Pantheon Report

Generated at 2018-06-30 00:24:38 (UTC).
Tested in mahimahi: mm-delay 10 mm-link 12mbps.trace 10-every-200.trace
Repeated the test of 17 congestion control schemes 10 times.
Each test lasted for 30 seconds running 1 flow.
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

Git summary:
branch: master @ 715dc5f09d172e419699f6f17f1cb4c45064f212
thread_party/fillp @ d47f4fa1b454a5e3c0537115c5a28436db4b834
thread_party/fillp-sheep @ 30060ab034de3b3424347f5cc3db86198eac35d2a
thread_party/genericCC @ d0153f8e594aa89e93b032143cedbdfcc85e62f4
thread_party/indigo @ 2601c92e4aa9d58d38dc4dfe0e0dcbf90c077e64d
thread_party/libutp @ b3465b942e8262f2179eaab4a906ce66bb7c3f
thread_party/pantheon-tunnel @ 6f038ed31259d366f9840f65b82ce8f464b1b39
thread_party/pcc @ 1afc958fa0d66d18b623c091a55f8c872b4981e1
  M receiver/src/buffer.h
  M receiver/src/core.cpp
  M sender/src/buffer.h
  M sender/src/core.cpp
thread_party/pcc-experimental @ cd43e34e3f5f5613e8a0d8f92c4eb24f974ab
thread_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3c4f42
thread_party/scream-reproduce @ f099118d1421aa3131bf1ff1964974e1da3c4d
  M src/ScreamClient
  M src/ScreamServer
thread_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
thread_party/verus @ d4b447ea74c66a26114af2629562939f9a494
  M src/verus.hpp
  M tools/plot.py
thread_party/vivace @ 2bae88211435ae071a32f96b7d8c504587f5d7f4
thread_party/webrtc @ 3f0cc2a9061a41b6f9d9de4735777d143a1fa2851
local test in mahimahi, 10 runs of 30s each per scheme
(mean of all runs by scheme)
<table>
<thead>
<tr>
<th>scheme</th>
<th># runs</th>
<th>mean avg tput (Mbit/s)</th>
<th>mean 95th-%ile delay (ms)</th>
<th>mean loss rate (%)</th>
</tr>
</thead>
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<tr>
<td>TCP BBR</td>
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<td>83.65</td>
<td>0.01</td>
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<tr>
<td>Copa</td>
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<td>2.99</td>
<td>69.45</td>
<td>0.16</td>
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<tr>
<td>TCP Cubic</td>
<td>10</td>
<td>11.31</td>
<td>1645.45</td>
<td>3.58</td>
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<tr>
<td>FillP</td>
<td>10</td>
<td>11.78</td>
<td>7276.51</td>
<td>19.54</td>
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<tr>
<td>FillP-Sheep</td>
<td>0</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td>Indigo</td>
<td>10</td>
<td>2.00</td>
<td>45.13</td>
<td>0.24</td>
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<tr>
<td>LEDBAT</td>
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<td>5.95</td>
<td>140.21</td>
<td>0.98</td>
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<tr>
<td>PCC-Allegro</td>
<td>10</td>
<td>4.14</td>
<td>12.32</td>
<td>0.03</td>
</tr>
<tr>
<td>PCC-Expr</td>
<td>10</td>
<td>7.13</td>
<td>412.05</td>
<td>1.91</td>
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<tr>
<td>QUIC Cubic</td>
<td>10</td>
<td>8.63</td>
<td>90.57</td>
<td>0.20</td>
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<tr>
<td>SCReAM</td>
<td>10</td>
<td>0.22</td>
<td>11.67</td>
<td>0.04</td>
</tr>
<tr>
<td>Sprout</td>
<td>10</td>
<td>0.76</td>
<td>23.78</td>
<td>0.03</td>
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<tr>
<td>TaoVA-100x</td>
<td>10</td>
<td>3.14</td>
<td>65.64</td>
<td>0.04</td>
</tr>
<tr>
<td>TCP Vegas</td>
<td>10</td>
<td>11.66</td>
<td>968.48</td>
<td>3.13</td>
</tr>
<tr>
<td>Verus</td>
<td>10</td>
<td>7.27</td>
<td>419.25</td>
<td>1.60</td>
</tr>
<tr>
<td>PCC-Vivace</td>
<td>10</td>
<td>3.60</td>
<td>12.21</td>
<td>0.03</td>
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<tr>
<td>WebRTC media</td>
<td>10</td>
<td>2.11</td>
<td>15.94</td>
<td>0.06</td>
</tr>
</tbody>
</table>
Run 1: Statistics of TCP BBR

End at: 2018-06-29 22:50:26

# Below is generated by plot.py at 2018-06-30 00:18:41
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 1.13 Mbit/s (9.5% utilization)
95th percentile per-packet one-way delay: 18.261 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.13 Mbit/s
95th percentile per-packet one-way delay: 18.261 ms
Loss rate: 0.00%
Run 1: Report of TCP BBR — Data Link

![Graph showing throughput and delay](image)

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 1.13 Mbit/s)  Flow 1 egress (mean 1.13 Mbit/s)

Per-packet one-way delay (ms)

Flow 1 (95th percentile 18.26 ms)
Run 2: Statistics of TCP BBR

End at: 2018-06-29 23:00:06

# Below is generated by plot.py at 2018-06-30 00:18:44
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 2.22 Mbit/s (18.5% utilization)
  95th percentile per-packet one-way delay: 100.562 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 2.22 Mbit/s
  95th percentile per-packet one-way delay: 100.562 ms
  Loss rate: 0.00%
Run 2: Report of TCP BBR — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 2.22 Mbit/s)  Flow 1 egress (mean 2.22 Mbit/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 100.56 ms)
Run 3: Statistics of TCP BBR

Start at: 2018-06-29 23:09:17
End at: 2018-06-29 23:09:47

# Below is generated by plot.py at 2018-06-30 00:18:46
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 2.47 Mbit/s (20.6% utilization)
  95th percentile per-packet one-way delay: 73.492 ms
  Loss rate: 0.02%
-- Flow 1:
  Average throughput: 2.47 Mbit/s
  95th percentile per-packet one-way delay: 73.492 ms
  Loss rate: 0.02%
Run 3: Report of TCP BBR — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 2.47 Mbit/s)  Flow 1 egress (mean 2.47 Mbit/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 73.49 ms)
Run 4: Statistics of TCP BBR

Start at: 2018-06-29 23:18:57
End at: 2018-06-29 23:19:27

# Below is generated by plot.py at 2018-06-30 00:18:46
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 2.01 Mbit/s (16.8% utilization)
95th percentile per-packet one-way delay: 102.595 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.01 Mbit/s
95th percentile per-packet one-way delay: 102.595 ms
Loss rate: 0.00%
Run 4: Report of TCP BBR — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 2.01 Mbit/s)  Flow 1 egress (mean 2.01 Mbit/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 102.59 ms)
Run 5: Statistics of TCP BBR

End at: 2018-06-29 23:29:07

# Below is generated by plot.py at 2018-06-30 00:18:46
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 2.75 Mbit/s (22.9% utilization)
95th percentile per-packet one-way delay: 90.525 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 2.75 Mbit/s
95th percentile per-packet one-way delay: 90.525 ms
Loss rate: 0.01%
Run 5: Report of TCP BBR — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 2.75 Mbit/s)  Flow 1 egress (mean 2.75 Mbit/s)

Per packet one way delay (ms)

Flow 1 (95th percentile 90.53 ms)
Run 6: Statistics of TCP BBR

Start at: 2018-06-29 23:38:18
End at: 2018-06-29 23:38:48

# Below is generated by plot.py at 2018-06-30 00:18:46
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 2.02 Mbit/s (16.8% utilization)
95th percentile per-packet one-way delay: 101.652 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.02 Mbit/s
95th percentile per-packet one-way delay: 101.652 ms
Loss rate: 0.00%
Run 6: Report of TCP BBR — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 2.02 Mbit/s)  Flow 1 egress (mean 2.02 Mbit/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 101.65 ms)
Run 7: Statistics of TCP BBR


# Below is generated by plot.py at 2018-06-30 00:18:46
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 2.33 Mbit/s (19.4% utilization)
95th percentile per-packet one-way delay: 75.389 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 2.33 Mbit/s
95th percentile per-packet one-way delay: 75.389 ms
Loss rate: 0.02%
Run 7: Report of TCP BBR — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 2.33 Mbit/s)
Flow 1 egress (mean 2.33 Mbit/s)

Per packet one way delay (ms)

Flow 1 (95th percentile 75.39 ms)
Run 8: Statistics of TCP BBR

Start at: 2018-06-29 23:57:38
End at: 2018-06-29 23:58:08

# Below is generated by plot.py at 2018-06-30 00:18:46
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 2.10 Mbit/s (17.5% utilization)
95th percentile per-packet one-way delay: 81.859 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 2.10 Mbit/s
95th percentile per-packet one-way delay: 81.859 ms
Loss rate: 0.02%
Run 8: Report of TCP BBR — Data Link

Average capacity 12.00 Mbit/s (shaded region)

- Flow 1 ingress (mean 2.10 Mbit/s)
- Flow 1 egress (mean 2.10 Mbit/s)

Per packet round trip time (ms)

- Flow 1 (95th percentile 81.86 ms)
Run 9: Statistics of TCP BBR

Start at: 2018-06-30 00:07:20
End at: 2018-06-30 00:07:50

# Below is generated by plot.py at 2018-06-30 00:18:51
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 1.93 Mbit/s (16.1% utilization)
  95th percentile per-packet one-way delay: 100.971 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 1.93 Mbit/s
  95th percentile per-packet one-way delay: 100.971 ms
  Loss rate: 0.00%
Run 9: Report of TCP BBR — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 1.93 Mbit/s)  Flow 1 egress (mean 1.93 Mbit/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 100.97 ms)
Run 10: Statistics of TCP BBR

Start at: 2018-06-30 00:17:00
End at: 2018-06-30 00:17:30

# Below is generated by plot.py at 2018-06-30 00:18:53
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 2.36 Mbit/s (19.6% utilization)
95th percentile per-packet one-way delay: 91.163 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.36 Mbit/s
95th percentile per-packet one-way delay: 91.163 ms
Loss rate: 0.00%
Run 10: Report of TCP BBR — Data Link

![Graph 1: Throughput (Mbps)]

Average capacity 12.00 Mbps (shaded region)

![Graph 2: Packet Delay (ms)]

Flow 1 ingress (mean 2.36 Mbps)  Flow 1 egress (mean 2.36 Mbps)

Flow 1 (95th percentile 91.16 ms)
Run 1: Statistics of Copa

End at: 2018-06-29 22:47:01

# Below is generated by plot.py at 2018-06-30 00:19:02
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 3.43 Mbit/s (28.6% utilization)
95th percentile per-packet one-way delay: 74.669 ms
Loss rate: 0.87%
-- Flow 1:
Average throughput: 3.43 Mbit/s
95th percentile per-packet one-way delay: 74.669 ms
Loss rate: 0.87%
Run 1: Report of Copa — Data Link
Run 2: Statistics of Copa

Start at: 2018-06-29 22:56:12
End at: 2018-06-29 22:56:42

# Below is generated by plot.py at 2018-06-30 00:19:02
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 2.92 Mbit/s (24.3% utilization)
  95th percentile per-packet one-way delay: 80.290 ms
  Loss rate: 0.05%
-- Flow 1:
  Average throughput: 2.92 Mbit/s
  95th percentile per-packet one-way delay: 80.290 ms
  Loss rate: 0.05%
Run 2: Report of Copa — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Flow 1 ingress (mean 2.92 Mbit/s)  Flow 1 egress (mean 2.92 Mbit/s)

Time (s)

Per packet one way delay (ms)

Flow 1 (95th percentile 80.29 ms)

Time (s)
Run 3: Statistics of Copa

Start at: 2018-06-29 23:05:52
End at: 2018-06-29 23:06:22

# Below is generated by plot.py at 2018-06-30 00:19:02
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 1.93 Mbit/s (16.1% utilization)
95th percentile per-packet one-way delay: 14.554 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 1.93 Mbit/s
95th percentile per-packet one-way delay: 14.554 ms
Loss rate: 0.09%
Run 3: Report of Copa — Data Link
Run 4: Statistics of Copa

Start at: 2018-06-29 23:15:32
End at: 2018-06-29 23:16:02

# Below is generated by plot.py at 2018-06-30 00:19:04
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 4.47 Mbit/s (37.3% utilization)
  95th percentile per-packet one-way delay: 105.489 ms
  Loss rate: 0.02%
-- Flow 1:
  Average throughput: 4.47 Mbit/s
  95th percentile per-packet one-way delay: 105.489 ms
  Loss rate: 0.02%
Run 4: Report of Copa — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Time (s)

Throughput (Mbit/s)

Flow 1 ingress (mean 4.47 Mbit/s)  Flow 1 egress (mean 4.47 Mbit/s)

Per-packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 105.49 ms)
Run 5: Statistics of Copa

End at: 2018-06-29 23:25:43

# Below is generated by plot.py at 2018-06-30 00:19:04
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 2.18 Mbit/s (18.1% utilization)
  95th percentile per-packet one-way delay: 14.325 ms
  Loss rate: 0.34%
-- Flow 1:
  Average throughput: 2.18 Mbit/s
  95th percentile per-packet one-way delay: 14.325 ms
  Loss rate: 0.34%
Run 5: Report of Copa — Data Link

![Graph showing throughput and latency]

Average capacity 12.00 Mbit/s (shaded region)

- Flow 1 ingress (mean 2.18 Mbit/s)
- Flow 1 egress (mean 2.18 Mbit/s)

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

Flow 1 (95th percentile 14.32 ms)
Run 6: Statistics of Copa

Start at: 2018-06-29 23:34:53
End at: 2018-06-29 23:35:23

# Below is generated by plot.py at 2018-06-30 00:19:04
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 2.26 Mbit/s (18.8% utilization)
  95th percentile per-packet one-way delay: 24.626 ms
  Loss rate: 0.08%
-- Flow 1:
  Average throughput: 2.26 Mbit/s
  95th percentile per-packet one-way delay: 24.626 ms
  Loss rate: 0.08%
Run 6: Report of Copa — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

- Flow 1 ingress (mean 2.26 Mbit/s)
- Flow 1 egress (mean 2.26 Mbit/s)

Per packet one-way delay (ms)

- Flow 1 (95th percentile 24.63 ms)
Run 7: Statistics of Copa

Start at: 2018-06-29 23:44:34
End at: 2018-06-29 23:45:04

# Below is generated by plot.py at 2018-06-30 00:19:07
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 2.56 Mbit/s (21.4% utilization)
  95th percentile per-packet one-way delay: 87.545 ms
  Loss rate: 0.05%
-- Flow 1:
  Average throughput: 2.56 Mbit/s
  95th percentile per-packet one-way delay: 87.545 ms
  Loss rate: 0.05%
Run 7: Report of Copa — Data Link
Run 8: Statistics of Copa

Start at: 2018-06-29 23:54:14
End at: 2018-06-29 23:54:44

# Below is generated by plot.py at 2018-06-30 00:19:11
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 3.37 Mbit/s (28.1% utilization)
  95th percentile per-packet one-way delay: 91.424 ms
  Loss rate: 0.03%
-- Flow 1:
  Average throughput: 3.37 Mbit/s
  95th percentile per-packet one-way delay: 91.424 ms
  Loss rate: 0.03%
Run 8: Report of Copa — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 3.37 Mbit/s)  Flow 1 egress (mean 3.37 Mbit/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 91.42 ms)
Run 9: Statistics of Copa

Start at: 2018-06-30 00:03:55
End at: 2018-06-30 00:04:25

# Below is generated by plot.py at 2018-06-30 00:19:14
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 3.93 Mbit/s (32.7% utilization)
  95th percentile per-packet one-way delay: 113.985 ms
  Loss rate: 0.04%
-- Flow 1:
  Average throughput: 3.93 Mbit/s
  95th percentile per-packet one-way delay: 113.985 ms
  Loss rate: 0.04%
Run 9: Report of Copa — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 3.93 Mbit/s)  Flow 1 egress (mean 3.93 Mbit/s)

Flow 1 (95th percentile 113.98 ms)
Run 10: Statistics of Copa

Start at: 2018-06-30 00:13:35
End at: 2018-06-30 00:14:05

# Below is generated by plot.py at 2018-06-30 00:19:14
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 2.84 Mbit/s (23.7% utilization)
95th percentile per-packet one-way delay: 87.585 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 2.84 Mbit/s
95th percentile per-packet one-way delay: 87.585 ms
Loss rate: 0.05%
Run 10: Report of Copa — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

- Flow 1 ingress (mean 2.84 Mbit/s)
- Flow 1 egress (mean 2.84 Mbit/s)

Packet error rate (per packet)

Time (s)

- Flow 1 (95th percentile 87.58 ms)
Run 1: Statistics of TCP Cubic

End at: 2018-06-29 22:43:02

# Below is generated by plot.py at 2018-06-30 00:19:20
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 11.41 Mbit/s (95.1% utilization)
95th percentile per-packet one-way delay: 1596.282 ms
Loss rate: 3.47%
-- Flow 1:
Average throughput: 11.41 Mbit/s
95th percentile per-packet one-way delay: 1596.282 ms
Loss rate: 3.47%
Run 1: Report of TCP Cubic — Data Link

![Graph showing average capacity and throughput over time with shaded region indicating average capacity of 12.00 Mbit/s.]

- Flow 1 ingress (mean 11.82 Mbit/s)
- Flow 1 egress (mean 11.41 Mbit/s)

![Graph showing packet delay over time with shaded region indicating 95th percentile delay of 1596.28 ms.]

Flow 1 (95th percentile 1596.28 ms)
Run 2: Statistics of TCP Cubic

Start at: 2018-06-29 22:52:12
End at: 2018-06-29 22:52:43

# Below is generated by plot.py at 2018-06-30 00:19:22
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 11.22 Mbit/s (93.5% utilization)
95th percentile per-packet one-way delay: 1720.099 ms
Loss rate: 3.24%
-- Flow 1:
Average throughput: 11.22 Mbit/s
95th percentile per-packet one-way delay: 1720.099 ms
Loss rate: 3.24%
Run 2: Report of TCP Cubic — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 11.60 Mbit/s)  Flow 1 egress (mean 11.22 Mbit/s)

Per packet one way delay (ms)

Flow 1 (95th percentile 1720.10 ms)
Run 3: Statistics of TCP Cubic

Start at: 2018-06-29 23:01:53
End at: 2018-06-29 23:02:23

# Below is generated by plot.py at 2018-06-30 00:19:24
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 11.40 Mbit/s (95.0% utilization)
  95th percentile per-packet one-way delay: 1591.551 ms
  Loss rate: 3.75%
-- Flow 1:
  Average throughput: 11.40 Mbit/s
  95th percentile per-packet one-way delay: 1591.551 ms
  Loss rate: 3.75%
Run 3: Report of TCP Cubic — Data Link
Run 4: Statistics of TCP Cubic

Start at: 2018-06-29 23:11:33
End at: 2018-06-29 23:12:03

# Below is generated by plot.py at 2018-06-30 00:19:27
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 11.20 Mbit/s (93.3% utilization)
  95th percentile per-packet one-way delay: 1611.372 ms
  Loss rate: 2.83%
-- Flow 1:
  Average throughput: 11.20 Mbit/s
  95th percentile per-packet one-way delay: 1611.372 ms
  Loss rate: 2.83%
Run 4: Report of TCP Cubic — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 11.53 Mbit/s)  Flow 1 egress (mean 11.20 Mbit/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 1011.37 ms)
Run 5: Statistics of TCP Cubic

End at: 2018-06-29 23:21:43

# Below is generated by plot.py at 2018-06-30 00:19:30
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 11.23 Mbit/s (93.6% utilization)
95th percentile per-packet one-way delay: 1706.609 ms
Loss rate: 3.21%
-- Flow 1:
Average throughput: 11.23 Mbit/s
95th percentile per-packet one-way delay: 1706.609 ms
Loss rate: 3.21%
Run 5: Report of TCP Cubic — Data Link

Average capacity 12.00 Mbit/s (shaded region)

- Flow 1 ingress (mean 11.61 Mbit/s)
- Flow 1 egress (mean 11.23 Mbit/s)

Per-packet one-way delay (ms)

- Flow 1 (95th percentile 1706.61 ms)
Run 6: Statistics of TCP Cubic

Start at: 2018-06-29 23:30:53

# Below is generated by plot.py at 2018-06-30 00:19:34
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 11.51 Mbit/s (96.0% utilization)
95th percentile per-packet one-way delay: 1608.725 ms
Loss rate: 3.78%
-- Flow 1:
Average throughput: 11.51 Mbit/s
95th percentile per-packet one-way delay: 1608.725 ms
Loss rate: 3.78%
Run 6: Report of TCP Cubic — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 11.97 Mbit/s)  Flow 1 egress (mean 11.51 Mbit/s)

Per packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 1608.72 ms)
Run 7: Statistics of TCP Cubic

Start at: 2018-06-29 23:40:34
End at: 2018-06-29 23:41:04

# Below is generated by plot.py at 2018-06-30 00:19:35
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 11.19 Mbit/s (93.2% utilization)
95th percentile per-packet one-way delay: 1672.790 ms
Loss rate: 3.89%
-- Flow 1:
Average throughput: 11.19 Mbit/s
95th percentile per-packet one-way delay: 1672.790 ms
Loss rate: 3.89%
Run 7: Report of TCP Cubic — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 11.65 Mbit/s)  Flow 1 egress (mean 11.19 Mbit/s)

Packet per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 1072.79 ms)
Run 8: Statistics of TCP Cubic

Start at: 2018-06-29 23:50:14
End at: 2018-06-29 23:50:44

# Below is generated by plot.py at 2018-06-30 00:19:37
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 11.26 Mbit/s (93.8% utilization)
95th percentile per-packet one-way delay: 1670.573 ms
Loss rate: 3.90%

-- Flow 1:
Average throughput: 11.26 Mbit/s
95th percentile per-packet one-way delay: 1670.573 ms
Loss rate: 3.90%
Run 8: Report of TCP Cubic — Data Link
Run 9: Statistics of TCP Cubic

End at: 2018-06-30 00:00:25

# Below is generated by plot.py at 2018-06-30 00:19:43
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 11.32 Mbit/s (94.4% utilization)
95th percentile per-packet one-way delay: 1605.089 ms
Loss rate: 3.81%
-- Flow 1:
Average throughput: 11.32 Mbit/s
95th percentile per-packet one-way delay: 1605.089 ms
Loss rate: 3.81%
Run 9: Report of TCP Cubic — Data Link

### Throughput

![Graph showing throughput over time](image)

- **Average capacity**: 12.00 Mbit/s (shaded region)
- **Flow 1 ingress**: mean 11.78 Mbit/s
- **Flow 1 egress**: mean 11.32 Mbit/s

### Packet Delay

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

- **Flow 1**
  - 95th percentile: 1605.09 ms
Run 10: Statistics of TCP Cubic

Start at: 2018-06-30 00:09:36
End at: 2018-06-30 00:10:06

# Below is generated by plot.py at 2018-06-30 00:19:44
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 11.34 Mbit/s (94.5% utilization)
  95th percentile per-packet one-way delay: 1671.368 ms
  Loss rate: 3.87%
-- Flow 1:
  Average throughput: 11.34 Mbit/s
  95th percentile per-packet one-way delay: 1671.368 ms
  Loss rate: 3.87%
Run 10: Report of TCP Cubic — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 11.80 Mbit/s)  Flow 1 egress (mean 11.34 Mbit/s)

Per-packet one-way delay (ms)

Flow 1 (95th percentile 1071.37 ms)
Run 1: Statistics of FillP

Start at: 2018-06-29 22:45:23
End at: 2018-06-29 22:45:53

# Below is generated by plot.py at 2018-06-30 00:19:51
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 11.79 Mbit/s (98.2% utilization)
  95th percentile per-packet one-way delay: 4621.426 ms
  Loss rate: 14.02%
-- Flow 1:
  Average throughput: 11.79 Mbit/s
  95th percentile per-packet one-way delay: 4621.426 ms
  Loss rate: 14.02%
Run 1: Report of FillP — Data Link

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

Average capacity 12.00 Mbit/s (shaded region)

- Flow 1 ingress (mean 13.71 Mbit/s)
- Flow 1 egress (mean 11.79 Mbit/s)

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

Per packet one-way delay (ms)

Flow 1 (95th percentile 4021.43 ms)
Run 2: Statistics of FillP


# Below is generated by plot.py at 2018-06-30 00:19:57
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 11.76 Mbit/s (98.0% utilization)
95th percentile per-packet one-way delay: 18427.907 ms
Loss rate: 39.70%
-- Flow 1:
Average throughput: 11.76 Mbit/s
95th percentile per-packet one-way delay: 18427.907 ms
Loss rate: 39.70%
Run 2: Report of FillP — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 19.49 Mbit/s)  Flow 1 egress (mean 11.76 Mbit/s)

Per packet one-way delay (ms)

Flow 1 (95th percentile 18427.91 ms)
Run 3: Statistics of FillP

Start at: 2018-06-29 23:04:44
End at: 2018-06-29 23:05:14

# Below is generated by plot.py at 2018-06-30 00:19:57
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 11.77 Mbit/s (98.1% utilization)
95th percentile per-packet one-way delay: 5717.786 ms
Loss rate: 17.39%
-- Flow 1:
Average throughput: 11.77 Mbit/s
95th percentile per-packet one-way delay: 5717.786 ms
Loss rate: 17.39%
Run 3: Report of FillP — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 14.25 Mbit/s)  Flow 1 egress (mean 11.77 Mbit/s)

Per-packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 5717.79 ms)
Run 4: Statistics of FillP

Start at: 2018-06-29 23:14:24
End at: 2018-06-29 23:14:54

# Below is generated by plot.py at 2018-06-30 00:20:01
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 11.78 Mbit/s (98.1% utilization)
  95th percentile per-packet one-way delay: 4493.402 ms
  Loss rate: 14.12%
-- Flow 1:
  Average throughput: 11.78 Mbit/s
  95th percentile per-packet one-way delay: 4493.402 ms
  Loss rate: 14.12%
Run 4: Report of FillP — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 13.71 Mbit/s)  Flow 1 egress (mean 11.78 Mbit/s)

Per packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 4493.40 ms)
Run 5: Statistics of FillP

Start at: 2018-06-29 23:24:04
End at: 2018-06-29 23:24:34

# Below is generated by plot.py at 2018-06-30 00:20:02
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 11.78 Mbit/s (98.1% utilization)
  95th percentile per-packet one-way delay: 4551.111 ms
  Loss rate: 14.30%
-- Flow 1:
  Average throughput: 11.78 Mbit/s
  95th percentile per-packet one-way delay: 4551.111 ms
  Loss rate: 14.30%
Run 5: Report of FillP — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 13.74 Mbit/s)  Flow 1 egress (mean 11.78 Mbit/s)

Per packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 4351.11 ms)
Run 6: Statistics of FillP

Start at: 2018-06-29 23:33:45
End at: 2018-06-29 23:34:15

# Below is generated by plot.py at 2018-06-30 00:20:08
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 11.76 Mbit/s (98.0% utilization)
  95th percentile per-packet one-way delay: 16160.949 ms
  Loss rate: 35.40%
-- Flow 1:
  Average throughput: 11.76 Mbit/s
  95th percentile per-packet one-way delay: 16160.949 ms
  Loss rate: 35.40%
Run 6: Report of FillP — Data Link
Run 7: Statistics of FillP


# Below is generated by plot.py at 2018-06-30 00:20:12
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 11.78 Mbit/s (98.1% utilization)
95th percentile per-packet one-way delay: 4226.893 ms
Loss rate: 13.90%
-- Flow 1:
Average throughput: 11.78 Mbit/s
95th percentile per-packet one-way delay: 4226.893 ms
Loss rate: 13.90%
Run 7: Report of FillP — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 13.67 Mbit/s)  Flow 1 egress (mean 11.78 Mbit/s)

Per-packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 4226.89 ms)
Run 8: Statistics of FillP

Start at: 2018-06-29 23:53:05
End at: 2018-06-29 23:53:35

# Below is generated by plot.py at 2018-06-30 00:20:14
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 11.77 Mbit/s (98.1% utilization)
95th percentile per-packet one-way delay: 4661.998 ms
Loss rate: 15.30%
-- Flow 1:
Average throughput: 11.77 Mbit/s
95th percentile per-packet one-way delay: 4661.998 ms
Loss rate: 15.30%
Run 8: Report of FillP — Data Link

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

**Average capacity 12.00 Mbps (shaded region)**

- Flow 1 ingress (mean 13.90 Mbps)
- Flow 1 egress (mean 11.77 Mbps)

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

- Flow 1 (95th percentile 4662.00 ms)
Run 9: Statistics of FillP

Start at: 2018-06-30 00:02:46
End at: 2018-06-30 00:03:16

# Below is generated by plot.py at 2018-06-30 00:20:24
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 11.78 Mbit/s (98.1% utilization)
95th percentile per-packet one-way delay: 4694.215 ms
Loss rate: 14.53%
-- Flow 1:
Average throughput: 11.78 Mbit/s
95th percentile per-packet one-way delay: 4694.215 ms
Loss rate: 14.53%
Run 9: Report of FillP — Data Link
Run 10: Statistics of FillP

Start at: 2018-06-30 00:12:27
End at: 2018-06-30 00:12:57

# Below is generated by plot.py at 2018-06-30 00:20:31
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 11.78 Mbit/s (98.2% utilization)
95th percentile per-packet one-way delay: 5209.443 ms
Loss rate: 16.77%
-- Flow 1:
Average throughput: 11.78 Mbit/s
95th percentile per-packet one-way delay: 5209.443 ms
Loss rate: 16.77%
Run 10: Report of FillP — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 14.15 Mbit/s)  Flow 1 egress (mean 11.78 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 529.44 ms)

83
Run 1: Statistics of FillP-Sheep

End at: 2018-06-29 22:44:11
Run 1: Report of FillP-Sheep — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (MB/s)

Time (s)

Flow 1 ingress (mean 0.00 Mbit/s)  Flow 1 egress (mean 0.00 Mbit/s)

Packet delay (ms)

Flow 1 (95th percentile 11.74 ms)
Run 2: Statistics of FillP-Sheep

End at: 2018-06-29 22:53:51
Run 2: Report of FillP-Sheep — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 0.00 Mbit/s)  Flow 1 egress (mean 0.00 Mbit/s)

Flow 1 (95th percentile 11.67 ms)
Run 3: Statistics of FillP-Sheep

Start at: 2018-06-29 23:03:01
End at: 2018-06-29 23:03:31
Run 3: Report of FillP-Sheep — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (MBits)

0 2 4 6 8 10 12

Time (s)

0 5 10 15 20 25 30

Flow 1 ingress (mean 0.00 Mbit/s)  Flow 1 egress (mean 0.00 Mbit/s)

Packet one-way delay (ms)

11.45 11.50 11.55 11.60 11.65

Time (s)

0 2 4 6 8 10 12 14

Flow 1 (95th percentile 11.65 ms)
Run 4: Statistics of FillP-Sheep

Start at: 2018-06-29 23:12:41
Run 4: Report of FillP-Sheep — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 0.00 Mbit/s)  Flow 1 egress (mean 0.00 Mbit/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 11.62 ms)
Run 5: Statistics of FillP-Sheep

End at: 2018-06-29 23:22:52
Run 5: Report of FillP-Sheep — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (MB/s)

Time (s)

Flow 1 ingress (mean 0.00 Mbit/s)  Flow 1 egress (mean 0.00 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 11.62 ms)
Run 6: Statistics of FillP-Sheep

Start at: 2018-06-29 23:32:02
End at: 2018-06-29 23:32:32
Run 6: Report of FillP-Sheep — Data Link

![Graph of average capacity and throughput over time](image)

**Average capacity 12.00 Mbit/s (shaded region)**

**Throughput (MBit/s)**

**Time (s)**

- **Flow 1 ingress (mean 0.00 Mbit/s)**
- **Flow 1 egress (mean 0.00 Mbit/s)**

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

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

**Time (s)**

- **Flow 1 (95th percentile 11.67 ms)**

95
Run 7: Statistics of FillP-Sheep

Start at: 2018-06-29 23:41:43
Run 7: Report of FillP-Sheep — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 0.00 Mbit/s)  Flow 1 egress (mean 0.00 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 11.66 ms)
Run 8: Statistics of FillP-Sheep

Start at: 2018-06-29 23:51:23
End at: 2018-06-29 23:51:53
Run 8: Report of FillP-Sheep — Data Link

![Graph 1: Average capacity 12.00 Mbit/s (shaded region)]

- Flow 1 ingress (mean 0.00 Mbit/s)
- Flow 1 egress (mean 0.00 Mbit/s)

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

- Flow 1 (95th percentile 11.69 ms)
Run 9: Statistics of FillP-Sheep

Start at: 2018-06-30 00:01:03
End at: 2018-06-30 00:01:33
Run 9: Report of FillP-Sheep — Data Link
Run 10: Statistics of FillP-Sheep

Start at: 2018-06-30 00:10:44
End at: 2018-06-30 00:11:14
Run 10: Report of FillP-Sheep — Data Link
Run 1: Statistics of Indigo


# Below is generated by plot.py at 2018-06-30 00:20:31
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 2.31 Mbit/s (19.3% utilization)
  95th percentile per-packet one-way delay: 53.288 ms
  Loss rate: 0.53%
-- Flow 1:
  Average throughput: 2.31 Mbit/s
  95th percentile per-packet one-way delay: 53.288 ms
  Loss rate: 0.53%
Run 1: Report of Indigo — Data Link
Run 2: Statistics of Indigo

Start at: 2018-06-29 22:57:54
End at: 2018-06-29 22:58:24

# Below is generated by plot.py at 2018-06-30 00:20:31
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 1.24 Mbit/s (10.3% utilization)
95th percentile per-packet one-way delay: 29.324 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.24 Mbit/s
95th percentile per-packet one-way delay: 29.324 ms
Loss rate: 0.00%
Run 2: Report of Indigo — Data Link

![Graph showing throughput and delay over time for Flow 1 ingress and egress.]
Run 3: Statistics of Indigo

Start at: 2018-06-29 23:07:35
End at: 2018-06-29 23:08:05

# Below is generated by plot.py at 2018-06-30 00:20:32
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 2.24 Mbit/s (18.7% utilization)
  95th percentile per-packet one-way delay: 53.167 ms
  Loss rate: 0.18%
-- Flow 1:
  Average throughput: 2.24 Mbit/s
  95th percentile per-packet one-way delay: 53.167 ms
  Loss rate: 0.18%
Run 3: Report of Indigo — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 2.25 Mbit/s)  Flow 1 egress (mean 2.24 Mbit/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 53.17 ms)
Run 4: Statistics of Indigo

Start at: 2018-06-29 23:17:15
End at: 2018-06-29 23:17:45

# Below is generated by plot.py at 2018-06-30 00:20:33
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 1.84 Mbit/s (15.3% utilization)
95th percentile per-packet one-way delay: 39.087 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 1.84 Mbit/s
95th percentile per-packet one-way delay: 39.087 ms
Loss rate: 0.20%
Run 4: Report of Indigo — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 1.84 Mbit/s)  Flow 1 egress (mean 1.84 Mbit/s)

Per packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 39.09 ms)
Run 5: Statistics of Indigo

Start at: 2018-06-29 23:26:55
End at: 2018-06-29 23:27:25

# Below is generated by plot.py at 2018-06-30 00:20:36
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 2.25 Mbit/s (18.7% utilization)
  95th percentile per-packet one-way delay: 53.205 ms
  Loss rate: 0.16%
-- Flow 1:
  Average throughput: 2.25 Mbit/s
  95th percentile per-packet one-way delay: 53.205 ms
  Loss rate: 0.16%
Run 5: Report of Indigo — Data Link
Run 6: Statistics of Indigo

Start at: 2018-06-29 23:36:36
End at: 2018-06-29 23:37:06

# Below is generated by plot.py at 2018-06-30 00:20:36
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 1.84 Mbit/s (15.3% utilization)
  95th percentile per-packet one-way delay: 38.659 ms
  Loss rate: 0.46%
-- Flow 1:
  Average throughput: 1.84 Mbit/s
  95th percentile per-packet one-way delay: 38.659 ms
  Loss rate: 0.46%
Run 6: Report of Indigo — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 1.64 Mbit/s)  Flow 1 egress (mean 1.84 Mbit/s)

Per packet one-way delay (ms)

Flow 1 (95th percentile 38.66 ms)
Run 7: Statistics of Indigo

Start at: 2018-06-29 23:46:16
End at: 2018-06-29 23:46:46

# Below is generated by plot.py at 2018-06-30 00:20:37
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 1.84 Mbit/s (15.3% utilization)
  95th percentile per-packet one-way delay: 38.991 ms
  Loss rate: 0.24%
-- Flow 1:
  Average throughput: 1.84 Mbit/s
  95th percentile per-packet one-way delay: 38.991 ms
  Loss rate: 0.24%
Run 7: Report of Indigo — Data Link

---

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 1.84 Mbit/s)  Flow 1 egress (mean 1.84 Mbit/s)

---

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 38.99 ms)
Run 8: Statistics of Indigo

End at: 2018-06-29 23:56:26

# Below is generated by plot.py at 2018-06-30 00:20:42
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 2.27 Mbit/s (18.9% utilization)
95th percentile per-packet one-way delay: 52.974 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 2.27 Mbit/s
95th percentile per-packet one-way delay: 52.974 ms
Loss rate: 0.28%
Run 8: Report of Indigo — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 2.28 Mbit/s)  Flow 1 egress (mean 2.27 Mbit/s)

Per packet one-way delay (ms)

Flow 1 (95th percentile 52.97 ms)
Run 9: Statistics of Indigo

Start at: 2018-06-30 00:05:37
End at: 2018-06-30 00:06:07

# Below is generated by plot.py at 2018-06-30 00:20:42
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 2.30 Mbit/s (19.2% utilization)
  95th percentile per-packet one-way delay: 53.621 ms
  Loss rate: 0.21%
-- Flow 1:
  Average throughput: 2.30 Mbit/s
  95th percentile per-packet one-way delay: 53.621 ms
  Loss rate: 0.21%
Run 9: Report of Indigo — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Flow 1 ingress (mean 2.31 Mbit/s)  Flow 1 egress (mean 2.30 Mbit/s)

Per packet one-way delay (ms)

Flow 1 (95th percentile 53.62 ms)
Run 10: Statistics of Indigo

Start at: 2018-06-30 00:15:18
End at: 2018-06-30 00:15:48

# Below is generated by plot.py at 2018-06-30 00:20:43
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 1.84 Mbit/s (15.3% utilization)
95th percentile per-packet one-way delay: 38.95 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 1.84 Mbit/s
95th percentile per-packet one-way delay: 38.95 ms
Loss rate: 0.18%
Run 10: Report of Indigo — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 1.84 Mbit/s)  Flow 1 egress (mean 1.84 Mbit/s)

Per packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 38.95 ms)
Run 1: Statistics of LEDBAT

End at: 2018-06-29 22:41:54

# Below is generated by plot.py at 2018-06-30 00:20:48
# Datalink statistics
-- Total of 1 flow:
   Average capacity: 12.00 Mbit/s
   Average throughput: 5.95 Mbit/s (49.6% utilization)
   95th percentile per-packet one-way delay: 140.248 ms
   Loss rate: 1.00%
-- Flow 1:
   Average throughput: 5.95 Mbit/s
   95th percentile per-packet one-way delay: 140.248 ms
   Loss rate: 1.00%
Run 1: Report of LEDBAT — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 6.01 Mbit/s)  Flow 1 egress (mean 5.95 Mbit/s)

Per packet one way delay (ms)

Flow 1 (95th percentile 140.25 ms)
Run 2: Statistics of LEDEBAT

End at: 2018-06-29 22:51:34

# Below is generated by plot.py at 2018-06-30 00:20:51
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 5.95 Mbit/s (49.6% utilization)
95th percentile per-packet one-way delay: 140.293 ms
Loss rate: 0.92%
-- Flow 1:
Average throughput: 5.95 Mbit/s
95th percentile per-packet one-way delay: 140.293 ms
Loss rate: 0.92%
Run 2: Report of LEDBAT — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 6.01 Mbit/s)  Flow 1 egress (mean 5.95 Mbit/s)

Packet per hop one way delay (ms)

Time (s)

Flow 1 (95th percentile 140.29 ms)
Run 3: Statistics of LEDBAT

Start at: 2018-06-29 23:00:44
End at: 2018-06-29 23:01:14

# Below is generated by plot.py at 2018-06-30 00:20:53
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 5.95 Mbit/s (49.6% utilization)
95th percentile per-packet one-way delay: 139.915 ms
Loss rate: 1.07%
-- Flow 1:
Average throughput: 5.95 Mbit/s
95th percentile per-packet one-way delay: 139.915 ms
Loss rate: 1.07%
Run 3: Report of LEDBAT — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 6.01 Mbit/s)  Flow 1 egress (mean 5.95 Mbit/s)

Flow 1 (95th percentile 139.91 ms)
Run 4: Statistics of LEDBAT

Start at: 2018-06-29 23:10:25
End at: 2018-06-29 23:10:55

# Below is generated by plot.py at 2018-06-30 00:20:53
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 5.95 Mbit/s (49.6% utilization)
95th percentile per-packet one-way delay: 140.507 ms
Loss rate: 0.95%
-- Flow 1:
Average throughput: 5.95 Mbit/s
95th percentile per-packet one-way delay: 140.507 ms
Loss rate: 0.95%
Run 4: Report of LEDBAT — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 6.01 Mbit/s)  Flow 1 egress (mean 5.95 Mbit/s)

Flow 1 (95th percentile 140.51 ms)
Run 5: Statistics of LEDBAT

Start at: 2018-06-29 23:20:05
End at: 2018-06-29 23:20:35

# Below is generated by plot.py at 2018-06-30 00:20:54
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 5.95 Mbit/s (49.5% utilization)
  95th percentile per-packet one-way delay: 140.069 ms
  Loss rate: 1.00%
-- Flow 1:
  Average throughput: 5.95 Mbit/s
  95th percentile per-packet one-way delay: 140.069 ms
  Loss rate: 1.00%
Run 5: Report of LEDBAT — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbps)

Flow 1 ingress (mean 6.01 Mbit/s)  Flow 1 egress (mean 5.95 Mbit/s)

Packet delay (ms)

Flow 1 (95th percentile 140.07 ms)

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Run 6: Statistics of LEDBAT

Start at: 2018-06-29 23:29:45
End at: 2018-06-29 23:30:15

# Below is generated by plot.py at 2018-06-30 00:20:59
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 5.95 Mbit/s (49.6% utilization)
95th percentile per-packet one-way delay: 140.158 ms
Loss rate: 0.94%
-- Flow 1:
Average throughput: 5.95 Mbit/s
95th percentile per-packet one-way delay: 140.158 ms
Loss rate: 0.94%
Run 6: Report of LEDBAT — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 6.01 Mbit/s)  Flow 1 egress (mean 5.95 Mbit/s)

Packet delay (ms)

Time (s)

Flow 1 (95th percentile 140.16 ms)
Run 7: Statistics of LEDBAT

End at: 2018-06-29 23:39:56

# Below is generated by plot.py at 2018-06-30 00:20:59
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 5.95 Mbit/s (49.6% utilization)
95th percentile per-packet one-way delay: 140.092 ms
Loss rate: 0.94%
-- Flow 1:
Average throughput: 5.95 Mbit/s
95th percentile per-packet one-way delay: 140.092 ms
Loss rate: 0.94%
Run 7: Report of LEDBAT — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 6.01 Mbit/s)  Flow 1 egress (mean 5.95 Mbit/s)

Packet drop rate (ms)

Time (s)

Flow 1 (95th percentile 140.09 ms)
Run 8: Statistics of LEDBAT

Start at: 2018-06-29 23:49:06
End at: 2018-06-29 23:49:36

# Below is generated by plot.py at 2018-06-30 00:21:00
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 5.95 Mbit/s (49.6% utilization)
95th percentile per-packet one-way delay: 140.182 ms
Loss rate: 1.06%
-- Flow 1:
Average throughput: 5.95 Mbit/s
95th percentile per-packet one-way delay: 140.182 ms
Loss rate: 1.06%
Run 8: Report of LEDBAT — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 6.01 Mbit/s)  Flow 1 egress (mean 5.95 Mbit/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 140.18 ms)
Run 9: Statistics of LEDBAT

Start at: 2018-06-29 23:58:46
End at: 2018-06-29 23:59:17

# Below is generated by plot.py at 2018-06-30 00:21:07
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 5.95 Mbit/s (49.6% utilization)
95th percentile per-packet one-way delay: 140.224 ms
Loss rate: 0.94%
-- Flow 1:
Average throughput: 5.95 Mbit/s
95th percentile per-packet one-way delay: 140.224 ms
Loss rate: 0.94%
Run 10: Statistics of LEDBAT

Start at: 2018-06-30 00:08:28
End at: 2018-06-30 00:08:58

# Below is generated by plot.py at 2018-06-30 00:21:08
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 5.94 Mbit/s (49.5% utilization)
95th percentile per-packet one-way delay: 140.396 ms
Loss rate: 0.96%
-- Flow 1:
Average throughput: 5.94 Mbit/s
95th percentile per-packet one-way delay: 140.396 ms
Loss rate: 0.96%
Run 10: Report of LEDBAT — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 6.00 Mbit/s) Flow 1 egress (mean 5.94 Mbit/s)

Per packet one way delay (ms)

* Flow 1 (95th percentile 140.40 ms)
Run 1: Statistics of PCC-Allegro

Start at: 2018-06-29 22:50:30
End at: 2018-06-29 22:51:00

# Below is generated by plot.py at 2018-06-30 00:21:10
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 4.51 Mbit/s (37.6% utilization)
95th percentile per-packet one-way delay: 12.351 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 4.51 Mbit/s
95th percentile per-packet one-way delay: 12.351 ms
Loss rate: 0.05%
Run 1: Report of PCC-Allegro — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 4.51 Mbit/s)  Flow 1 egress (mean 4.51 Mbit/s)

Packet error rate (ppm)

Time (s)

Flow 1 (95th percentile 12.35 ms)
Run 2: Statistics of PCC-Allegro

Start at: 2018-06-29 23:00:10
End at: 2018-06-29 23:00:40

# Below is generated by plot.py at 2018-06-30 00:21:10
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 3.71 Mbit/s (31.0% utilization)
  95th percentile per-packet one-way delay: 12.360 ms
  Loss rate: 0.03%
-- Flow 1:
  Average throughput: 3.71 Mbit/s
  95th percentile per-packet one-way delay: 12.360 ms
  Loss rate: 0.03%
Run 2: Report of PCC-Allegro — Data Link

![Graph of Average capacity 12.00 Mbit/s (shaded region)]

- **Flow 1 ingress (mean 3.71 Mbit/s)**
- **Flow 1 egress (mean 3.71 Mbit/s)**

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

- **Flow 1 (95th percentile 12.36 ms)**
Run 3: Statistics of PCC-Allegro

Start at: 2018-06-29 23:09:51
End at: 2018-06-29 23:10:21

# Below is generated by plot.py at 2018-06-30 00:21:10
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 4.24 Mbit/s (35.4% utilization)
95th percentile per-packet one-way delay: 12.236 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 4.24 Mbit/s
95th percentile per-packet one-way delay: 12.236 ms
Loss rate: 0.03%
Run 3: Report of PCC-Allegro — Data Link

![Graph showing throughput over time with shaded region indicating average capacity of 12.00 Mbit/s.](image)

- **Flow 1 ingress (mean 4.24 Mbit/s)**
- **Flow 1 egress (mean 4.24 Mbit/s)**

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

- **Flow 1 (95th percentile 12.24 ms)**

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Run 4: Statistics of PCC-Allegro

Start at: 2018-06-29 23:19:31
End at: 2018-06-29 23:20:01

# Below is generated by plot.py at 2018-06-30 00:21:16
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 4.34 Mbit/s (36.2% utilization)
  95th percentile per-packet one-way delay: 12.238 ms
  Loss rate: 0.03%
-- Flow 1:
  Average throughput: 4.34 Mbit/s
  95th percentile per-packet one-way delay: 12.238 ms
  Loss rate: 0.03%
Run 4: Report of PCC-Allegro — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 4.34 Mbit/s)  Flow 1 egress (mean 4.34 Mbit/s)

Per packets one-way delay (ms)

Flow 1 (95th percentile 12.24 ms)
Run 5: Statistics of PCC-Allegro

Start at: 2018-06-29 23:29:11
End at: 2018-06-29 23:29:41

# Below is generated by plot.py at 2018-06-30 00:21:16
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 4.71 Mbit/s (39.2% utilization)
  95th percentile per-packet one-way delay: 12.330 ms
  Loss rate: 0.04%
-- Flow 1:
  Average throughput: 4.71 Mbit/s
  95th percentile per-packet one-way delay: 12.330 ms
  Loss rate: 0.04%
Run 5: Report of PCC-Allegro — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 4.71 Mbit/s)  Flow 1 egress (mean 4.71 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 12.33 ms)
Run 6: Statistics of PCC-Allegro

Start at: 2018-06-29 23:38:52

# Below is generated by plot.py at 2018-06-30 00:21:16
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 3.85 Mbit/s (32.1% utilization)
  95th percentile per-packet one-way delay: 12.279 ms
  Loss rate: 0.03%
-- Flow 1:
  Average throughput: 3.85 Mbit/s
  95th percentile per-packet one-way delay: 12.279 ms
  Loss rate: 0.03%
Run 6: Report of PCC-Allegro — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 3.85 Mbit/s)  Flow 1 egress (mean 3.85 Mbit/s)

Per packet one-way delay (ms)

Flow 1 (95th percentile 12.28 ms)
Run 7: Statistics of PCC-Allegro

End at: 2018-06-29 23:49:02

# Below is generated by plot.py at 2018-06-30 00:21:22
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 3.76 Mbit/s (31.3% utilization)
95th percentile per-packet one-way delay: 12.374 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 3.76 Mbit/s
95th percentile per-packet one-way delay: 12.374 ms
Loss rate: 0.03%
Run 7: Report of PCC-Allegro — Data Link
Run 8: Statistics of PCC-Allegro

Start at: 2018-06-29 23:58:12
End at: 2018-06-29 23:58:42

# Below is generated by plot.py at 2018-06-30 00:21:24
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 4.77 Mbit/s (39.8% utilization)
95th percentile per-packet one-way delay: 12.320 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 4.77 Mbit/s
95th percentile per-packet one-way delay: 12.320 ms
Loss rate: 0.04%
Run 8: Report of PCC-Allegro — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 4.77 Mbit/s)  Flow 1 egress (mean 4.77 Mbit/s)

Per packet end-to-end delay (ms)

Time (s)

Flow 1 (95th percentile 12.32 ms)
Run 9: Statistics of PCC-Allegro

Start at: 2018-06-30 00:07:54
End at: 2018-06-30 00:08:24

# Below is generated by plot.py at 2018-06-30 00:21:24
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 3.77 Mbit/s (31.4% utilization)
95th percentile per-packet one-way delay: 12.316 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 3.77 Mbit/s
95th percentile per-packet one-way delay: 12.316 ms
Loss rate: 0.03%
Run 9: Report of PCC-Allegro — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 3.77 Mbit/s)  Flow 1 egress (mean 3.77 Mbit/s)

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

Time (s)

Flow 1 (95th percentile 12.32 ms)
Run 10: Statistics of PCC-Allegra

Start at: 2018-06-30 00:17:34
End at: 2018-06-30 00:18:04

# Below is generated by plot.py at 2018-06-30 00:21:25
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 3.75 Mbit/s (31.3% utilization)
95th percentile per-packet one-way delay: 12.406 ms
Loss rate: 0.03%

-- Flow 1:
Average throughput: 3.75 Mbit/s
95th percentile per-packet one-way delay: 12.406 ms
Loss rate: 0.03%
Run 10: Report of PCC-Allegro — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 3.75 Mbit/s)  Flow 1 egress (mean 3.75 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 12.41 ms)
Run 1: Statistics of PCC-Expr

Start at: 2018-06-29 22:47:06
End at: 2018-06-29 22:47:36

# Below is generated by plot.py at 2018-06-30 00:21:47
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 11.02 Mbit/s (91.8% utilization)
  95th percentile per-packet one-way delay: 1469.128 ms
  Loss rate: 3.26%
-- Flow 1:
  Average throughput: 11.02 Mbit/s
  95th percentile per-packet one-way delay: 1469.128 ms
  Loss rate: 3.26%
Run 1: Report of PCC-Expr — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 11.38 Mbit/s)
Flow 1 egress (mean 11.02 Mbit/s)

Flow 1 (95th percentile 1469.13 ms)
Run 2: Statistics of PCC-Expr

Start at: 2018-06-29 22:56:46
End at: 2018-06-29 22:57:16

# Below is generated by plot.py at 2018-06-30 00:21:47
# Datalink statistics
  -- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 5.29 Mbit/s (44.1% utilization)
  95th percentile per-packet one-way delay: 13.042 ms
  Loss rate: 0.05%
  -- Flow 1:
  Average throughput: 5.29 Mbit/s
  95th percentile per-packet one-way delay: 13.042 ms
  Loss rate: 0.05%
Run 2: Report of PCC-Expr — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 5.29 Mbit/s)  Flow 1 egress (mean 5.29 Mbit/s)

Per packet one way delay (ms)

Flow 1 (95th percentile 13.54 ms)
Run 3: Statistics of PCC-Expr

Start at: 2018-06-29 23:06:26
End at: 2018-06-29 23:06:56

# Below is generated by plot.py at 2018-06-30 00:21:47
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 7.67 Mbit/s (63.9% utilization)
95th percentile per-packet one-way delay: 18.769 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 7.67 Mbit/s
95th percentile per-packet one-way delay: 18.769 ms
Loss rate: 0.02%
Run 3: Report of PCC-Expr — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 7.67 Mbit/s)  Flow 1 egress (mean 7.67 Mbit/s)

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

Flow 1 (95th percentile 18.77 ms)
Run 4: Statistics of PCC-Expr

Start at: 2018-06-29 23:16:07
End at: 2018-06-29 23:16:37

# Below is generated by plot.py at 2018-06-30 00:21:47
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 5.50 Mbit/s (45.9% utilization)
95th percentile per-packet one-way delay: 13.054 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 5.50 Mbit/s
95th percentile per-packet one-way delay: 13.054 ms
Loss rate: 0.03%
Run 4: Report of PCC-Expr — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 5.50 Mbit/s) Flow 1 egress (mean 5.50 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 13.05 ms)
Run 5: Statistics of PCC-Expr

End at: 2018-06-29 23:26:17

# Below is generated by plot.py at 2018-06-30 00:21:49
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 7.31 Mbit/s (60.9% utilization)
  95th percentile per-packet one-way delay: 2513.806 ms
  Loss rate: 15.56%
-- Flow 1:
  Average throughput: 7.31 Mbit/s
  95th percentile per-packet one-way delay: 2513.806 ms
  Loss rate: 15.56%
Run 5: Report of PCC-Expr — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 8.66 Mbit/s)  Flow 1 egress (mean 7.31 Mbit/s)

Per packet one-way delay (ms)

Flow 1 (95th percentile 2513.81 ms)
Run 6: Statistics of PCC-Expr

Start at: 2018-06-29 23:35:27
End at: 2018-06-29 23:35:57

# Below is generated by plot.py at 2018-06-30 00:21:49
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 6.60 Mbit/s (55.0% utilization)
  95th percentile per-packet one-way delay: 13.092 ms
  Loss rate: 0.05%
-- Flow 1:
  Average throughput: 6.60 Mbit/s
  95th percentile per-packet one-way delay: 13.092 ms
  Loss rate: 0.05%
Run 6: Report of PCC-Expr — Data Link

Average capacity 12.00 Mbit/s (shaded region)

- Flow 1 ingress (mean 6.60 Mbit/s)
- Flow 1 egress (mean 6.60 Mbit/s)

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

- Flow 1 (95th percentile 13.59 ms)
Run 7: Statistics of PCC-Expr

Start at: 2018-06-29 23:45:08
End at: 2018-06-29 23:45:38

# Below is generated by plot.py at 2018-06-30 00:21:49
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 5.09 Mbit/s (42.4% utilization)
  95th percentile per-packet one-way delay: 13.092 ms
  Loss rate: 0.05%
-- Flow 1:
  Average throughput: 5.09 Mbit/s
  95th percentile per-packet one-way delay: 13.092 ms
  Loss rate: 0.05%
Run 7: Report of PCC-Expr — Data Link

![Graph of Average capacity 12.00 Mbit/s (shaded region)]

- **Flow 1 ingress (mean 5.09 Mbit/s)**
- **Flow 1 egress (mean 5.09 Mbit/s)**

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

- **Flow 1 (95th percentile 13.09 ms)**
Run 8: Statistics of PCC-Expr

Start at: 2018-06-29 23:54:48

# Below is generated by plot.py at 2018-06-30 00:21:51
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 8.02 Mbit/s (66.8% utilization)
  95th percentile per-packet one-way delay: 13.264 ms
  Loss rate: 0.04%
-- Flow 1:
  Average throughput: 8.02 Mbit/s
  95th percentile per-packet one-way delay: 13.264 ms
  Loss rate: 0.04%
Run 8: Report of PCC-Expr — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 8.02 Mbit/s)  Flow 1 egress (mean 8.02 Mbit/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 13.26 ms)
Run 9: Statistics of PCC-Expr

Start at: 2018-06-30 00:04:29
End at: 2018-06-30 00:04:59

# Below is generated by plot.py at 2018-06-30 00:22:06
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 8.27 Mbit/s (69.0% utilization)
  95th percentile per-packet one-way delay: 40.136 ms
  Loss rate: 0.02%
-- Flow 1:
  Average throughput: 8.27 Mbit/s
  95th percentile per-packet one-way delay: 40.136 ms
  Loss rate: 0.02%
Run 9: Report of PCC-Expr — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 8.27 Mbit/s)  Flow 1 egress (mean 8.27 Mbit/s)

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

Flow 1 (95th percentile 40.14 ms)
Run 10: Statistics of PCC-Expr

Start at: 2018-06-30 00:14:09
End at: 2018-06-30 00:14:39

# Below is generated by plot.py at 2018-06-30 00:22:06
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 6.57 Mbit/s (54.8% utilization)
  95th percentile per-packet one-way delay: 13.091 ms
  Loss rate: 0.03%
-- Flow 1:
  Average throughput: 6.57 Mbit/s
  95th percentile per-packet one-way delay: 13.091 ms
  Loss rate: 0.03%
Run 10: Report of PCC-Expr — Data Link

Average capacity 12.00 Mbit/s (shaded region)

- Flow 1 ingress (mean 6.57 Mbit/s)
- Flow 1 egress (mean 6.57 Mbit/s)

Per-packet one-way delay (ms)

- Flow 1 (95th percentile 13.09 ms)
Run 1: Statistics of QUIC Cubic

Start at: 2018-06-29 22:44:49
End at: 2018-06-29 22:45:19

# Below is generated by plot.py at 2018-06-30 00:22:06
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 9.08 Mbit/s (75.6% utilization)
  95th percentile per-packet one-way delay: 95.061 ms
  Loss rate: 0.16%
-- Flow 1:
  Average throughput: 9.08 Mbit/s
  95th percentile per-packet one-way delay: 95.061 ms
  Loss rate: 0.16%
Run 1: Report of QUIC Cubic — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

- Flow 1 ingress (mean 9.09 Mbit/s)
- Flow 1 egress (mean 9.08 Mbit/s)

Per packet one way delay (ms)

Time (s)

- Flow 1 (95th percentile 95.06 ms)
Run 2: Statistics of QUIC Cubic

Start at: 2018-06-29 22:54:29
End at: 2018-06-29 22:54:59

# Below is generated by plot.py at 2018-06-30 00:22:06
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 7.99 Mbit/s (66.6% utilization)
95th percentile per-packet one-way delay: 84.207 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 7.99 Mbit/s
95th percentile per-packet one-way delay: 84.207 ms
Loss rate: 0.20%
Run 2: Report of QUIC Cubic — Data Link

Average capacity 12.00 Mbit/s (shaded region)

- Flow 1 ingress (mean 8.00 Mbit/s)
- Flow 1 egress (mean 7.99 Mbit/s)

Per packet one way delay

- Flow 1 (95th percentile 84.21 ms)
Run 3: Statistics of QUIC Cubic

Start at: 2018-06-29 23:04:09
End at: 2018-06-29 23:04:39

# Below is generated by plot.py at 2018-06-30 00:22:08
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 8.70 Mbit/s (72.5% utilization)
95th percentile per-packet one-way delay: 90.925 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 8.70 Mbit/s
95th percentile per-packet one-way delay: 90.925 ms
Loss rate: 0.17%
Run 3: Report of QUIC Cubic — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 8.71 Mbit/s)  Flow 1 egress (mean 8.70 Mbit/s)

Per Packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 90.92 ms)
Run 4: Statistics of QUIC Cubic

End at: 2018-06-29 23:14:20

# Below is generated by plot.py at 2018-06-30 00:22:08
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 9.07 Mbit/s (75.6% utilization)
95th percentile per-packet one-way delay: 95.286 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 9.07 Mbit/s
95th percentile per-packet one-way delay: 95.286 ms
Loss rate: 0.19%
Run 4: Report of QUIC Cubic — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 9.09 Mbit/s)  Flow 1 egress (mean 9.07 Mbit/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 95.29 ms)
Run 5: Statistics of QUIC Cubic

Start at: 2018-06-29 23:23:30
End at: 2018-06-29 23:24:00

# Below is generated by plot.py at 2018-06-30 00:22:09
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 8.51 Mbit/s (70.9% utilization)
  95th percentile per-packet one-way delay: 88.904 ms
  Loss rate: 0.18%
-- Flow 1:
  Average throughput: 8.51 Mbit/s
  95th percentile per-packet one-way delay: 88.904 ms
  Loss rate: 0.18%
Run 5: Report of QUIC Cubic — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 8.52 Mbit/s)  Flow 1 egress (mean 8.51 Mbit/s)

Per packet end-to-end delay (ms)

Time (s)

Flow 1 (95th percentile 88.50 ms)
Run 6: Statistics of QUIC Cubic

Start at: 2018-06-29 23:33:10
End at: 2018-06-29 23:33:40

# Below is generated by plot.py at 2018-06-30 00:22:13
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 8.99 Mbit/s (74.9% utilization)
  95th percentile per-packet one-way delay: 93.595 ms
  Loss rate: 0.23%
-- Flow 1:
  Average throughput: 8.99 Mbit/s
  95th percentile per-packet one-way delay: 93.595 ms
  Loss rate: 0.23%
Run 6: Report of QUIC Cubic — Data Link

Average capacity 12.00 Mbit/s (shaded region)

- Flow 1 ingress (mean 9.01 Mbit/s)
- Flow 1 egress (mean 8.99 Mbit/s)

Per packet one-way delay (ms)

Flow 1 (95th percentile 93.59 ms)
Run 7: Statistics of QUIC Cubic

End at: 2018-06-29 23:43:21

# Below is generated by plot.py at 2018-06-30 00:22:21
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 7.02 Mbit/s (58.5% utilization)
  95th percentile per-packet one-way delay: 75.524 ms
  Loss rate: 0.20%
-- Flow 1:
  Average throughput: 7.02 Mbit/s
  95th percentile per-packet one-way delay: 75.524 ms
  Loss rate: 0.20%
Run 7: Report of QUIC Cubic — Data Link
Run 8: Statistics of QUIC Cubic

Start at: 2018-06-29 23:52:31
End at: 2018-06-29 23:53:01

# Below is generated by plot.py at 2018-06-30 00:22:28
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 9.08 Mbit/s (75.7% utilization)
  95th percentile per-packet one-way delay: 95.343 ms
  Loss rate: 0.23%
-- Flow 1:
  Average throughput: 9.08 Mbit/s
  95th percentile per-packet one-way delay: 95.343 ms
  Loss rate: 0.23%
Run 8: Report of QUIC Cubic — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 9.10 Mbit/s)  Flow 1 egress (mean 9.08 Mbit/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 95.34 ms)
Run 9: Statistics of QUIC Cubic

Start at: 2018-06-30 00:02:12
End at: 2018-06-30 00:02:42

# Below is generated by plot.py at 2018-06-30 00:22:29
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 8.80 Mbit/s (73.3% utilization)
95th percentile per-packet one-way delay: 91.996 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 8.80 Mbit/s
95th percentile per-packet one-way delay: 91.996 ms
Loss rate: 0.19%
Run 9: Report of QUIC Cubic — Data Link

![Graph](image1)

Average capacity 12.00 Mbit/s (shaded region)

Time (s)

Throughput (Mbit/s)

Flow 1 ingress (mean 8.81 Mbit/s)  Flow 1 egress (mean 8.80 Mbit/s)

![Graph](image2)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 92.00 ms)
Run 10: Statistics of QUIC Cubic

Start at: 2018-06-30 00:11:52
End at: 2018-06-30 00:12:22

# Below is generated by plot.py at 2018-06-30 00:22:30
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 9.08 Mbit/s (75.7% utilization)
95th percentile per-packet one-way delay: 94.843 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 9.08 Mbit/s
95th percentile per-packet one-way delay: 94.843 ms
Loss rate: 0.23%
Run 10: Report of QUIC Cubic — Data Link
Run 1: Statistics of SCReAM

End at: 2018-06-29 22:49:18

# Below is generated by plot.py at 2018-06-30 00:22:30
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 0.22 Mbit/s (1.8% utilization)
95th percentile per-packet one-way delay: 11.688 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 11.688 ms
Loss rate: 0.13%
Run 1: Report of SCReAM — Data Link

Average capacity 12.00 Mbit/s (shaded region)

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

Packet delay (ms)
- Flow 1 (95th percentile 11.69 ms)
Run 2: Statistics of SCReAM

End at: 2018-06-29 22:58:58

# Below is generated by plot.py at 2018-06-30 00:22:30
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 0.22 Mbit/s (1.8% utilization)
95th percentile per-packet one-way delay: 11.698 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 11.698 ms
Loss rate: 0.00%
Run 2: Report of SCReAM — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 0.22 Mbit/s)  Flow 1 egress (mean 0.22 Mbit/s)

Per packet one way delay (ms)

Time (s)

Flow 1 95th percentile 11.70 ms
Run 3: Statistics of SCReAM

Start at: 2018-06-29 23:08:09
End at: 2018-06-29 23:08:39

# Below is generated by plot.py at 2018-06-30 00:22:30
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 0.22 Mbit/s (1.8% utilization)
95th percentile per-packet one-way delay: 11.697 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 11.697 ms
Loss rate: 0.00%
Run 3: Report of SCReAM — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 0.22 Mbit/s)  Flow 1 egress (mean 0.22 Mbit/s)

Per packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 11.70 ms)
Run 4: Statistics of SCReAM

Start at: 2018-06-29 23:17:49
End at: 2018-06-29 23:18:19

# Below is generated by plot.py at 2018-06-30 00:22:30
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 0.22 Mbit/s (1.8% utilization)
95th percentile per-packet one-way delay: 11.637 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 11.637 ms
Loss rate: 0.00%
Run 4: Report of SCReAM — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 0.22 Mbit/s)  Flow 1 egress (mean 0.22 Mbit/s)

Per packet one-way delay (μs)

Flow 1 (95th percentile 11.64 ms)
Run 5: Statistics of SCReAM

End at: 2018-06-29 23:27:59

# Below is generated by plot.py at 2018-06-30 00:22:30
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 0.22 Mbit/s (1.8% utilization)
95th percentile per-packet one-way delay: 11.674 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 11.674 ms
Loss rate: 0.13%
Run 5: Report of SCReAM — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 0.22 Mbit/s)  Flow 1 egress (mean 0.22 Mbit/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 11.67 ms)

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Run 6: Statistics of SCReAM

Start at: 2018-06-29 23:37:10
End at: 2018-06-29 23:37:40

# Below is generated by plot.py at 2018-06-30 00:22:30
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 0.22 Mbit/s (1.8% utilization)
  95th percentile per-packet one-way delay: 11.684 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 11.684 ms
  Loss rate: 0.00%
Run 6: Report of SCReAM — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 0.22 Mbit/s)  Flow 1 egress (mean 0.22 Mbit/s)

Per packet one way delay (ms)

Flow 1 (95th percentile 11.68 ms)
Run 7: Statistics of SCReAM

Start at: 2018-06-29 23:46:50
End at: 2018-06-29 23:47:20

# Below is generated by plot.py at 2018-06-30 00:22:30
# Datalink statistics
 -- Total of 1 flow:
 Average capacity: 12.00 Mbit/s
 Average throughput: 0.22 Mbit/s (1.8% utilization)
 95th percentile per-packet one-way delay: 11.636 ms
 Loss rate: 0.00%
 -- Flow 1:
 Average throughput: 0.22 Mbit/s
 95th percentile per-packet one-way delay: 11.636 ms
 Loss rate: 0.00%
Run 7: Report of SCReAM — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 0.22 Mbit/s)  Flow 1 egress (mean 0.22 Mbit/s)

Per packet one way delay (ms)

Flow 1 (95th percentile 11.64 ms)
Run 8: Statistics of SCReAM

Start at: 2018-06-29 23:56:30
End at: 2018-06-29 23:57:00

# Below is generated by plot.py at 2018-06-30 00:22:32
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 0.22 Mbit/s (1.8% utilization)
95th percentile per-packet one-way delay: 11.657 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 11.657 ms
Loss rate: 0.00%
Run 8: Report of SCReAM — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 0.22 Mbit/s)  Flow 1 egress (mean 0.22 Mbit/s)

Per packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 11.66 ms)
Run 9: Statistics of SCReAM

Start at: 2018-06-30 00:06:11
End at: 2018-06-30 00:06:41

# Below is generated by plot.py at 2018-06-30 00:22:33
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 0.22 Mbit/s (1.8% utilization)
  95th percentile per-packet one-way delay: 11.660 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 11.660 ms
  Loss rate: 0.00%
Run 9: Report of SCReAM — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 0.22 Mbit/s)  Flow 1 egress (mean 0.22 Mbit/s)

Per packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 11.66 ms)
Run 10: Statistics of SCReAM

Start at: 2018-06-30 00:15:52
End at: 2018-06-30 00:16:22

# Below is generated by plot.py at 2018-06-30 00:22:34
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 0.22 Mbit/s (1.8% utilization)
  95th percentile per-packet one-way delay: 11.695 ms
  Loss rate: 0.13%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 11.695 ms
  Loss rate: 0.13%
Run 10: Report of SCReAM — Data Link
Run 1: Statistics of Sprout

Start at: 2018-06-29 22:47:40
End at: 2018-06-29 22:48:10

# Below is generated by plot.py at 2018-06-30 00:22:39
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 0.97 Mbit/s (8.1% utilization)
  95th percentile per-packet one-way delay: 27.083 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.97 Mbit/s
  95th percentile per-packet one-way delay: 27.083 ms
  Loss rate: 0.00%
Run 1: Report of Sprout — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 0.97 Mbit/s)  Flow 1 egress (mean 0.97 Mbit/s)

Flow 1 (95th percentile 27.08 ms)
Run 2: Statistics of Sprout

End at: 2018-06-29 22:57:50

# Below is generated by plot.py at 2018-06-30 00:22:39
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 0.25 Mbit/s (2.0% utilization)
  95th percentile per-packet one-way delay: 16.114 ms
  Loss rate: 0.26%
-- Flow 1:
  Average throughput: 0.25 Mbit/s
  95th percentile per-packet one-way delay: 16.114 ms
  Loss rate: 0.26%
Run 2: Report of Sprout — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 0.25 Mbit/s)  Flow 1 egress (mean 0.25 Mbit/s)

Flow 1 (95th percentile 16.11 ms)
Run 3: Statistics of Sprout

Start at: 2018-06-29 23:07:01  
End at: 2018-06-29 23:07:31

# Below is generated by plot.py at 2018-06-30 00:22:39  
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s  
  Average throughput: 0.28 Mbit/s (2.3% utilization)  
  95th percentile per-packet one-way delay: 15.035 ms  
  Loss rate: 0.00%  
-- Flow 1:
  Average throughput: 0.28 Mbit/s  
  95th percentile per-packet one-way delay: 15.035 ms  
  Loss rate: 0.00%
Run 3: Report of Sprout — Data Link

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

- Average capacity 12.00 Mbit/s (shaded region)
- Throughput in Megabits per second (Mbps)
- Time in seconds
- Flow 1 ingress (mean 0.28 Mbit/s)
- Flow 1 egress (mean 0.28 Mbit/s)

- Per packet one-way delay in milliseconds (ms)
- Flow 1 (95th percentile 15.04 ms)
Run 4: Statistics of Sprout

Start at: 2018-06-29 23:16:41
End at: 2018-06-29 23:17:11

# Below is generated by plot.py at 2018-06-30 00:22:39
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 0.85 Mbit/s (7.1% utilization)
95th percentile per-packet one-way delay: 25.729 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.85 Mbit/s
95th percentile per-packet one-way delay: 25.729 ms
Loss rate: 0.00%
Run 4: Report of Sprout — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 0.85 Mbit/s)  Flow 1 egress (mean 0.85 Mbit/s)

Flow 1 (95th percentile 25.73 ms)
Run 5: Statistics of Sprout

Start at: 2018-06-29 23:26:21
End at: 2018-06-29 23:26:51

# Below is generated by plot.py at 2018-06-30 00:22:41
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 0.71 Mbit/s (5.9% utilization)
95th percentile per-packet one-way delay: 23.620 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.71 Mbit/s
95th percentile per-packet one-way delay: 23.620 ms
Loss rate: 0.00%
Run 5: Report of Sprout — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

0 2 4 6 8 10 12

0 5 10 15 20 25 30 35

Time (s)

Flow 1 ingress (mean 0.71 Mbit/s)  Flow 1 egress (mean 0.71 Mbit/s)

Per Packet One-Way Delay (ms)

10.0 12.5 15.0 17.5 20.0 22.5 25.0 27.5

0 5 10 15 20 25 30

Time (s)

Flow 1 (95th percentile 23.62 ms)
Run 6: Statistics of Sprout

Start at: 2018-06-29 23:36:02
End at: 2018-06-29 23:36:32

# Below is generated by plot.py at 2018-06-30 00:22:43
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 0.66 Mbit/s (5.5% utilization)
95th percentile per-packet one-way delay: 22.293 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.66 Mbit/s
95th percentile per-packet one-way delay: 22.293 ms
Loss rate: 0.00%
Run 6: Report of Sprout — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

0  1  2  3  4  5  6  7  8  9  10  11  12

Time (s)

Flow 1 ingress (mean 0.66 Mbit/s)  Flow 1 egress (mean 0.66 Mbit/s)

Per packet one way delay (ms)

20  22  24

Flow 1 (95th percentile 22.29 ms)

235
Run 7: Statistics of Sprout

Start at: 2018-06-29 23:45:42
End at: 2018-06-29 23:46:12

# Below is generated by plot.py at 2018-06-30 00:22:45
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 0.92 Mbit/s (7.7% utilization)
95th percentile per-packet one-way delay: 25.834 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.92 Mbit/s
95th percentile per-packet one-way delay: 25.834 ms
Loss rate: 0.00%
Run 7: Report of Sprout — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 0.92 Mbit/s)  Flow 1 egress (mean 0.92 Mbit/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 25.83 ms)
Run 8: Statistics of Sprout

End at: 2018-06-29 23:55:52

# Below is generated by plot.py at 2018-06-30 00:22:46
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 0.67 Mbit/s (5.6% utilization)
  95th percentile per-packet one-way delay: 21.477 ms
  Loss rate: 0.08%
-- Flow 1:
  Average throughput: 0.67 Mbit/s
  95th percentile per-packet one-way delay: 21.477 ms
  Loss rate: 0.08%
Run 8: Report of Sprout — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 0.67 Mbit/s)  Flow 1 egress (mean 0.67 Mbit/s)

Flow 1 (95th percentile 21.48 ms)
Run 9: Statistics of Sprout

Start at: 2018-06-30 00:05:03
End at: 2018-06-30 00:05:33

# Below is generated by plot.py at 2018-06-30 00:22:48
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 1.12 Mbit/s (9.3% utilization)
95th percentile per-packet one-way delay: 30.201 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.12 Mbit/s
95th percentile per-packet one-way delay: 30.201 ms
Loss rate: 0.00%
Run 9: Report of Sprout — Data Link

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

- **Average capacity**: 12.00 Mbit/s (shaded region)
- **Flow 1 ingress** (mean 1.12 Mbit/s)
- **Flow 1 egress** (mean 1.12 Mbit/s)

- **Flow 1** (95th percentile 30.20 ms)
Run 10: Statistics of Sprout

Start at: 2018-06-30 00:14:44
End at: 2018-06-30 00:15:14

# Below is generated by plot.py at 2018-06-30 00:22:49
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 1.19 Mbit/s (9.9% utilization)
95th percentile per-packet one-way delay: 30.411 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.19 Mbit/s
95th percentile per-packet one-way delay: 30.411 ms
Loss rate: 0.00%
Run 10: Report of Sprout — Data Link

Average capacity 12.00 Mbit/s (shaded region)

- Flow 1 ingress (mean 1.19 Mbit/s)
- Flow 1 egress (mean 1.19 Mbit/s)

Per-jacket end-to-end delay (ms)

- Flow 1 (95th percentile 30.41 ms)
Run 1: Statistics of TaoVA-100x

End at: 2018-06-29 22:43:37

# Below is generated by plot.py at 2018-06-30 00:22:54
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 2.90 Mbit/s (24.1% utilization)
95th percentile per-packet one-way delay: 39.006 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 2.90 Mbit/s
95th percentile per-packet one-way delay: 39.006 ms
Loss rate: 0.03%
Run 1: Report of TaoVA-100x — Data Link
Run 2: Statistics of TaoVA-100x

End at: 2018-06-29 22:53:17

# Below is generated by plot.py at 2018-06-30 00:22:56
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 3.43 Mbit/s (28.6% utilization)
  95th percentile per-packet one-way delay: 30.799 ms
  Loss rate: 0.03%
-- Flow 1:
  Average throughput: 3.43 Mbit/s
  95th percentile per-packet one-way delay: 30.799 ms
  Loss rate: 0.03%
Run 2: Report of TaoVA-100x — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 3.43 Mbit/s)  Flow 1 egress (mean 3.43 Mbit/s)

Per packet end-to-end delay (ms)

Flow 1 (95th percentile 30.50 ms)
Run 3: Statistics of TaoVA-100x

Start at: 2018-06-29 23:02:27
End at: 2018-06-29 23:02:57

# Below is generated by plot.py at 2018-06-30 00:22:58
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 3.14 Mbit/s (26.2% utilization)
  95th percentile per-packet one-way delay: 198.191 ms
  Loss rate: 0.03%
-- Flow 1:
  Average throughput: 3.14 Mbit/s
  95th percentile per-packet one-way delay: 198.191 ms
  Loss rate: 0.03%
Run 3: Report of TaoVA-100x — Data Link

![Graph showing throughput and packet delay]

- Average capacity: 12.00 Mbit/s (shaded region)
- Throughput in Mbps over time
- Flow 1 ingress (mean 3.14 Mbit/s) vs. Flow 1 egress (mean 3.14 Mbit/s)
- Per packet one-way delay in ms over time
- Flow 1 (95th percentile: 198.19 ms)
Run 4: Statistics of TaoVA-100x

Start at: 2018-06-29 23:12:07
End at: 2018-06-29 23:12:37

# Below is generated by plot.py at 2018-06-30 00:23:00
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 3.46 Mbit/s (28.8% utilization)
  95th percentile per-packet one-way delay: 31.635 ms
  Loss rate: 0.01%
-- Flow 1:
  Average throughput: 3.46 Mbit/s
  95th percentile per-packet one-way delay: 31.635 ms
  Loss rate: 0.01%
Run 4: Report of TaoVA-100x — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 3.45 Mbit/s)  Flow 1 egress (mean 3.46 Mbit/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 31.64 ms)
Run 5: Statistics of TaoVA-100x

End at: 2018-06-29 23:22:18

# Below is generated by plot.py at 2018-06-30 00:23:03
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 3.07 Mbit/s (25.6% utilization)
95th percentile per-packet one-way delay: 36.886 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 3.07 Mbit/s
95th percentile per-packet one-way delay: 36.886 ms
Loss rate: 0.06%
Run 5: Report of TaoVA-100x — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 3.07 Mbit/s)  Flow 1 egress (mean 3.07 Mbit/s)

Per packet one-way delay (ms)

Flow 1 (95th percentile 36.59 ms)
Run 6: Statistics of TaoVA-100x

End at: 2018-06-29 23:31:58

# Below is generated by plot.py at 2018-06-30 00:23:03
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 2.86 Mbit/s (23.9% utilization)
95th percentile per-packet one-way delay: 13.301 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 2.86 Mbit/s
95th percentile per-packet one-way delay: 13.301 ms
Loss rate: 0.03%
Run 6: Report of TaoVA-100x — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 2.86 Mbit/s)  Flow 1 egress (mean 2.86 Mbit/s)

Per packet one-way delay (ms)

Flow 1 (95th percentile 13.30 ms)
Run 7: Statistics of TaoVA-100x

Start at: 2018-06-29 23:41:08
End at: 2018-06-29 23:41:38

# Below is generated by plot.py at 2018-06-30 00:23:05
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 3.18 Mbit/s (26.5% utilization)
95th percentile per-packet one-way delay: 199.298 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 3.18 Mbit/s
95th percentile per-packet one-way delay: 199.298 ms
Loss rate: 0.05%
Run 7: Report of TaoVA-100x — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 3.18 Mbit/s)  Flow 1 egress (mean 3.18 Mbit/s)

Per packet one way delay (ms)

Flow 1 (95th percentile 199.30 ms)
Run 8: Statistics of TaoVA-100x

Start at: 2018-06-29 23:50:49
End at: 2018-06-29 23:51:19

# Below is generated by plot.py at 2018-06-30 00:23:05
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 2.89 Mbit/s (24.0% utilization)
95th percentile per-packet one-way delay: 39.522 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 2.89 Mbit/s
95th percentile per-packet one-way delay: 39.522 ms
Loss rate: 0.07%
Run 8: Report of TaoVA-100x — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

0 5 10 15 20 25 30 35

Time (s)

Flow 1 ingress (mean 2.89 Mbit/s)  Flow 1 egress (mean 2.89 Mbit/s)

Per packet one-way delay (ms)

Flow 1 (50th percentile 39.52 ms)
Run 9: Statistics of TaoVA-100x

Start at: 2018-06-30 00:00:29
End at: 2018-06-30 00:00:59

# Below is generated by plot.py at 2018-06-30 00:23:10
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 3.24 Mbit/s (27.0% utilization)
  95th percentile per-packet one-way delay: 33.452 ms
  Loss rate: 0.03%
-- Flow 1:
  Average throughput: 3.24 Mbit/s
  95th percentile per-packet one-way delay: 33.452 ms
  Loss rate: 0.03%
Run 9: Report of TaoVA-100x — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

0 2 4 6 8 10 12
0 5 10 15 20 25 30 35
Time (s)

Flow 1 ingress (mean 3.24 Mbit/s) Flow 1 egress (mean 3.24 Mbit/s)

Per packet one-way delay (ms)

10 20 30 40 50 60 70 80
0 5 10 15 20 25 30 35
Time (s)

Flow 1 (95th percentile 33.45 ms)
Run 10: Statistics of TaoVA-100x

Start at: 2018-06-30 00:10:10
End at: 2018-06-30 00:10:40

# Below is generated by plot.py at 2018-06-30 00:23:12
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 3.27 Mbit/s (27.3% utilization)
  95th percentile per-packet one-way delay: 34.360 ms
  Loss rate: 0.05%
-- Flow 1:
  Average throughput: 3.27 Mbit/s
  95th percentile per-packet one-way delay: 34.360 ms
  Loss rate: 0.05%
Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 3.27 Mbit/s)  Flow 1 egress (mean 3.27 Mbit/s)

Per packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 34.36 ms)
Run 1: Statistics of TCP Vegas

End at: 2018-06-29 22:49:52

# Below is generated by plot.py at 2018-06-30 00:23:23
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 11.66 Mbit/s (97.1% utilization)
95th percentile per-packet one-way delay: 1218.188 ms
Loss rate: 4.01%
-- Flow 1:
Average throughput: 11.66 Mbit/s
95th percentile per-packet one-way delay: 1218.188 ms
Loss rate: 4.01%
Run 1: Report of TCP Vegas — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 12.14 Mbit/s)  Flow 1 egress (mean 11.66 Mbit/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 1218.19 ms)
Run 2: Statistics of TCP Vegas

Start at: 2018-06-29 22:59:02
End at: 2018-06-29 22:59:32

# Below is generated by plot.py at 2018-06-30 00:23:24
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 11.66 Mbit/s (97.1% utilization)
95th percentile per-packet one-way delay: 588.704 ms
Loss rate: 1.93%
-- Flow 1:
Average throughput: 11.66 Mbit/s
95th percentile per-packet one-way delay: 588.704 ms
Loss rate: 1.93%
Run 2: Report of TCP Vegas — Data Link

![Graph 1: Average capacity 12.00 Mbit/s (shaded region)]

- **Flow 1 ingress (mean 11.88 Mbit/s)**
- **Flow 1 egress (mean 11.66 Mbit/s)**

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

- **Flow 1 (95th percentile 588.70 ms)**
Run 3: Statistics of TCP Vegas

Start at: 2018-06-29 23:08:42
End at: 2018-06-29 23:09:12

# Below is generated by plot.py at 2018-06-30 00:23:25
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 11.66 Mbit/s (97.1% utilization)
95th percentile per-packet one-way delay: 1221.386 ms
Loss rate: 3.93%
-- Flow 1:
Average throughput: 11.66 Mbit/s
95th percentile per-packet one-way delay: 1221.386 ms
Loss rate: 3.93%
Run 3: Report of TCP Vegas — Data Link
Run 4: Statistics of TCP Vegas

End at: 2018-06-29 23:18:53

# Below is generated by plot.py at 2018-06-30 00:23:26
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 11.66 Mbit/s (97.1% utilization)
95th percentile per-packet one-way delay: 585.430 ms
Loss rate: 1.84%
-- Flow 1:
Average throughput: 11.66 Mbit/s
95th percentile per-packet one-way delay: 585.430 ms
Loss rate: 1.84%
Run 4: Report of TCP Vegas — Data Link

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

- Average capacity: 12.00 Mbit/s
- Throughput (in gray): 0.0 to 17.5 Mbit/s
- Time (s): 0 to 35

**Legend:**
- Flow 1 ingress (mean 11.88 Mbit/s)
- Flow 1 egress (mean 11.66 Mbit/s)

![Graph showing per-packet delay over time.]

- Time (s): 0 to 35
- Per packet one-way delay (ms): 0 to 600

**Legend:**
- Flow 1 (95th percentile 585.43 ms)
Run 5: Statistics of TCP Vegas

Start at: 2018-06-29 23:28:03
End at: 2018-06-29 23:28:33

# Below is generated by plot.py at 2018-06-30 00:23:27
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 11.66 Mbit/s (97.1% utilization)
95th percentile per-packet one-way delay: 589.194 ms
Loss rate: 1.93%
-- Flow 1:
Average throughput: 11.66 Mbit/s
95th percentile per-packet one-way delay: 589.194 ms
Loss rate: 1.93%
Run 5: Report of TCP Vegas — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

0 5 10 15 20 25 30 35

Flow 1 ingress (mean 11.88 Mbit/s)  Flow 1 egress (mean 11.66 Mbit/s)

Per packet one-way delay (ms)

0 100 200 300 400 500 600

Flow 1 (95th percentile 589.19 ms)
Run 6: Statistics of TCP Vegas

Start at: 2018-06-29 23:37:43
End at: 2018-06-29 23:38:13

# Below is generated by plot.py at 2018-06-30 00:23:28
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 11.66 Mbit/s (97.1% utilization)
95th percentile per-packet one-way delay: 1224.648 ms
Loss rate: 4.02%
-- Flow 1:
Average throughput: 11.66 Mbit/s
95th percentile per-packet one-way delay: 1224.648 ms
Loss rate: 4.02%
Run 6: Report of TCP Vegas — Data Link

Average capacity 12.00 Mbit/s (shaded region)

- Flow 1 ingress (mean 12.14 Mbit/s)
- Flow 1 egress (mean 11.66 Mbit/s)

Per-packet one-way delay (ms)

Flow 1 (95th percentile 1224.65 ms)
Run 7: Statistics of TCP Vegas

End at: 2018-06-29 23:47:54

# Below is generated by plot.py at 2018-06-30 00:23:33
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 11.66 Mbit/s (97.1% utilization)
  95th percentile per-packet one-way delay: 1221.515 ms
  Loss rate: 3.93%
-- Flow 1:
  Average throughput: 11.66 Mbit/s
  95th percentile per-packet one-way delay: 1221.515 ms
  Loss rate: 3.93%
Run 7: Report of TCP Vegas — Data Link

![Average capacity 12.00 Mbit/s (shaded region)]

- **Flow 1 ingress** (mean 12.14 Mbit/s)
- **Flow 1 egress** (mean 11.66 Mbit/s)

![Per packet one way delay (ms)]

- **Flow 1 (95th percentile 1221.52 ms)**
Run 8: Statistics of TCP Vegas

Start at: 2018-06-29 23:57:04
End at: 2018-06-29 23:57:34

# Below is generated by plot.py at 2018-06-30 00:23:35
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 11.66 Mbit/s (97.1% utilization)
95th percentile per-packet one-way delay: 1215.648 ms
Loss rate: 3.94%
-- Flow 1:
Average throughput: 11.66 Mbit/s
95th percentile per-packet one-way delay: 1215.648 ms
Loss rate: 3.94%
Run 8: Report of TCP Vegas — Data Link

![Graph 1: Throughput vs Time]

- Average capacity 12.00 Mbit/s (shaded region)
- Flow 1 ingress (mean 12.14 Mbit/s)
- Flow 1 egress (mean 11.66 Mbit/s)

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

- Flow 1 (95th percentile 1213.65 ms)
Run 9: Statistics of TCP Vegas

Start at: 2018-06-30 00:06:45
End at: 2018-06-30 00:07:15

# Below is generated by plot.py at 2018-06-30 00:23:47
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 11.66 Mbit/s (97.2% utilization)
95th percentile per-packet one-way delay: 590.707 ms
Loss rate: 1.84%
-- Flow 1:
Average throughput: 11.66 Mbit/s
95th percentile per-packet one-way delay: 590.707 ms
Loss rate: 1.84%
Run 9: Report of TCP Vegas — Data Link

![Graph showing throughput and delay over time]

Average capacity 12.00 Mbit/s (shaded region)

- Flow 1 ingress (mean 11.89 Mbit/s)
- Flow 1 egress (mean 11.66 Mbit/s)

Per packet one way delay (ms)

Flow 1 (95th percentile 580.71 ms)
Run 10: Statistics of TCP Vegas

Start at: 2018-06-30 00:16:26
End at: 2018-06-30 00:16:56

# Below is generated by plot.py at 2018-06-30 00:23:48
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 11.65 Mbit/s (97.1% utilization)
  95th percentile per-packet one-way delay: 1229.405 ms
  Loss rate: 3.97%
-- Flow 1:
  Average throughput: 11.65 Mbit/s
  95th percentile per-packet one-way delay: 1229.405 ms
  Loss rate: 3.97%
Run 10: Report of TCP Vegas — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 12.14 Mbit/s)  Flow 1 egress (mean 11.65 Mbit/s)

Per-packet one way delay (ms)

Flow 1 (95th percentile 1229.40 ms)
Run 1: Statistics of Verus

Start at: 2018-06-29 22:44:15
End at: 2018-06-29 22:44:45

# Below is generated by plot.py at 2018-06-30 00:23:48
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 6.56 Mbit/s (54.6% utilization)
95th percentile per-packet one-way delay: 363.150 ms
Loss rate: 2.72%
-- Flow 1:
Average throughput: 6.56 Mbit/s
95th percentile per-packet one-way delay: 363.150 ms
Loss rate: 2.72%
Run 1: Report of Verus — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 6.74 Mbit/s)  Flow 1 egress (mean 6.56 Mbit/s)

Flow 1 (95th percentile 363.15 ms)
Run 2: Statistics of Verus

End at: 2018-06-29 22:54:25

# Below is generated by plot.py at 2018-06-30 00:23:48
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 7.28 Mbit/s (60.7% utilization)
95th percentile per-packet one-way delay: 351.942 ms
Loss rate: 7.01%
-- Flow 1:
Average throughput: 7.28 Mbit/s
95th percentile per-packet one-way delay: 351.942 ms
Loss rate: 7.01%
Run 2: Report of Verus — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 7.83 Mbit/s)  Flow 1 egress (mean 7.28 Mbit/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 351.94 ms)
Run 3: Statistics of Verus

Start at: 2018-06-29 23:03:35
End at: 2018-06-29 23:04:05

# Below is generated by plot.py at 2018-06-30 00:23:48
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 8.37 Mbit/s (69.7% utilization)
95th percentile per-packet one-way delay: 421.055 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 8.37 Mbit/s
95th percentile per-packet one-way delay: 421.055 ms
Loss rate: 0.40%
Run 3: Report of Verus — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 8.41 Mbit/s)  Flow 1 egress (mean 8.37 Mbit/s)

Per packet one way delay (ms)

Flow 1 (95th percentile 421.06 ms)
Run 4: Statistics of Verus

End at: 2018-06-29 23:13:45

# Below is generated by plot.py at 2018-06-30 00:23:48
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 6.90 Mbit/s (57.5% utilization)
  95th percentile per-packet one-way delay: 363.559 ms
  Loss rate: 2.49%
-- Flow 1:
  Average throughput: 6.90 Mbit/s
  95th percentile per-packet one-way delay: 363.559 ms
  Loss rate: 2.49%
Run 4: Report of Verus — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 7.08 Mbit/s)  Flow 1 egress (mean 6.90 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 363.56 ms)
Run 5: Statistics of Verus

End at: 2018-06-29 23:23:26

# Below is generated by plot.py at 2018-06-30 00:23:52
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 7.04 Mbit/s (58.7% utilization)
95th percentile per-packet one-way delay: 402.892 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 7.04 Mbit/s
95th percentile per-packet one-way delay: 402.892 ms
Loss rate: 0.00%
Run 5: Report of Verus — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 7.05 Mbit/s)  Flow 1 egress (mean 7.04 Mbit/s)

Per packet one-way delay (ms)

Flow 1 (95th percentile 402.89 ms)
Run 6: Statistics of Verus

Start at: 2018-06-29 23:32:36
End at: 2018-06-29 23:33:06

# Below is generated by plot.py at 2018-06-30 00:23:54
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 7.13 Mbit/s (59.4% utilization)
  95th percentile per-packet one-way delay: 347.072 ms
  Loss rate: 1.99%
-- Flow 1:
  Average throughput: 7.13 Mbit/s
  95th percentile per-packet one-way delay: 347.072 ms
  Loss rate: 1.99%
Run 6: Report of Verus — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 7.27 Mbit/s) Flow 1 egress (mean 7.13 Mbit/s)

Per packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 347.07 ms)
Run 7: Statistics of Verus

Start at: 2018-06-29 23:42:16
End at: 2018-06-29 23:42:46

# Below is generated by plot.py at 2018-06-30 00:24:00
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 7.23 Mbit/s (60.3% utilization)
  95th percentile per-packet one-way delay: 355.330 ms
  Loss rate: 0.76%
-- Flow 1:
  Average throughput: 7.23 Mbit/s
  95th percentile per-packet one-way delay: 355.330 ms
  Loss rate: 0.76%
Run 7: Report of Verus — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 7.28 Mbit/s)  Flow 1 egress (mean 7.23 Mbit/s)

Per packet end-to-end delay (ms)

Time (s)

Flow 1 (95th percentile 355.33 ms)
Run 8: Statistics of Verus

Start at: 2018-06-29 23:51:57
End at: 2018-06-29 23:52:27

# Below is generated by plot.py at 2018-06-30 00:24:01
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 6.82 Mbit/s (56.8% utilization)
95th percentile per-packet one-way delay: 351.837 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 6.82 Mbit/s
95th percentile per-packet one-way delay: 351.837 ms
Loss rate: 0.00%
Run 8: Report of Verus — Data Link

![Graph 1: Average capacity 12.00 Mbit/s (shaded region)]

- **Flow 1 ingress (mean 6.82 Mbit/s)**
- **Flow 1 egress (mean 6.82 Mbit/s)**

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

- **Flow 1 (95th percentile 351.84 ms)**
Run 9: Statistics of Verus

Start at: 2018-06-30 00:01:37
End at: 2018-06-30 00:02:07

# Below is generated by plot.py at 2018-06-30 00:24:06
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 8.34 Mbit/s (69.5% utilization)
  95th percentile per-packet one-way delay: 846.619 ms
  Loss rate: 0.61%
-- Flow 1:
  Average throughput: 8.34 Mbit/s
  95th percentile per-packet one-way delay: 846.619 ms
  Loss rate: 0.61%
Run 9: Report of Verus — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 8.39 Mbit/s)  Flow 1 egress (mean 8.34 Mbit/s)

Per packet one-way delay (ms)

Flow 1 (95th percentile 846.62 ms)
Run 10: Statistics of Verus

Start at: 2018-06-30 00:11:18
End at: 2018-06-30 00:11:48

# Below is generated by plot.py at 2018-06-30 00:24:06
# Datalink statistics
--- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 7.04 Mbit/s (58.7% utilization)
95th percentile per-packet one-way delay: 388.994 ms
Loss rate: 0.00%
--- Flow 1:
Average throughput: 7.04 Mbit/s
95th percentile per-packet one-way delay: 388.994 ms
Loss rate: 0.00%
Run 10: Report of Verus — Data Link

Average capacity 12.00 Mbit/s (shaded region)

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

Flow 1 ingress (mean 7.04 Mbit/s)  Flow 1 egress (mean 7.04 Mbit/s)

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

Flow 1 (95th percentile 388.99 ms)
Run 1: Statistics of PCC-Vivace

Start at: 2018-06-29 22:45:57

# Below is generated by plot.py at 2018-06-30 00:24:06
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 2.43 Mbit/s (20.2% utilization)
  95th percentile per-packet one-way delay: 12.269 ms
  Loss rate: 0.02%
-- Flow 1:
  Average throughput: 2.43 Mbit/s
  95th percentile per-packet one-way delay: 12.269 ms
  Loss rate: 0.02%
Run 1: Report of PCC-Vivace — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbps)

0 10 20 30 40
0 2 4 6 8 10 12
0 5 10 15 20 25 30

Flow 1 ingress (mean 2.43 Mbit/s)  Flow 1 egress (mean 2.43 Mbit/s)

Per packet one-way delay (ms)

10.0 10.5 11.0 11.5 12.0 12.5 13.0 13.5
0 5 10 15 20 25 30

Flow 1 (95th percentile 12.27 ms)
Run 2: Statistics of PCC-Vivace

End at: 2018-06-29 22:56:08

# Below is generated by plot.py at 2018-06-30 00:24:06
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 4.06 Mbit/s (33.9% utilization)
95th percentile per-packet one-way delay: 12.130 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 4.06 Mbit/s
95th percentile per-packet one-way delay: 12.130 ms
Loss rate: 0.04%
Run 2: Report of PCC-Vivace — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 4.06 Mbit/s)
Flow 1 egress (mean 4.06 Mbit/s)

Per packet one way delay (ms)

Flow 1 (95th percentile 12.13 ms)
Run 3: Statistics of PCC-Vivace

Start at: 2018-06-29 23:05:18
End at: 2018-06-29 23:05:48

# Below is generated by plot.py at 2018-06-30 00:24:10
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 4.81 Mbit/s (40.1% utilization)
  95th percentile per-packet one-way delay: 12.231 ms
  Loss rate: 0.05%
-- Flow 1:
  Average throughput: 4.81 Mbit/s
  95th percentile per-packet one-way delay: 12.231 ms
  Loss rate: 0.05%
Run 3: Report of PCC-Vivace — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 4.81 Mbit/s)  Flow 1 egress (mean 4.81 Mbit/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 12.23 ms)
Run 4: Statistics of PCC-Vivace

Start at: 2018-06-29 23:14:58
End at: 2018-06-29 23:15:28

# Below is generated by plot.py at 2018-06-30 00:24:10
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 2.41 Mbit/s (20.1% utilization)
95th percentile per-packet one-way delay: 12.280 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 2.41 Mbit/s
95th percentile per-packet one-way delay: 12.280 ms
Loss rate: 0.06%
Run 4: Report of PCC-Vivace — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

0 5 10 15 20 25 30 35

Time (s)

Flow 1 ingress (mean 2.41 Mbit/s)  Flow 1 egress (mean 2.41 Mbit/s)

Per packet one way delay (ms)

0 5 10 15 20 25 30

Time (s)

Flow 1 (95th percentile 12.28 ms)
Run 5: Statistics of PCC-Vivace

End at: 2018-06-29 23:25:08

# Below is generated by plot.py at 2018-06-30 00:24:14
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 3.19 Mbit/s (26.6% utilization)
95th percentile per-packet one-way delay: 12.185 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 3.19 Mbit/s
95th percentile per-packet one-way delay: 12.185 ms
Loss rate: 0.01%
Run 5: Report of PCC-Vivace — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

0 2 4 6 8 10 12
0 5 10 15 20 25 30 35 Time (s)

Flow 1 ingress (mean 3.19 Mbit/s)  Flow 1 egress (mean 3.19 Mbit/s)

Per-packet one-way delay (ms)

0 3.5 7 10.5 14
0 5 10 15 20 25 30 Time (s)

Flow 1 (95th percentile 12.19 ms)
Run 6: Statistics of PCC-Vivace

Start at: 2018-06-29 23:34:19
End at: 2018-06-29 23:34:49

# Below is generated by plot.py at 2018-06-30 00:24:14
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 2.65 Mbit/s (22.1% utilization)
  95th percentile per-packet one-way delay: 12.254 ms
  Loss rate: 0.01%
-- Flow 1:
  Average throughput: 2.65 Mbit/s
  95th percentile per-packet one-way delay: 12.254 ms
  Loss rate: 0.01%
Run 6: Report of PCC-Vivace — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 2.65 Mbit/s)  Flow 1 egress (mean 2.65 Mbit/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 12.25 ms)
Run 7: Statistics of PCC-Vivace

End at: 2018-06-29 23:44:29

# Below is generated by plot.py at 2018-06-30 00:24:18
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 4.07 Mbit/s (33.9% utilization)
95th percentile per-packet one-way delay: 12.194 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 4.07 Mbit/s
95th percentile per-packet one-way delay: 12.194 ms
Loss rate: 0.02%
Run 7: Report of PCC-Vivace — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 4.07 Mbit/s)  Flow 1 egress (mean 4.07 Mbit/s)

Per packet delivery delay (ms)

Flow 1 (95th percentile 12.19 ms)
Run 8: Statistics of PCC-Vivace

Start at: 2018-06-29 23:53:40
End at: 2018-06-29 23:54:10

# Below is generated by plot.py at 2018-06-30 00:24:19
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 3.32 Mbit/s (27.7% utilization)
  95th percentile per-packet one-way delay: 12.119 ms
  Loss rate: 0.02%
-- Flow 1:
  Average throughput: 3.32 Mbit/s
  95th percentile per-packet one-way delay: 12.119 ms
  Loss rate: 0.02%
Run 8: Report of PCC-Vivace — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 3.32 Mbit/s)  Flow 1 egress (mean 3.32 Mbit/s)

Per packet one way delay (ms)

Flow 1 (95th percentile 12.12 ms)
Run 9: Statistics of PCC-Vivace

Start at: 2018-06-30 00:03:20
End at: 2018-06-30 00:03:50

# Below is generated by plot.py at 2018-06-30 00:24:27
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 6.52 Mbit/s (54.3% utilization)
  95th percentile per-packet one-way delay: 12.187 ms
  Loss rate: 0.02%
-- Flow 1:
  Average throughput: 6.52 Mbit/s
  95th percentile per-packet one-way delay: 12.187 ms
  Loss rate: 0.02%
Run 9: Report of PCC-Vivace — Data Link

![Average capacity 12.00 Mbit/s (shaded region)]

![Flow 1 ingress (mean 6.52 Mbit/s) — Flow 1 egress (mean 6.52 Mbit/s)]

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

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Run 10: Statistics of PCC-Vivace

Start at: 2018-06-30 00:13:01
End at: 2018-06-30 00:13:31

# Below is generated by plot.py at 2018-06-30 00:24:27
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 2.54 Mbit/s (21.2% utilization)
  95th percentile per-packet one-way delay: 12.260 ms
  Loss rate: 0.03%
-- Flow 1:
  Average throughput: 2.54 Mbit/s
  95th percentile per-packet one-way delay: 12.260 ms
  Loss rate: 0.03%
Run 10: Report of PCC-Vivace — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 2.54 Mbit/s)  Flow 1 egress (mean 2.54 Mbit/s)

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

Flow 1 (95th percentile 12.26 ms)
Run 1: Statistics of WebRTC media


# Below is generated by plot.py at 2018-06-30 00:24:27
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 2.09 Mbit/s (17.4% utilization)
95th percentile per-packet one-way delay: 16.384 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 2.09 Mbit/s
95th percentile per-packet one-way delay: 16.384 ms
Loss rate: 0.07%
Run 1: Report of WebRTC media — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 2.09 Mbit/s)  Flow 1 egress (mean 2.09 Mbit/s)

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

Time (s)

Flow 1 (95th percentile 16.38 ms)
Run 2: Statistics of WebRTC media

End at: 2018-06-29 22:52:09

# Below is generated by plot.py at 2018-06-30 00:24:27
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 2.13 Mbit/s (17.8% utilization)
  95th percentile per-packet one-way delay: 15.606 ms
  Loss rate: 0.06%
-- Flow 1:
  Average throughput: 2.13 Mbit/s
  95th percentile per-packet one-way delay: 15.606 ms
  Loss rate: 0.06%
Run 2: Report of WebRTC media — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 2.13 Mbit/s)  Flow 1 egress (mean 2.13 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 15.61 ms)
Run 3: Statistics of WebRTC media

Start at: 2018-06-29 23:01:19
End at: 2018-06-29 23:01:49

# Below is generated by plot.py at 2018-06-30 00:24:28
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 2.09 Mbit/s (17.4% utilization)
  95th percentile per-packet one-way delay: 15.990 ms
  Loss rate: 0.06%
-- Flow 1:
  Average throughput: 2.09 Mbit/s
  95th percentile per-packet one-way delay: 15.990 ms
  Loss rate: 0.06%
Run 3: Report of WebRTC media — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbps)

Time (s)

0
5
10
15
20
25
30
35

Flow 1 ingress (mean 2.09 Mbit/s)  Flow 1 egress (mean 2.09 Mbit/s)

Per-packet one-way delay (ms)

0
5
10
15
20
25
30
35
40
45
50
55
60

Flow 1 (95th percentile 15.99 ms)
Run 4: Statistics of WebRTC media

Start at: 2018-06-29 23:10:59
End at: 2018-06-29 23:11:29

# Below is generated by plot.py at 2018-06-30 00:24:28
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 2.17 Mbit/s (18.1% utilization)
  95th percentile per-packet one-way delay: 15.878 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 2.17 Mbit/s
  95th percentile per-packet one-way delay: 15.878 ms
  Loss rate: 0.00%
Run 4: Report of WebRTC media — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 2.17 Mbit/s)  Flow 1 egress (mean 2.17 Mbit/s)

Per-packet one-way delay (ms)

Flow 1 (95th percentile 15.88 ms)
Run 5: Statistics of WebRTC media

Start at: 2018-06-29 23:20:39
End at: 2018-06-29 23:21:09

# Below is generated by plot.py at 2018-06-30 00:24:31
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 2.15 Mbit/s (17.9% utilization)
95th percentile per-packet one-way delay: 15.803 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 2.15 Mbit/s
95th percentile per-packet one-way delay: 15.803 ms
Loss rate: 0.04%
Run 5: Report of WebRTC media — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 2.15 Mbit/s)  Flow 1 egress (mean 2.15 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 15.80 ms)
Run 6: Statistics of WebRTC media

Start at: 2018-06-29 23:30:19
End at: 2018-06-29 23:30:50

# Below is generated by plot.py at 2018-06-30 00:24:32
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 2.16 Mbit/s (18.0% utilization)
95th percentile per-packet one-way delay: 16.017 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 2.16 Mbit/s
95th percentile per-packet one-way delay: 16.017 ms
Loss rate: 0.07%
Run 6: Report of WebRTC media — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 2.16 Mbit/s)  Flow 1 egress (mean 2.16 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 16.02 ms)
Run 7: Statistics of WebRTC media

Start at: 2018-06-29 23:40:00
End at: 2018-06-29 23:40:30

# Below is generated by plot.py at 2018-06-30 00:24:32
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 2.13 Mbit/s (17.7% utilization)
  95th percentile per-packet one-way delay: 16.216 ms
  Loss rate: 0.06%
-- Flow 1:
  Average throughput: 2.13 Mbit/s
  95th percentile per-packet one-way delay: 16.216 ms
  Loss rate: 0.06%
Run 7: Report of WebRTC media — Data Link

![Graph showing throughput and delay over time for WebRTC media data link.](image)

- **Average capacity**: 12.00 Mbit/s (shaded region)
- **Throughput**: Measured in Mbps (Megabits per second)
- **Time (s)**: X-axis indicates time in seconds
- **Flow 1 Ingress (mean 2.13 Mbit/s)**
- **Flow 1 Egress (mean 2.13 Mbit/s)**

![Graph showing per-packet end-to-end delay for WebRTC media data link.](image)

- **Per-packet end-to-end delay (ms)**: Y-axis indicates delay in milliseconds
- **Flow 1 (95th percentile 16.22 ms)**

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Run 8: Statistics of WebRTC media

Start at: 2018-06-29 23:49:40
End at: 2018-06-29 23:50:10

# Below is generated by plot.py at 2018-06-30 00:24:34
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 2.15 Mbit/s (17.9% utilization)
  95th percentile per-packet one-way delay: 15.720 ms
  Loss rate: 0.07%
-- Flow 1:
  Average throughput: 2.15 Mbit/s
  95th percentile per-packet one-way delay: 15.720 ms
  Loss rate: 0.07%
Run 8: Report of WebRTC media — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 2.15 Mbit/s)  Flow 1 egress (mean 2.15 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 15.72 ms)
Run 9: Statistics of WebRTC media

Start at: 2018-06-29 23:59:21
End at: 2018-06-29 23:59:51

# Below is generated by plot.py at 2018-06-30 00:24:34
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 1.94 Mbit/s (16.2% utilization)
  95th percentile per-packet one-way delay: 15.437 ms
  Loss rate: 0.05%
-- Flow 1:
  Average throughput: 1.94 Mbit/s
  95th percentile per-packet one-way delay: 15.437 ms
  Loss rate: 0.05%
Run 9: Report of WebRTC media — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 1.94 Mbit/s)  Flow 1 egress (mean 1.94 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 15.44 ms)
Run 10: Statistics of WebRTC media

Start at: 2018-06-30 00:09:02
End at: 2018-06-30 00:09:32

# Below is generated by plot.py at 2018-06-30 00:24:35
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 2.10 Mbit/s (17.5% utilization)
95th percentile per-packet one-way delay: 16.353 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 2.10 Mbit/s
95th percentile per-packet one-way delay: 16.353 ms
Loss rate: 0.07%
Run 10: Report of WebRTC media — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 2.11 Mbit/s)  Flow 1 egress (mean 2.10 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 16.35 ms)