Pantheon Report

Generated at 2019-11-25 02:32:12 (UTC).
Data path: GCE Tokyo on ens4 (remote) → GCE Sydney 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 @ de42328552b3776a75a932a94dfaf7d72537b0ec
tree: ef2f9bca961e51a209f836740b962724659f636
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbfe58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0edcbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 5ce721187ad823da2095537730c74646ca4966
third_party/muses_dtree @ 387225f7b5f61ddbe92d708a8869fbbb84eb3200
third_party/pantheon-tunnel @ f866d3f58d27af942717625ee3a354cc2e802bd
third_party/pcc @ 1af9c958fa0d66d18b623c091a55f6c872b4981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143e9c978f3ccff42
third_party/scream-reproduce @ f099118d1421aa313bt1h1f1964974e1da3dbd2
M src/ScreamClient
M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
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
test from GCE Tokyo to GCE Sydney, 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>
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<tbody>
<tr>
<td>TCP BBR</td>
<td>5</td>
<td>478.80</td>
<td>109.87</td>
<td>0.43</td>
</tr>
<tr>
<td>Copa</td>
<td>5</td>
<td>303.38</td>
<td>73.68</td>
<td>0.43</td>
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<td>TCP Cubic</td>
<td>5</td>
<td>490.40</td>
<td>67.12</td>
<td>0.37</td>
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<td>FillP</td>
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<td>865.00</td>
<td>84.35</td>
<td>0.50</td>
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<td>799.52</td>
<td>103.35</td>
<td>1.04</td>
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<td>59.35</td>
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<td>0.48</td>
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<td>28.33</td>
<td>58.00</td>
<td>0.76</td>
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<td>56.93</td>
<td>0.44</td>
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<td>57.09</td>
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<td>TCP Vegas</td>
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<td>61.66</td>
<td>0.37</td>
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<td>Verus</td>
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<td>77.00</td>
<td>83.43</td>
<td>0.12</td>
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<td>57.10</td>
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</table>
Run 1: Statistics of TCP BBR

Local clock offset: -0.116 ms
Remote clock offset: -0.087 ms

# Below is generated by plot.py at 2019-11-25 00:38:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 520.77 Mbit/s
95th percentile per-packet one-way delay: 107.648 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 520.77 Mbit/s
95th percentile per-packet one-way delay: 107.648 ms
Loss rate: 0.34%
Run 1: Report of TCP BBR — Data Link
Run 2: Statistics of TCP BBR

Local clock offset: -0.067 ms
Remote clock offset: -0.122 ms

# Below is generated by plot.py at 2019-11-25 00:38:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 469.58 Mbit/s
95th percentile per-packet one-way delay: 89.328 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 469.58 Mbit/s
95th percentile per-packet one-way delay: 89.328 ms
Loss rate: 0.42%
Run 2: Report of TCP BBR — Data Link

![Graph 1: Throughput vs. Time](image1)
- **Flow 1 ingress (mean 469.75 Mbit/s)**
- **Flow 1 egress (mean 469.58 Mbit/s)**

![Graph 2: Per Packet One Way Delay vs. Time](image2)
- **Flow 1 (95th percentile 89.33 ms)**
Run 3: Statistics of TCP BBR

Start at: 2019-11-24 23:01:12
End at: 2019-11-24 23:01:42
Local clock offset: -0.101 ms
Remote clock offset: -0.078 ms

# Below is generated by plot.py at 2019-11-25 00:38:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 477.41 Mbit/s
95th percentile per-packet one-way delay: 119.539 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 477.41 Mbit/s
95th percentile per-packet one-way delay: 119.539 ms
Loss rate: 0.55%
Run 3: Report of TCP BBR — Data Link
Run 4: Statistics of TCP BBR

End at: 2019-11-24 23:37:07
Local clock offset: -0.07 ms
Remote clock offset: -0.023 ms

# Below is generated by plot.py at 2019-11-25 00:38:06
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 486.20 Mbit/s
  95th percentile per-packet one-way delay: 147.392 ms
  Loss rate: 0.44%
-- Flow 1:
  Average throughput: 486.20 Mbit/s
  95th percentile per-packet one-way delay: 147.392 ms
  Loss rate: 0.44%
Run 4: Report of TCP BBR — Data Link

![Graph of Throughput and Delay](image)

- **Throughput (Mbps)**
  - Flow 1 ingress (mean 486.48 Mbit/s)
  - Flow 1 egress (mean 486.30 Mbit/s)

- **Packet Delay (ms)**
  - Flow 1 (95th percentile 147.39 ms)
Run 5: Statistics of TCP BBR

Start at: 2019-11-25 00:11:32
End at: 2019-11-25 00:12:02
Local clock offset: 0.028 ms
Remote clock offset: -0.075 ms

# Below is generated by plot.py at 2019-11-25 00:38:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 440.05 Mbit/s
95th percentile per-packet one-way delay: 85.434 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 440.05 Mbit/s
95th percentile per-packet one-way delay: 85.434 ms
Loss rate: 0.39%
Run 5: Report of TCP BBR — Data Link

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

**Throughput (Mbps):**
- Flow 1 ingress (mean 440.08 Mbps)
- Flow 1 egress (mean 440.05 Mbps)

**Packet Delay (ms):**
- Flow 1 (95th percentile 85.43 ms)
Run 1: Statistics of Copa

End at: 2019-11-24 21:44:05
Local clock offset: 0.311 ms
Remote clock offset: -0.104 ms

# Below is generated by plot.py at 2019-11-25 00:38:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 288.44 Mbit/s
95th percentile per-packet one-way delay: 75.951 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 288.44 Mbit/s
95th percentile per-packet one-way delay: 75.951 ms
Loss rate: 0.37%
Run 1: Report of Copa — Data Link

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**Graph 1:**

Throughput vs. Time

- **Flow 1 ingress (mean 288.41 Mbit/s)**
- **Flow 1 egress (mean 288.44 Mbit/s)**

**Graph 2:**

Per-packet one-way delay (ms)

- **Flow 1 (95th percentile 75.95 ms)**

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Run 2: Statistics of Copa

End at: 2019-11-24 22:19:03
Local clock offset: -0.052 ms
Remote clock offset: -0.088 ms

# Below is generated by plot.py at 2019-11-25 00:38:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 297.33 Mbit/s
95th percentile per-packet one-way delay: 72.842 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 297.33 Mbit/s
95th percentile per-packet one-way delay: 72.842 ms
Loss rate: 0.44%
Run 2: Report of Copa — Data Link

![Graph of throughput vs time showing fluctuations in data link performance.]

- Flow 1 ingress (mean 297.49 Mbit/s)
- Flow 1 egress (mean 297.33 Mbit/s)

![Graph of per packet one-way delay vs time showing variations in delay.]

- Flow 1 (95th percentile 72.84 ms)
Run 3: Statistics of Copa

Local clock offset: -0.079 ms
Remote clock offset: -0.04 ms

# Below is generated by plot.py at 2019-11-25 00:38:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 306.40 Mbit/s
95th percentile per-packet one-way delay: 74.785 ms
Loss rate: 0.53%

-- Flow 1:
Average throughput: 306.40 Mbit/s
95th percentile per-packet one-way delay: 74.785 ms
Loss rate: 0.53%
Run 3: Report of Copa — Data Link

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

- Flow 1 ingress (mean 306.86 Mbit/s)
- Flow 1 egress (mean 306.40 Mbit/s)

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

- Flow 1 (95th percentile 74.78 ms)
Run 4: Statistics of Copa

Local clock offset: 0.274 ms
Remote clock offset: 0.09 ms

# Below is generated by plot.py at 2019-11-25 00:46:49
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 312.66 Mbit/s
  95th percentile per-packet one-way delay: 72.093 ms
  Loss rate: 0.44%
-- Flow 1:
  Average throughput: 312.66 Mbit/s
  95th percentile per-packet one-way delay: 72.093 ms
  Loss rate: 0.44%
Run 4: Report of Copa — Data Link

![Graph showing throughput and packet delay over time]
Run 5: Statistics of Copa

Start at: 2019-11-25 00:04:16
End at: 2019-11-25 00:04:46
Local clock offset: 0.344 ms
Remote clock offset: 0.014 ms

# Below is generated by plot.py at 2019-11-25 00:47:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 312.06 Mbit/s
95th percentile per-packet one-way delay: 72.731 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 312.06 Mbit/s
95th percentile per-packet one-way delay: 72.731 ms
Loss rate: 0.38%
Run 5: Report of Copa — Data Link

![Graph of Throughput (Mbps)]

- Flow 1 ingress (mean 312.04 Mbit/s)
- Flow 1 egress (mean 312.06 Mbit/s)

![Graph of Rtt (ms)]

- Flow 1 (95th percentile 72.73 ms)
Run 1: Statistics of TCP Cubic

Local clock offset: -0.116 ms
Remote clock offset: -0.024 ms

# Below is generated by plot.py at 2019-11-25 00:47:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 479.11 Mbit/s
95th percentile per-packet one-way delay: 61.798 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 479.11 Mbit/s
95th percentile per-packet one-way delay: 61.798 ms
Loss rate: 0.35%
Run 1: Report of TCP Cubic — Data Link
Run 2: Statistics of TCP Cubic

End at: 2019-11-24 22:29:45
Local clock offset: 0.284 ms
Remote clock offset: 0.004 ms

# Below is generated by plot.py at 2019-11-25 00:47:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 466.34 Mbit/s
95th percentile per-packet one-way delay: 60.517 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 466.34 Mbit/s
95th percentile per-packet one-way delay: 60.517 ms
Loss rate: 0.40%
Run 2: Report of TCP Cubic — Data Link

Time (s)

Throughput (Mbps)

Flow 1 ingress (mean 466.42 Mbit/s)  Flow 1 egress (mean 466.34 Mbit/s)

Time (s)

Pkt pckt 1 way delay (ms)

Flow 1 (95th percentile 60.52 ms)
Run 3: Statistics of TCP Cubic

Start at: 2019-11-24 23:04:18
End at: 2019-11-24 23:04:48
Local clock offset: -0.034 ms
Remote clock offset: -0.103 ms

# Below is generated by plot.py at 2019-11-25 00:47:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 494.71 Mbit/s
95th percentile per-packet one-way delay: 71.191 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 494.71 Mbit/s
95th percentile per-packet one-way delay: 71.191 ms
Loss rate: 0.33%
Run 3: Report of TCP Cubic — Data Link
Run 4: Statistics of TCP Cubic

Local clock offset: -0.079 ms
Remote clock offset: 0.166 ms

# Below is generated by plot.py at 2019-11-25 00:47:19
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 507.39 Mbit/s
  95th percentile per-packet one-way delay: 79.226 ms
  Loss rate: 0.40%
-- Flow 1:
  Average throughput: 507.39 Mbit/s
  95th percentile per-packet one-way delay: 79.226 ms
  Loss rate: 0.40%
Run 4: Report of TCP Cubic — Data Link
Run 5: Statistics of TCP Cubic

Start at: 2019-11-25 00:14:36
End at: 2019-11-25 00:15:06
Local clock offset: 0.368 ms
Remote clock offset: -0.112 ms

# Below is generated by plot.py at 2019-11-25 00:47:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 504.45 Mbit/s
95th percentile per-packet one-way delay: 62.891 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 504.45 Mbit/s
95th percentile per-packet one-way delay: 62.891 ms
Loss rate: 0.37%
Run 5: Report of TCP Cubic — Data Link

![Graph showing throughput and packet delay over time.](image-url)
Run 1: Statistics of FillP

Local clock offset: -0.022 ms
Remote clock offset: 0.029 ms

# Below is generated by plot.py at 2019-11-25 00:57:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 899.21 Mbit/s
95th percentile per-packet one-way delay: 72.372 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 899.21 Mbit/s
95th percentile per-packet one-way delay: 72.372 ms
Loss rate: 0.42%
Run 1: Report of FillP — Data Link

Throughput (Mbps/s)

Time (s)

Flow 1 ingress (mean 899.52 Mbps)  Flow 1 egress (mean 899.21 Mbps)

Per packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 72.37 ms)
Run 2: Statistics of FillP

End at: 2019-11-24 22:07:18
Local clock offset: -0.115 ms
Remote clock offset: -0.191 ms

# Below is generated by plot.py at 2019-11-25 01:03:46
# Datalink statistics
-- Total of 1 flow:
Average throughput: 834.13 Mbit/s
95th percentile per-packet one-way delay: 76.726 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 834.13 Mbit/s
95th percentile per-packet one-way delay: 76.726 ms
Loss rate: 0.40%
Run 2: Report of FillP — Data Link
Run 3: Statistics of FillP

Local clock offset: -0.052 ms
Remote clock offset: -0.089 ms

# Below is generated by plot.py at 2019-11-25 01:04:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 850.31 Mbit/s
95th percentile per-packet one-way delay: 74.514 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 850.31 Mbit/s
95th percentile per-packet one-way delay: 74.514 ms
Loss rate: 0.40%
Run 3: Report of FillP — Data Link

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

- Throughput (Mbps): 
  - Dashed line: Flow 1 ingress (mean 850.42 Mbps) 
  - Solid line: Flow 1 egress (mean 850.31 Mbps)

- Packet delay (ms): 
  - Dotted line: Flow 1 (95th percentile 74.41 ms)
Run 4: Statistics of FillP

End at: 2019-11-24 23:17:44
Local clock offset: -0.11 ms
Remote clock offset: 0.04 ms

# Below is generated by plot.py at 2019-11-25 01:06:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 918.82 Mbit/s
95th percentile per-packet one-way delay: 94.602 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 918.82 Mbit/s
95th percentile per-packet one-way delay: 94.602 ms
Loss rate: 0.73%
Run 4: Report of FillP — Data Link

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

![Graph 2: Per-Socket One-Way Delay Over Time](image2)
Run 5: Statistics of FillP

Local clock offset: -0.059 ms
Remote clock offset: 0.089 ms

# Below is generated by plot.py at 2019-11-25 01:06:12
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 822.55 Mbit/s
  95th percentile per-packet one-way delay: 103.514 ms
  Loss rate: 0.55%
-- Flow 1:
  Average throughput: 822.55 Mbit/s
  95th percentile per-packet one-way delay: 103.514 ms
  Loss rate: 0.55%
Run 5: Report of FillP — Data Link

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

- Flow 1 ingress (mean 823.91 Mbps) vs Flow 1 egress (mean 822.55 Mbps)
- Flow 1 (95th percentile 103.51 ms)
Run 1: Statistics of FillP-Sheep

Start at: 2019-11-24 21:26:05
End at: 2019-11-24 21:26:35
Local clock offset: -0.027 ms
Remote clock offset: -0.068 ms

# Below is generated by plot.py at 2019-11-25 01:06:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 626.85 Mbit/s
95th percentile per-packet one-way delay: 140.591 ms
Loss rate: 2.82%
-- Flow 1:
Average throughput: 626.85 Mbit/s
95th percentile per-packet one-way delay: 140.591 ms
Loss rate: 2.82%
Run 1: Report of FillP-Sheep — Data Link

![Graph showing network throughput and packet delay over time. The throughput graph has two lines indicating flow ingress and egress with mean rates of 643.42 Mbps and 626.85 Mbps, respectively. The packet delay graph shows variations in delay across different times.]
Run 2: Statistics of FillP-Sheep

Start at: 2019-11-24 22:00:54
End at: 2019-11-24 22:01:24
Local clock offset: 0.221 ms
Remote clock offset: -0.038 ms

# Below is generated by plot.py at 2019-11-25 01:06:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 867.48 Mbit/s
95th percentile per-packet one-way delay: 76.947 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 867.48 Mbit/s
95th percentile per-packet one-way delay: 76.947 ms
Loss rate: 0.40%
Run 2: Report of FillP-Sheep — Data Link

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

- **Throughput**
  - Flow 1 ingress (mean 867.61 Mbps)
  - Flow 1 egress (mean 867.48 Mbps)

- **Per-packet one way delay**
  - Flow 1 (95th percentile 76.95 ms)
Run 3: Statistics of FillP-Sheep

End at: 2019-11-24 22:36:43
Local clock offset: 0.29 ms
Remote clock offset: 0.031 ms

# Below is generated by plot.py at 2019-11-25 01:06:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 853.03 Mbit/s
95th percentile per-packet one-way delay: 86.021 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 853.03 Mbit/s
95th percentile per-packet one-way delay: 86.021 ms
Loss rate: 0.44%
Run 3: Report of FillP-Sheep — Data Link

![Graph showing network throughput and delay over time]

- **Throughput (Mb/s)**: The top graph displays the throughput over time for two flow identifiers: Flow 1 ingress (mean 853.46 Mb/s) and Flow 1 egress (mean 853.03 Mb/s).
- **Delay (ms)**: The bottom graph shows the per packet one-way delay over time for Flow 1, with a 95th percentile delay of 86.02 ms.

These graphs illustrate the performance metrics for the network during Run 3.
Run 4: Statistics of FillP-Sheep

End at: 2019-11-24 23:11:46
Local clock offset: -0.096 ms
Remote clock offset: -0.082 ms

# Below is generated by plot.py at 2019-11-25 01:15:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 825.12 Mbit/s
95th percentile per-packet one-way delay: 119.842 ms
Loss rate: 1.07%
-- Flow 1:
Average throughput: 825.12 Mbit/s
95th percentile per-packet one-way delay: 119.842 ms
Loss rate: 1.07%
Run 4: Report of FillP-Sheep — Data Link
Run 5: Statistics of FillP-Sheep

End at: 2019-11-24 23:47:10
Local clock offset: ~0.068 ms
Remote clock offset: ~0.034 ms

# Below is generated by plot.py at 2019-11-25 01:18:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 825.13 Mbit/s
95th percentile per-packet one-way delay: 93.346 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 825.13 Mbit/s
95th percentile per-packet one-way delay: 93.346 ms
Loss rate: 0.48%
Run 5: Report of FillP-Sheep — Data Link

![Graph of throughput over time](image1)

- **Flow 1 ingress (mean 825.88 Mbit/s)**
- **Flow 1 egress (mean 825.13 Mbit/s)**

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

- **Flow 1 (95th percentile 93.35 ms)**
Run 1: Statistics of Indigo

End at: 2019-11-24 21:30:57  
Local clock offset: 0.352 ms  
Remote clock offset: 0.098 ms

# Below is generated by plot.py at 2019-11-25 01:18:28  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 218.69 Mbit/s  
95th percentile per-packet one-way delay: 58.843 ms  
Loss rate: 0.41%  
-- Flow 1:  
Average throughput: 218.69 Mbit/s  
95th percentile per-packet one-way delay: 58.843 ms  
Loss rate: 0.41%
Run 1: Report of Indigo — Data Link
Run 2: Statistics of Indigo

End at: 2019-11-24 22:05:54
Local clock offset: -0.128 ms
Remote clock offset: -0.103 ms

# Below is generated by plot.py at 2019-11-25 01:18:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 183.56 Mbit/s
95th percentile per-packet one-way delay: 57.614 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 183.56 Mbit/s
95th percentile per-packet one-way delay: 57.614 ms
Loss rate: 0.39%
Run 2: Report of Indigo — Data Link
Run 3: Statistics of Indigo

Local clock offset: -0.047 ms
Remote clock offset: -0.048 ms

# Below is generated by plot.py at 2019-11-25 01:18:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 195.09 Mbit/s
95th percentile per-packet one-way delay: 61.154 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 195.09 Mbit/s
95th percentile per-packet one-way delay: 61.154 ms
Loss rate: 0.39%
Run 3: Report of Indigo — Data Link
Run 4: Statistics of Indigo

Start at: 2019-11-24 23:15:45
End at: 2019-11-24 23:16:16
Local clock offset: -0.085 ms
Remote clock offset: -0.12 ms

# Below is generated by plot.py at 2019-11-25 01:18:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 227.97 Mbit/s
95th percentile per-packet one-way delay: 58.231 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 227.97 Mbit/s
95th percentile per-packet one-way delay: 58.231 ms
Loss rate: 0.40%
Run 4: Report of Indigo — Data Link
Run 5: Statistics of Indigo

Start at: 2019-11-24 23:51:08
Local clock offset: -0.081 ms
Remote clock offset: -0.027 ms

# Below is generated by plot.py at 2019-11-25 01:18:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 223.05 Mbit/s
95th percentile per-packet one-way delay: 60.922 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 223.05 Mbit/s
95th percentile per-packet one-way delay: 60.922 ms
Loss rate: 0.39%
Run 5: Report of Indigo — Data Link

Throughput (Mbit/s) vs. Time (s)
- **Flow 1 ingress (mean 223.06 Mbit/s)**
- **Flow 1 egress (mean 223.05 Mbit/s)**

Packet drop delay (ms) vs. Time (s)
- **Flow 1 (95th percentile 60.92 ms)**
Run 1: Statistics of Indigo-MusesC3

Local clock offset: -0.046 ms
Remote clock offset: 0.03 ms

# Below is generated by plot.py at 2019-11-25 01:18:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 583.98 Mbit/s
95th percentile per-packet one-way delay: 65.916 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 583.98 Mbit/s
95th percentile per-packet one-way delay: 65.916 ms
Loss rate: 0.50%
Run 1: Report of Indigo-MusesC3 — Data Link
Run 2: Statistics of Indigo-MusesC3

Start at: 2019-11-24 21:57:00
End at: 2019-11-24 21:57:30
Local clock offset: -0.065 ms
Remote clock offset: -0.025 ms

# Below is generated by plot.py at 2019-11-25 01:20:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 597.88 Mbit/s
95th percentile per-packet one-way delay: 69.285 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 597.88 Mbit/s
95th percentile per-packet one-way delay: 69.285 ms
Loss rate: 0.44%
Run 2: Report of Indigo-MusesC3 — Data Link

---

**Throughput (Mbps)**

![Throughput Graph](image)

- **Flow 1 ingress** (mean 598.14 Mbps)
- **Flow 1 egress** (mean 597.88 Mbps)

---

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

![Delay Graph](image)

- **Flow 1** (95th percentile 69.28 ms)
Run 3: Statistics of Indigo-MusesC3

Local clock offset: -0.022 ms
Remote clock offset: 0.165 ms

# Below is generated by plot.py at 2019-11-25 01:20:45
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 593.02 Mbit/s
  95th percentile per-packet one-way delay: 66.281 ms
  Loss rate: 0.44%
-- Flow 1:
  Average throughput: 593.02 Mbit/s
  95th percentile per-packet one-way delay: 66.281 ms
  Loss rate: 0.44%
Run 3: Report of Indigo-MusesC3 — Data Link

![Chart: Throughput vs Time]

- Flow 1 ingress (mean 593.17 Mbit/s)
- Flow 1 egress (mean 593.02 Mbit/s)

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

- Flow 1 (95th percentile 66.28 ms)
Run 4: Statistics of Indigo-MusesC3

Local clock offset: -0.078 ms
Remote clock offset: -0.004 ms

# Below is generated by plot.py at 2019-11-25 01:21:18
# Datalink statistics
-- Total of 1 flow:
Average throughput: 593.91 Mbit/s
95th percentile per-packet one-way delay: 79.095 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 593.91 Mbit/s
95th percentile per-packet one-way delay: 79.095 ms
Loss rate: 0.45%
Run 4: Report of Indigo-MusesC3 — Data Link

![Graph 1: Throughput](image1)

- **Flow 1 ingress** (mean 594.18 Mbit/s)
- **Flow 1 egress** (mean 593.31 Mbit/s)

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

- **Flow 1** (95th percentile 79.09 ms)
Run 5: Statistics of Indigo-MusesC3

Local clock offset: -0.131 ms
Remote clock offset: -0.151 ms

# Below is generated by plot.py at 2019-11-25 01:22:57
# Datalink statistics
-- Total of 1 flow:
Average throughput: 575.05 Mbit/s
95th percentile per-packet one-way delay: 79.478 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 575.05 Mbit/s
95th percentile per-packet one-way delay: 79.478 ms
Loss rate: 0.42%
Run 5: Report of Indigo-MusesC3 — Data Link
Run 1: Statistics of Indigo-MusesC5

Start at: 2019-11-24 21:45:08
End at: 2019-11-24 21:45:38
Local clock offset: 0.235 ms
Remote clock offset: 0.01 ms

# Below is generated by plot.py at 2019-11-25 01:24:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 609.69 Mbit/s
95th percentile per-packet one-way delay: 80.301 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 609.69 Mbit/s
95th percentile per-packet one-way delay: 80.301 ms
Loss rate: 0.52%
Run 1: Report of Indigo-MusesC5 — Data Link

---

**Graph 1:**
- x-axis: Time (s)
- y-axis: Throughput (Mbps)
- Legend:
  - Flow 1 ingress (mean 610.35 Mbit/s)
  - Flow 1 egress (mean 609.69 Mbit/s)

**Graph 2:**
- x-axis: Time (s)
- y-axis: Per-packet one-way delay (ms)
- Legend:
  - Flow 1 (95th percentile 80.30 ms)
Run 2: Statistics of Indigo-MusesC5

Local clock offset: -0.038 ms
Remote clock offset: -0.036 ms

# Below is generated by plot.py at 2019-11-25 01:26:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 620.89 Mbit/s
95th percentile per-packet one-way delay: 75.851 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 620.89 Mbit/s
95th percentile per-packet one-way delay: 75.851 ms
Loss rate: 0.49%
Run 2: Report of Indigo-MusesC5 — Data Link
Run 3: Statistics of Indigo-MusesC5

Local clock offset: -0.079 ms
Remote clock offset: -0.094 ms

# Below is generated by plot.py at 2019-11-25 01:27:58
# Datalink statistics
-- Total of 1 flow:
Average throughput: 633.72 Mbit/s
95th percentile per-packet one-way delay: 84.817 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 633.72 Mbit/s
95th percentile per-packet one-way delay: 84.817 ms
Loss rate: 0.45%
Run 3: Report of Indigo-MusesC5 — Data Link

![Graph of throughput over time with two lines indicating flow ingress and egress speeds.]

![Graph of per-packet one-way delay over time with a single line indicating Flow 1's 95th percentile delay.]
Run 4: Statistics of Indigo-MusesC5

Start at: 2019-11-24 23:30:44
Local clock offset: -0.024 ms
Remote clock offset: -0.022 ms

# Below is generated by plot.py at 2019-11-25 01:28:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 602.10 Mbit/s
95th percentile per-packet one-way delay: 99.355 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 602.10 Mbit/s
95th percentile per-packet one-way delay: 99.355 ms
Loss rate: 0.53%
Run 4: Report of Indigo-MusesC5 — Data Link
Run 5: Statistics of Indigo-MusesC5

Start at: 2019-11-25 00:05:52
End at: 2019-11-25 00:06:22
Local clock offset: -0.051 ms
Remote clock offset: 0.022 ms

# Below is generated by plot.py at 2019-11-25 01:31:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 620.36 Mbit/s
95th percentile per-packet one-way delay: 89.867 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 620.36 Mbit/s
95th percentile per-packet one-way delay: 89.867 ms
Loss rate: 0.43%
Run 5: Report of Indigo-MusesC5 — Data Link

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

- Flow 1 ingress (mean 620.48 Mbit/s)
- Flow 1 egress (mean 620.36 Mbit/s)

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

- Flow 1 (95th percentile 89.87 ms)
Run 1: Statistics of Indigo-MusesD

Local clock offset: -0.03 ms
Remote clock offset: -0.031 ms

# Below is generated by plot.py at 2019-11-25 01:31:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 531.88 Mbit/s
95th percentile per-packet one-way delay: 91.005 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 531.88 Mbit/s
95th percentile per-packet one-way delay: 91.005 ms
Loss rate: 0.39%
Run 1: Report of Indigo-MusesD — Data Link

![Graph of throughput and delay over time for flow ingress and egress.]

*Flow 1 ingress (mean 531.78 Mbit/s) - Flow 1 egress (mean 531.88 Mbit/s)*

![Graph of per-packet delay over time for flow 1.]

*Flow 1 (95th percentile 91.00 ms)*
Run 2: Statistics of Indigo-MusesD

Local clock offset: -0.092 ms
Remote clock offset: -0.024 ms

# Below is generated by plot.py at 2019-11-25 01:31:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 517.66 Mbit/s
95th percentile per-packet one-way delay: 98.897 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 517.66 Mbit/s
95th percentile per-packet one-way delay: 98.897 ms
Loss rate: 0.45%
Run 2: Report of Indigo-MusesD — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 517.80 Mbit/s)  Flow 1 egress (mean 517.66 Mbit/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 90.90 ms)
Run 3: Statistics of Indigo-MusesD

Start at: 2019-11-24 22:30:45
Local clock offset: -0.046 ms
Remote clock offset: 0.11 ms

# Below is generated by plot.py at 2019-11-25 01:33:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 574.33 Mbit/s
95th percentile per-packet one-way delay: 85.653 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 574.33 Mbit/s
95th percentile per-packet one-way delay: 85.653 ms
Loss rate: 0.57%
Run 3: Report of Indigo-MusesD — Data Link

Graph 1: Throughput (Mbps)

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

Legend:
- Flow 1 ingress (mean 575.18 Mbps)
- Flow 1 egress (mean 574.33 Mbps)

Flow 1 (95th percentile 85.65 ms)
Run 4: Statistics of Indigo-MusesD

Start at: 2019-11-24 23:05:49
End at: 2019-11-24 23:06:19
Local clock offset: -0.072 ms
Remote clock offset: -0.183 ms

# Below is generated by plot.py at 2019-11-25 01:33:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 559.11 Mbit/s
95th percentile per-packet one-way delay: 98.111 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 559.11 Mbit/s
95th percentile per-packet one-way delay: 98.111 ms
Loss rate: 0.61%
Run 4: Report of Indigo-MusesD — Data Link

![Graph showing throughput over time with dashed line for Flow 1 ingress (mean 560.25 Mbit/s) and solid line for Flow 1 egress (mean 559.11 Mbit/s).]

![Graph showing per packet one-way delay over time with dashed line for Flow 1 (95th percentile 98.11 ms).]
Run 5: Statistics of Indigo-MusesD

End at: 2019-11-24 23:41:45
Local clock offset: -0.068 ms
Remote clock offset: 0.048 ms

# Below is generated by plot.py at 2019-11-25 01:36:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 529.38 Mbit/s
95th percentile per-packet one-way delay: 91.703 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 529.38 Mbit/s
95th percentile per-packet one-way delay: 91.703 ms
Loss rate: 0.37%
Run 5: Report of Indigo-MusesD — Data Link

![Graph of throughput and per-packet one-way delay]

- Flow 1 ingress (mean 529.18 Mbit/s)
- Flow 1 egress (mean 529.38 Mbit/s)

- Flow 1 (95th percentile 91.70 ms)
Run 1: Statistics of Indigo-MusesT

End at: 2019-11-24 21:34:07
Local clock offset: 0.334 ms
Remote clock offset: -0.094 ms

# Below is generated by plot.py at 2019-11-25 01:39:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 641.23 Mbit/s
95th percentile per-packet one-way delay: 103.942 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 641.23 Mbit/s
95th percentile per-packet one-way delay: 103.942 ms
Loss rate: 0.51%
Run 1: Report of Indigo-MusesT — Data Link
Run 2: Statistics of Indigo-MusesT

Start at: 2019-11-24 22:08:30
End at: 2019-11-24 22:09:00
Local clock offset: -0.075 ms
Remote clock offset: -0.059 ms

# Below is generated by plot.py at 2019-11-25 01:40:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 655.42 Mbit/s
95th percentile per-packet one-way delay: 99.153 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 655.42 Mbit/s
95th percentile per-packet one-way delay: 99.153 ms
Loss rate: 0.55%
Run 2: Report of Indigo-MusesT — Data Link

![Throughput (Mbps)](chart1.png)

- Flow 1 ingress (mean 656.36 Mbit/s)
- Flow 1 egress (mean 655.42 Mbit/s)

![Per packet srtt delay (ms)](chart2.png)

- Flow 1 (95th percentile 99.15 ms)
Run 3: Statistics of Indigo-MusesT

Local clock offset: -0.003 ms
Remote clock offset: 0.121 ms

# Below is generated by plot.py at 2019-11-25 01:41:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 658.86 Mbit/s
95th percentile per-packet one-way delay: 104.071 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 658.86 Mbit/s
95th percentile per-packet one-way delay: 104.071 ms
Loss rate: 0.51%
Run 3: Report of Indigo-MusesT — Data Link

![Throughput Graph](chart1.png)

![Packet Delay Graph](chart2.png)
Run 4: Statistics of Indigo-MusesT

Local clock offset: -0.064 ms
Remote clock offset: -0.113 ms

# Below is generated by plot.py at 2019-11-25 01:41:29
# Datalink statistics
-- Total of 1 flow:
Average throughput: 617.28 Mbit/s
95th percentile per-packet one-way delay: 115.106 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 617.28 Mbit/s
95th percentile per-packet one-way delay: 115.106 ms
Loss rate: 0.50%
Run 4: Report of Indigo-MusesT — Data Link

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

*Flow 1 ingress (mean 617.84 Mbit/s)  Flow 1 egress (mean 617.28 Mbit/s)*

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

*Flow 1 (95th percentile 115.11 ms)*
Run 5: Statistics of Indigo-MusesT

Local clock offset: -0.104 ms
Remote clock offset: -0.057 ms

# Below is generated by plot.py at 2019-11-25 01:42:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 642.58 Mbit/s
95th percentile per-packet one-way delay: 109.513 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 642.58 Mbit/s
95th percentile per-packet one-way delay: 109.513 ms
Loss rate: 0.52%
Run 5: Report of Indigo-MusesT — Data Link

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

- **Flow 1 ingress (mean 643.31 Mbit/s)**
- **Flow 1 egress (mean 642.58 Mbit/s)**

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

- **Flow 1 (95th percentile 109.51 ms)**
Run 1: Statistics of LEDBAT

Local clock offset: 0.331 ms
Remote clock offset: 0.078 ms

# Below is generated by plot.py at 2019-11-25 01:42:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 28.28 Mbit/s
95th percentile per-packet one-way delay: 58.214 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 28.28 Mbit/s
95th percentile per-packet one-way delay: 58.214 ms
Loss rate: 0.75%
Run 1: Report of LEDBAT — Data Link

![Graph of throughput over time with two lines indicating ingressed and egressed data with mean speeds of 28.46 Mbit/s and 28.28 Mbit/s respectively.]

![Graph of packet round trip delay with a 95th percentile of 58.21 ms.]
Run 2: Statistics of LEDBAT

End at: 2019-11-24 22:00:13
Local clock offset: -0.078 ms
Remote clock offset: -0.212 ms

# Below is generated by plot.py at 2019-11-25 01:42:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 28.16 Mbit/s
95th percentile per-packet one-way delay: 58.379 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 28.16 Mbit/s
95th percentile per-packet one-way delay: 58.379 ms
Loss rate: 0.76%
Run 2: Report of LEDBAT — Data Link

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

- Flow 1 ingress (mean 28.26 Mbit/s)
- Flow 1 egress (mean 28.16 Mbit/s)

![Graph 2: Delay vs Time](chart2.png)

- Flow 1 (99th percentile 38.38 ms)
Run 3: Statistics of LEDBAT

Start at: 2019-11-24 22:35:02
Local clock offset: -0.05 ms
Remote clock offset: 0.128 ms

# Below is generated by plot.py at 2019-11-25 01:42:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 28.40 Mbit/s
95th percentile per-packet one-way delay: 57.617 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 28.40 Mbit/s
95th percentile per-packet one-way delay: 57.617 ms
Loss rate: 0.76%
Run 3: Report of LEDBAT — Data Link

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

- Flow 1 ingress (mean 28.51 Mbit/s)
- Flow 1 egress (mean 28.40 Mbit/s)

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

- Flow 1 (95th percentile 57.62 ms)
Run 4: Statistics of LEDBAT

Start at: 2019-11-24 23:10:05
End at: 2019-11-24 23:10:35
Local clock offset: -0.054 ms
Remote clock offset: 0.018 ms

# Below is generated by plot.py at 2019-11-25 01:42:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 28.36 Mbit/s
95th percentile per-packet one-way delay: 57.740 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 28.36 Mbit/s
95th percentile per-packet one-way delay: 57.740 ms
Loss rate: 0.76%
Run 4: Report of LEDBAT — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 28.47 Mbps)
  - Flow 1 egress (mean 28.36 Mbps)

- **Packet Delay (ms):**
  - Flow 1 (95th percentile 57.74 ms)
Run 5: Statistics of LEDBAT

Start at: 2019-11-24 23:45:29
End at: 2019-11-24 23:45:59
Local clock offset: -0.083 ms
Remote clock offset: -0.016 ms

# Below is generated by plot.py at 2019-11-25 01:42:13
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 28.46 Mbit/s
  95th percentile per-packet one-way delay: 58.035 ms
  Loss rate: 0.75%
-- Flow 1:
  Average throughput: 28.46 Mbit/s
  95th percentile per-packet one-way delay: 58.035 ms
  Loss rate: 0.75%
Run 5: Report of LEDBAT — Data Link

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

- Flow 1 ingress (mean 28.57 Mbit/s)
- Flow 1 egress (mean 28.46 Mbit/s)

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

- Flow 1 (95th percentile 58.03 ms)
Run 1: Statistics of Muses\_DecisionTree

Local clock offset: -0.024 ms
Remote clock offset: -0.155 ms

# Below is generated by plot.py at 2019-11-25 01:47:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 613.61 Mbit/s
95th percentile per-packet one-way delay: 71.129 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 613.61 Mbit/s
95th percentile per-packet one-way delay: 71.129 ms
Loss rate: 0.44%
Run 1: Report of Muses_DecisionTree — Data Link
Run 2: Statistics of Muses\_DecisionTree

Start at: 2019-11-24 22:02:36  
End at: 2019-11-24 22:03:06  
Local clock offset: 0.225 ms  
Remote clock offset: -0.125 ms  

# Below is generated by plot.py at 2019-11-25 01:47:48  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 601.57 Mbit/s  
95th percentile per-packet one-way delay: 69.830 ms  
Loss rate: 0.43%  
-- Flow 1:  
Average throughput: 601.57 Mbit/s  
95th percentile per-packet one-way delay: 69.830 ms  
Loss rate: 0.43%
Run 2: Report of Muses_DecisionTree — Data Link
Run 3: Statistics of Muses\_DecisionTree

Local clock offset: 0.007 ms
Remote clock offset: -0.008 ms

# Below is generated by plot.py at 2019-11-25 01:49:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 634.16 Mbit/s
95th percentile per-packet one-way delay: 67.094 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 634.16 Mbit/s
95th percentile per-packet one-way delay: 67.094 ms
Loss rate: 0.45%
Run 3: Report of Muses_DecisionTree — Data Link
Run 4: Statistics of Muses\_DecisionTree

Start at: 2019-11-24 23:12:56
Local clock offset: -0.033 ms
Remote clock offset: 0.06 ms

# Below is generated by plot.py at 2019-11-25 01:50:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 611.10 Mbit/s
95th percentile per-packet one-way delay: 78.889 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 611.10 Mbit/s
95th percentile per-packet one-way delay: 78.889 ms
Loss rate: 0.42%
Run 4: Report of Muses

---

**Graph 1:**

- Title: Throughput vs Time
- X-axis: Time (s)
- Y-axis: Throughput (Mbit/s)
- Legend: 
  - Flow 1 ingress (mean 611.31 Mbit/s)
  - Flow 1 egress (mean 611.10 Mbit/s)

---

**Graph 2:**

- Title: Per packet one way delay vs Time
- X-axis: Time (s)
- Y-axis: Per packet one way delay (ms)
- Legend: 
  - Flow 1 (95th percentile 78.89 ms)
Run 5: Statistics of Muses\_DecisionTree

Local clock offset: -0.104 ms
Remote clock offset: -0.017 ms

# Below is generated by plot.py at 2019-11-25 01:51:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 597.71 Mbit/s
95th percentile per-packet one-way delay: 79.404 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 597.71 Mbit/s
95th percentile per-packet one-way delay: 79.404 ms
Loss rate: 0.41%
Run 5: Report of Muses_DecisionTree — Data Link

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

- Flow 1 ingress (mean 597.86 Mbit/s)
- Flow 1 egress (mean 597.71 Mbit/s)

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

- Flow 1 (95th percentile 79.40 ms)
Run 1: Statistics of Muses\_DecisionTreeH0

End at: 2019-11-24 21:35:43
Local clock offset: -0.059 ms
Remote clock offset: 0.012 ms

# Below is generated by plot.py at 2019-11-25 01:51:20
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 344.04 Mbit/s
  95th percentile per-packet one-way delay: 125.250 ms
  Loss rate: 0.08%
-- Flow 1:
  Average throughput: 344.04 Mbit/s
  95th percentile per-packet one-way delay: 125.250 ms
  Loss rate: 0.08%
Run 1: Report of Muses\_DecisionTreeH0 — Data Link

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

- Flow 1 ingress (mean 342.97 Mbit/s)
- Flow 1 egress (mean 344.04 Mbit/s)

![Graph showing packet delay.](image)

- Flow 1 (95th percentile 125.25 ms)
Run 2: Statistics of Muses\_DecisionTreeH0

Local clock offset: -0.048 ms
Remote clock offset: -0.196 ms

# Below is generated by plot.py at 2019-11-25 01:51:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 499.36 Mbit/s
95th percentile per-packet one-way delay: 108.513 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 499.36 Mbit/s
95th percentile per-packet one-way delay: 108.513 ms
Loss rate: 0.04%
Run 2: Report of Muses_DecisionTreeH0 — Data Link
Run 3: Statistics of Muses\_DecisionTreeH0

End at: 2019-11-24 22:45:56
Local clock offset: 0.291 ms
Remote clock offset: 0.283 ms

# Below is generated by plot.py at 2019-11-25 01:51:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 377.77 Mbit/s
95th percentile per-packet one-way delay: 122.892 ms
Loss rate: 0.91%
-- Flow 1:
Average throughput: 377.77 Mbit/s
95th percentile per-packet one-way delay: 122.892 ms
Loss rate: 0.91%
Run 3: Report of Muses.DecisionTreeH0 — Data Link
Run 4: Statistics of Muses\_DecisionTreeH0

End at: 2019-11-24 23:21:02
Local clock offset: 0.266 ms
Remote clock offset: -0.132 ms

# Below is generated by plot.py at 2019-11-25 01:58:51
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 600.03 Mbit/s
  95th percentile per-packet one-way delay: 87.638 ms
  Loss rate: 0.01%
-- Flow 1:
  Average throughput: 600.03 Mbit/s
  95th percentile per-packet one-way delay: 87.638 ms
  Loss rate: 0.01%
Run 4: Report of Muses_DecisionTreeH0 — Data Link

---

**Graph 1:**
- **Throughput (Mbps):**
  - **Flow 1 ingress (mean 597.87 Mbps):**
  - **Flow 1 egress (mean 600.03 Mbps):**

**Graph 2:**
- **Per packet one way delay (ms):**
  - **Flow 1 (95th percentile 87.64 ms):**
Run 5: Statistics of Muses\_DecisionTreeH0

Local clock offset: -0.082 ms  
Remote clock offset: -0.092 ms

# Below is generated by plot.py at 2019-11-25 01:58:51  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 292.16 Mbit/s  
95th percentile per-packet one-way delay: 139.750 ms  
Loss rate: 0.58%  
-- Flow 1:  
Average throughput: 292.16 Mbit/s  
95th percentile per-packet one-way delay: 139.750 ms  
Loss rate: 0.58%
Run 5: Report of Muses_DecisionTreeH0 — Data Link
Run 1: Statistics of Muses\_DecisionTreeR0

Local clock offset: -0.072 ms
Remote clock offset: 0.006 ms

# Below is generated by plot.py at 2019-11-25 01:59:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 610.64 Mbit/s
95th percentile per-packet one-way delay: 72.445 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 610.64 Mbit/s
95th percentile per-packet one-way delay: 72.445 ms
Loss rate: 0.43%
Run 1: Report of Muses_DecisionTreeR0 — Data Link

- **Throughput (Mbps)**
  - Flow 1 ingress (mean 610.79 Mbps)
  - Flow 1 egress (mean 610.64 Mbps)

- **Per-packet one-way delay (ms)**
  - Flow 1 (95th percentile 72.44 ms)
Run 2: Statistics of Muses\_DecisionTreeR0

Local clock offset: -0.013 ms
Remote clock offset: 0.09 ms

# Below is generated by plot.py at 2019-11-25 02:00:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 635.30 Mbit/s
95th percentile per-packet one-way delay: 67.808 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 635.30 Mbit/s
95th percentile per-packet one-way delay: 67.808 ms
Loss rate: 0.47%
Run 2: Report of Muses_DehcisonTreeR0 — Data Link

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

- **Flow 1 ingress (mean 635.78 Mbit/s)**
- **Flow 1 egress (mean 635.30 Mbit/s)**

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

- **Flow 1 (95th percentile 67.81 ms)**
Run 3: Statistics of Muses\_DecisionTreeR0

Local clock offset: -0.036 ms
Remote clock offset: -0.082 ms

# Below is generated by plot.py at 2019-11-25 02:01:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 638.90 Mbit/s
95th percentile per-packet one-way delay: 68.419 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 638.90 Mbit/s
95th percentile per-packet one-way delay: 68.419 ms
Loss rate: 0.47%
Run 3: Report of Muses_DecisionTreeR0 — Data Link

![Graph 1: Throughput (Mbps)]

![Graph 2: Per packet one way delay (ms)]
Run 4: Statistics of Muses\_DecisionTreeR0

End at: 2019-11-24 23:34:21
Local clock offset: -0.065 ms
Remote clock offset: 0.039 ms

# Below is generated by plot.py at 2019-11-25 02:01:59
# Datalink statistics
-- Total of 1 flow:
Average throughput: 628.36 Mbit/s
95th percentile per-packet one-way delay: 66.259 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 628.36 Mbit/s
95th percentile per-packet one-way delay: 66.259 ms
Loss rate: 0.41%
Run 4: Report of Muses_DecisionTreeR0 — Data Link

[Graph showing network traffic over time with legend indicating Flow 1 ingress (mean 628.47 Mbit/s) and Flow 1 egress (mean 628.36 Mbit/s).]

[Graph showing packet delay over time with legend indicating Flow 1 (95th percentile 66.26 ms).]
Run 5: Statistics of Muses\_DecisionTreeR0

Start at: 2019-11-25 00:08:48
End at: 2019-11-25 00:09:18
Local clock offset: 0.371 ms
Remote clock offset: -0.065 ms

# Below is generated by plot.py at 2019-11-25 02:02:04
# Datalink statistics
-- Total of 1 flow:
Average throughput: 592.75 Mbit/s
95th percentile per-packet one-way delay: 77.032 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 592.75 Mbit/s
95th percentile per-packet one-way delay: 77.032 ms
Loss rate: 0.42%
Run 5: Report of Muses_DecisionTreeR0 — Data Link

![Throughput Graph]

![Delay Graph]

Flow 1 ingress (mean 592.92 Mbit/s)  
Flow 1 egress (mean 592.75 Mbit/s)
Run 1: Statistics of PCC-Allegro

Local clock offset: -0.1 ms
Remote clock offset: -0.018 ms

# Below is generated by plot.py at 2019-11-25 02:04:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 358.02 Mbit/s
95th percentile per-packet one-way delay: 127.004 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 358.02 Mbit/s
95th percentile per-packet one-way delay: 127.004 ms
Loss rate: 0.60%
Run 1: Report of PCC-Allegro — Data Link
Run 2: Statistics of PCC-Allegro

Local clock offset: -0.053 ms
Remote clock offset: 0.002 ms

# Below is generated by plot.py at 2019-11-25 02:09:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 431.69 Mbit/s
95th percentile per-packet one-way delay: 176.199 ms
Loss rate: 2.55%
-- Flow 1:
Average throughput: 431.69 Mbit/s
95th percentile per-packet one-way delay: 176.199 ms
Loss rate: 2.55%
Run 2: Report of PCC-Allegro — Data Link
Run 3: Statistics of PCC-Allegro

Start at: 2019-11-24 23:02:46
End at: 2019-11-24 23:03:16
Local clock offset: -0.071 ms
Remote clock offset: -0.116 ms

# Below is generated by plot.py at 2019-11-25 02:12:50
# Datalink statistics
-- Total of 1 flow:
Average throughput: 373.17 Mbit/s
95th percentile per-packet one-way delay: 162.357 ms
Loss rate: 1.10%
-- Flow 1:
Average throughput: 373.17 Mbit/s
95th percentile per-packet one-way delay: 162.357 ms
Loss rate: 1.10%
Run 3: Report of PCC-Allegro — Data Link

![Throughput Graph]

- Flow 1 ingress (mean 375.89 Mbit/s)
- Flow 1 egress (mean 373.17 Mbit/s)

![Round-trip Time Graph]

- Flow 1 (95th percentile 162.36 ms)
Run 4: Statistics of PCC-Allegro

End at: 2019-11-24 23:38:42
Local clock offset: -0.076 ms
Remote clock offset: -0.208 ms

# Below is generated by plot.py at 2019-11-25 02:12:50
# Datalink statistics
-- Total of 1 flow:
Average throughput: 356.14 Mbit/s
95th percentile per-packet one-way delay: 151.573 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 356.14 Mbit/s
95th percentile per-packet one-way delay: 151.573 ms
Loss rate: 0.75%
Run 5: Statistics of PCC-Allegro

Start at: 2019-11-25 00:13:04
End at: 2019-11-25 00:13:34
Local clock offset: -0.049 ms
Remote clock offset: -0.078 ms

# Below is generated by plot.py at 2019-11-25 02:14:36
# Datalink statistics
-- Total of 1 flow:
Average throughput: 366.76 Mbit/s
95th percentile per-packet one-way delay: 150.507 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 366.76 Mbit/s
95th percentile per-packet one-way delay: 150.507 ms
Loss rate: 0.56%
Run 5: Report of PCC-Allegro — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 367.38 Mbit/s)  Flow 1 egress (mean 366.76 Mbit/s)

Bit Error Rate (BER)

Time (s)

Flow 1 (95th percentile 150.53 ms)
Run 1: Statistics of PCC-Expr

End at: 2019-11-24 21:41:01
Local clock offset: -0.118 ms
Remote clock offset: 0.065 ms

# Below is generated by plot.py at 2019-11-25 02:14:36
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 277.13 Mbit/s
  95th percentile per-packet one-way delay: 169.843 ms
  Loss rate: 3.25%
-- Flow 1:
  Average throughput: 277.13 Mbit/s
  95th percentile per-packet one-way delay: 169.843 ms
  Loss rate: 3.25%
Run 1: Report of PCC-Expr — Data Link
Run 2: Statistics of PCC-Expr

Local clock offset: -0.082 ms
Remote clock offset: -0.106 ms

# Below is generated by plot.py at 2019-11-25 02:14:36
# Datalink statistics
-- Total of 1 flow:
Average throughput: 322.96 Mbit/s
95th percentile per-packet one-way delay: 162.911 ms
Loss rate: 1.85%
-- Flow 1:
Average throughput: 322.96 Mbit/s
95th percentile per-packet one-way delay: 162.911 ms
Loss rate: 1.85%
Run 2: Report of PCC-Expr — Data Link

![Graph of Throughput (Mbps)]

- Flow 1 ingress (mean 327.77 Mbps)
- Flow 1 egress (mean 322.96 Mbps)

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

- Flow 1 (95th percentile 162.93 ms)
Run 3: Statistics of PCC-Expr

Local clock offset: -0.065 ms
Remote clock offset: 0.092 ms

# Below is generated by plot.py at 2019-11-25 02:14:36
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 290.32 Mbit/s
  95th percentile per-packet one-way delay: 163.648 ms
  Loss rate: 1.79%
-- Flow 1:
  Average throughput: 290.32 Mbit/s
  95th percentile per-packet one-way delay: 163.648 ms
  Loss rate: 1.79%
Run 3: Report of PCC-Expr — Data Link
Run 4: Statistics of PCC-Expr

Start at: 2019-11-24 23:26:01
End at: 2019-11-24 23:26:31
Local clock offset: 0.244 ms
Remote clock offset: -0.028 ms

# Below is generated by plot.py at 2019-11-25 02:17:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 334.91 Mbit/s
95th percentile per-packet one-way delay: 170.814 ms
Loss rate: 7.98%
-- Flow 1:
Average throughput: 334.91 Mbit/s
95th percentile per-packet one-way delay: 170.814 ms
Loss rate: 7.98%
Run 4: Report of PCC-Expr — Data Link

![Graph showing throughput and per-packet one-way delay over time for two flows.]

- **Flow 1 ingress (mean 362.53 Mbit/s)**
- **Flow 1 egress (mean 334.91 Mbit/s)**

![Graph showing per-packet one-way delay distribution for Flow 1.]

- **Flow 1 (95th percentile 170.81 ms)**
Run 5: Statistics of PCC-Expr

Start at: 2019-11-25 00:01:11
End at: 2019-11-25 00:01:41
Local clock offset: -0.023 ms
Remote clock offset: -0.076 ms

# Below is generated by plot.py at 2019-11-25 02:19:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 295.34 Mbit/s
95th percentile per-packet one-way delay: 151.887 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 295.34 Mbit/s
95th percentile per-packet one-way delay: 151.887 ms
Loss rate: 0.85%
Run 5: Report of PCC-Expr — Data Link

![Graph showing throughput and packet delay over time for Flow 1.]

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 296.71 Mbit/s) — Flow 1 egress (mean 295.34 Mbit/s)

Packet delay (ms)

Time (s)

Flow 1 (95th percentile 151.89 ms)
Run 1: Statistics of QUIC Cubic

End at: 2019-11-24 21:29:45
Local clock offset: -0.076 ms
Remote clock offset: -0.001 ms

# Below is generated by plot.py at 2019-11-25 02:19:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 81.95 Mbit/s
95th percentile per-packet one-way delay: 56.686 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 81.95 Mbit/s
95th percentile per-packet one-way delay: 56.686 ms
Loss rate: 0.00%
Run 1: Report of QUIC Cubic — Data Link

![Graph showing throughput over time]

- Flow 1 ingress (mean 81.95 Mbit/s)
- Flow 1 egress (mean 81.95 Mbit/s)

![Graph showing one-way delay over time]

- Flow 1 (95th percentile 56.69 ms)
Run 2: Statistics of QUIC Cubic

End at: 2019-11-24 22:04:42
Local clock offset: -0.119 ms
Remote clock offset: -0.043 ms

# Below is generated by plot.py at 2019-11-25 02:19:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 77.31 Mbit/s
95th percentile per-packet one-way delay: 56.826 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 77.31 Mbit/s
95th percentile per-packet one-way delay: 56.826 ms
Loss rate: 0.51%
Run 2: Report of QUIC Cubic — Data Link

![Graph 1: Throughput](image)

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

![Graph 2: Packet Delay](image)

- **Flow 1 (95th percentile 56.83 ms)**

168
Run 3: Statistics of QUIC Cubic

End at: 2019-11-24 22:40:01
Local clock offset: -0.067 ms
Remote clock offset: 0.057 ms

# Below is generated by plot.py at 2019-11-25 02:19:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 58.34 Mbit/s
95th percentile per-packet one-way delay: 56.843 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 58.34 Mbit/s
95th percentile per-packet one-way delay: 56.843 ms
Loss rate: 0.59%
Run 3: Report of QUIC Cubic — Data Link
Run 4: Statistics of QUIC Cubic

End at: 2019-11-24 23:15:03
Local clock offset: 0.245 ms
Remote clock offset: -0.094 ms

# Below is generated by plot.py at 2019-11-25 02:19:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 86.48 Mbit/s
95th percentile per-packet one-way delay: 57.484 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 86.48 Mbit/s
95th percentile per-packet one-way delay: 57.484 ms
Loss rate: 0.50%
Run 4: Report of QUIC Cubic — Data Link
Run 5: Statistics of QUIC Cubic

Local clock offset: -0.088 ms
Remote clock offset: -0.006 ms

# Below is generated by plot.py at 2019-11-25 02:19:53
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 71.03 Mbit/s
  95th percentile per-packet one-way delay: 56.822 ms
  Loss rate: 0.62%
-- Flow 1:
  Average throughput: 71.03 Mbit/s
  95th percentile per-packet one-way delay: 56.822 ms
  Loss rate: 0.62%
Run 5: Report of QUIC Cubic — Data Link

Time (s)

Throughput (Mbps)

Flow 1 ingress (mean 71.20 Mbit/s)  Flow 1 egress (mean 71.03 Mbit/s)

Time (s)

Per packet error delay (ms)

Flow 1 (95th percentile 56.82 ms)

174
Run 1: Statistics of SCReAM

Local clock offset: -0.103 ms
Remote clock offset: -0.191 ms

# Below is generated by plot.py at 2019-11-25 02:19:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 57.251 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 57.251 ms
Loss rate: 0.39%
Run 1: Report of SCReAM — Data Link
Run 2: Statistics of SCReAM

Local clock offset: -0.023 ms
Remote clock offset: 0.008 ms

# Below is generated by plot.py at 2019-11-25 02:19:53
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 57.067 ms
  Loss rate: 0.39%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 57.067 ms
  Loss rate: 0.39%
Run 2: Report of SCReAM — Data Link

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

![Graph showing per-packet one-way delay over time for Flow 1 with 95th percentile 57.07 ms.]
Run 3: Statistics of SCReAM

Start at: 2019-11-24 23:00:04
End at: 2019-11-24 23:00:34
Local clock offset: -0.031 ms
Remote clock offset: 0.027 ms

# Below is generated by plot.py at 2019-11-25 02:19:53
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 56.898 ms
  Loss rate: 0.38%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 56.898 ms
  Loss rate: 0.38%
Run 3: Report of SCReAM — Data Link

![Graph 1: Throughput vs Time (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 56.90 ms)
Run 4: Statistics of SCReAM

End at: 2019-11-24 23:35:59
Local clock offset: -0.031 ms
Remote clock offset: 0.02 ms

# Below is generated by plot.py at 2019-11-25 02:19:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 57.241 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 57.241 ms
Loss rate: 0.39%
Run 4: Report of SCReAM — Data Link

![Graph of throughput vs time for flow 1 ingress and egress.]

![Graph of per-packet one-way delay vs time for flow 1.]

Flow 1 (95th percentile 57.24 ms)
Run 5: Statistics of SCReAM

Start at: 2019-11-25 00:10:24
End at: 2019-11-25 00:10:54
Local clock offset: 0.009 ms
Remote clock offset: -0.086 ms

# Below is generated by plot.py at 2019-11-25 02:19:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 56.993 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 56.993 ms
Loss rate: 0.26%
Run 5: 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 56.99 ms)
Run 1: Statistics of Sprout

Local clock offset: -0.063 ms
Remote clock offset: -0.199 ms

# Below is generated by plot.py at 2019-11-25 02:19:53
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 7.88 Mbit/s
  95th percentile per-packet one-way delay: 57.446 ms
  Loss rate: 0.42%
-- Flow 1:
  Average throughput: 7.88 Mbit/s
  95th percentile per-packet one-way delay: 57.446 ms
  Loss rate: 0.42%
Run 1: Report of Sprout — Data Link

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

- **Flow 1 ingress (mean 7.89 Mbit/s)**
- **Flow 1 egress (mean 7.88 Mbit/s)**

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

- **Flow 1 (95th percentile 57.45 ms)**
Run 2: Statistics of Sprout

Local clock offset: -0.038 ms
Remote clock offset: -0.113 ms

# Below is generated by plot.py at 2019-11-25 02:19:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 7.99 Mbit/s
95th percentile per-packet one-way delay: 57.520 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 7.99 Mbit/s
95th percentile per-packet one-way delay: 57.520 ms
Loss rate: 0.43%
Run 2: Report of Sprout — Data Link
Run 3: Statistics of Sprout

Local clock offset: -0.078 ms
Remote clock offset: 0.069 ms

# Below is generated by plot.py at 2019-11-25 02:19:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 7.98 Mbit/s
95th percentile per-packet one-way delay: 57.378 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 7.98 Mbit/s
95th percentile per-packet one-way delay: 57.378 ms
Loss rate: 0.38%
Run 3: Report of Sprout — Data Link
Run 4: Statistics of Sprout

Local clock offset: -0.109 ms
Remote clock offset: -0.037 ms

# Below is generated by plot.py at 2019-11-25 02:19:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 7.99 Mbit/s
95th percentile per-packet one-way delay: 57.574 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 7.99 Mbit/s
95th percentile per-packet one-way delay: 57.574 ms
Loss rate: 0.42%
Run 4: Report of Sprout — Data Link

![Throughput Graph](chart1.png)

![Packet Delay Graph](chart2.png)
Run 5: Statistics of Sprout

Start at: 2019-11-25 00:00:02
End at: 2019-11-25 00:00:32
Local clock offset: -0.039 ms
Remote clock offset: -0.093 ms

# Below is generated by plot.py at 2019-11-25 02:19:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 6.93 Mbit/s
95th percentile per-packet one-way delay: 60.795 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 6.93 Mbit/s
95th percentile per-packet one-way delay: 60.795 ms
Loss rate: 0.37%
Run 5: Report of Sprout — Data Link
Run 1: Statistics of TaoVA-100x

End at: 2019-11-24 21:37:08
Local clock offset: -0.069 ms
Remote clock offset: -0.026 ms

# Below is generated by plot.py at 2019-11-25 02:23:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 229.99 Mbit/s
95th percentile per-packet one-way delay: 57.507 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 229.99 Mbit/s
95th percentile per-packet one-way delay: 57.507 ms
Loss rate: 0.39%
Run 1: Report of TaoVA-100x — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 229.99 Mbit/s)  Flow 1 egress (mean 229.99 Mbit/s)

Delay (ms)

Flow 1 (95th percentile 57.51 ms)
Run 2: Statistics of TaoVA-100x

End at: 2019-11-24 22:12:09
Local clock offset: -0.102 ms
Remote clock offset: -0.056 ms

# Below is generated by plot.py at 2019-11-25 02:23:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 225.23 Mbit/s
95th percentile per-packet one-way delay: 57.056 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 225.23 Mbit/s
95th percentile per-packet one-way delay: 57.056 ms
Loss rate: 0.41%
Run 2: Report of TaoVA-100x — Data Link

![Graph showing throughput over time with two lines for ingress and egress]

![Graph showing RTT over time with a single line]

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Run 3: Statistics of TaoVA-100x

Local clock offset: -0.021 ms
Remote clock offset: 0.086 ms

# Below is generated by plot.py at 2019-11-25 02:23:14
# Datalink statistics
-- Total of 1 flow:
Average throughput: 229.10 Mbit/s
95th percentile per-packet one-way delay: 57.459 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 229.10 Mbit/s
95th percentile per-packet one-way delay: 57.459 ms
Loss rate: 0.40%
Run 3: Report of TaoVA-100x — Data Link

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

- Flow 1 ingress (mean 229.14 Mbps)
- Flow 1 egress (mean 229.10 Mbps)

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

- Flow 1 (95th percentile 57.46 ms)
Run 4: Statistics of TaoVA-100x

Local clock offset: -0.071 ms  
Remote clock offset: -0.084 ms

# Below is generated by plot.py at 2019-11-25 02:23:14  
# Datalink statistics
-- Total of 1 flow:
Average throughput: 219.86 Mbit/s
95th percentile per-packet one-way delay: 57.453 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 219.86 Mbit/s
95th percentile per-packet one-way delay: 57.453 ms
Loss rate: 0.42%
Run 4: Report of TaoVA-100x — Data Link

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

- Flow 1 ingress (mean 219.92 Mbit/s)
- Flow 1 egress (mean 219.86 Mbit/s)

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

- Flow 1 (99th percentile 57.45 ms)
Run 5: Statistics of TaoVA-100x

Local clock offset: -0.029 ms
Remote clock offset: -0.141 ms

# Below is generated by plot.py at 2019-11-25 02:23:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 224.74 Mbit/s
95th percentile per-packet one-way delay: 60.844 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 224.74 Mbit/s
95th percentile per-packet one-way delay: 60.844 ms
Loss rate: 0.44%
Run 5: Report of TaoVA-100x — Data Link
Run 1: Statistics of TCP Vegas

Local clock offset: -0.109 ms
Remote clock offset: -0.147 ms

# Below is generated by plot.py at 2019-11-25 02:23:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 282.02 Mbit/s
95th percentile per-packet one-way delay: 77.020 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 282.02 Mbit/s
95th percentile per-packet one-way delay: 77.020 ms
Loss rate: 0.31%
Run 1: Report of TCP Vegas — Data Link

![Throughput Graph](image1)

- **Flow 1 ingress** (mean 281.78 Mbit/s)
- **Flow 1 egress** (mean 282.02 Mbit/s)

![Delay Graph](image2)

- **Flow 1** (95th percentile 77.02 ms)
Run 2: Statistics of TCP Vegas

Local clock offset: -0.06 ms
Remote clock offset: 0.102 ms

# Below is generated by plot.py at 2019-11-25 02:27:16
# Datalink statistics
-- Total of 1 flow:
Average throughput: 495.93 Mbit/s
95th percentile per-packet one-way delay: 57.610 ms
Loss rate: 0.40%

-- Flow 1:
Average throughput: 495.93 Mbit/s
95th percentile per-packet one-way delay: 57.610 ms
Loss rate: 0.40%
Run 2: Report of TCP Vegas — Data Link
Run 3: Statistics of TCP Vegas

Local clock offset: -0.028 ms
Remote clock offset: -0.007 ms

# Below is generated by plot.py at 2019-11-25 02:29:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 441.08 Mbit/s
95th percentile per-packet one-way delay: 57.335 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 441.08 Mbit/s
95th percentile per-packet one-way delay: 57.335 ms
Loss rate: 0.39%
Run 3: Report of TCP Vegas — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 441.09 Mbit/s)  Flow 1 egress (mean 441.08 Mbit/s)

Per-packet one way delay (ms)

Flow 1 (95th percentile 57.34 ms)
Run 4: Statistics of TCP Vegas

End at: 2019-11-24 23:32:49
Local clock offset: -0.084 ms
Remote clock offset: -0.024 ms

# Below is generated by plot.py at 2019-11-25 02:30:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 498.96 Mbit/s
95th percentile per-packet one-way delay: 59.089 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 498.96 Mbit/s
95th percentile per-packet one-way delay: 59.089 ms
Loss rate: 0.40%
Run 4: Report of TCP Vegas — Data Link
Run 5: Statistics of TCP Vegas

Start at: 2019-11-25 00:07:28
End at: 2019-11-25 00:07:58
Local clock offset: -0.019 ms
Remote clock offset: 0.001 ms

# Below is generated by plot.py at 2019-11-25 02:30:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 252.42 Mbit/s
95th percentile per-packet one-way delay: 57.237 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 252.42 Mbit/s
95th percentile per-packet one-way delay: 57.237 ms
Loss rate: 0.35%
Run 5: Report of TCP Vegas — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 252.34 Mbit/s)  Flow 1 egress (mean 252.42 Mbit/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 57.24 ms)
Run 1: Statistics of Verus

Local clock offset: 0.28 ms
Remote clock offset: -0.124 ms

# Below is generated by plot.py at 2019-11-25 02:30:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 74.18 Mbit/s
95th percentile per-packet one-way delay: 75.711 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 74.18 Mbit/s
95th percentile per-packet one-way delay: 75.711 ms
Loss rate: 0.00%
Run 1: Report of Verus — Data Link

![Throughput Graph]

- Flow 1 ingress (mean 74.18 Mbit/s)
- Flow 1 egress (mean 74.18 Mbit/s)

![Packet Drop Graph]

- Flow 1 (95th percentile 75.71 ms)
Run 2: Statistics of Verus

Local clock offset: -0.12 ms
Remote clock offset: -0.104 ms

# Below is generated by plot.py at 2019-11-25 02:30:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 38.64 Mbit/s
95th percentile per-packet one-way delay: 90.601 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 38.64 Mbit/s
95th percentile per-packet one-way delay: 90.601 ms
Loss rate: 0.00%
Run 2: Report of Verus — Data Link
Run 3: Statistics of Verus

Local clock offset: 0.277 ms
Remote clock offset: -0.02 ms

# Below is generated by plot.py at 2019-11-25 02:30:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 71.82 Mbit/s
95th percentile per-packet one-way delay: 77.406 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 71.82 Mbit/s
95th percentile per-packet one-way delay: 77.406 ms
Loss rate: 0.00%
Run 3: Report of Verus — Data Link

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

- **Flow 1 ingress (mean 69.42 Mbit/s)**
- **Flow 1 egress (mean 71.82 Mbit/s)**

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

- **Flow 1 (95th percentile 77.41 ms)**
Run 4: Statistics of Verus

Local clock offset: 0.009 ms
Remote clock offset: -0.087 ms

# Below is generated by plot.py at 2019-11-25 02:30:40
# Datalink statistics
-- Total of 1 flow:
Average throughput: 93.88 Mbit/s
95th percentile per-packet one-way delay: 69.190 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 93.88 Mbit/s
95th percentile per-packet one-way delay: 69.190 ms
Loss rate: 0.00%
Run 4: Report of Verus — Data Link

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**Throughput (Mbps)**

- Flow 1 ingress (mean 93.88 Mbit/s)
- Flow 1 egress (mean 93.88 Mbit/s)

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

- Flow 1 (95th percentile 69.19 ms)
Run 5: Statistics of Verus

Local clock offset: 0.323 ms
Remote clock offset: 0.053 ms

# Below is generated by plot.py at 2019-11-25 02:30:40
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 106.46 Mbit/s
  95th percentile per-packet one-way delay: 104.227 ms
  Loss rate: 0.59%
-- Flow 1:
  Average throughput: 106.46 Mbit/s
  95th percentile per-packet one-way delay: 104.227 ms
  Loss rate: 0.59%
Run 5: Report of Verus — Data Link

![Graph of throughput and round trip time for Flow 1]
Run 1: Statistics of PCC-Vivace

Local clock offset: 0.277 ms
Remote clock offset: -0.048 ms

# Below is generated by plot.py at 2019-11-25 02:31:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 355.23 Mbit/s
95th percentile per-packet one-way delay: 59.195 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 355.23 Mbit/s
95th percentile per-packet one-way delay: 59.195 ms
Loss rate: 0.49%
Run 2: Statistics of PCC-Vivace

Start at: 2019-11-24 22:17:03
Local clock offset: -0.036 ms
Remote clock offset: 0.052 ms

# Below is generated by plot.py at 2019-11-25 02:31:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 329.11 Mbit/s
95th percentile per-packet one-way delay: 57.684 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 329.11 Mbit/s
95th percentile per-packet one-way delay: 57.684 ms
Loss rate: 0.48%
Run 2: Report of PCC-Vivace — Data Link
Run 3: Statistics of PCC-Vivace

Local clock offset: -0.04 ms
Remote clock offset: -0.034 ms

# Below is generated by plot.py at 2019-11-25 02:32:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 344.55 Mbit/s
95th percentile per-packet one-way delay: 58.476 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 344.55 Mbit/s
95th percentile per-packet one-way delay: 58.476 ms
Loss rate: 0.48%
Run 3: Report of PCC-Vivace — Data Link

![Graph 1: Throughput (Mbps)]

- Flow 1 ingress (mean 344.88 Mbps)
- Flow 1 egress (mean 344.55 Mbps)

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

- Flow 1 (95th percentile 58.48 ms)
Run 4: Statistics of PCC-Vivace

Local clock offset: -0.096 ms
Remote clock offset: -0.066 ms

# Below is generated by plot.py at 2019-11-25 02:32:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 349.87 Mbit/s
95th percentile per-packet one-way delay: 57.992 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 349.87 Mbit/s
95th percentile per-packet one-way delay: 57.992 ms
Loss rate: 0.44%
Run 4: Report of PCC-Vivace — Data Link
Run 5: Statistics of PCC-Vivace

Start at: 2019-11-25 00:02:45
End at: 2019-11-25 00:03:15
Local clock offset: -0.026 ms
Remote clock offset: -0.038 ms

# Below is generated by plot.py at 2019-11-25 02:32:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 338.76 Mbit/s
95th percentile per-packet one-way delay: 58.689 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 338.76 Mbit/s
95th percentile per-packet one-way delay: 58.689 ms
Loss rate: 0.38%
Run 5: Report of PCC-Vivace — Data Link

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

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Run 1: Statistics of WebRTC media

Local clock offset: -0.022 ms
Remote clock offset: -0.157 ms
Run 1: Report of WebRTC media — Data Link

![Graph 1: Throughput (Mbps)]

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

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Run 2: Statistics of WebRTC media

End at: 2019-11-24 21:59:05
Local clock offset: -0.097 ms
Remote clock offset: -0.117 ms

# Below is generated by plot.py at 2019-11-25 02:32:08
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 57.011 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 57.011 ms
  Loss rate: 0.00%
Run 2: Report of WebRTC media — Data Link
Run 3: Statistics of WebRTC media

End at: 2019-11-24 22:34:24
Local clock offset: -0.02 ms
Remote clock offset: 0.016 ms

# Below is generated by plot.py at 2019-11-25 02:32:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 57.250 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 57.250 ms
Loss rate: 0.00%
Run 3: Report of WebRTC media — Data Link
Run 4: Statistics of WebRTC media

Local clock offset: -0.075 ms
Remote clock offset: -0.225 ms

# Below is generated by plot.py at 2019-11-25 02:32:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 57.119 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 57.119 ms
Loss rate: 0.00%
Run 4: Report of WebRTC media — Data Link
Run 5: Statistics of WebRTC media

End at: 2019-11-24 23:44:51
Local clock offset: -0.061 ms
Remote clock offset: -0.029 ms

# Below is generated by plot.py at 2019-11-25 02:32:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 57.039 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 57.039 ms
Loss rate: 0.00%
Run 5: Report of WebRTC media — Data Link

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