Pantheon Report

Generated at 2019-11-25 02:56:08 (UTC).
Data path: GCE Iowa on ens4 (remote) → GCE London on ens4 (local).
Repeated the test of 24 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 4.15.0-1044-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 @ de42328552b3776a75a932a94dfadfd722537b0ec
third_party/fillp @ 06da145933fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0eeb722943babcd2b0902c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbde58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdf69c077e6d4
third_party/libutp @ b3465b942e28262f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 0ce721187ad823a2095537730c746468eca4966
third_party/muses_dtree @ 387225f7b5f61ddbe92d708a8869ffbb84eb3200
third_party/pantheon-tunnel @ f866d3f58d27af942717625ee3a354cc2e802bd
third_party/pcc @ 1af958fa0d6d18b623c091a55f3ec872b4981e1
  M receiver/src/buffer.h
  M receiver/src/core.cpp
  M sender/src/buffer.h
  M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8ac0d08fab9c2eb2eb974ab
third_party/proto-quic @ 77961f1a82733a8642f1bc8143ebc978f33cf42
third_party/scream-reproduce @ f099118d1421a3131bf11ff1964974e1da39db2
  M src/verus.hpp
  M src/verus.cpp
third_party/scream-sim @ 366e35c6178b01e31d4a66ad1c74f9415f19a26
  M src/examples/cellsim.cc
  M src/examples/sproutbt2.cc
  M src/network/sproutconn.cc
third_party/sprout @ 366e35c6178b01e31d4a66ad1c74f9415f19a26
  M src/examples/cellsim.cc
  M src/examples/sproutbt2.cc
  M src/network/sproutconn.cc
third_party/verus @ 4d4b447ea74c6c60a261149af2629562939f9a949
  M src/verus.hpp
  M tools/plot.py
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851
test from GCE Iowa to GCE London, 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>501.22</td>
<td>130.14</td>
<td>0.69</td>
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<td>Copa</td>
<td>5</td>
<td>286.24</td>
<td>61.44</td>
<td>0.32</td>
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<td>TCP Cubic</td>
<td>5</td>
<td>509.37</td>
<td>88.39</td>
<td>0.35</td>
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<td>FillP</td>
<td>5</td>
<td>820.82</td>
<td>92.49</td>
<td>0.52</td>
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<td>FillP-Sheep</td>
<td>5</td>
<td>819.89</td>
<td>87.52</td>
<td>0.46</td>
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<td>Indigo</td>
<td>5</td>
<td>225.32</td>
<td>48.90</td>
<td>0.34</td>
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<td>Indigo-MusesC3</td>
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<td>0.36</td>
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<td>607.53</td>
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<td>Indigo-MusesD</td>
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<td>75.61</td>
<td>0.43</td>
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<td>0.44</td>
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<td>LEDBAT</td>
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<td>49.90</td>
<td>0.52</td>
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<td>608.01</td>
<td>62.82</td>
<td>0.29</td>
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<tr>
<td>Muses_DecisionTreeH0</td>
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<td>318.32</td>
<td>121.86</td>
<td>0.39</td>
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<td>Muses_DecisionTreeR0</td>
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<td>59.36</td>
<td>0.34</td>
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<td>PCC-Allegro</td>
<td>5</td>
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<td>176.43</td>
<td>4.23</td>
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<td>PCC-Expr</td>
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<td>126.87</td>
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<td>47.03</td>
<td>0.47</td>
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<td>SCReAM</td>
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<td>0.22</td>
<td>47.67</td>
<td>0.33</td>
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<td>Sprout</td>
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<td>9.49</td>
<td>47.76</td>
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<td>0.32</td>
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<td>51.85</td>
<td>0.28</td>
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<td>150.60</td>
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<td>PCC-Vivace</td>
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<td>0.57</td>
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<td>48.41</td>
<td>0.00</td>
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</table>
Run 1: Statistics of TCP BBR

Local clock offset: 0.023 ms
Remote clock offset: -0.065 ms

# Below is generated by plot.py at 2019-11-25 00:38:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 520.08 Mbit/s
95th percentile per-packet one-way delay: 139.944 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 520.08 Mbit/s
95th percentile per-packet one-way delay: 139.944 ms
Loss rate: 0.49%
Run 1: Report of TCP BBR — Data Link

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

- Flow 1 ingress (mean 520.95 Mbps)
- Flow 1 egress (mean 520.08 Mbps)

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

- Flow 1 (95th percentile 139.94 ms)
Run 2: Statistics of TCP BBR

Local clock offset: -0.006 ms
Remote clock offset: 0.021 ms

# Below is generated by plot.py at 2019-11-25 00:38:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 490.78 Mbit/s
95th percentile per-packet one-way delay: 146.059 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 490.78 Mbit/s
95th percentile per-packet one-way delay: 146.059 ms
Loss rate: 0.72%
Run 2: Report of TCP BBR — Data Link

![Throughput Graph](image1)

- Flow 1 ingress (mean 492.78 Mbit/s)
- Flow 1 egress (mean 490.78 Mbit/s)

![Delay Graph](image2)

- Flow 1 (95th percentile 146.06 ms)
Run 3: Statistics of TCP BBR

Start at: 2019-11-24 23:02:49
End at: 2019-11-24 23:03:19
Local clock offset: -0.087 ms
Remote clock offset: -0.085 ms

# Below is generated by plot.py at 2019-11-25 00:38:16
# Datalink statistics
-- Total of 1 flow:
Average throughput: 528.11 Mbit/s
95th percentile per-packet one-way delay: 86.634 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 528.11 Mbit/s
95th percentile per-packet one-way delay: 86.634 ms
Loss rate: 0.33%
Run 3: Report of TCP BBR — Data Link
Run 4: Statistics of TCP BBR

End at: 2019-11-24 23:38:05
Local clock offset: -0.07 ms
Remote clock offset: -0.039 ms

# Below is generated by plot.py at 2019-11-25 00:38:16
# Datalink statistics
-- Total of 1 flow:
Average throughput: 500.27 Mbit/s
95th percentile per-packet one-way delay: 118.978 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 500.27 Mbit/s
95th percentile per-packet one-way delay: 118.978 ms
Loss rate: 0.82%
Run 4: Report of TCP BBR — Data Link

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

- Flow 1 ingress (mean 502.78 Mbit/s)
- Flow 1 egress (mean 500.27 Mbit/s)

![Graph 2: End-to-End Delay (ms)](image2)

- Flow 1 (95th percentile 118.98 ms)
Run 5: Statistics of TCP BBR

Start at: 2019-11-25 00:12:18
End at: 2019-11-25 00:12:48
Local clock offset: -0.148 ms
Remote clock offset: 0.004 ms

# Below is generated by plot.py at 2019-11-25 00:38:16
# Datalink statistics
-- Total of 1 flow:
Average throughput: 466.88 Mbit/s
95th percentile per-packet one-way delay: 159.064 ms
Loss rate: 1.11%
-- Flow 1:
Average throughput: 466.88 Mbit/s
95th percentile per-packet one-way delay: 159.064 ms
Loss rate: 1.11%
Run 5: Report of TCP BBR — Data Link

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**Throughput (kbit/s)**

- Dashed line: Flow 1 ingress (mean 470.61 Mbit/s)
- Solid line: Flow 1 egress (mean 466.88 Mbit/s)

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

- Solid line: Flow 1 (95th percentile 159.06 ms)
Run 1: Statistics of Copa

End at: 2019-11-24 21:44:21
Local clock offset: 0.015 ms
Remote clock offset: -0.038 ms

# Below is generated by plot.py at 2019-11-25 00:38:16
# Datalink statistics
-- Total of 1 flow:
Average throughput: 245.01 Mbit/s
95th percentile per-packet one-way delay: 61.113 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 245.01 Mbit/s
95th percentile per-packet one-way delay: 61.113 ms
Loss rate: 0.31%
Run 1: Report of Copa — Data Link

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

- **Flow 1 ingress** (mean 244.99 Mbit/s)
- **Flow 1 egress** (mean 245.01 Mbit/s)

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

- **Flow 1** (95th percentile 61.11 ms)
Run 2: Statistics of Copa

Local clock offset: 0.008 ms
Remote clock offset: 0.003 ms

# Below is generated by plot.py at 2019-11-25 00:39:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 307.71 Mbit/s
95th percentile per-packet one-way delay: 62.497 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 307.71 Mbit/s
95th percentile per-packet one-way delay: 62.497 ms
Loss rate: 0.27%
Run 2: Report of Copa — Data Link

![Graphs showing throughput and packet delay over time.](image-url)
Run 3: Statistics of Copa

Local clock offset: -0.074 ms
Remote clock offset: -0.038 ms

# Below is generated by plot.py at 2019-11-25 00:39:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 286.50 Mbit/s
95th percentile per-packet one-way delay: 62.426 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 286.50 Mbit/s
95th percentile per-packet one-way delay: 62.426 ms
Loss rate: 0.34%
Run 3: Report of Copa — Data Link

![Graph showing network throughput over time](image)

- **Flow 1 ingress (mean 286.59 Mbit/s)**
- **Flow 1 egress (mean 286.50 Mbit/s)**

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

- **Flow 1 (95th percentile 62.43 ms)**
Run 4: Statistics of Copa

Local clock offset: -0.149 ms
Remote clock offset: -0.072 ms

# Below is generated by plot.py at 2019-11-25 00:49:06
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 297.86 Mbit/s
  95th percentile per-packet one-way delay: 60.475 ms
  Loss rate: 0.33%
-- Flow 1:
  Average throughput: 297.86 Mbit/s
  95th percentile per-packet one-way delay: 60.475 ms
  Loss rate: 0.33%
Run 4: Report of Copa — Data Link

![Graph of Throughput](image1)

- **Flow 1 ingress (mean 297.89 Mbit/s)**
- **Flow 1 egress (mean 297.86 Mbit/s)**

![Graph of Packet Delay](image2)

- **Flow 1 (95th percentile 60.48 ms)**
Run 5: Statistics of Copa

Start at: 2019-11-25 00:02:46
End at: 2019-11-25 00:03:16
Local clock offset: -0.098 ms
Remote clock offset: 0.001 ms

# Below is generated by plot.py at 2019-11-25 00:49:15
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 294.12 Mbit/s
  95th percentile per-packet one-way delay: 60.707 ms
  Loss rate: 0.33%
-- Flow 1:
  Average throughput: 294.12 Mbit/s
  95th percentile per-packet one-way delay: 60.707 ms
  Loss rate: 0.33%
Run 5: Report of Copa — Data Link
Run 1: Statistics of TCP Cubic

Local clock offset: 0.024 ms
Remote clock offset: -0.053 ms

# Below is generated by plot.py at 2019-11-25 00:49:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 555.63 Mbit/s
95th percentile per-packet one-way delay: 82.469 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 555.63 Mbit/s
95th percentile per-packet one-way delay: 82.469 ms
Loss rate: 0.34%
Run 1: Report of TCP Cubic — Data Link
Run 2: Statistics of TCP Cubic

End at: 2019-11-24 22:00:10
Local clock offset: 0.06 ms
Remote clock offset: -0.039 ms

# Below is generated by plot.py at 2019-11-25 00:49:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 528.42 Mbit/s
95th percentile per-packet one-way delay: 84.089 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 528.42 Mbit/s
95th percentile per-packet one-way delay: 84.089 ms
Loss rate: 0.32%
Run 2: Report of TCP Cubic — Data Link

![Throughput Throughput](image1)

![Per packet one way delay](image2)

Flow 1 ingress (mean 528.47 Mbit/s) — Flow 1 egress (mean 528.42 Mbit/s)

Flow 1 (95th percentile 84.09 ms)
Run 3: Statistics of TCP Cubic

End at: 2019-11-24 22:34:57
Local clock offset: -0.031 ms
Remote clock offset: 0.045 ms

# Below is generated by plot.py at 2019-11-25 00:49:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 526.80 Mbit/s
95th percentile per-packet one-way delay: 133.494 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 526.80 Mbit/s
95th percentile per-packet one-way delay: 133.494 ms
Loss rate: 0.37%
Run 3: Report of TCP Cubic — Data Link

![Graph of Throughput vs Time for Flow 1 (mean 527.10 Mbit/s) and Flow 1 egress (mean 526.80 Mbit/s)]

![Graph of Per-packet one way delay vs Time for Flow 1 (95th percentile 133.49 ms)]
Run 4: Statistics of TCP Cubic

Local clock offset: -0.11 ms
Remote clock offset: -0.088 ms

# Below is generated by plot.py at 2019-11-25 00:49:51
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 424.01 Mbit/s
  95th percentile per-packet one-way delay: 78.929 ms
  Loss rate: 0.34%
-- Flow 1:
  Average throughput: 424.01 Mbit/s
  95th percentile per-packet one-way delay: 78.929 ms
  Loss rate: 0.34%
Run 4: Report of TCP Cubic — Data Link

- Throughput (Mbps)
  - Flow 1 ingress (mean 424.08 Mbit/s)
  - Flow 1 egress (mean 424.01 Mbit/s)

- Per packet: one way delay (ms)
  - Flow 1 (95th percentile 78.93 ms)
Run 5: Statistics of TCP Cubic

Local clock offset: -0.076 ms
Remote clock offset: -0.029 ms

# Below is generated by plot.py at 2019-11-25 00:49:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 511.98 Mbit/s
95th percentile per-packet one-way delay: 62.980 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 511.98 Mbit/s
95th percentile per-packet one-way delay: 62.980 ms
Loss rate: 0.36%
Run 5: Report of TCP Cubic — Data Link

![Graph of Throughput](image1)

- **Flow 1 ingress (mean 512.23 Mbit/s)**
- **Flow 1 egress (mean 511.98 Mbit/s)**

![Graph of Packet Delay](image2)

- **Flow 1 (95th percentile 62.98 ms)**
Run 1: Statistics of FillP

Local clock offset: -0.021 ms
Remote clock offset: -0.068 ms

# Below is generated by plot.py at 2019-11-25 00:59:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 812.83 Mbit/s
95th percentile per-packet one-way delay: 103.833 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 812.83 Mbit/s
95th percentile per-packet one-way delay: 103.833 ms
Loss rate: 0.62%
Run 1: Report of FillP — Data Link

![Graph showing throughput and packet delay over time]

- Flow 1 ingress (mean 815.18 Mbit/s)
- Flow 1 egress (mean 812.83 Mbit/s)

- Flow 1 (95th percentile 103.83 ms)
Run 2: Statistics of FillP

Local clock offset: 0.026 ms
Remote clock offset: -0.05 ms

# Below is generated by plot.py at 2019-11-25 01:09:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 814.19 Mbit/s
95th percentile per-packet one-way delay: 76.710 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 814.19 Mbit/s
95th percentile per-packet one-way delay: 76.710 ms
Loss rate: 0.43%
Run 2: Report of FillP — Data Link

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

- **Flow 1 Ingress (mean 815.05 Mbps)**
- **Flow 1 Egress (mean 814.19 Mbps)**

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

- **Flow 1 (95th percentile 76.71 ms)**

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Run 3: Statistics of FillP

End at: 2019-11-24 22:30:12
Local clock offset: -0.014 ms
Remote clock offset: 0.028 ms

# Below is generated by plot.py at 2019-11-25 01:11:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 841.33 Mbit/s
95th percentile per-packet one-way delay: 86.480 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 841.33 Mbit/s
95th percentile per-packet one-way delay: 86.480 ms
Loss rate: 0.46%
Run 3: Report of FillP — Data Link

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

- **Flow 1 Ingress (mean 842.53 Mbps)**
- **Flow 1 Egress (mean 841.33 Mbps)**

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

- **Flow 1 (95th percentile 86.48 ms)**
Run 4: Statistics of FillP

End at: 2019-11-24 23:04:52
Local clock offset: -0.117 ms
Remote clock offset: -0.096 ms

# Below is generated by plot.py at 2019-11-25 01:11:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 795.74 Mbit/s
95th percentile per-packet one-way delay: 97.308 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 795.74 Mbit/s
95th percentile per-packet one-way delay: 97.308 ms
Loss rate: 0.46%
Run 5: Statistics of FillP

Local clock offset: -0.423 ms
Remote clock offset: -0.041 ms

# Below is generated by plot.py at 2019-11-25 01:12:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 840.00 Mbit/s
95th percentile per-packet one-way delay: 98.117 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 840.00 Mbit/s
95th percentile per-packet one-way delay: 98.117 ms
Loss rate: 0.63%
Run 5: Report of FillP — Data Link

![Graph of Throughput over Time](image1)

![Graph of Packet Delay over Time](image2)
Run 1: Statistics of FillP-Sheep

End at: 2019-11-24 21:45:50
Local clock offset: 0.041 ms
Remote clock offset: -0.056 ms

# Below is generated by plot.py at 2019-11-25 01:12:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 850.97 Mbit/s
95th percentile per-packet one-way delay: 78.677 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 850.97 Mbit/s
95th percentile per-packet one-way delay: 78.677 ms
Loss rate: 0.40%
Run 1: Report of FillP-Sheep — Data Link

![Throughput Graph]

- **Flow 1 Ingress** (mean 851.79 Mb/s)
- **Flow 1 Egress** (mean 850.97 Mb/s)

![Per-socket one-way delay Graph]

- **Flow 1** (95th percentile 78.68 ms)
Run 2: Statistics of FillP-Sheep

Local clock offset: 0.016 ms
Remote clock offset: 0.012 ms

# Below is generated by plot.py at 2019-11-25 01:12:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 830.93 Mbit/s
95th percentile per-packet one-way delay: 79.276 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 830.93 Mbit/s
95th percentile per-packet one-way delay: 79.276 ms
Loss rate: 0.39%
Run 2: Report of FillP-Sheep — Data Link

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

- Flow 1 ingress (mean 831.44 Mbit/s)
- Flow 1 egress (mean 830.93 Mbit/s)

- Flow 1 (95th percentile 79.28 ms)
Run 3: Statistics of FillP-Sheep

Local clock offset: ~0.059 ms
Remote clock offset: ~0.041 ms

# Below is generated by plot.py at 2019-11-25 01:12:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 755.16 Mbit/s
95th percentile per-packet one-way delay: 90.423 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 755.16 Mbit/s
95th percentile per-packet one-way delay: 90.423 ms
Loss rate: 0.58%
Run 3: Report of FillP-Sheep — Data Link

![Graph of throughput vs time showing two traces: one for ingress and one for egress. The throughput varies widely, with peaks and troughs, indicating network activity at different times.]

![Graph of per packet one-way delay vs time showing a spike at multiple points. The delay is measured in milliseconds, with a 95th percentile of 90.42 ms.]
Run 4: Statistics of FillP-Sheep

Local clock offset: -0.067 ms
Remote clock offset: -0.014 ms

# Below is generated by plot.py at 2019-11-25 01:22:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 781.12 Mbit/s
95th percentile per-packet one-way delay: 106.956 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 781.12 Mbit/s
95th percentile per-packet one-way delay: 106.956 ms
Loss rate: 0.54%
Run 4: Report of FillP-Sheep — Data Link
Run 5: Statistics of FillP-Sheep

Start at: 2019-11-25 00:04:19
End at: 2019-11-25 00:04:49
Local clock offset: -0.056 ms
Remote clock offset: -0.022 ms

# Below is generated by plot.py at 2019-11-25 01:33:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 881.27 Mbit/s
95th percentile per-packet one-way delay: 82.252 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 881.27 Mbit/s
95th percentile per-packet one-way delay: 82.252 ms
Loss rate: 0.37%
Run 5: Report of FillP-Sheep — Data Link

![Graph of Throughput and Delay](image.png)
Run 1: Statistics of Indigo

Local clock offset: 0.013 ms
Remote clock offset: -0.051 ms

# Below is generated by plot.py at 2019-11-25 01:33:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 225.50 Mbit/s
95th percentile per-packet one-way delay: 48.559 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 225.50 Mbit/s
95th percentile per-packet one-way delay: 48.559 ms
Loss rate: 0.39%
Run 1: Report of Indigo — Data Link
Run 2: Statistics of Indigo

Local clock offset: -0.015 ms
Remote clock offset: -0.009 ms

# Below is generated by plot.py at 2019-11-25 01:33:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 228.61 Mbit/s
95th percentile per-packet one-way delay: 48.498 ms
Loss rate: 0.36%  
-- Flow 1:
Average throughput: 228.61 Mbit/s
95th percentile per-packet one-way delay: 48.498 ms
Loss rate: 0.36%
Run 2: Report of Indigo — Data Link

![Graph](image1)

![Graph](image2)
Run 3: Statistics of Indigo

Local clock offset: -0.086 ms
Remote clock offset: -0.028 ms

# Below is generated by plot.py at 2019-11-25 01:33:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 201.99 Mbit/s
95th percentile per-packet one-way delay: 48.440 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 201.99 Mbit/s
95th percentile per-packet one-way delay: 48.440 ms
Loss rate: 0.35%
Run 3: Report of Indigo — Data Link

![Graph 1](image1.png)

- Flow 1 ingress (mean 202.06 Mbit/s)
- Flow 1 egress (mean 201.99 Mbit/s)

![Graph 2](image2.png)

- Flow 1 (95th percentile 48.44 ms)
Run 4: Statistics of Indigo

End at: 2019-11-24 23:26:54
Local clock offset: -0.09 ms
Remote clock offset: -0.058 ms

# Below is generated by plot.py at 2019-11-25 01:33:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 235.10 Mbit/s
95th percentile per-packet one-way delay: 49.527 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 235.10 Mbit/s
95th percentile per-packet one-way delay: 49.527 ms
Loss rate: 0.28%
Run 4: Report of Indigo — Data Link

![Graph showing throughput and packet loss over time for Indigo Data Link]

- Flow 1 ingress (mean 2.34.99 Mbit/s)
- Flow 1 egress (mean 235.10 Mbit/s)
Run 5: Statistics of Indigo

Start at: 2019-11-25 00:01:17
End at: 2019-11-25 00:01:47
Local clock offset: -0.133 ms
Remote clock offset: -0.007 ms

# Below is generated by plot.py at 2019-11-25 01:33:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 235.38 Mbit/s
95th percentile per-packet one-way delay: 49.454 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 235.38 Mbit/s
95th percentile per-packet one-way delay: 49.454 ms
Loss rate: 0.31%
Run 5: Report of Indigo — Data Link

[Graphs showing throughput and packet delay over time, with annotations for Flow 1 ingress and egress rates.]
Run 1: Statistics of Indigo-MusesC3

Start at: 2019-11-24 21:47:00
End at: 2019-11-24 21:47:30
Local clock offset: 0.026 ms
Remote clock offset: -0.047 ms

# Below is generated by plot.py at 2019-11-25 01:33:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 619.00 Mbit/s
95th percentile per-packet one-way delay: 61.953 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 619.00 Mbit/s
95th percentile per-packet one-way delay: 61.953 ms
Loss rate: 0.33%
Run 1: Report of Indigo-MusesC3 — Data Link

Throughput (kbps)

Time (s)

Flow 1 ingress (mean 618.92 Mbit/s) — Flow 1 egress (mean 619.00 Mbit/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 61.95 ms)
Run 2: Statistics of Indigo-MusesC3

Local clock offset: 0.017 ms
Remote clock offset: 0.043 ms

# Below is generated by plot.py at 2019-11-25 01:33:38
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 628.82 Mbit/s
  95th percentile per-packet one-way delay: 65.401 ms
  Loss rate: 0.36%
-- Flow 1:
  Average throughput: 628.82 Mbit/s
  95th percentile per-packet one-way delay: 65.401 ms
  Loss rate: 0.36%
Run 2: Report of Indigo-MusesC3 — Data Link

![Graph of Throughput over Time](image1)

- Flow 1 ingress (mean 628.89 Mbit/s)
- Flow 1 egress (mean 628.82 Mbit/s)

![Graph of Packet Delay over Time](image2)

- Flow 1 (95th percentile 65.40 ms)
Run 3: Statistics of Indigo-MusesC3

Local clock offset: -0.066 ms
Remote clock offset: -0.039 ms

# Below is generated by plot.py at 2019-11-25 01:33:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 618.46 Mbit/s
95th percentile per-packet one-way delay: 67.355 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 618.46 Mbit/s
95th percentile per-packet one-way delay: 67.355 ms
Loss rate: 0.35%
Run 3: Report of Indigo-MusesC3 — Data Link

![Graph showing throughput and delay over time for data link flows]
Run 4: Statistics of Indigo-MusesC3

End at: 2019-11-24 23:31:34
Local clock offset: -0.094 ms
Remote clock offset: -0.037 ms

# Below is generated by plot.py at 2019-11-25 01:33:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 584.25 Mbit/s
95th percentile per-packet one-way delay: 73.213 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 584.25 Mbit/s
95th percentile per-packet one-way delay: 73.213 ms
Loss rate: 0.40%
Run 4: Report of Indigo-MusesC3 — Data Link

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

Flow 1 ingress (mean 584.55 Mbps) vs. Flow 1 egress (mean 584.25 Mbps)

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

Flow 1 (95th percentile 73.21 ms)
Run 5: Statistics of Indigo-MusesC3

Start at: 2019-11-25 00:06:00
End at: 2019-11-25 00:06:30
Local clock offset: -0.124 ms
Remote clock offset: -0.015 ms

# Below is generated by plot.py at 2019-11-25 01:35:16
# Datalink statistics
-- Total of 1 flow:
Average throughput: 597.16 Mbit/s
95th percentile per-packet one-way delay: 70.673 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 597.16 Mbit/s
95th percentile per-packet one-way delay: 70.673 ms
Loss rate: 0.37%
Run 5: Report of Indigo-MusesC3 — Data Link

![Graph 1: Throughput (Mbps)]

- Flow 1 ingress (mean 597.33 Mbit/s)
- Flow 1 egress (mean 597.16 Mbit/s)

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

- Flow 1 (95th percentile 70.67 ms)
Run 1: Statistics of Indigo-MusesC5

Local clock offset: -0.392 ms
Remote clock offset: -0.077 ms
Run 1: Report of Indigo-MusesC5 — Data Link

![Graph of throughput over time]

- Flow 1 ingress (mean 448.09 Mbit/s)
- Flow 1 egress (mean 444.78 Mbit/s)

![Graph of packet delay over time]

- Flow 1 (95th percentile 70.55 ms)
Run 2: Statistics of Indigo-MusesC5

End at: 2019-11-24 21:58:34
Local clock offset: 0.075 ms
Remote clock offset: -0.045 ms

# Below is generated by plot.py at 2019-11-25 01:36:36
# Datalink statistics
-- Total of 1 flow:
Average throughput: 625.57 Mbit/s
95th percentile per-packet one-way delay: 66.477 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 625.57 Mbit/s
95th percentile per-packet one-way delay: 66.477 ms
Loss rate: 0.40%
Run 2: Report of Indigo-MusesC5 — Data Link

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

- Flow 1 ingress (mean 625.94 Mbit/s)
- Flow 1 egress (mean 625.57 Mbit/s)

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

- Flow 1 (95th percentile 66.48 ms)
Run 3: Statistics of Indigo-MusesC5

Local clock offset: 0.005 ms
Remote clock offset: 0.044 ms

# Below is generated by plot.py at 2019-11-25 01:38:04
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 633.63 Mbit/s
  95th percentile per-packet one-way delay: 73.243 ms
  Loss rate: 0.35%
-- Flow 1:
  Average throughput: 633.63 Mbit/s
  95th percentile per-packet one-way delay: 73.243 ms
  Loss rate: 0.35%
Run 3: Report of Indigo-MusesC5 — Data Link

Graphs showing throughput and per-packet one way delay over time.

Throughput:
- Flow 1 ingress (mean 633.69 Mbit/s)
- Flow 1 egress (mean 633.63 Mbit/s)

Per-packet one way delay (ms):
- Flow 1 (95th percentile 73.24 ms)
Run 4: Statistics of Indigo-MusesC5

End at: 2019-11-24 23:08:07
Local clock offset: -0.105 ms
Remote clock offset: -0.084 ms

# Below is generated by plot.py at 2019-11-25 01:38:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 592.27 Mbit/s
95th percentile per-packet one-way delay: 81.782 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 592.27 Mbit/s
95th percentile per-packet one-way delay: 81.782 ms
Loss rate: 0.41%
Run 4: Report of Indigo-MusesC5 — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 592.68 Mbit/s)

Flow 1 egress (mean 592.27 Mbit/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 81.78 ms)
Run 5: Statistics of Indigo-MusesC5

Local clock offset: -0.06 ms
Remote clock offset: -0.035 ms

# Below is generated by plot.py at 2019-11-25 01:45:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 578.65 Mbit/s
95th percentile per-packet one-way delay: 88.662 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 578.65 Mbit/s
95th percentile per-packet one-way delay: 88.662 ms
Loss rate: 0.40%
Run 5: Report of Indigo-MusesC5 — Data Link

![Throughput Graph](image1)

![Delay Graph](image2)
Run 1: Statistics of Indigo-MusesD

End at: 2019-11-24 21:34:02
Local clock offset: 0.026 ms
Remote clock offset: -0.07 ms

# Below is generated by plot.py at 2019-11-25 01:46:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 590.15 Mbit/s
95th percentile per-packet one-way delay: 81.644 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 590.15 Mbit/s
95th percentile per-packet one-way delay: 81.644 ms
Loss rate: 0.33%
Run 1: Report of Indigo-MusesD — Data Link
Run 2: Statistics of Indigo-MusesD

End at: 2019-11-24 22:08:42
Local clock offset: 0.063 ms
Remote clock offset: -0.032 ms

# Below is generated by plot.py at 2019-11-25 01:46:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 596.53 Mbit/s
95th percentile per-packet one-way delay: 74.974 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 596.53 Mbit/s
95th percentile per-packet one-way delay: 74.974 ms
Loss rate: 0.41%
Run 2: Report of Indigo-MusesD — Data Link

Graph 1: Throughput (Mbps)
- Flow 1 ingress (mean 596.97 Mbps)
- Flow 1 egress (mean 596.53 Mbps)

Graph 2: Per packet one way delay (ms)
- Flow 1 (95th percentile 74.97 ms)
Run 3: Statistics of Indigo-MusesD

Local clock offset: -0.028 ms
Remote clock offset: 0.07 ms

# Below is generated by plot.py at 2019-11-25 01:46:35
# Datalink statistics
-- Total of 1 flow:
Average throughput: 485.38 Mbit/s
95th percentile per-packet one-way delay: 75.251 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 485.38 Mbit/s
95th percentile per-packet one-way delay: 75.251 ms
Loss rate: 0.48%
Run 3: Report of Indigo-MusesD — Data Link

[Graph showing throughput over time with two lines: one for flow ingress and another for flow egress.]

[Another graph showing per-packet one-way delay over time with a blue line and a marker indicating 95th percentile delay.]
Run 4: Statistics of Indigo-MusesD

End at: 2019-11-24 23:18:08
Local clock offset: -0.089 ms
Remote clock offset: -0.104 ms

# Below is generated by plot.py at 2019-11-25 01:47:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 571.11 Mbit/s
95th percentile per-packet one-way delay: 75.899 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 571.11 Mbit/s
95th percentile per-packet one-way delay: 75.899 ms
Loss rate: 0.44%
Run 4: Report of Indigo-MusesD — Data Link

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

- **Flow 1 ingress (mean 571.69 Mbit/s)**
- **Flow 1 egress (mean 571.11 Mbit/s)**

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

- **Flow 1 (95th percentile 75.90 ms)**
Run 5: Statistics of Indigo-MusesD

Local clock offset: -0.092 ms
Remote clock offset: -0.027 ms

# Below is generated by plot.py at 2019-11-25 01:47:51
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 533.09 Mbit/s
  95th percentile per-packet one-way delay: 70.266 ms
  Loss rate: 0.47%
-- Flow 1:
  Average throughput: 533.09 Mbit/s
  95th percentile per-packet one-way delay: 70.266 ms
  Loss rate: 0.47%
Run 5: Report of Indigo-MusesD — Data Link

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

**Throughput (Mbps):**
- Flow 1 ingress (mean 533.77 Mbps)
- Flow 1 egress (mean 533.09 Mbps)

**Packet loss (persentile 95th)**
- Flow 1 (95th percentile 70.27 ms)
Run 1: Statistics of Indigo-MusesT

Local clock offset: 0.019 ms
Remote clock offset: -0.054 ms

# Below is generated by plot.py at 2019-11-25 01:52:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 653.49 Mbit/s
95th percentile per-packet one-way delay: 96.519 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 653.49 Mbit/s
95th percentile per-packet one-way delay: 96.519 ms
Loss rate: 0.48%
Run 1: Report of Indigo-MusesT — Data Link

![Throughput Graph]

- **Flow 1 ingress (mean 654.40 Mbit/s)**
- **Flow 1 egress (mean 653.49 Mbit/s)**

![Packet Delay Graph]

- **Flow 1 (95th percentile 96.52 ms)**
Run 2: Statistics of Indigo-MusesT

Local clock offset: 0.063 ms
Remote clock offset: -0.027 ms

# Below is generated by plot.py at 2019-11-25 01:52:25
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 612.81 Mbit/s
  95th percentile per-packet one-way delay: 107.749 ms
  Loss rate: 0.41%
-- Flow 1:
  Average throughput: 612.81 Mbit/s
  95th percentile per-packet one-way delay: 107.749 ms
  Loss rate: 0.41%
Run 2: Report of Indigo-MusesT — Data Link

![Throughput Graph]

- **Flow 1 ingress** (mean 613.24 Mbit/s)
- **Flow 1 egress** (mean 612.81 Mbit/s)

![Delay Graph]

- **Flow 1** (95th percentile 107.75 ms)
Run 3: Statistics of Indigo-MuseST

Local clock offset: -0.021 ms
Remote clock offset: 0.027 ms

# Below is generated by plot.py at 2019-11-25 01:58:04
# Datalink statistics
-- Total of 1 flow:
Average throughput: 641.10 Mbit/s
95th percentile per-packet one-way delay: 99.677 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 641.10 Mbit/s
95th percentile per-packet one-way delay: 99.677 ms
Loss rate: 0.47%
Run 3: Report of Indigo-MusesT — Data Link

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

- **Flow 1 ingress** (mean 641.94 Mbit/s)
- **Flow 1 egress** (mean 641.10 Mbit/s)

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

- **Flow 1** (95th percentile 99.68 ms)
Run 4: Statistics of Indigo-MusesT

Local clock offset: -0.105 ms
Remote clock offset: -0.099 ms

# Below is generated by plot.py at 2019-11-25 01:59:04
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 627.52 Mbit/s
  95th percentile per-packet one-way delay: 107.900 ms
  Loss rate: 0.44%
-- Flow 1:
  Average throughput: 627.52 Mbit/s
  95th percentile per-packet one-way delay: 107.900 ms
  Loss rate: 0.44%
Run 4: Report of Indigo-MusesT — Data Link

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

- Flow 1 ingress (mean 628.15 Mbps)
- Flow 1 egress (mean 627.52 Mbps)

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

- Flow 1 (95th percentile 107.90 ms)
Run 5: Statistics of Indigo-MusesT

Local clock offset: -0.093 ms
Remote clock offset: -0.027 ms

# Below is generated by plot.py at 2019-11-25 02:01:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 689.06 Mbit/s
95th percentile per-packet one-way delay: 82.758 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 689.06 Mbit/s
95th percentile per-packet one-way delay: 82.758 ms
Loss rate: 0.40%
Run 5: Report of Indigo-MusesT — Data Link

![Throughput Graph]

![Delay Graph]

Flow 1 ingress (mean 689.49 Mbit/s) vs. Flow 1 egress (mean 689.06 Mbit/s)

Flow 1 (95th percentile 82.76 ms)
Run 1: Statistics of LEDBAT

Local clock offset: -0.023 ms
Remote clock offset: -0.023 ms

# Below is generated by plot.py at 2019-11-25 02:01:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 38.15 Mbit/s
95th percentile per-packet one-way delay: 51.469 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 38.15 Mbit/s
95th percentile per-packet one-way delay: 51.469 ms
Loss rate: 0.65%
Run 1: Report of LEDBAT — Data Link
Run 2: Statistics of LEDBAT

Start at: 2019-11-24 22:02:49
End at: 2019-11-24 22:03:19
Local clock offset: 0.058 ms
Remote clock offset: -0.035 ms

# Below is generated by plot.py at 2019-11-25 02:01:45
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 25.61 Mbit/s
  95th percentile per-packet one-way delay: 51.085 ms
  Loss rate: 0.47%
-- Flow 1:
  Average throughput: 25.61 Mbit/s
  95th percentile per-packet one-way delay: 51.085 ms
  Loss rate: 0.47%
Run 2: Report of LEDBAT — Data Link
Run 3: Statistics of LEDBAT

End at: 2019-11-24 22:38:05
Local clock offset: 0.002 ms
Remote clock offset: 0.05 ms

# Below is generated by plot.py at 2019-11-25 02:01:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 41.58 Mbit/s
95th percentile per-packet one-way delay: 48.208 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 41.58 Mbit/s
95th percentile per-packet one-way delay: 48.208 ms
Loss rate: 0.62%
Run 3: Report of LEDBAT — Data Link

![Graph showing throughput and delay over time.]

- **Flow 1 ingress (mean 41.70 Mbit/s)**
- **Flow 1 egress (mean 41.58 Mbit/s)**

---

![Graph showing packet delay over time.]

- **Flow 1 95th percentile 48.21 ms**
Run 4: Statistics of LEDBAT

End at: 2019-11-24 23:12:47
Local clock offset: -0.09 ms
Remote clock offset: -0.102 ms

# Below is generated by plot.py at 2019-11-25 02:01:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 40.84 Mbit/s
95th percentile per-packet one-way delay: 49.432 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 40.84 Mbit/s
95th percentile per-packet one-way delay: 49.432 ms
Loss rate: 0.63%
Run 4: Report of LEDBAT — Data Link

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

- **Flow 1 ingress** (mean 40.97 Mbps)
- **Flow 1 egress** (mean 40.84 Mbps)

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

- **Flow 1** (95th percentile 49.43 ms)
Run 5: Statistics of LEDBAT

End at: 2019-11-24 23:47:34
Local clock offset: -0.075 ms
Remote clock offset: -0.009 ms

# Below is generated by plot.py at 2019-11-25 02:01:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 37.22 Mbit/s
95th percentile per-packet one-way delay: 49.317 ms
Loss rate: 0.21%
-- Flow 1:
Average throughput: 37.22 Mbit/s
95th percentile per-packet one-way delay: 49.317 ms
Loss rate: 0.21%
Run 5: Report of LEDBAT — Data Link

![Graph showing data link performance](image-url)

- Flow 1 ingress (mean 37.18 Mbit/s)
- Flow 1 egress (mean 37.22 Mbit/s)

![Graph showing packet delay](image-url)

- Flow 1 (95th percentile 49.32 ms)
Run 1: Statistics of Muses\_DecisionTree

Local clock offset: 0.042 ms
Remote clock offset: -0.046 ms

# Below is generated by plot.py at 2019-11-25 02:04:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 612.74 Mbit/s
95th percentile per-packet one-way delay: 60.484 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 612.74 Mbit/s
95th percentile per-packet one-way delay: 60.484 ms
Loss rate: 0.13%
Run 1: Report of Muses_DecisionTree — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 611.47 Mbit/s)  Flow 1 egress (mean 612.74 Mbit/s)

Per packet end-to-end delay (ms)

Flow 1 (95th percentile 60.48 ms)
Run 2: Statistics of Muses\_DecisionTree

Local clock offset: 0.005 ms
Remote clock offset: -0.013 ms

# Below is generated by plot.py at 2019-11-25 02:04:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 593.39 Mbit/s
95th percentile per-packet one-way delay: 61.507 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 593.39 Mbit/s
95th percentile per-packet one-way delay: 61.507 ms
Loss rate: 0.31%
Run 2: Report of Muses_DecisionTree — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 593.34 Mbit/s)  Flow 1 egress (mean 593.39 Mbit/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 61.51 ms)
Run 3: Statistics of Muses\_DecisionTree

Local clock offset: -0.047 ms
Remote clock offset: 0.007 ms

# Below is generated by plot.py at 2019-11-25 02:04:46
# Datalink statistics
-- Total of 1 flow:
Average throughput: 607.60 Mbit/s
95th percentile per-packet one-way delay: 64.115 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 607.60 Mbit/s
95th percentile per-packet one-way delay: 64.115 ms
Loss rate: 0.32%
Run 3: Report of Muses_DecisionTree — Data Link

- [Graph 1: Throughput vs. Time (s)]
  - Flow 1 ingress (mean 607.59 Mbit/s)
  - Flow 1 egress (mean 607.66 Mbit/s)

- [Graph 2: Per packet one way delay (ms)]
  - Flow 1 (95th percentile 64.11 ms)
Run 4: Statistics of Muses\_DecisionTree

Local clock offset: -0.056 ms
Remote clock offset: -0.07 ms

# Below is generated by plot.py at 2019-11-25 02:05:45
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 564.51 Mbit/s
  95th percentile per-packet one-way delay: 69.139 ms
  Loss rate: 0.37%
-- Flow 1:
  Average throughput: 564.51 Mbit/s
  95th percentile per-packet one-way delay: 69.139 ms
  Loss rate: 0.37%
Run 4: Report of Muses_DecisionTree — Data Link

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

- Flow 1 ingress (mean 564.79 Mbps)
- Flow 1 egress (mean 564.51 Mbps)

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

- Flow 1 (95th percentile 69.14 ms)
Run 5: Statistics of Muses\_DecisionTree

Start at: 2019-11-24 23:58:10
End at: 2019-11-24 23:58:40
Local clock offset: -0.077 ms
Remote clock offset: -0.023 ms

# Below is generated by plot.py at 2019-11-25 02:08:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 661.83 Mbit/s
95th percentile per-packet one-way delay: 58.872 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 661.83 Mbit/s
95th percentile per-packet one-way delay: 58.872 ms
Loss rate: 0.31%
Run 1: Statistics of Muses\_DecisionTreeH0

End at: 2019-11-24 21:32:40
Local clock offset: 0.056 ms
Remote clock offset: -0.064 ms

# Below is generated by plot.py at 2019-11-25 02:08:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 296.16 Mbit/s
95th percentile per-packet one-way delay: 122.284 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 296.16 Mbit/s
95th percentile per-packet one-way delay: 122.284 ms
Loss rate: 0.25%
Run 2: Statistics of Muses\_DecisionTreeH0

Start at: 2019-11-24 22:06:45  
End at: 2019-11-24 22:07:15  
Local clock offset: 0.064 ms  
Remote clock offset: -0.028 ms

# Below is generated by plot.py at 2019-11-25 02:09:27  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 430.21 Mbit/s  
95th percentile per-packet one-way delay: 100.059 ms  
Loss rate: 0.26%  
-- Flow 1:  
Average throughput: 430.21 Mbit/s  
95th percentile per-packet one-way delay: 100.059 ms  
Loss rate: 0.26%
Run 2: Report of Muses

DecisionTreeH0 — Data Link

![Graphs showing data](image-url)
Run 3: Statistics of Muses\_DecisionTreeH0

Local clock offset: -0.372 ms
Remote clock offset: 0.031 ms

# Below is generated by plot.py at 2019-11-25 02:09:27
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 315.90 Mbit/s
  95th percentile per-packet one-way delay: 117.112 ms
  Loss rate: 0.06%
-- Flow 1:
  Average throughput: 315.90 Mbit/s
  95th percentile per-packet one-way delay: 117.112 ms
  Loss rate: 0.06%
Run 3: Report of Muses_DecisionTreeH0 — Data Link

![Graphs showing throughput and packet delay over time.](image-url)
Run 4: Statistics of Muses\_DecisionTreeH0

Local clock offset: -0.088 ms
Remote clock offset: -0.117 ms

# Below is generated by plot.py at 2019-11-25 02:10:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 291.66 Mbit/s
95th percentile per-packet one-way delay: 125.775 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 291.66 Mbit/s
95th percentile per-packet one-way delay: 125.775 ms
Loss rate: 0.12%
Run 4: Report of Muses_DecisionTreeH0 — Data Link

![Graph showing network performance metrics over time, including throughput and packet delay.]

- Flow 1 ingress (mean 292.01 Mbit/s)
- Flow 1 egress (mean 291.66 Mbit/s)

![Graph showing packet delay for Flow 1 (95th percentile 125.78 ms).]
Run 5: Statistics of Muses\_DecisionTreeH0

Start at: 2019-11-24 23:51:05
Local clock offset: -0.081 ms
Remote clock offset: -0.016 ms

# Below is generated by plot.py at 2019-11-25 02:10:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 257.69 Mbit/s
95th percentile per-packet one-way delay: 144.085 ms
Loss rate: 1.28%
-- Flow 1:
Average throughput: 257.69 Mbit/s
95th percentile per-packet one-way delay: 144.085 ms
Loss rate: 1.28%
Run 5: Report of Muses_DecisionTreeH0 — Data Link

Diagram 1: Throughput (Mbps) over time (s)

Diagram 2: Flow 1 ingress (mean 260.18 Mbps) vs. Flow 1 egress (mean 257.69 Mbps)

Diagram 3: Per-packet one way delay (ms) over time (s)

Flow 1 (95th percentile 144.09 ms)
Run 1: Statistics of Muses\_DecisionTreeRO

Start at: 2019-11-24 21:26:40
Local clock offset: 0.002 ms
Remote clock offset: -0.077 ms

# Below is generated by plot.py at 2019-11-25 02:17:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 609.98 Mbit/s
95th percentile per-packet one-way delay: 66.192 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 609.98 Mbit/s
95th percentile per-packet one-way delay: 66.192 ms
Loss rate: 0.38%
Run 1: Report of Muses_DecisionTreeR0 — Data Link

![Graph showing network traffic and packet delay](image)

- **Flow 1 ingress** (mean 610.30 Mbit/s)
- **Flow 1 egress** (mean 609.98 Mbit/s)

Run 2: Statistics of Muses\_DecisionTreeR0

Start at: 2019-11-24 22:01:12
End at: 2019-11-24 22:01:42
Local clock offset: 0.047 ms
Remote clock offset: -0.023 ms

# Below is generated by plot.py at 2019-11-25 02:19:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 616.17 Mbit/s
95th percentile per-packet one-way delay: 56.775 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 616.17 Mbit/s
95th percentile per-packet one-way delay: 56.775 ms
Loss rate: 0.33%
Run 3: Statistics of Muses\_DecisionTreeR0

Local clock offset: -0.045 ms
Remote clock offset: 0.014 ms

# Below is generated by plot.py at 2019-11-25 02:19:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 623.59 Mbit/s
95th percentile per-packet one-way delay: 55.764 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 623.59 Mbit/s
95th percentile per-packet one-way delay: 55.764 ms
Loss rate: 0.33%
Run 3: Report of Muses_DecisionTreeR0 — Data Link
Run 4: Statistics of Muses\_DecisionTreeR0

End at: 2019-11-24 23:11:09
Local clock offset: -0.064 ms
Remote clock offset: -0.134 ms

# Below is generated by plot.py at 2019-11-25 02:24:01
# Datalink statistics
-- Total of 1 flow:
Average throughput: 674.23 Mbit/s
95th percentile per-packet one-way delay: 57.335 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 674.23 Mbit/s
95th percentile per-packet one-way delay: 57.335 ms
Loss rate: 0.33%
Run 4: Report of Muses_DecisionTreeR0 — Data Link

---

**Throughput (Mbps)**

- **Flow 1 ingress (mean 674.30 Mbit/s)**
- **Flow 1 egress (mean 674.23 Mbit/s)**

---

**Ping packet completion delay (ms)**

- **Flow 1 (95th percentile 57.34 ms)**

---

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Run 5: Statistics of Muses\_DecisionTreeR0

Start at: 2019-11-24 23:45:27  
End at: 2019-11-24 23:45:57  
Local clock offset: -0.069 ms  
Remote clock offset: -0.039 ms  

# Below is generated by plot.py at 2019-11-25 02:24:01  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 640.00 Mbit/s  
95th percentile per-packet one-way delay: 60.744 ms  
Loss rate: 0.33%  
-- Flow 1:  
Average throughput: 640.00 Mbit/s  
95th percentile per-packet one-way delay: 60.744 ms  
Loss rate: 0.33%
Run 5: Report of Muses_DecisionTreeR0 — Data Link

![Graph of throughput and packet delay over time for Flow 1](image)

- **Throughput (Mb/s):**
  - Flow 1 ingress (mean 640.13 Mb/s)
  - Flow 1 egress (mean 640.00 Mb/s)

- **Packet delay (ms):**
  - Flow 1 (95th percentile 60.74 ms)
Run 1: Statistics of PCC-Allegro

Local clock offset: 0.012 ms
Remote clock offset: -0.053 ms

# Below is generated by plot.py at 2019-11-25 02:25:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 363.26 Mbit/s
95th percentile per-packet one-way delay: 167.020 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 363.26 Mbit/s
95th percentile per-packet one-way delay: 167.020 ms
Loss rate: 0.88%
Run 1: Report of PCC-Allegro — Data Link

![Graph of throughput over time]

![Graph of per packet one way delay over time]
Run 2: Statistics of PCC-Allegro

End at: 2019-11-24 21:57:03  
Local clock offset: 0.033 ms  
Remote clock offset: -0.016 ms

# Below is generated by plot.py at 2019-11-25 02:26:18  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 381.81 Mbit/s  
95th percentile per-packet one-way delay: 169.981 ms  
Loss rate: 1.71%  
-- Flow 1:  
Average throughput: 381.81 Mbit/s  
95th percentile per-packet one-way delay: 169.981 ms  
Loss rate: 1.71%
Run 2: Report of PCC-Allegro — Data Link

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

- Flow 1 ingress (mean 387.20 Mbit/s)
- Flow 1 egress (mean 381.81 Mbit/s)

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

- Flow 1 (95th percentile 169.98 ms)
Run 3: Statistics of PCC-Allegro

Local clock offset: 0.365 ms
Remote clock offset: 0.036 ms

# Below is generated by plot.py at 2019-11-25 02:26:18
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 363.36 Mbit/s
  95th percentile per-packet one-way delay: 184.490 ms
  Loss rate: 1.58%
-- Flow 1:
  Average throughput: 363.36 Mbit/s
  95th percentile per-packet one-way delay: 184.490 ms
  Loss rate: 1.58%
Run 3: Report of PCC-Allegro — Data Link
Run 4: Statistics of PCC-Allegro

Start at: 2019-11-24 23:06:01
End at: 2019-11-24 23:06:31
Local clock offset: -0.06 ms
Remote clock offset: -0.077 ms

# Below is generated by plot.py at 2019-11-25 02:38:14
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 439.11 Mbit/s
  95th percentile per-packet one-way delay: 181.617 ms
  Loss rate: 7.55%
-- Flow 1:
  Average throughput: 439.11 Mbit/s
  95th percentile per-packet one-way delay: 181.617 ms
  Loss rate: 7.55%
Run 4: Report of PCC-Allegro — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 473.42 Mbit/s)  Flow 1 egress (mean 439.11 Mbit/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 181.62 ms)
Run 5: Statistics of PCC-Allegro

End at: 2019-11-24 23:41:18
Local clock offset: -0.046 ms
Remote clock offset: -0.033 ms

# Below is generated by plot.py at 2019-11-25 02:38:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 419.47 Mbit/s
95th percentile per-packet one-way delay: 179.063 ms
Loss rate: 9.45%
-- Flow 1:
Average throughput: 419.47 Mbit/s
95th percentile per-packet one-way delay: 179.063 ms
Loss rate: 9.45%
Run 5: Report of PCC-Allegro — Data Link
Run 1: Statistics of PCC-Expr

Local clock offset: 0.155 ms
Remote clock offset: -0.015 ms

# Below is generated by plot.py at 2019-11-25 02:38:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 282.47 Mbit/s
95th percentile per-packet one-way delay: 121.917 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 282.47 Mbit/s
95th percentile per-packet one-way delay: 121.917 ms
Loss rate: 0.35%
Run 1: Report of PCC-Expr — Data Link

Throughput (Mbps)

Flow 1 ingress (mean 282.54 Mbit/s)  Flow 1 egress (mean 282.47 Mbit/s)

Per packet one way delay (ms)

Flow 1 (95th percentile 121.92 ms)
Run 2: Statistics of PCC-Expr

Start at: 2019-11-24 22:11:05
Local clock offset: -0.003 ms
Remote clock offset: -0.032 ms

# Below is generated by plot.py at 2019-11-25 02:38:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 272.66 Mbit/s
95th percentile per-packet one-way delay: 154.110 ms
Loss rate: 1.73%
-- Flow 1:
Average throughput: 272.66 Mbit/s
95th percentile per-packet one-way delay: 154.110 ms
Loss rate: 1.73%
Run 2: Report of PCC-Expr — Data Link
Run 3: Statistics of PCC-Expr

Local clock offset: -0.025 ms
Remote clock offset: 0.029 ms

# Below is generated by plot.py at 2019-11-25 02:38:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 281.36 Mbit/s
95th percentile per-packet one-way delay: 85.564 ms
Loss rate: 0.96%
-- Flow 1:
Average throughput: 281.36 Mbit/s
95th percentile per-packet one-way delay: 85.564 ms
Loss rate: 0.96%
Run 3: Report of PCC-Expr — Data Link
Run 4: Statistics of PCC-Expr

End at: 2019-11-24 23:20:51
Local clock offset: -0.086 ms
Remote clock offset: -0.061 ms

# Below is generated by plot.py at 2019-11-25 02:38:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 269.93 Mbit/s
95th percentile per-packet one-way delay: 140.314 ms
Loss rate: 0.94%
-- Flow 1:
Average throughput: 269.93 Mbit/s
95th percentile per-packet one-way delay: 140.314 ms
Loss rate: 0.94%
Run 4: Report of PCC-Expr — Data Link

![Data Link Throughput Graph]

- Flow 1 ingress (mean 271.62 Mbit/s)
- Flow 1 egress (mean 269.93 Mbit/s)

![Data Link Latency Graph]

- Flow 1 (95th percentile 140.31 ms)
Run 5: Statistics of PCC-Expr

Local clock offset: -0.08 ms
Remote clock offset: -0.057 ms

# Below is generated by plot.py at 2019-11-25 02:39:36
# Datalink statistics
-- Total of 1 flow:
Average throughput: 304.61 Mbit/s
95th percentile per-packet one-way delay: 132.469 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 304.61 Mbit/s
95th percentile per-packet one-way delay: 132.469 ms
Loss rate: 0.39%
Run 5: Report of PCC-Expr — Data Link

![Throughput Graph](image1)

- Flow 1 ingress (mean 304.80 Mbit/s)
- Flow 1 egress (mean 304.61 Mbit/s)

![Packet Delay Graph](image2)

- Flow 1 (95th percentile 132.47 ms)
Run 1: Statistics of QUIC Cubic

Local clock offset: 0.047 ms
Remote clock offset: -0.042 ms
Run 1: Report of QUIC Cubic — Data Link

![Graph]

- Flow 1 ingress (mean 0.01 Mbit/s)
- Flow 1 egress (mean 0.01 Mbit/s)

![Graph]

- Flow 1 (95th percentile 50.74 ms)
Run 2: Statistics of QUIC Cubic

Start at: 2019-11-24 22:05:34
End at: 2019-11-24 22:06:04
Local clock offset: 0.081 ms
Remote clock offset: -0.038 ms

# Below is generated by plot.py at 2019-11-25 02:39:36
# Datalink statistics
-- Total of 1 flow:
Average throughput: 67.74 Mbit/s
95th percentile per-packet one-way delay: 47.274 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 67.74 Mbit/s
95th percentile per-packet one-way delay: 47.274 ms
Loss rate: 0.55%
Run 2: Report of QUIC Cubic — Data Link
Run 3: Statistics of QUIC Cubic

Local clock offset: -0.001 ms
Remote clock offset: 0.041 ms

# Below is generated by plot.py at 2019-11-25 02:39:36
# Datalink statistics
-- Total of 1 flow:
Average throughput: 76.90 Mbit/s
95th percentile per-packet one-way delay: 47.249 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 76.90 Mbit/s
95th percentile per-packet one-way delay: 47.249 ms
Loss rate: 0.49%
Run 3: Report of QUIC Cubic — Data Link
Run 4: Statistics of QUIC Cubic

Start at: 2019-11-24 23:15:05
Local clock offset: -0.08 ms
Remote clock offset: -0.124 ms

# Below is generated by plot.py at 2019-11-25 02:39:36
# Datalink statistics
-- Total of 1 flow:
Average throughput: 89.13 Mbit/s
95th percentile per-packet one-way delay: 46.474 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 89.13 Mbit/s
95th percentile per-packet one-way delay: 46.474 ms
Loss rate: 0.37%
Run 4: Report of QUIC Cubic — Data Link

![Graph showing throughput and packet delay over time for Flow 1 with ingress and egress speeds of 89.18 Mbit/s and 89.13 Mbit/s, respectively.](image)
Run 5: Statistics of QUIC Cubic

Local clock offset: -0.067 ms
Remote clock offset: -0.032 ms

# Below is generated by plot.py at 2019-11-25 02:39:36
# Datalink statistics
-- Total of 1 flow:
Average throughput: 78.77 Mbit/s
95th percentile per-packet one-way delay: 47.124 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 78.77 Mbit/s
95th percentile per-packet one-way delay: 47.124 ms
Loss rate: 0.45%
Run 5: Report of QUIC Cubic — Data Link
Run 1: Statistics of SCReAM

End at: 2019-11-24 21:49:05
Local clock offset: 0.053 ms
Remote clock offset: -0.028 ms

# Below is generated by plot.py at 2019-11-25 02:39:36
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 47.488 ms
  Loss rate: 0.38%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 47.488 ms
  Loss rate: 0.38%
Run 1: Report of SCReAM — Data Link

![Graph of data link performance](image1)

![Graph of per-packet one-way delay](image2)
Run 2: Statistics of SCReAM

Local clock offset: -0.023 ms
Remote clock offset: 0.01 ms

# Below is generated by plot.py at 2019-11-25 02:39:36
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 46.565 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 46.565 ms
Loss rate: 0.39%
Run 2: Report of SCReAM — Data Link

![Graph of Throughput vs Time for Flow 1 ingress (mean 0.22 Mbit/s) and Flow 1 egress (mean 0.22 Mbit/s).]

![Graph of Per-packet one-way delay (ms) for Flow 1 (95th percentile 46.56 ms).]
Run 3: Statistics of SCReAM

Local clock offset: -0.086 ms
Remote clock offset: -0.075 ms

# Below is generated by plot.py at 2019-11-25 02:39:36
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 46.574 ms
  Loss rate: 0.26%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 46.574 ms
  Loss rate: 0.26%
Run 3: Report of SCReAM — Data Link
Run 4: Statistics of SCReAM

End at: 2019-11-24 23:33:08
Local clock offset: -0.053 ms
Remote clock offset: -0.06 ms

# Below is generated by plot.py at 2019-11-25 02:39:36
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 50.263 ms
  Loss rate: 0.38%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 50.263 ms
  Loss rate: 0.38%
Run 4: Report of SCReAM — Data Link

![Graph of Throughput vs Time](image)

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

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

- Flow 1 (95th percentile 50.26 ms)
Run 5: Statistics of SCReAM

Start at: 2019-11-25 00:07:34
End at: 2019-11-25 00:08:04
Local clock offset: -0.144 ms
Remote clock offset: -0.029 ms

# Below is generated by plot.py at 2019-11-25 02:39:36
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 47.455 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 47.455 ms
Loss rate: 0.26%
Run 1: Statistics of Sprout

Start at: 2019-11-24 21:51:03
Local clock offset: 0.014 ms
Remote clock offset: -0.003 ms

# Below is generated by plot.py at 2019-11-25 02:39:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 8.88 Mbit/s
95th percentile per-packet one-way delay: 49.947 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 8.88 Mbit/s
95th percentile per-packet one-way delay: 49.947 ms
Loss rate: 0.38%
Run 1: Report of Sprout — Data Link

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

- Flow 1 ingress (mean 8.88 Mbit/s)
- Flow 1 egress (mean 8.88 Mbit/s)

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

- Flow 1 (95th percentile 49.95 ms)
Run 2: Statistics of Sprout

Local clock offset: 0.017 ms
Remote clock offset: 0.035 ms

# Below is generated by plot.py at 2019-11-25 02:39:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 9.70 Mbit/s
95th percentile per-packet one-way delay: 47.838 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 9.70 Mbit/s
95th percentile per-packet one-way delay: 47.838 ms
Loss rate: 0.35%
Run 2: Report of Sprout — Data Link

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

- **Throughput (Mbps)**
  - **Flow 1 ingress (mean 9.70 Mbps)**
  - **Flow 1 egress (mean 9.70 Mbps)**

- **Delay (ms)**
  - **Flow 1 (95th percentile 47.84 ms)**
Run 3: Statistics of Sprout

Start at: 2019-11-24 23:00:33
End at: 2019-11-24 23:01:03
Local clock offset: -0.077 ms
Remote clock offset: -0.102 ms

# Below is generated by plot.py at 2019-11-25 02:39:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 9.69 Mbit/s
95th percentile per-packet one-way delay: 47.147 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 9.69 Mbit/s
95th percentile per-packet one-way delay: 47.147 ms
Loss rate: 0.35%
Run 3: Report of Sprout — Data Link

![Graph of Throughput vs Time]

- Flow 1 ingress (mean 9.69 Mbit/s)
- Flow 1 egress (mean 9.69 Mbit/s)

![Graph of One-way Delay vs Time]

- Flow 1 (90th percentile 47.15 ms)
Run 4: Statistics of Sprout

Start at: 2019-11-24 23:35:19
End at: 2019-11-24 23:35:49
Local clock offset: -0.071 ms
Remote clock offset: -0.008 ms

# Below is generated by plot.py at 2019-11-25 02:39:37
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 9.50 Mbit/s
  95th percentile per-packet one-way delay: 46.911 ms
  Loss rate: 0.35%
-- Flow 1:
  Average throughput: 9.50 Mbit/s
  95th percentile per-packet one-way delay: 46.911 ms
  Loss rate: 0.35%
Run 4: Report of Sprout — Data Link

[Graphs showing throughput and packet delay over time for Flow 1 ingress and egress.]
Run 5: Statistics of Sprout

Start at: 2019-11-25 00:10:03
End at: 2019-11-25 00:10:33
Local clock offset: -0.159 ms
Remote clock offset: 0.007 ms

# Below is generated by plot.py at 2019-11-25 02:39:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 9.67 Mbit/s
95th percentile per-packet one-way delay: 46.949 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 9.67 Mbit/s
95th percentile per-packet one-way delay: 46.949 ms
Loss rate: 0.38%
Run 5: Report of Sprout — Data Link
Run 1: Statistics of TaoVA-100x

Local clock offset: 0.015 ms
Remote clock offset: -0.068 ms

# Below is generated by plot.py at 2019-11-25 02:45:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 253.60 Mbit/s
95th percentile per-packet one-way delay: 47.384 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 253.60 Mbit/s
95th percentile per-packet one-way delay: 47.384 ms
Loss rate: 0.34%
Run 1: Report of TaoVA-100x — Data Link

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

- Flow 1 ingress (mean 253.63 Mbit/s)
- Flow 1 egress (mean 253.60 Mbit/s)

![Graph 2: Packet Loss and Delay] (image2)

- Flow 1 (95th percentile 47.38 ms)
Run 2: Statistics of TaoVA-100x

Local clock offset: -0.034 ms
Remote clock offset: -0.012 ms

# Below is generated by plot.py at 2019-11-25 02:45:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 241.04 Mbit/s
95th percentile per-packet one-way delay: 49.495 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 241.04 Mbit/s
95th percentile per-packet one-way delay: 49.495 ms
Loss rate: 0.29%
Run 2: Report of TaoVA-100x — Data Link

![Graph 1]

- Flow 1 ingress (mean 240.91 Mbit/s)
- Flow 1 egress (mean 241.04 Mbit/s)

![Graph 2]

- Flow 1 (95th percentile 49.49 ms)
Run 3: Statistics of TaoVA-100x

Local clock offset: -0.043 ms
Remote clock offset: 0.034 ms

# Below is generated by plot.py at 2019-11-25 02:46:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 248.51 Mbit/s
95th percentile per-packet one-way delay: 50.281 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 248.51 Mbit/s
95th percentile per-packet one-way delay: 50.281 ms
Loss rate: 0.32%
Run 3: Report of TaoVA-100x — Data Link
Run 4: Statistics of TaoVA-100x

Local clock offset: -0.056 ms
Remote clock offset: -0.049 ms

# Below is generated by plot.py at 2019-11-25 02:47:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 257.13 Mbit/s
95th percentile per-packet one-way delay: 47.669 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 257.13 Mbit/s
95th percentile per-packet one-way delay: 47.669 ms
Loss rate: 0.31%
Run 4: Report of TaoVA-100x — Data Link

Throughput (Mbits/s)

Time (s)

Flow 1 ingress (mean 257.11 Mbit/s)  Flow 1 egress (mean 257.13 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 47.67 ms)
Run 5: Statistics of TaoVA-100x

Local clock offset: -0.059 ms
Remote clock offset: -0.024 ms

# Below is generated by plot.py at 2019-11-25 02:47:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 241.59 Mbit/s
95th percentile per-packet one-way delay: 47.772 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 241.59 Mbit/s
95th percentile per-packet one-way delay: 47.772 ms
Loss rate: 0.34%
Run 5: Report of TaoVA-100x — Data Link
Run 1: Statistics of TCP Vegas

End at: 2019-11-24 21:50:12
Local clock offset: 0.036 ms
Remote clock offset: -0.026 ms

# Below is generated by plot.py at 2019-11-25 02:47:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 279.81 Mbit/s
95th percentile per-packet one-way delay: 47.441 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 279.81 Mbit/s
95th percentile per-packet one-way delay: 47.441 ms
Loss rate: 0.30%
Run 1: Report of TCP Vegas — Data Link

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

Flow 1 ingress (mean 279.77 Mbit/s) vs Flow 1 egress (mean 279.81 Mbit/s)

Flow 1 (95th percentile 47.44 ms)
Run 2: Statistics of TCP Vegas

Local clock offset: 0.0 ms
Remote clock offset: 0.041 ms

# Below is generated by plot.py at 2019-11-25 02:47:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 268.22 Mbit/s
95th percentile per-packet one-way delay: 47.553 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 268.22 Mbit/s
95th percentile per-packet one-way delay: 47.553 ms
Loss rate: 0.30%
Run 2: Report of TCP Vegas — Data Link

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

- Flow 1 ingress (mean 268.17 Mbit/s)
- Flow 1 egress (mean 268.22 Mbit/s)

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

- Flow 1 (95th percentile 47.55 ms)
Run 3: Statistics of TCP Vegas

Start at: 2019-11-24 22:59:00
Local clock offset: -0.084 ms
Remote clock offset: -0.111 ms

# Below is generated by plot.py at 2019-11-25 02:52:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 549.21 Mbit/s
95th percentile per-packet one-way delay: 57.662 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 549.21 Mbit/s
95th percentile per-packet one-way delay: 57.662 ms
Loss rate: 0.17%
Run 3: Report of TCP Vegas — Data Link

Graph 1: Throughput (Mbps)

Graph 2: Packets per second, one-way delay (ms)

Legend:
- Flow 1 ingress (mean 548.42 Mbps)
- Flow 1 egress (mean 549.21 Mbps)
- Flow 1 (95th percentile 57.66 ms)
Run 4: Statistics of TCP Vegas

Start at: 2019-11-24 23:33:45
End at: 2019-11-24 23:34:15
Local clock offset: -0.455 ms
Remote clock offset: -0.046 ms

# Below is generated by plot.py at 2019-11-25 02:55:59
# Datalink statistics
-- Total of 1 flow:
 Average throughput: 562.22 Mbit/s
95th percentile per-packet one-way delay: 59.870 ms
 Loss rate: 0.34%
-- Flow 1:
 Average throughput: 562.22 Mbit/s
95th percentile per-packet one-way delay: 59.870 ms
 Loss rate: 0.34%
Run 4: Report of TCP Vegas — Data Link

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

- Flow 1 ingress (mean 562.33 Mbit/s)
- Flow 1 egress (mean 562.22 Mbit/s)

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

- Flow 1 (95th percentile 59.87 ms)
Run 5: Statistics of TCP Vegas

Start at: 2019-11-25 00:08:41
End at: 2019-11-25 00:09:11
Local clock offset: -0.15 ms
Remote clock offset: 0.019 ms

# Below is generated by plot.py at 2019-11-25 02:55:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 283.38 Mbit/s
95th percentile per-packet one-way delay: 46.745 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 283.38 Mbit/s
95th percentile per-packet one-way delay: 46.745 ms
Loss rate: 0.30%
Run 5: Report of TCP Vegas — Data Link

![Graph showing throughput and packet delay over time]

Throughput (Mbps) vs Time (s)

Flow 1 ingress (mean 283.34 Mbit/s) vs Flow 1 egress (mean 283.38 Mbit/s)

Packet delay (ms) vs Time (s)

Flow 1 (95th percentile 46.74 ms)
Run 1: Statistics of Verus

Start at: 2019-11-24 21:35:06
End at: 2019-11-24 21:35:36
Local clock offset: 0.019 ms
Remote clock offset: -0.052 ms

# Below is generated by plot.py at 2019-11-25 02:55:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 143.43 Mbit/s
95th percentile per-packet one-way delay: 99.212 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 143.43 Mbit/s
95th percentile per-packet one-way delay: 99.212 ms
Loss rate: 0.16%
Run 1: Report of Verus — Data Link

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### Throughput Plot

- **Flow 1 ingress (mean 143.57 Mbit/s)**
- **Flow 1 egress (mean 143.43 Mbit/s)**

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### Packet delay plot

- **Flow 1 (95th percentile 99.21 ms)**
Run 2: Statistics of Verus

Local clock offset: 0.015 ms
Remote clock offset: -0.032 ms

# Below is generated by plot.py at 2019-11-25 02:55:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 121.62 Mbit/s
95th percentile per-packet one-way delay: 116.047 ms
Loss rate: 0.21%
-- Flow 1:
Average throughput: 121.62 Mbit/s
95th percentile per-packet one-way delay: 116.047 ms
Loss rate: 0.21%
Run 2: Report of Verus — Data Link

![Graph showing throughput and packet delay over time for Flow 1 with two lines representing ingress and egress data.](image1)

![Graph showing packet delay per time for Flow 1 with dots showing 95th percentile delay.](image2)
Run 3: Statistics of Verus

End at: 2019-11-24 22:44:54
Local clock offset: 0.322 ms
Remote clock offset: 0.051 ms

# Below is generated by plot.py at 2019-11-25 02:55:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 74.19 Mbit/s
95th percentile per-packet one-way delay: 317.779 ms
Loss rate: 15.47%
-- Flow 1:
Average throughput: 74.19 Mbit/s
95th percentile per-packet one-way delay: 317.779 ms
Loss rate: 15.47%
Run 3: Report of Verus — Data Link

![Graph 1: Throughput vs Time (Run 3)]

- **Flow 1 ingress** (mean 87.76 Mbit/s)
- **Flow 1 egress** (mean 74.19 Mbit/s)

![Graph 2: Per packet one way delay vs Time (Run 3)]

- **Flow 1** (95th percentile 317.78 ms)
Run 4: Statistics of Verus

End at: 2019-11-24 23:19:40
Local clock offset: -0.473 ms
Remote clock offset: -0.083 ms

# Below is generated by plot.py at 2019-11-25 02:55:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 38.29 Mbit/s
95th percentile per-packet one-way delay: 152.186 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 38.29 Mbit/s
95th percentile per-packet one-way delay: 152.186 ms
Loss rate: 0.20%
Run 4: Report of Verus — Data Link
Run 5: Statistics of Verus

Local clock offset: -0.086 ms
Remote clock offset: -0.038 ms

# Below is generated by plot.py at 2019-11-25 02:55:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 58.87 Mbit/s
95th percentile per-packet one-way delay: 67.780 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 58.87 Mbit/s
95th percentile per-packet one-way delay: 67.780 ms
Loss rate: 0.00%
Run 5: Report of Verus — Data Link

![Data Link Graph](image)

![Packet Delay Graph](image)
Run 1: Statistics of PCC-Vivace

Start at: 2019-11-24 21:41:02
Local clock offset: -0.358 ms
Remote clock offset: -0.025 ms

# Below is generated by plot.py at 2019-11-25 02:55:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 222.03 Mbit/s
95th percentile per-packet one-way delay: 50.648 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 222.03 Mbit/s
95th percentile per-packet one-way delay: 50.648 ms
Loss rate: 0.59%
Run 1: Report of PCC-Vivace — Data Link
Run 2: Statistics of PCC-Vivace

Local clock offset: -0.366 ms
Remote clock offset: 0.015 ms

# Below is generated by plot.py at 2019-11-25 02:55:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 336.45 Mbit/s
95th percentile per-packet one-way delay: 52.391 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 336.45 Mbit/s
95th percentile per-packet one-way delay: 52.391 ms
Loss rate: 0.40%
Run 2: Report of PCC-Vivace — Data Link

![Graphs showing data link throughput and packet delay over time.](image-url)
Run 3: Statistics of PCC-Vivace

End at: 2019-11-24 22:50:45
Local clock offset: -0.068 ms
Remote clock offset: -0.053 ms

# Below is generated by plot.py at 2019-11-25 02:55:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 314.84 Mbit/s
95th percentile per-packet one-way delay: 200.914 ms
Loss rate: 1.10%
-- Flow 1:
Average throughput: 314.84 Mbit/s
95th percentile per-packet one-way delay: 200.914 ms
Loss rate: 1.10%
Run 3: Report of PCC-Vivace — Data Link
Run 4: Statistics of PCC-Vivace

Local clock offset: -0.081 ms
Remote clock offset: -0.06 ms

# Below is generated by plot.py at 2019-11-25 02:56:03
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 326.54 Mbit/s
  95th percentile per-packet one-way delay: 51.537 ms
  Loss rate: 0.39%
-- Flow 1:
  Average throughput: 326.54 Mbit/s
  95th percentile per-packet one-way delay: 51.537 ms
  Loss rate: 0.39%
Run 5: Statistics of PCC-Vivace

End at: 2019-11-25 00:00:19
Local clock offset: -0.1 ms
Remote clock offset: -0.023 ms

# Below is generated by plot.py at 2019-11-25 02:56:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 322.61 Mbit/s
95th percentile per-packet one-way delay: 56.828 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 322.61 Mbit/s
95th percentile per-packet one-way delay: 56.828 ms
Loss rate: 0.38%
Run 5: Report of PCC-Vivace — Data Link

[Graph showing throughput and packet delay over time]
Run 1: Statistics of WebRTC media

Local clock offset: 0.022 ms
Remote clock offset: 0.003 ms
Run 1: Report of WebRTC media — Data Link
Run 2: Statistics of WebRTC media

Local clock offset: 0.015 ms
Remote clock offset: 0.025 ms

# Below is generated by plot.py at 2019-11-25 02:56:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 50.312 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 50.312 ms
Loss rate: 0.00%
Run 2: Report of WebRTC media — Data Link
Run 3: Statistics of WebRTC media

Start at: 2019-11-24 23:01:42
End at: 2019-11-24 23:02:12
Local clock offset: -0.441 ms
Remote clock offset: -0.089 ms
Run 3: Report of WebRTC media — Data Link

![Graph of Throughput vs Time]

- Flow 1 ingress (mean 0.09 Mbit/s)
- Flow 1 egress (mean 0.09 Mbit/s)

![Graph of End-to-End Delay vs Time]

- Flow 1 (95th percentile 46.22 ms)
Run 4: Statistics of WebRTC media

End at: 2019-11-24 23:36:58
Local clock offset: -0.044 ms
Remote clock offset: -0.018 ms

# Below is generated by plot.py at 2019-11-25 02:56:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 47.407 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 47.407 ms
Loss rate: 0.00%
Run 4: Report of WebRTC media — Data Link

![Throughput Graph](image1)

*Flow 1 ingress (mean 0.05 Mbit/s) Flow 1 egress (mean 0.05 Mbit/s)*

![Delay Graph](image2)

*Flow 1 (95th percentile 47.41 ms)*
Run 5: Statistics of WebRTC media

Start at: 2019-11-25 00:11:11
End at: 2019-11-25 00:11:41
Local clock offset: -0.121 ms
Remote clock offset: -0.037 ms

# Below is generated by plot.py at 2019-11-25 02:56:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 47.503 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 47.503 ms
Loss rate: 0.00%
Run 5: Report of WebRTC media — Data Link

![Graph showing throughput and delay over time for WebRTC media流](image)

- **Throughput (Mbps)**
  - Time (s)
  - Flow 1 ingress (mean 0.05 Mbit/s)
  - Flow 1 egress (mean 0.05 Mbit/s)

- **Per-packet round-trip delay (ms)**
  - Time (s)
  - Flow 1 (95th percentile 47.50 ms)