Pantheon Report

Data path: GCE Sydney Ethernet (local) → GCE London Ethernet (remote).
Repeated the test of 16 congestion control schemes 10 times.
Each test lasted for 30 seconds running 1 flow.
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).
Tested BBR with qdisc of Fair Queuing (fq), and other schemes with the default Linux qdisc (pfifo_fast).

Git summary:
branch: master @ 114e807ac1bad7b85168ceb1f8a969063ee6c12c
third_party/calibrated_koho @ 3cb73c0d1c0322cdefae446ea37a522e53227db50
  M datagrump/sender.cc
third_party/fillp @ 11f8c46a2bf1d7c797253db7e8ca04076272baa4
third_party/genericCC @ 1d239e98228276fa83a807da6e0341dc0c7b899ac
third_party/indigo @ a9b2060d39e4da2e8987e893e3ce26c7c0ab9
  third_party/indigo-1-layer-128-unit @ 3ae9e4ef4230db7484501f82ce8b377695f2f66d
  third_party/indigo-1-layer-32-unit @ 2601c92e4aa9d59d38dc4afe0ed6bf90c077e64d
  third_party/indigo-no-calib @ 1f3a7f75b41135ed5b540c0fd3505939528e2a5f
third_party/indigo-no-calib @ 7224f220e8a044b306fa0b983ad8436053d89
third_party/koho_cc @ f0f2e693303ae82ea08e6928e4cf1083a6681
  M datagrump/sender.cc
third_party/libutp @ b3465b942e2826f2b179eeab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ fb1053193c2861da659ba9013db26744ccfcf993
third_party/pcc @ 1af9c958fa0d66d18b623c091a55f8e872e4981e1
  M receiver/src/buffer.h
  M receiver/src/core.cpp
  M sender/src/buffer.h
  M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8ac0d8ab92c4eb24f974ab
third_party/proto-quic @ 77961f1a82733a86b42fe8143ebc978f3c3ff42
third_party/scream @ c3370fd7bd17265a79eab34e4016ad23f5965885
third_party/sourdough @ f1a14bffe749737437f61b1eaebe8b267cde681
third_party/sprout @ 6f2e6e608d91066a9f023df375eee2665089ce
  M src/examples/cellsim.cc
  M src/examples/sproutbt2.cc
  M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562539f9a494
  M src/verus.hpp
  M tools/plot.py
third_party/vivace @ 7a4ba531e75b4af66f5c458019212041784ce3
third_party/webrtc @ f271183af822e5d0031620f4bebf38aedc5581
test from GCE Sydney Ethernet to GCE London 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></td>
<td>flow 1</td>
<td>flow 1</td>
<td></td>
<td>flow 1</td>
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<tr>
<td>TCP BBR</td>
<td>10</td>
<td>73.99</td>
<td>136.52</td>
<td>0.00</td>
</tr>
<tr>
<td>TCP Cubic</td>
<td>10</td>
<td>56.10</td>
<td>140.94</td>
<td>0.00</td>
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<td>LEDBAT</td>
<td>10</td>
<td>4.25</td>
<td>137.04</td>
<td>0.00</td>
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<td>PCC-Allegro</td>
<td>10</td>
<td>538.11</td>
<td>193.50</td>
<td>0.95</td>
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<td>QUIC Cubic</td>
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<td>64.86</td>
<td>136.13</td>
<td>0.00</td>
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<td>SCReAM</td>
<td>10</td>
<td>0.22</td>
<td>136.26</td>
<td>0.00</td>
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<td>WebRTC media</td>
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<td>0.06</td>
<td>136.59</td>
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<td>Sprout</td>
<td>10</td>
<td>0.40</td>
<td>136.62</td>
<td>0.00</td>
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<td>TaoVA-100x</td>
<td>10</td>
<td>147.33</td>
<td>136.52</td>
<td>0.00</td>
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<td>TCP Vegas</td>
<td>10</td>
<td>33.17</td>
<td>140.36</td>
<td>0.00</td>
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<td>Verus</td>
<td>10</td>
<td>156.79</td>
<td>175.24</td>
<td>0.05</td>
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<tr>
<td>Copa</td>
<td>10</td>
<td>71.06</td>
<td>136.38</td>
<td>0.00</td>
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<tr>
<td>FillP</td>
<td>10</td>
<td>782.14</td>
<td>214.55</td>
<td>3.93</td>
</tr>
<tr>
<td>Indigo-1-32</td>
<td>10</td>
<td>150.56</td>
<td>136.49</td>
<td>0.00</td>
</tr>
<tr>
<td>PCC-Vivace</td>
<td>10</td>
<td>322.53</td>
<td>144.03</td>
<td>0.06</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


# Below is generated by plot.py at 2018-04-25 00:28:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 74.67 Mbit/s
95th percentile per-packet one-way delay: 136.734 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 74.67 Mbit/s
95th percentile per-packet one-way delay: 136.734 ms
Loss rate: 0.00%
Run 1: Report of TCP BBR — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 74.67 Mbit/s)  Flow 1 egress (mean 74.67 Mbit/s)

Round-trip time (ms)

Time (s)

Flow 1 (95th percentile 136.73 ms)
Run 2: Statistics of TCP BBR

End at: 2018-04-24 21:30:26

# Below is generated by plot.py at 2018-04-25 00:28:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 74.38 Mbit/s
95th percentile per-packet one-way delay: 136.684 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 74.38 Mbit/s
95th percentile per-packet one-way delay: 136.684 ms
Loss rate: 0.00%
Run 2: Report of TCP BBR — Data Link

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

![Graph 2: Packet One Way Delay vs. Time](image2)
Run 3: Statistics of TCP BBR

Start at: 2018-04-24 21:44:08
End at: 2018-04-24 21:44:38

# Below is generated by plot.py at 2018-04-25 00:28:11
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 72.03 Mbit/s
  95th percentile per-packet one-way delay: 136.618 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 72.03 Mbit/s
  95th percentile per-packet one-way delay: 136.618 ms
  Loss rate: 0.00%
Run 3: Report of TCP BBR — Data Link

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

- **Flow 1 ingress (mean 72.04 Mbps)**
- **Flow 1 egress (mean 72.03 Mbps)**

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

- **Flow 1 (95th percentile 136.62 ms)**
Run 4: Statistics of TCP BBR

Start at: 2018-04-24 21:58:42

# Below is generated by plot.py at 2018-04-25 00:28:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 72.27 Mbit/s
95th percentile per-packet one-way delay: 136.634 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 72.27 Mbit/s
95th percentile per-packet one-way delay: 136.634 ms
Loss rate: 0.00%
Run 4: Report of TCP BBR — Data Link

![Graph of throughput and per-packet one-way delay for flow 1, showing mean 72.27 Mbit/s for ingress and egress.](image-url)
Run 5: Statistics of TCP BBR


# Below is generated by plot.py at 2018-04-25 00:28:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 72.05 Mbit/s
95th percentile per-packet one-way delay: 136.524 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 72.05 Mbit/s
95th percentile per-packet one-way delay: 136.524 ms
Loss rate: 0.00%
Run 5: Report of TCP BBR — Data Link

![Graph 1](image1)

![Graph 2](image2)
Run 6: Statistics of TCP BBR


# Below is generated by plot.py at 2018-04-25 00:28:13  
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 76.52 Mbit/s
  95th percentile per-packet one-way delay: 136.527 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 76.52 Mbit/s
  95th percentile per-packet one-way delay: 136.527 ms
  Loss rate: 0.00%
Run 7: Statistics of TCP BBR


# Below is generated by plot.py at 2018-04-25 00:28:15
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 78.09 Mbit/s
  95th percentile per-packet one-way delay: 136.710 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 78.09 Mbit/s
  95th percentile per-packet one-way delay: 136.710 ms
  Loss rate: 0.00%
Run 7: Report of TCP BBR — Data Link

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

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

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

- Flow 1 (99th percentile 136.71 ms)
Run 8: Statistics of TCP BBR


# Below is generated by plot.py at 2018-04-25 00:28:15
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 73.67 Mbit/s
  95th percentile per-packet one-way delay: 136.240 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 73.67 Mbit/s
  95th percentile per-packet one-way delay: 136.240 ms
  Loss rate: 0.00%
Run 8: Report of TCP BBR — Data Link

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

- Flow 1 ingress (mean 73.67 Mbit/s)
- Flow 1 egress (mean 73.67 Mbit/s)

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

- Flow 1 (95th percentile 136.24 ms)
Run 9: Statistics of TCP BBR

End at: 2018-04-24 23:11:54

# Below is generated by plot.py at 2018-04-25 00:29:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 72.31 Mbit/s
95th percentile per-packet one-way delay: 136.304 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 72.31 Mbit/s
95th percentile per-packet one-way delay: 136.304 ms
Loss rate: 0.00%
Run 9: Report of TCP BBR — Data Link
Run 10: Statistics of TCP BBR

End at: 2018-04-24 23:26:26

# Below is generated by plot.py at 2018-04-25 00:29:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 73.93 Mbit/s
95th percentile per-packet one-way delay: 136.231 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 73.93 Mbit/s
95th percentile per-packet one-way delay: 136.231 ms
Loss rate: 0.00%
Run 10: Report of TCP BBR — Data Link

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**Throughput (Mbps)**

![Graph showing throughput in Mbps over time]

**Time (s)**

- Flow 1 ingress (mean 73.93 Mbps)
- Flow 1 egress (mean 73.93 Mbps)

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

![Graph showing per-packet delay over time]

**Time (s)**

- Flow 1 (95th percentile 136.23 ms)
Run 1: Statistics of TCP Cubic

Start at: 2018-04-24 21:16:05

# Below is generated by plot.py at 2018-04-25 00:29:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 58.39 Mbit/s
95th percentile per-packet one-way delay: 143.737 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 58.39 Mbit/s
95th percentile per-packet one-way delay: 143.737 ms
Loss rate: 0.00%
Run 1: Report of TCP Cubic — Data Link

```
Flow 1 ingress (mean 58.40 Mbit/s)  Flow 1 egress (mean 58.39 Mbit/s)
```

```
Flow 1 (95th percentile 143.74 ms)
```
Run 2: Statistics of TCP Cubic

Start at: 2018-04-24 21:30:43

# Below is generated by plot.py at 2018-04-25 00:29:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 55.09 Mbit/s
95th percentile per-packet one-way delay: 139.222 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 55.09 Mbit/s
95th percentile per-packet one-way delay: 139.222 ms
Loss rate: 0.00%
Run 2: Report of TCP Cubic — Data Link

Throughput (Mbit/s)

Flow 1 ingress (mean 55.09 Mbit/s)  Flow 1 egress (mean 55.09 Mbit/s)

Per packet one way delay (ms)

Flow 1 (95th percentile 139.22 ms)
Run 3: Statistics of TCP Cubic

End at: 2018-04-24 21:45:25

# Below is generated by plot.py at 2018-04-25 00:29:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 58.64 Mbit/s
95th percentile per-packet one-way delay: 140.452 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 58.64 Mbit/s
95th percentile per-packet one-way delay: 140.452 ms
Loss rate: 0.00%
Run 3: Report of TCP Cubic — Data Link

![Graph 1: Throughput vs Time]

- **Flow 1 ingress (mean 58.65 Mbit/s)**
- **Flow 1 egress (mean 58.64 Mbit/s)**

![Graph 2: Packet Delay vs Time]

- **Flow 1 (95th percentile 140.45 ms)**
Run 4: Statistics of TCP Cubic


# Below is generated by plot.py at 2018-04-25 00:29:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 64.57 Mbit/s
95th percentile per-packet one-way delay: 144.622 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 64.57 Mbit/s
95th percentile per-packet one-way delay: 144.622 ms
Loss rate: 0.00%
Run 4: Report of TCP Cubic — Data Link

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Graph 1: Throughput (Mbps) over time (s)
- Flow 1 ingress (mean 64.59 Mbps)
- Flow 1 egress (mean 64.57 Mbps)

Graph 2: Per-packet one-way delay (ms) over time (s)
- Flow 1 (95th percentile 144.62 ms)
Run 5: Statistics of TCP Cubic

Start at: 2018-04-24 22:14:02

# Below is generated by plot.py at 2018-04-25 00:29:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 54.21 Mbit/s
95th percentile per-packet one-way delay: 139.149 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 54.21 Mbit/s
95th percentile per-packet one-way delay: 139.149 ms
Loss rate: 0.00%
Run 5: Report of TCP Cubic — Data Link
Run 6: Statistics of TCP Cubic

End at: 2018-04-24 22:29:10

# Below is generated by plot.py at 2018-04-25 00:29:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 65.97 Mbit/s
95th percentile per-packet one-way delay: 139.956 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 65.97 Mbit/s
95th percentile per-packet one-way delay: 139.956 ms
Loss rate: 0.00%
Run 6: Report of TCP Cubic — Data Link
Run 7: Statistics of TCP Cubic


# Below is generated by plot.py at 2018-04-25 00:30:04
# Datalink statistics
-- Total of 1 flow:
Average throughput: 53.42 Mbit/s
95th percentile per-packet one-way delay: 141.709 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 53.42 Mbit/s
95th percentile per-packet one-way delay: 141.709 ms
Loss rate: 0.00%
Run 7: Report of TCP Cubic — Data Link
Run 8: Statistics of TCP Cubic

End at: 2018-04-24 22:58:06

# Below is generated by plot.py at 2018-04-25 00:30:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 55.36 Mbit/s
95th percentile per-packet one-way delay: 139.336 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 55.36 Mbit/s
95th percentile per-packet one-way delay: 139.336 ms
Loss rate: 0.00%
Run 8: Report of TCP Cubic — Data Link

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

- **Flow 1 ingress** (mean 55.36 Mbit/s)
- **Flow 1 egress** (mean 55.36 Mbit/s)

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

- **Flow 1** (95th percentile 139.34 ms)
Run 9: Statistics of TCP Cubic

End at: 2018-04-24 23:12:41

# Below is generated by plot.py at 2018-04-25 00:30:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 44.32 Mbit/s
95th percentile per-packet one-way delay: 142.776 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 44.32 Mbit/s
95th percentile per-packet one-way delay: 142.776 ms
Loss rate: 0.00%
Run 9: Report of TCP Cubic — Data Link
Run 10: Statistics of TCP Cubic


# Below is generated by plot.py at 2018-04-25 00:30:06
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 51.05 Mbit/s
  95th percentile per-packet one-way delay: 138.430 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 51.05 Mbit/s
  95th percentile per-packet one-way delay: 138.430 ms
  Loss rate: 0.00%
Run 10: Report of TCP Cubic — Data Link

![Throughput Graph](image1)

- Flow 1 ingress (mean 51.05 Mbit/s)
- Flow 1 egress (mean 51.05 Mbit/s)

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

- Flow 1 (95th percentile 138.43 ms)
Run 1: Statistics of LEDBAT

Start at: 2018-04-24 21:04:42
End at: 2018-04-24 21:05:12

# Below is generated by plot.py at 2018-04-25 00:30:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.33 Mbit/s
95th percentile per-packet one-way delay: 136.842 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.33 Mbit/s
95th percentile per-packet one-way delay: 136.842 ms
Loss rate: 0.00%
Run 1: Report of LEDBAT — Data Link

[Graph showing throughput over time with labels for flow 1 ingress and egress.]
Run 2: Statistics of LEDBAT


# Below is generated by plot.py at 2018-04-25 00:30:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 4.82 Mbit/s
95th percentile per-packet one-way delay: 136.926 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 4.82 Mbit/s
95th percentile per-packet one-way delay: 136.926 ms
Loss rate: 0.00%
Run 3: Statistics of LEDBAT

End at: 2018-04-24 21:33:56

# Below is generated by plot.py at 2018-04-25 00:30:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 4.83 Mbit/s
95th percentile per-packet one-way delay: 137.261 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 4.83 Mbit/s
95th percentile per-packet one-way delay: 137.261 ms
Loss rate: 0.00%
Run 4: Statistics of LEDBAT

Start at: 2018-04-24 21:47:45

# Below is generated by plot.py at 2018-04-25 00:30:06
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 4.80 Mbit/s
  95th percentile per-packet one-way delay: 137.077 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 4.80 Mbit/s
  95th percentile per-packet one-way delay: 137.077 ms
  Loss rate: 0.00%
Run 4: Report of LEDBAT — Data Link

[Graphs showing throughput and packet one-way delay over time]
Run 5: Statistics of LEDBAT

Start at: 2018-04-24 22:02:15
End at: 2018-04-24 22:02:45

# Below is generated by plot.py at 2018-04-25 00:30:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 3.61 Mbit/s
95th percentile per-packet one-way delay: 137.108 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 3.61 Mbit/s
95th percentile per-packet one-way delay: 137.108 ms
Loss rate: 0.00%
Run 5: Report of LEDBAT — Data Link
Run 6: Statistics of LEDBAT

Start at: 2018-04-24 22:16:54

# Below is generated by plot.py at 2018-04-25 00:30:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 4.83 Mbit/s
95th percentile per-packet one-way delay: 136.791 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 4.83 Mbit/s
95th percentile per-packet one-way delay: 136.791 ms
Loss rate: 0.00%
Run 6: Report of LEDBAT — Data Link
Run 7: Statistics of LEDBAT

End at: 2018-04-24 22:32:03

# Below is generated by plot.py at 2018-04-25 00:30:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 4.83 Mbit/s
95th percentile per-packet one-way delay: 137.542 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 4.83 Mbit/s
95th percentile per-packet one-way delay: 137.542 ms
Loss rate: 0.00%
Run 7: Report of LEDBAT — Data Link

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

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

- Packet one-way delay (ms):
  - Flow 1 (99th percentile 137.54 ms)
Run 8: Statistics of LEDBAT

Start at: 2018-04-24 22:45:51

# Below is generated by plot.py at 2018-04-25 00:30:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 4.85 Mbit/s
95th percentile per-packet one-way delay: 136.710 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 4.85 Mbit/s
95th percentile per-packet one-way delay: 136.710 ms
Loss rate: 0.00%
Run 8: Report of LEDBAT — Data Link
Run 9: Statistics of LEDBAT

Start at: 2018-04-24 23:00:24
End at: 2018-04-24 23:00:54

# Below is generated by plot.py at 2018-04-25 00:30:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 4.83 Mbit/s
95th percentile per-packet one-way delay: 137.241 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 4.83 Mbit/s
95th percentile per-packet one-way delay: 137.241 ms
Loss rate: 0.00%
Run 9: Report of LEDBAT — Data Link
Run 10: Statistics of LEDBAT

End at: 2018-04-24 23:15:26

# Below is generated by plot.py at 2018-04-25 00:30:06
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 4.81 Mbit/s
  95th percentile per-packet one-way delay: 136.860 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 4.81 Mbit/s
  95th percentile per-packet one-way delay: 136.860 ms
  Loss rate: 0.00%
Run 10: Report of LEDBAT — Data Link

Graph 1: Throughput (Mb/s) vs Time (s)
- Flow 1 ingress (mean 4.82 Mb/s)
- Flow 1 egress (mean 4.81 Mb/s)

Graph 2: Packet one way delay (ms) vs Time (s)
- Flow 1 (99th percentile 136.86 ms)
Run 1: Statistics of PCC-Allegro

Start at: 2018-04-24 21:10:00
End at: 2018-04-24 21:10:30

# Below is generated by plot.py at 2018-04-25 00:38:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 558.71 Mbit/s
95th percentile per-packet one-way delay: 153.941 ms
Loss rate: 0.78%
-- Flow 1:
Average throughput: 558.71 Mbit/s
95th percentile per-packet one-way delay: 153.941 ms
Loss rate: 0.78%
Run 1: Report of PCC-Allegro — Data Link

![Graph showing network performance metrics over time. The first graph plots throughput (Mbps) against time (s) with two distinct lines representing different traffic conditions. The second graph plots per-packet one-way delay (ms) against time (s) with a single line indicating a high variability in delay.]

- Flow 1 ingress (mean 563.11 Mbps)
- Flow 1 egress (mean 558.71 Mbps)
- Flow 1 (95th percentile 153.94 ms)
Run 2: Statistics of PCC-Allegro

End at: 2018-04-24 21:25:03

# Below is generated by plot.py at 2018-04-25 00:38:38
# Datalink statistics
-- Total of 1 flow:
 Average throughput: 528.51 Mbit/s
 95th percentile per-packet one-way delay: 152.023 ms
 Loss rate: 0.83%
-- Flow 1:
 Average throughput: 528.51 Mbit/s
 95th percentile per-packet one-way delay: 152.023 ms
 Loss rate: 0.83%
Run 2: Report of PCC-Allegro — Data Link
Run 3: Statistics of PCC-Allegro


# Below is generated by plot.py at 2018-04-25 00:38:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 538.60 Mbit/s
95th percentile per-packet one-way delay: 173.394 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 538.60 Mbit/s
95th percentile per-packet one-way delay: 173.394 ms
Loss rate: 0.60%
Run 3: Report of PCC-Allegro — Data Link
Run 4: Statistics of PCC-Allegro


# Below is generated by plot.py at 2018-04-25 00:38:38
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 534.83 Mbit/s
  95th percentile per-packet one-way delay: 301.410 ms
  Loss rate: 1.74%
-- Flow 1:
  Average throughput: 534.83 Mbit/s
  95th percentile per-packet one-way delay: 301.410 ms
  Loss rate: 1.74%
Run 4: Report of PCC-Allegro — Data Link
Run 5: Statistics of PCC-Allegro

Start at: 2018-04-24 22:07:54
End at: 2018-04-24 22:08:24

# Below is generated by plot.py at 2018-04-25 00:39:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 562.79 Mbit/s
95th percentile per-packet one-way delay: 189.138 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 562.79 Mbit/s
95th percentile per-packet one-way delay: 189.138 ms
Loss rate: 0.69%
Run 5: Report of PCC-Allegro — Data Link

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

Flow 1 ingress (mean 566.80 Mbps)  Flow 1 egress (mean 562.79 Mbps)

![Graph 2: Per packet end-to-end delay (ms)](image2)

Flow 1 (95th percentile 189.14 ms)
Run 6: Statistics of PCC-Allegro


# Below is generated by plot.py at 2018-04-25 00:39:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 552.74 Mbit/s
95th percentile per-packet one-way delay: 196.809 ms
Loss rate: 0.93%
-- Flow 1:
Average throughput: 552.74 Mbit/s
95th percentile per-packet one-way delay: 196.809 ms
Loss rate: 0.93%
Run 6: Report of PCC-Allegro — Data Link

![Data Link Throughput Graph]

![Data Link Delay Graph]
Run 7: Statistics of PCC-Allegro

Start at: 2018-04-24 22:36:54

# Below is generated by plot.py at 2018-04-25 00:39:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 529.03 Mbit/s
95th percentile per-packet one-way delay: 189.067 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 529.03 Mbit/s
95th percentile per-packet one-way delay: 189.067 ms
Loss rate: 0.73%
Run 7: Report of PCC-Allegro — Data Link

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

- Flow 1 ingress (mean 532.94 Mbps)
- Flow 1 egress (mean 529.03 Mbps)

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

- Flow 1 (95th percentile 189.07 ms)
Run 8: Statistics of PCC-Allegro


# Below is generated by plot.py at 2018-04-25 00:39:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 501.59 Mbit/s
95th percentile per-packet one-way delay: 178.381 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 501.59 Mbit/s
95th percentile per-packet one-way delay: 178.381 ms
Loss rate: 0.84%
Run 8: Report of PCC-Allegro — Data Link

![Graph of throughput and delay](image)

- **Flow 1 ingress (mean 505.84 Mbit/s)**
- **Flow 1 egress (mean 501.59 Mbit/s)**
Run 9: Statistics of PCC-Allegro

Start at: 2018-04-24 23:06:01
End at: 2018-04-24 23:06:31

# Below is generated by plot.py at 2018-04-25 00:47:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 556.77 Mbit/s
95th percentile per-packet one-way delay: 185.047 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 556.77 Mbit/s
95th percentile per-packet one-way delay: 185.047 ms
Loss rate: 0.86%
Run 9: Report of PCC-Allegro — Data Link

![Graph of Throughput vs Time](image1)

- Flow 1 ingress (mean 361.60 Mbit/s)
- Flow 1 egress (mean 556.77 Mbit/s)

![Graph of Per-Socket One-Way Delay vs Time](image2)

- Flow 1 (95th percentile 185.05 ms)
Run 10: Statistics of PCC-Allegro


# Below is generated by plot.py at 2018-04-25 00:47:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 517.51 Mbit/s
95th percentile per-packet one-way delay: 215.770 ms
Loss rate: 1.49%
-- Flow 1:
Average throughput: 517.51 Mbit/s
95th percentile per-packet one-way delay: 215.770 ms
Loss rate: 1.49%
Run 10: Report of PCC-Allegro — Data Link
Run 1: Statistics of QUIC Cubic

End at: 2018-04-24 21:12:25
Run 1: Report of QUIC Cubic — Data Link

![Graph of throughput over time](image1)

- **Flow 1 ingress (mean 0.04 Mbit/s)**
- **Flow 1 egress (mean 0.04 Mbit/s)**

![Graph of packet round-trip delay over time](image2)

- **Flow 1 (95th percentile 136.55 ms)**
Run 2: Statistics of QUIC Cubic

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

# Below is generated by plot.py at 2018-04-25 00:47:49
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 64.67 Mbit/s
  95th percentile per-packet one-way delay: 136.697 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 64.67 Mbit/s
  95th percentile per-packet one-way delay: 136.697 ms
  Loss rate: 0.00%
Run 2: Report of QUIC Cubic — Data Link

![Graph showing throughput over time for Flow 1 ingress and egress with mean 64.67 Mbit/s.](image1)

![Graph showing packet round-trip delay for Flow 1 with 95th percentile 136.70 ms.](image2)
Run 3: Statistics of QUIC Cubic

End at: 2018-04-24 21:41:09

# Below is generated by plot.py at 2018-04-25 00:47:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 65.30 Mbit/s
95th percentile per-packet one-way delay: 136.412 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 65.30 Mbit/s
95th percentile per-packet one-way delay: 136.412 ms
Loss rate: 0.00%
Run 3: Report of QUIC Cubic — Data Link
Run 4: Statistics of QUIC Cubic


# Below is generated by plot.py at 2018-04-25 00:47:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 68.19 Mbit/s
95th percentile per-packet one-way delay: 136.515 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 68.19 Mbit/s
95th percentile per-packet one-way delay: 136.515 ms
Loss rate: 0.00%
Run 4: Report of QUIC Cubic — Data Link
Run 5: Statistics of QUIC Cubic

End at: 2018-04-24 22:10:18

# Below is generated by plot.py at 2018-04-25 00:47:49
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 67.29 Mbit/s
  95th percentile per-packet one-way delay: 134.922 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 67.29 Mbit/s
  95th percentile per-packet one-way delay: 134.922 ms
  Loss rate: 0.00%
Run 5: Report of QUIC Cubic — Data Link

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

![Graph 2: Packet delay over time](image2)
Run 6: Statistics of QUIC Cubic


# Below is generated by plot.py at 2018-04-25 00:47:49
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 67.64 Mbit/s
  95th percentile per-packet one-way delay: 135.889 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 67.64 Mbit/s
  95th percentile per-packet one-way delay: 135.889 ms
  Loss rate: 0.00%
Run 6: Report of QUIC Cubic — Data Link

![Graph of throughput and packet delay over time]

- Flow 1 ingress (mean 67.64 Mbit/s)
- Flow 1 egress (mean 67.64 Mbit/s)

- Flow 1 (95th percentile 135.89 ms)
Run 7: Statistics of QUIC Cubic


# Below is generated by plot.py at 2018-04-25 00:47:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 58.55 Mbit/s
95th percentile per-packet one-way delay: 135.815 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 58.55 Mbit/s
95th percentile per-packet one-way delay: 135.815 ms
Loss rate: 0.00%
Run 7: Report of QUIC Cubic — Data Link
Run 8: Statistics of QUIC Cubic


# Below is generated by plot.py at 2018-04-25 00:47:49
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 64.49 Mbit/s
  95th percentile per-packet one-way delay: 135.908 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 64.49 Mbit/s
  95th percentile per-packet one-way delay: 135.908 ms
  Loss rate: 0.00%
Run 8: Report of QUIC Cubic — Data Link

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

- **Flow 1 ingress (mean 64.49 Mbit/s)**
- **Flow 1 egress (mean 64.49 Mbit/s)**

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

- **Flow 1 (95th percentile 135.91 ms)**
Run 9: Statistics of QUIC Cubic

Start at: 2018-04-24 23:07:56
End at: 2018-04-24 23:08:26

# Below is generated by plot.py at 2018-04-25 00:47:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 60.54 Mbit/s
95th percentile per-packet one-way delay: 136.478 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 60.54 Mbit/s
95th percentile per-packet one-way delay: 136.478 ms
Loss rate: 0.00%
Run 9: Report of QUIC Cubic — Data Link

![Graph showing throughput and packet delay over time for flow 1 ing and egress with a mean of 60.54 Mbit/s and 95th percentile of 136.48 ms.]

101
Run 10: Statistics of QUIC Cubic


# Below is generated by plot.py at 2018-04-25 00:47:49
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 67.06 Mbit/s
  95th percentile per-packet one-way delay: 136.501 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 67.06 Mbit/s
  95th percentile per-packet one-way delay: 136.501 ms
  Loss rate: 0.00%
Run 10: Report of QUIC Cubic — Data Link
Run 1: Statistics of SCReAM

Start at: 2018-04-24 21:07:10
End at: 2018-04-24 21:07:40

# Below is generated by plot.py at 2018-04-25 00:47:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.726 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.726 ms
Loss rate: 0.00%
Run 1: Report of SCReAM — Data Link

![Graph 1](image1.png)

*Graph 1: Throughput (Mbps) over Time (s)*

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

![Graph 2](image2.png)

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

- **Flow 1 (95th percentile 136.73 ms)**

105
Run 2: Statistics of SCReAM

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

# Below is generated by plot.py at 2018-04-25 00:47:49
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 136.700 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 136.700 ms
  Loss rate: 0.00%
Run 2: Report of SCReAM — Data Link
Run 3: Statistics of SCReAM

End at: 2018-04-24 21:36:25

# Below is generated by plot.py at 2018-04-25 00:47:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 135.889 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 135.889 ms
Loss rate: 0.00%
Run 3: Report of SCReAM — Data Link

![Graph 1: Throughput vs Time for Flow 1 Ingress and Egress](image1)

![Graph 2: Packet Error Rate vs Time for Flow 1](image2)

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

Flow 1 (95th percentile 135.89 ms)
Run 4: Statistics of SCReAM

End at: 2018-04-24 21:50:46

# Below is generated by plot.py at 2018-04-25 00:47:49
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 136.037 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 136.037 ms
  Loss rate: 0.00%
Run 4: Report of SCReAM — Data Link

[Graphs showing throughput and packet delay over time]
Run 5: Statistics of SCReAM

End at: 2018-04-24 22:05:16

# Below is generated by plot.py at 2018-04-25 00:47:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.475 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.475 ms
Loss rate: 0.00%
Run 5: Report of SCReAM — Data Link

[Graph showing network throughput over time with labels for Flow 1 ingress (mean 0.22 Mbit/s) and Flow 1 egress (mean 0.22 Mbit/s).]

[Graph showing packet per-packet one-way delay over time with a marker for Flow 1 (95th percentile 136.47 ms).]
Run 6: Statistics of SCReAM


# Below is generated by plot.py at 2018-04-25 00:47:49
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 136.029 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 136.029 ms
  Loss rate: 0.00%
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: Round-trip delay (ms)](image)

- Flow 1 (95th percentile 136.03 ms)
Run 7: Statistics of SCReAM

Start at: 2018-04-24 22:34:04
End at: 2018-04-24 22:34:35

# Below is generated by plot.py at 2018-04-25 00:47:49
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 135.913 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 135.913 ms
  Loss rate: 0.00%
Run 7: Report of SCReAM — Data Link
Run 8: Statistics of SCReAM


# Below is generated by plot.py at 2018-04-25 00:47:49
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 136.228 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 136.228 ms
  Loss rate: 0.00%
Run 8: Report of SCReAM — Data Link

Throughput (Mbps)

Time (s)

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

Per-packet one-way delay (μs)

Time (s)

Flow 1 (95th percentile 136.23 μs)
Run 9: Statistics of SCReAM

Start at: 2018-04-24 23:02:52
End at: 2018-04-24 23:03:22

# Below is generated by plot.py at 2018-04-25 00:47:49
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 136.801 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 136.801 ms
  Loss rate: 0.00%
Run 9: Report of SCReAM — Data Link
Run 10: Statistics of SCReAM

End at: 2018-04-24 23:17:57

# Below is generated by plot.py at 2018-04-25 00:47:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 135.816 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 135.816 ms
Loss rate: 0.00%
Run 10: Report of SCReAM — Data Link

![Graph of throughput and packet round-trip time over time]

- Throughput (Mbps)
- Time (s)
- Flow 1 ingress (mean 0.22 Mbps) vs. Flow 1 egress (mean 0.22 Mbps)

- Packet round-trip time (ms)
- Time (s)
- Flow 1 (95th percentile 135.82 ms)
Run 1: Statistics of WebRTC media


# Below is generated by plot.py at 2018-04-25 00:47:49
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 137.095 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 137.095 ms
  Loss rate: 0.00%
Run 1: Report of WebRTC media — Data Link

- **Throughput (Mbps)**
  - X-axis: Time (s)
  - Y-axis: Throughput (Mbps)
  - Legend:
    - Flow 1 ingress (mean 0.06 Mbit/s)
    - Flow 1 egress (mean 0.06 Mbit/s)

- **Per packet one-way delay (ms)**
  - X-axis: Time (s)
  - Y-axis: Per packet one-way delay (ms)
  - Legend:
    - Flow 1 (90th percentile 137.09 ms)
Run 2: Statistics of WebRTC media

End at: 2018-04-24 21:27:45

# Below is generated by plot.py at 2018-04-25 00:47:49
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 136.738 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 136.738 ms
  Loss rate: 0.00%
Run 2: Report of WebRTC media — Data Link
Run 3: Statistics of WebRTC media

End at: 2018-04-24 21:41:56

# Below is generated by plot.py at 2018-04-25 00:47:49
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 136.728 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 136.728 ms
  Loss rate: 0.00%
Run 3: Report of WebRTC media — Data Link
Run 4: Statistics of WebRTC media

Start at: 2018-04-24 21:56:02

# Below is generated by plot.py at 2018-04-25 00:47:49
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 136.033 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 136.033 ms
  Loss rate: 0.00%
Run 4: Report of WebRTC media — Data Link
Run 5: Statistics of WebRTC media

End at: 2018-04-24 22:11:05

# Below is generated by plot.py at 2018-04-25 00:47:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 136.801 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 136.801 ms
Loss rate: 0.00%
Run 5: Report of WebRTC media — Data Link

Throughput (Mbit/s)

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 [90th percentile 136.80 ms]
Run 6: Statistics of WebRTC media


# Below is generated by plot.py at 2018-04-25 00:47:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 136.750 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 136.750 ms
Loss rate: 0.00%
Run 6: Report of WebRTC media — Data Link

Throughput (Mbps)

Time (s)

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

Packet per avg delay (ms)

Flow 1 (90th percentile 136.75 ms)
Run 7: Statistics of WebRTC media


# Below is generated by plot.py at 2018-04-25 00:47:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 136.844 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 136.844 ms
Loss rate: 0.00%
Run 7: Report of WebRTC media — Data Link

![Graph 1](image1.png)

![Graph 2](image2.png)
Run 8: Statistics of WebRTC media


# Below is generated by plot.py at 2018-04-25 00:47:49
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 136.269 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 136.269 ms
  Loss rate: 0.00%
Run 8: Report of WebRTC media — Data Link
Run 9: Statistics of WebRTC media

Start at: 2018-04-24 23:08:42
End at: 2018-04-24 23:09:12

# Below is generated by plot.py at 2018-04-25 00:47:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 136.301 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 136.301 ms
Loss rate: 0.00%
Run 9: Report of WebRTC media — Data Link
Run 10: Statistics of WebRTC media


# Below is generated by plot.py at 2018-04-25 00:47:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 136.374 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 136.374 ms
Loss rate: 0.00%
Run 10: Report of WebRTC media — Data Link

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

![Graph 2: Pre-packet inter-packet delay (ms)](image2)
Run 1: Statistics of Sprout

Start at: 2018-04-24 21:08:36
End at: 2018-04-24 21:09:06

# Below is generated by plot.py at 2018-04-25 00:47:49
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.39 Mbit/s
  95th percentile per-packet one-way delay: 136.936 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.39 Mbit/s
  95th percentile per-packet one-way delay: 136.936 ms
  Loss rate: 0.00%
Run 1: Report of Sprout — Data Link

![Graph of Throughput and Delay](image)

- Flow 1 ingress (mean 0.39 Mbit/s)
- Flow 1 egress (mean 0.39 Mbit/s)

- Flow 1 (90th percentile 136.94 ms)
Run 2: Statistics of Sprout


# Below is generated by plot.py at 2018-04-25 00:47:49
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 136.840 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 136.840 ms
  Loss rate: 0.00%
Run 2: Report of Sprout — Data Link
Run 3: Statistics of Sprout

End at: 2018-04-24 21:37:51

# Below is generated by plot.py at 2018-04-25 00:47:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 136.863 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 136.863 ms
Loss rate: 0.00%
Run 3: Report of Sprout — Data Link

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

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

![Graph showing packet delay distribution](image)

- Flow 1 (95th percentile 136.86 ms)
Run 4: Statistics of Sprout

Start at: 2018-04-24 21:52:01

# Below is generated by plot.py at 2018-04-25 00:47:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.41 Mbit/s
95th percentile per-packet one-way delay: 136.716 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.41 Mbit/s
95th percentile per-packet one-way delay: 136.716 ms
Loss rate: 0.00%
Run 4: Report of Sprout — Data Link

![Graph](image1)

![Graph](image2)

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Run 5: Statistics of Sprout

End at: 2018-04-24 22:07:01

# Below is generated by plot.py at 2018-04-25 00:47:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.38 Mbit/s
95th percentile per-packet one-way delay: 136.781 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.38 Mbit/s
95th percentile per-packet one-way delay: 136.781 ms
Loss rate: 0.00%
Run 5: Report of Sprout — Data Link

![Graph 1: Throughput (Mbps)]

![Graph 2: Per-packet one-way delay (ms)]
Run 6: Statistics of Sprout


# Below is generated by plot.py at 2018-04-25 00:47:49
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.40 Mbit/s
  95th percentile per-packet one-way delay: 136.465 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.40 Mbit/s
  95th percentile per-packet one-way delay: 136.465 ms
  Loss rate: 0.00%
Run 6: Report of Sprout — Data Link

![Throughput Graph]

![Packet Delay Graph]

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

Flow 1 (95th percentile 136.47 ms)
Run 7: Statistics of Sprout

End at: 2018-04-24 22:36:01

# Below is generated by plot.py at 2018-04-25 00:47:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.38 Mbit/s
95th percentile per-packet one-way delay: 136.126 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.38 Mbit/s
95th percentile per-packet one-way delay: 136.126 ms
Loss rate: 0.00%
Run 7: Report of Sprout — Data Link

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

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

*Flow 1 ingress (mean 0.38 Mbit/s) — Flow 1 egress (mean 0.38 Mbit/s)*

*Flow 1 (95th percentile 136.13 ms)*
Run 8: Statistics of Sprout

Start at: 2018-04-24 22:50:03
End at: 2018-04-24 22:50:33

# Below is generated by plot.py at 2018-04-25 00:47:49
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.42 Mbit/s
  95th percentile per-packet one-way delay: 136.272 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.42 Mbit/s
  95th percentile per-packet one-way delay: 136.272 ms
  Loss rate: 0.00%
Run 8: Report of Sprout — Data Link

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

![Graph 2: Per-packet end-to-end delay (ms)](image2)

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Run 9: Statistics of Sprout

Start at: 2018-04-24 23:04:38
End at: 2018-04-24 23:05:08

# Below is generated by plot.py at 2018-04-25 00:47:49
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.41 Mbit/s
  95th percentile per-packet one-way delay: 136.850 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.41 Mbit/s
  95th percentile per-packet one-way delay: 136.850 ms
  Loss rate: 0.00%
Run 9: Report of Sprout — Data Link

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

![Graph 2: Packet Delay vs. Time](image2)
Run 10: Statistics of Sprout

End at: 2018-04-24 23:19:42

# Below is generated by plot.py at 2018-04-25 00:47:49
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.41 Mbit/s
  95th percentile per-packet one-way delay: 136.394 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.41 Mbit/s
  95th percentile per-packet one-way delay: 136.394 ms
  Loss rate: 0.00%
Run 10: Report of Sprout — Data Link

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

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

- **Packet one-way delay (ms)**
  - Flow 1 (90th percentile 136.39 ms)
Run 1: Statistics of TaoVA-100x

Start at: 2018-04-24 21:07:52
End at: 2018-04-24 21:08:22

# Below is generated by plot.py at 2018-04-25 00:47:49
# Datalink statistics
-- Total of 1 flow:
    Average throughput: 13.33 Mbit/s
    95th percentile per-packet one-way delay: 136.491 ms
    Loss rate: 0.00%
-- Flow 1:
    Average throughput: 13.33 Mbit/s
    95th percentile per-packet one-way delay: 136.491 ms
    Loss rate: 0.00%
Run 1: Report of TaoVA-100x — Data Link

[Graphs showing throughput and packet delay over time]

Throughput (Mbit/s)

Flow 1 ingress (mean 13.33 Mbit/s)
Flow 1 egress (mean 13.33 Mbit/s)

Packet one way delay (ms)

Flow 1 (95th percentile 136.49 ms)
Run 2: Statistics of TaoVA-100x


# Below is generated by plot.py at 2018-04-25 00:47:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 213.92 Mbit/s
95th percentile per-packet one-way delay: 136.812 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 213.92 Mbit/s
95th percentile per-packet one-way delay: 136.812 ms
Loss rate: 0.00%
Run 2: Report of TaoVA-100x — Data Link
Run 3: Statistics of TaoVA-100x

Start at: 2018-04-24 21:36:36
End at: 2018-04-24 21:37:07

# Below is generated by plot.py at 2018-04-25 00:47:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 13.29 Mbit/s
95th percentile per-packet one-way delay: 136.484 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 13.29 Mbit/s
95th percentile per-packet one-way delay: 136.484 ms
Loss rate: 0.00%
Run 3: Report of TaoVA-100x — Data Link

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

- **Flow 1 ingress (mean 13.29 Mbps)**
- **Flow 1 egress (mean 13.29 Mbps)**

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

- **Flow 1 (95th percentile 136.48 ms)**
Run 4: Statistics of TaoVA-100x


# Below is generated by plot.py at 2018-04-25 00:47:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 200.80 Mbit/s
95th percentile per-packet one-way delay: 136.857 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 200.80 Mbit/s
95th percentile per-packet one-way delay: 136.857 ms
Loss rate: 0.00%
Run 4: Report of TaoVA-100x — Data Link
Run 5: Statistics of TaoVA-100x

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

# Below is generated by plot.py at 2018-04-25 00:47:49
# Datalink statistics

-- Total of 1 flow:
  Average throughput: 197.90 Mbit/s
  95th percentile per-packet one-way delay: 136.539 ms
  Loss rate: 0.00%

-- Flow 1:
  Average throughput: 197.90 Mbit/s
  95th percentile per-packet one-way delay: 136.539 ms
  Loss rate: 0.00%
Run 5: Report of TaoVA-100x — Data Link

![Graph of throughput and packet delay]

- Flow 1 ingress (mean 197.90 Mbit/s)
- Flow 1 egress (mean 197.90 Mbit/s)
Run 6: Statistics of TaoVA-100x

End at: 2018-04-24 22:20:34

# Below is generated by plot.py at 2018-04-25 00:47:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 204.86 Mbit/s
95th percentile per-packet one-way delay: 136.540 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 204.86 Mbit/s
95th percentile per-packet one-way delay: 136.540 ms
Loss rate: 0.00%
Run 6: Report of TaoVA-100x — Data Link
Run 7: Statistics of TaoVA-100x

Start at: 2018-04-24 22:34:46
End at: 2018-04-24 22:35:16

# Below is generated by plot.py at 2018-04-25 00:47:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 13.19 Mbit/s
95th percentile per-packet one-way delay: 136.311 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 13.19 Mbit/s
95th percentile per-packet one-way delay: 136.311 ms
Loss rate: 0.00%
Run 7: Report of TaoVA-100x — Data Link

![Graph of data link performance with throughput and packet delay over time.]

- Flow 1 ingress (mean 13.19 Mbit/s)
- Flow 1 egress (mean 13.19 Mbit/s)

- Flow 1 (95th percentile 136.31 ms)
Run 8: Statistics of TaoVA-100x


# Below is generated by plot.py at 2018-04-25 00:47:49
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 201.08 Mbit/s
  95th percentile per-packet one-way delay: 136.084 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 201.08 Mbit/s
  95th percentile per-packet one-way delay: 136.084 ms
  Loss rate: 0.00%
Run 8: Report of TaoVA-100x — Data Link

![Graph of Throughput over Time]

- **Flow 1 ingress (mean 201.09 Mbit/s)**
- **Flow 1 egress (mean 201.08 Mbit/s)**

![Graph of Per Packet One-Way Delay over Time]

- **Flow 1 (95th percentile 136.08 ms)**
Run 9: Statistics of TaoVA-100x

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

# Below is generated by plot.py at 2018-04-25 00:47:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 208.55 Mbit/s
95th percentile per-packet one-way delay: 136.704 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 208.55 Mbit/s
95th percentile per-packet one-way delay: 136.704 ms
Loss rate: 0.00%
Run 10: Statistics of TaoVA-100x


# Below is generated by plot.py at 2018-04-25 00:53:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 206.40 Mbit/s
95th percentile per-packet one-way delay: 136.383 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 206.40 Mbit/s
95th percentile per-packet one-way delay: 136.383 ms
Loss rate: 0.00%
Run 10: Report of TaoVA-100x — Data Link

---

**Throughput (Mbps)**

- Flow 1 ingress (mean 206.40 Mbit/s)
- Flow 1 egress (mean 206.40 Mbit/s)

**Packet one-way delay (ms)**

- Flow 1 (95th percentile 136.38 ms)

---

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Run 1: Statistics of TCP Vegas


# Below is generated by plot.py at 2018-04-25 00:53:25
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 25.31 Mbit/s
  95th percentile per-packet one-way delay: 140.920 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 25.31 Mbit/s
  95th percentile per-packet one-way delay: 140.920 ms
  Loss rate: 0.00%
Run 1: Report of TCP Vegas — Data Link

![Graph of throughput over time]

- Flow 1 ingress (mean 25.31 Mbit/s)
- Flow 1 egress (mean 25.31 Mbit/s)

![Graph of packet delay over time]

- Flow 1 (50th percentile 140.92 ms)
Run 2: Statistics of TCP Vegas


# Below is generated by plot.py at 2018-04-25 00:53:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 41.66 Mbit/s
95th percentile per-packet one-way delay: 138.490 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 41.66 Mbit/s
95th percentile per-packet one-way delay: 138.490 ms
Loss rate: 0.00%
Run 2: Report of TCP Vegas — Data Link

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

![Graph 2: Per-packet one-way delay (ms)](image2)
Run 3: Statistics of TCP Vegas


# Below is generated by plot.py at 2018-04-25 00:53:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 49.76 Mbit/s
95th percentile per-packet one-way delay: 146.481 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 49.76 Mbit/s
95th percentile per-packet one-way delay: 146.481 ms
Loss rate: 0.00%
Run 3: Report of TCP Vegas — Data Link
Run 4: Statistics of TCP Vegas


# Below is generated by plot.py at 2018-04-25 00:53:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 24.93 Mbit/s
95th percentile per-packet one-way delay: 138.358 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 24.93 Mbit/s
95th percentile per-packet one-way delay: 138.358 ms
Loss rate: 0.00%
Run 4: Report of TCP Vegas — Data Link

![Graph showing TCP Vegas data link performance with two plots: Throughput (Mbps) over time and per-packet one-way delay (ms) over time.](image)

- Flow 1 ingress (mean 24.93 Mbit/s)
- Flow 1 egress (mean 24.93 Mbit/s)

Flow 1 (95th percentile 138.36 ms)
Run 5: Statistics of TCP Vegas


# Below is generated by plot.py at 2018-04-25 00:53:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 25.58 Mbit/s
95th percentile per-packet one-way delay: 140.740 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 25.58 Mbit/s
95th percentile per-packet one-way delay: 140.740 ms
Loss rate: 0.00%
Run 5: Report of TCP Vegas — Data Link
Run 6: Statistics of TCP Vegas


# Below is generated by plot.py at 2018-04-25 00:53:25
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 24.12 Mbit/s
  95th percentile per-packet one-way delay: 139.866 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 24.12 Mbit/s
  95th percentile per-packet one-way delay: 139.866 ms
  Loss rate: 0.00%
Run 6: Report of TCP Vegas — Data Link

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

- **Flow 1 ingress (mean 24.12 Mbps)**
- **Flow 1 egress (mean 24.12 Mbps)**

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

- **Flow 1 (95th percentile 139.87 ms)**
Run 7: Statistics of TCP Vegas

End at: 2018-04-24 22:40:46

# Below is generated by plot.py at 2018-04-25 00:53:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 28.95 Mbit/s
95th percentile per-packet one-way delay: 138.441 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 28.95 Mbit/s
95th percentile per-packet one-way delay: 138.441 ms
Loss rate: 0.00%
Run 7: Report of TCP Vegas — Data Link

![Graph showing throughput and delay over time with blue lines indicating Flow 1 ingress and egress with mean throughputs of 28.96 Mbps and 28.95 Mbps respectively.]

![Graph showing time in seconds on the x-axis and percentiles on the y-axis with blue lines indicating Flow 1 95th percentile delay of 138.44 ms.]

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Run 8: Statistics of TCP Vegas


# Below is generated by plot.py at 2018-04-25 00:53:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 26.59 Mbit/s
95th percentile per-packet one-way delay: 137.663 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 26.59 Mbit/s
95th percentile per-packet one-way delay: 137.663 ms
Loss rate: 0.00%
Run 8: Report of TCP Vegas — Data Link
Run 9: Statistics of TCP Vegas

End at: 2018-04-24 23:09:54

# Below is generated by plot.py at 2018-04-25 00:53:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 56.91 Mbit/s
95th percentile per-packet one-way delay: 145.500 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 56.91 Mbit/s
95th percentile per-packet one-way delay: 145.500 ms
Loss rate: 0.00%
Run 10: Statistics of TCP Vegas


# Below is generated by plot.py at 2018-04-25 00:53:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 27.92 Mbit/s
95th percentile per-packet one-way delay: 137.151 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 27.92 Mbit/s
95th percentile per-packet one-way delay: 137.151 ms
Loss rate: 0.00%
Run 10: Report of TCP Vegas — Data Link

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

- Flow 1 ingress (mean 27.92 Mbps)
- Flow 1 egress (mean 27.92 Mbps)

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

- Flow 1 (95th percentile 137.15 ms)
Run 1: Statistics of Verus

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

# Below is generated by plot.py at 2018-04-25 00:53:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 189.02 Mbit/s
95th percentile per-packet one-way delay: 168.753 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 189.02 Mbit/s
95th percentile per-packet one-way delay: 168.753 ms
Loss rate: 0.00%
Run 1: Report of Verus — Data Link
Run 2: Statistics of Verus


# Below is generated by plot.py at 2018-04-25 00:53:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 149.66 Mbit/s
95th percentile per-packet one-way delay: 150.620 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 149.66 Mbit/s
95th percentile per-packet one-way delay: 150.620 ms
Loss rate: 0.00%
Run 2: Report of Verus — Data Link
Run 3: Statistics of Verus

Start at: 2018-04-24 21:45:41  

# Below is generated by plot.py at 2018-04-25 00:53:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 193.13 Mbit/s
95th percentile per-packet one-way delay: 201.310 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 193.13 Mbit/s
95th percentile per-packet one-way delay: 201.310 ms
Loss rate: 0.07%
Run 3: Report of Verus — Data Link

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

- **Flow 1 ingress (mean 193.34 Mbit/s)**
- **Flow 1 egress (mean 193.33 Mbit/s)**

---

Flow 1 (95th percentile 201.31 ms)
Run 4: Statistics of Verus

Start at: 2018-04-24 22:00:15
End at: 2018-04-24 22:00:45

# Below is generated by plot.py at 2018-04-25 00:53:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 114.42 Mbit/s
95th percentile per-packet one-way delay: 176.098 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 114.42 Mbit/s
95th percentile per-packet one-way delay: 176.098 ms
Loss rate: 0.01%
Run 5: Statistics of Verus


# Below is generated by plot.py at 2018-04-25 00:53:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 196.71 Mbit/s
95th percentile per-packet one-way delay: 177.727 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 196.71 Mbit/s
95th percentile per-packet one-way delay: 177.727 ms
Loss rate: 0.00%
Run 5: Report of Verus — Data Link

![Graph 1: Throughput (Mbit/s)]

- **Flow 1 ingress (mean 196.75 Mbit/s)**
- **Flow 1 egress (mean 196.71 Mbit/s)**

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

- **Flow 1 (95th percentile 177.73 ms)**
Run 6: Statistics of Verus


# Below is generated by plot.py at 2018-04-25 00:53:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 188.19 Mbit/s
95th percentile per-packet one-way delay: 180.721 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 188.19 Mbit/s
95th percentile per-packet one-way delay: 180.721 ms
Loss rate: 0.00%
Run 6: Report of Verus — Data Link

![Graph 1](image1)

- Flow 1 ingress (mean 188.92 Mbit/s)
- Flow 1 egress (mean 188.19 Mbit/s)

![Graph 2](image2)

- Flow 1 (95th percentile 180.72 ms)
Run 7: Statistics of Verus


# Below is generated by plot.py at 2018-04-25 00:53:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 158.47 Mbit/s
95th percentile per-packet one-way delay: 179.404 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 158.47 Mbit/s
95th percentile per-packet one-way delay: 179.404 ms
Loss rate: 0.01%
Run 7: Report of Verus — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 158.49 Mbit/s)  Flow 1 egress (mean 158.47 Mbit/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 179.40 ms)
Run 8: Statistics of Verus

End at: 2018-04-24 22:58:52

# Below is generated by plot.py at 2018-04-25 00:53:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 145.52 Mbit/s
95th percentile per-packet one-way delay: 150.466 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 145.52 Mbit/s
95th percentile per-packet one-way delay: 150.466 ms
Loss rate: 0.07%
Run 8: Report of Verus — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 145.63 Mbit/s)  Flow 1 egress (mean 145.52 Mbit/s)

Per packet one way delay (ms)

Flow 1 (95th percentile 150.47 ms)
Run 9: Statistics of Verus

Start at: 2018-04-24 23:12:56

# Below is generated by plot.py at 2018-04-25 00:53:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 104.73 Mbit/s
95th percentile per-packet one-way delay: 167.188 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 104.73 Mbit/s
95th percentile per-packet one-way delay: 167.188 ms
Loss rate: 0.00%
Run 9: Report of Verus — Data Link

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

- Flow 1 ingress (mean 104.73 Mbit/s)
- Flow 1 egress (mean 104.73 Mbit/s)

End-to-end packet one-way delay (ms)

Flow 1 (95th percentile 167.19 ms)
Run 10: Statistics of Verus


# Below is generated by plot.py at 2018-04-25 00:53:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 128.05 Mbit/s
95th percentile per-packet one-way delay: 200.119 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 128.05 Mbit/s
95th percentile per-packet one-way delay: 200.119 ms
Loss rate: 0.35%
Run 10: Report of Verus — Data Link
Run 1: Statistics of Copa

Start at: 2018-04-24 21:11:05

# Below is generated by plot.py at 2018-04-25 00:53:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 79.53 Mbit/s
95th percentile per-packet one-way delay: 136.516 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 79.53 Mbit/s
95th percentile per-packet one-way delay: 136.516 ms
Loss rate: 0.00%
Run 1: Report of Copa — Data Link

---

**Graph 1:**

- **Y-axis:** Throughput (Mbps)
- **X-axis:** Time (s)
- **Legend:**
  - Dashed line: Flow 1 ingress (mean 79.53 Mbps)
  - Solid line: Flow 1 egress (mean 79.53 Mbps)

**Graph 2:**

- **Y-axis:** Per packet one way delay (ms)
- **X-axis:** Time (s)
- **Legend:**
  - Flow 1 (95th percentile 136.52 ms)
Run 2: Statistics of Copa

End at: 2018-04-24 21:26:07

# Below is generated by plot.py at 2018-04-25 00:53:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 79.63 Mbit/s
95th percentile per-packet one-way delay: 136.503 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 79.63 Mbit/s
95th percentile per-packet one-way delay: 136.503 ms
Loss rate: 0.00%
Run 2: Report of Copa — Data Link
Run 3: Statistics of Copa

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

# Below is generated by plot.py at 2018-04-25 00:53:47
# Datalink statistics
-- Total of 1 flow:
Average throughput: 77.80 Mbit/s
95th percentile per-packet one-way delay: 136.463 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 77.80 Mbit/s
95th percentile per-packet one-way delay: 136.463 ms
Loss rate: 0.00%
Run 3: Report of Copa — Data Link

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

- Flow 1 ingress (mean 77.80 Mbit/s)
- Flow 1 egress (mean 77.80 Mbit/s)

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

- Flow 1 (95th percentile 136.46 ms)
Run 4: Statistics of Copa

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

# Below is generated by plot.py at 2018-04-25 00:53:47
# Datalink statistics
-- Total of 1 flow:
Average throughput: 36.35 Mbit/s
95th percentile per-packet one-way delay: 136.869 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 36.35 Mbit/s
95th percentile per-packet one-way delay: 136.869 ms
Loss rate: 0.00%
Run 4: Report of Copa — Data Link

![Graph of Throughput vs Time](image1)

- **Flow 1 ingress (mean 36.35 Mbit/s)**
- **Flow 1 egress (mean 36.35 Mbit/s)**

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

- **Flow 1 (95th percentile 136.87 ms)**
Run 5: Statistics of Copa

End at: 2018-04-24 22:09:29

# Below is generated by plot.py at 2018-04-25 00:54:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 60.36 Mbit/s
95th percentile per-packet one-way delay: 136.266 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 60.36 Mbit/s
95th percentile per-packet one-way delay: 136.266 ms
Loss rate: 0.00%
Run 5: Report of Copa — Data Link

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

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

# Below is generated by plot.py at 2018-04-25 00:54:59
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 77.91 Mbit/s
  95th percentile per-packet one-way delay: 136.273 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 77.91 Mbit/s
  95th percentile per-packet one-way delay: 136.273 ms
  Loss rate: 0.00%
Run 6: Report of Copa — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 77.91 Mbit/s)  Flow 1 egress (mean 77.91 Mbit/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 136.27 ms)
Run 7: Statistics of Copa


# Below is generated by plot.py at 2018-04-25 00:54:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 71.73 Mbit/s
95th percentile per-packet one-way delay: 136.344 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 71.73 Mbit/s
95th percentile per-packet one-way delay: 136.344 ms
Loss rate: 0.00%
Run 7: Report of Copa — Data Link
Run 8: Statistics of Copa

End at: 2018-04-24 22:53:00

# Below is generated by plot.py at 2018-04-25 00:55:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 82.31 Mbit/s
95th percentile per-packet one-way delay: 136.016 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 82.31 Mbit/s
95th percentile per-packet one-way delay: 136.016 ms
Loss rate: 0.00%
Run 8: Report of Copa — Data Link

![Graph of throughput over time showing fluctuations and two distinct flow lines: Flow 1 ingress (mean 82.31 Mbit/s) and Flow 1 egress (mean 82.31 Mbit/s).](image1)

![Graph of per-packet one-way delay showing a range from 136 ms to 142 ms, with a 95th percentile value of 136.02 ms.](image2)
Run 9: Statistics of Copa

Start at: 2018-04-24 23:07:06
End at: 2018-04-24 23:07:36

# Below is generated by plot.py at 2018-04-25 00:55:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 68.45 Mbit/s
95th percentile per-packet one-way delay: 136.527 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 68.45 Mbit/s
95th percentile per-packet one-way delay: 136.527 ms
Loss rate: 0.00%
Run 9: Report of Copa — Data Link

![Graph showing throughput and packet delay over time]

- Flow 1 ingress (mean 68.46 Mbit/s)
- Flow 1 egress (mean 68.45 Mbit/s)

![Graph showing packet delay over time]

- Flow 1 (95th percentile 136.53 ms)
Run 10: Statistics of Copa


# Below is generated by plot.py at 2018-04-25 00:55:47
# Datalink statistics
-- Total of 1 flow:
Average throughput: 76.51 Mbit/s
95th percentile per-packet one-way delay: 136.065 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 76.51 Mbit/s
95th percentile per-packet one-way delay: 136.065 ms
Loss rate: 0.00%
Run 10: Report of Copa — Data Link
Run 1: Statistics of FillP

Start at: 2018-04-24 21:14:03

# Below is generated by plot.py at 2018-04-25 01:07:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 793.19 Mbit/s
95th percentile per-packet one-way delay: 214.713 ms
Loss rate: 3.49%
-- Flow 1:
Average throughput: 793.19 Mbit/s
95th percentile per-packet one-way delay: 214.713 ms
Loss rate: 3.49%
Run 1: Report of FillP — Data Link

![Graph showing network performance metrics over time. The graph depicts two lines representing throughput and one-way delay.](image)

- **Throughput (Mbps):**
  - Flow 1 Ingress (mean 821.83 Mbps)
  - Flow 1 Egress (mean 793.19 Mbps)

- **One-Way Delay (ms):**
  - Flow 1 (95th percentile 214.71 ms)
Run 2: Statistics of FillP


# Below is generated by plot.py at 2018-04-25 01:07:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 792.29 Mbit/s
95th percentile per-packet one-way delay: 211.517 ms
Loss rate: 2.69%
-- Flow 1:
Average throughput: 792.29 Mbit/s
95th percentile per-packet one-way delay: 211.517 ms
Loss rate: 2.69%
Run 2: Report of FillP — Data Link
Run 3: Statistics of FillP


# Below is generated by plot.py at 2018-04-25 01:08:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 803.96 Mbit/s
95th percentile per-packet one-way delay: 211.137 ms
Loss rate: 2.05%
-- Flow 1:
Average throughput: 803.96 Mbit/s
95th percentile per-packet one-way delay: 211.137 ms
Loss rate: 2.05%
Run 3: Report of FillP — Data Link

Graph 1: Throughput (Mb/s)
- Flow 1 ingress (mean 820.01 Mb/s)
- Flow 1 egress (mean 803.96 Mb/s)

Graph 2: Per packet one way delay (ms)
- Flow 1 (95th percentile 211.14 ms)
Run 4: Statistics of FillP


# Below is generated by plot.py at 2018-04-25 01:08:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 761.34 Mbit/s
95th percentile per-packet one-way delay: 216.983 ms
Loss rate: 5.14%
-- Flow 1:
Average throughput: 761.34 Mbit/s
95th percentile per-packet one-way delay: 216.983 ms
Loss rate: 5.14%
Run 4: Report of FillP — Data Link
Run 5: Statistics of FillP

Start at: 2018-04-24 22:12:01
End at: 2018-04-24 22:12:31

# Below is generated by plot.py at 2018-04-25 01:08:41
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 794.55 Mbit/s
  95th percentile per-packet one-way delay: 212.320 ms
  Loss rate: 2.98%
-- Flow 1:
  Average throughput: 794.55 Mbit/s
  95th percentile per-packet one-way delay: 212.320 ms
  Loss rate: 2.98%
Run 5: Report of FillP — Data Link

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


# Below is generated by plot.py at 2018-04-25 01:08:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 774.33 Mbit/s
95th percentile per-packet one-way delay: 213.197 ms
Loss rate: 3.89%
-- Flow 1:
Average throughput: 774.33 Mbit/s
95th percentile per-packet one-way delay: 213.197 ms
Loss rate: 3.89%
Run 6: Report of FillP — Data Link

![Graph of throughput and packet delay over time for Flow 1, showing ingress and egress data with mean values.]
Run 7: Statistics of FillP

Start at: 2018-04-24 22:41:00
End at: 2018-04-24 22:41:30

# Below is generated by plot.py at 2018-04-25 01:08:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 759.47 Mbit/s
95th percentile per-packet one-way delay: 220.764 ms
Loss rate: 6.53%
-- Flow 1:
Average throughput: 759.47 Mbit/s
95th percentile per-packet one-way delay: 220.764 ms
Loss rate: 6.53%
Run 7: Report of FillP — Data Link

![Graph showing throughput and packet delay over time for Flow 1 with mean values given.](image)

Throughput (Mbit/s)

Flow 1 ingress (mean 812.52 Mbit/s)  Flow 1 egress (mean 759.47 Mbit/s)

Packet delay (ms)

Flow 1 (95th percentile 220.76 ms)
Run 8: Statistics of FillP


# Below is generated by plot.py at 2018-04-25 01:09:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 787.15 Mbit/s
95th percentile per-packet one-way delay: 214.723 ms
Loss rate: 4.10%
-- Flow 1:
Average throughput: 787.15 Mbit/s
95th percentile per-packet one-way delay: 214.723 ms
Loss rate: 4.10%
Run 8: Report of FillP — Data Link

![Graph showing throughput and latencies over time.]

- Flow 1 ingress (mean 820.80 Mbit/s)
- Flow 1 egress (mean 787.15 Mbit/s)

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

- Flow 1 (95th percentile 214.72 ms)
Run 9: Statistics of FillP

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

# Below is generated by plot.py at 2018-04-25 01:20:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 780.25 Mbit/s
95th percentile per-packet one-way delay: 210.659 ms
Loss rate: 3.42%
-- Flow 1:
Average throughput: 780.25 Mbit/s
95th percentile per-packet one-way delay: 210.659 ms
Loss rate: 3.42%
Run 10: Statistics of FillP


# Below is generated by plot.py at 2018-04-25 01:20:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 774.84 Mbit/s
95th percentile per-packet one-way delay: 219.500 ms
Loss rate: 5.01%
-- Flow 1:
Average throughput: 774.84 Mbit/s
95th percentile per-packet one-way delay: 219.500 ms
Loss rate: 5.01%
Run 10: Report of FillP — Data Link

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

Flow 1 ingress (mean 815.73 Mbit/s)  Flow 1 egress (mean 774.84 Mbit/s)
Run 1: Statistics of Indigo-1-32

Start at: 2018-04-24 21:05:24
End at: 2018-04-24 21:05:54

# Below is generated by plot.py at 2018-04-25 01:20:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 122.68 Mbit/s
95th percentile per-packet one-way delay: 136.680 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 122.68 Mbit/s
95th percentile per-packet one-way delay: 136.680 ms
Loss rate: 0.00%
Run 1: Report of Indigo-1-32 — Data Link

Throughput (Mbps)

Flow 1 ingress (mean 122.68 Mbit/s)  Flow 1 egress (mean 122.68 Mbit/s)

One way delay (ms)

Flow 1 (95th percentile 136.68 ms)
Run 2: Statistics of Indigo-1-32

End at: 2018-04-24 21:20:09

# Below is generated by plot.py at 2018-04-25 01:20:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 132.62 Mbit/s
95th percentile per-packet one-way delay: 136.525 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 132.62 Mbit/s
95th percentile per-packet one-way delay: 136.525 ms
Loss rate: 0.00%
Run 2: Report of Indigo-1-32 — Data Link

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

![Graph 2: RTT vs Time](image2)

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Run 3: Statistics of Indigo-1-32

Start at: 2018-04-24 21:34:09
End at: 2018-04-24 21:34:39

# Below is generated by plot.py at 2018-04-25 01:20:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 135.11 Mbit/s
95th percentile per-packet one-way delay: 136.640 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 135.11 Mbit/s
95th percentile per-packet one-way delay: 136.640 ms
Loss rate: 0.00%
Run 3: Report of Indigo-1-32 — Data Link

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

- Flow 1 ingress (mean 135.11 Mbit/s)
- Flow 1 egress (mean 135.11 Mbit/s)

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

- Flow 1 (95th percentile 136.64 ms)
Run 4: Statistics of Indigo-1-32


# Below is generated by plot.py at 2018-04-25 01:20:56
# Datalink statistics
-- Total of 1 flow:
 Average throughput: 178.99 Mbit/s
 95th percentile per-packet one-way delay: 136.503 ms
 Loss rate: 0.00%
-- Flow 1:
 Average throughput: 178.99 Mbit/s
 95th percentile per-packet one-way delay: 136.503 ms
 Loss rate: 0.00%
Run 4: Report of Indigo-1-32 — Data Link

Throughput (Mbit/s)

Flow 1 ingress (mean 178.99 Mbit/s)  Flow 1 egress (mean 178.99 Mbit/s)

Packet one way delay (ms)

Flow 1 (95th percentile 136.50 ms)
Run 5: Statistics of Indigo-1-32

Start at: 2018-04-24 22:02:58
End at: 2018-04-24 22:03:28

# Below is generated by plot.py at 2018-04-25 01:20:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 177.68 Mbit/s
95th percentile per-packet one-way delay: 136.352 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 177.68 Mbit/s
95th percentile per-packet one-way delay: 136.352 ms
Loss rate: 0.00%
Run 5: Report of Indigo-1-32 — Data Link

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

- **Flow 1 ingress (mean 177.68 Mbit/s)**
- **Flow 1 egress (mean 177.68 Mbit/s)**

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

- **Flow 1 (95th percentile 136.35 ms)**

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Run 6: Statistics of Indigo-1-32


# Below is generated by plot.py at 2018-04-25 01:20:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 134.28 Mbit/s
95th percentile per-packet one-way delay: 136.443 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 134.28 Mbit/s
95th percentile per-packet one-way delay: 136.443 ms
Loss rate: 0.00%
Run 6: Report of Indigo-1-32 — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 134.28 Mbit/s)  Flow 1 egress (mean 134.28 Mbit/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 136.44 ms)
Run 7: Statistics of Indigo-1-32

End at: 2018-04-24 22:32:46

# Below is generated by plot.py at 2018-04-25 01:20:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 175.66 Mbit/s
95th percentile per-packet one-way delay: 136.555 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 175.66 Mbit/s
95th percentile per-packet one-way delay: 136.555 ms
Loss rate: 0.00%
Run 7: Report of Indigo-1-32 — Data Link
Run 8: Statistics of Indigo-1-32


# Below is generated by plot.py at 2018-04-25 01:20:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 135.45 Mbit/s
95th percentile per-packet one-way delay: 136.202 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 135.45 Mbit/s
95th percentile per-packet one-way delay: 136.202 ms
Loss rate: 0.00%
Run 8: Report of Indigo-1-32 — Data Link

Graph 1:

- Flow 1 ingress (mean 135.45 Mbit/s)
- Flow 1 egress (mean 135.45 Mbit/s)

Graph 2:

- Flow 1 (95th percentile 136.20 ms)
Run 9: Statistics of Indigo-1-32

Start at: 2018-04-24 23:01:07
End at: 2018-04-24 23:01:37

# Below is generated by plot.py at 2018-04-25 01:20:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 135.51 Mbit/s
95th percentile per-packet one-way delay: 136.884 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 135.51 Mbit/s
95th percentile per-packet one-way delay: 136.884 ms
Loss rate: 0.00%
Run 9: Report of Indigo-1-32 — Data Link

![Graph 1](image1.png)

**Throughput (Mbps)**

- **Flow 1 ingress (mean 135.52 Mbit/s)**
- **Flow 1 egress (mean 135.51 Mbit/s)**

![Graph 2](image2.png)

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

- **Flow 1 (95th percentile 136.88 ms)**
Run 10: Statistics of Indigo-1-32

End at: 2018-04-24 23:16:09

# Below is generated by plot.py at 2018-04-25 01:20:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 177.66 Mbit/s
95th percentile per-packet one-way delay: 136.154 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 177.66 Mbit/s
95th percentile per-packet one-way delay: 136.154 ms
Loss rate: 0.00%
Run 10: Report of Indigo-1-32 — Data Link

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

Flow 1 ingress (mean 177.66 Mbit/s)  
Flow 1 egress (mean 177.66 Mbit/s)
Run 1: Statistics of PCC-Vivace

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

# Below is generated by plot.py at 2018-04-25 01:20:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 323.24 Mbit/s
95th percentile per-packet one-way delay: 140.061 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 323.24 Mbit/s
95th percentile per-packet one-way delay: 140.061 ms
Loss rate: 0.00%
Run 1: Report of PCC-Vivace — Data Link
Run 2: Statistics of PCC-Vivace


# Below is generated by plot.py at 2018-04-25 01:20:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 266.10 Mbit/s
95th percentile per-packet one-way delay: 136.218 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 266.10 Mbit/s
95th percentile per-packet one-way delay: 136.218 ms
Loss rate: 0.00%
Run 3: Statistics of PCC-Vivace

End at: 2018-04-24 21:47:08

# Below is generated by plot.py at 2018-04-25 01:20:56
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 321.18 Mbit/s
  95th percentile per-packet one-way delay: 149.335 ms
  Loss rate: 0.50%
-- Flow 1:
  Average throughput: 321.18 Mbit/s
  95th percentile per-packet one-way delay: 149.335 ms
  Loss rate: 0.50%
Run 3: Report of PCC-Vivace — Data Link

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

- **Flow 1 ingress** (mean 322.79 Mbit/s)
- **Flow 1 egress** (mean 321.18 Mbit/s)

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

- **Flow 1** (95th percentile 149.34 ms)
Run 4: Statistics of PCC-Vivace

Start at: 2018-04-24 22:01:06
End at: 2018-04-24 22:01:36

# Below is generated by plot.py at 2018-04-25 01:20:56
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 346.81 Mbit/s
  95th percentile per-packet one-way delay: 149.607 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 346.81 Mbit/s
  95th percentile per-packet one-way delay: 149.607 ms
  Loss rate: 0.00%
Run 4: Report of PCC-Vivace — Data Link

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

- **Flow 1 ingress (mean 346.80 Mbit/s)**
- **Flow 1 egress (mean 346.81 Mbit/s)**

![Graph showing packet delay distribution](image)

- **flow 1 (95th percentile 149.61 ms)**

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Run 5: Statistics of PCC-Vivace

Start at: 2018-04-24 22:15:45
End at: 2018-04-24 22:16:15

# Below is generated by plot.py at 2018-04-25 01:20:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 345.98 Mbit/s
95th percentile per-packet one-way delay: 147.191 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 345.98 Mbit/s
95th percentile per-packet one-way delay: 147.191 ms
Loss rate: 0.05%
Run 5: Report of PCC-Vivace — Data Link

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

- Flow 1 ingress (mean 346.16 Mbit/s)
- Flow 1 egress (mean 345.98 Mbit/s)

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

- Flow 1 (95th percentile 147.19 ms)
Run 6: Statistics of PCC-Vivace


# Below is generated by plot.py at 2018-04-25 01:20:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 349.09 Mbit/s
95th percentile per-packet one-way delay: 136.926 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 349.09 Mbit/s
95th percentile per-packet one-way delay: 136.926 ms
Loss rate: 0.00%
Run 6: Report of PCC-Vivace — Data Link
Run 7: Statistics of PCC-Vivace

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

# Below is generated by plot.py at 2018-04-25 01:21:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 345.97 Mbit/s
95th percentile per-packet one-way delay: 140.412 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 345.97 Mbit/s
95th percentile per-packet one-way delay: 140.412 ms
Loss rate: 0.00%
Run 7: Report of PCC-Vivace — Data Link

![Graph 1](image1)

- Flow 1 ingress (mean 345.99 Mbit/s)
- Flow 1 egress (mean 345.97 Mbit/s)

![Graph 2](image2)

- Flow 1 (95th percentile 140.41 ms)
Run 8: Statistics of PCC-Vivace

End at: 2018-04-24 22:59:45

# Below is generated by plot.py at 2018-04-25 01:21:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 334.81 Mbit/s
95th percentile per-packet one-way delay: 136.921 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 334.81 Mbit/s
95th percentile per-packet one-way delay: 136.921 ms
Loss rate: 0.00%
Run 8: Report of PCC-Vivace — Data Link
Run 9: Statistics of PCC-Vivace

End at: 2018-04-24 23:14:17

# Below is generated by plot.py at 2018-04-25 01:22:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 331.17 Mbit/s
95th percentile per-packet one-way delay: 166.610 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 331.17 Mbit/s
95th percentile per-packet one-way delay: 166.610 ms
Loss rate: 0.00%
Run 9: Report of PCC-Vivace — Data Link

![Graph of throughput and packet delay over time]

- Flow 1 ingress (mean 331.16 Mbit/s)
- Flow 1 egress (mean 331.17 Mbit/s)

![Graph of packet delay distribution over time]

- Flow 1 (95th percentile 166.61 ms)
Run 10: Statistics of PCC-Vivace


# Below is generated by plot.py at 2018-04-25 01:22:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 260.91 Mbit/s
95th percentile per-packet one-way delay: 136.984 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 260.91 Mbit/s
95th percentile per-packet one-way delay: 136.984 ms
Loss rate: 0.00%
Run 10: Report of PCC-Vivace — Data Link

![Throughput Chart]

- **Flow 1 ingress (mean 260.91 Mbit/s)**
- **Flow 1 egress (mean 260.91 Mbit/s)**

![Delay Chart]

- **Flow 1 (95th percentile 136.98 ms)**
Run 1: Statistics of PCC-Expr

Start at: 2018-04-24 21:09:18
End at: 2018-04-24 21:09:48
Run 1: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing
Run 2: Statistics of PCC-Expr

Run 2: Report of PCC-Expr — Data Link

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Run 3: Statistics of PCC-Expr

Start at: 2018-04-24 21:38:03
End at: 2018-04-24 21:38:33
Run 3: Report of PCC-Expr — Data Link

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Run 4: Statistics of PCC-Expr

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 22:07:42
Run 5: Report of PCC-Expr — Data Link

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Run 6: Statistics of PCC-Expr

Run 6: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing
Run 7: Statistics of PCC-Expr

End at: 2018-04-24 22:36:43
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 22:50:45
Run 8: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing
Run 9: Statistics of PCC-Expr

End at: 2018-04-24 23:05:50
Run 9: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing
Run 10: Statistics of PCC-Expr

Start at: 2018-04-24 23:19:54
Run 10: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing