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 @ 640164b5b17c7c6561fff557729b3b5935d8596ce
third_party/fillp @ d47f4fa1b45a5e3c0537115c5a28436dbd4b834
third_party/fillp-sheep @ daed0c84f98531712514b2231f43ec6901114ffe
third_party/genericCC @ d0153f8e594aa89e93b032143cedbfe58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0edcbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ 6f038ed31259d366f9840f65b82cbe8f464b1b39
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
  M receiver/src/buffer.h
  M receiver/src/core.cpp
  M sender/src/buffer.h
  M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08f9b2c4eb24f974ab
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3c7cf42
third_party/scream-reproduce @ f099118d1421aa3131bf1f1ff1964974e1da3db2
  M src/ScreamClient
  M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
third_party/verus @ d4b447ea74c660a261149af2629562939f9a494
  M src/verus.hpp
  M tools/plot.py
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9d4735770d143a1fa2851
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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<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: 2018-07-26 04:51:21
End at: 2018-07-26 04:51:51
Local clock offset: -0.031 ms
Remote clock offset: 0.141 ms

# Below is generated by plot.py at 2018-07-26 09:12:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 341.86 Mbit/s
95th percentile per-packet one-way delay: 87.558 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 176.24 Mbit/s
95th percentile per-packet one-way delay: 85.923 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 170.12 Mbit/s
95th percentile per-packet one-way delay: 87.770 ms
Loss rate: 0.72%
-- Flow 3:
Average throughput: 161.10 Mbit/s
95th percentile per-packet one-way delay: 89.752 ms
Loss rate: 1.51%
Run 1: Report of TCP BBR — Data Link

![Graph showing throughput and per-packet round-trip time over time for three flows.](image)

[Legend:
- Blue dashed line: Flow 1 ingress (mean 175.28 Mbit/s)
- Blue solid line: Flow 1 egress (mean 176.24 Mbit/s)
- Green dashed line: Flow 2 ingress (mean 170.20 Mbit/s)
- Green solid line: Flow 2 egress (mean 170.12 Mbit/s)
- Red dashed line: Flow 3 ingress (mean 162.17 Mbit/s)
- Red solid line: Flow 3 egress (mean 161.10 Mbit/s)]
Run 2: Statistics of TCP BBR

Start at: 2018-07-26 05:16:46
End at: 2018-07-26 05:17:16
Local clock offset: -0.049 ms
Remote clock offset: 0.159 ms

# Below is generated by plot.py at 2018-07-26 09:12:25
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 324.53 Mbit/s
  95th percentile per-packet one-way delay: 98.497 ms
  Loss rate: 0.72%
-- Flow 1:
  Average throughput: 167.95 Mbit/s
  95th percentile per-packet one-way delay: 96.366 ms
  Loss rate: 0.49%
-- Flow 2:
  Average throughput: 160.00 Mbit/s
  95th percentile per-packet one-way delay: 98.780 ms
  Loss rate: 0.66%
-- Flow 3:
  Average throughput: 152.37 Mbit/s
  95th percentile per-packet one-way delay: 101.007 ms
  Loss rate: 1.61%
Run 3: Statistics of TCP BBR

Start at: 2018-07-26 05:41:43  
End at: 2018-07-26 05:42:13  
Local clock offset: 0.016 ms  
Remote clock offset: -1.369 ms

# Below is generated by plot.py at 2018-07-26 09:12:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 318.62 Mbit/s  
95th percentile per-packet one-way delay: 95.780 ms  
Loss rate: 0.73%
-- Flow 1:
Average throughput: 168.56 Mbit/s  
95th percentile per-packet one-way delay: 92.064 ms  
Loss rate: 0.46%
-- Flow 2:
Average throughput: 153.39 Mbit/s  
95th percentile per-packet one-way delay: 96.417 ms  
Loss rate: 0.81%
-- Flow 3:
Average throughput: 145.89 Mbit/s  
95th percentile per-packet one-way delay: 101.747 ms  
Loss rate: 1.54%
Run 3: Report of TCP BBR — Data Link

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

- Flow 1 ingress (mean 168.64 Mbit/s)
- Flow 1 egress (mean 168.56 Mbit/s)
- Flow 2 ingress (mean 153.71 Mbit/s)
- Flow 2 egress (mean 153.39 Mbit/s)
- Flow 3 ingress (mean 146.34 Mbit/s)
- Flow 3 egress (mean 145.09 Mbit/s)

![Graph 2: Latency vs. Time](image2)

- Flow 1 (95th percentile 92.06 ms)
- Flow 2 (95th percentile 96.42 ms)
- Flow 3 (95th percentile 101.75 ms)
Run 4: Statistics of TCP BBR

Start at: 2018-07-26 06:06:45
End at: 2018-07-26 06:07:15
Local clock offset: 0.066 ms
Remote clock offset: -1.267 ms

# Below is generated by plot.py at 2018-07-26 09:12:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 335.82 Mbit/s
95th percentile per-packet one-way delay: 95.882 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 171.72 Mbit/s
95th percentile per-packet one-way delay: 93.513 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 173.10 Mbit/s
95th percentile per-packet one-way delay: 96.918 ms
Loss rate: 0.71%
-- Flow 3:
Average throughput: 148.87 Mbit/s
95th percentile per-packet one-way delay: 97.430 ms
Loss rate: 1.50%
Run 4: Report of TCP BBR — Data Link
Run 5: Statistics of TCP BBR

Start at: 2018-07-26 06:31:52
End at: 2018-07-26 06:32:22
Local clock offset: 0.133 ms
Remote clock offset: -0.401 ms

# Below is generated by plot.py at 2018-07-26 09:12:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 341.98 Mbit/s
95th percentile per-packet one-way delay: 91.791 ms
Loss rate: 0.68%

-- Flow 1:
Average throughput: 175.34 Mbit/s
95th percentile per-packet one-way delay: 89.665 ms
Loss rate: 0.43%

-- Flow 2:
Average throughput: 171.38 Mbit/s
95th percentile per-packet one-way delay: 91.733 ms
Loss rate: 0.65%

-- Flow 3:
Average throughput: 160.16 Mbit/s
95th percentile per-packet one-way delay: 94.502 ms
Loss rate: 1.53%
Run 5: Report of TCP BBR — Data Link
Run 6: Statistics of TCP BBR

Start at: 2018-07-26 06:57:03
End at: 2018-07-26 06:57:33
Local clock offset: 0.204 ms
Remote clock offset: 1.437 ms

# Below is generated by plot.py at 2018-07-26 09:12:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 343.14 Mbit/s
95th percentile per-packet one-way delay: 84.248 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 177.13 Mbit/s
95th percentile per-packet one-way delay: 82.874 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 168.21 Mbit/s
95th percentile per-packet one-way delay: 84.710 ms
Loss rate: 0.73%
-- Flow 3:
Average throughput: 164.74 Mbit/s
95th percentile per-packet one-way delay: 85.755 ms
Loss rate: 1.52%
Run 6: Report of TCP BBR — Data Link
Run 7: Statistics of TCP BBR

Start at: 2018-07-26 07:22:19
End at: 2018-07-26 07:22:49
Local clock offset: 0.239 ms
Remote clock offset: -1.391 ms

# Below is generated by plot.py at 2018-07-26 09:12:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 329.74 Mbit/s
95th percentile per-packet one-way delay: 100.183 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 170.86 Mbit/s
95th percentile per-packet one-way delay: 96.727 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 169.96 Mbit/s
95th percentile per-packet one-way delay: 100.936 ms
Loss rate: 0.72%
-- Flow 3:
Average throughput: 139.36 Mbit/s
95th percentile per-packet one-way delay: 103.065 ms
Loss rate: 1.62%
Run 7: Report of TCP BBR — Data Link

![Graph showing throughput and delay over time]
Run 8: Statistics of TCP BBR

Start at: 2018-07-26 07:47:33
End at: 2018-07-26 07:48:03
Local clock offset: 0.266 ms
Remote clock offset: 0.0 ms

# Below is generated by plot.py at 2018-07-26 09:12:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 338.34 Mbit/s
  95th percentile per-packet one-way delay: 95.976 ms
  Loss rate: 0.69%
-- Flow 1:
  Average throughput: 174.66 Mbit/s
  95th percentile per-packet one-way delay: 93.000 ms
  Loss rate: 0.41%
-- Flow 2:
  Average throughput: 168.89 Mbit/s
  95th percentile per-packet one-way delay: 95.548 ms
  Loss rate: 0.71%
-- Flow 3:
  Average throughput: 156.38 Mbit/s
  95th percentile per-packet one-way delay: 99.449 ms
  Loss rate: 1.57%
Run 8: Report of TCP BBR — Data Link

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

Start at: 2018-07-26 08:12:41
End at: 2018-07-26 08:13:11
Local clock offset: 0.267 ms
Remote clock offset: 1.294 ms

# Below is generated by plot.py at 2018-07-26 09:17:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 324.52 Mbit/s
95th percentile per-packet one-way delay: 102.561 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 168.91 Mbit/s
95th percentile per-packet one-way delay: 100.755 ms
Loss rate: 0.52%
-- Flow 2:
Average throughput: 164.77 Mbit/s
95th percentile per-packet one-way delay: 102.934 ms
Loss rate: 0.74%
-- Flow 3:
Average throughput: 139.83 Mbit/s
95th percentile per-packet one-way delay: 103.942 ms
Loss rate: 1.88%
Run 9: Report of TCP BBR — Data Link
Run 10: Statistics of TCP BBR

Start at: 2018-07-26 08:37:44  
End at: 2018-07-26 08:38:14  
Local clock offset: 0.305 ms  
Remote clock offset: -0.384 ms

# Below is generated by plot.py at 2018-07-26 09:18:24  
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 337.76 Mbit/s
  95th percentile per-packet one-way delay: 78.035 ms
  Loss rate: 0.66%
-- Flow 1:
  Average throughput: 173.63 Mbit/s
  95th percentile per-packet one-way delay: 76.402 ms
  Loss rate: 0.44%
-- Flow 2:
  Average throughput: 171.70 Mbit/s
  95th percentile per-packet one-way delay: 77.878 ms
  Loss rate: 0.65%
-- Flow 3:
  Average throughput: 151.65 Mbit/s
  95th percentile per-packet one-way delay: 83.009 ms
  Loss rate: 1.44%
Run 10: Report of TCP BBR — Data Link
Run 1: Statistics of Copa

Start at: 2018-07-26 04:36:22
End at: 2018-07-26 04:36:52
Local clock offset: -0.068 ms
Remote clock offset: -0.092 ms

# Below is generated by plot.py at 2018-07-26 09:18:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 188.39 Mbit/s
95th percentile per-packet one-way delay: 73.633 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 103.18 Mbit/s
95th percentile per-packet one-way delay: 73.959 ms
Loss rate: 0.48%
-- Flow 2:
Average throughput: 122.12 Mbit/s
95th percentile per-packet one-way delay: 73.951 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 70.16 Mbit/s
95th percentile per-packet one-way delay: 71.762 ms
Loss rate: 2.08%
Run 1: Report of Copa — Data Link

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

- **Flow 1 ingress (mean 103.20 Mbit/s)**
- **Flow 1 egress (mean 103.18 Mbit/s)**
- **Flow 2 ingress (mean 122.23 Mbit/s)**
- **Flow 2 egress (mean 122.12 Mbit/s)**
- **Flow 3 ingress (mean 70.77 Mbit/s)**
- **Flow 3 egress (mean 70.16 Mbit/s)**
Run 2: Statistics of Copa

Start at: 2018-07-26 05:01:28
End at: 2018-07-26 05:01:58
Local clock offset: 0.003 ms
Remote clock offset: 0.289 ms

# Below is generated by plot.py at 2018-07-26 09:20:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 248.44 Mbit/s
95th percentile per-packet one-way delay: 70.441 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 153.12 Mbit/s
95th percentile per-packet one-way delay: 70.778 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 112.53 Mbit/s
95th percentile per-packet one-way delay: 69.175 ms
Loss rate: 0.21%
-- Flow 3:
Average throughput: 62.61 Mbit/s
95th percentile per-packet one-way delay: 71.004 ms
Loss rate: 0.37%
Run 2: Report of Copa — Data Link

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

Start at: 2018-07-26 05:26:40
End at: 2018-07-26 05:27:10
Local clock offset: -0.085 ms
Remote clock offset: 0.111 ms

# Below is generated by plot.py at 2018-07-26 09:20:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 209.31 Mbit/s
95th percentile per-packet one-way delay: 71.791 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 128.13 Mbit/s
95th percentile per-packet one-way delay: 70.935 ms
Loss rate: 0.46%
-- Flow 2:
Average throughput: 90.54 Mbit/s
95th percentile per-packet one-way delay: 77.039 ms
Loss rate: 0.70%
-- Flow 3:
Average throughput: 64.00 Mbit/s
95th percentile per-packet one-way delay: 66.293 ms
Loss rate: 2.77%
Run 3: Report of Copa — Data Link

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

Legend:
- Flow 1 ingress (mean 128.21 Mbit/s)
- Flow 1 egress (mean 128.13 Mbit/s)
- Flow 2 ingress (mean 90.43 Mbit/s)
- Flow 2 egress (mean 90.54 Mbit/s)
- Flow 3 ingress (mean 65.04 Mbit/s)
- Flow 3 egress (mean 64.00 Mbit/s)
Run 4: Statistics of Copa

Start at: 2018-07-26 05:51:37
End at: 2018-07-26 05:52:07
Local clock offset: 0.055 ms
Remote clock offset: 0.155 ms

# Below is generated by plot.py at 2018-07-26 09:20:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 227.15 Mbit/s
95th percentile per-packet one-way delay: 72.506 ms
Loss rate: 0.78%
-- Flow 1:
Average throughput: 138.50 Mbit/s
95th percentile per-packet one-way delay: 73.311 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 84.65 Mbit/s
95th percentile per-packet one-way delay: 74.306 ms
Loss rate: 0.66%
-- Flow 3:
Average throughput: 98.18 Mbit/s
95th percentile per-packet one-way delay: 67.762 ms
Loss rate: 2.11%
Run 4: Report of Copa — Data Link

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

Flow 1 ingress (mean 138.67 Mbit/s), Flow 1 egress (mean 138.50 Mbit/s), Flow 2 ingress (mean 84.09 Mbit/s), Flow 2 egress (mean 84.65 Mbit/s), Flow 3 ingress (mean 99.06 Mbit/s), Flow 3 egress (mean 98.18 Mbit/s).
Run 5: Statistics of Copa

Start at: 2018-07-26 06:16:44
End at: 2018-07-26 06:17:14
Local clock offset: 0.11 ms
Remote clock offset: -0.052 ms

# Below is generated by plot.py at 2018-07-26 09:20:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 192.62 Mbit/s
95th percentile per-packet one-way delay: 75.424 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 124.81 Mbit/s
95th percentile per-packet one-way delay: 75.939 ms
Loss rate: 0.77%
-- Flow 2:
Average throughput: 89.28 Mbit/s
95th percentile per-packet one-way delay: 73.658 ms
Loss rate: 1.30%
-- Flow 3:
Average throughput: 38.47 Mbit/s
95th percentile per-packet one-way delay: 77.934 ms
Loss rate: 0.00%
Run 5: Report of Copa — Data Link

![Graph 1: Throughput vs. Time](image1)
Flow 1 ingress (mean 125.37 Mbit/s)  
Flow 1 egress (mean 124.81 Mbit/s)  
Flow 2 ingress (mean 89.98 Mbit/s)  
Flow 2 egress (mean 89.28 Mbit/s)  
Flow 3 ingress (mean 38.56 Mbit/s)  
Flow 3 egress (mean 38.47 Mbit/s)

![Graph 2: Packet Delay vs. Time](image2)
Flow 1 (95th percentile 75.94 ms)  
Flow 2 (95th percentile 73.66 ms)  
Flow 3 (95th percentile 77.93 ms)
Run 6: Statistics of Copa

Start at: 2018-07-26 06:41:55  
End at: 2018-07-26 06:42:25  
Local clock offset: 0.18 ms  
Remote clock offset: -0.082 ms

# Below is generated by plot.py at 2018-07-26 09:20:53  
# Datalink statistics
-- Total of 3 flows:
 Average throughput: 187.82 Mbit/s
  95th percentile per-packet one-way delay: 70.655 ms
  Loss rate: 0.83%
-- Flow 1:
 Average throughput: 103.46 Mbit/s
  95th percentile per-packet one-way delay: 71.784 ms
  Loss rate: 0.00%
-- Flow 2:
 Average throughput: 69.80 Mbit/s
  95th percentile per-packet one-way delay: 68.838 ms
  Loss rate: 1.78%
-- Flow 3:
 Average throughput: 134.42 Mbit/s
  95th percentile per-packet one-way delay: 70.242 ms
  Loss rate: 1.64%
Run 6: Report of Copa — Data Link
Run 7: Statistics of Copa

Start at: 2018-07-26 07:07:06
End at: 2018-07-26 07:07:36
Local clock offset: 0.235 ms
Remote clock offset: 0.071 ms

# Below is generated by plot.py at 2018-07-26 09:28:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 270.67 Mbit/s
95th percentile per-packet one-way delay: 70.100 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 175.82 Mbit/s
95th percentile per-packet one-way delay: 70.142 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 92.50 Mbit/s
95th percentile per-packet one-way delay: 73.138 ms
Loss rate: 0.55%
-- Flow 3:
Average throughput: 101.16 Mbit/s
95th percentile per-packet one-way delay: 62.198 ms
Loss rate: 1.51%
Run 7: Report of Copa — Data Link

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**Throughput (Mbps)**

- **Flow 1 ingress** (mean 175.55 Mbps)
- **Flow 1 egress** (mean 175.82 Mbps)
- **Flow 2 ingress** (mean 92.44 Mbps)
- **Flow 2 egress** (mean 92.50 Mbps)
- **Flow 3 ingress** (mean 101.44 Mbps)
- **Flow 3 egress** (mean 101.16 Mbps)

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

- **Flow 1** (95th percentile 70.14 ms)
- **Flow 2** (95th percentile 73.14 ms)
- **Flow 3** (95th percentile 62.20 ms)
Run 8: Statistics of Copa

Start at: 2018-07-26 07:32:24
End at: 2018-07-26 07:32:54
Local clock offset: 0.303 ms
Remote clock offset: -0.144 ms

# Below is generated by plot.py at 2018-07-26 09:28:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 241.53 Mbit/s
95th percentile per-packet one-way delay: 78.989 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 132.47 Mbit/s
95th percentile per-packet one-way delay: 78.828 ms
Loss rate: 0.24%
-- Flow 2:
Average throughput: 111.57 Mbit/s
95th percentile per-packet one-way delay: 81.617 ms
Loss rate: 0.22%
-- Flow 3:
Average throughput: 106.45 Mbit/s
95th percentile per-packet one-way delay: 71.842 ms
Loss rate: 2.08%
Run 8: Report of Copa — Data Link

[Graph showing network performance metrics with annotations for throughput and per-packet delay, including legend for different flow rates and delays.]
Run 9: Statistics of Copa

Start at: 2018-07-26 07:57:28
End at: 2018-07-26 07:57:58
Local clock offset: 0.249 ms
Remote clock offset: -0.067 ms

# Below is generated by plot.py at 2018-07-26 09:28:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 231.70 Mbit/s
95th percentile per-packet one-way delay: 72.349 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 129.42 Mbit/s
95th percentile per-packet one-way delay: 74.870 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 106.57 Mbit/s
95th percentile per-packet one-way delay: 68.593 ms
Loss rate: 0.38%
-- Flow 3:
Average throughput: 97.91 Mbit/s
95th percentile per-packet one-way delay: 69.134 ms
Loss rate: 0.00%
Run 9: Report of Copa — Data Link

![Graph showing network performance metrics](image-url)

**Key Points:**
- **Run 9 Report** focuses on data link performance metrics.
- Graphs illustrate throughput and packet latency for different flows.
- *Throughput:* Mean values across different ingress and egress conditions.
- *Latency:* 95th percentile values for packet round-trip delay.

**Throughput Metrics:**
- Flow 1 (ingress: 129.35 Mbit/s, egress: 129.42 Mbit/s)
- Flow 2 (ingress: 106.32 Mbit/s, egress: 106.57 Mbit/s)
- Flow 3 (ingress: 97.97 Mbit/s, egress: 97.91 Mbit/s)

**Latency Metrics:**
- Flow 1 (95th percentile: 74.87 ms)
- Flow 2 (95th percentile: 68.59 ms)
- Flow 3 (95th percentile: 69.13 ms)
Run 10: Statistics of Copa

Start at: 2018-07-26 08:22:45  
End at: 2018-07-26 08:23:15  
Local clock offset: 0.311 ms  
Remote clock offset: -0.447 ms

# Below is generated by plot.py at 2018-07-26 09:28:21  
# Datalink statistics

-- Total of 3 flows:
Average throughput: 256.63 Mbit/s
95th percentile per-packet one-way delay: 68.444 ms
Loss rate: 0.47%

-- Flow 1:
Average throughput: 178.26 Mbit/s
95th percentile per-packet one-way delay: 68.366 ms
Loss rate: 0.31%

-- Flow 2:
Average throughput: 85.27 Mbit/s
95th percentile per-packet one-way delay: 67.885 ms
Loss rate: 0.51%

-- Flow 3:
Average throughput: 65.86 Mbit/s
95th percentile per-packet one-way delay: 70.885 ms
Loss rate: 1.59%
Run 10: Report of Copa — Data Link
Run 1: Statistics of TCP Cubic

Start at: 2018-07-26 04:52:48
End at: 2018-07-26 04:53:18
Local clock offset: -0.006 ms
Remote clock offset: 0.018 ms

# Below is generated by plot.py at 2018-07-26 09:28:21
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 311.88 Mbit/s
  95th percentile per-packet one-way delay: 72.296 ms
  Loss rate: 0.56%
-- Flow 1:
  Average throughput: 187.59 Mbit/s
  95th percentile per-packet one-way delay: 72.480 ms
  Loss rate: 0.46%
-- Flow 2:
  Average throughput: 185.06 Mbit/s
  95th percentile per-packet one-way delay: 72.046 ms
  Loss rate: 0.66%
-- Flow 3:
  Average throughput: 4.12 Mbit/s
  95th percentile per-packet one-way delay: 66.428 ms
  Loss rate: 4.47%
Run 1: Report of TCP Cubic — Data Link

![Graph showing TCP Cubic data link performance with throughputs and delays for different flows over time.]

Legend:
- Flow 1 ingress (mean 187.70 Mbit/s)
- Flow 1 egress (mean 187.59 Mbit/s)
- Flow 2 ingress (mean 185.18 Mbit/s)
- Flow 2 egress (mean 185.06 Mbit/s)
- Flow 3 ingress (mean 4.26 Mbit/s)
- Flow 3 egress (mean 4.12 Mbit/s)

 Königsberg: The Merrymaking Of The Hikage Clan

Throughput (Mbps)

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

Start at: 2018-07-26 05:18:13
End at: 2018-07-26 05:18:43
Local clock offset: -0.032 ms
Remote clock offset: 0.126 ms

# Below is generated by plot.py at 2018-07-26 09:28:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 244.02 Mbit/s
95th percentile per-packet one-way delay: 72.287 ms
Loss rate: 0.56%

-- Flow 1:
Average throughput: 119.36 Mbit/s
95th percentile per-packet one-way delay: 70.246 ms
Loss rate: 0.41%

-- Flow 2:
Average throughput: 186.11 Mbit/s
95th percentile per-packet one-way delay: 73.980 ms
Loss rate: 0.66%

-- Flow 3:
Average throughput: 3.31 Mbit/s
95th percentile per-packet one-way delay: 68.892 ms
Loss rate: 5.44%
Run 2: Report of TCP Cubic — Data Link
Run 3: Statistics of TCP Cubic

Start at: 2018-07-26 05:43:08
End at: 2018-07-26 05:43:39
Local clock offset: -0.0 ms
Remote clock offset: -0.064 ms

# Below is generated by plot.py at 2018-07-26 09:28:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 328.95 Mbit/s
95th percentile per-packet one-way delay: 76.556 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 179.37 Mbit/s
95th percentile per-packet one-way delay: 75.157 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 179.90 Mbit/s
95th percentile per-packet one-way delay: 77.865 ms
Loss rate: 0.69%
-- Flow 3:
Average throughput: 91.90 Mbit/s
95th percentile per-packet one-way delay: 76.850 ms
Loss rate: 1.54%
Run 3: Report of TCP Cubic — Data Link

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

- **Throughput Graph**: Shows the throughput (in Mbps) over time. The graphs represent different flows (1-3) with ingress and egress data, each with a mean rate.
- **Delay Graph**: Displays the packet delay (in ms) for the same flows, highlighting the 95th percentile delay across the 30-second timeframe.

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Run 4: Statistics of TCP Cubic

Start at: 2018-07-26 06:08:12
End at: 2018-07-26 06:08:42
Local clock offset: 0.088 ms
Remote clock offset: 0.064 ms

# Below is generated by plot.py at 2018-07-26 09:28:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 332.70 Mbit/s
95th percentile per-packet one-way delay: 102.255 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 177.31 Mbit/s
95th percentile per-packet one-way delay: 101.387 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 161.09 Mbit/s
95th percentile per-packet one-way delay: 101.720 ms
Loss rate: 0.41%
-- Flow 3:
Average throughput: 148.09 Mbit/s
95th percentile per-packet one-way delay: 105.742 ms
Loss rate: 1.79%
Run 4: Report of TCP Cubic — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 177.43 Mbps)
  - Flow 1 egress (mean 177.31 Mbps)
  - Flow 2 ingress (mean 166.75 Mbps)
  - Flow 2 egress (mean 161.09 Mbps)
  - Flow 3 ingress (mean 148.94 Mbps)
  - Flow 3 egress (mean 148.09 Mbps)

- **Per-packet one-way delay (ms):**
  - Flow 1 (95th percentile 101.39 ms)
  - Flow 2 (95th percentile 101.72 ms)
  - Flow 3 (95th percentile 105.74 ms)
Run 5: Statistics of TCP Cubic

Start at: 2018-07-26 06:33:19
End at: 2018-07-26 06:33:49
Local clock offset: 0.135 ms
Remote clock offset: -0.172 ms

# Below is generated by plot.py at 2018-07-26 09:29:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 255.78 Mbit/s
95th percentile per-packet one-way delay: 72.596 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 124.50 Mbit/s
95th percentile per-packet one-way delay: 71.246 ms
Loss rate: 0.71%
-- Flow 2:
Average throughput: 112.02 Mbit/s
95th percentile per-packet one-way delay: 68.978 ms
Loss rate: 0.84%
-- Flow 3:
Average throughput: 173.63 Mbit/s
95th percentile per-packet one-way delay: 76.037 ms
Loss rate: 1.40%
Run 5: Report of TCP Cubic — Data Link

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

- **Flow 1 ingress (mean 124.88 Mbit/s)**
- **Flow 1 egress (mean 124.50 Mbit/s)**
- **Flow 2 ingress (mean 112.27 Mbit/s)**
- **Flow 2 egress (mean 112.02 Mbit/s)**
- **Flow 3 ingress (mean 174.00 Mbit/s)**
- **Flow 3 egress (mean 173.63 Mbit/s)**
Run 6: Statistics of TCP Cubic

Start at: 2018-07-26 06:58:30
End at: 2018-07-26 06:59:00
Local clock offset: 0.188 ms
Remote clock offset: 0.168 ms

# Below is generated by plot.py at 2018-07-26 09:32:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 343.12 Mbit/s
95th percentile per-packet one-way delay: 93.415 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 181.31 Mbit/s
95th percentile per-packet one-way delay: 92.210 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 165.20 Mbit/s
95th percentile per-packet one-way delay: 95.277 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 158.46 Mbit/s
95th percentile per-packet one-way delay: 93.938 ms
Loss rate: 1.67%
Run 7: Statistics of TCP Cubic

Start at: 2018-07-26 07:23:47
End at: 2018-07-26 07:24:17
Local clock offset: 0.263 ms
Remote clock offset: -0.254 ms

# Below is generated by plot.py at 2018-07-26 09:32:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 272.51 Mbit/s
95th percentile per-packet one-way delay: 75.383 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 188.76 Mbit/s
95th percentile per-packet one-way delay: 73.221 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 39.25 Mbit/s
95th percentile per-packet one-way delay: 76.733 ms
Loss rate: 2.94%
-- Flow 3:
Average throughput: 175.97 Mbit/s
95th percentile per-packet one-way delay: 78.045 ms
Loss rate: 1.36%
Run 7: Report of TCP Cubic — Data Link

Throughput vs Time:

- Flow 1 ingress (mean 188.84 Mbit/s)
- Flow 1 egress (mean 188.76 Mbit/s)
- Flow 2 ingress (mean 49.26 Mbit/s)
- Flow 2 egress (mean 39.25 Mbit/s)
- Flow 3 ingress (mean 176.19 Mbit/s)
- Flow 3 egress (mean 175.97 Mbit/s)

End-to-End Latency vs Time:

- Flow 1 (95th percentile 73.22 ms)
- Flow 2 (95th percentile 76.73 ms)
- Flow 3 (95th percentile 78.05 ms)
Run 8: Statistics of TCP Cubic

Start at: 2018-07-26 07:49:00
End at: 2018-07-26 07:49:30
Local clock offset: 0.279 ms
Remote clock offset: 1.332 ms

# Below is generated by plot.py at 2018-07-26 09:32:33
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 267.17 Mbit/s
  95th percentile per-packet one-way delay: 79.417 ms
  Loss rate: 0.91%
-- Flow 1:
  Average throughput: 186.33 Mbit/s
  95th percentile per-packet one-way delay: 75.628 ms
  Loss rate: 0.47%
-- Flow 2:
  Average throughput: 37.31 Mbit/s
  95th percentile per-packet one-way delay: 82.642 ms
  Loss rate: 3.00%
-- Flow 3:
  Average throughput: 171.02 Mbit/s
  95th percentile per-packet one-way delay: 83.024 ms
  Loss rate: 1.41%
Run 9: Statistics of TCP Cubic

Start at: 2018-07-26 08:14:07
End at: 2018-07-26 08:14:37
Local clock offset: 0.262 ms
Remote clock offset: 0.141 ms

# Below is generated by plot.py at 2018-07-26 09:33:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 325.40 Mbit/s
95th percentile per-packet one-way delay: 110.951 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 174.45 Mbit/s
95th percentile per-packet one-way delay: 110.146 ms
Loss rate: 0.46%
-- Flow 2:
Average throughput: 161.95 Mbit/s
95th percentile per-packet one-way delay: 110.178 ms
Loss rate: 0.45%
-- Flow 3:
Average throughput: 133.11 Mbit/s
95th percentile per-packet one-way delay: 113.674 ms
Loss rate: 1.91%
Run 10: Statistics of TCP Cubic

Start at: 2018-07-26 08:39:11
End at: 2018-07-26 08:39:41
Local clock offset: 0.319 ms
Remote clock offset: 0.05 ms

# Below is generated by plot.py at 2018-07-26 09:33:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 271.96 Mbit/s
95th percentile per-packet one-way delay: 74.841 ms
Loss rate: 0.91%
-- Flow 1:
Average throughput: 186.70 Mbit/s
95th percentile per-packet one-way delay: 74.585 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 41.61 Mbit/s
95th percentile per-packet one-way delay: 73.802 ms
Loss rate: 2.79%
-- Flow 3:
Average throughput: 175.19 Mbit/s
95th percentile per-packet one-way delay: 75.628 ms
Loss rate: 1.52%
Run 10: Report of TCP Cubic — Data Link
Run 1: Statistics of FillP

Start at: 2018-07-26 04:43:19
End at: 2018-07-26 04:43:49
Local clock offset: -0.046 ms
Remote clock offset: 0.13 ms

# Below is generated by plot.py at 2018-07-26 09:55:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1182.79 Mbit/s
95th percentile per-packet one-way delay: 253.317 ms
Loss rate: 8.70%
-- Flow 1:
Average throughput: 581.60 Mbit/s
95th percentile per-packet one-way delay: 275.572 ms
Loss rate: 9.64%
-- Flow 2:
Average throughput: 645.10 Mbit/s
95th percentile per-packet one-way delay: 235.699 ms
Loss rate: 6.29%
-- Flow 3:
Average throughput: 526.07 Mbit/s
95th percentile per-packet one-way delay: 192.862 ms
Loss rate: 11.27%
Run 1: Report of FillP — Data Link

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

Legend:
- Flow 1 Ingress (mean 641.05 Mbps)
- Flow 1 Egress (mean 581.80 Mbps)
- Flow 2 Ingress (mean 684.29 Mbps)
- Flow 2 Egress (mean 645.10 Mbps)
- Flow 3 Ingress (mean 585.44 Mbps)
- Flow 3 Egress (mean 526.07 Mbps)

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

Legend:
- Flow 1 (95th percentile 275.57 ms)
- Flow 2 (95th percentile 235.70 ms)
- Flow 3 (95th percentile 192.86 ms)
Run 2: Statistics of FillP

Start at: 2018-07-26 05:08:35
End at: 2018-07-26 05:09:05
Local clock offset: 0.04 ms
Remote clock offset: -0.186 ms

# Below is generated by plot.py at 2018-07-26 09:59:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1293.06 Mbit/s
95th percentile per-packet one-way delay: 262.803 ms
Loss rate: 4.95%
-- Flow 1:
Average throughput: 708.59 Mbit/s
95th percentile per-packet one-way delay: 252.904 ms
Loss rate: 4.15%
-- Flow 2:
Average throughput: 624.77 Mbit/s
95th percentile per-packet one-way delay: 271.625 ms
Loss rate: 4.34%
-- Flow 3:
Average throughput: 514.68 Mbit/s
95th percentile per-packet one-way delay: 278.607 ms
Loss rate: 9.50%
Run 2: Report of FillP — Data Link

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

Flow 1 Ingress (mean 736.21 Mbit/s) vs Flow 1 Egress (mean 708.59 Mbit/s)
Flow 2 Ingress (mean 649.16 Mbit/s) vs Flow 2 Egress (mean 634.77 Mbit/s)
Flow 3 Ingress (mean 561.61 Mbit/s) vs Flow 3 Egress (mean 514.68 Mbit/s)

Packet delay distribution for different flows:
- Flow 1 (95th percentile 252.90 ms)
- Flow 2 (95th percentile 271.62 ms)
- Flow 3 (95th percentile 278.61 ms)
Run 3: Statistics of FillP

Start at: 2018-07-26 05:33:36
End at: 2018-07-26 05:34:06
Local clock offset: -0.01 ms
Remote clock offset: 0.022 ms

# Below is generated by plot.py at 2018-07-26 10:02:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1312.97 Mbit/s
95th percentile per-packet one-way delay: 241.596 ms
Loss rate: 5.08%
-- Flow 1:
Average throughput: 671.11 Mbit/s
95th percentile per-packet one-way delay: 251.814 ms
Loss rate: 6.05%
-- Flow 2:
Average throughput: 658.55 Mbit/s
95th percentile per-packet one-way delay: 241.103 ms
Loss rate: 4.46%
-- Flow 3:
Average throughput: 621.30 Mbit/s
95th percentile per-packet one-way delay: 140.041 ms
Loss rate: 3.13%
Run 3: Report of FillP — Data Link

![Throughput and Delay Graphs](image)

**Throughput (Mbps):**
- Flow 1 ingress (mean 711.33 Mbps)
- Flow 1 egress (mean 671.11 Mbps)
- Flow 2 ingress (mean 685.00 Mbps)
- Flow 2 egress (mean 658.55 Mbps)
- Flow 3 ingress (mean 633.27 Mbps)
- Flow 3 egress (mean 621.30 Mbps)

**Per-packet one-way delay (ms):**
- Flow 1 (95th percentile 251.91 ms)
- Flow 2 (95th percentile 241.10 ms)
- Flow 3 (95th percentile 140.04 ms)
Run 4: Statistics of FillP

Start at: 2018-07-26 05:58:41
End at: 2018-07-26 05:59:11
Local clock offset: 0.095 ms
Remote clock offset: -1.451 ms

# Below is generated by plot.py at 2018-07-26 10:02:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1265.90 Mbit/s
95th percentile per-packet one-way delay: 250.647 ms
Loss rate: 5.11%
-- Flow 1:
Average throughput: 684.14 Mbit/s
95th percentile per-packet one-way delay: 254.786 ms
Loss rate: 2.93%
-- Flow 2:
Average throughput: 600.42 Mbit/s
95th percentile per-packet one-way delay: 255.197 ms
Loss rate: 9.66%
-- Flow 3:
Average throughput: 555.13 Mbit/s
95th percentile per-packet one-way delay: 140.897 ms
Loss rate: 2.59%
Run 4: Report of FillP — Data Link

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

Legend:
- **Flow 1 Ingress** (mean 701.85 MB/s)
- **Flow 1 Egress** (mean 684.14 MB/s)
- **Flow 2 Ingress** (mean 660.55 MB/s)
- **Flow 2 Egress** (mean 600.42 MB/s)
- **Flow 3 Ingress** (mean 562.89 MB/s)
- **Flow 3 Egress** (mean 555.13 MB/s)
Run 5: Statistics of FillP

Start at: 2018-07-26 06:23:43
End at: 2018-07-26 06:24:13
Local clock offset: 0.099 ms
Remote clock offset: -0.037 ms

# Below is generated by plot.py at 2018-07-26 10:02:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1252.08 Mbit/s
95th percentile per-packet one-way delay: 232.909 ms
Loss rate: 5.24%
-- Flow 1:
Average throughput: 656.89 Mbit/s
95th percentile per-packet one-way delay: 218.346 ms
Loss rate: 3.91%
-- Flow 2:
Average throughput: 622.78 Mbit/s
95th percentile per-packet one-way delay: 264.713 ms
Loss rate: 5.87%
-- Flow 3:
Average throughput: 551.68 Mbit/s
95th percentile per-packet one-way delay: 166.540 ms
Loss rate: 8.46%
Run 5: Report of FillP — Data Link

![Graph 1: Throughput (Mbps)]

![Graph 2: Per-packet one-way delay (ms)]
Run 6: Statistics of FillIP

Start at: 2018-07-26 06:48:56
End at: 2018-07-26 06:49:26
Local clock offset: 0.148 ms
Remote clock offset: -0.049 ms

# Below is generated by plot.py at 2018-07-26 10:02:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1184.79 Mbit/s
95th percentile per-packet one-way delay: 268.141 ms
Loss rate: 6.59%
-- Flow 1:
Average throughput: 650.65 Mbit/s
95th percentile per-packet one-way delay: 271.944 ms
Loss rate: 5.13%
-- Flow 2:
Average throughput: 541.56 Mbit/s
95th percentile per-packet one-way delay: 264.732 ms
Loss rate: 8.63%
-- Flow 3:
Average throughput: 530.36 Mbit/s
95th percentile per-packet one-way delay: 239.813 ms
Loss rate: 7.66%
Run 6: Report of FillP — Data Link

![Graph 1: Throughput (Mbps)]

- Flow 1 Ingress (mean 683.00 Mbps)
- Flow 1 Egress (mean 650.65 Mbps)
- Flow 2 Ingress (mean 589.08 Mbps)
- Flow 2 Egress (mean 543.56 Mbps)
- Flow 3 Ingress (mean 567.33 Mbps)
- Flow 3 Egress (mean 530.36 Mbps)

![Graph 2: Per-packet over-avg delay (ms)]

- Flow 1 (95th percentile 271.94 ms)
- Flow 2 (95th percentile 264.73 ms)
- Flow 3 (95th percentile 239.01 ms)
Run 7: Statistics of FillP

Start at: 2018-07-26 07:14:11
End at: 2018-07-26 07:14:41
Local clock offset: 0.223 ms
Remote clock offset: -0.426 ms

# Below is generated by plot.py at 2018-07-26 10:02:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1216.77 Mbit/s
95th percentile per-packet one-way delay: 253.385 ms
Loss rate: 6.97%
-- Flow 1:
Average throughput: 610.71 Mbit/s
95th percentile per-packet one-way delay: 255.955 ms
Loss rate: 7.69%
-- Flow 2:
Average throughput: 635.57 Mbit/s
95th percentile per-packet one-way delay: 260.699 ms
Loss rate: 6.18%
-- Flow 3:
Average throughput: 558.21 Mbit/s
95th percentile per-packet one-way delay: 165.903 ms
Loss rate: 6.38%
Run 7: Report of FillP — Data Link

![Graph of throughput and per-packet one-way delay over time for different flows.](image)
Run 8: Statistics of FillP

Start at: 2018-07-26 07:39:27
End at: 2018-07-26 07:39:57
Local clock offset: 0.264 ms
Remote clock offset: 0.234 ms

# Below is generated by plot.py at 2018-07-26 10:02:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1165.42 Mbit/s
95th percentile per-packet one-way delay: 269.971 ms
Loss rate: 6.84%
-- Flow 1:
Average throughput: 588.40 Mbit/s
95th percentile per-packet one-way delay: 246.131 ms
Loss rate: 6.82%
-- Flow 2:
Average throughput: 590.51 Mbit/s
95th percentile per-packet one-way delay: 298.678 ms
Loss rate: 7.01%
-- Flow 3:
Average throughput: 562.73 Mbit/s
95th percentile per-packet one-way delay: 152.843 ms
Loss rate: 6.55%
Run 8: Report of FillP — Data Link

Throughput (Mbps)

Time (s)

0 5 10 15 20 25 30

0 200 400 600 800 1000

Flow 1 Ingress (mean 628.96 Mbps/s) Flow 1 Egress (mean 588.40 Mbps/s)
Flow 2 Ingress (mean 633.10 Mbps/s) Flow 2 Egress (mean 590.53 Mbps/s)
Flow 3 Ingress (mean 594.68 Mbps/s) Flow 3 Egress (mean 562.73 Mbps/s)

Packet error rate / delay (ms)

Time (s)

0 5 10 15 20 25 30

50 100 150 200 250 300 350

Flow 1 (95th percentile 246.13 ms) Flow 2 (95th percentile 298.68 ms) Flow 3 (95th percentile 152.04 ms)
Run 9: Statistics of FillP

Start at: 2018-07-26 08:04:35
End at: 2018-07-26 08:05:05
Local clock offset: 0.294 ms
Remote clock offset: -1.425 ms

# Below is generated by plot.py at 2018-07-26 10:23:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1096.17 Mbit/s
95th percentile per-packet one-way delay: 287.898 ms
Loss rate: 7.85%
-- Flow 1:
Average throughput: 547.07 Mbit/s
95th percentile per-packet one-way delay: 289.850 ms
Loss rate: 6.84%
-- Flow 2:
Average throughput: 570.73 Mbit/s
95th percentile per-packet one-way delay: 266.187 ms
Loss rate: 8.37%
-- Flow 3:
Average throughput: 516.45 Mbit/s
95th percentile per-packet one-way delay: 302.529 ms
Loss rate: 9.84%
Run 9: Report of FillP — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 584.86 Mbps)
  - Flow 1 egress (mean 547.07 Mbps)
  - Flow 2 ingress (mean 619.94 Mbps)
  - Flow 2 egress (mean 570.73 Mbps)
  - Flow 3 ingress (mean 565.66 Mbps)
  - Flow 3 egress (mean 516.45 Mbps)

- **Delay (ms):**
  - Flow 1 (95th percentile 289.85 ms)
  - Flow 2 (95th percentile 266.19 ms)
  - Flow 3 (95th percentile 302.53 ms)
Run 10: Statistics of FillP

Start at: 2018-07-26 08:29:51
End at: 2018-07-26 08:30:21
Local clock offset: 0.277 ms
Remote clock offset: -0.131 ms

# Below is generated by plot.py at 2018-07-26 10:23:28
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 933.88 Mbit/s
  95th percentile per-packet one-way delay: 265.566 ms
  Loss rate: 7.40%
-- Flow 1:
  Average throughput: 303.47 Mbit/s
  95th percentile per-packet one-way delay: 326.018 ms
  Loss rate: 5.82%
-- Flow 2:
  Average throughput: 681.02 Mbit/s
  95th percentile per-packet one-way delay: 205.551 ms
  Loss rate: 8.01%
-- Flow 3:
  Average throughput: 541.37 Mbit/s
  95th percentile per-packet one-way delay: 207.384 ms
  Loss rate: 8.47%
Run 10: Report of FillIP — Data Link

### Throughput (Mbps/s)

- **Flow 1 ingress** (mean 320.89 Mbps/s)
- **Flow 1 egress** (mean 303.47 Mbps/s)
- **Flow 2 ingress** (mean 735.78 Mbps/s)
- **Flow 2 egress** (mean 683.02 Mbps/s)
- **Flow 3 ingress** (mean 584.16 Mbps/s)
- **Flow 3 egress** (mean 541.37 Mbps/s)

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

- **Flow 1** (95th percentile 326.02 ms)
- **Flow 2** (95th percentile 205.55 ms)
- **Flow 3** (95th percentile 207.38 ms)
Run 1: Statistics of FillP-Sheep

Start at: 2018-07-26 04:58:02
End at: 2018-07-26 04:58:32
Local clock offset: -0.031 ms
Remote clock offset: 0.107 ms

# Below is generated by plot.py at 2018-07-26 10:31:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1243.45 Mbit/s
95th percentile per-packet one-way delay: 164.531 ms
Loss rate: 2.09%
-- Flow 1:
Average throughput: 658.32 Mbit/s
95th percentile per-packet one-way delay: 161.079 ms
Loss rate: 1.45%
-- Flow 2:
Average throughput: 593.61 Mbit/s
95th percentile per-packet one-way delay: 167.885 ms
Loss rate: 2.93%
-- Flow 3:
Average throughput: 578.19 Mbit/s
95th percentile per-packet one-way delay: 167.450 ms
Loss rate: 2.55%
Run 1: Report of FillP-Sheep — Data Link

Throughput (Mb/s)

Flow 1 ingress (mean 665.26 Mb/s)  Flow 1 egress (mean 658.32 Mb/s)
Flow 2 ingress (mean 697.78 Mb/s)  Flow 2 egress (mean 593.01 Mb/s)
Flow 3 ingress (mean 585.97 Mb/s)  Flow 3 egress (mean 578.19 Mb/s)

Per-packet one-way delay (ms)

Flow 1 (95th percentile 161.08 ms)  Flow 2 (95th percentile 167.88 ms)  Flow 3 (95th percentile 167.45 ms)
Run 2: Statistics of FillP-Sheep

Start at: 2018-07-26 05:23:16
End at: 2018-07-26 05:23:46
Local clock offset: -0.051 ms
Remote clock offset: -0.492 ms

# Below is generated by plot.py at 2018-07-26 10:31:48
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1131.06 Mbit/s
  95th percentile per-packet one-way delay: 199.970 ms
  Loss rate: 1.28%
-- Flow 1:
  Average throughput: 612.61 Mbit/s
  95th percentile per-packet one-way delay: 135.187 ms
  Loss rate: 0.71%
-- Flow 2:
  Average throughput: 562.26 Mbit/s
  95th percentile per-packet one-way delay: 207.557 ms
  Loss rate: 2.03%
-- Flow 3:
  Average throughput: 440.04 Mbit/s
  95th percentile per-packet one-way delay: 218.844 ms
  Loss rate: 1.67%
Run 2: Report of FillP-Sheep — Data Link

![Throughput Graph](image)

![Delay Graph](image)

Legend:
- Flow 1 ingress (mean 614.46 Mbit/s)
- Flow 1 egress (mean 612.61 Mbit/s)
- Flow 2 ingress (mean 570.57 Mbit/s)
- Flow 2 egress (mean 562.26 Mbit/s)
- Flow 3 ingress (mean 442.01 Mbit/s)
- Flow 3 egress (mean 440.04 Mbit/s)

Legend:
- Flow 1 (95th percentile 135.19 ms)
- Flow 2 (95th percentile 207.56 ms)
- Flow 3 (95th percentile 218.84 ms)
Run 3: Statistics of FillP-Sheep

Start at: 2018-07-26 05:48:17
End at: 2018-07-26 05:48:47
Local clock offset: 0.061 ms
Remote clock offset: 0.104 ms

# Below is generated by plot.py at 2018-07-26 10:31:48
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1020.61 Mbit/s
  95th percentile per-packet one-way delay: 230.789 ms
  Loss rate: 1.37%
-- Flow 1:
  Average throughput: 619.58 Mbit/s
  95th percentile per-packet one-way delay: 233.020 ms
  Loss rate: 1.09%
-- Flow 2:
  Average throughput: 303.68 Mbit/s
  95th percentile per-packet one-way delay: 236.733 ms
  Loss rate: 1.87%
-- Flow 3:
  Average throughput: 606.57 Mbit/s
  95th percentile per-packet one-way delay: 133.709 ms
  Loss rate: 1.73%
Run 3: Report of FillP-Sheep — Data Link

Throughput (Mbps)

Time (s)

0 5 10 15 20 25 30

Flow 1 ingress (mean 623.85 Mbps) — Flow 1 egress (mean 619.58 Mbps)
Flow 2 ingress (mean 397.23 Mbps) — Flow 2 egress (mean 303.58 Mbps)
Flow 3 ingress (mean 609.97 Mbps) — Flow 3 egress (mean 606.57 Mbps)

Per-packet one-way delay (ms)

Time (s)

0 5 10 15 20 25 30

Flow 1 (95th percentile 233.02 ms) — Flow 2 (95th percentile 236.73 ms) — Flow 3 (95th percentile 133.71 ms)
Run 4: Statistics of FillP-Sheep

Start at: 2018-07-26 06:13:23  
End at: 2018-07-26 06:13:53  
Local clock offset: 0.126 ms  
Remote clock offset: -0.25 ms  

# Below is generated by plot.py at 2018-07-26 10:31:48  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 1031.42 Mbit/s  
95th percentile per-packet one-way delay: 233.973 ms  
Loss rate: 1.75%  
-- Flow 1:  
Average throughput: 541.58 Mbit/s  
95th percentile per-packet one-way delay: 230.390 ms  
Loss rate: 1.39%  
-- Flow 2:  
Average throughput: 435.34 Mbit/s  
95th percentile per-packet one-way delay: 260.533 ms  
Loss rate: 2.54%  
-- Flow 3:  
Average throughput: 611.30 Mbit/s  
95th percentile per-packet one-way delay: 145.704 ms  
Loss rate: 1.56%
Run 4: Report of FillP-Sheep — Data Link

[Diagram of throughput and per-packet end-to-end delay over time for different flows.

Legend for throughput:
- Flow 1 ingress (mean 546.97 Mbit/s)
- Flow 1 egress (mean 541.58 Mbit/s)
- Flow 2 ingress (mean 443.91 Mbit/s)
- Flow 2 egress (mean 435.54 Mbit/s)
- Flow 3 ingress (mean 613.31 Mbit/s)
- Flow 3 egress (mean 611.30 Mbit/s)

Legend for per-packet end-to-end delay:
- Flow 1 (95th percentile 230.39 ms)
- Flow 2 (95th percentile 260.53 ms)
- Flow 3 (95th percentile 145.70 ms)
Run 5: Statistics of FillP-Sheep

Start at: 2018-07-26 06:38:29
End at: 2018-07-26 06:38:59
Local clock offset: 0.18 ms
Remote clock offset: 1.263 ms

# Below is generated by plot.py at 2018-07-26 10:32:32
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1247.82 Mbit/s
  95th percentile per-packet one-way delay: 166.969 ms
  Loss rate: 1.62%
-- Flow 1:
  Average throughput: 635.77 Mbit/s
  95th percentile per-packet one-way delay: 161.956 ms
  Loss rate: 0.83%
-- Flow 2:
  Average throughput: 625.03 Mbit/s
  95th percentile per-packet one-way delay: 172.481 ms
  Loss rate: 1.87%
-- Flow 3:
  Average throughput: 598.32 Mbit/s
  95th percentile per-packet one-way delay: 157.620 ms
  Loss rate: 3.59%
Run 5: Report of FillP-Sheep — Data Link

- Throughput (Mbit/s)
- Time (s)

- Flow 1 ingress (mean 638.44 Mbit/s)
- Flow 1 egress (mean 635.77 Mbit/s)
- Flow 2 ingress (mean 633.00 Mbit/s)
- Flow 2 egress (mean 625.03 Mbit/s)
- Flow 3 ingress (mean 613.04 Mbit/s)
- Flow 3 egress (mean 598.32 Mbit/s)

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

- Flow 1 (95th percentile 161.96 ms)
- Flow 2 (95th percentile 172.48 ms)
- Flow 3 (95th percentile 157.62 ms)
Run 6: Statistics of FillP-Sheep

Start at: 2018-07-26 07:03:43
End at: 2018-07-26 07:04:13
Local clock offset: 0.228 ms
Remote clock offset: 1.325 ms

# Below is generated by plot.py at 2018-07-26 10:32:32
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1151.47 Mbit/s
  95th percentile per-packet one-way delay: 172.305 ms
  Loss rate: 2.38%
-- Flow 1:
  Average throughput: 591.58 Mbit/s
  95th percentile per-packet one-way delay: 168.506 ms
  Loss rate: 2.38%
-- Flow 2:
  Average throughput: 586.45 Mbit/s
  95th percentile per-packet one-way delay: 185.649 ms
  Loss rate: 2.60%
-- Flow 3:
  Average throughput: 517.57 Mbit/s
  95th percentile per-packet one-way delay: 136.903 ms
  Loss rate: 1.84%
Run 6: Report of FillP-Sheep — Data Link
Run 7: Statistics of FillP-Sheep

Start at: 2018-07-26 07:28:57
End at: 2018-07-26 07:29:27
Local clock offset: 0.235 ms
Remote clock offset: -0.187 ms

# Below is generated by plot.py at 2018-07-26 10:55:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1227.84 Mbit/s
95th percentile per-packet one-way delay: 138.305 ms
Loss rate: 1.10%
-- Flow 1:
Average throughput: 614.54 Mbit/s
95th percentile per-packet one-way delay: 137.921 ms
Loss rate: 0.68%
-- Flow 2:
Average throughput: 662.76 Mbit/s
95th percentile per-packet one-way delay: 134.971 ms
Loss rate: 1.25%
-- Flow 3:
Average throughput: 525.89 Mbit/s
95th percentile per-packet one-way delay: 152.741 ms
Loss rate: 2.19%
Run 7: Report of FillP-Sheep — Data Link
Run 8: Statistics of FillP-Sheep

Start at: 2018-07-26 07:54:06
End at: 2018-07-26 07:54:36
Local clock offset: 0.291 ms
Remote clock offset: -0.107 ms

# Below is generated by plot.py at 2018-07-26 10:55:07
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1099.24 Mbit/s
  95th percentile per-packet one-way delay: 228.381 ms
  Loss rate: 1.18%
-- Flow 1:
  Average throughput: 545.26 Mbit/s
  95th percentile per-packet one-way delay: 224.826 ms
  Loss rate: 0.73%
-- Flow 2:
  Average throughput: 621.21 Mbit/s
  95th percentile per-packet one-way delay: 145.096 ms
  Loss rate: 1.38%
-- Flow 3:
  Average throughput: 429.23 Mbit/s
  95th percentile per-packet one-way delay: 270.487 ms
  Loss rate: 2.32%
Run 8: Report of FillP-Sheep — Data Link

[Charts showing network performance metrics over time, including throughput and packet delay for different flows.]
Run 9: Statistics of FillP-Sheep

Start at: 2018-07-26 08:19:23
End at: 2018-07-26 08:19:53
Local clock offset: 0.262 ms
Remote clock offset: 0.136 ms

# Below is generated by plot.py at 2018-07-26 10:55:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1065.85 Mbit/s
95th percentile per-packet one-way delay: 241.603 ms
Loss rate: 1.15%
-- Flow 1:
Average throughput: 529.76 Mbit/s
95th percentile per-packet one-way delay: 231.679 ms
Loss rate: 0.91%
-- Flow 2:
Average throughput: 499.55 Mbit/s
95th percentile per-packet one-way delay: 256.634 ms
Loss rate: 1.28%
-- Flow 3:
Average throughput: 623.03 Mbit/s
95th percentile per-packet one-way delay: 102.690 ms
Loss rate: 1.58%
Run 9: Report of FillP-Sheep — Data Link
Run 10: Statistics of FillP-Sheep

Start at: 2018-07-26 08:44:20
End at: 2018-07-26 08:44:50
Local clock offset: 0.35 ms
Remote clock offset: 1.207 ms

# Below is generated by plot.py at 2018-07-26 10:59:39
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1228.47 Mbit/s
  95th percentile per-packet one-way delay: 141.440 ms
  Loss rate: 1.27%
-- Flow 1:
  Average throughput: 649.68 Mbit/s
  95th percentile per-packet one-way delay: 141.068 ms
  Loss rate: 0.92%
-- Flow 2:
  Average throughput: 591.63 Mbit/s
  95th percentile per-packet one-way delay: 144.819 ms
  Loss rate: 0.76%
-- Flow 3:
  Average throughput: 564.47 Mbit/s
  95th percentile per-packet one-way delay: 101.837 ms
  Loss rate: 3.50%
Run 1: Statistics of Indigo

Start at: 2018-07-26 04:45:20
End at: 2018-07-26 04:45:50
Local clock offset: -0.088 ms
Remote clock offset: 0.228 ms

# Below is generated by plot.py at 2018-07-26 10:59:39
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 391.71 Mbit/s
  95th percentile per-packet one-way delay: 77.047 ms
  Loss rate: 0.63%
-- Flow 1:
  Average throughput: 205.07 Mbit/s
  95th percentile per-packet one-way delay: 75.705 ms
  Loss rate: 0.45%
-- Flow 2:
  Average throughput: 199.90 Mbit/s
  95th percentile per-packet one-way delay: 77.691 ms
  Loss rate: 0.63%
-- Flow 3:
  Average throughput: 127.13 Mbit/s
  95th percentile per-packet one-way delay: 86.197 ms
  Loss rate: 1.48%
Run 1: Report of Indigo — Data Link
Run 2: Statistics of Indigo

Start at: 2018-07-26 05:10:41
End at: 2018-07-26 05:11:11
Local clock offset: -0.037 ms
Remote clock offset: -0.062 ms

# Below is generated by plot.py at 2018-07-26 10:59:39
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 384.79 Mbit/s
  95th percentile per-packet one-way delay: 79.524 ms
  Loss rate: 0.58%
-- Flow 1:
  Average throughput: 207.58 Mbit/s
  95th percentile per-packet one-way delay: 78.802 ms
  Loss rate: 0.38%
-- Flow 2:
  Average throughput: 203.50 Mbit/s
  95th percentile per-packet one-way delay: 79.577 ms
  Loss rate: 0.59%
-- Flow 3:
  Average throughput: 130.49 Mbit/s
  95th percentile per-packet one-way delay: 80.637 ms
  Loss rate: 1.52%
Run 2: Report of Indigo — Data Link
Run 3: Statistics of Indigo

Start at: 2018-07-26 05:35:41
End at: 2018-07-26 05:36:11
Local clock offset: -0.016 ms
Remote clock offset: -0.021 ms

# Below is generated by plot.py at 2018-07-26 10:59:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 384.52 Mbit/s
95th percentile per-packet one-way delay: 78.147 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 206.79 Mbit/s
95th percentile per-packet one-way delay: 77.118 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 200.41 Mbit/s
95th percentile per-packet one-way delay: 79.371 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 139.26 Mbit/s
95th percentile per-packet one-way delay: 79.448 ms
Loss rate: 1.44%
Run 3: Report of Indigo — Data Link

---

**Figure 1:**

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

**Legend:**
- Flow 1 ingress (mean 206.77 Mbit/s)
- Flow 1 egress (mean 206.79 Mbit/s)
- Flow 2 ingress (mean 200.45 Mbit/s)
- Flow 2 egress (mean 200.41 Mbit/s)
- Flow 3 ingress (mean 139.49 Mbit/s)
- Flow 3 egress (mean 139.26 Mbit/s)

---

**Figure 2:**

![Graph showing per-packet one-way delay over time for different flows.](image2)

**Legend:**
- Flow 1 (95th percentile 77.12 ms)
- Flow 2 (95th percentile 79.37 ms)
- Flow 3 (95th percentile 79.45 ms)
Run 4: Statistics of Indigo

Start at: 2018-07-26 06:00:45
End at: 2018-07-26 06:01:15
Local clock offset: 0.068 ms
Remote clock offset: -0.098 ms

# Below is generated by plot.py at 2018-07-26 10:59:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 374.44 Mbit/s
95th percentile per-packet one-way delay: 89.871 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 202.86 Mbit/s
95th percentile per-packet one-way delay: 88.098 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 201.01 Mbit/s
95th percentile per-packet one-way delay: 89.814 ms
Loss rate: 0.59%
-- Flow 3:
Average throughput: 118.58 Mbit/s
95th percentile per-packet one-way delay: 93.465 ms
Loss rate: 1.18%
Run 4: Report of Indigo — Data Link

![Graph 1]

![Graph 2]
Run 5: Statistics of Indigo

Start at: 2018-07-26 06:25:46
End at: 2018-07-26 06:26:16
Local clock offset: 0.1 ms
Remote clock offset: -0.029 ms

# Below is generated by plot.py at 2018-07-26 10:59:39
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 371.28 Mbit/s
  95th percentile per-packet one-way delay: 82.133 ms
  Loss rate: 0.60%
-- Flow 1:
  Average throughput: 203.82 Mbit/s
  95th percentile per-packet one-way delay: 78.730 ms
  Loss rate: 0.40%
-- Flow 2:
  Average throughput: 190.71 Mbit/s
  95th percentile per-packet one-way delay: 82.832 ms
  Loss rate: 0.61%
-- Flow 3:
  Average throughput: 127.73 Mbit/s
  95th percentile per-packet one-way delay: 86.131 ms
  Loss rate: 1.57%
Run 5: Report of Indigo — Data Link

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

- **Flow 1 ingress (mean 203.82 Mbit/s)**
- **Flow 1 egress (mean 203.82 Mbit/s)**
- **Flow 2 ingress (mean 190.67 Mbit/s)**
- **Flow 2 egress (mean 190.71 Mbit/s)**
- **Flow 3 ingress (mean 126.11 Mbit/s)**
- **Flow 3 egress (mean 127.73 Mbit/s)**

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

- **Flow 1 (95th percentile 78.73 ms)**
- **Flow 2 (95th percentile 82.83 ms)**
- **Flow 3 (95th percentile 86.13 ms)**
Run 6: Statistics of Indigo

Start at: 2018-07-26 06:50:57
End at: 2018-07-26 06:51:27
Local clock offset: 0.173 ms
Remote clock offset: 0.328 ms

# Below is generated by plot.py at 2018-07-26 10:59:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 402.07 Mbit/s
95th percentile per-packet one-way delay: 77.562 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 211.10 Mbit/s
95th percentile per-packet one-way delay: 76.361 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 202.46 Mbit/s
95th percentile per-packet one-way delay: 77.748 ms
Loss rate: 0.50%
-- Flow 3:
Average throughput: 134.42 Mbit/s
95th percentile per-packet one-way delay: 79.822 ms
Loss rate: 1.52%
Run 6: Report of Indigo — Data Link

---

**Throughput (Mbps)**

- Flow 1 ingress (mean 211.07 Mbps)
- Flow 1 egress (mean 211.10 Mbps)
- Flow 2 ingress (mean 202.21 Mbps)
- Flow 2 egress (mean 202.46 Mbps)
- Flow 3 ingress (mean 134.79 Mbps)
- Flow 3 egress (mean 134.42 Mbps)

---

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

- Flow 1 (95th percentile 76.36 ms)
- Flow 2 (95th percentile 77.75 ms)
- Flow 3 (95th percentile 79.82 ms)
Run 7: Statistics of Indigo

Start at: 2018-07-26 07:16:14
End at: 2018-07-26 07:16:44
Local clock offset: 0.243 ms
Remote clock offset: -0.212 ms

# Below is generated by plot.py at 2018-07-26 10:59:39
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 375.49 Mbit/s
  95th percentile per-packet one-way delay: 81.039 ms
  Loss rate: 0.56%
-- Flow 1:
  Average throughput: 208.11 Mbit/s
  95th percentile per-packet one-way delay: 72.784 ms
  Loss rate: 0.40%
-- Flow 2:
  Average throughput: 203.90 Mbit/s
  95th percentile per-packet one-way delay: 83.330 ms
  Loss rate: 0.60%
-- Flow 3:
  Average throughput: 101.47 Mbit/s
  95th percentile per-packet one-way delay: 85.639 ms
  Loss rate: 1.35%
Run 7: Report of Indigo — Data Link
Run 8: Statistics of Indigo

Start at: 2018-07-26 07:41:27
End at: 2018-07-26 07:41:57
Local clock offset: 0.212 ms
Remote clock offset: 0.132 ms

# Below is generated by plot.py at 2018-07-26 10:59:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 367.84 Mbit/s
95th percentile per-packet one-way delay: 85.904 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 198.80 Mbit/s
95th percentile per-packet one-way delay: 83.771 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 192.96 Mbit/s
95th percentile per-packet one-way delay: 86.475 ms
Loss rate: 0.60%
-- Flow 3:
Average throughput: 126.58 Mbit/s
95th percentile per-packet one-way delay: 90.214 ms
Loss rate: 1.51%
Run 8: Report of Indigo — Data Link

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

- Flow 1 ingress (mean 198.76 Mbit/s)
- Flow 1 egress (mean 198.80 Mbit/s)
- Flow 2 ingress (mean 192.92 Mbit/s)
- Flow 2 egress (mean 192.96 Mbit/s)
- Flow 3 ingress (mean 126.92 Mbit/s)
- Flow 3 egress (mean 126.58 Mbit/s)

- Flow 1 (50th percentile 83.77 ms)
- Flow 2 (50th percentile 66.47 ms)
- Flow 3 (50th percentile 90.21 ms)
Run 9: Statistics of Indigo

Start at: 2018-07-26 08:06:32
End at: 2018-07-26 08:07:02
Local clock offset: 0.281 ms
Remote clock offset: 0.131 ms

# Below is generated by plot.py at 2018-07-26 10:59:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 350.81 Mbit/s
95th percentile per-packet one-way delay: 84.968 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 199.89 Mbit/s
95th percentile per-packet one-way delay: 83.682 ms
Loss rate: 0.46%
-- Flow 2:
Average throughput: 182.46 Mbit/s
95th percentile per-packet one-way delay: 85.116 ms
Loss rate: 0.68%
-- Flow 3:
Average throughput: 93.35 Mbit/s
95th percentile per-packet one-way delay: 88.934 ms
Loss rate: 1.37%
Run 9: Report of Indigo — Data Link

---

**Throughput vs Time**

- **Flow 1 ingress** (mean 200.02 Mbit/s)
- **Flow 1 egress** (mean 199.89 Mbit/s)
- **Flow 2 ingress** (mean 182.56 Mbit/s)
- **Flow 2 egress** (mean 182.46 Mbit/s)
- **Flow 3 ingress** (mean 93.44 Mbit/s)
- **Flow 3 egress** (mean 93.35 Mbit/s)

---

**Per-packet one-way delay vs Time**

- **Flow 1** (95th percentile 83.68 ms)
- **Flow 2** (95th percentile 85.12 ms)
- **Flow 3** (95th percentile 88.93 ms)
Run 10: Statistics of Indigo

Start at: 2018-07-26 08:31:41
End at: 2018-07-26 08:32:11
Local clock offset: 0.316 ms
Remote clock offset: -0.057 ms

# Below is generated by plot.py at 2018-07-26 10:59:39
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 373.76 Mbit/s
  95th percentile per-packet one-way delay: 82.986 ms
  Loss rate: 0.56%
-- Flow 1:
  Average throughput: 206.16 Mbit/s
  95th percentile per-packet one-way delay: 82.107 ms
  Loss rate: 0.40%
-- Flow 2:
  Average throughput: 205.38 Mbit/s
  95th percentile per-packet one-way delay: 83.110 ms
  Loss rate: 0.63%
-- Flow 3:
  Average throughput: 96.69 Mbit/s
  95th percentile per-packet one-way delay: 84.555 ms
  Loss rate: 1.37%
Run 10: Report of Indigo — Data Link
Run 1: Statistics of LEDBAT

Start at: 2018-07-26 04:39:27
End at: 2018-07-26 04:39:57
Local clock offset: -0.059 ms
Remote clock offset: 1.471 ms

# Below is generated by plot.py at 2018-07-26 10:59:40
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 32.89 Mbit/s
  95th percentile per-packet one-way delay: 61.398 ms
  Loss rate: 1.09%
-- Flow 1:
  Average throughput: 23.77 Mbit/s
  95th percentile per-packet one-way delay: 61.463 ms
  Loss rate: 0.82%
-- Flow 2:
  Average throughput: 10.51 Mbit/s
  95th percentile per-packet one-way delay: 61.318 ms
  Loss rate: 1.50%
-- Flow 3:
  Average throughput: 6.60 Mbit/s
  95th percentile per-packet one-way delay: 60.870 ms
  Loss rate: 2.69%
Run 1: Report of LEDBAT — Data Link

![Graph of throughput over time for different flows]
Run 2: Statistics of LEDBAT

Start at: 2018-07-26 05:04:41
End at: 2018-07-26 05:05:11
Local clock offset: -0.063 ms
Remote clock offset: -0.092 ms

# Below is generated by plot.py at 2018-07-26 10:59:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 30.94 Mbit/s
95th percentile per-packet one-way delay: 62.563 ms
Loss rate: 1.17%
-- Flow 1:
Average throughput: 18.18 Mbit/s
95th percentile per-packet one-way delay: 62.743 ms
Loss rate: 0.93%
-- Flow 2:
Average throughput: 15.40 Mbit/s
95th percentile per-packet one-way delay: 62.382 ms
Loss rate: 1.25%
-- Flow 3:
Average throughput: 7.86 Mbit/s
95th percentile per-packet one-way delay: 62.201 ms
Loss rate: 2.47%
Run 2: Report of LEDBAT — Data Link

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

![Graph 2: Per-Packet One-Way Delay vs Time](image2)
Run 3: Statistics of LEDBAT

Start at: 2018-07-26 05:29:43
End at: 2018-07-26 05:30:13
Local clock offset: -0.043 ms
Remote clock offset: -0.036 ms

# Below is generated by plot.py at 2018-07-26 10:59:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 33.47 Mbit/s
95th percentile per-packet one-way delay: 62.972 ms
Loss rate: 1.12%
-- Flow 1:
Average throughput: 20.41 Mbit/s
95th percentile per-packet one-way delay: 63.073 ms
Loss rate: 0.88%
-- Flow 2:
Average throughput: 15.86 Mbit/s
95th percentile per-packet one-way delay: 62.931 ms
Loss rate: 1.23%
-- Flow 3:
Average throughput: 7.85 Mbit/s
95th percentile per-packet one-way delay: 62.399 ms
Loss rate: 2.48%
Run 3: Report of LEDBAT — Data Link

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

- Flow 1 ingress (mean 20.50 Mbps/s)
- Flow 1 egress (mean 20.41 Mbps/s)
- Flow 2 ingress (mean 15.96 Mbps/s)
- Flow 2 egress (mean 15.86 Mbps/s)
- Flow 3 ingress (mean 7.93 Mbps/s)
- Flow 3 egress (mean 7.85 Mbps/s)

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

- Flow 1 (95th percentile 63.07 ms)
- Flow 2 (95th percentile 62.93 ms)
- Flow 3 (95th percentile 62.40 ms)
Run 4: Statistics of LEDBAT

Start at: 2018-07-26 05:54:47
End at: 2018-07-26 05:55:17
Local clock offset: 0.081 ms
Remote clock offset: 0.002 ms

# Below is generated by plot.py at 2018-07-26 10:59:40
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 36.45 Mbit/s
  95th percentile per-packet one-way delay: 62.638 ms
  Loss rate: 1.06%
-- Flow 1:
  Average throughput: 23.40 Mbit/s
  95th percentile per-packet one-way delay: 62.424 ms
  Loss rate: 0.82%
-- Flow 2:
  Average throughput: 15.86 Mbit/s
  95th percentile per-packet one-way delay: 62.946 ms
  Loss rate: 1.23%
-- Flow 3:
  Average throughput: 7.79 Mbit/s
  95th percentile per-packet one-way delay: 62.497 ms
  Loss rate: 2.46%
Run 4: Report of LEDBAT — Data Link

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

- **Flow 1 ingress (mean 23.50 Mbit/s)**
- **Flow 1 egress (mean 23.40 Mbit/s)**
- **Flow 2 ingress (mean 15.96 Mbit/s)**
- **Flow 2 egress (mean 15.86 Mbit/s)**
- **Flow 3 ingress (mean 7.89 Mbit/s)**
- **Flow 3 egress (mean 7.79 Mbit/s)**

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

- **Flow 1 (95th percentile 62.42 ms)**
- **Flow 2 (95th percentile 62.95 ms)**
- **Flow 3 (95th percentile 62.50 ms)**
Run 5: Statistics of LEDBAT

Start at: 2018-07-26 06:19:52
End at: 2018-07-26 06:20:22
Local clock offset: 0.141 ms
Remote clock offset: -0.023 ms

# Below is generated by plot.py at 2018-07-26 10:59:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 33.78 Mbit/s
95th percentile per-packet one-way delay: 63.464 ms
Loss rate: 1.10%
-- Flow 1:
Average throughput: 22.23 Mbit/s
95th percentile per-packet one-way delay: 63.592 ms
Loss rate: 0.84%
-- Flow 2:
Average throughput: 13.61 Mbit/s
95th percentile per-packet one-way delay: 63.413 ms
Loss rate: 1.33%
-- Flow 3:
Average throughput: 7.83 Mbit/s
95th percentile per-packet one-way delay: 62.882 ms
Loss rate: 2.47%
Run 5: Report of LEDBAT — Data Link
Run 6: Statistics of LEDBAT

Start at: 2018-07-26 06:45:03
End at: 2018-07-26 06:45:33
Local clock offset: 0.183 ms
Remote clock offset: 0.177 ms

# Below is generated by plot.py at 2018-07-26 10:59:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 36.83 Mbit/s
95th percentile per-packet one-way delay: 62.467 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 23.73 Mbit/s
95th percentile per-packet one-way delay: 62.576 ms
Loss rate: 0.81%
-- Flow 2:
Average throughput: 15.87 Mbit/s
95th percentile per-packet one-way delay: 62.321 ms
Loss rate: 1.23%
-- Flow 3:
Average throughput: 7.84 Mbit/s
95th percentile per-packet one-way delay: 62.153 ms
Loss rate: 2.42%
Run 6: Report of LEDBAT — Data Link

![Graph showing throughput and packet delay over time for different flows with their respective mean rates.]

- Flow 1 ingress (mean 23.82 Mbit/s)
- Flow 2 ingress (mean 15.97 Mbit/s)
- Flow 3 ingress (mean 7.93 Mbit/s)
- Flow 1 egress (mean 23.73 Mbit/s)
- Flow 2 egress (mean 15.87 Mbit/s)
- Flow 3 egress (mean 7.84 Mbit/s)
Run 7: Statistics of LEDBAT

Start at: 2018-07-26 07:10:18
End at: 2018-07-26 07:10:48
Local clock offset: 0.218 ms
Remote clock offset: 0.068 ms

# Below is generated by plot.py at 2018-07-26 10:59:40
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 31.41 Mbit/s
  95th percentile per-packet one-way delay: 62.057 ms
  Loss rate: 1.06%
-- Flow 1:
  Average throughput: 18.29 Mbit/s
  95th percentile per-packet one-way delay: 62.162 ms
  Loss rate: 0.76%
-- Flow 2:
  Average throughput: 15.88 Mbit/s
  95th percentile per-packet one-way delay: 61.921 ms
  Loss rate: 1.22%
-- Flow 3:
  Average throughput: 7.87 Mbit/s
  95th percentile per-packet one-way delay: 61.702 ms
  Loss rate: 2.48%
Run 8: Statistics of LEDBAT

Start at: 2018-07-26 07:35:35
End at: 2018-07-26 07:36:05
Local clock offset: 0.272 ms
Remote clock offset: 0.06 ms

# Below is generated by plot.py at 2018-07-26 10:59:40
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 36.84 Mbit/s
  95th percentile per-packet one-way delay: 62.257 ms
  Loss rate: 1.05%
-- Flow 1:
  Average throughput: 23.87 Mbit/s
  95th percentile per-packet one-way delay: 62.320 ms
  Loss rate: 0.81%
-- Flow 2:
  Average throughput: 16.04 Mbit/s
  95th percentile per-packet one-way delay: 62.123 ms
  Loss rate: 1.22%
-- Flow 3:
  Average throughput: 7.03 Mbit/s
  95th percentile per-packet one-way delay: 61.756 ms
  Loss rate: 2.61%
Run 8: Report of LEDBAT — Data Link

---

**Throughput (Mbps)**

- **Flow 1 ingress** (mean 23.96 Mbps)
- **Flow 1 egress** (mean 23.87 Mbps)
- **Flow 2 ingress** (mean 16.14 Mbps)
- **Flow 2 egress** (mean 16.04 Mbps)
- **Flow 3 ingress** (mean 7.13 Mbps)
- **Flow 3 egress** (mean 7.03 Mbps)

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

- **Flow 1 (95th percentile 62.32 ms)**
- **Flow 2 (95th percentile 62.12 ms)**
- **Flow 3 (95th percentile 61.76 ms)**
Run 9: Statistics of LEDBAT

Start at: 2018-07-26 08:00:42
End at: 2018-07-26 08:01:12
Local clock offset: 0.227 ms
Remote clock offset: -0.373 ms

# Below is generated by plot.py at 2018-07-26 10:59:40
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 36.67 Mbit/s
  95th percentile per-packet one-way delay: 63.065 ms
  Loss rate: 1.05%
-- Flow 1:
  Average throughput: 23.84 Mbit/s
  95th percentile per-packet one-way delay: 63.261 ms
  Loss rate: 0.81%
-- Flow 2:
  Average throughput: 15.56 Mbit/s
  95th percentile per-packet one-way delay: 62.831 ms
  Loss rate: 1.24%
-- Flow 3:
  Average throughput: 7.74 Mbit/s
  95th percentile per-packet one-way delay: 62.127 ms
  Loss rate: 2.51%
Run 9: Report of LEDBAT — Data Link
Run 10: Statistics of LEDBAT

Start at: 2018-07-26 08:25:58
End at: 2018-07-26 08:26:28
Local clock offset: 0.282 ms
Remote clock offset: 0.12 ms

# Below is generated by plot.py at 2018-07-26 10:59:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 36.51 Mbit/s
95th percentile per-packet one-way delay: 62.263 ms
Loss rate: 1.06%
-- Flow 1:
Average throughput: 23.90 Mbit/s
95th percentile per-packet one-way delay: 62.306 ms
Loss rate: 0.81%
-- Flow 2:
Average throughput: 15.11 Mbit/s
95th percentile per-packet one-way delay: 62.218 ms
Loss rate: 1.26%
-- Flow 3:
Average throughput: 7.84 Mbit/s
95th percentile per-packet one-way delay: 62.128 ms
Loss rate: 2.47%
Run 10: Report of LEDBAT — Data Link

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

- Flow 1 ingress (mean 24.00 Mbps)
- Flow 1 egress (mean 23.90 Mbps)
- Flow 2 ingress (mean 15.21 Mbps)
- Flow 2 egress (mean 15.11 Mbps)
- Flow 3 ingress (mean 7.94 Mbps)
- Flow 3 egress (mean 7.84 Mbps)

![Graph showing packet delay for different flows.]

- Flow 1 (95th percentile 62.31 ms)
- Flow 2 (95th percentile 62.22 ms)
- Flow 3 (95th percentile 62.13 ms)
Run 1: Statistics of PCC-Allegro

Start at: 2018-07-26 04:34:57  
End at: 2018-07-26 04:35:27  
Local clock offset: -0.072 ms  
Remote clock offset: 0.059 ms

# Below is generated by plot.py at 2018-07-26 11:01:16  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 422.98 Mbit/s  
95th percentile per-packet one-way delay: 188.607 ms  
Loss rate: 0.80%  
-- Flow 1:  
Average throughput: 340.02 Mbit/s  
95th percentile per-packet one-way delay: 185.897 ms  
Loss rate: 0.75%  
-- Flow 2:  
Average throughput: 123.04 Mbit/s  
95th percentile per-packet one-way delay: 195.295 ms  
Loss rate: 0.98%  
-- Flow 3:  
Average throughput: 4.26 Mbit/s  
95th percentile per-packet one-way delay: 205.478 ms  
Loss rate: 2.16%
Run 1: Report of PCC-Allegro — Data Link

![Graph showing throughput and per-packet end-to-end delay over time for three flows: Flow 1, Flow 2, and Flow 3. The graphs indicate variations in throughput and latency across different time intervals.]
Run 2: Statistics of PCC-Allegro

Start at: 2018-07-26 05:00:03
End at: 2018-07-26 05:00:33
Local clock offset: -0.033 ms
Remote clock offset: 0.007 ms

# Below is generated by plot.py at 2018-07-26 11:01:16
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 412.39 Mbit/s
  95th percentile per-packet one-way delay: 156.556 ms
  Loss rate: 1.00%
-- Flow 1:
  Average throughput: 384.11 Mbit/s
  95th percentile per-packet one-way delay: 156.473 ms
  Loss rate: 0.96%
-- Flow 2:
  Average throughput: 40.51 Mbit/s
  95th percentile per-packet one-way delay: 157.188 ms
  Loss rate: 1.45%
-- Flow 3:
  Average throughput: 4.42 Mbit/s
  95th percentile per-packet one-way delay: 147.874 ms
  Loss rate: 2.67%
Run 2: Report of PCC-Allegro — Data Link

**Graph 1:**
- **Throughput (Mbps):**
  - **Flow 1 ingress** (mean 386.25 Mbps)
  - **Flow 1 egress** (mean 384.11 Mbps)
  - **Flow 2 ingress** (mean 40.05 Mbps)
  - **Flow 2 egress** (mean 40.51 Mbps)
  - **Flow 3 ingress** (mean 4.49 Mbps)
  - **Flow 3 egress** (mean 4.42 Mbps)

**Graph 2:**
- **Per-packet one-way delay (ms):**
  - **Flow 1** (95th percentile 156.47 ms)
  - **Flow 2** (95th percentile 157.19 ms)
  - **Flow 3** (95th percentile 147.87 ms)
Run 3: Statistics of PCC-Allegro

Start at: 2018-07-26 05:25:13
End at: 2018-07-26 05:25:43
Local clock offset: -0.063 ms
Remote clock offset: -0.247 ms

# Below is generated by plot.py at 2018-07-26 11:03:41
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 480.31 Mbit/s
  95th percentile per-packet one-way delay: 203.517 ms
  Loss rate: 1.29%
-- Flow 1:
  Average throughput: 467.86 Mbit/s
  95th percentile per-packet one-way delay: 203.540 ms
  Loss rate: 1.29%
-- Flow 2:
  Average throughput: 2.42 Mbit/s
  95th percentile per-packet one-way delay: 202.973 ms
  Loss rate: 1.27%
-- Flow 3:
  Average throughput: 33.21 Mbit/s
  95th percentile per-packet one-way delay: 136.471 ms
  Loss rate: 1.32%
Run 3: Report of PCC-Allegro — Data Link
Run 4: Statistics of PCC-Allegro

Start at: 2018-07-26 05:50:10
End at: 2018-07-26 05:50:40
Local clock offset: 0.061 ms
Remote clock offset: -0.131 ms

# Below is generated by plot.py at 2018-07-26 11:03:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 477.57 Mbit/s
95th percentile per-packet one-way delay: 159.422 ms
Loss rate: 1.27%
-- Flow 1:
Average throughput: 471.48 Mbit/s
95th percentile per-packet one-way delay: 159.497 ms
Loss rate: 1.26%
-- Flow 2:
Average throughput: 4.75 Mbit/s
95th percentile per-packet one-way delay: 128.946 ms
Loss rate: 1.28%
-- Flow 3:
Average throughput: 9.16 Mbit/s
95th percentile per-packet one-way delay: 139.005 ms
Loss rate: 2.75%
Run 4: Report of PCC-Allegro — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 475.52 Mbit/s)  Flow 1 egress (mean 471.48 Mbit/s)
Flow 2 ingress (mean 4.78 Mbit/s)  Flow 2 egress (mean 4.75 Mbit/s)
Flow 3 ingress (mean 9.30 Mbit/s)  Flow 3 egress (mean 9.16 Mbit/s)

Delay (ms)

Time (s)

Flow 1 (95th percentile 159.50 ms)  Flow 2 (95th percentile 128.95 ms)  Flow 3 (95th percentile 139.00 ms)
Run 5: Statistics of PCC-Allegro

Start at: 2018-07-26 06:15:17
End at: 2018-07-26 06:15:47
Local clock offset: 0.099 ms
Remote clock offset: -0.028 ms

# Below is generated by plot.py at 2018-07-26 11:05:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 492.61 Mbit/s
95th percentile per-packet one-way delay: 206.996 ms
Loss rate: 4.59%
-- Flow 1:
Average throughput: 489.27 Mbit/s
95th percentile per-packet one-way delay: 207.044 ms
Loss rate: 4.58%
-- Flow 2:
Average throughput: 4.00 Mbit/s
95th percentile per-packet one-way delay: 204.759 ms
Loss rate: 6.59%
-- Flow 3:
Average throughput: 2.10 Mbit/s
95th percentile per-packet one-way delay: 204.672 ms
Loss rate: 4.98%
Run 5: Report of PCC-Allegro — Data Link

[Graph with throughput and per-packet one-way delay over time for different flows.]
Run 6: Statistics of PCC-Allegro

Start at: 2018-07-26 06:40:30
End at: 2018-07-26 06:41:00
Local clock offset: 0.152 ms
Remote clock offset: -0.44 ms

# Below is generated by plot.py at 2018-07-26 11:05:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 405.05 Mbit/s
95th percentile per-packet one-way delay: 209.662 ms
Loss rate: 1.87%
-- Flow 1:
Average throughput: 358.93 Mbit/s
95th percentile per-packet one-way delay: 209.552 ms
Loss rate: 1.81%
-- Flow 2:
Average throughput: 65.66 Mbit/s
95th percentile per-packet one-way delay: 209.912 ms
Loss rate: 2.22%
-- Flow 3:
Average throughput: 7.87 Mbit/s
95th percentile per-packet one-way delay: 210.591 ms
Loss rate: 4.67%
Run 6: Report of PCC-Allegro — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 364.03 Mbit/s)
  - Flow 1 egress (mean 358.93 Mbit/s)
  - Flow 2 ingress (mean 66.74 Mbit/s)
  - Flow 2 egress (mean 65.66 Mbit/s)
  - Flow 3 ingress (mean 8.13 Mbit/s)
  - Flow 3 egress (mean 7.87 Mbit/s)

- **Per-packet one-way delay (ms):**
  - Flow 1 (95th percentile 209.55 ms)
  - Flow 2 (95th percentile 209.91 ms)
  - Flow 3 (95th percentile 210.59 ms)
Run 7: Statistics of PCC-Allegro

Start at: 2018-07-26 07:05:41
End at: 2018-07-26 07:06:11
Local clock offset: 0.227 ms
Remote clock offset: 0.097 ms

# Below is generated by plot.py at 2018-07-26 11:05:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 412.23 Mbit/s
95th percentile per-packet one-way delay: 191.554 ms
Loss rate: 0.78%
-- Flow 1:
Average throughput: 407.49 Mbit/s
95th percentile per-packet one-way delay: 191.656 ms
Loss rate: 0.78%
-- Flow 2:
Average throughput: 4.98 Mbit/s
95th percentile per-packet one-way delay: 188.862 ms
Loss rate: 1.04%
-- Flow 3:
Average throughput: 4.50 Mbit/s
95th percentile per-packet one-way delay: 89.783 ms
Loss rate: 1.81%
Run 7: Report of PCC-Allegro — Data Link

![Graph of Throughput](image)

![Graph of End-to-End Delay](image)

- Flow 1 ingress (mean 409.00 Mbit/s)
- Flow 1 egress (mean 407.49 Mbit/s)
- Flow 2 ingress (mean 5.00 Mbit/s)
- Flow 2 egress (mean 4.98 Mbit/s)
- Flow 3 ingress (mean 4.52 Mbit/s)
- Flow 3 egress (mean 4.50 Mbit/s)

- Flow 1 (95th percentile 191.66 ms)
- Flow 2 (95th percentile 188.86 ms)
- Flow 3 (95th percentile 89.78 ms)
Run 8: Statistics of PCC-Allegro

Start at: 2018-07-26 07:30:57
End at: 2018-07-26 07:31:27
Local clock offset: 0.248 ms
Remote clock offset: 1.417 ms

# Below is generated by plot.py at 2018-07-26 11:09:35
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 461.33 Mbit/s
  95th percentile per-packet one-way delay: 181.716 ms
  Loss rate: 1.03%
-- Flow 1:
  Average throughput: 357.39 Mbit/s
  95th percentile per-packet one-way delay: 181.767 ms
  Loss rate: 0.89%
-- Flow 2:
  Average throughput: 125.75 Mbit/s
  95th percentile per-packet one-way delay: 181.847 ms
  Loss rate: 1.30%
-- Flow 3:
  Average throughput: 62.79 Mbit/s
  95th percentile per-packet one-way delay: 168.995 ms
  Loss rate: 2.39%
Run 8: Report of PCC-Allegro — Data Link

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

- Flow 1 ingress (mean 359.10 Mbit/s)
- Flow 1 egress (mean 357.39 Mbit/s)
- Flow 2 ingress (mean 126.62 Mbit/s)
- Flow 2 egress (mean 125.75 Mbit/s)
- Flow 3 ingress (mean 63.52 Mbit/s)
- Flow 3 egress (mean 62.79 Mbit/s)

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

- Flow 1 (95th percentile 181.77 ms)
- Flow 2 (95th percentile 181.85 ms)
- Flow 3 (95th percentile 169.00 ms)
Run 9: Statistics of PCC-Allegro

Start at: 2018-07-26 07:56:02
End at: 2018-07-26 07:56:32
Local clock offset: 0.29 ms
Remote clock offset: 0.127 ms

# Below is generated by plot.py at 2018-07-26 11:09:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 448.12 Mbit/s
95th percentile per-packet one-way delay: 205.738 ms
Loss rate: 2.55%
-- Flow 1:
Average throughput: 441.18 Mbit/s
95th percentile per-packet one-way delay: 205.766 ms
Loss rate: 2.56%
-- Flow 2:
Average throughput: 2.38 Mbit/s
95th percentile per-packet one-way delay: 154.799 ms
Loss rate: 1.25%
-- Flow 3:
Average throughput: 16.39 Mbit/s
95th percentile per-packet one-way delay: 150.897 ms
Loss rate: 2.42%
Run 9: Report of PCC-Allegro — Data Link

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

**Throughput (Mbps)**
- Flow 1 ingress (mean 450.00 Mbps)
- Flow 1 egress (mean 441.18 Mbps)
- Flow 2 ingress (mean 2.39 Mbps)
- Flow 2 egress (mean 2.38 Mbps)
- Flow 3 ingress (mean 16.50 Mbps)
- Flow 3 egress (mean 16.39 Mbps)

**Per-packet one way delay (ms)**
- Flow 1 (95th percentile 205.77 ms)
- Flow 2 (95th percentile 154.80 ms)
- Flow 3 (95th percentile 150.90 ms)
Run 10: Statistics of PCC-Allegro

Start at: 2018-07-26 08:21:18
End at: 2018-07-26 08:21:48
Local clock offset: 0.296 ms
Remote clock offset: 0.092 ms

# Below is generated by plot.py at 2018-07-26 11:10:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 452.98 Mbit/s
95th percentile per-packet one-way delay: 183.616 ms
Loss rate: 1.42%
-- Flow 1:
Average throughput: 448.62 Mbit/s
95th percentile per-packet one-way delay: 184.349 ms
Loss rate: 1.43%
-- Flow 2:
Average throughput: 4.54 Mbit/s
95th percentile per-packet one-way delay: 132.494 ms
Loss rate: 0.83%
-- Flow 3:
Average throughput: 4.43 Mbit/s
95th percentile per-packet one-way delay: 140.363 ms
Loss rate: 1.59%
Run 10: Report of PCC-Allegro — Data Link
Run 1: Statistics of PCC-Expr

Start at: 2018-07-26 04:37:48
End at: 2018-07-26 04:38:18
Local clock offset: -0.092 ms
Remote clock offset: -1.472 ms

# Below is generated by plot.py at 2018-07-26 11:17:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 369.41 Mbit/s
95th percentile per-packet one-way delay: 205.358 ms
Loss rate: 3.56%
-- Flow 1:
Average throughput: 200.67 Mbit/s
95th percentile per-packet one-way delay: 203.144 ms
Loss rate: 2.29%
-- Flow 2:
Average throughput: 251.44 Mbit/s
95th percentile per-packet one-way delay: 217.627 ms
Loss rate: 4.99%
-- Flow 3:
Average throughput: 5.50 Mbit/s
95th percentile per-packet one-way delay: 204.039 ms
Loss rate: 7.59%
Run 1: Report of PCC-Expr — Data Link

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

- Flow 1 ingress (mean 204.52 Mbps)
- Flow 1 egress (mean 200.67 Mbps)
- Flow 2 ingress (mean 263.01 Mbps)
- Flow 2 egress (mean 251.44 Mbps)
- Flow 3 ingress (mean 5.87 Mbps)
- Flow 3 egress (mean 5.50 Mbps)

![Graph 2: PacketDelay vs Time (ms)]

- Flow 1 (95th percentile 203.14 ms)
- Flow 2 (95th percentile 217.63 ms)
- Flow 3 (95th percentile 204.04 ms)
Run 2: Statistics of PCC-Expr

Start at: 2018-07-26 05:02:59
End at: 2018-07-26 05:03:29
Local clock offset: -0.059 ms
Remote clock offset: 0.196 ms

# Below is generated by plot.py at 2018-07-26 11:18:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 407.92 Mbit/s
95th percentile per-packet one-way delay: 196.521 ms
Loss rate: 1.26%
-- Flow 1:
Average throughput: 277.19 Mbit/s
95th percentile per-packet one-way delay: 192.153 ms
Loss rate: 0.90%
-- Flow 2:
Average throughput: 191.16 Mbit/s
95th percentile per-packet one-way delay: 197.126 ms
Loss rate: 1.98%
-- Flow 3:
Average throughput: 11.71 Mbit/s
95th percentile per-packet one-way delay: 197.765 ms
Loss rate: 2.75%
Run 2: Report of PCC-Expr — Data Link
Run 3: Statistics of PCC-Expr

Start at: 2018-07-26 05:28:08
End at: 2018-07-26 05:28:38
Local clock offset: -0.052 ms
Remote clock offset: -0.091 ms

# Below is generated by plot.py at 2018-07-26 11:18:54
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 297.69 Mbit/s
  95th percentile per-packet one-way delay: 184.198 ms
  Loss rate: 0.54%
-- Flow 1:
  Average throughput: 226.19 Mbit/s
  95th percentile per-packet one-way delay: 177.361 ms
  Loss rate: 0.27%
-- Flow 2:
  Average throughput: 93.94 Mbit/s
  95th percentile per-packet one-way delay: 201.522 ms
  Loss rate: 1.31%
-- Flow 3:
  Average throughput: 28.05 Mbit/s
  95th percentile per-packet one-way delay: 204.648 ms
  Loss rate: 1.93%
Run 3: Report of PCC-Expr — Data Link

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

[Legend for graphs:]
- Flow 1 ingress (mean 225.86 Mbit/s)
- Flow 1 egress (mean 226.19 Mbit/s)
- Flow 2 ingress (mean 94.59 Mbit/s)
- Flow 2 egress (mean 93.94 Mbit/s)
- Flow 3 ingress (mean 28.24 Mbit/s)
- Flow 3 egress (mean 28.05 Mbit/s)
Run 4: Statistics of PCC-Expr

Start at: 2018-07-26 05:53:06
End at: 2018-07-26 05:53:36
Local clock offset: 0.068 ms
Remote clock offset: 0.161 ms

# Below is generated by plot.py at 2018-07-26 11:19:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 373.93 Mbit/s
95th percentile per-packet one-way delay: 248.909 ms
Loss rate: 5.65%
-- Flow 1:
Average throughput: 270.50 Mbit/s
95th percentile per-packet one-way delay: 267.499 ms
Loss rate: 6.71%
-- Flow 2:
Average throughput: 116.50 Mbit/s
95th percentile per-packet one-way delay: 193.384 ms
Loss rate: 2.42%
-- Flow 3:
Average throughput: 79.73 Mbit/s
95th percentile per-packet one-way delay: 194.102 ms
Loss rate: 3.69%
Run 4: Report of PCC-Expr — Data Link

---

**Throughput**

- Flow 1 ingress (mean 288.76 Mbit/s)
- Flow 1 egress (mean 270.50 Mbit/s)
- Flow 2 ingress (mean 116.65 Mbit/s)
- Flow 2 egress (mean 116.50 Mbit/s)
- Flow 3 ingress (mean 81.76 Mbit/s)
- Flow 3 egress (mean 79.73 Mbit/s)

**Delay**

- Flow 1 (95th percentile 267.50 ms)
- Flow 2 (95th percentile 193.38 ms)
- Flow 3 (95th percentile 194.10 ms)
Run 5: Statistics of PCC-Expr

Start at: 2018-07-26 06:18:11
End at: 2018-07-26 06:18:41
Local clock offset: 0.091 ms
Remote clock offset: -0.093 ms

# Below is generated by plot.py at 2018-07-26 11:21:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 390.30 Mbit/s
95th percentile per-packet one-way delay: 214.849 ms
Loss rate: 4.45%
-- Flow 1:
Average throughput: 269.08 Mbit/s
95th percentile per-packet one-way delay: 221.731 ms
Loss rate: 4.77%
-- Flow 2:
Average throughput: 134.15 Mbit/s
95th percentile per-packet one-way delay: 193.148 ms
Loss rate: 3.06%
-- Flow 3:
Average throughput: 98.44 Mbit/s
95th percentile per-packet one-way delay: 194.199 ms
Loss rate: 5.57%
Run 5: Report of PCC-Expr — Data Link
Run 6: Statistics of PCC-Expr

Start at: 2018-07-26 06:43:21
End at: 2018-07-26 06:43:51
Local clock offset: 0.15 ms
Remote clock offset: -0.119 ms

# Below is generated by plot.py at 2018-07-26 11:25:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 374.32 Mbit/s
95th percentile per-packet one-way delay: 297.080 ms
Loss rate: 7.69%
-- Flow 1:
Average throughput: 297.58 Mbit/s
95th percentile per-packet one-way delay: 307.075 ms
Loss rate: 9.24%
-- Flow 2:
Average throughput: 112.59 Mbit/s
95th percentile per-packet one-way delay: 175.156 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 6.34 Mbit/s
95th percentile per-packet one-way delay: 202.954 ms
Loss rate: 3.94%
Run 6: Report of PCC-Expr — Data Link
Run 7: Statistics of PCC-Expr

Start at: 2018-07-26 07:08:40
End at: 2018-07-26 07:09:10
Local clock offset: 0.185 ms
Remote clock offset: -0.167 ms

# Below is generated by plot.py at 2018-07-26 11:26:29
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 390.94 Mbit/s
  95th percentile per-packet one-way delay: 214.925 ms
  Loss rate: 2.28%
-- Flow 1:
  Average throughput: 257.77 Mbit/s
  95th percentile per-packet one-way delay: 215.573 ms
  Loss rate: 2.03%
-- Flow 2:
  Average throughput: 197.02 Mbit/s
  95th percentile per-packet one-way delay: 214.134 ms
  Loss rate: 2.74%
-- Flow 3:
  Average throughput: 7.32 Mbit/s
  95th percentile per-packet one-way delay: 159.571 ms
  Loss rate: 3.38%
Run 7: Report of PCC-Expr — Data Link
Run 8: Statistics of PCC-Expr

Start at: 2018-07-26 07:33:55
End at: 2018-07-26 07:34:25
Local clock offset: 0.242 ms
Remote clock offset: -0.023 ms

# Below is generated by plot.py at 2018-07-26 11:27:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 399.69 Mbit/s
95th percentile per-packet one-way delay: 169.679 ms
Loss rate: 1.60%
-- Flow 1:
Average throughput: 262.10 Mbit/s
95th percentile per-packet one-way delay: 169.220 ms
Loss rate: 1.60%
-- Flow 2:
Average throughput: 201.05 Mbit/s
95th percentile per-packet one-way delay: 168.229 ms
Loss rate: 1.55%
-- Flow 3:
Average throughput: 12.65 Mbit/s
95th percentile per-packet one-way delay: 191.809 ms
Loss rate: 3.11%
Run 8: Report of PCC-Expr — Data Link

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

- Flow 1 ingress (mean 265.25 Mbit/s)
- Flow 1 egress (mean 262.10 Mbit/s)
- Flow 2 ingress (mean 202.96 Mbit/s)
- Flow 2 egress (mean 201.05 Mbit/s)
- Flow 3 ingress (mean 12.69 Mbit/s)
- Flow 3 egress (mean 12.65 Mbit/s)

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

- Flow 1 (95th percentile 169.22 ms)
- Flow 2 (95th percentile 168.23 ms)
- Flow 3 (95th percentile 191.01 ms)
Run 9: Statistics of PCC-Expr

Start at: 2018-07-26 07:58:59
End at: 2018-07-26 07:59:29
Local clock offset: 0.214 ms
Remote clock offset: 1.004 ms

# Below is generated by plot.py at 2018-07-26 11:30:57
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 372.61 Mbit/s
  95th percentile per-packet one-way delay: 209.662 ms
  Loss rate: 2.44%
-- Flow 1:
  Average throughput: 264.00 Mbit/s
  95th percentile per-packet one-way delay: 218.494 ms
  Loss rate: 2.78%
-- Flow 2:
  Average throughput: 129.56 Mbit/s
  95th percentile per-packet one-way delay: 64.823 ms
  Loss rate: 0.96%
-- Flow 3:
  Average throughput: 69.20 Mbit/s
  95th percentile per-packet one-way delay: 68.309 ms
  Loss rate: 3.94%
Run 9: Report of PCC-Expr — Data Link

[Graph showing throughput over time for different flows]

[Graph showing per-packet one-way delay over time for different flows]
Run 10: Statistics of PCC-Expr

Start at: 2018-07-26 08:24:17
End at: 2018-07-26 08:24:47
Local clock offset: 0.29 ms
Remote clock offset: -0.122 ms

# Below is generated by plot.py at 2018-07-26 11:32:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 357.19 Mbit/s
95th percentile per-packet one-way delay: 244.694 ms
Loss rate: 7.22%
-- Flow 1:
Average throughput: 274.26 Mbit/s
95th percentile per-packet one-way delay: 258.211 ms
Loss rate: 8.71%
-- Flow 2:
Average throughput: 119.79 Mbit/s
95th percentile per-packet one-way delay: 169.012 ms
Loss rate: 1.79%
-- Flow 3:
Average throughput: 10.46 Mbit/s
95th percentile per-packet one-way delay: 198.566 ms
Loss rate: 5.63%
Run 10: Report of PCC-Expr — Data Link

![Graph of Throughput and Delay](image)

**Throughput (Mbps):**
- Flow 1 ingress (mean 239.18 Mbps)
- Flow 1 egress (mean 274.26 Mbps)
- Flow 2 ingress (mean 121.22 Mbps)
- Flow 2 egress (mean 119.79 Mbps)
- Flow 3 ingress (mean 10.05 Mbps)
- Flow 3 egress (mean 10.46 Mbps)

**Delay (ms):**
- Flow 1 (95th percentile 258.21 ms)
- Flow 2 (95th percentile 169.01 ms)
- Flow 3 (95th percentile 198.57 ms)
Run 1: Statistics of QUIC Cubic

Start at: 2018-07-26 04:56:49
End at: 2018-07-26 04:57:19
Local clock offset: -0.026 ms
Remote clock offset: 0.062 ms

# Below is generated by plot.py at 2018-07-26 11:32:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.86 Mbit/s
95th percentile per-packet one-way delay: 61.062 ms
Loss rate: 1.15%
-- Flow 1:
Average throughput: 43.35 Mbit/s
95th percentile per-packet one-way delay: 61.020 ms
Loss rate: 0.80%
-- Flow 2:
Average throughput: 36.76 Mbit/s
95th percentile per-packet one-way delay: 61.104 ms
Loss rate: 0.95%
-- Flow 3:
Average throughput: 20.92 Mbit/s
95th percentile per-packet one-way delay: 60.918 ms
Loss rate: 3.80%
Run 1: Report of QUIC Cubic — Data Link

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

- **Flow 1 ingress (mean 43.50 Mbit/s)**
- **Flow 1 egress (mean 43.35 Mbit/s)**
- **Flow 2 ingress (mean 36.89 Mbit/s)**
- **Flow 2 egress (mean 36.76 Mbit/s)**
- **Flow 3 ingress (mean 21.47 Mbit/s)**
- **Flow 3 egress (mean 20.92 Mbit/s)**

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

- **Flow 1 (95th percentile 61.02 ms)**
- **Flow 2 (95th percentile 61.10 ms)**
- **Flow 3 (95th percentile 60.92 ms)**
Run 2: Statistics of QUIC Cubic

Start at: 2018-07-26 05:22:03
End at: 2018-07-26 05:22:33
Local clock offset: -0.051 ms
Remote clock offset: -0.004 ms

# Below is generated by plot.py at 2018-07-26 11:32:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 73.51 Mbit/s
95th percentile per-packet one-way delay: 61.134 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 44.72 Mbit/s
95th percentile per-packet one-way delay: 61.164 ms
Loss rate: 0.55%
-- Flow 2:
Average throughput: 35.80 Mbit/s
95th percentile per-packet one-way delay: 60.994 ms
Loss rate: 1.03%
-- Flow 3:
Average throughput: 15.29 Mbit/s
95th percentile per-packet one-way delay: 61.160 ms
Loss rate: 0.80%
Run 2: Report of QUIC Cubic — Data Link
Run 3: Statistics of QUIC Cubic

Start at: 2018-07-26 05:47:04
End at: 2018-07-26 05:47:34
Local clock offset: 0.072 ms
Remote clock offset: -0.09 ms

# Below is generated by plot.py at 2018-07-26 11:32:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 74.95 Mbit/s
95th percentile per-packet one-way delay: 61.279 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 48.55 Mbit/s
95th percentile per-packet one-way delay: 61.218 ms
Loss rate: 0.57%
-- Flow 2:
Average throughput: 29.94 Mbit/s
95th percentile per-packet one-way delay: 61.313 ms
Loss rate: 1.30%
-- Flow 3:
Average throughput: 19.71 Mbit/s
95th percentile per-packet one-way delay: 61.349 ms
Loss rate: 0.51%
Run 3: Report of QUIC Cubic — Data Link

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

Legend:
- Flow 1 ingress (mean 48.63 Mbit/s)
- Flow 1 egress (mean 48.55 Mbit/s)
- Flow 2 ingress (mean 30.16 Mbit/s)
- Flow 2 egress (mean 29.94 Mbit/s)
- Flow 3 ingress (mean 19.56 Mbit/s)
- Flow 3 egress (mean 19.71 Mbit/s)

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

Legend:
- Flow 1 (95th percentile 61.22 ms)
- Flow 2 (95th percentile 61.31 ms)
- Flow 3 (95th percentile 61.35 ms)
Run 4: Statistics of QUIC Cubic

Start at: 2018-07-26 06:12:10
End at: 2018-07-26 06:12:40
Local clock offset: 0.063 ms
Remote clock offset: 1.172 ms

# Below is generated by plot.py at 2018-07-26 11:32:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 71.40 Mbit/s
95th percentile per-packet one-way delay: 60.214 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 40.32 Mbit/s
95th percentile per-packet one-way delay: 60.147 ms
Loss rate: 0.63%
-- Flow 2:
Average throughput: 36.56 Mbit/s
95th percentile per-packet one-way delay: 59.641 ms
Loss rate: 1.26%
-- Flow 3:
Average throughput: 20.75 Mbit/s
95th percentile per-packet one-way delay: 60.391 ms
Loss rate: 0.49%
Run 4: Report of QUIC Cubic — Data Link

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

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Run 5: Statistics of QUIC Cubic

Start at: 2018-07-26 06:37:15
End at: 2018-07-26 06:37:45
Local clock offset: 0.155 ms
Remote clock offset: 0.179 ms

# Below is generated by plot.py at 2018-07-26 11:32:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.74 Mbit/s
95th percentile per-packet one-way delay: 61.136 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 52.26 Mbit/s
95th percentile per-packet one-way delay: 60.949 ms
Loss rate: 0.60%
-- Flow 2:
Average throughput: 29.82 Mbit/s
95th percentile per-packet one-way delay: 60.919 ms
Loss rate: 1.11%
-- Flow 3:
Average throughput: 20.19 Mbit/s
95th percentile per-packet one-way delay: 61.291 ms
Loss rate: 1.73%
Run 5: Report of QUIC Cubic — Data Link
Run 6: Statistics of QUIC Cubic

Start at: 2018-07-26 07:02:30
End at: 2018-07-26 07:03:00
Local clock offset: 0.185 ms
Remote clock offset: 0.2 ms

# Below is generated by plot.py at 2018-07-26 11:32:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 75.57 Mbit/s
95th percentile per-packet one-way delay: 61.134 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 45.54 Mbit/s
95th percentile per-packet one-way delay: 60.953 ms
Loss rate: 0.70%
-- Flow 2:
Average throughput: 35.41 Mbit/s
95th percentile per-packet one-way delay: 61.223 ms
Loss rate: 1.02%
-- Flow 3:
Average throughput: 19.83 Mbit/s
95th percentile per-packet one-way delay: 60.962 ms
Loss rate: 0.85%
Run 6: Report of QUIC Cubic — Data Link

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

- Flow 1 ingress (mean 45.68 Mbit/s)
- Flow 1 egress (mean 45.54 Mbit/s)
- Flow 2 ingress (mean 35.56 Mbit/s)
- Flow 2 egress (mean 35.41 Mbit/s)
- Flow 3 ingress (mean 19.76 Mbit/s)
- Flow 3 egress (mean 19.83 Mbit/s)

![Graph 2: Per-packet RTT vs Time](image2)

- Flow 1 (95th percentile 60.95 ms)
- Flow 2 (95th percentile 61.22 ms)
- Flow 3 (95th percentile 60.96 ms)
Run 7: Statistics of QUIC Cubic

Start at: 2018-07-26 07:27:44
End at: 2018-07-26 07:28:14
Local clock offset: 0.227 ms
Remote clock offset: -0.177 ms

# Below is generated by plot.py at 2018-07-26 11:32:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 67.33 Mbit/s
95th percentile per-packet one-way delay: 61.535 ms
Loss rate: 1.07%
-- Flow 1:
Average throughput: 40.19 Mbit/s
95th percentile per-packet one-way delay: 61.504 ms
Loss rate: 0.70%
-- Flow 2:
Average throughput: 31.66 Mbit/s
95th percentile per-packet one-way delay: 61.567 ms
Loss rate: 0.65%
-- Flow 3:
Average throughput: 18.58 Mbit/s
95th percentile per-packet one-way delay: 61.050 ms
Loss rate: 4.79%
Run 7: Report of QUIC Cubic — Data Link

[Graph of network throughput over time for different flows, showing variations in ingress and egress data rates.]
Run 8: Statistics of QUIC Cubic

Start at: 2018-07-26 07:52:52
End at: 2018-07-26 07:53:22
Local clock offset: 0.291 ms
Remote clock offset: -0.006 ms

# Below is generated by plot.py at 2018-07-26 11:32:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 73.97 Mbit/s
95th percentile per-packet one-way delay: 61.251 ms
Loss rate: 0.45%

-- Flow 1:
Average throughput: 47.30 Mbit/s
95th percentile per-packet one-way delay: 61.229 ms
Loss rate: 0.55%

-- Flow 2:
Average throughput: 31.97 Mbit/s
95th percentile per-packet one-way delay: 61.274 ms
Loss rate: 0.20%

-- Flow 3:
Average throughput: 16.73 Mbit/s
95th percentile per-packet one-way delay: 61.189 ms
Loss rate: 0.61%
Run 8: Report of QUIC Cubic — Data Link
Run 9: Statistics of QUIC Cubic

Start at: 2018-07-26 08:18:10
End at: 2018-07-26 08:18:40
Local clock offset: 0.282 ms
Remote clock offset: 1.195 ms

# Below is generated by plot.py at 2018-07-26 11:32:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.69 Mbit/s
95th percentile per-packet one-way delay: 59.947 ms
Loss rate: 1.31%
-- Flow 1:
Average throughput: 48.43 Mbit/s
95th percentile per-packet one-way delay: 59.926 ms
Loss rate: 0.59%
-- Flow 2:
Average throughput: 33.98 Mbit/s
95th percentile per-packet one-way delay: 59.923 ms
Loss rate: 1.31%
-- Flow 3:
Average throughput: 17.28 Mbit/s
95th percentile per-packet one-way delay: 62.313 ms
Loss rate: 7.07%
Run 9: Report of QUIC Cubic — Data Link
Run 10: Statistics of QUIC Cubic

Start at: 2018-07-26 08:43:06
End at: 2018-07-26 08:43:36
Local clock offset: 0.305 ms
Remote clock offset: 0.036 ms

# Below is generated by plot.py at 2018-07-26 11:32:22
# Datalink statistics
  -- Total of 3 flows:
  Average throughput: 73.30 Mbit/s
  95th percentile per-packet one-way delay: 61.181 ms
  Loss rate: 1.64%
  -- Flow 1:
  Average throughput: 44.22 Mbit/s
  95th percentile per-packet one-way delay: 61.042 ms
  Loss rate: 0.69%
  -- Flow 2:
  Average throughput: 35.89 Mbit/s
  95th percentile per-packet one-way delay: 61.265 ms
  Loss rate: 1.26%
  -- Flow 3:
  Average throughput: 16.07 Mbit/s
  95th percentile per-packet one-way delay: 61.192 ms
  Loss rate: 10.50%
Run 10: Report of QUIC Cubic — Data Link
Run 1: Statistics of SCReAM

Start at: 2018-07-26 04:48:30
End at: 2018-07-26 04:49:00
Local clock offset: -0.018 ms
Remote clock offset: 0.065 ms

# Below is generated by plot.py at 2018-07-26 11:32:22
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 61.440 ms
  Loss rate: 0.64%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 61.342 ms
  Loss rate: 0.38%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 61.271 ms
  Loss rate: 0.61%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 61.548 ms
  Loss rate: 1.45%
Run 1: Report of SCReAM — Data Link

![Graph 1: Throughput (Mbps)]

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

Flow 1: Report of SCReAM — Data Link

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)
Run 2: Statistics of SCReAM

Start at: 2018-07-26 05:13:54
End at: 2018-07-26 05:14:24
Local clock offset: -0.035 ms
Remote clock offset: 1.25 ms

# Below is generated by plot.py at 2018-07-26 11:32:22
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.44 Mbit/s
  95th percentile per-packet one-way delay: 60.295 ms
  Loss rate: 0.57%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 60.321 ms
  Loss rate: 0.38%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 59.958 ms
  Loss rate: 0.61%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 59.850 ms
  Loss rate: 1.08%
Run 2: Report of SCReAM — Data Link

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

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

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

- Flow 1 (95th percentile 60.32 ms)
- Flow 2 (95th percentile 59.96 ms)
- Flow 3 (95th percentile 59.85 ms)
Run 3: Statistics of SCReAM

Start at: 2018-07-26 05:38:51
End at: 2018-07-26 05:39:21
Local clock offset: 0.028 ms
Remote clock offset: 0.075 ms

# Below is generated by plot.py at 2018-07-26 11:32:22
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.44 Mbit/s
  95th percentile per-packet one-way delay: 61.395 ms
  Loss rate: 0.57%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 61.395 ms
  Loss rate: 0.38%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 61.416 ms
  Loss rate: 0.61%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 60.997 ms
  Loss rate: 1.08%
Run 3: Report of SCReAM — Data Link

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

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

![Per-packet one-way delay over time for different flows.]

- Flow 1 (95th percentile 61.40 ms)
- Flow 2 (95th percentile 61.42 ms)
- Flow 3 (95th percentile 61.00 ms)
Run 4: Statistics of SCReAM

Start at: 2018-07-26 06:03:57
End at: 2018-07-26 06:04:27
Local clock offset: 0.102 ms
Remote clock offset: -0.356 ms

# Below is generated by plot.py at 2018-07-26 11:32:22
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.44 Mbit/s
  95th percentile per-packet one-way delay: 61.702 ms
  Loss rate: 0.57%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 61.707 ms
  Loss rate: 0.38%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 61.634 ms
  Loss rate: 0.61%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 61.954 ms
  Loss rate: 1.08%
Run 4: Report of SCReAM — Data Link

Throughput (Mb/s) vs Time (s)

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

Per-packet one way delay (ms)

- Flow 1 (95th percentile 61.71 ms)
- Flow 2 (95th percentile 61.63 ms)
- Flow 3 (95th percentile 61.95 ms)
Run 5: Statistics of SCReAM

Start at: 2018-07-26 06:28:55
End at: 2018-07-26 06:29:25
Local clock offset: 0.148 ms
Remote clock offset: 1.124 ms

# Below is generated by plot.py at 2018-07-26 11:32:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 60.285 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 60.329 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 60.249 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 60.144 ms
Loss rate: 1.08%
Run 6: Statistics of SCReAM

Start at: 2018-07-26 06:54:10
End at: 2018-07-26 06:54:40
Local clock offset: 0.197 ms
Remote clock offset: -0.472 ms

# Below is generated by plot.py at 2018-07-26 11:32:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 61.754 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.768 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.664 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.389 ms
Loss rate: 1.08%
Run 6: Report of SCReAM — Data Link

![Graph](image1.png)

![Graph](image2.png)
Run 7: Statistics of SCReAM

Start at: 2018-07-26 07:19:27
End at: 2018-07-26 07:19:57
Local clock offset: 0.269 ms
Remote clock offset: 1.333 ms

# Below is generated by plot.py at 2018-07-26 11:32:22
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.44 Mbit/s
  95th percentile per-packet one-way delay: 59.980 ms
  Loss rate: 0.57%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 60.000 ms
  Loss rate: 0.38%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 59.844 ms
  Loss rate: 0.61%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 59.827 ms
  Loss rate: 1.08%
Run 7: Report of SCReAM — Data Link

![Graph 1: Throughput (Mbps)]

![Graph 2: Per-packet round-trip delay (ms)]
Run 8: Statistics of SCReAM

Start at: 2018-07-26 07:44:39
End at: 2018-07-26 07:45:09
Local clock offset: 0.294 ms
Remote clock offset: -0.116 ms

# Below is generated by plot.py at 2018-07-26 11:32:22
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 61.561 ms
  Loss rate: 0.57%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 61.579 ms
  Loss rate: 0.38%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 61.427 ms
  Loss rate: 0.61%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 61.436 ms
  Loss rate: 1.08%
Run 8: Report of SCReAM — Data Link

Throughput (Mbps)

Time (s)

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

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 61.58 ms)  Flow 2 (95th percentile 61.43 ms)  Flow 3 (95th percentile 61.44 ms)
Run 9: Statistics of SCReAM

Start at: 2018-07-26 08:09:46
End at: 2018-07-26 08:10:16
Local clock offset: 0.275 ms
Remote clock offset: -0.079 ms

# Below is generated by plot.py at 2018-07-26 11:32:22
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 61.671 ms
  Loss rate: 0.64%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 61.704 ms
  Loss rate: 0.38%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 61.274 ms
  Loss rate: 0.61%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 61.016 ms
  Loss rate: 1.45%
Run 9: Report of SCReAM — Data Link
Run 10: Statistics of SCReAM

Start at: 2018-07-26 08:34:52
End at: 2018-07-26 08:35:22
Local clock offset: 0.281 ms
Remote clock offset: -0.186 ms

# Below is generated by plot.py at 2018-07-26 11:32:22
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.44 Mbit/s
  95th percentile per-packet one-way delay: 61.645 ms
  Loss rate: 0.57%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 61.394 ms
  Loss rate: 0.38%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 61.414 ms
  Loss rate: 0.61%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 61.692 ms
  Loss rate: 1.08%
Run 10: Report of SCReAM — Data Link

![Graph 1](image1)

![Graph 2](image2)
Run 1: Statistics of Sprout

Start at: 2018-07-26 04:55:40
End at: 2018-07-26 04:56:10
Local clock offset: 0.012 ms
Remote clock offset: 0.035 ms

# Below is generated by plot.py at 2018-07-26 11:32:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.85 Mbit/s
95th percentile per-packet one-way delay: 61.498 ms
Loss rate: 0.22%

-- Flow 1:
Average throughput: 1.28 Mbit/s
95th percentile per-packet one-way delay: 61.511 ms
Loss rate: 0.09%

-- Flow 2:
Average throughput: 0.42 Mbit/s
95th percentile per-packet one-way delay: 61.414 ms
Loss rate: 0.58%

-- Flow 3:
Average throughput: 0.89 Mbit/s
95th percentile per-packet one-way delay: 61.516 ms
Loss rate: 0.40%
Run 1: Report of Sprout — Data Link

Throughput (Mbps):

Time (s):

Flow 1 ingress (mean 1.27 Mbps)
Flow 1 egress (mean 1.28 Mbps)
Flow 2 ingress (mean 0.42 Mbps)
Flow 2 egress (mean 0.42 Mbps)
Flow 3 ingress (mean 0.89 Mbps)
Flow 3 egress (mean 0.89 Mbps)

Per-packet one-way delay (ms):

Flow 1 (95th percentile 61.51 ms)
Flow 2 (95th percentile 61.41 ms)
Flow 3 (95th percentile 61.52 ms)
Run 2: Statistics of Sprout

Start at: 2018-07-26 05:20:54
End at: 2018-07-26 05:21:24
Local clock offset: -0.081 ms
Remote clock offset: -0.02 ms

# Below is generated by plot.py at 2018-07-26 11:32:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.63 Mbit/s
95th percentile per-packet one-way delay: 61.337 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 0.89 Mbit/s
95th percentile per-packet one-way delay: 61.323 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 0.51 Mbit/s
95th percentile per-packet one-way delay: 61.376 ms
Loss rate: 0.49%
-- Flow 3:
Average throughput: 1.24 Mbit/s
95th percentile per-packet one-way delay: 61.296 ms
Loss rate: 0.76%
Run 2: Report of Sprout — Data Link

Throughput (Mb/s)

Flow 1 ingress (mean 0.89 Mb/s)
Flow 1 egress (mean 0.89 Mb/s)
Flow 2 ingress (mean 0.51 Mb/s)
Flow 2 egress (mean 0.51 Mb/s)
Flow 3 ingress (mean 1.24 Mb/s)
Flow 3 egress (mean 1.24 Mb/s)

Per packet one way delay (ms)

Flow 1 (95th percentile 61.32 ms)
Flow 2 (95th percentile 61.38 ms)
Flow 3 (95th percentile 61.30 ms)
Run 3: Statistics of Sprout

Start at: 2018-07-26 05:45:55
End at: 2018-07-26 05:46:25
Local clock offset: 0.046 ms
Remote clock offset: 0.038 ms

# Below is generated by plot.py at 2018-07-26 11:32:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.60 Mbit/s
95th percentile per-packet one-way delay: 61.908 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 0.30 Mbit/s
95th percentile per-packet one-way delay: 61.476 ms
Loss rate: 0.53%
-- Flow 2:
Average throughput: 4.62 Mbit/s
95th percentile per-packet one-way delay: 61.944 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 0.72 Mbit/s
95th percentile per-packet one-way delay: 61.410 ms
Loss rate: 0.51%
Run 3: Report of Sprout — Data Link

![Graphs showing network performance data over time]
Run 4: Statistics of Sprout

Start at: 2018-07-26 06:11:01
End at: 2018-07-26 06:11:31
Local clock offset: 0.104 ms
Remote clock offset: -0.082 ms

# Below is generated by plot.py at 2018-07-26 11:32:22
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 2.11 Mbit/s
  95th percentile per-packet one-way delay: 61.951 ms
  Loss rate: 0.09%
-- Flow 1:
  Average throughput: 0.46 Mbit/s
  95th percentile per-packet one-way delay: 61.468 ms
  Loss rate: 0.18%
-- Flow 2:
  Average throughput: 2.32 Mbit/s
  95th percentile per-packet one-way delay: 62.041 ms
  Loss rate: 0.05%
-- Flow 3:
  Average throughput: 0.34 Mbit/s
  95th percentile per-packet one-way delay: 61.418 ms
  Loss rate: 0.31%
Run 4: Report of Sprout — Data Link
Run 5: Statistics of Sprout

Start at: 2018-07-26 06:36:06
End at: 2018-07-26 06:36:36
Local clock offset: 0.179 ms
Remote clock offset: -0.094 ms

# Below is generated by plot.py at 2018-07-26 11:32:22
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 3.83 Mbit/s
  95th percentile per-packet one-way delay: 61.701 ms
  Loss rate: 0.22%
-- Flow 1:
  Average throughput: 2.52 Mbit/s
  95th percentile per-packet one-way delay: 61.708 ms
  Loss rate: 0.16%
-- Flow 2:
  Average throughput: 0.82 Mbit/s
  95th percentile per-packet one-way delay: 61.542 ms
  Loss rate: 0.08%
-- Flow 3:
  Average throughput: 2.37 Mbit/s
  95th percentile per-packet one-way delay: 61.757 ms
  Loss rate: 0.50%
Run 5: Report of Sprout — Data Link
Run 6: Statistics of Sprout

Start at: 2018-07-26 07:01:21
End at: 2018-07-26 07:01:51
Local clock offset: 0.195 ms
Remote clock offset: -0.083 ms

# Below is generated by plot.py at 2018-07-26 11:32:22
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 5.74 Mbit/s
  95th percentile per-packet one-way delay: 62.188 ms
  Loss rate: 0.64%
-- Flow 1:
  Average throughput: 0.55 Mbit/s
  95th percentile per-packet one-way delay: 61.608 ms
  Loss rate: 0.23%
-- Flow 2:
  Average throughput: 6.30 Mbit/s
  95th percentile per-packet one-way delay: 62.245 ms
  Loss rate: 0.83%
-- Flow 3:
  Average throughput: 3.12 Mbit/s
  95th percentile per-packet one-way delay: 61.941 ms
  Loss rate: 0.04%
Run 6: Report of Sprout — Data Link

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

- Flow 1 ingress (mean 0.55 Mbit/s)
- Flow 1 egress (mean 0.55 Mbit/s)
- Flow 2 ingress (mean 6.30 Mbit/s)
- Flow 2 egress (mean 6.30 Mbit/s)
- Flow 3 ingress (mean 3.09 Mbit/s)
- Flow 3 egress (mean 3.12 Mbit/s)
Run 7: Statistics of Sprout

Start at: 2018-07-26 07:26:35
End at: 2018-07-26 07:27:05
Local clock offset: 0.271 ms
Remote clock offset: -0.237 ms

# Below is generated by plot.py at 2018-07-26 11:32:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.35 Mbit/s
95th percentile per-packet one-way delay: 61.831 ms
Loss rate: 0.21%
-- Flow 1:
Average throughput: 0.79 Mbit/s
95th percentile per-packet one-way delay: 61.862 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 0.49 Mbit/s
95th percentile per-packet one-way delay: 61.764 ms
Loss rate: 0.50%
-- Flow 3:
Average throughput: 0.73 Mbit/s
95th percentile per-packet one-way delay: 61.740 ms
Loss rate: 0.35%
Run 7: Report of Sprout — Data Link

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

- **Flow 1 ingress (mean 0.79 Mbps)**
- **Flow 1 egress (mean 0.79 Mbps)**
- **Flow 2 ingress (mean 0.49 Mbps)**
- **Flow 2 egress (mean 0.49 Mbps)**
- **Flow 3 ingress (mean 0.72 Mbps)**
- **Flow 3 egress (mean 0.73 Mbps)**

![Graph of Per Packet One Way Delay (ms) over Time (s)]

- **Flow 1 (95th percentile 61.86 ms)**
- **Flow 2 (95th percentile 61.76 ms)**
- **Flow 3 (95th percentile 61.74 ms)**
Run 8: Statistics of Sprout

Start at: 2018-07-26 07:51:43
End at: 2018-07-26 07:52:13
Local clock offset: 0.289 ms
Remote clock offset: -0.214 ms

# Below is generated by plot.py at 2018-07-26 11:32:22
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 2.58 Mbit/s
  95th percentile per-packet one-way delay: 61.725 ms
  Loss rate: 0.14%
-- Flow 1:
  Average throughput: 2.01 Mbit/s
  95th percentile per-packet one-way delay: 61.753 ms
  Loss rate: 0.11%
-- Flow 2:
  Average throughput: 0.49 Mbit/s
  95th percentile per-packet one-way delay: 61.467 ms
  Loss rate: 0.25%
-- Flow 3:
  Average throughput: 0.76 Mbit/s
  95th percentile per-packet one-way delay: 61.643 ms
  Loss rate: 0.15%
Run 8: Report of Sprout — Data Link
Run 9: Statistics of Sprout

Start at: 2018-07-26 08:17:01
End at: 2018-07-26 08:17:31
Local clock offset: 0.301 ms
Remote clock offset: -0.183 ms

# Below is generated by plot.py at 2018-07-26 11:32:22
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 2.68 Mbit/s
  95th percentile per-packet one-way delay: 61.747 ms
  Loss rate: 0.16%
-- Flow 1:
  Average throughput: 2.04 Mbit/s
  95th percentile per-packet one-way delay: 61.783 ms
  Loss rate: 0.15%
-- Flow 2:
  Average throughput: 0.80 Mbit/s
  95th percentile per-packet one-way delay: 61.681 ms
  Loss rate: 0.02%
-- Flow 3:
  Average throughput: 0.35 Mbit/s
  95th percentile per-packet one-way delay: 61.661 ms
  Loss rate: 0.99%
Run 10: Statistics of Sprout

Start at: 2018-07-26 08:41:57
End at: 2018-07-26 08:42:27
Local clock offset: 0.308 ms
Remote clock offset: 0.164 ms

# Below is generated by plot.py at 2018-07-26 11:32:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.21 Mbit/s
95th percentile per-packet one-way delay: 61.253 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 1.03 Mbit/s
95th percentile per-packet one-way delay: 61.177 ms
Loss rate: 0.15%
-- Flow 2:
Average throughput: 0.99 Mbit/s
95th percentile per-packet one-way delay: 61.360 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 1.59 Mbit/s
95th percentile per-packet one-way delay: 61.094 ms
Loss rate: 0.83%
Run 10: Report of Sprout — Data Link

![Graph showing network traffic and latency over time]
Run 1: Statistics of TaoVA-100x

Start at: 2018-07-26 04:46:54
End at: 2018-07-26 04:47:24
Local clock offset: -0.041 ms
Remote clock offset: -0.051 ms

# Below is generated by plot.py at 2018-07-26 11:37:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 288.21 Mbit/s
95th percentile per-packet one-way delay: 63.745 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 216.59 Mbit/s
95th percentile per-packet one-way delay: 63.416 ms
Loss rate: 0.24%
-- Flow 2:
Average throughput: 43.68 Mbit/s
95th percentile per-packet one-way delay: 64.316 ms
Loss rate: 1.17%
-- Flow 3:
Average throughput: 129.26 Mbit/s
95th percentile per-packet one-way delay: 64.465 ms
Loss rate: 1.04%
Run 1: Report of TaoVA-100x — Data Link

![Graph 1: Throughput](image1)

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

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Run 2: Statistics of TaoVA-100x

Start at: 2018-07-26 05:12:16
End at: 2018-07-26 05:12:46
Local clock offset: -0.038 ms
Remote clock offset: -0.311 ms

# Below is generated by plot.py at 2018-07-26 11:38:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 310.23 Mbit/s
95th percentile per-packet one-way delay: 67.902 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 204.18 Mbit/s
95th percentile per-packet one-way delay: 70.407 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 94.09 Mbit/s
95th percentile per-packet one-way delay: 63.053 ms
Loss rate: 1.15%
-- Flow 3:
Average throughput: 132.62 Mbit/s
95th percentile per-packet one-way delay: 65.605 ms
Loss rate: 2.06%
Run 2: Report of TaoVA-100x — Data Link

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

**Throughput (Mbps)**

- Flow 1 Ingress (mean 204.16 Mbps)
- Flow 1 Egress (mean 204.18 Mbps)
- Flow 2 Ingress (mean 94.59 Mbps)
- Flow 2 Egress (mean 94.09 Mbps)
- Flow 3 Ingress (mean 133.23 Mbps)
- Flow 3 Egress (mean 132.62 Mbps)

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

- Flow 1 (95th percentile 70.41 ms)
- Flow 2 (95th percentile 63.05 ms)
- Flow 3 (95th percentile 65.61 ms)
Run 3: Statistics of TaoVA-100x

Start at: 2018-07-26 05:37:16
End at: 2018-07-26 05:37:46
Local clock offset: -0.012 ms
Remote clock offset: -0.202 ms

# Below is generated by plot.py at 2018-07-26 11:38:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 279.35 Mbit/s
95th percentile per-packet one-way delay: 68.113 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 220.80 Mbit/s
95th percentile per-packet one-way delay: 68.206 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 55.75 Mbit/s
95th percentile per-packet one-way delay: 67.599 ms
Loss rate: 0.15%
-- Flow 3:
Average throughput: 65.19 Mbit/s
95th percentile per-packet one-way delay: 67.936 ms
Loss rate: 0.26%
Run 3: Report of TaoVA-100x — Data Link

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

![Graph 2: Per-packet one way delay vs. Time (ms)]
Run 4: Statistics of TaoVA-100x

Start at: 2018-07-26 06:02:20
End at: 2018-07-26 06:02:50
Local clock offset: 0.073 ms
Remote clock offset: 0.131 ms

# Below is generated by plot.py at 2018-07-26 11:38:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 298.64 Mbit/s
95th percentile per-packet one-way delay: 64.856 ms
Loss rate: 0.74%
-- Flow 1:
Average throughput: 152.45 Mbit/s
95th percentile per-packet one-way delay: 63.121 ms
Loss rate: 0.55%
-- Flow 2:
Average throughput: 153.14 Mbit/s
95th percentile per-packet one-way delay: 66.458 ms
Loss rate: 0.44%
-- Flow 3:
Average throughput: 135.81 Mbit/s
95th percentile per-packet one-way delay: 65.004 ms
Loss rate: 2.04%
Run 4: Report of TaoVA-100x — Data Link

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

- **Throughput** (Mbps):
  - Flow 1 ingress (mean 152.67 Mbps)
  - Flow 1 egress (mean 152.45 Mbps)
  - Flow 2 ingress (mean 152.34 Mbps)
  - Flow 2 egress (mean 153.14 Mbps)
  - Flow 3 ingress (mean 136.90 Mbps)
  - Flow 3 egress (mean 135.61 Mbps)

- **Packet delay (ms):**
  - Flow 1 (95th percentile 63.12 ms)
  - Flow 2 (95th percentile 66.46 ms)
  - Flow 3 (95th percentile 65.00 ms)
Run 5: Statistics of TaoVA-100x

Start at: 2018-07-26 06:27:21
End at: 2018-07-26 06:27:51
Local clock offset: 0.13 ms
Remote clock offset: -0.103 ms

# Below is generated by plot.py at 2018-07-26 11:38:36
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 264.38 Mbit/s
  95th percentile per-packet one-way delay: 64.737 ms
  Loss rate: 0.19%
-- Flow 1:
  Average throughput: 173.92 Mbit/s
  95th percentile per-packet one-way delay: 63.649 ms
  Loss rate: 0.28%
-- Flow 2:
  Average throughput: 183.10 Mbit/s
  95th percentile per-packet one-way delay: 66.958 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 70.63 Mbit/s
  95th percentile per-packet one-way delay: 68.334 ms
  Loss rate: 0.00%
Run 5: Report of TaoVA-100x — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 173.71 Mbit/s)
Flow 2 ingress (mean 183.24 Mbit/s)
Flow 3 ingress (mean 70.74 Mbit/s)
Flow 1 egress (mean 173.92 Mbit/s)
Flow 2 egress (mean 183.10 Mbit/s)
Flow 3 egress (mean 70.63 Mbit/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 63.65 ms)
Flow 2 (95th percentile 66.96 ms)
Flow 3 (95th percentile 68.33 ms)
Run 6: Statistics of TaoVA-100x

Start at: 2018-07-26 06:52:32
End at: 2018-07-26 06:53:02
Local clock offset: 0.178 ms
Remote clock offset: 0.176 ms

# Below is generated by plot.py at 2018-07-26 11:39:43
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 321.27 Mbit/s
  95th percentile per-packet one-way delay: 64.050 ms
  Loss rate: 0.50%
-- Flow 1:
  Average throughput: 186.15 Mbit/s
  95th percentile per-packet one-way delay: 63.263 ms
  Loss rate: 0.32%
-- Flow 2:
  Average throughput: 143.98 Mbit/s
  95th percentile per-packet one-way delay: 64.348 ms
  Loss rate: 0.32%
-- Flow 3:
  Average throughput: 119.56 Mbit/s
  95th percentile per-packet one-way delay: 76.265 ms
  Loss rate: 1.77%
Run 6: Report of TaoVA-100x — Data Link

Throughput (Mb/s)

Time (s)

Flow 1 ingress (mean 185.98 Mb/s)
Flow 1 egress (mean 186.35 Mb/s)
Flow 2 ingress (mean 143.77 Mb/s)
Flow 2 egress (mean 143.98 Mb/s)
Flow 3 ingress (mean 120.21 Mb/s)
Flow 3 egress (mean 119.56 Mb/s)

Per-packet max delay (ms)

Time (s)

Flow 1 (95th percentile 63.26 ms)
Flow 2 (95th percentile 64.35 ms)
Flow 3 (95th percentile 76.27 ms)
Run 7: Statistics of TaoVA-100x

Start at: 2018-07-26 07:17:49
End at: 2018-07-26 07:18:19
Local clock offset: 0.253 ms
Remote clock offset: 0.144 ms

# Below is generated by plot.py at 2018-07-26 11:43:42
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 318.70 Mbit/s
  95th percentile per-packet one-way delay: 68.085 ms
  Loss rate: 0.55%
-- Flow 1:
  Average throughput: 184.26 Mbit/s
  95th percentile per-packet one-way delay: 65.467 ms
  Loss rate: 0.49%
-- Flow 2:
  Average throughput: 123.47 Mbit/s
  95th percentile per-packet one-way delay: 67.484 ms
  Loss rate: 0.07%
-- Flow 3:
  Average throughput: 158.93 Mbit/s
  95th percentile per-packet one-way delay: 74.079 ms
  Loss rate: 1.50%
Run 7: Report of TaoVA-100x — Data Link
Run 8: Statistics of TaoVA-100x

Start at: 2018-07-26 07:43:01
End at: 2018-07-26 07:43:31
Local clock offset: 0.235 ms
Remote clock offset: -0.16 ms

# Below is generated by plot.py at 2018-07-26 11:45:02
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 313.99 Mbit/s
  95th percentile per-packet one-way delay: 65.632 ms
  Loss rate: 0.52%
-- Flow 1:
  Average throughput: 198.02 Mbit/s
  95th percentile per-packet one-way delay: 65.051 ms
  Loss rate: 0.47%
-- Flow 2:
  Average throughput: 140.64 Mbit/s
  95th percentile per-packet one-way delay: 66.776 ms
  Loss rate: 0.68%
-- Flow 3:
  Average throughput: 68.20 Mbit/s
  95th percentile per-packet one-way delay: 65.379 ms
  Loss rate: 0.21%
Run 8: Report of TaoVA-100x — Data Link

[Two graphs showing network performance metrics over time, including throughput and per-packet one-way delay.]
Run 9: Statistics of TaoVA-100x

Start at: 2018-07-26 08:08:05
End at: 2018-07-26 08:08:35
Local clock offset: 0.269 ms
Remote clock offset: 1.062 ms

# Below is generated by plot.py at 2018-07-26 11:50:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 331.31 Mbit/s
95th percentile per-packet one-way delay: 66.545 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 200.63 Mbit/s
95th percentile per-packet one-way delay: 65.302 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 132.54 Mbit/s
95th percentile per-packet one-way delay: 68.939 ms
Loss rate: 0.78%
-- Flow 3:
Average throughput: 129.16 Mbit/s
95th percentile per-packet one-way delay: 66.521 ms
Loss rate: 1.48%
Run 9: Report of TaoVA-100x — Data Link

![Graph showing network throughput and packet delay over time for different flows.](image)
Run 10: Statistics of TaoVA-100x

Start at: 2018-07-26 08:33:16
End at: 2018-07-26 08:33:46
Local clock offset: 0.303 ms
Remote clock offset: -0.113 ms

# Below is generated by plot.py at 2018-07-26 11:50:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 293.17 Mbit/s
95th percentile per-packet one-way delay: 65.981 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 154.52 Mbit/s
95th percentile per-packet one-way delay: 64.783 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 141.31 Mbit/s
95th percentile per-packet one-way delay: 67.061 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 136.21 Mbit/s
95th percentile per-packet one-way delay: 66.641 ms
Loss rate: 1.35%
Run 10: Report of TaoVA-100x — Data Link

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

- Flow 1 ingress (mean 154.59 Mbit/s)
- Flow 1 egress (mean 154.52 Mbit/s)
- Flow 2 ingress (mean 141.63 Mbit/s)
- Flow 2 egress (mean 141.31 Mbit/s)
- Flow 3 ingress (mean 136.51 Mbit/s)
- Flow 3 egress (mean 136.21 Mbit/s)

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

- Flow 1 (95th percentile 64.78 ms)
- Flow 2 (95th percentile 67.06 ms)
- Flow 3 (95th percentile 66.64 ms)
Run 1: Statistics of TCP Vegas

Start at: 2018-07-26 04:54:13
End at: 2018-07-26 04:54:43
Local clock offset: -0.022 ms
Remote clock offset: 0.33 ms

# Below is generated by plot.py at 2018-07-26 11:50:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 324.47 Mbit/s
95th percentile per-packet one-way delay: 89.309 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 181.75 Mbit/s
95th percentile per-packet one-way delay: 90.164 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 137.30 Mbit/s
95th percentile per-packet one-way delay: 87.526 ms
Loss rate: 0.67%
-- Flow 3:
Average throughput: 156.13 Mbit/s
95th percentile per-packet one-way delay: 91.243 ms
Loss rate: 1.59%
Run 1: Report of TCP Vegas — Data Link

![Graphs showing throughput and packet round-trip time for different flow types and times.]

- Flow 1 ingress (mean 181.84 Mbit/s)
- Flow 1 egress (mean 181.75 Mbit/s)
- Flow 2 ingress (mean 137.37 Mbit/s)
- Flow 2 egress (mean 137.30 Mbit/s)
- Flow 3 ingress (mean 156.69 Mbit/s)
- Flow 3 egress (mean 156.13 Mbit/s)

- Flow 1 (95th percentile 90.16 ms)
- Flow 2 (95th percentile 87.53 ms)
- Flow 3 (95th percentile 91.24 ms)
Run 2: Statistics of TCP Vegas

Start at: 2018-07-26 05:19:35
End at: 2018-07-26 05:20:05
Local clock offset: -0.05 ms
Remote clock offset: -0.159 ms

# Below is generated by plot.py at 2018-07-26 11:50:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 177.16 Mbit/s
95th percentile per-packet one-way delay: 73.126 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 52.95 Mbit/s
95th percentile per-packet one-way delay: 67.502 ms
Loss rate: 0.46%
-- Flow 2:
Average throughput: 185.22 Mbit/s
95th percentile per-packet one-way delay: 75.025 ms
Loss rate: 0.65%
-- Flow 3:
Average throughput: 3.52 Mbit/s
95th percentile per-packet one-way delay: 66.622 ms
Loss rate: 2.90%
Run 2: Report of TCP Vegas — Data Link
Run 3: Statistics of TCP Vegas

Start at: 2018-07-26 05:44:36
End at: 2018-07-26 05:45:06
Local clock offset: 0.034 ms
Remote clock offset: 0.162 ms

# Below is generated by plot.py at 2018-07-26 11:50:00
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 193.13 Mbit/s
  95th percentile per-packet one-way delay: 71.717 ms
  Loss rate: 0.45%
-- Flow 1:
  Average throughput: 187.75 Mbit/s
  95th percentile per-packet one-way delay: 71.769 ms
  Loss rate: 0.43%
-- Flow 2:
  Average throughput: 6.37 Mbit/s
  95th percentile per-packet one-way delay: 66.198 ms
  Loss rate: 0.94%
-- Flow 3:
  Average throughput: 3.82 Mbit/s
  95th percentile per-packet one-way delay: 66.857 ms
  Loss rate: 2.74%
Run 3: Report of TCP Vegas — Data Link
Run 4: Statistics of TCP Vegas

Start at: 2018-07-26 06:09:40
End at: 2018-07-26 06:10:10
Local clock offset: 0.119 ms
Remote clock offset: -1.308 ms

# Below is generated by plot.py at 2018-07-26 11:50:00
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 237.31 Mbit/s
  95th percentile per-packet one-way delay: 73.504 ms
  Loss rate: 0.58%
-- Flow 1:
  Average throughput: 189.21 Mbit/s
  95th percentile per-packet one-way delay: 73.873 ms
  Loss rate: 0.43%
-- Flow 2:
  Average throughput: 23.72 Mbit/s
  95th percentile per-packet one-way delay: 69.833 ms
  Loss rate: 0.70%
-- Flow 3:
  Average throughput: 98.36 Mbit/s
  95th percentile per-packet one-way delay: 70.456 ms
  Loss rate: 1.37%
Run 4: Report of TCP Vegas — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 189.28 Mbps)  Flow 1 egress (mean 189.21 Mbps)
Flow 2 ingress (mean 23.74 Mbps)  Flow 2 egress (mean 23.72 Mbps)
Flow 3 ingress (mean 98.49 Mbps)  Flow 3 egress (mean 98.36 Mbps)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 73.87 ms)  Flow 2 (95th percentile 69.63 ms)  Flow 3 (95th percentile 70.46 ms)
Run 5: Statistics of TCP Vegas

Start at: 2018-07-26 06:34:42
End at: 2018-07-26 06:35:12
Local clock offset: 0.138 ms
Remote clock offset: 0.18 ms

# Below is generated by plot.py at 2018-07-26 11:50:01
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 273.72 Mbit/s
  95th percentile per-packet one-way delay: 71.161 ms
  Loss rate: 0.42%
-- Flow 1:
  Average throughput: 187.83 Mbit/s
  95th percentile per-packet one-way delay: 71.512 ms
  Loss rate: 0.47%
-- Flow 2:
  Average throughput: 127.75 Mbit/s
  95th percentile per-packet one-way delay: 70.102 ms
  Loss rate: 0.28%
-- Flow 3:
  Average throughput: 3.43 Mbit/s
  95th percentile per-packet one-way delay: 67.683 ms
  Loss rate: 2.95%
Run 5: Report of TCP Vegas — Data Link
Run 6: Statistics of TCP Vegas

Start at: 2018-07-26 06:59:58
End at: 2018-07-26 07:00:28
Local clock offset: 0.199 ms
Remote clock offset: -0.364 ms

# Below is generated by plot.py at 2018-07-26 11:50:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 253.79 Mbit/s
95th percentile per-packet one-way delay: 72.249 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 130.15 Mbit/s
95th percentile per-packet one-way delay: 68.797 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 184.11 Mbit/s
95th percentile per-packet one-way delay: 73.380 ms
Loss rate: 0.72%
-- Flow 3:
Average throughput: 3.81 Mbit/s
95th percentile per-packet one-way delay: 68.167 ms
Loss rate: 2.41%
Run 7: Statistics of TCP Vegas

Start at: 2018-07-26 07:25:10
End at: 2018-07-26 07:25:40
Local clock offset: 0.217 ms
Remote clock offset: 0.389 ms

# Below is generated by plot.py at 2018-07-26 11:50:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 282.18 Mbit/s
95th percentile per-packet one-way delay: 70.382 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 155.69 Mbit/s
95th percentile per-packet one-way delay: 69.503 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 162.46 Mbit/s
95th percentile per-packet one-way delay: 70.863 ms
Loss rate: 0.30%
-- Flow 3:
Average throughput: 56.41 Mbit/s
95th percentile per-packet one-way delay: 70.480 ms
Loss rate: 1.39%
Run 7: Report of TCP Vegas — Data Link

![Graph 1: Throughput (Mbps)]

- Flow 1 ingress (mean 155.70 Mbps)
- Flow 2 ingress (mean 161.95 Mbps)
- Flow 3 ingress (mean 56.50 Mbps)
- Flow 1 egress (mean 155.69 Mbps)
- Flow 2 egress (mean 162.46 Mbps)
- Flow 3 egress (mean 56.41 Mbps)

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

- Flow 1 (95th percentile 69.50 ms)
- Flow 2 (95th percentile 70.86 ms)
- Flow 3 (95th percentile 70.48 ms)
Run 8: Statistics of TCP Vegas

Start at: 2018-07-26 07:50:24
End at: 2018-07-26 07:50:54
Local clock offset: 0.288 ms
Remote clock offset: -0.013 ms

# Below is generated by plot.py at 2018-07-26 11:50:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 194.18 Mbit/s
95th percentile per-packet one-way delay: 72.511 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 71.57 Mbit/s
95th percentile per-packet one-way delay: 69.900 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 183.32 Mbit/s
95th percentile per-packet one-way delay: 73.293 ms
Loss rate: 0.24%
-- Flow 3:
Average throughput: 3.37 Mbit/s
95th percentile per-packet one-way delay: 68.935 ms
Loss rate: 2.96%
Run 8: Report of TCP Vegas — Data Link
Run 9: Statistics of TCP Vegas

Start at: 2018-07-26 08:15:35
End at: 2018-07-26 08:16:05
Local clock offset: 0.266 ms
Remote clock offset: -1.383 ms

# Below is generated by plot.py at 2018-07-26 11:51:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 303.58 Mbit/s
95th percentile per-packet one-way delay: 75.404 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 187.11 Mbit/s
95th percentile per-packet one-way delay: 73.943 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 174.03 Mbit/s
95th percentile per-packet one-way delay: 77.229 ms
Loss rate: 0.21%
-- Flow 3:
Average throughput: 2.97 Mbit/s
95th percentile per-packet one-way delay: 133.727 ms
Loss rate: 2.88%
Run 9: Report of TCP Vegas — Data Link

![Graph 1](image1)

![Graph 2](image2)
Run 10: Statistics of TCP Vegas

Start at: 2018-07-26 08:40:35
End at: 2018-07-26 08:41:05
Local clock offset: 0.304 ms
Remote clock offset: -0.058 ms

# Below is generated by plot.py at 2018-07-26 11:51:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 241.62 Mbit/s
95th percentile per-packet one-way delay: 73.058 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 75.51 Mbit/s
95th percentile per-packet one-way delay: 70.447 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 163.84 Mbit/s
95th percentile per-packet one-way delay: 72.691 ms
Loss rate: 0.22%
-- Flow 3:
Average throughput: 173.83 Mbit/s
95th percentile per-packet one-way delay: 76.550 ms
Loss rate: 1.53%
Run 10: Report of TCP Vegas — Data Link
Run 1: Statistics of Verus

Start at: 2018-07-26 04:41:48
End at: 2018-07-26 04:42:18
Local clock offset: -0.046 ms
Remote clock offset: 0.126 ms

# Below is generated by plot.py at 2018-07-26 11:54:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 308.59 Mbit/s
95th percentile per-packet one-way delay: 181.056 ms
Loss rate: 3.83%
-- Flow 1:
Average throughput: 194.32 Mbit/s
95th percentile per-packet one-way delay: 190.215 ms
Loss rate: 4.49%
-- Flow 2:
Average throughput: 120.27 Mbit/s
95th percentile per-packet one-way delay: 171.396 ms
Loss rate: 1.58%
-- Flow 3:
Average throughput: 103.85 Mbit/s
95th percentile per-packet one-way delay: 168.052 ms
Loss rate: 5.23%
Run 1: Report of Verus — Data Link
Run 2: Statistics of Verus

Start at: 2018-07-26 05:07:01
End at: 2018-07-26 05:07:31
Local clock offset: -0.061 ms
Remote clock offset: -0.026 ms

# Below is generated by plot.py at 2018-07-26 11:55:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 345.99 Mbit/s
95th percentile per-packet one-way delay: 243.153 ms
Loss rate: 4.81%
-- Flow 1:
Average throughput: 209.88 Mbit/s
95th percentile per-packet one-way delay: 170.999 ms
Loss rate: 1.70%
-- Flow 2:
Average throughput: 133.40 Mbit/s
95th percentile per-packet one-way delay: 174.869 ms
Loss rate: 3.16%
-- Flow 3:
Average throughput: 144.59 Mbit/s
95th percentile per-packet one-way delay: 346.295 ms
Loss rate: 18.72%
Run 2: Report of Verus — Data Link
Run 3: Statistics of Verus

Start at: 2018-07-26 05:32:04
End at: 2018-07-26 05:32:34
Local clock offset: -0.034 ms
Remote clock offset: 0.126 ms

# Below is generated by plot.py at 2018-07-26 11:55:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 327.65 Mbit/s
95th percentile per-packet one-way delay: 185.580 ms
Loss rate: 1.88%
-- Flow 1:
Average throughput: 201.89 Mbit/s
95th percentile per-packet one-way delay: 161.595 ms
Loss rate: 1.26%
-- Flow 2:
Average throughput: 153.01 Mbit/s
95th percentile per-packet one-way delay: 191.328 ms
Loss rate: 3.09%
-- Flow 3:
Average throughput: 74.68 Mbit/s
95th percentile per-packet one-way delay: 311.195 ms
Loss rate: 1.87%
Run 3: Report of Verus — Data Link

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

- Flow 1 ingress (mean 203.05 Mbit/s)
- Flow 1 egress (mean 201.89 Mbit/s)
- Flow 2 ingress (mean 156.91 Mbit/s)
- Flow 2 egress (mean 153.01 Mbit/s)
- Flow 3 ingress (mean 74.98 Mbit/s)
- Flow 3 egress (mean 74.68 Mbit/s)

![Graph of packet inter-packet delay for different flows.]

- Flow 1 (95th percentile 161.59 ms)
- Flow 2 (95th percentile 191.33 ms)
- Flow 3 (95th percentile 311.19 ms)
Run 4: Statistics of Verus

Start at: 2018-07-26 05:57:07
End at: 2018-07-26 05:57:37
Local clock offset: 0.127 ms
Remote clock offset: 1.038 ms

# Below is generated by plot.py at 2018-07-26 11:56:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 356.04 Mbit/s
95th percentile per-packet one-way delay: 171.273 ms
Loss rate: 1.49%
-- Flow 1:
Average throughput: 210.44 Mbit/s
95th percentile per-packet one-way delay: 145.816 ms
Loss rate: 1.43%
-- Flow 2:
Average throughput: 174.13 Mbit/s
95th percentile per-packet one-way delay: 162.564 ms
Loss rate: 0.73%
-- Flow 3:
Average throughput: 92.42 Mbit/s
95th percentile per-packet one-way delay: 287.581 ms
Loss rate: 4.72%
Run 5: Statistics of Verus

End at: 2018-07-26 06:22:43
Local clock offset: 0.107 ms
Remote clock offset: -0.176 ms

# Below is generated by plot.py at 2018-07-26 11:56:41
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 309.08 Mbit/s
  95th percentile per-packet one-way delay: 154.390 ms
  Loss rate: 1.46%
-- Flow 1:
  Average throughput: 198.44 Mbit/s
  95th percentile per-packet one-way delay: 143.368 ms
  Loss rate: 0.71%
-- Flow 2:
  Average throughput: 129.98 Mbit/s
  95th percentile per-packet one-way delay: 141.300 ms
  Loss rate: 1.46%
-- Flow 3:
  Average throughput: 76.75 Mbit/s
  95th percentile per-packet one-way delay: 226.291 ms
  Loss rate: 6.98%
Run 5: Report of Verus — Data Link
Run 6: Statistics of Verus

Start at: 2018-07-26 06:47:24
End at: 2018-07-26 06:47:54
Local clock offset: 0.175 ms
Remote clock offset: -0.217 ms

# Below is generated by plot.py at 2018-07-26 11:56:55
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 322.89 Mbit/s
  95th percentile per-packet one-way delay: 238.069 ms
  Loss rate: 3.02%
-- Flow 1:
  Average throughput: 194.95 Mbit/s
  95th percentile per-packet one-way delay: 173.110 ms
  Loss rate: 1.10%
-- Flow 2:
  Average throughput: 172.01 Mbit/s
  95th percentile per-packet one-way delay: 293.694 ms
  Loss rate: 6.30%
-- Flow 3:
  Average throughput: 41.49 Mbit/s
  95th percentile per-packet one-way delay: 186.173 ms
  Loss rate: 1.53%
Run 6: Report of Verus — Data Link

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

**Throughput (Mbps):**
- Flow 1 ingress (mean 196.35 Mbps)
- Flow 1 egress (mean 194.95 Mbps)
- Flow 2 ingress (mean 183.26 Mbps)
- Flow 2 egress (mean 172.01 Mbps)
- Flow 3 ingress (mean 41.63 Mbps)
- Flow 3 egress (mean 41.49 Mbps)

**Packet Delay (ms):**
- Flow 1 (95th percentile 173.11 ms)
- Flow 2 (95th percentile 293.69 ms)
- Flow 3 (95th percentile 186.17 ms)
Run 7: Statistics of Verus

Start at: 2018-07-26 07:12:39
End at: 2018-07-26 07:13:09
Local clock offset: 0.213 ms
Remote clock offset: 1.209 ms

# Below is generated by plot.py at 2018-07-26 11:57:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 333.16 Mbit/s
95th percentile per-packet one-way delay: 204.731 ms
Loss rate: 2.67%
-- Flow 1:
Average throughput: 212.15 Mbit/s
95th percentile per-packet one-way delay: 202.561 ms
Loss rate: 2.65%
-- Flow 2:
Average throughput: 103.22 Mbit/s
95th percentile per-packet one-way delay: 192.520 ms
Loss rate: 2.14%
-- Flow 3:
Average throughput: 160.53 Mbit/s
95th percentile per-packet one-way delay: 228.449 ms
Loss rate: 3.44%
Run 7: Report of Verus — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 216.67 Mbit/s)  Flow 1 egress (mean 212.15 Mbit/s)
Flow 2 ingress (mean 104.83 Mbit/s)  Flow 2 egress (mean 103.22 Mbit/s)
Flow 3 ingress (mean 166.30 Mbit/s)  Flow 3 egress (mean 160.53 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 202.56 ms)  Flow 2 (95th percentile 192.52 ms)  Flow 3 (95th percentile 228.45 ms)
Run 8: Statistics of Verus

Start at: 2018-07-26 07:37:56
End at: 2018-07-26 07:38:26
Local clock offset: 0.225 ms
Remote clock offset: 1.176 ms

# Below is generated by plot.py at 2018-07-26 11:58:53
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 313.62 Mbit/s
  95th percentile per-packet one-way delay: 181.035 ms
  Loss rate: 1.82%
-- Flow 1:
  Average throughput: 195.14 Mbit/s
  95th percentile per-packet one-way delay: 158.939 ms
  Loss rate: 0.67%
-- Flow 2:
  Average throughput: 132.73 Mbit/s
  95th percentile per-packet one-way delay: 225.680 ms
  Loss rate: 3.03%
-- Flow 3:
  Average throughput: 92.40 Mbit/s
  95th percentile per-packet one-way delay: 192.630 ms
  Loss rate: 5.47%
Run 8: Report of Verus — Data Link

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

- Flow 1 ingress (mean 195.86 Mbps)
- Flow 1 egress (mean 195.14 Mbps)
- Flow 2 ingress (mean 135.96 Mbps)
- Flow 2 egress (mean 132.73 Mbps)
- Flow 3 ingress (mean 96.47 Mbps)
- Flow 3 egress (mean 92.40 Mbps)

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

- Flow 1 (95th percentile 158.94 ms)
- Flow 2 (95th percentile 225.68 ms)
- Flow 3 (95th percentile 192.63 ms)
Run 9: Statistics of Verus

Start at: 2018-07-26 08:03:02
End at: 2018-07-26 08:03:33
Local clock offset: 0.289 ms
Remote clock offset: -0.165 ms

# Below is generated by plot.py at 2018-07-26 12:01:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 339.31 Mbit/s
95th percentile per-packet one-way delay: 196.472 ms
Loss rate: 1.38%
-- Flow 1:
Average throughput: 210.80 Mbit/s
95th percentile per-packet one-way delay: 179.854 ms
Loss rate: 0.78%
-- Flow 2:
Average throughput: 131.57 Mbit/s
95th percentile per-packet one-way delay: 192.000 ms
Loss rate: 1.62%
-- Flow 3:
Average throughput: 126.28 Mbit/s
95th percentile per-packet one-way delay: 247.431 ms
Loss rate: 3.87%
Run 9: Report of Verus — Data Link

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

Legend:
- Flow 1 ingress (mean 212.06 Mbit/s)
- Flow 1 egress (mean 210.80 Mbit/s)
- Flow 2 ingress (mean 132.48 Mbit/s)
- Flow 2 egress (mean 131.57 Mbit/s)
- Flow 3 ingress (mean 132.49 Mbit/s)
- Flow 3 egress (mean 126.28 Mbit/s)

- Flow 1 (95th percentile 179.85 ms)
- Flow 2 (95th percentile 192.00 ms)
- Flow 3 (95th percentile 247.43 ms)
Run 10: Statistics of Verus

Start at: 2018-07-26 08:28:19
End at: 2018-07-26 08:28:49
Local clock offset: 0.31 ms
Remote clock offset: -0.095 ms

# Below is generated by plot.py at 2018-07-26 12:01:59
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 325.28 Mbit/s
  95th percentile per-packet one-way delay: 179.253 ms
  Loss rate: 1.27%
-- Flow 1:
  Average throughput: 177.39 Mbit/s
  95th percentile per-packet one-way delay: 140.884 ms
  Loss rate: 1.02%
-- Flow 2:
  Average throughput: 180.72 Mbit/s
  95th percentile per-packet one-way delay: 173.549 ms
  Loss rate: 1.48%
-- Flow 3:
  Average throughput: 85.09 Mbit/s
  95th percentile per-packet one-way delay: 300.800 ms
  Loss rate: 2.00%
Run 10: Report of Verus — Data Link

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

- Flow 1 ingress (mean 178.47 Mbit/s)
- Flow 1 egress (mean 177.39 Mbit/s)
- Flow 2 ingress (mean 182.32 Mbit/s)
- Flow 2 egress (mean 160.72 Mbit/s)
- Flow 3 ingress (mean 85.75 Mbit/s)
- Flow 3 egress (mean 85.09 Mbit/s)

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

- Flow 1 (95th percentile 140.88 ms)
- Flow 2 (95th percentile 173.55 ms)
- Flow 3 (95th percentile 300.80 ms)
Run 1: Statistics of PCC-Vivace

Start at: 2018-07-26 04:49:38
End at: 2018-07-26 04:50:08
Local clock offset: -0.008 ms
Remote clock offset: 0.166 ms

# Below is generated by plot.py at 2018-07-26 12:05:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 466.70 Mbit/s
95th percentile per-packet one-way delay: 125.682 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 293.73 Mbit/s
95th percentile per-packet one-way delay: 123.656 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 233.06 Mbit/s
95th percentile per-packet one-way delay: 160.395 ms
Loss rate: 0.78%
-- Flow 3:
Average throughput: 55.92 Mbit/s
95th percentile per-packet one-way delay: 61.377 ms
Loss rate: 2.46%
Run 1: Report of PCC-Vivace — Data Link

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

- **Flow 1** ingress (mean 293.60 Mbit/s)
- **Flow 1** egress (mean 293.73 Mbit/s)
- **Flow 2** ingress (mean 233.45 Mbit/s)
- **Flow 2** egress (mean 233.06 Mbit/s)
- **Flow 3** ingress (mean 56.62 Mbit/s)
- **Flow 3** egress (mean 55.92 Mbit/s)

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

- **Flow 1** (95th percentile 123.66 ms)
- **Flow 2** (95th percentile 160.48 ms)
- **Flow 3** (95th percentile 61.38 ms)
Run 2: Statistics of PCC-Vivace

Start at: 2018-07-26 05:15:03
End at: 2018-07-26 05:15:33
Local clock offset: -0.019 ms
Remote clock offset: -0.352 ms

# Below is generated by plot.py at 2018-07-26 12:06:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 481.04 Mbit/s
95th percentile per-packet one-way delay: 177.668 ms
Loss rate: 1.40%
-- Flow 1:
Average throughput: 276.18 Mbit/s
95th percentile per-packet one-way delay: 211.579 ms
Loss rate: 1.93%
-- Flow 2:
Average throughput: 267.56 Mbit/s
95th percentile per-packet one-way delay: 104.857 ms
Loss rate: 0.55%
-- Flow 3:
Average throughput: 83.39 Mbit/s
95th percentile per-packet one-way delay: 62.246 ms
Loss rate: 1.52%
Run 2: Report of PCC-Vivace — Data Link
Run 3: Statistics of PCC-Vivace

Start at: 2018-07-26 05:40:00
End at: 2018-07-26 05:40:30
Local clock offset: -0.004 ms
Remote clock offset: 0.026 ms

# Below is generated by plot.py at 2018-07-26 12:06:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 469.01 Mbit/s
95th percentile per-packet one-way delay: 176.491 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 268.89 Mbit/s
95th percentile per-packet one-way delay: 214.233 ms
Loss rate: 0.91%
-- Flow 2:
Average throughput: 220.23 Mbit/s
95th percentile per-packet one-way delay: 67.312 ms
Loss rate: 0.68%
-- Flow 3:
Average throughput: 164.82 Mbit/s
95th percentile per-packet one-way delay: 64.847 ms
Loss rate: 1.25%
Run 3: Report of PCC-Vivace — Data Link

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

Start at: 2018-07-26 06:05:06
End at: 2018-07-26 06:05:36
Local clock offset: 0.083 ms
Remote clock offset: -0.226 ms

# Below is generated by plot.py at 2018-07-26 12:06:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 430.57 Mbit/s
95th percentile per-packet one-way delay: 77.488 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 246.04 Mbit/s
95th percentile per-packet one-way delay: 73.546 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 276.73 Mbit/s
95th percentile per-packet one-way delay: 82.669 ms
Loss rate: 0.67%
-- Flow 3:
Average throughput: 2.69 Mbit/s
95th percentile per-packet one-way delay: 61.649 ms
Loss rate: 1.71%
Run 4: Report of PCC-Vivace — Data Link

![Graph of data link throughput and packet loss delay over time.]

- Flow 1 ingress (mean 246.02 Mbit/s) & Flow 1 egress (mean 246.04 Mbit/s)
- Flow 2 ingress (mean 276.87 Mbit/s) & Flow 2 egress (mean 276.73 Mbit/s)
- Flow 3 ingress (mean 2.71 Mbit/s) & Flow 3 egress (mean 2.69 Mbit/s)
Run 5: Statistics of PCC-Vivace

Start at: 2018-07-26 06:30:04
End at: 2018-07-26 06:30:34
Local clock offset: 0.134 ms
Remote clock offset: -0.06 ms

# Below is generated by plot.py at 2018-07-26 12:09:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 554.57 Mbit/s
95th percentile per-packet one-way delay: 85.257 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 319.97 Mbit/s
95th percentile per-packet one-way delay: 69.031 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 273.61 Mbit/s
95th percentile per-packet one-way delay: 144.415 ms
Loss rate: 1.04%
-- Flow 3:
Average throughput: 161.91 Mbit/s
95th percentile per-packet one-way delay: 94.065 ms
Loss rate: 1.89%
Run 5: Report of PCC-Vivace — Data Link
Run 6: Statistics of PCC-Vivace

Start at: 2018-07-26 06:55:19
End at: 2018-07-26 06:55:49
Local clock offset: 0.181 ms
Remote clock offset: -0.363 ms

# Below is generated by plot.py at 2018-07-26 12:09:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 490.94 Mbit/s
95th percentile per-packet one-way delay: 201.780 ms
Loss rate: 1.21%
-- Flow 1:
Average throughput: 313.66 Mbit/s
95th percentile per-packet one-way delay: 209.088 ms
Loss rate: 1.34%
-- Flow 2:
Average throughput: 193.11 Mbit/s
95th percentile per-packet one-way delay: 63.538 ms
Loss rate: 0.71%
-- Flow 3:
Average throughput: 150.20 Mbit/s
95th percentile per-packet one-way delay: 63.621 ms
Loss rate: 1.67%
Run 6: Report of PCC-Vivace — Data Link
Run 7: Statistics of PCC-Vivace

Start at: 2018-07-26 07:20:35
End at: 2018-07-26 07:21:05
Local clock offset: 0.255 ms
Remote clock offset: -0.028 ms

# Below is generated by plot.py at 2018-07-26 12:10:41
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 485.74 Mbit/s
  95th percentile per-packet one-way delay: 132.510 ms
  Loss rate: 0.61%
-- Flow 1:
  Average throughput: 322.79 Mbit/s
  95th percentile per-packet one-way delay: 146.221 ms
  Loss rate: 0.26%
-- Flow 2:
  Average throughput: 160.97 Mbit/s
  95th percentile per-packet one-way delay: 63.109 ms
  Loss rate: 0.83%
-- Flow 3:
  Average throughput: 171.64 Mbit/s
  95th percentile per-packet one-way delay: 80.566 ms
  Loss rate: 2.16%
Run 7: Report of PCC-Vivace — Data Link

![Graph showing Throughput and Packet Delay](image-url)

- Flow 1 ingress (mean 322.29 Mbit/s) - Flow 1 egress (mean 322.79 Mbit/s)
- Flow 2 ingress (mean 161.11 Mbit/s) - Flow 2 egress (mean 160.97 Mbit/s)
- Flow 3 ingress (mean 173.23 Mbit/s) - Flow 3 egress (mean 171.64 Mbit/s)
Run 8: Statistics of PCC-Vivace

Start at: 2018-07-26 07:45:48  
End at: 2018-07-26 07:46:18  
Local clock offset: 0.256 ms  
Remote clock offset: -0.047 ms

# Below is generated by plot.py at 2018-07-26 12:11:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 506.05 Mbit/s
95th percentile per-packet one-way delay: 127.401 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 284.49 Mbit/s
95th percentile per-packet one-way delay: 126.702 ms
Loss rate: 0.27%
-- Flow 2:
Average throughput: 260.22 Mbit/s
95th percentile per-packet one-way delay: 168.999 ms
Loss rate: 0.49%
-- Flow 3:
Average throughput: 149.52 Mbit/s
95th percentile per-packet one-way delay: 70.156 ms
Loss rate: 1.43%
Run 8: Report of PCC-Vivace — Data Link

![Data Link Performance Graphs]

- Flow 1 ingress (mean 283.84 Mbit/s)
- Flow 1 egress (mean 284.49 Mbit/s)
- Flow 2 ingress (mean 259.89 Mbit/s)
- Flow 2 egress (mean 260.22 Mbit/s)
- Flow 3 ingress (mean 149.81 Mbit/s)
- Flow 3 egress (mean 149.52 Mbit/s)

- Flow 1 (95th percentile 126.70 ms)
- Flow 2 (95th percentile 169.00 ms)
- Flow 3 (95th percentile 70.16 ms)
Run 9: Statistics of PCC-Vivace

Start at: 2018-07-26 08:10:55
End at: 2018-07-26 08:11:25
Local clock offset: 0.29 ms
Remote clock offset: 1.442 ms

# Below is generated by plot.py at 2018-07-26 12:11:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 509.34 Mbit/s
95th percentile per-packet one-way delay: 158.928 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 292.39 Mbit/s
95th percentile per-packet one-way delay: 146.654 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 242.60 Mbit/s
95th percentile per-packet one-way delay: 175.343 ms
Loss rate: 0.49%
-- Flow 3:
Average throughput: 170.92 Mbit/s
95th percentile per-packet one-way delay: 93.027 ms
Loss rate: 1.97%
Run 10: Statistics of PCC-Vivace

Start at: 2018-07-26 08:36:01
End at: 2018-07-26 08:36:31
Local clock offset: 0.295 ms
Remote clock offset: -0.108 ms

# Below is generated by plot.py at 2018-07-26 12:11:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 472.79 Mbit/s
95th percentile per-packet one-way delay: 90.169 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 286.38 Mbit/s
95th percentile per-packet one-way delay: 88.619 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 259.23 Mbit/s
95th percentile per-packet one-way delay: 110.142 ms
Loss rate: 0.88%
-- Flow 3:
Average throughput: 44.07 Mbit/s
95th percentile per-packet one-way delay: 61.600 ms
Loss rate: 1.39%
Run 10: Report of PCC-Vivace — Data Link

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

- Flow 1 ingress (mean 286.40 Mbit/s)
- Flow 1 egress (mean 286.38 Mbit/s)
- Flow 2 ingress (mean 259.79 Mbit/s)
- Flow 2 egress (mean 259.23 Mbit/s)
- Flow 3 ingress (mean 44.11 Mbit/s)
- Flow 3 egress (mean 44.07 Mbit/s)
Run 1: Statistics of WebRTC media

Start at: 2018-07-26 04:40:39
End at: 2018-07-26 04:41:09
Local clock offset: -0.08 ms
Remote clock offset: -0.175 ms

# Below is generated by plot.py at 2018-07-26 12:11:40
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 2.93 Mbit/s
  95th percentile per-packet one-way delay: 61.517 ms
  Loss rate: 1.04%
-- Flow 1:
  Average throughput: 1.22 Mbit/s
  95th percentile per-packet one-way delay: 61.507 ms
  Loss rate: 0.82%
-- Flow 2:
  Average throughput: 1.22 Mbit/s
  95th percentile per-packet one-way delay: 61.502 ms
  Loss rate: 0.76%
-- Flow 3:
  Average throughput: 0.52 Mbit/s
  95th percentile per-packet one-way delay: 61.571 ms
  Loss rate: 2.23%
Run 1: Report of WebRTC media — Data Link
Run 2: Statistics of WebRTC media

Start at: 2018-07-26 05:05:52
End at: 2018-07-26 05:06:22
Local clock offset: -0.068 ms
Remote clock offset: -0.135 ms

# Below is generated by plot.py at 2018-07-26 12:11:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.88 Mbit/s
95th percentile per-packet one-way delay: 61.357 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 2.07 Mbit/s
95th percentile per-packet one-way delay: 61.340 ms
Loss rate: 0.46%
-- Flow 2:
Average throughput: 1.31 Mbit/s
95th percentile per-packet one-way delay: 61.248 ms
Loss rate: 0.49%
-- Flow 3:
Average throughput: 0.52 Mbit/s
95th percentile per-packet one-way delay: 61.438 ms
Loss rate: 1.66%
Run 2: Report of WebRTC media — Data Link

Throughput (Mbit/s) vs Time (s)

- Flow 1 ingress (mean 2.07 Mbit/s)
- Flow 1 egress (mean 2.07 Mbit/s)
- Flow 2 ingress (mean 1.31 Mbit/s)
- Flow 2 egress (mean 1.31 Mbit/s)
- Flow 3 ingress (mean 0.53 Mbit/s)
- Flow 3 egress (mean 0.52 Mbit/s)

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

- Flow 1 (95th percentile 61.34 ms)
- Flow 2 (95th percentile 61.25 ms)
- Flow 3 (95th percentile 61.44 ms)
Run 3: Statistics of WebRTC media

Start at: 2018-07-26 05:30:55
End at: 2018-07-26 05:31:25
Local clock offset: -0.079 ms
Remote clock offset: 0.067 ms

# Below is generated by plot.py at 2018-07-26 12:11:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.85 Mbit/s
95th percentile per-packet one-way delay: 61.185 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 2.03 Mbit/s
95th percentile per-packet one-way delay: 61.195 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 1.30 Mbit/s
95th percentile per-packet one-way delay: 61.197 ms
Loss rate: 0.70%
-- Flow 3:
Average throughput: 0.53 Mbit/s
95th percentile per-packet one-way delay: 61.050 ms
Loss rate: 1.70%
Run 3: Report of WebRTC media — Data Link

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

- **Flow 1 ingress (mean 2.03 Mbit/s)**
- **Flow 1 egress (mean 2.03 Mbit/s)**
- **Flow 2 ingress (mean 1.30 Mbit/s)**
- **Flow 2 egress (mean 1.30 Mbit/s)**
- **Flow 3 ingress (mean 0.54 Mbit/s)**
- **Flow 3 egress (mean 0.53 Mbit/s)**

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

- **Flow 1 (95th percentile 61.20 ms)**
- **Flow 2 (95th percentile 61.20 ms)**
- **Flow 3 (95th percentile 61.05 ms)**
Run 4: Statistics of WebRTC media

Start at: 2018-07-26 05:55:58
End at: 2018-07-26 05:56:28
Local clock offset: 0.045 ms
Remote clock offset: -0.164 ms

# Below is generated by plot.py at 2018-07-26 12:11:40
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 3.87 Mbit/s
  95th percentile per-packet one-way delay: 61.568 ms
  Loss rate: 0.69%
-- Flow 1:
  Average throughput: 2.06 Mbit/s
  95th percentile per-packet one-way delay: 61.537 ms
  Loss rate: 0.48%
-- Flow 2:
  Average throughput: 1.30 Mbit/s
  95th percentile per-packet one-way delay: 61.633 ms
  Loss rate: 0.69%
-- Flow 3:
  Average throughput: 0.52 Mbit/s
  95th percentile per-packet one-way delay: 61.496 ms
  Loss rate: 1.51%
Run 4: Report of WebRTC media — Data Link

The graphs show the throughput and per-packet end-to-end delay for three flows across different time intervals. The throughput graph illustrates the variation in data transfer rates over time, with each flow having distinct ingress and egress rates. The per-packet delay graph visualizes the delay experienced by packets in each flow. The labels on the graphs indicate the mean transfer rates for each flow's ingress and egress.
Run 5: Statistics of WebRTC media

Start at: 2018-07-26 06:21:04  
End at: 2018-07-26 06:21:34  
Local clock offset: 0.106 ms  
Remote clock offset: -0.057 ms  

# Below is generated by plot.py at 2018-07-26 12:11:40  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 3.84 Mbit/s  
95th percentile per-packet one-way delay: 61.511 ms  
Loss rate: 0.60%  
-- Flow 1:  
Average throughput: 2.04 Mbit/s  
95th percentile per-packet one-way delay: 61.409 ms  
Loss rate: 0.38%  
-- Flow 2:  
Average throughput: 1.29 Mbit/s  
95th percentile per-packet one-way delay: 61.564 ms  
Loss rate: 0.70%  
-- Flow 3:  
Average throughput: 0.52 Mbit/s  
95th percentile per-packet one-way delay: 61.356 ms  
Loss rate: 1.19%
Run 5: Report of WebRTC media — Data Link

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

![Graph 2: Packet Delay vs Time](image2)
Run 6: Statistics of WebRTC media

Start at: 2018-07-26 06:46:15
End at: 2018-07-26 06:46:45
Local clock offset: 0.178 ms
Remote clock offset: 0.001 ms

# Below is generated by plot.py at 2018-07-26 12:11:40
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 3.83 Mbit/s
  95th percentile per-packet one-way delay: 61.316 ms
  Loss rate: 0.80%
-- Flow 1:
  Average throughput: 2.03 Mbit/s
  95th percentile per-packet one-way delay: 61.327 ms
  Loss rate: 0.49%
-- Flow 2:
  Average throughput: 1.30 Mbit/s
  95th percentile per-packet one-way delay: 61.281 ms
  Loss rate: 0.71%
-- Flow 3:
  Average throughput: 0.52 Mbit/s
  95th percentile per-packet one-way delay: 61.296 ms
  Loss rate: 2.21%
Run 6: Report of WebRTC media — Data Link
Run 7: Statistics of WebRTC media

Start at: 2018-07-26 07:11:30
End at: 2018-07-26 07:12:00
Local clock offset: 0.211 ms
Remote clock offset: -0.024 ms

# Below is generated by plot.py at 2018-07-26 12:11:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.79 Mbit/s
95th percentile per-packet one-way delay: 61.373 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 1.98 Mbit/s
95th percentile per-packet one-way delay: 61.324 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 1.30 Mbit/s
95th percentile per-packet one-way delay: 61.475 ms
Loss rate: 0.78%
-- Flow 3:
Average throughput: 0.52 Mbit/s
95th percentile per-packet one-way delay: 61.414 ms
Loss rate: 1.80%
Run 7: Report of WebRTC media — Data Link

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

- Flow 1 ingress (mean 1.98 Mbps/s)
- Flow 1 egress (mean 1.98 Mbps/s)
- Flow 2 ingress (mean 1.31 Mbps/s)
- Flow 2 egress (mean 1.30 Mbps/s)
- Flow 3 ingress (mean 0.53 Mbps/s)
- Flow 3 egress (mean 0.52 Mbps/s)

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

- Flow 1 (95th percentile 61.32 ms)
- Flow 2 (95th percentile 61.48 ms)
- Flow 3 (95th percentile 61.41 ms)
Run 8: Statistics of WebRTC media

Start at: 2018-07-26 07:36:47
End at: 2018-07-26 07:37:17
Local clock offset: 0.251 ms
Remote clock offset: 0.09 ms

# Below is generated by plot.py at 2018-07-26 12:11:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.84 Mbit/s
95th percentile per-packet one-way delay: 61.103 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 2.03 Mbit/s
95th percentile per-packet one-way delay: 61.046 ms
Loss rate: 0.48%
-- Flow 2:
Average throughput: 1.30 Mbit/s
95th percentile per-packet one-way delay: 60.927 ms
Loss rate: 0.70%
-- Flow 3:
Average throughput: 0.53 Mbit/s
95th percentile per-packet one-way delay: 61.277 ms
Loss rate: 1.72%
Run 8: Report of WebRTC media — Data Link

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

- **Flow 1 ingress (mean 2.03 Mbit/s)**
- **Flow 1 egress (mean 2.03 Mbit/s)**
- **Flow 2 ingress (mean 1.31 Mbit/s)**
- **Flow 2 egress (mean 1.30 Mbit/s)**
- **Flow 3 ingress (mean 0.54 Mbit/s)**
- **Flow 3 egress (mean 0.53 Mbit/s)**

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

- **Flow 1 (95th percentile 61.05 ms)**
- **Flow 2 (95th percentile 60.93 ms)**
- **Flow 3 (95th percentile 61.28 ms)**
Run 9: Statistics of WebRTC media

Start at: 2018-07-26 08:01:53
End at: 2018-07-26 08:02:23
Local clock offset: 0.297 ms
Remote clock offset: -0.031 ms

# Below is generated by plot.py at 2018-07-26 12:11:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.81 Mbit/s
95th percentile per-packet one-way delay: 61.667 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 2.02 Mbit/s
95th percentile per-packet one-way delay: 61.699 ms
Loss rate: 0.48%
-- Flow 2:
Average throughput: 1.29 Mbit/s
95th percentile per-packet one-way delay: 61.371 ms
Loss rate: 0.88%
-- Flow 3:
Average throughput: 0.52 Mbit/s
95th percentile per-packet one-way delay: 61.532 ms
Loss rate: 2.14%
Run 9: Report of WebRTC media — Data Link

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[Graph showing throughput and round trip time with various flow metrics.

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Run 10: Statistics of WebRTC media

Start at: 2018-07-26 08:27:09
End at: 2018-07-26 08:27:39
Local clock offset: 0.303 ms
Remote clock offset: 0.164 ms

# Below is generated by plot.py at 2018-07-26 12:11:40
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 3.84 Mbit/s
  95th percentile per-packet one-way delay: 61.149 ms
  Loss rate: 0.82%
-- Flow 1:
  Average throughput: 2.03 Mbit/s
  95th percentile per-packet one-way delay: 61.168 ms
  Loss rate: 0.47%
-- Flow 2:
  Average throughput: 1.30 Mbit/s
  95th percentile per-packet one-way delay: 61.116 ms
  Loss rate: 0.97%
-- Flow 3:
  Average throughput: 0.53 Mbit/s
  95th percentile per-packet one-way delay: 61.100 ms
  Loss rate: 1.77%
Run 10: Report of WebRTC media — Data Link