Pantheon Report

Generated at 2018-06-30 00:29:26 (UTC).
Tested in mahimahi: mm-delay 30 mm-link 12mbps.trace 12mbps.trace
--uplink-queue=droptail --uplink-queue-args=bytes=30000
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 @ 715dc5f09d172e419699f6f6f17f1cb4c45064f212
third_party/fillp @ d47f4fa1b454a5e3c0537115c5a28436dbd4b834
third_party/fillp-sheep @ 30060ab034deb3424347f5cc3db86198eac35d2a
third_party/genericCC @ d0153f8e594aa89e93b032143cedbde58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0edbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ 6f038ed31259d366f9840f65b82cbe8f464d1b39
third_party/pcc @ 1af955fa0d66b18b623c091a55fec8724981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc878f3c7f42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2
M src/ScreamClient
M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
third_party/verus @ d4b447ea74c6c60a266149af2629562939f9a494
M src/verus.hpp
M tools/plot.py
third_party/vivace @ 2baf86211435ae071a32f96b7d8c50458f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9d5e4735770d143a1fa2851
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>
<tbody>
<tr>
<td>TCP BBR</td>
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<td>11.70</td>
<td>49.63</td>
<td>3.92</td>
</tr>
<tr>
<td>Copa</td>
<td>10</td>
<td>11.05</td>
<td>47.07</td>
<td>1.36</td>
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<tr>
<td>TCP Cubic</td>
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<td>11.72</td>
<td>48.69</td>
<td>0.27</td>
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<tr>
<td>FillP</td>
<td>10</td>
<td>11.78</td>
<td>50.95</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>
</tr>
<tr>
<td>Indigo</td>
<td>10</td>
<td>11.67</td>
<td>42.35</td>
<td>2.67</td>
</tr>
<tr>
<td>LEDBAT</td>
<td>10</td>
<td>8.85</td>
<td>49.60</td>
<td>1.12</td>
</tr>
<tr>
<td>PCC-Allegro</td>
<td>10</td>
<td>9.94</td>
<td>34.31</td>
<td>0.83</td>
</tr>
<tr>
<td>PCC-Expr</td>
<td>10</td>
<td>11.13</td>
<td>50.47</td>
<td>0.93</td>
</tr>
<tr>
<td>QUIC Cubic</td>
<td>10</td>
<td>11.71</td>
<td>49.77</td>
<td>0.36</td>
</tr>
<tr>
<td>SCReAM</td>
<td>10</td>
<td>0.21</td>
<td>31.67</td>
<td>0.09</td>
</tr>
<tr>
<td>Sprout</td>
<td>10</td>
<td>3.27</td>
<td>48.30</td>
<td>8.89</td>
</tr>
<tr>
<td>TaoVA-100x</td>
<td>10</td>
<td>11.50</td>
<td>33.29</td>
<td>0.71</td>
</tr>
<tr>
<td>TCP Vegas</td>
<td>10</td>
<td>11.77</td>
<td>37.03</td>
<td>0.20</td>
</tr>
<tr>
<td>Verus</td>
<td>10</td>
<td>6.57</td>
<td>51.84</td>
<td>93.53</td>
</tr>
<tr>
<td>PCC-Vivace</td>
<td>10</td>
<td>10.91</td>
<td>35.89</td>
<td>0.23</td>
</tr>
<tr>
<td>WebRTC media</td>
<td>10</td>
<td>2.19</td>
<td>36.26</td>
<td>0.19</td>
</tr>
</tbody>
</table>
Run 1: Statistics of TCP BBR

Start at: 2018-06-29 22:50:02
End at: 2018-06-29 22:50:32

# Below is generated by plot.py at 2018-06-30 00:20:40
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 11.64 Mbit/s (97.0% utilization)
  95th percentile per-packet one-way delay: 49.744 ms
  Loss rate: 3.75%
-- Flow 1:
  Average throughput: 11.64 Mbit/s
  95th percentile per-packet one-way delay: 49.744 ms
  Loss rate: 3.75%
Run 1: Report of TCP BBR — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 12.08 Mbit/s)  Flow 1 egress (mean 11.64 Mbit/s)

Per-packet one-way delay (ms)

Flow 1 (95th percentile 49.74 ms)
Run 2: Statistics of TCP BBR

Start at: 2018-06-29 22:59:49
End at: 2018-06-29 23:00:19

# Below is generated by plot.py at 2018-06-30 00:20:40
# Datalink statistics
-- Total of 1 flow:
   Average capacity: 12.00 Mbit/s
   Average throughput: 11.68 Mbit/s (97.3% utilization)
   95th percentile per-packet one-way delay: 49.685 ms
   Loss rate: 3.86%
-- Flow 1:
   Average throughput: 11.68 Mbit/s
   95th percentile per-packet one-way delay: 49.685 ms
   Loss rate: 3.86%
Run 2: Report of TCP BBR — Data Link

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

- **Flow 1 ingress (mean 12.13 Mbit/s)**
- **Flow 1 egress (mean 11.68 Mbit/s)**

**Per packet one way delay (ms)**
- **Flow 1 (95th percentile 49.69 ms)**

![Graph showing throughput and packet delay over time]
Run 3: Statistics of TCP BBR

Start at: 2018-06-29 23:09:37
End at: 2018-06-29 23:10:07

# Below is generated by plot.py at 2018-06-30 00:20:40
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 11.69 Mbit/s (97.4% utilization)
95th percentile per-packet one-way delay: 49.567 ms
Loss rate: 3.91%
-- Flow 1:
Average throughput: 11.69 Mbit/s
95th percentile per-packet one-way delay: 49.567 ms
Loss rate: 3.91%
Run 3: Report of TCP BBR — Data Link

![Graph showing throughput and packet delay with time]
Run 4: Statistics of TCP BBR

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

# Below is generated by plot.py at 2018-06-30 00:20:40
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 11.68 Mbit/s (97.3% utilization)
  95th percentile per-packet one-way delay: 49.626 ms
  Loss rate: 3.90%
-- Flow 1:
  Average throughput: 11.68 Mbit/s
  95th percentile per-packet one-way delay: 49.626 ms
  Loss rate: 3.90%
Run 4: Report of TCP BBR — Data Link

![Graph showing throughput and delay over time]

Average capacity 12.00 Mbit/s (shaded region)

- **Flow 1 ingress** (mean 12.14 Mbit/s)
- **Flow 1 egress** (mean 11.68 Mbit/s)

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

- **Flow 1** (95th percentile 49.63 ms)
Run 5: Statistics of TCP BBR

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

# Below is generated by plot.py at 2018-06-30 00:20:40
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 11.64 Mbit/s (97.0% utilization)
95th percentile per-packet one-way delay: 49.232 ms
Loss rate: 3.96%
-- Flow 1:
Average throughput: 11.64 Mbit/s
95th percentile per-packet one-way delay: 49.232 ms
Loss rate: 3.96%
Run 5: Report of TCP BBR — Data Link
Run 6: Statistics of TCP BBR

End at: 2018-06-29 23:39:34

# Below is generated by plot.py at 2018-06-30 00:20:41
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 11.68 Mbit/s (97.3% utilization)
  95th percentile per-packet one-way delay: 49.817 ms
  Loss rate: 4.04%
-- Flow 1:
  Average throughput: 11.68 Mbit/s
  95th percentile per-packet one-way delay: 49.817 ms
  Loss rate: 4.04%
Run 6: Report of TCP BBR — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 12.16 Mbit/s)  Flow 1 egress (mean 11.68 Mbit/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 49.82 ms)
Run 7: Statistics of TCP BBR

End at: 2018-06-29 23:49:21

# Below is generated by plot.py at 2018-06-30 00:20:41
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 11.68 Mbit/s (97.3% utilization)
  95th percentile per-packet one-way delay: 49.646 ms
  Loss rate: 4.08%
-- Flow 1:
  Average throughput: 11.68 Mbit/s
  95th percentile per-packet one-way delay: 49.646 ms
  Loss rate: 4.08%
Run 7: Report of TCP BBR — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 12.16 Mbit/s)  Flow 1 egress (mean 11.68 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 49.65 ms)
Run 8: Statistics of TCP BBR

Start at: 2018-06-29 23:58:40
End at: 2018-06-29 23:59:10

# Below is generated by plot.py at 2018-06-30 00:20:41
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 11.80 Mbit/s (98.3% utilization)
95th percentile per-packet one-way delay: 49.633 ms
Loss rate: 3.91%
-- Flow 1:
Average throughput: 11.80 Mbit/s
95th percentile per-packet one-way delay: 49.633 ms
Loss rate: 3.91%
Run 8: Report of TCP BBR — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 12.26 Mbit/s)  Flow 1 egress (mean 11.80 Mbit/s)

Per-packet one-way delay (ms)

Flow 1 (95th percentile 49.63 ms)
Run 9: Statistics of TCP BBR

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 00:20:56
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 11.68 Mbit/s (97.3% utilization)
  95th percentile per-packet one-way delay: 49.633 ms
  Loss rate: 4.04%
-- Flow 1:
  Average throughput: 11.68 Mbit/s
  95th percentile per-packet one-way delay: 49.633 ms
  Loss rate: 4.04%
Run 9: Report of TCP BBR — Data Link

![Graph 1: Throughput (Mbps)]

Average capacity 12.00 Mbps (shaded region)

- Flow 1 ingress (mean 12.16 Mbps)
- Flow 1 egress (mean 11.68 Mbps)

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

Flow 1 (95th percentile 49.63 ms)
Run 10: Statistics of TCP BBR

Start at: 2018-06-30 00:18:15
End at: 2018-06-30 00:18:46

# Below is generated by plot.py at 2018-06-30 00:20:57
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 11.80 Mbit/s (98.3% utilization)
  95th percentile per-packet one-way delay: 49.708 ms
  Loss rate: 3.77%
-- Flow 1:
  Average throughput: 11.80 Mbit/s
  95th percentile per-packet one-way delay: 49.708 ms
  Loss rate: 3.77%
Run 10: Report of TCP BBR — Data Link

Average capacity 12.00 Mbit/s (shaded region)

*Flow 1 ingress (mean 12.25 Mbit/s)  Flow 1 egress (mean 11.80 Mbit/s)*

Per packet one-way delay (ms)

*Flow 1 (95th percentile 49.71 ms)*
Run 1: Statistics of Copa


# Below is generated by plot.py at 2018-06-30 00:21:14
# 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: 45.864 ms
 Loss rate: 0.99%
-- Flow 1:
 Average throughput: 11.40 Mbit/s
  95th percentile per-packet one-way delay: 45.864 ms
 Loss rate: 0.99%
Run 1: Report of Copa — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 11.50 Mbit/s)  Flow 1 egress (mean 11.40 Mbit/s)

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

Time (s)

Flow 1 (95th percentile 45.56 ms)
Run 2: Statistics of Copa

Start at: 2018-06-29 22:58:05
End at: 2018-06-29 22:58:35

# Below is generated by plot.py at 2018-06-30 00:21:14
# 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: 47.446 ms
  Loss rate: 1.67%
-- Flow 1:
  Average throughput: 11.02 Mbit/s
  95th percentile per-packet one-way delay: 47.446 ms
  Loss rate: 1.67%
Run 2: Report of Copa — Data Link
Run 3: Statistics of Copa

Start at: 2018-06-29 23:07:53
End at: 2018-06-29 23:08:23

# Below is generated by plot.py at 2018-06-30 00:21:15
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 11.10 Mbit/s (92.5% utilization)
  95th percentile per-packet one-way delay: 46.149 ms
  Loss rate: 1.16%
-- Flow 1:
  Average throughput: 11.10 Mbit/s
  95th percentile per-packet one-way delay: 46.149 ms
  Loss rate: 1.16%
Run 3: Report of Copa — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 11.22 Mbit/s)  Flow 1 egress (mean 11.10 Mbit/s)

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

Time (s)

Flow 1 (95th percentile 46.15 ms)
Run 4: Statistics of Copa

Start at: 2018-06-29 23:17:43
End at: 2018-06-29 23:18:13

# Below is generated by plot.py at 2018-06-30 00:21:15
# 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: 47.764 ms
Loss rate: 1.55%
-- Flow 1:
Average throughput: 11.02 Mbit/s
95th percentile per-packet one-way delay: 47.764 ms
Loss rate: 1.55%
Run 4: Report of Copa — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 11.18 Mbit/s)  Flow 1 egress (mean 11.02 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 47.76 ms)
Run 5: Statistics of Copa

End at: 2018-06-29 23:28:02

# Below is generated by plot.py at 2018-06-30 00:21:15
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 11.18 Mbit/s (93.2% utilization)
  95th percentile per-packet one-way delay: 48.094 ms
  Loss rate: 1.54%
-- Flow 1:
  Average throughput: 11.18 Mbit/s
  95th percentile per-packet one-way delay: 48.094 ms
  Loss rate: 1.54%
Run 5: Report of Copa — Data Link
Run 6: Statistics of Copa

Start at: 2018-06-29 23:37:20
End at: 2018-06-29 23:37:50

# Below is generated by plot.py at 2018-06-30 00:21:15
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 10.99 Mbit/s (91.5% utilization)
95th percentile per-packet one-way delay: 49.173 ms
Loss rate: 1.76%
-- Flow 1:
Average throughput: 10.99 Mbit/s
95th percentile per-packet one-way delay: 49.173 ms
Loss rate: 1.76%
Run 6: Report of Copa — Data Link
Run 7: Statistics of Copa

Start at: 2018-06-29 23:47:07
End at: 2018-06-29 23:47:37

# Below is generated by plot.py at 2018-06-30 00:21:33
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 10.50 Mbit/s (87.5% utilization)
95th percentile per-packet one-way delay: 48.278 ms
Loss rate: 1.62%
-- Flow 1:
Average throughput: 10.50 Mbit/s
95th percentile per-packet one-way delay: 48.278 ms
Loss rate: 1.62%
Run 7: Report of Copa — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Flow 1 ingress (mean 10.66 Mbit/s)  Flow 1 egress (mean 10.50 Mbit/s)

Per-packet one-way delay (ms)

Flow 1 (95th percentile 48.28 ms)
Run 8: Statistics of Copa

Start at: 2018-06-29 23:56:56
End at: 2018-06-29 23:57:26

# Below is generated by plot.py at 2018-06-30 00:21:35
# 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: 45.051 ms
Loss rate: 0.95%
-- Flow 1:
Average throughput: 11.20 Mbit/s
95th percentile per-packet one-way delay: 45.051 ms
Loss rate: 0.95%
Run 8: Report of Copa — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 11.30 Mbit/s)  Flow 1 egress (mean 11.20 Mbit/s)

Per-packet one-way delay (ms)

Flow 1 (95th percentile 45.05 ms)
Run 9: Statistics of Copa

Start at: 2018-06-30 00:06:44
End at: 2018-06-30 00:07:14

# 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: 11.37 Mbit/s (94.7% utilization)
95th percentile per-packet one-way delay: 43.646 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 11.37 Mbit/s
95th percentile per-packet one-way delay: 43.646 ms
Loss rate: 0.76%
Run 9: Report of Copa — Data Link

[Graphs showing throughput and per-packet end-to-end delay over time]
Run 10: Statistics of Copa

Start at: 2018-06-30 00:16:32
End at: 2018-06-30 00:17:02

# 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: 10.74 Mbit/s (89.5% utilization)
95th percentile per-packet one-way delay: 49.204 ms
Loss rate: 1.62%
-- Flow 1:
Average throughput: 10.74 Mbit/s
95th percentile per-packet one-way delay: 49.204 ms
Loss rate: 1.62%
Run 10: Report of Copa — Data Link

Average capacity 12.00 Mbps (shaded region)

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 10.91 Mbps)  Flow 1 egress (mean 10.74 Mbps)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 49.20 ms)
Run 1: Statistics of TCP Cubic

Start at: 2018-06-29 22:47:09
End at: 2018-06-29 22:47:39

# 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: 11.75 Mbit/s (97.9% utilization)
   95th percentile per-packet one-way delay: 49.029 ms
   Loss rate: 0.27%
   -- Flow 1:
   Average throughput: 11.75 Mbit/s
   95th percentile per-packet one-way delay: 49.029 ms
   Loss rate: 0.27%
Run 1: Report of TCP Cubic — Data Link

Average capacity 12.00 Mbit/s (shaded region)

- Flow 1 ingress (mean 11.77 Mbit/s)
- Flow 1 egress (mean 11.75 Mbit/s)

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

- Flow 1 (95th percentile 49.03 ms)
Run 2: Statistics of TCP Cubic

End at: 2018-06-29 22:57:25

# 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: 11.71 Mbit/s (97.6% utilization)
95th percentile per-packet one-way delay: 48.537 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 11.71 Mbit/s
95th percentile per-packet one-way delay: 48.537 ms
Loss rate: 0.24%
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 11.73 Mbit/s)  Flow 1 egress (mean 11.71 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 48.54 ms)
Run 3: Statistics of TCP Cubic

Start at: 2018-06-29 23:06:44
End at: 2018-06-29 23:07:14

# 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: 11.76 Mbit/s (98.0% utilization)
95th percentile per-packet one-way delay: 48.861 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 11.76 Mbit/s
95th percentile per-packet one-way delay: 48.861 ms
Loss rate: 0.33%
Run 3: Report of TCP Cubic — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 11.79 Mbit/s)  Flow 1 egress (mean 11.76 Mbit/s)

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

Time (s)

Flow 1 (95th percentile 48.56 ms)
Run 4: Statistics of TCP Cubic

Start at: 2018-06-29 23:16:33
End at: 2018-06-29 23:17:03

# 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: 11.56 Mbit/s (96.3% utilization)
95th percentile per-packet one-way delay: 48.629 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 11.56 Mbit/s
95th percentile per-packet one-way delay: 48.629 ms
Loss rate: 0.26%
Run 4: Report of TCP Cubic — Data Link

Average capacity 12.00 Mb/s (shaded region)

Throughput (Mb/s)

Time (s)

Flow 1 ingress (mean 11.58 Mb/s)  Flow 1 egress (mean 11.56 Mb/s)

Per-packet one-way delay (ms)

Flow 1 (95th percentile 48.63 ms)
Run 5: Statistics of TCP Cubic

Start at: 2018-06-29 23:26:23
End at: 2018-06-29 23:26:53

# Below is generated by plot.py at 2018-06-30 00:21:59
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 11.75 Mbit/s (97.9% utilization)
95th percentile per-packet one-way delay: 48.435 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 11.75 Mbit/s
95th percentile per-packet one-way delay: 48.435 ms
Loss rate: 0.29%
Run 5: Report of TCP Cubic — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 11.77 Mbit/s)  Flow 1 egress (mean 11.75 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 48.44 ms)
Run 6: Statistics of TCP Cubic

Start at: 2018-06-29 23:36:10
End at: 2018-06-29 23:36:40

# Below is generated by plot.py at 2018-06-30 00:22:00
# 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: 48.971 ms
  Loss rate: 0.31%
-- Flow 1:
  Average throughput: 11.76 Mbit/s
  95th percentile per-packet one-way delay: 48.971 ms
  Loss rate: 0.31%
Run 6: Report of TCP Cubic — Data Link

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

- Flow 1 ingress (mean 11.79 Mbit/s)
- Flow 1 egress (mean 11.76 Mbit/s)

![Graph showing per-packet end-to-end delay over time with dots representing data points.]

- Flow 1 (95th percentile 48.97 ms)
Run 7: Statistics of TCP Cubic

Start at: 2018-06-29 23:45:58

# Below is generated by plot.py at 2018-06-30 00:22:01
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 11.72 Mbit/s (97.7% utilization)
95th percentile per-packet one-way delay: 48.590 ms
Loss rate: 0.24%

-- Flow 1:
Average throughput: 11.72 Mbit/s
95th percentile per-packet one-way delay: 48.590 ms
Loss rate: 0.24%
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 11.74 Mbit/s)  Flow 1 egress (mean 11.72 Mbit/s)

Per-packet on-way delay (ms)

Time (s)

Flow 1 (95th percentile 48.59 ms)
Run 8: Statistics of TCP Cubic

End at: 2018-06-29 23:56:16

# Below is generated by plot.py at 2018-06-30 00:22:03
# Datalink statistics
-- Total of 1 flow:
   Average capacity: 12.00 Mbit/s
   Average throughput: 11.72 Mbit/s (97.6% utilization)
   95th percentile per-packet one-way delay: 48.662 ms
   Loss rate: 0.20%
-- Flow 1:
   Average throughput: 11.72 Mbit/s
   95th percentile per-packet one-way delay: 48.662 ms
   Loss rate: 0.20%
Run 8: Report of TCP Cubic — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 11.73 Mbit/s)  Flow 1 egress (mean 11.72 Mbit/s)

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

Flow 1 (95th percentile 48.66 ms)
Run 9: Statistics of TCP Cubic

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

# Below is generated by plot.py at 2018-06-30 00:22:03  
# Datalink statistics  
-- Total of 1 flow:  
  Average capacity: 12.00 Mbit/s  
  Average throughput: 11.71 Mbit/s (97.6% utilization)  
  95th percentile per-packet one-way delay: 48.523 ms  
  Loss rate: 0.25%  
-- Flow 1:  
  Average throughput: 11.71 Mbit/s  
  95th percentile per-packet one-way delay: 48.523 ms  
  Loss rate: 0.25%
Run 9: Report of TCP Cubic — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 11.73 Mbit/s)  Flow 1 egress (mean 11.71 Mbit/s)

Per-jacket one-way delay (ms)

Time (s)

Flow 1 (95th percentile 48.52 ms)
Run 10: Statistics of TCP Cubic

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

# Below is generated by plot.py at 2018-06-30 00:22:03
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 11.74 Mbit/s (97.9% utilization)
95th percentile per-packet one-way delay: 48.624 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 11.74 Mbit/s
95th percentile per-packet one-way delay: 48.624 ms
Loss rate: 0.26%
Run 10: Report of TCP Cubic — Data Link

![Diagram 1: Throughput vs Time]

Average capacity 12.00 Mbit/s (shaded region)

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

Flow 1 ingress (mean 11.76 Mbit/s)  Flow 1 egress (mean 11.74 Mbit/s)

Flow 1 (95th percentile 48.62 ms)
Run 1: Statistics of FillP

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

# Below is generated by plot.py at 2018-06-30 00:22:14
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 11.75 Mbit/s (97.9% utilization)
95th percentile per-packet one-way delay: 50.972 ms
Loss rate: 7.94%
-- Flow 1:
Average throughput: 11.75 Mbit/s
95th percentile per-packet one-way delay: 50.972 ms
Loss rate: 7.94%
Run 1: Report of FillP — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 12.75 Mbit/s) — Flow 1 egress (mean 11.75 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 50.97 ms)
Run 2: Statistics of FillP

Start at: 2018-06-29 23:00:23
End at: 2018-06-29 23:00:53

# Below is generated by plot.py at 2018-06-30 00:22:15
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 11.82 Mbit/s (98.5% utilization)
  95th percentile per-packet one-way delay: 50.900 ms
  Loss rate: 9.39%
-- Flow 1:
  Average throughput: 11.82 Mbit/s
  95th percentile per-packet one-way delay: 50.900 ms
  Loss rate: 9.39%
Run 2: Report of FillP — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 13.03 Mbit/s)  Flow 1 egress (mean 11.82 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 50.90 ms)
Run 3: Statistics of FillP

Start at: 2018-06-29 23:10:11
End at: 2018-06-29 23:10:41

# Below is generated by plot.py at 2018-06-30 00:22:27
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 11.81 Mbit/s (98.4% utilization)
95th percentile per-packet one-way delay: 50.956 ms
Loss rate: 11.24%
-- Flow 1:
Average throughput: 11.81 Mbit/s
95th percentile per-packet one-way delay: 50.956 ms
Loss rate: 11.24%
Run 3: Report of FillP — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

0 10 20 30 40 50

Time (s)

0 5 10 15 20 25 30 35

Flow 1 ingress (mean 13.29 Mbit/s)  Flow 1 egress (mean 11.81 Mbit/s)

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

30 40 50 60

Time (s)

0 5 10 15 20 25 30

Flow 1 (95th percentile 50.96 ms)
Run 4: Statistics of FillP

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

# 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: 11.80 Mbit/s (98.3% utilization)
95th percentile per-packet one-way delay: 50.987 ms
Loss rate: 10.42%
-- Flow 1:
Average throughput: 11.80 Mbit/s
95th percentile per-packet one-way delay: 50.987 ms
Loss rate: 10.42%
Run 4: Report of FillP — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 13.16 Mbit/s)  Flow 1 egress (mean 11.80 Mbit/s)

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

Time (s)

Flow 1 (95th percentile 50.99 ms)
Run 5: Statistics of FillP

Start at: 2018-06-29 23:29:51
End at: 2018-06-29 23:30:21

# 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: 11.79 Mbit/s (98.2% utilization)
95th percentile per-packet one-way delay: 50.975 ms
Loss rate: 9.69%
-- Flow 1:
Average throughput: 11.79 Mbit/s
95th percentile per-packet one-way delay: 50.975 ms
Loss rate: 9.69%
Run 5: Report of FillP — Data Link

Average capacity 12.00 Mbit/s (shaded region)

- Flow 1 ingress (mean 13.04 Mbit/s)
- Flow 1 egress (mean 11.79 Mbit/s)

Per-packet round-trip delay (ms)

- Flow 1 (95th percentile 50.98 ms)
Run 6: Statistics of FillP

End at: 2018-06-29 23:40:08

# Below is generated by plot.py at 2018-06-30 00:22:31
# 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: 50.977 ms
Loss rate: 10.23%
-- Flow 1:
Average throughput: 11.79 Mbit/s
95th percentile per-packet one-way delay: 50.977 ms
Loss rate: 10.23%
Run 6: Report of FillP — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 13.12 Mbit/s)  Flow 1 egress (mean 11.79 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 50.98 ms)
Run 7: Statistics of FillP


# 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: 11.79 Mbit/s (98.3% utilization)
  95th percentile per-packet one-way delay: 50.940 ms
  Loss rate: 10.35%
-- Flow 1:
  Average throughput: 11.79 Mbit/s
  95th percentile per-packet one-way delay: 50.940 ms
  Loss rate: 10.35%
Run 7: Report of FillP — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 13.14 Mbit/s)  Flow 1 egress (mean 11.79 Mbit/s)

Packet per second vs. delay (ms)

Flow 1 (95th percentile 50.94 ms)
Run 8: Statistics of FillP

Start at: 2018-06-29 23:59:14
End at: 2018-06-29 23:59:44

# 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: 11.73 Mbit/s (97.7% utilization)
  95th percentile per-packet one-way delay: 50.968 ms
  Loss rate: 7.92%
-- Flow 1:
  Average throughput: 11.73 Mbit/s
  95th percentile per-packet one-way delay: 50.968 ms
  Loss rate: 7.92%
Run 8: Report of FillP — Data Link

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

- Average capacity 12.00 Mbit/s (shaded region)
- Flow 1 ingress (mean 12.73 Mbit/s)
- Flow 1 egress (mean 11.73 Mbit/s)

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

- Flow 1 (95th percentile 50.97 ms)
Run 9: Statistics of FillP

Start at: 2018-06-30 00:09:03
End at: 2018-06-30 00:09:33

# 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: 11.76 Mbit/s (98.0% utilization)
  95th percentile per-packet one-way delay: 50.919 ms
  Loss rate: 7.62%
-- Flow 1:
  Average throughput: 11.76 Mbit/s
  95th percentile per-packet one-way delay: 50.919 ms
  Loss rate: 7.62%
Run 9: Report of FillP — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 12.72 Mbit/s)  Flow 1 egress (mean 11.76 Mbit/s)

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

Time (s)

Flow 1 (95th percentile 50.92 ms)
Run 10: Statistics of FillP

Start at: 2018-06-30 00:18:50
End at: 2018-06-30 00:19:20

# Below is generated by plot.py at 2018-06-30 00:22:51
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 11.74 Mbit/s (97.8% utilization)
95th percentile per-packet one-way delay: 50.929 ms
Loss rate: 8.17%
-- Flow 1:
Average throughput: 11.74 Mbit/s
95th percentile per-packet one-way delay: 50.929 ms
Loss rate: 8.17%
Run 10: Report of FillP — Data Link

![Graph showing network traffic and delay]

Average capacity 12.00 Mbit/s (shaded region)

- Flow 1 ingress (mean 12.77 Mbit/s)
- Flow 1 egress (mean 11.74 Mbit/s)

![Graph showing packet delay over time]

- Flow 1 (95th percentile 50.93 ms)
Run 1: Statistics of FillP-Sheep

End at: 2018-06-29 22:41:54
Run 1: Report of FillP-Sheep — Data Link

![Graphs showing data for Run 1: Report of FillP-Sheep — Data Link]
Run 2: Statistics of FillP-Sheep

End at: 2018-06-29 22:51:41

Run 2: 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 31.36 ms)
Run 3: Statistics of FillP-Sheep

Start at: 2018-06-29 23:00:58
End at: 2018-06-29 23:01:28
Run 3: 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 31.61 ms)
Run 4: Statistics of FillP-Sheep

Start at: 2018-06-29 23:10:46
End at: 2018-06-29 23:11:16
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)

Packet delay (ms)

Time (s)

Flow 1 (95th percentile 31.51 ms)
Run 5: Statistics of FillP-Sheep

Start at: 2018-06-29 23:20:36
End at: 2018-06-29 23:21:06
Run 5: 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)

Per-packet one-way delay (ms)

Flow 1 (95th percentile 31.63 ms)
Run 6: Statistics of FillP-Sheep

Start at: 2018-06-29 23:30:25
End at: 2018-06-29 23:30:55
Run 6: Report of FillP-Sheep — Data Link
Run 7: Statistics of FillP-Sheep

End at: 2018-06-29 23:40:43
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 31.77 ms)
Run 8: Statistics of FillP-Sheep

Start at: 2018-06-29 23:50:00
End at: 2018-06-29 23:50:30
Run 8: Report of FillP-Sheep — Data Link

- Average capacity 12.00 Mbit/s (shaded region)
- Time (s)
- Throughput (MB/s)
- Flow 1 ingress (mean 0.00 Mbit/s)
- Flow 1 egress (mean 0.00 Mbit/s)

- Percentile one-way delay (ms)
- Time (s)
- Flow 1 (95th percentile 31.71 ms)
Run 9: Statistics of FillP-Sheep

Start at: 2018-06-29 23:59:49
End at: 2018-06-30 00:00:19
Run 9: Report of FillP-Sheep — Data Link
Run 10: Statistics of FillP-Sheep

Start at: 2018-06-30 00:09:37
End at: 2018-06-30 00:10:07
Run 10: 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)

Per packet one way delay (ms)

Flow 1 (95th percentile 31.53 ms)
Run 1: Statistics of Indigo

End at: 2018-06-29 22:43:03

# Below is generated by plot.py at 2018-06-30 00:23:07
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 11.62 Mbit/s (96.8% utilization)
  95th percentile per-packet one-way delay: 39.869 ms
  Loss rate: 1.02%
-- Flow 1:
  Average throughput: 11.62 Mbit/s
  95th percentile per-packet one-way delay: 39.869 ms
  Loss rate: 1.02%
Run 1: Report of Indigo — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 11.73 Mbit/s)  Flow 1 egress (mean 11.62 Mbit/s)

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

Flow 1 (95th percentile 39.87 ms)
Run 2: Statistics of Indigo

End at: 2018-06-29 22:52:50

# Below is generated by plot.py at 2018-06-30 00:23:08
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 11.86 Mbit/s (98.8% utilization)
95th percentile per-packet one-way delay: 39.805 ms
Loss rate: 0.87%
-- Flow 1:
Average throughput: 11.86 Mbit/s
95th percentile per-packet one-way delay: 39.805 ms
Loss rate: 0.87%
Run 2: Report of Indigo — Data Link

![Graph showing network performance metrics.](image)

- Average capacity: 12.00 Mbit/s (shaded region)
- Throughput: Mbit/s
- Time (s)

Legend:
- Flow 1 ingress (mean 11.95 Mbit/s)
- Flow 1 egress (mean 11.86 Mbit/s)

- Per-packet queue delay (ms)
- Time (s)

Legend:
- Flow 1 (95th percentile 39.80 ms)
Run 3: Statistics of Indigo

Start at: 2018-06-29 23:02:08
End at: 2018-06-29 23:02:38

# 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: 11.87 Mbit/s (98.9% utilization)
  95th percentile per-packet one-way delay: 39.837 ms
  Loss rate: 0.97%
-- Flow 1:
  Average throughput: 11.87 Mbit/s
  95th percentile per-packet one-way delay: 39.837 ms
  Loss rate: 0.97%
Run 3: Report of Indigo — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 11.98 Mbit/s)  Flow 1 egress (mean 11.87 Mbit/s)

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

Flow 1 (95th percentile 39.54 ms)
Run 4: Statistics of Indigo

Start at: 2018-06-29 23:11:58
End at: 2018-06-29 23:12:28

# 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: 11.83 Mbit/s (98.5% utilization)
95th percentile per-packet one-way delay: 43.424 ms
Loss rate: 4.43%
-- Flow 1:
Average throughput: 11.83 Mbit/s
95th percentile per-packet one-way delay: 43.424 ms
Loss rate: 4.43%
Run 4: Report of Indigo — Data Link

![Graph showing data link performance metrics]

- **Average capacity**: 12.00 Mbps (shaded region)
- **Throughput (Mbps)**
- **Time (s)**
- **Flow 1 ingress** (mean 12.36 Mbps)  
  **Flow 1 egress** (mean 11.83 Mbps)

![Graph showing per-packet end-to-end delay]

- **Per-packet end-to-end delay (ms)**
- **Time (s)**
- **Flow 1** (95th percentile 43.42 ms)
Run 5: Statistics of Indigo


# Below is generated by plot.py at 2018-06-30 00:23:13
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 11.87 Mbit/s (98.9% utilization)
95th percentile per-packet one-way delay: 48.487 ms
Loss rate: 5.78%
-- Flow 1:
Average throughput: 11.87 Mbit/s
95th percentile per-packet one-way delay: 48.487 ms
Loss rate: 5.78%
Run 5: Report of Indigo — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 12.58 Mbit/s)  Flow 1 egress (mean 11.87 Mbit/s)

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

Flow 1 (95th percentile 48.49 ms)
Run 6: Statistics of Indigo

End at: 2018-06-29 23:32:05

# Below is generated by plot.py at 2018-06-30 00:23:14
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 11.11 Mbit/s (92.6% utilization)
95th percentile per-packet one-way delay: 41.914 ms
Loss rate: 1.17%
-- Flow 1:
Average throughput: 11.11 Mbit/s
95th percentile per-packet one-way delay: 41.914 ms
Loss rate: 1.17%
Run 6: Report of Indigo — Data Link

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

![Graph showing per-packet one-way delay with data point indicating 95th percentile of 41.91 ms.](image)
Run 7: Statistics of Indigo

Start at: 2018-06-29 23:41:22
End at: 2018-06-29 23:41:52

# Below is generated by plot.py at 2018-06-30 00:23:16
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 11.84 Mbit/s (98.7% utilization)
95th percentile per-packet one-way delay: 39.905 ms
Loss rate: 1.04%
-- Flow 1:
Average throughput: 11.84 Mbit/s
95th percentile per-packet one-way delay: 39.905 ms
Loss rate: 1.04%
Run 7: Report of Indigo — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 11.96 Mbit/s)  Flow 1 egress (mean 11.84 Mbit/s)

Flow 1 (95th percentile 39.91 ms)
Run 8: Statistics of Indigo

Start at: 2018-06-29 23:51:11
End at: 2018-06-29 23:51:41

# Below is generated by plot.py at 2018-06-30 00:23:17
# 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: 48.486 ms
  Loss rate: 9.56%
-- Flow 1:
  Average throughput: 11.79 Mbit/s
  95th percentile per-packet one-way delay: 48.486 ms
  Loss rate: 9.56%
Run 8: Report of Indigo — Data Link
Run 9: Statistics of Indigo

Start at: 2018-06-30 00:00:59
End at: 2018-06-30 00:01:29

# 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: 11.01 Mbit/s (91.8% utilization)
  95th percentile per-packet one-way delay: 41.863 ms
  Loss rate: 1.17%
  -- Flow 1:
  Average throughput: 11.01 Mbit/s
  95th percentile per-packet one-way delay: 41.863 ms
  Loss rate: 1.17%
Run 9: Report of Indigo — Data Link

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

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 11.13 Mbit/s)  Flow 1 egress (mean 11.01 Mbit/s)

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

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 41.56 ms)
Run 10: Statistics of Indigo

Start at: 2018-06-30 00:10:47
End at: 2018-06-30 00:11:17

# 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: 11.88 Mbit/s (99.0% utilization)
95th percentile per-packet one-way delay: 39.878 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 11.88 Mbit/s
95th percentile per-packet one-way delay: 39.878 ms
Loss rate: 0.64%
Run 10: Report of Indigo — Data Link

Average capacity 12.00 Mbit/s (shaded region)

- Flow 1 ingress (mean 11.94 Mbit/s)
- Flow 1 egress (mean 11.88 Mbit/s)

Per-packet one-way delay (ms)
- Flow 1 (95th percentile 39.88 ms)
Run 1: Statistics of LEDBAT

Start at: 2018-06-29 22:46:34
End at: 2018-06-29 22:47:04

# 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: 8.84 Mbit/s (73.7\% utilization)
95th percentile per-packet one-way delay: 49.558 ms
Loss rate: 1.14\%
-- Flow 1:
Average throughput: 8.84 Mbit/s
95th percentile per-packet one-way delay: 49.558 ms
Loss rate: 1.14\%
Run 1: Report of LEDBAT — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 8.94 Mbit/s)  Flow 1 egress (mean 8.84 Mbit/s)

Flow 1 (95th percentile 49.56 ms)
Run 2: Statistics of LEDBAT

Start at: 2018-06-29 22:56:21
End at: 2018-06-29 22:56:51

# 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: 8.86 Mbit/s (73.8% utilization)
95th percentile per-packet one-way delay: 49.538 ms
Loss rate: 1.12%
-- Flow 1:
Average throughput: 8.86 Mbit/s
95th percentile per-packet one-way delay: 49.538 ms
Loss rate: 1.12%
Run 3: Statistics of LEDBAT

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

# 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: 8.87 Mbit/s (73.9% utilization)
     95th percentile per-packet one-way delay: 49.645 ms
     Loss rate: 1.07%
   -- Flow 1:
     Average throughput: 8.87 Mbit/s
     95th percentile per-packet one-way delay: 49.645 ms
     Loss rate: 1.07%
Run 3: Report of LEDBAT — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 8.96 Mbit/s)  Flow 1 egress (mean 8.87 Mbit/s)

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

Time (s)

Flow 1 (95th percentile 48.65 ms)
Run 4: Statistics of LEDBAT

Start at: 2018-06-29 23:16:59
End at: 2018-06-29 23:16:29

# Below is generated by plot.py at 2018-06-30 00:23:36
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 8.76 Mbit/s (73.0% utilization)
  95th percentile per-packet one-way delay: 49.689 ms
  Loss rate: 1.01%
-- Flow 1:
  Average throughput: 8.76 Mbit/s
  95th percentile per-packet one-way delay: 49.689 ms
  Loss rate: 1.01%
Run 4: Report of LEDBAT — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 8.54 Mbit/s)  Flow 1 egress (mean 8.76 Mbit/s)

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

Flow 1 (95th percentile 49.69 ms)
Run 5: Statistics of LEDBAT

End at: 2018-06-29 23:26:18

# Below is generated by plot.py at 2018-06-30 00:23:38
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 8.85 Mbit/s (73.8% utilization)
  95th percentile per-packet one-way delay: 49.577 ms
  Loss rate: 1.14%
-- Flow 1:
  Average throughput: 8.85 Mbit/s
  95th percentile per-packet one-way delay: 49.577 ms
  Loss rate: 1.14%
Run 5: Report of LEDBAT — Data Link

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

- **Flow 1 ingress (mean 8.94 Mbit/s)**
- **Flow 1 egress (mean 8.85 Mbit/s)**

**Per-packet end-to-end delay (ms)**
- **Flow 1 (95th percentile 49.58 ms)**
Run 6: Statistics of LEDBAT

Start at: 2018-06-29 23:35:36  
End at: 2018-06-29 23:36:06  

# Below is generated by plot.py at 2018-06-30 00:23:39  
# Datalink statistics  
-- Total of 1 flow:  
  Average capacity: 12.00 Mbit/s  
  Average throughput: 8.85 Mbit/s (73.7% utilization)  
  95th percentile per-packet one-way delay: 49.584 ms  
  Loss rate: 1.17%  
-- Flow 1:  
  Average throughput: 8.85 Mbit/s  
  95th percentile per-packet one-way delay: 49.584 ms  
  Loss rate: 1.17%
Run 6: Report of LEDBAT — Data Link

![Graph showing network performance metrics](image)

Average capacity 12.00 Mbit/s (shaded region)

**Flow 1 ingress (mean 8.94 Mbit/s)**

**Flow 1 egress (mean 8.85 Mbit/s)**

![Graph showing packet delay](image)

**Flow 1 (95th percentile 49.58 ms)**
Run 7: Statistics of LEDBAT

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

# 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: 8.85 Mbit/s (73.8% utilization)
95th percentile per-packet one-way delay: 49.563 ms
Loss rate: 1.18%
-- Flow 1:
Average throughput: 8.85 Mbit/s
95th percentile per-packet one-way delay: 49.563 ms
Loss rate: 1.18%
Run 7: Report of LEDBAT — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 8.95 Mbit/s)  Flow 1 egress (mean 8.85 Mbit/s)

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

Time (s)

Flow 1 (95th percentile 49.56 ms)
Run 8: Statistics of LEDBAT


# Below is generated by plot.py at 2018-06-30 00:23:53
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 8.87 Mbit/s (73.9% utilization)
  95th percentile per-packet one-way delay: 49.639 ms
  Loss rate: 1.10%
-- Flow 1:
  Average throughput: 8.87 Mbit/s
  95th percentile per-packet one-way delay: 49.639 ms
  Loss rate: 1.10%
Run 8: Report of LEDBAT — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

- Flow 1 ingress (mean 8.96 Mbit/s)
- Flow 1 egress (mean 8.87 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

- Flow 1 (95th percentile 49.64 ms)
Run 9: Statistics of LEDBAT

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

# 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: 8.86 Mbit/s (73.8% utilization)
95th percentile per-packet one-way delay: 49.540 ms
Loss rate: 1.15%
-- Flow 1:
Average throughput: 8.86 Mbit/s
95th percentile per-packet one-way delay: 49.540 ms
Loss rate: 1.15%
Run 9: Report of LEDBAT — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 8.95 Mbit/s)  Flow 1 egress (mean 8.86 Mbit/s)

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

Flow 1 (95th percentile 49.54 ms)
Run 10: Statistics of LEDBAT

Start at: 2018-06-30 00:14:48
End at: 2018-06-30 00:15:18

# 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: 8.86 Mbit/s (73.8% utilization)
95th percentile per-packet one-way delay: 49.655 ms
Loss rate: 1.14%
-- Flow 1:
Average throughput: 8.86 Mbit/s
95th percentile per-packet one-way delay: 49.655 ms
Loss rate: 1.14%
Run 10: Report of LEDBAT — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 8.95 Mbit/s)  Flow 1 egress (mean 8.86 Mbit/s)

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

Flow 1 (95th percentile 49.66 ms)
Run 1: Statistics of PCC-Allegro


# Below is generated by plot.py at 2018-06-30 00:23:57
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 9.47 Mbit/s (78.9% utilization)
  95th percentile per-packet one-way delay: 32.672 ms
  Loss rate: 0.90%
-- Flow 1:
  Average throughput: 9.47 Mbit/s
  95th percentile per-packet one-way delay: 32.672 ms
  Loss rate: 0.90%
Run 1: Report of PCC-Allegro — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 9.54 Mbit/s)  Flow 1 egress (mean 9.47 Mbit/s)

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

Flow 1 (95th percentile 32.67 ms)
Run 2: Statistics of PCC-Allegro

Start at: 2018-06-29 22:53:30
End at: 2018-06-29 22:54:00

# Below is generated by plot.py at 2018-06-30 00:23:58
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 9.33 Mbit/s (77.8% utilization)
95th percentile per-packet one-way delay: 32.678 ms
Loss rate: 0.81%
-- Flow 1:
Average throughput: 9.33 Mbit/s
95th percentile per-packet one-way delay: 32.678 ms
Loss rate: 0.81%
Run 2: Report of PCC-Allegro — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 9.40 Mbit/s)  Flow 1 egress (mean 9.33 Mbit/s)

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

Flow 1 (95th percentile 32.68 ms)
Run 3: Statistics of PCC-Allegro

Start at: 2018-06-29 23:03:18
End at: 2018-06-29 23:03:48

# 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: 10.44 Mbit/s (87.0% utilization)
  95th percentile per-packet one-way delay: 33.022 ms
  Loss rate: 0.75%
-- Flow 1:
  Average throughput: 10.44 Mbit/s
  95th percentile per-packet one-way delay: 33.022 ms
  Loss rate: 0.75%
Run 3: Report of PCC-Allegro — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 10.51 Mbit/s)  Flow 1 egress (mean 10.44 Mbit/s)

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

Time (s)

Flow 1 (95th percentile 33.02 ms)
Run 4: Statistics of PCC-Allegro

Start at: 2018-06-29 23:13:08

# Below is generated by plot.py at 2018-06-30 00:24:03
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 10.33 Mbit/s (86.1% utilization)
95th percentile per-packet one-way delay: 41.300 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 10.33 Mbit/s
95th percentile per-packet one-way delay: 41.300 ms
Loss rate: 0.84%
Run 4: Report of PCC-Allegro — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 10.41 Mbit/s)  Flow 1 egress (mean 10.33 Mbit/s)

Per-packet on-way delay (ms)

Time (s)

Flow 1 (95th percentile 41.30 ms)
Run 5: Statistics of PCC-Allegro

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

# Below is generated by plot.py at 2018-06-30 00:24:15
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 9.87 Mbit/s (82.2% utilization)
95th percentile per-packet one-way delay: 32.855 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 9.87 Mbit/s
95th percentile per-packet one-way delay: 32.855 ms
Loss rate: 0.90%
Run 5: Report of PCC-Allegro — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 9.95 Mbit/s)  Flow 1 egress (mean 9.87 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 32.85 ms)
Run 6: Statistics of PCC-Allegro

Start at: 2018-06-29 23:32:44
End at: 2018-06-29 23:33:14

# Below is generated by plot.py at 2018-06-30 00:24:17
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 9.74 Mbit/s (81.1% utilization)
  95th percentile per-packet one-way delay: 33.123 ms
  Loss rate: 0.82%
-- Flow 1:
  Average throughput: 9.74 Mbit/s
  95th percentile per-packet one-way delay: 33.123 ms
  Loss rate: 0.82%
Run 6: Report of PCC-Allegro — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbps)

Time (s)

- Flow 1 ingress (mean 9.81 Mbit/s)
- Flow 1 egress (mean 9.74 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 33.12 ms)
Run 7: Statistics of PCC-Allegro

End at: 2018-06-29 23:43:02

# 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: 10.08 Mbit/s (84.0% utilization)
  95th percentile per-packet one-way delay: 33.134 ms
  Loss rate: 0.76%
-- Flow 1:
  Average throughput: 10.08 Mbit/s
  95th percentile per-packet one-way delay: 33.134 ms
  Loss rate: 0.76%
Run 7: Report of PCC-Allegro — Data Link
Run 8: Statistics of PCC-Allegro

Start at: 2018-06-29 23:52:20
End at: 2018-06-29 23:52:50

# 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: 8.83 Mbit/s (73.6% utilization)
   95th percentile per-packet one-way delay: 32.487 ms
   Loss rate: 0.94%
-- Flow 1:
   Average throughput: 8.83 Mbit/s
   95th percentile per-packet one-way delay: 32.487 ms
   Loss rate: 0.94%
Run 8: Report of PCC-Allegro — Data Link

[Graph showing throughput and packet delay over time]

Average capacity 12.00 Mbit/s (shaded region)

- Flow 1 ingress (mean 8.91 Mbit/s)
- Flow 1 egress (mean 8.83 Mbit/s)

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

- Flow 1 (95th percentile 32.49 ms)
Run 9: Statistics of PCC-Allegro

Start at: 2018-06-30 00:02:08
End at: 2018-06-30 00:02:38

# Below is generated by plot.py at 2018-06-30 00:24:20
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 10.36 Mbit/s (86.3% utilization)
  95th percentile per-packet one-way delay: 34.155 ms
  Loss rate: 0.88%
-- Flow 1:
  Average throughput: 10.36 Mbit/s
  95th percentile per-packet one-way delay: 34.155 ms
  Loss rate: 0.88%
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 10.44 Mbit/s)  
Flow 1 egress (mean 10.36 Mbit/s)

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

Time (s)

Flow 1 (95th percentile 34.16 ms)
Run 10: Statistics of PCC-Allegro

Start at: 2018-06-30 00:11:56
End at: 2018-06-30 00:12:26

# Below is generated by plot.py at 2018-06-30 00:24:21
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 10.99 Mbit/s (91.6% utilization)
  95th percentile per-packet one-way delay: 37.678 ms
  Loss rate: 0.70%
-- Flow 1:
  Average throughput: 10.99 Mbit/s
  95th percentile per-packet one-way delay: 37.678 ms
  Loss rate: 0.70%
Run 10: Report of PCC-Allegro — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Flow 1 ingress (mean 11.05 Mbit/s)  Flow 1 egress (mean 10.99 Mbit/s)

Per-packet oneway delay (ms)

Flow 1 (95th percentile 37.68 ms)
Run 1: Statistics of PCC-Expr


# 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: 11.26 Mbit/s (93.8% utilization)
95th percentile per-packet one-way delay: 50.605 ms
Loss rate: 0.92%
-- Flow 1:
Average throughput: 11.26 Mbit/s
95th percentile per-packet one-way delay: 50.605 ms
Loss rate: 0.92%
Run 1: Report of PCC-Expr — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 11.35 Mbit/s)  Flow 1 egress (mean 11.26 Mbit/s)

Per-packet one-way delay (ms)

Flow 1 (95th percentile 50.60 ms)
Run 2: Statistics of PCC-Expr

Start at: 2018-06-29 22:57:30
End at: 2018-06-29 22:58:00

# 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: 10.80 Mbit/s (90.0% utilization)
95th percentile per-packet one-way delay: 50.792 ms
Loss rate: 1.39%
-- Flow 1:
Average throughput: 10.80 Mbit/s
95th percentile per-packet one-way delay: 50.792 ms
Loss rate: 1.39%
Run 2: Report of PCC-Expr — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 10.94 Mbit/s)  Flow 1 egress (mean 10.80 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 50.79 ms)
Run 3: Statistics of PCC-Expr

Start at: 2018-06-29 23:07:18
End at: 2018-06-29 23:07:48

# Below is generated by plot.py at 2018-06-30 00:24:52
# 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: 50.643 ms
Loss rate: 1.67%
-- Flow 1:
Average throughput: 11.40 Mbit/s
95th percentile per-packet one-way delay: 50.643 ms
Loss rate: 1.67%
Run 3: Report of PCC-Expr — Data Link

Average capacity 12.00 Mbit/s (shaded region)

- Flow 1 ingress (mean 11.58 Mbit/s)
- Flow 1 egress (mean 11.40 Mbit/s)

Per-packet one-way delay (ms)

- Flow 1 (95th percentile 50.64 ms)
Run 4: Statistics of PCC-Expr

Start at: 2018-06-29 23:17:08
End at: 2018-06-29 23:17:38

# Below is generated by plot.py at 2018-06-30 00:24:52
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 11.08 Mbit/s (92.4% utilization)
  95th percentile per-packet one-way delay: 50.682 ms
  Loss rate: 0.97%
-- Flow 1:
  Average throughput: 11.08 Mbit/s
  95th percentile per-packet one-way delay: 50.682 ms
  Loss rate: 0.97%
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 11.18 Mbit/s) — Flow 1 egress (mean 11.08 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 50.68 ms)
Run 5: Statistics of PCC-Expr

Start at: 2018-06-29 23:26:57
End at: 2018-06-29 23:27:27

# Below is generated by plot.py at 2018-06-30 00:24:52
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 11.13 Mbit/s (92.7% utilization)
95th percentile per-packet one-way delay: 50.406 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 11.13 Mbit/s
95th percentile per-packet one-way delay: 50.406 ms
Loss rate: 0.80%
Run 5: Report of PCC-Expr — Data Link
Run 6: Statistics of PCC-Expr

Start at: 2018-06-29 23:36:45
End at: 2018-06-29 23:37:15

# Below is generated by plot.py at 2018-06-30 00:24:52
# 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: 50.402 ms
Loss rate: 0.77%

-- Flow 1:
Average throughput: 11.20 Mbit/s
95th percentile per-packet one-way delay: 50.402 ms
Loss rate: 0.77%
Run 6: Report of PCC-Expr — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 11.28 Mbit/s)  Flow 1 egress (mean 11.20 Mbit/s)

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

Time (s)

Flow 1 (95th percentile 50.40 ms)
Run 7: Statistics of PCC-Expr

End at: 2018-06-29 23:47:02

# Below is generated by plot.py at 2018-06-30 00:24:55
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 11.11 Mbit/s (92.6% utilization)
95th percentile per-packet one-way delay: 50.276 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 11.11 Mbit/s
95th percentile per-packet one-way delay: 50.276 ms
Loss rate: 0.65%
Run 7: Report of PCC-Expr — Data Link
Run 8: Statistics of PCC-Expr

Start at: 2018-06-29 23:56:21
End at: 2018-06-29 23:56:51

# Below is generated by plot.py at 2018-06-30 00:24:56
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 11.18 Mbit/s (93.2% utilization)
95th percentile per-packet one-way delay: 50.412 ms
Loss rate: 0.81%
-- Flow 1:
Average throughput: 11.18 Mbit/s
95th percentile per-packet one-way delay: 50.412 ms
Loss rate: 0.81%
Run 8: Report of PCC-Expr — Data Link

Average capacity 12.00 Mbit/s (shaded region)

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

Flow 1 ingress (mean 11.26 Mbit/s)  Flow 1 egress (mean 11.18 Mbit/s)

Per-packet one-way delay (ms)
0 5 10 15 20 25 30
30 35 40 45 50 55

Flow 1 (95th percentile 50.41 ms)
Run 9: Statistics of PCC-Expr

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

# Below is generated by plot.py at 2018-06-30 00:25:12
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 11.11 Mbit/s (92.6% utilization)
95th percentile per-packet one-way delay: 50.439 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 11.11 Mbit/s
95th percentile per-packet one-way delay: 50.439 ms
Loss rate: 0.80%
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 11.19 Mbit/s)  Flow 1 egress (mean 11.11 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 50.44 ms)
Run 10: Statistics of PCC-Expr

Start at: 2018-06-30 00:15:57
End at: 2018-06-30 00:16:27

# Below is generated by plot.py at 2018-06-30 00:25:14
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 11.04 Mbit/s (92.0% utilization)
95th percentile per-packet one-way delay: 50.067 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 11.04 Mbit/s
95th percentile per-packet one-way delay: 50.067 ms
Loss rate: 0.48%
Run 10: Report of PCC-Expr — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 11.08 Mbit/s)  Flow 1 egress (mean 11.04 Mbit/s)

Round-trip end-to-end delay (ms)

Time (s)

Flow 1 (95th percentile 50.07 ms)
Run 1: Statistics of QUIC Cubic


# Below is generated by plot.py at 2018-06-30 00:25:15
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 11.71 Mbit/s (97.6% utilization)
95th percentile per-packet one-way delay: 49.896 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 11.71 Mbit/s
95th percentile per-packet one-way delay: 49.896 ms
Loss rate: 0.33%
Run 1: Report of QUIC Cubic — Data Link

![Graph showing throughput and round-trip time for Flow 1 ingress and egress.]
Run 2: Statistics of QUIC Cubic

End at: 2018-06-29 22:59:44

# Below is generated by plot.py at 2018-06-30 00:25:16
# Datalink statistics
-- Total of 1 flow:
 Average capacity: 12.00 Mbit/s
 Average throughput: 11.70 Mbit/s (97.5% utilization)
 95th percentile per-packet one-way delay: 49.616 ms
 Loss rate: 0.39%
-- Flow 1:
 Average throughput: 11.70 Mbit/s
 95th percentile per-packet one-way delay: 49.616 ms
 Loss rate: 0.39%
Run 2: Report of QUIC Cubic — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 11.73 Mbit/s)  Flow 1 egress (mean 11.70 Mbit/s)

Per-packet one-way delay (ms)

Flow 1 (95th percentile 49.62 ms)
Run 3: Statistics of QUIC Cubic

Start at: 2018-06-29 23:09:02
End at: 2018-06-29 23:09:32

# Below is generated by plot.py at 2018-06-30 00:25:18
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 11.72 Mbit/s (97.6% utilization)
95th percentile per-packet one-way delay: 49.727 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 11.72 Mbit/s
95th percentile per-packet one-way delay: 49.727 ms
Loss rate: 0.34%
Run 3: Report of QUIC Cubic — Data Link

![Graph showing throughput and packet delivery delay over time](image-url)

- **Average capacity 12.00 Mbit/s (shaded region)**
- **Throughput (Mbit/s)**
- **Time (s)**
- **Flow 1 ingress (mean 11.75 Mbit/s)**
- **Flow 1 egress (mean 11.72 Mbit/s)**

**Per-packet one-way delay (ms)**
- **Flow 1 (95th percentile 49.73 ms)**

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Run 4: Statistics of QUIC Cubic

Start at: 2018-06-29 23:18:52
End at: 2018-06-29 23:19:22

# Below is generated by plot.py at 2018-06-30 00:25:18
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 11.72 Mbit/s (97.7% utilization)
  95th percentile per-packet one-way delay: 49.681 ms
  Loss rate: 0.37%
-- Flow 1:
  Average throughput: 11.72 Mbit/s
  95th percentile per-packet one-way delay: 49.681 ms
  Loss rate: 0.37%
Run 4: Report of QUIC Cubic — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 11.75 Mbit/s)  Flow 1 egress (mean 11.72 Mbit/s)

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

Time (s)

Flow 1 (95th percentile 49.68 ms)
Run 5: Statistics of QUIC Cubic

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

# Below is generated by plot.py at 2018-06-30 00:25:21
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 11.71 Mbit/s (97.6% utilization)
  95th percentile per-packet one-way delay: 49.792 ms
  Loss rate: 0.36%
-- Flow 1:
  Average throughput: 11.71 Mbit/s
  95th percentile per-packet one-way delay: 49.792 ms
  Loss rate: 0.36%
Run 5: Report of QUIC Cubic — Data Link

Average capacity 12.00 Mbit/s (shaded region)

- **Flow 1 ingress** (mean 11.74 Mbit/s)
- **Flow 1 egress** (mean 11.71 Mbit/s)

Per-packet one-way delay (ms)

- **Flow 1** (95th percentile 49.79 ms)
Run 6: Statistics of QUIC Cubic

Start at: 2018-06-29 23:38:29
End at: 2018-06-29 23:38:59

# Below is generated by plot.py at 2018-06-30 00:25:22
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 11.71 Mbit/s (97.5% utilization)
95th percentile per-packet one-way delay: 49.707 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 11.71 Mbit/s
95th percentile per-packet one-way delay: 49.707 ms
Loss rate: 0.38%
Run 6: Report of QUIC Cubic — Data Link

![Graph showing average capacity and per-packet end-to-end delay over time.]

- Average capacity: 12.00 Mbit/s (shaded region)
- Time (s) on x-axis
- Throughput (Mbit/s) on y-axis

Legend:
- Flow 1 ingress (mean 11.74 Mbit/s)
- Flow 1 egress (mean 11.71 Mbit/s)

Per-packet end-to-end delay (ms) on y-axis

Legend:
- Flow 1 (95th percentile 49.71 ms)

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Run 7: Statistics of QUIC Cubic

End at: 2018-06-29 23:48:46

# Below is generated by plot.py at 2018-06-30 00:25:42
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 11.67 Mbit/s (97.3% utilization)
  95th percentile per-packet one-way delay: 49.633 ms
  Loss rate: 0.35%
-- Flow 1:
  Average throughput: 11.67 Mbit/s
  95th percentile per-packet one-way delay: 49.633 ms
  Loss rate: 0.35%
Run 7: Report of QUIC Cubic — Data Link

![Graph of throughput and RTT](image)

- **Throughput (Mbps):**
  - **Average capacity:** 12.00 Mbps (shaded region)
  - **Flow 1 ingress (mean 11.70 Mbps)**
  - **Flow 1 egress (mean 11.67 Mbps)**

- **RTT (ms):**
  - **Flow 1 (95th percentile 49.63 ms)**
Run 8: Statistics of QUIC Cubic

Start at: 2018-06-29 23:58:05
End at: 2018-06-29 23:58:35

# Below is generated by plot.py at 2018-06-30 00:25:44
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 11.69 Mbit/s (97.4% utilization)
95th percentile per-packet one-way delay: 49.766 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 11.69 Mbit/s
95th percentile per-packet one-way delay: 49.766 ms
Loss rate: 0.37%
Run 8: Report of QUIC Cubic — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 11.72 Mbit/s)  Flow 1 egress (mean 11.69 Mbit/s)

Per-packet one-way delay (ms)

Flow 1 (95th percentile 49.77 ms)
Run 9: Statistics of QUIC Cubic

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 00:25:46
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 11.72 Mbit/s (97.7% utilization)
95th percentile per-packet one-way delay: 49.891 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 11.72 Mbit/s
95th percentile per-packet one-way delay: 49.891 ms
Loss rate: 0.37%
Run 9: Report of QUIC Cubic — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 11.75 Mbit/s)  Flow 1 egress (mean 11.72 Mbit/s)

Per packet one-way delay (ms)

Flow 1 (95th percentile 48.89 ms)
Run 10: Statistics of QUIC Cubic

Start at: 2018-06-30 00:17:41
End at: 2018-06-30 00:18:11

# Below is generated by plot.py at 2018-06-30 00:25:46
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 11.71 Mbit/s (97.6% utilization)
95th percentile per-packet one-way delay: 49.950 ms
Loss rate: 0.39%

-- Flow 1:
Average throughput: 11.71 Mbit/s
95th percentile per-packet one-way delay: 49.950 ms
Loss rate: 0.39%
Run 10: Report of QUIC Cubic — Data Link

![Graph showing average capacity and throughput over time for Flow 1 ingress and egress.]
Run 1: Statistics of SCReAM

Start at: 2018-06-29 22:46:00
End at: 2018-06-29 22:46:30

# Below is generated by plot.py at 2018-06-30 00:25:46
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 0.21 Mbit/s (1.8% utilization)
95th percentile per-packet one-way delay: 31.777 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 31.777 ms
Loss rate: 0.00%
Run 1: Report of SCReAM — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 0.21 Mbit/s)  Flow 1 egress (mean 0.21 Mbit/s)

Per packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 31.78 ms)
Run 2: Statistics of SCReAM

End at: 2018-06-29 22:56:17

# Below is generated by plot.py at 2018-06-30 00:25:46
# Datalink statistics
---
Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 0.21 Mbit/s (1.8% utilization)
95th percentile per-packet one-way delay: 31.726 ms
Loss rate: 0.13%
---
Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 31.726 ms
Loss rate: 0.13%
Run 2: Report of SCReAM — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

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

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

- Flow 1 (95th percentile 31.73 ms)
Run 3: Statistics of SCReAM

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

# Below is generated by plot.py at 2018-06-30 00:25:46
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 0.21 Mbit/s (1.8% utilization)
95th percentile per-packet one-way delay: 31.627 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 31.627 ms
Loss rate: 0.13%
Run 3: Report of SCReAM — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 0.21 Mbit/s)  Flow 1 egress (mean 0.21 Mbit/s)

Delay (ms)

Per packet one-way delay (ms)

Flow 1 (95th percentile 31.63 ms)
Run 4: Statistics of SCReAM

Start at: 2018-06-29 23:15:25
End at: 2018-06-29 23:15:55

# Below is generated by plot.py at 2018-06-30 00:25:46
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 0.21 Mbit/s (1.8% utilization)
95th percentile per-packet one-way delay: 31.660 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 31.660 ms
Loss rate: 0.13%
Run 4: Report of SCReAM — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 0.21 Mbit/s)  Flow 1 egress (mean 0.21 Mbit/s)

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

Time (s)

Flow 1 (95th percentile 31.66 ms)
Run 5: Statistics of SCReAM

End at: 2018-06-29 23:25:44

# Below is generated by plot.py at 2018-06-30 00:25:46
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 0.21 Mbit/s (1.8% utilization)
  95th percentile per-packet one-way delay: 31.585 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 31.585 ms
  Loss rate: 0.00%
Run 5: Report of SCReAM — Data Link

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

- **Flow 1 ingress (mean 0.21 Mbit/s)**
- **Flow 1 egress (mean 0.21 Mbit/s)**

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

- **Flow 1 (95th percentile 31.59 ms)**
Run 6: Statistics of SCReAM

Start at: 2018-06-29 23:35:02
End at: 2018-06-29 23:35:32

# Below is generated by plot.py at 2018-06-30 00:25:46
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 0.21 Mbit/s (1.8% utilization)
  95th percentile per-packet one-way delay: 31.758 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 31.758 ms
  Loss rate: 0.00%
Run 6: Report of SCReAM — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 0.21 Mbit/s)
Flow 1 egress (mean 0.21 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (99th percentile 31.76 ms)
Run 7: Statistics of SCReAM

Start at: 2018-06-29 23:44:49
End at: 2018-06-29 23:45:19

# Below is generated by plot.py at 2018-06-30 00:25:46
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 0.21 Mbit/s (1.8% utilization)
  95th percentile per-packet one-way delay: 31.715 ms
  Loss rate: 0.13%
-- Flow 1:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 31.715 ms
  Loss rate: 0.13%
Run 7: Report of SCReAM — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 0.21 Mbit/s)  Flow 1 egress (mean 0.21 Mbit/s)

Per packet one-way delay (ms)

Flow 1 (95th percentile 31.71 ms)
Run 8: Statistics of SCReAM

Start at: 2018-06-29 23:54:38
End at: 2018-06-29 23:55:08

# Below is generated by plot.py at 2018-06-30 00:25:46
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 0.21 Mbit/s (1.8% utilization)
  95th percentile per-packet one-way delay: 31.617 ms
  Loss rate: 0.13%
-- Flow 1:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 31.617 ms
  Loss rate: 0.13%
Run 8: Report of SCReAM — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 0.21 Mbit/s)

Flow 1 egress (mean 0.21 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 31.62 ms)
Run 9: Statistics of SCReAM

Start at: 2018-06-30 00:04:26
End at: 2018-06-30 00:04:56

# Below is generated by plot.py at 2018-06-30 00:25:46
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 0.21 Mbit/s (1.8% utilization)
  95th percentile per-packet one-way delay: 31.646 ms
  Loss rate: 0.13%
-- Flow 1:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 31.646 ms
  Loss rate: 0.13%
Run 9: Report of SCReAM — Data Link

![Graph 1: Throughput over time showing average capacity of 12.00 Mbit/s (shaded region).]

![Graph 2: Packet round trip delay showing 95th percentile at 31.65 ms.)]
Run 10: Statistics of SCReAM

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

# Below is generated by plot.py at 2018-06-30 00:25:46
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 0.21 Mbit/s (1.8% utilization)
  95th percentile per-packet one-way delay: 31.581 ms
  Loss rate: 0.13%
-- Flow 1:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 31.581 ms
  Loss rate: 0.13%
Run 10: Report of SCReAM — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 0.21 Mbit/s)  Flow 1 egress (mean 0.21 Mbit/s)

Per packet one way delay (ms)

Flow 1 (95th percentile 31.58 ms)
Run 1: Statistics of Sprout

Start at: 2018-06-29 22:44:51
End at: 2018-06-29 22:45:21

# Below is generated by plot.py at 2018-06-30 00:25:53
# 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: 48.286 ms
Loss rate: 9.34%
-- Flow 1:
Average throughput: 3.24 Mbit/s
95th percentile per-packet one-way delay: 48.286 ms
Loss rate: 9.34%
Run 1: Report of Sprout — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Flow 1 ingress (mean 3.57 Mbit/s), Flow 1 egress (mean 3.24 Mbit/s)

Per-packet one-way delay (ms)

Flow 1 (95th percentile 48.29 ms)
Run 2: Statistics of Sprout


# Below is generated by plot.py at 2018-06-30 00:25:54
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 3.39 Mbit/s (28.3% utilization)
  95th percentile per-packet one-way delay: 48.621 ms
  Loss rate: 10.08%
-- Flow 1:
  Average throughput: 3.39 Mbit/s
  95th percentile per-packet one-way delay: 48.621 ms
  Loss rate: 10.08%
Run 2: Report of Sprout — Data Link
Run 3: Statistics of Sprout

Start at: 2018-06-29 23:04:26
End at: 2018-06-29 23:04:56

# Below is generated by plot.py at 2018-06-30 00:25:55
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 3.27 Mbit/s (27.2% utilization)
95th percentile per-packet one-way delay: 48.399 ms
Loss rate: 9.52%
-- Flow 1:
Average throughput: 3.27 Mbit/s
95th percentile per-packet one-way delay: 48.399 ms
Loss rate: 9.52%
Run 3: Report of Sprout — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 3.60 Mbit/s)  Flow 1 egress (mean 3.27 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 48.40 ms)
Run 4: Statistics of Sprout

Start at: 2018-06-29 23:14:16
End at: 2018-06-29 23:14:46

# Below is generated by plot.py at 2018-06-30 00:25:59
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 3.17 Mbit/s (26.4% utilization)
95th percentile per-packet one-way delay: 48.459 ms
Loss rate: 8.75%
-- Flow 1:
Average throughput: 3.17 Mbit/s
95th percentile per-packet one-way delay: 48.459 ms
Loss rate: 8.75%
Run 4: Report of Sprout — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 3.46 Mbit/s)  Flow 1 egress (mean 3.17 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 48.46 ms)
Run 5: Statistics of Sprout

Start at: 2018-06-29 23:24:05
End at: 2018-06-29 23:24:35

# Below is generated by plot.py at 2018-06-30 00:26:00
# Datalink statistics
--- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 3.31 Mbit/s (27.6% utilization)
95th percentile per-packet one-way delay: 48.081 ms
Loss rate: 7.26%
--- Flow 1:
Average throughput: 3.31 Mbit/s
95th percentile per-packet one-way delay: 48.081 ms
Loss rate: 7.26%
Run 6: Statistics of Sprout

End at: 2018-06-29 23:34:23

# Below is generated by plot.py at 2018-06-30 00:26:00
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 3.09 Mbit/s (25.7% utilization)
95th percentile per-packet one-way delay: 48.090 ms
Loss rate: 9.03%
-- Flow 1:
Average throughput: 3.09 Mbit/s
95th percentile per-packet one-way delay: 48.090 ms
Loss rate: 9.03%
Run 6: Report of Sprout — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 3.39 Mbit/s)  Flow 1 egress (mean 3.09 Mbit/s)

Per-packet one-way delay (ms)

Flow 1 (95th percentile 48.09 ms)
Run 7: Statistics of Sprout

Start at: 2018-06-29 23:43:40
End at: 2018-06-29 23:44:10

# Below is generated by plot.py at 2018-06-30 00:26:01
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 3.53 Mbit/s (29.4% utilization)
95th percentile per-packet one-way delay: 48.075 ms
Loss rate: 7.92%
-- Flow 1:
Average throughput: 3.53 Mbit/s
95th percentile per-packet one-way delay: 48.075 ms
Loss rate: 7.92%
Run 7: Report of Sprout — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 3.84 Mbit/s)  Flow 1 egress (mean 3.53 Mbit/s)

Per-packet one-way delay (ms)

Flow 1 (95th percentile 48.08 ms)
Run 8: Statistics of Sprout

Start at: 2018-06-29 23:53:29
End at: 2018-06-29 23:53:59

# Below is generated by plot.py at 2018-06-30 00:26:01
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 3.23 Mbit/s (26.9% utilization)
  95th percentile per-packet one-way delay: 48.272 ms
  Loss rate: 8.55%
-- Flow 1:
  Average throughput: 3.23 Mbit/s
  95th percentile per-packet one-way delay: 48.272 ms
  Loss rate: 8.55%
Run 8: Report of Sprout — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 3.52 Mbit/s)  Flow 1 egress (mean 3.23 Mbit/s)

Per-packet one-way delay (ms)

Flow 1 (95th percentile 48.27 ms)
Run 9: Statistics of Sprout

Start at: 2018-06-30 00:03:17
End at: 2018-06-30 00:03:47

# Below is generated by plot.py at 2018-06-30 00:26:07
# 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: 48.176 ms
  Loss rate: 8.58%
-- Flow 1:
  Average throughput: 3.19 Mbit/s
  95th percentile per-packet one-way delay: 48.176 ms
  Loss rate: 8.58%
Run 9: Report of Sprout — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Flow 1 ingress (mean 3.48 Mbit/s)  Flow 1 egress (mean 3.19 Mbit/s)

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

Flow 1 (95th percentile 48.18 ms)
Run 10: Statistics of Sprout

Start at: 2018-06-30 00:13:04
End at: 2018-06-30 00:13:34

# Below is generated by plot.py at 2018-06-30 00:26:09
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 3.33 Mbit/s (27.7% utilization)
  95th percentile per-packet one-way delay: 48.571 ms
  Loss rate: 9.84%
-- Flow 1:
  Average throughput: 3.33 Mbit/s
  95th percentile per-packet one-way delay: 48.571 ms
  Loss rate: 9.84%
Run 10: Report of Sprout — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 3.69 Mbit/s)  Flow 1 egress (mean 3.33 Mbit/s)

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

Time (s)

Flow 1 (95th percentile 48.57 ms)
Run 1: Statistics of TaoVA-100x

Start at: 2018-06-29 22:45:25
End at: 2018-06-29 22:45:55

# Below is generated by plot.py at 2018-06-30 00:26:32
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 11.51 Mbit/s (95.9% utilization)
95th percentile per-packet one-way delay: 32.872 ms
Loss rate: 0.74%
-- Flow 1:
Average throughput: 11.51 Mbit/s
95th percentile per-packet one-way delay: 32.872 ms
Loss rate: 0.74%
Run 1: Report of TaoVA-100x — Data Link
Run 2: Statistics of TaoVA-100x


# Below is generated by plot.py at 2018-06-30 00:26:33
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 11.50 Mbit/s (95.8% utilization)
95th percentile per-packet one-way delay: 32.782 ms
Loss rate: 0.74%
-- Flow 1:
Average throughput: 11.50 Mbit/s
95th percentile per-packet one-way delay: 32.782 ms
Loss rate: 0.74%
Run 2: Report of TaoVA-100x — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 11.57 Mbit/s)  Flow 1 egress (mean 11.50 Mbit/s)

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

Time (s)

Flow 1 (95th percentile 32.78 ms)
Run 3: Statistics of TaoVA-100x

Start at: 2018-06-29 23:05:00
End at: 2018-06-29 23:05:30

# Below is generated by plot.py at 2018-06-30 00:26:35
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 11.50 Mbit/s (95.9% utilization)
95th percentile per-packet one-way delay: 32.812 ms
Loss rate: 0.74%
-- Flow 1:
Average throughput: 11.50 Mbit/s
95th percentile per-packet one-way delay: 32.812 ms
Loss rate: 0.74%
Run 3: Report of TaoVA-100x — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 11.58 Mbit/s)  Flow 1 egress (mean 11.50 Mbit/s)

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

Time (s)

Flow 1 (95th percentile 32.81 ms)
Run 4: Statistics of TaoVA-100x

Start at: 2018-06-29 23:14:50
End at: 2018-06-29 23:15:20

# Below is generated by plot.py at 2018-06-30 00:26:36
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 11.51 Mbit/s (95.9% utilization)
95th percentile per-packet one-way delay: 33.860 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 11.51 Mbit/s
95th percentile per-packet one-way delay: 33.860 ms
Loss rate: 0.73%
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 11.59 Mbit/s)  Flow 1 egress (mean 11.51 Mbit/s)

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

Time (s)

Flow 1 (95th percentile 33.86 ms)
Run 5: Statistics of TaoVA-100x

Start at: 2018-06-29 23:24:39
End at: 2018-06-29 23:25:09

# Below is generated by plot.py at 2018-06-30 00:26:37
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 11.49 Mbit/s (95.7% utilization)
  95th percentile per-packet one-way delay: 32.785 ms
  Loss rate: 0.86%
-- Flow 1:
  Average throughput: 11.49 Mbit/s
  95th percentile per-packet one-way delay: 32.785 ms
  Loss rate: 0.86%
Run 5: Report of TaoVA-100x — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 11.57 Mbit/s)  Flow 1 egress (mean 11.49 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 32.78 ms)
Run 6: Statistics of TaoVA-100x

Start at: 2018-06-29 23:34:27
End at: 2018-06-29 23:34:57

# Below is generated by plot.py at 2018-06-30 00:26:38
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 11.48 Mbit/s (95.7% utilization)
95th percentile per-packet one-way delay: 32.790 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 11.48 Mbit/s
95th percentile per-packet one-way delay: 32.790 ms
Loss rate: 0.29%
Run 6: Report of TaoVA-100x — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 11.50 Mbit/s)  Flow 1 egress (mean 11.48 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 32.79 ms)
Run 7: Statistics of TaoVA-100x

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

# Below is generated by plot.py at 2018-06-30 00:26:43
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 11.51 Mbit/s (95.9% utilization)
95th percentile per-packet one-way delay: 33.406 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 11.51 Mbit/s
95th percentile per-packet one-way delay: 33.406 ms
Loss rate: 0.73%
Run 7: Report of TaoVA-100x — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 11.58 Mbit/s)  Flow 1 egress (mean 11.51 Mbit/s)

Per-packet one-way delay (ms)

Flow 1 (95th percentile 33.41 ms)
Run 8: Statistics of TaoVA-100x

Start at: 2018-06-29 23:54:03
End at: 2018-06-29 23:54:33

# Below is generated by plot.py at 2018-06-30 00:26:44
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 11.51 Mbit/s (95.9% utilization)
95th percentile per-packet one-way delay: 32.841 ms
Loss rate: 0.74%
-- Flow 1:
Average throughput: 11.51 Mbit/s
95th percentile per-packet one-way delay: 32.841 ms
Loss rate: 0.74%
Run 8: Report of TaoVA-100x — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 11.58 Mbit/s)  Flow 1 egress (mean 11.51 Mbit/s)

Per-packet one-way delay (ms)

Flow 1 (95th percentile 32.84 ms)
Run 9: Statistics of TaoVA-100x

Start at: 2018-06-30 00:03:51
End at: 2018-06-30 00:04:21

# Below is generated by plot.py at 2018-06-30 00:27:11
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 11.49 Mbit/s (95.7% utilization)
  95th percentile per-packet one-way delay: 34.901 ms
  Loss rate: 0.75%
-- Flow 1:
  Average throughput: 11.49 Mbit/s
  95th percentile per-packet one-way delay: 34.901 ms
  Loss rate: 0.75%
Run 9: Report of TaoVA-100x — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 11.56 Mbit/s)  Flow 1 egress (mean 11.49 Mbit/s)

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

Time (s)

Flow 1 (95th percentile 34.90 ms)
Run 10: Statistics of TaoVA-100x

Start at: 2018-06-30 00:13:39
End at: 2018-06-30 00:14:09

# Below is generated by plot.py at 2018-06-30 00:27:13
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 11.50 Mbit/s (95.8% utilization)
  95th percentile per-packet one-way delay: 33.807 ms
  Loss rate: 0.73%
-- Flow 1:
  Average throughput: 11.50 Mbit/s
  95th percentile per-packet one-way delay: 33.807 ms
  Loss rate: 0.73%
Run 10: Report of TaoVA-100x — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 11.57 Mbit/s)  Flow 1 egress (mean 11.50 Mbit/s)

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

Time (s)

Flow 1 (95th percentile 33.81 ms)

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Run 1: Statistics of TCP Vegas


# Below is generated by plot.py at 2018-06-30 00:27:13
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 11.74 Mbit/s (97.9% utilization)
95th percentile per-packet one-way delay: 37.919 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 11.74 Mbit/s
95th percentile per-packet one-way delay: 37.919 ms
Loss rate: 0.19%
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 11.76 Mbit/s)  Flow 1 egress (mean 11.74 Mbit/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 37.92 ms)
Run 2: Statistics of TCP Vegas

Start at: 2018-06-29 22:58:40
End at: 2018-06-29 22:59:10

# Below is generated by plot.py at 2018-06-30 00:27:13
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 11.73 Mbit/s (97.7% utilization)
  95th percentile per-packet one-way delay: 36.158 ms
  Loss rate: 0.19%
-- Flow 1:
  Average throughput: 11.73 Mbit/s
  95th percentile per-packet one-way delay: 36.158 ms
  Loss rate: 0.19%
Run 2: Report of TCP Vegas — Data Link

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

- Flow 1 ingress (mean 11.74 Mbit/s)
- Flow 1 egress (mean 11.73 Mbit/s)

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

- Flow 1 (95th percentile 36.16 ms)
Run 3: Statistics of TCP Vegas

Start at: 2018-06-29 23:08:28
End at: 2018-06-29 23:08:58

# Below is generated by plot.py at 2018-06-30 00:27:13
# 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: 36.649 ms
  Loss rate: 0.19%
-- Flow 1:
  Average throughput: 11.76 Mbit/s
  95th percentile per-packet one-way delay: 36.649 ms
  Loss rate: 0.19%
Run 3: Report of TCP Vegas — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 11.77 Mbit/s)  Flow 1 egress (mean 11.76 Mbit/s)

Flow 1 (95th percentile 36.65 ms)
Run 4: Statistics of TCP Vegas

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

# Below is generated by plot.py at 2018-06-30 00:27:13
# 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: 37.359 ms
   Loss rate: 0.19%
-- Flow 1:
   Average throughput: 11.77 Mbit/s
   95th percentile per-packet one-way delay: 37.359 ms
   Loss rate: 0.19%
Run 4: Report of TCP Vegas — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 11.78 Mbit/s)  Flow 1 egress (mean 11.77 Mbit/s)

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

Flow 1 (95th percentile 37.36 ms)
Run 5: Statistics of TCP Vegas

End at: 2018-06-29 23:28:37

# Below is generated by plot.py at 2018-06-30 00:27:13  
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 11.77 Mbit/s (98.0% utilization)  
95th percentile per-packet one-way delay: 36.639 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 11.77 Mbit/s
95th percentile per-packet one-way delay: 36.639 ms
Loss rate: 0.19%
Run 5: Report of TCP Vegas — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 11.78 Mbit/s)  Flow 1 egress (mean 11.77 Mbit/s)

Packet error rate (percentages)

Time (s)

Flow 1 (95th percentile 36.64 ms)
Run 6: Statistics of TCP Vegas

End at: 2018-06-29 23:38:25

# Below is generated by plot.py at 2018-06-30 00:27:13
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 11.74 Mbit/s (97.8% utilization)
  95th percentile per-packet one-way delay: 37.102 ms
  Loss rate: 0.19%
-- Flow 1:
  Average throughput: 11.74 Mbit/s
  95th percentile per-packet one-way delay: 37.102 ms
  Loss rate: 0.19%
Run 6: 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
0  2  4  6  8 10

Flow 1 ingress (mean 11.75 Mbit/s)  Flow 1 egress (mean 11.74 Mbit/s)

Per protocol one way delay (ms)

30.0 32.5 35.0 37.5 40.0 42.5 45.0 47.5 50.0
0  5 10 15 20 25 30

Flow 1 (95th percentile 37.10 ms)
Run 7: Statistics of TCP Vegas

Start at: 2018-06-29 23:47:42
End at: 2018-06-29 23:48:12

# Below is generated by plot.py at 2018-06-30 00:27:24
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 11.74 Mbit/s (97.8% utilization)
  95th percentile per-packet one-way delay: 37.811 ms
  Loss rate: 0.20%
-- Flow 1:
  Average throughput: 11.74 Mbit/s
  95th percentile per-packet one-way delay: 37.811 ms
  Loss rate: 0.20%
Run 7: Report of TCP Vegas — Data Link

![Graph showing throughput and delay](image)

- Average capacity 12.00 Mbit/s (shaded region)
- Flow 1 ingress (mean 11.75 Mbit/s)
- Flow 1 egress (mean 11.74 Mbit/s)

![Graph showing delay distribution](image)

- Flow 1 (95th percentile 37.81 ms)
Run 8: Statistics of TCP Vegas

Start at: 2018-06-29 23:57:31
End at: 2018-06-29 23:58:01

# Below is generated by plot.py at 2018-06-30 00:27:25
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 11.74 Mbit/s (97.8% utilization)
  95th percentile per-packet one-way delay: 36.769 ms
  Loss rate: 0.20%
-- Flow 1:
  Average throughput: 11.74 Mbit/s
  95th percentile per-packet one-way delay: 36.769 ms
  Loss rate: 0.20%
Run 8: Report of TCP Vegas — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 11.75 Mbit/s)  Flow 1 egress (mean 11.74 Mbit/s)

Flow 1 (95th percentile 36.77 ms)
Run 9: Statistics of TCP Vegas

Start at: 2018-06-30 00:07:19
End at: 2018-06-30 00:07:49

# Below is generated by plot.py at 2018-06-30 00:27:26
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 11.90 Mbit/s (99.1% utilization)
95th percentile per-packet one-way delay: 37.024 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 11.90 Mbit/s
95th percentile per-packet one-way delay: 37.024 ms
Loss rate: 0.26%
Run 9: Report of TCP Vegas — Data Link
Run 10: Statistics of TCP Vegas

Start at: 2018-06-30 00:17:06
End at: 2018-06-30 00:17:36

# Below is generated by plot.py at 2018-06-30 00:27:26
# 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: 36.912 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 11.77 Mbit/s
95th percentile per-packet one-way delay: 36.912 ms
Loss rate: 0.19%
Run 10: Report of TCP Vegas — Data Link
Run 1: Statistics of Verus


# Below is generated by plot.py at 2018-06-30 00:27:49
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 6.32 Mbit/s (52.7% utilization)
  95th percentile per-packet one-way delay: 51.715 ms
  Loss rate: 91.99%
-- Flow 1:
  Average throughput: 6.32 Mbit/s
  95th percentile per-packet one-way delay: 51.715 ms
  Loss rate: 91.99%
Run 1: Report of Verus — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 70.84 Mbit/s)  Flow 1 egress (mean 6.32 Mbit/s)

Per-packet one-way delay (ms)

Flow 1 (95th percentile 51.72 ms)
Run 2: Statistics of Verus

Start at: 2018-06-29 22:51:45
End at: 2018-06-29 22:52:15

# Below is generated by plot.py at 2018-06-30 00:27:55
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 6.65 Mbit/s (55.4% utilization)
95th percentile per-packet one-way delay: 51.903 ms
Loss rate: 92.62%
-- Flow 1:
Average throughput: 6.65 Mbit/s
95th percentile per-packet one-way delay: 51.903 ms
Loss rate: 92.62%
Run 2: Report of Verus — Data Link

Average capacity 12.00 Mbit/s (shaded region)

- Flow 1 ingress (mean 90.03 Mbit/s)
- Flow 1 egress (mean 6.65 Mbit/s)

Per packet one-way delay (ms)

- Flow 1 (95th percentile 51.90 ms)
Run 3: Statistics of Verus

Start at: 2018-06-29 23:01:32
End at: 2018-06-29 23:02:02

# Below is generated by plot.py at 2018-06-30 00:28:11
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 6.74 Mbit/s (56.2% utilization)
95th percentile per-packet one-way delay: 51.769 ms
Loss rate: 94.90%
-- Flow 1:
Average throughput: 6.74 Mbit/s
95th percentile per-packet one-way delay: 51.769 ms
Loss rate: 94.90%
Run 3: Report of Verus — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 131.99 Mbit/s)  Flow 1 egress (mean 6.74 Mbit/s)

Per-packet one-way delay (ms)

Flow 1 (95th percentile 51.77 ms)
Run 4: Statistics of Verus

Start at: 2018-06-29 23:11:20
End at: 2018-06-29 23:11:50

# Below is generated by plot.py at 2018-06-30 00:29:07
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 6.44 Mbit/s (53.7% utilization)
95th percentile per-packet one-way delay: 52.075 ms
Loss rate: 97.40%
-- Flow 1:
Average throughput: 6.44 Mbit/s
95th percentile per-packet one-way delay: 52.075 ms
Loss rate: 97.40%
Run 4: Report of Verus — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Flow 1 ingress (mean 247.72 Mbit/s)  Flow 1 egress (mean 6.44 Mbit/s)

Per packet one-way delay (ms)

Flow 1 (95th percentile 52.08 ms)
Run 5: Statistics of Verus

Start at: 2018-06-29 23:21:10
End at: 2018-06-29 23:21:40

# Below is generated by plot.py at 2018-06-30 00:29:07
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 6.58 Mbit/s (54.9% utilization)
  95th percentile per-packet one-way delay: 51.970 ms
  Loss rate: 96.64%
-- Flow 1:
  Average throughput: 6.58 Mbit/s
  95th percentile per-packet one-way delay: 51.970 ms
  Loss rate: 96.64%
Run 5: Report of Verus — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 195.95 Mbit/s)  Flow 1 egress (mean 6.58 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 51.97 ms)
Run 6: Statistics of Verus

Start at: 2018-06-29 23:30:59
End at: 2018-06-29 23:31:29

# Below is generated by plot.py at 2018-06-30 00:29:07
# 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: 51.850 ms
Loss rate: 94.08%
-- Flow 1:
Average throughput: 6.60 Mbit/s
95th percentile per-packet one-way delay: 51.850 ms
Loss rate: 94.08%
Run 6: Report of Verus — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 111.24 Mbit/s)  Flow 1 egress (mean 66.60 Mbit/s)

Per-packet one-way delay (ms)

Flow 1 (95th percentile 51.85 ms)
Run 7: Statistics of Verus

Start at: 2018-06-29 23:40:47
End at: 2018-06-29 23:41:17

# Below is generated by plot.py at 2018-06-30 00:29:07
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 6.95 Mbit/s (57.9\% utilization)
  95th percentile per-packet one-way delay: 51.662 ms
  Loss rate: 87.35\%
-- Flow 1:
  Average throughput: 6.95 Mbit/s
  95th percentile per-packet one-way delay: 51.662 ms
  Loss rate: 87.35\%
Run 7: Report of Verus — Data Link

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Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 54.83 Mbit/s)  Flow 1 egress (mean 6.95 Mbit/s)

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Per-packet one-way delay (ms)

Flow 1 (95th percentile 51.66 ms)
Run 8: Statistics of Verus

Start at: 2018-06-29 23:50:34
End at: 2018-06-29 23:51:04

# Below is generated by plot.py at 2018-06-30 00:29:07
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 6.37 Mbit/s (53.1% utilization)
  95th percentile per-packet one-way delay: 51.890 ms
  Loss rate: 95.73%
-- Flow 1:
  Average throughput: 6.37 Mbit/s
  95th percentile per-packet one-way delay: 51.890 ms
  Loss rate: 95.73%
Run 8: Report of Verus — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 149.37 Mbit/s)  Flow 1 egress (mean 6.37 Mbit/s)

Flow 1 (95th percentile 51.89 ms)
Run 9: Statistics of Verus

Start at: 2018-06-30 00:00:23
End at: 2018-06-30 00:00:53

# Below is generated by plot.py at 2018-06-30 00:29:07
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 6.73 Mbit/s (56.1% utilization)
95th percentile per-packet one-way delay: 51.825 ms
Loss rate: 93.87%
-- Flow 1:
Average throughput: 6.73 Mbit/s
95th percentile per-packet one-way delay: 51.825 ms
Loss rate: 93.87%
Run 9: Report of Verus — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 109.44 Mbit/s)  Flow 1 egress (mean 6.73 Mbit/s)

Per packet one-way delay (ms)

Flow 1 (95th percentile 51.83 ms)
Run 10: Statistics of Verus

Start at: 2018-06-30 00:10:11
End at: 2018-06-30 00:10:41

# Below is generated by plot.py at 2018-06-30 00:29:07
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 6.34 Mbit/s (52.8% utilization)
  95th percentile per-packet one-way delay: 51.721 ms
  Loss rate: 90.72%
-- Flow 1:
  Average throughput: 6.34 Mbit/s
  95th percentile per-packet one-way delay: 51.721 ms
  Loss rate: 90.72%
Run 10: Report of Verus — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 68.19 Mbit/s)  Flow 1 egress (mean 6.34 Mbit/s)

Per packet one-way delay (ms)

Flow 1 (95th percentile 51.72 ms)
Run 1: Statistics of PCC-Vivace

Start at: 2018-06-29 22:43:08
End at: 2018-06-29 22:43:38

# Below is generated by plot.py at 2018-06-30 00:29:07
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 10.92 Mbit/s (91.0% utilization)
  95th percentile per-packet one-way delay: 35.998 ms
  Loss rate: 0.72%
-- Flow 1:
  Average throughput: 10.92 Mbit/s
  95th percentile per-packet one-way delay: 35.998 ms
  Loss rate: 0.72%
Run 1: Report of PCC-Vivace — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 10.99 Mbit/s)  Flow 1 egress (mean 10.92 Mbit/s)

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

Time (s)

Flow 1 (95th percentile 36.00 ms)
Run 2: Statistics of PCC-Vivace


# Below is generated by plot.py at 2018-06-30 00:29:07
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 10.98 Mbit/s (91.5% utilization)
95th percentile per-packet one-way delay: 37.804 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 10.98 Mbit/s
95th percentile per-packet one-way delay: 37.804 ms
Loss rate: 0.18%
Run 2: Report of PCC-Vivace — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 10.99 Mbit/s)  Flow 1 egress (mean 10.98 Mbit/s)

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

Time (s)

Flow 1 (95th percentile 37.50 ms)
Run 3: Statistics of PCC-Vivace

Start at: 2018-06-29 23:02:43
End at: 2018-06-29 23:03:13

# Below is generated by plot.py at 2018-06-30 00:29:07
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 10.87 Mbit/s (90.5% utilization)
  95th percentile per-packet one-way delay: 35.595 ms
  Loss rate: 0.18%
-- Flow 1:
  Average throughput: 10.87 Mbit/s
  95th percentile per-packet one-way delay: 35.595 ms
  Loss rate: 0.18%
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 10.87 Mbit/s)  Flow 1 egress (mean 10.87 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 35.59 ms)
Run 4: Statistics of PCC-Vivace

Start at: 2018-06-29 23:12:33
End at: 2018-06-29 23:13:03

# Below is generated by plot.py at 2018-06-30 00:29:07
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 10.88 Mbit/s (90.6% utilization)
95th percentile per-packet one-way delay: 36.549 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 10.88 Mbit/s
95th percentile per-packet one-way delay: 36.549 ms
Loss rate: 0.20%
Run 4: Report of PCC-Vivace — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 10.59 Mbit/s)  Flow 1 egress (mean 10.88 Mbit/s)

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

Time (s)

Flow 1 (95th percentile 36.55 ms)
Run 5: Statistics of PCC-Vivace

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

# Below is generated by plot.py at 2018-06-30 00:29:07
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 10.88 Mbit/s (90.6% utilization)
  95th percentile per-packet one-way delay: 35.815 ms
  Loss rate: 0.19%
-- Flow 1:
  Average throughput: 10.88 Mbit/s
  95th percentile per-packet one-way delay: 35.815 ms
  Loss rate: 0.19%
Run 5: Report of PCC-Vivace — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 10.99 Mbit/s)  Flow 1 egress (mean 10.88 Mbit/s)

Per-packet on-way delay (ms)

Time (s)

Flow 1 (95th percentile 35.81 ms)
Run 6: Statistics of PCC-Vivace

Start at: 2018-06-29 23:32:10
End at: 2018-06-29 23:32:40

# Below is generated by plot.py at 2018-06-30 00:29:07
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 10.91 Mbit/s (90.9% utilization)
95th percentile per-packet one-way delay: 35.616 ms
Loss rate: 0.21%
-- Flow 1:
Average throughput: 10.91 Mbit/s
95th percentile per-packet one-way delay: 35.616 ms
Loss rate: 0.21%
Run 6: Report of PCC-Vivace — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 10.92 Mbit/s)  Flow 1 egress (mean 10.91 Mbit/s)

Per-packet inter-byte delay (ms)

Flow 1 (95th percentile 35.62 ms)
Run 7: Statistics of PCC-Vivace

Start at: 2018-06-29 23:41:57
End at: 2018-06-29 23:42:27

# Below is generated by plot.py at 2018-06-30 00:29:07
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 10.98 Mbit/s (91.5% utilization)
  95th percentile per-packet one-way delay: 35.486 ms
  Loss rate: 0.18%
-- Flow 1:
  Average throughput: 10.98 Mbit/s
  95th percentile per-packet one-way delay: 35.486 ms
  Loss rate: 0.18%
Run 7: Report of PCC-Vivace — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Flow 1 ingress (mean 10.98 Mbit/s)  Flow 1 egress (mean 10.98 Mbit/s)

Per-packet one-way delay (ms)

Flow 1 (95th percentile 35.49 ms)
Run 8: Statistics of PCC-Vivace

Start at: 2018-06-29 23:51:45
End at: 2018-06-29 23:52:15

# Below is generated by plot.py at 2018-06-30 00:29:07
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 10.92 Mbit/s (91.0% utilization)
95th percentile per-packet one-way delay: 35.713 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 10.92 Mbit/s
95th percentile per-packet one-way delay: 35.713 ms
Loss rate: 0.18%
Run 8: Report of PCC-Vivace — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 10.93 Mbit/s)  Flow 1 egress (mean 10.92 Mbit/s)

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

Time (s)

Flow 1 (95th percentile 35.71 ms)
Run 9: Statistics of PCC-Vivace

Start at: 2018-06-30 00:01:33
End at: 2018-06-30 00:02:03

# Below is generated by plot.py at 2018-06-30 00:29:07
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 10.87 Mbit/s (90.5% utilization)
95th percentile per-packet one-way delay: 36.340 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 10.87 Mbit/s
95th percentile per-packet one-way delay: 36.340 ms
Loss rate: 0.19%
Run 9: Report of PCC-Vivace — Data Link

![Graph showing average capacity and packet delay](image)

Average capacity 12.00 Mbit/s (shaded region)

- Flow 1 ingress (mean 10.87 Mbit/s)
- Flow 1 egress (mean 10.87 Mbit/s)

Packet delay (95th percentile 38.34 ms)
Run 10: Statistics of PCC-Vivace

Start at: 2018-06-30 00:11:21
End at: 2018-06-30 00:11:51

# Below is generated by plot.py at 2018-06-30 00:29:17
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 10.89 Mbit/s (90.7% utilization)
  95th percentile per-packet one-way delay: 33.943 ms
  Loss rate: 0.10%
-- Flow 1:
  Average throughput: 10.89 Mbit/s
  95th percentile per-packet one-way delay: 33.943 ms
  Loss rate: 0.10%
Run 10: Report of PCC-Vivace — Data Link
Run 1: Statistics of WebRTC media

Start at: 2018-06-29 22:44:17
End at: 2018-06-29 22:44:47

# Below is generated by plot.py at 2018-06-30 00:29:17
# 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: 36.092 ms
  Loss rate: 0.21%
-- Flow 1:
  Average throughput: 2.13 Mbit/s
  95th percentile per-packet one-way delay: 36.092 ms
  Loss rate: 0.21%
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 2.14 Mbit/s)**

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

Per packet one-way delay (ms)

Time (s)

**Flow 1 (95th percentile 36.09 ms)**
Run 2: Statistics of WebRTC media

Start at: 2018-06-29 22:54:04
End at: 2018-06-29 22:54:34

# Below is generated by plot.py at 2018-06-30 00:29:17
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 2.20 Mbit/s (18.3% utilization)
  95th percentile per-packet one-way delay: 36.331 ms
  Loss rate: 0.21%
-- Flow 1:
  Average throughput: 2.20 Mbit/s
  95th percentile per-packet one-way delay: 36.331 ms
  Loss rate: 0.21%
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 2.20 Mbit/s)  Flow 1 egress (mean 2.20 Mbit/s)

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

Time (s)

Flow 1 (95th percentile 36.33 ms)
Run 3: Statistics of WebRTC media

Start at: 2018-06-29 23:03:52
End at: 2018-06-29 23:04:22

# Below is generated by plot.py at 2018-06-30 00:29:17
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 2.20 Mbit/s (18.3% utilization)
  95th percentile per-packet one-way delay: 36.099 ms
  Loss rate: 0.21%
-- Flow 1:
  Average throughput: 2.20 Mbit/s
  95th percentile per-packet one-way delay: 36.099 ms
  Loss rate: 0.21%
Run 3: Report of WebRTC media — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 2.20 Mbit/s)  Flow 1 egress (mean 2.20 Mbit/s)

Per-packet on-way delay (ms)

Time (s)

Flow 1 (95th percentile 36.10 ms)
Run 4: Statistics of WebRTC media

End at: 2018-06-29 23:14:12

# Below is generated by plot.py at 2018-06-30 00:29:17
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 2.18 Mbit/s (18.2% utilization)
  95th percentile per-packet one-way delay: 36.296 ms
  Loss rate: 0.21%
-- Flow 1:
  Average throughput: 2.18 Mbit/s
  95th percentile per-packet one-way delay: 36.296 ms
  Loss rate: 0.21%
Run 4: Report of WebRTC media — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbit/s)

Time (s)

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

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

Time (s)

Flow 1 (95th percentile 36.30 ms)
Run 5: Statistics of WebRTC media

End at: 2018-06-29 23:24:01

# Below is generated by plot.py at 2018-06-30 00:29:21
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 2.19 Mbit/s (18.2% utilization)
95th percentile per-packet one-way delay: 36.381 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 2.19 Mbit/s
95th percentile per-packet one-way delay: 36.381 ms
Loss rate: 0.15%
Run 5: Report of WebRTC media — Data Link
Run 6: Statistics of WebRTC media

Start at: 2018-06-29 23:33:19
End at: 2018-06-29 23:33:49

# Below is generated by plot.py at 2018-06-30 00:29:22
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 2.21 Mbit/s (18.4% utilization)
  95th percentile per-packet one-way delay: 36.331 ms
  Loss rate: 0.19%
-- Flow 1:
  Average throughput: 2.21 Mbit/s
  95th percentile per-packet one-way delay: 36.331 ms
  Loss rate: 0.19%
Run 6: Report of WebRTC media — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 2.21 Mbit/s)  Flow 1 egress (mean 2.21 Mbit/s)

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

Flow 1 (95th percentile 36.33 ms)
Run 7: Statistics of WebRTC media

Start at: 2018-06-29 23:43:06
End at: 2018-06-29 23:43:36

# Below is generated by plot.py at 2018-06-30 00:29:22
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 2.14 Mbit/s (17.8% utilization)
  95th percentile per-packet one-way delay: 36.127 ms
  Loss rate: 0.18%
-- Flow 1:
  Average throughput: 2.14 Mbit/s
  95th percentile per-packet one-way delay: 36.127 ms
  Loss rate: 0.18%
Run 7: Report of WebRTC media — Data Link

Average capacity 12.00 Mbit/s (shaded region)

Time (s)

Throughput (Mbit/s)

Flow 1 ingress (mean 2.14 Mbit/s)  Flow 1 egress (mean 2.14 Mbit/s)

Per packet one way delay (ms)

Flow 1 (95th percentile 36.13 ms)
Run 8: Statistics of WebRTC media

End at: 2018-06-29 23:53:25

# Below is generated by plot.py at 2018-06-30 00:29:23
# Datalink statistics
-- Total of 1 flow:
Average capacity: 12.00 Mbit/s
Average throughput: 2.23 Mbit/s (18.6% utilization)
95th percentile per-packet one-way delay: 36.419 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 2.23 Mbit/s
95th percentile per-packet one-way delay: 36.419 ms
Loss rate: 0.14%
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 2.23 Mbit/s) Flow 1 egress (mean 2.23 Mbit/s)

Per packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 36.42 ms)
Run 9: Statistics of WebRTC media

Start at: 2018-06-30 00:02:43
End at: 2018-06-30 00:03:13

# Below is generated by plot.py at 2018-06-30 00:29:24
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 2.21 Mbit/s (18.4% utilization)
  95th percentile per-packet one-way delay: 36.188 ms
  Loss rate: 0.19%
-- Flow 1:
  Average throughput: 2.21 Mbit/s
  95th percentile per-packet one-way delay: 36.188 ms
  Loss rate: 0.19%
Run 9: Report of WebRTC media — Data Link

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

- **Flow\_1 ingress**: mean 2.22 Mbit/s
- **Flow\_1 egress**: mean 2.21 Mbit/s

![Graph showing per-packet round-trip delay (ms)]

- **Flow\_1 (95th percentile 36.19 ms)**
Run 10: Statistics of WebRTC media

Start at: 2018-06-30 00:12:30
End at: 2018-06-30 00:13:00

# Below is generated by plot.py at 2018-06-30 00:29:25
# Datalink statistics
-- Total of 1 flow:
  Average capacity: 12.00 Mbit/s
  Average throughput: 2.21 Mbit/s (18.5% utilization)
  95th percentile per-packet one-way delay: 36.372 ms
  Loss rate: 0.22%
-- Flow 1:
  Average throughput: 2.21 Mbit/s
  95th percentile per-packet one-way delay: 36.372 ms
  Loss rate: 0.22%
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 2.22 Mbit/s)  Flow 1 egress (mean 2.21 Mbit/s)

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

Time (s)

Flow 1 (95th percentile 36.37 ms)

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