Pantheon Report

Data path: GCE Tokyo Ethernet (remote) → GCE Iowa 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 @ d47f4fa1b454a5e3c0537f115c5a2843ed4db4834
third_party/fillp-sheep @ daed0c84f98531712514b2231f43ec6901114ffe
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf358e5f2f4
third_party/indigo @ 2601c92e4aa9d583d38d44df0ecdbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ 6f038ed312594366f9840f65b82ce8f464b1b39
third_party/pcc @ 1af9c5fe4c0d66d18b623c091a55fed1872b4981e1
    M receiver/src/buffer.h
    M receiver/src/core.cpp
    M sender/src/buffer.h
    M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acc084eb24f974ab
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebe2978737f3cf42
third_party/scream-reproduce @ f099118d421aa3131bf11ff1964974e1da3bdb2
    M src/ScreamClient
    M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
    M src/verus.hpp
    M tools/plot.py
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9d4de4735770d143a1fafa2851
test from GCE Tokyo to GCE Iowa, 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) flow 1</th>
<th>mean 95th-%ile delay (ms) flow 1</th>
<th>mean loss rate (%) flow 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>TCP BBR</td>
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<td>505.87</td>
<td>147.77</td>
<td>1.52</td>
</tr>
<tr>
<td>Copa</td>
<td>10</td>
<td>184.40</td>
<td>67.70</td>
<td>0.25</td>
</tr>
<tr>
<td>TCP Cubic</td>
<td>10</td>
<td>257.43</td>
<td>64.22</td>
<td>0.58</td>
</tr>
<tr>
<td>FillP</td>
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<td>777.42</td>
<td>141.35</td>
<td>6.28</td>
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<tr>
<td>FillP-Sheep</td>
<td>10</td>
<td>800.30</td>
<td>130.85</td>
<td>1.84</td>
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<td>Indigo</td>
<td>10</td>
<td>209.99</td>
<td>63.75</td>
<td>0.42</td>
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<td>LEDBAT</td>
<td>10</td>
<td>23.02</td>
<td>63.32</td>
<td>0.83</td>
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<tr>
<td>PCC-Allegro</td>
<td>10</td>
<td>618.05</td>
<td>125.23</td>
<td>2.68</td>
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<tr>
<td>PCC-Expr</td>
<td>10</td>
<td>289.18</td>
<td>150.64</td>
<td>3.24</td>
</tr>
<tr>
<td>QUIC Cubic</td>
<td>3</td>
<td>64.48</td>
<td>64.68</td>
<td>0.58</td>
</tr>
<tr>
<td>SCReAM</td>
<td>10</td>
<td>0.22</td>
<td>61.47</td>
<td>0.45</td>
</tr>
<tr>
<td>Sprout</td>
<td>10</td>
<td>1.03</td>
<td>64.51</td>
<td>0.37</td>
</tr>
<tr>
<td>TaoVA-100x</td>
<td>10</td>
<td>197.94</td>
<td>62.23</td>
<td>0.36</td>
</tr>
<tr>
<td>TCP Vegas</td>
<td>10</td>
<td>114.51</td>
<td>63.78</td>
<td>0.44</td>
</tr>
<tr>
<td>Verus</td>
<td>10</td>
<td>254.21</td>
<td>123.91</td>
<td>1.24</td>
</tr>
<tr>
<td>PCC-Vivace</td>
<td>10</td>
<td>368.81</td>
<td>74.90</td>
<td>0.58</td>
</tr>
<tr>
<td>WebRTC media</td>
<td>10</td>
<td>1.85</td>
<td>63.26</td>
<td>0.47</td>
</tr>
</tbody>
</table>
Run 1: Statistics of TCP BBR

Start at: 2018-08-11 14:39:23
End at: 2018-08-11 14:39:53
Local clock offset: -0.376 ms
Remote clock offset: -0.814 ms

# Below is generated by plot.py at 2018-08-11 18:46:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 476.62 Mbit/s
95th percentile per-packet one-way delay: 144.323 ms
Loss rate: 1.21%
-- Flow 1:
Average throughput: 476.62 Mbit/s
95th percentile per-packet one-way delay: 144.323 ms
Loss rate: 1.21%
Run 1: Report of TCP BBR — Data Link

![Graph 1: Throughput over time showing Flow 1 ingress (mean 480.36 Mbit/s) and Flow 1 egress (mean 476.62 Mbit/s).](Image)

![Graph 2: Packet delay percentage showing Flow 1 95th percentile delay (144.32 ms).](Image)
Run 2: Statistics of TCP BBR

Start at: 2018-08-11 15:02:09
End at: 2018-08-11 15:02:39
Local clock offset: -0.464 ms
Remote clock offset: -0.217 ms

# Below is generated by plot.py at 2018-08-11 18:46:37
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 505.25 Mbit/s
  95th percentile per-packet one-way delay: 146.523 ms
  Loss rate: 1.66%
-- Flow 1:
  Average throughput: 505.25 Mbit/s
  95th percentile per-packet one-way delay: 146.523 ms
  Loss rate: 1.66%
Run 2: Report of TCP BBR — Data Link

![Throughput graph]

- Flow 1 ingress (mean 511.56 Mbit/s)
- Flow 1 egress (mean 505.25 Mbit/s)

![Per packet one way delay graph]

Flow 1 (95th percentile 146.52 ms)
Run 3: Statistics of TCP BBR

Start at: 2018-08-11 15:24:57
End at: 2018-08-11 15:25:27
Local clock offset: ~0.5 ms
Remote clock offset: ~1.239 ms

# Below is generated by plot.py at 2018-08-11 18:46:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 521.78 Mbit/s
95th percentile per-packet one-way delay: 150.384 ms
Loss rate: 2.00%
-- Flow 1:
Average throughput: 521.78 Mbit/s
95th percentile per-packet one-way delay: 150.384 ms
Loss rate: 2.00%
Run 3: Report of TCP BBR — Data Link
Run 4: Statistics of TCP BBR

Start at: 2018-08-11 15:47:57
End at: 2018-08-11 15:48:27
Local clock offset: -0.495 ms
Remote clock offset: -0.52 ms

# Below is generated by plot.py at 2018-08-11 18:46:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 507.31 Mbit/s
95th percentile per-packet one-way delay: 144.134 ms
Loss rate: 1.28%
-- Flow 1:
Average throughput: 507.31 Mbit/s
95th percentile per-packet one-way delay: 144.134 ms
Loss rate: 1.28%
Run 4: Report of TCP BBR — Data Link

![Graph of data link throughput vs time for Flow 1 ingress and egress]
Run 5: Statistics of TCP BBR

Start at: 2018-08-11 16:10:10
End at: 2018-08-11 16:10:40
Local clock offset: -0.644 ms
Remote clock offset: 0.962 ms

# Below is generated by plot.py at 2018-08-11 18:46:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 499.42 Mbit/s
95th percentile per-packet one-way delay: 142.218 ms
Loss rate: 1.43%
-- Flow 1:
Average throughput: 499.42 Mbit/s
95th percentile per-packet one-way delay: 142.218 ms
Loss rate: 1.43%
Run 5: Report of TCP BBR — Data Link
Run 6: Statistics of TCP BBR

Start at: 2018-08-11 16:32:31
End at: 2018-08-11 16:33:01
Local clock offset: -0.656 ms
Remote clock offset: -0.249 ms

# Below is generated by plot.py at 2018-08-11 18:46:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 515.86 Mbit/s
95th percentile per-packet one-way delay: 145.414 ms
Loss rate: 1.32%
-- Flow 1:
Average throughput: 515.86 Mbit/s
95th percentile per-packet one-way delay: 145.414 ms
Loss rate: 1.32%
Run 6: Report of TCP BBR — Data Link

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

- Flow 1 ingress (mean 520.60 Mbps)
- Flow 1 egress (mean 515.86 Mbps)

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

- Flow 1 (95th percentile 145.41 ms)
Run 7: Statistics of TCP BBR

Start at: 2018-08-11 16:55:38
End at: 2018-08-11 16:56:08
Local clock offset: -0.486 ms
Remote clock offset: -0.065 ms

# Below is generated by plot.py at 2018-08-11 18:46:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 480.76 Mbit/s
95th percentile per-packet one-way delay: 149.054 ms
Loss rate: 2.18%
-- Flow 1:
Average throughput: 480.76 Mbit/s
95th percentile per-packet one-way delay: 149.054 ms
Loss rate: 2.18%
Run 7: Report of TCP BBR — Data Link
Run 8: Statistics of TCP BBR

Start at: 2018-08-11 17:18:47
End at: 2018-08-11 17:19:17
Local clock offset: 0.243 ms
Remote clock offset: -0.998 ms

# Below is generated by plot.py at 2018-08-11 18:46:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 506.72 Mbit/s
95th percentile per-packet one-way delay: 148.406 ms
Loss rate: 1.66%
-- Flow 1:
Average throughput: 506.72 Mbit/s
95th percentile per-packet one-way delay: 148.406 ms
Loss rate: 1.66%
Run 8: Report of TCP BBR — Data Link

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

- Flow 1 ingress (mean 513.17 Mbps)
- Flow 1 egress (mean 506.72 Mbps)

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

- Flow 1 (95th percentile 148.41 ms)
Run 9: Statistics of TCP BBR

Start at: 2018-08-11 17:41:42
End at: 2018-08-11 17:42:12
Local clock offset: 0.487 ms
Remote clock offset: -1.254 ms

# Below is generated by plot.py at 2018-08-11 18:55:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 539.54 Mbit/s
95th percentile per-packet one-way delay: 142.175 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 539.54 Mbit/s
95th percentile per-packet one-way delay: 142.175 ms
Loss rate: 0.66%
Run 9: Report of TCP BBR — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 540.92 Mbps)
  - Flow 1 egress (mean 539.54 Mbps)

- **Packet delay (ms):**
  - Flow 1 (95th percentile 142.18 ms)
Run 10: Statistics of TCP BBR

Start at: 2018-08-11 18:04:39
End at: 2018-08-11 18:05:09
Local clock offset: 0.769 ms
Remote clock offset: 0.17 ms

# Below is generated by plot.py at 2018-08-11 18:55:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 505.43 Mbit/s
95th percentile per-packet one-way delay: 165.109 ms
Loss rate: 1.76%
-- Flow 1:
Average throughput: 505.43 Mbit/s
95th percentile per-packet one-way delay: 165.109 ms
Loss rate: 1.76%
Run 10: Report of TCP BBR — Data Link

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

- Flow 1 ingress (mean 512.39 Mbps)
- Flow 1 egress (mean 505.43 Mbps)

![Graph 2: Packet Delay (ms)](image2)

- Flow 1 (95th percentile 165.11 ms)
Run 1: Statistics of Copa

Start at: 2018-08-11 14:47:15
End at: 2018-08-11 14:47:45
Local clock offset: -0.435 ms
Remote clock offset: -0.123 ms

# Below is generated by plot.py at 2018-08-11 18:55:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 185.18 Mbit/s
95th percentile per-packet one-way delay: 80.469 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 185.18 Mbit/s
95th percentile per-packet one-way delay: 80.469 ms
Loss rate: 0.30%
Run 1: Report of Copa — Data Link
Run 2: Statistics of Copa

Start at: 2018-08-11 15:09:59
End at: 2018-08-11 15:10:29
Local clock offset: -0.484 ms
Remote clock offset: -0.215 ms

# Below is generated by plot.py at 2018-08-11 18:55:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 183.78 Mbit/s
95th percentile per-packet one-way delay: 64.258 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 183.78 Mbit/s
95th percentile per-packet one-way delay: 64.258 ms
Loss rate: 0.14%
Run 2: Report of Copa — Data Link

![Throughput Graph]

![Delay Graph]
Run 3: Statistics of Copa

Start at: 2018-08-11 15:32:49  
End at: 2018-08-11 15:33:19  
Local clock offset: -0.485 ms  
Remote clock offset: -0.081 ms

# Below is generated by plot.py at 2018-08-11 18:55:09
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 194.64 Mbit/s
  95th percentile per-packet one-way delay: 69.963 ms
  Loss rate: 0.10%
-- Flow 1:
  Average throughput: 194.64 Mbit/s
  95th percentile per-packet one-way delay: 69.963 ms
  Loss rate: 0.10%
Run 3: Report of Copa — Data Link
Run 4: Statistics of Copa

Start at: 2018-08-11 15:55:47
End at: 2018-08-11 15:56:17
Local clock offset: -0.573 ms
Remote clock offset: -0.291 ms

# Below is generated by plot.py at 2018-08-11 18:55:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 91.20 Mbit/s
95th percentile per-packet one-way delay: 66.804 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 91.20 Mbit/s
95th percentile per-packet one-way delay: 66.804 ms
Loss rate: 0.75%
Run 4: Report of Copa — Data Link
Run 5: Statistics of Copa

Start at: 2018-08-11 16:17:57
End at: 2018-08-11 16:18:27
Local clock offset: -0.623 ms
Remote clock offset: 0.529 ms

# Below is generated by plot.py at 2018-08-11 18:55:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 146.36 Mbit/s
95th percentile per-packet one-way delay: 65.905 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 146.36 Mbit/s
95th percentile per-packet one-way delay: 65.905 ms
Loss rate: 0.02%
Run 5: Report of Copa — Data Link

![Graph showing throughput over time](image)

- Flow 1 ingress (mean 145.69 Mbit/s)
- Flow 1 egress (mean 146.36 Mbit/s)

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

- Flow 1 (95th percentile 65.91 ms)
Run 6: Statistics of Copa

Start at: 2018-08-11 16:40:26
End at: 2018-08-11 16:40:56
Local clock offset: -0.746 ms
Remote clock offset: -0.25 ms

# Below is generated by plot.py at 2018-08-11 18:55:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 211.26 Mbit/s
95th percentile per-packet one-way delay: 66.916 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 211.26 Mbit/s
95th percentile per-packet one-way delay: 66.916 ms
Loss rate: 0.05%
Run 7: Statistics of Copa

Start at: 2018-08-11 17:03:34
End at: 2018-08-11 17:04:04
Local clock offset: -0.094 ms
Remote clock offset: 0.461 ms

# Below is generated by plot.py at 2018-08-11 18:56:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 205.66 Mbit/s
95th percentile per-packet one-way delay: 66.608 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 205.66 Mbit/s
95th percentile per-packet one-way delay: 66.608 ms
Loss rate: 0.28%
Run 7: Report of Copa — Data Link

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

- Flow 1 ingress (mean 205.39 Mbit/s)
- Flow 1 egress (mean 205.66 Mbit/s)

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

- Flow 1 (95th percentile 66.61 ms)
Run 8: Statistics of Copa

Start at: 2018-08-11 17:26:40
End at: 2018-08-11 17:27:10
Local clock offset: 0.352 ms
Remote clock offset: 0.066 ms

# Below is generated by plot.py at 2018-08-11 18:58:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 206.68 Mbit/s
95th percentile per-packet one-way delay: 64.169 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 206.68 Mbit/s
95th percentile per-packet one-way delay: 64.169 ms
Loss rate: 0.40%
Run 8: Report of Copa — Data Link

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[Graph showing network throughput over time]

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[Graph showing packet delay over time]

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Flow 1 ingress (mean 206.66 Mbit/s)
Flow 1 egress (mean 206.68 Mbit/s)

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Flow 1 (95th percentile 64.17 ms)
Run 9: Statistics of Copa

Start at: 2018-08-11 17:49:38
End at: 2018-08-11 17:50:08
Local clock offset: 0.563 ms
Remote clock offset: -0.036 ms

# Below is generated by plot.py at 2018-08-11 18:58:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 203.21 Mbit/s
95th percentile per-packet one-way delay: 65.238 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 203.21 Mbit/s
95th percentile per-packet one-way delay: 65.238 ms
Loss rate: 0.37%
Run 9: Report of Copa — Data Link

[Graphs showing throughput and per packet one way delay over time.]
Run 10: Statistics of Copa

Start at: 2018-08-11 18:12:30
End at: 2018-08-11 18:13:00
Local clock offset: 0.671 ms
Remote clock offset: -0.733 ms

# Below is generated by plot.py at 2018-08-11 18:59:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 216.05 Mbit/s
95th percentile per-packet one-way delay: 66.622 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 216.05 Mbit/s
95th percentile per-packet one-way delay: 66.622 ms
Loss rate: 0.06%
Run 10: Report of Copa — Data Link
Run 1: Statistics of TCP Cubic

Start at: 2018-08-11 14:52:27
End at: 2018-08-11 14:52:57
Local clock offset: -0.455 ms
Remote clock offset: -0.579 ms

# Below is generated by plot.py at 2018-08-11 18:59:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 237.89 Mbit/s
95th percentile per-packet one-way delay: 63.021 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 237.89 Mbit/s
95th percentile per-packet one-way delay: 63.021 ms
Loss rate: 0.43%
Run 1: Report of TCP Cubic — Data Link

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

- Flow 1 ingress (mean 237.96 Mbit/s)
- Flow 1 egress (mean 237.89 Mbit/s)

![Graph showing packet delay distribution over time.]

- Flow 1 (95th percentile 63.92 ms)
Run 2: Statistics of TCP Cubic

Start at: 2018-08-11 15:15:10
End at: 2018-08-11 15:15:40
Local clock offset: -0.517 ms
Remote clock offset: -0.283 ms

# Below is generated by plot.py at 2018-08-11 18:59:33
# Datalink statistics
-- Total of 1 flow:
Average throughput: 306.98 Mbit/s
95th percentile per-packet one-way delay: 63.060 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 306.98 Mbit/s
95th percentile per-packet one-way delay: 63.060 ms
Loss rate: 0.64%
Run 2: Report of TCP Cubic — Data Link

The image contains two graphs. The first graph shows the throughput over time for two flows (ingress and egress), with throughput values in Mbit/s. The second graph illustrates the per-packet one-way delay over time, with values in ms. The legend indicates the mean throughput for each flow and the 95th percentile delay.
Run 3: Statistics of TCP Cubic

Start at: 2018-08-11 15:38:10
End at: 2018-08-11 15:38:40
Local clock offset: -0.551 ms
Remote clock offset: -0.738 ms

# Below is generated by plot.py at 2018-08-11 19:00:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 319.75 Mbit/s
95th percentile per-packet one-way delay: 69.102 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 319.75 Mbit/s
95th percentile per-packet one-way delay: 69.102 ms
Loss rate: 0.44%
Run 3: Report of TCP Cubic — Data Link

![Graph showing throughput over time](image1)

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

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Run 4: Statistics of TCP Cubic

Start at: 2018-08-11 16:00:43
End at: 2018-08-11 16:01:13
Local clock offset: -0.622 ms
Remote clock offset: -1.005 ms

# Below is generated by plot.py at 2018-08-11 19:00:41
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 272.27 Mbit/s
  95th percentile per-packet one-way delay: 63.471 ms
  Loss rate: 0.49%
-- Flow 1:
  Average throughput: 272.27 Mbit/s
  95th percentile per-packet one-way delay: 63.471 ms
  Loss rate: 0.49%
Run 4: Report of TCP Cubic — Data Link

![Graph of throughput over time with two lines: one for flow ingress and one for egress.

![Graph of packet one-way delay with a single line showing the 95th percentile delay.

Flow 1 (95th percentile 63.47 ms)
Run 5: Statistics of TCP Cubic

Start at: 2018-08-11 16:23:08
End at: 2018-08-11 16:23:38
Local clock offset: -0.614 ms
Remote clock offset: -0.36 ms

# Below is generated by plot.py at 2018-08-11 19:00:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 239.41 Mbit/s
95th percentile per-packet one-way delay: 63.376 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 239.41 Mbit/s
95th percentile per-packet one-way delay: 63.376 ms
Loss rate: 0.69%
Run 5: Report of TCP Cubic — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 240.04 Mbit/s)  Flow 1 egress (mean 239.41 Mbit/s)

Packet retransmit delay (ms)

Time (s)

Flow 1 (95th percentile 63.38 ms)
Run 6: Statistics of TCP Cubic

Start at: 2018-08-11 16:45:42
End at: 2018-08-11 16:46:12
Local clock offset: -0.752 ms
Remote clock offset: -0.146 ms

# Below is generated by plot.py at 2018-08-11 19:02:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 294.54 Mbit/s
95th percentile per-packet one-way delay: 67.574 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 294.54 Mbit/s
95th percentile per-packet one-way delay: 67.574 ms
Loss rate: 0.67%
Run 6: Report of TCP Cubic — Data Link

![Graph of Throughput (kbps)](image1)

![Graph of Latency (ms)](image2)
Run 7: Statistics of TCP Cubic

Start at: 2018-08-11 17:08:50
End at: 2018-08-11 17:09:20
Local clock offset: 0.061 ms
Remote clock offset: -0.378 ms

# Below is generated by plot.py at 2018-08-11 19:02:05
# Datalink statistics
-- Total of 1 flow:
Average throughput: 236.14 Mbit/s
95th percentile per-packet one-way delay: 62.508 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 236.14 Mbit/s
95th percentile per-packet one-way delay: 62.508 ms
Loss rate: 0.41%
Run 7: Report of TCP Cubic — Data Link
Run 8: Statistics of TCP Cubic

Start at: 2018-08-11 17:31:52
End at: 2018-08-11 17:32:22
Local clock offset: 0.452 ms
Remote clock offset: -0.626 ms

# Below is generated by plot.py at 2018-08-11 19:02:34
# Datalink statistics
-- Total of 1 flow:
Average throughput: 212.59 Mbit/s
95th percentile per-packet one-way delay: 63.619 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 212.59 Mbit/s
95th percentile per-packet one-way delay: 63.619 ms
Loss rate: 0.56%
Run 8: Report of TCP Cubic — Data Link
Run 9: Statistics of TCP Cubic

Start at: 2018-08-11 17:54:55
End at: 2018-08-11 17:55:25
Local clock offset: 0.652 ms
Remote clock offset: 0.108 ms

# Below is generated by plot.py at 2018-08-11 19:02:45
# Datalink statistics
-- Total of 1 flow:
Average throughput: 224.96 Mbit/s
95th percentile per-packet one-way delay: 62.383 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 224.96 Mbit/s
95th percentile per-packet one-way delay: 62.383 ms
Loss rate: 0.72%
Run 9: Report of TCP Cubic — Data Link

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

- Flow 1 ingress (mean 225.68 Mbit/s)
- Flow 1 egress (mean 224.96 Mbit/s)

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

- Flow 1 (95th percentile 62.38 ms)
Run 10: Statistics of TCP Cubic

Start at: 2018-08-11 18:17:43
End at: 2018-08-11 18:18:13
Local clock offset: 0.871 ms
Remote clock offset: -1.506 ms

# Below is generated by plot.py at 2018-08-11 19:03:10
# Datalink statistics
-- Total of 1 flow:
Average throughput: 229.78 Mbit/s
95th percentile per-packet one-way delay: 64.093 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 229.78 Mbit/s
95th percentile per-packet one-way delay: 64.093 ms
Loss rate: 0.76%
Run 10: Report of TCP Cubic — Data Link

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

- Flow 1 ingress (mean 230.60 Mbps)
- Flow 1 egress (mean 229.78 Mbps)

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

- Flow 1 (95th percentile 64.09 ms)
Run 1: Statistics of FillP

Start at: 2018-08-11 14:56:29  
End at: 2018-08-11 14:56:59  
Local clock offset: -0.47 ms  
Remote clock offset: -0.137 ms  

# Below is generated by plot.py at 2018-08-11 19:17:38  
# Datalink statistics  
-- Total of 1 flow:  
  Average throughput: 796.90 Mbit/s  
  95th percentile per-packet one-way delay: 135.641 ms  
  Loss rate: 5.50%  
-- Flow 1:  
  Average throughput: 796.90 Mbit/s  
  95th percentile per-packet one-way delay: 135.641 ms  
  Loss rate: 5.50%
Run 1: Report of FillP — Data Link

Throughput (Mbps):

- Flow 1 ingress (mean 839.68 Mbps)
- Flow 1 egress (mean 796.90 Mbps)

Per packet one-way delay (ms):

- Flow 1 (95th percentile 135.64 ms)
Run 2: Statistics of FillP

Start at: 2018-08-11 15:19:18
End at: 2018-08-11 15:19:48
Local clock offset: -0.474 ms
Remote clock offset: -1.418 ms

# Below is generated by plot.py at 2018-08-11 19:17:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 781.29 Mbit/s
95th percentile per-packet one-way delay: 139.470 ms
Loss rate: 6.98%
-- Flow 1:
Average throughput: 781.29 Mbit/s
95th percentile per-packet one-way delay: 139.470 ms
Loss rate: 6.98%
Run 2: Report of FillP — Data Link

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- Flow 1 ingress (mean 836.31 Mbit/s)
- Flow 1 egress (mean 781.29 Mbit/s)

- Flow 1 (95th percentile 139.47 ms)
Run 3: Statistics of FillP

Start at: 2018-08-11 15:42:18
End at: 2018-08-11 15:42:48
Local clock offset: -0.545 ms
Remote clock offset: 0.239 ms

# Below is generated by plot.py at 2018-08-11 19:17:38
# Datalink statistics
-- Total of 1 flow:
Average throughput: 757.41 Mbit/s
95th percentile per-packet one-way delay: 147.291 ms
Loss rate: 6.95%
-- Flow 1:
Average throughput: 757.41 Mbit/s
95th percentile per-packet one-way delay: 147.291 ms
Loss rate: 6.95%
Run 3: Report of FillP — Data Link
Run 4: Statistics of FillP

Start at: 2018-08-11 16:04:50
End at: 2018-08-11 16:05:20
Local clock offset: -0.62 ms
Remote clock offset: -0.248 ms

# Below is generated by plot.py at 2018-08-11 19:18:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 777.13 Mbit/s
95th percentile per-packet one-way delay: 139.110 ms
Loss rate: 5.95%
-- Flow 1:
Average throughput: 777.13 Mbit/s
95th percentile per-packet one-way delay: 139.110 ms
Loss rate: 5.95%
Run 4: Report of FillP — Data Link

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

- **Flow 1 Ingress** (mean 822.70 Mbit/s)
- **Flow 1 Egress** (mean 777.13 Mbit/s)

![Graph 2: Per Packet End-to-End Delay vs Time](image)

- **Flow 1** (95th percentile 139.11 ms)
Run 5: Statistics of FillP

Start at: 2018-08-11 16:27:10
End at: 2018-08-11 16:27:41
Local clock offset: -0.668 ms
Remote clock offset: -0.118 ms

# Below is generated by plot.py at 2018-08-11 19:18:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 760.52 Mbit/s
95th percentile per-packet one-way delay: 142.800 ms
Loss rate: 5.06%
-- Flow 1:
Average throughput: 760.52 Mbit/s
95th percentile per-packet one-way delay: 142.800 ms
Loss rate: 5.06%
Run 5: Report of FillP — Data Link

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

- **Flow 1 Ingress (mean 797.78 Mbps)**
- **Flow 1 Egress (mean 760.52 Mbps)**

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

- **Flow 1 (95th percentile 142.80 ms)**
Run 6: Statistics of FillP

Start at: 2018-08-11 16:49:51
End at: 2018-08-11 16:50:21
Local clock offset: -0.696 ms
Remote clock offset: -0.083 ms

# Below is generated by plot.py at 2018-08-11 19:18:27
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 722.29 Mbit/s
  95th percentile per-packet one-way delay: 148.564 ms
  Loss rate: 9.93%
-- Flow 1:
  Average throughput: 722.29 Mbit/s
  95th percentile per-packet one-way delay: 148.564 ms
  Loss rate: 9.93%
Run 6: Report of FillP — Data Link

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

- *Flow 1 ingress* (mean 798.60 Mbps)
- *Flow 1 egress* (mean 722.29 Mbps)

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

- *Flow 1* (95th percentile 148.56 ms)
Run 7: Statistics of FillP

Start at: 2018-08-11 17:12:58
End at: 2018-08-11 17:13:28
Local clock offset: 0.162 ms
Remote clock offset: -0.248 ms

# Below is generated by plot.py at 2018-08-11 19:18:36
# Datalink statistics
-- Total of 1 flow:
Average throughput: 745.75 Mbit/s
95th percentile per-packet one-way delay: 149.823 ms
Loss rate: 6.90%
-- Flow 1:
Average throughput: 745.75 Mbit/s
95th percentile per-packet one-way delay: 149.823 ms
Loss rate: 6.90%
Run 7: Report of FillP — Data Link

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

- **Flow 1 ingress (mean 797.75 Mbps)**
- **Flow 1 egress (mean 745.75 Mbps)**

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

- **Flow 1 (95th percentile 149.82 ms)**
Run 8: Statistics of FillP

Start at: 2018-08-11 17:35:57
End at: 2018-08-11 17:36:27
Local clock offset: 0.445 ms
Remote clock offset: -0.095 ms

# Below is generated by plot.py at 2018-08-11 19:19:39
# Datalink statistics
-- Total of 1 flow:
Average throughput: 764.96 Mbit/s
95th percentile per-packet one-way delay: 143.699 ms
Loss rate: 7.40%
-- Flow 1:
Average throughput: 764.96 Mbit/s
95th percentile per-packet one-way delay: 143.699 ms
Loss rate: 7.40%
Run 8: Report of FillP — Data Link

![Graph showing throughput and delay over time]

- **Throughput (Mbps)**
  - Flow 1 ingress (mean 822.70 Mbps)
  - Flow 1 egress (mean 764.96 Mbps)

- **Per-packet one-way delay (ms)**
  - Flow 1 (95th percentile 143.70 ms)
Run 9: Statistics of FillP

Start at: 2018-08-11 17:58:58
End at: 2018-08-11 17:59:28
Local clock offset: 0.67 ms
Remote clock offset: -0.561 ms

# Below is generated by plot.py at 2018-08-11 19:34:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 815.04 Mbit/s
95th percentile per-packet one-way delay: 134.479 ms
Loss rate: 4.95%
-- Flow 1:
Average throughput: 815.04 Mbit/s
95th percentile per-packet one-way delay: 134.479 ms
Loss rate: 4.95%
Run 9: Report of FillP — Data Link

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

- Flow 1 ingress (mean 834.00 Mbit/s)
- Flow 1 egress (mean 815.04 Mbit/s)

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

- Flow 1 (95th percentile 134.48 ms)
Run 10: Statistics of FillP

Start at: 2018-08-11 18:21:50
End at: 2018-08-11 18:22:20
Local clock offset: 0.936 ms
Remote clock offset: 0.051 ms

# Below is generated by plot.py at 2018-08-11 19:35:36
# Datalink statistics
-- Total of 1 flow:
Average throughput: 852.91 Mbit/s
95th percentile per-packet one-way delay: 132.635 ms
Loss rate: 3.20%
-- Flow 1:
Average throughput: 852.91 Mbit/s
95th percentile per-packet one-way delay: 132.635 ms
Loss rate: 3.20%
Run 10: Report of FillP — Data Link
Run 1: Statistics of FillP-Sheep

Start at: 2018-08-11 14:42:01
End at: 2018-08-11 14:42:31
Local clock offset: -0.44 ms
Remote clock offset: -1.308 ms

# Below is generated by plot.py at 2018-08-11 19:36:04
# Datalink statistics
-- Total of 1 flow:
Average throughput: 874.82 Mbit/s
95th percentile per-packet one-way delay: 121.885 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 874.82 Mbit/s
95th percentile per-packet one-way delay: 121.885 ms
Loss rate: 0.66%
Run 1: Report of FillP-Sheep — Data Link

[Graph 1: Throughtput (Mbps) over Time (s)]

- Flow 1 ingress (mean 877.03 Mbps)
- Flow 1 egress (mean 874.82 Mbps)

[Graph 2: Per-Session one-way delay (ms) over Time (s)]

- Flow 1 (95th percentile 121.89 ms)
Run 2: Statistics of FillP-Sheep

Start at: 2018-08-11 15:04:47
End at: 2018-08-11 15:05:17
Local clock offset: -0.476 ms
Remote clock offset: -0.697 ms

# Below is generated by plot.py at 2018-08-11 19:36:04
# Datalink statistics
   -- Total of 1 flow:
   Average throughput: 786.96 Mbit/s
   95th percentile per-packet one-way delay: 127.473 ms
   Loss rate: 1.41%
   -- Flow 1:
   Average throughput: 786.96 Mbit/s
   95th percentile per-packet one-way delay: 127.473 ms
   Loss rate: 1.41%
Run 2: Report of FillP-Sheep — Data Link

- Flow 1 ingress (mean 794.75 Mbit/s)
- Flow 1 egress (mean 786.96 Mbit/s)

- Flow 1 (95th percentile 127.47 ms)
Run 3: Statistics of FillP-Sheep

Start at: 2018-08-11 15:27:37
End at: 2018-08-11 15:28:07
Local clock offset: -0.511 ms
Remote clock offset: -0.814 ms

# Below is generated by plot.py at 2018-08-11 19:36:04
# Datalink statistics
-- Total of 1 flow:
Average throughput: 799.68 Mbit/s
95th percentile per-packet one-way delay: 132.034 ms
Loss rate: 2.47%
-- Flow 1:
Average throughput: 799.68 Mbit/s
95th percentile per-packet one-way delay: 132.034 ms
Loss rate: 2.47%
Run 3: Report of FillP-Sheep — Data Link

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

- **Flow 1 Ingress (mean 816.40 Mbits/s)**
- **Flow 1 Egress (mean 799.68 Mbits/s)**

![Graph 2: Per-Socket One-Way Delay over Time](image)

- **Flow 1 (95th percentile 132.03 ms)**
Run 4: Statistics of FillP-Sheep

Start at: 2018-08-11 15:50:35
End at: 2018-08-11 15:51:05
Local clock offset: -0.568 ms
Remote clock offset: -0.155 ms

# Below is generated by plot.py at 2018-08-11 19:36:04
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 757.66 Mbit/s
  95th percentile per-packet one-way delay: 118.477 ms
  Loss rate: 1.16%
-- Flow 1:
  Average throughput: 757.66 Mbit/s
  95th percentile per-packet one-way delay: 118.477 ms
  Loss rate: 1.16%
Run 4: Report of FillP-Sheep — Data Link
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: -0.589 ms
Remote clock offset: -0.934 ms

# Below is generated by plot.py at 2018-08-11 19:36:04
# Datalink statistics
-- Total of 1 flow:
Average throughput: 754.48 Mbit/s
95th percentile per-packet one-way delay: 141.368 ms
Loss rate: 1.74%
-- Flow 1:
Average throughput: 754.48 Mbit/s
95th percentile per-packet one-way delay: 141.368 ms
Loss rate: 1.74%
Run 5: Report of FillP-Sheep — Data Link

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

- Flow 1 ingress (mean 784.52 Mb/s)
- Flow 1 egress (mean 754.48 Mb/s)

- Flow 1 (95th percentile 141.37 ms)
Run 6: Statistics of FillP-Sheep

Start at: 2018-08-11 16:35:10
End at: 2018-08-11 16:35:40
Local clock offset: -0.716 ms
Remote clock offset: 0.122 ms

# Below is generated by plot.py at 2018-08-11 19:37:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 813.11 Mbit/s
95th percentile per-packet one-way delay: 127.563 ms
Loss rate: 1.86%
-- Flow 1:
Average throughput: 813.11 Mbit/s
95th percentile per-packet one-way delay: 127.563 ms
Loss rate: 1.86%
Run 6: Report of FillP-Sheep — Data Link
Run 7: Statistics of FillP-Sheep

Start at: 2018-08-11 16:58:16
End at: 2018-08-11 16:58:46
Local clock offset: -0.343 ms
Remote clock offset: 1.216 ms

# Below is generated by plot.py at 2018-08-11 19:55:27
# Datalink statistics
-- Total of 1 flow:
   Average throughput: 931.65 Mbit/s
   95th percentile per-packet one-way delay: 118.801 ms
   Loss rate: 1.48%
-- Flow 1:
   Average throughput: 931.65 Mbit/s
   95th percentile per-packet one-way delay: 118.801 ms
   Loss rate: 1.48%
Run 7: Report of FillP-Sheep — Data Link

![Graph of throughput and per-packet delay over time for two data flows.]

- **Flow 1 ingress**: Mean 941.80 Mb/s
- **Flow 1 egress**: Mean 931.65 Mb/s
- **Flow 1 (95th percentile 118.80 ms)**
Run 8: Statistics of FillP-Sheep

Start at: 2018-08-11 17:21:26
End at: 2018-08-11 17:21:56
Local clock offset: 0.301 ms
Remote clock offset: -0.78 ms

# Below is generated by plot.py at 2018-08-11 19:55:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 735.93 Mbit/s
95th percentile per-packet one-way delay: 135.969 ms
Loss rate: 1.69%
-- Flow 1:
Average throughput: 735.93 Mbit/s
95th percentile per-packet one-way delay: 135.969 ms
Loss rate: 1.69%
Run 8: Report of FillP-Sheep — Data Link

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

- Flow 1 ingress (mean 745.65 Mbit/s)
- Flow 1 egress (mean 735.93 Mbit/s)

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

- Flow 1 (95th percentile 135.97 ms)
Run 9: Statistics of FillP-Sheep

Start at: 2018-08-11 17:44:23
End at: 2018-08-11 17:44:53
Local clock offset: 0.512 ms
Remote clock offset: -0.265 ms

# Below is generated by plot.py at 2018-08-11 19:55:27
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 795.84 Mbit/s
  95th percentile per-packet one-way delay: 138.037 ms
  Loss rate: 2.26%
-- Flow 1:
  Average throughput: 795.84 Mbit/s
  95th percentile per-packet one-way delay: 138.037 ms
  Loss rate: 2.26%
Run 9: Report of FillP-Sheep — Data Link

Throughput (Mbps):

- Flow 1 ingress (mean 810.90 Mbps)
- Flow 1 egress (mean 795.84 Mbps)

Per-socket one-way delay (ms):

- Flow 1 (95th percentile 138.04 ms)
Run 10: Statistics of FillP-Sheep

Start at: 2018-08-11 18:07:19
End at: 2018-08-11 18:07:49
Local clock offset: 0.772 ms
Remote clock offset: 0.013 ms

# Below is generated by plot.py at 2018-08-11 19:55:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 752.88 Mbit/s
95th percentile per-packet one-way delay: 146.929 ms
Loss rate: 3.65%
-- Flow 1:
Average throughput: 752.88 Mbit/s
95th percentile per-packet one-way delay: 146.929 ms
Loss rate: 3.65%
Run 10: Report of FillP-Sheep — Data Link

![Graph showing throughput and delay over time]
Run 1: Statistics of Indigo

End at: 2018-08-11 14:55:43
Local clock offset: -0.416 ms
Remote clock offset: -0.081 ms

# Below is generated by plot.py at 2018-08-11 19:55:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 176.44 Mbit/s
95th percentile per-packet one-way delay: 61.578 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 176.44 Mbit/s
95th percentile per-packet one-way delay: 61.578 ms
Loss rate: 0.52%
Run 1: Report of Indigo — Data Link

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

- **Flow 1 ingress** (mean 176.59 Mbps)
- **Flow 1 egress** (mean 176.44 Mbps)

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

- **Flow 1** (95th percentile 61.58 ms)
Run 2: Statistics of Indigo

Start at: 2018-08-11 15:17:59
End at: 2018-08-11 15:18:29
Local clock offset: -0.511 ms
Remote clock offset: 0.66 ms

# Below is generated by plot.py at 2018-08-11 19:55:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 215.01 Mbit/s
95th percentile per-packet one-way delay: 60.629 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 215.01 Mbit/s
95th percentile per-packet one-way delay: 60.629 ms
Loss rate: 0.41%
Run 2: Report of Indigo — Data Link

![Throughput Graph]

- Flow 1 ingress (mean 215.00 Mbit/s)
- Flow 1 egress (mean 215.01 Mbit/s)

![Packet Delay Graph]

- Flow 1 (95th percentile 60.63 ms)
Run 3: Statistics of Indigo

Start at: 2018-08-11 15:40:58
End at: 2018-08-11 15:41:28
Local clock offset: -0.541 ms
Remote clock offset: -0.296 ms

# Below is generated by plot.py at 2018-08-11 19:55:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 217.03 Mbit/s
95th percentile per-packet one-way delay: 61.542 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 217.03 Mbit/s
95th percentile per-packet one-way delay: 61.542 ms
Loss rate: 0.44%

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Run 3: Report of Indigo — Data Link

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

- **Flow 1 ingress (mean 217.10 Mbps)**
- **Flow 1 egress (mean 217.03 Mbps)**

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

- **Flow 1 (95th percentile 61.54 ms)**
Run 4: Statistics of Indigo

Start at: 2018-08-11 16:03:31
End at: 2018-08-11 16:04:01
Local clock offset: -0.58 ms
Remote clock offset: -1.499 ms

# Below is generated by plot.py at 2018-08-11 19:55:27
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 212.14 Mbit/s
  95th percentile per-packet one-way delay: 68.054 ms
  Loss rate: 0.40%
-- Flow 1:
  Average throughput: 212.14 Mbit/s
  95th percentile per-packet one-way delay: 68.054 ms
  Loss rate: 0.40%
Run 4: Report of Indigo — Data Link
Run 5: Statistics of Indigo

Start at: 2018-08-11 16:25:51
End at: 2018-08-11 16:26:21
Local clock offset: -0.68 ms
Remote clock offset: -0.533 ms

# Below is generated by plot.py at 2018-08-11 19:55:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 211.05 Mbit/s
95th percentile per-packet one-way delay: 67.256 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 211.05 Mbit/s
95th percentile per-packet one-way delay: 67.256 ms
Loss rate: 0.42%
Run 5: Report of Indigo — Data Link
Run 6: Statistics of Indigo

Start at: 2018-08-11 16:48:31
End at: 2018-08-11 16:49:01
Local clock offset: -0.778 ms
Remote clock offset: -0.768 ms

# Below is generated by plot.py at 2018-08-11 19:55:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 212.32 Mbit/s
95th percentile per-packet one-way delay: 67.604 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 212.32 Mbit/s
95th percentile per-packet one-way delay: 67.604 ms
Loss rate: 0.40%
Run 6: Report of Indigo — Data Link
Run 7: Statistics of Indigo

Start at: 2018-08-11 17:11:38
End at: 2018-08-11 17:12:08
Local clock offset: 0.115 ms
Remote clock offset: -0.353 ms

# Below is generated by plot.py at 2018-08-11 19:55:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 216.22 Mbit/s
95th percentile per-packet one-way delay: 61.725 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 216.22 Mbit/s
95th percentile per-packet one-way delay: 61.725 ms
Loss rate: 0.39%
Run 7: Report of Indigo — Data Link

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

- Flow 1 ingress (mean 216.17 Mbit/s)
- Flow 1 egress (mean 216.22 Mbit/s)

- Flow 1 (95th percentile 61.73 ms)
Run 8: Statistics of Indigo

Start at: 2018-08-11 17:34:38
End at: 2018-08-11 17:35:08
Local clock offset: 0.484 ms
Remote clock offset: -0.021 ms

# Below is generated by plot.py at 2018-08-11 19:55:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 209.25 Mbit/s
95th percentile per-packet one-way delay: 61.353 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 209.25 Mbit/s
95th percentile per-packet one-way delay: 61.353 ms
Loss rate: 0.43%
Run 8: Report of Indigo — Data Link

Throughput (Mbps)

0 5 10 15 20 25 30

Time (s)

Flow 1 ingress (mean 209.28 Mbit/s)  Flow 1 egress (mean 209.25 Mbit/s)

Per packet loss, one way delay (ms)

0 5 10 15 20 25 30

Time (s)

Flow 1 (95th percentile 61.35 ms)
Run 9: Statistics of Indigo

Start at: 2018-08-11 17:57:39
End at: 2018-08-11 17:58:09
Local clock offset: 0.672 ms
Remote clock offset: -0.04 ms

# Below is generated by plot.py at 2018-08-11 19:55:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 213.58 Mbit/s
95th percentile per-packet one-way delay: 66.827 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 213.58 Mbit/s
95th percentile per-packet one-way delay: 66.827 ms
Loss rate: 0.39%
Run 9: Report of Indigo — Data Link
Run 10: Statistics of Indigo

Start at: 2018-08-11 18:20:31
End at: 2018-08-11 18:21:01
Local clock offset: 0.926 ms
Remote clock offset: 0.318 ms

# Below is generated by plot.py at 2018-08-11 19:55:27
# Datalink statistics
-- Total of 1 flow:
Average throughput: 216.84 Mbit/s
95th percentile per-packet one-way delay: 60.924 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 216.84 Mbit/s
95th percentile per-packet one-way delay: 60.924 ms
Loss rate: 0.42%
Run 10: Report of Indigo — Data Link

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

- Flow 1 ingress (mean 216.84 Mbps)
- Flow 1 egress (mean 216.84 Mbps)

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

- Flow 1 (95th percentile 60.92 ms)
Run 1: Statistics of LEDBAT

Start at: 2018-08-11 14:48:37
End at: 2018-08-11 14:49:07
Local clock offset: -0.417 ms
Remote clock offset: -0.783 ms

# Below is generated by plot.py at 2018-08-11 19:55:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 23.97 Mbit/s
95th percentile per-packet one-way delay: 63.013 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 23.97 Mbit/s
95th percentile per-packet one-way delay: 63.013 ms
Loss rate: 0.82%
Run 1: Report of LEDBAT — Data Link
Run 2: Statistics of LEDBAT

Start at: 2018-08-11 15:11:22
End at: 2018-08-11 15:11:52
Local clock offset: -0.504 ms
Remote clock offset: -0.02 ms

# Below is generated by plot.py at 2018-08-11 19:55:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 20.47 Mbit/s
95th percentile per-packet one-way delay: 62.635 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 20.47 Mbit/s
95th percentile per-packet one-way delay: 62.635 ms
Loss rate: 0.88%
Run 2: Report of LEDBAT — Data Link

---

**Graph 1:**

- **X-axis:** Time (s)
- **Y-axis:** Throughput (Mbps)
- Lines represent:
  - Flow 1 ingress (mean 20.57 Mbps/s)
  - Flow 1 egress (mean 20.47 Mbps/s)

---

**Graph 2:**

- **X-axis:** Time (s)
- **Y-axis:** Per-packet one-way delay (ms)
- Dots represent:
  - Flow 1 (95th percentile 62.63 ms)
Run 3: Statistics of LEDBAT

Start at: 2018-08-11 15:34:13
End at: 2018-08-11 15:34:43
Local clock offset: -0.549 ms
Remote clock offset: 0.602 ms

# Below is generated by plot.py at 2018-08-11 19:55:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 24.02 Mbit/s
95th percentile per-packet one-way delay: 61.713 ms
Loss rate: 0.81%
-- Flow 1:
Average throughput: 24.02 Mbit/s
95th percentile per-packet one-way delay: 61.713 ms
Loss rate: 0.81%
Run 3: Report of LEDBAT — Data Link

[Graph showing throughput over time with two lines indicating flow ingress and egress]

[Graph showing packet inter-arrival delay over time with a single line indicating flow 1 95th percentile 61.71 ms]
Run 4: Statistics of LEDBAT

Start at: 2018-08-11 15:57:00
End at: 2018-08-11 15:57:30
Local clock offset: -0.579 ms
Remote clock offset: 0.241 ms

# Below is generated by plot.py at 2018-08-11 19:55:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 22.70 Mbit/s
95th percentile per-packet one-way delay: 67.065 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 22.70 Mbit/s
95th percentile per-packet one-way delay: 67.065 ms
Loss rate: 0.83%
Run 4: Report of LEDBAT — Data Link
Run 5: Statistics of LEDBAT

Start at: 2018-08-11 16:19:16
End at: 2018-08-11 16:19:46
Local clock offset: -0.639 ms
Remote clock offset: -0.12 ms

# Below is generated by plot.py at 2018-08-11 19:55:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 22.00 Mbit/s
95th percentile per-packet one-way delay: 67.591 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 22.00 Mbit/s
95th percentile per-packet one-way delay: 67.591 ms
Loss rate: 0.84%
Run 5: Report of LEDBAT — Data Link
Run 6: Statistics of LEDBAT

Start at: 2018-08-11 16:41:50
End at: 2018-08-11 16:42:20
Local clock offset: -0.679 ms
Remote clock offset: -0.746 ms

# Below is generated by plot.py at 2018-08-11 19:55:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 23.74 Mbit/s
95th percentile per-packet one-way delay: 63.409 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 23.74 Mbit/s
95th percentile per-packet one-way delay: 63.409 ms
Loss rate: 0.82%
Run 6: Report of LEDBAT — Data Link
Run 7: Statistics of LEDBAT

Start at: 2018-08-11 17:04:58
End at: 2018-08-11 17:05:28
Local clock offset: -0.056 ms
Remote clock offset: 0.53 ms

# Below is generated by plot.py at 2018-08-11 19:55:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 22.86 Mbit/s
95th percentile per-packet one-way delay: 61.929 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 22.86 Mbit/s
95th percentile per-packet one-way delay: 61.929 ms
Loss rate: 0.84%
Run 7: Report of LEDBAT — Data Link

![Graph 1: Throughput vs Time for Flow 1 ( ingress & egress)]

- **Flow 1 ingress** (mean 22.96 Mbit/s)
- **Flow 1 egress** (mean 22.86 Mbit/s)

![Graph 2: Packet delay vs Time for Flow 1 (95th percentile)]

- **Flow 1** 95th percentile: 61.93 ms
Run 8: Statistics of LEDBAT

Start at: 2018-08-11 17:28:05
End at: 2018-08-11 17:28:35
Local clock offset: 0.372 ms
Remote clock offset: -0.032 ms

# Below is generated by plot.py at 2018-08-11 19:55:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 22.61 Mbit/s
95th percentile per-packet one-way delay: 62.113 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 22.61 Mbit/s
95th percentile per-packet one-way delay: 62.113 ms
Loss rate: 0.84%
Run 8: Report of LEDBAT — Data Link
Run 9: Statistics of LEDBAT

Start at: 2018-08-11 17:51:02
End at: 2018-08-11 17:51:32
Local clock offset: 0.556 ms
Remote clock offset: 0.86 ms

# Below is generated by plot.py at 2018-08-11 19:55:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 23.93 Mbit/s
95th percentile per-packet one-way delay: 61.431 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 23.93 Mbit/s
95th percentile per-packet one-way delay: 61.431 ms
Loss rate: 0.82%
Run 9: Report of LEDBAT — Data Link

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

- **Throughput (Mbit/s)**: The graph illustrates the throughput in megabits per second (Mbit/s) over time. The three lines represent different data flows with varying mean rates.
  - **Flow 1 ingress** (mean 24.03 Mbit/s)
  - **Flow 1 egress** (mean 23.93 Mbit/s)

- **Per-packet one-way delay (ms)**: The bottom graph shows the per-packet one-way delay in milliseconds (ms) over time. This data provides insight into the latency of the data flows.
  - **Flow 1 (95th percentile 61.43 ms)**
Run 10: Statistics of LEDBAT

Start at: 2018-08-11 18:13:56
End at: 2018-08-11 18:14:26
Local clock offset: 0.776 ms
Remote clock offset: -0.013 ms

# Below is generated by plot.py at 2018-08-11 19:55:28
# Datalink statistics
-- Total of 1 flow:
Average throughput: 23.95 Mbit/s
95th percentile per-packet one-way delay: 62.319 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 23.95 Mbit/s
95th percentile per-packet one-way delay: 62.319 ms
Loss rate: 0.82%
Run 10: Report of LEDBAT — Data Link

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

- Flow 1 ingress (mean 24.05 Mbps)
- Flow 1 egress (mean 23.95 Mbps)

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

- Flow 1 (95th percentile 62.32 ms)
Run 1: Statistics of PCC-Allegro

Start at: 2018-08-11 14:53:45
End at: 2018-08-11 14:54:15
Local clock offset: -0.421 ms
Remote clock offset: -0.598 ms

# Below is generated by plot.py at 2018-08-11 19:56:24
# Datalink statistics
-- Total of 1 flow:
Average throughput: 580.90 Mbit/s
95th percentile per-packet one-way delay: 136.303 ms
Loss rate: 2.65%
-- Flow 1:
Average throughput: 580.90 Mbit/s
95th percentile per-packet one-way delay: 136.303 ms
Loss rate: 2.65%
Run 1: Report of PCC-Allegro — Data Link

![Graph showing network throughput and latency results for Flow 1. The graph displays two lines representing the ingress and egress traffic, with the y-axis labeled as Throughput (Mbps) and the x-axis as Time (s). The graph also includes a dot indicating the 95th percentile delay of 136.30 ms for Flow 1.]
Run 2: Statistics of PCC-Allegro

Start at: 2018-08-11 15:16:30
End at: 2018-08-11 15:17:00
Local clock offset: -0.434 ms
Remote clock offset: -0.257 ms

# Below is generated by plot.py at 2018-08-11 19:57:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 638.42 Mbit/s
95th percentile per-packet one-way delay: 151.376 ms
Loss rate: 6.70%
-- Flow 1:
Average throughput: 638.42 Mbit/s
95th percentile per-packet one-way delay: 151.376 ms
Loss rate: 6.70%
Run 2: Report of PCC-Allegro — Data Link
Run 3: Statistics of PCC-Allegro

Start at: 2018-08-11 15:39:31
End at: 2018-08-11 15:40:01
Local clock offset: -0.546 ms
Remote clock offset: 0.014 ms

# Below is generated by plot.py at 2018-08-11 19:57:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 585.70 Mbit/s
95th percentile per-packet one-way delay: 131.536 ms
Loss rate: 2.27%
-- Flow 1:
Average throughput: 585.70 Mbit/s
95th percentile per-packet one-way delay: 131.536 ms
Loss rate: 2.27%
Run 3: Report of PCC-Allegro — Data Link
Run 4: Statistics of PCC-Allegro

Start at: 2018-08-11 16:02:02
End at: 2018-08-11 16:02:32
Local clock offset: -0.625 ms
Remote clock offset: -0.091 ms

# Below is generated by plot.py at 2018-08-11 19:57:51
# Datalink statistics
-- Total of 1 flow:
Average throughput: 614.17 Mbit/s
95th percentile per-packet one-way delay: 98.859 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 614.17 Mbit/s
95th percentile per-packet one-way delay: 98.859 ms
Loss rate: 0.59%
Run 4: Report of PCC-Allegro — Data Link

![Graph 1: Throughput](image1)

![Graph 2: Packet Delay](image2)
Run 5: Statistics of PCC-Allegro

Start at: 2018-08-11 16:24:26
End at: 2018-08-11 16:24:56
Local clock offset: -0.638 ms
Remote clock offset: 0.018 ms

# Below is generated by plot.py at 2018-08-11 20:00:23
# Datalink statistics
-- Total of 1 flow:
Average throughput: 557.18 Mbit/s
95th percentile per-packet one-way delay: 119.633 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 557.18 Mbit/s
95th percentile per-packet one-way delay: 119.633 ms
Loss rate: 0.59%
Run 5: Report of PCC-Allegro — Data Link

![Throughput Graph]

- Flow 1 ingress (mean 558.08 Mbit/s)
- Flow 1 egress (mean 557.18 Mbit/s)

![Packet Delay Graph]

- Flow 1 (95th percentile 119.63 ms)
Run 6: Statistics of PCC-Allegro

Start at: 2018-08-11 16:47:02
End at: 2018-08-11 16:47:32
Local clock offset: -0.704 ms
Remote clock offset: -0.006 ms

# Below is generated by plot.py at 2018-08-11 20:02:15
# Datalink statistics
-- Total of 1 flow:
Average throughput: 650.76 Mbit/s
95th percentile per-packet one-way delay: 94.322 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 650.76 Mbit/s
95th percentile per-packet one-way delay: 94.322 ms
Loss rate: 0.75%
Run 6: Report of PCC-Allegro — Data Link

[Graphs showing throughput and packet delay over time]
Run 7: Statistics of PCC-Allegro

Start at: 2018-08-11 17:10:07
End at: 2018-08-11 17:10:37
Local clock offset: 0.136 ms
Remote clock offset: -0.23 ms

# Below is generated by plot.py at 2018-08-11 20:04:30
# Datalink statistics
-- Total of 1 flow:
Average throughput: 695.51 Mbit/s
95th percentile per-packet one-way delay: 117.154 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 695.51 Mbit/s
95th percentile per-packet one-way delay: 117.154 ms
Loss rate: 0.79%
Run 7: Report of PCC-Allegro — Data Link
Run 8: Statistics of PCC-Allegro

Start at: 2018-08-11 17:33:09
End at: 2018-08-11 17:33:39
Local clock offset: 0.434 ms
Remote clock offset: 1.497 ms

# Below is generated by plot.py at 2018-08-11 20:06:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 651.39 Mbit/s
95th percentile per-packet one-way delay: 122.552 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 651.39 Mbit/s
95th percentile per-packet one-way delay: 122.552 ms
Loss rate: 0.98%
Run 8: Report of PCC-Allegro — Data Link
Run 9: Statistics of PCC-Allegro

Start at: 2018-08-11 17:56:12
End at: 2018-08-11 17:56:42
Local clock offset: 0.623 ms
Remote clock offset: -0.617 ms

# Below is generated by plot.py at 2018-08-11 20:06:56
# Datalink statistics
-- Total of 1 flow:
Average throughput: 557.36 Mbit/s
95th percentile per-packet one-way delay: 67.990 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 557.36 Mbit/s
95th percentile per-packet one-way delay: 67.990 ms
Loss rate: 0.53%
Run 10: Statistics of PCC-Allegro

Start at: 2018-08-11 18:19:00
End at: 2018-08-11 18:19:30
Local clock offset: 0.875 ms
Remote clock offset: -0.659 ms

# Below is generated by plot.py at 2018-08-11 20:09:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 649.16 Mbit/s
95th percentile per-packet one-way delay: 212.598 ms
Loss rate: 10.94%
-- Flow 1:
Average throughput: 649.16 Mbit/s
95th percentile per-packet one-way delay: 212.598 ms
Loss rate: 10.94%
Run 10: Report of PCC-Allegro — Data Link

Throughput (Mbps):

- Flow 1 ingress (mean 725.88 Mbps)
- Flow 1 egress (mean 649.16 Mbps)

Packet delay (ms):

- Flow 1 (95th percentile 212.60 ms)
Run 1: Statistics of PCC-Expr

Start at: 2018-08-11 14:37:48
End at: 2018-08-11 14:38:18
Local clock offset: -0.391 ms
Remote clock offset: -0.113 ms

# Below is generated by plot.py at 2018-08-11 20:09:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 324.67 Mbit/s
95th percentile per-packet one-way delay: 153.825 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 324.67 Mbit/s
95th percentile per-packet one-way delay: 153.825 ms
Loss rate: 0.85%
Run 1: Report of PCC-Expr — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 326.11 Mbit/s)  Flow 1 egress (mean 324.67 Mbit/s)

Packet delay (ms)

Flow 1 (95th percentile 153.82 ms)
Run 2: Statistics of PCC-Expr

Start at: 2018-08-11 15:00:38  
End at: 2018-08-11 15:01:08  
Local clock offset: -0.405 ms  
Remote clock offset: -0.808 ms

# Below is generated by plot.py at 2018-08-11 20:09:17  
# Datalink statistics

-- Total of 1 flow:
Average throughput: 272.62 Mbit/s
95th percentile per-packet one-way delay: 100.947 ms
Loss rate: 0.51%

-- Flow 1:
Average throughput: 272.62 Mbit/s
95th percentile per-packet one-way delay: 100.947 ms
Loss rate: 0.51%
Run 2: Report of PCC-Expr — Data Link

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

[Graph showing per-packet one-way delay over time with a single line for Flow 1 (95th percentile 100.95 ms)]
Run 3: Statistics of PCC-Expr

Start at: 2018-08-11 15:23:22
End at: 2018-08-11 15:23:52
Local clock offset: -0.462 ms
Remote clock offset: 0.023 ms

# Below is generated by plot.py at 2018-08-11 20:11:08
# Datalink statistics
-- Total of 1 flow:
Average throughput: 318.02 Mbit/s
95th percentile per-packet one-way delay: 99.266 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 318.02 Mbit/s
95th percentile per-packet one-way delay: 99.266 ms
Loss rate: 0.47%
Run 3: Report of PCC-Expr — Data Link
Run 4: Statistics of PCC-Expr

Start at: 2018-08-11 15:46:27
End at: 2018-08-11 15:46:57
Local clock offset: -0.572 ms
Remote clock offset: 0.44 ms

# Below is generated by plot.py at 2018-08-11 20:12:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 274.14 Mbit/s
95th percentile per-packet one-way delay: 175.202 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 274.14 Mbit/s
95th percentile per-packet one-way delay: 175.202 ms
Loss rate: 0.71%
Run 4: Report of PCC-Expr — Data Link

![Graph of throughput and packet delay over time]

- **Flow 1 ingress (mean 274.95 Mbit/s)**
- **Flow 1 egress (mean 274.14 Mbit/s)**

- **Flow 1 (95th percentile 175.20 ms)**
Run 5: Statistics of PCC-Expr

Start at: 2018-08-11 16:08:55
End at: 2018-08-11 16:09:25
Local clock offset: -0.578 ms
Remote clock offset: -0.304 ms

# Below is generated by plot.py at 2018-08-11 20:12:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 153.38 Mbit/s
95th percentile per-packet one-way delay: 66.939 ms
Loss rate: 1.20%
-- Flow 1:
Average throughput: 153.38 Mbit/s
95th percentile per-packet one-way delay: 66.939 ms
Loss rate: 1.20%
Run 5: Report of PCC-Expr — Data Link
Run 6: Statistics of PCC-Expr

Start at: 2018-08-11 16:31:09
End at: 2018-08-11 16:31:39
Local clock offset: -0.616 ms
Remote clock offset: 0.032 ms

# Below is generated by plot.py at 2018-08-11 20:14:21
# Datalink statistics
-- Total of 1 flow:
Average throughput: 234.70 Mbit/s
95th percentile per-packet one-way delay: 205.623 ms
Loss rate: 3.72%
-- Flow 1:
Average throughput: 234.70 Mbit/s
95th percentile per-packet one-way delay: 205.623 ms
Loss rate: 3.72%
Run 6: Report of PCC-Expr — Data Link
Run 7: Statistics of PCC-Expr

Start at: 2018-08-11 16:54:01
End at: 2018-08-11 16:54:31
Local clock offset: -0.595 ms
Remote clock offset: 0.548 ms

# Below is generated by plot.py at 2018-08-11 20:19:36
# Datalink statistics
-- Total of 1 flow:
Average throughput: 356.07 Mbit/s
95th percentile per-packet one-way delay: 190.556 ms
Loss rate: 13.53%
-- Flow 1:
Average throughput: 356.07 Mbit/s
95th percentile per-packet one-way delay: 190.556 ms
Loss rate: 13.53%
Run 7: Report of PCC-Expr — Data Link

[Graph showing throughput and latency over time]
Run 8: Statistics of PCC-Expr

Start at: 2018-08-11 17:17:08
End at: 2018-08-11 17:17:38
Local clock offset: 0.19 ms
Remote clock offset: -0.235 ms

# Below is generated by plot.py at 2018-08-11 20:19:54
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 366.49 Mbit/s
  95th percentile per-packet one-way delay: 194.003 ms
  Loss rate: 8.26%
-- Flow 1:
  Average throughput: 366.49 Mbit/s
  95th percentile per-packet one-way delay: 194.003 ms
  Loss rate: 8.26%
Run 8: Report of PCC-Expr — Data Link
Run 9: Statistics of PCC-Expr

Start at: 2018-08-11 17:40:08
End at: 2018-08-11 17:40:38
Local clock offset: 0.426 ms
Remote clock offset: 0.011 ms

# Below is generated by plot.py at 2018-08-11 20:19:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 320.63 Mbit/s
95th percentile per-packet one-way delay: 209.040 ms
Loss rate: 2.65%
-- Flow 1:
Average throughput: 320.63 Mbit/s
95th percentile per-packet one-way delay: 209.040 ms
Loss rate: 2.65%
Run 9: Report of PCC-Expr — Data Link

![Graph 1: Throughput (Mbps)]

- **Flow 1 ingress (mean 328.02 Mbps)**
- **Flow 1 egress (mean 320.63 Mbps)**

![Graph 2: RTT (ms)]

- **Flow 1 (95th percentile 209.84 ms)**
Run 10: Statistics of PCC-Expr

Start at: 2018-08-11 18:03:12
End at: 2018-08-11 18:03:42
Local clock offset: 0.668 ms
Remote clock offset: -0.785 ms

# Below is generated by plot.py at 2018-08-11 20:19:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 271.09 Mbit/s
95th percentile per-packet one-way delay: 110.952 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 271.09 Mbit/s
95th percentile per-packet one-way delay: 110.952 ms
Loss rate: 0.49%
Run 10: Report of PCC-Expr — Data Link

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

- Flow 1 ingress (mean 271.31 Mbps)
- Flow 1 egress (mean 271.09 Mbps)

![Graph 2: Packet Delay (ms)](image2)

- Flow 1 (95th percentile 110.95 ms)
Run 1: Statistics of QUIC Cubic

Start at: 2018-08-11 14:43:42
End at: 2018-08-11 14:44:12
Local clock offset: -0.418 ms
Remote clock offset: -0.277 ms
Run 1: Report of QUIC Cubic — Data Link

![Graph of throughput over time]

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

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

- Flow 1 (95th percentile 62.19 ms)
Run 2: Statistics of QUIC Cubic

Start at: 2018-08-11 15:06:25
End at: 2018-08-11 15:06:55
Local clock offset: -0.443 ms
Remote clock offset: -0.245 ms
Run 2: Report of QUIC Cubic — Data Link

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

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

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

- Flow 1 (95th percentile 61.38 ms)
Run 3: Statistics of QUIC Cubic

Start at: 2018-08-11 15:29:15
End at: 2018-08-11 15:29:45
Local clock offset: ~0.507 ms
Remote clock offset: 0.258 ms
Run 3: Report of QUIC Cubic — Data Link

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

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

![Graph 2: Per-Cycle One-Way Delay vs Time](chart2.png)

- Flow 1 (95th percentile 60.61 ms)
Run 4: Statistics of QUIC Cubic

Start at: 2018-08-11 15:52:12
End at: 2018-08-11 15:52:42
Local clock offset: -0.551 ms
Remote clock offset: 0.415 ms

# Below is generated by plot.py at 2018-08-11 20:19:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 60.50 Mbit/s
95th percentile per-packet one-way delay: 66.079 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 60.50 Mbit/s
95th percentile per-packet one-way delay: 66.079 ms
Loss rate: 0.50%
Run 4: Report of QUIC Cubic — Data Link

![Graph showing throughput and packet delay](image)
Run 5: Statistics of QUIC Cubic

Start at: 2018-08-11 16:14:25
End at: 2018-08-11 16:14:55
Local clock offset: -0.62 ms
Remote clock offset: 1.148 ms
Run 5: Report of QUIC Cubic — Data Link

[Graph 1: Throughput vs Time (Mbps)]

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

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Run 6: Statistics of QUIC Cubic

Start at: 2018-08-11 16:36:49
End at: 2018-08-11 16:37:19
Local clock offset: -0.652 ms
Remote clock offset: -0.19 ms
Run 6: Report of QUIC Cubic — Data Link

![Graph of Throughput vs Time for Flow 1 ingress (mean 0.05 Mbit/s) and Flow 1 egress (mean 0.05 Mbit/s).]

![Graph of Per-packet one-way delay vs Time for Flow 1 (95th percentile 61.37 ms).]
Run 7: Statistics of QUIC Cubic

Start at: 2018-08-11 17:00:00
End at: 2018-08-11 17:00:30
Local clock offset: \(-0.229\) ms
Remote clock offset: \(-0.503\) ms
Run 7: Report of QUIC Cubic — Data Link

![Graph showing throughput over time for two flows.]

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

![Graph showing packet loss over time for Flow 1.]

- Flow 1 (95th percentile 61.63 ms)
Run 8: Statistics of QUIC Cubic

Start at: 2018-08-11 17:23:01
End at: 2018-08-11 17:23:31
Local clock offset: 0.316 ms
Remote clock offset: -0.429 ms

# Below is generated by plot.py at 2018-08-11 20:19:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 66.78 Mbit/s
95th percentile per-packet one-way delay: 67.330 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 66.78 Mbit/s
95th percentile per-packet one-way delay: 67.330 ms
Loss rate: 0.63%
Run 8: Report of QUIC Cubic — Data Link
Run 9: Statistics of QUIC Cubic

Start at: 2018-08-11 17:46:02
End at: 2018-08-11 17:46:32
Local clock offset: 0.589 ms
Remote clock offset: 0.606 ms

# Below is generated by plot.py at 2018-08-11 20:19:54
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 66.15 Mbit/s
  95th percentile per-packet one-way delay: 60.639 ms
  Loss rate: 0.62%
-- Flow 1:
  Average throughput: 66.15 Mbit/s
  95th percentile per-packet one-way delay: 60.639 ms
  Loss rate: 0.62%
Run 9: Report of QUIC Cubic — Data Link
Run 10: Statistics of QUIC Cubic

Start at: 2018-08-11 18:08:56
End at: 2018-08-11 18:09:26
Local clock offset: 0.844 ms
Remote clock offset: -0.034 ms
Run 10: Report of QUIC Cubic — Data Link

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

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

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

- Flow 1 (95th percentile 61.26 ms)
Run 1: Statistics of SCReAM

Start at: 2018-08-11 14:46:09
End at: 2018-08-11 14:46:39
Local clock offset: -0.408 ms
Remote clock offset: -0.015 ms

# Below is generated by plot.py at 2018-08-11 20:19:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.710 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.710 ms
Loss rate: 0.38%
Run 1: Report of SCReAM — Data Link
Run 2: Statistics of SCReAM

Start at: 2018-08-11 15:08:54
End at: 2018-08-11 15:09:24
Local clock offset: -0.516 ms
Remote clock offset: -0.659 ms

# Below is generated by plot.py at 2018-08-11 20:19:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.954 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.954 ms
Loss rate: 0.38%
Run 2: Report of SCReAM — Data Link
Run 3: Statistics of SCReAM

Start at: 2018-08-11 15:31:44
End at: 2018-08-11 15:32:14
Local clock offset: ~0.567 ms
Remote clock offset: ~0.137 ms

# Below is generated by plot.py at 2018-08-11 20:19:54
# Datalink statistics
-- Total of 1 flow:
   Average throughput: 0.22 Mbit/s
   95th percentile per-packet one-way delay: 61.413 ms
   Loss rate: 0.38%
-- Flow 1:
   Average throughput: 0.22 Mbit/s
   95th percentile per-packet one-way delay: 61.413 ms
   Loss rate: 0.38%
Run 3: Report of SCReAM — Data Link

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

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

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

- Flow 1 (95th percentile 61.41 ms)
Run 4: Statistics of SCReAM

Start at: 2018-08-11 15:54:41
End at: 2018-08-11 15:55:11
Local clock offset: -0.57 ms
Remote clock offset: -0.149 ms

# Below is generated by plot.py at 2018-08-11 20:19:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.625 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.625 ms
Loss rate: 0.51%
Run 4: Report of SCReAM — Data Link
Run 5: Statistics of SCReAM

Start at: 2018-08-11 16:16:51
End at: 2018-08-11 16:17:21
Local clock offset: -0.645 ms
Remote clock offset: -0.307 ms

# Below is generated by plot.py at 2018-08-11 20:19:54
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 61.521 ms
  Loss rate: 0.51%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 61.521 ms
  Loss rate: 0.51%
Run 5: Report of SCReAM — Data Link

[Graphs showing network performance metrics over time]

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

Flow 1 (95th percentile 61.52 ms)
Run 6: Statistics of SCReAM

Start at: 2018-08-11 16:39:20
End at: 2018-08-11 16:39:50
Local clock offset: -0.729 ms
Remote clock offset: 0.516 ms

# Below is generated by plot.py at 2018-08-11 20:19:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.026 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.026 ms
Loss rate: 0.39%
Run 6: Report of SCReAM — Data Link

Throughput (Mbps)

0.25
0.20
0.15
0.10
0.05
0.00

Time (s)

0
5
10
15
20
25
30

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

Per-packet one-way delay (ms)

61.2
61.0
60.8
60.6
60.4

Time (s)

0
5
10
15
20
25
30

Flow 1 (95th percentile 61.03 ms)
Run 7: Statistics of SCReAM

Start at: 2018-08-11 17:02:28
End at: 2018-08-11 17:02:58
Local clock offset: -0.109 ms
Remote clock offset: -0.084 ms

# Below is generated by plot.py at 2018-08-11 20:19:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.489 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.489 ms
Loss rate: 0.38%
Run 7: Report of SCReAM — Data Link

![Graph of throughput over time with two lines representing different flows. One line is labeled "Flow 1 ingress (mean 0.22 Mbit/s)" and the other is labeled "Flow 1 egress (mean 0.22 Mbit/s)."

![Graph of one-way delay per packet over time with a line representing a flow labeled "Flow 1 (95th percentile 61.49 ms)."

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Run 8: Statistics of SCReAM

Start at: 2018-08-11 17:25:34
End at: 2018-08-11 17:26:04
Local clock offset: 0.363 ms
Remote clock offset: 0.318 ms

# Below is generated by plot.py at 2018-08-11 20:19:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.320 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.320 ms
Loss rate: 0.51%
Run 8: Report of SCReAM — Data Link

Throughput (Mbps)

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

Per-packet one way delay (ms)

Flow 1 (95th percentile 61.32 ms)
Run 9: Statistics of SCReAM

Start at: 2018-08-11 17:48:32
End at: 2018-08-11 17:49:02
Local clock offset: 0.57 ms
Remote clock offset: -0.002 ms

# Below is generated by plot.py at 2018-08-11 20:19:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.351 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.351 ms
Loss rate: 0.51%
Run 9: Report of SCReAM — Data Link

![Graph 1: Throughput (Mbps)]

![Graph 2: Per-packet one-way delay (ms)]
Run 10: Statistics of SCReAM

Start at: 2018-08-11 18:11:25
End at: 2018-08-11 18:11:55
Local clock offset: 0.811 ms
Remote clock offset: 0.065 ms

# Below is generated by plot.py at 2018-08-11 20:19:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.305 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.305 ms
Loss rate: 0.51%
Run 10: Report of SCReAM — Data Link

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

![Graph showing packet delay over time.](image2)
Run 1: Statistics of Sprout

Start at: 2018-08-11 14:40:55
End at: 2018-08-11 14:41:25
Local clock offset: -0.42 ms
Remote clock offset: -0.905 ms

# Below is generated by plot.py at 2018-08-11 20:19:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.84 Mbit/s
95th percentile per-packet one-way delay: 62.447 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 0.84 Mbit/s
95th percentile per-packet one-way delay: 62.447 ms
Loss rate: 0.23%
Run 1: Report of Sprout — Data Link

---

**Throughput (Mbit/s)**

- **Flow 1 ingress (mean 0.84 Mbit/s)**
- **Flow 1 egress (mean 0.84 Mbit/s)**

---

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

- **Flow 1 95th percentile 62.45 ms**

---

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Run 2: Statistics of Sprout

Start at: 2018-08-11 15:03:41
End at: 2018-08-11 15:04:11
Local clock offset: -0.463 ms
Remote clock offset: -0.187 ms

# Below is generated by plot.py at 2018-08-11 20:19:54
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.85 Mbit/s
95th percentile per-packet one-way delay: 61.714 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 1.85 Mbit/s
95th percentile per-packet one-way delay: 61.714 ms
Loss rate: 0.32%
Run 2: Report of Sprout — Data Link

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

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

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Run 3: Statistics of Sprout

Start at: 2018-08-11 15:26:31
End at: 2018-08-11 15:27:01
Local clock offset: -0.5 ms
Remote clock offset: -0.9 ms

# Below is generated by plot.py at 2018-08-11 20:19:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.26 Mbit/s
95th percentile per-packet one-way delay: 62.414 ms
Loss rate: 1.07%
-- Flow 1:
Average throughput: 1.26 Mbit/s
95th percentile per-packet one-way delay: 62.414 ms
Loss rate: 1.07%
Run 3: Report of Sprout — Data Link

Graph 1: Throughput (Mbps)

Graph 2: Per-packet one-way delay (ms)
Run 4: Statistics of Sprout

Start at: 2018-08-11 15:49:29
End at: 2018-08-11 15:49:59
Local clock offset: -0.587 ms
Remote clock offset: -0.844 ms

# Below is generated by plot.py at 2018-08-11 20:19:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.11 Mbit/s
95th percentile per-packet one-way delay: 67.608 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 1.11 Mbit/s
95th percentile per-packet one-way delay: 67.608 ms
Loss rate: 0.10%
Run 4: Report of Sprout — Data Link

![Graph showing throughput over time for flow ingress and egress.]
Run 5: Statistics of Sprout

Start at: 2018-08-11 16:11:43
End at: 2018-08-11 16:12:13
Local clock offset: -0.545 ms
Remote clock offset: -0.097 ms

# Below is generated by plot.py at 2018-08-11 20:19:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.72 Mbit/s
95th percentile per-packet one-way delay: 66.936 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 0.72 Mbit/s
95th percentile per-packet one-way delay: 66.936 ms
Loss rate: 0.16%
Run 5: Report of Sprout — Data Link
Run 6: Statistics of Sprout

Start at: 2018-08-11 16:34:04
End at: 2018-08-11 16:34:34
Local clock offset: -0.697 ms
Remote clock offset: 0.247 ms

# Below is generated by plot.py at 2018-08-11 20:19:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.65 Mbit/s
95th percentile per-packet one-way delay: 66.528 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 0.65 Mbit/s
95th percentile per-packet one-way delay: 66.528 ms
Loss rate: 0.12%
Run 6: Report of Sprout — Data Link

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

- **Flow 1 ingress (mean 0.65 Mbit/s)**
- **Flow 1 egress (mean 0.65 Mbit/s)**

![Graph showing packet delay distribution over time.]
Run 7: Statistics of Sprout

Start at: 2018-08-11 16:57:09
End at: 2018-08-11 16:57:39
Local clock offset: -0.397 ms
Remote clock offset: 1.424 ms

# Below is generated by plot.py at 2018-08-11 20:19:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 2.60 Mbit/s
95th percentile per-packet one-way delay: 60.419 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 2.60 Mbit/s
95th percentile per-packet one-way delay: 60.419 ms
Loss rate: 0.15%
Run 7: Report of Sprout — Data Link

---

**Throughput (Mbit/s)**

- **Flow 1 ingress (mean 2.59 Mbit/s)**
- **Flow 1 egress (mean 2.60 Mbit/s)**

---

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

- **Flow 1 (95th percentile 60.42 ms)**
Run 8: Statistics of Sprout

Start at: 2018-08-11 17:20:20
End at: 2018-08-11 17:20:50
Local clock offset: 0.27 ms
Remote clock offset: -0.157 ms

# Below is generated by plot.py at 2018-08-11 20:19:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 67.013 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 67.013 ms
Loss rate: 0.01%
Run 8: Report of Sprout — Data Link

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

- **Flow 1 ingress (mean 0.44 Mbit/s)**
- **Flow 1 egress (mean 0.44 Mbit/s)**

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

- **Flow 1 95th percentile 67.01 ms**
Run 9: Statistics of Sprout

Start at: 2018-08-11 17:43:17
End at: 2018-08-11 17:43:47
Local clock offset: 0.518 ms
Remote clock offset: -0.137 ms

# Below is generated by plot.py at 2018-08-11 20:19:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.35 Mbit/s
95th percentile per-packet one-way delay: 67.175 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 0.35 Mbit/s
95th percentile per-packet one-way delay: 67.175 ms
Loss rate: 0.22%
Run 9: Report of Sprout — Data Link

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

- Flow 1 ingress (mean 0.35 Mbps)
- Flow 1 egress (mean 0.35 Mbps)

![Graph 2: Packet Delays (ms)](image2)

- Flow 1 (95th percentile 67.17 ms)
Run 10: Statistics of Sprout

Start at: 2018-08-11 18:06:13
End at: 2018-08-11 18:06:43
Local clock offset: 0.752 ms
Remote clock offset: -1.315 ms

# Below is generated by plot.py at 2018-08-11 20:19:55
# Datalink statistics
-- Total of 1 flow:
Average throughput: 0.46 Mbit/s
95th percentile per-packet one-way delay: 62.827 ms
Loss rate: 1.29%
-- Flow 1:
Average throughput: 0.46 Mbit/s
95th percentile per-packet one-way delay: 62.827 ms
Loss rate: 1.29%
Run 10: Report of Sprout — Data Link

![Graph of Throughput vs. Time]

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 0.47 Mbit/s)  Flow 1 egress (mean 0.46 Mbit/s)

![Graph of Per-packet one-way delay vs. Time]

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 62.83 ms)
Run 1: Statistics of TaoVA-100x

Start at: 2018-08-11 14:35:25
End at: 2018-08-11 14:35:55
Local clock offset: -0.387 ms
Remote clock offset: 0.458 ms

# Below is generated by plot.py at 2018-08-11 20:19:55
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 124.28 Mbit/s
  95th percentile per-packet one-way delay: 60.977 ms
  Loss rate: 0.94%
-- Flow 1:
  Average throughput: 124.28 Mbit/s
  95th percentile per-packet one-way delay: 60.977 ms
  Loss rate: 0.94%
Run 1: Report of TaoVA-100x — Data Link
Run 2: Statistics of TaoVA-100x

Start at: 2018-08-11 14:58:08
End at: 2018-08-11 14:58:38
Local clock offset: -0.38 ms
Remote clock offset: -0.004 ms

# Below is generated by plot.py at 2018-08-11 20:20:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 223.54 Mbit/s
95th percentile per-packet one-way delay: 61.688 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 223.54 Mbit/s
95th percentile per-packet one-way delay: 61.688 ms
Loss rate: 0.47%
Run 2: Report of TaoVA-100x — Data Link

![Throughput Graph](chart1)

![Packet Drop Graph](chart2)
Run 3: Statistics of TaoVA-100x

Start at: 2018-08-11 15:20:57
End at: 2018-08-11 15:21:27
Local clock offset: -0.497 ms
Remote clock offset: 1.072 ms

# Below is generated by plot.py at 2018-08-11 20:20:09
# Datalink statistics
-- Total of 1 flow:
Average throughput: 159.09 Mbit/s
95th percentile per-packet one-way delay: 60.519 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 159.09 Mbit/s
95th percentile per-packet one-way delay: 60.519 ms
Loss rate: 0.46%
Run 4: Statistics of TaoVA-100x

Start at: 2018-08-11 15:43:55
End at: 2018-08-11 15:44:25
Local clock offset: -0.562 ms
Remote clock offset: 0.608 ms

# Below is generated by plot.py at 2018-08-11 20:22:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 233.78 Mbit/s
95th percentile per-packet one-way delay: 60.888 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 233.78 Mbit/s
95th percentile per-packet one-way delay: 60.888 ms
Loss rate: 0.00%
Run 4: Report of TaoVA-100x — Data Link

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

- **Throughput (Mbps)**
- **Time (s)**
  - 0 5 10 15 20 25 30
  - Flow 1 ingress (mean 233.82 Mb/s)
  - Flow 1 egress (mean 233.78 Mb/s)

- **Packet one-way delay (ms)**
  - 0 5 10 15 20 25 30
  - Flow 1 (95th percentile 60.89 ms)
Run 5: Statistics of TaoVA-100x

Start at: 2018-08-11 16:06:28
End at: 2018-08-11 16:06:58
Local clock offset: -0.62 ms
Remote clock offset: -0.256 ms

# Below is generated by plot.py at 2018-08-11 20:22:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 175.54 Mbit/s
95th percentile per-packet one-way delay: 67.123 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 175.54 Mbit/s
95th percentile per-packet one-way delay: 67.123 ms
Loss rate: 0.00%
Run 5: Report of TaoVA-100x — Data Link
Run 6: Statistics of TaoVA-100x

Start at: 2018-08-11 16:28:47
End at: 2018-08-11 16:29:17
Local clock offset: -0.674 ms
Remote clock offset: 0.295 ms

# Below is generated by plot.py at 2018-08-11 20:22:48
# Datalink statistics
-- Total of 1 flow:
Average throughput: 124.60 Mbit/s
95th percentile per-packet one-way delay: 66.180 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 124.60 Mbit/s
95th percentile per-packet one-way delay: 66.180 ms
Loss rate: 0.00%
Run 6: Report of TaoVA-100x — Data Link

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

- **Flow 1 ingress** (mean 124.62 Mbit/s)
- **Flow 1 egress** (mean 124.69 Mbit/s)

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

- **Flow 1** (95th percentile 66.18 ms)
Run 7: Statistics of TaoVA-100x

Start at: 2018-08-11 16:51:28
End at: 2018-08-11 16:51:58
Local clock offset: -0.729 ms
Remote clock offset: -0.041 ms

# Below is generated by plot.py at 2018-08-11 20:27:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 240.61 Mbit/s
95th percentile per-packet one-way delay: 61.568 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 240.61 Mbit/s
95th percentile per-packet one-way delay: 61.568 ms
Loss rate: 0.44%
Run 7: Report of TaoVA-100x — Data Link
Run 8: Statistics of TaoVA-100x

Start at: 2018-08-11 17:14:35
End at: 2018-08-11 17:15:05
Local clock offset: 0.181 ms
Remote clock offset: -0.626 ms

# Below is generated by plot.py at 2018-08-11 20:27:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 231.78 Mbit/s
95th percentile per-packet one-way delay: 61.936 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 231.78 Mbit/s
95th percentile per-packet one-way delay: 61.936 ms
Loss rate: 0.45%
Run 8: Report of TaoVA-100x — Data Link

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

Flow 1 ingress (mean 231.86 Mbit/s)  Flow 1 egress (mean 231.78 Mbit/s)

Flow 1 (95th percentile 61.94 ms)
Run 9: Statistics of TaoVA-100x

Start at: 2018-08-11 17:37:35
End at: 2018-08-11 17:38:05
Local clock offset: 0.474 ms
Remote clock offset: 1.308 ms

# Below is generated by plot.py at 2018-08-11 20:27:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 230.46 Mbit/s
95th percentile per-packet one-way delay: 60.100 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 230.46 Mbit/s
95th percentile per-packet one-way delay: 60.100 ms
Loss rate: 0.44%
Run 9: Report of TaoVA-100x — Data Link

![Graph showing throughput and packet delay over time]

- **Throughput**: The throughput graphs show the data transfer rates over time. The dashed line represents the ingress (mean 230.53 Mbit/s) and the solid line represents the egress (mean 230.46 Mbit/s).

- **Packet Delay**: The lower graph illustrates the per-packet one-way delay. The 95th percentile delay is marked as 60.10 ms.
Run 10: Statistics of TaoVA-100x

Start at: 2018-08-11 18:00:38
End at: 2018-08-11 18:01:08
Local clock offset: 0.706 ms
Remote clock offset: -0.022 ms

# Below is generated by plot.py at 2018-08-11 20:28:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 235.77 Mbit/s
95th percentile per-packet one-way delay: 61.354 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 235.77 Mbit/s
95th percentile per-packet one-way delay: 61.354 ms
Loss rate: 0.44%
Run 10: Report of TaoVA-100x — Data Link

![Graph 1](image1.png)

- Flow 1 ingress (mean 235.84 Mbit/s)
- Flow 1 egress (mean 235.77 Mbit/s)

![Graph 2](image2.png)

- Flow 1 (95th percentile 61.35 ms)
Run 1: Statistics of TCP Vegas

Start at: 2018-08-11 14:49:45
End at: 2018-08-11 14:50:15
Local clock offset: -0.449 ms
Remote clock offset: -0.092 ms

# Below is generated by plot.py at 2018-08-11 20:28:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 111.04 Mbit/s
95th percentile per-packet one-way delay: 62.208 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 111.04 Mbit/s
95th percentile per-packet one-way delay: 62.208 ms
Loss rate: 0.38%
Run 1: Report of TCP Vegas — Data Link

Throuoghput (Mbps)

Time (s)

Flow 1 ingress (mean 111.00 Mbit/s)  Flow 1 egress (mean 111.04 Mbit/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 62.21 ms)
Run 2: Statistics of TCP Vegas

Start at: 2018-08-11 15:12:29
End at: 2018-08-11 15:12:59
Local clock offset: -0.455 ms
Remote clock offset: -0.502 ms

# Below is generated by plot.py at 2018-08-11 20:28:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 38.02 Mbit/s
95th percentile per-packet one-way delay: 62.964 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 38.02 Mbit/s
95th percentile per-packet one-way delay: 62.964 ms
Loss rate: 0.52%
Run 2: Report of TCP Vegas — Data Link

Throughput (Megabits/s) vs Time (s)

- Flow 1 ingress (mean 38.06 Mbit/s)
- Flow 1 egress (mean 38.02 Mbit/s)

Average packet one-way delay (ms) vs Time (s)

- Flow 1 (95th percentile 62.96 ms)
Run 3: Statistics of TCP Vegas

Start at: 2018-08-11 15:35:20
End at: 2018-08-11 15:35:50
Local clock offset: -0.523 ms
Remote clock offset: 0.575 ms

# Below is generated by plot.py at 2018-08-11 20:28:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 211.56 Mbit/s
95th percentile per-packet one-way delay: 61.501 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 211.56 Mbit/s
95th percentile per-packet one-way delay: 61.501 ms
Loss rate: 0.42%
Run 3: Report of TCP Vegas — Data Link

---

**Graph 1:**
- X-axis: Time (s)
- Y-axis: Throughput (Mbit/s)
- Legend:
  - Flow 1 ingress (mean 211.59 Mbit/s)
  - Flow 1 egress (mean 211.56 Mbit/s)

**Graph 2:**
- X-axis: Time (s)
- Y-axis: Pre-packet one-way delay (ms)
- Legend:
  - Flow 1 (95th percentile 61.50 ms)
Run 4: Statistics of TCP Vegas

Start at: 2018-08-11 15:58:07
End at: 2018-08-11 15:58:38
Local clock offset: -0.598 ms
Remote clock offset: -0.303 ms

# Below is generated by plot.py at 2018-08-11 20:28:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 41.14 Mbit/s
95th percentile per-packet one-way delay: 67.080 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 41.14 Mbit/s
95th percentile per-packet one-way delay: 67.080 ms
Loss rate: 0.49%
Run 4: Report of TCP Vegas — Data Link

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

- **Flow 1 ingress (mean 41.17 Mbit/s)**
- **Flow 1 egress (mean 41.14 Mbit/s)**

![Graph 2: Ping Pong round-trip delay vs Time](image2.png)

- **Flow 1 95th percentile 67.08 ms**

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Run 5: Statistics of TCP Vegas

Start at: 2018-08-11 16:20:23
End at: 2018-08-11 16:20:53
Local clock offset: -0.647 ms
Remote clock offset: -0.689 ms

# Below is generated by plot.py at 2018-08-11 20:28:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 126.24 Mbit/s
95th percentile per-packet one-way delay: 67.687 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 126.24 Mbit/s
95th percentile per-packet one-way delay: 67.687 ms
Loss rate: 0.42%
Run 5: Report of TCP Vegas — Data Link

![Graph of TCP Vegas data link performance](image)

- **Flow 1 ingress (mean 126.26 Mbit/s)**
- **Flow 1 egress (mean 126.24 Mbit/s)**
Run 6: Statistics of TCP Vegas

Start at: 2018-08-11 16:42:58
End at: 2018-08-11 16:43:28
Local clock offset: -0.688 ms
Remote clock offset: -0.815 ms

# Below is generated by plot.py at 2018-08-11 20:28:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 123.94 Mbit/s
95th percentile per-packet one-way delay: 67.889 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 123.94 Mbit/s
95th percentile per-packet one-way delay: 67.889 ms
Loss rate: 0.44%
Run 6: Report of TCP Vegas — Data Link

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

- **Throughput**
  - Flow 1 ingress (mean 123.99 Mbit/s)
  - Flow 1 egress (mean 123.94 Mbit/s)

- **Packet Delay**
  - Flow 1 (95th percentile 67.89 ms)
Run 7: Statistics of TCP Vegas

Start at: 2018-08-11 17:06:05
End at: 2018-08-11 17:06:35
Local clock offset: 0.012 ms
Remote clock offset: -0.002 ms

# Below is generated by plot.py at 2018-08-11 20:28:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 116.90 Mbit/s
95th percentile per-packet one-way delay: 62.359 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 116.90 Mbit/s
95th percentile per-packet one-way delay: 62.359 ms
Loss rate: 0.40%
Run 7: Report of TCP Vegas — Data Link

![Graph of Throughput vs Time](image1)

- **Flow 1 ingress (mean 116.89 Mbit/s)**
- **Flow 1 egress (mean 116.50 Mbit/s)**

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

- **Flow 1 (95th percentile 62.36 ms)**
Run 8: Statistics of TCP Vegas

Start at: 2018-08-11 17:29:12
End at: 2018-08-11 17:29:42
Local clock offset: 0.391 ms
Remote clock offset: 1.109 ms

# Below is generated by plot.py at 2018-08-11 20:28:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 126.57 Mbit/s
95th percentile per-packet one-way delay: 61.181 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 126.57 Mbit/s
95th percentile per-packet one-way delay: 61.181 ms
Loss rate: 0.42%
Run 8: Report of TCP Vegas — Data Link

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**Throughput (Mbps)**

![Throughput Graph](image)

- **Flow 1 ingress (mean 126.59 Mbps)**
- **Flow 1 egress (mean 126.57 Mbps)**

---

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

![Delay Graph](image)

- **Flow 1 (95th percentile 61.18 ms)**

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Run 9: Statistics of TCP Vegas

Start at: 2018-08-11 17:52:09
End at: 2018-08-11 17:52:40
Local clock offset: 0.627 ms
Remote clock offset: -0.316 ms

# Below is generated by plot.py at 2018-08-11 20:28:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 127.67 Mbit/s
95th percentile per-packet one-way delay: 62.278 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 127.67 Mbit/s
95th percentile per-packet one-way delay: 62.278 ms
Loss rate: 0.44%
Run 9: Report of TCP Vegas — Data Link
Run 10: Statistics of TCP Vegas

Start at: 2018-08-11 18:15:03
End at: 2018-08-11 18:15:33
Local clock offset: 0.798 ms
Remote clock offset: 0.022 ms

# Below is generated by plot.py at 2018-08-11 20:28:02
# Datalink statistics
-- Total of 1 flow:
Average throughput: 122.04 Mbit/s
95th percentile per-packet one-way delay: 62.677 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 122.04 Mbit/s
95th percentile per-packet one-way delay: 62.677 ms
Loss rate: 0.42%
Run 10: Report of TCP Vegas — Data Link

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

- **Flow 1 ingress (mean 122.06 Mbits/s)**
- **Flow 1 egress (mean 122.04 Mbits/s)**

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

- **Flow 1 (95th percentile 62.68 ms)**
Run 1: Statistics of Verus

Start at: 2018-08-11 14:44:48
End at: 2018-08-11 14:45:18
Local clock offset: -0.426 ms
Remote clock offset: 1.417 ms

# Below is generated by plot.py at 2018-08-11 20:30:47
# Datalink statistics
-- Total of 1 flow:
Average throughput: 243.77 Mbit/s
95th percentile per-packet one-way delay: 107.322 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 243.77 Mbit/s
95th percentile per-packet one-way delay: 107.322 ms
Loss rate: 0.56%
Run 1: Report of Verus — Data Link

![Graph of data link throughput over time]

- Flow 1 ingress (mean 244.28 Mbit/s)
- Flow 1 egress (mean 243.77 Mbit/s)

![Graph of packet delay over time]

- Flow 1 (95th percentile 107.32 ms)
Run 2: Statistics of Verus

Start at: 2018-08-11 15:07:31  
End at: 2018-08-11 15:08:01  
Local clock offset: -0.432 ms  
Remote clock offset: -0.836 ms

# Below is generated by plot.py at 2018-08-11 20:31:40  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 262.33 Mbit/s  
95th percentile per-packet one-way delay: 107.843 ms  
Loss rate: 0.78%  
-- Flow 1:  
Average throughput: 262.33 Mbit/s  
95th percentile per-packet one-way delay: 107.843 ms  
Loss rate: 0.78%
Run 2: Report of Verus — Data Link

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

- Flow 1 ingress (mean 263.18 Mbps)
- Flow 1 egress (mean 262.33 Mbps)

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

- Flow 1 (95th percentile 107.84 ms)
Run 3: Statistics of Verus

Start at: 2018-08-11 15:30:21
End at: 2018-08-11 15:30:51
Local clock offset: -0.537 ms
Remote clock offset: 0.409 ms

# Below is generated by plot.py at 2018-08-11 20:32:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 266.29 Mbit/s
95th percentile per-packet one-way delay: 94.211 ms
Loss rate: 0.92%
-- Flow 1:
Average throughput: 266.29 Mbit/s
95th percentile per-packet one-way delay: 94.211 ms
Loss rate: 0.92%
Run 3: Report of Verus — Data Link

Graph 1: Throughput (Mbps) vs Time (s)
- Flow 1 ingress (mean 267.65 Mbps)
- Flow 1 egress (mean 266.29 Mbps)

Graph 2: Per-packet one-way delay (ms) vs Time (s)
- Flow 1 (95th percentile 94.21 ms)
Run 4: Statistics of Verus

Start at: 2018-08-11 15:53:21
End at: 2018-08-11 15:53:51
Local clock offset: -0.583 ms
Remote clock offset: -0.031 ms

# Below is generated by plot.py at 2018-08-11 20:32:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 217.39 Mbit/s
95th percentile per-packet one-way delay: 97.891 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 217.39 Mbit/s
95th percentile per-packet one-way delay: 97.891 ms
Loss rate: 0.73%
Run 4: Report of Verus — Data Link

![Graph 1: Throughput (Mbps)](image)
- **Flow 1 ingress (mean 218.09 Mbps)**
- **Flow 1 egress (mean 217.39 Mbps)**

![Graph 2: Per packet one way delay (ms)](image)
- **Flow 1 (95th percentile 97.89 ms)**
Run 5: Statistics of Verus

Start at: 2018-08-11 16:15:31
End at: 2018-08-11 16:16:01
Local clock offset: -0.607 ms
Remote clock offset: 1.168 ms

# Below is generated by plot.py at 2018-08-11 20:32:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 225.53 Mbit/s
95th percentile per-packet one-way delay: 171.072 ms
Loss rate: 3.91%
-- Flow 1:
Average throughput: 225.53 Mbit/s
95th percentile per-packet one-way delay: 171.072 ms
Loss rate: 3.91%
Run 5: Report of Verus — Data Link

![Graph of Throughput vs Time](image1)

- Flow 1 ingress (mean 233.74 Mbit/s)
- Flow 1 egress (mean 225.53 Mbit/s)

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

- Flow 1 (95th percentile 171.07 ms)
Run 6: Statistics of Verus

Start at: 2018-08-11 16:37:54
End at: 2018-08-11 16:38:24
Local clock offset: -0.712 ms
Remote clock offset: -1.306 ms

# Below is generated by plot.py at 2018-08-11 20:33:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 303.91 Mbit/s
95th percentile per-packet one-way delay: 170.786 ms
Loss rate: 3.36%
-- Flow 1:
Average throughput: 303.91 Mbit/s
95th percentile per-packet one-way delay: 170.786 ms
Loss rate: 3.36%
Run 6: Report of Verus — Data Link

![Graph](image)

- Flow 1 ingress (mean 313.56 Mbit/s)
- Flow 1 egress (mean 303.91 Mbit/s)

![Graph](image)

- Flow 1 (95th percentile 170.79 ms)

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Run 7: Statistics of Verus

Start at: 2018-08-11 17:01:06
End at: 2018-08-11 17:01:36
Local clock offset: -0.232 ms
Remote clock offset: -0.067 ms

# Below is generated by plot.py at 2018-08-11 20:33:06
# Datalink statistics
-- Total of 1 flow:
  Average throughput: 250.38 Mbit/s
  95th percentile per-packet one-way delay: 102.186 ms
  Loss rate: 0.43%
-- Flow 1:
  Average throughput: 250.38 Mbit/s
  95th percentile per-packet one-way delay: 102.186 ms
  Loss rate: 0.43%
Run 7: Report of Verus — Data Link

![Graph showing throughput and delay over time]

- Flow 1 ingress (mean 250.83 Mbit/s)
- Flow 1 egress (mean 250.38 Mbit/s)

- Flow 1 (95th percentile 102.19 ms)
Run 8: Statistics of Verus

Start at: 2018-08-11 17:24:11
End at: 2018-08-11 17:24:41
Local clock offset: 0.353 ms
Remote clock offset: -0.927 ms

# Below is generated by plot.py at 2018-08-11 20:33:06
# Datalink statistics
-- Total of 1 flow:
Average throughput: 269.99 Mbit/s
95th percentile per-packet one-way delay: 137.729 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 269.99 Mbit/s
95th percentile per-packet one-way delay: 137.729 ms
Loss rate: 0.54%
Run 8: Report of Verus — Data Link

![Graph showing throughput and delay over time]
Run 9: Statistics of Verus

Start at: 2018-08-11 17:47:11
End at: 2018-08-11 17:47:41
Local clock offset: 0.573 ms
Remote clock offset: -0.759 ms

# Below is generated by plot.py at 2018-08-11 20:34:39
# Datalink statistics
-- Total of 1 flow:
Average throughput: 235.76 Mbit/s
95th percentile per-packet one-way delay: 122.670 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 235.76 Mbit/s
95th percentile per-packet one-way delay: 122.670 ms
Loss rate: 0.65%
Run 9: Report of Verus — Data Link
Run 10: Statistics of Verus

Start at: 2018-08-11 18:10:01
End at: 2018-08-11 18:10:31
Local clock offset: 0.747 ms
Remote clock offset: -0.132 ms

# Below is generated by plot.py at 2018-08-11 20:35:43
# Datalink statistics
-- Total of 1 flow:
Average throughput: 266.76 Mbit/s
95th percentile per-packet one-way delay: 127.349 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 266.76 Mbit/s
95th percentile per-packet one-way delay: 127.349 ms
Loss rate: 0.49%
Run 10: Report of Verus — Data Link

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

- **Flow 1 ingress** (mean 266.96 Mbps)
- **Flow 1 egress** (mean 266.76 Mbps)

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

- **Flow 1** (95th percentile 127.35 ms)
Run 1: Statistics of PCC-Vivace

Start at: 2018-08-11 14:50:56
End at: 2018-08-11 14:51:26
Local clock offset: -0.416 ms
Remote clock offset: -1.584 ms

# Below is generated by plot.py at 2018-08-11 20:38:41
# Datalink statistics
-- Total of 1 flow:
Average throughput: 373.15 Mbit/s
95th percentile per-packet one-way delay: 63.563 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 373.15 Mbit/s
95th percentile per-packet one-way delay: 63.563 ms
Loss rate: 0.48%
Run 1: Report of PCC-Vivace — Data Link

![Throughput graph](image1)

![Per packet one way delay graph](image2)
Run 2: Statistics of PCC-Vivace

Start at: 2018-08-11 15:13:37
End at: 2018-08-11 15:14:08
Local clock offset: -0.501 ms
Remote clock offset: -0.67 ms

# Below is generated by plot.py at 2018-08-11 20:39:03
# Datalink statistics
-- Total of 1 flow:
Average throughput: 394.65 Mbit/s
95th percentile per-packet one-way delay: 63.780 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 394.65 Mbit/s
95th percentile per-packet one-way delay: 63.780 ms
Loss rate: 0.50%
Run 2: Report of PCC-Vivace — Data Link

![Graph of Throughput (Mbps)]

- Flow 1 ingress (mean 394.98 Mbps)
- Flow 1 egress (mean 394.65 Mbps)

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

- Flow 1 (95th percentile 63.78 ms)
Run 3: Statistics of PCC-Vivace

Start at: 2018-08-11 15:36:36
End at: 2018-08-11 15:37:06
Local clock offset: -0.53 ms
Remote clock offset: -0.89 ms

# Below is generated by plot.py at 2018-08-11 20:39:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 405.83 Mbit/s
95th percentile per-packet one-way delay: 63.300 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 405.83 Mbit/s
95th percentile per-packet one-way delay: 63.300 ms
Loss rate: 0.50%
Run 3: Report of PCC-Vivace — Data Link
Run 4: Statistics of PCC-Vivace

Start at: 2018-08-11 15:59:16
End at: 2018-08-11 15:59:46
Local clock offset: -0.602 ms
Remote clock offset: 0.037 ms

# Below is generated by plot.py at 2018-08-11 20:39:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 293.57 Mbit/s
95th percentile per-packet one-way delay: 63.507 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 293.57 Mbit/s
95th percentile per-packet one-way delay: 63.507 ms
Loss rate: 0.53%
Run 4: Report of PCC-Vivace — Data Link

![Graph showing throughput and packet loss over time]

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 293.82 Mbit/s)  Flow 1 egress (mean 293.57 Mbit/s)

Packet loss (99th percentile 63.51 ms)
Run 5: Statistics of PCC-Vivace

Start at: 2018-08-11 16:21:35
End at: 2018-08-11 16:22:05
Local clock offset: -0.662 ms
Remote clock offset: 0.058 ms

# Below is generated by plot.py at 2018-08-11 20:40:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 404.71 Mbit/s
95th percentile per-packet one-way delay: 62.810 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 404.71 Mbit/s
95th percentile per-packet one-way delay: 62.810 ms
Loss rate: 0.43%
Run 5: Report of PCC-Vivace — Data Link

![Graph showing network performance metrics](image)

- Flow 1 ingress (mean 404.62 Mbit/s)
- Flow 1 egress (mean 404.71 Mbit/s)
Run 6: Statistics of PCC-Vivace

Start at: 2018-08-11 16:44:10
End at: 2018-08-11 16:44:40
Local clock offset: -0.709 ms
Remote clock offset: 1.207 ms

# Below is generated by plot.py at 2018-08-11 20:40:17
# Datalink statistics
-- Total of 1 flow:
Average throughput: 378.75 Mbit/s
95th percentile per-packet one-way delay: 61.133 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 378.75 Mbit/s
95th percentile per-packet one-way delay: 61.133 ms
Loss rate: 0.58%
Run 6: Report of PCC-Vivace — Data Link

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

- **Flow 1 ingress (mean 379.40 Mbit/s)**
- **Flow 1 egress (mean 378.75 Mbit/s)**
Run 7: Statistics of PCC-Vivace

Start at: 2018-08-11 17:07:17
End at: 2018-08-11 17:07:47
Local clock offset: 0.017 ms
Remote clock offset: -0.493 ms

# Below is generated by plot.py at 2018-08-11 20:40:57
# Datalink statistics
-- Total of 1 flow:
Average throughput: 392.60 Mbit/s
95th percentile per-packet one-way delay: 63.234 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 392.60 Mbit/s
95th percentile per-packet one-way delay: 63.234 ms
Loss rate: 0.44%
Run 7: Report of PCC-Vivace — Data Link

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

- **Flow 1 ingress (mean 392.72 Mbit/s)**
- **Flow 1 egress (mean 392.60 Mbit/s)**

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

- **Flow 1 (95th percentile 63.23 ms)**
Run 8: Statistics of PCC-Vivace

Start at: 2018-08-11 17:30:24
End at: 2018-08-11 17:30:54
Local clock offset: 0.386 ms
Remote clock offset: -0.08 ms

# Below is generated by plot.py at 2018-08-11 20:41:00
# Datalink statistics
-- Total of 1 flow:
Average throughput: 326.30 Mbit/s
95th percentile per-packet one-way delay: 176.937 ms
Loss rate: 1.40%
-- Flow 1:
Average throughput: 326.30 Mbit/s
95th percentile per-packet one-way delay: 176.937 ms
Loss rate: 1.40%
Run 8: Report of PCC-Vivace — Data Link
Run 9: Statistics of PCC-Vivace

Start at: 2018-08-11 17:53:22
End at: 2018-08-11 17:53:52
Local clock offset: 0.623 ms
Remote clock offset: -0.21 ms

# Below is generated by plot.py at 2018-08-11 20:41:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 405.09 Mbit/s
95th percentile per-packet one-way delay: 63.221 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 405.09 Mbit/s
95th percentile per-packet one-way delay: 63.221 ms
Loss rate: 0.45%
Run 9: Report of PCC-Vivace — Data Link

![Graph showing throughput and packet delay](image-url)
Run 10: Statistics of PCC-Vivace

Start at: 2018-08-11 18:16:15  
End at: 2018-08-11 18:16:45  
Local clock offset: 1.0 ms  
Remote clock offset: -0.255 ms

# Below is generated by plot.py at 2018-08-11 20:41:37  
# Datalink statistics  
-- Total of 1 flow:  
Average throughput: 313.45 Mbit/s  
95th percentile per-packet one-way delay: 67.539 ms  
Loss rate: 0.54%  
-- Flow 1:  
Average throughput: 313.45 Mbit/s  
95th percentile per-packet one-way delay: 67.539 ms  
Loss rate: 0.54%
Run 10: Report of PCC-Vivace — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 313.86 Mbit/s)  Flow 1 egress (mean 313.45 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 67.54 ms)
Run 1: Statistics of WebRTC media

Start at: 2018-08-11 14:36:42
End at: 2018-08-11 14:37:12
Local clock offset: -0.409 ms
Remote clock offset: -0.828 ms

# Below is generated by plot.py at 2018-08-11 20:41:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.48 Mbit/s
95th percentile per-packet one-way delay: 62.061 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 1.48 Mbit/s
95th percentile per-packet one-way delay: 62.061 ms
Loss rate: 0.70%
Run 1: Report of WebRTC media — Data Link

![Graph showing throughput over time with two lines representing Flow 1 ingress and egress with mean throughputs of 1.49 Mbit/s and 1.48 Mbit/s respectively.]

![Graph showing packet one-way delay with dots representing Flow 1 and the 95th percentile at 62.56 ms.]

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Run 2: Statistics of WebRTC media

Start at: 2018-08-11 14:59:32
End at: 2018-08-11 15:00:02
Local clock offset: -0.452 ms
Remote clock offset: -1.519 ms

# Below is generated by plot.py at 2018-08-11 20:41:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.92 Mbit/s
95th percentile per-packet one-way delay: 62.924 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 1.92 Mbit/s
95th percentile per-packet one-way delay: 62.924 ms
Loss rate: 0.33%
Run 2: Report of WebRTC media — Data Link

![Graph showing throughput over time with two lines representing Flow 1 ingress and egress with a mean of 1.92 Mbps.](image1)

![Graph showing per-packet one-way delay over time with Flow 1 (95th percentile 62.92 ms).](image2)
Run 3: Statistics of WebRTC media

Start at: 2018-08-11 15:22:16  
End at: 2018-08-11 15:22:46  
Local clock offset: -0.533 ms  
Remote clock offset: -0.076 ms

# Below is generated by plot.py at 2018-08-11 20:41:37  
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.94 Mbit/s  
95th percentile per-packet one-way delay: 61.363 ms  
Loss rate: 0.50%
-- Flow 1:
Average throughput: 1.94 Mbit/s  
95th percentile per-packet one-way delay: 61.363 ms  
Loss rate: 0.50%
Run 3: Report of WebRTC media — Data Link
Run 4: Statistics of WebRTC media

Start at: 2018-08-11 15:45:21
End at: 2018-08-11 15:45:51
Local clock offset: -0.518 ms
Remote clock offset: 1.209 ms

# Below is generated by plot.py at 2018-08-11 20:41:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.85 Mbit/s
95th percentile per-packet one-way delay: 60.185 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 1.85 Mbit/s
95th percentile per-packet one-way delay: 60.185 ms
Loss rate: 0.51%
Run 4: Report of WebRTC media — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 1.85 Mbit/s)  Flow 1 egress (mean 1.85 Mbit/s)

Packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 60.19 ms)
Run 5: Statistics of WebRTC media

Start at: 2018-08-11 16:07:49
End at: 2018-08-11 16:08:19
Local clock offset: -0.626 ms
Remote clock offset: 0.466 ms

# Below is generated by plot.py at 2018-08-11 20:41:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.91 Mbit/s
95th percentile per-packet one-way delay: 66.232 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 1.91 Mbit/s
95th percentile per-packet one-way delay: 66.232 ms
Loss rate: 0.50%
Run 5: Report of WebRTC media — Data Link
Run 6: Statistics of WebRTC media

Start at: 2018-08-11 16:30:03
End at: 2018-08-11 16:30:33
Local clock offset: ~0.654 ms
Remote clock offset: ~1.366 ms

# Below is generated by plot.py at 2018-08-11 20:41:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.87 Mbit/s
95th percentile per-packet one-way delay: 62.997 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 1.87 Mbit/s
95th percentile per-packet one-way delay: 62.997 ms
Loss rate: 0.45%
Run 6: Report of WebRTC media — Data Link
Run 7: Statistics of WebRTC media

Start at: 2018-08-11 16:52:55
End at: 2018-08-11 16:53:25
Local clock offset: -0.696 ms
Remote clock offset: -0.243 ms

# Below is generated by plot.py at 2018-08-11 20:41:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.89 Mbit/s
95th percentile per-packet one-way delay: 67.191 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 1.89 Mbit/s
95th percentile per-packet one-way delay: 67.191 ms
Loss rate: 0.44%
Run 7: Report of WebRTC media — Data Link
Run 8: Statistics of WebRTC media

Start at: 2018-08-11 17:16:02
End at: 2018-08-11 17:16:32
Local clock offset: 0.207 ms
Remote clock offset: -0.62 ms

# Below is generated by plot.py at 2018-08-11 20:41:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.89 Mbit/s
95th percentile per-packet one-way delay: 62.026 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 1.89 Mbit/s
95th percentile per-packet one-way delay: 62.026 ms
Loss rate: 0.45%
Run 8: Report of WebRTC media — Data Link

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

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

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

- *Flow 1 95th percentile 62.03 ms*
Run 9: Statistics of WebRTC media

Start at: 2018-08-11 17:39:02
End at: 2018-08-11 17:39:32
Local clock offset: 0.422 ms
Remote clock offset: 0.395 ms

# Below is generated by plot.py at 2018-08-11 20:41:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.88 Mbit/s
95th percentile per-packet one-way delay: 60.958 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 1.88 Mbit/s
95th percentile per-packet one-way delay: 60.958 ms
Loss rate: 0.44%
Run 9: Report of WebRTC media — Data Link

- Throughput (Mbps)
  - Flow 1 ingress (mean 1.88 Mbps)
  - Flow 1 egress (mean 1.88 Mbps)

- Per-packet one-way delay (ms)
  - Flow 1 (95th percentile 60.96 ms)
Run 10: Statistics of WebRTC media

Start at: 2018-08-11 18:02:06
End at: 2018-08-11 18:02:36
Local clock offset: 0.697 ms
Remote clock offset: 0.536 ms

# Below is generated by plot.py at 2018-08-11 20:41:37
# Datalink statistics
-- Total of 1 flow:
Average throughput: 1.91 Mbit/s
95th percentile per-packet one-way delay: 66.631 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 1.91 Mbit/s
95th percentile per-packet one-way delay: 66.631 ms
Loss rate: 0.43%
Run 10: Report of WebRTC media — Data Link

![Throughput Graph]

Time (s)

Flow 1 ingress (mean 1.91 Mbit/s)  Flow 1 egress (mean 1.91 Mbit/s)

![Delay Graph]

Per packet one-way delay (ms)

Flow 1 (95th percentile 66.63 ms)