Pantheon Report

Generated at 2018-04-25 00:24:41 (UTC).
Data path: GCE Tokyo Ethernet (remote) → GCE Iowa 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 @ 3cb73c0d1c0322cdfe4d6a37a522e53227db50
  M datagrump/sender.cc
third_party/fillp @ 11f8c46a2bf1dc797253db7e8ca04076272b2a44
third_party/genericCC @ d223989828276fa83a807da6e0341dc0c7b89aec
third_party/indigo @ a9b2060d39e64da2e8987e893e3eca26c7c0ab9
  M datagrump/sender.cc
third_party/indigo-1-layer-128-unit @ 3ae9e4ef4230db748450182ce8b377695f2f66d
third_party/indigo-1-layer-32-unit @ 2601c92e4aa9d58d38dc4dfe0ecdfb90c77e64d
third_party/indigo-1-layer-32-unit-no-calib @ 1f3a7f75b41135ed5b540c0fd3505939528e2a5f
third_party/indigo-no-calib @ 7224f2202e8a044d83d6fa0b93ad84360c53d89
third_party/koho_cc @ f0f2e6933033ae82ea808e6928eac4f1083a6681
  M datagrump/sender.cc
third_party/liputp @ b3465b942e282f2b179eaab4a906ce66b7cf3cf
third_party/pantheon-tunnel @ fb1053193c2861da659ba9013db26744ccf993
third_party/pcc @ 1af958fa0d66d18b623c091a55f6e872b4981e1
  M receiver/src/buffer.h
  M receiver/src/core.cpp
  M sender/src/buffer.h
  M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8ac0d8f92c4eb24f974ab
third_party/proto-quic @ 7796f1a82733a86b42f16c8143eb978f3cf3f42
third_party/scream @ c3370fd7bd17205a79aeb34e016ad23f5965885
third_party/sourdough @ f1a14bffe749737437f61b1eaebe03b267cde681
third_party/sprout @ 6f2e9ab6e088d91066a9f023df375ee2665089ce
  M src/examples/cellsim.cc
  M src/examples/sproutb2.cc
  M src/network/sproutconn.cc
third_party/verus @ dbb447ea74c6c60a261149af2629562939f9a494
  M src/verus.hpp
  M tools/plot.py
third_party/vivace @ 7a4ba531e75b4a6f66f5c4580192120401784ce3
third_party/webrtc @ f271183af82ee65d0031620f4beb38aedd581
test from GCE Tokyo Ethernet to GCE Iowa 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>174.44</td>
<td>65.97</td>
<td>0.44</td>
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<tr>
<td>TCP Cubic</td>
<td>10</td>
<td>160.27</td>
<td>72.21</td>
<td>0.36</td>
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<td>LEDBAT</td>
<td>10</td>
<td>21.60</td>
<td>64.96</td>
<td>0.82</td>
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<td>PCC-Allegro</td>
<td>10</td>
<td>528.39</td>
<td>144.95</td>
<td>1.64</td>
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<td>49.39</td>
<td>63.57</td>
<td>0.61</td>
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<td>SCReAM</td>
<td>10</td>
<td>0.22</td>
<td>63.42</td>
<td>0.39</td>
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<td>WebRTC media</td>
<td>10</td>
<td>0.06</td>
<td>63.89</td>
<td>0.01</td>
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<td>Sprout</td>
<td>10</td>
<td>6.56</td>
<td>64.33</td>
<td>0.44</td>
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<td>TaoVA-100x</td>
<td>10</td>
<td>173.92</td>
<td>65.68</td>
<td>0.36</td>
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<td>TCP Vegas</td>
<td>10</td>
<td>144.53</td>
<td>72.20</td>
<td>0.32</td>
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<td>Verus</td>
<td>10</td>
<td>212.95</td>
<td>119.50</td>
<td>0.84</td>
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<tr>
<td>Copa</td>
<td>10</td>
<td>83.54</td>
<td>63.62</td>
<td>0.34</td>
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<td>FillP</td>
<td>10</td>
<td>786.98</td>
<td>158.26</td>
<td>7.14</td>
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<td>Indigo-1-32</td>
<td>10</td>
<td>215.92</td>
<td>63.68</td>
<td>0.44</td>
</tr>
<tr>
<td>PCC-Vivace</td>
<td>10</td>
<td>331.39</td>
<td>88.43</td>
<td>0.45</td>
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<tr>
<td>PCC-Expr</td>
<td>0</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
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</tbody>
</table>
Run 1: Statistics of TCP BBR

End at: 2018-04-24 18:49:36

# Below is generated by plot.py at 2018-04-24 23:16:23
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 179.15 Mbit/s
  95th percentile per-packet one-way delay: 68.197 ms
  Loss rate: 0.44%
-- Flow 1:
  Average throughput: 179.15 Mbit/s
  95th percentile per-packet one-way delay: 68.197 ms
  Loss rate: 0.44%
Run 1: Report of TCP BBR — Data Link
Run 2: Statistics of TCP BBR

Start at: 2018-04-24 19:02:24  
End at: 2018-04-24 19:02:54

# Below is generated by plot.py at 2018-04-24 23:16:23  
# Datalink statistics  
-- Total of 1 flow:  
  Average throughput: 175.07 Mbit/s  
  95th percentile per-packet one-way delay: 65.849 ms  
  Loss rate: 0.43% 
-- Flow 1:  
  Average throughput: 175.07 Mbit/s  
  95th percentile per-packet one-way delay: 65.849 ms  
  Loss rate: 0.43%
Run 2: Report of TCP BBR — Data Link

![Graph 1: Throughput vs Time]

- Flow 1 ingress (mean 175.10 Mbit/s)
- Flow 1 egress (mean 175.07 Mbit/s)

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

- Flow 1 (95th percentile 65.85 ms)
Run 3: Statistics of TCP BBR


# Below is generated by plot.py at 2018-04-24 23:16:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 170.97 Mbit/s
95th percentile per-packet one-way delay: 63.841 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 170.97 Mbit/s
95th percentile per-packet one-way delay: 63.841 ms
Loss rate: 0.44%
Run 3: Report of TCP BBR — Data Link

[Graphs showing throughput and packet delay over time]
Run 4: Statistics of TCP BBR


# Below is generated by plot.py at 2018-04-24 23:16:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 172.60 Mbit/s
95th percentile per-packet one-way delay: 63.994 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 172.60 Mbit/s
95th percentile per-packet one-way delay: 63.994 ms
Loss rate: 0.44%
Run 4: Report of TCP BBR — Data Link
Run 5: Statistics of TCP BBR

End at: 2018-04-24 19:43:05

# Below is generated by plot.py at 2018-04-24 23:16:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 175.20 Mbit/s
95th percentile per-packet one-way delay: 67.889 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 175.20 Mbit/s
95th percentile per-packet one-way delay: 67.889 ms
Loss rate: 0.43%
Run 5: Report of TCP BBR — Data Link

![Throughput Graph]

- Flow 1 ingress (mean 175.22 Mbit/s)
- Flow 1 egress (mean 175.20 Mbit/s)

![Delay Graph]

- Flow 1 (95th percentile 67.89 ms)
Run 6: Statistics of TCP BBR


# Below is generated by plot.py at 2018-04-24 23:16:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 176.45 Mbit/s
95th percentile per-packet one-way delay: 68.706 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 176.45 Mbit/s
95th percentile per-packet one-way delay: 68.706 ms
Loss rate: 0.44%
Run 6: Report of TCP BBR — Data Link
Run 7: Statistics of TCP BBR

Start at: 2018-04-24 20:09:17
End at: 2018-04-24 20:09:48

# Below is generated by plot.py at 2018-04-24 23:16:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 174.58 Mbit/s
95th percentile per-packet one-way delay: 63.792 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 174.58 Mbit/s
95th percentile per-packet one-way delay: 63.792 ms
Loss rate: 0.43%
Run 7: Report of TCP BBR — Data Link
Run 8: Statistics of TCP BBR

End at: 2018-04-24 20:23:16

# Below is generated by plot.py at 2018-04-24 23:16:23
# Datalink statistics
   -- Total of 1 flow:
Average throughput: 174.66 Mbit/s
95th percentile per-packet one-way delay: 66.426 ms
Loss rate: 0.40%
   -- Flow 1:
Average throughput: 174.66 Mbit/s
95th percentile per-packet one-way delay: 66.426 ms
Loss rate: 0.40%
Run 8: Report of TCP BBR — Data Link

![Graph 1: Throughput (kbps)]

- Flow 1 ingress (mean 174.57 Mbit/s)
- Flow 1 egress (mean 174.66 Mbit/s)

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

- Flow 1 (95th percentile 66.43 ms)
Run 9: Statistics of TCP BBR

Start at: 2018-04-24 20:36:39
End at: 2018-04-24 20:37:09

# Below is generated by plot.py at 2018-04-24 23:19:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 173.07 Mbit/s
95th percentile per-packet one-way delay: 65.037 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 173.07 Mbit/s
95th percentile per-packet one-way delay: 65.037 ms
Loss rate: 0.45%
Run 9: Report of TCP BBR — Data Link

![Throughput plot]

Flow 1 ingress (mean 173.11 Mbit/s)  Flow 1 egress (mean 173.07 Mbit/s)

![Packet delay plot]

Flow 1 (95th percentile 65.04 ms)
Run 10: Statistics of TCP BBR

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

# Below is generated by plot.py at 2018-04-24 23:19:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 172.69 Mbit/s
95th percentile per-packet one-way delay: 65.940 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 172.69 Mbit/s
95th percentile per-packet one-way delay: 65.940 ms
Loss rate: 0.45%
Run 10: Report of TCP BBR — Data Link

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**Graph 1:**

- **X-axis:** Time (s)
- **Y-axis:** Throughput (Mbps)
- **Legend:**
  - Flow 1 ingress (mean 172.72 Mbps)
  - Flow 1 egress (mean 172.69 Mbps)

**Graph 2:**

- **X-axis:** Time (s)
- **Y-axis:** Per-packet one way delay (ms)
- **Legend:**
  - Flow 1 (95th percentile 65.94 ms)
Run 1: Statistics of TCP Cubic

Start at: 2018-04-24 18:45:51
End at: 2018-04-24 18:46:21

# Below is generated by plot.py at 2018-04-24 23:19:15
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 130.69 Mbit/s
  95th percentile per-packet one-way delay: 72.435 ms
  Loss rate: 0.26%
-- Flow 1:
  Average throughput: 130.69 Mbit/s
  95th percentile per-packet one-way delay: 72.435 ms
  Loss rate: 0.26%
Run 1: Report of TCP Cubic — Data Link
Run 2: Statistics of TCP Cubic

Start at: 2018-04-24 18:59:07
End at: 2018-04-24 18:59:37

# Below is generated by plot.py at 2018-04-24 23:19:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 183.44 Mbit/s
95th percentile per-packet one-way delay: 73.587 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 183.44 Mbit/s
95th percentile per-packet one-way delay: 73.587 ms
Loss rate: 0.45%
Run 2: Report of TCP Cubic — Data Link
Run 3: Statistics of TCP Cubic

Start at: 2018-04-24 19:12:34

# Below is generated by plot.py at 2018-04-24 23:19:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 181.24 Mbit/s
95th percentile per-packet one-way delay: 72.665 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 181.24 Mbit/s
95th percentile per-packet one-way delay: 72.665 ms
Loss rate: 0.48%
Run 3: Report of TCP Cubic — Data Link
Run 4: Statistics of TCP Cubic

End at: 2018-04-24 19:26:20

# Below is generated by plot.py at 2018-04-24 23:19:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 172.02 Mbit/s
95th percentile per-packet one-way delay: 71.763 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 172.02 Mbit/s
95th percentile per-packet one-way delay: 71.763 ms
Loss rate: 0.27%
Run 4: Report of TCP Cubic — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 171.76 Mbit/s)  Flow 1 egress (mean 172.02 Mbit/s)

Packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 71.76 ms)
Run 5: Statistics of TCP Cubic


# Below is generated by plot.py at 2018-04-24 23:19:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 176.72 Mbit/s
95th percentile per-packet one-way delay: 71.503 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 176.72 Mbit/s
95th percentile per-packet one-way delay: 71.503 ms
Loss rate: 0.25%
Run 5: Report of TCP Cubic — Data Link

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

- Flow 1 ingress (mean 176.42 Mbit/s)
- Flow 1 egress (mean 176.72 Mbit/s)

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

- Flow 1 (95th percentile 71.50 ms)
Run 6: Statistics of TCP Cubic


# Below is generated by plot.py at 2018-04-24 23:19:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 141.74 Mbit/s
95th percentile per-packet one-way delay: 70.723 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 141.74 Mbit/s
95th percentile per-packet one-way delay: 70.723 ms
Loss rate: 0.58%
Run 6: Report of TCP Cubic — Data Link
Run 7: Statistics of TCP Cubic

Start at: 2018-04-24 20:05:57
End at: 2018-04-24 20:06:27

# Below is generated by plot.py at 2018-04-24 23:21:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 182.48 Mbit/s
95th percentile per-packet one-way delay: 72.839 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 182.48 Mbit/s
95th percentile per-packet one-way delay: 72.839 ms
Loss rate: 0.44%
Run 7: Report of TCP Cubic — Data Link

![Graph 1: Throughput vs Time]

- Flow 1 ingress (mean 182.56 Mbit/s)
- Flow 1 egress (mean 182.48 Mbit/s)

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

- Flow 1 (95th percentile 72.84 ms)
Run 8: Statistics of TCP Cubic

End at: 2018-04-24 20:19:57

# Below is generated by plot.py at 2018-04-24 23:21:53
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 179.10 Mbit/s
  95th percentile per-packet one-way delay: 74.257 ms
  Loss rate: 0.20%
-- Flow 1:
  Average throughput: 179.10 Mbit/s
  95th percentile per-packet one-way delay: 74.257 ms
  Loss rate: 0.20%
Run 8: Report of TCP Cubic — Data Link

![Graph of Throughput vs Time]

- Flow 1 ingress (mean 178.97 Mbit/s)
- Flow 1 egress (mean 179.10 Mbit/s)

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

- Flow 1 (95th percentile 74.26 ms)
Run 9: Statistics of TCP Cubic

Start at: 2018-04-24 20:33:07
End at: 2018-04-24 20:33:37

# Below is generated by plot.py at 2018-04-24 23:21:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 148.78 Mbit/s
95th percentile per-packet one-way delay: 71.826 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 148.78 Mbit/s
95th percentile per-packet one-way delay: 71.826 ms
Loss rate: 0.36%
Run 9: Report of TCP Cubic — Data Link
Run 10: Statistics of TCP Cubic

Start at: 2018-04-24 20:46:40
End at: 2018-04-24 20:47:10

# Below is generated by plot.py at 2018-04-24 23:21:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 106.47 Mbit/s
95th percentile per-packet one-way delay: 70.542 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 106.47 Mbit/s
95th percentile per-packet one-way delay: 70.542 ms
Loss rate: 0.33%
Run 10: Report of TCP Cubic — Data Link

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**Graph 1: Throughput (Mbps)**

- Flow 1 ingress (mean 106.38 Mbps)
- Flow 1 egress (mean 106.47 Mbps)

**Graph 2: Per-packet one-way delay (ms)**

- Flow 1 (95th percentile 70.54 ms)
Run 1: Statistics of LEDBAT

End at: 2018-04-24 18:47:05

# Below is generated by plot.py at 2018-04-24 23:21:53
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 21.23 Mbit/s
  95th percentile per-packet one-way delay: 64.408 ms
  Loss rate: 0.86%
-- Flow 1:
  Average throughput: 21.23 Mbit/s
  95th percentile per-packet one-way delay: 64.408 ms
  Loss rate: 0.86%
Run 1: Report of LEDBAT — Data Link

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

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

Start at: 2018-04-24 18:59:54
End at: 2018-04-24 19:00:24

# Below is generated by plot.py at 2018-04-24 23:21:53
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 18.37 Mbit/s
  95th percentile per-packet one-way delay: 65.118 ms
  Loss rate: 0.62%
-- Flow 1:
  Average throughput: 18.37 Mbit/s
  95th percentile per-packet one-way delay: 65.118 ms
  Loss rate: 0.62%
Run 2: Report of LEDBAT — Data Link

![Graph showing throughput and delay over time]

- Flow 1 ingress (mean 18.41 Mbit/s)
- Flow 1 egress (mean 18.37 Mbit/s)

![Graph showing packet delay over time]

- Flow 1 95th percentile 65.12 ms
Run 3: Statistics of LEDBAT


# Below is generated by plot.py at 2018-04-24 23:21:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 22.33 Mbit/s
95th percentile per-packet one-way delay: 65.654 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 22.33 Mbit/s
95th percentile per-packet one-way delay: 65.654 ms
Loss rate: 0.83%
Run 3: Report of LEDBAT — Data Link

![Graph 1: Throughput vs Time]

![Graph 2: Packet Delay vs Time]

Legend:
- Flow 1 ingress (mean 22.42 Mbit/s)
- Flow 1 egress (mean 22.33 Mbit/s)

Flow 1 95th percentile 65.65 ms
Run 4: Statistics of LEDBAT

Start at: 2018-04-24 19:26:36
End at: 2018-04-24 19:27:06

# Below is generated by plot.py at 2018-04-24 23:21:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 22.44 Mbit/s
95th percentile per-packet one-way delay: 65.146 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 22.44 Mbit/s
95th percentile per-packet one-way delay: 65.146 ms
Loss rate: 0.83%
Run 4: Report of LEDBAT — Data Link

![Graph showing throughput and packet delay over time]

- Flow 1 ingress (mean 22.53 Mbit/s)
- Flow 1 egress (mean 22.44 Mbit/s)

![Graph showing packet delay over time]

- Flow 1 (95th percentile 65.15 ms)
Run 5: Statistics of LEDBAT

Start at: 2018-04-24 19:40:03
End at: 2018-04-24 19:40:33

# Below is generated by plot.py at 2018-04-24 23:21:53
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 22.13 Mbit/s
  95th percentile per-packet one-way delay: 64.565 ms
  Loss rate: 0.85%
-- Flow 1:
  Average throughput: 22.13 Mbit/s
  95th percentile per-packet one-way delay: 64.565 ms
  Loss rate: 0.85%
Run 5: Report of LEDBAT — Data Link

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

- **Flow 1 ingress (mean 22.23 Mbit/s)**
- **Flow 1 egress (mean 22.13 Mbit/s)**
Run 6: Statistics of LEDBAT


# Below is generated by plot.py at 2018-04-24 23:21:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 20.55 Mbit/s
95th percentile per-packet one-way delay: 65.272 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 20.55 Mbit/s
95th percentile per-packet one-way delay: 65.272 ms
Loss rate: 0.88%
Run 6: Report of LEDBAT — Data Link

![Graph of throughput over time]

- **Flow 1 ingress** (mean 20.64 Mbit/s)
- **Flow 1 egress** (mean 20.55 Mbit/s)

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

- **Flow 1 95th percentile 65.27 ms**
Run 7: Statistics of LEDBAT

Start at: 2018-04-24 20:06:44
End at: 2018-04-24 20:07:14

# Below is generated by plot.py at 2018-04-24 23:21:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 22.18 Mbit/s
95th percentile per-packet one-way delay: 65.358 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 22.18 Mbit/s
95th percentile per-packet one-way delay: 65.358 ms
Loss rate: 0.84%

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Run 7: Report of LEDBAT — Data Link

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

- **Flow 1 ingress (mean 22.27 Mbit/s)**
- **Flow 1 egress (mean 22.18 Mbit/s)**

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

- **Flow 1 (95th percentile 65.36 ms)**
Run 8: Statistics of LEDBAT

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

# Below is generated by plot.py at 2018-04-24 23:21:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 22.57 Mbit/s
95th percentile per-packet one-way delay: 64.442 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 22.57 Mbit/s
95th percentile per-packet one-way delay: 64.442 ms
Loss rate: 0.83%
Run 8: Report of LEDBAT — Data Link

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

- **Flow 1 ingress (mean 22.66 Mbit/s)**
- **Flow 1 egress (mean 22.57 Mbit/s)**

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

- **Flow 1 (95th percentile 64.44 ms)**
Run 9: Statistics of LEDBAT

End at: 2018-04-24 20:34:27

# Below is generated by plot.py at 2018-04-24 23:21:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 21.79 Mbit/s
95th percentile per-packet one-way delay: 64.827 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 21.79 Mbit/s
95th percentile per-packet one-way delay: 64.827 ms
Loss rate: 0.85%
Run 9: Report of LEDBAT — Data Link

Graph 1: Throughput over Time
Graph 2: Packet Delay over Time
Run 10: Statistics of LEDBAT


# Below is generated by plot.py at 2018-04-24 23:21:53
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 22.42 Mbit/s
  95th percentile per-packet one-way delay: 64.845 ms
  Loss rate: 0.84%
-- Flow 1:
  Average throughput: 22.42 Mbit/s
  95th percentile per-packet one-way delay: 64.845 ms
  Loss rate: 0.84%
Run 10: Report of LEDBAT — Data Link

![Graph of throughput over time](image)

- **Flow 1 ingress (mean 22.51 Mbit/s)**
- **Flow 1 egress (mean 22.42 Mbit/s)**

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

- **Flow 1 95th percentile 64.84 ms**
Run 1: Statistics of PCC-Allegro

End at: 2018-04-24 18:45:23

# Below is generated by plot.py at 2018-04-24 23:30:17
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 552.39 Mbit/s
  95th percentile per-packet one-way delay: 97.719 ms
  Loss rate: 0.76%
-- Flow 1:
  Average throughput: 552.39 Mbit/s
  95th percentile per-packet one-way delay: 97.719 ms
  Loss rate: 0.76%
Run 1: Report of PCC-Allegro — Data Link

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

Flow 1 ingress (mean 554.22 Mbit/s)
Flow 1 egress (mean 552.39 Mbit/s)

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

Flow 1 (95th percentile 97.72 ms)
Run 2: Statistics of PCC-Allegro

Start at: 2018-04-24 18:58:10
End at: 2018-04-24 18:58:40

# Below is generated by plot.py at 2018-04-24 23:30:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 519.08 Mbit/s
95th percentile per-packet one-way delay: 197.512 ms
Loss rate: 1.96%
-- Flow 1:
Average throughput: 519.08 Mbit/s
95th percentile per-packet one-way delay: 197.512 ms
Loss rate: 1.96%
Run 2: Report of PCC-Allegro — Data Link

![Graph 1: Throughput](image1)

Time (s)

- Flow 1 ingress (mean 527.24 Mbit/s)
- Flow 1 egress (mean 519.08 Mbit/s)

![Graph 2: Packet Delay](image2)

Per packet one way delay (ms)

Flow 1 (95th percentile 197.53 ms)
Run 3: Statistics of PCC-Allegro

End at: 2018-04-24 19:12:08

# Below is generated by plot.py at 2018-04-24 23:30:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 517.86 Mbit/s
95th percentile per-packet one-way delay: 138.530 ms
Loss rate: 1.30%
-- Flow 1:
Average throughput: 517.86 Mbit/s
95th percentile per-packet one-way delay: 138.530 ms
Loss rate: 1.30%
Run 3: Report of PCC-Allegro — Data Link
Run 4: Statistics of PCC-Allegro


# Below is generated by plot.py at 2018-04-24 23:30:25
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 551.54 Mbit/s
  95th percentile per-packet one-way delay: 149.606 ms
  Loss rate: 1.99%
-- Flow 1:
  Average throughput: 551.54 Mbit/s
  95th percentile per-packet one-way delay: 149.606 ms
  Loss rate: 1.99%
Run 4: Report of PCC-Allegro — Data Link
Run 5: Statistics of PCC-Allegro

Start at: 2018-04-24 19:38:21
End at: 2018-04-24 19:38:51

# Below is generated by plot.py at 2018-04-24 23:30:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 514.22 Mbit/s
95th percentile per-packet one-way delay: 204.664 ms
Loss rate: 2.88%
-- Flow 1:
Average throughput: 514.22 Mbit/s
95th percentile per-packet one-way delay: 204.664 ms
Loss rate: 2.88%
Run 5: Report of PCC-Allegro — Data Link

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

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

Flow 1 ingress (mean 527.21 Mb/s) vs. Flow 1 egress (mean 514.22 Mb/s).

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

Flow 1 (95th percentile 204.66 ms).]
Run 6: Statistics of PCC-Allegro

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

# Below is generated by plot.py at 2018-04-24 23:32:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 564.21 Mbit/s
95th percentile per-packet one-way delay: 199.772 ms
Loss rate: 2.84%
-- Flow 1:
Average throughput: 564.21 Mbit/s
95th percentile per-packet one-way delay: 199.772 ms
Loss rate: 2.84%
Run 6: Report of PCC-Allegro — Data Link
Run 7: Statistics of PCC-Allegro

Start at: 2018-04-24 20:05:01
End at: 2018-04-24 20:05:31

# Below is generated by plot.py at 2018-04-24 23:32:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 499.08 Mbit/s
95th percentile per-packet one-way delay: 89.213 ms
Loss rate: 1.19%
-- Flow 1:
Average throughput: 499.08 Mbit/s
95th percentile per-packet one-way delay: 89.213 ms
Loss rate: 1.19%
Run 7: Report of PCC-Allegro — Data Link
Run 8: Statistics of PCC-Allegro

Start at: 2018-04-24 20:18:30
End at: 2018-04-24 20:19:00

# Below is generated by plot.py at 2018-04-24 23:32:12
# Datalink statistics
-- Total of 1 flow:
 Average throughput: 517.12 Mbit/s
 95th percentile per-packet one-way delay: 148.671 ms
 Loss rate: 1.39%
-- Flow 1:
 Average throughput: 517.12 Mbit/s
 95th percentile per-packet one-way delay: 148.671 ms
 Loss rate: 1.39%
Run 8: Report of PCC-Allegro — Data Link

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

- Flow 1 ingress (mean 522.16 Mbps)
- Flow 1 egress (mean 517.12 Mbps)

![Per packet drop w/ delay (ms) graph]

- Flow 1 (95th percentile 148.67 ms)
Run 9: Statistics of PCC-Allegro

Start at: 2018-04-24 20:32:09
End at: 2018-04-24 20:32:39

# Below is generated by plot.py at 2018-04-24 23:39:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 535.34 Mbit/s
95th percentile per-packet one-way delay: 100.332 ms
Loss rate: 1.19%
-- Flow 1:
Average throughput: 535.34 Mbit/s
95th percentile per-packet one-way delay: 100.332 ms
Loss rate: 1.19%
Run 9: Report of PCC-Allegro — Data Link

![Throughput Graph]

- Flow 1 ingress (mean 539.48 Mbit/s)
- Flow 1 egress (mean 535.34 Mbit/s)

![Delay Graph]

- Flow 1 (95th percentile 100.33 ms)
Run 10: Statistics of PCC-Allegro

Start at: 2018-04-24 20:45:44

# Below is generated by plot.py at 2018-04-24 23:39:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 513.09 Mbit/s
95th percentile per-packet one-way delay: 123.498 ms
Loss rate: 0.93%
-- Flow 1:
Average throughput: 513.09 Mbit/s
95th percentile per-packet one-way delay: 123.498 ms
Loss rate: 0.93%
Run 10: Report of PCC-Allegro — Data Link
Run 1: Statistics of QUIC Cubic

Start at: 2018-04-24 18:51:56
End at: 2018-04-24 18:52:26

# Below is generated by plot.py at 2018-04-24 23:39:38
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 46.88 Mbit/s
  95th percentile per-packet one-way delay: 63.525 ms
  Loss rate: 0.23%
-- Flow 1:
  Average throughput: 46.88 Mbit/s
  95th percentile per-packet one-way delay: 63.525 ms
  Loss rate: 0.23%
Run 1: Report of QUIC Cubic — Data Link

---

**Throughput (Mbps)**

- **Flow 1 ingress** (mean 46.75 Mbit/s)
- **Flow 1 egress** (mean 46.88 Mbit/s)

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

- **Flow 1 (95th percentile 63.52 ms)**
Run 2: Statistics of QUIC Cubic

Start at: 2018-04-24 19:05:14
End at: 2018-04-24 19:05:44

# Below is generated by plot.py at 2018-04-24 23:39:38
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 46.54 Mbit/s
  95th percentile per-packet one-way delay: 63.525 ms
  Loss rate: 0.68%
-- Flow 1:
  Average throughput: 46.54 Mbit/s
  95th percentile per-packet one-way delay: 63.525 ms
  Loss rate: 0.68%
Run 2: Report of QUIC Cubic — Data Link

[Graph showing throughput and packet delay over time]
Run 3: Statistics of QUIC Cubic


# Below is generated by plot.py at 2018-04-24 23:39:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 52.17 Mbit/s
95th percentile per-packet one-way delay: 63.599 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 52.17 Mbit/s
95th percentile per-packet one-way delay: 63.599 ms
Loss rate: 0.58%
Run 3: Report of QUIC Cubic — Data Link
Run 4: Statistics of QUIC Cubic

Start at: 2018-04-24 19:32:01
End at: 2018-04-24 19:32:31

# Below is generated by plot.py at 2018-04-24 23:39:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 51.39 Mbit/s
95th percentile per-packet one-way delay: 63.537 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 51.39 Mbit/s
95th percentile per-packet one-way delay: 63.537 ms
Loss rate: 0.68%
Run 4: Report of QUIC Cubic — Data Link
Run 5: Statistics of QUIC Cubic

Start at: 2018-04-24 19:45:25
End at: 2018-04-24 19:45:55

# Below is generated by plot.py at 2018-04-24 23:39:38
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 46.22 Mbit/s
  95th percentile per-packet one-way delay: 63.605 ms
  Loss rate: 0.64%
-- Flow 1:
  Average throughput: 46.22 Mbit/s
  95th percentile per-packet one-way delay: 63.605 ms
  Loss rate: 0.64%
Run 5: Report of QUIC Cubic — Data Link

![Throughput Graph]

- **Flow 1 ingress (mean 46.32 Mbit/s)**
- **Flow 1 egress (mean 46.22 Mbit/s)**

![Packet Delay Graph]

- **Flow 1 (95th percentile 63.60 ms)**
Run 6: Statistics of QUIC Cubic

End at: 2018-04-24 19:59:18

# Below is generated by plot.py at 2018-04-24 23:39:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 51.07 Mbit/s
95th percentile per-packet one-way delay: 63.483 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 51.07 Mbit/s
95th percentile per-packet one-way delay: 63.483 ms
Loss rate: 0.64%
Run 6: Report of QUIC Cubic — Data Link

![Graphs showing network throughput and packet delay over time for two data streams: Flow 1 ingress and egress.](Image)

- **Flow 1 ingress** (mean 51.17 Mbit/s)
- **Flow 1 egress** (mean 51.07 Mbit/s)

- **Per-packet one-way delay:** Flow 1 (95th percentile 63.48 ms)
Run 7: Statistics of QUIC Cubic

Start at: 2018-04-24 20:12:08
End at: 2018-04-24 20:12:38

# Below is generated by plot.py at 2018-04-24 23:39:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 57.84 Mbit/s
95th percentile per-packet one-way delay: 63.830 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 57.84 Mbit/s
95th percentile per-packet one-way delay: 63.830 ms
Loss rate: 0.55%
Run 7: Report of QUIC Cubic — Data Link

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

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

Flow 1 ingress (mean 57.92 Mbit/s) vs Flow 1 egress (mean 57.84 Mbit/s)

Flow 1 (95th percentile 63.83 ms)
Run 8: Statistics of QUIC Cubic

End at: 2018-04-24 20:26:07

# Below is generated by plot.py at 2018-04-24 23:39:38
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 47.79 Mbit/s
  95th percentile per-packet one-way delay: 63.772 ms
  Loss rate: 0.72%
-- Flow 1:
  Average throughput: 47.79 Mbit/s
  95th percentile per-packet one-way delay: 63.772 ms
  Loss rate: 0.72%
Run 8: Report of QUIC Cubic — Data Link

- Throughput (Mbps):
  - Flow 1 ingress (mean 47.94 Mbps)
  - Flow 1 egress (mean 47.79 Mbps)

- Per-packet one-way delay (ms):
  - Flow 1 (95th percentile 63.77 ms)
Run 9: Statistics of QUIC Cubic


# Below is generated by plot.py at 2018-04-24 23:39:38  
# Datalink statistics
-- Total of 1 flow:  
Average throughput: 43.81 Mbit/s  
95th percentile per-packet one-way delay: 63.497 ms  
Loss rate: 0.65%  
-- Flow 1:  
Average throughput: 43.81 Mbit/s  
95th percentile per-packet one-way delay: 63.497 ms  
Loss rate: 0.65%
Run 9: Report of QUIC Cubic — Data Link

![Graph of throughput over time]

- Flow 1 ingress (mean 43.91 Mbit/s)
- Flow 1 egress (mean 43.81 Mbit/s)

![Graph of packet one-way delay over time]

- Flow 1 (95th percentile 83.50 ms)
Run 10: Statistics of QUIC Cubic

Start at: 2018-04-24 20:52:43

# Below is generated by plot.py at 2018-04-24 23:39:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 50.18 Mbit/s
95th percentile per-packet one-way delay: 63.303 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 50.18 Mbit/s
95th percentile per-packet one-way delay: 63.303 ms
Loss rate: 0.71%
Run 10: Report of QUIC Cubic — Data Link
Run 1: Statistics of SCReAM

Start at: 2018-04-24 18:49:52
End at: 2018-04-24 18:50:22

# Below is generated by plot.py at 2018-04-24 23:39:39
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.940 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.940 ms
Loss rate: 0.38%
Run 1: Report of SCReAM — Data Link
Run 2: Statistics of SCReAM

Start at: 2018-04-24 19:03:10
End at: 2018-04-24 19:03:40

# Below is generated by plot.py at 2018-04-24 23:39:39
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.782 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.782 ms
Loss rate: 0.38%
Run 2: Report of SCReAM — Data Link

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

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

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

Flow 1 (95th percentile 63.78 ms)
Run 3: Statistics of SCReAM

End at: 2018-04-24 19:17:09

# Below is generated by plot.py at 2018-04-24 23:39:39
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 63.859 ms
  Loss rate: 0.51%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 63.859 ms
  Loss rate: 0.51%
Run 3: Report of SCReAM — Data Link

![Graph of Throughput vs Time](chart1.png)

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

![Graph of Ping-Pong one way delay vs Time](chart2.png)

- **Flow 1 (95th percentile 63.86 ms)**
Run 4: Statistics of SCReAM

End at: 2018-04-24 19:30:27

# Below is generated by plot.py at 2018-04-24 23:39:39
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 64.060 ms
  Loss rate: 0.38%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 64.060 ms
  Loss rate: 0.38%
Run 4: Report of SCReAM — Data Link

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

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

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

- Flow 1 (95th percentile 64.06 ms)
Run 5: Statistics of SCReAM

End at: 2018-04-24 19:43:52

# Below is generated by plot.py at 2018-04-24 23:39:39
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 63.847 ms
  Loss rate: 0.38%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 63.847 ms
  Loss rate: 0.38%
Run 5: Report of SCReAM — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 0.22 Mbps)
  - Flow 1 egress (mean 0.22 Mbps)

- **Packet Round-Trip Delay (ms):**
  - Flow 1 (95th percentile 63.85 ms)
Run 6: Statistics of SCReAM

Start at: 2018-04-24 19:56:45
End at: 2018-04-24 19:57:15

# Below is generated by plot.py at 2018-04-24 23:39:39
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 63.665 ms
  Loss rate: 0.38%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 63.665 ms
  Loss rate: 0.38%
Run 6: Report of SCReAM — Data Link

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

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

**Packet delay (ms)**
- **Flow 1 (95th percentile 63.66 ms)**
Run 7: Statistics of SCReAM

Start at: 2018-04-24 20:10:04
End at: 2018-04-24 20:10:34

# Below is generated by plot.py at 2018-04-24 23:39:39
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 63.834 ms
  Loss rate: 0.38%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 63.834 ms
  Loss rate: 0.38%
Run 7: Report of SCReAM — Data Link

![Graph showing network performance metrics]

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

- **Per packet one-way delay (ms)**
  - **Flow 1 (95th percentile 63.83 ms)**
Run 8: Statistics of SCReAM

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

# Below is generated by plot.py at 2018-04-24 23:39:39
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 63.644 ms
  Loss rate: 0.38%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 63.644 ms
  Loss rate: 0.38%
Run 8: Report of SCReAM — Data Link

![Graph showing throughput and delay over time.](image-url)
Run 9: Statistics of SCReAM


# Below is generated by plot.py at 2018-04-24 23:39:39
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.719 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.719 ms
Loss rate: 0.38%
Run 9: Report of SCReAM — Data Link

![Graph showing throughput and latency over time]

- **Throughput**: Blue line represents Flow 1 ingress (mean 0.22 Mbit/s), and the black line represents Flow 1 egress (mean 0.22 Mbit/s).
- **Latency**: Blue circles represent Flow 1 (95th percentile 63.72 ms).

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Run 10: Statistics of SCReAM

Start at: 2018-04-24 20:50:40
End at: 2018-04-24 20:51:10

# Below is generated by plot.py at 2018-04-24 23:39:39
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 61.872 ms
  Loss rate: 0.38%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 61.872 ms
  Loss rate: 0.38%
Run 10: Report of SCReAM — Data Link

Throughput (Mbit/s)

Time (s)

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

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 61.87 ms)
Run 1: Statistics of WebRTC media

Start at: 2018-04-24 18:40:54
End at: 2018-04-24 18:41:24

# Below is generated by plot.py at 2018-04-24 23:39:39
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 63.851 ms
  Loss rate: 0.15%
-- Flow 1:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 63.851 ms
  Loss rate: 0.15%
Run 1: Report of WebRTC media — Data Link

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

- **Flow 1 ingress** (mean 0.05 Mbps)
- **Flow 1 egress** (mean 0.05 Mbps)

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

- **Flow 1 95th percentile 63.85 ms**
Run 2: Statistics of WebRTC media

Start at: 2018-04-24 18:54:10
End at: 2018-04-24 18:54:40

# Below is generated by plot.py at 2018-04-24 23:39:39
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 63.786 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 63.786 ms
  Loss rate: 0.00%
Run 2: Report of WebRTC media — Data Link
Run 3: Statistics of WebRTC media

End at: 2018-04-24 19:08:05

# Below is generated by plot.py at 2018-04-24 23:39:39
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 63.788 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 63.788 ms
  Loss rate: 0.00%
Run 3: Report of WebRTC media — Data Link

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

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

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

- Flow 1 (95th percentile 63.79 ms)
Run 4: Statistics of WebRTC media


# Below is generated by plot.py at 2018-04-24 23:39:39
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 64.332 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 64.332 ms
Loss rate: 0.00%
Run 4: Report of WebRTC media — Data Link
Run 5: Statistics of WebRTC media

Start at: 2018-04-24 19:34:25
End at: 2018-04-24 19:34:55

# Below is generated by plot.py at 2018-04-24 23:39:39
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 64.188 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 64.188 ms
Loss rate: 0.00%
Run 5: Report of WebRTC media — Data Link

![Throughput Graph](image)

**Throughput (Mbps)**

- Blue line: Flow 1 ingress (mean 0.06 Mbps)
- Blue line: Flow 1 egress (mean 0.06 Mbps)

![Delay Graph](image)

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

- Blue dots: Flow 1 (95th percentile 64.19 ms)
Run 6: Statistics of WebRTC media

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

# Below is generated by plot.py at 2018-04-24 23:39:39
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 63.986 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 63.986 ms
  Loss rate: 0.00%
Run 6: Report of WebRTC media — Data Link

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

![Graph 2: Per-packet one-way delay (ms)](image2)
Run 7: Statistics of WebRTC media

Start at: 2018-04-24 20:01:06
End at: 2018-04-24 20:01:36

# Below is generated by plot.py at 2018-04-24 23:39:39
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 63.668 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 63.668 ms
Loss rate: 0.00%
Run 7: Report of WebRTC media — Data Link

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

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

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

- Flow 1 (95th percentile 63.67 ms)
Run 8: Statistics of WebRTC media

End at: 2018-04-24 20:14:58

# Below is generated by plot.py at 2018-04-24 23:39:39
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 63.791 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 63.791 ms
  Loss rate: 0.00%
Run 8: Report of WebRTC media — Data Link

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

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 0.06 Mbit/s)

Flow 1 egress (mean 0.06 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 63.79 ms)
Run 9: Statistics of WebRTC media

Start at: 2018-04-24 20:28:02

# Below is generated by plot.py at 2018-04-24 23:39:39
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 64.045 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 64.045 ms
Loss rate: 0.00%
Run 9: Report of WebRTC media — Data Link
Run 10: Statistics of WebRTC media

Start at: 2018-04-24 20:41:46
End at: 2018-04-24 20:42:16

# Below is generated by plot.py at 2018-04-24 23:39:39
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 63.500 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 63.500 ms
  Loss rate: 0.00%
Run 10: Report of WebRTC media — Data Link

![Graph showing throughput over time](image1)

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

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

- **Flow 1 (95th percentile 63.50 ms)**
Run 1: Statistics of Sprout

Start at: 2018-04-24 18:44:15
End at: 2018-04-24 18:44:45

# Below is generated by plot.py at 2018-04-24 23:39:39
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.60 Mbit/s
95th percentile per-packet one-way delay: 64.143 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 6.60 Mbit/s
95th percentile per-packet one-way delay: 64.143 ms
Loss rate: 0.07%
Run 1: Report of Sprout — Data Link
Run 2: Statistics of Sprout

End at: 2018-04-24 18:58:02

# Below is generated by plot.py at 2018-04-24 23:39:39
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.57 Mbit/s
95th percentile per-packet one-way delay: 64.513 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 6.57 Mbit/s
95th percentile per-packet one-way delay: 64.513 ms
Loss rate: 0.51%
Run 2: Report of Sprout — Data Link

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

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

- **Packet Loss**
  - **Flow 1 (95th percentile 64.51 ms)**
Run 3: Statistics of Sprout

Start at: 2018-04-24 19:11:00
End at: 2018-04-24 19:11:30

# Below is generated by plot.py at 2018-04-24 23:39:39
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 6.53 Mbit/s
  95th percentile per-packet one-way delay: 64.504 ms
  Loss rate: 0.35%
-- Flow 1:
  Average throughput: 6.53 Mbit/s
  95th percentile per-packet one-way delay: 64.504 ms
  Loss rate: 0.35%
Run 3: Report of Sprout — Data Link
Run 4: Statistics of Sprout

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

# Below is generated by plot.py at 2018-04-24 23:39:39
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.54 Mbit/s
95th percentile per-packet one-way delay: 64.483 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 6.54 Mbit/s
95th percentile per-packet one-way delay: 64.483 ms
Loss rate: 0.48%
Run 4: Report of Sprout — Data Link

---

**Throughput (Mbit/s)**

- **Flow 1 ingress (mean 6.55 Mbit/s)**
- **Flow 1 egress (mean 6.54 Mbit/s)**

---

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

- **Flow 1 (95th percentile 64.48 ms)**

---

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Run 5: Statistics of Sprout


# Below is generated by plot.py at 2018-04-24 23:39:39
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 6.54 Mbit/s
  95th percentile per-packet one-way delay: 64.481 ms
  Loss rate: 0.51%
-- Flow 1:
  Average throughput: 6.54 Mbit/s
  95th percentile per-packet one-way delay: 64.481 ms
  Loss rate: 0.51%
Run 5: Report of Sprout — Data Link

Throughput (Mbit/s) vs Time (s)

- Flow 1 ingress (mean 6.55 Mbit/s)
- Flow 1 egress (mean 6.54 Mbit/s)

Per-packet end-to-end delay (ms) vs Time (s)

- Flow 1 (95th percentile 64.48 ms)
Run 6: Statistics of Sprout

Start at: 2018-04-24 19:51:06
End at: 2018-04-24 19:51:36

# Below is generated by plot.py at 2018-04-24 23:39:39
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.51 Mbit/s
95th percentile per-packet one-way delay: 64.615 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 6.51 Mbit/s
95th percentile per-packet one-way delay: 64.615 ms
Loss rate: 0.47%
Run 6: Report of Sprout — Data Link

![Graph of throughput and delay over time](image.png)
Run 7: Statistics of Sprout

Start at: 2018-04-24 20:04:23
End at: 2018-04-24 20:04:53

# Below is generated by plot.py at 2018-04-24 23:39:39
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.54 Mbit/s
95th percentile per-packet one-way delay: 64.445 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 6.54 Mbit/s
95th percentile per-packet one-way delay: 64.445 ms
Loss rate: 0.46%
Run 8: Statistics of Sprout

Start at: 2018-04-24 20:17:52
End at: 2018-04-24 20:18:22

# Below is generated by plot.py at 2018-04-24 23:39:39
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.48 Mbit/s
95th percentile per-packet one-way delay: 64.654 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 6.48 Mbit/s
95th percentile per-packet one-way delay: 64.654 ms
Loss rate: 0.58%
Run 8: Report of Sprout — Data Link

![Graph of throughput and delay over time]

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 6.50 Mbps)
  - Flow 1 egress (mean 6.48 Mbps)

- **Delay (ms):**
  - Flow 1 (95th percentile 64.65 ms)
Run 9: Statistics of Sprout

End at: 2018-04-24 20:32:01

# Below is generated by plot.py at 2018-04-24 23:39:39
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.57 Mbit/s
95th percentile per-packet one-way delay: 64.554 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 6.57 Mbit/s
95th percentile per-packet one-way delay: 64.554 ms
Loss rate: 0.51%
Run 9: Report of Sprout — Data Link
Run 10: Statistics of Sprout

Start at: 2018-04-24 20:45:06
End at: 2018-04-24 20:45:36

# Below is generated by plot.py at 2018-04-24 23:39:39
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.68 Mbit/s
95th percentile per-packet one-way delay: 62.879 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 6.68 Mbit/s
95th percentile per-packet one-way delay: 62.879 ms
Loss rate: 0.50%
Run 10: Report of Sprout — Data Link

![Graph of Throughput](image1)

![Graph of Delay](image2)

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Run 1: Statistics of TaoVA-100x

End at: 2018-04-24 18:53:50

# Below is generated by plot.py at 2018-04-24 23:39:39
# Datalink statistics
-- Total of 1 flow:
Average throughput: 141.12 Mbit/s
95th percentile per-packet one-way delay: 63.625 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 141.12 Mbit/s
95th percentile per-packet one-way delay: 63.625 ms
Loss rate: 0.48%
Run 1: Report of TaoVA-100x — Data Link

![Throughput over time graph](image1.png)

- **Flow 1 ingress (mean 141.21 Mbit/s)**
- **Flow 1 egress (mean 141.12 Mbit/s)**

![Packet Delay graph](image2.png)

- **Flow 1 (95th percentile 63.62 ms)**

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Run 2: Statistics of TaoVA-100x

Start at: 2018-04-24 19:06:40
End at: 2018-04-24 19:07:11

# Below is generated by plot.py at 2018-04-24 23:39:39
# Datalink statistics
-- Total of 1 flow:
Average throughput: 183.45 Mbit/s
95th percentile per-packet one-way delay: 68.411 ms
Loss rate: 0.21%
-- Flow 1:
Average throughput: 183.45 Mbit/s
95th percentile per-packet one-way delay: 68.411 ms
Loss rate: 0.21%
Run 2: Report of TaoVA-100x — Data Link
Run 3: Statistics of TaoVA-100x

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

# Below is generated by plot.py at 2018-04-24 23:39:39
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 98.02 Mbit/s
  95th percentile per-packet one-way delay: 63.619 ms
  Loss rate: 0.39%
-- Flow 1:
  Average throughput: 98.02 Mbit/s
  95th percentile per-packet one-way delay: 63.619 ms
  Loss rate: 0.39%
Run 3: Report of TaoVA-100x — Data Link

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

![Graph of Per-packet two-way delay (ms) vs Time (s)](image2)
Run 4: Statistics of TaoVA-100x


# Below is generated by plot.py at 2018-04-24 23:40:17
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 222.22 Mbit/s
  95th percentile per-packet one-way delay: 64.964 ms
  Loss rate: 0.50%
-- Flow 1:
  Average throughput: 222.22 Mbit/s
  95th percentile per-packet one-way delay: 64.964 ms
  Loss rate: 0.50%
Run 4: Report of TaoVA-100x — Data Link

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

- **Flow 1 ingress (mean 222.38 Mbit/s)**
- **Flow 1 egress (mean 222.22 Mbit/s)**

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

- **Flow 1 (95th percentile 64.96 ms)**
Run 5: Statistics of TaoVA-100x

End at: 2018-04-24 19:47:21

# Below is generated by plot.py at 2018-04-24 23:40:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 185.12 Mbit/s
95th percentile per-packet one-way delay: 64.996 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 185.12 Mbit/s
95th percentile per-packet one-way delay: 64.996 ms
Loss rate: 0.33%
Run 5: Report of TaoVA-100x — Data Link

![Graph of Throughput vs Time](image1)

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

Flow 1 ingress (mean 184.93 Mbit/s) and Flow 1 egress (mean 185.12 Mbit/s)
Run 6: Statistics of TaoVA-100x

Start at: 2018-04-24 20:00:11
End at: 2018-04-24 20:00:41

# Below is generated by plot.py at 2018-04-24 23:40:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 187.41 Mbit/s
95th percentile per-packet one-way delay: 67.253 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 187.41 Mbit/s
95th percentile per-packet one-way delay: 67.253 ms
Loss rate: 0.20%
Run 7: Statistics of TaoVA-100x

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

# Below is generated by plot.py at 2018-04-24 23:41:51
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 165.32 Mbit/s
  95th percentile per-packet one-way delay: 66.201 ms
  Loss rate: 0.62%
-- Flow 1:
  Average throughput: 165.32 Mbit/s
  95th percentile per-packet one-way delay: 66.201 ms
  Loss rate: 0.62%
Run 7: Report of TaoVA-100x — Data Link

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

- Flow 1 ingress (mean 165.65 Mbit/s)
- Flow 1 egress (mean 165.32 Mbit/s)
- Flow 1 95th percentile 66.20 ms
Run 8: Statistics of TaoVA-100x

Start at: 2018-04-24 20:27:03

# Below is generated by plot.py at 2018-04-24 23:45:09
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 225.89 Mbit/s
  95th percentile per-packet one-way delay: 66.764 ms
  Loss rate: 0.33%
-- Flow 1:
  Average throughput: 225.89 Mbit/s
  95th percentile per-packet one-way delay: 66.764 ms
  Loss rate: 0.33%
Run 8: Report of TaoVA-100x — Data Link
Run 9: Statistics of TaoVA-100x

Start at: 2018-04-24 20:40:56
End at: 2018-04-24 20:41:26

# Below is generated by plot.py at 2018-04-24 23:45:09
# Datalink statistics
   -- Total of 1 flow:
      Average throughput: 136.56 Mbit/s
      95th percentile per-packet one-way delay: 63.738 ms
      Loss rate: 0.04%
   -- Flow 1:
      Average throughput: 136.56 Mbit/s
      95th percentile per-packet one-way delay: 63.738 ms
      Loss rate: 0.04%
Run 9: Report of TaoVA-100x — Data Link
Run 10: Statistics of TaoVA-100x

Start at: 2018-04-24 20:54:09
End at: 2018-04-24 20:54:39

# Below is generated by plot.py at 2018-04-24 23:45:26
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 194.05 Mbit/s
  95th percentile per-packet one-way delay: 67.191 ms
  Loss rate: 0.52%
-- Flow 1:
  Average throughput: 194.05 Mbit/s
  95th percentile per-packet one-way delay: 67.191 ms
  Loss rate: 0.52%
Run 10: Report of TaoVA-100x — Data Link
Run 1: Statistics of TCP Vegas

Start at: 2018-04-24 18:52:36
End at: 2018-04-24 18:53:06

# Below is generated by plot.py at 2018-04-24 23:45:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 112.50 Mbit/s
95th percentile per-packet one-way delay: 71.325 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 112.50 Mbit/s
95th percentile per-packet one-way delay: 71.325 ms
Loss rate: 0.29%
Run 1: Report of TCP Vegas — Data Link
Run 2: Statistics of TCP Vegas

Start at: 2018-04-24 19:05:54
End at: 2018-04-24 19:06:24

# Below is generated by plot.py at 2018-04-24 23:45:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 162.82 Mbit/s
95th percentile per-packet one-way delay: 73.486 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 162.82 Mbit/s
95th percentile per-packet one-way delay: 73.486 ms
Loss rate: 0.39%
Run 2: Report of TCP Vegas — Data Link
Run 3: Statistics of TCP Vegas


# Below is generated by plot.py at 2018-04-24 23:45:26
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 65.14 Mbit/s
  95th percentile per-packet one-way delay: 64.454 ms
  Loss rate: 0.41%
-- Flow 1:
  Average throughput: 65.14 Mbit/s
  95th percentile per-packet one-way delay: 64.454 ms
  Loss rate: 0.41%
Run 3: Report of TCP Vegas — Data Link
Run 4: Statistics of TCP Vegas

End at: 2018-04-24 19:33:11

# Below is generated by plot.py at 2018-04-24 23:45:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 180.52 Mbit/s
95th percentile per-packet one-way delay: 73.145 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 180.52 Mbit/s
95th percentile per-packet one-way delay: 73.145 ms
Loss rate: 0.44%
Run 4: Report of TCP Vegas — Data Link
Run 5: Statistics of TCP Vegas

Start at: 2018-04-24 19:46:05

# Below is generated by plot.py at 2018-04-24 23:45:26
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 182.37 Mbit/s
  95th percentile per-packet one-way delay: 73.156 ms
  Loss rate: 0.48%
-- Flow 1:
  Average throughput: 182.37 Mbit/s
  95th percentile per-packet one-way delay: 73.156 ms
  Loss rate: 0.48%
Run 5: Report of TCP Vegas — Data Link

![Graph showing throughput and packet delay over time for Flow 1 ingress and egress with mean values.]

- Flow 1 ingress (mean 182.48 Mbit/s)
- Flow 1 egress (mean 182.37 Mbit/s)

Packet delay shows variability with a 95th percentile of 73.16 ms.
Run 6: Statistics of TCP Vegas


# Below is generated by plot.py at 2018-04-24 23:45:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 77.73 Mbit/s
95th percentile per-packet one-way delay: 73.167 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 77.73 Mbit/s
95th percentile per-packet one-way delay: 73.167 ms
Loss rate: 0.33%
Run 6: Report of TCP Vegas — Data Link

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

- Flow 1 ingress (mean 77.66 Mbit/s)
- Flow 1 egress (mean 77.73 Mbit/s)

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

- Flow 1 (95th percentile 73.17 ms)
Run 7: Statistics of TCP Vegas

Start at: 2018-04-24 20:12:49

# Below is generated by plot.py at 2018-04-24 23:45:26
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 163.01 Mbit/s
  95th percentile per-packet one-way delay: 73.648 ms
  Loss rate: 0.26%
-- Flow 1:
  Average throughput: 163.01 Mbit/s
  95th percentile per-packet one-way delay: 73.648 ms
  Loss rate: 0.26%
Run 7: Report of TCP Vegas — Data Link

![Graph showing network throughput and ping times over time.]

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 162.75 Mbps)
  - Flow 1 egress (mean 163.01 Mbps)

- **Ping Times (ms):**
  - Flow 1 (95th percentile 73.65 ms)
Run 8: Statistics of TCP Vegas

Start at: 2018-04-24 20:26:17
End at: 2018-04-24 20:26:47

# Below is generated by plot.py at 2018-04-24 23:45:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 179.63 Mbit/s
95th percentile per-packet one-way delay: 72.035 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 179.63 Mbit/s
95th percentile per-packet one-way delay: 72.035 ms
Loss rate: 0.20%
Run 8: Report of TCP Vegas — Data Link

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

![Graph 2: Per-packet one-way delay (ms)](image2)
Run 9: Statistics of TCP Vegas

Start at: 2018-04-24 20:40:09
End at: 2018-04-24 20:40:40

# Below is generated by plot.py at 2018-04-24 23:45:46
# Datalink statistics
-- Total of 1 flow:
Average throughput: 174.01 Mbit/s
95th percentile per-packet one-way delay: 73.962 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 174.01 Mbit/s
95th percentile per-packet one-way delay: 73.962 ms
Loss rate: 0.18%
Run 9: Report of TCP Vegas — Data Link

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

- Flow 1 ingress (mean 173.59 Mbps)
- Flow 1 egress (mean 174.01 Mbps)

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

- Flow 1 (95th percentile 73.96 ms)
Run 10: Statistics of TCP Vegas

End at: 2018-04-24 20:53:54

# Below is generated by plot.py at 2018-04-24 23:45:57
# Datalink statistics
-- Total of 1 flow:
Average throughput: 147.58 Mbit/s
95th percentile per-packet one-way delay: 73.663 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 147.58 Mbit/s
95th percentile per-packet one-way delay: 73.663 ms
Loss rate: 0.22%
Run 10: Report of TCP Vegas — Data Link

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

- Flow 1 ingress (mean 147.30 Mbit/s)
- Flow 1 egress (mean 147.58 Mbit/s)

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

- Flow 1 (95th percentile 73.66 ms)
Run 1: Statistics of Verus

End at: 2018-04-24 18:43:52

# Below is generated by plot.py at 2018-04-24 23:48:06
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 239.42 Mbit/s
  95th percentile per-packet one-way delay: 104.601 ms
  Loss rate: 0.67%
-- Flow 1:
  Average throughput: 239.42 Mbit/s
  95th percentile per-packet one-way delay: 104.601 ms
  Loss rate: 0.67%
Run 1: Report of Verus — Data Link
Run 2: Statistics of Verus

Start at: 2018-04-24 18:56:39
End at: 2018-04-24 18:57:09

# Below is generated by plot.py at 2018-04-24 23:48:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 247.78 Mbit/s
95th percentile per-packet one-way delay: 92.018 ms
Loss rate: 1.30%
-- Flow 1:
Average throughput: 247.78 Mbit/s
95th percentile per-packet one-way delay: 92.018 ms
Loss rate: 1.30%
Run 2: Report of Verus — Data Link

![Graph of throughput over time](image1.png)

- Flow 1 ingress (mean 249.99 Mbit/s)
- Flow 1 egress (mean 247.78 Mbit/s)

![Graph of packet delay over time](image2.png)

- Flow 1 (95th percentile 92.02 ms)
Run 3: Statistics of Verus

Start at: 2018-04-24 19:10:08
End at: 2018-04-24 19:10:38

# Below is generated by plot.py at 2018-04-24 23:49:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 224.34 Mbit/s
95th percentile per-packet one-way delay: 156.160 ms
Loss rate: 1.19%
-- Flow 1:
Average throughput: 224.34 Mbit/s
95th percentile per-packet one-way delay: 156.160 ms
Loss rate: 1.19%
Run 3: Report of Verus — Data Link

![Graph of throughputs and delays](image)

*Flow 1 ingress (mean 227.37 Mbit/s)  Flow 1 egress (mean 224.34 Mbit/s)*

*Flow 1 (95th percentile 156.16 ms)*
Run 4: Statistics of Verus

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

# Below is generated by plot.py at 2018-04-24 23:49:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 185.18 Mbit/s
95th percentile per-packet one-way delay: 147.437 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 185.18 Mbit/s
95th percentile per-packet one-way delay: 147.437 ms
Loss rate: 0.71%
Run 4: Report of Verus — Data Link

![Graph 1: Throughput (Mbps)]

Flow 1 ingress (mean 185.84 Mbit/s) — Flow 1 egress (mean 185.18 Mbit/s)

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

Flow 1 (95th percentile 147.44 ms)
Run 5: Statistics of Verus


# Below is generated by plot.py at 2018-04-24 23:49:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 205.31 Mbit/s
95th percentile per-packet one-way delay: 98.204 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 205.31 Mbit/s
95th percentile per-packet one-way delay: 98.204 ms
Loss rate: 0.56%
Run 5: Report of Verus — Data Link

![Graph 1](image1.png)

- Flow 1 ingress (mean 204.78 Mbit/s)
- Flow 1 egress (mean 205.31 Mbit/s)

![Graph 2](image2.png)

- Flow 1 (95th percentile 98.20 ms)
Run 6: Statistics of Verus

Start at: 2018-04-24 19:50:15
End at: 2018-04-24 19:50:45

# Below is generated by plot.py at 2018-04-24 23:49:40
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 219.28 Mbit/s
  95th percentile per-packet one-way delay: 88.766 ms
  Loss rate: 0.71%
-- Flow 1:
  Average throughput: 219.28 Mbit/s
  95th percentile per-packet one-way delay: 88.766 ms
  Loss rate: 0.71%
Run 6: Report of Verus — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 219.94 Mbit/s)  Flow 1 egress (mean 219.28 Mbit/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 88.77 ms)
Run 7: Statistics of Verus

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

# Below is generated by plot.py at 2018-04-24 23:49:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 185.64 Mbit/s
95th percentile per-packet one-way delay: 124.069 ms
Loss rate: 1.17%
-- Flow 1:
Average throughput: 185.64 Mbit/s
95th percentile per-packet one-way delay: 124.069 ms
Loss rate: 1.17%
Run 7: Report of Verus — Data Link

![Graph showing network throughput over time with two lines representing flow ingress and egress.]

![Graph showing packet delay over time with a dashed line representing the 95th percentile delay.]

Flow 1 ingress (mean 186.50 Mbit/s)
Flow 1 egress (mean 185.64 Mbit/s)
Flow 1 (95th percentile 124.07 ms)
Run 8: Statistics of Verus

Start at: 2018-04-24 20:17:00
End at: 2018-04-24 20:17:30

# Below is generated by plot.py at 2018-04-24 23:50:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 219.08 Mbit/s
95th percentile per-packet one-way delay: 114.905 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 219.08 Mbit/s
95th percentile per-packet one-way delay: 114.905 ms
Loss rate: 0.35%
Run 8: Report of Verus — Data Link
Run 9: Statistics of Verus

Start at: 2018-04-24 20:30:39
End at: 2018-04-24 20:31:09

# Below is generated by plot.py at 2018-04-24 23:51:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 199.34 Mbit/s
95th percentile per-packet one-way delay: 110.775 ms
Loss rate: 0.92%
-- Flow 1:
Average throughput: 199.34 Mbit/s
95th percentile per-packet one-way delay: 110.775 ms
Loss rate: 0.92%
Run 9: Report of Verus — Data Link

![Graph showing throughput and ping-time over time](image1)

- **Throughput** (Mbps):
  - Flow 1 ingress (mean 200.35 Mbps)
  - Flow 1 egress (mean 199.34 Mbps)

![Graph showing packet drop rate over time](image2)

- **Packet drops per second** (ms):
  - Flow 1 (95th percentile 110.78 ms)
Run 10: Statistics of Verus

Start at: 2018-04-24 20:44:15
End at: 2018-04-24 20:44:45

# Below is generated by plot.py at 2018-04-24 23:52:10
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 204.11 Mbit/s
  95th percentile per-packet one-way delay: 158.089 ms
  Loss rate: 0.84%
-- Flow 1:
  Average throughput: 204.11 Mbit/s
  95th percentile per-packet one-way delay: 158.089 ms
  Loss rate: 0.84%
Run 10: Report of Verus — Data Link

The diagrams show the throughput and per-packet one-way delay for Flow 1. The throughput graph indicates a peak of approximately 350 Mbit/s near the beginning, followed by fluctuations around 200 Mbit/s. The per-packet one-way delay shows high spikes, with the 95th percentile delay being 158.09 ms.
Run 1: Statistics of Copa

End at: 2018-04-24 18:43:06

# Below is generated by plot.py at 2018-04-24 23:52:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.35 Mbit/s
95th percentile per-packet one-way delay: 63.735 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 89.35 Mbit/s
95th percentile per-packet one-way delay: 63.735 ms
Loss rate: 0.37%
Run 1: Report of Copa — Data Link
Run 2: Statistics of Copa

End at: 2018-04-24 18:56:23

# Below is generated by plot.py at 2018-04-24 23:52:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 87.94 Mbit/s
95th percentile per-packet one-way delay: 63.659 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 87.94 Mbit/s
95th percentile per-packet one-way delay: 63.659 ms
Loss rate: 0.28%
Run 2: Report of Copa — Data Link
Run 3: Statistics of Copa

End at: 2018-04-24 19:09:52

# Below is generated by plot.py at 2018-04-24 23:52:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 87.07 Mbit/s
95th percentile per-packet one-way delay: 63.501 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 87.07 Mbit/s
95th percentile per-packet one-way delay: 63.501 ms
Loss rate: 0.44%
Run 3: Report of Copa — Data Link
Run 4: Statistics of Copa

End at: 2018-04-24 19:23:08

# Below is generated by plot.py at 2018-04-24 23:52:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 81.05 Mbit/s
95th percentile per-packet one-way delay: 63.557 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 81.05 Mbit/s
95th percentile per-packet one-way delay: 63.557 ms
Loss rate: 0.43%
Run 4: Report of Copa — Data Link

![Graph showing throughput and delay over time for data link.]

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 81.06 Mbps)
  - Flow 1 egress (mean 81.05 Mbps)

- **Delay (ms):**
  - Flow 1 (95th percentile 63.56 ms)
Run 5: Statistics of Copa

Start at: 2018-04-24 19:36:08
End at: 2018-04-24 19:36:38

# Below is generated by plot.py at 2018-04-24 23:52:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 74.57 Mbit/s
95th percentile per-packet one-way delay: 63.923 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 74.57 Mbit/s
95th percentile per-packet one-way delay: 63.923 ms
Loss rate: 0.42%
Run 5: Report of Copa — Data Link

![Graph showing throughput and delay over time for Flow 1 with ingress and egress data.]
Run 6: Statistics of Copa


# Below is generated by plot.py at 2018-04-24 23:53:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 88.07 Mbit/s
95th percentile per-packet one-way delay: 63.587 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 88.07 Mbit/s
95th percentile per-packet one-way delay: 63.587 ms
Loss rate: 0.23%
Run 6: Report of Copa — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 87.90 Mbit/s)  Flow 1 egress (mean 88.07 Mbit/s)

Packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 63.59 ms)
Run 7: Statistics of Copa

Start at: 2018-04-24 20:02:49
End at: 2018-04-24 20:03:19

# Below is generated by plot.py at 2018-04-24 23:53:22
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 58.03 Mbit/s
  95th percentile per-packet one-way delay: 63.650 ms
  Loss rate: 0.05%
-- Flow 1:
  Average throughput: 58.03 Mbit/s
  95th percentile per-packet one-way delay: 63.650 ms
  Loss rate: 0.05%
Run 7: Report of Copa — Data Link

![Graph 1: Throughput (Mb/s)](image1)

- Flow 1 ingress (mean 57.82 Mb/s)
- Flow 1 egress (mean 58.03 Mb/s)

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

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

End at: 2018-04-24 20:16:44

# Below is generated by plot.py at 2018-04-24 23:54:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 91.01 Mbit/s
95th percentile per-packet one-way delay: 63.596 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 91.01 Mbit/s
95th percentile per-packet one-way delay: 63.596 ms
Loss rate: 0.39%
Run 8: Report of Copa — Data Link

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

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

Start at: 2018-04-24 20:29:52
End at: 2018-04-24 20:30:22

# Below is generated by plot.py at 2018-04-24 23:54:33
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 90.04 Mbit/s
  95th percentile per-packet one-way delay: 63.479 ms
  Loss rate: 0.41%
-- Flow 1:
  Average throughput: 90.04 Mbit/s
  95th percentile per-packet one-way delay: 63.479 ms
  Loss rate: 0.41%
Run 10: Statistics of Copa

End at: 2018-04-24 20:43:59

# Below is generated by plot.py at 2018-04-24 23:54:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 88.30 Mbit/s
95th percentile per-packet one-way delay: 63.506 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 88.30 Mbit/s
95th percentile per-packet one-way delay: 63.506 ms
Loss rate: 0.42%
Run 10: Report of Copa — Data Link

![Graph of throughput and packet delay over time]

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 88.29 Mbit/s)
  - Flow 1 egress (mean 88.30 Mbit/s)

- **Packet Delay (ms):**
  - Flow 1 (95th percentile 63.51 ms)
Run 1: Statistics of FillP

End at: 2018-04-24 18:42:02

# Below is generated by plot.py at 2018-04-25 00:07:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 728.96 Mbit/s
95th percentile per-packet one-way delay: 155.772 ms
Loss rate: 6.33%
-- Flow 1:
Average throughput: 728.96 Mbit/s
95th percentile per-packet one-way delay: 155.772 ms
Loss rate: 6.33%
Run 1: Report of FillP — Data Link

![Graphs showing throughput and packet delay over time.](image-url)
Run 2: Statistics of FillP

Start at: 2018-04-24 18:54:47

# Below is generated by plot.py at 2018-04-25 00:07:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 774.09 Mbit/s
95th percentile per-packet one-way delay: 147.161 ms
Loss rate: 6.43%
-- Flow 1:
Average throughput: 774.09 Mbit/s
95th percentile per-packet one-way delay: 147.161 ms
Loss rate: 6.43%
Run 2: Report of FillP — Data Link

Throughput (Mb/s)

Time (s)

Flow 1 ingress (mean 823.84 Mb/s)  Flow 1 egress (mean 774.09 Mb/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 147.16 ms)
Run 3: Statistics of FillP

End at: 2018-04-24 19:08:43

# Below is generated by plot.py at 2018-04-25 00:08:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 866.57 Mbit/s
95th percentile per-packet one-way delay: 142.192 ms
Loss rate: 4.05%
-- Flow 1:
Average throughput: 866.57 Mbit/s
95th percentile per-packet one-way delay: 142.192 ms
Loss rate: 4.05%
Run 3: Report of FillP — Data Link

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

**Throughput (Mbps)**

- Flow 1 ingress (mean 899.34 Mbps)
- Flow 1 egress (mean 886.57 Mbps)

**Delay (ms)**

- Flow 1 (95th percentile 142.19 ms)
Run 4: Statistics of FillP


# Below is generated by plot.py at 2018-04-25 00:09:01
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 843.48 Mbit/s
  95th percentile per-packet one-way delay: 144.310 ms
  Loss rate: 7.48%
-- Flow 1:
  Average throughput: 843.48 Mbit/s
  95th percentile per-packet one-way delay: 144.310 ms
  Loss rate: 7.48%
Run 4: Report of FillP — Data Link

![Graph showing network traffic and latency over time]

- **Flow 1 Ingress (mean 907.81 Mbps)**
- **Flow 1 Egress (mean 843.48 Mbps)**

![Graph showing packet delay variation over time]

- **Flow 1 (95th percentile 144.31 ms)**
Run 5: Statistics of FillP

Start at: 2018-04-24 19:35:02
End at: 2018-04-24 19:35:32

# Below is generated by plot.py at 2018-04-25 00:09:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 770.99 Mbit/s
95th percentile per-packet one-way delay: 154.266 ms
Loss rate: 7.06%
-- Flow 1:
Average throughput: 770.99 Mbit/s
95th percentile per-packet one-way delay: 154.266 ms
Loss rate: 7.06%
Run 5: Report of FillP — Data Link

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

**Legend:**
- Blue dashed line: Flow 1 ingress (mean 826.00 Mbps)
- Blue solid line: Flow 1 egress (mean 770.99 Mbps)

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

**Legend:**
- Blue solid line: Flow 1 (95th percentile 154.27 ms)
Run 6: Statistics of FillP


# Below is generated by plot.py at 2018-04-25 00:09:17
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 788.11 Mbit/s
  95th percentile per-packet one-way delay: 146.715 ms
  Loss rate: 5.64%
-- Flow 1:
  Average throughput: 788.11 Mbit/s
  95th percentile per-packet one-way delay: 146.715 ms
  Loss rate: 5.64%
Run 6: Report of FillP — Data Link

![Graph of Throughput and Per-Packet Delay Over Time]

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 831.63 Mbps)  
Flow 1 egress (mean 788.11 Mbps)

Per-packet one-way delay (ms)

Time (s)

Flows 1 (95th percentile 146.72 ms)
Run 7: Statistics of FillP

Start at: 2018-04-24 20:01:43
End at: 2018-04-24 20:02:13

# Below is generated by plot.py at 2018-04-25 00:09:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 760.60 Mbit/s
95th percentile per-packet one-way delay: 152.402 ms
Loss rate: 7.91%
-- Flow 1:
Average throughput: 760.60 Mbit/s
95th percentile per-packet one-way delay: 152.402 ms
Loss rate: 7.91%
Run 7: Report of FillP — Data Link

![Graph showing throughput and per-packet one-way delay over time. The graph includes two lines representing Flow 1 ingress and egress, with annotations indicating mean speeds of 822.49 Mbps and 760.60 Mbps respectively. Additionally, a line representing Flow 1's 95th percentile delay is shown, with a value of 152.40 ms.]
Run 8: Statistics of FillP

Start at: 2018-04-24 20:15:05
End at: 2018-04-24 20:15:35

# Below is generated by plot.py at 2018-04-25 00:09:38
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 797.99 Mbit/s
  95th percentile per-packet one-way delay: 222.498 ms
  Loss rate: 8.39%
-- Flow 1:
  Average throughput: 797.99 Mbit/s
  95th percentile per-packet one-way delay: 222.498 ms
  Loss rate: 8.39%
Run 8: Report of FillP — Data Link

![Graph of data link throughput and per-packet one-way delay over time.]

- **Ingress** (mean 857.43 Mbps)
- **Egress** (mean 797.99 Mbps)
Run 9: Statistics of FillP

End at: 2018-04-24 20:29:09

# Below is generated by plot.py at 2018-04-25 00:22:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 815.97 Mbit/s
95th percentile per-packet one-way delay: 151.068 ms
Loss rate: 7.73%
-- Flow 1:
Average throughput: 815.97 Mbit/s
95th percentile per-packet one-way delay: 151.068 ms
Loss rate: 7.73%
Run 9: Report of FillP — Data Link

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

**Throughput** (Mbps):
- Flow 1 ingress (mean 880.60 Mbps)
- Flow 1 egress (mean 815.97 Mbps)

**Per-packet one-way delay (ms):**
- Flow 1 (95th percentile 151.67 ms)
Run 10: Statistics of FillP


# Below is generated by plot.py at 2018-04-25 00:22:14
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 723.05 Mbit/s
  95th percentile per-packet one-way delay: 166.227 ms
  Loss rate: 10.36%
-- Flow 1:
  Average throughput: 723.05 Mbit/s
  95th percentile per-packet one-way delay: 166.227 ms
  Loss rate: 10.36%
Run 10: Report of FillP — Data Link

- Throughput (Mbps)
  - Flow 1 ingress (mean 803.31 Mbps)
  - Flow 1 egress (mean 723.05 Mbps)

- Packet one way delay (ms)
  - Flow 1 (95th percentile 166.23 ms)
Run 1: Statistics of Indigo-1-32

End at: 2018-04-24 18:48:45

# Below is generated by plot.py at 2018-04-25 00:22:14
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 216.49 Mbit/s
  95th percentile per-packet one-way delay: 63.613 ms
  Loss rate: 0.50%
-- Flow 1:
  Average throughput: 216.49 Mbit/s
  95th percentile per-packet one-way delay: 63.613 ms
  Loss rate: 0.50%
Run 1: Report of Indigo-1-32 — Data Link

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

- **Throughput**
  - Flow 1 ingress (mean 216.55 Mbit/s)
  - Flow 1 egress (mean 216.49 Mbit/s)

- **Packet Delay**
  - Flow 1 (95th percentile 63.61 ms)
Run 2: Statistics of Indigo-1-32

Start at: 2018-04-24 19:01:32
End at: 2018-04-24 19:02:02

# Below is generated by plot.py at 2018-04-25 00:22:14
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 214.69 Mbit/s
  95th percentile per-packet one-way delay: 63.796 ms
  Loss rate: 0.42%
-- Flow 1:
  Average throughput: 214.69 Mbit/s
  95th percentile per-packet one-way delay: 63.796 ms
  Loss rate: 0.42%
Run 2: Report of Indigo-1-32 — Data Link

**Chart 1:**
Throughput (Mbps) vs. Time (s)
- **Flow 1 ingress** (mean 214.67 Mbps)
- **Flow 1 egress** (mean 214.69 Mbps)

**Chart 2:**
Per-packet one-way delay (ms) vs. Time (s)
- **Flow 1** (95th percentile 63.80 ms)
Run 3: Statistics of Indigo-1-32

Start at: 2018-04-24 19:15:01
End at: 2018-04-24 19:15:31

# Below is generated by plot.py at 2018-04-25 00:22:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 207.81 Mbit/s
95th percentile per-packet one-way delay: 63.545 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 207.81 Mbit/s
95th percentile per-packet one-way delay: 63.545 ms
Loss rate: 0.45%
Run 3: Report of Indigo-1-32 — Data Link
Run 4: Statistics of Indigo-1-32


# Below is generated by plot.py at 2018-04-25 00:22:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 218.61 Mbit/s
95th percentile per-packet one-way delay: 63.805 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 218.61 Mbit/s
95th percentile per-packet one-way delay: 63.805 ms
Loss rate: 0.44%
Run 4: Report of Indigo-1-32 — Data Link
Run 5: Statistics of Indigo-1-32


# Below is generated by plot.py at 2018-04-25 00:22:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 216.43 Mbit/s
95th percentile per-packet one-way delay: 63.762 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 216.43 Mbit/s
95th percentile per-packet one-way delay: 63.762 ms
Loss rate: 0.43%
Run 5: Report of Indigo-1-32 — Data Link
Run 6: Statistics of Indigo-1-32


# Below is generated by plot.py at 2018-04-25 00:22:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 223.39 Mbit/s
95th percentile per-packet one-way delay: 63.611 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 223.39 Mbit/s
95th percentile per-packet one-way delay: 63.611 ms
Loss rate: 0.38%
Run 6: Report of Indigo-1-32 — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 223.29 Mbit/s)  Flow 1 egress (mean 223.39 Mbit/s)

Per packet one way delay (ms)

Flow 1 (95th percentile 63.61 ms)
Run 7: Statistics of Indigo-1-32

Start at: 2018-04-24 20:08:25
End at: 2018-04-24 20:08:55

# Below is generated by plot.py at 2018-04-25 00:22:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 218.50 Mbit/s
95th percentile per-packet one-way delay: 63.664 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 218.50 Mbit/s
95th percentile per-packet one-way delay: 63.664 ms
Loss rate: 0.45%
Run 7: Report of Indigo-1-32 — Data Link
Run 8: Statistics of Indigo-1-32

Start at: 2018-04-24 20:21:54

# Below is generated by plot.py at 2018-04-25 00:22:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 218.21 Mbit/s
95th percentile per-packet one-way delay: 63.820 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 218.21 Mbit/s
95th percentile per-packet one-way delay: 63.820 ms
Loss rate: 0.40%
Run 8: Report of Indigo-1-32 — Data Link

![Graph 1: Throughput (Mbps)]

- Flow 1 ingress (mean 218.15 Mbit/s)
- Flow 1 egress (mean 218.21 Mbit/s)

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

- Flow 1 (95th percentile 63.82 ms)
Run 9: Statistics of Indigo-1-32

Start at: 2018-04-24 20:35:47
End at: 2018-04-24 20:36:17

# Below is generated by plot.py at 2018-04-25 00:22:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 210.83 Mbit/s
95th percentile per-packet one-way delay: 63.596 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 210.83 Mbit/s
95th percentile per-packet one-way delay: 63.596 ms
Loss rate: 0.45%
Run 9: Report of Indigo-1-32 — Data Link

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

**Graph 2:**
![Packet One-Way Delay Graph](image2)
Run 10: Statistics of Indigo-1-32

Start at: 2018-04-24 20:49:00
End at: 2018-04-24 20:49:30

# Below is generated by plot.py at 2018-04-25 00:22:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 214.28 Mbit/s
95th percentile per-packet one-way delay: 63.612 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 214.28 Mbit/s
95th percentile per-packet one-way delay: 63.612 ms
Loss rate: 0.44%
Run 10: Report of Indigo-1-32 — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 214.32 Mbit/s)  Flow 1 egress (mean 214.28 Mbit/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 63.61 ms)
Run 1: Statistics of PCC-Vivace

End at: 2018-04-24 18:47:44

# Below is generated by plot.py at 2018-04-25 00:22:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 340.29 Mbit/s
95th percentile per-packet one-way delay: 73.846 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 340.29 Mbit/s
95th percentile per-packet one-way delay: 73.846 ms
Loss rate: 0.40%
Run 1: Report of PCC-Vivace — Data Link
Run 2: Statistics of PCC-Vivace

Start at: 2018-04-24 19:00:33
End at: 2018-04-24 19:01:03

# Below is generated by plot.py at 2018-04-25 00:22:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 309.02 Mbit/s
95th percentile per-packet one-way delay: 73.007 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 309.02 Mbit/s
95th percentile per-packet one-way delay: 73.007 ms
Loss rate: 0.43%
Run 2: Report of PCC-Vivace — Data Link
Run 3: Statistics of PCC-Vivace

Start at: 2018-04-24 19:14:00
End at: 2018-04-24 19:14:30

# Below is generated by plot.py at 2018-04-25 00:22:14
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 340.08 Mbit/s
  95th percentile per-packet one-way delay: 79.432 ms
  Loss rate: 0.43%
-- Flow 1:
  Average throughput: 340.08 Mbit/s
  95th percentile per-packet one-way delay: 79.432 ms
  Loss rate: 0.43%
Run 3: Report of PCC-Vivace — Data Link

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

- Flow 1 ingress (mean 340.09 Mbit/s)
- Flow 1 egress (mean 340.08 Mbit/s)

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

- Flow 1 (95th percentile 79.43 ms)
Run 4: Statistics of PCC-Vivace


# Below is generated by plot.py at 2018-04-25 00:22:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 369.90 Mbit/s
95th percentile per-packet one-way delay: 84.173 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 369.90 Mbit/s
95th percentile per-packet one-way delay: 84.173 ms
Loss rate: 0.45%
Run 4: Report of PCC-Vivace — Data Link
Run 5: Statistics of PCC-Vivace


# Below is generated by plot.py at 2018-04-25 00:22:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 348.94 Mbit/s
95th percentile per-packet one-way delay: 90.335 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 348.94 Mbit/s
95th percentile per-packet one-way delay: 90.335 ms
Loss rate: 0.30%
Run 5: Report of PCC-Vivace — Data Link

- Throughput: Mean 348.48 Mbit/s
- Packet delay: 90.33 ms (95th percentile)
Run 6: Statistics of PCC-Vivace

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 00:22:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 297.35 Mbit/s
95th percentile per-packet one-way delay: 67.750 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 297.35 Mbit/s
95th percentile per-packet one-way delay: 67.750 ms
Loss rate: 0.49%
Run 6: Report of PCC-Vivace — Data Link
Run 7: Statistics of PCC-Vivace

Start at: 2018-04-24 20:07:23
End at: 2018-04-24 20:07:53

# Below is generated by plot.py at 2018-04-25 00:24:04
# Datalink statistics
 -- Total of 1 flow:
 Average throughput: 329.48 Mbit/s
95th percentile per-packet one-way delay: 99.420 ms
Loss rate: 0.50%
 -- Flow 1:
 Average throughput: 329.48 Mbit/s
95th percentile per-packet one-way delay: 99.420 ms
Loss rate: 0.50%
Run 7: Report of PCC-Vivace — Data Link

![Graph showing throughput over time and per-packet one-way delay.](image-url)
Run 8: Statistics of PCC-Vivace


# Below is generated by plot.py at 2018-04-25 00:24:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 334.16 Mbit/s
95th percentile per-packet one-way delay: 90.793 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 334.16 Mbit/s
95th percentile per-packet one-way delay: 90.793 ms
Loss rate: 0.42%
Run 8: Report of PCC-Vivace — Data Link
Run 9: Statistics of PCC-Vivace

Start at: 2018-04-24 20:34:36
End at: 2018-04-24 20:35:07

# Below is generated by plot.py at 2018-04-25 00:24:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 348.93 Mbit/s
95th percentile per-packet one-way delay: 77.090 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 348.93 Mbit/s
95th percentile per-packet one-way delay: 77.090 ms
Loss rate: 0.47%
Run 9: Report of PCC-Vivace — Data Link

![Graph 1](image1.png)

![Graph 2](image2.png)
Run 10: Statistics of PCC-Vivace

Start at: 2018-04-24 20:48:02

# Below is generated by plot.py at 2018-04-25 00:24:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 295.77 Mbit/s
95th percentile per-packet one-way delay: 148.462 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 295.77 Mbit/s
95th percentile per-packet one-way delay: 148.462 ms
Loss rate: 0.63%
Run 10: Report of PCC-Vivace — Data Link

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

- Flow 1 ingress (mean 296.40 Mbit/s)
- Flow 1 egress (mean 295.77 Mbit/s)

![Graph showing packet delay](image)

- Flow 1 (95th percentile 148.46 ms)
Run 1: Statistics of PCC-Expr

Start at: 2018-04-24 18:50:30
End at: 2018-04-24 18:51:00
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 19:03:48
End at: 2018-04-24 19:04:18
Run 2: Report of PCC-Expr — Data Link

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Run 3: Statistics of PCC-Expr

Start at: 2018-04-24 19:17:16
End at: 2018-04-24 19:17:46
Run 3: Report of PCC-Expr — Data Link

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Figure is missing
Run 4: Statistics of PCC-Expr

Start at: 2018-04-24 19:30:34
Run 4: Report of PCC-Expr — Data Link

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Figure is missing
Run 5: Statistics of PCC-Expr

End at: 2018-04-24 19:44:29
Run 5: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing
Run 6: Statistics of PCC-Expr

End at: 2018-04-24 19:57:52
Run 6: Report of PCC-Expr — Data Link

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Figure is missing
Run 7: Statistics of PCC-Expr

Start at: 2018-04-24 20:10:41
End at: 2018-04-24 20:11:11
Run 7: Report of PCC-Expr — Data Link

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Figure is missing
Run 8: Statistics of PCC-Expr

Start at: 2018-04-24 20:24:10
End at: 2018-04-24 20:24:40
Run 8: Report of PCC-Expr — Data Link

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Figure is missing
Run 9: Statistics of PCC-Expr

Start at: 2018-04-24 20:38:03
End at: 2018-04-24 20:38:33
Run 9: Report of PCC-Expr — Data Link

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Figure is missing
Run 10: Statistics of PCC-Expr

Start at: 2018-04-24 20:51:17
End at: 2018-04-24 20:51:47
Run 10: Report of PCC-Expr — Data Link

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Figure is missing