Pantheon Report

Data path: GCE Sydney on ens4 (local) → GCE Tokyo on ens4 (remote).
Repeated the test of 21 congestion control schemes 5 times.
Each test lasted for 30 seconds running 1 flow.
NTP offsets were measured against time.google.com and have been applied to correct the timestamps in logs.

System info:
Linux 4.15.0-1026-gcp
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912

Git summary:
branch: muses @ 7a686f7c2ed0a333082c921ab47e6ee
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbf5e562f4
third_party/indigo @ 2601c92e4aa9d58d38d4dfe0ecdf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaaab4a906ce65b7f3cf
third_party/muses @ 5ce721187ad823da2095537730c746486ca4966
third_party/pantheon-tunnel @ f866d3f58d27af942717625e3a354cc2e802bd
third_party/pcc @ 1af958fa0d6d18b23c091a55f7ec872b4981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4ebf249f74ab
third_party/proto-quic @ 77961f1a8273a86b42f1bc8143e9bc978f3c2f42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bd2b
M src/ScreamClient
M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4ad6ad18c74f9415f19a26
M src/examples/cellsim.cc
M src/examples/sproutbt2.cc
M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
M src/verus.hpp
M tools/plot.py
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851
test from GCE Sydney to GCE Tokyo, 5 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>5</td>
<td>537.45</td>
<td>142.71</td>
<td>0.84</td>
</tr>
<tr>
<td>Copa</td>
<td>5</td>
<td>242.23</td>
<td>60.58</td>
<td>0.00</td>
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<tr>
<td>TCP Cubic</td>
<td>5</td>
<td>624.38</td>
<td>83.49</td>
<td>0.05</td>
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<td>FillP</td>
<td>5</td>
<td>918.05</td>
<td>98.48</td>
<td>2.50</td>
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<td>FillP-Sheep</td>
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<td>931.92</td>
<td>90.99</td>
<td>0.20</td>
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<td>Indigo</td>
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<td>218.68</td>
<td>60.23</td>
<td>0.01</td>
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<td>Indigo-MusesC3</td>
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<td>62.40</td>
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<td>Indigo-MusesD</td>
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<td>0.01</td>
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<td>74.89</td>
<td>0.03</td>
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<td>LEDBAT</td>
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<td>26.58</td>
<td>59.56</td>
<td>0.03</td>
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<td>PCC-Allegro</td>
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<td>155.37</td>
<td>1.58</td>
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<td>PCC-Expr</td>
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<td>347.26</td>
<td>126.00</td>
<td>0.68</td>
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<tr>
<td>QUIC Cubic</td>
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<td>65.72</td>
<td>57.93</td>
<td>0.00</td>
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<td>SCReAM</td>
<td>5</td>
<td>0.22</td>
<td>58.47</td>
<td>0.00</td>
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<td>Sprout</td>
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<td>7.30</td>
<td>59.53</td>
<td>0.00</td>
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<td>221.47</td>
<td>59.37</td>
<td>0.01</td>
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<td>5</td>
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<td>65.90</td>
<td>0.00</td>
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<td>Verus</td>
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<td>166.07</td>
<td>110.50</td>
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<td>PCC-Vivace</td>
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<td>61.13</td>
<td>0.00</td>
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<td>WebRTC media</td>
<td>5</td>
<td>0.90</td>
<td>57.67</td>
<td>0.00</td>
</tr>
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</table>
Run 1: Statistics of TCP BBR

End at: 2019-02-20 19:13:43
Local clock offset: -0.041 ms
Remote clock offset: 1.187 ms

# Below is generated by plot.py at 2019-02-20 22:11:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 565.75 Mbit/s
95th percentile per-packet one-way delay: 143.719 ms
Loss rate: 0.75%

-- Flow 1:
Average throughput: 565.75 Mbit/s
95th percentile per-packet one-way delay: 143.719 ms
Loss rate: 0.75%
Run 1: Report of TCP BBR — Data Link

![Graph Showing Throughput and Packet Delay](image-url)
Run 2: Statistics of TCP BBR

Start at: 2019-02-20 19:49:29
End at: 2019-02-20 19:49:59
Local clock offset: 0.094 ms
Remote clock offset: -1.554 ms

# Below is generated by plot.py at 2019-02-20 22:11:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 494.85 Mbit/s
95th percentile per-packet one-way delay: 148.041 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 494.85 Mbit/s
95th percentile per-packet one-way delay: 148.041 ms
Loss rate: 0.57%
Run 2: Report of TCP BBR — Data Link

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

- **Flow 1 ingress** (mean 497.70 Mbit/s)
- **Flow 1 egress** (mean 494.85 Mbit/s)

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

- **Flow 1** (95th percentile 148.04 ms)
Run 3: Statistics of TCP BBR

Start at: 2019-02-20 20:23:35
End at: 2019-02-20 20:24:05
Local clock offset: 0.251 ms
Remote clock offset: -1.041 ms

# Below is generated by plot.py at 2019-02-20 22:11:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 567.57 Mbit/s
95th percentile per-packet one-way delay: 132.617 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 567.57 Mbit/s
95th percentile per-packet one-way delay: 132.617 ms
Loss rate: 0.39%
Run 3: Report of TCP BBR — Data Link

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

- Flow 1 ingress (mean 569.81 Mbit/s)
- Flow 1 egress (mean 567.57 Mbit/s)

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

- Flow 1 (95th percentile 132.62 ms)
Run 4: Statistics of TCP BBR

Start at: 2019-02-20 20:57:33
End at: 2019-02-20 20:58:03
Local clock offset: -0.47 ms
Remote clock offset: -0.162 ms

# Below is generated by plot.py at 2019-02-20 22:11:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 541.84 Mbit/s
95th percentile per-packet one-way delay: 128.371 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 541.84 Mbit/s
95th percentile per-packet one-way delay: 128.371 ms
Loss rate: 0.45%
Run 4: Report of TCP BBR — Data Link

- Throughput (Mb/s)
- Time (s)
- Flow 1 ingress (mean 544.31 Mb/s)
- Flow 1 egress (mean 541.84 Mb/s)

- Per-packet one way delay (ms)
- Time (s)
- Flow 1 (95th percentile 128.37 ms)
Run 5: Statistics of TCP BBR

Start at: 2019-02-20 21:33:18
End at: 2019-02-20 21:33:48
Local clock offset: -0.067 ms
Remote clock offset: 0.01 ms

# Below is generated by plot.py at 2019-02-20 22:11:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 517.22 Mbit/s
95th percentile per-packet one-way delay: 160.801 ms
Loss rate: 2.03%
-- Flow 1:
Average throughput: 517.22 Mbit/s
95th percentile per-packet one-way delay: 160.801 ms
Loss rate: 2.03%
Run 5: Report of TCP BBR — Data Link
Run 1: Statistics of Copa

Start at: 2019-02-20 19:07:44
End at: 2019-02-20 19:08:14
Local clock offset: 0.386 ms
Remote clock offset: 0.511 ms

# Below is generated by plot.py at 2019-02-20 22:11:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 223.44 Mbit/s
95th percentile per-packet one-way delay: 59.496 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 223.44 Mbit/s
95th percentile per-packet one-way delay: 59.496 ms
Loss rate: 0.00%
Run 1: Report of Copa — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 223.46 Mbps)
  - Flow 1 egress (mean 223.44 Mbps)

- **Packet Delay (ms):**
  - Flow 1 (95th percentile 59.50 ms)
Run 2: Statistics of Copa

Start at: 2019-02-20 19:43:49
End at: 2019-02-20 19:44:20
Local clock offset: 0.416 ms
Remote clock offset: -0.784 ms

# Below is generated by plot.py at 2019-02-20 22:11:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 251.48 Mbit/s
95th percentile per-packet one-way delay: 60.242 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 251.48 Mbit/s
95th percentile per-packet one-way delay: 60.242 ms
Loss rate: 0.00%
Run 2: Report of Copa — Data Link

[Graph showing network performance metrics]

1. Throughput (Mbps)
2. End-to-end delay (ms)

- Flow 1 ingress (mean 251.48 Mbit/s)
- Flow 1 egress (mean 251.48 Mbit/s)

Flow 1 (95th percentile 65.24 ms)
Run 3: Statistics of Copa

Start at: 2019-02-20 20:18:19
End at: 2019-02-20 20:18:49
Local clock offset: 0.106 ms
Remote clock offset: -0.971 ms

# Below is generated by plot.py at 2019-02-20 22:11:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 298.54 Mbit/s
95th percentile per-packet one-way delay: 57.321 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 298.54 Mbit/s
95th percentile per-packet one-way delay: 57.321 ms
Loss rate: 0.00%
Run 3: Report of Copa — Data Link
Run 4: Statistics of Copa

Start at: 2019-02-20 20:52:25
End at: 2019-02-20 20:52:55
Local clock offset: 0.122 ms
Remote clock offset: -0.194 ms

# Below is generated by plot.py at 2019-02-20 22:14:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 200.97 Mbit/s
95th percentile per-packet one-way delay: 59.896 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 200.97 Mbit/s
95th percentile per-packet one-way delay: 59.896 ms
Loss rate: 0.00%
Run 4: Report of Copa — Data Link

![Graph 1: Throughput vs Time]

- Flow 1 ingress (mean 200.97 Mbit/s)
- Flow 1 egress (mean 200.97 Mbit/s)

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

- Flow 1 (95th percentile 59.90 ms)
Run 5: Statistics of Copa

End at: 2019-02-20 21:28:05
Local clock offset: -0.297 ms
Remote clock offset: 0.789 ms

# Below is generated by plot.py at 2019-02-20 22:16:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 236.72 Mbit/s
95th percentile per-packet one-way delay: 65.967 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 236.72 Mbit/s
95th percentile per-packet one-way delay: 65.967 ms
Loss rate: 0.00%
Run 5: Report of Copa — Data Link
Run 1: Statistics of TCP Cubic

Start at: 2019-02-20 18:59:41
End at: 2019-02-20 19:00:11
Local clock offset: -0.383 ms
Remote clock offset: -1.369 ms

# Below is generated by plot.py at 2019-02-20 22:21:04
# Datalink statistics
-- Total of 1 flow:
Average throughput: 603.74 Mbit/s
95th percentile per-packet one-way delay: 77.727 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 603.74 Mbit/s
95th percentile per-packet one-way delay: 77.727 ms
Loss rate: 0.00%
Run 1: Report of TCP Cubic — Data Link

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

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

Start at: 2019-02-20 19:35:45
End at: 2019-02-20 19:36:15
Local clock offset: -0.322 ms
Remote clock offset: -0.878 ms

# Below is generated by plot.py at 2019-02-20 22:21:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 594.68 Mbit/s
95th percentile per-packet one-way delay: 77.477 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 594.68 Mbit/s
95th percentile per-packet one-way delay: 77.477 ms
Loss rate: 0.11%
Run 3: Statistics of TCP Cubic

Start at: 2019-02-20 20:11:15
End at: 2019-02-20 20:11:45
Local clock offset: 0.086 ms
Remote clock offset: 1.124 ms

# Below is generated by plot.py at 2019-02-20 22:21:42
# Datalink statistics
-- Total of 1 flow:
Average throughput: 604.78 Mbit/s
95th percentile per-packet one-way delay: 87.669 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 604.78 Mbit/s
95th percentile per-packet one-way delay: 87.669 ms
Loss rate: 0.02%
Run 3: Report of TCP Cubic — Data Link

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

Legend:
- Flow 1 ingress (mean 604.81 Mbit/s)
- Flow 1 egress (mean 604.78 Mbit/s)

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

Legend:
- Flow 1 (95th percentile 87.67 ms)
Run 4: Statistics of TCP Cubic

Start at: 2019-02-20 20:45:12
End at: 2019-02-20 20:45:42
Local clock offset: -0.47 ms
Remote clock offset: -1.107 ms

# Below is generated by plot.py at 2019-02-20 22:22:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 665.93 Mbit/s
95th percentile per-packet one-way delay: 97.559 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 665.93 Mbit/s
95th percentile per-packet one-way delay: 97.559 ms
Loss rate: 0.06%
Run 4: Report of TCP Cubic — Data Link

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

- Dashed line: Flow 1 ingress (mean 666.24 Mbit/s)
- Solid line: Flow 1 egress (mean 665.93 Mbit/s)

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

- Dashed line: Flow 1 (95th percentile 97.56 ms)
Run 5: Statistics of TCP Cubic

Start at: 2019-02-20 21:20:08
End at: 2019-02-20 21:20:38
Local clock offset: -0.321 ms
Remote clock offset: -0.05 ms

# Below is generated by plot.py at 2019-02-20 22:22:48
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 652.79 Mbit/s
  95th percentile per-packet one-way delay: 76.998 ms
  Loss rate: 0.07%
-- Flow 1:
  Average throughput: 652.79 Mbit/s
  95th percentile per-packet one-way delay: 76.998 ms
  Loss rate: 0.07%
Run 5: Report of TCP Cubic — Data Link

![Graph of Throughput vs Time](image1)

- Flow 1 ingress (mean 653.28 Mbit/s)
- Flow 1 egress (mean 652.79 Mbit/s)

![Graph of Percentile Delay vs Time](image2)

- Flow 1 (95th percentile 77.00 ms)
Run 1: Statistics of FillP

Start at: 2019-02-20 19:01:46
End at: 2019-02-20 19:02:16
Local clock offset: -0.14 ms
Remote clock offset: -0.75 ms

# Below is generated by plot.py at 2019-02-20 22:30:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 923.47 Mbit/s
95th percentile per-packet one-way delay: 98.457 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 923.47 Mbit/s
95th percentile per-packet one-way delay: 98.457 ms
Loss rate: 0.03%
Run 1: Report of FillP — Data Link

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

- Flow 1 ingress (mean 923.65 Mbps)
- Flow 1 egress (mean 923.47 Mbps)

![Graph 2: Round-trip delay (ms) vs Time (s)]

- Flow 1 (95th percentile 98.46 ms)
Run 2: Statistics of FillP

Start at: 2019-02-20 19:37:41
End at: 2019-02-20 19:38:11
Local clock offset: -0.074 ms
Remote clock offset: -0.929 ms

# Below is generated by plot.py at 2019-02-20 22:34:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 922.24 Mbit/s
95th percentile per-packet one-way delay: 111.361 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 922.24 Mbit/s
95th percentile per-packet one-way delay: 111.361 ms
Loss rate: 0.58%
Run 2: Report of FillP — Data Link

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

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Flow 1 ingress (mean 927.55 Mbit/s)  
Flow 1 egress (mean 922.24 Mbit/s)

Flow 1 (95th percentile 111.36 ms)
Run 3: Statistics of FillP

Start at: 2019-02-20 20:13:01
End at: 2019-02-20 20:13:31
Local clock offset: -0.055 ms
Remote clock offset: 1.082 ms

# Below is generated by plot.py at 2019-02-20 22:36:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 859.01 Mbit/s
95th percentile per-packet one-way delay: 106.279 ms
Loss rate: 6.07%
-- Flow 1:
Average throughput: 859.01 Mbit/s
95th percentile per-packet one-way delay: 106.279 ms
Loss rate: 6.07%
Run 3: Report of FillP — Data Link
Run 4: Statistics of FillP

Start at: 2019-02-20 20:46:57
End at: 2019-02-20 20:47:27
Local clock offset: -0.245 ms
Remote clock offset: -1.026 ms

# Below is generated by plot.py at 2019-02-20 22:42:16
# Datalink statistics
-- Total of 1 flow:
Average throughput: 890.36 Mbit/s
95th percentile per-packet one-way delay: 89.518 ms
Loss rate: 5.78%
-- Flow 1:
Average throughput: 890.36 Mbit/s
95th percentile per-packet one-way delay: 89.518 ms
Loss rate: 5.78%
Run 4: Report of FillP — Data Link

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

Flow 1 ingress (mean 944.92 Mbps)  Flow 1 egress (mean 890.36 Mbps)

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

Flow 1 (95th percentile 89.52 ms)
Run 5: Statistics of FillP

Start at: 2019-02-20 21:22:03
Local clock offset: -0.034 ms
Remote clock offset: 0.826 ms

# Below is generated by plot.py at 2019-02-20 22:44:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 995.18 Mbit/s
95th percentile per-packet one-way delay: 86.803 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 995.18 Mbit/s
95th percentile per-packet one-way delay: 86.803 ms
Loss rate: 0.05%
Run 5: Report of FillP — Data Link

\[\text{Throughput (Mb/s)}\]

\[\text{Time (s)}\]

- Flow 1 ingress (mean 995.68 Mb/s)
- Flow 1 egress (mean 995.18 Mb/s)

\[\text{Per-packet one-way delay (ms)}\]

\[\text{Time (s)}\]

- Flow 1 (95th percentile 86.80 ms)
Run 1: Statistics of FillP-Sheep

Start at: 2019-02-20 19:26:11
End at: 2019-02-20 19:26:41
Local clock offset: 0.034 ms
Remote clock offset: 0.479 ms

# Below is generated by plot.py at 2019-02-20 22:44:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 939.78 Mbit/s
95th percentile per-packet one-way delay: 89.055 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 939.78 Mbit/s
95th percentile per-packet one-way delay: 89.055 ms
Loss rate: 0.29%
Run 1: Report of FillP-Sheep — Data Link

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**Throughput (Mbps)**

- **Flow 1 ingress (mean 942.50 Mbps)**
- **Flow 1 egress (mean 939.78 Mbps)**

**Packet per second one way delay (ms)**

- **Flow 1 (95th percentile 89.06 ms)**

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Run 2: Statistics of FillP-Sheep

Start at: 2019-02-20 20:01:50
End at: 2019-02-20 20:02:20
Local clock offset: -0.053 ms
Remote clock offset: -0.843 ms

# Below is generated by plot.py at 2019-02-20 22:44:36
# Datalink statistics
-- Total of 1 flow:
Average throughput: 930.85 Mbit/s
95th percentile per-packet one-way delay: 95.983 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 930.85 Mbit/s
95th percentile per-packet one-way delay: 95.983 ms
Loss rate: 0.23%
Run 2: Report of FillP-Sheep — Data Link

![Throughput and Packet Delay Graphs](image)

- Flow 1 ingress (mean 933.02 Mb/s)
- Flow 1 egress (mean 930.85 Mb/s)

Flow 1 (95th percentile 95.98 ms)
Run 3: Statistics of FillP-Sheep

Start at: 2019-02-20 20:35:27
End at: 2019-02-20 20:35:57
Local clock offset: -0.456 ms
Remote clock offset: -0.293 ms

# Below is generated by plot.py at 2019-02-20 22:44:36
# Datalink statistics
-- Total of 1 flow:
Average throughput: 924.31 Mbit/s
95th percentile per-packet one-way delay: 95.018 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 924.31 Mbit/s
95th percentile per-packet one-way delay: 95.018 ms
Loss rate: 0.27%
Run 3: Report of FillP-Sheep — Data Link

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

- Flow 1 ingress (mean 926.86 Mbps)
- Flow 1 egress (mean 924.31 Mbps)

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

- Flow 1 (95th percentile 95.02 ms)
Run 4: Statistics of FillP-Sheep

Start at: 2019-02-20 21:10:18
End at: 2019-02-20 21:10:48
Local clock offset: -0.291 ms
Remote clock offset: -0.702 ms

# Below is generated by plot.py at 2019-02-20 22:54:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 916.56 Mbit/s
95th percentile per-packet one-way delay: 88.893 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 916.56 Mbit/s
95th percentile per-packet one-way delay: 88.893 ms
Loss rate: 0.18%
Run 4: Report of FillP-Sheep — Data Link

![Throughput Graph]

Flow 1 ingress (mean 918.17 Mbit/s)  
Flow 1 egress (mean 916.56 Mbit/s)

![Delay Graph]

Flow 1 (95th percentile 88.89 ms)
Run 5: Statistics of FillP-Sheep

Start at: 2019-02-20 21:45:36
End at: 2019-02-20 21:46:06
Local clock offset: -0.13 ms
Remote clock offset: 0.58 ms

# Below is generated by plot.py at 2019-02-20 22:58:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 948.12 Mbit/s
95th percentile per-packet one-way delay: 85.996 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 948.12 Mbit/s
95th percentile per-packet one-way delay: 85.996 ms
Loss rate: 0.02%
Run 5: Report of FillP-Sheep — Data Link

[Graph showing throughput and delay over time]

Flow 1 ingress (mean 948.34 Mbit/s)  Flow 1 egress (mean 948.12 Mbit/s)
Run 1: Statistics of Indigo

Start at: 2019-02-20 19:24:26
End at: 2019-02-20 19:24:56
Local clock offset: -0.224 ms
Remote clock offset: 0.538 ms

# Below is generated by plot.py at 2019-02-20 22:58:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 221.96 Mbit/s
95th percentile per-packet one-way delay: 61.907 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 221.96 Mbit/s
95th percentile per-packet one-way delay: 61.907 ms
Loss rate: 0.02%
Run 1: Report of Indigo — Data Link

![Graph showing throughput over time with labels for Flow 1 ingress (mean 221.98 Mbit/s) and Flow 1 egress (mean 221.96 Mbit/s).]

![Graph showing per-packet end-to-end delay with a label for Flow 1 (95th percentile 61.91 ms).]
Run 2: Statistics of Indigo

Start at: 2019-02-20 20:00:11
End at: 2019-02-20 20:00:41
Local clock offset: -0.069 ms
Remote clock offset: 1.121 ms

# Below is generated by plot.py at 2019-02-20 22:58:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 217.60 Mbit/s
95th percentile per-packet one-way delay: 59.621 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 217.60 Mbit/s
95th percentile per-packet one-way delay: 59.621 ms
Loss rate: 0.00%
Run 2: Report of Indigo — Data Link

![Graph showing throughput and packet loss over time]

- **Flow 1 ingress (mean 217.61 Mbit/s)**
- **Flow 1 egress (mean 217.60 Mbit/s)**

![Graph showing packet loss over time]
Run 3: Statistics of Indigo

Start at: 2019-02-20 20:33:54
End at: 2019-02-20 20:34:24
Local clock offset: -0.267 ms
Remote clock offset: -0.958 ms

# Below is generated by plot.py at 2019-02-20 22:58:20
# Datalink statistics

-- Total of 1 flow:
Average throughput: 218.94 Mbit/s
95th percentile per-packet one-way delay: 60.208 ms
Loss rate: 0.00%

-- Flow 1:
Average throughput: 218.94 Mbit/s
95th percentile per-packet one-way delay: 60.208 ms
Loss rate: 0.00%
Run 3: Report of Indigo — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 218.94 Mbit/s)  Flow 1 egress (mean 218.94 Mbit/s)

Packet delay (ms)

Time (s)

Flow 1 (95th percentile 60.21 ms)
Run 4: Statistics of Indigo

Start at: 2019-02-20 21:08:36
End at: 2019-02-20 21:09:06
Local clock offset: -0.257 ms
Remote clock offset: -0.007 ms

# Below is generated by plot.py at 2019-02-20 22:58:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 220.44 Mbit/s
95th percentile per-packet one-way delay: 60.811 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 220.44 Mbit/s
95th percentile per-packet one-way delay: 60.811 ms
Loss rate: 0.01%
Run 4: Report of Indigo — Data Link
Run 5: Statistics of Indigo

Start at: 2019-02-20 21:44:01
End at: 2019-02-20 21:44:31
Local clock offset: -0.439 ms
Remote clock offset: -0.022 ms

# Below is generated by plot.py at 2019-02-20 22:58:20
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 214.45 Mbit/s
  95th percentile per-packet one-way delay: 58.605 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 214.45 Mbit/s
  95th percentile per-packet one-way delay: 58.605 ms
  Loss rate: 0.00%
Run 5: Report of Indigo — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 214.44 Mbit/s)  Flow 1 egress (mean 214.45 Mbit/s)

Per-packet one-way delay (ms)

Flow 1 (95th percentile 58.60 ms)
Run 1: Statistics of Indigo-MusesC3

Start at: 2019-02-20 18:57:49
End at: 2019-02-20 18:58:19
Local clock offset: 0.195 ms
Remote clock offset: -0.785 ms

# Below is generated by plot.py at 2019-02-20 22:58:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 569.17 Mbit/s
95th percentile per-packet one-way delay: 59.446 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 569.17 Mbit/s
95th percentile per-packet one-way delay: 59.446 ms
Loss rate: 0.01%
Run 1: Report of Indigo-MusesC3 — Data Link

![Graph showing throughput in Mbps over time for Flow 1 ingress and egress with mean rates of 569.20 Mbps and 569.17 Mbps respectively.]

![Graph showing per-packet one-way delay in ms with a 95th percentile of 59.45 ms for Flow 1.]
Run 2: Statistics of Indigo-MusesC3

Start at: 2019-02-20 19:33:53
End at: 2019-02-20 19:34:23
Local clock offset: -0.053 ms
Remote clock offset: 0.527 ms

# Below is generated by plot.py at 2019-02-20 22:58:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 541.75 Mbit/s
95th percentile per-packet one-way delay: 61.068 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 541.75 Mbit/s
95th percentile per-packet one-way delay: 61.068 ms
Loss rate: 0.01%
Run 2: Report of Indigo-MusesC3 — Data Link

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

- **Flow 1 ingress (mean 541.80 Mbit/s)**
- **Flow 1 egress (mean 541.75 Mbit/s)**

![Graph 2: Per-Packet One-Way Delay](image2)

- **Flow 1 (95th percentile 61.67 ms)**
Run 3: Statistics of Indigo-MusesC3

Start at: 2019-02-20 20:09:28
End at: 2019-02-20 20:09:58
Local clock offset: -0.241 ms
Remote clock offset: -1.072 ms

# Below is generated by plot.py at 2019-02-20 23:00:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 570.10 Mbit/s
95th percentile per-packet one-way delay: 59.735 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 570.10 Mbit/s
95th percentile per-packet one-way delay: 59.735 ms
Loss rate: 0.02%
Run 3: Report of Indigo-MusesC3 — Data Link

![Graph of throughput over time for Flow 1 ingress and egress](image1)

![Graph of per-packet one-way delay for Flow 1 (95th percentile 59.73 ms)](image2)
Run 4: Statistics of Indigo-MusesC3

Start at: 2019-02-20 20:43:23
End at: 2019-02-20 20:43:53
Local clock offset: -0.054 ms
Remote clock offset: -0.862 ms

# Below is generated by plot.py at 2019-02-20 23:02:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 586.41 Mbit/s
95th percentile per-packet one-way delay: 64.133 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 586.41 Mbit/s
95th percentile per-packet one-way delay: 64.133 ms
Loss rate: 0.01%
Run 4: Report of Indigo-MusesC3 — Data Link

![Graph 1: Throughput (Mbps)]

- Flow 1 ingress (mean 586.41 Mbit/s)
- Flow 1 egress (mean 586.41 Mbit/s)

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

- Flow 1 (95th percentile 64.13 ms)
Run 5: Statistics of Indigo-MusesC3

Start at: 2019-02-20 21:18:14
End at: 2019-02-20 21:18:44
Local clock offset: -0.308 ms
Remote clock offset: 0.149 ms

# Below is generated by plot.py at 2019-02-20 23:03:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 577.96 Mbit/s
95th percentile per-packet one-way delay: 67.616 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 577.96 Mbit/s
95th percentile per-packet one-way delay: 67.616 ms
Loss rate: 0.00%
Run 5: Report of Indigo-MusesC3 — Data Link

![Graph of throughput and latency over time]

**Throughput (Mbps):**
- Flow 1 ingress (mean 577.98 Mbps)
- Flow 1 egress (mean 577.96 Mbps)

**Per-packet one-way delay (ms):**
- Flow 1 (95th percentile 67.62 ms)
Run 1: Statistics of Indigo-MusesC5

Start at: 2019-02-20 18:53:55
End at: 2019-02-20 18:54:25
Local clock offset: -0.19 ms
Remote clock offset: -1.421 ms
Run 1: Report of Indigo-MusesC5 — Data Link

![Graph showing throughput and delay over time for Flow 1 ingress and egress.]
Run 2: Statistics of Indigo-MusesC5

Start at: 2019-02-20 19:29:28
End at: 2019-02-20 19:29:58
Local clock offset: -0.471 ms
Remote clock offset: -0.007 ms

# Below is generated by plot.py at 2019-02-20 23:04:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 602.88 Mbit/s
95th percentile per-packet one-way delay: 77.815 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 602.88 Mbit/s
95th percentile per-packet one-way delay: 77.815 ms
Loss rate: 0.01%
Run 2: Report of Indigo-MusesC5 — Data Link

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

- **Flow 1 ingress (mean 602.91 Mbit/s)**
- **Flow 1 egress (mean 602.88 Mbit/s)**

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

- **Flow 1 (95th percentile 77.81 ms)**

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Run 3: Statistics of Indigo-MusesC5

Start at: 2019-02-20 20:04:56  
End at: 2019-02-20 20:05:26  
Local clock offset: -0.084 ms  
Remote clock offset: -0.207 ms

# Below is generated by plot.py at 2019-02-20 23:05:29  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 533.41 Mbit/s  
95th percentile per-packet one-way delay: 60.632 ms  
Loss rate: 0.02%  
-- Flow 1:  
Average throughput: 533.41 Mbit/s  
95th percentile per-packet one-way delay: 60.632 ms  
Loss rate: 0.02%
Run 3: Report of Indigo-MusesC5 — Data Link
Run 4: Statistics of Indigo-MusesC5

Start at: 2019-02-20 20:38:47
End at: 2019-02-20 20:39:17
Local clock offset: 0.015 ms
Remote clock offset: -1.66 ms

# Below is generated by plot.py at 2019-02-20 23:07:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 618.49 Mbit/s
95th percentile per-packet one-way delay: 73.143 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 618.49 Mbit/s
95th percentile per-packet one-way delay: 73.143 ms
Loss rate: 0.02%
Run 4: Report of Indigo-MusesC5 — Data Link

Throughput (Mbps)

0 5 10 15 20 25 30

Time (s)

Flow 1 ingress (mean 618.64 Mbit/s)  Flow 1 egress (mean 618.49 Mbit/s)

Per packet one way delay (ms)

0 5 10 15 20 25

Time (s)

Flow 1 (95th percentile 73.14 ms)
Run 5: Statistics of Indigo-MusesC5

End at: 2019-02-20 21:14:07
Local clock offset: 0.02 ms
Remote clock offset: -0.732 ms

# Below is generated by plot.py at 2019-02-20 23:10:21
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 592.50 Mbit/s
  95th percentile per-packet one-way delay: 71.504 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 592.50 Mbit/s
  95th percentile per-packet one-way delay: 71.504 ms
  Loss rate: 0.00%
Run 5: Report of Indigo-MusesC5 — Data Link

![Throughput Graph]

Flow 1 ingress (mean 592.51 Mbit/s)  Flow 1 egress (mean 592.50 Mbit/s)

![Packet Delay Graph]

Flow 1 (95th percentile 71.50 ms)
Run 1: Statistics of Indigo-MusesD

Start at: 2019-02-20 19:11:27
End at: 2019-02-20 19:11:57
Local clock offset: -0.133 ms
Remote clock offset: 0.101 ms

# Below is generated by plot.py at 2019-02-20 23:10:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 515.77 Mbit/s
95th percentile per-packet one-way delay: 62.352 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 515.77 Mbit/s
95th percentile per-packet one-way delay: 62.352 ms
Loss rate: 0.01%
Run 1: Report of Indigo-MusesD — Data Link

![Graph showing throughput and packet delay over time for Flow 1 with mean 515.84 Mbps ingress and 515.77 Mbps egress.]

- Flow ingress (mean 515.84 Mbps)
- Flow egress (mean 515.77 Mbps)

![Graph showing packet delay over time for Flow 1 with the 95th percentile delay of 62.35 ms.]

Flow 1 (95th percentile 62.35 ms)
Run 2: Statistics of Indigo-MusesD

Start at: 2019-02-20 19:47:42
End at: 2019-02-20 19:48:12
Local clock offset: 0.088 ms
Remote clock offset: -0.939 ms

# Below is generated by plot.py at 2019-02-20 23:10:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 512.33 Mbit/s
95th percentile per-packet one-way delay: 62.554 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 512.33 Mbit/s
95th percentile per-packet one-way delay: 62.554 ms
Loss rate: 0.00%
Run 2: Report of Indigo-MusesD — Data Link
Run 3: Statistics of Indigo-MusesD

Start at: 2019-02-20 20:21:55
End at: 2019-02-20 20:22:25
Local clock offset: -0.174 ms
Remote clock offset: 0.343 ms

# Below is generated by plot.py at 2019-02-20 23:12:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 500.74 Mbit/s
95th percentile per-packet one-way delay: 85.055 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 500.74 Mbit/s
95th percentile per-packet one-way delay: 85.055 ms
Loss rate: 0.01%
Run 3: Report of Indigo-MusesD — Data Link

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

- **Flow 1 ingress (mean 500.69 Mbps)**
- **Flow 1 egress (mean 500.74 Mbps)**

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

- **Flow 1 (95th percentile 85.06 ms)**
Run 4: Statistics of Indigo-MusesD

Start at: 2019-02-20 20:55:56
End at: 2019-02-20 20:56:26
Local clock offset: -0.228 ms
Remote clock offset: -1.015 ms

# Below is generated by plot.py at 2019-02-20 23:12:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 447.43 Mbit/s
95th percentile per-packet one-way delay: 62.659 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 447.43 Mbit/s
95th percentile per-packet one-way delay: 62.659 ms
Loss rate: 0.01%
Run 4: Report of Indigo-MusesD — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 447.39 Mbit/s)  Flow 1 egress (mean 447.43 Mbit/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 62.66 ms)
Run 5: Statistics of Indigo-MusesD

Start at: 2019-02-20 21:31:32
End at: 2019-02-20 21:32:02
Local clock offset: -0.765 ms
Remote clock offset: -0.855 ms

# Below is generated by plot.py at 2019-02-20 23:14:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 497.04 Mbit/s
95th percentile per-packet one-way delay: 62.486 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 497.04 Mbit/s
95th percentile per-packet one-way delay: 62.486 ms
Loss rate: 0.01%
Run 1: Statistics of Indigo-MusesT

Start at: 2019-02-20 19:15:15
End at: 2019-02-20 19:15:45
Local clock offset: -0.03 ms
Remote clock offset: -0.265 ms

# Below is generated by plot.py at 2019-02-20 23:17:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 604.39 Mbit/s
95th percentile per-packet one-way delay: 87.923 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 604.39 Mbit/s
95th percentile per-packet one-way delay: 87.923 ms
Loss rate: 0.00%
Run 1: Report of Indigo-MusesT — Data Link
Run 2: Statistics of Indigo-MusesT

Start at: 2019-02-20 19:51:17
End at: 2019-02-20 19:51:47
Local clock offset: 0.272 ms
Remote clock offset: -0.225 ms

# Below is generated by plot.py at 2019-02-20 23:19:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 628.64 Mbit/s
95th percentile per-packet one-way delay: 70.372 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 628.64 Mbit/s
95th percentile per-packet one-way delay: 70.372 ms
Loss rate: 0.07%
Run 2: Report of Indigo-MusesT — Data Link
Run 3: Statistics of Indigo-MusesT

Start at: 2019-02-20 20:25:24
End at: 2019-02-20 20:25:54
Local clock offset: 0.257 ms
Remote clock offset: -0.338 ms

# Below is generated by plot.py at 2019-02-20 23:20:10
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 582.79 Mbit/s
  95th percentile per-packet one-way delay: 72.247 ms
  Loss rate: 0.05%
-- Flow 1:
  Average throughput: 582.79 Mbit/s
  95th percentile per-packet one-way delay: 72.247 ms
  Loss rate: 0.05%
Run 3: Report of Indigo-MusesT — Data Link
Run 4: Statistics of Indigo-MuseST

Start at: 2019-02-20 20:59:24
End at: 2019-02-20 20:59:54
Local clock offset: -0.253 ms
Remote clock offset: -0.12 ms

# Below is generated by plot.py at 2019-02-20 23:21:16
# Datalink statistics
-- Total of 1 flow:
Average throughput: 623.63 Mbit/s
95th percentile per-packet one-way delay: 75.443 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 623.63 Mbit/s
95th percentile per-packet one-way delay: 75.443 ms
Loss rate: 0.03%
Run 4: Report of Indigo-MusesT — Data Link

![Graph 1](image1.png)

Flow 1 ingress (mean 623.79 Mbit/s)  Flow 1 egress (mean 623.63 Mbit/s)

![Graph 2](image2.png)

Flow 1 (95th percentile 75.44 ms)
Run 5: Statistics of Indigo-MusesT

Start at: 2019-02-20 21:35:07
End at: 2019-02-20 21:35:37
Local clock offset: -0.062 ms
Remote clock offset: -0.1 ms

# Below is generated by plot.py at 2019-02-20 23:21:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 606.42 Mbit/s
95th percentile per-packet one-way delay: 68.485 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 606.42 Mbit/s
95th percentile per-packet one-way delay: 68.485 ms
Loss rate: 0.02%
Run 5: Report of Indigo-MusesT — Data Link

![Graphs showing throughput and packet delay for Flow 1 ingressing and egressing](image-url)
Run 1: Statistics of LEDBAT

Start at: 2019-02-20 19:23:14
End at: 2019-02-20 19:23:44
Local clock offset: 0.106 ms
Remote clock offset: -0.247 ms

# Below is generated by plot.py at 2019-02-20 23:21:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 26.89 Mbit/s
95th percentile per-packet one-way delay: 58.223 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 26.89 Mbit/s
95th percentile per-packet one-way delay: 58.223 ms
Loss rate: 0.00%
Run 1: Report of LEDBAT — Data Link

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

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

Legend:
- Dashed line: Flow ingress (mean 26.89 Mb/s)
- Solid line: Flow egress (mean 26.89 Mb/s)
- Filled circle: Flow 1 (95th percentile 58.22 ms)
Run 2: Statistics of LEDBAT

Start at: 2019-02-20 19:58:59
End at: 2019-02-20 19:59:30
Local clock offset: -0.065 ms
Remote clock offset: 0.44 ms

# Below is generated by plot.py at 2019-02-20 23:21:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 26.99 Mbit/s
95th percentile per-packet one-way delay: 61.873 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 26.99 Mbit/s
95th percentile per-packet one-way delay: 61.873 ms
Loss rate: 0.15%
Run 2: Report of LEDBAT — Data Link
Run 3: Statistics of LEDBAT

Start at: 2019-02-20 20:32:42
End at: 2019-02-20 20:33:12
Local clock offset: -0.216 ms
Remote clock offset: -0.571 ms

# Below is generated by plot.py at 2019-02-20 23:21:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 26.69 Mbit/s
95th percentile per-packet one-way delay: 58.228 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 26.69 Mbit/s
95th percentile per-packet one-way delay: 58.228 ms
Loss rate: 0.00%
Run 3: Report of LEDBAT — Data Link
Run 4: Statistics of LEDBAT

Start at: 2019-02-20 21:07:24
End at: 2019-02-20 21:07:54
Local clock offset: -0.083 ms
Remote clock offset: 0.055 ms

# Below is generated by plot.py at 2019-02-20 23:21:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 26.89 Mbit/s
95th percentile per-packet one-way delay: 58.067 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 26.89 Mbit/s
95th percentile per-packet one-way delay: 58.067 ms
Loss rate: 0.00%
Run 4: Report of LEDBAT — Data Link
Run 5: Statistics of LEDBAT

Start at: 2019-02-20 21:42:49
End at: 2019-02-20 21:43:19
Local clock offset: -0.778 ms
Remote clock offset: -0.858 ms

# Below is generated by plot.py at 2019-02-20 23:21:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 25.42 Mbit/s
95th percentile per-packet one-way delay: 61.402 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 25.42 Mbit/s
95th percentile per-packet one-way delay: 61.402 ms
Loss rate: 0.00%
Run 1: Statistics of PCC-Allegro

Start at: 2019-02-20 19:09:30
End at: 2019-02-20 19:10:00
Local clock offset: 0.369 ms
Remote clock offset: 0.573 ms

# Below is generated by plot.py at 2019-02-20 23:34:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 493.13 Mbit/s
95th percentile per-packet one-way delay: 132.313 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 493.13 Mbit/s
95th percentile per-packet one-way delay: 132.313 ms
Loss rate: 0.40%
Run 1: Report of PCC-Allegro — Data Link

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

- Flow 1 ingress (mean 495.10 Mbit/s)
- Flow 1 egress (mean 493.13 Mbit/s)

- Flow 1 (95th percentile 132.31 ms)
Run 2: Statistics of PCC-Allegro

Start at: 2019-02-20 19:45:39
End at: 2019-02-20 19:46:09
Local clock offset: -0.057 ms
Remote clock offset: 1.226 ms

# Below is generated by plot.py at 2019-02-20 23:34:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 447.59 Mbit/s
95th percentile per-packet one-way delay: 159.618 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 447.59 Mbit/s
95th percentile per-packet one-way delay: 159.618 ms
Loss rate: 0.85%
Run 2: Report of PCC-Allegro — Data Link
Run 3: Statistics of PCC-Allegro

Start at: 2019-02-20 20:20:05
End at: 2019-02-20 20:20:35
Local clock offset: 0.278 ms
Remote clock offset: -0.276 ms

# Below is generated by plot.py at 2019-02-20 23:34:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 467.36 Mbit/s
95th percentile per-packet one-way delay: 154.269 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 467.36 Mbit/s
95th percentile per-packet one-way delay: 154.269 ms
Loss rate: 0.82%
Run 3: Report of PCC-Allegro — Data Link

![Graph showing throughput and packet delay over time]

- **Throughput (Mbps)**
  - Flow 1 ingress (mean 471.24 Mbps)
  - Flow 1 egress (mean 467.36 Mbps)

- **Packet delay (ms)**
  - Flow 1 (95th percentile 154.27 ms)
Run 4: Statistics of PCC-Allegro

Start at: 2019-02-20 20:54:01
End at: 2019-02-20 20:54:31
Local clock offset: -0.668 ms
Remote clock offset: 0.432 ms

# Below is generated by plot.py at 2019-02-20 23:36:31
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 495.75 Mbit/s
  95th percentile per-packet one-way delay: 156.681 ms
  Loss rate: 1.38%
-- Flow 1:
  Average throughput: 495.75 Mbit/s
  95th percentile per-packet one-way delay: 156.681 ms
  Loss rate: 1.38%
Run 4: Report of PCC-Allegro — Data Link
Run 5: Statistics of PCC-Allegro

Start at: 2019-02-20 21:29:26
End at: 2019-02-20 21:29:56
Local clock offset: -0.147 ms
Remote clock offset: -0.144 ms

# Below is generated by plot.py at 2019-02-20 23:37:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 474.21 Mbit/s
95th percentile per-packet one-way delay: 173.963 ms
Loss rate: 4.45%
-- Flow 1:
Average throughput: 474.21 Mbit/s
95th percentile per-packet one-way delay: 173.963 ms
Loss rate: 4.45%
Run 5: Report of PCC-Allegro — Data Link

![Graph 1: Throughput](image1)

- Flow 1 ingress (mean 496.26 Mbit/s)
- Flow 1 egress (mean 474.21 Mbit/s)

![Graph 2: Packet Delay](image2)

- Flow 1 (95th percentile 173.96 ms)
Run 1: Statistics of PCC-Expr

Start at: 2019-02-20 19:18:22
End at: 2019-02-20 19:18:52
Local clock offset: -0.045 ms
Remote clock offset: 1.184 ms

# Below is generated by plot.py at 2019-02-20 23:37:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 367.91 Mbit/s
95th percentile per-packet one-way delay: 100.612 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 367.91 Mbit/s
95th percentile per-packet one-way delay: 100.612 ms
Loss rate: 0.48%
Run 1: Report of PCC-Expr — Data Link

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

- **Flow 1 ingress** (mean 369.69 Mbps)
- **Flow 1 egress** (mean 367.91 Mbps)

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

- **Flow 1** (95th percentile 100.61 ms)
Run 2: Statistics of PCC-Expr

Start at: 2019-02-20 19:54:17
End at: 2019-02-20 19:54:47
Local clock offset: 0.359 ms
Remote clock offset: -1.009 ms

# Below is generated by plot.py at 2019-02-20 23:37:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 339.65 Mbit/s
95th percentile per-packet one-way delay: 140.335 ms
Loss rate: 1.08%
-- Flow 1:
Average throughput: 339.65 Mbit/s
95th percentile per-packet one-way delay: 140.335 ms
Loss rate: 1.08%
Run 2: Report of PCC-Expr — Data Link
Run 3: Statistics of PCC-Expr

Start at: 2019-02-20 20:28:15  
End at: 2019-02-20 20:28:45  
Local clock offset: -0.349 ms  
Remote clock offset: 0.41 ms

# Below is generated by plot.py at 2019-02-20 23:37:32  
# Datalink statistics

-- Total of 1 flow:
Average throughput: 356.48 Mbit/s  
95th percentile per-packet one-way delay: 148.991 ms  
Loss rate: 0.55%

-- Flow 1:
Average throughput: 356.48 Mbit/s  
95th percentile per-packet one-way delay: 148.991 ms  
Loss rate: 0.55%
Run 3: Report of PCC-Expr — Data Link

![Graph of throughput and delay over time for Flow 1 ingress and egress.]
Run 4: Statistics of PCC-Expr

Start at: 2019-02-20 21:02:29
End at: 2019-02-20 21:02:59
Local clock offset: -0.138 ms
Remote clock offset: -0.737 ms

# Below is generated by plot.py at 2019-02-20 23:44:31
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 354.57 Mbit/s
  95th percentile per-packet one-way delay: 148.158 ms
  Loss rate: 1.24%
-- Flow 1:
  Average throughput: 354.57 Mbit/s
  95th percentile per-packet one-way delay: 148.158 ms
  Loss rate: 1.24%
Run 4: Report of PCC-Expr — Data Link
Run 5: Statistics of PCC-Expr

Start at: 2019-02-20 21:38:09
End at: 2019-02-20 21:38:39
Local clock offset: -0.366 ms
Remote clock offset: -0.074 ms

# Below is generated by plot.py at 2019-02-20 23:44:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 317.69 Mbit/s
95th percentile per-packet one-way delay: 91.924 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 317.69 Mbit/s
95th percentile per-packet one-way delay: 91.924 ms
Loss rate: 0.04%
Run 5: Report of PCC-Expr — Data Link
Run 1: Statistics of QUIC Cubic

Start at: 2019-02-20 19:20:16
End at: 2019-02-20 19:20:46
Local clock offset: -0.034 ms
Remote clock offset: -0.077 ms
Run 1: Report of QUIC Cubic — Data Link

![Graphs showing throughput and per-packet one-way delay over time for Flow 1 ingress and egress, with specific values indicated.](image-url)
Run 2: Statistics of QUIC Cubic

Start at: 2019-02-20 19:56:05
End at: 2019-02-20 19:56:35
Local clock offset: -0.225 ms
Remote clock offset: -0.17 ms

# Below is generated by plot.py at 2019-02-20 23:44:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 73.76 Mbit/s
95th percentile per-packet one-way delay: 60.598 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 73.76 Mbit/s
95th percentile per-packet one-way delay: 60.598 ms
Loss rate: 0.01%
Run 2: Report of QUIC Cubic — Data Link

![Graph of Throughput over Time]

- Flow 1 ingress (mean 73.76 Mbit/s)
- Flow 1 egress (mean 73.76 Mbit/s)

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

- Flow 1 (95th percentile 60.60 ms)
Run 3: Statistics of QUIC Cubic

Start at: 2019-02-20 20:30:03
End at: 2019-02-20 20:30:33
Local clock offset: 0.081 ms
Remote clock offset: -0.209 ms

# Below is generated by plot.py at 2019-02-20 23:44:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 63.00 Mbit/s
95th percentile per-packet one-way delay: 57.275 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 63.00 Mbit/s
95th percentile per-packet one-way delay: 57.275 ms
Loss rate: 0.00%
Run 3: Report of QUIC Cubic — Data Link
Run 4: Statistics of QUIC Cubic

Start at: 2019-02-20 21:04:25
End at: 2019-02-20 21:04:55
Local clock offset: -0.073 ms
Remote clock offset: -0.863 ms

# Below is generated by plot.py at 2019-02-20 23:44:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 65.96 Mbit/s
95th percentile per-packet one-way delay: 55.985 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 65.96 Mbit/s
95th percentile per-packet one-way delay: 55.985 ms
Loss rate: 0.00%
Run 5: Statistics of QUIC Cubic

Start at: 2019-02-20 21:39:59
End at: 2019-02-20 21:40:29
Local clock offset: -0.768 ms
Remote clock offset: 0.03 ms

# Below is generated by plot.py at 2019-02-20 23:44:37
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 60.17 Mbit/s
  95th percentile per-packet one-way delay: 57.857 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 60.17 Mbit/s
  95th percentile per-packet one-way delay: 57.857 ms
  Loss rate: 0.00%
Run 5: Report of QUIC Cubic — Data Link

[Graph showing throughput and packet delivery delay over time, with two lines representing flow 1 ingress and egress, and a dot line indicating the 95th percentile delay of 57.96 ms.]
Run 1: Statistics of SCReAM

Start at: 2019-02-20 19:28:20
End at: 2019-02-20 19:28:50
Local clock offset: 0.196 ms
Remote clock offset: -0.159 ms

# Below is generated by plot.py at 2019-02-20 23:44:37
# Datalink statistics
-- Total of 1 flow:
   Average throughput: 0.22 Mbit/s
   95th percentile per-packet one-way delay: 57.108 ms
   Loss rate: 0.00%
-- Flow 1:
   Average throughput: 0.22 Mbit/s
   95th percentile per-packet one-way delay: 57.108 ms
   Loss rate: 0.00%
Run 1: Report of SCReAM — Data Link
Run 2: Statistics of SCReAM

Start at: 2019-02-20 20:03:48
End at: 2019-02-20 20:04:18
Local clock offset: 0.323 ms
Remote clock offset: 0.482 ms

# Below is generated by plot.py at 2019-02-20 23:44:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 57.568 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 57.568 ms
Loss rate: 0.00%
Run 2: Report of SCReAM — Data Link
Run 3: Statistics of SCReAM

Start at: 2019-02-20 20:37:39
End at: 2019-02-20 20:38:09
Local clock offset: 0.221 ms
Remote clock offset: -0.928 ms

# Below is generated by plot.py at 2019-02-20 23:44:37
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 59.528 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 59.528 ms
  Loss rate: 0.00%
Run 3: Report of SCReAM — Data Link

![Graph 1: Throughput (Mbps)]

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

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

- Flow 1 (95th percentile 59.53 ms)
Run 4: Statistics of SCReAM

Start at: 2019-02-20 21:12:29
End at: 2019-02-20 21:12:59
Local clock offset: ~0.033 ms
Remote clock offset: ~0.797 ms

# Below is generated by plot.py at 2019-02-20 23:44:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 56.298 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 56.298 ms
Loss rate: 0.00%
Run 4: Report of SCReAM — Data Link

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

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

- Flow 1 (95th percentile 56.30 ms)
Run 5: Statistics of SCReAM

Start at: 2019-02-20 21:47:35
End at: 2019-02-20 21:48:06
Local clock offset: -0.688 ms
Remote clock offset: 0.686 ms

# Below is generated by plot.py at 2019-02-20 23:44:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.833 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.833 ms
Loss rate: 0.00%
Run 5: Report of SCReAM — Data Link
Run 1: Statistics of Sprout

Start at: 2019-02-20 18:55:18
End at: 2019-02-20 18:55:48
Local clock offset: ~0.056 ms
Remote clock offset: 0.57 ms

# Below is generated by plot.py at 2019-02-20 23:44:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.89 Mbit/s
95th percentile per-packet one-way delay: 61.713 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 6.89 Mbit/s
95th percentile per-packet one-way delay: 61.713 ms
Loss rate: 0.00%
Run 1: Report of Sprout — Data Link
Run 2: Statistics of Sprout

Start at: 2019-02-20 19:31:20
End at: 2019-02-20 19:31:50
Local clock offset: -0.302 ms
Remote clock offset: -0.293 ms

# Below is generated by plot.py at 2019-02-20 23:44:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 7.04 Mbit/s
95th percentile per-packet one-way delay: 61.327 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 7.04 Mbit/s
95th percentile per-packet one-way delay: 61.327 ms
Loss rate: 0.00%
Run 2: Report of Sprout — Data Link
Run 3: Statistics of Sprout

Start at: 2019-02-20 20:06:40
End at: 2019-02-20 20:07:10
Local clock offset: 0.085 ms
Remote clock offset: 0.428 ms

# Below is generated by plot.py at 2019-02-20 23:44:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 7.07 Mbit/s
95th percentile per-packet one-way delay: 58.110 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 7.07 Mbit/s
95th percentile per-packet one-way delay: 58.110 ms
Loss rate: 0.00%
Run 3: Report of Sprout — Data Link

![Graph showing throughput over time for different flows and packet delay.]
Run 4: Statistics of Sprout

Start at: 2019-02-20 20:40:43
End at: 2019-02-20 20:41:13
Local clock offset: -0.451 ms
Remote clock offset: 0.465 ms

# Below is generated by plot.py at 2019-02-20 23:44:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 7.76 Mbit/s
95th percentile per-packet one-way delay: 59.002 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 7.76 Mbit/s
95th percentile per-packet one-way delay: 59.002 ms
Loss rate: 0.00%
Run 4: Report of Sprout — Data Link

[Graph showing throughput and delay over time]

- **Flow 1 ingress (mean 7.76 Mbit/s)**
- **Flow 1 egress (mean 7.76 Mbit/s)**

[Graph showing packet delay over time]

- **Flow 1 (95th percentile 59.00 ms)**
Run 5: Statistics of Sprout

Start at: 2019-02-20 21:15:27
End at: 2019-02-20 21:15:58
Local clock offset: -0.112 ms
Remote clock offset: -0.158 ms

# Below is generated by plot.py at 2019-02-20 23:44:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 7.76 Mbit/s
95th percentile per-packet one-way delay: 57.508 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 7.76 Mbit/s
95th percentile per-packet one-way delay: 57.508 ms
Loss rate: 0.00%
Run 5: Report of Sprout — Data Link
Run 1: Statistics of TaoVA-100x

Start at: 2019-02-20 19:04:06
End at: 2019-02-20 19:04:36
Local clock offset: -0.362 ms
Remote clock offset: -0.053 ms

# Below is generated by plot.py at 2019-02-20 23:44:37
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 219.67 Mbit/s
  95th percentile per-packet one-way delay: 61.065 ms
  Loss rate: 0.01%
-- Flow 1:
  Average throughput: 219.67 Mbit/s
  95th percentile per-packet one-way delay: 61.065 ms
  Loss rate: 0.01%
Run 1: Report of TaoVA-100x — Data Link

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

![Graph 2: Per-packet one-way delay (µs)](image2)
Run 2: Statistics of TaoVA-100x

Start at: 2019-02-20 19:40:03
End at: 2019-02-20 19:40:33
Local clock offset: -0.068 ms
Remote clock offset: -0.17 ms

# Below is generated by plot.py at 2019-02-20 23:44:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 224.95 Mbit/s
95th percentile per-packet one-way delay: 60.569 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 224.95 Mbit/s
95th percentile per-packet one-way delay: 60.569 ms
Loss rate: 0.01%
Run 2: Report of TaoVA-100x — Data Link
Run 3: Statistics of TaoVA-100x

Start at: 2019-02-20 20:14:51
End at: 2019-02-20 20:15:21
Local clock offset: 0.153 ms
Remote clock offset: -0.917 ms

# Below is generated by plot.py at 2019-02-20 23:44:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 222.59 Mbit/s
95th percentile per-packet one-way delay: 56.496 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 222.59 Mbit/s
95th percentile per-packet one-way delay: 56.496 ms
Loss rate: 0.00%
Run 3: Report of TaoVA-100x — Data Link

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

- **Flow 1 ingress (mean 222.59 Mbit/s)**
- **Flow 1 egress (mean 222.59 Mbit/s)**

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

- **Flow 1 (95th percentile 56.50 ms)**
Run 4: Statistics of TaoVA-100x

Start at: 2019-02-20 20:48:42
End at: 2019-02-20 20:49:12
Local clock offset: -0.274 ms
Remote clock offset: -0.355 ms

# Below is generated by plot.py at 2019-02-20 23:44:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 220.45 Mbit/s
95th percentile per-packet one-way delay: 61.059 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 220.45 Mbit/s
95th percentile per-packet one-way delay: 61.059 ms
Loss rate: 0.01%
Run 4: Report of TaoVA-100x — Data Link

![Graph of throughput and delay over time for Data Link]

- **Throughput (Mbps) vs. Time (s)**
  - Flow 1 ingress (mean 220.46 Mb/s)
  - Flow 1 egress (mean 220.45 Mb/s)

- **Per-packet one-way delay (ms) vs. Time (s)**
  - Flow 1 (95th percentile 61.06 ms)
Run 5: Statistics of TaoVA-100x

Start at: 2019-02-20 21:24:19  
End at: 2019-02-20 21:24:49  
Local clock offset: -0.273 ms  
Remote clock offset: -0.088 ms

#Below is generated by plot.py at 2019-02-20 23:44:37  
#Datalink statistics  
--Total of 1 flow:  
Average throughput: 219.70 Mbit/s  
95th percentile per-packet one-way delay: 57.669 ms  
Loss rate: 0.00%  
--Flow 1:  
Average throughput: 219.70 Mbit/s  
95th percentile per-packet one-way delay: 57.669 ms  
Loss rate: 0.00%
Run 5: Report of TaoVA-100x — Data Link

![Graph showing throughput and packet delay]

Throughput (Mbps):
- Flow 1 ingress (mean 219.70 Mbps)
- Flow 1 egress (mean 219.70 Mbps)

Packet delay (ms):
- Flow 1 (95th percentile 57.67 ms)
Run 1: Statistics of TCP Vegas

Start at: 2019-02-20 19:21:24
End at: 2019-02-20 19:21:54
Local clock offset: -0.056 ms
Remote clock offset: 0.582 ms

# Below is generated by plot.py at 2019-02-20 23:46:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 484.45 Mbit/s
95th percentile per-packet one-way delay: 58.901 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 484.45 Mbit/s
95th percentile per-packet one-way delay: 58.901 ms
Loss rate: 0.00%
Run 1: Report of TCP Vegas — Data Link
Run 2: Statistics of TCP Vegas

Start at: 2019-02-20 19:57:17
End at: 2019-02-20 19:57:48
Local clock offset: -0.08 ms
Remote clock offset: -0.322 ms

# Below is generated by plot.py at 2019-02-20 23:53:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 479.58 Mbit/s
95th percentile per-packet one-way delay: 57.653 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 479.58 Mbit/s
95th percentile per-packet one-way delay: 57.653 ms
Loss rate: 0.00%
Run 2: Report of TCP Vegas — Data Link

[Graphs showing throughput and delay over time with specific labels for flow ingress and egress.]
Run 3: Statistics of TCP Vegas

Start at: 2019-02-20 20:31:15
End at: 2019-02-20 20:31:45
Local clock offset: -0.017 ms
Remote clock offset: -1.197 ms

# Below is generated by plot.py at 2019-02-20 23:53:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 304.10 Mbit/s
95th percentile per-packet one-way delay: 56.826 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 304.10 Mbit/s
95th percentile per-packet one-way delay: 56.826 ms
Loss rate: 0.00%
Run 3: Report of TCP Vegas — Data Link

![Graph showing throughput and packet delay over time]

- Flow 1 ingress (mean 304.10 Mbit/s)
- Flow 1 egress (mean 304.10 Mbit/s)

- Flow 1 (95th percentile 56.83 ms)
Run 4: Statistics of TCP Vegas

Start at: 2019-02-20 21:05:38
End at: 2019-02-20 21:06:08
Local clock offset: -0.273 ms
Remote clock offset: -0.954 ms

# Below is generated by plot.py at 2019-02-20 23:53:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 470.59 Mbit/s
95th percentile per-packet one-way delay: 62.463 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 470.59 Mbit/s
95th percentile per-packet one-way delay: 62.463 ms
Loss rate: 0.01%
Run 4: Report of TCP Vegas — Data Link

![Throughput Graph]

*Flow 1 ingress (mean 470.57 Mbit/s)  Flow 1 egress (mean 470.59 Mbit/s)*

![Packet Delay Graph]

*Flow 1 (95th percentile 62.46 ms)*
Run 5: Statistics of TCP Vegas

Start at: 2019-02-20 21:41:11
End at: 2019-02-20 21:41:41
Local clock offset: -0.068 ms
Remote clock offset: -0.764 ms

# Below is generated by plot.py at 2019-02-20 23:53:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 448.68 Mbit/s
95th percentile per-packet one-way delay: 93.652 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 448.68 Mbit/s
95th percentile per-packet one-way delay: 93.652 ms
Loss rate: 0.00%
Run 5: Report of TCP Vegas — Data Link

![Graph 1: Throughput (Mbps)]

- Flow 1 ingress (mean 448.68 Mbps)
- Flow 1 egress (mean 448.68 Mbps)

![Graph 2: Round-trip delay (ms)]

- Flow 1 (95th percentile 93.65 ms)
Run 1: Statistics of Verus

Start at: 2019-02-20 18:56:28
End at: 2019-02-20 18:56:58
Local clock offset: -0.459 ms
Remote clock offset: -1.395 ms

# Below is generated by plot.py at 2019-02-20 23:53:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 135.32 Mbit/s
95th percentile per-packet one-way delay: 69.048 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 135.32 Mbit/s
95th percentile per-packet one-way delay: 69.048 ms
Loss rate: 0.00%
Run 1: Report of Verus — Data Link

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

- Flow 1 ingress (mean 135.33 Mbit/s)
- Flow 1 egress (mean 135.32 Mbit/s)
- Flow 1 (95th percentile 69.05 ms)
Run 2: Statistics of Verus

Start at: 2019-02-20 19:32:29
End at: 2019-02-20 19:32:59
Local clock offset: -0.042 ms
Remote clock offset: -0.149 ms

# Below is generated by plot.py at 2019-02-20 23:53:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 129.18 Mbit/s
95th percentile per-packet one-way delay: 68.449 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 129.18 Mbit/s
95th percentile per-packet one-way delay: 68.449 ms
Loss rate: 0.01%
Run 2: Report of Verus — Data Link
Run 3: Statistics of Verus

Start at: 2019-02-20 20:07:49
End at: 2019-02-20 20:08:19
Local clock offset: 0.172 ms
Remote clock offset: 0.465 ms

# Below is generated by plot.py at 2019-02-20 23:53:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 187.20 Mbit/s
95th percentile per-packet one-way delay: 186.289 ms
Loss rate: 1.96%
-- Flow 1:
Average throughput: 187.20 Mbit/s
95th percentile per-packet one-way delay: 186.289 ms
Loss rate: 1.96%
Run 3: Report of Verus — Data Link

![Graph showing data link throughput and packet delay for Flow 1.]

- **Flow 1 ingress** (mean 191.77 Mbit/s)
- **Flow 1 egress** (mean 187.20 Mbit/s)

**Throughput (Mbps)**

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

Flow 1 (95th percentile 186.29 ms)
Run 4: Statistics of Verus

Start at: 2019-02-20 20:41:53
End at: 2019-02-20 20:42:23
Local clock offset: -0.25 ms
Remote clock offset: 0.357 ms

# Below is generated by plot.py at 2019-02-20 23:54:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 184.14 Mbit/s
95th percentile per-packet one-way delay: 114.626 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 184.14 Mbit/s
95th percentile per-packet one-way delay: 114.626 ms
Loss rate: 0.02%
Run 4: Report of Verus — Data Link

![Graph 1: Throughput in Mbit/s vs. Time (s)]

- Flow 1 ingress (mean 184.24 Mbit/s)
- Flow 1 egress (mean 184.14 Mbit/s)

![Graph 2: Packets per second vs. Time (s)]

- Flow 1 (95th percentile 114.63 ms)
Run 5: Statistics of Verus

Start at: 2019-02-20 21:16:37
End at: 2019-02-20 21:17:07
Local clock offset: 0.102 ms
Remote clock offset: 0.014 ms

# Below is generated by plot.py at 2019-02-20 23:56:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 194.51 Mbit/s
95th percentile per-packet one-way delay: 114.064 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 194.51 Mbit/s
95th percentile per-packet one-way delay: 114.064 ms
Loss rate: 0.15%
Run 5: Report of Verus — Data Link

[Graph showing throughput and packet delay over time]

Flow 1 ingress (mean 194.79 Mbit/s)  
Flow 1 egress (mean 194.51 Mbit/s)
Run 1: Statistics of PCC-Vivace

Start at: 2019-02-20 19:05:47
End at: 2019-02-20 19:06:17
Local clock offset: -0.033 ms
Remote clock offset: -0.007 ms

# Below is generated by plot.py at 2019-02-20 23:57:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 436.83 Mbit/s
95th percentile per-packet one-way delay: 58.675 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 436.83 Mbit/s
95th percentile per-packet one-way delay: 58.675 ms
Loss rate: 0.00%
Run 1: Report of PCC-Vivace — Data Link

[Graphs showing throughput and packet delay over time for 'Flow 1 ingress (mean 436.83 Mbit/s)' and 'Flow 1 egress (mean 436.83 Mbit/s)'.]
Run 2: Statistics of PCC-Vivace

Start at: 2019-02-20 19:41:45
End at: 2019-02-20 19:42:15
Local clock offset: -0.062 ms
Remote clock offset: -0.202 ms

# Below is generated by plot.py at 2019-02-20 23:57:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 407.63 Mbit/s
95th percentile per-packet one-way delay: 61.775 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 407.63 Mbit/s
95th percentile per-packet one-way delay: 61.775 ms
Loss rate: 0.01%
Run 2: Report of PCC-Vivace — Data Link

![Throughput graph](image1)

- Flow 1 ingress (mean 407.62 Mbit/s)
- Flow 1 egress (mean 407.63 Mbit/s)

![Delay graph](image2)

- Flow 1 (95th percentile 61.77 ms)
Run 3: Statistics of PCC-Vivace

Start at: 2019-02-20 20:16:34
End at: 2019-02-20 20:17:04
Local clock offset: -0.121 ms
Remote clock offset: -0.927 ms

# Below is generated by plot.py at 2019-02-20 23:57:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 421.58 Mbit/s
95th percentile per-packet one-way delay: 59.301 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 421.58 Mbit/s
95th percentile per-packet one-way delay: 59.301 ms
Loss rate: 0.00%
Run 3: Report of PCC-Vivace — Data Link
Run 4: Statistics of PCC-Vivace

Start at: 2019-02-20 20:50:21
End at: 2019-02-20 20:50:51
Local clock offset: -0.683 ms
Remote clock offset: -0.864 ms

# Below is generated by plot.py at 2019-02-20 23:58:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 403.15 Mbit/s
95th percentile per-packet one-way delay: 64.686 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 403.15 Mbit/s
95th percentile per-packet one-way delay: 64.686 ms
Loss rate: 0.00%
Run 4: Report of PCC-Vivace — Data Link

- Flow 1 ingress (mean 403.15 Mbit/s)
- Flow 1 egress (mean 403.15 Mbit/s)

- Flow 1 95th percentile 64.69 ms
Run 5: Statistics of PCC-Vivace

Start at: 2019-02-20 21:25:50
End at: 2019-02-20 21:26:20
Local clock offset: -0.366 ms
Remote clock offset: -0.722 ms

# Below is generated by plot.py at 2019-02-20 23:58:03
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 382.61 Mbit/s
  95th percentile per-packet one-way delay: 61.193 ms
  Loss rate: 0.01%
-- Flow 1:
  Average throughput: 382.61 Mbit/s
  95th percentile per-packet one-way delay: 61.193 ms
  Loss rate: 0.01%
Run 5: Report of PCC-Vivace — Data Link

![Graphs showing throughput and per-packet one-way delay](image-url)
Run 1: Statistics of WebRTC media

Start at: 2019-02-20 19:17:13
End at: 2019-02-20 19:17:43
Local clock offset: 0.109 ms
Remote clock offset: 0.523 ms

# Below is generated by plot.py at 2019-02-20 23:58:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.09 Mbit/s
95th percentile per-packet one-way delay: 57.895 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.09 Mbit/s
95th percentile per-packet one-way delay: 57.895 ms
Loss rate: 0.00%
Run 1: Report of WebRTC media — Data Link
Run 2: Statistics of WebRTC media

Start at: 2019-02-20 19:53:09
End at: 2019-02-20 19:53:39
Local clock offset: -0.137 ms
Remote clock offset: 0.554 ms

# Below is generated by plot.py at 2019-02-20 23:58:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 57.850 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 57.850 ms
Loss rate: 0.00%
Run 2: Report of WebRTC media — Data Link
Run 3: Statistics of WebRTC media

Start at: 2019-02-20 20:27:07
End at: 2019-02-20 20:27:37
Local clock offset: 0.109 ms
Remote clock offset: 0.521 ms

# Below is generated by plot.py at 2019-02-20 23:58:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 57.681 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 57.681 ms
Loss rate: 0.00%
Run 3: Report of WebRTC media — Data Link

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

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Run 4: Statistics of WebRTC media

Start at: 2019-02-20 21:01:21
End at: 2019-02-20 21:01:51
Local clock offset: 0.132 ms
Remote clock offset: 0.724 ms

# Below is generated by plot.py at 2019-02-20 23:58:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 57.486 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 57.486 ms
Loss rate: 0.00%
Run 4: Report of WebRTC media — Data Link

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

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

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

- Flow 1 (90th percentile 57.49 ms)
Run 5: Statistics of WebRTC media

Start at: 2019-02-20 21:37:01
End at: 2019-02-20 21:37:31
Local clock offset: -0.517 ms
Remote clock offset: -0.323 ms

# Below is generated by plot.py at 2019-02-20 23:58:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.25 Mbit/s
95th percentile per-packet one-way delay: 57.454 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.25 Mbit/s
95th percentile per-packet one-way delay: 57.454 ms
Loss rate: 0.00%
Run 5: Report of WebRTC media — Data Link