Pantheon Report

Generated at 2018-07-13 00:00:10 (UTC).
Data path: GCE Tokyo Ethernet (remote) → GCE Sydney 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 @ 9250dbeec7fb57193cddf1ba8c440b4e1e6a30f0
third_party/fillp @ 047f4fa1b454a5e3c05371155c5a28436bd4b834
third_party/fillp-sheep @ 737162fe9af85249aeccac061c93e75640ef710b5
third_party/genericCC @ 0d513f8e594a9e89e9b032143cedbf58e562f4
third_party/indigo @ 2601c924eaa9d58d38dc4dfe0edbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ 6f038ed31259d366f9840f6583cbe8f464b1b39
third_party/pcc @ 0d0153f8e594a9e89e9b032143cedbf58e562f4
third_party/pcc-experimental @ cd43e34e3f5f5613e8ac08f92c4eb24f974ab
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cfc42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3b6b2
M src/ScreamClient
M src/ScreamServer
third_party/sprout @ 36e35c6178b01e314a46ad186c84b934f9415f19a26
third_party/verus @ 0d4b447ea74c6c60a261149af26295625939f9a494
M src/verus.hpp
M tools/plot.py
third_party/vivace @ 2baf862f1435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9ddee4735770d143a1fa2851
test from GCE Tokyo to GCE Sydney, 10 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)
<table>
<thead>
<tr>
<th>scheme</th>
<th># runs</th>
<th>flow 1 avg tput (Mbit/s)</th>
<th>flow 2 avg tput (Mbit/s)</th>
<th>flow 3 avg tput (Mbit/s)</th>
<th>flow 1 95th-%ile delay (ms)</th>
<th>flow 2 95th-%ile delay (ms)</th>
<th>flow 3 95th-%ile delay (ms)</th>
<th>flow 1 mean loss rate (%)</th>
<th>flow 2 mean loss rate (%)</th>
<th>flow 3 mean loss rate (%)</th>
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<tbody>
<tr>
<td>TCP BBR</td>
<td>10</td>
<td>203.06</td>
<td>194.56</td>
<td>169.92</td>
<td>82.22</td>
<td>84.07</td>
<td>87.15</td>
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<td>Copa</td>
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<td>119.78</td>
<td>95.79</td>
<td>65.93</td>
<td>59.96</td>
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<td>201.86</td>
<td>161.81</td>
<td>61.88</td>
<td>65.67</td>
<td>64.39</td>
<td>63.53</td>
<td>0.36</td>
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<td>637.14</td>
<td>619.20</td>
<td>173.01</td>
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<td>FillP-Sheep</td>
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<td>630.33</td>
<td>577.04</td>
<td>227.59</td>
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<td>189.12</td>
<td>135.30</td>
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<td>25.17</td>
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<td>179.99</td>
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<td>0.46</td>
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</table>
Run 1: Statistics of TCP BBR

Start at: 2018-07-12 16:39:03
End at: 2018-07-12 16:39:33
Local clock offset: -0.054 ms
Remote clock offset: -1.36 ms

# Below is generated by plot.py at 2018-07-12 21:13:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 385.67 Mbit/s
95th percentile per-packet one-way delay: 83.301 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 201.87 Mbit/s
95th percentile per-packet one-way delay: 81.054 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 188.94 Mbit/s
95th percentile per-packet one-way delay: 83.580 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 176.04 Mbit/s
95th percentile per-packet one-way delay: 87.980 ms
Loss rate: 1.35%
Run 1: Report of TCP BBR — Data Link

[Graph showing throughput and per-packet one-way delay over time with different flow rates and delays for various traffic flows.]
Run 2: Statistics of TCP BBR

Start at: 2018-07-12 17:03:53
End at: 2018-07-12 17:04:23
Local clock offset: -0.049 ms
Remote clock offset: 1.101 ms

# Below is generated by plot.py at 2018-07-12 21:13:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 379.10 Mbit/s
95th percentile per-packet one-way delay: 88.897 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 205.05 Mbit/s
95th percentile per-packet one-way delay: 86.452 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 184.91 Mbit/s
95th percentile per-packet one-way delay: 88.731 ms
Loss rate: 0.65%
-- Flow 3:
Average throughput: 154.91 Mbit/s
95th percentile per-packet one-way delay: 92.925 ms
Loss rate: 1.51%
Run 2: Report of TCP BBR — Data Link

Graph 1: Throughput vs Time
- Flow 1 Ingress (mean 205.16 Mbit/s)
- Flow 1 Egress (mean 205.05 Mbit/s)
- Flow 2 Ingress (mean 185.13 Mbit/s)
- Flow 2 Egress (mean 184.91 Mbit/s)
- Flow 3 Ingress (mean 155.58 Mbit/s)
- Flow 3 Egress (mean 154.91 Mbit/s)

Graph 2: Per-packet round-trip delay vs Time
- Flow 1 (95th percentile 86.45 ms)
- Flow 2 (95th percentile 88.73 ms)
- Flow 3 (95th percentile 92.92 ms)
Run 3: Statistics of TCP BBR

Start at: 2018-07-12 17:32:31
End at: 2018-07-12 17:33:01
Local clock offset: 0.042 ms
Remote clock offset: -1.603 ms

# Below is generated by plot.py at 2018-07-12 21:13:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 381.91 Mbit/s
95th percentile per-packet one-way delay: 92.651 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 200.84 Mbit/s
95th percentile per-packet one-way delay: 91.058 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 197.37 Mbit/s
95th percentile per-packet one-way delay: 93.230 ms
Loss rate: 0.57%
-- Flow 3:
Average throughput: 151.01 Mbit/s
95th percentile per-packet one-way delay: 94.043 ms
Loss rate: 1.30%
Run 3: Report of TCP BBR — Data Link
Run 4: Statistics of TCP BBR

Start at: 2018-07-12 17:58:19
End at: 2018-07-12 17:58:49
Local clock offset: 0.034 ms
Remote clock offset: 0.263 ms

# Below is generated by plot.py at 2018-07-12 21:13:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 396.05 Mbit/s
95th percentile per-packet one-way delay: 82.589 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 207.41 Mbit/s
95th percentile per-packet one-way delay: 80.897 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 193.17 Mbit/s
95th percentile per-packet one-way delay: 82.438 ms
Loss rate: 0.66%
-- Flow 3:
Average throughput: 182.12 Mbit/s
95th percentile per-packet one-way delay: 84.651 ms
Loss rate: 1.35%
Run 4: Report of TCP BBR — Data Link
Run 5: Statistics of TCP BBR

Start at: 2018-07-12 18:23:03
End at: 2018-07-12 18:23:33
Local clock offset: -0.411 ms
Remote clock offset: -0.142 ms

# Below is generated by plot.py at 2018-07-12 21:13:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 379.82 Mbit/s
95th percentile per-packet one-way delay: 81.098 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 195.45 Mbit/s
95th percentile per-packet one-way delay: 79.699 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 194.35 Mbit/s
95th percentile per-packet one-way delay: 80.455 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 166.95 Mbit/s
95th percentile per-packet one-way delay: 83.652 ms
Loss rate: 1.40%
Run 5: Report of TCP BBR — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 195.57 Mbps)
Flow 1 egress (mean 195.45 Mbps)
Flow 2 ingress (mean 194.52 Mbps)
Flow 2 egress (mean 194.35 Mbps)
Flow 3 ingress (mean 167.29 Mbps)
Flow 3 egress (mean 166.95 Mbps)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 79.70 ms)
Flow 2 (95th percentile 80.45 ms)
Flow 3 (95th percentile 83.65 ms)
Run 6: Statistics of TCP BBR

Start at: 2018-07-12 18:48:10
End at: 2018-07-12 18:48:40
Local clock offset: 0.402 ms
Remote clock offset: 0.123 ms

# Below is generated by plot.py at 2018-07-12 21:13:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 385.06 Mbit/s
95th percentile per-packet one-way delay: 88.567 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 196.81 Mbit/s
95th percentile per-packet one-way delay: 86.914 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 200.84 Mbit/s
95th percentile per-packet one-way delay: 89.460 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 165.77 Mbit/s
95th percentile per-packet one-way delay: 89.701 ms
Loss rate: 1.40%
Run 7: Statistics of TCP BBR

End at: 2018-07-12 19:14:06
Local clock offset: -0.014 ms
Remote clock offset: -0.095 ms

# Below is generated by plot.py at 2018-07-12 21:13:19
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 397.25 Mbit/s
  95th percentile per-packet one-way delay: 77.971 ms
  Loss rate: 0.40%
-- Flow 1:
  Average throughput: 203.58 Mbit/s
  95th percentile per-packet one-way delay: 75.505 ms
  Loss rate: 0.37%
-- Flow 2:
  Average throughput: 204.85 Mbit/s
  95th percentile per-packet one-way delay: 77.972 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 174.90 Mbit/s
  95th percentile per-packet one-way delay: 81.980 ms
  Loss rate: 1.39%
Run 7: Report of TCP BBR — Data Link

Throughput (Mbit/s) vs Time (s):
- Flow 1 ingress (mean 203.66 Mbit/s)
- Flow 1 egress (mean 203.58 Mbit/s)
- Flow 2 ingress (mean 203.78 Mbit/s)
- Flow 2 egress (mean 204.85 Mbit/s)
- Flow 3 ingress (mean 179.54 Mbit/s)
- Flow 3 egress (mean 174.99 Mbit/s)

Per packet one way delay (ms) vs Time (s):
- Flow 1 (95th percentile 75.50 ms)
- Flow 2 (95th percentile 77.97 ms)
- Flow 3 (95th percentile 81.98 ms)
Run 8: Statistics of TCP BBR

Start at: 2018-07-12 19:38:58
End at: 2018-07-12 19:39:28
Local clock offset: -0.096 ms
Remote clock offset: -0.238 ms

# Below is generated by plot.py at 2018-07-12 21:13:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 393.56 Mbit/s
95th percentile per-packet one-way delay: 80.846 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 206.41 Mbit/s
95th percentile per-packet one-way delay: 78.644 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 195.15 Mbit/s
95th percentile per-packet one-way delay: 80.502 ms
Loss rate: 0.60%
-- Flow 3:
Average throughput: 173.96 Mbit/s
95th percentile per-packet one-way delay: 86.379 ms
Loss rate: 1.41%
Run 8: Report of TCP BBR — Data Link

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

Throughput (Mbps)

Time (s)

- Flow 1 ingress (mean 206.50 Mbps)
- Flow 1 egress (mean 206.41 Mbps)
- Flow 2 ingress (mean 195.28 Mbps)
- Flow 2 egress (mean 195.15 Mbps)
- Flow 3 ingress (mean 174.50 Mbps)
- Flow 3 egress (mean 173.96 Mbps)

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

Per-packet one-way delay (ms)

Time (s)

- Flow 1 (95th percentile 78.64 ms)
- Flow 2 (95th percentile 80.50 ms)
- Flow 3 (95th percentile 86.38 ms)
Run 9: Statistics of TCP BBR

Start at: 2018-07-12 20:04:21
End at: 2018-07-12 20:04:51
Local clock offset: 0.226 ms
Remote clock offset: -0.141 ms

# Below is generated by plot.py at 2018-07-12 21:19:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 392.82 Mbit/s
95th percentile per-packet one-way delay: 84.375 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 212.31 Mbit/s
95th percentile per-packet one-way delay: 83.254 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 185.40 Mbit/s
95th percentile per-packet one-way delay: 84.653 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 173.29 Mbit/s
95th percentile per-packet one-way delay: 86.417 ms
Loss rate: 1.27%
Run 9: Report of TCP BBR — Data Link

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

- Flow 1 ingress (mean 212.41 Mbit/s)
- Flow 1 egress (mean 212.31 Mbit/s)
- Flow 2 ingress (mean 185.46 Mbit/s)
- Flow 2 egress (mean 185.40 Mbit/s)
- Flow 3 ingress (mean 173.69 Mbit/s)
- Flow 3 egress (mean 173.29 Mbit/s)

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

- Flow 1 (95th percentile 83.25 ms)
- Flow 2 (95th percentile 84.65 ms)
- Flow 3 (95th percentile 86.42 ms)
Run 10: Statistics of TCP BBR

Start at: 2018-07-12 20:29:34
End at: 2018-07-12 20:30:04
Local clock offset: 0.017 ms
Remote clock offset: -0.081 ms

# Below is generated by plot.py at 2018-07-12 21:19:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 393.79 Mbit/s
95th percentile per-packet one-way delay: 80.401 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 200.91 Mbit/s
95th percentile per-packet one-way delay: 78.680 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 200.65 Mbit/s
95th percentile per-packet one-way delay: 79.645 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 180.26 Mbit/s
95th percentile per-packet one-way delay: 83.797 ms
Loss rate: 1.48%
Run 10: Report of TCP BBR — Data Link

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

- Flow 1 ingress (mean 201.02 Mbit/s)
- Flow 1 egress (mean 200.91 Mbit/s)
- Flow 2 ingress (mean 200.88 Mbit/s)
- Flow 2 egress (mean 200.65 Mbit/s)
- Flow 3 ingress (mean 181.15 Mbit/s)
- Flow 3 egress (mean 180.26 Mbit/s)
Run 1: Statistics of Copa

Start at: 2018-07-12 16:45:48
End at: 2018-07-12 16:46:18
Local clock offset: 0.02 ms
Remote clock offset: -0.053 ms

# Below is generated by plot.py at 2018-07-12 21:19:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 212.87 Mbit/s
95th percentile per-packet one-way delay: 58.565 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 128.73 Mbit/s
95th percentile per-packet one-way delay: 58.619 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 86.26 Mbit/s
95th percentile per-packet one-way delay: 56.534 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 90.03 Mbit/s
95th percentile per-packet one-way delay: 61.731 ms
Loss rate: 0.03%
Run 1: Report of Copa — Data Link
Run 2: Statistics of Copa

Start at: 2018-07-12 17:11:43
End at: 2018-07-12 17:12:13
Local clock offset: -0.269 ms
Remote clock offset: 1.059 ms

# Below is generated by plot.py at 2018-07-12 21:20:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 228.83 Mbit/s
95th percentile per-packet one-way delay: 56.275 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 116.64 Mbit/s
95th percentile per-packet one-way delay: 56.148 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 148.56 Mbit/s
95th percentile per-packet one-way delay: 56.232 ms
Loss rate: 0.25%
-- Flow 3:
Average throughput: 41.22 Mbit/s
95th percentile per-packet one-way delay: 58.175 ms
Loss rate: 1.85%
Run 3: Statistics of Copa

Start at: 2018-07-12 17:39:50
End at: 2018-07-12 17:40:20
Local clock offset: 0.172 ms
Remote clock offset: -0.221 ms

# Below is generated by plot.py at 2018-07-12 21:23:01
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 301.56 Mbit/s
  95th percentile per-packet one-way delay: 65.895 ms
  Loss rate: 0.37%
-- Flow 1:
  Average throughput: 256.17 Mbit/s
  95th percentile per-packet one-way delay: 66.528 ms
  Loss rate: 0.30%
-- Flow 2:
  Average throughput: 32.50 Mbit/s
  95th percentile per-packet one-way delay: 56.338 ms
  Loss rate: 0.20%
-- Flow 3:
  Average throughput: 72.09 Mbit/s
  95th percentile per-packet one-way delay: 65.977 ms
  Loss rate: 1.27%
Run 3: Report of Copa — Data Link

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

Legend:
- Flow 1 ingress (mean 256.05 Mbit/s)
- Flow 1 egress (mean 256.17 Mbit/s)
- Flow 2 ingress (mean 32.40 Mbit/s)
- Flow 2 egress (mean 32.50 Mbit/s)
- Flow 3 ingress (mean 72.34 Mbit/s)
- Flow 3 egress (mean 72.09 Mbit/s)
Run 4: Statistics of Copa

Start at: 2018-07-12 18:05:11
End at: 2018-07-12 18:05:41
Local clock offset: -0.132 ms
Remote clock offset: -0.03 ms

# Below is generated by plot.py at 2018-07-12 21:23:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 192.67 Mbit/s
95th percentile per-packet one-way delay: 58.797 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 73.80 Mbit/s
95th percentile per-packet one-way delay: 59.815 ms
Loss rate: 0.24%
-- Flow 2:
Average throughput: 115.55 Mbit/s
95th percentile per-packet one-way delay: 57.730 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 127.45 Mbit/s
95th percentile per-packet one-way delay: 58.915 ms
Loss rate: 0.61%
Run 4: Report of Copa — Data Link

![Graph showing network traffic and packet delay over time for different flows.](image)
Run 5: Statistics of Copa

Start at: 2018-07-12 18:30:03
End at: 2018-07-12 18:30:33
Local clock offset: 0.019 ms
Remote clock offset: -0.001 ms

# Below is generated by plot.py at 2018-07-12 21:23:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 188.56 Mbit/s
95th percentile per-packet one-way delay: 58.413 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 53.88 Mbit/s
95th percentile per-packet one-way delay: 53.670 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 184.41 Mbit/s
95th percentile per-packet one-way delay: 60.333 ms
Loss rate: 0.25%
-- Flow 3:
Average throughput: 36.75 Mbit/s
95th percentile per-packet one-way delay: 54.555 ms
Loss rate: 2.25%
Run 5: Report of Copa — Data Link
Run 6: Statistics of Copa

Start at: 2018-07-12 18:55:07
End at: 2018-07-12 18:55:37
Local clock offset: -0.037 ms
Remote clock offset: 0.143 ms

# Below is generated by plot.py at 2018-07-12 21:23:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 194.32 Mbit/s
95th percentile per-packet one-way delay: 64.471 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 131.19 Mbit/s
95th percentile per-packet one-way delay: 59.878 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 69.24 Mbit/s
95th percentile per-packet one-way delay: 76.268 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 51.83 Mbit/s
95th percentile per-packet one-way delay: 55.115 ms
Loss rate: 1.09%
Run 6: Report of Copa — Data Link
Run 7: Statistics of Copa

Start at: 2018-07-12 19:20:36
End at: 2018-07-12 19:21:06
Local clock offset: 0.395 ms
Remote clock offset: -0.036 ms

# Below is generated by plot.py at 2018-07-12 21:23:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 111.97 Mbit/s
95th percentile per-packet one-way delay: 54.095 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 59.49 Mbit/s
95th percentile per-packet one-way delay: 54.086 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 50.71 Mbit/s
95th percentile per-packet one-way delay: 54.102 ms
Loss rate: 0.17%
-- Flow 3:
Average throughput: 56.90 Mbit/s
95th percentile per-packet one-way delay: 54.104 ms
Loss rate: 1.13%
Run 7: Report of Copa — Data Link

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

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Flow 1 ingress (mean 59.42 Mbit/s)  
Flow 1 egress (mean 59.49 Mbit/s)  
Flow 2 ingress (mean 50.54 Mbit/s)  
Flow 2 egress (mean 50.71 Mbit/s)  
Flow 3 ingress (mean 56.96 Mbit/s)  
Flow 3 egress (mean 56.90 Mbit/s)

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Flow 1 (95th percentile 54.09 ms)  
Flow 2 (95th percentile 54.10 ms)  
Flow 3 (95th percentile 54.10 ms)
Run 8: Statistics of Copa

Start at: 2018-07-12 19:46:02
End at: 2018-07-12 19:46:32
Local clock offset: 0.401 ms
Remote clock offset: -0.232 ms

# Below is generated by plot.py at 2018-07-12 21:26:04
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 206.94 Mbit/s
  95th percentile per-packet one-way delay: 63.388 ms
  Loss rate: 0.53%
-- Flow 1:
  Average throughput: 153.08 Mbit/s
  95th percentile per-packet one-way delay: 65.202 ms
  Loss rate: 0.32%
-- Flow 2:
  Average throughput: 60.01 Mbit/s
  95th percentile per-packet one-way delay: 54.540 ms
  Loss rate: 1.00%
-- Flow 3:
  Average throughput: 42.28 Mbit/s
  95th percentile per-packet one-way delay: 54.690 ms
  Loss rate: 1.44%
Run 8: Report of Copa — Data Link
Run 9: Statistics of Copa

Start at: 2018-07-12 20:11:18
End at: 2018-07-12 20:11:48
Local clock offset: 0.158 ms
Remote clock offset: -0.065 ms

# Below is generated by plot.py at 2018-07-12 21:26:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 201.29 Mbit/s
95th percentile per-packet one-way delay: 67.824 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 114.93 Mbit/s
95th percentile per-packet one-way delay: 64.782 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 87.05 Mbit/s
95th percentile per-packet one-way delay: 73.823 ms
Loss rate: 0.59%
-- Flow 3:
Average throughput: 86.24 Mbit/s
95th percentile per-packet one-way delay: 66.099 ms
Loss rate: 1.30%
Run 9: Report of Copa — Data Link

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

Flow 1 ingress (mean 115.27 Mbit/s)  |  Flow 1 egress (mean 114.93 Mbit/s)
Flow 2 ingress (mean 87.12 Mbit/s)  |  Flow 2 egress (mean 87.05 Mbit/s)
Flow 3 ingress (mean 86.47 Mbit/s)  |  Flow 3 egress (mean 86.24 Mbit/s)

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

- Flow 1 (95th percentile 64.78 ms)
- Flow 2 (95th percentile 73.82 ms)
- Flow 3 (95th percentile 66.10 ms)
Run 10: Statistics of Copa

Start at: 2018-07-12 20:36:33
End at: 2018-07-12 20:37:03
Local clock offset: -0.12 ms
Remote clock offset: -0.42 ms

# Below is generated by plot.py at 2018-07-12 21:26:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 210.06 Mbit/s
95th percentile per-packet one-way delay: 59.165 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 109.88 Mbit/s
95th percentile per-packet one-way delay: 60.868 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 123.57 Mbit/s
95th percentile per-packet one-way delay: 58.752 ms
Loss rate: 0.77%
-- Flow 3:
Average throughput: 54.54 Mbit/s
95th percentile per-packet one-way delay: 53.934 ms
Loss rate: 1.64%
Run 10: Report of Copa — Data Link

![Graph of network performance metrics over time]

**Throughput (Mbps):**
- Flow 1 ingress (mean 109.60 Mbps)
- Flow 1 egress (mean 109.88 Mbps)
- Flow 2 ingress (mean 123.89 Mbps)
- Flow 2 egress (mean 123.57 Mbps)
- Flow 3 ingress (mean 54.89 Mbps)
- Flow 3 egress (mean 54.54 Mbps)

**Per-packet one-way delay (ms):**
- Flow 1 (95th percentile 60.87 ms)
- Flow 2 (95th percentile 58.75 ms)
- Flow 3 (95th percentile 53.93 ms)
Run 1: Statistics of TCP Cubic

Start at: 2018-07-12 16:44:27
End at: 2018-07-12 16:44:57
Local clock offset: -0.071 ms
Remote clock offset: -0.213 ms

# Below is generated by plot.py at 2018-07-12 21:26:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 235.92 Mbit/s
95th percentile per-packet one-way delay: 61.745 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 199.91 Mbit/s
95th percentile per-packet one-way delay: 61.881 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 51.96 Mbit/s
95th percentile per-packet one-way delay: 56.634 ms
Loss rate: 2.26%
-- Flow 3:
Average throughput: 4.46 Mbit/s
95th percentile per-packet one-way delay: 53.601 ms
Loss rate: 4.35%
Run 1: Report of TCP Cubic — Data Link

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Run 2: Statistics of TCP Cubic

Start at: 2018-07-12 17:10:17
End at: 2018-07-12 17:10:47
Local clock offset: 0.085 ms
Remote clock offset: -0.071 ms

# Below is generated by plot.py at 2018-07-12 21:26:34
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 364.75 Mbit/s
  95th percentile per-packet one-way delay: 64.294 ms
  Loss rate: 0.48%
-- Flow 1:
  Average throughput: 220.77 Mbit/s
  95th percentile per-packet one-way delay: 63.897 ms
  Loss rate: 0.40%
-- Flow 2:
  Average throughput: 214.77 Mbit/s
  95th percentile per-packet one-way delay: 64.698 ms
  Loss rate: 0.56%
-- Flow 3:
  Average throughput: 4.29 Mbit/s
  95th percentile per-packet one-way delay: 60.061 ms
  Loss rate: 4.51%
Run 2: Report of TCP Cubic — Data Link
Run 3: Statistics of TCP Cubic

Start at: 2018-07-12 17:38:22
End at: 2018-07-12 17:38:52
Local clock offset: -0.327 ms
Remote clock offset: 0.257 ms

# Below is generated by plot.py at 2018-07-12 21:26:59
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 376.00 Mbit/s
  95th percentile per-packet one-way delay: 58.934 ms
  Loss rate: 0.42%
-- Flow 1:
  Average throughput: 227.81 Mbit/s
  95th percentile per-packet one-way delay: 59.399 ms
  Loss rate: 0.39%
-- Flow 2:
  Average throughput: 221.33 Mbit/s
  95th percentile per-packet one-way delay: 57.849 ms
  Loss rate: 0.42%
-- Flow 3:
  Average throughput: 4.31 Mbit/s
  95th percentile per-packet one-way delay: 56.014 ms
  Loss rate: 4.43%
Run 3: Report of TCP Cubic — Data Link
Run 4: Statistics of TCP Cubic

Start at: 2018-07-12 18:03:43
End at: 2018-07-12 18:04:13
Local clock offset: 0.119 ms
Remote clock offset: 0.028 ms

# Below is generated by plot.py at 2018-07-12 21:29:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 340.91 Mbit/s
95th percentile per-packet one-way delay: 64.958 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 166.34 Mbit/s
95th percentile per-packet one-way delay: 63.703 ms
Loss rate: 0.49%
-- Flow 2:
Average throughput: 215.26 Mbit/s
95th percentile per-packet one-way delay: 65.832 ms
Loss rate: 0.57%
-- Flow 3:
Average throughput: 95.64 Mbit/s
95th percentile per-packet one-way delay: 64.315 ms
Loss rate: 1.24%
Run 4: Report of TCP Cubic — Data Link

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

- **Flow 1 ingress** (mean 166.58 Mbit/s)
- **Flow 1 egress** (mean 166.34 Mbit/s)
- **Flow 2 ingress** (mean 215.36 Mbit/s)
- **Flow 2 egress** (mean 215.26 Mbit/s)
- **Flow 3 ingress** (mean 95.83 Mbit/s)
- **Flow 3 egress** (mean 95.64 Mbit/s)
Run 5: Statistics of TCP Cubic

Start at: 2018-07-12 18:28:36
End at: 2018-07-12 18:29:06
Local clock offset: 0.022 ms
Remote clock offset: -0.12 ms

# Below is generated by plot.py at 2018-07-12 21:29:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 347.23 Mbit/s
95th percentile per-packet one-way delay: 63.993 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 203.77 Mbit/s
95th percentile per-packet one-way delay: 64.440 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 213.32 Mbit/s
95th percentile per-packet one-way delay: 62.995 ms
Loss rate: 0.48%
-- Flow 3:
Average throughput: 5.07 Mbit/s
95th percentile per-packet one-way delay: 61.139 ms
Loss rate: 3.90%
Run 5: Report of TCP Cubic — Data Link
Run 6: Statistics of TCP Cubic

Start at: 2018-07-12 18:53:43
End at: 2018-07-12 18:54:13
Local clock offset: 0.606 ms
Remote clock offset: 0.079 ms

# Below is generated by plot.py at 2018-07-12 21:29:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 289.81 Mbit/s
95th percentile per-packet one-way delay: 63.466 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 215.14 Mbit/s
95th percentile per-packet one-way delay: 63.554 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 49.81 Mbit/s
95th percentile per-packet one-way delay: 59.186 ms
Loss rate: 2.47%
-- Flow 3:
Average throughput: 126.11 Mbit/s
95th percentile per-packet one-way delay: 64.298 ms
Loss rate: 1.18%
Run 7: Statistics of TCP Cubic

Start at: 2018-07-12 19:19:10
End at: 2018-07-12 19:19:40
Local clock offset: -0.036 ms
Remote clock offset: -0.18 ms

# Below is generated by plot.py at 2018-07-12 21:31:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 311.38 Mbit/s
95th percentile per-packet one-way delay: 64.917 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 214.61 Mbit/s
95th percentile per-packet one-way delay: 62.969 ms
Loss rate: 0.29%
-- Flow 2:
Average throughput: 47.60 Mbit/s
95th percentile per-packet one-way delay: 67.055 ms
Loss rate: 2.37%
-- Flow 3:
Average throughput: 197.94 Mbit/s
95th percentile per-packet one-way delay: 67.172 ms
Loss rate: 0.43%
Run 7: Report of TCP Cubic — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 214.46 Mbps)
  - Flow 1 egress (mean 214.61 Mbps)
  - Flow 2 ingress (mean 48.52 Mbps)
  - Flow 2 egress (mean 47.60 Mbps)
  - Flow 3 ingress (mean 196.72 Mbps)
  - Flow 3 egress (mean 197.04 Mbps)

- **Per-packet one-way delay (ms):**
  - Flow 1 (95th percentile 62.97 ms)
  - Flow 2 (95th percentile 67.06 ms)
  - Flow 3 (95th percentile 67.17 ms)
Run 8: Statistics of TCP Cubic

Start at: 2018-07-12 19:44:35
End at: 2018-07-12 19:45:05
Local clock offset: -0.036 ms
Remote clock offset: -0.279 ms

# Below is generated by plot.py at 2018-07-12 21:32:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 331.44 Mbit/s
95th percentile per-packet one-way delay: 87.534 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 144.68 Mbit/s
95th percentile per-packet one-way delay: 87.956 ms
Loss rate: 0.61%
-- Flow 2:
Average throughput: 196.00 Mbit/s
95th percentile per-packet one-way delay: 84.954 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 171.83 Mbit/s
95th percentile per-packet one-way delay: 89.499 ms
Loss rate: 1.43%
Run 8: Report of TCP Cubic — Data Link

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

- **Flow 1 ingress (mean 145.69 Mbit/s)**
- **Flow 1 egress (mean 144.68 Mbit/s)**
- **Flow 2 ingress (mean 196.25 Mbit/s)**
- **Flow 2 egress (mean 196.00 Mbit/s)**
- **Flow 3 ingress (mean 172.62 Mbit/s)**
- **Flow 3 egress (mean 171.83 Mbit/s)**

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

- **Flow 1 (95th percentile 87.96 ms)**
- **Flow 2 (95th percentile 84.95 ms)**
- **Flow 3 (95th percentile 89.50 ms)**

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Run 9: Statistics of TCP Cubic

Start at: 2018-07-12 20:09:51
End at: 2018-07-12 20:10:21
Local clock offset: -0.055 ms
Remote clock offset: -0.132 ms

# Below is generated by plot.py at 2018-07-12 21:32:29
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 345.06 Mbit/s
  95th percentile per-packet one-way delay: 61.557 ms
  Loss rate: 0.21%
-- Flow 1:
  Average throughput: 208.64 Mbit/s
  95th percentile per-packet one-way delay: 61.898 ms
  Loss rate: 0.16%
-- Flow 2:
  Average throughput: 202.63 Mbit/s
  95th percentile per-packet one-way delay: 59.744 ms
  Loss rate: 0.24%
-- Flow 3:
  Average throughput: 5.08 Mbit/s
  95th percentile per-packet one-way delay: 56.695 ms
  Loss rate: 3.91%
Run 9: Report of TCP Cubic — Data Link

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**Throughput (Mb/s)**

- **Flow 1 ingress** (mean 208.25 Mb/s)
- **Flow 1 egress** (mean 208.64 Mb/s)
- **Flow 2 ingress** (mean 202.03 Mb/s)
- **Flow 2 egress** (mean 202.63 Mb/s)
- **Flow 3 ingress** (mean 5.24 Mb/s)
- **Flow 3 egress** (mean 5.08 Mb/s)

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

- **Flow 1** (95th percentile 61.90 ms)
- **Flow 2** (95th percentile 59.74 ms)
- **Flow 3** (95th percentile 56.70 ms)
Run 10: Statistics of TCP Cubic

Start at: 2018-07-12 20:35:05
End at: 2018-07-12 20:35:35
Local clock offset: -0.002 ms
Remote clock offset: -0.46 ms

# Below is generated by plot.py at 2018-07-12 21:32:45
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 354.82 Mbit/s
  95th percentile per-packet one-way delay: 66.467 ms
  Loss rate: 0.37%
-- Flow 1:
  Average throughput: 216.91 Mbit/s
  95th percentile per-packet one-way delay: 66.958 ms
  Loss rate: 0.38%
-- Flow 2:
  Average throughput: 205.46 Mbit/s
  95th percentile per-packet one-way delay: 64.986 ms
  Loss rate: 0.32%
-- Flow 3:
  Average throughput: 4.04 Mbit/s
  95th percentile per-packet one-way delay: 62.489 ms
  Loss rate: 4.56%
Run 10: Report of TCP Cubic — Data Link
Run 1: Statistics of FillP

Start at: 2018-07-12 16:32:59
End at: 2018-07-12 16:33:29
Local clock offset: -0.151 ms
Remote clock offset: -0.349 ms

# Below is generated by plot.py at 2018-07-12 21:54:24
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1256.56 Mbit/s
  95th percentile per-packet one-way delay: 200.217 ms
  Loss rate: 5.19%
-- Flow 1:
  Average throughput: 651.68 Mbit/s
  95th percentile per-packet one-way delay: 151.163 ms
  Loss rate: 4.65%
-- Flow 2:
  Average throughput: 638.60 Mbit/s
  95th percentile per-packet one-way delay: 244.625 ms
  Loss rate: 5.69%
-- Flow 3:
  Average throughput: 552.79 Mbit/s
  95th percentile per-packet one-way delay: 184.946 ms
  Loss rate: 5.98%
Run 1: Report of FillP — Data Link

![Graph showing Throughput and Per-packet One-Way Delay over Time](image)

- Flow 1 ingress (mean 681.06 Mbit/s)
- Flow 1 egress (mean 651.68 Mbit/s)
- Flow 2 ingress (mean 673.45 Mbit/s)
- Flow 2 egress (mean 638.60 Mbit/s)
- Flow 3 ingress (mean 581.33 Mbit/s)
- Flow 3 egress (mean 552.79 Mbit/s)
Run 2: Statistics of FillP

Start at: 2018-07-12 16:57:51
End at: 2018-07-12 16:58:21
Local clock offset: -0.179 ms
Remote clock offset: -1.386 ms

# Below is generated by plot.py at 2018-07-12 21:56:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1253.59 Mbit/s
95th percentile per-packet one-way delay: 178.809 ms
Loss rate: 7.45%
-- Flow 1:
Average throughput: 610.36 Mbit/s
95th percentile per-packet one-way delay: 164.056 ms
Loss rate: 9.08%
-- Flow 2:
Average throughput: 654.31 Mbit/s
95th percentile per-packet one-way delay: 165.066 ms
Loss rate: 6.61%
-- Flow 3:
Average throughput: 633.20 Mbit/s
95th percentile per-packet one-way delay: 251.940 ms
Loss rate: 4.25%
Run 2: Report of FillP — Data Link

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

- Flow 1 ingress (mean 668.93 Mbit/s)
- Flow 1 egress (mean 610.36 Mbit/s)
- Flow 2 ingress (mean 696.97 Mbit/s)
- Flow 2 egress (mean 654.31 Mbit/s)
- Flow 3 ingress (mean 654.02 Mbit/s)
- Flow 3 egress (mean 633.29 Mbit/s)

- Flow 1 (95th percentile 164.06 ms)
- Flow 2 (95th percentile 165.07 ms)
- Flow 3 (95th percentile 251.94 ms)
Run 3: Statistics of FillP

Start at: 2018-07-12 17:25:00
End at: 2018-07-12 17:25:30
Local clock offset: -0.15 ms
Remote clock offset: 1.098 ms

# Below is generated by plot.py at 2018-07-12 22:00:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1402.76 Mbit/s
95th percentile per-packet one-way delay: 209.093 ms
Loss rate: 5.05%
-- Flow 1:
Average throughput: 742.92 Mbit/s
95th percentile per-packet one-way delay: 216.239 ms
Loss rate: 5.04%
-- Flow 2:
Average throughput: 624.88 Mbit/s
95th percentile per-packet one-way delay: 219.308 ms
Loss rate: 5.76%
-- Flow 3:
Average throughput: 741.97 Mbit/s
95th percentile per-packet one-way delay: 131.790 ms
Loss rate: 3.88%
Run 3: Report of FillP — Data Link

![Graph 1: Throughput vs. Time](image1)
- Blue dotted line: Flow 1 ingress (mean 779.58 Mbps)
- Blue dashed line: Flow 1 egress (mean 742.92 Mbps)
- Green dotted line: Flow 2 ingress (mean 659.51 Mbps)
- Green dashed line: Flow 2 egress (mean 624.88 Mbps)
- Red dotted line: Flow 3 ingress (mean 763.39 Mbps)
- Red dashed line: Flow 3 egress (mean 741.97 Mbps)

![Graph 2: Per-packet one-way delay vs. Time](image2)
- Blue line: Flow 1 (95th percentile 216.24 ms)
- Green line: Flow 2 (95th percentile 219.31 ms)
- Red line: Flow 3 (95th percentile 131.79 ms)
Run 4: Statistics of FillP

Start at: 2018-07-12 17:52:00
End at: 2018-07-12 17:52:30
Local clock offset: -0.341 ms
Remote clock offset: 0.131 ms

# Below is generated by plot.py at 2018-07-12 22:01:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1436.33 Mbit/s
95th percentile per-packet one-way delay: 169.718 ms
Loss rate: 3.81%
-- Flow 1:
Average throughput: 717.85 Mbit/s
95th percentile per-packet one-way delay: 143.558 ms
Loss rate: 4.33%
-- Flow 2:
Average throughput: 759.89 Mbit/s
95th percentile per-packet one-way delay: 195.155 ms
Loss rate: 3.45%
-- Flow 3:
Average throughput: 649.13 Mbit/s
95th percentile per-packet one-way delay: 135.258 ms
Loss rate: 2.91%
Run 4: Report of FillP — Data Link

![Graph 1: Throughput vs Time for different flows.]

![Graph 2: Per-packet delay vs Time for different flows.]

- Flow 1 ingress (mean 747.70 Mbit/s)
- Flow 1 egress (mean 717.85 Mbit/s)
- Flow 2 ingress (mean 782.90 Mbit/s)
- Flow 2 egress (mean 759.89 Mbit/s)
- Flow 3 ingress (mean 661.28 Mbit/s)
- Flow 3 egress (mean 649.13 Mbit/s)
Run 5: Statistics of FillP

Start at: 2018-07-12 18:16:49
End at: 2018-07-12 18:17:19
Local clock offset: 0.041 ms
Remote clock offset: -0.063 ms

# Below is generated by plot.py at 2018-07-12 22:01:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1344.38 Mbit/s
95th percentile per-packet one-way delay: 156.148 ms
Loss rate: 6.27%
-- Flow 1:
Average throughput: 718.18 Mbit/s
95th percentile per-packet one-way delay: 141.955 ms
Loss rate: 4.26%
-- Flow 2:
Average throughput: 626.04 Mbit/s
95th percentile per-packet one-way delay: 175.269 ms
Loss rate: 9.31%
-- Flow 3:
Average throughput: 638.81 Mbit/s
95th percentile per-packet one-way delay: 135.323 ms
Loss rate: 6.76%
Run 5: Report of FillP — Data Link

Throughput (Mbps):

- Flow 1 ingress (mean 747.55 Mbps)
- Flow 1 egress (mean 718.18 Mbps)
- Flow 2 ingress (mean 686.53 Mbps)
- Flow 2 egress (mean 626.04 Mbps)
- Flow 3 ingress (mean 677.87 Mbps)
- Flow 3 egress (mean 638.83 Mbps)

Per-packet one way delay (ms):

- Flow 1 (95th percentile 141.96 ms)
- Flow 2 (95th percentile 175.27 ms)
- Flow 3 (95th percentile 135.32 ms)
Run 6: Statistics of FillP

Start at: 2018-07-12 18:41:55
End at: 2018-07-12 18:42:25
Local clock offset: 0.355 ms
Remote clock offset: 0.002 ms

# Below is generated by plot.py at 2018-07-12 22:02:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1366.21 Mbit/s
95th percentile per-packet one-way delay: 201.771 ms
Loss rate: 4.42%
-- Flow 1:
Average throughput: 682.59 Mbit/s
95th percentile per-packet one-way delay: 159.059 ms
Loss rate: 3.48%
-- Flow 2:
Average throughput: 703.43 Mbit/s
95th percentile per-packet one-way delay: 232.198 ms
Loss rate: 4.77%
-- Flow 3:
Average throughput: 656.92 Mbit/s
95th percentile per-packet one-way delay: 187.749 ms
Loss rate: 6.54%
Run 6: Report of FillP — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 704.67 Mbps)  Flow 1 egress (mean 682.59 Mbps)
Flow 2 ingress (mean 734.84 Mbps)  Flow 2 egress (mean 703.43 Mbps)
Flow 3 ingress (mean 695.16 Mbps)  Flow 3 egress (mean 656.92 Mbps)

Per-packet one-way delay (ms)

Flow 1 (95th percentile 159.06 ms)  Flow 2 (95th percentile 232.20 ms)  Flow 3 (95th percentile 187.75 ms)
Run 7: Statistics of FillP

Start at: 2018-07-12 19:07:24
End at: 2018-07-12 19:07:54
Local clock offset: -0.033 ms
Remote clock offset: -0.093 ms

# Below is generated by plot.py at 2018-07-12 22:02:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1347.61 Mbit/s
95th percentile per-packet one-way delay: 154.534 ms
Loss rate: 6.43%
-- Flow 1:
Average throughput: 702.22 Mbit/s
95th percentile per-packet one-way delay: 143.840 ms
Loss rate: 5.58%
-- Flow 2:
Average throughput: 728.86 Mbit/s
95th percentile per-packet one-way delay: 136.663 ms
Loss rate: 5.63%
-- Flow 3:
Average throughput: 489.80 Mbit/s
95th percentile per-packet one-way delay: 174.536 ms
Loss rate: 12.16%
Run 7: Report of FillP — Data Link

![Graph 1](Image 134x430 to 477x642)

![Graph 2](Image 134x219 to 477x405)
Run 8: Statistics of FillP

Start at: 2018-07-12 19:32:44
End at: 2018-07-12 19:33:14
Local clock offset: 0.588 ms
Remote clock offset: -0.067 ms

# Below is generated by plot.py at 2018-07-12 22:02:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1268.80 Mbit/s
95th percentile per-packet one-way delay: 219.444 ms
Loss rate: 6.29%
-- Flow 1:
Average throughput: 794.86 Mbit/s
95th percentile per-packet one-way delay: 209.490 ms
Loss rate: 4.34%
-- Flow 2:
Average throughput: 476.72 Mbit/s
95th percentile per-packet one-way delay: 200.802 ms
Loss rate: 6.04%
-- Flow 3:
Average throughput: 477.33 Mbit/s
95th percentile per-packet one-way delay: 314.989 ms
Loss rate: 15.49%
Run 8: Report of FillP — Data Link

---

**Throughput (Mbps)**

- Flow 1 Ingress (mean 828.01 Mbps)
- Flow 1 Egress (mean 794.86 Mbps)
- Flow 2 Ingress (mean 504.61 Mbps)
- Flow 2 Egress (mean 476.72 Mbps)
- Flow 3 Ingress (mean 558.87 Mbps)
- Flow 3 Egress (mean 477.33 Mbps)

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**Per-packet delay (ms)**

- Flow 1 (95th percentile 209.49 ms)
- Flow 2 (95th percentile 200.80 ms)
- Flow 3 (95th percentile 314.99 ms)
Run 9: Statistics of FillP

Start at: 2018-07-12 19:58:24
End at: 2018-07-12 19:58:54
Local clock offset: -0.054 ms
Remote clock offset: -0.27 ms

# Below is generated by plot.py at 2018-07-12 22:19:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1098.32 Mbit/s
95th percentile per-packet one-way delay: 233.283 ms
Loss rate: 3.68%
-- Flow 1:
Average throughput: 584.45 Mbit/s
95th percentile per-packet one-way delay: 222.293 ms
Loss rate: 3.70%
-- Flow 2:
Average throughput: 440.96 Mbit/s
95th percentile per-packet one-way delay: 267.350 ms
Loss rate: 3.30%
-- Flow 3:
Average throughput: 670.51 Mbit/s
95th percentile per-packet one-way delay: 136.485 ms
Loss rate: 4.12%
Run 9: Report of FillP — Data Link

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

- **Flow 1 Ingress (mean 604.68 Mbit/s)**
- **Flow 1 Egress (mean 584.45 Mbit/s)**
- **Flow 2 Ingress (mean 453.53 Mbit/s)**
- **Flow 2 Egress (mean 440.96 Mbit/s)**
- **Flow 3 Ingress (mean 691.92 Mbit/s)**
- **Flow 3 Egress (mean 670.51 Mbit/s)**

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

- **Flow 1 (95th percentile 222.29 ms)**
- **Flow 2 (95th percentile 267.35 ms)**
- **Flow 3 (95th percentile 166.49 ms)**
Run 10: Statistics of FillP

Start at: 2018-07-12 20:23:14
End at: 2018-07-12 20:23:44
Local clock offset: 0.003 ms
Remote clock offset: -0.158 ms

# Below is generated by plot.py at 2018-07-12 22:29:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1443.73 Mbit/s
95th percentile per-packet one-way delay: 187.181 ms
Loss rate: 2.71%
-- Flow 1:
Average throughput: 742.30 Mbit/s
95th percentile per-packet one-way delay: 178.468 ms
Loss rate: 3.09%
-- Flow 2:
Average throughput: 717.68 Mbit/s
95th percentile per-packet one-way delay: 204.428 ms
Loss rate: 2.47%
-- Flow 3:
Average throughput: 681.52 Mbit/s
95th percentile per-packet one-way delay: 188.236 ms
Loss rate: 1.97%
Run 10: Report of FillIP — Data Link

![Graph 1: Throughput (Mbps)]

- Flow 1 ingress (mean 763.34 Mbps)
- Flow 1 egress (mean 742.30 Mbps)
- Flow 2 ingress (mean 731.91 Mbps)
- Flow 2 egress (mean 717.68 Mbps)
- Flow 3 ingress (mean 687.64 Mbps)
- Flow 3 egress (mean 681.32 Mbps)

![Graph 2: Packet arrival delay (ms)]

- Flow 1 (95th percentile 178.47 ms)
- Flow 2 (95th percentile 204.43 ms)
- Flow 3 (95th percentile 188.24 ms)
Run 1: Statistics of FillP-Sheep

Start at: 2018-07-12 16:48:48
End at: 2018-07-12 16:49:18
Local clock offset: -0.054 ms
Remote clock offset: -0.09 ms

# Below is generated by plot.py at 2018-07-12 22:29:02
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1220.91 Mbit/s
  95th percentile per-packet one-way delay: 227.130 ms
  Loss rate: 7.59%
-- Flow 1:
  Average throughput: 628.02 Mbit/s
  95th percentile per-packet one-way delay: 246.094 ms
  Loss rate: 9.22%
-- Flow 2:
  Average throughput: 619.43 Mbit/s
  95th percentile per-packet one-way delay: 187.276 ms
  Loss rate: 7.21%
-- Flow 3:
  Average throughput: 552.72 Mbit/s
  95th percentile per-packet one-way delay: 117.755 ms
  Loss rate: 2.40%
Run 1: Report of FillP-Sheep — Data Link

![Graph showing throughput and delay over time for different flows.](image)
Run 2: Statistics of FillP-Sheep

Start at: 2018-07-12 17:15:01
End at: 2018-07-12 17:15:31
Local clock offset: 0.036 ms
Remote clock offset: -1.33 ms

# Below is generated by plot.py at 2018-07-12 22:29:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1237.05 Mbit/s
95th percentile per-packet one-way delay: 164.943 ms
Loss rate: 4.85%
-- Flow 1:
Average throughput: 653.76 Mbit/s
95th percentile per-packet one-way delay: 189.186 ms
Loss rate: 5.39%
-- Flow 2:
Average throughput: 606.80 Mbit/s
95th percentile per-packet one-way delay: 149.439 ms
Loss rate: 5.57%
-- Flow 3:
Average throughput: 550.06 Mbit/s
95th percentile per-packet one-way delay: 116.786 ms
Loss rate: 1.12%
Run 2: Report of FillP-Sheep — Data Link
Run 3: Statistics of FillP-Sheep

Start at: 2018-07-12 17:42:57
End at: 2018-07-12 17:43:27
Local clock offset: 0.141 ms
Remote clock offset: -0.17 ms

# Below is generated by plot.py at 2018-07-12 22:29:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1026.39 Mbit/s
95th percentile per-packet one-way delay: 247.726 ms
Loss rate: 5.96%
-- Flow 1:
Average throughput: 273.04 Mbit/s
95th percentile per-packet one-way delay: 259.673 ms
Loss rate: 6.44%
-- Flow 2:
Average throughput: 796.33 Mbit/s
95th percentile per-packet one-way delay: 248.777 ms
Loss rate: 5.32%
-- Flow 3:
Average throughput: 681.61 Mbit/s
95th percentile per-packet one-way delay: 174.870 ms
Loss rate: 6.89%
Run 3: Report of FillP-Sheep — Data Link

[Graph showing throughput and per-packet one-way delay over time for different flows with mean data rates indicated]

[Graph showing throughput and per-packet one-way delay over time for different flows with 95th percentile delays indicated]
Run 4: Statistics of FillP-Sheep

Start at: 2018-07-12 18:08:08
End at: 2018-07-12 18:08:38
Local clock offset: -0.039 ms
Remote clock offset: -0.151 ms

# Below is generated by plot.py at 2018-07-12 22:29:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 899.55 Mbit/s
95th percentile per-packet one-way delay: 247.256 ms
Loss rate: 12.39%
-- Flow 1:
Average throughput: 273.21 Mbit/s
95th percentile per-packet one-way delay: 248.352 ms
Loss rate: 8.68%
-- Flow 2:
Average throughput: 628.73 Mbit/s
95th percentile per-packet one-way delay: 229.090 ms
Loss rate: 13.43%
-- Flow 3:
Average throughput: 635.06 Mbit/s
95th percentile per-packet one-way delay: 248.520 ms
Loss rate: 14.90%
Run 4: Report of FillP-Sheep — Data Link
Run 5: Statistics of FillP-Sheep

Start at: 2018-07-12 18:32:57
End at: 2018-07-12 18:33:27
Local clock offset: -0.06 ms
Remote clock offset: -0.09 ms

# Below is generated by plot.py at 2018-07-12 22:32:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1322.16 Mbit/s
95th percentile per-packet one-way delay: 221.482 ms
Loss rate: 7.67%
-- Flow 1:
Average throughput: 698.05 Mbit/s
95th percentile per-packet one-way delay: 225.637 ms
Loss rate: 8.19%
-- Flow 2:
Average throughput: 614.49 Mbit/s
95th percentile per-packet one-way delay: 220.379 ms
Loss rate: 7.72%
-- Flow 3:
Average throughput: 656.34 Mbit/s
95th percentile per-packet one-way delay: 132.436 ms
Loss rate: 5.86%
Run 5: Report of FillP-Sheep — Data Link

![Graph showing network performance metrics over time for different flows. The graphs display throughput and per-packet one-way delay for flows 1, 2, and 3.]

- Flow 1 Ingress (mean 757.59 Mbit/s)
- Flow 1 Egress (mean 698.05 Mbit/s)
- Flow 2 Ingress (mean 662.37 Mbit/s)
- Flow 2 Egress (mean 614.49 Mbit/s)
- Flow 3 Ingress (mean 699.83 Mbit/s)
- Flow 3 Egress (mean 656.34 Mbit/s)
Run 6: Statistics of FillP-Sheep

Start at: 2018-07-12 18:58:04
End at: 2018-07-12 18:58:34
Local clock offset: -0.013 ms
Remote clock offset: -0.075 ms

# Below is generated by plot.py at 2018-07-12 22:32:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1365.80 Mbit/s
95th percentile per-packet one-way delay: 221.102 ms
Loss rate: 3.43%
-- Flow 1:
Average throughput: 756.46 Mbit/s
95th percentile per-packet one-way delay: 228.350 ms
Loss rate: 2.76%
-- Flow 2:
Average throughput: 638.47 Mbit/s
95th percentile per-packet one-way delay: 210.376 ms
Loss rate: 4.16%
-- Flow 3:
Average throughput: 564.58 Mbit/s
95th percentile per-packet one-way delay: 132.526 ms
Loss rate: 4.48%
Run 6: Report of FillP-Sheep — Data Link

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

- Flow 1 Ingress (mean 775.12 Mbit/s)
- Flow 1 Egress (mean 756.46 Mbit/s)
- Flow 2 Ingress (mean 662.58 Mbit/s)
- Flow 2 Egress (mean 638.47 Mbit/s)
- Flow 3 Ingress (mean 585.05 Mbit/s)
- Flow 3 Egress (mean 564.58 Mbit/s)

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

- Flow 1 (95th percentile 228.35 ms)
- Flow 2 (95th percentile 210.38 ms)
- Flow 3 (95th percentile 132.53 ms)
Run 7: Statistics of FillP-Sheep

Start at: 2018-07-12 19:23:27
End at: 2018-07-12 19:23:57
Local clock offset: 0.303 ms
Remote clock offset: -0.175 ms

# Below is generated by plot.py at 2018-07-12 22:50:12
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1268.49 Mbit/s
  95th percentile per-packet one-way delay: 176.279 ms
  Loss rate: 7.46%
-- Flow 1:
  Average throughput: 698.51 Mbit/s
  95th percentile per-packet one-way delay: 168.534 ms
  Loss rate: 7.31%
-- Flow 2:
  Average throughput: 580.29 Mbit/s
  95th percentile per-packet one-way delay: 246.647 ms
  Loss rate: 8.87%
-- Flow 3:
  Average throughput: 560.22 Mbit/s
  95th percentile per-packet one-way delay: 166.003 ms
  Loss rate: 4.92%
Run 7: Report of FillP-Sheep — Data Link

Throughput (Mbps/s)

Flow 1 Ingress (mean 751.01 Mbps/s)  Flow 1 Egress (mean 698.51 Mbps/s)
Flow 2 Ingress (mean 633.53 Mbps/s)  Flow 2 Egress (mean 580.29 Mbps/s)
Flow 3 Ingress (mean 583.21 Mbps/s)  Flow 3 Egress (mean 560.22 Mbps/s)

Per-packet one-way delay (ms)

Flow 1 (95th percentile 168.53 ms)  Flow 2 (95th percentile 246.65 ms)  Flow 3 (95th percentile 166.00 ms)
Run 8: Statistics of FillP-Sheep

Start at: 2018-07-12 19:49:04
End at: 2018-07-12 19:49:34
Local clock offset: -0.023 ms
Remote clock offset: -0.112 ms

# Below is generated by plot.py at 2018-07-12 22:51:27
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1261.53 Mbit/s
  95th percentile per-packet one-way delay: 231.091 ms
  Loss rate: 7.27%
-- Flow 1:
  Average throughput: 691.81 Mbit/s
  95th percentile per-packet one-way delay: 241.920 ms
  Loss rate: 7.81%
-- Flow 2:
  Average throughput: 627.34 Mbit/s
  95th percentile per-packet one-way delay: 190.332 ms
  Loss rate: 7.83%
-- Flow 3:
  Average throughput: 467.50 Mbit/s
  95th percentile per-packet one-way delay: 203.518 ms
  Loss rate: 3.12%
Run 8: Report of FillP-Sheep — Data Link

![Graph 1](image1.png)

- Flow 1 ingress (mean 747.82 Mb/s)
- Flow 1 egress (mean 691.81 Mb/s)
- Flow 2 ingress (mean 676.99 Mb/s)
- Flow 2 egress (mean 627.34 Mb/s)
- Flow 3 ingress (mean 477.96 Mb/s)
- Flow 3 egress (mean 467.50 Mb/s)

![Graph 2](image2.png)

- Flow 1 (95th percentile 241.92 ms)
- Flow 2 (95th percentile 190.33 ms)
- Flow 3 (95th percentile 203.52 ms)
Run 9: Statistics of FillP-Sheep

Start at: 2018-07-12 20:14:18
End at: 2018-07-12 20:14:48
Local clock offset: 0.173 ms
Remote clock offset: -0.334 ms

# Below is generated by plot.py at 2018-07-12 22:52:58
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1230.89 Mbit/s
  95th percentile per-packet one-way delay: 188.517 ms
  Loss rate: 5.28%
-- Flow 1:
  Average throughput: 667.63 Mbit/s
  95th percentile per-packet one-way delay: 196.361 ms
  Loss rate: 6.54%
-- Flow 2:
  Average throughput: 604.48 Mbit/s
  95th percentile per-packet one-way delay: 139.199 ms
  Loss rate: 4.18%
-- Flow 3:
  Average throughput: 491.80 Mbit/s
  95th percentile per-packet one-way delay: 215.872 ms
  Loss rate: 2.62%
Run 9: Report of FillP-Sheep — Data Link

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

- Flow 1 ingress (mean 712.13 Mbps)
- Flow 1 egress (mean 667.63 Mbps)
- Flow 2 ingress (mean 627.53 Mbps)
- Flow 2 egress (mean 604.48 Mbps)
- Flow 3 ingress (mean 499.67 Mbps)
- Flow 3 egress (mean 491.80 Mbps)

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

- Flow 1 (95th percentile 196.36 ms)
- Flow 2 (95th percentile 139.20 ms)
- Flow 3 (95th percentile 215.87 ms)
Run 10: Statistics of FillP-Sheep

Start at: 2018-07-12 20:39:32
End at: 2018-07-12 20:40:02
Local clock offset: -0.092 ms
Remote clock offset: -0.251 ms

# Below is generated by plot.py at 2018-07-12 22:55:51
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1206.94 Mbit/s
  95th percentile per-packet one-way delay: 269.832 ms
  Loss rate: 4.93%
-- Flow 1:
  Average throughput: 618.22 Mbit/s
  95th percentile per-packet one-way delay: 271.778 ms
  Loss rate: 6.31%
-- Flow 2:
  Average throughput: 586.93 Mbit/s
  95th percentile per-packet one-way delay: 276.909 ms
  Loss rate: 4.31%
-- Flow 3:
  Average throughput: 610.49 Mbit/s
  95th percentile per-packet one-way delay: 164.299 ms
  Loss rate: 1.68%
Run 1: Statistics of Indigo

Start at: 2018-07-12 16:53:29
End at: 2018-07-12 16:53:59
Local clock offset: 0.053 ms
Remote clock offset: -0.13 ms

# Below is generated by plot.py at 2018-07-12 22:55:51
# Datalink statistics
-- Total of 3 flows:
95th percentile per-packet one-way delay: 69.541 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 197.99 Mbit/s
95th percentile per-packet one-way delay: 68.203 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 204.42 Mbit/s
95th percentile per-packet one-way delay: 69.762 ms
Loss rate: 0.48%
-- Flow 3:
Average throughput: 116.43 Mbit/s
95th percentile per-packet one-way delay: 71.558 ms
Loss rate: 1.34%
Run 1: Report of Indigo — Data Link
Run 2: Statistics of Indigo

Start at: 2018-07-12 17:20:37
End at: 2018-07-12 17:21:07
Local clock offset: 0.138 ms
Remote clock offset: -0.498 ms

# Below is generated by plot.py at 2018-07-12 22:55:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 392.06 Mbit/s
95th percentile per-packet one-way delay: 70.668 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 210.30 Mbit/s
95th percentile per-packet one-way delay: 68.761 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 213.14 Mbit/s
95th percentile per-packet one-way delay: 71.866 ms
Loss rate: 0.50%
-- Flow 3:
Average throughput: 123.66 Mbit/s
95th percentile per-packet one-way delay: 77.991 ms
Loss rate: 1.24%
Run 2: Report of Indigo — Data Link

![Graph of Throughput vs Time](image1)

![Graph of Per-packet one-way delay vs Time](image2)
Run 3: Statistics of Indigo

Start at: 2018-07-12 17:47:37
End at: 2018-07-12 17:48:07
Local clock offset: -0.018 ms
Remote clock offset: -0.105 ms

# Below is generated by plot.py at 2018-07-12 22:55:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 345.33 Mbit/s
95th percentile per-packet one-way delay: 62.600 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 174.31 Mbit/s
95th percentile per-packet one-way delay: 61.912 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 189.05 Mbit/s
95th percentile per-packet one-way delay: 62.568 ms
Loss rate: 0.52%
-- Flow 3:
Average throughput: 140.07 Mbit/s
95th percentile per-packet one-way delay: 63.536 ms
Loss rate: 1.21%
Run 3: Report of Indigo — Data Link
Run 4: Statistics of Indigo

Start at: 2018-07-12 18:12:31
End at: 2018-07-12 18:13:02
Local clock offset: 0.234 ms
Remote clock offset: -0.044 ms

# Below is generated by plot.py at 2018-07-12 22:55:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 385.65 Mbit/s
95th percentile per-packet one-way delay: 65.455 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 232.79 Mbit/s
95th percentile per-packet one-way delay: 64.751 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 164.80 Mbit/s
95th percentile per-packet one-way delay: 65.618 ms
Loss rate: 0.53%
-- Flow 3:
Average throughput: 134.70 Mbit/s
95th percentile per-packet one-way delay: 67.067 ms
Loss rate: 1.12%
Run 4: Report of Indigo — Data Link

```
Flow 1 ingress (mean 232.73 Mbit/s)
Flow 1 egress (mean 232.79 Mbit/s)
Flow 2 ingress (mean 164.77 Mbit/s)
Flow 2 egress (mean 164.88 Mbit/s)
Flow 3 ingress (mean 134.78 Mbit/s)
Flow 3 egress (mean 134.79 Mbit/s)
```

```
Flow 1 (95th percentile 64.75 ms)
Flow 2 (95th percentile 65.62 ms)
Flow 3 (95th percentile 67.07 ms)
```
Run 5: Statistics of Indigo

Start at: 2018-07-12 18:37:31
End at: 2018-07-12 18:38:01
Local clock offset: 0.003 ms
Remote clock offset: 0.022 ms

# Below is generated by plot.py at 2018-07-12 22:55:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 389.60 Mbit/s
95th percentile per-packet one-way delay: 63.142 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 215.27 Mbit/s
95th percentile per-packet one-way delay: 62.685 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 185.28 Mbit/s
95th percentile per-packet one-way delay: 63.152 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 141.02 Mbit/s
95th percentile per-packet one-way delay: 64.018 ms
Loss rate: 1.33%
Run 5: Report of Indigo — Data Link

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

- Flow 1 ingress (mean 215.33 Mbit/s)
- Flow 1 egress (mean 215.27 Mbit/s)
- Flow 2 ingress (mean 185.31 Mbit/s)
- Flow 2 egress (mean 185.28 Mbit/s)
- Flow 3 ingress (mean 141.40 Mbit/s)
- Flow 3 egress (mean 141.02 Mbit/s)
Run 6: Statistics of Indigo

Start at: 2018-07-12 19:03:06
End at: 2018-07-12 19:03:36
Local clock offset: 0.052 ms
Remote clock offset: -0.058 ms

# Below is generated by plot.py at 2018-07-12 22:55:51
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 389.72 Mbit/s
  95th percentile per-packet one-way delay: 65.099 ms
  Loss rate: 0.50%
-- Flow 1:
  Average throughput: 228.20 Mbit/s
  95th percentile per-packet one-way delay: 63.645 ms
  Loss rate: 0.31%
-- Flow 2:
  Average throughput: 172.46 Mbit/s
  95th percentile per-packet one-way delay: 65.100 ms
  Loss rate: 0.57%
-- Flow 3:
  Average throughput: 146.34 Mbit/s
  95th percentile per-packet one-way delay: 68.069 ms
  Loss rate: 1.25%
Run 6: Report of Indigo — Data Link

![Graph of throughput and packet delay over time for flows 1, 2, and 3. The graphs show the mean throughput and 95th percentile delay for each flow.]

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Run 7: Statistics of Indigo

Start at: 2018-07-12 19:28:15
End at: 2018-07-12 19:28:45
Local clock offset: 0.472 ms
Remote clock offset: -0.231 ms

# Below is generated by plot.py at 2018-07-12 22:55:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 387.12 Mbit/s
95th percentile per-packet one-way delay: 69.628 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 214.36 Mbit/s
95th percentile per-packet one-way delay: 67.271 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 197.93 Mbit/s
95th percentile per-packet one-way delay: 70.541 ms
Loss rate: 0.53%
-- Flow 3:
Average throughput: 126.74 Mbit/s
95th percentile per-packet one-way delay: 75.898 ms
Loss rate: 1.22%
Run 7: Report of Indigo — Data Link
Run 8: Statistics of Indigo

Start at: 2018-07-12 19:53:56
End at: 2018-07-12 19:54:26
Local clock offset: -0.065 ms
Remote clock offset: -0.185 ms

# Below is generated by plot.py at 2018-07-12 22:55:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 380.10 Mbit/s
95th percentile per-packet one-way delay: 63.283 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 208.10 Mbit/s
95th percentile per-packet one-way delay: 62.378 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 194.00 Mbit/s
95th percentile per-packet one-way delay: 63.691 ms
Loss rate: 0.54%
-- Flow 3:
Average throughput: 133.73 Mbit/s
95th percentile per-packet one-way delay: 67.883 ms
Loss rate: 1.27%
Run 8: Report of Indigo — Data Link
Run 9: Statistics of Indigo

Start at: 2018-07-12 20:18:57
End at: 2018-07-12 20:19:27
Local clock offset: 0.144 ms
Remote clock offset: -0.135 ms

# Below is generated by plot.py at 2018-07-12 22:55:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 396.37 Mbit/s
95th percentile per-packet one-way delay: 66.278 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 216.77 Mbit/s
95th percentile per-packet one-way delay: 65.611 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 201.85 Mbit/s
95th percentile per-packet one-way delay: 66.331 ms
Loss rate: 0.49%
-- Flow 3:
Average throughput: 140.14 Mbit/s
95th percentile per-packet one-way delay: 67.578 ms
Loss rate: 1.26%
Run 9: Report of Indigo — Data Link

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

![Graph of per-packet round-trip delay over time for different flows.](image)
Run 10: Statistics of Indigo

Start at: 2018-07-12 20:44:25
End at: 2018-07-12 20:44:55
Local clock offset: 0.16 ms
Remote clock offset: -0.344 ms

# Below is generated by plot.py at 2018-07-12 22:55:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 383.62 Mbit/s
95th percentile per-packet one-way delay: 65.565 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 223.02 Mbit/s
95th percentile per-packet one-way delay: 63.776 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 168.31 Mbit/s
95th percentile per-packet one-way delay: 66.609 ms
Loss rate: 0.52%
-- Flow 3:
Average throughput: 150.18 Mbit/s
95th percentile per-packet one-way delay: 67.953 ms
Loss rate: 1.18%
Run 10: Report of Indigo — Data Link

![Graph showing throughput and delay over time for different flows.]
Run 1: Statistics of LEDBAT

Start at: 2018-07-12 16:40:31
End at: 2018-07-12 16:41:01
Local clock offset: -0.026 ms
Remote clock offset: -0.131 ms

# Below is generated by plot.py at 2018-07-12 22:55:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 48.45 Mbit/s
95th percentile per-packet one-way delay: 54.483 ms
Loss rate: 0.89%
-- Flow 1:
Average throughput: 32.14 Mbit/s
95th percentile per-packet one-way delay: 54.561 ms
Loss rate: 0.69%
-- Flow 2:
Average throughput: 21.39 Mbit/s
95th percentile per-packet one-way delay: 54.266 ms
Loss rate: 1.06%
-- Flow 3:
Average throughput: 6.51 Mbit/s
95th percentile per-packet one-way delay: 51.740 ms
Loss rate: 2.67%
Run 1: Report of LEDBAT — Data Link

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

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

- Flow 1 ingress (mean 32.25 Mbit/s)
- Flow 1 egress (mean 32.14 Mbit/s)
- Flow 2 ingress (mean 21.51 Mbit/s)
- Flow 2 egress (mean 21.39 Mbit/s)
- Flow 3 ingress (mean 6.62 Mbit/s)
- Flow 3 egress (mean 6.51 Mbit/s)
Run 2: Statistics of LEDBAT

Start at: 2018-07-12 17:05:20
End at: 2018-07-12 17:05:50
Local clock offset: 0.04 ms
Remote clock offset: -0.072 ms

# Below is generated by plot.py at 2018-07-12 22:55:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 49.50 Mbit/s
95th percentile per-packet one-way delay: 55.135 ms
Loss rate: 0.89%
-- Flow 1:
Average throughput: 32.36 Mbit/s
95th percentile per-packet one-way delay: 55.234 ms
Loss rate: 0.69%
-- Flow 2:
Average throughput: 20.59 Mbit/s
95th percentile per-packet one-way delay: 54.995 ms
Loss rate: 1.06%
-- Flow 3:
Average throughput: 10.50 Mbit/s
95th percentile per-packet one-way delay: 55.967 ms
Loss rate: 2.11%
Run 2: Report of LEDBAT — Data Link

![Data Link Diagram]

- Flow 1 ingress (mean 32.47 Mbit/s)
- Flow 1 egress (mean 32.36 Mbit/s)
- Flow 2 ingress (mean 20.70 Mbit/s)
- Flow 2 egress (mean 20.59 Mbit/s)
- Flow 3 ingress (mean 10.62 Mbit/s)
- Flow 3 egress (mean 10.50 Mbit/s)

![Packet Delay Diagram]
Run 3: Statistics of LEDBAT

Start at: 2018-07-12 17:33:59
End at: 2018-07-12 17:34:29
Local clock offset: 0.01 ms
Remote clock offset: -0.501 ms

# Below is generated by plot.py at 2018-07-12 22:55:51
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 50.41 Mbit/s
  95th percentile per-packet one-way delay: 54.882 ms
  Loss rate: 0.90%
-- Flow 1:
  Average throughput: 31.81 Mbit/s
  95th percentile per-packet one-way delay: 54.977 ms
  Loss rate: 0.70%
-- Flow 2:
  Average throughput: 22.72 Mbit/s
  95th percentile per-packet one-way delay: 54.582 ms
  Loss rate: 1.02%
-- Flow 3:
  Average throughput: 10.78 Mbit/s
  95th percentile per-packet one-way delay: 51.773 ms
  Loss rate: 2.12%
Run 3: Report of LEDBAT — Data Link

![Throughput Graph]

- Flow 1 ingress (mean 31.92 Mbit/s)
- Flow 1 egress (mean 31.81 Mbit/s)
- Flow 2 ingress (mean 22.84 Mbit/s)
- Flow 2 egress (mean 22.72 Mbit/s)
- Flow 3 ingress (mean 10.90 Mbit/s)
- Flow 3 egress (mean 10.78 Mbit/s)

![Per-packet one-way delay Graph]

- Flow 1 (95th percentile 54.90 ms)
- Flow 2 (95th percentile 54.58 ms)
- Flow 3 (95th percentile 51.77 ms)
Run 4: Statistics of LEDBAT

Start at: 2018-07-12 17:59:48
End at: 2018-07-12 18:00:18
Local clock offset: -0.053 ms
Remote clock offset: -0.039 ms

# Below is generated by plot.py at 2018-07-12 22:55:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 51.33 Mbit/s
95th percentile per-packet one-way delay: 54.259 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 33.35 Mbit/s
95th percentile per-packet one-way delay: 54.369 ms
Loss rate: 0.68%
-- Flow 2:
Average throughput: 21.76 Mbit/s
95th percentile per-packet one-way delay: 54.128 ms
Loss rate: 1.04%
-- Flow 3:
Average throughput: 10.71 Mbit/s
95th percentile per-packet one-way delay: 51.297 ms
Loss rate: 2.12%
Run 5: Statistics of LEDBAT

Start at: 2018-07-12 18:24:31
End at: 2018-07-12 18:25:01
Local clock offset: 0.075 ms
Remote clock offset: -0.1 ms

# Below is generated by plot.py at 2018-07-12 22:55:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 50.36 Mbit/s
95th percentile per-packet one-way delay: 53.870 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 32.68 Mbit/s
95th percentile per-packet one-way delay: 54.100 ms
Loss rate: 0.69%
-- Flow 2:
Average throughput: 21.29 Mbit/s
95th percentile per-packet one-way delay: 51.495 ms
Loss rate: 1.06%
-- Flow 3:
Average throughput: 10.87 Mbit/s
95th percentile per-packet one-way delay: 52.637 ms
Loss rate: 2.11%
Run 5: Report of LEDBAT — Data Link

[Graph showing throughput over time for multiple flows with different line styles and colors, indicating average throughput rates.]

[Graph showing per-packet one-way delay over time for multiple flows with different line styles and colors, indicating 95th percentile delays.]
Run 6: Statistics of LEDBAT

Start at: 2018-07-12 18:49:39
End at: 2018-07-12 18:50:09
Local clock offset: 0.025 ms
Remote clock offset: -0.133 ms

# Below is generated by plot.py at 2018-07-12 22:55:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 48.58 Mbit/s
95th percentile per-packet one-way delay: 54.996 ms
Loss rate: 0.91%
-- Flow 1:
Average throughput: 31.32 Mbit/s
95th percentile per-packet one-way delay: 54.980 ms
Loss rate: 0.71%
-- Flow 2:
Average throughput: 20.77 Mbit/s
95th percentile per-packet one-way delay: 54.934 ms
Loss rate: 1.07%
-- Flow 3:
Average throughput: 10.55 Mbit/s
95th percentile per-packet one-way delay: 55.604 ms
Loss rate: 2.12%
Run 6: Report of LEDBAT — Data Link

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

- Flow 1 ingress (mean 31.43 Mbit/s)
- Flow 1 egress (mean 31.32 Mbit/s)
- Flow 2 ingress (mean 20.88 Mbit/s)
- Flow 2 egress (mean 20.77 Mbit/s)
- Flow 3 ingress (mean 10.67 Mbit/s)
- Flow 3 egress (mean 10.55 Mbit/s)

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

- Flow 1 (95th percentile 54.98 ms)
- Flow 2 (95th percentile 54.93 ms)
- Flow 3 (95th percentile 55.60 ms)
Run 7: Statistics of LEDBAT

Start at: 2018-07-12 19:15:05
End at: 2018-07-12 19:15:35
Local clock offset: 0.013 ms
Remote clock offset: -0.204 ms

# Below is generated by plot.py at 2018-07-12 22:55:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 50.38 Mbit/s
95th percentile per-packet one-way delay: 54.186 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 31.34 Mbit/s
95th percentile per-packet one-way delay: 54.308 ms
Loss rate: 0.70%
-- Flow 2:
Average throughput: 23.43 Mbit/s
95th percentile per-packet one-way delay: 53.197 ms
Loss rate: 1.01%
-- Flow 3:
Average throughput: 10.58 Mbit/s
95th percentile per-packet one-way delay: 51.072 ms
Loss rate: 2.14%
Run 7: Report of LEDBAT — Data Link
Run 8: Statistics of LEDBAT

Start at: 2018-07-12 19:40:27
End at: 2018-07-12 19:40:57
Local clock offset: 0.608 ms
Remote clock offset: -0.095 ms

# Below is generated by plot.py at 2018-07-12 22:55:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 48.73 Mbit/s
95th percentile per-packet one-way delay: 55.189 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 33.23 Mbit/s
95th percentile per-packet one-way delay: 55.214 ms
Loss rate: 0.68%
-- Flow 2:
Average throughput: 18.26 Mbit/s
95th percentile per-packet one-way delay: 55.213 ms
Loss rate: 1.13%
-- Flow 3:
Average throughput: 10.44 Mbit/s
95th percentile per-packet one-way delay: 54.753 ms
Loss rate: 2.11%
Run 8: Report of LEDBAT — Data Link

Graph 1: Time vs. Throughput (Mbps)

- Flow 1 ingress (mean 33.34 Mbps)
- Flow 1 egress (mean 33.23 Mbps)
- Flow 2 ingress (mean 18.37 Mbps)
- Flow 2 egress (mean 16.26 Mbps)
- Flow 3 ingress (mean 10.55 Mbps)
- Flow 3 egress (mean 10.44 Mbps)

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

- Flow 1 (95th percentile 55.21 ms)
- Flow 2 (95th percentile 55.21 ms)
- Flow 3 (95th percentile 54.75 ms)
Run 9: Statistics of LEDBAT

Start at: 2018-07-12 20:05:51
End at: 2018-07-12 20:06:21
Local clock offset: -0.059 ms
Remote clock offset: 0.013 ms

# Below is generated by plot.py at 2018-07-12 22:55:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 50.11 Mbit/s
95th percentile per-packet one-way delay: 54.688 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 33.21 Mbit/s
95th percentile per-packet one-way delay: 54.794 ms
Loss rate: 0.68%
-- Flow 2:
Average throughput: 21.60 Mbit/s
95th percentile per-packet one-way delay: 54.559 ms
Loss rate: 1.04%
-- Flow 3:
Average throughput: 7.84 Mbit/s
95th percentile per-packet one-way delay: 54.444 ms
Loss rate: 2.15%
Run 9: Report of LEDBAT — Data Link

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

Legend:
- Flow 1 ingress (mean 33.32 Mbit/s) — Blue line
- Flow 1 egress (mean 32.21 Mbit/s) — Green line
- Flow 2 ingress (mean 21.71 Mbit/s) — Red line
- Flow 2 egress (mean 21.60 Mbit/s) — Green line
- Flow 3 ingress (mean 7.93 Mbit/s) — Red line
- Flow 3 egress (mean 7.84 Mbit/s) — Blue line

Throughput (Mbps)

Time (s)

Per-packet one-way delay (ms)

Time (s)
Run 10: Statistics of LEDBAT

Start at: 2018-07-12 20:31:04
End at: 2018-07-12 20:31:34
Local clock offset: 0.124 ms
Remote clock offset: 0.129 ms

# Below is generated by plot.py at 2018-07-12 22:55:51
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 47.85 Mbit/s
  95th percentile per-packet one-way delay: 54.461 ms
  Loss rate: 0.91%
-- Flow 1:
  Average throughput: 31.08 Mbit/s
  95th percentile per-packet one-way delay: 54.435 ms
  Loss rate: 0.70%
-- Flow 2:
  Average throughput: 20.39 Mbit/s
  95th percentile per-packet one-way delay: 54.506 ms
  Loss rate: 1.07%
-- Flow 3:
  Average throughput: 9.86 Mbit/s
  95th percentile per-packet one-way delay: 54.440 ms
  Loss rate: 2.18%
Run 10: Report of LEDBAT — Data Link
Run 1: Statistics of PCC-Allegro

Start at: 2018-07-12 16:56:27
End at: 2018-07-12 16:56:57
Local clock offset: -0.072 ms
Remote clock offset: -0.196 ms

# Below is generated by plot.py at 2018-07-12 23:00:23
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 457.27 Mbit/s
  95th percentile per-packet one-way delay: 188.257 ms
  Loss rate: 1.34%
-- Flow 1:
  Average throughput: 434.20 Mbit/s
  95th percentile per-packet one-way delay: 188.232 ms
  Loss rate: 1.32%
-- Flow 2:
  Average throughput: 32.27 Mbit/s
  95th percentile per-packet one-way delay: 191.785 ms
  Loss rate: 1.74%
-- Flow 3:
  Average throughput: 5.24 Mbit/s
  95th percentile per-packet one-way delay: 152.416 ms
  Loss rate: 1.51%
Run 1: Report of PCC-Allegro — Data Link

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

- **Flow 1 ingress** (mean 438.47 Mbit/s) vs **Flow 1 egress** (mean 434.26 Mbit/s)
- **Flow 2 ingress** (mean 32.66 Mbit/s) vs **Flow 2 egress** (mean 32.27 Mbit/s)
- **Flow 3 ingress** (mean 5.27 Mbit/s) vs **Flow 3 egress** (mean 5.24 Mbit/s)

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

- **Flow 1 (95th percentile 188.23 ms)** vs **Flow 2 (95th percentile 191.78 ms)** vs **Flow 3 (95th percentile 152.42 ms)**
Run 2: Statistics of PCC-Allegro

Start at: 2018-07-12 17:23:33
End at: 2018-07-12 17:24:03
Local clock offset: 0.183 ms
Remote clock offset: 1.205 ms

# Below is generated by plot.py at 2018-07-12 23:01:03
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 508.98 Mbit/s
  95th percentile per-packet one-way delay: 193.317 ms
  Loss rate: 3.72%
-- Flow 1:
  Average throughput: 503.04 Mbit/s
  95th percentile per-packet one-way delay: 193.314 ms
  Loss rate: 3.69%
-- Flow 2:
  Average throughput: 7.96 Mbit/s
  95th percentile per-packet one-way delay: 193.716 ms
  Loss rate: 5.93%
-- Flow 3:
  Average throughput: 2.12 Mbit/s
  95th percentile per-packet one-way delay: 192.634 ms
  Loss rate: 5.10%
Run 2: Report of PCC-Allegro — Data Link

![Graph showing network throughput and packet delivery delay over time. The graphs display throughput in Mbit/s and packet delivery delay in milliseconds for different network flows.]
Run 3: Statistics of PCC-Allegro

Start at: 2018-07-12 17:50:33
End at: 2018-07-12 17:51:03
Local clock offset: -0.55 ms
Remote clock offset: -0.132 ms

# Below is generated by plot.py at 2018-07-12 23:01:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 496.94 Mbit/s
95th percentile per-packet one-way delay: 186.940 ms
Loss rate: 1.09%
-- Flow 1:
Average throughput: 465.50 Mbit/s
95th percentile per-packet one-way delay: 187.043 ms
Loss rate: 1.10%
-- Flow 2:
Average throughput: 31.64 Mbit/s
95th percentile per-packet one-way delay: 187.880 ms
Loss rate: 0.87%
-- Flow 3:
Average throughput: 31.91 Mbit/s
95th percentile per-packet one-way delay: 176.171 ms
Loss rate: 1.12%
Run 3: Report of PCC-Allegro — Data Link
Run 4: Statistics of PCC-Allegro

Start at: 2018-07-12 18:15:23
End at: 2018-07-12 18:15:53
Local clock offset: 0.147 ms
Remote clock offset: 0.025 ms

# Below is generated by plot.py at 2018-07-12 23:01:03
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 451.18 Mbit/s
  95th percentile per-packet one-way delay: 115.803 ms
  Loss rate: 0.62%
-- Flow 1:
  Average throughput: 423.41 Mbit/s
  95th percentile per-packet one-way delay: 115.732 ms
  Loss rate: 0.54%
-- Flow 2:
  Average throughput: 7.23 Mbit/s
  95th percentile per-packet one-way delay: 115.671 ms
  Loss rate: 1.33%
-- Flow 3:
  Average throughput: 70.48 Mbit/s
  95th percentile per-packet one-way delay: 119.447 ms
  Loss rate: 1.86%
Run 4: Report of PCC-Allegro — Data Link

Graph 1: Throughput (Mbps)
- Flow 1 ingress (mean 424.22 Mbps)
- Flow 1 egress (mean 423.41 Mbps)
- Flow 2 ingress (mean 7.29 Mbps)
- Flow 2 egress (mean 7.23 Mbps)
- Flow 3 ingress (mean 71.08 Mbps)
- Flow 3 egress (mean 70.48 Mbps)

Graph 2: Per-packet one-way delay (ms)
- Flow 1 (95th percentile 115.73 ms)
- Flow 2 (95th percentile 115.67 ms)
- Flow 3 (95th percentile 119.45 ms)
Run 5: Statistics of PCC-Allegro

Start at: 2018-07-12 18:40:28
End at: 2018-07-12 18:40:58
Local clock offset: -0.413 ms
Remote clock offset: -0.226 ms

# Below is generated by plot.py at 2018-07-12 23:01:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 496.28 Mbit/s
95th percentile per-packet one-way delay: 191.368 ms
Loss rate: 1.79%
-- Flow 1:
Average throughput: 484.70 Mbit/s
95th percentile per-packet one-way delay: 191.374 ms
Loss rate: 1.79%
-- Flow 2:
Average throughput: 15.27 Mbit/s
95th percentile per-packet one-way delay: 193.150 ms
Loss rate: 1.95%
-- Flow 3:
Average throughput: 4.44 Mbit/s
95th percentile per-packet one-way delay: 107.438 ms
Loss rate: 1.15%
Run 5: Report of PCC-Allegro — Data Link

![Graph 1: Throughput @ Time (s)]

![Graph 2: Per-Packet One-way Delay (ms)]
Run 6: Statistics of PCC-Allegro

Start at: 2018-07-12 19:05:57
End at: 2018-07-12 19:06:27
Local clock offset: 0.364 ms
Remote clock offset: 0.081 ms

# Below is generated by plot.py at 2018-07-12 23:01:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 495.02 Mbit/s
95th percentile per-packet one-way delay: 180.405 ms
Loss rate: 0.74%
-- Flow 1:
Average throughput: 486.47 Mbit/s
95th percentile per-packet one-way delay: 180.509 ms
Loss rate: 0.73%
-- Flow 2:
Average throughput: 4.09 Mbit/s
95th percentile per-packet one-way delay: 166.974 ms
Loss rate: 0.58%
-- Flow 3:
Average throughput: 17.84 Mbit/s
95th percentile per-packet one-way delay: 109.277 ms
Loss rate: 1.23%
Run 6: Report of PCC-Allegro — Data Link
Run 7: Statistics of PCC-Allegro

Start at: 2018-07-12 19:31:17
End at: 2018-07-12 19:31:47
Local clock offset: 0.04 ms
Remote clock offset: -0.21 ms

# Below is generated by plot.py at 2018-07-12 23:02:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 483.62 Mbit/s
95th percentile per-packet one-way delay: 178.988 ms
Loss rate: 1.41%
-- Flow 1:
Average throughput: 470.66 Mbit/s
95th percentile per-packet one-way delay: 179.473 ms
Loss rate: 1.39%
-- Flow 2:
Average throughput: 4.76 Mbit/s
95th percentile per-packet one-way delay: 176.273 ms
Loss rate: 1.59%
-- Flow 3:
Average throughput: 29.98 Mbit/s
95th percentile per-packet one-way delay: 166.703 ms
Loss rate: 2.35%
Run 7: Report of PCC-Allegro — Data Link

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

Legend:
- Flow 1 ingress (mean 475.63 Mbit/s)
- Flow 1 egress (mean 470.66 Mbit/s)
- Flow 2 ingress (mean 4.81 Mbit/s)
- Flow 2 egress (mean 4.76 Mbit/s)
- Flow 3 ingress (mean 30.37 Mbit/s)
- Flow 3 egress (mean 29.98 Mbit/s)
Run 8: Statistics of PCC-Allegro

Start at: 2018-07-12 19:56:56
End at: 2018-07-12 19:57:26
Local clock offset: -0.015 ms
Remote clock offset: -0.107 ms

# Below is generated by plot.py at 2018-07-12 23:06:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 524.09 Mbit/s
95th percentile per-packet one-way delay: 182.947 ms
Loss rate: 2.11%
-- Flow 1:
Average throughput: 438.36 Mbit/s
95th percentile per-packet one-way delay: 182.750 ms
Loss rate: 2.18%
-- Flow 2:
Average throughput: 68.13 Mbit/s
95th percentile per-packet one-way delay: 182.956 ms
Loss rate: 2.00%
-- Flow 3:
Average throughput: 124.03 Mbit/s
95th percentile per-packet one-way delay: 183.513 ms
Loss rate: 1.48%
Run 8: Report of PCC-Allegro — Data Link

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

- **Flow 1** (ingress mean: 446.49 Mbit/s, egress mean: 438.36 Mbit/s)
- **Flow 2** (ingress mean: 69.14 Mbit/s, egress mean: 68.13 Mbit/s)
- **Flow 3** (ingress mean: 124.51 Mbit/s, egress mean: 124.03 Mbit/s)

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

- **Flow 1** (95th percentile: 182.75 ms)
- **Flow 2** (95th percentile: 182.96 ms)
- **Flow 3** (95th percentile: 183.51 ms)
Run 9: Statistics of PCC-Allegro

Start at: 2018-07-12 20:21:46
End at: 2018-07-12 20:22:16
Local clock offset: 0.103 ms
Remote clock offset: 0.02 ms

# Below is generated by plot.py at 2018-07-12 23:08:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 502.15 Mbit/s
95th percentile per-packet one-way delay: 191.059 ms
Loss rate: 2.79%
-- Flow 1:
Average throughput: 451.11 Mbit/s
95th percentile per-packet one-way delay: 191.757 ms
Loss rate: 2.87%
-- Flow 2:
Average throughput: 62.11 Mbit/s
95th percentile per-packet one-way delay: 185.585 ms
Loss rate: 1.71%
-- Flow 3:
Average throughput: 30.07 Mbit/s
95th percentile per-packet one-way delay: 186.193 ms
Loss rate: 3.72%
Run 10: Statistics of PCC-Allegro

Start at: 2018-07-12 20:47:15
End at: 2018-07-12 20:47:45
Local clock offset: 0.061 ms
Remote clock offset: 0.56 ms

# Below is generated by plot.py at 2018-07-12 23:08:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 476.87 Mbit/s
95th percentile per-packet one-way delay: 189.575 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 459.23 Mbit/s
95th percentile per-packet one-way delay: 189.739 ms
Loss rate: 0.82%
-- Flow 2:
Average throughput: 18.20 Mbit/s
95th percentile per-packet one-way delay: 81.470 ms
Loss rate: 0.58%
-- Flow 3:
Average throughput: 17.02 Mbit/s
95th percentile per-packet one-way delay: 75.513 ms
Loss rate: 1.12%
Run 10: Report of PCC-Allegro — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 461.41 Mbit/s)
Flow 1 egress (mean 459.23 Mbit/s)
Flow 2 ingress (mean 18.21 Mbit/s)
Flow 2 egress (mean 18.20 Mbit/s)
Flow 3 ingress (mean 17.04 Mbit/s)
Flow 3 egress (mean 17.02 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 189.74 ms)
Flow 2 (95th percentile 71.47 ms)
Flow 3 (95th percentile 75.51 ms)
Run 1: Statistics of PCC-Expr

Start at: 2018-07-12 16:41:42
End at: 2018-07-12 16:42:12
Local clock offset: 0.008 ms
Remote clock offset: 1.191 ms

# Below is generated by plot.py at 2018-07-12 23:14:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 398.01 Mbit/s
95th percentile per-packet one-way delay: 308.941 ms
Loss rate: 10.29%
-- Flow 1:
Average throughput: 310.71 Mbit/s
95th percentile per-packet one-way delay: 314.834 ms
Loss rate: 12.26%
-- Flow 2:
Average throughput: 128.05 Mbit/s
95th percentile per-packet one-way delay: 187.005 ms
Loss rate: 2.47%
-- Flow 3:
Average throughput: 7.15 Mbit/s
95th percentile per-packet one-way delay: 183.553 ms
Loss rate: 3.86%
Run 1: Report of PCC-Expr — Data Link

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

Legend:
- Flow 1 ing (mean 352.94 Mbit/s)
- Flow 1 egress (mean 310.71 Mbit/s)
- Flow 2 ing (mean 130.60 Mbit/s)
- Flow 2 egress (mean 128.05 Mbit/s)
- Flow 3 ing (mean 7.36 Mbit/s)
- Flow 3 egress (mean 7.15 Mbit/s)

Legend for packet delay:
- Flow 1 (95th percentile 314.83 ms)
- Flow 2 (95th percentile 187.00 ms)
- Flow 3 (95th percentile 183.55 ms)
Run 2: Statistics of PCC-Expr

Start at: 2018-07-12 17:07:12
End at: 2018-07-12 17:07:42
Local clock offset: -0.024 ms
Remote clock offset: -0.086 ms

# Below is generated by plot.py at 2018-07-12 23:14:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 342.40 Mbit/s
95th percentile per-packet one-way delay: 214.684 ms
Loss rate: 4.79%
-- Flow 1:
Average throughput: 246.21 Mbit/s
95th percentile per-packet one-way delay: 240.300 ms
Loss rate: 5.34%
-- Flow 2:
Average throughput: 93.62 Mbit/s
95th percentile per-packet one-way delay: 139.618 ms
Loss rate: 2.13%
-- Flow 3:
Average throughput: 103.72 Mbit/s
95th percentile per-packet one-way delay: 182.439 ms
Loss rate: 5.59%
Run 2: Report of PCC-Expr — Data Link
Run 3: Statistics of PCC-Expr

Start at: 2018-07-12 17:35:31
End at: 2018-07-12 17:36:01
Local clock offset: ~0.039 ms
Remote clock offset: 1.077 ms

# Below is generated by plot.py at 2018-07-12 23:14:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 383.10 Mbit/s
95th percentile per-packet one-way delay: 202.400 ms
Loss rate: 3.67%
-- Flow 1:
Average throughput: 280.57 Mbit/s
95th percentile per-packet one-way delay: 203.819 ms
Loss rate: 3.24%
-- Flow 2:
Average throughput: 135.86 Mbit/s
95th percentile per-packet one-way delay: 195.132 ms
Loss rate: 4.34%
-- Flow 3:
Average throughput: 37.82 Mbit/s
95th percentile per-packet one-way delay: 195.625 ms
Loss rate: 8.26%
Run 3: Report of PCC-Expr — Data Link

![Graph showing throughput and latency over time for flow 1, 2, and 3.](image)

- **Flow 1** (ingress: mean 288.95 Mb/s, egress: mean 280.57 Mb/s)
- **Flow 2** (ingress: mean 141.26 Mb/s, egress: mean 135.86 Mb/s)
- **Flow 3** (ingress: mean 40.79 Mb/s, egress: mean 37.82 Mb/s)

![Graph showing packet error rate over time for flow 1, 2, and 3.](image)

- **Flow 1** (95th percentile 203.82 ms)
- **Flow 2** (95th percentile 195.13 ms)
- **Flow 3** (95th percentile 195.62 ms)
Run 4: Statistics of PCC-Expr

Start at: 2018-07-12 18:01:01
End at: 2018-07-12 18:01:31
Local clock offset: -0.128 ms
Remote clock offset: -0.394 ms

# Below is generated by plot.py at 2018-07-12 23:14:53
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 255.15 Mbit/s
  95th percentile per-packet one-way delay: 104.032 ms
  Loss rate: 0.87%
-- Flow 1:
  Average throughput: 99.39 Mbit/s
  95th percentile per-packet one-way delay: 61.476 ms
  Loss rate: 0.41%
-- Flow 2:
  Average throughput: 197.52 Mbit/s
  95th percentile per-packet one-way delay: 132.565 ms
  Loss rate: 0.97%
-- Flow 3:
  Average throughput: 75.37 Mbit/s
  95th percentile per-packet one-way delay: 71.168 ms
  Loss rate: 2.11%
Run 4: Report of PCC-Expr — Data Link

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

- Flow 1 ingress (mean 99.46 Mbit/s)
- Flow 1 egress (mean 99.39 Mbit/s)
- Flow 2 ingress (mean 198.41 Mbit/s)
- Flow 2 egress (mean 197.52 Mbit/s)
- Flow 3 ingress (mean 76.17 Mbit/s)
- Flow 3 egress (mean 75.37 Mbit/s)

![Graph 2: Per-Packet One-Way Delay vs Time](image)

- Flow 1 (95th percentile 61.48 ms)
- Flow 2 (95th percentile 132.56 ms)
- Flow 3 (95th percentile 71.17 ms)
Run 5: Statistics of PCC-Expr

Start at: 2018-07-12 18:25:44
End at: 2018-07-12 18:26:14
Local clock offset: 0.11 ms
Remote clock offset: 0.164 ms

# Below is generated by plot.py at 2018-07-12 23:14:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 373.86 Mbit/s
95th percentile per-packet one-way delay: 200.004 ms
Loss rate: 4.89%
-- Flow 1:
Average throughput: 285.39 Mbit/s
95th percentile per-packet one-way delay: 208.076 ms
Loss rate: 5.20%
-- Flow 2:
Average throughput: 91.30 Mbit/s
95th percentile per-packet one-way delay: 164.077 ms
Loss rate: 2.92%
-- Flow 3:
Average throughput: 85.13 Mbit/s
95th percentile per-packet one-way delay: 197.850 ms
Loss rate: 5.98%
Run 5: Report of PCC-Expr — Data Link

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

Flow 1 ingress (mean 299.97 Mbit/s) vs Flow 1 egress (mean 285.39 Mbit/s) vs Flow 2 ingress (mean 93.53 Mbit/s) vs Flow 2 egress (mean 91.30 Mbit/s) vs Flow 3 ingress (mean 89.54 Mbit/s) vs Flow 3 egress (mean 85.13 Mbit/s).

Flow 1 (95th percentile 208.08 ms) vs Flow 2 (95th percentile 164.08 ms) vs Flow 3 (95th percentile 197.85 ms).
Run 6: Statistics of PCC-Expr

Start at: 2018-07-12 18:50:52
End at: 2018-07-12 18:51:22
Local clock offset: -0.028 ms
Remote clock offset: 0.05 ms

# Below is generated by plot.py at 2018-07-12 23:24:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 422.08 Mbit/s
95th percentile per-packet one-way delay: 204.026 ms
Loss rate: 14.60%
-- Flow 1:
Average throughput: 242.71 Mbit/s
95th percentile per-packet one-way delay: 201.290 ms
Loss rate: 11.15%
-- Flow 2:
Average throughput: 268.61 Mbit/s
95th percentile per-packet one-way delay: 207.007 ms
Loss rate: 18.83%
-- Flow 3:
Average throughput: 3.26 Mbit/s
95th percentile per-packet one-way delay: 200.295 ms
Loss rate: 23.99%
Run 6: Report of PCC-Expr — Data Link

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

- **Throughput**:
  - Flow 1 Ingress (mean 272.17 Mbit/s)
  - Flow 2 Ingress (mean 329.17 Mbit/s)
  - Flow 3 Ingress (mean 4.24 Mbit/s)
  - Flow 1 Egress (mean 242.71 Mbit/s)
  - Flow 2 Egress (mean 268.61 Mbit/s)
  - Flow 3 Egress (mean 3.26 Mbit/s)

- **Packet Delay**:
  - Flow 1 (95th percentile 201.29 ms)
  - Flow 2 (95th percentile 207.01 ms)
  - Flow 3 (95th percentile 200.29 ms)
Run 7: Statistics of PCC-Expr

Start at: 2018-07-12 19:16:18
End at: 2018-07-12 19:16:48
Local clock offset: 0.21 ms
Remote clock offset: 0.073 ms

# Below is generated by plot.py at 2018-07-12 23:24:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 392.49 Mbit/s
95th percentile per-packet one-way delay: 246.146 ms
Loss rate: 4.45%
-- Flow 1:
Average throughput: 298.31 Mbit/s
95th percentile per-packet one-way delay: 250.826 ms
Loss rate: 5.56%
-- Flow 2:
Average throughput: 95.92 Mbit/s
95th percentile per-packet one-way delay: 53.907 ms
Loss rate: 0.53%
-- Flow 3:
Average throughput: 92.84 Mbit/s
95th percentile per-packet one-way delay: 53.862 ms
Loss rate: 1.24%
Run 7: Report of PCC-Expr — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 314.78 Mbps)
  - Flow 1 egress (mean 298.31 Mbps)
  - Flow 2 ingress (mean 95.95 Mbps)
  - Flow 2 egress (mean 95.92 Mbps)
  - Flow 3 ingress (mean 93.01 Mbps)
  - Flow 3 egress (mean 92.84 Mbps)

- **Packet one-way delay (ms):**
  - Flow 1 (95th percentile 250.83 ms)
  - Flow 2 (95th percentile 53.91 ms)
  - Flow 3 (95th percentile 53.86 ms)
Run 8: Statistics of PCC-Expr

Start at: 2018-07-12 19:41:40
End at: 2018-07-12 19:42:10
Local clock offset: 0.166 ms
Remote clock offset: 0.025 ms

# Below is generated by plot.py at 2018-07-12 23:25:27
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 449.83 Mbit/s
  95th percentile per-packet one-way delay: 144.326 ms
  Loss rate: 1.72%
-- Flow 1:
  Average throughput: 290.56 Mbit/s
  95th percentile per-packet one-way delay: 140.743 ms
  Loss rate: 1.39%
-- Flow 2:
  Average throughput: 214.11 Mbit/s
  95th percentile per-packet one-way delay: 157.611 ms
  Loss rate: 2.30%
-- Flow 3:
  Average throughput: 52.26 Mbit/s
  95th percentile per-packet one-way delay: 97.675 ms
  Loss rate: 2.48%
Run 8: Report of PCC-Expr — Data Link

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

- Flow 1 ingress (mean 293.58 Mbit/s)
- Flow 1 egress (mean 290.56 Mbit/s)
- Flow 2 ingress (mean 217.95 Mbit/s)
- Flow 2 egress (mean 214.11 Mbit/s)
- Flow 3 ingress (mean 53.00 Mbit/s)
- Flow 3 egress (mean 52.26 Mbit/s)
Run 9: Statistics of PCC-Expr

Start at: 2018-07-12 20:07:04
End at: 2018-07-12 20:07:34
Local clock offset: -0.058 ms
Remote clock offset: 0.01 ms

# Below is generated by plot.py at 2018-07-12 23:25:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 316.88 Mbit/s
95th percentile per-packet one-way delay: 178.595 ms
Loss rate: 1.40%
-- Flow 1:
Average throughput: 234.96 Mbit/s
95th percentile per-packet one-way delay: 180.066 ms
Loss rate: 1.66%
-- Flow 2:
Average throughput: 99.21 Mbit/s
95th percentile per-packet one-way delay: 53.758 ms
Loss rate: 0.49%
-- Flow 3:
Average throughput: 48.99 Mbit/s
95th percentile per-packet one-way delay: 53.603 ms
Loss rate: 1.30%
Run 9: Report of PCC-Expr — Data Link

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

- Flow 1 ingress (mean 238.08 Mbit/s)
- Flow 1 egress (mean 234.96 Mbit/s)
- Flow 2 ingress (mean 99.20 Mbit/s)
- Flow 2 egress (mean 99.21 Mbit/s)
- Flow 3 ingress (mean 49.13 Mbit/s)
- Flow 3 egress (mean 48.99 Mbit/s)
Run 10: Statistics of PCC-Expr

Start at: 2018-07-12 20:32:16
End at: 2018-07-12 20:32:46
Local clock offset: -0.043 ms
Remote clock offset: -0.295 ms

# Below is generated by plot.py at 2018-07-12 23:25:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 342.41 Mbit/s
95th percentile per-packet one-way delay: 83.079 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 202.53 Mbit/s
95th percentile per-packet one-way delay: 102.905 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 175.11 Mbit/s
95th percentile per-packet one-way delay: 67.176 ms
Loss rate: 0.68%
-- Flow 3:
Average throughput: 72.18 Mbit/s
95th percentile per-packet one-way delay: 54.021 ms
Loss rate: 1.37%
Run 10: Report of PCC-Expr — Data Link

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

- Flow 1 ingress (mean 202.49 Mbit/s)
- Flow 1 egress (mean 202.53 Mbit/s)
- Flow 2 ingress (mean 175.37 Mbit/s)
- Flow 2 egress (mean 175.11 Mbit/s)
- Flow 3 ingress (mean 72.35 Mbit/s)
- Flow 3 egress (mean 72.18 Mbit/s)

- Flow 1 (95th percentile 102.91 ms)
- Flow 2 (95th percentile 67.18 ms)
- Flow 3 (95th percentile 54.02 ms)
Run 1: Statistics of QUIC Cubic

Start at: 2018-07-12 16:50:46
End at: 2018-07-12 16:51:16
Local clock offset: -0.191 ms
Remote clock offset: 0.058 ms

# Below is generated by plot.py at 2018-07-12 23:25:36
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 75.89 Mbit/s
  95th percentile per-packet one-way delay: 53.281 ms
  Loss rate: 0.73%
-- Flow 1:
  Average throughput: 46.44 Mbit/s
  95th percentile per-packet one-way delay: 53.287 ms
  Loss rate: 0.64%
-- Flow 2:
  Average throughput: 33.28 Mbit/s
  95th percentile per-packet one-way delay: 53.278 ms
  Loss rate: 1.00%
-- Flow 3:
  Average throughput: 19.44 Mbit/s
  95th percentile per-packet one-way delay: 50.278 ms
  Loss rate: 0.43%
Run 1: Report of QUIC Cubic — Data Link
Run 2: Statistics of QUIC Cubic

Start at: 2018-07-12 17:17:00
End at: 2018-07-12 17:17:30
Local clock offset: -0.104 ms
Remote clock offset: 0.06 ms

# Below is generated by plot.py at 2018-07-12 23:25:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 81.57 Mbit/s
95th percentile per-packet one-way delay: 53.358 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 46.45 Mbit/s
95th percentile per-packet one-way delay: 53.365 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 44.22 Mbit/s
95th percentile per-packet one-way delay: 53.310 ms
Loss rate: 0.92%
-- Flow 3:
Average throughput: 17.52 Mbit/s
95th percentile per-packet one-way delay: 53.398 ms
Loss rate: 0.26%
Run 2: Report of QUIC Cubic — Data Link
Run 3: Statistics of QUIC Cubic

Start at: 2018-07-12 17:44:50
End at: 2018-07-12 17:45:20
Local clock offset: 0.059 ms
Remote clock offset: -0.118 ms

# Below is generated by plot.py at 2018-07-12 23:25:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 75.75 Mbit/s
95th percentile per-packet one-way delay: 50.334 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 46.87 Mbit/s
95th percentile per-packet one-way delay: 50.319 ms
Loss rate: 0.49%
-- Flow 2:
Average throughput: 35.24 Mbit/s
95th percentile per-packet one-way delay: 53.785 ms
Loss rate: 1.20%
-- Flow 3:
Average throughput: 16.64 Mbit/s
95th percentile per-packet one-way delay: 50.361 ms
Loss rate: 0.28%
Run 3: Report of QUIC Cubic — Data Link

![Graphs showing performance metrics for different flows over time.](image-url)
Run 4: Statistics of QUIC Cubic

Start at: 2018-07-12 18:09:57
End at: 2018-07-12 18:10:27
Local clock offset: -0.219 ms
Remote clock offset: -0.081 ms

# Below is generated by plot.py at 2018-07-12 23:25:36
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 87.33 Mbit/s
  95th percentile per-packet one-way delay: 53.269 ms
  Loss rate: 0.57%
-- Flow 1:
  Average throughput: 51.67 Mbit/s
  95th percentile per-packet one-way delay: 53.227 ms
  Loss rate: 0.39%
-- Flow 2:
  Average throughput: 45.19 Mbit/s
  95th percentile per-packet one-way delay: 53.479 ms
  Loss rate: 0.88%
-- Flow 3:
  Average throughput: 17.15 Mbit/s
  95th percentile per-packet one-way delay: 49.779 ms
  Loss rate: 0.59%
Run 4: Report of QUIC Cubic — Data Link
Run 5: Statistics of QUIC Cubic

Start at: 2018-07-12 18:35:03
End at: 2018-07-12 18:35:33
Local clock offset: -0.135 ms
Remote clock offset: -0.177 ms

# Below is generated by plot.py at 2018-07-12 23:25:36
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 81.07 Mbit/s
  95th percentile per-packet one-way delay: 53.744 ms
  Loss rate: 0.46%
-- Flow 1:
  Average throughput: 54.99 Mbit/s
  95th percentile per-packet one-way delay: 50.260 ms
  Loss rate: 0.55%
-- Flow 2:
  Average throughput: 31.46 Mbit/s
  95th percentile per-packet one-way delay: 53.646 ms
  Loss rate: 0.17%
-- Flow 3:
  Average throughput: 15.75 Mbit/s
  95th percentile per-packet one-way delay: 53.850 ms
  Loss rate: 0.65%
Run 5: Report of QUIC Cubic — Data Link

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

Throughput (Mbit/s)

Time (s)

Per-packet round trip time (ms)

Flow 1 ingress (mean 55.11 Mbit/s), Flow 1 egress (mean 54.99 Mbit/s), Flow 2 ingress (mean 31.35 Mbit/s), Flow 2 egress (mean 31.46 Mbit/s), Flow 3 ingress (mean 15.69 Mbit/s), Flow 3 egress (mean 15.75 Mbit/s)
Run 6: Statistics of QUIC Cubic

Start at: 2018-07-12 19:00:10
End at: 2018-07-12 19:00:40
Local clock offset: 0.19 ms
Remote clock offset: 0.002 ms

# Below is generated by plot.py at 2018-07-12 23:25:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 82.95 Mbit/s
95th percentile per-packet one-way delay: 50.410 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 46.33 Mbit/s
95th percentile per-packet one-way delay: 50.280 ms
Loss rate: 0.46%
-- Flow 2:
Average throughput: 46.77 Mbit/s
95th percentile per-packet one-way delay: 50.443 ms
Loss rate: 0.88%
-- Flow 3:
Average throughput: 16.94 Mbit/s
95th percentile per-packet one-way delay: 50.353 ms
Loss rate: 0.54%
Run 6: Report of QUIC Cubic — Data Link
Run 7: Statistics of QUIC Cubic

Start at: 2018-07-12 19:25:29
End at: 2018-07-12 19:25:59
Local clock offset: -0.027 ms
Remote clock offset: 0.093 ms

# Below is generated by plot.py at 2018-07-12 23:25:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.96 Mbit/s
95th percentile per-packet one-way delay: 50.087 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 54.03 Mbit/s
95th percentile per-packet one-way delay: 50.094 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 30.55 Mbit/s
95th percentile per-packet one-way delay: 49.852 ms
Loss rate: 0.16%
-- Flow 3:
Average throughput: 17.08 Mbit/s
95th percentile per-packet one-way delay: 50.132 ms
Loss rate: 2.30%
Run 7: Report of QUIC Cubic — Data Link

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

- Flow 1 ingress (mean 54.03 Mbit/s)
- Flow 1 egress (mean 54.03 Mbit/s)
- Flow 2 ingress (mean 30.45 Mbit/s)
- Flow 2 egress (mean 30.55 Mbit/s)
- Flow 3 ingress (mean 17.30 Mbit/s)
- Flow 3 egress (mean 17.08 Mbit/s)

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

- Flow 1 (95th percentile 50.09 ms)
- Flow 2 (95th percentile 49.85 ms)
- Flow 3 (95th percentile 50.13 ms)
Run 8: Statistics of QUIC Cubic

Start at: 2018-07-12 19:51:08
End at: 2018-07-12 19:51:38
Local clock offset: -0.197 ms
Remote clock offset: 0.06 ms

# Below is generated by plot.py at 2018-07-12 23:25:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 73.92 Mbit/s
95th percentile per-packet one-way delay: 53.294 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 47.53 Mbit/s
95th percentile per-packet one-way delay: 53.326 ms
Loss rate: 0.62%
-- Flow 2:
Average throughput: 31.03 Mbit/s
95th percentile per-packet one-way delay: 49.654 ms
Loss rate: 0.32%
-- Flow 3:
Average throughput: 17.57 Mbit/s
95th percentile per-packet one-way delay: 49.954 ms
Loss rate: 0.48%
Run 8: Report of QUIC Cubic — Data Link
Run 9: Statistics of QUIC Cubic

Start at: 2018-07-12 20:16:19
End at: 2018-07-12 20:16:49
Local clock offset: 0.101 ms
Remote clock offset: -0.047 ms

# Below is generated by plot.py at 2018-07-12 23:25:36
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 77.88 Mbit/s
  95th percentile per-packet one-way delay: 53.705 ms
  Loss rate: 0.44%
-- Flow 1:
  Average throughput: 49.79 Mbit/s
  95th percentile per-packet one-way delay: 53.683 ms
  Loss rate: 0.52%
-- Flow 2:
  Average throughput: 31.81 Mbit/s
  95th percentile per-packet one-way delay: 50.337 ms
  Loss rate: 0.24%
-- Flow 3:
  Average throughput: 21.14 Mbit/s
  95th percentile per-packet one-way delay: 53.774 ms
  Loss rate: 0.51%
Run 9: Report of QUIC Cubic — Data Link
Run 10: Statistics of QUIC Cubic

Start at: 2018-07-12 20:41:33
End at: 2018-07-12 20:42:03
Local clock offset: 0.029 ms
Remote clock offset: 0.032 ms

# Below is generated by plot.py at 2018-07-12 23:25:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.67 Mbit/s
95th percentile per-packet one-way delay: 53.524 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 45.88 Mbit/s
95th percentile per-packet one-way delay: 53.543 ms
Loss rate: 0.57%
-- Flow 2:
Average throughput: 42.70 Mbit/s
95th percentile per-packet one-way delay: 50.153 ms
Loss rate: 1.03%
-- Flow 3:
Average throughput: 16.45 Mbit/s
95th percentile per-packet one-way delay: 50.374 ms
Loss rate: 0.47%
Run 10: Report of QUIC Cubic — Data Link
Run 1: Statistics of SCReAM

Start at: 2018-07-12 16:34:58
End at: 2018-07-12 16:35:28
Local clock offset: -0.028 ms
Remote clock offset: -1.61 ms

# Below is generated by plot.py at 2018-07-12 23:25:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 55.384 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 55.150 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 55.134 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 55.427 ms
Loss rate: 0.73%
Run 1: Report of SCReAM — Data Link
Run 2: Statistics of SCReAM

Start at: 2018-07-12 16:59:51
End at: 2018-07-12 17:00:21
Local clock offset: -0.059 ms
Remote clock offset: -0.124 ms

# Below is generated by plot.py at 2018-07-12 23:25:36
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 53.751 ms
  Loss rate: 0.51%
-- Flow 1:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 53.677 ms
  Loss rate: 0.38%
-- Flow 2:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 50.456 ms
  Loss rate: 0.43%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 53.785 ms
  Loss rate: 1.09%
Run 2: Report of SCReAM — Data Link

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

![Graph 2: Round-trip times (ms)](image2)
Run 3: Statistics of SCReAM

Start at: 2018-07-12 17:27:04
End at: 2018-07-12 17:27:34
Local clock offset: 0.044 ms
Remote clock offset: -0.218 ms

# Below is generated by plot.py at 2018-07-12 23:25:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 54.010 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 53.881 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 54.038 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.553 ms
Loss rate: 0.74%
Run 3: Report of SCReAM — Data Link

[Graph showing throughput and latency over time for different data flows]

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Run 4: Statistics of SCReAM

Start at: 2018-07-12 17:54:08
End at: 2018-07-12 17:54:38
Local clock offset: -0.415 ms
Remote clock offset: -0.142 ms

# Below is generated by plot.py at 2018-07-12 23:25:36
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 53.424 ms
  Loss rate: 0.57%
-- Flow 1:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 53.449 ms
  Loss rate: 0.38%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 50.078 ms
  Loss rate: 0.61%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 53.403 ms
  Loss rate: 1.08%
Run 4: Report of SCReAM — Data Link

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

Start at: 2018-07-12 18:18:55
End at: 2018-07-12 18:19:25
Local clock offset: 0.125 ms
Remote clock offset: -0.132 ms

# Below is generated by plot.py at 2018-07-12 23:25:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 54.091 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 54.116 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.946 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 53.953 ms
Loss rate: 1.09%
Run 5: Report of SCReAM — Data Link

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

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

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

- Flow 1 (95th percentile 54.12 ms)
- Flow 2 (95th percentile 53.95 ms)
- Flow 3 (95th percentile 53.95 ms)
Run 6: Statistics of SCReAM

Start at: 2018-07-12 18:44:00
End at: 2018-07-12 18:44:30
Local clock offset: -0.011 ms
Remote clock offset: -0.213 ms

# Below is generated by plot.py at 2018-07-12 23:25:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 53.855 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 50.547 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.825 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 53.901 ms
Loss rate: 1.09%
Run 6: Report of SCReAM — Data Link
Run 7: Statistics of SCReAM

Start at: 2018-07-12 19:09:30
End at: 2018-07-12 19:10:00
Local clock offset: 0.061 ms
Remote clock offset: -0.08 ms

# Below is generated by plot.py at 2018-07-12 23:25:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 53.973 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 50.178 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.995 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 53.833 ms
Loss rate: 1.08%
Run 7: Report of SCReAM — Data Link

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

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

- Per-packet one-way delay (ms):
  - Flow 1 (95th percentile 50.18 ms)
  - Flow 2 (95th percentile 53.99 ms)
  - Flow 3 (95th percentile 53.83 ms)
Run 8: Statistics of SCReAM

Start at: 2018-07-12 19:34:47
End at: 2018-07-12 19:35:17
Local clock offset: -0.071 ms
Remote clock offset: -0.092 ms

# Below is generated by plot.py at 2018-07-12 23:25:36
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 53.663 ms
  Loss rate: 0.58%
-- Flow 1:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 53.668 ms
  Loss rate: 0.38%
-- Flow 2:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 50.207 ms
  Loss rate: 0.62%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 53.684 ms
  Loss rate: 1.09%
Run 8: Report of SCReAM — Data Link
Run 9: Statistics of SCReAM

Start at: 2018-07-12 20:00:19
End at: 2018-07-12 20:00:49
Local clock offset: -0.048 ms
Remote clock offset: -0.145 ms

# Below is generated by plot.py at 2018-07-12 23:25:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 53.734 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.752 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.683 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.313 ms
Loss rate: 1.09%
Run 9: Report of SCReAM — Data Link

![Graph showing throughput and packet delay over time]

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

![Graph showing packet delay over time]

- Flow 1 (95th percentile 53.75 ms)
- Flow 2 (95th percentile 53.68 ms)
- Flow 3 (95th percentile 50.31 ms)
Run 10: Statistics of SCReAM

Start at: 2018-07-12 20:25:22
End at: 2018-07-12 20:25:52
Local clock offset: 0.138 ms
Remote clock offset: -0.453 ms

# Below is generated by plot.py at 2018-07-12 23:25:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 54.296 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 54.158 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 54.292 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 54.360 ms
Loss rate: 1.08%
Run 10: Report of SCReAM — Data Link

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

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

- **Packet Loss (ms):**
  - Flow 1 (95th percentile 54.16 ms)
  - Flow 2 (95th percentile 54.29 ms)
  - Flow 3 (95th percentile 54.36 ms)
Run 1: Statistics of Sprout

Start at: 2018-07-12 16:37:54
End at: 2018-07-12 16:38:24
Local clock offset: -0.182 ms
Remote clock offset: -0.144 ms

# Below is generated by plot.py at 2018-07-12 23:25:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 11.52 Mbit/s
95th percentile per-packet one-way delay: 54.023 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 6.09 Mbit/s
95th percentile per-packet one-way delay: 54.190 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 5.39 Mbit/s
95th percentile per-packet one-way delay: 53.518 ms
Loss rate: 0.79%
-- Flow 3:
Average throughput: 5.66 Mbit/s
95th percentile per-packet one-way delay: 50.626 ms
Loss rate: 0.00%
Run 1: Report of Sprout — Data Link

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

- Flow 1 ingress (mean 6.09 Mbit/s)
- Flow 1 egress (mean 6.09 Mbit/s)
- Flow 2 ingress (mean 5.40 Mbit/s)
- Flow 2 egress (mean 5.39 Mbit/s)
- Flow 3 ingress (mean 5.60 Mbit/s)
- Flow 3 egress (mean 5.66 Mbit/s)

[Diagram showing packet delay distribution over time for different flows]

- Flow 1 (95th percentile 54.19 ms)
- Flow 2 (95th percentile 53.52 ms)
- Flow 3 (95th percentile 56.63 ms)
Run 2: Statistics of Sprout

Start at: 2018-07-12 17:02:44
End at: 2018-07-12 17:03:14
Local clock offset: -0.21 ms
Remote clock offset: -0.013 ms

# Below is generated by plot.py at 2018-07-12 23:25:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.18 Mbit/s
95th percentile per-packet one-way delay: 54.005 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 5.50 Mbit/s
95th percentile per-packet one-way delay: 54.004 ms
Loss rate: 0.15%
-- Flow 2:
Average throughput: 6.92 Mbit/s
95th percentile per-packet one-way delay: 53.973 ms
Loss rate: 0.32%
-- Flow 3:
Average throughput: 6.39 Mbit/s
95th percentile per-packet one-way delay: 54.078 ms
Loss rate: 1.74%
Run 2: Report of Sprout — Data Link

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

- **Flow 1 ingress (mean 5.48 Mbit/s)**
- **Flow 1 egress (mean 5.50 Mbit/s)**
- **Flow 2 ingress (mean 6.91 Mbit/s)**
- **Flow 2 egress (mean 6.92 Mbit/s)**
- **Flow 3 ingress (mean 6.43 Mbit/s)**
- **Flow 3 egress (mean 6.39 Mbit/s)**

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

- **Flow 1 (95th percentile 54.00 ms)**
- **Flow 2 (95th percentile 53.97 ms)**
- **Flow 3 (95th percentile 54.08 ms)**
Run 3: Statistics of Sprout

Start at: 2018-07-12 17:30:21
End at: 2018-07-12 17:30:51
Local clock offset: -0.192 ms
Remote clock offset: 1.186 ms

# Below is generated by plot.py at 2018-07-12 23:25:36
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 11.72 Mbit/s
  95th percentile per-packet one-way delay: 52.663 ms
  Loss rate: 0.40%
-- Flow 1:
  Average throughput: 5.94 Mbit/s
  95th percentile per-packet one-way delay: 52.609 ms
  Loss rate: 0.13%
-- Flow 2:
  Average throughput: 6.12 Mbit/s
  95th percentile per-packet one-way delay: 52.748 ms
  Loss rate: 0.51%
-- Flow 3:
  Average throughput: 5.27 Mbit/s
  95th percentile per-packet one-way delay: 52.633 ms
  Loss rate: 1.08%
Run 3: Report of Sprout — Data Link
Run 4: Statistics of Sprout

Start at: 2018-07-12 17:57:08
End at: 2018-07-12 17:57:38
Local clock offset: -0.053 ms
Remote clock offset: -0.171 ms

# Below is generated by plot.py at 2018-07-12 23:25:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 10.47 Mbit/s
95th percentile per-packet one-way delay: 54.300 ms
Loss rate: 1.00%
-- Flow 1:
Average throughput: 5.80 Mbit/s
95th percentile per-packet one-way delay: 54.291 ms
Loss rate: 0.49%
-- Flow 2:
Average throughput: 4.16 Mbit/s
95th percentile per-packet one-way delay: 54.271 ms
Loss rate: 1.38%
-- Flow 3:
Average throughput: 5.80 Mbit/s
95th percentile per-packet one-way delay: 54.366 ms
Loss rate: 1.98%
Run 4: Report of Sprout — Data Link

![Graphs showing throughput and packet delay over time for different flows.](image-url)
Run 5: Statistics of Sprout

Start at: 2018-07-12 18:21:52
End at: 2018-07-12 18:22:22
Local clock offset: 0.259 ms
Remote clock offset: -0.048 ms

# Below is generated by plot.py at 2018-07-12 23:25:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 9.51 Mbit/s
95th percentile per-packet one-way delay: 54.457 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 3.23 Mbit/s
95th percentile per-packet one-way delay: 54.340 ms
Loss rate: 0.60%
-- Flow 2:
Average throughput: 6.51 Mbit/s
95th percentile per-packet one-way delay: 54.506 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 5.95 Mbit/s
95th percentile per-packet one-way delay: 54.457 ms
Loss rate: 0.66%
Run 5: Report of Sprout — Data Link
Run 6: Statistics of Sprout

Start at: 2018-07-12 18:46:59
End at: 2018-07-12 18:47:29
Local clock offset: 0.046 ms
Remote clock offset: 0.027 ms

# Below is generated by plot.py at 2018-07-12 23:25:36
# Datalink statistics
-- Total of 3 flows:
   Average throughput: 12.82 Mbit/s
   95th percentile per-packet one-way delay: 54.344 ms
   Loss rate: 0.65%
-- Flow 1:
   Average throughput: 6.21 Mbit/s
   95th percentile per-packet one-way delay: 54.295 ms
   Loss rate: 0.52%
-- Flow 2:
   Average throughput: 6.41 Mbit/s
   95th percentile per-packet one-way delay: 54.338 ms
   Loss rate: 0.57%
-- Flow 3:
   Average throughput: 7.18 Mbit/s
   95th percentile per-packet one-way delay: 54.440 ms
   Loss rate: 1.12%
Run 6: Report of Sprout — Data Link

![Graph showing network performance metrics over time. The graphs display throughput and per-packet round trip time for different flow directions and time periods.](image-url)
Run 7: Statistics of Sprout

Start at: 2018-07-12 19:12:26
End at: 2018-07-12 19:12:56
Local clock offset: 0.296 ms
Remote clock offset: 0.008 ms

# Below is generated by plot.py at 2018-07-12 23:25:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.72 Mbit/s
95th percentile per-packet one-way delay: 54.430 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 6.75 Mbit/s
95th percentile per-packet one-way delay: 54.328 ms
Loss rate: 0.54%
-- Flow 2:
Average throughput: 5.56 Mbit/s
95th percentile per-packet one-way delay: 54.588 ms
Loss rate: 0.69%
-- Flow 3:
Average throughput: 6.98 Mbit/s
95th percentile per-packet one-way delay: 54.461 ms
Loss rate: 1.68%
Run 7: Report of Sprout — Data Link
Run 8: Statistics of Sprout

Start at: 2018-07-12 19:37:47
End at: 2018-07-12 19:38:17
Local clock offset: 0.031 ms
Remote clock offset: -0.096 ms

# Below is generated by plot.py at 2018-07-12 23:25:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.53 Mbit/s
95th percentile per-packet one-way delay: 54.118 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 7.21 Mbit/s
95th percentile per-packet one-way delay: 54.249 ms
Loss rate: 0.22%
-- Flow 2:
Average throughput: 5.94 Mbit/s
95th percentile per-packet one-way delay: 53.936 ms
Loss rate: 0.84%
-- Flow 3:
Average throughput: 7.24 Mbit/s
95th percentile per-packet one-way delay: 50.801 ms
Loss rate: 1.81%
Run 8: Report of Sprout — Data Link

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

Legend:
- Blue dashed line: Flow 1 ingress (mean 7.21 Mbps)
- Blue solid line: Flow 1 egress (mean 7.21 Mbps)
- Green dashed line: Flow 2 ingress (mean 5.96 Mbps)
- Green solid line: Flow 2 egress (mean 5.94 Mbps)
- Red dashed line: Flow 3 ingress (mean 7.32 Mbps)
- Red solid line: Flow 3 egress (mean 7.24 Mbps)
Run 9: Statistics of Sprout

Start at: 2018-07-12 20:03:11
End at: 2018-07-12 20:03:41
Local clock offset: -0.156 ms
Remote clock offset: 0.005 ms

# Below is generated by plot.py at 2018-07-12 23:25:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.36 Mbit/s
95th percentile per-packet one-way delay: 54.097 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 6.29 Mbit/s
95th percentile per-packet one-way delay: 53.997 ms
Loss rate: 0.19%
-- Flow 2:
Average throughput: 7.09 Mbit/s
95th percentile per-packet one-way delay: 54.199 ms
Loss rate: 0.25%
-- Flow 3:
Average throughput: 7.23 Mbit/s
95th percentile per-packet one-way delay: 54.191 ms
Loss rate: 0.49%
Run 9: Report of Sprout — Data Link

![Graph of Throughput vs Time](image1)

- Flow 1 ingress (mean 6.28 Mbit/s)
- Flow 1 egress (mean 6.29 Mbit/s)
- Flow 2 ingress (mean 7.06 Mbit/s)
- Flow 2 egress (mean 7.09 Mbit/s)
- Flow 3 ingress (mean 7.21 Mbit/s)
- Flow 3 egress (mean 7.23 Mbit/s)

![Graph of Per Packet One Way Delay vs Time](image2)

- Flow 1 (95th percentile 54.00 ms)
- Flow 2 (95th percentile 54.20 ms)
- Flow 3 (95th percentile 54.19 ms)
Run 10: Statistics of Sprout

Start at: 2018-07-12 20:28:24
End at: 2018-07-12 20:28:54
Local clock offset: -0.006 ms
Remote clock offset: -0.222 ms

# Below is generated by plot.py at 2018-07-12 23:25:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.01 Mbit/s
95th percentile per-packet one-way delay: 54.439 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 6.87 Mbit/s
95th percentile per-packet one-way delay: 54.342 ms
Loss rate: 0.46%
-- Flow 2:
Average throughput: 6.59 Mbit/s
95th percentile per-packet one-way delay: 54.420 ms
Loss rate: 0.44%
-- Flow 3:
Average throughput: 5.37 Mbit/s
95th percentile per-packet one-way delay: 54.643 ms
Loss rate: 0.99%
Run 10: Report of Sprout — Data Link

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

- Flow 1 ingress (mean 6.88 Mbit/s)
- Flow 1 egress (mean 6.87 Mbit/s)
- Flow 2 ingress (mean 6.59 Mbit/s)
- Flow 2 egress (mean 6.59 Mbit/s)
- Flow 3 ingress (mean 5.39 Mbit/s)
- Flow 3 egress (mean 5.37 Mbit/s)
Run 1: Statistics of TaoVA-100x

Start at: 2018-07-12 16:51:59
End at: 2018-07-12 16:52:29
Local clock offset: -0.07 ms
Remote clock offset: -1.4 ms

# Below is generated by plot.py at 2018-07-12 23:30:04
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 255.06 Mbit/s
  95th percentile per-packet one-way delay: 54.952 ms
  Loss rate: 0.42%
-- Flow 1:
  Average throughput: 241.12 Mbit/s
  95th percentile per-packet one-way delay: 54.954 ms
  Loss rate: 0.40%
-- Flow 2:
  Average throughput: 14.06 Mbit/s
  95th percentile per-packet one-way delay: 54.913 ms
  Loss rate: 0.54%
-- Flow 3:
  Average throughput: 13.89 Mbit/s
  95th percentile per-packet one-way delay: 54.916 ms
  Loss rate: 1.11%
Run 1: Report of TaoVA-100x — Data Link
Run 2: Statistics of TaoVA-100x

Start at: 2018-07-12 17:18:33
End at: 2018-07-12 17:19:03
Local clock offset: 0.101 ms
Remote clock offset: -0.204 ms

# Below is generated by plot.py at 2018-07-12 23:30:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 178.39 Mbit/s
95th percentile per-packet one-way delay: 53.899 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 156.11 Mbit/s
95th percentile per-packet one-way delay: 53.863 ms
Loss rate: 0.62%
-- Flow 2:
Average throughput: 22.57 Mbit/s
95th percentile per-packet one-way delay: 54.153 ms
Loss rate: 0.33%
-- Flow 3:
Average throughput: 22.06 Mbit/s
95th percentile per-packet one-way delay: 53.959 ms
Loss rate: 0.70%
Run 2: Report of TaoVA-100x — Data Link
Run 3: Statistics of TaoVA-100x

Start at: 2018-07-12 17:46:04
End at: 2018-07-12 17:46:34
Local clock offset: 0.268 ms
Remote clock offset: 0.413 ms

# Below is generated by plot.py at 2018-07-12 23:30:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 264.40 Mbit/s
95th percentile per-packet one-way delay: 53.438 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 124.96 Mbit/s
95th percentile per-packet one-way delay: 51.898 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 202.93 Mbit/s
95th percentile per-packet one-way delay: 53.816 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 13.65 Mbit/s
95th percentile per-packet one-way delay: 54.323 ms
Loss rate: 1.12%
Run 3: Report of TaoVA-100x — Data Link
Run 4: Statistics of TaoVA-100x

Start at: 2018-07-12 18:11:11
End at: 2018-07-12 18:11:41
Local clock offset: -0.527 ms
Remote clock offset: -0.161 ms

# Below is generated by plot.py at 2018-07-12 23:30:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 122.42 Mbit/s
95th percentile per-packet one-way delay: 53.198 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 107.15 Mbit/s
95th percentile per-packet one-way delay: 53.170 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 13.75 Mbit/s
95th percentile per-packet one-way delay: 53.471 ms
Loss rate: 0.53%
-- Flow 3:
Average throughput: 18.58 Mbit/s
95th percentile per-packet one-way delay: 53.263 ms
Loss rate: 0.76%
Run 4: Report of TaoVA-100x — Data Link
Run 5: Statistics of TaoVA-100x

Start at: 2018-07-12 18:36:17
End at: 2018-07-12 18:36:47
Local clock offset: -0.107 ms
Remote clock offset: -0.123 ms

# Below is generated by plot.py at 2018-07-12 23:30:21
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 51.54 Mbit/s
  95th percentile per-packet one-way delay: 53.713 ms
  Loss rate: 0.12%

-- Flow 1:
  Average throughput: 62.86 Mbit/s
  95th percentile per-packet one-way delay: 53.704 ms
  Loss rate: 0.00%

-- Flow 2:
  Average throughput: 14.10 Mbit/s
  95th percentile per-packet one-way delay: 53.560 ms
  Loss rate: 0.42%

-- Flow 3:
  Average throughput: 57.75 Mbit/s
  95th percentile per-packet one-way delay: 54.305 ms
  Loss rate: 0.10%
Run 5: Report of TaoVA-100x — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 62.86 Mbps)
  - Flow 1 egress (mean 62.86 Mbps)
  - Flow 2 ingress (mean 14.08 Mbps)
  - Flow 2 egress (mean 14.10 Mbps)
  - Flow 3 ingress (mean 37.24 Mbps)
  - Flow 3 egress (mean 37.75 Mbps)

- **Per-packet one-way delay (ms):**
  - Flow 1 (95th percentile 53.70 ms)
  - Flow 2 (95th percentile 53.56 ms)
  - Flow 3 (95th percentile 54.30 ms)
Run 6: Statistics of TaoVA-100x

Start at: 2018-07-12 19:01:24
End at: 2018-07-12 19:01:54
Local clock offset: 0.086 ms
Remote clock offset: -0.077 ms

# Below is generated by plot.py at 2018-07-12 23:36:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 357.55 Mbit/s
95th percentile per-packet one-way delay: 56.535 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 199.51 Mbit/s
95th percentile per-packet one-way delay: 54.057 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 230.66 Mbit/s
95th percentile per-packet one-way delay: 60.332 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 14.11 Mbit/s
95th percentile per-packet one-way delay: 54.096 ms
Loss rate: 1.27%
Run 7: Statistics of TaoVA-100x

Start at: 2018-07-12 19:26:43
End at: 2018-07-12 19:27:13
Local clock offset: -0.032 ms
Remote clock offset: 0.057 ms

# Below is generated by plot.py at 2018-07-12 23:36:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 259.85 Mbit/s
95th percentile per-packet one-way delay: 53.573 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 246.06 Mbit/s
95th percentile per-packet one-way delay: 53.558 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 13.84 Mbit/s
95th percentile per-packet one-way delay: 54.425 ms
Loss rate: 0.52%
-- Flow 3:
Average throughput: 13.97 Mbit/s
95th percentile per-packet one-way delay: 53.548 ms
Loss rate: 1.07%
Run 7: Report of TaoVA-100x — Data Link
Run 8: Statistics of TaoVA-100x

Start at: 2018-07-12 19:52:21
End at: 2018-07-12 19:52:51
Local clock offset: -0.229 ms
Remote clock offset: -0.051 ms

# Below is generated by plot.py at 2018-07-12 23:36:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 289.83 Mbit/s
  95th percentile per-packet one-way delay: 54.430 ms
  Loss rate: 0.29%
-- Flow 1:
  Average throughput: 235.83 Mbit/s
  95th percentile per-packet one-way delay: 54.223 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 73.85 Mbit/s
  95th percentile per-packet one-way delay: 56.454 ms
  Loss rate: 0.10%
-- Flow 3:
  Average throughput: 218.48 Mbit/s
  95th percentile per-packet one-way delay: 53.641 ms
  Loss rate: 1.10%
Run 8: Report of TaoVA-100x — Data Link
Run 9: Statistics of TaoVA-100x

Start at: 2018-07-12 20:17:33
End at: 2018-07-12 20:18:03
Local clock offset: 0.023 ms
Remote clock offset: -0.154 ms

# Below is generated by plot.py at 2018-07-12 23:36:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 156.39 Mbit/s
  95th percentile per-packet one-way delay: 53.977 ms
  Loss rate: 0.54%
-- Flow 1:
  Average throughput: 54.09 Mbit/s
  95th percentile per-packet one-way delay: 53.658 ms
  Loss rate: 0.04%
-- Flow 2:
  Average throughput: 49.87 Mbit/s
  95th percentile per-packet one-way delay: 54.258 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 240.07 Mbit/s
  95th percentile per-packet one-way delay: 54.121 ms
  Loss rate: 1.04%
Run 9: Report of TaoVA-100x — Data Link

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

- Flow 1 ingress (mean 53.03 Mbit/s)
- Flow 1 egress (mean 54.09 Mbit/s)
- Flow 2 ingress (mean 49.99 Mbit/s)
- Flow 2 egress (mean 49.87 Mbit/s)
- Flow 3 ingress (mean 240.02 Mbit/s)
- Flow 3 egress (mean 240.07 Mbit/s)
Run 10: Statistics of TaoVA-100x

Start at: 2018-07-12 20:42:47
End at: 2018-07-12 20:43:17
Local clock offset: 0.003 ms
Remote clock offset: -0.124 ms

# Below is generated by plot.py at 2018-07-12 23:37:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 329.28 Mbit/s
95th percentile per-packet one-way delay: 55.092 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 161.31 Mbit/s
95th percentile per-packet one-way delay: 53.822 ms
Loss rate: 0.20%
-- Flow 2:
Average throughput: 241.49 Mbit/s
95th percentile per-packet one-way delay: 56.156 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 22.51 Mbit/s
95th percentile per-packet one-way delay: 59.916 ms
Loss rate: 0.68%
Run 1: Statistics of TCP Vegas

Start at: 2018-07-12 16:55:01
End at: 2018-07-12 16:55:31
Local clock offset: 0.081 ms
Remote clock offset: -1.42 ms

# Below is generated by plot.py at 2018-07-12 23:37:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 337.50 Mbit/s
95th percentile per-packet one-way delay: 68.734 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 219.93 Mbit/s
95th percentile per-packet one-way delay: 68.952 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 79.93 Mbit/s
95th percentile per-packet one-way delay: 66.379 ms
Loss rate: 0.50%
-- Flow 3:
Average throughput: 196.39 Mbit/s
95th percentile per-packet one-way delay: 69.078 ms
Loss rate: 1.35%
Run 1: Report of TCP Vegas — Data Link

![Graph showing throughput and packet delay for TCP Vegas runs.](image)

- **Flow 1** ingress (mean 220.03 Mbit/s)
- **Flow 1** egress (mean 219.93 Mbit/s)
- **Flow 2** ingress (mean 79.92 Mbit/s)
- **Flow 2** egress (mean 79.93 Mbit/s)
- **Flow 3** ingress (mean 196.92 Mbit/s)
- **Flow 3** egress (mean 196.39 Mbit/s)

![Graph showing packet delay distribution for TCP Vegas runs.](image)

- **Flow 1** (95th percentile 68.95 ms)
- **Flow 2** (95th percentile 66.38 ms)
- **Flow 3** (95th percentile 69.08 ms)
Run 2: Statistics of TCP Vegas

Start at: 2018-07-12 17:22:10
End at: 2018-07-12 17:22:40
Local clock offset: -0.115 ms
Remote clock offset: -1.337 ms

# Below is generated by plot.py at 2018-07-12 23:37:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 300.20 Mbit/s
95th percentile per-packet one-way delay: 62.074 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 129.82 Mbit/s
95th percentile per-packet one-way delay: 61.589 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 156.19 Mbit/s
95th percentile per-packet one-way delay: 61.071 ms
Loss rate: 0.53%
-- Flow 3:
Average throughput: 202.34 Mbit/s
95th percentile per-packet one-way delay: 63.059 ms
Loss rate: 1.20%
Run 2: Report of TCP Vegas — Data Link
Run 3: Statistics of TCP Vegas

Start at: 2018-07-12 17:49:09
End at: 2018-07-12 17:49:39
Local clock offset: 0.137 ms
Remote clock offset: 0.397 ms

# Below is generated by plot.py at 2018-07-12 23:37:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 293.53 Mbit/s
95th percentile per-packet one-way delay: 64.742 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 222.09 Mbit/s
95th percentile per-packet one-way delay: 64.887 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 7.15 Mbit/s
95th percentile per-packet one-way delay: 60.797 ms
Loss rate: 0.46%
-- Flow 3:
Average throughput: 203.22 Mbit/s
95th percentile per-packet one-way delay: 64.522 ms
Loss rate: 1.19%
Run 3: Report of TCP Vegas — Data Link

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

**Throughput (Mbps):**
- Flow 1 ingress (mean 222.15 Mbps)
- Flow 1 egress (mean 222.09 Mbps)
- Flow 2 ingress (mean 7.15 Mbps)
- Flow 2 egress (mean 7.15 Mbps)
- Flow 3 ingress (mean 203.53 Mbps)
- Flow 3 egress (mean 203.22 Mbps)

**Packet Loss (ms):**
- Flow 1 (95th percentile 64.89 ms)
- Flow 2 (95th percentile 60.80 ms)
- Flow 3 (95th percentile 64.52 ms)
Run 4: Statistics of TCP Vegas

Start at: 2018-07-12 18:14:07  
End at: 2018-07-12 18:14:37  
Local clock offset: -0.084 ms  
Remote clock offset: 0.038 ms

# Below is generated by plot.py at 2018-07-12 23:37:43
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 127.50 Mbit/s
  95th percentile per-packet one-way delay: 58.138 ms
  Loss rate: 0.87%
-- Flow 1:
  Average throughput: 27.06 Mbit/s
  95th percentile per-packet one-way delay: 56.657 ms
  Loss rate: 0.41%
-- Flow 2:
  Average throughput: 45.49 Mbit/s
  95th percentile per-packet one-way delay: 57.397 ms
  Loss rate: 0.51%
-- Flow 3:
  Average throughput: 212.81 Mbit/s
  95th percentile per-packet one-way delay: 58.741 ms
  Loss rate: 1.20%
Run 4: Report of TCP Vegas — Data Link

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

![Graph 2: Per-packet one way delay vs Time](image2)
Run 5: Statistics of TCP Vegas

Start at: 2018-07-12 18:39:05
End at: 2018-07-12 18:39:35
Local clock offset: -0.106 ms
Remote clock offset: -0.031 ms

# Below is generated by plot.py at 2018-07-12 23:38:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 263.76 Mbit/s
95th percentile per-packet one-way delay: 62.369 ms
Loss rate: 0.21%
-- Flow 1:
Average throughput: 219.92 Mbit/s
95th percentile per-packet one-way delay: 62.503 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 51.75 Mbit/s
95th percentile per-packet one-way delay: 59.444 ms
Loss rate: 0.51%
-- Flow 3:
Average throughput: 28.64 Mbit/s
95th percentile per-packet one-way delay: 56.716 ms
Loss rate: 0.89%
Run 5: Report of TCP Vegas — Data Link

![Graph of Throughput vs Time and Per-packet one-way delay vs Time for different flows with specified mean throughput and 95th percentile delay.](image)
Run 6: Statistics of TCP Vegas

Start at: 2018-07-12 19:04:41
End at: 2018-07-12 19:05:11
Local clock offset: 0.4 ms
Remote clock offset: -0.094 ms

# Below is generated by plot.py at 2018-07-12 23:38:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 128.14 Mbit/s
95th percentile per-packet one-way delay: 53.983 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 26.53 Mbit/s
95th percentile per-packet one-way delay: 54.560 ms
Loss rate: 0.54%
-- Flow 2:
Average throughput: 150.38 Mbit/s
95th percentile per-packet one-way delay: 51.613 ms
Loss rate: 0.57%
-- Flow 3:
Average throughput: 5.03 Mbit/s
95th percentile per-packet one-way delay: 51.201 ms
Loss rate: 1.46%
Run 6: Report of TCP Vegas — Data Link
Run 7: Statistics of TCP Vegas

Start at: 2018-07-12 19:29:50
End at: 2018-07-12 19:30:20
Local clock offset: -0.291 ms
Remote clock offset: -0.234 ms

# Below is generated by plot.py at 2018-07-12 23:40:42
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 349.97 Mbit/s
  95th percentile per-packet one-way delay: 61.826 ms
  Loss rate: 0.47%
-- Flow 1:
  Average throughput: 205.41 Mbit/s
  95th percentile per-packet one-way delay: 60.171 ms
  Loss rate: 0.35%
-- Flow 2:
  Average throughput: 215.32 Mbit/s
  95th percentile per-packet one-way delay: 62.844 ms
  Loss rate: 0.61%
-- Flow 3:
  Average throughput: 4.59 Mbit/s
  95th percentile per-packet one-way delay: 59.664 ms
  Loss rate: 2.53%
Run 7: Report of TCP Vegas — Data Link
Run 8: Statistics of TCP Vegas

Start at: 2018-07-12 19:55:30
End at: 2018-07-12 19:56:00
Local clock offset: 0.105 ms
Remote clock offset: 0.163 ms

# Below is generated by plot.py at 2018-07-12 23:41:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 318.23 Mbit/s
95th percentile per-packet one-way delay: 62.389 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 219.98 Mbit/s
95th percentile per-packet one-way delay: 61.958 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 46.58 Mbit/s
95th percentile per-packet one-way delay: 60.595 ms
Loss rate: 0.65%
-- Flow 3:
Average throughput: 203.85 Mbit/s
95th percentile per-packet one-way delay: 65.659 ms
Loss rate: 1.23%
Run 8: Report of TCP Vegas — Data Link

![Plot 1: Throughput (Mbps)]

- Flow 1 ingress (mean 220.45 Mbps)
- Flow 2 ingress (mean 46.65 Mbps)
- Flow 3 ingress (mean 204.30 Mbps)
- Flow 1 egress (mean 219.98 Mbps)
- Flow 2 egress (mean 46.58 Mbps)
- Flow 3 egress (mean 203.85 Mbps)

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

- Flow 1 (95th percentile 61.96 ms)
- Flow 2 (95th percentile 60.59 ms)
- Flow 3 (95th percentile 65.66 ms)

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Run 9: Statistics of TCP Vegas

Start at: 2018-07-12 20:20:32
End at: 2018-07-12 20:21:02
Local clock offset: 0.095 ms
Remote clock offset: 0.166 ms

# Below is generated by plot.py at 2018-07-12 23:41:09
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 92.85 Mbit/s
  95th percentile per-packet one-way delay: 53.874 ms
  Loss rate: 0.78%
-- Flow 1:
  Average throughput: 21.42 Mbit/s
  95th percentile per-packet one-way delay: 53.986 ms
  Loss rate: 0.44%
-- Flow 2:
  Average throughput: 35.76 Mbit/s
  95th percentile per-packet one-way delay: 53.921 ms
  Loss rate: 0.42%
-- Flow 3:
  Average throughput: 144.40 Mbit/s
  95th percentile per-packet one-way delay: 53.673 ms
  Loss rate: 1.10%
Run 9: Report of TCP Vegas — Data Link

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

- Flow 1 ingress (mean 21.45 Mbit/s)
- Flow 1 egress (mean 21.42 Mbit/s)
- Flow 2 ingress (mean 35.73 Mbit/s)
- Flow 2 egress (mean 35.76 Mbit/s)
- Flow 3 ingress (mean 144.52 Mbit/s)
- Flow 3 egress (mean 144.46 Mbit/s)
Run 10: Statistics of TCP Vegas

Start at: 2018-07-12 20:46:00
End at: 2018-07-12 20:46:30
Local clock offset: 0.185 ms
Remote clock offset: 0.486 ms

# Below is generated by plot.py at 2018-07-12 23:41:09
# Datalink statistics
--- Total of 3 flows:
Average throughput: 95.10 Mbit/s
95th percentile per-packet one-way delay: 53.738 ms
Loss rate: 0.80%
--- Flow 1:
Average throughput: 31.60 Mbit/s
95th percentile per-packet one-way delay: 53.838 ms
Loss rate: 0.39%
--- Flow 2:
Average throughput: 22.46 Mbit/s
95th percentile per-packet one-way delay: 53.756 ms
Loss rate: 0.61%
--- Flow 3:
Average throughput: 147.34 Mbit/s
95th percentile per-packet one-way delay: 53.271 ms
Loss rate: 1.13%
Run 10: Report of TCP Vegas — Data Link

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

- **Flow 1 ingress (mean 31.62 Mbps)**
- **Flow 1 egress (mean 31.60 Mbps)**
- **Flow 2 ingress (mean 22.48 Mbps)**
- **Flow 2 egress (mean 22.46 Mbps)**
- **Flow 3 ingress (mean 147.45 Mbps)**
- **Flow 3 egress (mean 147.34 Mbps)**

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

- **Flow 1 (95th percentile 53.84 ms)**
- **Flow 2 (95th percentile 53.76 ms)**
- **Flow 3 (95th percentile 53.27 ms)**

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Run 1: Statistics of Verus

Start at: 2018-07-12 16:47:14
End at: 2018-07-12 16:47:44
Local clock offset: -0.057 ms
Remote clock offset: -0.137 ms

# Below is generated by plot.py at 2018-07-12 23:43:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 384.42 Mbit/s
95th percentile per-packet one-way delay: 152.612 ms
Loss rate: 1.44%
-- Flow 1:
Average throughput: 241.73 Mbit/s
95th percentile per-packet one-way delay: 140.394 ms
Loss rate: 1.55%
-- Flow 2:
Average throughput: 169.98 Mbit/s
95th percentile per-packet one-way delay: 154.176 ms
Loss rate: 0.92%
-- Flow 3:
Average throughput: 90.03 Mbit/s
95th percentile per-packet one-way delay: 209.523 ms
Loss rate: 2.47%
Run 1: Report of Verus — Data Link

![Graph showing network performance metrics]

Key:
- Flow 1 ingress (mean 244.97 Mbit/s)
- Flow 1 egress (mean 241.73 Mbit/s)
- Flow 2 ingress (mean 170.64 Mbit/s)
- Flow 2 egress (mean 169.98 Mbit/s)
- Flow 3 ingress (mean 92.16 Mbit/s)
- Flow 3 egress (mean 90.03 Mbit/s)

![Graph showing latency performance metrics]

Key:
- Flow 1 (95th percentile 140.39 ms)
- Flow 2 (95th percentile 154.18 ms)
- Flow 3 (95th percentile 209.52 ms)
Run 2: Statistics of Verus

Start at: 2018-07-12 17:13:31
End at: 2018-07-12 17:14:01
Local clock offset: 0.018 ms
Remote clock offset: -0.353 ms

# Below is generated by plot.py at 2018-07-12 23:43:45
# Datalink statistics

-- Total of 3 flows:
Average throughput: 334.82 Mbit/s
95th percentile per-packet one-way delay: 172.990 ms
Loss rate: 0.79%

-- Flow 1:
Average throughput: 214.35 Mbit/s
95th percentile per-packet one-way delay: 136.838 ms
Loss rate: 0.37%

-- Flow 2:
Average throughput: 115.94 Mbit/s
95th percentile per-packet one-way delay: 182.233 ms
Loss rate: 1.88%

-- Flow 3:
Average throughput: 132.88 Mbit/s
95th percentile per-packet one-way delay: 222.362 ms
Loss rate: 0.91%
Run 2: Report of Verus — Data Link

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![Graph 1: Throughput (Mbps)](image1)
- Flow 1 ingress (mean 215.14 Mbps)
- Flow 1 egress (mean 214.35 Mbps)
- Flow 2 ingress (mean 117.73 Mbps)
- Flow 2 egress (mean 115.94 Mbps)
- Flow 3 ingress (mean 131.66 Mbps)
- Flow 3 egress (mean 132.88 Mbps)

![Graph 2: Per-packet one-way delay (ms)](image2)
- Flow 1 (95th percentile 136.84 ms)
- Flow 2 (95th percentile 182.23 ms)
- Flow 3 (95th percentile 222.36 ms)
Run 3: Statistics of Verus

Start at: 2018-07-12 17:41:25
End at: 2018-07-12 17:41:55
Local clock offset: -0.242 ms
Remote clock offset: 0.049 ms

# Below is generated by plot.py at 2018-07-12 23:43:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 328.96 Mbit/s
95th percentile per-packet one-way delay: 186.897 ms
Loss rate: 2.18%
-- Flow 1:
Average throughput: 182.33 Mbit/s
95th percentile per-packet one-way delay: 167.136 ms
Loss rate: 1.62%
-- Flow 2:
Average throughput: 160.22 Mbit/s
95th percentile per-packet one-way delay: 177.326 ms
Loss rate: 2.74%
-- Flow 3:
Average throughput: 123.47 Mbit/s
95th percentile per-packet one-way delay: 228.068 ms
Loss rate: 3.23%
Run 3: Report of Verus — Data Link

![Graph of Throughput](image1)

![Graph of Per-packet Delay](image2)
Run 4: Statistics of Verus

Start at: 2018-07-12 18:06:37
End at: 2018-07-12 18:07:07
Local clock offset: 0.37 ms
Remote clock offset: -0.308 ms

# Below is generated by plot.py at 2018-07-12 23:44:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 327.59 Mbit/s
95th percentile per-packet one-way delay: 182.296 ms
Loss rate: 1.73%
-- Flow 1:
Average throughput: 207.99 Mbit/s
95th percentile per-packet one-way delay: 147.241 ms
Loss rate: 1.76%
-- Flow 2:
Average throughput: 144.05 Mbit/s
95th percentile per-packet one-way delay: 181.671 ms
Loss rate: 0.26%
-- Flow 3:
Average throughput: 74.02 Mbit/s
95th percentile per-packet one-way delay: 327.753 ms
Loss rate: 6.83%
Run 4: Report of Verus — Data Link

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

- Flow 1 ingress (mean 210.84 Mbit/s)
- Flow 1 egress (mean 207.99 Mbit/s)
- Flow 2 ingress (mean 145.07 Mbit/s)
- Flow 2 egress (mean 144.05 Mbit/s)
- Flow 3 ingress (mean 79.29 Mbit/s)
- Flow 3 egress (mean 74.02 Mbit/s)

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

- Flow 1 (95th percentile 147.24 ms)
- Flow 2 (95th percentile 181.67 ms)
- Flow 3 (95th percentile 327.75 ms)
Run 5: Statistics of Verus

Start at: 2018-07-12 18:31:29
End at: 2018-07-12 18:31:59
Local clock offset: -0.511 ms
Remote clock offset: -0.132 ms

# Below is generated by plot.py at 2018-07-12 23:44:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 287.75 Mbit/s
95th percentile per-packet one-way delay: 172.138 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 196.72 Mbit/s
95th percentile per-packet one-way delay: 169.339 ms
Loss rate: 0.46%
-- Flow 2:
Average throughput: 105.43 Mbit/s
95th percentile per-packet one-way delay: 169.095 ms
Loss rate: 0.78%
-- Flow 3:
Average throughput: 63.64 Mbit/s
95th percentile per-packet one-way delay: 188.688 ms
Loss rate: 1.26%
Run 5: Report of Verus — Data Link

---

![Throughput Graph](image1)

- **Flow 1 ingress (mean 196.97 Mbit/s)**
- **Flow 1 egress (mean 196.72 Mbit/s)**
- **Flow 2 ingress (mean 105.71 Mbit/s)**
- **Flow 2 egress (mean 105.43 Mbit/s)**
- **Flow 3 ingress (mean 63.76 Mbit/s)**
- **Flow 3 egress (mean 63.64 Mbit/s)**

![Delay Graph](image2)

- **Flow 1 (95th percentile 169.34 ms)**
- **Flow 2 (95th percentile 169.09 ms)**
- **Flow 3 (95th percentile 180.69 ms)**

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Run 6: Statistics of Verus

Start at: 2018-07-12 18:56:34
End at: 2018-07-12 18:57:04
Local clock offset: 0.458 ms
Remote clock offset: 0.03 ms

# Below is generated by plot.py at 2018-07-12 23:44:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 313.21 Mbit/s
95th percentile per-packet one-way delay: 162.977 ms
Loss rate: 1.73%
-- Flow 1:
Average throughput: 191.81 Mbit/s
95th percentile per-packet one-way delay: 168.961 ms
Loss rate: 2.62%
-- Flow 2:
Average throughput: 135.76 Mbit/s
95th percentile per-packet one-way delay: 139.739 ms
Loss rate: 0.21%
-- Flow 3:
Average throughput: 95.35 Mbit/s
95th percentile per-packet one-way delay: 212.173 ms
Loss rate: 0.52%
Run 6: Report of Verus — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 196.34 Mbps)  Flow 1 egress (mean 191.81 Mbps)
Flow 2 ingress (mean 135.12 Mbps)  Flow 2 egress (mean 135.76 Mbps)
Flow 3 ingress (mean 94.90 Mbps)  Flow 3 egress (mean 95.35 Mbps)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 168.96 ms)  Flow 2 (95th percentile 139.74 ms)  Flow 3 (95th percentile 212.17 ms)
Run 7: Statistics of Verus

Local clock offset: -0.071 ms
Remote clock offset: 0.124 ms

# Below is generated by plot.py at 2018-07-12 23:47:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 356.51 Mbit/s
95th percentile per-packet one-way delay: 195.165 ms
Loss rate: 2.15%
-- Flow 1:
Average throughput: 243.18 Mbit/s
95th percentile per-packet one-way delay: 202.966 ms
Loss rate: 2.14%
-- Flow 2:
Average throughput: 124.34 Mbit/s
95th percentile per-packet one-way delay: 162.673 ms
Loss rate: 1.04%
-- Flow 3:
Average throughput: 94.44 Mbit/s
95th percentile per-packet one-way delay: 247.935 ms
Loss rate: 5.02%
Run 7: Report of Verus — Data Link

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

- **Flow 1 ingress (mean 247.43 Mbps)**
- **Flow 1 egress (mean 243.18 Mbps)**
- **Flow 2 ingress (mean 124.99 Mbps)**
- **Flow 2 egress (mean 124.34 Mbps)**
- **Flow 3 ingress (mean 98.16 Mbps)**
- **Flow 3 egress (mean 94.44 Mbps)**

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

- **Flow 1 (95th percentile 202.97 ms)**
- **Flow 2 (95th percentile 162.67 ms)**
- **Flow 3 (95th percentile 247.94 ms)**
Run 8: Statistics of Verus

Start at: 2018-07-12 19:47:29
End at: 2018-07-12 19:47:59
Local clock offset: 0.207 ms
Remote clock offset: -0.153 ms

# Below is generated by plot.py at 2018-07-12 23:48:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 377.14 Mbit/s
95th percentile per-packet one-way delay: 153.567 ms
Loss rate: 2.07%
-- Flow 1:
Average throughput: 208.35 Mbit/s
95th percentile per-packet one-way delay: 159.171 ms
Loss rate: 2.79%
-- Flow 2:
Average throughput: 168.82 Mbit/s
95th percentile per-packet one-way delay: 144.471 ms
Loss rate: 0.89%
-- Flow 3:
Average throughput: 172.44 Mbit/s
95th percentile per-packet one-way delay: 177.907 ms
Loss rate: 1.73%
Run 8: Report of Verus — Data Link

Throughput (Mbps)

_time (s)_

Flow 1 ingress (mean 213.57 Mbps)
Flow 1 egress (mean 208.35 Mbps)
Flow 2 ingress (mean 199.44 Mbps)
Flow 2 egress (mean 168.82 Mbps)
Flow 3 ingress (mean 173.66 Mbps)
Flow 3 egress (mean 172.44 Mbps)

Per-packet one-way delay (ms)

_time (s)_

Flow 1 (95th percentile 159.17 ms)
Flow 2 (95th percentile 144.47 ms)
Flow 3 (95th percentile 177.91 ms)
Run 9: Statistics of Verus

Start at: 2018-07-12 20:12:45
End at: 2018-07-12 20:13:15
Local clock offset: -0.131 ms
Remote clock offset: 0.023 ms

# Below is generated by plot.py at 2018-07-12 23:49:14
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 348.33 Mbit/s
  95th percentile per-packet one-way delay: 192.901 ms
  Loss rate: 2.51%
-- Flow 1:
  Average throughput: 208.36 Mbit/s
  95th percentile per-packet one-way delay: 167.971 ms
  Loss rate: 0.96%
-- Flow 2:
  Average throughput: 183.15 Mbit/s
  95th percentile per-packet one-way delay: 223.608 ms
  Loss rate: 5.27%
-- Flow 3:
  Average throughput: 55.82 Mbit/s
  95th percentile per-packet one-way delay: 175.517 ms
  Loss rate: 0.96%
Run 9: Report of Verus — Data Link
Run 10: Statistics of Verus

Start at: 2018-07-12 20:38:01
End at: 2018-07-12 20:38:31
Local clock offset: 0.067 ms
Remote clock offset: -0.023 ms

# Below is generated by plot.py at 2018-07-12 23:49:14
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 321.14 Mbit/s
  95th percentile per-packet one-way delay: 158.550 ms
  Loss rate: 1.04%
-- Flow 1:
  Average throughput: 185.67 Mbit/s
  95th percentile per-packet one-way delay: 128.825 ms
  Loss rate: 0.30%
-- Flow 2:
  Average throughput: 155.06 Mbit/s
  95th percentile per-packet one-way delay: 197.587 ms
  Loss rate: 1.69%
-- Flow 3:
  Average throughput: 116.06 Mbit/s
  95th percentile per-packet one-way delay: 226.265 ms
  Loss rate: 2.91%
Run 10: Report of Verus — Data Link

Throughput (Mbps)

- Flow 1 ingress (mean 185.16 Mbps)
- Flow 1 egress (mean 185.67 Mbps)
- Flow 2 ingress (mean 148.98 Mbps)
- Flow 2 egress (mean 155.06 Mbps)
- Flow 3 ingress (mean 117.85 Mbps)
- Flow 3 egress (mean 116.06 Mbps)

Per-packet one-way delay (ms)

- Flow 1 (95th percentile 128.82 ms)
- Flow 2 (95th percentile 197.59 ms)
- Flow 3 (95th percentile 226.26 ms)
Run 1: Statistics of PCC-Vivace

Start at: 2018-07-12 16:36:06
End at: 2018-07-12 16:36:36
Local clock offset: 0.036 ms
Remote clock offset: -0.27 ms

# Below is generated by plot.py at 2018-07-12 23:54:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 592.20 Mbit/s
95th percentile per-packet one-way delay: 116.382 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 305.46 Mbit/s
95th percentile per-packet one-way delay: 112.776 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 329.34 Mbit/s
95th percentile per-packet one-way delay: 116.371 ms
Loss rate: 0.53%
-- Flow 3:
Average throughput: 207.95 Mbit/s
95th percentile per-packet one-way delay: 119.729 ms
Loss rate: 3.64%
Run 1: Report of PCC-Vivace — Data Link

![Graph showing throughput and packet delay over time for different flows]
Run 2: Statistics of PCC-Vivace

Start at: 2018-07-12 17:00:59
End at: 2018-07-12 17:01:29
Local clock offset: -0.27 ms
Remote clock offset: -1.334 ms

# Below is generated by plot.py at 2018-07-12 23:54:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 547.12 Mbit/s
95th percentile per-packet one-way delay: 110.842 ms
Loss rate: 1.30%
-- Flow 1:
Average throughput: 336.80 Mbit/s
95th percentile per-packet one-way delay: 101.568 ms
Loss rate: 1.73%
-- Flow 2:
Average throughput: 272.80 Mbit/s
95th percentile per-packet one-way delay: 178.353 ms
Loss rate: 0.49%
-- Flow 3:
Average throughput: 89.05 Mbit/s
95th percentile per-packet one-way delay: 55.280 ms
Loss rate: 1.32%
Run 2: Report of PCC-Vivace — Data Link
Run 3: Statistics of PCC-Vivace

Start at: 2018-07-12 17:28:33
End at: 2018-07-12 17:29:03
Local clock offset: -0.049 ms
Remote clock offset: -0.374 ms

# Below is generated by plot.py at 2018-07-12 23:54:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 603.15 Mbit/s
95th percentile per-packet one-way delay: 61.395 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 346.37 Mbit/s
95th percentile per-packet one-way delay: 58.009 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 306.03 Mbit/s
95th percentile per-packet one-way delay: 73.115 ms
Loss rate: 0.59%
-- Flow 3:
Average throughput: 163.69 Mbit/s
95th percentile per-packet one-way delay: 57.209 ms
Loss rate: 1.21%
Run 3: Report of PCC-Vivace — Data Link

[Graphs showing throughput and per-packet one-way delay over time for different flows, with annotations for mean throughput and 95th percentile delay.]
Run 4: Statistics of PCC-Vivace

Start at: 2018-07-12 17:55:18
End at: 2018-07-12 17:55:48
Local clock offset: -0.043 ms
Remote clock offset: -0.288 ms

# Below is generated by plot.py at 2018-07-12 23:56:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 599.99 Mbit/s
95th percentile per-packet one-way delay: 70.244 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 330.42 Mbit/s
95th percentile per-packet one-way delay: 95.036 ms
Loss rate: 0.52%
-- Flow 2:
Average throughput: 317.19 Mbit/s
95th percentile per-packet one-way delay: 60.011 ms
Loss rate: 0.55%
-- Flow 3:
Average throughput: 179.78 Mbit/s
95th percentile per-packet one-way delay: 52.944 ms
Loss rate: 1.24%
Run 4: Report of PCC-Vivace — Data Link

Graph showing throughput and per-packet round-trip delay over time for different flows.
Run 5: Statistics of PCC-Vivace

Start at: 2018-07-12 18:20:04
End at: 2018-07-12 18:20:34
Local clock offset: 0.279 ms
Remote clock offset: -0.09 ms

# Below is generated by plot.py at 2018-07-12 23:58:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 569.53 Mbit/s
95th percentile per-packet one-way delay: 60.964 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 341.11 Mbit/s
95th percentile per-packet one-way delay: 57.715 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 328.28 Mbit/s
95th percentile per-packet one-way delay: 125.746 ms
Loss rate: 0.34%
-- Flow 3:
Average throughput: 32.22 Mbit/s
95th percentile per-packet one-way delay: 50.435 ms
Loss rate: 1.43%
Run 5: Report of PCC-Vivace — Data Link

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

- **Throughput (Mbps)**
  - Flow 1 ingress (mean 341.02 Mbps)
  - Flow 1 egress (mean 341.11 Mbps)
  - Flow 2 ingress (mean 327.73 Mbps)
  - Flow 2 egress (mean 328.28 Mbps)
  - Flow 3 ingress (mean 32.35 Mbps)
  - Flow 3 egress (mean 32.22 Mbps)

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

  - Flow 1 (95th percentile 57.72 ms)
  - Flow 2 (95th percentile 125.75 ms)
  - Flow 3 (95th percentile 50.44 ms)
Run 6: Statistics of PCC-Vivace

Start at: 2018-07-12 18:45:10
End at: 2018-07-12 18:45:40
Local clock offset: -0.141 ms
Remote clock offset: -0.077 ms

# Below is generated by plot.py at 2018-07-12 23:58:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 586.39 Mbit/s
  95th percentile per-packet one-way delay: 74.763 ms
  Loss rate: 0.51%
-- Flow 1:
  Average throughput: 328.85 Mbit/s
  95th percentile per-packet one-way delay: 59.939 ms
  Loss rate: 0.43%
-- Flow 2:
  Average throughput: 307.61 Mbit/s
  95th percentile per-packet one-way delay: 82.290 ms
  Loss rate: 0.55%
-- Flow 3:
  Average throughput: 163.10 Mbit/s
  95th percentile per-packet one-way delay: 58.684 ms
  Loss rate: 0.80%
Run 6: Report of PCC-Vivace — Data Link

![Graphs showing throughput and per-packet cell delay over time for different flows.](image-url)
Run 7: Statistics of PCC-Vivace

Start at: 2018-07-12 19:10:39
End at: 2018-07-12 19:11:09
Local clock offset: -0.023 ms
Remote clock offset: -0.233 ms

# Below is generated by plot.py at 2018-07-12 23:58:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 532.14 Mbit/s
95th percentile per-packet one-way delay: 74.259 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 298.40 Mbit/s
95th percentile per-packet one-way delay: 125.188 ms
Loss rate: 0.46%
-- Flow 2:
Average throughput: 308.79 Mbit/s
95th percentile per-packet one-way delay: 57.322 ms
Loss rate: 0.43%
-- Flow 3:
Average throughput: 87.48 Mbit/s
95th percentile per-packet one-way delay: 51.007 ms
Loss rate: 1.22%
Run 7: Report of PCC-Vivace — Data Link

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**Throughput (Mbps)**

- Flow 1 ingress (mean 298.70 Mbps)
- Flow 1 egress (mean 298.40 Mbps)
- Flow 2 ingress (mean 308.53 Mbps)
- Flow 2 egress (mean 308.79 Mbps)
- Flow 3 ingress (mean 87.65 Mbps)
- Flow 3 egress (mean 87.48 Mbps)

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

- Flow 1 (95th percentile 125.19 ms)
- Flow 2 (95th percentile 57.32 ms)
- Flow 3 (95th percentile 51.01 ms)
Run 8: Statistics of PCC-Vivace

Start at: 2018-07-12 19:35:57
End at: 2018-07-12 19:36:27
Local clock offset: 0.107 ms
Remote clock offset: -0.139 ms

# Below is generated by plot.py at 2018-07-12 23:59:31
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 612.07 Mbit/s
  95th percentile per-packet one-way delay: 116.962 ms
  Loss rate: 0.51%
-- Flow 1:
  Average throughput: 349.94 Mbit/s
  95th percentile per-packet one-way delay: 72.732 ms
  Loss rate: 0.56%
-- Flow 2:
  Average throughput: 333.21 Mbit/s
  95th percentile per-packet one-way delay: 128.600 ms
  Loss rate: 0.26%
-- Flow 3:
  Average throughput: 125.24 Mbit/s
  95th percentile per-packet one-way delay: 55.285 ms
  Loss rate: 1.42%
Run 9: Statistics of PCC-Vivace

Start at: 2018-07-12 20:01:29
End at: 2018-07-12 20:01:59
Local clock offset: 0.249 ms
Remote clock offset: -0.077 ms

# Below is generated by plot.py at 2018-07-12 23:59:44
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 467.78 Mbit/s
  95th percentile per-packet one-way delay: 148.316 ms
  Loss rate: 0.53%
-- Flow 1:
  Average throughput: 313.88 Mbit/s
  95th percentile per-packet one-way delay: 156.113 ms
  Loss rate: 0.34%
-- Flow 2:
  Average throughput: 147.07 Mbit/s
  95th percentile per-packet one-way delay: 65.282 ms
  Loss rate: 0.57%
-- Flow 3:
  Average throughput: 171.79 Mbit/s
  95th percentile per-packet one-way delay: 58.566 ms
  Loss rate: 1.49%
Run 9: Report of PCC-Vivace — Data Link

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

**Throughput (Mbps):**
- Flow 1 ingress (mean 313.83 Mbps)
- Flow 1 egress (mean 313.88 Mbps)
- Flow 2 ingress (mean 147.10 Mbps)
- Flow 2 egress (mean 147.07 Mbps)
- Flow 3 ingress (mean 172.41 Mbps)
- Flow 3 egress (mean 171.79 Mbps)

**Per-packet round-trip delay (ms):**
- Flow 1 (95th percentile 156.11 ms)
- Flow 2 (95th percentile 65.28 ms)
- Flow 3 (95th percentile 58.57 ms)
Run 10: Statistics of PCC-Vivace

Start at: 2018-07-12 20:26:32  
End at: 2018-07-12 20:27:02  
Local clock offset: 0.23 ms  
Remote clock offset: -0.066 ms

# Below is generated by plot.py at 2018-07-13 00:00:05  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 635.80 Mbit/s  
95th percentile per-packet one-way delay: 62.128 ms  
Loss rate: 0.45%  
-- Flow 1:  
Average throughput: 360.94 Mbit/s  
95th percentile per-packet one-way delay: 54.379 ms  
Loss rate: 0.31%  
-- Flow 2:  
Average throughput: 331.57 Mbit/s  
95th percentile per-packet one-way delay: 65.534 ms  
Loss rate: 0.48%  
-- Flow 3:  
Average throughput: 167.36 Mbit/s  
95th percentile per-packet one-way delay: 76.513 ms  
Loss rate: 1.25%
Run 10: Report of PCC-Vivace — Data Link

![Graph of throughput over time with annotations for Flow 1 ingress (mean 360.74 Mbit/s), Flow 1 egress (mean 360.94 Mbit/s), Flow 2 ingress (mean 331.36 Mbit/s), Flow 2 egress (mean 331.57 Mbit/s), Flow 3 ingress (mean 167.61 Mbit/s), Flow 3 egress (mean 167.36 Mbit/s).

![Graph of per-packet round trip delay over time with annotations for Flow 1 (95th percentile 54.38 ms), Flow 2 (95th percentile 65.53 ms), Flow 3 (95th percentile 76.51 ms).]
Run 1: Statistics of WebRTC media

Start at: 2018-07-12 16:43:19
End at: 2018-07-12 16:43:49
Local clock offset: -0.016 ms
Remote clock offset: -0.071 ms

# Below is generated by plot.py at 2018-07-13 00:00:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.59 Mbit/s
95th percentile per-packet one-way delay: 53.828 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 1.70 Mbit/s
95th percentile per-packet one-way delay: 53.817 ms
Loss rate: 0.74%
-- Flow 2:
Average throughput: 1.36 Mbit/s
95th percentile per-packet one-way delay: 53.844 ms
Loss rate: 0.67%
-- Flow 3:
Average throughput: 0.56 Mbit/s
95th percentile per-packet one-way delay: 53.545 ms
Loss rate: 1.57%
Run 1: Report of WebRTC media — Data Link
Run 2: Statistics of WebRTC media

Start at: 2018-07-12 17:09:08
End at: 2018-07-12 17:09:38
Local clock offset: 0.236 ms
Remote clock offset: -1.53 ms

# Below is generated by plot.py at 2018-07-13 00:00:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.88 Mbit/s
95th percentile per-packet one-way delay: 55.442 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 1.98 Mbit/s
95th percentile per-packet one-way delay: 55.407 ms
Loss rate: 0.59%
-- Flow 2:
Average throughput: 1.35 Mbit/s
95th percentile per-packet one-way delay: 55.445 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 0.57 Mbit/s
95th percentile per-packet one-way delay: 55.476 ms
Loss rate: 1.54%
Run 2: Report of WebRTC media — Data Link
Run 3: Statistics of WebRTC media

Start at: 2018-07-12 17:37:12
End at: 2018-07-12 17:37:42
Local clock offset: -0.191 ms
Remote clock offset: 0.217 ms

# Below is generated by plot.py at 2018-07-13 00:00:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.92 Mbit/s
95th percentile per-packet one-way delay: 53.227 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 2.06 Mbit/s
95th percentile per-packet one-way delay: 50.235 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 1.34 Mbit/s
95th percentile per-packet one-way delay: 53.260 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 0.54 Mbit/s
95th percentile per-packet one-way delay: 53.216 ms
Loss rate: 1.65%
Run 3: Report of WebRTC media — Data Link
Run 4: Statistics of WebRTC media

Start at: 2018-07-12 18:02:33
End at: 2018-07-12 18:03:03
Local clock offset: 0.136 ms
Remote clock offset: 0.418 ms

# Below is generated by plot.py at 2018-07-13 00:00:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.94 Mbit/s
95th percentile per-packet one-way delay: 53.363 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 2.06 Mbit/s
95th percentile per-packet one-way delay: 53.384 ms
Loss rate: 0.48%
-- Flow 2:
Average throughput: 1.34 Mbit/s
95th percentile per-packet one-way delay: 50.369 ms
Loss rate: 0.70%
-- Flow 3:
Average throughput: 0.56 Mbit/s
95th percentile per-packet one-way delay: 50.084 ms
Loss rate: 1.56%
Run 4: Report of WebRTC media — Data Link

The first chart shows the throughput (Mbps) over time for four separate flows, each represented by a different line color.

- **Flow 1 ingress** (mean 2.06 Mbps)
- **Flow 1 egress** (mean 2.06 Mbps)
- **Flow 2 ingress** (mean 1.15 Mbps)
- **Flow 2 egress** (mean 1.14 Mbps)
- **Flow 3 ingress** (mean 0.56 Mbps)
- **Flow 3 egress** (mean 0.56 Mbps)

The second chart displays the per-packet one-way delay (ms) over time for the same flows.

- **Flow 1** (95th percentile 53.38 ms)
- **Flow 2** (95th percentile 50.37 ms)
- **Flow 3** (95th percentile 50.08 ms)
Run 5: Statistics of WebRTC media

Start at: 2018-07-12 18:27:26
End at: 2018-07-12 18:27:56
Local clock offset: 0.003 ms
Remote clock offset: -0.078 ms

# Below is generated by plot.py at 2018-07-13 00:00:05
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 3.92 Mbit/s
  95th percentile per-packet one-way delay: 53.947 ms
  Loss rate: 0.63%
-- Flow 1:
  Average throughput: 2.06 Mbit/s
  95th percentile per-packet one-way delay: 53.968 ms
  Loss rate: 0.38%
-- Flow 2:
  Average throughput: 1.36 Mbit/s
  95th percentile per-packet one-way delay: 53.806 ms
  Loss rate: 0.61%
-- Flow 3:
  Average throughput: 0.52 Mbit/s
  95th percentile per-packet one-way delay: 53.673 ms
  Loss rate: 1.68%
Run 5: Report of WebRTC media — Data Link

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Graph 1: Throughput (Mbps) vs. Time (s)
- Flow 1 ingress (mean 2.06 Mbps)
- Flow 1 egress (mean 2.06 Mbps)
- Flow 2 ingress (mean 1.36 Mbps)
- Flow 2 egress (mean 1.36 Mbps)
- Flow 3 ingress (mean 0.53 Mbps)
- Flow 3 egress (mean 0.52 Mbps)

Graph 2: Per-packet round-trip delay (ms) vs. Time (s)
- Flow 1 (95th percentile 53.97 ms)
- Flow 2 (95th percentile 53.81 ms)
- Flow 3 (95th percentile 53.67 ms)
Run 6: Statistics of WebRTC media

Start at: 2018-07-12 18:52:33
End at: 2018-07-12 18:53:03
Local clock offset: 0.122 ms
Remote clock offset: -0.358 ms

# Below is generated by plot.py at 2018-07-13 00:00:05
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 3.91 Mbit/s
  95th percentile per-packet one-way delay: 54.182 ms
  Loss rate: 0.52%
-- Flow 1:
  Average throughput: 2.03 Mbit/s
  95th percentile per-packet one-way delay: 54.151 ms
  Loss rate: 0.30%
-- Flow 2:
  Average throughput: 1.34 Mbit/s
  95th percentile per-packet one-way delay: 54.217 ms
  Loss rate: 0.42%
-- Flow 3:
  Average throughput: 0.56 Mbit/s
  95th percentile per-packet one-way delay: 54.006 ms
  Loss rate: 1.58%
Run 6: Report of WebRTC media — Data Link

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

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 2.03 Mbps)
Flow 1 egress (mean 2.03 Mbps)
Flow 2 ingress (mean 1.34 Mbps)
Flow 2 egress (mean 1.34 Mbps)
Flow 3 ingress (mean 0.56 Mbps)
Flow 3 egress (mean 0.56 Mbps)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 54.15 ms)
Flow 2 (95th percentile 54.22 ms)
Flow 3 (95th percentile 54.01 ms)
Run 7: Statistics of WebRTC media

Start at: 2018-07-12 19:18:00
End at: 2018-07-12 19:18:30
Local clock offset: 0.535 ms
Remote clock offset: -0.057 ms

# Below is generated by plot.py at 2018-07-13 00:00:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.91 Mbit/s
95th percentile per-packet one-way delay: 54.445 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 2.07 Mbit/s
95th percentile per-packet one-way delay: 54.370 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 1.33 Mbit/s
95th percentile per-packet one-way delay: 54.498 ms
Loss rate: 0.73%
-- Flow 3:
Average throughput: 0.53 Mbit/s
95th percentile per-packet one-way delay: 54.350 ms
Loss rate: 0.99%
Run 7: Report of WebRTC media — Data Link
Run 8: Statistics of WebRTC media

Start at: 2018-07-12 19:43:25
End at: 2018-07-12 19:43:55
Local clock offset: 0.156 ms
Remote clock offset: -0.238 ms

# Below is generated by plot.py at 2018-07-13 00:00:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.92 Mbit/s
95th percentile per-packet one-way delay: 54.227 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 2.04 Mbit/s
95th percentile per-packet one-way delay: 54.255 ms
Loss rate: 0.29%
-- Flow 2:
Average throughput: 1.35 Mbit/s
95th percentile per-packet one-way delay: 54.089 ms
Loss rate: 0.88%
-- Flow 3:
Average throughput: 0.55 Mbit/s
95th percentile per-packet one-way delay: 54.109 ms
Loss rate: 1.64%
Run 8: Report of WebRTC media — Data Link

[Graphs showing throughput and packet round trip delay over time for different flows.]
Run 9: Statistics of WebRTC media

Start at: 2018-07-12 20:08:41
End at: 2018-07-12 20:09:11
Local clock offset: -0.158 ms
Remote clock offset: -0.003 ms

# Below is generated by plot.py at 2018-07-13 00:00:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.94 Mbit/s
95th percentile per-packet one-way delay: 53.521 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 2.07 Mbit/s
95th percentile per-packet one-way delay: 53.533 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 1.33 Mbit/s
95th percentile per-packet one-way delay: 53.502 ms
Loss rate: 0.66%
-- Flow 3:
Average throughput: 0.55 Mbit/s
95th percentile per-packet one-way delay: 53.467 ms
Loss rate: 2.00%
Run 9: Report of WebRTC media — Data Link

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

Throughput (Mbps)

Time (s)

- Flow 1 ingress (mean 2.07 Mbps)
- Flow 1 egress (mean 2.07 Mbps)
- Flow 2 ingress (mean 1.34 Mbps)
- Flow 2 egress (mean 1.33 Mbps)
- Flow 3 ingress (mean 0.56 Mbps)
- Flow 3 egress (mean 0.55 Mbps)

Per packet one way delay (ms)

Time (s)

- Flow 1 (95th percentile 53.53 ms)
- Flow 2 (95th percentile 53.50 ms)
- Flow 3 (95th percentile 53.47 ms)
Run 10: Statistics of WebRTC media

Start at: 2018-07-12 20:33:55
End at: 2018-07-12 20:34:25
Local clock offset: -0.022 ms
Remote clock offset: -0.419 ms

# Below is generated by plot.py at 2018-07-13 00:00:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.94 Mbit/s
95th percentile per-packet one-way delay: 54.010 ms
Loss rate: 0.64%

-- Flow 1:
Average throughput: 2.05 Mbit/s
95th percentile per-packet one-way delay: 54.032 ms
Loss rate: 0.37%

-- Flow 2:
Average throughput: 1.35 Mbit/s
95th percentile per-packet one-way delay: 50.892 ms
Loss rate: 0.67%

-- Flow 3:
Average throughput: 0.55 Mbit/s
95th percentile per-packet one-way delay: 50.936 ms
Loss rate: 1.58%
Run 10: Report of WebRTC media — Data Link

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