Pantheon Report

Generated at 2018-08-22 23:17:22 (UTC).
Data path: Mexico Ethernet (remote) → AWS California 2 Ethernet (local).
Repeated the test of 17 congestion control schemes 10 times.
Each test lasted for 30 seconds running 3 flows with 10-second interval between two flows.
NTP offsets were measured against time.stanford.edu and have been applied to correct the timestamps in logs.

System info:
Linux 4.15.0-1017-aws
net.core.default_qdisc = fq_codel
net.core.rmem_default = 16777216
net.core.rmem_max = 33554432
net.core.wmem_default = 212992
net.core.wmem_max = 212992
net.ipv4.tcp_rmem = 4096 87380 6291456
net.ipv4.tcp_wmem = 4096 16384 4194304

Git summary:
branch: master @ 7719b900495aa706f8452ab7d4a94dd562e9296e
third_party/fillp @ d47f4fa1b454a5e3c0537115c5a28436dbd4b834
third_party/fillp-sheep @ daed0c84f98531712514b2231f43ec6901114ffe
third_party/genericCC @ d0153f8e594aa89e93b032143cedb9e58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0edbf90c077e6d4
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ 6f038ed31259d366f9840f65b82cbe8f464b1b39
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 @ cd43e34e3f5f5613e8ac08f9ab92c4eb24f974ab
third_party/proto-quic @ 7796f1a82733a86b42f1bc8143ebc978f3cf42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3b5b2
M src/ScreamClient
M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
M src/verus.hpp
M tools/plot.py
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webtcc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851
test from Mexico to AWS California 2, 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>59.14</td>
<td>38.73</td>
<td>29.39</td>
</tr>
<tr>
<td>Copa</td>
<td>10</td>
<td>53.84</td>
<td>33.08</td>
<td>27.04</td>
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<tr>
<td>TCP Cubic</td>
<td>10</td>
<td>51.73</td>
<td>37.09</td>
<td>31.00</td>
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<td>59.18</td>
<td>39.20</td>
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<td>FillP-Sheep</td>
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<td>58.15</td>
<td>41.41</td>
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<td>Indigo</td>
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<tr>
<td>PCC-Allegro</td>
<td>10</td>
<td>57.30</td>
<td>36.76</td>
<td>32.56</td>
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<tr>
<td>PCC-Expr</td>
<td>10</td>
<td>53.02</td>
<td>39.72</td>
<td>32.62</td>
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<tr>
<td>QUIC Cubic</td>
<td>10</td>
<td>46.41</td>
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<td>29.02</td>
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<td>Sprout</td>
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<td>10.91</td>
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<td>TaoVA-100x</td>
<td>10</td>
<td>49.69</td>
<td>39.44</td>
<td>31.42</td>
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<td>TCP Vegas</td>
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<td>52.84</td>
<td>33.78</td>
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<td>Verus</td>
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<td>53.54</td>
<td>38.09</td>
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<td>PCC-Vivace</td>
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<td>55.51</td>
<td>34.92</td>
<td>26.34</td>
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<tr>
<td>WebRTC media</td>
<td>10</td>
<td>1.82</td>
<td>1.07</td>
<td>0.46</td>
</tr>
</tbody>
</table>
Run 1: Statistics of TCP BBR

Start at: 2018-08-22 19:21:46
End at: 2018-08-22 19:22:16
Local clock offset: -0.059 ms
Remote clock offset: 0.601 ms

# Below is generated by plot.py at 2018-08-22 22:54:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.78 Mbit/s
95th percentile per-packet one-way delay: 57.047 ms
Loss rate: 2.34%
-- Flow 1:
Average throughput: 62.67 Mbit/s
95th percentile per-packet one-way delay: 56.760 ms
Loss rate: 2.04%
-- Flow 2:
Average throughput: 36.51 Mbit/s
95th percentile per-packet one-way delay: 77.806 ms
Loss rate: 3.15%
-- Flow 3:
Average throughput: 23.54 Mbit/s
95th percentile per-packet one-way delay: 70.253 ms
Loss rate: 2.16%
Run 1: Report of TCP BBR — Data Link

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

- Flow 1 ingress (mean 63.83 Mbit/s)
- Flow 1 egress (mean 62.67 Mbit/s)
- Flow 2 ingress (mean 37.58 Mbit/s)
- Flow 2 egress (mean 36.51 Mbit/s)
- Flow 3 ingress (mean 23.90 Mbit/s)
- Flow 3 egress (mean 23.54 Mbit/s)
Run 2: Statistics of TCP BBR

Start at: 2018-08-22 19:44:51
End at: 2018-08-22 19:45:21
Local clock offset: 0.21 ms
Remote clock offset: 0.958 ms

# Below is generated by plot.py at 2018-08-22 22:54:24
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 94.96 Mbit/s
  95th percentile per-packet one-way delay: 67.131 ms
  Loss rate: 2.51%
-- Flow 1:
  Average throughput: 57.93 Mbit/s
  95th percentile per-packet one-way delay: 62.086 ms
  Loss rate: 1.95%
-- Flow 2:
  Average throughput: 39.73 Mbit/s
  95th percentile per-packet one-way delay: 66.384 ms
  Loss rate: 3.45%
-- Flow 3:
  Average throughput: 31.92 Mbit/s
  95th percentile per-packet one-way delay: 68.725 ms
  Loss rate: 3.14%
Run 2: Report of TCP BBR — Data Link

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

- **Flow 1 ingress (mean 58.96 Mbit/s)**
- **Flow 1 egress (mean 57.93 Mbit/s)**
- **Flow 2 ingress (mean 41.02 Mbit/s)**
- **Flow 2 egress (mean 39.73 Mbit/s)**
- **Flow 3 ingress (mean 32.74 Mbit/s)**
- **Flow 3 egress (mean 31.92 Mbit/s)**

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

- **Flow 1 (95th percentile 62.09 ms)**
- **Flow 2 (95th percentile 66.38 ms)**
- **Flow 3 (95th percentile 68.72 ms)**
Run 3: Statistics of TCP BBR

Start at: 2018-08-22 20:07:48
End at: 2018-08-22 20:08:18
Local clock offset: 0.514 ms
Remote clock offset: 0.377 ms

# Below is generated by plot.py at 2018-08-22 22:54:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.68 Mbit/s
95th percentile per-packet one-way delay: 67.119 ms
Loss rate: 2.35%
-- Flow 1:
Average throughput: 57.56 Mbit/s
95th percentile per-packet one-way delay: 58.598 ms
Loss rate: 1.77%
-- Flow 2:
Average throughput: 39.96 Mbit/s
95th percentile per-packet one-way delay: 67.154 ms
Loss rate: 3.24%
-- Flow 3:
Average throughput: 31.80 Mbit/s
95th percentile per-packet one-way delay: 68.421 ms
Loss rate: 3.26%
Run 3: Report of TCP BBR — Data Link

![Graphs showing throughput and per-packet one-way delay for flows 1, 2, and 3.]
Run 4: Statistics of TCP BBR

Start at: 2018-08-22 20:30:49
End at: 2018-08-22 20:31:19
Local clock offset: 0.416 ms
Remote clock offset: 0.192 ms

# Below is generated by plot.py at 2018-08-22 22:54:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.69 Mbit/s
95th percentile per-packet one-way delay: 67.332 ms
Loss rate: 2.32%
-- Flow 1:
Average throughput: 57.79 Mbit/s
95th percentile per-packet one-way delay: 66.474 ms
Loss rate: 1.97%
-- Flow 2:
Average throughput: 39.59 Mbit/s
95th percentile per-packet one-way delay: 67.195 ms
Loss rate: 2.69%
-- Flow 3:
Average throughput: 31.90 Mbit/s
95th percentile per-packet one-way delay: 68.396 ms
Loss rate: 3.35%
Run 4: Report of TCP BBR — Data Link
Run 5: Statistics of TCP BBR

Start at: 2018-08-22 20:53:48
End at: 2018-08-22 20:54:18
Local clock offset: -2.768 ms
Remote clock offset: -0.742 ms

# Below is generated by plot.py at 2018-08-22 22:54:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.90 Mbit/s
95th percentile per-packet one-way delay: 67.171 ms
Loss rate: 2.30%
-- Flow 1:
Average throughput: 58.02 Mbit/s
95th percentile per-packet one-way delay: 66.217 ms
Loss rate: 1.97%
-- Flow 2:
Average throughput: 39.63 Mbit/s
95th percentile per-packet one-way delay: 66.830 ms
Loss rate: 2.90%
-- Flow 3:
Average throughput: 31.76 Mbit/s
95th percentile per-packet one-way delay: 68.678 ms
Loss rate: 2.60%
Run 5: Report of TCP BBR — Data Link

Graph 1: Throughput vs Time

Graph 2: Per-packet one-way delay vs Time

Legend:
- Flow 1 ingress (mean 59.06 Mbit/s)
- Flow 1 egress (mean 58.02 Mbit/s)
- Flow 2 ingress (mean 40.68 Mbit/s)
- Flow 2 egress (mean 39.65 Mbit/s)
- Flow 3 ingress (mean 32.39 Mbit/s)
- Flow 3 egress (mean 31.76 Mbit/s)
Run 6: Statistics of TCP BBR

Start at: 2018-08-22 21:16:44
End at: 2018-08-22 21:17:14
Local clock offset: -3.853 ms
Remote clock offset: -1.421 ms

# Below is generated by plot.py at 2018-08-22 22:54:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.08 Mbit/s
95th percentile per-packet one-way delay: 67.222 ms
Loss rate: 2.32%
-- Flow 1:
Average throughput: 57.20 Mbit/s
95th percentile per-packet one-way delay: 66.081 ms
Loss rate: 1.93%
-- Flow 2:
Average throughput: 39.73 Mbit/s
95th percentile per-packet one-way delay: 67.763 ms
Loss rate: 2.67%
-- Flow 3:
Average throughput: 31.51 Mbit/s
95th percentile per-packet one-way delay: 68.000 ms
Loss rate: 3.53%
Run 6: Report of TCP BBR — Data Link

[Graph showing throughput and per-packet one-way delay over time for different flows with legends for each flow indicating mean throughput and 95th percentile delay.]
Run 7: Statistics of TCP BBR

Start at: 2018-08-22 21:39:36
End at: 2018-08-22 21:40:06
Local clock offset: -3.554 ms
Remote clock offset: -2.156 ms

# Below is generated by plot.py at 2018-08-22 22:54:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.80 Mbit/s
95th percentile per-packet one-way delay: 65.985 ms
Loss rate: 2.28%
-- Flow 1:
Average throughput: 57.86 Mbit/s
95th percentile per-packet one-way delay: 65.395 ms
Loss rate: 1.91%
-- Flow 2:
Average throughput: 39.76 Mbit/s
95th percentile per-packet one-way delay: 65.109 ms
Loss rate: 2.93%
-- Flow 3:
Average throughput: 31.65 Mbit/s
95th percentile per-packet one-way delay: 67.807 ms
Loss rate: 2.69%
Run 7: Report of TCP BBR — Data Link

![Graph of Throughput and Per Packet One Way Delay](image)

- **Throughput (Mbps)**
  - Flow 1 ingress (mean 58.86 Mbps)
  - Flow 1 egress (mean 57.86 Mbps)
  - Flow 2 ingress (mean 40.62 Mbps)
  - Flow 2 egress (mean 39.76 Mbps)
  - Flow 3 ingress (mean 32.31 Mbps)
  - Flow 3 egress (mean 31.65 Mbps)

- **Per Packet One Way Delay (ms)**
  - Flow 1 (95th percentile 65.39 ms)
  - Flow 2 (95th percentile 65.11 ms)
  - Flow 3 (95th percentile 67.81 ms)
Run 8: Statistics of TCP BBR

Start at: 2018-08-22 22:02:52  
End at: 2018-08-22 22:03:22  
Local clock offset: 1.063 ms  
Remote clock offset: -0.938 ms  

# Below is generated by plot.py at 2018-08-22 22:54:26  
# Datalink statistics  
-- Total of 3 flows: 
Average throughput: 94.89 Mbit/s  
95th percentile per-packet one-way delay: 66.371 ms  
Loss rate: 2.34%  
-- Flow 1: 
Average throughput: 57.53 Mbit/s  
95th percentile per-packet one-way delay: 57.140 ms  
Loss rate: 1.98%  
-- Flow 2:  
Average throughput: 40.41 Mbit/s  
95th percentile per-packet one-way delay: 67.706 ms  
Loss rate: 3.07%  
-- Flow 3: 
Average throughput: 31.57 Mbit/s  
95th percentile per-packet one-way delay: 68.066 ms  
Loss rate: 2.42%
Run 8: Report of TCP BBR — Data Link
Run 9: Statistics of TCP BBR

Start at: 2018-08-22 22:25:54
End at: 2018-08-22 22:26:24
Local clock offset: 0.725 ms
Remote clock offset: -0.854 ms

# Below is generated by plot.py at 2018-08-22 22:55:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.35 Mbit/s
95th percentile per-packet one-way delay: 57.398 ms
Loss rate: 2.15%
-- Flow 1:
Average throughput: 62.30 Mbit/s
95th percentile per-packet one-way delay: 57.115 ms
Loss rate: 1.81%
-- Flow 2:
Average throughput: 36.03 Mbit/s
95th percentile per-packet one-way delay: 77.255 ms
Loss rate: 2.83%
-- Flow 3:
Average throughput: 24.40 Mbit/s
95th percentile per-packet one-way delay: 79.690 ms
Loss rate: 2.64%
Run 9: Report of TCP BBR — Data Link

**Graph 1:**
- **Throughput (Mbps):**
  - Flow 1 ingress (mean 63.31 Mbps)
  - Flow 1 egress (mean 62.30 Mbps)
  - Flow 2 ingress (mean 36.96 Mbps)
  - Flow 2 egress (mean 36.03 Mbps)
  - Flow 3 ingress (mean 24.83 Mbps)
  - Flow 3 egress (mean 24.40 Mbps)

**Graph 2:**
- **Per packet one-way delay (ms):**
  - Flow 1 (95th percentile 57.12 ms)
  - Flow 2 (95th percentile 77.25 ms)
  - Flow 3 (95th percentile 79.69 ms)
Run 10: Statistics of TCP BBR

End at: 2018-08-22 22:49:27
Local clock offset: 0.582 ms
Remote clock offset: -0.292 ms

# Below is generated by plot.py at 2018-08-22 22:55:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.34 Mbit/s
95th percentile per-packet one-way delay: 62.399 ms
Loss rate: 2.41%
-- Flow 1:
Average throughput: 62.53 Mbit/s
95th percentile per-packet one-way delay: 56.869 ms
Loss rate: 1.94%
-- Flow 2:
Average throughput: 35.91 Mbit/s
95th percentile per-packet one-way delay: 75.191 ms
Loss rate: 3.29%
-- Flow 3:
Average throughput: 23.86 Mbit/s
95th percentile per-packet one-way delay: 79.552 ms
Loss rate: 3.43%
Run 10: Report of TCP BBR — Data Link

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

Legend:
- Flow 1 ingress (mean 63.63 Mbit/s)
- Flow 1 egress (mean 62.53 Mbit/s)
- Flow 2 ingress (mean 37.01 Mbit/s)
- Flow 2 egress (mean 35.91 Mbit/s)
- Flow 3 ingress (mean 24.54 Mbit/s)
- Flow 3 egress (mean 23.86 Mbit/s)

Legend for packet delay:
- Flow 1 (95th percentile 56.87 ms)
- Flow 2 (95th percentile 75.19 ms)
- Flow 3 (95th percentile 79.55 ms)
Run 1: Statistics of Copa

Start at: 2018-08-22 19:09:35
End at: 2018-08-22 19:10:05
Local clock offset: -0.104 ms
Remote clock offset: -0.293 ms

# Below is generated by plot.py at 2018-08-22 22:56:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 80.33 Mbit/s
95th percentile per-packet one-way delay: 48.920 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 49.44 Mbit/s
95th percentile per-packet one-way delay: 46.312 ms
Loss rate: 0.15%
-- Flow 2:
Average throughput: 31.68 Mbit/s
95th percentile per-packet one-way delay: 52.642 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 29.58 Mbit/s
95th percentile per-packet one-way delay: 50.687 ms
Loss rate: 0.67%
Run 1: Report of Copa — Data Link
Run 2: Statistics of Copa

Start at: 2018-08-22 19:32:29
End at: 2018-08-22 19:32:59
Local clock offset: 0.122 ms
Remote clock offset: 0.604 ms

# Below is generated by plot.py at 2018-08-22 22:56:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.34 Mbit/s
95th percentile per-packet one-way delay: 43.570 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 58.13 Mbit/s
95th percentile per-packet one-way delay: 43.521 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 34.89 Mbit/s
95th percentile per-packet one-way delay: 46.971 ms
Loss rate: 0.29%
-- Flow 3:
Average throughput: 24.11 Mbit/s
95th percentile per-packet one-way delay: 42.045 ms
Loss rate: 0.67%
Run 2: Report of Copa — Data Link

[Graph showing throughput and packet delay over time for different flows with mean values provided.]
Run 3: Statistics of Copa

Start at: 2018-08-22 19:55:36  
End at: 2018-08-22 19:56:06  
Local clock offset: 0.332 ms  
Remote clock offset: 1.604 ms

# Below is generated by plot.py at 2018-08-22 22:56:19  
# Datalink statistics

-- Total of 3 flows:  
Average throughput: 86.84 Mbit/s  
95th percentile per-packet one-way delay: 43.611 ms  
Loss rate: 0.23%  

-- Flow 1:  
Average throughput: 51.68 Mbit/s  
95th percentile per-packet one-way delay: 43.625 ms  
Loss rate: 0.20%  

-- Flow 2:  
Average throughput: 43.95 Mbit/s  
95th percentile per-packet one-way delay: 43.605 ms  
Loss rate: 0.26%  

-- Flow 3:  
Average throughput: 17.85 Mbit/s  
95th percentile per-packet one-way delay: 37.496 ms  
Loss rate: 0.34%
Run 3: Report of Copa — Data Link

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**Graph 1:**
- **Throughput (Mbps):**
  - **Flow 1 ingress (mean 51.67 Mbps):** Dotted blue line
  - **Flow 1 egress (mean 51.68 Mbps):** Solid blue line
  - **Flow 2 ingress (mean 43.92 Mbps):** Dotted green line
  - **Flow 2 egress (mean 43.95 Mbps):** Solid green line
  - **Flow 3 ingress (mean 17.79 Mbps):** Dotted red line
  - **Flow 3 egress (mean 17.85 Mbps):** Solid red line

**Graph 2:**
- **Per-packet one-way delay (ms):**
  - **Flow 1 (95th percentile 43.62 ms):** Dotted blue line
  - **Flow 2 (95th percentile 43.60 ms):** Solid blue line
  - **Flow 3 (95th percentile 37.50 ms):** Dotted red line

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Run 4: Statistics of Copa

Start at: 2018-08-22 20:18:30
End at: 2018-08-22 20:19:00
Local clock offset: 0.267 ms
Remote clock offset: 0.192 ms

# Below is generated by plot.py at 2018-08-22 22:56:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.24 Mbit/s
95th percentile per-packet one-way delay: 43.691 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 54.31 Mbit/s
95th percentile per-packet one-way delay: 43.661 ms
Loss rate: 0.21%
-- Flow 2:
Average throughput: 34.30 Mbit/s
95th percentile per-packet one-way delay: 46.403 ms
Loss rate: 0.25%
-- Flow 3:
Average throughput: 21.41 Mbit/s
95th percentile per-packet one-way delay: 43.826 ms
Loss rate: 0.80%
Run 4: Report of Copa — Data Link
Run 5: Statistics of Copa

Start at: 2018-08-22 20:41:35
End at: 2018-08-22 20:42:05
Local clock offset: -0.884 ms
Remote clock offset: -0.16 ms

# Below is generated by plot.py at 2018-08-22 22:56:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.63 Mbit/s
95th percentile per-packet one-way delay: 52.043 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 47.37 Mbit/s
95th percentile per-packet one-way delay: 45.820 ms
Loss rate: 0.19%
-- Flow 2:
Average throughput: 32.76 Mbit/s
95th percentile per-packet one-way delay: 51.467 ms
Loss rate: 0.28%
-- Flow 3:
Average throughput: 31.58 Mbit/s
95th percentile per-packet one-way delay: 53.283 ms
Loss rate: 0.94%
Run 5: Report of Copa — Data Link
Run 6: Statistics of Copa

Start at: 2018-08-22 21:04:33
End at: 2018-08-22 21:05:03
Local clock offset: -3.403 ms
Remote clock offset: -0.919 ms

# Below is generated by plot.py at 2018-08-22 22:56:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 82.29 Mbit/s
95th percentile per-packet one-way delay: 46.733 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 52.42 Mbit/s
95th percentile per-packet one-way delay: 47.047 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 25.46 Mbit/s
95th percentile per-packet one-way delay: 50.018 ms
Loss rate: 0.33%
-- Flow 3:
Average throughput: 39.02 Mbit/s
95th percentile per-packet one-way delay: 40.069 ms
Loss rate: 0.77%
Run 6: Report of Copa — Data Link

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**Throughput (Mbps)**

- **Flow 1 ingress (mean 52.39 Mbps)**
- **Flow 1 egress (mean 52.42 Mbps)**
- **Flow 2 ingress (mean 25.47 Mbps)**
- **Flow 2 egress (mean 25.46 Mbps)**
- **Flow 3 ingress (mean 39.07 Mbps)**
- **Flow 3 egress (mean 39.02 Mbps)**

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

- **Flow 1 (95th percentile 47.05 ms)**
- **Flow 2 (95th percentile 50.02 ms)**
- **Flow 3 (95th percentile 40.07 ms)**

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Run 7: Statistics of Copa

Start at: 2018-08-22 21:27:26
End at: 2018-08-22 21:27:56
Local clock offset: -4.489 ms
Remote clock offset: -1.798 ms

# Below is generated by plot.py at 2018-08-22 22:57:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.21 Mbit/s
95th percentile per-packet one-way delay: 43.611 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 53.52 Mbit/s
95th percentile per-packet one-way delay: 43.573 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 39.37 Mbit/s
95th percentile per-packet one-way delay: 42.726 ms
Loss rate: 0.30%
-- Flow 3:
Average throughput: 28.60 Mbit/s
95th percentile per-packet one-way delay: 54.267 ms
Loss rate: 0.72%
Run 7: Report of Copa — Data Link
Run 8: Statistics of Copa

Start at: 2018-08-22 21:50:22
End at: 2018-08-22 21:50:52
Local clock offset: -0.277 ms
Remote clock offset: -1.519 ms

# Below is generated by plot.py at 2018-08-22 22:57:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 81.41 Mbit/s
95th percentile per-packet one-way delay: 43.759 ms
Loss rate: 0.21%
-- Flow 1:
Average throughput: 53.61 Mbit/s
95th percentile per-packet one-way delay: 43.708 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 30.23 Mbit/s
95th percentile per-packet one-way delay: 43.283 ms
Loss rate: 0.30%
-- Flow 3:
Average throughput: 23.20 Mbit/s
95th percentile per-packet one-way delay: 58.704 ms
Loss rate: 0.94%
Run 8: Report of Copa — Data Link

![Graphs showing throughput and per-packet one-way delay over time for different flows, with mean throughputs and 95th percentile delays highlighted.]
Run 9: Statistics of Copa

End at: 2018-08-22 22:14:08
Local clock offset: 0.749 ms
Remote clock offset: -0.849 ms

# Below is generated by plot.py at 2018-08-22 22:58:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.45 Mbit/s
95th percentile per-packet one-way delay: 43.950 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 57.16 Mbit/s
95th percentile per-packet one-way delay: 43.585 ms
Loss rate: 0.18%
-- Flow 2:
Average throughput: 28.78 Mbit/s
95th percentile per-packet one-way delay: 51.583 ms
Loss rate: 0.34%
-- Flow 3:
Average throughput: 30.56 Mbit/s
95th percentile per-packet one-way delay: 39.183 ms
Loss rate: 0.67%
Run 9: Report of Copa — Data Link

[Graphs showing throughput and packet delay for different flows over time]
Run 10: Statistics of Copa

Start at: 2018-08-22 22:36:46
End at: 2018-08-22 22:37:16
Local clock offset: 0.923 ms
Remote clock offset: -0.612 ms

# Below is generated by plot.py at 2018-08-22 22:58:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.41 Mbit/s
95th percentile per-packet one-way delay: 43.742 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 60.76 Mbit/s
95th percentile per-packet one-way delay: 43.768 ms
Loss rate: 0.17%
-- Flow 2:
Average throughput: 29.37 Mbit/s
95th percentile per-packet one-way delay: 40.860 ms
Loss rate: 0.29%
-- Flow 3:
Average throughput: 24.45 Mbit/s
95th percentile per-packet one-way delay: 43.575 ms
Loss rate: 0.66%
Run 1: Statistics of TCP Cubic

Start at: 2018-08-22 19:13:39
End at: 2018-08-22 19:14:09
Local clock offset: -0.04 ms
Remote clock offset: -0.229 ms

# Below is generated by plot.py at 2018-08-22 22:58:06
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 86.12 Mbit/s
  95th percentile per-packet one-way delay: 41.522 ms
  Loss rate: 0.27%
-- Flow 1:
  Average throughput: 55.12 Mbit/s
  95th percentile per-packet one-way delay: 41.462 ms
  Loss rate: 0.21%
-- Flow 2:
  Average throughput: 36.17 Mbit/s
  95th percentile per-packet one-way delay: 41.597 ms
  Loss rate: 0.22%
-- Flow 3:
  Average throughput: 20.92 Mbit/s
  95th percentile per-packet one-way delay: 41.604 ms
  Loss rate: 0.88%
Run 1: Report of TCP Cubic — Data Link

![Graph of Throughput (Mbps) vs Time (s)](image1)

- **Flow 1 ingress (mean 55.12 Mbps)**
- **Flow 1 egress (mean 55.12 Mbps)**
- **Flow 2 ingress (mean 36.13 Mbps)**
- **Flow 2 egress (mean 36.17 Mbps)**
- **Flow 3 ingress (mean 20.97 Mbps)**
- **Flow 3 egress (mean 20.92 Mbps)**

![Graph of Per packet one way delay (ms) vs Time (s)](image2)

- **Flow 1 (95th percentile 41.46 ms)**
- **Flow 2 (95th percentile 41.60 ms)**
- **Flow 3 (95th percentile 41.60 ms)**

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Run 2: Statistics of TCP Cubic

Start at: 2018-08-22 19:36:36  
End at: 2018-08-22 19:37:06  
Local clock offset: 0.119 ms  
Remote clock offset: 0.466 ms

# Below is generated by plot.py at 2018-08-22 22:58:06  
# Datalink statistics
-- Total of 3 flows:  
Average throughput: 86.22 Mbit/s  
95th percentile per-packet one-way delay: 41.374 ms  
Loss rate: 0.26%  
-- Flow 1:  
Average throughput: 46.82 Mbit/s  
95th percentile per-packet one-way delay: 40.943 ms  
Loss rate: 0.14%  
-- Flow 2:  
Average throughput: 37.05 Mbit/s  
95th percentile per-packet one-way delay: 41.823 ms  
Loss rate: 0.22%  
-- Flow 3:  
Average throughput: 44.48 Mbit/s  
95th percentile per-packet one-way delay: 41.462 ms  
Loss rate: 0.71%
Run 2: Report of TCP Cubic — Data Link

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

- **Throughput (Mbps)**
  - Flow 1 ingress (mean 45.79 Mbps)
  - Flow 1 egress (mean 46.82 Mbps)
  - Flow 2 ingress (mean 37.01 Mbps)
  - Flow 2 egress (mean 37.05 Mbps)
  - Flow 3 ingress (mean 44.51 Mbps)
  - Flow 3 egress (mean 44.48 Mbps)

- **Per-packet round-trip time (ms)**
  - Flow 1 (95th percentile 40.94 ms)
  - Flow 2 (95th percentile 41.82 ms)
  - Flow 3 (95th percentile 41.46 ms)
Run 3: Statistics of TCP Cubic

Start at: 2018-08-22 19:59:40
End at: 2018-08-22 20:00:10
Local clock offset: 0.469 ms
Remote clock offset: 1.657 ms

# Below is generated by plot.py at 2018-08-22 22:58:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.54 Mbit/s
95th percentile per-packet one-way delay: 41.260 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 47.05 Mbit/s
95th percentile per-packet one-way delay: 40.845 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 46.35 Mbit/s
95th percentile per-packet one-way delay: 40.705 ms
Loss rate: 0.34%
-- Flow 3:
Average throughput: 26.11 Mbit/s
95th percentile per-packet one-way delay: 43.480 ms
Loss rate: 0.63%
Run 3: Report of TCP Cubic — Data Link
Run 4: Statistics of TCP Cubic

Start at: 2018-08-22 20:22:34
End at: 2018-08-22 20:23:04
Local clock offset: 0.391 ms
Remote clock offset: 0.277 ms

# Below is generated by plot.py at 2018-08-22 22:58:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.25 Mbit/s
95th percentile per-packet one-way delay: 41.039 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 54.00 Mbit/s
95th percentile per-packet one-way delay: 40.373 ms
Loss rate: 0.19%
-- Flow 2:
Average throughput: 31.96 Mbit/s
95th percentile per-packet one-way delay: 42.256 ms
Loss rate: 0.25%
-- Flow 3:
Average throughput: 24.15 Mbit/s
95th percentile per-packet one-way delay: 41.857 ms
Loss rate: 0.84%
Run 4: Report of TCP Cubic — Data Link
Run 5: Statistics of TCP Cubic

Start at: 2018-08-22 20:45:38
End at: 2018-08-22 20:46:08
Local clock offset: -1.734 ms
Remote clock offset: -0.564 ms

# Below is generated by plot.py at 2018-08-22 22:58:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.04 Mbit/s
95th percentile per-packet one-way delay: 41.455 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 53.57 Mbit/s
95th percentile per-packet one-way delay: 40.999 ms
Loss rate: 0.19%
-- Flow 2:
Average throughput: 36.90 Mbit/s
95th percentile per-packet one-way delay: 42.766 ms
Loss rate: 0.22%
-- Flow 3:
Average throughput: 23.92 Mbit/s
95th percentile per-packet one-way delay: 42.227 ms
Loss rate: 0.88%
Run 5: Report of TCP Cubic — Data Link

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

- **Flow 1 ingress (mean 53.56 Mbit/s)**
- **Flow 1 egress (mean 53.57 Mbit/s)**
- **Flow 2 ingress (mean 36.86 Mbit/s)**
- **Flow 2 egress (mean 36.90 Mbit/s)**
- **Flow 3 ingress (mean 23.90 Mbit/s)**
- **Flow 3 egress (mean 23.92 Mbit/s)**
Run 6: Statistics of TCP Cubic

Start at: 2018-08-22 21:08:36  
End at: 2018-08-22 21:09:06  
Local clock offset: -3.639 ms  
Remote clock offset: -0.866 ms

# Below is generated by plot.py at 2018-08-22 22:58:18  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 84.13 Mbit/s  
95th percentile per-packet one-way delay: 40.641 ms  
Loss rate: 0.26%  
-- Flow 1:  
Average throughput: 47.02 Mbit/s  
95th percentile per-packet one-way delay: 40.210 ms  
Loss rate: 0.12%  
-- Flow 2:  
Average throughput: 38.31 Mbit/s  
95th percentile per-packet one-way delay: 41.348 ms  
Loss rate: 0.27%  
-- Flow 3:  
Average throughput: 35.06 Mbit/s  
95th percentile per-packet one-way delay: 35.381 ms  
Loss rate: 0.83%
Run 6: Report of TCP Cubic — Data Link

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

- Flow 1 ingress (mean 46.98 Mbps)
- Flow 1 egress (mean 47.02 Mbps)
- Flow 2 ingress (mean 38.30 Mbps)
- Flow 2 egress (mean 38.31 Mbps)
- Flow 3 ingress (mean 35.13 Mbps)
- Flow 3 egress (mean 35.06 Mbps)

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

- Flow 1 (95th percentile 40.21 ms)
- Flow 2 (95th percentile 41.35 ms)
- Flow 3 (95th percentile 35.38 ms)
Run 7: Statistics of TCP Cubic

Start at: 2018-08-22 21:31:30
End at: 2018-08-22 21:32:00
Local clock offset: -4.683 ms
Remote clock offset: -1.928 ms

# Below is generated by plot.py at 2018-08-22 22:58:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.00 Mbit/s
95th percentile per-packet one-way delay: 40.560 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 49.41 Mbit/s
95th percentile per-packet one-way delay: 39.894 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 38.73 Mbit/s
95th percentile per-packet one-way delay: 40.531 ms
Loss rate: 0.33%
-- Flow 3:
Average throughput: 29.70 Mbit/s
95th percentile per-packet one-way delay: 41.574 ms
Loss rate: 0.62%
Run 7: Report of TCP Cubic — Data Link

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

Legend:
- Flow 1 Ingress (mean 49.38 Mbit/s)
- Flow 1 Egress (mean 49.41 Mbit/s)
- Flow 2 Ingress (mean 38.73 Mbit/s)
- Flow 2 Egress (mean 38.73 Mbit/s)
- Flow 3 Ingress (mean 29.70 Mbit/s)
- Flow 3 Egress (mean 29.70 Mbit/s)
Run 8: Statistics of TCP Cubic

Start at: 2018-08-22 21:54:29
End at: 2018-08-22 21:54:59
Local clock offset: 0.32 ms
Remote clock offset: -1.254 ms

# Below is generated by plot.py at 2018-08-22 22:58:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 91.44 Mbit/s
  95th percentile per-packet one-way delay: 40.889 ms
  Loss rate: 0.25%
-- Flow 1:
  Average throughput: 60.14 Mbit/s
  95th percentile per-packet one-way delay: 40.512 ms
  Loss rate: 0.17%
-- Flow 2:
  Average throughput: 32.70 Mbit/s
  95th percentile per-packet one-way delay: 40.767 ms
  Loss rate: 0.32%
-- Flow 3:
  Average throughput: 28.77 Mbit/s
  95th percentile per-packet one-way delay: 43.070 ms
  Loss rate: 0.56%
Run 8: Report of TCP Cubic — Data Link

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

Legend:
- Flow 1 ingress (mean 60.12 Mbps)
- Flow 1 egress (mean 60.14 Mbps)
- Flow 2 ingress (mean 32.70 Mbps)
- Flow 2 egress (mean 32.70 Mbps)
- Flow 3 ingress (mean 28.74 Mbps)
- Flow 3 egress (mean 28.77 Mbps)

Legend for per-packet one-way delay:
- Flow 1 (95th percentile 40.51 ms)
- Flow 2 (95th percentile 40.77 ms)
- Flow 3 (95th percentile 43.07 ms)
Run 9: Statistics of TCP Cubic

Start at: 2018-08-22 22:17:44
End at: 2018-08-22 22:18:14
Local clock offset: 0.747 ms
Remote clock offset: -0.764 ms

# Below is generated by plot.py at 2018-08-22 22:58:32
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 93.19 Mbit/s
  95th percentile per-packet one-way delay: 41.384 ms
  Loss rate: 0.24%
-- Flow 1:
  Average throughput: 54.96 Mbit/s
  95th percentile per-packet one-way delay: 41.285 ms
  Loss rate: 0.11%
-- Flow 2:
  Average throughput: 33.95 Mbit/s
  95th percentile per-packet one-way delay: 40.891 ms
  Loss rate: 0.26%
-- Flow 3:
  Average throughput: 47.24 Mbit/s
  95th percentile per-packet one-way delay: 41.993 ms
  Loss rate: 0.69%
Run 9: Report of TCP Cubic — Data Link

Throughput (Mb/s)

Time (s)

Flow 1 ingress (mean 54.90 Mb/s)
Flow 1 egress (mean 54.96 Mb/s)
Flow 2 ingress (mean 33.93 Mb/s)
Flow 2 egress (mean 33.95 Mb/s)
Flow 3 ingress (mean 47.26 Mb/s)
Flow 3 egress (mean 47.24 Mb/s)

Per packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 41.28 ms)
Flow 2 (95th percentile 40.89 ms)
Flow 3 (95th percentile 41.99 ms)
Run 10: Statistics of TCP Cubic

Start at: 2018-08-22 22:40:49  
End at: 2018-08-22 22:41:19  
Local clock offset: 0.729 ms  
Remote clock offset: -0.432 ms  

# Below is generated by plot.py at 2018-08-22 22:58:34  
# Datalink statistics  
-- Total of 3 flows:  
  Average throughput: 84.76 Mbit/s  
  95th percentile per-packet one-way delay: 41.139 ms  
  Loss rate: 0.26%  
  -- Flow 1:  
    Average throughput: 49.17 Mbit/s  
    95th percentile per-packet one-way delay: 41.085 ms  
    Loss rate: 0.16%  
  -- Flow 2:  
    Average throughput: 38.74 Mbit/s  
    95th percentile per-packet one-way delay: 40.773 ms  
    Loss rate: 0.33%  
  -- Flow 3:  
    Average throughput: 29.64 Mbit/s  
    95th percentile per-packet one-way delay: 42.146 ms  
    Loss rate: 0.60%
Run 10: Report of TCP Cubic — Data Link

![Graph 1: Throughput (Mbps)]

- Flow 1 ingress (mean 49.15 Mbit/s)
- Flow 1 egress (mean 49.17 Mbit/s)
- Flow 2 ingress (mean 38.74 Mbit/s)
- Flow 2 egress (mean 38.74 Mbit/s)
- Flow 3 ingress (mean 29.63 Mbit/s)
- Flow 3 egress (mean 29.64 Mbit/s)

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

- Flow 1 (95th percentile 41.09 ms)
- Flow 2 (95th percentile 40.77 ms)
- Flow 3 (95th percentile 42.15 ms)
Run 1: Statistics of FillP

Start at: 2018-08-22 19:05:28
End at: 2018-08-22 19:05:58
Local clock offset: -0.236 ms
Remote clock offset: -0.479 ms

# Below is generated by plot.py at 2018-08-22 22:59:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.77 Mbit/s
95th percentile per-packet one-way delay: 69.816 ms
Loss rate: 2.51%
-- Flow 1:
Average throughput: 64.03 Mbit/s
95th percentile per-packet one-way delay: 53.162 ms
Loss rate: 1.77%
-- Flow 2:
Average throughput: 36.07 Mbit/s
95th percentile per-packet one-way delay: 70.885 ms
Loss rate: 3.60%
-- Flow 3:
Average throughput: 23.49 Mbit/s
95th percentile per-packet one-way delay: 72.310 ms
Loss rate: 5.06%
Run 1: Report of FillP — Data Link
Run 2: Statistics of FillP

Start at: 2018-08-22 19:28:22
End at: 2018-08-22 19:28:52
Local clock offset: 0.077 ms
Remote clock offset: 0.839 ms

# Below is generated by plot.py at 2018-08-22 22:59:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.74 Mbit/s
95th percentile per-packet one-way delay: 62.013 ms
Loss rate: 2.73%
-- Flow 1:
Average throughput: 58.89 Mbit/s
95th percentile per-packet one-way delay: 60.866 ms
Loss rate: 1.85%
-- Flow 2:
Average throughput: 39.81 Mbit/s
95th percentile per-packet one-way delay: 62.212 ms
Loss rate: 4.11%
-- Flow 3:
Average throughput: 31.43 Mbit/s
95th percentile per-packet one-way delay: 63.139 ms
Loss rate: 4.07%
Run 2: Report of FillP — Data Link
Run 3: Statistics of FillP

Start at: 2018-08-22 19:51:29
End at: 2018-08-22 19:51:59
Local clock offset: 0.26 ms
Remote clock offset: 1.348 ms

# Below is generated by plot.py at 2018-08-22 22:59:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.70 Mbit/s
95th percentile per-packet one-way delay: 70.328 ms
Loss rate: 2.45%
-- Flow 1:
Average throughput: 56.28 Mbit/s
95th percentile per-packet one-way delay: 69.601 ms
Loss rate: 1.43%
-- Flow 2:
Average throughput: 47.58 Mbit/s
95th percentile per-packet one-way delay: 53.539 ms
Loss rate: 3.47%
-- Flow 3:
Average throughput: 23.59 Mbit/s
95th percentile per-packet one-way delay: 72.553 ms
Loss rate: 5.45%
Run 3: Report of FillP — Data Link

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

- **Flow 1 ingress** (mean 56.96 Mbit/s)
- **Flow 1 egress** (mean 56.28 Mbit/s)
- **Flow 2 ingress** (mean 49.14 Mbit/s)
- **Flow 2 egress** (mean 47.58 Mbit/s)
- **Flow 3 ingress** (mean 24.78 Mbit/s)
- **Flow 3 egress** (mean 23.59 Mbit/s)

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

- **Flow 1** (95th percentile 69.60 ms)
- **Flow 2** (95th percentile 53.54 ms)
- **Flow 3** (95th percentile 72.55 ms)
Run 4: Statistics of FillP

Start at: 2018-08-22 20:14:23
End at: 2018-08-22 20:14:53
Local clock offset: 0.31 ms
Remote clock offset: 0.266 ms

# Below is generated by plot.py at 2018-08-22 22:59:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.19 Mbit/s
95th percentile per-packet one-way delay: 62.344 ms
Loss rate: 2.42%
-- Flow 1:
Average throughput: 57.29 Mbit/s
95th percentile per-packet one-way delay: 61.313 ms
Loss rate: 1.39%
-- Flow 2:
Average throughput: 39.91 Mbit/s
95th percentile per-packet one-way delay: 62.431 ms
Loss rate: 4.04%
-- Flow 3:
Average throughput: 31.35 Mbit/s
95th percentile per-packet one-way delay: 63.258 ms
Loss rate: 3.79%
Run 4: Report of FillP — Data Link

[Graph showing throughput and delay over time for different flows]
Run 5: Statistics of FillP

Start at: 2018-08-22 20:37:27
End at: 2018-08-22 20:37:57
Local clock offset: 0.385 ms
Remote clock offset: 0.103 ms

# Below is generated by plot.py at 2018-08-22 22:59:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.19 Mbit/s
95th percentile per-packet one-way delay: 62.576 ms
Loss rate: 2.35%
-- Flow 1:
Average throughput: 57.35 Mbit/s
95th percentile per-packet one-way delay: 61.802 ms
Loss rate: 1.49%
-- Flow 2:
Average throughput: 39.81 Mbit/s
95th percentile per-packet one-way delay: 62.542 ms
Loss rate: 3.43%
-- Flow 3:
Average throughput: 31.37 Mbit/s
95th percentile per-packet one-way delay: 63.385 ms
Loss rate: 4.18%
Run 5: Report of FillP — Data Link
Run 6: Statistics of FillP

Start at: 2018-08-22 21:00:26
End at: 2018-08-22 21:00:56
Local clock offset: -3.196 ms
Remote clock offset: -0.616 ms

# Below is generated by plot.py at 2018-08-22 22:59:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.75 Mbit/s
95th percentile per-packet one-way delay: 70.150 ms
Loss rate: 2.41%
-- Flow 1:
Average throughput: 63.96 Mbit/s
95th percentile per-packet one-way delay: 53.309 ms
Loss rate: 1.64%
-- Flow 2:
Average throughput: 36.05 Mbit/s
95th percentile per-packet one-way delay: 71.131 ms
Loss rate: 3.35%
-- Flow 3:
Average throughput: 23.67 Mbit/s
95th percentile per-packet one-way delay: 72.555 ms
Loss rate: 5.60%
Run 6: Report of FillP — Data Link
Run 7: Statistics of FillP

Start at: 2018-08-22 21:23:19
End at: 2018-08-22 21:23:49
Local clock offset: -4.247 ms
Remote clock offset: -1.912 ms

# Below is generated by plot.py at 2018-08-22 22:59:59
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 95.72 Mbit/s
  95th percentile per-packet one-way delay: 62.354 ms
  Loss rate: 2.31%
-- Flow 1:
  Average throughput: 59.30 Mbit/s
  95th percentile per-packet one-way delay: 61.586 ms
  Loss rate: 1.51%
-- Flow 2:
  Average throughput: 40.05 Mbit/s
  95th percentile per-packet one-way delay: 62.357 ms
  Loss rate: 3.52%
-- Flow 3:
  Average throughput: 29.70 Mbit/s
  95th percentile per-packet one-way delay: 63.381 ms
  Loss rate: 3.79%
Run 7: Report of FillP — Data Link

![Graph 1: Throughput (Mbps)]

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

Start at: 2018-08-22 21:46:11
End at: 2018-08-22 21:46:41
Local clock offset: -1.111 ms
Remote clock offset: -1.508 ms

# Below is generated by plot.py at 2018-08-22 23:00:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.70 Mbit/s
95th percentile per-packet one-way delay: 61.882 ms
Loss rate: 2.46%
-- Flow 1:
Average throughput: 59.83 Mbit/s
95th percentile per-packet one-way delay: 61.070 ms
Loss rate: 1.68%
-- Flow 2:
Average throughput: 38.33 Mbit/s
95th percentile per-packet one-way delay: 61.851 ms
Loss rate: 3.55%
-- Flow 3:
Average throughput: 31.47 Mbit/s
95th percentile per-packet one-way delay: 62.975 ms
Loss rate: 4.21%
Run 9: Statistics of FillP

Start at: 2018-08-22 22:09:29
End at: 2018-08-22 22:09:59
Local clock offset: 1.11 ms
Remote clock offset: -0.908 ms

# Below is generated by plot.py at 2018-08-22 23:00:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.74 Mbit/s
95th percentile per-packet one-way delay: 69.841 ms
Loss rate: 2.48%
-- Flow 1:
Average throughput: 57.44 Mbit/s
95th percentile per-packet one-way delay: 69.491 ms
Loss rate: 1.77%
-- Flow 2:
Average throughput: 34.37 Mbit/s
95th percentile per-packet one-way delay: 70.978 ms
Loss rate: 3.76%
-- Flow 3:
Average throughput: 46.81 Mbit/s
95th percentile per-packet one-way delay: 53.766 ms
Loss rate: 3.19%
Run 9: Report of FillP — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 58.32 Mbit/s) — Flow 1 egress (mean 57.44 Mbit/s)
Flow 2 ingress (mean 35.61 Mbit/s) — Flow 2 egress (mean 34.37 Mbit/s)
Flow 3 ingress (mean 46.01 Mbit/s) — Flow 3 egress (mean 46.01 Mbit/s)

Per-packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 69.49 ms) — Flow 2 (95th percentile 70.98 ms) — Flow 3 (95th percentile 53.77 ms)
Run 10: Statistics of FillP

Start at: 2018-08-22 22:32:30
End at: 2018-08-22 22:33:00
Local clock offset: 0.734 ms
Remote clock offset: -0.632 ms

# Below is generated by plot.py at 2018-08-22 23:01:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.21 Mbit/s
95th percentile per-packet one-way delay: 62.244 ms
Loss rate: 2.37%
-- Flow 1:
Average throughput: 57.43 Mbit/s
95th percentile per-packet one-way delay: 61.082 ms
Loss rate: 1.67%
-- Flow 2:
Average throughput: 40.05 Mbit/s
95th percentile per-packet one-way delay: 62.442 ms
Loss rate: 3.28%
-- Flow 3:
Average throughput: 30.75 Mbit/s
95th percentile per-packet one-way delay: 63.205 ms
Loss rate: 3.88%
Run 10: Report of FillP — Data Link
Run 1: Statistics of FillP-Sheep

Start at: 2018-08-22 19:17:43
End at: 2018-08-22 19:18:13
Local clock offset: -0.076 ms
Remote clock offset: 0.037 ms

# Below is generated by plot.py at 2018-08-22 23:01:09
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 95.61 Mbit/s
  95th percentile per-packet one-way delay: 54.882 ms
  Loss rate: 0.80%
-- Flow 1:
  Average throughput: 58.56 Mbit/s
  95th percentile per-packet one-way delay: 54.456 ms
  Loss rate: 0.80%
-- Flow 2:
  Average throughput: 40.04 Mbit/s
  95th percentile per-packet one-way delay: 55.715 ms
  Loss rate: 0.73%
-- Flow 3:
  Average throughput: 31.63 Mbit/s
  95th percentile per-packet one-way delay: 58.234 ms
  Loss rate: 0.95%
Run 1: Report of FillP-Sheep — Data Link

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**Throughput (Mbps)**

- Flow 1 ingress (mean 58.91 Mbps)
- Flow 1 egress (mean 58.56 Mbps)
- Flow 2 ingress (mean 40.21 Mbps)
- Flow 2 egress (mean 40.04 Mbps)
- Flow 3 ingress (mean 31.79 Mbps)
- Flow 3 egress (mean 31.63 Mbps)

---

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

- Flow 1 (95th percentile 54.46 ms)
- Flow 2 (95th percentile 55.72 ms)
- Flow 3 (95th percentile 58.23 ms)
Run 2: Statistics of FillP-Sheep

Start at: 2018-08-22 19:40:46
End at: 2018-08-22 19:41:16
Local clock offset: 0.177 ms
Remote clock offset: 0.742 ms

# Below is generated by plot.py at 2018-08-22 23:01:10
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 95.55 Mbit/s
  95th percentile per-packet one-way delay: 54.559 ms
  Loss rate: 0.78%
-- Flow 1:
  Average throughput: 58.65 Mbit/s
  95th percentile per-packet one-way delay: 54.238 ms
  Loss rate: 0.82%
-- Flow 2:
  Average throughput: 39.71 Mbit/s
  95th percentile per-packet one-way delay: 54.731 ms
  Loss rate: 0.63%
-- Flow 3:
  Average throughput: 31.76 Mbit/s
  95th percentile per-packet one-way delay: 59.474 ms
  Loss rate: 0.94%
Run 2: Report of FillP-Sheep — Data Link

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

- Flow 1 ingress (mean 59.02 Mb/s)
- Flow 1 egress (mean 58.65 Mb/s)
- Flow 2 ingress (mean 39.83 Mb/s)
- Flow 2 egress (mean 39.71 Mb/s)
- Flow 3 ingress (mean 31.85 Mb/s)
- Flow 3 egress (mean 31.76 Mb/s)

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

- Flow 1 (95th percentile 54.24 ms)
- Flow 2 (95th percentile 54.73 ms)
- Flow 3 (95th percentile 59.47 ms)
Run 3: Statistics of FillP-Sheep

Start at: 2018-08-22 20:03:45
End at: 2018-08-22 20:04:15
Local clock offset: 0.503 ms
Remote clock offset: 0.996 ms

# Below is generated by plot.py at 2018-08-22 23:01:13
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 95.74 Mbit/s
  95th percentile per-packet one-way delay: 54.447 ms
  Loss rate: 0.78%
-- Flow 1:
  Average throughput: 58.71 Mbit/s
  95th percentile per-packet one-way delay: 54.053 ms
  Loss rate: 0.77%
-- Flow 2:
  Average throughput: 39.91 Mbit/s
  95th percentile per-packet one-way delay: 54.399 ms
  Loss rate: 0.74%
-- Flow 3:
  Average throughput: 31.76 Mbit/s
  95th percentile per-packet one-way delay: 59.669 ms
  Loss rate: 0.92%
Run 3: Report of FillP-Sheep — Data Link
Run 4: Statistics of FillP-Sheep

Start at: 2018-08-22 20:26:40
End at: 2018-08-22 20:27:10
Local clock offset: 0.346 ms
Remote clock offset: 0.301 ms

# Below is generated by plot.py at 2018-08-22 23:01:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.67 Mbit/s
95th percentile per-packet one-way delay: 55.189 ms
Loss rate: 0.78%
-- Flow 1:
Average throughput: 58.70 Mbit/s
95th percentile per-packet one-way delay: 55.335 ms
Loss rate: 0.83%
-- Flow 2:
Average throughput: 39.77 Mbit/s
95th percentile per-packet one-way delay: 54.267 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 31.94 Mbit/s
95th percentile per-packet one-way delay: 57.709 ms
Loss rate: 0.91%
Run 4: Report of FillP-Sheep — Data Link

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

- Flow 1 ingress (mean 59.06 Mbit/s)
- Flow 1 egress (mean 58.70 Mbit/s)
- Flow 2 ingress (mean 39.91 Mbit/s)
- Flow 2 egress (mean 39.77 Mbit/s)
- Flow 3 ingress (mean 32.02 Mbit/s)
- Flow 3 egress (mean 31.94 Mbit/s)

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

- Flow 1 (95th percentile 55.34 ms)
- Flow 2 (95th percentile 54.27 ms)
- Flow 3 (95th percentile 57.71 ms)
Run 5: Statistics of FillP-Sheep

Start at: 2018-08-22 20:49:43
End at: 2018-08-22 20:50:13
Local clock offset: -2.354 ms
Remote clock offset: -0.481 ms

# Below is generated by plot.py at 2018-08-22 23:01:28
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 95.60 Mbit/s
  95th percentile per-packet one-way delay: 53.558 ms
  Loss rate: 0.64%
-- Flow 1:
  Average throughput: 56.16 Mbit/s
  95th percentile per-packet one-way delay: 53.903 ms
  Loss rate: 0.59%
-- Flow 2:
  Average throughput: 47.21 Mbit/s
  95th percentile per-packet one-way delay: 51.468 ms
  Loss rate: 0.63%
-- Flow 3:
  Average throughput: 24.34 Mbit/s
  95th percentile per-packet one-way delay: 68.177 ms
  Loss rate: 1.05%
Run 5: Report of FillP-Sheep — Data Link

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

- Flow 1 ingress (mean 56.38 Mbit/s)
- Flow 1 egress (mean 56.16 Mbit/s)
- Flow 2 ingress (mean 47.36 Mbit/s)
- Flow 2 egress (mean 47.21 Mbit/s)
- Flow 3 ingress (mean 24.44 Mbit/s)
- Flow 3 egress (mean 24.34 Mbit/s)

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

- Flow 1 (95th percentile 53.90 ms)
- Flow 2 (95th percentile 51.47 ms)
- Flow 3 (95th percentile 68.18 ms)
Run 6: Statistics of FillP-Sheep

Start at: 2018-08-22 21:12:40
End at: 2018-08-22 21:13:10
Local clock offset: -3.695 ms
Remote clock offset: -1.17 ms

# Below is generated by plot.py at 2018-08-22 23:01:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.69 Mbit/s
95th percentile per-packet one-way delay: 53.901 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 56.23 Mbit/s
95th percentile per-packet one-way delay: 54.456 ms
Loss rate: 0.65%
-- Flow 2:
Average throughput: 47.35 Mbit/s
95th percentile per-packet one-way delay: 51.904 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 24.16 Mbit/s
95th percentile per-packet one-way delay: 68.130 ms
Loss rate: 1.11%
Run 6: Report of FillP-Sheep — Data Link
Run 7: Statistics of FillP-Sheep

Start at: 2018-08-22 21:35:34
End at: 2018-08-22 21:36:04
Local clock offset: -4.891 ms
Remote clock offset: -2.043 ms

# Below is generated by plot.py at 2018-08-22 23:02:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.76 Mbit/s
95th percentile per-packet one-way delay: 54.175 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 58.60 Mbit/s
95th percentile per-packet one-way delay: 53.582 ms
Loss rate: 0.61%
-- Flow 2:
Average throughput: 40.05 Mbit/s
95th percentile per-packet one-way delay: 56.265 ms
Loss rate: 0.89%
-- Flow 3:
Average throughput: 31.88 Mbit/s
95th percentile per-packet one-way delay: 58.204 ms
Loss rate: 0.86%
Run 7: Report of FillP-Sheep — Data Link
Run 8: Statistics of FillP-Sheep

Start at: 2018-08-22 21:58:49
End at: 2018-08-22 21:59:19
Local clock offset: 0.668 ms
Remote clock offset: -0.994 ms

# Below is generated by plot.py at 2018-08-22 23:02:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.69 Mbit/s
95th percentile per-packet one-way delay: 54.535 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 58.61 Mbit/s
95th percentile per-packet one-way delay: 53.818 ms
Loss rate: 0.78%
-- Flow 2:
Average throughput: 40.01 Mbit/s
95th percentile per-packet one-way delay: 56.629 ms
Loss rate: 0.76%
-- Flow 3:
Average throughput: 31.74 Mbit/s
95th percentile per-packet one-way delay: 57.473 ms
Loss rate: 0.89%
Run 8: Report of FillP-Sheep — Data Link

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

- Flow 1 ingress (mean 58.95 Mbit/s)
- Flow 1 egress (mean 58.61 Mbit/s)
- Flow 2 ingress (mean 40.19 Mbit/s)
- Flow 2 egress (mean 40.01 Mbit/s)
- Flow 3 ingress (mean 31.83 Mbit/s)
- Flow 3 egress (mean 31.74 Mbit/s)

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

- Flow 1 (95th percentile 53.82 ms)
- Flow 2 (95th percentile 56.63 ms)
- Flow 3 (95th percentile 57.47 ms)
Run 9: Statistics of FillP-Sheep

Start at: 2018-08-22 22:21:50
Local clock offset: 0.679 ms
Remote clock offset: -0.746 ms

# Below is generated by plot.py at 2018-08-22 23:02:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.79 Mbit/s
95th percentile per-packet one-way delay: 53.764 ms
Loss rate: 0.81%
-- Flow 1:
Average throughput: 58.58 Mbit/s
95th percentile per-packet one-way delay: 53.611 ms
Loss rate: 0.84%
-- Flow 2:
Average throughput: 40.11 Mbit/s
95th percentile per-packet one-way delay: 54.006 ms
Loss rate: 0.71%
-- Flow 3:
Average throughput: 31.92 Mbit/s
95th percentile per-packet one-way delay: 57.689 ms
Loss rate: 0.87%
Run 9: Report of FillP-Sheep — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 58.96 Mbps)
  - Flow 1 egress (mean 58.58 Mbps)
  - Flow 2 ingress (mean 40.28 Mbps)
  - Flow 2 egress (mean 40.11 Mbps)
  - Flow 3 ingress (mean 32.00 Mbps)
  - Flow 3 egress (mean 31.92 Mbps)

- **Packet Error Rate (%)**
  - Flow 1 (95th percentile 53.61 ms)
  - Flow 2 (95th percentile 54.01 ms)
  - Flow 3 (95th percentile 57.69 ms)
Run 10: Statistics of FillP-Sheep

Start at: 2018-08-22 22:44:54
End at: 2018-08-22 22:45:24
Local clock offset: 0.627 ms
Remote clock offset: -0.357 ms

# Below is generated by plot.py at 2018-08-22 23:02:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.71 Mbit/s
95th percentile per-packet one-way delay: 54.536 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 58.66 Mbit/s
95th percentile per-packet one-way delay: 54.246 ms
Loss rate: 0.85%
-- Flow 2:
Average throughput: 39.89 Mbit/s
95th percentile per-packet one-way delay: 55.184 ms
Loss rate: 0.84%
-- Flow 3:
Average throughput: 31.86 Mbit/s
95th percentile per-packet one-way delay: 57.653 ms
Loss rate: 0.98%
Run 10: Report of FillIP-Sheep — Data Link

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

The graphs above illustrate the throughput and per-packet one-way delay for three different flows (Flow 1, Flow 2, and Flow 3) over a period of 30 seconds. Each flow shows distinct patterns in its throughput and delay characteristics.
Run 1: Statistics of Indigo

Start at: 2018-08-22 19:01:32
End at: 2018-08-22 19:02:02
Local clock offset: -0.185 ms
Remote clock offset: -0.769 ms

# Below is generated by plot.py at 2018-08-22 23:02:40
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 95.93 Mbit/s
  95th percentile per-packet one-way delay: 46.526 ms
  Loss rate: 0.33%
-- Flow 1:
  Average throughput: 58.90 Mbit/s
  95th percentile per-packet one-way delay: 46.094 ms
  Loss rate: 0.22%
-- Flow 2:
  Average throughput: 40.13 Mbit/s
  95th percentile per-packet one-way delay: 46.862 ms
  Loss rate: 0.39%
-- Flow 3:
  Average throughput: 31.71 Mbit/s
  95th percentile per-packet one-way delay: 53.606 ms
  Loss rate: 0.75%
Run 1: Report of Indigo — Data Link
Run 2: Statistics of Indigo

Start at: 2018-08-22 19:24:27
End at: 2018-08-22 19:24:57
Local clock offset: -0.017 ms
Remote clock offset: 0.852 ms

# Below is generated by plot.py at 2018-08-22 23:02:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.09 Mbit/s
95th percentile per-packet one-way delay: 47.411 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 59.03 Mbit/s
95th percentile per-packet one-way delay: 46.326 ms
Loss rate: 0.22%
-- Flow 2:
Average throughput: 40.12 Mbit/s
95th percentile per-packet one-way delay: 47.481 ms
Loss rate: 0.44%
-- Flow 3:
Average throughput: 31.69 Mbit/s
95th percentile per-packet one-way delay: 54.445 ms
Loss rate: 0.89%
Run 2: Report of Indigo — Data Link

- **Throughput (Mbit/s)**
  - Flow 1 ingress (mean 59.03 Mbit/s)
  - Flow 1 egress (mean 59.03 Mbit/s)
  - Flow 2 ingress (mean 40.17 Mbit/s)
  - Flow 2 egress (mean 40.12 Mbit/s)
  - Flow 3 ingress (mean 31.76 Mbit/s)
  - Flow 3 egress (mean 31.69 Mbit/s)

- **Per-packet one-way delay (ms)**
  - Flow 1 (95th percentile 46.33 ms)
  - Flow 2 (95th percentile 47.48 ms)
  - Flow 3 (95th percentile 54.45 ms)
Run 3: Statistics of Indigo

Start at: 2018-08-22 19:47:32
End at: 2018-08-22 19:48:02
Local clock offset: 0.275 ms
Remote clock offset: 1.002 ms

# Below is generated by plot.py at 2018-08-22 23:02:42
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 95.87 Mbit/s
  95th percentile per-packet one-way delay: 46.662 ms
  Loss rate: 0.34%
-- Flow 1:
  Average throughput: 58.90 Mbit/s
  95th percentile per-packet one-way delay: 46.850 ms
  Loss rate: 0.22%
-- Flow 2:
  Average throughput: 40.05 Mbit/s
  95th percentile per-packet one-way delay: 46.248 ms
  Loss rate: 0.42%
-- Flow 3:
  Average throughput: 31.75 Mbit/s
  95th percentile per-packet one-way delay: 48.158 ms
  Loss rate: 0.75%
Run 3: Report of Indigo — Data Link

![Graphs showing throughput and per-packet one-way delay over time for different flows.](image-url)
Run 4: Statistics of Indigo

Start at: 2018-08-22 20:10:28
End at: 2018-08-22 20:10:58
Local clock offset: 0.451 ms
Remote clock offset: 0.275 ms

# Below is generated by plot.py at 2018-08-22 23:02:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.17 Mbit/s
95th percentile per-packet one-way delay: 45.651 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 64.30 Mbit/s
95th percentile per-packet one-way delay: 40.926 ms
Loss rate: 0.20%
-- Flow 2:
Average throughput: 36.44 Mbit/s
95th percentile per-packet one-way delay: 53.825 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 23.36 Mbit/s
95th percentile per-packet one-way delay: 42.019 ms
Loss rate: 0.70%
Run 4: Report of Indigo — Data Link
Run 5: Statistics of Indigo

Start at: 2018-08-22 20:33:31
End at: 2018-08-22 20:34:01
Local clock offset: 0.451 ms
Remote clock offset: 0.479 ms

# Below is generated by plot.py at 2018-08-22 23:03:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.17 Mbit/s
95th percentile per-packet one-way delay: 46.315 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 59.16 Mbit/s
95th percentile per-packet one-way delay: 46.401 ms
Loss rate: 0.21%
-- Flow 2:
Average throughput: 40.12 Mbit/s
95th percentile per-packet one-way delay: 46.280 ms
Loss rate: 0.37%
-- Flow 3:
Average throughput: 31.69 Mbit/s
95th percentile per-packet one-way delay: 46.210 ms
Loss rate: 0.70%
Run 5: Report of Indigo — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 59.16 Mbps)
  - Flow 1 egress (mean 59.16 Mbps)
  - Flow 2 ingress (mean 40.14 Mbps)
  - Flow 2 egress (mean 40.12 Mbps)
  - Flow 3 ingress (mean 31.70 Mbps)
  - Flow 3 egress (mean 31.69 Mbps)

- **Per-packet one-way delay (ms):**
  - Flow 1 (95th percentile 46.40 ms)
  - Flow 2 (95th percentile 46.28 ms)
  - Flow 3 (95th percentile 46.21 ms)
Run 6: Statistics of Indigo

Start at: 2018-08-22 20:56:29
End at: 2018-08-22 20:56:59
Local clock offset: -2.949 ms
Remote clock offset: -0.547 ms

# Below is generated by plot.py at 2018-08-22 23:03:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.10 Mbit/s
95th percentile per-packet one-way delay: 46.745 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 59.04 Mbit/s
95th percentile per-packet one-way delay: 46.837 ms
Loss rate: 0.24%
-- Flow 2:
Average throughput: 40.13 Mbit/s
95th percentile per-packet one-way delay: 46.427 ms
Loss rate: 0.36%
-- Flow 3:
Average throughput: 31.78 Mbit/s
95th percentile per-packet one-way delay: 51.968 ms
Loss rate: 0.74%
Run 6: Report of Indigo — Data Link
Run 7: Statistics of Indigo

Start at: 2018-08-22 21:19:24
End at: 2018-08-22 21:19:54
Local clock offset: -3.987 ms
Remote clock offset: -1.48 ms

# Below is generated by plot.py at 2018-08-22 23:03:46
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 96.10 Mbit/s
  95th percentile per-packet one-way delay: 44.367 ms
  Loss rate: 0.27%
-- Flow 1:
  Average throughput: 64.25 Mbit/s
  95th percentile per-packet one-way delay: 40.742 ms
  Loss rate: 0.19%
-- Flow 2:
  Average throughput: 36.26 Mbit/s
  95th percentile per-packet one-way delay: 47.303 ms
  Loss rate: 0.33%
-- Flow 3:
  Average throughput: 23.68 Mbit/s
  95th percentile per-packet one-way delay: 41.449 ms
  Loss rate: 0.69%
Run 7: Report of Indigo — Data Link
Run 8: Statistics of Indigo

Start at: 2018-08-22 21:42:16
End at: 2018-08-22 21:42:46
Local clock offset: -2.315 ms
Remote clock offset: -2.09 ms

# Below is generated by plot.py at 2018-08-22 23:03:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.03 Mbit/s
95th percentile per-packet one-way delay: 46.137 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 59.03 Mbit/s
95th percentile per-packet one-way delay: 46.787 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 40.06 Mbit/s
95th percentile per-packet one-way delay: 45.628 ms
Loss rate: 0.33%
-- Flow 3:
Average throughput: 31.71 Mbit/s
95th percentile per-packet one-way delay: 45.952 ms
Loss rate: 0.74%
Run 8: Report of Indigo — Data Link

![Graph showing data link performance metrics with overlay text on graph]

- Flow 1 ingress (mean 59.95 Mbit/s)
- Flow 1 egress (mean 59.03 Mbit/s)
- Flow 2 ingress (mean 40.06 Mbit/s)
- Flow 2 egress (mean 40.06 Mbit/s)
- Flow 3 ingress (mean 31.74 Mbit/s)
- Flow 3 egress (mean 31.72 Mbit/s)

![Graph showing packet delay with overlay text on graph]

- Flow 1 (95th percentile 46.79 ms)
- Flow 2 (95th percentile 45.63 ms)
- Flow 3 (95th percentile 45.95 ms)
Run 9: Statistics of Indigo

Start at: 2018-08-22 22:05:32
End at: 2018-08-22 22:06:02
Local clock offset: 1.278 ms
Remote clock offset: -0.727 ms

# Below is generated by plot.py at 2018-08-22 23:03:50
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 95.91 Mbit/s
  95th percentile per-packet one-way delay: 45.156 ms
  Loss rate: 0.28%
-- Flow 1:
  Average throughput: 64.00 Mbit/s
  95th percentile per-packet one-way delay: 41.578 ms
  Loss rate: 0.19%
-- Flow 2:
  Average throughput: 36.25 Mbit/s
  95th percentile per-packet one-way delay: 51.639 ms
  Loss rate: 0.35%
-- Flow 3:
  Average throughput: 23.89 Mbit/s
  95th percentile per-packet one-way delay: 47.120 ms
  Loss rate: 0.82%
Run 9: Report of Indigo — Data Link
Run 10: Statistics of Indigo

Start at: 2018-08-22 22:28:34
End at: 2018-08-22 22:29:04
Local clock offset: 0.674 ms
Remote clock offset: -0.682 ms

# Below is generated by plot.py at 2018-08-22 23:03:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.12 Mbit/s
95th percentile per-packet one-way delay: 46.573 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 59.10 Mbit/s
95th percentile per-packet one-way delay: 46.718 ms
Loss rate: 0.20%
-- Flow 2:
Average throughput: 40.14 Mbit/s
95th percentile per-packet one-way delay: 46.199 ms
Loss rate: 0.37%
-- Flow 3:
Average throughput: 31.68 Mbit/s
95th percentile per-packet one-way delay: 53.257 ms
Loss rate: 0.72%
Run 10: Report of Indigo — Data Link
Run 1: Statistics of LEDBAT

Start at: 2018-08-22 19:19:04
End at: 2018-08-22 19:19:34
Local clock offset: 0.027 ms
Remote clock offset: 0.178 ms

# Below is generated by plot.py at 2018-08-22 23:03:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 63.76 Mbit/s
95th percentile per-packet one-way delay: 41.007 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 33.45 Mbit/s
95th percentile per-packet one-way delay: 40.684 ms
Loss rate: 0.18%
-- Flow 2:
Average throughput: 31.89 Mbit/s
95th percentile per-packet one-way delay: 42.856 ms
Loss rate: 0.18%
-- Flow 3:
Average throughput: 27.54 Mbit/s
95th percentile per-packet one-way delay: 40.034 ms
Loss rate: 1.31%
Run 1: Report of LEDBAT — Data Link

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

- Flow 1 ingress (mean 33.44 Mb/s)
- Flow 1 egress (mean 33.45 Mb/s)
- Flow 2 ingress (mean 31.84 Mb/s)
- Flow 2 egress (mean 31.89 Mb/s)
- Flow 3 ingress (mean 27.72 Mb/s)
- Flow 3 egress (mean 27.54 Mb/s)
Run 2: Statistics of LEDBAT

Start at: 2018-08-22 19:42:06
End at: 2018-08-22 19:42:36
Local clock offset: 0.108 ms
Remote clock offset: 0.806 ms

# Below is generated by plot.py at 2018-08-22 23:03:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 68.13 Mbit/s
95th percentile per-packet one-way delay: 42.746 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 40.09 Mbit/s
95th percentile per-packet one-way delay: 43.269 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 31.30 Mbit/s
95th percentile per-packet one-way delay: 42.797 ms
Loss rate: 0.37%
-- Flow 3:
Average throughput: 21.74 Mbit/s
95th percentile per-packet one-way delay: 40.082 ms
Loss rate: 1.06%
Run 2: Report of LEDBAT — Data Link
Run 3: Statistics of LEDBAT

Start at: 2018-08-22 20:05:05
End at: 2018-08-22 20:05:35
Local clock offset: 0.433 ms
Remote clock offset: 0.845 ms

# Below is generated by plot.py at 2018-08-22 23:04:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 68.28 Mbit/s
95th percentile per-packet one-way delay: 41.207 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 42.66 Mbit/s
95th percentile per-packet one-way delay: 40.549 ms
Loss rate: 0.20%
-- Flow 2:
Average throughput: 30.73 Mbit/s
95th percentile per-packet one-way delay: 42.954 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 15.72 Mbit/s
95th percentile per-packet one-way delay: 44.018 ms
Loss rate: 0.99%
Run 3: Report of LEDBAT — Data Link

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

Flow 1 ingress (mean 42.65 Mbps)  
Flow 1 egress (mean 42.66 Mbps)  
Flow 2 ingress (mean 30.76 Mbps)  
Flow 2 egress (mean 30.73 Mbps)  
Flow 3 ingress (mean 15.77 Mbps)  
Flow 3 egress (mean 15.72 Mbps)

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

Flow 1 (95th percentile 40.55 ms)  
Flow 2 (95th percentile 42.95 ms)  
Flow 3 (95th percentile 44.02 ms)
Run 4: Statistics of LEDBAT

Start at: 2018-08-22 20:28:01
End at: 2018-08-22 20:28:31
Local clock offset: 0.363 ms
Remote clock offset: 0.187 ms

# Below is generated by plot.py at 2018-08-22 23:04:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 68.57 Mbit/s
95th percentile per-packet one-way delay: 42.288 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 40.24 Mbit/s
95th percentile per-packet one-way delay: 41.953 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 31.24 Mbit/s
95th percentile per-packet one-way delay: 42.603 ms
Loss rate: 0.39%
-- Flow 3:
Average throughput: 22.79 Mbit/s
95th percentile per-packet one-way delay: 42.493 ms
Loss rate: 0.94%
Run 4: Report of LEDBAT — Data Link

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

Legend:
- Flow 1 ingress (mean 40.21 Mbit/s)
- Flow 1 egress (mean 40.24 Mbit/s)
- Flow 2 ingress (mean 31.26 Mbit/s)
- Flow 2 egress (mean 31.24 Mbit/s)
- Flow 3 ingress (mean 22.85 Mbit/s)
- Flow 3 egress (mean 22.79 Mbit/s)

Legend for per-packet one way delay:
- Flow 1 (95th percentile 41.95 ms)
- Flow 2 (95th percentile 42.60 ms)
- Flow 3 (95th percentile 42.49 ms)
Run 5: Statistics of LEDBAT

Start at: 2018-08-22 20:51:04
End at: 2018-08-22 20:51:34
Local clock offset: -2.473 ms
Remote clock offset: -0.441 ms

# Below is generated by plot.py at 2018-08-22 23:04:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 66.69 Mbit/s
95th percentile per-packet one-way delay: 41.156 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 38.46 Mbit/s
95th percentile per-packet one-way delay: 41.006 ms
Loss rate: 0.18%
-- Flow 2:
Average throughput: 29.06 Mbit/s
95th percentile per-packet one-way delay: 42.597 ms
Loss rate: 0.26%
-- Flow 3:
Average throughput: 27.00 Mbit/s
95th percentile per-packet one-way delay: 39.905 ms
Loss rate: 0.02%
Run 5: Report of LEDBAT — Data Link

![Graph of throughput and per-packet one-way delay for different flows over time](image-url)
Run 6: Statistics of LEDBAT

Start at: 2018-08-22 21:14:01
End at: 2018-08-22 21:14:31
Local clock offset: -3.829 ms
Remote clock offset: -1.462 ms

# Below is generated by plot.py at 2018-08-22 23:04:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 68.18 Mbit/s
95th percentile per-packet one-way delay: 42.621 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 40.00 Mbit/s
95th percentile per-packet one-way delay: 42.800 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 31.48 Mbit/s
95th percentile per-packet one-way delay: 42.653 ms
Loss rate: 0.37%
-- Flow 3:
Average throughput: 21.88 Mbit/s
95th percentile per-packet one-way delay: 41.568 ms
Loss rate: 1.04%
Run 6: Report of LEDBAT — Data Link

![Graph of throughput and per-packet round-trip delay](image)

**Throughput (Mbit/s)**
- Flow 1 ingress (mean 39.97 Mbit/s)
- Flow 1 egress (mean 40.00 Mbit/s)
- Flow 2 ingress (mean 31.49 Mbit/s)
- Flow 2 egress (mean 31.48 Mbit/s)
- Flow 3 ingress (mean 21.96 Mbit/s)
- Flow 3 egress (mean 21.88 Mbit/s)

**Per-packet round-trip delay (ms)**
- Flow 1 (95th percentile 42.80 ms)
- Flow 2 (95th percentile 42.65 ms)
- Flow 3 (95th percentile 41.57 ms)
Run 7: Statistics of LEDBAT

Start at: 2018-08-22 21:36:54
End at: 2018-08-22 21:37:24
Local clock offset: -4.894 ms
Remote clock offset: -2.109 ms

# Below is generated by plot.py at 2018-08-22 23:04:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 67.19 Mbit/s
95th percentile per-packet one-way delay: 40.688 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 43.21 Mbit/s
95th percentile per-packet one-way delay: 40.799 ms
Loss rate: 0.18%
-- Flow 2:
Average throughput: 25.67 Mbit/s
95th percentile per-packet one-way delay: 40.726 ms
Loss rate: 0.34%
-- Flow 3:
Average throughput: 20.89 Mbit/s
95th percentile per-packet one-way delay: 40.363 ms
Loss rate: 1.13%
Run 7: Report of LEDBAT — Data Link
Run 8: Statistics of LEDBAT

Start at: 2018-08-22 22:00:09
End at: 2018-08-22 22:00:39
Local clock offset: 0.902 ms
Remote clock offset: -1.094 ms

# Below is generated by plot.py at 2018-08-22 23:04:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 66.56 Mbit/s
95th percentile per-packet one-way delay: 41.541 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 41.58 Mbit/s
95th percentile per-packet one-way delay: 42.074 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 26.67 Mbit/s
95th percentile per-packet one-way delay: 40.252 ms
Loss rate: 0.46%
-- Flow 3:
Average throughput: 21.94 Mbit/s
95th percentile per-packet one-way delay: 41.671 ms
Loss rate: 1.04%
Run 8: Report of LEDBAT — Data Link

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

Legend:
- Blue dashed line: Flow 1 ingress (mean 41.54 Mbit/s)
- Blue solid line: Flow 1 egress (mean 41.58 Mbit/s)
- Green dashed line: Flow 2 ingress (mean 26.71 Mbit/s)
- Green solid line: Flow 2 egress (mean 26.67 Mbit/s)
- Red dashed line: Flow 3 ingress (mean 22.03 Mbit/s)
- Red solid line: Flow 3 egress (mean 21.94 Mbit/s)

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

Legend:
- Blue line: Flow 1 (95th percentile 42.07 ms)
- Green line: Flow 2 (95th percentile 40.25 ms)
- Red line: Flow 3 (95th percentile 41.67 ms)
Run 9: Statistics of LEDBAT

Start at: 2018-08-22 22:23:10
End at: 2018-08-22 22:23:40
Local clock offset: 0.702 ms
Remote clock offset: -0.721 ms

# Below is generated by plot.py at 2018-08-22 23:04:43
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 68.51 Mbit/s
  95th percentile per-packet one-way delay: 43.407 ms
  Loss rate: 0.29%
  -- Flow 1:
  Average throughput: 40.45 Mbit/s
  95th percentile per-packet one-way delay: 42.113 ms
  Loss rate: 0.13%
  -- Flow 2:
  Average throughput: 31.41 Mbit/s
  95th percentile per-packet one-way delay: 45.673 ms
  Loss rate: 0.33%
  -- Flow 3:
  Average throughput: 21.72 Mbit/s
  95th percentile per-packet one-way delay: 39.714 ms
  Loss rate: 1.05%
Run 9: Report of LEDBAT — Data Link

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

- Flow 1 ingress (mean 40.42 Mbit/s)
- Flow 1 egress (mean 40.45 Mbit/s)
- Flow 2 ingress (mean 31.42 Mbit/s)
- Flow 2 egress (mean 31.41 Mbit/s)
- Flow 3 ingress (mean 21.81 Mbit/s)
- Flow 3 egress (mean 21.72 Mbit/s)

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

- Flow 1 (95th percentile 42.11 ms)
- Flow 2 (95th percentile 45.67 ms)
- Flow 3 (95th percentile 39.71 ms)
Run 10: Statistics of LEDBAT

Start at: 2018-08-22 22:46:14
End at: 2018-08-22 22:46:44
Local clock offset: 0.628 ms
Remote clock offset: -0.334 ms

# Below is generated by plot.py at 2018-08-22 23:04:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 67.89 Mbit/s
95th percentile per-packet one-way delay: 43.008 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 39.83 Mbit/s
95th percentile per-packet one-way delay: 43.553 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 31.44 Mbit/s
95th percentile per-packet one-way delay: 42.668 ms
Loss rate: 0.37%
-- Flow 3:
Average throughput: 21.55 Mbit/s
95th percentile per-packet one-way delay: 40.864 ms
Loss rate: 1.08%
Run 10: Report of LEDBAT — Data Link

![Data Link Throughput Graph]

![Data Link Delay Graph]

Legend:
- Flow 1 ingress (mean 39.80 Mbit/s)
- Flow 1 egress (mean 39.83 Mbit/s)
- Flow 2 ingress (mean 31.46 Mbit/s)
- Flow 2 egress (mean 31.44 Mbit/s)
- Flow 3 ingress (mean 21.64 Mbit/s)
- Flow 3 egress (mean 21.55 Mbit/s)

Legend:
- Flow 1 (95th percentile 43.55 ms)
- Flow 2 (95th percentile 42.67 ms)
- Flow 3 (95th percentile 40.86 ms)
Run 1: Statistics of PCC-Allegro

Start at: 2018-08-22 19:12:19
End at: 2018-08-22 19:12:49
Local clock offset: -0.149 ms
Remote clock offset: -0.131 ms

# Below is generated by plot.py at 2018-08-22 23:05:35
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 92.45 Mbit/s
  95th percentile per-packet one-way delay: 68.946 ms
  Loss rate: 5.22%
-- Flow 1:
  Average throughput: 55.75 Mbit/s
  95th percentile per-packet one-way delay: 64.831 ms
  Loss rate: 6.61%
-- Flow 2:
  Average throughput: 34.93 Mbit/s
  95th percentile per-packet one-way delay: 72.838 ms
  Loss rate: 4.26%
-- Flow 3:
  Average throughput: 41.01 Mbit/s
  95th percentile per-packet one-way delay: 53.382 ms
  Loss rate: 0.80%
Run 1: Report of PCC-Allegro — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 59.56 Mbit/s) — Flow 1 egress (mean 55.75 Mbit/s)
Flow 2 ingress (mean 36.36 Mbit/s) — Flow 2 egress (mean 34.93 Mbit/s)
Flow 3 ingress (mean 41.07 Mbit/s) — Flow 3 egress (mean 41.01 Mbit/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 64.83 ms) — Flow 2 (95th percentile 72.84 ms) — Flow 3 (95th percentile 53.38 ms)
Run 2: Statistics of PCC-Allegro

Start at: 2018-08-22 19:35:14
End at: 2018-08-22 19:35:44
Local clock offset: 0.041 ms
Remote clock offset: 0.609 ms

# Below is generated by plot.py at 2018-08-22 23:05:40
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 92.37 Mbit/s
  95th percentile per-packet one-way delay: 65.025 ms
  Loss rate: 5.12%
-- Flow 1:
  Average throughput: 57.69 Mbit/s
  95th percentile per-packet one-way delay: 61.062 ms
  Loss rate: 6.27%
-- Flow 2:
  Average throughput: 37.25 Mbit/s
  95th percentile per-packet one-way delay: 65.994 ms
  Loss rate: 3.39%
-- Flow 3:
  Average throughput: 30.22 Mbit/s
  95th percentile per-packet one-way delay: 66.931 ms
  Loss rate: 2.52%
Run 2: Report of PCC-Allegro — Data Link

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

Start at: 2018-08-22 19:58:21
End at: 2018-08-22 19:58:51
Local clock offset: 0.446 ms
Remote clock offset: 1.735 ms

# Below is generated by plot.py at 2018-08-22 23:05:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.29 Mbit/s
95th percentile per-packet one-way delay: 68.820 ms
Loss rate: 5.11%
-- Flow 1:
Average throughput: 55.73 Mbit/s
95th percentile per-packet one-way delay: 64.938 ms
Loss rate: 6.49%
-- Flow 2:
Average throughput: 34.94 Mbit/s
95th percentile per-packet one-way delay: 72.462 ms
Loss rate: 4.11%
-- Flow 3:
Average throughput: 40.57 Mbit/s
95th percentile per-packet one-way delay: 53.373 ms
Loss rate: 0.80%
Run 3: Report of PCC-Allegro — Data Link

![Graph showing throughput and latency](image)

The graphs above illustrate the performance of different data flows in terms of throughput and latency. The throughput graphs show the rate of data transfer over time, with distinct lines representing different flows, each with specified mean bandwidths.

The latency graphs demonstrate the delay in data transmission, again with lines indicating each flow's 95th percentile latency.

Throughput Graph:
- **Flow 1 ingress (mean 59.45 Mbit/s)**
- **Flow 2 ingress (mean 36.31 Mbit/s)**
- **Flow 3 ingress (mean 40.63 Mbit/s)**
- **Flow 1 egress (mean 55.73 Mbit/s)**
- **Flow 2 egress (mean 34.94 Mbit/s)**
- **Flow 3 egress (mean 40.57 Mbit/s)**

Latency Graph:
- **Flow 1 (95th percentile 64.94 ms)**
- **Flow 2 (95th percentile 72.46 ms)**
- **Flow 3 (95th percentile 53.37 ms)**
Run 4: Statistics of PCC-Allegro

Start at: 2018-08-22 20:21:14
End at: 2018-08-22 20:21:44
Local clock offset: 0.3 ms
Remote clock offset: 0.187 ms

# Below is generated by plot.py at 2018-08-22 23:05:44
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 92.30 Mbit/s
  95th percentile per-packet one-way delay: 70.466 ms
  Loss rate: 3.79%
-- Flow 1:
  Average throughput: 62.98 Mbit/s
  95th percentile per-packet one-way delay: 54.992 ms
  Loss rate: 3.89%
-- Flow 2:
  Average throughput: 33.70 Mbit/s
  95th percentile per-packet one-way delay: 73.558 ms
  Loss rate: 4.38%
-- Flow 3:
  Average throughput: 21.06 Mbit/s
  95th percentile per-packet one-way delay: 73.699 ms
  Loss rate: 0.88%
Run 4: Report of PCC-Allegro — Data Link

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

Throughput (Mbps):
- Flow 1 ingress (mean 65.39 Mbps)
- Flow 1 egress (mean 62.98 Mbps)
- Flow 2 ingress (mean 35.11 Mbps)
- Flow 2 egress (mean 33.70 Mbps)
- Flow 3 ingress (mean 21.11 Mbps)
- Flow 3 egress (mean 21.06 Mbps)

Packet delay (ms):
- Flow 1 (95th percentile 54.99 ms)
- Flow 2 (95th percentile 73.56 ms)
- Flow 3 (95th percentile 73.70 ms)
Run 5: Statistics of PCC-Allegro

Start at: 2018-08-22 20:44:18
End at: 2018-08-22 20:44:48
Local clock offset: -1.583 ms
Remote clock offset: -0.259 ms

# Below is generated by plot.py at 2018-08-22 23:05:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.96 Mbit/s
95th percentile per-packet one-way delay: 65.046 ms
Loss rate: 5.26%
-- Flow 1:
Average throughput: 58.02 Mbit/s
95th percentile per-packet one-way delay: 61.082 ms
Loss rate: 6.32%
-- Flow 2:
Average throughput: 37.75 Mbit/s
95th percentile per-packet one-way delay: 66.183 ms
Loss rate: 3.79%
-- Flow 3:
Average throughput: 29.94 Mbit/s
95th percentile per-packet one-way delay: 66.989 ms
Loss rate: 2.61%
Run 5: Report of PCC-Allegro — Data Link
Run 6: Statistics of PCC-Allegro

Start at: 2018-08-22 21:07:17
End at: 2018-08-22 21:07:47
Local clock offset: -3.499 ms
Remote clock offset: -0.917 ms

# Below is generated by plot.py at 2018-08-22 23:05:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.60 Mbit/s
95th percentile per-packet one-way delay: 69.392 ms
Loss rate: 5.11%
-- Flow 1:
Average throughput: 56.21 Mbit/s
95th percentile per-packet one-way delay: 65.062 ms
Loss rate: 6.47%
-- Flow 2:
Average throughput: 34.22 Mbit/s
95th percentile per-packet one-way delay: 73.332 ms
Loss rate: 4.16%
-- Flow 3:
Average throughput: 41.54 Mbit/s
95th percentile per-packet one-way delay: 53.515 ms
Loss rate: 0.79%
Run 6: Report of PCC-Allegro — Data Link

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

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

Legend:
- Flow 1 ingress (mean 59.96 Mbit/s)
- Flow 1 egress (mean 56.21 Mbit/s)
- Flow 2 ingress (mean 35.58 Mbit/s)
- Flow 2 egress (mean 34.22 Mbit/s)
- Flow 3 ingress (mean 41.60 Mbit/s)
- Flow 3 egress (mean 41.54 Mbit/s)

Legend:
- Flow 1 (95th percentile 65.06 ms)
- Flow 2 (95th percentile 73.33 ms)
- Flow 3 (95th percentile 53.52 ms)
Run 7: Statistics of PCC-Allegro

Start at: 2018-08-22 21:30:10
End at: 2018-08-22 21:30:40
Local clock offset: -4.526 ms
Remote clock offset: -1.904 ms

# Below is generated by plot.py at 2018-08-22 23:05:54
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 92.30 Mbit/s
  95th percentile per-packet one-way delay: 65.185 ms
  Loss rate: 5.07%
  -- Flow 1:
    Average throughput: 57.66 Mbit/s
    95th percentile per-packet one-way delay: 61.116 ms
    Loss rate: 6.35%
  -- Flow 2:
    Average throughput: 37.14 Mbit/s
    95th percentile per-packet one-way delay: 66.267 ms
    Loss rate: 2.95%
  -- Flow 3:
    Average throughput: 30.27 Mbit/s
    95th percentile per-packet one-way delay: 67.007 ms
    Loss rate: 2.61%
Run 7: Report of PCC-Allegro — Data Link

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

- Flow 1 ingress (mean 61.44 Mbit/s)
- Flow 1 egress (mean 57.66 Mbit/s)
- Flow 2 ingress (mean 38.14 Mbit/s)
- Flow 2 egress (mean 37.14 Mbit/s)
- Flow 3 ingress (mean 30.88 Mbit/s)
- Flow 3 egress (mean 30.27 Mbit/s)

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

- Flow 1 (95th percentile 61.12 ms)
- Flow 2 (95th percentile 66.27 ms)
- Flow 3 (95th percentile 67.01 ms)
Run 8: Statistics of PCC-Allegro

Start at: 2018-08-22 21:53:08
End at: 2018-08-22 21:53:38
Local clock offset: 0.153 ms
Remote clock offset: -1.127 ms

# Below is generated by plot.py at 2018-08-22 23:06:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.34 Mbit/s
95th percentile per-packet one-way delay: 62.352 ms
Loss rate: 4.25%
-- Flow 1:
Average throughput: 56.27 Mbit/s
95th percentile per-packet one-way delay: 64.383 ms
Loss rate: 6.49%
-- Flow 2:
Average throughput: 44.06 Mbit/s
95th percentile per-packet one-way delay: 40.786 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 20.68 Mbit/s
95th percentile per-packet one-way delay: 71.702 ms
Loss rate: 1.21%
Run 8: Report of PCC-Allegro — Data Link

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

Start at: 2018-08-22 22:16:24
End at: 2018-08-22 22:16:54
Local clock offset: 0.755 ms
Remote clock offset: -0.877 ms

# Below is generated by plot.py at 2018-08-22 23:06:38
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 92.78 Mbit/s
  95th percentile per-packet one-way delay: 68.355 ms
  Loss rate: 5.15%
-- Flow 1:
  Average throughput: 56.32 Mbit/s
  95th percentile per-packet one-way delay: 64.892 ms
  Loss rate: 6.43%
-- Flow 2:
  Average throughput: 35.00 Mbit/s
  95th percentile per-packet one-way delay: 72.339 ms
  Loss rate: 4.10%
-- Flow 3:
  Average throughput: 40.19 Mbit/s
  95th percentile per-packet one-way delay: 51.431 ms
  Loss rate: 1.33%
Run 9: Report of PCC-Allegro — Data Link
Run 10: Statistics of PCC-Allegro

Start at: 2018-08-22 22:39:30
End at: 2018-08-22 22:40:00
Local clock offset: 0.792 ms
Remote clock offset: -0.431 ms

# Below is generated by plot.py at 2018-08-22 23:06:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.94 Mbit/s
95th percentile per-packet one-way delay: 65.851 ms
Loss rate: 2.64%
-- Flow 1:
Average throughput: 56.38 Mbit/s
95th percentile per-packet one-way delay: 65.051 ms
Loss rate: 2.16%
-- Flow 2:
Average throughput: 38.60 Mbit/s
95th percentile per-packet one-way delay: 66.075 ms
Loss rate: 3.85%
-- Flow 3:
Average throughput: 30.16 Mbit/s
95th percentile per-packet one-way delay: 66.952 ms
Loss rate: 2.15%
Run 10: Report of PCC-Allegro — Data Link
Run 1: Statistics of PCC-Expr

Start at: 2018-08-22 19:06:49
End at: 2018-08-22 19:07:19
Local clock offset: -0.16 ms
Remote clock offset: -0.661 ms

# Below is generated by plot.py at 2018-08-22 23:07:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.14 Mbit/s
95th percentile per-packet one-way delay: 61.991 ms
Loss rate: 0.78%
-- Flow 1:
Average throughput: 53.87 Mbit/s
95th percentile per-packet one-way delay: 61.437 ms
Loss rate: 0.53%
-- Flow 2:
Average throughput: 40.45 Mbit/s
95th percentile per-packet one-way delay: 61.867 ms
Loss rate: 0.97%
-- Flow 3:
Average throughput: 28.53 Mbit/s
95th percentile per-packet one-way delay: 62.687 ms
Loss rate: 1.64%
Run 1: Report of PCC-Expr — Data Link

![Throughput Graph]

- Flow 1 ingress (mean 54.05 Mbit/s)
- Flow 1 egress (mean 53.87 Mbit/s)
- Flow 2 ingress (mean 40.71 Mbit/s)
- Flow 2 egress (mean 40.45 Mbit/s)
- Flow 3 ingress (mean 26.81 Mbit/s)
- Flow 3 egress (mean 28.53 Mbit/s)

![Delay Graph]

- Flow 1 (95th percentile 61.44 ms)
- Flow 2 (95th percentile 61.87 ms)
- Flow 3 (95th percentile 62.69 ms)
Run 2: Statistics of PCC-Expr

Start at: 2018-08-22 19:29:43
End at: 2018-08-22 19:30:13
Local clock offset: 0.011 ms
Remote clock offset: 0.423 ms

# Below is generated by plot.py at 2018-08-22 23:07:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.99 Mbit/s
95th percentile per-packet one-way delay: 61.502 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 54.79 Mbit/s
95th percentile per-packet one-way delay: 60.694 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 38.36 Mbit/s
95th percentile per-packet one-way delay: 61.532 ms
Loss rate: 0.89%
-- Flow 3:
Average throughput: 29.46 Mbit/s
95th percentile per-packet one-way delay: 62.477 ms
Loss rate: 1.32%
Run 2: Report of PCC-Expr — Data Link
Run 3: Statistics of PCC-Expr

Start at: 2018-08-22 19:52:50
End at: 2018-08-22 19:53:20
Local clock offset: 0.359 ms
Remote clock offset: 1.377 ms

# Below is generated by plot.py at 2018-08-22 23:07:45
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 90.73 Mbit/s
  95th percentile per-packet one-way delay: 69.757 ms
  Loss rate: 1.03%
-- Flow 1:
  Average throughput: 52.77 Mbit/s
  95th percentile per-packet one-way delay: 69.398 ms
  Loss rate: 0.99%
-- Flow 2:
  Average throughput: 35.05 Mbit/s
  95th percentile per-packet one-way delay: 70.266 ms
  Loss rate: 1.14%
-- Flow 3:
  Average throughput: 44.59 Mbit/s
  95th percentile per-packet one-way delay: 53.065 ms
  Loss rate: 1.02%
Run 3: Report of PCC-Expr — Data Link

**Throughput (Mbps)**

- Flow 1 ingress (mean 53.17 Mbps)
- Flow 1 egress (mean 52.77 Mbps)
- Flow 2 ingress (mean 35.32 Mbps)
- Flow 2 egress (mean 35.05 Mbps)
- Flow 3 ingress (mean 44.77 Mbps)
- Flow 3 egress (mean 44.59 Mbps)

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

- Flow 1 (95th percentile 69.40 ms)
- Flow 2 (95th percentile 70.27 ms)
- Flow 3 (95th percentile 53.06 ms)
Run 4: Statistics of PCC-Expr

Start at: 2018-08-22 20:15:44
End at: 2018-08-22 20:16:14
Local clock offset: 0.289 ms
Remote clock offset: 0.245 ms

# Below is generated by plot.py at 2018-08-22 23:07:47
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 90.69 Mbit/s
  95th percentile per-packet one-way delay: 61.319 ms
  Loss rate: 1.20%
-- Flow 1:
  Average throughput: 55.55 Mbit/s
  95th percentile per-packet one-way delay: 61.067 ms
  Loss rate: 0.87%
-- Flow 2:
  Average throughput: 38.75 Mbit/s
  95th percentile per-packet one-way delay: 60.539 ms
  Loss rate: 1.88%
-- Flow 3:
  Average throughput: 28.49 Mbit/s
  95th percentile per-packet one-way delay: 62.213 ms
  Loss rate: 1.21%
Run 4: Report of PCC-Expr — Data Link

![Throughput Graph]

![Delay Graph]

Legend:
- Flow 1 ingress (mean 55.90 Mbit/s)
- Flow 1 egress (mean 55.55 Mbit/s)
- Flow 2 ingress (mean 39.37 Mbit/s)
- Flow 2 egress (mean 38.75 Mbit/s)
- Flow 3 ingress (mean 26.81 Mbit/s)
- Flow 3 egress (mean 28.49 Mbit/s)

Legend:
- Flow 1 (95th percentile 61.07 ms)
- Flow 2 (95th percentile 60.54 ms)
- Flow 3 (95th percentile 62.21 ms)
Run 5: Statistics of PCC-Expr

Start at: 2018-08-22 20:38:48
End at: 2018-08-22 20:39:18
Local clock offset: -0.149 ms
Remote clock offset: -0.243 ms

# Below is generated by plot.py at 2018-08-22 23:07:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.50 Mbit/s
95th percentile per-packet one-way delay: 70.542 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 50.76 Mbit/s
95th percentile per-packet one-way delay: 55.017 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 44.13 Mbit/s
95th percentile per-packet one-way delay: 53.293 ms
Loss rate: 0.69%
-- Flow 3:
Average throughput: 25.58 Mbit/s
95th percentile per-packet one-way delay: 71.685 ms
Loss rate: 1.40%
Run 5: Report of PCC-Expr — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 50.84 Mbps)
  - Flow 1 egress (mean 50.76 Mbps)
  - Flow 2 ingress (mean 44.29 Mbps)
  - Flow 2 egress (mean 44.13 Mbps)
  - Flow 3 ingress (mean 25.78 Mbps)
  - Flow 3 egress (mean 25.58 Mbps)

- **Per-packet one-way delay (ms):**
  - Flow 1 (95th percentile 55.02 ms)
  - Flow 2 (95th percentile 53.29 ms)
  - Flow 3 (95th percentile 71.69 ms)
Run 6: Statistics of PCC-Expr

Start at: 2018-08-22 21:01:47
End at: 2018-08-22 21:02:17
Local clock offset: -3.275 ms
Remote clock offset: -0.652 ms

# Below is generated by plot.py at 2018-08-22 23:08:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.96 Mbit/s
95th percentile per-packet one-way delay: 69.893 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 53.07 Mbit/s
95th percentile per-packet one-way delay: 69.061 ms
Loss rate: 0.87%
-- Flow 2:
Average throughput: 44.80 Mbit/s
95th percentile per-packet one-way delay: 52.714 ms
Loss rate: 0.70%
-- Flow 3:
Average throughput: 24.67 Mbit/s
95th percentile per-packet one-way delay: 71.205 ms
Loss rate: 1.28%
Run 6: Report of PCC-Expr — Data Link

![Graph 1: Throughput vs Time](image1)
- Flow 1 ingress (mean 53.41 Mbit/s)
- Flow 1 egress (mean 53.07 Mbit/s)
- Flow 2 ingress (mean 44.97 Mbit/s)
- Flow 2 egress (mean 44.80 Mbit/s)
- Flow 3 ingress (mean 24.82 Mbit/s)
- Flow 3 egress (mean 24.67 Mbit/s)

![Graph 2: Per-packet round-trip delay vs Time](image2)
- Flow 1 (95th percentile 69.06 ms)
- Flow 2 (95th percentile 52.71 ms)
- Flow 3 (95th percentile 71.20 ms)
Run 7: Statistics of PCC-Expr

Start at: 2018-08-22 21:24:40
End at: 2018-08-22 21:25:10
Local clock offset: -4.326 ms
Remote clock offset: -1.755 ms

# Below is generated by plot.py at 2018-08-22 23:08:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.73 Mbit/s
95th percentile per-packet one-way delay: 61.250 ms
Loss rate: 0.93%
-- Flow 1:
Average throughput: 54.82 Mbit/s
95th percentile per-packet one-way delay: 59.304 ms
Loss rate: 0.69%
-- Flow 2:
Average throughput: 37.91 Mbit/s
95th percentile per-packet one-way delay: 61.540 ms
Loss rate: 0.53%
-- Flow 3:
Average throughput: 32.53 Mbit/s
95th percentile per-packet one-way delay: 61.656 ms
Loss rate: 3.07%
Run 7: Report of PCC-Expr — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 55.08 Mbps)
  - Flow 1 egress (mean 54.82 Mbps)
  - Flow 2 ingress (mean 37.99 Mbps)
  - Flow 2 egress (mean 37.91 Mbps)
  - Flow 3 ingress (mean 33.34 Mbps)
  - Flow 3 egress (mean 32.53 Mbps)

- **Per-packet one-way delay (ms):**
  - Flow 1 (95th percentile 59.30 ms)
  - Flow 2 (95th percentile 61.54 ms)
  - Flow 3 (95th percentile 61.66 ms)
Run 8: Statistics of PCC-Expr

Start at: 2018-08-22 21:47:32
End at: 2018-08-22 21:48:02
Local clock offset: -0.886 ms
Remote clock offset: -1.469 ms

# Below is generated by plot.py at 2018-08-22 23:08:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.52 Mbit/s
95th percentile per-packet one-way delay: 69.283 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 53.73 Mbit/s
95th percentile per-packet one-way delay: 68.513 ms
Loss rate: 1.11%
-- Flow 2:
Average throughput: 43.32 Mbit/s
95th percentile per-packet one-way delay: 52.784 ms
Loss rate: 0.74%
-- Flow 3:
Average throughput: 24.30 Mbit/s
95th percentile per-packet one-way delay: 71.039 ms
Loss rate: 1.83%
Run 8: Report of PCC-Expr — Data Link

![Graph of throughput and packet error rate over time]

**Throughput (Mbps)**
- Flow 1 ingress (mean 54.21 Mbps)
- Flow 1 egress (mean 53.73 Mbps)
- Flow 2 ingress (mean 43.50 Mbps)
- Flow 2 egress (mean 43.32 Mbps)
- Flow 3 ingress (mean 24.54 Mbps)
- Flow 3 egress (mean 24.30 Mbps)

**Per-packet error rate (ms)**
- Flow 1 (95th percentile 68.51 ms)
- Flow 2 (95th percentile 52.78 ms)
- Flow 3 (95th percentile 71.04 ms)
Run 9: Statistics of PCC-Expr

Start at: 2018-08-22 22:10:49
End at: 2018-08-22 22:11:19
Local clock offset: 1.003 ms
Remote clock offset: -0.853 ms

# Below is generated by plot.py at 2018-08-22 23:09:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.13 Mbit/s
95th percentile per-packet one-way delay: 69.986 ms
Loss rate: 0.87%
-- Flow 1:
Average throughput: 51.10 Mbit/s
95th percentile per-packet one-way delay: 70.073 ms
Loss rate: 0.52%
-- Flow 2:
Average throughput: 36.84 Mbit/s
95th percentile per-packet one-way delay: 70.304 ms
Loss rate: 1.50%
-- Flow 3:
Average throughput: 44.19 Mbit/s
95th percentile per-packet one-way delay: 53.016 ms
Loss rate: 1.03%
Run 9: Report of PCC-Expr — Data Link

![Graph showing throughput and per-packet one-way delay over time for different flows.](image-url)
Run 10: Statistics of PCC-Expr

Start at: 2018-08-22 22:33:58
End at: 2018-08-22 22:34:28
Local clock offset: 0.865 ms
Remote clock offset: -0.629 ms

# Below is generated by plot.py at 2018-08-22 23:09:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.15 Mbit/s
95th percentile per-packet one-way delay: 70.062 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 49.72 Mbit/s
95th percentile per-packet one-way delay: 70.031 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 37.61 Mbit/s
95th percentile per-packet one-way delay: 70.465 ms
Loss rate: 1.40%
-- Flow 3:
Average throughput: 43.88 Mbit/s
95th percentile per-packet one-way delay: 52.810 ms
Loss rate: 0.84%
Run 10: Report of PCC-Expr — Data Link

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

- Flow 1 ingress (mean 49.83 Mbit/s)
- Flow 1 egress (mean 49.72 Mbit/s)
- Flow 2 ingress (mean 38.02 Mbit/s)
- Flow 2 egress (mean 37.61 Mbit/s)
- Flow 3 ingress (mean 43.97 Mbit/s)
- Flow 3 egress (mean 43.88 Mbit/s)
Run 1: Statistics of QUIC Cubic

Start at: 2018-08-22 19:16:23
End at: 2018-08-22 19:16:53
Local clock offset: -0.1 ms
Remote clock offset: 0.175 ms

# Below is generated by plot.py at 2018-08-22 23:09:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 75.48 Mbit/s
95th percentile per-packet one-way delay: 55.420 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 42.13 Mbit/s
95th percentile per-packet one-way delay: 44.929 ms
Loss rate: 0.20%
-- Flow 2:
Average throughput: 35.16 Mbit/s
95th percentile per-packet one-way delay: 55.645 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 30.33 Mbit/s
95th percentile per-packet one-way delay: 65.243 ms
Loss rate: 0.94%
Run 1: Report of QUIC Cubic — Data Link

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

- **Flow 1 ingress** (mean 42.14 Mbit/s)
- **Flow 1 egress** (mean 42.13 Mbit/s)
- **Flow 2 ingress** (mean 35.19 Mbit/s)
- **Flow 2 egress** (mean 35.16 Mbit/s)
- **Flow 3 ingress** (mean 30.44 Mbit/s)
- **Flow 3 egress** (mean 30.33 Mbit/s)

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

- **Flow 1** (95th percentile 44.93 ms)
- **Flow 2** (95th percentile 55.65 ms)
- **Flow 3** (95th percentile 65.24 ms)
Run 2: Statistics of QUIC Cubic

Start at: 2018-08-22 19:39:24
End at: 2018-08-22 19:39:54
Local clock offset: 0.059 ms
Remote clock offset: 0.779 ms

# Below is generated by plot.py at 2018-08-22 23:09:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.52 Mbit/s
95th percentile per-packet one-way delay: 54.358 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 51.86 Mbit/s
95th percentile per-packet one-way delay: 44.651 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 35.57 Mbit/s
95th percentile per-packet one-way delay: 55.575 ms
Loss rate: 0.38%
-- Flow 3:
Average throughput: 30.46 Mbit/s
95th percentile per-packet one-way delay: 66.063 ms
Loss rate: 0.91%
Run 2: Report of QUIC Cubic — Data Link

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

- Flow 1 ingress (mean 51.83 Mbit/s)
- Flow 1 egress (mean 51.86 Mbit/s)
- Flow 2 ingress (mean 35.59 Mbit/s)
- Flow 2 egress (mean 35.57 Mbit/s)
- Flow 3 ingress (mean 30.55 Mbit/s)
- Flow 3 egress (mean 30.46 Mbit/s)
Run 3: Statistics of QUIC Cubic

Start at: 2018-08-22 20:02:25
End at: 2018-08-22 20:02:55
Local clock offset: 0.478 ms
Remote clock offset: 1.043 ms

# Below is generated by plot.py at 2018-08-22 23:09:44
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 76.11 Mbit/s
  95th percentile per-packet one-way delay: 55.186 ms
  Loss rate: 0.36%
-- Flow 1:
  Average throughput: 42.35 Mbit/s
  95th percentile per-packet one-way delay: 45.165 ms
  Loss rate: 0.22%
-- Flow 2:
  Average throughput: 35.81 Mbit/s
  95th percentile per-packet one-way delay: 55.756 ms
  Loss rate: 0.37%
-- Flow 3:
  Average throughput: 30.28 Mbit/s
  95th percentile per-packet one-way delay: 65.219 ms
  Loss rate: 0.91%
Run 3: Report of QUIC Cubic — Data Link

-- Diagrams with data visualizations showing throughput and per-packet one-way delay for different flows and time periods.

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Run 4: Statistics of QUIC Cubic

Start at: 2018-08-22 20:25:19
End at: 2018-08-22 20:25:49
Local clock offset: 0.339 ms
Remote clock offset: 0.429 ms

# Below is generated by plot.py at 2018-08-22 23:09:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 75.02 Mbit/s
95th percentile per-packet one-way delay: 55.177 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 41.66 Mbit/s
95th percentile per-packet one-way delay: 44.814 ms
Loss rate: 0.22%
-- Flow 2:
Average throughput: 35.45 Mbit/s
95th percentile per-packet one-way delay: 55.536 ms
Loss rate: 0.41%
-- Flow 3:
Average throughput: 29.71 Mbit/s
95th percentile per-packet one-way delay: 64.983 ms
Loss rate: 1.24%
Run 4: Report of QUIC Cubic — Data Link

![Graph showing throughput and packet delay over time for different flows.]
Run 5: Statistics of QUIC Cubic

Start at: 2018-08-22 20:48:23
End at: 2018-08-22 20:48:53
Local clock offset: -2.182 ms
Remote clock offset: -0.399 ms

# Below is generated by plot.py at 2018-08-22 23:09:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 75.24 Mbit/s
95th percentile per-packet one-way delay: 55.327 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 46.49 Mbit/s
95th percentile per-packet one-way delay: 45.006 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 31.69 Mbit/s
95th percentile per-packet one-way delay: 55.799 ms
Loss rate: 0.37%
-- Flow 3:
Average throughput: 23.38 Mbit/s
95th percentile per-packet one-way delay: 75.424 ms
Loss rate: 1.03%
Run 5: Report of QUIC Cubic — Data Link
Run 6: Statistics of QUIC Cubic

Start at: 2018-08-22 21:11:20
End at: 2018-08-22 21:11:50
Local clock offset: -3.642 ms
Remote clock offset: -0.918 ms

# Below is generated by plot.py at 2018-08-22 23:09:56
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 77.06 Mbit/s
  95th percentile per-packet one-way delay: 52.445 ms
  Loss rate: 0.36%
-- Flow 1:
  Average throughput: 48.10 Mbit/s
  95th percentile per-packet one-way delay: 44.826 ms
  Loss rate: 0.26%
-- Flow 2:
  Average throughput: 31.96 Mbit/s
  95th percentile per-packet one-way delay: 55.502 ms
  Loss rate: 0.33%
-- Flow 3:
  Average throughput: 23.46 Mbit/s
  95th percentile per-packet one-way delay: 75.352 ms
  Loss rate: 1.03%
Run 6: Report of QUIC Cubic — Data Link

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

- **Flow 1 ingress (mean 48.13 Mbps)**
- **Flow 1 egress (mean 48.10 Mbps)**
- **Flow 2 ingress (mean 31.97 Mbps)**
- **Flow 2 egress (mean 31.96 Mbps)**
- **Flow 3 ingress (mean 23.55 Mbps)**
- **Flow 3 egress (mean 23.46 Mbps)**

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

- **Flow 1 (95th percentile 44.83 ms)**
- **Flow 2 (95th percentile 55.50 ms)**
- **Flow 3 (95th percentile 75.35 ms)**
Run 7: Statistics of QUIC Cubic

Start at: 2018-08-22 21:34:14
End at: 2018-08-22 21:34:44
Local clock offset: -4.72 ms
Remote clock offset: -2.056 ms

# Below is generated by plot.py at 2018-08-22 23:09:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 75.01 Mbit/s
95th percentile per-packet one-way delay: 54.730 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 41.65 Mbit/s
95th percentile per-packet one-way delay: 45.125 ms
Loss rate: 0.21%
-- Flow 2:
Average throughput: 35.11 Mbit/s
95th percentile per-packet one-way delay: 55.740 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 30.48 Mbit/s
95th percentile per-packet one-way delay: 61.241 ms
Loss rate: 1.08%
Run 7: Report of QUIC Cubic — Data Link
Run 8: Statistics of QUIC Cubic

Start at: 2018-08-22 21:57:27
End at: 2018-08-22 21:57:57
Local clock offset: 0.544 ms
Remote clock offset: -1.042 ms

# Below is generated by plot.py at 2018-08-22 23:10:02
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 75.53 Mbit/s
  95th percentile per-packet one-way delay: 55.125 ms
  Loss rate: 0.40%
-- Flow 1:
  Average throughput: 42.27 Mbit/s
  95th percentile per-packet one-way delay: 44.970 ms
  Loss rate: 0.19%
-- Flow 2:
  Average throughput: 34.85 Mbit/s
  95th percentile per-packet one-way delay: 55.558 ms
  Loss rate: 0.59%
-- Flow 3:
  Average throughput: 30.69 Mbit/s
  95th percentile per-packet one-way delay: 64.723 ms
  Loss rate: 0.80%
Run 8: Report of QUIC Cubic — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 42.26 Mbps)
  - Flow 1 egress (mean 42.27 Mbps)
  - Flow 2 ingress (mean 34.94 Mbps)
  - Flow 2 egress (mean 34.85 Mbps)
  - Flow 3 ingress (mean 30.75 Mbps)
  - Flow 3 egress (mean 30.69 Mbps)

- **Per-packet one-way delay (ms):**
  - Flow 1 (95th percentile 44.97 ms)
  - Flow 2 (95th percentile 55.56 ms)
  - Flow 3 (95th percentile 64.72 ms)
Run 9: Statistics of QUIC Cubic

Start at: 2018-08-22 22:20:29
End at: 2018-08-22 22:20:59
Local clock offset: 0.732 ms
Remote clock offset: -0.758 ms

# Below is generated by plot.py at 2018-08-22 23:10:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.53 Mbit/s
95th percentile per-packet one-way delay: 55.218 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 49.91 Mbit/s
95th percentile per-packet one-way delay: 45.059 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 31.60 Mbit/s
95th percentile per-packet one-way delay: 55.489 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 38.34 Mbit/s
95th percentile per-packet one-way delay: 55.709 ms
Loss rate: 1.10%
Run 9: Report of QUIC Cubic — Data Link

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

![Graph 2: Per-packet delay vs. Time](image2)
Run 10: Statistics of QUIC Cubic

Start at: 2018-08-22 22:43:33
End at: 2018-08-22 22:44:03
Local clock offset: 0.656 ms
Remote clock offset: -0.411 ms

# Below is generated by plot.py at 2018-08-22 23:10:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.53 Mbit/s
95th percentile per-packet one-way delay: 52.629 ms
Loss rate: 0.35%

-- Flow 1:
Average throughput: 57.64 Mbit/s
95th percentile per-packet one-way delay: 44.839 ms
Loss rate: 0.21%

-- Flow 2:
Average throughput: 32.01 Mbit/s
95th percentile per-packet one-way delay: 55.745 ms
Loss rate: 0.38%

-- Flow 3:
Average throughput: 23.11 Mbit/s
95th percentile per-packet one-way delay: 76.057 ms
Loss rate: 1.26%
Run 10: Report of QUIC Cubic — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 57.64 Mbit/s)
Flow 1 egress (mean 57.64 Mbit/s)
Flow 2 ingress (mean 32.03 Mbit/s)
Flow 2 egress (mean 32.01 Mbit/s)
Flow 3 ingress (mean 23.26 Mbit/s)
Flow 3 egress (mean 23.11 Mbit/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 44.84 ms)
Flow 2 (95th percentile 55.74 ms)
Flow 3 (95th percentile 76.06 ms)
Run 1: Statistics of SCReAM

Start at: 2018-08-22 19:04:11
End at: 2018-08-22 19:04:41
Local clock offset: -0.131 ms
Remote clock offset: -0.612 ms

# Below is generated by plot.py at 2018-08-22 23:10:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 33.742 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 33.748 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 33.705 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 33.732 ms
Loss rate: 0.71%
Run 1: Report of SCReAM — Data Link
Run 2: Statistics of SCReAM

Start at: 2018-08-22 19:27:06
End at: 2018-08-22 19:27:36
Local clock offset: 0.104 ms
Remote clock offset: 0.734 ms

# Below is generated by plot.py at 2018-08-22 23:10:39
# Datalink statistics

-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 33.656 ms
Loss rate: 0.38%

-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 33.656 ms
Loss rate: 0.26%

-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 33.626 ms
Loss rate: 0.40%

-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 33.670 ms
Loss rate: 0.71%
Run 3: Statistics of SCReAM

Start at: 2018-08-22 19:50:13
End at: 2018-08-22 19:50:43
Local clock offset: 0.321 ms
Remote clock offset: 1.284 ms

# Below is generated by plot.py at 2018-08-22 23:10:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 33.672 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 33.641 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 33.644 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 33.695 ms
Loss rate: 0.71%
Run 3: Report of SCReAM — Data Link
Run 4: Statistics of SCReAM

Start at: 2018-08-22 20:13:07  
End at: 2018-08-22 20:13:37  
Local clock offset: 0.322 ms  
Remote clock offset: 0.095 ms

# Below is generated by plot.py at 2018-08-22 23:10:39  
# Datalink statistics

-- Total of 3 flows:  
Average throughput: 0.43 Mbit/s  
95th percentile per-packet one-way delay: 33.781 ms  
Loss rate: 0.31%  

-- Flow 1:  
Average throughput: 0.21 Mbit/s  
95th percentile per-packet one-way delay: 33.776 ms  
Loss rate: 0.26%  

-- Flow 2:  
Average throughput: 0.21 Mbit/s  
95th percentile per-packet one-way delay: 33.765 ms  
Loss rate: 0.19%  

-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 33.800 ms  
Loss rate: 0.71%
Run 4: Report of SCReAM — Data Link

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

- Flow 1 ingress (mean 0.21 Mbps)
- Flow 1 egress (mean 0.21 Mbps)
- Flow 2 ingress (mean 0.21 Mbps)
- Flow 2 egress (mean 0.21 Mbps)
- Flow 3 ingress (mean 0.22 Mbps)
- Flow 3 egress (mean 0.22 Mbps)

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

- Flow 1 (95th percentile 33.78 ms)
- Flow 2 (95th percentile 33.77 ms)
- Flow 3 (95th percentile 33.80 ms)
Run 5: Statistics of SCReAM

Start at: 2018-08-22 20:36:11
End at: 2018-08-22 20:36:41
Local clock offset: 0.488 ms
Remote clock offset: 0.221 ms

# Below is generated by plot.py at 2018-08-22 23:10:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 33.437 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 33.433 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 33.431 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 33.448 ms
Loss rate: 0.71%
Run 6: Statistics of SCReAM

Start at: 2018-08-22 20:59:09
End at: 2018-08-22 20:59:39
Local clock offset: -3.15 ms
Remote clock offset: -0.545 ms

# Below is generated by plot.py at 2018-08-22 23:10:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 33.630 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 33.634 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 33.609 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 33.639 ms
Loss rate: 0.71%
Run 6: Report of SCReAM — Data Link
Run 7: Statistics of SCReAM

Start at: 2018-08-22 21:22:03
End at: 2018-08-22 21:22:33
Local clock offset: -4.129 ms
Remote clock offset: -1.82 ms

# Below is generated by plot.py at 2018-08-22 23:10:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 33.846 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 33.763 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 33.776 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 33.868 ms
Loss rate: 0.71%
Run 7: Report of SCReAM — Data Link
Run 8: Statistics of SCReAM

Start at: 2018-08-22 21:44:55
End at: 2018-08-22 21:45:25
Local clock offset: -1.571 ms
Remote clock offset: -1.764 ms

# Below is generated by plot.py at 2018-08-22 23:10:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 33.360 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 33.364 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 33.304 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 33.355 ms
Loss rate: 0.71%
Run 8: Report of SCReAM — Data Link

Diagram showing the throughput (Mbps) over time for different flows.

Diagram showing the per-packet one-way delay (ms) over time for different flows.

Legend:
- Flow 1 ingress (mean 0.21 Mbps)
- Flow 1 egress (mean 0.21 Mbps)
- Flow 2 ingress (mean 0.21 Mbps)
- Flow 2 egress (mean 0.21 Mbps)
- Flow 3 ingress (mean 0.22 Mbps)
- Flow 3 egress (mean 0.22 Mbps)

Legend for packet delay:
- Flow 1 (95th percentile 33.36 ms)
- Flow 2 (95th percentile 33.30 ms)
- Flow 3 (95th percentile 33.35 ms)
Run 9: Statistics of SCReAM

Start at: 2018-08-22 22:08:12
End at: 2018-08-22 22:08:42
Local clock offset: 1.255 ms
Remote clock offset: -0.89 ms

# Below is generated by plot.py at 2018-08-22 23:10:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 33.721 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 33.711 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 33.730 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 33.715 ms
Loss rate: 0.71%
Run 9: Report of SCReAM — Data Link

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

- Flow 1 ingress (mean 0.21 Mbits/s)
- Flow 1 egress (mean 0.21 Mbits/s)
- Flow 2 ingress (mean 0.21 Mbits/s)
- Flow 2 egress (mean 0.21 Mbits/s)
- Flow 3 ingress (mean 0.22 Mbits/s)
- Flow 3 egress (mean 0.22 Mbits/s)

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

- Flow 1 (95th percentile 33.71 ms)
- Flow 2 (95th percentile 33.73 ms)
- Flow 3 (95th percentile 33.72 ms)
Run 10: Statistics of SCReAM

End at: 2018-08-22 22:31:43
Local clock offset: 0.811 ms
Remote clock offset: -0.86 ms

# Below is generated by plot.py at 2018-08-22 23:10:39
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 33.887 ms
  Loss rate: 0.38%
-- Flow 1:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 33.847 ms
  Loss rate: 0.26%
-- Flow 2:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 33.872 ms
  Loss rate: 0.40%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 33.909 ms
  Loss rate: 0.71%
Run 10: Report of SCReAM — Data Link
Run 1: Statistics of Sprout

Start at: 2018-08-22 19:00:14
End at: 2018-08-22 19:00:44
Local clock offset: -0.062 ms
Remote clock offset: -0.581 ms

# Below is generated by plot.py at 2018-08-22 23:10:39
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 21.21 Mbit/s
  95th percentile per-packet one-way delay: 41.304 ms
  Loss rate: 0.47%
-- Flow 1:
  Average throughput: 10.75 Mbit/s
  95th percentile per-packet one-way delay: 40.958 ms
  Loss rate: 0.30%
-- Flow 2:
  Average throughput: 10.65 Mbit/s
  95th percentile per-packet one-way delay: 41.491 ms
  Loss rate: 0.48%
-- Flow 3:
  Average throughput: 10.31 Mbit/s
  95th percentile per-packet one-way delay: 41.891 ms
  Loss rate: 0.97%
Run 1: Report of Sprout — Data Link
Run 2: Statistics of Sprout

Start at: 2018-08-22 19:23:09
End at: 2018-08-22 19:23:39
Local clock offset: 0.063 ms
Remote clock offset: 0.576 ms

# Below is generated by plot.py at 2018-08-22 23:10:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 21.19 Mbit/s
95th percentile per-packet one-way delay: 41.121 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 10.72 Mbit/s
95th percentile per-packet one-way delay: 40.984 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 10.57 Mbit/s
95th percentile per-packet one-way delay: 41.261 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 10.48 Mbit/s
95th percentile per-packet one-way delay: 41.372 ms
Loss rate: 0.97%
Run 2: Report of Sprout — Data Link

Graph 1: Throughput (Mbps)
- Blue dashed line: Flow 1 ingress (mean 10.71 Mbps)
- Blue solid line: Flow 1 egress (mean 10.72 Mbps)
- Green dashed line: Flow 2 ingress (mean 10.55 Mbps)
- Green solid line: Flow 2 egress (mean 10.57 Mbps)
- Red dashed line: Flow 3 ingress (mean 10.51 Mbps)
- Red solid line: Flow 3 egress (mean 10.48 Mbps)

Graph 2: Per-packet one-way delay (ms)
- Blue dots: Flow 1 (95th percentile 40.38 ms)
- Green dots: Flow 2 (95th percentile 41.26 ms)
- Red dots: Flow 3 (95th percentile 41.37 ms)
Run 3: Statistics of Sprout

Start at: 2018-08-22 19:46:14
End at: 2018-08-22 19:46:44
Local clock offset: 0.255 ms
Remote clock offset: 1.058 ms

# Below is generated by plot.py at 2018-08-22 23:10:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 21.29 Mbit/s
95th percentile per-packet one-way delay: 41.038 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 10.81 Mbit/s
95th percentile per-packet one-way delay: 40.261 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 10.67 Mbit/s
95th percentile per-packet one-way delay: 41.952 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 10.34 Mbit/s
95th percentile per-packet one-way delay: 41.827 ms
Loss rate: 0.95%
Run 3: Report of Sprout — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 10.81 Mbit/s) · Flow 1 egress (mean 10.81 Mbit/s)
Flow 2 ingress (mean 10.64 Mbit/s) · Flow 2 egress (mean 10.67 Mbit/s)
Flow 3 ingress (mean 10.37 Mbit/s) · Flow 3 egress (mean 10.34 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 40.26 ms) · Flow 2 (95th percentile 41.85 ms) · Flow 3 (95th percentile 41.83 ms)
Run 4: Statistics of Sprout

Start at: 2018-08-22 20:09:10
End at: 2018-08-22 20:09:40
Local clock offset: 0.492 ms
Remote clock offset: 0.67 ms

# Below is generated by plot.py at 2018-08-22 23:10:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 21.58 Mbit/s
95th percentile per-packet one-way delay: 41.172 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 11.06 Mbit/s
95th percentile per-packet one-way delay: 41.132 ms
Loss rate: 0.21%
-- Flow 2:
Average throughput: 10.83 Mbit/s
95th percentile per-packet one-way delay: 40.508 ms
Loss rate: 0.44%
-- Flow 3:
Average throughput: 10.15 Mbit/s
95th percentile per-packet one-way delay: 42.479 ms
Loss rate: 1.02%
Run 4: Report of Sprout — Data Link
Run 5: Statistics of Sprout

Start at: 2018-08-22 20:32:13
End at: 2018-08-22 20:32:43
Local clock offset: 0.529 ms
Remote clock offset: 0.436 ms

# Below is generated by plot.py at 2018-08-22 23:10:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 21.50 Mbit/s
95th percentile per-packet one-way delay: 41.148 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 10.98 Mbit/s
95th percentile per-packet one-way delay: 40.889 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 10.76 Mbit/s
95th percentile per-packet one-way delay: 41.495 ms
Loss rate: 0.38%
-- Flow 3:
Average throughput: 10.28 Mbit/s
95th percentile per-packet one-way delay: 41.231 ms
Loss rate: 1.02%
Run 5: Report of Sprout — Data Link

![Graph showing network performance metrics over time, including throughput and per-packet one-way delay.](image-url)
Run 6: Statistics of Sprout

Start at: 2018-08-22 20:55:11
End at: 2018-08-22 20:55:41
Local clock offset: -2.959 ms
Remote clock offset: -0.679 ms

# Below is generated by plot.py at 2018-08-22 23:10:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 21.47 Mbit/s
95th percentile per-packet one-way delay: 42.575 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 10.89 Mbit/s
95th percentile per-packet one-way delay: 41.965 ms
Loss rate: 0.29%
-- Flow 2:
Average throughput: 10.82 Mbit/s
95th percentile per-packet one-way delay: 43.668 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 10.35 Mbit/s
95th percentile per-packet one-way delay: 42.291 ms
Loss rate: 0.12%
Run 6: Report of Sprout — Data Link

![Graph 1: Throughput vs Time]

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

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Run 7: Statistics of Sprout

Start at: 2018-08-22 21:18:06
End at: 2018-08-22 21:18:36
Local clock offset: -3.92 ms
Remote clock offset: -1.461 ms

# Below is generated by plot.py at 2018-08-22 23:10:39
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 21.44 Mbit/s
  95th percentile per-packet one-way delay: 40.906 ms
  Loss rate: 0.31%
-- Flow 1:
  Average throughput: 10.88 Mbit/s
  95th percentile per-packet one-way delay: 40.611 ms
  Loss rate: 0.25%
-- Flow 2:
  Average throughput: 10.68 Mbit/s
  95th percentile per-packet one-way delay: 41.034 ms
  Loss rate: 0.41%
-- Flow 3:
  Average throughput: 10.51 Mbit/s
  95th percentile per-packet one-way delay: 41.730 ms
  Loss rate: 0.27%
Run 7: Report of Sprout — Data Link

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

- **Flow 1 ingress** (mean 10.88 Mbit/s)
- **Flow 1 egress** (mean 10.88 Mbit/s)
- **Flow 2 ingress** (mean 10.70 Mbit/s)
- **Flow 2 egress** (mean 10.58 Mbit/s)
- **Flow 3 ingress** (mean 10.47 Mbit/s)
- **Flow 3 egress** (mean 10.51 Mbit/s)
Run 8: Statistics of Sprout

Start at: 2018-08-22 21:40:58
End at: 2018-08-22 21:41:28
Local clock offset: -2.858 ms
Remote clock offset: -2.104 ms

# Below is generated by plot.py at 2018-08-22 23:10:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 21.51 Mbit/s
95th percentile per-packet one-way delay: 40.601 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 10.93 Mbit/s
95th percentile per-packet one-way delay: 40.632 ms
Loss rate: 0.15%
-- Flow 2:
Average throughput: 10.75 Mbit/s
95th percentile per-packet one-way delay: 40.267 ms
Loss rate: 0.24%
-- Flow 3:
Average throughput: 10.49 Mbit/s
95th percentile per-packet one-way delay: 41.066 ms
Loss rate: 0.95%
Run 8: Report of Sprout — Data Link

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

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

Flow 1 ingress (mean 10.92 Mbit/s), Flow 1 egress (mean 10.93 Mbit/s), Flow 2 ingress (mean 10.74 Mbit/s), Flow 2 egress (mean 10.75 Mbit/s), Flow 3 ingress (mean 10.49 Mbit/s), Flow 3 egress (mean 10.49 Mbit/s)
Run 9: Statistics of Sprout

Start at: 2018-08-22 22:04:14
End at: 2018-08-22 22:04:44
Local clock offset: 1.183 ms
Remote clock offset: -1.057 ms

# Below is generated by plot.py at 2018-08-22 23:10:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 21.58 Mbit/s
95th percentile per-packet one-way delay: 40.920 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 10.93 Mbit/s
95th percentile per-packet one-way delay: 40.648 ms
Loss rate: 0.22%
-- Flow 2:
Average throughput: 10.81 Mbit/s
95th percentile per-packet one-way delay: 41.164 ms
Loss rate: 0.21%
-- Flow 3:
Average throughput: 10.52 Mbit/s
95th percentile per-packet one-way delay: 41.332 ms
Loss rate: 0.56%
Run 9: Report of Sprout — Data Link

[Graph showing throughput and packet delay over time]
Run 10: Statistics of Sprout

Start at: 2018-08-22 22:27:16
End at: 2018-08-22 22:27:46
Local clock offset: 0.639 ms
Remote clock offset: -0.668 ms

# Below is generated by plot.py at 2018-08-22 23:10:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 21.77 Mbit/s
95th percentile per-packet one-way delay: 41.160 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 11.10 Mbit/s
95th percentile per-packet one-way delay: 40.729 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 10.96 Mbit/s
95th percentile per-packet one-way delay: 40.962 ms
Loss rate: 0.37%
-- Flow 3:
Average throughput: 10.31 Mbit/s
95th percentile per-packet one-way delay: 42.694 ms
Loss rate: 0.98%
Run 10: Report of Sprout — Data Link

![Graphs showing throughput and per-packet end-to-end delay over time for different flows.](image-url)
Run 1: Statistics of TaoVA-100x

Start at: 2018-08-22 19:14:59
End at: 2018-08-22 19:15:29
Local clock offset: -0.029 ms
Remote clock offset: -0.151 ms

# Below is generated by plot.py at 2018-08-22 23:12:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.18 Mbit/s
95th percentile per-packet one-way delay: 71.162 ms
Loss rate: 0.91%
-- Flow 1:
Average throughput: 47.01 Mbit/s
95th percentile per-packet one-way delay: 71.271 ms
Loss rate: 0.55%
-- Flow 2:
Average throughput: 35.70 Mbit/s
95th percentile per-packet one-way delay: 71.340 ms
Loss rate: 1.43%
-- Flow 3:
Average throughput: 46.38 Mbit/s
95th percentile per-packet one-way delay: 53.461 ms
Loss rate: 1.19%
Run 1: Report of TaoVA-100x — Data Link

- **Flow 1 Ingress (mean 47.17 Mbit/s)**
- **Flow 1 Egress (mean 47.01 Mbit/s)**
- **Flow 2 Ingress (mean 36.07 Mbit/s)**
- **Flow 2 Egress (mean 35.70 Mbit/s)**
- **Flow 3 Ingress (mean 46.64 Mbit/s)**
- **Flow 3 Egress (mean 46.38 Mbit/s)**

- **Flow 1 (95th percentile 71.27 ms)**
- **Flow 2 (95th percentile 71.34 ms)**
- **Flow 3 (95th percentile 53.46 ms)**
Run 2: Statistics of TaoVA-100x

Start at: 2018-08-22 19:37:58
End at: 2018-08-22 19:38:28
Local clock offset: 0.16 ms
Remote clock offset: 0.638 ms

# Below is generated by plot.py at 2018-08-22 23:12:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.06 Mbit/s
95th percentile per-packet one-way delay: 70.907 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 46.95 Mbit/s
95th percentile per-packet one-way delay: 70.926 ms
Loss rate: 0.53%
-- Flow 2:
Average throughput: 46.82 Mbit/s
95th percentile per-packet one-way delay: 53.496 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 24.02 Mbit/s
95th percentile per-packet one-way delay: 71.481 ms
Loss rate: 2.49%
Run 3: Statistics of TaoVA-100x

Start at: 2018-08-22 20:01:01
End at: 2018-08-22 20:01:31
Local clock offset: 0.481 ms
Remote clock offset: 1.493 ms

# Below is generated by plot.py at 2018-08-22 23:12:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.43 Mbit/s
95th percentile per-packet one-way delay: 70.902 ms
Loss rate: 0.93%
-- Flow 1:
Average throughput: 54.77 Mbit/s
95th percentile per-packet one-way delay: 53.195 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 35.66 Mbit/s
95th percentile per-packet one-way delay: 71.249 ms
Loss rate: 1.35%
-- Flow 3:
Average throughput: 23.93 Mbit/s
95th percentile per-packet one-way delay: 71.711 ms
Loss rate: 3.21%
Run 3: Report of TaoVA-100x — Data Link

![Graph 1: Throughput Graph][1]

![Graph 2: Packet Error Rate Graph][2]
Run 4: Statistics of TaoVA-100x

Start at: 2018-08-22 20:23:55
End at: 2018-08-22 20:24:25
Local clock offset: 0.313 ms
Remote clock offset: 0.08 ms

# Below is generated by plot.py at 2018-08-22 23:12:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.75 Mbit/s
95th percentile per-packet one-way delay: 62.456 ms
Loss rate: 1.46%
-- Flow 1:
Average throughput: 49.96 Mbit/s
95th percentile per-packet one-way delay: 62.346 ms
Loss rate: 1.08%
-- Flow 2:
Average throughput: 39.62 Mbit/s
95th percentile per-packet one-way delay: 62.405 ms
Loss rate: 1.32%
-- Flow 3:
Average throughput: 31.45 Mbit/s
95th percentile per-packet one-way delay: 62.650 ms
Loss rate: 3.53%
Run 4: Report of TaoVA-100x — Data Link

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

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

Flow 1 ingress (mean 50.38 Mbps/s)
Flow 1 egress (mean 49.96 Mbps/s)
Flow 2 ingress (mean 39.99 Mbps/s)
Flow 2 egress (mean 39.62 Mbps/s)
Flow 3 ingress (mean 32.35 Mbps/s)
Flow 3 egress (mean 31.45 Mbps/s)
Run 5: Statistics of TaoVA-100x

Start at: 2018-08-22 20:46:59
End at: 2018-08-22 20:47:29
Local clock offset: -2.071 ms
Remote clock offset: -0.555 ms

# Below is generated by plot.py at 2018-08-22 23:12:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.31 Mbit/s
95th percentile per-packet one-way delay: 71.103 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 54.59 Mbit/s
95th percentile per-packet one-way delay: 53.595 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 35.73 Mbit/s
95th percentile per-packet one-way delay: 71.335 ms
Loss rate: 1.23%
-- Flow 3:
Average throughput: 23.95 Mbit/s
95th percentile per-packet one-way delay: 71.970 ms
Loss rate: 2.95%
Run 5: Report of TaoVA-100x — Data Link
Run 6: Statistics of TaoVA-100x

Start at: 2018-08-22 21:09:57
End at: 2018-08-22 21:10:27
Local clock offset: -3.608 ms
Remote clock offset: -0.898 ms

# Below is generated by plot.py at 2018-08-22 23:12:31
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 86.35 Mbit/s
  95th percentile per-packet one-way delay: 71.005 ms
  Loss rate: 0.70%
-- Flow 1:
  Average throughput: 47.25 Mbit/s
  95th percentile per-packet one-way delay: 70.736 ms
  Loss rate: 0.48%
-- Flow 2:
  Average throughput: 46.80 Mbit/s
  95th percentile per-packet one-way delay: 53.167 ms
  Loss rate: 0.62%
-- Flow 3:
  Average throughput: 23.97 Mbit/s
  95th percentile per-packet one-way delay: 71.788 ms
  Loss rate: 2.24%
Run 6: Report of TaoVA-100x — Data Link

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

- **Flow 1 ingress** (mean 47.38 Mbps)
- **Flow 1 egress** (mean 47.25 Mbps)
- **Flow 2 ingress** (mean 46.95 Mbps)
- **Flow 2 egress** (mean 46.80 Mbps)
- **Flow 3 ingress** (mean 24.36 Mbps)
- **Flow 3 egress** (mean 23.97 Mbps)

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

- Flow 1 (95th percentile 70.74 ms)
- Flow 2 (95th percentile 53.17 ms)
- Flow 3 (95th percentile 71.79 ms)

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Run 7: Statistics of TaoVA-100x

Start at: 2018-08-22 21:32:50
End at: 2018-08-22 21:33:20
Local clock offset: -4.672 ms
Remote clock offset: -1.967 ms

# Below is generated by plot.py at 2018-08-22 23:12:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.10 Mbit/s
95th percentile per-packet one-way delay: 62.190 ms
Loss rate: 1.85%
-- Flow 1:
Average throughput: 49.40 Mbit/s
95th percentile per-packet one-way delay: 62.122 ms
Loss rate: 1.12%
-- Flow 2:
Average throughput: 39.43 Mbit/s
95th percentile per-packet one-way delay: 62.292 ms
Loss rate: 1.89%
-- Flow 3:
Average throughput: 31.53 Mbit/s
95th percentile per-packet one-way delay: 62.145 ms
Loss rate: 5.05%
Run 7: Report of TaoVA-100x — Data Link
Run 8: Statistics of TaoVA-100x

Start at: 2018-08-22 21:55:50
End at: 2018-08-22 21:56:20
Local clock offset: 0.454 ms
Remote clock offset: -1.267 ms

# Below is generated by plot.py at 2018-08-22 23:12:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.52 Mbit/s
95th percentile per-packet one-way delay: 71.372 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 47.41 Mbit/s
95th percentile per-packet one-way delay: 71.332 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 35.75 Mbit/s
95th percentile per-packet one-way delay: 71.634 ms
Loss rate: 0.87%
-- Flow 3:
Average throughput: 46.21 Mbit/s
95th percentile per-packet one-way delay: 53.467 ms
Loss rate: 1.00%
Run 9: Statistics of TaoVA-100x

Start at: 2018-08-22 22:19:05
End at: 2018-08-22 22:19:35
Local clock offset: 0.642 ms
Remote clock offset: -0.804 ms

# Below is generated by plot.py at 2018-08-22 23:14:09
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 86.66 Mbit/s
  95th percentile per-packet one-way delay: 62.327 ms
  Loss rate: 1.94%
-- Flow 1:
  Average throughput: 49.91 Mbit/s
  95th percentile per-packet one-way delay: 62.141 ms
  Loss rate: 1.10%
-- Flow 2:
  Average throughput: 39.54 Mbit/s
  95th percentile per-packet one-way delay: 62.215 ms
  Loss rate: 2.28%
-- Flow 3:
  Average throughput: 31.46 Mbit/s
  95th percentile per-packet one-way delay: 62.633 ms
  Loss rate: 4.94%
Run 9: Report of TaoVA-100x — Data Link

![Graph showing throughput and packet delay over time]
Run 10: Statistics of TaoVA-100x

Start at: 2018-08-22 22:42:10
End at: 2018-08-22 22:42:40
Local clock offset: 0.687 ms
Remote clock offset: -0.436 ms

# Below is generated by plot.py at 2018-08-22 23:14:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.22 Mbit/s
95th percentile per-packet one-way delay: 62.396 ms
Loss rate: 1.26%
-- Flow 1:
Average throughput: 49.62 Mbit/s
95th percentile per-packet one-way delay: 62.131 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 39.39 Mbit/s
95th percentile per-packet one-way delay: 62.397 ms
Loss rate: 1.49%
-- Flow 3:
Average throughput: 31.30 Mbit/s
95th percentile per-packet one-way delay: 62.685 ms
Loss rate: 3.53%
Run 10: Report of TaoVA-100x — Data Link
Run 1: Statistics of TCP Vegas

Start at: 2018-08-22 19:10:58
End at: 2018-08-22 19:11:28
Local clock offset: -0.065 ms
Remote clock offset: -0.279 ms

# Below is generated by plot.py at 2018-08-22 23:14:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.59 Mbit/s
95th percentile per-packet one-way delay: 35.757 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 53.12 Mbit/s
95th percentile per-packet one-way delay: 38.168 ms
Loss rate: 0.17%
-- Flow 2:
Average throughput: 34.41 Mbit/s
95th percentile per-packet one-way delay: 35.617 ms
Loss rate: 0.32%
-- Flow 3:
Average throughput: 22.84 Mbit/s
95th percentile per-packet one-way delay: 35.732 ms
Loss rate: 0.74%
Run 1: Report of TCP Vegas — Data Link

![Throughput Graph]

- Flow 1 ingress (mean 53.09 Mb/s)
- Flow 1 egress (mean 53.12 Mb/s)
- Flow 2 ingress (mean 34.41 Mb/s)
- Flow 2 egress (mean 34.41 Mb/s)
- Flow 3 ingress (mean 22.86 Mb/s)
- Flow 3 egress (mean 22.84 Mb/s)

![Delay Graph]

- Flow 1 (95th percentile 38.17 ms)
- Flow 2 (95th percentile 35.62 ms)
- Flow 3 (95th percentile 35.73 ms)
Run 2: Statistics of TCP Vegas

Start at: 2018-08-22 19:33:53
End at: 2018-08-22 19:34:24
Local clock offset: 0.121 ms
Remote clock offset: 0.59 ms

# Below is generated by plot.py at 2018-08-22 23:14:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.96 Mbit/s
95th percentile per-packet one-way delay: 36.571 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 60.73 Mbit/s
95th percentile per-packet one-way delay: 36.817 ms
Loss rate: 0.18%
-- Flow 2:
Average throughput: 31.29 Mbit/s
95th percentile per-packet one-way delay: 36.429 ms
Loss rate: 0.26%
-- Flow 3:
Average throughput: 22.38 Mbit/s
95th percentile per-packet one-way delay: 35.434 ms
Loss rate: 0.75%
Run 2: Report of TCP Vegas — Data Link
Run 3: Statistics of TCP Vegas

Start at: 2018-08-22 19:57:00
End at: 2018-08-22 19:57:30
Local clock offset: 0.338 ms
Remote clock offset: 1.645 ms

# Below is generated by plot.py at 2018-08-22 23:14:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.47 Mbit/s
95th percentile per-packet one-way delay: 35.965 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 47.14 Mbit/s
95th percentile per-packet one-way delay: 38.440 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 42.22 Mbit/s
95th percentile per-packet one-way delay: 35.176 ms
Loss rate: 0.36%
-- Flow 3:
Average throughput: 30.91 Mbit/s
95th percentile per-packet one-way delay: 36.233 ms
Loss rate: 0.67%
Run 3: Report of TCP Vegas — Data Link

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

- **Flow 1 ingress (mean 47.08 Mbit/s)**
- **Flow 1 egress (mean 47.14 Mbit/s)**
- **Flow 2 ingress (mean 42.24 Mbit/s)**
- **Flow 2 egress (mean 42.22 Mbit/s)**
- **Flow 3 ingress (mean 30.92 Mbit/s)**
- **Flow 3 egress (mean 30.91 Mbit/s)**

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

- **Flow 1 (95th percentile 38.44 ms)**
- **Flow 2 (95th percentile 35.18 ms)**
- **Flow 3 (95th percentile 36.23 ms)**

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Run 4: Statistics of TCP Vegas

Start at: 2018-08-22 20:19:54
End at: 2018-08-22 20:20:24
Local clock offset: 0.39 ms
Remote clock offset: 0.034 ms

# Below is generated by plot.py at 2018-08-22 23:14:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.61 Mbit/s
95th percentile per-packet one-way delay: 36.252 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 48.69 Mbit/s
95th percentile per-packet one-way delay: 38.492 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 34.38 Mbit/s
95th percentile per-packet one-way delay: 35.841 ms
Loss rate: 0.33%
-- Flow 3:
Average throughput: 36.33 Mbit/s
95th percentile per-packet one-way delay: 36.333 ms
Loss rate: 0.71%
Run 4: Report of TCP Vegas — Data Link
Run 5: Statistics of TCP Vegas

Start at: 2018-08-22 20:42:58
End at: 2018-08-22 20:43:28
Local clock offset: -1.294 ms
Remote clock offset: -0.254 ms

# Below is generated by plot.py at 2018-08-22 23:14:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.58 Mbit/s
95th percentile per-packet one-way delay: 36.987 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 53.18 Mbit/s
95th percentile per-packet one-way delay: 37.279 ms
Loss rate: 0.17%
-- Flow 2:
Average throughput: 34.33 Mbit/s
95th percentile per-packet one-way delay: 36.733 ms
Loss rate: 0.33%
-- Flow 3:
Average throughput: 22.79 Mbit/s
95th percentile per-packet one-way delay: 37.231 ms
Loss rate: 0.77%
Run 5: Report of TCP Vegas — Data Link
Run 6: Statistics of TCP Vegas

Start at: 2018-08-22 21:05:56
End at: 2018-08-22 21:06:26
Local clock offset: -3.528 ms
Remote clock offset: -0.935 ms

# Below is generated by plot.py at 2018-08-22 23:14:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.01 Mbit/s
95th percentile per-packet one-way delay: 36.433 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 52.37 Mbit/s
95th percentile per-packet one-way delay: 35.782 ms
Loss rate: 0.15%
-- Flow 2:
Average throughput: 32.86 Mbit/s
95th percentile per-packet one-way delay: 36.533 ms
Loss rate: 0.30%
-- Flow 3:
Average throughput: 32.54 Mbit/s
95th percentile per-packet one-way delay: 36.724 ms
Loss rate: 0.67%
Run 6: Report of TCP Vegas — Data Link

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

- **Flow 1 Ingress (mean 52.34 Mbit/s)**
- **Flow 1 Egress (mean 52.37 Mbit/s)**
- **Flow 2 Ingress (mean 32.85 Mbit/s)**
- **Flow 2 Egress (mean 32.86 Mbit/s)**
- **Flow 3 Ingress (mean 32.55 Mbit/s)**
- **Flow 3 Egress (mean 32.54 Mbit/s)**

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

- **Flow 1 (95th percentile 35.78 ms)**
- **Flow 2 (95th percentile 36.53 ms)**
- **Flow 3 (95th percentile 36.72 ms)**
Run 7: Statistics of TCP Vegas

Start at: 2018-08-22 21:28:50
End at: 2018-08-22 21:29:20
Local clock offset: -4.464 ms
Remote clock offset: -1.755 ms

# Below is generated by plot.py at 2018-08-22 23:14:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 81.83 Mbit/s
95th percentile per-packet one-way delay: 36.772 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 49.08 Mbit/s
95th percentile per-packet one-way delay: 38.792 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 30.02 Mbit/s
95th percentile per-packet one-way delay: 36.153 ms
Loss rate: 0.30%
-- Flow 3:
Average throughput: 38.62 Mbit/s
95th percentile per-packet one-way delay: 36.737 ms
Loss rate: 0.74%
Run 7: Report of TCP Vegas — Data Link

![Throughput Graph](Image)

![Delay Graph](Image)

- Flow 1 ingress (mean 49.05 Mbit/s)
- Flow 1 egress (mean 49.08 Mbit/s)
- Flow 2 ingress (mean 30.02 Mbit/s)
- Flow 2 egress (mean 30.02 Mbit/s)
- Flow 3 ingress (mean 38.66 Mbit/s)
- Flow 3 egress (mean 30.62 Mbit/s)
Run 8: Statistics of TCP Vegas

Start at: 2018-08-22 21:51:47
End at: 2018-08-22 21:52:17
Local clock offset: -0.142 ms
Remote clock offset: -1.239 ms

# Below is generated by plot.py at 2018-08-22 23:14:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.50 Mbit/s
95th percentile per-packet one-way delay: 35.592 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 53.01 Mbit/s
95th percentile per-packet one-way delay: 36.382 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 34.49 Mbit/s
95th percentile per-packet one-way delay: 35.460 ms
Loss rate: 0.32%
-- Flow 3:
Average throughput: 22.78 Mbit/s
95th percentile per-packet one-way delay: 35.435 ms
Loss rate: 0.77%
Run 8: Report of TCP Vegas — Data Link

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

- **Flow 1 ingress (mean 52.99 Mbit/s)**
- **Flow 1 egress (mean 53.01 Mbit/s)**
- **Flow 2 ingress (mean 34.48 Mbit/s)**
- **Flow 2 egress (mean 34.49 Mbit/s)**
- **Flow 3 ingress (mean 22.81 Mbit/s)**
- **Flow 3 egress (mean 22.78 Mbit/s)**

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

**Flow 1 (95th percentile 36.38 ms)**
**Flow 2 (95th percentile 35.46 ms)**
**Flow 3 (95th percentile 35.44 ms)**
Run 9: Statistics of TCP Vegas

Start at: 2018-08-22 22:15:03
End at: 2018-08-22 22:15:33
Local clock offset: 0.711 ms
Remote clock offset: -0.842 ms

# Below is generated by plot.py at 2018-08-22 23:14:34
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 83.69 Mbit/s
  95th percentile per-packet one-way delay: 35.519 ms
  Loss rate: 0.26%
-- Flow 1:
  Average throughput: 53.21 Mbit/s
  95th percentile per-packet one-way delay: 36.633 ms
  Loss rate: 0.17%
-- Flow 2:
  Average throughput: 34.38 Mbit/s
  95th percentile per-packet one-way delay: 35.321 ms
  Loss rate: 0.31%
-- Flow 3:
  Average throughput: 22.99 Mbit/s
  95th percentile per-packet one-way delay: 35.856 ms
  Loss rate: 0.74%
Run 9: Report of TCP Vegas — Data Link

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

- Flow 1 ingress (mean 53.18 Mbit/s) vs Flow 1 egress (mean 53.21 Mbit/s)
- Flow 2 ingress (mean 34.38 Mbit/s) vs Flow 2 egress (mean 34.38 Mbit/s)
- Flow 3 ingress (mean 23.01 Mbit/s) vs Flow 3 egress (mean 22.99 Mbit/s)

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

- Flow 1 (95th percentile 36.63 ms) vs Flow 2 (95th percentile 35.32 ms) vs Flow 3 (95th percentile 35.86 ms)
Run 10: Statistics of TCP Vegas

Start at: 2018-08-22 22:38:09
End at: 2018-08-22 22:38:39
Local clock offset: 0.854 ms
Remote clock offset: -0.493 ms

# Below is generated by plot.py at 2018-08-22 23:14:36
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 84.76 Mbit/s
  95th percentile per-packet one-way delay: 37.573 ms
  Loss rate: 0.28%
-- Flow 1:
  Average throughput: 57.84 Mbit/s
  95th percentile per-packet one-way delay: 38.227 ms
  Loss rate: 0.21%
-- Flow 2:
  Average throughput: 29.42 Mbit/s
  95th percentile per-packet one-way delay: 35.409 ms
  Loss rate: 0.29%
-- Flow 3:
  Average throughput: 22.21 Mbit/s
  95th percentile per-packet one-way delay: 35.785 ms
  Loss rate: 0.79%
Run 10: Report of TCP Vegas — Data Link

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

- **Flow 1 Ingress (mean 57.84 Mbps)**
- **Flow 1 Egress (mean 57.84 Mbps)**
- **Flow 2 Ingress (mean 29.41 Mbps)**
- **Flow 2 Egress (mean 29.42 Mbps)**
- **Flow 3 Ingress (mean 22.24 Mbps)**
- **Flow 3 Egress (mean 22.21 Mbps)**

![Graph 2: Packet Loss Rate (ms) vs. Time (s)]

- **Flow 1 (95th percentile 38.23 ms)**
- **Flow 2 (95th percentile 35.41 ms)**
- **Flow 3 (95th percentile 35.78 ms)**
Run 1: Statistics of Verus

Start at: 2018-08-22 19:08:13
End at: 2018-08-22 19:08:43
Local clock offset: -0.152 ms
Remote clock offset: -0.4 ms

# Below is generated by plot.py at 2018-08-22 23:14:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.13 Mbit/s
95th percentile per-packet one-way delay: 69.499 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 51.30 Mbit/s
95th percentile per-packet one-way delay: 68.907 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 34.89 Mbit/s
95th percentile per-packet one-way delay: 76.069 ms
Loss rate: 0.60%
-- Flow 3:
Average throughput: 44.21 Mbit/s
95th percentile per-packet one-way delay: 56.898 ms
Loss rate: 1.23%
Run 1: Report of Verus — Data Link

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

- **Flow 1 ingress (mean 51.35 Mbit/s)**
- **Flow 1 egress (mean 51.30 Mbit/s)**
- **Flow 2 ingress (mean 34.95 Mbit/s)**
- **Flow 2 egress (mean 34.89 Mbit/s)**
- **Flow 3 ingress (mean 44.42 Mbit/s)**
- **Flow 3 egress (mean 44.21 Mbit/s)**

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

- **Flow 1 (95th percentile 68.91 ms)**
- **Flow 2 (95th percentile 76.07 ms)**
- **Flow 3 (95th percentile 56.90 ms)**
Run 2: Statistics of Verus

Start at: 2018-08-22 19:31:07  
End at: 2018-08-22 19:31:37  
Local clock offset: 0.102 ms  
Remote clock offset: 0.641 ms

# Below is generated by plot.py at 2018-08-22 23:14:49  
# Datalink statistics
   -- Total of 3 flows:
   Average throughput: 89.19 Mbit/s  
   95th percentile per-packet one-way delay: 67.868 ms  
   Loss rate: 0.47%  
   -- Flow 1:
   Average throughput: 53.17 Mbit/s  
   95th percentile per-packet one-way delay: 64.332 ms  
   Loss rate: 0.32%  
   -- Flow 2:
   Average throughput: 38.85 Mbit/s  
   95th percentile per-packet one-way delay: 68.128 ms  
   Loss rate: 0.53%  
   -- Flow 3:
   Average throughput: 30.76 Mbit/s  
   95th percentile per-packet one-way delay: 68.177 ms  
   Loss rate: 1.16%
Run 2: Report of Verus — Data Link
Run 3: Statistics of Verus

Start at: 2018-08-22 19:54:14
End at: 2018-08-22 19:54:44
Local clock offset: 0.395 ms
Remote clock offset: 1.522 ms

# Below is generated by plot.py at 2018-08-22 23:15:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.00 Mbit/s
95th percentile per-packet one-way delay: 67.882 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 54.08 Mbit/s
95th percentile per-packet one-way delay: 65.100 ms
Loss rate: 0.18%
-- Flow 2:
Average throughput: 38.33 Mbit/s
95th percentile per-packet one-way delay: 67.959 ms
Loss rate: 0.36%
-- Flow 3:
Average throughput: 31.57 Mbit/s
95th percentile per-packet one-way delay: 68.372 ms
Loss rate: 1.34%
Run 3: Report of Verus — Data Link

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

Flow 1 ingress (mean 54.05 Mbit/s)  Flow 1 egress (mean 54.08 Mbit/s)
Flow 2 ingress (mean 38.41 Mbit/s)  Flow 2 egress (mean 38.33 Mbit/s)
Flow 3 ingress (mean 31.85 Mbit/s)  Flow 3 egress (mean 31.57 Mbit/s)
Run 4: Statistics of Verus

Start at: 2018-08-22 20:17:08
End at: 2018-08-22 20:17:38
Local clock offset: 0.269 ms
Remote clock offset: 0.266 ms

# Below is generated by plot.py at 2018-08-22 23:15:23
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 89.79 Mbit/s
  95th percentile per-packet one-way delay: 67.614 ms
  Loss rate: 0.56%
-- Flow 1:
  Average throughput: 53.63 Mbit/s
  95th percentile per-packet one-way delay: 67.436 ms
  Loss rate: 0.19%
-- Flow 2:
  Average throughput: 39.01 Mbit/s
  95th percentile per-packet one-way delay: 67.603 ms
  Loss rate: 0.76%
-- Flow 3:
  Average throughput: 30.89 Mbit/s
  95th percentile per-packet one-way delay: 67.831 ms
  Loss rate: 1.93%
Run 4: Report of Verus — Data Link
Run 5: Statistics of Verus

Start at: 2018-08-22 20:40:12
End at: 2018-08-22 20:40:42
Local clock offset: -0.624 ms
Remote clock offset: -0.083 ms

# Below is generated by plot.py at 2018-08-22 23:15:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.02 Mbit/s
95th percentile per-packet one-way delay: 69.498 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 57.77 Mbit/s
95th percentile per-packet one-way delay: 56.934 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 35.09 Mbit/s
95th percentile per-packet one-way delay: 78.812 ms
Loss rate: 0.38%
-- Flow 3:
Average throughput: 23.92 Mbit/s
95th percentile per-packet one-way delay: 78.689 ms
Loss rate: 1.11%
Run 5: Report of Verus — Data Link
Run 6: Statistics of Verus

Start at: 2018-08-22 21:03:11
End at: 2018-08-22 21:03:41
Local clock offset: -3.331 ms
Remote clock offset: -0.813 ms

# Below is generated by plot.py at 2018-08-22 23:15:39
# Datalink statistics
-- Total of 3 flows:
 Average throughput: 89.12 Mbit/s
 95th percentile per-packet one-way delay: 68.047 ms
 Loss rate: 0.50%
-- Flow 1:
 Average throughput: 52.58 Mbit/s
 95th percentile per-packet one-way delay: 66.659 ms
 Loss rate: 0.31%
-- Flow 2:
 Average throughput: 39.62 Mbit/s
 95th percentile per-packet one-way delay: 68.115 ms
 Loss rate: 0.54%
-- Flow 3:
 Average throughput: 31.05 Mbit/s
 95th percentile per-packet one-way delay: 68.405 ms
 Loss rate: 1.36%
Run 6: Report of Verus — Data Link
Run 7: Statistics of Verus

Start at: 2018-08-22 21:26:04
End at: 2018-08-22 21:26:34
Local clock offset: -4.318 ms
Remote clock offset: -1.848 ms

# Below is generated by plot.py at 2018-08-22 23:15:43
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 89.12 Mbit/s
  95th percentile per-packet one-way delay: 68.194 ms
  Loss rate: 0.50%
-- Flow 1:
  Average throughput: 50.56 Mbit/s
  95th percentile per-packet one-way delay: 72.029 ms
  Loss rate: 0.34%
-- Flow 2:
  Average throughput: 46.17 Mbit/s
  95th percentile per-packet one-way delay: 57.137 ms
  Loss rate: 0.59%
-- Flow 3:
  Average throughput: 23.72 Mbit/s
  95th percentile per-packet one-way delay: 77.624 ms
  Loss rate: 1.19%
Run 7: Report of Verus — Data Link

![Graphs showing throughput and per-packet one-way delay for different flows.](image-url)
Run 8: Statistics of Verus

End at: 2018-08-22 21:49:29
Local clock offset: -0.619 ms
Remote clock offset: -1.397 ms

# Below is generated by plot.py at 2018-08-22 23:15:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.39 Mbit/s
95th percentile per-packet one-way delay: 67.857 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 54.13 Mbit/s
95th percentile per-packet one-way delay: 67.079 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 37.96 Mbit/s
95th percentile per-packet one-way delay: 67.977 ms
Loss rate: 0.41%
-- Flow 3:
Average throughput: 30.26 Mbit/s
95th percentile per-packet one-way delay: 68.020 ms
Loss rate: 2.80%
Run 9: Statistics of Verus

Start at: 2018-08-22 22:12:15
End at: 2018-08-22 22:12:45
Local clock offset: 0.927 ms
Remote clock offset: -0.888 ms

# Below is generated by plot.py at 2018-08-22 23:15:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.21 Mbit/s
95th percentile per-packet one-way delay: 70.246 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 58.36 Mbit/s
95th percentile per-packet one-way delay: 56.960 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 34.66 Mbit/s
95th percentile per-packet one-way delay: 79.067 ms
Loss rate: 0.58%
-- Flow 3:
Average throughput: 23.50 Mbit/s
95th percentile per-packet one-way delay: 78.899 ms
Loss rate: 1.39%
Run 9: Report of Verus — Data Link
Run 10: Statistics of Verus

Start at: 2018-08-22 22:35:23
End at: 2018-08-22 22:35:53
Local clock offset: 0.88 ms
Remote clock offset: -0.608 ms

# Below is generated by plot.py at 2018-08-22 23:16:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.55 Mbit/s
95th percentile per-packet one-way delay: 72.080 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 49.86 Mbit/s
95th percentile per-packet one-way delay: 72.805 ms
Loss rate: 0.28%
-- Flow 2:
Average throughput: 36.33 Mbit/s
95th percentile per-packet one-way delay: 77.263 ms
Loss rate: 0.36%
-- Flow 3:
Average throughput: 43.90 Mbit/s
95th percentile per-packet one-way delay: 56.998 ms
Loss rate: 1.07%
Run 10: Report of Verus — Data Link
Run 1: Statistics of PCC-Vivace

Start at: 2018-08-22 19:20:24
End at: 2018-08-22 19:20:54
Local clock offset: 0.029 ms
Remote clock offset: 0.366 ms

# Below is generated by plot.py at 2018-08-22 23:16:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.55 Mbit/s
95th percentile per-packet one-way delay: 69.736 ms
Loss rate: 1.63%
-- Flow 1:
Average throughput: 53.05 Mbit/s
95th percentile per-packet one-way delay: 68.823 ms
Loss rate: 1.23%
-- Flow 2:
Average throughput: 32.62 Mbit/s
95th percentile per-packet one-way delay: 74.013 ms
Loss rate: 2.93%
-- Flow 3:
Average throughput: 35.92 Mbit/s
95th percentile per-packet one-way delay: 56.220 ms
Loss rate: 1.00%
Run 1: Report of PCC-Vivace — Data Link

![Graph of throughput and packet error rate over time for different flows]

- **Flow 1**: Ingress (mean 53.59 Mbit/s) / Egress (mean 53.05 Mbit/s)
- **Flow 2**: Ingress (mean 33.50 Mbit/s) / Egress (mean 32.62 Mbit/s)
- **Flow 3**: Ingress (mean 36.04 Mbit/s) / Egress (mean 35.92 Mbit/s)

![Graph of packet error rate over time for different flows]

- **Flow 1**: 95th percentile 68.82 ms
- **Flow 2**: 95th percentile 74.01 ms
- **Flow 3**: 95th percentile 56.22 ms

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Run 2: Statistics of PCC-Vivace

Start at: 2018-08-22 19:43:28
End at: 2018-08-22 19:43:58
Local clock offset: 0.216 ms
Remote clock offset: 0.91 ms

# Below is generated by plot.py at 2018-08-22 23:16:35
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 87.10 Mbit/s
  95th percentile per-packet one-way delay: 70.193 ms
  Loss rate: 1.30%
-- Flow 1:
  Average throughput: 60.46 Mbit/s
  95th percentile per-packet one-way delay: 68.662 ms
  Loss rate: 1.03%
-- Flow 2:
  Average throughput: 21.61 Mbit/s
  95th percentile per-packet one-way delay: 72.683 ms
  Loss rate: 2.79%
-- Flow 3:
  Average throughput: 37.32 Mbit/s
  95th percentile per-packet one-way delay: 36.639 ms
  Loss rate: 0.88%
Run 2: Report of PCC-Vivace — Data Link

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

- Flow 1 ingress (mean 60.96 Mbit/s)
- Flow 2 ingress (mean 22.16 Mbit/s)
- Flow 3 ingress (mean 37.41 Mbit/s)
- Flow 1 egress (mean 60.46 Mbit/s)
- Flow 2 egress (mean 21.61 Mbit/s)
- Flow 3 egress (mean 37.32 Mbit/s)

Flow 1 (95th percentile 68.66 ms)
Flow 2 (95th percentile 72.68 ms)
Flow 3 (95th percentile 36.64 ms)
Run 3: Statistics of PCC-Vivace

Start at: 2018-08-22 20:06:26
End at: 2018-08-22 20:06:56
Local clock offset: 0.547 ms
Remote clock offset: 0.568 ms

# Below is generated by plot.py at 2018-08-22 23:16:40
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 85.52 Mbit/s
  95th percentile per-packet one-way delay: 64.895 ms
  Loss rate: 0.79%
-- Flow 1:
  Average throughput: 52.70 Mbit/s
  95th percentile per-packet one-way delay: 63.429 ms
  Loss rate: 0.52%
-- Flow 2:
  Average throughput: 34.99 Mbit/s
  95th percentile per-packet one-way delay: 65.340 ms
  Loss rate: 0.84%
-- Flow 3:
  Average throughput: 29.12 Mbit/s
  95th percentile per-packet one-way delay: 66.877 ms
  Loss rate: 2.13%
Run 3: Report of PCC-Vivace — Data Link

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

- Flow 1 ingress (mean 52.87 Mbps)
- Flow 1 egress (mean 52.70 Mbps)
- Flow 2 ingress (mean 35.18 Mbps)
- Flow 2 egress (mean 34.99 Mbps)
- Flow 3 ingress (mean 29.56 Mbps)
- Flow 3 egress (mean 29.12 Mbps)

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

- Flow 1 (95th percentile 63.43 ms)
- Flow 2 (95th percentile 65.34 ms)
- Flow 3 (95th percentile 66.88 ms)
Run 4: Statistics of PCC-Vivace

Start at: 2018-08-22 20:29:24
End at: 2018-08-22 20:29:54
Local clock offset: 0.475 ms
Remote clock offset: 0.36 ms

# Below is generated by plot.py at 2018-08-22 23:16:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.13 Mbit/s
95th percentile per-packet one-way delay: 64.450 ms
Loss rate: 1.28%
-- Flow 1:
Average throughput: 55.61 Mbit/s
95th percentile per-packet one-way delay: 63.639 ms
Loss rate: 1.45%
-- Flow 2:
Average throughput: 35.32 Mbit/s
95th percentile per-packet one-way delay: 65.245 ms
Loss rate: 1.02%
-- Flow 3:
Average throughput: 27.47 Mbit/s
95th percentile per-packet one-way delay: 66.867 ms
Loss rate: 0.90%
Run 4: Report of PCC-Vivace — Data Link

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

- Flow 1 ingress (mean 36.30 Mbit/s)
- Flow 1 egress (mean 55.61 Mbit/s)
- Flow 2 ingress (mean 35.57 Mbit/s)
- Flow 2 egress (mean 35.32 Mbit/s)
- Flow 3 ingress (mean 27.54 Mbit/s)
- Flow 3 egress (mean 27.47 Mbit/s)

![Chart of per-packet one-way delay for different flows.]

- Flow 1 (95th percentile 63.64 ms)
- Flow 2 (95th percentile 65.25 ms)
- Flow 3 (95th percentile 66.87 ms)
Run 5: Statistics of PCC-Vivace

Start at: 2018-08-22 20:52:25
End at: 2018-08-22 20:52:55
Local clock offset: -2.606 ms
Remote clock offset: -0.444 ms

# Below is generated by plot.py at 2018-08-22 23:16:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.73 Mbit/s
95th percentile per-packet one-way delay: 72.725 ms
Loss rate: 2.24%
-- Flow 1:
Average throughput: 54.64 Mbit/s
95th percentile per-packet one-way delay: 72.094 ms
Loss rate: 3.09%
-- Flow 2:
Average throughput: 40.68 Mbit/s
95th percentile per-packet one-way delay: 55.656 ms
Loss rate: 0.44%
-- Flow 3:
Average throughput: 21.45 Mbit/s
95th percentile per-packet one-way delay: 75.764 ms
Loss rate: 2.36%
Run 5: Report of PCC-Vivace — Data Link

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

- Flow 1 ingress (mean 56.25 Mbit/s)
- Flow 1 egress (mean 54.64 Mbit/s)
- Flow 2 ingress (mean 40.73 Mbit/s)
- Flow 2 egress (mean 40.68 Mbit/s)
- Flow 3 ingress (mean 21.82 Mbit/s)
- Flow 3 egress (mean 21.45 Mbit/s)

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

- Flow 1 (95th percentile 72.09 ms)
- Flow 2 (95th percentile 55.66 ms)
- Flow 3 (95th percentile 75.76 ms)
Run 6: Statistics of PCC-Vivace

Start at: 2018-08-22 21:15:22
End at: 2018-08-22 21:15:52
Local clock offset: -3.789 ms
Remote clock offset: -1.544 ms

# Below is generated by plot.py at 2018-08-22 23:16:58
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 88.24 Mbit/s
  95th percentile per-packet one-way delay: 62.879 ms
  Loss rate: 2.11%
-- Flow 1:
  Average throughput: 56.65 Mbit/s
  95th percentile per-packet one-way delay: 59.392 ms
  Loss rate: 2.79%
-- Flow 2:
  Average throughput: 34.02 Mbit/s
  95th percentile per-packet one-way delay: 64.291 ms
  Loss rate: 0.71%
-- Flow 3:
  Average throughput: 27.31 Mbit/s
  95th percentile per-packet one-way delay: 66.959 ms
  Loss rate: 1.26%
Run 6: Report of PCC-Vivace — Data Link

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

- Flow 1 ingress (mean 58.15 Mbit/s)
- Flow 1 egress (mean 56.65 Mbit/s)
- Flow 2 ingress (mean 34.16 Mbit/s)
- Flow 2 egress (mean 34.02 Mbit/s)
- Flow 3 ingress (mean 27.48 Mbit/s)
- Flow 3 egress (mean 27.31 Mbit/s)

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

- Flow 1 (95th percentile 59.39 ms)
- Flow 2 (95th percentile 64.29 ms)
- Flow 3 (95th percentile 66.96 ms)
Run 7: Statistics of PCC-Vivace

Start at: 2018-08-22 21:38:14
End at: 2018-08-22 21:38:44
Local clock offset: -4.215 ms
Remote clock offset: -2.172 ms

# Below is generated by plot.py at 2018-08-22 23:17:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.80 Mbit/s
95th percentile per-packet one-way delay: 73.493 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 50.98 Mbit/s
95th percentile per-packet one-way delay: 72.341 ms
Loss rate: 0.49%
-- Flow 2:
Average throughput: 41.33 Mbit/s
95th percentile per-packet one-way delay: 55.137 ms
Loss rate: 0.48%
-- Flow 3:
Average throughput: 22.34 Mbit/s
95th percentile per-packet one-way delay: 76.842 ms
Loss rate: 2.45%
Run 7: Report of PCC-Vivace — Data Link
Run 8: Statistics of PCC-Vivace

Start at: 2018-08-22 22:01:30
End at: 2018-08-22 22:02:00
Local clock offset: 0.88 ms
Remote clock offset: -0.941 ms

# Below is generated by plot.py at 2018-08-22 23:17:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.34 Mbit/s
95th percentile per-packet one-way delay: 60.646 ms
Loss rate: 2.67%
-- Flow 1:
Average throughput: 54.75 Mbit/s
95th percentile per-packet one-way delay: 60.931 ms
Loss rate: 3.88%
-- Flow 2:
Average throughput: 40.73 Mbit/s
95th percentile per-packet one-way delay: 55.347 ms
Loss rate: 0.43%
-- Flow 3:
Average throughput: 19.82 Mbit/s
95th percentile per-packet one-way delay: 75.549 ms
Loss rate: 1.44%
Run 8: Report of PCC-Vivace — Data Link

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

[Graph 2: Per packet one way delay (ms) vs. Time (s)]
Run 9: Statistics of PCC-Vivace

Start at: 2018-08-22 22:24:31
End at: 2018-08-22 22:25:01
Local clock offset: 0.712 ms
Remote clock offset: -0.737 ms

# Below is generated by plot.py at 2018-08-22 23:17:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.66 Mbit/s
95th percentile per-packet one-way delay: 73.007 ms
Loss rate: 1.39%
-- Flow 1:
Average throughput: 57.77 Mbit/s
95th percentile per-packet one-way delay: 49.288 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 34.48 Mbit/s
95th percentile per-packet one-way delay: 74.708 ms
Loss rate: 3.88%
-- Flow 3:
Average throughput: 21.21 Mbit/s
95th percentile per-packet one-way delay: 76.160 ms
Loss rate: 2.25%
Run 10: Statistics of PCC-Vivace

Start at: 2018-08-22 22:47:35
End at: 2018-08-22 22:48:05
Local clock offset: 0.593 ms
Remote clock offset: -0.288 ms

# Below is generated by plot.py at 2018-08-22 23:17:21
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 87.73 Mbit/s
  95th percentile per-packet one-way delay: 72.105 ms
  Loss rate: 1.01%
-- Flow 1:
  Average throughput: 58.46 Mbit/s
  95th percentile per-packet one-way delay: 49.152 ms
  Loss rate: 0.26%
-- Flow 2:
  Average throughput: 33.41 Mbit/s
  95th percentile per-packet one-way delay: 74.221 ms
  Loss rate: 2.57%
-- Flow 3:
  Average throughput: 21.44 Mbit/s
  95th percentile per-packet one-way delay: 75.631 ms
  Loss rate: 2.20%
Run 10: Report of PCC-Vivace — Data Link

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

- **Flow 1**: Mean 58.48 Mbit/s (58.46 Mbit/s ingress, 58.46 Mbit/s egress)
- **Flow 2**: Mean 34.18 Mbit/s (33.41 Mbit/s ingress, 31.44 Mbit/s egress)
- **Flow 3**: Mean 21.79 Mbit/s (21.44 Mbit/s ingress, 21.44 Mbit/s egress)

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

- **Flow 1**: 95th percentile 49.15 ms
- **Flow 2**: 95th percentile 74.22 ms
- **Flow 3**: 95th percentile 75.63 ms
Run 1: Statistics of WebRTC media

Start at: 2018-08-22 19:02:54
End at: 2018-08-22 19:03:24
Local clock offset: -0.093 ms
Remote clock offset: -0.549 ms

# Below is generated by plot.py at 2018-08-22 23:17:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.17 Mbit/s
95th percentile per-packet one-way delay: 34.211 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 1.74 Mbit/s
95th percentile per-packet one-way delay: 34.169 ms
Loss rate: 0.18%
-- Flow 2:
Average throughput: 1.01 Mbit/s
95th percentile per-packet one-way delay: 34.220 ms
Loss rate: 0.35%
-- Flow 3:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 34.445 ms
Loss rate: 0.82%
Run 1: Report of WebRTC media — Data Link
Run 2: Statistics of WebRTC media

Start at: 2018-08-22 19:25:49
End at: 2018-08-22 19:26:19
Local clock offset: 0.076 ms
Remote clock offset: 1.082 ms

# Below is generated by plot.py at 2018-08-22 23:17:21
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 3.37 Mbit/s
  95th percentile per-packet one-way delay: 34.011 ms
  Loss rate: 0.26%
-- Flow 1:
  Average throughput: 1.85 Mbit/s
  95th percentile per-packet one-way delay: 33.935 ms
  Loss rate: 0.10%
-- Flow 2:
  Average throughput: 1.09 Mbit/s
  95th percentile per-packet one-way delay: 33.997 ms
  Loss rate: 0.33%
-- Flow 3:
  Average throughput: 0.46 Mbit/s
  95th percentile per-packet one-way delay: 34.294 ms
  Loss rate: 0.75%
Run 2: Report of WebRTC media — Data Link
Run 3: Statistics of WebRTC media

Start at: 2018-08-22 19:48:56
End at: 2018-08-22 19:49:26
Local clock offset: 0.3 ms
Remote clock offset: 1.238 ms

# Below is generated by plot.py at 2018-08-22 23:17:21
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 3.36 Mbit/s
  95th percentile per-packet one-way delay: 34.272 ms
  Loss rate: 0.31%
-- Flow 1:
  Average throughput: 1.84 Mbit/s
  95th percentile per-packet one-way delay: 34.168 ms
  Loss rate: 0.03%
-- Flow 2:
  Average throughput: 1.08 Mbit/s
  95th percentile per-packet one-way delay: 34.346 ms
  Loss rate: 0.32%
-- Flow 3:
  Average throughput: 0.46 Mbit/s
  95th percentile per-packet one-way delay: 34.476 ms
  Loss rate: 1.40%
Run 3: Report of WebRTC media — Data Link

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

- **Throughput** (Mbps):
  - Flow 1 ing (mean 1.84 Mbit/s)
  - Flow 1 egress (mean 1.84 Mbit/s)
  - Flow 2 ing (mean 1.08 Mbit/s)
  - Flow 2 egress (mean 1.08 Mbit/s)
  - Flow 3 ing (mean 0.47 Mbit/s)
  - Flow 3 egress (mean 0.46 Mbit/s)

- **Per-packet one-way delay (ms):**
  - Flow 1 (95th percentile 34.17 ms)
  - Flow 2 (95th percentile 34.35 ms)
  - Flow 3 (95th percentile 34.48 ms)
Run 4: Statistics of WebRTC media

Start at: 2018-08-22 20:11:50
End at: 2018-08-22 20:12:20
Local clock offset: 0.416 ms
Remote clock offset: 0.425 ms

# Below is generated by plot.py at 2018-08-22 23:17:21
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 3.37 Mbit/s
  95th percentile per-packet one-way delay: 34.244 ms
  Loss rate: 0.16%
-- Flow 1:
  Average throughput: 1.82 Mbit/s
  95th percentile per-packet one-way delay: 34.197 ms
  Loss rate: 0.11%
-- Flow 2:
  Average throughput: 1.10 Mbit/s
  95th percentile per-packet one-way delay: 34.255 ms
  Loss rate: 0.32%
-- Flow 3:
  Average throughput: 0.47 Mbit/s
  95th percentile per-packet one-way delay: 34.399 ms
  Loss rate: 0.00%
Run 4: Report of WebRTC media — Data Link
Run 5: Statistics of WebRTC media

Start at: 2018-08-22 20:34:54
End at: 2018-08-22 20:35:24
Local clock offset: 0.477 ms
Remote clock offset: 0.303 ms

# Below is generated by plot.py at 2018-08-22 23:17:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.30 Mbit/s
95th percentile per-packet one-way delay: 34.154 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 1.81 Mbit/s
95th percentile per-packet one-way delay: 34.083 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 1.05 Mbit/s
95th percentile per-packet one-way delay: 34.115 ms
Loss rate: 0.32%
-- Flow 3:
Average throughput: 0.46 Mbit/s
95th percentile per-packet one-way delay: 34.424 ms
Loss rate: 0.76%
Run 5: Report of WebRTC media — Data Link

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

Legend:
- Flow 1 ingress (mean 1.81 Mbit/s)
- Flow 1 egress (mean 1.81 Mbit/s)
- Flow 2 ingress (mean 1.05 Mbit/s)
- Flow 2 egress (mean 1.05 Mbit/s)
- Flow 3 ingress (mean 0.46 Mbit/s)
- Flow 3 egress (mean 0.46 Mbit/s)
Run 6: Statistics of WebRTC media

Start at: 2018-08-22 20:57:52
End at: 2018-08-22 20:58:22
Local clock offset: -3.123 ms
Remote clock offset: -0.571 ms

# Below is generated by plot.py at 2018-08-22 23:17:21
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 3.33 Mbit/s
  95th percentile per-packet one-way delay: 34.260 ms
  Loss rate: 0.18%
-- Flow 1:
  Average throughput: 1.80 Mbit/s
  95th percentile per-packet one-way delay: 34.187 ms
  Loss rate: 0.10%
-- Flow 2:
  Average throughput: 1.08 Mbit/s
  95th percentile per-packet one-way delay: 34.261 ms
  Loss rate: 0.06%
-- Flow 3:
  Average throughput: 0.46 Mbit/s
  95th percentile per-packet one-way delay: 34.462 ms
  Loss rate: 0.76%
Run 6: Report of WebRTC media — Data Link

![Graph showing throughput and per-packet round-trip time](image)
Run 7: Statistics of WebRTC media

Start at: 2018-08-22 21:20:46
End at: 2018-08-22 21:21:16
Local clock offset: -4.056 ms
Remote clock offset: -1.774 ms

# Below is generated by plot.py at 2018-08-22 23:17:21
# Datalink statistics
-- Total of 3 flows:
   Average throughput: 3.36 Mbit/s
   95th percentile per-packet one-way delay: 34.513 ms
   Loss rate: 0.22%
-- Flow 1:
   Average throughput: 1.84 Mbit/s
   95th percentile per-packet one-way delay: 34.407 ms
   Loss rate: 0.20%
-- Flow 2:
   Average throughput: 1.07 Mbit/s
   95th percentile per-packet one-way delay: 34.558 ms
   Loss rate: 0.03%
-- Flow 3:
   Average throughput: 0.46 Mbit/s
   95th percentile per-packet one-way delay: 34.709 ms
   Loss rate: 0.75%
Run 7: Report of WebRTC media — Data Link

![Graphs showing WebRTC media data link performance](image-url)

Legend:
- Flow 1 ingress (mean 1.84 Mbps)
- Flow 1 egress (mean 1.84 Mbps)
- Flow 2 ingress (mean 1.07 Mbps)
- Flow 2 egress (mean 1.07 Mbps)
- Flow 3 ingress (mean 0.47 Mbps)
- Flow 3 egress (mean 0.46 Mbps)

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

Legend:
- Flow 1 (95th percentile 34.41 ms)
- Flow 2 (95th percentile 34.56 ms)
- Flow 3 (95th percentile 34.71 ms)
Run 8: Statistics of WebRTC media

Start at: 2018-08-22 21:43:38
End at: 2018-08-22 21:44:08
Local clock offset: -1.913 ms
Remote clock offset: -1.937 ms

# Below is generated by plot.py at 2018-08-22 23:17:21
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 3.39 Mbit/s
  95th percentile per-packet one-way delay: 34.033 ms
  Loss rate: 0.26%
-- Flow 1:
  Average throughput: 1.85 Mbit/s
  95th percentile per-packet one-way delay: 34.004 ms
  Loss rate: 0.10%
-- Flow 2:
  Average throughput: 1.08 Mbit/s
  95th percentile per-packet one-way delay: 33.998 ms
  Loss rate: 0.32%
-- Flow 3:
  Average throughput: 0.47 Mbit/s
  95th percentile per-packet one-way delay: 34.289 ms
  Loss rate: 0.73%
Run 8: Report of WebRTC media — Data Link

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

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

<table>
<thead>
<tr>
<th>Flow Type</th>
<th>Ingress Mean</th>
<th>Egress Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow 1</td>
<td>1.09 Mbit/s</td>
<td>1.85 Mbit/s</td>
</tr>
<tr>
<td>Flow 2</td>
<td>1.08 Mbit/s</td>
<td>1.85 Mbit/s</td>
</tr>
<tr>
<td>Flow 3</td>
<td>0.48 Mbit/s</td>
<td>0.47 Mbit/s</td>
</tr>
</tbody>
</table>
Run 9: Statistics of WebRTC media

Start at: 2018-08-22 22:06:54
End at: 2018-08-22 22:07:25
Local clock offset: 1.285 ms
Remote clock offset: -1.121 ms

# Below is generated by plot.py at 2018-08-22 23:17:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.37 Mbit/s
95th percentile per-packet one-way delay: 34.577 ms
Loss rate: 0.21%
-- Flow 1:
Average throughput: 1.84 Mbit/s
95th percentile per-packet one-way delay: 34.426 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 1.08 Mbit/s
95th percentile per-packet one-way delay: 34.467 ms
Loss rate: 0.32%
-- Flow 3:
Average throughput: 0.47 Mbit/s
95th percentile per-packet one-way delay: 34.970 ms
Loss rate: 0.72%
Run 9: Report of WebRTC media — Data Link
Run 10: Statistics of WebRTC media

Start at: 2018-08-22 22:29:56
End at: 2018-08-22 22:30:26
Local clock offset: 0.779 ms
Remote clock offset: -0.631 ms

# Below is generated by plot.py at 2018-08-22 23:17:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.36 Mbit/s
95th percentile per-packet one-way delay: 34.252 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 1.85 Mbit/s
95th percentile per-packet one-way delay: 34.190 ms
Loss rate: 0.21%
-- Flow 2:
Average throughput: 1.07 Mbit/s
95th percentile per-packet one-way delay: 34.231 ms
Loss rate: 0.32%
-- Flow 3:
Average throughput: 0.46 Mbit/s
95th percentile per-packet one-way delay: 34.442 ms
Loss rate: 0.26%
Run 10: Report of WebRTC media — Data Link