Pantheon Report

Data path: GCE London on ens4 (remote) → GCE Sydney on 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 time.google.com and have been applied to correct the timestamps in logs.

System info:
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

Git summary:
branch: muses @ 7a686f7c2ed0a333082c0bab1fa5c921ab47e6ee
third_party/fillp @ d6da1459332fceed56963885d7e17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943bab2d2b90d2c64fc45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbfe58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6b7cf3cf
third_party/muses @ 0ce721187ad823da2095537730c746486ca4966
third_party/pantheon-tunnel @ f866d3f58d27af9d42717625ee3a354cc2e802bd
third_party/pcc @ 1afcc958fa0d6618b623c991a55f5ec872b498e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f556f13e8acd08fab92c4eb24f974ab
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3c6f42
third_party/scream-reproduce @ f099118d1421aa3131b1f1ff19649f74e1da3b2b0
M src/ScreamClient
M src/ScreamServer
third_party/sprout @ 566e35c6178b01e31d4a46ad18cc4f9415f19a26
M src/examples/cellsim.cc
M src/examples/sproutbt2.cc
M src/network/sproutconn.cc
third_party/verus @ 5a4b47d7a4c60a26149af2629562939f9a494
M src/verus.hpp
M tools/plot.py
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851
test from GCE London 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>
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<tr>
<td></td>
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<td>flow 1</td>
<td>flow 2</td>
<td>flow 3</td>
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<td>189.38</td>
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<td>302.78</td>
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<td>PCC-Vivace</td>
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</table>
Run 1: Statistics of TCP BBR

Start at: 2019-04-24 09:02:44
End at: 2019-04-24 09:03:14
Local clock offset: -0.071 ms
Remote clock offset: 0.07 ms

# Below is generated by plot.py at 2019-04-24 12:03:27
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 631.98 Mbit/s
  95th percentile per-packet one-way delay: 178.933 ms
  Loss rate: 1.84%
-- Flow 1:
  Average throughput: 344.23 Mbit/s
  95th percentile per-packet one-way delay: 161.750 ms
  Loss rate: 1.20%
-- Flow 2:
  Average throughput: 325.49 Mbit/s
  95th percentile per-packet one-way delay: 229.815 ms
  Loss rate: 2.36%
-- Flow 3:
  Average throughput: 220.34 Mbit/s
  95th percentile per-packet one-way delay: 133.216 ms
  Loss rate: 3.32%
Run 1: Report of TCP BBR — Data Link
Run 2: Statistics of TCP BBR

Start at: 2019-04-24 09:40:32
End at: 2019-04-24 09:41:02
Local clock offset: 0.046 ms
Remote clock offset: 0.039 ms

# Below is generated by plot.py at 2019-04-24 12:03:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 638.42 Mbit/s
95th percentile per-packet one-way delay: 179.141 ms
Loss rate: 2.07%
-- Flow 1:
Average throughput: 351.13 Mbit/s
95th percentile per-packet one-way delay: 224.619 ms
Loss rate: 1.67%
-- Flow 2:
Average throughput: 317.29 Mbit/s
95th percentile per-packet one-way delay: 165.981 ms
Loss rate: 1.62%
-- Flow 3:
Average throughput: 235.13 Mbit/s
95th percentile per-packet one-way delay: 134.498 ms
Loss rate: 5.00%
Run 2: Report of TCP BBR — Data Link
Run 3: Statistics of TCP BBR

End at: 2019-04-24 10:19:09
Local clock offset: -0.111 ms
Remote clock offset: -0.051 ms

# Below is generated by plot.py at 2019-04-24 12:03:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 635.19 Mbit/s
95th percentile per-packet one-way delay: 187.832 ms
Loss rate: 2.21%
-- Flow 1:
Average throughput: 349.30 Mbit/s
95th percentile per-packet one-way delay: 176.379 ms
Loss rate: 1.03%
-- Flow 2:
Average throughput: 316.83 Mbit/s
95th percentile per-packet one-way delay: 212.035 ms
Loss rate: 2.04%
-- Flow 3:
Average throughput: 232.13 Mbit/s
95th percentile per-packet one-way delay: 226.576 ms
Loss rate: 7.75%
Run 3: Report of TCP BBR — Data Link

![Graph showing network throughput over time for different flows.]
Run 4: Statistics of TCP BBR

End at: 2019-04-24 10:56:19
Local clock offset: -0.073 ms
Remote clock offset: 0.039 ms

# Below is generated by plot.py at 2019-04-24 12:04:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 661.42 Mbit/s
95th percentile per-packet one-way delay: 150.621 ms
Loss rate: 1.77%
-- Flow 1:
Average throughput: 353.29 Mbit/s
95th percentile per-packet one-way delay: 141.566 ms
Loss rate: 1.09%
-- Flow 2:
Average throughput: 349.30 Mbit/s
95th percentile per-packet one-way delay: 150.374 ms
Loss rate: 1.95%
-- Flow 3:
Average throughput: 234.46 Mbit/s
95th percentile per-packet one-way delay: 173.189 ms
Loss rate: 4.26%
Run 4: Report of TCP BBR — Data Link
Run 5: Statistics of TCP BBR

End at: 2019-04-24 11:33:29
Local clock offset: -0.255 ms
Remote clock offset: -0.034 ms

# Below is generated by plot.py at 2019-04-24 12:04:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 574.95 Mbit/s
95th percentile per-packet one-way delay: 185.457 ms
Loss rate: 1.50%
-- Flow 1:
Average throughput: 280.66 Mbit/s
95th percentile per-packet one-way delay: 172.402 ms
Loss rate: 0.54%
-- Flow 2:
Average throughput: 314.55 Mbit/s
95th percentile per-packet one-way delay: 180.432 ms
Loss rate: 1.56%
-- Flow 3:
Average throughput: 262.46 Mbit/s
95th percentile per-packet one-way delay: 202.194 ms
Loss rate: 4.36%
Run 5: Report of TCP BBR — Data Link

![Graph 1: Throughput (Mbps)]
- Flow 1 ingress (mean 279.67 Mbps)
- Flow 1 egress (mean 280.66 Mbps)
- Flow 2 ingress (mean 315.27 Mbps)
- Flow 2 egress (mean 314.55 Mbps)
- Flow 3 ingress (mean 267.09 Mbps)
- Flow 3 egress (mean 262.46 Mbps)

![Graph 2: Per-packet one way delay (ms)]
- Flow 1 (95th percentile 172.40 ms)
- Flow 2 (95th percentile 180.43 ms)
- Flow 3 (95th percentile 202.19 ms)
Run 1: Statistics of Copa

End at: 2019-04-24 08:55:43
Local clock offset: -0.063 ms
Remote clock offset: 0.034 ms

# Below is generated by plot.py at 2019-04-24 12:09:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 518.78 Mbit/s
95th percentile per-packet one-way delay: 186.572 ms
Loss rate: 1.50%
-- Flow 1:
Average throughput: 282.81 Mbit/s
95th percentile per-packet one-way delay: 181.667 ms
Loss rate: 0.95%
-- Flow 2:
Average throughput: 263.04 Mbit/s
95th percentile per-packet one-way delay: 196.587 ms
Loss rate: 1.36%
-- Flow 3:
Average throughput: 188.85 Mbit/s
95th percentile per-packet one-way delay: 166.894 ms
Loss rate: 4.34%
Run 1: Report of Copa — Data Link

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

- **Flow 1 ingress (mean 282.99 Mbit/s)**
- **Flow 1 egress (mean 282.81 Mbit/s)**
- **Flow 2 ingress (mean 263.13 Mbit/s)**
- **Flow 2 egress (mean 263.04 Mbit/s)**
- **Flow 3 ingress (mean 192.17 Mbit/s)**
- **Flow 3 egress (mean 188.85 Mbit/s)**
Run 2: Statistics of Copa

Start at: 2019-04-24 09:32:52
End at: 2019-04-24 09:33:22
Local clock offset: 0.058 ms
Remote clock offset: -0.334 ms

# Below is generated by plot.py at 2019-04-24 12:09:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 499.85 Mbit/s
95th percentile per-packet one-way delay: 196.479 ms
Loss rate: 1.38%
-- Flow 1:
Average throughput: 270.36 Mbit/s
95th percentile per-packet one-way delay: 210.243 ms
Loss rate: 0.74%
-- Flow 2:
Average throughput: 257.18 Mbit/s
95th percentile per-packet one-way delay: 185.556 ms
Loss rate: 1.42%
-- Flow 3:
Average throughput: 180.73 Mbit/s
95th percentile per-packet one-way delay: 139.901 ms
Loss rate: 4.11%
Run 2: Report of Copa — Data Link
Run 3: Statistics of Copa

Start at: 2019-04-24 10:11:06
End at: 2019-04-24 10:11:36
Local clock offset: -0.115 ms
Remote clock offset: -0.021 ms

# Below is generated by plot.py at 2019-04-24 12:09:42
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 502.25 Mbit/s
  95th percentile per-packet one-way delay: 184.036 ms
  Loss rate: 1.36%
-- Flow 1:
  Average throughput: 289.70 Mbit/s
  95th percentile per-packet one-way delay: 195.974 ms
  Loss rate: 0.88%
-- Flow 2:
  Average throughput: 232.78 Mbit/s
  95th percentile per-packet one-way delay: 159.508 ms
  Loss rate: 1.38%
-- Flow 3:
  Average throughput: 178.67 Mbit/s
  95th percentile per-packet one-way delay: 177.822 ms
  Loss rate: 3.59%
Run 3: Report of Copa — Data Link

- Flow 1 ingress (mean 289.67 Mbit/s)
- Flow 1 egress (mean 289.70 Mbit/s)
- Flow 2 ingress (mean 232.83 Mbit/s)
- Flow 2 egress (mean 232.78 Mbit/s)
- Flow 3 ingress (mean 180.37 Mbit/s)
- Flow 3 egress (mean 178.67 Mbit/s)

- Flow 1 (95th percentile 195.97 ms)
- Flow 2 (95th percentile 159.51 ms)
- Flow 3 (95th percentile 177.82 ms)
Run 4: Statistics of Copa

Local clock offset: -0.106 ms
Remote clock offset: 0.024 ms

# Below is generated by plot.py at 2019-04-24 12:18:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 466.01 Mbit/s
95th percentile per-packet one-way delay: 159.428 ms
Loss rate: 1.52%
-- Flow 1:
Average throughput: 248.68 Mbit/s
95th percentile per-packet one-way delay: 167.087 ms
Loss rate: 1.01%
-- Flow 2:
Average throughput: 229.72 Mbit/s
95th percentile per-packet one-way delay: 146.692 ms
Loss rate: 1.30%
-- Flow 3:
Average throughput: 199.26 Mbit/s
95th percentile per-packet one-way delay: 136.394 ms
Loss rate: 3.92%
Run 4: Report of Copa — Data Link
Run 5: Statistics of Copa

End at: 2019-04-24 11:25:57
Local clock offset: -0.065 ms
Remote clock offset: 0.047 ms

# Below is generated by plot.py at 2019-04-24 12:20:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 497.87 Mbit/s
95th percentile per-packet one-way delay: 151.370 ms
Loss rate: 1.50%
-- Flow 1:
Average throughput: 256.98 Mbit/s
95th percentile per-packet one-way delay: 144.852 ms
Loss rate: 0.87%
-- Flow 2:
Average throughput: 265.16 Mbit/s
95th percentile per-packet one-way delay: 156.103 ms
Loss rate: 1.51%
-- Flow 3:
Average throughput: 199.40 Mbit/s
95th percentile per-packet one-way delay: 147.258 ms
Loss rate: 3.87%
Run 5: Report of Copa — Data Link

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Throughput (Mbit/s)

<table>
<thead>
<tr>
<th>Time (s)</th>
<th>Flow 1 ingress (mean 256.96 Mbit/s)</th>
<th>Flow 1 egress (mean 256.98 Mbit/s)</th>
<th>Flow 2 ingress (mean 265.62 Mbit/s)</th>
<th>Flow 2 egress (mean 265.16 Mbit/s)</th>
<th>Flow 3 ingress (mean 201.88 Mbit/s)</th>
<th>Flow 3 egress (mean 199.40 Mbit/s)</th>
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Per-packet one-way delay (ms)

<table>
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<tr>
<th>Time (s)</th>
<th>Flow 1 (95th percentile 144.85 ms)</th>
<th>Flow 2 (95th percentile 156.10 ms)</th>
<th>Flow 3 (95th percentile 147.26 ms)</th>
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24
Run 1: Statistics of TCP Cubic

Start at: 2019-04-24 09:04:48
End at: 2019-04-24 09:05:18
Local clock offset: -0.284 ms
Remote clock offset: 0.063 ms

# Below is generated by plot.py at 2019-04-24 12:20:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 676.84 Mbit/s
95th percentile per-packet one-way delay: 150.866 ms
Loss rate: 1.48%
-- Flow 1:
Average throughput: 382.48 Mbit/s
95th percentile per-packet one-way delay: 137.565 ms
Loss rate: 0.85%
-- Flow 2:
Average throughput: 315.74 Mbit/s
95th percentile per-packet one-way delay: 159.911 ms
Loss rate: 1.58%
-- Flow 3:
Average throughput: 260.14 Mbit/s
95th percentile per-packet one-way delay: 167.597 ms
Loss rate: 3.99%
Run 1: Report of TCP Cubic — Data Link

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

Flow 1 ingress (mean 382.33 Mbit/s), Flow 1 egress (mean 382.48 Mbit/s), Flow 2 ingress (mean 316.53 Mbit/s), Flow 2 egress (mean 315.74 Mbit/s), Flow 3 ingress (mean 263.79 Mbit/s), Flow 3 egress (mean 260.14 Mbit/s)

Delay (ms): Flow 1 (95th percentile 137.56 ms), Flow 2 (95th percentile 159.91 ms), Flow 3 (95th percentile 167.60 ms)
Run 2: Statistics of TCP Cubic

End at: 2019-04-24 09:43:05
Local clock offset: 0.281 ms
Remote clock offset: 0.019 ms

# Below is generated by plot.py at 2019-04-24 12:20:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 708.97 Mbit/s
95th percentile per-packet one-way delay: 164.393 ms
Loss rate: 1.64%
-- Flow 1:
Average throughput: 374.52 Mbit/s
95th percentile per-packet one-way delay: 142.181 ms
Loss rate: 1.07%
-- Flow 2:
Average throughput: 382.26 Mbit/s
95th percentile per-packet one-way delay: 196.073 ms
Loss rate: 1.84%
-- Flow 3:
Average throughput: 247.61 Mbit/s
95th percentile per-packet one-way delay: 159.927 ms
Loss rate: 3.62%
Run 2: Report of TCP Cubic — Data Link

![Graph](image)

**Throughput (Mbps):**
- Flow 1 ingress (mean 375.21 Mbps)
- Flow 1 egress (mean 374.52 Mbps)
- Flow 2 ingress (mean 384.22 Mbps)
- Flow 2 egress (mean 382.26 Mbps)
- Flow 3 ingress (mean 250.07 Mbps)
- Flow 3 egress (mean 247.61 Mbps)

**Per-packet one-way delay (ms):**
- Flow 1 (95th percentile 142.18 ms)
- Flow 2 (95th percentile 196.07 ms)
- Flow 3 (95th percentile 159.93 ms)
Run 3: Statistics of TCP Cubic

Start at: 2019-04-24 10:20:42
Local clock offset: -0.134 ms
Remote clock offset: -0.028 ms

# Below is generated by plot.py at 2019-04-24 12:20:36
# Datalink statistics
-- Total of 3 flows:
   Average throughput: 594.09 Mbit/s
   95th percentile per-packet one-way delay: 144.281 ms
   Loss rate: 1.49%
-- Flow 1:
   Average throughput: 332.75 Mbit/s
   95th percentile per-packet one-way delay: 144.253 ms
   Loss rate: 0.92%
-- Flow 2:
   Average throughput: 295.68 Mbit/s
   95th percentile per-packet one-way delay: 149.005 ms
   Loss rate: 1.41%
-- Flow 3:
   Average throughput: 199.89 Mbit/s
   95th percentile per-packet one-way delay: 134.262 ms
   Loss rate: 4.54%
Run 3: Report of TCP Cubic — Data Link
Run 4: Statistics of TCP Cubic

Local clock offset: -0.332 ms
Remote clock offset: 0.019 ms

# Below is generated by plot.py at 2019-04-24 12:20:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 333.42 Mbit/s
95th percentile per-packet one-way delay: 154.516 ms
Loss rate: 2.13%
-- Flow 1:
Average throughput: 55.81 Mbit/s
95th percentile per-packet one-way delay: 132.734 ms
Loss rate: 2.39%
-- Flow 2:
Average throughput: 289.59 Mbit/s
95th percentile per-packet one-way delay: 133.375 ms
Loss rate: 1.73%
-- Flow 3:
Average throughput: 261.93 Mbit/s
95th percentile per-packet one-way delay: 215.656 ms
Loss rate: 2.84%
Run 4: Report of TCP Cubic — Data Link
Run 5: Statistics of TCP Cubic

Start at: 2019-04-24 11:35:00
End at: 2019-04-24 11:35:30
Local clock offset: -0.051 ms
Remote clock offset: -0.03 ms

# Below is generated by plot.py at 2019-04-24 12:21:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 658.49 Mbit/s
95th percentile per-packet one-way delay: 152.068 ms
Loss rate: 1.40%
-- Flow 1:
Average throughput: 368.35 Mbit/s
95th percentile per-packet one-way delay: 137.211 ms
Loss rate: 0.91%
-- Flow 2:
Average throughput: 305.45 Mbit/s
95th percentile per-packet one-way delay: 157.584 ms
Loss rate: 1.11%
-- Flow 3:
Average throughput: 268.50 Mbit/s
95th percentile per-packet one-way delay: 184.393 ms
Loss rate: 4.06%
Run 5: Report of TCP Cubic — Data Link
Run 1: Statistics of FILLP

Start at: 2019-04-24 08:41:10
End at: 2019-04-24 08:41:40
Local clock offset: 0.195 ms
Remote clock offset: 0.022 ms

# Below is generated by plot.py at 2019-04-24 12:25:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 707.92 Mbit/s
95th percentile per-packet one-way delay: 171.052 ms
Loss rate: 1.29%
-- Flow 1:
Average throughput: 443.20 Mbit/s
95th percentile per-packet one-way delay: 183.645 ms
Loss rate: 1.05%
-- Flow 2:
Average throughput: 298.68 Mbit/s
95th percentile per-packet one-way delay: 137.978 ms
Loss rate: 1.12%
-- Flow 3:
Average throughput: 206.26 Mbit/s
95th percentile per-packet one-way delay: 134.328 ms
Loss rate: 3.38%
Run 1: Report of FillP — Data Link
Run 2: Statistics of FILLP

Start at: 2019-04-24 09:18:46
End at: 2019-04-24 09:19:16
Local clock offset: 0.157 ms
Remote clock offset: 0.057 ms

# Below is generated by plot.py at 2019-04-24 12:25:27
# Datalink statistics
-- Total of 3 flows:
   Average throughput: 399.26 Mbit/s
   95th percentile per-packet one-way delay: 153.303 ms
   Loss rate: 1.33%
-- Flow 1:
   Average throughput: 109.62 Mbit/s
   95th percentile per-packet one-way delay: 174.986 ms
   Loss rate: 0.28%
-- Flow 2:
   Average throughput: 323.47 Mbit/s
   95th percentile per-packet one-way delay: 136.066 ms
   Loss rate: 1.24%
-- Flow 3:
   Average throughput: 233.27 Mbit/s
   95th percentile per-packet one-way delay: 135.693 ms
   Loss rate: 3.05%
Run 2: Report of FillP — Data Link

---

**Throughput (Mb/s)**

- Flow 1 ingress (mean 108.49 Mb/s)
- Flow 1 egress (mean 109.62 Mb/s)
- Flow 2 ingress (mean 323.44 Mb/s)
- Flow 2 egress (mean 323.47 Mb/s)
- Flow 3 ingress (mean 233.68 Mb/s)
- Flow 3 egress (mean 233.27 Mb/s)

---

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

- Flow 1 (95th percentile 174.99 ms)
- Flow 2 (95th percentile 136.07 ms)
- Flow 3 (95th percentile 135.69 ms)

---
Run 3: Statistics of FillP

Start at: 2019-04-24 09:57:08
End at: 2019-04-24 09:57:38
Local clock offset: 0.297 ms
Remote clock offset: 0.014 ms

# Below is generated by plot.py at 2019-04-24 12:30:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 706.58 Mbit/s
95th percentile per-packet one-way delay: 174.178 ms
Loss rate: 1.20%
-- Flow 1:
Average throughput: 434.87 Mbit/s
95th percentile per-packet one-way delay: 180.964 ms
Loss rate: 1.04%
-- Flow 2:
Average throughput: 307.54 Mbit/s
95th percentile per-packet one-way delay: 135.479 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 209.71 Mbit/s
95th percentile per-packet one-way delay: 133.045 ms
Loss rate: 2.65%
Run 3: Report of FillP — Data Link
Run 4: Statistics of FillP

Start at: 2019-04-24 10:34:41
End at: 2019-04-24 10:35:11
Local clock offset: -0.359 ms
Remote clock offset: -0.011 ms

# Below is generated by plot.py at 2019-04-24 12:30:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 352.86 Mbit/s
95th percentile per-packet one-way delay: 136.208 ms
Loss rate: 1.17%
-- Flow 1:
Average throughput: 67.01 Mbit/s
95th percentile per-packet one-way delay: 134.804 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 326.53 Mbit/s
95th percentile per-packet one-way delay: 137.095 ms
Loss rate: 0.99%
-- Flow 3:
Average throughput: 214.01 Mbit/s
95th percentile per-packet one-way delay: 133.548 ms
Loss rate: 2.78%
Run 4: Report of FillP — Data Link

![Graph showing network throughput and packet delay over time.](image-url)
Run 5: Statistics of FillP

Start at: 2019-04-24 11:11:43
End at: 2019-04-24 11:12:13
Local clock offset: -0.256 ms
Remote clock offset: -0.0 ms

# Below is generated by plot.py at 2019-04-24 12:30:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 335.31 Mbit/s
95th percentile per-packet one-way delay: 136.362 ms
Loss rate: 1.27%
-- Flow 1:
Average throughput: 56.20 Mbit/s
95th percentile per-packet one-way delay: 135.249 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 310.43 Mbit/s
95th percentile per-packet one-way delay: 137.159 ms
Loss rate: 1.09%
-- Flow 3:
Average throughput: 227.74 Mbit/s
95th percentile per-packet one-way delay: 133.668 ms
Loss rate: 2.71%
Run 5: Report of FillP — Data Link

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

- Flow 1 Ingress: 55.40 Mbit/s, Egress: 56.20 Mbit/s
- Flow 2 Ingress: 309.38 Mbit/s, Egress: 310.43 Mbit/s
- Flow 3 Ingress: 228.18 Mbit/s, Egress: 227.74 Mbit/s

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

- Flow 1 95th percentile: 135.25 ms
- Flow 2 95th percentile: 137.16 ms
- Flow 3 95th percentile: 133.67 ms
Run 1: Statistics of FillP-Sheep

Start at: 2019-04-24 08:39:24
End at: 2019-04-24 08:39:54
Local clock offset: 0.352 ms
Remote clock offset: -0.347 ms

# Below is generated by plot.py at 2019-04-24 12:30:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 517.80 Mbit/s
95th percentile per-packet one-way delay: 194.372 ms
Loss rate: 2.24%
-- Flow 1:
Average throughput: 229.93 Mbit/s
95th percentile per-packet one-way delay: 207.314 ms
Loss rate: 3.08%
-- Flow 2:
Average throughput: 325.26 Mbit/s
95th percentile per-packet one-way delay: 139.201 ms
Loss rate: 1.12%
-- Flow 3:
Average throughput: 222.57 Mbit/s
95th percentile per-packet one-way delay: 140.106 ms
Loss rate: 2.89%
Run 1: Report of FillP-Sheep — Data Link

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

- Flow 1 ingress (mean 234.97 Mbit/s)
- Flow 1 egress (mean 222.57 Mbit/s)
- Flow 2 ingress (mean 324.86 Mbit/s)
- Flow 2 egress (mean 325.26 Mbit/s)
- Flow 3 ingress (mean 223.16 Mbit/s)
- Flow 3 egress (mean 222.57 Mbit/s)
Run 2: Statistics of FillP-Sheep

Start at: 2019-04-24 09:17:08
End at: 2019-04-24 09:17:38
Local clock offset: -0.083 ms
Remote clock offset: 0.065 ms

# Below is generated by plot.py at 2019-04-24 12:30:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 370.10 Mbit/s
95th percentile per-packet one-way delay: 137.056 ms
Loss rate: 1.38%
-- Flow 1:
Average throughput: 98.32 Mbit/s
95th percentile per-packet one-way delay: 142.789 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 307.74 Mbit/s
95th percentile per-packet one-way delay: 134.952 ms
Loss rate: 1.38%
-- Flow 3:
Average throughput: 209.30 Mbit/s
95th percentile per-packet one-way delay: 135.053 ms
Loss rate: 3.21%
Run 2: Report of FillP-Sheep — Data Link

![Graph showing throughput and delay over time for Flow 1, Flow 2, and Flow 3.]

Throughput (Mbps/s) vs. Time (s)
- Flow 1 Ingress (mean 97.59 Mbps/s)
- Flow 1 Egress (mean 98.32 Mbps/s)
- Flow 2 Ingress (mean 307.53 Mbps/s)
- Flow 2 Egress (mean 307.74 Mbps/s)
- Flow 3 Ingress (mean 210.26 Mbps/s)
- Flow 3 Egress (mean 209.30 Mbps/s)

![Graph showing per-packet one-way delay for Flow 1, Flow 2, and Flow 3.]

Per-Packet One-Way Delay (ms) vs. Time (s)
- Flow 1 (95th percentile 142.79 ms)
- Flow 2 (95th percentile 134.95 ms)
- Flow 3 (95th percentile 135.05 ms)
Run 3: Statistics of FillP-Sheep

Local clock offset: -0.137 ms
Remote clock offset: -0.031 ms

# Below is generated by plot.py at 2019-04-24 12:37:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 718.90 Mbit/s
95th percentile per-packet one-way delay: 141.619 ms
Loss rate: 0.97%
-- Flow 1:
Average throughput: 422.34 Mbit/s
95th percentile per-packet one-way delay: 143.772 ms
Loss rate: 0.54%
-- Flow 2:
Average throughput: 339.60 Mbit/s
95th percentile per-packet one-way delay: 139.058 ms
Loss rate: 1.10%
-- Flow 3:
Average throughput: 219.97 Mbit/s
95th percentile per-packet one-way delay: 135.168 ms
Loss rate: 3.02%
Run 3: Report of FillP-Sheep — Data Link

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

- Flow 1 Ingress (mean 421.11 Mb/s)
- Flow 1 Egress (mean 422.54 Mb/s)
- Flow 2 Ingress (mean 338.81 Mb/s)
- Flow 2 Egress (mean 339.60 Mb/s)
- Flow 3 Ingress (mean 220.64 Mb/s)
- Flow 3 Egress (mean 219.97 Mb/s)

![Graph 2: One packet delay (ms)](image2)

- Flow 1 (95th percentile 143.77 ms)
- Flow 2 (95th percentile 139.06 ms)
- Flow 3 (95th percentile 135.17 ms)
Run 4: Statistics of FillP-Sheep

Start at: 2019-04-24 10:33:02
Local clock offset: -0.337 ms
Remote clock offset: -0.004 ms

# Below is generated by plot.py at 2019-04-24 12:37:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 365.23 Mbit/s
95th percentile per-packet one-way delay: 135.445 ms
Loss rate: 1.56%
-- Flow 1:
Average throughput: 57.25 Mbit/s
95th percentile per-packet one-way delay: 139.379 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 336.89 Mbit/s
95th percentile per-packet one-way delay: 135.030 ms
Loss rate: 1.25%
-- Flow 3:
Average throughput: 260.89 Mbit/s
95th percentile per-packet one-way delay: 134.220 ms
Loss rate: 3.37%
Run 4: Report of FillP-Sheep — Data Link

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

- Flow 1 Ingress (mean 56.98 Mbit/s)
- Flow 1 Egress (mean 57.25 Mbit/s)
- Flow 2 Ingress (mean 336.56 Mbit/s)
- Flow 2 Egress (mean 336.89 Mbit/s)
- Flow 3 Ingress (mean 262.31 Mbit/s)
- Flow 3 Egress (mean 260.89 Mbit/s)

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

- Flow 1 (95th percentile 139.38 ms)
- Flow 2 (95th percentile 135.03 ms)
- Flow 3 (95th percentile 134.22 ms)
Run 5: Statistics of FillP-Sheep

Start at: 2019-04-24 11:10:05
End at: 2019-04-24 11:10:35
Local clock offset: -0.129 ms
Remote clock offset: 0.004 ms

# Below is generated by plot.py at 2019-04-24 12:37:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 316.96 Mbit/s
95th percentile per-packet one-way delay: 136.644 ms
Loss rate: 1.33%
-- Flow 1:
Average throughput: 41.94 Mbit/s
95th percentile per-packet one-way delay: 137.825 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 307.90 Mbit/s
95th percentile per-packet one-way delay: 136.837 ms
Loss rate: 1.00%
-- Flow 3:
Average throughput: 218.81 Mbit/s
95th percentile per-packet one-way delay: 134.710 ms
Loss rate: 3.01%
Run 5: Report of FillP-Sheep — Data Link
Run 1: Statistics of Indigo

Start at: 2019-04-24 08:36:13
End at: 2019-04-24 08:36:43
Local clock offset: 0.218 ms
Remote clock offset: 0.036 ms

# Below is generated by plot.py at 2019-04-24 12:37:08
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 311.87 Mbit/s
  95th percentile per-packet one-way delay: 134.562 ms
  Loss rate: 1.30%
-- Flow 1:
  Average throughput: 166.00 Mbit/s
  95th percentile per-packet one-way delay: 133.989 ms
  Loss rate: 0.84%
-- Flow 2:
  Average throughput: 149.45 Mbit/s
  95th percentile per-packet one-way delay: 134.415 ms
  Loss rate: 1.26%
-- Flow 3:
  Average throughput: 121.76 Mbit/s
  95th percentile per-packet one-way delay: 138.136 ms
  Loss rate: 3.20%
Run 1: Report of Indigo — Data Link
Run 2: Statistics of Indigo

End at: 2019-04-24 09:14:26
Local clock offset: -0.301 ms
Remote clock offset: 0.091 ms

# Below is generated by plot.py at 2019-04-24 12:37:08
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 300.16 Mbit/s
  95th percentile per-packet one-way delay: 133.477 ms
  Loss rate: 1.30%
-- Flow 1:
  Average throughput: 165.39 Mbit/s
  95th percentile per-packet one-way delay: 133.516 ms
  Loss rate: 0.81%
-- Flow 2:
  Average throughput: 148.39 Mbit/s
  95th percentile per-packet one-way delay: 133.216 ms
  Loss rate: 1.30%
-- Flow 3:
  Average throughput: 114.90 Mbit/s
  95th percentile per-packet one-way delay: 133.927 ms
  Loss rate: 3.41%
Run 2: Report of Indigo — Data Link

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

- **Flow 1 ingress (mean 165.25 Mbps)**
- **Flow 1 egress (mean 165.39 Mbps)**
- **Flow 2 ingress (mean 148.30 Mbps)**
- **Flow 2 egress (mean 148.39 Mbps)**
- **Flow 3 ingress (mean 115.69 Mbps)**
- **Flow 3 egress (mean 114.90 Mbps)**

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

- **Flow 1 (95th percentile 133.52 ms)**
- **Flow 2 (95th percentile 133.22 ms)**
- **Flow 3 (95th percentile 133.93 ms)**
Run 3: Statistics of Indigo

Start at: 2019-04-24 09:52:01
End at: 2019-04-24 09:52:31
Local clock offset: -0.13 ms
Remote clock offset: -0.011 ms

# Below is generated by plot.py at 2019-04-24 12:39:13
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 293.40 Mbit/s
  95th percentile per-packet one-way delay: 136.440 ms
  Loss rate: 1.32%
-- Flow 1:
  Average throughput: 156.81 Mbit/s
  95th percentile per-packet one-way delay: 138.779 ms
  Loss rate: 0.81%
-- Flow 2:
  Average throughput: 149.04 Mbit/s
  95th percentile per-packet one-way delay: 134.648 ms
  Loss rate: 1.33%
-- Flow 3:
  Average throughput: 118.49 Mbit/s
  95th percentile per-packet one-way delay: 142.045 ms
  Loss rate: 3.33%
Run 3: Report of Indigo — Data Link

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

**Throughput (Mbps):**
- Flow 1 ingress (mean 156.69 Mbps)
- Flow 1 egress (mean 150.81 Mbps)
- Flow 2 ingress (mean 149.02 Mbps)
- Flow 2 egress (mean 149.04 Mbps)
- Flow 3 ingress (mean 119.24 Mbps)
- Flow 3 egress (mean 118.49 Mbps)

**Per-packet one-way delay (ms):**
- Flow 1 (95th percentile 138.78 ms)
- Flow 2 (95th percentile 134.65 ms)
- Flow 3 (95th percentile 142.04 ms)
Run 4: Statistics of Indigo

End at: 2019-04-24 10:30:21
Local clock offset: -0.249 ms
Remote clock offset: 0.013 ms

# Below is generated by plot.py at 2019-04-24 12:40:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 292.54 Mbit/s
95th percentile per-packet one-way delay: 134.113 ms
Loss rate: 1.33%
-- Flow 1:
Average throughput: 155.54 Mbit/s
95th percentile per-packet one-way delay: 133.450 ms
Loss rate: 0.83%
-- Flow 2:
Average throughput: 151.28 Mbit/s
95th percentile per-packet one-way delay: 135.774 ms
Loss rate: 1.33%
-- Flow 3:
Average throughput: 116.64 Mbit/s
95th percentile per-packet one-way delay: 135.223 ms
Loss rate: 3.40%
Run 4: Report of Indigo — Data Link

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

Legend for Throughput Graph:
- Flow 1 ingress (mean 155.44 Mbit/s)
- Flow 1 egress (mean 155.54 Mbit/s)
- Flow 2 ingress (mean 151.25 Mbit/s)
- Flow 2 egress (mean 151.28 Mbit/s)
- Flow 3 ingress (mean 117.43 Mbit/s)
- Flow 3 egress (mean 116.64 Mbit/s)

Legend for Per-packet One-way Delay Graph:
- Flow 1 (95th percentile 133.45 ms)
- Flow 2 (95th percentile 135.77 ms)
- Flow 3 (95th percentile 135.22 ms)
Run 5: Statistics of Indigo

Start at: 2019-04-24 11:06:53
End at: 2019-04-24 11:07:23
Local clock offset: -0.04 ms
Remote clock offset: 0.39 ms

# Below is generated by plot.py at 2019-04-24 12:40:53
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 295.73 Mbit/s
  95th percentile per-packet one-way delay: 134.202 ms
  Loss rate: 1.30%
-- Flow 1:
  Average throughput: 154.16 Mbit/s
  95th percentile per-packet one-way delay: 133.617 ms
  Loss rate: 0.83%
-- Flow 2:
  Average throughput: 151.58 Mbit/s
  95th percentile per-packet one-way delay: 134.155 ms
  Loss rate: 1.29%
-- Flow 3:
  Average throughput: 130.19 Mbit/s
  95th percentile per-packet one-way delay: 136.846 ms
  Loss rate: 3.06%
Run 5: Report of Indigo — Data Link

![Graph of Throughput and Per-packet one-way delay](image-url)
Run 1: Statistics of Indigo-MusesC3

Start at: 2019-04-24 08:47:30
End at: 2019-04-24 08:48:00
Local clock offset: 0.374 ms
Remote clock offset: 0.065 ms

# Below is generated by plot.py at 2019-04-24 12:42:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 655.50 Mbit/s
95th percentile per-packet one-way delay: 158.839 ms
Loss rate: 1.37%
-- Flow 1:
Average throughput: 403.14 Mbit/s
95th percentile per-packet one-way delay: 165.655 ms
Loss rate: 0.73%
-- Flow 2:
Average throughput: 299.45 Mbit/s
95th percentile per-packet one-way delay: 139.014 ms
Loss rate: 1.24%
-- Flow 3:
Average throughput: 226.94 Mbit/s
95th percentile per-packet one-way delay: 134.052 ms
Loss rate: 5.83%
Run 1: Report of Indigo-MusesC3 — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 402.33 Mbps)
Flow 1 egress (mean 403.14 Mbps)
Flow 2 ingress (mean 298.84 Mbps)
Flow 2 egress (mean 299.45 Mbps)
Flow 3 ingress (mean 232.63 Mbps)
Flow 3 egress (mean 226.94 Mbps)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 165.66 ms)
Flow 2 (95th percentile 139.01 ms)
Flow 3 (95th percentile 134.05 ms)
Run 2: Statistics of Indigo-MusesC3

Start at: 2019-04-24 09:25:00
End at: 2019-04-24 09:25:30
Local clock offset: -0.382 ms
Remote clock offset: 0.036 ms

# Below is generated by plot.py at 2019-04-24 12:43:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 637.58 Mbit/s
95th percentile per-packet one-way delay: 136.445 ms
Loss rate: 1.18%
-- Flow 1:
Average throughput: 380.89 Mbit/s
95th percentile per-packet one-way delay: 137.337 ms
Loss rate: 0.74%
-- Flow 2:
Average throughput: 319.89 Mbit/s
95th percentile per-packet one-way delay: 134.883 ms
Loss rate: 0.82%
-- Flow 3:
Average throughput: 191.17 Mbit/s
95th percentile per-packet one-way delay: 134.152 ms
Loss rate: 5.68%
Run 2: Report of Indigo-MusesC3 — Data Link

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

**Throughput (Mbps):**
- Flow 1 ingress (mean 380.15 Mbps)
- Flow 1 egress (mean 380.89 Mbps)
- Flow 2 ingress (mean 317.94 Mbps)
- Flow 2 egress (mean 319.89 Mbps)
- Flow 3 ingress (mean 195.60 Mbps)
- Flow 3 egress (mean 191.17 Mbps)

**Per-packet one-way delay (ms):**
- Flow 1 (95th percentile 137.34 ms)
- Flow 2 (95th percentile 134.98 ms)
- Flow 3 (95th percentile 134.15 ms)
Run 3: Statistics of Indigo-MusesC3

Start at: 2019-04-24 10:03:26
End at: 2019-04-24 10:03:56
Local clock offset: 0.322 ms
Remote clock offset: 0.017 ms

# Below is generated by plot.py at 2019-04-24 12:45:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 648.05 Mbit/s
95th percentile per-packet one-way delay: 145.358 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 395.12 Mbit/s
95th percentile per-packet one-way delay: 148.084 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 309.77 Mbit/s
95th percentile per-packet one-way delay: 141.030 ms
Loss rate: 1.03%
-- Flow 3:
Average throughput: 204.58 Mbit/s
95th percentile per-packet one-way delay: 137.915 ms
Loss rate: 3.42%
Run 3: Report of Indigo-MusesC3 — Data Link

[Graph showing throughput and per-packet one-way delay over time for different flows.]
Run 4: Statistics of Indigo-MusesC3

Start at: 2019-04-24 10:40:42
End at: 2019-04-24 10:41:12
Local clock offset: -0.03 ms
Remote clock offset: 0.011 ms

# Below is generated by plot.py at 2019-04-24 12:47:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 653.58 Mbit/s
95th percentile per-packet one-way delay: 145.317 ms
Loss rate: 1.34%
-- Flow 1:
Average throughput: 403.65 Mbit/s
95th percentile per-packet one-way delay: 153.738 ms
Loss rate: 0.68%
-- Flow 2:
Average throughput: 299.24 Mbit/s
95th percentile per-packet one-way delay: 136.396 ms
Loss rate: 1.72%
-- Flow 3:
Average throughput: 224.87 Mbit/s
95th percentile per-packet one-way delay: 134.302 ms
Loss rate: 4.47%
Run 4: Report of Indigo-MusesC3 — Data Link

![Throughput Graph](image1)

![Per-packet Delay Graph](image2)
Run 5: Statistics of Indigo-MusesC3

Start at: 2019-04-24 11:17:47
End at: 2019-04-24 11:18:17
Local clock offset: -0.061 ms
Remote clock offset: 0.024 ms

# Below is generated by plot.py at 2019-04-24 12:48:44
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 633.87 Mbit/s
  95th percentile per-packet one-way delay: 136.674 ms
  Loss rate: 1.08%
-- Flow 1:
  Average throughput: 391.90 Mbit/s
  95th percentile per-packet one-way delay: 138.037 ms
  Loss rate: 0.79%
-- Flow 2:
  Average throughput: 281.28 Mbit/s
  95th percentile per-packet one-way delay: 135.165 ms
  Loss rate: 0.98%
-- Flow 3:
  Average throughput: 228.23 Mbit/s
  95th percentile per-packet one-way delay: 133.899 ms
  Loss rate: 3.15%
Run 5: Report of Indigo-MusesC3 — Data Link

- Flow 1 ingress (mean 391.33 Mbit/s)
- Flow 1 egress (mean 391.90 Mbit/s)
- Flow 2 ingress (mean 279.37 Mbit/s)
- Flow 2 egress (mean 281.28 Mbit/s)
- Flow 3 ingress (mean 227.72 Mbit/s)
- Flow 3 egress (mean 228.23 Mbit/s)

Per-packet one-way delay (ms)

Flow 1 (95th percentile 138.04 ms)
Flow 2 (95th percentile 135.16 ms)
Flow 3 (95th percentile 133.90 ms)
Run 1: Statistics of Indigo-MusesC5

Start at: 2019-04-24 08:49:27
End at: 2019-04-24 08:49:57
Local clock offset: -0.04 ms
Remote clock offset: 0.103 ms

# Below is generated by plot.py at 2019-04-24 12:49:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 559.75 Mbit/s
95th percentile per-packet one-way delay: 181.068 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 346.77 Mbit/s
95th percentile per-packet one-way delay: 185.975 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 300.01 Mbit/s
95th percentile per-packet one-way delay: 136.367 ms
Loss rate: 1.62%
-- Flow 3:
Average throughput: 82.82 Mbit/s
95th percentile per-packet one-way delay: 133.136 ms
Loss rate: 4.60%
Run 1: Report of Indigo-MusesC5 — Data Link
Run 2: Statistics of Indigo-MusesC5

Start at: 2019-04-24 09:26:55
Local clock offset: -0.147 ms
Remote clock offset: 0.023 ms

# Below is generated by plot.py at 2019-04-24 12:49:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 536.77 Mbit/s
95th percentile per-packet one-way delay: 186.646 ms
Loss rate: 1.44%
-- Flow 1:
Average throughput: 317.84 Mbit/s
95th percentile per-packet one-way delay: 210.623 ms
Loss rate: 1.12%
-- Flow 2:
Average throughput: 305.65 Mbit/s
95th percentile per-packet one-way delay: 137.456 ms
Loss rate: 1.53%
-- Flow 3:
Average throughput: 88.35 Mbit/s
95th percentile per-packet one-way delay: 133.276 ms
Loss rate: 4.99%
Run 2: Report of Indigo-MusesC5 — Data Link
Run 3: Statistics of Indigo-MusesC5

Start at: 2019-04-24 10:05:25
End at: 2019-04-24 10:05:55
Local clock offset: -0.285 ms
Remote clock offset: -0.426 ms

# Below is generated by plot.py at 2019-04-24 12:50:28
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 527.34 Mbit/s
  95th percentile per-packet one-way delay: 180.153 ms
  Loss rate: 1.01%
-- Flow 1:
  Average throughput: 335.84 Mbit/s
  95th percentile per-packet one-way delay: 189.214 ms
  Loss rate: 0.72%
-- Flow 2:
  Average throughput: 264.12 Mbit/s
  95th percentile per-packet one-way delay: 138.971 ms
  Loss rate: 1.04%
-- Flow 3:
  Average throughput: 82.53 Mbit/s
  95th percentile per-packet one-way delay: 133.503 ms
  Loss rate: 4.93%
Run 3: Report of Indigo-MusesC5 — Data Link

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

- **Flow 1 ingress (mean 335.02 Mbit/s)**
- **Flow 1 egress (mean 335.84 Mbit/s)**
- **Flow 2 ingress (mean 265.05 Mbit/s)**
- **Flow 2 egress (mean 264.12 Mbit/s)**
- **Flow 3 ingress (mean 83.98 Mbit/s)**
- **Flow 3 egress (mean 82.53 Mbit/s)**
Run 4: Statistics of Indigo-MusesC5

End at: 2019-04-24 10:43:09
Local clock offset: 0.274 ms
Remote clock offset: 0.005 ms

# Below is generated by plot.py at 2019-04-24 12:50:32
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 443.62 Mbit/s
  95th percentile per-packet one-way delay: 142.851 ms
  Loss rate: 1.25%
-- Flow 1:
  Average throughput: 242.46 Mbit/s
  95th percentile per-packet one-way delay: 146.108 ms
  Loss rate: 0.74%
-- Flow 2:
  Average throughput: 280.79 Mbit/s
  95th percentile per-packet one-way delay: 138.387 ms
  Loss rate: 1.45%
-- Flow 3:
  Average throughput: 81.66 Mbit/s
  95th percentile per-packet one-way delay: 133.754 ms
  Loss rate: 5.24%
Run 4: Report of Indigo-MusesC5 — Data Link
Run 5: Statistics of Indigo-MusesC5

Local clock offset: -0.263 ms
Remote clock offset: 0.044 ms

# Below is generated by plot.py at 2019-04-24 12:52:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 536.93 Mbit/s
95th percentile per-packet one-way delay: 183.301 ms
Loss rate: 1.00%
-- Flow 1:
Average throughput: 317.24 Mbit/s
95th percentile per-packet one-way delay: 192.658 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 309.34 Mbit/s
95th percentile per-packet one-way delay: 140.755 ms
Loss rate: 1.41%
-- Flow 3:
Average throughput: 83.37 Mbit/s
95th percentile per-packet one-way delay: 133.034 ms
Loss rate: 4.63%
Run 5: Report of Indigo-MusesC5 — Data Link

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

- Flow 1 ingress (mean 315.75 Mbit/s)
- Flow 1 egress (mean 317.24 Mbit/s)
- Flow 2 ingress (mean 309.23 Mbit/s)
- Flow 2 egress (mean 309.34 Mbit/s)
- Flow 3 ingress (mean 84.46 Mbit/s)
- Flow 3 egress (mean 83.37 Mbit/s)
Run 1: Statistics of Indigo-MusesD

Start at: 2019-04-24 08:34:21
End at: 2019-04-24 08:34:51
Local clock offset: -0.353 ms
Remote clock offset: 0.045 ms

# Below is generated by plot.py at 2019-04-24 12:55:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 571.49 Mbit/s
95th percentile per-packet one-way delay: 136.970 ms
Loss rate: 1.15%
-- Flow 1:
Average throughput: 349.14 Mbit/s
95th percentile per-packet one-way delay: 136.805 ms
Loss rate: 0.71%
-- Flow 2:
Average throughput: 311.81 Mbit/s
95th percentile per-packet one-way delay: 137.566 ms
Loss rate: 1.56%
-- Flow 3:
Average throughput: 80.43 Mbit/s
95th percentile per-packet one-way delay: 133.233 ms
Loss rate: 4.22%
Run 2: Statistics of Indigo-MusesD

Start at: 2019-04-24 09:12:02
End at: 2019-04-24 09:12:32
Local clock offset: -0.085 ms
Remote clock offset: 0.054 ms

# Below is generated by plot.py at 2019-04-24 12:58:16
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 611.54 Mbit/s
  95th percentile per-packet one-way delay: 138.970 ms
  Loss rate: 1.11%
-- Flow 1:
  Average throughput: 407.94 Mbit/s
  95th percentile per-packet one-way delay: 140.321 ms
  Loss rate: 0.63%
-- Flow 2:
  Average throughput: 289.15 Mbit/s
  95th percentile per-packet one-way delay: 135.351 ms
  Loss rate: 1.76%
-- Flow 3:
  Average throughput: 72.71 Mbit/s
  95th percentile per-packet one-way delay: 133.471 ms
  Loss rate: 4.94%
Run 2: Report of Indigo-MusesD — Data Link

![Graph showing throughput and packet delay](image-url)
Run 3: Statistics of Indigo-MusesD

Start at: 2019-04-24 09:50:07
End at: 2019-04-24 09:50:37
Local clock offset: -0.523 ms
Remote clock offset: 0.008 ms

# Below is generated by plot.py at 2019-04-24 12:59:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 602.75 Mbit/s
95th percentile per-packet one-way delay: 136.934 ms
Loss rate: 1.16%
-- Flow 1:
Average throughput: 378.35 Mbit/s
95th percentile per-packet one-way delay: 137.216 ms
Loss rate: 0.75%
-- Flow 2:
Average throughput: 316.74 Mbit/s
95th percentile per-packet one-way delay: 136.746 ms
Loss rate: 1.56%
-- Flow 3:
Average throughput: 81.51 Mbit/s
95th percentile per-packet one-way delay: 133.286 ms
Loss rate: 4.38%
Run 3: Report of Indigo-MusesD — Data Link

![Throughput Graph](image)

![Delay Graph](image)

- Flow 1 ingress (mean 377.67 Mbit/s)
- Flow 1 egress (mean 378.35 Mbit/s)
- Flow 2 ingress (mean 317.68 Mbit/s)
- Flow 2 egress (mean 316.74 Mbit/s)
- Flow 3 ingress (mean 82.31 Mbit/s)
- Flow 3 egress (mean 81.51 Mbit/s)

- Flow 1 (95th percentile 137.22 ms)
- Flow 2 (95th percentile 136.75 ms)
- Flow 3 (95th percentile 133.29 ms)
Run 4: Statistics of Indigo-MusesD

Local clock offset: 0.273 ms
Remote clock offset: 0.065 ms

# Below is generated by plot.py at 2019-04-24 12:59:48
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 611.75 Mbit/s
  95th percentile per-packet one-way delay: 159.932 ms
  Loss rate: 1.25%
-- Flow 1:
  Average throughput: 386.30 Mbit/s
  95th percentile per-packet one-way delay: 143.159 ms
  Loss rate: 0.90%
-- Flow 2:
  Average throughput: 320.17 Mbit/s
  95th percentile per-packet one-way delay: 204.128 ms
  Loss rate: 1.53%
-- Flow 3:
  Average throughput: 79.07 Mbit/s
  95th percentile per-packet one-way delay: 133.520 ms
  Loss rate: 4.77%
Run 4: Report of Indigo-MusesD — Data Link
Run 5: Statistics of Indigo-MusesD

Start at: 2019-04-24 11:04:56
End at: 2019-04-24 11:05:26
Local clock offset: -0.087 ms
Remote clock offset: -0.013 ms

# Below is generated by plot.py at 2019-04-24 13:00:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 626.45 Mbit/s
95th percentile per-packet one-way delay: 142.336 ms
Loss rate: 1.09%
-- Flow 1:
Average throughput: 411.73 Mbit/s
95th percentile per-packet one-way delay: 143.144 ms
Loss rate: 0.82%
-- Flow 2:
Average throughput: 302.69 Mbit/s
95th percentile per-packet one-way delay: 140.276 ms
Loss rate: 1.33%
-- Flow 3:
Average throughput: 77.48 Mbit/s
95th percentile per-packet one-way delay: 132.717 ms
Loss rate: 4.24%
Run 5: Report of Indigo-MusesD — Data Link
Run 1: Statistics of Indigo-MusesT

Start at: 2019-04-24 09:00:47
End at: 2019-04-24 09:01:17
Local clock offset: -0.059 ms
Remote clock offset: 0.069 ms

# Below is generated by plot.py at 2019-04-24 13:01:58
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 660.49 Mbit/s
  95th percentile per-packet one-way delay: 199.703 ms
  Loss rate: 1.45%
-- Flow 1:
  Average throughput: 427.35 Mbit/s
  95th percentile per-packet one-way delay: 205.605 ms
  Loss rate: 1.18%
-- Flow 2:
  Average throughput: 326.67 Mbit/s
  95th percentile per-packet one-way delay: 135.071 ms
  Loss rate: 1.68%
-- Flow 3:
  Average throughput: 86.47 Mbit/s
  95th percentile per-packet one-way delay: 133.279 ms
  Loss rate: 4.36%
Run 1: Report of Indigo-MusesT — Data Link
Run 2: Statistics of Indigo-MusesT

Start at: 2019-04-24 09:38:25
End at: 2019-04-24 09:38:55
Local clock offset: -0.101 ms
Remote clock offset: 0.015 ms

# Below is generated by plot.py at 2019-04-24 13:02:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 697.16 Mbit/s
95th percentile per-packet one-way delay: 212.814 ms
Loss rate: 1.62%
-- Flow 1:
Average throughput: 429.60 Mbit/s
95th percentile per-packet one-way delay: 220.701 ms
Loss rate: 1.19%
-- Flow 2:
Average throughput: 335.85 Mbit/s
95th percentile per-packet one-way delay: 145.775 ms
Loss rate: 1.62%
-- Flow 3:
Average throughput: 186.57 Mbit/s
95th percentile per-packet one-way delay: 136.098 ms
Loss rate: 5.14%
Run 2: Report of Indigo-MusesT — Data Link

![Throughput Graph](image1)

- **Flow 1 ingress (mean 430.64 Mbit/s)**
- **Flow 1 egress (mean 429.60 Mbit/s)**
- **Flow 2 ingress (mean 336.53 Mbit/s)**
- **Flow 2 egress (mean 335.05 Mbit/s)**
- **Flow 3 ingress (mean 189.96 Mbit/s)**
- **Flow 3 egress (mean 186.57 Mbit/s)**

![Delay Graph](image2)

- **Flow 1 (95th percentile 220.70 ms)**
- **Flow 2 (95th percentile 145.78 ms)**
- **Flow 3 (95th percentile 136.10 ms)**

98
Run 3: Statistics of Indigo-MusesT

Start at: 2019-04-24 10:16:42
End at: 2019-04-24 10:17:12
Local clock offset: -0.531 ms
Remote clock offset: -0.039 ms

# Below is generated by plot.py at 2019-04-24 13:04:27
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 649.31 Mbit/s
  95th percentile per-packet one-way delay: 140.171 ms
  Loss rate: 1.08%
-- Flow 1:
  Average throughput: 418.11 Mbit/s
  95th percentile per-packet one-way delay: 140.629 ms
  Loss rate: 0.76%
-- Flow 2:
  Average throughput: 322.12 Mbit/s
  95th percentile per-packet one-way delay: 140.259 ms
  Loss rate: 1.33%
-- Flow 3:
  Average throughput: 92.44 Mbit/s
  95th percentile per-packet one-way delay: 132.977 ms
  Loss rate: 4.37%
Run 3: Report of Indigo-MusesT — Data Link

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

- Flow 1 ingress (mean 417.36 Mbit/s) vs Flow 1 egress (mean 418.11 Mbit/s)
- Flow 2 ingress (mean 321.73 Mbit/s) vs Flow 2 egress (mean 322.32 Mbit/s)
- Flow 3 ingress (mean 93.31 Mbit/s) vs Flow 3 egress (mean 92.44 Mbit/s)
Run 4: Statistics of Indigo-MusesT

End at: 2019-04-24 10:54:21
Local clock offset: -0.062 ms
Remote clock offset: 0.014 ms

# Below is generated by plot.py at 2019-04-24 13:07:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 672.95 Mbit/s
95th percentile per-packet one-way delay: 157.427 ms
Loss rate: 1.13%
-- Flow 1:
Average throughput: 428.08 Mbit/s
95th percentile per-packet one-way delay: 163.733 ms
Loss rate: 0.70%
-- Flow 2:
Average throughput: 343.57 Mbit/s
95th percentile per-packet one-way delay: 145.308 ms
Loss rate: 1.62%
-- Flow 3:
Average throughput: 92.28 Mbit/s
95th percentile per-packet one-way delay: 132.626 ms
Loss rate: 4.08%
Run 5: Statistics of Indigo-MusesT

Start at: 2019-04-24 11:31:01
End at: 2019-04-24 11:31:31
Local clock offset: -0.402 ms
Remote clock offset: -0.435 ms

# Below is generated by plot.py at 2019-04-24 13:09:05
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 675.01 Mbit/s
  95th percentile per-packet one-way delay: 157.937 ms
  Loss rate: 1.12%
-- Flow 1:
  Average throughput: 431.75 Mbit/s
  95th percentile per-packet one-way delay: 157.414 ms
  Loss rate: 0.75%
-- Flow 2:
  Average throughput: 341.24 Mbit/s
  95th percentile per-packet one-way delay: 160.035 ms
  Loss rate: 1.49%
-- Flow 3:
  Average throughput: 90.76 Mbit/s
  95th percentile per-packet one-way delay: 133.509 ms
  Loss rate: 4.29%
Run 5: Report of Indigo-MusesT — Data Link

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

- Flow 1 ingress (mean 430.94 Mbps)
- Flow 1 egress (mean 431.75 Mbps)
- Flow 2 ingress (mean 341.34 Mbps)
- Flow 2 egress (mean 341.24 Mbps)
- Flow 3 ingress (mean 91.64 Mbps)
- Flow 3 egress (mean 90.76 Mbps)

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

- Flow 1 (95th percentile 157.41 ms)
- Flow 2 (95th percentile 160.03 ms)
- Flow 3 (95th percentile 133.51 ms)
Run 1: Statistics of LEDBAT

Start at: 2019-04-24 08:43:05
End at: 2019-04-24 08:43:35
Local clock offset: 0.344 ms
Remote clock offset: 0.056 ms

# Below is generated by plot.py at 2019-04-24 13:09:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.02 Mbit/s
95th percentile per-packet one-way delay: 133.967 ms
Loss rate: 2.29%
-- Flow 1:
Average throughput: 5.24 Mbit/s
95th percentile per-packet one-way delay: 133.739 ms
Loss rate: 1.78%
-- Flow 2:
Average throughput: 3.43 Mbit/s
95th percentile per-packet one-way delay: 134.158 ms
Loss rate: 2.69%
-- Flow 3:
Average throughput: 1.66 Mbit/s
95th percentile per-packet one-way delay: 133.952 ms
Loss rate: 5.42%
Run 2: Statistics of LEDBAT

Start at: 2019-04-24 09:20:28
End at: 2019-04-24 09:20:58
Local clock offset: ~0.318 ms
Remote clock offset: 0.007 ms

# Below is generated by plot.py at 2019-04-24 13:09:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.01 Mbit/s
95th percentile per-packet one-way delay: 133.357 ms
Loss rate: 2.30%
-- Flow 1:
Average throughput: 5.24 Mbit/s
95th percentile per-packet one-way delay: 133.313 ms
Loss rate: 1.79%
-- Flow 2:
Average throughput: 3.42 Mbit/s
95th percentile per-packet one-way delay: 133.441 ms
Loss rate: 2.70%
-- Flow 3:
Average throughput: 1.66 Mbit/s
95th percentile per-packet one-way delay: 133.266 ms
Loss rate: 5.41%
Run 2: Report of LEDBAT — Data Link

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**Throughput (Mbps)**

- **Flow 1 ingress** (mean 5.29 Mbps)
- **Flow 1 egress** (mean 5.24 Mbps)
- **Flow 2 ingress** (mean 3.47 Mbps)
- **Flow 2 egress** (mean 3.42 Mbps)
- **Flow 3 ingress** (mean 1.71 Mbps)
- **Flow 3 egress** (mean 1.66 Mbps)

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

- **Flow 1 (95th percentile 133.31 ms)**
- **Flow 2 (95th percentile 133.44 ms)**
- **Flow 3 (95th percentile 133.27 ms)**

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108
Run 3: Statistics of LEDBAT

Start at: 2019-04-24 09:59:03
End at: 2019-04-24 09:59:33
Local clock offset: 0.308 ms
Remote clock offset: -0.016 ms

# Below is generated by plot.py at 2019-04-24 13:09:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.24 Mbit/s
95th percentile per-packet one-way delay: 133.753 ms
Loss rate: 2.05%
-- Flow 1:
Average throughput: 4.47 Mbit/s
95th percentile per-packet one-way delay: 133.421 ms
Loss rate: 1.29%
-- Flow 2:
Average throughput: 3.42 Mbit/s
95th percentile per-packet one-way delay: 134.275 ms
Loss rate: 2.71%
-- Flow 3:
Average throughput: 1.67 Mbit/s
95th percentile per-packet one-way delay: 133.826 ms
Loss rate: 5.40%
Run 3: Report of LEDBAT — Data Link

![Throughput vs Time Graph](image1)

![Packet one way delay vs Time Graph](image2)

110
Run 4: Statistics of LEDBAT

End at: 2019-04-24 10:36:50
Local clock offset: 0.094 ms
Remote clock offset: 0.035 ms

# Below is generated by plot.py at 2019-04-24 13:09:05
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 8.02 Mbit/s
  95th percentile per-packet one-way delay: 133.696 ms
  Loss rate: 2.30%
-- Flow 1:
  Average throughput: 5.23 Mbit/s
  95th percentile per-packet one-way delay: 133.691 ms
  Loss rate: 1.79%
-- Flow 2:
  Average throughput: 3.42 Mbit/s
  95th percentile per-packet one-way delay: 133.744 ms
  Loss rate: 2.70%
-- Flow 3:
  Average throughput: 1.66 Mbit/s
  95th percentile per-packet one-way delay: 133.564 ms
  Loss rate: 5.42%
Run 4: Report of LEDBAT — Data Link

![Throughput Graph]

- Flow 1 ingress (mean 5.28 Mbit/s)
- Flow 1 egress (mean 5.23 Mbit/s)
- Flow 2 ingress (mean 3.46 Mbit/s)
- Flow 2 egress (mean 3.42 Mbit/s)
- Flow 3 ingress (mean 1.71 Mbit/s)
- Flow 3 egress (mean 1.66 Mbit/s)

![Packet Delay Graph]

- Flow 1 (95th percentile 133.69 ms)
- Flow 2 (95th percentile 133.74 ms)
- Flow 3 (95th percentile 133.56 ms)
Run 5: Statistics of LEDBAT

Local clock offset: 0.145 ms
Remote clock offset: 0.009 ms

# Below is generated by plot.py at 2019-04-24 13:09:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.02 Mbit/s
95th percentile per-packet one-way delay: 133.889 ms
Loss rate: 2.30%
-- Flow 1:
Average throughput: 5.23 Mbit/s
95th percentile per-packet one-way delay: 133.333 ms
Loss rate: 1.79%
-- Flow 2:
Average throughput: 3.42 Mbit/s
95th percentile per-packet one-way delay: 134.109 ms
Loss rate: 2.70%
-- Flow 3:
Average throughput: 1.67 Mbit/s
95th percentile per-packet one-way delay: 133.454 ms
Loss rate: 5.40%
Run 5: Report of LEDBAT — Data Link

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

- **Flow 1 ingress** (mean 5.28 Mbps)
- **Flow 1 egress** (mean 5.23 Mbps)
- **Flow 2 ingress** (mean 3.47 Mbps)
- **Flow 2 egress** (mean 3.42 Mbps)
- **Flow 3 ingress** (mean 1.72 Mbps)
- **Flow 3 egress** (mean 1.67 Mbps)

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

- **Flow 1 (95th percentile 133.33 ms)**
- **Flow 2 (95th percentile 134.11 ms)**
- **Flow 3 (95th percentile 133.45 ms)**
Run 1: Statistics of PCC-Allegro

Start at: 2019-04-24 09:06:49
End at: 2019-04-24 09:07:19
Local clock offset: -0.014 ms
Remote clock offset: 0.058 ms

# Below is generated by plot.py at 2019-04-24 13:18:50
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 550.03 Mbit/s
  95th percentile per-packet one-way delay: 236.012 ms
  Loss rate: 3.13%
-- Flow 1:
  Average throughput: 310.66 Mbit/s
  95th percentile per-packet one-way delay: 233.563 ms
  Loss rate: 1.92%
-- Flow 2:
  Average throughput: 252.90 Mbit/s
  95th percentile per-packet one-way delay: 248.499 ms
  Loss rate: 4.77%
-- Flow 3:
  Average throughput: 223.09 Mbit/s
  95th percentile per-packet one-way delay: 245.564 ms
  Loss rate: 4.36%
Run 1: Report of PCC-Allegro — Data Link

**Graph 1:**
- **Throughput (Mbps):**
- **Time (s):**
- **Legend:**
  - Flow 1 ingress (mean 313.92 Mbps)
  - Flow 1 egress (mean 310.66 Mbps)
  - Flow 2 ingress (mean 261.99 Mbps)
  - Flow 2 egress (mean 252.90 Mbps)
  - Flow 3 ingress (mean 226.95 Mbps)
  - Flow 3 egress (mean 223.09 Mbps)

**Graph 2:**
- **Per-packet one way delay (ms):**
- **Time (s):**
- **Legend:**
  - Flow 1 (95th percentile 233.56 ms)
  - Flow 2 (95th percentile 248.50 ms)
  - Flow 3 (95th percentile 245.56 ms)
Run 2: Statistics of PCC-Allegro

Start at: 2019-04-24 09:44:38
End at: 2019-04-24 09:45:08
Local clock offset: -0.137 ms
Remote clock offset: 0.021 ms

# Below is generated by plot.py at 2019-04-24 13:20:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 605.04 Mbit/s
95th percentile per-packet one-way delay: 262.678 ms
Loss rate: 4.61%
-- Flow 1:
Average throughput: 317.86 Mbit/s
95th percentile per-packet one-way delay: 234.406 ms
Loss rate: 1.84%
-- Flow 2:
Average throughput: 323.63 Mbit/s
95th percentile per-packet one-way delay: 274.979 ms
Loss rate: 8.78%
-- Flow 3:
Average throughput: 225.83 Mbit/s
95th percentile per-packet one-way delay: 200.151 ms
Loss rate: 3.54%
Run 2: Report of PCC-Allegro — Data Link

![Graph 1: Throughput vs Time]

![Graph 2: Packet Delay vs Time]

- **Flow 1 ingress** (mean 320.94 Mbit/s)
- **Flow 1 egress** (mean 317.86 Mbit/s)
- **Flow 2 ingress** (mean 350.02 Mbit/s)
- **Flow 2 egress** (mean 323.63 Mbit/s)
- **Flow 3 ingress** (mean 227.79 Mbit/s)
- **Flow 3 egress** (mean 225.63 Mbit/s)

- **Flow 1 (95th percentile 234.41 ms)**
- **Flow 2 (95th percentile 274.98 ms)**
- **Flow 3 (95th percentile 200.15 ms)**
Run 3: Statistics of PCC-Allegro

Local clock offset: 0.166 ms
Remote clock offset: 0.05 ms

# Below is generated by plot.py at 2019-04-24 13:20:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 557.90 Mbit/s
95th percentile per-packet one-way delay: 177.860 ms
Loss rate: 2.00%
-- Flow 1:
Average throughput: 307.56 Mbit/s
95th percentile per-packet one-way delay: 160.565 ms
Loss rate: 1.18%
-- Flow 2:
Average throughput: 269.14 Mbit/s
95th percentile per-packet one-way delay: 212.120 ms
Loss rate: 2.45%
-- Flow 3:
Average throughput: 223.83 Mbit/s
95th percentile per-packet one-way delay: 253.564 ms
Loss rate: 4.27%
Run 3: Report of PCC-Allegro — Data Link

![Graph showing network performance metrics and throughput values for different flows.]
Run 4: Statistics of PCC-Allegro

Start at: 2019-04-24 10:59:34
End at: 2019-04-24 11:00:04
Local clock offset: -0.451 ms
Remote clock offset: 0.029 ms

# Below is generated by plot.py at 2019-04-24 13:23:10
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 606.32 Mbit/s
  95th percentile per-packet one-way delay: 248.970 ms
  Loss rate: 2.90%
-- Flow 1:
  Average throughput: 354.83 Mbit/s
  95th percentile per-packet one-way delay: 254.911 ms
  Loss rate: 2.96%
-- Flow 2:
  Average throughput: 270.22 Mbit/s
  95th percentile per-packet one-way delay: 213.076 ms
  Loss rate: 2.64%
-- Flow 3:
  Average throughput: 224.63 Mbit/s
  95th percentile per-packet one-way delay: 216.049 ms
  Loss rate: 3.22%
Run 4: Report of PCC-Allegro — Data Link
Run 5: Statistics of PCC-Allegro

Start at: 2019-04-24 11:37:00
End at: 2019-04-24 11:37:30
Local clock offset: 0.393 ms
Remote clock offset: -0.091 ms

# Below is generated by plot.py at 2019-04-24 13:24:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 610.95 Mbit/s
95th percentile per-packet one-way delay: 258.626 ms
Loss rate: 3.65%
-- Flow 1:
Average throughput: 375.40 Mbit/s
95th percentile per-packet one-way delay: 261.422 ms
Loss rate: 4.45%
-- Flow 2:
Average throughput: 248.11 Mbit/s
95th percentile per-packet one-way delay: 182.791 ms
Loss rate: 1.49%
-- Flow 3:
Average throughput: 221.53 Mbit/s
95th percentile per-packet one-way delay: 272.604 ms
Loss rate: 4.27%
Run 5: Report of PCC-Allegro — Data Link

Graph 1: Throughput (Mbps)
- Flow 1 ingress (mean 389.39 Mbps)
- Flow 1 egress (mean 375.40 Mbps)
- Flow 2 ingress (mean 248.50 Mbps)
- Flow 2 egress (mean 248.11 Mbps)
- Flow 3 ingress (mean 225.27 Mbps)
- Flow 3 egress (mean 221.53 Mbps)

Graph 2: Per-packet latency (delay ms)
- Flow 1 (95th percentile 261.42 ms)
- Flow 2 (95th percentile 182.79 ms)
- Flow 3 (95th percentile 272.60 ms)
Run 1: Statistics of PCC-Expr

Start at: 2019-04-24 08:57:30
End at: 2019-04-24 08:58:00
Local clock offset: 0.097 ms
Remote clock offset: 0.071 ms

# Below is generated by plot.py at 2019-04-24 13:24:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 363.10 Mbit/s
95th percentile per-packet one-way delay: 147.845 ms
Loss rate: 1.56%
-- Flow 1:
Average throughput: 206.55 Mbit/s
95th percentile per-packet one-way delay: 153.395 ms
Loss rate: 1.09%
-- Flow 2:
Average throughput: 165.69 Mbit/s
95th percentile per-packet one-way delay: 134.385 ms
Loss rate: 1.56%
-- Flow 3:
Average throughput: 144.51 Mbit/s
95th percentile per-packet one-way delay: 135.346 ms
Loss rate: 3.55%
Run 1: Report of PCC-Expr — Data Link

![Throughput Graph]

- Flow 1 ingress (mean 206.98 Mbit/s)
- Flow 1 egress (mean 206.55 Mbit/s)
- Flow 2 ingress (mean 166.07 Mbit/s)
- Flow 2 egress (mean 165.69 Mbit/s)
- Flow 3 ingress (mean 145.78 Mbit/s)
- Flow 3 egress (mean 144.51 Mbit/s)

![Packet Delay Graph]

- Flow 1 (95th percentile 153.40 ms)
- Flow 2 (95th percentile 134.38 ms)
- Flow 3 (95th percentile 135.35 ms)
Run 2: Statistics of PCC-Expr

Start at: 2019-04-24 09:35:06
End at: 2019-04-24 09:35:36
Local clock offset: -0.387 ms
Remote clock offset: -0.01 ms

# Below is generated by plot.py at 2019-04-24 13:24:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 351.69 Mbit/s
95th percentile per-packet one-way delay: 136.492 ms
Loss rate: 1.52%
-- Flow 1:
Average throughput: 194.47 Mbit/s
95th percentile per-packet one-way delay: 138.235 ms
Loss rate: 1.08%
-- Flow 2:
Average throughput: 169.93 Mbit/s
95th percentile per-packet one-way delay: 133.184 ms
Loss rate: 1.52%
-- Flow 3:
Average throughput: 138.14 Mbit/s
95th percentile per-packet one-way delay: 134.006 ms
Loss rate: 3.36%
Run 2: Report of PCC-Expr — Data Link
Run 3: Statistics of PCC-Expr

Local clock offset: -0.187 ms
Remote clock offset: 0.018 ms

# Below is generated by plot.py at 2019-04-24 13:24:34
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 404.49 Mbit/s
  95th percentile per-packet one-way delay: 233.101 ms
  Loss rate: 2.05%
-- Flow 1:
  Average throughput: 248.94 Mbit/s
  95th percentile per-packet one-way delay: 239.911 ms
  Loss rate: 1.95%
-- Flow 2:
  Average throughput: 167.10 Mbit/s
  95th percentile per-packet one-way delay: 133.988 ms
  Loss rate: 1.66%
-- Flow 3:
  Average throughput: 138.71 Mbit/s
  95th percentile per-packet one-way delay: 137.278 ms
  Loss rate: 3.49%
Run 3: Report of PCC-Expr — Data Link

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

- **Flow 1 ingress (mean 251.63 Mbit/s)**
- **Flow 1 egress (mean 248.94 Mbit/s)**
- **Flow 2 ingress (mean 167.64 Mbit/s)**
- **Flow 2 egress (mean 167.10 Mbit/s)**
- **Flow 3 ingress (mean 139.85 Mbit/s)**
- **Flow 3 egress (mean 138.71 Mbit/s)**

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

- **Flow 1 (95th percentile 239.91 ms)**
- **Flow 2 (95th percentile 133.99 ms)**
- **Flow 3 (95th percentile 137.28 ms)**
Run 4: Statistics of PCC-Expr

End at: 2019-04-24 10:50:59
Local clock offset: -0.37 ms
Remote clock offset: 0.003 ms

# Below is generated by plot.py at 2019-04-24 13:30:10
# Datalink statistics
-- Total of 3 flows:
   Average throughput: 414.49 Mbit/s
   95th percentile per-packet one-way delay: 200.947 ms
   Loss rate: 1.62%
-- Flow 1:
   Average throughput: 249.51 Mbit/s
   95th percentile per-packet one-way delay: 212.904 ms
   Loss rate: 1.25%
-- Flow 2:
   Average throughput: 181.63 Mbit/s
   95th percentile per-packet one-way delay: 136.975 ms
   Loss rate: 1.62%
-- Flow 3:
   Average throughput: 138.10 Mbit/s
   95th percentile per-packet one-way delay: 137.058 ms
   Loss rate: 3.69%
Run 4: Report of PCC-Expr — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 250.43 Mbit/s)
Flow 1 egress (mean 249.51 Mbit/s)
Flow 2 ingress (mean 182.14 Mbit/s)
Flow 2 egress (mean 181.63 Mbit/s)
Flow 3 ingress (mean 139.49 Mbit/s)
Flow 3 egress (mean 138.10 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 212.90 ms)
Flow 2 (95th percentile 136.97 ms)
Flow 3 (95th percentile 137.06 ms)
Run 5: Statistics of PCC-Expr

End at: 2019-04-24 11:28:12
Local clock offset: 0.106 ms
Remote clock offset: -0.005 ms

# Below is generated by plot.py at 2019-04-24 13:31:48
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 389.25 Mbit/s
  95th percentile per-packet one-way delay: 225.113 ms
  Loss rate: 1.71%
-- Flow 1:
  Average throughput: 256.78 Mbit/s
  95th percentile per-packet one-way delay: 231.644 ms
  Loss rate: 1.59%
-- Flow 2:
  Average throughput: 163.26 Mbit/s
  95th percentile per-packet one-way delay: 147.781 ms
  Loss rate: 1.61%
-- Flow 3:
  Average throughput: 75.27 Mbit/s
  95th percentile per-packet one-way delay: 134.008 ms
  Loss rate: 3.43%
Run 5: Report of PCC-Expr — Data Link

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

- Flow 1 ingress (mean 258.60 Mbit/s)
- Flow 1 egress (mean 256.78 Mbit/s)
- Flow 2 ingress (mean 163.69 Mbit/s)
- Flow 2 egress (mean 163.26 Mbit/s)
- Flow 3 ingress (mean 75.64 Mbit/s)
- Flow 3 egress (mean 75.27 Mbit/s)
Run 1: Statistics of QUIC Cubic

Start at: 2019-04-24 08:44:25
End at: 2019-04-24 08:44:55
Local clock offset: 0.134 ms
Remote clock offset: 0.012 ms

# Below is generated by plot.py at 2019-04-24 13:31:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 99.64 Mbit/s
95th percentile per-packet one-way delay: 133.268 ms
Loss rate: 1.56%
-- Flow 1:
Average throughput: 54.20 Mbit/s
95th percentile per-packet one-way delay: 133.287 ms
Loss rate: 1.41%
-- Flow 2:
Average throughput: 48.70 Mbit/s
95th percentile per-packet one-way delay: 132.539 ms
Loss rate: 2.10%
-- Flow 3:
Average throughput: 34.29 Mbit/s
95th percentile per-packet one-way delay: 133.081 ms
Loss rate: 0.63%
Run 1: Report of QUIC Cubic — Data Link
Run 2: Statistics of QUIC Cubic

End at: 2019-04-24 09:22:18
Local clock offset: 0.11 ms
Remote clock offset: -0.31 ms

# Below is generated by plot.py at 2019-04-24 13:31:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.24 Mbit/s
95th percentile per-packet one-way delay: 133.659 ms
Loss rate: 1.48%
-- Flow 1:
Average throughput: 58.66 Mbit/s
95th percentile per-packet one-way delay: 133.673 ms
Loss rate: 1.20%
-- Flow 2:
Average throughput: 38.53 Mbit/s
95th percentile per-packet one-way delay: 132.946 ms
Loss rate: 2.40%
-- Flow 3:
Average throughput: 34.08 Mbit/s
95th percentile per-packet one-way delay: 133.394 ms
Loss rate: 0.78%
Run 2: Report of QUIC Cubic — Data Link

![Graph 1](image1)

![Graph 2](image2)

138
Run 3: Statistics of QUIC Cubic

Start at: 2019-04-24 10:00:23
End at: 2019-04-24 10:00:53
Local clock offset: -0.117 ms
Remote clock offset: -0.013 ms

# Below is generated by plot.py at 2019-04-24 13:31:48
# Datalink statistics
  -- Total of 3 flows:
  Average throughput: 95.55 Mbit/s
  95th percentile per-packet one-way delay: 132.904 ms
  Loss rate: 1.93%
  -- Flow 1:
  Average throughput: 48.10 Mbit/s
  95th percentile per-packet one-way delay: 132.917 ms
  Loss rate: 1.47%
  -- Flow 2:
  Average throughput: 43.97 Mbit/s
  95th percentile per-packet one-way delay: 132.881 ms
  Loss rate: 2.05%
  -- Flow 3:
  Average throughput: 56.46 Mbit/s
  95th percentile per-packet one-way delay: 132.837 ms
  Loss rate: 2.93%
Run 3: Report of QUIC Cubic — Data Link
Run 4: Statistics of QUIC Cubic

Start at: 2019-04-24 10:37:40
End at: 2019-04-24 10:38:10
Local clock offset: -0.502 ms
Remote clock offset: 0.04 ms

# Below is generated by plot.py at 2019-04-24 13:31:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 106.25 Mbit/s
95th percentile per-packet one-way delay: 132.350 ms
Loss rate: 1.87%
-- Flow 1:
Average throughput: 57.18 Mbit/s
95th percentile per-packet one-way delay: 132.302 ms
Loss rate: 1.05%
-- Flow 2:
Average throughput: 53.90 Mbit/s
95th percentile per-packet one-way delay: 132.371 ms
Loss rate: 1.93%
-- Flow 3:
Average throughput: 41.10 Mbit/s
95th percentile per-packet one-way delay: 131.631 ms
Loss rate: 5.06%
Run 4: Report of QUIC Cubic — Data Link
Run 5: Statistics of QUIC Cubic

End at: 2019-04-24 11:15:11
Local clock offset: -0.097 ms
Remote clock offset: 0.028 ms

# Below is generated by plot.py at 2019-04-24 13:31:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 103.26 Mbit/s
95th percentile per-packet one-way delay: 133.111 ms
Loss rate: 1.26%
-- Flow 1:
Average throughput: 60.33 Mbit/s
95th percentile per-packet one-way delay: 133.129 ms
Loss rate: 0.98%
-- Flow 2:
Average throughput: 48.10 Mbit/s
95th percentile per-packet one-way delay: 132.953 ms
Loss rate: 2.10%
-- Flow 3:
Average throughput: 34.75 Mbit/s
95th percentile per-packet one-way delay: 132.873 ms
Loss rate: 0.35%
Run 5: Report of QUIC Cubic — Data Link
Run 1: Statistics of SCReAM

Start at: 2019-04-24 09:08:52
End at: 2019-04-24 09:09:22
Local clock offset: -0.246 ms
Remote clock offset: 0.421 ms

# Below is generated by plot.py at 2019-04-24 13:31:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.32 Mbit/s
95th percentile per-packet one-way delay: 132.719 ms
Loss rate: 1.43%
-- Flow 1:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 132.741 ms
Loss rate: 0.88%
-- Flow 2:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 131.963 ms
Loss rate: 1.39%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 132.476 ms
Loss rate: 2.60%
Run 1: Report of SCReAM — Data Link

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

- Flow 1 ingress (mean 0.15 Mbit/s)
- Flow 1 egress (mean 0.15 Mbit/s)
- Flow 2 ingress (mean 0.15 Mbit/s)
- Flow 2 egress (mean 0.15 Mbit/s)
- Flow 3 ingress (mean 0.22 Mbit/s)
- Flow 3 egress (mean 0.22 Mbit/s)

![Graph showing 95th percentile delay for different flows](image)

- Flow 1 (95th percentile 132.74 ms)
- Flow 2 (95th percentile 131.96 ms)
- Flow 3 (95th percentile 132.48 ms)
Run 2: Statistics of SCReAM

End at: 2019-04-24 09:47:18
Local clock offset: -0.57 ms
Remote clock offset: 0.018 ms

# Below is generated by plot.py at 2019-04-24 13:31:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.30 Mbit/s
  95th percentile per-packet one-way delay: 132.121 ms
  Loss rate: 1.32%
-- Flow 1:
  Average throughput: 0.15 Mbit/s
  95th percentile per-packet one-way delay: 132.127 ms
  Loss rate: 0.88%
-- Flow 2:
  Average throughput: 0.15 Mbit/s
  95th percentile per-packet one-way delay: 131.703 ms
  Loss rate: 1.39%
-- Flow 3:
  Average throughput: 0.16 Mbit/s
  95th percentile per-packet one-way delay: 132.147 ms
  Loss rate: 2.44%
Run 2: Report of SCReAM — Data Link
Run 3: Statistics of SCReAM

Local clock offset: -0.075 ms
Remote clock offset: -0.007 ms

# Below is generated by plot.py at 2019-04-24 13:31:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.34 Mbit/s
95th percentile per-packet one-way delay: 133.214 ms
Loss rate: 1.35%
-- Flow 1:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 133.068 ms
Loss rate: 0.88%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 132.942 ms
Loss rate: 1.44%
-- Flow 3:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 133.271 ms
Loss rate: 2.44%
Run 3: Report of SCReAM — Data Link

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

- **Throughput (Mbps)**: X-axis
- **Time (s)**: Y-axis
- Lines represent:
  - Flow 1 ingress (mean 0.15 Mbps)
  - Flow 1 egress (mean 0.15 Mbps)
  - Flow 2 ingress (mean 0.21 Mbps)
  - Flow 2 egress (mean 0.21 Mbps)
  - Flow 3 ingress (mean 0.19 Mbps)
  - Flow 3 egress (mean 0.16 Mbps)

![Graph 2: Delay vs. Time](image)

- **Perceived one-way delay (ms)**: X-axis
- **Time (s)**: Y-axis
- Points represent:
  - Flow 1 (95th percentile 133.07 ms)
  - Flow 2 (95th percentile 132.94 ms)
  - Flow 3 (95th percentile 131.27 ms)
Run 4: Statistics of SCReAM

Start at: 2019-04-24 11:01:42
End at: 2019-04-24 11:02:12
Local clock offset: -0.096 ms
Remote clock offset: 0.026 ms

# Below is generated by plot.py at 2019-04-24 13:31:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.30 Mbit/s
  95th percentile per-packet one-way delay: 133.193 ms
  Loss rate: 1.32%
-- Flow 1:
  Average throughput: 0.15 Mbit/s
  95th percentile per-packet one-way delay: 133.214 ms
  Loss rate: 0.88%
-- Flow 2:
  Average throughput: 0.15 Mbit/s
  95th percentile per-packet one-way delay: 133.020 ms
  Loss rate: 1.39%
-- Flow 3:
  Average throughput: 0.16 Mbit/s
  95th percentile per-packet one-way delay: 132.524 ms
  Loss rate: 2.45%
Run 4: Report of SCReAM — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 0.15 Mbps)  Flow 1 egress (mean 0.15 Mbps)
Flow 2 ingress (mean 0.15 Mbps)  Flow 2 egress (mean 0.15 Mbps)
Flow 3 ingress (mean 0.16 Mbps)  Flow 3 egress (mean 0.16 Mbps)

Packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 133.21 ms)  Flow 2 (95th percentile 133.02 ms)  Flow 3 (95th percentile 132.52 ms)
Run 5: Statistics of SCReAM

Start at: 2019-04-24 11:39:08
Local clock offset: -0.135 ms
Remote clock offset: -0.06 ms

# Below is generated by plot.py at 2019-04-24 13:31:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.36 Mbit/s
  95th percentile per-packet one-way delay: 133.080 ms
  Loss rate: 1.25%
-- Flow 1:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 132.370 ms
  Loss rate: 0.90%
-- Flow 2:
  Average throughput: 0.15 Mbit/s
  95th percentile per-packet one-way delay: 132.861 ms
  Loss rate: 1.39%
-- Flow 3:
  Average throughput: 0.16 Mbit/s
  95th percentile per-packet one-way delay: 133.140 ms
  Loss rate: 2.45%
Run 5: Report of SCReAM — Data Link

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

- **Flow 1 ingress** (mean 0.21 Mbit/s)
- **Flow 1 egress** (mean 0.21 Mbit/s)
- **Flow 2 ingress** (mean 0.15 Mbit/s)
- **Flow 2 egress** (mean 0.15 Mbit/s)
- **Flow 3 ingress** (mean 0.16 Mbit/s)
- **Flow 3 egress** (mean 0.16 Mbit/s)

- **Flow 1 (95th percentile 132.37 ms)**
- **Flow 2 (95th percentile 132.86 ms)**
- **Flow 3 (95th percentile 133.14 ms)**
Run 1: Statistics of Sprout

Start at: 2019-04-24 08:38:05
End at: 2019-04-24 08:38:35
Local clock offset: 0.418 ms
Remote clock offset: 0.023 ms

# Below is generated by plot.py at 2019-04-24 13:31:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1.50 Mbit/s
  95th percentile per-packet one-way delay: 133.696 ms
  Loss rate: 1.09%
-- Flow 1:
  Average throughput: 0.84 Mbit/s
  95th percentile per-packet one-way delay: 133.255 ms
  Loss rate: 0.77%
-- Flow 2:
  Average throughput: 0.69 Mbit/s
  95th percentile per-packet one-way delay: 133.631 ms
  Loss rate: 1.39%
-- Flow 3:
  Average throughput: 0.63 Mbit/s
  95th percentile per-packet one-way delay: 133.778 ms
  Loss rate: 1.75%
Run 1: Report of Sprout — Data Link
Run 2: Statistics of Sprout

Start at: 2019-04-24 09:15:49
End at: 2019-04-24 09:16:19
Local clock offset: -0.45 ms
Remote clock offset: 0.043 ms

# Below is generated by plot.py at 2019-04-24 13:31:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1.35 Mbit/s
  95th percentile per-packet one-way delay: 132.750 ms
  Loss rate: 1.42%
-- Flow 1:
  Average throughput: 0.69 Mbit/s
  95th percentile per-packet one-way delay: 132.766 ms
  Loss rate: 1.04%
-- Flow 2:
  Average throughput: 0.69 Mbit/s
  95th percentile per-packet one-way delay: 132.678 ms
  Loss rate: 1.22%
-- Flow 3:
  Average throughput: 0.62 Mbit/s
  95th percentile per-packet one-way delay: 132.792 ms
  Loss rate: 3.12%
Run 2: Report of Sprout — Data Link
Run 3: Statistics of Sprout

Start at: 2019-04-24 09:53:54  
End at: 2019-04-24 09:54:24  
Local clock offset: -0.106 ms  
Remote clock offset: 0.027 ms

# Below is generated by plot.py at 2019-04-24 13:31:49
# Datalink statistics
-- Total of 3 flows:  
Average throughput: 1.26 Mbit/s  
95th percentile per-packet one-way delay: 133.156 ms  
Loss rate: 1.55%  
-- Flow 1:  
Average throughput: 0.65 Mbit/s  
95th percentile per-packet one-way delay: 133.197 ms  
Loss rate: 0.97%  
-- Flow 2:  
Average throughput: 0.63 Mbit/s  
95th percentile per-packet one-way delay: 133.009 ms  
Loss rate: 1.62%  
-- Flow 3:  
Average throughput: 0.58 Mbit/s  
95th percentile per-packet one-way delay: 133.093 ms  
Loss rate: 3.34%
Run 3: Report of Sprout — Data Link
Run 4: Statistics of Sprout

Local clock offset: -0.081 ms
Remote clock offset: -0.005 ms

# Below is generated by plot.py at 2019-04-24 13:31:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1.25 Mbit/s
  95th percentile per-packet one-way delay: 133.146 ms
  Loss rate: 1.60%
-- Flow 1:
  Average throughput: 0.67 Mbit/s
  95th percentile per-packet one-way delay: 133.081 ms
  Loss rate: 1.09%
-- Flow 2:
  Average throughput: 0.64 Mbit/s
  95th percentile per-packet one-way delay: 133.193 ms
  Loss rate: 1.50%
-- Flow 3:
  Average throughput: 0.48 Mbit/s
  95th percentile per-packet one-way delay: 133.198 ms
  Loss rate: 3.99%
Run 4: Report of Sprout — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 0.67 Mbit/s)
Flow 1 egress (mean 0.67 Mbit/s)
Flow 2 ingress (mean 0.64 Mbit/s)
Flow 2 egress (mean 0.64 Mbit/s)
Flow 3 ingress (mean 0.49 Mbit/s)
Flow 3 egress (mean 0.48 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 133.08 ms)
Flow 2 (95th percentile 133.19 ms)
Flow 3 (95th percentile 133.20 ms)
Run 5: Statistics of Sprout

Start at: 2019-04-24 11:08:46
End at: 2019-04-24 11:09:16
Local clock offset: -0.355 ms
Remote clock offset: 0.005 ms

# Below is generated by plot.py at 2019-04-24 13:31:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1.31 Mbit/s
  95th percentile per-packet one-way delay: 133.050 ms
  Loss rate: 1.54%
-- Flow 1:
  Average throughput: 0.66 Mbit/s
  95th percentile per-packet one-way delay: 132.969 ms
  Loss rate: 0.84%
-- Flow 2:
  Average throughput: 0.68 Mbit/s
  95th percentile per-packet one-way delay: 133.093 ms
  Loss rate: 1.67%
-- Flow 3:
  Average throughput: 0.64 Mbit/s
  95th percentile per-packet one-way delay: 132.816 ms
  Loss rate: 3.39%
Run 5: Report of Sprout — Data Link
Run 1: Statistics of TaoVA-100x

Start at: 2019-04-24 08:53:08
End at: 2019-04-24 08:53:38
Local clock offset: -0.102 ms
Remote clock offset: -0.287 ms

# Below is generated by plot.py at 2019-04-24 13:37:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 414.42 Mbit/s
95th percentile per-packet one-way delay: 135.136 ms
Loss rate: 1.35%
-- Flow 1:
Average throughput: 211.83 Mbit/s
95th percentile per-packet one-way delay: 134.181 ms
Loss rate: 0.89%
-- Flow 2:
Average throughput: 208.23 Mbit/s
95th percentile per-packet one-way delay: 134.985 ms
Loss rate: 1.26%
-- Flow 3:
Average throughput: 197.92 Mbit/s
95th percentile per-packet one-way delay: 138.063 ms
Loss rate: 3.01%
Run 1: Report of TaoVA-100x — Data Link

![Throughput Graph]

- Flow 1 ingress (mean 211.82 Mbit/s)
- Flow 1 egress (mean 211.83 Mbit/s)
- Flow 2 ingress (mean 208.05 Mbit/s)
- Flow 2 egress (mean 208.23 Mbit/s)
- Flow 3 ingress (mean 196.65 Mbit/s)
- Flow 3 egress (mean 197.92 Mbit/s)

![Per-packet one-way delay Graph]

- Flow 1 (99th percentile 134.18 ms)
- Flow 2 (99th percentile 134.99 ms)
- Flow 3 (99th percentile 138.06 ms)
Run 2: Statistics of TaoVA-100x

Start at: 2019-04-24 09:30:49  
End at: 2019-04-24 09:31:19  
Local clock offset: -0.367 ms  
Remote clock offset: 0.041 ms

# Below is generated by plot.py at 2019-04-24 13:37:16  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 387.83 Mbit/s  
95th percentile per-packet one-way delay: 138.424 ms  
Loss rate: 1.20%  
-- Flow 1:  
Average throughput: 196.07 Mbit/s  
95th percentile per-packet one-way delay: 138.541 ms  
Loss rate: 0.92%  
-- Flow 2:  
Average throughput: 194.86 Mbit/s  
95th percentile per-packet one-way delay: 138.865 ms  
Loss rate: 0.76%  
-- Flow 3:  
Average throughput: 191.77 Mbit/s  
95th percentile per-packet one-way delay: 135.931 ms  
Loss rate: 2.98%
Run 2: Report of TaoVA-100x — Data Link

![Graph of throughput vs time for different flows]

- Flow 1 ingress (mean 196.30 Mbit/s)
- Flow 1 egress (mean 196.07 Mbit/s)
- Flow 2 ingress (mean 193.72 Mbit/s)
- Flow 2 egress (mean 194.86 Mbit/s)
- Flow 3 ingress (mean 192.37 Mbit/s)
- Flow 3 egress (mean 191.77 Mbit/s)

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

- Flow 1 (95th percentile 138.54 ms)
- Flow 2 (95th percentile 138.87 ms)
- Flow 3 (95th percentile 135.93 ms)
Run 3: Statistics of TaoVA-100x

Start at: 2019-04-24 10:09:06
End at: 2019-04-24 10:09:36
Local clock offset: -0.361 ms
Remote clock offset: -0.022 ms

# Below is generated by plot.py at 2019-04-24 13:37:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 367.13 Mbit/s
95th percentile per-packet one-way delay: 136.166 ms
Loss rate: 1.25%
-- Flow 1:
Average throughput: 202.03 Mbit/s
95th percentile per-packet one-way delay: 134.742 ms
Loss rate: 0.90%
-- Flow 2:
Average throughput: 162.20 Mbit/s
95th percentile per-packet one-way delay: 141.680 ms
Loss rate: 0.80%
-- Flow 3:
Average throughput: 177.64 Mbit/s
95th percentile per-packet one-way delay: 134.439 ms
Loss rate: 3.24%
Run 3: Report of TaoVA-100x — Data Link

![Graph of throughput vs time for different flows]

![Graph of per-packet delay vs time for different flows]

170
Run 4: Statistics of TaoVA-100x

End at: 2019-04-24 10:46:45
Local clock offset: -0.313 ms
Remote clock offset: 0.042 ms

# Below is generated by plot.py at 2019-04-24 13:37:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 394.02 Mbit/s
95th percentile per-packet one-way delay: 136.013 ms
Loss rate: 1.35%
-- Flow 1:
Average throughput: 207.43 Mbit/s
95th percentile per-packet one-way delay: 135.154 ms
Loss rate: 0.80%
-- Flow 2:
Average throughput: 194.67 Mbit/s
95th percentile per-packet one-way delay: 137.538 ms
Loss rate: 1.30%
-- Flow 3:
Average throughput: 176.22 Mbit/s
95th percentile per-packet one-way delay: 135.323 ms
Loss rate: 3.38%
Run 4: Report of TaoVA-100x — Data Link
Run 5: Statistics of TaoVA-100x

Local clock offset: -0.101 ms
Remote clock offset: 0.022 ms

# Below is generated by plot.py at 2019-04-24 13:37:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 352.49 Mbit/s
95th percentile per-packet one-way delay: 134.460 ms
Loss rate: 1.61%
-- Flow 1:
Average throughput: 155.01 Mbit/s
95th percentile per-packet one-way delay: 134.850 ms
Loss rate: 1.18%
-- Flow 2:
Average throughput: 206.77 Mbit/s
95th percentile per-packet one-way delay: 134.024 ms
Loss rate: 1.35%
-- Flow 3:
Average throughput: 184.90 Mbit/s
95th percentile per-packet one-way delay: 134.848 ms
Loss rate: 3.30%
Run 5: Report of TaoVA-100x — Data Link

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

Throughput (Mbps)

Time (s)

- Flow 1 ingress (mean 155.46 Mbps)
- Flow 1 egress (mean 155.01 Mbps)
- Flow 2 ingress (mean 206.78 Mbps)
- Flow 2 egress (mean 206.77 Mbps)
- Flow 3 ingress (mean 186.10 Mbps)
- Flow 3 egress (mean 184.90 Mbps)

Per-packet round-trip delay (ms)

Time (s)

- Flow 1 (95th percentile 134.85 ms)
- Flow 2 (95th percentile 134.02 ms)
- Flow 3 (95th percentile 134.85 ms)
Run 1: Statistics of TCP Vegas

Start at: 2019-04-24 08:32:25
End at: 2019-04-24 08:32:55
Local clock offset: 0.377 ms
Remote clock offset: 0.055 ms

# Below is generated by plot.py at 2019-04-24 13:37:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 593.91 Mbit/s
95th percentile per-packet one-way delay: 141.985 ms
Loss rate: 1.68%
-- Flow 1:
Average throughput: 296.03 Mbit/s
95th percentile per-packet one-way delay: 141.999 ms
Loss rate: 0.88%
-- Flow 2:
Average throughput: 294.13 Mbit/s
95th percentile per-packet one-way delay: 140.858 ms
Loss rate: 1.60%
-- Flow 3:
Average throughput: 315.70 Mbit/s
95th percentile per-packet one-way delay: 146.368 ms
Loss rate: 4.07%

175
Run 1: Report of TCP Vegas — Data Link

![Graph showing network throughput and packet delay over time for three flows. Flow 1 has the highest throughput but also the highest packet delay, while Flow 3 has the lowest throughput and packet delay. Flow 2 is in the middle with moderate throughput and packet delay.]
Run 2: Statistics of TCP Vegas

Start at: 2019-04-24 09:10:10
End at: 2019-04-24 09:10:40
Local clock offset: 0.367 ms
Remote clock offset: 0.052 ms

# Below is generated by plot.py at 2019-04-24 13:41:08
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 522.38 Mbit/s
  95th percentile per-packet one-way delay: 135.789 ms
  Loss rate: 1.51%
  -- Flow 1:
  Average throughput: 319.56 Mbit/s
  95th percentile per-packet one-way delay: 133.802 ms
  Loss rate: 0.98%
  -- Flow 2:
  Average throughput: 190.37 Mbit/s
  95th percentile per-packet one-way delay: 164.016 ms
  Loss rate: 1.33%
  -- Flow 3:
  Average throughput: 234.63 Mbit/s
  95th percentile per-packet one-way delay: 143.239 ms
  Loss rate: 3.98%
Run 2: Report of TCP Vegas — Data Link

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

Legend:
- Flow 1 ingress (mean 319.87 Mbit/s)
- Flow 1 egress (mean 319.56 Mbit/s)
- Flow 2 ingress (mean 190.37 Mbit/s)
- Flow 2 egress (mean 190.37 Mbit/s)
- Flow 3 ingress (mean 237.88 Mbit/s)
- Flow 3 egress (mean 234.63 Mbit/s)
Run 3: Statistics of TCP Vegas

Start at: 2019-04-24 09:48:06
End at: 2019-04-24 09:48:36
Local clock offset: 0.286 ms
Remote clock offset: 0.012 ms

# Below is generated by plot.py at 2019-04-24 13:43:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 597.57 Mbit/s
95th percentile per-packet one-way delay: 143.251 ms
Loss rate: 1.51%
-- Flow 1:
Average throughput: 331.25 Mbit/s
95th percentile per-packet one-way delay: 139.352 ms
Loss rate: 1.01%
-- Flow 2:
Average throughput: 302.85 Mbit/s
95th percentile per-packet one-way delay: 159.952 ms
Loss rate: 1.65%
-- Flow 3:
Average throughput: 200.15 Mbit/s
95th percentile per-packet one-way delay: 134.679 ms
Loss rate: 3.54%
Run 3: Report of TCP Vegas — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 331.65 Mbps)
  - Flow 1 egress (mean 331.25 Mbps)
  - Flow 2 ingress (mean 303.86 Mbps)
  - Flow 2 egress (mean 302.85 Mbps)
  - Flow 3 ingress (mean 291.99 Mbps)
  - Flow 3 egress (mean 290.15 Mbps)

- **Per-packet one-way delay (ms):**
  - Flow 1 (95th percentile 139.35 ms)
  - Flow 2 (95th percentile 159.95 ms)
  - Flow 3 (95th percentile 134.68 ms)
Run 4: Statistics of TCP Vegas

Start at: 2019-04-24 10:26:01
End at: 2019-04-24 10:26:31
Local clock offset: 0.088 ms
Remote clock offset: 0.031 ms

# Below is generated by plot.py at 2019-04-24 13:45:56
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 567.23 Mbit/s
  95th percentile per-packet one-way delay: 145.820 ms
  Loss rate: 1.52%
  -- Flow 1:
  Average throughput: 290.27 Mbit/s
  95th percentile per-packet one-way delay: 146.690 ms
  Loss rate: 0.94%
  -- Flow 2:
  Average throughput: 312.49 Mbit/s
  95th percentile per-packet one-way delay: 134.959 ms
  Loss rate: 1.81%
  -- Flow 3:
  Average throughput: 213.89 Mbit/s
  95th percentile per-packet one-way delay: 170.745 ms
  Loss rate: 3.04%
Run 4: Report of TCP Vegas — Data Link
Run 5: Statistics of TCP Vegas

Start at: 2019-04-24 11:03:00
End at: 2019-04-24 11:03:30
Local clock offset: -0.521 ms
Remote clock offset: 0.025 ms

# Below is generated by plot.py at 2019-04-24 13:46:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 591.76 Mbit/s
95th percentile per-packet one-way delay: 185.809 ms
Loss rate: 1.38%
-- Flow 1:
Average throughput: 306.05 Mbit/s
95th percentile per-packet one-way delay: 159.536 ms
Loss rate: 0.90%
-- Flow 2:
Average throughput: 320.67 Mbit/s
95th percentile per-packet one-way delay: 200.383 ms
Loss rate: 1.28%
-- Flow 3:
Average throughput: 223.88 Mbit/s
95th percentile per-packet one-way delay: 138.773 ms
Loss rate: 3.68%
Run 5: Report of TCP Vegas — Data Link
Run 1: Statistics of Verus

Start at: 2019-04-24 08:45:50
End at: 2019-04-24 08:46:20
Local clock offset: -0.121 ms
Remote clock offset: 0.034 ms

# Below is generated by plot.py at 2019-04-24 13:46:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 175.42 Mbit/s
95th percentile per-packet one-way delay: 300.640 ms
Loss rate: 2.42%
-- Flow 1:
Average throughput: 106.26 Mbit/s
95th percentile per-packet one-way delay: 216.312 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 34.17 Mbit/s
95th percentile per-packet one-way delay: 137.467 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 144.88 Mbit/s
95th percentile per-packet one-way delay: 315.250 ms
Loss rate: 8.23%
Run 1: Report of Verus — Data Link

![Graph 1: Throughput (Mbps)]

- Flow 1 ingress (mean: 105.45 Mbit/s)
- Flow 1 egress (mean: 106.26 Mbit/s)
- Flow 2 ingress (mean: 33.74 Mbit/s)
- Flow 2 egress (mean: 34.17 Mbit/s)
- Flow 3 ingress (mean: 159.24 Mbit/s)
- Flow 3 egress (mean: 144.98 Mbit/s)

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

- Flow 1 (95th percentile: 216.31 ms)
- Flow 2 (95th percentile: 137.47 ms)
- Flow 3 (95th percentile: 315.25 ms)
Run 2: Statistics of Verus

Start at: 2019-04-24 09:23:16
End at: 2019-04-24 09:23:46
Local clock offset: -0.269 ms
Remote clock offset: 0.003 ms

# Below is generated by plot.py at 2019-04-24 13:46:29
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 176.25 Mbit/s
  95th percentile per-packet one-way delay: 233.308 ms
  Loss rate: 1.89%
-- Flow 1:
  Average throughput: 134.37 Mbit/s
  95th percentile per-packet one-way delay: 243.723 ms
  Loss rate: 2.32%
-- Flow 2:
  Average throughput: 40.83 Mbit/s
  95th percentile per-packet one-way delay: 172.383 ms
  Loss rate: 0.25%
-- Flow 3:
  Average throughput: 45.86 Mbit/s
  95th percentile per-packet one-way delay: 166.587 ms
  Loss rate: 0.98%
Run 2: Report of Verus — Data Link

![Graph 1](image1)

![Graph 2](image2)

188
Run 3: Statistics of Verus

Start at: 2019-04-24 10:01:50
End at: 2019-04-24 10:02:20
Local clock offset: -0.152 ms
Remote clock offset: 0.006 ms

# Below is generated by plot.py at 2019-04-24 13:46:29
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 112.66 Mbit/s
  95th percentile per-packet one-way delay: 301.909 ms
  Loss rate: 2.96%
-- Flow 1:
  Average throughput: 44.30 Mbit/s
  95th percentile per-packet one-way delay: 139.776 ms
  Loss rate: 1.67%
-- Flow 2:
  Average throughput: 38.43 Mbit/s
  95th percentile per-packet one-way delay: 136.050 ms
  Loss rate: 0.15%
-- Flow 3:
  Average throughput: 131.45 Mbit/s
  95th percentile per-packet one-way delay: 322.224 ms
  Loss rate: 5.81%
Run 3: Report of Verus — Data Link

![Graph 1: Throughput vs Time]

Legend:
- Flow 1 ingress (mean 44.65 Mbit/s)
- Flow 2 ingress (mean 37.97 Mbit/s)
- Flow 3 ingress (mean 140.77 Mbit/s)
- Flow 1 egress (mean 44.30 Mbit/s)
- Flow 2 egress (mean 38.45 Mbit/s)
- Flow 3 egress (mean 131.45 Mbit/s)

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

Legend:
- Flow 1 (95th percentile 139.78 ms)
- Flow 2 (95th percentile 136.05 ms)
- Flow 3 (95th percentile 322.22 ms)
Run 4: Statistics of Verus

Local clock offset: -0.477 ms
Remote clock offset: -0.353 ms

# Below is generated by plot.py at 2019-04-24 13:46:29
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 142.19 Mbit/s
  95th percentile per-packet one-way delay: 268.910 ms
  Loss rate: 2.70%
  -- Flow 1:
  Average throughput: 97.46 Mbit/s
  95th percentile per-packet one-way delay: 301.989 ms
  Loss rate: 2.82%
  -- Flow 2:
  Average throughput: 28.67 Mbit/s
  95th percentile per-packet one-way delay: 135.295 ms
  Loss rate: 0.88%
  -- Flow 3:
  Average throughput: 79.18 Mbit/s
  95th percentile per-packet one-way delay: 220.386 ms
  Loss rate: 3.56%
Run 4: Report of Verus — Data Link

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

Start at: 2019-04-24 11:16:08  
End at: 2019-04-24 11:16:38  
Local clock offset: 0.12 ms  
Remote clock offset: -0.021 ms  

# Below is generated by plot.py at 2019-04-24 13:46:30  
# Datalink statistics  
-- Total of 3 flows:  
  Average throughput: 154.46 Mbit/s  
  95th percentile per-packet one-way delay: 274.703 ms  
  Loss rate: 2.92%  
-- Flow 1:  
  Average throughput: 113.68 Mbit/s  
  95th percentile per-packet one-way delay: 277.142 ms  
  Loss rate: 3.47%  
-- Flow 2:  
  Average throughput: 49.96 Mbit/s  
  95th percentile per-packet one-way delay: 291.720 ms  
  Loss rate: 1.63%  
-- Flow 3:  
  Average throughput: 24.12 Mbit/s  
  95th percentile per-packet one-way delay: 168.385 ms  
  Loss rate: 0.23%
Run 5: Report of Verus — Data Link
Run 1: Statistics of PCC-Vivace

Start at: 2019-04-24 08:51:19
End at: 2019-04-24 08:51:49
Local clock offset: -0.075 ms
Remote clock offset: 0.04 ms

# Below is generated by plot.py at 2019-04-24 13:47:25
# Datalink statistics
  -- Total of 3 flows:
  Average throughput: 360.05 Mbit/s
  95th percentile per-packet one-way delay: 133.385 ms
  Loss rate: 1.63%
  -- Flow 1:
  Average throughput: 210.24 Mbit/s
  95th percentile per-packet one-way delay: 133.166 ms
  Loss rate: 1.02%
  -- Flow 2:
  Average throughput: 168.23 Mbit/s
  95th percentile per-packet one-way delay: 133.220 ms
  Loss rate: 1.74%
  -- Flow 3:
  Average throughput: 118.70 Mbit/s
  95th percentile per-packet one-way delay: 134.460 ms
  Loss rate: 4.55%
Run 1: Report of PCC-Vivace — Data Link
Run 2: Statistics of PCC-Vivace

End at: 2019-04-24 09:29:28
Local clock offset: -0.557 ms
Remote clock offset: 0.083 ms

# Below is generated by plot.py at 2019-04-24 13:47:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 372.41 Mbit/s
95th percentile per-packet one-way delay: 148.108 ms
Loss rate: 1.24%
-- Flow 1:
Average throughput: 241.35 Mbit/s
95th percentile per-packet one-way delay: 157.563 ms
Loss rate: 0.72%
-- Flow 2:
Average throughput: 142.84 Mbit/s
95th percentile per-packet one-way delay: 132.563 ms
Loss rate: 1.42%
-- Flow 3:
Average throughput: 112.67 Mbit/s
95th percentile per-packet one-way delay: 138.798 ms
Loss rate: 4.05%
Run 2: Report of PCC-Vivace — Data Link

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

- Flow 1 ingress (mean 240.94 Mbps)
- Flow 1 egress (mean 241.35 Mbps)
- Flow 2 ingress (mean 142.95 Mbps)
- Flow 2 egress (mean 142.86 Mbps)
- Flow 3 ingress (mean 114.26 Mbps)
- Flow 3 egress (mean 112.67 Mbps)

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

- Flow 1 (95th percentile 157.56 ms)
- Flow 2 (95th percentile 132.56 ms)
- Flow 3 (95th percentile 138.80 ms)

198
Run 3: Statistics of PCC-Vivace

Start at: 2019-04-24 10:07:16
End at: 2019-04-24 10:07:46
Local clock offset: -0.111 ms
Remote clock offset: -0.017 ms

# Below is generated by plot.py at 2019-04-24 13:47:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 364.42 Mbit/s
95th percentile per-packet one-way delay: 133.102 ms
Loss rate: 1.82%
-- Flow 1:
Average throughput: 195.88 Mbit/s
95th percentile per-packet one-way delay: 132.594 ms
Loss rate: 1.16%
-- Flow 2:
Average throughput: 192.56 Mbit/s
95th percentile per-packet one-way delay: 133.141 ms
Loss rate: 2.00%
-- Flow 3:
Average throughput: 126.99 Mbit/s
95th percentile per-packet one-way delay: 137.374 ms
Loss rate: 4.35%
Run 3: Report of PCC-Vivace — Data Link

![Graph showing throughput and delay over time]
Run 4: Statistics of PCC-Vivace

End at: 2019-04-24 10:44:54
Local clock offset: -0.005 ms
Remote clock offset: 0.375 ms

# Below is generated by plot.py at 2019-04-24 13:48:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 363.06 Mbit/s
95th percentile per-packet one-way delay: 134.796 ms
Loss rate: 1.51%
-- Flow 1:
Average throughput: 200.57 Mbit/s
95th percentile per-packet one-way delay: 133.906 ms
Loss rate: 0.69%
-- Flow 2:
Average throughput: 184.74 Mbit/s
95th percentile per-packet one-way delay: 133.703 ms
Loss rate: 1.89%
-- Flow 3:
Average throughput: 124.07 Mbit/s
95th percentile per-packet one-way delay: 143.230 ms
Loss rate: 4.28%
Run 4: Report of PCC-Vivace — Data Link

Throughput (Mbit/s)

Time (s)

0 5 10 15 20 25 30

Flow 1 ingress (mean 200.10 Mbit/s)  Flow 1 egress (mean 200.57 Mbit/s)
Flow 2 ingress (mean 185.77 Mbit/s)  Flow 2 egress (mean 184.76 Mbit/s)
Flow 3 ingress (mean 126.09 Mbit/s)  Flow 3 egress (mean 124.07 Mbit/s)

Per-packet one-way delay (ms)

0 5 10 15 20 25 30

Flow 1 (95th percentile 133.91 ms)  Flow 2 (95th percentile 133.70 ms)
Flow 3 (95th percentile 143.23 ms)
Run 5: Statistics of PCC-Vivace

Start at: 2019-04-24 11:21:34
Local clock offset: ~0.0 ms
Remote clock offset: 0.021 ms

# Below is generated by plot.py at 2019-04-24 13:48:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 416.84 Mbit/s
95th percentile per-packet one-way delay: 135.398 ms
Loss rate: 1.45%
-- Flow 1:
Average throughput: 255.35 Mbit/s
95th percentile per-packet one-way delay: 135.369 ms
Loss rate: 0.80%
-- Flow 2:
Average throughput: 186.10 Mbit/s
95th percentile per-packet one-way delay: 134.001 ms
Loss rate: 1.78%
-- Flow 3:
Average throughput: 118.26 Mbit/s
95th percentile per-packet one-way delay: 148.298 ms
Loss rate: 4.58%
Run 5: Report of PCC-Vivace — Data Link
Run 1: Statistics of WebRTC media

Start at: 2019-04-24 08:59:29
End at: 2019-04-24 08:59:59
Local clock offset: -0.309 ms
Remote clock offset: 0.048 ms

# Below is generated by plot.py at 2019-04-24 13:48:17
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.13 Mbit/s
  95th percentile per-packet one-way delay: 133.029 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.07 Mbit/s
  95th percentile per-packet one-way delay: 132.754 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 133.067 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 132.744 ms
  Loss rate: 0.00%
Run 1: Report of WebRTC media — Data Link
Run 2: Statistics of WebRTC media

Start at: 2019-04-24 09:37:07
End at: 2019-04-24 09:37:37
Local clock offset: -0.52 ms
Remote clock offset: 0.042 ms

# Below is generated by plot.py at 2019-04-24 13:48:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 132.705 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 132.714 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 132.707 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 132.663 ms
Loss rate: 0.00%
Run 2: Report of WebRTC media — Data Link

![Graph showing throughput vs time for different flows.

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

Another graph showing packet loss rate vs time for different flows.

Legend:
- Flow 1 (95th percentile 132.71 ms)
- Flow 2 (95th percentile 132.71 ms)
- Flow 3 (95th percentile 132.66 ms)
Run 3: Statistics of WebRTC media

Local clock offset: -0.098 ms
Remote clock offset: -0.01 ms

# Below is generated by plot.py at 2019-04-24 13:48:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 133.058 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 133.035 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 133.015 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 133.065 ms
Loss rate: 0.00%
Run 3: Report of WebRTC media — Data Link
Run 4: Statistics of WebRTC media

End at: 2019-04-24 10:53:03
Local clock offset: -0.164 ms
Remote clock offset: 0.026 ms

# Below is generated by plot.py at 2019-04-24 13:48:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 133.012 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 132.988 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 132.966 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 133.084 ms
Loss rate: 0.00%
Run 4: Report of WebRTC media — Data Link

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

[Graph 2: Per-packet round-trip delay (ms) vs Time (s)]
Run 5: Statistics of WebRTC media

End at: 2019-04-24 11:30:13
Local clock offset: -0.135 ms
Remote clock offset: 0.018 ms

# Below is generated by plot.py at 2019-04-24 13:48:18
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.13 Mbit/s
  95th percentile per-packet one-way delay: 132.949 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 132.073 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 132.891 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 133.001 ms
  Loss rate: 0.00%
Run 5: Report of WebRTC media — Data Link