Pantheon Report

Generated at 2019-03-20 01:57:09 (UTC).
Data path: GCE Tokyo on \textit{ens4} (remote) \rightarrow GCE Sydney on \textit{ens4} (local).
Repeated the test of 21 congestion control schemes 5 times.
Each test lasted for 30 seconds running 3 flows with 10-second interval between two flows.
NTP offsets were measured against \texttt{time.google.com} and have been applied to correct the timestamps in logs.

System info:
\begin{verbatim}
Linux 4.15.0-1028-gcp
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
\end{verbatim}

Git summary:
\begin{verbatim}
branch: muses @ 7a686f7c2ed0a333082c0bab1fa5c921ab47e6ee
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e6549aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0edc7bf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6b7fc3f
third_party/muses @ 5ce721187ad823da2095537730c746486ca4966
third_party/pantheon-tunnel @ f866d3f58d27af9d42717625ee3a354cc2e802bd
third_party/pcc @ 1afc958fa0d66d18b623c091a55feca872b4981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3df5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quic @ 77961f6a82733a86b42f1bc8143ebc978f3c5f5c42
third_party/scream-reproduce @ f09918d1421aa3131bf11ff19649703e2da3d6bb2
M src/ScreamClient
M src/ScreamServer
third_party/sprout @ 366ea35c6178b01e31d4a46ad18c74f9415f19a26
M src/examples/cellsim.cc
M src/examples/sproutbt2.cc
M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
M src/verus.hpp
M tools/plot.py
\end{verbatim}
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851
test from GCE Tokyo to GCE Sydney, 5 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>
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<tr>
<td></td>
<td></td>
<td>flow 1</td>
<td>flow 2</td>
<td>flow 3</td>
</tr>
<tr>
<td>TCP BBR</td>
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<td>471.90</td>
<td>439.49</td>
<td>428.51</td>
</tr>
<tr>
<td>Copa</td>
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<td>274.07</td>
<td>258.64</td>
<td>233.19</td>
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<tr>
<td>TCP Cubic</td>
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<td>494.96</td>
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<td>375.29</td>
<td>269.01</td>
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<td>FillP-Sheep</td>
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<td>528.69</td>
<td>327.43</td>
<td>248.97</td>
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<td>Indigo</td>
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<td>216.88</td>
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<td>Indigo-MusesC3</td>
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<td>412.12</td>
<td>249.35</td>
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<td>LEDBAT</td>
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<td>PCC-Expr</td>
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<td>300.37</td>
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<td>Verus</td>
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<td>147.24</td>
<td>122.07</td>
<td>90.10</td>
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<tr>
<td>PCC-Vivace</td>
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<td>312.14</td>
<td>171.24</td>
<td>82.13</td>
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<td>WebRTC media</td>
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<td>0.05</td>
<td>0.05</td>
<td>0.05</td>
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</table>
Run 1: Statistics of TCP BBR

Start at: 2019-03-19 20:02:36
End at: 2019-03-19 20:03:06
Local clock offset: ~0.411 ms
Remote clock offset: 0.056 ms

# Below is generated by plot.py at 2019-03-19 23:36:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 897.53 Mbit/s
95th percentile per-packet one-way delay: 165.533 ms
Loss rate: 1.45%
-- Flow 1:
Average throughput: 441.32 Mbit/s
95th percentile per-packet one-way delay: 158.354 ms
Loss rate: 1.14%
-- Flow 2:
Average throughput: 452.71 Mbit/s
95th percentile per-packet one-way delay: 190.536 ms
Loss rate: 1.87%
-- Flow 3:
Average throughput: 470.14 Mbit/s
95th percentile per-packet one-way delay: 99.078 ms
Loss rate: 1.51%
Run 1: Report of TCP BBR — Data Link

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

**Throughput (Mbps):**
- Flow 1 ingress (mean 444.67 Mbps)
- Flow 2 ingress (mean 458.62 Mbps)
- Flow 3 ingress (mean 471.77 Mbps)
- Flow 1 egress (mean 441.32 Mbps)
- Flow 2 egress (mean 452.71 Mbps)
- Flow 3 egress (mean 470.14 Mbps)

**Round-trip delay (ms):**
- Flow 1 (95th percentile 158.35 ms)
- Flow 2 (95th percentile 190.54 ms)
- Flow 3 (95th percentile 99.08 ms)
Run 2: Statistics of TCP BBR

Start at: 2019-03-19 20:42:53
End at: 2019-03-19 20:43:23
Local clock offset: 0.289 ms
Remote clock offset: -0.815 ms

# Below is generated by plot.py at 2019-03-19 23:36:29
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 904.51 Mbit/s
  95th percentile per-packet one-way delay: 206.902 ms
  Loss rate: 2.03%
-- Flow 1:
  Average throughput: 477.57 Mbit/s
  95th percentile per-packet one-way delay: 206.797 ms
  Loss rate: 1.22%
-- Flow 2:
  Average throughput: 422.29 Mbit/s
  95th percentile per-packet one-way delay: 212.111 ms
  Loss rate: 2.99%
-- Flow 3:
  Average throughput: 444.00 Mbit/s
  95th percentile per-packet one-way delay: 192.794 ms
  Loss rate: 2.79%
Run 2: Report of TCP BBR — Data Link

![Throughput Graph](image1)

![Delay Graph](image2)

Legend:
- Flow 1 ingress (mean 481.64 Mbit/s)
- Flow 1 egress (mean 477.57 Mbit/s)
- Flow 2 ingress (mean 432.82 Mbit/s)
- Flow 2 egress (mean 422.79 Mbit/s)
- Flow 3 ingress (mean 451.27 Mbit/s)
- Flow 3 egress (mean 444.00 Mbit/s)

Legend:
- Flow 1 (95th percentile 206.80 ms)
- Flow 2 (95th percentile 212.11 ms)
- Flow 3 (95th percentile 192.79 ms)
Run 3: Statistics of TCP BBR

Start at: 2019-03-19 21:23:40
End at: 2019-03-19 21:24:10
Local clock offset: -0.312 ms
Remote clock offset: -0.224 ms

# Below is generated by plot.py at 2019-03-19 23:36:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 894.91 Mbit/s
95th percentile per-packet one-way delay: 188.678 ms
Loss rate: 1.86%
-- Flow 1:
Average throughput: 474.81 Mbit/s
95th percentile per-packet one-way delay: 180.803 ms
Loss rate: 1.57%
-- Flow 2:
Average throughput: 415.65 Mbit/s
95th percentile per-packet one-way delay: 218.578 ms
Loss rate: 1.87%
-- Flow 3:
Average throughput: 435.77 Mbit/s
95th percentile per-packet one-way delay: 135.432 ms
Loss rate: 2.80%
Run 4: Statistics of TCP BBR

Start at: 2019-03-19 22:03:13
End at: 2019-03-19 22:03:44
Local clock offset: -0.454 ms
Remote clock offset: -0.012 ms

# Below is generated by plot.py at 2019-03-19 23:36:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 915.86 Mbit/s
95th percentile per-packet one-way delay: 177.958 ms
Loss rate: 1.56%
-- Flow 1:
Average throughput: 475.78 Mbit/s
95th percentile per-packet one-way delay: 176.901 ms
Loss rate: 1.25%
-- Flow 2:
Average throughput: 459.02 Mbit/s
95th percentile per-packet one-way delay: 185.014 ms
Loss rate: 1.07%
-- Flow 3:
Average throughput: 409.19 Mbit/s
95th percentile per-packet one-way delay: 134.308 ms
Loss rate: 3.73%
Run 5: Statistics of TCP BBR

Start at: 2019-03-19 22:44:04  
End at: 2019-03-19 22:44:34  
Local clock offset: 0.095 ms  
Remote clock offset: -0.286 ms

# Below is generated by plot.py at 2019-03-19 23:36:43  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 914.11 Mbit/s  
95th percentile per-packet one-way delay: 166.331 ms  
Loss rate: 1.18%  
-- Flow 1:  
Average throughput: 490.04 Mbit/s  
95th percentile per-packet one-way delay: 143.376 ms  
Loss rate: 0.67%  
-- Flow 2:  
Average throughput: 447.76 Mbit/s  
95th percentile per-packet one-way delay: 182.603 ms  
Loss rate: 1.67%  
-- Flow 3:  
Average throughput: 383.44 Mbit/s  
95th percentile per-packet one-way delay: 149.481 ms  
Loss rate: 1.96%
Run 5: Report of TCP BBR — Data Link

![Graph of Throughput and Delay](image)

**Throughput (Mbps)**
- Flow 1 ingress (mean 491.47 Mbps)
- Flow 1 egress (mean 490.04 Mbps)
- Flow 2 ingress (mean 452.66 Mbps)
- Flow 2 egress (mean 447.76 Mbps)
- Flow 3 ingress (mean 396.57 Mbps)
- Flow 3 egress (mean 383.44 Mbps)

**Delay (ms)**
- Flow 1 (95th percentile 143.38 ms)
- Flow 2 (95th percentile 182.60 ms)
- Flow 3 (95th percentile 149.48 ms)
Run 1: Statistics of Copa

Start at: 2019-03-19 19:40:55
End at: 2019-03-19 19:41:25
Local clock offset: -0.342 ms
Remote clock offset: -0.288 ms

# Below is generated by plot.py at 2019-03-19 23:37:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 528.14 Mbit/s
95th percentile per-packet one-way delay: 79.938 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 284.77 Mbit/s
95th percentile per-packet one-way delay: 74.616 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 252.23 Mbit/s
95th percentile per-packet one-way delay: 84.259 ms
Loss rate: 0.59%
-- Flow 3:
Average throughput: 230.00 Mbit/s
95th percentile per-packet one-way delay: 104.456 ms
Loss rate: 1.38%
Run 1: Report of Copa — Data Link
Run 2: Statistics of Copa

Start at: 2019-03-19 20:22:05
Local clock offset: 0.31 ms
Remote clock offset: -0.117 ms

# Below is generated by plot.py at 2019-03-19 23:38:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 531.53 Mbit/s
95th percentile per-packet one-way delay: 78.056 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 277.46 Mbit/s
95th percentile per-packet one-way delay: 75.486 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 267.74 Mbit/s
95th percentile per-packet one-way delay: 82.095 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 230.95 Mbit/s
95th percentile per-packet one-way delay: 78.328 ms
Loss rate: 1.29%
Run 2: Report of Copa — Data Link

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

- Flow 1 ingress (mean 277.40 Mbit/s)
- Flow 2 ingress (mean 267.88 Mbit/s)
- Flow 3 ingress (mean 231.29 Mbit/s)
- Flow 1 egress (mean 277.46 Mbit/s)
- Flow 2 egress (mean 267.74 Mbit/s)
- Flow 3 egress (mean 230.95 Mbit/s)

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

- Flow 1 (95th percentile 75.49 ms)
- Flow 2 (95th percentile 82.09 ms)
- Flow 3 (95th percentile 78.33 ms)
Run 3: Statistics of Copa

Start at: 2019-03-19 21:02:34
End at: 2019-03-19 21:03:04
Local clock offset: -0.092 ms
Remote clock offset: 0.002 ms

# Below is generated by plot.py at 2019-03-19 23:38:03
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 522.56 Mbit/s
  95th percentile per-packet one-way delay: 86.637 ms
  Loss rate: 0.03%
-- Flow 1:
  Average throughput: 272.90 Mbit/s
  95th percentile per-packet one-way delay: 81.916 ms
  Loss rate: 0.02%
-- Flow 2:
  Average throughput: 257.16 Mbit/s
  95th percentile per-packet one-way delay: 96.950 ms
  Loss rate: 0.02%
-- Flow 3:
  Average throughput: 235.90 Mbit/s
  95th percentile per-packet one-way delay: 75.448 ms
  Loss rate: 0.05%
Run 3: Report of Copa — Data Link

![Graph showing throughput and delay over time.](image-url)
Run 4: Statistics of Copa

Start at: 2019-03-19 21:43:08
End at: 2019-03-19 21:43:38
Local clock offset: -0.335 ms
Remote clock offset: -0.007 ms

# Below is generated by plot.py at 2019-03-19 23:54:24
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 536.94 Mbit/s
  95th percentile per-packet one-way delay: 73.893 ms
  Loss rate: 0.55%
-- Flow 1:
  Average throughput: 287.65 Mbit/s
  95th percentile per-packet one-way delay: 71.971 ms
  Loss rate: 0.34%
-- Flow 2:
  Average throughput: 267.64 Mbit/s
  95th percentile per-packet one-way delay: 77.515 ms
  Loss rate: 0.52%
-- Flow 3:
  Average throughput: 216.16 Mbit/s
  95th percentile per-packet one-way delay: 68.571 ms
  Loss rate: 1.43%
Run 5: Statistics of Copa

End at: 2019-03-19 22:23:45
Local clock offset: -0.457 ms
Remote clock offset: 0.091 ms

# Below is generated by plot.py at 2019-03-19 23:54:24
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 496.13 Mbit/s
  95th percentile per-packet one-way delay: 81.933 ms
  Loss rate: 0.55%
-- Flow 1:
  Average throughput: 247.57 Mbit/s
  95th percentile per-packet one-way delay: 83.708 ms
  Loss rate: 0.29%
-- Flow 2:
  Average throughput: 248.43 Mbit/s
  95th percentile per-packet one-way delay: 84.816 ms
  Loss rate: 0.52%
-- Flow 3:
  Average throughput: 252.93 Mbit/s
  95th percentile per-packet one-way delay: 71.092 ms
  Loss rate: 1.35%
Run 5: Report of Copa — Data Link

Graph 1: Throughput (Mbps)

Graph 2: Per-packet one-way delay (ms)
Run 1: Statistics of TCP Cubic

Start at: 2019-03-19 20:14:22
End at: 2019-03-19 20:14:52
Local clock offset: -0.496 ms
Remote clock offset: -0.304 ms

# Below is generated by plot.py at 2019-03-19 23:54:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 938.00 Mbit/s
95th percentile per-packet one-way delay: 104.990 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 500.63 Mbit/s
95th percentile per-packet one-way delay: 101.522 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 454.36 Mbit/s
95th percentile per-packet one-way delay: 83.872 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 409.86 Mbit/s
95th percentile per-packet one-way delay: 173.247 ms
Loss rate: 1.46%
Run 2: Statistics of TCP Cubic

Start at: 2019-03-19 20:54:58
Local clock offset: -0.393 ms
Remote clock offset: -0.171 ms

# Below is generated by plot.py at 2019-03-19 23:54:24
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 942.78 Mbit/s
  95th percentile per-packet one-way delay: 95.760 ms
  Loss rate: 0.59%
-- Flow 1:
  Average throughput: 519.08 Mbit/s
  95th percentile per-packet one-way delay: 92.986 ms
  Loss rate: 0.44%
-- Flow 2:
  Average throughput: 451.70 Mbit/s
  95th percentile per-packet one-way delay: 103.274 ms
  Loss rate: 0.61%
-- Flow 3:
  Average throughput: 373.70 Mbit/s
  95th percentile per-packet one-way delay: 79.102 ms
  Loss rate: 1.19%
Run 2: Report of TCP Cubic — Data Link

Graph showing throughput and packet delay over time for different flow types.
Run 3: Statistics of TCP Cubic

Start at: 2019-03-19 21:35:28
End at: 2019-03-19 21:35:58
Local clock offset: -0.351 ms
Remote clock offset: -0.943 ms

# Below is generated by plot.py at 2019-03-19 23:54:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 927.03 Mbit/s
95th percentile per-packet one-way delay: 87.338 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 478.55 Mbit/s
95th percentile per-packet one-way delay: 80.060 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 472.68 Mbit/s
95th percentile per-packet one-way delay: 95.202 ms
Loss rate: 0.59%
-- Flow 3:
Average throughput: 407.02 Mbit/s
95th percentile per-packet one-way delay: 79.249 ms
Loss rate: 1.29%
Run 3: Report of TCP Cubic — Data Link
Run 4: Statistics of TCP Cubic

End at: 2019-03-19 22:15:57 
Local clock offset: 0.322 ms  
Remote clock offset: -0.174 ms

# Below is generated by plot.py at 2019-03-19 23:54:24  
# Datalink statistics

-- Total of 3 flows:
Average throughput: 915.96 Mbit/s 
95th percentile per-packet one-way delay: 121.863 ms 
Loss rate: 0.61% 

-- Flow 1: 
Average throughput: 470.29 Mbit/s 
95th percentile per-packet one-way delay: 81.455 ms 
Loss rate: 0.50%

-- Flow 2: 
Average throughput: 459.41 Mbit/s 
95th percentile per-packet one-way delay: 192.676 ms 
Loss rate: 0.39%

-- Flow 3: 
Average throughput: 425.28 Mbit/s 
95th percentile per-packet one-way delay: 109.601 ms 
Loss rate: 1.44%
Run 4: Report of TCP Cubic — Data Link
Run 5: Statistics of TCP Cubic

Start at: 2019-03-19 22:56:02
End at: 2019-03-19 22:56:32
Local clock offset: -0.532 ms
Remote clock offset: -0.291 ms

# Below is generated by plot.py at 2019-03-19 23:55:32
# Datalink statistics
-- Total of 3 flows: 
Average throughput: 965.65 Mbit/s
95th percentile per-packet one-way delay: 125.455 ms
Loss rate: 0.67%
-- Flow 1: 
Average throughput: 506.25 Mbit/s
95th percentile per-packet one-way delay: 134.103 ms
Loss rate: 0.42%
-- Flow 2: 
Average throughput: 485.10 Mbit/s
95th percentile per-packet one-way delay: 111.103 ms
Loss rate: 0.72%
-- Flow 3: 
Average throughput: 414.74 Mbit/s
95th percentile per-packet one-way delay: 90.450 ms
Loss rate: 1.48%
Run 5: Report of TCP Cubic — Data Link
Run 1: Statistics of FillP

Start at: 2019-03-19 20:16:42
End at: 2019-03-19 20:17:12
Local clock offset: -0.339 ms
Remote clock offset: -0.127 ms

# Below is generated by plot.py at 2019-03-19 23:56:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 844.83 Mbit/s
95th percentile per-packet one-way delay: 89.682 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 527.18 Mbit/s
95th percentile per-packet one-way delay: 97.651 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 355.27 Mbit/s
95th percentile per-packet one-way delay: 63.250 ms
Loss rate: 0.54%
-- Flow 3:
Average throughput: 248.53 Mbit/s
95th percentile per-packet one-way delay: 64.530 ms
Loss rate: 1.20%
Run 1: Report of FillP — Data Link

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**Throughput (Mbps)**

- **Flow 1 Ingress (mean 527.57 Mbps)**
- **Flow 1 Egress (mean 527.18 Mbps)**
- **Flow 2 Ingress (mean 355.08 Mbps)**
- **Flow 2 Egress (mean 355.23 Mbps)**
- **Flow 3 Ingress (mean 248.79 Mbps)**
- **Flow 3 Egress (mean 248.53 Mbps)**

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

- **Flow 1 (95th percentile 97.65 ms)**
- **Flow 2 (95th percentile 63.25 ms)**
- **Flow 3 (95th percentile 64.53 ms)**
Run 2: Statistics of FillP

Start at: 2019-03-19 20:57:18
End at: 2019-03-19 20:57:48
Local clock offset: 0.281 ms
Remote clock offset: -0.079 ms

# Below is generated by plot.py at 2019-03-20 00:11:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 857.31 Mbit/s
95th percentile per-packet one-way delay: 103.363 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 517.65 Mbit/s
95th percentile per-packet one-way delay: 109.147 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 371.84 Mbit/s
95th percentile per-packet one-way delay: 62.010 ms
Loss rate: 0.47%
-- Flow 3:
Average throughput: 282.35 Mbit/s
95th percentile per-packet one-way delay: 62.874 ms
Loss rate: 1.13%
Run 3: Statistics of FillP

Start at: 2019-03-19 21:37:53
End at: 2019-03-19 21:38:23
Local clock offset: 0.094 ms
Remote clock offset: -0.02 ms

# Below is generated by plot.py at 2019-03-20 00:13:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 912.62 Mbit/s
95th percentile per-packet one-way delay: 103.263 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 579.96 Mbit/s
95th percentile per-packet one-way delay: 106.617 ms
Loss rate: 0.56%
-- Flow 2:
Average throughput: 369.72 Mbit/s
95th percentile per-packet one-way delay: 63.879 ms
Loss rate: 0.48%
-- Flow 3:
Average throughput: 264.57 Mbit/s
95th percentile per-packet one-way delay: 59.525 ms
Loss rate: 1.18%
Run 3: Report of FillP — Data Link

![Graph showing data link performance](image)

**Throughput (Mbps):**
- Flow 1 Ingress (mean 580.96 Mbps)
- Flow 1 Egress (mean 579.96 Mbps)
- Flow 2 Ingress (mean 369.55 Mbps)
- Flow 2 Egress (mean 369.72 Mbps)
- Flow 3 Ingress (mean 264.77 Mbps)
- Flow 3 Egress (mean 264.57 Mbps)

**Packet Delay (ms):**
- Flow 1 (95th percentile 106.62 ms)
- Flow 2 (95th percentile 63.88 ms)
- Flow 3 (95th percentile 59.52 ms)
Run 4: Statistics of FillP

Start at: 2019-03-19 22:17:31
End at: 2019-03-19 22:18:01
Local clock offset: -0.485 ms
Remote clock offset: -0.287 ms

# Below is generated by plot.py at 2019-03-20 00:13:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 919.64 Mbit/s
95th percentile per-packet one-way delay: 74.298 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 546.92 Mbit/s
95th percentile per-packet one-way delay: 85.918 ms
Loss rate: 0.23%
-- Flow 2:
Average throughput: 408.69 Mbit/s
95th percentile per-packet one-way delay: 67.305 ms
Loss rate: 0.65%
-- Flow 3:
Average throughput: 307.86 Mbit/s
95th percentile per-packet one-way delay: 64.884 ms
Loss rate: 1.09%
Run 4: Report of FillP — Data Link

Throughput (Mbps):

- Flow 1 Ingress (mean 546.20 Mbps)
- Flow 1 Egress (mean 546.92 Mbps)
- Flow 2 Ingress (mean 408.69 Mbps)
- Flow 2 Egress (mean 408.69 Mbps)
- Flow 3 Ingress (mean 307.85 Mbps)
- Flow 3 Egress (mean 307.88 Mbps)

Per-packet one way delay (ms):

- Flow 1 (95th percentile 85.92 ms)
- Flow 2 (95th percentile 67.31 ms)
- Flow 3 (95th percentile 64.88 ms)
Run 5: Statistics of FillP

Start at: 2019-03-19 22:58:32
End at: 2019-03-19 22:59:02
Local clock offset: -0.136 ms
Remote clock offset: -0.279 ms

# Below is generated by plot.py at 2019-03-20 00:13:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 867.61 Mbit/s
95th percentile per-packet one-way delay: 90.661 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 541.91 Mbit/s
95th percentile per-packet one-way delay: 96.654 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 370.91 Mbit/s
95th percentile per-packet one-way delay: 63.938 ms
Loss rate: 0.34%
-- Flow 3:
Average throughput: 241.72 Mbit/s
95th percentile per-packet one-way delay: 64.884 ms
Loss rate: 1.29%
Run 5: Report of FillP — Data Link

---

**Throughput (Mb/s)**

- **Flow 1 Ingress** (mean 541.55 Mb/s)
- **Flow 1 Egress** (mean 541.91 Mb/s)
- **Flow 2 Ingress** (mean 370.14 Mb/s)
- **Flow 2 Egress** (mean 370.91 Mb/s)
- **Flow 3 Ingress** (mean 241.53 Mb/s)
- **Flow 3 Egress** (mean 241.72 Mb/s)

---

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

- **Flow 1** (95th percentile 96.65 ms)
- **Flow 2** (95th percentile 63.94 ms)
- **Flow 3** (95th percentile 64.88 ms)
Run 1: Statistics of FillP-Sheep

Start at: 2019-03-19 19:43:21
End at: 2019-03-19 19:43:51
Local clock offset: -0.375 ms
Remote clock offset: -0.194 ms

# Below is generated by plot.py at 2019-03-20 00:13:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 846.41 Mbit/s
95th percentile per-packet one-way delay: 75.802 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 538.80 Mbit/s
95th percentile per-packet one-way delay: 80.321 ms
Loss rate: 0.27%
-- Flow 2:
Average throughput: 319.53 Mbit/s
95th percentile per-packet one-way delay: 65.940 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 290.06 Mbit/s
95th percentile per-packet one-way delay: 62.185 ms
Loss rate: 0.97%
Run 1: Report of FillP-Sheep — Data Link

![Graph showing throughput and delay over time]

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 538.08 Mbps)  Flow 1 egress (mean 538.80 Mbps)
Flow 2 ingress (mean 319.67 Mbps)  Flow 2 egress (mean 319.53 Mbps)
Flow 3 ingress (mean 299.01 Mbps)  Flow 3 egress (mean 299.06 Mbps)

Delay (ms)

Per packet one way delay (ms)

Flow 1 (95th percentile 80.32 ms)  Flow 2 (95th percentile 65.94 ms)  Flow 3 (95th percentile 62.19 ms)
Run 2: Statistics of FillP-Sheep

Start at: 2019-03-19 20:24:30
End at: 2019-03-19 20:25:00
Local clock offset: -0.103 ms
Remote clock offset: -0.105 ms

# Below is generated by plot.py at 2019-03-20 00:13:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 801.16 Mbit/s
95th percentile per-packet one-way delay: 75.208 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 515.39 Mbit/s
95th percentile per-packet one-way delay: 78.693 ms
Loss rate: 0.28%
-- Flow 2:
Average throughput: 310.12 Mbit/s
95th percentile per-packet one-way delay: 60.216 ms
Loss rate: 0.49%
-- Flow 3:
Average throughput: 242.80 Mbit/s
95th percentile per-packet one-way delay: 59.395 ms
Loss rate: 1.35%
Run 2: Report of FillP-Sheep — Data Link

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

- Flow 1 ingress (mean 515.00 Mbit/s)
- Flow 1 egress (mean 515.39 Mbit/s)
- Flow 2 ingress (mean 309.93 Mbit/s)
- Flow 2 egress (mean 310.12 Mbit/s)
- Flow 3 ingress (mean 242.75 Mbit/s)
- Flow 3 egress (mean 242.80 Mbit/s)
Run 3: Statistics of FillP-Sheep

Start at: 2019-03-19 21:05:02
End at: 2019-03-19 21:05:32
Local clock offset: 0.045 ms
Remote clock offset: -0.06 ms

# Below is generated by plot.py at 2019-03-20 00:13:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 834.32 Mbit/s
95th percentile per-packet one-way delay: 72.293 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 536.13 Mbit/s
95th percentile per-packet one-way delay: 78.151 ms
Loss rate: 0.20%
-- Flow 2:
Average throughput: 338.84 Mbit/s
95th percentile per-packet one-way delay: 64.050 ms
Loss rate: 0.43%
-- Flow 3:
Average throughput: 222.45 Mbit/s
95th percentile per-packet one-way delay: 61.337 ms
Loss rate: 1.68%
Run 3: Report of FillP-Sheep — Data Link

---

**Throughput (Mbps)**

- Flow 1 ingress (mean 535.31 Mbps)
- Flow 1 egress (mean 536.13 Mbps)
- Flow 2 ingress (mean 338.45 Mbps)
- Flow 2 egress (mean 338.84 Mbps)
- Flow 3 ingress (mean 223.68 Mbps)
- Flow 3 egress (mean 222.45 Mbps)

---

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

- Flow 1 (95th percentile 78.15 ms)
- Flow 2 (95th percentile 64.05 ms)
- Flow 3 (95th percentile 61.34 ms)

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Run 4: Statistics of FillP-Sheep

Start at: 2019-03-19 21:45:36
End at: 2019-03-19 21:46:06
Local clock offset: 0.205 ms
Remote clock offset: -0.401 ms

# Below is generated by plot.py at 2019-03-20 00:14:57
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 828.04 Mbit/s
  95th percentile per-packet one-way delay: 73.944 ms
  Loss rate: 0.43%
  -- Flow 1:
    Average throughput: 530.86 Mbit/s
    95th percentile per-packet one-way delay: 78.989 ms
    Loss rate: 0.21%
  -- Flow 2:
    Average throughput: 331.78 Mbit/s
    95th percentile per-packet one-way delay: 61.475 ms
    Loss rate: 0.59%
  -- Flow 3:
    Average throughput: 233.74 Mbit/s
    95th percentile per-packet one-way delay: 65.195 ms
    Loss rate: 1.42%
Run 4: Report of FillP-Sheep — Data Link

![Graph showing throughput and per-packet one way delay](image-url)
Run 5: Statistics of FillP-Sheep

Start at: 2019-03-19 22:25:34
End at: 2019-03-19 22:26:04
Local clock offset: 0.083 ms
Remote clock offset: -0.175 ms

# Below is generated by plot.py at 2019-03-20 00:30:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 829.97 Mbit/s
95th percentile per-packet one-way delay: 73.887 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 522.29 Mbit/s
95th percentile per-packet one-way delay: 80.180 ms
Loss rate: 0.21%
-- Flow 2:
Average throughput: 336.87 Mbit/s
95th percentile per-packet one-way delay: 63.499 ms
Loss rate: 0.54%
-- Flow 3:
Average throughput: 255.81 Mbit/s
95th percentile per-packet one-way delay: 64.138 ms
Loss rate: 1.20%
Run 5: Report of FillP-Sheep — Data Link

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

- **Flow 1 Ingress (mean 521.38 Mb/s)**
- **Flow 1 Egress (mean 522.29 Mb/s)**
- **Flow 2 Ingress (mean 336.46 Mb/s)**
- **Flow 2 Egress (mean 336.87 Mb/s)**
- **Flow 3 Ingress (mean 256.15 Mb/s)**
- **Flow 3 Egress (mean 255.81 Mb/s)**

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

- **Flow 1 (95th percentile 80.18 ms)**
- **Flow 2 (95th percentile 63.50 ms)**
- **Flow 3 (95th percentile 64.14 ms)**
Run 1: Statistics of Indigo

Start at: 2019-03-19 19:57:16
End at: 2019-03-19 19:57:46
Local clock offset: 0.263 ms
Remote clock offset: -0.074 ms

# Below is generated by plot.py at 2019-03-20 00:30:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 413.29 Mbit/s
95th percentile per-packet one-way delay: 63.028 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 212.13 Mbit/s
95th percentile per-packet one-way delay: 62.924 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 214.18 Mbit/s
95th percentile per-packet one-way delay: 62.636 ms
Loss rate: 0.57%
-- Flow 3:
Average throughput: 166.16 Mbit/s
95th percentile per-packet one-way delay: 63.602 ms
Loss rate: 1.43%
Run 1: Report of Indigo — Data Link
Run 2: Statistics of Indigo

Start at: 2019-03-19 20:37:26
End at: 2019-03-19 20:37:56
Local clock offset: -0.428 ms
Remote clock offset: -0.092 ms

# Below is generated by plot.py at 2019-03-20 00:30:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 411.54 Mbit/s
95th percentile per-packet one-way delay: 61.155 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 220.39 Mbit/s
95th percentile per-packet one-way delay: 59.869 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 208.16 Mbit/s
95th percentile per-packet one-way delay: 60.854 ms
Loss rate: 0.54%
-- Flow 3:
Average throughput: 165.83 Mbit/s
95th percentile per-packet one-way delay: 62.398 ms
Loss rate: 1.40%
Run 2: Report of Indigo — Data Link

---

**Throughput (Mbps)**

- Flow 1 ingress (mean 220.27 Mbps)
- Flow 1 egress (mean 220.39 Mbps)
- Flow 2 ingress (mean 208.07 Mbps)
- Flow 2 egress (mean 208.16 Mbps)
- Flow 3 ingress (mean 166.15 Mbps)
- Flow 3 egress (mean 165.83 Mbps)

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**Per-packet per-flow delay (ms)**

- Flow 1 (95th percentile 59.87 ms)
- Flow 2 (95th percentile 60.85 ms)
- Flow 3 (95th percentile 62.40 ms)
Run 3: Statistics of Indigo

Start at: 2019-03-19 21:18:21
End at: 2019-03-19 21:18:51
Local clock offset: -0.43 ms
Remote clock offset: -0.161 ms

# Below is generated by plot.py at 2019-03-20 00:30:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 412.79 Mbit/s
95th percentile per-packet one-way delay: 63.448 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 219.94 Mbit/s
95th percentile per-packet one-way delay: 64.412 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 209.08 Mbit/s
95th percentile per-packet one-way delay: 62.947 ms
Loss rate: 0.60%
-- Flow 3:
Average throughput: 168.22 Mbit/s
95th percentile per-packet one-way delay: 59.210 ms
Loss rate: 1.22%
Run 3: Report of Indigo — Data Link

![Graph 1: Throughput (Mbps)]

- Flow 1 ingress (mean 219.95 Mbps)
- Flow 1 egress (mean 219.94 Mbps)
- Flow 2 ingress (mean 209.12 Mbps)
- Flow 2 egress (mean 209.08 Mbps)
- Flow 3 ingress (mean 168.28 Mbps)
- Flow 3 egress (mean 168.22 Mbps)

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

- Flow 1 (95th percentile 64.41 ms)
- Flow 2 (95th percentile 62.95 ms)
- Flow 3 (95th percentile 59.21 ms)
Run 4: Statistics of Indigo

Start at: 2019-03-19 21:58:03
End at: 2019-03-19 21:58:33
Local clock offset: -0.473 ms
Remote clock offset: -0.475 ms

# Below is generated by plot.py at 2019-03-20 00:30:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 392.08 Mbit/s
95th percentile per-packet one-way delay: 64.577 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 216.46 Mbit/s
95th percentile per-packet one-way delay: 65.652 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 185.56 Mbit/s
95th percentile per-packet one-way delay: 63.044 ms
Loss rate: 0.49%
-- Flow 3:
Average throughput: 163.74 Mbit/s
95th percentile per-packet one-way delay: 60.747 ms
Loss rate: 1.41%
Run 4: Report of Indigo — Data Link
Run 5: Statistics of Indigo

Start at: 2019-03-19 22:38:24
End at: 2019-03-19 22:38:54
Local clock offset: -0.077 ms
Remote clock offset: -0.12 ms

# Below is generated by plot.py at 2019-03-20 00:30:17
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 409.63 Mbit/s
  95th percentile per-packet one-way delay: 64.389 ms
  Loss rate: 0.58%
-- Flow 1:
  Average throughput: 215.46 Mbit/s
  95th percentile per-packet one-way delay: 61.414 ms
  Loss rate: 0.43%
-- Flow 2:
  Average throughput: 212.73 Mbit/s
  95th percentile per-packet one-way delay: 68.768 ms
  Loss rate: 0.59%
-- Flow 3:
  Average throughput: 165.04 Mbit/s
  95th percentile per-packet one-way delay: 61.972 ms
  Loss rate: 1.15%
Run 5: Report of Indigo — Data Link

[Graphs showing throughput and per-packet end-to-end delay for different flows]
Run 1: Statistics of Indigo-MusesC3

Start at: 2019-03-19 20:12:18
End at: 2019-03-19 20:12:48
Local clock offset: -0.454 ms
Remote clock offset: -0.061 ms

# Below is generated by plot.py at 2019-03-20 00:30:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 781.38 Mbit/s
95th percentile per-packet one-way delay: 74.229 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 467.89 Mbit/s
95th percentile per-packet one-way delay: 78.956 ms
Loss rate: 0.28%
-- Flow 2:
Average throughput: 369.14 Mbit/s
95th percentile per-packet one-way delay: 67.535 ms
Loss rate: 0.55%
-- Flow 3:
Average throughput: 276.33 Mbit/s
95th percentile per-packet one-way delay: 61.291 ms
Loss rate: 2.20%
Run 1: Report of Indigo-MusesC3 — Data Link
Run 2: Statistics of Indigo-MusesC3

Start at: 2019-03-19 20:52:52
End at: 2019-03-19 20:53:22
Local clock offset: -0.144 ms
Remote clock offset: -0.275 ms

# Below is generated by plot.py at 2019-03-20 00:30:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 794.55 Mbit/s
95th percentile per-packet one-way delay: 77.303 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 465.22 Mbit/s
95th percentile per-packet one-way delay: 86.744 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 386.20 Mbit/s
95th percentile per-packet one-way delay: 69.437 ms
Loss rate: 0.52%
-- Flow 3:
Average throughput: 293.36 Mbit/s
95th percentile per-packet one-way delay: 68.469 ms
Loss rate: 1.60%
Run 2: Report of Indigo-MusesC3 — Data Link
Run 3: Statistics of Indigo-MusesC3

Start at: 2019-03-19 21:33:24
End at: 2019-03-19 21:33:54
Local clock offset: 0.355 ms
Remote clock offset: -0.207 ms

# Below is generated by plot.py at 2019-03-20 00:38:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 720.20 Mbit/s
95th percentile per-packet one-way delay: 64.823 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 421.91 Mbit/s
95th percentile per-packet one-way delay: 65.649 ms
Loss rate: 0.29%
-- Flow 2:
Average throughput: 348.54 Mbit/s
95th percentile per-packet one-way delay: 63.293 ms
Loss rate: 0.59%
-- Flow 3:
Average throughput: 251.51 Mbit/s
95th percentile per-packet one-way delay: 60.021 ms
Loss rate: 1.59%
Run 3: Report of Indigo-MusesC3 — Data Link
Run 4: Statistics of Indigo-MusesC3

Local clock offset: -0.063 ms
Remote clock offset: -0.098 ms

# Below is generated by plot.py at 2019-03-20 00:39:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 728.22 Mbit/s
95th percentile per-packet one-way delay: 77.243 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 418.34 Mbit/s
95th percentile per-packet one-way delay: 95.567 ms
Loss rate: 0.27%
-- Flow 2:
Average throughput: 368.31 Mbit/s
95th percentile per-packet one-way delay: 65.630 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 266.25 Mbit/s
95th percentile per-packet one-way delay: 59.811 ms
Loss rate: 1.76%
Run 4: Report of Indigo-MusesC3 — Data Link

![Graph showing network performance metrics over time for different traffic flows.]

- **Flow 1 ingress (mean 417.78 Mbit/s)**
- **Flow 1 egress (mean 418.34 Mbit/s)**
- **Flow 2 ingress (mean 368.00 Mbit/s)**
- **Flow 2 egress (mean 368.31 Mbit/s)**
- **Flow 3 ingress (mean 267.01 Mbit/s)**
- **Flow 3 egress (mean 266.25 Mbit/s)**

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

- **Flow 1 (95th percentile 95.57 ms)**
- **Flow 2 (95th percentile 65.63 ms)**
- **Flow 3 (95th percentile 59.81 ms)**
Run 5: Statistics of Indigo-MusesC3

Start at: 2019-03-19 22:54:06
End at: 2019-03-19 22:54:36
Local clock offset: -0.106 ms
Remote clock offset: -0.145 ms

# Below is generated by plot.py at 2019-03-20 00:41:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 794.54 Mbit/s
95th percentile per-packet one-way delay: 76.336 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 455.58 Mbit/s
95th percentile per-packet one-way delay: 79.617 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 405.11 Mbit/s
95th percentile per-packet one-way delay: 70.353 ms
Loss rate: 0.51%
-- Flow 3:
Average throughput: 297.66 Mbit/s
95th percentile per-packet one-way delay: 63.734 ms
Loss rate: 1.86%
Run 5: Report of Indigo-MusesC3 — Data Link
Run 1: Statistics of Indigo-MusesC5

Start at: 2019-03-19 20:18:39
End at: 2019-03-19 20:19:09
Local clock offset: -0.104 ms
Remote clock offset: -0.111 ms

# Below is generated by plot.py at 2019-03-20 00:42:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 847.54 Mbit/s
95th percentile per-packet one-way delay: 92.963 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 500.63 Mbit/s
95th percentile per-packet one-way delay: 94.161 ms
Loss rate: 0.52%
-- Flow 2:
Average throughput: 411.95 Mbit/s
95th percentile per-packet one-way delay: 92.634 ms
Loss rate: 0.52%
-- Flow 3:
Average throughput: 299.32 Mbit/s
95th percentile per-packet one-way delay: 70.764 ms
Loss rate: 0.77%
Run 1: Report of Indigo-MusesC5 — Data Link

[Graphs showing throughput and per-packet one-way delay for different flows]
Run 2: Statistics of Indigo-MusesC5

Start at: 2019-03-19 20:59:16
End at: 2019-03-19 20:59:46
Local clock offset: -0.061 ms
Remote clock offset: 0.367 ms

# Below is generated by plot.py at 2019-03-20 00:42:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 822.43 Mbit/s
95th percentile per-packet one-way delay: 127.954 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 505.95 Mbit/s
95th percentile per-packet one-way delay: 131.176 ms
Loss rate: 0.24%
-- Flow 2:
Average throughput: 448.02 Mbit/s
95th percentile per-packet one-way delay: 102.373 ms
Loss rate: 0.78%
-- Flow 3:
Average throughput: 100.65 Mbit/s
95th percentile per-packet one-way delay: 60.695 ms
Loss rate: 1.74%
Run 2: Report of Indigo-MusesC5 — Data Link
Run 3: Statistics of Indigo-MusesC5

End at: 2019-03-19 21:40:18
Local clock offset: -0.087 ms
Remote clock offset: -0.189 ms

# Below is generated by plot.py at 2019-03-20 00:42:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 753.87 Mbit/s
95th percentile per-packet one-way delay: 79.366 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 476.81 Mbit/s
95th percentile per-packet one-way delay: 79.702 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 388.02 Mbit/s
95th percentile per-packet one-way delay: 80.087 ms
Loss rate: 0.73%
-- Flow 3:
Average throughput: 102.11 Mbit/s
95th percentile per-packet one-way delay: 57.779 ms
Loss rate: 1.66%
Run 3: Report of Indigo-MusesC5 — Data Link
Run 4: Statistics of Indigo-MusesC5

End at: 2019-03-19 22:20:18
Local clock offset: -0.063 ms
Remote clock offset: -0.255 ms

# Below is generated by plot.py at 2019-03-20 00:44:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 816.75 Mbit/s
95th percentile per-packet one-way delay: 87.188 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 501.56 Mbit/s
95th percentile per-packet one-way delay: 89.500 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 446.30 Mbit/s
95th percentile per-packet one-way delay: 82.870 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 101.77 Mbit/s
95th percentile per-packet one-way delay: 61.300 ms
Loss rate: 1.80%
Run 4: Report of Indigo-MusesC5 — Data Link
Run 5: Statistics of Indigo-MusesC5

Start at: 2019-03-19 23:00:37
End at: 2019-03-19 23:01:07
Local clock offset: 0.324 ms
Remote clock offset: -0.692 ms

# Below is generated by plot.py at 2019-03-20 00:45:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 777.37 Mbit/s
95th percentile per-packet one-way delay: 90.805 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 493.20 Mbit/s
95th percentile per-packet one-way delay: 94.087 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 394.93 Mbit/s
95th percentile per-packet one-way delay: 73.285 ms
Loss rate: 0.72%
-- Flow 3:
Average throughput: 111.30 Mbit/s
95th percentile per-packet one-way delay: 59.188 ms
Loss rate: 1.61%
Run 5: Report of Indigo-MusesC5 — Data Link

[Graphs showing network performance metrics over time]
Run 1: Statistics of Indigo-MusesD

End at: 2019-03-19 19:55:42
Local clock offset: 0.121 ms
Remote clock offset: -0.097 ms

# Below is generated by plot.py at 2019-03-20 00:52:07
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 749.74 Mbit/s
  95th percentile per-packet one-way delay: 69.113 ms
  Loss rate: 0.52%
-- Flow 1:
  Average throughput: 437.32 Mbit/s
  95th percentile per-packet one-way delay: 71.632 ms
  Loss rate: 0.27%
-- Flow 2:
  Average throughput: 362.43 Mbit/s
  95th percentile per-packet one-way delay: 63.422 ms
  Loss rate: 0.53%
-- Flow 3:
  Average throughput: 294.79 Mbit/s
  95th percentile per-packet one-way delay: 60.967 ms
  Loss rate: 1.80%
Run 1: Report of Indigo-MusesD — Data Link

![Graph of data link performance over time with throughput and per-packet round-trip delay metrics for different flows.]

Legend:
- Flow 1 ingress (mean 436.72 Mbit/s)
- Flow 1 egress (mean 437.32 Mbit/s)
- Flow 2 ingress (mean 362.63 Mbit/s)
- Flow 2 egress (mean 362.43 Mbit/s)
- Flow 3 ingress (mean 296.77 Mbit/s)
- Flow 3 egress (mean 294.79 Mbit/s)
Run 2: Statistics of Indigo-MusesD

Start at: 2019-03-19 20:35:33
End at: 2019-03-19 20:36:03
Local clock offset: -0.129 ms
Remote clock offset: -0.649 ms

# Below is generated by plot.py at 2019-03-20 00:52:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 676.58 Mbit/s
95th percentile per-packet one-way delay: 84.408 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 436.60 Mbit/s
95th percentile per-packet one-way delay: 89.089 ms
Loss rate: 0.28%
-- Flow 2:
Average throughput: 245.80 Mbit/s
95th percentile per-packet one-way delay: 69.485 ms
Loss rate: 0.24%
-- Flow 3:
Average throughput: 304.10 Mbit/s
95th percentile per-packet one-way delay: 61.047 ms
Loss rate: 1.90%
Run 2: Report of Indigo-MusesD — Data Link

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

Legend:
- Flow 1 ingress (mean 436.17 Mbit/s)
- Flow 1 egress (mean 436.60 Mbit/s)
- Flow 2 ingress (mean 244.81 Mbit/s)
- Flow 2 egress (mean 245.90 Mbit/s)
- Flow 3 ingress (mean 305.56 Mbit/s)
- Flow 3 egress (mean 304.10 Mbit/s)
Run 3: Statistics of Indigo-MusesD

Start at: 2019-03-19 21:16:17
End at: 2019-03-19 21:16:47
Local clock offset: 0.061 ms
Remote clock offset: 0.016 ms

# Below is generated by plot.py at 2019-03-20 00:54:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 711.54 Mbit/s
95th percentile per-packet one-way delay: 79.420 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 390.62 Mbit/s
95th percentile per-packet one-way delay: 83.102 ms
Loss rate: 0.22%
-- Flow 2:
Average throughput: 382.55 Mbit/s
95th percentile per-packet one-way delay: 75.125 ms
Loss rate: 0.67%
-- Flow 3:
Average throughput: 277.84 Mbit/s
95th percentile per-packet one-way delay: 63.238 ms
Loss rate: 1.81%
Run 3: Report of Indigo-MusesD — Data Link
Run 4: Statistics of Indigo-MusesD

Start at: 2019-03-19 21:56:13
End at: 2019-03-19 21:56:43
Local clock offset: 0.351 ms
Remote clock offset: -0.512 ms

# Below is generated by plot.py at 2019-03-20 00:54:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 660.28 Mbit/s
95th percentile per-packet one-way delay: 65.566 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 415.50 Mbit/s
95th percentile per-packet one-way delay: 68.864 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 349.08 Mbit/s
95th percentile per-packet one-way delay: 61.243 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 76.60 Mbit/s
95th percentile per-packet one-way delay: 61.668 ms
Loss rate: 1.60%
Run 4: Report of Indigo-MusesD — Data Link
Run 5: Statistics of Indigo-MusesD

Start at: 2019-03-19 22:36:21
End at: 2019-03-19 22:36:51
Local clock offset: -0.082 ms
Remote clock offset: 0.012 ms

# Below is generated by plot.py at 2019-03-20 00:54:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 684.19 Mbit/s
95th percentile per-packet one-way delay: 83.569 ms
Loss rate: 0.58%

-- Flow 1:
Average throughput: 383.51 Mbit/s
95th percentile per-packet one-way delay: 90.072 ms
Loss rate: 0.41%

-- Flow 2:
Average throughput: 346.62 Mbit/s
95th percentile per-packet one-way delay: 60.186 ms
Loss rate: 0.45%

-- Flow 3:
Average throughput: 285.97 Mbit/s
95th percentile per-packet one-way delay: 60.388 ms
Loss rate: 1.82%
Run 5: Report of Indigo-MusesD — Data Link

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Run 1: Statistics of Indigo-MusesT

Start at: 2019-03-19 19:59:17
End at: 2019-03-19 19:59:47
Local clock offset: -0.156 ms
Remote clock offset: -0.044 ms

# Below is generated by plot.py at 2019-03-20 00:58:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 862.76 Mbit/s
95th percentile per-packet one-way delay: 108.640 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 507.76 Mbit/s
95th percentile per-packet one-way delay: 115.323 ms
Loss rate: 0.22%
-- Flow 2:
Average throughput: 422.05 Mbit/s
95th percentile per-packet one-way delay: 68.024 ms
Loss rate: 0.57%
-- Flow 3:
Average throughput: 307.56 Mbit/s
95th percentile per-packet one-way delay: 63.523 ms
Loss rate: 2.22%
Run 1: Report of Indigo-MusesT — Data Link
Run 2: Statistics of Indigo-MusesT

Start at: 2019-03-19 20:39:25
End at: 2019-03-19 20:39:55
Local clock offset: 0.323 ms
Remote clock offset: -0.225 ms

# Below is generated by plot.py at 2019-03-20 01:00:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 865.89 Mbit/s
95th percentile per-packet one-way delay: 115.698 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 515.17 Mbit/s
95th percentile per-packet one-way delay: 124.343 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 425.44 Mbit/s
95th percentile per-packet one-way delay: 74.406 ms
Loss rate: 0.45%
-- Flow 3:
Average throughput: 275.99 Mbit/s
95th percentile per-packet one-way delay: 62.988 ms
Loss rate: 2.10%
Run 2: Report of Indigo-MusesT — Data Link

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

- Flow 1 ingress (mean 514.88 Mbps)
- Flow 1 egress (mean 515.17 Mbps)
- Flow 2 ingress (mean 424.58 Mbps)
- Flow 2 egress (mean 425.44 Mbps)
- Flow 3 ingress (mean 277.75 Mbps)
- Flow 3 egress (mean 275.99 Mbps)

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

- Flow 1 (95th percentile 124.34 ms)
- Flow 2 (95th percentile 74.41 ms)
- Flow 3 (95th percentile 62.99 ms)
Run 3: Statistics of Indigo-MusesT

Start at: 2019-03-19 21:20:25  
End at: 2019-03-19 21:20:55  
Local clock offset: 0.268 ms  
Remote clock offset: -0.229 ms  

# Below is generated by plot.py at 2019-03-20 01:00:29  
# Datalink statistics  
-- Total of 3 flows:  
  Average throughput: 810.00 Mbit/s  
  95th percentile per-packet one-way delay: 119.896 ms  
  Loss rate: 0.58%  
-- Flow 1:  
  Average throughput: 483.57 Mbit/s  
  95th percentile per-packet one-way delay: 125.018 ms  
  Loss rate: 0.31%  
-- Flow 2:  
  Average throughput: 387.73 Mbit/s  
  95th percentile per-packet one-way delay: 93.781 ms  
  Loss rate: 0.64%  
-- Flow 3:  
  Average throughput: 281.59 Mbit/s  
  95th percentile per-packet one-way delay: 65.957 ms  
  Loss rate: 2.11%
Run 3: Report of Indigo-MusesT — Data Link

![Graph 1: Throughput (Mbps)](image)
- Flow 1 ingress (mean 483.02 Mbps)
- Flow 1 egress (mean 483.57 Mbps)
- Flow 2 ingress (mean 387.79 Mbps)
- Flow 2 egress (mean 387.73 Mbps)
- Flow 3 ingress (mean 283.48 Mbps)
- Flow 3 egress (mean 281.59 Mbps)

![Graph 2: Per-packet one-way delay (ms)](image)
- Flow 1 (95th percentile 125.02 ms)
- Flow 2 (95th percentile 93.78 ms)
- Flow 3 (95th percentile 65.96 ms)
Run 4: Statistics of Indigo-MusesT

Start at: 2019-03-19 22:00:00
End at: 2019-03-19 22:00:30
Local clock offset: 0.3 ms
Remote clock offset: -0.182 ms

# Below is generated by plot.py at 2019-03-20 01:05:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 769.89 Mbit/s
95th percentile per-packet one-way delay: 109.669 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 481.65 Mbit/s
95th percentile per-packet one-way delay: 115.185 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 404.93 Mbit/s
95th percentile per-packet one-way delay: 83.231 ms
Loss rate: 0.53%
-- Flow 3:
Average throughput: 101.06 Mbit/s
95th percentile per-packet one-way delay: 58.260 ms
Loss rate: 1.80%
Run 4: Report of Indigo-MusesT — Data Link

![Graph showing data link performance over time with various flow metrics.](chart)

- **Flow 1**: Ingress (mean 481.16 Mbit/s), Egress (mean 481.65 Mbit/s)
- **Flow 2**: Ingress (mean 404.48 Mbit/s), Egress (mean 404.93 Mbit/s)
- **Flow 3**: Ingress (mean 101.34 Mbit/s), Egress (mean 101.06 Mbit/s)

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

- **Flow 1**: 95th percentile 115.19 ms
- **Flow 2**: 95th percentile 83.23 ms
- **Flow 3**: 95th percentile 58.26 ms
Run 5: Statistics of Indigo-MusesT

Start at: 2019-03-19 22:40:40
End at: 2019-03-19 22:41:10
Local clock offset: 0.267 ms
Remote clock offset: 0.289 ms

# Below is generated by plot.py at 2019-03-20 01:06:34
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 846.49 Mbit/s
  95th percentile per-packet one-way delay: 111.084 ms
  Loss rate: 0.52%
  -- Flow 1:
  Average throughput: 500.40 Mbit/s
  95th percentile per-packet one-way delay: 116.567 ms
  Loss rate: 0.20%
  -- Flow 2:
  Average throughput: 420.47 Mbit/s
  95th percentile per-packet one-way delay: 88.268 ms
  Loss rate: 0.65%
  -- Flow 3:
  Average throughput: 280.56 Mbit/s
  95th percentile per-packet one-way delay: 64.398 ms
  Loss rate: 2.15%
Run 5: Report of Indigo-MusesT — Data Link

Throughput (Mbit/s)

0  5  10  15  20  25

Time (s)

- Flow 1 ingress (mean 499.41 Mbit/s)
- Flow 1 egress (mean 500.40 Mbit/s)
- Flow 2 ingress (mean 420.38 Mbit/s)
- Flow 2 egress (mean 420.47 Mbit/s)
- Flow 3 ingress (mean 282.36 Mbit/s)
- Flow 3 egress (mean 280.56 Mbit/s)

Per packet one way delay (ms)

0  5  10  15  20  25

Time (s)

- Flow 1 (95th percentile 116.57 ms)
- Flow 2 (95th percentile 88.27 ms)
- Flow 3 (95th percentile 64.40 ms)
Run 1: Statistics of LEDBAT

Start at: 2019-03-19 19:39:36
End at: 2019-03-19 19:40:06
Local clock offset: -0.554 ms
Remote clock offset: 0.056 ms

# Below is generated by plot.py at 2019-03-20 01:06:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 43.57 Mbit/s
95th percentile per-packet one-way delay: 60.253 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 28.25 Mbit/s
95th percentile per-packet one-way delay: 58.070 ms
Loss rate: 0.76%
-- Flow 2:
Average throughput: 18.81 Mbit/s
95th percentile per-packet one-way delay: 58.457 ms
Loss rate: 1.15%
-- Flow 3:
Average throughput: 8.78 Mbit/s
95th percentile per-packet one-way delay: 61.103 ms
Loss rate: 2.38%
Run 2: Statistics of LEDBAT

Start at: 2019-03-19 20:20:47
End at: 2019-03-19 20:21:17
Local clock offset: -0.26 ms
Remote clock offset: -0.274 ms

# Below is generated by plot.py at 2019-03-20 01:06:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 43.01 Mbit/s
95th percentile per-packet one-way delay: 60.841 ms
Loss rate: 0.92%
-- Flow 1:
Average throughput: 28.20 Mbit/s
95th percentile per-packet one-way delay: 58.641 ms
Loss rate: 0.65%
-- Flow 2:
Average throughput: 17.79 Mbit/s
95th percentile per-packet one-way delay: 61.214 ms
Loss rate: 1.19%
-- Flow 3:
Average throughput: 9.27 Mbit/s
95th percentile per-packet one-way delay: 58.036 ms
Loss rate: 2.32%
Run 2: Report of LEDBAT — Data Link

![Graph showing data link performance metrics over time]

- **Throughput (Mbps)** over **Time (s)**
- **Flow 1 Ingress** (mean 28.26 Mbps/s)
- **Flow 1 Egress** (mean 28.20 Mbps/s)
- **Flow 2 Ingress** (mean 17.90 Mbps/s)
- **Flow 2 Egress** (mean 17.79 Mbps/s)
- **Flow 3 Ingress** (mean 9.38 Mbps/s)
- **Flow 3 Egress** (mean 9.27 Mbps/s)

![Graph showing per-packet one-way delay (ms)]
- **Flow 1** (95th percentile 58.64 ms)
- **Flow 2** (95th percentile 61.21 ms)
- **Flow 3** (95th percentile 58.04 ms)
Run 3: Statistics of LEDBAT

Start at: 2019-03-19 21:01:17
End at: 2019-03-19 21:01:47
Local clock offset: 0.025 ms
Remote clock offset: -0.163 ms

# Below is generated by plot.py at 2019-03-20 01:06:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 37.75 Mbit/s
95th percentile per-packet one-way delay: 60.891 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 22.53 Mbit/s
95th percentile per-packet one-way delay: 59.008 ms
Loss rate: 0.18%
-- Flow 2:
Average throughput: 18.80 Mbit/s
95th percentile per-packet one-way delay: 58.470 ms
Loss rate: 1.15%
-- Flow 3:
Average throughput: 8.35 Mbit/s
95th percentile per-packet one-way delay: 61.631 ms
Loss rate: 2.45%
Run 3: Report of LEDBAT — Data Link

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

**Graph Legend:**
- Flow 1 ingress (mean 22.49 Mbit/s)
- Flow 1 egress (mean 22.53 Mbit/s)
- Flow 2 ingress (mean 18.91 Mbit/s)
- Flow 2 egress (mean 18.80 Mbit/s)
- Flow 3 ingress (mean 8.45 Mbit/s)
- Flow 3 egress (mean 8.35 Mbit/s)

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

**Graph Legend:**
- Flow 1 (95th percentile 59.01 ms)
- Flow 2 (95th percentile 58.47 ms)
- Flow 3 (95th percentile 61.63 ms)
Run 4: Statistics of LEDBAT

Start at: 2019-03-19 21:41:49
End at: 2019-03-19 21:42:19
Local clock offset: 0.129 ms
Remote clock offset: -0.153 ms

# Below is generated by plot.py at 2019-03-20 01:06:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 43.68 Mbit/s
95th percentile per-packet one-way delay: 58.926 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 28.31 Mbit/s
95th percentile per-packet one-way delay: 58.902 ms
Loss rate: 0.76%
-- Flow 2:
Average throughput: 18.68 Mbit/s
95th percentile per-packet one-way delay: 59.050 ms
Loss rate: 1.16%
-- Flow 3:
Average throughput: 9.25 Mbit/s
95th percentile per-packet one-way delay: 58.452 ms
Loss rate: 2.32%
Run 4: Report of LEDBAT — Data Link
Run 5: Statistics of LEDBAT

Local clock offset: -0.074 ms
Remote clock offset: -0.166 ms

# Below is generated by plot.py at 2019-03-20 01:06:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 36.12 Mbit/s
95th percentile per-packet one-way delay: 61.468 ms
Loss rate: 1.04%
-- Flow 1:
Average throughput: 21.33 Mbit/s
95th percentile per-packet one-way delay: 58.321 ms
Loss rate: 0.78%
-- Flow 2:
Average throughput: 17.73 Mbit/s
95th percentile per-packet one-way delay: 62.026 ms
Loss rate: 1.19%
-- Flow 3:
Average throughput: 9.25 Mbit/s
95th percentile per-packet one-way delay: 57.948 ms
Loss rate: 2.33%
Run 5: Report of LEDBAT — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 21.42 Mbps)
  - Flow 1 egress (mean 21.33 Mbps)
  - Flow 2 ingress (mean 17.84 Mbps)
  - Flow 2 egress (mean 17.73 Mbps)
  - Flow 3 ingress (mean 9.36 Mbps)
  - Flow 3 egress (mean 9.25 Mbps)

- **Per-packet one-way delay (ms):**
  - Flow 1 (95th percentile 58.32 ms)
  - Flow 2 (95th percentile 62.03 ms)
  - Flow 3 (95th percentile 57.95 ms)
Run 1: Statistics of PCC-Allegro

Start at: 2019-03-19 19:45:21
End at: 2019-03-19 19:45:51
Local clock offset: 0.003 ms
Remote clock offset: 0.045 ms

# Below is generated by plot.py at 2019-03-20 01:20:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 679.36 Mbit/s
95th percentile per-packet one-way delay: 201.116 ms
Loss rate: 2.71%
-- Flow 1:
Average throughput: 378.42 Mbit/s
95th percentile per-packet one-way delay: 196.134 ms
Loss rate: 2.12%
-- Flow 2:
Average throughput: 338.45 Mbit/s
95th percentile per-packet one-way delay: 205.792 ms
Loss rate: 3.20%
-- Flow 3:
Average throughput: 234.39 Mbit/s
95th percentile per-packet one-way delay: 166.557 ms
Loss rate: 4.17%
Run 1: Report of PCC-Allegro — Data Link

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

- Flow 1 ingress (mean 385.12 Mbit/s) vs Flow 1 egress (mean 378.42 Mbit/s)
- Flow 2 ingress (mean 347.57 Mbit/s) vs Flow 2 egress (mean 338.45 Mbit/s)
- Flow 3 ingress (mean 241.59 Mbit/s) vs Flow 3 egress (mean 234.39 Mbit/s)

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

- Flow 1 (95th percentile 196.13 ms)
- Flow 2 (95th percentile 205.79 ms)
- Flow 3 (95th percentile 166.56 ms)
Run 2: Statistics of PCC-Allegro

Start at: 2019-03-19 20:26:38
End at: 2019-03-19 20:27:08
Local clock offset: -0.534 ms
Remote clock offset: -0.215 ms

# Below is generated by plot.py at 2019-03-20 01:21:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 700.65 Mbit/s
95th percentile per-packet one-way delay: 184.575 ms
Loss rate: 4.46%
-- Flow 1:
Average throughput: 415.14 Mbit/s
95th percentile per-packet one-way delay: 199.917 ms
Loss rate: 6.76%
-- Flow 2:
Average throughput: 310.07 Mbit/s
95th percentile per-packet one-way delay: 82.699 ms
Loss rate: 0.71%
-- Flow 3:
Average throughput: 244.10 Mbit/s
95th percentile per-packet one-way delay: 81.291 ms
Loss rate: 1.42%
Run 3: Statistics of PCC-Allegro

Start at: 2019-03-19 21:07:05
End at: 2019-03-19 21:07:35
Local clock offset: 0.223 ms
Remote clock offset: -0.151 ms

# Below is generated by plot.py at 2019-03-20 01:21:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 672.74 Mbit/s
95th percentile per-packet one-way delay: 176.045 ms
Loss rate: 2.70%
-- Flow 1:
Average throughput: 380.41 Mbit/s
95th percentile per-packet one-way delay: 177.998 ms
Loss rate: 3.67%
-- Flow 2:
Average throughput: 310.53 Mbit/s
95th percentile per-packet one-way delay: 91.376 ms
Loss rate: 1.34%
-- Flow 3:
Average throughput: 264.36 Mbit/s
95th percentile per-packet one-way delay: 132.587 ms
Loss rate: 1.62%
Run 3: Report of PCC-Allegro — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 393.33 Mbps)  Flow 1 egress (mean 380.41 Mbps)
Flow 2 ingress (mean 312.91 Mbps)  Flow 2 egress (mean 310.53 Mbps)
Flow 3 ingress (mean 265.48 Mbps)  Flow 3 egress (mean 264.36 Mbps)

Packet loss rate (percentage)

Time (s)

Flow 1 (95th percentile 178.00 ms)  Flow 2 (95th percentile 91.38 ms)  Flow 3 (95th percentile 132.59 ms)
Run 4: Statistics of PCC-Allegro

Start at: 2019-03-19 21:47:38
End at: 2019-03-19 21:48:08
Local clock offset: 0.297 ms
Remote clock offset: -0.281 ms

# Below is generated by plot.py at 2019-03-20 01:21:52
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 642.53 Mbit/s
  95th percentile per-packet one-way delay: 205.117 ms
  Loss rate: 8.77%
-- Flow 1:
  Average throughput: 362.51 Mbit/s
  95th percentile per-packet one-way delay: 202.694 ms
  Loss rate: 13.62%
-- Flow 2:
  Average throughput: 312.29 Mbit/s
  95th percentile per-packet one-way delay: 206.454 ms
  Loss rate: 1.72%
-- Flow 3:
  Average throughput: 238.73 Mbit/s
  95th percentile per-packet one-way delay: 167.867 ms
  Loss rate: 2.19%
Run 5: Statistics of PCC-Allegro

Local clock offset: 0.163 ms
Remote clock offset: 0.387 ms

# Below is generated by plot.py at 2019-03-20 01:27:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 735.01 Mbit/s
95th percentile per-packet one-way delay: 212.581 ms
Loss rate: 7.14%
-- Flow 1:
Average throughput: 371.18 Mbit/s
95th percentile per-packet one-way delay: 217.242 ms
Loss rate: 5.42%
-- Flow 2:
Average throughput: 430.66 Mbit/s
95th percentile per-packet one-way delay: 187.932 ms
Loss rate: 10.18%
-- Flow 3:
Average throughput: 239.52 Mbit/s
95th percentile per-packet one-way delay: 253.960 ms
Loss rate: 3.58%
Run 5: Report of PCC-Allegro — Data Link

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

Throughput (Mbps)

- **Flow 1 ingress** (mean 390.91 Mbps)
- **Flow 1 egress** (mean 371.18 Mbps)
- **Flow 2 ingress** (mean 476.62 Mbps)
- **Flow 2 egress** (mean 430.66 Mbps)
- **Flow 3 ingress** (mean 245.54 Mbps)
- **Flow 3 egress** (mean 239.52 Mbps)

Per-packet one-way delay (ms)

- **Flow 1** (95th percentile 217.24 ms)
- **Flow 2** (95th percentile 187.93 ms)
- **Flow 3** (95th percentile 253.96 ms)
Run 1: Statistics of PCC-Expr

Start at: 2019-03-19 19:50:18
End at: 2019-03-19 19:50:48
Local clock offset: -0.492 ms
Remote clock offset: -0.101 ms

# Below is generated by plot.py at 2019-03-20 01:27:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 537.65 Mbit/s
95th percentile per-packet one-way delay: 175.390 ms
Loss rate: 3.74%
-- Flow 1:
Average throughput: 294.88 Mbit/s
95th percentile per-packet one-way delay: 173.002 ms
Loss rate: 2.66%
-- Flow 2:
Average throughput: 230.96 Mbit/s
95th percentile per-packet one-way delay: 107.447 ms
Loss rate: 0.92%
-- Flow 3:
Average throughput: 273.27 Mbit/s
95th percentile per-packet one-way delay: 190.230 ms
Loss rate: 11.31%
Run 1: Report of PCC-Expr — Data Link
Run 2: Statistics of PCC-Expr

Start at: 2019-03-19 20:31:19
End at: 2019-03-19 20:31:49
Local clock offset: -0.05 ms
Remote clock offset: -0.12 ms

# Below is generated by plot.py at 2019-03-20 01:27:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 483.07 Mbit/s
95th percentile per-packet one-way delay: 183.939 ms
Loss rate: 6.96%
-- Flow 1:
Average throughput: 292.50 Mbit/s
95th percentile per-packet one-way delay: 189.945 ms
Loss rate: 10.51%
-- Flow 2:
Average throughput: 199.16 Mbit/s
95th percentile per-packet one-way delay: 147.113 ms
Loss rate: 0.71%
-- Flow 3:
Average throughput: 178.31 Mbit/s
95th percentile per-packet one-way delay: 120.861 ms
Loss rate: 1.42%
Run 2: Report of PCC-Expr — Data Link
Run 3: Statistics of PCC-Expr

Start at: 2019-03-19 21:12:10
End at: 2019-03-19 21:12:40
Local clock offset: -0.179 ms
Remote clock offset: -0.232 ms

# Below is generated by plot.py at 2019-03-20 01:27:00
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 455.72 Mbit/s
  95th percentile per-packet one-way delay: 168.352 ms
  Loss rate: 1.47%
-- Flow 1:
  Average throughput: 271.16 Mbit/s
  95th percentile per-packet one-way delay: 168.642 ms
  Loss rate: 1.35%
-- Flow 2:
  Average throughput: 228.45 Mbit/s
  95th percentile per-packet one-way delay: 183.840 ms
  Loss rate: 1.70%
-- Flow 3:
  Average throughput: 100.66 Mbit/s
  95th percentile per-packet one-way delay: 58.053 ms
  Loss rate: 1.36%
Run 3: Report of PCC-Expr — Data Link

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

- Flow 1 ingress (mean 273.81 Mbit/s)
- Flow 1 egress (mean 271.16 Mbit/s)
- Flow 2 ingress (mean 231.02 Mbit/s)
- Flow 2 egress (mean 228.45 Mbit/s)
- Flow 3 ingress (mean 190.84 Mbit/s)
- Flow 3 egress (mean 190.66 Mbit/s)

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

- Flow 1 (95th percentile 168.64 ms)
- Flow 2 (95th percentile 183.84 ms)
- Flow 3 (95th percentile 58.05 ms)
Run 4: Statistics of PCC-Expr

Start at: 2019-03-19 21:52:19
End at: 2019-03-19 21:52:49
Local clock offset: 0.089 ms
Remote clock offset: -0.24 ms

# Below is generated by plot.py at 2019-03-20 01:34:54
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 471.33 Mbit/s
  95th percentile per-packet one-way delay: 167.146 ms
  Loss rate: 0.96%
-- Flow 1:
  Average throughput: 268.15 Mbit/s
  95th percentile per-packet one-way delay: 168.684 ms
  Loss rate: 0.64%
-- Flow 2:
  Average throughput: 222.06 Mbit/s
  95th percentile per-packet one-way delay: 170.945 ms
  Loss rate: 1.38%
-- Flow 3:
  Average throughput: 170.40 Mbit/s
  95th percentile per-packet one-way delay: 61.747 ms
  Loss rate: 1.33%
Run 4: Report of PCC-Expr — Data Link
Run 5: Statistics of PCC-Expr

End at: 2019-03-19 22:32:28
Local clock offset: -0.067 ms
Remote clock offset: -0.152 ms

# Below is generated by plot.py at 2019-03-20 01:37:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 469.66 Mbit/s
95th percentile per-packet one-way delay: 200.722 ms
Loss rate: 3.37%
-- Flow 1:
Average throughput: 261.18 Mbit/s
95th percentile per-packet one-way delay: 203.862 ms
Loss rate: 4.68%
-- Flow 2:
Average throughput: 278.04 Mbit/s
95th percentile per-packet one-way delay: 172.923 ms
Loss rate: 1.66%
-- Flow 3:
Average throughput: 72.97 Mbit/s
95th percentile per-packet one-way delay: 57.981 ms
Loss rate: 1.90%
Run 5: Report of PCC-Expr — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 272.92 Mbit/s)  Flow 1 egress (mean 261.18 Mbit/s)
Flow 2 ingress (mean 281.10 Mbit/s)  Flow 2 egress (mean 278.04 Mbit/s)
Flow 3 ingress (mean 73.51 Mbit/s)  Flow 3 egress (mean 72.97 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 203.86 ms)  Flow 2 (95th percentile 172.92 ms)  Flow 3 (95th percentile 57.98 ms)
Run 1: Statistics of QUIC Cubic

Start at: 2019-03-19 20:04:53
End at: 2019-03-19 20:05:23
Local clock offset: 0.228 ms
Remote clock offset: -0.33 ms

# Below is generated by plot.py at 2019-03-20 01:37:04
# Datalink statistics
-- Total of 3 flows:
 Average throughput: 109.81 Mbit/s
  95th percentile per-packet one-way delay: 60.889 ms
 Loss rate: 0.63%
-- Flow 1:
 Average throughput: 68.82 Mbit/s
  95th percentile per-packet one-way delay: 57.406 ms
 Loss rate: 0.60%
-- Flow 2:
 Average throughput: 47.85 Mbit/s
  95th percentile per-packet one-way delay: 57.411 ms
 Loss rate: 0.78%
-- Flow 3:
 Average throughput: 22.87 Mbit/s
  95th percentile per-packet one-way delay: 61.062 ms
 Loss rate: 0.33%
Run 1: Report of QUIC Cubic — Data Link
Run 2: Statistics of QUIC Cubic

Start at: 2019-03-19 20:45:19
End at: 2019-03-19 20:45:49
Local clock offset: 0.082 ms
Remote clock offset: -0.054 ms

# Below is generated by plot.py at 2019-03-20 01:37:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 80.86 Mbit/s
95th percentile per-packet one-way delay: 57.433 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 54.85 Mbit/s
95th percentile per-packet one-way delay: 57.450 ms
Loss rate: 0.72%
-- Flow 2:
Average throughput: 31.42 Mbit/s
95th percentile per-packet one-way delay: 57.341 ms
Loss rate: 0.71%
-- Flow 3:
Average throughput: 16.30 Mbit/s
95th percentile per-packet one-way delay: 57.364 ms
Loss rate: 0.33%
Run 2: Report of QUIC Cubic — Data Link

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

Legend:
- Flow 1 ingress (mean 55.05 Mbit/s)
- Flow 1 egress (mean 54.83 Mbit/s)
- Flow 2 ingress (mean 31.18 Mbit/s)
- Flow 2 egress (mean 31.42 Mbit/s)
- Flow 3 ingress (mean 16.17 Mbit/s)
- Flow 3 egress (mean 16.30 Mbit/s)

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

Legend:
- Flow 1 (95th percentile 57.45 ms)
- Flow 2 (95th percentile 57.34 ms)
- Flow 3 (95th percentile 57.36 ms)
Run 3: Statistics of QUIC Cubic

Start at: 2019-03-19 21:26:06
End at: 2019-03-19 21:26:36
Local clock offset: 0.325 ms
Remote clock offset: -0.094 ms

# Below is generated by plot.py at 2019-03-20 01:37:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.65 Mbit/s
95th percentile per-packet one-way delay: 61.010 ms
Loss rate: 0.96%
-- Flow 1:
Average throughput: 54.69 Mbit/s
95th percentile per-packet one-way delay: 57.391 ms
Loss rate: 0.55%
-- Flow 2:
Average throughput: 33.47 Mbit/s
95th percentile per-packet one-way delay: 57.376 ms
Loss rate: 1.38%
-- Flow 3:
Average throughput: 59.71 Mbit/s
95th percentile per-packet one-way delay: 61.072 ms
Loss rate: 1.58%
Run 3: Report of QUIC Cubic — Data Link

![Graph 1: Throughput vs Time](chart1)

![Graph 2: Per-Packet Round-Trip Time vs Time](chart2)
Run 4: Statistics of QUIC Cubic

Start at: 2019-03-19 22:05:45
End at: 2019-03-19 22:06:15
Local clock offset: -0.04 ms
Remote clock offset: -0.226 ms

# Below is generated by plot.py at 2019-03-20 01:37:04
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 82.11 Mbit/s
  95th percentile per-packet one-way delay: 57.331 ms
  Loss rate: 0.75%
-- Flow 1:
  Average throughput: 48.40 Mbit/s
  95th percentile per-packet one-way delay: 57.226 ms
  Loss rate: 0.54%
-- Flow 2:
  Average throughput: 40.69 Mbit/s
  95th percentile per-packet one-way delay: 57.225 ms
  Loss rate: 1.15%
-- Flow 3:
  Average throughput: 20.38 Mbit/s
  95th percentile per-packet one-way delay: 57.413 ms
  Loss rate: 0.63%
Run 4: Report of QUIC Cubic — Data Link
Run 5: Statistics of QUIC Cubic

End at: 2019-03-19 22:47:18
Local clock offset: 0.194 ms
Remote clock offset: -0.124 ms

# Below is generated by plot.py at 2019-03-20 01:37:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.69 Mbit/s
95th percentile per-packet one-way delay: 60.794 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 54.08 Mbit/s
95th percentile per-packet one-way delay: 57.297 ms
Loss rate: 0.50%
-- Flow 2:
Average throughput: 43.72 Mbit/s
95th percentile per-packet one-way delay: 57.393 ms
Loss rate: 0.91%
-- Flow 3:
Average throughput: 17.14 Mbit/s
95th percentile per-packet one-way delay: 60.947 ms
Loss rate: 0.00%
Run 5: Report of QUIC Cubic — Data Link

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

Legend:
- Flow 1 ingress (mean 54.15 Mbit/s)
- Flow 1 egress (mean 54.08 Mbit/s)
- Flow 2 ingress (mean 43.87 Mbit/s)
- Flow 2 egress (mean 43.72 Mbit/s)
- Flow 3 ingress (mean 16.95 Mbit/s)
- Flow 3 egress (mean 17.14 Mbit/s)
Run 1: Statistics of SCReAM

Start at: 2019-03-19 20:01:24
End at: 2019-03-19 20:01:54
Local clock offset: -0.134 ms
Remote clock offset: 0.001 ms

# Below is generated by plot.py at 2019-03-20 01:37:05
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 60.372 ms
  Loss rate: 0.58%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 56.889 ms
  Loss rate: 0.38%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 60.393 ms
  Loss rate: 0.61%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 60.148 ms
  Loss rate: 1.08%
Run 1: Report of SCReAM — Data Link

![Graph showing data link performance metrics](image-url)
Run 2: Statistics of SCReAM

Start at: 2019-03-19 20:41:42
End at: 2019-03-19 20:42:12
Local clock offset: 0.184 ms
Remote clock offset: -0.351 ms

# Below is generated by plot.py at 2019-03-20 01:37:05
# Datalink statistics
 -- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 61.257 ms
  Loss rate: 0.58%
 -- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 61.281 ms
  Loss rate: 0.38%
 -- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 57.753 ms
  Loss rate: 0.61%
 -- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 61.044 ms
  Loss rate: 1.11%
Run 2: Report of SCReAM — Data Link
Run 3: Statistics of SCReAM

Local clock offset: -0.034 ms
Remote clock offset: -0.255 ms

# Below is generated by plot.py at 2019-03-20 01:37:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 61.031 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.054 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 60.670 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 57.700 ms
Loss rate: 1.08%
Run 3: Report of SCReAM — Data Link

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

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

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

- Flow 1 (95th percentile 61.05 ms)
- Flow 2 (95th percentile 60.67 ms)
- Flow 3 (95th percentile 57.70 ms)
Run 4: Statistics of SCReAM

Start at: 2019-03-19 22:02:02
End at: 2019-03-19 22:02:32
Local clock offset: -0.062 ms
Remote clock offset: -0.099 ms

# Below is generated by plot.py at 2019-03-20 01:37:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 57.476 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 57.193 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 57.160 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 57.520 ms
Loss rate: 1.08%
Run 4: Report of SCReAM — Data Link

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

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

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

- Flow 1 (95th percentile 57.19 ms)
- Flow 2 (95th percentile 57.16 ms)
- Flow 3 (95th percentile 57.52 ms)
Run 5: Statistics of SCReAM

End at: 2019-03-19 22:43:21
Local clock offset: 0.157 ms
Remote clock offset: -0.726 ms

# Below is generated by plot.py at 2019-03-20 01:37:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 58.283 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 58.104 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 58.311 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 58.144 ms
Loss rate: 1.09%
Run 5: Report of SCReAM — Data Link

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

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

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Flow 1 (95th percentile 58.10 ms)  
Flow 2 (95th percentile 58.31 ms)  
Flow 3 (95th percentile 58.14 ms)

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Run 1: Statistics of Sprout

Start at: 2019-03-19 20:11:04
End at: 2019-03-19 20:11:34
Local clock offset: -0.078 ms
Remote clock offset: -0.076 ms

# Below is generated by plot.py at 2019-03-20 01:37:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.88 Mbit/s
95th percentile per-packet one-way delay: 60.997 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 7.04 Mbit/s
95th percentile per-packet one-way delay: 61.084 ms
Loss rate: 0.48%
-- Flow 2:
Average throughput: 7.13 Mbit/s
95th percentile per-packet one-way delay: 57.618 ms
Loss rate: 0.72%
-- Flow 3:
Average throughput: 6.46 Mbit/s
95th percentile per-packet one-way delay: 60.974 ms
Loss rate: 1.53%
Run 1: Report of Sprout — Data Link

![Graph of throughput and round-trip times for different flows]

- **Throughput (Mbps)**
  - **Flow 1 ingress** (mean 7.05 Mbps)
  - **Flow 1 egress** (mean 7.04 Mbps)
  - **Flow 2 ingress** (mean 7.14 Mbps)
  - **Flow 2 egress** (mean 7.13 Mbps)
  - **Flow 3 ingress** (mean 6.48 Mbps)
  - **Flow 3 egress** (mean 6.46 Mbps)

- **Round-trip time (ms)**
  - **Flow 1 95th percentile** 61.08 ms
  - **Flow 2 95th percentile** 57.62 ms
  - **Flow 3 95th percentile** 62.97 ms
Run 2: Statistics of Sprout

Start at: 2019-03-19 20:51:38
End at: 2019-03-19 20:52:08
Local clock offset: -0.098 ms
Remote clock offset: -0.096 ms

# Below is generated by plot.py at 2019-03-20 01:37:05
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 14.88 Mbit/s
  95th percentile per-packet one-way delay: 57.901 ms
  Loss rate: 0.48%
-- Flow 1:
  Average throughput: 7.74 Mbit/s
  95th percentile per-packet one-way delay: 57.783 ms
  Loss rate: 0.05%
-- Flow 2:
  Average throughput: 7.74 Mbit/s
  95th percentile per-packet one-way delay: 57.547 ms
  Loss rate: 0.64%
-- Flow 3:
  Average throughput: 6.10 Mbit/s
  95th percentile per-packet one-way delay: 58.419 ms
  Loss rate: 1.71%
Run 2: Report of Sprout — Data Link

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

- Flow 1 ingress (mean 7.72 Mbit/s)
- Flow 1 egress (mean 7.74 Mbit/s)
- Flow 2 ingress (mean 7.75 Mbit/s)
- Flow 2 egress (mean 7.74 Mbit/s)
- Flow 3 ingress (mean 6.15 Mbit/s)
- Flow 3 egress (mean 6.10 Mbit/s)

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

- Flow 1 (95th percentile 57.78 ms)
- Flow 2 (95th percentile 57.55 ms)
- Flow 3 (95th percentile 58.42 ms)
Run 3: Statistics of Sprout

Start at: 2019-03-19 21:32:10
End at: 2019-03-19 21:32:40
Local clock offset: -0.071 ms
Remote clock offset: -0.361 ms

# Below is generated by plot.py at 2019-03-20 01:37:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.07 Mbit/s
95th percentile per-packet one-way delay: 57.853 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 7.56 Mbit/s
95th percentile per-packet one-way delay: 57.791 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 7.75 Mbit/s
95th percentile per-packet one-way delay: 57.931 ms
Loss rate: 0.59%
-- Flow 3:
Average throughput: 7.25 Mbit/s
95th percentile per-packet one-way delay: 57.800 ms
Loss rate: 0.67%
Run 3: Report of Sprout — Data Link
Run 4: Statistics of Sprout

Start at: 2019-03-19 22:12:07
End at: 2019-03-19 22:12:37
Local clock offset: -0.212 ms
Remote clock offset: -0.062 ms

# Below is generated by plot.py at 2019-03-20 01:37:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.36 Mbit/s
95th percentile per-packet one-way delay: 57.482 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 7.78 Mbit/s
95th percentile per-packet one-way delay: 57.305 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 7.82 Mbit/s
95th percentile per-packet one-way delay: 57.343 ms
Loss rate: 0.65%
-- Flow 3:
Average throughput: 7.30 Mbit/s
95th percentile per-packet one-way delay: 57.616 ms
Loss rate: 1.31%
Run 4: Report of Sprout — Data Link

![Graph showing throughput and packet loss time series](image-url)

- **Throughput (Mbps)**
  - Flow 1 ingress (mean 7.78 Mbps)
  - Flow 1 egress (mean 7.78 Mbps)
  - Flow 2 ingress (mean 7.82 Mbps)
  - Flow 2 egress (mean 7.82 Mbps)
  - Flow 3 ingress (mean 7.30 Mbps)
  - Flow 3 egress (mean 7.30 Mbps)

- **Per packet one-way delay (ms)**
  - Flow 1 (95th percentile 57.30 ms)
  - Flow 2 (95th percentile 57.34 ms)
  - Flow 3 (95th percentile 57.62 ms)
Run 5: Statistics of Sprout

Start at: 2019-03-19 22:52:52
End at: 2019-03-19 22:53:22
Local clock offset: -0.175 ms
Remote clock offset: -0.463 ms

# Below is generated by plot.py at 2019-03-20 01:37:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.07 Mbit/s
95th percentile per-packet one-way delay: 61.119 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 7.78 Mbit/s
95th percentile per-packet one-way delay: 58.176 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 7.76 Mbit/s
95th percentile per-packet one-way delay: 58.329 ms
Loss rate: 0.78%
-- Flow 3:
Average throughput: 6.55 Mbit/s
95th percentile per-packet one-way delay: 61.881 ms
Loss rate: 1.65%
Run 5: Report of Sprout — Data Link

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

Legend:
- Flow 1 ingress (mean 7.78 Mbit/s)
- Flow 1 egress (mean 7.78 Mbit/s)
- Flow 2 ingress (mean 7.76 Mbit/s)
- Flow 2 egress (mean 7.76 Mbit/s)
- Flow 3 ingress (mean 6.56 Mbit/s)
- Flow 3 egress (mean 6.55 Mbit/s)

![Graph showing per packet one-way delay]

Legend for delay graph:
- Flow 1 (95th percentile 58.18 ms)
- Flow 2 (95th percentile 58.33 ms)
- Flow 3 (95th percentile 61.88 ms)
Run 1: Statistics of TaoVA-100x

Start at: 2019-03-19 19:47:39
End at: 2019-03-19 19:48:09
Local clock offset: -0.314 ms
Remote clock offset: -0.246 ms

# Below is generated by plot.py at 2019-03-20 01:41:08
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 478.10 Mbit/s
  95th percentile per-packet one-way delay: 60.128 ms
  Loss rate: 0.62%
-- Flow 1:
  Average throughput: 239.98 Mbit/s
  95th percentile per-packet one-way delay: 59.736 ms
  Loss rate: 0.40%
-- Flow 2:
  Average throughput: 241.85 Mbit/s
  95th percentile per-packet one-way delay: 59.627 ms
  Loss rate: 0.64%
-- Flow 3:
  Average throughput: 234.56 Mbit/s
  95th percentile per-packet one-way delay: 61.667 ms
  Loss rate: 1.28%
Run 1: Report of TaoVA-100x — Data Link
Run 2: Statistics of TaoVA-100x

Start at: 2019-03-19 20:29:07
End at: 2019-03-19 20:29:37
Local clock offset: 0.194 ms
Remote clock offset: -0.973 ms

# Below is generated by plot.py at 2019-03-20 01:41:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 470.71 Mbit/s
95th percentile per-packet one-way delay: 60.652 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 242.91 Mbit/s
95th percentile per-packet one-way delay: 60.333 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 228.43 Mbit/s
95th percentile per-packet one-way delay: 61.109 ms
Loss rate: 0.44%
-- Flow 3:
Average throughput: 230.05 Mbit/s
95th percentile per-packet one-way delay: 61.076 ms
Loss rate: 1.00%
Run 2: Report of TaoVA-100x — Data Link

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

- Flow 1 ingress (mean 242.77 Mbps)
- Flow 1 egress (mean 242.91 Mbps)
- Flow 2 ingress (mean 228.12 Mbps)
- Flow 2 egress (mean 228.43 Mbps)
- Flow 3 ingress (mean 229.69 Mbps)
- Flow 3 egress (mean 230.05 Mbps)

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

- Flow 1 (95th percentile 60.33 ms)
- Flow 2 (95th percentile 61.11 ms)
- Flow 3 (95th percentile 61.08 ms)
Run 3: Statistics of TaoVA-100x

Start at: 2019-03-19 21:09:40
End at: 2019-03-19 21:10:10
Local clock offset: 0.228 ms
Remote clock offset: 0.151 ms

# Below is generated by plot.py at 2019-03-20 01:41:18
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 472.21 Mbit/s
  95th percentile per-packet one-way delay: 58.747 ms
  Loss rate: 0.63%
-- Flow 1:
  Average throughput: 240.50 Mbit/s
  95th percentile per-packet one-way delay: 59.109 ms
  Loss rate: 0.44%
-- Flow 2:
  Average throughput: 240.23 Mbit/s
  95th percentile per-packet one-way delay: 58.453 ms
  Loss rate: 0.59%
-- Flow 3:
  Average throughput: 218.49 Mbit/s
  95th percentile per-packet one-way delay: 58.709 ms
  Loss rate: 1.35%
Run 3: Report of TaoVA-100x — Data Link
Run 4: Statistics of TaoVA-100x

Start at: 2019-03-19 21:50:08
End at: 2019-03-19 21:50:38
Local clock offset: -0.51 ms
Remote clock offset: -0.316 ms

# Below is generated by plot.py at 2019-03-20 01:41:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 447.44 Mbit/s
95th percentile per-packet one-way delay: 64.023 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 228.22 Mbit/s
95th percentile per-packet one-way delay: 63.345 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 226.87 Mbit/s
95th percentile per-packet one-way delay: 60.010 ms
Loss rate: 0.65%
-- Flow 3:
Average throughput: 207.61 Mbit/s
95th percentile per-packet one-way delay: 67.715 ms
Loss rate: 1.42%
Run 4: Report of TaoVA-100x — Data Link
Run 5: Statistics of TaoVA-100x

Start at: 2019-03-19 22:29:40
End at: 2019-03-19 22:30:10
Local clock offset: 0.025 ms
Remote clock offset: -0.285 ms

# Below is generated by plot.py at 2019-03-20 01:41:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 467.18 Mbit/s
95th percentile per-packet one-way delay: 61.987 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 237.88 Mbit/s
95th percentile per-packet one-way delay: 60.758 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 238.57 Mbit/s
95th percentile per-packet one-way delay: 62.157 ms
Loss rate: 0.67%
-- Flow 3:
Average throughput: 214.44 Mbit/s
95th percentile per-packet one-way delay: 63.188 ms
Loss rate: 1.30%
Run 5: Report of TaoVA-100x — Data Link

![Graph of throughput and delay over time for different flows.](image-url)
Run 1: Statistics of TCP Vegas

Start at: 2019-03-19 20:09:12
End at: 2019-03-19 20:09:42
Local clock offset: -0.071 ms
Remote clock offset: -0.264 ms

# Below is generated by plot.py at 2019-03-20 01:41:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 571.64 Mbit/s
95th percentile per-packet one-way delay: 72.251 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 256.99 Mbit/s
95th percentile per-packet one-way delay: 57.585 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 352.94 Mbit/s
95th percentile per-packet one-way delay: 82.067 ms
Loss rate: 0.41%
-- Flow 3:
Average throughput: 242.66 Mbit/s
95th percentile per-packet one-way delay: 72.278 ms
Loss rate: 1.22%
Run 1: Report of TCP Vegas — Data Link

![Graph showing throughput and per-packet one-way delay over time for different flows.]
Run 2: Statistics of TCP Vegas

Start at: 2019-03-19 20:49:36
End at: 2019-03-19 20:50:06
Local clock offset: -0.268 ms
Remote clock offset: 0.502 ms

# Below is generated by plot.py at 2019-03-20 01:49:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 705.10 Mbit/s
95th percentile per-packet one-way delay: 78.207 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 256.86 Mbit/s
95th percentile per-packet one-way delay: 69.424 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 443.21 Mbit/s
95th percentile per-packet one-way delay: 68.836 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 465.73 Mbit/s
95th percentile per-packet one-way delay: 93.881 ms
Loss rate: 1.25%
Run 2: Report of TCP Vegas — Data Link

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

- **Flow 1 ingress (mean 256.87 Mbit/s)**
- **Flow 2 ingress (mean 443.35 Mbit/s)**
- **Flow 3 ingress (mean 466.20 Mbit/s)**
- **Flow 1 egress (mean 256.86 Mbit/s)**
- **Flow 2 egress (mean 443.21 Mbit/s)**
- **Flow 3 egress (mean 465.73 Mbit/s)**

- **Flow 1 (95th percentile 69.42 ms)**
- **Flow 2 (95th percentile 68.84 ms)**
- **Flow 3 (95th percentile 93.88 ms)**
Run 3: Statistics of TCP Vegas

Start at: 2019-03-19 21:30:19
End at: 2019-03-19 21:30:49
Local clock offset: 0.143 ms
Remote clock offset: -0.329 ms

# Below is generated by plot.py at 2019-03-20 01:49:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 613.06 Mbit/s
95th percentile per-packet one-way delay: 70.191 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 336.43 Mbit/s
95th percentile per-packet one-way delay: 63.626 ms
Loss rate: 0.28%
-- Flow 2:
Average throughput: 298.67 Mbit/s
95th percentile per-packet one-way delay: 81.486 ms
Loss rate: 0.46%
-- Flow 3:
Average throughput: 236.13 Mbit/s
95th percentile per-packet one-way delay: 65.344 ms
Loss rate: 1.19%
Run 3: Report of TCP Vegas — Data Link

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

Legend:
- Flow 1 ingress (mean 336.08 Mbit/s)
- Flow 1 egress (mean 336.43 Mbit/s)
- Flow 2 ingress (mean 298.34 Mbit/s)
- Flow 2 egress (mean 298.67 Mbit/s)
- Flow 3 ingress (mean 236.25 Mbit/s)
- Flow 3 egress (mean 236.33 Mbit/s)
Run 4: Statistics of TCP Vegas

Start at: 2019-03-19 22:10:05
End at: 2019-03-19 22:10:35
Local clock offset: -0.302 ms
Remote clock offset: 0.688 ms

# Below is generated by plot.py at 2019-03-20 01:51:13
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 691.21 Mbit/s
  95th percentile per-packet one-way delay: 113.597 ms
  Loss rate: 0.50%
-- Flow 1:
  Average throughput: 267.17 Mbit/s
  95th percentile per-packet one-way delay: 63.339 ms
  Loss rate: 0.10%
-- Flow 2:
  Average throughput: 453.14 Mbit/s
  95th percentile per-packet one-way delay: 118.058 ms
  Loss rate: 0.51%
-- Flow 3:
  Average throughput: 372.12 Mbit/s
  95th percentile per-packet one-way delay: 71.397 ms
  Loss rate: 1.35%
Run 4: Report of TCP Vegas — Data Link

![Graph showing throughput and packet loss over time for different flows.]
Run 5: Statistics of TCP Vegas

Start at: 2019-03-19 22:50:57
End at: 2019-03-19 22:51:27
Local clock offset: 0.243 ms
Remote clock offset: -0.101 ms

# Below is generated by plot.py at 2019-03-20 01:52:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 648.86 Mbit/s
95th percentile per-packet one-way delay: 63.970 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 384.42 Mbit/s
95th percentile per-packet one-way delay: 59.833 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 302.13 Mbit/s
95th percentile per-packet one-way delay: 67.537 ms
Loss rate: 0.23%
-- Flow 3:
Average throughput: 192.81 Mbit/s
95th percentile per-packet one-way delay: 64.804 ms
Loss rate: 1.20%
Run 5: Report of TCP Vegas — Data Link
Run 1: Statistics of Verus

Start at: 2019-03-19 20:07:26
End at: 2019-03-19 20:07:56
Local clock offset: 0.041 ms
Remote clock offset: -0.223 ms

# Below is generated by plot.py at 2019-03-20 01:52:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 266.64 Mbit/s
95th percentile per-packet one-way delay: 147.626 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 144.01 Mbit/s
95th percentile per-packet one-way delay: 125.647 ms
Loss rate: 0.27%
-- Flow 2:
Average throughput: 125.90 Mbit/s
95th percentile per-packet one-way delay: 183.491 ms
Loss rate: 1.45%
-- Flow 3:
Average throughput: 119.21 Mbit/s
95th percentile per-packet one-way delay: 96.186 ms
Loss rate: 0.78%
Run 1: Report of Verus — Data Link

![Data Link Graph](image)

**Throughput (Mbps)**

- **Flow 1 ingress** (mean 143.45 Mbps)
- **Flow 1 egress** (mean 144.01 Mbps)
- **Flow 2 ingress** (mean 127.00 Mbps)
- **Flow 2 egress** (mean 125.90 Mbps)
- **Flow 3 ingress** (mean 118.72 Mbps)
- **Flow 3 egress** (mean 119.21 Mbps)

![Delay Graph](image)

**Packet one-way delay (ms)**

- **Flow 1** (95th percentile 125.65 ms)
- **Flow 2** (95th percentile 183.49 ms)
- **Flow 3** (95th percentile 96.19 ms)
Run 2: Statistics of Verus

Start at: 2019-03-19 20:47:48
End at: 2019-03-19 20:48:18
Local clock offset: -0.224 ms
Remote clock offset: -0.173 ms

# Below is generated by plot.py at 2019-03-20 01:52:46
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 285.72 Mbit/s
  95th percentile per-packet one-way delay: 193.400 ms
  Loss rate: 1.87%
-- Flow 1:
  Average throughput: 156.08 Mbit/s
  95th percentile per-packet one-way delay: 121.796 ms
  Loss rate: 0.10%
-- Flow 2:
  Average throughput: 167.28 Mbit/s
  95th percentile per-packet one-way delay: 231.410 ms
  Loss rate: 4.12%
-- Flow 3:
  Average throughput: 57.07 Mbit/s
  95th percentile per-packet one-way delay: 104.768 ms
  Loss rate: 2.63%
Run 2: Report of Verus — Data Link

![Graph showing data link traffic and latency over time.]

Legend:
- Flow 1 ingress (mean 155.50 Mbit/s)
- Flow 1 egress (mean 156.08 Mbit/s)
- Flow 2 ingress (mean 173.43 Mbit/s)
- Flow 2 egress (mean 167.28 Mbit/s)
- Flow 3 ingress (mean 57.49 Mbit/s)
- Flow 3 egress (mean 57.07 Mbit/s)
Run 3: Statistics of Verus

Start at: 2019-03-19 21:28:37
End at: 2019-03-19 21:29:07
Local clock offset: -0.092 ms
Remote clock offset: -0.191 ms

# Below is generated by plot.py at 2019-03-20 01:52:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 255.75 Mbit/s
95th percentile per-packet one-way delay: 142.255 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 162.33 Mbit/s
95th percentile per-packet one-way delay: 144.012 ms
Loss rate: 0.84%
-- Flow 2:
Average throughput: 103.91 Mbit/s
95th percentile per-packet one-way delay: 146.297 ms
Loss rate: 0.23%
-- Flow 3:
Average throughput: 75.14 Mbit/s
95th percentile per-packet one-way delay: 66.695 ms
Loss rate: 1.80%
Run 3: Report of Verus — Data Link

Throughput (Mbps):

- Flow 1 ingress (mean 162.77 Mbps)
- Flow 1 egress (mean 162.33 Mbps)
- Flow 2 ingress (mean 103.90 Mbps)
- Flow 2 egress (mean 103.91 Mbps)
- Flow 3 ingress (mean 75.47 Mbps)
- Flow 3 egress (mean 75.14 Mbps)

Latency (ms):

- Flow 1 (95th percentile 144.01 ms)
- Flow 2 (95th percentile 146.30 ms)
- Flow 3 (95th percentile 66.69 ms)
Run 4: Statistics of Verus

Start at: 2019-03-19 22:08:17  
End at: 2019-03-19 22:08:47  
Local clock offset: 0.334 ms  
Remote clock offset: -0.334 ms

# Below is generated by plot.py at 2019-03-20 01:52:46  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 261.91 Mbit/s  
95th percentile per-packet one-way delay: 143.344 ms  
Loss rate: 0.78%  
-- Flow 1:  
Average throughput: 167.90 Mbit/s  
95th percentile per-packet one-way delay: 154.538 ms  
Loss rate: 0.43%  
-- Flow 2:  
Average throughput: 92.55 Mbit/s  
95th percentile per-packet one-way delay: 92.079 ms  
Loss rate: 1.23%  
-- Flow 3:  
Average throughput: 98.82 Mbit/s  
95th percentile per-packet one-way delay: 114.711 ms  
Loss rate: 1.73%
Run 4: Report of Verus — Data Link
Run 5: Statistics of Verus

Start at: 2019-03-19 22:49:19
End at: 2019-03-19 22:49:49
Local clock offset: -0.53 ms
Remote clock offset: -0.227 ms

# Below is generated by plot.py at 2019-03-20 01:55:26
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 218.74 Mbit/s
  95th percentile per-packet one-way delay: 103.232 ms
  Loss rate: 0.29%
-- Flow 1:
  Average throughput: 105.87 Mbit/s
  95th percentile per-packet one-way delay: 127.032 ms
  Loss rate: 0.43%
-- Flow 2:
  Average throughput: 120.73 Mbit/s
  95th percentile per-packet one-way delay: 93.768 ms
  Loss rate: 0.19%
-- Flow 3:
  Average throughput: 100.25 Mbit/s
  95th percentile per-packet one-way delay: 74.233 ms
  Loss rate: 0.10%
Run 5: Report of Verus — Data Link
Run 1: Statistics of PCC-Vivace

Start at: 2019-03-19 19:52:58
End at: 2019-03-19 19:53:28
Local clock offset: 0.265 ms
Remote clock offset: 0.125 ms

# Below is generated by plot.py at 2019-03-20 01:56:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 471.59 Mbit/s
95th percentile per-packet one-way delay: 70.040 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 344.06 Mbit/s
95th percentile per-packet one-way delay: 77.033 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 120.73 Mbit/s
95th percentile per-packet one-way delay: 61.528 ms
Loss rate: 0.90%
-- Flow 3:
Average throughput: 144.83 Mbit/s
95th percentile per-packet one-way delay: 61.739 ms
Loss rate: 1.54%
Run 1: Report of PCC-Vivace — Data Link
Run 2: Statistics of PCC-Vivace

Start at: 2019-03-19 20:33:39
End at: 2019-03-19 20:34:09
Local clock offset: 0.086 ms
Remote clock offset: -0.663 ms

# Below is generated by plot.py at 2019-03-20 01:56:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 441.99 Mbit/s
95th percentile per-packet one-way delay: 87.100 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 321.73 Mbit/s
95th percentile per-packet one-way delay: 103.087 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 157.19 Mbit/s
95th percentile per-packet one-way delay: 58.890 ms
Loss rate: 1.21%
-- Flow 3:
Average throughput: 48.67 Mbit/s
95th percentile per-packet one-way delay: 58.083 ms
Loss rate: 1.55%
Run 2: Report of PCC-Vivace — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 321.75 Mbps)  Flow 1 egress (mean 321.73 Mbps)
Flow 2 ingress (mean 158.20 Mbps)  Flow 2 egress (mean 157.19 Mbps)
Flow 3 ingress (mean 48.66 Mbps)   Flow 3 egress (mean 48.67 Mbps)

Per-packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 103.09 ms)  Flow 2 (95th percentile 58.89 ms)  Flow 3 (95th percentile 58.08 ms)
Run 3: Statistics of PCC-Vivace

Start at: 2019-03-19 21:14:24
End at: 2019-03-19 21:14:54
Local clock offset: 0.321 ms
Remote clock offset: -0.098 ms

# Below is generated by plot.py at 2019-03-20 01:56:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 467.07 Mbit/s
95th percentile per-packet one-way delay: 67.857 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 310.50 Mbit/s
95th percentile per-packet one-way delay: 74.033 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 191.51 Mbit/s
95th percentile per-packet one-way delay: 62.255 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 90.29 Mbit/s
95th percentile per-packet one-way delay: 61.316 ms
Loss rate: 1.55%
Run 3: Report of PCC-Vivace — Data Link
Run 4: Statistics of PCC-Vivace

Start at: 2019-03-19 21:54:27
End at: 2019-03-19 21:54:57
Local clock offset: -0.516 ms
Remote clock offset: -0.259 ms

# Below is generated by plot.py at 2019-03-20 01:56:59
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 396.82 Mbit/s
  95th percentile per-packet one-way delay: 60.437 ms
  Loss rate: 0.43%
-- Flow 1:
  Average throughput: 253.22 Mbit/s
  95th percentile per-packet one-way delay: 60.769 ms
  Loss rate: 0.34%
-- Flow 2:
  Average throughput: 196.55 Mbit/s
  95th percentile per-packet one-way delay: 57.223 ms
  Loss rate: 0.39%
-- Flow 3:
  Average throughput: 40.06 Mbit/s
  95th percentile per-packet one-way delay: 56.884 ms
  Loss rate: 2.59%
Run 4: Report of PCC-Vivace — Data Link
Run 5: Statistics of PCC-Vivace

Start at: 2019-03-19 22:34:12
End at: 2019-03-19 22:34:42
Local clock offset: -0.08 ms
Remote clock offset: -0.186 ms

# Below is generated by plot.py at 2019-03-20 01:57:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 485.84 Mbit/s
95th percentile per-packet one-way delay: 63.633 ms
Loss rate: 0.97%
-- Flow 1:
Average throughput: 331.19 Mbit/s
95th percentile per-packet one-way delay: 65.466 ms
Loss rate: 1.05%
-- Flow 2:
Average throughput: 190.20 Mbit/s
95th percentile per-packet one-way delay: 58.941 ms
Loss rate: 0.66%
-- Flow 3:
Average throughput: 86.79 Mbit/s
95th percentile per-packet one-way delay: 57.720 ms
Loss rate: 1.51%
Run 5: Report of PCC-Vivace — Data Link

- Throughput (Mbps):
  - Flow 1 ingress (mean 333.42 Mbps)
  - Flow 1 egress (mean 331.19 Mbps)
  - Flow 2 ingress (mean 190.35 Mbps)
  - Flow 2 egress (mean 190.20 Mbps)
  - Flow 3 ingress (mean 87.11 Mbps)
  - Flow 3 egress (mean 86.79 Mbps)

- Per-packet one-way delay (ms):
  - Flow 1 (95th percentile 65.47 ms)
  - Flow 2 (95th percentile 58.94 ms)
  - Flow 3 (95th percentile 57.72 ms)
Run 1: Statistics of WebRTC media

Start at: 2019-03-19 20:06:14
End at: 2019-03-19 20:06:44
Local clock offset: 0.045 ms
Remote clock offset: -0.371 ms

# Below is generated by plot.py at 2019-03-20 01:57:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 60.957 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 61.031 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 57.687 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 60.836 ms
Loss rate: 0.00%
Run 1: Report of WebRTC media — Data Link
Run 2: Statistics of WebRTC media

Start at: 2019-03-19 20:46:36
End at: 2019-03-19 20:47:06
Local clock offset: 0.327 ms
Remote clock offset: -0.263 ms

# Below is generated by plot.py at 2019-03-20 01:57:05
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.14 Mbit/s
  95th percentile per-packet one-way delay: 58.228 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 57.607 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 57.874 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 58.289 ms
  Loss rate: 0.00%
Run 2: Report of WebRTC media — Data Link

![Graph](image1)

![Graph](image2)
Run 3: Statistics of WebRTC media

Local clock offset: ~0.081 ms
Remote clock offset: ~0.323 ms

# Below is generated by plot.py at 2019-03-20 01:57:05
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.14 Mbit/s
  95th percentile per-packet one-way delay: 60.678 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 57.478 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 57.464 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 60.737 ms
  Loss rate: 0.00%
Run 3: Report of WebRTC media — Data Link

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

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

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

- Flow 1 (95th percentile 57.48 ms)
- Flow 2 (95th percentile 57.46 ms)
- Flow 3 (95th percentile 60.74 ms)
Run 4: Statistics of WebRTC media

Start at: 2019-03-19 22:07:05
End at: 2019-03-19 22:07:35
Local clock offset: 0.395 ms
Remote clock offset: -0.283 ms

# Below is generated by plot.py at 2019-03-20 01:57:05
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.14 Mbit/s
  95th percentile per-packet one-way delay: 57.871 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 57.723 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 57.891 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 57.877 ms
  Loss rate: 0.00%
Run 4: Report of WebRTC media — Data Link
Run 5: Statistics of WebRTC media

Local clock offset: -0.293 ms
Remote clock offset: -0.068 ms

# Below is generated by plot.py at 2019-03-20 01:57:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 60.630 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 57.406 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 60.671 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 57.336 ms
Loss rate: 0.00%
Run 5: Report of WebRTC media — Data Link