
Data path: GCE London on ens4 (remote) → GCE Sydney on ens4 (local).
Repeated the test of 18 congestion control schemes 5 times.
Each test lasted for 30 seconds running 3 flows with 10-second interval between two flows.
NTP offsets were measured against time.google.com and have been applied to correct the timestamps in logs.

System info:
Linux 4.15.0-1018-gcp
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
net.ipv4.tcp_mem = 190986 254651 381972

Git summary:
branch: muses @ f30bceca2aec2ef14a3cf71e25642f4a30905a03
third_party/fillp @ d47f4fa1b454a5e3c0537115c5a28436dbd4b834
third_party/fillp-sheep @ daed0c84f98531712514b2231f43ec6901114ffe
third_party/genericCC @ d0153f8e594aa89e93b032143ced6dfe58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3c3f
third_party/muses @ 65ac1b19bebed0c6349ae98600b4f8643c40a
third_party/pantheon-tunnel @ cbf734b5f5740dafe1771f813cd646339e1952
third_party/pcc @ 1af4958fa0d66d18b623c091a55fe8724981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f613e8acd08fab92c4e24b9f7ab
third_party/proto-quic @ 7796f1a8273a86b42f1bc8143ebc978f3c4f2
third_party/scream-reproduce @ f099118d1421aa313b1f11ff1964974e1da3db2
M/src/ScreamClient
M/src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f9a26
M/src/examples/cellsim.cc
M/src/examples/sproutbt2.cc
M/src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
M/src/verus.hpp
M tools/plot.py
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9d4d35770d143a1fa2851
test from GCE London to GCE Sydney, 5 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)
<table>
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<tr>
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<th># runs</th>
<th>mean avg tput (Mbit/s)</th>
<th>mean 95th-%ile delay (ms)</th>
<th>mean loss rate (%)</th>
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<td>150.63</td>
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<td>201.52</td>
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<td>WebRTC media</td>
<td>5</td>
<td>1.69</td>
<td>1.03</td>
<td>0.33</td>
</tr>
</tbody>
</table>
Run 1: Statistics of TCP BBR

Start at: 2018-09-11 11:01:09
End at: 2018-09-11 11:01:39
Local clock offset: 0.107 ms
Remote clock offset: -0.093 ms

# Below is generated by plot.py at 2018-09-11 13:58:14
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 727.44 Mbit/s
  95th percentile per-packet one-way delay: 275.423 ms
  Loss rate: 5.21%
-- Flow 1:
  Average throughput: 411.15 Mbit/s
  95th percentile per-packet one-way delay: 280.267 ms
  Loss rate: 6.64%
-- Flow 2:
  Average throughput: 380.46 Mbit/s
  95th percentile per-packet one-way delay: 252.398 ms
  Loss rate: 2.97%
-- Flow 3:
  Average throughput: 196.23 Mbit/s
  95th percentile per-packet one-way delay: 136.626 ms
  Loss rate: 4.47%
Run 1: Report of TCP BBR — Data Link
Run 2: Statistics of TCP BBR

Start at: 2018-09-11 11:34:33
End at: 2018-09-11 11:35:03
Local clock offset: 0.001 ms
Remote clock offset: -0.111 ms

# Below is generated by plot.py at 2018-09-11 13:58:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 698.60 Mbit/s
95th percentile per-packet one-way delay: 276.005 ms
Loss rate: 4.65%
-- Flow 1:
Average throughput: 389.91 Mbit/s
95th percentile per-packet one-way delay: 281.965 ms
Loss rate: 4.73%
-- Flow 2:
Average throughput: 335.37 Mbit/s
95th percentile per-packet one-way delay: 261.235 ms
Loss rate: 3.37%
-- Flow 3:
Average throughput: 264.39 Mbit/s
95th percentile per-packet one-way delay: 249.528 ms
Loss rate: 7.44%
Run 3: Statistics of TCP BBR

Start at: 2018-09-11 12:11:08
End at: 2018-09-11 12:11:38
Local clock offset: 0.005 ms
Remote clock offset: -0.461 ms

# Below is generated by plot.py at 2018-09-11 13:58:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 774.21 Mbit/s
95th percentile per-packet one-way delay: 281.322 ms
Loss rate: 7.16%
-- Flow 1:
Average throughput: 441.81 Mbit/s
95th percentile per-packet one-way delay: 304.322 ms
Loss rate: 7.78%
-- Flow 2:
Average throughput: 393.28 Mbit/s
95th percentile per-packet one-way delay: 273.551 ms
Loss rate: 6.38%
-- Flow 3:
Average throughput: 219.52 Mbit/s
95th percentile per-packet one-way delay: 140.143 ms
Loss rate: 6.15%
Run 3: Report of TCP BBR — Data Link

![Graphs showing throughput and per-packet one-way delay for different flows.](Image)

- **Flow 1 ingress (mean 474.71 Mbit/s)**
- **Flow 1 egress (mean 441.81 Mbit/s)**
- **Flow 2 ingress (mean 414.33 Mbit/s)**
- **Flow 2 egress (mean 393.28 Mbit/s)**
- **Flow 3 ingress (mean 227.49 Mbit/s)**
- **Flow 3 egress (mean 219.52 Mbit/s)**

![Graphs showing throughput and per-packet one-way delay for different flows.](Image)

- **Flow 1 (95th percentile 304.32 ms)**
- **Flow 2 (95th percentile 273.55 ms)**
- **Flow 3 (95th percentile 140.14 ms)**
Run 4: Statistics of TCP BBR

End at: 2018-09-11 12:50:02
Local clock offset: -0.086 ms
Remote clock offset: -0.149 ms

# Below is generated by plot.py at 2018-09-11 13:58:54
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 699.64 Mbit/s
  95th percentile per-packet one-way delay: 298.746 ms
  Loss rate: 6.46%
-- Flow 1:
  Average throughput: 352.05 Mbit/s
  95th percentile per-packet one-way delay: 306.288 ms
  Loss rate: 8.40%
-- Flow 2:
  Average throughput: 421.53 Mbit/s
  95th percentile per-packet one-way delay: 259.300 ms
  Loss rate: 4.17%
-- Flow 3:
  Average throughput: 209.91 Mbit/s
  95th percentile per-packet one-way delay: 148.199 ms
  Loss rate: 5.41%
Run 4: Report of TCP BBR — Data Link

![Graphs showing throughput and packet delay over time]

- **Throughput**
  - Flow 1 ingress (mean 380.87 Mbit/s)
  - Flow 1 egress (mean 352.05 Mbit/s)
  - Flow 2 ingress (mean 435.11 Mbit/s)
  - Flow 2 egress (mean 421.53 Mbit/s)
  - Flow 3 ingress (mean 215.86 Mbit/s)
  - Flow 3 egress (mean 209.91 Mbit/s)

- **Packet Delay**
  - Flow 1 (95th percentile 306.29 ms)
  - Flow 2 (95th percentile 259.30 ms)
  - Flow 3 (95th percentile 148.20 ms)
Run 5: Statistics of TCP BBR

Local clock offset: -0.074 ms
Remote clock offset: 0.294 ms

# Below is generated by plot.py at 2018-09-11 13:58:54
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 692.87 Mbit/s
  95th percentile per-packet one-way delay: 290.116 ms
  Loss rate: 5.43%
-- Flow 1:
  Average throughput: 423.16 Mbit/s
  95th percentile per-packet one-way delay: 261.306 ms
  Loss rate: 3.18%
-- Flow 2:
  Average throughput: 293.37 Mbit/s
  95th percentile per-packet one-way delay: 322.771 ms
  Loss rate: 10.00%
-- Flow 3:
  Average throughput: 230.28 Mbit/s
  95th percentile per-packet one-way delay: 136.331 ms
  Loss rate: 5.41%
Run 5: Report of TCP BBR — Data Link
Run 1: Statistics of Copa

Start at: 2018-09-11 10:56:56
End at: 2018-09-11 10:57:26
Local clock offset: 0.06 ms
Remote clock offset: 0.281 ms

# Below is generated by plot.py at 2018-09-11 14:02:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 510.85 Mbit/s
95th percentile per-packet one-way delay: 222.243 ms
Loss rate: 1.78%
-- Flow 1:
Average throughput: 264.03 Mbit/s
95th percentile per-packet one-way delay: 188.123 ms
Loss rate: 0.84%
-- Flow 2:
Average throughput: 255.75 Mbit/s
95th percentile per-packet one-way delay: 247.162 ms
Loss rate: 1.47%
-- Flow 3:
Average throughput: 236.63 Mbit/s
95th percentile per-packet one-way delay: 283.801 ms
Loss rate: 5.52%
Run 1: Report of Copa — Data Link
Run 2: Statistics of Copa

Start at: 2018-09-11 11:30:22
End at: 2018-09-11 11:30:52
Local clock offset: -0.054 ms
Remote clock offset: -0.11 ms

# Below is generated by plot.py at 2018-09-11 14:02:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 529.76 Mbit/s
95th percentile per-packet one-way delay: 168.850 ms
Loss rate: 1.55%
-- Flow 1:
Average throughput: 286.38 Mbit/s
95th percentile per-packet one-way delay: 164.636 ms
Loss rate: 0.97%
-- Flow 2:
Average throughput: 265.03 Mbit/s
95th percentile per-packet one-way delay: 171.581 ms
Loss rate: 1.54%
-- Flow 3:
Average throughput: 207.33 Mbit/s
95th percentile per-packet one-way delay: 168.888 ms
Loss rate: 3.96%
Run 2: Report of Copa — Data Link

![Graph showing network performance metrics](image-url)

**Throughput (Mbps)**
- Flow 1 ingress (mean 286.58 Mbps)
- Flow 1 egress (mean 286.38 Mbps)
- Flow 2 ingress (mean 265.52 Mbps)
- Flow 2 egress (mean 265.03 Mbps)
- Flow 3 ingress (mean 209.96 Mbps)
- Flow 3 egress (mean 207.33 Mbps)

**Per-packet transmission delay (ms)**
- Flow 1 (95th percentile 164.64 ms)
- Flow 2 (95th percentile 171.58 ms)
- Flow 3 (95th percentile 168.89 ms)
Run 3: Statistics of Copa

Start at: 2018-09-11 12:06:09
End at: 2018-09-11 12:06:39
Local clock offset: 0.094 ms
Remote clock offset: 0.253 ms

# Below is generated by plot.py at 2018-09-11 14:02:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 511.20 Mbit/s
95th percentile per-packet one-way delay: 188.597 ms
Loss rate: 1.61%
-- Flow 1:
Average throughput: 270.10 Mbit/s
95th percentile per-packet one-way delay: 194.846 ms
Loss rate: 0.93%
-- Flow 2:
Average throughput: 266.54 Mbit/s
95th percentile per-packet one-way delay: 165.243 ms
Loss rate: 1.64%
-- Flow 3:
Average throughput: 197.34 Mbit/s
95th percentile per-packet one-way delay: 183.368 ms
Loss rate: 4.24%
Run 3: Report of Copa — Data Link
Run 4: Statistics of Copa

Start at: 2018-09-11 12:45:22
End at: 2018-09-11 12:45:52
Local clock offset: -0.121 ms
Remote clock offset: -0.507 ms

# Below is generated by plot.py at 2018-09-11 14:14:57
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 497.48 Mbit/s
  95th percentile per-packet one-way delay: 204.245 ms
  Loss rate: 1.48%
-- Flow 1:
  Average throughput: 248.44 Mbit/s
  95th percentile per-packet one-way delay: 199.663 ms
  Loss rate: 0.87%
-- Flow 2:
  Average throughput: 280.06 Mbit/s
  95th percentile per-packet one-way delay: 166.093 ms
  Loss rate: 1.64%
-- Flow 3:
  Average throughput: 194.19 Mbit/s
  95th percentile per-packet one-way delay: 213.161 ms
  Loss rate: 3.34%
Run 4: Report of Copa — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 248.35 Mbps)
  - Flow 1 egress (mean 248.44 Mbps)
  - Flow 2 ingress (mean 280.84 Mbps)
  - Flow 2 egress (mean 280.06 Mbps)
  - Flow 3 ingress (mean 195.73 Mbps)
  - Flow 3 egress (mean 194.19 Mbps)

- **Per-packet one-way delay (ms):**
  - Flow 1 (95th percentile 199.66 ms)
  - Flow 2 (95th percentile 166.09 ms)
  - Flow 3 (95th percentile 213.16 ms)
Run 5: Statistics of Copa

Start at: 2018-09-11 13:19:03
End at: 2018-09-11 13:19:33
Local clock offset: -0.058 ms
Remote clock offset: 0.297 ms

# Below is generated by plot.py at 2018-09-11 14:15:41
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 518.69 Mbit/s
  95th percentile per-packet one-way delay: 252.255 ms
  Loss rate: 1.45%
-- Flow 1:
  Average throughput: 283.80 Mbit/s
  95th percentile per-packet one-way delay: 199.741 ms
  Loss rate: 0.96%
-- Flow 2:
  Average throughput: 261.88 Mbit/s
  95th percentile per-packet one-way delay: 193.752 ms
  Loss rate: 1.52%
-- Flow 3:
  Average throughput: 187.79 Mbit/s
  95th percentile per-packet one-way delay: 305.569 ms
  Loss rate: 3.48%
Run 5: Report of Copa — Data Link
Run 1: Statistics of TCP Cubic

Start at: 2018-09-11 11:03:20
End at: 2018-09-11 11:03:50
Local clock offset: -0.007 ms
Remote clock offset: -0.058 ms

# Below is generated by plot.py at 2018-09-11 14:15:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 863.59 Mbit/s
95th percentile per-packet one-way delay: 230.333 ms
Loss rate: 1.95%
-- Flow 1:
Average throughput: 475.56 Mbit/s
95th percentile per-packet one-way delay: 235.809 ms
Loss rate: 1.09%
-- Flow 2:
Average throughput: 445.20 Mbit/s
95th percentile per-packet one-way delay: 211.147 ms
Loss rate: 2.05%
-- Flow 3:
Average throughput: 284.41 Mbit/s
95th percentile per-packet one-way delay: 232.414 ms
Loss rate: 5.87%
Run 1: Report of TCP Cubic — Data Link

Run 1: Report of TCP Cubic — Data Link

Run 1: Report of TCP Cubic — Data Link

Run 1: Report of TCP Cubic — Data Link

Run 1: Report of TCP Cubic — Data Link
Run 2: Statistics of TCP Cubic

Start at: 2018-09-11 11:36:37
End at: 2018-09-11 11:37:07
Local clock offset: -0.153 ms
Remote clock offset: -0.087 ms

# Below is generated by plot.py at 2018-09-11 14:15:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 764.75 Mbit/s
95th percentile per-packet one-way delay: 210.776 ms
Loss rate: 2.29%
-- Flow 1:
Average throughput: 422.80 Mbit/s
95th percentile per-packet one-way delay: 173.212 ms
Loss rate: 1.32%
-- Flow 2:
Average throughput: 371.16 Mbit/s
95th percentile per-packet one-way delay: 213.000 ms
Loss rate: 2.71%
-- Flow 3:
Average throughput: 293.90 Mbit/s
95th percentile per-packet one-way delay: 263.078 ms
Loss rate: 5.32%
Run 2: Report of TCP Cubic — Data Link

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

![Chart 2: Per-packet one-way delay vs Time](image2)
Run 3: Statistics of TCP Cubic

End at: 2018-09-11 12:14:09
Local clock offset: 0.01 ms
Remote clock offset: 0.279 ms

# Below is generated by plot.py at 2018-09-11 14:15:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 790.47 Mbit/s
95th percentile per-packet one-way delay: 220.381 ms
Loss rate: 1.91%
-- Flow 1:
Average throughput: 435.49 Mbit/s
95th percentile per-packet one-way delay: 215.145 ms
Loss rate: 1.06%
-- Flow 2:
Average throughput: 427.85 Mbit/s
95th percentile per-packet one-way delay: 225.727 ms
Loss rate: 2.17%
-- Flow 3:
Average throughput: 218.33 Mbit/s
95th percentile per-packet one-way delay: 216.168 ms
Loss rate: 5.86%
Run 3: Report of TCP Cubic — Data Link

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

- **Flow 1 Ingress** (mean 436.18 Mbps)
- **Flow 1 Egress** (mean 435.49 Mbps)
- **Flow 2 Ingress** (mean 431.41 Mbps)
- **Flow 2 Egress** (mean 427.85 Mbps)
- **Flow 3 Ingress** (mean 226.80 Mbps)
- **Flow 3 Egress** (mean 218.33 Mbps)

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

- **Flow 1 (95th percentile 215.15 ms)**
- **Flow 2 (95th percentile 225.73 ms)**
- **Flow 3 (95th percentile 216.17 ms)**
Run 4: Statistics of TCP Cubic

Start at: 2018-09-11 12:51:42
End at: 2018-09-11 12:52:12
Local clock offset: -0.175 ms
Remote clock offset: 0.215 ms

# Below is generated by plot.py at 2018-09-11 14:17:58
# Datalink statistics
-- Total of 3 flows:
  95th percentile per-packet one-way delay: 222.934 ms 
  Loss rate: 2.01%
-- Flow 1:
  Average throughput: 454.17 Mbit/s 
  95th percentile per-packet one-way delay: 232.945 ms 
  Loss rate: 1.25%
-- Flow 2:
  Average throughput: 433.86 Mbit/s 
  95th percentile per-packet one-way delay: 211.376 ms 
  Loss rate: 2.09%
-- Flow 3:
  Average throughput: 314.47 Mbit/s 
  95th percentile per-packet one-way delay: 203.917 ms 
  Loss rate: 5.01%
Run 4: Report of TCP Cubic — Data Link

![Graph 1: Throughput vs Time](image1)
- Blue dashed line: Flow 1 ingress (mean 455.75 Mbit/s)
- Blue solid line: Flow 1 egress (mean 454.17 Mbit/s)
- Green dashed line: Flow 2 ingress (mean 437.12 Mbit/s)
- Green solid line: Flow 2 egress (mean 433.86 Mbit/s)
- Red dashed line: Flow 3 ingress (mean 322.68 Mbit/s)
- Red solid line: Flow 3 egress (mean 314.47 Mbit/s)

![Graph 2: Packet Delay vs Time](image2)
- Blue line: Flow 1 (95th percentile 232.94 ms)
- Green line: Flow 2 (95th percentile 211.38 ms)
- Red line: Flow 3 (95th percentile 203.92 ms)
Run 5: Statistics of TCP Cubic

Local clock offset: -0.118 ms
Remote clock offset: -0.05 ms

# Below is generated by plot.py at 2018-09-11 14:17:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 831.16 Mbit/s
95th percentile per-packet one-way delay: 235.712 ms
Loss rate: 1.93%
-- Flow 1:
Average throughput: 457.16 Mbit/s
95th percentile per-packet one-way delay: 234.470 ms
Loss rate: 1.25%
-- Flow 2:
Average throughput: 446.55 Mbit/s
95th percentile per-packet one-way delay: 239.400 ms
Loss rate: 2.06%
-- Flow 3:
Average throughput: 238.24 Mbit/s
95th percentile per-packet one-way delay: 143.204 ms
Loss rate: 5.32%
Run 5: Report of TCP Cubic — Data Link
Run 1: Statistics of FillP

Start at: 2018-09-11 10:35:02
End at: 2018-09-11 10:35:32
Local clock offset: 0.04 ms
Remote clock offset: -0.091 ms

# Below is generated by plot.py at 2018-09-11 14:26:54
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1101.24 Mbit/s
  95th percentile per-packet one-way delay: 230.191 ms
  Loss rate: 7.47%
-- Flow 1:
  Average throughput: 679.89 Mbit/s
  95th percentile per-packet one-way delay: 221.393 ms
  Loss rate: 5.83%
-- Flow 2:
  Average throughput: 565.35 Mbit/s
  95th percentile per-packet one-way delay: 240.509 ms
  Loss rate: 10.11%
-- Flow 3:
  Average throughput: 145.28 Mbit/s
  95th percentile per-packet one-way delay: 136.455 ms
  Loss rate: 9.08%
Run 1: Report of FillP — Data Link
Run 2: Statistics of FillP

Start at: 2018-09-11 11:08:07
End at: 2018-09-11 11:08:37
Local clock offset: -0.008 ms
Remote clock offset: -0.075 ms

# Below is generated by plot.py at 2018-09-11 14:40:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1225.28 Mbit/s
95th percentile per-packet one-way delay: 221.820 ms
Loss rate: 6.27%
-- Flow 1:
Average throughput: 671.62 Mbit/s
95th percentile per-packet one-way delay: 222.192 ms
Loss rate: 5.87%
-- Flow 2:
Average throughput: 592.14 Mbit/s
95th percentile per-packet one-way delay: 216.637 ms
Loss rate: 6.46%
-- Flow 3:
Average throughput: 496.86 Mbit/s
95th percentile per-packet one-way delay: 234.805 ms
Loss rate: 7.45%
Run 2: Report of FillP — Data Link

![Graph showing throughput and packet delay over time for various flows.](image)

Legend for graphs:
- Blue dashed line: Flow 1 ingress (mean 707.00 Mb/s)
- Blue solid line: Flow 1 egress (mean 671.62 Mb/s)
- Green dashed line: Flow 2 ingress (mean 623.15 Mb/s)
- Green solid line: Flow 2 egress (mean 592.14 Mb/s)
- Red dashed line: Flow 3 ingress (mean 522.06 Mb/s)
- Red solid line: Flow 3 egress (mean 496.86 Mb/s)
Run 3: Statistics of FillP

Start at: 2018-09-11 11:41:19
End at: 2018-09-11 11:41:49
Local clock offset: 0.332 ms
Remote clock offset: -0.142 ms

# Below is generated by plot.py at 2018-09-11 14:42:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1255.62 Mbit/s
95th percentile per-packet one-way delay: 207.486 ms
Loss rate: 3.61%
-- Flow 1:
Average throughput: 713.37 Mbit/s
95th percentile per-packet one-way delay: 207.744 ms
Loss rate: 4.10%
-- Flow 2:
Average throughput: 581.06 Mbit/s
95th percentile per-packet one-way delay: 208.425 ms
Loss rate: 2.97%
-- Flow 3:
Average throughput: 484.34 Mbit/s
95th percentile per-packet one-way delay: 175.373 ms
Loss rate: 2.92%
Run 3: Report of FillP — Data Link

![Graph showing network performance metrics](image)

- Flow 1 ingress (mean 737.11 Mbit/s)
- Flow 1 egress (mean 713.37 Mbit/s)
- Flow 2 ingress (mean 590.60 Mbit/s)
- Flow 2 egress (mean 582.06 Mbit/s)
- Flow 3 ingress (mean 485.22 Mbit/s)
- Flow 3 egress (mean 484.34 Mbit/s)

![Graph showing packet drop metrics](image)

- Flow 1 (95th percentile 207.74 ms)
- Flow 2 (95th percentile 208.43 ms)
- Flow 3 (95th percentile 175.37 ms)
Run 4: Statistics of FillP

Start at: 2018-09-11 12:18:51
End at: 2018-09-11 12:19:21
Local clock offset: -0.282 ms
Remote clock offset: -0.082 ms

# Below is generated by plot.py at 2018-09-11 14:43:01
# Datalink statistics
 -- Total of 3 flows:
 Average throughput: 1275.51 Mbit/s
 95th percentile per-packet one-way delay: 196.906 ms
 Loss rate: 2.97%
 -- Flow 1:
 Average throughput: 722.17 Mbit/s
 95th percentile per-packet one-way delay: 204.164 ms
 Loss rate: 3.37%
 -- Flow 2:
 Average throughput: 600.74 Mbit/s
 95th percentile per-packet one-way delay: 198.712 ms
 Loss rate: 2.35%
 -- Flow 3:
 Average throughput: 477.62 Mbit/s
 95th percentile per-packet one-way delay: 160.033 ms
 Loss rate: 2.63%
Run 4: Report of FillP — Data Link
Run 5: Statistics of FillP

Start at: 2018-09-11 12:56:29
End at: 2018-09-11 12:56:59
Local clock offset: -0.165 ms
Remote clock offset: 0.249 ms

# Below is generated by plot.py at 2018-09-11 14:43:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1218.04 Mbit/s
95th percentile per-packet one-way delay: 211.163 ms
Loss rate: 3.51%
-- Flow 1:
Average throughput: 688.76 Mbit/s
95th percentile per-packet one-way delay: 209.575 ms
Loss rate: 3.18%
-- Flow 2:
Average throughput: 582.34 Mbit/s
95th percentile per-packet one-way delay: 212.618 ms
Loss rate: 3.78%
-- Flow 3:
Average throughput: 440.95 Mbit/s
95th percentile per-packet one-way delay: 219.899 ms
Loss rate: 4.39%
Run 5: Report of FillP — Data Link

![Graph of throughput over time](image1)

- **Flow 1 Ingress** (mean 704.91 Mbps)
- **Flow 1 Egress** (mean 688.76 Mbps)
- **Flow 2 Ingress** (mean 597.01 Mbps)
- **Flow 2 Egress** (mean 582.34 Mbps)
- **Flow 3 Ingress** (mean 448.60 Mbps)
- **Flow 3 Egress** (mean 440.95 Mbps)

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

- **Flow 1 (95th percentile 209.57 ms)**
- **Flow 2 (95th percentile 212.62 ms)**
- **Flow 3 (95th percentile 219.90 ms)**

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Run 1: Statistics of FillP-Sheep

Start at: 2018-09-11 10:40:06
End at: 2018-09-11 10:40:36
Local clock offset: 0.048 ms
Remote clock offset: -0.118 ms

# Below is generated by plot.py at 2018-09-11 14:43:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1118.87 Mbit/s
95th percentile per-packet one-way delay: 229.349 ms
Loss rate: 5.43%
-- Flow 1:
Average throughput: 628.43 Mbit/s
95th percentile per-packet one-way delay: 229.012 ms
Loss rate: 5.73%
-- Flow 2:
Average throughput: 506.89 Mbit/s
95th percentile per-packet one-way delay: 233.675 ms
Loss rate: 5.43%
-- Flow 3:
Average throughput: 475.70 Mbit/s
95th percentile per-packet one-way delay: 186.982 ms
Loss rate: 4.18%
Run 1: Report of FillP-Sheep — Data Link

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

- Flow 1 Ingress (mean 660.70 Mbps)
- Flow 1 Egress (mean 628.43 Mbps)
- Flow 2 Ingress (mean 528.65 Mbps)
- Flow 2 Egress (mean 506.89 Mbps)
- Flow 3 Ingress (mean 483.57 Mbps)
- Flow 3 Egress (mean 475.70 Mbps)

![Graph 2: Per-packet round-trip delay (ms)](image2)

- Flow 1 (95th percentile 229.01 ms)
- Flow 2 (95th percentile 233.68 ms)
- Flow 3 (95th percentile 186.99 ms)
Run 2: Statistics of FillP-Sheep

Start at: 2018-09-11 11:13:30
End at: 2018-09-11 11:14:00
Local clock offset: 0.092 ms
Remote clock offset: -0.092 ms

# Below is generated by plot.py at 2018-09-11 14:44:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1153.52 Mbit/s
95th percentile per-packet one-way delay: 211.688 ms
Loss rate: 4.19%
-- Flow 1:
Average throughput: 632.26 Mbit/s
95th percentile per-packet one-way delay: 214.558 ms
Loss rate: 5.62%
-- Flow 2:
Average throughput: 576.39 Mbit/s
95th percentile per-packet one-way delay: 198.365 ms
Loss rate: 2.03%
-- Flow 3:
Average throughput: 430.03 Mbit/s
95th percentile per-packet one-way delay: 165.478 ms
Loss rate: 3.42%
Run 2: Report of FillP-Sheep — Data Link

![Graph showing throughput and delay over time for different data flows.](image-url)

- **Throughput (Mbps):**
  - Flow 1 Ingress (mean 663.56 Mbps)
  - Flow 1 Egress (mean 632.26 Mbps)
  - Flow 2 Ingress (mean 580.30 Mbps)
  - Flow 2 Egress (mean 576.39 Mbps)
  - Flow 3 Ingress (mean 432.95 Mbps)
  - Flow 3 Egress (mean 430.03 Mbps)

- **Delay (ms):**
  - Flow 1 (95th percentile 214.56 ms)
  - Flow 2 (95th percentile 198.37 ms)
  - Flow 3 (95th percentile 165.48 ms)
Run 3: Statistics of FillP-Sheep

Start at: 2018-09-11 11:47:04
End at: 2018-09-11 11:47:34
Local clock offset: 0.095 ms
Remote clock offset: -0.11 ms

# Below is generated by plot.py at 2018-09-11 14:44:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1130.77 Mbit/s
95th percentile per-packet one-way delay: 224.053 ms
Loss rate: 5.07%
-- Flow 1:
Average throughput: 617.16 Mbit/s
95th percentile per-packet one-way delay: 227.601 ms
Loss rate: 5.58%
-- Flow 2:
Average throughput: 544.02 Mbit/s
95th percentile per-packet one-way delay: 219.633 ms
Loss rate: 4.22%
-- Flow 3:
Average throughput: 470.97 Mbit/s
95th percentile per-packet one-way delay: 199.134 ms
Loss rate: 4.96%
Run 3: Report of FillP-Sheep — Data Link

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

![Graph 2: Per-packet delay vs. Time](image2)
Run 4: Statistics of FillP-Sheep

Start at: 2018-09-11 12:24:38
End at: 2018-09-11 12:25:08
Local clock offset: -0.03 ms
Remote clock offset: 0.24 ms

# Below is generated by plot.py at 2018-09-11 14:58:45
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1235.51 Mbit/s
  95th percentile per-packet one-way delay: 199.242 ms
  Loss rate: 2.82%
-- Flow 1:
  Average throughput: 683.96 Mbit/s
  95th percentile per-packet one-way delay: 202.656 ms
  Loss rate: 3.47%
-- Flow 2:
  Average throughput: 615.00 Mbit/s
  95th percentile per-packet one-way delay: 191.449 ms
  Loss rate: 1.39%
-- Flow 3:
  Average throughput: 445.20 Mbit/s
  95th percentile per-packet one-way delay: 153.289 ms
  Loss rate: 3.69%
Run 4: Report of FillP-Sheep — Data Link

![Graph 1](image1.png)

![Graph 2](image2.png)
Run 5: Statistics of FillP-Sheep

Start at: 2018-09-11 13:02:07
End at: 2018-09-11 13:02:37
Local clock offset: -0.082 ms
Remote clock offset: -0.428 ms

# Below is generated by plot.py at 2018-09-11 15:08:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1171.24 Mbit/s
95th percentile per-packet one-way delay: 210.670 ms
Loss rate: 3.79%
-- Flow 1:
Average throughput: 647.00 Mbit/s
95th percentile per-packet one-way delay: 212.052 ms
Loss rate: 3.83%
-- Flow 2:
Average throughput: 568.96 Mbit/s
95th percentile per-packet one-way delay: 216.499 ms
Loss rate: 3.99%
-- Flow 3:
Average throughput: 453.16 Mbit/s
95th percentile per-packet one-way delay: 161.763 ms
Loss rate: 3.10%
Run 5: Report of FillP-Sheep — Data Link

![Graph showing throughput and delay over time for different flows]

- **Throughput** (Mbps):
  - Flow 1 ing (mean 666.71 Mbps)
  - Flow 1 egress (mean 647.00 Mbps)
  - Flow 2 ing (mean 584.77 Mbps)
  - Flow 2 egress (mean 568.96 Mbps)
  - Flow 3 ing (mean 454.89 Mbps)
  - Flow 3 egress (mean 453.16 Mbps)

- **Delay (ms)**:
  - Flow 1 (95th percentile 212.05 ms)
  - Flow 2 (95th percentile 216.50 ms)
  - Flow 3 (95th percentile 161.76 ms)
Run 1: Statistics of Indigo

Start at: 2018-09-11 10:59:11
End at: 2018-09-11 10:59:41
Local clock offset: 0.109 ms
Remote clock offset: -0.054 ms

# Below is generated by plot.py at 2018-09-11 15:08:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 353.02 Mbit/s
95th percentile per-packet one-way delay: 138.216 ms
Loss rate: 1.47%
-- Flow 1:
Average throughput: 182.91 Mbit/s
95th percentile per-packet one-way delay: 137.538 ms
Loss rate: 0.95%
-- Flow 2:
Average throughput: 175.78 Mbit/s
95th percentile per-packet one-way delay: 138.545 ms
Loss rate: 1.42%
-- Flow 3:
Average throughput: 152.40 Mbit/s
95th percentile per-packet one-way delay: 143.166 ms
Loss rate: 3.43%
Run 1: Report of Indigo — Data Link

---

**Throughput (Mbps)**

- Flow 1 ingress (mean 182.94 Mbps)
- Flow 1 egress (mean 182.91 Mbps)
- Flow 2 ingress (mean 175.83 Mbps)
- Flow 2 egress (mean 175.78 Mbps)
- Flow 3 ingress (mean 153.41 Mbps)
- Flow 3 egress (mean 152.40 Mbps)

---

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

- Flow 1 (95th percentile 137.54 ms)
- Flow 2 (95th percentile 138.54 ms)
- Flow 3 (95th percentile 143.17 ms)

---
Run 2: Statistics of Indigo

Start at: 2018-09-11 11:32:40
End at: 2018-09-11 11:33:10
Local clock offset: -0.031 ms
Remote clock offset: 0.246 ms

# Below is generated by plot.py at 2018-09-11 15:08:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 296.91 Mbit/s
95th percentile per-packet one-way delay: 138.062 ms
Loss rate: 1.52%
-- Flow 1:
Average throughput: 135.64 Mbit/s
95th percentile per-packet one-way delay: 137.627 ms
Loss rate: 0.98%
-- Flow 2:
Average throughput: 169.57 Mbit/s
95th percentile per-packet one-way delay: 138.399 ms
Loss rate: 1.33%
-- Flow 3:
Average throughput: 155.36 Mbit/s
95th percentile per-packet one-way delay: 140.486 ms
Loss rate: 3.39%
Run 2: Report of Indigo — Data Link

![Graph showing throughput and per-packet one-way delay for flows 1, 2, and 3.]
Run 3: Statistics of Indigo

Start at: 2018-09-11 12:09:05
End at: 2018-09-11 12:09:35
Local clock offset: 0.022 ms
Remote clock offset: 0.237 ms

# Below is generated by plot.py at 2018-09-11 15:08:10
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 324.97 Mbit/s
  95th percentile per-packet one-way delay: 138.096 ms
  Loss rate: 1.32%
-- Flow 1:
  Average throughput: 177.18 Mbit/s
  95th percentile per-packet one-way delay: 137.713 ms
  Loss rate: 0.83%
-- Flow 2:
  Average throughput: 170.00 Mbit/s
  95th percentile per-packet one-way delay: 138.668 ms
  Loss rate: 1.32%
-- Flow 3:
  Average throughput: 113.25 Mbit/s
  95th percentile per-packet one-way delay: 137.684 ms
  Loss rate: 3.72%
Run 3: Report of Indigo — Data Link

---

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

- Flow 1 ingress (mean 177.02 Mbit/s)
- Flow 1 egress (mean 177.18 Mbit/s)
- Flow 2 ingress (mean 169.91 Mbit/s)
- Flow 2 egress (mean 170.00 Mbit/s)
- Flow 3 ingress (mean 114.24 Mbit/s)
- Flow 3 egress (mean 113.25 Mbit/s)

![Graph 2: Latency vs Time](image2)

- Flow 1 (95th percentile 137.71 ms)
- Flow 2 (95th percentile 138.67 ms)
- Flow 3 (95th percentile 137.68 ms)

---

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Run 4: Statistics of Indigo

Start at: 2018-09-11 12:47:43
Local clock offset: 0.026 ms
Remote clock offset: -0.164 ms

# Below is generated by plot.py at 2018-09-11 15:08:10
# Datalink statistics
-- Total of 3 flows:
   Average throughput: 262.95 Mbit/s
   95th percentile per-packet one-way delay: 138.246 ms
   Loss rate: 1.52%
-- Flow 1:
   Average throughput: 138.85 Mbit/s
   95th percentile per-packet one-way delay: 138.204 ms
   Loss rate: 0.96%
-- Flow 2:
   Average throughput: 132.50 Mbit/s
   95th percentile per-packet one-way delay: 138.628 ms
   Loss rate: 1.54%
-- Flow 3:
   Average throughput: 112.74 Mbit/s
   95th percentile per-packet one-way delay: 137.071 ms
   Loss rate: 3.57%
Run 4: Report of Indigo — Data Link
Run 5: Statistics of Indigo

End at: 2018-09-11 13:21:51
Local clock offset: -0.157 ms
Remote clock offset: 0.332 ms

# Below is generated by plot.py at 2018-09-11 15:08:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 335.60 Mbit/s
95th percentile per-packet one-way delay: 138.233 ms
Loss rate: 1.42%
-- Flow 1:
Average throughput: 170.49 Mbit/s
95th percentile per-packet one-way delay: 138.616 ms
Loss rate: 0.83%
-- Flow 2:
Average throughput: 173.42 Mbit/s
95th percentile per-packet one-way delay: 137.390 ms
Loss rate: 1.36%
-- Flow 3:
Average throughput: 160.10 Mbit/s
95th percentile per-packet one-way delay: 138.497 ms
Loss rate: 3.48%
Run 5: Report of Indigo — Data Link
Run 1: Statistics of LEDBAT

Start at: 2018-09-11 10:43:39
End at: 2018-09-11 10:44:09
Local clock offset: 0.046 ms
Remote clock offset: -0.103 ms

# Below is generated by plot.py at 2018-09-11 15:08:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.74 Mbit/s
95th percentile per-packet one-way delay: 136.437 ms
Loss rate: 2.33%
-- Flow 1:
Average throughput: 5.06 Mbit/s
95th percentile per-packet one-way delay: 136.511 ms
Loss rate: 1.82%
-- Flow 2:
Average throughput: 3.30 Mbit/s
95th percentile per-packet one-way delay: 136.257 ms
Loss rate: 2.74%
-- Flow 3:
Average throughput: 1.59 Mbit/s
95th percentile per-packet one-way delay: 136.414 ms
Loss rate: 5.55%
Run 1: Report of LEDBAT — Data Link

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

- Flow 1 ingress (mean 5.11 Mbit/s)
- Flow 1 egress (mean 5.06 Mbit/s)
- Flow 2 ingress (mean 3.35 Mbit/s)
- Flow 2 egress (mean 3.30 Mbit/s)
- Flow 3 ingress (mean 1.64 Mbit/s)
- Flow 3 egress (mean 1.59 Mbit/s)

![Graph of per-packet one-way delay over time showing different flow delays.]

- Flow 1 (95th percentile 136.51 ms)
- Flow 2 (95th percentile 136.26 ms)
- Flow 3 (95th percentile 136.41 ms)
Run 2: Statistics of LEDBAT

Start at: 2018-09-11 11:17:05
End at: 2018-09-11 11:17:35
Local clock offset: -0.014 ms
Remote clock offset: -0.127 ms

# Below is generated by plot.py at 2018-09-11 15:08:10
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 7.73 Mbit/s
  95th percentile per-packet one-way delay: 136.826 ms
  Loss rate: 2.33%
-- Flow 1:
  Average throughput: 5.03 Mbit/s
  95th percentile per-packet one-way delay: 136.584 ms
  Loss rate: 1.82%
-- Flow 2:
  Average throughput: 3.30 Mbit/s
  95th percentile per-packet one-way delay: 136.939 ms
  Loss rate: 2.74%
-- Flow 3:
  Average throughput: 1.59 Mbit/s
  95th percentile per-packet one-way delay: 136.360 ms
  Loss rate: 5.55%
Run 2: Report of LEDBAT — Data Link

![Graph of throughput over time showing different flow ingress and egress rates with error bars indicating 95th percentile delay.]
Run 3: Statistics of LEDBAT

Start at: 2018-09-11 11:50:55
End at: 2018-09-11 11:51:25
Local clock offset: 0.113 ms
Remote clock offset: -0.09 ms

# Below is generated by plot.py at 2018-09-11 15:08:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.72 Mbit/s
95th percentile per-packet one-way delay: 137.198 ms
Loss rate: 2.33%
-- Flow 1:
Average throughput: 5.03 Mbit/s
95th percentile per-packet one-way delay: 137.220 ms
Loss rate: 1.82%
-- Flow 2:
Average throughput: 3.30 Mbit/s
95th percentile per-packet one-way delay: 137.246 ms
Loss rate: 2.74%
-- Flow 3:
Average throughput: 1.58 Mbit/s
95th percentile per-packet one-way delay: 136.558 ms
Loss rate: 5.56%
Run 3: Report of LEDBAT — Data Link
Run 4: Statistics of LEDBAT

Start at: 2018-09-11 12:28:42
End at: 2018-09-11 12:29:12
Local clock offset: -0.007 ms
Remote clock offset: -0.125 ms

# Below is generated by plot.py at 2018-09-11 15:08:11
# Datalink statistics
-- Total of 3 flows:
  95th percentile per-packet one-way delay: 137.166 ms
  Loss rate: 2.35%
-- Flow 1:
  Average throughput: 4.97 Mbit/s
  95th percentile per-packet one-way delay: 137.168 ms
  Loss rate: 1.83%
-- Flow 2:
  Average throughput: 3.32 Mbit/s
  95th percentile per-packet one-way delay: 137.198 ms
  Loss rate: 2.74%
-- Flow 3:
  Average throughput: 1.58 Mbit/s
  95th percentile per-packet one-way delay: 136.765 ms
  Loss rate: 5.58%
Run 4: Report of LEDBAT — Data Link

---

**Throughput (Mbps)**

- **Flow 1 ingress** (mean 5.01 Mbps)
- **Flow 1 egress** (mean 4.97 Mbps)
- **Flow 2 ingress** (mean 3.36 Mbps)
- **Flow 2 egress** (mean 3.32 Mbps)
- **Flow 3 ingress** (mean 1.62 Mbps)
- **Flow 3 egress** (mean 1.36 Mbps)

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

- **Flow 1** (95th percentile 137.17 ms)
- **Flow 2** (95th percentile 137.20 ms)
- **Flow 3** (95th percentile 136.76 ms)
Run 5: Statistics of LEDBAT

Start at: 2018-09-11 13:05:42
End at: 2018-09-11 13:06:12
Local clock offset: -0.085 ms
Remote clock offset: 0.272 ms

# Below is generated by plot.py at 2018-09-11 15:08:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.71 Mbit/s
95th percentile per-packet one-way delay: 136.558 ms
Loss rate: 2.33%
-- Flow 1:
Average throughput: 5.04 Mbit/s
95th percentile per-packet one-way delay: 136.637 ms
Loss rate: 1.82%
-- Flow 2:
Average throughput: 3.29 Mbit/s
95th percentile per-packet one-way delay: 136.402 ms
Loss rate: 2.74%
-- Flow 3:
Average throughput: 1.54 Mbit/s
95th percentile per-packet one-way delay: 136.056 ms
Loss rate: 5.62%
Run 5: Report of LEDBAT — Data Link

Graphs showing throughput and per-packet one-way delay over time for different flows.
Run 1: Statistics of Indigo-Muses

Start at: 2018-09-11 10:46:32
End at: 2018-09-11 10:47:02
Local clock offset: 0.116 ms
Remote clock offset: -0.103 ms

# Below is generated by plot.py at 2018-09-11 15:08:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 921.53 Mbit/s
95th percentile per-packet one-way delay: 232.158 ms
Loss rate: 1.58%
-- Flow 1:
Average throughput: 568.56 Mbit/s
95th percentile per-packet one-way delay: 219.416 ms
Loss rate: 1.00%
-- Flow 2:
Average throughput: 427.57 Mbit/s
95th percentile per-packet one-way delay: 239.216 ms
Loss rate: 1.71%
-- Flow 3:
Average throughput: 215.20 Mbit/s
95th percentile per-packet one-way delay: 247.726 ms
Loss rate: 5.63%
Run 1: Report of Indigo-Muses — Data Link

![Graph of throughput and delay over time for different flows.](image)

**Throughput (Mbps):**
- Flow 1 ingress (mean 569.03 Mbps)
- Flow 1 egress (mean 568.56 Mbps)
- Flow 2 ingress (mean 429.05 Mbps)
- Flow 2 egress (mean 427.57 Mbps)
- Flow 3 ingress (mean 221.73 Mbps)
- Flow 3 egress (mean 215.20 Mbps)

**Delay (ms):**
- Flow 1 (95th percentile 219.42 ms)
- Flow 2 (95th percentile 239.22 ms)
- Flow 3 (95th percentile 247.73 ms)
Run 2: Statistics of Indigo-Muses

Start at: 2018-09-11 11:20:02
End at: 2018-09-11 11:20:32
Local clock offset: 0.147 ms
Remote clock offset: -0.083 ms

# Below is generated by plot.py at 2018-09-11 15:09:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 905.50 Mbit/s
95th percentile per-packet one-way delay: 224.222 ms
Loss rate: 1.98%
-- Flow 1:
Average throughput: 548.37 Mbit/s
95th percentile per-packet one-way delay: 197.600 ms
Loss rate: 0.98%
-- Flow 2:
Average throughput: 405.87 Mbit/s
95th percentile per-packet one-way delay: 248.062 ms
Loss rate: 2.50%
-- Flow 3:
Average throughput: 274.36 Mbit/s
95th percentile per-packet one-way delay: 244.815 ms
Loss rate: 6.32%
Run 2: Report of Indigo-Muses — Data Link

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

- Flow 1 ingress (mean 548.87 Mb/s) vs Flow 1 egress (mean 548.87 Mb/s)
- Flow 2 ingress (mean 410.57 Mb/s) vs Flow 2 egress (mean 405.87 Mb/s)
- Flow 3 ingress (mean 284.80 Mb/s) vs Flow 3 egress (mean 274.36 Mb/s)
Run 3: Statistics of Indigo-Muses

Start at: 2018-09-11 11:53:58
End at: 2018-09-11 11:54:28
Local clock offset: -0.026 ms
Remote clock offset: 0.267 ms

# Below is generated by plot.py at 2018-09-11 15:09:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 881.45 Mbit/s
95th percentile per-packet one-way delay: 195.202 ms
Loss rate: 1.75%
-- Flow 1:
Average throughput: 507.62 Mbit/s
95th percentile per-packet one-way delay: 191.232 ms
Loss rate: 0.95%
-- Flow 2:
Average throughput: 418.83 Mbit/s
95th percentile per-packet one-way delay: 215.847 ms
Loss rate: 1.74%
-- Flow 3:
Average throughput: 298.61 Mbit/s
95th percentile per-packet one-way delay: 188.461 ms
Loss rate: 5.82%
Run 3: Report of Indigo-Muses — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 507.79 Mbps)
Flow 1 egress (mean 507.62 Mbps)
Flow 2 ingress (mean 420.24 Mbps)
Flow 2 egress (mean 418.83 Mbps)
Flow 3 ingress (mean 308.26 Mbps)
Flow 3 egress (mean 296.61 Mbps)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 191.23 ms)
Flow 2 (95th percentile 215.85 ms)
Flow 3 (95th percentile 188.46 ms)
Run 4: Statistics of Indigo-Muses

End at: 2018-09-11 12:32:43
Local clock offset: -0.054 ms
Remote clock offset: 0.212 ms

# Below is generated by plot.py at 2018-09-11 15:10:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 882.41 Mbit/s
95th percentile per-packet one-way delay: 216.673 ms
Loss rate: 2.14%
-- Flow 1:
Average throughput: 509.94 Mbit/s
95th percentile per-packet one-way delay: 201.675 ms
Loss rate: 1.13%
-- Flow 2:
Average throughput: 409.90 Mbit/s
95th percentile per-packet one-way delay: 229.646 ms
Loss rate: 1.93%
-- Flow 3:
Average throughput: 312.73 Mbit/s
95th percentile per-packet one-way delay: 243.322 ms
Loss rate: 7.47%
Run 4: Report of Indigo-Muses — Data Link
Run 5: Statistics of Indigo-Muses

Start at: 2018-09-11 13:08:33
End at: 2018-09-11 13:09:03
Local clock offset: -0.154 ms
Remote clock offset: -0.056 ms

# Below is generated by plot.py at 2018-09-11 15:10:51
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 856.63 Mbit/s
  95th percentile per-packet one-way delay: 200.539 ms
  Loss rate: 1.74%
-- Flow 1:
  Average throughput: 477.21 Mbit/s
  95th percentile per-packet one-way delay: 199.292 ms
  Loss rate: 0.96%
-- Flow 2:
  Average throughput: 428.94 Mbit/s
  95th percentile per-packet one-way delay: 217.485 ms
  Loss rate: 1.98%
-- Flow 3:
  Average throughput: 296.16 Mbit/s
  95th percentile per-packet one-way delay: 182.902 ms
  Loss rate: 4.78%
Run 5: Report of Indigo-Muses — Data Link

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

- Flow 1 ingress (mean 477.44 Mbit/s)
- Flow 1 egress (mean 477.21 Mbit/s)
- Flow 2 ingress (mean 431.49 Mbit/s)
- Flow 2 egress (mean 428.94 Mbit/s)
- Flow 3 ingress (mean 302.44 Mbit/s)
- Flow 3 egress (mean 296.16 Mbit/s)

![Graph showing packet delay distribution over time for different flows.]

- Flow 1 (95th percentile 199.29 ms)
- Flow 2 (95th percentile 217.49 ms)
- Flow 3 (95th percentile 182.90 ms)
Run 1: Statistics of PCC-Allegro

Start at: 2018-09-11 10:54:47
End at: 2018-09-11 10:55:17
Local clock offset: 0.013 ms
Remote clock offset: -0.468 ms

# Below is generated by plot.py at 2018-09-11 15:18:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 635.07 Mbit/s
95th percentile per-packet one-way delay: 259.060 ms
Loss rate: 4.91%
-- Flow 1:
Average throughput: 398.22 Mbit/s
95th percentile per-packet one-way delay: 259.716 ms
Loss rate: 5.29%
-- Flow 2:
Average throughput: 250.48 Mbit/s
95th percentile per-packet one-way delay: 178.064 ms
Loss rate: 2.77%
-- Flow 3:
Average throughput: 220.09 Mbit/s
95th percentile per-packet one-way delay: 277.251 ms
Loss rate: 7.52%
Run 1: Report of PCC-Allegro — Data Link
Run 2: Statistics of PCC-Allegro

End at: 2018-09-11 11:28:50
Local clock offset: 0.113 ms
Remote clock offset: 0.273 ms

# Below is generated by plot.py at 2018-09-11 15:18:44
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 542.25 Mbit/s
  95th percentile per-packet one-way delay: 237.355 ms
  Loss rate: 3.88%
-- Flow 1:
  Average throughput: 295.66 Mbit/s
  95th percentile per-packet one-way delay: 231.577 ms
  Loss rate: 2.70%
-- Flow 2:
  Average throughput: 263.89 Mbit/s
  95th percentile per-packet one-way delay: 225.129 ms
  Loss rate: 4.13%
-- Flow 3:
  Average throughput: 222.76 Mbit/s
  95th percentile per-packet one-way delay: 280.438 ms
  Loss rate: 7.90%
Run 2: Report of PCC-Allegro — Data Link

**Throughput (Mbps):**
- Flow 1 ingress (mean 301.09 Mbps)
- Flow 1 egress (mean 295.66 Mbps)
- Flow 2 ingress (mean 271.47 Mbps)
- Flow 2 egress (mean 263.89 Mbps)
- Flow 3 ingress (mean 235.17 Mbps)
- Flow 3 egress (mean 222.76 Mbps)

**Per-packet one-way delay (ms):**
- Flow 1 (95th percentile 231.58 ms)
- Flow 2 (95th percentile 225.13 ms)
- Flow 3 (95th percentile 280.44 ms)
Run 3: Statistics of PCC-Allegro

Start at: 2018-09-11 12:03:45
End at: 2018-09-11 12:04:15
Local clock offset: 0.073 ms
Remote clock offset: -0.097 ms

# Below is generated by plot.py at 2018-09-11 15:29:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 678.26 Mbit/s
95th percentile per-packet one-way delay: 257.752 ms
Loss rate: 5.83%
-- Flow 1:
Average throughput: 333.93 Mbit/s
95th percentile per-packet one-way delay: 264.340 ms
Loss rate: 3.54%
-- Flow 2:
Average throughput: 413.10 Mbit/s
95th percentile per-packet one-way delay: 252.110 ms
Loss rate: 7.77%
-- Flow 3:
Average throughput: 220.03 Mbit/s
95th percentile per-packet one-way delay: 284.707 ms
Loss rate: 8.62%
Run 3: Report of PCC-Allegro — Data Link

![Graph showing throughput and latency for different flows over time.](image)

- **Throughput**
  - Flow 1 ingress (mean 343.05 Mbit/s)
  - Flow 1 egress (mean 333.03 Mbit/s)
  - Flow 2 ingress (mean 442.42 Mbit/s)
  - Flow 2 egress (mean 413.10 Mbit/s)
  - Flow 3 ingress (mean 234.12 Mbit/s)
  - Flow 3 egress (mean 220.03 Mbit/s)

- **Latency**
  - Flow 1 (95th percentile 264.34 ms)
  - Flow 2 (95th percentile 252.11 ms)
  - Flow 3 (95th percentile 284.71 ms)
Run 4: Statistics of PCC-Allegro

Start at: 2018-09-11 12:43:03
End at: 2018-09-11 12:43:33
Local clock offset: -0.074 ms
Remote clock offset: -0.132 ms

# Below is generated by plot.py at 2018-09-11 15:30:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 575.26 Mbit/s
95th percentile per-packet one-way delay: 254.495 ms
Loss rate: 3.52%
-- Flow 1:
Average throughput: 317.54 Mbit/s
95th percentile per-packet one-way delay: 256.044 ms
Loss rate: 2.87%
-- Flow 2:
Average throughput: 280.31 Mbit/s
95th percentile per-packet one-way delay: 208.375 ms
Loss rate: 3.37%
-- Flow 3:
Average throughput: 223.45 Mbit/s
95th percentile per-packet one-way delay: 280.846 ms
Loss rate: 6.65%
Run 4: Report of PCC-Allegro — Data Link
Run 5: Statistics of PCC-Allegro

End at: 2018-09-11 13:17:25
Local clock offset: -0.053 ms
Remote clock offset: -0.393 ms

# Below is generated by plot.py at 2018-09-11 15:34:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 621.58 Mbit/s
95th percentile per-packet one-way delay: 240.608 ms
Loss rate: 3.15%
-- Flow 1:
Average throughput: 354.40 Mbit/s
95th percentile per-packet one-way delay: 247.121 ms
Loss rate: 2.67%
-- Flow 2:
Average throughput: 295.02 Mbit/s
95th percentile per-packet one-way delay: 231.328 ms
Loss rate: 3.43%
-- Flow 3:
Average throughput: 223.63 Mbit/s
95th percentile per-packet one-way delay: 246.739 ms
Loss rate: 4.75%
Run 5: Report of PCC-Allegro — Data Link

![Graph of Throughput (Mbps)]

- Flow 1 ingress (mean 360.79 Mbps)
- Flow 1 egress (mean 354.60 Mbps)
- Flow 2 ingress (mean 301.33 Mbps)
- Flow 2 egress (mean 295.02 Mbps)
- Flow 3 ingress (mean 226.28 Mbps)
- Flow 3 egress (mean 223.63 Mbps)

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

- Flow 1 (95th percentile 247.12 ms)
- Flow 2 (95th percentile 231.33 ms)
- Flow 3 (95th percentile 246.74 ms)
Run 1: Statistics of PCC-Expr

Start at: 2018-09-11 10:50:37
End at: 2018-09-11 10:51:07
Local clock offset: 0.148 ms
Remote clock offset: -0.104 ms

# Below is generated by plot.py at 2018-09-11 15:34:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 497.95 Mbit/s
95th percentile per-packet one-way delay: 244.712 ms
Loss rate: 4.10%
-- Flow 1:
Average throughput: 265.59 Mbit/s
95th percentile per-packet one-way delay: 229.696 ms
Loss rate: 2.43%
-- Flow 2:
Average throughput: 281.73 Mbit/s
95th percentile per-packet one-way delay: 255.148 ms
Loss rate: 5.98%
-- Flow 3:
Average throughput: 141.82 Mbit/s
95th percentile per-packet one-way delay: 252.678 ms
Loss rate: 5.73%
Run 1: Report of PCC-Expr — Data Link

Graph showing throughput and per-packet one-way delay for three flows. The graphs indicate the mean throughput and 95th percentile delay for each flow.
Run 2: Statistics of PCC-Expr

Start at: 2018-09-11 11:24:16
End at: 2018-09-11 11:24:46
Local clock offset: 0.091 ms
Remote clock offset: -0.055 ms

# Below is generated by plot.py at 2018-09-11 15:34:02
# Datalink statistics
-- Total of 3 flows:
  95th percentile per-packet one-way delay: 247.069 ms
  Loss rate: 4.27%
-- Flow 1:
  Average throughput: 255.50 Mbit/s
  95th percentile per-packet one-way delay: 210.673 ms
  Loss rate: 2.00%
-- Flow 2:
  Average throughput: 174.22 Mbit/s
  95th percentile per-packet one-way delay: 210.218 ms
  Loss rate: 3.41%
-- Flow 3:
  Average throughput: 205.33 Mbit/s
  95th percentile per-packet one-way delay: 261.479 ms
  Loss rate: 13.30%
Run 2: Report of PCC-Expr — Data Link
Run 3: Statistics of PCC-Expr

Start at: 2018-09-11 11:58:48
End at: 2018-09-11 11:59:18
Local clock offset: 0.08 ms
Remote clock offset: -0.089 ms

# Below is generated by plot.py at 2018-09-11 15:34:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 486.46 Mbit/s
95th percentile per-packet one-way delay: 274.116 ms
Loss rate: 5.91%
-- Flow 1:
Average throughput: 292.72 Mbit/s
95th percentile per-packet one-way delay: 267.698 ms
Loss rate: 6.23%
-- Flow 2:
Average throughput: 221.61 Mbit/s
95th percentile per-packet one-way delay: 268.867 ms
Loss rate: 5.84%
-- Flow 3:
Average throughput: 145.39 Mbit/s
95th percentile per-packet one-way delay: 321.456 ms
Loss rate: 4.13%
Run 3: Report of PCC-Expr — Data Link

![Graph showing throughput and packet loss over time]

- Flow 1 ingress (mean 399.32 Mbps)
- Flow 1 egress (mean 292.72 Mbps)
- Flow 2 ingress (mean 232.12 Mbps)
- Flow 2 egress (mean 221.61 Mbps)
- Flow 3 ingress (mean 147.49 Mbps)
- Flow 3 egress (mean 145.39 Mbps)

![Another graph showing packet loss over time]
Run 4: Statistics of PCC-Expr

Start at: 2018-09-11 12:37:41
End at: 2018-09-11 12:38:11
Local clock offset: -0.021 ms
Remote clock offset: -0.132 ms

# Below is generated by plot.py at 2018-09-11 15:41:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 551.94 Mbit/s
95th percentile per-packet one-way delay: 240.082 ms
Loss rate: 3.34%
-- Flow 1:
Average throughput: 294.97 Mbit/s
95th percentile per-packet one-way delay: 218.278 ms
Loss rate: 1.93%
-- Flow 2:
Average throughput: 281.57 Mbit/s
95th percentile per-packet one-way delay: 245.027 ms
Loss rate: 3.16%
-- Flow 3:
Average throughput: 217.91 Mbit/s
95th percentile per-packet one-way delay: 254.828 ms
Loss rate: 9.26%
Run 4: Report of PCC-Expr — Data Link
Run 5: Statistics of PCC-Expr

Start at: 2018-09-11 13:12:52
Local clock offset: 0.108 ms
Remote clock offset: -0.069 ms

# Below is generated by plot.py at 2018-09-11 15:41:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 445.47 Mbit/s
95th percentile per-packet one-way delay: 249.973 ms
Loss rate: 4.24%
-- Flow 1:
Average throughput: 284.81 Mbit/s
95th percentile per-packet one-way delay: 254.057 ms
Loss rate: 5.37%
-- Flow 2:
Average throughput: 172.13 Mbit/s
95th percentile per-packet one-way delay: 153.392 ms
Loss rate: 1.63%
-- Flow 3:
Average throughput: 144.45 Mbit/s
95th percentile per-packet one-way delay: 200.762 ms
Loss rate: 3.42%
Run 5: Report of PCC-Expr — Data Link

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

**Throughput (Mbps)**
- Flow 1 ingress (mean 298.24 Mbps)
- Flow 1 egress (mean 284.81 Mbps)
- Flow 2 ingress (mean 172.58 Mbps)
- Flow 2 egress (mean 172.13 Mbps)
- Flow 3 ingress (mean 145.45 Mbps)
- Flow 3 egress (mean 144.45 Mbps)

**Delay (ms)**
- Flow 1 (95th percentile 254.06 ms)
- Flow 2 (95th percentile 153.39 ms)
- Flow 3 (95th percentile 200.76 ms)
Run 1: Statistics of QUIC Cubic

Start at: 2018-09-11 10:38:43
End at: 2018-09-11 10:39:13
Local clock offset: -0.106 ms
Remote clock offset: -0.086 ms

# Below is generated by plot.py at 2018-09-11 15:41:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.11 Mbit/s
95th percentile per-packet one-way delay: 135.609 ms
Loss rate: 2.02%
-- Flow 1:
Average throughput: 34.05 Mbit/s
95th percentile per-packet one-way delay: 135.338 ms
Loss rate: 0.55%
-- Flow 2:
Average throughput: 41.45 Mbit/s
95th percentile per-packet one-way delay: 135.627 ms
Loss rate: 2.04%
-- Flow 3:
Average throughput: 39.09 Mbit/s
95th percentile per-packet one-way delay: 135.637 ms
Loss rate: 5.56%
Run 1: Report of QUIC Cubic — Data Link

![Graph showing throughput and packet delay over time for different flows.](image)

- **Throughput (Mb/s):**
  - Flow 1 ingress (mean 33.91 Mb/s)
  - Flow 1 egress (mean 34.65 Mb/s)
  - Flow 2 ingress (mean 41.75 Mb/s)
  - Flow 2 egress (mean 41.45 Mb/s)
  - Flow 3 ingress (mean 40.26 Mb/s)
  - Flow 3 egress (mean 39.09 Mb/s)

- **Packet Delay (ms):**
  - Flow 1 (95th percentile 135.34 ms)
  - Flow 2 (95th percentile 135.63 ms)
  - Flow 3 (95th percentile 135.64 ms)
Run 2: Statistics of QUIC Cubic

Start at: 2018-09-11 11:12:06
End at: 2018-09-11 11:12:36
Local clock offset: 0.008 ms
Remote clock offset: -0.082 ms

# Below is generated by plot.py at 2018-09-11 15:41:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.68 Mbit/s
95th percentile per-packet one-way delay: 136.148 ms
Loss rate: 2.07%

-- Flow 1:
Average throughput: 52.11 Mbit/s
95th percentile per-packet one-way delay: 135.500 ms
Loss rate: 1.36%

-- Flow 2:
Average throughput: 48.40 Mbit/s
95th percentile per-packet one-way delay: 136.186 ms
Loss rate: 2.03%

-- Flow 3:
Average throughput: 29.38 Mbit/s
95th percentile per-packet one-way delay: 135.504 ms
Loss rate: 5.92%
Run 2: Report of QUIC Cubic — Data Link
Run 3: Statistics of QUIC Cubic

Start at: 2018-09-11 11:45:39
End at: 2018-09-11 11:46:09
Local clock offset: -0.112 ms
Remote clock offset: -0.131 ms

# Below is generated by plot.py at 2018-09-11 15:41:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.03 Mbit/s
95th percentile per-packet one-way delay: 136.058 ms
Loss rate: 2.37%
-- Flow 1:
Average throughput: 46.11 Mbit/s
95th percentile per-packet one-way delay: 136.069 ms
Loss rate: 1.42%
-- Flow 2:
Average throughput: 46.73 Mbit/s
95th percentile per-packet one-way delay: 136.053 ms
Loss rate: 2.05%
-- Flow 3:
Average throughput: 33.90 Mbit/s
95th percentile per-packet one-way delay: 135.491 ms
Loss rate: 6.97%
Run 3: Report of QUIC Cubic — Data Link
Run 4: Statistics of QUIC Cubic

End at: 2018-09-11 12:23:43  
Local clock offset: 0.159 ms  
Remote clock offset: 0.26 ms

# Below is generated by plot.py at 2018-09-11 15:41:10  
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.77 Mbit/s
95th percentile per-packet one-way delay: 135.597 ms
Loss rate: 2.23%
-- Flow 1:
Average throughput: 53.14 Mbit/s
95th percentile per-packet one-way delay: 135.506 ms
Loss rate: 1.31%
-- Flow 2:
Average throughput: 42.06 Mbit/s
95th percentile per-packet one-way delay: 135.655 ms
Loss rate: 2.41%
-- Flow 3:
Average throughput: 29.56 Mbit/s
95th percentile per-packet one-way delay: 135.102 ms
Loss rate: 6.51%
Run 4: Report of QUIC Cubic — Data Link

![Graph showing throughput and per-packet one-way delay across different flows and time periods.]

**Throughput**: (Graph showing line charts for different flows indicating their throughput over time.)

**Per-packet one-way delay**: (Graph showing line charts for different flows indicating their per-packet one-way delay over time.)

- **Flow 1** (ingress: 53.36 Mbit/s, egress: 53.14 Mbit/s)
- **Flow 2** (ingress: 42.51 Mbit/s, egress: 42.06 Mbit/s)
- **Flow 3** (ingress: 30.75 Mbit/s, egress: 29.56 Mbit/s)
Run 5: Statistics of QUIC Cubic

Start at: 2018-09-11 13:00:43
End at: 2018-09-11 13:01:13
Local clock offset: -0.048 ms
Remote clock offset: 0.237 ms

# Below is generated by plot.py at 2018-09-11 15:41:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 82.37 Mbit/s
95th percentile per-packet one-way delay: 135.466 ms
Loss rate: 2.34%
-- Flow 1:
Average throughput: 45.74 Mbit/s
95th percentile per-packet one-way delay: 135.423 ms
Loss rate: 1.46%
-- Flow 2:
Average throughput: 41.31 Mbit/s
95th percentile per-packet one-way delay: 135.491 ms
Loss rate: 2.38%
-- Flow 3:
Average throughput: 26.86 Mbit/s
95th percentile per-packet one-way delay: 135.509 ms
Loss rate: 6.55%
Run 5: Report of QUIC Cubic — Data Link

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

- **Flow 1 ingress** (mean 45.98 Mbit/s)
- **Flow 1 egress** (mean 45.74 Mbit/s)
- **Flow 2 ingress** (mean 41.73 Mbit/s)
- **Flow 2 egress** (mean 41.31 Mbit/s)
- **Flow 3 ingress** (mean 27.96 Mbit/s)
- **Flow 3 egress** (mean 26.86 Mbit/s)

![Graph of percent one-way delay over time for different flows.]

- **Flow 1 (95th percentile 135.42 ms)**
- **Flow 2 (95th percentile 135.49 ms)**
- **Flow 3 (95th percentile 135.51 ms)**
Run 1: Statistics of SCReAM

Start at: 2018-09-11 11:05:32
End at: 2018-09-11 11:06:02
Local clock offset: -0.039 ms
Remote clock offset: -0.085 ms

# Below is generated by plot.py at 2018-09-11 15:41:10
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.44 Mbit/s
  95th percentile per-packet one-way delay: 135.914 ms
  Loss rate: 1.30%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 135.508 ms
  Loss rate: 0.89%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 135.720 ms
  Loss rate: 1.43%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 136.026 ms
  Loss rate: 2.25%
Run 1: Report of SCReAM — Data Link
Run 2: Statistics of SCReAM

Start at: 2018-09-11 11:38:43
Local clock offset: 0.057 ms
Remote clock offset: -0.101 ms

# Below is generated by plot.py at 2018-09-11 15:41:10
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.44 Mbit/s
  95th percentile per-packet one-way delay: 136.582 ms
  Loss rate: 1.36%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 136.548 ms
  Loss rate: 0.89%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 136.520 ms
  Loss rate: 1.43%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 136.630 ms
  Loss rate: 2.59%
Run 2: Report of SCReAM — Data Link

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

- Flow 1 ingress (mean 0.22 Mbit/s)
- Flow 1 egress (mean 0.22 Mbit/s)
- Flow 2 ingress (mean 0.22 Mbit/s)
- Flow 2 egress (mean 0.22 Mbit/s)
- Flow 3 ingress (mean 0.22 Mbit/s)
- Flow 3 egress (mean 0.22 Mbit/s)

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

- Flow 1 (95th percentile 136.55 ms)
- Flow 2 (95th percentile 138.52 ms)
- Flow 3 (95th percentile 136.63 ms)
Run 3: Statistics of SCReAM

Start at: 2018-09-11 12:16:16
End at: 2018-09-11 12:16:46
Local clock offset: -0.158 ms
Remote clock offset: -0.089 ms

# Below is generated by plot.py at 2018-09-11 15:41:10
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.44 Mbit/s
  95th percentile per-packet one-way delay: 136.371 ms
  Loss rate: 1.36%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 135.834 ms
  Loss rate: 0.89%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 136.423 ms
  Loss rate: 1.43%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 135.671 ms
  Loss rate: 2.59%
Run 3: Report of SCReAM — Data Link
Run 4: Statistics of SCReAM

End at: 2018-09-11 12:54:23
Local clock offset: -0.113 ms
Remote clock offset: 0.19 ms

# Below is generated by plot.py at 2018-09-11 15:41:10
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.44 Mbit/s
  95th percentile per-packet one-way delay: 136.019 ms
  Loss rate: 1.36%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 135.048 ms
  Loss rate: 0.89%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 135.493 ms
  Loss rate: 1.43%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 136.078 ms
  Loss rate: 2.59%
Run 4: Report of SCReAM — Data Link

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**Graph 1:**
- **Y-axis:** Throughput (Mbps)
- **X-axis:** Time (s)
- **Legend:**
  - Flow 1 ingress (mean 0.22 Mbps)
  - Flow 1 egress (mean 0.22 Mbps)
  - Flow 2 ingress (mean 0.22 Mbps)
  - Flow 2 egress (mean 0.22 Mbps)
  - Flow 3 ingress (mean 0.22 Mbps)
  - Flow 3 egress (mean 0.22 Mbps)

**Graph 2:**
- **Y-axis:** Per-packet one-way delay (ms)
- **X-axis:** Time (s)
- **Legend:**
  - Flow 1 (95th percentile 135.05 ms)
  - Flow 2 (95th percentile 135.49 ms)
  - Flow 3 (95th percentile 136.08 ms)
Run 5: Statistics of SCReAM

End at: 2018-09-11 13:28:03
Local clock offset: -0.133 ms
Remote clock offset: 0.31 ms

# Below is generated by plot.py at 2018-09-11 15:41:10
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.44 Mbit/s
  95th percentile per-packet one-way delay: 135.755 ms
  Loss rate: 1.30%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 134.270 ms
  Loss rate: 0.89%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 135.800 ms
  Loss rate: 1.43%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 134.672 ms
  Loss rate: 2.25%
Run 1: Statistics of Sprout

Start at: 2018-09-11 11:06:49
End at: 2018-09-11 11:07:19
Local clock offset: 0.184 ms
Remote clock offset: -0.134 ms

# Below is generated by plot.py at 2018-09-11 15:41:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.84 Mbit/s
95th percentile per-packet one-way delay: 136.309 ms
Loss rate: 1.12%
-- Flow 1:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 136.392 ms
Loss rate: 0.70%
-- Flow 2:
Average throughput: 0.48 Mbit/s
95th percentile per-packet one-way delay: 136.073 ms
Loss rate: 1.11%
-- Flow 3:
Average throughput: 0.35 Mbit/s
95th percentile per-packet one-way delay: 135.747 ms
Loss rate: 2.59%
Run 2: Statistics of Sprout

Start at: 2018-09-11 11:40:01
End at: 2018-09-11 11:40:31
Local clock offset: ~0.119 ms
Remote clock offset: ~0.116 ms

# Below is generated by plot.py at 2018-09-11 15:41:10
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.88 Mbit/s
  95th percentile per-packet one-way delay: 136.443 ms
  Loss rate: 0.81%
-- Flow 1:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 136.467 ms
  Loss rate: 0.64%
-- Flow 2:
  Average throughput: 0.41 Mbit/s
  95th percentile per-packet one-way delay: 136.454 ms
  Loss rate: 1.33%
-- Flow 3:
  Average throughput: 0.54 Mbit/s
  95th percentile per-packet one-way delay: 136.185 ms
  Loss rate: 0.42%
Run 2: Report of Sprout — Data Link
Run 3: Statistics of Sprout

Start at: 2018-09-11 12:17:33
End at: 2018-09-11 12:18:03
Local clock offset: 0.065 ms
Remote clock offset: 0.261 ms

# Below is generated by plot.py at 2018-09-11 15:41:10
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.76 Mbit/s
  95th percentile per-packet one-way delay: 136.191 ms
  Loss rate: 1.13%
-- Flow 1:
  Average throughput: 0.38 Mbit/s
  95th percentile per-packet one-way delay: 135.468 ms
  Loss rate: 1.05%
-- Flow 2:
  Average throughput: 0.36 Mbit/s
  95th percentile per-packet one-way delay: 136.230 ms
  Loss rate: 1.63%
-- Flow 3:
  Average throughput: 0.45 Mbit/s
  95th percentile per-packet one-way delay: 136.256 ms
  Loss rate: 0.50%
Run 4: Statistics of Sprout

Start at: 2018-09-11 12:55:10
End at: 2018-09-11 12:55:40
Local clock offset: -0.1 ms
Remote clock offset: 0.229 ms

# Below is generated by plot.py at 2018-09-11 15:41:10
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.93 Mbit/s
  95th percentile per-packet one-way delay: 135.671 ms
  Loss rate: 0.97%
-- Flow 1:
  Average throughput: 0.47 Mbit/s
  95th percentile per-packet one-way delay: 135.597 ms
  Loss rate: 0.67%
-- Flow 2:
  Average throughput: 0.45 Mbit/s
  95th percentile per-packet one-way delay: 135.169 ms
  Loss rate: 0.93%
-- Flow 3:
  Average throughput: 0.50 Mbit/s
  95th percentile per-packet one-way delay: 135.740 ms
  Loss rate: 1.94%
Run 4: Report of Sprout — Data Link

![Graph showing throughput and packet round-trip delay over time for different flows.]

- Flow 1 ingress (mean 0.47 Mbit/s)
- Flow 1 egress (mean 0.47 Mbit/s)
- Flow 2 ingress (mean 0.45 Mbit/s)
- Flow 2 egress (mean 0.45 Mbit/s)
- Flow 3 ingress (mean 0.49 Mbit/s)
- Flow 3 egress (mean 0.50 Mbit/s)
Run 5: Statistics of Sprout

End at: 2018-09-11 13:29:21
Local clock offset: 0.104 ms
Remote clock offset: -0.054 ms

# Below is generated by plot.py at 2018-09-11 15:41:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.97 Mbit/s
95th percentile per-packet one-way delay: 135.275 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 134.983 ms
Loss rate: 0.81%
-- Flow 2:
Average throughput: 0.47 Mbit/s
95th percentile per-packet one-way delay: 135.300 ms
Loss rate: 1.14%
-- Flow 3:
Average throughput: 0.66 Mbit/s
95th percentile per-packet one-way delay: 135.311 ms
Loss rate: 0.06%
Run 5: Report of Sprout — Data Link

![Graph 1: Throughput (Mbps)]

- Flow 1 ingress (mean 0.44 Mbps)
- Flow 1 egress (mean 0.44 Mbps)
- Flow 2 ingress (mean 0.47 Mbps)
- Flow 2 egress (mean 0.47 Mbps)
- Flow 3 ingress (mean 0.64 Mbps)
- Flow 3 egress (mean 0.66 Mbps)

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

- Flow 1 (95th percentile 134.98 ms)
- Flow 2 (95th percentile 135.30 ms)
- Flow 3 (95th percentile 135.31 ms)
Run 1: Statistics of TaoVA-100x

Start at: 2018-09-11 10:37:15
End at: 2018-09-11 10:37:46
Local clock offset: 0.207 ms
Remote clock offset: -0.141 ms

# Below is generated by plot.py at 2018-09-11 15:41:10
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 79.57 Mbit/s
  95th percentile per-packet one-way delay: 136.110 ms
  Loss rate: 2.79%
-- Flow 1:
  Average throughput: 12.92 Mbit/s
  95th percentile per-packet one-way delay: 135.562 ms
  Loss rate: 0.92%
-- Flow 2:
  Average throughput: 12.84 Mbit/s
  95th percentile per-packet one-way delay: 135.974 ms
  Loss rate: 1.40%
-- Flow 3:
  Average throughput: 178.26 Mbit/s
  95th percentile per-packet one-way delay: 136.149 ms
  Loss rate: 3.39%
Run 1: Report of TaoVA-100x — Data Link
Run 2: Statistics of TaoVA-100x

Start at: 2018-09-11 11:10:26
End at: 2018-09-11 11:10:56
Local clock offset: 0.13 ms
Remote clock offset: -0.092 ms

# Below is generated by plot.py at 2018-09-11 15:41:10
# Datalink statistics
-- Total of 3 flows:
 Average throughput: 178.56 Mbit/s
 95th percentile per-packet one-way delay: 136.703 ms
 Loss rate: 1.93%
-- Flow 1:
 Average throughput: 12.93 Mbit/s
 95th percentile per-packet one-way delay: 135.945 ms
 Loss rate: 0.93%
-- Flow 2:
 Average throughput: 186.62 Mbit/s
 95th percentile per-packet one-way delay: 136.319 ms
 Loss rate: 1.47%
-- Flow 3:
 Average throughput: 128.41 Mbit/s
 95th percentile per-packet one-way delay: 137.330 ms
 Loss rate: 3.55%
Run 2: Report of TaoVA-100x — Data Link

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

- Flow 1 ingress (mean 12.93 Mbit/s)
- Flow 1 egress (mean 12.93 Mbit/s)
- Flow 2 ingress (mean 186.83 Mbit/s)
- Flow 2 egress (mean 186.62 Mbit/s)
- Flow 3 ingress (mean 129.50 Mbit/s)
- Flow 3 egress (mean 128.41 Mbit/s)

![Graph showing packet delay over time for different flows]

- Flow 1 (95th percentile 135.94 ms)
- Flow 2 (95th percentile 136.32 ms)
- Flow 3 (95th percentile 137.33 ms)
Run 3: Statistics of TaoVA-100x

Start at: 2018-09-11 11:43:40
End at: 2018-09-11 11:44:10
Local clock offset: 0.165 ms
Remote clock offset: -0.035 ms

# Below is generated by plot.py at 2018-09-11 15:44:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 354.63 Mbit/s
95th percentile per-packet one-way delay: 136.688 ms
Loss rate: 1.57%
-- Flow 1:
Average throughput: 178.58 Mbit/s
95th percentile per-packet one-way delay: 136.683 ms
Loss rate: 1.14%
-- Flow 2:
Average throughput: 175.17 Mbit/s
95th percentile per-packet one-way delay: 136.642 ms
Loss rate: 1.36%
-- Flow 3:
Average throughput: 183.79 Mbit/s
95th percentile per-packet one-way delay: 136.871 ms
Loss rate: 3.19%
Run 3: Report of TaoVA-100x — Data Link

[Graph showing throughput and per-packet one-way delay over time for different flows.]
Run 4: Statistics of TaoVA-100x

End at: 2018-09-11 12:21:43
Local clock offset: -0.064 ms
Remote clock offset: -0.092 ms

# Below is generated by plot.py at 2018-09-11 15:44:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 336.46 Mbit/s
95th percentile per-packet one-way delay: 135.478 ms
Loss rate: 1.25%
-- Flow 1:
Average throughput: 203.81 Mbit/s
95th percentile per-packet one-way delay: 135.460 ms
Loss rate: 1.00%
-- Flow 2:
Average throughput: 193.89 Mbit/s
95th percentile per-packet one-way delay: 135.529 ms
Loss rate: 1.59%
-- Flow 3:
Average throughput: 12.37 Mbit/s
95th percentile per-packet one-way delay: 135.430 ms
Loss rate: 2.76%
Run 4: Report of TaoVA-100x — Data Link

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

Legend:
- Flow 1 ingress (mean 204.02 Mbit/s)
- Flow 1 egress (mean 203.81 Mbit/s)
- Flow 2 ingress (mean 194.36 Mbit/s)
- Flow 2 egress (mean 193.89 Mbit/s)
- Flow 3 ingress (mean 12.37 Mbit/s)
- Flow 3 egress (mean 12.37 Mbit/s)
Run 5: Statistics of TaoVA-100x

Start at: 2018-09-11 12:58:46
End at: 2018-09-11 12:59:16
Local clock offset: 0.026 ms
Remote clock offset: -0.143 ms

# Below is generated by plot.py at 2018-09-11 15:44:31
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 321.57 Mbit/s
  95th percentile per-packet one-way delay: 135.999 ms
  Loss rate: 1.22%
-- Flow 1:
  Average throughput: 195.19 Mbit/s
  95th percentile per-packet one-way delay: 135.949 ms
  Loss rate: 0.96%
-- Flow 2:
  Average throughput: 184.61 Mbit/s
  95th percentile per-packet one-way delay: 136.093 ms
  Loss rate: 1.57%
-- Flow 3:
  Average throughput: 12.20 Mbit/s
  95th percentile per-packet one-way delay: 135.981 ms
  Loss rate: 2.88%
Run 5: Report of TaoVA-100x — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 195.27 Mbit/s)
Flow 1 egress (mean 195.19 Mbit/s)
Flow 2 ingress (mean 185.01 Mbit/s)
Flow 2 egress (mean 184.61 Mbit/s)
Flow 3 ingress (mean 12.23 Mbit/s)
Flow 3 egress (mean 12.20 Mbit/s)

Per-packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 135.95 ms)
Flow 2 (95th percentile 136.09 ms)
Flow 3 (95th percentile 135.98 ms)
Run 1: Statistics of TCP Vegas

Start at: 2018-09-11 10:48:44
End at: 2018-09-11 10:49:14
Local clock offset: 0.014 ms
Remote clock offset: -0.127 ms

# Below is generated by plot.py at 2018-09-11 15:45:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 534.63 Mbit/s
95th percentile per-packet one-way delay: 151.577 ms
Loss rate: 1.86%
-- Flow 1:
Average throughput: 233.63 Mbit/s
95th percentile per-packet one-way delay: 136.932 ms
Loss rate: 0.93%
-- Flow 2:
Average throughput: 304.05 Mbit/s
95th percentile per-packet one-way delay: 175.906 ms
Loss rate: 1.73%
-- Flow 3:
Average throughput: 304.68 Mbit/s
95th percentile per-packet one-way delay: 153.416 ms
Loss rate: 4.21%
Run 1: Report of TCP Vegas — Data Link

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

- **Flow 1 ingress (mean 233.68 Mbps)**
- **Flow 1 egress (mean 233.63 Mbps)**
- **Flow 2 ingress (mean 305.21 Mbps)**
- **Flow 2 egress (mean 304.05 Mbps)**
- **Flow 3 ingress (mean 309.42 Mbps)**
- **Flow 3 egress (mean 304.68 Mbps)**

![Graph showing per-packet delay over time for different flows.](image)

- **Flow 1 (95th percentile 136.93 ms)**
- **Flow 2 (95th percentile 175.91 ms)**
- **Flow 3 (95th percentile 153.42 ms)**
Run 2: Statistics of TCP Vegas

End at: 2018-09-11 11:22:46
Local clock offset: 0.135 ms
Remote clock offset: -0.086 ms

# Below is generated by plot.py at 2018-09-11 15:47:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 689.73 Mbit/s
95th percentile per-packet one-way delay: 207.915 ms
Loss rate: 1.47%
-- Flow 1:
Average throughput: 419.00 Mbit/s
95th percentile per-packet one-way delay: 150.541 ms
Loss rate: 1.03%
-- Flow 2:
Average throughput: 312.54 Mbit/s
95th percentile per-packet one-way delay: 241.805 ms
Loss rate: 1.68%
-- Flow 3:
Average throughput: 194.21 Mbit/s
95th percentile per-packet one-way delay: 136.783 ms
Loss rate: 3.65%
Run 2: Report of TCP Vegas — Data Link

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

Legend:
- Flow 1 ingress (mean 419.54 Mbit/s)
- Flow 1 egress (mean 419.00 Mbit/s)
- Flow 2 ingress (mean 313.56 Mbit/s)
- Flow 2 egress (mean 312.54 Mbit/s)
- Flow 3 ingress (mean 196.07 Mbit/s)
- Flow 3 egress (mean 194.21 Mbit/s)
Run 3: Statistics of TCP Vegas

Start at: 2018-09-11 11:56:31
End at: 2018-09-11 11:57:01
Local clock offset: -0.005 ms
Remote clock offset: -0.103 ms

# Below is generated by plot.py at 2018-09-11 15:47:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 529.15 Mbit/s
95th percentile per-packet one-way delay: 179.540 ms
Loss rate: 1.70%
-- Flow 1:
Average throughput: 288.05 Mbit/s
95th percentile per-packet one-way delay: 172.631 ms
Loss rate: 0.97%
-- Flow 2:
Average throughput: 253.74 Mbit/s
95th percentile per-packet one-way delay: 188.264 ms
Loss rate: 2.10%
-- Flow 3:
Average throughput: 223.10 Mbit/s
95th percentile per-packet one-way delay: 179.330 ms
Loss rate: 3.56%
Run 3: Report of TCP Vegas — Data Link

![Graph showing throughput and packet delivery delay over time.](image-url)
Run 4: Statistics of TCP Vegas

Start at: 2018-09-11 12:35:07
End at: 2018-09-11 12:35:37
Local clock offset: -0.102 ms
Remote clock offset: -0.138 ms

# Below is generated by plot.py at 2018-09-11 15:52:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 734.90 Mbit/s
95th percentile per-packet one-way delay: 206.193 ms
Loss rate: 1.42%
-- Flow 1:
Average throughput: 477.45 Mbit/s
95th percentile per-packet one-way delay: 202.641 ms
Loss rate: 0.66%
-- Flow 2:
Average throughput: 291.15 Mbit/s
95th percentile per-packet one-way delay: 174.165 ms
Loss rate: 1.63%
-- Flow 3:
Average throughput: 197.37 Mbit/s
95th percentile per-packet one-way delay: 326.463 ms
Loss rate: 6.12%
Run 4: Report of TCP Vegas — Data Link

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

*Legend for Graph 1:*
- Flow 1 ingress (mean 476.25 Mbps)
- Flow 1 egress (mean 477.45 Mbps)
- Flow 2 ingress (mean 291.94 Mbps)
- Flow 2 egress (mean 291.15 Mbps)
- Flow 3 ingress (mean 204.50 Mbps)
- Flow 3 egress (mean 197.37 Mbps)

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

*Legend for Graph 2:*
- Flow 1 (95th percentile 202.64 ms)
- Flow 2 (95th percentile 174.16 ms)
- Flow 3 (95th percentile 326.46 ms)
Run 5: Statistics of TCP Vegas

Start at: 2018-09-11 13:10:44
End at: 2018-09-11 13:11:14
Local clock offset: 0.096 ms
Remote clock offset: -0.059 ms

# Below is generated by plot.py at 2018-09-11 15:56:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 785.87 Mbit/s
95th percentile per-packet one-way delay: 185.901 ms
Loss rate: 1.98%
-- Flow 1:
Average throughput: 421.49 Mbit/s
95th percentile per-packet one-way delay: 156.942 ms
Loss rate: 1.34%
-- Flow 2:
Average throughput: 391.24 Mbit/s
95th percentile per-packet one-way delay: 198.633 ms
Loss rate: 2.10%
-- Flow 3:
Average throughput: 321.35 Mbit/s
95th percentile per-packet one-way delay: 224.317 ms
Loss rate: 4.19%
Run 5: Report of TCP Vegas — Data Link

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

Legend:
- Flow 1 ingress (mean 423.34 Mbit/s)
- Flow 1 egress (mean 421.49 Mbit/s)
- Flow 2 ingress (mean 394.22 Mbit/s)
- Flow 2 egress (mean 391.24 Mbit/s)
- Flow 3 ingress (mean 326.28 Mbit/s)
- Flow 3 egress (mean 321.35 Mbit/s)

Legend for per-packet one-way delay:
- Flow 1 (95th percentile 156.94 ms)
- Flow 2 (95th percentile 198.63 ms)
- Flow 3 (95th percentile 224.32 ms)
Run 1: Statistics of Verus

Start at: 2018-09-11 10:44:59
End at: 2018-09-11 10:45:29
Local clock offset: 0.064 ms
Remote clock offset: -0.472 ms

# Below is generated by plot.py at 2018-09-11 15:56:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 116.61 Mbit/s
95th percentile per-packet one-way delay: 160.963 ms
Loss rate: 4.31%
-- Flow 1:
Average throughput: 77.64 Mbit/s
95th percentile per-packet one-way delay: 152.691 ms
Loss rate: 4.45%
-- Flow 2:
Average throughput: 46.43 Mbit/s
95th percentile per-packet one-way delay: 175.743 ms
Loss rate: 4.27%
-- Flow 3:
Average throughput: 25.47 Mbit/s
95th percentile per-packet one-way delay: 151.837 ms
Loss rate: 3.07%
Run 1: Report of Verus — Data Link

![Graphs showing throughputs and packet delays over time for different flows.]

- Flow 1 ingress (mean 80.52 Mbit/s)
- Flow 1 egress (mean 77.64 Mbit/s)
- Flow 2 ingress (mean 48.10 Mbit/s)
- Flow 2 egress (mean 46.45 Mbit/s)
- Flow 3 ingress (mean 25.55 Mbit/s)
- Flow 3 egress (mean 25.47 Mbit/s)
Run 2: Statistics of Verus

Start at: 2018-09-11 11:18:24
End at: 2018-09-11 11:18:54
Local clock offset: 0.132 ms
Remote clock offset: -0.068 ms

# Below is generated by plot.py at 2018-09-11 15:56:12
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 166.02 Mbit/s
  95th percentile per-packet one-way delay: 241.660 ms
  Loss rate: 2.45%
-- Flow 1:
  Average throughput: 128.37 Mbit/s
  95th percentile per-packet one-way delay: 203.461 ms
  Loss rate: 1.07%
-- Flow 2:
  Average throughput: 32.59 Mbit/s
  95th percentile per-packet one-way delay: 144.771 ms
  Loss rate: 5.44%
-- Flow 3:
  Average throughput: 52.57 Mbit/s
  95th percentile per-packet one-way delay: 305.662 ms
  Loss rate: 8.44%
Run 2: Report of Verus — Data Link

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

Legend:
- Flow 1 ingress (mean 128.31 Mbit/s)
- Flow 1 egress (mean 128.37 Mbit/s)
- Flow 2 ingress (mean 33.99 Mbit/s)
- Flow 2 egress (mean 32.59 Mbit/s)
- Flow 3 ingress (mean 55.77 Mbit/s)
- Flow 3 egress (mean 52.57 Mbit/s)
Run 3: Statistics of Verus

Start at: 2018-09-11 11:52:15
End at: 2018-09-11 11:52:45
Local clock offset: 0.213 ms
Remote clock offset: -0.089 ms

# Below is generated by plot.py at 2018-09-11 15:56:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 166.88 Mbit/s
95th percentile per-packet one-way delay: 216.606 ms
Loss rate: 1.13%
-- Flow 1:
Average throughput: 121.45 Mbit/s
95th percentile per-packet one-way delay: 219.551 ms
Loss rate: 0.53%
-- Flow 2:
Average throughput: 51.84 Mbit/s
95th percentile per-packet one-way delay: 191.154 ms
Loss rate: 1.71%
-- Flow 3:
Average throughput: 34.54 Mbit/s
95th percentile per-packet one-way delay: 142.151 ms
Loss rate: 5.66%
Run 3: Report of Verus — Data Link

![Graph showing network traffic and delay](image-url)
Run 4: Statistics of Verus

Start at: 2018-09-11 12:30:01
End at: 2018-09-11 12:30:31
Local clock offset: 0.186 ms
Remote clock offset: -0.13 ms

# Below is generated by plot.py at 2018-09-11 15:56:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 233.02 Mbit/s
95th percentile per-packet one-way delay: 202.151 ms
Loss rate: 1.03%
-- Flow 1:
Average throughput: 123.82 Mbit/s
95th percentile per-packet one-way delay: 209.654 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 146.01 Mbit/s
95th percentile per-packet one-way delay: 182.967 ms
Loss rate: 2.31%
-- Flow 3:
Average throughput: 41.44 Mbit/s
95th percentile per-packet one-way delay: 213.068 ms
Loss rate: 0.02%
Run 4: Report of Verus — Data Link

![Graph showing network throughput and delay over time for different flows.](image)

- **Graph 1:** Throughput over time for different flows, indicating variability in data transfer rates.
- **Graph 2:** Delay per packet over time for different flows, highlighting fluctuations in latency.

**Legend for Graph 1:**
- Blue dashed line: Flow 1 ingress (mean 123.80 Mbit/s)
- Blue solid line: Flow 1 egress (mean 123.82 Mbit/s)
- Green dashed line: Flow 2 ingress (mean 146.07 Mbit/s)
- Green solid line: Flow 2 egress (mean 146.01 Mbit/s)
- Red dashed line: Flow 3 ingress (mean 40.29 Mbit/s)
- Red solid line: Flow 3 egress (mean 41.44 Mbit/s)

**Legend for Graph 2:**
- Blue line with markers: Flow 1 (95th percentile 209.65 ms)
- Green line with markers: Flow 2 (95th percentile 182.97 ms)
- Red line with markers: Flow 3 (95th percentile 213.07 ms)
Run 5: Statistics of Verus

Start at: 2018-09-11 13:07:01
End at: 2018-09-11 13:07:31
Local clock offset: 0.078 ms
Remote clock offset: -0.053 ms

# Below is generated by plot.py at 2018-09-11 15:56:12
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 100.93 Mbit/s
  95th percentile per-packet one-way delay: 193.371 ms
  Loss rate: 0.51%
-- Flow 1:
  Average throughput: 45.82 Mbit/s
  95th percentile per-packet one-way delay: 140.968 ms
  Loss rate: 0.01%
-- Flow 2:
  Average throughput: 62.07 Mbit/s
  95th percentile per-packet one-way delay: 268.545 ms
  Loss rate: 0.52%
-- Flow 3:
  Average throughput: 44.01 Mbit/s
  95th percentile per-packet one-way delay: 147.290 ms
  Loss rate: 2.11%
Run 5: Report of Verus — Data Link

The graphs show the throughput and per-packet one way delay for Flows 1, 2, and 3 over time. The throughput graphs indicate a fluctuating pattern with peaks and valleys, while the per-packet one way delay graphs show more consistent patterns with occasional spikes.

Legend for Throughput Graphs:
- Flow 1 ingress (mean 45.41 Mbit/s)
- Flow 1 egress (mean 45.82 Mbit/s)
- Flow 2 ingress (mean 62.76 Mbit/s)
- Flow 2 egress (mean 62.07 Mbit/s)
- Flow 3 ingress (mean 43.64 Mbit/s)
- Flow 3 egress (mean 44.01 Mbit/s)

Legend for Per-Packet One Way Delay Graphs:
- Flow 1 (95th percentile 140.97 ms)
- Flow 2 (95th percentile 268.55 ms)
- Flow 3 (95th percentile 147.29 ms)
Run 1: Statistics of PCC-Vivace

Start at: 2018-09-11 10:52:50
End at: 2018-09-11 10:53:20
Local clock offset: -0.022 ms
Remote clock offset: -0.085 ms

# Below is generated by plot.py at 2018-09-11 15:56:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 465.78 Mbit/s
95th percentile per-packet one-way delay: 147.160 ms
Loss rate: 1.79%
-- Flow 1:
Average throughput: 301.26 Mbit/s
95th percentile per-packet one-way delay: 159.132 ms
Loss rate: 1.22%
-- Flow 2:
Average throughput: 194.40 Mbit/s
95th percentile per-packet one-way delay: 138.816 ms
Loss rate: 2.28%
-- Flow 3:
Average throughput: 110.72 Mbit/s
95th percentile per-packet one-way delay: 146.238 ms
Loss rate: 4.67%
Run 1: Report of PCC-Vivace — Data Link

![Graph showing throughput and delay over time for different flows.]
Run 2: Statistics of PCC-Vivace

Start at: 2018-09-11 11:26:23
End at: 2018-09-11 11:26:53
Local clock offset: -0.16 ms
Remote clock offset: -0.097 ms

# Below is generated by plot.py at 2018-09-11 15:56:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 455.47 Mbit/s
95th percentile per-packet one-way delay: 141.15 ms
Loss rate: 1.77%
-- Flow 1:
Average throughput: 302.69 Mbit/s
95th percentile per-packet one-way delay: 141.87 ms
Loss rate: 1.26%
-- Flow 2:
Average throughput: 173.87 Mbit/s
95th percentile per-packet one-way delay: 137.08 ms
Loss rate: 1.91%
-- Flow 3:
Average throughput: 116.25 Mbit/s
95th percentile per-packet one-way delay: 163.36 ms
Loss rate: 5.23%
Run 2: Report of PCC-Vivace — Data Link

**Throughput (Mbps):**
- **Flow 1 ingress (mean 303.76 Mbps)**
- **Flow 1 egress (mean 302.69 Mbps)**
- **Flow 2 ingress (mean 174.85 Mbps)**
- **Flow 2 egress (mean 173.87 Mbps)**
- **Flow 3 ingress (mean 119.27 Mbps)**
- **Flow 3 egress (mean 116.25 Mbps)**

**Per-packet one-way delay (ms):**
- **Flow 1 (95th percentile 141.98 ms)**
- **Flow 2 (95th percentile 137.08 ms)**
- **Flow 3 (95th percentile 163.36 ms)**
Run 3: Statistics of PCC-Vivace

Start at: 2018-09-11 12:01:39
End at: 2018-09-11 12:02:09
Local clock offset: 0.053 ms
Remote clock offset: -0.454 ms

# Below is generated by plot.py at 2018-09-11 15:57:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 459.04 Mbit/s
95th percentile per-packet one-way delay: 157.575 ms
Loss rate: 1.89%
-- Flow 1:
Average throughput: 307.65 Mbit/s
95th percentile per-packet one-way delay: 167.576 ms
Loss rate: 1.37%
-- Flow 2:
Average throughput: 174.75 Mbit/s
95th percentile per-packet one-way delay: 140.766 ms
Loss rate: 2.03%
-- Flow 3:
Average throughput: 110.32 Mbit/s
95th percentile per-packet one-way delay: 156.085 ms
Loss rate: 5.75%
Run 4: Statistics of PCC-Vivace

Start at: 2018-09-11 12:40:34
End at: 2018-09-11 12:41:04
Local clock offset: -0.025 ms
Remote clock offset: 0.237 ms

# Below is generated by plot.py at 2018-09-11 15:57:54
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 529.03 Mbit/s
  95th percentile per-packet one-way delay: 222.314 ms
  Loss rate: 2.66%
-- Flow 1:
  Average throughput: 303.25 Mbit/s
  95th percentile per-packet one-way delay: 153.934 ms
  Loss rate: 1.60%
-- Flow 2:
  Average throughput: 277.80 Mbit/s
  95th percentile per-packet one-way delay: 279.033 ms
  Loss rate: 3.90%
-- Flow 3:
  Average throughput: 129.46 Mbit/s
  95th percentile per-packet one-way delay: 146.390 ms
  Loss rate: 4.68%
Run 4: Report of PCC-Vivace — Data Link
Run 5: Statistics of PCC-Vivace

Start at: 2018-09-11 13:15:00
End at: 2018-09-11 13:15:30
Local clock offset: 0.118 ms
Remote clock offset: 0.29 ms

# Below is generated by plot.py at 2018-09-11 15:57:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 444.39 Mbit/s
95th percentile per-packet one-way delay: 152.514 ms
Loss rate: 1.88%
-- Flow 1:
Average throughput: 283.99 Mbit/s
95th percentile per-packet one-way delay: 145.790 ms
Loss rate: 1.43%
-- Flow 2:
Average throughput: 186.77 Mbit/s
95th percentile per-packet one-way delay: 197.099 ms
Loss rate: 1.95%
-- Flow 3:
Average throughput: 113.51 Mbit/s
95th percentile per-packet one-way delay: 144.571 ms
Loss rate: 4.94%
Run 5: Report of PCC-Vivace — Data Link
Run 1: Statistics of WebRTC media

End at: 2018-09-11 10:42:50
Local clock offset: 0.192 ms
Remote clock offset: -0.09 ms

# Below is generated by plot.py at 2018-09-11 15:57:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.67 Mbit/s
95th percentile per-packet one-way delay: 135.881 ms
Loss rate: 2.09%
-- Flow 1:
Average throughput: 1.34 Mbit/s
95th percentile per-packet one-way delay: 135.885 ms
Loss rate: 1.27%
-- Flow 2:
Average throughput: 1.03 Mbit/s
95th percentile per-packet one-way delay: 135.892 ms
Loss rate: 2.34%
-- Flow 3:
Average throughput: 0.33 Mbit/s
95th percentile per-packet one-way delay: 135.525 ms
Loss rate: 4.60%
Run 1: Report of WebRTC media — Data Link

![Throughput Graph](image)

- Flow 1 ingress (mean 1.34 Mbit/s)
- Flow 1 egress (mean 1.34 Mbit/s)
- Flow 2 ingress (mean 1.04 Mbit/s)
- Flow 2 egress (mean 1.03 Mbit/s)
- Flow 3 ingress (mean 0.34 Mbit/s)
- Flow 3 egress (mean 0.33 Mbit/s)

![Delay Graph](image)

- Flow 1 (95th percentile 135.88 ms)
- Flow 2 (95th percentile 135.89 ms)
- Flow 3 (95th percentile 135.53 ms)
Run 2: Statistics of WebRTC media

Start at: 2018-09-11 11:15:46
End at: 2018-09-11 11:16:16
Local clock offset: 0.016 ms
Remote clock offset: -0.059 ms

# Below is generated by plot.py at 2018-09-11 15:57:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.10 Mbit/s
95th percentile per-packet one-way delay: 136.501 ms
Loss rate: 1.78%
-- Flow 1:
Average throughput: 1.78 Mbit/s
95th percentile per-packet one-way delay: 136.454 ms
Loss rate: 0.88%
-- Flow 2:
Average throughput: 1.02 Mbit/s
95th percentile per-packet one-way delay: 136.325 ms
Loss rate: 2.02%
-- Flow 3:
Average throughput: 0.32 Mbit/s
95th percentile per-packet one-way delay: 136.612 ms
Loss rate: 5.83%
Run 2: Report of WebRTC media — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 1.78 Mbit/s)
Flow 1 egress (mean 1.78 Mbit/s)
Flow 2 ingress (mean 1.03 Mbit/s)
Flow 2 egress (mean 1.02 Mbit/s)
Flow 3 ingress (mean 0.34 Mbit/s)
Flow 3 egress (mean 0.32 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 136.45 ms)
Flow 2 (95th percentile 136.32 ms)
Flow 3 (95th percentile 136.61 ms)
Run 3: Statistics of WebRTC media

Start at: 2018-09-11 11:49:37
End at: 2018-09-11 11:50:07
Local clock offset: 0.122 ms
Remote clock offset: -0.116 ms

# Below is generated by plot.py at 2018-09-11 15:57:54
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 3.12 Mbit/s
  95th percentile per-packet one-way delay: 136.602 ms
  Loss rate: 1.77%
-- Flow 1:
  Average throughput: 1.80 Mbit/s
  95th percentile per-packet one-way delay: 136.363 ms
  Loss rate: 1.04%
-- Flow 2:
  Average throughput: 1.02 Mbit/s
  95th percentile per-packet one-way delay: 136.646 ms
  Loss rate: 2.17%
-- Flow 3:
  Average throughput: 0.33 Mbit/s
  95th percentile per-packet one-way delay: 135.899 ms
  Loss rate: 4.57%
Run 3: Report of WebRTC media — Data Link
Run 4: Statistics of WebRTC media

Start at: 2018-09-11 12:27:24
End at: 2018-09-11 12:27:54
Local clock offset: -0.045 ms
Remote clock offset: 0.26 ms

# Below is generated by plot.py at 2018-09-11 15:57:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.09 Mbit/s
95th percentile per-packet one-way delay: 136.111 ms
Loss rate: 1.77%
-- Flow 1:
Average throughput: 1.74 Mbit/s
95th percentile per-packet one-way delay: 135.200 ms
Loss rate: 1.36%
-- Flow 2:
Average throughput: 1.04 Mbit/s
95th percentile per-packet one-way delay: 136.186 ms
Loss rate: 1.48%
-- Flow 3:
Average throughput: 0.34 Mbit/s
95th percentile per-packet one-way delay: 135.506 ms
Loss rate: 4.84%
Run 4: Report of WebRTC media — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 1.75 Mbit/s)
  - Flow 1 egress (mean 1.74 Mbit/s)
  - Flow 2 ingress (mean 1.05 Mbit/s)
  - Flow 2 egress (mean 1.04 Mbit/s)
  - Flow 3 ingress (mean 0.35 Mbit/s)
  - Flow 3 egress (mean 0.34 Mbit/s)

- **Packet Delay (ms):**
  - Flow 1 (95th percentile 135.20 ms)
  - Flow 2 (95th percentile 136.19 ms)
  - Flow 3 (95th percentile 135.51 ms)
Run 5: Statistics of WebRTC media

Start at: 2018-09-11 13:04:23
End at: 2018-09-11 13:04:53
Local clock offset: 0.022 ms
Remote clock offset: -0.102 ms

# Below is generated by plot.py at 2018-09-11 15:57:54
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 3.11 Mbit/s
  95th percentile per-packet one-way delay: 136.585 ms
  Loss rate: 1.77%
-- Flow 1:
  Average throughput: 1.78 Mbit/s
  95th percentile per-packet one-way delay: 135.964 ms
  Loss rate: 1.05%
-- Flow 2:
  Average throughput: 1.03 Mbit/s
  95th percentile per-packet one-way delay: 136.103 ms
  Loss rate: 1.77%
-- Flow 3:
  Average throughput: 0.33 Mbit/s
  95th percentile per-packet one-way delay: 136.753 ms
  Loss rate: 5.57%
Run 5: Report of WebRTC media — Data Link