Pantheon Report

Generated at 2018-04-25 00:26:24 (UTC).
Data path: GCE London Ethernet (remote) → GCE Sydney Ethernet (local).
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 @ 114e807ac1bad7b85168ceb1f8a969063ee6c12c
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
M datagroup/sender.cc
third_party/fillp @ 11f8c46a2bf1dc797253db7e8ca04076272b2a44
third_party/genericCC @ d223989828276fa83a807da6e0341dc0c7b89aec
third_party/indigo @ a9b2060d39e4da2e8987e893e3eca2a6c7cd0bab
third_party/indigo-1-layer-128-unit @ 3ae9e4ef4230db7484501f82ce8b37769f2f66d
third_party/indigo-1-layer-32-unit @ 2601c92e4a9d58d38dc4dfee0edcf90c077e64d
third_party/indigo-1-layer-32-unit-no-calib @ 1f3a7f75b41135ed5b540c0fd3505939528e2a5f
third_party/indigo-no-calib @ 7224f2202e8a044d8306fa0b98ad84360c53d89
third_party/koho_cc @ f0f2e693303ae82ea808e6928eac4f1083a6681
M datagroup/sender.cc
third_party/libutp @ b3465b942e2826f2b179eaaab4a906ce6bb7cfc3cf
third_party/pantheon-tunnel @ fb1053193c2b861da659ba9013db26744ccfcf993
third_party/pcc @ 1af9c958fa0d66d18b623c091a55f3e872b4981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8ac0f8ab24ebf974ab
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cfc42
third_party/scream @ c3370fd7bd17265a79eab34e4016ad23f5965885
third_party/sourdough @ f1a14bffe749737437f61b1aeab03b267cde681
third_party/sprout @ 6f2e6e6088d91066a9f023df375eee2665089ce
M src/example/cellsim.cc
M src/example/sproutbt2.cc
M src/network/sproutconn.cc
third_party/verus @ d4b447e7a4c6c60a261149af2629562539f9a49
M src/verus.hpp
M tools/plot.py
third_party/vivace @ 7a4ba531e75b4a6f66f5c4580192120401784ce3
third_party/webrtc @ f271183af822ee5d0031620f4bebf38aecd5581
test from GCE London Ethernet to GCE Sydney Ethernet, 10 runs of 30s each per scheme (mean of all runs by scheme)

![Graph showing average throughput vs. 95th percentile one-way delay for various schemes.]

- Copa
- FillP
- Verus
- Sprout
- WebRTC media
- PCC-Vivace
- SCReAM
- TCP Vegas
- TCP Cubic
- TaoVA-100x
- QUIC Cubic
- Indigo-1-32
- PCC-Allegro
- TCP BBR
- LEDBAT
<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>73.34</td>
<td>136.23</td>
<td>1.01</td>
</tr>
<tr>
<td>TCP Cubic</td>
<td>10</td>
<td>64.45</td>
<td>141.34</td>
<td>1.09</td>
</tr>
<tr>
<td>LEDBAT</td>
<td>10</td>
<td>3.06</td>
<td>136.88</td>
<td>2.55</td>
</tr>
<tr>
<td>PCC-Allegro</td>
<td>10</td>
<td>539.94</td>
<td>220.58</td>
<td>2.26</td>
</tr>
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<td>QUIC Cubic</td>
<td>10</td>
<td>63.98</td>
<td>136.00</td>
<td>1.26</td>
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<tr>
<td>SCReAM</td>
<td>10</td>
<td>0.22</td>
<td>136.34</td>
<td>0.89</td>
</tr>
<tr>
<td>WebRTC media</td>
<td>10</td>
<td>0.06</td>
<td>136.24</td>
<td>0.00</td>
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<td>Sprout</td>
<td>10</td>
<td>0.40</td>
<td>136.31</td>
<td>0.96</td>
</tr>
<tr>
<td>TaoVA-100x</td>
<td>10</td>
<td>127.75</td>
<td>136.46</td>
<td>0.89</td>
</tr>
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<td>TCP Vegas</td>
<td>10</td>
<td>47.33</td>
<td>141.14</td>
<td>0.87</td>
</tr>
<tr>
<td>Verus</td>
<td>10</td>
<td>149.67</td>
<td>169.46</td>
<td>1.22</td>
</tr>
<tr>
<td>Copa</td>
<td>10</td>
<td>74.15</td>
<td>136.25</td>
<td>0.81</td>
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<tr>
<td>FillP</td>
<td>10</td>
<td>685.49</td>
<td>230.93</td>
<td>6.58</td>
</tr>
<tr>
<td>Indigo-1-32</td>
<td>10</td>
<td>150.28</td>
<td>136.21</td>
<td>0.93</td>
</tr>
<tr>
<td>PCC-Vivace</td>
<td>10</td>
<td>294.17</td>
<td>157.07</td>
<td>1.56</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

Start at: 2018-04-24 18:47:01
End at: 2018-04-24 18:47:31

# Below is generated by plot.py at 2018-04-24 23:36:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 72.66 Mbit/s
95th percentile per-packet one-way delay: 136.411 ms
Loss rate: 0.99%
-- Flow 1:
Average throughput: 72.66 Mbit/s
95th percentile per-packet one-way delay: 136.411 ms
Loss rate: 0.99%
Run 1: Report of TCP BBR — Data Link

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

- **Flow 1 ingress** (mean 72.72 Mbit/s)
- **Flow 1 egress** (mean 72.66 Mbit/s)

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

- **Flow 1 (95th percentile 136.41 ms)**
Run 2: Statistics of TCP BBR

Start at: 2018-04-24 19:01:06
End at: 2018-04-24 19:01:36

# Below is generated by plot.py at 2018-04-24 23:36:18
# Datalink statistics
- Total of 1 flow:
  Average throughput: 72.58 Mbit/s
  95th percentile per-packet one-way delay: 136.344 ms
  Loss rate: 0.99%
- Flow 1:
  Average throughput: 72.58 Mbit/s
  95th percentile per-packet one-way delay: 136.344 ms
  Loss rate: 0.99%
Run 2: Report of TCP BBR — Data Link

![Throughput Graph](image1)

- **Flow 1 ingress (mean 72.64 Mbit/s)**
- **Flow 1 egress (mean 72.58 Mbit/s)**

![Per-packet delay graph](image2)

- **Flow 1 (95th percentile 136.34 ms)**
Run 3: Statistics of TCP BBR

Start at: 2018-04-24 19:15:46
End at: 2018-04-24 19:16:16

# Below is generated by plot.py at 2018-04-24 23:36:22
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 74.24 Mbit/s
  95th percentile per-packet one-way delay: 136.777 ms
  Loss rate: 1.05%
-- Flow 1:
  Average throughput: 74.24 Mbit/s
  95th percentile per-packet one-way delay: 136.777 ms
  Loss rate: 1.05%
Run 3: Report of TCP BBR — Data Link

![Graph showing throughput and round-trip time over time. The graph indicates fluctuating throughput with a peak at around 80 Mbit/s and a minimum around 40 Mbit/s. The round-trip time shows a range from 135.0 ms to 155.0 ms, with a 95th percentile of 136.78 ms.]
Run 4: Statistics of TCP BBR

Start at: 2018-04-24 19:30:16
End at: 2018-04-24 19:30:46

# Below is generated by plot.py at 2018-04-24 23:36:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 72.68 Mbit/s
95th percentile per-packet one-way delay: 136.028 ms
Loss rate: 0.99%
-- Flow 1:
Average throughput: 72.68 Mbit/s
95th percentile per-packet one-way delay: 136.028 ms
Loss rate: 0.99%
Run 4: Report of TCP BBR — Data Link
Run 5: Statistics of TCP BBR

Start at: 2018-04-24 19:44:30
End at: 2018-04-24 19:45:00

# Below is generated by plot.py at 2018-04-24 23:36:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 73.85 Mbit/s
95th percentile per-packet one-way delay: 136.014 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 73.85 Mbit/s
95th percentile per-packet one-way delay: 136.014 ms
Loss rate: 0.98%
Run 5: Report of TCP BBR — Data Link

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

- Flow 1 ingress (mean 74.01 Mbit/s)
- Flow 1 egress (mean 73.85 Mbit/s)

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

- Flow 1 (95th percentile 136.01 ms)
Run 6: Statistics of TCP BBR

End at: 2018-04-24 19:59:43

# Below is generated by plot.py at 2018-04-24 23:36:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 72.32 Mbit/s
95th percentile per-packet one-way delay: 136.426 ms
Loss rate: 1.11%
-- Flow 1:
Average throughput: 72.32 Mbit/s
95th percentile per-packet one-way delay: 136.426 ms
Loss rate: 1.11%
Run 6: Report of TCP BBR — Data Link
Run 7: Statistics of TCP BBR

End at: 2018-04-24 20:14:05

# Below is generated by plot.py at 2018-04-24 23:36:22
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 73.87 Mbit/s
  95th percentile per-packet one-way delay: 135.939 ms
  Loss rate: 1.02%
-- Flow 1:
  Average throughput: 73.87 Mbit/s
  95th percentile per-packet one-way delay: 135.939 ms
  Loss rate: 1.02%
Run 7: Report of TCP BBR — Data Link
Run 8: Statistics of TCP BBR

End at: 2018-04-24 20:27:50

# Below is generated by plot.py at 2018-04-24 23:36:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 71.73 Mbit/s
95th percentile per-packet one-way delay: 136.032 ms
Loss rate: 1.01%
-- Flow 1:
Average throughput: 71.73 Mbit/s
95th percentile per-packet one-way delay: 136.032 ms
Loss rate: 1.01%
Run 8: Report of TCP BBR — Data Link

![Graph of Throughput and Delay]

- **Flow 1 ingress (mean 71.86 Mbit/s)**
- **Flow 1 egress (mean 71.73 Mbit/s)**

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

- **Flow 1 (95th percentile 136.03 ms)**
Run 9: Statistics of TCP BBR


# Below is generated by plot.py at 2018-04-24 23:37:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 73.95 Mbit/s
95th percentile per-packet one-way delay: 136.116 ms
Loss rate: 0.96%
-- Flow 1:
Average throughput: 73.95 Mbit/s
95th percentile per-packet one-way delay: 136.116 ms
Loss rate: 0.96%
Run 9: Report of TCP BBR — Data Link

![Throughput Graph]

![RTT Graph]

Flow 1 ingress (mean 73.99 Mbit/s)  
Flow 1 egress (mean 73.95 Mbit/s)

Flow 1 (95th percentile 136.12 ms)
Run 10: Statistics of TCP BBR

Start at: 2018-04-24 20:56:21
End at: 2018-04-24 20:56:51

# Below is generated by plot.py at 2018-04-24 23:37:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 75.49 Mbit/s
95th percentile per-packet one-way delay: 136.241 ms
Loss rate: 0.96%
-- Flow 1:
Average throughput: 75.49 Mbit/s
95th percentile per-packet one-way delay: 136.241 ms
Loss rate: 0.96%
Run 10: Report of TCP BBR — Data Link

![Graph 1: Throughput over Time](chart1.png)

![Graph 2: Per Packet One-Way Delay](chart2.png)
Run 1: Statistics of TCP Cubic

Start at: 2018-04-24 18:50:06
End at: 2018-04-24 18:50:36

# Below is generated by plot.py at 2018-04-24 23:37:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 62.72 Mbit/s
95th percentile per-packet one-way delay: 138.091 ms
Loss rate: 1.18%
-- Flow 1:
Average throughput: 62.72 Mbit/s
95th percentile per-packet one-way delay: 138.091 ms
Loss rate: 1.18%
Run 1: Report of TCP Cubic — Data Link

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

- Flow 1 ingress (mean 62.80 Mbps)
- Flow 1 egress (mean 62.72 Mbps)

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

Flow 1 (95th percentile 138.09 ms)
Run 2: Statistics of TCP Cubic

End at: 2018-04-24 19:04:50

# Below is generated by plot.py at 2018-04-24 23:37:35
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 48.32 Mbit/s
  95th percentile per-packet one-way delay: 141.549 ms
  Loss rate: 0.72%
-- Flow 1:
  Average throughput: 48.32 Mbit/s
  95th percentile per-packet one-way delay: 141.549 ms
  Loss rate: 0.72%
Run 2: Report of TCP Cubic — Data Link

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

- **Flow 1 ingress (mean 48.23 Mbit/s)**
- **Flow 1 egress (mean 48.32 Mbit/s)**

![Graph of Round-trip delay (ms)](image2)

- **Flow 1 (95th percentile 141.55 ms)**
Run 3: Statistics of TCP Cubic


# Below is generated by plot.py at 2018-04-24 23:37:35
# Datalink statistics
-- Total of 1 flow:
 Average throughput: 61.33 Mbit/s
 95th percentile per-packet one-way delay: 143.013 ms
 Loss rate: 0.47%
-- Flow 1:
 Average throughput: 61.33 Mbit/s
 95th percentile per-packet one-way delay: 143.013 ms
 Loss rate: 0.47%
Run 3: Report of TCP Cubic — Data Link
Run 4: Statistics of TCP Cubic


# Below is generated by plot.py at 2018-04-24 23:37:50
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 83.98 Mbit/s
  95th percentile per-packet one-way delay: 143.794 ms
  Loss rate: 0.98%
-- Flow 1:
  Average throughput: 83.98 Mbit/s
  95th percentile per-packet one-way delay: 143.794 ms
  Loss rate: 0.98%
Run 4: Report of TCP Cubic — Data Link

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

Flow 1 ingress (mean 84.05 Mbit/s), Flow 1 egress (mean 83.98 Mbit/s)

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

Flow 1 (95th percentile 143.79 ms)
Run 5: Statistics of TCP Cubic


# Below is generated by plot.py at 2018-04-24 23:37:50
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 84.94 Mbit/s
  95th percentile per-packet one-way delay: 143.993 ms
  Loss rate: 0.94%
-- Flow 1:
  Average throughput: 84.94 Mbit/s
  95th percentile per-packet one-way delay: 143.993 ms
  Loss rate: 0.94%
Run 5: Report of TCP Cubic — Data Link

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

Start at: 2018-04-24 20:02:27
End at: 2018-04-24 20:02:57

# Below is generated by plot.py at 2018-04-24 23:37:50
# Datalink statistics
-- Total of 1 flow:
Average throughput: 57.99 Mbit/s
95th percentile per-packet one-way delay: 142.896 ms
Loss rate: 1.36%
-- Flow 1:
Average throughput: 57.99 Mbit/s
95th percentile per-packet one-way delay: 142.896 ms
Loss rate: 1.36%
Run 6: Report of TCP Cubic — Data Link

![Graph of throughput and packet delay over time for Flow 1, showing mean ingress and egress rates of 58.26 Mbit/s and 57.99 Mbit/s respectively.]

![Graph showing packet delay versus time for Flow 1, with a 95th percentile delay of 142.90 ms.]
Run 7: Statistics of TCP Cubic

Start at: 2018-04-24 20:16:40
End at: 2018-04-24 20:17:10

# Below is generated by plot.py at 2018-04-24 23:38:00
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 46.38 Mbit/s
  95th percentile per-packet one-way delay: 140.414 ms
  Loss rate: 1.70%
-- Flow 1:
  Average throughput: 46.38 Mbit/s
  95th percentile per-packet one-way delay: 140.414 ms
  Loss rate: 1.70%
Run 7: Report of TCP Cubic — Data Link
Run 8: Statistics of TCP Cubic

Start at: 2018-04-24 20:30:24
End at: 2018-04-24 20:30:54

# Below is generated by plot.py at 2018-04-24 23:38:19
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 57.73 Mbit/s
  95th percentile per-packet one-way delay: 138.076 ms
  Loss rate: 1.28%
-- Flow 1:
  Average throughput: 57.73 Mbit/s
  95th percentile per-packet one-way delay: 138.076 ms
  Loss rate: 1.28%
Run 8: Report of TCP Cubic — Data Link

![Graph 1: Throughout (Mbps)]

![Graph 2: Per packet one way delay (ms)]
Run 9: Statistics of TCP Cubic

Start at: 2018-04-24 20:45:01
End at: 2018-04-24 20:45:31

# Below is generated by plot.py at 2018-04-24 23:38:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 84.22 Mbit/s
95th percentile per-packet one-way delay: 143.822 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 84.22 Mbit/s
95th percentile per-packet one-way delay: 143.822 ms
Loss rate: 0.98%
Run 9: Report of TCP Cubic — Data Link

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

- Flow 1 ingress (mean 84.29 Mbit/s)
- Flow 1 egress (mean 84.22 Mbit/s)

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

- Flow 1 (95th percentile 143.82 ms)
Run 10: Statistics of TCP Cubic


# Below is generated by plot.py at 2018-04-24 23:38:41
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 56.94 Mbit/s
  95th percentile per-packet one-way delay: 137.758 ms
  Loss rate: 1.30%
-- Flow 1:
  Average throughput: 56.94 Mbit/s
  95th percentile per-packet one-way delay: 137.758 ms
  Loss rate: 1.30%
Run 10: Report of TCP Cubic — Data Link

[Graph showing throughput over time with two lines representing flow ingress and egress speeds, and another graph showing packet error rate with a line indicating the 95th percentile delay time.]
Run 1: Statistics of LEDBAT

End at: 2018-04-24 18:45:25

# Below is generated by plot.py at 2018-04-24 23:38:41
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.26 Mbit/s
  95th percentile per-packet one-way delay: 136.564 ms
  Loss rate: 3.47%
-- Flow 1:
  Average throughput: 0.26 Mbit/s
  95th percentile per-packet one-way delay: 136.564 ms
  Loss rate: 3.47%
Run 1: Report of LEDBAT — Data Link

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

- **Throughput (Mbps)**
  - Flow 1 ingress (mean 0.27 Mbps)
  - Flow 1 egress (mean 0.26 Mbps)

- **Packet one-way delay (ms)**
  - Flow 1 (95th percentile 136.56 ms)
Run 2: Statistics of LEDBAT

Start at: 2018-04-24 18:59:00
End at: 2018-04-24 18:59:30

# Below is generated by plot.py at 2018-04-24 23:38:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.46 Mbit/s
95th percentile per-packet one-way delay: 137.098 ms
Loss rate: 3.09%
-- Flow 1:
Average throughput: 1.46 Mbit/s
95th percentile per-packet one-way delay: 137.098 ms
Loss rate: 3.09%
Run 2: Report of LEDBAT — Data Link

![Throughput vs Time Graph]

- **Flow 1 ingress (mean 1.49 Mbit/s)**
- **Flow 1 egress (mean 1.46 Mbit/s)**

![Packet Delay vs Time Graph]

- **Flow 1 (95th percentile 137.10 ns)**
Run 3: Statistics of LEDBAT

End at: 2018-04-24 19:14:09

# Below is generated by plot.py at 2018-04-24 23:38:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 4.85 Mbit/s
95th percentile per-packet one-way delay: 137.264 ms
Loss rate: 1.82%
-- Flow 1:
Average throughput: 4.85 Mbit/s
95th percentile per-packet one-way delay: 137.264 ms
Loss rate: 1.82%
Run 3: Report of LEDBAT — Data Link
Run 4: Statistics of LEDBAT


# Below is generated by plot.py at 2018-04-24 23:38:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 4.79 Mbit/s
95th percentile per-packet one-way delay: 136.990 ms
Loss rate: 1.83%
-- Flow 1:
Average throughput: 4.79 Mbit/s
95th percentile per-packet one-way delay: 136.990 ms
Loss rate: 1.83%
Run 4: Report of LEDBAT — Data Link

![Diagram representing throughput and per-packet one-way delay over time for Flow 1. The throughput graph shows the data rate in Mbps, with several spikes indicating variations. The per-packet delay graph shows intervals of time, with a 95th percentile value of 136.99 ms indicated.]
Run 5: Statistics of LEDBAT

End at: 2018-04-24 19:42:54

# Below is generated by plot.py at 2018-04-24 23:38:41
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.93 Mbit/s
  95th percentile per-packet one-way delay: 137.016 ms
  Loss rate: 3.79%
-- Flow 1:
  Average throughput: 0.93 Mbit/s
  95th percentile per-packet one-way delay: 137.016 ms
  Loss rate: 3.79%
Run 5: Report of LEDBAT — Data Link

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

- **Flow 1 ingress (mean 0.96 Mbit/s)**
- **Flow 1 egress (mean 0.93 Mbit/s)**

![Graph 2: One-way Delay vs Time](image2)

- **Flow 1 (99th percentile 137.02 ms)**
Run 6: Statistics of LEDBAT

Start at: 2018-04-24 19:57:06
End at: 2018-04-24 19:57:36

# Below is generated by plot.py at 2018-04-24 23:38:41
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 2.94 Mbit/s
  95th percentile per-packet one-way delay: 136.854 ms
  Loss rate: 2.30%
-- Flow 1:
  Average throughput: 2.94 Mbit/s
  95th percentile per-packet one-way delay: 136.854 ms
  Loss rate: 2.30%
Run 6: Report of LEDBAT — Data Link
Run 7: Statistics of LEDBAT

End at: 2018-04-24 20:11:58

# Below is generated by plot.py at 2018-04-24 23:38:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 4.87 Mbit/s
95th percentile per-packet one-way delay: 136.259 ms
Loss rate: 1.82%
-- Flow 1:
Average throughput: 4.87 Mbit/s
95th percentile per-packet one-way delay: 136.259 ms
Loss rate: 1.82%
Run 7: Report of LEDBAT — Data Link

![Graph showing throughput and packet loss over time]

Throughput (Mb/s)

Time (s)

0 5 10 15 20 25 30

Flow 1 ingress (mean 4.92 Mb/s)
Flow 1 egress (mean 4.87 Mb/s)

Packet size (Mb/s)

Time (s)

0 5 10 15 20 25 30

Flow 1 (99th percentile 136.26 ms)
Run 8: Statistics of LEDBAT

End at: 2018-04-24 20:25:43

# Below is generated by plot.py at 2018-04-24 23:38:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 4.79 Mbit/s
95th percentile per-packet one-way delay: 136.955 ms
Loss rate: 1.83%
-- Flow 1:
Average throughput: 4.79 Mbit/s
95th percentile per-packet one-way delay: 136.955 ms
Loss rate: 1.83%
Run 8: Report of LEDBAT — Data Link

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

- **Throughput** (Mbps/s):
  - **Flow 1 ingress** (mean 4.83 Mbps/s)
  - **Flow 1 egress** (mean 4.76 Mbps/s)

- **Packet delay** (ms):
  - **Flow 1** (95th percentile 136.96 ms)
Run 9: Statistics of LEDBAT

End at: 2018-04-24 20:40:18

# Below is generated by plot.py at 2018-04-24 23:38:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 4.79 Mbit/s
95th percentile per-packet one-way delay: 137.108 ms
Loss rate: 1.83%
-- Flow 1:
Average throughput: 4.79 Mbit/s
95th percentile per-packet one-way delay: 137.108 ms
Loss rate: 1.83%
Run 9: Report of LEDBAT — Data Link
Run 10: Statistics of LEDBAT

Start at: 2018-04-24 20:54:14
End at: 2018-04-24 20:54:45

# Below is generated by plot.py at 2018-04-24 23:38:41
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.94 Mbit/s
  95th percentile per-packet one-way delay: 136.688 ms
  Loss rate: 3.74%
-- Flow 1:
  Average throughput: 0.94 Mbit/s
  95th percentile per-packet one-way delay: 136.688 ms
  Loss rate: 3.74%
Run 10: Report of LEDBAT — Data Link
Run 1: Statistics of PCC-Allegro

End at: 2018-04-24 18:52:25

# Below is generated by plot.py at 2018-04-24 23:46:36
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 548.07 Mbit/s
  95th percentile per-packet one-way delay: 192.431 ms
  Loss rate: 2.06%
-- Flow 1:
  Average throughput: 548.07 Mbit/s
  95th percentile per-packet one-way delay: 192.431 ms
  Loss rate: 2.06%
Run 1: Report of PCC-Allegro — Data Link

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

- Throughput (Mbps): Flow 1 ingress (mean 354.50 Mbps), Flow 1 egress (mean 548.07 Mbps)
- Packet delay (ms): Flow 1 (95th percentile 192.43 ms)
Run 2: Statistics of PCC-Allegro

End at: 2018-04-24 19:06:44

# Below is generated by plot.py at 2018-04-24 23:46:40
# Datalink statistics
   -- Total of 1 flow:
   Average throughput: 551.28 Mbit/s
   95th percentile per-packet one-way delay: 252.205 ms
   Loss rate: 2.76%
   -- Flow 1:
   Average throughput: 551.28 Mbit/s
   95th percentile per-packet one-way delay: 252.205 ms
   Loss rate: 2.76%
Run 3: Statistics of PCC-Allegro


# Below is generated by plot.py at 2018-04-24 23:46:40
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 506.10 Mbit/s
  95th percentile per-packet one-way delay: 222.597 ms
  Loss rate: 2.01%
-- Flow 1:
  Average throughput: 506.10 Mbit/s
  95th percentile per-packet one-way delay: 222.597 ms
  Loss rate: 2.01%
Run 3: Report of PCC-Allegro — Data Link

![Graph showing network performance metrics over time.](image1)

- Flow 1 ingress (mean 511.75 Mbps)
- Flow 1 egress (mean 506.10 Mbps)

![Graph showing per-packet one-way delay over time.](image2)

- Flow 1 (95th percentile 222.60 ms)
Run 4: Statistics of PCC-Allegro

Start at: 2018-04-24 19:35:16
End at: 2018-04-24 19:35:46

# Below is generated by plot.py at 2018-04-24 23:46:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 539.37 Mbit/s
95th percentile per-packet one-way delay: 178.498 ms
Loss rate: 1.75%
-- Flow 1:
Average throughput: 539.37 Mbit/s
95th percentile per-packet one-way delay: 178.498 ms
Loss rate: 1.75%
Run 4: Report of PCC-Allegro — Data Link

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

- **Flow 1 ingress (mean 543.98 Mbit/s)**
- **Flow 1 egress (mean 539.37 Mbit/s)**

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

- **Flow 1 (95th percentile 178.50 ms)**
Run 5: Statistics of PCC-Allegro

End at: 2018-04-24 19:50:08

# Below is generated by plot.py at 2018-04-24 23:46:55
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 560.26 Mbit/s
  95th percentile per-packet one-way delay: 210.970 ms
  Loss rate: 1.61%
-- Flow 1:
  Average throughput: 560.26 Mbit/s
  95th percentile per-packet one-way delay: 210.970 ms
  Loss rate: 1.61%
Run 5: Report of PCC-Allegro — Data Link

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

- **Flow 1 ingress (mean 364.21 Mbit/s)**
- **Flow 1 egress (mean 560.26 Mbit/s)**

![Graph 2: Per Roundtrip vs Time](image2)

- **Flow 1 (95th percentile 210.97 ms)**
Run 6: Statistics of PCC-Allegro

Start at: 2018-04-24 20:04:21
End at: 2018-04-24 20:04:51

# Below is generated by plot.py at 2018-04-24 23:46:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 517.13 Mbit/s
95th percentile per-packet one-way delay: 188.721 ms
Loss rate: 1.98%
-- Flow 1:
Average throughput: 517.13 Mbit/s
95th percentile per-packet one-way delay: 188.721 ms
Loss rate: 1.98%
Run 6: Report of PCC-Allegro — Data Link

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

- Flow 1 ingress (mean 522.76 Mbit/s)
- Flow 1 egress (mean 517.13 Mbit/s)

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

- Flow 1 (95th percentile 188.72 ms)
Run 7: Statistics of PCC-Allegro

Start at: 2018-04-24 20:18:34
End at: 2018-04-24 20:19:04

# Below is generated by plot.py at 2018-04-24 23:46:55
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 533.88 Mbit/s
  95th percentile per-packet one-way delay: 222.645 ms
  Loss rate: 2.14%
-- Flow 1:
  Average throughput: 533.88 Mbit/s
  95th percentile per-packet one-way delay: 222.645 ms
  Loss rate: 2.14%
Run 7: Report of PCC-Allegro — Data Link

[Graph showing network traffic and delay over time]
Run 8: Statistics of PCC-Allegro

Start at: 2018-04-24 20:32:17
End at: 2018-04-24 20:32:47

# Below is generated by plot.py at 2018-04-24 23:47:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 550.63 Mbit/s
95th percentile per-packet one-way delay: 248.899 ms
Loss rate: 2.98%
-- Flow 1:
Average throughput: 550.63 Mbit/s
95th percentile per-packet one-way delay: 248.899 ms
Loss rate: 2.98%
Run 8: Report of PCC-Allegro — Data Link

Throughput (Mb/s)

Time (s)

Flow 1 ingress (mean 362.38 Mb/s)  Flow 1 egress (mean 550.63 Mb/s)

Per packet one way delay (ms)

Flow 1 (95th percentile 248.90 ms)
Run 9: Statistics of PCC-Allegro

End at: 2018-04-24 20:47:21

# Below is generated by plot.py at 2018-04-24 23:55:32
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 546.95 Mbit/s
  95th percentile per-packet one-way delay: 251.150 ms
  Loss rate: 2.90%
-- Flow 1:
  Average throughput: 546.95 Mbit/s
  95th percentile per-packet one-way delay: 251.150 ms
  Loss rate: 2.90%
Run 9: Report of PCC-Allegro — Data Link

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

![Graph 2: Per Packet one-way delay (ms) vs Time (s)]
Run 10: Statistics of PCC-Allegro

End at: 2018-04-24 21:01:43

# Below is generated by plot.py at 2018-04-24 23:55:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 545.72 Mbit/s
95th percentile per-packet one-way delay: 237.687 ms
Loss rate: 2.42%
-- Flow 1:
Average throughput: 545.72 Mbit/s
95th percentile per-packet one-way delay: 237.687 ms
Loss rate: 2.42%
Run 10: Report of PCC-Allegro — Data Link

![Graph for Throughput (Mbps)]

- **Flow 1 ingress (mean 534.11 Mbps)**
- **Flow 1 egress (mean 545.72 Mbps)**

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

- **Flow 1 (95th percentile 237.69 ms)**
Run 1: Statistics of QUIC Cubic

End at: 2018-04-24 18:49:08

# Below is generated by plot.py at 2018-04-24 23:55:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 56.75 Mbit/s
95th percentile per-packet one-way delay: 136.361 ms
Loss rate: 1.33%
-- Flow 1:
Average throughput: 56.75 Mbit/s
95th percentile per-packet one-way delay: 136.361 ms
Loss rate: 1.33%
Run 1: Report of QUIC Cubic — Data Link

![Graph showing throughput over time for a data link with two streams: Flow 1 ingress and Flow 1 egress. The graph indicates variability in throughput with peaks and troughs.]

![Graph showing packet one-way delay with a 95th percentile value of 136.36 ms for Flow 1.]

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Run 2: Statistics of QUIC Cubic

Start at: 2018-04-24 19:02:52
End at: 2018-04-24 19:03:22

# Below is generated by plot.py at 2018-04-24 23:55:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 65.05 Mbit/s
95th percentile per-packet one-way delay: 136.281 ms
Loss rate: 1.25%
-- Flow 1:
Average throughput: 65.05 Mbit/s
95th percentile per-packet one-way delay: 136.281 ms
Loss rate: 1.25%
Run 2: Report of QUIC Cubic — Data Link
Run 3: Statistics of QUIC Cubic

Start at: 2018-04-24 19:17:30
End at: 2018-04-24 19:18:00

# Below is generated by plot.py at 2018-04-24 23:55:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 63.93 Mbit/s
95th percentile per-packet one-way delay: 136.110 ms
Loss rate: 1.28%
-- Flow 1:
Average throughput: 63.93 Mbit/s
95th percentile per-packet one-way delay: 136.110 ms
Loss rate: 1.28%
Run 3: Report of QUIC Cubic — Data Link
Run 4: Statistics of QUIC Cubic

End at: 2018-04-24 19:32:26

# Below is generated by plot.py at 2018-04-24 23:55:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 64.89 Mbit/s
95th percentile per-packet one-way delay: 136.537 ms
Loss rate: 1.26%
-- Flow 1:
Average throughput: 64.89 Mbit/s
95th percentile per-packet one-way delay: 136.537 ms
Loss rate: 1.26%
Run 4: Report of QUIC Cubic — Data Link

![Graph of Throughput vs Time with legend: Flow 1 ingress (mean 65.12 Mbit/s) and Flow 1 egress (mean 64.89 Mbit/s)]]

![Graph of Packet One Way Delay vs Time with legend: Flow 1 (95th percentile 136.54 ms)]
Run 5: Statistics of QUIC Cubic


# Below is generated by plot.py at 2018-04-24 23:55:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 64.49 Mbit/s
95th percentile per-packet one-way delay: 135.900 ms
Loss rate: 1.16%
-- Flow 1:
Average throughput: 64.49 Mbit/s
95th percentile per-packet one-way delay: 135.900 ms
Loss rate: 1.16%
Run 5: Report of QUIC Cubic — Data Link

![Graph 1: Throughput (Mbps)](chart1.png)

- Flow 1 ingress (mean 64.65 Mbps)
- Flow 1 egress (mean 64.49 Mbps)

![Graph 2: Per packet one-way delay (ms)](chart2.png)

- Flow 1 (95th percentile 135.90 ms)
Run 6: Statistics of QUIC Cubic

Start at: 2018-04-24 20:00:59
End at: 2018-04-24 20:01:29

# Below is generated by plot.py at 2018-04-24 23:55:48
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 65.34 Mbit/s
  95th percentile per-packet one-way delay: 136.210 ms
  Loss rate: 1.25%
-- Flow 1:
  Average throughput: 65.34 Mbit/s
  95th percentile per-packet one-way delay: 136.210 ms
  Loss rate: 1.25%
Run 6: Report of QUIC Cubic — Data Link
Run 7: Statistics of QUIC Cubic

Start at: 2018-04-24 20:15:11
End at: 2018-04-24 20:15:41

# Below is generated by plot.py at 2018-04-24 23:55:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 64.73 Mbit/s
95th percentile per-packet one-way delay: 135.808 ms
Loss rate: 1.26%
-- Flow 1:
Average throughput: 64.73 Mbit/s
95th percentile per-packet one-way delay: 135.808 ms
Loss rate: 1.26%
Run 7: Report of QUIC Cubic — Data Link
Run 8: Statistics of QUIC Cubic

End at: 2018-04-24 20:29:26

# Below is generated by plot.py at 2018-04-24 23:55:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 63.89 Mbit/s
95th percentile per-packet one-way delay: 135.927 ms
Loss rate: 1.27%
-- Flow 1:
Average throughput: 63.89 Mbit/s
95th percentile per-packet one-way delay: 135.927 ms
Loss rate: 1.27%
Run 8: Report of QUIC Cubic — Data Link

![Graph](image)

Flow 1 ingress (mean 64.12 Mbit/s)  
Flow 1 egress (mean 63.89 Mbit/s)

![Graph](image)

Flow 1 (95th percentile 135.93 ms)
Run 9: Statistics of QUIC Cubic

End at: 2018-04-24 20:44:03

# Below is generated by plot.py at 2018-04-24 23:55:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 65.63 Mbit/s
95th percentile per-packet one-way delay: 136.011 ms
Loss rate: 1.24%
-- Flow 1:
Average throughput: 65.63 Mbit/s
95th percentile per-packet one-way delay: 136.011 ms
Loss rate: 1.24%
Run 9: Report of QUIC Cubic — Data Link
Run 10: Statistics of QUIC Cubic

Start at: 2018-04-24 20:57:56
End at: 2018-04-24 20:58:26

# Below is generated by plot.py at 2018-04-24 23:55:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 65.12 Mbit/s
95th percentile per-packet one-way delay: 134.841 ms
Loss rate: 1.25%
-- Flow 1:
Average throughput: 65.12 Mbit/s
95th percentile per-packet one-way delay: 134.841 ms
Loss rate: 1.25%
Run 10: Report of QUIC Cubic — Data Link

![Graph of throughput and packet delay over time]

- **Flow 1 ingress (mean 65.34 Mbit/s)**
- **Flow 1 egress (mean 65.12 Mbit/s)**

- **Flow 1 (55th percentile 134.84 ms)**
Run 1: Statistics of SCReAM


# Below is generated by plot.py at 2018-04-24 23:55:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.178 ms
Loss rate: 0.89%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.178 ms
Loss rate: 0.89%
Run 2: Statistics of SCReAM

Start at: 2018-04-24 19:03:38
End at: 2018-04-24 19:04:08

# Below is generated by plot.py at 2018-04-24 23:55:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.067 ms
Loss rate: 0.89%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.067 ms
Loss rate: 0.89%
Run 2: Report of SCReAM — Data Link

![Graph showing network performance metrics including throughput and end-to-end delay over time.](image)

- **Throughput**: Measured in Mbps.
- **End-to-End Delay**: Measured in milliseconds (ms).

**Key Observations**:
- **Throughput**: Generally stable with some spikes.
- **Delay**: Consistently low with minor fluctuations.

*Flow 1 ingress (mean 0.22 Mbps) and Flow 1 egress (mean 0.22 Mbps)*
Run 3: Statistics of SCReAM

Start at: 2018-04-24 19:18:16
End at: 2018-04-24 19:18:46

# Below is generated by plot.py at 2018-04-24 23:55:48
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 136.795 ms
  Loss rate: 0.89%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 136.795 ms
  Loss rate: 0.89%
Run 3: Report of SCReAM — Data Link
Run 4: Statistics of SCReAM


# Below is generated by plot.py at 2018-04-24 23:55:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.169 ms
Loss rate: 0.89%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.169 ms
Loss rate: 0.89%
Run 4: Report of SCReAM — Data Link

[Graph 1: Throughput vs Time (s)]

[Graph 2: Per-packet one-way delay (ms)]
Run 5: Statistics of SCReAM

Start at: 2018-04-24 19:47:02

# Below is generated by plot.py at 2018-04-24 23:55:48
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 136.385 ms
  Loss rate: 0.89%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 136.385 ms
  Loss rate: 0.89%
Run 5: Report of SCReAM — Data Link

![Graph of throughput and delay over time](image1)

**Throughput (Mb/s):**
- Flow 1 ingress (mean 0.22 Mb/s)
- Flow 1 egress (mean 0.22 Mb/s)

![Graph of packet interarrival delay](image2)

**Packet interarrival delay (ms):**
- Flow 1 (95th percentile 136.38 ms)
Run 6: Statistics of SCReAM

Start at: 2018-04-24 20:01:45
End at: 2018-04-24 20:02:15

# Below is generated by plot.py at 2018-04-24 23:55:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.257 ms
Loss rate: 0.89%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.257 ms
Loss rate: 0.89%
Run 6: Report of SCReAM — Data Link

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

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

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

- Flow 1 (95th percentile: 136.26 ms)
Run 7: Statistics of SCReAM

End at: 2018-04-24 20:16:28

# Below is generated by plot.py at 2018-04-24 23:55:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.337 ms
Loss rate: 0.89%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.337 ms
Loss rate: 0.89%
Run 7: Report of SCReAM — Data Link

![Graph 1](image1)
Flow 1 ingress (mean 0.22 Mbps)  |  Flow 1 egress (mean 0.22 Mbps)

![Graph 2](image2)
Flow 1 (95th percentile 136.34 ms)
Run 8: Statistics of SCReAM

Start at: 2018-04-24 20:29:42
End at: 2018-04-24 20:30:12

# Below is generated by plot.py at 2018-04-24 23:55:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 135.977 ms
Loss rate: 0.89%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 135.977 ms
Loss rate: 0.89%
Run 8: Report of SCReAM — Data Link

![Graph showing throughput over time](image1)

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

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

- Flow 1 (95th percentile 135.98 ms)
Run 9: Statistics of SCReAM

End at: 2018-04-24 20:44:50

# Below is generated by plot.py at 2018-04-24 23:55:48
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 136.094 ms
  Loss rate: 0.89%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 136.094 ms
  Loss rate: 0.89%
Run 9: Report of SCReAM — Data Link

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

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

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

- Flow 1 (95th percentile 136.09 ms)
Run 10: Statistics of SCReAM

Start at: 2018-04-24 20:58:43

# Below is generated by plot.py at 2018-04-24 23:55:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 137.146 ms
Loss rate: 0.89%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 137.146 ms
Loss rate: 0.89%
Run 10: Report of SCReAM — Data Link

![Graph showing throughput and per-packet round-trip delay](image)

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

Flow 1 (95th percentile 137.15 ms)
Run 1: Statistics of WebRTC media

End at: 2018-04-24 18:46:49

# Below is generated by plot.py at 2018-04-24 23:55:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 136.094 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 136.094 ms
Loss rate: 0.00%
Run 1: Report of WebRTC media — Data Link

![Graph showing throughput and delay over time]

- **Flow 1 ingress** (mean 0.06 Mbit/s)
- **Flow 1 egress** (mean 0.06 Mbit/s)

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

- **Flow 1 90th percentile** 136.09 ms

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Run 2: Statistics of WebRTC media

Start at: 2018-04-24 19:00:24
End at: 2018-04-24 19:00:54

# Below is generated by plot.py at 2018-04-24 23:55:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 136.147 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 136.147 ms
Loss rate: 0.00%
Run 2: Report of WebRTC media — Data Link

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

- **Throughput (Mbps)**
  - Flow 1 ingress (mean 0.06 Mbps)
  - Flow 1 egress (mean 0.06 Mbps)

- **Packet One-way Delay (ms)**
  - Flow 1 (95th percentile 138.15 ms)
Run 3: Statistics of WebRTC media

End at: 2018-04-24 19:15:34

# Below is generated by plot.py at 2018-04-24 23:55:48
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 136.718 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 136.718 ms
  Loss rate: 0.00%
Run 3: Report of WebRTC media — Data Link

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

**Throughput (Mbps):**
- Flow 1 ingress (mean 0.06 Mbps)
- Flow 1 egress (mean 0.06 Mbps)

**Delay (ms):**
- Flow 1 (95th percentile 136.72 ms)
Run 4: Statistics of WebRTC media

End at: 2018-04-24 19:30:03

# Below is generated by plot.py at 2018-04-24 23:55:48
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 136.267 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 136.267 ms
  Loss rate: 0.00%
Run 4: Report of WebRTC media — Data Link

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

- Flow 1 ingress (mean 0.06 Mbit/s)
- Flow 1 egress (mean 0.06 Mbit/s)

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

- Flow 1 (95th percentile 136.27 ms)
Run 5: Statistics of WebRTC media

End at: 2018-04-24 19:44:18

# Below is generated by plot.py at 2018-04-24 23:55:48
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 136.378 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 136.378 ms
  Loss rate: 0.00%
Run 5: Report of WebRTC media — Data Link
Run 6: Statistics of WebRTC media

Start at: 2018-04-24 19:58:30
End at: 2018-04-24 19:59:00

# Below is generated by plot.py at 2018-04-24 23:55:48
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 136.761 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 136.761 ms
  Loss rate: 0.00%
Run 6: Report of WebRTC media — Data Link

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

- Flow 1 ingress (mean 0.06 Mbit/s)
- Flow 1 egress (mean 0.06 Mbit/s)

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

- Flow 1 (95th percentile 136.76 ms)
Run 7: Statistics of WebRTC media

Start at: 2018-04-24 20:12:53

# Below is generated by plot.py at 2018-04-24 23:55:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 136.019 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 136.019 ms
Loss rate: 0.00%
Run 7: Report of WebRTC media — Data Link

![Graph 1: Throughput (Mb/s) vs Time (s)]

- **Flow 1 ingress** (mean 0.06 Mb/s)
- **Flow 1 egress** (mean 0.06 Mb/s)

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

- **Flow 1 (95th percentile 136.02 ms)**
Run 8: Statistics of WebRTC media

Start at: 2018-04-24 20:26:38
End at: 2018-04-24 20:27:08

# Below is generated by plot.py at 2018-04-24 23:55:48
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 136.047 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 136.047 ms
  Loss rate: 0.00%
Run 8: Report of WebRTC media — Data Link
Run 9: Statistics of WebRTC media

Start at: 2018-04-24 20:41:12
End at: 2018-04-24 20:41:42

# Below is generated by plot.py at 2018-04-24 23:55:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 135.449 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 135.449 ms
Loss rate: 0.00%
Run 9: Report of WebRTC media — Data Link
Run 10: Statistics of WebRTC media

End at: 2018-04-24 20:56:09

# Below is generated by plot.py at 2018-04-24 23:55:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 136.516 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 136.516 ms
Loss rate: 0.00%
Run 10: Report of WebRTC media — Data Link

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

![Graph 2: Per-packet one-way delay (ms)](image2)
Run 1: Statistics of Sprout

Start at: 2018-04-24 18:45:37
End at: 2018-04-24 18:46:07

# Below is generated by plot.py at 2018-04-24 23:55:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 136.514 ms
Loss rate: 0.97%
-- Flow 1:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 136.514 ms
Loss rate: 0.97%
Run 1: Report of Sprout — Data Link

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

- **Flow 1 ingress (mean 0.36 Mbit/s)**
- **Flow 1 egress (mean 0.36 Mbit/s)**

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

- **Flow 1 (95th percentile 136.51 ms)**
Run 2: Statistics of Sprout

Start at: 2018-04-24 18:59:42
End at: 2018-04-24 19:00:12

# Below is generated by plot.py at 2018-04-24 23:55:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 136.465 ms
Loss rate: 0.97%
-- Flow 1:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 136.465 ms
Loss rate: 0.97%
Run 2: Report of Sprout — Data Link
Run 3: Statistics of Sprout

End at: 2018-04-24 19:14:52

# Below is generated by plot.py at 2018-04-24 23:55:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 136.258 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 136.258 ms
Loss rate: 0.86%
Run 3: Report of Sprout — Data Link

![Graph showing throughput and latency over time.]

Throughput (Mbit/s)

Time (s)

- Flow 1 ingress (mean 0.40 Mbit/s)
- Flow 1 egress (mean 0.40 Mbit/s)

Packet delay (ms)

Time (s)

- Flow 1 (95th percentile 136.26 ms)
Run 4: Statistics of Sprout

End at: 2018-04-24 19:29:21

# Below is generated by plot.py at 2018-04-24 23:55:48
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.36 Mbit/s
  95th percentile per-packet one-way delay: 136.155 ms
  Loss rate: 0.94%
-- Flow 1:
  Average throughput: 0.36 Mbit/s
  95th percentile per-packet one-way delay: 136.155 ms
  Loss rate: 0.94%
Run 4: Report of Sprout — Data Link
Run 5: Statistics of Sprout

End at: 2018-04-24 19:43:36

# Below is generated by plot.py at 2018-04-24 23:55:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.42 Mbit/s
95th percentile per-packet one-way delay: 136.505 ms
Loss rate: 1.56%
-- Flow 1:
Average throughput: 0.42 Mbit/s
95th percentile per-packet one-way delay: 136.505 ms
Loss rate: 1.56%
Run 5: Report of Sprout — Data Link

Throughput (Mbit/s)

0 5 10 15 20 25 30

0.2 0.3 0.4 0.5 0.6 0.7 0.8

Flow 1 ingress (mean 0.42 Mbit/s)  Flow 1 egress (mean 0.42 Mbit/s)

Packet one way delay (ms)

0 5 10 15 20 25 30

136.0 136.5 137.0 137.5 138.0

Flow 1 [95th percentile 136.50 ms]
Run 6: Statistics of Sprout

End at: 2018-04-24 19:58:18

# Below is generated by plot.py at 2018-04-24 23:55:48
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.41 Mbit/s
  95th percentile per-packet one-way delay: 136.411 ms
  Loss rate: 0.86%
-- Flow 1:
  Average throughput: 0.41 Mbit/s
  95th percentile per-packet one-way delay: 136.411 ms
  Loss rate: 0.86%
Run 6: Report of Sprout — Data Link

![Graph showing throughput and packet delay over time]

Throughput (Mbps)

Flow 1 ingress (mean 0.41 Mbit/s)  Flow 1 egress (mean 0.41 Mbit/s)

Packet delay (ms)

Flow 1 (95th percentile 136.41 ms)
Run 7: Statistics of Sprout

Start at: 2018-04-24 20:12:11
End at: 2018-04-24 20:12:41

# Below is generated by plot.py at 2018-04-24 23:55:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.41 Mbit/s
95th percentile per-packet one-way delay: 136.036 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 0.41 Mbit/s
95th percentile per-packet one-way delay: 136.036 ms
Loss rate: 0.79%
Run 7: Report of Sprout — Data Link

![Graph 1: Throughput (Mbps)]

- **Flow 1 ingress (mean 0.41 Mbit/s)**
- **Flow 1 egress (mean 0.41 Mbit/s)**

![Graph 2: RTT (ms)]

- **Flow 1 (95th percentile 136.04 ms)**
Run 8: Statistics of Sprout

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

# Below is generated by plot.py at 2018-04-24 23:55:48
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.46 Mbit/s
  95th percentile per-packet one-way delay: 136.304 ms
  Loss rate: 1.01%
-- Flow 1:
  Average throughput: 0.46 Mbit/s
  95th percentile per-packet one-way delay: 136.304 ms
  Loss rate: 1.01%
Run 9: Statistics of Sprout

Start at: 2018-04-24 20:40:30
End at: 2018-04-24 20:41:01

# Below is generated by plot.py at 2018-04-24 23:55:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 136.144 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 136.144 ms
Loss rate: 0.80%
Run 9: Report of Sprout — Data Link

Throughput (Mbit/s)

- Flow 1 ingress (mean 0.44 Mbit/s)
- Flow 1 egress (mean 0.44 Mbit/s)

Packet error rate

- Flow 1 (95th percentile 136.14 ms)
Run 10: Statistics of Sprout

Start at: 2018-04-24 20:54:57

# Below is generated by plot.py at 2018-04-24 23:55:48
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.42 Mbit/s
  95th percentile per-packet one-way delay: 136.356 ms
  Loss rate: 0.83%
-- Flow 1:
  Average throughput: 0.42 Mbit/s
  95th percentile per-packet one-way delay: 136.356 ms
  Loss rate: 0.83%
Run 10: Report of Sprout — Data Link
Run 1: Statistics of TaoVA-100x

Start at: 2018-04-24 18:40:57
End at: 2018-04-24 18:41:27

# Below is generated by plot.py at 2018-04-24 23:55:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 206.90 Mbit/s
95th percentile per-packet one-way delay: 136.535 ms
Loss rate: 1.01%
-- Flow 1:
Average throughput: 206.90 Mbit/s
95th percentile per-packet one-way delay: 136.535 ms
Loss rate: 1.01%
Run 1: Report of TaoVA-100x — Data Link

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

- **Flow 1 ingress (mean 207.10 Mbit/s)**
- **Flow 1 egress (mean 206.90 Mbit/s)**

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

- **Flow 1 (95th percentile 136.53 ms)**
Run 2: Statistics of TaoVA-100x


# Below is generated by plot.py at 2018-04-24 23:55:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 13.34 Mbit/s
95th percentile per-packet one-way delay: 136.721 ms
Loss rate: 0.93%
-- Flow 1:
Average throughput: 13.34 Mbit/s
95th percentile per-packet one-way delay: 136.721 ms
Loss rate: 0.93%
Run 2: Report of TaoVA-100x — Data Link
Run 3: Statistics of TaoVA-100x

Start at: 2018-04-24 19:09:40
End at: 2018-04-24 19:10:10

# Below is generated by plot.py at 2018-04-24 23:55:48
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 201.76 Mbit/s
  95th percentile per-packet one-way delay: 136.291 ms
  Loss rate: 1.04%
-- Flow 1:
  Average throughput: 201.76 Mbit/s
  95th percentile per-packet one-way delay: 136.291 ms
  Loss rate: 1.04%
Run 3: Report of TaoVA-100x — Data Link

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

![Graph 2: Packet Egress Delay (ms)]

*Flow 1: Ingress (mean 202.04 Mbit/s) - Egress (mean 201.76 Mbit/s)*

*Flow 1 (95th percentile 136.29 ms)*
Run 4: Statistics of TaoVA-100x


# Below is generated by plot.py at 2018-04-24 23:55:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 206.11 Mbit/s
95th percentile per-packet one-way delay: 136.723 ms
Loss rate: 0.96%
-- Flow 1:
Average throughput: 206.11 Mbit/s
95th percentile per-packet one-way delay: 136.723 ms
Loss rate: 0.96%
Run 4: Report of TaoVA-100x — Data Link

![Graph 1: Throughput Over Time]

- Flow 1 ingress (mean 206.26 Mbit/s)
- Flow 1 egress (mean 206.11 Mbit/s)

![Graph 2: Packet One-Way Delay Over Time]

- Flow 1 (95th percentile 136.72 ms)
Run 5: Statistics of TaoVA-100x

Start at: 2018-04-24 19:38:40
End at: 2018-04-24 19:39:10

# Below is generated by plot.py at 2018-04-24 23:55:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 13.42 Mbit/s
95th percentile per-packet one-way delay: 135.949 ms
Loss rate: 0.92%
-- Flow 1:
Average throughput: 13.42 Mbit/s
95th percentile per-packet one-way delay: 135.949 ms
Loss rate: 0.92%
Run 6: Statistics of TaoVA-100x

End at: 2018-04-24 19:53:34

# Below is generated by plot.py at 2018-04-24 23:55:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 206.94 Mbit/s
95th percentile per-packet one-way delay: 136.463 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 206.94 Mbit/s
95th percentile per-packet one-way delay: 136.463 ms
Loss rate: 0.75%
Run 6: Report of TaoVA-100x — Data Link
Run 7: Statistics of TaoVA-100x

Start at: 2018-04-24 20:07:45
End at: 2018-04-24 20:08:15

# Below is generated by plot.py at 2018-04-24 23:55:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 11.86 Mbit/s
95th percentile per-packet one-way delay: 136.255 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 11.86 Mbit/s
95th percentile per-packet one-way delay: 136.255 ms
Loss rate: 0.39%
Run 7: Report of TaoVA-100x — Data Link

[Graph showing throughput and latency over time]
Run 8: Statistics of TaoVA-100x


# Below is generated by plot.py at 2018-04-24 23:55:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 13.12 Mbit/s
95th percentile per-packet one-way delay: 136.240 ms
Loss rate: 0.94%
-- Flow 1:
Average throughput: 13.12 Mbit/s
95th percentile per-packet one-way delay: 136.240 ms
Loss rate: 0.94%
Run 8: Report of TaoVA-100x — Data Link

![Throughput vs Time Graph]

- *Flow 1 ingress (mean 13.12 Mbit/s)*
- *Flow 1 egress (mean 13.12 Mbit/s)*

![Packet delivery time vs Time Graph]

- *Flow 1 (95th percentile 136.24 ms)*

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Run 9: Statistics of TaoVA-100x

Start at: 2018-04-24 20:35:45
End at: 2018-04-24 20:36:15

# Below is generated by plot.py at 2018-04-24 23:55:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 206.23 Mbit/s
95th percentile per-packet one-way delay: 136.469 ms
Loss rate: 0.96%
-- Flow 1:
Average throughput: 206.23 Mbit/s
95th percentile per-packet one-way delay: 136.469 ms
Loss rate: 0.96%
Run 9: Report of TaoVA-100x — Data Link

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

**Throughput (Mbps):**
- Flow 1 ingress (mean 206.32 Mbps)
- Flow 1 egress (mean 206.23 Mbps)

**Packet Delay (ms):**
- Flow 1 (95th percentile 136.47 ms)
Run 10: Statistics of TaoVA-100x

Start at: 2018-04-24 20:50:17
End at: 2018-04-24 20:50:47

# Below is generated by plot.py at 2018-04-24 23:56:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 197.86 Mbit/s
95th percentile per-packet one-way delay: 136.904 ms
Loss rate: 0.96%
-- Flow 1:
Average throughput: 197.86 Mbit/s
95th percentile per-packet one-way delay: 136.904 ms
Loss rate: 0.96%
Run 10: Report of TaoVA-100x — Data Link
Run 1: Statistics of TCP Vegas

Start at: 2018-04-24 18:54:34

# Below is generated by plot.py at 2018-04-24 23:56:07
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 29.11 Mbit/s
  95th percentile per-packet one-way delay: 139.982 ms
  Loss rate: 0.98%
-- Flow 1:
  Average throughput: 29.11 Mbit/s
  95th percentile per-packet one-way delay: 139.982 ms
  Loss rate: 0.98%
Run 1: Report of TCP Vegas — Data Link
Run 2: Statistics of TCP Vegas

Start at: 2018-04-24 19:08:53
End at: 2018-04-24 19:09:23

# Below is generated by plot.py at 2018-04-24 23:56:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 53.13 Mbit/s
95th percentile per-packet one-way delay: 143.066 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 53.13 Mbit/s
95th percentile per-packet one-way delay: 143.066 ms
Loss rate: 0.56%
Run 2: Report of TCP Vegas — Data Link
Run 3: Statistics of TCP Vegas

End at: 2018-04-24 19:23:54

# Below is generated by plot.py at 2018-04-24 23:56:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 22.42 Mbit/s
95th percentile per-packet one-way delay: 138.420 ms
Loss rate: 0.96%
-- Flow 1:
Average throughput: 22.42 Mbit/s
95th percentile per-packet one-way delay: 138.420 ms
Loss rate: 0.96%
Run 3: Report of TCP Vegas — Data Link

![TCP Vegas Data Link Graph](image1)

- **Flow 1 ingress (mean 22.43 Mbit/s)**
- **Flow 1 egress (mean 22.42 Mbit/s)**

![TCP Vegas Data Link Graph](image2)

- **Flow 1 (95th percentile 138.42 ms)**
Run 4: Statistics of TCP Vegas

End at: 2018-04-24 19:38:25

# Below is generated by plot.py at 2018-04-24 23:56:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 28.05 Mbit/s
95th percentile per-packet one-way delay: 139.208 ms
Loss rate: 1.00%
-- Flow 1:
Average throughput: 28.05 Mbit/s
95th percentile per-packet one-way delay: 139.208 ms
Loss rate: 1.00%
Run 4: Report of TCP Vegas — Data Link

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

- **Flow 1 ingress (mean 28.07 Mbps)**
- **Flow 1 egress (mean 28.05 Mbps)**

![Graph of Packet Error Rate (ms) over Time (s)]

- **Flow 1 (95th percentile 139.21 ms)**
Run 5: Statistics of TCP Vegas


# Below is generated by plot.py at 2018-04-24 23:56:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 46.41 Mbit/s
95th percentile per-packet one-way delay: 139.361 ms
Loss rate: 0.96%
-- Flow 1:
Average throughput: 46.41 Mbit/s
95th percentile per-packet one-way delay: 139.361 ms
Loss rate: 0.96%
Run 5: Report of TCP Vegas — Data Link
Run 6: Statistics of TCP Vegas

Start at: 2018-04-24 20:07:00
End at: 2018-04-24 20:07:30

# Below is generated by plot.py at 2018-04-24 23:56:17
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 24.58 Mbit/s
  95th percentile per-packet one-way delay: 139.688 ms
  Loss rate: 0.89%
-- Flow 1:
  Average throughput: 24.58 Mbit/s
  95th percentile per-packet one-way delay: 139.688 ms
  Loss rate: 0.89%
Run 6: Report of TCP Vegas — Data Link

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

Flow 1 ingress (mean 24.58 Mbit/s)  
Flow 1 egress (mean 24.58 Mbit/s)

Flow 1 (99th percentile 139.69 ms)
Run 7: Statistics of TCP Vegas


# Below is generated by plot.py at 2018-04-24 23:56:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 82.50 Mbit/s
95th percentile per-packet one-way delay: 145.446 ms
Loss rate: 0.99%
-- Flow 1:
Average throughput: 82.50 Mbit/s
95th percentile per-packet one-way delay: 145.446 ms
Loss rate: 0.99%
Run 7: Report of TCP Vegas — Data Link

![Throughput vs Time](image1)

- **Flow 1 ingress (mean 82.58 Mbit/s)**
- **Flow 1 egress (mean 82.50 Mbit/s)**

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

- **Flow 1 (95th percentile 145.45 ms)**

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Run 8: Statistics of TCP Vegas

Start at: 2018-04-24 20:34:57
End at: 2018-04-24 20:35:27

# Below is generated by plot.py at 2018-04-24 23:57:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 82.61 Mbit/s
95th percentile per-packet one-way delay: 143.409 ms
Loss rate: 0.97%
-- Flow 1:
Average throughput: 82.61 Mbit/s
95th percentile per-packet one-way delay: 143.409 ms
Loss rate: 0.97%
Run 8: Report of TCP Vegas — Data Link

![Graph of Throughput (Mbit/s) vs Time (s)]

- Flow 1 ingress (mean 82.66 Mbit/s)
- Flow 1 egress (mean 82.61 Mbit/s)

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

- Flow 1 (95th percentile 143.41 ms)
Run 9: Statistics of TCP Vegas

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

# Below is generated by plot.py at 2018-04-24 23:57:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 33.92 Mbit/s
95th percentile per-packet one-way delay: 137.303 ms
Loss rate: 0.99%
-- Flow 1:
Average throughput: 33.92 Mbit/s
95th percentile per-packet one-way delay: 137.303 ms
Loss rate: 0.99%
Run 9: Report of TCP Vegas — Data Link
Run 10: Statistics of TCP Vegas

Start at: 2018-04-24 21:03:53

# Below is generated by plot.py at 2018-04-24 23:57:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 70.58 Mbit/s
95th percentile per-packet one-way delay: 145.554 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 70.58 Mbit/s
95th percentile per-packet one-way delay: 145.554 ms
Loss rate: 0.37%
Run 10: Report of TCP Vegas — Data Link

[Graph showing throughput over time with two different flow rates: 70.20 Mbit/s for ingress and 70.58 Mbit/s for egress.]

[Graph showing per-packet one-way delay over time with a 95th percentile of 145.55 ms.]
Run 1: Statistics of Verus

End at: 2018-04-24 18:48:18

# Below is generated by plot.py at 2018-04-24 23:57:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 105.76 Mbit/s
95th percentile per-packet one-way delay: 157.979 ms
Loss rate: 2.18%
-- Flow 1:
Average throughput: 105.76 Mbit/s
95th percentile per-packet one-way delay: 157.979 ms
Loss rate: 2.18%
Run 1: Report of Verus — Data Link

![Graphs showing network performance metrics over time.]

- **Flow 1 ingress (mean 107.49 Mbit/s)**
- **Flow 1 egress (mean 105.76 Mbit/s)**

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

- Flow 1 (95th percentile 157.98 ms)
Run 2: Statistics of Verus

Start at: 2018-04-24 19:01:53
End at: 2018-04-24 19:02:23

# Below is generated by plot.py at 2018-04-24 23:59:47
# Datalink statistics
-- Total of 1 flow:
Average throughput: 228.38 Mbit/s
95th percentile per-packet one-way delay: 155.740 ms
Loss rate: 1.09%
-- Flow 1:
Average throughput: 228.38 Mbit/s
95th percentile per-packet one-way delay: 155.740 ms
Loss rate: 1.09%
Run 2: Report of Verus — Data Link

![Graph of throughput and packet delay over time]

Flow 1 ingress (mean 227.97 Mb/s)  Flow 1 egress (mean 228.38 Mb/s)

Flow 1 (95th percentile 155.74 ms)
Run 3: Statistics of Verus

End at: 2018-04-24 19:17:03

# Below is generated by plot.py at 2018-04-24 23:59:47
# Datalink statistics
-- Total of 1 flow:
Average throughput: 189.81 Mbit/s
95th percentile per-packet one-way delay: 171.949 ms
Loss rate: 1.37%
-- Flow 1:
Average throughput: 189.81 Mbit/s
95th percentile per-packet one-way delay: 171.949 ms
Loss rate: 1.37%
Run 3: Report of Verus — Data Link

Graph showing throughput and latency over time with two lines indicating different data flow rates.

Flow 1 ingress (mean 190.69 Mbit/s) and Flow 1 egress (mean 189.81 Mbit/s).

Graph showing packet delay with Flow 1 (95th percentile 171.95 ms).
Run 4: Statistics of Verus

Start at: 2018-04-24 19:31:02

# Below is generated by plot.py at 2018-04-24 23:59:47
# Datalink statistics
-- Total of 1 flow:
Average throughput: 154.49 Mbit/s
95th percentile per-packet one-way delay: 185.578 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 154.49 Mbit/s
95th percentile per-packet one-way delay: 185.578 ms
Loss rate: 0.79%
Run 4: Report of Verus — Data Link

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

- Flow 1 ingress (mean 155.11 Mb/s)
- Flow 1 egress (mean 154.49 Mb/s)

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

- Flow 1 (95th percentile 185.58 ms)
Run 5: Statistics of Verus

Start at: 2018-04-24 19:45:17
End at: 2018-04-24 19:45:47

# Below is generated by plot.py at 2018-04-24 23:59:56
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 216.09 Mbit/s
  95th percentile per-packet one-way delay: 182.070 ms
  Loss rate: 1.01%
-- Flow 1:
  Average throughput: 216.09 Mbit/s
  95th percentile per-packet one-way delay: 182.070 ms
  Loss rate: 1.01%
Run 5: Report of Verus — Data Link
Run 6: Statistics of Verus

End at: 2018-04-24 20:00:29

# Below is generated by plot.py at 2018-04-25 00:00:44
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 231.90 Mbit/s
  95th percentile per-packet one-way delay: 223.903 ms
  Loss rate: 0.76%
-- Flow 1:
  Average throughput: 231.90 Mbit/s
  95th percentile per-packet one-way delay: 223.903 ms
  Loss rate: 0.76%
Run 6: Report of Verus — Data Link
Run 7: Statistics of Verus

End at: 2018-04-24 20:14:52

# Below is generated by plot.py at 2018-04-25 00:00:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 90.75 Mbit/s
95th percentile per-packet one-way delay: 155.404 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 90.75 Mbit/s
95th percentile per-packet one-way delay: 155.404 ms
Loss rate: 0.07%
Run 7: Report of Verus — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 89.98 Mbit/s)  Flow 1 egress (mean 90.75 Mbit/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 155.40 ms)
Run 8: Statistics of Verus


# Below is generated by plot.py at 2018-04-25 00:00:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 87.08 Mbit/s
95th percentile per-packet one-way delay: 147.060 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 87.08 Mbit/s
95th percentile per-packet one-way delay: 147.060 ms
Loss rate: 0.31%
Run 8: Report of Verus — Data Link

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

![Graph 2: Packet Delay vs Time](image2.png)
Run 9: Statistics of Verus

End at: 2018-04-24 20:43:12

# Below is generated by plot.py at 2018-04-25 00:00:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 114.59 Mbit/s
95th percentile per-packet one-way delay: 168.178 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 114.59 Mbit/s
95th percentile per-packet one-way delay: 168.178 ms
Loss rate: 0.40%
Run 9: Report of Verus — Data Link

![Graph of throughput and packet delay over time for Flow 1, showing ingress and egress data with mean values.]
Run 10: Statistics of Verus

Start at: 2018-04-24 20:57:08
End at: 2018-04-24 20:57:38

# Below is generated by plot.py at 2018-04-25 00:00:44
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 77.88 Mbit/s
  95th percentile per-packet one-way delay: 146.786 ms
  Loss rate: 4.21%
-- Flow 1:
  Average throughput: 77.88 Mbit/s
  95th percentile per-packet one-way delay: 146.786 ms
  Loss rate: 4.21%
Run 10: Report of Verus — Data Link
Run 1: Statistics of Copa

Start at: 2018-04-24 18:42:00
End at: 2018-04-24 18:42:30

# Below is generated by plot.py at 2018-04-25 00:00:44
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 72.98 Mbit/s
  95th percentile per-packet one-way delay: 136.726 ms
  Loss rate: 1.28%
-- Flow 1:
  Average throughput: 72.98 Mbit/s
  95th percentile per-packet one-way delay: 136.726 ms
  Loss rate: 1.28%
Run 1: Report of Copa — Data Link

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

- **Flow 1 ingress (mean 73.17 Mbps)**
- **Flow 1 egress (mean 72.98 Mbps)**

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

- **Flow 1 (95th percentile 136.73 ms)**
Run 2: Statistics of Copa

Start at: 2018-04-24 18:56:04
End at: 2018-04-24 18:56:34

# Below is generated by plot.py at 2018-04-25 00:01:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 78.09 Mbit/s
95th percentile per-packet one-way delay: 136.223 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 78.09 Mbit/s
95th percentile per-packet one-way delay: 136.223 ms
Loss rate: 0.56%
Run 2: Report of Copa — Data Link

![Graph of throughput and packet delay over time]

- Flow 1 ingress (mean 77.82 Mbit/s)
- Flow 1 egress (mean 78.09 Mbit/s)

Flow 1 (95th percentile 136.22 ms)
Run 3: Statistics of Copa

Start at: 2018-04-24 19:10:42
End at: 2018-04-24 19:11:12

# Below is generated by plot.py at 2018-04-25 00:01:37
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 77.31 Mbit/s
  95th percentile per-packet one-way delay: 136.146 ms
  Loss rate: 0.99%
-- Flow 1:
  Average throughput: 77.31 Mbit/s
  95th percentile per-packet one-way delay: 136.146 ms
  Loss rate: 0.99%
Run 3: Report of Copa — Data Link

![Graph 1](image1)

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

End at: 2018-04-24 19:25:42

# Below is generated by plot.py at 2018-04-25 00:01:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 77.95 Mbit/s
95th percentile per-packet one-way delay: 136.637 ms
Loss rate: 0.97%
-- Flow 1:
Average throughput: 77.95 Mbit/s
95th percentile per-packet one-way delay: 136.637 ms
Loss rate: 0.97%
Run 4: Report of Copa — Data Link
Run 5: Statistics of Copa


# Below is generated by plot.py at 2018-04-25 00:01:59
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 74.73 Mbit/s
  95th percentile per-packet one-way delay: 136.288 ms
  Loss rate: 1.05%
-- Flow 1:
  Average throughput: 74.73 Mbit/s
  95th percentile per-packet one-way delay: 136.288 ms
  Loss rate: 1.05%
Run 6: Statistics of Copa

Start at: 2018-04-24 19:54:07
End at: 2018-04-24 19:54:37

# Below is generated by plot.py at 2018-04-25 00:01:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 70.84 Mbit/s
95th percentile per-packet one-way delay: 136.345 ms
Loss rate: 0.21%
-- Flow 1:
Average throughput: 70.84 Mbit/s
95th percentile per-packet one-way delay: 136.345 ms
Loss rate: 0.21%
Run 6: Report of Copa — Data Link

![Graph of throughput and packet delay over time for Flow 1 ingress and egress, with mean values labeled.](image)

![Graph of packet delay over time for Flow 1, showing 95th percentile delay.](image)
Run 7: Statistics of Copa

Start at: 2018-04-24 20:08:29
End at: 2018-04-24 20:08:59

# Below is generated by plot.py at 2018-04-25 00:02:17
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 77.31 Mbit/s
  95th percentile per-packet one-way delay: 136.501 ms
  Loss rate: 1.05%
-- Flow 1:
  Average throughput: 77.31 Mbit/s
  95th percentile per-packet one-way delay: 136.501 ms
  Loss rate: 1.05%
Run 7: Report of Copa — Data Link

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

- Flow 1 ingress (mean 77.41 Mbit/s)
- Flow 1 egress (mean 77.31 Mbit/s)

![Graph showing packet delay over time.]

- Flow 1 (95th percentile 136.50 ms)
Run 8: Statistics of Copa


# Below is generated by plot.py at 2018-04-25 00:02:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 61.73 Mbit/s
95th percentile per-packet one-way delay: 135.749 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 61.73 Mbit/s
95th percentile per-packet one-way delay: 135.749 ms
Loss rate: 0.48%
Run 8: Report of Copa — Data Link

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

---

Flow 1 ingress (mean 61.46 Mbit/s)  Flow 1 egress (mean 61.73 Mbit/s)

Flow 1 (95th percentile 135.75 ms)
Run 9: Statistics of Copa

Start at: 2018-04-24 20:36:48
End at: 2018-04-24 20:37:18

# Below is generated by plot.py at 2018-04-25 00:03:00
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 72.08 Mbit/s
  95th percentile per-packet one-way delay: 135.914 ms
  Loss rate: 0.49%
-- Flow 1:
  Average throughput: 72.08 Mbit/s
  95th percentile per-packet one-way delay: 135.914 ms
  Loss rate: 0.49%
Run 9: Report of Copa — Data Link

[Graph showing throughput and delay over time]

Flow 1 ingress (mean 71.78 Mbit/s)  |  Flow 1 egress (mean 72.08 Mbit/s)

[Graph showing packet delay over time]

Flow 1 (95th percentile 135.91 ms)
Run 10: Statistics of Copa

Start at: 2018-04-24 20:51:19
End at: 2018-04-24 20:51:49

# Below is generated by plot.py at 2018-04-25 00:03:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 78.49 Mbit/s
95th percentile per-packet one-way delay: 135.943 ms
Loss rate: 1.03%
-- Flow 1:
Average throughput: 78.49 Mbit/s
95th percentile per-packet one-way delay: 135.943 ms
Loss rate: 1.03%
Run 10: Report of Copa — Data Link
Run 1: Statistics of FillP

Start at: 2018-04-24 18:43:42
End at: 2018-04-24 18:44:12

# Below is generated by plot.py at 2018-04-25 00:14:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 765.73 Mbit/s
95th percentile per-packet one-way delay: 216.258 ms
Loss rate: 5.17%
-- Flow 1:
Average throughput: 765.73 Mbit/s
95th percentile per-packet one-way delay: 216.258 ms
Loss rate: 5.17%
Run 1: Report of FillP — Data Link

- Flow 1 ingress (mean 800.14 Mbit/s)
- Flow 1 egress (mean 765.73 Mbit/s)

- Flow 1 (95th percentile 216.26 ms)
Run 2: Statistics of FillP

End at: 2018-04-24 18:58:17

# Below is generated by plot.py at 2018-04-25 00:14:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 760.78 Mbit/s
95th percentile per-packet one-way delay: 217.529 ms
Loss rate: 5.11%
-- Flow 1:
Average throughput: 760.78 Mbit/s
95th percentile per-packet one-way delay: 217.529 ms
Loss rate: 5.11%
Run 2: Report of FillP — Data Link

[Graph showing throughput and per packet one-way delay over time]
Run 3: Statistics of FillP

Start at: 2018-04-24 19:12:25
End at: 2018-04-24 19:12:55

# Below is generated by plot.py at 2018-04-25 00:15:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 774.40 Mbit/s
95th percentile per-packet one-way delay: 215.507 ms
Loss rate: 5.49%
-- Flow 1:
Average throughput: 774.40 Mbit/s
95th percentile per-packet one-way delay: 215.507 ms
Loss rate: 5.49%
Run 3: Report of FillP — Data Link

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

*Legend:*
- Flow 1 ingress (mean 811.96 Mbit/s)
- Flow 1 egress (mean 774.40 Mbit/s)

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

*Legend:*
- Flow 1 (95th percentile 215.51 ms)
Run 4: Statistics of FillP


# Below is generated by plot.py at 2018-04-25 00:15:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 754.67 Mbit/s
95th percentile per-packet one-way delay: 221.214 ms
Loss rate: 8.60%
-- Flow 1:
Average throughput: 754.67 Mbit/s
95th percentile per-packet one-way delay: 221.214 ms
Loss rate: 8.60%
Run 4: Report of FillP — Data Link
Run 5: Statistics of FillP

Start at: 2018-04-24 19:41:10
End at: 2018-04-24 19:41:40

# Below is generated by plot.py at 2018-04-25 00:15:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 756.43 Mbit/s
95th percentile per-packet one-way delay: 215.542 ms
Loss rate: 4.87%
-- Flow 1:
Average throughput: 756.43 Mbit/s
95th percentile per-packet one-way delay: 215.542 ms
Loss rate: 4.87%
Run 5: Report of FillP — Data Link
Run 6: Statistics of FillP

End at: 2018-04-24 19:56:22

# Below is generated by plot.py at 2018-04-25 00:15:39
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 755.65 Mbit/s
  95th percentile per-packet one-way delay: 219.880 ms
  Loss rate: 6.39%
-- Flow 1:
  Average throughput: 755.65 Mbit/s
  95th percentile per-packet one-way delay: 219.880 ms
  Loss rate: 6.39%
Run 6: Report of FillP — Data Link
Run 7: Statistics of FillP

Start at: 2018-04-24 20:10:15
End at: 2018-04-24 20:10:45

# Below is generated by plot.py at 2018-04-25 00:15:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 754.86 Mbit/s
95th percentile per-packet one-way delay: 213.611 ms
Loss rate: 4.31%
-- Flow 1:
Average throughput: 754.86 Mbit/s
95th percentile per-packet one-way delay: 213.611 ms
Loss rate: 4.31%
Run 7: Report of FillP — Data Link

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

- Flow 1 Ingress (mean 781.64 Mbps)
- Flow 1 Egress (mean 754.86 Mbps)

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

- Flow 1 (95th percentile 213.61 ms)
Run 8: Statistics of FillP

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

# Below is generated by plot.py at 2018-04-25 00:15:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 74.01 Mbit/s
95th percentile per-packet one-way delay: 348.716 ms
Loss rate: 11.79%
-- Flow 1:
Average throughput: 74.01 Mbit/s
95th percentile per-packet one-way delay: 348.716 ms
Loss rate: 11.79%
Run 8: Report of FillP — Data Link

![Graph 1: Throughput vs Time (Mb/s)]

- Flow 1 ingress (mean 83.12 Mb/s)
- Flow 1 egress (mean 74.01 Mb/s)

![Graph 2: Per Packet One-Way Delay (ms)]

- Flow 1 (95th percentile 348.72 ms)
Run 9: Statistics of FillP

Start at: 2018-04-24 20:38:34

# Below is generated by plot.py at 2018-04-25 00:18:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 735.96 Mbit/s
95th percentile per-packet one-way delay: 219.600 ms
Loss rate: 7.53%
-- Flow 1:
Average throughput: 735.96 Mbit/s
95th percentile per-packet one-way delay: 219.600 ms
Loss rate: 7.53%
Run 9: Report of FillP — Data Link

![Graph of throughput over time showing two flows](image)

Flow 1 Ingress (mean 788.62 Mbits/s) vs Flow 1 Egress (mean 735.96 Mbits/s)

![Graph of per-packet one-way delay over time showing flow 1](image)

Flow 1 (95th percentile 219.60 ms)
Run 10: Statistics of FillP

Start at: 2018-04-24 20:53:03
End at: 2018-04-24 20:53:33

# Below is generated by plot.py at 2018-04-25 00:26:12
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 722.39 Mbit/s
  95th percentile per-packet one-way delay: 221.408 ms
  Loss rate: 6.54%
-- Flow 1:
  Average throughput: 722.39 Mbit/s
  95th percentile per-packet one-way delay: 221.408 ms
  Loss rate: 6.54%
Run 10: Report of FillIP — Data Link

![Graph of Throughput](image1)

- **Flow 1 Ingress** (mean 785.88 Mbits)
- **Flow 1 Egress** (mean 722.39 Mbits)

![Graph of Per-Socket Round-Trip Delay](image2)

- **Flow 1** (95th percentile 221.41 ms)
Run 1: Statistics of Indigo-1-32


# Below is generated by plot.py at 2018-04-25 00:26:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 133.81 Mbit/s
95th percentile per-packet one-way delay: 136.812 ms
Loss rate: 0.97%
-- Flow 1:
Average throughput: 133.81 Mbit/s
95th percentile per-packet one-way delay: 136.812 ms
Loss rate: 0.97%
Run 1: Report of Indigo-1-32 — Data Link

![Graph of throughput and packet delay over time](image)

**Throughput (Mbps)**

- Flow 1 ingress (mean 133.86 Mbps)
- Flow 1 egress (mean 133.81 Mbps)

**Packet Delay (ms)**

- Flow 1 (95th percentile 136.81 ms)
Run 2: Statistics of Indigo-1-32

End at: 2018-04-24 18:57:25

# Below is generated by plot.py at 2018-04-25 00:26:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 134.91 Mbit/s
95th percentile per-packet one-way delay: 136.656 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 134.91 Mbit/s
95th percentile per-packet one-way delay: 136.656 ms
Loss rate: 0.98%
Run 2: Report of Indigo-1-32 — Data Link
Run 3: Statistics of Indigo-1-32

End at: 2018-04-24 19:12:03

# Below is generated by plot.py at 2018-04-25 00:26:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 131.64 Mbit/s
95th percentile per-packet one-way delay: 136.039 ms
Loss rate: 0.94%
-- Flow 1:
Average throughput: 131.64 Mbit/s
95th percentile per-packet one-way delay: 136.039 ms
Loss rate: 0.94%
Run 4: Statistics of Indigo-1-32

Start at: 2018-04-24 19:26:03
End at: 2018-04-24 19:26:33

# Below is generated by plot.py at 2018-04-25 00:26:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 131.51 Mbit/s
95th percentile per-packet one-way delay: 136.246 ms
Loss rate: 0.97%
-- Flow 1:
Average throughput: 131.51 Mbit/s
95th percentile per-packet one-way delay: 136.246 ms
Loss rate: 0.97%
Run 4: Report of Indigo-1-32 — Data Link

![Graph showing throughput and packet delay over time for Flow 1 ingress and egress with mean rates of 131.57 Mbit/s and 131.51 Mbit/s respectively.]

![Graph showing packet delay over time for Flow 1 with 95th percentile of 136.25 ms.]
Run 5: Statistics of Indigo-1-32

End at: 2018-04-24 19:40:45

# Below is generated by plot.py at 2018-04-25 00:26:12
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 178.21 Mbit/s
  95th percentile per-packet one-way delay: 136.591 ms
  Loss rate: 0.91%
-- Flow 1:
  Average throughput: 178.21 Mbit/s
  95th percentile per-packet one-way delay: 136.591 ms
  Loss rate: 0.91%
Run 5: Report of Indigo-1-32 — Data Link

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

- **Flow 1 ingress (mean 178.19 Mbps)**
- **Flow 1 egress (mean 178.21 Mbps)**

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

- **Flow 1 (95th percentile 136.59 ms)**
Run 6: Statistics of Indigo-1-32

Start at: 2018-04-24 19:54:57

# Below is generated by plot.py at 2018-04-25 00:26:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 175.32 Mbit/s
95th percentile per-packet one-way delay: 136.468 ms
Loss rate: 0.91%
-- Flow 1:
Average throughput: 175.32 Mbit/s
95th percentile per-packet one-way delay: 136.468 ms
Loss rate: 0.91%
Run 6: Report of Indigo-1-32 — Data Link
Run 7: Statistics of Indigo-1-32

End at: 2018-04-24 20:09:50

# Below is generated by plot.py at 2018-04-25 00:26:12
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 176.97 Mbit/s
  95th percentile per-packet one-way delay: 135.845 ms
  Loss rate: 0.90%
-- Flow 1:
  Average throughput: 176.97 Mbit/s
  95th percentile per-packet one-way delay: 135.845 ms
  Loss rate: 0.90%
Run 7: Report of Indigo-1-32 — Data Link

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

- Flow 1 ingress (mean 176.88 Mbit/s)
- Flow 1 egress (mean 176.97 Mbit/s)

![Graph 2: First packet end-to-end delay (ms) vs. Time (s)]

- Flow 1 (95th percentile 135.84 ms)
Run 8: Statistics of Indigo-1-32

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

# Below is generated by plot.py at 2018-04-25 00:26:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 133.25 Mbit/s
95th percentile per-packet one-way delay: 135.949 ms
Loss rate: 0.96%
-- Flow 1:
Average throughput: 133.25 Mbit/s
95th percentile per-packet one-way delay: 135.949 ms
Loss rate: 0.96%
Run 8: Report of Indigo-1-32 — Data Link
Run 9: Statistics of Indigo-1-32

End at: 2018-04-24 20:38:08

# Below is generated by plot.py at 2018-04-25 00:26:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 173.67 Mbit/s
95th percentile per-packet one-way delay: 135.917 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 173.67 Mbit/s
95th percentile per-packet one-way delay: 135.917 ms
Loss rate: 0.84%
Run 9: Report of Indigo-1-32 — Data Link

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

- Flow 1 ingress (mean 173.54 Mbit/s)
- Flow 1 egress (mean 173.67 Mbit/s)

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

- Flow 1 (95th percentile 135.92 ms)
Run 10: Statistics of Indigo-1-32

Start at: 2018-04-24 20:52:10
End at: 2018-04-24 20:52:40

# Below is generated by plot.py at 2018-04-25 00:26:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 133.55 Mbit/s
95th percentile per-packet one-way delay: 135.573 ms
Loss rate: 0.94%
-- Flow 1:
Average throughput: 133.55 Mbit/s
95th percentile per-packet one-way delay: 135.573 ms
Loss rate: 0.94%
Run 10: Report of Indigo-1-32 — Data Link

![Graph of Throughput vs Time]

- Flow 1 ingress (mean 133.47 Mbit/s)
- Flow 1 egress (mean 133.55 Mbit/s)

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

- Flow 1 (95th percentile 135.57 ms)
Run 1: Statistics of PCC-Vivace

End at: 2018-04-24 18:51:23

# Below is generated by plot.py at 2018-04-25 00:26:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 261.06 Mbit/s
95th percentile per-packet one-way delay: 146.058 ms
Loss rate: 1.40%
-- Flow 1:
Average throughput: 261.06 Mbit/s
95th percentile per-packet one-way delay: 146.058 ms
Loss rate: 1.40%
Run 1: Report of PCC-Vivace — Data Link
Run 2: Statistics of PCC-Vivace

Start at: 2018-04-24 19:05:06
End at: 2018-04-24 19:05:36

# Below is generated by plot.py at 2018-04-25 00:26:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 333.06 Mbit/s
95th percentile per-packet one-way delay: 137.594 ms
Loss rate: 1.04%
-- Flow 1:
Average throughput: 333.06 Mbit/s
95th percentile per-packet one-way delay: 137.594 ms
Loss rate: 1.04%
Run 2: Report of PCC-Vivace — Data Link

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

- Flow 1 ingress (mean 333.48 Mbit/s)
- Flow 1 egress (mean 333.06 Mbit/s)

- Flow 1 (95th percentile 137.59 ms)
Run 3: Statistics of PCC-Vivace


# Below is generated by plot.py at 2018-04-25 00:26:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 256.92 Mbit/s
95th percentile per-packet one-way delay: 159.132 ms
Loss rate: 1.75%
-- Flow 1:
Average throughput: 256.92 Mbit/s
95th percentile per-packet one-way delay: 159.132 ms
Loss rate: 1.75%
Run 3: Report of PCC-Vivace — Data Link

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

- Flow 1 ingress (mean 259.10 Mbit/s)
- Flow 1 egress (mean 256.92 Mbit/s)

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

- Flow 1 (95th percentile 159.13 ms)
Run 4: Statistics of PCC-Vivace

End at: 2018-04-24 19:34:43

# Below is generated by plot.py at 2018-04-25 00:26:13
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 264.80 Mbit/s
  95th percentile per-packet one-way delay: 163.949 ms
  Loss rate: 1.26%
-- Flow 1:
  Average throughput: 264.80 Mbit/s
  95th percentile per-packet one-way delay: 163.949 ms
  Loss rate: 1.26%
Run 4: Report of PCC-Vivace — Data Link

![Graph showing throughput and delay over time with multiple data points and lines representing different flow conditions.]

- Flow 1 ingress (mean 265.73 Mbit/s)
- Flow 1 egress (mean 264.80 Mbit/s)

Flow 1 (95th percentile 163.95 ms)
Run 5: Statistics of PCC-Vivace

End at: 2018-04-24 19:49:02

# Below is generated by plot.py at 2018-04-25 00:26:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 309.94 Mbit/s
95th percentile per-packet one-way delay: 139.043 ms
Loss rate: 1.72%
-- Flow 1:
Average throughput: 309.94 Mbit/s
95th percentile per-packet one-way delay: 139.043 ms
Loss rate: 1.72%
Run 6: Statistics of PCC-Vivace

Start at: 2018-04-24 20:03:13
End at: 2018-04-24 20:03:43

# Below is generated by plot.py at 2018-04-25 00:26:13
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 331.11 Mbit/s
  95th percentile per-packet one-way delay: 172.858 ms
  Loss rate: 1.40%
-- Flow 1:
  Average throughput: 331.11 Mbit/s
  95th percentile per-packet one-way delay: 172.858 ms
  Loss rate: 1.40%
Run 6: Report of PCC-Vivace — Data Link

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

Flow 1 ingress (mean 332.74 Mbit/s)  
Flow 1 egress (mean 331.11 Mbit/s)

![Graph 2: Per packet delivery delay (ms)](image2)

Flow 1 (95th percentile 172.86 ms)
Run 7: Statistics of PCC-Vivace

Start at: 2018-04-24 20:17:25
End at: 2018-04-24 20:17:55

# Below is generated by plot.py at 2018-04-25 00:26:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 342.70 Mbit/s
95th percentile per-packet one-way delay: 164.582 ms
Loss rate: 1.73%

-- Flow 1:
Average throughput: 342.70 Mbit/s
95th percentile per-packet one-way delay: 164.582 ms
Loss rate: 1.73%
Run 7: Report of PCC-Vivace — Data Link

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

- Flow 1 ingress (mean 345.55 Mbps)
- Flow 1 egress (mean 342.70 Mbps)

![Graph 2: Per Packet One Way Delay (ms)]

- Flow 1 (95th percentile 164.58 ms)
Run 8: Statistics of PCC-Vivace

Start at: 2018-04-24 20:31:10
End at: 2018-04-24 20:31:40

# Below is generated by plot.py at 2018-04-25 00:26:21
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 321.99 Mbit/s
  95th percentile per-packet one-way delay: 181.116 ms
  Loss rate: 1.77%
-- Flow 1:
  Average throughput: 321.99 Mbit/s
  95th percentile per-packet one-way delay: 181.116 ms
  Loss rate: 1.77%
Run 8: Report of PCC-Vivace — Data Link
Run 9: Statistics of PCC-Vivace

Start at: 2018-04-24 20:45:49
End at: 2018-04-24 20:46:19

# Below is generated by plot.py at 2018-04-25 00:26:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 263.22 Mbit/s
95th percentile per-packet one-way delay: 147.243 ms
Loss rate: 2.15%
-- Flow 1:
Average throughput: 263.22 Mbit/s
95th percentile per-packet one-way delay: 147.243 ms
Loss rate: 2.15%
Run 9: Report of PCC-Vivace — Data Link

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

- Flow 1 ingress (mean 266.55 Mbit/s)
- Flow 1 egress (mean 263.22 Mbit/s)

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

- Flow 1 (95th percentile 147.24 ms)
Run 10: Statistics of PCC-Vivace

Start at: 2018-04-24 21:00:11
End at: 2018-04-24 21:00:41

# Below is generated by plot.py at 2018-04-25 00:26:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 256.94 Mbit/s
95th percentile per-packet one-way delay: 159.129 ms
Loss rate: 1.41%
-- Flow 1:
Average throughput: 256.94 Mbit/s
95th percentile per-packet one-way delay: 159.129 ms
Loss rate: 1.41%
Run 10: Report of PCC-Vivace — Data Link

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

- Flow 1 ingress (mean 258.24 Mbit/s)
- Flow 1 egress (mean 256.94 Mbit/s)

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

- Flow 1 (95th percentile 159.13 ms)
Run 1: Statistics of PCC-Expr

End at: 2018-04-24 18:53:29
Run 1: Report of PCC-Expr — Data Link

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Run 2: Statistics of PCC-Expr

Start at: 2018-04-24 19:07:18
End at: 2018-04-24 19:07:48
Run 2: Report of PCC-Expr — Data Link

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Run 3: Statistics of PCC-Expr

Run 3: Report of PCC-Expr — Data Link

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Run 4: Statistics of PCC-Expr

End at: 2018-04-24 19:36:50
Run 4: Report of PCC-Expr — Data Link

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Run 5: Statistics of PCC-Expr

Run 5: Report of PCC-Expr — Data Link

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Run 6: Statistics of PCC-Expr

Start at: 2018-04-24 20:05:25
End at: 2018-04-24 20:05:55
Run 6: Report of PCC-Expr — Data Link

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Run 7: Statistics of PCC-Expr

End at: 2018-04-24 20:20:08
Run 7: Report of PCC-Expr — Data Link

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Figure is missing
Run 8: Statistics of PCC-Expr

End at: 2018-04-24 20:33:52
Run 8: Report of PCC-Expr — Data Link

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Run 9: Statistics of PCC-Expr

Run 9: Report of PCC-Expr — Data Link

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Run 10: Statistics of PCC-Expr

Start at: 2018-04-24 21:02:18
End at: 2018-04-24 21:02:48
Run 10: Report of PCC-Expr — Data Link

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