Pantheon Report

Generated at 2018-08-11 14:31:27 (UTC).
Data path: GCE Iowa Ethernet (local) → GCE Tokyo Ethernet (remote).
Repeated the test of 17 congestion control schemes 10 times.
Each test lasted for 30 seconds running 3 flows with 10-second interval between two flows.
NTP offsets were measured against time.google.com and have been applied to correct the timestamps in logs.

System info:
Linux 4.15.0-1014-gcp
net.core.default_qdisc = fq_codel
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: master @ 7719b900495aa706f706f8452ab7d4a94dd562e9296e
third_party/fillp @ d47f4fa1b454a5e3c0537115c5a28436dbd4b834
third_party/fillp-sheep @ daed0c84f98531712514b2231f43ec6901114ffe
third_party/genericCC @ d0153f8e594aa89e93b032143ceddf4e58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0edcbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6b7cf3fc
third_party/pantheon-tunnel @ 6f0386ed31259d366f9840f65b82ce8f46d4b1b39
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f613e8acd08fab92c4eb24f974ab
third_party/proto-quic @ 77961f1a82733a66b42f1ae8143ebc978f3cf42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3dbd2
M src/ScreamClient
M src/ScreamServer
third_party/sprout @ 366e35c61780b01e31d4a4e6ad18c74f9415f19a26
third_party/verus @ d4b447ea74c6c60a261149af262956293f9a494
M src/verus.hpp
M tools/plot.py
third_party/vivace @ 2ba86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9d3e4735770d143a1fa2851
test from GCE Iowa to GCE Tokyo, 10 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)
<table>
<thead>
<tr>
<th>scheme</th>
<th># runs</th>
<th>mean avg tput (Mbit/s)</th>
<th>mean 95th-%ile delay (ms)</th>
<th>mean loss rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>flow 1</td>
<td>flow 2</td>
<td>flow 3</td>
</tr>
<tr>
<td>TCP BBR</td>
<td>10</td>
<td>411.28</td>
<td>331.77</td>
<td>140.28</td>
</tr>
<tr>
<td>Copa</td>
<td>10</td>
<td>160.32</td>
<td>126.06</td>
<td>128.78</td>
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<tr>
<td>TCP Cubic</td>
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<td>258.95</td>
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<tr>
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<tr>
<td>FillP-Sheep</td>
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<td>692.89</td>
<td>629.25</td>
<td>526.07</td>
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<td>Indigo</td>
<td>10</td>
<td>203.64</td>
<td>195.91</td>
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<td>LEDBAT</td>
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<td>23.07</td>
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<tr>
<td>PCC-Allegro</td>
<td>10</td>
<td>508.01</td>
<td>208.60</td>
<td>52.80</td>
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<tr>
<td>PCC-Expr</td>
<td>10</td>
<td>250.17</td>
<td>199.63</td>
<td>111.99</td>
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<tr>
<td>QUIC Cubic</td>
<td>10</td>
<td>30.60</td>
<td>36.83</td>
<td>32.56</td>
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<td>SCReAM</td>
<td>10</td>
<td>0.22</td>
<td>0.22</td>
<td>0.22</td>
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<tr>
<td>Sprout</td>
<td>10</td>
<td>0.95</td>
<td>1.43</td>
<td>1.29</td>
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<td>TaoVA-100x</td>
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<td>157.59</td>
<td>173.70</td>
<td>185.81</td>
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<tr>
<td>TCP Vegas</td>
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<td>124.69</td>
<td>133.80</td>
<td>58.78</td>
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<tr>
<td>Verus</td>
<td>10</td>
<td>201.44</td>
<td>155.47</td>
<td>122.50</td>
</tr>
<tr>
<td>PCC-Vivace</td>
<td>10</td>
<td>339.37</td>
<td>285.66</td>
<td>120.32</td>
</tr>
<tr>
<td>WebRTC media</td>
<td>10</td>
<td>1.99</td>
<td>1.22</td>
<td>0.48</td>
</tr>
</tbody>
</table>
Run 1: Statistics of TCP BBR

Start at: 2018-08-11 06:42:42
End at: 2018-08-11 06:43:12
Local clock offset: -0.182 ms
Remote clock offset: -1.401 ms

# Below is generated by plot.py at 2018-08-11 11:37:42
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 702.58 Mbit/s
  95th percentile per-packet one-way delay: 220.279 ms
  Loss rate: 3.40%
-- Flow 1:
  Average throughput: 435.08 Mbit/s
  95th percentile per-packet one-way delay: 227.418 ms
  Loss rate: 3.84%
-- Flow 2:
  Average throughput: 319.61 Mbit/s
  95th percentile per-packet one-way delay: 178.665 ms
  Loss rate: 2.46%
-- Flow 3:
  Average throughput: 163.90 Mbit/s
  95th percentile per-packet one-way delay: 149.979 ms
  Loss rate: 3.48%
Run 1: Report of TCP BBR — Data Link
Run 2: Statistics of TCP BBR

Start at: 2018-08-11 07:09:19
End at: 2018-08-11 07:09:49
Local clock offset: -0.13 ms
Remote clock offset: -0.151 ms

# Below is generated by plot.py at 2018-08-11 11:37:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 699.92 Mbit/s
95th percentile per-packet one-way delay: 215.525 ms
Loss rate: 3.51%
-- Flow 1:
Average throughput: 422.82 Mbit/s
95th percentile per-packet one-way delay: 207.827 ms
Loss rate: 2.47%
-- Flow 2:
Average throughput: 354.37 Mbit/s
95th percentile per-packet one-way delay: 231.609 ms
Loss rate: 4.50%
-- Flow 3:
Average throughput: 123.40 Mbit/s
95th percentile per-packet one-way delay: 154.568 ms
Loss rate: 8.11%
Run 2: Report of TCP BBR — Data Link

![Graph showing throughput and delay over time for different flows.](image-url)
Run 3: Statistics of TCP BBR

Start at: 2018-08-11 07:35:13
End at: 2018-08-11 07:35:43
Local clock offset: 0.011 ms
Remote clock offset: -0.678 ms

# Below is generated by plot.py at 2018-08-11 11:37:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 682.63 Mbit/s
95th percentile per-packet one-way delay: 202.384 ms
Loss rate: 4.49%
-- Flow 1:
Average throughput: 411.58 Mbit/s
95th percentile per-packet one-way delay: 202.342 ms
Loss rate: 4.47%
-- Flow 2:
Average throughput: 340.02 Mbit/s
95th percentile per-packet one-way delay: 211.190 ms
Loss rate: 4.10%
-- Flow 3:
Average throughput: 138.97 Mbit/s
95th percentile per-packet one-way delay: 155.106 ms
Loss rate: 6.59%
Run 3: Report of TCP BBR — Data Link

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

- Flow 1 ingress (mean 430.92 Mbit/s)
- Flow 1 egress (mean 411.58 Mbit/s)
- Flow 2 ingress (mean 354.59 Mbit/s)
- Flow 2 egress (mean 340.02 Mbit/s)
- Flow 3 ingress (mean 148.69 Mbit/s)
- Flow 3 egress (mean 138.97 Mbit/s)

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

- Flow 1 (95th percentile 202.34 ms)
- Flow 2 (95th percentile 211.19 ms)
- Flow 3 (95th percentile 155.11 ms)
Run 4: Statistics of TCP BBR

Start at: 2018-08-11 08:00:57
End at: 2018-08-11 08:01:27
Local clock offset: -0.066 ms
Remote clock offset: -1.388 ms

# Below is generated by plot.py at 2018-08-11 11:37:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 656.37 Mbit/s
95th percentile per-packet one-way delay: 211.072 ms
Loss rate: 4.37%
-- Flow 1:
Average throughput: 389.22 Mbit/s
95th percentile per-packet one-way delay: 224.890 ms
Loss rate: 4.23%
-- Flow 2:
Average throughput: 334.07 Mbit/s
95th percentile per-packet one-way delay: 189.555 ms
Loss rate: 4.03%
-- Flow 3:
Average throughput: 133.32 Mbit/s
95th percentile per-packet one-way delay: 175.570 ms
Loss rate: 7.23%
Run 4: Report of TCP BBR — Data Link

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

Flow 1 ingress (mean 406.44 Mbit/s)  Flow 1 egress (mean 389.22 Mbit/s)
Flow 2 ingress (mean 348.21 Mbit/s)  Flow 2 egress (mean 334.07 Mbit/s)
Flow 3 ingress (mean 143.79 Mbit/s)  Flow 3 egress (mean 133.32 Mbit/s)
Run 5: Statistics of TCP BBR

Start at: 2018-08-11 08:26:37
End at: 2018-08-11 08:27:07
Local clock offset: -0.021 ms
Remote clock offset: 0.246 ms

# Below is generated by plot.py at 2018-08-11 11:37:42
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 638.93 Mbit/s
  95th percentile per-packet one-way delay: 248.713 ms
  Loss rate: 4.04%
-- Flow 1:
  Average throughput: 378.11 Mbit/s
  95th percentile per-packet one-way delay: 249.737 ms
  Loss rate: 4.39%
-- Flow 2:
  Average throughput: 326.17 Mbit/s
  95th percentile per-packet one-way delay: 251.281 ms
  Loss rate: 3.58%
-- Flow 3:
  Average throughput: 131.90 Mbit/s
  95th percentile per-packet one-way delay: 160.565 ms
  Loss rate: 3.26%
Run 5: Report of TCP BBR — Data Link
Run 6: Statistics of TCP BBR

Start at: 2018-08-11 08:52:07
End at: 2018-08-11 08:52:37
Local clock offset: -0.064 ms
Remote clock offset: -0.111 ms

# Below is generated by plot.py at 2018-08-11 11:37:42
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 691.96 Mbit/s
  95th percentile per-packet one-way delay: 195.460 ms
  Loss rate: 2.68%
-- Flow 1:
  Average throughput: 382.36 Mbit/s
  95th percentile per-packet one-way delay: 151.626 ms
  Loss rate: 1.90%
-- Flow 2:
  Average throughput: 380.17 Mbit/s
  95th percentile per-packet one-way delay: 229.089 ms
  Loss rate: 3.88%
-- Flow 3:
  Average throughput: 169.57 Mbit/s
  95th percentile per-packet one-way delay: 149.573 ms
  Loss rate: 2.50%
Run 6: Report of TCP BBR — Data Link
Run 7: Statistics of TCP BBR

Start at: 2018-08-11 09:18:23
End at: 2018-08-11 09:18:53
Local clock offset: -0.074 ms
Remote clock offset: -0.343 ms

# Below is generated by plot.py at 2018-08-11 11:37:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 677.00 Mbit/s
95th percentile per-packet one-way delay: 223.414 ms
Loss rate: 4.33%
-- Flow 1:
Average throughput: 426.82 Mbit/s
95th percentile per-packet one-way delay: 228.777 ms
Loss rate: 4.68%
-- Flow 2:
Average throughput: 325.26 Mbit/s
95th percentile per-packet one-way delay: 203.433 ms
Loss rate: 3.81%
-- Flow 3:
Average throughput: 100.25 Mbit/s
95th percentile per-packet one-way delay: 156.105 ms
Loss rate: 3.30%
Run 7: Report of TCP BBR — Data Link

[Graph showing throughput and per-packet one-way delay over time for different flows]
Run 8: Statistics of TCP BBR

Start at: 2018-08-11 09:45:09
End at: 2018-08-11 09:45:39
Local clock offset: 0.038 ms
Remote clock offset: -0.492 ms

# Below is generated by plot.py at 2018-08-11 11:37:42
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 680.04 Mbit/s
  95th percentile per-packet one-way delay: 212.251 ms
  Loss rate: 3.47%
-- Flow 1:
  Average throughput: 427.91 Mbit/s
  95th percentile per-packet one-way delay: 182.932 ms
  Loss rate: 2.31%
-- Flow 2:
  Average throughput: 372.28 Mbit/s
  95th percentile per-packet one-way delay: 238.986 ms
  Loss rate: 5.40%
-- Flow 3:
  Average throughput: 12.54 Mbit/s
  95th percentile per-packet one-way delay: 153.911 ms
  Loss rate: 4.05%
Run 9: Statistics of TCP BBR

Start at: 2018-08-11 10:12:07
End at: 2018-08-11 10:12:37
Local clock offset: 0.001 ms
Remote clock offset: 0.026 ms

# Below is generated by plot.py at 2018-08-11 11:47:20
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 671.66 Mbit/s
  95th percentile per-packet one-way delay: 224.671 ms
  Loss rate: 4.20%
-- Flow 1:
  Average throughput: 439.74 Mbit/s
  95th percentile per-packet one-way delay: 233.561 ms
  Loss rate: 5.45%
-- Flow 2:
  Average throughput: 279.67 Mbit/s
  95th percentile per-packet one-way delay: 164.154 ms
  Loss rate: 1.21%
-- Flow 3:
  Average throughput: 138.71 Mbit/s
  95th percentile per-packet one-way delay: 155.845 ms
  Loss rate: 3.76%
Run 9: Report of TCP BBR — Data Link

![Graph 1: Throughput (Mbps)]

- Flow 1 ingress (mean 465.09 Mbps)
- Flow 1 egress (mean 439.74 Mbps)
- Flow 2 ingress (mean 283.74 Mbps)
- Flow 2 egress (mean 279.67 Mbps)
- Flow 3 ingress (mean 144.34 Mbps)
- Flow 3 egress (mean 138.71 Mbps)

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

- Flow 1 (95th percentile 233.56 ms)
- Flow 2 (95th percentile 164.15 ms)
- Flow 3 (95th percentile 155.84 ms)
Run 10: Statistics of TCP BBR

Start at: 2018-08-11 10:38:55
End at: 2018-08-11 10:39:25
Local clock offset: -0.118 ms
Remote clock offset: 1.402 ms

# Below is generated by plot.py at 2018-08-11 11:47:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 686.35 Mbit/s
95th percentile per-packet one-way delay: 189.123 ms
Loss rate: 2.92%
-- Flow 1:
Average throughput: 399.21 Mbit/s
95th percentile per-packet one-way delay: 199.897 ms
Loss rate: 2.03%
-- Flow 2:
Average throughput: 286.07 Mbit/s
95th percentile per-packet one-way delay: 152.580 ms
Loss rate: 2.21%
-- Flow 3:
Average throughput: 290.24 Mbit/s
95th percentile per-packet one-way delay: 230.205 ms
Loss rate: 7.72%
Run 10: Report of TCP BBR — Data Link
Run 1: Statistics of Copa

Start at: 2018-08-11 06:51:34
End at: 2018-08-11 06:52:04
Local clock offset: -0.124 ms
Remote clock offset: -0.183 ms

# Below is generated by plot.py at 2018-08-11 11:49:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 403.89 Mbit/s
95th percentile per-packet one-way delay: 75.496 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 217.64 Mbit/s
95th percentile per-packet one-way delay: 71.457 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 143.64 Mbit/s
95th percentile per-packet one-way delay: 99.515 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 272.61 Mbit/s
95th percentile per-packet one-way delay: 75.008 ms
Loss rate: 0.04%
Run 1: Report of Copa — Data Link
Run 2: Statistics of Copa

Start at: 2018-08-11 07:17:38
End at: 2018-08-11 07:18:08
Local clock offset: -0.104 ms
Remote clock offset: -0.358 ms

# Below is generated by plot.py at 2018-08-11 11:49:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 153.69 Mbit/s
95th percentile per-packet one-way delay: 67.285 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 105.59 Mbit/s
95th percentile per-packet one-way delay: 68.350 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 29.24 Mbit/s
95th percentile per-packet one-way delay: 66.551 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 87.14 Mbit/s
95th percentile per-packet one-way delay: 66.764 ms
Loss rate: 0.14%
Run 2: Report of Copa — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 105.61 Mbps)
  - Flow 1 egress (mean 105.59 Mbps)
  - Flow 2 ingress (mean 29.24 Mbps)
  - Flow 2 egress (mean 29.24 Mbps)
  - Flow 3 ingress (mean 87.27 Mbps)
  - Flow 3 egress (mean 87.14 Mbps)

- **Per-packet one-way delay (ms):**
  - Flow 1 (95th percentile 68.35 ms)
  - Flow 2 (95th percentile 66.55 ms)
  - Flow 3 (95th percentile 66.76 ms)
Run 3: Statistics of Copa

Start at: 2018-08-11 07:43:45  
End at: 2018-08-11 07:44:15  
Local clock offset: -0.033 ms  
Remote clock offset: -0.755 ms

# Below is generated by plot.py at 2018-08-11 11:49:09
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 163.57 Mbit/s  
  95th percentile per-packet one-way delay: 72.883 ms
  Loss rate: 0.06%
-- Flow 1:
  Average throughput: 139.70 Mbit/s
  95th percentile per-packet one-way delay: 76.107 ms
  Loss rate: 0.05%
-- Flow 2:
  Average throughput: 19.89 Mbit/s  
  95th percentile per-packet one-way delay: 66.100 ms
  Loss rate: 0.09%
-- Flow 3:
  Average throughput: 31.98 Mbit/s
  95th percentile per-packet one-way delay: 66.094 ms
  Loss rate: 0.13%
Run 3: Report of Copa — Data Link

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

- Flow 1 ingress (mean 139.75 Mbit/s)
- Flow 1 egress (mean 139.70 Mbit/s)
- Flow 2 ingress (mean 19.91 Mbit/s)
- Flow 2 egress (mean 19.89 Mbit/s)
- Flow 3 ingress (mean 32.02 Mbit/s)
- Flow 3 egress (mean 31.98 Mbit/s)

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

- Flow 1 (95th percentile 76.11 ms)
- Flow 2 (95th percentile 66.10 ms)
- Flow 3 (95th percentile 66.09 ms)
Run 4: Statistics of Copa

Start at: 2018-08-11 08:09:12
End at: 2018-08-11 08:09:42
Local clock offset: -0.085 ms
Remote clock offset: -1.305 ms

# Below is generated by plot.py at 2018-08-11 11:49:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 295.06 Mbit/s
95th percentile per-packet one-way delay: 67.119 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 142.83 Mbit/s
95th percentile per-packet one-way delay: 64.368 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 169.69 Mbit/s
95th percentile per-packet one-way delay: 68.798 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 117.97 Mbit/s
95th percentile per-packet one-way delay: 80.877 ms
Loss rate: 0.00%
Run 4: Report of Copa — Data Link

![Run 4: Report of Copa — Data Link](image-url)

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![Run 4: Report of Copa — Data Link](image-url)

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Run 5: Statistics of Copa

Start at: 2018-08-11 08:34:50
End at: 2018-08-11 08:35:20
Local clock offset: -0.13 ms
Remote clock offset: -0.2 ms

# Below is generated by plot.py at 2018-08-11 11:49:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 107.59 Mbit/s
95th percentile per-packet one-way delay: 66.738 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 65.34 Mbit/s
95th percentile per-packet one-way delay: 66.707 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 47.25 Mbit/s
95th percentile per-packet one-way delay: 66.764 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 32.54 Mbit/s
95th percentile per-packet one-way delay: 66.786 ms
Loss rate: 0.00%
Run 5: Report of Copa — Data Link
Run 6: Statistics of Copa

Start at: 2018-08-11 09:00:40
End at: 2018-08-11 09:01:10
Local clock offset: -0.055 ms
Remote clock offset: -0.954 ms

# Below is generated by plot.py at 2018-08-11 11:49:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 297.62 Mbit/s
95th percentile per-packet one-way delay: 75.912 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 155.80 Mbit/s
95th percentile per-packet one-way delay: 66.073 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 86.38 Mbit/s
95th percentile per-packet one-way delay: 65.920 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 253.80 Mbit/s
95th percentile per-packet one-way delay: 81.997 ms
Loss rate: 0.00%
Run 6: Report of Copa — Data Link
Run 7: Statistics of Copa

Start at: 2018-08-11 09:27:16
End at: 2018-08-11 09:27:46
Local clock offset: -0.07 ms
Remote clock offset: -0.813 ms

# Below is generated by plot.py at 2018-08-11 11:49:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 239.04 Mbit/s
95th percentile per-packet one-way delay: 77.147 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 213.79 Mbit/s
95th percentile per-packet one-way delay: 66.097 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 238.65 Mbit/s
95th percentile per-packet one-way delay: 80.420 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 71.09 Mbit/s
95th percentile per-packet one-way delay: 73.810 ms
Loss rate: 0.00%
Run 7: Report of Copa — Data Link
Run 8: Statistics of Copa

Start at: 2018-08-11 09:54:00
End at: 2018-08-11 09:54:30
Local clock offset: 0.014 ms
Remote clock offset: 0.692 ms

# Below is generated by plot.py at 2018-08-11 11:51:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 336.80 Mbit/s
95th percentile per-packet one-way delay: 76.559 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 171.66 Mbit/s
95th percentile per-packet one-way delay: 69.058 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 203.57 Mbit/s
95th percentile per-packet one-way delay: 82.580 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 89.11 Mbit/s
95th percentile per-packet one-way delay: 73.184 ms
Loss rate: 0.08%
Run 8: Report of Copa — Data Link

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

Start at: 2018-08-11 10:20:53
End at: 2018-08-11 10:21:23
Local clock offset: -0.038 ms
Remote clock offset: 0.07 ms

# Below is generated by plot.py at 2018-08-11 11:53:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 367.82 Mbit/s
95th percentile per-packet one-way delay: 74.443 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 218.19 Mbit/s
95th percentile per-packet one-way delay: 70.980 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 143.55 Mbit/s
95th percentile per-packet one-way delay: 76.386 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 163.84 Mbit/s
95th percentile per-packet one-way delay: 82.802 ms
Loss rate: 0.00%
Run 9: Report of Copa — Data Link

![Graphs showing data link performance metrics](image-url)
Run 10: Statistics of Copa

Start at: 2018-08-11 10:47:48
End at: 2018-08-11 10:48:18
Local clock offset: -0.109 ms
Remote clock offset: -0.048 ms

# Below is generated by plot.py at 2018-08-11 11:57:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 347.52 Mbit/s
95th percentile per-packet one-way delay: 72.209 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 172.71 Mbit/s
95th percentile per-packet one-way delay: 65.727 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 178.79 Mbit/s
95th percentile per-packet one-way delay: 77.983 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 167.70 Mbit/s
95th percentile per-packet one-way delay: 71.383 ms
Loss rate: 0.00%
Run 10: Report of Copa — Data Link

![Graph of Throughput vs Time](image)

![Graph of Per-packet one-way delay vs Time](image)
Run 1: Statistics of TCP Cubic

Start at: 2018-08-11 06:59:03
End at: 2018-08-11 06:59:33
Local clock offset: -0.185 ms
Remote clock offset: -0.074 ms

# Below is generated by plot.py at 2018-08-11 11:57:05
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 365.89 Mbit/s
  95th percentile per-packet one-way delay: 63.803 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 261.91 Mbit/s
  95th percentile per-packet one-way delay: 63.734 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 154.33 Mbit/s
  95th percentile per-packet one-way delay: 64.117 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 3.55 Mbit/s
  95th percentile per-packet one-way delay: 62.015 ms
  Loss rate: 0.34%
Run 1: Report of TCP Cubic — Data Link

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

Flow 1 (95th percentile 63.73 ms), Flow 2 (95th percentile 64.12 ms), Flow 3 (95th percentile 62.02 ms).]
Run 2: Statistics of TCP Cubic

Start at: 2018-08-11 07:24:38
End at: 2018-08-11 07:25:08
Local clock offset: -0.097 ms
Remote clock offset: -0.565 ms

# Below is generated by plot.py at 2018-08-11 11:57:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 458.84 Mbit/s
95th percentile per-packet one-way delay: 97.177 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 284.68 Mbit/s
95th percentile per-packet one-way delay: 69.503 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 259.90 Mbit/s
95th percentile per-packet one-way delay: 107.702 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 3.90 Mbit/s
95th percentile per-packet one-way delay: 66.873 ms
Loss rate: 0.25%
Run 2: Report of TCP Cubic — Data Link

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

- Flow 1 ingress (mean 284.75 Mbit/s)
- Flow 1 egress (mean 284.68 Mbit/s)
- Flow 2 ingress (mean 259.94 Mbit/s)
- Flow 2 egress (mean 259.90 Mbit/s)
- Flow 3 ingress (mean 3.91 Mbit/s)
- Flow 3 egress (mean 3.90 Mbit/s)

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

- Flow 1 (95th percentile 69.50 ms)
- Flow 2 (95th percentile 107.70 ms)
- Flow 3 (95th percentile 66.87 ms)
Run 3: Statistics of TCP Cubic

Start at: 2018-08-11 07:50:32
End at: 2018-08-11 07:51:02
Local clock offset: -0.031 ms
Remote clock offset: 0.007 ms

# Below is generated by plot.py at 2018-08-11 11:57:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 496.19 Mbit/s
95th percentile per-packet one-way delay: 113.250 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 210.34 Mbit/s
95th percentile per-packet one-way delay: 72.594 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 427.42 Mbit/s
95th percentile per-packet one-way delay: 117.922 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 3.26 Mbit/s
95th percentile per-packet one-way delay: 73.006 ms
Loss rate: 0.73%
Run 3: Report of TCP Cubic — Data Link

![Graph showing throughput and delay over time for Flow 1, Flow 2, and Flow 3.]
Run 4: Statistics of TCP Cubic

Start at: 2018-08-11 08:16:05  
End at: 2018-08-11 08:16:35  
Local clock offset: -0.071 ms  
Remote clock offset: 0.298 ms  

# Below is generated by plot.py at 2018-08-11 11:57:05  
# Datalink statistics  
-- Total of 3 flows:  
  Average throughput: 430.84 Mbit/s  
  95th percentile per-packet one-way delay: 68.956 ms  
  Loss rate: 0.04%  
-- Flow 1:  
  Average throughput: 216.29 Mbit/s  
  95th percentile per-packet one-way delay: 68.961 ms  
  Loss rate: 0.04%  
-- Flow 2:  
  Average throughput: 320.42 Mbit/s  
  95th percentile per-packet one-way delay: 68.952 ms  
  Loss rate: 0.03%  
-- Flow 3:  
  Average throughput: 3.31 Mbit/s  
  95th percentile per-packet one-way delay: 68.337 ms  
  Loss rate: 0.36%
Run 4: Report of TCP Cubic — Data Link

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

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

Start at: 2018-08-11 08:41:50
End at: 2018-08-11 08:42:20
Local clock offset: -0.073 ms
Remote clock offset: 0.612 ms

# Below is generated by plot.py at 2018-08-11 11:57:05
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 365.11 Mbit/s
  95th percentile per-packet one-way delay: 64.218 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 221.07 Mbit/s
  95th percentile per-packet one-way delay: 63.756 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 214.46 Mbit/s
  95th percentile per-packet one-way delay: 65.136 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 3.56 Mbit/s
  95th percentile per-packet one-way delay: 63.938 ms
  Loss rate: 0.34%
Run 5: Report of TCP Cubic — Data Link
Run 6: Statistics of TCP Cubic

Start at: 2018-08-11 09:07:52  
End at: 2018-08-11 09:08:22  
Local clock offset: -0.035 ms  
Remote clock offset: -0.83 ms

# Below is generated by plot.py at 2018-08-11 11:58:37
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 377.64 Mbit/s
  95th percentile per-packet one-way delay: 164.635 ms
  Loss rate: 0.16%
-- Flow 1:
  Average throughput: 228.21 Mbit/s
  95th percentile per-packet one-way delay: 78.548 ms
  Loss rate: 0.12%
-- Flow 2:
  Average throughput: 40.27 Mbit/s
  95th percentile per-packet one-way delay: 92.120 ms
  Loss rate: 0.36%
-- Flow 3:
  Average throughput: 368.93 Mbit/s
  95th percentile per-packet one-way delay: 181.174 ms
  Loss rate: 0.17%
Run 6: Report of TCP Cubic — Data Link
Run 7: Statistics of TCP Cubic

Start at: 2018-08-11 09:34:36
End at: 2018-08-11 09:35:06
Local clock offset: -0.016 ms
Remote clock offset: -0.872 ms

# Below is generated by plot.py at 2018-08-11 12:00:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 475.69 Mbit/s
95th percentile per-packet one-way delay: 65.208 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 341.08 Mbit/s
95th percentile per-packet one-way delay: 65.408 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 199.95 Mbit/s
95th percentile per-packet one-way delay: 64.253 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 4.12 Mbit/s
95th percentile per-packet one-way delay: 62.067 ms
Loss rate: 0.18%
Run 7: Report of TCP Cubic — Data Link

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

- Flow 1 ingress (mean 341.03 Mbit/s)
- Flow 1 egress (mean 341.08 Mbit/s)
- Flow 2 ingress (mean 199.96 Mbit/s)
- Flow 2 egress (mean 199.95 Mbit/s)
- Flow 3 ingress (mean 4.13 Mbit/s)
- Flow 3 egress (mean 4.12 Mbit/s)

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

- Flow 1 (95th percentile 65.41 ms)
- Flow 2 (95th percentile 64.25 ms)
- Flow 3 (95th percentile 62.07 ms)
Run 8: Statistics of TCP Cubic

Start at: 2018-08-11 10:01:27
End at: 2018-08-11 10:01:57
Local clock offset: 0.063 ms
Remote clock offset: 1.077 ms

# Below is generated by plot.py at 2018-08-11 12:03:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 596.05 Mbit/s
95th percentile per-packet one-way delay: 157.396 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 326.64 Mbit/s
95th percentile per-packet one-way delay: 80.810 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 402.71 Mbit/s
95th percentile per-packet one-way delay: 173.547 ms
Loss rate: 0.32%
-- Flow 3:
Average throughput: 3.36 Mbit/s
95th percentile per-packet one-way delay: 75.593 ms
Loss rate: 0.36%
Run 8: Report of TCP Cubic — Data Link
Run 9: Statistics of TCP Cubic

Start at: 2018-08-11 10:28:20
End at: 2018-08-11 10:28:50
Local clock offset: 0.022 ms
Remote clock offset: -0.062 ms

# Below is generated by plot.py at 2018-08-11 12:03:14
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 356.18 Mbit/s
  95th percentile per-packet one-way delay: 64.768 ms
  Loss rate: 0.03%
-- Flow 1:
  Average throughput: 252.70 Mbit/s
  95th percentile per-packet one-way delay: 64.372 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 44.63 Mbit/s
  95th percentile per-packet one-way delay: 62.802 ms
  Loss rate: 0.01%
-- Flow 3:
  Average throughput: 222.47 Mbit/s
  95th percentile per-packet one-way delay: 69.267 ms
  Loss rate: 0.16%
Run 10: Statistics of TCP Cubic

Start at: 2018-08-11 10:55:06
End at: 2018-08-11 10:55:36
Local clock offset: -0.032 ms
Remote clock offset: 1.297 ms

# Below is generated by plot.py at 2018-08-11 12:03:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 403.34 Mbit/s
95th percentile per-packet one-way delay: 66.495 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 246.58 Mbit/s
95th percentile per-packet one-way delay: 67.243 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 233.27 Mbit/s
95th percentile per-packet one-way delay: 65.267 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 4.23 Mbit/s
95th percentile per-packet one-way delay: 64.089 ms
Loss rate: 0.09%
Run 10: Report of TCP Cubic — Data Link

![Graph of Throughput and Per-Packet One-Way Delay](image)
Run 1: Statistics of FillP

Start at: 2018-08-11 06:40:37
End at: 2018-08-11 06:41:07
Local clock offset: -0.117 ms
Remote clock offset: 0.064 ms

# Below is generated by plot.py at 2018-08-11 12:21:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1345.59 Mbit/s
95th percentile per-packet one-way delay: 132.063 ms
Loss rate: 1.80%
-- Flow 1:
Average throughput: 728.17 Mbit/s
95th percentile per-packet one-way delay: 130.597 ms
Loss rate: 1.78%
-- Flow 2:
Average throughput: 628.29 Mbit/s
95th percentile per-packet one-way delay: 138.478 ms
Loss rate: 2.58%
-- Flow 3:
Average throughput: 598.32 Mbit/s
95th percentile per-packet one-way delay: 119.477 ms
Loss rate: 0.18%
Run 1: Report of FillP — Data Link
Run 2: Statistics of FillP

Start at: 2018-08-11 07:07:13
End at: 2018-08-11 07:07:43
Local clock offset: -0.156 ms
Remote clock offset: 0.038 ms

# Below is generated by plot.py at 2018-08-11 12:23:10
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1361.08 Mbit/s
  95th percentile per-packet one-way delay: 141.153 ms
  Loss rate: 3.75%
-- Flow 1:
  Average throughput: 719.89 Mbit/s
  95th percentile per-packet one-way delay: 140.420 ms
  Loss rate: 4.73%
-- Flow 2:
  Average throughput: 660.40 Mbit/s
  95th percentile per-packet one-way delay: 132.194 ms
  Loss rate: 1.97%
-- Flow 3:
  Average throughput: 608.98 Mbit/s
  95th percentile per-packet one-way delay: 153.013 ms
  Loss rate: 4.01%
Run 2: Report of FillP — Data Link
Run 3: Statistics of FillP

Start at: 2018-08-11 07:33:04
End at: 2018-08-11 07:33:34
Local clock offset: -0.062 ms
Remote clock offset: -1.446 ms

# Below is generated by plot.py at 2018-08-11 12:25:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1410.33 Mbit/s
95th percentile per-packet one-way delay: 138.143 ms
Loss rate: 2.86%
-- Flow 1:
Average throughput: 744.10 Mbit/s
95th percentile per-packet one-way delay: 144.859 ms
Loss rate: 3.23%
-- Flow 2:
Average throughput: 697.75 Mbit/s
95th percentile per-packet one-way delay: 133.507 ms
Loss rate: 3.15%
-- Flow 3:
Average throughput: 607.56 Mbit/s
95th percentile per-packet one-way delay: 128.270 ms
Loss rate: 0.75%
Run 3: Report of FillP — Data Link

Throughput (Mbps/s)

Time (s)

Flow 1 Ingress (mean 768.84 Mbps/s)  Flow 1 egress (mean 744.10 Mbps/s)
Flow 2 Ingress (mean 720.41 Mbps/s)  Flow 2 egress (mean 697.75 Mbps/s)
Flow 3 Ingress (mean 612.17 Mbps/s)  Flow 3 egress (mean 607.56 Mbps/s)

Packet delay (ms)

Time (s)

Flow 1 (95th percentile 144.86 ms)  Flow 2 (95th percentile 133.51 ms)  Flow 3 (95th percentile 128.27 ms)
Run 4: Statistics of FillP

Start at: 2018-08-11 07:58:51
End at: 2018-08-11 07:59:21
Local clock offset: -0.063 ms
Remote clock offset: -0.344 ms

# Below is generated by plot.py at 2018-08-11 12:25:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1352.62 Mbit/s
95th percentile per-packet one-way delay: 142.227 ms
Loss rate: 2.59%

-- Flow 1:
Average throughput: 679.45 Mbit/s
95th percentile per-packet one-way delay: 149.081 ms
Loss rate: 4.33%

-- Flow 2:
Average throughput: 707.00 Mbit/s
95th percentile per-packet one-way delay: 123.458 ms
Loss rate: 0.90%

-- Flow 3:
Average throughput: 608.92 Mbit/s
95th percentile per-packet one-way delay: 128.011 ms
Loss rate: 0.50%
Run 4: Report of FillP — Data Link

**Throughput (Mbps)**

- **Flow 1 ingress (mean 710.19 Mbps)**
- **Flow 1 egress (mean 679.45 Mbps)**
- **Flow 2 ingress (mean 713.47 Mbps)**
- **Flow 2 egress (mean 707.00 Mbps)**
- **Flow 3 ingress (mean 611.91 Mbps)**
- **Flow 3 egress (mean 608.92 Mbps)**

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

- **Flow 1 (95th percentile 149.08 ms)**
- **Flow 2 (95th percentile 123.46 ms)**
- **Flow 3 (95th percentile 128.01 ms)**

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Run 5: Statistics of FillP

Start at: 2018-08-11 08:24:32
End at: 2018-08-11 08:25:02
Local clock offset: -0.071 ms
Remote clock offset: 1.17 ms

# Below is generated by plot.py at 2018-08-11 12:28:20
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1362.01 Mbit/s
  95th percentile per-packet one-way delay: 142.555 ms
  Loss rate: 2.06%
-- Flow 1:
  Average throughput: 707.71 Mbit/s
  95th percentile per-packet one-way delay: 141.568 ms
  Loss rate: 2.32%
-- Flow 2:
  Average throughput: 686.25 Mbit/s
  95th percentile per-packet one-way delay: 138.711 ms
  Loss rate: 1.70%
-- Flow 3:
  Average throughput: 596.31 Mbit/s
  95th percentile per-packet one-way delay: 149.166 ms
  Loss rate: 1.97%
Run 5: Report of FillP — Data Link

Throughput (Mbps):

- Flow 1 ingress (mean 724.38 Mbps)
- Flow 1 egress (mean 707.71 Mbps)
- Flow 2 ingress (mean 698.22 Mbps)
- Flow 2 egress (mean 686.25 Mbps)
- Flow 3 ingress (mean 608.31 Mbps)
- Flow 3 egress (mean 596.31 Mbps)

Packet drop rate (delay (ms)):

- Flow 1 (95th percentile 141.57 ms)
- Flow 2 (95th percentile 138.71 ms)
- Flow 3 (95th percentile 149.17 ms)
Run 6: Statistics of FillP

Start at: 2018-08-11 08:50:00
End at: 2018-08-11 08:50:30
Local clock offset: -0.097 ms
Remote clock offset: -0.233 ms

# Below is generated by plot.py at 2018-08-11 12:29:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1406.20 Mbit/s
95th percentile per-packet one-way delay: 133.053 ms
Loss rate: 2.34%
-- Flow 1:
Average throughput: 729.49 Mbit/s
95th percentile per-packet one-way delay: 134.055 ms
Loss rate: 2.77%
-- Flow 2:
Average throughput: 704.78 Mbit/s
95th percentile per-packet one-way delay: 129.194 ms
Loss rate: 1.91%
-- Flow 3:
Average throughput: 624.46 Mbit/s
95th percentile per-packet one-way delay: 134.597 ms
Loss rate: 1.78%
Run 6: Report of FillP — Data Link

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

- Flow 1 ingress (mean 750.14 Mbps)
- Flow 1 egress (mean 729.49 Mbps)
- Flow 2 ingress (mean 718.45 Mbps)
- Flow 2 egress (mean 704.78 Mbps)
- Flow 3 ingress (mean 635.79 Mbps)
- Flow 3 egress (mean 624.46 Mbps)

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

- Flow 1 (95th percentile 134.06 ms)
- Flow 2 (95th percentile 129.19 ms)
- Flow 3 (95th percentile 134.60 ms)
Run 7: Statistics of FillP

Start at: 2018-08-11 09:16:13
End at: 2018-08-11 09:16:43
Local clock offset: -0.081 ms
Remote clock offset: 0.231 ms

# Below is generated by plot.py at 2018-08-11 12:31:36
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1462.41 Mbit/s
  95th percentile per-packet one-way delay: 130.358 ms
  Loss rate: 1.40%
-- Flow 1:
  Average throughput: 780.67 Mbit/s
  95th percentile per-packet one-way delay: 130.511 ms
  Loss rate: 1.60%
-- Flow 2:
  Average throughput: 719.76 Mbit/s
  95th percentile per-packet one-way delay: 131.269 ms
  Loss rate: 1.58%
-- Flow 3:
  Average throughput: 612.95 Mbit/s
  95th percentile per-packet one-way delay: 126.239 ms
  Loss rate: 0.21%
Run 7: Report of FillP — Data Link

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

Legend:
- Blue dashed line: Flow 1 ingress (mean 793.52 Mbps)
- Blue solid line: Flow 1 egress (mean 780.67 Mbps)
- Green dashed line: Flow 2 ingress (mean 731.40 Mbps)
- Green solid line: Flow 2 egress (mean 719.76 Mbps)
- Red dashed line: Flow 3 ingress (mean 612.95 Mbps)
- Red solid line: Flow 3 egress (mean 612.95 Mbps)
Run 8: Statistics of FillP

Start at: 2018-08-11 09:43:01
End at: 2018-08-11 09:43:31
Local clock offset: 0.04 ms
Remote clock offset: 1.208 ms

# Below is generated by plot.py at 2018-08-11 12:32:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1437.99 Mbit/s
95th percentile per-packet one-way delay: 138.317 ms
Loss rate: 1.78%
-- Flow 1:
Average throughput: 728.76 Mbit/s
95th percentile per-packet one-way delay: 137.604 ms
Loss rate: 3.12%
-- Flow 2:
Average throughput: 741.18 Mbit/s
95th percentile per-packet one-way delay: 147.011 ms
Loss rate: 0.52%
-- Flow 3:
Average throughput: 652.80 Mbit/s
95th percentile per-packet one-way delay: 111.379 ms
Loss rate: 0.00%
Run 8: Report of FillP — Data Link

Throughput (Mbps):

Time (s):

Flow 1 Ingress (mean 752.23 Mbps/s)  Flow 1 Egress (mean 728.76 Mbps/s)
Flow 2 Ingress (mean 745.21 Mbps/s)  Flow 2 Egress (mean 743.18 Mbps/s)
Flow 3 Ingress (mean 652.72 Mbps/s)  Flow 3 Egress (mean 652.80 Mbps/s)

Per-packet oneway delay (ms):

Time (s):

Flow 1 (95th percentile 137.60 ms)  Flow 2 (95th percentile 147.01 ms)  Flow 3 (95th percentile 111.38 ms)
Run 9: Statistics of FillP

Start at: 2018-08-11 10:09:58
End at: 2018-08-11 10:10:28
Local clock offset: 0.026 ms
Remote clock offset: 0.061 ms

# Below is generated by plot.py at 2018-08-11 12:51:58
# Datalink statistics

-- Total of 3 flows:
Average throughput: 1444.68 Mbit/s
95th percentile per-packet one-way delay: 132.394 ms
Loss rate: 1.14%

-- Flow 1:
Average throughput: 771.41 Mbit/s
95th percentile per-packet one-way delay: 188.541 ms
Loss rate: 1.33%

-- Flow 2:
Average throughput: 691.43 Mbit/s
95th percentile per-packet one-way delay: 126.104 ms
Loss rate: 1.27%

-- Flow 3:
Average throughput: 642.43 Mbit/s
95th percentile per-packet one-way delay: 107.961 ms
Loss rate: 0.14%
Run 9: Report of FillP — Data Link
Run 10: Statistics of FillP

Start at: 2018-08-11 10:36:48
End at: 2018-08-11 10:37:18
Local clock offset: -0.038 ms
Remote clock offset: -0.011 ms

# Below is generated by plot.py at 2018-08-11 12:52:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1386.24 Mbit/s
95th percentile per-packet one-way delay: 134.768 ms
Loss rate: 3.03%
-- Flow 1:
Average throughput: 748.52 Mbit/s
95th percentile per-packet one-way delay: 132.295 ms
Loss rate: 3.10%
-- Flow 2:
Average throughput: 657.98 Mbit/s
95th percentile per-packet one-way delay: 146.218 ms
Loss rate: 3.48%
-- Flow 3:
Average throughput: 603.73 Mbit/s
95th percentile per-packet one-way delay: 126.452 ms
Loss rate: 1.75%
Run 10: Report of FillP — Data Link

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**Graph 1**: Throughput vs. Time
- **Flow 1** ingress (mean 772.47 Mbit/s)
- **Flow 1** egress (mean 746.52 Mbit/s)
- **Flow 2** ingress (mean 681.71 Mbit/s)
- **Flow 2** egress (mean 657.98 Mbit/s)
- **Flow 3** ingress (mean 614.43 Mbit/s)
- **Flow 3** egress (mean 603.73 Mbit/s)

**Graph 2**: Packet Delay vs. Time
- **Flow 1** (95th percentile 132.29 ms)
- **Flow 2** (95th percentile 146.22 ms)
- **Flow 3** (95th percentile 126.45 ms)

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Run 1: Statistics of FillP-Sheep

Start at: 2018-08-11 06:55:16
End at: 2018-08-11 06:55:46
Local clock offset: -0.118 ms
Remote clock offset: -0.024 ms

# Below is generated by plot.py at 2018-08-11 12:52:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1259.84 Mbit/s
95th percentile per-packet one-way delay: 117.425 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 664.94 Mbit/s
95th percentile per-packet one-way delay: 127.563 ms
Loss rate: 0.77%
-- Flow 2:
Average throughput: 650.91 Mbit/s
95th percentile per-packet one-way delay: 89.139 ms
Loss rate: 0.46%
-- Flow 3:
Average throughput: 478.74 Mbit/s
95th percentile per-packet one-way delay: 76.948 ms
Loss rate: 0.00%
Run 1: Report of FillP-Sheep — Data Link

- Flow 1 ingress (mean 670.10 Mbit/s)
- Flow 1 egress (mean 664.94 Mbit/s)
- Flow 2 ingress (mean 654.06 Mbit/s)
- Flow 2 egress (mean 650.93 Mbit/s)
- Flow 3 ingress (mean 478.70 Mbit/s)
- Flow 3 egress (mean 478.74 Mbit/s)

Per packet one way delay (ms)

- Flow 1 (95th percentile 127.56 ms)
- Flow 2 (95th percentile 89.14 ms)
- Flow 3 (95th percentile 76.95 ms)
Run 2: Statistics of FillP-Sheep

Start at: 2018-08-11 07:20:45
End at: 2018-08-11 07:21:15
Local clock offset: -0.095 ms
Remote clock offset: -0.01 ms

# Below is generated by plot.py at 2018-08-11 12:52:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1246.22 Mbit/s
95th percentile per-packet one-way delay: 120.177 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 672.24 Mbit/s
95th percentile per-packet one-way delay: 126.473 ms
Loss rate: 0.66%
-- Flow 2:
Average throughput: 600.36 Mbit/s
95th percentile per-packet one-way delay: 94.660 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 525.38 Mbit/s
95th percentile per-packet one-way delay: 80.163 ms
Loss rate: 0.00%
Run 2: Report of FillP-Sheep — Data Link

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

Legend:
- Flow 1 ingress (mean 676.66 Mbit/s)
- Flow 1 egress (mean 672.24 Mbit/s)
- Flow 2 ingress (mean 600.24 Mbit/s)
- Flow 2 egress (mean 600.36 Mbit/s)
- Flow 3 ingress (mean 525.47 Mbit/s)
- Flow 3 egress (mean 525.38 Mbit/s)

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

Legend:
- Flow 1 (95th percentile 126.47 ms)
- Flow 2 (95th percentile 94.66 ms)
- Flow 3 (95th percentile 80.16 ms)
Run 3: Statistics of FillP-Sheep

Start at: 2018-08-11 07:46:41
End at: 2018-08-11 07:47:11
Local clock offset: -0.048 ms
Remote clock offset: -0.316 ms

# Below is generated by plot.py at 2018-08-11 12:54:34
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1246.28 Mbit/s
  95th percentile per-packet one-way delay: 138.300 ms
  Loss rate: 1.19%
-- Flow 1:
  Average throughput: 707.86 Mbit/s
  95th percentile per-packet one-way delay: 131.817 ms
  Loss rate: 0.97%
-- Flow 2:
  Average throughput: 558.27 Mbit/s
  95th percentile per-packet one-way delay: 159.128 ms
  Loss rate: 2.09%
-- Flow 3:
  Average throughput: 503.23 Mbit/s
  95th percentile per-packet one-way delay: 84.340 ms
  Loss rate: 0.09%
Run 3: Report of FillP-Sheep — Data Link
Run 4: Statistics of FillP-Sheep

Start at: 2018-08-11 08:12:15
End at: 2018-08-11 08:12:45
Local clock offset: -0.087 ms
Remote clock offset: -0.417 ms

# Below is generated by plot.py at 2018-08-11 12:56:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1267.72 Mbit/s
95th percentile per-packet one-way delay: 127.874 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 681.47 Mbit/s
95th percentile per-packet one-way delay: 137.543 ms
Loss rate: 1.25%
-- Flow 2:
Average throughput: 616.89 Mbit/s
95th percentile per-packet one-way delay: 94.350 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 524.44 Mbit/s
95th percentile per-packet one-way delay: 124.440 ms
Loss rate: 0.09%
Run 4: Report of FillP-Sheep — Data Link

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

- **Flow 1 Ingress (mean 690.15 Mb/s)**
- **Flow 1 Egress (mean 681.47 Mb/s)**
- **Flow 2 Ingress (mean 636.95 Mb/s)**
- **Flow 2 Egress (mean 616.89 Mb/s)**
- **Flow 3 Ingress (mean 525.01 Mb/s)**
- **Flow 3 Egress (mean 524.44 Mb/s)**

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

- **Flow 1 (95th percentile 137.54 ms)**
- **Flow 2 (95th percentile 94.35 ms)**
- **Flow 3 (95th percentile 124.44 ms)**
Run 5: Statistics of FillP-Sheep

Start at: 2018-08-11 08:37:56
End at: 2018-08-11 08:38:26
Local clock offset: -0.076 ms
Remote clock offset: 0.037 ms

# Below is generated by plot.py at 2018-08-11 13:00:36
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1367.33 Mbit/s
  95th percentile per-packet one-way delay: 119.459 ms
  Loss rate: 0.35%
-- Flow 1:
  Average throughput: 733.44 Mbit/s
  95th percentile per-packet one-way delay: 124.892 ms
  Loss rate: 0.49%
-- Flow 2:
  Average throughput: 675.22 Mbit/s
  95th percentile per-packet one-way delay: 109.168 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 558.49 Mbit/s
  95th percentile per-packet one-way delay: 111.880 ms
  Loss rate: 0.64%
Run 5: Report of FillP-Sheep — Data Link
Run 6: Statistics of FillP-Sheep

Start at: 2018-08-11 09:04:02
End at: 2018-08-11 09:04:32
Local clock offset: -0.086 ms
Remote clock offset: -0.369 ms

# Below is generated by plot.py at 2018-08-11 13:00:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1311.71 Mbit/s
95th percentile per-packet one-way delay: 127.175 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 692.81 Mbit/s
95th percentile per-packet one-way delay: 139.549 ms
Loss rate: 1.02%
-- Flow 2:
Average throughput: 692.88 Mbit/s
95th percentile per-packet one-way delay: 110.984 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 478.97 Mbit/s
95th percentile per-packet one-way delay: 119.871 ms
Loss rate: 0.00%
Run 6: Report of FillP-Sheep — Data Link

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

- Flow 1 ingress (mean 699.93 Mb/s)
- Flow 1 egress (mean 692.81 Mb/s)
- Flow 2 ingress (mean 693.92 Mb/s)
- Flow 2 egress (mean 692.88 Mb/s)
- Flow 3 ingress (mean 478.96 Mb/s)
- Flow 3 egress (mean 478.97 Mb/s)

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

- Flow 1 (95th percentile 139.55 ms)
- Flow 2 (95th percentile 110.98 ms)
- Flow 3 (95th percentile 119.87 ms)
Run 7: Statistics of FillP-Sheep

Start at: 2018-08-11 09:30:41
End at: 2018-08-11 09:31:11
Local clock offset: -0.016 ms
Remote clock offset: 0.545 ms

# Below is generated by plot.py at 2018-08-11 13:20:19
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1331.20 Mbit/s
  95th percentile per-packet one-way delay: 116.597 ms
  Loss rate: 0.21%
-- Flow 1:
  Average throughput: 712.24 Mbit/s
  95th percentile per-packet one-way delay: 121.088 ms
  Loss rate: 0.39%
-- Flow 2:
  Average throughput: 640.79 Mbit/s
  95th percentile per-packet one-way delay: 98.875 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 581.05 Mbit/s
  95th percentile per-packet one-way delay: 106.873 ms
  Loss rate: 0.02%
Run 7: Report of FillP-Sheep — Data Link
Run 8: Statistics of FillP-Sheep

Start at: 2018-08-11 09:57:32
End at: 2018-08-11 09:58:02
Local clock offset: 0.1 ms
Remote clock offset: 0.065 ms

# Below is generated by plot.py at 2018-08-11 13:20:20
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1273.25 Mbit/s
  95th percentile per-packet one-way delay: 120.103 ms
  Loss rate: 0.40%
-- Flow 1:
  Average throughput: 696.60 Mbit/s
  95th percentile per-packet one-way delay: 124.293 ms
  Loss rate: 0.38%
-- Flow 2:
  Average throughput: 615.18 Mbit/s
  95th percentile per-packet one-way delay: 118.287 ms
  Loss rate: 0.59%
-- Flow 3:
  Average throughput: 506.73 Mbit/s
  95th percentile per-packet one-way delay: 79.697 ms
  Loss rate: 0.02%
Run 8: Report of FillP-Sheep — Data Link

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

- Flow 1 ingress (mean 699.40 Mbps/s)
- Flow 1 egress (mean 696.60 Mbps/s)
- Flow 2 ingress (mean 613.89 Mbps/s)
- Flow 2 egress (mean 615.18 Mbps/s)
- Flow 3 ingress (mean 506.84 Mbps/s)
- Flow 3 egress (mean 506.73 Mbps/s)

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

- Flow 1 (95th percentile 124.29 ms)
- Flow 2 (95th percentile 118.29 ms)
- Flow 3 (95th percentile 79.70 ms)
Run 9: Statistics of FillP-Sheep

Start at: 2018-08-11 10:24:27
End at: 2018-08-11 10:24:57
Local clock offset: 0.054 ms
Remote clock offset: -0.025 ms

# Below is generated by plot.py at 2018-08-11 13:20:20
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1262.05 Mbit/s
  95th percentile per-packet one-way delay: 115.784 ms
  Loss rate: 0.14%
-- Flow 1:
  Average throughput: 672.54 Mbit/s
  95th percentile per-packet one-way delay: 123.136 ms
  Loss rate: 0.25%
-- Flow 2:
  Average throughput: 618.59 Mbit/s
  95th percentile per-packet one-way delay: 98.514 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 538.97 Mbit/s
  95th percentile per-packet one-way delay: 121.299 ms
  Loss rate: 0.05%
Run 9: Report of FillP-Sheep — Data Link

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

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Run 10: Statistics of FillIP-Sheep

Start at: 2018-08-11 10:51:20
End at: 2018-08-11 10:51:50
Local clock offset: -0.085 ms
Remote clock offset: 0.153 ms

# Below is generated by plot.py at 2018-08-11 13:21:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1296.75 Mbit/s
95th percentile per-packet one-way delay: 133.643 ms
Loss rate: 0.81%
-- Flow 1:
Average throughput: 694.78 Mbit/s
95th percentile per-packet one-way delay: 126.373 ms
Loss rate: 0.73%
-- Flow 2:
Average throughput: 623.46 Mbit/s
95th percentile per-packet one-way delay: 150.810 ms
Loss rate: 1.29%
-- Flow 3:
Average throughput: 564.73 Mbit/s
95th percentile per-packet one-way delay: 116.237 ms
Loss rate: 0.00%
Run 10: Report of FillIP-Sheep — Data Link
Run 1: Statistics of Indigo

Start at: 2018-08-11 07:04:11
End at: 2018-08-11 07:04:41
Local clock offset: -0.176 ms
Remote clock offset: 0.536 ms

# Below is generated by plot.py at 2018-08-11 13:21:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 320.15 Mbit/s
95th percentile per-packet one-way delay: 63.145 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 122.06 Mbit/s
95th percentile per-packet one-way delay: 63.131 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 207.52 Mbit/s
95th percentile per-packet one-way delay: 62.952 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 186.93 Mbit/s
95th percentile per-packet one-way delay: 63.601 ms
Loss rate: 0.00%
Run 1: Report of Indigo — Data Link
Run 2: Statistics of Indigo

Start at: 2018-08-11 07:29:57
End at: 2018-08-11 07:30:27
Local clock offset: -0.09 ms
Remote clock offset: -0.665 ms

# Below is generated by plot.py at 2018-08-11 13:21:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 398.71 Mbit/s
95th percentile per-packet one-way delay: 66.903 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 210.34 Mbit/s
95th percentile per-packet one-way delay: 66.714 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 208.41 Mbit/s
95th percentile per-packet one-way delay: 67.108 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 155.25 Mbit/s
95th percentile per-packet one-way delay: 67.367 ms
Loss rate: 0.00%
Run 2: Report of Indigo — Data Link
Run 3: Statistics of Indigo

Start at: 2018-08-11 07:55:45
End at: 2018-08-11 07:56:15
Local clock offset: -0.116 ms
Remote clock offset: 0.518 ms

# Below is generated by plot.py at 2018-08-11 13:21:05
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 390.31 Mbit/s
  95th percentile per-packet one-way delay: 68.453 ms
  Loss rate: 0.03%
-- Flow 1:
  Average throughput: 208.46 Mbit/s
  95th percentile per-packet one-way delay: 68.201 ms
  Loss rate: 0.02%
-- Flow 2:
  Average throughput: 194.88 Mbit/s
  95th percentile per-packet one-way delay: 68.713 ms
  Loss rate: 0.02%
-- Flow 3:
  Average throughput: 163.25 Mbit/s
  95th percentile per-packet one-way delay: 68.672 ms
  Loss rate: 0.04%
Run 3: Report of Indigo — Data Link

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

Legend:
- Flow 1 ingress (mean 208.51 Mbit/s)
- Flow 1 egress (mean 208.46 Mbit/s)
- Flow 2 ingress (mean 194.89 Mbit/s)
- Flow 2 egress (mean 194.88 Mbit/s)
- Flow 3 ingress (mean 163.25 Mbit/s)
- Flow 3 egress (mean 163.25 Mbit/s)
Run 4: Statistics of Indigo

Start at: 2018-08-11 08:21:22
End at: 2018-08-11 08:21:52
Local clock offset: -0.055 ms
Remote clock offset: -0.069 ms

# Below is generated by plot.py at 2018-08-11 13:21:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 363.02 Mbit/s
95th percentile per-packet one-way delay: 67.640 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 210.64 Mbit/s
95th percentile per-packet one-way delay: 67.342 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 154.47 Mbit/s
95th percentile per-packet one-way delay: 67.862 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 153.66 Mbit/s
95th percentile per-packet one-way delay: 68.082 ms
Loss rate: 0.12%
Run 4: Report of Indigo — Data Link
Run 5: Statistics of Indigo

Start at: 2018-08-11 08:46:55
End at: 2018-08-11 08:47:25
Local clock offset: -0.065 ms
Remote clock offset: -0.261 ms

# Below is generated by plot.py at 2018-08-11 13:21:05
# Datalink statistics
-- Total of 3 flows:
 Average throughput: 401.93 Mbit/s
  95th percentile per-packet one-way delay: 62.725 ms
 Loss rate: 0.18%
-- Flow 1:
 Average throughput: 211.92 Mbit/s
  95th percentile per-packet one-way delay: 62.355 ms
 Loss rate: 0.00%
-- Flow 2:
 Average throughput: 197.42 Mbit/s
  95th percentile per-packet one-way delay: 62.813 ms
 Loss rate: 0.50%
-- Flow 3:
 Average throughput: 184.32 Mbit/s
  95th percentile per-packet one-way delay: 63.494 ms
 Loss rate: 0.09%
Run 5: Report of Indigo — Data Link
Run 6: Statistics of Indigo

Start at: 2018-08-11 09:13:04
End at: 2018-08-11 09:13:34
Local clock offset: -0.093 ms
Remote clock offset: -0.283 ms

# Below is generated by plot.py at 2018-08-11 13:21:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 406.04 Mbit/s
95th percentile per-packet one-way delay: 62.097 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 216.37 Mbit/s
95th percentile per-packet one-way delay: 61.721 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 208.40 Mbit/s
95th percentile per-packet one-way delay: 62.573 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 160.17 Mbit/s
95th percentile per-packet one-way delay: 62.402 ms
Loss rate: 0.00%
Run 6: Report of Indigo — Data Link
Run 7: Statistics of Indigo

Start at: 2018-08-11 09:39:53
End at: 2018-08-11 09:40:23
Local clock offset: 0.002 ms
Remote clock offset: -0.143 ms

# Below is generated by plot.py at 2018-08-11 13:21:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 403.72 Mbit/s
95th percentile per-packet one-way delay: 62.374 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 213.27 Mbit/s
95th percentile per-packet one-way delay: 62.199 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 208.83 Mbit/s
95th percentile per-packet one-way delay: 62.370 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 163.32 Mbit/s
95th percentile per-packet one-way delay: 62.891 ms
Loss rate: 0.00%
Run 7: Report of Indigo — Data Link

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

- **Flow 1** (ingress mean 213.36 Mbit/s, egress mean 213.27 Mbit/s)
- **Flow 2** (ingress mean 208.83 Mbit/s, egress mean 208.83 Mbit/s)
- **Flow 3** (ingress mean 163.34 Mbit/s, egress mean 163.32 Mbit/s)

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Run 8: Statistics of Indigo

Start at: 2018-08-11 10:06:50
End at: 2018-08-11 10:07:20
Local clock offset: 0.042 ms
Remote clock offset: -0.745 ms

# Below is generated by plot.py at 2018-08-11 13:21:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 395.19 Mbit/s
95th percentile per-packet one-way delay: 61.410 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 207.69 Mbit/s
95th percentile per-packet one-way delay: 61.104 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 199.82 Mbit/s
95th percentile per-packet one-way delay: 61.547 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 169.40 Mbit/s
95th percentile per-packet one-way delay: 61.854 ms
Loss rate: 0.00%
Run 8: Report of Indigo — Data Link

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**Throughput (Mbps):**

- **Flow 1 ingress (mean 207.69 Mbps)**
- **Flow 1 egress (mean 207.69 Mbps)**
- **Flow 2 ingress (mean 199.82 Mbps)**
- **Flow 2 egress (mean 199.82 Mbps)**
- **Flow 3 ingress (mean 169.37 Mbps)**
- **Flow 3 egress (mean 169.40 Mbps)**

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

- **Flow 1 (95th percentile 61.10 ms)**
- **Flow 2 (95th percentile 61.55 ms)**
- **Flow 3 (95th percentile 61.85 ms)**
Run 9: Statistics of Indigo

Start at: 2018-08-11 10:33:26
End at: 2018-08-11 10:33:56
Local clock offset: 0.054 ms
Remote clock offset: 0.287 ms

# Below is generated by plot.py at 2018-08-11 13:21:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 396.33 Mbit/s
95th percentile per-packet one-way delay: 63.618 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 216.26 Mbit/s
95th percentile per-packet one-way delay: 63.310 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 178.94 Mbit/s
95th percentile per-packet one-way delay: 64.398 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 189.22 Mbit/s
95th percentile per-packet one-way delay: 63.497 ms
Loss rate: 0.00%
Run 9: Report of Indigo — Data Link
Run 10: Statistics of Indigo

Start at: 2018-08-11 11:00:26
End at: 2018-08-11 11:00:56
Local clock offset: -0.005 ms
Remote clock offset: 0.726 ms

# Below is generated by plot.py at 2018-08-11 13:21:05
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 414.45 Mbit/s
  95th percentile per-packet one-way delay: 63.734 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 219.35 Mbit/s
  95th percentile per-packet one-way delay: 63.435 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 200.37 Mbit/s
  95th percentile per-packet one-way delay: 63.950 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 192.39 Mbit/s
  95th percentile per-packet one-way delay: 64.254 ms
  Loss rate: 0.00%
Run 10: Report of Indigo — Data Link

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

Legend:
- Flow 1 ingress (mean 219.35 Mbit/s)
- Flow 1 egress (mean 219.35 Mbit/s)
- Flow 2 ingress (mean 200.37 Mbit/s)
- Flow 2 egress (mean 200.37 Mbit/s)
- Flow 3 ingress (mean 192.37 Mbit/s)
- Flow 3 egress (mean 192.39 Mbit/s)
Run 1: Statistics of LEDBAT

Start at: 2018-08-11 06:50:23
End at: 2018-08-11 06:50:53
Local clock offset: -0.091 ms
Remote clock offset: -0.049 ms

# Below is generated by plot.py at 2018-08-11 13:21:05
# Datalink statistics
--- Total of 3 flows:
Average throughput: 36.81 Mbit/s
95th percentile per-packet one-way delay: 62.347 ms
Loss rate: 0.00%
--- Flow 1:
Average throughput: 23.52 Mbit/s
95th percentile per-packet one-way delay: 62.480 ms
Loss rate: 0.00%
--- Flow 2:
Average throughput: 16.07 Mbit/s
95th percentile per-packet one-way delay: 62.077 ms
Loss rate: 0.00%
--- Flow 3:
Average throughput: 7.94 Mbit/s
95th percentile per-packet one-way delay: 61.934 ms
Loss rate: 0.00%
Run 1: Report of LEDBAT — Data Link

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

**Throughput (Mbps)**

**Time (s)**

- **Flow 1 Ingress (mean 23.52 Mbps)**
- **Flow 1 Egress (mean 23.52 Mbps)**
- **Flow 2 Ingress (mean 16.07 Mbps)**
- **Flow 2 Egress (mean 16.07 Mbps)**
- **Flow 3 Ingress (mean 7.94 Mbps)**
- **Flow 3 Egress (mean 7.94 Mbps)**

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

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

**Time (s)**

- **Flow 1 (95th percentile 62.48 ms)**
- **Flow 2 (95th percentile 62.08 ms)**
- **Flow 3 (95th percentile 61.93 ms)**
Run 2: Statistics of LEDBAT

Start at: 2018-08-11 07:16:27
End at: 2018-08-11 07:16:57
Local clock offset: -0.001 ms
Remote clock offset: -0.064 ms

# Below is generated by plot.py at 2018-08-11 13:21:05
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 32.54 Mbit/s
  95th percentile per-packet one-way delay: 67.981 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 20.90 Mbit/s
  95th percentile per-packet one-way delay: 68.096 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 14.10 Mbit/s
  95th percentile per-packet one-way delay: 67.651 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 6.96 Mbit/s
  95th percentile per-packet one-way delay: 67.416 ms
  Loss rate: 0.00%
Run 2: Report of LEDBAT — Data Link

![Graph showing throughput and delay over time for three flows with different colors and labels.](image-url)
Run 3: Statistics of LEDBAT

Start at: 2018-08-11 07:42:34
End at: 2018-08-11 07:43:04
Local clock offset: -0.062 ms
Remote clock offset: -0.185 ms

# Below is generated by plot.py at 2018-08-11 13:21:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 32.95 Mbit/s
95th percentile per-packet one-way delay: 67.868 ms
Loss rate: 0.00%

-- Flow 1:
Average throughput: 20.89 Mbit/s
95th percentile per-packet one-way delay: 67.909 ms
Loss rate: 0.00%

-- Flow 2:
Average throughput: 14.57 Mbit/s
95th percentile per-packet one-way delay: 67.823 ms
Loss rate: 0.00%

-- Flow 3:
Average throughput: 7.27 Mbit/s
95th percentile per-packet one-way delay: 67.515 ms
Loss rate: 0.00%
Run 3: Report of LEDBAT — Data Link
Run 4: Statistics of LEDBAT

Start at: 2018-08-11 08:08:00
End at: 2018-08-11 08:08:30
Local clock offset: -0.079 ms
Remote clock offset: 0.628 ms

# Below is generated by plot.py at 2018-08-11 13:21:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 36.59 Mbit/s
95th percentile per-packet one-way delay: 63.217 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 23.71 Mbit/s
95th percentile per-packet one-way delay: 63.345 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 15.49 Mbit/s
95th percentile per-packet one-way delay: 63.094 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 7.88 Mbit/s
95th percentile per-packet one-way delay: 62.682 ms
Loss rate: 0.00%
Run 4: Report of LEDBAT — Data Link
Run 5: Statistics of LEDBAT

Start at: 2018-08-11 08:33:38
End at: 2018-08-11 08:34:08
Local clock offset: -0.13 ms
Remote clock offset: -0.678 ms

# Below is generated by plot.py at 2018-08-11 13:21:05
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 34.39 Mbit/s
  95th percentile per-packet one-way delay: 67.367 ms
  Loss rate: 0.11%
  -- Flow 1:
  Average throughput: 21.96 Mbit/s
  95th percentile per-packet one-way delay: 67.565 ms
  Loss rate: 0.00%
  -- Flow 2:
  Average throughput: 15.06 Mbit/s
  95th percentile per-packet one-way delay: 66.867 ms
  Loss rate: 0.00%
  -- Flow 3:
  Average throughput: 7.38 Mbit/s
  95th percentile per-packet one-way delay: 66.923 ms
  Loss rate: 1.57%
Run 5: Report of LEDBAT — Data Link

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

Legend:
- Blue dashed line: Flow 1 ingress (mean 21.96 Mbit/s)
- Blue solid line: Flow 1 egress (mean 21.96 Mbit/s)
- Green dashed line: Flow 2 ingress (mean 15.06 Mbit/s)
- Green solid line: Flow 2 egress (mean 15.06 Mbit/s)
- Red dashed line: Flow 3 ingress (mean 7.40 Mbit/s)
- Red solid line: Flow 3 egress (mean 7.38 Mbit/s)
Run 6: Statistics of LEDBAT

Start at: 2018-08-11 08:59:29
End at: 2018-08-11 08:59:59
Local clock offset: -0.054 ms
Remote clock offset: -0.86 ms

# Below is generated by plot.py at 2018-08-11 13:21:05
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 36.66 Mbit/s
  95th percentile per-packet one-way delay: 61.777 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 24.05 Mbit/s
  95th percentile per-packet one-way delay: 61.882 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 15.12 Mbit/s
  95th percentile per-packet one-way delay: 61.555 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 7.79 Mbit/s
  95th percentile per-packet one-way delay: 61.316 ms
  Loss rate: 0.00%
Run 6: Report of LEDBAT — Data Link

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

**Throughput (Mbit/s):**
- Flow 1 ingress (mean 24.05 Mbit/s)
- Flow 1 egress (mean 24.05 Mbit/s)
- Flow 2 ingress (mean 15.12 Mbit/s)
- Flow 2 egress (mean 15.12 Mbit/s)
- Flow 3 ingress (mean 7.79 Mbit/s)
- Flow 3 egress (mean 7.79 Mbit/s)

**Delay (ms):**
- Flow 1 (95th percentile 61.88 ms)
- Flow 2 (95th percentile 61.55 ms)
- Flow 3 (95th percentile 61.32 ms)
Run 7: Statistics of LEDBAT

Start at: 2018-08-11 09:26:05
End at: 2018-08-11 09:26:35
Local clock offset: -0.102 ms
Remote clock offset: -0.329 ms

# Below is generated by plot.py at 2018-08-11 13:21:05
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 36.22 Mbit/s
  95th percentile per-packet one-way delay: 62.663 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 24.03 Mbit/s
  95th percentile per-packet one-way delay: 62.717 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 14.49 Mbit/s
  95th percentile per-packet one-way delay: 62.771 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 7.89 Mbit/s
  95th percentile per-packet one-way delay: 61.867 ms
  Loss rate: 0.00%
Run 7: Report of LEDBAT — Data Link

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

![Graph 2: Per packet one way delay (ms)](image)
Run 8: Statistics of LEDBAT

Start at: 2018-08-11 09:52:49
End at: 2018-08-11 09:53:19
Local clock offset: 0.004 ms
Remote clock offset: -0.312 ms

# Below is generated by plot.py at 2018-08-11 13:21:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 36.90 Mbit/s
95th percentile per-packet one-way delay: 62.166 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 23.58 Mbit/s
95th percentile per-packet one-way delay: 62.324 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 16.06 Mbit/s
95th percentile per-packet one-way delay: 61.989 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 8.01 Mbit/s
95th percentile per-packet one-way delay: 61.435 ms
Loss rate: 0.00%
Run 8: Report of LEDBAT — Data Link

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

![Graph showing per-packet one-way delay over time for different flows with 95th percentile delays]
Run 9: Statistics of LEDBAT

Start at: 2018-08-11 10:19:42
End at: 2018-08-11 10:20:12
Local clock offset: -0.05 ms
Remote clock offset: 0.077 ms

# Below is generated by plot.py at 2018-08-11 13:21:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 37.30 Mbit/s
95th percentile per-packet one-way delay: 62.931 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 24.01 Mbit/s
95th percentile per-packet one-way delay: 62.975 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 16.06 Mbit/s
95th percentile per-packet one-way delay: 62.996 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 7.86 Mbit/s
95th percentile per-packet one-way delay: 62.206 ms
Loss rate: 0.00%
Run 9: Report of LEDBAT — Data Link
Run 10: Statistics of LEDBAT

Start at: 2018-08-11 10:46:37
End at: 2018-08-11 10:47:07
Local clock offset: -0.062 ms
Remote clock offset: -0.853 ms

# Below is generated by plot.py at 2018-08-11 13:21:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 36.32 Mbit/s
95th percentile per-packet one-way delay: 61.839 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 24.07 Mbit/s
95th percentile per-packet one-way delay: 61.743 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 14.49 Mbit/s
95th percentile per-packet one-way delay: 62.392 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 7.88 Mbit/s
95th percentile per-packet one-way delay: 61.470 ms
Loss rate: 0.00%
Run 10: Report of LEDBAT — Data Link

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

- **Throughput** (Mbps/s):
  - Flow 1 ingress (mean 24.07 Mbps/s)
  - Flow 1 egress (mean 24.07 Mbps/s)
  - Flow 2 ingress (mean 14.49 Mbps/s)
  - Flow 2 egress (mean 14.49 Mbps/s)
  - Flow 3 ingress (mean 7.88 Mbps/s)
  - Flow 3 egress (mean 7.88 Mbps/s)

- **Per packet one way delay (ms):**
  - Flow 1 (95th percentile 61.74 ms)
  - Flow 2 (95th percentile 62.39 ms)
  - Flow 3 (95th percentile 61.47 ms)
Run 1: Statistics of PCC-Allegro

Start at: 2018-08-11 06:47:40
End at: 2018-08-11 06:48:10
Local clock offset: -0.14 ms
Remote clock offset: 0.582 ms

# Below is generated by plot.py at 2018-08-11 13:28:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 660.99 Mbit/s
95th percentile per-packet one-way delay: 195.271 ms
Loss rate: 1.76%
-- Flow 1:
Average throughput: 535.82 Mbit/s
95th percentile per-packet one-way delay: 206.457 ms
Loss rate: 1.87%
-- Flow 2:
Average throughput: 126.99 Mbit/s
95th percentile per-packet one-way delay: 152.067 ms
Loss rate: 0.86%
-- Flow 3:
Average throughput: 122.83 Mbit/s
95th percentile per-packet one-way delay: 152.749 ms
Loss rate: 2.19%
Run 1: Report of PCC-Allegro — Data Link

![Graph showing network throughput and per-packet one-way delay over time for different flows.](image-url)
Run 2: Statistics of PCC-Allegro

Start at: 2018-08-11 07:13:43
End at: 2018-08-11 07:14:13
Local clock offset: -0.092 ms
Remote clock offset: 0.106 ms

# Below is generated by plot.py at 2018-08-11 13:29:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 693.92 Mbit/s
95th percentile per-packet one-way delay: 200.370 ms
Loss rate: 3.05%
-- Flow 1:
Average throughput: 527.77 Mbit/s
95th percentile per-packet one-way delay: 210.444 ms
Loss rate: 3.19%
-- Flow 2:
Average throughput: 247.80 Mbit/s
95th percentile per-packet one-way delay: 158.477 ms
Loss rate: 2.62%
-- Flow 3:
Average throughput: 4.49 Mbit/s
95th percentile per-packet one-way delay: 154.375 ms
Loss rate: 0.49%
Run 2: Report of PCC-Allegro — Data Link
Run 3: Statistics of PCC-Allegro

Start at: 2018-08-11 07:39:50
End at: 2018-08-11 07:40:21
Local clock offset: -0.027 ms
Remote clock offset: 1.28 ms

# Below is generated by plot.py at 2018-08-11 13:29:44
# Datalink statistics
-- Total of 3 flows:
95th percentile per-packet one-way delay: 170.882 ms
Loss rate: 0.89%
-- Flow 1:
Average throughput: 474.40 Mbit/s
95th percentile per-packet one-way delay: 189.118 ms
Loss rate: 1.10%
-- Flow 2:
Average throughput: 246.34 Mbit/s
95th percentile per-packet one-way delay: 138.937 ms
Loss rate: 0.39%
-- Flow 3:
Average throughput: 62.40 Mbit/s
95th percentile per-packet one-way delay: 139.604 ms
Loss rate: 0.06%
Run 3: Report of PCC-Allegro — Data Link
Run 4: Statistics of PCC-Allegro

Start at: 2018-08-11 08:05:19
End at: 2018-08-11 08:05:49
Local clock offset: -0.057 ms
Remote clock offset: 0.545 ms

# Below is generated by plot.py at 2018-08-11 13:29:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 624.42 Mbit/s
95th percentile per-packet one-way delay: 230.651 ms
Loss rate: 2.98%
-- Flow 1:
Average throughput: 500.47 Mbit/s
95th percentile per-packet one-way delay: 234.471 ms
Loss rate: 3.60%
-- Flow 2:
Average throughput: 122.98 Mbit/s
95th percentile per-packet one-way delay: 151.278 ms
Loss rate: 0.23%
-- Flow 3:
Average throughput: 128.28 Mbit/s
95th percentile per-packet one-way delay: 154.370 ms
Loss rate: 0.71%
Run 4: Report of PCC-Allegro — Data Link

![Graph of Throughput and Delay](image)

**Throughput (Mbps):**
- Flow 1 ingress (mean 519.21 Mbps)
- Flow 1 egress (mean 500.47 Mbps)
- Flow 2 ingress (mean 123.30 Mbps)
- Flow 2 egress (mean 122.98 Mbps)
- Flow 3 ingress (mean 126.29 Mbps)
- Flow 3 egress (mean 126.28 Mbps)

**Delay (ms):**
- Flow 1 (95th percentile 234.47 ms)
- Flow 2 (95th percentile 151.28 ms)
- Flow 3 (95th percentile 154.37 ms)
Run 5: Statistics of PCC-Allegro

Start at: 2018-08-11 08:30:57
End at: 2018-08-11 08:31:27
Local clock offset: -0.084 ms
Remote clock offset: -0.154 ms

# Below is generated by plot.py at 2018-08-11 13:30:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 622.93 Mbit/s
95th percentile per-packet one-way delay: 168.270 ms
Loss rate: 1.40%
-- Flow 1:
Average throughput: 493.90 Mbit/s
95th percentile per-packet one-way delay: 169.448 ms
Loss rate: 1.73%
-- Flow 2:
Average throughput: 193.08 Mbit/s
95th percentile per-packet one-way delay: 145.372 ms
Loss rate: 0.13%
-- Flow 3:
Average throughput: 2.29 Mbit/s
95th percentile per-packet one-way delay: 160.990 ms
Loss rate: 0.58%
Run 5: Report of PCC-Allegro — Data Link

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

- **Flow 1 ingress (mean 592.61 Mbit/s)**
- **Flow 1 egress (mean 493.90 Mbit/s)**
- **Flow 2 ingress (mean 193.29 Mbit/s)**
- **Flow 2 egress (mean 193.08 Mbit/s)**
- **Flow 3 ingress (mean 2.31 Mbit/s)**
- **Flow 3 egress (mean 2.29 Mbit/s)**

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

- **Flow 1 (95th percentile 169.45 ms)**
- **Flow 2 (95th percentile 145.37 ms)**
- **Flow 3 (95th percentile 160.99 ms)**
Run 6: Statistics of PCC-Allegro

Start at: 2018-08-11 08:56:44
End at: 2018-08-11 08:57:14
Local clock offset: -0.023 ms
Remote clock offset: 1.151 ms

# Below is generated by plot.py at 2018-08-11 13:32:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 696.27 Mbit/s
95th percentile per-packet one-way delay: 187.847 ms
Loss rate: 5.84%

-- Flow 1:
Average throughput: 495.92 Mbit/s
95th percentile per-packet one-way delay: 201.154 ms
Loss rate: 5.82%

-- Flow 2:
Average throughput: 247.16 Mbit/s
95th percentile per-packet one-way delay: 154.939 ms
Loss rate: 5.53%

-- Flow 3:
Average throughput: 109.98 Mbit/s
95th percentile per-packet one-way delay: 155.133 ms
Loss rate: 7.56%
Run 6: Report of PCC-Allegro — Data Link

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

- Flow 1 ingress (mean 526.57 Mbit/s)
- Flow 1 egress (mean 495.92 Mbit/s)
- Flow 2 ingress (mean 261.62 Mbit/s)
- Flow 2 egress (mean 247.16 Mbit/s)
- Flow 3 ingress (mean 118.97 Mbit/s)
- Flow 3 egress (mean 109.99 Mbit/s)
Run 7: Statistics of PCC-Allegro

Start at: 2018-08-11 09:23:22
End at: 2018-08-11 09:23:52
Local clock offset: -0.089 ms
Remote clock offset: 0.422 ms

# Below is generated by plot.py at 2018-08-11 13:32:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 659.92 Mbit/s
95th percentile per-packet one-way delay: 179.431 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 480.68 Mbit/s
95th percentile per-packet one-way delay: 186.150 ms
Loss rate: 0.94%
-- Flow 2:
Average throughput: 254.77 Mbit/s
95th percentile per-packet one-way delay: 149.769 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 30.22 Mbit/s
95th percentile per-packet one-way delay: 153.478 ms
Loss rate: 0.16%
Run 7: Report of PCC-Allegro — Data Link

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**Graph 1:**
- **Throughput (Mbps):**
  - Flow 1 Ingress (mean 485.19 Mbps)
  - Flow 1 Egress (mean 480.68 Mbps)
  - Flow 2 Ingress (mean 256.19 Mbps)
  - Flow 2 Egress (mean 254.77 Mbps)
  - Flow 3 Ingress (mean 30.27 Mbps)
  - Flow 3 Egress (mean 30.22 Mbps)

**Graph 2:**
- **Per-packet one way delay (ms):**
  - Flow 1 (95th percentile 186.15 ms)
  - Flow 2 (95th percentile 149.77 ms)
  - Flow 3 (95th percentile 153.48 ms)
Run 8: Statistics of PCC-Allegro

Start at: 2018-08-11 09:50:05
End at: 2018-08-11 09:50:35
Local clock offset: 0.044 ms
Remote clock offset: 0.705 ms

# Below is generated by plot.py at 2018-08-11 13:33:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 674.45 Mbit/s
95th percentile per-packet one-way delay: 169.491 ms
Loss rate: 4.00%
-- Flow 1:
Average throughput: 519.21 Mbit/s
95th percentile per-packet one-way delay: 172.277 ms
Loss rate: 4.09%
-- Flow 2:
Average throughput: 231.40 Mbit/s
95th percentile per-packet one-way delay: 156.774 ms
Loss rate: 3.76%
-- Flow 3:
Average throughput: 4.11 Mbit/s
95th percentile per-packet one-way delay: 111.504 ms
Loss rate: 0.21%
Run 8: Report of PCC-Allegro — Data Link

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

Throughput (Mbps)

- Flow 1 ingress (mean 541.35 Mbps)
- Flow 1 egress (mean 519.21 Mbps)
- Flow 2 ingress (mean 240.43 Mbps)
- Flow 2 egress (mean 232.40 Mbps)
- Flow 3 ingress (mean 4.12 Mbps)
- Flow 3 egress (mean 4.11 Mbps)

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

Per-packet one-way delay (ms)

- Flow 1 (95th percentile 172.28 ms)
- Flow 2 (95th percentile 156.77 ms)
- Flow 3 (95th percentile 111.50 ms)
Run 9: Statistics of PCC-Allegro

Start at: 2018-08-11 10:16:59
End at: 2018-08-11 10:17:29
Local clock offset: 0.048 ms
Remote clock offset: 0.444 ms

# Below is generated by plot.py at 2018-08-11 13:39:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 659.35 Mbit/s
95th percentile per-packet one-way delay: 229.469 ms
Loss rate: 4.93%
-- Flow 1:
Average throughput: 553.10 Mbit/s
95th percentile per-packet one-way delay: 231.579 ms
Loss rate: 5.63%
-- Flow 2:
Average throughput: 157.63 Mbit/s
95th percentile per-packet one-way delay: 150.193 ms
Loss rate: 1.09%
-- Flow 3:
Average throughput: 4.47 Mbit/s
95th percentile per-packet one-way delay: 149.910 ms
Loss rate: 0.79%
Run 9: Report of PCC-Allegro — Data Link

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

- Flow 1 ingress (mean 586.10 Mbps)
- Flow 1 egress (mean 553.10 Mbps)
- Flow 2 ingress (mean 159.36 Mbps)
- Flow 2 egress (mean 157.63 Mbps)
- Flow 3 ingress (mean 4.50 Mbps)
- Flow 3 egress (mean 4.47 Mbps)

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

- Flow 1 (95th percentile 231.58 ms)
- Flow 2 (95th percentile 150.19 ms)
- Flow 3 (95th percentile 149.91 ms)
Run 10: Statistics of PCC-Allegro

End at: 2018-08-11 10:44:23
Local clock offset: -0.03 ms
Remote clock offset: -0.004 ms

# Below is generated by plot.py at 2018-08-11 13:41:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 689.75 Mbit/s
95th percentile per-packet one-way delay: 218.612 ms
Loss rate: 2.76%
-- Flow 1:
Average throughput: 498.84 Mbit/s
95th percentile per-packet one-way delay: 234.573 ms
Loss rate: 2.97%
-- Flow 2:
Average throughput: 257.89 Mbit/s
95th percentile per-packet one-way delay: 152.432 ms
Loss rate: 2.15%
-- Flow 3:
Average throughput: 58.90 Mbit/s
95th percentile per-packet one-way delay: 153.015 ms
Loss rate: 2.52%
Run 10: Report of PCC-Allegro — Data Link

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

**Throughput (Mbps):**
- Flow 1 ingress: 514.19 Mbps (mean)
- Flow 1 egress: 498.84 Mbps (mean)
- Flow 2 ingress: 263.53 Mbps (mean)
- Flow 2 egress: 257.89 Mbps (mean)
- Flow 3 ingress: 60.44 Mbps (mean)
- Flow 3 egress: 58.90 Mbps (mean)

**Per-packet one-way delay (ms):**
- Flow 1 (95th percentile): 234.57 ms
- Flow 2 (95th percentile): 152.43 ms
- Flow 3 (95th percentile): 153.01 ms
Run 1: Statistics of PCC-Expr

Start at: 2018-08-11 06:53:20
End at: 2018-08-11 06:53:50
Local clock offset: -0.13 ms
Remote clock offset: -0.604 ms

# Below is generated by plot.py at 2018-08-11 13:45:16
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 504.45 Mbit/s
  95th percentile per-packet one-way delay: 226.039 ms
  Loss rate: 4.57%
-- Flow 1:
  Average throughput: 315.47 Mbit/s
  95th percentile per-packet one-way delay: 233.471 ms
  Loss rate: 5.26%
-- Flow 2:
  Average throughput: 237.76 Mbit/s
  95th percentile per-packet one-way delay: 212.060 ms
  Loss rate: 4.01%
-- Flow 3:
  Average throughput: 92.40 Mbit/s
  95th percentile per-packet one-way delay: 61.753 ms
  Loss rate: 0.00%
Run 1: Report of PCC-Expr — Data Link

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

- Flow 1 ingress (mean 332.98 Mbit/s)
- Flow 1 egress (mean 315.47 Mbit/s)
- Flow 2 ingress (mean 247.68 Mbit/s)
- Flow 2 egress (mean 237.76 Mbit/s)
- Flow 3 ingress (mean 92.40 Mbit/s)
- Flow 3 egress (mean 92.40 Mbit/s)
Run 2: Statistics of PCC-Expr

Start at: 2018-08-11 07:19:01
End at: 2018-08-11 07:19:31
Local clock offset: -0.068 ms
Remote clock offset: -0.044 ms

# Below is generated by plot.py at 2018-08-11 13:45:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 387.97 Mbit/s
95th percentile per-packet one-way delay: 206.352 ms
Loss rate: 5.67%
-- Flow 1:
Average throughput: 293.73 Mbit/s
95th percentile per-packet one-way delay: 209.645 ms
Loss rate: 7.36%
-- Flow 2:
Average throughput: 61.88 Mbit/s
95th percentile per-packet one-way delay: 66.747 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 160.93 Mbit/s
95th percentile per-packet one-way delay: 88.622 ms
Loss rate: 0.00%
Run 2: Report of PCC-Expr — Data Link

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

**Throughput (Mbps):**
- Flow 1 ingress (mean 317.01 Mbit/s)
- Flow 1 egress (mean 293.73 Mbit/s)
- Flow 2 ingress (mean 61.98 Mbit/s)
- Flow 2 egress (mean 61.85 Mbit/s)
- Flow 3 ingress (mean 160.83 Mbit/s)
- Flow 3 egress (mean 160.93 Mbit/s)

**Per-packet one-way delay (ms):**
- Flow 1 (95th percentile 209.65 ms)
- Flow 2 (95th percentile 66.75 ms)
- Flow 3 (95th percentile 88.62 ms)
Run 3: Statistics of PCC-Expr

Start at: 2018-08-11 07:45:08
End at: 2018-08-11 07:45:38
Local clock offset: -0.046 ms
Remote clock offset: -0.721 ms

# Below is generated by plot.py at 2018-08-11 13:45:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 282.66 Mbit/s
95th percentile per-packet one-way delay: 186.339 ms
Loss rate: 0.78%

-- Flow 1:
Average throughput: 64.47 Mbit/s
95th percentile per-packet one-way delay: 66.160 ms
Loss rate: 0.01%

-- Flow 2:
Average throughput: 237.12 Mbit/s
95th percentile per-packet one-way delay: 227.649 ms
Loss rate: 1.36%

-- Flow 3:
Average throughput: 183.98 Mbit/s
95th percentile per-packet one-way delay: 97.106 ms
Loss rate: 0.06%
Run 3: Report of PCC-Expr — Data Link

[Graph showing throughput and packet delay over time for different flows with mean rates and 95th percentile delays indicated.]
Run 4: Statistics of PCC-Expr

Start at: 2018-08-11 08:10:48
End at: 2018-08-11 08:11:18
Local clock offset: -0.052 ms
Remote clock offset: 0.193 ms

# Below is generated by plot.py at 2018-08-11 13:45:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 208.12 Mbit/s
95th percentile per-packet one-way delay: 67.020 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 98.00 Mbit/s
95th percentile per-packet one-way delay: 67.020 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 139.99 Mbit/s
95th percentile per-packet one-way delay: 67.012 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 51.97 Mbit/s
95th percentile per-packet one-way delay: 67.055 ms
Loss rate: 0.00%
Run 4: Report of PCC-Expr — Data Link

First graph:
- Y-axis: Throughput (Mbit/s)
- X-axis: Time (s)
- Legend:
  - Flow 1 ingress (mean 98.02 Mbit/s)
  - Flow 1 egress (mean 98.00 Mbit/s)
  - Flow 2 ingress (mean 139.91 Mbit/s)
  - Flow 2 egress (mean 139.99 Mbit/s)
  - Flow 3 ingress (mean 51.97 Mbit/s)
  - Flow 3 egress (mean 51.97 Mbit/s)

Second graph:
- Y-axis: Per-packet one-way delay (ms)
- X-axis: Time (s)
- Legend:
  - Flow 1 (95th percentile 67.02 ms)
  - Flow 2 (95th percentile 67.01 ms)
  - Flow 3 (95th percentile 67.06 ms)
Run 5: Statistics of PCC-Expr

Start at: 2018-08-11 08:36:08
End at: 2018-08-11 08:36:38
Local clock offset: -0.068 ms
Remote clock offset: -0.97 ms

# Below is generated by plot.py at 2018-08-11 13:52:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 566.51 Mbit/s
95th percentile per-packet one-way delay: 222.866 ms
Loss rate: 7.13%
-- Flow 1:
Average throughput: 410.07 Mbit/s
95th percentile per-packet one-way delay: 228.122 ms
Loss rate: 8.40%
-- Flow 2:
Average throughput: 232.47 Mbit/s
95th percentile per-packet one-way delay: 164.832 ms
Loss rate: 3.61%
-- Flow 3:
Average throughput: 5.49 Mbit/s
95th percentile per-packet one-way delay: 166.699 ms
Loss rate: 4.09%
Run 5: Report of PCC-Expr — Data Link
Run 6: Statistics of PCC-Expr

Start at: 2018-08-11 09:02:17
End at: 2018-08-11 09:02:47
Local clock offset: -0.034 ms
Remote clock offset: 0.567 ms

# Below is generated by plot.py at 2018-08-11 13:52:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 388.11 Mbit/s
95th percentile per-packet one-way delay: 68.117 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 220.67 Mbit/s
95th percentile per-packet one-way delay: 65.802 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 232.60 Mbit/s
95th percentile per-packet one-way delay: 70.095 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 38.82 Mbit/s
95th percentile per-packet one-way delay: 67.572 ms
Loss rate: 0.00%
Run 6: Report of PCC-Expr — Data Link
Run 7: Statistics of PCC-Expr

Start at: 2018-08-11 09:28:47
End at: 2018-08-11 09:29:17
Local clock offset: -0.034 ms
Remote clock offset: 0.043 ms

# Below is generated by plot.py at 2018-08-11 13:55:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 482.41 Mbit/s
95th percentile per-packet one-way delay: 128.561 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 288.59 Mbit/s
95th percentile per-packet one-way delay: 154.723 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 205.49 Mbit/s
95th percentile per-packet one-way delay: 65.156 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 173.53 Mbit/s
95th percentile per-packet one-way delay: 67.044 ms
Loss rate: 0.01%
Run 7: Report of PCC-Expr — Data Link
Run 8: Statistics of PCC-Expr

Start at: 2018-08-11 09:55:40
End at: 2018-08-11 09:56:10
Local clock offset: 0.021 ms
Remote clock offset: 0.074 ms

# Below is generated by plot.py at 2018-08-11 13:55:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 465.36 Mbit/s
95th percentile per-packet one-way delay: 225.759 ms
Loss rate: 2.04%
-- Flow 1:
Average throughput: 289.32 Mbit/s
95th percentile per-packet one-way delay: 231.715 ms
Loss rate: 3.24%
-- Flow 2:
Average throughput: 181.40 Mbit/s
95th percentile per-packet one-way delay: 64.990 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 168.11 Mbit/s
95th percentile per-packet one-way delay: 66.701 ms
Loss rate: 0.00%
Run 8: Report of PCC-Expr — Data Link

[Graph showing throughput over time for different flows]

[Graph showing packet delay over time for different flows]

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Run 9: Statistics of PCC-Expr

Start at: 2018-08-11 10:22:35
End at: 2018-08-11 10:23:05
Local clock offset: -0.007 ms
Remote clock offset: -0.019 ms

# Below is generated by plot.py at 2018-08-11 13:56:14
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 462.79 Mbit/s
  95th percentile per-packet one-way delay: 195.397 ms
  Loss rate: 3.73%
-- Flow 1:
  Average throughput: 275.81 Mbit/s
  95th percentile per-packet one-way delay: 215.338 ms
  Loss rate: 6.11%
-- Flow 2:
  Average throughput: 189.96 Mbit/s
  95th percentile per-packet one-way delay: 65.012 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 184.49 Mbit/s
  95th percentile per-packet one-way delay: 70.071 ms
  Loss rate: 0.00%
Run 9: Report of PCC-Expr — Data Link
Run 10: Statistics of PCC-Expr

Start at: 2018-08-11 10:49:29
End at: 2018-08-11 10:49:59
Local clock offset: 0.049 ms
Remote clock offset: -0.049 ms

# Below is generated by plot.py at 2018-08-11 13:56:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 449.99 Mbit/s
95th percentile per-packet one-way delay: 169.918 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 245.52 Mbit/s
95th percentile per-packet one-way delay: 138.008 ms
Loss rate: 0.19%
-- Flow 2:
Average throughput: 277.61 Mbit/s
95th percentile per-packet one-way delay: 193.335 ms
Loss rate: 1.75%
-- Flow 3:
Average throughput: 60.16 Mbit/s
95th percentile per-packet one-way delay: 61.949 ms
Loss rate: 0.00%
Run 1: Statistics of QUIC Cubic

Start at: 2018-08-11 07:03:01
End at: 2018-08-11 07:03:31
Local clock offset: -0.142 ms
Remote clock offset: -0.251 ms

# Below is generated by plot.py at 2018-08-11 13:56:25
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 11.14 Mbit/s
  95th percentile per-packet one-way delay: 60.868 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 61.032 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 61.565 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 34.16 Mbit/s
  95th percentile per-packet one-way delay: 60.867 ms
  Loss rate: 0.00%
Run 1: Report of QUIC Cubic — Data Link

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

![Graph 2: Per-packet one way delay](image2)
Run 2: Statistics of QUIC Cubic

Start at: 2018-08-11 07:28:43
End at: 2018-08-11 07:29:13
Local clock offset: -0.033 ms
Remote clock offset: -0.04 ms

# Below is generated by plot.py at 2018-08-11 13:56:25
# Datalink statistics
# Total of 3 flows:
-- Average throughput: 95.22 Mbit/s
95th percentile per-packet one-way delay: 61.364 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 49.72 Mbit/s
95th percentile per-packet one-way delay: 61.381 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 38.64 Mbit/s
95th percentile per-packet one-way delay: 61.166 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 62.08 Mbit/s
95th percentile per-packet one-way delay: 61.378 ms
Loss rate: 0.00%
Run 3: Statistics of QUIC Cubic

Start at: 2018-08-11 07:54:33
End at: 2018-08-11 07:55:03
Local clock offset: -0.028 ms
Remote clock offset: 1.177 ms

# Below is generated by plot.py at 2018-08-11 13:56:25
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 35.28 Mbit/s
  95th percentile per-packet one-way delay: 62.531 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 68.120 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 44.84 Mbit/s
  95th percentile per-packet one-way delay: 62.377 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 17.02 Mbit/s
  95th percentile per-packet one-way delay: 62.675 ms
  Loss rate: 0.00%
Run 3: Report of QUIC Cubic — Data Link
Run 4: Statistics of QUIC Cubic

Start at: 2018-08-11 08:20:09
End at: 2018-08-11 08:20:39
Local clock offset: -0.103 ms
Remote clock offset: -0.186 ms

# Below is generated by plot.py at 2018-08-11 13:56:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.60 Mbit/s
95th percentile per-packet one-way delay: 61.089 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 44.53 Mbit/s
95th percentile per-packet one-way delay: 61.073 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 46.68 Mbit/s
95th percentile per-packet one-way delay: 61.098 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 27.72 Mbit/s
95th percentile per-packet one-way delay: 61.130 ms
Loss rate: 0.00%
Run 4: Report of QUIC Cubic — Data Link
Run 5: Statistics of QUIC Cubic

Start at: 2018-08-11 08:45:44
End at: 2018-08-11 08:46:14
Local clock offset: -0.078 ms
Remote clock offset: -0.331 ms

# Below is generated by plot.py at 2018-08-11 13:56:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 35.66 Mbit/s
95th percentile per-packet one-way delay: 61.093 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 66.798 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 39.85 Mbit/s
95th percentile per-packet one-way delay: 61.115 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 28.09 Mbit/s
95th percentile per-packet one-way delay: 60.941 ms
Loss rate: 0.00%
Run 5: Report of QUIC Cubic — Data Link
Run 6: Statistics of QUIC Cubic

Start at: 2018-08-11 09:11:50
End at: 2018-08-11 09:12:20
Local clock offset: -0.131 ms
Remote clock offset: -0.143 ms

# Below is generated by plot.py at 2018-08-11 13:56:25
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 87.65 Mbit/s
  95th percentile per-packet one-way delay: 61.295 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 53.97 Mbit/s
  95th percentile per-packet one-way delay: 61.303 ms
  Loss rate: 0.01%
-- Flow 2:
  Average throughput: 40.69 Mbit/s
  95th percentile per-packet one-way delay: 61.279 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 20.35 Mbit/s
  95th percentile per-packet one-way delay: 61.212 ms
  Loss rate: 0.00%
Run 6: Report of QUIC Cubic — Data Link

Throughput (Mb/s)

Time (s)

Flow 1 ingress (mean 53.98 Mb/s)  Flow 1 egress (mean 53.97 Mb/s)
Flow 2 ingress (mean 40.68 Mb/s)  Flow 2 egress (mean 40.69 Mb/s)
Flow 3 ingress (mean 20.35 Mb/s)  Flow 3 egress (mean 20.35 Mb/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 61.30 ms)  Flow 2 (95th percentile 61.28 ms)  Flow 3 (95th percentile 61.21 ms)
Run 7: Statistics of QUIC Cubic

Start at: 2018-08-11 09:38:39
End at: 2018-08-11 09:39:09
Local clock offset: 0.007 ms
Remote clock offset: -0.147 ms

# Below is generated by plot.py at 2018-08-11 13:56:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.86 Mbit/s
95th percentile per-packet one-way delay: 61.040 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 61.79 Mbit/s
95th percentile per-packet one-way delay: 60.999 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 34.15 Mbit/s
95th percentile per-packet one-way delay: 61.100 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 22.59 Mbit/s
95th percentile per-packet one-way delay: 61.046 ms
Loss rate: 0.00%
Run 7: Report of QUIC Cubic — Data Link

*Flow 1 ingress (mean 61.79 Mbit/s)*
*Flow 1 egress (mean 61.79 Mbit/s)*
*Flow 2 ingress (mean 34.15 Mbit/s)*
*Flow 2 egress (mean 34.15 Mbit/s)*
*Flow 3 ingress (mean 22.59 Mbit/s)*
*Flow 3 egress (mean 22.59 Mbit/s)*

*Flow 1 (95th percentile 61.00 ms)*
*Flow 2 (95th percentile 61.10 ms)*
*Flow 3 (95th percentile 61.05 ms)*
Run 8: Statistics of QUIC Cubic

Start at: 2018-08-11 10:05:36
End at: 2018-08-11 10:06:06
Local clock offset: -0.016 ms
Remote clock offset: 0.675 ms

# Below is generated by plot.py at 2018-08-11 13:56:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.55 Mbit/s
95th percentile per-packet one-way delay: 61.978 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 47.06 Mbit/s
95th percentile per-packet one-way delay: 61.994 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 36.64 Mbit/s
95th percentile per-packet one-way delay: 61.963 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 40.16 Mbit/s
95th percentile per-packet one-way delay: 61.942 ms
Loss rate: 0.00%
Run 8: Report of QUIC Cubic — Data Link

![Graph showing throughput and packet round-trip delay over time for three flows. The graphs illustrate the variability in throughput and delay for each flow, with different colors representing the ingress and egress data for each flow.](image-url)
Run 9: Statistics of QUIC Cubic

Start at: 2018-08-11 10:32:15  
End at: 2018-08-11 10:32:45  
Local clock offset: -0.02 ms  
Remote clock offset: 0.165 ms

# Below is generated by plot.py at 2018-08-11 13:56:25  
# Datalink statistics
-- Total of 3 flows:
Average throughput: 38.42 Mbit/s
95th percentile per-packet one-way delay: 61.582 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 61.356 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 45.83 Mbit/s
95th percentile per-packet one-way delay: 61.585 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 24.42 Mbit/s
95th percentile per-packet one-way delay: 61.568 ms
Loss rate: 0.00%
Run 9: Report of QUIC Cubic — Data Link
Run 10: Statistics of QUIC Cubic

Start at: 2018-08-11 10:59:12
End at: 2018-08-11 10:59:42
Local clock offset: -0.041 ms
Remote clock offset: 0.224 ms

# Below is generated by plot.py at 2018-08-11 13:56:25
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 91.98 Mbit/s
  95th percentile per-packet one-way delay: 61.579 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 48.76 Mbit/s
  95th percentile per-packet one-way delay: 61.583 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 40.94 Mbit/s
  95th percentile per-packet one-way delay: 61.522 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 49.03 Mbit/s
  95th percentile per-packet one-way delay: 61.626 ms
  Loss rate: 0.00%
Run 10: Report of QUIC Cubic — Data Link
Run 1: Statistics of SCReAM

Start at: 2018-08-11 07:00:30
End at: 2018-08-11 07:01:00
Local clock offset: -0.124 ms
Remote clock offset: 0.213 ms

# Below is generated by plot.py at 2018-08-11 13:56:25
# Datalink statistics

-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 61.505 ms
Loss rate: 0.00%

-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.646 ms
Loss rate: 0.00%

-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.421 ms
Loss rate: 0.00%

-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.461 ms
Loss rate: 0.00%
Run 1: Report of SCReAM — Data Link
Run 2: Statistics of SCReAM

Start at: 2018-08-11 07:26:11
End at: 2018-08-11 07:26:41
Local clock offset: -0.032 ms
Remote clock offset: -0.183 ms

# Below is generated by plot.py at 2018-08-11 13:56:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 66.910 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 66.919 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 66.862 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 66.921 ms
Loss rate: 0.00%
Run 2: Report of SCReAM — Data Link

Throughput (Mbps)

Time (s)

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

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 66.92 ms)  Flow 2 (95th percentile 66.86 ms)  Flow 3 (95th percentile 66.92 ms)
Run 3: Statistics of SCReAM

Start at: 2018-08-11 07:52:06
End at: 2018-08-11 07:52:36
Local clock offset: -0.07 ms
Remote clock offset: -0.569 ms

# Below is generated by plot.py at 2018-08-11 13:56:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 61.009 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.042 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 60.823 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 60.868 ms
Loss rate: 0.00%
Run 3: Report of SCReAM — Data Link
Run 4: Statistics of SCReAM

Start at: 2018-08-11 08:17:35
End at: 2018-08-11 08:18:05
Local clock offset: -0.052 ms
Remote clock offset: 0.588 ms

# Below is generated by plot.py at 2018-08-11 13:56:25
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.44 Mbit/s
  95th percentile per-packet one-way delay: 67.598 ms
  Loss rate: 0.06%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 62.058 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 62.082 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 67.697 ms
  Loss rate: 0.35%
Run 4: Report of SCReAM — Data Link

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

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

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

- Flow 1 (95th percentile 62.06 ms)
- Flow 2 (95th percentile 62.08 ms)
- Flow 3 (95th percentile 67.70 ms)
Run 5: Statistics of SCReAM

Start at: 2018-08-11 08:43:18
End at: 2018-08-11 08:43:48
Local clock offset: -0.108 ms
Remote clock offset: -0.054 ms

# Below is generated by plot.py at 2018-08-11 13:56:25
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.44 Mbit/s
  95th percentile per-packet one-way delay: 61.509 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 61.509 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 61.450 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 61.598 ms
  Loss rate: 0.00%
Run 5: Report of SCReAM — Data Link
Run 6: Statistics of SCReAM

Start at: 2018-08-11 09:09:21
End at: 2018-08-11 09:09:51
Local clock offset: -0.094 ms
Remote clock offset: 1.259 ms

# Below is generated by plot.py at 2018-08-11 13:56:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 62.989 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 62.762 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 62.750 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.089 ms
Loss rate: 0.00%
Run 6: Report of SCReAM — Data Link

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Throughput (Mbit/s) vs Time (s)

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

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

Flow 1 (95th percentile 62.76 ms)  
Flow 2 (95th percentile 62.75 ms)  
Flow 3 (95th percentile 62.09 ms)

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Run 7: Statistics of SCReAM

Start at: 2018-08-11 09:36:08  
End at: 2018-08-11 09:36:38  
Local clock offset: -0.007 ms  
Remote clock offset: 0.318 ms

# Below is generated by plot.py at 2018-08-11 13:56:25  
# Datalink statistics  
-- Total of 3 flows:  
  Average throughput: 0.44 Mbit/s  
  95th percentile per-packet one-way delay: 61.982 ms  
  Loss rate: 0.00%  
-- Flow 1:  
  Average throughput: 0.22 Mbit/s  
  95th percentile per-packet one-way delay: 62.026 ms  
  Loss rate: 0.00%  
-- Flow 2:  
  Average throughput: 0.22 Mbit/s  
  95th percentile per-packet one-way delay: 61.760 ms  
  Loss rate: 0.00%  
-- Flow 3:  
  Average throughput: 0.22 Mbit/s  
  95th percentile per-packet one-way delay: 61.637 ms  
  Loss rate: 0.00%
Run 8: Statistics of SCReAM

Start at: 2018-08-11 10:03:06
End at: 2018-08-11 10:03:36
Local clock offset: -0.032 ms
Remote clock offset: -0.684 ms

# Below is generated by plot.py at 2018-08-11 13:56:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 60.927 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 60.901 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 60.970 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 60.721 ms
Loss rate: 0.00%
Run 8: Report of SCReAM — Data Link
Run 9: Statistics of SCReAM

Start at: 2018-08-11 10:29:47  
End at: 2018-08-11 10:30:17  
Local clock offset: -0.014 ms  
Remote clock offset: 0.393 ms  

# Below is generated by plot.py at 2018-08-11 13:56:25  
# Datalink statistics  
-- Total of 3 flows:  
  Average throughput: 0.44 Mbit/s  
  95th percentile per-packet one-way delay: 61.936 ms  
  Loss rate: 0.00%  
-- Flow 1:  
  Average throughput: 0.22 Mbit/s  
  95th percentile per-packet one-way delay: 61.748 ms  
  Loss rate: 0.00%  
-- Flow 2:  
  Average throughput: 0.22 Mbit/s  
  95th percentile per-packet one-way delay: 62.014 ms  
  Loss rate: 0.00%  
-- Flow 3:  
  Average throughput: 0.22 Mbit/s  
  95th percentile per-packet one-way delay: 61.818 ms  
  Loss rate: 0.00%
Run 9: Report of SCReAM — Data Link
Run 10: Statistics of SCReAM

Start at: 2018-08-11 10:56:36
End at: 2018-08-11 10:57:06
Local clock offset: -0.069 ms
Remote clock offset: -0.205 ms

# Below is generated by plot.py at 2018-08-11 13:56:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 61.330 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.319 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.095 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.391 ms
Loss rate: 0.00%
Run 10: Report of SCReAM — Data Link
Run 1: Statistics of Sprout

Start at: 2018-08-11 06:49:13
End at: 2018-08-11 06:49:43
Local clock offset: -0.096 ms
Remote clock offset: -0.76 ms

# Below is generated by plot.py at 2018-08-11 13:56:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.19 Mbit/s
95th percentile per-packet one-way delay: 60.633 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.82 Mbit/s
95th percentile per-packet one-way delay: 60.554 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.45 Mbit/s
95th percentile per-packet one-way delay: 60.627 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 3.24 Mbit/s
95th percentile per-packet one-way delay: 60.730 ms
Loss rate: 0.00%
Run 1: Report of Sprout — Data Link

---

Graph 1: Throughput (Mbps) over Time (s)

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

---

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Run 2: Statistics of Sprout

Start at: 2018-08-11 07:15:18
End at: 2018-08-11 07:15:48
Local clock offset: -0.097 ms
Remote clock offset: 0.758 ms

# Below is generated by plot.py at 2018-08-11 13:56:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.39 Mbit/s
95th percentile per-packet one-way delay: 67.841 ms
Loss rate: 0.00%

-- Flow 1:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 67.724 ms
Loss rate: 0.00%

-- Flow 2:
Average throughput: 0.91 Mbit/s
95th percentile per-packet one-way delay: 67.875 ms
Loss rate: 0.00%

-- Flow 3:
Average throughput: 1.28 Mbit/s
95th percentile per-packet one-way delay: 67.846 ms
Loss rate: 0.00%
Run 2: Report of Sprout — Data Link

![Graph showing throughput and packet loss over time for different flows.](image)
Run 3: Statistics of Sprout

Start at: 2018-08-11 07:41:24
End at: 2018-08-11 07:41:54
Local clock offset: -0.07 ms
Remote clock offset: -0.076 ms

# Below is generated by plot.py at 2018-08-11 13:56:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.27 Mbit/s
95th percentile per.packet one-way delay: 66.992 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 0.56 Mbit/s
95th percentile per.packet one-way delay: 66.980 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.78 Mbit/s
95th percentile per.packet one-way delay: 66.863 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 1.59 Mbit/s
95th percentile per.packet one-way delay: 67.109 ms
Loss rate: 0.00%
Run 3: Report of Sprout — Data Link

Graph 1: Throughput (Mbps)

Graph 2: Per packet one way delay (ms)

Legend:
- Flow 1 ingress (mean 0.56 Mbps)
- Flow 1 egress (mean 0.56 Mbps)
- Flow 2 ingress (mean 1.78 Mbps)
- Flow 2 egress (mean 1.78 Mbps)
- Flow 3 ingress (mean 1.59 Mbps)
- Flow 3 egress (mean 1.59 Mbps)
Run 4: Statistics of Sprout

Start at: 2018-08-11 08:06:52
End at: 2018-08-11 08:07:22
Local clock offset: -0.122 ms
Remote clock offset: 0.391 ms

# Below is generated by plot.py at 2018-08-11 13:56:25
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1.59 Mbit/s
  95th percentile per-packet one-way delay: 67.583 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.51 Mbit/s
  95th percentile per-packet one-way delay: 67.582 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 1.14 Mbit/s
  95th percentile per-packet one-way delay: 67.568 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.95 Mbit/s
  95th percentile per-packet one-way delay: 67.618 ms
  Loss rate: 0.00%
Run 4: Report of Sprout — Data Link

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

Start at: 2018-08-11 08:32:29
End at: 2018-08-11 08:32:59
Local clock offset: -0.059 ms
Remote clock offset: 1.09 ms

# Below is generated by plot.py at 2018-08-11 13:56:25
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1.03 Mbit/s
  95th percentile per-packet one-way delay: 68.246 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.50 Mbit/s
  95th percentile per-packet one-way delay: 68.262 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.59 Mbit/s
  95th percentile per-packet one-way delay: 68.244 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.42 Mbit/s
  95th percentile per-packet one-way delay: 68.190 ms
  Loss rate: 0.00%
Run 5: Report of Sprout — Data Link

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

- Flow 1 ingress (mean 0.50 Mbit/s)
- Flow 1 egress (mean 0.50 Mbit/s)
- Flow 2 ingress (mean 0.59 Mbit/s)
- Flow 2 egress (mean 0.59 Mbit/s)
- Flow 3 ingress (mean 0.42 Mbit/s)
- Flow 3 egress (mean 0.42 Mbit/s)

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

- Flow 1 (95th percentile 68.26 ms)
- Flow 2 (95th percentile 68.24 ms)
- Flow 3 (95th percentile 68.19 ms)
Run 6: Statistics of Sprout

Start at: 2018-08-11 08:58:20
End at: 2018-08-11 08:58:50
Local clock offset: -0.078 ms
Remote clock offset: -0.817 ms

# Below is generated by plot.py at 2018-08-11 13:56:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.00 Mbit/s
95th percentile per-packet one-way delay: 66.212 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.47 Mbit/s
95th percentile per-packet one-way delay: 66.260 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.64 Mbit/s
95th percentile per-packet one-way delay: 60.927 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.33 Mbit/s
95th percentile per-packet one-way delay: 60.810 ms
Loss rate: 0.00%
Run 7: Statistics of Sprout

Start at: 2018-08-11 09:24:56
End at: 2018-08-11 09:25:26
Local clock offset: -0.046 ms
Remote clock offset: 0.408 ms

# Below is generated by plot.py at 2018-08-11 13:56:25
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1.80 Mbit/s
  95th percentile per-packet one-way delay: 63.314 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.41 Mbit/s
  95th percentile per-packet one-way delay: 67.460 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 1.72 Mbit/s
  95th percentile per-packet one-way delay: 62.066 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.75 Mbit/s
  95th percentile per-packet one-way delay: 62.066 ms
  Loss rate: 0.00%
Run 7: Report of Sprout — Data Link

![Graph showing network performance metrics over time]

- **Flow 1**: Ingress (mean 0.41 Mbit/s), Egress (mean 0.41 Mbit/s)
- **Flow 2**: Ingress (mean 1.72 Mbit/s), Egress (mean 1.72 Mbit/s)
- **Flow 3**: Ingress (mean 0.75 Mbit/s), Egress (mean 0.75 Mbit/s)

![Graph showing packet delay statistics over time]

- **Flow 1**: 95th percentile 67.46 ms
- **Flow 2**: 95th percentile 62.07 ms
- **Flow 3**: 95th percentile 62.07 ms
Run 8: Statistics of Sprout

Start at: 2018-08-11 09:51:40
End at: 2018-08-11 09:52:10
Local clock offset: 0.073 ms
Remote clock offset: 0.039 ms

# Below is generated by plot.py at 2018-08-11 13:56:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.64 Mbit/s
95th percentile per-packet one-way delay: 61.636 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.22 Mbit/s
95th percentile per-packet one-way delay: 61.663 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 4.17 Mbit/s
95th percentile per-packet one-way delay: 61.620 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 1.98 Mbit/s
95th percentile per-packet one-way delay: 61.586 ms
Loss rate: 0.00%
Run 8: Report of Sprout — Data Link

---

**Graph 1:**
- **Throughput (Mbps):**
  - Flow 1 ingress (mean 1.22 Mbps)
  - Flow 1 egress (mean 1.22 Mbps)
  - Flow 2 ingress (mean 4.17 Mbps)
  - Flow 2 egress (mean 4.17 Mbps)
  - Flow 3 ingress (mean 1.98 Mbps)
  - Flow 3 egress (mean 1.98 Mbps)

**Graph 2:**
- **Per packet one-way delay (ms):**
  - Flow 1 (95th percentile 61.66 ms)
  - Flow 2 (95th percentile 61.62 ms)
  - Flow 3 (95th percentile 61.59 ms)

---

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Run 9: Statistics of Sprout

Start at: 2018-08-11 10:18:32
End at: 2018-08-11 10:19:02
Local clock offset: -0.002 ms
Remote clock offset: 0.071 ms

# Below is generated by plot.py at 2018-08-11 13:56:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 5.49 Mbit/s
95th percentile per-packet one-way delay: 61.767 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 4.19 Mbit/s
95th percentile per-packet one-way delay: 61.813 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.23 Mbit/s
95th percentile per-packet one-way delay: 61.611 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 1.48 Mbit/s
95th percentile per-packet one-way delay: 61.616 ms
Loss rate: 0.00%
Run 9: Report of Sprout — Data Link

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

- Flow 1 ingress (mean 4.19 Mbps)
- Flow 1 egress (mean 4.19 Mbps)
- Flow 2 ingress (mean 1.23 Mbps)
- Flow 2 egress (mean 1.23 Mbps)
- Flow 3 ingress (mean 1.48 Mbps)
- Flow 3 egress (mean 1.48 Mbps)

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

- Flow 1 (95th percentile 61.81 ms)
- Flow 2 (95th percentile 61.61 ms)
- Flow 3 (95th percentile 61.62 ms)
Run 10: Statistics of Sprout

Start at: 2018-08-11 10:45:28
End at: 2018-08-11 10:45:58
Local clock offset: -0.014 ms
Remote clock offset: -0.533 ms

# Below is generated by plot.py at 2018-08-11 13:56:26
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1.89 Mbit/s
  95th percentile per-packet one-way delay: 61.047 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.50 Mbit/s
  95th percentile per-packet one-way delay: 60.917 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 1.62 Mbit/s
  95th percentile per-packet one-way delay: 61.056 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.92 Mbit/s
  95th percentile per-packet one-way delay: 61.114 ms
  Loss rate: 0.00%
Run 10: Report of Sprout — Data Link
Run 1: Statistics of TaoVA-100x

Start at: 2018-08-11 06:44:37
End at: 2018-08-11 06:45:07
Local clock offset: -0.179 ms
Remote clock offset: -0.825 ms

# Below is generated by plot.py at 2018-08-11 14:03:51
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 455.18 Mbit/s
  95th percentile per-packet one-way delay: 64.140 ms
  Loss rate: 0.05%
-- Flow 1:
  Average throughput: 226.44 Mbit/s
  95th percentile per-packet one-way delay: 62.719 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 231.57 Mbit/s
  95th percentile per-packet one-way delay: 62.923 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 220.71 Mbit/s
  95th percentile per-packet one-way delay: 71.231 ms
  Loss rate: 0.32%
Run 1: Report of TaoVA-100x — Data Link

![Graph of throughput and per-packet one-way delay over time for three flows](image)

- **Flow 1** ingress (mean 226.44 Mbit/s)
- **Flow 1** egress (mean 226.44 Mbit/s)
- **Flow 2** ingress (mean 231.60 Mbit/s)
- **Flow 2** egress (mean 231.57 Mbit/s)
- **Flow 3** ingress (mean 220.52 Mbit/s)
- **Flow 3** egress (mean 220.71 Mbit/s)

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

- **Flow 1** (95th percentile 62.72 ms)
- **Flow 2** (95th percentile 62.92 ms)
- **Flow 3** (95th percentile 71.23 ms)
Run 2: Statistics of TaoVA-100x

Start at: 2018-08-11 07:11:14
End at: 2018-08-11 07:11:44
Local clock offset: -0.108 ms
Remote clock offset: -0.049 ms

# Below is generated by plot.py at 2018-08-11 14:03:51
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 132.41 Mbit/s
  95th percentile per-packet one-way delay: 66.759 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 197.54 Mbit/s
  95th percentile per-packet one-way delay: 66.668 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 51.67 Mbit/s
  95th percentile per-packet one-way delay: 66.827 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 99.82 Mbit/s
  95th percentile per-packet one-way delay: 66.973 ms
  Loss rate: 0.00%
Run 2: Report of TaoVA-100x — Data Link

Throughput (Mb/s) vs Time (s)

- Flow 1 ingress (mean 197.61 Mb/s)
- Flow 1 egress (mean 197.54 Mb/s)
- Flow 2 ingress (mean 51.64 Mb/s)
- Flow 2 egress (mean 51.67 Mb/s)
- Flow 3 ingress (mean 99.89 Mb/s)
- Flow 3 egress (mean 99.82 Mb/s)

Packet error rate vs Time (s)

- Flow 1 (95th percentile 66.67 ms)
- Flow 2 (95th percentile 66.83 ms)
- Flow 3 (95th percentile 66.97 ms)
Run 3: Statistics of TaoVA-100x

Start at: 2018-08-11 07:37:04
End at: 2018-08-11 07:37:34
Local clock offset: -0.034 ms
Remote clock offset: -0.02 ms

# Below is generated by plot.py at 2018-08-11 14:03:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 295.27 Mbit/s
95th percentile per-packet one-way delay: 67.323 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 185.73 Mbit/s
95th percentile per-packet one-way delay: 66.752 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 228.90 Mbit/s
95th percentile per-packet one-way delay: 67.373 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 191.74 Mbit/s
95th percentile per-packet one-way delay: 68.809 ms
Loss rate: 0.00%
Run 4: Statistics of TaoVA-100x

Start at: 2018-08-11 08:02:52  
End at: 2018-08-11 08:03:22  
Local clock offset: -0.107 ms  
Remote clock offset: -0.295 ms

# Below is generated by plot.py at 2018-08-11 14:03:51  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 104.27 Mbit/s  
95th percentile per-packet one-way delay: 66.877 ms  
Loss rate: 0.04%  
-- Flow 1:  
Average throughput: 17.24 Mbit/s  
95th percentile per-packet one-way delay: 66.660 ms  
Loss rate: 0.01%  
-- Flow 2:  
Average throughput: 27.91 Mbit/s  
95th percentile per-packet one-way delay: 66.863 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 226.40 Mbit/s  
95th percentile per-packet one-way delay: 66.914 ms  
Loss rate: 0.06%
Run 4: Report of TaoVA-100x — Data Link
Run 5: Statistics of TaoVA-100x

Start at: 2018-08-11 08:28:30
End at: 2018-08-11 08:29:00
Local clock offset: -0.101 ms
Remote clock offset: 0.084 ms

# Below is generated by plot.py at 2018-08-11 14:03:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.71 Mbit/s
95th percentile per-packet one-way delay: 67.017 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 13.40 Mbit/s
95th percentile per-packet one-way delay: 67.112 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 86.52 Mbit/s
95th percentile per-packet one-way delay: 67.065 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 97.33 Mbit/s
95th percentile per-packet one-way delay: 63.720 ms
Loss rate: 0.00%
Run 5: Report of TaoVA-100x — Data Link
Run 6: Statistics of TaoVA-100x

Start at: 2018-08-11 08:53:56
End at: 2018-08-11 08:54:26
Local clock offset: -0.079 ms
Remote clock offset: -0.029 ms

# Below is generated by plot.py at 2018-08-11 14:05:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 336.77 Mbit/s
95th percentile per-packet one-way delay: 64.800 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 114.01 Mbit/s
95th percentile per-packet one-way delay: 66.876 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 226.79 Mbit/s
95th percentile per-packet one-way delay: 62.911 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 216.18 Mbit/s
95th percentile per-packet one-way delay: 66.245 ms
Loss rate: 0.00%
Run 6: Report of TaoVA-100x — Data Link

```
<table>
<thead>
<tr>
<th>Flow 1 ingress (mean 114.01 Mbit/s)</th>
<th>Flow 1 egress (mean 114.01 Mbit/s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow 2 ingress (mean 226.78 Mbit/s)</td>
<td>Flow 2 egress (mean 226.78 Mbit/s)</td>
</tr>
<tr>
<td>Flow 3 ingress (mean 216.17 Mbit/s)</td>
<td>Flow 3 egress (mean 216.18 Mbit/s)</td>
</tr>
</tbody>
</table>
```

```
| Flow 1 (95th percentile 66.88 ms)  | Flow 2 (95th percentile 62.91 ms)  | Flow 3 (95th percentile 66.25 ms)  |
```

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Run 7: Statistics of TaoVA-100x

Start at: 2018-08-11 09:20:22
End at: 2018-08-11 09:20:52
Local clock offset: -0.12 ms
Remote clock offset: 0.211 ms

# Below is generated by plot.py at 2018-08-11 14:06:36
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 351.27 Mbit/s
  95th percentile per-packet one-way delay: 64.813 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 137.03 Mbit/s
  95th percentile per-packet one-way delay: 64.588 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 219.39 Mbit/s
  95th percentile per-packet one-way delay: 64.416 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 204.52 Mbit/s
  95th percentile per-packet one-way delay: 65.999 ms
  Loss rate: 0.00%
Run 7: Report of TaoVA-100x — Data Link

Graph 1: Throughput (Mbps) vs Time (s)
- Flow 1 ingress (mean 137.03 Mbps)
- Flow 1 egress (mean 137.03 Mbps)
- Flow 2 ingress (mean 219.38 Mbps)
- Flow 2 egress (mean 219.39 Mbps)
- Flow 3 ingress (mean 204.51 Mbps)
- Flow 3 egress (mean 204.52 Mbps)

Graph 2: Per-packet one-way delay (ms) vs Time (s)
- Flow 1 (95th percentile 64.59 ms)
- Flow 2 (95th percentile 64.42 ms)
- Flow 3 (95th percentile 66.00 ms)
Run 8: Statistics of TaoVA-100x

Start at: 2018-08-11 09:47:05
End at: 2018-08-11 09:47:35
Local clock offset: 0.077 ms
Remote clock offset: -0.141 ms

# Below is generated by plot.py at 2018-08-11 14:10:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 454.30 Mbit/s
95th percentile per-packet one-way delay: 62.660 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 234.58 Mbit/s
95th percentile per-packet one-way delay: 62.347 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 227.20 Mbit/s
95th percentile per-packet one-way delay: 62.889 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 206.24 Mbit/s
95th percentile per-packet one-way delay: 63.018 ms
Loss rate: 1.03%
Run 8: Report of TaoVA-100x — Data Link

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

Throughput (Mb/s)

<table>
<thead>
<tr>
<th>Flow 1 ingress (mean 234.58 Mb/s)</th>
<th>Flow 1 egress (mean 234.58 Mb/s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow 2 ingress (mean 227.22 Mb/s)</td>
<td>Flow 2 egress (mean 227.20 Mb/s)</td>
</tr>
<tr>
<td>Flow 3 ingress (mean 208.32 Mb/s)</td>
<td>Flow 3 egress (mean 206.24 Mb/s)</td>
</tr>
</tbody>
</table>

Per-packet one-way delay (ms)

| Flow 1 (95th percentile 62.35 ms) | Flow 2 (95th percentile 62.89 ms) | Flow 3 (95th percentile 63.02 ms) |
Run 9: Statistics of TaoVA-100x

Start at: 2018-08-11 10:14:00
End at: 2018-08-11 10:14:30
Local clock offset: 0.058 ms
Remote clock offset: 0.182 ms

# Below is generated by plot.py at 2018-08-11 14:10:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 440.14 Mbit/s
95th percentile per-packet one-way delay: 66.193 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 228.17 Mbit/s
95th percentile per-packet one-way delay: 64.781 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 215.25 Mbit/s
95th percentile per-packet one-way delay: 66.184 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 206.66 Mbit/s
95th percentile per-packet one-way delay: 71.772 ms
Loss rate: 0.00%
Run 9: Report of TaoVA-100x — Data Link

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

- **Throughput (Mbps)**
  - Flow 1 ingress (mean 228.18 Mbps)
  - Flow 1 egress (mean 228.17 Mbps)
  - Flow 2 ingress (mean 215.24 Mbps)
  - Flow 2 egress (mean 215.25 Mbps)
  - Flow 3 ingress (mean 206.65 Mbps)
  - Flow 3 egress (mean 206.66 Mbps)

- **Per-packet end-to-end delay (ms)**
  - Flow 1 (95th percentile 64.78 ms)
  - Flow 2 (95th percentile 66.18 ms)
  - Flow 3 (95th percentile 71.77 ms)
Run 10: Statistics of TaoVA-100x

Start at: 2018-08-11 10:40:52
End at: 2018-08-11 10:41:22
Local clock offset: -0.055 ms
Remote clock offset: 0.099 ms

# Below is generated by plot.py at 2018-08-11 14:10:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 432.06 Mbit/s
95th percentile per-packet one-way delay: 63.496 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 221.80 Mbit/s
95th percentile per-packet one-way delay: 62.385 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 221.76 Mbit/s
95th percentile per-packet one-way delay: 63.843 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 188.53 Mbit/s
95th percentile per-packet one-way delay: 66.564 ms
Loss rate: 0.00%
Run 10: Report of TaoVA-100x — Data Link

![Throughput Graph](image)

- **Flow 1 ingress (mean 221.80 Mbit/s)**
- **Flow 1 egress (mean 221.80 Mbit/s)**
- **Flow 2 ingress (mean 221.77 Mbit/s)**
- **Flow 2 egress (mean 221.76 Mbit/s)**
- **Flow 3 ingress (mean 188.52 Mbit/s)**
- **Flow 3 egress (mean 188.53 Mbit/s)**

![Delay Graph](image)

- **Flow 1 (95th percentile 62.38 ms)**
- **Flow 2 (95th percentile 63.84 ms)**
- **Flow 3 (95th percentile 66.56 ms)**

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Run 1: Statistics of TCP Vegas

Start at: 2018-08-11 07:01:39  
End at: 2018-08-11 07:02:09  
Local clock offset: -0.161 ms  
Remote clock offset: 0.537 ms

# Below is generated by plot.py at 2018-08-11 14:10:59  
# Datalink statistics

-- Total of 3 flows:  
Average throughput: 231.35 Mbit/s  
95th percentile per-packet one-way delay: 62.784 ms  
Loss rate: 0.00%  

-- Flow 1:  
Average throughput: 111.34 Mbit/s  
95th percentile per-packet one-way delay: 62.643 ms  
Loss rate: 0.00%  

-- Flow 2:  
Average throughput: 125.81 Mbit/s  
95th percentile per-packet one-way delay: 62.796 ms  
Loss rate: 0.00%  

-- Flow 3:  
Average throughput: 108.98 Mbit/s  
95th percentile per-packet one-way delay: 63.486 ms  
Loss rate: 0.00%
Run 1: Report of TCP Vegas — Data Link

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

- Flow 1 ingress (mean 111.34 Mb/s) - Flow 1 egress (mean 111.34 Mb/s)
- Flow 2 ingress (mean 125.81 Mb/s) - Flow 2 egress (mean 125.81 Mb/s)
- Flow 3 ingress (mean 108.97 Mb/s) - Flow 3 egress (mean 108.98 Mb/s)

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

- Flow 1 (95th percentile 62.64 ms) - Flow 2 (95th percentile 62.80 ms) - Flow 3 (95th percentile 63.49 ms)
Run 2: Statistics of TCP Vegas

Start at: 2018-08-11 07:27:19
End at: 2018-08-11 07:27:49
Local clock offset: -0.029 ms
Remote clock offset: -0.085 ms

# Below is generated by plot.py at 2018-08-11 14:10:59
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 281.54 Mbit/s
  95th percentile per-packet one-way delay: 98.703 ms
  Loss rate: 0.29%
-- Flow 1:
  Average throughput: 123.92 Mbit/s
  95th percentile per-packet one-way delay: 67.901 ms
  Loss rate: 0.01%
-- Flow 2:
  Average throughput: 234.64 Mbit/s
  95th percentile per-packet one-way delay: 113.354 ms
  Loss rate: 0.52%
-- Flow 3:
  Average throughput: 3.84 Mbit/s
  95th percentile per-packet one-way delay: 67.229 ms
  Loss rate: 0.19%
Run 2: Report of TCP Vegas — Data Link
Run 3: Statistics of TCP Vegas

Start at: 2018-08-11 07:53:15
End at: 2018-08-11 07:53:45
Local clock offset: -0.056 ms
Remote clock offset: 0.142 ms

# Below is generated by plot.py at 2018-08-11 14:10:59
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 168.78 Mbit/s
  95th percentile per-packet one-way delay: 67.932 ms
  Loss rate: 0.02%
-- Flow 1:
  Average throughput: 125.92 Mbit/s
  95th percentile per-packet one-way delay: 68.036 ms
  Loss rate: 0.01%
-- Flow 2:
  Average throughput: 7.70 Mbit/s
  95th percentile per-packet one-way delay: 67.266 ms
  Loss rate: 0.50%
-- Flow 3:
  Average throughput: 113.61 Mbit/s
  95th percentile per-packet one-way delay: 67.326 ms
  Loss rate: 0.00%
Run 3: Report of TCP Vegas — Data Link

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

Legend:
- Flow 1 ingress (mean 125.92 Mbit/s)
- Flow 1 egress (mean 125.92 Mbit/s)
- Flow 2 ingress (mean 7.73 Mbit/s)
- Flow 2 egress (mean 7.70 Mbit/s)
- Flow 3 ingress (mean 113.67 Mbit/s)
- Flow 3 egress (mean 113.61 Mbit/s)

Legend for latency:
- Flow 1 (95th percentile 68.04 ms)
- Flow 2 (95th percentile 67.27 ms)
- Flow 3 (95th percentile 67.33 ms)
Run 4: Statistics of TCP Vegas

Start at: 2018-08-11 08:18:44
End at: 2018-08-11 08:19:14
Local clock offset: -0.078 ms
Remote clock offset: -0.076 ms

# Below is generated by plot.py at 2018-08-11 14:10:59
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 283.35 Mbit/s
  95th percentile per-packet one-way delay: 68.679 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 110.49 Mbit/s
  95th percentile per-packet one-way delay: 68.555 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 203.83 Mbit/s
  95th percentile per-packet one-way delay: 68.952 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 111.87 Mbit/s
  95th percentile per-packet one-way delay: 68.377 ms
  Loss rate: 0.00%
Run 4: Report of TCP Vegas — Data Link
Run 5: Statistics of TCP Vegas

Start at: 2018-08-11 08:44:27
End at: 2018-08-11 08:44:57
Local clock offset: -0.08 ms
Remote clock offset: -0.256 ms

# Below is generated by plot.py at 2018-08-11 14:10:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 157.35 Mbit/s
95th percentile per-packet one-way delay: 61.931 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 70.44 Mbit/s
95th percentile per-packet one-way delay: 62.000 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 99.19 Mbit/s
95th percentile per-packet one-way delay: 61.763 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 62.82 Mbit/s
95th percentile per-packet one-way delay: 62.372 ms
Loss rate: 0.00%
Run 5: Report of TCP Vegas — Data Link

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

- **Flow 1 ingress (mean 70.44 Mbit/s)**
- **Flow 2 ingress (mean 99.19 Mbit/s)**
- **Flow 3 ingress (mean 62.81 Mbit/s)**
- **Flow 1 egress (mean 70.44 Mbit/s)**
- **Flow 2 egress (mean 99.19 Mbit/s)**
- **Flow 3 egress (mean 62.82 Mbit/s)**

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

- **Flow 1 (95th percentile 62.00 ms)**
- **Flow 2 (95th percentile 61.76 ms)**
- **Flow 3 (95th percentile 62.37 ms)**
Run 6: Statistics of TCP Vegas

Start at: 2018-08-11 09:10:29
End at: 2018-08-11 09:10:59
Local clock offset: -0.069 ms
Remote clock offset: -0.378 ms

# Below is generated by plot.py at 2018-08-11 14:10:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 206.91 Mbit/s
95th percentile per-packet one-way delay: 61.964 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 122.67 Mbit/s
95th percentile per-packet one-way delay: 61.959 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 124.35 Mbit/s
95th percentile per-packet one-way delay: 61.976 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 4.22 Mbit/s
95th percentile per-packet one-way delay: 61.299 ms
Loss rate: 0.17%
Run 6: Report of TCP Vegas — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 122.65 Mbit/s) — Flow 1 egress (mean 122.67 Mbit/s)
Flow 2 ingress (mean 124.35 Mbit/s) — Flow 2 egress (mean 124.35 Mbit/s)
Flow 3 ingress (mean 4.22 Mbit/s) — Flow 3 egress (mean 4.22 Mbit/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 61.96 ms) — Flow 2 (95th percentile 61.98 ms) — Flow 3 (95th percentile 61.30 ms)
Run 7: Statistics of TCP Vegas

Start at: 2018-08-11 09:37:17
End at: 2018-08-11 09:37:47
Local clock offset: 0.02 ms
Remote clock offset: -0.179 ms

# Below is generated by plot.py at 2018-08-11 14:10:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 240.94 Mbit/s
95th percentile per-packet one-way delay: 62.140 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 197.95 Mbit/s
95th percentile per-packet one-way delay: 62.082 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 7.95 Mbit/s
95th percentile per-packet one-way delay: 61.540 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 113.48 Mbit/s
95th percentile per-packet one-way delay: 62.920 ms
Loss rate: 0.00%
Run 7: Report of TCP Vegas — Data Link
Run 8: Statistics of TCP Vegas

Start at: 2018-08-11 10:04:14
End at: 2018-08-11 10:04:44
Local clock offset: -0.016 ms
Remote clock offset: -0.118 ms

# Below is generated by plot.py at 2018-08-11 14:11:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 237.47 Mbit/s
95th percentile per-packet one-way delay: 62.456 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 118.42 Mbit/s
95th percentile per-packet one-way delay: 62.508 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 176.75 Mbit/s
95th percentile per-packet one-way delay: 62.402 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 4.02 Mbit/s
95th percentile per-packet one-way delay: 61.395 ms
Loss rate: 0.24%
Run 8: Report of TCP Vegas — Data Link

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

- Flow 1 ingress (mean 118.42 Mbit/s)
- Flow 1 egress (mean 118.42 Mbit/s)
- Flow 2 ingress (mean 176.75 Mbit/s)
- Flow 2 egress (mean 176.75 Mbit/s)
- Flow 3 ingress (mean 4.03 Mbit/s)
- Flow 3 egress (mean 4.02 Mbit/s)
Run 9: Statistics of TCP Vegas

Start at: 2018-08-11 10:30:56
End at: 2018-08-11 10:31:26
Local clock offset: 0.028 ms
Remote clock offset: 0.149 ms

# Below is generated by plot.py at 2018-08-11 14:11:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 171.52 Mbit/s
95th percentile per-packet one-way delay: 63.779 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 69.73 Mbit/s
95th percentile per-packet one-way delay: 63.305 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 122.59 Mbit/s
95th percentile per-packet one-way delay: 63.988 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 60.62 Mbit/s
95th percentile per-packet one-way delay: 64.729 ms
Loss rate: 0.00%
Run 9: Report of TCP Vegas — Data Link

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

- Flow 1 ingress (mean 69.73 Mbit/s)
- Flow 1 egress (mean 69.73 Mbit/s)
- Flow 2 ingress (mean 122.60 Mbit/s)
- Flow 2 egress (mean 122.59 Mbit/s)
- Flow 3 ingress (mean 60.61 Mbit/s)
- Flow 3 egress (mean 60.62 Mbit/s)
Run 10: Statistics of TCP Vegas

Start at: 2018-08-11 10:57:45
End at: 2018-08-11 10:58:15
Local clock offset: -0.046 ms
Remote clock offset: -0.058 ms

# Below is generated by plot.py at 2018-08-11 14:14:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 354.07 Mbit/s
95th percentile per-packet one-way delay: 62.833 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 196.05 Mbit/s
95th percentile per-packet one-way delay: 62.527 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 235.19 Mbit/s
95th percentile per-packet one-way delay: 63.274 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 4.34 Mbit/s
95th percentile per-packet one-way delay: 61.771 ms
Loss rate: 0.08%
Run 10: Report of TCP Vegas — Data Link

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

- Flow 1 ingress (mean 196.05 Mbit/s)
- Flow 1 egress (mean 196.05 Mbit/s)
- Flow 2 ingress (mean 235.19 Mbit/s)
- Flow 2 egress (mean 235.19 Mbit/s)
- Flow 3 ingress (mean 4.34 Mbit/s)
- Flow 3 egress (mean 4.34 Mbit/s)

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

- Flow 1 (95th percentile 62.53 ms)
- Flow 2 (95th percentile 63.27 ms)
- Flow 3 (95th percentile 61.77 ms)
Run 1: Statistics of Verus

Start at: 2018-08-11 06:39:02
End at: 2018-08-11 06:39:32
Local clock offset: -0.161 ms
Remote clock offset: -0.269 ms

# Below is generated by plot.py at 2018-08-11 14:16:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 376.38 Mbit/s
95th percentile per-packet one-way delay: 107.405 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 223.50 Mbit/s
95th percentile per-packet one-way delay: 111.466 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 153.51 Mbit/s
95th percentile per-packet one-way delay: 101.289 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 187.30 Mbit/s
95th percentile per-packet one-way delay: 103.924 ms
Loss rate: 0.00%
Run 1: Report of Verus — Data Link

![Graph 1: Throughput vs Time]

- Flow 1 ingress (mean 223.76 Mbit/s)
- Flow 1 egress (mean 223.50 Mbit/s)
- Flow 2 ingress (mean 153.86 Mbit/s)
- Flow 2 egress (mean 153.51 Mbit/s)
- Flow 3 ingress (mean 168.11 Mbit/s)
- Flow 3 egress (mean 187.30 Mbit/s)

![Graph 2: Per-packet end-to-end delay vs Time]

- Flow 1 (95th percentile 111.47 ms)
- Flow 2 (95th percentile 101.29 ms)
- Flow 3 (95th percentile 103.92 ms)
Run 2: Statistics of Verus

Start at: 2018-08-11 07:05:42
End at: 2018-08-11 07:06:12
Local clock offset: -0.126 ms
Remote clock offset: -0.43 ms

# Below is generated by plot.py at 2018-08-11 14:16:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 332.64 Mbit/s
95th percentile per-packet one-way delay: 119.585 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 211.40 Mbit/s
95th percentile per-packet one-way delay: 133.154 ms
Loss rate: 0.21%
-- Flow 2:
Average throughput: 126.80 Mbit/s
95th percentile per-packet one-way delay: 97.983 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 125.36 Mbit/s
95th percentile per-packet one-way delay: 102.386 ms
Loss rate: 0.51%
Run 2: Report of Verus — Data Link

![Graph showing throughput and per-packet one-way delay over time for different flow ingress and egress rates.]

- Flow 1 ingress (mean 211.82 Mbit/s)
- Flow 1 egress (mean 211.40 Mbit/s)
- Flow 2 ingress (mean 126.89 Mbit/s)
- Flow 2 egress (mean 126.89 Mbit/s)
- Flow 3 ingress (mean 113.64 Mbit/s)
- Flow 3 egress (mean 125.36 Mbit/s)
Run 3: Statistics of Verus

Start at: 2018-08-11 07:31:33
End at: 2018-08-11 07:32:03
Local clock offset: 0.002 ms
Remote clock offset: -0.595 ms

# Below is generated by plot.py at 2018-08-11 14:16:29
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 323.80 Mbit/s
  95th percentile per-packet one-way delay: 116.133 ms
  Loss rate: 0.01%
-- Flow 1:
  Average throughput: 201.90 Mbit/s
  95th percentile per-packet one-way delay: 118.457 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 136.81 Mbit/s
  95th percentile per-packet one-way delay: 116.975 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 96.02 Mbit/s
  95th percentile per-packet one-way delay: 99.790 ms
  Loss rate: 0.09%
Run 3: Report of Verus — Data Link

![Throughput Graph](image1)

- Flow 1 ingress (mean 201.89 Mbit/s)
- Flow 1 egress (mean 201.90 Mbit/s)
- Flow 2 ingress (mean 136.81 Mbit/s)
- Flow 2 egress (mean 136.81 Mbit/s)
- Flow 3 ingress (mean 96.04 Mbit/s)
- Flow 3 egress (mean 96.02 Mbit/s)

![Delay Graph](image2)

- Flow 1 (95th percentile 118.46 ms)
- Flow 2 (95th percentile 116.97 ms)
- Flow 3 (95th percentile 99.79 ms)
Run 4: Statistics of Verus

Start at: 2018-08-11 07:57:20
End at: 2018-08-11 07:57:50
Local clock offset: -0.026 ms
Remote clock offset: -0.914 ms

# Below is generated by plot.py at 2018-08-11 14:16:32
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 321.19 Mbit/s
  95th percentile per-packet one-way delay: 118.064 ms
  Loss rate: 0.31%
-- Flow 1:
  Average throughput: 165.85 Mbit/s
  95th percentile per-packet one-way delay: 92.975 ms
  Loss rate: 0.01%
-- Flow 2:
  Average throughput: 153.65 Mbit/s
  95th percentile per-packet one-way delay: 124.491 ms
  Loss rate: 0.65%
-- Flow 3:
  Average throughput: 162.14 Mbit/s
  95th percentile per-packet one-way delay: 170.484 ms
  Loss rate: 0.58%
Run 4: Report of Verus — Data Link

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

- Flow 1 ingress (mean 165.85 Mbit/s)
- Flow 1 egress (mean 165.85 Mbit/s)
- Flow 2 ingress (mean 154.95 Mbit/s)
- Flow 2 egress (mean 153.05 Mbit/s)
- Flow 3 ingress (mean 163.07 Mbit/s)
- Flow 3 egress (mean 162.14 Mbit/s)

- Flow 1 (95th percentile 92.97 ms)
- Flow 2 (95th percentile 124.49 ms)
- Flow 3 (95th percentile 170.48 ms)
Run 5: Statistics of Verus

Start at: 2018-08-11 08:22:56
End at: 2018-08-11 08:23:26
Local clock offset: -0.068 ms
Remote clock offset: -0.074 ms

# Below is generated by plot.py at 2018-08-11 14:17:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 388.31 Mbit/s
95th percentile per-packet one-way delay: 175.021 ms
Loss rate: 2.15%
-- Flow 1:
Average throughput: 258.05 Mbit/s
95th percentile per-packet one-way delay: 186.031 ms
Loss rate: 2.85%
-- Flow 2:
Average throughput: 144.68 Mbit/s
95th percentile per-packet one-way delay: 128.956 ms
Loss rate: 0.77%
-- Flow 3:
Average throughput: 103.09 Mbit/s
95th percentile per-packet one-way delay: 126.751 ms
Loss rate: 0.65%
Run 5: Report of Verus — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 265.62 Mbps)
  - Flow 2 ingress (mean 145.68 Mbps)
  - Flow 3 ingress (mean 104.60 Mbps)
  - Flow 1 egress (mean 258.05 Mbps)
  - Flow 2 egress (mean 144.68 Mbps)
  - Flow 3 egress (mean 103.90 Mbps)

- **Packet one-way delay (ms):**
  - Flow 1 (95th percentile 186.03 ms)
  - Flow 2 (95th percentile 128.96 ms)
  - Flow 3 (95th percentile 126.75 ms)
Run 6: Statistics of Verus

Start at: 2018-08-11 08:48:31
End at: 2018-08-11 08:49:01
Local clock offset: -0.101 ms
Remote clock offset: -1.479 ms

# Below is generated by plot.py at 2018-08-11 14:17:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 288.88 Mbit/s
95th percentile per-packet one-way delay: 132.164 ms
Loss rate: 2.88%
-- Flow 1:
Average throughput: 174.87 Mbit/s
95th percentile per-packet one-way delay: 195.853 ms
Loss rate: 4.59%
-- Flow 2:
Average throughput: 115.70 Mbit/s
95th percentile per-packet one-way delay: 129.020 ms
Loss rate: 0.13%
-- Flow 3:
Average throughput: 115.14 Mbit/s
95th percentile per-packet one-way delay: 121.271 ms
Loss rate: 0.13%
Run 6: Report of Verus — Data Link
Run 7: Statistics of Verus

Start at: 2018-08-11 09:14:40
End at: 2018-08-11 09:15:10
Local clock offset: -0.101 ms
Remote clock offset: 0.203 ms

# Below is generated by plot.py at 2018-08-11 14:17:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 345.54 Mbit/s
95th percentile per-packet one-way delay: 152.425 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 172.61 Mbit/s
95th percentile per-packet one-way delay: 167.914 ms
Loss rate: 1.51%
-- Flow 2:
Average throughput: 207.87 Mbit/s
95th percentile per-packet one-way delay: 118.128 ms
Loss rate: 0.25%
-- Flow 3:
Average throughput: 119.24 Mbit/s
95th percentile per-packet one-way delay: 93.000 ms
Loss rate: 0.02%
Run 7: Report of Verus — Data Link

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**Throughput (Mbit/s)**

- Flow 1 ingress (mean 175.54 Mbit/s)
- Flow 2 ingress (mean 208.41 Mbit/s)
- Flow 3 ingress (mean 107.10 Mbit/s)
- Flow 1 egress (mean 172.61 Mbit/s)
- Flow 2 egress (mean 207.87 Mbit/s)
- Flow 3 egress (mean 119.24 Mbit/s)

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

- Flow 1 (95th percentile 167.91 ms)
- Flow 2 (95th percentile 118.13 ms)
- Flow 3 (95th percentile 93.00 ms)
Run 8: Statistics of Verus

Start at: 2018-08-11 09:41:29
End at: 2018-08-11 09:41:59
Local clock offset: 0.048 ms
Remote clock offset: 0.768 ms

# Below is generated by plot.py at 2018-08-11 14:20:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 336.81 Mbit/s
95th percentile per-packet one-way delay: 177.538 ms
Loss rate: 1.70%
-- Flow 1:
Average throughput: 175.95 Mbit/s
95th percentile per-packet one-way delay: 104.199 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 171.94 Mbit/s
95th percentile per-packet one-way delay: 204.715 ms
Loss rate: 4.83%
-- Flow 3:
Average throughput: 143.32 Mbit/s
95th percentile per-packet one-way delay: 100.485 ms
Loss rate: 0.00%
Run 8: Report of Verus — Data Link
Run 9: Statistics of Verus

Start at: 2018-08-11 10:08:26
End at: 2018-08-11 10:08:56
Local clock offset: -0.033 ms
Remote clock offset: -0.673 ms

# Below is generated by plot.py at 2018-08-11 14:21:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 345.21 Mbit/s
95th percentile per-packet one-way delay: 162.378 ms
Loss rate: 0.89%
-- Flow 1:
Average throughput: 213.84 Mbit/s
95th percentile per-packet one-way delay: 173.725 ms
Loss rate: 0.79%
-- Flow 2:
Average throughput: 156.93 Mbit/s
95th percentile per-packet one-way delay: 157.056 ms
Loss rate: 0.97%
-- Flow 3:
Average throughput: 98.31 Mbit/s
95th percentile per-packet one-way delay: 112.625 ms
Loss rate: 1.23%
Run 9: Report of Verus — Data Link
Run 10: Statistics of Verus

Start at: 2018-08-11 10:35:01
End at: 2018-08-11 10:35:31
Local clock offset: -0.013 ms
Remote clock offset: 0.038 ms

# Below is generated by plot.py at 2018-08-11 14:21:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 364.20 Mbit/s
95th percentile per-packet one-way delay: 142.604 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 216.47 Mbit/s
95th percentile per-packet one-way delay: 160.098 ms
Loss rate: 0.69%
-- Flow 2:
Average throughput: 186.86 Mbit/s
95th percentile per-packet one-way delay: 112.372 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 74.24 Mbit/s
95th percentile per-packet one-way delay: 117.008 ms
Loss rate: 0.39%
Run 10: Report of Verus — Data Link

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

Start at: 2018-08-11 06:57:18
End at: 2018-08-11 06:57:48
Local clock offset: -0.132 ms
Remote clock offset: -0.078 ms

# Below is generated by plot.py at 2018-08-11 14:24:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 514.81 Mbit/s
95th percentile per-packet one-way delay: 64.923 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 321.66 Mbit/s
95th percentile per-packet one-way delay: 63.574 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 248.79 Mbit/s
95th percentile per-packet one-way delay: 67.382 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 83.27 Mbit/s
95th percentile per-packet one-way delay: 61.402 ms
Loss rate: 0.00%
Run 1: Report of PCC-Vivace — Data Link
Run 2: Statistics of PCC-Vivace

Start at: 2018-08-11 07:22:46
End at: 2018-08-11 07:23:16
Local clock offset: -0.036 ms
Remote clock offset: -0.645 ms

# Below is generated by plot.py at 2018-08-11 14:27:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 618.36 Mbit/s
95th percentile per-packet one-way delay: 85.500 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 353.54 Mbit/s
95th percentile per-packet one-way delay: 90.332 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 317.29 Mbit/s
95th percentile per-packet one-way delay: 83.370 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 163.47 Mbit/s
95th percentile per-packet one-way delay: 73.050 ms
Loss rate: 0.02%
Run 2: Report of PCC-Vivace — Data Link

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

- **Flow 1 ingress** (mean 353.53 Mbit/s)
- **Flow 1 egress** (mean 353.54 Mbit/s)
- **Flow 2 ingress** (mean 317.28 Mbit/s)
- **Flow 2 egress** (mean 317.29 Mbit/s)
- **Flow 3 ingress** (mean 163.46 Mbit/s)
- **Flow 3 egress** (mean 163.47 Mbit/s)

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

- **Flow 1 (95th percentile 90.33 ms)**
- **Flow 2 (95th percentile 83.37 ms)**
- **Flow 3 (95th percentile 73.05 ms)**
Run 3: Statistics of PCC-Vivace

Start at: 2018-08-11 07:48:41
End at: 2018-08-11 07:49:11
Local clock offset: -0.039 ms
Remote clock offset: 0.131 ms

# Below is generated by plot.py at 2018-08-11 14:27:00
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 595.73 Mbit/s
  95th percentile per-packet one-way delay: 64.256 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 368.07 Mbit/s
  95th percentile per-packet one-way delay: 64.857 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 320.75 Mbit/s
  95th percentile per-packet one-way delay: 63.389 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 43.81 Mbit/s
  95th percentile per-packet one-way delay: 61.436 ms
  Loss rate: 0.00%
Run 3: Report of PCC-Vivace — Data Link
Run 4: Statistics of PCC-Vivace

Start at: 2018-08-11 08:14:17
End at: 2018-08-11 08:14:47
Local clock offset: -0.037 ms
Remote clock offset: -0.774 ms

# Below is generated by plot.py at 2018-08-11 14:27:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 551.93 Mbit/s
95th percentile per-packet one-way delay: 64.860 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 338.56 Mbit/s
95th percentile per-packet one-way delay: 63.643 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 295.09 Mbit/s
95th percentile per-packet one-way delay: 63.398 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 50.01 Mbit/s
95th percentile per-packet one-way delay: 66.115 ms
Loss rate: 0.08%
Run 4: Report of PCC-Vivace — Data Link

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

- Flow 1 ingress (mean 338.56 Mbps)  
- Flow 1 egress (mean 338.56 Mbps)  
- Flow 2 ingress (mean 295.10 Mbps)  
- Flow 2 egress (mean 295.09 Mbps)  
- Flow 3 ingress (mean 50.04 Mbps)  
- Flow 3 egress (mean 50.01 Mbps)  

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

- Flow 1 (95th percentile 63.64 ms)  
- Flow 2 (95th percentile 63.40 ms)  
- Flow 3 (95th percentile 66.11 ms)
Run 5: Statistics of PCC-Vivace

Start at: 2018-08-11 08:40:01
End at: 2018-08-11 08:40:31
Local clock offset: -0.08 ms
Remote clock offset: -0.661 ms

# Below is generated by plot.py at 2018-08-11 14:27:35
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 557.58 Mbit/s
  95th percentile per-packet one-way delay: 66.950 ms
  Loss rate: 0.05%
-- Flow 1:
  Average throughput: 327.03 Mbit/s
  95th percentile per-packet one-way delay: 69.208 ms
  Loss rate: 0.08%
-- Flow 2:
  Average throughput: 317.35 Mbit/s
  95th percentile per-packet one-way delay: 66.669 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 59.21 Mbit/s
  95th percentile per-packet one-way delay: 60.967 ms
  Loss rate: 0.00%
Run 5: Report of PCC-Vivace — Data Link

![Data Link Throughput Graph](image)

- Flow 1 ingress (mean 327.23 Mbit/s)
- Flow 1 egress (mean 327.03 Mbit/s)
- Flow 2 ingress (mean 317.35 Mbit/s)
- Flow 2 egress (mean 317.35 Mbit/s)
- Flow 3 ingress (mean 59.20 Mbit/s)
- Flow 3 egress (mean 59.21 Mbit/s)

![Data Link Delay Graph](image)

- Flow 1 (95th percentile 69.21 ms)
- Flow 2 (95th percentile 66.67 ms)
- Flow 3 (95th percentile 60.97 ms)
Run 6: Statistics of PCC-Vivace

Start at: 2018-08-11 09:06:06
End at: 2018-08-11 09:06:36
Local clock offset: -0.083 ms
Remote clock offset: -0.247 ms

# Below is generated by plot.py at 2018-08-11 14:29:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 523.22 Mbit/s
95th percentile per-packet one-way delay: 66.733 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 326.77 Mbit/s
95th percentile per-packet one-way delay: 72.538 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 270.20 Mbit/s
95th percentile per-packet one-way delay: 63.332 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 51.36 Mbit/s
95th percentile per-packet one-way delay: 66.924 ms
Loss rate: 0.04%
Run 6: Report of PCC-Vivace — Data Link

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

Legend:
- Flow 1 ingress (mean 362.77 Mbit/s)
- Flow 1 egress (mean 362.77 Mbit/s)
- Flow 2 ingress (mean 270.20 Mbit/s)
- Flow 2 egress (mean 270.20 Mbit/s)
- Flow 3 ingress (mean 51.36 Mbit/s)
- Flow 3 egress (mean 51.36 Mbit/s)
Run 7: Statistics of PCC-Vivace

Start at: 2018-08-11 09:32:45
End at: 2018-08-11 09:33:15
Local clock offset: -0.007 ms
Remote clock offset: -0.055 ms

# Below is generated by plot.py at 2018-08-11 14:30:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 597.75 Mbit/s
95th percentile per-packet one-way delay: 87.339 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 332.11 Mbit/s
95th percentile per-packet one-way delay: 99.570 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 259.58 Mbit/s
95th percentile per-packet one-way delay: 76.768 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 282.67 Mbit/s
95th percentile per-packet one-way delay: 69.639 ms
Loss rate: 0.04%
Run 7: Report of PCC-Vivace — Data Link
Run 8: Statistics of PCC-Vivace

Start at: 2018-08-11 09:59:34
End at: 2018-08-11 10:00:04
Local clock offset: 0.025 ms
Remote clock offset: 1.373 ms

# Below is generated by plot.py at 2018-08-11 14:30:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 624.30 Mbit/s
95th percentile per-packet one-way delay: 67.881 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 356.69 Mbit/s
95th percentile per-packet one-way delay: 68.367 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 272.91 Mbit/s
95th percentile per-packet one-way delay: 95.555 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 260.98 Mbit/s
95th percentile per-packet one-way delay: 66.304 ms
Loss rate: 0.00%
Run 8: Report of PCC-Vivace — Data Link

![Graph showing network performance metrics](image)

- **Throughput (Mbps)**
  - Flow 1 ingress (mean 356.97 Mbps)
  - Flow 2 ingress (mean 272.90 Mbps)
  - Flow 3 ingress (mean 260.97 Mbps)
  - Flow 1 egress (mean 356.69 Mbps)
  - Flow 2 egress (mean 272.91 Mbps)
  - Flow 3 egress (mean 260.98 Mbps)

- **Per-packet one-way delay (ms)**
  - Flow 1 (95th percentile 68.37 ms)
  - Flow 2 (95th percentile 95.56 ms)
  - Flow 3 (95th percentile 66.30 ms)
Run 9: Statistics of PCC-Vivace

Start at: 2018-08-11 10:26:28
End at: 2018-08-11 10:26:58
Local clock offset: -0.017 ms
Remote clock offset: 0.01 ms

# Below is generated by plot.py at 2018-08-11 14:31:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 617.46 Mbit/s
95th percentile per-packet one-way delay: 66.554 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 365.17 Mbit/s
95th percentile per-packet one-way delay: 68.131 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 285.27 Mbit/s
95th percentile per-packet one-way delay: 62.569 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 189.93 Mbit/s
95th percentile per-packet one-way delay: 62.761 ms
Loss rate: 0.00%
Run 9: Report of PCC-Vivace — Data Link

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

- **Flow 1 ingress (mean 365.17 Mbps)**
- **Flow 1 egress (mean 365.17 Mbps)**
- **Flow 2 ingress (mean 285.25 Mbps)**
- **Flow 2 egress (mean 285.27 Mbps)**
- **Flow 3 ingress (mean 289.92 Mbps)**
- **Flow 3 egress (mean 189.93 Mbps)**
Run 10: Statistics of PCC-Vivace

Start at: 2018-08-11 10:53:22
End at: 2018-08-11 10:53:52
Local clock offset: -0.027 ms
Remote clock offset: 0.184 ms

# Below is generated by plot.py at 2018-08-11 14:31:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 489.31 Mbit/s
95th percentile per-packet one-way delay: 63.256 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 304.14 Mbit/s
95th percentile per-packet one-way delay: 63.578 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 269.33 Mbit/s
95th percentile per-packet one-way delay: 62.685 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 18.51 Mbit/s
95th percentile per-packet one-way delay: 61.590 ms
Loss rate: 0.00%
Run 10: Report of PCC-Vivace — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 304.14 Mbit/s)  
Flow 1 egress (mean 304.14 Mbit/s)  
Flow 2 ingress (mean 269.32 Mbit/s)  
Flow 2 egress (mean 269.33 Mbit/s)  
Flow 3 ingress (mean 18.50 Mbit/s)  
Flow 3 egress (mean 18.51 Mbit/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 63.58 ms)  
Flow 2 (95th percentile 62.69 ms)  
Flow 3 (95th percentile 61.59 ms)
Run 1: Statistics of WebRTC media

Start at: 2018-08-11 06:46:30
End at: 2018-08-11 06:47:00
Local clock offset: -0.108 ms
Remote clock offset: -0.904 ms

# Below is generated by plot.py at 2018-08-11 14:31:23
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 3.74 Mbit/s
  95th percentile per-packet one-way delay: 60.417 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 1.92 Mbit/s
  95th percentile per-packet one-way delay: 60.408 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 1.44 Mbit/s
  95th percentile per-packet one-way delay: 60.421 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.58 Mbit/s
  95th percentile per-packet one-way delay: 60.438 ms
  Loss rate: 0.00%
Run 1: Report of WebRTC media — Data Link

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

- Flow 1 ingress (mean 1.92 Mbit/s)
- Flow 1 egress (mean 1.92 Mbit/s)
- Flow 2 ingress (mean 1.44 Mbit/s)
- Flow 2 egress (mean 1.44 Mbit/s)
- Flow 3 ingress (mean 0.58 Mbit/s)
- Flow 3 egress (mean 0.58 Mbit/s)

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

- Flow 1 (95th percentile 60.41 ms)
- Flow 2 (95th percentile 60.42 ms)
- Flow 3 (95th percentile 60.44 ms)
Run 2: Statistics of WebRTC media

Start at: 2018-08-11 07:12:34
End at: 2018-08-11 07:13:04
Local clock offset: -0.098 ms
Remote clock offset: -0.348 ms

# Below is generated by plot.py at 2018-08-11 14:31:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.67 Mbit/s
95th percentile per-packet one-way delay: 61.344 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.01 Mbit/s
95th percentile per-packet one-way delay: 61.328 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.20 Mbit/s
95th percentile per-packet one-way delay: 61.195 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.49 Mbit/s
95th percentile per-packet one-way delay: 66.404 ms
Loss rate: 0.00%
Run 2: Report of WebRTC media — Data Link

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

- Flow 1 ingress (mean 2.01 Mbit/s)
- Flow 1 egress (mean 2.01 Mbit/s)
- Flow 2 ingress (mean 1.20 Mbit/s)
- Flow 2 egress (mean 1.20 Mbit/s)
- Flow 3 ingress (mean 0.49 Mbit/s)
- Flow 3 egress (mean 0.49 Mbit/s)
Run 3: Statistics of WebRTC media

Start at: 2018-08-11 07:38:41
End at: 2018-08-11 07:39:11
Local clock offset: -0.049 ms
Remote clock offset: 1.319 ms

# Below is generated by plot.py at 2018-08-11 14:31:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.53 Mbit/s
95th percentile per-packet one-way delay: 68.297 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 1.92 Mbit/s
95th percentile per-packet one-way delay: 68.340 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 1.16 Mbit/s
95th percentile per-packet one-way delay: 62.675 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.46 Mbit/s
95th percentile per-packet one-way delay: 68.096 ms
Loss rate: 0.00%
Run 3: Report of WebRTC media — Data Link

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

- **Flow 1 ingress** (mean 1.93 Mbit/s)
- **Flow 1 egress** (mean 1.92 Mbit/s)
- **Flow 2 ingress** (mean 1.16 Mbit/s)
- **Flow 2 egress** (mean 1.16 Mbit/s)
- **Flow 3 ingress** (mean 0.46 Mbit/s)
- **Flow 3 egress** (mean 0.46 Mbit/s)

Throughput (Mbit/s)

Time (s)

Per packet one way delay (ms)

Time (s)
Run 4: Statistics of WebRTC media

Start at: 2018-08-11 08:04:10
End at: 2018-08-11 08:04:40
Local clock offset: -0.087 ms
Remote clock offset: -0.073 ms

# Below is generated by plot.py at 2018-08-11 14:31:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.61 Mbit/s
95th percentile per-packet one-way delay: 67.089 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.92 Mbit/s
95th percentile per-packet one-way delay: 67.099 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.21 Mbit/s
95th percentile per-packet one-way delay: 67.099 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.48 Mbit/s
95th percentile per-packet one-way delay: 61.566 ms
Loss rate: 0.00%
Run 4: Report of WebRTC media — Data Link

![WebRTC Media Throughput Graph](image1)

![WebRTC Media Delay Graph](image2)
Run 5: Statistics of WebRTC media

Start at: 2018-08-11 08:29:48
End at: 2018-08-11 08:30:18
Local clock offset: -0.075 ms
Remote clock offset: -0.813 ms

# Below is generated by plot.py at 2018-08-11 14:31:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.60 Mbit/s
95th percentile per-packet one-way delay: 66.211 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 1.98 Mbit/s
95th percentile per-packet one-way delay: 66.122 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.18 Mbit/s
95th percentile per-packet one-way delay: 60.782 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.46 Mbit/s
95th percentile per-packet one-way delay: 66.336 ms
Loss rate: 0.37%
Run 5: Report of WebRTC media — Data Link

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

- **Throughput (Mbps)**
  - Flow 1 ingress (mean 1.98 Mbps)
  - Flow 1 egress (mean 1.98 Mbps)
  - Flow 2 ingress (mean 1.18 Mbps)
  - Flow 2 egress (mean 1.18 Mbps)
  - Flow 3 ingress (mean 0.46 Mbps)
  - Flow 3 egress (mean 0.46 Mbps)

- **Per-packet one-way delay (ms)**
  - Flow 1 (95th percentile 66.12 ms)
  - Flow 2 (95th percentile 60.78 ms)
  - Flow 3 (95th percentile 66.34 ms)
Run 6: Statistics of WebRTC media

Start at: 2018-08-11 08:55:35
End at: 2018-08-11 08:56:05
Local clock offset: -0.074 ms
Remote clock offset: -0.074 ms

# Below is generated by plot.py at 2018-08-11 14:31:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.73 Mbit/s
95th percentile per-packet one-way delay: 66.972 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.06 Mbit/s
95th percentile per-packet one-way delay: 61.640 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.21 Mbit/s
95th percentile per-packet one-way delay: 67.046 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.47 Mbit/s
95th percentile per-packet one-way delay: 61.454 ms
Loss rate: 0.00%
Run 6: Report of WebRTC media — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 2.06 Mbit/s)
Flow 1 egress (mean 2.06 Mbit/s)
Flow 2 ingress (mean 1.21 Mbit/s)
Flow 2 egress (mean 1.21 Mbit/s)
Flow 3 ingress (mean 0.47 Mbit/s)
Flow 3 egress (mean 0.47 Mbit/s)

Per packet one way delay [ms]

Time (s)

Flow 1 (95th percentile 61.64 ms)
Flow 2 (95th percentile 67.05 ms)
Flow 3 (95th percentile 61.45 ms)
Run 7: Statistics of WebRTC media

Start at: 2018-08-11 09:22:13
End at: 2018-08-11 09:22:43
Local clock offset: -0.048 ms
Remote clock offset: -0.063 ms

# Below is generated by plot.py at 2018-08-11 14:31:23
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 3.64 Mbit/s
  95th percentile per-packet one-way delay: 61.504 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 1.98 Mbit/s
  95th percentile per-packet one-way delay: 61.533 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 1.20 Mbit/s
  95th percentile per-packet one-way delay: 61.421 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.47 Mbit/s
  95th percentile per-packet one-way delay: 61.456 ms
  Loss rate: 0.00%
Run 7: Report of WebRTC media — Data Link

![Graph of throughput (Mbit/s) over time](image1)

- **Flow 1 ingress (mean 1.98 Mbit/s)**
- **Flow 1 egress (mean 1.98 Mbit/s)**
- **Flow 2 ingress (mean 1.20 Mbit/s)**
- **Flow 2 egress (mean 1.20 Mbit/s)**
- **Flow 3 ingress (mean 0.47 Mbit/s)**
- **Flow 3 egress (mean 0.47 Mbit/s)**

![Graph of per-packet one-way delay (ms) over time](image2)

- **Flow 1 (95th percentile 61.53 ms)**
- **Flow 2 (95th percentile 61.42 ms)**
- **Flow 3 (95th percentile 61.46 ms)**
Run 8: Statistics of WebRTC media

Start at: 2018-08-11 09:48:56
End at: 2018-08-11 09:49:26
Local clock offset: 0.034 ms
Remote clock offset: 0.407 ms

# Below is generated by plot.py at 2018-08-11 14:31:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.69 Mbit/s
95th percentile per-packet one-way delay: 61.757 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 2.06 Mbit/s
95th percentile per-packet one-way delay: 61.706 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 1.18 Mbit/s
95th percentile per-packet one-way delay: 61.805 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.47 Mbit/s
95th percentile per-packet one-way delay: 61.774 ms
Loss rate: 0.00%
Run 8: Report of WebRTC media — Data Link

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

- Flow 1 ingress (mean 2.06 Mbit/s)
- Flow 1 egress (mean 2.06 Mbit/s)
- Flow 2 ingress (mean 1.18 Mbit/s)
- Flow 2 egress (mean 1.18 Mbit/s)
- Flow 3 ingress (mean 0.47 Mbit/s)
- Flow 3 egress (mean 0.47 Mbit/s)

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

- Flow 1 (95th percentile 61.71 ms)
- Flow 2 (95th percentile 61.80 ms)
- Flow 3 (95th percentile 61.77 ms)
Run 9: Statistics of WebRTC media

Start at: 2018-08-11 10:15:50
End at: 2018-08-11 10:16:20
Local clock offset: -0.011 ms
Remote clock offset: -0.666 ms

# Below is generated by plot.py at 2018-08-11 14:31:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.69 Mbit/s
95th percentile per-packet one-way delay: 60.788 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 2.02 Mbit/s
95th percentile per-packet one-way delay: 60.814 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 1.20 Mbit/s
95th percentile per-packet one-way delay: 60.669 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.47 Mbit/s
95th percentile per-packet one-way delay: 60.708 ms
Loss rate: 0.00%
Run 9: Report of WebRTC media — Data Link
Run 10: Statistics of WebRTC media

Start at: 2018-08-11 10:42:44
End at: 2018-08-11 10:43:14
Local clock offset: -0.057 ms
Remote clock offset: -0.032 ms

# Below is generated by plot.py at 2018-08-11 14:31:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.65 Mbit/s
95th percentile per-packet one-way delay: 61.456 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.99 Mbit/s
95th percentile per-packet one-way delay: 61.325 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.21 Mbit/s
95th percentile per-packet one-way delay: 61.544 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.48 Mbit/s
95th percentile per-packet one-way delay: 61.423 ms
Loss rate: 0.00%
Run 10: Report of WebRTC media — Data Link

Throughput (Mbit/s) vs Time (s)

- Flow 1 ingress (mean 1.99 Mbit/s)
- Flow 1 egress (mean 1.99 Mbit/s)
- Flow 2 ingress (mean 1.21 Mbit/s)
- Flow 2 egress (mean 1.21 Mbit/s)
- Flow 3 ingress (mean 0.48 Mbit/s)
- Flow 3 egress (mean 0.48 Mbit/s)

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

- Flow 1 (95th percentile 61.33 ms)
- Flow 2 (95th percentile 61.54 ms)
- Flow 3 (95th percentile 61.42 ms)