Pantheon Report

Data path: GCE Tokyo Ethernet (remote) → GCE Iowa Ethernet (local).
Repeated the test of 17 congestion control schemes 10 times.
Each test lasted for 30 seconds running 3 flows with 10-second interval between two flows.
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).
NTP offsets were measured against time.google.com and have been applied to correct the timestamps in logs.

Git summary:
branch: master @ 9250dbeec7fb57193cddff1ba8c440b4e16ab30f0
third_party/fillp @ d47f4fa1b454a5e3c0537115c5a28436b4d4b834
third_party/fillp-sheep @ 37162fe9af85249a4ecac061c93e75640ef710b5
third_party/genericCC @ d015f3f8e594aa89e93b0321f3c3ad7e58e562f4
third_party/indigo @ 2601c92e4a9d58d48d48e0ecdbe4f90c007e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7c3f
third_party/pantheon-tunnel @ 6f038ed31259d366f9840f65b22c8f464b1b39
third_party/pcc @ 1af958fa0d66d18b523c091555f8872b4981e1
  M receiver/src/buffer.h
  M receiver/src/core.cpp
  M sender/src/buffer.h
  M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8ac08f92c4eb24f974ab
third_party/proto-quic @ 77961f1a8273a86b42f1bc814d3ebc978f3c4f2
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3b2b
  M src/verus.hpp
  M tools/plot.py
third_party/sprout @ 366e35c6178b01e314d46ad18c74f9415f19a26
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
  M src/verus.hpp
  M tools/plot.py
third_party/vivace @ 2ba0f86211435a071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9d4e735770d143a1fa2851
test from GCE Tokyo to GCE Iowa, 10 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)
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<th># runs</th>
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<td>375.61</td>
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<td>PCC-Expr</td>
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<td>238.83</td>
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<td>QUIC Cubic</td>
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<td>SCReAM</td>
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<td>0.22</td>
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<tr>
<td>Sprout</td>
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<td>0.96</td>
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<td>TaoVA-100x</td>
<td>10</td>
<td>163.98</td>
<td>148.03</td>
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<td>TCP Vegas</td>
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<td>158.29</td>
<td>120.85</td>
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<td>Verus</td>
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<td>184.58</td>
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<td>PCC-Vivace</td>
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<td>286.12</td>
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<td>105.36</td>
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<tr>
<td>WebRTC media</td>
<td>10</td>
<td>1.95</td>
<td>1.29</td>
<td>0.52</td>
</tr>
</tbody>
</table>
Run 1: Statistics of TCP BBR

Start at: 2018-07-05 05:09:27
End at: 2018-07-05 05:09:57
Local clock offset: 0.375 ms
Remote clock offset: -0.035 ms

# Below is generated by plot.py at 2018-07-05 09:41:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 326.80 Mbit/s
95th percentile per-packet one-way delay: 88.448 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 165.71 Mbit/s
95th percentile per-packet one-way delay: 86.214 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 168.42 Mbit/s
95th percentile per-packet one-way delay: 89.080 ms
Loss rate: 0.73%
-- Flow 3:
Average throughput: 149.08 Mbit/s
95th percentile per-packet one-way delay: 90.754 ms
Loss rate: 1.67%
Run 1: Report of TCP BBR — Data Link

![Graph 1: Throughput (Mbps)]

- **Flow 1 ingress (mean 165.83 Mbps)**
- **Flow 1 egress (mean 165.71 Mbps)**
- **Flow 2 ingress (mean 168.63 Mbps)**
- **Flow 2 egress (mean 168.42 Mbps)**
- **Flow 3 ingress (mean 149.75 Mbps)**
- **Flow 3 egress (mean 149.08 Mbps)**

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

- **Flow 1 (95th percentile 86.21 ms)**
- **Flow 2 (95th percentile 89.08 ms)**
- **Flow 3 (95th percentile 90.75 ms)**
Run 2: Statistics of TCP BBR

Start at: 2018-07-05 05:34:32
End at: 2018-07-05 05:35:02
Local clock offset: -0.042 ms
Remote clock offset: 0.038 ms

# Below is generated by plot.py at 2018-07-05 09:42:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 339.47 Mbit/s
95th percentile per-packet one-way delay: 93.272 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 174.17 Mbit/s
95th percentile per-packet one-way delay: 90.132 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 169.36 Mbit/s
95th percentile per-packet one-way delay: 93.095 ms
Loss rate: 0.53%
-- Flow 3:
Average throughput: 159.91 Mbit/s
95th percentile per-packet one-way delay: 96.516 ms
Loss rate: 1.53%
Run 2: Report of TCP BBR — Data Link

[Graph showing throughput and per-packet round trip time for three flows over time]
Run 3: Statistics of TCP BBR

Start at: 2018-07-05 05:59:23
End at: 2018-07-05 05:59:53
Local clock offset: -0.036 ms
Remote clock offset: -1.046 ms

# Below is generated by plot.py at 2018-07-05 09:42:13
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 330.69 Mbit/s
  95th percentile per-packet one-way delay: 92.537 ms
  Loss rate: 0.74%
-- Flow 1:
  Average throughput: 170.44 Mbit/s
  95th percentile per-packet one-way delay: 90.062 ms
  Loss rate: 0.52%
-- Flow 2:
  Average throughput: 168.21 Mbit/s
  95th percentile per-packet one-way delay: 92.167 ms
  Loss rate: 0.70%
-- Flow 3:
  Average throughput: 146.97 Mbit/s
  95th percentile per-packet one-way delay: 96.362 ms
  Loss rate: 1.60%
Run 3: Report of TCP BBR — Data Link
Run 4: Statistics of TCP BBR

Start at: 2018-07-05 06:24:45
End at: 2018-07-05 06:25:15
Local clock offset: -0.051 ms
Remote clock offset: 1.337 ms

# Below is generated by plot.py at 2018-07-05 09:42:13
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 338.92 Mbit/s
  95th percentile per-packet one-way delay: 78.317 ms
  Loss rate: 0.78%
-- Flow 1:
  Average throughput: 174.79 Mbit/s
  95th percentile per-packet one-way delay: 76.721 ms
  Loss rate: 0.54%
-- Flow 2:
  Average throughput: 167.13 Mbit/s
  95th percentile per-packet one-way delay: 78.623 ms
  Loss rate: 0.81%
-- Flow 3:
  Average throughput: 160.88 Mbit/s
  95th percentile per-packet one-way delay: 80.768 ms
  Loss rate: 1.51%
Run 5: Statistics of TCP BBR

Start at: 2018-07-05 06:50:02
End at: 2018-07-05 06:50:32
Local clock offset: -0.072 ms
Remote clock offset: 1.016 ms

# Below is generated by plot.py at 2018-07-05 09:42:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 345.02 Mbit/s
95th percentile per-packet one-way delay: 76.448 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 176.64 Mbit/s
95th percentile per-packet one-way delay: 75.584 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 167.99 Mbit/s
95th percentile per-packet one-way delay: 76.821 ms
Loss rate: 0.68%
-- Flow 3:
Average throughput: 171.81 Mbit/s
95th percentile per-packet one-way delay: 77.103 ms
Loss rate: 1.55%
Run 5: Report of TCP BBR — Data Link

**Throughput (Mbps)**

- Flow 1 ingress (mean 176.69 Mbps)
- Flow 1 egress (mean 176.64 Mbps)
- Flow 2 ingress (mean 168.24 Mbps)
- Flow 2 egress (mean 167.99 Mbps)
- Flow 3 ingress (mean 172.36 Mbps)
- Flow 3 egress (mean 171.81 Mbps)

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

- Flow 1 (95th percentile 75.58 ms)
- Flow 2 (95th percentile 76.82 ms)
- Flow 3 (95th percentile 77.10 ms)
Run 6: Statistics of TCP BBR

Start at: 2018-07-05 07:15:11
End at: 2018-07-05 07:15:42
Local clock offset: -0.058 ms
Remote clock offset: -0.015 ms

# Below is generated by plot.py at 2018-07-05 09:42:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 321.39 Mbit/s
95th percentile per-packet one-way delay: 95.107 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 170.18 Mbit/s
95th percentile per-packet one-way delay: 92.307 ms
Loss rate: 0.58%
-- Flow 2:
Average throughput: 159.57 Mbit/s
95th percentile per-packet one-way delay: 94.148 ms
Loss rate: 0.85%
-- Flow 3:
Average throughput: 137.03 Mbit/s
95th percentile per-packet one-way delay: 100.987 ms
Loss rate: 1.95%
Run 6: Report of TCP BBR — Data Link

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

![Graph 2: Per-packet one-way delay vs. Time](image2)
Run 7: Statistics of TCP BBR

Start at: 2018-07-05 07:40:35
End at: 2018-07-05 07:41:05
Local clock offset: -0.068 ms
Remote clock offset: -0.124 ms

# Below is generated by plot.py at 2018-07-05 09:42:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 330.31 Mbit/s
95th percentile per-packet one-way delay: 90.387 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 172.73 Mbit/s
95th percentile per-packet one-way delay: 88.301 ms
Loss rate: 0.46%
-- Flow 2:
Average throughput: 165.01 Mbit/s
95th percentile per-packet one-way delay: 89.861 ms
Loss rate: 0.74%
-- Flow 3:
Average throughput: 145.28 Mbit/s
95th percentile per-packet one-way delay: 95.306 ms
Loss rate: 1.62%
Run 8: Statistics of TCP BBR

Start at: 2018-07-05 08:05:39
End at: 2018-07-05 08:06:09
Local clock offset: -0.111 ms
Remote clock offset: -0.118 ms

# Below is generated by plot.py at 2018-07-05 09:42:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 335.42 Mbit/s
95th percentile per-packet one-way delay: 89.286 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 177.73 Mbit/s
95th percentile per-packet one-way delay: 86.861 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 163.70 Mbit/s
95th percentile per-packet one-way delay: 89.727 ms
Loss rate: 0.75%
-- Flow 3:
Average throughput: 148.52 Mbit/s
95th percentile per-packet one-way delay: 94.385 ms
Loss rate: 1.49%
Run 8: Report of TCP BBR — Data Link

![Graph showing throughput over time for different flows.](image1)

![Graph showing per-packet round-trip delay over time for different flows.](image2)
Run 9: Statistics of TCP BBR

Start at: 2018-07-05 08:30:40
End at: 2018-07-05 08:31:10
Local clock offset: -0.038 ms
Remote clock offset: 0.088 ms

# Below is generated by plot.py at 2018-07-05 09:48:17
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 336.57 Mbit/s
  95th percentile per-packet one-way delay: 99.870 ms
  Loss rate: 0.72%
-- Flow 1:
  Average throughput: 173.99 Mbit/s
  95th percentile per-packet one-way delay: 93.031 ms
  Loss rate: 0.44%
-- Flow 2:
  Average throughput: 166.44 Mbit/s
  95th percentile per-packet one-way delay: 100.211 ms
  Loss rate: 0.73%
-- Flow 3:
  Average throughput: 157.92 Mbit/s
  95th percentile per-packet one-way delay: 104.803 ms
  Loss rate: 1.64%
Run 9: Report of TCP BBR — Data Link

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

- **Flow 1 ingress (mean 174.04 Mbit/s)**
- **Flow 1 egress (mean 173.99 Mbit/s)**
- **Flow 2 ingress (mean 166.52 Mbit/s)**
- **Flow 2 egress (mean 166.44 Mbit/s)**
- **Flow 3 ingress (mean 158.56 Mbit/s)**
- **Flow 3 egress (mean 157.92 Mbit/s)**

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

- **Flow 1 (95th percentile 93.03 ms)**
- **Flow 2 (95th percentile 100.21 ms)**
- **Flow 3 (95th percentile 104.80 ms)**
Run 10: Statistics of TCP BBR

Start at: 2018-07-05 08:55:23
End at: 2018-07-05 08:55:53
Local clock offset: 0.032 ms
Remote clock offset: -0.276 ms

# Below is generated by plot.py at 2018-07-05 09:48:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 327.77 Mbit/s
95th percentile per-packet one-way delay: 109.064 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 171.36 Mbit/s
95th percentile per-packet one-way delay: 108.309 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 166.98 Mbit/s
95th percentile per-packet one-way delay: 110.077 ms
Loss rate: 0.73%
-- Flow 3:
Average throughput: 138.07 Mbit/s
95th percentile per-packet one-way delay: 108.144 ms
Loss rate: 1.85%
Run 1: Statistics of Copa

Start at: 2018-07-05 05:12:26
End at: 2018-07-05 05:12:56
Local clock offset: 0.272 ms
Remote clock offset: -1.224 ms

# Below is generated by plot.py at 2018-07-05 09:50:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 216.07 Mbit/s
95th percentile per-packet one-way delay: 75.373 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 121.02 Mbit/s
95th percentile per-packet one-way delay: 75.152 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 134.09 Mbit/s
95th percentile per-packet one-way delay: 75.974 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 67.83 Mbit/s
95th percentile per-packet one-way delay: 72.653 ms
Loss rate: 0.00%
Run 1: Report of Copa — Data Link

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

Start at: 2018-07-05 05:37:30
End at: 2018-07-05 05:38:00
Local clock offset: -0.039 ms
Remote clock offset: -1.379 ms

# Below is generated by plot.py at 2018-07-05 09:50:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 221.62 Mbit/s
95th percentile per-packet one-way delay: 68.224 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 160.56 Mbit/s
95th percentile per-packet one-way delay: 68.520 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 79.67 Mbit/s
95th percentile per-packet one-way delay: 68.011 ms
Loss rate: 0.73%
-- Flow 3:
Average throughput: 24.56 Mbit/s
95th percentile per-packet one-way delay: 62.933 ms
Loss rate: 1.63%
Run 2: Report of Copa — Data Link
Run 3: Statistics of Copa

Start at: 2018-07-05 06:02:22
End at: 2018-07-05 06:02:52
Local clock offset: -0.05 ms
Remote clock offset: -0.046 ms

# Below is generated by plot.py at 2018-07-05 09:50:33
# Datalink statistics
-- Total of 3 flows:
 Average throughput: 219.43 Mbit/s
 95th percentile per-packet one-way delay: 80.334 ms
 Loss rate: 0.79%
-- Flow 1:
 Average throughput: 96.34 Mbit/s
 95th percentile per-packet one-way delay: 76.978 ms
 Loss rate: 0.81%
-- Flow 2:
 Average throughput: 141.78 Mbit/s
 95th percentile per-packet one-way delay: 88.565 ms
 Loss rate: 0.60%
-- Flow 3:
 Average throughput: 87.40 Mbit/s
 95th percentile per-packet one-way delay: 63.635 ms
 Loss rate: 1.37%
Run 3: Report of Copa — Data Link
Run 4: Statistics of Copa

Start at: 2018-07-05 06:27:44
End at: 2018-07-05 06:28:14
Local clock offset: -0.05 ms
Remote clock offset: 1.269 ms

# Below is generated by plot.py at 2018-07-05 09:50:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 191.32 Mbit/s
95th percentile per-packet one-way delay: 75.699 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 105.98 Mbit/s
95th percentile per-packet one-way delay: 74.674 ms
Loss rate: 0.50%
-- Flow 2:
Average throughput: 89.97 Mbit/s
95th percentile per-packet one-way delay: 78.143 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 77.43 Mbit/s
95th percentile per-packet one-way delay: 72.382 ms
Loss rate: 3.40%
Run 4: Report of Copa — Data Link

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

- Flow 1 ingress (mean 106.68 Mbit/s)
- Flow 1 egress (mean 105.98 Mbit/s)
- Flow 2 ingress (mean 89.49 Mbit/s)
- Flow 2 egress (mean 89.97 Mbit/s)
- Flow 3 ingress (mean 79.38 Mbit/s)
- Flow 3 egress (mean 77.43 Mbit/s)
Run 5: Statistics of Copa

Start at: 2018-07-05 06:53:00
End at: 2018-07-05 06:53:30
Local clock offset: -0.056 ms
Remote clock offset: -0.007 ms

# Below is generated by plot.py at 2018-07-05 09:51:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 236.65 Mbit/s
95th percentile per-packet one-way delay: 69.216 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 154.12 Mbit/s
95th percentile per-packet one-way delay: 67.818 ms
Loss rate: 0.21%
-- Flow 2:
Average throughput: 83.23 Mbit/s
95th percentile per-packet one-way delay: 72.466 ms
Loss rate: 0.48%
-- Flow 3:
Average throughput: 90.39 Mbit/s
95th percentile per-packet one-way delay: 70.511 ms
Loss rate: 0.00%
Run 5: Report of Copa — Data Link
Run 6: Statistics of Copa

Start at: 2018-07-05 07:18:10
End at: 2018-07-05 07:18:40
Local clock offset: -0.054 ms
Remote clock offset: 0.109 ms

# Below is generated by plot.py at 2018-07-05 09:51:10
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 231.59 Mbit/s
  95th percentile per-packet one-way delay: 69.643 ms
  Loss rate: 0.52%
  -- Flow 1:
  Average throughput: 143.11 Mbit/s
  95th percentile per-packet one-way delay: 69.088 ms
  Loss rate: 0.41%
  -- Flow 2:
  Average throughput: 76.21 Mbit/s
  95th percentile per-packet one-way delay: 72.631 ms
  Loss rate: 0.67%
  -- Flow 3:
  Average throughput: 114.90 Mbit/s
  95th percentile per-packet one-way delay: 67.110 ms
  Loss rate: 0.75%
Run 6: Report of Copa — Data Link
Run 7: Statistics of Copa

Start at: 2018-07-05 07:43:30
End at: 2018-07-05 07:44:00
Local clock offset: -0.029 ms
Remote clock offset: 1.462 ms

# Below is generated by plot.py at 2018-07-05 09:57:39
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 230.14 Mbit/s
  95th percentile per-packet one-way delay: 71.849 ms
  Loss rate: 0.46%
-- Flow 1:
  Average throughput: 143.04 Mbit/s
  95th percentile per-packet one-way delay: 75.182 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 99.60 Mbit/s
  95th percentile per-packet one-way delay: 66.926 ms
  Loss rate: 0.84%
-- Flow 3:
  Average throughput: 84.93 Mbit/s
  95th percentile per-packet one-way delay: 66.534 ms
  Loss rate: 1.77%
Run 7: Report of Copa — Data Link

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

- **Throughput**:
  - **Flow 1 ingress**: mean 143.07 Mbit/s
  - **Flow 1 egress**: mean 143.04 Mbit/s
  - **Flow 2 ingress**: mean 99.77 Mbit/s
  - **Flow 2 egress**: mean 99.60 Mbit/s
  - **Flow 3 ingress**: mean 85.40 Mbit/s
  - **Flow 3 egress**: mean 84.93 Mbit/s

- **Packet Loss Delay**:
  - **Flow 1**: 95th percentile 75.18 ms
  - **Flow 2**: 95th percentile 66.93 ms
  - **Flow 3**: 95th percentile 66.53 ms

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Run 8: Statistics of Copa

Start at: 2018-07-05 08:08:35
End at: 2018-07-05 08:09:05
Local clock offset: -0.06 ms
Remote clock offset: 0.036 ms

# Below is generated by plot.py at 2018-07-05 09:57:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 222.05 Mbit/s
95th percentile per-packet one-way delay: 66.891 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 145.34 Mbit/s
95th percentile per-packet one-way delay: 66.393 ms
Loss rate: 0.23%
-- Flow 2:
Average throughput: 83.22 Mbit/s
95th percentile per-packet one-way delay: 67.560 ms
Loss rate: 0.84%
-- Flow 3:
Average throughput: 64.96 Mbit/s
95th percentile per-packet one-way delay: 68.835 ms
Loss rate: 2.70%
Run 9: Statistics of Copa

Start at: 2018-07-05 08:33:39
End at: 2018-07-05 08:34:09
Local clock offset: -0.065 ms
Remote clock offset: -0.477 ms

# Below is generated by plot.py at 2018-07-05 09:57:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 167.51 Mbit/s
95th percentile per-packet one-way delay: 69.159 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 96.90 Mbit/s
95th percentile per-packet one-way delay: 69.587 ms
Loss rate: 0.29%
-- Flow 2:
Average throughput: 64.79 Mbit/s
95th percentile per-packet one-way delay: 70.884 ms
Loss rate: 0.74%
-- Flow 3:
Average throughput: 83.58 Mbit/s
95th percentile per-packet one-way delay: 66.905 ms
Loss rate: 0.15%
Run 9: Report of Copa — Data Link

![Graph showing network data over time.](Image)

- **Throughput** (Mbps):
  - Flow 1 ingress (mean 96.79 Mbps)
  - Flow 1 egress (mean 96.90 Mbps)
  - Flow 2 ingress (mean 64.88 Mbps)
  - Flow 2 egress (mean 64.79 Mbps)
  - Flow 3 ingress (mean 82.68 Mbps)
  - Flow 3 egress (mean 83.58 Mbps)

- **Per-packet one-way delay (ms)**:
  - Flow 1 (95th percentile 69.59 ms)
  - Flow 2 (95th percentile 70.88 ms)
  - Flow 3 (95th percentile 66.91 ms)
Run 10: Statistics of Copa

Start at: 2018-07-05 08:58:21
End at: 2018-07-05 08:58:51
Local clock offset: 0.059 ms
Remote clock offset: -0.043 ms

# Below is generated by plot.py at 2018-07-05 09:59:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 237.76 Mbit/s
95th percentile per-packet one-way delay: 71.105 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 91.56 Mbit/s
95th percentile per-packet one-way delay: 70.316 ms
Loss rate: 0.53%
-- Flow 2:
Average throughput: 189.43 Mbit/s
95th percentile per-packet one-way delay: 72.557 ms
Loss rate: 0.38%
-- Flow 3:
Average throughput: 61.49 Mbit/s
95th percentile per-packet one-way delay: 65.616 ms
Loss rate: 1.80%
Run 10: Report of Copa — Data Link
Run 1: Statistics of TCP Cubic

Start at: 2018-07-05 05:04:36
End at: 2018-07-05 05:05:06
Local clock offset: 0.313 ms
Remote clock offset: 0.399 ms

# Below is generated by plot.py at 2018-07-05 09:59:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 312.34 Mbit/s
95th percentile per-packet one-way delay: 71.588 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 188.55 Mbit/s
95th percentile per-packet one-way delay: 71.337 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 184.78 Mbit/s
95th percentile per-packet one-way delay: 71.913 ms
Loss rate: 0.66%
-- Flow 3:
Average throughput: 3.30 Mbit/s
95th percentile per-packet one-way delay: 65.978 ms
Loss rate: 5.35%
Run 1: Report of TCP Cubic — Data Link

![Graph of Throughput vs Time and Per-packet one-way delay vs Time]

Legend:
- Flow 1 ingress (mean 188.61 Mbit/s)
- Flow 1 egress (mean 188.55 Mbit/s)
- Flow 2 ingress (mean 184.90 Mbit/s)
- Flow 2 egress (mean 184.78 Mbit/s)
- Flow 3 ingress (mean 3.45 Mbit/s)
- Flow 3 egress (mean 3.30 Mbit/s)
- Flow 1 (95th percentile 71.34 ms)
- Flow 2 (95th percentile 71.91 ms)
- Flow 3 (95th percentile 65.98 ms)
Run 2: Statistics of TCP Cubic

Start at: 2018-07-05 05:29:46
End at: 2018-07-05 05:30:16
Local clock offset: -0.018 ms
Remote clock offset: -1.336 ms

# Below is generated by plot.py at 2018-07-05 09:59:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 270.46 Mbit/s
95th percentile per-packet one-way delay: 80.027 ms
Loss rate: 0.89%
-- Flow 1:
Average throughput: 186.31 Mbit/s
95th percentile per-packet one-way delay: 78.062 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 40.33 Mbit/s
95th percentile per-packet one-way delay: 80.980 ms
Loss rate: 2.64%
-- Flow 3:
Average throughput: 174.28 Mbit/s
95th percentile per-packet one-way delay: 83.351 ms
Loss rate: 1.41%
Run 3: Statistics of TCP Cubic

Start at: 2018-07-05 05:54:30
End at: 2018-07-05 05:55:00
Local clock offset: -0.035 ms
Remote clock offset: -0.025 ms

# Below is generated by plot.py at 2018-07-05 09:59:11
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 319.11 Mbit/s
  95th percentile per-packet one-way delay: 106.373 ms
  Loss rate: 0.41%
-- Flow 1:
  Average throughput: 164.02 Mbit/s
  95th percentile per-packet one-way delay: 105.228 ms
  Loss rate: 0.25%
-- Flow 2:
  Average throughput: 161.36 Mbit/s
  95th percentile per-packet one-way delay: 106.116 ms
  Loss rate: 0.47%
-- Flow 3:
  Average throughput: 145.58 Mbit/s
  95th percentile per-packet one-way delay: 108.375 ms
  Loss rate: 0.82%
Run 3: Report of TCP Cubic — Data Link

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

Start at: 2018-07-05 06:19:59
End at: 2018-07-05 06:20:29
Local clock offset: -0.054 ms
Remote clock offset: -0.185 ms

# Below is generated by plot.py at 2018-07-05 09:59:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 304.48 Mbit/s
95th percentile per-packet one-way delay: 89.446 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 135.27 Mbit/s
95th percentile per-packet one-way delay: 86.678 ms
Loss rate: 0.61%
-- Flow 2:
Average throughput: 176.08 Mbit/s
95th percentile per-packet one-way delay: 90.012 ms
Loss rate: 0.70%
-- Flow 3:
Average throughput: 158.82 Mbit/s
95th percentile per-packet one-way delay: 91.895 ms
Loss rate: 1.63%
Run 4: Report of TCP Cubic — Data Link

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

**Throughput (Mbps):**
- Flow 1 ingress (mean 135.56 Mbps)
- Flow 1 egress (mean 135.27 Mbps)
- Flow 2 ingress (mean 176.62 Mbps)
- Flow 2 egress (mean 176.08 Mbps)
- Flow 3 ingress (mean 159.44 Mbps)
- Flow 3 egress (mean 158.82 Mbps)

**Packet Delay (ms):**
- Flow 1 (95th percentile 86.68 ms)
- Flow 2 (95th percentile 90.01 ms)
- Flow 3 (95th percentile 91.89 ms)
Run 5: Statistics of TCP Cubic

Start at: 2018-07-05 06:45:15
End at: 2018-07-05 06:45:45
Local clock offset: -0.078 ms
Remote clock offset: 0.064 ms

# Below is generated by plot.py at 2018-07-05 10:00:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 216.93 Mbit/s
95th percentile per-packet one-way delay: 72.931 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 188.61 Mbit/s
95th percentile per-packet one-way delay: 73.179 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 40.95 Mbit/s
95th percentile per-packet one-way delay: 68.922 ms
Loss rate: 2.84%
-- Flow 3:
Average throughput: 3.72 Mbit/s
95th percentile per-packet one-way delay: 68.045 ms
Loss rate: 4.72%
Run 5: Report of TCP Cubic — Data Link

![Graph showing throughput and packet delay over time for Flow 1, Flow 2, and Flow 3.](image-url)
Run 6: Statistics of TCP Cubic

Start at: 2018-07-05 07:10:25
End at: 2018-07-05 07:10:55
Local clock offset: -0.046 ms
Remote clock offset: 0.171 ms

# Below is generated by plot.py at 2018-07-05 10:00:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 227.08 Mbit/s
95th percentile per-packet one-way delay: 70.991 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 112.51 Mbit/s
95th percentile per-packet one-way delay: 70.154 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 170.55 Mbit/s
95th percentile per-packet one-way delay: 71.605 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 3.85 Mbit/s
95th percentile per-packet one-way delay: 68.857 ms
Loss rate: 5.07%
Run 6: Report of TCP Cubic — Data Link

![Graph 1: Throughout (Mbps)]

![Graph 2: Per-packet one-way delay (ms)]
Run 7: Statistics of TCP Cubic

Start at: 2018-07-05 07:35:41
End at: 2018-07-05 07:36:11
Local clock offset: -0.045 ms
Remote clock offset: 1.221 ms

# Below is generated by plot.py at 2018-07-05 10:03:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 324.07 Mbit/s
95th percentile per-packet one-way delay: 85.307 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 181.76 Mbit/s
95th percentile per-packet one-way delay: 84.898 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 135.81 Mbit/s
95th percentile per-packet one-way delay: 82.216 ms
Loss rate: 0.58%
-- Flow 3:
Average throughput: 158.30 Mbit/s
95th percentile per-packet one-way delay: 88.499 ms
Loss rate: 1.68%
Run 7: Report of TCP Cubic — Data Link
Run 8: Statistics of TCP Cubic

Start at: 2018-07-05 08:00:49
End at: 2018-07-05 08:01:19
Local clock offset: -0.054 ms
Remote clock offset: -0.089 ms

# Below is generated by plot.py at 2018-07-05 10:03:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 288.21 Mbit/s
95th percentile per-packet one-way delay: 103.651 ms
Loss rate: 0.74%
-- Flow 1:
Average throughput: 124.72 Mbit/s
95th percentile per-packet one-way delay: 99.461 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 172.62 Mbit/s
95th percentile per-packet one-way delay: 101.829 ms
Loss rate: 0.72%
-- Flow 3:
Average throughput: 148.37 Mbit/s
95th percentile per-packet one-way delay: 109.259 ms
Loss rate: 1.63%
Run 8: Report of TCP Cubic — Data Link

![Graph of Throughput and Per-packet round-trip delay](image)

- **Flow 1 ingress (mean 124.70 Mbit/s)**
- **Flow 1 egress (mean 124.72 Mbit/s)**
- **Flow 2 ingress (mean 172.84 Mbit/s)**
- **Flow 2 egress (mean 172.62 Mbit/s)**
- **Flow 3 ingress (mean 149.05 Mbit/s)**
- **Flow 3 egress (mean 148.37 Mbit/s)**
Run 9: Statistics of TCP Cubic

Start at: 2018-07-05 08:25:51
End at: 2018-07-05 08:26:21
Local clock offset: -0.065 ms
Remote clock offset: -0.093 ms

# Below is generated by plot.py at 2018-07-05 10:04:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 310.75 Mbit/s
95th percentile per-packet one-way delay: 74.333 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 187.72 Mbit/s
95th percentile per-packet one-way delay: 74.894 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 183.12 Mbit/s
95th percentile per-packet one-way delay: 73.865 ms
Loss rate: 0.72%
-- Flow 3:
Average throughput: 4.35 Mbit/s
95th percentile per-packet one-way delay: 68.491 ms
Loss rate: 5.08%
Run 9: Report of TCP Cubic — Data Link

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

- **Flow 1 ingress** (mean 187.78 Mbps)
- **Flow 1 egress** (mean 187.72 Mbps)
- **Flow 2 ingress** (mean 183.32 Mbps)
- **Flow 2 egress** (mean 183.32 Mbps)
- **Flow 3 ingress** (mean 4.52 Mbps)
- **Flow 3 egress** (mean 4.25 Mbps)

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

- **Flow 1** (95th percentile 74.89 ms)
- **Flow 2** (95th percentile 73.86 ms)
- **Flow 3** (95th percentile 68.49 ms)
Run 10: Statistics of TCP Cubic

Start at: 2018-07-05 08:50:32  
End at: 2018-07-05 08:51:02  
Local clock offset: -0.013 ms  
Remote clock offset: -0.355 ms

# Below is generated by plot.py at 2018-07-05 10:04:39  
# Datalink statistics
-- Total of 3 flows:
Average throughput: 340.51 Mbit/s  
95th percentile per-packet one-way delay: 98.338 ms  
Loss rate: 0.73%  
-- Flow 1:
Average throughput: 178.61 Mbit/s  
95th percentile per-packet one-way delay: 97.791 ms  
Loss rate: 0.45%  
-- Flow 2:
Average throughput: 170.20 Mbit/s  
95th percentile per-packet one-way delay: 97.091 ms  
Loss rate: 0.77%  
-- Flow 3:
Average throughput: 149.00 Mbit/s  
95th percentile per-packet one-way delay: 101.584 ms  
Loss rate: 1.67%
Run 10: Report of TCP Cubic — Data Link
Run 1: Statistics of FillP

Start at: 2018-07-05 05:24:47
End at: 2018-07-05 05:25:17
Local clock offset: 0.043 ms
Remote clock offset: -1.169 ms

# Below is generated by plot.py at 2018-07-05 10:30:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1236.90 Mbit/s
95th percentile per-packet one-way delay: 262.305 ms
Loss rate: 8.47%
-- Flow 1:
Average throughput: 646.31 Mbit/s
95th percentile per-packet one-way delay: 277.806 ms
Loss rate: 6.97%
-- Flow 2:
Average throughput: 654.21 Mbit/s
95th percentile per-packet one-way delay: 212.735 ms
Loss rate: 8.45%
-- Flow 3:
Average throughput: 474.31 Mbit/s
95th percentile per-packet one-way delay: 229.774 ms
Loss rate: 14.25%
Run 1: Report of FillP — Data Link
Run 2: Statistics of FillP

Start at: 2018-07-05 05:49:27
End at: 2018-07-05 05:49:57
Local clock offset: -0.076 ms
Remote clock offset: -1.219 ms

# Below is generated by plot.py at 2018-07-05 10:33:03
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1285.80 Mbit/s
  95th percentile per-packet one-way delay: 253.152 ms
  Loss rate: 6.52%
-- Flow 1:
  Average throughput: 721.31 Mbit/s
  95th percentile per-packet one-way delay: 258.133 ms
  Loss rate: 4.98%
-- Flow 2:
  Average throughput: 544.32 Mbit/s
  95th percentile per-packet one-way delay: 256.050 ms
  Loss rate: 7.60%
-- Flow 3:
  Average throughput: 617.29 Mbit/s
  95th percentile per-packet one-way delay: 185.523 ms
  Loss rate: 9.87%
Run 2: Report of FillP — Data Link

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

- Flow 1 Ingress (mean 755.97 Mbit/s)
- Flow 1 Egress (mean 721.31 Mbit/s)
- Flow 2 Ingress (mean 585.45 Mbit/s)
- Flow 2 Egress (mean 544.32 Mbit/s)
- Flow 3 Ingress (mean 616.41 Mbit/s)
- Flow 3 Egress (mean 617.29 Mbit/s)

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

- Flow 1 (95th percentile 258.13 ms)
- Flow 2 (95th percentile 256.05 ms)
- Flow 3 (95th percentile 185.52 ms)
Run 3: Statistics of FillP

Start at: 2018-07-05 06:14:49
End at: 2018-07-05 06:15:19
Local clock offset: -0.072 ms
Remote clock offset: -0.083 ms

# Below is generated by plot.py at 2018-07-05 10:35:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1297.83 Mbit/s
95th percentile per-packet one-way delay: 245.822 ms
Loss rate: 6.90%
-- Flow 1:
Average throughput: 705.42 Mbit/s
95th percentile per-packet one-way delay: 248.135 ms
Loss rate: 6.47%
-- Flow 2:
Average throughput: 623.55 Mbit/s
95th percentile per-packet one-way delay: 200.680 ms
Loss rate: 7.29%
-- Flow 3:
Average throughput: 541.77 Mbit/s
95th percentile per-packet one-way delay: 286.937 ms
Loss rate: 7.71%
Run 3: Report of FillP — Data Link

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

- **Flow 1**: Ingress (mean 751.13 Mbits/s), Egress (mean 705.42 Mbits/s)
- **Flow 2**: Ingress (mean 668.41 Mbits/s), Egress (mean 623.55 Mbits/s)
- **Flow 3**: Ingress (mean 579.73 Mbits/s), Egress (mean 541.77 Mbits/s)

![Graph showing packet loss rate over time for Flow 1, Flow 2, and Flow 3.]

- **Flow 1**: 95th percentile 248.13 ms
- **Flow 2**: 95th percentile 200.68 ms
- **Flow 3**: 95th percentile 286.94 ms
Run 4: Statistics of FillP

Start at: 2018-07-05 06:40:10
End at: 2018-07-05 06:40:40
Local clock offset: -0.047 ms
Remote clock offset: 0.009 ms

# Below is generated by plot.py at 2018-07-05 10:35:02
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1203.50 Mbit/s
  95th percentile per-packet one-way delay: 270.560 ms
  Loss rate: 6.94%
-- Flow 1:
  Average throughput: 720.27 Mbit/s
  95th percentile per-packet one-way delay: 264.239 ms
  Loss rate: 5.35%
-- Flow 2:
  Average throughput: 542.52 Mbit/s
  95th percentile per-packet one-way delay: 315.128 ms
  Loss rate: 10.83%
-- Flow 3:
  Average throughput: 378.81 Mbit/s
  95th percentile per-packet one-way delay: 293.906 ms
  Loss rate: 4.13%
Run 4: Report of FillP — Data Link

Throughput (Mbps/s) vs. Time (s)

- Flow 1 Ingress (mean 758.02 Mbps/s)
- Flow 1 Egress (mean 720.27 Mbps/s)
- Flow 2 Ingress (mean 604.67 Mbps/s)
- Flow 2 Egress (mean 542.52 Mbps/s)
- Flow 3 Ingress (mean 385.32 Mbps/s)
- Flow 3 Egress (mean 378.81 Mbps/s)

Packet one-way delay (ms) vs. Time (s)

- Flow 1 (95th percentile 264.24 ms)
- Flow 2 (95th percentile 315.13 ms)
- Flow 3 (95th percentile 293.91 ms)

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Run 5: Statistics of FillP

Start at: 2018-07-05 07:05:21
End at: 2018-07-05 07:05:51
Local clock offset: -0.032 ms
Remote clock offset: 0.154 ms

# Below is generated by plot.py at 2018-07-05 10:37:38
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1299.24 Mbit/s
  95th percentile per-packet one-way delay: 248.868 ms
  Loss rate: 4.68%
-- Flow 1:
  Average throughput: 701.68 Mbit/s
  95th percentile per-packet one-way delay: 251.504 ms
  Loss rate: 4.92%
-- Flow 2:
  Average throughput: 615.57 Mbit/s
  95th percentile per-packet one-way delay: 265.748 ms
  Loss rate: 4.37%
-- Flow 3:
  Average throughput: 573.67 Mbit/s
  95th percentile per-packet one-way delay: 170.973 ms
  Loss rate: 4.48%
Run 5: Report of FillP — Data Link

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

- Flow 1 Ingress (mean 734.93 Mbit/s)
- Flow 1 Egress (mean 701.68 Mbit/s)
- Flow 2 Ingress (mean 639.74 Mbit/s)
- Flow 2 Egress (mean 615.57 Mbit/s)
- Flow 3 Ingress (mean 593.16 Mbit/s)
- Flow 3 Egress (mean 573.67 Mbit/s)
Run 6: Statistics of FillP

Start at: 2018-07-05 07:30:44  
End at: 2018-07-05 07:31:14  
Local clock offset: -0.052 ms  
Remote clock offset: 0.246 ms

# Below is generated by plot.py at 2018-07-05 10:37:38  
# Datalink statistics

-- Total of 3 flows:  
Average throughput: 1181.14 Mbit/s  
95th percentile per-packet one-way delay: 260.173 ms  
Loss rate: 7.00%  

-- Flow 1:  
Average throughput: 578.36 Mbit/s  
95th percentile per-packet one-way delay: 277.048 ms  
Loss rate: 6.87%  

-- Flow 2:  
Average throughput: 650.99 Mbit/s  
95th percentile per-packet one-way delay: 231.372 ms  
Loss rate: 6.72%  

-- Flow 3:  
Average throughput: 517.28 Mbit/s  
95th percentile per-packet one-way delay: 183.134 ms  
Loss rate: 8.12%
Run 6: Report of FillP — Data Link

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

- Flow 1 ingress (mean 618.47 Mbit/s)
- Flow 1 egress (mean 578.36 Mbit/s)
- Flow 2 ingress (mean 693.55 Mbit/s)
- Flow 2 egress (mean 650.99 Mbit/s)
- Flow 3 ingress (mean 555.95 Mbit/s)
- Flow 3 egress (mean 517.28 Mbit/s)

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

- Flow 1 (95th percentile 277.05 ms)
- Flow 2 (95th percentile 231.37 ms)
- Flow 3 (95th percentile 183.13 ms)
Run 7: Statistics of FillP

End at: 2018-07-05 07:56:17
Local clock offset: -0.02 ms
Remote clock offset: -0.024 ms

# Below is generated by plot.py at 2018-07-05 10:37:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1238.13 Mbit/s
95th percentile per-packet one-way delay: 212.299 ms
Loss rate: 7.46%
-- Flow 1:
Average throughput: 650.18 Mbit/s
95th percentile per-packet one-way delay: 208.170 ms
Loss rate: 5.34%
-- Flow 2:
Average throughput: 611.45 Mbit/s
95th percentile per-packet one-way delay: 252.258 ms
Loss rate: 9.48%
-- Flow 3:
Average throughput: 553.07 Mbit/s
95th percentile per-packet one-way delay: 184.874 ms
Loss rate: 10.19%
Run 7: Report of FillP — Data Link
Run 8: Statistics of FillP

Start at: 2018-07-05 08:20:52
End at: 2018-07-05 08:21:22
Local clock offset: -0.056 ms
Remote clock offset: -0.114 ms

# Below is generated by plot.py at 2018-07-05 10:37:38
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1195.95 Mbit/s
  95th percentile per-packet one-way delay: 235.411 ms
  Loss rate: 6.17%
-- Flow 1:
  Average throughput: 614.19 Mbit/s
  95th percentile per-packet one-way delay: 237.399 ms
  Loss rate: 5.90%
-- Flow 2:
  Average throughput: 608.19 Mbit/s
  95th percentile per-packet one-way delay: 239.304 ms
  Loss rate: 6.44%
-- Flow 3:
  Average throughput: 541.40 Mbit/s
  95th percentile per-packet one-way delay: 196.457 ms
  Loss rate: 6.47%
Run 8: Report of FillP — Data Link

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

- Flow 1 ingress (mean 650.07 Mbps)
- Flow 1 egress (mean 614.19 Mbps)
- Flow 2 ingress (mean 645.99 Mbps)
- Flow 2 egress (mean 608.19 Mbps)
- Flow 3 ingress (mean 571.63 Mbps)
- Flow 3 egress (mean 541.40 Mbps)

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

- Flow 1 (95th percentile 237.40 ms)
- Flow 2 (95th percentile 239.30 ms)
- Flow 3 (95th percentile 196.46 ms)
Run 9: Statistics of FillP

Start at: 2018-07-05 08:45:34
End at: 2018-07-05 08:46:04
Local clock offset: -0.02 ms
Remote clock offset: -0.287 ms

# Below is generated by plot.py at 2018-07-05 11:04:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1255.43 Mbit/s
95th percentile per-packet one-way delay: 247.954 ms
Loss rate: 4.52%
-- Flow 1:
Average throughput: 692.90 Mbit/s
95th percentile per-packet one-way delay: 252.756 ms
Loss rate: 4.11%
-- Flow 2:
Average throughput: 572.79 Mbit/s
95th percentile per-packet one-way delay: 225.185 ms
Loss rate: 5.26%
-- Flow 3:
Average throughput: 553.35 Mbit/s
95th percentile per-packet one-way delay: 285.713 ms
Loss rate: 4.54%
Run 9: Report of FillP — Data Link

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**Throughput (Mbps):**

- **Flow 1 Ingress:** (mean 719.62 Mbps)
- **Flow 1 Egress:** (mean 692.90 Mbps)
- **Flow 2 Ingress:** (mean 600.84 Mbps)
- **Flow 2 Egress:** (mean 572.79 Mbps)
- **Flow 3 Ingress:** (mean 572.44 Mbps)
- **Flow 3 Egress:** (mean 553.35 Mbps)

**Per-Packet Average Delay (ms):**

- **Flow 1** (95th percentile 252.76 ms)
- **Flow 2** (95th percentile 225.19 ms)
- **Flow 3** (95th percentile 285.71 ms)
Run 10: Statistics of FillP

Start at: 2018-07-05 09:10:48
End at: 2018-07-05 09:11:18
Local clock offset: 0.063 ms
Remote clock offset: 1.188 ms

# Below is generated by plot.py at 2018-07-05 11:05:58
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1220.69 Mbit/s
  95th percentile per-packet one-way delay: 278.438 ms
  Loss rate: 5.89%
-- Flow 1:
  Average throughput: 689.99 Mbit/s
  95th percentile per-packet one-way delay: 266.153 ms
  Loss rate: 4.92%
-- Flow 2:
  Average throughput: 556.85 Mbit/s
  95th percentile per-packet one-way delay: 304.494 ms
  Loss rate: 6.82%
-- Flow 3:
  Average throughput: 489.33 Mbit/s
  95th percentile per-packet one-way delay: 216.720 ms
  Loss rate: 7.78%
Run 10: Report of FillIP — Data Link

- **Throughput (Mbps)**
  - Flow 1 ingress (mean 722.74 Mbps)
  - Flow 1 egress (mean 689.99 Mbps)
  - Flow 2 ingress (mean 593.87 Mbps)
  - Flow 2 egress (mean 556.85 Mbps)
  - Flow 3 ingress (mean 524.02 Mbps)
  - Flow 3 egress (mean 489.33 Mbps)

- **Per-packet one-way delay (ms)**
  - Flow 1 (95th percentile 266.15 ms)
  - Flow 2 (95th percentile 304.49 ms)
  - Flow 3 (95th percentile 216.72 ms)
Run 1: Statistics of FillP-Sheep

Start at: 2018-07-05 05:13:55
End at: 2018-07-05 05:14:25
Local clock offset: 0.266 ms
Remote clock offset: 0.273 ms

# Below is generated by plot.py at 2018-07-05 11:05:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1203.70 Mbit/s
95th percentile per-packet one-way delay: 248.085 ms
Loss rate: 9.02%
-- Flow 1:
Average throughput: 613.88 Mbit/s
95th percentile per-packet one-way delay: 207.332 ms
Loss rate: 10.72%
-- Flow 2:
Average throughput: 593.92 Mbit/s
95th percentile per-packet one-way delay: 262.543 ms
Loss rate: 9.12%
-- Flow 3:
Average throughput: 595.43 Mbit/s
95th percentile per-packet one-way delay: 257.807 ms
Loss rate: 2.96%
Run 1: Report of FillP-Sheep — Data Link

- Throughput (Mbps):
  - Flow 1 ingress (mean 684.96 Mbps)
  - Flow 1 egress (mean 613.88 Mbps)
  - Flow 2 ingress (mean 649.41 Mbps)
  - Flow 2 egress (mean 593.92 Mbps)
  - Flow 3 ingress (mean 606.02 Mbps)
  - Flow 3 egress (mean 595.43 Mbps)

- Packet loss rate (ms):
  - Flow 1 (95th percentile 207.33 ms)
  - Flow 2 (95th percentile 262.54 ms)
  - Flow 3 (95th percentile 257.81 ms)
Run 2: Statistics of FillP-Sheep

Start at: 2018-07-05 05:39:00
End at: 2018-07-05 05:39:30
Local clock offset: -0.09 ms
Remote clock offset: 0.095 ms

# Below is generated by plot.py at 2018-07-05 11:05:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 486.75 Mbit/s
95th percentile per-packet one-way delay: 308.138 ms
Loss rate: 17.07%
-- Flow 1:
Average throughput: 195.01 Mbit/s
95th percentile per-packet one-way delay: 308.587 ms
Loss rate: 9.73%
-- Flow 2:
Average throughput: 163.05 Mbit/s
95th percentile per-packet one-way delay: 295.620 ms
Loss rate: 17.06%
-- Flow 3:
Average throughput: 557.88 Mbit/s
95th percentile per-packet one-way delay: 312.678 ms
Loss rate: 23.67%
Run 2: Report of FillP-Sheep — Data Link

Throughput (Mbps):

- **Flow 1 ingress (mean 215.15 Mbps)**
- **Flow 1 egress (mean 195.01 Mbps)**
- **Flow 2 ingress (mean 195.40 Mbps)**
- **Flow 2 egress (mean 163.05 Mbps)**
- **Flow 3 ingress (mean 721.87 Mbps)**
- **Flow 3 egress (mean 557.88 Mbps)**

Average per-packet one-way delay (ms):

- **Flow 1 (95th percentile 308.59 ms)**
- **Flow 2 (95th percentile 295.62 ms)**
- **Flow 3 (95th percentile 312.60 ms)**
Run 3: Statistics of FillP-Sheep

Start at: 2018-07-05 06:03:52
End at: 2018-07-05 06:04:22
Local clock offset: -0.056 ms
Remote clock offset: -0.008 ms

# Below is generated by plot.py at 2018-07-05 11:07:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1239.30 Mbit/s
95th percentile per-packet one-way delay: 220.052 ms
Loss rate: 6.72%
-- Flow 1:
Average throughput: 648.57 Mbit/s
95th percentile per-packet one-way delay: 204.372 ms
Loss rate: 8.31%
-- Flow 2:
Average throughput: 621.99 Mbit/s
95th percentile per-packet one-way delay: 251.631 ms
Loss rate: 5.19%
-- Flow 3:
Average throughput: 539.92 Mbit/s
95th percentile per-packet one-way delay: 147.359 ms
Loss rate: 4.23%
Run 3: Report of FillP-Sheep — Data Link

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

Flow 1 Ingress (mean 704.42 Mbit/s)  Flow 1 Egress (mean 648.57 Mbit/s)
Flow 2 Ingress (mean 653.95 Mbit/s)  Flow 2 Egress (mean 623.99 Mbit/s)
Flow 3 Ingress (mean 556.68 Mbit/s)  Flow 3 Egress (mean 539.92 Mbit/s)

Flow 1 (95th percentile 204.37 ms)  Flow 2 (95th percentile 251.63 ms)  Flow 3 (95th percentile 147.36 ms)
Run 4: Statistics of FillP-Sheep

Start at: 2018-07-05 06:29:12
End at: 2018-07-05 06:29:42
Local clock offset: -0.076 ms
Remote clock offset: 0.274 ms

# Below is generated by plot.py at 2018-07-05 11:08:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1169.40 Mbit/s
95th percentile per-packet one-way delay: 207.051 ms
Loss rate: 10.81%
-- Flow 1:
Average throughput: 597.28 Mbit/s
95th percentile per-packet one-way delay: 224.802 ms
Loss rate: 11.67%
-- Flow 2:
Average throughput: 611.62 Mbit/s
95th percentile per-packet one-way delay: 176.268 ms
Loss rate: 11.28%
-- Flow 3:
Average throughput: 506.39 Mbit/s
95th percentile per-packet one-way delay: 227.801 ms
Loss rate: 6.31%
Run 4: Report of FillP-Sheep — Data Link

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

- Flow 1 ingress (mean 673.36 Mbit/s)
- Flow 1 egress (mean 597.28 Mbit/s)
- Flow 2 ingress (mean 685.06 Mbit/s)
- Flow 2 egress (mean 611.62 Mbit/s)
- Flow 3 ingress (mean 533.73 Mbit/s)
- Flow 3 egress (mean 506.39 Mbit/s)
Run 5: Statistics of FillP-Sheep

Start at: 2018-07-05 06:54:32
End at: 2018-07-05 06:55:02
Local clock offset: -0.072 ms
Remote clock offset: -0.09 ms

# Below is generated by plot.py at 2018-07-05 11:09:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1203.26 Mbit/s
95th percentile per-packet one-way delay: 277.102 ms
Loss rate: 7.52%
-- Flow 1:
Average throughput: 611.34 Mbit/s
95th percentile per-packet one-way delay: 287.811 ms
Loss rate: 9.76%
-- Flow 2:
Average throughput: 625.01 Mbit/s
95th percentile per-packet one-way delay: 237.349 ms
Loss rate: 5.56%
-- Flow 3:
Average throughput: 539.90 Mbit/s
95th percentile per-packet one-way delay: 167.109 ms
Loss rate: 4.00%
Run 5: Report of FillP-Sheep — Data Link

![Graph of Throughput](image)

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

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Run 6: Statistics of FillP-Sheep

Start at: 2018-07-05 07:19:41
End at: 2018-07-05 07:20:11
Local clock offset: -0.078 ms
Remote clock offset: -0.365 ms

# Below is generated by plot.py at 2018-07-05 11:12:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1300.37 Mbit/s
95th percentile per-packet one-way delay: 251.500 ms
Loss rate: 8.41%
-- Flow 1:
Average throughput: 704.26 Mbit/s
95th percentile per-packet one-way delay: 251.586 ms
Loss rate: 8.91%
-- Flow 2:
Average throughput: 596.73 Mbit/s
95th percentile per-packet one-way delay: 278.203 ms
Loss rate: 9.50%
-- Flow 3:
Average throughput: 610.04 Mbit/s
95th percentile per-packet one-way delay: 231.973 ms
Loss rate: 4.28%
Run 6: Report of FillP-Sheep — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 769.94 Mbps)
  - Flow 1 egress (mean 704.26 Mbps)
  - Flow 2 ingress (mean 655.27 Mbps)
  - Flow 2 egress (mean 596.73 Mbps)
  - Flow 3 ingress (mean 629.44 Mbps)
  - Flow 3 egress (mean 610.04 Mbps)

- **Per-packet one-way delay (ms):**
  - Flow 1 (95th percentile 251.59 ms)
  - Flow 2 (95th percentile 278.20 ms)
  - Flow 3 (95th percentile 231.97 ms)
Run 7: Statistics of FillP-Sheep

Start at: 2018-07-05 07:45:00
End at: 2018-07-05 07:45:30
Local clock offset: ~0.054 ms
Remote clock offset: 0.23 ms

# Below is generated by plot.py at 2018-07-05 11:12:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 722.02 Mbit/s
95th percentile per-packet one-way delay: 286.136 ms
Loss rate: 15.36%
-- Flow 1:
Average throughput: 129.20 Mbit/s
95th percentile per-packet one-way delay: 313.644 ms
Loss rate: 17.52%
-- Flow 2:
Average throughput: 694.75 Mbit/s
95th percentile per-packet one-way delay: 288.225 ms
Loss rate: 12.56%
-- Flow 3:
Average throughput: 400.96 Mbit/s
95th percentile per-packet one-way delay: 219.123 ms
Loss rate: 22.12%
Run 7: Report of FillP-Sheep — Data Link

Throughput (Mb/s):

- Flow 1 ingress (mean 155.70 Mb/s)
- Flow 1 egress (mean 129.26 Mb/s)
- Flow 2 ingress (mean 788.62 Mb/s)
- Flow 2 egress (mean 694.75 Mb/s)
- Flow 3 ingress (mean 506.32 Mb/s)
- Flow 3 egress (mean 400.96 Mb/s)

Per packet one-way delay (ms):

- Flow 1 (95th percentile 313.64 ms)
- Flow 2 (95th percentile 288.23 ms)
- Flow 3 (95th percentile 219.12 ms)
Run 8: Statistics of FillP-Sheep

Start at: 2018-07-05 08:10:05
End at: 2018-07-05 08:10:35
Local clock offset: -0.055 ms
Remote clock offset: 1.266 ms

# Below is generated by plot.py at 2018-07-05 11:29:51
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 894.11 Mbit/s
  95th percentile per-packet one-way delay: 274.478 ms
  Loss rate: 6.71%
-- Flow 1:
  Average throughput: 405.54 Mbit/s
  95th percentile per-packet one-way delay: 266.607 ms
  Loss rate: 6.14%
-- Flow 2:
  Average throughput: 513.28 Mbit/s
  95th percentile per-packet one-way delay: 304.103 ms
  Loss rate: 8.88%
-- Flow 3:
  Average throughput: 448.83 Mbit/s
  95th percentile per-packet one-way delay: 215.945 ms
  Loss rate: 3.01%
Run 8: Report of FillP-Sheep — Data Link
Run 9: Statistics of FillP-Sheep

Start at: 2018-07-05 08:35:04
End at: 2018-07-05 08:35:34
Local clock offset: -0.084 ms
Remote clock offset: -0.344 ms

# Below is generated by plot.py at 2018-07-05 11:29:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 632.73 Mbit/s
95th percentile per-packet one-way delay: 280.759 ms
Loss rate: 8.52%
-- Flow 1:
Average throughput: 347.48 Mbit/s
95th percentile per-packet one-way delay: 263.920 ms
Loss rate: 4.29%
-- Flow 2:
Average throughput: 166.59 Mbit/s
95th percentile per-packet one-way delay: 314.952 ms
Loss rate: 14.60%
-- Flow 3:
Average throughput: 532.43 Mbit/s
95th percentile per-packet one-way delay: 284.746 ms
Loss rate: 12.28%
Run 9: Report of FillP-Sheep — Data Link
Run 10: Statistics of FillP-Sheep

Start at: 2018-07-05 08:59:53
End at: 2018-07-05 09:00:23
Local clock offset: 0.017 ms
Remote clock offset: -1.31 ms

# Below is generated by plot.py at 2018-07-05 11:37:38
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1116.68 Mbit/s
  95th percentile per-packet one-way delay: 264.155 ms
  Loss rate: 9.49%
-- Flow 1:
  Average throughput: 600.43 Mbit/s
  95th percentile per-packet one-way delay: 263.086 ms
  Loss rate: 10.21%
-- Flow 2:
  Average throughput: 580.57 Mbit/s
  95th percentile per-packet one-way delay: 221.147 ms
  Loss rate: 10.04%
-- Flow 3:
  Average throughput: 400.01 Mbit/s
  95th percentile per-packet one-way delay: 315.116 ms
  Loss rate: 4.28%
Run 10: Report of FillIP-Sheep — Data Link

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

- Blue dashed line: Flow 1 Ingress (mean 666.11 MB/s)
- Blue solid line: Flow 1 Egress (mean 600.43 MB/s)
- Red dashed line: Flow 2 Ingress (mean 641.34 MB/s)
- Red solid line: Flow 2 Egress (mean 580.57 MB/s)
- Green dashed line: Flow 3 Ingress (mean 412.09 MB/s)
- Green solid line: Flow 3 Egress (mean 400.01 MB/s)

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

- Blue circle: Flow 1 (95th percentile 263.09 ms)
- Green circle: Flow 2 (95th percentile 221.15 ms)
- Red circle: Flow 3 (95th percentile 315.12 ms)
Run 1: Statistics of Indigo

Start at: 2018-07-05 05:28:11
End at: 2018-07-05 05:28:41
Local clock offset: 0.004 ms
Remote clock offset: 0.211 ms

# Below is generated by plot.py at 2018-07-05 11:37:38
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 395.53 Mbit/s
  95th percentile per-packet one-way delay: 90.146 ms
  Loss rate: 0.61%
-- Flow 1:
  Average throughput: 206.47 Mbit/s
  95th percentile per-packet one-way delay: 87.579 ms
  Loss rate: 0.42%
-- Flow 2:
  Average throughput: 203.27 Mbit/s
  95th percentile per-packet one-way delay: 90.318 ms
  Loss rate: 0.58%
-- Flow 3:
  Average throughput: 133.11 Mbit/s
  95th percentile per-packet one-way delay: 93.349 ms
  Loss rate: 1.51%
Run 1: Report of Indigo — Data Link

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

- Flow 1 ingress (mean 206.43 Mbit/s)
- Flow 1 egress (mean 206.47 Mbit/s)
- Flow 2 ingress (mean 203.53 Mbit/s)
- Flow 2 egress (mean 203.27 Mbit/s)
- Flow 3 ingress (mean 133.46 Mbit/s)
- Flow 3 egress (mean 133.11 Mbit/s)
Run 2: Statistics of Indigo

Start at: 2018-07-05 05:52:55  
End at: 2018-07-05 05:53:25  
Local clock offset: -0.053 ms  
Remote clock offset: -0.064 ms

# Below is generated by plot.py at 2018-07-05 11:37:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 384.28 Mbit/s
95th percentile per-packet one-way delay: 77.526 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 207.69 Mbit/s
95th percentile per-packet one-way delay: 76.596 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 210.73 Mbit/s
95th percentile per-packet one-way delay: 77.767 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 113.65 Mbit/s
95th percentile per-packet one-way delay: 78.721 ms
Loss rate: 1.54%
Run 2: Report of Indigo — Data Link
Run 3: Statistics of Indigo

Start at: 2018-07-05 06:18:24
End at: 2018-07-05 06:18:54
Local clock offset: -0.036 ms
Remote clock offset: -0.274 ms

# Below is generated by plot.py at 2018-07-05 11:37:38
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 365.49 Mbit/s
  95th percentile per-packet one-way delay: 97.442 ms
  Loss rate: 0.60%
-- Flow 1:
  Average throughput: 202.71 Mbit/s
  95th percentile per-packet one-way delay: 94.613 ms
  Loss rate: 0.40%
-- Flow 2:
  Average throughput: 189.10 Mbit/s
  95th percentile per-packet one-way delay: 97.911 ms
  Loss rate: 0.60%
-- Flow 3:
  Average throughput: 116.35 Mbit/s
  95th percentile per-packet one-way delay: 101.238 ms
  Loss rate: 1.66%
Run 3: Report of Indigo — Data Link

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Run 4: Statistics of Indigo

Start at: 2018-07-05 06:43:41
End at: 2018-07-05 06:44:11
Local clock offset: -0.046 ms
Remote clock offset: -1.344 ms

# Below is generated by plot.py at 2018-07-05 11:37:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 371.39 Mbit/s
95th percentile per-packet one-way delay: 93.725 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 203.04 Mbit/s
95th percentile per-packet one-way delay: 89.774 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 191.86 Mbit/s
95th percentile per-packet one-way delay: 93.606 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 126.77 Mbit/s
95th percentile per-packet one-way delay: 98.277 ms
Loss rate: 1.39%
Run 4: Report of Indigo — Data Link
Run 5: Statistics of Indigo

Start at: 2018-07-05 07:08:51
End at: 2018-07-05 07:09:21
Local clock offset: -0.042 ms
Remote clock offset: 0.952 ms

# Below is generated by plot.py at 2018-07-05 11:37:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 364.70 Mbit/s
95th percentile per-packet one-way delay: 91.594 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 204.09 Mbit/s
95th percentile per-packet one-way delay: 90.115 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 186.73 Mbit/s
95th percentile per-packet one-way delay: 91.879 ms
Loss rate: 0.60%
-- Flow 3:
Average throughput: 108.83 Mbit/s
95th percentile per-packet one-way delay: 93.209 ms
Loss rate: 1.37%
Run 5: Report of Indigo — Data Link

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

- Flow 1 ingress (mean 204.09 Mbit/s)
- Flow 1 egress (mean 204.09 Mbit/s)
- Flow 2 ingress (mean 186.66 Mbit/s)
- Flow 2 egress (mean 186.73 Mbit/s)
- Flow 3 ingress (mean 108.98 Mbit/s)
- Flow 3 egress (mean 108.83 Mbit/s)

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

- Flow 1 (95th percentile 90.11 ms)
- Flow 2 (95th percentile 91.88 ms)
- Flow 3 (95th percentile 93.21 ms)
Run 6: Statistics of Indigo

Start at: 2018-07-05 07:34:06
End at: 2018-07-05 07:34:36
Local clock offset: -0.015 ms
Remote clock offset: -1.329 ms

# Below is generated by plot.py at 2018-07-05 11:37:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 370.28 Mbit/s
95th percentile per-packet one-way delay: 109.835 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 200.67 Mbit/s
95th percentile per-packet one-way delay: 97.231 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 191.91 Mbit/s
95th percentile per-packet one-way delay: 109.564 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 131.19 Mbit/s
95th percentile per-packet one-way delay: 120.211 ms
Loss rate: 1.47%
Run 7: Statistics of Indigo

Start at: 2018-07-05 07:59:14
End at: 2018-07-05 07:59:44
Local clock offset: -0.099 ms
Remote clock offset: 0.135 ms

# Below is generated by plot.py at 2018-07-05 11:37:38
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 375.49 Mbit/s
  95th percentile per-packet one-way delay: 75.305 ms
  Loss rate: 0.62%
-- Flow 1:
  Average throughput: 205.04 Mbit/s
  95th percentile per-packet one-way delay: 74.860 ms
  Loss rate: 0.40%
-- Flow 2:
  Average throughput: 190.55 Mbit/s
  95th percentile per-packet one-way delay: 75.546 ms
  Loss rate: 0.67%
-- Flow 3:
  Average throughput: 137.33 Mbit/s
  95th percentile per-packet one-way delay: 75.869 ms
  Loss rate: 1.49%
Run 8: Statistics of Indigo

Start at: 2018-07-05 08:24:15
End at: 2018-07-05 08:24:45
Local clock offset: -0.045 ms
Remote clock offset: -0.157 ms

# Below is generated by plot.py at 2018-07-05 11:37:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 368.40 Mbit/s
95th percentile per-packet one-way delay: 96.684 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 201.19 Mbit/s
95th percentile per-packet one-way delay: 94.250 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 187.15 Mbit/s
95th percentile per-packet one-way delay: 96.309 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 132.74 Mbit/s
95th percentile per-packet one-way delay: 104.149 ms
Loss rate: 1.51%
Run 8: Report of Indigo — Data Link

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

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

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Run 9: Statistics of Indigo

Start at: 2018-07-05 08:48:58
End at: 2018-07-05 08:49:28
Local clock offset: -0.036 ms
Remote clock offset: -0.195 ms

# Below is generated by plot.py at 2018-07-05 11:37:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 366.97 Mbit/s
95th percentile per-packet one-way delay: 87.479 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 207.76 Mbit/s
95th percentile per-packet one-way delay: 85.138 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 180.10 Mbit/s
95th percentile per-packet one-way delay: 88.352 ms
Loss rate: 0.66%
-- Flow 3:
Average throughput: 124.56 Mbit/s
95th percentile per-packet one-way delay: 90.437 ms
Loss rate: 1.60%
Run 9: Report of Indigo — Data Link
Run 10: Statistics of Indigo

Start at: 2018-07-05 09:14:14
End at: 2018-07-05 09:14:44
Local clock offset: 0.044 ms
Remote clock offset: 0.151 ms

# Below is generated by plot.py at 2018-07-05 11:37:38
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 351.24 Mbit/s
  95th percentile per-packet one-way delay: 95.705 ms
  Loss rate: 0.57%
-- Flow 1:
  Average throughput: 204.91 Mbit/s
  95th percentile per-packet one-way delay: 92.554 ms
  Loss rate: 0.40%
-- Flow 2:
  Average throughput: 181.95 Mbit/s
  95th percentile per-packet one-way delay: 96.489 ms
  Loss rate: 0.62%
-- Flow 3:
  Average throughput: 80.34 Mbit/s
  95th percentile per-packet one-way delay: 99.655 ms
  Loss rate: 1.62%
Run 10: Report of Indigo — Data Link
Run 1: Statistics of LEDBAT

Start at: 2018-07-05 05:20:09
End at: 2018-07-05 05:20:39
Local clock offset: 0.055 ms
Remote clock offset: 1.339 ms

# Below is generated by plot.py at 2018-07-05 11:37:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 36.90 Mbit/s
95th percentile per-packet one-way delay: 61.392 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 23.86 Mbit/s
95th percentile per-packet one-way delay: 61.580 ms
Loss rate: 0.82%
-- Flow 2:
Average throughput: 15.92 Mbit/s
95th percentile per-packet one-way delay: 61.036 ms
Loss rate: 1.23%
-- Flow 3:
Average throughput: 7.58 Mbit/s
95th percentile per-packet one-way delay: 60.949 ms
Loss rate: 2.52%
Run 1: Report of LEDBAT — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 23.96 Mbit/s)  Flow 1 egress (mean 23.86 Mbit/s)
Flow 2 ingress (mean 16.02 Mbit/s)  Flow 2 egress (mean 15.92 Mbit/s)
Flow 3 ingress (mean 7.68 Mbit/s)  Flow 3 egress (mean 7.56 Mbit/s)

Per packet one way delay (ms)

Flow 1 (95th percentile 61.58 ms)  Flow 2 (95th percentile 61.04 ms)  Flow 3 (95th percentile 60.95 ms)
Run 2: Statistics of LEDBAT

Start at: 2018-07-05 05:44:48
End at: 2018-07-05 05:45:18
Local clock offset: -0.062 ms
Remote clock offset: -1.022 ms

# Below is generated by plot.py at 2018-07-05 11:37:38
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 36.14 Mbit/s
  95th percentile per-packet one-way delay: 63.479 ms
  Loss rate: 1.07%
-- Flow 1:
  Average throughput: 23.18 Mbit/s
  95th percentile per-packet one-way delay: 63.486 ms
  Loss rate: 0.83%
-- Flow 2:
  Average throughput: 15.93 Mbit/s
  95th percentile per-packet one-way delay: 63.484 ms
  Loss rate: 1.23%
-- Flow 3:
  Average throughput: 7.40 Mbit/s
  95th percentile per-packet one-way delay: 63.385 ms
  Loss rate: 2.55%
Run 2: Report of LEDBAT — Data Link
Run 3: Statistics of LEDBAT

Start at: 2018-07-05 06:10:11
End at: 2018-07-05 06:10:41
Local clock offset: -0.057 ms
Remote clock offset: 0.019 ms

# Below is generated by plot.py at 2018-07-05 11:37:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 36.53 Mbit/s
95th percentile per-packet one-way delay: 62.386 ms
Loss rate: 1.06%
-- Flow 1:
Average throughput: 23.40 Mbit/s
95th percentile per-packet one-way delay: 62.422 ms
Loss rate: 0.82%
-- Flow 2:
Average throughput: 15.91 Mbit/s
95th percentile per-packet one-way delay: 62.214 ms
Loss rate: 1.23%
-- Flow 3:
Average throughput: 7.87 Mbit/s
95th percentile per-packet one-way delay: 62.593 ms
Loss rate: 2.47%
Run 3: Report of LEDBAT — Data Link

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

- **Flow 1 ingress (mean 23.50 Mbps/s)**
- **Flow 1 egress (mean 23.40 Mbps/s)**
- **Flow 2 ingress (mean 16.00 Mbps/s)**
- **Flow 2 egress (mean 15.91 Mbps/s)**
- **Flow 3 ingress (mean 7.97 Mbps/s)**
- **Flow 3 egress (mean 7.07 Mbps/s)**

![Graph 2: Per packet round trip delay (ms) vs Time (s)]

- **Flow 1 (95th percentile 62.42 ms)**
- **Flow 2 (95th percentile 62.21 ms)**
- **Flow 3 (95th percentile 62.59 ms)**

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Run 4: Statistics of LEDBAT

Start at: 2018-07-05 06:35:32
End at: 2018-07-05 06:36:02
Local clock offset: -0.037 ms
Remote clock offset: -1.398 ms

# Below is generated by plot.py at 2018-07-05 11:37:38
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 30.57 Mbit/s
  95th percentile per-packet one-way delay: 64.242 ms
  Loss rate: 1.16%
-- Flow 1:
  Average throughput: 17.94 Mbit/s
  95th percentile per-packet one-way delay: 64.425 ms
  Loss rate: 0.94%
-- Flow 2:
  Average throughput: 16.06 Mbit/s
  95th percentile per-packet one-way delay: 64.099 ms
  Loss rate: 1.23%
-- Flow 3:
  Average throughput: 6.11 Mbit/s
  95th percentile per-packet one-way delay: 63.429 ms
  Loss rate: 2.79%
Run 4: Report of LEDBAT — Data Link
Run 5: Statistics of LEDBAT

Start at: 2018-07-05 07:00:42
End at: 2018-07-05 07:01:12
Local clock offset: 0.006 ms
Remote clock offset: -1.316 ms

# Below is generated by plot.py at 2018-07-05 11:37:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 37.08 Mbit/s
95th percentile per-packet one-way delay: 63.724 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 23.95 Mbit/s
95th percentile per-packet one-way delay: 63.839 ms
Loss rate: 0.82%
-- Flow 2:
Average throughput: 15.93 Mbit/s
95th percentile per-packet one-way delay: 63.560 ms
Loss rate: 1.23%
-- Flow 3:
Average throughput: 7.87 Mbit/s
95th percentile per-packet one-way delay: 63.220 ms
Loss rate: 2.47%
Run 5: Report of LEDBAT — Data Link

[Graph showing Throughput vs Time for different flows]

[Graph showing Per packet one way delay vs Time for different flows]
Run 6: Statistics of LEDBAT

Start at: 2018-07-05 07:26:06  
End at: 2018-07-05 07:26:36  
Local clock offset: -0.041 ms  
Remote clock offset: -1.385 ms

# Below is generated by plot.py at 2018-07-05 11:37:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 37.12 Mbit/s
95th percentile per-packet one-way delay: 64.189 ms
Loss rate: 1.05%

-- Flow 1:
Average throughput: 23.98 Mbit/s
95th percentile per-packet one-way delay: 64.352 ms
Loss rate: 0.81%

-- Flow 2:
Average throughput: 15.92 Mbit/s
95th percentile per-packet one-way delay: 63.779 ms
Loss rate: 1.23%

-- Flow 3:
Average throughput: 7.87 Mbit/s
95th percentile per-packet one-way delay: 63.269 ms
Loss rate: 2.47%
Run 6: Report of LEDBAT — Data Link
Run 7: Statistics of LEDBAT

Start at: 2018-07-05 07:51:08
End at: 2018-07-05 07:51:38
Local clock offset: -0.033 ms
Remote clock offset: -0.099 ms

# Below is generated by plot.py at 2018-07-05 11:37:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 36.44 Mbit/s
95th percentile per-packet one-way delay: 62.643 ms
Loss rate: 1.06%
-- Flow 1:
Average throughput: 23.58 Mbit/s
95th percentile per-packet one-way delay: 62.603 ms
Loss rate: 0.82%
-- Flow 2:
Average throughput: 15.51 Mbit/s
95th percentile per-packet one-way delay: 62.931 ms
Loss rate: 1.25%
-- Flow 3:
Average throughput: 7.86 Mbit/s
95th percentile per-packet one-way delay: 62.213 ms
Loss rate: 2.47%
Run 7: Report of LEDBAT — Data Link

![Graph showing throughput over time with different flow characteristics.]

- **Flow 1 ingress (mean 23.68 Mbit/s)**
- **Flow 1 egress (mean 23.58 Mbit/s)**
- **Flow 2 ingress (mean 15.61 Mbit/s)**
- **Flow 2 egress (mean 15.51 Mbit/s)**
- **Flow 3 ingress (mean 7.96 Mbit/s)**
- **Flow 3 egress (mean 7.86 Mbit/s)**

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

- **Flow 1 (95th percentile 62.60 ms)**
- **Flow 2 (95th percentile 62.93 ms)**
- **Flow 3 (95th percentile 62.21 ms)**

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Run 8: Statistics of LEDBAT

Start at: 2018-07-05 08:16:14
End at: 2018-07-05 08:16:44
Local clock offset: -0.097 ms
Remote clock offset: 0.041 ms

# Below is generated by plot.py at 2018-07-05 11:37:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 34.72 Mbit/s
95th percentile per-packet one-way delay: 62.358 ms
Loss rate: 1.09%
-- Flow 1:
Average throughput: 21.72 Mbit/s
95th percentile per-packet one-way delay: 62.475 ms
Loss rate: 0.85%
-- Flow 2:
Average throughput: 15.92 Mbit/s
95th percentile per-packet one-way delay: 62.155 ms
Loss rate: 1.23%
-- Flow 3:
Average throughput: 7.40 Mbit/s
95th percentile per-packet one-way delay: 61.891 ms
Loss rate: 2.55%
Run 8: Report of LEDBAT — Data Link

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

- **Flow 1 ingress (mean 21.82 Mbit/s)**
- **Flow 1 egress (mean 21.72 Mbit/s)**
- **Flow 2 ingress (mean 16.02 Mbit/s)**
- **Flow 2 egress (mean 15.92 Mbit/s)**
- **Flow 3 ingress (mean 7.50 Mbit/s)**
- **Flow 3 egress (mean 7.40 Mbit/s)**

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

- **Flow 1 (95th percentile 62.48 ms)**
- **Flow 2 (95th percentile 62.16 ms)**
- **Flow 3 (95th percentile 61.89 ms)**

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Run 9: Statistics of LEDBAT

Start at: 2018-07-05 08:40:55
End at: 2018-07-05 08:41:25
Local clock offset: -0.04 ms
Remote clock offset: 1.448 ms

# Below is generated by plot.py at 2018-07-05 11:37:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 36.47 Mbit/s
95th percentile per-packet one-way delay: 60.915 ms
Loss rate: 1.06%
-- Flow 1:
Average throughput: 23.45 Mbit/s
95th percentile per-packet one-way delay: 60.987 ms
Loss rate: 0.82%
-- Flow 2:
Average throughput: 15.93 Mbit/s
95th percentile per-packet one-way delay: 60.799 ms
Loss rate: 1.23%
-- Flow 3:
Average throughput: 7.58 Mbit/s
95th percentile per-packet one-way delay: 60.431 ms
Loss rate: 2.52%
Run 9: Report of LEDBAT — Data Link

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

- Flow 1 ingress (mean 23.54 Mbps)
- Flow 1 egress (mean 23.45 Mbps)
- Flow 2 ingress (mean 16.02 Mbps)
- Flow 2 egress (mean 15.93 Mbps)
- Flow 3 ingress (mean 7.68 Mbps)
- Flow 3 egress (mean 7.58 Mbps)

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

- Flow 1 (95th percentile 60.99 ms)
- Flow 2 (95th percentile 60.80 ms)
- Flow 3 (95th percentile 60.43 ms)
Run 10: Statistics of LEDBAT

Start at: 2018-07-05 09:06:09
End at: 2018-07-05 09:06:39
Local clock offset: 0.068 ms
Remote clock offset: -0.215 ms

# Below is generated by plot.py at 2018-07-05 11:37:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 36.90 Mbit/s
95th percentile per-packet one-way delay: 63.250 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 23.83 Mbit/s
95th percentile per-packet one-way delay: 63.383 ms
Loss rate: 0.82%
-- Flow 2:
Average throughput: 15.86 Mbit/s
95th percentile per-packet one-way delay: 63.109 ms
Loss rate: 1.23%
-- Flow 3:
Average throughput: 7.86 Mbit/s
95th percentile per-packet one-way delay: 62.573 ms
Loss rate: 2.47%
Run 10: Report of LEDBAT — Data Link

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

**Legend:**
- Flow 1 ingress (mean 23.93 Mbit/s)
- Flow 1 egress (mean 23.83 Mbit/s)
- Flow 2 ingress (mean 15.96 Mbit/s)
- Flow 2 egress (mean 15.86 Mbit/s)
- Flow 3 ingress (mean 7.95 Mbit/s)
- Flow 3 egress (mean 7.86 Mbit/s)

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

**Legend:**
- Flow 1 (95th percentile 63.38 ms)
- Flow 2 (95th percentile 63.11 ms)
- Flow 3 (95th percentile 62.57 ms)

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Run 1: Statistics of PCC-Allegro

Start at: 2018-07-05 05:17:32
End at: 2018-07-05 05:18:02
Local clock offset: 0.14 ms
Remote clock offset: 0.012 ms

# Below is generated by plot.py at 2018-07-05 11:37:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 398.60 Mbit/s
95th percentile per-packet one-way delay: 115.867 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 385.41 Mbit/s
95th percentile per-packet one-way delay: 115.122 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 10.03 Mbit/s
95th percentile per-packet one-way delay: 117.241 ms
Loss rate: 0.78%
-- Flow 3:
Average throughput: 20.02 Mbit/s
95th percentile per-packet one-way delay: 120.647 ms
Loss rate: 1.42%
Run 1: Report of PCC-Allegro — Data Link

- Flow 1 ingress (mean 385.37 Mbit/s)
- Flow 1 egress (mean 385.41 Mbit/s)
- Flow 2 ingress (mean 19.04 Mbit/s)
- Flow 2 egress (mean 10.03 Mbit/s)
- Flow 3 ingress (mean 20.06 Mbit/s)
- Flow 3 egress (mean 20.02 Mbit/s)

- Flow 1 (95th percentile 115.12 ms)
- Flow 2 (95th percentile 117.24 ms)
- Flow 3 (95th percentile 120.65 ms)
Run 2: Statistics of PCC-Allegro

Start at: 2018-07-05 05:42:11
End at: 2018-07-05 05:42:41
Local clock offset: -0.006 ms
Remote clock offset: 1.421 ms

# Below is generated by plot.py at 2018-07-05 11:37:39
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 410.73 Mbit/s
  95th percentile per-packet one-way delay: 208.391 ms
  Loss rate: 0.63%
-- Flow 1:
  Average throughput: 388.35 Mbit/s
  95th percentile per-packet one-way delay: 205.721 ms
  Loss rate: 0.57%
-- Flow 2:
  Average throughput: 4.43 Mbit/s
  95th percentile per-packet one-way delay: 208.684 ms
  Loss rate: 0.86%
-- Flow 3:
  Average throughput: 59.69 Mbit/s
  95th percentile per-packet one-way delay: 210.314 ms
  Loss rate: 1.72%
Run 2: Report of PCC-Allegro — Data Link
Run 3: Statistics of PCC-Allegro

Start at: 2018-07-05 06:07:33
End at: 2018-07-05 06:08:03
Local clock offset: -0.07 ms
Remote clock offset: 1.374 ms

# Below is generated by plot.py at 2018-07-05 11:37:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 380.68 Mbit/s
95th percentile per-packet one-way delay: 166.496 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 285.44 Mbit/s
95th percentile per-packet one-way delay: 165.299 ms
Loss rate: 0.48%
-- Flow 2:
Average throughput: 127.96 Mbit/s
95th percentile per-packet one-way delay: 167.711 ms
Loss rate: 0.84%
-- Flow 3:
Average throughput: 31.83 Mbit/s
95th percentile per-packet one-way delay: 168.929 ms
Loss rate: 1.50%
Run 3: Report of PCC-Allegro — Data Link

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

Flow 1 ingress (mean 285.64 Mbit/s)  
Flow 1 egress (mean 285.44 Mbit/s)  
Flow 2 ingress (mean 128.25 Mbit/s)  
Flow 2 egress (mean 127.96 Mbit/s)  
Flow 3 ingress (mean 31.93 Mbit/s)  
Flow 3 egress (mean 31.83 Mbit/s)

Flow 1 (95th percentile 165.30 ms)  
Flow 2 (95th percentile 167.71 ms)  
Flow 3 (95th percentile 168.93 ms)
Run 4: Statistics of PCC-Allegro

Start at: 2018-07-05 06:32:52
End at: 2018-07-05 06:33:22
Local clock offset: -0.065 ms
Remote clock offset: 0.095 ms

# Below is generated by plot.py at 2018-07-05 11:37:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 457.93 Mbit/s
95th percentile per-packet one-way delay: 217.208 ms
Loss rate: 2.41%
-- Flow 1:
Average throughput: 431.88 Mbit/s
95th percentile per-packet one-way delay: 219.637 ms
Loss rate: 2.40%
-- Flow 2:
Average throughput: 1.99 Mbit/s
95th percentile per-packet one-way delay: 209.731 ms
Loss rate: 2.95%
-- Flow 3:
Average throughput: 75.68 Mbit/s
95th percentile per-packet one-way delay: 203.747 ms
Loss rate: 2.42%
Run 4: Report of PCC-Allegro — Data Link

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

- **Flow 1 ingress** (mean 440.70 Mbit/s)
- **Flow 1 egress** (mean 431.88 Mbit/s)
- **Flow 2 ingress** (mean 2.04 Mbit/s)
- **Flow 2 egress** (mean 1.99 Mbit/s)
- **Flow 3 ingress** (mean 76.58 Mbit/s)
- **Flow 3 egress** (mean 75.66 Mbit/s)

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

- **Flow 1 (95th percentile 219.64 ms)**
- **Flow 2 (95th percentile 209.73 ms)**
- **Flow 3 (95th percentile 203.75 ms)**
Run 5: Statistics of PCC-Allegro

Start at: 2018-07-05 06:58:05
End at: 2018-07-05 06:58:35
Local clock offset: -0.052 ms
Remote clock offset: 0.092 ms

# Below is generated by plot.py at 2018-07-05 11:37:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 391.10 Mbit/s
95th percentile per-packet one-way delay: 123.685 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 329.12 Mbit/s
95th percentile per-packet one-way delay: 123.748 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 77.60 Mbit/s
95th percentile per-packet one-way delay: 123.506 ms
Loss rate: 0.71%
-- Flow 3:
Average throughput: 32.36 Mbit/s
95th percentile per-packet one-way delay: 123.152 ms
Loss rate: 1.32%
Run 5: Report of PCC-Allegro — Data Link

![Graph showing Throughput and Per-packet round-trip delay]
Run 6: Statistics of PCC-Allegro

Start at: 2018-07-05 07:23:28  
End at: 2018-07-05 07:23:58  
Local clock offset: -0.044 ms  
Remote clock offset: 0.096 ms

# Below is generated by plot.py at 2018-07-05 11:38:17  
# Datalink statistics  
-- Total of 3 flows:  
  Average throughput: 390.92 Mbit/s  
  95th percentile per-packet one-way delay: 168.550 ms  
  Loss rate: 0.65%  
-- Flow 1:  
  Average throughput: 383.65 Mbit/s  
  95th percentile per-packet one-way delay: 168.606 ms  
  Loss rate: 0.64%  
-- Flow 2:  
  Average throughput: 2.67 Mbit/s  
  95th percentile per-packet one-way delay: 148.915 ms  
  Loss rate: 0.93%  
-- Flow 3:  
  Average throughput: 16.98 Mbit/s  
  95th percentile per-packet one-way delay: 93.382 ms  
  Loss rate: 1.42%
Run 6: Report of PCC-Allegro — Data Link

![Graph of network performance metrics during Run 6, showing throughput and packet delay over time. The graphs display data for different flows with their respective throughput and packet delay statistics.]
Run 7: Statistics of PCC-Allegro

Start at: 2018-07-05 07:48:28
End at: 2018-07-05 07:48:58
Local clock offset: -0.054 ms
Remote clock offset: -0.082 ms

# Below is generated by plot.py at 2018-07-05 11:40:01
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 446.79 Mbit/s
  95th percentile per-packet one-way delay: 214.646 ms
  Loss rate: 3.58%
-- Flow 1:
  Average throughput: 343.30 Mbit/s
  95th percentile per-packet one-way delay: 214.962 ms
  Loss rate: 3.91%
-- Flow 2:
  Average throughput: 125.72 Mbit/s
  95th percentile per-packet one-way delay: 203.748 ms
  Loss rate: 2.16%
-- Flow 3:
  Average throughput: 61.41 Mbit/s
  95th percentile per-packet one-way delay: 204.442 ms
  Loss rate: 3.82%
Run 7: Report of PCC-Allegro — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 355.79 Mbps)  Flow 1 egress (mean 343.90 Mbps)
Flow 2 ingress (mean 127.69 Mbps)  Flow 2 egress (mean 125.72 Mbps)
Flow 3 ingress (mean 63.04 Mbps)  Flow 3 egress (mean 61.41 Mbps)

Packet delivery one-way delay (ms)

Time (s)

Flow 1 (95th percentile 214.96 ms)  Flow 2 (95th percentile 203.75 ms)  Flow 3 (95th percentile 204.44 ms)
Run 8: Statistics of PCC-Allegro

Start at: 2018-07-05 08:13:34
End at: 2018-07-05 08:14:04
Local clock offset: -0.062 ms
Remote clock offset: -0.139 ms

# Below is generated by plot.py at 2018-07-05 11:44:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 469.14 Mbit/s
95th percentile per-packet one-way delay: 180.308 ms
Loss rate: 2.10%
-- Flow 1:
Average throughput: 441.20 Mbit/s
95th percentile per-packet one-way delay: 180.904 ms
Loss rate: 2.14%
-- Flow 2:
Average throughput: 38.08 Mbit/s
95th percentile per-packet one-way delay: 168.445 ms
Loss rate: 1.42%
-- Flow 3:
Average throughput: 8.21 Mbit/s
95th percentile per-packet one-way delay: 182.399 ms
Loss rate: 2.62%
Run 8: Report of PCC-Allegro — Data Link

[Graphs showing throughput and per-packet end-to-end delay over time for different flows, with annotations for each graph.]

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Run 9: Statistics of PCC-Allegro

Start at: 2018-07-05 08:38:17
End at: 2018-07-05 08:38:47
Local clock offset: -0.06 ms
Remote clock offset: 0.041 ms

# Below is generated by plot.py at 2018-07-05 11:44:50
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 412.72 Mbit/s
  95th percentile per-packet one-way delay: 195.362 ms
  Loss rate: 0.64%
-- Flow 1:
  Average throughput: 399.39 Mbit/s
  95th percentile per-packet one-way delay: 196.170 ms
  Loss rate: 0.62%
-- Flow 2:
  Average throughput: 4.17 Mbit/s
  95th percentile per-packet one-way delay: 196.941 ms
  Loss rate: 0.91%
-- Flow 3:
  Average throughput: 32.56 Mbit/s
  95th percentile per-packet one-way delay: 101.262 ms
  Loss rate: 1.47%
Run 9: Report of PCC-Allegro — Data Link

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

- **Flow 1 ingress (mean 400.21 Mbit/s)**
- **Flow 1 egress (mean 399.39 Mbit/s)**
- **Flow 2 ingress (mean 4.18 Mbit/s)**
- **Flow 2 egress (mean 4.17 Mbit/s)**
- **Flow 3 ingress (mean 32.63 Mbit/s)**
- **Flow 3 egress (mean 32.56 Mbit/s)**

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

- **Flow 1 (95th percentile 196.17 ms)**
- **Flow 2 (95th percentile 196.94 ms)**
- **Flow 3 (95th percentile 101.26 ms)**

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Run 10: Statistics of PCC-Allegro

Start at: 2018-07-05 09:03:31
End at: 2018-07-05 09:04:01
Local clock offset: 0.057 ms
Remote clock offset: -0.093 ms

# Below is generated by plot.py at 2018-07-05 11:44:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 390.97 Mbit/s
95th percentile per-packet one-way delay: 101.535 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 368.39 Mbit/s
95th percentile per-packet one-way delay: 101.341 ms
Loss rate: 0.57%
-- Flow 2:
Average throughput: 18.20 Mbit/s
95th percentile per-packet one-way delay: 100.615 ms
Loss rate: 0.77%
-- Flow 3:
Average throughput: 32.29 Mbit/s
95th percentile per-packet one-way delay: 103.317 ms
Loss rate: 1.35%
Run 10: Report of PCC-Allegro — Data Link

![Graph 1]

![Graph 2]
Run 1: Statistics of PCC-Expr

Start at: 2018-07-05 05:07:46
End at: 2018-07-05 05:08:16
Local clock offset: 0.345 ms
Remote clock offset: -0.103 ms

# Below is generated by plot.py at 2018-07-05 11:49:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 338.10 Mbit/s
95th percentile per-packet one-way delay: 155.207 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 238.50 Mbit/s
95th percentile per-packet one-way delay: 180.395 ms
Loss rate: 0.68%
-- Flow 2:
Average throughput: 118.59 Mbit/s
95th percentile per-packet one-way delay: 62.958 ms
Loss rate: 0.73%
-- Flow 3:
Average throughput: 63.88 Mbit/s
95th percentile per-packet one-way delay: 62.280 ms
Loss rate: 1.85%
Run 1: Report of PCC-Expr — Data Link

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

**Throughput (Mbps):**
- Flow 1 ingress (mean 239.15 Mbps)
- Flow 1 egress (mean 238.50 Mbps)
- Flow 2 ingress (mean 118.72 Mbps)
- Flow 2 egress (mean 118.59 Mbps)
- Flow 3 ingress (mean 64.26 Mbps)
- Flow 3 egress (mean 63.88 Mbps)

**Packet Delay (ms):**
- Flow 1 (95th percentile 180.40 ms)
- Flow 2 (95th percentile 62.96 ms)
- Flow 3 (95th percentile 62.28 ms)
Run 2: Statistics of PCC-Expr

Start at: 2018-07-05 05:32:57
End at: 2018-07-05 05:33:27
Local clock offset: -0.047 ms
Remote clock offset: 0.132 ms

# Below is generated by plot.py at 2018-07-05 11:50:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 323.21 Mbit/s
95th percentile per-packet one-way delay: 211.667 ms
Loss rate: 2.98%
-- Flow 1:
Average throughput: 207.15 Mbit/s
95th percentile per-packet one-way delay: 211.327 ms
Loss rate: 2.33%
-- Flow 2:
Average throughput: 172.07 Mbit/s
95th percentile per-packet one-way delay: 211.894 ms
Loss rate: 4.09%
-- Flow 3:
Average throughput: 5.65 Mbit/s
95th percentile per-packet one-way delay: 212.340 ms
Loss rate: 5.57%
Run 2: Report of PCC-Expr — Data Link

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

- Flow 1 ingress (mean 211.21 Mbit/s)
- Flow 1 egress (mean 207.15 Mbit/s)
- Flow 2 ingress (mean 178.30 Mbit/s)
- Flow 2 egress (mean 172.07 Mbit/s)
- Flow 3 ingress (mean 5.90 Mbit/s)
- Flow 3 egress (mean 5.65 Mbit/s)

![Graph 2: Per-packet delay vs Time](image)

- Flow 1 (95th percentile 211.33 ms)
- Flow 2 (95th percentile 211.89 ms)
- Flow 3 (95th percentile 212.34 ms)
Run 3: Statistics of PCC-Expr

Start at: 2018-07-05 05:57:45
End at: 2018-07-05 05:58:15
Local clock offset: -0.037 ms
Remote clock offset: 0.353 ms

# Below is generated by plot.py at 2018-07-05 11:52:28
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 301.32 Mbit/s
  95th percentile per-packet one-way delay: 353.052 ms
  Loss rate: 34.53%
-- Flow 1:
  Average throughput: 275.80 Mbit/s
  95th percentile per-packet one-way delay: 353.872 ms
  Loss rate: 36.12%
-- Flow 2:
  Average throughput: 36.69 Mbit/s
  95th percentile per-packet one-way delay: 211.035 ms
  Loss rate: 10.13%
-- Flow 3:
  Average throughput: 3.66 Mbit/s
  95th percentile per-packet one-way delay: 211.673 ms
  Loss rate: 16.27%
Run 3: Report of PCC-Expr — Data Link

![Graph of Throughput](image1)

![Graph of Packet Delay](image2)
Run 4: Statistics of PCC-Expr

Start at: 2018-07-05 06:23:05
End at: 2018-07-05 06:23:35
Local clock offset: -0.056 ms
Remote clock offset: 1.23 ms

# Below is generated by plot.py at 2018-07-05 11:52:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 355.85 Mbit/s
95th percentile per-packet one-way delay: 209.173 ms
Loss rate: 3.26%
-- Flow 1:
Average throughput: 194.81 Mbit/s
95th percentile per-packet one-way delay: 203.869 ms
Loss rate: 2.00%
-- Flow 2:
Average throughput: 231.84 Mbit/s
95th percentile per-packet one-way delay: 221.355 ms
Loss rate: 4.73%
-- Flow 3:
Average throughput: 21.92 Mbit/s
95th percentile per-packet one-way delay: 205.822 ms
Loss rate: 5.28%
Run 4: Report of PCC-Expr — Data Link

![Graph of Throughput vs Time](image1)

- Flow 1 ingress (mean 197.97 Mbit/s)
- Flow 1 egress (mean 194.81 Mbit/s)
- Flow 2 ingress (mean 241.83 Mbit/s)
- Flow 2 egress (mean 231.84 Mbit/s)
- Flow 3 ingress (mean 22.85 Mbit/s)
- Flow 3 egress (mean 21.92 Mbit/s)

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

- Flow 1 (95th percentile 203.97 ms)
- Flow 2 (95th percentile 221.35 ms)
- Flow 3 (95th percentile 205.82 ms)
Run 5: Statistics of PCC-Expr

Start at: 2018-07-05 06:48:24
End at: 2018-07-05 06:48:54
Local clock offset: -0.041 ms
Remote clock offset: -0.228 ms

# Below is generated by plot.py at 2018-07-05 11:55:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 351.79 Mbit/s
95th percentile per-packet one-way delay: 186.956 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 286.81 Mbit/s
95th percentile per-packet one-way delay: 177.850 ms
Loss rate: 0.73%
-- Flow 2:
Average throughput: 94.19 Mbit/s
95th percentile per-packet one-way delay: 196.186 ms
Loss rate: 0.68%
-- Flow 3:
Average throughput: 7.56 Mbit/s
95th percentile per-packet one-way delay: 197.805 ms
Loss rate: 1.27%
Run 5: Report of PCC-Expr — Data Link

![Graph 1: Throughput (Mbps)]

- **Flow 1 ingress** (mean 287.73 Mbps)
- **Flow 1 egress** (mean 286.81 Mbps)
- **Flow 2 ingress** (mean 94.24 Mbps)
- **Flow 2 egress** (mean 94.19 Mbps)
- **Flow 3 ingress** (mean 7.56 Mbps)
- **Flow 3 egress** (mean 7.56 Mbps)

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

- **Flow 1** (95th percentile 177.85 ms)
- **Flow 2** (95th percentile 196.19 ms)
- **Flow 3** (95th percentile 197.81 ms)
Run 6: Statistics of PCC-Expr

Start at: 2018-07-05 07:13:30
End at: 2018-07-05 07:14:00
Local clock offset: -0.054 ms
Remote clock offset: -0.151 ms

# Below is generated by plot.py at 2018-07-05 11:59:34
# Datalink statistics
-- Total of 3 flows:
 Average throughput: 358.94 Mbit/s
 95th percentile per-packet one-way delay: 140.496 ms
 Loss rate: 0.69%
-- Flow 1:
 Average throughput: 242.71 Mbit/s
 95th percentile per-packet one-way delay: 149.546 ms
 Loss rate: 0.58%
-- Flow 2:
 Average throughput: 149.36 Mbit/s
 95th percentile per-packet one-way delay: 70.235 ms
 Loss rate: 0.81%
-- Flow 3:
 Average throughput: 52.27 Mbit/s
 95th percentile per-packet one-way delay: 70.328 ms
 Loss rate: 1.46%
Run 6: Report of PCC-Expr — Data Link

![Graph showing throughput and per-packet one-way delay for flows 1, 2, and 3.]
Run 7: Statistics of PCC-Expr

Start at: 2018-07-05 07:38:57
End at: 2018-07-05 07:39:27
Local clock offset: -0.037 ms
Remote clock offset: -1.007 ms

# Below is generated by plot.py at 2018-07-05 11:59:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 325.15 Mbit/s
95th percentile per-packet one-way delay: 198.986 ms
Loss rate: 1.23%
-- Flow 1:
Average throughput: 242.29 Mbit/s
95th percentile per-packet one-way delay: 203.787 ms
Loss rate: 1.18%
-- Flow 2:
Average throughput: 97.95 Mbit/s
95th percentile per-packet one-way delay: 111.836 ms
Loss rate: 1.10%
-- Flow 3:
Average throughput: 54.61 Mbit/s
95th percentile per-packet one-way delay: 93.017 ms
Loss rate: 2.34%
Run 7: Report of PCC-Expr — Data Link

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

- Flow 1 ingress (mean 244.17 Mbps)
- Flow 1 egress (mean 242.29 Mbps)
- Flow 2 ingress (mean 98.41 Mbps)
- Flow 2 egress (mean 97.95 Mbps)
- Flow 3 ingress (mean 55.22 Mbps)
- Flow 3 egress (mean 54.61 Mbps)

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

- Flow 1 (95th percentile 203.79 ms)
- Flow 2 (95th percentile 111.84 ms)
- Flow 3 (95th percentile 93.02 ms)
Run 8: Statistics of PCC-Expr

Start at: 2018-07-05 08:04:00
End at: 2018-07-05 08:04:30
Local clock offset: -0.096 ms
Remote clock offset: 0.059 ms

# Below is generated by plot.py at 2018-07-05 12:01:09
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 348.05 Mbit/s
  95th percentile per-packet one-way delay: 322.187 ms
  Loss rate: 6.03%
-- Flow 1:
  Average throughput: 268.57 Mbit/s
  95th percentile per-packet one-way delay: 331.293 ms
  Loss rate: 6.77%
-- Flow 2:
  Average throughput: 109.10 Mbit/s
  95th percentile per-packet one-way delay: 203.384 ms
  Loss rate: 3.25%
-- Flow 3:
  Average throughput: 21.65 Mbit/s
  95th percentile per-packet one-way delay: 201.711 ms
  Loss rate: 5.58%
Run 8: Report of PCC-Expr — Data Link
Run 9: Statistics of PCC-Expr

Start at: 2018-07-05 08:29:00
End at: 2018-07-05 08:29:30
Local clock offset: -0.062 ms
Remote clock offset: 0.015 ms

# Below is generated by plot.py at 2018-07-05 12:04:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 353.54 Mbit/s
95th percentile per-packet one-way delay: 179.770 ms
Loss rate: 1.96%
-- Flow 1:
Average throughput: 195.82 Mbit/s
95th percentile per-packet one-way delay: 187.956 ms
Loss rate: 1.67%
-- Flow 2:
Average throughput: 217.04 Mbit/s
95th percentile per-packet one-way delay: 165.557 ms
Loss rate: 2.30%
-- Flow 3:
Average throughput: 41.77 Mbit/s
95th percentile per-packet one-way delay: 181.364 ms
Loss rate: 2.65%
Run 9: Report of PCC-Expr — Data Link

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

![Graph 2: Per-packet one-way delay vs Time](image2)
Run 10: Statistics of PCC-Expr

Start at: 2018-07-05 08:53:44
End at: 2018-07-05 08:54:14
Local clock offset: 0.035 ms
Remote clock offset: 1.266 ms

# Below is generated by plot.py at 2018-07-05 12:05:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 365.49 Mbit/s
95th percentile per-packet one-way delay: 205.915 ms
Loss rate: 3.80%
-- Flow 1:
Average throughput: 235.86 Mbit/s
95th percentile per-packet one-way delay: 204.306 ms
Loss rate: 2.60%
-- Flow 2:
Average throughput: 193.10 Mbit/s
95th percentile per-packet one-way delay: 208.572 ms
Loss rate: 5.87%
-- Flow 3:
Average throughput: 4.55 Mbit/s
95th percentile per-packet one-way delay: 205.580 ms
Loss rate: 7.70%
Run 10: Report of PCC-Expr — Data Link

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

- Flow 1 ingress (mean 241.18 Mbit/s)
- Flow 1 egress (mean 235.86 Mbit/s)
- Flow 2 ingress (mean 203.87 Mbit/s)
- Flow 2 egress (mean 193.10 Mbit/s)
- Flow 3 ingress (mean 4.86 Mbit/s)
- Flow 3 egress (mean 4.55 Mbit/s)

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

- Flow 1 (95th percentile 204.31 ms)
- Flow 2 (95th percentile 208.57 ms)
- Flow 3 (95th percentile 205.58 ms)
Run 1: Statistics of QUIC Cubic

Start at: 2018-07-05 05:18:56
End at: 2018-07-05 05:19:26
Local clock offset: 0.123 ms
Remote clock offset: 0.121 ms

# Below is generated by plot.py at 2018-07-05 12:05:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 72.78 Mbit/s
95th percentile per-packet one-way delay: 61.258 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 39.92 Mbit/s
95th percentile per-packet one-way delay: 61.239 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 33.77 Mbit/s
95th percentile per-packet one-way delay: 61.292 ms
Loss rate: 1.21%
-- Flow 3:
Average throughput: 20.92 Mbit/s
95th percentile per-packet one-way delay: 61.082 ms
Loss rate: 0.58%
Run 1: Report of QUIC Cubic — Data Link

![Throughput Graph](image1)

![Packet Delay Graph](image2)

*Flow 1 (95th percentile 61.24 ms)  *Flow 2 (95th percentile 61.29 ms)  *Flow 3 (95th percentile 61.08 ms)
Run 2: Statistics of QUIC Cubic

Start at: 2018-07-05 05:43:35
End at: 2018-07-05 05:44:05
Local clock offset: -0.068 ms
Remote clock offset: 0.276 ms

# Below is generated by plot.py at 2018-07-05 12:05:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 75.56 Mbit/s
95th percentile per-packet one-way delay: 61.164 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 45.58 Mbit/s
95th percentile per-packet one-way delay: 61.151 ms
Loss rate: 0.53%
-- Flow 2:
Average throughput: 37.04 Mbit/s
95th percentile per-packet one-way delay: 60.764 ms
Loss rate: 1.11%
-- Flow 3:
Average throughput: 16.40 Mbit/s
95th percentile per-packet one-way delay: 61.395 ms
Loss rate: 0.62%
Run 2: Report of QUIC Cubic — Data Link
Run 3: Statistics of QUIC Cubic

Start at: 2018-07-05 06:08:57
End at: 2018-07-05 06:09:27
Local clock offset: -0.021 ms
Remote clock offset: 0.333 ms

# Below is generated by plot.py at 2018-07-05 12:05:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 74.71 Mbit/s
95th percentile per-packet one-way delay: 61.124 ms
Loss rate: 0.81%
-- Flow 1:
Average throughput: 44.58 Mbit/s
95th percentile per-packet one-way delay: 61.063 ms
Loss rate: 0.63%
-- Flow 2:
Average throughput: 35.09 Mbit/s
95th percentile per-packet one-way delay: 61.149 ms
Loss rate: 1.20%
-- Flow 3:
Average throughput: 20.93 Mbit/s
95th percentile per-packet one-way delay: 61.263 ms
Loss rate: 0.66%
Run 3: Report of QUIC Cubic — Data Link
Run 4: Statistics of QUIC Cubic

Start at: 2018-07-05 06:34:18
End at: 2018-07-05 06:34:48
Local clock offset: -0.048 ms
Remote clock offset: -1.313 ms

# Below is generated by plot.py at 2018-07-05 12:05:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.35 Mbit/s
95th percentile per-packet one-way delay: 62.574 ms
Loss rate: 0.93%

-- Flow 1:
Average throughput: 46.38 Mbit/s
95th percentile per-packet one-way delay: 62.452 ms
Loss rate: 0.63%

-- Flow 2:
Average throughput: 35.82 Mbit/s
95th percentile per-packet one-way delay: 62.610 ms
Loss rate: 1.10%

-- Flow 3:
Average throughput: 18.91 Mbit/s
95th percentile per-packet one-way delay: 62.705 ms
Loss rate: 2.54%
Run 4: Report of QUIC Cubic — Data Link

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

- **Flow 1**: Ingress (mean 46.49 Mbit/s) and Egress (mean 46.38 Mbit/s)
- **Flow 2**: Ingress (mean 35.99 Mbit/s) and Egress (mean 35.82 Mbit/s)
- **Flow 3**: Ingress (mean 19.16 Mbit/s) and Egress (mean 10.91 Mbit/s)

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

- **Flow 1**: 95th percentile 62.45 ms
- **Flow 2**: 95th percentile 62.61 ms
- **Flow 3**: 95th percentile 62.70 ms
Run 5: Statistics of QUIC Cubic

Start at: 2018-07-05 06:59:29
End at: 2018-07-05 06:59:59
Local clock offset: -0.063 ms
Remote clock offset: -1.075 ms

# Below is generated by plot.py at 2018-07-05 12:05:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 75.92 Mbit/s
95th percentile per-packet one-way delay: 62.434 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 48.59 Mbit/s
95th percentile per-packet one-way delay: 62.466 ms
Loss rate: 0.56%
-- Flow 2:
Average throughput: 31.01 Mbit/s
95th percentile per-packet one-way delay: 62.321 ms
Loss rate: 0.13%
-- Flow 3:
Average throughput: 20.65 Mbit/s
95th percentile per-packet one-way delay: 62.420 ms
Loss rate: 0.44%
Run 5: Report of QUIC Cubic — Data Link

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

Legend:
- Flow 1 ingress (mean 48.67 Mbit/s)
- Flow 1 egress (mean 48.59 Mbit/s)
- Flow 2 ingress (mean 30.80 Mbit/s)
- Flow 2 egress (mean 31.01 Mbit/s)
- Flow 3 ingress (mean 20.49 Mbit/s)
- Flow 3 egress (mean 20.63 Mbit/s)

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

Legend:
- Flow 1 (95th percentile 62.47 ms)
- Flow 2 (95th percentile 62.32 ms)
- Flow 3 (95th percentile 62.42 ms)
Run 6: Statistics of QUIC Cubic

Start at: 2018-07-05 07:24:52
End at: 2018-07-05 07:25:23
Local clock offset: -0.055 ms
Remote clock offset: -0.029 ms

# Below is generated by plot.py at 2018-07-05 12:05:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 69.17 Mbit/s
95th percentile per-packet one-way delay: 61.421 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 43.36 Mbit/s
95th percentile per-packet one-way delay: 61.385 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 30.83 Mbit/s
95th percentile per-packet one-way delay: 61.359 ms
Loss rate: 0.27%
-- Flow 3:
Average throughput: 16.41 Mbit/s
95th percentile per-packet one-way delay: 61.586 ms
Loss rate: 0.45%
Run 6: Report of QUIC Cubic — Data Link

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

Legend:
- Flow 1 ingress (mean 43.46 Mbit/s)
- Flow 1 egress (mean 43.36 Mbit/s)
- Flow 2 ingress (mean 30.66 Mbit/s)
- Flow 2 egress (mean 30.83 Mbit/s)
- Flow 3 ingress (mean 16.28 Mbit/s)
- Flow 3 egress (mean 16.41 Mbit/s)
Run 7: Statistics of QUIC Cubic

Start at: 2018-07-05 07:49:55
End at: 2018-07-05 07:50:25
Local clock offset: -0.033 ms
Remote clock offset: 0.1 ms

# Below is generated by plot.py at 2018-07-05 12:05:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 70.49 Mbit/s
95th percentile per-packet one-way delay: 61.438 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 47.10 Mbit/s
95th percentile per-packet one-way delay: 61.427 ms
Loss rate: 0.65%
-- Flow 2:
Average throughput: 27.58 Mbit/s
95th percentile per-packet one-way delay: 61.180 ms
Loss rate: 1.21%
-- Flow 3:
Average throughput: 15.57 Mbit/s
95th percentile per-packet one-way delay: 61.835 ms
Loss rate: 0.00%
Run 7: Report of QUIC Cubic — Data Link

Graph 1: Throughput (Mbps)

Graph 2: Per-packet round-trip delay (ms)

Legend:
- Flow 1 ingress (mean 47.22 Mbps)
- Flow 1 egress (mean 47.10 Mbps)
- Flow 2 ingress (mean 27.75 Mbps)
- Flow 2 egress (mean 27.58 Mbps)
- Flow 3 ingress (mean 15.40 Mbps)
- Flow 3 egress (mean 15.57 Mbps)
Run 8: Statistics of QUIC Cubic

Start at: 2018-07-05 08:15:01
End at: 2018-07-05 08:15:31
Local clock offset: -0.04 ms
Remote clock offset: -0.174 ms

# Below is generated by plot.py at 2018-07-05 12:05:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 69.46 Mbit/s
95th percentile per-packet one-way delay: 61.496 ms
Loss rate: 0.81%
-- Flow 1:
Average throughput: 40.22 Mbit/s
95th percentile per-packet one-way delay: 61.508 ms
Loss rate: 0.62%
-- Flow 2:
Average throughput: 33.98 Mbit/s
95th percentile per-packet one-way delay: 61.494 ms
Loss rate: 1.20%
-- Flow 3:
Average throughput: 20.37 Mbit/s
95th percentile per-packet one-way delay: 61.282 ms
Loss rate: 0.62%
Run 8: Report of QUIC Cubic — Data Link
Run 9: Statistics of QUIC Cubic

Start at: 2018-07-05 08:39:42
End at: 2018-07-05 08:40:12
Local clock offset: -0.028 ms
Remote clock offset: -0.076 ms

# Below is generated by plot.py at 2018-07-05 12:05:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 70.40 Mbit/s
95th percentile per-packet one-way delay: 61.348 ms
Loss rate: 0.81%
-- Flow 1:
Average throughput: 41.65 Mbit/s
95th percentile per-packet one-way delay: 61.307 ms
Loss rate: 0.59%
-- Flow 2:
Average throughput: 35.37 Mbit/s
95th percentile per-packet one-way delay: 61.387 ms
Loss rate: 1.23%
-- Flow 3:
Average throughput: 16.08 Mbit/s
95th percentile per-packet one-way delay: 61.192 ms
Loss rate: 0.63%
Run 9: Report of QUIC Cubic — Data Link

![Throughput Graph]

![Per-packet RTT Graph]

- Flow 1 ingress (mean 41.72 Mbps)
- Flow 1 egress (mean 41.65 Mbps)
- Flow 2 ingress (mean 35.59 Mbps)
- Flow 2 egress (mean 35.37 Mbps)
- Flow 3 ingress (mean 15.99 Mbps)
- Flow 3 egress (mean 16.08 Mbps)

- Flow 1 (95th percentile 61.31 ms)
- Flow 2 (95th percentile 61.39 ms)
- Flow 3 (95th percentile 61.19 ms)
Run 10: Statistics of QUIC Cubic

Start at: 2018-07-05 09:04:56
End at: 2018-07-05 09:05:26
Local clock offset: 0.058 ms
Remote clock offset: -0.196 ms

# Below is generated by plot.py at 2018-07-05 12:05:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 74.23 Mbit/s
95th percentile per-packet one-way delay: 61.681 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 47.75 Mbit/s
95th percentile per-packet one-way delay: 61.592 ms
Loss rate: 0.62%
-- Flow 2:
Average throughput: 30.36 Mbit/s
95th percentile per-packet one-way delay: 61.741 ms
Loss rate: 0.26%
-- Flow 3:
Average throughput: 19.27 Mbit/s
95th percentile per-packet one-way delay: 61.706 ms
Loss rate: 0.57%
Run 10: Report of QUIC Cubic — Data Link
Run 1: Statistics of SCReAM

Start at: 2018-07-05 05:23:39
End at: 2018-07-05 05:24:09
Local clock offset: 0.052 ms
Remote clock offset: 0.081 ms

# Below is generated by plot.py at 2018-07-05 12:05:59
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.44 Mbit/s
  95th percentile per-packet one-way delay: 61.463 ms
  Loss rate: 0.57%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 61.514 ms
  Loss rate: 0.38%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 61.311 ms
  Loss rate: 0.61%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 61.337 ms
  Loss rate: 1.08%
Run 1: Report of SCReAM — Data Link

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

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

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

- Flow 1 (95th percentile 61.51 ms)
- Flow 2 (95th percentile 61.33 ms)
- Flow 3 (95th percentile 61.34 ms)

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Run 2: Statistics of SCReAM

Start at: 2018-07-05 05:48:18
End at: 2018-07-05 05:48:48
Local clock offset: -0.025 ms
Remote clock offset: 1.466 ms

# Below is generated by plot.py at 2018-07-05 12:05:59
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 59.916 ms
  Loss rate: 0.64%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 59.883 ms
  Loss rate: 0.38%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 59.949 ms
  Loss rate: 0.61%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 59.764 ms
  Loss rate: 1.45%
Run 3: Statistics of SCReAM

Start at: 2018-07-05 06:13:41
End at: 2018-07-05 06:14:11
Local clock offset: -0.034 ms
Remote clock offset: 1.302 ms

# Below is generated by plot.py at 2018-07-05 12:05:59
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 60.053 ms
  Loss rate: 0.58%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 60.082 ms
  Loss rate: 0.38%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 59.925 ms
  Loss rate: 0.61%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 59.903 ms
  Loss rate: 1.10%
Run 3: Report of SCReAM — Data Link

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

- Throughput in Mbps:
  - Flow 1 ingress: Mean 0.32 Mbps
  - Flow 1 egress: Mean 0.32 Mbps
  - Flow 2 ingress: Mean 0.32 Mbps
  - Flow 2 egress: Mean 0.32 Mbps
  - Flow 3 ingress: Mean 0.32 Mbps
  - Flow 3 egress: Mean 0.32 Mbps

- Packet round trip delay in ms:
  - Flow 1 (95th percentile 60.08 ms)
  - Flow 2 (95th percentile 59.92 ms)
  - Flow 3 (95th percentile 59.90 ms)
Run 4: Statistics of SCReAM

Start at: 2018-07-05 06:39:01
End at: 2018-07-05 06:39:31
Local clock offset: -0.022 ms
Remote clock offset: -1.245 ms

# Below is generated by plot.py at 2018-07-05 12:05:59
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.44 Mbit/s
  95th percentile per-packet one-way delay: 62.691 ms
  Loss rate: 0.57%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 62.707 ms
  Loss rate: 0.38%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 62.410 ms
  Loss rate: 0.61%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 62.406 ms
  Loss rate: 1.08%
Run 4: Report of SCReAM — Data Link
Run 5: Statistics of SCReAM

Start at: 2018-07-05 07:04:12
End at: 2018-07-05 07:04:42
Local clock offset: -0.069 ms
Remote clock offset: 0.031 ms

# Below is generated by plot.py at 2018-07-05 12:05:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 61.191 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.205 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.169 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.042 ms
Loss rate: 1.08%
Run 5: Report of SCReAM — Data Link
Run 6: Statistics of SCReAM

Start at: 2018-07-05 07:29:36
End at: 2018-07-05 07:30:06
Local clock offset: -0.101 ms
Remote clock offset: 0.36 ms

# Below is generated by plot.py at 2018-07-05 12:05:59
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.44 Mbit/s
  95th percentile per-packet one-way delay: 60.886 ms
  Loss rate: 0.57%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 60.912 ms
  Loss rate: 0.38%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 60.574 ms
  Loss rate: 0.61%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 60.858 ms
  Loss rate: 1.08%
Run 6: Report of SCReAM — Data Link

![Graph showing throughput and per-packet end-to-end delay over time for different flows.](image-url)
Run 7: Statistics of SCReAM

Start at: 2018-07-05 07:54:38
End at: 2018-07-05 07:55:08
Local clock offset: -0.096 ms
Remote clock offset: 0.99 ms

# Below is generated by plot.py at 2018-07-05 12:05:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 60.478 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 60.502 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 60.257 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 60.174 ms
Loss rate: 1.08%
Run 8: Statistics of SCReAM

Start at: 2018-07-05 08:19:44
End at: 2018-07-05 08:20:14
Local clock offset: -0.052 ms
Remote clock offset: 0.099 ms

# Below is generated by plot.py at 2018-07-05 12:05:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 61.135 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.121 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.033 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.233 ms
Loss rate: 1.08%
Run 8: Report of SCReAM — Data Link
Run 9: Statistics of SCReAM

Start at: 2018-07-05 08:44:25
End at: 2018-07-05 08:44:55
Local clock offset: -0.046 ms
Remote clock offset: -0.098 ms

# Below is generated by plot.py at 2018-07-05 12:05:59
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 61.554 ms
  Loss rate: 0.57%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 61.445 ms
  Loss rate: 0.38%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 61.586 ms
  Loss rate: 0.61%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 61.464 ms
  Loss rate: 1.08%
Run 10: Statistics of SCReAM

Start at: 2018-07-05 09:09:39
End at: 2018-07-05 09:10:09
Local clock offset: 0.056 ms
Remote clock offset: -0.059 ms

# Below is generated by plot.py at 2018-07-05 12:06:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 61.440 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.465 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.309 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.333 ms
Loss rate: 1.08%
Run 10: Report of SCReAM — Data Link

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

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

- **Packet Loss (Delay ms):**
  - Flow 1 (95th percentile 61.47 ms)
  - Flow 2 (95th percentile 61.31 ms)
  - Flow 3 (95th percentile 61.33 ms)
Run 1: Statistics of Sprout

Start at: 2018-07-05 05:21:20
End at: 2018-07-05 05:21:50
Local clock offset: 0.08 ms
Remote clock offset: -1.201 ms

# Below is generated by plot.py at 2018-07-05 12:06:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.92 Mbit/s
95th percentile per-packet one-way delay: 62.871 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 1.02 Mbit/s
95th percentile per-packet one-way delay: 63.056 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 1.05 Mbit/s
95th percentile per-packet one-way delay: 62.630 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 0.63 Mbit/s
95th percentile per-packet one-way delay: 62.614 ms
Loss rate: 0.03%
Run 1: Report of Sprout — Data Link
Run 2: Statistics of Sprout

Start at: 2018-07-05 05:46:00
End at: 2018-07-05 05:46:30
Local clock offset: -0.05 ms
Remote clock offset: -0.03 ms

# Below is generated by plot.py at 2018-07-05 12:06:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.12 Mbit/s
95th percentile per-packet one-way delay: 61.600 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 61.551 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 0.65 Mbit/s
95th percentile per-packet one-way delay: 61.539 ms
Loss rate: 0.35%
-- Flow 3:
Average throughput: 0.77 Mbit/s
95th percentile per-packet one-way delay: 61.659 ms
Loss rate: 1.67%
Run 2: Report of Sprout — Data Link

[Graph showing throughput over time with distinct lines for different flows and their ingress and egress speeds.]

[Graph showing per-packet one-way delay with markers for different flows and their 95th percentile delay.]
Run 3: Statistics of Sprout

Start at: 2018-07-05 06:11:22
End at: 2018-07-05 06:11:52
Local clock offset: -0.044 ms
Remote clock offset: 0.342 ms

# Below is generated by plot.py at 2018-07-05 12:06:00
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 2.37 Mbit/s
  95th percentile per-packet one-way delay: 61.536 ms
  Loss rate: 0.22%
-- Flow 1:
  Average throughput: 0.98 Mbit/s
  95th percentile per-packet one-way delay: 61.738 ms
  Loss rate: 0.32%
-- Flow 2:
  Average throughput: 0.86 Mbit/s
  95th percentile per-packet one-way delay: 61.170 ms
  Loss rate: 0.20%
-- Flow 3:
  Average throughput: 2.48 Mbit/s
  95th percentile per-packet one-way delay: 61.452 ms
  Loss rate: 0.10%
Run 3: Report of Sprout — Data Link

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

Legend:
- Flow 1 ingress (mean 0.98 Mbit/s)
- Flow 1 egress (mean 0.98 Mbit/s)
- Flow 2 ingress (mean 0.86 Mbit/s)
- Flow 2 egress (mean 0.86 Mbit/s)
- Flow 3 ingress (mean 2.45 Mbit/s)
- Flow 3 egress (mean 2.48 Mbit/s)

Overhead:

- Flow 1 (95th percentile 61.74 ms)
- Flow 2 (95th percentile 61.17 ms)
- Flow 3 (95th percentile 61.45 ms)
Run 4: Statistics of Sprout

Start at: 2018-07-05 06:36:43
End at: 2018-07-05 06:37:13
Local clock offset: -0.036 ms
Remote clock offset: -1.301 ms

# Below is generated by plot.py at 2018-07-05 12:06:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.09 Mbit/s
95th percentile per-packet one-way delay: 62.832 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 0.51 Mbit/s
95th percentile per-packet one-way delay: 62.944 ms
Loss rate: 0.23%
-- Flow 2:
Average throughput: 0.51 Mbit/s
95th percentile per-packet one-way delay: 62.673 ms
Loss rate: 0.35%
-- Flow 3:
Average throughput: 0.72 Mbit/s
95th percentile per-packet one-way delay: 62.505 ms
Loss rate: 0.02%
Run 4: Report of Sprout — Data Link

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

- Throughput (Mbps)
- Time (s)
- Flow 1 ingress (mean 0.51 Mbps)
- Flow 1 egress (mean 0.51 Mbps)
- Flow 2 ingress (mean 0.51 Mbps)
- Flow 2 egress (mean 0.51 Mbps)
- Flow 3 ingress (mean 0.72 Mbps)
- Flow 3 egress (mean 0.72 Mbps)

![Graph showing packet round-trip time ( latency ) for different flows.](image)

- Per-packet one-way delay (ms)
- Time (s)
- Flow 1 (95th percentile 62.94 ms)
- Flow 2 (95th percentile 62.67 ms)
- Flow 3 (95th percentile 62.51 ms)

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Run 5: Statistics of Sprout

Start at: 2018-07-05 07:01:54
End at: 2018-07-05 07:02:24
Local clock offset: -0.071 ms
Remote clock offset: 0.176 ms

# Below is generated by plot.py at 2018-07-05 12:06:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.82 Mbit/s
95th percentile per-packet one-way delay: 61.492 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 2.30 Mbit/s
95th percentile per-packet one-way delay: 61.555 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 0.37 Mbit/s
95th percentile per-packet one-way delay: 61.039 ms
Loss rate: 0.47%
-- Flow 3:
Average throughput: 0.84 Mbit/s
95th percentile per-packet one-way delay: 61.215 ms
Loss rate: 1.27%
Run 5: Report of Sprout — Data Link

![Graph showing network performance metrics over time]

- **Flow 1 ingress (mean 2.29 Mbit/s)**
- **Flow 1 egress (mean 2.30 Mbit/s)**
- **Flow 2 ingress (mean 0.37 Mbit/s)**
- **Flow 2 egress (mean 0.37 Mbit/s)**
- **Flow 3 ingress (mean 0.84 Mbit/s)**
- **Flow 3 egress (mean 0.84 Mbit/s)**

![Graph showing packet delay over time]

- **Flow 1 (95th percentile 61.55 ms)**
- **Flow 2 (95th percentile 61.04 ms)**
- **Flow 3 (95th percentile 61.22 ms)**
Run 6: Statistics of Sprout

Start at: 2018-07-05 07:27:17
End at: 2018-07-05 07:27:47
Local clock offset: -0.072 ms
Remote clock offset: 0.045 ms

# Below is generated by plot.py at 2018-07-05 12:06:00
# Datalink statistics
-- Total of 3 flows:
   Average throughput: 1.77 Mbit/s
   95th percentile per-packet one-way delay: 61.527 ms
   Loss rate: 0.40%
-- Flow 1:
   Average throughput: 0.60 Mbit/s
   95th percentile per-packet one-way delay: 61.527 ms
   Loss rate: 0.58%
-- Flow 2:
   Average throughput: 1.39 Mbit/s
   95th percentile per-packet one-way delay: 61.566 ms
   Loss rate: 0.18%
-- Flow 3:
   Average throughput: 0.75 Mbit/s
   95th percentile per-packet one-way delay: 61.352 ms
   Loss rate: 0.77%
Run 6: Report of Sprout — Data Link

Graph 1: Throughput (Mbps)

Graph 2: Per packet one way delay (ms)

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Run 7: Statistics of Sprout

Start at: 2018-07-05 07:52:19
End at: 2018-07-05 07:52:49
Local clock offset: -0.026 ms
Remote clock offset: -1.249 ms

# Below is generated by plot.py at 2018-07-05 12:06:00
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 2.47 Mbit/s
  95th percentile per-packet one-way delay: 63.031 ms
  Loss rate: 0.23%
-- Flow 1:
  Average throughput: 1.74 Mbit/s
  95th percentile per-packet one-way delay: 67.906 ms
  Loss rate: 0.14%
-- Flow 2:
  Average throughput: 0.77 Mbit/s
  95th percentile per-packet one-way delay: 62.636 ms
  Loss rate: 0.08%
-- Flow 3:
  Average throughput: 0.67 Mbit/s
  95th percentile per-packet one-way delay: 62.608 ms
  Loss rate: 1.26%
Run 7: Report of Sprout — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 1.73 Mbit/s)  Flow 1 egress (mean 1.74 Mbit/s)
Flow 2 ingress (mean 0.77 Mbit/s)  Flow 2 egress (mean 0.77 Mbit/s)
Flow 3 ingress (mean 0.67 Mbit/s)  Flow 3 egress (mean 0.67 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 67.91 ms)  Flow 2 (95th percentile 62.64 ms)  Flow 3 (95th percentile 62.61 ms)
Run 8: Statistics of Sprout

Start at: 2018-07-05 08:17:25
End at: 2018-07-05 08:17:55
Local clock offset: -0.084 ms
Remote clock offset: 0.139 ms

# Below is generated by plot.py at 2018-07-05 12:06:00
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1.70 Mbit/s
  95th percentile per-packet one-way delay: 61.098 ms
  Loss rate: 0.45%
-- Flow 1:
  Average throughput: 0.91 Mbit/s
  95th percentile per-packet one-way delay: 61.057 ms
  Loss rate: 0.13%
-- Flow 2:
  Average throughput: 0.50 Mbit/s
  95th percentile per-packet one-way delay: 61.146 ms
  Loss rate: 0.92%
-- Flow 3:
  Average throughput: 1.37 Mbit/s
  95th percentile per-packet one-way delay: 61.064 ms
  Loss rate: 0.77%
Run 8: Report of Sprout — Data Link
Run 9: Statistics of Sprout

Start at: 2018-07-05 08:42:07
End at: 2018-07-05 08:42:37
Local clock offset: -0.036 ms
Remote clock offset: -0.287 ms

# Below is generated by plot.py at 2018-07-05 12:06:00
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1.45 Mbit/s
  95th percentile per-packet one-way delay: 61.567 ms
  Loss rate: 0.96%
-- Flow 1:
  Average throughput: 0.57 Mbit/s
  95th percentile per-packet one-way delay: 61.504 ms
  Loss rate: 1.66%
-- Flow 2:
  Average throughput: 0.90 Mbit/s
  95th percentile per-packet one-way delay: 61.588 ms
  Loss rate: 0.53%
-- Flow 3:
  Average throughput: 0.87 Mbit/s
  95th percentile per-packet one-way delay: 61.601 ms
  Loss rate: 0.42%
Run 9: Report of Sprout — Data Link

![Graph showing throughput and packet delay over time]

- **Throughput (Mbps)**
  - Flow 1 ingress (mean 0.58 Mbps)
  - Flow 1 egress (mean 0.57 Mbps)
  - Flow 2 ingress (mean 0.90 Mbps)
  - Flow 2 egress (mean 0.90 Mbps)
  - Flow 3 ingress (mean 0.86 Mbps)
  - Flow 3 egress (mean 0.87 Mbps)

- **Packet Delay (ms)**
  - Flow 1 (95th percentile 61.50 ms)
  - Flow 2 (95th percentile 61.59 ms)
  - Flow 3 (95th percentile 61.60 ms)
Run 10: Statistics of Sprout

Start at: 2018-07-05 09:07:21
End at: 2018-07-05 09:07:51
Local clock offset: 0.047 ms
Remote clock offset: -0.213 ms

# Below is generated by plot.py at 2018-07-05 12:06:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.13 Mbit/s
95th percentile per-packet one-way delay: 61.750 ms
Loss rate: 0.87%
-- Flow 1:
Average throughput: 0.57 Mbit/s
95th percentile per-packet one-way delay: 61.625 ms
Loss rate: 0.55%
-- Flow 2:
Average throughput: 0.60 Mbit/s
95th percentile per-packet one-way delay: 61.788 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 0.50 Mbit/s
95th percentile per-packet one-way delay: 61.861 ms
Loss rate: 3.07%
Run 10: Report of Sprout — Data Link

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

- **Flow 1 ingress (mean 0.57 Mbit/s)**
- **Flow 1 egress (mean 0.57 Mbit/s)**
- **Flow 2 ingress (mean 0.60 Mbit/s)**
- **Flow 2 egress (mean 0.60 Mbit/s)**
- **Flow 3 ingress (mean 0.50 Mbit/s)**
- **Flow 3 egress (mean 0.50 Mbit/s)**

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

- **Flow 1 (95th percentile 61.62 ms)**
- **Flow 2 (95th percentile 61.79 ms)**
- **Flow 3 (95th percentile 61.86 ms)**
Run 1: Statistics of TaoVA-100x

Start at: 2018-07-05 05:15:58
End at: 2018-07-05 05:16:28
Local clock offset: 0.191 ms
Remote clock offset: 1.542 ms

# Below is generated by plot.py at 2018-07-05 12:09:52
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 256.24 Mbit/s
  95th percentile per-packet one-way delay: 61.969 ms
  Loss rate: 0.43%
-- Flow 1:
  Average throughput: 145.12 Mbit/s
  95th percentile per-packet one-way delay: 61.653 ms
  Loss rate: 0.04%
-- Flow 2:
  Average throughput: 151.84 Mbit/s
  95th percentile per-packet one-way delay: 62.171 ms
  Loss rate: 0.97%
-- Flow 3:
  Average throughput: 30.97 Mbit/s
  95th percentile per-packet one-way delay: 64.214 ms
  Loss rate: 0.55%
Run 1: Report of TaoVA-100x — Data Link

![Graph showing data link performance metrics for different flows with various throughput and packet delay measurements.]

- **Flow 1:**
  - Ingress: Mean 144.58 Mbit/s
  - Egress: Mean 145.12 Mbit/s

- **Flow 2:**
  - Ingress: Mean 132.38 Mbit/s
  - Egress: Mean 151.84 Mbit/s

- **Flow 3:**
  - Ingress: Mean 30.76 Mbit/s
  - Egress: Mean 30.97 Mbit/s

- **Packet Delay:**
  - Flow 1: 95th percentile 61.65 ms
  - Flow 2: 95th percentile 62.17 ms
  - Flow 3: 95th percentile 64.21 ms

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Run 2: Statistics of TaoVA-100x

Start at: 2018-07-05 05:40:34
End at: 2018-07-05 05:41:04
Local clock offset: -0.078 ms
Remote clock offset: 1.382 ms

# Below is generated by plot.py at 2018-07-05 12:11:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 289.90 Mbit/s
95th percentile per-packet one-way delay: 62.823 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 145.08 Mbit/s
95th percentile per-packet one-way delay: 63.133 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 108.94 Mbit/s
95th percentile per-packet one-way delay: 64.129 ms
Loss rate: 1.27%
-- Flow 3:
Average throughput: 219.70 Mbit/s
95th percentile per-packet one-way delay: 60.728 ms
Loss rate: 1.32%
Run 3: Statistics of TaoVA-100x

Start at: 2018-07-05 06:05:55
End at: 2018-07-05 06:06:25
Local clock offset: -0.041 ms
Remote clock offset: -0.01 ms

# Below is generated by plot.py at 2018-07-05 12:12:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 307.72 Mbit/s
95th percentile per-packet one-way delay: 65.352 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 157.09 Mbit/s
95th percentile per-packet one-way delay: 64.341 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 177.01 Mbit/s
95th percentile per-packet one-way delay: 66.294 ms
Loss rate: 0.58%
-- Flow 3:
Average throughput: 100.11 Mbit/s
95th percentile per-packet one-way delay: 65.966 ms
Loss rate: 2.53%
Run 3: Report of TaoVA-100x — Data Link

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

Legend:
- Flow 1 ingress (mean 157.00 Mbit/s)
- Flow 1 egress (mean 157.09 Mbit/s)
- Flow 2 ingress (mean 176.85 Mbit/s)
- Flow 2 egress (mean 177.01 Mbit/s)
- Flow 3 ingress (mean 101.45 Mbit/s)
- Flow 3 egress (mean 101.11 Mbit/s)
Run 4: Statistics of TaoVA-100x

Start at: 2018-07-05 06:31:16
End at: 2018-07-05 06:31:46
Local clock offset: -0.083 ms
Remote clock offset: -0.214 ms

# Below is generated by plot.py at 2018-07-05 12:12:10
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 285.07 Mbit/s
  95th percentile per-packet one-way delay: 66.801 ms
  Loss rate: 0.49%
-- Flow 1:
  Average throughput: 188.30 Mbit/s
  95th percentile per-packet one-way delay: 67.821 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 125.21 Mbit/s
  95th percentile per-packet one-way delay: 64.917 ms
  Loss rate: 0.83%
-- Flow 3:
  Average throughput: 73.93 Mbit/s
  95th percentile per-packet one-way delay: 64.551 ms
  Loss rate: 2.81%
Run 4: Report of TaoVA-100x — Data Link
Run 5: Statistics of TaoVA-100x

Start at: 2018-07-05 06:56:36
End at: 2018-07-05 06:57:06
Local clock offset: -0.03 ms
Remote clock offset: 0.195 ms

# Below is generated by plot.py at 2018-07-05 12:12:10
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 205.64 Mbit/s
  95th percentile per-packet one-way delay: 64.959 ms
  Loss rate: 0.44%
-- Flow 1:
  Average throughput: 44.81 Mbit/s
  95th percentile per-packet one-way delay: 65.325 ms
  Loss rate: 1.71%
-- Flow 2:
  Average throughput: 200.50 Mbit/s
  95th percentile per-packet one-way delay: 64.443 ms
  Loss rate: 0.09%
-- Flow 3:
  Average throughput: 85.48 Mbit/s
  95th percentile per-packet one-way delay: 65.585 ms
  Loss rate: 0.00%
Run 5: Report of TaoVA-100x — Data Link
Run 6: Statistics of TaoVA-100x

Start at: 2018-07-05 07:21:49
End at: 2018-07-05 07:22:19
Local clock offset: -0.046 ms
Remote clock offset: 0.179 ms

# Below is generated by plot.py at 2018-07-05 12:14:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 332.42 Mbit/s
95th percentile per-packet one-way delay: 65.214 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 201.11 Mbit/s
95th percentile per-packet one-way delay: 64.538 ms
Loss rate: 0.18%
-- Flow 2:
Average throughput: 119.16 Mbit/s
95th percentile per-packet one-way delay: 64.502 ms
Loss rate: 0.93%
-- Flow 3:
Average throughput: 158.42 Mbit/s
95th percentile per-packet one-way delay: 68.368 ms
Loss rate: 1.24%
Run 7: Statistics of TaoVA-100x

Start at: 2018-07-05 07:46:46
End at: 2018-07-05 07:47:16
Local clock offset: -0.017 ms
Remote clock offset: 0.009 ms

# Below is generated by plot.py at 2018-07-05 12:18:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 337.96 Mbit/s
95th percentile per-packet one-way delay: 66.249 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 204.10 Mbit/s
95th percentile per-packet one-way delay: 66.802 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 195.09 Mbit/s
95th percentile per-packet one-way delay: 65.867 ms
Loss rate: 0.78%
-- Flow 3:
Average throughput: 12.68 Mbit/s
95th percentile per-packet one-way delay: 62.617 ms
Loss rate: 1.30%
Run 7: Report of TaoVA-100x — Data Link

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

Legend:
- Flow 1 ingress (mean 204.11 Mbit/s)
- Flow 1 egress (mean 204.10 Mbit/s)
- Flow 2 ingress (mean 195.42 Mbit/s)
- Flow 2 egress (mean 195.09 Mbit/s)
- Flow 3 ingress (mean 12.69 Mbit/s)
- Flow 3 egress (mean 12.66 Mbit/s)

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

Legend:
- Flow 1 (95th percentile 66.80 ms)
- Flow 2 (95th percentile 65.87 ms)
- Flow 3 (95th percentile 62.62 ms)
Run 8: Statistics of TaoVA-100x

Start at: 2018-07-05 08:11:56
End at: 2018-07-05 08:12:26
Local clock offset: -0.063 ms
Remote clock offset: 0.084 ms

# Below is generated by plot.py at 2018-07-05 12:19:31
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 312.09 Mbit/s
  95th percentile per-packet one-way delay: 65.290 ms
  Loss rate: 0.42%
-- Flow 1:
  Average throughput: 210.12 Mbit/s
  95th percentile per-packet one-way delay: 66.011 ms
  Loss rate: 0.24%
-- Flow 2:
  Average throughput: 120.76 Mbit/s
  95th percentile per-packet one-way delay: 64.430 ms
  Loss rate: 0.42%
-- Flow 3:
  Average throughput: 66.28 Mbit/s
  95th percentile per-packet one-way delay: 64.323 ms
  Loss rate: 2.07%
Run 8: Report of TaoVA-100x — Data Link
Run 9: Statistics of TaoVA-100x

Start at: 2018-07-05 08:36:43
End at: 2018-07-05 08:37:13
Local clock offset: -0.055 ms
Remote clock offset: -0.046 ms

# Below is generated by plot.py at 2018-07-05 12:20:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 273.08 Mbit/s
95th percentile per-packet one-way delay: 67.681 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 177.81 Mbit/s
95th percentile per-packet one-way delay: 66.901 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 127.37 Mbit/s
95th percentile per-packet one-way delay: 68.042 ms
Loss rate: 0.66%
-- Flow 3:
Average throughput: 32.21 Mbit/s
95th percentile per-packet one-way delay: 70.278 ms
Loss rate: 5.21%
Run 9: Report of TaoVA-100x — Data Link

![Graph 1](image1)

![Graph 2](image2)
Run 10: Statistics of TaoVA-100x

Start at: 2018-07-05 09:01:54
End at: 2018-07-05 09:02:24
Local clock offset: 0.028 ms
Remote clock offset: 0.163 ms

# Below is generated by plot.py at 2018-07-05 12:22:15
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 290.87 Mbit/s
  95th percentile per-packet one-way delay: 63.232 ms
  Loss rate: 0.65%
-- Flow 1:
  Average throughput: 166.22 Mbit/s
  95th percentile per-packet one-way delay: 62.457 ms
  Loss rate: 0.30%
-- Flow 2:
  Average throughput: 154.42 Mbit/s
  95th percentile per-packet one-way delay: 63.726 ms
  Loss rate: 0.69%
-- Flow 3:
  Average throughput: 67.65 Mbit/s
  95th percentile per-packet one-way delay: 64.810 ms
  Loss rate: 3.06%
Run 10: Report of TaoVA-100x — Data Link

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

```
Flow 1 ingress (mean 165.73 Mbit/s)  Flow 1 egress (mean 166.22 Mbit/s)
Flow 2 ingress (mean 154.54 Mbit/s)  Flow 2 egress (mean 154.42 Mbit/s)
Flow 3 ingress (mean 68.92 Mbit/s)  Flow 3 egress (mean 67.65 Mbit/s)
```

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

```
Flow 1 (95th percentile 62.46 ms)  Flow 2 (95th percentile 63.73 ms)  Flow 3 (95th percentile 64.81 ms)
```

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Run 1: Statistics of TCP Vegas

Start at: 2018-07-05 05:26:52
End at: 2018-07-05 05:27:22
Local clock offset: 0.042 ms
Remote clock offset: 0.499 ms

# Below is generated by plot.py at 2018-07-05 12:22:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 184.85 Mbit/s
95th percentile per-packet one-way delay: 70.386 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 76.67 Mbit/s
95th percentile per-packet one-way delay: 67.786 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 157.56 Mbit/s
95th percentile per-packet one-way delay: 71.137 ms
Loss rate: 0.45%
-- Flow 3:
Average throughput: 10.48 Mbit/s
95th percentile per-packet one-way delay: 66.348 ms
Loss rate: 1.72%
Run 1: Report of TCP Vegas — Data Link

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

*Flow 1 ingress (mean 26.70 Mbit/s) - Flow 1 egress (mean 76.67 Mbit/s)*
*Flow 2 ingress (mean 157.30 Mbit/s) - Flow 2 egress (mean 157.56 Mbit/s)*
*Flow 3 ingress (mean 10.54 Mbit/s) - Flow 3 egress (mean 10.48 Mbit/s)*

*Flow 1 (95th percentile 67.79 ms) - Flow 2 (95th percentile 71.14 ms) - Flow 3 (95th percentile 66.35 ms)*
Run 2: Statistics of TCP Vegas

Start at: 2018-07-05 05:51:32
End at: 2018-07-05 05:52:02
Local clock offset: -0.031 ms
Remote clock offset: 0.226 ms

# Below is generated by plot.py at 2018-07-05 12:22:15
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 263.25 Mbit/s
  95th percentile per-packet one-way delay: 72.409 ms
  Loss rate: 0.34%
-- Flow 1:
  Average throughput: 173.98 Mbit/s
  95th percentile per-packet one-way delay: 73.321 ms
  Loss rate: 0.14%
-- Flow 2:
  Average throughput: 118.09 Mbit/s
  95th percentile per-packet one-way delay: 68.678 ms
  Loss rate: 0.63%
-- Flow 3:
  Average throughput: 32.99 Mbit/s
  95th percentile per-packet one-way delay: 66.613 ms
  Loss rate: 1.36%
Run 2: Report of TCP Vegas — Data Link

![Graph of throughput and per-packet one-way delay]
Run 3: Statistics of TCP Vegas

Start at: 2018-07-05 06:16:58
End at: 2018-07-05 06:17:28
Local clock offset: -0.051 ms
Remote clock offset: -0.26 ms

# Below is generated by plot.py at 2018-07-05 12:22:15
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 310.06 Mbit/s
  95th percentile per-packet one-way delay: 74.991 ms
  Loss rate: 0.55%
  -- Flow 1:
     Average throughput: 186.35 Mbit/s
     95th percentile per-packet one-way delay: 75.194 ms
     Loss rate: 0.47%
  -- Flow 2:
     Average throughput: 184.36 Mbit/s
     95th percentile per-packet one-way delay: 74.717 ms
     Loss rate: 0.65%
  -- Flow 3:
     Average throughput: 3.98 Mbit/s
     95th percentile per-packet one-way delay: 69.875 ms
     Loss rate: 2.57%
Run 3: Report of TCP Vegas — Data Link

![Graph showing throughput and packet loss](image)

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 186.47 Mbps)
  - Flow 1 egress (mean 186.35 Mbps)
  - Flow 2 ingress (mean 184.47 Mbps)
  - Flow 2 egress (mean 184.36 Mbps)
  - Flow 3 ingress (mean 4.04 Mbps)
  - Flow 3 egress (mean 3.98 Mbps)

- **Packet Loss (ms):**
  - Flow 1 (95th percentile 75.19 ms)
  - Flow 2 (95th percentile 74.72 ms)
  - Flow 3 (95th percentile 69.88 ms)
Run 4: Statistics of TCP Vegas

Start at: 2018-07-05 06:42:14
End at: 2018-07-05 06:42:44
Local clock offset: -0.035 ms
Remote clock offset: 0.403 ms

# Below is generated by plot.py at 2018-07-05 12:22:15
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 321.02 Mbit/s
  95th percentile per-packet one-way delay: 71.113 ms
  Loss rate: 0.57%
-- Flow 1:
  Average throughput: 187.32 Mbit/s
  95th percentile per-packet one-way delay: 71.839 ms
  Loss rate: 0.47%
-- Flow 2:
  Average throughput: 185.33 Mbit/s
  95th percentile per-packet one-way delay: 70.458 ms
  Loss rate: 0.65%
-- Flow 3:
  Average throughput: 32.38 Mbit/s
  95th percentile per-packet one-way delay: 67.729 ms
  Loss rate: 1.25%
Run 4: Report of TCP Vegas — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 187.43 Mbps)
Flow 1 egress (mean 187.32 Mbps)
Flow 2 ingress (mean 185.45 Mbps)
Flow 2 egress (mean 185.33 Mbps)
Flow 3 ingress (mean 32.24 Mbps)
Flow 3 egress (mean 32.38 Mbps)

Per-packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 71.84 ms)
Flow 2 (95th percentile 70.46 ms)
Flow 3 (95th percentile 67.73 ms)
Run 5: Statistics of TCP Vegas

Start at: 2018-07-05 07:07:27
End at: 2018-07-05 07:07:57
Local clock offset: -0.001 ms
Remote clock offset: -0.015 ms

# Below is generated by plot.py at 2018-07-05 12:22:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 271.63 Mbit/s
95th percentile per-packet one-way delay: 63.730 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 140.03 Mbit/s
95th percentile per-packet one-way delay: 63.795 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 165.95 Mbit/s
95th percentile per-packet one-way delay: 63.533 ms
Loss rate: 0.67%
-- Flow 3:
Average throughput: 64.57 Mbit/s
95th percentile per-packet one-way delay: 64.329 ms
Loss rate: 1.35%
Run 5: Report of TCP Vegas — Data Link

[Graph showing throughput over time for different flows]

[Graph showing per-packet round-trip delay over time for different flows]
Run 6: Statistics of TCP Vegas

Start at: 2018-07-05 07:32:45  
End at: 2018-07-05 07:33:15  
Local clock offset: -0.025 ms  
Remote clock offset: 0.203 ms

# Below is generated by plot.py at 2018-07-05 12:22:47  
# Datalink statistics

-- Total of 3 flows:
 Average throughput: 216.16 Mbit/s
 95th percentile per-packet one-way delay: 71.590 ms
 Loss rate: 0.54%

-- Flow 1:
 Average throughput: 187.42 Mbit/s
 95th percentile per-packet one-way delay: 71.818 ms
 Loss rate: 0.45%

-- Flow 2:
 Average throughput: 24.76 Mbit/s
 95th percentile per-packet one-way delay: 66.959 ms
 Loss rate: 0.82%

-- Flow 3:
 Average throughput: 37.39 Mbit/s
 95th percentile per-packet one-way delay: 66.758 ms
 Loss rate: 1.46%
Run 6: Report of TCP Vegas — Data Link
Run 7: Statistics of TCP Vegas

Start at: 2018-07-05 07:57:50
End at: 2018-07-05 07:58:20
Local clock offset: -0.079 ms
Remote clock offset: 1.395 ms

# Below is generated by plot.py at 2018-07-05 12:25:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 285.32 Mbit/s
95th percentile per-packet one-way delay: 70.731 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 187.24 Mbit/s
95th percentile per-packet one-way delay: 71.539 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 70.76 Mbit/s
95th percentile per-packet one-way delay: 66.107 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 155.13 Mbit/s
95th percentile per-packet one-way delay: 68.201 ms
Loss rate: 1.38%
Run 8: Statistics of TCP Vegas

Start at: 2018-07-05 08:22:54
End at: 2018-07-05 08:23:24
Local clock offset: -0.11 ms
Remote clock offset: 0.296 ms

# Below is generated by plot.py at 2018-07-05 12:25:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 236.10 Mbit/s
95th percentile per-packet one-way delay: 74.273 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 174.98 Mbit/s
95th percentile per-packet one-way delay: 73.450 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 6.99 Mbit/s
95th percentile per-packet one-way delay: 68.306 ms
Loss rate: 1.21%
-- Flow 3:
Average throughput: 171.77 Mbit/s
95th percentile per-packet one-way delay: 76.071 ms
Loss rate: 1.53%
Run 8: Report of TCP Vegas — Data Link

---

**Throughput (Mbps)**

- **Flow 1 ingress (mean 174.51 Mbps)**
- **Flow 1 egress (mean 174.98 Mbps)**
- **Flow 2 ingress (mean 7.03 Mbps)**
- **Flow 2 egress (mean 6.99 Mbps)**
- **Flow 3 ingress (mean 172.31 Mbps)**
- **Flow 3 egress (mean 171.77 Mbps)**

---

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

- **Flow 1 (95th percentile 73.45 ms)**
- **Flow 2 (95th percentile 68.31 ms)**
- **Flow 3 (95th percentile 76.07 ms)**

---
Run 9: Statistics of TCP Vegas

Start at: 2018-07-05 08:47:38
End at: 2018-07-05 08:48:08
Local clock offset: -0.021 ms
Remote clock offset: -0.082 ms

# Below is generated by plot.py at 2018-07-05 12:25:09
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 206.06 Mbit/s
  95th percentile per-packet one-way delay: 70.632 ms
  Loss rate: 0.57%
-- Flow 1:
  Average throughput: 81.77 Mbit/s
  95th percentile per-packet one-way delay: 67.246 ms
  Loss rate: 0.43%
-- Flow 2:
  Average throughput: 185.51 Mbit/s
  95th percentile per-packet one-way delay: 71.568 ms
  Loss rate: 0.65%
-- Flow 3:
  Average throughput: 3.42 Mbit/s
  95th percentile per-packet one-way delay: 67.399 ms
  Loss rate: 2.98%
Run 9: Report of TCP Vegas — Data Link
Run 10: Statistics of TCP Vegas

Start at: 2018-07-05 09:12:52
End at: 2018-07-05 09:13:22
Local clock offset: 0.048 ms
Remote clock offset: 1.293 ms

# Below is generated by plot.py at 2018-07-05 12:26:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 260.76 Mbit/s
95th percentile per-packet one-way delay: 71.471 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 187.18 Mbit/s
95th percentile per-packet one-way delay: 72.136 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 109.22 Mbit/s
95th percentile per-packet one-way delay: 67.664 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 3.37 Mbit/s
95th percentile per-packet one-way delay: 67.195 ms
Loss rate: 3.00%
Run 10: Report of TCP Vegas — Data Link

![Graph of throughput over time with data points for different flows and their mean throughputs.]

![Graph of per-packet one-way delay over time with data points for different flows and their 95th percentiles.]
Run 1: Statistics of Verus

Start at: 2018-07-05 05:10:53
End at: 2018-07-05 05:11:23
Local clock offset: 0.4 ms
Remote clock offset: 0.25 ms

# Below is generated by plot.py at 2018-07-05 12:29:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 332.79 Mbit/s
95th percentile per-packet one-way delay: 188.899 ms
Loss rate: 1.30%
-- Flow 1:
Average throughput: 189.59 Mbit/s
95th percentile per-packet one-way delay: 220.138 ms
Loss rate: 1.18%
-- Flow 2:
Average throughput: 180.03 Mbit/s
95th percentile per-packet one-way delay: 162.683 ms
Loss rate: 1.73%
-- Flow 3:
Average throughput: 70.76 Mbit/s
95th percentile per-packet one-way delay: 141.812 ms
Loss rate: 0.00%
Run 2: Statistics of Verus

Start at: 2018-07-05 05:35:59
End at: 2018-07-05 05:36:29
Local clock offset: -0.034 ms
Remote clock offset: 0.27 ms

# Below is generated by plot.py at 2018-07-05 12:29:17
# Datalink statistics
  -- Total of 3 flows:
    Average throughput: 310.89 Mbit/s
    95th percentile per-packet one-way delay: 239.436 ms
    Loss rate: 3.39%
  -- Flow 1:
    Average throughput: 165.30 Mbit/s
    95th percentile per-packet one-way delay: 224.917 ms
    Loss rate: 1.06%
  -- Flow 2:
    Average throughput: 185.03 Mbit/s
    95th percentile per-packet one-way delay: 240.493 ms
    Loss rate: 5.07%
  -- Flow 3:
    Average throughput: 88.14 Mbit/s
    95th percentile per-packet one-way delay: 312.757 ms
    Loss rate: 8.49%
Run 2: Report of Verus — Data Link

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

**Throughput (Mbps):**
- Flow 1 ingress (mean 167.40 Mbps)
- Flow 1 egress (mean 165.30 Mbps)
- Flow 2 ingress (mean 192.39 Mbps)
- Flow 2 egress (mean 185.03 Mbps)
- Flow 3 ingress (mean 94.96 Mbps)
- Flow 3 egress (mean 88.14 Mbps)

**Per-packet one-way delay (ms):**
- Flow 1 (95th percentile 224.92 ms)
- Flow 2 (95th percentile 240.49 ms)
- Flow 3 (95th percentile 312.76 ms)
Run 3: Statistics of Verus

Start at: 2018-07-05 06:00:49
End at: 2018-07-05 06:01:19
Local clock offset: -0.026 ms
Remote clock offset: -0.322 ms

# Below is generated by plot.py at 2018-07-05 12:29:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 325.57 Mbit/s
95th percentile per-packet one-way delay: 320.729 ms
Loss rate: 10.06%
-- Flow 1:
Average throughput: 180.04 Mbit/s
95th percentile per-packet one-way delay: 203.643 ms
Loss rate: 4.01%
-- Flow 2:
Average throughput: 218.02 Mbit/s
95th percentile per-packet one-way delay: 351.898 ms
Loss rate: 17.16%
-- Flow 3:
Average throughput: 27.50 Mbit/s
95th percentile per-packet one-way delay: 212.512 ms
Loss rate: 4.89%
Run 3: Report of Verus — Data Link

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

- Flow 1: Ingress (mean 187.56 Mbit/s), Egress (mean 180.04 Mbit/s)
- Flow 2: Ingress (mean 248.37 Mbit/s), Egress (mean 218.02 Mbit/s)
- Flow 3: Ingress (mean 24.99 Mbit/s), Egress (mean 27.50 Mbit/s)
Run 4: Statistics of Verus

Start at: 2018-07-05 06:26:13
End at: 2018-07-05 06:26:43
Local clock offset: -0.049 ms
Remote clock offset: -0.021 ms

# Below is generated by plot.py at 2018-07-05 12:30:02
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 307.30 Mbit/s
  95th percentile per-packet one-way delay: 274.132 ms
  Loss rate: 5.07%
-- Flow 1:
  Average throughput: 225.78 Mbit/s
  95th percentile per-packet one-way delay: 281.403 ms
  Loss rate: 4.66%
-- Flow 2:
  Average throughput: 94.19 Mbit/s
  95th percentile per-packet one-way delay: 197.375 ms
  Loss rate: 4.15%
-- Flow 3:
  Average throughput: 70.23 Mbit/s
  95th percentile per-packet one-way delay: 186.807 ms
  Loss rate: 11.85%
Run 4: Report of Verus — Data Link

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

Start at: 2018-07-05 06:51:30
End at: 2018-07-05 06:52:00
Local clock offset: -0.05 ms
Remote clock offset: 0.018 ms

# Below is generated by plot.py at 2018-07-05 12:31:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 299.97 Mbit/s
95th percentile per-packet one-way delay: 269.012 ms
Loss rate: 4.96%
-- Flow 1:
Average throughput: 237.71 Mbit/s
95th percentile per-packet one-way delay: 271.491 ms
Loss rate: 5.08%
-- Flow 2:
Average throughput: 51.86 Mbit/s
95th percentile per-packet one-way delay: 206.568 ms
Loss rate: 1.22%
-- Flow 3:
Average throughput: 89.53 Mbit/s
95th percentile per-packet one-way delay: 283.932 ms
Loss rate: 8.15%
Run 5: Report of Verus — Data Link

![Graph of data link throughput and delay](image-url)
Run 6: Statistics of Verus

Start at: 2018-07-05 07:16:38
End at: 2018-07-05 07:17:08
Local clock offset: ~0.064 ms
Remote clock offset: 1.283 ms

# Below is generated by plot.py at 2018-07-05 12:31:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 313.03 Mbit/s
95th percentile per-packet one-way delay: 187.886 ms
Loss rate: 2.87%
-- Flow 1:
Average throughput: 164.53 Mbit/s
95th percentile per-packet one-way delay: 188.025 ms
Loss rate: 3.11%
-- Flow 2:
Average throughput: 163.90 Mbit/s
95th percentile per-packet one-way delay: 190.980 ms
Loss rate: 2.47%
-- Flow 3:
Average throughput: 121.22 Mbit/s
95th percentile per-packet one-way delay: 155.593 ms
Loss rate: 3.00%
Run 6: Report of Verus — Data Link

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

- Flow 1 ingress (mean 168.92 Mbit/s)
- Flow 1 egress (mean 164.53 Mbit/s)
- Flow 2 ingress (mean 166.94 Mbit/s)
- Flow 2 egress (mean 163.90 Mbit/s)
- Flow 3 ingress (mean 123.41 Mbit/s)
- Flow 3 egress (mean 121.22 Mbit/s)

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

- Flow 1 (95th percentile 188.03 ms)
- Flow 2 (95th percentile 190.99 ms)
- Flow 3 (95th percentile 155.59 ms)
Run 7: Statistics of Verus

Start at: 2018-07-05 07:42:02
End at: 2018-07-05 07:42:32
Local clock offset: -0.094 ms
Remote clock offset: 1.349 ms

# Below is generated by plot.py at 2018-07-05 12:31:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 264.20 Mbit/s
95th percentile per-packet one-way delay: 131.832 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 163.47 Mbit/s
95th percentile per-packet one-way delay: 133.371 ms
Loss rate: 0.48%
-- Flow 2:
Average throughput: 111.24 Mbit/s
95th percentile per-packet one-way delay: 130.106 ms
Loss rate: 0.87%
-- Flow 3:
Average throughput: 82.40 Mbit/s
95th percentile per-packet one-way delay: 129.342 ms
Loss rate: 1.40%
Run 7: Report of Verus — Data Link

---

**Throughput (Mbit/s) vs Time (s)**
- Flow 1 ingress (mean 163.57 Mbit/s)
- Flow 1 egress (mean 163.47 Mbit/s)
- Flow 2 ingress (mean 111.16 Mbit/s)
- Flow 2 egress (mean 111.24 Mbit/s)
- Flow 3 ingress (mean 82.39 Mbit/s)
- Flow 3 egress (mean 82.40 Mbit/s)

---

**Per-packet one-way delay (ms) vs Time (s)**
- Flow 1 (95th percentile 133.37 ms)
- Flow 2 (95th percentile 130.11 ms)
- Flow 3 (95th percentile 129.34 ms)
Run 8: Statistics of Verus

Start at: 2018-07-05 08:07:05
End at: 2018-07-05 08:07:35
Local clock offset: -0.059 ms
Remote clock offset: 1.234 ms

# Below is generated by plot.py at 2018-07-05 12:32:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 272.43 Mbit/s
95th percentile per-packet one-way delay: 140.188 ms
Loss rate: 1.24%
-- Flow 1:
Average throughput: 161.13 Mbit/s
95th percentile per-packet one-way delay: 128.531 ms
Loss rate: 1.25%
-- Flow 2:
Average throughput: 123.00 Mbit/s
95th percentile per-packet one-way delay: 140.877 ms
Loss rate: 1.21%
-- Flow 3:
Average throughput: 89.99 Mbit/s
95th percentile per-packet one-way delay: 219.248 ms
Loss rate: 1.26%
Run 8: Report of Verus — Data Link
Run 9: Statistics of Verus

Start at: 2018-07-05 08:32:07
End at: 2018-07-05 08:32:37
Local clock offset: -0.059 ms
Remote clock offset: -0.103 ms

# Below is generated by plot.py at 2018-07-05 12:35:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 323.41 Mbit/s
95th percentile per-packet one-way delay: 209.752 ms
Loss rate: 2.23%
-- Flow 1:
Average throughput: 179.45 Mbit/s
95th percentile per-packet one-way delay: 203.752 ms
Loss rate: 2.13%
-- Flow 2:
Average throughput: 172.17 Mbit/s
95th percentile per-packet one-way delay: 143.379 ms
Loss rate: 0.33%
-- Flow 3:
Average throughput: 91.40 Mbit/s
95th percentile per-packet one-way delay: 334.109 ms
Loss rate: 9.44%
Run 9: Report of Verus — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 182.60 Mbps) — Flow 1 egress (mean 179.45 Mbps)
Flow 2 ingress (mean 172.57 Mbps) — Flow 2 egress (mean 172.17 Mbps)
Flow 3 ingress (mean 99.65 Mbps) — Flow 3 egress (mean 91.40 Mbps)

Per packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 203.75 ms) — Flow 2 (95th percentile 143.38 ms) — Flow 3 (95th percentile 334.11 ms)
Run 10: Statistics of Verus

Start at: 2018-07-05 08:56:49
End at: 2018-07-05 08:57:19
Local clock offset: -0.018 ms
Remote clock offset: -0.245 ms

# Below is generated by plot.py at 2018-07-05 12:35:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 311.55 Mbit/s
95th percentile per-packet one-way delay: 188.857 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 178.81 Mbit/s
95th percentile per-packet one-way delay: 208.288 ms
Loss rate: 0.62%
-- Flow 2:
Average throughput: 168.36 Mbit/s
95th percentile per-packet one-way delay: 156.893 ms
Loss rate: 0.77%
-- Flow 3:
Average throughput: 66.18 Mbit/s
95th percentile per-packet one-way delay: 196.768 ms
Loss rate: 1.01%
Run 10: Report of Verus — Data Link

![Graph of Run 10: Data Link](image)

- **Throughput (Mbps)**
  - Flow 1 ingress (mean 178.44 Mbps)
  - Flow 1 egress (mean 178.81 Mbps)
  - Flow 2 ingress (mean 168.48 Mbps)
  - Flow 2 egress (mean 168.36 Mbps)
  - Flow 3 ingress (mean 66.00 Mbps)
  - Flow 3 egress (mean 66.18 Mbps)

- **Per-packet one-way delay (ms)**
  - Flow 1 (95th percentile 208.29 ms)
  - Flow 2 (95th percentile 156.89 ms)
  - Flow 3 (95th percentile 196.77 ms)
Run 1: Statistics of PCC-Vivace

Start at: 2018-07-05 05:06:02
End at: 2018-07-05 05:06:32
Local clock offset: 0.334 ms
Remote clock offset: -0.072 ms

# Below is generated by plot.py at 2018-07-05 12:40:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 490.37 Mbit/s
95th percentile per-packet one-way delay: 149.964 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 291.74 Mbit/s
95th percentile per-packet one-way delay: 174.133 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 291.60 Mbit/s
95th percentile per-packet one-way delay: 100.769 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 15.56 Mbit/s
95th percentile per-packet one-way delay: 61.748 ms
Loss rate: 1.77%
Run 1: Report of PCC-Vivace — Data Link

Throughput (Mbps) vs Time (s)

- Flow 1 ingress (mean 291.28 Mbps)
- Flow 1 egress (mean 291.74 Mbps)
- Flow 2 ingress (mean 291.60 Mbps)
- Flow 2 egress (mean 291.60 Mbps)
- Flow 3 ingress (mean 15.64 Mbps)
- Flow 3 egress (mean 15.56 Mbps)

Delay (ms) vs Time (s)

- Flow 1 (95th percentile 174.13 ms)
- Flow 2 (95th percentile 100.77 ms)
- Flow 3 (95th percentile 61.75 ms)
Run 2: Statistics of PCC-Vivace

Start at: 2018-07-05 05:31:09
End at: 2018-07-05 05:31:39
Local clock offset: -0.0 ms
Remote clock offset: 0.084 ms

# Below is generated by plot.py at 2018-07-05 12:42:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 532.09 Mbit/s
95th percentile per-packet one-way delay: 197.100 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 353.64 Mbit/s
95th percentile per-packet one-way delay: 147.325 ms
Loss rate: 0.49%
-- Flow 2:
Average throughput: 247.83 Mbit/s
95th percentile per-packet one-way delay: 231.342 ms
Loss rate: 1.38%
-- Flow 3:
Average throughput: 43.57 Mbit/s
95th percentile per-packet one-way delay: 61.530 ms
Loss rate: 2.86%
Run 2: Report of PCC-Vivace — Data Link
Run 3: Statistics of PCC-Vivace

Start at: 2018-07-05 05:55:57
End at: 2018-07-05 05:56:27
Local clock offset: -0.051 ms
Remote clock offset: 0.022 ms

# Below is generated by plot.py at 2018-07-05 12:43:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 537.88 Mbit/s
95th percentile per-packet one-way delay: 150.227 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 321.11 Mbit/s
95th percentile per-packet one-way delay: 173.258 ms
Loss rate: 0.49%
-- Flow 2:
Average throughput: 249.60 Mbit/s
95th percentile per-packet one-way delay: 119.558 ms
Loss rate: 0.34%
-- Flow 3:
Average throughput: 156.18 Mbit/s
95th percentile per-packet one-way delay: 94.570 ms
Loss rate: 1.57%
Run 3: Report of PCC-Vivace — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 321.38 Mbps) — Flow 1 egress (mean 321.11 Mbps)
Flow 2 ingress (mean 248.88 Mbps) — Flow 2 egress (mean 249.00 Mbps)
Flow 3 ingress (mean 156.70 Mbps) — Flow 3 egress (mean 156.18 Mbps)

Round-trip time (ms)

Time (s)

Flow 1 (95th percentile 173.26 ms) — Flow 2 (95th percentile 119.56 ms) — Flow 3 (95th percentile 94.57 ms)
Run 4: Statistics of PCC-Vivace

Start at: 2018-07-05 06:21:26
End at: 2018-07-05 06:21:56
Local clock offset: -0.079 ms
Remote clock offset: -0.076 ms

# Below is generated by plot.py at 2018-07-05 12:43:07
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 414.01 Mbit/s
  95th percentile per-packet one-way delay: 96.683 ms
  Loss rate: 0.64%
-- Flow 1:
  Average throughput: 198.91 Mbit/s
  95th percentile per-packet one-way delay: 94.363 ms
  Loss rate: 0.29%
-- Flow 2:
  Average throughput: 297.91 Mbit/s
  95th percentile per-packet one-way delay: 111.142 ms
  Loss rate: 0.61%
-- Flow 3:
  Average throughput: 53.08 Mbit/s
  95th percentile per-packet one-way delay: 62.377 ms
  Loss rate: 4.88%
Run 4: Report of PCC-Vivace — Data Link

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

- **Flow 1** (ingress: mean 198.66 Mbit/s, egress: mean 198.91 Mbit/s)
- **Flow 2** (ingress: mean 297.88 Mbit/s, egress: mean 297.91 Mbit/s)
- **Flow 3** (ingress: mean 55.99 Mbit/s, egress: mean 53.09 Mbit/s)

- Flow 1 (95th percentile: 94.36 ms)
- Flow 2 (95th percentile: 111.14 ms)
- Flow 3 (95th percentile: 62.38 ms)
Run 5: Statistics of PCC-Vivace

Start at: 2018-07-05 06:46:36
End at: 2018-07-05 06:47:06
Local clock offset: -0.031 ms
Remote clock offset: 0.093 ms

# Below is generated by plot.py at 2018-07-05 12:43:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 527.17 Mbit/s
95th percentile per-packet one-way delay: 129.970 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 280.91 Mbit/s
95th percentile per-packet one-way delay: 133.249 ms
Loss rate: 0.74%
-- Flow 2:
Average throughput: 289.40 Mbit/s
95th percentile per-packet one-way delay: 139.777 ms
Loss rate: 0.93%
-- Flow 3:
Average throughput: 165.65 Mbit/s
95th percentile per-packet one-way delay: 81.223 ms
Loss rate: 1.45%
Run 5: Report of PCC-Vivace — Data Link
Run 6: Statistics of PCC-Vivace

Start at: 2018-07-05 07:11:46
End at: 2018-07-05 07:12:16
Local clock offset: ~0.018 ms
Remote clock offset: 1.453 ms

# Below is generated by plot.py at 2018-07-05 12:43:36
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 474.21 Mbit/s
  95th percentile per-packet one-way delay: 119.281 ms
  Loss rate: 0.71%
-- Flow 1:
  Average throughput: 246.56 Mbit/s
  95th percentile per-packet one-way delay: 67.773 ms
  Loss rate: 0.35%
-- Flow 2:
  Average throughput: 252.28 Mbit/s
  95th percentile per-packet one-way delay: 166.865 ms
  Loss rate: 0.87%
-- Flow 3:
  Average throughput: 183.95 Mbit/s
  95th percentile per-packet one-way delay: 111.664 ms
  Loss rate: 1.70%
Run 6: Report of PCC-Vivace — Data Link

**Throughput (Mbit/s)**

- Flow 1 ingress (mean 246.40 Mbit/s)
- Flow 1 egress (mean 246.56 Mbit/s)
- Flow 2 ingress (mean 252.95 Mbit/s)
- Flow 2 egress (mean 252.28 Mbit/s)
- Flow 3 ingress (mean 184.81 Mbit/s)
- Flow 3 egress (mean 183.95 Mbit/s)

**Packet Transfer Delay (ms)**

- Flow 1 (95th percentile 67.77 ms)
- Flow 2 (95th percentile 166.87 ms)
- Flow 3 (95th percentile 111.66 ms)
Run 7: Statistics of PCC-Vivace

Start at: 2018-07-05 07:37:09
End at: 2018-07-05 07:37:39
Local clock offset: -0.063 ms
Remote clock offset: -0.022 ms

# Below is generated by plot.py at 2018-07-05 12:45:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 543.19 Mbit/s
95th percentile per-packet one-way delay: 151.086 ms
Loss rate: 1.20%
-- Flow 1:
Average throughput: 317.96 Mbit/s
95th percentile per-packet one-way delay: 175.601 ms
Loss rate: 1.43%
-- Flow 2:
Average throughput: 280.07 Mbit/s
95th percentile per-packet one-way delay: 137.859 ms
Loss rate: 0.84%
-- Flow 3:
Average throughput: 120.25 Mbit/s
95th percentile per-packet one-way delay: 126.315 ms
Loss rate: 1.05%
Run 7: Report of PCC-Vivace — Data Link
Run 8: Statistics of PCC-Vivace

Start at: 2018-07-05 08:02:14
End at: 2018-07-05 08:02:44
Local clock offset: 0.009 ms
Remote clock offset: 1.293 ms

# Below is generated by plot.py at 2018-07-05 12:45:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 500.61 Mbit/s
95th percentile per-packet one-way delay: 143.836 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 298.93 Mbit/s
95th percentile per-packet one-way delay: 155.421 ms
Loss rate: 0.81%
-- Flow 2:
Average throughput: 276.49 Mbit/s
95th percentile per-packet one-way delay: 119.715 ms
Loss rate: 0.70%
-- Flow 3:
Average throughput: 55.56 Mbit/s
95th percentile per-packet one-way delay: 60.682 ms
Loss rate: 2.02%
Run 8: Report of PCC-Vivace — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 300.13 Mbps)  
Flow 1 egress (mean 298.93 Mbps)  
Flow 2 ingress (mean 276.75 Mbps)  
Flow 2 egress (mean 276.49 Mbps)  
Flow 3 ingress (mean 55.99 Mbps)  
Flow 3 egress (mean 55.56 Mbps)

Per-packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 155.42 ms)  
Flow 2 (95th percentile 119.72 ms)  
Flow 3 (95th percentile 60.68 ms)
Run 9: Statistics of PCC-Vivace

Start at: 2018-07-05 08:27:16
End at: 2018-07-05 08:27:46
Local clock offset: -0.032 ms
Remote clock offset: 0.079 ms

# Below is generated by plot.py at 2018-07-05 12:46:27
# Datalink statistics
-- Total of 3 flows:
   Average throughput: 454.33 Mbit/s
   95th percentile per-packet one-way delay: 141.984 ms
   Loss rate: 0.68%
-- Flow 1:
   Average throughput: 260.60 Mbit/s
   95th percentile per-packet one-way delay: 177.254 ms
   Loss rate: 0.52%
-- Flow 2:
   Average throughput: 244.57 Mbit/s
   95th percentile per-packet one-way delay: 92.522 ms
   Loss rate: 0.64%
-- Flow 3:
   Average throughput: 95.97 Mbit/s
   95th percentile per-packet one-way delay: 61.806 ms
   Loss rate: 2.18%
Run 9: Report of PCC-Vivace — Data Link

- Throughput (Mbps)
  - Flow 1 ingress (mean 260.89 Mbps)
  - Flow 1 egress (mean 260.60 Mbps)
  - Flow 2 ingress (mean 244.61 Mbps)
  - Flow 2 egress (mean 244.57 Mbps)
  - Flow 3 ingress (mean 98.85 Mbps)
  - Flow 3 egress (mean 95.97 Mbps)

- Per-packet one-way delay (ms)
  - Flow 1 (95th percentile 177.25 ms)
  - Flow 2 (95th percentile 92.52 ms)
  - Flow 3 (95th percentile 61.81 ms)
Run 10: Statistics of PCC-Vivace

Start at: 2018-07-05 08:52:01
End at: 2018-07-05 08:52:31
Local clock offset: 0.021 ms
Remote clock offset: -1.262 ms

# Below is generated by plot.py at 2018-07-05 12:46:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 470.38 Mbit/s
95th percentile per-packet one-way delay: 140.883 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 290.84 Mbit/s
95th percentile per-packet one-way delay: 167.007 ms
Loss rate: 0.48%
-- Flow 2:
Average throughput: 189.76 Mbit/s
95th percentile per-packet one-way delay: 68.413 ms
Loss rate: 0.38%
-- Flow 3:
Average throughput: 163.84 Mbit/s
95th percentile per-packet one-way delay: 66.322 ms
Loss rate: 1.71%
Run 10: Report of PCC-Vivace — Data Link
Run 1: Statistics of WebRTC media

Start at: 2018-07-05 05:22:30
End at: 2018-07-05 05:23:00
Local clock offset: 0.055 ms
Remote clock offset: 1.45 ms

# Below is generated by plot.py at 2018-07-05 12:46:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.82 Mbit/s
95th percentile per-packet one-way delay: 59.982 ms
Loss rate: 0.97%
-- Flow 1:
Average throughput: 1.17 Mbit/s
95th percentile per-packet one-way delay: 59.970 ms
Loss rate: 0.78%
-- Flow 2:
Average throughput: 1.19 Mbit/s
95th percentile per-packet one-way delay: 59.988 ms
Loss rate: 0.53%
-- Flow 3:
Average throughput: 0.48 Mbit/s
95th percentile per-packet one-way delay: 59.984 ms
Loss rate: 2.51%
Run 1: Report of WebRTC media — Data Link

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

- Flow 1 ingress (mean 1.17 Mbps)
- Flow 1 egress (mean 1.17 Mbps)
- Flow 2 ingress (mean 1.19 Mbps)
- Flow 2 egress (mean 1.19 Mbps)
- Flow 3 ingress (mean 0.49 Mbps)
- Flow 3 egress (mean 0.48 Mbps)

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

- Flow 1 (95th percentile 59.97 ms)
- Flow 2 (95th percentile 59.99 ms)
- Flow 3 (95th percentile 59.98 ms)
Run 2: Statistics of WebRTC media

Start at: 2018-07-05 05:47:09
End at: 2018-07-05 05:47:39
Local clock offset: -0.03 ms
Remote clock offset: 0.149 ms

# Below is generated by plot.py at 2018-07-05 12:46:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.83 Mbit/s
95th percentile per-packet one-way delay: 61.333 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 2.03 Mbit/s
95th percentile per-packet one-way delay: 61.364 ms
Loss rate: 0.57%
-- Flow 2:
Average throughput: 1.30 Mbit/s
95th percentile per-packet one-way delay: 61.288 ms
Loss rate: 0.71%
-- Flow 3:
Average throughput: 0.52 Mbit/s
95th percentile per-packet one-way delay: 61.263 ms
Loss rate: 1.80%
Run 2: Report of WebRTC media — Data Link
Run 3: Statistics of WebRTC media

Start at: 2018-07-05 06:12:31
End at: 2018-07-05 06:13:01
Local clock offset: -0.052 ms
Remote clock offset: -1.35 ms

# Below is generated by plot.py at 2018-07-05 12:46:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.86 Mbit/s
95th percentile per-packet one-way delay: 62.712 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 2.08 Mbit/s
95th percentile per-packet one-way delay: 62.672 ms
Loss rate: 0.46%
-- Flow 2:
Average throughput: 1.29 Mbit/s
95th percentile per-packet one-way delay: 62.706 ms
Loss rate: 0.81%
-- Flow 3:
Average throughput: 0.50 Mbit/s
95th percentile per-packet one-way delay: 62.960 ms
Loss rate: 2.36%
Run 3: Report of WebRTC media — Data Link
Run 4: Statistics of WebRTC media

Start at: 2018-07-05 06:37:52
End at: 2018-07-05 06:38:22
Local clock offset: -0.033 ms
Remote clock offset: 1.209 ms

# Below is generated by plot.py at 2018-07-05 12:46:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.83 Mbit/s
95th percentile per-packet one-way delay: 60.236 ms
Loss rate: 0.81%
-- Flow 1:
Average throughput: 2.04 Mbit/s
95th percentile per-packet one-way delay: 60.181 ms
Loss rate: 0.48%
-- Flow 2:
Average throughput: 1.29 Mbit/s
95th percentile per-packet one-way delay: 60.284 ms
Loss rate: 0.98%
-- Flow 3:
Average throughput: 0.53 Mbit/s
95th percentile per-packet one-way delay: 60.176 ms
Loss rate: 1.66%
Run 4: Report of WebRTC media — Data Link

Throughput (Mbps) vs Time (s)

Flow 1 ingress (mean 2.04 Mbps) — Flow 1 egress (mean 2.04 Mbps)
Flow 2 ingress (mean 1.30 Mbps) — Flow 2 egress (mean 1.29 Mbps)
Flow 3 ingress (mean 0.53 Mbps) — Flow 3 egress (mean 0.53 Mbps)

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

Flow 1 (95th percentile 60.18 ms) — Flow 2 (95th percentile 60.28 ms) — Flow 3 (95th percentile 60.18 ms)
Run 5: Statistics of WebRTC media

Start at: 2018-07-05 07:03:03
End at: 2018-07-05 07:03:33
Local clock offset: -0.051 ms
Remote clock offset: 1.251 ms

# Below is generated by plot.py at 2018-07-05 12:46:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.83 Mbit/s
95th percentile per-packet one-way delay: 60.177 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 2.04 Mbit/s
95th percentile per-packet one-way delay: 60.203 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 1.29 Mbit/s
95th percentile per-packet one-way delay: 60.116 ms
Loss rate: 0.71%
-- Flow 3:
Average throughput: 0.52 Mbit/s
95th percentile per-packet one-way delay: 60.169 ms
Loss rate: 2.27%
Run 5: Report of WebRTC media — Data Link

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

- **Throughput (Mbps)**
  - Flow 1 ingress (mean 2.04 Mbps)
  - Flow 1 egress (mean 2.04 Mbps)
  - Flow 2 ingress (mean 1.30 Mbps)
  - Flow 2 egress (mean 1.29 Mbps)
  - Flow 3 ingress (mean 0.53 Mbps)
  - Flow 3 egress (mean 0.52 Mbps)

- **Packet Delay (ms)**
  - Flow 1 (95th percentile 60.20 ms)
  - Flow 2 (95th percentile 60.12 ms)
  - Flow 3 (95th percentile 60.17 ms)
Run 6: Statistics of WebRTC media

Start at: 2018-07-05 07:28:26
End at: 2018-07-05 07:28:56
Local clock offset: -0.067 ms
Remote clock offset: 0.238 ms

# Below is generated by plot.py at 2018-07-05 12:46:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 3.86 Mbit/s
  95th percentile per-packet one-way delay: 61.099 ms
  Loss rate: 0.81%
-- Flow 1:
  Average throughput: 2.05 Mbit/s
  95th percentile per-packet one-way delay: 61.044 ms
  Loss rate: 0.37%
-- Flow 2:
  Average throughput: 1.30 Mbit/s
  95th percentile per-packet one-way delay: 61.155 ms
  Loss rate: 0.96%
-- Flow 3:
  Average throughput: 0.53 Mbit/s
  95th percentile per-packet one-way delay: 60.959 ms
  Loss rate: 2.16%
Run 6: Report of WebRTC media — Data Link

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

![Graph 2: Per packet one-way delay](image2)
Run 7: Statistics of WebRTC media

Start at: 2018-07-05 07:53:29
End at: 2018-07-05 07:53:59
Local clock offset: -0.067 ms
Remote clock offset: -0.06 ms

# Below is generated by plot.py at 2018-07-05 12:46:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.87 Mbit/s
95th percentile per-packet one-way delay: 61.461 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 2.05 Mbit/s
95th percentile per-packet one-way delay: 61.292 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 1.32 Mbit/s
95th percentile per-packet one-way delay: 61.533 ms
Loss rate: 0.93%
-- Flow 3:
Average throughput: 0.52 Mbit/s
95th percentile per-packet one-way delay: 61.439 ms
Loss rate: 1.70%
Run 7: Report of WebRTC media — Data Link

![Graph showing throughputs and delays](image-url)
Run 8: Statistics of WebRTC media

Start at: 2018-07-05 08:18:35
End at: 2018-07-05 08:19:05
Local clock offset: -0.066 ms
Remote clock offset: -0.314 ms

# Below is generated by plot.py at 2018-07-05 12:46:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.82 Mbit/s
95th percentile per-packet one-way delay: 61.638 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 2.02 Mbit/s
95th percentile per-packet one-way delay: 61.680 ms
Loss rate: 0.49%
-- Flow 2:
Average throughput: 1.30 Mbit/s
95th percentile per-packet one-way delay: 61.588 ms
Loss rate: 0.75%
-- Flow 3:
Average throughput: 0.53 Mbit/s
95th percentile per-packet one-way delay: 61.331 ms
Loss rate: 1.72%
Run 8: Report of WebRTC media — Data Link
Run 9: Statistics of WebRTC media

Start at: 2018-07-05 08:43:16
End at: 2018-07-05 08:43:46
Local clock offset: -0.009 ms
Remote clock offset: -0.061 ms

# Below is generated by plot.py at 2018-07-05 12:46:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.86 Mbit/s
95th percentile per-packet one-way delay: 61.371 ms
Loss rate: 0.74%
-- Flow 1:
Average throughput: 2.04 Mbit/s
95th percentile per-packet one-way delay: 61.397 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 1.32 Mbit/s
95th percentile per-packet one-way delay: 61.331 ms
Loss rate: 0.73%
-- Flow 3:
Average throughput: 0.53 Mbit/s
95th percentile per-packet one-way delay: 61.185 ms
Loss rate: 2.12%
Run 9: Report of WebRTC media — Data Link
Run 10: Statistics of WebRTC media

Start at: 2018-07-05 09:08:30
End at: 2018-07-05 09:09:00
Local clock offset: 0.084 ms
Remote clock offset: -0.237 ms

# Below is generated by plot.py at 2018-07-05 12:46:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.82 Mbit/s
95th percentile per-packet one-way delay: 61.588 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 2.02 Mbit/s
95th percentile per-packet one-way delay: 61.501 ms
Loss rate: 0.49%
-- Flow 2:
Average throughput: 1.30 Mbit/s
95th percentile per-packet one-way delay: 61.648 ms
Loss rate: 0.97%
-- Flow 3:
Average throughput: 0.51 Mbit/s
95th percentile per-packet one-way delay: 61.638 ms
Loss rate: 1.96%
Run 10: Report of WebRTC media — Data Link