-18 15:49:42
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 437.80 Mbit/s
  95th percentile per-packet one-way delay: 56.712 ms
  Loss rate: 0.49%
-- Flow 1:
  Average throughput: 222.99 Mbit/s
  95th percentile per-packet one-way delay: 56.042 ms
  Loss rate: 0.28%
-- Flow 2:
  Average throughput: 221.74 Mbit/s
  95th percentile per-packet one-way delay: 57.247 ms
  Loss rate: 0.53%
-- Flow 3:
  Average throughput: 205.79 Mbit/s
  95th percentile per-packet one-way delay: 57.090 ms
  Loss rate: 1.12%
Run 6: Report of TCP BBR — Data Link

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

- Flow 1 ingress (mean 222.62 Mbit/s), egress (mean 222.99 Mbit/s)
- Flow 2 ingress (mean 221.86 Mbit/s), egress (mean 221.74 Mbit/s)
- Flow 3 ingress (mean 205.98 Mbit/s), egress (mean 205.79 Mbit/s)

- Flow 1 (95th percentile 56.04 ms)  
- Flow 2 (95th percentile 57.25 ms)  
- Flow 3 (95th percentile 57.09 ms)
Run 7: Statistics of TCP BBR

End at: 2018-04-18 11:54:09

# Below is generated by plot.py at 2018-04-18 15:49:42
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 422.44 Mbit/s
  95th percentile per-packet one-way delay: 64.286 ms
  Loss rate: 0.57%
-- Flow 1:
  Average throughput: 216.77 Mbit/s
  95th percentile per-packet one-way delay: 61.611 ms
  Loss rate: 0.37%
-- Flow 2:
  Average throughput: 211.76 Mbit/s
  95th percentile per-packet one-way delay: 64.311 ms
  Loss rate: 0.57%
-- Flow 3:
  Average throughput: 197.80 Mbit/s
  95th percentile per-packet one-way delay: 67.433 ms
  Loss rate: 1.21%
Run 7: Report of TCP BBR — Data Link

![Graph showing throughput and packet error rate over time for different flows.](image-url)
Run 8: Statistics of TCP BBR

Start at: 2018-04-18 12:09:23
End at: 2018-04-18 12:09:53

# Below is generated by plot.py at 2018-04-18 15:49:42
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 430.01 Mbit/s
  95th percentile per-packet one-way delay: 62.654 ms
  Loss rate: 0.54%
-- Flow 1:
  Average throughput: 221.26 Mbit/s
  95th percentile per-packet one-way delay: 61.574 ms
  Loss rate: 0.35%
-- Flow 2:
  Average throughput: 212.99 Mbit/s
  95th percentile per-packet one-way delay: 62.317 ms
  Loss rate: 0.57%
-- Flow 3:
  Average throughput: 204.77 Mbit/s
  95th percentile per-packet one-way delay: 65.309 ms
  Loss rate: 1.13%
Run 8: Report of TCP BBR — Data Link
Run 9: Statistics of TCP BBR

Start at: 2018-04-18 12:25:17
End at: 2018-04-18 12:25:47

# Below is generated by plot.py at 2018-04-18 15:57:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 411.76 Mbit/s
95th percentile per-packet one-way delay: 73.428 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 212.68 Mbit/s
95th percentile per-packet one-way delay: 71.321 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 207.24 Mbit/s
95th percentile per-packet one-way delay: 73.175 ms
Loss rate: 0.59%
-- Flow 3:
Average throughput: 186.13 Mbit/s
95th percentile per-packet one-way delay: 76.675 ms
Loss rate: 1.36%
Run 9: Report of TCP BBR — Data Link

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

- **Flow 1 ingress (mean 212.84 Mbit/s)**
- **Flow 1 egress (mean 212.68 Mbit/s)**
- **Flow 2 ingress (mean 207.53 Mbit/s)**
- **Flow 2 egress (mean 207.24 Mbit/s)**
- **Flow 3 ingress (mean 186.91 Mbit/s)**
- **Flow 3 egress (mean 186.13 Mbit/s)**
Run 10: Statistics of TCP BBR

Start at: 2018-04-18 12:41:05
End at: 2018-04-18 12:41:35

# Below is generated by plot.py at 2018-04-18 15:57:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 433.10 Mbit/s
95th percentile per-packet one-way delay: 57.850 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 222.23 Mbit/s
95th percentile per-packet one-way delay: 57.213 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 216.00 Mbit/s
95th percentile per-packet one-way delay: 58.873 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 204.41 Mbit/s
95th percentile per-packet one-way delay: 56.118 ms
Loss rate: 1.11%
Run 10: Report of TCP BBR — Data Link

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

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

- Flow 1 ingress (mean 222.30 Mbps)
- Flow 1 egress (mean 222.23 Mbps)
- Flow 2 ingress (mean 216.11 Mbps)
- Flow 2 egress (mean 216.08 Mbps)
- Flow 3 ingress (mean 204.59 Mbps)
- Flow 3 egress (mean 204.41 Mbps)
Run 1: Statistics of TCP Cubic

Start at: 2018-04-18 10:19:36
End at: 2018-04-18 10:20:06

# Below is generated by plot.py at 2018-04-18 15:57:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 232.66 Mbit/s
95th percentile per-packet one-way delay: 56.746 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 107.40 Mbit/s
95th percentile per-packet one-way delay: 53.717 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 186.35 Mbit/s
95th percentile per-packet one-way delay: 57.713 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 4.60 Mbit/s
95th percentile per-packet one-way delay: 51.092 ms
Loss rate: 4.22%
Run 1: Report of TCP Cubic — Data Link
Run 2: Statistics of TCP Cubic

Start at: 2018-04-18 10:35:26
End at: 2018-04-18 10:35:56

# Below is generated by plot.py at 2018-04-18 15:57:44
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 294.55 Mbit/s
  95th percentile per-packet one-way delay: 58.747 ms
  Loss rate: 0.66%
-- Flow 1:
  Average throughput: 155.99 Mbit/s
  95th percentile per-packet one-way delay: 58.385 ms
  Loss rate: 0.54%
-- Flow 2:
  Average throughput: 131.38 Mbit/s
  95th percentile per-packet one-way delay: 57.158 ms
  Loss rate: 0.70%
-- Flow 3:
  Average throughput: 156.32 Mbit/s
  95th percentile per-packet one-way delay: 60.159 ms
  Loss rate: 0.99%
Run 2: Report of TCP Cubic — Data Link

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

- **Flow 1** (ingress mean 156.34 Mbit/s, egress mean 155.99 Mbit/s)
- **Flow 2** (ingress mean 131.62 Mbit/s, egress mean 131.38 Mbit/s)
- **Flow 3** (ingress mean 156.27 Mbit/s, egress mean 156.32 Mbit/s)

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

- Flow 1 (95th percentile 58.38 ms)
- Flow 2 (95th percentile 57.16 ms)
- Flow 3 (95th percentile 60.16 ms)
Run 3: Statistics of TCP Cubic

Start at: 2018-04-18 10:51:24
End at: 2018-04-18 10:51:54

# Below is generated by plot.py at 2018-04-18 15:57:44
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 234.39 Mbit/s
  95th percentile per-packet one-way delay: 58.278 ms
  Loss rate: 0.67%
-- Flow 1:
  Average throughput: 160.10 Mbit/s
  95th percentile per-packet one-way delay: 59.051 ms
  Loss rate: 0.21%
-- Flow 2:
  Average throughput: 52.59 Mbit/s
  95th percentile per-packet one-way delay: 54.311 ms
  Loss rate: 2.18%
-- Flow 3:
  Average throughput: 120.01 Mbit/s
  95th percentile per-packet one-way delay: 55.533 ms
  Loss rate: 1.16%
Run 3: Report of TCP Cubic — Data Link

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

- Flow 1 ingress (mean 159.90 Mbps)
- Flow 1 egress (mean 160.10 Mbps)
- Flow 2 ingress (mean 53.48 Mbps)
- Flow 2 egress (mean 52.59 Mbps)
- Flow 3 ingress (mean 120.18 Mbps)
- Flow 3 egress (mean 120.01 Mbps)

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

- Flow 1 (95th percentile 59.05 ms)
- Flow 2 (95th percentile 54.31 ms)
- Flow 3 (95th percentile 55.53 ms)
Run 4: Statistics of TCP Cubic

Start at: 2018-04-18 11:07:12
End at: 2018-04-18 11:07:42

# Below is generated by plot.py at 2018-04-18 15:57:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 268.07 Mbit/s
95th percentile per-packet one-way delay: 55.917 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 156.35 Mbit/s
95th percentile per-packet one-way delay: 55.271 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 165.79 Mbit/s
95th percentile per-packet one-way delay: 56.446 ms
Loss rate: 0.48%
-- Flow 3:
Average throughput: 4.61 Mbit/s
95th percentile per-packet one-way delay: 51.845 ms
Loss rate: 4.20%
Run 4: Report of TCP Cubic — Data Link
Run 5: Statistics of TCP Cubic

Start at: 2018-04-18 11:23:06
End at: 2018-04-18 11:23:36

# Below is generated by plot.py at 2018-04-18 15:57:44
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 244.92 Mbit/s
  95th percentile per-packet one-way delay: 56.672 ms
  Loss rate: 0.50%
-- Flow 1:
  Average throughput: 149.20 Mbit/s
  95th percentile per-packet one-way delay: 57.674 ms
  Loss rate: 0.35%
-- Flow 2:
  Average throughput: 141.86 Mbit/s
  95th percentile per-packet one-way delay: 54.411 ms
  Loss rate: 0.68%
-- Flow 3:
  Average throughput: 5.12 Mbit/s
  95th percentile per-packet one-way delay: 52.187 ms
  Loss rate: 4.01%
Run 5: Report of TCP Cubic — Data Link

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

![Graph of Packet Drop vs. Time](image2)

Legend:
- Flow 1 ingress (mean 149.23 Mbit/s)
- Flow 1 egress (mean 149.20 Mbit/s)
- Flow 2 ingress (mean 142.10 Mbit/s)
- Flow 2 egress (mean 141.86 Mbit/s)
- Flow 3 ingress (mean 5.28 Mbit/s)
- Flow 3 egress (mean 5.12 Mbit/s)

Legend for Packet Drop:
- Flow 1 (95th percentile 57.67 ms)
- Flow 2 (95th percentile 54.41 ms)
- Flow 3 (95th percentile 52.19 ms)
Run 6: Statistics of TCP Cubic

Start at: 2018-04-18 11:38:52
End at: 2018-04-18 11:39:22

# Below is generated by plot.py at 2018-04-18 15:57:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 254.13 Mbit/s
95th percentile per-packet one-way delay: 57.866 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 137.12 Mbit/s
95th percentile per-packet one-way delay: 55.325 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 122.80 Mbit/s
95th percentile per-packet one-way delay: 61.252 ms
Loss rate: 0.53%
-- Flow 3:
Average throughput: 108.00 Mbit/s
95th percentile per-packet one-way delay: 53.098 ms
Loss rate: 1.13%
Run 6: Report of TCP Cubic — Data Link
Run 7: Statistics of TCP Cubic

Start at: 2018-04-18 11:54:41

# Below is generated by plot.py at 2018-04-18 15:59:37
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 306.76 Mbit/s
  95th percentile per-packet one-way delay: 54.255 ms
  Loss rate: 0.49%
-- Flow 1:
  Average throughput: 181.94 Mbit/s
  95th percentile per-packet one-way delay: 54.740 ms
  Loss rate: 0.27%
-- Flow 2:
  Average throughput: 134.04 Mbit/s
  95th percentile per-packet one-way delay: 54.006 ms
  Loss rate: 0.69%
-- Flow 3:
  Average throughput: 108.71 Mbit/s
  95th percentile per-packet one-way delay: 52.914 ms
  Loss rate: 1.12%
Run 7: Report of TCP Cubic — Data Link
Run 8: Statistics of TCP Cubic

Start at: 2018-04-18 12:10:25  
End at: 2018-04-18 12:10:55  

# Below is generated by plot.py at 2018-04-18 15:59:37  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 212.72 Mbit/s  
95th percentile per-packet one-way delay: 52.471 ms  
Loss rate: 0.77%  
-- Flow 1:  
Average throughput: 174.99 Mbit/s  
95th percentile per-packet one-way delay: 52.451 ms  
Loss rate: 0.44%  
-- Flow 2:  
Average throughput: 54.19 Mbit/s  
95th percentile per-packet one-way delay: 52.638 ms  
Loss rate: 2.19%  
-- Flow 3:  
Average throughput: 5.29 Mbit/s  
95th percentile per-packet one-way delay: 51.359 ms  
Loss rate: 3.93%
Run 8: Report of TCP Cubic — Data Link

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

Legend:
- **Flow 1 ingress (mean 175.17 Mbit/s)**
- **Flow 1 egress (mean 174.99 Mbit/s)**
- **Flow 2 ingress (mean 55.12 Mbit/s)**
- **Flow 2 egress (mean 54.19 Mbit/s)**
- **Flow 3 ingress (mean 5.45 Mbit/s)**
- **Flow 3 egress (mean 5.29 Mbit/s)**

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

Legend:
- **Flow 1 (95th percentile 52.45 ms)**
- **Flow 2 (95th percentile 52.64 ms)**
- **Flow 3 (95th percentile 51.36 ms)**
Run 9: Statistics of TCP Cubic

Start at: 2018-04-18 12:26:18
End at: 2018-04-18 12:26:48

# Below is generated by plot.py at 2018-04-18 15:59:37
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 257.01 Mbit/s
  95th percentile per-packet one-way delay: 55.654 ms
  Loss rate: 0.60%
-- Flow 1:
  Average throughput: 143.29 Mbit/s
  95th percentile per-packet one-way delay: 56.055 ms
  Loss rate: 0.37%
-- Flow 2:
  Average throughput: 113.95 Mbit/s
  95th percentile per-packet one-way delay: 54.483 ms
  Loss rate: 0.76%
-- Flow 3:
  Average throughput: 115.43 Mbit/s
  95th percentile per-packet one-way delay: 56.081 ms
  Loss rate: 1.16%
Run 9: Report of TCP Cubic — Data Link

![Graph 1: Throughput (Mbps)]

![Graph 2: Packet Loss (ms)]
Run 10: Statistics of TCP Cubic

Start at: 2018-04-18 12:42:06
End at: 2018-04-18 12:42:36

# Below is generated by plot.py at 2018-04-18 16:00:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 300.00 Mbit/s
95th percentile per-packet one-way delay: 56.363 ms
Loss rate: 0.54%
 -- Flow 1:
Average throughput: 146.76 Mbit/s
95th percentile per-packet one-way delay: 58.283 ms
Loss rate: 0.26%
 -- Flow 2:
Average throughput: 161.07 Mbit/s
95th percentile per-packet one-way delay: 55.056 ms
Loss rate: 0.67%
 -- Flow 3:
Average throughput: 140.41 Mbit/s
95th percentile per-packet one-way delay: 54.417 ms
Loss rate: 1.17%
Run 10: Report of TCP Cubic — Data Link

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

- **Throughput**:
  - Flow 1 ingress (mean 146.63 Mbit/s)
  - Flow 1 egress (mean 146.76 Mbit/s)
  - Flow 2 ingress (mean 161.33 Mbit/s)
  - Flow 2 egress (mean 161.07 Mbit/s)
  - Flow 3 ingress (mean 140.64 Mbit/s)
  - Flow 3 egress (mean 140.41 Mbit/s)

- **Per-packet one-way delay**:
  - Flow 1 (95th percentile 58.28 ms)
  - Flow 2 (95th percentile 55.06 ms)
  - Flow 3 (95th percentile 54.42 ms)
Run 1: Statistics of LEDBAT

Start at: 2018-04-18 10:29:59
End at: 2018-04-18 10:30:29

# Below is generated by plot.py at 2018-04-18 16:00:05
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 27.50 Mbit/s
  95th percentile per-packet one-way delay: 51.391 ms
  Loss rate: 1.11%
-- Flow 1:
  Average throughput: 8.61 Mbit/s
  95th percentile per-packet one-way delay: 51.325 ms
  Loss rate: 0.87%
-- Flow 2:
  Average throughput: 23.02 Mbit/s
  95th percentile per-packet one-way delay: 51.417 ms
  Loss rate: 1.02%
-- Flow 3:
  Average throughput: 11.07 Mbit/s
  95th percentile per-packet one-way delay: 51.361 ms
  Loss rate: 2.09%
Run 1: Report of LEDBAT — Data Link
Run 2: Statistics of LEDBAT

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

# Below is generated by plot.py at 2018-04-18 16:00:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 39.16 Mbit/s
95th percentile per-packet one-way delay: 52.093 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 19.99 Mbit/s
95th percentile per-packet one-way delay: 52.065 ms
Loss rate: 0.88%
-- Flow 2:
Average throughput: 23.27 Mbit/s
95th percentile per-packet one-way delay: 52.124 ms
Loss rate: 1.01%
-- Flow 3:
Average throughput: 11.37 Mbit/s
95th percentile per-packet one-way delay: 52.228 ms
Loss rate: 2.06%
Run 2: Report of LEDBAT — Data Link

![Graph 1](image1)

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

Start at: 2018-04-18 11:01:44
End at: 2018-04-18 11:02:14

# Below is generated by plot.py at 2018-04-18 16:00:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 51.18 Mbit/s
95th percentile per-packet one-way delay: 52.237 ms
Loss rate: 0.89%
-- Flow 1:
Average throughput: 31.75 Mbit/s
95th percentile per-packet one-way delay: 52.022 ms
Loss rate: 0.69%
-- Flow 2:
Average throughput: 23.67 Mbit/s
95th percentile per-packet one-way delay: 52.757 ms
Loss rate: 1.00%
-- Flow 3:
Average throughput: 11.37 Mbit/s
95th percentile per-packet one-way delay: 52.106 ms
Loss rate: 2.05%
Run 3: Report of LEDBAT — Data Link
Run 4: Statistics of LEDBAT

Start at: 2018-04-18 11:17:36
End at: 2018-04-18 11:18:06

# Below is generated by plot.py at 2018-04-18 16:00:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 53.90 Mbit/s
95th percentile per-packet one-way delay: 52.697 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 34.82 Mbit/s
95th percentile per-packet one-way delay: 52.813 ms
Loss rate: 0.66%
-- Flow 2:
Average throughput: 23.03 Mbit/s
95th percentile per-packet one-way delay: 52.439 ms
Loss rate: 1.02%
-- Flow 3:
Average throughput: 11.50 Mbit/s
95th percentile per-packet one-way delay: 52.397 ms
Loss rate: 2.05%
Run 4: Report of LEDBAT — Data Link

### Throughput (Mbps)

- **Flow 1 ingress** (mean 34.94 Mbps/s)
- **Flow 1 egress** (mean 34.82 Mbps/s)
- **Flow 2 ingress** (mean 23.15 Mbps/s)
- **Flow 2 egress** (mean 23.03 Mbps/s)
- **Flow 3 ingress** (mean 11.62 Mbps/s)
- **Flow 3 egress** (mean 11.50 Mbps/s)

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

- **Flow 1** (95th percentile 52.81 ms)
- **Flow 2** (95th percentile 52.44 ms)
- **Flow 3** (95th percentile 52.40 ms)
Run 5: Statistics of LEDBAT

Start at: 2018-04-18 11:33:24
End at: 2018-04-18 11:33:54

# Below is generated by plot.py at 2018-04-18 16:00:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 53.67 Mbit/s
95th percentile per-packet one-way delay: 53.068 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 34.86 Mbit/s
95th percentile per-packet one-way delay: 53.277 ms
Loss rate: 0.67%
-- Flow 2:
Average throughput: 23.43 Mbit/s
95th percentile per-packet one-way delay: 52.799 ms
Loss rate: 1.01%
-- Flow 3:
Average throughput: 10.09 Mbit/s
95th percentile per-packet one-way delay: 53.402 ms
Loss rate: 2.18%
Run 5: Report of LEDBAT — Data Link

Graph 1: Throughput over time for different flows.

Graph 2: Latency over time for different flows.

Legend:
- Flow 1 ingress (mean 34.96 Mbit/s)
- Flow 1 egress (mean 34.86 Mbit/s)
- Flow 2 ingress (mean 23.35 Mbit/s)
- Flow 2 egress (mean 23.43 Mbit/s)
- Flow 3 ingress (mean 10.21 Mbit/s)
- Flow 3 egress (mean 10.09 Mbit/s)
Run 6: Statistics of LEDBAT

Start at: 2018-04-18 11:49:16
End at: 2018-04-18 11:49:46

# Below is generated by plot.py at 2018-04-18 16:00:05
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 54.26 Mbit/s
  95th percentile per-packet one-way delay: 51.629 ms
  Loss rate: 0.86%
-- Flow 1:
  Average throughput: 35.21 Mbit/s
  95th percentile per-packet one-way delay: 51.721 ms
  Loss rate: 0.67%
-- Flow 2:
  Average throughput: 23.81 Mbit/s
  95th percentile per-packet one-way delay: 51.452 ms
  Loss rate: 1.00%
-- Flow 3:
  Average throughput: 9.96 Mbit/s
  95th percentile per-packet one-way delay: 51.306 ms
  Loss rate: 2.20%
Run 6: Report of LEDBAT — Data Link
Run 7: Statistics of LEDBAT

Start at: 2018-04-18 12:04:58
End at: 2018-04-18 12:05:28

# Below is generated by plot.py at 2018-04-18 16:00:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 43.78 Mbit/s
95th percentile per-packet one-way delay: 52.417 ms
Loss rate: 0.95%
-- Flow 1:
Average throughput: 25.57 Mbit/s
95th percentile per-packet one-way delay: 52.615 ms
Loss rate: 0.75%
-- Flow 2:
Average throughput: 23.06 Mbit/s
95th percentile per-packet one-way delay: 52.319 ms
Loss rate: 1.02%
-- Flow 3:
Average throughput: 8.92 Mbit/s
95th percentile per-packet one-way delay: 51.502 ms
Loss rate: 2.31%
Run 7: Report of LEDBAT — Data Link

![Graph 1: Throughput vs Time]

- Flow 1 ingress (mean 25.68 Mbit/s)
- Flow 1 egress (mean 25.57 Mbit/s)
- Flow 2 ingress (mean 23.18 Mbit/s)
- Flow 2 egress (mean 23.06 Mbit/s)
- Flow 3 ingress (mean 9.04 Mbit/s)
- Flow 3 egress (mean 8.92 Mbit/s)

![Graph 2: Per Packet End-to-End Delay vs Time]

- Flow 1 (95th percentile 52.62 ms)
- Flow 2 (95th percentile 52.32 ms)
- Flow 3 (95th percentile 51.50 ms)
Run 8: Statistics of LEDBAT

Start at: 2018-04-18 12:20:50

# Below is generated by plot.py at 2018-04-18 16:00:05
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 53.58 Mbit/s
  95th percentile per-packet one-way delay: 51.865 ms
  Loss rate: 0.86%
-- Flow 1:
  Average throughput: 34.55 Mbit/s
  95th percentile per-packet one-way delay: 51.699 ms
  Loss rate: 0.68%
-- Flow 2:
  Average throughput: 23.30 Mbit/s
  95th percentile per-packet one-way delay: 51.968 ms
  Loss rate: 0.98%
-- Flow 3:
  Average throughput: 11.14 Mbit/s
  95th percentile per-packet one-way delay: 52.230 ms
  Loss rate: 2.08%
Run 8: Report of LEDBAT — Data Link

![Graph of Throughput and Time (s)]

- Flow 1 ingress (mean 34.66 Mbit/s)
- Flow 1 egress (mean 34.55 Mbit/s)
- Flow 2 ingress (mean 23.41 Mbit/s)
- Flow 2 egress (mean 23.30 Mbit/s)
- Flow 3 ingress (mean 11.26 Mbit/s)
- Flow 3 egress (mean 11.14 Mbit/s)

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

- Flow 1 (95th percentile 51.70 ms)
- Flow 2 (95th percentile 51.97 ms)
- Flow 3 (95th percentile 52.23 ms)
Run 9: Statistics of LEDBAT

Start at: 2018-04-18 12:36:37
End at: 2018-04-18 12:37:07

# Below is generated by plot.py at 2018-04-18 16:00:05
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 53.08 Mbit/s
  95th percentile per-packet one-way delay: 51.867 ms
  Loss rate: 0.87%
  -- Flow 1:
    Average throughput: 34.17 Mbit/s
    95th percentile per-packet one-way delay: 51.926 ms
    Loss rate: 0.68%
  -- Flow 2:
    Average throughput: 22.96 Mbit/s
    95th percentile per-packet one-way delay: 51.787 ms
    Loss rate: 1.02%
  -- Flow 3:
    Average throughput: 11.38 Mbit/s
    95th percentile per-packet one-way delay: 51.549 ms
    Loss rate: 2.06%
Run 9: Report of LEDBAT — Data Link
Run 10: Statistics of LEDBAT

Start at: 2018-04-18 12:52:27
End at: 2018-04-18 12:52:57

# Below is generated by plot.py at 2018-04-18 16:00:05
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 37.78 Mbit/s
  95th percentile per-packet one-way delay: 51.314 ms
  Loss rate: 1.07%
-- Flow 1:
  Average throughput: 18.94 Mbit/s
  95th percentile per-packet one-way delay: 51.344 ms
  Loss rate: 0.91%
-- Flow 2:
  Average throughput: 23.19 Mbit/s
  95th percentile per-packet one-way delay: 51.325 ms
  Loss rate: 1.02%
-- Flow 3:
  Average throughput: 10.50 Mbit/s
  95th percentile per-packet one-way delay: 51.000 ms
  Loss rate: 2.14%
Run 10: Report of LEDBAT — Data Link
Run 1: Statistics of PCC-Allegro

Start at: 2018-04-18 10:25:27
End at: 2018-04-18 10:25:57

# Below is generated by plot.py at 2018-04-18 16:09:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 616.42 Mbit/s
95th percentile per-packet one-way delay: 207.153 ms
Loss rate: 3.19%
-- Flow 1:
Average throughput: 537.36 Mbit/s
95th percentile per-packet one-way delay: 213.387 ms
Loss rate: 3.37%
-- Flow 2:
Average throughput: 117.89 Mbit/s
95th percentile per-packet one-way delay: 156.124 ms
Loss rate: 1.92%
-- Flow 3:
Average throughput: 2.45 Mbit/s
95th percentile per-packet one-way delay: 154.274 ms
Loss rate: 1.46%
Run 1: Report of PCC-Allegro — Data Link

![Graph 1: Throughput](image)

- Flow 1 ingress (mean 554.24 Mbit/s)
- Flow 1 egress (mean 537.36 Mbit/s)
- Flow 2 ingress (mean 119.58 Mbit/s)
- Flow 2 egress (mean 117.89 Mbit/s)
- Flow 3 ingress (mean 2.47 Mbit/s)
- Flow 3 egress (mean 2.45 Mbit/s)

![Graph 2: Delay](image)

- Flow 1 (95th percentile 213.39 ms)
- Flow 2 (95th percentile 156.12 ms)
- Flow 3 (95th percentile 154.27 ms)
Run 2: Statistics of PCC-Allegro

Start at: 2018-04-18 10:41:14
End at: 2018-04-18 10:41:44

# Below is generated by plot.py at 2018-04-18 16:10:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 640.13 Mbit/s
95th percentile per-packet one-way delay: 221.755 ms
Loss rate: 3.18%
-- Flow 1:
Average throughput: 526.81 Mbit/s
95th percentile per-packet one-way delay: 223.019 ms
Loss rate: 3.38%
-- Flow 2:
Average throughput: 140.19 Mbit/s
95th percentile per-packet one-way delay: 152.793 ms
Loss rate: 2.25%
-- Flow 3:
Average throughput: 62.49 Mbit/s
95th percentile per-packet one-way delay: 150.856 ms
Loss rate: 2.32%
Run 2: Report of PCC-Allegro — Data Link

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

Legend:
- Flow 1 ingress (mean 543.41 Mbit/s)
- Flow 1 egress (mean 526.81 Mbit/s)
- Flow 2 ingress (mean 142.70 Mbit/s)
- Flow 2 egress (mean 140.19 Mbit/s)
- Flow 3 ingress (mean 63.32 Mbit/s)
- Flow 3 egress (mean 62.49 Mbit/s)
Run 3: Statistics of PCC-Allegro

Start at: 2018-04-18 10:57:10
End at: 2018-04-18 10:57:40

# Below is generated by plot.py at 2018-04-18 16:10:19
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 628.41 Mbit/s
  95th percentile per-packet one-way delay: 231.835 ms
  Loss rate: 3.50%
-- Flow 1:
  Average throughput: 542.31 Mbit/s
  95th percentile per-packet one-way delay: 233.155 ms
  Loss rate: 3.87%
-- Flow 2:
  Average throughput: 127.35 Mbit/s
  95th percentile per-packet one-way delay: 148.399 ms
  Loss rate: 1.08%
-- Flow 3:
  Average throughput: 4.87 Mbit/s
  95th percentile per-packet one-way delay: 138.036 ms
  Loss rate: 2.02%
Run 3: Report of PCC-Allegro — Data Link

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

- **Flow 1** (ingress: 562.20 Mbit/s, egress: 542.31 Mbit/s)
- **Flow 2** (ingress: 128.07 Mbit/s, egress: 127.35 Mbit/s)
- **Flow 3** (ingress: 4.92 Mbit/s, egress: 4.87 Mbit/s)

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

- **Flow 1** (95th percentile: 233.16 ms)
- **Flow 2** (95th percentile: 148.40 ms)
- **Flow 3** (95th percentile: 138.04 ms)
Run 4: Statistics of PCC-Allegro

Start at: 2018-04-18 11:13:02
End at: 2018-04-18 11:13:32

# Below is generated by plot.py at 2018-04-18 16:10:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 577.36 Mbit/s
95th percentile per-packet one-way delay: 151.602 ms
Loss rate: 1.35%
-- Flow 1:
Average throughput: 508.95 Mbit/s
95th percentile per-packet one-way delay: 156.487 ms
Loss rate: 1.42%
-- Flow 2:
Average throughput: 71.32 Mbit/s
95th percentile per-packet one-way delay: 124.637 ms
Loss rate: 0.67%
-- Flow 3:
Average throughput: 64.68 Mbit/s
95th percentile per-packet one-way delay: 127.706 ms
Loss rate: 1.17%
Run 4: Report of PCC-Allegro — Data Link

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

- Flow 1 ingress (mean 514.39 Mbps)
- Flow 1 egress (mean 508.95 Mbps)
- Flow 2 ingress (mean 71.42 Mbps)
- Flow 2 egress (mean 71.32 Mbps)
- Flow 3 ingress (mean 64.73 Mbps)
- Flow 3 egress (mean 64.68 Mbps)

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

- Flow 1 (95th percentile 156.49 ms)
- Flow 2 (95th percentile 124.64 ms)
- Flow 3 (95th percentile 127.71 ms)
Run 5: Statistics of PCC-Allegro

End at: 2018-04-18 11:29:23

# Below is generated by plot.py at 2018-04-18 16:10:28
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 607.37 Mbit/s
  95th percentile per-packet one-way delay: 254.157 ms
  Loss rate: 4.44%
-- Flow 1:
  Average throughput: 493.74 Mbit/s
  95th percentile per-packet one-way delay: 258.867 ms
  Loss rate: 5.12%
-- Flow 2:
  Average throughput: 110.68 Mbit/s
  95th percentile per-packet one-way delay: 155.710 ms
  Loss rate: 1.24%
-- Flow 3:
  Average throughput: 123.14 Mbit/s
  95th percentile per-packet one-way delay: 156.928 ms
  Loss rate: 1.66%
Run 5: Report of PCC-Allegro — Data Link

![Graph showing network performance metrics over time](image-url)
Run 6: Statistics of PCC-Allegro

Start at: 2018-04-18 11:44:43
End at: 2018-04-18 11:45:13

# Below is generated by plot.py at 2018-04-18 16:10:28
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 584.97 Mbit/s
  95th percentile per-packet one-way delay: 230.952 ms
  Loss rate: 4.55%
-- Flow 1:
  Average throughput: 469.26 Mbit/s
  95th percentile per-packet one-way delay: 240.327 ms
  Loss rate: 5.45%
-- Flow 2:
  Average throughput: 157.71 Mbit/s
  95th percentile per-packet one-way delay: 144.725 ms
  Loss rate: 0.67%
-- Flow 3:
  Average throughput: 33.53 Mbit/s
  95th percentile per-packet one-way delay: 148.079 ms
  Loss rate: 1.14%
Run 6: Report of PCC-Allegro — Data Link

![Graph of Throughput (Mbps) over time for different flows.](image1)

![Graph of Per-packet one-way delay (ms) over time for different flows.](image2)
Run 7: Statistics of PCC-Allegro

Start at: 2018-04-18 12:00:22
End at: 2018-04-18 12:00:52

# Below is generated by plot.py at 2018-04-18 16:10:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 596.76 Mbit/s
95th percentile per-packet one-way delay: 225.774 ms
Loss rate: 2.07%
-- Flow 1:
Average throughput: 477.93 Mbit/s
95th percentile per-packet one-way delay: 231.305 ms
Loss rate: 2.14%
-- Flow 2:
Average throughput: 122.19 Mbit/s
95th percentile per-packet one-way delay: 151.075 ms
Loss rate: 1.29%
-- Flow 3:
Average throughput: 115.84 Mbit/s
95th percentile per-packet one-way delay: 152.415 ms
Loss rate: 2.90%
Run 7: Report of PCC-Allegro — Data Link
Run 8: Statistics of PCC-Allegro

Start at: 2018-04-18 12:16:15
End at: 2018-04-18 12:16:45

# Below is generated by plot.py at 2018-04-18 16:12:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 638.83 Mbit/s
95th percentile per-packet one-way delay: 200.676 ms
Loss rate: 6.40%
-- Flow 1:
Average throughput: 488.22 Mbit/s
95th percentile per-packet one-way delay: 218.321 ms
Loss rate: 7.15%
-- Flow 2:
Average throughput: 224.94 Mbit/s
95th percentile per-packet one-way delay: 149.677 ms
Loss rate: 3.92%
-- Flow 3:
Average throughput: 4.30 Mbit/s
95th percentile per-packet one-way delay: 149.083 ms
Loss rate: 2.27%
Run 8: Report of PCC-Allegro — Data Link
Run 9: Statistics of PCC-Allegro

Start at: 2018-04-18 12:32:05
End at: 2018-04-18 12:32:35

# Below is generated by plot.py at 2018-04-18 16:20:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 574.07 Mbit/s
95th percentile per-packet one-way delay: 154.231 ms
Loss rate: 1.06%
-- Flow 1:
Average throughput: 560.38 Mbit/s
95th percentile per-packet one-way delay: 155.525 ms
Loss rate: 1.05%
-- Flow 2:
Average throughput: 4.63 Mbit/s
95th percentile per-packet one-way delay: 89.634 ms
Loss rate: 0.90%
-- Flow 3:
Average throughput: 32.73 Mbit/s
95th percentile per-packet one-way delay: 89.408 ms
Loss rate: 1.20%
Run 9: Report of PCC-Allegro — Data Link

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

- Flow 1 ingress (mean 564.47 Mbps)
- Flow 1 egress (mean 560.38 Mbps)
- Flow 2 ingress (mean 4.65 Mbps)
- Flow 2 egress (mean 4.63 Mbps)
- Flow 3 ingress (mean 32.79 Mbps)
- Flow 3 egress (mean 32.73 Mbps)

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

- Flow 1 (95th percentile 155.53 ms)
- Flow 2 (95th percentile 89.63 ms)
- Flow 3 (95th percentile 89.41 ms)
Run 10: Statistics of PCC-Allegro


# Below is generated by plot.py at 2018-04-18 16:20:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 579.91 Mbit/s
  95th percentile per-packet one-way delay: 181.023 ms
  Loss rate: 3.21%
-- Flow 1:
  Average throughput: 464.74 Mbit/s
  95th percentile per-packet one-way delay: 211.950 ms
  Loss rate: 3.82%
-- Flow 2:
  Average throughput: 142.65 Mbit/s
  95th percentile per-packet one-way delay: 118.899 ms
  Loss rate: 0.55%
-- Flow 3:
  Average throughput: 63.06 Mbit/s
  95th percentile per-packet one-way delay: 92.355 ms
  Loss rate: 1.22%
Run 10: Report of PCC-Allegro — Data Link

Graph 1: Throughput (Mbps)

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

Legend:
- Flow 1 ingress (mean 481.53 Mbit/s)
- Flow 1 egress (mean 464.74 Mbit/s)
- Flow 2 ingress (mean 142.74 Mbit/s)
- Flow 2 egress (mean 142.65 Mbit/s)
- Flow 3 ingress (mean 63.18 Mbit/s)
- Flow 3 egress (mean 63.06 Mbit/s)
Run 1: Statistics of QUIC Cubic

Start at: 2018-04-18 10:28:10
End at: 2018-04-18 10:28:40

# Below is generated by plot.py at 2018-04-18 16:20:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 105.88 Mbit/s
95th percentile per-packet one-way delay: 50.700 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 65.10 Mbit/s
95th percentile per-packet one-way delay: 50.652 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 31.41 Mbit/s
95th percentile per-packet one-way delay: 50.665 ms
Loss rate: 0.15%
-- Flow 3:
Average throughput: 54.02 Mbit/s
95th percentile per-packet one-way delay: 50.754 ms
Loss rate: 1.39%
Run 1: Report of QUIC Cubic — Data Link

![Graph showing throughput and packet arrival time for Flow 1, Flow 2, and Flow 3.](image)

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 65.14 Mbps)
  - Flow 2 ingress (mean 31.31 Mbps)
  - Flow 3 ingress (mean 54.22 Mbps)
  - Flow 1 egress (mean 65.10 Mbps)
  - Flow 2 egress (mean 31.41 Mbps)
  - Flow 3 egress (mean 54.02 Mbps)

- **Packet Arrival Time (ms):**
  - Flow 1 (95th percentile 50.65 ms)
  - Flow 2 (95th percentile 50.66 ms)
  - Flow 3 (95th percentile 50.75 ms)
Run 2: Statistics of QUIC Cubic

End at: 2018-04-18 10:44:29

# Below is generated by plot.py at 2018-04-18 16:20:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.57 Mbit/s
95th percentile per-packet one-way delay: 50.812 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 66.42 Mbit/s
95th percentile per-packet one-way delay: 50.705 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 32.38 Mbit/s
95th percentile per-packet one-way delay: 50.597 ms
Loss rate: 0.99%
-- Flow 3:
Average throughput: 20.34 Mbit/s
95th percentile per-packet one-way delay: 50.969 ms
Loss rate: 0.45%
Run 2: Report of QUIC Cubic — Data Link

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

Legend:
- Flow 1 ingress (mean 66.40 Mbit/s)
- Flow 1 egress (mean 66.42 Mbit/s)
- Flow 2 ingress (mean 32.54 Mbit/s)
- Flow 2 egress (mean 32.38 Mbit/s)
- Flow 3 ingress (mean 20.22 Mbit/s)
- Flow 3 egress (mean 20.34 Mbit/s)
Run 3: Statistics of QUIC Cubic

Start at: 2018-04-18 10:59:54
End at: 2018-04-18 11:00:24

# Below is generated by plot.py at 2018-04-18 16:20:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 101.80 Mbit/s
  95th percentile per-packet one-way delay: 51.169 ms
  Loss rate: 0.52%
-- Flow 1:
  Average throughput: 55.57 Mbit/s
  95th percentile per-packet one-way delay: 50.764 ms
  Loss rate: 0.46%
-- Flow 2:
  Average throughput: 61.63 Mbit/s
  95th percentile per-packet one-way delay: 51.255 ms
  Loss rate: 0.64%
-- Flow 3:
  Average throughput: 16.28 Mbit/s
  95th percentile per-packet one-way delay: 50.176 ms
  Loss rate: 0.27%
Run 3: Report of QUIC Cubic — Data Link
Run 4: Statistics of QUIC Cubic

Start at: 2018-04-18 11:15:45
End at: 2018-04-18 11:16:15

# Below is generated by plot.py at 2018-04-18 16:20:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 115.80 Mbit/s
  95th percentile per-packet one-way delay: 51.494 ms
  Loss rate: 0.42%
-- Flow 1:
  Average throughput: 58.98 Mbit/s
  95th percentile per-packet one-way delay: 51.572 ms
  Loss rate: 0.40%
-- Flow 2:
  Average throughput: 59.60 Mbit/s
  95th percentile per-packet one-way delay: 50.952 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 53.34 Mbit/s
  95th percentile per-packet one-way delay: 51.402 ms
  Loss rate: 1.40%
Run 4: Report of QUIC Cubic — Data Link
Run 5: Statistics of QUIC Cubic

Start at: 2018-04-18 11:31:37
End at: 2018-04-18 11:32:07

# Below is generated by plot.py at 2018-04-18 16:20:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 72.10 Mbit/s
  95th percentile per-packet one-way delay: 51.250 ms
  Loss rate: 0.70%
-- Flow 1:
  Average throughput: 38.25 Mbit/s
  95th percentile per-packet one-way delay: 51.290 ms
  Loss rate: 0.06%
-- Flow 2:
  Average throughput: 29.00 Mbit/s
  95th percentile per-packet one-way delay: 50.751 ms
  Loss rate: 1.42%
-- Flow 3:
  Average throughput: 44.63 Mbit/s
  95th percentile per-packet one-way delay: 51.207 ms
  Loss rate: 1.43%
Run 5: Report of QUIC Cubic — Data Link
Run 6: Statistics of QUIC Cubic

End at: 2018-04-18 11:47:58

# Below is generated by plot.py at 2018-04-18 16:20:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 71.65 Mbit/s
95th percentile per-packet one-way delay: 51.543 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 49.01 Mbit/s
95th percentile per-packet one-way delay: 51.589 ms
Loss rate: 0.53%
-- Flow 2:
Average throughput: 26.06 Mbit/s
95th percentile per-packet one-way delay: 50.844 ms
Loss rate: 1.17%
-- Flow 3:
Average throughput: 16.41 Mbit/s
95th percentile per-packet one-way delay: 51.161 ms
Loss rate: 0.34%
Run 6: Report of QUIC Cubic — Data Link

![Graph showing network performance metrics over time.](image-url)
Run 7: Statistics of QUIC Cubic

Start at: 2018-04-18 12:03:07
End at: 2018-04-18 12:03:37

# Below is generated by plot.py at 2018-04-18 16:20:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 115.02 Mbit/s
  95th percentile per-packet one-way delay: 50.746 ms
  Loss rate: 0.56%
-- Flow 1:
  Average throughput: 59.93 Mbit/s
  95th percentile per-packet one-way delay: 50.779 ms
  Loss rate: 0.33%
-- Flow 2:
  Average throughput: 61.53 Mbit/s
  95th percentile per-packet one-way delay: 50.661 ms
  Loss rate: 0.63%
-- Flow 3:
  Average throughput: 43.61 Mbit/s
  95th percentile per-packet one-way delay: 50.559 ms
  Loss rate: 1.32%
Run 7: Report of QUIC Cubic — Data Link
Run 8: Statistics of QUIC Cubic

Start at: 2018-04-18 12:19:01
End at: 2018-04-18 12:19:31

# Below is generated by plot.py at 2018-04-18 16:20:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 64.77 Mbit/s
95th percentile per-packet one-way delay: 50.659 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 36.80 Mbit/s
95th percentile per-packet one-way delay: 50.721 ms
Loss rate: 0.63%
-- Flow 2:
Average throughput: 33.57 Mbit/s
95th percentile per-packet one-way delay: 50.463 ms
Loss rate: 0.92%
-- Flow 3:
Average throughput: 17.41 Mbit/s
95th percentile per-packet one-way delay: 49.916 ms
Loss rate: 0.21%
Run 8: Report of QUIC Cubic — Data Link

![Graph 1](image1.png)

- **Flow 1 ingress** (mean 36.91 Mbps)
- **Flow 1 egress** (mean 36.80 Mbps)
- **Flow 2 ingress** (mean 33.71 Mbps)
- **Flow 2 egress** (mean 33.57 Mbps)
- **Flow 3 ingress** (mean 17.34 Mbps)
- **Flow 3 egress** (mean 17.41 Mbps)

![Graph 2](image2.png)

- Flow 1 (95th percentile 50.72 ms)
- Flow 2 (95th percentile 50.46 ms)
- Flow 3 (95th percentile 49.92 ms)
Run 9: Statistics of QUIC Cubic

Start at: 2018-04-18 12:34:48
End at: 2018-04-18 12:35:18

# Below is generated by plot.py at 2018-04-18 16:20:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 85.18 Mbit/s
  95th percentile per-packet one-way delay: 50.451 ms
  Loss rate: 0.57%
-- Flow 1:
  Average throughput: 32.87 Mbit/s
  95th percentile per-packet one-way delay: 50.345 ms
  Loss rate: 0.62%
-- Flow 2:
  Average throughput: 59.11 Mbit/s
  95th percentile per-packet one-way delay: 50.525 ms
  Loss rate: 0.26%
-- Flow 3:
  Average throughput: 40.13 Mbit/s
  95th percentile per-packet one-way delay: 50.057 ms
  Loss rate: 1.39%
Run 9: Report of QUIC Cubic — Data Link

[Graph 1: Throughput (Mbps) vs Time (s)]
- Flow 1 ingress (mean 32.97 Mbps)
- Flow 1 egress (mean 32.87 Mbps)
- Flow 2 ingress (mean 59.14 Mbps)
- Flow 2 egress (mean 59.11 Mbps)
- Flow 3 ingress (mean 40.27 Mbps)
- Flow 3 egress (mean 40.13 Mbps)

[Graph 2: Per packet one way delay (ms) vs Time (s)]
- Flow 1 (95th percentile 50.34 ms)
- Flow 2 (95th percentile 50.52 ms)
- Flow 3 (95th percentile 50.06 ms)
Run 10: Statistics of QUIC Cubic

Start at: 2018-04-18 12:50:36
End at: 2018-04-18 12:51:06

# Below is generated by plot.py at 2018-04-18 16:20:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 122.98 Mbit/s
  95th percentile per-packet one-way delay: 50.689 ms
  Loss rate: 0.58%
-- Flow 1:
  Average throughput: 66.68 Mbit/s
  95th percentile per-packet one-way delay: 50.723 ms
  Loss rate: 0.39%
-- Flow 2:
  Average throughput: 62.26 Mbit/s
  95th percentile per-packet one-way delay: 50.568 ms
  Loss rate: 0.62%
-- Flow 3:
  Average throughput: 46.02 Mbit/s
  95th percentile per-packet one-way delay: 50.508 ms
  Loss rate: 1.29%
Run 10: Report of QUIC Cubic — Data Link

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

- Flow 1 ingress (mean 65.72 Mbit/s)
- Flow 1 egress (mean 66.68 Mbit/s)
- Flow 2 ingress (mean 62.32 Mbit/s)
- Flow 2 egress (mean 62.26 Mbit/s)
- Flow 3 ingress (mean 46.15 Mbit/s)
- Flow 3 egress (mean 46.02 Mbit/s)

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

- Flow 1 (95th percentile 50.72 ms)
- Flow 2 (95th percentile 50.57 ms)
- Flow 3 (95th percentile 50.51 ms)
Run 1: Statistics of SCReAM

Start at: 2018-04-18 10:30:40
End at: 2018-04-18 10:31:10

# Below is generated by plot.py at 2018-04-18 16:20:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 51.030 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 51.007 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 51.061 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.930 ms
Loss rate: 1.11%
Run 1: Report of SCReAM — Data Link
Run 2: Statistics of SCReAM

Start at: 2018-04-18 10:46:30
End at: 2018-04-18 10:47:00

# Below is generated by plot.py at 2018-04-18 16:20:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 50.787 ms
  Loss rate: 0.59%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 50.819 ms
  Loss rate: 0.38%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 50.536 ms
  Loss rate: 0.63%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 50.574 ms
  Loss rate: 1.11%
Run 2: Report of SCReAM — Data Link
Run 3: Statistics of SCReAM

Start at: 2018-04-18 11:02:27
End at: 2018-04-18 11:02:57

# Below is generated by plot.py at 2018-04-18 16:20:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 51.316 ms
  Loss rate: 0.52%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 51.274 ms
  Loss rate: 0.25%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 51.346 ms
  Loss rate: 0.63%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 51.202 ms
  Loss rate: 1.10%
Run 3: Report of SCReAM — Data Link

![Graph showing throughput and per-packet one-way delay over time for three data 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)
Run 4: Statistics of SCReAM

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

# Below is generated by plot.py at 2018-04-18 16:20:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 51.610 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 51.392 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 51.645 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 51.135 ms
Loss rate: 1.11%
Run 4: Report of SCReAM — Data Link
Run 5: Statistics of SCReAM

Start at: 2018-04-18 11:34:08
End at: 2018-04-18 11:34:38

# Below is generated by plot.py at 2018-04-18 16:20:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 51.719 ms
  Loss rate: 0.46%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 51.487 ms
  Loss rate: 0.38%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 51.760 ms
  Loss rate: 0.43%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 51.559 ms
  Loss rate: 0.76%
Run 5: Report of SCReAM — Data Link
Run 6: Statistics of SCReAM

End at: 2018-04-18 11:50:29

# Below is generated by plot.py at 2018-04-18 16:20:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 51.314 ms
  Loss rate: 0.52%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 51.279 ms
  Loss rate: 0.25%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 51.350 ms
  Loss rate: 0.63%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 51.295 ms
  Loss rate: 1.11%
Run 7: Statistics of SCReAM

Start at: 2018-04-18 12:05:41
End at: 2018-04-18 12:06:11

# Below is generated by plot.py at 2018-04-18 16:20:31
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 50.871 ms
  Loss rate: 0.59%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 50.906 ms
  Loss rate: 0.38%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 50.751 ms
  Loss rate: 0.63%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 50.244 ms
  Loss rate: 1.11%
Run 7: Report of SCReAM — Data Link

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

- Flow 1 (95th percentile 50.91 ms)
- Flow 2 (95th percentile 50.73 ms)
- Flow 3 (95th percentile 50.24 ms)
Run 8: Statistics of SCReAM

End at: 2018-04-18 12:22:02

# Below is generated by plot.py at 2018-04-18 16:20:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 51.084 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.558 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.655 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 51.143 ms
Loss rate: 1.11%
Run 8: Report of SCReAM — Data Link

Throughput (Mbps)

Time (s)

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

Per-packet conn. delay (ms)

Time (s)

Flow 1 (95th percentile 50.56 ms)  Flow 2 (95th percentile 50.66 ms)  Flow 3 (95th percentile 51.14 ms)
Run 9: Statistics of SCReAM

Start at: 2018-04-18 12:37:20
End at: 2018-04-18 12:37:50

# Below is generated by plot.py at 2018-04-18 16:20:31
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 51.104 ms
  Loss rate: 0.52%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 51.141 ms
  Loss rate: 0.38%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 50.858 ms
  Loss rate: 0.42%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 50.864 ms
  Loss rate: 1.10%
Run 9: Report of SCReAM — Data Link

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

[Graph 2: One-packet-come-one-delay (ms) vs Time (s)]
Run 10: Statistics of SCReAM

Start at: 2018-04-18 12:53:09
End at: 2018-04-18 12:53:39

# Below is generated by plot.py at 2018-04-18 16:20:31
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 50.778 ms
  Loss rate: 0.45%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 50.623 ms
  Loss rate: 0.25%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 50.559 ms
  Loss rate: 0.42%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 50.897 ms
  Loss rate: 1.11%
Run 10: Report of SCReAM — Data Link

Throughput (Mbps)

Time (s)

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

Packet-cumulative delay (ms)

Time (s)

Flow 1 (95th percentile 50.62 ms)  Flow 2 (95th percentile 50.56 ms)  Flow 3 (95th percentile 50.90 ms)
Run 1: Statistics of WebRTC media

Start at: 2018-04-18 10:26:29
End at: 2018-04-18 10:26:59

# Below is generated by plot.py at 2018-04-18 16:20:31
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.17 Mbit/s
  95th percentile per-packet one-way delay: 51.219 ms
  Loss rate: 0.06%
-- Flow 1:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 51.227 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 51.275 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 51.123 ms
  Loss rate: 0.15%
Run 1: Report of WebRTC media — Data Link

![Graph showing network performance metrics over time for different flows. The graphs display throughput in Mbps and per-packet round-trip delay in ms for each flow. The metrics include 95th percentile values for each flow.]

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


# Below is generated by plot.py at 2018-04-18 16:20:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 51.024 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 51.254 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 50.936 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 51.081 ms
Loss rate: 0.16%
Run 2: Report of WebRTC media — Data Link

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**Graph 1:**
Throughput (Mb/s) vs. Time (s)
- Flow 1 ingress (mean 0.06 Mb/s)
- Flow 1 egress (mean 0.06 Mb/s)
- Flow 2 ingress (mean 0.06 Mb/s)
- Flow 2 egress (mean 0.06 Mb/s)
- Flow 3 ingress (mean 0.05 Mb/s)
- Flow 3 egress (mean 0.05 Mb/s)

**Graph 2:**
Per-packet one-way delay [ms] vs. Time (s)
- Flow 1 (95th percentile 51.25 ms)
- Flow 2 (95th percentile 50.94 ms)
- Flow 3 (95th percentile 51.08 ms)
Run 3: Statistics of WebRTC media

End at: 2018-04-18 10:58:43

# Below is generated by plot.py at 2018-04-18 16:20:31
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.17 Mbit/s
  95th percentile per-packet one-way delay: 51.193 ms
  Loss rate: 0.05%
  -- Flow 1:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 51.056 ms
  Loss rate: 0.00%
  -- Flow 2:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 51.235 ms
  Loss rate: 0.00%
  -- Flow 3:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 51.079 ms
  Loss rate: 0.16%
Run 3: Report of WebRTC media — Data Link
Run 4: Statistics of WebRTC media

Start at: 2018-04-18 11:14:03
End at: 2018-04-18 11:14:33

# Below is generated by plot.py at 2018-04-18 16:20:31
# Datalink statistics
-- Total of 3 flows:
   Average throughput: 0.17 Mbit/s
   95th percentile per-packet one-way delay: 51.599 ms
   Loss rate: 0.05%
   -- Flow 1:
   Average throughput: 0.06 Mbit/s
   95th percentile per-packet one-way delay: 51.182 ms
   Loss rate: 0.00%
   -- Flow 2:
   Average throughput: 0.06 Mbit/s
   95th percentile per-packet one-way delay: 51.554 ms
   Loss rate: 0.00%
   -- Flow 3:
   Average throughput: 0.05 Mbit/s
   95th percentile per-packet one-way delay: 51.694 ms
   Loss rate: 0.16%
Run 4: Report of WebRTC media — Data Link
Run 5: Statistics of WebRTC media

Start at: 2018-04-18 11:29:56
End at: 2018-04-18 11:30:26

# Below is generated by plot.py at 2018-04-18 16:20:31
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.17 Mbit/s
  95th percentile per-packet one-way delay: 51.757 ms
  Loss rate: 0.05%
-- Flow 1:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 51.652 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 51.739 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 52.340 ms
  Loss rate: 0.16%
Run 5: Report of WebRTC media — Data Link
Run 6: Statistics of WebRTC media

Start at: 2018-04-18 11:45:45
End at: 2018-04-18 11:46:15

# Below is generated by plot.py at 2018-04-18 16:20:31
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.17 Mbit/s
  95th percentile per-packet one-way delay: 51.487 ms
  Loss rate: 0.06%
-- Flow 1:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 51.484 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 51.370 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 51.604 ms
  Loss rate: 0.20%
Run 6: Report of WebRTC media — Data Link

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

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

Per-packet one-way delay [ms]
Run 7: Statistics of WebRTC media

Start at: 2018-04-18 12:01:24
End at: 2018-04-18 12:01:54

# Below is generated by plot.py at 2018-04-18 16:20:31
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.17 Mbit/s
  95th percentile per-packet one-way delay: 51.141 ms
  Loss rate: 0.05%
-- Flow 1:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 52.655 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 51.110 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 51.058 ms
  Loss rate: 0.16%
Run 7: Report of WebRTC media — Data Link

[Graph showing throughput and packet delay over time for different flows, with annotations for mean and 95th percentile values for each flow.]
Run 8: Statistics of WebRTC media

Start at: 2018-04-18 12:17:19
End at: 2018-04-18 12:17:49

# Below is generated by plot.py at 2018-04-18 16:20:31
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.17 Mbit/s
  95th percentile per-packet one-way delay: 51.093 ms
  Loss rate: 0.05%
-- Flow 1:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 50.504 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 51.125 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 50.848 ms
  Loss rate: 0.16%
Run 8: Report of WebRTC media — Data Link

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

- **Flow 1 ingress (mean 0.06 Mbit/s)**
- **Flow 1 egress (mean 0.06 Mbit/s)**
- **Flow 2 ingress (mean 0.06 Mbit/s)**
- **Flow 2 egress (mean 0.06 Mbit/s)**
- **Flow 3 ingress (mean 0.05 Mbit/s)**
- **Flow 3 egress (mean 0.05 Mbit/s)**
Run 9: Statistics of WebRTC media

Start at: 2018-04-18 12:33:06
End at: 2018-04-18 12:33:36

# Below is generated by plot.py at 2018-04-18 16:20:31
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.17 Mbit/s
  95th percentile per-packet one-way delay: 51.029 ms
  Loss rate: 0.05%
-- Flow 1:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 50.989 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 51.078 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 50.534 ms
  Loss rate: 0.16%
Run 9: Report of WebRTC media — Data Link

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

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

![Graph 2: Per-packet end-to-end delay (ms)](image2)

- Flow 1 (95th percentile 50.99 ms)
- Flow 2 (95th percentile 51.08 ms)
- Flow 3 (95th percentile 50.53 ms)
Run 10: Statistics of WebRTC media

Start at: 2018-04-18 12:48:54
End at: 2018-04-18 12:49:24

# Below is generated by plot.py at 2018-04-18 16:20:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 51.008 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 50.759 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 51.122 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 50.918 ms
Loss rate: 0.16%
Run 10: Report of WebRTC media — Data Link

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

![Graph 2: Per-packet one-way delay (ms)]]
Run 1: Statistics of Sprout

Start at: 2018-04-18 10:24:47
End at: 2018-04-18 10:25:17

# Below is generated by plot.py at 2018-04-18 16:20:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.68 Mbit/s
95th percentile per-packet one-way delay: 51.334 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 7.96 Mbit/s
95th percentile per-packet one-way delay: 51.333 ms
Loss rate: 0.15%
-- Flow 2:
Average throughput: 7.85 Mbit/s
95th percentile per-packet one-way delay: 51.365 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 7.64 Mbit/s
95th percentile per-packet one-way delay: 51.274 ms
Loss rate: 0.00%
Run 1: Report of Sprout — Data Link
Run 2: Statistics of Sprout

Start at: 2018-04-18 10:40:34
End at: 2018-04-18 10:41:04

# Below is generated by plot.py at 2018-04-18 16:20:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.79 Mbit/s
95th percentile per-packet one-way delay: 51.502 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 8.03 Mbit/s
95th percentile per-packet one-way delay: 51.511 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 7.93 Mbit/s
95th percentile per-packet one-way delay: 51.539 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 7.67 Mbit/s
95th percentile per-packet one-way delay: 50.513 ms
Loss rate: 0.14%
Run 2: Report of Sprout — Data Link
Run 3: Statistics of Sprout

Start at: 2018-04-18 10:56:30
End at: 2018-04-18 10:57:00

# Below is generated by plot.py at 2018-04-18 16:20:31
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 15.73 Mbit/s
  95th percentile per-packet one-way delay: 51.626 ms
  Loss rate: 0.43%
-- Flow 1:
  Average throughput: 8.00 Mbit/s
  95th percentile per-packet one-way delay: 51.707 ms
  Loss rate: 0.41%
-- Flow 2:
  Average throughput: 7.86 Mbit/s
  95th percentile per-packet one-way delay: 51.569 ms
  Loss rate: 0.61%
-- Flow 3:
  Average throughput: 7.71 Mbit/s
  95th percentile per-packet one-way delay: 50.739 ms
  Loss rate: 0.11%
Run 3: Report of Sprout — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 8.00 Mbit/s)  Flow 1 egress (mean 8.00 Mbit/s)
Flow 2 ingress (mean 7.87 Mbit/s)  Flow 2 egress (mean 7.86 Mbit/s)
Flow 3 ingress (mean 7.66 Mbit/s)  Flow 3 egress (mean 7.71 Mbit/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 51.71 ms)  Flow 2 (95th percentile 51.57 ms)  Flow 3 (95th percentile 50.74 ms)
Run 4: Statistics of Sprout

Start at: 2018-04-18 11:12:22
End at: 2018-04-18 11:12:52

# Below is generated by plot.py at 2018-04-18 16:20:31
# Datalink statistics
-- Total of 3 flows:
    Average throughput: 15.64 Mbit/s
    95th percentile per-packet one-way delay: 52.498 ms
    Loss rate: 0.60%
-- Flow 1:
    Average throughput: 7.93 Mbit/s
    95th percentile per-packet one-way delay: 52.361 ms
    Loss rate: 0.41%
-- Flow 2:
    Average throughput: 7.87 Mbit/s
    95th percentile per-packet one-way delay: 52.706 ms
    Loss rate: 0.64%
-- Flow 3:
    Average throughput: 7.61 Mbit/s
    95th percentile per-packet one-way delay: 52.113 ms
    Loss rate: 1.12%
Run 4: Report of Sprout — Data Link
Run 5: Statistics of Sprout

End at: 2018-04-18 11:28:43

# Below is generated by plot.py at 2018-04-18 16:20:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.67 Mbit/s
95th percentile per-packet one-way delay: 52.271 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 7.95 Mbit/s
95th percentile per-packet one-way delay: 52.314 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 7.87 Mbit/s
95th percentile per-packet one-way delay: 52.179 ms
Loss rate: 0.18%
-- Flow 3:
Average throughput: 7.66 Mbit/s
95th percentile per-packet one-way delay: 52.255 ms
Loss rate: 1.29%
Run 5: Report of Sprout — Data Link
Run 6: Statistics of Sprout

Start at: 2018-04-18 11:44:03
End at: 2018-04-18 11:44:33

# Below is generated by plot.py at 2018-04-18 16:20:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.60 Mbit/s
95th percentile per-packet one-way delay: 52.025 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 7.94 Mbit/s
95th percentile per-packet one-way delay: 51.961 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 7.80 Mbit/s
95th percentile per-packet one-way delay: 52.032 ms
Loss rate: 0.59%
-- Flow 3:
Average throughput: 7.59 Mbit/s
95th percentile per-packet one-way delay: 52.153 ms
Loss rate: 1.34%
Run 6: Report of Sprout — Data Link

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

- **Throughput Graph**
  - X-axis: Time (s)
  - Y-axis: Throughput (Mbps)
  - Legend:
    - Flow 1 ingress (mean 7.94 Mbps/s)
    - Flow 1 egress (mean 7.94 Mbps/s)
    - Flow 2 ingress (mean 7.81 Mbps/s)
    - Flow 2 egress (mean 7.80 Mbps/s)
    - Flow 3 ingress (mean 7.60 Mbps/s)
    - Flow 3 egress (mean 7.59 Mbps/s)

- **Packet Delay Graph**
  - X-axis: Time (s)
  - Y-axis: Per packet one-way delay (ms)
  - Legend:
    - Flow 1 (95th percentile 51.96 ms)
    - Flow 2 (95th percentile 52.03 ms)
    - Flow 3 (95th percentile 52.15 ms)
Run 7: Statistics of Sprout

Start at: 2018-04-18 11:59:42
End at: 2018-04-18 12:00:12

# Below is generated by plot.py at 2018-04-18 16:20:31
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 15.41 Mbit/s
  95th percentile per-packet one-way delay: 51.715 ms
  Loss rate: 0.39%
-- Flow 1:
  Average throughput: 7.81 Mbit/s
  95th percentile per-packet one-way delay: 51.603 ms
  Loss rate: 0.35%
-- Flow 2:
  Average throughput: 7.89 Mbit/s
  95th percentile per-packet one-way delay: 51.742 ms
  Loss rate: 0.61%
-- Flow 3:
  Average throughput: 7.24 Mbit/s
  95th percentile per-packet one-way delay: 51.916 ms
  Loss rate: 0.02%
Run 7: Report of Sprout — Data Link
Run 8: Statistics of Sprout

Start at: 2018-04-18 12:15:35
End at: 2018-04-18 12:16:05

# Below is generated by plot.py at 2018-04-18 16:20:31
# Datalink statistics
  -- Total of 3 flows:
  Average throughput: 15.66 Mbit/s
  95th percentile per-packet one-way delay: 51.565 ms
  Loss rate: 0.63%
  -- Flow 1:
  Average throughput: 7.98 Mbit/s
  95th percentile per-packet one-way delay: 51.611 ms
  Loss rate: 0.42%
  -- Flow 2:
  Average throughput: 7.91 Mbit/s
  95th percentile per-packet one-way delay: 51.475 ms
  Loss rate: 0.60%
  -- Flow 3:
  Average throughput: 7.45 Mbit/s
  95th percentile per-packet one-way delay: 51.591 ms
  Loss rate: 1.36%
Run 8: Report of Sprout — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 7.96 Mbps)
  - Flow 2 ingress (mean 7.91 Mbps)
  - Flow 3 ingress (mean 7.46 Mbps)
  - Flow 1 egress (mean 7.96 Mbps)
  - Flow 2 egress (mean 7.91 Mbps)
  - Flow 3 egress (mean 7.45 Mbps)

- **Per-packet one-way delay (ms):**
  - Flow 1 (95th percentile 51.61 ms)
  - Flow 2 (95th percentile 51.48 ms)
  - Flow 3 (95th percentile 51.59 ms)
Run 9: Statistics of Sprout


# Below is generated by plot.py at 2018-04-18 16:20:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.60 Mbit/s
95th percentile per-packet one-way delay: 51.519 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 7.94 Mbit/s
95th percentile per-packet one-way delay: 51.514 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 7.83 Mbit/s
95th percentile per-packet one-way delay: 51.479 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 7.56 Mbit/s
95th percentile per-packet one-way delay: 51.641 ms
Loss rate: 1.34%
Run 9: Report of Sprout — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 7.94 Mbit/s)
Flow 1 egress (mean 7.94 Mbit/s)
Flow 2 ingress (mean 7.84 Mbit/s)
Flow 2 egress (mean 7.83 Mbit/s)
Flow 3 ingress (mean 7.57 Mbit/s)
Flow 3 egress (mean 7.56 Mbit/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 51.51 ms)
Flow 2 (95th percentile 51.48 ms)
Flow 3 (95th percentile 51.64 ms)
Run 10: Statistics of Sprout

End at: 2018-04-18 12:47:43

# Below is generated by plot.py at 2018-04-18 16:20:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.66 Mbit/s
95th percentile per-packet one-way delay: 51.396 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 7.96 Mbit/s
95th percentile per-packet one-way delay: 51.420 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 7.89 Mbit/s
95th percentile per-packet one-way delay: 51.399 ms
Loss rate: 0.16%
-- Flow 3:
Average throughput: 7.54 Mbit/s
95th percentile per-packet one-way delay: 51.289 ms
Loss rate: 1.29%
Run 10: Report of Sprout — Data Link

![Graphs showing throughput and packet delay]

- Throughput (Mbps): Flow 1 ingress (mean 7.98 Mbps), Flow 1 egress (mean 7.96 Mbps), Flow 2 ingress (mean 7.88 Mbps), Flow 2 egress (mean 7.89 Mbps), Flow 3 ingress (mean 7.56 Mbps), Flow 3 egress (mean 7.34 Mbps)

- Packet delay (ms): Flow 1 (95th percentile 51.42 ms), Flow 2 (95th percentile 51.40 ms), Flow 3 (95th percentile 51.29 ms)
Run 1: Statistics of TaoVA-100x

End at: 2018-04-18 10:21:52

# Below is generated by plot.py at 2018-04-18 16:28:04
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 389.97 Mbit/s
  95th percentile per-packet one-way delay: 61.133 ms
  Loss rate: 0.49%
-- Flow 1:
  Average throughput: 206.83 Mbit/s
  95th percentile per-packet one-way delay: 57.197 ms
  Loss rate: 0.20%
-- Flow 2:
  Average throughput: 202.82 Mbit/s
  95th percentile per-packet one-way delay: 59.274 ms
  Loss rate: 0.33%
-- Flow 3:
  Average throughput: 148.21 Mbit/s
  95th percentile per-packet one-way delay: 69.483 ms
  Loss rate: 2.16%
Run 1: Report of TaoVA-100x — Data Link

![Graph showing throughput and packet size distribution over time with annotations for different flows and their mean speeds.]

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Run 2: Statistics of TaoVA-100x

Start at: 2018-04-18 10:37:15
End at: 2018-04-18 10:37:45

# Below is generated by plot.py at 2018-04-18 16:28:04
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 363.00 Mbit/s
  95th percentile per-packet one-way delay: 62.155 ms
  Loss rate: 0.44%
-- Flow 1:
  Average throughput: 193.86 Mbit/s
  95th percentile per-packet one-way delay: 62.067 ms
  Loss rate: 0.16%
-- Flow 2:
  Average throughput: 176.20 Mbit/s
  95th percentile per-packet one-way delay: 64.952 ms
  Loss rate: 0.63%
-- Flow 3:
  Average throughput: 158.53 Mbit/s
  95th percentile per-packet one-way delay: 51.664 ms
  Loss rate: 1.04%
Run 2: Report of TaoVA-100x — Data Link

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

![Graph 2: Per packet one way delay (ms)](image2)
Run 3: Statistics of TaoVA-100x

Start at: 2018-04-18 10:53:10
End at: 2018-04-18 10:53:40

# Below is generated by plot.py at 2018-04-18 16:28:04
# Datalink statistics
   -- Total of 3 flows:
      Average throughput: 369.76 Mbit/s
      95th percentile per-packet one-way delay: 60.989 ms
      Loss rate: 0.27%
   -- Flow 1:
      Average throughput: 194.87 Mbit/s
      95th percentile per-packet one-way delay: 56.016 ms
      Loss rate: 0.15%
   -- Flow 2:
      Average throughput: 197.52 Mbit/s
      95th percentile per-packet one-way delay: 67.340 ms
      Loss rate: 0.30%
   -- Flow 3:
      Average throughput: 132.88 Mbit/s
      95th percentile per-packet one-way delay: 62.100 ms
      Loss rate: 0.69%
Run 3: Report of TaoVA-100x — Data Link

[Graphs showing throughput and per-packet one-way delay over time for different flows, with legend indicating mean throughput and 95th percentile delay for each flow.]
Run 4: Statistics of TaoVA-100x

Start at: 2018-04-18 11:09:00
End at: 2018-04-18 11:09:30

# Below is generated by plot.py at 2018-04-18 16:28:04
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 375.57 Mbit/s
  95th percentile per-packet one-way delay: 55.434 ms
  Loss rate: 0.55%
-- Flow 1:
  Average throughput: 206.49 Mbit/s
  95th percentile per-packet one-way delay: 54.629 ms
  Loss rate: 0.37%
-- Flow 2:
  Average throughput: 147.82 Mbit/s
  95th percentile per-packet one-way delay: 55.134 ms
  Loss rate: 0.81%
-- Flow 3:
  Average throughput: 215.88 Mbit/s
  95th percentile per-packet one-way delay: 60.523 ms
  Loss rate: 0.72%
Run 4: Report of TaoVA-100x — Data Link

[Graph showing throughput and per-packet one-way delay over time for different flows.]
Run 5: Statistics of TaoVA-100x

Start at: 2018-04-18 11:24:52
End at: 2018-04-18 11:25:22

# Below is generated by plot.py at 2018-04-18 16:28:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 398.24 Mbit/s
95th percentile per-packet one-way delay: 64.177 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 211.42 Mbit/s
95th percentile per-packet one-way delay: 60.784 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 190.81 Mbit/s
95th percentile per-packet one-way delay: 65.926 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 182.05 Mbit/s
95th percentile per-packet one-way delay: 68.579 ms
Loss rate: 1.31%
Run 5: Report of TaoVA-100x — Data Link

![Graph of throughput over time for different flows]

- Flow 1 ingress (mean 211.43 Mbit/s)
- Flow 1 egress (mean 211.42 Mbit/s)
- Flow 2 ingress (mean 191.01 Mbit/s)
- Flow 2 egress (mean 190.01 Mbit/s)
- Flow 3 ingress (mean 182.56 Mbit/s)
- Flow 3 egress (mean 182.05 Mbit/s)

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

- Flow 1 (95th percentile 60.78 ms)
- Flow 2 (95th percentile 65.93 ms)
- Flow 3 (95th percentile 68.58 ms)
Run 6: Statistics of TaoVA-100x

Start at: 2018-04-18 11:40:39
End at: 2018-04-18 11:41:09

# Below is generated by plot.py at 2018-04-18 16:29:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 415.17 Mbit/s
95th percentile per-packet one-way delay: 64.951 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 213.03 Mbit/s
95th percentile per-packet one-way delay: 65.515 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 215.22 Mbit/s
95th percentile per-packet one-way delay: 60.288 ms
Loss rate: 0.57%
-- Flow 3:
Average throughput: 179.81 Mbit/s
95th percentile per-packet one-way delay: 68.538 ms
Loss rate: 0.38%
Run 6: Report of TaoVA-100x — Data Link
Run 7: Statistics of TaoVA-100x

End at: 2018-04-18 11:56:58

# Below is generated by plot.py at 2018-04-18 16:32:01
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 297.20 Mbit/s
  95th percentile per-packet one-way delay: 59.813 ms
  Loss rate: 0.44%
-- Flow 1:
  Average throughput: 150.32 Mbit/s
  95th percentile per-packet one-way delay: 52.655 ms
  Loss rate: 0.03%
-- Flow 2:
  Average throughput: 142.62 Mbit/s
  95th percentile per-packet one-way delay: 60.949 ms
  Loss rate: 0.49%
-- Flow 3:
  Average throughput: 158.20 Mbit/s
  95th percentile per-packet one-way delay: 69.840 ms
  Loss rate: 1.50%
Run 7: Report of TaoVA-100x — Data Link

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

- Flow 1 ingress (mean 149.84 Mbit/s)
- Flow 1 egress (mean 150.32 Mbit/s)
- Flow 2 ingress (mean 142.60 Mbit/s)
- Flow 2 egress (mean 142.62 Mbit/s)
- Flow 3 ingress (mean 158.95 Mbit/s)
- Flow 3 egress (mean 158.20 Mbit/s)
Run 8: Statistics of TaoVA-100x

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

# Below is generated by plot.py at 2018-04-18 16:36:12
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 406.18 Mbit/s
  95th percentile per-packet one-way delay: 55.817 ms
  Loss rate: 0.47%
-- Flow 1:
  Average throughput: 207.49 Mbit/s
  95th percentile per-packet one-way delay: 53.980 ms
  Loss rate: 0.35%
-- Flow 2:
  Average throughput: 201.96 Mbit/s
  95th percentile per-packet one-way delay: 57.555 ms
  Loss rate: 0.59%
-- Flow 3:
  Average throughput: 196.25 Mbit/s
  95th percentile per-packet one-way delay: 56.050 ms
  Loss rate: 0.59%
Run 8: Report of TaoVA-100x — Data Link
Run 9: Statistics of TaoVA-100x

End at: 2018-04-18 12:28:34

# Below is generated by plot.py at 2018-04-18 16:39:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 361.48 Mbit/s
  95th percentile per-packet one-way delay: 68.663 ms
  Loss rate: 0.35%
-- Flow 1:
  Average throughput: 196.95 Mbit/s
  95th percentile per-packet one-way delay: 63.176 ms
  Loss rate: 0.16%
-- Flow 2:
  Average throughput: 178.03 Mbit/s
  95th percentile per-packet one-way delay: 70.147 ms
  Loss rate: 0.31%
-- Flow 3:
  Average throughput: 140.72 Mbit/s
  95th percentile per-packet one-way delay: 75.371 ms
  Loss rate: 1.26%
Run 9: Report of TaoVA-100x — Data Link

![Throughput Graph]

- Flow 1 ingress (mean 196.59 Mbit/s)
- Flow 2 ingress (mean 177.66 Mbit/s)
- Flow 3 ingress (mean 141.04 Mbit/s)
- Flow 1 egress (mean 196.95 Mbit/s)
- Flow 2 egress (mean 178.03 Mbit/s)
- Flow 3 egress (mean 140.72 Mbit/s)

![Delay Graph]

- Flow 1 (95th percentile 63.18 ms)
- Flow 2 (95th percentile 70.15 ms)
- Flow 3 (95th percentile 75.37 ms)
Run 10: Statistics of TaoVA-100x

End at: 2018-04-18 12:44:23

# Below is generated by plot.py at 2018-04-18 16:41:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 392.01 Mbit/s
95th percentile per-packet one-way delay: 57.958 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 201.93 Mbit/s
95th percentile per-packet one-way delay: 53.771 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 196.05 Mbit/s
95th percentile per-packet one-way delay: 65.922 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 182.46 Mbit/s
95th percentile per-packet one-way delay: 58.600 ms
Loss rate: 1.14%
Run 10: Report of TaoVA-100x — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 201.78 Mbps)  Flow 1 egress (mean 201.93 Mbps)
Flow 2 ingress (mean 196.23 Mbps)  Flow 2 egress (mean 196.05 Mbps)
Flow 3 ingress (mean 182.68 Mbps)  Flow 3 egress (mean 182.46 Mbps)

Per packet one way delay (ms)

Time (s)
Run 1: Statistics of TCP Vegas

Start at: 2018-04-18 10:16:45
End at: 2018-04-18 10:17:15

# Below is generated by plot.py at 2018-04-18 16:41:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 169.10 Mbit/s
95th percentile per-packet one-way delay: 51.313 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 73.90 Mbit/s
95th percentile per-packet one-way delay: 51.128 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 109.13 Mbit/s
95th percentile per-packet one-way delay: 51.530 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 68.92 Mbit/s
95th percentile per-packet one-way delay: 51.806 ms
Loss rate: 1.10%
Run 1: Report of TCP Vegas — Data Link
Run 2: Statistics of TCP Vegas

Start at: 2018-04-18 10:32:33
End at: 2018-04-18 10:33:03

# Below is generated by plot.py at 2018-04-18 16:41:34
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 176.43 Mbit/s
  95th percentile per-packet one-way delay: 51.904 ms
  Loss rate: 0.43%
-- Flow 1:
  Average throughput: 108.95 Mbit/s
  95th percentile per-packet one-way delay: 51.818 ms
  Loss rate: 0.29%
-- Flow 2:
  Average throughput: 78.84 Mbit/s
  95th percentile per-packet one-way delay: 52.066 ms
  Loss rate: 0.52%
-- Flow 3:
  Average throughput: 46.09 Mbit/s
  95th percentile per-packet one-way delay: 51.861 ms
  Loss rate: 1.09%
Run 2: Report of TCP Vegas — Data Link
Run 3: Statistics of TCP Vegas


# Below is generated by plot.py at 2018-04-18 16:41:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 133.70 Mbit/s
95th percentile per-packet one-way delay: 53.227 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 78.22 Mbit/s
95th percentile per-packet one-way delay: 52.833 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 80.43 Mbit/s
95th percentile per-packet one-way delay: 53.999 ms
Loss rate: 0.58%
-- Flow 3:
Average throughput: 6.10 Mbit/s
95th percentile per-packet one-way delay: 51.576 ms
Loss rate: 2.08%
Run 3: Report of TCP Vegas — Data Link

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

- Flow 1 ingress (mean 78.26 Mbit/s)
- Flow 1 egress (mean 78.22 Mbit/s)
- Flow 2 ingress (mean 80.43 Mbit/s)
- Flow 2 egress (mean 80.43 Mbit/s)
- Flow 3 ingress (mean 6.17 Mbit/s)
- Flow 3 egress (mean 6.10 Mbit/s)

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

- Flow 1 (95th percentile 52.83 ms)
- Flow 2 (95th percentile 54.00 ms)
- Flow 3 (95th percentile 51.58 ms)
Run 4: Statistics of TCP Vegas

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

# Below is generated by plot.py at 2018-04-18 16:41:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 136.88 Mbit/s
95th percentile per-packet one-way delay: 52.221 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 76.43 Mbit/s
95th percentile per-packet one-way delay: 52.138 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 55.86 Mbit/s
95th percentile per-packet one-way delay: 52.056 ms
Loss rate: 0.41%
-- Flow 3:
Average throughput: 70.85 Mbit/s
95th percentile per-packet one-way delay: 52.541 ms
Loss rate: 1.10%
Run 4: Report of TCP Vegas — Data Link

![Graph showing throughput and packet loss over time for different flows. The graphs display the throughput in Mbps and packet loss in ms. The data is represented for flows 1, 2, and 3, with each flow showing variations in throughput and packet loss over time.](image-url)
Run 5: Statistics of TCP Vegas

Start at: 2018-04-18 11:20:07
End at: 2018-04-18 11:20:37

# Below is generated by plot.py at 2018-04-18 16:41:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 259.51 Mbit/s
95th percentile per-packet one-way delay: 51.901 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 156.68 Mbit/s
95th percentile per-packet one-way delay: 51.827 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 83.12 Mbit/s
95th percentile per-packet one-way delay: 52.456 ms
Loss rate: 0.45%
-- Flow 3:
Average throughput: 144.91 Mbit/s
95th percentile per-packet one-way delay: 51.869 ms
Loss rate: 1.13%
Run 5: Report of TCP Vegas — Data Link

![Throughput vs Time Graph]

![Packet Round-trip Delay vs Time Graph]

Flow 1 ingress (mean 156.63 Mbit/s)  Flow 1 egress (mean 156.68 Mbit/s)
Flow 2 ingress (mean 83.04 Mbit/s)  Flow 2 egress (mean 83.12 Mbit/s)
Flow 3 ingress (mean 145.06 Mbit/s)  Flow 3 egress (mean 144.91 Mbit/s)
Run 6: Statistics of TCP Vegas

Start at: 2018-04-18 11:35:58
End at: 2018-04-18 11:36:28

# Below is generated by plot.py at 2018-04-18 16:41:34
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 223.55 Mbit/s
  95th percentile per-packet one-way delay: 52.740 ms
  Loss rate: 0.36%
-- Flow 1:
  Average throughput: 184.40 Mbit/s
  95th percentile per-packet one-way delay: 52.557 ms
  Loss rate: 0.33%
-- Flow 2:
  Average throughput: 56.09 Mbit/s
  95th percentile per-packet one-way delay: 54.612 ms
  Loss rate: 0.39%
-- Flow 3:
  Average throughput: 5.97 Mbit/s
  95th percentile per-packet one-way delay: 52.002 ms
  Loss rate: 2.12%
Run 6: Report of TCP Vegas — Data Link
Run 7: Statistics of TCP Vegas

Start at: 2018-04-18 11:51:47
End at: 2018-04-18 11:52:17

# Below is generated by plot.py at 2018-04-18 16:41:34
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 245.13 Mbit/s
  95th percentile per-packet one-way delay: 58.442 ms
  Loss rate: 0.37%
-- Flow 1:
  Average throughput: 130.77 Mbit/s
  95th percentile per-packet one-way delay: 59.659 ms
  Loss rate: 0.23%
-- Flow 2:
  Average throughput: 169.24 Mbit/s
  95th percentile per-packet one-way delay: 52.017 ms
  Loss rate: 0.50%
-- Flow 3:
  Average throughput: 6.08 Mbit/s
  95th percentile per-packet one-way delay: 51.869 ms
  Loss rate: 2.07%
Run 7: Report of TCP Vegas — Data Link

![Graph of throughput and latency over time for multiple flows, showing fluctuations and mean values for ingress and egress.]
Run 8: Statistics of TCP Vegas

Start at: 2018-04-18 12:07:30
End at: 2018-04-18 12:08:00

# Below is generated by plot.py at 2018-04-18 16:41:34
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 249.92 Mbit/s
  95th percentile per-packet one-way delay: 52.450 ms
  Loss rate: 0.34%
-- Flow 1:
  Average throughput: 183.29 Mbit/s
  95th percentile per-packet one-way delay: 52.608 ms
  Loss rate: 0.18%
-- Flow 2:
  Average throughput: 62.92 Mbit/s
  95th percentile per-packet one-way delay: 52.170 ms
  Loss rate: 0.55%
-- Flow 3:
  Average throughput: 75.59 Mbit/s
  95th percentile per-packet one-way delay: 52.003 ms
  Loss rate: 1.14%
Run 8: Report of TCP Vegas — Data Link

![Graph 1: Throughput (Mbps)]

- Flow 1 ingress (mean 183.01 Mbps)
- Flow 1 egress (mean 183.29 Mbps)
- Flow 2 ingress (mean 62.95 Mbps)
- Flow 2 egress (mean 62.92 Mbps)
- Flow 3 ingress (mean 75.69 Mbps)
- Flow 3 egress (mean 75.59 Mbps)

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

- Flow 1 (95th percentile 52.61 ms)
- Flow 2 (95th percentile 52.17 ms)
- Flow 3 (95th percentile 52.00 ms)
Run 9: Statistics of TCP Vegas

End at: 2018-04-18 12:23:54

# Below is generated by plot.py at 2018-04-18 16:41:34
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 181.64 Mbit/s
  95th percentile per-packet one-way delay: 57.658 ms
  Loss rate: 0.33%
-- Flow 1:
  Average throughput: 120.23 Mbit/s
  95th percentile per-packet one-way delay: 58.100 ms
  Loss rate: 0.18%
-- Flow 2:
  Average throughput: 59.25 Mbit/s
  95th percentile per-packet one-way delay: 55.131 ms
  Loss rate: 0.41%
-- Flow 3:
  Average throughput: 67.38 Mbit/s
  95th percentile per-packet one-way delay: 51.337 ms
  Loss rate: 0.96%
Run 9: Report of TCP Vegas — Data Link

[Graph showing throughput and per-packet one-way delay over time for different flows with specified mean throughputs and 95th percentiles for packet delay.]
Run 10: Statistics of TCP Vegas

Start at: 2018-04-18 12:39:09

# Below is generated by plot.py at 2018-04-18 16:41:34
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 243.13 Mbit/s
  95th percentile per-packet one-way delay: 51.826 ms
  Loss rate: 0.31%
-- Flow 1:
  Average throughput: 167.49 Mbit/s
  95th percentile per-packet one-way delay: 51.926 ms
  Loss rate: 0.18%
-- Flow 2:
  Average throughput: 110.87 Mbit/s
  95th percentile per-packet one-way delay: 51.626 ms
  Loss rate: 0.56%
-- Flow 3:
  Average throughput: 6.08 Mbit/s
  95th percentile per-packet one-way delay: 50.766 ms
  Loss rate: 2.09%
Run 10: Report of TCP Vegas — Data Link
Run 1: Statistics of Verus

Start at: 2018-04-18 10:17:34
End at: 2018-04-18 10:18:04

# Below is generated by plot.py at 2018-04-18 16:42:33
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 330.42 Mbit/s
  95th percentile per-packet one-way delay: 98.361 ms
  Loss rate: 0.31%
-- Flow 1:
  Average throughput: 177.71 Mbit/s
  95th percentile per-packet one-way delay: 88.183 ms
  Loss rate: 0.02%
-- Flow 2:
  Average throughput: 164.32 Mbit/s
  95th percentile per-packet one-way delay: 104.831 ms
  Loss rate: 0.90%
-- Flow 3:
  Average throughput: 132.39 Mbit/s
  95th percentile per-packet one-way delay: 124.576 ms
  Loss rate: 0.00%
Run 1: Report of Verus — Data Link

![Graph showing network throughput and delay for different flows.](image-url)
Run 2: Statistics of Verus

Start at: 2018-04-18 10:33:22
End at: 2018-04-18 10:33:52

# Below is generated by plot.py at 2018-04-18 16:43:04
# Datalink statistics
# Total of 3 flows:
Average throughput: 351.26 Mbit/s
95th percentile per-packet one-way delay: 139.163 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 189.65 Mbit/s
95th percentile per-packet one-way delay: 131.205 ms
Loss rate: 0.77%
-- Flow 2:
Average throughput: 211.23 Mbit/s
95th percentile per-packet one-way delay: 151.559 ms
Loss rate: 0.77%
-- Flow 3:
Average throughput: 64.51 Mbit/s
95th percentile per-packet one-way delay: 101.898 ms
Loss rate: 2.54%
Run 2: Report of Verus — Data Link

![Diagram 1: Throughput](image1)

![Diagram 2: Per-packet delay](image2)
Run 3: Statistics of Verus

Start at: 2018-04-18 10:49:09
End at: 2018-04-18 10:49:39

# Below is generated by plot.py at 2018-04-18 16:43:04
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 321.03 Mbit/s
  95th percentile per-packet one-way delay: 127.004 ms
  Loss rate: 0.49%
-- Flow 1:
  Average throughput: 208.76 Mbit/s
  95th percentile per-packet one-way delay: 112.832 ms
  Loss rate: 0.09%
-- Flow 2:
  Average throughput: 116.66 Mbit/s
  95th percentile per-packet one-way delay: 88.771 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 132.97 Mbit/s
  95th percentile per-packet one-way delay: 191.125 ms
  Loss rate: 3.44%
Run 3: Report of Verus — Data Link

![Graph 1: Throughput vs Time for Flow 1 and Flow 2 ingress, Flow 1 and Flow 2 egress, Flow 3 ingress, Flow 3 egress (mean 207.78 Mbit/s, mean 208.76 Mbit/s, mean 116.71 Mbit/s, mean 116.66 Mbit/s, mean 122.45 Mbit/s, mean 132.97 Mbit/s)]

![Graph 2: Per-packet one-way delay vs Time for Flow 1, Flow 2, Flow 3 (95th percentile: Flow 1 112.83 ms, Flow 2 88.77 ms, Flow 3 191.12 ms)]
Run 4: Statistics of Verus

Start at: 2018-04-18 11:05:07  
End at: 2018-04-18 11:05:37  

# Below is generated by plot.py at 2018-04-18 16:43:09  
# Datalink statistics

-- Total of 3 flows:

Average throughput: 351.76 Mbit/s  
95th percentile per-packet one-way delay: 158.171 ms  
Loss rate: 0.73%

-- Flow 1:

Average throughput: 207.39 Mbit/s  
95th percentile per-packet one-way delay: 163.577 ms  
Loss rate: 0.30%

-- Flow 2:

Average throughput: 162.11 Mbit/s  
95th percentile per-packet one-way delay: 125.592 ms  
Loss rate: 1.37%

-- Flow 3:

Average throughput: 111.61 Mbit/s  
95th percentile per-packet one-way delay: 122.338 ms  
Loss rate: 1.32%
Run 4: Report of Verus — Data Link
Run 5: Statistics of Verus

Start at: 2018-04-18 11:21:01
End at: 2018-04-18 11:21:31

# Below is generated by plot.py at 2018-04-18 16:43:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 358.64 Mbit/s
95th percentile per-packet one-way delay: 229.572 ms
Loss rate: 2.94%
-- Flow 1:
Average throughput: 190.48 Mbit/s
95th percentile per-packet one-way delay: 130.773 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 198.77 Mbit/s
95th percentile per-packet one-way delay: 262.999 ms
Loss rate: 7.26%
-- Flow 3:
Average throughput: 109.85 Mbit/s
95th percentile per-packet one-way delay: 124.174 ms
Loss rate: 0.05%
Run 5: Report of Verus — Data Link
Run 6: Statistics of Verus

Start at: 2018-04-18 11:36:49
End at: 2018-04-18 11:37:19

# Below is generated by plot.py at 2018-04-18 16:46:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 306.47 Mbit/s
95th percentile per-packet one-way delay: 159.370 ms
Loss rate: 2.29%
-- Flow 1:
Average throughput: 162.01 Mbit/s
95th percentile per-packet one-way delay: 134.458 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 152.54 Mbit/s
95th percentile per-packet one-way delay: 232.465 ms
Loss rate: 6.06%
-- Flow 3:
Average throughput: 134.77 Mbit/s
95th percentile per-packet one-way delay: 84.907 ms
Loss rate: 1.57%
Run 6: Report of Verus — Data Link

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

- Flow 1 ingress (mean 161.98 Mbit/s)
- Flow 1 egress (mean 162.01 Mbit/s)
- Flow 2 ingress (mean 159.43 Mbit/s)
- Flow 2 egress (mean 152.54 Mbit/s)
- Flow 3 ingress (mean 135.59 Mbit/s)
- Flow 3 egress (mean 134.77 Mbit/s)

![Graphs showing end-to-end delays for different flows.]

- Flow 1 (95th percentile 134.46 ms)
- Flow 2 (95th percentile 232.47 ms)
- Flow 3 (95th percentile 84.91 ms)
Run 7: Statistics of Verus

Start at: 2018-04-18 11:52:39
End at: 2018-04-18 11:53:09

# Below is generated by plot.py at 2018-04-18 16:46:02
# Datalink statistics
 -- Total of 3 flows:
  Average throughput: 296.36 Mbit/s
  95th percentile per-packet one-way delay: 113.514 ms
  Loss rate: 1.01%
  -- Flow 1:
  Average throughput: 184.64 Mbit/s
  95th percentile per-packet one-way delay: 102.353 ms
  Loss rate: 0.47%
  -- Flow 2:
  Average throughput: 106.16 Mbit/s
  95th percentile per-packet one-way delay: 161.827 ms
  Loss rate: 2.70%
  -- Flow 3:
  Average throughput: 142.03 Mbit/s
  95th percentile per-packet one-way delay: 116.252 ms
  Loss rate: 0.48%
Run 7: Report of Verus — Data Link

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

Legend:
- Flow 1 ingress (mean 184.71 Mbit/s)
- Flow 2 ingress (mean 197.88 Mbit/s)
- Flow 3 ingress (mean 127.91 Mbit/s)
- Flow 1 egress (mean 184.64 Mbit/s)
- Flow 2 egress (mean 106.16 Mbit/s)
- Flow 3 egress (mean 142.03 Mbit/s)

Legend for packet delay:
- Flow 1 (95th percentile 102.35 ms)
- Flow 2 (95th percentile 161.83 ms)
- Flow 3 (95th percentile 116.25 ms)
Run 8: Statistics of Verus

Start at: 2018-04-18 12:08:22
End at: 2018-04-18 12:08:52

# Below is generated by plot.py at 2018-04-18 16:47:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 314.28 Mbit/s
95th percentile per-packet one-way delay: 223.233 ms
Loss rate: 3.00%
-- Flow 1:
Average throughput: 159.76 Mbit/s
95th percentile per-packet one-way delay: 257.164 ms
Loss rate: 3.07%
-- Flow 2:
Average throughput: 185.53 Mbit/s
95th percentile per-packet one-way delay: 148.976 ms
Loss rate: 3.36%
-- Flow 3:
Average throughput: 94.95 Mbit/s
95th percentile per-packet one-way delay: 124.838 ms
Loss rate: 1.22%
Run 8: Report of Verus — Data Link

![Throughput Graph]

- **Flow 1 ingress** (mean 164.28 Mbit/s)
- **Flow 1 egress** (mean 159.76 Mbit/s)
- **Flow 2 ingress** (mean 190.99 Mbit/s)
- **Flow 2 egress** (mean 185.53 Mbit/s)
- **Flow 3 ingress** (mean 95.94 Mbit/s)
- **Flow 3 egress** (mean 94.95 Mbit/s)

![Delay Graph]

- **Flow 1** (95th percentile 257.16 ms)
- **Flow 2** (95th percentile 148.98 ms)
- **Flow 3** (95th percentile 124.84 ms)
Run 9: Statistics of Verus

End at: 2018-04-18 12:24:43

# Below is generated by plot.py at 2018-04-18 16:49:04
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 336.22 Mbit/s
  95th percentile per-packet one-way delay: 147.389 ms
  Loss rate: 1.73%
-- Flow 1:
  Average throughput: 197.22 Mbit/s
  95th percentile per-packet one-way delay: 102.094 ms
  Loss rate: 0.48%
-- Flow 2:
  Average throughput: 167.29 Mbit/s
  95th percentile per-packet one-way delay: 162.834 ms
  Loss rate: 0.50%
-- Flow 3:
  Average throughput: 87.29 Mbit/s
  95th percentile per-packet one-way delay: 355.139 ms
  Loss rate: 13.38%
Run 9: Report of Verus — Data Link
Run 10: Statistics of Verus

Start at: 2018-04-18 12:40:01
End at: 2018-04-18 12:40:31

# Below is generated by plot.py at 2018-04-18 16:49:07
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 338.63 Mbit/s
  95th percentile per-packet one-way delay: 183.774 ms
  Loss rate: 1.03%
-- Flow 1:
  Average throughput: 214.25 Mbit/s
  95th percentile per-packet one-way delay: 203.818 ms
  Loss rate: 1.30%
-- Flow 2:
  Average throughput: 137.45 Mbit/s
  95th percentile per-packet one-way delay: 128.957 ms
  Loss rate: 0.39%
-- Flow 3:
  Average throughput: 100.61 Mbit/s
  95th percentile per-packet one-way delay: 110.368 ms
  Loss rate: 1.02%
Run 10: Report of Verus — Data Link

![Throughput Graph]

![Delay Graph]
Run 1: Statistics of Copa

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

# Below is generated by plot.py at 2018-04-18 16:49:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 156.98 Mbit/s
95th percentile per-packet one-way delay: 50.784 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 68.02 Mbit/s
95th percentile per-packet one-way delay: 50.786 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 85.69 Mbit/s
95th percentile per-packet one-way delay: 50.802 ms
Loss rate: 0.59%
-- Flow 3:
Average throughput: 96.69 Mbit/s
95th percentile per-packet one-way delay: 50.360 ms
Loss rate: 0.78%
Run 1: Report of Copa — Data Link

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

Legend:
- Flow 1 ingress (mean 67.90 Mbit/s)
- Flow 1 egress (mean 68.02 Mbit/s)
- Flow 2 ingress (mean 85.75 Mbit/s)
- Flow 2 egress (mean 85.69 Mbit/s)
- Flow 3 ingress (mean 96.45 Mbit/s)
- Flow 3 egress (mean 96.69 Mbit/s)
Run 2: Statistics of Copa

Start at: 2018-04-18 10:36:20
End at: 2018-04-18 10:36:50

# Below is generated by plot.py at 2018-04-18 16:49:07
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 163.91 Mbit/s
  95th percentile per-packet one-way delay: 50.892 ms
  Loss rate: 0.39%
-- Flow 1:
  Average throughput: 83.81 Mbit/s
  95th percentile per-packet one-way delay: 50.875 ms
  Loss rate: 0.15%
-- Flow 2:
  Average throughput: 78.72 Mbit/s
  95th percentile per-packet one-way delay: 50.921 ms
  Loss rate: 0.43%
-- Flow 3:
  Average throughput: 84.34 Mbit/s
  95th percentile per-packet one-way delay: 50.855 ms
  Loss rate: 1.06%
Run 2: Report of Copa — Data Link
Run 3: Statistics of Copa

Start at: 2018-04-18 10:52:16
End at: 2018-04-18 10:52:46

# Below is generated by plot.py at 2018-04-18 16:49:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 147.78 Mbit/s
95th percentile per-packet one-way delay: 50.933 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 77.38 Mbit/s
95th percentile per-packet one-way delay: 50.838 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 71.58 Mbit/s
95th percentile per-packet one-way delay: 50.994 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 69.29 Mbit/s
95th percentile per-packet one-way delay: 50.936 ms
Loss rate: 1.23%
Run 3: Report of Copa — Data Link
Run 4: Statistics of Copa

Start at: 2018-04-18 11:08:05
End at: 2018-04-18 11:08:35

# Below is generated by plot.py at 2018-04-18 16:51:42
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 152.86 Mbit/s
  95th percentile per-packet one-way delay: 51.240 ms
  Loss rate: 0.50%
-- Flow 1:
  Average throughput: 82.15 Mbit/s
  95th percentile per-packet one-way delay: 51.266 ms
  Loss rate: 0.36%
-- Flow 2:
  Average throughput: 71.53 Mbit/s
  95th percentile per-packet one-way delay: 51.244 ms
  Loss rate: 0.42%
-- Flow 3:
  Average throughput: 70.75 Mbit/s
  95th percentile per-packet one-way delay: 51.011 ms
  Loss rate: 1.16%
Run 5: Statistics of Copa

End at: 2018-04-18 11:24:29

# Below is generated by plot.py at 2018-04-18 16:51:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 138.66 Mbit/s
95th percentile per-packet one-way delay: 51.493 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 63.71 Mbit/s
95th percentile per-packet one-way delay: 51.556 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 77.03 Mbit/s
95th percentile per-packet one-way delay: 51.411 ms
Loss rate: 0.48%
-- Flow 3:
Average throughput: 72.25 Mbit/s
95th percentile per-packet one-way delay: 51.332 ms
Loss rate: 1.16%
Run 5: Report of Copa — Data Link

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

- Flow 1 ingress (mean 63.7 Mb/s)
- Flow 1 egress (mean 63.7 Mbit/s)
- Flow 2 ingress (mean 77.01 Mb/s)
- Flow 2 egress (mean 77.03 Mbit/s)
- Flow 3 ingress (mean 72.35 Mb/s)
- Flow 3 egress (mean 72.25 Mbit/s)

Packet delay:
- Flow 1 (95th percentile 51.56 ms)
- Flow 2 (95th percentile 51.41 ms)
- Flow 3 (95th percentile 51.33 ms)
Run 6: Statistics of Copa

Start at: 2018-04-18 11:39:45
End at: 2018-04-18 11:40:15

# Below is generated by plot.py at 2018-04-18 16:52:52
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 141.68 Mbit/s
  95th percentile per-packet one-way delay: 51.642 ms
  Loss rate: 0.49%
-- Flow 1:
  Average throughput: 66.78 Mbit/s
  95th percentile per-packet one-way delay: 51.627 ms
  Loss rate: 0.33%
-- Flow 2:
  Average throughput: 79.54 Mbit/s
  95th percentile per-packet one-way delay: 51.680 ms
  Loss rate: 0.44%
-- Flow 3:
  Average throughput: 67.06 Mbit/s
  95th percentile per-packet one-way delay: 50.329 ms
  Loss rate: 1.12%
Run 6: Report of Copa — Data Link

![Graph 1: Throughput (Mbps)]

- Flow 1 ingress (mean 66.77 Mbps)
- Flow 1 egress (mean 66.78 Mbps)
- Flow 2 ingress (mean 79.49 Mbps)
- Flow 2 egress (mean 79.54 Mbps)
- Flow 3 ingress (mean 67.13 Mbps)
- Flow 3 egress (mean 67.06 Mbps)

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

- Flow 1 (95th percentile 51.63 ms)
- Flow 2 (95th percentile 51.68 ms)
- Flow 3 (95th percentile 50.33 ms)
Run 7: Statistics of Copa

End at: 2018-04-18 11:56:06

# Below is generated by plot.py at 2018-04-18 16:53:05
# Datalink statistics
-- Total of 3 flows:
   Average throughput: 128.04 Mbit/s
   95th percentile per-packet one-way delay: 50.853 ms
   Loss rate: 0.45%
   -- Flow 1:
   Average throughput: 55.70 Mbit/s
   95th percentile per-packet one-way delay: 50.887 ms
   Loss rate: 0.15%
   -- Flow 2:
   Average throughput: 72.20 Mbit/s
   95th percentile per-packet one-way delay: 50.815 ms
   Loss rate: 0.51%
   -- Flow 3:
   Average throughput: 73.97 Mbit/s
   95th percentile per-packet one-way delay: 50.824 ms
   Loss rate: 1.03%
Run 7: Report of Copa — Data Link

![Graph 1: Throughput](image)

- **Flow 1 ingress (mean 55.59 Mbit/s)**
- **Flow 1 egress (mean 55.70 Mbit/s)**
- **Flow 2 ingress (mean 72.20 Mbit/s)**
- **Flow 2 egress (mean 72.20 Mbit/s)**
- **Flow 3 ingress (mean 73.98 Mbit/s)**
- **Flow 3 egress (mean 73.97 Mbit/s)**

![Graph 2: Roundtrip Time](image)

- **Flow 1 (95th percentile 50.89 ms)**
- **Flow 2 (95th percentile 50.81 ms)**
- **Flow 3 (95th percentile 50.82 ms)**
Run 8: Statistics of Copa

Start at: 2018-04-18 12:11:15
End at: 2018-04-18 12:11:45

# Below is generated by plot.py at 2018-04-18 16:53:56
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 145.69 Mbit/s
  95th percentile per-packet one-way delay: 50.695 ms
  Loss rate: 0.68%
  -- Flow 1:
    Average throughput: 69.14 Mbit/s
    95th percentile per-packet one-way delay: 50.811 ms
    Loss rate: 0.53%
  -- Flow 2:
    Average throughput: 70.08 Mbit/s
    95th percentile per-packet one-way delay: 49.936 ms
    Loss rate: 0.71%
  -- Flow 3:
    Average throughput: 91.33 Mbit/s
    95th percentile per-packet one-way delay: 49.940 ms
    Loss rate: 0.97%
Run 8: Report of Copa — Data Link

The first chart shows the throughput over time for different flows:
- Flow 1 ingress (mean 69.27 Mbit/s)
- Flow 1 egress (mean 69.14 Mbit/s)
- Flow 2 ingress (mean 70.23 Mbit/s)
- Flow 2 egress (mean 70.08 Mbit/s)
- Flow 3 ingress (mean 91.32 Mbit/s)
- Flow 3 egress (mean 91.33 Mbit/s)

The second chart shows the per-packet one-way delay over time for different flows:
- Flow 1 (95th percentile 50.01 ms)
- Flow 2 (95th percentile 49.94 ms)
- Flow 3 (95th percentile 49.94 ms)
Run 9: Statistics of Copa

End at: 2018-04-18 12:27:41

# Below is generated by plot.py at 2018-04-18 16:53:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 136.19 Mbit/s
95th percentile per-packet one-way delay: 50.789 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 69.17 Mbit/s
95th percentile per-packet one-way delay: 50.773 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 76.41 Mbit/s
95th percentile per-packet one-way delay: 50.721 ms
Loss rate: 0.60%
-- Flow 3:
Average throughput: 49.46 Mbit/s
95th percentile per-packet one-way delay: 50.937 ms
Loss rate: 1.30%
Run 9: Report of Copa — Data Link
Run 10: Statistics of Copa

Start at: 2018-04-18 12:43:02
End at: 2018-04-18 12:43:32

# Below is generated by plot.py at 2018-04-18 16:53:56
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 126.56 Mbit/s
  95th percentile per-packet one-way delay: 50.932 ms
  Loss rate: 0.51%
-- Flow 1:
  Average throughput: 56.08 Mbit/s
  95th percentile per-packet one-way delay: 50.846 ms
  Loss rate: 0.24%
-- Flow 2:
  Average throughput: 66.95 Mbit/s
  95th percentile per-packet one-way delay: 51.019 ms
  Loss rate: 0.50%
-- Flow 3:
  Average throughput: 79.05 Mbit/s
  95th percentile per-packet one-way delay: 50.848 ms
  Loss rate: 1.10%
Run 10: Report of Copa — Data Link
Run 1: Statistics of FillP

End at: 2018-04-18 10:23:07

# Below is generated by plot.py at 2018-04-18 17:16:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1356.55 Mbit/s
95th percentile per-packet one-way delay: 157.455 ms
Loss rate: 5.79%
-- Flow 1:
Average throughput: 712.64 Mbit/s
95th percentile per-packet one-way delay: 155.028 ms
Loss rate: 6.02%
-- Flow 2:
Average throughput: 702.03 Mbit/s
95th percentile per-packet one-way delay: 147.568 ms
Loss rate: 4.42%
-- Flow 3:
Average throughput: 542.66 Mbit/s
95th percentile per-packet one-way delay: 169.434 ms
Loss rate: 8.33%
Run 1: Report of FillP — Data Link

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

- **Flow 1 ingress (mean 755.75 Mbps)**
- **Flow 1 egress (mean 712.64 Mbps)**
- **Flow 2 ingress (mean 736.71 Mbps)**
- **Flow 2 egress (mean 702.03 Mbps)**
- **Flow 3 ingress (mean 585.89 Mbps)**
- **Flow 3 egress (mean 542.66 Mbps)**

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

- **Flow 1 (95th percentile 155.03 ms)**
- **Flow 2 (95th percentile 147.57 ms)**
- **Flow 3 (95th percentile 169.43 ms)**
Run 2: Statistics of FillP

Start at: 2018-04-18 10:38:27
End at: 2018-04-18 10:38:57

# Below is generated by plot.py at 2018-04-18 17:18:39
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1344.25 Mbit/s
  95th percentile per-packet one-way delay: 163.642 ms
  Loss rate: 5.73%
-- Flow 1:
  Average throughput: 681.50 Mbit/s
  95th percentile per-packet one-way delay: 165.082 ms
  Loss rate: 4.96%
-- Flow 2:
  Average throughput: 660.22 Mbit/s
  95th percentile per-packet one-way delay: 166.572 ms
  Loss rate: 7.51%
-- Flow 3:
  Average throughput: 683.99 Mbit/s
  95th percentile per-packet one-way delay: 148.812 ms
  Loss rate: 4.50%
Run 2: Report of FillP — Data Link
Run 3: Statistics of FillP

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

# Below is generated by plot.py at 2018-04-18 17:18:39
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1262.70 Mbit/s
  95th percentile per-packet one-way delay: 178.265 ms
  Loss rate: 7.85%
-- Flow 1:
  Average throughput: 674.40 Mbit/s
  95th percentile per-packet one-way delay: 178.031 ms
  Loss rate: 6.91%
-- Flow 2:
  Average throughput: 651.35 Mbit/s
  95th percentile per-packet one-way delay: 158.572 ms
  Loss rate: 5.35%
-- Flow 3:
  Average throughput: 473.36 Mbit/s
  95th percentile per-packet one-way delay: 191.295 ms
  Loss rate: 17.54%
Run 3: Report of FillP — Data Link

![Graph of data link throughput and delay](image)

- Flow 1 ingress (mean 722.03 Mbit/s)
- Flow 1 egress (mean 674.40 Mbit/s)
- Flow 2 ingress (mean 684.72 Mbit/s)
- Flow 2 egress (mean 651.35 Mbit/s)
- Flow 3 ingress (mean 568.32 Mbit/s)
- Flow 3 egress (mean 473.36 Mbit/s)

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

- Flow 1 (95th percentile 178.03 ms)
- Flow 2 (95th percentile 158.57 ms)
- Flow 3 (95th percentile 191.29 ms)
Run 4: Statistics of FillP

Start at: 2018-04-18 11:10:13
End at: 2018-04-18 11:10:43

# Below is generated by plot.py at 2018-04-18 17:18:43
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1268.31 Mbit/s
  95th percentile per-packet one-way delay: 272.043 ms
  Loss rate: 6.28%
-- Flow 1:
  Average throughput: 647.58 Mbit/s
  95th percentile per-packet one-way delay: 279.509 ms
  Loss rate: 5.66%
-- Flow 2:
  Average throughput: 633.36 Mbit/s
  95th percentile per-packet one-way delay: 276.073 ms
  Loss rate: 5.28%
-- Flow 3:
  Average throughput: 609.89 Mbit/s
  95th percentile per-packet one-way delay: 188.601 ms
  Loss rate: 10.18%
Run 4: Report of FillP — Data Link

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

![Graph 2: Per-packet data rate vs time](image2)
Run 5: Statistics of FillP

Start at: 2018-04-18 11:26:09
End at: 2018-04-18 11:26:39

# Below is generated by plot.py at 2018-04-18 17:18:43
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1158.68 Mbit/s
  95th percentile per-packet one-way delay: 163.148 ms
  Loss rate: 6.77%
-- Flow 1:
  Average throughput: 517.29 Mbit/s
  95th percentile per-packet one-way delay: 159.387 ms
  Loss rate: 4.78%
-- Flow 2:
  Average throughput: 651.80 Mbit/s
  95th percentile per-packet one-way delay: 164.225 ms
  Loss rate: 7.68%
-- Flow 3:
  Average throughput: 636.03 Mbit/s
  95th percentile per-packet one-way delay: 165.358 ms
  Loss rate: 9.59%
Run 5: Report of FillP — Data Link

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

![Graph 2: Per-packet one-way delay vs Time](image2)
Run 6: Statistics of FillP

Start at: 2018-04-18 11:41:56
End at: 2018-04-18 11:42:26

# Below is generated by plot.py at 2018-04-18 17:18:46
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1226.50 Mbit/s
  95th percentile per-packet one-way delay: 170.800 ms
  Loss rate: 7.94%
-- Flow 1:
  Average throughput: 637.21 Mbit/s
  95th percentile per-packet one-way delay: 167.260 ms
  Loss rate: 6.91%
-- Flow 2:
  Average throughput: 602.61 Mbit/s
  95th percentile per-packet one-way delay: 175.342 ms
  Loss rate: 9.41%
-- Flow 3:
  Average throughput: 574.88 Mbit/s
  95th percentile per-packet one-way delay: 179.573 ms
  Loss rate: 8.23%
Run 6: Report of FillP — Data Link
Run 7: Statistics of FillP

Start at: 2018-04-18 11:57:35
End at: 2018-04-18 11:58:05

# Below is generated by plot.py at 2018-04-18 17:19:23
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1247.92 Mbit/s
  95th percentile per-packet one-way delay: 248.503 ms
  Loss rate: 5.56%
  -- Flow 1:
  Average throughput: 669.93 Mbit/s
  95th percentile per-packet one-way delay: 234.412 ms
  Loss rate: 3.97%
  -- Flow 2:
  Average throughput: 608.86 Mbit/s
  95th percentile per-packet one-way delay: 165.001 ms
  Loss rate: 5.50%
  -- Flow 3:
  Average throughput: 529.84 Mbit/s
  95th percentile per-packet one-way delay: 311.430 ms
  Loss rate: 11.34%
Run 7: Report of FillP — Data Link

![Graph of throughput and time](image1)

![Graph of per-packet one-way delay and time](image2)
Run 8: Statistics of FillP


# Below is generated by plot.py at 2018-04-18 17:19:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1239.77 Mbit/s
95th percentile per-packet one-way delay: 272.681 ms
Loss rate: 7.28%
-- Flow 1:
Average throughput: 643.85 Mbit/s
95th percentile per-packet one-way delay: 274.404 ms
Loss rate: 5.59%
-- Flow 2:
Average throughput: 618.90 Mbit/s
95th percentile per-packet one-way delay: 281.391 ms
Loss rate: 7.20%
-- Flow 3:
Average throughput: 564.51 Mbit/s
95th percentile per-packet one-way delay: 193.143 ms
Loss rate: 12.89%
Run 8: Report of FillP — Data Link
Run 9: Statistics of FillP

Start at: 2018-04-18 12:29:16
End at: 2018-04-18 12:29:46

# Below is generated by plot.py at 2018-04-18 17:43:44
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1286.40 Mbit/s
  95th percentile per-packet one-way delay: 173.664 ms
  Loss rate: 8.92%
-- Flow 1:
  Average throughput: 669.67 Mbit/s
  95th percentile per-packet one-way delay: 175.609 ms
  Loss rate: 8.43%
-- Flow 2:
  Average throughput: 657.73 Mbit/s
  95th percentile per-packet one-way delay: 161.495 ms
  Loss rate: 6.88%
-- Flow 3:
  Average throughput: 547.54 Mbit/s
  95th percentile per-packet one-way delay: 188.178 ms
  Loss rate: 15.11%
Run 9: Report of FillP — Data Link

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

- **Flow 1 ingress (mean 728.86 Mbit/s)**
- **Flow 1 egress (mean 669.67 Mbit/s)**
- **Flow 2 ingress (mean 702.75 Mbit/s)**
- **Flow 2 egress (mean 657.73 Mbit/s)**
- **Flow 3 ingress (mean 638.38 Mbit/s)**
- **Flow 3 egress (mean 547.54 Mbit/s)**

- **Flow 1 (95th percentile 175.61 ms)**
- **Flow 2 (95th percentile 161.50 ms)**
- **Flow 3 (95th percentile 188.18 ms)**
Run 10: Statistics of FillP

Start at: 2018-04-18 12:45:09
End at: 2018-04-18 12:45:39

# Below is generated by plot.py at 2018-04-18 17:43:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1169.04 Mbit/s
95th percentile per-packet one-way delay: 216.877 ms
Loss rate: 5.03%
-- Flow 1:
Average throughput: 713.68 Mbit/s
95th percentile per-packet one-way delay: 196.108 ms
Loss rate: 2.94%
-- Flow 2:
Average throughput: 380.12 Mbit/s
95th percentile per-packet one-way delay: 254.098 ms
Loss rate: 2.73%
-- Flow 3:
Average throughput: 618.18 Mbit/s
95th percentile per-packet one-way delay: 178.582 ms
Loss rate: 14.09%
Run 10: Report of FillIP — Data Link

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

End at: 2018-04-18 10:29:25

# Below is generated by plot.py at 2018-04-18 17:43:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 381.22 Mbit/s
95th percentile per-packet one-way delay: 51.988 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 203.43 Mbit/s
95th percentile per-packet one-way delay: 52.039 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 185.79 Mbit/s
95th percentile per-packet one-way delay: 52.248 ms
Loss rate: 0.58%
-- Flow 3:
Average throughput: 165.53 Mbit/s
95th percentile per-packet one-way delay: 51.589 ms
Loss rate: 1.17%
Run 1: Report of Indigo-1-32 — Data Link

![Graph showing throughput and per-packet one-way delay over time for three flows: Flow 1, Flow 2, and Flow 3. The graphs display the mean throughput (203.45 Mbit/s for Flow 1 ingress, 203.43 Mbit/s for Flow 1 egress, 185.94 Mbit/s for Flow 2 ingress, 185.79 Mbit/s for Flow 2 egress, 165.80 Mbit/s for Flow 3 ingress, and 165.53 Mbit/s for Flow 3 egress) and the 95th percentile delay (52.04 ms for Flow 1, 52.25 ms for Flow 2, and 51.59 ms for Flow 3).]
Run 2: Statistics of Indigo-1-32

Start at: 2018-04-18 10:44:44
End at: 2018-04-18 10:45:14

# Below is generated by plot.py at 2018-04-18 17:43:44
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 391.76 Mbit/s
  95th percentile per-packet one-way delay: 51.415 ms
  Loss rate: 0.51%
-- Flow 1:
  Average throughput: 211.67 Mbit/s
  95th percentile per-packet one-way delay: 51.959 ms
  Loss rate: 0.32%
-- Flow 2:
  Average throughput: 189.32 Mbit/s
  95th percentile per-packet one-way delay: 51.563 ms
  Loss rate: 0.54%
-- Flow 3:
  Average throughput: 167.65 Mbit/s
  95th percentile per-packet one-way delay: 50.140 ms
  Loss rate: 1.19%
Run 2: Report of Indigo-1-32 — Data Link

[Graphs showing throughput and per-packet one-way delay over time for different flows, with data points and lines indicating trends.]
Run 3: Statistics of Indigo-1-32

Start at: 2018-04-18 11:00:39
End at: 2018-04-18 11:01:09

# Below is generated by plot.py at 2018-04-18 17:43:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 378.62 Mbit/s
95th percentile per-packet one-way delay: 54.213 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 202.10 Mbit/s
95th percentile per-packet one-way delay: 54.160 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 185.28 Mbit/s
95th percentile per-packet one-way delay: 55.308 ms
Loss rate: 0.57%
-- Flow 3:
Average throughput: 167.63 Mbit/s
95th percentile per-packet one-way delay: 52.138 ms
Loss rate: 1.21%
Run 3: Report of Indigo-1-32 — Data Link
Run 4: Statistics of Indigo-1-32

Start at: 2018-04-18 11:16:31
End at: 2018-04-18 11:17:01

# Below is generated by plot.py at 2018-04-18 17:43:44
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 375.97 Mbit/s
  95th percentile per-packet one-way delay: 58.857 ms
  Loss rate: 0.54%
-- Flow 1:
  Average throughput: 198.94 Mbit/s
  95th percentile per-packet one-way delay: 55.570 ms
  Loss rate: 0.35%
-- Flow 2:
  Average throughput: 183.18 Mbit/s
  95th percentile per-packet one-way delay: 65.044 ms
  Loss rate: 0.55%
-- Flow 3:
  Average throughput: 172.12 Mbit/s
  95th percentile per-packet one-way delay: 58.508 ms
  Loss rate: 1.19%
Run 5: Statistics of Indigo-1-32

End at: 2018-04-18 11:32:50

# Below is generated by plot.py at 2018-04-18 17:43:44
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 368.78 Mbit/s
  95th percentile per-packet one-way delay: 59.822 ms
  Loss rate: 0.55%
-- Flow 1:
  Average throughput: 195.51 Mbit/s
  95th percentile per-packet one-way delay: 60.712 ms
  Loss rate: 0.38%
-- Flow 2:
  Average throughput: 179.43 Mbit/s
  95th percentile per-packet one-way delay: 58.337 ms
  Loss rate: 0.55%
-- Flow 3:
  Average throughput: 168.49 Mbit/s
  95th percentile per-packet one-way delay: 60.128 ms
  Loss rate: 1.12%
Run 5: Report of Indigo-1-32 — Data Link

![Graph showing throughput and packet delay over time.](image_url)

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 195.61 Mbps)
  - Flow 1 egress (mean 195.51 Mbps)
  - Flow 2 ingress (mean 179.51 Mbps)
  - Flow 2 egress (mean 179.43 Mbps)
  - Flow 3 ingress (mean 168.66 Mbps)
  - Flow 3 egress (mean 168.49 Mbps)

- **Per packet one way delay (ms):**
  - Flow 1 (95th percentile 60.71 ms)
  - Flow 2 (95th percentile 58.34 ms)
  - Flow 3 (95th percentile 60.13 ms)
Run 6: Statistics of Indigo-1-32


# Below is generated by plot.py at 2018-04-18 17:43:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 376.41 Mbit/s
95th percentile per-packet one-way delay: 54.558 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 197.55 Mbit/s
95th percentile per-packet one-way delay: 55.159 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 184.86 Mbit/s
95th percentile per-packet one-way delay: 54.773 ms
Loss rate: 0.57%
-- Flow 3:
Average throughput: 173.93 Mbit/s
95th percentile per-packet one-way delay: 52.895 ms
Loss rate: 1.12%
Run 6: Report of Indigo-1-32 — Data Link

Diagram 1: Throughput (Mbps)

Diagram 2: Per-packet one-way delay (ms)
Run 7: Statistics of Indigo-1-32

Start at: 2018-04-18 12:03:53
End at: 2018-04-18 12:04:23

# Below is generated by plot.py at 2018-04-18 17:43:44
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 385.95 Mbit/s
  95th percentile per-packet one-way delay: 55.320 ms
  Loss rate: 0.51%
  -- Flow 1:
  Average throughput: 208.74 Mbit/s
  95th percentile per-packet one-way delay: 54.452 ms
  Loss rate: 0.32%
  -- Flow 2:
  Average throughput: 185.47 Mbit/s
  95th percentile per-packet one-way delay: 58.350 ms
  Loss rate: 0.55%
  -- Flow 3:
  Average throughput: 168.67 Mbit/s
  95th percentile per-packet one-way delay: 52.673 ms
  Loss rate: 1.13%
Run 7: Report of Indigo-1-32 — Data Link

![Graph showing throughput and packet loss over time for three different flows.](image-url)
Run 8: Statistics of Indigo-1-32

Start at: 2018-04-18 12:19:44
End at: 2018-04-18 12:20:14

# Below is generated by plot.py at 2018-04-18 17:43:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 383.81 Mbit/s
95th percentile per-packet one-way delay: 56.917 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 206.98 Mbit/s
95th percentile per-packet one-way delay: 57.035 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 184.82 Mbit/s
95th percentile per-packet one-way delay: 58.346 ms
Loss rate: 0.50%
-- Flow 3:
Average throughput: 167.99 Mbit/s
95th percentile per-packet one-way delay: 54.097 ms
Loss rate: 1.19%
Run 8: Report of Indigo-1-32 — Data Link

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

- **Flow 1**: Ingress (mean 207.03 Mbit/s), Egress (mean 206.98 Mbit/s)
- **Flow 2**: Ingress (mean 185.11 Mbit/s), Egress (mean 184.82 Mbit/s)
- **Flow 3**: Ingress (mean 198.24 Mbit/s), Egress (mean 167.99 Mbit/s)

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

- **Flow 1**: 95th percentile 57.03 ms
- **Flow 2**: 95th percentile 58.35 ms
- **Flow 3**: 95th percentile 54.10 ms
Run 9: Statistics of Indigo-1-32

Start at: 2018-04-18 12:35:32
End at: 2018-04-18 12:36:02

# Below is generated by plot.py at 2018-04-18 17:43:44
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 381.90 Mbit/s
  95th percentile per-packet one-way delay: 57.245 ms
  Loss rate: 0.51%
-- Flow 1:
  Average throughput: 203.05 Mbit/s
  95th percentile per-packet one-way delay: 56.517 ms
  Loss rate: 0.31%
-- Flow 2:
  Average throughput: 183.81 Mbit/s
  95th percentile per-packet one-way delay: 57.864 ms
  Loss rate: 0.52%
-- Flow 3:
  Average throughput: 176.99 Mbit/s
  95th percentile per-packet one-way delay: 57.277 ms
  Loss rate: 1.16%
Run 9: Report of Indigo-1-32 — Data Link

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

- Flow 1 Ingress (mean 203.00 Mbps)
- Flow 1 Egress (mean 203.05 Mbps)
- Flow 2 Ingress (mean 183.84 Mbps)
- Flow 2 Egress (mean 183.81 Mbps)
- Flow 3 Ingress (mean 177.19 Mbps)
- Flow 3 Egress (mean 176.99 Mbps)

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

- Flow 1 (95th percentile 56.52 ms)
- Flow 2 (95th percentile 57.86 ms)
- Flow 3 (95th percentile 57.28 ms)
Run 10: Statistics of Indigo-1-32

Start at: 2018-04-18 12:51:22
End at: 2018-04-18 12:51:52

# Below is generated by plot.py at 2018-04-18 17:43:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 383.66 Mbit/s
95th percentile per-packet one-way delay: 53.881 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 203.86 Mbit/s
95th percentile per-packet one-way delay: 53.353 ms
Loss rate: 0.29%
-- Flow 2:
Average throughput: 189.13 Mbit/s
95th percentile per-packet one-way delay: 54.517 ms
Loss rate: 0.55%
-- Flow 3:
Average throughput: 167.24 Mbit/s
95th percentile per-packet one-way delay: 53.530 ms
Loss rate: 1.20%
Run 10: Report of Indigo-1-32 — Data Link

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

**Throughput (Mbps):**
- Flow 1 ingress (mean 203.75 Mbps)
- Flow 1 egress (mean 203.86 Mbps)
- Flow 2 ingress (mean 189.20 Mbps)
- Flow 2 egress (mean 189.13 Mbps)
- Flow 3 ingress (mean 167.49 Mbps)
- Flow 3 egress (mean 167.24 Mbps)

**Per-packet one-way delay (ms):**
- Flow 1 (95th percentile 53.35 ms)
- Flow 2 (95th percentile 54.52 ms)
- Flow 3 (95th percentile 53.53 ms)
Run 1: Statistics of PCC-Vivace

Start at: 2018-04-18 10:15:34
End at: 2018-04-18 10:16:04

# Below is generated by plot.py at 2018-04-18 17:43:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 463.92 Mbit/s
95th percentile per-packet one-way delay: 167.128 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 292.26 Mbit/s
95th percentile per-packet one-way delay: 197.500 ms
Loss rate: 0.61%
-- Flow 2:
Average throughput: 233.20 Mbit/s
95th percentile per-packet one-way delay: 62.222 ms
Loss rate: 0.53%
-- Flow 3:
Average throughput: 51.85 Mbit/s
95th percentile per-packet one-way delay: 49.552 ms
Loss rate: 1.35%
Run 1: Report of PCC-Vivace — Data Link

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

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

*Flow 1 (95th percentile 197.50 ms)  Flow 2 (95th percentile 62.22 ms)  Flow 3 (95th percentile 49.55 ms)*

![Image](image3)
Run 2: Statistics of PCC-Vivace

End at: 2018-04-18 10:31:50

# Below is generated by plot.py at 2018-04-18 17:43:44
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 491.03 Mbit/s
  95th percentile per-packet one-way delay: 55.135 ms
  Loss rate: 0.49%
-- Flow 1:
  Average throughput: 283.97 Mbit/s
  95th percentile per-packet one-way delay: 56.534 ms
  Loss rate: 0.30%
-- Flow 2:
  Average throughput: 231.11 Mbit/s
  95th percentile per-packet one-way delay: 53.618 ms
  Loss rate: 0.62%
-- Flow 3:
  Average throughput: 165.28 Mbit/s
  95th percentile per-packet one-way delay: 52.642 ms
  Loss rate: 1.11%
Run 2: Report of PCC-Vivace — Data Link

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

![Graph of Per-packet one-way delay (ms)](image)
Run 3: Statistics of PCC-Vivace

Start at: 2018-04-18 10:47:10
End at: 2018-04-18 10:47:40

# Below is generated by plot.py at 2018-04-18 17:43:44
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 478.30 Mbit/s
  95th percentile per-packet one-way delay: 80.923 ms
  Loss rate: 0.50%
-- Flow 1:
  Average throughput: 270.60 Mbit/s
  95th percentile per-packet one-way delay: 53.018 ms
  Loss rate: 0.22%
-- Flow 2:
  Average throughput: 215.79 Mbit/s
  95th percentile per-packet one-way delay: 193.983 ms
  Loss rate: 0.57%
-- Flow 3:
  Average throughput: 197.53 Mbit/s
  95th percentile per-packet one-way delay: 51.306 ms
  Loss rate: 1.51%
Run 3: Report of PCC-Vivace — Data Link

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

Throughput (Mbps)

- Flow 1 ingress (mean 270.29 Mbps)
- Flow 1 egress (mean 270.60 Mbps)
- Flow 2 ingress (mean 215.92 Mbps)
- Flow 2 egress (mean 215.79 Mbps)
- Flow 3 ingress (mean 196.48 Mbps)
- Flow 3 egress (mean 197.53 Mbps)

Delay (ms)

- Flow 1 (95th percentile 53.02 ms)
- Flow 2 (95th percentile 193.98 ms)
- Flow 3 (95th percentile 51.31 ms)
Run 4: Statistics of PCC-Vivace

Start at: 2018-04-18 11:03:07
End at: 2018-04-18 11:03:37

# Below is generated by plot.py at 2018-04-18 17:43:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 484.46 Mbit/s
95th percentile per-packet one-way delay: 110.096 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 288.98 Mbit/s
95th percentile per-packet one-way delay: 115.984 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 209.30 Mbit/s
95th percentile per-packet one-way delay: 103.476 ms
Loss rate: 0.37%
-- Flow 3:
Average throughput: 173.34 Mbit/s
95th percentile per-packet one-way delay: 52.810 ms
Loss rate: 1.21%
Run 4: Report of PCC-Vivace — Data Link
Run 5: Statistics of PCC-Vivace

Start at: 2018-04-18 11:18:58
End at: 2018-04-18 11:19:28

# Below is generated by plot.py at 2018-04-18 17:43:44
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 423.67 Mbit/s
  95th percentile per-packet one-way delay: 123.154 ms
  Loss rate: 0.78%
-- Flow 1:
  Average throughput: 237.18 Mbit/s
  95th percentile per-packet one-way delay: 63.824 ms
  Loss rate: 0.29%
-- Flow 2:
  Average throughput: 264.34 Mbit/s
  95th percentile per-packet one-way delay: 190.226 ms
  Loss rate: 1.39%
-- Flow 3:
  Average throughput: 33.52 Mbit/s
  95th percentile per-packet one-way delay: 51.372 ms
  Loss rate: 1.55%
Run 5: Report of PCC-Vivace — Data Link

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

- Flow 1 ingress (mean 237.06 Mbps)
- Flow 1 egress (mean 237.18 Mbps)
- Flow 2 ingress (mean 266.73 Mbps)
- Flow 2 egress (mean 264.34 Mbps)
- Flow 3 ingress (mean 33.69 Mbps)
- Flow 3 egress (mean 33.52 Mbps)

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

- Flow 1 (95th percentile 63.82 ms)
- Flow 2 (95th percentile 190.23 ms)
- Flow 3 (95th percentile 51.37 ms)
Run 6: Statistics of PCC-Vivace

Start at: 2018-04-18 11:34:47
End at: 2018-04-18 11:35:17

# Below is generated by plot.py at 2018-04-18 17:43:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 432.73 Mbit/s
95th percentile per-packet one-way delay: 60.574 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 242.97 Mbit/s
95th percentile per-packet one-way delay: 60.527 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 258.74 Mbit/s
95th percentile per-packet one-way delay: 62.258 ms
Loss rate: 0.60%
-- Flow 3:
Average throughput: 55.66 Mbit/s
95th percentile per-packet one-way delay: 52.225 ms
Loss rate: 1.41%
Run 6: Report of PCC-Vivace — Data Link

![Data Link Graph](image)

![Packet Delay Graph](image)

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Run 7: Statistics of PCC-Vivace

Start at: 2018-04-18 11:50:39
End at: 2018-04-18 11:51:09

# Below is generated by plot.py at 2018-04-18 17:43:51
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 394.25 Mbit/s
  95th percentile per-packet one-way delay: 57.500 ms
  Loss rate: 0.43%
-- Flow 1:
  Average throughput: 253.16 Mbit/s
  95th percentile per-packet one-way delay: 61.951 ms
  Loss rate: 0.26%
-- Flow 2:
  Average throughput: 188.70 Mbit/s
  95th percentile per-packet one-way delay: 55.144 ms
  Loss rate: 0.66%
-- Flow 3:
  Average throughput: 48.36 Mbit/s
  95th percentile per-packet one-way delay: 50.526 ms
  Loss rate: 1.26%
Run 7: Report of PCC-Vivace — Data Link
Run 8: Statistics of PCC-Vivace

Start at: 2018-04-18 12:06:20
End at: 2018-04-18 12:06:50

# Below is generated by plot.py at 2018-04-18 17:44:08
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 429.67 Mbit/s
  95th percentile per-packet one-way delay: 52.741 ms
  Loss rate: 0.62%
-- Flow 1:
  Average throughput: 260.88 Mbit/s
  95th percentile per-packet one-way delay: 52.444 ms
  Loss rate: 0.37%
-- Flow 2:
  Average throughput: 242.17 Mbit/s
  95th percentile per-packet one-way delay: 59.388 ms
  Loss rate: 0.98%
-- Flow 3:
  Average throughput: 25.44 Mbit/s
  95th percentile per-packet one-way delay: 51.185 ms
  Loss rate: 1.47%
Run 8: Report of PCC-Vivace — Data Link

[Graph showing throughput and per-packet round-trip delay over time for flows 1, 2, and 3.]
Run 9: Statistics of PCC-Vivace


# Below is generated by plot.py at 2018-04-18 17:45:01
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 458.96 Mbit/s
  95th percentile per-packet one-way delay: 99.126 ms
  Loss rate: 0.45%
-- Flow 1:
  Average throughput: 262.81 Mbit/s
  95th percentile per-packet one-way delay: 146.656 ms
  Loss rate: 0.31%
-- Flow 2:
  Average throughput: 227.49 Mbit/s
  95th percentile per-packet one-way delay: 71.186 ms
  Loss rate: 0.50%
-- Flow 3:
  Average throughput: 138.67 Mbit/s
  95th percentile per-packet one-way delay: 51.856 ms
  Loss rate: 1.07%
Run 9: Report of PCC-Vivace — Data Link

![Graph showing network performance metrics over time]
Run 10: Statistics of PCC-Vivace

Start at: 2018-04-18 12:38:00
End at: 2018-04-18 12:38:30

# Below is generated by plot.py at 2018-04-18 17:45:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 418.49 Mbit/s
95th percentile per-packet one-way delay: 53.432 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 254.66 Mbit/s
95th percentile per-packet one-way delay: 54.174 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 202.21 Mbit/s
95th percentile per-packet one-way delay: 53.136 ms
Loss rate: 0.54%
-- Flow 3:
Average throughput: 90.72 Mbit/s
95th percentile per-packet one-way delay: 51.028 ms
Loss rate: 1.30%
Run 10: Report of PCC-Vivace — Data Link

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

- Flow 1 ingress (mean 254.57 Mbit/s)
- Flow 1 egress (mean 254.66 Mbit/s)
- Flow 2 ingress (mean 202.28 Mbit/s)
- Flow 2 egress (mean 202.21 Mbit/s)
- Flow 3 ingress (mean 90.98 Mbit/s)
- Flow 3 egress (mean 90.72 Mbit/s)

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

- Flow 1 (95th percentile 54.17 ms)
- Flow 2 (95th percentile 53.14 ms)
- Flow 3 (95th percentile 51.03 ms)
Run 1: Statistics of PCC-Expr

Start at: 2018-04-18 10:24:08
End at: 2018-04-18 10:24:38
Run 1: Report of PCC-Expr — Data Link

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Run 2: Statistics of PCC-Expr

End at: 2018-04-18 10:40:25
Run 2: Report of PCC-Expr — Data Link

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Run 3: Statistics of PCC-Expr

End at: 2018-04-18 10:56:21
Run 3: Report of PCC-Expr — Data Link

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Run 4: Statistics of PCC-Expr

Start at: 2018-04-18 11:11:43
End at: 2018-04-18 11:12:13
Run 4: Report of PCC-Expr — Data Link

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Run 5: Statistics of PCC-Expr

Start at: 2018-04-18 11:27:34
End at: 2018-04-18 11:28:04
Run 5: Report of PCC-Expr — Data Link

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Run 6: Statistics of PCC-Expr

End at: 2018-04-18 11:43:54
Run 6: Report of PCC-Expr — Data Link

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Run 7: Statistics of PCC-Expr

Start at: 2018-04-18 11:59:03
End at: 2018-04-18 11:59:33
Run 7: Report of PCC-Expr — Data Link

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Run 8: Statistics of PCC-Expr

Start at: 2018-04-18 12:14:56
End at: 2018-04-18 12:15:26
Run 8: Report of PCC-Expr — Data Link

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Run 9: Statistics of PCC-Expr

Start at: 2018-04-18 12:30:46
End at: 2018-04-18 12:31:16
Run 9: Report of PCC-Expr — Data Link

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Run 10: Statistics of PCC-Expr

End at: 2018-04-18 12:47:03
Run 10: Report of PCC-Expr — Data Link

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