Pantheon Report

Data path: GCE Iowa Ethernet (local) → GCE Tokyo Ethernet (remote).
Repeated the test of 16 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).
Tested BBR with qdisc of Fair Queuing (fq), and other schemes with the default Linux qdisc (pfifo_fast).

Git summary:
branch: master @ 114e807ac1bad7b85168cebf8a969063ee6c12c
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
  M datagrupm/sender.cc
third_party/fillp @ 11f8c46a2b1dfc737253db7e8ca4076272baa4
third_party/genericCC @ d223989828276fa83a807da6e0341dc0c7b89aec
third_party/indigo @ a9b2060d39e4da2e8987e893e3eca2a67c7cd0aab
third_party/indigo-1-layer-128-unit @ 3ae9e4ef42330db7484501f82ce8b377695f2f66d
third_party/indigo-1-layer-32-unit @ 2601c92e4aa9d58d38dc4dfef0ecdbf90c077e64d
third_party/indigo-1-layer-32-unit-no-calib @ 1f3a7f75b41135ed5b540c0fd350939528e2a5f
third_party/indigo-no-calib @ 722f4202e8a044d8306fa0b983ad84360c53d89
third_party/koho_cc @ f0f2e693303aae82ea080e6928eac4ff083a6681
  M datagrupm/sender.cc
third_party/libutp @ b3465b942e2826f2b2b79eaab4a906ce6b7cf3cf
third_party/pantheon-tunnel @ fb1053193c2861da659ba9013db26744ccf993
third_party/pcc @ 1af958fa0d66d18b623c091a55fec872b4981e1
  M receiver/src/buffer.h
  M receiver/src/core.cpp
  M sender/src/buffer.h
  M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8a0cd8af92b4eb24f974ab
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc9783cf3cf42
third_party/scream @ c3370fd7b17265a9e2be34e016ad23f5965885
third_party/sourdough @ f1a14bffe749737437fe6b1eaebe3b267cde681
third_party/sprout @ 6f2e6e6088d91066a9f023d375e62665089ce
  M src/examples/cellsim.cc
  M src/examples/sproutbt2.cc
  M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af26295626239f9a494
  M src/verus.hpp
  M tools/plot.py
third_party/vivace @ 7a4ba531e75b4a6f66f5c4580192120401784ce3
third_party/webrtc @ f271183af82e65d0031620f4bebf38aedc5581
test from GCE Iowa Ethernet to GCE Tokyo Ethernet, 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>
<td>10</td>
<td>173.88</td>
<td>70.80</td>
<td>0.01</td>
</tr>
<tr>
<td>TCP Cubic</td>
<td>10</td>
<td>152.04</td>
<td>75.84</td>
<td>0.01</td>
</tr>
<tr>
<td>LEDBAT</td>
<td>10</td>
<td>22.36</td>
<td>65.42</td>
<td>0.01</td>
</tr>
<tr>
<td>PCC-Allegro</td>
<td>10</td>
<td>268.34</td>
<td>102.61</td>
<td>0.23</td>
</tr>
<tr>
<td>QUIC Cubic</td>
<td>9</td>
<td>57.84</td>
<td>63.28</td>
<td>0.00</td>
</tr>
<tr>
<td>SCReAM</td>
<td>10</td>
<td>0.22</td>
<td>63.09</td>
<td>0.00</td>
</tr>
<tr>
<td>WebRTC media</td>
<td>10</td>
<td>0.06</td>
<td>63.91</td>
<td>0.00</td>
</tr>
<tr>
<td>Sprout</td>
<td>10</td>
<td>6.48</td>
<td>64.86</td>
<td>0.00</td>
</tr>
<tr>
<td>TaoVA-100x</td>
<td>10</td>
<td>139.73</td>
<td>64.17</td>
<td>0.00</td>
</tr>
<tr>
<td>TCP Vegas</td>
<td>10</td>
<td>102.65</td>
<td>69.84</td>
<td>0.01</td>
</tr>
<tr>
<td>Verus</td>
<td>10</td>
<td>203.37</td>
<td>154.35</td>
<td>0.14</td>
</tr>
<tr>
<td>Copa</td>
<td>10</td>
<td>77.54</td>
<td>64.03</td>
<td>0.00</td>
</tr>
<tr>
<td>FillP</td>
<td>10</td>
<td>717.76</td>
<td>306.97</td>
<td>4.69</td>
</tr>
<tr>
<td>Indigo-1-32</td>
<td>10</td>
<td>202.90</td>
<td>68.28</td>
<td>0.00</td>
</tr>
<tr>
<td>PCC-Vivace</td>
<td>10</td>
<td>294.76</td>
<td>63.65</td>
<td>0.00</td>
</tr>
<tr>
<td>PCC-Expr</td>
<td>0</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>
Run 1: Statistics of TCP BBR

End at: 2018-04-24 21:04:53

# Below is generated by plot.py at 2018-04-25 00:28:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 175.12 Mbit/s
95th percentile per-packet one-way delay: 70.460 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 175.12 Mbit/s
95th percentile per-packet one-way delay: 70.460 ms
Loss rate: 0.01%
Run 1: Report of TCP BBR — Data Link
Run 2: Statistics of TCP BBR


# Below is generated by plot.py at 2018-04-25 00:28:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 172.22 Mbit/s
95th percentile per-packet one-way delay: 70.502 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 172.22 Mbit/s
95th percentile per-packet one-way delay: 70.502 ms
Loss rate: 0.00%
Run 2: Report of TCP BBR — Data Link
Run 3: Statistics of TCP BBR

Start at: 2018-04-24 21:30:21
End at: 2018-04-24 21:30:51

# Below is generated by plot.py at 2018-04-25 00:28:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 173.90 Mbit/s
95th percentile per-packet one-way delay: 71.701 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 173.90 Mbit/s
95th percentile per-packet one-way delay: 71.701 ms
Loss rate: 0.01%
Run 3: Report of TCP BBR — Data Link
Run 4: Statistics of TCP BBR

End at: 2018-04-24 21:44:03

# Below is generated by plot.py at 2018-04-25 00:28:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 177.47 Mbit/s
95th percentile per-packet one-way delay: 73.084 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 177.47 Mbit/s
95th percentile per-packet one-way delay: 73.084 ms
Loss rate: 0.01%
Run 4: Report of TCP BBR — Data Link
Run 5: Statistics of TCP BBR

End at: 2018-04-24 21:57:02

# Below is generated by plot.py at 2018-04-25 00:28:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 175.14 Mbit/s
95th percentile per-packet one-way delay: 72.501 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 175.14 Mbit/s
95th percentile per-packet one-way delay: 72.501 ms
Loss rate: 0.01%
Run 5: Report of TCP BBR — Data Link
Run 6: Statistics of TCP BBR

End at: 2018-04-24 22:09:43

# Below is generated by plot.py at 2018-04-25 00:28:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 177.36 Mbit/s
95th percentile per-packet one-way delay: 72.793 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 177.36 Mbit/s
95th percentile per-packet one-way delay: 72.793 ms
Loss rate: 0.00%
Run 6: Report of TCP BBR — Data Link
Run 7: Statistics of TCP BBR


# Below is generated by plot.py at 2018-04-25 00:28:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 170.08 Mbit/s
95th percentile per-packet one-way delay: 65.666 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 170.08 Mbit/s
95th percentile per-packet one-way delay: 65.666 ms
Loss rate: 0.01%
Run 7: Report of TCP BBR — Data Link
Run 8: Statistics of TCP BBR

End at: 2018-04-24 22:35:58

# Below is generated by plot.py at 2018-04-25 00:28:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 173.73 Mbit/s
95th percentile per-packet one-way delay: 67.390 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 173.73 Mbit/s
95th percentile per-packet one-way delay: 67.390 ms
Loss rate: 0.01%
Run 8: Report of TCP BBR — Data Link

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

- Flow 1 ingress (mean 173.75 Mbit/s)
- Flow 1 egress (mean 173.73 Mbit/s)

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

- Flow 1 (95th percentile 67.39 ms)
Run 9: Statistics of TCP BBR


# Below is generated by plot.py at 2018-04-25 00:31:10
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 172.82 Mbit/s
  95th percentile per-packet one-way delay: 73.637 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 172.82 Mbit/s
  95th percentile per-packet one-way delay: 73.637 ms
  Loss rate: 0.00%
Run 9: Report of TCP BBR — Data Link

![Graphs showing data link performance metrics]

- Flow 1 ingress (mean 172.82 Mbit/s)
- Flow 1 egress (mean 172.82 Mbit/s)

![Graph showing packet one-way delay]

- Flow 1 (95th percentile 73.64 ms)
Run 10: Statistics of TCP BBR

Start at: 2018-04-24 23:01:48
End at: 2018-04-24 23:02:19

# Below is generated by plot.py at 2018-04-25 00:31:11
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 170.94 Mbit/s
  95th percentile per-packet one-way delay: 70.254 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 170.94 Mbit/s
  95th percentile per-packet one-way delay: 70.254 ms
  Loss rate: 0.00%
Run 10: Report of TCP BBR — Data Link

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

- Flow 1 ingress (mean 170.95 Mbit/s)
- Flow 1 egress (mean 170.94 Mbit/s)

- Flow 1 (95th percentile 70.25 ms)
Run 1: Statistics of TCP Cubic

End at: 2018-04-24 21:00:29

# Below is generated by plot.py at 2018-04-25 00:31:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 122.40 Mbit/s
95th percentile per-packet one-way delay: 72.795 ms
Loss rate: 0.00%

-- Flow 1:
Average throughput: 122.40 Mbit/s
95th percentile per-packet one-way delay: 72.795 ms
Loss rate: 0.00%
Run 1: Report of TCP Cubic — Data Link

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

- Flow 1 ingress (mean 122.41 Mbit/s)
- Flow 1 egress (mean 122.40 Mbit/s)

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

- Flow 1 (95th percentile 72.80 ms)
Run 2: Statistics of TCP Cubic

Start at: 2018-04-24 21:12:50

# Below is generated by plot.py at 2018-04-25 00:31:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 180.38 Mbit/s
95th percentile per-packet one-way delay: 76.942 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 180.38 Mbit/s
95th percentile per-packet one-way delay: 76.942 ms
Loss rate: 0.00%
Run 2: Report of TCP Cubic — Data Link

![Graph of throughput and packet loss over time for Flow 1 ingoing and egressing at 180.38 Mbit/s, with 95th percentile delay of 76.94 ms.]

27
Run 3: Statistics of TCP Cubic

End at: 2018-04-24 21:26:20

# Below is generated by plot.py at 2018-04-25 00:31:22
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 117.63 Mbit/s
  95th percentile per-packet one-way delay: 73.463 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 117.63 Mbit/s
  95th percentile per-packet one-way delay: 73.463 ms
  Loss rate: 0.00%
Run 3: Report of TCP Cubic — Data Link

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

![Graph 2: Packet Delay vs Time](image2)
Run 4: Statistics of TCP Cubic

Start at: 2018-04-24 21:39:02

# Below is generated by plot.py at 2018-04-25 00:31:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 178.28 Mbit/s
95th percentile per-packet one-way delay: 78.383 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 178.28 Mbit/s
95th percentile per-packet one-way delay: 78.383 ms
Loss rate: 0.00%
Run 4: Report of TCP Cubic — Data Link

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

- **Flow 1 ingress** (mean 178.30 Mbit/s)
- **Flow 1 egress** (mean 178.28 Mbit/s)

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

- **Flow 1** (95th percentile 78.38 ms)

31
Run 5: Statistics of TCP Cubic

Start at: 2018-04-24 21:52:00
End at: 2018-04-24 21:52:30

# Below is generated by plot.py at 2018-04-25 00:31:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 144.30 Mbit/s
95th percentile per-packet one-way delay: 75.657 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 144.30 Mbit/s
95th percentile per-packet one-way delay: 75.657 ms
Loss rate: 0.01%
Run 5: Report of TCP Cubic — Data Link
Run 6: Statistics of TCP Cubic

End at: 2018-04-24 22:05:14

# Below is generated by plot.py at 2018-04-25 00:31:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 121.32 Mbit/s
95th percentile per-packet one-way delay: 74.297 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 121.32 Mbit/s
95th percentile per-packet one-way delay: 74.297 ms
Loss rate: 0.00%
Run 6: Report of TCP Cubic — Data Link

---

**Throughput (Mbps)**

- Flow 1 ingress (mean 121.39 Mbit/s)
- Flow 1 egress (mean 121.32 Mbit/s)

**Packet one way delay (ms)**

Flow 1 (95th percentile 74.30 ms)
Run 7: Statistics of TCP Cubic


# Below is generated by plot.py at 2018-04-25 00:33:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 176.71 Mbit/s
95th percentile per-packet one-way delay: 75.574 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 176.71 Mbit/s
95th percentile per-packet one-way delay: 75.574 ms
Loss rate: 0.00%
Run 7: Report of TCP Cubic — Data Link

![Graph of TCP Cubic Data Link](image1)

- Flow 1 ingress (mean 176.77 Mbps)
- Flow 1 egress (mean 176.71 Mbps)

![Graph of Data Link Delay](image2)

- Flow 1 (95th percentile 75.57 ms)
Run 8: Statistics of TCP Cubic

Start at: 2018-04-24 22:31:00

# Below is generated by plot.py at 2018-04-25 00:33:30
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 121.36 Mbit/s
95th percentile per-packet one-way delay: 73.275 ms
Loss rate: 0.01%
-- Flow 1:
  Average throughput: 121.36 Mbit/s
95th percentile per-packet one-way delay: 73.275 ms
Loss rate: 0.01%
Run 8: Report of TCP Cubic — Data Link

![Graph of Throughput vs. Time for Flow 1 ingress and egress]

![Graph of Per-packet one-way delay vs. Time for Flow 1 95th percentile 73.28 ms]
Run 9: Statistics of TCP Cubic


# Below is generated by plot.py at 2018-04-25 00:33:35
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 178.38 Mbit/s
  95th percentile per-packet one-way delay: 79.781 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 178.38 Mbit/s
  95th percentile per-packet one-way delay: 79.781 ms
  Loss rate: 0.00%
Run 9: Report of TCP Cubic — Data Link
Run 10: Statistics of TCP Cubic


# Below is generated by plot.py at 2018-04-25 00:33:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 179.62 Mbit/s
95th percentile per-packet one-way delay: 78.222 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 179.62 Mbit/s
95th percentile per-packet one-way delay: 78.222 ms
Loss rate: 0.03%
Run 10: Report of TCP Cubic — Data Link

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

- **Throughput**: Blue line shows the ingress (mean 179.71 Mbit/s) and the egress (mean 179.62 Mbit/s).
- **Packet Delay**: Blue line indicates the 95th percentile of packet delay, reaching up to 78.22 ms.
Run 1: Statistics of LEDBAT

Start at: 2018-04-24 21:02:15
End at: 2018-04-24 21:02:45

# Below is generated by plot.py at 2018-04-25 00:33:53
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 22.44 Mbit/s
  95th percentile per-packet one-way delay: 63.917 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 22.44 Mbit/s
  95th percentile per-packet one-way delay: 63.917 ms
  Loss rate: 0.00%
Run 1: Report of LEDBAT — Data Link
Run 2: Statistics of LEDBAT


# Below is generated by plot.py at 2018-04-25 00:33:53
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 21.73 Mbit/s
  95th percentile per-packet one-way delay: 65.998 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 21.73 Mbit/s
  95th percentile per-packet one-way delay: 65.998 ms
  Loss rate: 0.00%
Run 2: Report of LEDBAT — Data Link

[Graph 1: Time (s) vs. Throughput (Mbit/s)]
- Flow 1 ingress (mean 21.73 Mbit/s)
- Flow 1 egress (mean 21.73 Mbit/s)

[Graph 2: Time (s) vs. Per-packet one-way delay (ms)]
- Flow 1 (95th percentile 66.00 ms)
Run 3: Statistics of LEDBAT


# Below is generated by plot.py at 2018-04-25 00:33:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 23.08 Mbit/s
95th percentile per-packet one-way delay: 63.978 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 23.08 Mbit/s
95th percentile per-packet one-way delay: 63.978 ms
Loss rate: 0.00%
Run 3: Report of LEDBAT — Data Link

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

Flow 1 ingress (mean 23.08 Mbit/s)  Flow 1 egress (mean 23.08 Mbit/s)

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

Flow 1 (95th percentile 63.98 ms)
Run 4: Statistics of LEDBAT


# Below is generated by plot.py at 2018-04-25 00:33:53
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 22.58 Mbit/s
  95th percentile per-packet one-way delay: 65.470 ms
  Loss rate: 0.05%
-- Flow 1:
  Average throughput: 22.58 Mbit/s
  95th percentile per-packet one-way delay: 65.470 ms
  Loss rate: 0.05%
Run 4: Report of LEDBAT — Data Link
Run 5: Statistics of LEDBAT


# Below is generated by plot.py at 2018-04-25 00:33:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 22.13 Mbit/s
95th percentile per-packet one-way delay: 65.458 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 22.13 Mbit/s
95th percentile per-packet one-way delay: 65.458 ms
Loss rate: 0.00%
Run 5: Report of LEDBAT — Data Link

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

- **Flow 1 ingress** (mean 22.13 Mbit/s)
- **Flow 1 egress** (mean 22.13 Mbit/s)

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

- **Flow 1 95th percentile** 65.46 ms
Run 6: Statistics of LEDBAT

Start at: 2018-04-24 22:07:05

# Below is generated by plot.py at 2018-04-25 00:33:53
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 22.53 Mbit/s
  95th percentile per-packet one-way delay: 65.947 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 22.53 Mbit/s
  95th percentile per-packet one-way delay: 65.947 ms
  Loss rate: 0.00%
Run 6: Report of LEDBAT — Data Link

![Graph showing throughput over time](image)

- Flow 1 ingress (mean 22.53 Mbit/s)
- Flow 1 egress (mean 22.53 Mbit/s)

![Graph showing packet error rate](image)

- Flow 1 95th percentile 65.95 ms
Run 7: Statistics of LEDBAT

End at: 2018-04-24 22:20:45

# Below is generated by plot.py at 2018-04-25 00:33:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 22.13 Mbit/s
95th percentile per-packet one-way delay: 65.941 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 22.13 Mbit/s
95th percentile per-packet one-way delay: 65.941 ms
Loss rate: 0.00%
Run 7: Report of LEDBAT — Data Link

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

- **Flow 1 ingress (mean 22.13 Mbit/s)**
- **Flow 1 egress (mean 22.13 Mbit/s)**

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

- **Flow 1 (95th percentile 65.94 ms)**
Run 8: Statistics of LEDBAT


# Below is generated by plot.py at 2018-04-25 00:33:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 22.32 Mbit/s
95th percentile per-packet one-way delay: 65.319 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 22.32 Mbit/s
95th percentile per-packet one-way delay: 65.319 ms
Loss rate: 0.00%
Run 8: Report of LEDBAT — Data Link
Run 9: Statistics of LEDBAT


# Below is generated by plot.py at 2018-04-25 00:33:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 22.27 Mbit/s
95th percentile per-packet one-way delay: 66.109 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 22.27 Mbit/s
95th percentile per-packet one-way delay: 66.109 ms
Loss rate: 0.00%
Run 9: Report of LEDBAT — Data Link
Run 10: Statistics of LEDBAT

End at: 2018-04-24 23:00:09

# Below is generated by plot.py at 2018-04-25 00:33:53
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 22.40 Mbit/s
  95th percentile per-packet one-way delay: 66.041 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 22.40 Mbit/s
  95th percentile per-packet one-way delay: 66.041 ms
  Loss rate: 0.00%
Run 10: Report of LEDBAT — Data Link

[Graphs showing throughput and per-packet round-trip delay over time]
Run 1: Statistics of PCC-Allegro

Start at: 2018-04-24 20:58:27
End at: 2018-04-24 20:58:57

# Below is generated by plot.py at 2018-04-25 00:37:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 280.80 Mbit/s
95th percentile per-packet one-way delay: 73.462 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 280.80 Mbit/s
95th percentile per-packet one-way delay: 73.462 ms
Loss rate: 0.20%
Run 1: Report of PCC-Allegro — Data Link

![Throughput Graph](image1)

- Flow 1 ingress (mean 281.37 Mbit/s)
- Flow 1 egress (mean 280.80 Mbit/s)

![Delay Graph](image2)

- Flow 1 (95th percentile 73.46 ms)
Run 2: Statistics of PCC-Allegro

End at: 2018-04-24 21:11:50

# Below is generated by plot.py at 2018-04-25 00:37:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 259.21 Mbit/s
95th percentile per-packet one-way delay: 100.438 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 259.21 Mbit/s
95th percentile per-packet one-way delay: 100.438 ms
Loss rate: 0.25%
Run 2: Report of PCC-Allegro — Data Link

![Graph showing throughput and end-to-end delays over time.]

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 259.84 Mbit/s)
  - Flow 1 egress (mean 259.21 Mbit/s)

- **End-to-end delays (ms):**
  - Flow 1 (95th percentile 100.44 ms)
Run 3: Statistics of PCC-Allegro


# Below is generated by plot.py at 2018-04-25 00:37:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 265.60 Mbit/s
95th percentile per-packet one-way delay: 76.320 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 265.60 Mbit/s
95th percentile per-packet one-way delay: 76.320 ms
Loss rate: 0.24%
Run 3: Report of PCC-Allegro — Data Link

![Graph 1: Throughput (Mbps)]

- **Flow 1 ingress** (mean 266.25 Mbit/s)
- **Flow 1 egress** (mean 265.60 Mbit/s)

![Graph 2: RTT (ms)]

- **Flow 1 95th percentile** 76.32 ms

---

69
Run 4: Statistics of PCC-Allegro

End at: 2018-04-24 21:38:01

# Below is generated by plot.py at 2018-04-25 00:37:09
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 237.64 Mbit/s
  95th percentile per-packet one-way delay: 121.604 ms
  Loss rate: 0.31%
-- Flow 1:
  Average throughput: 237.64 Mbit/s
  95th percentile per-packet one-way delay: 121.604 ms
  Loss rate: 0.31%
Run 4: Report of PCC-Allegro — Data Link

[Graphs showing throughput and packet delay over time]
Run 5: Statistics of PCC-Allegro


# Below is generated by plot.py at 2018-04-25 00:37:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 262.70 Mbit/s
95th percentile per-packet one-way delay: 104.738 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 262.70 Mbit/s
95th percentile per-packet one-way delay: 104.738 ms
Loss rate: 0.20%
Run 5: Report of PCC-Allegro — Data Link

![Graph showing throughput and packet delay over time. The top graph displays throughput in bits per second over time, with two lines indicating different flows (ingress and egress) and their respective average speeds. The bottom graph shows packet delay in milliseconds over time, with a dotted line indicating the 95th percentile delay.](image-url)
Run 6: Statistics of PCC-Allegro

End at: 2018-04-24 22:03:41

# Below is generated by plot.py at 2018-04-25 00:38:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 273.63 Mbit/s
95th percentile per-packet one-way delay: 94.743 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 273.63 Mbit/s
95th percentile per-packet one-way delay: 94.743 ms
Loss rate: 0.20%
Run 6: Report of PCC-Allegro — Data Link
Run 7: Statistics of PCC-Allegro


# Below is generated by plot.py at 2018-04-25 00:39:16
# Datalink statistics
-- Total of 1 flow:
Average throughput: 310.68 Mbit/s
95th percentile per-packet one-way delay: 122.871 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 310.68 Mbit/s
95th percentile per-packet one-way delay: 122.871 ms
Loss rate: 0.11%
Run 7: Report of PCC-Allegro — Data Link

![Graph of throughput and packet delay over time](image-url)
Run 8: Statistics of PCC-Allegro


# Below is generated by plot.py at 2018-04-25 00:39:16
# Datalink statistics
-- Total of 1 flow:
Average throughput: 266.10 Mbit/s
95th percentile per-packet one-way delay: 87.428 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 266.10 Mbit/s
95th percentile per-packet one-way delay: 87.428 ms
Loss rate: 0.24%
Run 8: Report of PCC-Allegro — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 266.76 Mbps)  Flow 1 egress (mean 266.10 Mbps)

Latency (ms)

Flow 1 (95th percentile 87.43 ms)
Run 9: Statistics of PCC-Allegro


# Below is generated by plot.py at 2018-04-25 00:41:36
# Datalink statistics
-- Total of 1 flow:
Average throughput: 250.58 Mbit/s
95th percentile per-packet one-way delay: 158.688 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 250.58 Mbit/s
95th percentile per-packet one-way delay: 158.688 ms
Loss rate: 0.35%
Run 9: Report of PCC-Allegro — Data Link

![Throughput Graph]

Time (s)

Throughput (Mbps)

- Flow 1 ingress (mean 251.44 Mbit/s)
- Flow 1 egress (mean 250.58 Mbit/s)

![Delay Graph]

Time (s)

Per packet one way delay (ms)

Flow 1 (95th percentile 158.69 ms)
Run 10: Statistics of PCC-Allegro


# Below is generated by plot.py at 2018-04-25 00:42:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 276.47 Mbit/s
95th percentile per-packet one-way delay: 85.769 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 276.47 Mbit/s
95th percentile per-packet one-way delay: 85.769 ms
Loss rate: 0.17%
Run 10: Report of PCC-Allegro — Data Link

![Graph 1: Throughput (Mbps)]

- Flow 1 ingress (mean 276.93 Mbit/s)
- Flow 1 egress (mean 276.47 Mbit/s)

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

- Flow 1 (95th percentile 85.77 ms)
Run 1: Statistics of QUIC Cubic

Start at: 2018-04-24 21:00:43
End at: 2018-04-24 21:01:13
Run 2: Statistics of QUIC Cubic

End at: 2018-04-24 21:14:07

# Below is generated by plot.py at 2018-04-25 00:42:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 67.60 Mbit/s
95th percentile per-packet one-way delay: 63.542 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 67.60 Mbit/s
95th percentile per-packet one-way delay: 63.542 ms
Loss rate: 0.01%
Run 2: Report of QUIC Cubic — Data Link

![Throughput Graph]

- **Flow 1 ingress (mean 67.60 Mbit/s)**
- **Flow 1 egress (mean 67.60 Mbit/s)**

![Packet Delay Graph]

- **Flow 1 (95th percentile 63.54 ms)**
Run 3: Statistics of QUIC Cubic

End at: 2018-04-24 21:27:03

# Below is generated by plot.py at 2018-04-25 00:42:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 59.70 Mbit/s
95th percentile per-packet one-way delay: 63.427 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 59.70 Mbit/s
95th percentile per-packet one-way delay: 63.427 ms
Loss rate: 0.00%
Run 3: Report of QUIC Cubic — Data Link
Run 4: Statistics of QUIC Cubic

End at: 2018-04-24 21:40:18

# Below is generated by plot.py at 2018-04-25 00:42:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 52.66 Mbit/s
95th percentile per-packet one-way delay: 63.454 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 52.66 Mbit/s
95th percentile per-packet one-way delay: 63.454 ms
Loss rate: 0.01%
Run 4: Report of QUIC Cubic — Data Link

![Graph of throughput and delay over time for QUIC Cubic flow 1]
Run 5: Statistics of QUIC Cubic

Start at: 2018-04-24 21:52:45  

# Below is generated by plot.py at 2018-04-25 00:42:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 60.64 Mbit/s 
95th percentile per-packet one-way delay: 61.714 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 60.64 Mbit/s 
95th percentile per-packet one-way delay: 61.714 ms
Loss rate: 0.00%
Run 5: Report of QUIC Cubic — Data Link
Run 6: Statistics of QUIC Cubic

End at: 2018-04-24 22:05:58

# Below is generated by plot.py at 2018-04-25 00:42:11
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 56.17 Mbit/s
  95th percentile per-packet one-way delay: 63.389 ms
  Loss rate: 0.02%
-- Flow 1:
  Average throughput: 56.17 Mbit/s
  95th percentile per-packet one-way delay: 63.389 ms
  Loss rate: 0.02%
Run 6: Report of QUIC Cubic — Data Link
Run 7: Statistics of QUIC Cubic

End at: 2018-04-24 22:19:03

# Below is generated by plot.py at 2018-04-25 00:42:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 58.80 Mbit/s
95th percentile per-packet one-way delay: 63.449 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 58.80 Mbit/s
95th percentile per-packet one-way delay: 63.449 ms
Loss rate: 0.00%
Run 7: Report of QUIC Cubic — Data Link

![Graph showing throughput over time for Flow 1 ingress and egress.]

![Graph showing per packet one-way delay for Flow 1.]

Flow 1 ingress (mean 58.80 Mbit/s) — Flow 1 egress (mean 58.80 Mbit/s)

Flow 1 (95th percentile 63.45 ms)
Run 8: Statistics of QUIC Cubic


# Below is generated by plot.py at 2018-04-25 00:42:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 54.40 Mbit/s
95th percentile per-packet one-way delay: 63.448 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 54.40 Mbit/s
95th percentile per-packet one-way delay: 63.448 ms
Loss rate: 0.00%
Run 9: Statistics of QUIC Cubic

End at: 2018-04-24 22:45:14

# Below is generated by plot.py at 2018-04-25 00:42:11
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 58.69 Mbit/s
  95th percentile per-packet one-way delay: 63.562 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 58.69 Mbit/s
  95th percentile per-packet one-way delay: 63.562 ms
  Loss rate: 0.00%
Run 9: Report of QUIC Cubic — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 58.69 Mbit/s)  Flow 1 egress (mean 58.69 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 63.56 ms)
Run 10: Statistics of QUIC Cubic


# Below is generated by plot.py at 2018-04-25 00:42:11
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 51.86 Mbit/s
  95th percentile per-packet one-way delay: 63.550 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 51.86 Mbit/s
  95th percentile per-packet one-way delay: 63.550 ms
  Loss rate: 0.00%
Run 10: Report of QUIC Cubic — Data Link

![Graph 1: Throughput](image1)

![Graph 2: Packet delay](image2)
Run 1: Statistics of SCReAM

Start at: 2018-04-24 21:03:46
End at: 2018-04-24 21:04:16

# Below is generated by plot.py at 2018-04-25 00:42:11
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 63.861 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 63.861 ms
  Loss rate: 0.00%
Run 1: Report of SCReAM — Data Link
Run 2: Statistics of SCReAM

End at: 2018-04-24 21:17:17

# Below is generated by plot.py at 2018-04-25 00:42:11
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 61.768 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 61.768 ms
  Loss rate: 0.00%
Run 2: Report of SCReAM — Data Link

Throughput (Mbps)

Time (s)

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

Per-packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 61.77 ms)
Run 3: Statistics of SCReAM

End at: 2018-04-24 21:30:14

# Below is generated by plot.py at 2018-04-25 00:42:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.543 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.543 ms
Loss rate: 0.00%
Run 3: Report of SCReAM — Data Link

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

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

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

- Flow 1 (95th percentile 63.54 ms)
Run 4: Statistics of SCReAM


# Below is generated by plot.py at 2018-04-25 00:42:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.737 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.737 ms
Loss rate: 0.00%
Run 4: Report of SCReAM — Data Link

![Graph showing throughput and packet delay over time for Flow 1.]

- Flow 1 ingress (mean 0.22 Mbit/s)
- Flow 1 egress (mean 0.22 Mbit/s)
Run 5: Statistics of SCReAM


# Below is generated by plot.py at 2018-04-25 00:42:11
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 63.484 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 63.484 ms
  Loss rate: 0.00%
Run 5: Report of SCReAM — Data Link

![Graph 1: Throughput vs Time]

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

![Graph 2: Packet Delay vs Time]

- **Flow 1 (95th percentile 63.48 ms)**
Run 6: Statistics of SCReAM

End at: 2018-04-24 22:09:05

# Below is generated by plot.py at 2018-04-25 00:42:11
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 63.722 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 63.722 ms
  Loss rate: 0.00%
Run 6: Report of SCReAM — Data Link

![Graph showing throughput and packet delay over time for Flow 1 ingress and egress with mean 0.22 Mbit/s and 95th percentile 63.72 ms.]

115
Run 7: Statistics of SCReAM


# Below is generated by plot.py at 2018-04-25 00:42:11
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 63.654 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 63.654 ms
  Loss rate: 0.00%
Run 7: Report of SCReAM — Data Link

![Throughput (Mbps) vs Time (s)](image1)

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

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

Flow 1 (95th percentile 63.65 ms)
Run 8: Statistics of SCReAM

Start at: 2018-04-24 22:34:50

# Below is generated by plot.py at 2018-04-25 00:42:11
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 61.848 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 61.848 ms
  Loss rate: 0.00%
Run 8: Report of SCReAM — Data Link

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

**Throughput (Mbps)**

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

**Packet One-Way Delay (ms)**

- Flow 1 (95th percentile 61.85 ms)
Run 9: Statistics of SCReAM


# Below is generated by plot.py at 2018-04-25 00:42:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.625 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.625 ms
Loss rate: 0.00%
Run 9: Report of SCReAM — Data Link

[Graphs showing network performance metrics over time]
Run 10: Statistics of SCReAM

Start at: 2018-04-24 23:01:11
End at: 2018-04-24 23:01:41

# Below is generated by plot.py at 2018-04-25 00:42:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.682 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.682 ms
Loss rate: 0.00%
Run 10: Report of SCReAM — Data Link
Run 1: Statistics of WebRTC media

Start at: 2018-04-24 21:05:10
End at: 2018-04-24 21:05:40

# Below is generated by plot.py at 2018-04-25 00:42:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 64.627 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 64.627 ms
Loss rate: 0.00%
Run 1: Report of WebRTC media — Data Link
Run 2: Statistics of WebRTC media


# Below is generated by plot.py at 2018-04-25 00:42:11
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 63.945 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 63.945 ms
  Loss rate: 0.00%
Run 2: Report of WebRTC media — Data Link

![Graph showing network throughput and packet delay over time.](image-url)
Run 3: Statistics of WebRTC media


# Below is generated by plot.py at 2018-04-25 00:42:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 63.735 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 63.735 ms
Loss rate: 0.00%
Run 3: Report of WebRTC media — Data Link

![Graph showing throughput and packet delay over time.]
Run 4: Statistics of WebRTC media

End at: 2018-04-24 21:44:49

# Below is generated by plot.py at 2018-04-25 00:42:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 63.867 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 63.867 ms
Loss rate: 0.00%
Run 4: Report of WebRTC media — Data Link
Run 5: Statistics of WebRTC media


# Below is generated by plot.py at 2018-04-25 00:42:11
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 63.868 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 63.868 ms
  Loss rate: 0.00%
Run 5: Report of WebRTC media — Data Link
Run 6: Statistics of WebRTC media


# Below is generated by plot.py at 2018-04-25 00:42:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 63.804 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 63.804 ms
Loss rate: 0.00%
Run 6: Report of WebRTC media — Data Link
Run 7: Statistics of WebRTC media


# Below is generated by plot.py at 2018-04-25 00:42:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 64.108 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 64.108 ms
Loss rate: 0.00%
Run 7: Report of WebRTC media — Data Link
Run 8: Statistics of WebRTC media

Start at: 2018-04-24 22:36:15
End at: 2018-04-24 22:36:45

# Below is generated by plot.py at 2018-04-25 00:42:11
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 63.678 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 63.678 ms
  Loss rate: 0.00%
Run 8: Report of WebRTC media — Data Link
Run 9: Statistics of WebRTC media

End at: 2018-04-24 22:49:45

# Below is generated by plot.py at 2018-04-25 00:42:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 63.889 ms
Loss rate: 0.00%

-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 63.889 ms
Loss rate: 0.00%
Run 9: Report of WebRTC media — Data Link

![Graph of WebRTC media data link with throughput and latency metrics over time.]

- Flow 1 ingress (mean 0.06 Mbit/s)
- Flow 1 egress (mean 0.06 Mbit/s)
Run 10: Statistics of WebRTC media

Start at: 2018-04-24 23:02:34
End at: 2018-04-24 23:03:04

# Below is generated by plot.py at 2018-04-25 00:42:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 63.548 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 63.548 ms
Loss rate: 0.00%
Run 10: Report of WebRTC media — Data Link
Run 1: Statistics of Sprout

Start at: 2018-04-24 21:05:47
End at: 2018-04-24 21:06:17

# Below is generated by plot.py at 2018-04-25 00:42:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.58 Mbit/s
95th percentile per-packet one-way delay: 64.682 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 6.58 Mbit/s
95th percentile per-packet one-way delay: 64.682 ms
Loss rate: 0.00%
Run 1: Report of Sprout — Data Link
Run 2: Statistics of Sprout

End at: 2018-04-24 21:19:18

# Below is generated by plot.py at 2018-04-25 00:42:11
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 6.44 Mbit/s
  95th percentile per-packet one-way delay: 64.639 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 6.44 Mbit/s
  95th percentile per-packet one-way delay: 64.639 ms
  Loss rate: 0.00%
Run 2: Report of Sprout — Data Link
Run 3: Statistics of Sprout

Start at: 2018-04-24 21:31:45

# Below is generated by plot.py at 2018-04-25 00:42:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.46 Mbit/s
95th percentile per-packet one-way delay: 64.564 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 6.46 Mbit/s
95th percentile per-packet one-way delay: 64.564 ms
Loss rate: 0.00%
Run 3: Report of Sprout — Data Link

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

- **Flow 1 ingress (mean 6.47 Mbit/s)**
- **Flow 1 egress (mean 6.46 Mbit/s)**

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

- **Flow 1 95th percentile 64.56 ms**

149
Run 4: Statistics of Sprout

End at: 2018-04-24 21:45:26

# Below is generated by plot.py at 2018-04-25 00:42:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.39 Mbit/s
95th percentile per-packet one-way delay: 64.953 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 6.39 Mbit/s
95th percentile per-packet one-way delay: 64.953 ms
Loss rate: 0.00%
Run 4: Report of Sprout — Data Link
Run 5: Statistics of Sprout

End at: 2018-04-24 21:58:26

# Below is generated by plot.py at 2018-04-25 00:42:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.59 Mbit/s
95th percentile per-packet one-way delay: 65.013 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 6.59 Mbit/s
95th percentile per-packet one-way delay: 65.013 ms
Loss rate: 0.00%
Run 5: Report of Sprout — Data Link
Run 6: Statistics of Sprout


# Below is generated by plot.py at 2018-04-25 00:42:11
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 6.46 Mbit/s
  95th percentile per-packet one-way delay: 64.819 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 6.46 Mbit/s
  95th percentile per-packet one-way delay: 64.819 ms
  Loss rate: 0.00%
Run 6: Report of Sprout — Data Link

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

- **Flow 1 ingress (mean 6.46 Mbit/s)**
- **Flow 1 egress (mean 6.46 Mbit/s)**

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

- **Flow 1 95th percentile 64.82 ms**
Run 7: Statistics of Sprout


# Below is generated by plot.py at 2018-04-25 00:42:11
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 6.38 Mbit/s
  95th percentile per-packet one-way delay: 65.004 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 6.38 Mbit/s
  95th percentile per-packet one-way delay: 65.004 ms
  Loss rate: 0.00%
Run 7: Report of Sprout — Data Link

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

- Flow 1 ingress (mean 6.38 Mbit/s)
- Flow 1 egress (mean 6.38 Mbit/s)

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

- Flow 1 95th percentile 65.00 ms
Run 8: Statistics of Sprout

Start at: 2018-04-24 22:36:52

# Below is generated by plot.py at 2018-04-25 00:42:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.48 Mbit/s
95th percentile per-packet one-way delay: 64.917 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 6.48 Mbit/s
95th percentile per-packet one-way delay: 64.917 ms
Loss rate: 0.00%
Run 8: Report of Sprout — Data Link
Run 9: Statistics of Sprout


# Below is generated by plot.py at 2018-04-25 00:42:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.57 Mbit/s
95th percentile per-packet one-way delay: 64.909 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 6.57 Mbit/s
95th percentile per-packet one-way delay: 64.909 ms
Loss rate: 0.00%
Run 9: Report of Sprout — Data Link
Run 10: Statistics of Sprout

Start at: 2018-04-24 23:03:12
End at: 2018-04-24 23:03:42

# Below is generated by plot.py at 2018-04-25 00:42:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.43 Mbit/s
95th percentile per-packet one-way delay: 65.084 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 6.43 Mbit/s
95th percentile per-packet one-way delay: 65.084 ms
Loss rate: 0.00%
Run 1: Statistics of TaoVA-100x

End at: 2018-04-24 20:56:43

# Below is generated by plot.py at 2018-04-25 00:44:49
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 149.02 Mbit/s
  95th percentile per-packet one-way delay: 63.701 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 149.02 Mbit/s
  95th percentile per-packet one-way delay: 63.701 ms
  Loss rate: 0.00%
Run 1: Report of TaoVA-100x — Data Link

![Graph of Throughput Over Time](image1)

- Flow 1 ingress (mean 149.01 Mbit/s)
- Flow 1 egress (mean 149.02 Mbit/s)

![Graph of Round Trip Time](image2)

- Flow 1 (95th percentile 63.70 ms)
Run 2: Statistics of TaoVA-100x

Start at: 2018-04-24 21:09:06
End at: 2018-04-24 21:09:36

# Below is generated by plot.py at 2018-04-25 00:44:50
# Datalink statistics
-- Total of 1 flow:
Average throughput: 116.80 Mbit/s
95th percentile per-packet one-way delay: 65.005 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 116.80 Mbit/s
95th percentile per-packet one-way delay: 65.005 ms
Loss rate: 0.00%
Run 2: Report of TaoVA-100x — Data Link
Run 3: Statistics of TaoVA-100x


# Below is generated by plot.py at 2018-04-25 00:44:50
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 16.06 Mbit/s
  95th percentile per-packet one-way delay: 63.703 ms
  Loss rate: 0.01%
-- Flow 1:
  Average throughput: 16.06 Mbit/s
  95th percentile per-packet one-way delay: 63.703 ms
  Loss rate: 0.01%
Run 3: Report of TaoVA-100x — Data Link

![Graph of Throughput (Mbps)](image1)

- **Flow 1 ingress (mean 16.06 Mbit/s)**
- **Flow 1 egress (mean 16.06 Mbit/s)**

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

- **Flow 1 (95th percentile 63.70 ms)**
Run 4: Statistics of TaoVA-100x

Start at: 2018-04-24 21:35:07
End at: 2018-04-24 21:35:37

# Below is generated by plot.py at 2018-04-25 00:47:51
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 232.62 Mbit/s
  95th percentile per-packet one-way delay: 64.206 ms
  Loss rate: 0.01%
-- Flow 1:
  Average throughput: 232.62 Mbit/s
  95th percentile per-packet one-way delay: 64.206 ms
  Loss rate: 0.01%
Run 4: Report of TaoVA-100x — Data Link

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

Flow 1 ingress (mean 232.62 Mbit/s) — Flow 1 egress (mean 232.62 Mbit/s)

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

Flow 1 (95th percentile 64.21 ms)
Run 5: Statistics of TaoVA-100x


# Below is generated by plot.py at 2018-04-25 00:47:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 102.07 Mbit/s
95th percentile per-packet one-way delay: 64.006 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 102.07 Mbit/s
95th percentile per-packet one-way delay: 64.006 ms
Loss rate: 0.00%
Run 5: Report of TaoVA-100x — Data Link
Run 6: Statistics of TaoVA-100x

Start at: 2018-04-24 22:00:58
End at: 2018-04-24 22:01:28

# Below is generated by plot.py at 2018-04-25 00:47:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 102.59 Mbit/s
95th percentile per-packet one-way delay: 64.266 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 102.59 Mbit/s
95th percentile per-packet one-way delay: 64.266 ms
Loss rate: 0.00%
Run 6: Report of TaoVA-100x — Data Link
Run 7: Statistics of TaoVA-100x


# Below is generated by plot.py at 2018-04-25 00:47:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 161.15 Mbit/s
95th percentile per-packet one-way delay: 64.053 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 161.15 Mbit/s
95th percentile per-packet one-way delay: 64.053 ms
Loss rate: 0.00%
Run 7: Report of TaoVA-100x — Data Link
Run 8: Statistics of TaoVA-100x


# Below is generated by plot.py at 2018-04-25 00:47:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 181.01 Mbit/s
95th percentile per-packet one-way delay: 64.446 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 181.01 Mbit/s
95th percentile per-packet one-way delay: 64.446 ms
Loss rate: 0.00%
Run 9: Statistics of TaoVA-100x


# Below is generated by plot.py at 2018-04-25 00:47:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 121.22 Mbit/s
95th percentile per-packet one-way delay: 63.601 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 121.22 Mbit/s
95th percentile per-packet one-way delay: 63.601 ms
Loss rate: 0.00%
Run 9: Report of TaoVA-100x — Data Link

![Graph of Throughput and Delay](image)

Throughput (Mbps)

- Flow 1 ingress (mean 121.22 Mbps)
- Flow 1 egress (mean 121.22 Mbps)

Delay (ms)

- Flow 1 (95th percentile 63.60 ms)
Run 10: Statistics of TaoVA-100x

End at: 2018-04-24 22:53:45

# Below is generated by plot.py at 2018-04-25 00:50:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 214.76 Mbit/s
95th percentile per-packet one-way delay: 64.715 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 214.76 Mbit/s
95th percentile per-packet one-way delay: 64.715 ms
Loss rate: 0.00%
Run 10: Report of TaoVA-100x — Data Link

![Graph of Throughput (Mbps)](image)

- Flow 1 ingress (mean 214.85 Mbit/s)
- Flow 1 egress (mean 214.76 Mbit/s)

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

- Flow 1 (95th percentile 64.72 ms)
Run 1: Statistics of TCP Vegas

Start at: 2018-04-24 21:07:16
End at: 2018-04-24 21:07:46

# Below is generated by plot.py at 2018-04-25 00:50:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 73.69 Mbit/s
95th percentile per-packet one-way delay: 66.647 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 73.69 Mbit/s
95th percentile per-packet one-way delay: 66.647 ms
Loss rate: 0.00%
Run 1: Report of TCP Vegas — Data Link
Run 2: Statistics of TCP Vegas


# Below is generated by plot.py at 2018-04-25 00:50:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 171.89 Mbit/s
95th percentile per-packet one-way delay: 76.744 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 171.89 Mbit/s
95th percentile per-packet one-way delay: 76.744 ms
Loss rate: 0.00%
Run 2: Report of TCP Vegas — Data Link
Run 3: Statistics of TCP Vegas


# Below is generated by plot.py at 2018-04-25 00:50:43
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 127.04 Mbit/s
  95th percentile per-packet one-way delay: 66.352 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 127.04 Mbit/s
  95th percentile per-packet one-way delay: 66.352 ms
  Loss rate: 0.00%
Run 3: Report of TCP Vegas — Data Link

![Graph showing throughput and per-packet delay performance over time for TCP Vegas runs.]

---

189
Run 4: Statistics of TCP Vegas


# Below is generated by plot.py at 2018-04-25 00:50:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 81.33 Mbit/s
95th percentile per-packet one-way delay: 74.941 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 81.33 Mbit/s
95th percentile per-packet one-way delay: 74.941 ms
Loss rate: 0.00%
Run 4: Report of TCP Vegas — Data Link
Run 5: Statistics of TCP Vegas

End at: 2018-04-24 21:59:54

# Below is generated by plot.py at 2018-04-25 00:50:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 91.98 Mbit/s
95th percentile per-packet one-way delay: 65.527 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 91.98 Mbit/s
95th percentile per-packet one-way delay: 65.527 ms
Loss rate: 0.00%
Run 5: Report of TCP Vegas — Data Link
Run 6: Statistics of TCP Vegas

Start at: 2018-04-24 22:12:05

# Below is generated by plot.py at 2018-04-25 00:50:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 58.84 Mbit/s
95th percentile per-packet one-way delay: 65.312 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 58.84 Mbit/s
95th percentile per-packet one-way delay: 65.312 ms
Loss rate: 0.00%
Run 6: Report of TCP Vegas — Data Link
Run 7: Statistics of TCP Vegas


# Below is generated by plot.py at 2018-04-25 00:50:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 179.59 Mbit/s
95th percentile per-packet one-way delay: 75.713 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 179.59 Mbit/s
95th percentile per-packet one-way delay: 75.713 ms
Loss rate: 0.05%
Run 7: Report of TCP Vegas — Data Link

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

**Throughput (Mbps)**
- Flow 1 ingress (mean 179.70 Mbps)
- Flow 1 egress (mean 179.59 Mbps)

**Per-packet one-way delay (ms)**
- Flow 1 (95th percentile 75.71 ms)
Run 8: Statistics of TCP Vegas


# Below is generated by plot.py at 2018-04-25 00:50:43
# Datalink statistics
-- Total of 1 flow:
 Average throughput: 34.82 Mbit/s
 95th percentile per-packet one-way delay: 65.094 ms
 Loss rate: 0.00%
-- Flow 1:
 Average throughput: 34.82 Mbit/s
 95th percentile per-packet one-way delay: 65.094 ms
 Loss rate: 0.00%
Run 8: Report of TCP Vegas — Data Link

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

- **Flow 1 ingress (mean 34.82 Mbit/s)**
- **Flow 1 egress (mean 34.82 Mbit/s)**

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

- **Flow 1 (95th percentile 65.09 ms)**
Run 9: Statistics of TCP Vegas


# Below is generated by plot.py at 2018-04-25 00:50:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 180.54 Mbit/s
95th percentile per-packet one-way delay: 76.807 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 180.54 Mbit/s
95th percentile per-packet one-way delay: 76.807 ms
Loss rate: 0.06%
Run 10: Statistics of TCP Vegas

Start at: 2018-04-24 23:04:40
End at: 2018-04-24 23:05:10

# Below is generated by plot.py at 2018-04-25 00:50:43
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 26.78 Mbit/s
  95th percentile per-packet one-way delay: 65.309 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 26.78 Mbit/s
  95th percentile per-packet one-way delay: 65.309 ms
  Loss rate: 0.00%
Run 10: Report of TCP Vegas — Data Link

![Graph showing throughput and delay over time]

- Flow 1 ingress (mean 26.78 Mbit/s)
- Flow 1 egress (mean 26.78 Mbit/s)

![Graph showing per-packet round trip delay over time]

- Flow 1 (95th percentile 65.31 ms)
Run 1: Statistics of Verus

Start at: 2018-04-24 21:02:55
End at: 2018-04-24 21:03:25

# Below is generated by plot.py at 2018-04-25 00:51:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 198.80 Mbit/s
95th percentile per-packet one-way delay: 116.338 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 198.80 Mbit/s
95th percentile per-packet one-way delay: 116.338 ms
Loss rate: 0.03%
Run 1: Report of Verus — Data Link
Run 2: Statistics of Verus

End at: 2018-04-24 21:16:26

# Below is generated by plot.py at 2018-04-25 00:51:18
# Datalink statistics
-- Total of 1 flow:
   Average throughput: 200.49 Mbit/s
   95th percentile per-packet one-way delay: 138.616 ms
   Loss rate: 0.00%
-- Flow 1:
   Average throughput: 200.49 Mbit/s
   95th percentile per-packet one-way delay: 138.616 ms
   Loss rate: 0.00%
Run 2: Report of Verus — Data Link

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

- **Flow 1 ingress (mean 200.50 Mbps)**
- **Flow 1 egress (mean 200.49 Mbps)**

![Graph 2: Packet delay (ms)](image2.png)

- **Flow 1 (95th percentile 138.62 ms)**
Run 3: Statistics of Verus


# Below is generated by plot.py at 2018-04-25 00:51:21
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 200.06 Mbit/s
  95th percentile per-packet one-way delay: 176.990 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 200.06 Mbit/s
  95th percentile per-packet one-way delay: 176.990 ms
  Loss rate: 0.00%
Run 3: Report of Verus — Data Link

![Throughput Graph]

- Flow 1 ingress (mean 200.05 Mbit/s)
- Flow 1 egress (mean 200.06 Mbit/s)

![Packet Delay Graph]

- Flow 1 (95th percentile 176.99 ms)
Run 4: Statistics of Verus


# Below is generated by plot.py at 2018-04-25 00:51:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 189.67 Mbit/s
95th percentile per-packet one-way delay: 175.336 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 189.67 Mbit/s
95th percentile per-packet one-way delay: 175.336 ms
Loss rate: 0.06%
Run 4: Report of Verus — Data Link

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

- Flow 1 ingress (mean 190.05 Mbit/s)
- Flow 1 egress (mean 189.67 Mbit/s)

- Flow 1 (95th percentile 175.34 ms)
Run 5: Statistics of Verus


# Below is generated by plot.py at 2018-04-25 00:51:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 225.61 Mbit/s
95th percentile per-packet one-way delay: 206.969 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 225.61 Mbit/s
95th percentile per-packet one-way delay: 206.969 ms
Loss rate: 0.53%
Run 5: Report of Verus — Data Link

![Graph of throughput and packet delay over time](image-url)
Run 6: Statistics of Verus

End at: 2018-04-24 22:08:14

# Below is generated by plot.py at 2018-04-25 00:53:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 206.16 Mbit/s
95th percentile per-packet one-way delay: 191.563 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 206.16 Mbit/s
95th percentile per-packet one-way delay: 191.563 ms
Loss rate: 0.45%
Run 6: Report of Verus — Data Link
Run 7: Statistics of Verus


# Below is generated by plot.py at 2018-04-25 00:53:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 202.10 Mbit/s
95th percentile per-packet one-way delay: 123.305 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 202.10 Mbit/s
95th percentile per-packet one-way delay: 123.305 ms
Loss rate: 0.01%
Run 7: Report of Verus — Data Link

![Graph showing network throughput and packet delay over time.](image)
Run 8: Statistics of Verus

Start at: 2018-04-24 22:34:00
End at: 2018-04-24 22:34:30

# Below is generated by plot.py at 2018-04-25 00:54:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 204.89 Mbit/s
95th percentile per-packet one-way delay: 106.096 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 204.89 Mbit/s
95th percentile per-packet one-way delay: 106.096 ms
Loss rate: 0.03%
Run 8: Report of Verus — Data Link

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

- **Flow 1 ingress (mean 204.93 Mbit/s)**
- **Flow 1 egress (mean 204.89 Mbit/s)**

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

- **Flow 1 (95th percentile 106.10 ms)**
Run 9: Statistics of Verus

Start at: 2018-04-24 22:47:02

# Below is generated by plot.py at 2018-04-25 00:54:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 167.81 Mbit/s
95th percentile per-packet one-way delay: 91.397 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 167.81 Mbit/s
95th percentile per-packet one-way delay: 91.397 ms
Loss rate: 0.12%
Run 9: Report of Verus — Data Link

![Graph 1: Throughput (Mbps)]

- **Flow 1 ingress** (mean 168.01 Mbit/s)
- **Flow 1 egress** (mean 167.81 Mbit/s)

![Graph 2: Packet delay (ms)]

- **Flow 1** (95th percentile 91.40 ms)
Run 10: Statistics of Verus

Start at: 2018-04-24 23:00:18
End at: 2018-04-24 23:00:48

# Below is generated by plot.py at 2018-04-25 00:55:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 238.15 Mbit/s
95th percentile per-packet one-way delay: 216.912 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 238.15 Mbit/s
95th percentile per-packet one-way delay: 216.912 ms
Loss rate: 0.19%
Run 10: Report of Verus — Data Link

Graph 1: Throughput (Mbps)
- Flow 1 ingress (mean 238.96 Mbps)
- Flow 1 egress (mean 238.15 Mbps)

Graph 2: Per packet one way delay (ms)
- Flow 1 (95th percentile 216.91 ms)
Run 1: Statistics of Copa

Start at: 2018-04-24 20:59:15
End at: 2018-04-24 20:59:45

# Below is generated by plot.py at 2018-04-25 00:55:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 64.99 Mbit/s
95th percentile per-packet one-way delay: 62.075 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 64.99 Mbit/s
95th percentile per-packet one-way delay: 62.075 ms
Loss rate: 0.00%
Run 1: Report of Copa — Data Link
Run 2: Statistics of Copa

Start at: 2018-04-24 21:12:07
End at: 2018-04-24 21:12:37

# Below is generated by plot.py at 2018-04-25 00:55:26
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 54.16 Mbit/s
  95th percentile per-packet one-way delay: 69.717 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 54.16 Mbit/s
  95th percentile per-packet one-way delay: 69.717 ms
  Loss rate: 0.00%
Run 2: Report of Copa — Data Link

![Throughput Graph]

![Delay Graph]

Flow 1 ingress (mean 54.16 Mbit/s)  Flow 1 egress (mean 54.16 Mbit/s)

Flow 1 (95th percentile 69.72 ms)
Run 3: Statistics of Copa


# Below is generated by plot.py at 2018-04-25 00:55:26
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 68.73 Mbit/s
  95th percentile per-packet one-way delay: 63.564 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 68.73 Mbit/s
  95th percentile per-packet one-way delay: 63.564 ms
  Loss rate: 0.00%
Run 3: Report of Copa — Data Link
Run 4: Statistics of Copa


# Below is generated by plot.py at 2018-04-25 00:55:27
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 77.72 Mbit/s
  95th percentile per-packet one-way delay: 63.715 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 77.72 Mbit/s
  95th percentile per-packet one-way delay: 63.715 ms
  Loss rate: 0.00%
Run 4: Report of Copa — Data Link

![Graph showing throughput and delay over time for Flow 1 ingress and egress with mean 77.72 Mbit/s.](image)

![Graph showing per-packet one-way delay for Flow 1 with 95th percentile 63.72 ms.](image)
Run 5: Statistics of Copa

End at: 2018-04-24 21:51:45

# Below is generated by plot.py at 2018-04-25 00:56:05
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 84.37 Mbit/s
  95th percentile per-packet one-way delay: 63.488 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 84.37 Mbit/s
  95th percentile per-packet one-way delay: 63.488 ms
  Loss rate: 0.00%
Run 5: Report of Copa — Data Link
Run 6: Statistics of Copa


# Below is generated by plot.py at 2018-04-25 00:56:39
# Datalink statistics
-- Total of 1 flow:
Average throughput: 88.73 Mbit/s
95th percentile per-packet one-way delay: 63.545 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 88.73 Mbit/s
95th percentile per-packet one-way delay: 63.545 ms
Loss rate: 0.00%
Run 6: Report of Copa — Data Link

![Throughput Graph](image)

![Packet Delay Graph](image)
Run 7: Statistics of Copa

Start at: 2018-04-24 22:17:01

# Below is generated by plot.py at 2018-04-25 00:56:39
# Datalink statistics
-- Total of 1 flow:
Average throughput: 78.60 Mbit/s
95th percentile per-packet one-way delay: 63.532 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 78.60 Mbit/s
95th percentile per-packet one-way delay: 63.532 ms
Loss rate: 0.00%
Run 7: Report of Copa — Data Link

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

- **Flow 1 ingress (mean 78.60 Mbit/s)**
- **Flow 1 egress (mean 78.60 Mbit/s)**

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

- **Flow 1 (95th percentile 63.53 ms)**

237
Run 8: Statistics of Copa

Start at: 2018-04-24 22:30:15
End at: 2018-04-24 22:30:45

# Below is generated by plot.py at 2018-04-25 00:56:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 80.38 Mbit/s
95th percentile per-packet one-way delay: 63.591 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 80.38 Mbit/s
95th percentile per-packet one-way delay: 63.591 ms
Loss rate: 0.00%
Run 8: Report of Copa — Data Link
Run 9: Statistics of Copa


# Below is generated by plot.py at 2018-04-25 00:57:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 86.42 Mbit/s
95th percentile per-packet one-way delay: 63.538 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 86.42 Mbit/s
95th percentile per-packet one-way delay: 63.538 ms
Loss rate: 0.00%
Run 9: Report of Copa — Data Link

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

![Graph 2: Per-packet one-way delay vs Time](image2)
Run 10: Statistics of Copa


# Below is generated by plot.py at 2018-04-25 00:57:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 91.31 Mbit/s
95th percentile per-packet one-way delay: 63.579 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 91.31 Mbit/s
95th percentile per-packet one-way delay: 63.579 ms
Loss rate: 0.00%
Run 10: Report of Copa — Data Link
Run 1: Statistics of FillP


# Below is generated by plot.py at 2018-04-25 01:09:36
# Datalink statistics
-- Total of 1 flow:
Average throughput: 776.23 Mbit/s
95th percentile per-packet one-way delay: 299.516 ms
Loss rate: 2.58%
-- Flow 1:
Average throughput: 776.23 Mbit/s
95th percentile per-packet one-way delay: 299.516 ms
Loss rate: 2.58%
Run 1: Report of FillP — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 796.78 Mbit/s)
Flow 1 egress (mean 776.23 Mbit/s)

Per packet one way delay (ms)

Flow 1 (95th percentile 299.52 ms)
Run 2: Statistics of FillP

End at: 2018-04-24 21:08:28

# Below is generated by plot.py at 2018-04-25 01:09:36
# Datalink statistics
-- Total of 1 flow:
Average throughput: 765.07 Mbit/s
95th percentile per-packet one-way delay: 295.846 ms
Loss rate: 3.00%
-- Flow 1:
Average throughput: 765.07 Mbit/s
95th percentile per-packet one-way delay: 295.846 ms
Loss rate: 3.00%
Run 2: Report of FillP — Data Link

![Graph of throughput over time]

- Flow 1 ingress (mean 788.70 Mbit/s)
- Flow 1 egress (mean 765.07 Mbit/s)

![Graph of per packet delay over time]

- Flow 1 (95th percentile 295.85 ms)
Run 3: Statistics of FillP


# Below is generated by plot.py at 2018-04-25 01:09:47
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 761.58 Mbit/s
  95th percentile per-packet one-way delay: 297.167 ms
  Loss rate: 2.22%
-- Flow 1:
  Average throughput: 761.58 Mbit/s
  95th percentile per-packet one-way delay: 297.167 ms
  Loss rate: 2.22%
Run 3: Report of FillP — Data Link

[Graphs showing throughput and packet delay over time for Flow 1 ingress and egress with mean values.]
Run 4: Statistics of FillP

End at: 2018-04-24 21:34:27

# Below is generated by plot.py at 2018-04-25 01:10:08
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 774.66 Mbit/s
  95th percentile per-packet one-way delay: 313.238 ms
  Loss rate: 4.68%
-- Flow 1:
  Average throughput: 774.66 Mbit/s
  95th percentile per-packet one-way delay: 313.238 ms
  Loss rate: 4.68%
Run 4: Report of FillP — Data Link

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

- Flow 1 ingress (mean 812.62 Mbit/s)
- Flow 1 egress (mean 774.66 Mbit/s)

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

- Flow 1 (95th percentile 313.24 ms)
Run 5: Statistics of FillP


# Below is generated by plot.py at 2018-04-25 01:10:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 755.73 Mbit/s
95th percentile per-packet one-way delay: 307.879 ms
Loss rate: 6.98%
-- Flow 1:
Average throughput: 755.73 Mbit/s
95th percentile per-packet one-way delay: 307.879 ms
Loss rate: 6.98%
Run 5: Report of FillP — Data Link

Throughput (Mb/s)

Time (s)

Flow 1 ingress (mean 812.46 Mb/s)  Flow 1 egress (mean 755.73 Mb/s)

Packet one way delay (ms)

Flow 1 (95th percentile 307.88 ms)
Run 6: Statistics of FillP

Start at: 2018-04-24 22:00:07
End at: 2018-04-24 22:00:37

# Below is generated by plot.py at 2018-04-25 01:10:08
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 355.71 Mbit/s
  95th percentile per-packet one-way delay: 307.017 ms
  Loss rate: 6.54%
-- Flow 1:
  Average throughput: 355.71 Mbit/s
  95th percentile per-packet one-way delay: 307.017 ms
  Loss rate: 6.54%
Run 6: Report of FillP — Data Link
Run 7: Statistics of FillP


# Below is generated by plot.py at 2018-04-25 01:10:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 748.07 Mbit/s
95th percentile per-packet one-way delay: 313.480 ms
Loss rate: 5.04%
-- Flow 1:
Average throughput: 748.07 Mbit/s
95th percentile per-packet one-way delay: 313.480 ms
Loss rate: 5.04%
Run 7: Report of FillP — Data Link

![Graph 1: Throughput vs Time]

- Flow 1 ingress (mean 787.74 Mbit/s)
- Flow 1 egress (mean 748.07 Mbit/s)

![Graph 2: RTT vs Time]

- Flow 1 (95th percentile 313.48 ms)
Run 8: Statistics of FillP

Start at: 2018-04-24 22:26:03

# Below is generated by plot.py at 2018-04-25 01:10:27
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 739.66 Mbit/s
  95th percentile per-packet one-way delay: 307.784 ms
  Loss rate: 2.33%
-- Flow 1:
  Average throughput: 739.66 Mbit/s
  95th percentile per-packet one-way delay: 307.784 ms
  Loss rate: 2.33%
Run 8: Report of FillP — Data Link

![Graph of Throughput (Mbps)](image1)

![Graph of Packet Delay (ms)](image2)
Run 9: Statistics of FillP


# Below is generated by plot.py at 2018-04-25 01:18:15
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 764.88 Mbit/s
  95th percentile per-packet one-way delay: 315.618 ms
  Loss rate: 7.27%
-- Flow 1:
  Average throughput: 764.88 Mbit/s
  95th percentile per-packet one-way delay: 315.618 ms
  Loss rate: 7.27%
Run 9: Report of FillP — Data Link
Run 10: Statistics of FillP


# Below is generated by plot.py at 2018-04-25 01:23:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 736.04 Mbit/s
95th percentile per-packet one-way delay: 312.106 ms
Loss rate: 6.24%
-- Flow 1:
Average throughput: 736.04 Mbit/s
95th percentile per-packet one-way delay: 312.106 ms
Loss rate: 6.24%
Run 10: Report of FillP — Data Link

![Graph 1: Throughput vs Time](Image1)

- Flow 1 Ingress (mean 784.95 Mbit/s)
- Flow 1 Egress (mean 736.04 Mbit/s)

![Graph 2: Packet Delay vs Time](Image2)

- Flow 1 (95th percentile 312.11 ms)
Run 1: Statistics of Indigo-1-32

End at: 2018-04-24 21:06:55

# Below is generated by plot.py at 2018-04-25 01:23:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 191.47 Mbit/s
95th percentile per-packet one-way delay: 69.947 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 191.47 Mbit/s
95th percentile per-packet one-way delay: 69.947 ms
Loss rate: 0.03%
Run 1: Report of Indigo-1-32 — Data Link

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

Flow 1 ingress (mean 191.54 Mbit/s)  
Flow 1 egress (mean 191.47 Mbit/s)

Flow 1 (95th percentile 69.95 ms)
Run 2: Statistics of Indigo-1-32

End at: 2018-04-24 21:19:56

# Below is generated by plot.py at 2018-04-25 01:23:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 202.42 Mbit/s
95th percentile per-packet one-way delay: 67.197 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 202.42 Mbit/s
95th percentile per-packet one-way delay: 67.197 ms
Loss rate: 0.00%
Run 2: Report of Indigo-1-32 — Data Link
Run 3: Statistics of Indigo-1-32


# Below is generated by plot.py at 2018-04-25 01:23:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 196.38 Mbit/s
95th percentile per-packet one-way delay: 64.915 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 196.38 Mbit/s
95th percentile per-packet one-way delay: 64.915 ms
Loss rate: 0.00%
Run 3: Report of Indigo-1-32 — Data Link
Run 4: Statistics of Indigo-1-32

Start at: 2018-04-24 21:45:34

# Below is generated by plot.py at 2018-04-25 01:23:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 199.81 Mbit/s
95th percentile per-packet one-way delay: 71.704 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 199.81 Mbit/s
95th percentile per-packet one-way delay: 71.704 ms
Loss rate: 0.00%
Run 4: Report of Indigo-1-32 — Data Link
Run 5: Statistics of Indigo-1-32

Start at: 2018-04-24 21:58:34

# Below is generated by plot.py at 2018-04-25 01:23:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 203.50 Mbit/s
95th percentile per-packet one-way delay: 67.198 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 203.50 Mbit/s
95th percentile per-packet one-way delay: 67.198 ms
Loss rate: 0.00%
Run 5: Report of Indigo-1-32 — Data Link
Run 6: Statistics of Indigo-1-32

End at: 2018-04-24 22:11:45

# Below is generated by plot.py at 2018-04-25 01:23:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 198.64 Mbit/s
95th percentile per-packet one-way delay: 64.335 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 198.64 Mbit/s
95th percentile per-packet one-way delay: 64.335 ms
Loss rate: 0.00%
Run 6: Report of Indigo-1-32 — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 198.64 Mbit/s)  Flow 1 egress (mean 198.64 Mbit/s)

Per packet one way delay (ms)

Time (s)

* Flow 1 (95th percentile 64.33 ms)
Run 7: Statistics of Indigo-1-32


# Below is generated by plot.py at 2018-04-25 01:23:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 210.78 Mbit/s
95th percentile per-packet one-way delay: 65.270 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 210.78 Mbit/s
95th percentile per-packet one-way delay: 65.270 ms
Loss rate: 0.00%
Run 7: Report of Indigo-1-32 — Data Link

![Throughput Graph]

![Packet Delay Graph]
Run 8: Statistics of Indigo-1-32

End at: 2018-04-24 22:38:00

# Below is generated by plot.py at 2018-04-25 01:23:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 212.41 Mbit/s
95th percentile per-packet one-way delay: 67.693 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 212.41 Mbit/s
95th percentile per-packet one-way delay: 67.693 ms
Loss rate: 0.00%
Run 8: Report of Indigo-1-32 — Data Link

---

**Throughput (Mbps)**

- Flow 1 ingress (mean 212.41 Mbps)
- Flow 1 egress (mean 212.41 Mbps)

---

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

- Flow 1 (95th percentile 67.69 ms)

---

279
Run 9: Statistics of Indigo-1-32

Start at: 2018-04-24 22:50:30
End at: 2018-04-24 22:51:00

# Below is generated by plot.py at 2018-04-25 01:23:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 206.73 Mbit/s
95th percentile per-packet one-way delay: 72.589 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 206.73 Mbit/s
95th percentile per-packet one-way delay: 72.589 ms
Loss rate: 0.00%
Run 9: Report of Indigo-1-32 — Data Link

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

- Flow 1 ingress (mean 206.69 Mbit/s)
- Flow 1 egress (mean 206.73 Mbit/s)

![Graph 2: Packet Loss vs Time (ms)]

- Flow 1 (95th percentile 72.59 ms)
Run 10: Statistics of Indigo-1-32

Start at: 2018-04-24 23:03:50
End at: 2018-04-24 23:04:20

# Below is generated by plot.py at 2018-04-25 01:23:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 206.82 Mbit/s
95th percentile per-packet one-way delay: 71.952 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 206.82 Mbit/s
95th percentile per-packet one-way delay: 71.952 ms
Loss rate: 0.00%
Run 1: Statistics of PCC-Vivace

Start at: 2018-04-24 21:01:20
End at: 2018-04-24 21:01:50

# Below is generated by plot.py at 2018-04-25 01:23:09
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 247.98 Mbit/s
  95th percentile per-packet one-way delay: 62.180 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 247.98 Mbit/s
  95th percentile per-packet one-way delay: 62.180 ms
  Loss rate: 0.00%
Run 1: Report of PCC-Vivace — Data Link

Throughput [Mbps]

- Flow 1 ingress (mean 247.97 Mbps)
- Flow 1 egress (mean 247.98 Mbps)

Packet Error Rate [%]

- Flow 1 (95th percentile 62.18 ms)
Run 2: Statistics of PCC-Vivace


# Below is generated by plot.py at 2018-04-25 01:23:09
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 296.11 Mbit/s
  95th percentile per-packet one-way delay: 64.232 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 296.11 Mbit/s
  95th percentile per-packet one-way delay: 64.232 ms
  Loss rate: 0.00%
Run 2: Report of PCC-Vivace — Data Link
Run 3: Statistics of PCC-Vivace


# Below is generated by plot.py at 2018-04-25 01:23:09
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 319.51 Mbit/s
  95th percentile per-packet one-way delay: 64.192 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 319.51 Mbit/s
  95th percentile per-packet one-way delay: 64.192 ms
  Loss rate: 0.00%
Run 3: Report of PCC-Vivace — Data Link

![Graph of Throughput (Mbps)](image1)

![Graph of Packet Delay (ms)](image2)

Flow 1 ingress (mean 319.51 Mbit/s)  Flow 1 egress (mean 319.51 Mbit/s)

Flow 1 (99th percentile 64.19 ms)
Run 4: Statistics of PCC-Vivace


# Below is generated by plot.py at 2018-04-25 01:23:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 301.14 Mbit/s
95th percentile per-packet one-way delay: 62.735 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 301.14 Mbit/s
95th percentile per-packet one-way delay: 62.735 ms
Loss rate: 0.00%
Run 4: Report of PCC-Vivace — Data Link

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

- Flow 1 ingress (mean 301.14 Mbit/s)
- Flow 1 egress (mean 301.14 Mbit/s)

![Graph 2: Packet arrival delay (ms) vs. Time (s)]

- Flow 1 (95th percentile 62.73 ms)
Run 5: Statistics of PCC-Vivace


# Below is generated by plot.py at 2018-04-25 01:23:09
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 275.81 Mbit/s
  95th percentile per-packet one-way delay: 63.409 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 275.81 Mbit/s
  95th percentile per-packet one-way delay: 63.409 ms
  Loss rate: 0.00%
Run 5: Report of PCC-Vivace — Data Link
Run 6: Statistics of PCC-Vivace

Start at: 2018-04-24 22:06:08
End at: 2018-04-24 22:06:38

# Below is generated by plot.py at 2018-04-25 01:23:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 280.39 Mbit/s
95th percentile per-packet one-way delay: 63.549 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 280.39 Mbit/s
95th percentile per-packet one-way delay: 63.549 ms
Loss rate: 0.00%
Run 6: Report of PCC-Vivace — Data Link
Run 7: Statistics of PCC-Vivace


# Below is generated by plot.py at 2018-04-25 01:23:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 347.71 Mbit/s
95th percentile per-packet one-way delay: 65.161 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 347.71 Mbit/s
95th percentile per-packet one-way delay: 65.161 ms
Loss rate: 0.00%
Run 7: Report of PCC-Vivace — Data Link

![Graph of Run 7 Report]

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 347.73 Mbps)
  - Flow 1 egress (mean 347.71 Mbps)

- **Per packet one way delay (ms):**
  - Flow 1 (95th percentile 65.16 ms)
Run 8: Statistics of PCC-Vivace


# Below is generated by plot.py at 2018-04-25 01:23:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 260.39 Mbit/s
95th percentile per-packet one-way delay: 63.769 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 260.39 Mbit/s
95th percentile per-packet one-way delay: 63.769 ms
Loss rate: 0.00%
Run 8: Report of PCC-Vivace — Data Link

![Graph showing throughput (Mbps) over time with two lines: one for flow ingress and one for flow egress. The graph indicates a peak at the beginning and a steadier trend towards the end.]

![Graph showing packet delivery delay (ms) over time with a peak around the middle of the time frame. The graph includes a marker for flow 1 (95th percentile 63.77 ms).]
Run 9: Statistics of PCC-Vivace

End at: 2018-04-24 22:45:55

# Below is generated by plot.py at 2018-04-25 01:23:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 287.04 Mbit/s
95th percentile per-packet one-way delay: 62.144 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 287.04 Mbit/s
95th percentile per-packet one-way delay: 62.144 ms
Loss rate: 0.00%
Run 9: Report of PCC-Vivace — Data Link
Run 10: Statistics of PCC-Vivace


# Below is generated by plot.py at 2018-04-25 01:23:34
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 331.53 Mbit/s
  95th percentile per-packet one-way delay: 65.146 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 331.53 Mbit/s
  95th percentile per-packet one-way delay: 65.146 ms
  Loss rate: 0.00%
Run 10: Report of PCC-Vivace — Data Link

![Graph showing throughput over time with two lines representing flow ingress and egress, and another graph showing packet delay distribution.]

Flow 1 ingress (mean 331.53 Mbit/s)  Flow 1 egress (mean 331.53 Mbit/s)

Flow 1 (95th percentile 65.15 ms)
Run 1: Statistics of PCC-Expr

Start at: 2018-04-24 20:57:03
End at: 2018-04-24 20:57:34
Run 1: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing
Run 2: Statistics of PCC-Expr

Start at: 2018-04-24 21:09:54
End at: 2018-04-24 21:10:24
Run 2: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing
Run 3: Statistics of PCC-Expr

Run 3: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing
Run 4: Statistics of PCC-Expr

Start at: 2018-04-24 21:36:04
End at: 2018-04-24 21:36:34
Run 4: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing
Run 5: Statistics of PCC-Expr

Start at: 2018-04-24 21:49:01
Run 5: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing
Run 6: Statistics of PCC-Expr

Start at: 2018-04-24 22:01:45
End at: 2018-04-24 22:02:15
Run 6: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing
Run 7: Statistics of PCC-Expr

Start at: 2018-04-24 22:14:45
Run 7: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing
Run 8: Statistics of PCC-Expr

Start at: 2018-04-24 22:28:02
Figure is missing

Figure is missing
Run 9: Statistics of PCC-Expr

Run 9: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing
Run 10: Statistics of PCC-Expr

Run 10: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing