Pantheon Report

Generated at 2018-07-12 10:52:31 (UTC).
Data path: GCE Sydney Ethernet (local) → GCE Tokyo Ethernet (remote).
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 @ 9250dbeec7fb57193cddf1ba8c440b4e16ab30f0
third_party/fillp @ d47f4fa1b454a5e3c0537115c5a28436dbd4b834
third_party/fillp-sheep @ 37162fe9af85249aecac061c93e75640ef710b5
third_party/genericCC @ d0153f8e594aa89e93b032143c3bd8e562f4
third_party/indigo @ 2601c924eaa9d58d38dc44df8f0e0cdbe90c077e6a4
third_party/libutp @ b3465b942e2826f2b179ea4b4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ 6f038ed31259d366f9840f65b82cbe8f464b1b39
third_party/pcc @ 1af958fa0d66d16b623c091a55f8c872b981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8ac08f24b24f974ab
third_party/proto-quic @ 77961f1a8273a86b42f1bc8143ebc978f3c4f2
third_party/scream-reproduce @ f099118d1421a3131bf11f8964974e1da3dbb2
M src/ScreamClient
M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
third_party/verus @ d4b447ea74c6c60a261149af262956293f9a494
M src/verus.hpp
M tools/plot.py
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webRTC @ 3f0cc2a9061a41b6f9d3e4735770d143a1fa2851
test from GCE Sydney to GCE Tokyo, 10 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)
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<td>TCP Vegas</td>
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<td>2.07</td>
<td>1.33</td>
<td>0.54</td>
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</tbody>
</table>
Run 1: Statistics of TCP BBR

Start at: 2018-07-12 03:58:44  
End at: 2018-07-12 03:59:14  
Local clock offset: -0.091 ms  
Remote clock offset: -1.546 ms

# Below is generated by plot.py at 2018-07-12 08:19:25  
# Datalink statistics
-- Total of 3 flows:
Average throughput: 413.79 Mbit/s
95th percentile per-packet one-way delay: 66.862 ms
Loss rate: 0.00%

-- Flow 1:
Average throughput: 207.54 Mbit/s
95th percentile per-packet one-way delay: 65.753 ms
Loss rate: 0.00%

-- Flow 2:
Average throughput: 209.08 Mbit/s
95th percentile per-packet one-way delay: 66.656 ms
Loss rate: 0.00%

-- Flow 3:
Average throughput: 201.22 Mbit/s
95th percentile per-packet one-way delay: 69.084 ms
Loss rate: 0.00%
Run 1: Report of TCP BBR — Data Link

![Graph 1: Throughput (Mbps)]

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

Start at: 2018-07-12 04:23:32
End at: 2018-07-12 04:24:02
Local clock offset: 0.088 ms
Remote clock offset: -1.556 ms

# Below is generated by plot.py at 2018-07-12 08:19:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 404.23 Mbit/s
95th percentile per-packet one-way delay: 70.697 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 204.51 Mbit/s
95th percentile per-packet one-way delay: 69.621 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 200.79 Mbit/s
95th percentile per-packet one-way delay: 70.992 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 198.55 Mbit/s
95th percentile per-packet one-way delay: 71.940 ms
Loss rate: 0.00%
Run 2: Report of TCP BBR — Data Link
Run 3: Statistics of TCP BBR

Start at: 2018-07-12 04:47:43
End at: 2018-07-12 04:48:13
Local clock offset: -0.093 ms
Remote clock offset: -0.527 ms

# Below is generated by plot.py at 2018-07-12 08:19:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 414.14 Mbit/s
95th percentile per-packet one-way delay: 66.239 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 211.99 Mbit/s
95th percentile per-packet one-way delay: 64.905 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 201.98 Mbit/s
95th percentile per-packet one-way delay: 66.627 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 203.31 Mbit/s
95th percentile per-packet one-way delay: 68.119 ms
Loss rate: 0.00%
Run 3: Report of TCP BBR — Data Link

![Graph 1: Throughput vs Time]

*Flow 1 ingress (mean 212.03 Mbit/s)*
*Flow 1 egress (mean 211.99 Mbit/s)*
*Flow 2 ingress (mean 202.01 Mbit/s)*
*Flow 2 egress (mean 201.98 Mbit/s)*
*Flow 3 ingress (mean 203.68 Mbit/s)*
*Flow 3 egress (mean 203.31 Mbit/s)*

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

*Flow 1 (95th percentile 64.91 ms)*
*Flow 2 (95th percentile 66.63 ms)*
*Flow 3 (95th percentile 68.12 ms)*
Run 4: Statistics of TCP BBR

Start at: 2018-07-12 05:12:44
End at: 2018-07-12 05:13:14
Local clock offset: 0.066 ms
Remote clock offset: -0.357 ms

# Below is generated by plot.py at 2018-07-12 08:19:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 412.39 Mbit/s
95th percentile per-packet one-way delay: 67.971 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 211.23 Mbit/s
95th percentile per-packet one-way delay: 66.463 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 206.05 Mbit/s
95th percentile per-packet one-way delay: 67.247 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 191.88 Mbit/s
95th percentile per-packet one-way delay: 70.625 ms
Loss rate: 0.00%
Run 4: Report of TCP BBR — Data Link

![Graph 1: Throughput (Mbps) over time for different flows.]

- Flow 1 ingress (mean 211.26 Mbps)
- Flow 1 egress (mean 211.23 Mbps)
- Flow 2 ingress (mean 206.09 Mbps)
- Flow 2 egress (mean 206.05 Mbps)
- Flow 3 ingress (mean 191.95 Mbps)
- Flow 3 egress (mean 191.88 Mbps)

![Graph 2: Per-packet one-way delay (ms) over time for different flows.]

- Flow 1 (95th percentile 66.46 ms)
- Flow 2 (95th percentile 67.25 ms)
- Flow 3 (95th percentile 70.62 ms)
Run 5: Statistics of TCP BBR

Start at: 2018-07-12 05:37:25
End at: 2018-07-12 05:37:55
Local clock offset: -0.068 ms
Remote clock offset: -0.276 ms

# Below is generated by plot.py at 2018-07-12 08:19:28
# Datalink statistics
# Total of 3 flows:
# Average throughput: 395.08 Mbit/s
95th percentile per-packet one-way delay: 73.567 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 202.56 Mbit/s
95th percentile per-packet one-way delay: 72.409 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 197.47 Mbit/s
95th percentile per-packet one-way delay: 73.921 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 183.64 Mbit/s
95th percentile per-packet one-way delay: 74.538 ms
Loss rate: 0.00%
Run 5: Report of TCP BBR — Data Link
Run 6: Statistics of TCP BBR

Start at: 2018-07-12 06:01:53
End at: 2018-07-12 06:02:23
Local clock offset: -0.219 ms
Remote clock offset: -1.486 ms

# Below is generated by plot.py at 2018-07-12 08:19:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 410.06 Mbit/s
95th percentile per-packet one-way delay: 70.139 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 216.77 Mbit/s
95th percentile per-packet one-way delay: 69.492 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 195.19 Mbit/s
95th percentile per-packet one-way delay: 69.621 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 190.36 Mbit/s
95th percentile per-packet one-way delay: 73.264 ms
Loss rate: 0.00%
Run 6: Report of TCP BBR — Data Link

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

- Flow 1 ingress (mean 216.80 Mbit/s)
- Flow 1 egress (mean 216.77 Mbit/s)
- Flow 2 ingress (mean 195.21 Mbit/s)
- Flow 2 egress (mean 195.19 Mbit/s)
- Flow 3 ingress (mean 190.36 Mbit/s)
- Flow 3 egress (mean 190.36 Mbit/s)

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

- Flow 1 (95th percentile 69.49 ms)
- Flow 2 (95th percentile 69.62 ms)
- Flow 3 (95th percentile 73.26 ms)
Run 7: Statistics of TCP BBR

Start at: 2018-07-12 06:26:36
End at: 2018-07-12 06:27:06
Local clock offset: 0.017 ms
Remote clock offset: -0.004 ms

# Below is generated by plot.py at 2018-07-12 08:19:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 411.11 Mbit/s
95th percentile per-packet one-way delay: 72.666 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 210.54 Mbit/s
95th percentile per-packet one-way delay: 71.147 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 205.38 Mbit/s
95th percentile per-packet one-way delay: 72.590 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 191.60 Mbit/s
95th percentile per-packet one-way delay: 74.671 ms
Loss rate: 0.00%
Run 7: Report of TCP BBR — Data Link

![Graph 1: Throughput vs. Time]

- Flow 1 ingress (mean 210.64 Mbit/s)
- Flow 1 egress (mean 210.54 Mbit/s)
- Flow 2 ingress (mean 205.52 Mbit/s)
- Flow 2 egress (mean 205.38 Mbit/s)
- Flow 3 ingress (mean 191.87 Mbit/s)
- Flow 3 egress (mean 191.66 Mbit/s)

![Graph 2: Per-packet one-way delay vs. Time]

- Flow 1 (95th percentile 71.15 ms)
- Flow 2 (95th percentile 72.59 ms)
- Flow 3 (95th percentile 74.67 ms)
Run 8: Statistics of TCP BBR

Start at: 2018-07-12 06:51:41
End at: 2018-07-12 06:52:11
Local clock offset: 0.047 ms
Remote clock offset: -1.451 ms

# Below is generated by plot.py at 2018-07-12 08:19:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 391.35 Mbit/s
95th percentile per-packet one-way delay: 81.420 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 201.75 Mbit/s
95th percentile per-packet one-way delay: 79.546 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 200.64 Mbit/s
95th percentile per-packet one-way delay: 81.294 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 167.70 Mbit/s
95th percentile per-packet one-way delay: 84.392 ms
Loss rate: 0.00%
Run 8: Report of TCP BBR — Data Link

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

Legend:
- Flow 1 ingress (mean 201.86 Mbit/s)
- Flow 1 egress (mean 201.75 Mbit/s)
- Flow 2 ingress (mean 200.83 Mbit/s)
- Flow 2 egress (mean 200.66 Mbit/s)
- Flow 3 ingress (mean 168.02 Mbit/s)
- Flow 3 egress (mean 167.70 Mbit/s)

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

Legend:
- Flow 1 (95th percentile 79.55 ms)
- Flow 2 (95th percentile 81.29 ms)
- Flow 3 (95th percentile 84.39 ms)
Run 9: Statistics of TCP BBR

Start at: 2018-07-12 07:16:17
End at: 2018-07-12 07:16:47
Local clock offset: -0.304 ms
Remote clock offset: 0.048 ms

# Below is generated by plot.py at 2018-07-12 08:25:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 408.53 Mbit/s
95th percentile per-packet one-way delay: 67.826 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 206.42 Mbit/s
95th percentile per-packet one-way delay: 66.589 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 205.81 Mbit/s
95th percentile per-packet one-way delay: 68.108 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 195.44 Mbit/s
95th percentile per-packet one-way delay: 69.145 ms
Loss rate: 0.03%
Run 9: Report of TCP BBR — Data Link
Run 10: Statistics of TCP BBR

Start at: 2018-07-12 07:40:43
End at: 2018-07-12 07:41:13
Local clock offset: -0.165 ms
Remote clock offset: -0.029 ms

# Below is generated by plot.py at 2018-07-12 08:25:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 408.34 Mbit/s
95th percentile per-packet one-way delay: 71.283 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 206.16 Mbit/s
95th percentile per-packet one-way delay: 69.865 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 207.31 Mbit/s
95th percentile per-packet one-way delay: 71.143 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 194.36 Mbit/s
95th percentile per-packet one-way delay: 72.959 ms
Loss rate: 0.00%
Run 10: Report of TCP BBR — Data Link

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**Throughput (Mbps)**

- **Flow 1 ingress (mean 206.14 Mbps)**
- **Flow 1 egress (mean 206.16 Mbps)**
- **Flow 2 ingress (mean 207.31 Mbps)**
- **Flow 2 egress (mean 207.31 Mbps)**
- **Flow 3 ingress (mean 194.37 Mbps)**
- **Flow 3 egress (mean 194.36 Mbps)**

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

- **Flow 1 (95th percentile 69.86 ms)**
- **Flow 2 (95th percentile 71.14 ms)**
- **Flow 3 (95th percentile 72.96 ms)**

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Run 1: Statistics of Copa

Start at: 2018-07-12 04:09:39
End at: 2018-07-12 04:10:09
Local clock offset: -0.198 ms
Remote clock offset: -0.329 ms

# Below is generated by plot.py at 2018-07-12 08:25:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 196.73 Mbit/s
95th percentile per-packet one-way delay: 58.544 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 122.04 Mbit/s
95th percentile per-packet one-way delay: 59.080 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 59.04 Mbit/s
95th percentile per-packet one-way delay: 57.034 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 106.37 Mbit/s
95th percentile per-packet one-way delay: 58.377 ms
Loss rate: 0.00%
Run 1: Report of Copa — Data Link
Run 2: Statistics of Copa

Start at: 2018-07-12 04:34:27
End at: 2018-07-12 04:34:57
Local clock offset: 0.021 ms
Remote clock offset: 0.048 ms

# Below is generated by plot.py at 2018-07-12 08:25:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 218.10 Mbit/s
95th percentile per-packet one-way delay: 55.638 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 167.52 Mbit/s
95th percentile per-packet one-way delay: 55.743 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 33.65 Mbit/s
95th percentile per-packet one-way delay: 53.793 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 84.86 Mbit/s
95th percentile per-packet one-way delay: 56.501 ms
Loss rate: 0.00%
Run 2: Report of Copa — Data Link

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

Start at: 2018-07-12 04:58:31
End at: 2018-07-12 04:59:01
Local clock offset: -0.138 ms
Remote clock offset: 0.152 ms

# Below is generated by plot.py at 2018-07-12 08:26:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 223.69 Mbit/s
95th percentile per-packet one-way delay: 63.203 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 133.98 Mbit/s
95th percentile per-packet one-way delay: 62.899 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 105.88 Mbit/s
95th percentile per-packet one-way delay: 64.655 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 66.11 Mbit/s
95th percentile per-packet one-way delay: 62.851 ms
Loss rate: 0.00%
Run 3: Report of Copa — Data Link

![Throughput Graph](image)

- Flow 1 ingress (mean 133.97 Mbit/s)
- Flow 1 egress (mean 133.98 Mbit/s)
- Flow 2 ingress (mean 105.91 Mbit/s)
- Flow 2 egress (mean 105.88 Mbit/s)
- Flow 3 ingress (mean 66.43 Mbit/s)
- Flow 3 egress (mean 66.11 Mbit/s)

![Delay Graph](image)

- Flow 1 (95th percentile 62.90 ms)
- Flow 2 (95th percentile 64.66 ms)
- Flow 3 (95th percentile 62.85 ms)
Run 4: Statistics of Copa

Start at: 2018-07-12 05:23:44
End at: 2018-07-12 05:24:14
Local clock offset: 0.042 ms
Remote clock offset: -0.124 ms

# Below is generated by plot.py at 2018-07-12 08:26:04
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 146.29 Mbit/s
  95th percentile per-packet one-way delay: 54.517 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 90.41 Mbit/s
  95th percentile per-packet one-way delay: 54.353 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 56.25 Mbit/s
  95th percentile per-packet one-way delay: 53.408 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 55.84 Mbit/s
  95th percentile per-packet one-way delay: 60.685 ms
  Loss rate: 0.00%
Run 4: Report of Copa — Data Link

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

Start at: 2018-07-12 05:48:16
End at: 2018-07-12 05:48:46
Local clock offset: -0.076 ms
Remote clock offset: 0.11 ms

# Below is generated by plot.py at 2018-07-12 08:26:04
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 174.99 Mbit/s
  95th percentile per-packet one-way delay: 57.187 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 111.22 Mbit/s
  95th percentile per-packet one-way delay: 57.195 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 62.16 Mbit/s
  95th percentile per-packet one-way delay: 53.972 ms
  Loss rate: 0.01%
-- Flow 3:
  Average throughput: 67.45 Mbit/s
  95th percentile per-packet one-way delay: 59.795 ms
  Loss rate: 0.00%
Run 5: Report of Copa — Data Link

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

- Flow 1 ingress (mean 111.23 Mbit/s)
- Flow 1 egress (mean 111.22 Mbit/s)
- Flow 2 ingress (mean 62.17 Mbit/s)
- Flow 2 egress (mean 62.16 Mbit/s)
- Flow 3 ingress (mean 67.44 Mbit/s)
- Flow 3 egress (mean 67.45 Mbit/s)
Run 6: Statistics of Copa

Start at: 2018-07-12 06:12:43
End at: 2018-07-12 06:13:13
Local clock offset: -0.02 ms
Remote clock offset: 0.283 ms

# Below is generated by plot.py at 2018-07-12 08:26:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 231.47 Mbit/s
95th percentile per-packet one-way delay: 61.788 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 103.87 Mbit/s
95th percentile per-packet one-way delay: 55.438 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 123.58 Mbit/s
95th percentile per-packet one-way delay: 65.505 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 136.50 Mbit/s
95th percentile per-packet one-way delay: 74.708 ms
Loss rate: 0.00%
Run 6: Report of Copa — Data Link
Run 7: Statistics of Copa

Start at: 2018-07-12 06:37:42
End at: 2018-07-12 06:38:12
Local clock offset: -0.017 ms
Remote clock offset: 0.036 ms

# Below is generated by plot.py at 2018-07-12 08:32:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 285.43 Mbit/s
95th percentile per-packet one-way delay: 59.967 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 181.15 Mbit/s
95th percentile per-packet one-way delay: 56.720 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 123.79 Mbit/s
95th percentile per-packet one-way delay: 68.341 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 65.64 Mbit/s
95th percentile per-packet one-way delay: 53.431 ms
Loss rate: 0.00%
Run 7: Report of Copa — Data Link

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

Legend:
- Flow 1 ingress (mean 181.17 Mbit/s)
- Flow 1 egress (mean 181.15 Mbit/s)
- Flow 2 ingress (mean 123.81 Mbit/s)
- Flow 2 egress (mean 123.79 Mbit/s)
- Flow 3 ingress (mean 65.64 Mbit/s)
- Flow 3 egress (mean 65.64 Mbit/s)
Run 8: Statistics of Copa

Start at: 2018-07-12 07:02:34
End at: 2018-07-12 07:03:04
Local clock offset: 0.131 ms
Remote clock offset: -1.422 ms

# Below is generated by plot.py at 2018-07-12 08:32:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 249.22 Mbit/s
95th percentile per-packet one-way delay: 63.916 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 81.52 Mbit/s
95th percentile per-packet one-way delay: 56.925 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 241.13 Mbit/s
95th percentile per-packet one-way delay: 66.001 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 67.23 Mbit/s
95th percentile per-packet one-way delay: 65.563 ms
Loss rate: 0.00%
Run 8: Report of Copa — Data Link
Run 9: Statistics of Copa

Start at: 2018-07-12 07:27:09
End at: 2018-07-12 07:27:39
Local clock offset: -0.007 ms
Remote clock offset: -0.167 ms

# Below is generated by plot.py at 2018-07-12 08:32:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 173.33 Mbit/s
95th percentile per-packet one-way delay: 55.130 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 104.35 Mbit/s
95th percentile per-packet one-way delay: 55.455 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 86.56 Mbit/s
95th percentile per-packet one-way delay: 55.100 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 34.27 Mbit/s
95th percentile per-packet one-way delay: 53.597 ms
Loss rate: 0.00%
Run 9: Report of Copa — Data Link

![Graph showing throughput and packet delay](image_url)

- **Throughput (Mb/s)**
  - Blue dashed line: Flow 1 ingress (mean 104.35 Mb/s)
  - Blue solid line: Flow 1 egress (mean 104.35 Mb/s)
  - Green dashed line: Flow 2 ingress (mean 86.47 Mb/s)
  - Green solid line: Flow 2 egress (mean 86.56 Mb/s)
  - Red dashed line: Flow 3 ingress (mean 34.28 Mb/s)
  - Red solid line: Flow 3 egress (mean 34.27 Mb/s)

- **Packet Delay (ms)**
  - Blue markers: Flow 1 (95th percentile 55.45 ms)
  - Green markers: Flow 2 (95th percentile 55.10 ms)
  - Red markers: Flow 3 (95th percentile 53.60 ms)
Run 10: Statistics of Copa

Start at: 2018-07-12 07:51:38
End at: 2018-07-12 07:52:08
Local clock offset: -0.049 ms
Remote clock offset: 0.273 ms

# Below is generated by plot.py at 2018-07-12 08:32:59
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 191.52 Mbit/s
  95th percentile per-packet one-way delay: 68.293 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 106.06 Mbit/s
  95th percentile per-packet one-way delay: 63.822 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 72.36 Mbit/s
  95th percentile per-packet one-way delay: 58.891 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 117.64 Mbit/s
  95th percentile per-packet one-way delay: 85.514 ms
  Loss rate: 0.01%
Run 10: Report of Copa — Data Link
Run 1: Statistics of TCP Cubic

Start at: 2018-07-12 04:00:14
End at: 2018-07-12 04:00:44
Local clock offset: -0.056 ms
Remote clock offset: -0.129 ms

# Below is generated by plot.py at 2018-07-12 08:32:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 307.83 Mbit/s
95th percentile per-packet one-way delay: 86.040 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 212.71 Mbit/s
95th percentile per-packet one-way delay: 80.903 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 45.12 Mbit/s
95th percentile per-packet one-way delay: 88.818 ms
Loss rate: 0.23%
-- Flow 3:
Average throughput: 195.94 Mbit/s
95th percentile per-packet one-way delay: 89.679 ms
Loss rate: 0.00%
Run 1: Report of TCP Cubic — Data Link
Run 2: Statistics of TCP Cubic

Start at: 2018-07-12 04:25:00
End at: 2018-07-12 04:25:30
Local clock offset: -0.306 ms
Remote clock offset: -0.134 ms

# Below is generated by plot.py at 2018-07-12 08:32:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 295.82 Mbit/s
95th percentile per-packet one-way delay: 58.817 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 120.46 Mbit/s
95th percentile per-packet one-way delay: 58.872 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 166.35 Mbit/s
95th percentile per-packet one-way delay: 58.945 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 194.25 Mbit/s
95th percentile per-packet one-way delay: 58.462 ms
Loss rate: 0.00%
Run 2: Report of TCP Cubic — Data Link
Run 3: Statistics of TCP Cubic

Start at: 2018-07-12 04:49:11  
End at: 2018-07-12 04:49:41  
Local clock offset: 0.033 ms  
Remote clock offset: -0.159 ms

# Below is generated by plot.py at 2018-07-12 08:32:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 256.08 Mbit/s  
95th percentile per-packet one-way delay: 55.253 ms  
Loss rate: 0.00%
-- Flow 1:
Average throughput: 162.47 Mbit/s  
95th percentile per-packet one-way delay: 55.892 ms  
Loss rate: 0.00%
-- Flow 2:
Average throughput: 137.94 Mbit/s  
95th percentile per-packet one-way delay: 54.415 ms  
Loss rate: 0.00%
-- Flow 3:
Average throughput: 5.18 Mbit/s  
95th percentile per-packet one-way delay: 55.181 ms  
Loss rate: 0.14%
Run 3: Report of TCP Cubic — Data Link

![Graph showing throughput and packet round-trip time over time for different flows. The graphs are labeled with their respective mean throughput values (e.g., Flow 1 ingress mean 162.46 Mbit/s).]
Run 4: Statistics of TCP Cubic

Start at: 2018-07-12 05:14:13
End at: 2018-07-12 05:14:43
Local clock offset: -0.03 ms
Remote clock offset: -1.504 ms

# Below is generated by plot.py at 2018-07-12 08:32:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 277.46 Mbit/s
95th percentile per-packet one-way delay: 75.486 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 136.77 Mbit/s
95th percentile per-packet one-way delay: 71.132 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 132.54 Mbit/s
95th percentile per-packet one-way delay: 73.262 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 158.08 Mbit/s
95th percentile per-packet one-way delay: 79.301 ms
Loss rate: 0.00%
Run 4: Report of TCP Cubic — Data Link
Run 5: Statistics of TCP Cubic

Start at: 2018-07-12 05:38:52
End at: 2018-07-12 05:39:22
Local clock offset: -0.159 ms
Remote clock offset: -0.193 ms

# Below is generated by plot.py at 2018-07-12 08:35:05
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 282.10 Mbit/s
  95th percentile per-packet one-way delay: 58.550 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 152.29 Mbit/s
  95th percentile per-packet one-way delay: 59.025 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 116.15 Mbit/s
  95th percentile per-packet one-way delay: 56.603 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 157.67 Mbit/s
  95th percentile per-packet one-way delay: 58.659 ms
  Loss rate: 0.00%
Run 5: Report of TCP Cubic — Data Link
Run 6: Statistics of TCP Cubic

Start at: 2018-07-12 06:03:22
End at: 2018-07-12 06:03:52
Local clock offset: -0.038 ms
Remote clock offset: -0.039 ms

# Below is generated by plot.py at 2018-07-12 08:35:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 300.11 Mbit/s
95th percentile per-packet one-way delay: 65.065 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 156.53 Mbit/s
95th percentile per-packet one-way delay: 65.067 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 153.37 Mbit/s
95th percentile per-packet one-way delay: 64.820 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 125.20 Mbit/s
95th percentile per-packet one-way delay: 65.419 ms
Loss rate: 0.00%
Run 6: Report of TCP Cubic — Data Link

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

- Flow 1 ingress (mean 156.59 Mbit/s)
- Flow 1 egress (mean 156.53 Mbit/s)
- Flow 2 ingress (mean 153.45 Mbit/s)
- Flow 2 egress (mean 153.37 Mbit/s)
- Flow 3 ingress (mean 126.30 Mbit/s)
- Flow 3 egress (mean 125.20 Mbit/s)

Flow 1 (95th percentile 65.07 ms)
Flow 2 (95th percentile 64.82 ms)
Flow 3 (95th percentile 65.42 ms)
Run 7: Statistics of TCP Cubic

Start at: 2018-07-12 06:28:06
End at: 2018-07-12 06:28:36
Local clock offset: -0.04 ms
Remote clock offset: -1.549 ms

# Below is generated by plot.py at 2018-07-12 08:37:20
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 385.73 Mbit/s
  95th percentile per-packet one-way delay: 59.410 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 226.98 Mbit/s
  95th percentile per-packet one-way delay: 59.529 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 141.37 Mbit/s
  95th percentile per-packet one-way delay: 58.396 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 194.40 Mbit/s
  95th percentile per-packet one-way delay: 59.841 ms
  Loss rate: 0.00%
Run 7: Report of TCP Cubic — Data Link

[Graph showing throughput and per-packet one-way delay over time for three flows, with annotations for flow rate and delay percentiles.]
Run 8: Statistics of TCP Cubic

Start at: 2018-07-12 06:53:09  
End at: 2018-07-12 06:53:39  
Local clock offset: ~0.146 ms  
Remote clock offset: ~0.401 ms

# Below is generated by plot.py at 2018-07-12 08:37:20
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 251.91 Mbit/s  
95th percentile per-packet one-way delay: 55.983 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 171.93 Mbit/s  
95th percentile per-packet one-way delay: 55.676 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 117.42 Mbit/s  
95th percentile per-packet one-way delay: 56.469 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 5.34 Mbit/s  
95th percentile per-packet one-way delay: 57.294 ms  
Loss rate: 0.11%
Run 8: Report of TCP Cubic — Data Link

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

Throughput (Mbps)

Time (s)

- Flow 1 ingress (mean 171.93 Mbps)
- Flow 1 egress (mean 171.93 Mbps)
- Flow 2 ingress (mean 117.42 Mbps)
- Flow 2 egress (mean 117.42 Mbps)
- Flow 3 ingress (mean 5.34 Mbps)
- Flow 3 egress (mean 5.34 Mbps)

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

Per-packet one way delay (ms)

Time (s)

- Flow 1 (95th percentile 55.68 ms)
- Flow 2 (95th percentile 56.47 ms)
- Flow 3 (95th percentile 57.29 ms)
Run 9: Statistics of TCP Cubic

Start at: 2018-07-12 07:17:45
End at: 2018-07-12 07:18:15
Local clock offset: -0.199 ms
Remote clock offset: -0.048 ms

# Below is generated by plot.py at 2018-07-12 08:37:20
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 341.31 Mbit/s
  95th percentile per-packet one-way delay: 61.707 ms
  Loss rate: 0.01%
-- Flow 1:
  Average throughput: 165.94 Mbit/s
  95th percentile per-packet one-way delay: 62.066 ms
  Loss rate: 0.01%
-- Flow 2:
  Average throughput: 204.36 Mbit/s
  95th percentile per-packet one-way delay: 61.501 ms
  Loss rate: 0.03%
-- Flow 3:
  Average throughput: 117.87 Mbit/s
  95th percentile per-packet one-way delay: 61.629 ms
  Loss rate: 0.00%
Run 9: Report of TCP Cubic — Data Link
Run 10: Statistics of TCP Cubic

Start at: 2018-07-12 07:42:13
End at: 2018-07-12 07:42:43
Local clock offset: -0.047 ms
Remote clock offset: -0.0 ms

# Below is generated by plot.py at 2018-07-12 08:37:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 276.64 Mbit/s
95th percentile per-packet one-way delay: 60.014 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 178.44 Mbit/s
95th percentile per-packet one-way delay: 59.390 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 145.27 Mbit/s
95th percentile per-packet one-way delay: 60.453 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 4.29 Mbit/s
95th percentile per-packet one-way delay: 58.720 ms
Loss rate: 0.28%
Run 10: Report of TCP Cubic — Data Link
Run 1: Statistics of FillP

Start at: 2018-07-12 03:52:57
End at: 2018-07-12 03:53:27
Local clock offset: 0.067 ms
Remote clock offset: -0.063 ms

# Below is generated by plot.py at 2018-07-12 08:59:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1339.96 Mbit/s
95th percentile per-packet one-way delay: 230.765 ms
Loss rate: 2.85%
-- Flow 1:
Average throughput: 698.85 Mbit/s
95th percentile per-packet one-way delay: 260.379 ms
Loss rate: 4.75%
-- Flow 2:
Average throughput: 700.30 Mbit/s
95th percentile per-packet one-way delay: 191.404 ms
Loss rate: 0.75%
-- Flow 3:
Average throughput: 528.12 Mbit/s
95th percentile per-packet one-way delay: 121.757 ms
Loss rate: 0.50%
Run 1: Report of FillP — Data Link

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**Throughput (Mb/s)**

- Flow 1 ingress (mean 733.65 Mb/s)
- Flow 1 egress (mean 698.85 Mb/s)
- Flow 2 ingress (mean 705.59 Mb/s)
- Flow 2 egress (mean 700.30 Mb/s)
- Flow 3 ingress (mean 530.64 Mb/s)
- Flow 3 egress (mean 528.12 Mb/s)

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

- Flow 1 (95th percentile 260.38 ms)
- Flow 2 (95th percentile 191.40 ms)
- Flow 3 (95th percentile 121.76 ms)

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Run 2: Statistics of FillP

Start at: 2018-07-12 04:17:51
End at: 2018-07-12 04:18:21
Local clock offset: 0.076 ms
Remote clock offset: -0.265 ms

# Below is generated by plot.py at 2018-07-12 09:02:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1428.19 Mbit/s
95th percentile per-packet one-way delay: 149.769 ms
Loss rate: 1.97%
-- Flow 1:
Average throughput: 734.20 Mbit/s
95th percentile per-packet one-way delay: 164.749 ms
Loss rate: 2.30%
-- Flow 2:
Average throughput: 710.59 Mbit/s
95th percentile per-packet one-way delay: 147.038 ms
Loss rate: 2.35%
-- Flow 3:
Average throughput: 668.44 Mbit/s
95th percentile per-packet one-way delay: 106.670 ms
Loss rate: 0.00%
Run 2: Report of FillP — Data Link

![Graph showing throughput and delay for flows 1, 2, and 3 over time.](image)
Run 3: Statistics of FillP

Start at: 2018-07-12 04:42:32
End at: 2018-07-12 04:43:02
Local clock offset: -0.036 ms
Remote clock offset: 1.13 ms

# Below is generated by plot.py at 2018-07-12 09:02:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1158.64 Mbit/s
95th percentile per-packet one-way delay: 229.095 ms
Loss rate: 1.83%
-- Flow 1:
Average throughput: 604.94 Mbit/s
95th percentile per-packet one-way delay: 233.877 ms
Loss rate: 1.80%
-- Flow 2:
Average throughput: 466.85 Mbit/s
95th percentile per-packet one-way delay: 240.174 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 731.90 Mbit/s
95th percentile per-packet one-way delay: 194.123 ms
Loss rate: 3.65%
Run 3: Report of FillP — Data Link

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

Legend:
- Flow 1 Ingress (mean 616.07 Mbps)
- Flow 1 Egress (mean 604.94 Mbps)
- Flow 2 Ingress (mean 468.47 Mbps)
- Flow 2 Egress (mean 466.85 Mbps)
- Flow 3 Ingress (mean 759.57 Mbps)
- Flow 3 Egress (mean 731.90 Mbps)
Run 4: Statistics of FillP

Start at: 2018-07-12 05:06:56
End at: 2018-07-12 05:07:26
Local clock offset: -0.289 ms
Remote clock offset: 0.047 ms

# Below is generated by plot.py at 2018-07-12 09:05:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1457.02 Mbit/s
95th percentile per-packet one-way delay: 192.102 ms
Loss rate: 2.16%
-- Flow 1:
Average throughput: 763.77 Mbit/s
95th percentile per-packet one-way delay: 202.899 ms
Loss rate: 1.91%
-- Flow 2:
Average throughput: 706.51 Mbit/s
95th percentile per-packet one-way delay: 159.413 ms
Loss rate: 3.09%
-- Flow 3:
Average throughput: 672.38 Mbit/s
95th percentile per-packet one-way delay: 120.831 ms
Loss rate: 1.04%
Run 4: Report of FillP — Data Link

![Graph of Throughput vs Time for Run 4]

- **Flow 1 Ingress** (mean 778.58 Mbps)
- **Flow 1 Egress** (mean 763.77 Mbps)
- **Flow 2 Ingress** (mean 728.90 Mbps)
- **Flow 2 Egress** (mean 706.53 Mbps)
- **Flow 3 Ingress** (mean 679.27 Mbps)
- **Flow 3 Egress** (mean 672.38 Mbps)

![Graph of Per-packet Delay vs Time for Run 4]

- **Flow 1** (95th percentile 202.90 ms)
- **Flow 2** (95th percentile 159.41 ms)
- **Flow 3** (95th percentile 120.83 ms)

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Run 5: Statistics of FillP

Start at: 2018-07-12 05:31:46
End at: 2018-07-12 05:32:16
Local clock offset: -0.19 ms
Remote clock offset: 0.199 ms

# Below is generated by plot.py at 2018-07-12 09:05:43
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1475.89 Mbit/s
  95th percentile per-packet one-way delay: 202.536 ms
  Loss rate: 1.00%
-- Flow 1:
  Average throughput: 763.81 Mbit/s
  95th percentile per-packet one-way delay: 220.800 ms
  Loss rate: 0.59%
-- Flow 2:
  Average throughput: 739.89 Mbit/s
  95th percentile per-packet one-way delay: 179.945 ms
  Loss rate: 1.08%
-- Flow 3:
  Average throughput: 662.77 Mbit/s
  95th percentile per-packet one-way delay: 146.481 ms
  Loss rate: 2.19%
Run 5: Report of FillP — Data Link

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

- Blue dotted line: Flow 1 ingress (mean 788.42 Mbps)
- Red dotted line: Flow 1 egress (mean 763.81 Mbps)
- Green dashed line: Flow 2 ingress (mean 747.85 Mbps)
- Green solid line: Flow 2 egress (mean 739.85 Mbps)
- Red dashed line: Flow 3 ingress (mean 677.39 Mbps)
- Red solid line: Flow 3 egress (mean 662.77 Mbps)

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

- Blue dotted line: Flow 1 (95th percentile 220.80 ms)
- Green solid line: Flow 2 (95th percentile 179.94 ms)
- Red solid line: Flow 3 (95th percentile 146.48 ms)
Run 6: Statistics of FillP

Start at: 2018-07-12 05:56:15
End at: 2018-07-12 05:56:45
Local clock offset: 0.112 ms
Remote clock offset: -0.13 ms

# Below is generated by plot.py at 2018-07-12 09:05:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1441.70 Mbit/s
95th percentile per-packet one-way delay: 181.293 ms
Loss rate: 3.63%
-- Flow 1:
Average throughput: 740.82 Mbit/s
95th percentile per-packet one-way delay: 192.275 ms
Loss rate: 3.98%
-- Flow 2:
Average throughput: 725.09 Mbit/s
95th percentile per-packet one-way delay: 159.442 ms
Loss rate: 3.00%
-- Flow 3:
Average throughput: 660.21 Mbit/s
95th percentile per-packet one-way delay: 136.367 ms
Loss rate: 3.86%
Run 6: Report of FillP — Data Link

Throughput (Mbps):

Time (s):

Flow 1 ingress (mean 771.60 Mbps) — Flow 1 egress (mean 740.82 Mbps)
Flow 2 ingress (mean 747.54 Mbps) — Flow 2 egress (mean 725.09 Mbps)
Flow 3 ingress (mean 687.00 Mbps) — Flow 3 egress (mean 660.21 Mbps)

Packet error rate: 75
Run 7: Statistics of FillP

Start at: 2018-07-12 06:20:53  
End at: 2018-07-12 06:21:23  
Local clock offset: -0.069 ms  
Remote clock offset: -0.193 ms

# Below is generated by plot.py at 2018-07-12 09:05:54  
# Datalink statistics

-- Total of 3 flows:
Average throughput: 1358.03 Mbit/s  
95th percentile per-packet one-way delay: 208.292 ms  
Loss rate: 1.62%

-- Flow 1:
Average throughput: 774.59 Mbit/s  
95th percentile per-packet one-way delay: 137.799 ms  
Loss rate: 2.24%

-- Flow 2:
Average throughput: 661.00 Mbit/s  
95th percentile per-packet one-way delay: 245.372 ms  
Loss rate: 0.81%

-- Flow 3:
Average throughput: 432.52 Mbit/s  
95th percentile per-packet one-way delay: 220.130 ms  
Loss rate: 0.74%
Run 7: Report of FillP — Data Link

Graph 1: Throughput (Mb/s) vs Time (s)
- Flow 1 Ingress (mean 792.49 Mb/s)
- Flow 1 Egress (mean 774.59 Mb/s)
- Flow 2 Ingress (mean 666.39 Mb/s)
- Flow 2 Egress (mean 663.00 Mb/s)
- Flow 3 Ingress (mean 435.79 Mb/s)
- Flow 3 Egress (mean 432.52 Mb/s)

Graph 2: Packet one-way delay (ms) vs Time (s)
- Flow 1 (95th percentile 137.80 ms)
- Flow 2 (95th percentile 245.37 ms)
- Flow 3 (95th percentile 220.13 ms)
Run 8: Statistics of FillP

Start at: 2018-07-12 06:46:04
End at: 2018-07-12 06:46:34
Local clock offset: -0.084 ms
Remote clock offset: -1.438 ms

# Below is generated by plot.py at 2018-07-12 09:07:52
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1459.70 Mbit/s
  95th percentile per-packet one-way delay: 196.870 ms
  Loss rate: 1.45%
-- Flow 1:
  Average throughput: 760.42 Mbit/s
  95th percentile per-packet one-way delay: 214.725 ms
  Loss rate: 2.41%
-- Flow 2:
  Average throughput: 726.48 Mbit/s
  95th percentile per-packet one-way delay: 124.456 ms
  Loss rate: 0.56%
-- Flow 3:
  Average throughput: 651.32 Mbit/s
  95th percentile per-packet one-way delay: 60.300 ms
  Loss rate: 0.00%
Run 8: Report of FillP — Data Link

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

- Flow 1 Ingress (mean 779.21 Mbit/s)
- Flow 1 Egress (mean 760.42 Mbit/s)
- Flow 2 Ingress (mean 730.57 Mbit/s)
- Flow 2 Egress (mean 726.48 Mbit/s)
- Flow 3 Ingress (mean 651.28 Mbit/s)
- Flow 3 Egress (mean 651.32 Mbit/s)

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

- Flow 1 (95th percentile 214.72 ms)
- Flow 2 (95th percentile 124.46 ms)
- Flow 3 (95th percentile 60.30 ms)
Run 9: Statistics of FillP

Start at: 2018-07-12 07:10:38
End at: 2018-07-12 07:11:08
Local clock offset: -0.042 ms
Remote clock offset: 1.162 ms

# Below is generated by plot.py at 2018-07-12 09:30:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1453.25 Mbit/s
95th percentile per-packet one-way delay: 144.383 ms
Loss rate: 1.73%
-- Flow 1:
Average throughput: 767.48 Mbit/s
95th percentile per-packet one-way delay: 145.433 ms
Loss rate: 1.78%
-- Flow 2:
Average throughput: 717.85 Mbit/s
95th percentile per-packet one-way delay: 146.910 ms
Loss rate: 2.16%
-- Flow 3:
Average throughput: 625.45 Mbit/s
95th percentile per-packet one-way delay: 117.776 ms
Loss rate: 0.52%
Run 9: Report of FillP — Data Link

![Graph showing network performance metrics](image)

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

Legend:
- Flow 1 Ingress (mean 781.26 Mbit/s)
- Flow 1 Egress (mean 767.48 Mbit/s)
- Flow 2 Ingress (mean 733.60 Mbit/s)
- Flow 2 Egress (mean 717.85 Mbit/s)
- Flow 3 Ingress (mean 628.51 Mbit/s)
- Flow 3 Egress (mean 625.45 Mbit/s)

![Graph showing packet delay](image)

Legend:
- Flow 1 (95th percentile 145.43 ms)
- Flow 2 (95th percentile 146.91 ms)
- Flow 3 (95th percentile 117.78 ms)
Run 10: Statistics of FillP

Start at: 2018-07-12 07:35:17
End at: 2018-07-12 07:35:47
Local clock offset: 0.141 ms
Remote clock offset: 0.204 ms

# Below is generated by plot.py at 2018-07-12 09:32:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1527.44 Mbit/s
95th percentile per-packet one-way delay: 175.690 ms
Loss rate: 1.91%
-- Flow 1:
Average throughput: 804.70 Mbit/s
95th percentile per-packet one-way delay: 171.301 ms
Loss rate: 1.65%
-- Flow 2:
Average throughput: 758.03 Mbit/s
95th percentile per-packet one-way delay: 135.190 ms
Loss rate: 2.39%
-- Flow 3:
Average throughput: 658.87 Mbit/s
95th percentile per-packet one-way delay: 221.593 ms
Loss rate: 1.74%
Run 10: Report of FillIP — Data Link

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

- Flow 1 Ingress (mean 818.13 Mbit/s)
- Flow 1 Egress (mean 804.70 Mbit/s)
- Flow 2 Ingress (mean 776.54 Mbit/s)
- Flow 2 Egress (mean 758.03 Mbit/s)
- Flow 3 Ingress (mean 670.34 Mbit/s)
- Flow 3 Egress (mean 658.87 Mbit/s)

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

- Flow 1 (95th percentile 171.30 ms)
- Flow 2 (95th percentile 135.19 ms)
- Flow 3 (95th percentile 221.59 ms)
Run 1: Statistics of FillP-Sheep

Start at: 2018-07-12 03:56:45
End at: 2018-07-12 03:57:15
Local clock offset: -0.103 ms
Remote clock offset: -0.132 ms

# Below is generated by plot.py at 2018-07-12 09:32:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1264.07 Mbit/s
95th percentile per-packet one-way delay: 180.565 ms
Loss rate: 4.21%
-- Flow 1:
Average throughput: 699.79 Mbit/s
95th percentile per-packet one-way delay: 191.009 ms
Loss rate: 4.22%
-- Flow 2:
Average throughput: 573.40 Mbit/s
95th percentile per-packet one-way delay: 166.706 ms
Loss rate: 6.06%
-- Flow 3:
Average throughput: 544.69 Mbit/s
95th percentile per-packet one-way delay: 71.618 ms
Loss rate: 0.00%
Run 1: Report of FillP-Sheep — Data Link

Graph 1: Throughput (Mbps)

Graph 2: Packet one-way delay (ms)

Key:
- Flow 1 Ingress (mean 730.67 Mbps)
- Flow 1 Egress (mean 699.79 Mbps)
- Flow 2 Ingress (mean 610.49 Mbps)
- Flow 2 Egress (mean 573.40 Mbps)
- Flow 3 Ingress (mean 544.70 Mbps)
- Flow 3 Egress (mean 544.69 Mbps)

Flow 1 (95th percentile 191.01 ms)
Flow 2 (95th percentile 166.71 ms)
Flow 3 (95th percentile 71.62 ms)
Run 2: Statistics of FillP-Sheep

Start at: 2018-07-12 04:21:34
End at: 2018-07-12 04:22:04
Local clock offset: -0.022 ms
Remote clock offset: 0.003 ms

# Below is generated by plot.py at 2018-07-12 09:32:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1232.98 Mbit/s
95th percentile per-packet one-way delay: 206.775 ms
Loss rate: 1.32%
-- Flow 1:
Average throughput: 646.24 Mbit/s
95th percentile per-packet one-way delay: 231.145 ms
Loss rate: 2.07%
-- Flow 2:
Average throughput: 640.56 Mbit/s
95th percentile per-packet one-way delay: 118.890 ms
Loss rate: 0.65%
-- Flow 3:
Average throughput: 485.48 Mbit/s
95th percentile per-packet one-way delay: 73.224 ms
Loss rate: 0.00%
Run 2: Report of FillP-Sheep — Data Link

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

**Throughput (Mbps)**
- Flow 1 ingress (mean 659.90 Mbps)
- Flow 1 egress (mean 646.24 Mbps)
- Flow 2 ingress (mean 644.76 Mbps)
- Flow 2 egress (mean 640.56 Mbps)
- Flow 3 ingress (mean 485.34 Mbps)
- Flow 3 egress (mean 485.48 Mbps)

**Packet delay (ms)**
- Flow 1 (95th percentile 231.15 ms)
- Flow 2 (95th percentile 118.89 ms)
- Flow 3 (95th percentile 73.22 ms)
Run 3: Statistics of FillP-Sheep

Start at: 2018-07-12 04:46:09
End at: 2018-07-12 04:46:39
Local clock offset: 0.058 ms
Remote clock offset: 1.15 ms

# Below is generated by plot.py at 2018-07-12 09:32:40
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 593.66 Mbit/s
  95th percentile per-packet one-way delay: 249.441 ms
  Loss rate: 6.55%
-- Flow 1:
  Average throughput: 196.52 Mbit/s
  95th percentile per-packet one-way delay: 258.257 ms
  Loss rate: 2.69%
-- Flow 2:
  Average throughput: 253.79 Mbit/s
  95th percentile per-packet one-way delay: 255.771 ms
  Loss rate: 4.98%
-- Flow 3:
  Average throughput: 688.00 Mbit/s
  95th percentile per-packet one-way delay: 144.628 ms
  Loss rate: 10.69%
Run 3: Report of FillP-Sheep — Data Link

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

Flow 1 ingress (mean 201.96 Mbit/s) — Flow 1 egress (mean 196.52 Mbit/s)
Flow 2 ingress (mean 267.05 Mbit/s) — Flow 2 egress (mean 253.79 Mbit/s)
Flow 3 ingress (mean 770.13 Mbit/s) — Flow 3 egress (mean 688.00 Mbit/s)
Run 4: Statistics of FillP-Sheep

Start at: 2018-07-12 05:10:48
End at: 2018-07-12 05:11:18
Local clock offset: -0.068 ms
Remote clock offset: -0.178 ms

# Below is generated by plot.py at 2018-07-12 09:32:40
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1179.23 Mbit/s
  95th percentile per-packet one-way delay: 238.464 ms
  Loss rate: 2.09%
-- Flow 1:
  Average throughput: 492.44 Mbit/s
  95th percentile per-packet one-way delay: 235.962 ms
  Loss rate: 2.06%
-- Flow 2:
  Average throughput: 738.61 Mbit/s
  95th percentile per-packet one-way delay: 244.905 ms
  Loss rate: 2.70%
-- Flow 3:
  Average throughput: 587.50 Mbit/s
  95th percentile per-packet one-way delay: 120.774 ms
  Loss rate: 0.60%
Run 4: Report of FillP-Sheep — Data Link

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

- Flow 1 ingress (mean 502.76 Mbit/s)
- Flow 1 egress (mean 492.44 Mbit/s)
- Flow 2 ingress (mean 759.11 Mbit/s)
- Flow 2 egress (mean 738.61 Mbit/s)
- Flow 3 ingress (mean 591.23 Mbit/s)
- Flow 3 egress (mean 587.50 Mbit/s)

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

- Flow 1 (95th percentile 235.96 ms)
- Flow 2 (95th percentile 244.91 ms)
- Flow 3 (95th percentile 120.77 ms)
Run 5: Statistics of FillP-Sheep

Start at: 2018-07-12 05:35:35
End at: 2018-07-12 05:36:05
Local clock offset: -0.094 ms
Remote clock offset: -1.561 ms

# Below is generated by plot.py at 2018-07-12 09:32:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 982.42 Mbit/s
95th percentile per-packet one-way delay: 259.636 ms
Loss rate: 2.08%
-- Flow 1:
Average throughput: 322.53 Mbit/s
95th percentile per-packet one-way delay: 273.071 ms
Loss rate: 2.26%
-- Flow 2:
Average throughput: 697.09 Mbit/s
95th percentile per-packet one-way delay: 230.801 ms
Loss rate: 2.10%
-- Flow 3:
Average throughput: 590.50 Mbit/s
95th percentile per-packet one-way delay: 272.125 ms
Loss rate: 1.71%
Run 5: Report of FillP-Sheep — Data Link

![Graph 1: Throughput (Mbps)]

![Graph 2: Per-packet transmission delay (ms)]
Run 6: Statistics of FillP-Sheep

Start at: 2018-07-12 05:59:54
End at: 2018-07-12 06:00:24
Local clock offset: 0.047 ms
Remote clock offset: -0.065 ms

# Below is generated by plot.py at 2018-07-12 09:33:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1158.76 Mbit/s
95th percentile per-packet one-way delay: 256.279 ms
Loss rate: 1.73%
-- Flow 1:
Average throughput: 583.76 Mbit/s
95th percentile per-packet one-way delay: 254.552 ms
Loss rate: 1.87%
-- Flow 2:
Average throughput: 604.73 Mbit/s
95th percentile per-packet one-way delay: 266.079 ms
Loss rate: 2.27%
-- Flow 3:
Average throughput: 529.23 Mbit/s
95th percentile per-packet one-way delay: 85.793 ms
Loss rate: 0.00%
Run 6: Report of FillP-Sheep — Data Link
Run 7: Statistics of FillP-Sheep

Start at: 2018-07-12 06:24:35
End at: 2018-07-12 06:25:05
Local clock offset: -0.085 ms
Remote clock offset: 1.346 ms

# Below is generated by plot.py at 2018-07-12 09:47:58
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1278.16 Mbit/s
  95th percentile per-packet one-way delay: 180.530 ms
  Loss rate: 3.45%
-- Flow 1:
  Average throughput: 688.31 Mbit/s
  95th percentile per-packet one-way delay: 207.520 ms
  Loss rate: 3.47%
-- Flow 2:
  Average throughput: 628.51 Mbit/s
  95th percentile per-packet one-way delay: 165.953 ms
  Loss rate: 4.77%
-- Flow 3:
  Average throughput: 519.06 Mbit/s
  95th percentile per-packet one-way delay: 88.376 ms
  Loss rate: 0.00%
Run 7: Report of FillP-Sheep — Data Link

![Graph showing throughput and delay over time for different flows.](image-url)
Run 8: Statistics of FillP-Sheep

Start at: 2018-07-12 06:49:41
End at: 2018-07-12 06:50:11
Local clock offset: 0.15 ms
Remote clock offset: -0.199 ms

# Below is generated by plot.py at 2018-07-12 09:54:17
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1265.42 Mbit/s
  95th percentile per-packet one-way delay: 234.375 ms
  Loss rate: 2.80%
-- Flow 1:
  Average throughput: 671.45 Mbit/s
  95th percentile per-packet one-way delay: 254.813 ms
  Loss rate: 2.39%
-- Flow 2:
  Average throughput: 635.52 Mbit/s
  95th percentile per-packet one-way delay: 143.408 ms
  Loss rate: 4.43%
-- Flow 3:
  Average throughput: 517.37 Mbit/s
  95th percentile per-packet one-way delay: 102.650 ms
  Loss rate: 0.28%
Run 8: Report of FillP-Sheep — Data Link
Run 9: Statistics of FillP-Sheep

Start at: 2018-07-12 07:14:19
End at: 2018-07-12 07:14:49
Local clock offset: -0.201 ms
Remote clock offset: -0.242 ms

# Below is generated by plot.py at 2018-07-12 09:54:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1196.80 Mbit/s
95th percentile per-packet one-way delay: 210.288 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 659.90 Mbit/s
95th percentile per-packet one-way delay: 207.411 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 544.81 Mbit/s
95th percentile per-packet one-way delay: 226.191 ms
Loss rate: 1.18%
-- Flow 3:
Average throughput: 531.99 Mbit/s
95th percentile per-packet one-way delay: 58.084 ms
Loss rate: 0.00%
Run 9: Report of FillP-Sheep — Data Link
Run 10: Statistics of FillP-Sheep

Start at: 2018-07-12 07:38:58
End at: 2018-07-12 07:39:28
Local clock offset: -0.06 ms
Remote clock offset: -0.359 ms

# Below is generated by plot.py at 2018-07-12 09:54:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 834.33 Mbit/s
95th percentile per-packet one-way delay: 235.978 ms
Loss rate: 2.93%
-- Flow 1:
Average throughput: 222.32 Mbit/s
95th percentile per-packet one-way delay: 209.122 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 736.16 Mbit/s
95th percentile per-packet one-way delay: 247.168 ms
Loss rate: 4.32%
-- Flow 3:
Average throughput: 369.13 Mbit/s
95th percentile per-packet one-way delay: 183.414 ms
Loss rate: 1.71%
Run 10: Report of FillIP-Sheep — Data Link

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

- Flow 1 Ingress (mean 225.26 Mbit/s)
- Flow 1 Egress (mean 222.32 Mbit/s)
- Flow 2 Ingress (mean 769.33 Mbit/s)
- Flow 2 Egress (mean 736.16 Mbit/s)
- Flow 3 Ingress (mean 374.87 Mbit/s)
- Flow 3 Egress (mean 369.13 Mbit/s)

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

- Flow 1 (95th percentile 209.12 ms)
- Flow 2 (95th percentile 247.17 ms)
- Flow 3 (95th percentile 183.41 ms)
Run 1: Statistics of Indigo

Start at: 2018-07-12 03:51:28
End at: 2018-07-12 03:51:58
Local clock offset: 0.048 ms
Remote clock offset: 1.251 ms

# Below is generated by plot.py at 2018-07-12 09:54:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 321.08 Mbit/s
95th percentile per-packet one-way delay: 56.910 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 155.84 Mbit/s
95th percentile per-packet one-way delay: 56.555 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 169.62 Mbit/s
95th percentile per-packet one-way delay: 56.945 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 162.86 Mbit/s
95th percentile per-packet one-way delay: 57.446 ms
Loss rate: 0.03%
Run 1: Report of Indigo — Data Link

Data Link Throughput (Mbps):

- Flow 1 ingress (mean 155.86 Mbps)
- Flow 1 egress (mean 155.84 Mbps)
- Flow 2 ingress (mean 169.63 Mbps)
- Flow 2 egress (mean 169.62 Mbps)
- Flow 3 ingress (mean 162.84 Mbps)
- Flow 3 egress (mean 162.86 Mbps)

Data Link Latency (ms):

- Flow 1 (95th percentile 56.55 ms)
- Flow 2 (95th percentile 56.95 ms)
- Flow 3 (95th percentile 57.45 ms)
Run 2: Statistics of Indigo

Start at: 2018-07-12 04:16:18
End at: 2018-07-12 04:16:48
Local clock offset: -0.247 ms
Remote clock offset: -0.088 ms

# Below is generated by plot.py at 2018-07-12 09:54:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 386.65 Mbit/s
95th percentile per-packet one-way delay: 54.207 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 210.91 Mbit/s
95th percentile per-packet one-way delay: 54.048 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 190.91 Mbit/s
95th percentile per-packet one-way delay: 54.367 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 151.00 Mbit/s
95th percentile per-packet one-way delay: 55.008 ms
Loss rate: 0.00%
Run 2: Report of Indigo — Data Link
Run 3: Statistics of Indigo

Start at: 2018-07-12 04:41:01
End at: 2018-07-12 04:41:31
Local clock offset: -0.092 ms
Remote clock offset: -0.334 ms

# Below is generated by plot.py at 2018-07-12 09:54:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 358.86 Mbit/s
95th percentile per-packet one-way delay: 61.095 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 200.01 Mbit/s
95th percentile per-packet one-way delay: 59.695 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 167.43 Mbit/s
95th percentile per-packet one-way delay: 61.425 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 148.22 Mbit/s
95th percentile per-packet one-way delay: 62.947 ms
Loss rate: 0.00%
Run 3: Report of Indigo — Data Link

![Graph showing throughput and per-packet one-way delay](image)
Run 4: Statistics of Indigo

Start at: 2018-07-12 05:05:23
End at: 2018-07-12 05:05:53
Local clock offset: 0.14 ms
Remote clock offset: -0.238 ms

# Below is generated by plot.py at 2018-07-12 09:54:33
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 374.11 Mbit/s
  95th percentile per-packet one-way delay: 71.947 ms
  Loss rate: 0.02%
-- Flow 1:
  Average throughput: 209.64 Mbit/s
  95th percentile per-packet one-way delay: 69.264 ms
  Loss rate: 0.01%
-- Flow 2:
  Average throughput: 181.67 Mbit/s
  95th percentile per-packet one-way delay: 72.765 ms
  Loss rate: 0.02%
-- Flow 3:
  Average throughput: 135.96 Mbit/s
  95th percentile per-packet one-way delay: 76.052 ms
  Loss rate: 0.05%
Run 4: Report of Indigo — Data Link

![Graph of Throughput vs Time]

- Flow 1 ingress (mean 209.69 Mbit/s)
- Flow 1 egress (mean 209.64 Mbit/s)
- Flow 2 ingress (mean 181.75 Mbit/s)
- Flow 2 egress (mean 181.67 Mbit/s)
- Flow 3 ingress (mean 136.10 Mbit/s)
- Flow 3 egress (mean 135.96 Mbit/s)

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

- Flow 1 (95th percentile 69.26 ms)
- Flow 2 (95th percentile 72.77 ms)
- Flow 3 (95th percentile 76.05 ms)
Run 5: Statistics of Indigo

Start at: 2018-07-12 05:30:13
End at: 2018-07-12 05:30:43
Local clock offset: -0.002 ms
Remote clock offset: -0.26 ms

# Below is generated by plot.py at 2018-07-12 09:54:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 387.89 Mbit/s
95th percentile per-packet one-way delay: 73.110 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 212.26 Mbit/s
95th percentile per-packet one-way delay: 70.120 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 187.43 Mbit/s
95th percentile per-packet one-way delay: 73.275 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 157.43 Mbit/s
95th percentile per-packet one-way delay: 77.602 ms
Loss rate: 0.04%
Run 5: Report of Indigo — Data Link

![Graph 1: Throughput (Mbps)]

Throughput (Mbps)

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

Per-packet one-way delay (ms)
Run 6: Statistics of Indigo

Start at: 2018-07-12 05:54:43
End at: 2018-07-12 05:55:13
Local clock offset: 0.032 ms
Remote clock offset: -0.104 ms

# Below is generated by plot.py at 2018-07-12 09:54:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 361.38 Mbit/s
95th percentile per-packet one-way delay: 68.620 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 196.47 Mbit/s
95th percentile per-packet one-way delay: 66.052 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 185.05 Mbit/s
95th percentile per-packet one-way delay: 70.473 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 130.40 Mbit/s
95th percentile per-packet one-way delay: 76.610 ms
Loss rate: 0.00%
Run 6: Report of Indigo — Data Link

![Graph of data link throughput and packet delay]

- Flow 1 ingress (mean 196.51 Mbit/s)
- Flow 1 egress (mean 196.47 Mbit/s)
- Flow 2 ingress (mean 185.12 Mbit/s)
- Flow 2 egress (mean 185.05 Mbit/s)
- Flow 3 ingress (mean 130.49 Mbit/s)
- Flow 3 egress (mean 130.40 Mbit/s)

![Graph of data link packet delay]

- Flow 1 (95th percentile 66.05 ms)
- Flow 2 (95th percentile 70.47 ms)
- Flow 3 (95th percentile 76.61 ms)
Run 7: Statistics of Indigo

Start at: 2018-07-12 06:19:21
End at: 2018-07-12 06:19:51
Local clock offset: -0.157 ms
Remote clock offset: 0.005 ms

# Below is generated by plot.py at 2018-07-12 09:54:33
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 374.00 Mbit/s
  95th percentile per-packet one-way delay: 53.375 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 196.11 Mbit/s
  95th percentile per-packet one-way delay: 53.396 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 192.55 Mbit/s
  95th percentile per-packet one-way delay: 52.919 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 153.87 Mbit/s
  95th percentile per-packet one-way delay: 53.253 ms
  Loss rate: 0.00%
Run 7: Report of Indigo — Data Link

![Graph showing throughput and packet delay over time for different flows.]
Run 8: Statistics of Indigo

Start at: 2018-07-12 06:44:31
End at: 2018-07-12 06:45:01
Local clock offset: 0.13 ms
Remote clock offset: -0.068 ms

# Below is generated by plot.py at 2018-07-12 09:54:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 377.74 Mbit/s
95th percentile per-packet one-way delay: 56.230 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 200.31 Mbit/s
95th percentile per-packet one-way delay: 55.382 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 186.65 Mbit/s
95th percentile per-packet one-way delay: 56.224 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 163.49 Mbit/s
95th percentile per-packet one-way delay: 57.846 ms
Loss rate: 0.00%
Run 8: Report of Indigo — Data Link

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

- **Flow 1 ingress (mean 200.29 Mbit/s)**
- **Flow 1 egress (mean 200.31 Mbit/s)**
- **Flow 2 ingress (mean 186.65 Mbit/s)**
- **Flow 2 egress (mean 186.65 Mbit/s)**
- **Flow 3 ingress (mean 163.48 Mbit/s)**
- **Flow 3 egress (mean 163.49 Mbit/s)**

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

- **Flow 1 (95th percentile 55.38 ms)**
- **Flow 2 (95th percentile 56.22 ms)**
- **Flow 3 (95th percentile 57.85 ms)**

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Run 9: Statistics of Indigo

Start at: 2018-07-12 07:09:06
End at: 2018-07-12 07:09:36
Local clock offset: -0.023 ms
Remote clock offset: 1.234 ms

# Below is generated by plot.py at 2018-07-12 09:54:33
# Datalink statistics
-- Total of 3 flows:
 Average throughput: 376.87 Mbit/s
 95th percentile per-packet one-way delay: 52.567 ms
 Loss rate: 0.00%
-- Flow 1:
 Average throughput: 205.65 Mbit/s
 95th percentile per-packet one-way delay: 52.390 ms
 Loss rate: 0.00%
-- Flow 2:
 Average throughput: 183.16 Mbit/s
 95th percentile per-packet one-way delay: 52.677 ms
 Loss rate: 0.00%
-- Flow 3:
 Average throughput: 152.20 Mbit/s
 95th percentile per-packet one-way delay: 52.891 ms
 Loss rate: 0.00%
Run 9: Report of Indigo — Data Link

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

- Flow 1 ingress (mean 205.65 Mbit/s)
- Flow 1 egress (mean 205.65 Mbit/s)
- Flow 2 ingress (mean 183.16 Mbit/s)
- Flow 2 egress (mean 183.16 Mbit/s)
- Flow 3 ingress (mean 152.19 Mbit/s)
- Flow 3 egress (mean 152.29 Mbit/s)
Run 10: Statistics of Indigo

Start at: 2018-07-12 07:33:44
End at: 2018-07-12 07:34:14
Local clock offset: -0.15 ms
Remote clock offset: 0.216 ms

# Below is generated by plot.py at 2018-07-12 09:54:33
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 377.00 Mbit/s
  95th percentile per-packet one-way delay: 66.115 ms
  Loss rate: 0.01%
-- Flow 1:
  Average throughput: 209.22 Mbit/s
  95th percentile per-packet one-way delay: 64.731 ms
  Loss rate: 0.01%
-- Flow 2:
  Average throughput: 187.68 Mbit/s
  95th percentile per-packet one-way delay: 66.613 ms
  Loss rate: 0.01%
-- Flow 3:
  Average throughput: 132.44 Mbit/s
  95th percentile per-packet one-way delay: 68.418 ms
  Loss rate: 0.05%
Run 10: Report of Indigo — Data Link

![Graph 1](image1)

**Legend:**
- Flow 1 ingress (mean 209.29 Mbit/s)
- Flow 1 egress (mean 209.22 Mbit/s)
- Flow 2 ingress (mean 187.78 Mbit/s)
- Flow 2 egress (mean 187.68 Mbit/s)
- Flow 3 ingress (mean 132.63 Mbit/s)
- Flow 3 egress (mean 132.44 Mbit/s)

![Graph 2](image2)

**Legend:**
- Flow 1 (95th percentile 64.73 ms)
- Flow 2 (95th percentile 66.61 ms)
- Flow 3 (95th percentile 68.42 ms)
Run 1: Statistics of LEDBAT

Start at: 2018-07-12 04:03:07
End at: 2018-07-12 04:03:37
Local clock offset: -0.19 ms
Remote clock offset: 0.881 ms

# Below is generated by plot.py at 2018-07-12 09:54:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 52.22 Mbit/s
95th percentile per-packet one-way delay: 56.475 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 33.88 Mbit/s
95th percentile per-packet one-way delay: 56.453 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 22.08 Mbit/s
95th percentile per-packet one-way delay: 56.281 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 11.04 Mbit/s
95th percentile per-packet one-way delay: 58.598 ms
Loss rate: 0.31%
Run 1: Report of LEDBAT — Data Link

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

- **Flow 1 Ingress** (mean 33.90 Mbit/s)
- **Flow 1 Egress** (mean 33.88 Mbit/s)
- **Flow 2 Ingress** (mean 22.08 Mbit/s)
- **Flow 2 Egress** (mean 22.08 Mbit/s)
- **Flow 3 Ingress** (mean 11.08 Mbit/s)
- **Flow 3 Egress** (mean 11.04 Mbit/s)

![Graph 2: Per-Packet Round Trip Delay](image2.png)

- **Flow 1** (95th percentile 56.45 ms)
- **Flow 2** (95th percentile 56.28 ms)
- **Flow 3** (95th percentile 58.60 ms)
Run 2: Statistics of LEDBAT

Start at: 2018-07-12 04:27:51
End at: 2018-07-12 04:28:21
Local clock offset: -0.116 ms
Remote clock offset: 0.043 ms

# Below is generated by plot.py at 2018-07-12 09:54:34
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 51.93 Mbit/s
  95th percentile per-packet one-way delay: 54.332 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 34.21 Mbit/s
  95th percentile per-packet one-way delay: 54.463 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 21.79 Mbit/s
  95th percentile per-packet one-way delay: 52.705 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 9.74 Mbit/s
  95th percentile per-packet one-way delay: 53.829 ms
  Loss rate: 0.00%
Run 2: Report of LEDBAT — Data Link
Run 3: Statistics of LEDBAT

Start at: 2018-07-12 04:52:01
End at: 2018-07-12 04:52:31
Local clock offset: -0.161 ms
Remote clock offset: 0.068 ms

# Below is generated by plot.py at 2018-07-12 09:54:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 50.65 Mbit/s
95th percentile per-packet one-way delay: 55.735 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 33.37 Mbit/s
95th percentile per-packet one-way delay: 55.749 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 20.54 Mbit/s
95th percentile per-packet one-way delay: 55.496 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 10.98 Mbit/s
95th percentile per-packet one-way delay: 56.592 ms
Loss rate: 0.00%
Run 3: Report of LEDBAT — Data Link

![Graph showing data link throughputs and delays over time for three flows.](image-url)
Run 4: Statistics of LEDBAT

Start at: 2018-07-12 05:17:01
End at: 2018-07-12 05:17:31
Local clock offset: -0.003 ms
Remote clock offset: -0.258 ms

# Below is generated by plot.py at 2018-07-12 09:54:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 50.52 Mbit/s
95th percentile per-packet one-way delay: 55.385 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 33.56 Mbit/s
95th percentile per-packet one-way delay: 55.471 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 20.41 Mbit/s
95th percentile per-packet one-way delay: 55.167 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 10.22 Mbit/s
95th percentile per-packet one-way delay: 55.302 ms
Loss rate: 0.00%
Run 4: Report of LEDBAT — Data Link

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

- **Flow 1**: Ingress (mean 33.56 Mbit/s), Egress (mean 33.56 Mbit/s)
- **Flow 2**: Ingress (mean 20.41 Mbit/s), Egress (mean 20.41 Mbit/s)
- **Flow 3**: Ingress (mean 10.22 Mbit/s), Egress (mean 10.22 Mbit/s)
Run 5: Statistics of LEDBAT

Start at: 2018-07-12 05:41:44
End at: 2018-07-12 05:42:14
Local clock offset: -0.136 ms
Remote clock offset: 1.369 ms

# Below is generated by plot.py at 2018-07-12 09:54:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 44.79 Mbit/s
95th percentile per-packet one-way delay: 55.748 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 25.89 Mbit/s
95th percentile per-packet one-way delay: 55.870 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 22.93 Mbit/s
95th percentile per-packet one-way delay: 55.290 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 11.07 Mbit/s
95th percentile per-packet one-way delay: 53.038 ms
Loss rate: 0.00%
Run 5: Report of LEDBAT — Data Link

![Graph showing throughput and packet round-trip delay over time for different flows.](image-url)
Run 6: Statistics of LEDBAT

Start at: 2018-07-12 06:06:14
End at: 2018-07-12 06:06:44
Local clock offset: -0.029 ms
Remote clock offset: -1.138 ms

# Below is generated by plot.py at 2018-07-12 09:54:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 48.92 Mbit/s
95th percentile per-packet one-way delay: 54.243 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 31.70 Mbit/s
95th percentile per-packet one-way delay: 54.234 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 20.84 Mbit/s
95th percentile per-packet one-way delay: 54.230 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 10.29 Mbit/s
95th percentile per-packet one-way delay: 54.308 ms
Loss rate: 0.00%
Run 6: Report of LEDBAT — Data Link

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

- **Flow 1 ingress** (mean 31.70 Mbps)
- **Flow 1 egress** (mean 31.70 Mbps)
- **Flow 2 ingress** (mean 20.84 Mbps)
- **Flow 2 egress** (mean 20.84 Mbps)
- **Flow 3 ingress** (mean 10.26 Mbps)
- **Flow 3 egress** (mean 10.29 Mbps)

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

- **Flow 1 (95th percentile 54.23 ms)**
- **Flow 2 (95th percentile 54.23 ms)**
- **Flow 3 (95th percentile 54.31 ms)**

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Run 7: Statistics of LEDBAT

Start at: 2018-07-12 06:31:03
End at: 2018-07-12 06:31:33
Local clock offset: 0.033 ms
Remote clock offset: -0.134 ms

# Below is generated by plot.py at 2018-07-12 09:54:34
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 47.80 Mbit/s
  95th percentile per-packet one-way delay: 54.352 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 33.68 Mbit/s
  95th percentile per-packet one-way delay: 54.349 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 19.32 Mbit/s
  95th percentile per-packet one-way delay: 54.309 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 3.97 Mbit/s
  95th percentile per-packet one-way delay: 55.294 ms
  Loss rate: 0.00%
Run 7: Report of LEDBAT — Data Link

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

- **Flow 1 ingress (mean 33.68 Mbit/s)**
- **Flow 1 egress (mean 33.68 Mbit/s)**
- **Flow 2 ingress (mean 19.32 Mbit/s)**
- **Flow 2 egress (mean 19.32 Mbit/s)**
- **Flow 3 ingress (mean 3.97 Mbit/s)**
- **Flow 3 egress (mean 3.97 Mbit/s)**

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

- **Flow 1 (95th percentile 54.35 ms)**
- **Flow 2 (95th percentile 54.31 ms)**
- **Flow 3 (95th percentile 55.29 ms)**
Run 8: Statistics of LEDBAT

Start at: 2018-07-12 06:55:57
End at: 2018-07-12 06:56:27
Local clock offset: -0.045 ms
Remote clock offset: -0.022 ms

# Below is generated by plot.py at 2018-07-12 09:54:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 49.35 Mbit/s
95th percentile per-packet one-way delay: 55.869 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 32.49 Mbit/s
95th percentile per-packet one-way delay: 55.980 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 20.25 Mbit/s
95th percentile per-packet one-way delay: 55.611 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 10.30 Mbit/s
95th percentile per-packet one-way delay: 56.052 ms
Loss rate: 0.00%
Run 8: Report of LEDBAT — Data Link
Run 9: Statistics of LEDBAT

Start at: 2018-07-12 07:20:36
End at: 2018-07-12 07:21:06
Local clock offset: -0.118 ms
Remote clock offset: -0.205 ms

# Below is generated by plot.py at 2018-07-12 09:54:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 51.81 Mbit/s
95th percentile per-packet one-way delay: 54.742 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 33.88 Mbit/s
95th percentile per-packet one-way delay: 54.813 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 21.46 Mbit/s
95th percentile per-packet one-way delay: 54.526 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 10.98 Mbit/s
95th percentile per-packet one-way delay: 54.117 ms
Loss rate: 0.00%
Run 9: Report of LEDBAT — Data Link

![Graph showing throughput over time](image1)

- **Flow 1 Ingress (mean 33.88 Mbit/s)**
- **Flow 1 Egress (mean 33.88 Mbit/s)**
- **Flow 2 Ingress (mean 21.46 Mbit/s)**
- **Flow 2 Egress (mean 21.46 Mbit/s)**
- **Flow 3 Ingress (mean 10.97 Mbit/s)**
- **Flow 3 Egress (mean 10.98 Mbit/s)**

![Graph showing packet delay over time](image2)

- **Flow 1 (95th percentile 54.81 ms)**
- **Flow 2 (95th percentile 54.53 ms)**
- **Flow 3 (95th percentile 54.12 ms)**
Run 10: Statistics of LEDBAT

Start at: 2018-07-12 07:45:03
End at: 2018-07-12 07:45:33
Local clock offset: -0.319 ms
Remote clock offset: -1.261 ms

# Below is generated by plot.py at 2018-07-12 09:54:34
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 49.16 Mbit/s
  95th percentile per-packet one-way delay: 53.684 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 31.71 Mbit/s
  95th percentile per-packet one-way delay: 53.780 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 21.36 Mbit/s
  95th percentile per-packet one-way delay: 53.518 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 9.88 Mbit/s
  95th percentile per-packet one-way delay: 52.562 ms
  Loss rate: 0.00%
Run 1: Statistics of PCC-Allegro

Start at: 2018-07-12 04:01:42
End at: 2018-07-12 04:02:12
Local clock offset: 0.043 ms
Remote clock offset: -0.058 ms

# Below is generated by plot.py at 2018-07-12 09:58:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 474.70 Mbit/s
  95th percentile per-packet one-way delay: 151.295 ms
  Loss rate: 0.08%
-- Flow 1:
  Average throughput: 317.75 Mbit/s
  95th percentile per-packet one-way delay: 150.934 ms
  Loss rate: 0.07%
-- Flow 2:
  Average throughput: 233.32 Mbit/s
  95th percentile per-packet one-way delay: 152.337 ms
  Loss rate: 0.10%
-- Flow 3:
  Average throughput: 4.77 Mbit/s
  95th percentile per-packet one-way delay: 133.510 ms
  Loss rate: 0.00%
Run 1: Report of PCC-Allegro — Data Link
Run 2: Statistics of PCC-Allegro

Start at: 2018-07-12 04:26:24
End at: 2018-07-12 04:26:54
Local clock offset: 0.051 ms
Remote clock offset: 1.104 ms

# Below is generated by plot.py at 2018-07-12 09:58:51
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 494.17 Mbit/s
  95th percentile per-packet one-way delay: 217.544 ms
  Loss rate: 6.86%
-- Flow 1:
  Average throughput: 475.22 Mbit/s
  95th percentile per-packet one-way delay: 217.689 ms
  Loss rate: 7.09%
-- Flow 2:
  Average throughput: 4.04 Mbit/s
  95th percentile per-packet one-way delay: 214.828 ms
  Loss rate: 5.26%
-- Flow 3:
  Average throughput: 49.32 Mbit/s
  95th percentile per-packet one-way delay: 140.973 ms
  Loss rate: 0.00%
Run 2: Report of PCC-Allegro — Data Link
Run 3: Statistics of PCC-Allegro

Start at: 2018-07-12 04:50:33
End at: 2018-07-12 04:51:03
Local clock offset: -0.169 ms
Remote clock offset: -0.078 ms

# Below is generated by plot.py at 2018-07-12 09:59:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 519.45 Mbit/s
95th percentile per-packet one-way delay: 198.306 ms
Loss rate: 9.34%
-- Flow 1:
Average throughput: 442.39 Mbit/s
95th percentile per-packet one-way delay: 198.228 ms
Loss rate: 9.00%
-- Flow 2:
Average throughput: 114.83 Mbit/s
95th percentile per-packet one-way delay: 198.634 ms
Loss rate: 11.28%
-- Flow 3:
Average throughput: 2.02 Mbit/s
95th percentile per-packet one-way delay: 197.486 ms
Loss rate: 7.44%
Run 3: Report of PCC-Allegro — Data Link

[Graph showing throughput and per-packet delay over time with Legends]

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Run 4: Statistics of PCC-Allegro

Start at: 2018-07-12 05:15:35
End at: 2018-07-12 05:16:05
Local clock offset: -0.26 ms
Remote clock offset: -0.081 ms

# Below is generated by plot.py at 2018-07-12 09:59:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 480.94 Mbit/s
95th percentile per-packet one-way delay: 177.146 ms
Loss rate: 2.12%
-- Flow 1:
Average throughput: 447.63 Mbit/s
95th percentile per-packet one-way delay: 177.145 ms
Loss rate: 2.03%
-- Flow 2:
Average throughput: 34.69 Mbit/s
95th percentile per-packet one-way delay: 176.977 ms
Loss rate: 2.72%
-- Flow 3:
Average throughput: 31.12 Mbit/s
95th percentile per-packet one-way delay: 177.522 ms
Loss rate: 4.64%
Run 4: Report of PCC-Allegro — Data Link

[Graph 1: Throughput (Mbps)]
- Flow 1 ingress (mean 458.42 Mbps)
- Flow 1 egress (mean 447.63 Mbps)
- Flow 2 ingress (mean 35.72 Mbps)
- Flow 2 egress (mean 34.69 Mbps)
- Flow 3 ingress (mean 32.96 Mbps)
- Flow 3 egress (mean 31.12 Mbps)

[Graph 2: Per-packet one-way delay (ms)]
- Flow 1 (95th percentile 177.15 ms)
- Flow 2 (95th percentile 176.98 ms)
- Flow 3 (95th percentile 177.52 ms)
Run 5: Statistics of PCC-Allegro

Start at: 2018-07-12 05:40:14
End at: 2018-07-12 05:40:44
Local clock offset: 0.124 ms
Remote clock offset: -0.26 ms

# Below is generated by plot.py at 2018-07-12 10:00:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 567.79 Mbit/s
95th percentile per-packet one-way delay: 169.852 ms
Loss rate: 3.20%
-- Flow 1:
Average throughput: 526.73 Mbit/s
95th percentile per-packet one-way delay: 169.852 ms
Loss rate: 2.82%
-- Flow 2:
Average throughput: 4.30 Mbit/s
95th percentile per-packet one-way delay: 168.486 ms
Loss rate: 4.09%
-- Flow 3:
Average throughput: 115.85 Mbit/s
95th percentile per-packet one-way delay: 169.912 ms
Loss rate: 8.17%
Run 5: Report of PCC-Allegro — Data Link

![Graph of Throughput vs Time]

- Flow 1 ingress (mean 544.01 Mbit/s)
- Flow 1 egress (mean 526.73 Mbit/s)
- Flow 2 ingress (mean 4.51 Mbit/s)
- Flow 2 egress (mean 4.30 Mbit/s)
- Flow 3 ingress (mean 126.62 Mbit/s)
- Flow 3 egress (mean 115.85 Mbit/s)

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

- Flow 1 (95th percentile 169.85 ms)
- Flow 2 (95th percentile 168.49 ms)
- Flow 3 (95th percentile 169.91 ms)
Run 6: Statistics of PCC-Allegro

Start at: 2018-07-12 06:04:46
End at: 2018-07-12 06:05:16
Local clock offset: -0.066 ms
Remote clock offset: 0.018 ms

# Below is generated by plot.py at 2018-07-12 10:00:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 534.03 Mbit/s
95th percentile per-packet one-way delay: 184.454 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 503.43 Mbit/s
95th percentile per-packet one-way delay: 184.470 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 40.94 Mbit/s
95th percentile per-packet one-way delay: 184.622 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 10.31 Mbit/s
95th percentile per-packet one-way delay: 129.438 ms
Loss rate: 0.00%
Run 6: Report of PCC-Allegro — Data Link
Run 7: Statistics of PCC-Allegro

Start at: 2018-07-12 06:29:37  
End at: 2018-07-12 06:30:07  
Local clock offset: -0.084 ms  
Remote clock offset: -0.268 ms  

# Below is generated by plot.py at 2018-07-12 10:03:26  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 488.59 Mbit/s  
95th percentile per-packet one-way delay: 199.899 ms  
Loss rate: 1.12%  
-- Flow 1:  
Average throughput: 462.90 Mbit/s  
95th percentile per-packet one-way delay: 200.542 ms  
Loss rate: 1.15%  
-- Flow 2:  
Average throughput: 7.93 Mbit/s  
95th percentile per-packet one-way delay: 175.682 ms  
Loss rate: 0.36%  
-- Flow 3:  
Average throughput: 61.80 Mbit/s  
95th percentile per-packet one-way delay: 176.714 ms  
Loss rate: 0.72%
Run 7: Report of PCC-Allegro — Data Link

Throughput (Mbit/s)

0 5 10 15 20 25 30

Time (s)

Flow 1 ingress (mean 469.63 Mbit/s)  Flow 1 egress (mean 462.90 Mbit/s)
Flow 2 ingress (mean 7.97 Mbit/s)  Flow 2 egress (mean 7.93 Mbit/s)
Flow 3 ingress (mean 62.41 Mbit/s)  Flow 3 egress (mean 61.80 Mbit/s)

Per-packet error rate / delay (ms)

0 5 10 15 20 25 30

Time (s)

Flow 1 (95th percentile 200.54 ms)  Flow 2 (95th percentile 175.68 ms)  Flow 3 (95th percentile 176.71 ms)
Run 8: Statistics of PCC-Allegro

Start at: 2018-07-12 06:54:30
End at: 2018-07-12 06:55:00
Local clock offset: 0.127 ms
Remote clock offset: -0.053 ms

# Below is generated by plot.py at 2018-07-12 10:04:08
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 508.19 Mbit/s
  95th percentile per-packet one-way delay: 214.459 ms
  Loss rate: 4.63%
-- Flow 1:
  Average throughput: 504.75 Mbit/s
  95th percentile per-packet one-way delay: 214.456 ms
  Loss rate: 4.61%
-- Flow 2:
  Average throughput: 4.39 Mbit/s
  95th percentile per-packet one-way delay: 214.716 ms
  Loss rate: 6.40%
-- Flow 3:
  Average throughput: 1.77 Mbit/s
  95th percentile per-packet one-way delay: 215.921 ms
  Loss rate: 8.44%
Run 9: Statistics of PCC-Allegro

Start at: 2018-07-12 07:19:11
End at: 2018-07-12 07:19:41
Local clock offset: 0.176 ms
Remote clock offset: 1.374 ms

# Below is generated by plot.py at 2018-07-12 10:05:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 453.44 Mbit/s
95th percentile per-packet one-way delay: 219.945 ms
Loss rate: 12.44%
-- Flow 1:
Average throughput: 452.93 Mbit/s
95th percentile per-packet one-way delay: 219.942 ms
Loss rate: 12.42%
-- Flow 2:
Average throughput: 1.69 Mbit/s
95th percentile per-packet one-way delay: 219.993 ms
Loss rate: 15.34%
-- Flow 3:
Average throughput: 1.81 Mbit/s
95th percentile per-packet one-way delay: 221.472 ms
Loss rate: 18.71%
Run 9: Report of PCC-Allegro — Data Link
Run 10: Statistics of PCC-Allegro

Start at: 2018-07-12 07:43:35
End at: 2018-07-12 07:44:05
Local clock offset: -0.02 ms
Remote clock offset: -0.214 ms

# Below is generated by plot.py at 2018-07-12 10:07:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 549.31 Mbit/s
95th percentile per-packet one-way delay: 182.379 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 536.41 Mbit/s
95th percentile per-packet one-way delay: 182.364 ms
Loss rate: 0.76%
-- Flow 2:
Average throughput: 16.63 Mbit/s
95th percentile per-packet one-way delay: 183.941 ms
Loss rate: 0.76%
-- Flow 3:
Average throughput: 5.65 Mbit/s
95th percentile per-packet one-way delay: 129.938 ms
Loss rate: 0.00%
Run 10: Report of PCC-Allegro — Data Link

Throughput (Mbit/s)

Time (s)

0 5 10 15 20 25 30

Flow 1 ingress (mean 540.55 Mbit/s)  Flow 1 egress (mean 536.41 Mbit/s)
Flow 2 ingress (mean 16.76 Mbit/s)  Flow 2 egress (mean 16.65 Mbit/s)
Flow 3 ingress (mean 5.65 Mbit/s)  Flow 3 egress (mean 5.65 Mbit/s)

Per packet one-way delay (ms)

Time (s)

0 5 10 15 20 25 30

Flow 1 (95th percentile 182.36 ms)  Flow 2 (95th percentile 183.94 ms)  Flow 3 (95th percentile 129.94 ms)
Run 1: Statistics of PCC-Expr

Start at: 2018-07-12 03:55:01
End at: 2018-07-12 03:55:31
Local clock offset: -0.082 ms
Remote clock offset: -0.132 ms

# Below is generated by plot.py at 2018-07-12 10:13:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 462.73 Mbit/s
95th percentile per-packet one-way delay: 177.884 ms
Loss rate: 2.98%
-- Flow 1:
Average throughput: 287.29 Mbit/s
95th percentile per-packet one-way delay: 175.607 ms
Loss rate: 2.02%
-- Flow 2:
Average throughput: 252.76 Mbit/s
95th percentile per-packet one-way delay: 180.457 ms
Loss rate: 4.45%
-- Flow 3:
Average throughput: 20.12 Mbit/s
95th percentile per-packet one-way delay: 177.054 ms
Loss rate: 6.03%
Run 1: Report of PCC-Expr — Data Link

![Graph showing throughput and packet delay over time for flows 1, 2, and 3.]
Run 2: Statistics of PCC-Expr

Start at: 2018-07-12 04:19:56
End at: 2018-07-12 04:20:26
Local clock offset: 0.116 ms
Remote clock offset: -0.144 ms

# Below is generated by plot.py at 2018-07-12 10:13:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 401.46 Mbit/s
95th percentile per-packet one-way delay: 198.239 ms
Loss rate: 3.30%
-- Flow 1:
Average throughput: 272.13 Mbit/s
95th percentile per-packet one-way delay: 208.970 ms
Loss rate: 4.46%
-- Flow 2:
Average throughput: 144.83 Mbit/s
95th percentile per-packet one-way delay: 164.022 ms
Loss rate: 0.60%
-- Flow 3:
Average throughput: 99.22 Mbit/s
95th percentile per-packet one-way delay: 173.443 ms
Loss rate: 1.23%
Run 2: Report of PCC-Expr — Data Link
Run 3: Statistics of PCC-Expr

Start at: 2018-07-12 04:44:28
End at: 2018-07-12 04:44:58
Local clock offset: -0.283 ms
Remote clock offset: -0.075 ms

# Below is generated by plot.py at 2018-07-12 10:15:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 449.68 Mbit/s
95th percentile per-packet one-way delay: 293.677 ms
Loss rate: 14.45%
-- Flow 1:
Average throughput: 368.87 Mbit/s
95th percentile per-packet one-way delay: 297.991 ms
Loss rate: 16.44%
-- Flow 2:
Average throughput: 87.24 Mbit/s
95th percentile per-packet one-way delay: 182.921 ms
Loss rate: 3.33%
-- Flow 3:
Average throughput: 69.10 Mbit/s
95th percentile per-packet one-way delay: 184.662 ms
Loss rate: 5.72%
Run 3: Report of PCC-Expr — Data Link

![Graph of Throughput (Mbps) over time with various flows.]

- **Flow 1 ingress (mean 441.46 Mbps)**
- **Flow 1 egress (mean 368.87 Mbps)**
- **Flow 2 ingress (mean 90.23 Mbps)**
- **Flow 2 egress (mean 87.24 Mbps)**
- **Flow 3 ingress (mean 73.30 Mbps)**
- **Flow 3 egress (mean 69.10 Mbps)**

![Graph of Per-packet one-way delay (ms) over time with various flows.]

- **Flow 1 (95th percentile 297.99 ms)**
- **Flow 2 (95th percentile 182.92 ms)**
- **Flow 3 (95th percentile 184.66 ms)**
Run 4: Statistics of PCC-Expr

Start at: 2018-07-12 05:09:01
End at: 2018-07-12 05:09:31
Local clock offset: -0.063 ms
Remote clock offset: 0.005 ms

# Below is generated by plot.py at 2018-07-12 10:18:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 500.71 Mbit/s
95th percentile per-packet one-way delay: 213.649 ms
Loss rate: 15.52%
-- Flow 1:
Average throughput: 362.81 Mbit/s
95th percentile per-packet one-way delay: 233.979 ms
Loss rate: 14.14%
-- Flow 2:
Average throughput: 205.27 Mbit/s
95th percentile per-packet one-way delay: 189.154 ms
Loss rate: 18.90%
-- Flow 3:
Average throughput: 4.49 Mbit/s
95th percentile per-packet one-way delay: 193.245 ms
Loss rate: 25.28%
Run 4: Report of PCC-Expr — Data Link

\begin{figure}
  \centering
  \includegraphics[width=\textwidth]{run_4_data_link}
  \caption{Throughput and Packet Delays for Flows 1 to 3 in Run 4.}
\end{figure}
Run 5: Statistics of PCC-Expr

Start at: 2018-07-12 05:33:53
End at: 2018-07-12 05:34:23
Local clock offset: -0.0 ms
Remote clock offset: -0.071 ms

# Below is generated by plot.py at 2018-07-12 10:18:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 387.68 Mbit/s
95th percentile per-packet one-way delay: 82.994 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 286.59 Mbit/s
95th percentile per-packet one-way delay: 83.774 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 97.47 Mbit/s
95th percentile per-packet one-way delay: 53.428 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 109.81 Mbit/s
95th percentile per-packet one-way delay: 92.614 ms
Loss rate: 0.00%
Run 5: Report of PCC-Expr — Data Link
Run 6: Statistics of PCC-Expr

Start at: 2018-07-12 05:58:21
End at: 2018-07-12 05:58:52
Local clock offset: -0.217 ms
Remote clock offset: -1.598 ms

# Below is generated by plot.py at 2018-07-12 10:18:20
# Datalink statistics
   -- Total of 3 flows:
      Average throughput: 310.73 Mbit/s
      95th percentile per-packet one-way delay: 215.669 ms
      Loss rate: 3.48%
   -- Flow 1:
      Average throughput: 206.42 Mbit/s
      95th percentile per-packet one-way delay: 253.950 ms
      Loss rate: 4.58%
   -- Flow 2:
      Average throughput: 120.71 Mbit/s
      95th percentile per-packet one-way delay: 137.960 ms
      Loss rate: 0.88%
   -- Flow 3:
      Average throughput: 71.91 Mbit/s
      95th percentile per-packet one-way delay: 176.744 ms
      Loss rate: 2.43%
Run 6: Report of PCC-Expr — Data Link

![Graph of Throughput and Packet Delay](image)

**Throughput (Mbps):**
- Flow 1 Ingress: Mean 217.05 Mbps
- Flow 1 Egress: Mean 206.42 Mbps
- Flow 2 Ingress: Mean 122.41 Mbps
- Flow 2 Egress: Mean 120.71 Mbps
- Flow 3 Ingress: Mean 74.40 Mbps
- Flow 3 Egress: Mean 71.91 Mbps

**Packet Delay (ms):**
- Flow 1 (95th percentile 253.95 ms)
- Flow 2 (95th percentile 137.96 ms)
- Flow 3 (95th percentile 176.74 ms)
Run 7: Statistics of PCC-Expr

Start at: 2018-07-12 06:22:56
End at: 2018-07-12 06:23:26
Local clock offset: 0.047 ms
Remote clock offset: 1.144 ms

# Below is generated by plot.py at 2018-07-12 10:22:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 417.61 Mbit/s
95th percentile per-packet one-way delay: 304.281 ms
Loss rate: 21.75%
-- Flow 1:
Average throughput: 380.91 Mbit/s
95th percentile per-packet one-way delay: 305.417 ms
Loss rate: 23.18%
-- Flow 2:
Average throughput: 52.21 Mbit/s
95th percentile per-packet one-way delay: 191.970 ms
Loss rate: 3.14%
-- Flow 3:
Average throughput: 5.89 Mbit/s
95th percentile per-packet one-way delay: 180.592 ms
Loss rate: 1.44%
Run 7: Report of PCC-Expr — Data Link

---

**Throughput (Mbps):**

- **Flow 1 Ingress** (mean 496.56 Mbps)
- **Flow 1 Egress** (mean 380.91 Mbps)
- **Flow 2 Ingress** (mean 54.03 Mbps)
- **Flow 2 Egress** (mean 52.21 Mbps)
- **Flow 3 Ingress** (mean 6.90 Mbps)
- **Flow 3 Egress** (mean 5.89 Mbps)

**Delay (ms):**

- **Flow 1** (95th percentile 305.42 ms)
- **Flow 2** (95th percentile 191.97 ms)
- **Flow 3** (95th percentile 180.59 ms)
Run 8: Statistics of PCC-Expr

Start at: 2018-07-12 06:48:10
End at: 2018-07-12 06:48:40
Local clock offset: -0.069 ms
Remote clock offset: 0.965 ms

# Below is generated by plot.py at 2018-07-12 10:22:39
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 281.07 Mbit/s
  95th percentile per-packet one-way delay: 209.578 ms
  Loss rate: 2.37%
-- Flow 1:
  Average throughput: 114.83 Mbit/s
  95th percentile per-packet one-way delay: 54.593 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 216.09 Mbit/s
  95th percentile per-packet one-way delay: 218.588 ms
  Loss rate: 4.54%
-- Flow 3:
  Average throughput: 68.10 Mbit/s
  95th percentile per-packet one-way delay: 62.269 ms
  Loss rate: 0.00%
Run 8: Report of PCC-Expr — Data Link
Run 9: Statistics of PCC-Expr

Start at: 2018-07-12 07:12:44
End at: 2018-07-12 07:13:14
Local clock offset: −0.192 ms
Remote clock offset: 0.153 ms

# Below is generated by plot.py at 2018-07-12 10:24:20
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 334.18 Mbit/s
  95th percentile per-packet one-way delay: 179.557 ms
  Loss rate: 4.67%
-- Flow 1:
  Average throughput: 124.47 Mbit/s
  95th percentile per-packet one-way delay: 176.270 ms
  Loss rate: 3.28%
-- Flow 2:
  Average throughput: 224.99 Mbit/s
  95th percentile per-packet one-way delay: 179.338 ms
  Loss rate: 4.31%
-- Flow 3:
  Average throughput: 181.33 Mbit/s
  95th percentile per-packet one-way delay: 185.565 ms
  Loss rate: 8.26%
Run 9: Report of PCC-Expr — Data Link

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

<table>
<thead>
<tr>
<th>Flow 1 ingress (mean 129.21 Mbit/s)</th>
<th>Flow 1 egress (mean 124.47 Mbit/s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow 2 ingress (mean 235.69 Mbit/s)</td>
<td>Flow 2 egress (mean 224.99 Mbit/s)</td>
</tr>
<tr>
<td>Flow 3 ingress (mean 290.02 Mbit/s)</td>
<td>Flow 3 egress (mean 181.33 Mbit/s)</td>
</tr>
</tbody>
</table>
Run 10: Statistics of PCC-Expr

Start at: 2018-07-12 07:37:26
End at: 2018-07-12 07:37:56
Local clock offset: 0.1 ms
Remote clock offset: -1.242 ms

# Below is generated by plot.py at 2018-07-12 10:25:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 305.92 Mbit/s
95th percentile per-packet one-way delay: 238.331 ms
Loss rate: 9.71%
-- Flow 1:
Average throughput: 240.16 Mbit/s
95th percentile per-packet one-way delay: 240.808 ms
Loss rate: 9.09%
-- Flow 2:
Average throughput: 97.57 Mbit/s
95th percentile per-packet one-way delay: 227.497 ms
Loss rate: 11.77%
-- Flow 3:
Average throughput: 3.21 Mbit/s
95th percentile per-packet one-way delay: 229.670 ms
Loss rate: 19.59%
Run 10: Report of PCC-Expr — Data Link
Run 1: Statistics of QUIC Cubic

Start at: 2018-07-12 04:08:28
End at: 2018-07-12 04:08:58
Local clock offset: -0.048 ms
Remote clock offset: -0.081 ms

# Below is generated by plot.py at 2018-07-12 10:25:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 56.96 Mbit/s
95th percentile per-packet one-way delay: 53.648 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 50.981 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 56.05 Mbit/s
95th percentile per-packet one-way delay: 53.666 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 60.14 Mbit/s
95th percentile per-packet one-way delay: 50.270 ms
Loss rate: 0.00%
Run 1: Report of QUIC Cubic — Data Link

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

- **Flow 1 ingress (mean 0.06 Mbit/s)**
- **Flow 1 egress (mean 0.06 Mbit/s)**
- **Flow 2 ingress (mean 56.05 Mbit/s)**
- **Flow 2 egress (mean 56.05 Mbit/s)**
- **Flow 3 ingress (mean 60.14 Mbit/s)**
- **Flow 3 egress (mean 60.14 Mbit/s)**

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

- **Flow 1 (95th percentile 50.98 ms)**
- **Flow 2 (95th percentile 53.67 ms)**
- **Flow 3 (95th percentile 50.27 ms)**
Run 2: Statistics of QUIC Cubic

Start at: 2018-07-12 04:33:13
End at: 2018-07-12 04:33:43
Local clock offset: -0.093 ms
Remote clock offset: -1.342 ms

# Below is generated by plot.py at 2018-07-12 10:25:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 108.75 Mbit/s
95th percentile per-packet one-way delay: 52.352 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 60.22 Mbit/s
95th percentile per-packet one-way delay: 52.375 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 41.70 Mbit/s
95th percentile per-packet one-way delay: 52.088 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 63.49 Mbit/s
95th percentile per-packet one-way delay: 49.100 ms
Loss rate: 0.00%
Run 2: Report of QUIC Cubic — Data Link

[Graphs showing throughput and round-trip time over time for different flows]
Run 3: Statistics of QUIC Cubic

Start at: 2018-07-12 04:57:17
End at: 2018-07-12 04:57:47
Local clock offset: -0.026 ms
Remote clock offset: -0.106 ms

# Below is generated by plot.py at 2018-07-12 10:25:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 99.62 Mbit/s
95th percentile per-packet one-way delay: 50.580 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 71.91 Mbit/s
95th percentile per-packet one-way delay: 50.467 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 31.93 Mbit/s
95th percentile per-packet one-way delay: 50.489 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 20.06 Mbit/s
95th percentile per-packet one-way delay: 53.614 ms
Loss rate: 0.00%
Run 3: Report of QUIC Cubic — Data Link

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

![Graph 2: Per-packet end-to-end delay (ms)](image)
Run 4: Statistics of QUIC Cubic

Start at: 2018-07-12 05:22:29
End at: 2018-07-12 05:22:59
Local clock offset: -0.001 ms
Remote clock offset: -0.113 ms

# Below is generated by plot.py at 2018-07-12 10:25:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 113.47 Mbit/s
95th percentile per-packet one-way delay: 53.434 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 71.94 Mbit/s
95th percentile per-packet one-way delay: 53.426 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 31.75 Mbit/s
95th percentile per-packet one-way delay: 50.437 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 62.32 Mbit/s
95th percentile per-packet one-way delay: 53.463 ms
Loss rate: 0.01%
Run 4: Report of QUIC Cubic — Data Link

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

- Flow 1 ingress (mean 71.93 Mbit/s)
- Flow 2 ingress (mean 31.75 Mbit/s)
- Flow 3 ingress (mean 62.33 Mbit/s)
- Flow 1 egress (mean 71.94 Mbit/s)
- Flow 2 egress (mean 31.75 Mbit/s)
- Flow 3 egress (mean 62.32 Mbit/s)
Run 5: Statistics of QUIC Cubic

Start at: 2018-07-12 05:47:01
End at: 2018-07-12 05:47:31
Local clock offset: 0.163 ms
Remote clock offset: 1.153 ms

# Below is generated by plot.py at 2018-07-12 10:25:01
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 118.29 Mbit/s
  95th percentile per-packet one-way delay: 54.377 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 65.42 Mbit/s
  95th percentile per-packet one-way delay: 54.399 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 57.49 Mbit/s
  95th percentile per-packet one-way delay: 51.292 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 44.76 Mbit/s
  95th percentile per-packet one-way delay: 54.045 ms
  Loss rate: 0.00%
Run 5: Report of QUIC Cubic — Data Link
Run 6: Statistics of QUIC Cubic

Start at: 2018-07-12 06:11:30
End at: 2018-07-12 06:12:00
Local clock offset: -0.046 ms
Remote clock offset: 0.985 ms

# Below is generated by plot.py at 2018-07-12 10:25:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 107.95 Mbit/s
95th percentile per-packet one-way delay: 54.303 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 54.12 Mbit/s
95th percentile per-packet one-way delay: 54.324 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 58.15 Mbit/s
95th percentile per-packet one-way delay: 54.286 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 46.48 Mbit/s
95th percentile per-packet one-way delay: 54.281 ms
Loss rate: 0.04%
Run 6: Report of QUIC Cubic — Data Link

![Graph showing throughput and packet loss over time for different flow types.]
Run 7: Statistics of QUIC Cubic

Start at: 2018-07-12 06:36:28
End at: 2018-07-12 06:36:58
Local clock offset: -0.062 ms
Remote clock offset: -0.151 ms

# Below is generated by plot.py at 2018-07-12 10:25:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 108.27 Mbit/s
95th percentile per-packet one-way delay: 53.072 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 60.72 Mbit/s
95th percentile per-packet one-way delay: 50.296 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 46.12 Mbit/s
95th percentile per-packet one-way delay: 50.700 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 51.69 Mbit/s
95th percentile per-packet one-way delay: 53.141 ms
Loss rate: 0.00%
Run 7: Report of QUIC Cubic — Data Link

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

- **Flow 1**: Ingress (mean 60.72 Mbit/s), Egress (mean 60.72 Mbit/s)
- **Flow 2**: Ingress (mean 46.12 Mbit/s), Egress (mean 46.12 Mbit/s)
- **Flow 3**: Ingress (mean 51.67 Mbit/s), Egress (mean 51.69 Mbit/s)

*Flow 1 (95th percentile 50.30 ms) • Flow 2 (95th percentile 50.70 ms) • Flow 3 (95th percentile 53.14 ms)*
Run 8: Statistics of QUIC Cubic

Start at: 2018-07-12 07:01:21
End at: 2018-07-12 07:01:51
Local clock offset: -0.088 ms
Remote clock offset: -1.229 ms

# Below is generated by plot.py at 2018-07-12 10:25:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.66 Mbit/s
95th percentile per-packet one-way delay: 52.572 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 64.27 Mbit/s
95th percentile per-packet one-way delay: 52.583 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 26.64 Mbit/s
95th percentile per-packet one-way delay: 49.448 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 20.43 Mbit/s
95th percentile per-packet one-way delay: 52.541 ms
Loss rate: 0.01%
Run 8: Report of QUIC Cubic — Data Link

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

**Throughput (Mbps):**
- Blue dashed line: Flow 1 ingress (mean 64.26 Mbps)
- Blue solid line: Flow 1 egress (mean 64.27 Mbps)
- Green dashed line: Flow 2 ingress (mean 26.64 Mbps)
- Green solid line: Flow 2 egress (mean 26.64 Mbps)
- Red dashed line: Flow 3 ingress (mean 20.43 Mbps)
- Red solid line: Flow 3 egress (mean 20.43 Mbps)

**Packet Delay (ms):**
- Blue circle: Flow 1 (95th percentile 52.58 ms)
- Green circle: Flow 2 (95th percentile 49.45 ms)
- Red circle: Flow 3 (95th percentile 52.54 ms)
Run 9: Statistics of QUIC Cubic

Start at: 2018-07-12 07:25:55
End at: 2018-07-12 07:26:25
Local clock offset: 0.145 ms
Remote clock offset: -0.198 ms

# Below is generated by plot.py at 2018-07-12 10:25:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 105.34 Mbit/s
95th percentile per-packet one-way delay: 53.350 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 72.75 Mbit/s
95th percentile per-packet one-way delay: 53.294 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 41.27 Mbit/s
95th percentile per-packet one-way delay: 53.363 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 15.83 Mbit/s
95th percentile per-packet one-way delay: 53.470 ms
Loss rate: 0.00%
Run 9: Report of QUIC Cubic — Data Link

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

- Flow 1 ingress (mean 72.75 Mbit/s)
- Flow 1 egress (mean 72.75 Mbit/s)
- Flow 2 ingress (mean 41.26 Mbit/s)
- Flow 2 egress (mean 41.27 Mbit/s)
- Flow 3 ingress (mean 15.83 Mbit/s)
- Flow 3 egress (mean 15.83 Mbit/s)
Run 10: Statistics of QUIC Cubic

Start at: 2018-07-12 07:50:23
End at: 2018-07-12 07:50:53
Local clock offset: -0.02 ms
Remote clock offset: -0.061 ms

# Below is generated by plot.py at 2018-07-12 10:25:01
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 133.23 Mbit/s
  95th percentile per-packet one-way delay: 53.561 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 72.70 Mbit/s
  95th percentile per-packet one-way delay: 53.550 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 75.95 Mbit/s
  95th percentile per-packet one-way delay: 53.575 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 30.78 Mbit/s
  95th percentile per-packet one-way delay: 50.260 ms
  Loss rate: 0.01%
Run 10: Report of QUIC Cubic — Data Link
Run 1: Statistics of SCReAM

Start at: 2018-07-12 04:06:03
End at: 2018-07-12 04:06:33
Local clock offset: -0.093 ms
Remote clock offset: -0.082 ms

# Below is generated by plot.py at 2018-07-12 10:25:01
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 54.102 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 54.124 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 53.868 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 50.845 ms
  Loss rate: 0.00%
Run 1: Report of SCReAM — Data Link

![Graph showing throughput and packet delay over time]

- 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 packet delay per second over time]

- Flow 1 (95th percentile 54.12 ms)
- Flow 2 (95th percentile 53.87 ms)
- Flow 3 (95th percentile 50.84 ms)
Run 2: Statistics of SCReAM

Start at: 2018-07-12 04:30:46
End at: 2018-07-12 04:31:16
Local clock offset: -0.067 ms
Remote clock offset: 0.928 ms

# Below is generated by plot.py at 2018-07-12 10:25:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.39 Mbit/s
95th percentile per-packet one-way delay: 54.837 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 54.849 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 54.739 ms
Loss rate: 0.36%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 54.844 ms
Loss rate: 0.00%
Run 2: Report of SCReAM — Data Link

![Graph showing throughput and per-packet one-way delay over time for different flows.]
Run 3: Statistics of SCReAM

Start at: 2018-07-12 04:54:54
End at: 2018-07-12 04:55:24
Local clock offset: -0.107 ms
Remote clock offset: 1.148 ms

# Below is generated by plot.py at 2018-07-12 10:25:01
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 55.280 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 55.308 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 55.058 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 52.146 ms
  Loss rate: 0.00%
Run 3: Report of SCReAM — Data Link
Run 4: Statistics of SCReAM

Start at: 2018-07-12 05:19:55
End at: 2018-07-12 05:20:25
Local clock offset: -0.163 ms
Remote clock offset: 0.011 ms

# Below is generated by plot.py at 2018-07-12 10:25:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 54.006 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.511 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 54.057 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.897 ms
Loss rate: 0.00%
Run 4: Report of SCReAM — Data Link
Run 5: Statistics of SCReAM

Start at: 2018-07-12 05:44:37
End at: 2018-07-12 05:45:07
Local clock offset: -0.234 ms
Remote clock offset: -0.246 ms

# Below is generated by plot.py at 2018-07-12 10:25:01
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 53.487 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 53.201 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 53.519 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 53.163 ms
  Loss rate: 0.00%
Run 5: Report of SCReAM — Data Link

[Graphs showing throughput and delay over time for different flows]
Run 6: Statistics of SCReAM

Start at: 2018-07-12 06:09:07
End at: 2018-07-12 06:09:37
Local clock offset: 0.066 ms
Remote clock offset: 1.183 ms

# Below is generated by plot.py at 2018-07-12 10:25:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 54.612 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 52.165 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 51.970 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 54.715 ms
Loss rate: 0.00%
Run 6: Report of SCReAM — Data Link

![Graph of Throughput (Mbps)]

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

![Graph of Packet Round-trip Delay (ms)]

- Flow 1 (95th percentile 52.16 ms)
- Flow 2 (95th percentile 51.97 ms)
- Flow 3 (95th percentile 54.72 ms)
Run 7: Statistics of SCReAM

Start at: 2018-07-12 06:33:59
End at: 2018-07-12 06:34:29
Local clock offset: -0.214 ms
Remote clock offset: -0.161 ms

# Below is generated by plot.py at 2018-07-12 10:25:02
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 53.975 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 53.691 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 54.017 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 50.502 ms
  Loss rate: 0.00%
Run 7: Report of SCReAM — Data Link

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

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

- Flow 1 (95th percentile 53.69 ms)
- Flow 2 (95th percentile 54.02 ms)
- Flow 3 (95th percentile 50.50 ms)
Run 8: Statistics of SCReAM

Start at: 2018-07-12 06:58:54
End at: 2018-07-12 06:59:24
Local clock offset: 0.046 ms
Remote clock offset: -0.165 ms

# Below is generated by plot.py at 2018-07-12 10:25:02
# Datalink statistics
-- Total of 3 flows:
 Average throughput: 0.43 Mbit/s
 95th percentile per-packet one-way delay: 53.600 ms
 Loss rate: 0.00%
-- Flow 1:
 Average throughput: 0.22 Mbit/s
 95th percentile per-packet one-way delay: 53.531 ms
 Loss rate: 0.00%
-- Flow 2:
 Average throughput: 0.21 Mbit/s
 95th percentile per-packet one-way delay: 53.643 ms
 Loss rate: 0.00%
-- Flow 3:
 Average throughput: 0.22 Mbit/s
 95th percentile per-packet one-way delay: 50.548 ms
 Loss rate: 0.00%
Run 8: Report of SCReAM — Data Link

![Graph showing throughput and per-packet mean delay over time for flows 1, 2, and 3.](image)

- Flow 1 ingress (mean 0.22 Mbit/s)
- Flow 1 egress (mean 0.22 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 mean delay over time for flows 1, 2, and 3.](image)

- Flow 1 (95th percentile 53.53 ms)
- Flow 2 (95th percentile 53.64 ms)
- Flow 3 (95th percentile 50.55 ms)
Run 9: Statistics of SCReAM

Start at: 2018-07-12 07:23:28
End at: 2018-07-12 07:23:58
Local clock offset: 0.037 ms
Remote clock offset: 0.028 ms

# Below is generated by plot.py at 2018-07-12 10:25:02
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 53.795 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 50.742 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 53.831 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 50.424 ms
  Loss rate: 0.00%
Run 9: Report of SCReAM — Data Link
Run 10: Statistics of SCReAM

Start at: 2018-07-12 07:47:55
End at: 2018-07-12 07:48:25
Local clock offset: 0.016 ms
Remote clock offset: 0.116 ms

# Below is generated by plot.py at 2018-07-12 10:25:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 53.933 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.926 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.878 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 53.972 ms
Loss rate: 0.00%
Run 10: Report of SCReAM — Data Link
Run 1: Statistics of Sprout

Start at: 2018-07-12 03:50:19
End at: 2018-07-12 03:50:49
Local clock offset: -0.049 ms
Remote clock offset: -0.295 ms

# Below is generated by plot.py at 2018-07-12 10:25:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.27 Mbit/s
95th percentile per-packet one-way delay: 54.304 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 7.26 Mbit/s
95th percentile per-packet one-way delay: 54.381 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 6.83 Mbit/s
95th percentile per-packet one-way delay: 54.223 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 7.46 Mbit/s
95th percentile per-packet one-way delay: 54.126 ms
Loss rate: 0.00%
Run 1: Report of Sprout — Data Link
Run 2: Statistics of Sprout

Start at: 2018-07-12 04:15:08
End at: 2018-07-12 04:15:38
Local clock offset: 0.046 ms
Remote clock offset: -0.323 ms

# Below is generated by plot.py at 2018-07-12 10:25:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.21 Mbit/s
95th percentile per-packet one-way delay: 54.203 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 7.27 Mbit/s
95th percentile per-packet one-way delay: 54.168 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 7.08 Mbit/s
95th percentile per-packet one-way delay: 54.330 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 3.77 Mbit/s
95th percentile per-packet one-way delay: 53.914 ms
Loss rate: 0.00%
Run 2: Report of Sprout — Data Link

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

Start at: 2018-07-12 04:39:51
End at: 2018-07-12 04:40:21
Local clock offset: 0.105 ms
Remote clock offset: -1.316 ms

# Below is generated by plot.py at 2018-07-12 10:25:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.05 Mbit/s
95th percentile per-packet one-way delay: 53.150 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 6.82 Mbit/s
95th percentile per-packet one-way delay: 53.029 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 7.68 Mbit/s
95th percentile per-packet one-way delay: 53.151 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 6.40 Mbit/s
95th percentile per-packet one-way delay: 53.306 ms
Loss rate: 0.00%
Run 3: Report of Sprout — Data Link

![Graph showing throughput and per-packet round-trip time for different traffic flows over time. The graphs display variations in throughput and delay for Flow 1, Flow 2, and Flow 3.]
Run 4: Statistics of Sprout

Start at: 2018-07-12 05:04:14
End at: 2018-07-12 05:04:44
Local clock offset: 0.067 ms
Remote clock offset: -1.054 ms

# Below is generated by plot.py at 2018-07-12 10:25:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.32 Mbit/s
95th percentile per-packet one-way delay: 53.385 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 5.98 Mbit/s
95th percentile per-packet one-way delay: 53.468 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 7.31 Mbit/s
95th percentile per-packet one-way delay: 53.315 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 7.52 Mbit/s
95th percentile per-packet one-way delay: 53.072 ms
Loss rate: 0.00%
Run 4: Report of Sprout — Data Link

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**Throughput (Mbps/s)**

- **Flow 1 ingress (mean 5.98 Mbps/s)**
- **Flow 1 egress (mean 5.98 Mbps/s)**
- **Flow 2 ingress (mean 7.31 Mbps/s)**
- **Flow 2 egress (mean 7.31 Mbps/s)**
- **Flow 3 ingress (mean 7.32 Mbps/s)**
- **Flow 3 egress (mean 7.32 Mbps/s)**

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

- **Flow 1 (95th percentile 53.47 ms)**
- **Flow 2 (95th percentile 53.31 ms)**
- **Flow 3 (95th percentile 53.07 ms)**
Run 5: Statistics of Sprout

Start at: 2018-07-12 05:29:03
End at: 2018-07-12 05:29:33
Local clock offset: -0.162 ms
Remote clock offset: 0.936 ms

# Below is generated by plot.py at 2018-07-12 10:25:02
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 14.27 Mbit/s
  95th percentile per-packet one-way delay: 55.238 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 7.11 Mbit/s
  95th percentile per-packet one-way delay: 55.085 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 7.68 Mbit/s
  95th percentile per-packet one-way delay: 55.295 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 6.23 Mbit/s
  95th percentile per-packet one-way delay: 55.410 ms
  Loss rate: 0.00%
Run 5: Report of Sprout — Data Link

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

- Flow 1 ingress (mean 7.11 Mbps)
- Flow 1 egress (mean 7.11 Mbps)
- Flow 2 ingress (mean 7.68 Mbps)
- Flow 2 egress (mean 7.68 Mbps)
- Flow 3 ingress (mean 6.23 Mbps)
- Flow 3 egress (mean 6.23 Mbps)

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

- Flow 1 (95th percentile 55.09 ms)
- Flow 2 (95th percentile 55.30 ms)
- Flow 3 (95th percentile 55.41 ms)
Run 6: Statistics of Sprout

Start at: 2018-07-12 05:53:34
End at: 2018-07-12 05:54:04
Local clock offset: -0.114 ms
Remote clock offset: -0.166 ms

# Below is generated by plot.py at 2018-07-12 10:25:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.01 Mbit/s
95th percentile per-packet one-way delay: 54.085 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 7.18 Mbit/s
95th percentile per-packet one-way delay: 54.176 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 7.10 Mbit/s
95th percentile per-packet one-way delay: 54.044 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 6.42 Mbit/s
95th percentile per-packet one-way delay: 51.778 ms
Loss rate: 0.00%
Run 6: Report of Sprout — Data Link

![Data Link Throughput Graph]

![Data Link Delay Graph]

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Run 7: Statistics of Sprout

Start at: 2018-07-12 06:18:11
End at: 2018-07-12 06:18:41
Local clock offset: -0.256 ms
Remote clock offset: 0.09 ms

# Below is generated by plot.py at 2018-07-12 10:25:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.86 Mbit/s
95th percentile per-packet one-way delay: 54.583 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 7.05 Mbit/s
95th percentile per-packet one-way delay: 54.556 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 7.48 Mbit/s
95th percentile per-packet one-way delay: 54.629 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 5.57 Mbit/s
95th percentile per-packet one-way delay: 54.559 ms
Loss rate: 0.00%
Run 7: Report of Sprout — Data Link
Run 8: Statistics of Sprout

Start at: 2018-07-12 06:43:22
End at: 2018-07-12 06:43:52
Local clock offset: 0.088 ms
Remote clock offset: 0.065 ms

# Below is generated by plot.py at 2018-07-12 10:25:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.02 Mbit/s
95th percentile per-packet one-way delay: 54.239 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 6.57 Mbit/s
95th percentile per-packet one-way delay: 54.338 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 6.87 Mbit/s
95th percentile per-packet one-way delay: 54.182 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 5.72 Mbit/s
95th percentile per-packet one-way delay: 51.538 ms
Loss rate: 0.00%
Run 8: Report of Sprout — Data Link

![Graphs showing throughput and per-packet round-trip delay over time.]

- **Throughput (Mbps)**
  - Flow 1 ingress (mean 6.57 Mbps)
  - Flow 1 egress (mean 6.57 Mbps)
  - Flow 2 ingress (mean 6.87 Mbps)
  - Flow 2 egress (mean 6.87 Mbps)
  - Flow 3 ingress (mean 5.72 Mbps)
  - Flow 3 egress (mean 5.72 Mbps)

- **Per-packet round-trip delay (ms)**
  - Flow 1 (95th percentile 54.34 ms)
  - Flow 2 (95th percentile 54.18 ms)
  - Flow 3 (95th percentile 51.54 ms)
Run 9: Statistics of Sprout

Start at: 2018-07-12 07:07:56
End at: 2018-07-12 07:08:26
Local clock offset: -0.084 ms
Remote clock offset: 0.038 ms

# Below is generated by plot.py at 2018-07-12 10:25:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.78 Mbit/s
95th percentile per-packet one-way delay: 54.516 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 7.01 Mbit/s
95th percentile per-packet one-way delay: 54.642 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 6.86 Mbit/s
95th percentile per-packet one-way delay: 54.329 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 6.70 Mbit/s
95th percentile per-packet one-way delay: 52.024 ms
Loss rate: 0.00%
Run 9: Report of Sprout — Data Link

![Graph of throughput (Mb/s) over time for different flows.]

- **Flow 1 ingress (mean 7.01 Mb/s)**
- **Flow 1 egress (mean 7.01 Mb/s)**
- **Flow 2 ingress (mean 6.86 Mb/s)**
- **Flow 2 egress (mean 6.86 Mb/s)**
- **Flow 3 ingress (mean 6.70 Mb/s)**
- **Flow 3 egress (mean 6.70 Mb/s)**

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

- **Flow 1 (95th percentile 54.64 ms)**
- **Flow 2 (95th percentile 54.33 ms)**
- **Flow 3 (95th percentile 52.02 ms)**
Run 10: Statistics of Sprout

Start at: 2018-07-12 07:32:35
End at: 2018-07-12 07:33:05
Local clock offset: -0.036 ms
Remote clock offset: -0.219 ms

# Below is generated by plot.py at 2018-07-12 10:25:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.27 Mbit/s
95th percentile per-packet one-way delay: 54.135 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 7.18 Mbit/s
95th percentile per-packet one-way delay: 54.245 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 5.57 Mbit/s
95th percentile per-packet one-way delay: 53.939 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 7.25 Mbit/s
95th percentile per-packet one-way delay: 52.972 ms
Loss rate: 0.00%
Run 1: Statistics of TaoVA-100x

Start at: 2018-07-12 03:48:52
End at: 2018-07-12 03:49:22
Local clock offset: -0.06 ms
Remote clock offset: 0.011 ms

# Below is generated by plot.py at 2018-07-12 10:27:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 211.62 Mbit/s
95th percentile per-packet one-way delay: 53.934 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 159.02 Mbit/s
95th percentile per-packet one-way delay: 53.668 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 129.22 Mbit/s
95th percentile per-packet one-way delay: 54.024 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 74.32 Mbit/s
95th percentile per-packet one-way delay: 53.835 ms
Loss rate: 0.00%
Run 1: Report of TaoVA-100x — Data Link
Run 2: Statistics of TaoVA-100x

Start at: 2018-07-12 04:13:43
End at: 2018-07-12 04:14:13
Local clock offset: -0.094 ms
Remote clock offset: -0.253 ms

# Below is generated by plot.py at 2018-07-12 10:27:45
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 189.06 Mbit/s
  95th percentile per-packet one-way delay: 53.555 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 12.01 Mbit/s
  95th percentile per-packet one-way delay: 53.575 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 139.83 Mbit/s
  95th percentile per-packet one-way delay: 53.564 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 252.51 Mbit/s
  95th percentile per-packet one-way delay: 53.450 ms
  Loss rate: 0.00%
Run 2: Report of TaoVA-100x — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 12.01 Mbit/s)  Flow 1 egress (mean 12.01 Mbit/s)
Flow 2 ingress (mean 139.82 Mbit/s)  Flow 2 egress (mean 139.83 Mbit/s)
Flow 3 ingress (mean 252.58 Mbit/s)  Flow 3 egress (mean 252.51 Mbit/s)

Per packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 53.58 ms)  Flow 2 (95th percentile 53.56 ms)  Flow 3 (95th percentile 53.45 ms)
Run 3: Statistics of TaoVA-100x

Start at: 2018-07-12 04:38:35
End at: 2018-07-12 04:39:05
Local clock offset: 0.071 ms
Remote clock offset: -0.213 ms

# Below is generated by plot.py at 2018-07-12 10:27:45
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 93.08 Mbit/s
  95th percentile per-packet one-way delay: 53.432 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 77.85 Mbit/s
  95th percentile per-packet one-way delay: 53.354 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 15.93 Mbit/s
  95th percentile per-packet one-way delay: 53.909 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 13.92 Mbit/s
  95th percentile per-packet one-way delay: 53.376 ms
  Loss rate: 0.00%
Run 3: Report of TaoVA-100x — Data Link

[Graph showing network throughput and latency over time for different flows.]
Run 4: Statistics of TaoVA-100x

Start at: 2018-07-12 05:02:38
End at: 2018-07-12 05:03:08
Local clock offset: 0.083 ms
Remote clock offset: -0.269 ms

# Below is generated by plot.py at 2018-07-12 10:31:35
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 314.41 Mbit/s
  95th percentile per-packet one-way delay: 53.228 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 157.84 Mbit/s
  95th percentile per-packet one-way delay: 52.713 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 173.25 Mbit/s
  95th percentile per-packet one-way delay: 53.248 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 123.84 Mbit/s
  95th percentile per-packet one-way delay: 53.156 ms
  Loss rate: 0.00%
Run 4: Report of TaoVA-100x — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 157.84 Mbps)  
Flow 1 egress (mean 157.84 Mbps)  
Flow 2 ingress (mean 173.25 Mbps)  
Flow 2 egress (mean 173.25 Mbps)  
Flow 3 ingress (mean 123.84 Mbps)  
Flow 3 egress (mean 123.84 Mbps)

Per-packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 52.71 ms)  
Flow 2 (95th percentile 53.25 ms)  
Flow 3 (95th percentile 53.16 ms)

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Run 5: Statistics of TaoVA-100x

Start at: 2018-07-12 05:27:45  
End at: 2018-07-12 05:28:15  
Local clock offset: -0.093 ms  
Remote clock offset: 0.105 ms

# Below is generated by plot.py at 2018-07-12 10:31:35  
# Datalink statistics
-- Total of 3 flows:
Average throughput: 110.64 Mbit/s  
95th percentile per-packet one-way delay: 53.526 ms  
Loss rate: 0.00%
-- Flow 1:
Average throughput: 14.11 Mbit/s  
95th percentile per-packet one-way delay: 53.519 ms  
Loss rate: 0.00%
-- Flow 2:
Average throughput: 137.33 Mbit/s  
95th percentile per-packet one-way delay: 53.484 ms  
Loss rate: 0.00%
-- Flow 3:
Average throughput: 15.15 Mbit/s  
95th percentile per-packet one-way delay: 53.771 ms  
Loss rate: 0.00%
Run 5: Report of TaoVA-100x — Data Link

![Graph of throughput and per packet one way delay over time for different flows.](image-url)
Run 6: Statistics of TaoVA-100x

Start at: 2018-07-12 05:52:20
End at: 2018-07-12 05:52:50
Local clock offset: −0.133 ms
Remote clock offset: −0.224 ms

# Below is generated by plot.py at 2018-07-12 10:31:35
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 59.80 Mbit/s
  95th percentile per-packet one-way delay: 53.223 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 28.66 Mbit/s
  95th percentile per-packet one-way delay: 53.269 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 13.90 Mbit/s
  95th percentile per-packet one-way delay: 53.152 ms
  Loss rate: 0.01%
-- Flow 3:
  Average throughput: 65.85 Mbit/s
  95th percentile per-packet one-way delay: 53.127 ms
  Loss rate: 0.00%
Run 6: Report of TaoVA-100x — Data Link
Run 7: Statistics of TaoVA-100x

Start at: 2018-07-12 06:16:51
End at: 2018-07-12 06:17:21
Local clock offset: -0.019 ms
Remote clock offset: -0.246 ms

# Below is generated by plot.py at 2018-07-12 10:31:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 136.02 Mbit/s
95th percentile per-packet one-way delay: 53.181 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 21.20 Mbit/s
95th percentile per-packet one-way delay: 53.074 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 166.85 Mbit/s
95th percentile per-packet one-way delay: 53.199 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 11.10 Mbit/s
95th percentile per-packet one-way delay: 52.929 ms
Loss rate: 0.00%
Run 7: Report of TaoVA-100x — Data Link

![Graph showing network performance metrics over time, including throughput and per-packet one-way delay.]

- **Flow 1**: Mean 21.20 Mbit/s, Ingress and Egress data.
- **Flow 2**: Mean 166.84 Mbit/s, Ingress data.
- **Flow 3**: Mean 11.10 Mbit/s, Ingress and Egress data.

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Run 8: Statistics of TaoVA-100x

Start at: 2018-07-12 06:41:57
End at: 2018-07-12 06:42:27
Local clock offset: -0.114 ms
Remote clock offset: -0.061 ms

# Below is generated by plot.py at 2018-07-12 10:31:35
# Datalink statistics

-- Total of 3 flows:
Average throughput: 195.72 Mbit/s
95th percentile per-packet one-way delay: 53.781 ms
Loss rate: 0.02%

-- Flow 1:
Average throughput: 88.79 Mbit/s
95th percentile per-packet one-way delay: 53.541 ms
Loss rate: 0.01%

-- Flow 2:
Average throughput: 41.08 Mbit/s
95th percentile per-packet one-way delay: 54.839 ms
Loss rate: 0.00%

-- Flow 3:
Average throughput: 252.61 Mbit/s
95th percentile per-packet one-way delay: 53.846 ms
Loss rate: 0.03%
Run 8: Report of TaoVA-100x — Data Link

![Data Link Graph]

- **Flow 1 ingress (mean 88.79 Mbit/s)**
- **Flow 1 egress (mean 88.79 Mbit/s)**
- **Flow 2 ingress (mean 41.08 Mbit/s)**
- **Flow 2 egress (mean 41.08 Mbit/s)**
- **Flow 3 ingress (mean 252.59 Mbit/s)**
- **Flow 3 egress (mean 252.61 Mbit/s)**

![Delay Graph]

- **Flow 1 (95th percentile 53.54 ms)**
- **Flow 2 (95th percentile 54.84 ms)**
- **Flow 3 (95th percentile 53.85 ms)**
Run 9: Statistics of TaoVA-100x

Start at: 2018-07-12 07:06:40
End at: 2018-07-12 07:07:10
Local clock offset: 0.011 ms
Remote clock offset: -0.22 ms

# Below is generated by plot.py at 2018-07-12 10:31:35
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 87.06 Mbit/s
  95th percentile per-packet one-way delay: 55.628 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 13.56 Mbit/s
  95th percentile per-packet one-way delay: 53.475 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 194.25 Mbit/s
  95th percentile per-packet one-way delay: 53.476 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 148.86 Mbit/s
  95th percentile per-packet one-way delay: 60.818 ms
  Loss rate: 0.00%
Run 9: Report of TaoVA-100x — Data Link

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

Flow 1 ingress (mean 13.56 Mbit/s)  Flow 1 egress (mean 13.56 Mbit/s)
Flow 2 ingress (mean 194.36 Mbit/s)  Flow 2 egress (mean 194.25 Mbit/s)
Flow 3 ingress (mean 148.85 Mbit/s)  Flow 3 egress (mean 148.86 Mbit/s)
Run 10: Statistics of TaoVA-100x

Start at: 2018-07-12 07:31:11
End at: 2018-07-12 07:31:41
Local clock offset: -0.027 ms
Remote clock offset: 0.128 ms

# Below is generated by plot.py at 2018-07-12 10:31:35
# Datalink statistics
  -- Total of 3 flows:
  Average throughput: 175.68 Mbit/s
  95th percentile per-packet one-way delay: 53.921 ms
  Loss rate: 0.00%
  -- Flow 1:
  Average throughput: 12.33 Mbit/s
  95th percentile per-packet one-way delay: 53.996 ms
  Loss rate: 0.00%
  -- Flow 2:
  Average throughput: 144.11 Mbit/s
  95th percentile per-packet one-way delay: 53.876 ms
  Loss rate: 0.00%
  -- Flow 3:
  Average throughput: 202.88 Mbit/s
  95th percentile per-packet one-way delay: 53.891 ms
  Loss rate: 0.00%
Run 10: Report of TaoVA-100x — Data Link

---

1. Throughput Graph:
   - X-axis: Time (s)
   - Y-axis: Throughput (Mbps)
   - Legend:
     - Flow 1 ingress (mean 12.33 Mbps)
     - Flow 1 egress (mean 12.33 Mbps)
     - Flow 2 ingress (mean 144.11 Mbps)
     - Flow 2 egress (mean 144.11 Mbps)
     - Flow 3 ingress (mean 202.28 Mbps)
     - Flow 3 egress (mean 202.88 Mbps)

2. Delay Graph:
   - X-axis: Time (s)
   - Y-axis: Per-packet one way delay (ms)
   - Legend:
     - Flow 1 (95th percentile 54.00 ms)
     - Flow 2 (95th percentile 53.88 ms)
     - Flow 3 (95th percentile 53.89 ms)

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Run 1: Statistics of TCP Vegas

Start at: 2018-07-12 04:07:11
End at: 2018-07-12 04:07:41
Local clock offset: -0.164 ms
Remote clock offset: -0.32 ms

# Below is generated by plot.py at 2018-07-12 10:31:35
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 180.47 Mbit/s
  95th percentile per-packet one-way delay: 54.154 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 126.05 Mbit/s
  95th percentile per-packet one-way delay: 54.163 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 79.04 Mbit/s
  95th percentile per-packet one-way delay: 54.116 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 5.35 Mbit/s
  95th percentile per-packet one-way delay: 54.485 ms
  Loss rate: 0.05%
Run 1: Report of TCP Vegas — Data Link

![Throughput Graph]

- Flow 1 ingress (mean 126.06 Mbit/s)
- Flow 1 egress (mean 126.05 Mbit/s)
- Flow 2 ingress (mean 79.05 Mbit/s)
- Flow 2 egress (mean 79.04 Mbit/s)
- Flow 3 ingress (mean 5.35 Mbit/s)
- Flow 3 egress (mean 5.35 Mbit/s)

![Per-packet-rw delay Graph]

- Flow 1 (95th percentile 54.16 ms)
- Flow 2 (95th percentile 54.12 ms)
- Flow 3 (95th percentile 54.48 ms)
Run 2: Statistics of TCP Vegas

Start at: 2018-07-12 04:31:54
End at: 2018-07-12 04:32:24
Local clock offset: -0.15 ms
Remote clock offset: 1.133 ms

# Below is generated by plot.py at 2018-07-12 10:31:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 213.61 Mbit/s
95th percentile per-packet one-way delay: 56.704 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 96.68 Mbit/s
95th percentile per-packet one-way delay: 56.701 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 106.03 Mbit/s
95th percentile per-packet one-way delay: 56.373 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 139.42 Mbit/s
95th percentile per-packet one-way delay: 57.036 ms
Loss rate: 0.00%
Run 2: Report of TCP Vegas — Data Link

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

- Flow 1 ingress (mean 96.68 Mbit/s)
- Flow 1 egress (mean 96.68 Mbit/s)
- Flow 2 ingress (mean 106.03 Mbit/s)
- Flow 2 egress (mean 106.03 Mbit/s)
- Flow 3 ingress (mean 139.42 Mbit/s)
- Flow 3 egress (mean 139.42 Mbit/s)

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

- Flow 1 (95th percentile 56.70 ms)
- Flow 2 (95th percentile 56.37 ms)
- Flow 3 (95th percentile 57.04 ms)
Run 3: Statistics of TCP Vegas

Start at: 2018-07-12 04:56:03
End at: 2018-07-12 04:56:33
Local clock offset: -0.062 ms
Remote clock offset: -0.234 ms

# Below is generated by plot.py at 2018-07-12 10:31:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 130.25 Mbit/s
95th percentile per-packet one-way delay: 54.980 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 70.25 Mbit/s
95th percentile per-packet one-way delay: 55.055 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 72.07 Mbit/s
95th percentile per-packet one-way delay: 55.007 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 36.28 Mbit/s
95th percentile per-packet one-way delay: 54.565 ms
Loss rate: 0.00%
Run 3: Report of TCP Vegas — Data Link

![Graph 1](image1)

![Graph 2](image2)
Run 4: Statistics of TCP Vegas

Start at: 2018-07-12 05:21:03
End at: 2018-07-12 05:21:33
Local clock offset: 0.027 ms
Remote clock offset: -1.27 ms

# Below is generated by plot.py at 2018-07-12 10:34:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 360.04 Mbit/s
95th percentile per-packet one-way delay: 61.784 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 210.37 Mbit/s
95th percentile per-packet one-way delay: 61.919 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 123.61 Mbit/s
95th percentile per-packet one-way delay: 60.050 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 202.62 Mbit/s
95th percentile per-packet one-way delay: 63.489 ms
Loss rate: 0.00%
Run 4: Report of TCP Vegas — Data Link
Run 5: Statistics of TCP Vegas

Start at: 2018-07-12 05:45:46
End at: 2018-07-12 05:46:16
Local clock offset: -0.016 ms
Remote clock offset: -0.1 ms

# Below is generated by plot.py at 2018-07-12 10:34:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 148.07 Mbit/s
95th percentile per-packet one-way delay: 55.686 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 33.23 Mbit/s
95th percentile per-packet one-way delay: 54.518 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 63.24 Mbit/s
95th percentile per-packet one-way delay: 56.138 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 219.03 Mbit/s
95th percentile per-packet one-way delay: 55.923 ms
Loss rate: 0.00%
Run 5: Report of TCP Vegas — Data Link
Run 6: Statistics of TCP Vegas

Start at: 2018-07-12 06:10:15
End at: 2018-07-12 06:10:45
Local clock offset: -0.087 ms
Remote clock offset: 1.246 ms

# Below is generated by plot.py at 2018-07-12 10:34:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 123.27 Mbit/s
95th percentile per-packet one-way delay: 56.134 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 88.88 Mbit/s
95th percentile per-packet one-way delay: 56.142 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 19.96 Mbit/s
95th percentile per-packet one-way delay: 55.889 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 63.63 Mbit/s
95th percentile per-packet one-way delay: 56.265 ms
Loss rate: 0.00%
Run 6: Report of TCP Vegas — Data Link

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

- **Flow 1** ingress (mean 88.89 Mbit/s)
- **Flow 1** egress (mean 88.88 Mbit/s)
- **Flow 2** ingress (mean 19.96 Mbit/s)
- **Flow 2** egress (mean 19.96 Mbit/s)
- **Flow 3** ingress (mean 63.62 Mbit/s)
- **Flow 3** egress (mean 63.63 Mbit/s)

![Graph showing packet delay distribution.](image)

- **Flow 1** (95th percentile 56.14 ms)
- **Flow 2** (95th percentile 55.89 ms)
- **Flow 3** (95th percentile 56.27 ms)
Run 7: Statistics of TCP Vegas

Start at: 2018-07-12 06:35:07
End at: 2018-07-12 06:35:37
Local clock offset: -0.028 ms
Remote clock offset: -0.262 ms

# Below is generated by plot.py at 2018-07-12 10:34:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 265.49 Mbit/s
95th percentile per-packet one-way delay: 53.474 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 161.22 Mbit/s
95th percentile per-packet one-way delay: 53.488 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 153.86 Mbit/s
95th percentile per-packet one-way delay: 53.460 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 5.39 Mbit/s
95th percentile per-packet one-way delay: 53.510 ms
Loss rate: 0.16%
Run 7: Report of TCP Vegas — Data Link

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

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

Flow 1 (95th percentile 53.49 ms)  Flow 2 (95th percentile 53.46 ms)  Flow 3 (95th percentile 53.51 ms)
Run 8: Statistics of TCP Vegas

Start at: 2018-07-12 07:00:02
End at: 2018-07-12 07:00:32
Local clock offset: -0.212 ms
Remote clock offset: 0.134 ms

# Below is generated by plot.py at 2018-07-12 10:34:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 212.63 Mbit/s
95th percentile per-packet one-way delay: 59.230 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 39.99 Mbit/s
95th percentile per-packet one-way delay: 59.469 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 216.28 Mbit/s
95th percentile per-packet one-way delay: 59.340 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 87.05 Mbit/s
95th percentile per-packet one-way delay: 55.067 ms
Loss rate: 0.00%
Run 8: Report of TCP Vegas — Data Link

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

Throughput (Mbit/s)

Per-packet one-way delay (ms)

Run 9: Statistics of TCP Vegas

Start at: 2018-07-12 07:24:36
End at: 2018-07-12 07:25:06
Local clock offset: 0.019 ms
Remote clock offset: 0.254 ms

# Below is generated by plot.py at 2018-07-12 10:34:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 191.66 Mbit/s
95th percentile per-packet one-way delay: 59.629 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 51.34 Mbit/s
95th percentile per-packet one-way delay: 56.667 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 197.58 Mbit/s
95th percentile per-packet one-way delay: 59.977 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 26.39 Mbit/s
95th percentile per-packet one-way delay: 56.973 ms
Loss rate: 0.00%
Run 9: Report of TCP Vegas — Data Link
Run 10: Statistics of TCP Vegas

Start at: 2018-07-12 07:49:04
End at: 2018-07-12 07:49:34
Local clock offset: 0.065 ms
Remote clock offset: -0.407 ms

# Below is generated by plot.py at 2018-07-12 10:35:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 228.87 Mbit/s
95th percentile per-packet one-way delay: 59.664 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 219.70 Mbit/s
95th percentile per-packet one-way delay: 59.694 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 11.32 Mbit/s
95th percentile per-packet one-way delay: 59.279 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 5.65 Mbit/s
95th percentile per-packet one-way delay: 59.245 ms
Loss rate: 0.11%
Run 1: Statistics of Verus

Start at: 2018-07-12 04:11:05
End at: 2018-07-12 04:11:35
Local clock offset: 0.014 ms
Remote clock offset: -1.405 ms

# Below is generated by plot.py at 2018-07-12 10:37:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 327.82 Mbit/s
95th percentile per-packet one-way delay: 110.950 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 184.17 Mbit/s
95th percentile per-packet one-way delay: 99.944 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 145.07 Mbit/s
95th percentile per-packet one-way delay: 114.113 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 143.14 Mbit/s
95th percentile per-packet one-way delay: 122.843 ms
Loss rate: 0.00%
Run 1: Report of Verus — Data Link
Run 2: Statistics of Verus

Start at: 2018-07-12 04:35:54
End at: 2018-07-12 04:36:24
Local clock offset: -0.204 ms
Remote clock offset: 0.861 ms

# Below is generated by plot.py at 2018-07-12 10:37:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 361.60 Mbit/s
95th percentile per-packet one-way delay: 172.174 ms
Loss rate: 1.27%
-- Flow 1:
Average throughput: 181.46 Mbit/s
95th percentile per-packet one-way delay: 139.321 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 239.93 Mbit/s
95th percentile per-packet one-way delay: 188.589 ms
Loss rate: 2.19%
-- Flow 3:
Average throughput: 62.79 Mbit/s
95th percentile per-packet one-way delay: 171.275 ms
Loss rate: 2.27%
Run 2: Report of Verus — Data Link
Run 3: Statistics of Verus

Start at: 2018-07-12 04:59:58
End at: 2018-07-12 05:00:28
Local clock offset: -0.038 ms
Remote clock offset: -0.038 ms

# Below is generated by plot.py at 2018-07-12 10:37:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 358.31 Mbit/s
95th percentile per-packet one-way delay: 201.164 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 278.04 Mbit/s
95th percentile per-packet one-way delay: 207.431 ms
Loss rate: 0.66%
-- Flow 2:
Average throughput: 80.19 Mbit/s
95th percentile per-packet one-way delay: 158.384 ms
Loss rate: 0.36%
-- Flow 3:
Average throughput: 92.19 Mbit/s
95th percentile per-packet one-way delay: 156.620 ms
Loss rate: 0.48%
Run 3: Report of Verus — Data Link
Run 4: Statistics of Verus

Start at: 2018-07-12 05:25:05
End at: 2018-07-12 05:25:35
Local clock offset: -0.095 ms
Remote clock offset: -0.159 ms

# Below is generated by plot.py at 2018-07-12 10:40:33
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 361.94 Mbit/s
  95th percentile per-packet one-way delay: 118.799 ms
  Loss rate: 0.07%
-- Flow 1:
  Average throughput: 188.33 Mbit/s
  95th percentile per-packet one-way delay: 103.794 ms
  Loss rate: 0.01%
-- Flow 2:
  Average throughput: 199.92 Mbit/s
  95th percentile per-packet one-way delay: 119.833 ms
  Loss rate: 0.11%
-- Flow 3:
  Average throughput: 126.06 Mbit/s
  95th percentile per-packet one-way delay: 145.126 ms
  Loss rate: 0.17%
Run 4: Report of Verus — Data Link

Throughput (Mbit/s) vs Time (s)

- Flow 1 ingress (mean 188.68 Mbit/s)
- Flow 1 egress (mean 188.33 Mbit/s)
- Flow 2 ingress (mean 200.70 Mbit/s)
- Flow 2 egress (mean 199.92 Mbit/s)
- Flow 3 ingress (mean 126.13 Mbit/s)
- Flow 3 egress (mean 126.06 Mbit/s)

Delay (ms) vs Time (s)

- Flow 1 (95th percentile 103.79 ms)
- Flow 2 (95th percentile 119.83 ms)
- Flow 3 (95th percentile 145.13 ms)
Run 5: Statistics of Verus

Start at: 2018-07-12 05:49:39
End at: 2018-07-12 05:50:09
Local clock offset: -0.274 ms
Remote clock offset: -0.218 ms

# Below is generated by plot.py at 2018-07-12 10:40:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 358.45 Mbit/s
95th percentile per-packet one-way delay: 155.744 ms
Loss rate: 0.94%
-- Flow 1:
Average throughput: 246.80 Mbit/s
95th percentile per-packet one-way delay: 152.520 ms
Loss rate: 0.66%
-- Flow 2:
Average throughput: 128.60 Mbit/s
95th percentile per-packet one-way delay: 130.343 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 80.44 Mbit/s
95th percentile per-packet one-way delay: 268.462 ms
Loss rate: 4.42%
Run 5: Report of Verus — Data Link
Run 6: Statistics of Verus

Start at: 2018-07-12 06:14:11
End at: 2018-07-12 06:14:41
Local clock offset: -0.098 ms
Remote clock offset: 0.191 ms

# Below is generated by plot.py at 2018-07-12 10:40:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 345.56 Mbit/s
95th percentile per-packet one-way delay: 195.466 ms
Loss rate: 2.86%
-- Flow 1:
Average throughput: 253.53 Mbit/s
95th percentile per-packet one-way delay: 197.023 ms
Loss rate: 2.03%
-- Flow 2:
Average throughput: 110.65 Mbit/s
95th percentile per-packet one-way delay: 157.287 ms
Loss rate: 1.52%
-- Flow 3:
Average throughput: 56.00 Mbit/s
95th percentile per-packet one-way delay: 272.946 ms
Loss rate: 17.09%
Run 6: Report of Verus — Data Link
Run 7: Statistics of Verus

Start at: 2018-07-12 06:39:15
End at: 2018-07-12 06:39:45
Local clock offset: -0.021 ms
Remote clock offset: 0.015 ms

# Below is generated by plot.py at 2018-07-12 10:40:58
# Datalink statistics
-- Total of 3 flows:
 Average throughput: 363.15 Mbit/s
 95th percentile per-packet one-way delay: 201.427 ms
 Loss rate: 3.40%
-- Flow 1:
 Average throughput: 233.82 Mbit/s
 95th percentile per-packet one-way delay: 205.489 ms
 Loss rate: 3.06%
-- Flow 2:
 Average throughput: 151.05 Mbit/s
 95th percentile per-packet one-way delay: 156.223 ms
 Loss rate: 1.98%
-- Flow 3:
 Average throughput: 90.42 Mbit/s
 95th percentile per-packet one-way delay: 249.042 ms
 Loss rate: 10.33%
Run 7: Report of Verus — Data Link

![Graph showing network performance metrics over time]

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 241.18 Mbps)
  - Flow 2 ingress (mean 154.11 Mbps)
  - Flow 3 ingress (mean 101.20 Mbps)
  - Flow 1 egress (mean 233.82 Mbps)
  - Flow 2 egress (mean 151.05 Mbps)
  - Flow 3 egress (mean 90.42 Mbps)

- **Per-packet one-way delay (ms):**
  - Flow 1 (95th percentile 205.49 ms)
  - Flow 2 (95th percentile 156.22 ms)
  - Flow 3 (95th percentile 249.04 ms)
Run 8: Statistics of Verus

Start at: 2018-07-12 07:04:04
End at: 2018-07-12 07:04:34
Local clock offset: -0.011 ms
Remote clock offset: -0.26 ms

# Below is generated by plot.py at 2018-07-12 10:40:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 292.00 Mbit/s
95th percentile per-packet one-way delay: 134.815 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 176.79 Mbit/s
95th percentile per-packet one-way delay: 116.356 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 122.50 Mbit/s
95th percentile per-packet one-way delay: 109.222 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 102.58 Mbit/s
95th percentile per-packet one-way delay: 248.847 ms
Loss rate: 1.06%
Run 8: Report of Verus — Data Link

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

Flow 1 ingress (mean 177.45 Mbit/s)  
Flow 1 egress (mean 176.79 Mbit/s)  
Flow 2 ingress (mean 122.47 Mbit/s)  
Flow 2 egress (mean 122.50 Mbit/s)  
Flow 3 ingress (mean 103.63 Mbit/s)  
Flow 3 egress (mean 102.58 Mbit/s)  

Flow 1 (95th percentile 116.36 ms)  
Flow 2 (95th percentile 109.22 ms)  
Flow 3 (95th percentile 248.85 ms)
Run 9: Statistics of Verus

Start at: 2018-07-12 07:28:32
End at: 2018-07-12 07:29:02
Local clock offset: -0.175 ms
Remote clock offset: -1.41 ms

# Below is generated by plot.py at 2018-07-12 10:43:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 333.91 Mbit/s
95th percentile per-packet one-way delay: 141.108 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 215.05 Mbit/s
95th percentile per-packet one-way delay: 136.034 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 144.98 Mbit/s
95th percentile per-packet one-way delay: 151.106 ms
Loss rate: 0.51%
-- Flow 3:
Average throughput: 69.73 Mbit/s
95th percentile per-packet one-way delay: 135.930 ms
Loss rate: 1.02%
Run 10: Statistics of Verus

Start at: 2018-07-12 07:53:03
End at: 2018-07-12 07:53:33
Local clock offset: -0.083 ms
Remote clock offset: 0.091 ms

# Below is generated by plot.py at 2018-07-12 10:44:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 389.08 Mbit/s
95th percentile per-packet one-way delay: 197.303 ms
Loss rate: 1.76%
-- Flow 1:
Average throughput: 266.55 Mbit/s
95th percentile per-packet one-way delay: 205.307 ms
Loss rate: 1.80%
-- Flow 2:
Average throughput: 141.30 Mbit/s
95th percentile per-packet one-way delay: 175.890 ms
Loss rate: 1.52%
-- Flow 3:
Average throughput: 91.72 Mbit/s
95th percentile per-packet one-way delay: 168.548 ms
Loss rate: 2.05%
Run 10: Report of Verus — Data Link

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

- Flow 1 ingress (mean 272.07 Mbit/s)
- Flow 1 egress (mean 266.55 Mbit/s)
- Flow 2 ingress (mean 143.18 Mbit/s)
- Flow 2 egress (mean 141.30 Mbit/s)
- Flow 3 ingress (mean 93.91 Mbit/s)
- Flow 3 egress (mean 91.72 Mbit/s)

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

- Flow 1 (95th percentile 205.31 ms)
- Flow 2 (95th percentile 175.89 ms)
- Flow 3 (95th percentile 168.55 ms)
Run 1: Statistics of PCC-Vivace

Start at: 2018-07-12 04:04:18
End at: 2018-07-12 04:04:48
Local clock offset: -0.163 ms
Remote clock offset: 0.129 ms

# Below is generated by plot.py at 2018-07-12 10:48:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 532.47 Mbit/s
95th percentile per-packet one-way delay: 54.346 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 325.39 Mbit/s
95th percentile per-packet one-way delay: 54.883 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 289.62 Mbit/s
95th percentile per-packet one-way delay: 53.860 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 43.22 Mbit/s
95th percentile per-packet one-way delay: 54.249 ms
Loss rate: 0.00%
Run 1: Report of PCC-Vivace — Data Link

![Graph showing throughput and packet delay over time for Flow 1, Flow 2, and Flow 3.]
Run 2: Statistics of PCC-Vivace

Start at: 2018-07-12 04:29:03
End at: 2018-07-12 04:29:33
Local clock offset: 0.047 ms
Remote clock offset: -0.014 ms

# Below is generated by plot.py at 2018-07-12 10:49:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 512.34 Mbit/s
95th percentile per-packet one-way delay: 53.767 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 318.36 Mbit/s
95th percentile per-packet one-way delay: 50.711 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 259.87 Mbit/s
95th percentile per-packet one-way delay: 53.922 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 64.12 Mbit/s
95th percentile per-packet one-way delay: 50.631 ms
Loss rate: 0.00%
Run 3: Statistics of PCC-Vivace

Start at: 2018-07-12 04:53:12
End at: 2018-07-12 04:53:42
Local clock offset: -0.109 ms
Remote clock offset: -0.047 ms

# Below is generated by plot.py at 2018-07-12 10:49:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 497.59 Mbit/s
95th percentile per-packet one-way delay: 54.737 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 313.51 Mbit/s
95th percentile per-packet one-way delay: 55.307 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 250.83 Mbit/s
95th percentile per-packet one-way delay: 51.444 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 52.48 Mbit/s
95th percentile per-packet one-way delay: 53.565 ms
Loss rate: 0.05%
Run 3: Report of PCC-Vivace — Data Link

Throughput (Mbps)

Time (s)

0  5  10  15  20  25  30

Flow 1 ingress (mean 313.45 Mbps)  Flow 1 egress (mean 313.51 Mbps)
Flow 2 ingress (mean 250.77 Mbps)  Flow 2 egress (mean 250.83 Mbps)
Flow 3 ingress (mean 52.55 Mbps)   Flow 3 egress (mean 52.48 Mbps)

Per packet one way delay (ms)

Time (s)

0  5  10  15  20  25  30

Flow 1 (95th percentile 55.31 ms)  Flow 2 (95th percentile 51.44 ms)  Flow 3 (95th percentile 53.56 ms)
Run 4: Statistics of PCC-Vivace

Start at: 2018-07-12 05:18:12  
End at: 2018-07-12 05:18:42  
Local clock offset: -0.058 ms  
Remote clock offset: -0.465 ms

# Below is generated by plot.py at 2018-07-12 10:49:30  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 500.90 Mbit/s  
95th percentile per-packet one-way delay: 53.426 ms  
Loss rate: 0.01%  
-- Flow 1:  
Average throughput: 261.29 Mbit/s  
95th percentile per-packet one-way delay: 53.469 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 279.75 Mbit/s  
95th percentile per-packet one-way delay: 53.395 ms  
Loss rate: 0.02%  
-- Flow 3:  
Average throughput: 163.06 Mbit/s  
95th percentile per-packet one-way delay: 53.205 ms  
Loss rate: 0.02%
Run 4: Report of PCC-Vivace — Data Link
Run 5: Statistics of PCC-Vivace

Start at: 2018-07-12 05:42:54
End at: 2018-07-12 05:43:24
Local clock offset: -0.157 ms
Remote clock offset: -0.038 ms

# Below is generated by plot.py at 2018-07-12 10:49:42
# Datalink statistics
--- Total of 3 flows:
Average throughput: 511.76 Mbit/s
95th percentile per-packet one-way delay: 54.188 ms
Loss rate: 0.01%
--- Flow 1:
Average throughput: 297.02 Mbit/s
95th percentile per-packet one-way delay: 53.616 ms
Loss rate: 0.00%
--- Flow 2:
Average throughput: 246.46 Mbit/s
95th percentile per-packet one-way delay: 54.629 ms
Loss rate: 0.01%
--- Flow 3:
Average throughput: 154.23 Mbit/s
95th percentile per-packet one-way delay: 54.778 ms
Loss rate: 0.04%
Run 5: Report of PCC-Vivace — Data Link
Run 6: Statistics of PCC-Vivace

Start at: 2018-07-12 06:07:25
End at: 2018-07-12 06:07:55
Local clock offset: -0.132 ms
Remote clock offset: 0.128 ms

# Below is generated by plot.py at 2018-07-12 10:49:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 492.30 Mbit/s
95th percentile per-packet one-way delay: 55.585 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 330.13 Mbit/s
95th percentile per-packet one-way delay: 112.408 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 197.96 Mbit/s
95th percentile per-packet one-way delay: 53.446 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 91.64 Mbit/s
95th percentile per-packet one-way delay: 53.743 ms
Loss rate: 0.03%
Run 6: Report of PCC-Vivace — Data Link

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

- Flow 1 ingress (mean 330.13 Mbps)
- Flow 1 egress (mean 330.13 Mbps)
- Flow 2 ingress (mean 198.01 Mbps)
- Flow 2 egress (mean 197.96 Mbps)
- Flow 3 ingress (mean 91.64 Mbps)
- Flow 3 egress (mean 91.64 Mbps)

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

- Flow 1 (95th percentile 112.41 ms)
- Flow 2 (95th percentile 53.45 ms)
- Flow 3 (95th percentile 53.74 ms)
Run 7: Statistics of PCC-Vivace

Start at: 2018-07-12 06:32:14
End at: 2018-07-12 06:32:44
Local clock offset: 0.055 ms
Remote clock offset: -0.104 ms

# Below is generated by plot.py at 2018-07-12 10:51:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 524.20 Mbit/s
95th percentile per-packet one-way delay: 50.921 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 306.82 Mbit/s
95th percentile per-packet one-way delay: 51.323 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 245.54 Mbit/s
95th percentile per-packet one-way delay: 50.478 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 164.20 Mbit/s
95th percentile per-packet one-way delay: 51.119 ms
Loss rate: 0.00%
Run 7: Report of PCC-Vivace — Data Link

[Graph showing throughput and per-packet one-way delay over time for different flows.]
Run 8: Statistics of PCC-Vivace

Start at: 2018-07-12 06:57:09
End at: 2018-07-12 06:57:39
Local clock offset: -0.034 ms
Remote clock offset: 1.017 ms

# Below is generated by plot.py at 2018-07-12 10:51:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 538.88 Mbit/s
95th percentile per-packet one-way delay: 55.017 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 337.86 Mbit/s
95th percentile per-packet one-way delay: 55.144 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 261.26 Mbit/s
95th percentile per-packet one-way delay: 54.870 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 82.89 Mbit/s
95th percentile per-packet one-way delay: 54.890 ms
Loss rate: 0.00%
Run 8: Report of PCC-Vivace — Data Link

![Graph showing data link performance metrics over time]

- **Flow 1 ingress (mean 337.85 Mbit/s)**
- **Flow 1 egress (mean 337.86 Mbit/s)**
- **Flow 2 ingress (mean 261.21 Mbit/s)**
- **Flow 2 egress (mean 261.26 Mbit/s)**
- **Flow 3 ingress (mean 82.89 Mbit/s)**
- **Flow 3 egress (mean 82.89 Mbit/s)**

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

- **Flow 1 (95th percentile 55.14 ms)**
- **Flow 2 (95th percentile 54.87 ms)**
- **Flow 3 (95th percentile 54.89 ms)**
Run 9: Statistics of PCC-Vivace

Start at: 2018-07-12 07:21:48
End at: 2018-07-12 07:22:18
Local clock offset: 0.004 ms
Remote clock offset: 1.286 ms

# Below is generated by plot.py at 2018-07-12 10:52:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 470.03 Mbit/s
95th percentile per-packet one-way delay: 54.954 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 264.63 Mbit/s
95th percentile per-packet one-way delay: 55.021 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 224.08 Mbit/s
95th percentile per-packet one-way delay: 54.658 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 171.06 Mbit/s
95th percentile per-packet one-way delay: 51.965 ms
Loss rate: 0.00%
Run 9: Report of PCC-Vivace — Data Link

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**Graph:**
- **Throughput (Mbps):**
  - Flow 1 ingress (mean 264.66 Mbps)
  - Flow 1 egress (mean 264.63 Mbps)
  - Flow 2 ingress (mean 224.07 Mbps)
  - Flow 2 egress (mean 224.08 Mbps)
  - Flow 3 ingress (mean 171.01 Mbps)
  - Flow 3 egress (mean 171.06 Mbps)

- **Per-packet one-way delay (ms):**
  - Flow 1 (95th percentile 55.02 ms)
  - Flow 2 (95th percentile 54.66 ms)
  - Flow 3 (95th percentile 51.97 ms)
Run 10: Statistics of PCC-Vivace

Start at: 2018-07-12 07:46:14
End at: 2018-07-12 07:46:44
Local clock offset: 0.102 ms
Remote clock offset: -1.427 ms

# Below is generated by plot.py at 2018-07-12 10:52:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 482.57 Mbit/s
95th percentile per-packet one-way delay: 52.043 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 298.90 Mbit/s
95th percentile per-packet one-way delay: 52.070 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 228.89 Mbit/s
95th percentile per-packet one-way delay: 49.075 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 95.15 Mbit/s
95th percentile per-packet one-way delay: 48.785 ms
Loss rate: 0.00%
Run 10: Report of PCC-Vivace — Data Link

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

![Graph 2: Per-packet error delay (ms)](image)
Run 1: Statistics of WebRTC media

Start at: 2018-07-12 04:12:35
End at: 2018-07-12 04:13:05
Local clock offset: -0.065 ms
Remote clock offset: -0.068 ms

# Below is generated by plot.py at 2018-07-12 10:52:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.28 Mbit/s
95th percentile per-packet one-way delay: 54.115 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.25 Mbit/s
95th percentile per-packet one-way delay: 54.142 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.50 Mbit/s
95th percentile per-packet one-way delay: 53.881 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.62 Mbit/s
95th percentile per-packet one-way delay: 53.996 ms
Loss rate: 0.00%
Run 1: Report of WebRTC media — Data Link
Run 2: Statistics of WebRTC media

Start at: 2018-07-12 04:37:26
End at: 2018-07-12 04:37:56
Local clock offset: 0.1 ms
Remote clock offset: 0.096 ms

# Below is generated by plot.py at 2018-07-12 10:52:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.90 Mbit/s
95th percentile per-packet one-way delay: 53.847 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.08 Mbit/s
95th percentile per-packet one-way delay: 53.538 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.30 Mbit/s
95th percentile per-packet one-way delay: 53.896 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.53 Mbit/s
95th percentile per-packet one-way delay: 53.809 ms
Loss rate: 0.00%
Run 2: Report of WebRTC media — Data Link
Run 3: Statistics of WebRTC media

Start at: 2018-07-12 05:01:30
End at: 2018-07-12 05:02:00
Local clock offset: 0.083 ms
Remote clock offset: 0.032 ms

# Below is generated by plot.py at 2018-07-12 10:52:27
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 3.82 Mbit/s
  95th percentile per-packet one-way delay: 53.965 ms
  Loss rate: 0.04%

-- Flow 1:
  Average throughput: 2.02 Mbit/s
  95th percentile per-packet one-way delay: 53.909 ms
  Loss rate: 0.08%

-- Flow 2:
  Average throughput: 1.30 Mbit/s
  95th percentile per-packet one-way delay: 50.493 ms
  Loss rate: 0.00%

-- Flow 3:
  Average throughput: 0.52 Mbit/s
  95th percentile per-packet one-way delay: 54.060 ms
  Loss rate: 0.00%
Run 3: Report of WebRTC media — Data Link

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

Start at: 2018-07-12 05:26:37
End at: 2018-07-12 05:27:07
Local clock offset: 0.066 ms
Remote clock offset: -0.132 ms

# Below is generated by plot.py at 2018-07-12 10:52:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.90 Mbit/s
95th percentile per-packet one-way delay: 53.713 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.05 Mbit/s
95th percentile per-packet one-way delay: 53.244 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.33 Mbit/s
95th percentile per-packet one-way delay: 53.801 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.54 Mbit/s
95th percentile per-packet one-way delay: 53.295 ms
Loss rate: 0.00%
Run 4: Report of WebRTC media — Data Link

![Graph of WebRTC media throughput and per-packet one-way delay](image-url)

- Flow 1 ingress (mean 2.05 Mbit/s)
- Flow 1 egress (mean 2.05 Mbit/s)
- Flow 2 ingress (mean 1.33 Mbit/s)
- Flow 2 egress (mean 1.33 Mbit/s)
- Flow 3 ingress (mean 0.54 Mbit/s)
- Flow 3 egress (mean 0.54 Mbit/s)

![Graph of WebRTC media per-packet one-way delay](image-url)

- Flow 1 (95th percentile 53.24 ms)
- Flow 2 (95th percentile 53.80 ms)
- Flow 3 (95th percentile 53.30 ms)
Run 5: Statistics of WebRTC media

Start at: 2018-07-12 05:51:11
End at: 2018-07-12 05:51:41
Local clock offset: 0.218 ms
Remote clock offset: -0.225 ms

# Below is generated by plot.py at 2018-07-12 10:52:27
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 4.01 Mbit/s
  95th percentile per-packet one-way delay: 53.099 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 2.14 Mbit/s
  95th percentile per-packet one-way delay: 53.110 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 1.34 Mbit/s
  95th percentile per-packet one-way delay: 53.095 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.54 Mbit/s
  95th percentile per-packet one-way delay: 52.947 ms
  Loss rate: 0.00%
Run 5: Report of WebRTC media — Data Link

![Graph 1: Throughput vs Time (Mbps)]
- Flow 1 ingress (mean 2.14 Mbit/s)
- Flow 1 egress (mean 2.14 Mbit/s)
- Flow 2 ingress (mean 1.34 Mbit/s)
- Flow 2 egress (mean 1.34 Mbit/s)
- Flow 3 ingress (mean 0.54 Mbit/s)
- Flow 3 egress (mean 0.54 Mbit/s)

![Graph 2: Per-packet one-way delay (ms)]
- Flow 1 (95th percentile 53.11 ms)
- Flow 2 (95th percentile 53.09 ms)
- Flow 3 (95th percentile 52.95 ms)
Run 6: Statistics of WebRTC media

Start at: 2018-07-12 06:15:42
End at: 2018-07-12 06:16:12
Local clock offset: 0.083 ms
Remote clock offset: -1.232 ms

# Below is generated by plot.py at 2018-07-12 10:52:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.86 Mbit/s
95th percentile per-packet one-way delay: 52.556 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.04 Mbit/s
95th percentile per-packet one-way delay: 52.361 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.29 Mbit/s
95th percentile per-packet one-way delay: 52.632 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.55 Mbit/s
95th percentile per-packet one-way delay: 52.177 ms
Loss rate: 0.00%
Run 6: Report of WebRTC media — Data Link

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

- Flow 1 ingress (mean 2.04 Mbit/s)
- Flow 1 egress (mean 2.04 Mbit/s)
- Flow 2 ingress (mean 1.29 Mbit/s)
- Flow 2 egress (mean 1.29 Mbit/s)
- Flow 3 ingress (mean 0.55 Mbit/s)
- Flow 3 egress (mean 0.55 Mbit/s)
Run 7: Statistics of WebRTC media

Start at: 2018-07-12 06:40:49
End at: 2018-07-12 06:41:19
Local clock offset: -0.046 ms
Remote clock offset: -0.289 ms

# Below is generated by plot.py at 2018-07-12 10:52:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.87 Mbit/s
95th percentile per-packet one-way delay: 53.500 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.03 Mbit/s
95th percentile per-packet one-way delay: 53.318 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.33 Mbit/s
95th percentile per-packet one-way delay: 53.560 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.53 Mbit/s
95th percentile per-packet one-way delay: 53.329 ms
Loss rate: 0.00%
Run 7: Report of WebRTC media — Data Link

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

- **Throughput (Mbps):**
  - **Flow 1 ingress** (mean 2.03 Mbps/s)
  - **Flow 1 egress** (mean 2.03 Mbps/s)
  - **Flow 2 ingress** (mean 1.33 Mbps/s)
  - **Flow 2 egress** (mean 1.33 Mbps/s)
  - **Flow 3 ingress** (mean 0.53 Mbps/s)
  - **Flow 3 egress** (mean 0.53 Mbps/s)

- **Packet delay (ms):**
  - **Flow 1** (95th percentile 53.32 ms)
  - **Flow 2** (95th percentile 53.56 ms)
  - **Flow 3** (95th percentile 53.33 ms)
Run 8: Statistics of WebRTC media

Start at: 2018-07-12 07:05:32
End at: 2018-07-12 07:06:02
Local clock offset: -0.058 ms
Remote clock offset: 0.095 ms

# Below is generated by plot.py at 2018-07-12 10:52:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.78 Mbit/s
95th percentile per-packet one-way delay: 54.146 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.01 Mbit/s
95th percentile per-packet one-way delay: 54.130 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.26 Mbit/s
95th percentile per-packet one-way delay: 53.978 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.52 Mbit/s
95th percentile per-packet one-way delay: 54.215 ms
Loss rate: 0.00%
Run 8: Report of WebRTC media — Data Link
Run 9: Statistics of WebRTC media

Start at: 2018-07-12 07:30:02
End at: 2018-07-12 07:30:32
Local clock offset: -0.222 ms
Remote clock offset: -0.236 ms

# Below is generated by plot.py at 2018-07-12 10:52:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.88 Mbit/s
95th percentile per-packet one-way delay: 53.690 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.05 Mbit/s
95th percentile per-packet one-way delay: 50.813 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.32 Mbit/s
95th percentile per-packet one-way delay: 50.624 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.53 Mbit/s
95th percentile per-packet one-way delay: 53.790 ms
Loss rate: 0.00%
Run 9: Report of WebRTC media — Data Link
Run 10: Statistics of WebRTC media

Start at: 2018-07-12 07:54:37  
End at: 2018-07-12 07:55:07  
Local clock offset: 0.032 ms  
Remote clock offset: -0.005 ms

# Below is generated by plot.py at 2018-07-12 10:52:27
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 3.85 Mbit/s
  95th percentile per-packet one-way delay: 53.637 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 2.03 Mbit/s
  95th percentile per-packet one-way delay: 50.487 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 1.30 Mbit/s
  95th percentile per-packet one-way delay: 53.765 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.54 Mbit/s
  95th percentile per-packet one-way delay: 50.601 ms
  Loss rate: 0.00%
Run 10: Report of WebRTC media — Data Link

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

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

- **Packet loss (per packet one-way delay [ms]):**
  - Flow 1 (95th percentile 50.49 ms)
  - Flow 2 (95th percentile 53.77 ms)
  - Flow 3 (95th percentile 50.60 ms)