Pantheon Report

Generated at 2019-01-26 02:35:27 (UTC).
Data path: China on eno1 (remote) → AWS Korea on ens5 (local).
Repeated the test of 21 congestion control schemes 5 times.
Each test lasted for 30 seconds running 3 flows with 10-second interval between two flows.
NTP offsets were measured against ntp.nict.jp and have been applied to correct the timestamps in logs.

System info:
Linux 4.15.0-1031-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912

Git summary:
branch: muses @ 0b8e9a949603c3842368430acf469ee3b941f9f
third_party/fillp @ d6da1459332fcee56963885d7eb17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2bb090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143c6bdf5e58e562f4
third_party/indigo @ 2601c9e4a9d58d38dc4dfe0edc5bf90c077e6d4
third_party/libutp @ b3465b94e2826f2b179eaab4a906e6bb7cf3cf
third_party/muses @ d9c5ea33091330aca25ecd105ab2d634d540d
third_party/pantheon-tunnel @ f866d3f58d27af0d942717625ee3a354ce2e820bd
third_party/pcc @ 1af9c958fa0d66d18b623c091a55f3872b4981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8ac08fab92c4eb24f974ab
third_party/proto-quic @ 77961f1aa82733a886b42f1b278439c798f3cff42
third_party/scream-reproduce @ f09918d1421aa3131bf11ff1964974e1da3b9d2
M src/ScreamClient
M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a6ad18c74f9415f19a26
M src/examples/cellsim.cc
M src/examples/sproutb2.cc
M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c6b0a261149af2629562939f9a494
M src/verus.hpp
M tools/plot.py
third_party/vivace @ 2bafe8211f435ae071a32f96b7d8c5046f87f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9d7e4735770d143a18a2851
test from China to AWS Korea, 5 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)

Average throughput (Mbit/s)
95th percentile one-way delay (ms)

FillP
FillP-Sheep
Copa
Indigo
QUIC Cubic
TCP Cubic
Sprout
Indigo-MusesD
PCC-Vivace
SCReAM
TCP Vegas
LEDBAT
Verus
TCP BBR
Indigo-MusesC5
PCC-Allegro
Indigo-MusesT
Indigo-MusesC3
WebRTC media
TaoVA-100x
PCC-Expr

3
<table>
<thead>
<tr>
<th>scheme</th>
<th># runs</th>
<th>mean avg tput (Mbit/s)</th>
<th>mean 95th-%ile delay (ms)</th>
<th>mean loss rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>flow 1  flow 2  flow 3</td>
<td>flow 1  flow 2  flow 3</td>
<td>flow 1  flow 2  flow 3</td>
</tr>
<tr>
<td>TCP BBR</td>
<td>5</td>
<td>3.40  19.42  6.69</td>
<td>166.71  171.63  167.94</td>
<td>84.14  40.51  30.20</td>
</tr>
<tr>
<td>Copa</td>
<td>5</td>
<td>1.46  10.91  6.17</td>
<td>166.00  173.25  171.31</td>
<td>58.35  16.96  22.39</td>
</tr>
<tr>
<td>TCP Cubic</td>
<td>5</td>
<td>0.01  0.68  0.67</td>
<td>167.40  168.42  168.43</td>
<td>98.74  7.92  10.01</td>
</tr>
<tr>
<td>FillP</td>
<td>5</td>
<td>20.86 9.01  8.35</td>
<td>173.06  171.02  169.37</td>
<td>20.25  23.81  22.44</td>
</tr>
<tr>
<td>FillP-Sheep</td>
<td>5</td>
<td>21.44 9.49  6.03</td>
<td>172.06  171.10  169.00</td>
<td>13.84  17.21  15.81</td>
</tr>
<tr>
<td>Indigo</td>
<td>5</td>
<td>86.91 22.75  7.81</td>
<td>167.40  225.34  217.18</td>
<td>34.90  65.24  70.85</td>
</tr>
<tr>
<td>Indigo-MusesC3</td>
<td>5</td>
<td>20.23 18.95  8.82</td>
<td>173.19  170.58  169.98</td>
<td>12.07  13.75  13.73</td>
</tr>
<tr>
<td>Indigo-MusesC5</td>
<td>5</td>
<td>24.07 13.73  7.84</td>
<td>182.07  182.44  173.39</td>
<td>23.61  21.73  15.41</td>
</tr>
<tr>
<td>Indigo-MusesD</td>
<td>5</td>
<td>23.04 14.04  1.86</td>
<td>169.96  169.36  168.74</td>
<td>22.70  23.84  23.07</td>
</tr>
<tr>
<td>Indigo-MusesT</td>
<td>5</td>
<td>27.22 10.52  8.55</td>
<td>171.83  170.27  172.09</td>
<td>17.65  13.83  12.65</td>
</tr>
<tr>
<td>LEDBAT</td>
<td>5</td>
<td>0.64  0.66  0.66</td>
<td>167.40  167.52  167.27</td>
<td>6.76  7.15  8.70</td>
</tr>
<tr>
<td>PCC-Allegro</td>
<td>5</td>
<td>11.33  8.71  6.74</td>
<td>167.52  167.77  181.17</td>
<td>41.62  16.84  26.80</td>
</tr>
<tr>
<td>PCC-Expr</td>
<td>5</td>
<td>11.54 12.70  5.35</td>
<td>168.39  175.40  168.25</td>
<td>23.11  14.62  14.36</td>
</tr>
<tr>
<td>QUIC Cubic</td>
<td>5</td>
<td>1.58  1.30  2.73</td>
<td>167.77  167.60  167.85</td>
<td>5.42  5.37  6.97</td>
</tr>
<tr>
<td>SCReAM</td>
<td>5</td>
<td>0.10  0.11  0.13</td>
<td>167.45  167.29  167.19</td>
<td>6.11  7.06  8.25</td>
</tr>
<tr>
<td>Sprout</td>
<td>5</td>
<td>0.52  0.52  0.54</td>
<td>167.90  167.63  167.70</td>
<td>8.69  9.15  8.23</td>
</tr>
<tr>
<td>TaoVA-100x</td>
<td>5</td>
<td>14.85 10.21  15.23</td>
<td>172.13  172.90  176.19</td>
<td>13.95  15.63  15.01</td>
</tr>
<tr>
<td>TCP Vegas</td>
<td>5</td>
<td>0.55  0.76  0.71</td>
<td>167.76  168.28  168.27</td>
<td>29.24  9.83  9.58</td>
</tr>
<tr>
<td>Verus</td>
<td>5</td>
<td>27.98  7.00  8.49</td>
<td>284.56  263.28  291.56</td>
<td>32.74  37.52  42.35</td>
</tr>
<tr>
<td>PCC-Vivace</td>
<td>5</td>
<td>6.51  8.48  12.95</td>
<td>168.59  168.46  191.69</td>
<td>6.83  7.59  12.35</td>
</tr>
<tr>
<td>WebRTC media</td>
<td>5</td>
<td>0.86  0.05  0.05</td>
<td>167.45  168.31  167.63</td>
<td>45.26  7.57  10.20</td>
</tr>
</tbody>
</table>
Run 1: Statistics of TCP BBR

End at: 2019-01-25 19:12:05
Local clock offset: 14.675 ms
Remote clock offset: 12.265 ms

# Below is generated by plot.py at 2019-01-26 02:31:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 10.98 Mbit/s
95th percentile per-packet one-way delay: 167.842 ms
Loss rate: 33.15%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 165.446 ms
Loss rate: 99.37%
-- Flow 2:
Average throughput: 16.43 Mbit/s
95th percentile per-packet one-way delay: 167.890 ms
Loss rate: 33.11%
-- Flow 3:
Average throughput: 0.25 Mbit/s
95th percentile per-packet one-way delay: 165.604 ms
Loss rate: 36.14%
Run 1: Report of TCP BBR — Data Link
Run 2: Statistics of TCP BBR

Start at: 2019-01-25 21:00:00
End at: 2019-01-25 21:00:30
Local clock offset: 0.845 ms
Remote clock offset: -3.098 ms

# Below is generated by plot.py at 2019-01-26 02:31:32
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 17.01 Mbit/s
  95th percentile per-packet one-way delay: 170.336 ms
  Loss rate: 25.71%
-- Flow 1:
  Average throughput: 0.01 Mbit/s
  95th percentile per-packet one-way delay: 167.010 ms
  Loss rate: 98.79%
-- Flow 2:
  Average throughput: 25.33 Mbit/s
  95th percentile per-packet one-way delay: 170.484 ms
  Loss rate: 25.68%
-- Flow 3:
  Average throughput: 0.61 Mbit/s
  95th percentile per-packet one-way delay: 167.096 ms
  Loss rate: 27.03%
Run 2: Report of TCP BBR — Data Link
Run 3: Statistics of TCP BBR

Local clock offset: 5.047 ms
Remote clock offset: 0.066 ms

# Below is generated by plot.py at 2019-01-26 02:31:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 22.08 Mbit/s
95th percentile per-packet one-way delay: 176.812 ms
Loss rate: 24.93%
-- Flow 1:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 148.191 ms
Loss rate: 98.79%
-- Flow 2:
Average throughput: 27.33 Mbit/s
95th percentile per-packet one-way delay: 181.788 ms
Loss rate: 23.42%
-- Flow 3:
Average throughput: 12.09 Mbit/s
95th percentile per-packet one-way delay: 168.006 ms
Loss rate: 31.08%
Run 3: Report of TCP BBR — Data Link
Run 4: Statistics of TCP BBR

Start at: 2019-01-26 00:37:50
End at: 2019-01-26 00:38:20
Local clock offset: -0.006 ms
Remote clock offset: -1.201 ms

# Below is generated by plot.py at 2019-01-26 02:31:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 22.38 Mbit/s
95th percentile per-packet one-way delay: 169.894 ms
Loss rate: 23.35%
-- Flow 1:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 169.192 ms
Loss rate: 98.79%
-- Flow 2:
Average throughput: 27.98 Mbit/s
95th percentile per-packet one-way delay: 170.042 ms
Loss rate: 21.56%
-- Flow 3:
Average throughput: 11.61 Mbit/s
95th percentile per-packet one-way delay: 169.646 ms
Loss rate: 30.99%
Run 4: Report of TCP BBR — Data Link

![Graph showing network performance metrics over time]

**Throughput (Mbps)**

- **Flow 1 Ingress** (mean 0.56 Mbps)
- **Flow 1 Egress** (mean 0.01 Mbps)
- **Flow 2 Ingress** (mean 35.27 Mbps)
- **Flow 2 Egress** (mean 27.98 Mbps)
- **Flow 3 Ingress** (mean 16.44 Mbps)
- **Flow 3 Egress** (mean 11.61 Mbps)

![Graph showing packet latency over time]

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

- **Flow 1** (95th percentile 169.19 ms)
- **Flow 2** (95th percentile 170.04 ms)
- **Flow 3** (95th percentile 169.65 ms)
Run 5: Statistics of TCP BBR

Start at: 2019-01-26 01:32:56
End at: 2019-01-26 01:33:26
Local clock offset: 6.562 ms
Remote clock offset: -0.377 ms

# Below is generated by plot.py at 2019-01-26 02:31:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.87 Mbit/s
95th percentile per-packet one-way delay: 180.343 ms
Loss rate: 25.09%
-- Flow 1:
Average throughput: 16.95 Mbit/s
95th percentile per-packet one-way delay: 183.697 ms
Loss rate: 24.96%
-- Flow 2:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 167.963 ms
Loss rate: 98.79%
-- Flow 3:
Average throughput: 8.90 Mbit/s
95th percentile per-packet one-way delay: 169.373 ms
Loss rate: 25.75%
Run 5: Report of TCP BBR — Data Link

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

Local clock offset: 3.0 ms
Remote clock offset: -15.255 ms

# Below is generated by plot.py at 2019-01-26 02:31:53
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 16.28 Mbit/s
  95th percentile per-packet one-way delay: 180.075 ms
  Loss rate: 45.67%
-- Flow 1:
  Average throughput: 0.03 Mbit/s
  95th percentile per-packet one-way delay: 167.181 ms
  Loss rate: 95.60%
-- Flow 2:
  Average throughput: 21.54 Mbit/s
  95th percentile per-packet one-way delay: 180.659 ms
  Loss rate: 45.55%
-- Flow 3:
  Average throughput: 5.85 Mbit/s
  95th percentile per-packet one-way delay: 173.383 ms
  Loss rate: 46.46%
Run 1: Report of Copa — Data Link

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

Legend:
- Flow 1 ingress (mean 0.31 Mbit/s)
- Flow 1 egress (mean 0.03 Mbit/s)
- Flow 2 ingress (mean 39.09 Mbit/s)
- Flow 2 egress (mean 21.54 Mbit/s)
- Flow 3 ingress (mean 10.66 Mbit/s)
- Flow 3 egress (mean 5.85 Mbit/s)

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

Legend:
- Flow 1 (95th percentile 167.18 ms)
- Flow 2 (95th percentile 180.66 ms)
- Flow 3 (95th percentile 173.38 ms)
Run 2: Statistics of Copa

Local clock offset: 1.796 ms
Remote clock offset: -2.343 ms

# Below is generated by plot.py at 2019-01-26 02:31:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.93 Mbit/s
95th percentile per-packet one-way delay: 177.705 ms
Loss rate: 35.99%
-- Flow 1:
Average throughput: 0.03 Mbit/s
95th percentile per-packet one-way delay: 166.975 ms
Loss rate: 94.60%
-- Flow 2:
Average throughput: 23.45 Mbit/s
95th percentile per-packet one-way delay: 178.884 ms
Loss rate: 29.69%
-- Flow 3:
Average throughput: 13.49 Mbit/s
95th percentile per-packet one-way delay: 176.566 ms
Loss rate: 51.51%
Run 2: Report of Copa — Data Link

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

- Flow 1 ingress (mean 0.53 Mbps)
- Flow 1 egress (mean 0.03 Mbps)
- Flow 2 ingress (mean 32.99 Mbps)
- Flow 2 egress (mean 23.45 Mbps)
- Flow 3 ingress (mean 27.12 Mbps)
- Flow 3 egress (mean 13.49 Mbps)

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

- Flow 1 (95th percentile 166.97 ms)
- Flow 2 (95th percentile 178.88 ms)
- Flow 3 (95th percentile 176.57 ms)
Run 3: Statistics of Copa

Start at: 2019-01-25 23:49:00
Local clock offset: 16.047 ms
Remote clock offset: -1.225 ms

# Below is generated by plot.py at 2019-01-26 02:31:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.41 Mbit/s
95th percentile per-packet one-way delay: 168.095 ms
Loss rate: 2.26%
-- Flow 1:
Average throughput: 0.02 Mbit/s
95th percentile per-packet one-way delay: 157.314 ms
Loss rate: 95.46%
-- Flow 2:
Average throughput: 2.98 Mbit/s
95th percentile per-packet one-way delay: 168.131 ms
Loss rate: 1.91%
-- Flow 3:
Average throughput: 4.39 Mbit/s
95th percentile per-packet one-way delay: 168.045 ms
Loss rate: 2.50%
Run 4: Statistics of Copa

Start at: 2019-01-26 00:57:40
End at: 2019-01-26 00:58:10
Local clock offset: -0.215 ms
Remote clock offset: -1.373 ms

# Below is generated by plot.py at 2019-01-26 02:31:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 6.69 Mbit/s
95th percentile per-packet one-way delay: 169.333 ms
Loss rate: 3.22%
-- Flow 1:
Average throughput: 3.37 Mbit/s
95th percentile per-packet one-way delay: 169.296 ms
Loss rate: 2.50%
-- Flow 2:
Average throughput: 3.57 Mbit/s
95th percentile per-packet one-way delay: 169.363 ms
Loss rate: 3.07%
-- Flow 3:
Average throughput: 2.90 Mbit/s
95th percentile per-packet one-way delay: 169.336 ms
Loss rate: 6.07%
Run 4: Report of Copa — Data Link
Run 5: Statistics of Copa

Start at: 2019-01-26 01:53:13
End at: 2019-01-26 01:53:43
Local clock offset: 2.671 ms
Remote clock offset: -0.739 ms

# Below is generated by plot.py at 2019-01-26 02:31:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.21 Mbit/s
95th percentile per-packet one-way delay: 169.219 ms
Loss rate: 4.23%
-- Flow 1:
Average throughput: 3.83 Mbit/s
95th percentile per-packet one-way delay: 169.218 ms
Loss rate: 3.60%
-- Flow 2:
Average throughput: 3.02 Mbit/s
95th percentile per-packet one-way delay: 169.219 ms
Loss rate: 4.59%
-- Flow 3:
Average throughput: 4.24 Mbit/s
95th percentile per-packet one-way delay: 169.220 ms
Loss rate: 5.42%
Run 5: Report of Copa — Data Link

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### Throughput (Mb/s)

- **Flow 1 ingress (mean 3.95 Mb/s)**
- **Flow 1 egress (mean 3.83 Mb/s)**
- **Flow 2 ingress (mean 3.13 Mb/s)**
- **Flow 2 egress (mean 3.02 Mb/s)**
- **Flow 3 ingress (mean 4.38 Mb/s)**
- **Flow 3 egress (mean 4.24 Mb/s)**

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

- **Flow 1 (95th percentile 169.22 ms)**
- **Flow 2 (95th percentile 169.22 ms)**
- **Flow 3 (95th percentile 169.22 ms)**
Run 1: Statistics of TCP Cubic

End at: 2019-01-25 20:37:54
Local clock offset: 1.669 ms
Remote clock offset: -3.766 ms

# Below is generated by plot.py at 2019-01-26 02:31:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.11 Mbit/s
95th percentile per-packet one-way delay: 166.923 ms
Loss rate: 25.32%
-- Flow 1:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 166.249 ms
Loss rate: 98.66%
-- Flow 2:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 166.929 ms
Loss rate: 21.66%
-- Flow 3:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 166.873 ms
Loss rate: 28.53%
Run 1: Report of TCP Cubic — Data Link
Run 2: Statistics of TCP Cubic

Local clock offset: 14.387 ms  
Remote clock offset: -0.511 ms

# Below is generated by plot.py at 2019-01-26 02:31:57  
# Datalink statistics  
-- Total of 3 flows:  
  Average throughput: 0.37 Mbit/s  
  95th percentile per-packet one-way delay: 166.946 ms  
  Loss rate: 7.08%  
-- Flow 1:  
  Average throughput: 0.01 Mbit/s  
  95th percentile per-packet one-way delay: 165.489 ms  
  Loss rate: 98.66%  
-- Flow 2:  
  Average throughput: 0.39 Mbit/s  
  95th percentile per-packet one-way delay: 166.918 ms  
  Loss rate: 6.02%  
-- Flow 3:  
  Average throughput: 0.38 Mbit/s  
  95th percentile per-packet one-way delay: 166.971 ms  
  Loss rate: 6.64%
Run 2: Report of TCP Cubic — Data Link

![Graph of network performance metrics]

- Flow 1 ingress (mean 0.51 Mbit/s)
- Flow 1 egress (mean 0.01 Mbit/s)
- Flow 2 ingress (mean 0.39 Mbit/s)
- Flow 2 egress (mean 0.39 Mbit/s)
- Flow 3 ingress (mean 0.40 Mbit/s)
- Flow 3 egress (mean 0.38 Mbit/s)

![Graph of per-packet round-trip delay]

- Flow 1 (95th percentile 165.49 ms)
- Flow 2 (95th percentile 166.92 ms)
- Flow 3 (95th percentile 166.97 ms)
Run 3: Statistics of TCP Cubic

Start at: 2019-01-26 00:24:08
End at: 2019-01-26 00:24:38
Local clock offset: -0.829 ms
Remote clock offset: 0.377 ms

# Below is generated by plot.py at 2019-01-26 02:31:57
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1.31 Mbit/s
  95th percentile per-packet one-way delay: 168.784 ms
  Loss rate: 3.06%
-- Flow 1:
  Average throughput: 0.01 Mbit/s
  95th percentile per-packet one-way delay: 168.108 ms
  Loss rate: 98.79%
-- Flow 2:
  Average throughput: 1.64 Mbit/s
  95th percentile per-packet one-way delay: 168.739 ms
  Loss rate: 2.51%
-- Flow 3:
  Average throughput: 0.68 Mbit/s
  95th percentile per-packet one-way delay: 168.928 ms
  Loss rate: 3.99%
Run 4: Statistics of TCP Cubic

Start at: 2019-01-26 01:15:55
End at: 2019-01-26 01:16:25
Local clock offset: 6.901 ms
Remote clock offset: -0.614 ms

# Below is generated by plot.py at 2019-01-26 02:31:57
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.82 Mbit/s
  95th percentile per-packet one-way delay: 169.004 ms
  Loss rate: 4.39%
-- Flow 1:
  Average throughput: 0.01 Mbit/s
  95th percentile per-packet one-way delay: 167.438 ms
  Loss rate: 98.79%
-- Flow 2:
  Average throughput: 0.63 Mbit/s
  95th percentile per-packet one-way delay: 169.026 ms
  Loss rate: 4.01%
-- Flow 3:
  Average throughput: 1.23 Mbit/s
  95th percentile per-packet one-way delay: 168.954 ms
  Loss rate: 3.86%
Run 4: Report of TCP Cubic — Data Link
Run 5: Statistics of TCP Cubic

Start at: 2019-01-26 02:15:12
End at: 2019-01-26 02:15:42
Local clock offset: 1.299 ms
Remote clock offset: -1.354 ms

# Below is generated by plot.py at 2019-01-26 02:31:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.73 Mbit/s
95th percentile per-packet one-way delay: 170.455 ms
Loss rate: 6.60%
-- Flow 1:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 169.700 ms
Loss rate: 98.79%
-- Flow 2:
Average throughput: 0.62 Mbit/s
95th percentile per-packet one-way delay: 170.481 ms
Loss rate: 5.40%
-- Flow 3:
Average throughput: 0.97 Mbit/s
95th percentile per-packet one-way delay: 170.428 ms
Loss rate: 7.02%
Run 5: Report of TCP Cubic — Data Link
Run 1: Statistics of FillP

Local clock offset: 2.108 ms
Remote clock offset: -9.431 ms

# Below is generated by plot.py at 2019-01-26 02:31:57
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 18.79 Mbit/s
  95th percentile per-packet one-way delay: 169.406 ms
  Loss rate: 19.25%
-- Flow 1:
  Average throughput: 9.75 Mbit/s
  95th percentile per-packet one-way delay: 169.446 ms
  Loss rate: 18.55%
-- Flow 2:
  Average throughput: 8.38 Mbit/s
  95th percentile per-packet one-way delay: 169.490 ms
  Loss rate: 19.16%
-- Flow 3:
  Average throughput: 10.67 Mbit/s
  95th percentile per-packet one-way delay: 169.220 ms
  Loss rate: 21.30%
Run 2: Statistics of FillP

Local clock offset: 1.559 ms
Remote clock offset: -0.468 ms

# Below is generated by plot.py at 2019-01-26 02:32:06
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 28.90 Mbit/s
  95th percentile per-packet one-way delay: 169.460 ms
  Loss rate: 23.44%
-- Flow 1:
  Average throughput: 16.67 Mbit/s
  95th percentile per-packet one-way delay: 169.801 ms
  Loss rate: 22.49%
-- Flow 2:
  Average throughput: 15.08 Mbit/s
  95th percentile per-packet one-way delay: 168.943 ms
  Loss rate: 25.73%
-- Flow 3:
  Average throughput: 6.78 Mbit/s
  95th percentile per-packet one-way delay: 166.938 ms
  Loss rate: 19.68%
Run 2: Report of FillP — Data Link

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

- **Flow 1 Ingress (mean 21.36 Mbit/s)**
- **Flow 1 Egress (mean 16.67 Mbit/s)**
- **Flow 2 Ingress (mean 20.08 Mbit/s)**
- **Flow 2 Egress (mean 15.08 Mbit/s)**
- **Flow 3 Ingress (mean 8.25 Mbit/s)**
- **Flow 3 Egress (mean 6.78 Mbit/s)**

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

- **Flow 1 (95th percentile 169.80 ms)**
- **Flow 2 (95th percentile 168.94 ms)**
- **Flow 3 (95th percentile 166.94 ms)**
Run 3: Statistics of FillP

Start at: 2019-01-26 00:14:50
End at: 2019-01-26 00:15:20
Local clock offset: 2.06 ms
Remote clock offset: 0.043 ms

# Below is generated by plot.py at 2019-01-26 02:32:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 36.20 Mbit/s
95th percentile per-packet one-way delay: 174.871 ms
Loss rate: 20.37%
-- Flow 1:
Average throughput: 29.42 Mbit/s
95th percentile per-packet one-way delay: 175.163 ms
Loss rate: 18.79%
-- Flow 2:
Average throughput: 4.29 Mbit/s
95th percentile per-packet one-way delay: 171.573 ms
Loss rate: 24.91%
-- Flow 3:
Average throughput: 12.05 Mbit/s
95th percentile per-packet one-way delay: 171.922 ms
Loss rate: 27.69%
Run 3: Report of FillP — Data Link

- **Flow 1 ingress (mean 35.96 Mbit/s)**
- **Flow 1 egress (mean 29.42 Mbit/s)**
- **Flow 2 ingress (mean 5.65 Mbit/s)**
- **Flow 2 egress (mean 4.29 Mbit/s)**
- **Flow 3 ingress (mean 16.28 Mbit/s)**
- **Flow 3 egress (mean 12.05 Mbit/s)**

Per-packet one-way delay (ms)

- **Flow 1 (95th percentile 175.16 ms)**
- **Flow 2 (95th percentile 171.57 ms)**
- **Flow 3 (95th percentile 171.92 ms)**
Run 4: Statistics of FillP

Start at: 2019-01-26 01:05:54
End at: 2019-01-26 01:06:24
Local clock offset: 3.928 ms
Remote clock offset: -1.215 ms

# Below is generated by plot.py at 2019-01-26 02:32:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 30.57 Mbit/s
95th percentile per-packet one-way delay: 174.624 ms
Loss rate: 22.28%
-- Flow 1:
Average throughput: 22.91 Mbit/s
95th percentile per-packet one-way delay: 175.037 ms
Loss rate: 21.99%
-- Flow 2:
Average throughput: 8.47 Mbit/s
95th percentile per-packet one-way delay: 172.922 ms
Loss rate: 23.33%
-- Flow 3:
Average throughput: 6.25 Mbit/s
95th percentile per-packet one-way delay: 169.257 ms
Loss rate: 22.62%
Run 4: Report of FillP — Data Link

*Throughput (Mbps)*

- Blue dashed line: Flow 1 ingress (mean 29.15 Mbps)
- Blue solid line: Flow 1 egress (mean 22.91 Mbps)
- Green dashed line: Flow 2 ingress (mean 10.92 Mbps)
- Green solid line: Flow 2 egress (mean 8.47 Mbps)
- Red dashed line: Flow 3 ingress (mean 7.91 Mbps)
- Red solid line: Flow 3 egress (mean 6.25 Mbps)

*Packet one-way delay (ms)*

- Blue dots: Flow 1 (95th percentile 175.04 ms)
- Green dots: Flow 2 (95th percentile 172.92 ms)
- Red dots: Flow 3 (95th percentile 169.26 ms)
Run 5: Statistics of FillP

Start at: 2019-01-26 02:04:58
End at: 2019-01-26 02:05:28
Local clock offset: 1.812 ms
Remote clock offset: -0.133 ms

# Below is generated by plot.py at 2019-01-26 02:32:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 33.35 Mbit/s
95th percentile per-packet one-way delay: 175.399 ms
Loss rate: 20.74%
-- Flow 1:
Average throughput: 25.53 Mbit/s
95th percentile per-packet one-way delay: 175.829 ms
Loss rate: 19.43%
-- Flow 2:
Average throughput: 8.83 Mbit/s
95th percentile per-packet one-way delay: 172.193 ms
Loss rate: 25.92%
-- Flow 3:
Average throughput: 5.98 Mbit/s
95th percentile per-packet one-way delay: 169.504 ms
Loss rate: 20.92%
Run 5: Report of FillP — Data Link

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

- Flow 1 ingress (mean 31.46 Mbps/s)
- Flow 1 egress (mean 25.53 Mbps/s)
- Flow 2 ingress (mean 11.78 Mbps/s)
- Flow 2 egress (mean 8.83 Mbps/s)
- Flow 3 ingress (mean 7.40 Mbps/s)
- Flow 3 egress (mean 5.98 Mbps/s)

![Graph 2: Per-Packet Congestion Delay (ms)]

- Flow 1 (95th percentile 175.83 ms)
- Flow 2 (95th percentile 172.19 ms)
- Flow 3 (95th percentile 169.50 ms)

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Run 1: Statistics of FillP-Sheep

End at: 2019-01-25 20:39:19
Local clock offset: 1.42 ms
Remote clock offset: -4.2 ms

# Below is generated by plot.py at 2019-01-26 02:32:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.85 Mbit/s
95th percentile per-packet one-way delay: 167.283 ms
Loss rate: 15.58%
-- Flow 1:
Average throughput: 6.83 Mbit/s
95th percentile per-packet one-way delay: 167.187 ms
Loss rate: 15.14%
-- Flow 2:
Average throughput: 7.43 Mbit/s
95th percentile per-packet one-way delay: 166.961 ms
Loss rate: 15.52%
-- Flow 3:
Average throughput: 6.40 Mbit/s
95th percentile per-packet one-way delay: 167.595 ms
Loss rate: 17.12%
Run 1: Report of FillP-Sheep — Data Link

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

- **Flow 1 ingress** (mean 7.99 Mbit/s)
- **Flow 1 egress** (mean 6.83 Mbit/s)
- **Flow 2 ingress** (mean 8.69 Mbit/s)
- **Flow 2 egress** (mean 7.43 Mbit/s)
- **Flow 3 ingress** (mean 7.55 Mbit/s)
- **Flow 3 egress** (mean 6.40 Mbit/s)

![Graph showing packet delay distribution over time](image)

- **Flow 1** (95th percentile 167.19 ms)
- **Flow 2** (95th percentile 166.96 ms)
- **Flow 3** (95th percentile 167.59 ms)

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Run 2: Statistics of FillP-Sheep

Local clock offset: 15.641 ms
Remote clock offset: -0.402 ms

# Below is generated by plot.py at 2019-01-26 02:32:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 27.34 Mbit/s
95th percentile per-packet one-way delay: 169.627 ms
Loss rate: 13.16%
-- Flow 1:
Average throughput: 18.03 Mbit/s
95th percentile per-packet one-way delay: 169.989 ms
Loss rate: 12.13%
-- Flow 2:
Average throughput: 11.20 Mbit/s
95th percentile per-packet one-way delay: 167.907 ms
Loss rate: 14.91%
-- Flow 3:
Average throughput: 5.78 Mbit/s
95th percentile per-packet one-way delay: 167.597 ms
Loss rate: 15.70%
Run 2: Report of FillP-Sheep — Data Link

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**Throughput (Mbit/s)**

- **Flow 1 ingress** (mean 20.37 Mbit/s)
- **Flow 1 egress** (mean 18.03 Mbit/s)
- **Flow 2 ingress** (mean 13.02 Mbit/s)
- **Flow 2 egress** (mean 11.20 Mbit/s)
- **Flow 3 ingress** (mean 6.69 Mbit/s)
- **Flow 3 egress** (mean 5.76 Mbit/s)

---

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

- **Flow 1** (95th percentile 169.99 ms)
- **Flow 2** (95th percentile 167.91 ms)
- **Flow 3** (95th percentile 167.60 ms)

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Run 3: Statistics of FillP-Sheep

Start at: 2019-01-26 00:25:29
End at: 2019-01-26 00:26:00
Local clock offset: -1.27 ms
Remote clock offset: -0.885 ms

# Below is generated by plot.py at 2019-01-26 02:32:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 35.59 Mbit/s
  95th percentile per-packet one-way delay: 174.080 ms
  Loss rate: 15.46%
-- Flow 1:
  Average throughput: 24.31 Mbit/s
  95th percentile per-packet one-way delay: 173.201 ms
  Loss rate: 13.27%
-- Flow 2:
  Average throughput: 13.62 Mbit/s
  95th percentile per-packet one-way delay: 178.329 ms
  Loss rate: 21.41%
-- Flow 3:
  Average throughput: 6.89 Mbit/s
  95th percentile per-packet one-way delay: 169.549 ms
  Loss rate: 12.65%
Run 3: Report of FillP-Sheep — Data Link

[Top diagram: Throughput (Mbps)]

[Bottom diagram: Per packet one way delay (ms)]
Run 4: Statistics of FillP-Sheep

Start at: 2019-01-26 01:17:20
End at: 2019-01-26 01:17:50
Local clock offset: 7.38 ms
Remote clock offset: -0.582 ms

# Below is generated by plot.py at 2019-01-26 02:32:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 33.54 Mbit/s
  95th percentile per-packet one-way delay: 173.615 ms
  Loss rate: 12.77%
-- Flow 1:
  Average throughput: 26.45 Mbit/s
  95th percentile per-packet one-way delay: 173.876 ms
  Loss rate: 11.57%
-- Flow 2:
  Average throughput: 8.33 Mbit/s
  95th percentile per-packet one-way delay: 171.702 ms
  Loss rate: 17.50%
-- Flow 3:
  Average throughput: 4.81 Mbit/s
  95th percentile per-packet one-way delay: 169.898 ms
  Loss rate: 15.06%
Run 4: Report of FillP-Sheep — Data Link

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

- Flow 1 ingress (mean 29.68 Mbit/s)
- Flow 1 egress (mean 26.45 Mbit/s)
- Flow 2 ingress (mean 9.98 Mbit/s)
- Flow 2 egress (mean 8.33 Mbit/s)
- Flow 3 ingress (mean 5.54 Mbit/s)
- Flow 3 egress (mean 4.81 Mbit/s)

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

- Flow 1 (95th percentile 173.88 ms)
- Flow 2 (95th percentile 171.70 ms)
- Flow 3 (95th percentile 169.90 ms)
Run 5: Statistics of FillP-Sheep

Start at: 2019-01-26 02:16:34  
End at: 2019-01-26 02:17:04  
Local clock offset: 1.301 ms  
Remote clock offset: -0.816 ms

# Below is generated by plot.py at 2019-01-26 02:32:34  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 38.18 Mbit/s  
95th percentile per-packet one-way delay: 175.220 ms  
Loss rate: 17.13%  
-- Flow 1:  
Average throughput: 31.56 Mbit/s  
95th percentile per-packet one-way delay: 176.035 ms  
Loss rate: 17.10%  
-- Flow 2:  
Average throughput: 6.89 Mbit/s  
95th percentile per-packet one-way delay: 170.594 ms  
Loss rate: 16.70%  
-- Flow 3:  
Average throughput: 6.26 Mbit/s  
95th percentile per-packet one-way delay: 170.341 ms  
Loss rate: 18.54%
Run 5: Report of FillP-Sheep — Data Link

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

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

Start at: 2019-01-25 20:07:32
End at: 2019-01-25 20:08:02
Local clock offset: 0.596 ms
Remote clock offset: -10.074 ms

# Below is generated by plot.py at 2019-01-26 02:32:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.42 Mbit/s
95th percentile per-packet one-way delay: 235.171 ms
Loss rate: 73.85%
-- Flow 1:
Average throughput: 70.35 Mbit/s
95th percentile per-packet one-way delay: 166.583 ms
Loss rate: 23.21%
-- Flow 2:
Average throughput: 21.83 Mbit/s
95th percentile per-packet one-way delay: 236.219 ms
Loss rate: 73.73%
-- Flow 3:
Average throughput: 2.98 Mbit/s
95th percentile per-packet one-way delay: 228.043 ms
Loss rate: 75.61%
Run 1: Report of Indigo — Data Link

Throughput (Mbps):

- Flow 1 ingress (mean 0.69 Mbps)
- Flow 1 egress (mean 70.35 Mbps)
- Flow 2 ingress (mean 82.05 Mbps)
- Flow 2 egress (mean 21.83 Mbps)
- Flow 3 ingress (mean 11.90 Mbps)
- Flow 3 egress (mean 2.98 Mbps)

Per-packet one-way delay (ms):

- Flow 1 (95th percentile 166.58 ms)
- Flow 2 (95th percentile 236.22 ms)
- Flow 3 (95th percentile 228.04 ms)
Run 2: Statistics of Indigo

Local clock offset: 1.782 ms
Remote clock offset: -0.357 ms

# Below is generated by plot.py at 2019-01-26 02:32:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.54 Mbit/s
95th percentile per-packet one-way delay: 242.946 ms
Loss rate: 69.50%
-- Flow 1:
Average throughput: 64.87 Mbit/s
95th percentile per-packet one-way delay: 166.066 ms
Loss rate: 28.73%
-- Flow 2:
Average throughput: 22.21 Mbit/s
95th percentile per-packet one-way delay: 247.291 ms
Loss rate: 69.44%
-- Flow 3:
Average throughput: 5.62 Mbit/s
95th percentile per-packet one-way delay: 212.031 ms
Loss rate: 70.02%
Run 2: Report of Indigo — Data Link

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

- Flow 1 ingress (mean 0.74 Mbit/s)
- Flow 1 egress (mean 64.87 Mbit/s)
- Flow 2 ingress (mean 71.82 Mbit/s)
- Flow 2 egress (mean 22.21 Mbit/s)
- Flow 3 ingress (mean 18.30 Mbit/s)
- Flow 3 egress (mean 5.62 Mbit/s)
Run 3: Statistics of Indigo

Start at: 2019-01-26 00:11:38
End at: 2019-01-26 00:12:08
Local clock offset: 4.492 ms
Remote clock offset: -0.412 ms

# Below is generated by plot.py at 2019-01-26 02:32:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 20.14 Mbit/s
95th percentile per-packet one-way delay: 204.027 ms
Loss rate: 58.84%
-- Flow 1:
Average throughput: 106.34 Mbit/s
95th percentile per-packet one-way delay: 165.471 ms
Loss rate: 37.68%
-- Flow 2:
Average throughput: 25.30 Mbit/s
95th percentile per-packet one-way delay: 206.414 ms
Loss rate: 55.06%
-- Flow 3:
Average throughput: 10.45 Mbit/s
95th percentile per-packet one-way delay: 199.486 ms
Loss rate: 70.94%
Run 3: Report of Indigo — Data Link

![Graph showing throughput and per-packet one-way delay over time. The graphs illustrate the performance metrics for different flows with varying ingress and egress throughput speeds. The data points indicate fluctuations in throughput and delay across the time intervals.]
Run 4: Statistics of Indigo

Start at: 2019-01-26 01:02:31
End at: 2019-01-26 01:03:01
Local clock offset: 2.013 ms
Remote clock offset: -1.595 ms

# Below is generated by plot.py at 2019-01-26 02:32:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.80 Mbit/s
95th percentile per-packet one-way delay: 205.068 ms
Loss rate: 61.32%
-- Flow 1:
Average throughput: 97.39 Mbit/s
95th percentile per-packet one-way delay: 169.801 ms
Loss rate: 37.69%
-- Flow 2:
Average throughput: 23.21 Mbit/s
95th percentile per-packet one-way delay: 203.390 ms
Loss rate: 59.97%
-- Flow 3:
Average throughput: 10.54 Mbit/s
95th percentile per-packet one-way delay: 211.254 ms
Loss rate: 66.44%
Run 4: Report of Indigo — Data Link

![Graph 1: Throughput vs Time]

- Flow 1 ingress (mean 0.87 Mbit/s)
- Flow 1 egress (mean 97.39 Mbit/s)
- Flow 2 ingress (mean 57.31 Mbit/s)
- Flow 2 egress (mean 23.21 Mbit/s)
- Flow 3 ingress (mean 30.66 Mbit/s)
- Flow 3 egress (mean 10.54 Mbit/s)

![Graph 2: Packet Delay vs Time]

- Flow 1 (95th percentile 169.80 ms)
- Flow 2 (95th percentile 203.39 ms)
- Flow 3 (95th percentile 211.25 ms)
Run 5: Statistics of Indigo

Start at: 2019-01-26 01:58:37
End at: 2019-01-26 01:59:07
Local clock offset: 2.443 ms
Remote clock offset: -1.137 ms

# Below is generated by plot.py at 2019-01-26 02:32:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 17.10 Mbit/s
95th percentile per-packet one-way delay: 233.754 ms
Loss rate: 68.62%
-- Flow 1:
Average throughput: 95.59 Mbit/s
95th percentile per-packet one-way delay: 169.081 ms
Loss rate: 47.19%
-- Flow 2:
Average throughput: 21.19 Mbit/s
95th percentile per-packet one-way delay: 233.372 ms
Loss rate: 67.99%
-- Flow 3:
Average throughput: 9.44 Mbit/s
95th percentile per-packet one-way delay: 235.066 ms
Loss rate: 71.24%
Run 5: Report of Indigo — Data Link
Run 1: Statistics of Indigo-MusesC3

Start at: 2019-01-25 20:33:07
End at: 2019-01-25 20:33:37
Local clock offset: 1.594 ms
Remote clock offset: -5.09 ms

# Below is generated by plot.py at 2019-01-26 02:32:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 25.49 Mbit/s
95th percentile per-packet one-way delay: 168.313 ms
Loss rate: 16.95%
-- Flow 1:
Average throughput: 15.48 Mbit/s
95th percentile per-packet one-way delay: 167.591 ms
Loss rate: 15.47%
-- Flow 2:
Average throughput: 14.44 Mbit/s
95th percentile per-packet one-way delay: 168.849 ms
Loss rate: 19.25%
-- Flow 3:
Average throughput: 3.71 Mbit/s
95th percentile per-packet one-way delay: 168.488 ms
Loss rate: 18.10%
Run 1: Report of Indigo-MusesC3 — Data Link

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

**Throughput (Mbps/s)**

- **Flow 1 ingress** (mean 18.17 Mbps/s)
- **Flow 1 egress** (mean 15.48 Mbps/s)
- **Flow 2 ingress** (mean 17.66 Mbps/s)
- **Flow 2 egress** (mean 14.44 Mbps/s)
- **Flow 3 ingress** (mean 4.40 Mbps/s)
- **Flow 3 egress** (mean 3.71 Mbps/s)

**Packet size vs. delay (ms)**

- **Flow 1** (95th percentile 167.59 ms)
- **Flow 2** (95th percentile 168.85 ms)
- **Flow 3** (95th percentile 168.49 ms)
Run 2: Statistics of Indigo-MusesC3

Start at: 2019-01-25 22:05:54
Local clock offset: 11.682 ms
Remote clock offset: -0.83 ms

# Below is generated by plot.py at 2019-01-26 02:32:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 37.92 Mbit/s
95th percentile per-packet one-way delay: 173.175 ms
Loss rate: 13.32%
-- Flow 1:
Average throughput: 27.77 Mbit/s
95th percentile per-packet one-way delay: 176.886 ms
Loss rate: 13.02%
-- Flow 2:
Average throughput: 9.97 Mbit/s
95th percentile per-packet one-way delay: 167.648 ms
Loss rate: 11.12%
-- Flow 3:
Average throughput: 14.66 Mbit/s
95th percentile per-packet one-way delay: 170.578 ms
Loss rate: 18.58%
Run 2: Report of Indigo-MusesC3 — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 31.68 Mbps)
  - Flow 1 egress (mean 27.77 Mbps)
  - Flow 2 ingress (mean 11.07 Mbps)
  - Flow 2 egress (mean 9.97 Mbps)
  - Flow 3 ingress (mean 17.47 Mbps)
  - Flow 3 egress (mean 14.66 Mbps)

- **Per-packet one-way delay (ms):**
  - Flow 1 (95th percentile 176.89 ms)
  - Flow 2 (95th percentile 167.65 ms)
  - Flow 3 (95th percentile 170.58 ms)
Run 3: Statistics of Indigo-MusesC3

Start at: 2019-01-26 00:22:05
End at: 2019-01-26 00:22:35
Local clock offset: -0.559 ms
Remote clock offset: -0.427 ms

# Below is generated by plot.py at 2019-01-26 02:32:55
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 33.86 Mbit/s
  95th percentile per-packet one-way delay: 172.109 ms
  Loss rate: 14.08%
-- Flow 1:
  Average throughput: 19.79 Mbit/s
  95th percentile per-packet one-way delay: 173.408 ms
  Loss rate: 12.31%
-- Flow 2:
  Average throughput: 18.81 Mbit/s
  95th percentile per-packet one-way delay: 170.627 ms
  Loss rate: 16.80%
-- Flow 3:
  Average throughput: 7.87 Mbit/s
  95th percentile per-packet one-way delay: 170.064 ms
  Loss rate: 14.31%
Run 3: Report of Indigo-MusesC3 — Data Link

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

Legend:
- Flow 1 ingress (mean 22.39 Mbit/s)
- Flow 1 egress (mean 19.79 Mbit/s)
- Flow 2 ingress (mean 22.33 Mbit/s)
- Flow 2 egress (mean 18.81 Mbit/s)
- Flow 3 ingress (mean 8.93 Mbit/s)
- Flow 3 egress (mean 7.87 Mbit/s)
Run 4: Statistics of Indigo-MusesC3

Start at: 2019-01-26 01:13:31
End at: 2019-01-26 01:14:01
Local clock offset: 6.603 ms
Remote clock offset: -1.562 ms

# Below is generated by plot.py at 2019-01-26 02:32:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 37.55 Mbit/s
95th percentile per-packet one-way delay: 172.503 ms
Loss rate: 7.56%
-- Flow 1:
Average throughput: 21.64 Mbit/s
95th percentile per-packet one-way delay: 171.595 ms
Loss rate: 6.05%
-- Flow 2:
Average throughput: 20.37 Mbit/s
95th percentile per-packet one-way delay: 173.785 ms
Loss rate: 9.78%
-- Flow 3:
Average throughput: 11.74 Mbit/s
95th percentile per-packet one-way delay: 171.530 ms
Loss rate: 8.49%
Run 4: Report of Indigo-MusesC3 — Data Link

![Graph showing throughput and delay over time for different flows.](image-url)
Run 5: Statistics of Indigo-MusesC3

Start at: 2019-01-26 02:12:41
End at: 2019-01-26 02:13:11
Local clock offset: 1.489 ms
Remote clock offset: -0.361 ms

# Below is generated by plot.py at 2019-01-26 02:33:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 37.86 Mbit/s
95th percentile per-packet one-way delay: 174.928 ms
Loss rate: 12.44%
-- Flow 1:
Average throughput: 16.49 Mbit/s
95th percentile per-packet one-way delay: 176.454 ms
Loss rate: 13.51%
-- Flow 2:
Average throughput: 31.17 Mbit/s
95th percentile per-packet one-way delay: 171.981 ms
Loss rate: 11.80%
-- Flow 3:
Average throughput: 6.11 Mbit/s
95th percentile per-packet one-way delay: 169.265 ms
Loss rate: 9.15%
Run 5: Report of Indigo-MusesC3 — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 18.91 Mbit/s)  Flow 1 egress (mean 16.49 Mbit/s)
Flow 2 ingress (mean 34.90 Mbit/s)  Flow 2 egress (mean 31.17 Mbit/s)
Flow 3 ingress (mean 6.53 Mbit/s)  Flow 3 egress (mean 6.11 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 176.45 ms)  Flow 2 (95th percentile 171.98 ms)  Flow 3 (95th percentile 169.26 ms)
Run 1: Statistics of Indigo-MusesC5

Local clock offset: 1.976 ms
Remote clock offset: -6.685 ms

# Below is generated by plot.py at 2019-01-26 02:33:01
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 32.17 Mbit/s
  95th percentile per-packet one-way delay: 182.012 ms
  Loss rate: 31.27%
  -- Flow 1:
  Average throughput: 28.05 Mbit/s
  95th percentile per-packet one-way delay: 182.592 ms
  Loss rate: 32.58%
  -- Flow 2:
  Average throughput: 2.72 Mbit/s
  95th percentile per-packet one-way delay: 175.941 ms
  Loss rate: 19.81%
  -- Flow 3:
  Average throughput: 11.29 Mbit/s
  95th percentile per-packet one-way delay: 179.134 ms
  Loss rate: 21.39%
Run 1: Report of Indigo-MusesC5 — Data Link

[Insert Khan Academy Figures]

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Run 2: Statistics of Indigo-MusesC5

End at: 2019-01-25 22:02:58
Local clock offset: 6.909 ms
Remote clock offset: -1.417 ms

# Below is generated by plot.py at 2019-01-26 02:33:04
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 37.05 Mbit/s
  95th percentile per-packet one-way delay: 181.582 ms
  Loss rate: 32.63%
-- Flow 1:
  Average throughput: 34.28 Mbit/s
  95th percentile per-packet one-way delay: 181.966 ms
  Loss rate: 33.62%
-- Flow 2:
  Average throughput: 1.02 Mbit/s
  95th percentile per-packet one-way delay: 177.051 ms
  Loss rate: 24.81%
-- Flow 3:
  Average throughput: 7.92 Mbit/s
  95th percentile per-packet one-way delay: 175.140 ms
  Loss rate: 14.93%
Run 2: Report of Indigo-MusesC5 — Data Link
Run 3: Statistics of Indigo-MusesC5

Start at: 2019-01-26 00:18:54
End at: 2019-01-26 00:19:24
Local clock offset: 0.412 ms
Remote clock offset: -0.091 ms

# Below is generated by plot.py at 2019-01-26 02:33:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 37.85 Mbit/s
95th percentile per-packet one-way delay: 177.991 ms
Loss rate: 17.18%
-- Flow 1:
Average throughput: 19.90 Mbit/s
95th percentile per-packet one-way delay: 180.489 ms
Loss rate: 21.06%
-- Flow 2:
Average throughput: 25.08 Mbit/s
95th percentile per-packet one-way delay: 174.015 ms
Loss rate: 12.12%
-- Flow 3:
Average throughput: 7.48 Mbit/s
95th percentile per-packet one-way delay: 171.430 ms
Loss rate: 14.72%
Run 3: Report of Indigo-MusesC5 — Data Link

![Graph showing throughput and packet delay]

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 25.01 Mbps/s)
Flow 1 egress (mean 19.90 Mbps/s)
Flow 2 ingress (mean 28.19 Mbps/s)
Flow 2 egress (mean 25.08 Mbps/s)
Flow 3 ingress (mean 8.52 Mbps/s)
Flow 3 egress (mean 7.48 Mbps/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 180.49 ms)
Flow 2 (95th percentile 174.01 ms)
Flow 3 (95th percentile 171.43 ms)
Run 4: Statistics of Indigo-MusesC5

Start at: 2019-01-26 01:09:30
End at: 2019-01-26 01:10:00
Local clock offset: 5.558 ms
Remote clock offset: -1.434 ms

# Below is generated by plot.py at 2019-01-26 02:33:14
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 35.54 Mbit/s
  95th percentile per-packet one-way delay: 176.880 ms
  Loss rate: 16.71%
-- Flow 1:
  Average throughput: 23.67 Mbit/s
  95th percentile per-packet one-way delay: 175.535 ms
  Loss rate: 11.70%
-- Flow 2:
  Average throughput: 15.39 Mbit/s
  95th percentile per-packet one-way delay: 180.909 ms
  Loss rate: 26.62%
-- Flow 3:
  Average throughput: 7.79 Mbit/s
  95th percentile per-packet one-way delay: 171.274 ms
  Loss rate: 17.45%
Run 4: Report of Indigo-MusesC5 — Data Link

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

- **Flow 1 ingress** (mean 26.60 Mbps/s)
- **Flow 1 egress** (mean 23.67 Mbps/s)
- **Flow 2 ingress** (mean 20.71 Mbps/s)
- **Flow 2 egress** (mean 15.39 Mbps/s)
- **Flow 3 ingress** (mean 9.18 Mbps/s)
- **Flow 3 egress** (mean 7.79 Mbps/s)

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

- **Flow 1** (95th percentile 175.53 ms)
- **Flow 2** (95th percentile 180.91 ms)
- **Flow 3** (95th percentile 171.22 ms)
Run 5: Statistics of Indigo-MusesC5

Start at: 2019-01-26 02:10:28
End at: 2019-01-26 02:10:58
Local clock offset: 1.63 ms
Remote clock offset: -1.157 ms

# Below is generated by plot.py at 2019-01-26 02:33:19
# Datalink statistics
-- Total of 3 flows:
   Average throughput: 31.46 Mbit/s
   95th percentile per-packet one-way delay: 199.268 ms
   Loss rate: 21.96%
-- Flow 1:
   Average throughput: 14.46 Mbit/s
   95th percentile per-packet one-way delay: 189.773 ms
   Loss rate: 19.07%
-- Flow 2:
   Average throughput: 24.43 Mbit/s
   95th percentile per-packet one-way delay: 204.280 ms
   Loss rate: 25.30%
-- Flow 3:
   Average throughput: 4.70 Mbit/s
   95th percentile per-packet one-way delay: 169.962 ms
   Loss rate: 8.58%
Run 5: Report of Indigo-MusesC5 — Data Link
Run 1: Statistics of Indigo-MusesD

Local clock offset: -2.841 ms
Remote clock offset: -8.9 ms

# Below is generated by plot.py at 2019-01-26 02:33:25
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 32.35 Mbit/s
  95th percentile per-packet one-way delay: 168.028 ms
  Loss rate: 45.10%
-- Flow 1:
  Average throughput: 31.90 Mbit/s
  95th percentile per-packet one-way delay: 168.036 ms
  Loss rate: 45.08%
-- Flow 2:
  Average throughput: 0.49 Mbit/s
  95th percentile per-packet one-way delay: 166.899 ms
  Loss rate: 48.71%
-- Flow 3:
  Average throughput: 0.54 Mbit/s
  95th percentile per-packet one-way delay: 167.274 ms
  Loss rate: 42.51%
Run 1: Report of Indigo-MusesD — Data Link

[Graph showing throughput vs. time with different flow labels and theirThroughput (Mbit/s) over time.]

[Graph showing per-packet round-trip time vs. time with different flow labels and their 95th percentile delays.]
Run 2: Statistics of Indigo-MusesD

Local clock offset: 1.662 ms
Remote clock offset: -1.887 ms

# Below is generated by plot.py at 2019-01-26 02:33:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 36.54 Mbit/s
95th percentile per-packet one-way delay: 169.802 ms
Loss rate: 39.83%
-- Flow 1:
Average throughput: 36.06 Mbit/s
95th percentile per-packet one-way delay: 169.822 ms
Loss rate: 39.79%
-- Flow 2:
Average throughput: 0.54 Mbit/s
95th percentile per-packet one-way delay: 167.853 ms
Loss rate: 43.66%
-- Flow 3:
Average throughput: 0.56 Mbit/s
95th percentile per-packet one-way delay: 168.753 ms
Loss rate: 41.84%
Run 2: Report of Indigo-MusesD — Data Link
Run 3: Statistics of Indigo-MusesD

Local clock offset: 16.316 ms
Remote clock offset: -1.073 ms

# Below is generated by plot.py at 2019-01-26 02:33:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 35.90 Mbit/s
95th percentile per-packet one-way delay: 171.702 ms
Loss rate: 13.04%
-- Flow 1:
Average throughput: 16.50 Mbit/s
95th percentile per-packet one-way delay: 171.765 ms
Loss rate: 12.05%
-- Flow 2:
Average throughput: 29.90 Mbit/s
95th percentile per-packet one-way delay: 171.674 ms
Loss rate: 13.84%
-- Flow 3:
Average throughput: 0.88 Mbit/s
95th percentile per-packet one-way delay: 169.215 ms
Loss rate: 14.83%
Run 3: Report of Indigo-MusesD — Data Link

![Graph of Throughput and Delay](image-url)
Run 4: Statistics of Indigo-MusesD

Start at: 2019-01-26 00:59:18
End at: 2019-01-26 00:59:48
Local clock offset: -0.109 ms
Remote clock offset: -1.219 ms

# Below is generated by plot.py at 2019-01-26 02:33:31
# Datalink statistics
-- Total of 3 flows:
   Average throughput: 27.12 Mbit/s
   95th percentile per-packet one-way delay: 170.245 ms
   Loss rate: 8.53%
-- Flow 1:
   Average throughput: 5.10 Mbit/s
   95th percentile per-packet one-way delay: 169.366 ms
   Loss rate: 3.97%
-- Flow 2:
   Average throughput: 33.20 Mbit/s
   95th percentile per-packet one-way delay: 170.509 ms
   Loss rate: 9.50%
-- Flow 3:
   Average throughput: 3.53 Mbit/s
   95th percentile per-packet one-way delay: 169.263 ms
   Loss rate: 10.04%
Run 4: Report of Indigo-MusesD — Data Link

Graph 1: Throughput (Mbps)

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

Legend:
- Flow 1 ingress (mean 5.28 Mbps)
- Flow 1 egress (mean 5.10 Mbps)
- Flow 2 ingress (mean 36.23 Mbps)
- Flow 2 egress (mean 33.20 Mbps)
- Flow 3 ingress (mean 3.81 Mbps)
- Flow 3 egress (mean 3.33 Mbps)

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Run 5: Statistics of Indigo-MusesD

Start at: 2019-01-26 01:55:03
End at: 2019-01-26 01:55:33
Local clock offset: 2.54 ms
Remote clock offset: -1.378 ms

# Below is generated by plot.py at 2019-01-26 02:33:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 30.45 Mbit/s
95th percentile per-packet one-way delay: 170.567 ms
Loss rate: 11.35%
-- Flow 1:
Average throughput: 25.63 Mbit/s
95th percentile per-packet one-way delay: 170.835 ms
Loss rate: 12.60%
-- Flow 2:
Average throughput: 6.05 Mbit/s
95th percentile per-packet one-way delay: 169.841 ms
Loss rate: 3.50%
-- Flow 3:
Average throughput: 3.78 Mbit/s
95th percentile per-packet one-way delay: 169.177 ms
Loss rate: 6.12%
Run 5: Report of Indigo-MusesD — Data Link

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

![Graph 2: Per-packet one-way delay (ms)](image2)
Run 1: Statistics of Indigo-MusesT

End at: 2019-01-25 19:38:17
Local clock offset: 7.437 ms
Remote clock offset: -11.606 ms

# Below is generated by plot.py at 2019-01-26 02:33:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 28.60 Mbit/s
95th percentile per-packet one-way delay: 169.669 ms
Loss rate: 25.03%
-- Flow 1:
Average throughput: 25.68 Mbit/s
95th percentile per-packet one-way delay: 169.889 ms
Loss rate: 25.45%
-- Flow 2:
Average throughput: 2.65 Mbit/s
95th percentile per-packet one-way delay: 167.408 ms
Loss rate: 22.77%
-- Flow 3:
Average throughput: 4.65 Mbit/s
95th percentile per-packet one-way delay: 167.834 ms
Loss rate: 18.79%
Run 2: Statistics of Indigo-MusesT

Local clock offset: 1.415 ms
Remote clock offset: -3.17 ms

# Below is generated by plot.py at 2019-01-26 02:33:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 35.89 Mbit/s
95th percentile per-packet one-way delay: 169.868 ms
Loss rate: 24.68%
-- Flow 1:
Average throughput: 31.72 Mbit/s
95th percentile per-packet one-way delay: 170.212 ms
Loss rate: 25.27%
-- Flow 2:
Average throughput: 3.71 Mbit/s
95th percentile per-packet one-way delay: 167.980 ms
Loss rate: 23.14%
-- Flow 3:
Average throughput: 6.96 Mbit/s
95th percentile per-packet one-way delay: 168.722 ms
Loss rate: 15.26%
Run 2: Report of Indigo-MuseST — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 42.11 Mbit/s)
Flow 1 egress (mean 31.72 Mbit/s)
Flow 2 ingress (mean 4.76 Mbit/s)
Flow 2 egress (mean 3.71 Mbit/s)
Flow 3 ingress (mean 7.97 Mbit/s)
Flow 3 egress (mean 6.96 Mbit/s)

Per-packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 170.21 ms)
Flow 2 (95th percentile 167.99 ms)
Flow 3 (95th percentile 168.72 ms)
Run 3: Statistics of Indigo-MusesT

Local clock offset: 16.346 ms
Remote clock offset: -1.877 ms

# Below is generated by plot.py at 2019-01-26 02:33:53
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 38.81 Mbit/s
  95th percentile per-packet one-way delay: 173.108 ms
  Loss rate: 11.18%
-- Flow 1:
  Average throughput: 30.57 Mbit/s
  95th percentile per-packet one-way delay: 172.696 ms
  Loss rate: 11.41%
-- Flow 2:
  Average throughput: 8.53 Mbit/s
  95th percentile per-packet one-way delay: 169.711 ms
  Loss rate: 7.46%
-- Flow 3:
  Average throughput: 10.80 Mbit/s
  95th percentile per-packet one-way delay: 181.839 ms
  Loss rate: 15.24%
Run 3: Report of Indigo-MusesT — Data Link

![Graph 1: Throughput](image)

- Flow 1 ingress (mean 34.24 Mbit/s)
- Flow 1 egress (mean 30.57 Mbit/s)
- Flow 2 ingress (mean 9.11 Mbit/s)
- Flow 2 egress (mean 5.53 Mbit/s)
- Flow 3 ingress (mean 12.38 Mbit/s)
- Flow 3 egress (mean 10.80 Mbit/s)

![Graph 2: Round-trip delay](image)

- Flow 1 (95th percentile 172.70 ms)
- Flow 2 (95th percentile 169.71 ms)
- Flow 3 (95th percentile 181.84 ms)
Run 4: Statistics of Indigo-MusesT

Start at: 2019-01-26 00:54:43
End at: 2019-01-26 00:55:13
Local clock offset: 0.029 ms
Remote clock offset: -1.15 ms

# Below is generated by plot.py at 2019-01-26 02:33:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 38.73 Mbit/s
95th percentile per-packet one-way delay: 170.862 ms
Loss rate: 7.95%
-- Flow 1:
Average throughput: 26.97 Mbit/s
95th percentile per-packet one-way delay: 171.071 ms
Loss rate: 9.10%
-- Flow 2:
Average throughput: 13.79 Mbit/s
95th percentile per-packet one-way delay: 170.460 ms
Loss rate: 4.87%
-- Flow 3:
Average throughput: 11.99 Mbit/s
95th percentile per-packet one-way delay: 170.954 ms
Loss rate: 6.19%
Run 4: Report of Indigo-MusesT — Data Link

Throughput (Mbit/s)

- Flow 1 ingress (mean 29.43 Mbit/s)
- Flow 1 egress (mean 26.97 Mbit/s)
- Flow 2 ingress (mean 14.32 Mbit/s)
- Flow 2 egress (mean 13.79 Mbit/s)
- Flow 3 ingress (mean 12.41 Mbit/s)
- Flow 3 egress (mean 11.99 Mbit/s)

Per-packet one way delay (ms)

- Flow 1 (95th percentile 171.07 ms)
- Flow 2 (95th percentile 170.46 ms)
- Flow 3 (95th percentile 170.95 ms)
Run 5: Statistics of Indigo-MusesT

Start at: 2019-01-26 01:49:32
End at: 2019-01-26 01:50:02
Local clock offset: 2.956 ms
Remote clock offset: -1.088 ms

# Below is generated by plot.py at 2019-01-26 02:34:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 38.54 Mbit/s
95th percentile per-packet one-way delay: 175.201 ms
Loss rate: 14.21%
-- Flow 1:
Average throughput: 21.18 Mbit/s
95th percentile per-packet one-way delay: 175.285 ms
Loss rate: 17.01%
-- Flow 2:
Average throughput: 23.91 Mbit/s
95th percentile per-packet one-way delay: 175.813 ms
Loss rate: 10.91%
-- Flow 3:
Average throughput: 8.36 Mbit/s
95th percentile per-packet one-way delay: 171.107 ms
Loss rate: 7.76%
Run 5: Report of Indigo-MusesT — Data Link

[Graph showing throughput and per-packet delivery delay over time for different flows.]
Run 1: Statistics of LEDBAT

End at: 2019-01-25 19:20:09
Local clock offset: 18.558 ms
Remote clock offset: 2.452 ms

# Below is generated by plot.py at 2019-01-26 02:34:01
# Datalink statistics
# Total of 3 flows:
Average throughput: 0.24 Mbit/s
95th percentile per-packet one-way delay: 165.496 ms
Loss rate: 15.56%

-- Flow 1:
Average throughput: 0.12 Mbit/s
95th percentile per-packet one-way delay: 164.809 ms
Loss rate: 14.47%

-- Flow 2:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 165.674 ms
Loss rate: 14.89%

-- Flow 3:
Average throughput: 0.10 Mbit/s
95th percentile per-packet one-way delay: 165.278 ms
Loss rate: 21.59%
Run 1: Report of LEDBAT — Data Link
Run 2: Statistics of LEDBAT

Local clock offset: 1.554 ms
Remote clock offset: -1.821 ms

# Below is generated by plot.py at 2019-01-26 02:34:01
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 167.261 ms
  Loss rate: 12.07%
-- Flow 1:
  Average throughput: 0.18 Mbit/s
  95th percentile per-packet one-way delay: 167.505 ms
  Loss rate: 12.84%
-- Flow 2:
  Average throughput: 0.23 Mbit/s
  95th percentile per-packet one-way delay: 167.199 ms
  Loss rate: 12.94%
-- Flow 3:
  Average throughput: 0.30 Mbit/s
  95th percentile per-packet one-way delay: 166.337 ms
  Loss rate: 9.19%
Run 2: Report of LEDBAT — Data Link

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**Throughput (Mbps)**

- Flow 1 ingress (mean 0.20 Mbit/s)
- Flow 1 egress (mean 0.18 Mbit/s)
- Flow 2 ingress (mean 0.26 Mbit/s)
- Flow 2 egress (mean 0.23 Mbit/s)
- Flow 3 ingress (mean 0.33 Mbit/s)
- Flow 3 egress (mean 0.30 Mbit/s)

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

- Flow 1 (95th percentile 167.50 ms)
- Flow 2 (95th percentile 167.20 ms)
- Flow 3 (95th percentile 166.34 ms)
Run 3: Statistics of LEDEBAT

End at: 2019-01-25 22:58:09
Local clock offset: 0.014 ms
Remote clock offset: 0.551 ms

# Below is generated by plot.py at 2019-01-26 02:34:01
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 2.27 Mbit/s
  95th percentile per-packet one-way delay: 166.495 ms
  Loss rate: 2.43%
-- Flow 1:
  Average throughput: 1.05 Mbit/s
  95th percentile per-packet one-way delay: 166.448 ms
  Loss rate: 2.27%
-- Flow 2:
  Average throughput: 1.18 Mbit/s
  95th percentile per-packet one-way delay: 166.484 ms
  Loss rate: 1.97%
-- Flow 3:
  Average throughput: 1.33 Mbit/s
  95th percentile per-packet one-way delay: 166.583 ms
  Loss rate: 3.61%
Run 3: Report of LEDBAT — Data Link
Run 4: Statistics of LEDBAT

Start at: 2019-01-26 00:41:03
End at: 2019-01-26 00:41:33
Local clock offset: 0.217 ms
Remote clock offset: -1.28 ms

# Below is generated by plot.py at 2019-01-26 02:34:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.78 Mbit/s
95th percentile per-packet one-way delay: 169.363 ms
Loss rate: 2.77%
-- Flow 1:
Average throughput: 0.94 Mbit/s
95th percentile per-packet one-way delay: 169.388 ms
Loss rate: 1.82%
-- Flow 2:
Average throughput: 0.93 Mbit/s
95th percentile per-packet one-way delay: 169.360 ms
Loss rate: 2.89%
-- Flow 3:
Average throughput: 0.72 Mbit/s
95th percentile per-packet one-way delay: 169.246 ms
Loss rate: 6.14%
Run 4: Report of LEDBAT — Data Link

![Graph of throughput and delay over time for three flows.]
Run 5: Statistics of LEDBAT

Start at: 2019-01-26 01:36:20
End at: 2019-01-26 01:36:50
Local clock offset: 5.265 ms
Remote clock offset: -0.253 ms

# Below is generated by plot.py at 2019-01-26 02:34:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.69 Mbit/s
95th percentile per-packet one-way delay: 168.873 ms
Loss rate: 2.68%
-- Flow 1:
Average throughput: 0.91 Mbit/s
95th percentile per-packet one-way delay: 168.843 ms
Loss rate: 2.39%
-- Flow 2:
Average throughput: 0.82 Mbit/s
95th percentile per-packet one-way delay: 168.901 ms
Loss rate: 3.05%
-- Flow 3:
Average throughput: 0.85 Mbit/s
95th percentile per-packet one-way delay: 168.908 ms
Loss rate: 2.95%
Run 5: Report of LEDBAT — Data Link
Run 1: Statistics of PCC-Allegro

End at: 2019-01-25 19:24:50
Local clock offset: 19.896 ms
Remote clock offset: -1.281 ms

# Below is generated by plot.py at 2019-01-26 02:34:01
# Datalink statistics
-- Total of 3 flows:
   Average throughput: 1.58 Mbit/s
   95th percentile per-packet one-way delay: 165.282 ms
   Loss rate: 26.28%
-- Flow 1:
   Average throughput: 0.00 Mbit/s
   95th percentile per-packet one-way delay: 163.944 ms
   Loss rate: 89.32%
-- Flow 2:
   Average throughput: 1.59 Mbit/s
   95th percentile per-packet one-way delay: 165.316 ms
   Loss rate: 26.09%
-- Flow 3:
   Average throughput: 1.64 Mbit/s
   95th percentile per-packet one-way delay: 165.166 ms
   Loss rate: 26.58%
Run 1: Report of PCC-Allegro — Data Link

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

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

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Run 2: Statistics of PCC-Allegro

End at: 2019-01-25 21:12:19
Local clock offset: 1.669 ms
Remote clock offset: -2.751 ms

# Below is generated by plot.py at 2019-01-26 02:34:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.88 Mbit/s
95th percentile per-packet one-way delay: 167.224 ms
Loss rate: 14.88%
-- Flow 1:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 167.092 ms
Loss rate: 85.42%
-- Flow 2:
Average throughput: 1.90 Mbit/s
95th percentile per-packet one-way delay: 167.236 ms
Loss rate: 14.33%
-- Flow 3:
Average throughput: 1.94 Mbit/s
95th percentile per-packet one-way delay: 167.196 ms
Loss rate: 15.95%
Run 2: Report of PCC-Allegro — Data Link

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

Legend:
- **Flow 1 ingress (mean 0.03 Mbit/s)**
- **Flow 1 egress (mean 0.01 Mbit/s)**
- **Flow 2 ingress (mean 2.20 Mbit/s)**
- **Flow 2 egress (mean 1.90 Mbit/s)**
- **Flow 3 ingress (mean 2.20 Mbit/s)**
- **Flow 3 egress (mean 1.94 Mbit/s)**

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

Legend:
- **Flow 1 (95th percentile 167.09 ms)**
- **Flow 2 (95th percentile 167.24 ms)**
- **Flow 3 (95th percentile 167.20 ms)**
Run 3: Statistics of PCC-Allegro

Start at: 2019-01-25 23:03:56
End at: 2019-01-25 23:04:26
Local clock offset: 6.16 ms
Remote clock offset: -0.365 ms

# Below is generated by plot.py at 2019-01-26 02:34:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 33.77 Mbit/s
95th percentile per-packet one-way delay: 168.396 ms
Loss rate: 24.18%
-- Flow 1:
Average throughput: 27.01 Mbit/s
95th percentile per-packet one-way delay: 166.835 ms
Loss rate: 16.00%
-- Flow 2:
Average throughput: 1.67 Mbit/s
95th percentile per-packet one-way delay: 166.701 ms
Loss rate: 19.89%
-- Flow 3:
Average throughput: 17.38 Mbit/s
95th percentile per-packet one-way delay: 233.277 ms
Loss rate: 48.62%
Run 3: Report of PCC-Allegro — Data Link

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

- Flow 1 ingress (mean 31.92 Mbit/s)
- Flow 1 egress (mean 27.01 Mbit/s)
- Flow 2 ingress (mean 2.06 Mbit/s)
- Flow 2 egress (mean 1.67 Mbit/s)
- Flow 3 ingress (mean 33.11 Mbit/s)
- Flow 3 egress (mean 17.38 Mbit/s)
Run 4: Statistics of PCC-Allegro

Start at: 2019-01-26 00:45:09
End at: 2019-01-26 00:45:39
Local clock offset: 0.173 ms
Remote clock offset: -1.665 ms

# Below is generated by plot.py at 2019-01-26 02:34:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.75 Mbit/s
95th percentile per-packet one-way delay: 169.606 ms
Loss rate: 6.17%
-- Flow 1:
Average throughput: 1.95 Mbit/s
95th percentile per-packet one-way delay: 169.660 ms
Loss rate: 3.47%
-- Flow 2:
Average throughput: 31.83 Mbit/s
95th percentile per-packet one-way delay: 169.599 ms
Loss rate: 6.49%
-- Flow 3:
Average throughput: 2.21 Mbit/s
95th percentile per-packet one-way delay: 169.585 ms
Loss rate: 3.72%
Run 4: Report of PCC-Allegro — Data Link

![Graph of Throughput vs Time]

![Graph of Packet One-Way Delay vs Time]

Legend:
- Blue dashed line: Flow 1 ingress (mean 2.00 Mbit/s)
- Blue solid line: Flow 1 egress (mean 1.95 Mbit/s)
- Green dashed line: Flow 2 ingress (mean 33.67 Mbit/s)
- Green solid line: Flow 2 egress (mean 31.83 Mbit/s)
- Red dashed line: Flow 3 ingress (mean 2.18 Mbit/s)
- Red solid line: Flow 3 egress (mean 2.22 Mbit/s)
Run 5: Statistics of PCC-Allegro

Start at: 2019-01-26 01:40:28
End at: 2019-01-26 01:40:58
Local clock offset: 4.233 ms
Remote clock offset: -1.29 ms

# Below is generated by plot.py at 2019-01-26 02:34:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 35.44 Mbit/s
95th percentile per-packet one-way delay: 170.104 ms
Loss rate: 17.63%
-- Flow 1:
Average throughput: 27.68 Mbit/s
95th percentile per-packet one-way delay: 170.081 ms
Loss rate: 13.91%
-- Flow 2:
Average throughput: 6.56 Mbit/s
95th percentile per-packet one-way delay: 170.011 ms
Loss rate: 17.41%
-- Flow 3:
Average throughput: 10.52 Mbit/s
95th percentile per-packet one-way delay: 170.643 ms
Loss rate: 39.13%
Run 5: Report of PCC-Allegro — Data Link

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

![Graph 2: Packet Delay vs Time](image2)
Run 1: Statistics of PCC-Expr

Start at: 2019-01-25 20:48:05
Local clock offset: 1.455 ms
Remote clock offset: -4.111 ms

# Below is generated by plot.py at 2019-01-26 02:34:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.31 Mbit/s
95th percentile per-packet one-way delay: 167.078 ms
Loss rate: 18.77%
-- Flow 1:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 167.824 ms
Loss rate: 80.95%
-- Flow 2:
Average throughput: 4.41 Mbit/s
95th percentile per-packet one-way delay: 167.081 ms
Loss rate: 18.59%
-- Flow 3:
Average throughput: 4.26 Mbit/s
95th percentile per-packet one-way delay: 167.068 ms
Loss rate: 19.14%
Run 1: Report of PCC-Expr — Data Link
Run 2: Statistics of PCC-Expr

End at: 2019-01-25 22:17:42
Local clock offset: 19.979 ms
Remote clock offset: 0.654 ms

# Below is generated by plot.py at 2019-01-26 02:34:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.75 Mbit/s
95th percentile per-packet one-way delay: 165.901 ms
Loss rate: 5.11%
-- Flow 1:
Average throughput: 9.33 Mbit/s
95th percentile per-packet one-way delay: 165.943 ms
Loss rate: 4.89%
-- Flow 2:
Average throughput: 6.57 Mbit/s
95th percentile per-packet one-way delay: 165.857 ms
Loss rate: 5.04%
-- Flow 3:
Average throughput: 6.34 Mbit/s
95th percentile per-packet one-way delay: 165.808 ms
Loss rate: 6.21%
Run 2: Report of PCC-Expr — Data Link
Run 3: Statistics of PCC-Expr

Start at: 2019-01-26 00:31:46
End at: 2019-01-26 00:32:16
Local clock offset: -1.151 ms
Remote clock offset: -1.1 ms

# Below is generated by plot.py at 2019-01-26 02:34:39
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 24.68 Mbit/s
  95th percentile per-packet one-way delay: 199.474 ms
  Loss rate: 27.90%
-- Flow 1:
  Average throughput: 8.85 Mbit/s
  95th percentile per-packet one-way delay: 169.503 ms
  Loss rate: 17.86%
-- Flow 2:
  Average throughput: 21.04 Mbit/s
  95th percentile per-packet one-way delay: 205.341 ms
  Loss rate: 34.16%
-- Flow 3:
  Average throughput: 5.75 Mbit/s
  95th percentile per-packet one-way delay: 169.464 ms
  Loss rate: 17.11%
Run 3: Report of PCC-Expr — Data Link
Run 4: Statistics of PCC-Expr

Start at: 2019-01-26 01:25:21
End at: 2019-01-26 01:25:51
Local clock offset: 7.932 ms
Remote clock offset: -1.012 ms

# Below is generated by plot.py at 2019-01-26 02:34:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 32.33 Mbit/s
  95th percentile per-packet one-way delay: 169.079 ms
  Loss rate: 10.67%
-- Flow 1:
  Average throughput: 17.00 Mbit/s
  95th percentile per-packet one-way delay: 169.059 ms
  Loss rate: 8.47%
-- Flow 2:
  Average throughput: 20.96 Mbit/s
  95th percentile per-packet one-way delay: 169.091 ms
  Loss rate: 11.62%
-- Flow 3:
  Average throughput: 4.32 Mbit/s
  95th percentile per-packet one-way delay: 169.165 ms
  Loss rate: 24.59%
Run 4: Report of PCC-Expr — Data Link

Throughput (Mb/s)

Time (s)

Flow 1 ingress (mean 18.44 Mb/s)
Flow 1 egress (mean 17.00 Mb/s)
Flow 2 ingress (mean 23.45 Mb/s)
Flow 2 egress (mean 20.96 Mb/s)
Flow 3 ingress (mean 5.60 Mb/s)
Flow 3 egress (mean 4.32 Mb/s)

Round-trip time (ms)

Time (s)

Flow 1 (95th percentile 169.06 ms)
Flow 2 (95th percentile 167.09 ms)
Flow 3 (95th percentile 169.16 ms)
Run 5: Statistics of PCC-Expr

Start at: 2019-01-26 02:23:44
End at: 2019-01-26 02:24:14
Local clock offset: 0.889 ms
Remote clock offset: -1.055 ms

# Below is generated by plot.py at 2019-01-26 02:34:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 31.45 Mbit/s
95th percentile per-packet one-way delay: 169.633 ms
Loss rate: 3.52%
-- Flow 1:
Average throughput: 22.51 Mbit/s
95th percentile per-packet one-way delay: 169.609 ms
Loss rate: 3.36%
-- Flow 2:
Average throughput: 10.51 Mbit/s
95th percentile per-packet one-way delay: 169.654 ms
Loss rate: 3.68%
-- Flow 3:
Average throughput: 6.08 Mbit/s
95th percentile per-packet one-way delay: 169.734 ms
Loss rate: 4.77%
Run 5: Report of PCC-Expr — Data Link
Run 1: Statistics of QUIC Cubic

Start at: 2019-01-25 20:06:01
End at: 2019-01-25 20:06:31
Local clock offset: 0.068 ms
Remote clock offset: -9.066 ms

# Below is generated by plot.py at 2019-01-26 02:34:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1.01 Mbit/s
  95th percentile per-packet one-way delay: 166.055 ms
  Loss rate: 14.48%
-- Flow 1:
  Average throughput: 0.46 Mbit/s
  95th percentile per-packet one-way delay: 166.123 ms
  Loss rate: 14.40%
-- Flow 2:
  Average throughput: 0.49 Mbit/s
  95th percentile per-packet one-way delay: 165.667 ms
  Loss rate: 13.24%
-- Flow 3:
  Average throughput: 0.66 Mbit/s
  95th percentile per-packet one-way delay: 166.357 ms
  Loss rate: 16.43%
Run 1: Report of QUIC Cubic — Data Link

![Graph showing network data](image-url)

**Throughput (Mbps):**
- Flow 1 ingress (mean 0.54 Mbps)
- Flow 1 egress (mean 0.46 Mbps)
- Flow 2 ingress (mean 0.55 Mbps)
- Flow 2 egress (mean 0.49 Mbps)
- Flow 3 ingress (mean 0.77 Mbps)
- Flow 3 egress (mean 0.66 Mbps)

**Per-packet one-way delay (ms):**
- Flow 1 (95th percentile 166.12 ms)
- Flow 2 (95th percentile 165.67 ms)
- Flow 3 (95th percentile 166.36 ms)
Run 2: Statistics of QUIC Cubic

Local clock offset: 1.918 ms
Remote clock offset: -0.346 ms

# Below is generated by plot.py at 2019-01-26 02:34:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.42 Mbit/s
95th percentile per-packet one-way delay: 166.273 ms
Loss rate: 6.61%
-- Flow 1:
Average throughput: 0.71 Mbit/s
95th percentile per-packet one-way delay: 165.721 ms
Loss rate: 6.16%
-- Flow 2:
Average throughput: 0.68 Mbit/s
95th percentile per-packet one-way delay: 166.143 ms
Loss rate: 6.18%
-- Flow 3:
Average throughput: 0.79 Mbit/s
95th percentile per-packet one-way delay: 166.454 ms
Loss rate: 8.54%
Run 2: Report of QUIC Cubic — Data Link

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

- **Flow 1 ingress (mean 0.75 Mbit/s)**
- **Flow 1 egress (mean 0.71 Mbit/s)**
- **Flow 2 ingress (mean 0.72 Mbit/s)**
- **Flow 2 egress (mean 0.68 Mbit/s)**
- **Flow 3 ingress (mean 0.83 Mbit/s)**
- **Flow 3 egress (mean 0.79 Mbit/s)**

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

- **Flow 1 (95th percentile 165.72 ms)**
- **Flow 2 (95th percentile 166.14 ms)**
- **Flow 3 (95th percentile 166.45 ms)**
Run 3: Statistics of QUIC Cubic

Start at: 2019-01-26 00:06:46
End at: 2019-01-26 00:07:16
Local clock offset: 7.125 ms
Remote clock offset: -0.236 ms

# Below is generated by plot.py at 2019-01-26 02:34:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.44 Mbit/s
95th percentile per-packet one-way delay: 169.519 ms
Loss rate: 1.70%
-- Flow 1:
Average throughput: 3.84 Mbit/s
95th percentile per-packet one-way delay: 169.612 ms
Loss rate: 1.16%
-- Flow 2:
Average throughput: 2.39 Mbit/s
95th percentile per-packet one-way delay: 169.145 ms
Loss rate: 1.98%
-- Flow 3:
Average throughput: 9.23 Mbit/s
95th percentile per-packet one-way delay: 169.520 ms
Loss rate: 2.24%
Run 3: Report of QUIC Cubic — Data Link
Run 4: Statistics of QUIC Cubic

Start at: 2019-01-26 01:01:04
End at: 2019-01-26 01:01:34
Local clock offset: 0.954 ms
Remote clock offset: -0.199 ms

# Below is generated by plot.py at 2019-01-26 02:34:49
# Datalink statistics
-- Total of 3 flows:
   Average throughput: 2.79 Mbit/s
   95th percentile per-packet one-way delay: 167.886 ms
   Loss rate: 3.18%
-- Flow 1:
   Average throughput: 1.55 Mbit/s
   95th percentile per-packet one-way delay: 167.947 ms
   Loss rate: 3.07%
-- Flow 2:
   Average throughput: 1.23 Mbit/s
   95th percentile per-packet one-way delay: 167.696 ms
   Loss rate: 3.09%
-- Flow 3:
   Average throughput: 1.32 Mbit/s
   95th percentile per-packet one-way delay: 167.489 ms
   Loss rate: 3.75%
Run 4: Report of QUIC Cubic — Data Link

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![Graph 1](Image 134x424 to 477x642)

![Graph 2](Image 134x214 to 477x399)

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Run 5: Statistics of QUIC Cubic

Start at: 2019-01-26 01:57:14
End at: 2019-01-26 01:57:44
Local clock offset: 2.358 ms
Remote clock offset: -0.95 ms

# Below is generated by plot.py at 2019-01-26 02:34:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 3.03 Mbit/s
  95th percentile per-packet one-way delay: 169.403 ms
  Loss rate: 2.62%
-- Flow 1:
  Average throughput: 1.36 Mbit/s
  95th percentile per-packet one-way delay: 169.430 ms
  Loss rate: 2.33%
-- Flow 2:
  Average throughput: 1.72 Mbit/s
  95th percentile per-packet one-way delay: 169.363 ms
  Loss rate: 2.35%
-- Flow 3:
  Average throughput: 1.64 Mbit/s
  95th percentile per-packet one-way delay: 169.407 ms
  Loss rate: 3.90%
Run 1: Statistics of SCReAM

Local clock offset: 19.508 ms
Remote clock offset: -1.35 ms

# Below is generated by plot.py at 2019-01-26 02:34:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 166.489 ms
Loss rate: 16.47%
-- Flow 1:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 166.565 ms
Loss rate: 15.48%
-- Flow 2:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 166.395 ms
Loss rate: 17.93%
-- Flow 3:
Average throughput: 0.09 Mbit/s
95th percentile per-packet one-way delay: 166.104 ms
Loss rate: 16.79%
Run 1: Report of SCReAM — Data Link
Run 2: Statistics of SCReAM

End at: 2019-01-25 21:10:57
Local clock offset: 1.664 ms
Remote clock offset: -1.86 ms

# Below is generated by plot.py at 2019-01-26 02:34:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 166.143 ms
Loss rate: 11.21%
-- Flow 1:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 166.197 ms
Loss rate: 10.83%
-- Flow 2:
Average throughput: 0.09 Mbit/s
95th percentile per-packet one-way delay: 166.042 ms
Loss rate: 10.38%
-- Flow 3:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 165.586 ms
Loss rate: 13.97%
Run 2: Report of SCReAM — Data Link

[Chart of throughput over time showing various flows and their ingress and egress rates.]

[Chart of packet delay over time showing different flows with their respective 95th percentile delays.]
Run 3: Statistics of SCReAM

Start at: 2019-01-25 23:02:02
End at: 2019-01-25 23:02:32
Local clock offset: 3.625 ms
Remote clock offset: -0.015 ms

# Below is generated by plot.py at 2019-01-26 02:34:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.28 Mbit/s
95th percentile per-packet one-way delay: 165.933 ms
Loss rate: 1.74%
-- Flow 1:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 166.139 ms
Loss rate: 0.85%
-- Flow 2:
Average throughput: 0.11 Mbit/s
95th percentile per-packet one-way delay: 165.699 ms
Loss rate: 2.81%
-- Flow 3:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 165.809 ms
Loss rate: 2.74%
Run 3: Report of SCReAM — Data Link

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

Start at: 2019-01-26 00:43:50
End at: 2019-01-26 00:44:20
Local clock offset: 0.316 ms
Remote clock offset: -1.717 ms

# Below is generated by plot.py at 2019-01-26 02:34:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.24 Mbit/s
  95th percentile per-packet one-way delay: 169.507 ms
  Loss rate: 1.92%
-- Flow 1:
  Average throughput: 0.09 Mbit/s
  95th percentile per-packet one-way delay: 169.492 ms
  Loss rate: 1.05%
-- Flow 2:
  Average throughput: 0.14 Mbit/s
  95th percentile per-packet one-way delay: 169.191 ms
  Loss rate: 1.97%
-- Flow 3:
  Average throughput: 0.16 Mbit/s
  95th percentile per-packet one-way delay: 169.757 ms
  Loss rate: 3.30%
Run 4: Report of SCReAM — Data Link

![Graph showing data link performance metrics over time.](image)
Run 5: Statistics of SCReAM

Start at: 2019-01-26 01:39:07
End at: 2019-01-26 01:39:37
Local clock offset: 4.678 ms
Remote clock offset: -0.231 ms

# Below is generated by plot.py at 2019-01-26 02:34:49
# Datalink statistics
  -- Total of 3 flows:
  Average throughput: 0.23 Mbit/s
  95th percentile per-packet one-way delay: 168.930 ms
  Loss rate: 2.76%
  -- Flow 1:
    Average throughput: 0.10 Mbit/s
    95th percentile per-packet one-way delay: 168.839 ms
    Loss rate: 2.33%
  -- Flow 2:
    Average throughput: 0.12 Mbit/s
    95th percentile per-packet one-way delay: 169.100 ms
    Loss rate: 2.21%
  -- Flow 3:
    Average throughput: 0.16 Mbit/s
    95th percentile per-packet one-way delay: 168.701 ms
    Loss rate: 4.44%
Run 5: Report of SCReAM — Data Link
Run 1: Statistics of Sprout

Local clock offset: 19.009 ms
Remote clock offset: 0.787 ms

# Below is generated by plot.py at 2019-01-26 02:34:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 165.978 ms
Loss rate: 20.33%
-- Flow 1:
Average throughput: 0.10 Mbit/s
95th percentile per-packet one-way delay: 166.076 ms
Loss rate: 19.80%
-- Flow 2:
Average throughput: 0.10 Mbit/s
95th percentile per-packet one-way delay: 165.847 ms
Loss rate: 20.88%
-- Flow 3:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 165.812 ms
Loss rate: 20.69%
Run 1: Report of Sprout — Data Link
Run 2: Statistics of Sprout

Start at: 2019-01-25 21:08:52
Local clock offset: 1.546 ms
Remote clock offset: -2.921 ms

# Below is generated by plot.py at 2019-01-26 02:34:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.39 Mbit/s
  95th percentile per-packet one-way delay: 167.318 ms
  Loss rate: 11.86%
-- Flow 1:
  Average throughput: 0.17 Mbit/s
  95th percentile per-packet one-way delay: 167.200 ms
  Loss rate: 11.98%
-- Flow 2:
  Average throughput: 0.15 Mbit/s
  95th percentile per-packet one-way delay: 167.131 ms
  Loss rate: 16.42%
-- Flow 3:
  Average throughput: 0.36 Mbit/s
  95th percentile per-packet one-way delay: 167.427 ms
  Loss rate: 7.38%
Run 2: Report of Sprout — Data Link
Run 3: Statistics of Sprout

End at: 2019-01-25 23:00:26
Local clock offset: 0.209 ms
Remote clock offset: -0.423 ms

# Below is generated by plot.py at 2019-01-26 02:34:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.01 Mbit/s
95th percentile per-packet one-way delay: 166.946 ms
Loss rate: 2.54%
-- Flow 1:
Average throughput: 0.58 Mbit/s
95th percentile per-packet one-way delay: 166.630 ms
Loss rate: 7.70%
-- Flow 2:
Average throughput: 1.12 Mbit/s
95th percentile per-packet one-way delay: 167.038 ms
Loss rate: 2.38%
-- Flow 3:
Average throughput: 0.82 Mbit/s
95th percentile per-packet one-way delay: 166.829 ms
Loss rate: 2.87%
Run 3: Report of Sprout — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 0.65 Mbit/s)
Flow 1 egress (mean 0.58 Mbit/s)
Flow 2 ingress (mean 1.13 Mbit/s)
Flow 2 egress (mean 1.12 Mbit/s)
Flow 3 ingress (mean 0.83 Mbit/s)
Flow 3 egress (mean 0.82 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 166.63 ms)
Flow 2 (95th percentile 167.04 ms)
Flow 3 (95th percentile 166.83 ms)
Run 4: Statistics of Sprout

Start at: 2019-01-26 00:42:27
End at: 2019-01-26 00:42:57
Local clock offset: 0.152 ms
Remote clock offset: -0.964 ms

# Below is generated by plot.py at 2019-01-26 02:34:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.80 Mbit/s
95th percentile per-packet one-way delay: 169.677 ms
Loss rate: 2.76%
-- Flow 1:
Average throughput: 1.14 Mbit/s
95th percentile per-packet one-way delay: 169.949 ms
Loss rate: 2.10%
-- Flow 2:
Average throughput: 0.63 Mbit/s
95th percentile per-packet one-way delay: 168.931 ms
Loss rate: 3.01%
-- Flow 3:
Average throughput: 0.74 Mbit/s
95th percentile per-packet one-way delay: 169.017 ms
Loss rate: 5.37%
Run 4: Report of Sprout — Data Link

[Graph showing throughput over time for different flows with annotations for mean throughput rates.]

[Graph showing packet delay over time for different flows with annotations for 95th percentile delay.]
Run 5: Statistics of Sprout

Start at: 2019-01-26 01:37:42
End at: 2019-01-26 01:38:12
Local clock offset: 4.963 ms
Remote clock offset: -0.447 ms

# Below is generated by plot.py at 2019-01-26 02:34:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1.24 Mbit/s
  95th percentile per-packet one-way delay: 169.514 ms
  Loss rate: 2.77%
-- Flow 1:
  Average throughput: 0.63 Mbit/s
  95th percentile per-packet one-way delay: 169.628 ms
  Loss rate: 1.88%
-- Flow 2:
  Average throughput: 0.60 Mbit/s
  95th percentile per-packet one-way delay: 169.228 ms
  Loss rate: 3.06%
-- Flow 3:
  Average throughput: 0.64 Mbit/s
  95th percentile per-packet one-way delay: 169.417 ms
  Loss rate: 4.88%
Run 5: Report of Sprout — Data Link

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

![Graph 2: Per-packet one way delay (ms) vs Time (s)]
Run 1: Statistics of TaoVA-100x

Local clock offset: 21.247 ms
Remote clock offset: -5.758 ms

# Below is generated by plot.py at 2019-01-26 02:34:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 10.00 Mbit/s
95th percentile per-packet one-way delay: 167.884 ms
Loss rate: 25.91%
-- Flow 1:
Average throughput: 4.96 Mbit/s
95th percentile per-packet one-way delay: 167.755 ms
Loss rate: 25.57%
-- Flow 2:
Average throughput: 5.05 Mbit/s
95th percentile per-packet one-way delay: 167.868 ms
Loss rate: 26.02%
-- Flow 3:
Average throughput: 5.27 Mbit/s
95th percentile per-packet one-way delay: 168.147 ms
Loss rate: 26.70%
Run 1: Report of TaoVA-100x — Data Link

![Graph of throughput and packet delay over time]

- **Throughput** (Mbps):
  - Flow 1 ingress (mean 6.61 Mbps)
  - Flow 1 egress (mean 4.96 Mbps)
  - Flow 2 ingress (mean 6.25 Mbps)
  - Flow 2 egress (mean 5.05 Mbps)
  - Flow 3 ingress (mean 6.88 Mbps)
  - Flow 3 egress (mean 5.27 Mbps)

- **Packet Delay (ms):**
  - Flow 1 (95th percentile 167.75 ms)
  - Flow 2 (95th percentile 167.87 ms)
  - Flow 3 (95th percentile 168.15 ms)
Run 2: Statistics of TaoVA-100x

End at: 2019-01-25 21:17:05
Local clock offset: 1.679 ms
Remote clock offset: -2.962 ms

# Below is generated by plot.py at 2019-01-26 02:34:51
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 23.45 Mbit/s
  95th percentile per-packet one-way delay: 172.795 ms
  Loss rate: 16.05%
-- Flow 1:
  Average throughput: 12.19 Mbit/s
  95th percentile per-packet one-way delay: 171.672 ms
  Loss rate: 15.97%
-- Flow 2:
  Average throughput: 10.94 Mbit/s
  95th percentile per-packet one-way delay: 170.006 ms
  Loss rate: 15.53%
-- Flow 3:
  Average throughput: 12.23 Mbit/s
  95th percentile per-packet one-way delay: 175.823 ms
  Loss rate: 17.22%
Run 2: Report of TaoVA-100x — Data Link

![Chart 1: Throughput (Mbps)]

- Flow 1 ingress (mean 14.40 Mbps)
- Flow 1 egress (mean 12.19 Mbps)
- Flow 2 ingress (mean 12.81 Mbps)
- Flow 2 egress (mean 10.94 Mbps)
- Flow 3 ingress (mean 14.71 Mbps)
- Flow 3 egress (mean 12.23 Mbps)

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

- Flow 1 (95th percentile 171.67 ms)
- Flow 2 (95th percentile 170.01 ms)
- Flow 3 (95th percentile 175.82 ms)
Run 3: Statistics of TaoVA-100x

Local clock offset: 15.79 ms
Remote clock offset: -1.775 ms

# Below is generated by plot.py at 2019-01-26 02:35:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 30.05 Mbit/s
95th percentile per-packet one-way delay: 170.331 ms
Loss rate: 9.22%
-- Flow 1:
Average throughput: 16.26 Mbit/s
95th percentile per-packet one-way delay: 170.257 ms
Loss rate: 9.23%
-- Flow 2:
Average throughput: 13.35 Mbit/s
95th percentile per-packet one-way delay: 173.067 ms
Loss rate: 10.31%
-- Flow 3:
Average throughput: 15.02 Mbit/s
95th percentile per-packet one-way delay: 167.479 ms
Loss rate: 7.15%
Run 3: Report of TaoVA-100x — Data Link
Run 4: Statistics of TaoVA-100x

Start at: 2019-01-26 00:50:09
End at: 2019-01-26 00:50:39
Local clock offset: 0.232 ms
Remote clock offset: -0.986 ms

# Below is generated by plot.py at 2019-01-26 02:35:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 33.28 Mbit/s
95th percentile per-packet one-way delay: 178.499 ms
Loss rate: 9.67%
-- Flow 1:
Average throughput: 16.46 Mbit/s
95th percentile per-packet one-way delay: 175.928 ms
Loss rate: 7.12%
-- Flow 2:
Average throughput: 18.36 Mbit/s
95th percentile per-packet one-way delay: 178.181 ms
Loss rate: 11.43%
-- Flow 3:
Average throughput: 14.21 Mbit/s
95th percentile per-packet one-way delay: 186.374 ms
Loss rate: 13.54%
Run 4: Report of TaoVA-100x — Data Link

---

**Throughput (Mbps):**

- **Flow 1 Ingress** (mean 17.60 Mbps)
- **Flow 1 Egress** (mean 16.46 Mbps)
- **Flow 2 Ingress** (mean 20.63 Mbps)
- **Flow 2 Egress** (mean 18.36 Mbps)
- **Flow 3 Ingress** (mean 16.08 Mbps)
- **Flow 3 Egress** (mean 14.21 Mbps)

---

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

- **Flow 1** (95th percentile 175.93 ms)
- **Flow 2** (95th percentile 178.18 ms)
- **Flow 3** (95th percentile 186.37 ms)
Run 5: Statistics of TaoVA-100x

Start at: 2019-01-26 01:46:20
End at: 2019-01-26 01:46:50
Local clock offset: 3.553 ms
Remote clock offset: -1.393 ms

# Below is generated by plot.py at 2019-01-26 02:35:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 36.16 Mbit/s
95th percentile per-packet one-way delay: 177.108 ms
Loss rate: 11.69%
-- Flow 1:
Average throughput: 24.37 Mbit/s
95th percentile per-packet one-way delay: 175.016 ms
Loss rate: 11.87%
-- Flow 2:
Average throughput: 3.37 Mbit/s
95th percentile per-packet one-way delay: 175.401 ms
Loss rate: 14.88%
-- Flow 3:
Average throughput: 29.44 Mbit/s
95th percentile per-packet one-way delay: 183.112 ms
Loss rate: 10.44%
Run 5: Report of TaoVA-100x — Data Link
Run 1: Statistics of TCP Vegas

Start at: 2019-01-25 19:28:00
Local clock offset: 20.772 ms
Remote clock offset: -5.525 ms

# Below is generated by plot.py at 2019-01-26 02:35:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 167.045 ms
Loss rate: 25.28%
-- Flow 1:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 167.106 ms
Loss rate: 26.52%
-- Flow 2:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 166.878 ms
Loss rate: 23.85%
-- Flow 3:
Average throughput: 0.09 Mbit/s
95th percentile per-packet one-way delay: 166.838 ms
Loss rate: 24.44%
Run 1: Report of TCP Vegas — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 0.10 Mbps)  Flow 1 egress (mean 0.07 Mbps)
Flow 2 ingress (mean 0.09 Mbps)  Flow 2 egress (mean 0.07 Mbps)
Flow 3 ingress (mean 0.12 Mbps)  Flow 3 egress (mean 0.09 Mbps)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 167.11 ms)  Flow 2 (95th percentile 168.88 ms)  Flow 3 (95th percentile 166.84 ms)
Run 2: Statistics of TCP Vegas

Local clock offset: 1.603 ms
Remote clock offset: -2.749 ms

# Below is generated by plot.py at 2019-01-26 02:35:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.24 Mbit/s
95th percentile per-packet one-way delay: 167.309 ms
Loss rate: 15.59%
-- Flow 1:
Average throughput: 0.12 Mbit/s
95th percentile per-packet one-way delay: 167.285 ms
Loss rate: 15.13%
-- Flow 2:
Average throughput: 0.12 Mbit/s
95th percentile per-packet one-way delay: 167.330 ms
Loss rate: 17.61%
-- Flow 3:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 167.345 ms
Loss rate: 13.17%
Run 2: Report of TCP Vegas — Data Link

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

- Flow 1 ingress (mean 0.14 Mbit/s)
- Flow 1 egress (mean 0.12 Mbit/s)
- Flow 2 ingress (mean 0.14 Mbit/s)
- Flow 2 egress (mean 0.12 Mbit/s)
- Flow 3 ingress (mean 0.16 Mbit/s)
- Flow 3 egress (mean 0.14 Mbit/s)

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

- Flow 1 (95th percentile 167.28 ms)
- Flow 2 (95th percentile 167.33 ms)
- Flow 3 (95th percentile 167.34 ms)
Run 3: Statistics of TCP Vegas

Local clock offset: 15.074 ms
Remote clock offset: -1.232 ms

# Below is generated by plot.py at 2019-01-26 02:35:15
# Datalink statistics
-- Total of 3 flows:
95th percentile per-packet one-way delay: 167.540 ms
Loss rate: 1.85%
-- Flow 1:
Average throughput: 2.03 Mbit/s
95th percentile per-packet one-way delay: 167.527 ms
Loss rate: 1.68%
-- Flow 2:
Average throughput: 1.71 Mbit/s
95th percentile per-packet one-way delay: 167.532 ms
Loss rate: 1.98%
-- Flow 3:
Average throughput: 1.34 Mbit/s
95th percentile per-packet one-way delay: 167.610 ms
Loss rate: 2.26%
Run 3: Report of TCP Vegas — Data Link

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

Start at: 2019-01-26 00:48:48
End at: 2019-01-26 00:49:18
Local clock offset: 0.179 ms
Remote clock offset: -1.203 ms

# Below is generated by plot.py at 2019-01-26 02:35:15
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1.05 Mbit/s
  95th percentile per-packet one-way delay: 169.558 ms
  Loss rate: 3.41%
-- Flow 1:
  Average throughput: 0.01 Mbit/s
  95th percentile per-packet one-way delay: 166.810 ms
  Loss rate: 98.79%
-- Flow 2:
  Average throughput: 0.86 Mbit/s
  95th percentile per-packet one-way delay: 169.596 ms
  Loss rate: 2.84%
-- Flow 3:
  Average throughput: 1.49 Mbit/s
  95th percentile per-packet one-way delay: 169.512 ms
  Loss rate: 3.30%
Run 4: Report of TCP Vegas — Data Link

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

- Flow 1 ingress (mean 0.59 Mbps)
- Flow 1 egress (mean 0.01 Mbps)
- Flow 2 ingress (mean 0.87 Mbps)
- Flow 2 egress (mean 0.86 Mbps)
- Flow 3 ingress (mean 1.51 Mbps)
- Flow 3 egress (mean 1.49 Mbps)

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

- Flow 1 (95th percentile 166.81 ms)
- Flow 2 (95th percentile 169.60 ms)
- Flow 3 (95th percentile 169.51 ms)
Run 5: Statistics of TCP Vegas

Start at: 2019-01-26 01:44:57
End at: 2019-01-26 01:45:27
Local clock offset: 3.47 ms
Remote clock offset: -1.408 ms

# Below is generated by plot.py at 2019-01-26 02:35:15
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1.40 Mbit/s
  95th percentile per-packet one-way delay: 170.061 ms
  Loss rate: 3.56%
-- Flow 1:
  Average throughput: 0.53 Mbit/s
  95th percentile per-packet one-way delay: 170.051 ms
  Loss rate: 4.09%
-- Flow 2:
  Average throughput: 1.06 Mbit/s
  95th percentile per-packet one-way delay: 170.086 ms
  Loss rate: 2.88%
-- Flow 3:
  Average throughput: 0.50 Mbit/s
  95th percentile per-packet one-way delay: 170.049 ms
  Loss rate: 4.72%
Run 5: Report of TCP Vegas — Data Link

![Graph 1](image1)

![Graph 2](image2)

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Run 1: Statistics of Verus

End at: 2019-01-25 20:51:58
Local clock offset: 1.077 ms
Remote clock offset: -3.829 ms

# Below is generated by plot.py at 2019-01-26 02:35:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.45 Mbit/s
95th percentile per-packet one-way delay: 277.344 ms
Loss rate: 27.72%

-- Flow 1:
Average throughput: 11.15 Mbit/s
95th percentile per-packet one-way delay: 290.248 ms
Loss rate: 31.91%

-- Flow 2:
Average throughput: 5.62 Mbit/s
95th percentile per-packet one-way delay: 228.162 ms
Loss rate: 24.82%

-- Flow 3:
Average throughput: 12.79 Mbit/s
95th percentile per-packet one-way delay: 194.843 ms
Loss rate: 14.80%
Run 1: Report of Verus — Data Link

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

Throughput (Mbps):
- Flow 1 ingress (mean 16.19 Mbps)
- Flow 1 egress (mean 11.15 Mbps)
- Flow 2 ingress (mean 7.40 Mbps)
- Flow 2 egress (mean 5.62 Mbps)
- Flow 3 ingress (mean 12.21 Mbps)
- Flow 3 egress (mean 12.79 Mbps)

Packet delay (ms):
- Flow 1 (95th percentile 290.25 ms)
- Flow 2 (95th percentile 228.16 ms)
- Flow 3 (95th percentile 194.84 ms)
Run 2: Statistics of Verus

Local clock offset: 23.617 ms
Remote clock offset: 0.883 ms

# Below is generated by plot.py at 2019-01-26 02:35:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 36.98 Mbit/s
95th percentile per-packet one-way delay: 277.791 ms
Loss rate: 34.42%
-- Flow 1:
Average throughput: 31.44 Mbit/s
95th percentile per-packet one-way delay: 244.964 ms
Loss rate: 24.64%
-- Flow 2:
Average throughput: 6.67 Mbit/s
95th percentile per-packet one-way delay: 341.794 ms
Loss rate: 62.65%
-- Flow 3:
Average throughput: 3.44 Mbit/s
95th percentile per-packet one-way delay: 350.462 ms
Loss rate: 60.38%
Run 2: Report of Verus — Data Link
Run 3: Statistics of Verus

Start at: 2019-01-26 00:35:43
End at: 2019-01-26 00:36:13
Local clock offset: -0.41 ms
Remote clock offset: 0.008 ms

# Below is generated by plot.py at 2019-01-26 02:35:15
# Datalink statistics

-- Total of 3 flows:
Average throughput: 25.33 Mbit/s
95th percentile per-packet one-way delay: 341.925 ms
Loss rate: 30.64%

-- Flow 1:
Average throughput: 28.91 Mbit/s
95th percentile per-packet one-way delay: 352.768 ms
Loss rate: 37.62%

-- Flow 2:
Average throughput: 20.93 Mbit/s
95th percentile per-packet one-way delay: 256.485 ms
Loss rate: 22.27%

-- Flow 3:
Average throughput: 22.53 Mbit/s
95th percentile per-packet one-way delay: 349.877 ms
Loss rate: 39.14%
Run 3: Report of Verus — Data Link

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

Legend:
- Flow 1 ingress (mean 46.34 Mbit/s)
- Flow 1 egress (mean 28.91 Mbit/s)
- Flow 2 ingress (mean 26.57 Mbit/s)
- Flow 2 egress (mean 20.93 Mbit/s)
- Flow 3 ingress (mean 36.11 Mbit/s)
- Flow 3 egress (mean 22.53 Mbit/s)

Legend for packet delay:
- Flow 1 (95th percentile 352.77 ms)
- Flow 2 (95th percentile 256.49 ms)
- Flow 3 (95th percentile 349.88 ms)
Run 4: Statistics of Verus

Start at: 2019-01-26 01:30:07
End at: 2019-01-26 01:30:37
Local clock offset: 8.166 ms
Remote clock offset: -0.263 ms

# Below is generated by plot.py at 2019-01-26 02:35:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 35.31 Mbit/s
95th percentile per-packet one-way delay: 278.699 ms
Loss rate: 34.29%
-- Flow 1:
Average throughput: 34.05 Mbit/s
95th percentile per-packet one-way delay: 277.664 ms
Loss rate: 33.58%
-- Flow 2:
Average throughput: 0.79 Mbit/s
95th percentile per-packet one-way delay: 252.029 ms
Loss rate: 39.79%
-- Flow 3:
Average throughput: 3.36 Mbit/s
95th percentile per-packet one-way delay: 330.982 ms
Loss rate: 54.04%
Run 4: Report of Verus — Data Link

![Graph showing throughput and packet delay over time for different flows.](image-url)
Run 5: Statistics of Verus

Start at: 2019-01-26 02:28:23
End at: 2019-01-26 02:28:53
Local clock offset: 0.622 ms
Remote clock offset: -0.744 ms

# Below is generated by plot.py at 2019-01-26 02:35:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 35.04 Mbit/s
95th percentile per-packet one-way delay: 256.940 ms
Loss rate: 36.03%
-- Flow 1:
Average throughput: 34.33 Mbit/s
95th percentile per-packet one-way delay: 257.172 ms
Loss rate: 35.97%
-- Flow 2:
Average throughput: 0.98 Mbit/s
95th percentile per-packet one-way delay: 237.910 ms
Loss rate: 38.09%
-- Flow 3:
Average throughput: 0.33 Mbit/s
95th percentile per-packet one-way delay: 231.611 ms
Loss rate: 43.40%
Run 5: Report of Verus — Data Link

![Graph 1](image1)

![Graph 2](image2)
Run 1: Statistics of PCC-Vivace

Start at: 2019-01-25 20:45:31
End at: 2019-01-25 20:46:01
Local clock offset: 1.374 ms
Remote clock offset: -4.082 ms

# Below is generated by plot.py at 2019-01-26 02:35:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.08 Mbit/s
95th percentile per-packet one-way delay: 167.309 ms
Loss rate: 13.77%
-- Flow 1:
Average throughput: 1.75 Mbit/s
95th percentile per-packet one-way delay: 167.355 ms
Loss rate: 13.01%
-- Flow 2:
Average throughput: 1.40 Mbit/s
95th percentile per-packet one-way delay: 166.704 ms
Loss rate: 13.30%
-- Flow 3:
Average throughput: 1.25 Mbit/s
95th percentile per-packet one-way delay: 166.515 ms
Loss rate: 17.86%
Run 1: Report of PCC-Vivace — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 2.00 Mbps)  
Flow 1 egress (mean 1.75 Mbps)  
Flow 2 ingress (mean 1.60 Mbps)  
Flow 2 egress (mean 1.40 Mbps)  
Flow 3 ingress (mean 1.48 Mbps)  
Flow 3 egress (mean 1.25 Mbps)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 167.35 ms)  
Flow 2 (95th percentile 166.70 ms)  
Flow 3 (95th percentile 166.51 ms)
Run 2: Statistics of PCC-Vivace

End at: 2019-01-25 22:14:42
Local clock offset: 18.267 ms
Remote clock offset: -0.086 ms

# Below is generated by plot.py at 2019-01-26 02:35:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.46 Mbit/s
95th percentile per-packet one-way delay: 166.539 ms
Loss rate: 4.50%
-- Flow 1:
Average throughput: 4.71 Mbit/s
95th percentile per-packet one-way delay: 166.369 ms
Loss rate: 4.67%
-- Flow 2:
Average throughput: 13.28 Mbit/s
95th percentile per-packet one-way delay: 166.570 ms
Loss rate: 4.37%
-- Flow 3:
Average throughput: 6.01 Mbit/s
95th percentile per-packet one-way delay: 166.649 ms
Loss rate: 4.70%
Run 2: Report of PCC-Vivace — Data Link

Throughput (Mbps) over Time (s)

- Flow 1 ingress (mean 4.90 Mbps)
- Flow 1 egress (mean 4.71 Mbps)
- Flow 2 ingress (mean 13.73 Mbps)
- Flow 2 egress (mean 13.28 Mbps)
- Flow 3 ingress (mean 6.17 Mbps)
- Flow 3 egress (mean 6.01 Mbps)

Packet Delay (ms) over Time (s)

- Flow 1 (95th percentile 166.37 ms)
- Flow 2 (95th percentile 166.57 ms)
- Flow 3 (95th percentile 166.65 ms)
Run 3: Statistics of PCC-Vivace

Start at: 2019-01-26 00:28:40
End at: 2019-01-26 00:29:10
Local clock offset: -1.89 ms
Remote clock offset: -1.281 ms

# Below is generated by plot.py at 2019-01-26 02:35:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.95 Mbit/s
95th percentile per-packet one-way delay: 214.114 ms
Loss rate: 9.81%
-- Flow 1:
Average throughput: 9.72 Mbit/s
95th percentile per-packet one-way delay: 170.543 ms
Loss rate: 4.87%
-- Flow 2:
Average throughput: 2.88 Mbit/s
95th percentile per-packet one-way delay: 170.759 ms
Loss rate: 7.42%
-- Flow 3:
Average throughput: 25.55 Mbit/s
95th percentile per-packet one-way delay: 243.664 ms
Loss rate: 15.45%
Run 3: Report of PCC-Vivace — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 10.14 Mbit/s)
Flow 1 egress (mean 9.72 Mbit/s)
Flow 2 ingress (mean 3.08 Mbit/s)
Flow 2 egress (mean 2.68 Mbit/s)
Flow 3 ingress (mean 29.54 Mbit/s)
Flow 3 egress (mean 25.55 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 170.54 ms)
Flow 2 (95th percentile 170.76 ms)
Flow 3 (95th percentile 242.66 ms)
Run 4: Statistics of PCC-Vivace

Start at: 2019-01-26 01:20:34
End at: 2019-01-26 01:21:04
Local clock offset: 7.615 ms
Remote clock offset: -0.231 ms

# Below is generated by plot.py at 2019-01-26 02:35:26
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 28.45 Mbit/s
  95th percentile per-packet one-way delay: 168.530 ms
  Loss rate: 7.78%
-- Flow 1:
  Average throughput: 12.36 Mbit/s
  95th percentile per-packet one-way delay: 168.626 ms
  Loss rate: 6.26%
-- Flow 2:
  Average throughput: 21.82 Mbit/s
  95th percentile per-packet one-way delay: 168.323 ms
  Loss rate: 8.24%
-- Flow 3:
  Average throughput: 5.60 Mbit/s
  95th percentile per-packet one-way delay: 168.475 ms
  Loss rate: 13.94%
Run 4: Report of PCC-Vivace — Data Link
Run 5: Statistics of PCC-Vivace

Start at: 2019-01-26 02:21:11
End at: 2019-01-26 02:21:41
Local clock offset: 0.964 ms
Remote clock offset: -0.974 ms

# Below is generated by plot.py at 2019-01-26 02:35:26
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 14.58 Mbit/s
  95th percentile per-packet one-way delay: 207.243 ms
  Loss rate: 7.94%
-- Flow 1:
  Average throughput: 4.01 Mbit/s
  95th percentile per-packet one-way delay: 170.052 ms
  Loss rate: 5.35%
-- Flow 2:
  Average throughput: 3.01 Mbit/s
  95th percentile per-packet one-way delay: 169.929 ms
  Loss rate: 4.61%
-- Flow 3:
  Average throughput: 26.36 Mbit/s
  95th percentile per-packet one-way delay: 213.170 ms
  Loss rate: 9.82%
Run 5: Report of PCC-Vivace — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 4.21 Mbps)
  - Flow 1 egress (mean 4.01 Mbps)
  - Flow 2 ingress (mean 3.12 Mbps)
  - Flow 2 egress (mean 3.01 Mbps)
  - Flow 3 ingress (mean 26.55 Mbps)
  - Flow 3 egress (mean 26.36 Mbps)

- **Per-packet one-way delay (ms):**
  - Flow 1 (95th percentile 170.05 ms)
  - Flow 2 (95th percentile 169.93 ms)
  - Flow 3 (95th percentile 213.17 ms)
Run 1: Statistics of WebRTC media

End at: 2019-01-25 19:27:02
Local clock offset: 20.438 ms
Remote clock offset: -4.111 ms

# Below is generated by plot.py at 2019-01-26 02:35:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.12 Mbit/s
95th percentile per-packet one-way delay: 166.607 ms
Loss rate: 30.04%
-- Flow 1:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 166.635 ms
Loss rate: 31.69%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 166.640 ms
Loss rate: 30.32%
-- Flow 3:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 166.430 ms
Loss rate: 27.95%
Run 1: Report of WebRTC media — Data Link

*Throughput (Mbit/s)*

*Time (s)*

- Flow 1 ingress (mean 0.06 Mbit/s)
- Flow 1 egress (mean 0.04 Mbit/s)
- Flow 2 ingress (mean 0.06 Mbit/s)
- Flow 2 egress (mean 0.05 Mbit/s)
- Flow 3 ingress (mean 0.06 Mbit/s)
- Flow 3 egress (mean 0.04 Mbit/s)

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

*Time (s)*

- Flow 1 (95th percentile 166.63 ms)
- Flow 2 (95th percentile 166.64 ms)
- Flow 3 (95th percentile 166.43 ms)
Run 2: Statistics of WebRTC media

End at: 2019-01-25 21:14:00
Local clock offset: 1.536 ms
Remote clock offset: -2.865 ms

# Below is generated by plot.py at 2019-01-26 02:35:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.97 Mbit/s
95th percentile per-packet one-way delay: 166.888 ms
Loss rate: 10.17%
-- Flow 1:
Average throughput: 1.89 Mbit/s
95th percentile per-packet one-way delay: 166.858 ms
Loss rate: 10.10%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 167.490 ms
Loss rate: 7.43%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 167.333 ms
Loss rate: 15.78%
Run 2: Report of WebRTC media — Data Link

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

- Flow 1 ingress (mean 2.08 Mbit/s)
- Flow 1 egress (mean 1.89 Mbit/s)
- Flow 2 ingress (mean 0.06 Mbit/s)
- Flow 2 egress (mean 0.05 Mbit/s)
- Flow 3 ingress (mean 0.06 Mbit/s)
- Flow 3 egress (mean 0.05 Mbit/s)

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

- Flow 1 (95th percentile 166.86 ms)
- Flow 2 (95th percentile 167.49 ms)
- Flow 3 (95th percentile 167.33 ms)
Run 3: Statistics of WebRTC media

Local clock offset: 14.629 ms
Remote clock offset: -0.158 ms

# Below is generated by plot.py at 2019-01-26 02:35:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.09 Mbit/s
95th percentile per-packet one-way delay: 167.382 ms
Loss rate: 4.08%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 165.854 ms
Loss rate: 91.07%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 167.561 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 164.611 ms
Loss rate: 0.00%
Run 3: Report of WebRTC media — Data Link

#### Throughput (Mbps)

- **Flow 1 ingress (mean 0.03 Mbit/s)**
- **Flow 1 egress (mean 0.00 Mbit/s)**
- **Flow 2 ingress (mean 0.05 Mbit/s)**
- **Flow 2 egress (mean 0.05 Mbit/s)**
- **Flow 3 ingress (mean 0.05 Mbit/s)**
- **Flow 3 egress (mean 0.05 Mbit/s)**

#### RTT (ms)

- **Flow 1 (95th percentile 165.85 ms)**
- **Flow 2 (95th percentile 167.56 ms)**
- **Flow 3 (95th percentile 164.61 ms)**
Run 4: Statistics of WebRTC media

Start at: 2019-01-26 00:47:21
End at: 2019-01-26 00:47:51
Local clock offset: 0.278 ms
Remote clock offset: -1.625 ms

# Below is generated by plot.py at 2019-01-26 02:35:26
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 2.44 Mbit/s
  95th percentile per-packet one-way delay: 169.186 ms
  Loss rate: 2.86%
-- Flow 1:
  Average throughput: 2.35 Mbit/s
  95th percentile per-packet one-way delay: 169.172 ms
  Loss rate: 2.86%
-- Flow 2:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 170.089 ms
  Loss rate: 0.05%
-- Flow 3:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 169.768 ms
  Loss rate: 5.61%
Run 4: Report of WebRTC media — Data Link

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

- Flow 1 ingress (mean 2.40 Mbit/s)
- Flow 1 egress (mean 2.35 Mbit/s)
- Flow 2 ingress (mean 0.04 Mbit/s)
- Flow 2 egress (mean 0.05 Mbit/s)
- Flow 3 ingress (mean 0.05 Mbit/s)
- Flow 3 egress (mean 0.05 Mbit/s)

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

- Flow 1 (95th percentile 169.17 ms)
- Flow 2 (95th percentile 170.09 ms)
- Flow 3 (95th percentile 169.77 ms)
Run 5: Statistics of WebRTC media

Start at: 2019-01-26 01:43:39
End at: 2019-01-26 01:44:09
Local clock offset: 3.902 ms
Remote clock offset: -1.178 ms

# Below is generated by plot.py at 2019-01-26 02:35:26
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.09 Mbit/s
  95th percentile per-packet one-way delay: 169.853 ms
  Loss rate: 4.82%
-- Flow 1:
  Average throughput: 0.00 Mbit/s
  95th percentile per-packet one-way delay: 168.735 ms
  Loss rate: 90.59%
-- Flow 2:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 169.774 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 170.000 ms
  Loss rate: 1.67%
Run 5: Report of WebRTC media — Data Link

Throughput (Mbps) vs Time (s)

- Flow 1 ingress (mean 0.04 Mbps)
- Flow 1 egress (mean 0.00 Mbps)
- Flow 2 ingress (mean 0.05 Mbps)
- Flow 2 egress (mean 0.05 Mbps)
- Flow 3 ingress (mean 0.05 Mbps)
- Flow 3 egress (mean 0.05 Mbps)

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

- Flow 1 (95th percentile 168.74 ms)
- Flow 2 (95th percentile 169.77 ms)
- Flow 3 (95th percentile 170.00 ms)