Pantheon Report

Data path: GCE London Ethernet (remote) → GCE Sydney Ethernet (local).
Repeated the test of 17 congestion control schemes 10 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 4.15.0-1014-gcp
net.core.default_qdisc = fq_codel
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: master @ 7719b900495aa706f8452ab7d4a94dd562e9296e
third_party/fillp @ d47f4fa1b454a5e3c0537115c5a2843edbd4b834
third_party/fillp-sheep @ daed0c84f98531712514b2231f43ec6901114ffe
third_party/genericCC @ d0153f8e594aa89e93b032143cedbfe58e562f4
third_party/indigo @ 2601c92e4a9d58d38d4dfe0edbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaaab4a906ce6bb7cf3fc
third_party/pantheon-tunnel @ 6f038ed31259d366f9840f65b82cbe8f464b1b39
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8ac0d8f92c4eb249f74ab
third_party/proto-quic @ 77961faa827383a86b42f1b813e0ebc978f3cf4f
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3dbb2
M src/ScreamClient
M src/ScreamServer
third_party/sprout @ 366e35c678b01e31d4a46ad18c74f9415f19a26
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
M src/verus.hpp
M tools/plot.py
third_party/vivace @ 2ba86211435ae071a32f96b7d8c50455f75d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9d6e4735770d143a1fa2851
test from GCE London to GCE Sydney, 10 runs of 30s each per scheme
(mean of all runs by scheme)
<table>
<thead>
<tr>
<th>scheme</th>
<th># runs</th>
<th>mean avg tput (Mbit/s)</th>
<th>mean 95th-%ile delay (ms)</th>
<th>mean loss rate (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TCP BBR</td>
<td>10</td>
<td>416.90</td>
<td>233.11</td>
<td>3.57</td>
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<tr>
<td>Copa</td>
<td>10</td>
<td>195.68</td>
<td>169.59</td>
<td>0.97</td>
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<td>TCP Cubic</td>
<td>10</td>
<td>123.50</td>
<td>139.39</td>
<td>1.53</td>
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<td>FillP</td>
<td>10</td>
<td>746.98</td>
<td>213.97</td>
<td>6.14</td>
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<td>FillP-Sheep</td>
<td>10</td>
<td>702.06</td>
<td>220.71</td>
<td>8.30</td>
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<td>Indigo</td>
<td>10</td>
<td>164.40</td>
<td>136.55</td>
<td>0.86</td>
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<td>LEDBAT</td>
<td>10</td>
<td>3.75</td>
<td>137.29</td>
<td>1.79</td>
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<td>PCC-Allegro</td>
<td>10</td>
<td>546.75</td>
<td>194.53</td>
<td>2.85</td>
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<td>PCC-Expr</td>
<td>10</td>
<td>252.73</td>
<td>213.37</td>
<td>2.77</td>
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<tr>
<td>QUIC Cubic</td>
<td>0</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td>SCReAM</td>
<td>10</td>
<td>0.22</td>
<td>136.41</td>
<td>0.85</td>
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<tr>
<td>Sprout</td>
<td>10</td>
<td>0.16</td>
<td>136.43</td>
<td>0.75</td>
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<td>TaoVA-100x</td>
<td>10</td>
<td>104.41</td>
<td>136.49</td>
<td>0.94</td>
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<tr>
<td>TCP Vegas</td>
<td>10</td>
<td>48.34</td>
<td>137.87</td>
<td>0.98</td>
</tr>
<tr>
<td>Verus</td>
<td>10</td>
<td>158.12</td>
<td>196.31</td>
<td>2.44</td>
</tr>
<tr>
<td>PCC-Vivace</td>
<td>10</td>
<td>329.73</td>
<td>148.37</td>
<td>1.22</td>
</tr>
<tr>
<td>WebRTC media</td>
<td>10</td>
<td>1.91</td>
<td>136.43</td>
<td>1.22</td>
</tr>
</tbody>
</table>
Run 1: Statistics of TCP BBR

Start at: 2018-08-11 14:44:11
End at: 2018-08-11 14:44:42
Local clock offset: -0.404 ms
Remote clock offset: -0.55 ms

# Below is generated by plot.py at 2018-08-11 18:49:41
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 410.77 Mbit/s
  95th percentile per-packet one-way delay: 230.433 ms
  Loss rate: 3.02%
-- Flow 1:
  Average throughput: 410.77 Mbit/s
  95th percentile per-packet one-way delay: 230.433 ms
  Loss rate: 3.02%
Run 1: Report of TCP BBR — Data Link
Run 2: Statistics of TCP BBR

Start at: 2018-08-11 15:07:51
End at: 2018-08-11 15:08:21
Local clock offset: -0.376 ms
Remote clock offset: -0.568 ms

# Below is generated by plot.py at 2018-08-11 18:50:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 438.11 Mbit/s
95th percentile per-packet one-way delay: 232.906 ms
Loss rate: 3.77%
-- Flow 1:
Average throughput: 438.11 Mbit/s
95th percentile per-packet one-way delay: 232.906 ms
Loss rate: 3.77%
Run 2: Report of TCP BBR — Data Link

![Graph 1: Throughput (Mbps)]

- **Flow 1 ingress** (mean 451.14 Mbps)
- **Flow 1 egress** (mean 438.11 Mbps)

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

- **Flow 1** (95th percentile 232.91 ms)
Run 3: Statistics of TCP BBR

Start at: 2018-08-11 15:31:55
End at: 2018-08-11 15:32:25
Local clock offset: -0.447 ms
Remote clock offset: -0.575 ms

# Below is generated by plot.py at 2018-08-11 18:50:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 376.49 Mbit/s
95th percentile per-packet one-way delay: 241.036 ms
Loss rate: 4.99%
-- Flow 1:
Average throughput: 376.49 Mbit/s
95th percentile per-packet one-way delay: 241.036 ms
Loss rate: 4.99%
Run 3: Report of TCP BBR — Data Link

![Graph 1: Throughput (Mbps)]

- Flow 1 ingress (mean 392.69 Mbit/s)
- Flow 1 egress (mean 376.49 Mbit/s)

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

- Flow 1 (95th percentile 241.84 ms)
Run 4: Statistics of TCP BBR

Start at: 2018-08-11 15:56:01
End at: 2018-08-11 15:56:31
Local clock offset: -0.395 ms
Remote clock offset: -0.513 ms

# Below is generated by plot.py at 2018-08-11 18:50:07
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 422.19 Mbit/s
  95th percentile per-packet one-way delay: 241.059 ms
  Loss rate: 4.23%
-- Flow 1:
  Average throughput: 422.19 Mbit/s
  95th percentile per-packet one-way delay: 241.059 ms
  Loss rate: 4.23%
Run 4: Report of TCP BBR — Data Link

![Graph of Throughput vs Time](image1)

Flow 1 ingress (mean 432.13 Mbit/s) and Flow 1 egress (mean 422.19 Mbit/s)

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

Flow 1 (95th percentile 241.06 ms)
Run 5: Statistics of TCP BBR

Start at: 2018-08-11 16:19:39
End at: 2018-08-11 16:20:09
Local clock offset: -0.77 ms
Remote clock offset: -0.388 ms

# Below is generated by plot.py at 2018-08-11 18:50:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 408.42 Mbit/s
95th percentile per-packet one-way delay: 233.964 ms
Loss rate: 4.09%
-- Flow 1:
Average throughput: 408.42 Mbit/s
95th percentile per-packet one-way delay: 233.964 ms
Loss rate: 4.09%
Run 5: Report of TCP BBR — Data Link
Run 6: Statistics of TCP BBR

Start at: 2018-08-11 16:43:24
End at: 2018-08-11 16:43:54
Local clock offset: -0.667 ms
Remote clock offset: -0.206 ms

# Below is generated by plot.py at 2018-08-11 18:50:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 439.53 Mbit/s
95th percentile per-packet one-way delay: 227.010 ms
Loss rate: 3.02%
-- Flow 1:
Average throughput: 439.53 Mbit/s
95th percentile per-packet one-way delay: 227.010 ms
Loss rate: 3.02%
Run 6: Report of TCP BBR — Data Link
Run 7: Statistics of TCP BBR

Start at: 2018-08-11 17:06:52
End at: 2018-08-11 17:07:22
Local clock offset: -0.77 ms
Remote clock offset: -0.594 ms

# Below is generated by plot.py at 2018-08-11 18:50:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 430.23 Mbit/s
95th percentile per-packet one-way delay: 245.824 ms
Loss rate: 6.43%
-- Flow 1:
Average throughput: 430.23 Mbit/s
95th percentile per-packet one-way delay: 245.824 ms
Loss rate: 6.43%
Run 7: Report of TCP BBR — Data Link

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**Graph 1:**
- Title: Throughput in Mbps over Time
- Axes:
  - X-axis: Time (s)
  - Y-axis: Throughput (Mbps)
- Legend:
  - Flow 1 ingress (mean 455.56 Mbit/s)
  - Flow 1 egress (mean 430.23 Mbit/s)

**Graph 2:**
- Title: Per Packet One Way Delay
- Axes:
  - X-axis: Time (s)
  - Y-axis: Per Packet One Way Delay (ms)
- Legend:
  - Flow 1 (95th percentile 245.82 ms)
Run 8: Statistics of TCP BBR

Start at: 2018-08-11 17:30:34
End at: 2018-08-11 17:31:04
Local clock offset: -0.518 ms
Remote clock offset: -0.117 ms

# Below is generated by plot.py at 2018-08-11 18:50:07
# Datalink statistics
-- Total of 1 flow:
Average throughput: 435.99 Mbit/s
95th percentile per-packet one-way delay: 225.791 ms
Loss rate: 1.32%
-- Flow 1:
Average throughput: 435.99 Mbit/s
95th percentile per-packet one-way delay: 225.791 ms
Loss rate: 1.32%
Run 8: Report of TCP BBR — Data Link

![Throughput and Per-packet one-way delay graphs](image)

- **Throughput (Mbps):** Flow 1 ingress (mean 437.82 Mbps), Flow 1 egress (mean 435.99 Mbps)
- **Per-packet one-way delay (ms):** Flow 1 (95th percentile 225.79 ms)
Run 9: Statistics of TCP BBR

Start at: 2018-08-11 17:53:58
End at: 2018-08-11 17:54:28
Local clock offset: 0.377 ms
Remote clock offset: -0.094 ms

# Below is generated by plot.py at 2018-08-11 18:56:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 430.65 Mbit/s
95th percentile per-packet one-way delay: 228.074 ms
Loss rate: 2.55%
-- Flow 1:
Average throughput: 430.65 Mbit/s
95th percentile per-packet one-way delay: 228.074 ms
Loss rate: 2.55%
Run 9: Report of TCP BBR — Data Link
Run 10: Statistics of TCP BBR

Start at: 2018-08-11 18:17:20
End at: 2018-08-11 18:17:50
Local clock offset: 0.513 ms
Remote clock offset: -0.273 ms

# Below is generated by plot.py at 2018-08-11 18:56:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 376.60 Mbit/s
95th percentile per-packet one-way delay: 224.982 ms
Loss rate: 2.24%
-- Flow 1:
Average throughput: 376.60 Mbit/s
95th percentile per-packet one-way delay: 224.982 ms
Loss rate: 2.24%
Run 10: Report of TCP BBR — Data Link

![Graph showing throughput and packet delay over time for Flow 1 with mean throughput of 381.69 Mbit/s and mean egress of 376.60 Mbit/s](image-url)

![Graph showing packet delay over time for Flow 1 with 95th percentile delay of 224.98 ms](image-url)
Run 1: Statistics of Copa

Start at: 2018-08-11 14:50:23
End at: 2018-08-11 14:50:53
Local clock offset: -0.371 ms
Remote clock offset: -0.209 ms

# Below is generated by plot.py at 2018-08-11 18:56:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 178.58 Mbit/s
95th percentile per-packet one-way delay: 219.919 ms
Loss rate: 2.97%
-- Flow 1:
Average throughput: 178.58 Mbit/s
95th percentile per-packet one-way delay: 219.919 ms
Loss rate: 2.97%
Run 1: Report of Copa — Data Link
Run 2: Statistics of Copa

Start at: 2018-08-11 15:13:52
End at: 2018-08-11 15:14:22
Local clock offset: -0.602 ms
Remote clock offset: 0.187 ms

# Below is generated by plot.py at 2018-08-11 18:56:46
# Datalink statistics
-- Total of 1 flow:
   Average throughput: 231.28 Mbit/s
   95th percentile per-packet one-way delay: 160.076 ms
   Loss rate: 1.40%
-- Flow 1:
   Average throughput: 231.28 Mbit/s
   95th percentile per-packet one-way delay: 160.076 ms
   Loss rate: 1.40%
Run 2: Report of Copa — Data Link

![Throughput Graph](image)

- Flow 1 ingress (mean 232.45 Mbit/s)
- Flow 1 egress (mean 231.28 Mbit/s)

![Delay Graph](image)

- Flow 1 (95th percentile 160.00 ms)
Run 3: Statistics of Copa

Start at: 2018-08-11 15:38:10
End at: 2018-08-11 15:38:40
Local clock offset: -0.327 ms
Remote clock offset: -0.597 ms

# Below is generated by plot.py at 2018-08-11 18:56:46
# Datalink statistics
-- Total of 1 flow:
Average throughput: 210.80 Mbit/s
95th percentile per-packet one-way delay: 157.857 ms
Loss rate: 0.81%
-- Flow 1:
Average throughput: 210.80 Mbit/s
95th percentile per-packet one-way delay: 157.857 ms
Loss rate: 0.81%
Run 3: Report of Copa — Data Link

![Graph showing data link performance metrics]

- Flow 1 ingress (mean 210.60 Mbit/s)
- Flow 1 egress (mean 210.80 Mbit/s)

![Graph showing packet delay]

- Flow 1 (95th percentile 157.86 ms)
Run 4: Statistics of Copa

Start at: 2018-08-11 16:02:05
End at: 2018-08-11 16:02:35
Local clock offset: -0.441 ms
Remote clock offset: -0.156 ms

# Below is generated by plot.py at 2018-08-11 18:56:46
# Datalink statistics
-- Total of 1 flow:
Average throughput: 172.95 Mbit/s
95th percentile per-packet one-way delay: 156.035 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 172.95 Mbit/s
95th percentile per-packet one-way delay: 156.035 ms
Loss rate: 0.79%
Run 4: Report of Copa — Data Link
Run 5: Statistics of Copa

Start at: 2018-08-11 16:25:59
End at: 2018-08-11 16:26:29
Local clock offset: -0.807 ms
Remote clock offset: 0.208 ms

# Below is generated by plot.py at 2018-08-11 18:56:46
# Datalink statistics
-- Total of 1 flow:
Average throughput: 176.74 Mbit/s
95th percentile per-packet one-way delay: 224.068 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 176.74 Mbit/s
95th percentile per-packet one-way delay: 224.068 ms
Loss rate: 0.86%
Run 5: Report of Copa — Data Link

![Throughput and Delay Graphs]

- Flow 1 ingress (mean 176.66 Mbps)
- Flow 1 egress (mean 176.74 Mbps)
Run 6: Statistics of Copa

Start at: 2018-08-11 16:49:37
End at: 2018-08-11 16:50:07
Local clock offset: -0.553 ms
Remote clock offset: -0.553 ms

# Below is generated by plot.py at 2018-08-11 18:56:46
# Datalink statistics
-- Total of 1 flow:
Average throughput: 205.40 Mbit/s
95th percentile per-packet one-way delay: 149.942 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 205.40 Mbit/s
95th percentile per-packet one-way delay: 149.942 ms
Loss rate: 0.40%
Run 6: Report of Copa — Data Link

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

- **Flow 1 ingress** (mean 204.38 Mbps)
- **Flow 1 egress** (mean 205.40 Mbps)

![Graph 2: Per-Packet Round-Trip Delay (ms)]

- **Flow 1** (95th percentile 149.94 ms)
Run 7: Statistics of Copa

Start at: 2018-08-11 17:12:59
End at: 2018-08-11 17:13:29
Local clock offset: -0.794 ms
Remote clock offset: -0.173 ms

# Below is generated by plot.py at 2018-08-11 19:00:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 178.48 Mbit/s
95th percentile per-packet one-way delay: 142.564 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 178.48 Mbit/s
95th percentile per-packet one-way delay: 142.564 ms
Loss rate: 0.80%
Run 7: Report of Copa — Data Link

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

**Throughput (Mbps)**

- **Flow 1 ingress** (mean 178.29 Mbit/s)
- **Flow 1 egress** (mean 178.48 Mbit/s)

**Packet delay (ms)**

- **Flow 1** (95th percentile 142.56 ms)
Run 8: Statistics of Copa

Start at: 2018-08-11 17:36:46
End at: 2018-08-11 17:37:16
Local clock offset: -0.021 ms
Remote clock offset: -0.158 ms

# Below is generated by plot.py at 2018-08-11 19:00:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 168.98 Mbit/s
95th percentile per-packet one-way delay: 187.026 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 168.98 Mbit/s
95th percentile per-packet one-way delay: 187.026 ms
Loss rate: 0.26%
Run 9: Statistics of Copa

Start at: 2018-08-11 18:00:07
End at: 2018-08-11 18:00:37
Local clock offset: 0.422 ms
Remote clock offset: -0.088 ms

# Below is generated by plot.py at 2018-08-11 19:01:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 185.70 Mbit/s
95th percentile per-packet one-way delay: 144.918 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 185.70 Mbit/s
95th percentile per-packet one-way delay: 144.918 ms
Loss rate: 0.39%
Run 9: Report of Copa — Data Link
Run 10: Statistics of Copa

Start at: 2018-08-11 18:23:15
End at: 2018-08-11 18:23:45
Local clock offset: 0.868 ms
Remote clock offset: -0.279 ms

# Below is generated by plot.py at 2018-08-11 19:03:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 247.85 Mbit/s
95th percentile per-packet one-way delay: 153.479 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 247.85 Mbit/s
95th percentile per-packet one-way delay: 153.479 ms
Loss rate: 1.05%
Run 10: Report of Copa — Data Link

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

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

[Legend]
- Flow 1 ingress (mean 248.20 Mbit/s)
- Flow 1 egress (mean 247.85 Mbit/s)
- Flow 1 (95th percentile 153.48 ms)
Run 1: Statistics of TCP Cubic

Start at: 2018-08-11 14:39:29
End at: 2018-08-11 14:39:59
Local clock offset: -0.438 ms
Remote clock offset: -0.268 ms

# Below is generated by plot.py at 2018-08-11 19:03:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 86.27 Mbit/s
95th percentile per-packet one-way delay: 139.007 ms
Loss rate: 1.61%
-- Flow 1:
Average throughput: 86.27 Mbit/s
95th percentile per-packet one-way delay: 139.007 ms
Loss rate: 1.61%
Run 1: Report of TCP Cubic — Data Link
Run 2: Statistics of TCP Cubic

Start at: 2018-08-11 15:02:48
End at: 2018-08-11 15:03:18
Local clock offset: -0.342 ms
Remote clock offset: -0.147 ms

# Below is generated by plot.py at 2018-08-11 19:03:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 115.03 Mbit/s
95th percentile per-packet one-way delay: 138.160 ms
Loss rate: 1.43%
-- Flow 1:
Average throughput: 115.03 Mbit/s
95th percentile per-packet one-way delay: 138.160 ms
Loss rate: 1.43%
Run 2: Report of TCP Cubic — Data Link
Run 3: Statistics of TCP Cubic

Start at: 2018-08-11 15:27:08
End at: 2018-08-11 15:27:38
Local clock offset: -0.435 ms
Remote clock offset: 0.128 ms

# Below is generated by plot.py at 2018-08-11 19:03:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 125.48 Mbit/s
95th percentile per-packet one-way delay: 138.026 ms
Loss rate: 1.37%
-- Flow 1:
Average throughput: 125.48 Mbit/s
95th percentile per-packet one-way delay: 138.026 ms
Loss rate: 1.37%
Run 3: Report of TCP Cubic — Data Link

![Graph 1: Throughput (Mbps)]

- Flow 1 ingress (mean 126.06 Mbps)
- Flow 1 egress (mean 125.48 Mbps)

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

- Flow 1 (95th percentile 138.03 ms)
Run 4: Statistics of TCP Cubic

Start at: 2018-08-11 15:50:58
End at: 2018-08-11 15:51:28
Local clock offset: -0.4 ms
Remote clock offset: -0.152 ms

# Below is generated by plot.py at 2018-08-11 19:03:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 124.85 Mbit/s
95th percentile per-packet one-way delay: 138.945 ms
Loss rate: 1.37%
-- Flow 1:
Average throughput: 124.85 Mbit/s
95th percentile per-packet one-way delay: 138.945 ms
Loss rate: 1.37%
Run 4: Report of TCP Cubic — Data Link

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

- Flow 1 ingress (mean 125.43 Mbit/s)
- Flow 1 egress (mean 124.85 Mbit/s)

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

- Flow 1 (95th percentile 138.94 ms)
Run 5: Statistics of TCP Cubic

Start at: 2018-08-11 16:14:32
End at: 2018-08-11 16:15:02
Local clock offset: -0.793 ms
Remote clock offset: -0.082 ms

# Below is generated by plot.py at 2018-08-11 19:03:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 206.15 Mbit/s
95th percentile per-packet one-way delay: 138.914 ms
Loss rate: 1.16%
-- Flow 1:
Average throughput: 206.15 Mbit/s
95th percentile per-packet one-way delay: 138.914 ms
Loss rate: 1.16%
Run 5: Report of TCP Cubic — Data Link
Run 6: Statistics of TCP Cubic

Start at: 2018-08-11 16:38:20
End at: 2018-08-11 16:38:50
Local clock offset: -0.51 ms
Remote clock offset: -0.186 ms

# Below is generated by plot.py at 2018-08-11 19:03:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 139.52 Mbit/s
95th percentile per-packet one-way delay: 138.111 ms
Loss rate: 1.21%
-- Flow 1:
Average throughput: 139.52 Mbit/s
95th percentile per-packet one-way delay: 138.111 ms
Loss rate: 1.21%
Run 6: Report of TCP Cubic — Data Link

![Graph showing throughput and packet delay over time]

- **Throughput (kbps)**
  - Flow 1 ingress (mean 139.94 Mbit/s)
  - Flow 1 egress (mean 139.52 Mbit/s)

- **Packet delay (ms)**
  - Flow 1 (95th percentile 138.11 ms)
Run 7: Statistics of TCP Cubic

Start at: 2018-08-11 17:02:08
End at: 2018-08-11 17:02:38
Local clock offset: ~0.776 ms
Remote clock offset: 0.16 ms

# Below is generated by plot.py at 2018-08-11 19:03:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 119.37 Mbit/s
95th percentile per-packet one-way delay: 139.028 ms
Loss rate: 1.35%
-- Flow 1:
Average throughput: 119.37 Mbit/s
95th percentile per-packet one-way delay: 139.028 ms
Loss rate: 1.35%
Run 7: Report of TCP Cubic — Data Link
Run 8: Statistics of TCP Cubic

Start at: 2018-08-11 17:25:31
End at: 2018-08-11 17:26:01
Local clock offset: -0.672 ms
Remote clock offset: -0.203 ms

# Below is generated by plot.py at 2018-08-11 19:03:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 116.99 Mbit/s
95th percentile per-packet one-way delay: 145.850 ms
Loss rate: 2.88%
-- Flow 1:
Average throughput: 116.99 Mbit/s
95th percentile per-packet one-way delay: 145.850 ms
Loss rate: 2.88%
Run 8: Report of TCP Cubic — Data Link
Run 9: Statistics of TCP Cubic

Start at: 2018-08-11 17:49:15
End at: 2018-08-11 17:49:45
Local clock offset: 0.194 ms
Remote clock offset: 0.259 ms

# Below is generated by plot.py at 2018-08-11 19:03:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 100.96 Mbit/s
95th percentile per-packet one-way delay: 138.718 ms
Loss rate: 1.45%
-- Flow 1:
Average throughput: 100.96 Mbit/s
95th percentile per-packet one-way delay: 138.718 ms
Loss rate: 1.45%
Run 9: Report of TCP Cubic — Data Link

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

- Flow 1 ingress (mean 101.51 Mbit/s)
- Flow 1 egress (mean 100.96 Mbit/s)

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

- Flow 1 (95th percentile 138.72 ms)
Run 10: Statistics of TCP Cubic

Start at: 2018-08-11 18:12:37
End at: 2018-08-11 18:13:07
Local clock offset: 0.421 ms
Remote clock offset: -0.176 ms

# Below is generated by plot.py at 2018-08-11 19:03:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 100.36 Mbit/s
95th percentile per-packet one-way delay: 139.145 ms
Loss rate: 1.46%
-- Flow 1:
Average throughput: 100.36 Mbit/s
95th percentile per-packet one-way delay: 139.145 ms
Loss rate: 1.46%
Run 10: Report of TCP Cubic — Data Link

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

- Flow 1 ingress (mean 100.92 Mbit/s)
- Flow 1 egress (mean 100.36 Mbit/s)

![Graph 2: Round-trip delay vs. Time](image2)

- Flow 1 (95th percentile 139.15 ms)
Run 1: Statistics of FillP

Start at: 2018-08-11 14:57:06
End at: 2018-08-11 14:57:36
Local clock offset: -0.376 ms
Remote clock offset: -0.164 ms

# Below is generated by plot.py at 2018-08-11 19:15:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 700.94 Mbit/s
95th percentile per-packet one-way delay: 214.769 ms
Loss rate: 6.55%
-- Flow 1:
Average throughput: 700.94 Mbit/s
95th percentile per-packet one-way delay: 214.769 ms
Loss rate: 6.55%
Run 1: Report of FillP — Data Link

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

- Flow 1 Ingress (mean 743.28 Mbps)
- Flow 1 Egress (mean 700.94 Mbps)

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

- Flow 1 (95th percentile 214.77 ms)
Run 2: Statistics of FillP

Start at: 2018-08-11 15:21:03
End at: 2018-08-11 15:21:34
Local clock offset: -0.667 ms
Remote clock offset: -0.193 ms

# Below is generated by plot.py at 2018-08-11 19:15:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 689.28 Mbit/s
95th percentile per-packet one-way delay: 220.639 ms
Loss rate: 7.63%
-- Flow 1:
Average throughput: 689.28 Mbit/s
95th percentile per-packet one-way delay: 220.639 ms
Loss rate: 7.63%
Run 2: Report of FillP — Data Link

![Graph of Throughput vs. Time]

- **Flow 1 Ingress (mean 739.29 Mbit/s)**
- **Flow 1 Egress (mean 689.28 Mbit/s)**

![Graph of Packet Delivery vs. Time]

- **Flow 1 (95th percentile 220.64 ms)**
Run 3: Statistics of FillP

Start at: 2018-08-11 15:45:14
End at: 2018-08-11 15:45:45
Local clock offset: -0.541 ms
Remote clock offset: -0.266 ms

# Below is generated by plot.py at 2018-08-11 19:15:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 683.63 Mbit/s
95th percentile per-packet one-way delay: 221.411 ms
Loss rate: 7.99%
-- Flow 1:
Average throughput: 683.63 Mbit/s
95th percentile per-packet one-way delay: 221.411 ms
Loss rate: 7.99%
Run 3: Report of FillP — Data Link

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

- Flow 1 ingress (mean 736.25 Mbit/s)
- Flow 1 egress (mean 683.63 Mbit/s)

- Flow 1 (95th percentile 221.41 ms)
Run 4: Statistics of FillP

Start at: 2018-08-11 16:08:45
End at: 2018-08-11 16:09:15
Local clock offset: -0.468 ms
Remote clock offset: 0.257 ms

# Below is generated by plot.py at 2018-08-11 19:17:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 785.84 Mbit/s
95th percentile per-packet one-way delay: 217.116 ms
Loss rate: 5.37%
-- Flow 1:
Average throughput: 785.84 Mbit/s
95th percentile per-packet one-way delay: 217.116 ms
Loss rate: 5.37%
Run 4: Report of FillP — Data Link
Run 5: Statistics of FillP

Start at: 2018-08-11 16:32:39
End at: 2018-08-11 16:33:09
Local clock offset: -0.757 ms
Remote clock offset: 0.175 ms

# Below is generated by plot.py at 2018-08-11 19:17:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 704.99 Mbit/s
95th percentile per-packet one-way delay: 222.473 ms
Loss rate: 7.54%
-- Flow 1:
Average throughput: 704.99 Mbit/s
95th percentile per-packet one-way delay: 222.473 ms
Loss rate: 7.54%
Run 5: Report of FillP — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 755.57 Mbps)  Flow 1 egress (mean 704.99 Mbps)

Packet delivery over delay (ms)

Flow 1 (95th percentile 222.47 ms)
Run 6: Statistics of FillP

Start at: 2018-08-11 16:56:22
End at: 2018-08-11 16:56:52
Local clock offset: -0.861 ms
Remote clock offset: -0.31 ms

# Below is generated by plot.py at 2018-08-11 19:17:26
# Datalink statistics
-- Total of 1 flow:
Average throughput: 735.28 Mbit/s
95th percentile per-packet one-way delay: 219.147 ms
Loss rate: 7.45%
-- Flow 1:
Average throughput: 735.28 Mbit/s
95th percentile per-packet one-way delay: 219.147 ms
Loss rate: 7.45%
Run 6: Report of FillP — Data Link

![Graph 1: Throughput (Mbps)]

- **Flow 1 Ingress (mean 787.23 Mbps)**
- **Flow 1 Egress (mean 735.28 Mbps)**

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

- **Flow 1 (95th percentile 219.15 ms)**
Run 7: Statistics of FillP

Start at: 2018-08-11 17:19:44
End at: 2018-08-11 17:20:14
Local clock offset: -0.838 ms
Remote clock offset: -0.235 ms

# Below is generated by plot.py at 2018-08-11 19:18:16
# Datalink statistics
-- Total of 1 flow:
Average throughput: 784.37 Mbit/s
95th percentile per-packet one-way delay: 210.109 ms
Loss rate: 5.32%
-- Flow 1:
Average throughput: 784.37 Mbit/s
95th percentile per-packet one-way delay: 210.109 ms
Loss rate: 5.32%
Run 7: Report of FillP — Data Link

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

- Flow 1 ingress (mean 820.92 Mbps)
- Flow 1 egress (mean 784.37 Mbps)

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

Flow 1 (95th percentile 210.11 ms)
Run 8: Statistics of FillP

Start at: 2018-08-11 17:43:27
End at: 2018-08-11 17:43:57
Local clock offset: 0.324 ms
Remote clock offset: 0.219 ms

# Below is generated by plot.py at 2018-08-11 19:19:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 797.88 Mbit/s
95th percentile per-packet one-way delay: 205.511 ms
Loss rate: 4.74%
-- Flow 1:
Average throughput: 797.88 Mbit/s
95th percentile per-packet one-way delay: 205.511 ms
Loss rate: 4.74%
Run 8: Report of FillP — Data Link

![Graph of Throughput](image1)

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

- Flow 1 ingress (mean 829.97 Mb/s)
- Flow 1 egress (mean 797.88 Mb/s)

![Graph of Packet Delay](image2)

**Packet Delay (ms) vs Time (s)**

- Flow 1 (95th percentile 205.51 ms)
Run 9: Statistics of FillP

Start at: 2018-08-11 18:06:46
End at: 2018-08-11 18:07:16
Local clock offset: 0.536 ms
Remote clock offset: -0.211 ms

# Below is generated by plot.py at 2018-08-11 19:32:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 843.85 Mbit/s
95th percentile per-packet one-way delay: 195.403 ms
Loss rate: 2.27%
-- Flow 1:
Average throughput: 843.85 Mbit/s
95th percentile per-packet one-way delay: 195.403 ms
Loss rate: 2.27%
Run 9: Report of FillP — Data Link

---

**Throughput (Mbps)**

- Flow 1 ingress (mean 855.61 Mbps)
- Flow 1 egress (mean 843.85 Mbps)

---

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

- Flow 1 (95th percentile 195.40 ms)
Run 10: Statistics of FillP

Start at: 2018-08-11 18:30:06
End at: 2018-08-11 18:30:36
Local clock offset: 0.87 ms
Remote clock offset: -0.285 ms

# Below is generated by plot.py at 2018-08-11 19:32:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 743.75 Mbit/s
95th percentile per-packet one-way delay: 213.089 ms
Loss rate: 6.55%
-- Flow 1:
Average throughput: 743.75 Mbit/s
95th percentile per-packet one-way delay: 213.089 ms
Loss rate: 6.55%
Run 10: Report of FillP — Data Link

![Graph of throughput and delay over time for two flows.]

- Flow 1 ingress (mean 788.71 Mbits) vs. Flow 1 egress (mean 743.75 Mbits)
- Flow 1 (95th percentile 213.09 ms)
Run 1: Statistics of FillP-Sheep

Start at: 2018-08-11 14:37:44
End at: 2018-08-11 14:38:14
Local clock offset: -0.442 ms
Remote clock offset: -0.264 ms

# Below is generated by plot.py at 2018-08-11 19:32:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 743.64 Mbit/s
95th percentile per-packet one-way delay: 206.947 ms
Loss rate: 5.68%
-- Flow 1:
Average throughput: 743.64 Mbit/s
95th percentile per-packet one-way delay: 206.947 ms
Loss rate: 5.68%
Run 1: Report of FillP-Sheep — Data Link

- Flow 1 ingress (mean 781.28 Mbit/s)
- Flow 1 egress (mean 743.64 Mbit/s)

Flow 1 (95th percentile 206.95 ms)
Run 2: Statistics of FillP-Sheep

Start at: 2018-08-11 15:01:05
End at: 2018-08-11 15:01:35
Local clock offset: -0.375 ms
Remote clock offset: -0.476 ms

# Below is generated by plot.py at 2018-08-11 19:32:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 686.71 Mbit/s
95th percentile per-packet one-way delay: 228.616 ms
Loss rate: 9.96%
-- Flow 1:
Average throughput: 686.71 Mbit/s
95th percentile per-packet one-way delay: 228.616 ms
Loss rate: 9.96%
Run 2: Report of FillP-Sheep — Data Link

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

- **Flow 1 ingress (mean 755.75 Mbit/s)**
- **Flow 1 egress (mean 686.71 Mbit/s)**

![Graph 2: Per-packet end-to-end delay vs. Time](Image)

- **Flow 1 (95th percentile 228.62 ms)**
Run 3: Statistics of FillP-Sheep

Start at: 2018-08-11 15:25:12
End at: 2018-08-11 15:25:42
Local clock offset: -0.415 ms
Remote clock offset: -0.14 ms

# Below is generated by plot.py at 2018-08-11 19:32:03
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 663.66 Mbit/s
  95th percentile per-packet one-way delay: 240.408 ms
  Loss rate: 10.87%
-- Flow 1:
  Average throughput: 663.66 Mbit/s
  95th percentile per-packet one-way delay: 240.408 ms
  Loss rate: 10.87%
Run 3: Report of FillP-Sheep — Data Link

![Graph showing throughput and packet delay over time]

- **Flow 1 Ingress (mean 737.87 Mb/s)**
- **Flow 1 Egress (mean 663.66 Mb/s)**

- **Flow 1 (95th percentile 240.41 ms)**
Run 4: Statistics of FillP-Sheep

Start at: 2018-08-11 15:49:14
End at: 2018-08-11 15:49:44
Local clock offset: -0.673 ms
Remote clock offset: -0.229 ms

# Below is generated by plot.py at 2018-08-11 19:32:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 709.97 Mbit/s
95th percentile per-packet one-way delay: 217.042 ms
Loss rate: 9.66%
-- Flow 1:
Average throughput: 709.97 Mbit/s
95th percentile per-packet one-way delay: 217.042 ms
Loss rate: 9.66%
Run 4: Report of FillP-Sheep — Data Link

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

- **Flow 1 Ingress (mean 778.75 Mbps)**
- **Flow 1 Egress (mean 709.97 Mbps)**

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

- **Flow 1 (95th percentile 217.04 ms)**
Run 5: Statistics of FillP-Sheep

Start at: 2018-08-11 16:12:49
End at: 2018-08-11 16:13:19
Local clock offset: -0.731 ms
Remote clock offset: -0.155 ms

# Below is generated by plot.py at 2018-08-11 19:32:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 691.74 Mbit/s
95th percentile per-packet one-way delay: 231.127 ms
Loss rate: 9.14%
-- Flow 1:
Average throughput: 691.74 Mbit/s
95th percentile per-packet one-way delay: 231.127 ms
Loss rate: 9.14%
Run 5: Report of FillP-Sheep — Data Link
Run 6: Statistics of FillP-Sheep

Start at: 2018-08-11 16:36:39
End at: 2018-08-11 16:37:09
Local clock offset: ~0.901 ms
Remote clock offset: 0.169 ms

# Below is generated by plot.py at 2018-08-11 19:34:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 639.10 Mbit/s
95th percentile per-packet one-way delay: 230.028 ms
Loss rate: 10.25%
-- Flow 1:
Average throughput: 639.10 Mbit/s
95th percentile per-packet one-way delay: 230.028 ms
Loss rate: 10.25%
Run 6: Report of FillP-Sheep — Data Link
Run 7: Statistics of FillP-Sheep

Start at: 2018-08-11 17:00:24
End at: 2018-08-11 17:00:54
Local clock offset: -0.627 ms
Remote clock offset: -0.211 ms

# Below is generated by plot.py at 2018-08-11 19:44:26
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 697.22 Mbit/s
  95th percentile per-packet one-way delay: 217.181 ms
  Loss rate: 7.96%
-- Flow 1:
  Average throughput: 697.22 Mbit/s
  95th percentile per-packet one-way delay: 217.181 ms
  Loss rate: 7.96%
Run 7: Report of FillP-Sheep — Data Link

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

- Flow 1 ingress (mean 750.61 Mbit/s)
- Flow 1 egress (mean 697.22 Mbit/s)

- Flow 1 (95th percentile 217.18 ms)
Run 8: Statistics of FillP-Sheep

Start at: 2018-08-11 17:23:47
End at: 2018-08-11 17:24:17
Local clock offset: -0.743 ms
Remote clock offset: -0.233 ms

# Below is generated by plot.py at 2018-08-11 19:44:50
# Datalink statistics
--- Total of 1 flow:
Average throughput: 725.92 Mbit/s
95th percentile per-packet one-way delay: 213.276 ms
Loss rate: 7.32%
--- Flow 1:
Average throughput: 725.92 Mbit/s
95th percentile per-packet one-way delay: 213.276 ms
Loss rate: 7.32%
Run 8: Report of FillP-Sheep — Data Link

![Graph showing throughput and delay over time with different flow rates and delays.]

- Flow 1 ingress (mean 776.23 Mbps)
- Flow 1 egress (mean 725.92 Mbps)

Flow 1 (95th percentile 213.28 ms)
Run 9: Statistics of FillP-Sheep

Start at: 2018-08-11 17:47:31
End at: 2018-08-11 17:48:01
Local clock offset: 0.315 ms
Remote clock offset: -0.092 ms

# Below is generated by plot.py at 2018-08-11 19:44:53
# Datalink statistics
-- Total of 1 flow:
Average throughput: 722.27 Mbit/s
95th percentile per-packet one-way delay: 211.958 ms
Loss rate: 6.43%
-- Flow 1:
Average throughput: 722.27 Mbit/s
95th percentile per-packet one-way delay: 211.958 ms
Loss rate: 6.43%
Run 9: Report of FillP-Sheep — Data Link
Run 10: Statistics of FillP-Sheep

Start at: 2018-08-11 18:10:51
End at: 2018-08-11 18:11:21
Local clock offset: 0.298 ms
Remote clock offset: 0.138 ms

# Below is generated by plot.py at 2018-08-11 19:47:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 740.37 Mbit/s
95th percentile per-packet one-way delay: 210.472 ms
Loss rate: 5.76%
-- Flow 1:
Average throughput: 740.37 Mbit/s
95th percentile per-packet one-way delay: 210.472 ms
Loss rate: 5.76%
Run 10: Report of FillP-Sheep — Data Link

Throughput (Mbits/s)

Time (s)

Flow 1 ingress (mean 778.56 Mbits/s)  Flow 1 egress (mean 740.37 Mbits/s)

Per packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 210.47 ms)
Run 1: Statistics of Indigo

Start at: 2018-08-11 14:53:23
End at: 2018-08-11 14:53:53
Local clock offset: -0.508 ms
Remote clock offset: 0.15 ms

# Below is generated by plot.py at 2018-08-11 19:47:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 173.44 Mbit/s
95th percentile per-packet one-way delay: 135.552 ms
Loss rate: 0.92%
-- Flow 1:
Average throughput: 173.44 Mbit/s
95th percentile per-packet one-way delay: 135.552 ms
Loss rate: 0.92%
Run 1: Report of Indigo — Data Link

![Graph showing throughput and delay over time for 105 seconds.]

- **Flow 1 ingress (mean 173.40 Mbit/s)**
- **Flow 1 egress (mean 173.44 Mbit/s)**

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

- **Flow 1 (95th percentile 135.55 ms)**
Run 2: Statistics of Indigo

Start at: 2018-08-11 15:17:18
End at: 2018-08-11 15:17:48
Local clock offset: -0.414 ms
Remote clock offset: -0.216 ms

# Below is generated by plot.py at 2018-08-11 19:47:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 162.28 Mbit/s
95th percentile per-packet one-way delay: 136.109 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 162.28 Mbit/s
95th percentile per-packet one-way delay: 136.109 ms
Loss rate: 0.80%
Run 2: Report of Indigo — Data Link

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

![Graph 2: Packet Delay](image2.png)
Run 3: Statistics of Indigo

Start at: 2018-08-11 15:41:35
End at: 2018-08-11 15:42:05
Local clock offset: -0.365 ms
Remote clock offset: -0.614 ms

# Below is generated by plot.py at 2018-08-11 19:47:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 167.65 Mbit/s
95th percentile per-packet one-way delay: 136.611 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 167.65 Mbit/s
95th percentile per-packet one-way delay: 136.611 ms
Loss rate: 0.83%
Run 3: Report of Indigo — Data Link

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

- Flow 1 ingress (mean 167.51 Mbit/s)
- Flow 1 egress (mean 167.65 Mbit/s)

![Graph showing packet delay distribution for Flow 1 (95th percentile 136.61 ms).]
Run 4: Statistics of Indigo

Start at: 2018-08-11 16:05:02
End at: 2018-08-11 16:05:33
Local clock offset: -0.429 ms
Remote clock offset: 0.247 ms

# Below is generated by plot.py at 2018-08-11 19:47:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 160.28 Mbit/s
95th percentile per-packet one-way delay: 136.775 ms
Loss rate: 0.84%
-- Flow 1:
  Average throughput: 160.28 Mbit/s
  95th percentile per-packet one-way delay: 136.775 ms
  Loss rate: 0.84%
Run 4: Report of Indigo — Data Link

![Network Performance Graphs]

1. **Throughput Graph**
   - Vertical Axis: Throughput (Mbps)
   - Horizontal Axis: Time (s)
   - Legend:
     - Dotted line: Flow 1 ingress (mean 160.14 Mbit/s)
     - Solid line: Flow 1 egress (mean 160.28 Mbit/s)

2. **Delay Graph**
   - Vertical Axis: Per packet one way delay (ms)
   - Horizontal Axis: Time (s)
   - Marker: Flow 1 (95th percentile 136.78 ms)
Run 5: Statistics of Indigo

Start at: 2018-08-11 16:28:57
End at: 2018-08-11 16:29:27
Local clock offset: -0.586 ms
Remote clock offset: -0.538 ms

# Below is generated by plot.py at 2018-08-11 19:47:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 168.18 Mbit/s
95th percentile per-packet one-way delay: 136.627 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 168.18 Mbit/s
95th percentile per-packet one-way delay: 136.627 ms
Loss rate: 0.82%
Run 5: Report of Indigo — Data Link

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

- Flow 1 ingress (mean 168.04 Mbit/s)
- Flow 1 egress (mean 168.18 Mbit/s)

![Graph showing packet delay over time for data link]

- Flow 1 (95th percentile 136.63 ms)
Run 6: Statistics of Indigo

Start at: 2018-08-11 16:52:39
End at: 2018-08-11 16:53:09
Local clock offset: -0.719 ms
Remote clock offset: -0.557 ms

# Below is generated by plot.py at 2018-08-11 19:47:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 170.25 Mbit/s
95th percentile per-packet one-way delay: 137.236 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 170.25 Mbit/s
95th percentile per-packet one-way delay: 137.236 ms
Loss rate: 0.86%
Run 6: Report of Indigo — Data Link
Run 7: Statistics of Indigo

Start at: 2018-08-11 17:16:02
End at: 2018-08-11 17:16:32
Local clock offset: -0.854 ms
Remote clock offset: -0.232 ms

# Below is generated by plot.py at 2018-08-11 19:47:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 170.16 Mbit/s
95th percentile per-packet one-way delay: 136.808 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 170.16 Mbit/s
95th percentile per-packet one-way delay: 136.808 ms
Loss rate: 0.85%
Run 7: Report of Indigo — Data Link

![Graph of throughput over time with two distinct lines representing flow ingress and egress data.]

![Graph of packet delay over time with a scatter plot showing flow 1's 95th percentile delay.]
Run 8: Statistics of Indigo

Start at: 2018-08-11 17:39:44
End at: 2018-08-11 17:40:14
Local clock offset: 0.02 ms
Remote clock offset: -0.131 ms

# Below is generated by plot.py at 2018-08-11 19:47:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 170.87 Mbit/s
95th percentile per-packet one-way delay: 136.049 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 170.87 Mbit/s
95th percentile per-packet one-way delay: 136.049 ms
Loss rate: 0.86%
Run 8: Report of Indigo — Data Link

![Graph 1: Throughput (Mbps)]

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

Flow 1 ingress (mean 170.77 Mbit/s) — Flow 1 egress (mean 170.87 Mbit/s)

Flow 1 (95th percentile 136.05 ms)
Run 9: Statistics of Indigo

Start at: 2018-08-11 18:03:06
End at: 2018-08-11 18:03:36
Local clock offset: 0.338 ms
Remote clock offset: -0.114 ms

# Below is generated by plot.py at 2018-08-11 19:47:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 129.89 Mbit/s
95th percentile per-packet one-way delay: 136.794 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 129.89 Mbit/s
95th percentile per-packet one-way delay: 136.794 ms
Loss rate: 0.98%
Run 9: Report of Indigo — Data Link
Run 10: Statistics of Indigo

Start at: 2018-08-11 18:26:20
End at: 2018-08-11 18:26:50
Local clock offset: 0.557 ms
Remote clock offset: -0.393 ms

# Below is generated by plot.py at 2018-08-11 19:47:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 170.96 Mbit/s
95th percentile per-packet one-way delay: 136.903 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 170.96 Mbit/s
95th percentile per-packet one-way delay: 136.903 ms
Loss rate: 0.84%
Run 10: Report of Indigo — Data Link

![Graph showing throughput and packet delay over time. The graph depicts two lines indicating flow ingress and egress, with peak values and fluctuations over time. The x-axis represents time in seconds, ranging from 0 to 30, and the y-axis represents throughput in MB/s. The packet delay graph shows a distribution of delays, with most values clustered around the 95th percentile at 136.90 ms.](image-url)
Run 1: Statistics of LEDBAT

Start at: 2018-08-11 14:55:56
End at: 2018-08-11 14:56:26
Local clock offset: -0.49 ms
Remote clock offset: -0.542 ms

# Below is generated by plot.py at 2018-08-11 19:47:12
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 4.79 Mbit/s
  95th percentile per-packet one-way delay: 137.202 ms
  Loss rate: 1.83%
-- Flow 1:
  Average throughput: 4.79 Mbit/s
  95th percentile per-packet one-way delay: 137.202 ms
  Loss rate: 1.83%
Run 1: Report of LEDBAT — Data Link

Throughput (Mbit/s) vs Time (s)
- Flow 1 ingress (mean 4.84 Mbit/s)
- Flow 1 egress (mean 4.76 Mbit/s)

Round trip time (ms) vs Time (s)
- Flow 1 (95th percentile 137.20 ms)
Run 2: Statistics of LEDBAT

Start at: 2018-08-11 15:19:54
End at: 2018-08-11 15:20:25
Local clock offset: -0.469 ms
Remote clock offset: -0.214 ms

# Below is generated by plot.py at 2018-08-11 19:47:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 3.30 Mbit/s
95th percentile per-packet one-way delay: 136.793 ms
Loss rate: 2.13%
-- Flow 1:
Average throughput: 3.30 Mbit/s
95th percentile per-packet one-way delay: 136.793 ms
Loss rate: 2.13%
Run 2: Report of LEDBAT — Data Link

![Throughput vs Time](chart1.png)

- **Flow 1 ingress (mean 3.37 Mbit/s)**
- **Flow 1 egress (mean 3.30 Mbit/s)**

![Packet Delay vs Time](chart2.png)

- **Flow 1 (95th percentile 136.79 ms)**
Run 3: Statistics of LEDBAT

Start at: 2018-08-11 15:44:06
End at: 2018-08-11 15:44:36
Local clock offset: -0.549 ms
Remote clock offset: -0.567 ms

# Below is generated by plot.py at 2018-08-11 19:47:12
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.35 Mbit/s
  95th percentile per-packet one-way delay: 136.833 ms
  Loss rate: 2.08%
-- Flow 1:
  Average throughput: 0.35 Mbit/s
  95th percentile per-packet one-way delay: 136.833 ms
  Loss rate: 2.08%
Run 3: Report of LEDBAT — Data Link

![Graph of Throughput vs Time]

- Flow 1 ingress (mean 0.36 Mbit/s)
- Flow 1 egress (mean 0.35 Mbit/s)

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

- Flow 1 (95th percentile 136.83 ms)
Run 4: Statistics of LEDBAT

Start at: 2018-08-11 16:07:35
End at: 2018-08-11 16:08:05
Local clock offset: -0.745 ms
Remote clock offset: 0.264 ms

# Below is generated by plot.py at 2018-08-11 19:47:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 4.80 Mbit/s
95th percentile per-packet one-way delay: 137.360 ms
Loss rate: 1.84%
-- Flow 1:
Average throughput: 4.80 Mbit/s
95th percentile per-packet one-way delay: 137.360 ms
Loss rate: 1.84%
Run 4: Report of LEDBAT — Data Link
Run 5: Statistics of LEDBAT

Start at: 2018-08-11 16:31:31
End at: 2018-08-11 16:32:01
Local clock offset: -0.539 ms
Remote clock offset: 0.193 ms

# Below is generated by plot.py at 2018-08-11 19:47:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.23 Mbit/s
95th percentile per-packet one-way delay: 136.361 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 0.23 Mbit/s
95th percentile per-packet one-way delay: 136.361 ms
Loss rate: 0.82%
Run 5: Report of LEDBAT — Data Link

![Throughput and Delay Graphs]

Throughput (Mbps)

Time (s)
Flow 1 ingress (mean 0.23 Mbps)  Flow 1 egress (mean 0.23 Mbps)

Percent of one-way delay (ms)

Time (s)
Flow 1 (95th percentile 136.36 ms)
Run 6: Statistics of LEDBAT

Start at: 2018-08-11 16:55:12
End at: 2018-08-11 16:55:42
Local clock offset: -0.828 ms
Remote clock offset: -0.273 ms

# Below is generated by plot.py at 2018-08-11 19:47:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 4.79 Mbit/s
95th percentile per-packet one-way delay: 137.741 ms
Loss rate: 1.84%
-- Flow 1:
Average throughput: 4.79 Mbit/s
95th percentile per-packet one-way delay: 137.741 ms
Loss rate: 1.84%
Run 6: Report of LEDBAT — Data Link

![Graph of throughput and FDDI round-trip delay vs. time](image)

- **Flow 1 ingress (mean 4.84 Mbit/s)**
- **Flow 1 egress (mean 4.79 Mbit/s)**

![Graph of FDDI round-trip delay vs. time](image)

- **Flow 1 (90th percentile 137.74 ms)**
Run 7: Statistics of LEDBAT

Start at: 2018-08-11 17:18:35
End at: 2018-08-11 17:19:05
Local clock offset: -0.66 ms
Remote clock offset: -0.59 ms

# Below is generated by plot.py at 2018-08-11 19:47:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 4.81 Mbit/s
95th percentile per-packet one-way delay: 138.101 ms
Loss rate: 1.83%
-- Flow 1:
Average throughput: 4.81 Mbit/s
95th percentile per-packet one-way delay: 138.101 ms
Loss rate: 1.83%
Run 7: Report of LEDBAT — Data Link

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

- **Flow 1 ingress (mean 4.85 Mbit/s)**
- **Flow 1 egress (mean 4.81 Mbit/s)**

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

- **Flow 1 (95th percentile 138.10 ms)**
Run 8: Statistics of LEDBAT

Start at: 2018-08-11 17:42:18
End at: 2018-08-11 17:42:48
Local clock offset: -0.102 ms
Remote clock offset: -0.501 ms

# Below is generated by plot.py at 2018-08-11 19:47:12
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 4.81 Mbit/s
  95th percentile per-packet one-way delay: 137.237 ms
  Loss rate: 1.83%
-- Flow 1:
  Average throughput: 4.81 Mbit/s
  95th percentile per-packet one-way delay: 137.237 ms
  Loss rate: 1.83%
Run 9: Statistics of LEDBAT

Start at: 2018-08-11 18:05:37
End at: 2018-08-11 18:06:07
Local clock offset: 0.464 ms
Remote clock offset: 0.202 ms

# Below is generated by plot.py at 2018-08-11 19:47:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 4.80 Mbit/s
95th percentile per-packet one-way delay: 137.482 ms
Loss rate: 1.83%
-- Flow 1:
Average throughput: 4.80 Mbit/s
95th percentile per-packet one-way delay: 137.482 ms
Loss rate: 1.83%
Run 9: Report of LEDBAT — Data Link

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

![Graph showing packet one-way delay vs time with a note for flow 1, 95th percentile 137.48 ms]
Run 10: Statistics of LEDBAT

Start at: 2018-08-11 18:28:56
End at: 2018-08-11 18:29:26
Local clock offset: 0.745 ms
Remote clock offset: -0.311 ms

# Below is generated by plot.py at 2018-08-11 19:47:12
# Datalink statistics
-- Total of 1 flow:
Average throughput: 4.79 Mbit/s
95th percentile per-packet one-way delay: 137.783 ms
Loss rate: 1.84%
-- Flow 1:
Average throughput: 4.79 Mbit/s
95th percentile per-packet one-way delay: 137.783 ms
Loss rate: 1.84%
Run 10: Report of LEDBAT — Data Link

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Graph 1: Throughput (Mbps/s) vs Time (s)
- Dashed line: Flow 1 ingress (mean 4.84 Mbps/s)
- Solid line: Flow 1 egress (mean 4.76 Mbps/s)

Graph 2: Per-packet one-way delay (ms) vs Time (s)
- Marker: Flow 1 (99th percentile 137.78 ms)
Run 1: Statistics of PCC-Allegro

Start at: 2018-08-11 14:51:51
End at: 2018-08-11 14:52:21
Local clock offset: -0.482 ms
Remote clock offset: -0.158 ms

# Below is generated by plot.py at 2018-08-11 19:48:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 554.28 Mbit/s
95th percentile per-packet one-way delay: 144.258 ms
Loss rate: 2.06%
-- Flow 1:
Average throughput: 554.28 Mbit/s
95th percentile per-packet one-way delay: 144.258 ms
Loss rate: 2.06%
Run 1: Report of PCC-Allegro — Data Link
Run 2: Statistics of PCC-Allegro

Start at: 2018-08-11 15:15:37
End at: 2018-08-11 15:16:07
Local clock offset: -0.606 ms
Remote clock offset: -0.227 ms

# Below is generated by plot.py at 2018-08-11 19:49:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 564.64 Mbit/s
95th percentile per-packet one-way delay: 206.672 ms
Loss rate: 2.38%
-- Flow 1:
Average throughput: 564.64 Mbit/s
95th percentile per-packet one-way delay: 206.672 ms
Loss rate: 2.38%
Run 2: Report of PCC-Allegro — Data Link

![Graph 1: Throughput vs Time]  
Flow 1 ingress (mean 573.11 Mbit/s)  
Flow 1 egress (mean 564.64 Mbit/s)

![Graph 2: Per-packet one-way delay vs Time]  
Flow 1 (95th percentile 206.67 ms)
Run 3: Statistics of PCC-Allegro

Start at: 2018-08-11 15:40:00
End at: 2018-08-11 15:40:30
Local clock offset: -0.51 ms
Remote clock offset: 0.093 ms

# Below is generated by plot.py at 2018-08-11 19:49:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 557.70 Mbit/s
95th percentile per-packet one-way delay: 174.543 ms
Loss rate: 2.26%
-- Flow 1:
Average throughput: 557.70 Mbit/s
95th percentile per-packet one-way delay: 174.543 ms
Loss rate: 2.26%
Run 3: Report of PCC-Allegro — Data Link

![Graph of Throughput vs. Time](image1)

- Flow 1 ingress (mean 365.38 Mbit/s)
- Flow 1 egress (mean 557.70 Mbit/s)

![Graph of Per Packet End-to-End Delay vs. Time](image2)

- Flow 1 (99th percentile 174.54 ms)
Run 4: Statistics of PCC-Allegro

Start at: 2018-08-11 16:03:32
End at: 2018-08-11 16:04:02
Local clock offset: -0.466 ms
Remote clock offset: -0.101 ms

# Below is generated by plot.py at 2018-08-11 19:49:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 525.40 Mbit/s
95th percentile per-packet one-way delay: 208.863 ms
Loss rate: 2.04%
-- Flow 1:
Average throughput: 525.40 Mbit/s
95th percentile per-packet one-way delay: 208.863 ms
Loss rate: 2.04%
Run 4: Report of PCC-Allegro — Data Link

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

- **Flow 1 ingress (mean 531.46 Mb/s)**
- **Flow 1 egress (mean 525.40 Mb/s)**

![Flow 1 (95th percentile 208.86 ms)]
Run 5: Statistics of PCC-Allegro

Start at: 2018-08-11 16:27:27  
End at: 2018-08-11 16:27:57  
Local clock offset: -0.657 ms  
Remote clock offset: -0.187 ms

# Below is generated by plot.py at 2018-08-11 19:53:45  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 517.53 Mbit/s  
95th percentile per-packet one-way delay: 211.384 ms  
Loss rate: 2.27%  
-- Flow 1:  
Average throughput: 517.53 Mbit/s  
95th percentile per-packet one-way delay: 211.384 ms  
Loss rate: 2.27%
Run 5: Report of PCC-Allegro — Data Link
Run 6: Statistics of PCC-Allegro

Start at: 2018-08-11 16:51:07
End at: 2018-08-11 16:51:37
Local clock offset: -0.774 ms
Remote clock offset: 0.142 ms

# Below is generated by plot.py at 2018-08-11 19:54:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 537.60 Mbit/s
95th percentile per-packet one-way delay: 184.023 ms
Loss rate: 1.52%
-- Flow 1:
Average throughput: 537.60 Mbit/s
95th percentile per-packet one-way delay: 184.023 ms
Loss rate: 1.52%
Run 6: Report of PCC-Allegro — Data Link
Run 7: Statistics of PCC-Allegro

Start at: 2018-08-11 17:14:27
End at: 2018-08-11 17:14:57
Local clock offset: -0.997 ms
Remote clock offset: -0.208 ms

# Below is generated by plot.py at 2018-08-11 19:56:20
# Datalink statistics
-- Total of 1 flow:
Average throughput: 608.67 Mbit/s
95th percentile per-packet one-way delay: 282.579 ms
Loss rate: 8.98%
-- Flow 1:
Average throughput: 608.67 Mbit/s
95th percentile per-packet one-way delay: 282.579 ms
Loss rate: 8.98%
Run 7: Report of PCC-Allegro — Data Link
Run 8: Statistics of PCC-Allegro

Start at: 2018-08-11 17:38:13
End at: 2018-08-11 17:38:43
Local clock offset: -0.177 ms
Remote clock offset: -0.195 ms

# Below is generated by plot.py at 2018-08-11 19:56:57
# Datalink statistics
-- Total of 1 flow:
Average throughput: 538.48 Mbit/s
95th percentile per-packet one-way delay: 210.171 ms
Loss rate: 2.33%
-- Flow 1:
Average throughput: 538.48 Mbit/s
95th percentile per-packet one-way delay: 210.171 ms
Loss rate: 2.33%
Run 8: Report of PCC-Allegro — Data Link

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

- **Flow 1 Ingress (mean 546.31 Mbits)**
- **Flow 1 Egress (mean 538.48 Mbits)**

![Graph of Per-Packet One-Way Delay vs Time](image2.png)

- **Flow 1 (95th percentile 210.17 ms)**
Run 9: Statistics of PCC-Allegro

Start at: 2018-08-11 18:01:35
End at: 2018-08-11 18:02:05
Local clock offset: 0.504 ms
Remote clock offset: -0.093 ms

# Below is generated by plot.py at 2018-08-11 19:58:47
# Datalink statistics
-- Total of 1 flow:
Average throughput: 548.42 Mbit/s
95th percentile per-packet one-way delay: 162.052 ms
Loss rate: 2.45%
-- Flow 1:
Average throughput: 548.42 Mbit/s
95th percentile per-packet one-way delay: 162.052 ms
Loss rate: 2.45%
Run 9: Report of PCC-Allegro — Data Link

![Graph of throughput over time for Flow 1 ingress and egress. ]

- Flow 1 ingress (mean 357.05 Mb/s)
- Flow 1 egress (mean 548.42 Mb/s)

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

- Flow 1 (95th percentile 162.85 ms)
Run 10: Statistics of PCC-Allegro

Start at: 2018-08-11 18:24:49
End at: 2018-08-11 18:25:19
Local clock offset: 0.696 ms
Remote clock offset: -0.625 ms

# Below is generated by plot.py at 2018-08-11 19:58:47
# Datalink statistics
-- Total of 1 flow:
Average throughput: 514.80 Mbit/s
95th percentile per-packet one-way delay: 160.768 ms
Loss rate: 2.17%
-- Flow 1:
Average throughput: 514.80 Mbit/s
95th percentile per-packet one-way delay: 160.768 ms
Loss rate: 2.17%
Run 10: Report of PCC-Allegro — Data Link
Run 1: Statistics of PCC-Expr

Start at: 2018-08-11 14:45:48
End at: 2018-08-11 14:46:18
Local clock offset: -0.352 ms
Remote clock offset: -0.174 ms

# Below is generated by plot.py at 2018-08-11 19:59:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 297.93 Mbit/s
95th percentile per-packet one-way delay: 224.823 ms
Loss rate: 1.65%
-- Flow 1:
Average throughput: 297.93 Mbit/s
95th percentile per-packet one-way delay: 224.823 ms
Loss rate: 1.65%
Run 1: Report of PCC-Expr — Data Link
Run 2: Statistics of PCC-Expr

Start at: 2018-08-11 15:09:27
End at: 2018-08-11 15:09:57
Local clock offset: -0.341 ms
Remote clock offset: -0.517 ms

# Below is generated by plot.py at 2018-08-11 19:59:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 199.59 Mbit/s
95th percentile per-packet one-way delay: 136.346 ms
Loss rate: 1.02%
-- Flow 1:
Average throughput: 199.59 Mbit/s
95th percentile per-packet one-way delay: 136.346 ms
Loss rate: 1.02%
Run 2: Report of PCC-Expr — Data Link

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

- Flow 1 ingress (mean 199.82 Mbit/s)
- Flow 1 egress (mean 199.59 Mbit/s)

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

- Flow 1 (95th percentile 136.35 ms)
Run 3: Statistics of PCC-Expr

Start at: 2018-08-11 15:33:28
End at: 2018-08-11 15:33:58
Local clock offset: -0.456 ms
Remote clock offset: 0.112 ms

# Below is generated by plot.py at 2018-08-11 20:04:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 314.00 Mbit/s
95th percentile per-packet one-way delay: 252.829 ms
Loss rate: 1.72%
-- Flow 1:
Average throughput: 314.00 Mbit/s
95th percentile per-packet one-way delay: 252.829 ms
Loss rate: 1.72%
Run 3: Report of PCC-Expr — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 316.58 Mbps)
  - Flow 1 egress (mean 314.00 Mbps)

- **Per-packet one-way delay (ms):**
  - Flow 1 (95th percentile 252.83 ms)
Run 4: Statistics of PCC-Expr

Start at: 2018-08-11 15:57:39
End at: 2018-08-11 15:58:09
Local clock offset: -0.516 ms
Remote clock offset: 0.268 ms

# Below is generated by plot.py at 2018-08-11 20:04:32
# Datalink statistics
-- Total of 1 flow:
Average throughput: 181.72 Mbit/s
95th percentile per-packet one-way delay: 136.491 ms
Loss rate: 1.26%
-- Flow 1:
Average throughput: 181.72 Mbit/s
95th percentile per-packet one-way delay: 136.491 ms
Loss rate: 1.26%
Run 4: Report of PCC-Expr — Data Link

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

- Flow 1 ingress (mean 182.37 Mbit/s)
- Flow 1 egress (mean 181.72 Mbit/s)

![Graph 2: Per-Packet One-Way Delay for Flow 1]

- Flow 1 (95th percentile 136.49 ms)
Run 5: Statistics of PCC-Expr

Start at: 2018-08-11 16:21:16
End at: 2018-08-11 16:21:46
Local clock offset: -0.558 ms
Remote clock offset: -0.433 ms

# Below is generated by plot.py at 2018-08-11 20:07:19
# Datalink statistics
  -- Total of 1 flow:
    Average throughput: 314.94 Mbit/s
    95th percentile per-packet one-way delay: 257.246 ms
    Loss rate: 2.76%
  -- Flow 1:
    Average throughput: 314.94 Mbit/s
    95th percentile per-packet one-way delay: 257.246 ms
    Loss rate: 2.76%
Run 5: Report of PCC-Expr — Data Link

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

- Flow 1 ingress (mean 320.94 Mbit/s)
- Flow 1 egress (mean 314.94 Mbit/s)

![Graph 2: Per packet vs Time](image2)

- Flow 1 (95th percentile 257.25 ms)
Run 6: Statistics of PCC-Expr

Start at: 2018-08-11 16:45:02
End at: 2018-08-11 16:45:32
Local clock offset: -0.766 ms
Remote clock offset: 0.084 ms

# Below is generated by plot.py at 2018-08-11 20:07:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 254.21 Mbit/s
95th percentile per-packet one-way delay: 339.897 ms
Loss rate: 8.84%
-- Flow 1:
Average throughput: 254.21 Mbit/s
95th percentile per-packet one-way delay: 339.897 ms
Loss rate: 8.84%
Run 6: Report of PCC-Expr — Data Link

- Throughput (Mbps)
  - Flow 1 ingress (mean 276.32 Mbps)
  - Flow 1 egress (mean 254.21 Mbps)

- Per packet egress delay (ms)
  - Flow 1 (95th percentile 339.90 ms)
Run 7: Statistics of PCC-Expr

Start at: 2018-08-11 17:08:30
End at: 2018-08-11 17:09:00
Local clock offset: -0.529 ms
Remote clock offset: -0.265 ms

# Below is generated by plot.py at 2018-08-11 20:07:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 186.85 Mbit/s
95th percentile per-packet one-way delay: 137.107 ms
Loss rate: 1.48%
-- Flow 1:
Average throughput: 186.85 Mbit/s
95th percentile per-packet one-way delay: 137.107 ms
Loss rate: 1.48%
Run 7: Report of PCC-Expr — Data Link

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

Flow 1 ingress (mean 187.91 Mbit/s)  
Flow 1 egress (mean 186.85 Mbit/s)

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

Flow 1 (50th percentile 137.11 ms)
Run 8: Statistics of PCC-Expr

Start at: 2018-08-11 17:32:09
End at: 2018-08-11 17:32:39
Local clock offset: -0.323 ms
Remote clock offset: -0.157 ms

# Below is generated by plot.py at 2018-08-11 20:09:18
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 299.21 Mbit/s
  95th percentile per-packet one-way delay: 266.173 ms
  Loss rate: 5.19%
-- Flow 1:
  Average throughput: 299.21 Mbit/s
  95th percentile per-packet one-way delay: 266.173 ms
  Loss rate: 5.19%
Run 8: Report of PCC-Expr — Data Link

[Graph showing throughput and packet delay over time]

Flow 1 ingress (mean 312.70 Mbit/s)  Flow 1 egress (mean 299.21 Mbit/s)

Flow 1 (95th percentile 266.17 ms)
Run 9: Statistics of PCC-Expr

Start at: 2018-08-11 17:55:34
End at: 2018-08-11 17:56:05
Local clock offset: 0.321 ms
Remote clock offset: -0.475 ms

# Below is generated by plot.py at 2018-08-11 20:09:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 297.84 Mbit/s
95th percentile per-packet one-way delay: 245.984 ms
Loss rate: 2.77%
-- Flow 1:
Average throughput: 297.84 Mbit/s
95th percentile per-packet one-way delay: 245.984 ms
Loss rate: 2.77%
Run 9: Report of PCC-Expr — Data Link
Run 10: Statistics of PCC-Expr

Start at: 2018-08-11 18:18:51
End at: 2018-08-11 18:19:21
Local clock offset: 0.593 ms
Remote clock offset: -0.21 ms

# Below is generated by plot.py at 2018-08-11 20:09:22
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 181.02 Mbit/s
  95th percentile per-packet one-way delay: 136.805 ms
  Loss rate: 1.03%
-- Flow 1:
  Average throughput: 181.02 Mbit/s
  95th percentile per-packet one-way delay: 136.805 ms
  Loss rate: 1.03%
Run 10: Report of PCC-Expr — Data Link

![Graph showing throughput and per-packet one way delay over time.](image-url)
Run 1: Statistics of QUIC Cubic

Start at: 2018-08-11 14:36:36
End at: 2018-08-11 14:37:06
Local clock offset: -0.353 ms
Remote clock offset: -0.28 ms
Run 1: Report of QUIC Cubic — Data Link
Run 2: Statistics of QUIC Cubic

Start at: 2018-08-11 14:59:57
End at: 2018-08-11 15:00:27
Local clock offset: -0.243 ms
Remote clock offset: -0.505 ms
Run 2: Report of QUIC Cubic — Data Link

Graph 1: Throughput vs Time

Graph 2: Per-packet round-trip delay vs Time

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

Flow 1 (95th percentile 136.75 ms)
Run 3: Statistics of QUIC Cubic

Start at: 2018-08-11 15:24:03
End at: 2018-08-11 15:24:33
Local clock offset: -0.465 ms
Remote clock offset: 0.157 ms
Run 3: Report of QUIC Cubic — Data Link

Throughput (Mbps) vs Time (s)

- Flow 1 ingress (mean 0.04 Mbps)
- Flow 1 egress (mean 0.04 Mbps)

Packet inter-arrival delay (ms) vs Time (s)

- Flow 1 (95th percentile 135.49 ms)
Run 4: Statistics of QUIC Cubic

Start at: 2018-08-11 15:48:06
End at: 2018-08-11 15:48:36
Local clock offset: -0.563 ms
Remote clock offset: -0.162 ms
Run 4: Report of QUIC Cubic — Data Link

![Graph of Throughput vs Time](image1)

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

![Graph of Per-Packet End-to-End Delay vs Time](image2)

- Flow 1 (95th percentile 135.60 ms)
Run 5: Statistics of QUIC Cubic

Start at: 2018-08-11 16:11:41
End at: 2018-08-11 16:12:11
Local clock offset: −0.391 ms
Remote clock offset: −0.12 ms
Run 5: Report of QUIC Cubic — Data Link
Run 6: Statistics of QUIC Cubic

Start at: 2018-08-11 16:35:31
End at: 2018-08-11 16:36:01
Local clock offset: -0.734 ms
Remote clock offset: -0.222 ms
Run 6: Report of QUIC Cubic — Data Link

![Graph 1](image1)

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

![Graph 2](image2)

- **Flow 1 (95th percentile 136.46 ms)**
Run 7: Statistics of QUIC Cubic

Start at: 2018-08-11 16:59:16
End at: 2018-08-11 16:59:46
Local clock offset: -0.921 ms
Remote clock offset: 0.105 ms
Run 7: Report of QUIC Cubic — Data Link

![Graph of Throughput vs Time](image1)

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

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Run 8: Statistics of QUIC Cubic

Start at: 2018-08-11 17:22:39
End at: 2018-08-11 17:23:09
Local clock offset: -0.823 ms
Remote clock offset: -0.214 ms
Run 8: Report of QUIC Cubic — Data Link
Run 9: Statistics of QUIC Cubic

Start at: 2018-08-11 17:46:23
End at: 2018-08-11 17:46:53
Local clock offset: 0.211 ms
Remote clock offset: -0.549 ms
Run 10: Statistics of QUIC Cubic

Start at: 2018-08-11 18:09:43
End at: 2018-08-11 18:10:13
Local clock offset: 0.29 ms
Remote clock offset: -0.227 ms
Run 10: Report of QUIC Cubic — Data Link
Run 1: Statistics of SCReAM

Start at: 2018-08-11 14:35:28
End at: 2018-08-11 14:35:58
Local clock offset: -0.108 ms
Remote clock offset: -0.287 ms

# Below is generated by plot.py at 2018-08-11 20:09:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.531 ms
Loss rate: 0.89%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.531 ms
Loss rate: 0.89%
Run 1: Report of SCReAM — Data Link

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

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

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

- Flow 1 (95th percentile 136.53 ms)
Run 2: Statistics of SCReAM

Start at: 2018-08-11 14:58:49
End at: 2018-08-11 14:59:19
Local clock offset: -0.261 ms
Remote clock offset: -0.156 ms

# Below is generated by plot.py at 2018-08-11 20:09:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.103 ms
Loss rate: 0.89%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.103 ms
Loss rate: 0.89%
Run 2: Report of SCReAM — Data Link

Graph 1: Throughput (Mbps)

Graph 2: One-way delay (ms)

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

Flow 1 (95th percentile 136.10 ms)
Run 3: Statistics of SCReAM

End at: 2018-08-11 15:23:25
Local clock offset: -0.497 ms
Remote clock offset: -0.246 ms

# Below is generated by plot.py at 2018-08-11 20:09:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.173 ms
Loss rate: 0.89%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.173 ms
Loss rate: 0.89%
Run 3: Report of SCReAM — Data Link
Run 4: Statistics of SCReAM

Start at: 2018-08-11 15:46:57
End at: 2018-08-11 15:47:27
Local clock offset: -0.23 ms
Remote clock offset: -0.226 ms

# Below is generated by plot.py at 2018-08-11 20:09:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.302 ms
Loss rate: 0.89%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.302 ms
Loss rate: 0.89%
Run 4: Report of SCReAM — Data Link
Run 5: Statistics of SCReAM

Start at: 2018-08-11 16:10:32
End at: 2018-08-11 16:11:02
Local clock offset: -0.491 ms
Remote clock offset: 0.2 ms

# Below is generated by plot.py at 2018-08-11 20:09:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.598 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.598 ms
Loss rate: 0.76%
Run 5: Report of SCReAM — Data Link

![Graph 1: Throughput vs. Time]

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

![Graph 2: Packet delay vs. Time]

- Flow 1 (95th percentile 136.60 ms)
Run 6: Statistics of SCReAM

Start at: 2018-08-11 16:34:23
End at: 2018-08-11 16:34:53
Local clock offset: -0.682 ms
Remote clock offset: -0.179 ms

# Below is generated by plot.py at 2018-08-11 20:09:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 135.941 ms
Loss rate: 0.89%

-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 135.941 ms
Loss rate: 0.89%
Run 6: Report of SCReAM — Data Link

![Graph showing network traffic over time.](image1)

![Graph showing packet delay over time.](image2)
Run 7: Statistics of SCReAM

Start at: 2018-08-11 16:58:07
End at: 2018-08-11 16:58:37
Local clock offset: -0.52 ms
Remote clock offset: -0.22 ms

# Below is generated by plot.py at 2018-08-11 20:09:22
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 137.127 ms
  Loss rate: 0.89%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 137.127 ms
  Loss rate: 0.89%
Run 7: Report of SCReAM — Data Link

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

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

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

Flow 1 (95th percentile 137.13 ms)
Run 8: Statistics of SCReAM

Start at: 2018-08-11 17:21:31
End at: 2018-08-11 17:22:01
Local clock offset: -0.879 ms
Remote clock offset: 0.173 ms

# Below is generated by plot.py at 2018-08-11 20:09:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.091 ms
Loss rate: 0.89%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.091 ms
Loss rate: 0.89%
Run 8: Report of SCReAM — Data Link

![Throughput vs Time Graph](image1)

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

Start at: 2018-08-11 17:45:15
End at: 2018-08-11 17:45:45
Local clock offset: -0.003 ms
Remote clock offset: -0.124 ms

# Below is generated by plot.py at 2018-08-11 20:09:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.271 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.271 ms
Loss rate: 0.76%
Run 9: Report of SCReAM — Data Link

[Graphs showing network throughput and packet delay over time]
Run 10: Statistics of SCReAM

Start at: 2018-08-11 18:08:35
End at: 2018-08-11 18:09:05
Local clock offset: 0.514 ms
Remote clock offset: -0.205 ms

# Below is generated by plot.py at 2018-08-11 20:09:22
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 136.940 ms
  Loss rate: 0.76%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 136.940 ms
  Loss rate: 0.76%
Run 10: Report of SCReAM — Data Link
Run 1: Statistics of Sprout

Start at: 2018-08-11 14:41:54
End at: 2018-08-11 14:42:24
Local clock offset: -0.446 ms
Remote clock offset: 0.08 ms

# Below is generated by plot.py at 2018-08-11 20:09:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 135.856 ms
Loss rate: 1.01%
-- Flow 1:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 135.856 ms
Loss rate: 1.01%
Run 2: Statistics of Sprout

Start at: 2018-08-11 15:05:33
End at: 2018-08-11 15:06:03
Local clock offset: -0.432 ms
Remote clock offset: 0.157 ms

# Below is generated by plot.py at 2018-08-11 20:09:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 135.928 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 135.928 ms
Loss rate: 0.77%
Run 2: Report of Sprout — Data Link

![Graph showing throughput and delay](image)

Flow 1 ingress (mean 0.15 Mbit/s)  Flow 1 egress (mean 0.15 Mbit/s)

Flow 1 (95th percentile 135.93 ms)
Run 3: Statistics of Sprout

Start at: 2018-08-11 15:29:37
End at: 2018-08-11 15:30:07
Local clock offset: -0.47 ms
Remote clock offset: -0.623 ms

# Below is generated by plot.py at 2018-08-11 20:09:22
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.17 Mbit/s
  95th percentile per-packet one-way delay: 136.433 ms
  Loss rate: 0.69%
-- Flow 1:
  Average throughput: 0.17 Mbit/s
  95th percentile per-packet one-way delay: 136.433 ms
  Loss rate: 0.69%
Run 3: Report of Sprout — Data Link

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

- **Throughput**: The graph depicts throughput in Mbps over time. Two lines are shown: dashed blue for Flow 1 ingress (mean 0.17 Mbps) and solid blue for Flow 1 egress (mean 0.17 Mbps).
- **Packet Delay**: The lower graph shows packet delay (one-way delay in ms) over time.

*Flow 1 (95th percentile 136.43 ms)*
Run 4: Statistics of Sprout

Start at: 2018-08-11 15:53:44
End at: 2018-08-11 15:54:14
Local clock offset: -0.486 ms
Remote clock offset: -0.178 ms

# Below is generated by plot.py at 2018-08-11 20:09:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 137.020 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 137.020 ms
Loss rate: 0.88%
Run 4: Report of Sprout — Data Link

![Graph showing throughput and packet delay over time for Flow 1 ingress and egress with mean 0.14 Mbit/s.]

![Graph showing per-packet one-way delay over time with 95th percentile at 137.02 ms.]
Run 5: Statistics of Sprout

Start at: 2018-08-11 16:17:22
End at: 2018-08-11 16:17:52
Local clock offset: -0.574 ms
Remote clock offset: -0.082 ms

# Below is generated by plot.py at 2018-08-11 20:09:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 136.932 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 136.932 ms
Loss rate: 0.77%
Run 5: Report of Sprout — Data Link

![Graph showing throughput and round-trip delay over time.]

- **Throughput (Mbps)**
  - Flow 1 ingress (mean 0.15 Mbps)
  - Flow 1 egress (mean 0.15 Mbps)

- **Round-trip delay (ms)**
  - Flow 1 (95th percentile 136.93 ms)
Run 6: Statistics of Sprout

Start at: 2018-08-11 16:41:06
End at: 2018-08-11 16:41:36
Local clock offset: -0.721 ms
Remote clock offset: 0.171 ms

# Below is generated by plot.py at 2018-08-11 20:09:22
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.14 Mbit/s
  95th percentile per-packet one-way delay: 135.704 ms
  Loss rate: 0.83%
-- Flow 1:
  Average throughput: 0.14 Mbit/s
  95th percentile per-packet one-way delay: 135.704 ms
  Loss rate: 0.83%
Run 6: Report of Sprout — Data Link

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

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

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Run 7: Statistics of Sprout

Start at: 2018-08-11 17:04:35
End at: 2018-08-11 17:05:05
Local clock offset: -0.495 ms
Remote clock offset: -0.186 ms

# Below is generated by plot.py at 2018-08-11 20:09:22
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.17 Mbit/s
  95th percentile per-packet one-way delay: 137.238 ms
  Loss rate: 0.88%
-- Flow 1:
  Average throughput: 0.17 Mbit/s
  95th percentile per-packet one-way delay: 137.238 ms
  Loss rate: 0.88%
Run 7: Report of Sprout — Data Link
Run 8: Statistics of Sprout

Start at: 2018-08-11 17:28:16
End at: 2018-08-11 17:28:46
Local clock offset: -0.819 ms
Remote clock offset: -0.135 ms

# Below is generated by plot.py at 2018-08-11 20:09:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.23 Mbit/s
95th percentile per-packet one-way delay: 135.822 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 0.23 Mbit/s
95th percentile per-packet one-way delay: 135.822 ms
Loss rate: 0.23%
Run 8: Report of Sprout — Data Link

Throughput (Mb/s)

Time (s)

Flow 1 ingress (mean 0.23 Mb/s)  Flow 1 egress (mean 0.23 Mb/s)

Packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 135.82 ms)
Run 9: Statistics of Sprout

Start at: 2018-08-11 17:51:41
End at: 2018-08-11 17:52:11
Local clock offset: 0.321 ms
Remote clock offset: 0.25 ms

# Below is generated by plot.py at 2018-08-11 20:09:22
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.16 Mbit/s
  95th percentile per-packet one-way delay: 136.639 ms
  Loss rate: 0.98%
-- Flow 1:
  Average throughput: 0.16 Mbit/s
  95th percentile per-packet one-way delay: 136.639 ms
  Loss rate: 0.98%
Run 9: Report of Sprout — Data Link
Run 10: Statistics of Sprout

Start at: 2018-08-11 18:15:02
End at: 2018-08-11 18:15:32
Local clock offset: 0.468 ms
Remote clock offset: -0.233 ms

# Below is generated by plot.py at 2018-08-11 20:09:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 136.767 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 136.767 ms
Loss rate: 0.45%
Run 10: Report of Sprout — Data Link

![Graph showing throughput and per-packet one-way delay over time for Flow 1.]

- Flow 1 ingress (mean 0.17 Mbit/s)
- Flow 1 egress (mean 0.17 Mbit/s)

Flow 1 (95th percentile 136.77 ms)
Run 1: Statistics of TaoVA-100x

Start at: 2018-08-11 14:40:43  
End at: 2018-08-11 14:41:13  
Local clock offset: -0.484 ms  
Remote clock offset: -0.254 ms  

# Below is generated by plot.py at 2018-08-11 20:09:22  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 13.22 Mbit/s  
95th percentile per-packet one-way delay: 135.710 ms  
Loss rate: 0.74%  
-- Flow 1:  
Average throughput: 13.22 Mbit/s  
95th percentile per-packet one-way delay: 135.710 ms  
Loss rate: 0.74%
Run 1: Report of TaoVA-100x — Data Link
Run 2: Statistics of TaoVA-100x

Start at: 2018-08-11 15:04:04
End at: 2018-08-11 15:04:34
Local clock offset: -0.455 ms
Remote clock offset: -0.179 ms

# Below is generated by plot.py at 2018-08-11 20:09:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 193.66 Mbit/s
95th percentile per-packet one-way delay: 136.594 ms
Loss rate: 0.99%
-- Flow 1:
Average throughput: 193.66 Mbit/s
95th percentile per-packet one-way delay: 136.594 ms
Loss rate: 0.99%
Run 2: Report of TaoVA-100x — Data Link
Run 3: Statistics of TaoVA-100x

Start at: 2018-08-11 15:28:26
End at: 2018-08-11 15:28:56
Local clock offset: -0.362 ms
Remote clock offset: 0.078 ms

# Below is generated by plot.py at 2018-08-11 20:09:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 13.35 Mbit/s
95th percentile per-packet one-way delay: 135.808 ms
Loss rate: 0.93%
-- Flow 1:
Average throughput: 13.35 Mbit/s
95th percentile per-packet one-way delay: 135.808 ms
Loss rate: 0.93%
Run 3: Report of TaoVA-100x — Data Link
Run 4: Statistics of TaoVA-100x

Start at: 2018-08-11 15:52:14
End at: 2018-08-11 15:52:44
Local clock offset: -0.432 ms
Remote clock offset: -0.547 ms

# Below is generated by plot.py at 2018-08-11 20:10:19
# Datalink statistics
-- Total of 1 flow:
Average throughput: 203.15 Mbit/s
95th percentile per-packet one-way delay: 137.391 ms
Loss rate: 1.01%
-- Flow 1:
Average throughput: 203.15 Mbit/s
95th percentile per-packet one-way delay: 137.391 ms
Loss rate: 1.01%
Run 4: Report of TaoVA-100x — Data Link
Run 5: Statistics of TaoVA-100x

Start at: 2018-08-11 16:15:53
End at: 2018-08-11 16:16:23
Local clock offset: -0.687 ms
Remote clock offset: -0.162 ms

# Below is generated by plot.py at 2018-08-11 20:11:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 195.63 Mbit/s
95th percentile per-packet one-way delay: 136.971 ms
Loss rate: 1.00%
-- Flow 1:
Average throughput: 195.63 Mbit/s
95th percentile per-packet one-way delay: 136.971 ms
Loss rate: 1.00%
Run 5: Report of TaoVA-100x — Data Link
Run 6: Statistics of TaoVA-100x

Start at: 2018-08-11 16:39:37
End at: 2018-08-11 16:40:07
Local clock offset: -0.654 ms
Remote clock offset: -0.143 ms

# Below is generated by plot.py at 2018-08-11 20:11:50
# Datalink statistics
-- Total of 1 flow:
Average throughput: 192.34 Mbit/s
95th percentile per-packet one-way delay: 136.033 ms
Loss rate: 1.02%
-- Flow 1:
Average throughput: 192.34 Mbit/s
95th percentile per-packet one-way delay: 136.033 ms
Loss rate: 1.02%
Run 6: Report of TaoVA-100x — Data Link
Run 7: Statistics of TaoVA-100x

Start at: 2018-08-11 17:03:24
End at: 2018-08-11 17:03:54
Local clock offset: -0.83 ms
Remote clock offset: -0.213 ms

# Below is generated by plot.py at 2018-08-11 20:11:50
# Datalink statistics
-- Total of 1 flow:
Average throughput: 13.28 Mbit/s
95th percentile per-packet one-way delay: 136.683 ms
Loss rate: 0.93%
-- Flow 1:
Average throughput: 13.28 Mbit/s
95th percentile per-packet one-way delay: 136.683 ms
Loss rate: 0.93%
Run 7: Report of TaoVA-100x — Data Link

![Graph of data link throughput over time]

- Flow 1 ingress (mean 13.28 Mbps)
- Flow 1 egress (mean 13.28 Mbps)

![Graph of packet delay over time]

- Flow 1 (95th percentile 136.68 ms)
Run 8: Statistics of TaoVA-100x

Start at: 2018-08-11 17:26:47
End at: 2018-08-11 17:27:17
Local clock offset: -0.74 ms
Remote clock offset: -0.199 ms

# Below is generated by plot.py at 2018-08-11 20:12:44
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 192.81 Mbit/s
  95th percentile per-packet one-way delay: 136.255 ms
  Loss rate: 0.96%
-- Flow 1:
  Average throughput: 192.81 Mbit/s
  95th percentile per-packet one-way delay: 136.255 ms
  Loss rate: 0.96%
Run 8: Report of TaoVA-100x — Data Link

Throughput (Mb/s)

Flow 1 ingress (mean 192.88 Mb/s)  Flow 1 egress (mean 192.81 Mb/s)

Per-packet one way delay (ms)

Flow 1 (95th percentile 136.25 ms)
Run 9: Statistics of TaoVA-100x

Start at: 2018-08-11 17:50:30
End at: 2018-08-11 17:51:00
Local clock offset: 0.25 ms
Remote clock offset: 0.248 ms

# Below is generated by plot.py at 2018-08-11 20:12:44
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 13.22 Mbit/s
  95th percentile per-packet one-way delay: 136.379 ms
  Loss rate: 0.94%
-- Flow 1:
  Average throughput: 13.22 Mbit/s
  95th percentile per-packet one-way delay: 136.379 ms
  Loss rate: 0.94%
Run 9: Report of TaoVA-100x — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 13.22 Mbit/s)  Flow 1 egress (mean 13.22 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 136.38 ms)
Run 10: Statistics of TaoVA-100x

Start at: 2018-08-11 18:13:52
End at: 2018-08-11 18:14:22
Local clock offset: 0.485 ms
Remote clock offset: -0.573 ms

# Below is generated by plot.py at 2018-08-11 20:12:44
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 13.40 Mbit/s
  95th percentile per-packet one-way delay: 137.038 ms
  Loss rate: 0.93%
-- Flow 1:
  Average throughput: 13.40 Mbit/s
  95th percentile per-packet one-way delay: 137.038 ms
  Loss rate: 0.93%
Run 10: Report of TaoVA-100x — Data Link

![Graph 1](image1.png)

- Flow 1 ingress (mean 13.41 Mbps)
- Flow 1 egress (mean 13.40 Mbps)

![Graph 2](image2.png)

- Flow 1 (95th percentile 137.04 ms)
Run 1: Statistics of TCP Vegas

Start at: 2018-08-11 14:54:44
End at: 2018-08-11 14:55:14
Local clock offset: -0.256 ms
Remote clock offset: 0.24 ms

# Below is generated by plot.py at 2018-08-11 20:12:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 55.44 Mbit/s
95th percentile per-packet one-way delay: 137.447 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 55.44 Mbit/s
95th percentile per-packet one-way delay: 137.447 ms
Loss rate: 0.98%
Run 1: Report of TCP Vegas — Data Link

![Graph showing throughput and packet delay]

- Flow 1 ingress (mean 55.48 Mbit/s)
- Flow 1 egress (mean 55.44 Mbit/s)

Packet delay (ms)

Flow 1 (95th percentile 137.45 ms)
Run 2: Statistics of TCP Vegas

Start at: 2018-08-11 15:18:42
End at: 2018-08-11 15:19:12
Local clock offset: -0.441 ms
Remote clock offset: -0.186 ms

# Below is generated by plot.py at 2018-08-11 20:12:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 44.79 Mbit/s
95th percentile per-packet one-way delay: 137.161 ms
Loss rate: 0.96%
-- Flow 1:
Average throughput: 44.79 Mbit/s
95th percentile per-packet one-way delay: 137.161 ms
Loss rate: 0.96%
Run 2: Report of TCP Vegas — Data Link

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

Flow 1 ingress (mean 44.81 Mbps)  
Flow 1 egress (mean 44.79 Mbps)

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

Flow 1 (95th percentile 137.16 ms)
Run 3: Statistics of TCP Vegas

Start at: 2018-08-11 15:42:56
End at: 2018-08-11 15:43:26
Local clock offset: -0.394 ms
Remote clock offset: -0.287 ms

# Below is generated by plot.py at 2018-08-11 20:12:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 15.59 Mbit/s
95th percentile per-packet one-way delay: 137.244 ms
Loss rate: 1.08%
-- Flow 1:
Average throughput: 15.59 Mbit/s
95th percentile per-packet one-way delay: 137.244 ms
Loss rate: 1.08%
Run 3: Report of TCP Vegas — Data Link
Run 4: Statistics of TCP Vegas

Start at: 2018-08-11 16:06:24
End at: 2018-08-11 16:06:54
Local clock offset: -0.553 ms
Remote clock offset: 0.246 ms

# Below is generated by plot.py at 2018-08-11 20:12:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 43.62 Mbit/s
95th percentile per-packet one-way delay: 139.492 ms
Loss rate: 0.95%
-- Flow 1:
Average throughput: 43.62 Mbit/s
95th percentile per-packet one-way delay: 139.492 ms
Loss rate: 0.95%
Run 4: Report of TCP Vegas — Data Link
Run 5: Statistics of TCP Vegas

Start at: 2018-08-11 16:30:19
End at: 2018-08-11 16:30:49
Local clock offset: -0.482 ms
Remote clock offset: -0.21 ms

# Below is generated by plot.py at 2018-08-11 20:12:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 55.15 Mbit/s
95th percentile per-packet one-way delay: 137.256 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 55.15 Mbit/s
95th percentile per-packet one-way delay: 137.256 ms
Loss rate: 0.98%
Run 5: Report of TCP Vegas — Data Link

Throughput (Mbit/s)

Flow 1 ingress (mean 55.20 Mbit/s)  Flow 1 egress (mean 55.15 Mbit/s)

Packet interarrival delay (ms)

Flow 1 (95th percentile 137.26 ms)
Run 6: Statistics of TCP Vegas

Start at: 2018-08-11 16:54:00
End at: 2018-08-11 16:54:30
Local clock offset: -0.479 ms
Remote clock offset: -0.23 ms

# Below is generated by plot.py at 2018-08-11 20:12:44
# Datalink statistics
-- Total of 1 flow:
Average throughput: 50.36 Mbit/s
95th percentile per-packet one-way delay: 138.532 ms
Loss rate: 1.00%
-- Flow 1:
Average throughput: 50.36 Mbit/s
95th percentile per-packet one-way delay: 138.532 ms
Loss rate: 1.00%
Run 6: Report of TCP Vegas — Data Link

[Graph showing throughput over time for different flow types]

[Graph showing per-packet one-way delay over time for a specific flow]

Flow 1 ingress (mean 50.40 Mbit/s)  Flow 1 egress (mean 50.36 Mbit/s)
Flow 1 (95th percentile 138.53 ms)
Run 7: Statistics of TCP Vegas

Start at: 2018-08-11 17:17:24
End at: 2018-08-11 17:17:54
Local clock offset: -0.928 ms
Remote clock offset: -0.222 ms

# Below is generated by plot.py at 2018-08-11 20:12:44
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 30.34 Mbit/s
  95th percentile per-packet one-way delay: 137.880 ms
  Loss rate: 0.94%
-- Flow 1:
  Average throughput: 30.34 Mbit/s
  95th percentile per-packet one-way delay: 137.880 ms
  Loss rate: 0.94%
Run 7: Report of TCP Vegas — Data Link
Run 8: Statistics of TCP Vegas

Start at: 2018-08-11 17:41:06
End at: 2018-08-11 17:41:36
Local clock offset: -0.098 ms
Remote clock offset: 0.289 ms

# Below is generated by plot.py at 2018-08-11 20:12:44
# Datalink statistics
-- Total of 1 flow:
    Average throughput: 54.83 Mbit/s
    95th percentile per-packet one-way delay: 137.376 ms
    Loss rate: 0.98%
-- Flow 1:
    Average throughput: 54.83 Mbit/s
    95th percentile per-packet one-way delay: 137.376 ms
    Loss rate: 0.98%
Run 8: Report of TCP Vegas — Data Link

Graph 1: Throughput vs. Time (s)
- Flow 1 ingress (mean 54.87 Mbit/s)
- Flow 1 egress (mean 54.83 Mbit/s)

Graph 2: One-way delay vs. Time (s)
- Flow 1 (95th percentile 137.30 ms)
Run 9: Statistics of TCP Vegas

Start at: 2018-08-11 18:04:25
End at: 2018-08-11 18:04:55
Local clock offset: 0.447 ms
Remote clock offset: -0.146 ms

# Below is generated by plot.py at 2018-08-11 20:12:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 46.46 Mbit/s
95th percentile per-packet one-way delay: 138.047 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 46.46 Mbit/s
95th percentile per-packet one-way delay: 138.047 ms
Loss rate: 0.98%
Run 9: Report of TCP Vegas — Data Link

![Graph 1: Throughput](image1)

- **Flow 1 ingress (mean 46.49 Mbit/s)**
- **Flow 1 egress (mean 46.46 Mbit/s)**

![Graph 2: Packet Delay](image2)

- **Flow 1 (99th percentile 138.05 ms)**
Run 10: Statistics of TCP Vegas

Start at: 2018-08-11 18:27:42
End at: 2018-08-11 18:28:12
Local clock offset: 0.66 ms
Remote clock offset: 0.047 ms

# Below is generated by plot.py at 2018-08-11 20:12:45
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 86.83 Mbit/s
  95th percentile per-packet one-way delay: 138.237 ms
  Loss rate: 0.96%
-- Flow 1:
  Average throughput: 86.83 Mbit/s
  95th percentile per-packet one-way delay: 138.237 ms
  Loss rate: 0.96%
Run 10: Report of TCP Vegas — Data Link
Run 1: Statistics of Verus

Start at: 2018-08-11 14:49:03
End at: 2018-08-11 14:49:33
Local clock offset: -0.218 ms
Remote clock offset: -0.509 ms

# Below is generated by plot.py at 2018-08-11 20:12:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 145.65 Mbit/s
95th percentile per-packet one-way delay: 220.111 ms
Loss rate: 1.43%
-- Flow 1:
Average throughput: 145.65 Mbit/s
95th percentile per-packet one-way delay: 220.111 ms
Loss rate: 1.43%
Run 1: Report of Verus — Data Link

![Graph of network throughput]

- Flow 1 ingress (mean 146.03 Mbit/s)
- Flow 1 egress (mean 145.65 Mbit/s)

![Graph of packet delay]

- Flow 1 (95th percentile 220.11 ms)
Run 2: Statistics of Verus

Start at: 2018-08-11 15:12:36
End at: 2018-08-11 15:13:06
Local clock offset: -0.235 ms
Remote clock offset: -0.175 ms

# Below is generated by plot.py at 2018-08-11 20:12:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 70.33 Mbit/s
95th percentile per-packet one-way delay: 199.800 ms
Loss rate: 1.42%
-- Flow 1:
Average throughput: 70.33 Mbit/s
95th percentile per-packet one-way delay: 199.800 ms
Loss rate: 1.42%
Run 2: Report of Verus — Data Link

![Graph 1: Throughput (Mbps) vs Time (s)]
- Flow 1 ingress (mean 70.68 Mbps)
- Flow 1 egress (mean 70.33 Mbps)

![Graph 2: Round trip time (ms) vs Time (s)]
- Flow 1 (95th percentile 199.80 ms)
Run 3: Statistics of Verus

Start at: 2018-08-11 15:36:51
End at: 2018-08-11 15:37:21
Local clock offset: -0.46 ms
Remote clock offset: -0.579 ms

# Below is generated by plot.py at 2018-08-11 20:12:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 93.55 Mbit/s
95th percentile per-packet one-way delay: 152.704 ms
Loss rate: 1.39%
-- Flow 1:
Average throughput: 93.55 Mbit/s
95th percentile per-packet one-way delay: 152.704 ms
Loss rate: 1.39%
Run 3: Report of Verus — Data Link

---

Throughput (Mbps)

0 5 10 15 20 25 30

Flow 1 ingress (mean 94.22 Mbit/s)  Flow 1 egress (mean 93.55 Mbit/s)

---

Packet one way delay (ms)

0 5 10 15 20 25 30

Flow 1 (95th percentile 152.70 ms)
Run 4: Statistics of Verus

Start at: 2018-08-11 16:00:44
End at: 2018-08-11 16:01:14
Local clock offset: -0.744 ms
Remote clock offset: 0.189 ms

# Below is generated by plot.py at 2018-08-11 20:13:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 153.11 Mbit/s
95th percentile per-packet one-way delay: 181.052 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 153.11 Mbit/s
95th percentile per-packet one-way delay: 181.052 ms
Loss rate: 0.28%
Run 4: Report of Verus — Data Link
Run 5: Statistics of Verus

Start at: 2018-08-11 16:24:34
End at: 2018-08-11 16:25:04
Local clock offset: -0.636 ms
Remote clock offset: 0.213 ms

# Below is generated by plot.py at 2018-08-11 20:14:52
# Datalink statistics
-- Total of 1 flow:
Average throughput: 208.22 Mbit/s
95th percentile per-packet one-way delay: 181.993 ms
Loss rate: 1.60%
-- Flow 1:
Average throughput: 208.22 Mbit/s
95th percentile per-packet one-way delay: 181.993 ms
Loss rate: 1.60%
Run 5: Report of Verus — Data Link

![Graph showing throughput and packet delay over time for Flow 1 ingress and egress, with mean values and 95th percentile delay noted.]
Run 6: Statistics of Verus

Start at: 2018-08-11 16:48:12
End at: 2018-08-11 16:48:42
Local clock offset: -0.815 ms
Remote clock offset: -0.201 ms

# Below is generated by plot.py at 2018-08-11 20:15:22
# Datalink statistics
-- Total of 1 flow:
Average throughput: 201.93 Mbit/s
95th percentile per-packet one-way delay: 270.817 ms
Loss rate: 13.30%
-- Flow 1:
Average throughput: 201.93 Mbit/s
95th percentile per-packet one-way delay: 270.817 ms
Loss rate: 13.30%
Run 6: Report of Verus — Data Link

Throughput (Mbps)

0 5 10 15 20 25 30

Time (s)

Flow 1 ingress (mean 229.19 Mbps)  Flow 1 egress (mean 201.93 Mbps)

Per packet one way delay (ms)

0 5 10 15 20 25 30

Time (s)

Flow 1 (95th percentile 270.82 ms)

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Run 7: Statistics of Verus

Start at: 2018-08-11 17:11:34
End at: 2018-08-11 17:12:04
Local clock offset: -0.774 ms
Remote clock offset: -0.247 ms

# Below is generated by plot.py at 2018-08-11 20:15:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 211.47 Mbit/s
95th percentile per-packet one-way delay: 190.599 ms
Loss rate: 2.10%
-- Flow 1:
Average throughput: 211.47 Mbit/s
95th percentile per-packet one-way delay: 190.599 ms
Loss rate: 2.10%
Run 7: Report of Verus — Data Link

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

- **Flow 1 ingress** (mean 214.84 Mbps)
- **Flow 1 egress** (mean 211.47 Mbps)

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

- **Flow 1** (95th percentile 190.60 ms)
Run 8: Statistics of Verus

Start at: 2018-08-11 17:35:23
End at: 2018-08-11 17:35:53
Local clock offset: -0.124 ms
Remote clock offset: -0.228 ms

# Below is generated by plot.py at 2018-08-11 20:15:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 183.56 Mbit/s
95th percentile per-packet one-way delay: 208.641 ms
Loss rate: 1.33%
-- Flow 1:
Average throughput: 183.56 Mbit/s
95th percentile per-packet one-way delay: 208.641 ms
Loss rate: 1.33%
Run 8: Report of Verus — Data Link
Run 9: Statistics of Verus

Start at: 2018-08-11 17:58:48
End at: 2018-08-11 17:59:18
Local clock offset: 0.518 ms
Remote clock offset: -0.088 ms

# Below is generated by plot.py at 2018-08-11 20:15:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 121.63 Mbit/s
95th percentile per-packet one-way delay: 176.210 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 121.63 Mbit/s
95th percentile per-packet one-way delay: 176.210 ms
Loss rate: 0.39%
Run 9: Report of Verus — Data Link

[Graphs showing throughput and packet delay over time for different flows]
Run 10: Statistics of Verus

Start at: 2018-08-11 18:21:52
End at: 2018-08-11 18:22:22
Local clock offset: 0.592 ms
Remote clock offset: -0.301 ms

# Below is generated by plot.py at 2018-08-11 20:16:03
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 191.78 Mbit/s
  95th percentile per-packet one-way delay: 181.177 ms
  Loss rate: 1.14%
-- Flow 1:
  Average throughput: 191.78 Mbit/s
  95th percentile per-packet one-way delay: 181.177 ms
  Loss rate: 1.14%
Run 10: Report of Verus — Data Link

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

Start at: 2018-08-11 14:47:27
End at: 2018-08-11 14:47:57
Local clock offset: -0.362 ms
Remote clock offset: -0.168 ms

# Below is generated by plot.py at 2018-08-11 20:18:49
# Datalink statistics
-- Total of 1 flow:
Average throughput: 339.48 Mbit/s
95th percentile per-packet one-way delay: 138.318 ms
Loss rate: 1.36%
-- Flow 1:
Average throughput: 339.48 Mbit/s
95th percentile per-packet one-way delay: 138.318 ms
Loss rate: 1.36%
Run 1: Report of PCC-Vivace — Data Link
Run 2: Statistics of PCC-Vivace

Start at: 2018-08-11 15:10:57
End at: 2018-08-11 15:11:27
Local clock offset: -0.517 ms
Remote clock offset: -0.157 ms

# Below is generated by plot.py at 2018-08-11 20:20:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 331.17 Mbit/s
95th percentile per-packet one-way delay: 138.377 ms
Loss rate: 1.67%
-- Flow 1:
Average throughput: 331.17 Mbit/s
95th percentile per-packet one-way delay: 138.377 ms
Loss rate: 1.67%
Run 2: Report of PCC-Vivace — Data Link
Run 3: Statistics of PCC-Vivace

Start at: 2018-08-11 15:35:09
End at: 2018-08-11 15:35:39
Local clock offset: -0.492 ms
Remote clock offset: -0.235 ms

# Below is generated by plot.py at 2018-08-11 20:20:50
# Datalink statistics
-- Total of 1 flow:
Average throughput: 327.13 Mbit/s
95th percentile per-packet one-way delay: 172.566 ms
Loss rate: 1.14%
-- Flow 1:
Average throughput: 327.13 Mbit/s
95th percentile per-packet one-way delay: 172.566 ms
Loss rate: 1.14%
Run 3: Report of PCC-Vivace — Data Link

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

- **Flow 1 ingress (mean 327.89 Mbit/s)**
- **Flow 1 egress (mean 327.13 Mbit/s)**

![Graph of packet delay distribution.](image)

- **Flow 1 (95th percentile 172.57 ms)**
Run 4: Statistics of PCC-Vivace

Start at: 2018-08-11 15:59:07
End at: 2018-08-11 15:59:37
Local clock offset: -0.523 ms
Remote clock offset: -0.111 ms

# Below is generated by plot.py at 2018-08-11 20:21:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 356.96 Mbit/s
95th percentile per-packet one-way delay: 137.993 ms
Loss rate: 0.99%
-- Flow 1:
Average throughput: 356.96 Mbit/s
95th percentile per-packet one-way delay: 137.993 ms
Loss rate: 0.99%
Run 4: Report of PCC-Vivace — Data Link

![Graph showing throughput and packet delay over time for Flow 1-ingress and Flow 1-egress with mean values and 95th percentile delay].
Run 5: Statistics of PCC-Vivace

Start at: 2018-08-11 16:22:58
End at: 2018-08-11 16:23:28
Local clock offset: -0.693 ms
Remote clock offset: -0.183 ms

# Below is generated by plot.py at 2018-08-11 20:21:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 347.52 Mbit/s
95th percentile per-packet one-way delay: 145.489 ms
Loss rate: 1.02%
-- Flow 1:
Average throughput: 347.52 Mbit/s
95th percentile per-packet one-way delay: 145.489 ms
Loss rate: 1.02%
Run 5: Report of PCC-Vivace — Data Link

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

Throughput (Mbit/s)

- Flow 1 ingress (mean 347.90 Mbit/s)
- Flow 1 egress (mean 347.52 Mbit/s)

Delay (ms)

- Flow 1 (95th percentile 145.49 ms)
Run 6: Statistics of PCC-Vivace

Start at: 2018-08-11 16:46:39
End at: 2018-08-11 16:47:09
Local clock offset: -0.659 ms
Remote clock offset: -0.605 ms

# Below is generated by plot.py at 2018-08-11 20:21:25
# Datalink statistics
-- Total of 1 flow:
Average throughput: 306.55 Mbit/s
95th percentile per-packet one-way delay: 152.983 ms
Loss rate: 1.27%
-- Flow 1:
Average throughput: 306.55 Mbit/s
95th percentile per-packet one-way delay: 152.983 ms
Loss rate: 1.27%
Run 6: Report of PCC-Vivace — Data Link

![Graph showing throughput and packet delay over time for Flow 1 with ingress and egress rates, and 95th percentile delay.]

- Flow 1 ingress (mean 307.67 Mbit/s)
- Flow 1 egress (mean 306.55 Mbit/s)

Flow 1 (95th percentile 152.98 ms)
Run 7: Statistics of PCC-Vivace

Start at: 2018-08-11 17:09:58
End at: 2018-08-11 17:10:28
Local clock offset: -0.91 ms
Remote clock offset: -0.212 ms

# Below is generated by plot.py at 2018-08-11 20:21:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 328.03 Mbit/s
95th percentile per-packet one-way delay: 137.446 ms
Loss rate: 1.39%
-- Flow 1:
Average throughput: 328.03 Mbit/s
95th percentile per-packet one-way delay: 137.446 ms
Loss rate: 1.39%
Run 7: Report of PCC-Vivace — Data Link

![Graph of throughput and delay over time for Flow 1 ingress and egress.]
Run 8: Statistics of PCC-Vivace

Start at: 2018-08-11 17:33:50
End at: 2018-08-11 17:34:20
Local clock offset: -0.305 ms
Remote clock offset: -0.206 ms

# Below is generated by plot.py at 2018-08-11 20:21:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 316.69 Mbit/s
95th percentile per-packet one-way delay: 144.686 ms
Loss rate: 1.15%
-- Flow 1:
Average throughput: 316.69 Mbit/s
95th percentile per-packet one-way delay: 144.686 ms
Loss rate: 1.15%
Run 8: Report of PCC-Vivace — Data Link

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

- Flow 1 ingress (mean 317.45 Mbps)
- Flow 1 egress (mean 316.69 Mbps)

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

Flow 1 (95th percentile 144.69 ms)
Run 9: Statistics of PCC-Vivace

Start at: 2018-08-11 17:57:14
End at: 2018-08-11 17:57:44
Local clock offset: 0.406 ms
Remote clock offset: -0.124 ms

# Below is generated by plot.py at 2018-08-11 20:22:11
# Datalink statistics
-- Total of 1 flow:
Average throughput: 331.32 Mbit/s
95th percentile per-packet one-way delay: 177.057 ms
Loss rate: 1.18%
-- Flow 1:
Average throughput: 331.32 Mbit/s
95th percentile per-packet one-way delay: 177.057 ms
Loss rate: 1.18%
Run 9: Report of PCC-Vivace — Data Link

![Graph showing throughput and packet delay over time for Flow 1 ingress and egress with mean values and 95th percentile.]
Run 10: Statistics of PCC-Vivace

Start at: 2018-08-11 18:20:19
End at: 2018-08-11 18:20:49
Local clock offset: 0.555 ms
Remote clock offset: -0.259 ms

# Below is generated by plot.py at 2018-08-11 20:22:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 312.42 Mbit/s
95th percentile per-packet one-way delay: 138.789 ms
Loss rate: 1.07%
-- Flow 1:
Average throughput: 312.42 Mbit/s
95th percentile per-packet one-way delay: 138.789 ms
Loss rate: 1.07%
Run 10: Report of PCC-Vivace — Data Link

[Graph showing throughput and packet delay over time]

Throughput (bits)

0 5 10 15 20 25 30

Time (s)

Flow 1 ingress (mean 312.91 Mbit/s)

Flow 1 egress (mean 312.42 Mbit/s)

Packet one way delay (ms)

0 10 20 30

Time (s)

Flow 1 (99th percentile 138.79 ms)
Run 1: Statistics of WebRTC media

Start at: 2018-08-11 14:43:03
End at: 2018-08-11 14:43:33
Local clock offset: -0.492 ms
Remote clock offset: -0.571 ms

# Below is generated by plot.py at 2018-08-11 20:22:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.58 Mbit/s
95th percentile per-packet one-way delay: 136.323 ms
Loss rate: 1.90%
-- Flow 1:
Average throughput: 1.58 Mbit/s
95th percentile per-packet one-way delay: 136.323 ms
Loss rate: 1.90%
Run 1: Report of WebRTC media — Data Link

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

Flow 1 ingress (mean 1.60 Mbit/s)  Flow 1 egress (mean 1.58 Mbit/s)

![Graph of Packet Drop Delay (ms) vs Time (s)](image2)

Flow 1 (95th percentile 136.32 ms)
Run 2: Statistics of WebRTC media

Start at: 2018-08-11 15:06:41
End at: 2018-08-11 15:07:12
Local clock offset: ~0.389 ms
Remote clock offset: 0.196 ms

# Below is generated by plot.py at 2018-08-11 20:22:13
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 1.95 Mbit/s
  95th percentile per-packet one-way delay: 136.009 ms
  Loss rate: 0.90%
-- Flow 1:
  Average throughput: 1.95 Mbit/s
  95th percentile per-packet one-way delay: 136.009 ms
  Loss rate: 0.90%
Run 2: Report of WebRTC media — Data Link

![Graph showing throughput and packet loss over time for WebRTC media with Flow 1 ingress and egress. The graphs display peak and mean values.]
Run 3: Statistics of WebRTC media

Start at: 2018-08-11 15:30:46
End at: 2018-08-11 15:31:16
Local clock offset: -0.407 ms
Remote clock offset: -0.285 ms

# Below is generated by plot.py at 2018-08-11 20:22:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.98 Mbit/s
95th percentile per-packet one-way delay: 136.494 ms
Loss rate: 1.00%
-- Flow 1:
Average throughput: 1.98 Mbit/s
95th percentile per-packet one-way delay: 136.494 ms
Loss rate: 1.00%
Run 3: Report of WebRTC media — Data Link
Run 4: Statistics of WebRTC media

Start at: 2018-08-11 15:54:52
End at: 2018-08-11 15:55:22
Local clock offset: -0.71 ms
Remote clock offset: -0.136 ms

# Below is generated by plot.py at 2018-08-11 20:22:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.89 Mbit/s
95th percentile per-packet one-way delay: 136.647 ms
Loss rate: 1.27%
-- Flow 1:
Average throughput: 1.89 Mbit/s
95th percentile per-packet one-way delay: 136.647 ms
Loss rate: 1.27%
Run 4: Report of WebRTC media — Data Link

![Throughput graph]

- Flow 1 ingress (mean 1.90 Mbit/s)
- Flow 1 egress (mean 1.89 Mbit/s)

![Packet delay graph]

- Flow 1 (95th percentile 136.65 ms)
Run 5: Statistics of WebRTC media

Start at: 2018-08-11 16:18:30
End at: 2018-08-11 16:19:00
Local clock offset: -0.554 ms
Remote clock offset: -0.417 ms

# Below is generated by plot.py at 2018-08-11 20:22:13
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 1.89 Mbit/s
  95th percentile per-packet one-way delay: 137.075 ms
  Loss rate: 1.01%
-- Flow 1:
  Average throughput: 1.89 Mbit/s
  95th percentile per-packet one-way delay: 137.075 ms
  Loss rate: 1.01%
Run 5: Report of WebRTC media — Data Link

![Graph showing throughput over time for two flows: Flow 1 ingress (mean 1.90 Mbit/s) and Flow 1 egress (mean 1.89 Mbit/s).](image1)

![Graph showing per-packet one-way delay for Flow 1, with 95th percentile at 137.07 ms.](image2)
Run 6: Statistics of WebRTC media

Start at: 2018-08-11 16:42:14
End at: 2018-08-11 16:42:44
Local clock offset: -0.819 ms
Remote clock offset: -0.127 ms

# Below is generated by plot.py at 2018-08-11 20:22:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.95 Mbit/s
95th percentile per-packet one-way delay: 136.453 ms
Loss rate: 1.42%
-- Flow 1:
Average throughput: 1.95 Mbit/s
95th percentile per-packet one-way delay: 136.453 ms
Loss rate: 1.42%
Run 6: Report of WebRTC media — Data Link

![Graph of throughput vs time](image1)

- Flow 1 ingress (mean 1.96 Mbit/s)
- Flow 1 egress (mean 1.95 Mbit/s)

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

- Flow 1 (95th percentile 136.45 ms)
Run 7: Statistics of WebRTC media

Start at: 2018-08-11 17:05:43
End at: 2018-08-11 17:06:13
Local clock offset: -0.78 ms
Remote clock offset: 0.138 ms

# Below is generated by plot.py at 2018-08-11 20:22:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.96 Mbit/s
95th percentile per-packet one-way delay: 136.396 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 1.96 Mbit/s
95th percentile per-packet one-way delay: 136.396 ms
Loss rate: 0.98%
Run 7: Report of WebRTC media — Data Link

![Graph showing throughput and packet delay over time]

- Flow 1 ingress (mean 1.96 Mbit/s)
- Flow 1 egress (mean 1.96 Mbit/s)

![Graph showing packet delay over time]

- Flow 1 (90th percentile 136.40 ms)
Run 8: Statistics of WebRTC media

Start at: 2018-08-11 17:29:25
End at: 2018-08-11 17:29:55
Local clock offset: -0.738 ms
Remote clock offset: -0.158 ms

# Below is generated by plot.py at 2018-08-11 20:22:13
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 1.93 Mbit/s
  95th percentile per-packet one-way delay: 136.085 ms
  Loss rate: 1.11%
-- Flow 1:
  Average throughput: 1.93 Mbit/s
  95th percentile per-packet one-way delay: 136.085 ms
  Loss rate: 1.11%
Run 8: Report of WebRTC media — Data Link

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

- Flow 1 ingress (mean 1.93 Mbit/s)
- Flow 1 egress (mean 1.93 Mbit/s)

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

- Flow 1 (95th percentile 136.09 ms)
Run 9: Statistics of WebRTC media

Start at: 2018-08-11 17:52:49
End at: 2018-08-11 17:53:19
Local clock offset: 0.307 ms
Remote clock offset: 0.292 ms

# Below is generated by plot.py at 2018-08-11 20:22:13
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.96 Mbit/s
95th percentile per-packet one-way delay: 136.037 ms
Loss rate: 1.42%
-- Flow 1:
Average throughput: 1.96 Mbit/s
95th percentile per-packet one-way delay: 136.037 ms
Loss rate: 1.42%
Run 9: Report of WebRTC media — Data Link

![Graph showing throughput and packet delay over time for two flows: Flow 1 ingress (mean 1.97 Mbit/s) and Flow 1 egress (mean 1.96 Mbit/s).]
Run 10: Statistics of WebRTC media

Start at: 2018-08-11 18:16:11
End at: 2018-08-11 18:16:41
Local clock offset: 0.761 ms
Remote clock offset: -0.22 ms

# Below is generated by plot.py at 2018-08-11 20:22:13
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 2.01 Mbit/s
  95th percentile per-packet one-way delay: 136.761 ms
  Loss rate: 1.20%
-- Flow 1:
  Average throughput: 2.01 Mbit/s
  95th percentile per-packet one-way delay: 136.761 ms
  Loss rate: 1.20%
Run 10: Report of WebRTC media — Data Link