Pantheon Report

Generated at 2018-02-21 12:05:07 (UTC).
Data path: GCE Tokyo Ethernet (remote) → GCE Sydney Ethernet (local).
Repeated the test of 17 congestion control schemes 10 times.
Each test lasted for 30 seconds running 3 flows with 10-second interval between two flows.
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).
Tested BBR with qdisc of Fair Queuing (fq), and other schemes with the default Linux qdisc (pfifo_fast).

Git summary:
branch: master @ f12c42a2c63fdd9a862eefa0468859bf379b6623
third_party/calibrated_koho @ 3cb73c0d1c0322c6dfe4a46ea37a522e53227db50
M datagram/sender.cc
third_party/fillp @ 828bbf95fd4941149b55e90f281d1c69ae1a5c6
third_party/genericCC @ 9249eaa3238475c4d8cc07148d70becca6a2a42
third_party/indigo @ a9b2060d94da2e8987e893e3e3ca2a6c5c0a9
third_party/indigo-1-layer-128-unit @ 3ae9e4e4230db7484501f82ce80b7377695f2f66d
third_party/indigo-1-layer-32-unit @ 2601c92e4aa9fd58d8dc4dfe0ecdbf90c077e64d
third_party/indigo-1-layer-32-unit-no-calib @ 1f3a7f75b41135ed5b540c0fd35059359528e2a5f
third_party/indigo-no-calib @ 7224f2202e8a044d8306fa0b983ad48360c53d89
third_party/koho.cc @ f0f2e69303ae82ea808e6928eac4f1083a6681
M datagram/sender.cc
third_party/libutp @ b3465b942e2b26f2b179eaab4a906ce6b7b7c3fe1
third_party/pantheon-tunnel @ fb1053193c2861a659ba9013db2744ccfcf993
third_party/pcc @ 1af0c958fa0d66d18b623c091a55f6c872b4981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/proto-quic @ 77961f0a182733a86b42f1bc8143ebc978f3ccf42
third_party/scream @ c3370fd7bd17265a79ae83e4a016ad23f5965885
third_party/sourdough @ f1a14bffe74973437f61b1eae3b267c5e681
third_party/sprout @ 6f2e6e6e0889d1066a9f023df375ee2665089ce
M src/examples/cellsim.cc
M src/examples/sproutbt2.cc
M src/network/sproutcomm.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562539f9a494
M src/verus.cpp
M tools/plot.py
third_party/vivace @ 7a4ba531e75b4a6f66f5c4580192120401784ce3
third_party/webrtc @ a488197dd041ace68a42849b2540ad834825f42
test from GCE Tokyo Ethernet to GCE Sydney Ethernet, 10 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)

- Copa
- FillP
- Verus
- Sprout
- WebRTC media
- SCReAM
- Vivace-LTE
- TCP Vegas
- TCP Cubic
- TaoVA-100x
- QUIC Cubic
- Indigo-1-32
- PCC
- Vivace-latency
- TCP BBR
- LEDBAT
- Vivace-loss
<table>
<thead>
<tr>
<th>scheme</th>
<th># runs</th>
<th>mean avg tput (Mbit/s)</th>
<th>mean 95th-%ile delay (ms)</th>
<th>mean loss rate (%)</th>
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<tbody>
<tr>
<td></td>
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<td>flow 2</td>
<td>flow 3</td>
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<tr>
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<td>201.18</td>
<td>189.29</td>
<td>159.59</td>
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<td>TCP Cubic</td>
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<td>181.98</td>
<td>110.97</td>
<td>103.86</td>
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<td>0.21</td>
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<td>107.50</td>
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<td>145.77</td>
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<td>274.71</td>
<td>67.48</td>
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<td>Vivace-loss</td>
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<td>322.96</td>
<td>300.17</td>
<td>250.81</td>
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<td>Vivace-LTE</td>
<td>10</td>
<td>361.09</td>
<td>306.75</td>
<td>230.43</td>
</tr>
</tbody>
</table>
Run 1: Statistics of TCP BBR

Start at: 2018-02-21 03:40:26
End at: 2018-02-21 03:40:56

# Below is generated by plot.py at 2018-02-21 09:52:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 364.05 Mbit/s
95th percentile per-packet one-way delay: 101.305 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 195.63 Mbit/s
95th percentile per-packet one-way delay: 98.377 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 179.92 Mbit/s
95th percentile per-packet one-way delay: 101.162 ms
Loss rate: 0.67%
-- Flow 3:
Average throughput: 149.05 Mbit/s
95th percentile per-packet one-way delay: 107.677 ms
Loss rate: 1.48%
Run 1: Report of TCP BBR — Data Link
Run 2: Statistics of TCP BBR

Start at: 2018-02-21 03:58:40
End at: 2018-02-21 03:59:10

# Below is generated by plot.py at 2018-02-21 09:53:12
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 381.32 Mbit/s
  95th percentile per-packet one-way delay: 90.661 ms
  Loss rate: 0.67%
-- Flow 1:
  Average throughput: 200.21 Mbit/s
  95th percentile per-packet one-way delay: 84.370 ms
  Loss rate: 0.44%
-- Flow 2:
  Average throughput: 195.00 Mbit/s
  95th percentile per-packet one-way delay: 90.629 ms
  Loss rate: 0.64%
-- Flow 3:
  Average throughput: 155.99 Mbit/s
  95th percentile per-packet one-way delay: 95.907 ms
  Loss rate: 1.67%
Run 3: Statistics of TCP BBR

Start at: 2018-02-21 04:16:01
End at: 2018-02-21 04:16:31

# Below is generated by plot.py at 2018-02-21 09:53:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 395.53 Mbit/s
95th percentile per-packet one-way delay: 73.035 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 207.80 Mbit/s
95th percentile per-packet one-way delay: 72.364 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 200.59 Mbit/s
95th percentile per-packet one-way delay: 72.870 ms
Loss rate: 0.59%
-- Flow 3:
Average throughput: 164.99 Mbit/s
95th percentile per-packet one-way delay: 74.464 ms
Loss rate: 1.33%
Run 3: Report of TCP BBR — Data Link

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

Legend:
- Flow 1 ingress (mean 207.91 Mbit/s)
- Flow 1 egress (mean 207.80 Mbit/s)
- Flow 2 ingress (mean 200.78 Mbit/s)
- Flow 2 egress (mean 200.59 Mbit/s)
- Flow 3 ingress (mean 165.46 Mbit/s)
- Flow 3 egress (mean 164.99 Mbit/s)
Run 4: Statistics of TCP BBR

Start at: 2018-02-21 04:33:44
End at: 2018-02-21 04:34:14

# Below is generated by plot.py at 2018-02-21 09:53:26
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 388.70 Mbit/s
  95th percentile per-packet one-way delay: 81.038 ms
  Loss rate: 0.58%
-- Flow 1:
  Average throughput: 203.35 Mbit/s
  95th percentile per-packet one-way delay: 77.934 ms
  Loss rate: 0.38%
-- Flow 2:
  Average throughput: 194.85 Mbit/s
  95th percentile per-packet one-way delay: 80.447 ms
  Loss rate: 0.58%
-- Flow 3:
  Average throughput: 170.05 Mbit/s
  95th percentile per-packet one-way delay: 84.305 ms
  Loss rate: 1.31%
Run 4: Report of TCP BBR — Data Link

![Graph showing throughput and per-packet one-way delay over time.](image-url)
Run 5: Statistics of TCP BBR

Start at: 2018-02-21 04:50:58
End at: 2018-02-21 04:51:28

# Below is generated by plot.py at 2018-02-21 09:53:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 371.12 Mbit/s
95th percentile per-packet one-way delay: 92.448 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 200.91 Mbit/s
95th percentile per-packet one-way delay: 89.192 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 182.96 Mbit/s
95th percentile per-packet one-way delay: 92.514 ms
Loss rate: 0.67%
-- Flow 3:
Average throughput: 147.61 Mbit/s
95th percentile per-packet one-way delay: 95.225 ms
Loss rate: 1.70%
Run 5: Report of TCP BBR — Data Link

![Graph of TCP BBR data link](image)

- **Flow 1 ingress (mean 200.96 Mb/s)**
- **Flow 1 egress (mean 200.91 Mb/s)**
- **Flow 2 ingress (mean 183.04 Mb/s)**
- **Flow 2 egress (mean 182.96 Mb/s)**
- **Flow 3 ingress (mean 148.43 Mb/s)**
- **Flow 3 egress (mean 147.61 Mb/s)**

![Graph of packet error rate](image)

Flow 1 (95th percentile 89.19 ms)  
Flow 2 (95th percentile 92.51 ms)  
Flow 3 (95th percentile 95.22 ms)
Run 6: Statistics of TCP BBR

Start at: 2018-02-21 05:08:44
End at: 2018-02-21 05:09:14

# Below is generated by plot.py at 2018-02-21 09:53:26
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 387.89 Mbit/s
  95th percentile per-packet one-way delay: 74.666 ms
  Loss rate: 0.59%
-- Flow 1:
  Average throughput: 205.18 Mbit/s
  95th percentile per-packet one-way delay: 71.864 ms
  Loss rate: 0.34%
-- Flow 2:
  Average throughput: 188.68 Mbit/s
  95th percentile per-packet one-way delay: 75.131 ms
  Loss rate: 0.64%
-- Flow 3:
  Average throughput: 174.12 Mbit/s
  95th percentile per-packet one-way delay: 80.757 ms
  Loss rate: 1.35%
Run 6: Report of TCP BBR — Data Link
Run 7: Statistics of TCP BBR

Start at: 2018-02-21 05:26:25
End at: 2018-02-21 05:26:55

# Below is generated by plot.py at 2018-02-21 09:53:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 389.35 Mbit/s
95th percentile per-packet one-way delay: 77.626 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 203.07 Mbit/s
95th percentile per-packet one-way delay: 76.308 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 196.55 Mbit/s
95th percentile per-packet one-way delay: 77.427 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 168.74 Mbit/s
95th percentile per-packet one-way delay: 80.522 ms
Loss rate: 1.26%
Run 7: Report of TCP BBR — Data Link

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

- Flow 1 ingress (mean 203.12 Mbps)
- Flow 1 egress (mean 203.07 Mbps)
- Flow 2 ingress (mean 196.75 Mbps)
- Flow 2 egress (mean 196.55 Mbps)
- Flow 3 ingress (mean 168.88 Mbps)
- Flow 3 egress (mean 168.74 Mbps)

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

- Flow 1 (95th percentile 76.31 ms)
- Flow 2 (95th percentile 77.43 ms)
- Flow 3 (95th percentile 80.52 ms)
Run 8: Statistics of TCP BBR

Start at: 2018-02-21 05:44:13
End at: 2018-02-21 05:44:43

# Below is generated by plot.py at 2018-02-21 09:53:26
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 363.72 Mbit/s
  95th percentile per-packet one-way delay: 99.059 ms
  Loss rate: 0.58%
-- Flow 1:
  Average throughput: 194.29 Mbit/s
  95th percentile per-packet one-way delay: 96.403 ms
  Loss rate: 0.31%
-- Flow 2:
  Average throughput: 179.18 Mbit/s
  95th percentile per-packet one-way delay: 99.227 ms
  Loss rate: 0.64%
-- Flow 3:
  Average throughput: 153.96 Mbit/s
  95th percentile per-packet one-way delay: 104.233 ms
  Loss rate: 1.46%
Run 8: Report of TCP BBR — Data Link

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

- **Flow 1 ingress** (mean 193.86 Mbps)
- **Flow 1 egress** (mean 194.29 Mbps)
- **Flow 2 ingress** (mean 179.39 Mbps)
- **Flow 2 egress** (mean 179.18 Mbps)
- **Flow 3 ingress** (mean 154.80 Mbps)
- **Flow 3 egress** (mean 153.96 Mbps)

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

- **Flow 1 (95th percentile 96.40 ms)**
- **Flow 2 (95th percentile 99.23 ms)**
- **Flow 3 (95th percentile 104.23 ms)**
Run 9: Statistics of TCP BBR

Start at: 2018-02-21 06:01:45
End at: 2018-02-21 06:02:15

# Below is generated by plot.py at 2018-02-21 09:58:58
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 362.26 Mbit/s
  95th percentile per-packet one-way delay: 106.328 ms
  Loss rate: 0.62%
-- Flow 1:
  Average throughput: 195.31 Mbit/s
  95th percentile per-packet one-way delay: 102.081 ms
  Loss rate: 0.38%
-- Flow 2:
  Average throughput: 182.05 Mbit/s
  95th percentile per-packet one-way delay: 106.318 ms
  Loss rate: 0.62%
-- Flow 3:
  Average throughput: 139.62 Mbit/s
  95th percentile per-packet one-way delay: 110.301 ms
  Loss rate: 1.63%
Run 9: Report of TCP BBR — Data Link
Run 10: Statistics of TCP BBR

Start at: 2018-02-21 06:19:09
End at: 2018-02-21 06:19:39

# Below is generated by plot.py at 2018-02-21 09:59:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 390.29 Mbit/s
95th percentile per-packet one-way delay: 76.704 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 206.05 Mbit/s
95th percentile per-packet one-way delay: 74.280 ms
Loss rate: 0.23%
-- Flow 2:
Average throughput: 193.13 Mbit/s
95th percentile per-packet one-way delay: 77.064 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 171.80 Mbit/s
95th percentile per-packet one-way delay: 80.983 ms
Loss rate: 1.33%
Run 10: Report of TCP BBR — Data Link

![Graph showing throughput and packet delay over time for different flows.](image-url)
Run 1: Statistics of TCP Cubic

Start at: 2018-02-21 03:46:02
End at: 2018-02-21 03:46:32

# Below is generated by plot.py at 2018-02-21 09:59:35
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 318.13 Mbit/s
  95th percentile per-packet one-way delay: 63.840 ms
  Loss rate: 0.58%
-- Flow 1:
  Average throughput: 166.01 Mbit/s
  95th percentile per-packet one-way delay: 63.549 ms
  Loss rate: 0.48%
-- Flow 2:
  Average throughput: 161.07 Mbit/s
  95th percentile per-packet one-way delay: 64.631 ms
  Loss rate: 0.49%
-- Flow 3:
  Average throughput: 137.75 Mbit/s
  95th percentile per-packet one-way delay: 62.618 ms
  Loss rate: 1.14%
Run 1: Report of TCP Cubic — Data Link
Run 2: Statistics of TCP Cubic

Start at: 2018-02-21 04:04:14
End at: 2018-02-21 04:04:44

# Below is generated by plot.py at 2018-02-21 09:59:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 241.96 Mbit/s
95th percentile per-packet one-way delay: 60.955 ms
Loss rate: 0.78%
-- Flow 1:
Average throughput: 169.03 Mbit/s
95th percentile per-packet one-way delay: 61.311 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 52.01 Mbit/s
95th percentile per-packet one-way delay: 57.666 ms
Loss rate: 2.20%
-- Flow 3:
Average throughput: 116.52 Mbit/s
95th percentile per-packet one-way delay: 57.931 ms
Loss rate: 1.16%
Run 2: Report of TCP Cubic — Data Link

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**Graph 1:**
- **Throughput (Mbps):**
  - Flow 1 ingress (mean 169.14 Mbps)
  - Flow 1 egress (mean 169.03 Mbps)
  - Flow 2 ingress (mean 52.90 Mbps)
  - Flow 2 egress (mean 52.01 Mbps)
  - Flow 3 ingress (mean 116.75 Mbps)
  - Flow 3 egress (mean 116.52 Mbps)

**Graph 2:**
- **Per-packet one-way delay (ms):**
  - Flow 1 (95th percentile 61.31 ms)
  - Flow 2 (95th percentile 57.67 ms)
  - Flow 3 (95th percentile 57.93 ms)
Run 3: Statistics of TCP Cubic

Start at: 2018-02-21 04:21:26
End at: 2018-02-21 04:21:56

# Below is generated by plot.py at 2018-02-21 09:59:35
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 228.45 Mbit/s
  95th percentile per-packet one-way delay: 60.282 ms
  Loss rate: 0.58%
-- Flow 1:
  Average throughput: 158.65 Mbit/s
  95th percentile per-packet one-way delay: 59.009 ms
  Loss rate: 0.30%
-- Flow 2:
  Average throughput: 43.45 Mbit/s
  95th percentile per-packet one-way delay: 61.039 ms
  Loss rate: 1.20%
-- Flow 3:
  Average throughput: 124.36 Mbit/s
  95th percentile per-packet one-way delay: 61.224 ms
  Loss rate: 1.24%
Run 3: Report of TCP Cubic — Data Link

![Graph showing throughput and round-trip time data for different traffic flows.]

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 158.58 Mbps)
  - Flow 1 egress (mean 158.65 Mbps)
  - Flow 2 ingress (mean 43.69 Mbps)
  - Flow 2 egress (mean 43.45 Mbps)
  - Flow 3 ingress (mean 124.56 Mbps)
  - Flow 3 egress (mean 124.36 Mbps)

- **Per-packet one-way delay (ms):**
  - Flow 1 (95th percentile 59.01 ms)
  - Flow 2 (95th percentile 61.04 ms)
  - Flow 3 (95th percentile 61.22 ms)
Run 4: Statistics of TCP Cubic

Start at: 2018-02-21 04:39:16
End at: 2018-02-21 04:39:46

# Below is generated by plot.py at 2018-02-21 09:59:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 308.82 Mbit/s
95th percentile per-packet one-way delay: 57.871 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 177.59 Mbit/s
95th percentile per-packet one-way delay: 58.038 ms
Loss rate: 0.21%
-- Flow 2:
Average throughput: 141.61 Mbit/s
95th percentile per-packet one-way delay: 57.353 ms
Loss rate: 0.70%
-- Flow 3:
Average throughput: 112.63 Mbit/s
95th percentile per-packet one-way delay: 56.016 ms
Loss rate: 1.20%
Run 4: Report of TCP Cubic — Data Link

![Graph showing packet throughput and per-packet delays for three flows.]

Legend:
- Flow 1 ingress (mean 177.32 Mbit/s)
- Flow 1 egress (mean 177.59 Mbit/s)
- Flow 2 ingress (mean 141.86 Mbit/s)
- Flow 2 egress (mean 141.61 Mbit/s)
- Flow 3 ingress (mean 112.80 Mbit/s)
- Flow 3 egress (mean 112.63 Mbit/s)
Run 5: Statistics of TCP Cubic

Start at: 2018-02-21 04:56:28
End at: 2018-02-21 04:56:58

# Below is generated by plot.py at 2018-02-21 09:59:35
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 252.46 Mbit/s
  95th percentile per-packet one-way delay: 60.874 ms
  Loss rate: 0.54%
-- Flow 1:
  Average throughput: 218.36 Mbit/s
  95th percentile per-packet one-way delay: 60.923 ms
  Loss rate: 0.22%
-- Flow 2:
  Average throughput: 49.14 Mbit/s
  95th percentile per-packet one-way delay: 59.376 ms
  Loss rate: 2.44%
-- Flow 3:
  Average throughput: 4.31 Mbit/s
  95th percentile per-packet one-way delay: 61.686 ms
  Loss rate: 4.49%
Run 5: Report of TCP Cubic — Data Link

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

- **Flow 1 ingress (mean 218.27 Mbit/s)**
- **Flow 1 egress (mean 218.36 Mbit/s)**
- **Flow 2 ingress (mean 50.10 Mbit/s)**
- **Flow 2 egress (mean 49.14 Mbit/s)**
- **Flow 3 ingress (mean 4.46 Mbit/s)**
- **Flow 3 egress (mean 4.31 Mbit/s)**

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

- **Flow 1 (95th percentile 60.92 ms)**
- **Flow 2 (95th percentile 59.38 ms)**
- **Flow 3 (95th percentile 61.69 ms)**
Run 6: Statistics of TCP Cubic

Start at: 2018-02-21 05:14:19
End at: 2018-02-21 05:14:49

# Below is generated by plot.py at 2018-02-21 09:59:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 307.14 Mbit/s
95th percentile per-packet one-way delay: 61.170 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 207.38 Mbit/s
95th percentile per-packet one-way delay: 61.448 ms
Loss rate: 0.24%
-- Flow 2:
Average throughput: 147.63 Mbit/s
95th percentile per-packet one-way delay: 60.536 ms
Loss rate: 0.52%
-- Flow 3:
Average throughput: 4.98 Mbit/s
95th percentile per-packet one-way delay: 59.751 ms
Loss rate: 3.59%
Run 6: Report of TCP Cubic — Data Link

![Graph showing throughput and per packet one way delay over time for different flows.](image-url)
Run 7: Statistics of TCP Cubic

Start at: 2018-02-21 05:32:02
End at: 2018-02-21 05:32:32

# Below is generated by plot.py at 2018-02-21 10:02:34
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 314.49 Mbit/s
  95th percentile per-packet one-way delay: 61.515 ms
  Loss rate: 0.46%
-- Flow 1:
  Average throughput: 189.15 Mbit/s
  95th percentile per-packet one-way delay: 61.851 ms
  Loss rate: 0.28%
-- Flow 2:
  Average throughput: 132.45 Mbit/s
  95th percentile per-packet one-way delay: 59.381 ms
  Loss rate: 0.58%
-- Flow 3:
  Average throughput: 113.23 Mbit/s
  95th percentile per-packet one-way delay: 56.510 ms
  Loss rate: 1.12%
Run 7: Report of TCP Cubic — Data Link

- Flow 1 ingress (mean 189.01 Mbps)
- Flow 1 egress (mean 189.15 Mbps)
- Flow 2 ingress (mean 132.55 Mbps)
- Flow 2 egress (mean 132.45 Mbps)
- Flow 3 ingress (mean 113.32 Mbps)
- Flow 3 egress (mean 113.23 Mbps)

- Flow 1 (95th percentile 61.85 ms)
- Flow 2 (95th percentile 59.38 ms)
- Flow 3 (95th percentile 56.51 ms)
Run 8: Statistics of TCP Cubic

Start at: 2018-02-21 05:49:45
End at: 2018-02-21 05:50:15

# Below is generated by plot.py at 2018-02-21 10:02:57
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 329.17 Mbit/s
  95th percentile per-packet one-way delay: 61.452 ms
  Loss rate: 0.61%
-- Flow 1:
  Average throughput: 167.73 Mbit/s
  95th percentile per-packet one-way delay: 58.454 ms
  Loss rate: 0.29%
-- Flow 2:
  Average throughput: 141.09 Mbit/s
  95th percentile per-packet one-way delay: 62.003 ms
  Loss rate: 0.70%
-- Flow 3:
  Average throughput: 205.59 Mbit/s
  95th percentile per-packet one-way delay: 63.565 ms
  Loss rate: 1.28%
Run 8: Report of TCP Cubic — Data Link

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

Flow 1 ingress (mean 167.62 Mbit/s)
Flow 1 egress (mean 167.73 Mbit/s)
Flow 2 ingress (mean 141.34 Mbit/s)
Flow 2 egress (mean 141.09 Mbit/s)
Flow 3 ingress (mean 206.01 Mbit/s)
Flow 3 egress (mean 205.59 Mbit/s)

Flow 1 (95th percentile 58.45 ms)
Flow 2 (95th percentile 62.00 ms)
Flow 3 (95th percentile 63.56 ms)
Run 9: Statistics of TCP Cubic

Start at: 2018-02-21 06:07:11
End at: 2018-02-21 06:07:41

# Below is generated by plot.py at 2018-02-21 10:03:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 321.54 Mbit/s
95th percentile per-packet one-way delay: 62.711 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 195.13 Mbit/s
95th percentile per-packet one-way delay: 62.673 ms
Loss rate: 0.19%
-- Flow 2:
Average throughput: 128.10 Mbit/s
95th percentile per-packet one-way delay: 62.263 ms
Loss rate: 0.72%
-- Flow 3:
Average throughput: 125.68 Mbit/s
95th percentile per-packet one-way delay: 63.659 ms
Loss rate: 1.26%
Run 10: Statistics of TCP Cubic

Start at: 2018-02-21 06:24:42
End at: 2018-02-21 06:25:12

# Below is generated by plot.py at 2018-02-21 10:03:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 276.56 Mbit/s
95th percentile per-packet one-way delay: 58.299 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 170.75 Mbit/s
95th percentile per-packet one-way delay: 57.987 ms
Loss rate: 0.46%
-- Flow 2:
Average throughput: 113.14 Mbit/s
95th percentile per-packet one-way delay: 58.907 ms
Loss rate: 0.28%
-- Flow 3:
Average throughput: 93.56 Mbit/s
95th percentile per-packet one-way delay: 55.744 ms
Loss rate: 1.21%
Run 10: Report of TCP Cubic — Data Link
Run 1: Statistics of LEDBAT

Start at: 2018-02-21 03:39:03
End at: 2018-02-21 03:39:33

# Below is generated by plot.py at 2018-02-21 10:03:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 50.31 Mbit/s
95th percentile per-packet one-way delay: 54.690 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 33.16 Mbit/s
95th percentile per-packet one-way delay: 54.594 ms
Loss rate: 0.68%
-- Flow 2:
Average throughput: 21.47 Mbit/s
95th percentile per-packet one-way delay: 54.780 ms
Loss rate: 1.04%
-- Flow 3:
Average throughput: 8.82 Mbit/s
95th percentile per-packet one-way delay: 55.053 ms
Loss rate: 2.31%
Run 1: Report of LEDBAT — Data Link

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

- **Flow 1** (ingress 33.27 Mbit/s, egress 33.16 Mbit/s)
- **Flow 2** (ingress 21.58 Mbit/s, egress 21.47 Mbit/s)
- **Flow 3** (ingress 8.94 Mbit/s, egress 8.82 Mbit/s)
Run 2: Statistics of LEDBAT

Start at: 2018-02-21 03:57:18
End at: 2018-02-21 03:57:48

# Below is generated by plot.py at 2018-02-21 10:03:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 50.05 Mbit/s
95th percentile per-packet one-way delay: 54.489 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 31.85 Mbit/s
95th percentile per-packet one-way delay: 54.286 ms
Loss rate: 0.70%
-- Flow 2:
Average throughput: 21.87 Mbit/s
95th percentile per-packet one-way delay: 55.104 ms
Loss rate: 1.03%
-- Flow 3:
Average throughput: 11.25 Mbit/s
95th percentile per-packet one-way delay: 55.674 ms
Loss rate: 2.04%
Run 2: Report of LEDBAT — Data Link

![Graph of throughput over time for three flows with different ingress and egress rates.]

- **Flow 1** ingress (mean 31.96 Mbit/s)
- **Flow 1** egress (mean 31.85 Mbit/s)
- **Flow 2** ingress (mean 21.99 Mbit/s)
- **Flow 2** egress (mean 21.87 Mbit/s)
- **Flow 3** ingress (mean 11.37 Mbit/s)
- **Flow 3** egress (mean 11.25 Mbit/s)

![Graph of per packet one-way delay for three flows.]

- **Flow 1** (95th percentile 54.29 ms)
- **Flow 2** (95th percentile 55.10 ms)
- **Flow 3** (95th percentile 55.67 ms)
Run 3: Statistics of LEDBAT

Start at: 2018-02-21 04:14:39
End at: 2018-02-21 04:15:09

# Below is generated by plot.py at 2018-02-21 10:03:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 48.62 Mbit/s
95th percentile per-packet one-way delay: 54.625 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 31.65 Mbit/s
95th percentile per-packet one-way delay: 54.498 ms
Loss rate: 0.70%
-- Flow 2:
Average throughput: 21.25 Mbit/s
95th percentile per-packet one-way delay: 54.951 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 8.81 Mbit/s
95th percentile per-packet one-way delay: 54.327 ms
Loss rate: 2.34%
Run 3: Report of LEDBAT — Data Link
Run 4: Statistics of LEDEBAT

Start at: 2018-02-21 04:32:22
End at: 2018-02-21 04:32:52

# Below is generated by plot.py at 2018-02-21 10:03:04
# Datalink statistics
-- Total of 3 flows:
   Average throughput: 48.98 Mbit/s
   95th percentile per-packet one-way delay: 55.086 ms
   Loss rate: 0.90%
   -- Flow 1:
   Average throughput: 31.67 Mbit/s
   95th percentile per-packet one-way delay: 55.175 ms
   Loss rate: 0.70%
   -- Flow 2:
   Average throughput: 21.00 Mbit/s
   95th percentile per-packet one-way delay: 54.925 ms
   Loss rate: 1.05%
   -- Flow 3:
   Average throughput: 10.55 Mbit/s
   95th percentile per-packet one-way delay: 55.212 ms
   Loss rate: 2.11%
Run 4: Report of LEDBAT — Data Link
Run 5: Statistics of LEDBAT

Start at: 2018-02-21 04:49:36
End at: 2018-02-21 04:50:06

# Below is generated by plot.py at 2018-02-21 10:03:04
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 41.62 Mbit/s
  95th percentile per-packet one-way delay: 54.847 ms
  Loss rate: 0.91%
-- Flow 1:
  Average throughput: 23.91 Mbit/s
  95th percentile per-packet one-way delay: 54.890 ms
  Loss rate: 0.65%
-- Flow 2:
  Average throughput: 21.58 Mbit/s
  95th percentile per-packet one-way delay: 54.812 ms
  Loss rate: 1.05%
-- Flow 3:
  Average throughput: 10.42 Mbit/s
  95th percentile per-packet one-way delay: 54.314 ms
  Loss rate: 2.14%
Run 5: Report of LEDBAT — Data Link

![Graph showing throughput and packet latency over time for different flow rates.]

Legend:
- Blue dashed line: Flow 1 ingress (mean 23.99 Mbit/s) and egress (mean 23.91 Mbit/s)
- Green dashed line: Flow 2 ingress (mean 21.69 Mbit/s) and egress (mean 21.58 Mbit/s)
- Red dashed line: Flow 3 ingress (mean 10.54 Mbit/s) and egress (mean 10.42 Mbit/s)
Run 6: Statistics of LEDBAT

Start at: 2018-02-21 05:07:22
End at: 2018-02-21 05:07:52

# Below is generated by plot.py at 2018-02-21 10:03:04
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 52.95 Mbit/s
  95th percentile per-packet one-way delay: 51.752 ms
  Loss rate: 0.88%
-- Flow 1:
  Average throughput: 34.06 Mbit/s
  95th percentile per-packet one-way delay: 51.602 ms
  Loss rate: 0.68%
-- Flow 2:
  Average throughput: 22.99 Mbit/s
  95th percentile per-packet one-way delay: 52.031 ms
  Loss rate: 1.02%
-- Flow 3:
  Average throughput: 11.27 Mbit/s
  95th percentile per-packet one-way delay: 51.454 ms
  Loss rate: 2.08%
Run 6: Report of LEDBAT — Data Link

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

![Graph 2: Packet Round-Trip Delay (ms)](image2)
Run 7: Statistics of LEDBAT

Start at: 2018-02-21 05:25:03
End at: 2018-02-21 05:25:33

# Below is generated by plot.py at 2018-02-21 10:03:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 48.19 Mbit/s
95th percentile per-packet one-way delay: 55.311 ms
Loss rate: 0.91%
-- Flow 1:
Average throughput: 31.15 Mbit/s
95th percentile per-packet one-way delay: 55.227 ms
Loss rate: 0.70%
-- Flow 2:
Average throughput: 20.57 Mbit/s
95th percentile per-packet one-way delay: 55.820 ms
Loss rate: 1.08%
-- Flow 3:
Average throughput: 10.36 Mbit/s
95th percentile per-packet one-way delay: 55.061 ms
Loss rate: 2.14%
Run 7: Report of LEDBAT — Data Link
Run 8: Statistics of LEDBAT

Start at: 2018-02-21 05:42:51
End at: 2018-02-21 05:43:21

# Below is generated by plot.py at 2018-02-21 10:03:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 49.76 Mbit/s
95th percentile per-packet one-way delay: 54.685 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 32.56 Mbit/s
95th percentile per-packet one-way delay: 54.848 ms
Loss rate: 0.69%
-- Flow 2:
Average throughput: 20.33 Mbit/s
95th percentile per-packet one-way delay: 54.534 ms
Loss rate: 1.08%
-- Flow 3:
Average throughput: 11.36 Mbit/s
95th percentile per-packet one-way delay: 54.230 ms
Loss rate: 2.06%
Run 8: Report of LEDBAT — Data Link
Run 9: Statistics of LEDBAT

Start at: 2018-02-21 06:00:23  
End at: 2018-02-21 06:00:53

# Below is generated by plot.py at 2018-02-21 10:03:04
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 48.85 Mbit/s
  95th percentile per-packet one-way delay: 55.803 ms
  Loss rate: 0.84%
-- Flow 1:
  Average throughput: 31.55 Mbit/s
  95th percentile per-packet one-way delay: 55.207 ms
  Loss rate: 0.64%
-- Flow 2:
  Average throughput: 22.39 Mbit/s
  95th percentile per-packet one-way delay: 56.285 ms
  Loss rate: 1.00%
-- Flow 3:
  Average throughput: 7.34 Mbit/s
  95th percentile per-packet one-way delay: 56.047 ms
  Loss rate: 2.49%
Run 10: Statistics of LEDBAT

Start at: 2018-02-21 06:17:47
End at: 2018-02-21 06:18:17

# Below is generated by plot.py at 2018-02-21 10:03:04
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 44.27 Mbit/s
  95th percentile per-packet one-way delay: 55.023 ms
  Loss rate: 0.75%
-- Flow 1:
  Average throughput: 28.72 Mbit/s
  95th percentile per-packet one-way delay: 55.020 ms
  Loss rate: 0.42%
-- Flow 2:
  Average throughput: 18.49 Mbit/s
  95th percentile per-packet one-way delay: 55.197 ms
  Loss rate: 1.14%
-- Flow 3:
  Average throughput: 9.97 Mbit/s
  95th percentile per-packet one-way delay: 54.644 ms
  Loss rate: 2.20%
Run 10: Report of LEDBAT — Data Link

![Graph showing throughput over time for different flows.](image1)

![Graph showing per-packet round-trip delay over time for different flows.](image2)
Run 1: Statistics of PCC

Start at: 2018-02-21 03:43:03
End at: 2018-02-21 03:43:33

# Below is generated by plot.py at 2018-02-21 10:09:10
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 471.26 Mbit/s
  95th percentile per-packet one-way delay: 173.317 ms
  Loss rate: 1.26%
-- Flow 1:
  Average throughput: 410.08 Mbit/s
  95th percentile per-packet one-way delay: 173.351 ms
  Loss rate: 1.26%
-- Flow 2:
  Average throughput: 59.81 Mbit/s
  95th percentile per-packet one-way delay: 173.439 ms
  Loss rate: 1.21%
-- Flow 3:
  Average throughput: 65.75 Mbit/s
  95th percentile per-packet one-way delay: 163.254 ms
  Loss rate: 1.36%
Run 1: Report of PCC — Data Link
Run 2: Statistics of PCC

Start at: 2018-02-21 04:01:15
End at: 2018-02-21 04:01:45

# Below is generated by plot.py at 2018-02-21 10:09:23
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 480.91 Mbit/s
  95th percentile per-packet one-way delay: 183.616 ms
  Loss rate: 5.27%
-- Flow 1:
  Average throughput: 404.65 Mbit/s
  95th percentile per-packet one-way delay: 185.226 ms
  Loss rate: 4.85%
-- Flow 2:
  Average throughput: 61.42 Mbit/s
  95th percentile per-packet one-way delay: 177.646 ms
  Loss rate: 4.09%
-- Flow 3:
  Average throughput: 109.42 Mbit/s
  95th percentile per-packet one-way delay: 179.615 ms
  Loss rate: 10.99%
Run 2: Report of PCC — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 423.76 Mbit/s)  Flow 1 egress (mean 404.65 Mbit/s)
Flow 2 ingress (mean 63.71 Mbit/s)  Flow 2 egress (mean 61.42 Mbit/s)
Flow 3 ingress (mean 121.45 Mbit/s)  Flow 3 egress (mean 109.42 Mbit/s)

Per packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 185.23 ms)  Flow 2 (95th percentile 177.65 ms)  Flow 3 (95th percentile 179.62 ms)
Run 3: Statistics of PCC

Start at: 2018-02-21 04:18:28
End at: 2018-02-21 04:18:58

# Below is generated by plot.py at 2018-02-21 10:09:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 457.47 Mbit/s
95th percentile per-packet one-way delay: 144.911 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 421.47 Mbit/s
95th percentile per-packet one-way delay: 146.167 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 38.24 Mbit/s
95th percentile per-packet one-way delay: 145.397 ms
Loss rate: 0.75%
-- Flow 3:
Average throughput: 32.68 Mbit/s
95th percentile per-packet one-way delay: 82.100 ms
Loss rate: 1.19%
Run 3: Report of PCC — Data Link

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

- **Flow 1 ingress** (mean 422.17 Mbit/s)
- **Flow 1 egress** (mean 421.47 Mbit/s)
- **Flow 2 ingress** (mean 38.33 Mbit/s)
- **Flow 2 egress** (mean 38.24 Mbit/s)
- **Flow 3 ingress** (mean 32.73 Mbit/s)
- **Flow 3 egress** (mean 32.68 Mbit/s)
Run 4: Statistics of PCC

Start at: 2018-02-21 04:36:16
End at: 2018-02-21 04:36:46

# Below is generated by plot.py at 2018-02-21 10:10:12
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 490.75 Mbit/s
  95th percentile per-packet one-way delay: 170.725 ms
  Loss rate: 1.48%
-- Flow 1:
  Average throughput: 428.37 Mbit/s
  95th percentile per-packet one-way delay: 170.850 ms
  Loss rate: 1.52%
-- Flow 2:
  Average throughput: 34.01 Mbit/s
  95th percentile per-packet one-way delay: 170.622 ms
  Loss rate: 1.45%
-- Flow 3:
  Average throughput: 122.59 Mbit/s
  95th percentile per-packet one-way delay: 129.101 ms
  Loss rate: 1.11%
Run 4: Report of PCC — Data Link
Run 5: Statistics of PCC

Start at: 2018-02-21 04:53:32
End at: 2018-02-21 04:54:02

# Below is generated by plot.py at 2018-02-21 10:10:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 411.18 Mbit/s
95th percentile per-packet one-way delay: 189.498 ms
Loss rate: 3.33%
-- Flow 1:
Average throughput: 251.30 Mbit/s
95th percentile per-packet one-way delay: 189.399 ms
Loss rate: 2.59%
-- Flow 2:
Average throughput: 238.84 Mbit/s
95th percentile per-packet one-way delay: 189.601 ms
Loss rate: 4.44%
-- Flow 3:
Average throughput: 4.02 Mbit/s
95th percentile per-packet one-way delay: 189.983 ms
Loss rate: 6.59%
Run 5: Report of PCC — Data Link

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

- Flow 1 ingress (mean 257.08 Mbit/s)
- Flow 2 ingress (mean 248.69 Mbit/s)
- Flow 3 ingress (mean 4.26 Mbit/s)
- Flow 1 egress (mean 251.30 Mbit/s)
- Flow 2 egress (mean 238.84 Mbit/s)
- Flow 3 egress (mean 4.62 Mbit/s)
Run 6: Statistics of PCC

Start at: 2018-02-21 05:11:18
End at: 2018-02-21 05:11:48

# Below is generated by plot.py at 2018-02-21 10:12:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 507.90 Mbit/s
95th percentile per-packet one-way delay: 183.796 ms
Loss rate: 1.29%
-- Flow 1:
Average throughput: 443.83 Mbit/s
95th percentile per-packet one-way delay: 184.020 ms
Loss rate: 1.30%
-- Flow 2:
Average throughput: 66.26 Mbit/s
95th percentile per-packet one-way delay: 166.888 ms
Loss rate: 0.79%
-- Flow 3:
Average throughput: 61.55 Mbit/s
95th percentile per-packet one-way delay: 167.438 ms
Loss rate: 2.24%
Run 6: Report of PCC — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 448.09 Mbit/s)
  - Flow 1 egress (mean 443.83 Mbit/s)
  - Flow 2 ingress (mean 66.43 Mbit/s)
  - Flow 2 egress (mean 66.26 Mbit/s)
  - Flow 3 ingress (mean 62.31 Mbit/s)
  - Flow 3 egress (mean 61.53 Mbit/s)

- **Per-packet one-way delay (ms):**
  - Flow 1 (95th percentile 184.02 ms)
  - Flow 2 (95th percentile 166.89 ms)
  - Flow 3 (95th percentile 167.44 ms)
Run 7: Statistics of PCC

Start at: 2018-02-21 05:29:04
End at: 2018-02-21 05:29:34

# Below is generated by plot.py at 2018-02-21 10:12:07
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 443.34 Mbit/s
  95th percentile per-packet one-way delay: 187.326 ms
  Loss rate: 3.04%
-- Flow 1:
  Average throughput: 362.06 Mbit/s
  95th percentile per-packet one-way delay: 187.243 ms
  Loss rate: 3.08%
-- Flow 2:
  Average throughput: 121.44 Mbit/s
  95th percentile per-packet one-way delay: 187.687 ms
  Loss rate: 2.83%
-- Flow 3:
  Average throughput: 2.45 Mbit/s
  95th percentile per-packet one-way delay: 184.748 ms
  Loss rate: 1.95%
Run 7: Report of PCC — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 372.31 Mbps)
  - Flow 1 egress (mean 362.06 Mbps)
  - Flow 2 ingress (mean 124.32 Mbps)
  - Flow 2 egress (mean 121.44 Mbps)
  - Flow 3 ingress (mean 2.47 Mbps)
  - Flow 3 egress (mean 2.45 Mbps)

- **Per-packet one-way delay (ms):**
  - Flow 1 (95th percentile 187.24 ms)
  - Flow 2 (95th percentile 187.69 ms)
  - Flow 3 (95th percentile 184.75 ms)
Run 8: Statistics of PCC

Start at: 2018-02-21 05:46:47
End at: 2018-02-21 05:47:17

# Below is generated by plot.py at 2018-02-21 10:12:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 464.06 Mbit/s
95th percentile per-packet one-way delay: 177.940 ms
Loss rate: 1.32%
-- Flow 1:
Average throughput: 422.65 Mbit/s
95th percentile per-packet one-way delay: 177.880 ms
Loss rate: 1.32%
-- Flow 2:
Average throughput: 61.52 Mbit/s
95th percentile per-packet one-way delay: 178.735 ms
Loss rate: 1.28%
-- Flow 3:
Average throughput: 1.96 Mbit/s
95th percentile per-packet one-way delay: 179.690 ms
Loss rate: 2.55%
Run 8: Report of PCC — Data Link
Run 9: Statistics of PCC

Start at: 2018-02-21 06:04:15
End at: 2018-02-21 06:04:45

# Below is generated by plot.py at 2018-02-21 10:16:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 416.24 Mbit/s
95th percentile per-packet one-way delay: 133.128 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 373.81 Mbit/s
95th percentile per-packet one-way delay: 133.003 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 32.68 Mbit/s
95th percentile per-packet one-way delay: 133.619 ms
Loss rate: 0.70%
-- Flow 3:
Average throughput: 63.72 Mbit/s
95th percentile per-packet one-way delay: 137.895 ms
Loss rate: 1.31%
Run 9: Report of PCC — Data Link

**Throughput (Mbps)**

- Flow 1 ingress (mean 373.99 Mbps)
- Flow 1 egress (mean 373.81 Mbps)
- Flow 2 ingress (mean 32.74 Mbps)
- Flow 2 egress (mean 32.68 Mbps)
- Flow 3 ingress (mean 63.90 Mbps)
- Flow 3 egress (mean 63.72 Mbps)

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

- Flow 1 (95th percentile 133.00 ms)
- Flow 2 (95th percentile 133.62 ms)
- Flow 3 (95th percentile 137.90 ms)
Run 10: Statistics of PCC

Start at: 2018-02-21 06:21:42
End at: 2018-02-21 06:22:12

# Below is generated by plot.py at 2018-02-21 10:17:35
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 460.36 Mbit/s
  95th percentile per-packet one-way delay: 174.570 ms
  Loss rate: 1.31%
  -- Flow 1:
  Average throughput: 382.43 Mbit/s
  95th percentile per-packet one-way delay: 174.292 ms
  Loss rate: 1.08%
  -- Flow 2:
  Average throughput: 60.08 Mbit/s
  95th percentile per-packet one-way delay: 174.769 ms
  Loss rate: 1.59%
  -- Flow 3:
  Average throughput: 116.67 Mbit/s
  95th percentile per-packet one-way delay: 175.246 ms
  Loss rate: 3.34%
Run 10: Report of PCC — Data Link

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

- Flow 1 ingress (mean 385.24 Mbit/s)
- Flow 1 egress (mean 382.43 Mbit/s)
- Flow 2 ingress (mean 60.75 Mbit/s)
- Flow 2 egress (mean 60.05 Mbit/s)
- Flow 3 ingress (mean 119.44 Mbit/s)
- Flow 3 egress (mean 116.67 Mbit/s)
Run 1: Statistics of QUIC Cubic

Start at: 2018-02-21 03:42:16
End at: 2018-02-21 03:42:46

# Below is generated by plot.py at 2018-02-21 10:17:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 135.49 Mbit/s
95th percentile per-packet one-way delay: 53.560 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 76.98 Mbit/s
95th percentile per-packet one-way delay: 50.225 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 66.05 Mbit/s
95th percentile per-packet one-way delay: 50.538 ms
Loss rate: 0.54%
-- Flow 3:
Average throughput: 44.81 Mbit/s
95th percentile per-packet one-way delay: 53.738 ms
Loss rate: 1.38%
Run 1: Report of QUIC Cubic — Data Link
Run 2: Statistics of QUIC Cubic

Start at: 2018-02-21 04:00:28
End at: 2018-02-21 04:00:58

# Below is generated by plot.py at 2018-02-21 10:17:35
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 123.85 Mbit/s
  95th percentile per-packet one-way delay: 53.696 ms
  Loss rate: 0.55%
-- Flow 1:
  Average throughput: 75.04 Mbit/s
  95th percentile per-packet one-way delay: 53.733 ms
  Loss rate: 0.35%
-- Flow 2:
  Average throughput: 63.89 Mbit/s
  95th percentile per-packet one-way delay: 50.506 ms
  Loss rate: 0.51%
-- Flow 3:
  Average throughput: 19.40 Mbit/s
  95th percentile per-packet one-way delay: 50.676 ms
  Loss rate: 3.16%
Run 2: Report of QUIC Cubic — Data Link

![Graph showing throughput and per-packet one-way delay over time for different flows. The graph illustrates variations in throughput and latency across the time period from 0 to 30 seconds. Each flow is represented by a different line color.](image-url)
Run 3: Statistics of QUIC Cubic

Start at: 2018-02-21 04:17:44
End at: 2018-02-21 04:18:14

# Below is generated by plot.py at 2018-02-21 10:17:35
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 87.59 Mbit/s
  95th percentile per-packet one-way delay: 54.004 ms
  Loss rate: 0.38%
-- Flow 1:
  Average throughput: 57.17 Mbit/s
  95th percentile per-packet one-way delay: 53.952 ms
  Loss rate: 0.07%
-- Flow 2:
  Average throughput: 38.58 Mbit/s
  95th percentile per-packet one-way delay: 53.947 ms
  Loss rate: 1.12%
-- Flow 3:
  Average throughput: 14.77 Mbit/s
  95th percentile per-packet one-way delay: 54.179 ms
  Loss rate: 0.00%
Run 3: Report of QUIC Cubic — Data Link
Run 4: Statistics of QUIC Cubic

Start at: 2018-02-21 04:35:30
End at: 2018-02-21 04:36:00

# Below is generated by plot.py at 2018-02-21 10:17:35
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 118.11 Mbit/s
  95th percentile per-packet one-way delay: 53.897 ms
  Loss rate: 0.35%
-- Flow 1:
  Average throughput: 78.38 Mbit/s
  95th percentile per-packet one-way delay: 53.916 ms
  Loss rate: 0.14%
-- Flow 2:
  Average throughput: 52.78 Mbit/s
  95th percentile per-packet one-way delay: 53.824 ms
  Loss rate: 0.86%
-- Flow 3:
  Average throughput: 14.82 Mbit/s
  95th percentile per-packet one-way delay: 53.423 ms
  Loss rate: 0.00%
Run 4: Report of QUIC Cubic — Data Link

**Graph 1:**
- X-axis: Time (s)
- Y-axis: Throughput (Mb/s)
- Legend:
  - Flow 1 ingress (mean 78.16 Mb/s)
  - Flow 1 egress (mean 78.38 Mb/s)
  - Flow 2 ingress (mean 52.96 Mb/s)
  - Flow 2 egress (mean 52.78 Mb/s)
  - Flow 3 ingress (mean 14.52 Mb/s)
  - Flow 3 egress (mean 14.82 Mb/s)

**Graph 2:**
- X-axis: Time (s)
- Y-axis: Per-packet one-way delay (ms)
- Legend:
  - Flow 1 (95th percentile 53.92 ms)
  - Flow 2 (95th percentile 53.82 ms)
  - Flow 3 (95th percentile 53.42 ms)
Run 5: Statistics of QUIC Cubic

Start at: 2018-02-21 04:52:47
End at: 2018-02-21 04:53:17

# Below is generated by plot.py at 2018-02-21 10:17:35
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 97.70 Mbit/s
  95th percentile per-packet one-way delay: 53.884 ms
  Loss rate: 0.69%
-- Flow 1:
  Average throughput: 54.51 Mbit/s
  95th percentile per-packet one-way delay: 53.866 ms
  Loss rate: 0.40%
-- Flow 2:
  Average throughput: 46.23 Mbit/s
  95th percentile per-packet one-way delay: 53.943 ms
  Loss rate: 0.75%
-- Flow 3:
  Average throughput: 38.22 Mbit/s
  95th percentile per-packet one-way delay: 53.600 ms
  Loss rate: 1.83%
Run 5: Report of QUIC Cubic — Data Link

![Graphs showing throughput and per-packet one-way delay over time for different flows.](image-url)
Run 6: Statistics of QUIC Cubic

Start at: 2018-02-21 05:10:35
End at: 2018-02-21 05:11:05

# Below is generated by plot.py at 2018-02-21 10:17:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.85 Mbit/s
95th percentile per-packet one-way delay: 53.741 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 40.02 Mbit/s
95th percentile per-packet one-way delay: 53.742 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 46.97 Mbit/s
95th percentile per-packet one-way delay: 53.751 ms
Loss rate: 0.88%
-- Flow 3:
Average throughput: 20.35 Mbit/s
95th percentile per-packet one-way delay: 53.522 ms
Loss rate: 0.52%
Run 6: Report of QUIC Cubic — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress: 40.01 Mbps (mean)
  - Flow 1 egress: 40.02 Mbps (mean)
  - Flow 2 ingress: 47.14 Mbps (mean)
  - Flow 2 egress: 46.97 Mbps (mean)
  - Flow 3 ingress: 20.25 Mbps (mean)
  - Flow 3 egress: 20.35 Mbps (mean)

- **Per-packet transmission delay (ms):**
  - Flow 1: 53.74 ms (95th percentile)
  - Flow 2: 53.75 ms (95th percentile)
  - Flow 3: 53.52 ms (95th percentile)
Run 7: Statistics of QUIC Cubic

Start at: 2018-02-21 05:28:18
End at: 2018-02-21 05:28:48

# Below is generated by plot.py at 2018-02-21 10:17:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 113.81 Mbit/s
95th percentile per-packet one-way delay: 53.889 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 54.42 Mbit/s
95th percentile per-packet one-way delay: 50.735 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 70.22 Mbit/s
95th percentile per-packet one-way delay: 53.821 ms
Loss rate: 0.53%
-- Flow 3:
Average throughput: 39.17 Mbit/s
95th percentile per-packet one-way delay: 54.077 ms
Loss rate: 1.54%
Run 7: Report of QUIC Cubic — Data Link
Run 8: Statistics of QUIC Cubic

Start at: 2018-02-21 05:46:02
End at: 2018-02-21 05:46:32

# Below is generated by plot.py at 2018-02-21 10:17:36
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 97.73 Mbit/s
  95th percentile per-packet one-way delay: 54.036 ms
  Loss rate: 0.32%
-- Flow 1:
  Average throughput: 48.91 Mbit/s
  95th percentile per-packet one-way delay: 50.655 ms
  Loss rate: 0.47%
-- Flow 2:
  Average throughput: 42.41 Mbit/s
  95th percentile per-packet one-way delay: 53.972 ms
  Loss rate: 0.16%
-- Flow 3:
  Average throughput: 63.33 Mbit/s
  95th percentile per-packet one-way delay: 54.142 ms
  Loss rate: 0.16%
Run 9: Statistics of QUIC Cubic

Start at: 2018-02-21 06:03:32
End at: 2018-02-21 06:04:02

# Below is generated by plot.py at 2018-02-21 10:17:36
# Datalink statistics
-- Total of 3 flows:
   Average throughput: 69.61 Mbit/s
   95th percentile per-packet one-way delay: 54.119 ms
   Loss rate: 0.50%
   -- Flow 1:
      Average throughput: 37.39 Mbit/s
      95th percentile per-packet one-way delay: 54.142 ms
      Loss rate: 0.10%
   -- Flow 2:
      Average throughput: 40.08 Mbit/s
      95th percentile per-packet one-way delay: 54.090 ms
      Loss rate: 1.08%
   -- Flow 3:
      Average throughput: 16.93 Mbit/s
      95th percentile per-packet one-way delay: 50.713 ms
      Loss rate: 0.34%
Run 9: Report of QUIC Cubic — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 37.30 Mbit/s)  Flow 1 egress (mean 37.39 Mbit/s)
Flow 2 ingress (mean 40.30 Mbit/s)  Flow 2 egress (mean 40.08 Mbit/s)
Flow 3 ingress (mean 16.81 Mbit/s)  Flow 3 egress (mean 16.93 Mbit/s)

Per packet one way delay (ms)

Flow 1 (95th percentile 54.14 ms)  Flow 2 (95th percentile 54.09 ms)  Flow 3 (95th percentile 50.71 ms)
Run 10: Statistics of QUIC Cubic

Start at: 2018-02-21 06:20:57
End at: 2018-02-21 06:21:27

# Below is generated by plot.py at 2018-02-21 10:17:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 113.54 Mbit/s
95th percentile per-packet one-way delay: 53.619 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 54.18 Mbit/s
95th percentile per-packet one-way delay: 53.690 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 63.36 Mbit/s
95th percentile per-packet one-way delay: 50.306 ms
Loss rate: 0.50%
-- Flow 3:
Average throughput: 51.45 Mbit/s
95th percentile per-packet one-way delay: 50.397 ms
Loss rate: 1.20%
Run 10: Report of QUIC Cubic — Data Link

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

- Flow 1 ingress (mean 54.23 Mbit/s) vs. Flow 1 egress (mean 54.18 Mbit/s)
- Flow 2 ingress (mean 63.35 Mbit/s) vs. Flow 2 egress (mean 63.36 Mbit/s)
- Flow 3 ingress (mean 51.56 Mbit/s) vs. Flow 3 egress (mean 51.45 Mbit/s)

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

- Flow 1 (95th percentile 53.69 ms)
- Flow 2 (95th percentile 50.31 ms)
- Flow 3 (95th percentile 50.40 ms)
Run 1: Statistics of SCReAM

Start at: 2018-02-21 03:39:46
End at: 2018-02-21 03:40:16

# Below is generated by plot.py at 2018-02-21 10:17:36
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.38 Mbit/s
  95th percentile per-packet one-way delay: 53.719 ms
  Loss rate: 0.57%
-- Flow 1:
  Average throughput: 0.17 Mbit/s
  95th percentile per-packet one-way delay: 53.753 ms
  Loss rate: 0.30%
-- Flow 2:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 53.446 ms
  Loss rate: 0.63%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 53.751 ms
  Loss rate: 1.09%
Run 1: Report of SCReAM — Data Link

Graph 1: Throughput (Mbps)

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

Legend:
- Flow 1 ingress (mean 0.17 Mbps)
- Flow 1 egress (mean 0.17 Mbps)
- Flow 2 ingress (mean 0.21 Mbps)
- Flow 2 egress (mean 0.21 Mbps)
- Flow 3 ingress (mean 0.22 Mbps)
- Flow 3 egress (mean 0.22 Mbps)
Run 2: Statistics of SCReAM

Start at: 2018-02-21 03:58:01
End at: 2018-02-21 03:58:31

# Below is generated by plot.py at 2018-02-21 10:17:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 53.707 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.739 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 49.999 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 53.642 ms
Loss rate: 1.11%
Run 3: Statistics of SCReAM

Start at: 2018-02-21 04:15:22
End at: 2018-02-21 04:15:52

# Below is generated by plot.py at 2018-02-21 10:17:36
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 54.070 ms
  Loss rate: 0.52%
-- Flow 1:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 54.030 ms
  Loss rate: 0.38%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 54.099 ms
  Loss rate: 0.43%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 53.968 ms
  Loss rate: 1.11%
Run 3: Report of SCReAM — Data Link

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

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

Start at: 2018-02-21 04:33:04
End at: 2018-02-21 04:33:34

# Below is generated by plot.py at 2018-02-21 10:17:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 53.913 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.889 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.643 ms
Loss rate: 0.43%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 53.958 ms
Loss rate: 1.10%
Run 4: Report of SCReAM — Data Link

![Plot 1: Throughput (Mbps)]

- **Flow 1 ingress (mean 0.21 Mbps)**
- **Flow 1 egress (mean 0.21 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)**

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

- **Flow 1 (95th percentile 53.89 ms)**
- **Flow 2 (95th percentile 50.64 ms)**
- **Flow 3 (95th percentile 53.96 ms)**
Run 5: Statistics of SCReAM

Start at: 2018-02-21 04:50:18
End at: 2018-02-21 04:50:48

# Below is generated by plot.py at 2018-02-21 10:17:36
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 53.794 ms
  Loss rate: 0.45%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 53.732 ms
  Loss rate: 0.25%
-- Flow 2:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 53.858 ms
  Loss rate: 0.42%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 53.533 ms
  Loss rate: 1.11%
Run 5: Report of SCReAM — Data Link

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

- Flow 1 ingress (mean 0.22 Mbit/s)
- Flow 1 egress (mean 0.22 Mbit/s)
- Flow 2 ingress (mean 0.21 Mbit/s)
- Flow 2 egress (mean 0.21 Mbit/s)
- Flow 3 ingress (mean 0.22 Mbit/s)
- Flow 3 egress (mean 0.22 Mbit/s)
Run 6: Statistics of SCReAM

Start at: 2018-02-21 05:08:04
End at: 2018-02-21 05:08:34

# Below is generated by plot.py at 2018-02-21 10:17:36
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 53.731 ms
  Loss rate: 0.46%
-- Flow 1:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 53.749 ms
  Loss rate: 0.25%
-- Flow 2:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 53.215 ms
  Loss rate: 0.43%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 53.297 ms
  Loss rate: 1.11%
Run 6: Report of SCReAM — Data Link

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

![Graph 2: Per-packet one-way delay (ms) over Time (s)]
Run 7: Statistics of SCReAM

Start at: 2018-02-21 05:25:45
End at: 2018-02-21 05:26:15

# Below is generated by plot.py at 2018-02-21 10:17:36
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 53.894 ms
  Loss rate: 0.45%
-- Flow 1:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 53.896 ms
  Loss rate: 0.26%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 53.854 ms
  Loss rate: 0.42%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 53.920 ms
  Loss rate: 1.09%
Run 7: Report of SCReAM — Data Link
Run 8: Statistics of SCReAM

Start at: 2018-02-21 05:43:34
End at: 2018-02-21 05:44:04

# Below is generated by plot.py at 2018-02-21 10:17:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 53.928 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 53.933 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 53.928 ms
Loss rate: 0.43%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 53.908 ms
Loss rate: 1.11%
Run 8: Report of SCReAM — Data Link

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Graph 1: Throughput (Mbps) over time.
- Flow 1 ingress (mean 0.22 Mbps)
- Flow 1 egress (mean 0.22 Mbps)
- Flow 2 ingress (mean 0.21 Mbps)
- Flow 2 egress (mean 0.21 Mbps)
- Flow 3 ingress (mean 0.22 Mbps)
- Flow 3 egress (mean 0.22 Mbps)

Graph 2: Per-packet one-way delay (ms) over time.
- Flow 1 (95th percentile 53.93 ms)
- Flow 2 (95th percentile 53.93 ms)
- Flow 3 (95th percentile 51.91 ms)
Run 9: Statistics of SCReAM

Start at: 2018-02-21 06:01:05
End at: 2018-02-21 06:01:35

# Below is generated by plot.py at 2018-02-21 10:17:36
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.30 Mbit/s
  95th percentile per-packet one-way delay: 54.121 ms
  Loss rate: 0.65%
-- Flow 1:
  Average throughput: 0.09 Mbit/s
  95th percentile per-packet one-way delay: 53.964 ms
  Loss rate: 0.33%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 50.365 ms
  Loss rate: 0.63%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 54.195 ms
  Loss rate: 1.11%
Run 9: Report of SCReAM — Data Link

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

- Flow 1 ingress (mean 0.09 Mbit/s)
- Flow 1 egress (mean 0.09 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 showing 95th percentile delay for different flows.]

- Flow 1 (95th percentile 53.96 ms)
- Flow 2 (95th percentile 50.37 ms)
- Flow 3 (95th percentile 54.20 ms)
Run 10: Statistics of SCReAM

Start at: 2018-02-21 06:18:30
End at: 2018-02-21 06:19:00

# Below is generated by plot.py at 2018-02-21 10:17:36
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 54.142 ms
  Loss rate: 0.45%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 54.050 ms
  Loss rate: 0.25%
-- Flow 2:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 54.183 ms
  Loss rate: 0.43%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 53.892 ms
  Loss rate: 1.09%
Run 10: Report of SCReAM — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 0.22 Mbit/s)
Flow 1 egress (mean 0.22 Mbit/s)
Flow 2 ingress (mean 0.21 Mbit/s)
Flow 2 egress (mean 0.21 Mbit/s)
Flow 3 ingress (mean 0.22 Mbit/s)
Flow 3 egress (mean 0.22 Mbit/s)

Packet error rate (PRR)

Time (s)

Flow 1 (95th percentile 54.05 ms)
Flow 2 (95th percentile 54.18 ms)
Flow 3 (95th percentile 53.89 ms)
Run 1: Statistics of WebRTC media

Start at: 2018-02-21 03:53:25
End at: 2018-02-21 03:53:55

# Below is generated by plot.py at 2018-02-21 10:17:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.37 Mbit/s
95th percentile per-packet one-way delay: 53.718 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 2.29 Mbit/s
95th percentile per-packet one-way delay: 53.764 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 1.47 Mbit/s
95th percentile per-packet one-way delay: 50.689 ms
Loss rate: 0.52%
-- Flow 3:
Average throughput: 0.63 Mbit/s
95th percentile per-packet one-way delay: 50.465 ms
Loss rate: 1.37%
Run 1: Report of WebRTC media — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 2.29 Mbit/s)  
Flow 1 egress (mean 2.29 Mbit/s)  
Flow 2 ingress (mean 1.47 Mbit/s)  
Flow 2 egress (mean 1.47 Mbit/s)  
Flow 3 ingress (mean 0.63 Mbit/s)  
Flow 3 egress (mean 0.63 Mbit/s)

Per-packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 53.76 ms)  
Flow 2 (95th percentile 50.69 ms)  
Flow 3 (95th percentile 50.47 ms)
Run 2: Statistics of WebRTC media

Start at: 2018-02-21 04:11:08
End at: 2018-02-21 04:11:38

# Below is generated by plot.py at 2018-02-21 10:17:36
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 4.28 Mbit/s
  95th percentile per-packet one-way delay: 53.889 ms
  Loss rate: 0.56%
-- Flow 1:
  Average throughput: 2.24 Mbit/s
  95th percentile per-packet one-way delay: 50.965 ms
  Loss rate: 0.42%
-- Flow 2:
  Average throughput: 1.43 Mbit/s
  95th percentile per-packet one-way delay: 53.961 ms
  Loss rate: 0.48%
-- Flow 3:
  Average throughput: 0.63 Mbit/s
  95th percentile per-packet one-way delay: 53.627 ms
  Loss rate: 1.24%
Run 2: Report of WebRTC media — Data Link

![Graph 1: Throughput (Mbps)]
- Flow 1 ingress (mean 2.24 Mbps)
- Flow 1 egress (mean 2.24 Mbps)
- Flow 2 ingress (mean 1.44 Mbps)
- Flow 2 egress (mean 1.43 Mbps)
- Flow 3 ingress (mean 0.64 Mbps)
- Flow 3 egress (mean 0.63 Mbps)

![Graph 2: Per-packet one-way delay (ms)]
- Flow 1 (95th percentile 50.97 ms)
- Flow 2 (95th percentile 53.96 ms)
- Flow 3 (95th percentile 53.63 ms)
Run 3: Statistics of WebRTC media

Start at: 2018-02-21 04:28:25
End at: 2018-02-21 04:28:55

# Below is generated by plot.py at 2018-02-21 10:17:36
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 4.35 Mbit/s
  95th percentile per-packet one-way delay: 54.074 ms
  Loss rate: 0.78%
-- Flow 1:
  Average throughput: 2.28 Mbit/s
  95th percentile per-packet one-way delay: 53.678 ms
  Loss rate: 0.52%
-- Flow 2:
  Average throughput: 1.46 Mbit/s
  95th percentile per-packet one-way delay: 50.432 ms
  Loss rate: 0.81%
-- Flow 3:
  Average throughput: 0.63 Mbit/s
  95th percentile per-packet one-way delay: 54.305 ms
  Loss rate: 1.66%
Run 3: Report of WebRTC media — Data Link

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

- Flow 1 ingress (mean 2.28 Mbit/s)
- Flow 1 egress (mean 2.28 Mbit/s)
- Flow 2 ingress (mean 1.47 Mbit/s)
- Flow 2 egress (mean 1.46 Mbit/s)
- Flow 3 ingress (mean 0.64 Mbit/s)
- Flow 3 egress (mean 0.63 Mbit/s)

![Graph of per packet one way delay over time for different flows.](image)

- Flow 1 (95th percentile 53.68 ms)
- Flow 2 (95th percentile 50.43 ms)
- Flow 3 (95th percentile 54.30 ms)
Run 4: Statistics of WebRTC media

Start at: 2018-02-21 04:46:15
End at: 2018-02-21 04:46:45

# Below is generated by plot.py at 2018-02-21 10:17:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.34 Mbit/s
95th percentile per-packet one-way delay: 53.774 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 2.28 Mbit/s
95th percentile per-packet one-way delay: 50.887 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 1.46 Mbit/s
95th percentile per-packet one-way delay: 53.924 ms
Loss rate: 0.69%
-- Flow 3:
Average throughput: 0.62 Mbit/s
95th percentile per-packet one-way delay: 50.688 ms
Loss rate: 1.80%
Run 4: Report of WebRTC media — Data Link

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

- **Flow 1 ingress** (mean 2.29 Mbit/s)
- **Flow 1 egress** (mean 2.28 Mbit/s)
- **Flow 2 ingress** (mean 1.47 Mbit/s)
- **Flow 2 egress** (mean 1.46 Mbit/s)
- **Flow 3 ingress** (mean 0.63 Mbit/s)
- **Flow 3 egress** (mean 0.62 Mbit/s)

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

- **Flow 1** (95th percentile 50.89 ms)
- **Flow 2** (95th percentile 53.92 ms)
- **Flow 3** (95th percentile 50.69 ms)
Run 5: Statistics of WebRTC media

Start at: 2018-02-21 05:03:29
End at: 2018-02-21 05:03:59

# Below is generated by plot.py at 2018-02-21 10:17:36
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 4.33 Mbit/s
  95th percentile per-packet one-way delay: 50.514 ms
  Loss rate: 0.65%
-- Flow 1:
  Average throughput: 2.28 Mbit/s
  95th percentile per-packet one-way delay: 50.525 ms
  Loss rate: 0.35%
-- Flow 2:
  Average throughput: 1.46 Mbit/s
  95th percentile per-packet one-way delay: 50.351 ms
  Loss rate: 0.66%
-- Flow 3:
  Average throughput: 0.62 Mbit/s
  95th percentile per-packet one-way delay: 53.619 ms
  Loss rate: 1.72%
Run 5: Report of WebRTC media — Data Link
Run 6: Statistics of WebRTC media

Start at: 2018-02-21 05:21:24
End at: 2018-02-21 05:21:54

# Below is generated by plot.py at 2018-02-21 10:17:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.37 Mbit/s
95th percentile per-packet one-way delay: 54.063 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 2.29 Mbit/s
95th percentile per-packet one-way delay: 54.096 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 1.47 Mbit/s
95th percentile per-packet one-way delay: 53.986 ms
Loss rate: 0.72%
-- Flow 3:
Average throughput: 0.64 Mbit/s
95th percentile per-packet one-way delay: 50.621 ms
Loss rate: 0.97%
Run 6: Report of WebRTC media — Data Link

![Graph of throughput and packet delay](image)

**Throughput (Mbps)**
- Flow 1 ingress (mean 2.29 Mbps)
- Flow 1 egress (mean 2.29 Mbps)
- Flow 2 ingress (mean 1.47 Mbps)
- Flow 2 egress (mean 1.47 Mbps)
- Flow 3 ingress (mean 0.64 Mbps)
- Flow 3 egress (mean 0.64 Mbps)

**Packet Delay (ms)**
- Flow 1 (95th percentile 54.10 ms)
- Flow 2 (95th percentile 53.99 ms)
- Flow 3 (95th percentile 50.62 ms)
Run 7: Statistics of WebRTC media

Start at: 2018-02-21 05:39:09
End at: 2018-02-21 05:39:39

# Below is generated by plot.py at 2018-02-21 10:17:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.37 Mbit/s
95th percentile per-packet one-way delay: 53.878 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 2.28 Mbit/s
95th percentile per-packet one-way delay: 50.942 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 1.48 Mbit/s
95th percentile per-packet one-way delay: 50.827 ms
Loss rate: 0.71%
-- Flow 3:
Average throughput: 0.63 Mbit/s
95th percentile per-packet one-way delay: 54.054 ms
Loss rate: 1.08%
Run 7: Report of WebRTC media — Data Link

---

**Throughput (Mbit/s)**

**Time (s)**

- Flow 1 ingress (mean 2.28 Mbit/s)
- Flow 1 egress (mean 2.28 Mbit/s)
- Flow 2 ingress (mean 1.48 Mbit/s)
- Flow 2 egress (mean 1.48 Mbit/s)
- Flow 3 ingress (mean 0.64 Mbit/s)
- Flow 3 egress (mean 0.63 Mbit/s)

---

**Per-packet round-trip delay (ms)**

**Time (s)**

- Flow 1 (95th percentile 50.94 ms)
- Flow 2 (95th percentile 50.83 ms)
- Flow 3 (95th percentile 54.05 ms)
Run 8: Statistics of WebRTC media

Start at: 2018-02-21 05:56:48
End at: 2018-02-21 05:57:18

# Below is generated by plot.py at 2018-02-21 10:17:36
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 4.82 Mbit/s
  95th percentile per-packet one-way delay: 54.082 ms
  Loss rate: 0.67%
-- Flow 1:
  Average throughput: 2.75 Mbit/s
  95th percentile per-packet one-way delay: 54.034 ms
  Loss rate: 0.62%
-- Flow 2:
  Average throughput: 1.47 Mbit/s
  95th percentile per-packet one-way delay: 54.099 ms
  Loss rate: 0.52%
-- Flow 3:
  Average throughput: 0.63 Mbit/s
  95th percentile per-packet one-way delay: 54.137 ms
  Loss rate: 1.24%
Run 8: Report of WebRTC media — Data Link

![Graph of WebRTC media throughput and latency](image-url)

**Throughput (Mb/s)**

- Flow 1 ingress (mean 2.75 Mb/s)
- Flow 1 egress (mean 2.75 Mb/s)
- Flow 2 ingress (mean 1.47 Mb/s)
- Flow 2 egress (mean 1.47 Mb/s)
- Flow 3 ingress (mean 0.64 Mb/s)
- Flow 3 egress (mean 0.63 Mb/s)

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

- Flow 1 (95th percentile 54.03 ms)
- Flow 2 (95th percentile 54.10 ms)
- Flow 3 (95th percentile 54.14 ms)
Run 9: Statistics of WebRTC media

Start at: 2018-02-21 06:14:15
End at: 2018-02-21 06:14:45

# Below is generated by plot.py at 2018-02-21 10:17:36
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 4.35 Mbit/s
  95th percentile per-packet one-way delay: 50.959 ms
  Loss rate: 0.62%
-- Flow 1:
  Average throughput: 2.27 Mbit/s
  95th percentile per-packet one-way delay: 51.014 ms
  Loss rate: 0.41%
-- Flow 2:
  Average throughput: 1.46 Mbit/s
  95th percentile per-packet one-way delay: 50.640 ms
  Loss rate: 0.75%
-- Flow 3:
  Average throughput: 0.64 Mbit/s
  95th percentile per-packet one-way delay: 53.986 ms
  Loss rate: 1.05%
Run 9: Report of WebRTC media — Data Link

---

**Graph 1:**
- Y-axis: Throughput (Mbit/s)
- X-axis: Time (s)
- Legend:
  - Dashed blue line: Flow 1 ingress (mean 2.27 Mbit/s)
  - Solid blue line: Flow 1 egress (mean 2.27 Mbit/s)
  - Dashed green line: Flow 2 ingress (mean 1.47 Mbit/s)
  - Solid green line: Flow 2 egress (mean 1.46 Mbit/s)
  - Dashed red line: Flow 3 ingress (mean 0.65 Mbit/s)
  - Solid red line: Flow 3 egress (mean 0.64 Mbit/s)

**Graph 2:**
- Y-axis: Per packet one-way delay (ms)
- X-axis: Time (s)
- Legend:
  - Blue dots: Flow 1 (95th percentile 51.01 ms)
  - Green dots: Flow 2 (95th percentile 50.64 ms)
  - Red dots: Flow 3 (95th percentile 53.99 ms)
Run 10: Statistics of WebRTC media

Start at: 2018-02-21 06:31:48
End at: 2018-02-21 06:32:18

# Below is generated by plot.py at 2018-02-21 10:17:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.36 Mbit/s
95th percentile per-packet one-way delay: 53.956 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 2.28 Mbit/s
95th percentile per-packet one-way delay: 53.922 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 1.46 Mbit/s
95th percentile per-packet one-way delay: 54.007 ms
Loss rate: 0.73%
-- Flow 3:
Average throughput: 0.64 Mbit/s
95th percentile per-packet one-way delay: 53.750 ms
Loss rate: 0.99%
Run 10: Report of WebRTC media — Data Link
Run 1: Statistics of Sprout

Start at: 2018-02-21 03:38:23
End at: 2018-02-21 03:38:53

# Below is generated by plot.py at 2018-02-21 10:17:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.41 Mbit/s
95th percentile per-packet one-way delay: 54.621 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 7.80 Mbit/s
95th percentile per-packet one-way delay: 54.578 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 7.81 Mbit/s
95th percentile per-packet one-way delay: 54.737 ms
Loss rate: 0.72%
-- Flow 3:
Average throughput: 7.42 Mbit/s
95th percentile per-packet one-way delay: 53.758 ms
Loss rate: 1.33%
Run 1: Report of Sprout — Data Link

---

**Throughput vs Time**

- **Flow 1 ingress (mean 7.81 Mbit/s)**
- **Flow 1 egress (mean 7.80 Mbit/s)**
- **Flow 2 ingress (mean 7.82 Mbit/s)**
- **Flow 2 egress (mean 7.81 Mbit/s)**
- **Flow 3 ingress (mean 7.43 Mbit/s)**
- **Flow 3 egress (mean 7.42 Mbit/s)**

---

**Delay vs Time**

- **Flow 1 (95th percentile 54.58 ms)**
- **Flow 2 (95th percentile 54.74 ms)**
- **Flow 3 (95th percentile 53.76 ms)**
Run 2: Statistics of Sprout

Start at: 2018-02-21 03:56:38
End at: 2018-02-21 03:57:08

# Below is generated by plot.py at 2018-02-21 10:17:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.46 Mbit/s
95th percentile per-packet one-way delay: 54.520 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 7.88 Mbit/s
95th percentile per-packet one-way delay: 54.561 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 7.77 Mbit/s
95th percentile per-packet one-way delay: 54.555 ms
Loss rate: 0.54%
-- Flow 3:
Average throughput: 7.41 Mbit/s
95th percentile per-packet one-way delay: 52.152 ms
Loss rate: 1.40%
Run 2: Report of Sprout — Data Link
Run 3: Statistics of Sprout

Start at: 2018-02-21 04:13:59
End at: 2018-02-21 04:14:29

# Below is generated by plot.py at 2018-02-21 10:17:36
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 15.13 Mbit/s
  95th percentile per-packet one-way delay: 55.031 ms
  Loss rate: 0.63%
-- Flow 1:
  Average throughput: 7.54 Mbit/s
  95th percentile per-packet one-way delay: 54.992 ms
  Loss rate: 0.38%
-- Flow 2:
  Average throughput: 7.78 Mbit/s
  95th percentile per-packet one-way delay: 55.016 ms
  Loss rate: 0.64%
-- Flow 3:
  Average throughput: 7.43 Mbit/s
  95th percentile per-packet one-way delay: 55.151 ms
  Loss rate: 1.35%
Run 3: Report of Sprout — Data Link

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

- Flow 1 ingress (mean 7.55 Mbps/s)
- Flow 1 egress (mean 7.54 Mbps/s)
- Flow 2 ingress (mean 7.81 Mbps/s)
- Flow 2 egress (mean 7.76 Mbps/s)
- Flow 3 ingress (mean 7.45 Mbps/s)
- Flow 3 egress (mean 7.43 Mbps/s)

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

- Flow 1 (95th percentile 54.99 ms)
- Flow 2 (95th percentile 55.02 ms)
- Flow 3 (95th percentile 55.15 ms)
Run 4: Statistics of Sprout

Start at: 2018-02-21 04:31:41
End at: 2018-02-21 04:32:11

# Below is generated by plot.py at 2018-02-21 10:17:36
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 15.40 Mbit/s
  95th percentile per-packet one-way delay: 55.009 ms
  Loss rate: 0.65%
-- Flow 1:
  Average throughput: 7.85 Mbit/s
  95th percentile per-packet one-way delay: 54.991 ms
  Loss rate: 0.42%
-- Flow 2:
  Average throughput: 7.76 Mbit/s
  95th percentile per-packet one-way delay: 55.064 ms
  Loss rate: 0.65%
-- Flow 3:
  Average throughput: 7.33 Mbit/s
  95th percentile per-packet one-way delay: 54.655 ms
  Loss rate: 1.40%
Run 4: Report of Sprout — Data Link

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

- Flow 1 ingress (mean 7.86 Mbit/s)
- Flow 1 egress (mean 7.85 Mbit/s)
- Flow 2 ingress (mean 7.76 Mbit/s)
- Flow 2 egress (mean 7.76 Mbit/s)
- Flow 3 ingress (mean 7.38 Mbit/s)
- Flow 3 egress (mean 7.33 Mbit/s)
Run 5: Statistics of Sprout

Start at: 2018-02-21 04:48:56
End at: 2018-02-21 04:49:26

# Below is generated by plot.py at 2018-02-21 10:17:36
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 15.49 Mbit/s
  95th percentile per-packet one-way delay: 54.993 ms
  Loss rate: 0.49%
-- Flow 1:
  Average throughput: 7.89 Mbit/s
  95th percentile per-packet one-way delay: 54.932 ms
  Loss rate: 0.12%
-- Flow 2:
  Average throughput: 7.80 Mbit/s
  95th percentile per-packet one-way delay: 54.976 ms
  Loss rate: 0.64%
-- Flow 3:
  Average throughput: 7.41 Mbit/s
  95th percentile per-packet one-way delay: 55.099 ms
  Loss rate: 1.36%
Run 5: Report of Sprout — Data Link

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

- Flow 1 ingress (mean 7.87 Mbps)
- Flow 1 egress (mean 7.89 Mbps)
- Flow 2 ingress (mean 7.82 Mbps)
- Flow 2 egress (mean 7.80 Mbps)
- Flow 3 ingress (mean 7.43 Mbps)
- Flow 3 egress (mean 7.41 Mbps)

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

- Flow 1 (95th percentile 54.93 ms)
- Flow 2 (95th percentile 54.98 ms)
- Flow 3 (95th percentile 55.10 ms)
Run 6: Statistics of Sprout

Start at: 2018-02-21 05:06:41
End at: 2018-02-21 05:07:12

# Below is generated by plot.py at 2018-02-21 10:17:36
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 15.08 Mbit/s
  95th percentile per-packet one-way delay: 55.001 ms
  Loss rate: 0.57%
-- Flow 1:
  Average throughput: 7.46 Mbit/s
  95th percentile per-packet one-way delay: 54.870 ms
  Loss rate: 0.28%
-- Flow 2:
  Average throughput: 7.90 Mbit/s
  95th percentile per-packet one-way delay: 54.954 ms
  Loss rate: 0.64%
-- Flow 3:
  Average throughput: 7.29 Mbit/s
  95th percentile per-packet one-way delay: 55.833 ms
  Loss rate: 1.32%
Run 6: Report of Sprout — Data Link

![Graph of Throughput and Delay](image-url)
Run 7: Statistics of Sprout

Start at: 2018-02-21 05:24:22
End at: 2018-02-21 05:24:52

# Below is generated by plot.py at 2018-02-21 10:17:36
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 15.51 Mbit/s
  95th percentile per-packet one-way delay: 54.539 ms
  Loss rate: 0.45%
-- Flow 1:
  Average throughput: 7.82 Mbit/s
  95th percentile per-packet one-way delay: 54.690 ms
  Loss rate: 0.11%
-- Flow 2:
  Average throughput: 7.83 Mbit/s
  95th percentile per-packet one-way delay: 54.115 ms
  Loss rate: 0.67%
-- Flow 3:
  Average throughput: 7.63 Mbit/s
  95th percentile per-packet one-way delay: 52.790 ms
  Loss rate: 1.07%
Run 7: Report of Sprout — Data Link

![Graph of throughput and delay over time for different flows]
Run 8: Statistics of Sprout

Start at: 2018-02-21 05:42:11
End at: 2018-02-21 05:42:41

# Below is generated by plot.py at 2018-02-21 10:17:36
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 15.31 Mbit/s
  95th percentile per-packet one-way delay: 55.040 ms
  Loss rate: 0.57%
-- Flow 1:
  Average throughput: 7.85 Mbit/s
  95th percentile per-packet one-way delay: 55.056 ms
  Loss rate: 0.36%
-- Flow 2:
  Average throughput: 7.72 Mbit/s
  95th percentile per-packet one-way delay: 54.973 ms
  Loss rate: 0.56%
-- Flow 3:
  Average throughput: 7.15 Mbit/s
  95th percentile per-packet one-way delay: 55.086 ms
  Loss rate: 1.28%
Run 8: Report of Sprout — Data Link

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

- **Flow 1 ingress** (mean 7.84 Mbps/s)
- **Flow 1 egress** (mean 7.85 Mbps/s)
- **Flow 2 ingress** (mean 7.72 Mbps/s)
- **Flow 2 egress** (mean 7.72 Mbps/s)
- **Flow 3 ingress** (mean 7.17 Mbps/s)
- **Flow 3 egress** (mean 7.15 Mbps/s)

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

- **Flow 1** (95th percentile 55.06 ms)
- **Flow 2** (95th percentile 54.97 ms)
- **Flow 3** (95th percentile 55.09 ms)
Run 9: Statistics of Sprout

Start at: 2018-02-21 05:59:42
End at: 2018-02-21 06:00:12

# Below is generated by plot.py at 2018-02-21 10:17:36
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 15.23 Mbit/s
  95th percentile per-packet one-way delay: 55.538 ms
  Loss rate: 0.57%
-- Flow 1:
  Average throughput: 7.80 Mbit/s
  95th percentile per-packet one-way delay: 55.518 ms
  Loss rate: 0.42%
-- Flow 2:
  Average throughput: 7.51 Mbit/s
  95th percentile per-packet one-way delay: 55.520 ms
  Loss rate: 0.60%
-- Flow 3:
  Average throughput: 7.47 Mbit/s
  95th percentile per-packet one-way delay: 55.589 ms
  Loss rate: 1.00%
Run 9: Report of Sprout — Data Link

---

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

- **Flow 1 ingress** (mean 7.82 Mbps/s)
- **Flow 1 egress** (mean 7.80 Mbps/s)
- **Flow 2 ingress** (mean 7.51 Mbps/s)
- **Flow 2 egress** (mean 7.51 Mbps/s)
- **Flow 3 ingress** (mean 7.47 Mbps/s)
- **Flow 3 egress** (mean 7.47 Mbps/s)

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

- **Flow 1** (95th percentile 55.52 ms)
- **Flow 2** (95th percentile 55.52 ms)
- **Flow 3** (95th percentile 55.59 ms)

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Run 10: Statistics of Sprout

Start at: 2018-02-21 06:17:07
End at: 2018-02-21 06:17:37

# Below is generated by plot.py at 2018-02-21 10:17:36
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 15.44 Mbit/s
  95th percentile per-packet one-way delay: 55.089 ms
  Loss rate: 0.33%
-- Flow 1:
  Average throughput: 7.82 Mbit/s
  95th percentile per-packet one-way delay: 55.170 ms
  Loss rate: 0.42%
-- Flow 2:
  Average throughput: 7.70 Mbit/s
  95th percentile per-packet one-way delay: 54.983 ms
  Loss rate: 0.09%
-- Flow 3:
  Average throughput: 7.64 Mbit/s
  95th percentile per-packet one-way delay: 54.904 ms
  Loss rate: 0.54%
Run 10: Report of Sprout — Data Link
Run 1: Statistics of TaoVA-100x

Start at: 2018-02-21 03:54:05
End at: 2018-02-21 03:54:35

# Below is generated by plot.py at 2018-02-21 10:25:16
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 327.52 Mbit/s
  95th percentile per-packet one-way delay: 54.213 ms
  Loss rate: 0.40%
-- Flow 1:
  Average throughput: 160.15 Mbit/s
  95th percentile per-packet one-way delay: 51.598 ms
  Loss rate: 0.03%
-- Flow 2:
  Average throughput: 151.78 Mbit/s
  95th percentile per-packet one-way delay: 56.248 ms
  Loss rate: 0.32%
-- Flow 3:
  Average throughput: 202.14 Mbit/s
  95th percentile per-packet one-way delay: 56.165 ms
  Loss rate: 1.41%
Run 1: Report of TaoVA-100x — Data Link

![Throughput Graph](image1)

![Delay Graph](image2)

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Run 2: Statistics of TaoVA-100x

Start at: 2018-02-21 04:11:48
End at: 2018-02-21 04:12:18

# Below is generated by plot.py at 2018-02-21 10:25:16
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 103.96 Mbit/s
  95th percentile per-packet one-way delay: 54.102 ms
  Loss rate: 0.13%
-- Flow 1:
  Average throughput: 26.24 Mbit/s
  95th percentile per-packet one-way delay: 54.007 ms
  Loss rate: 0.18%
-- Flow 2:
  Average throughput: 172.20 Mbit/s
  95th percentile per-packet one-way delay: 54.180 ms
  Loss rate: 0.06%
-- Flow 3:
  Average throughput: 15.22 Mbit/s
  95th percentile per-packet one-way delay: 53.902 ms
  Loss rate: 0.96%
Run 2: Report of TaoVA-100x — Data Link

![Graph 1: Throughput (Mbps)](image)
- Flow 1 ingress (mean 26.20 Mbps)
- Flow 1 egress (mean 26.24 Mbps)
- Flow 2 ingress (mean 172.29 Mbps)
- Flow 2 egress (mean 172.20 Mbps)
- Flow 3 ingress (mean 15.20 Mbps)
- Flow 3 egress (mean 15.22 Mbps)

![Graph 2: Per-packet one-way delay (ms)](image)
- Flow 1 (95th percentile 54.01 ms)
- Flow 2 (95th percentile 54.18 ms)
- Flow 3 (95th percentile 53.90 ms)
Run 3: Statistics of TaoVA-100x

Start at: 2018-02-21 04:29:05
End at: 2018-02-21 04:29:35

# Below is generated by plot.py at 2018-02-21 10:26:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 373.33 Mbit/s
95th percentile per-packet one-way delay: 55.100 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 219.80 Mbit/s
95th percentile per-packet one-way delay: 52.381 ms
Loss rate: 0.27%
-- Flow 2:
Average throughput: 225.23 Mbit/s
95th percentile per-packet one-way delay: 60.170 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 11.71 Mbit/s
95th percentile per-packet one-way delay: 55.103 ms
Loss rate: 1.04%
Run 3: Report of TaoVA-100x — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 219.83 Mbps)
  - Flow 1 egress (mean 219.80 Mbps)
  - Flow 2 ingress (mean 225.30 Mbps)
  - Flow 2 egress (mean 225.23 Mbps)
  - Flow 3 ingress (mean 11.70 Mbps)
  - Flow 3 egress (mean 11.71 Mbps)

- **Per-packet one-way delay (ms):**
  - Flow 1 (95th percentile 52.38 ms)
  - Flow 2 (95th percentile 60.17 ms)
  - Flow 3 (95th percentile 55.10 ms)
Run 4: Statistics of TaoVA-100x

Start at: 2018-02-21 04:46:55
End at: 2018-02-21 04:47:25

# Below is generated by plot.py at 2018-02-21 10:26:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 33.48 Mbit/s
95th percentile per-packet one-way delay: 53.895 ms
Loss rate: 1.12%
-- Flow 1:
Average throughput: 32.86 Mbit/s
95th percentile per-packet one-way delay: 53.847 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 25.12 Mbit/s
95th percentile per-packet one-way delay: 53.740 ms
Loss rate: 2.23%
-- Flow 3:
Average throughput: 18.39 Mbit/s
95th percentile per-packet one-way delay: 54.320 ms
Loss rate: 0.00%
Run 4: Report of TaoVA-100x — Data Link

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

- Flow 1 ingress (mean 32.87 Mbit/s)
- Flow 1 egress (mean 32.86 Mbit/s)
- Flow 2 ingress (mean 25.56 Mbit/s)
- Flow 2 egress (mean 25.12 Mbit/s)
- Flow 3 ingress (mean 18.39 Mbit/s)
- Flow 3 egress (mean 18.39 Mbit/s)
Run 5: Statistics of TaoVA-100x

Start at: 2018-02-21 05:04:09
End at: 2018-02-21 05:04:39

# Below is generated by plot.py at 2018-02-21 10:26:31
# Datalink statistics
-- Total of 3 flows:
 Average throughput: 292.47 Mbit/s
 95th percentile per-packet one-way delay: 55.285 ms
 Loss rate: 0.48%
-- Flow 1:
 Average throughput: 216.57 Mbit/s
 95th percentile per-packet one-way delay: 54.110 ms
 Loss rate: 0.36%
-- Flow 2:
 Average throughput: 18.96 Mbit/s
 95th percentile per-packet one-way delay: 54.102 ms
 Loss rate: 0.39%
-- Flow 3:
 Average throughput: 192.17 Mbit/s
 95th percentile per-packet one-way delay: 72.962 ms
 Loss rate: 0.90%
Run 5: Report of TaoVA-100x — Data Link

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

**Flow 1**
- Ingress: Mean 216.58 Mbit/s
- Egress: Mean 216.57 Mbit/s

**Flow 2**
- Ingress: Mean 18.94 Mbit/s
- Egress: Mean 18.96 Mbit/s

**Flow 3**
- Ingress: Mean 190.83 Mbit/s
- Egress: Mean 192.17 Mbit/s
Run 6: Statistics of TaoVA-100x

Start at: 2018-02-21 05:22:04
End at: 2018-02-21 05:22:34

# Below is generated by plot.py at 2018-02-21 10:26:31
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 179.67 Mbit/s
  95th percentile per-packet one-way delay: 53.793 ms
  Loss rate: 0.57%
  -- Flow 1:
  Average throughput: 90.58 Mbit/s
  95th percentile per-packet one-way delay: 53.797 ms
  Loss rate: 0.04%
  -- Flow 2:
  Average throughput: 17.33 Mbit/s
  95th percentile per-packet one-way delay: 54.117 ms
  Loss rate: 0.41%
  -- Flow 3:
  Average throughput: 235.54 Mbit/s
  95th percentile per-packet one-way delay: 50.682 ms
  Loss rate: 1.20%
Run 6: Report of TaoVA-100x — Data Link

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

- **Flow 1 ingress (mean 90.31 Mbit/s)**
- **Flow 1 egress (mean 90.58 Mbit/s)**
- **Flow 2 ingress (mean 17.30 Mbit/s)**
- **Flow 2 egress (mean 17.33 Mbit/s)**
- **Flow 3 ingress (mean 235.92 Mbit/s)**
- **Flow 3 egress (mean 235.54 Mbit/s)**
Run 7: Statistics of TaoVA-100x

Start at: 2018-02-21 05:39:49
End at: 2018-02-21 05:40:19

# Below is generated by plot.py at 2018-02-21 10:26:31
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 204.14 Mbit/s
  95th percentile per-packet one-way delay: 54.107 ms
  Loss rate: 0.52%
  -- Flow 1:
  Average throughput: 25.11 Mbit/s
  95th percentile per-packet one-way delay: 54.460 ms
  Loss rate: 0.42%
  -- Flow 2:
  Average throughput: 224.51 Mbit/s
  95th percentile per-packet one-way delay: 54.097 ms
  Loss rate: 0.61%
  -- Flow 3:
  Average throughput: 90.76 Mbit/s
  95th percentile per-packet one-way delay: 54.020 ms
  Loss rate: 0.15%
Run 7: Report of TaoVA-100x — Data Link
Run 8: Statistics of TaoVA-100x

Start at: 2018-02-21 05:57:29
End at: 2018-02-21 05:57:59

# Below is generated by plot.py at 2018-02-21 10:26:31
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 129.17 Mbit/s
  95th percentile per-packet one-way delay: 55.945 ms
  Loss rate: 0.72%
-- Flow 1:
  Average throughput: 227.91 Mbit/s
  95th percentile per-packet one-way delay: 52.340 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 14.23 Mbit/s
  95th percentile per-packet one-way delay: 54.881 ms
  Loss rate: 0.43%
-- Flow 3:
  Average throughput: 227.07 Mbit/s
  95th percentile per-packet one-way delay: 58.536 ms
  Loss rate: 1.18%
Run 9: Statistics of TaoVA-100x

Start at: 2018-02-21 06:14:55
End at: 2018-02-21 06:15:25

# Below is generated by plot.py at 2018-02-21 10:26:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 118.09 Mbit/s
95th percentile per-packet one-way delay: 56.434 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 26.30 Mbit/s
95th percentile per-packet one-way delay: 54.152 ms
Loss rate: 0.19%
-- Flow 2:
Average throughput: 21.96 Mbit/s
95th percentile per-packet one-way delay: 54.087 ms
Loss rate: 0.34%
-- Flow 3:
Average throughput: 234.36 Mbit/s
95th percentile per-packet one-way delay: 57.510 ms
Loss rate: 0.89%
Run 9: Report of TaoVA-100x — Data Link
Run 10: Statistics of TaoVA-100x

Start at: 2018-02-21 06:32:28
End at: 2018-02-21 06:32:58

# Below is generated by plot.py at 2018-02-21 10:26:31
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 241.26 Mbit/s
  95th percentile per-packet one-way delay: 55.482 ms
  Loss rate: 0.26%
-- Flow 1:
  Average throughput: 90.85 Mbit/s
  95th percentile per-packet one-way delay: 55.122 ms
  Loss rate: 0.33%
-- Flow 2:
  Average throughput: 181.36 Mbit/s
  95th percentile per-packet one-way delay: 55.821 ms
  Loss rate: 0.04%
-- Flow 3:
  Average throughput: 90.74 Mbit/s
  95th percentile per-packet one-way delay: 55.458 ms
  Loss rate: 0.91%
Run 10: Report of TaoVA-100x — Data Link

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

- **Flow 1 ingress** (mean 90.85 Mbit/s)
- **Flow 1 egress** (mean 90.85 Mbit/s)
- **Flow 2 ingress** (mean 180.48 Mbit/s)
- **Flow 2 egress** (mean 181.36 Mbit/s)
- **Flow 3 ingress** (mean 90.63 Mbit/s)
- **Flow 3 egress** (mean 90.74 Mbit/s)

- **Per-packet one way delay (ms):**
  - **Flow 1** (95th percentile 55.12 ms)
  - **Flow 2** (95th percentile 55.82 ms)
  - **Flow 3** (95th percentile 55.46 ms)

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Run 1: Statistics of TCP Vegas

Start at: 2018-02-21 03:41:24
End at: 2018-02-21 03:41:54

# Below is generated by plot.py at 2018-02-21 10:26:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 246.86 Mbit/s
95th percentile per-packet one-way delay: 60.861 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 80.62 Mbit/s
95th percentile per-packet one-way delay: 56.593 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 220.26 Mbit/s
95th percentile per-packet one-way delay: 61.262 ms
Loss rate: 0.60%
-- Flow 3:
Average throughput: 60.68 Mbit/s
95th percentile per-packet one-way delay: 56.125 ms
Loss rate: 1.07%
Run 1: Report of TCP Vegas — Data Link
Run 2: Statistics of TCP Vegas

Start at: 2018-02-21 03:59:39
End at: 2018-02-21 04:00:09

# Below is generated by plot.py at 2018-02-21 10:26:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 190.68 Mbit/s
95th percentile per-packet one-way delay: 62.636 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 137.45 Mbit/s
95th percentile per-packet one-way delay: 63.908 ms
Loss rate: 0.19%
-- Flow 2:
Average throughput: 77.40 Mbit/s
95th percentile per-packet one-way delay: 57.533 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 5.84 Mbit/s
95th percentile per-packet one-way delay: 53.928 ms
Loss rate: 2.14%
Run 2: Report of TCP Vegas — Data Link

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

- Flow 1 ingress (mean 137.23 Mbps)
- Flow 1 egress (mean 137.45 Mbps)
- Flow 2 ingress (mean 77.48 Mbps)
- Flow 2 egress (mean 77.40 Mbps)
- Flow 3 ingress (mean 5.90 Mbps)
- Flow 3 egress (mean 5.84 Mbps)

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

- Flow 1 (95th percentile 63.91 ms)
- Flow 2 (95th percentile 57.53 ms)
- Flow 3 (95th percentile 53.93 ms)
Run 3: Statistics of TCP Vegas

Start at: 2018-02-21 04:17:01
End at: 2018-02-21 04:17:31

# Below is generated by plot.py at 2018-02-21 10:26:31
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 74.23 Mbit/s
  95th percentile per-packet one-way delay: 54.480 ms
  Loss rate: 0.52%
-- Flow 1:
  Average throughput: 25.98 Mbit/s
  95th percentile per-packet one-way delay: 54.403 ms
  Loss rate: 0.39%
-- Flow 2:
  Average throughput: 70.24 Mbit/s
  95th percentile per-packet one-way delay: 54.544 ms
  Loss rate: 0.53%
-- Flow 3:
  Average throughput: 4.92 Mbit/s
  95th percentile per-packet one-way delay: 53.924 ms
  Loss rate: 2.43%
Run 3: Report of TCP Vegas — Data Link
Run 4: Statistics of TCP Vegas

Start at: 2018-02-21 04:34:43  
End at: 2018-02-21 04:35:13  

# Below is generated by plot.py at 2018-02-21 10:26:31  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 149.01 Mbit/s  
95th percentile per-packet one-way delay: 55.614 ms  
Loss rate: 0.43%  
-- Flow 1:  
Average throughput: 63.43 Mbit/s  
95th percentile per-packet one-way delay: 55.289 ms  
Loss rate: 0.27%  
-- Flow 2:  
Average throughput: 110.94 Mbit/s  
95th percentile per-packet one-way delay: 56.080 ms  
Loss rate: 0.49%  
-- Flow 3:  
Average throughput: 36.28 Mbit/s  
95th percentile per-packet one-way delay: 55.598 ms  
Loss rate: 0.97%
Run 4: Report of TCP Vegas — Data Link
Run 5: Statistics of TCP Vegas

Start at: 2018-02-21 04:51:56
End at: 2018-02-21 04:52:26

# Below is generated by plot.py at 2018-02-21 10:26:53
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 225.37 Mbit/s
  95th percentile per-packet one-way delay: 54.786 ms
  Loss rate: 0.55%
-- Flow 1:
  Average throughput: 114.12 Mbit/s
  95th percentile per-packet one-way delay: 54.963 ms
  Loss rate: 0.37%
-- Flow 2:
  Average throughput: 97.81 Mbit/s
  95th percentile per-packet one-way delay: 55.108 ms
  Loss rate: 0.54%
-- Flow 3:
  Average throughput: 140.50 Mbit/s
  95th percentile per-packet one-way delay: 52.261 ms
  Loss rate: 1.02%
Run 5: Report of TCP Vegas — Data Link

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

- **Flow 1 ingress (mean 114.15 Mbit/s)**
- **Flow 1 egress (mean 114.12 Mbit/s)**
- **Flow 2 ingress (mean 97.81 Mbit/s)**
- **Flow 2 egress (mean 97.81 Mbit/s)**
- **Flow 3 ingress (mean 140.51 Mbit/s)**
- **Flow 3 egress (mean 140.50 Mbit/s)**

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

- **Flow 1 (95th percentile 54.96 ms)**
- **Flow 2 (95th percentile 55.11 ms)**
- **Flow 3 (95th percentile 52.26 ms)**
Run 6: Statistics of TCP Vegas

Start at: 2018-02-21 05:09:43
End at: 2018-02-21 05:10:13

# Below is generated by plot.py at 2018-02-21 10:28:25
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 237.40 Mbit/s
  95th percentile per-packet one-way delay: 60.652 ms
  Loss rate: 0.26%
-- Flow 1:
  Average throughput: 143.23 Mbit/s
  95th percentile per-packet one-way delay: 60.987 ms
  Loss rate: 0.18%
-- Flow 2:
  Average throughput: 120.23 Mbit/s
  95th percentile per-packet one-way delay: 59.729 ms
  Loss rate: 0.19%
-- Flow 3:
  Average throughput: 43.52 Mbit/s
  95th percentile per-packet one-way delay: 55.411 ms
  Loss rate: 1.50%
Run 6: Report of TCP Vegas — Data Link
Run 7: Statistics of TCP Vegas

Start at: 2018-02-21 05:27:24
End at: 2018-02-21 05:27:54

# Below is generated by plot.py at 2018-02-21 10:29:39
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 291.04 Mbit/s
  95th percentile per-packet one-way delay: 60.337 ms
  Loss rate: 0.35%
-- Flow 1:
  Average throughput: 161.39 Mbit/s
  95th percentile per-packet one-way delay: 60.925 ms
  Loss rate: 0.16%
-- Flow 2:
  Average throughput: 125.52 Mbit/s
  95th percentile per-packet one-way delay: 57.752 ms
  Loss rate: 0.30%
-- Flow 3:
  Average throughput: 140.96 Mbit/s
  95th percentile per-packet one-way delay: 53.246 ms
  Loss rate: 1.11%

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Run 7: Report of TCP Vegas — Data Link

![Graph of TCP Vegas data link throughput and per-packet one-way delay over time.]
Run 8: Statistics of TCP Vegas

Start at: 2018-02-21 05:45:11
End at: 2018-02-21 05:45:41

# Below is generated by plot.py at 2018-02-21 10:29:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 224.42 Mbit/s
95th percentile per-packet one-way delay: 57.836 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 75.89 Mbit/s
95th percentile per-packet one-way delay: 57.040 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 220.63 Mbit/s
95th percentile per-packet one-way delay: 57.970 ms
Loss rate: 0.49%
-- Flow 3:
Average throughput: 5.74 Mbit/s
95th percentile per-packet one-way delay: 54.850 ms
Loss rate: 2.05%
Run 8: Report of TCP Vegas — Data Link
Run 9: Statistics of TCP Vegas

Start at: 2018-02-21 06:02:43
End at: 2018-02-21 06:03:13

# Below is generated by plot.py at 2018-02-21 10:29:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 187.66 Mbit/s
95th percentile per-packet one-way delay: 55.210 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 59.45 Mbit/s
95th percentile per-packet one-way delay: 55.222 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 180.26 Mbit/s
95th percentile per-packet one-way delay: 55.271 ms
Loss rate: 0.55%
-- Flow 3:
Average throughput: 25.55 Mbit/s
95th percentile per-packet one-way delay: 54.174 ms
Loss rate: 1.16%
Run 9: Report of TCP Vegas — Data Link
Run 10: Statistics of TCP Vegas

Start at: 2018-02-21 06:20:08
End at: 2018-02-21 06:20:38

# Below is generated by plot.py at 2018-02-21 10:29:39
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 168.73 Mbit/s
  95th percentile per-packet one-way delay: 61.473 ms
  Loss rate: 0.40%
-- Flow 1:
  Average throughput: 104.95 Mbit/s
  95th percentile per-packet one-way delay: 61.549 ms
  Loss rate: 0.26%
-- Flow 2:
  Average throughput: 9.28 Mbit/s
  95th percentile per-packet one-way delay: 57.968 ms
  Loss rate: 0.83%
-- Flow 3:
  Average throughput: 174.85 Mbit/s
  95th percentile per-packet one-way delay: 61.292 ms
  Loss rate: 0.59%
Run 10: Report of TCP Vegas — Data Link

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

- Flow 1 ingress (mean 104.86 Mbit/s)
- Flow 1 egress (mean 104.95 Mbit/s)
- Flow 2 ingress (mean 9.31 Mbit/s)
- Flow 2 egress (mean 9.28 Mbit/s)
- Flow 3 ingress (mean 173.98 Mbit/s)
- Flow 3 egress (mean 174.85 Mbit/s)

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

- Flow 1 (95th percentile 61.55 ms)
- Flow 2 (95th percentile 57.97 ms)
- Flow 3 (95th percentile 61.29 ms)
Run 1: Statistics of Verus

Start at: 2018-02-21 03:52:22
End at: 2018-02-21 03:52:52

# Below is generated by plot.py at 2018-02-21 10:31:57
# Datalink statistics
   -- Total of 3 flows:
     Average throughput: 362.63 Mbit/s
     95th percentile per-packet one-way delay: 117.186 ms
     Loss rate: 0.93%
     -- Flow 1:
     Average throughput: 233.84 Mbit/s
     95th percentile per-packet one-way delay: 112.415 ms
     Loss rate: 1.03%
     -- Flow 2:
     Average throughput: 169.83 Mbit/s
     95th percentile per-packet one-way delay: 118.811 ms
     Loss rate: 0.88%
     -- Flow 3:
     Average throughput: 66.52 Mbit/s
     95th percentile per-packet one-way delay: 122.924 ms
     Loss rate: 0.12%

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Run 1: Report of Verus — Data Link
Run 2: Statistics of Verus

Start at: 2018-02-21 04:10:06
End at: 2018-02-21 04:10:36

# Below is generated by plot.py at 2018-02-21 10:32:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 334.31 Mbit/s
95th percentile per-packet one-way delay: 152.040 ms
Loss rate: 1.33%
-- Flow 1:
Average throughput: 172.53 Mbit/s
95th percentile per-packet one-way delay: 157.792 ms
Loss rate: 1.33%
-- Flow 2:
Average throughput: 205.73 Mbit/s
95th percentile per-packet one-way delay: 131.555 ms
Loss rate: 1.12%
-- Flow 3:
Average throughput: 77.82 Mbit/s
95th percentile per-packet one-way delay: 212.702 ms
Loss rate: 2.45%
Run 2: Report of Verus — Data Link
Run 3: Statistics of Verus

Start at: 2018-02-21 04:27:22
End at: 2018-02-21 04:27:52

# Below is generated by plot.py at 2018-02-21 10:32:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 352.86 Mbit/s
95th percentile per-packet one-way delay: 169.892 ms
Loss rate: 0.91%
-- Flow 1:
Average throughput: 240.30 Mbit/s
95th percentile per-packet one-way delay: 180.760 ms
Loss rate: 0.86%
-- Flow 2:
Average throughput: 134.71 Mbit/s
95th percentile per-packet one-way delay: 149.852 ms
Loss rate: 0.43%
-- Flow 3:
Average throughput: 81.62 Mbit/s
95th percentile per-packet one-way delay: 128.708 ms
Loss rate: 3.08%
Run 3: Report of Verus — Data Link

![Graph showing throughput and per-packet one-way delay over time for different flows. The graphs depict fluctuating throughput and delay with time.]

Legend:
- Flow 1 ingress (mean 240.59 Mbit/s)
- Flow 1 egress (mean 240.30 Mbit/s)
- Flow 2 ingress (mean 134.59 Mbit/s)
- Flow 2 egress (mean 134.71 Mbit/s)
- Flow 3 ingress (mean 74.87 Mbit/s)
- Flow 3 egress (mean 81.62 Mbit/s)
Run 4: Statistics of Verus

Start at: 2018-02-21 04:45:13
End at: 2018-02-21 04:45:43

# Below is generated by plot.py at 2018-02-21 10:34:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 342.99 Mbit/s
95th percentile per-packet one-way delay: 164.211 ms
Loss rate: 2.37%
-- Flow 1:
Average throughput: 206.22 Mbit/s
95th percentile per-packet one-way delay: 113.643 ms
Loss rate: 0.99%
-- Flow 2:
Average throughput: 130.12 Mbit/s
95th percentile per-packet one-way delay: 246.712 ms
Loss rate: 5.21%
-- Flow 3:
Average throughput: 153.10 Mbit/s
95th percentile per-packet one-way delay: 129.799 ms
Loss rate: 2.96%
Run 4: Report of Verus — Data Link
Run 5: Statistics of Verus

Start at: 2018-02-21 05:02:27
End at: 2018-02-21 05:02:57

# Below is generated by plot.py at 2018-02-21 10:34:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 338.61 Mbit/s
95th percentile per-packet one-way delay: 214.654 ms
Loss rate: 1.02%
-- Flow 1:
Average throughput: 235.58 Mbit/s
95th percentile per-packet one-way delay: 230.248 ms
Loss rate: 0.91%
-- Flow 2:
Average throughput: 127.95 Mbit/s
95th percentile per-packet one-way delay: 145.090 ms
Loss rate: 1.20%
-- Flow 3:
Average throughput: 61.41 Mbit/s
95th percentile per-packet one-way delay: 161.339 ms
Loss rate: 1.59%
Run 5: Report of Verus — Data Link

![Graph of Throughput and Delay](image)

**Throughput (Mbps)**

- Flow 1 ingress (mean 239.25 Mbps)
- Flow 1 egress (mean 235.58 Mbps)
- Flow 2 ingress (mean 129.13 Mbps)
- Flow 2 egress (mean 127.95 Mbps)
- Flow 3 ingress (mean 54.92 Mbps)
- Flow 3 egress (mean 61.41 Mbps)

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

- Flow 1 (95th percentile 230.25 ms)
- Flow 2 (95th percentile 145.09 ms)
- Flow 3 (95th percentile 161.34 ms)
Run 6: Statistics of Verus

Start at: 2018-02-21 05:20:23
End at: 2018-02-21 05:20:53

# Below is generated by plot.py at 2018-02-21 10:34:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 322.34 Mbit/s
95th percentile per-packet one-way delay: 155.248 ms
Loss rate: 1.24%
-- Flow 1:
Average throughput: 206.46 Mbit/s
95th percentile per-packet one-way delay: 151.242 ms
Loss rate: 0.73%
-- Flow 2:
Average throughput: 110.67 Mbit/s
95th percentile per-packet one-way delay: 207.232 ms
Loss rate: 3.20%
-- Flow 3:
Average throughput: 130.37 Mbit/s
95th percentile per-packet one-way delay: 140.852 ms
Loss rate: 0.19%
Run 6: Report of Verus — Data Link

[Graphs showing throughput and packet delay over time for different flows, with annotations for each flow's ingress and egress mean data rates.]
Run 7: Statistics of Verus

Start at: 2018-02-21 05:38:05
End at: 2018-02-21 05:38:35

# Below is generated by plot.py at 2018-02-21 10:35:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 369.64 Mbit/s
95th percentile per-packet one-way delay: 165.140 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 218.52 Mbit/s
95th percentile per-packet one-way delay: 158.095 ms
Loss rate: 0.50%
-- Flow 2:
Average throughput: 190.51 Mbit/s
95th percentile per-packet one-way delay: 165.538 ms
Loss rate: 0.67%
-- Flow 3:
Average throughput: 83.18 Mbit/s
95th percentile per-packet one-way delay: 176.784 ms
Loss rate: 1.66%
Run 7: Report of Verus — Data Link

![Graph of Throughput vs Time]

- Flow 1 ingress (mean 218.82 Mbit/s)
- Flow 1 egress (mean 218.52 Mbit/s)
- Flow 2 ingress (mean 191.37 Mbit/s)
- Flow 2 egress (mean 190.51 Mbit/s)
- Flow 3 ingress (mean 75.70 Mbit/s)
- Flow 3 egress (mean 83.18 Mbit/s)

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

- Flow 1 (95th percentile 158.09 ms)
- Flow 2 (95th percentile 165.54 ms)
- Flow 3 (95th percentile 170.78 ms)
Run 8: Statistics of Verus

Start at: 2018-02-21 05:55:47
End at: 2018-02-21 05:56:17

# Below is generated by plot.py at 2018-02-21 10:35:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 318.17 Mbit/s
95th percentile per-packet one-way delay: 179.259 ms
Loss rate: 2.62%
-- Flow 1:
Average throughput: 202.60 Mbit/s
95th percentile per-packet one-way delay: 141.114 ms
Loss rate: 1.87%
-- Flow 2:
Average throughput: 123.14 Mbit/s
95th percentile per-packet one-way delay: 148.636 ms
Loss rate: 1.02%
-- Flow 3:
Average throughput: 103.74 Mbit/s
95th percentile per-packet one-way delay: 327.618 ms
Loss rate: 10.29%
Run 8: Report of Verus — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 295.75 Mbps)
  - Flow 1 egress (mean 202.60 Mbps)
  - Flow 2 ingress (mean 124.45 Mbps)
  - Flow 2 egress (mean 123.14 Mbps)
  - Flow 3 ingress (mean 116.15 Mbps)
  - Flow 3 egress (mean 103.74 Mbps)

- **Per-packet one-way delay (ms):**
  - Flow 1 (95th percentile 141.11 ms)
  - Flow 2 (95th percentile 148.64 ms)
  - Flow 3 (95th percentile 327.62 ms)
Run 9: Statistics of Verus

Start at: 2018-02-21 06:13:14
End at: 2018-02-21 06:13:44

# Below is generated by plot.py at 2018-02-21 10:37:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 313.67 Mbit/s
95th percentile per-packet one-way delay: 152.527 ms
Loss rate: 1.54%
-- Flow 1:
Average throughput: 181.81 Mbit/s
95th percentile per-packet one-way delay: 161.830 ms
Loss rate: 1.67%
-- Flow 2:
Average throughput: 139.04 Mbit/s
95th percentile per-packet one-way delay: 137.536 ms
Loss rate: 1.42%
-- Flow 3:
Average throughput: 119.83 Mbit/s
95th percentile per-packet one-way delay: 159.004 ms
Loss rate: 1.20%
Run 9: Report of Verus — Data Link
Run 10: Statistics of Verus

Start at: 2018-02-21 06:30:45
End at: 2018-02-21 06:31:15

# Below is generated by plot.py at 2018-02-21 10:38:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 349.51 Mbit/s
95th percentile per-packet one-way delay: 122.989 ms
Loss rate: 0.95%
-- Flow 1:
Average throughput: 228.13 Mbit/s
95th percentile per-packet one-way delay: 115.898 ms
Loss rate: 1.38%
-- Flow 2:
Average throughput: 139.53 Mbit/s
95th percentile per-packet one-way delay: 196.980 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 87.99 Mbit/s
95th percentile per-packet one-way delay: 101.540 ms
Loss rate: 0.59%
Run 10: Report of Verus — Data Link

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

- **Flow 1 Ingress**: Mean 231.06 Mbit/s
- **Flow 1 Egress**: Mean 228.13 Mbit/s
- **Flow 2 Ingress**: Mean 140.77 Mbit/s
- **Flow 2 Egress**: Mean 139.53 Mbit/s
- **Flow 3 Ingress**: Mean 87.49 Mbit/s
- **Flow 3 Egress**: Mean 87.99 Mbit/s

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

- **Flow 1**: 95th percentile 115.90 ms
- **Flow 2**: 95th percentile 196.98 ms
- **Flow 3**: 95th percentile 101.54 ms
Run 1: Statistics of Copa

Start at: 2018-02-21 03:49:33
End at: 2018-02-21 03:50:03

# Below is generated by plot.py at 2018-02-21 10:47:35
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 399.14 Mbit/s
  95th percentile per-packet one-way delay: 232.226 ms
  Loss rate: 38.98%
-- Flow 1:
  Average throughput: 397.79 Mbit/s
  95th percentile per-packet one-way delay: 232.243 ms
  Loss rate: 39.04%
-- Flow 2:
  Average throughput: 0.65 Mbit/s
  95th percentile per-packet one-way delay: 165.872 ms
  Loss rate: 5.22%
-- Flow 3:
  Average throughput: 2.84 Mbit/s
  95th percentile per-packet one-way delay: 166.792 ms
  Loss rate: 11.27%
Run 1: Report of Copa — Data Link

[Graph showing throughput and delay over time with different flow rates and percentiles]
Run 2: Statistics of Copa

Start at: 2018-02-21 04:07:38
End at: 2018-02-21 04:08:08

# Below is generated by plot.py at 2018-02-21 10:47:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 118.35 Mbit/s
95th percentile per-packet one-way delay: 53.984 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 48.07 Mbit/s
95th percentile per-packet one-way delay: 54.017 ms
Loss rate: 0.71%
-- Flow 2:
Average throughput: 75.73 Mbit/s
95th percentile per-packet one-way delay: 53.813 ms
Loss rate: 0.30%
-- Flow 3:
Average throughput: 60.58 Mbit/s
95th percentile per-packet one-way delay: 54.051 ms
Loss rate: 1.21%
Run 2: Report of Copa — Data Link

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

Legend:
- Flow 1 ingress (mean 48.25 Mbit/s)
- Flow 1 egress (mean 48.07 Mbit/s)
- Flow 2 ingress (mean 75.58 Mbit/s)
- Flow 2 egress (mean 75.73 Mbit/s)
- Flow 3 ingress (mean 60.68 Mbit/s)
- Flow 3 egress (mean 60.58 Mbit/s)

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

Legend:
- Flow 1 (95th percentile 54.02 ms)
- Flow 2 (95th percentile 53.81 ms)
- Flow 3 (95th percentile 54.05 ms)
Run 3: Statistics of Copa

Start at: 2018-02-21 04:24:49
End at: 2018-02-21 04:25:19

# Below is generated by plot.py at 2018-02-21 10:47:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 136.61 Mbit/s
95th percentile per-packet one-way delay: 53.860 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 78.80 Mbit/s
95th percentile per-packet one-way delay: 53.925 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 65.02 Mbit/s
95th percentile per-packet one-way delay: 50.778 ms
Loss rate: 0.46%
-- Flow 3:
Average throughput: 44.29 Mbit/s
95th percentile per-packet one-way delay: 50.387 ms
Loss rate: 1.41%
Run 3: Report of Copa — Data Link

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

- **Throughput**
  - Time (s)
  - Throughput (Mbps)
  - Legend:
    - Flow 1 ingress (mean 78.55 Mbps)
    - Flow 1 egress (mean 78.80 Mbps)
    - Flow 2 ingress (mean 64.99 Mbps)
    - Flow 2 egress (mean 65.02 Mbps)
    - Flow 3 ingress (mean 44.46 Mbps)
    - Flow 3 egress (mean 44.29 Mbps)

- **Packet Loss**
  - Time (s)
  - Per packet one way delay (ms)
  - Legend:
    - Flow 1 (95th percentile 53.92 ms)
    - Flow 2 (95th percentile 50.78 ms)
    - Flow 3 (95th percentile 50.39 ms)
Run 4: Statistics of Copa

Start at: 2018-02-21 04:42:41
End at: 2018-02-21 04:43:11

# Below is generated by plot.py at 2018-02-21 10:47:35
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 151.88 Mbit/s
  95th percentile per-packet one-way delay: 53.927 ms
  Loss rate: 0.44%
-- Flow 1:
  Average throughput: 82.51 Mbit/s
  95th percentile per-packet one-way delay: 53.977 ms
  Loss rate: 0.27%
-- Flow 2:
  Average throughput: 74.35 Mbit/s
  95th percentile per-packet one-way delay: 53.782 ms
  Loss rate: 0.43%
-- Flow 3:
  Average throughput: 60.77 Mbit/s
  95th percentile per-packet one-way delay: 53.332 ms
  Loss rate: 1.18%
Run 4: Report of Copa — Data Link

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

- Flow 1 ingress (mean 82.45 Mbit/s)
- Flow 1 egress (mean 82.51 Mbit/s)
- Flow 2 ingress (mean 74.28 Mbit/s)
- Flow 2 egress (mean 74.35 Mbit/s)
- Flow 3 ingress (mean 60.83 Mbit/s)
- Flow 3 egress (mean 60.77 Mbit/s)
Run 5: Statistics of Copa

Start at: 2018-02-21 04:59:56
End at: 2018-02-21 05:00:26

# Below is generated by plot.py at 2018-02-21 10:47:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 153.55 Mbit/s
95th percentile per-packet one-way delay: 53.745 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 78.83 Mbit/s
95th percentile per-packet one-way delay: 53.769 ms
Loss rate: 0.28%
-- Flow 2:
Average throughput: 81.53 Mbit/s
95th percentile per-packet one-way delay: 53.723 ms
Loss rate: 0.47%
-- Flow 3:
Average throughput: 62.34 Mbit/s
95th percentile per-packet one-way delay: 53.589 ms
Loss rate: 1.16%
Run 5: Report of Copa — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 78.77 Mbps)  Flow 1 egress (mean 78.83 Mbps)
Flow 2 ingress (mean 81.51 Mbps)  Flow 2 egress (mean 81.53 Mbps)
Flow 3 ingress (mean 62.41 Mbps)  Flow 3 egress (mean 62.34 Mbps)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 53.77 ms)  Flow 2 (95th percentile 53.72 ms)  Flow 3 (95th percentile 53.59 ms)
Run 6: Statistics of Copa

Start at: 2018-02-21 05:17:54
End at: 2018-02-21 05:18:24

# Below is generated by plot.py at 2018-02-21 10:47:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 147.99 Mbit/s
95th percentile per-packet one-way delay: 54.007 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 83.26 Mbit/s
95th percentile per-packet one-way delay: 53.899 ms
Loss rate: 0.28%
-- Flow 2:
Average throughput: 58.15 Mbit/s
95th percentile per-packet one-way delay: 54.110 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 79.20 Mbit/s
95th percentile per-packet one-way delay: 53.873 ms
Loss rate: 1.58%
Run 7: Statistics of Copa

Start at: 2018-02-21 05:35:36
End at: 2018-02-21 05:36:06

# Below is generated by plot.py at 2018-02-21 10:47:35
# Datalink statistics
-- Total of 3 flows:  
Average throughput: 124.24 Mbit/s  
95th percentile per-packet one-way delay: 53.883 ms  
Loss rate: 0.53%  
-- Flow 1:  
Average throughput: 52.29 Mbit/s  
95th percentile per-packet one-way delay: 53.821 ms  
Loss rate: 0.05%  
-- Flow 2:  
Average throughput: 77.00 Mbit/s  
95th percentile per-packet one-way delay: 53.868 ms  
Loss rate: 0.53%  
-- Flow 3:  
Average throughput: 63.11 Mbit/s  
95th percentile per-packet one-way delay: 53.990 ms  
Loss rate: 1.70%
Run 7: Report of Copa — Data Link

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

- Flow 1 ingress (mean 52.13 Mbit/s)
- Flow 1 egress (mean 52.29 Mbit/s)
- Flow 2 ingress (mean 77.00 Mbit/s)
- Flow 2 egress (mean 77.00 Mbit/s)
- Flow 3 ingress (mean 63.50 Mbit/s)
- Flow 3 egress (mean 63.11 Mbit/s)

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

- Flow 1 (95th percentile 53.82 ms)
- Flow 2 (95th percentile 53.87 ms)
- Flow 3 (95th percentile 53.99 ms)
Run 8: Statistics of Copa

Start at: 2018-02-21 05:53:15
End at: 2018-02-21 05:53:45

# Below is generated by plot.py at 2018-02-21 10:47:35
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 140.20 Mbit/s
  95th percentile per-packet one-way delay: 53.974 ms
  Loss rate: 0.54%
-- Flow 1:
  Average throughput: 77.18 Mbit/s
  95th percentile per-packet one-way delay: 53.980 ms
  Loss rate: 0.40%
-- Flow 2:
  Average throughput: 72.80 Mbit/s
  95th percentile per-packet one-way delay: 53.982 ms
  Loss rate: 0.39%
-- Flow 3:
  Average throughput: 44.42 Mbit/s
  95th percentile per-packet one-way delay: 50.987 ms
  Loss rate: 1.81%
Run 8: Report of Copa — Data Link

![Graph showing network performance metrics over time.]
Run 9: Statistics of Copa

Start at: 2018-02-21 06:10:45
End at: 2018-02-21 06:11:15

# Below is generated by plot.py at 2018-02-21 10:47:35
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 148.84 Mbit/s
  95th percentile per-packet one-way delay: 54.133 ms
  Loss rate: 0.49%
-- Flow 1:
  Average throughput: 100.48 Mbit/s
  95th percentile per-packet one-way delay: 54.044 ms
  Loss rate: 0.47%
-- Flow 2:
  Average throughput: 46.59 Mbit/s
  95th percentile per-packet one-way delay: 54.129 ms
  Loss rate: 0.10%
-- Flow 3:
  Average throughput: 52.91 Mbit/s
  95th percentile per-packet one-way delay: 54.357 ms
  Loss rate: 1.29%
Run 9: Report of Copa — Data Link
Run 10: Statistics of Copa

Start at: 2018-02-21 06:28:13
End at: 2018-02-21 06:28:43

# Below is generated by plot.py at 2018-02-21 10:47:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 144.04 Mbit/s
95th percentile per-packet one-way delay: 54.140 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 75.81 Mbit/s
95th percentile per-packet one-way delay: 54.193 ms
Loss rate: 0.15%
-- Flow 2:
Average throughput: 69.92 Mbit/s
95th percentile per-packet one-way delay: 53.889 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 66.05 Mbit/s
95th percentile per-packet one-way delay: 54.158 ms
Loss rate: 1.65%
Run 10: Report of Copa — Data Link
Run 1: Statistics of FillP

Start at: 2018-02-21 03:50:46
End at: 2018-02-21 03:51:16

# Below is generated by plot.py at 2018-02-21 11:04:57
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1441.15 Mbit/s
  95th percentile per-packet one-way delay: 297.156 ms
  Loss rate: 8.52%
-- Flow 1:
  Average throughput: 765.36 Mbit/s
  95th percentile per-packet one-way delay: 217.460 ms
  Loss rate: 9.57%
-- Flow 2:
  Average throughput: 743.70 Mbit/s
  95th percentile per-packet one-way delay: 314.312 ms
  Loss rate: 6.05%
-- Flow 3:
  Average throughput: 553.17 Mbit/s
  95th percentile per-packet one-way delay: 326.241 ms
  Loss rate: 10.54%
Run 1: Report of FillP — Data Link

![Throughput Graph](image)

- **Flow 1 Ingress** (mean 843.53 Mb/s)
- **Flow 1 Egress** (mean 765.36 Mb/s)
- **Flow 2 Ingress** (mean 787.47 Mb/s)
- **Flow 2 Egress** (mean 743.70 Mb/s)
- **Flow 3 Ingress** (mean 611.78 Mb/s)
- **Flow 3 Egress** (mean 553.17 Mb/s)

![Delay Graph](image)

- **Flow 1 (95th percentile 217.46 ms)**
- **Flow 2 (95th percentile 314.31 ms)**
- **Flow 3 (95th percentile 326.24 ms)**

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Run 2: Statistics of FillP

Start at: 2018-02-21 04:08:29
End at: 2018-02-21 04:08:59

# Below is generated by plot.py at 2018-02-21 11:07:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1452.49 Mbit/s
95th percentile per-packet one-way delay: 276.370 ms
Loss rate: 10.94%
-- Flow 1:
Average throughput: 763.34 Mbit/s
95th percentile per-packet one-way delay: 285.016 ms
Loss rate: 11.53%
-- Flow 2:
Average throughput: 701.54 Mbit/s
95th percentile per-packet one-way delay: 204.429 ms
Loss rate: 10.68%
-- Flow 3:
Average throughput: 680.91 Mbit/s
95th percentile per-packet one-way delay: 170.127 ms
Loss rate: 9.41%
Run 2: Report of FillP — Data Link

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

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

Legend:
- Flow 1 Ingress (mean 859.88 Mbps/s)
- Flow 1 Egress (mean 763.34 Mbps/s)
- Flow 2 Ingress (mean 783.44 Mbps/s)
- Flow 2 Egress (mean 793.54 Mbps/s)
- Flow 3 Ingress (mean 743.64 Mbps/s)
- Flow 3 Egress (mean 680.91 Mbps/s)

Legend:
- Flow 1 (95th percentile 285.02 ms)
- Flow 2 (95th percentile 204.13 ms)
- Flow 3 (95th percentile 170.13 ms)
Run 3: Statistics of FillP

Start at: 2018-02-21 04:25:42
End at: 2018-02-21 04:26:12

# Below is generated by plot.py at 2018-02-21 11:07:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1354.77 Mbit/s
  95th percentile per-packet one-way delay: 331.101 ms
  Loss rate: 8.97%
-- Flow 1:
  Average throughput: 743.23 Mbit/s
  95th percentile per-packet one-way delay: 312.131 ms
  Loss rate: 6.30%
-- Flow 2:
  Average throughput: 616.06 Mbit/s
  95th percentile per-packet one-way delay: 353.105 ms
  Loss rate: 13.12%
-- Flow 3:
  Average throughput: 616.49 Mbit/s
  95th percentile per-packet one-way delay: 210.705 ms
  Loss rate: 9.70%
Run 3: Report of FillP — Data Link

[Image of two graphs showing network performance metrics over time]
Run 4: Statistics of FillP

Start at: 2018-02-21 04:43:35
End at: 2018-02-21 04:44:05

# Below is generated by plot.py at 2018-02-21 11:09:05
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1488.53 Mbit/s
  95th percentile per-packet one-way delay: 277.633 ms
  Loss rate: 11.16%
-- Flow 1:
  Average throughput: 782.74 Mbit/s
  95th percentile per-packet one-way delay: 306.032 ms
  Loss rate: 9.49%
-- Flow 2:
  Average throughput: 766.13 Mbit/s
  95th percentile per-packet one-way delay: 222.147 ms
  Loss rate: 8.22%
-- Flow 3:
  Average throughput: 637.11 Mbit/s
  95th percentile per-packet one-way delay: 219.194 ms
  Loss rate: 23.16%
Run 4: Report of FillP — Data Link

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

- **Flow 1 Ingress** (mean 861.74 Mbit/s)
- **Flow 1 Egress** (mean 782.74 Mbit/s)
- **Flow 2 Ingress** (mean 830.50 Mbit/s)
- **Flow 2 Egress** (mean 766.13 Mbit/s)
- **Flow 3 Ingress** (mean 770.37 Mbit/s)
- **Flow 3 Egress** (mean 637.11 Mbit/s)

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

- **Flow 1 95th percentile 306.03 ms**
- **Flow 2 95th percentile 222.15 ms**
- **Flow 3 95th percentile 219.19 ms**
Run 5: Statistics of FillP

Start at: 2018-02-21 05:00:50
End at: 2018-02-21 05:01:20

# Below is generated by plot.py at 2018-02-21 11:09:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1483.96 Mbit/s
95th percentile per-packet one-way delay: 190.215 ms
Loss rate: 12.37%
-- Flow 1:
Average throughput: 791.99 Mbit/s
95th percentile per-packet one-way delay: 159.170 ms
Loss rate: 10.29%
-- Flow 2:
Average throughput: 731.71 Mbit/s
95th percentile per-packet one-way delay: 261.425 ms
Loss rate: 13.61%
-- Flow 3:
Average throughput: 628.25 Mbit/s
95th percentile per-packet one-way delay: 201.779 ms
Loss rate: 16.94%
Run 5: Report of FillP — Data Link

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**Throughput (Mbps)**

![Graph of Throughput](image)

Legend:
- Flow 1 Ingress (mean 879.70 Mbps)
- Flow 1 Egress (mean 791.99 Mbps)
- Flow 2 Ingress (mean 842.70 Mbps)
- Flow 2 Egress (mean 732.71 Mbps)
- Flow 3 Ingress (mean 748.17 Mbps)
- Flow 3 Egress (mean 628.25 Mbps)

---

**Packet Delay (ms)**

![Graph of Packet Delay](image)

Legend:
- Flow 1 (95th percentile 159.17 ms)
- Flow 2 (95th percentile 261.43 ms)
- Flow 3 (95th percentile 201.78 ms)
Run 6: Statistics of FillIP

Start at: 2018-02-21 05:18:45
End at: 2018-02-21 05:19:15

# Below is generated by plot.py at 2018-02-21 11:11:51
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1539.03 Mbit/s
  95th percentile per-packet one-way delay: 248.343 ms
  Loss rate: 9.64%
-- Flow 1:
  Average throughput: 777.19 Mbit/s
  95th percentile per-packet one-way delay: 248.522 ms
  Loss rate: 10.01%
-- Flow 2:
  Average throughput: 816.19 Mbit/s
  95th percentile per-packet one-way delay: 237.876 ms
  Loss rate: 6.94%
-- Flow 3:
  Average throughput: 667.95 Mbit/s
  95th percentile per-packet one-way delay: 254.292 ms
  Loss rate: 14.52%
Run 6: Report of FillP — Data Link

![Graph showing network traffic and delay trends over time.](image)
Run 7: Statistics of FillP

Start at: 2018-02-21 05:36:28
End at: 2018-02-21 05:36:58

# Below is generated by plot.py at 2018-02-21 11:11:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1497.21 Mbit/s
95th percentile per-packet one-way delay: 273.600 ms
Loss rate: 9.57%
-- Flow 1:
Average throughput: 773.64 Mbit/s
95th percentile per-packet one-way delay: 274.497 ms
Loss rate: 8.35%
-- Flow 2:
Average throughput: 738.02 Mbit/s
95th percentile per-packet one-way delay: 278.212 ms
Loss rate: 10.53%
-- Flow 3:
Average throughput: 710.06 Mbit/s
95th percentile per-packet one-way delay: 170.922 ms
Loss rate: 11.46%
Run 7: Report of FillP — Data Link

![Throughput Graph](image1)

- Flow 1 ingress (mean 840.36 Mbit/s)
- Flow 1 egress (mean 773.84 Mbit/s)
- Flow 2 ingress (mean 819.28 Mbit/s)
- Flow 2 egress (mean 738.02 Mbit/s)
- Flow 3 ingress (mean 791.35 Mbit/s)
- Flow 3 egress (mean 710.06 Mbit/s)

![Packet Delay Graph](image2)

- Flow 1 (95th percentile 274.50 ms)
- Flow 2 (95th percentile 278.21 ms)
- Flow 3 (95th percentile 170.92 ms)
Run 8: Statistics of FillP

Start at: 2018-02-21 05:54:07
End at: 2018-02-21 05:54:37

# Below is generated by plot.py at 2018-02-21 11:13:18
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1232.70 Mbit/s
  95th percentile per-packet one-way delay: 358.267 ms
  Loss rate: 11.64%
-- Flow 1:
  Average throughput: 704.08 Mbit/s
  95th percentile per-packet one-way delay: 329.941 ms
  Loss rate: 10.15%
-- Flow 2:
  Average throughput: 577.20 Mbit/s
  95th percentile per-packet one-way delay: 362.026 ms
  Loss rate: 13.16%
-- Flow 3:
  Average throughput: 446.19 Mbit/s
  95th percentile per-packet one-way delay: 396.848 ms
  Loss rate: 14.51%
Run 8: Report of FillP — Data Link

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

- Flow 1 Ingress (mean 780.89 Mbps)
- Flow 1 Egress (mean 704.08 Mbps)
- Flow 2 Ingress (mean 663.13 Mbps)
- Flow 2 Egress (mean 577.20 Mbps)
- Flow 3 Ingress (mean 510.06 Mbps)
- Flow 3 Egress (mean 446.19 Mbps)

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

- Flow 1 (95th percentile 329.94 ms)
- Flow 2 (95th percentile 362.03 ms)
- Flow 3 (95th percentile 396.05 ms)
Run 9: Statistics of FillP

Start at: 2018-02-21 06:11:36
End at: 2018-02-21 06:12:06

# Below is generated by plot.py at 2018-02-21 11:36:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1547.85 Mbit/s
95th percentile per-packet one-way delay: 219.189 ms
Loss rate: 10.21%
-- Flow 1:
Average throughput: 818.82 Mbit/s
95th percentile per-packet one-way delay: 211.346 ms
Loss rate: 8.85%
-- Flow 2:
Average throughput: 806.20 Mbit/s
95th percentile per-packet one-way delay: 217.114 ms
Loss rate: 8.62%
-- Flow 3:
Average throughput: 588.90 Mbit/s
95th percentile per-packet one-way delay: 297.279 ms
Loss rate: 19.20%
Run 9: Report of FillP — Data Link

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

- Flow 1 ingress (mean 895.64 Mbit/s)
- Flow 1 egress (mean 818.82 Mbit/s)
- Flow 2 ingress (mean 877.64 Mbit/s)
- Flow 2 egress (mean 806.20 Mbit/s)
- Flow 3 ingress (mean 720.81 Mbit/s)
- Flow 3 egress (mean 588.90 Mbit/s)
Run 10: Statistics of FillP

Start at: 2018-02-21 06:29:05
End at: 2018-02-21 06:29:35

# Below is generated by plot.py at 2018-02-21 11:37:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1598.75 Mbit/s
95th percentile per-packet one-way delay: 237.824 ms
Loss rate: 7.90%
-- Flow 1:
Average throughput: 835.82 Mbit/s
95th percentile per-packet one-way delay: 168.591 ms
Loss rate: 8.09%
-- Flow 2:
Average throughput: 837.79 Mbit/s
95th percentile per-packet one-way delay: 274.823 ms
Loss rate: 4.93%
-- Flow 3:
Average throughput: 626.90 Mbit/s
95th percentile per-packet one-way delay: 298.003 ms
Loss rate: 14.38%
Run 10: Report of FillIP — Data Link

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

Legend:
- Flow 1 Ingress (mean 906.23 Mbit/s)
- Flow 1 Egress (mean 855.82 Mbit/s)
- Flow 2 Ingress (mean 876.53 Mbit/s)
- Flow 2 Egress (mean 837.79 Mbit/s)
- Flow 3 Ingress (mean 724.37 Mbit/s)
- Flow 3 Egress (mean 626.90 Mbit/s)
Run 1: Statistics of Indigo-1-32

Start at: 2018-02-21 03:43:59
End at: 2018-02-21 03:44:29

# Below is generated by plot.py at 2018-02-21 11:37:36
# Datalink statistics
  -- Total of 3 flows:
    Average throughput: 337.86 Mbit/s
    95th percentile per-packet one-way delay: 62.730 ms
    Loss rate: 0.52%
  -- Flow 1:
    Average throughput: 180.18 Mbit/s
    95th percentile per-packet one-way delay: 61.924 ms
    Loss rate: 0.35%
  -- Flow 2:
    Average throughput: 163.92 Mbit/s
    95th percentile per-packet one-way delay: 62.224 ms
    Loss rate: 0.52%
  -- Flow 3:
    Average throughput: 150.80 Mbit/s
    95th percentile per-packet one-way delay: 64.627 ms
    Loss rate: 1.12%
Run 1: Report of Indigo-1-32 — Data Link
Run 2: Statistics of Indigo-1-32

Start at: 2018-02-21 04:02:12
End at: 2018-02-21 04:02:42

# Below is generated by plot.py at 2018-02-21 11:37:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 333.58 Mbit/s
95th percentile per-packet one-way delay: 55.327 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 179.31 Mbit/s
95th percentile per-packet one-way delay: 54.940 ms
Loss rate: 0.29%
-- Flow 2:
Average throughput: 164.90 Mbit/s
95th percentile per-packet one-way delay: 55.542 ms
Loss rate: 0.43%
-- Flow 3:
Average throughput: 138.68 Mbit/s
95th percentile per-packet one-way delay: 56.190 ms
Loss rate: 1.11%
Run 2: Report of Indigo-1-32 — Data Link
Run 3: Statistics of Indigo-1-32

Start at: 2018-02-21 04:19:24
End at: 2018-02-21 04:19:54

# Below is generated by plot.py at 2018-02-21 11:37:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 334.15 Mbit/s
95th percentile per-packet one-way delay: 56.773 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 180.14 Mbit/s
95th percentile per-packet one-way delay: 55.912 ms
Loss rate: 0.29%
-- Flow 2:
Average throughput: 158.81 Mbit/s
95th percentile per-packet one-way delay: 56.790 ms
Loss rate: 0.57%
-- Flow 3:
Average throughput: 149.49 Mbit/s
95th percentile per-packet one-way delay: 57.840 ms
Loss rate: 0.97%
Run 3: Report of Indigo-1-32 — Data Link

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

- **Throughput (Mbps)**: The top graph shows the throughput over time for different flows, with markers indicating specific time points.
- **Per-packet round-trip delay (ms)**: The bottom graph shows the per-packet round-trip delay for each flow, with markers indicating specific time points.

Legend:
- Flow 1 ingress (mean 180.04 Mbps) — Flow 1 egress (mean 180.14 Mbps)
- Flow 2 ingress (mean 158.91 Mbps) — Flow 2 egress (mean 158.81 Mbps)
- Flow 3 ingress (mean 149.39 Mbps) — Flow 3 egress (mean 149.49 Mbps)

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Run 4: Statistics of Indigo-1-32

Start at: 2018-02-21 04:37:13
End at: 2018-02-21 04:37:43

# Below is generated by plot.py at 2018-02-21 11:37:36
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 332.53 Mbit/s
  95th percentile per-packet one-way delay: 55.276 ms
  Loss rate: 0.50%
-- Flow 1:
  Average throughput: 174.86 Mbit/s
  95th percentile per-packet one-way delay: 55.155 ms
  Loss rate: 0.36%
-- Flow 2:
  Average throughput: 166.85 Mbit/s
  95th percentile per-packet one-way delay: 55.496 ms
  Loss rate: 0.46%
-- Flow 3:
  Average throughput: 145.66 Mbit/s
  95th percentile per-packet one-way delay: 55.189 ms
  Loss rate: 1.14%
Run 4: Report of Indigo-1-32 — Data Link

**Throughput vs Time**
- Flow 1 ingress (mean 174.86 Mbit/s)
- Flow 1 egress (mean 174.86 Mbit/s)
- Flow 2 ingress (mean 166.72 Mbit/s)
- Flow 2 egress (mean 166.85 Mbit/s)
- Flow 3 ingress (mean 145.81 Mbit/s)
- Flow 3 egress (mean 145.66 Mbit/s)

**Per-packet one-way delay vs Time**
- Flow 1 (95th percentile 55.16 ms)
- Flow 2 (95th percentile 55.50 ms)
- Flow 3 (95th percentile 55.19 ms)
Run 5: Statistics of Indigo-1-32

Start at: 2018-02-21 04:54:26
End at: 2018-02-21 04:54:56

# Below is generated by plot.py at 2018-02-21 11:37:36
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 337.07 Mbit/s
  95th percentile per-packet one-way delay: 54.369 ms
  Loss rate: 0.46%
-- Flow 1:
  Average throughput: 183.80 Mbit/s
  95th percentile per-packet one-way delay: 53.198 ms
  Loss rate: 0.27%
-- Flow 2:
  Average throughput: 162.33 Mbit/s
  95th percentile per-packet one-way delay: 54.826 ms
  Loss rate: 0.49%
-- Flow 3:
  Average throughput: 140.35 Mbit/s
  95th percentile per-packet one-way delay: 55.604 ms
  Loss rate: 1.12%
Run 5: Report of Indigo-1-32 — Data Link

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

- Flow 1 ingress (mean 183.67 Mbps)
- Flow 1 egress (mean 183.80 Mbps)
- Flow 2 ingress (mean 162.29 Mbps)
- Flow 2 egress (mean 162.33 Mbps)
- Flow 3 ingress (mean 140.45 Mbps)
- Flow 3 egress (mean 140.35 Mbps)

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

- Flow 1 (95th percentile 53.20 ms)
- Flow 2 (95th percentile 54.83 ms)
- Flow 3 (95th percentile 55.60 ms)
Run 6: Statistics of Indigo-1-32

Start at: 2018-02-21 05:12:16  
End at: 2018-02-21 05:12:46

# Below is generated by plot.py at 2018-02-21 11:37:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 351.06 Mbit/s
95th percentile per-packet one-way delay: 56.413 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 191.25 Mbit/s
95th percentile per-packet one-way delay: 55.670 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 167.98 Mbit/s
95th percentile per-packet one-way delay: 56.703 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 150.28 Mbit/s
95th percentile per-packet one-way delay: 57.408 ms
Loss rate: 1.12%
Run 6: Report of Indigo-1-32 — Data Link

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

![Graph of Per-packet one-way delay (ms)](image2)
Run 7: Statistics of Indigo-1-32

Start at: 2018-02-21 05:29:59
End at: 2018-02-21 05:30:29

# Below is generated by plot.py at 2018-02-21 11:37:36
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 343.12 Mbit/s
  95th percentile per-packet one-way delay: 54.968 ms
  Loss rate: 0.47%
-- Flow 1:
  Average throughput: 186.76 Mbit/s
  95th percentile per-packet one-way delay: 54.706 ms
  Loss rate: 0.27%
-- Flow 2:
  Average throughput: 163.75 Mbit/s
  95th percentile per-packet one-way delay: 54.962 ms
  Loss rate: 0.50%
-- Flow 3:
  Average throughput: 148.62 Mbit/s
  95th percentile per-packet one-way delay: 55.443 ms
  Loss rate: 1.19%
Run 7: Report of Indigo-1-32 — Data Link
Run 8: Statistics of Indigo-1-32

Start at: 2018-02-21 05:47:43
End at: 2018-02-21 05:48:13

# Below is generated by plot.py at 2018-02-21 11:37:36
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 336.18 Mbit/s
  95th percentile per-packet one-way delay: 82.639 ms
  Loss rate: 0.53%
-- Flow 1:
  Average throughput: 178.77 Mbit/s
  95th percentile per-packet one-way delay: 79.234 ms
  Loss rate: 0.34%
-- Flow 2:
  Average throughput: 174.15 Mbit/s
  95th percentile per-packet one-way delay: 83.037 ms
  Loss rate: 0.52%
-- Flow 3:
  Average throughput: 130.82 Mbit/s
  95th percentile per-packet one-way delay: 86.229 ms
  Loss rate: 1.33%
Run 8: Report of Indigo-1-32 — Data Link
Run 9: Statistics of Indigo-1-32

Start at: 2018-02-21 06:05:09
End at: 2018-02-21 06:05:39

# Below is generated by plot.py at 2018-02-21 11:37:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 331.98 Mbit/s
95th percentile per-packet one-way delay: 60.123 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 173.15 Mbit/s
95th percentile per-packet one-way delay: 56.963 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 167.21 Mbit/s
95th percentile per-packet one-way delay: 60.571 ms
Loss rate: 0.49%
-- Flow 3:
Average throughput: 147.20 Mbit/s
95th percentile per-packet one-way delay: 64.513 ms
Loss rate: 1.26%
Run 9: Report of Indigo-1-32 — Data Link

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**Throughput Graph**

- **Flow 1 ingress (mean 173.19 Mbps)**
- **Flow 1 egress (mean 173.15 Mbps)**
- **Flow 2 ingress (mean 167.15 Mbps)**
- **Flow 2 egress (mean 167.21 Mbps)**
- **Flow 3 ingress (mean 147.52 Mbps)**
- **Flow 3 egress (mean 147.20 Mbps)**

**End-to-End Delay Graph**

- **Flow 1 (95th percentile 56.96 ms)**
- **Flow 2 (95th percentile 60.57 ms)**
- **Flow 3 (95th percentile 64.51 ms)**
Run 10: Statistics of Indigo-1-32

Start at: 2018-02-21 06:22:38
End at: 2018-02-21 06:23:09

# Below is generated by plot.py at 2018-02-21 11:37:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 351.55 Mbit/s
95th percentile per-packet one-way delay: 57.984 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 188.94 Mbit/s
95th percentile per-packet one-way delay: 57.181 ms
Loss rate: 0.29%
-- Flow 2:
Average throughput: 167.75 Mbit/s
95th percentile per-packet one-way delay: 57.824 ms
Loss rate: 0.50%
-- Flow 3:
Average throughput: 155.82 Mbit/s
95th percentile per-packet one-way delay: 60.318 ms
Loss rate: 1.36%
Run 10: Report of Indigo-1-32 — Data Link
Run 1: Statistics of Vivace-latency

Start at: 2018-02-21 03:48:18
End at: 2018-02-21 03:48:48

# Below is generated by plot.py at 2018-02-21 11:37:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 528.30 Mbit/s
95th percentile per-packet one-way delay: 111.494 ms
Loss rate: 0.87%
-- Flow 1:
Average throughput: 299.71 Mbit/s
95th percentile per-packet one-way delay: 118.215 ms
Loss rate: 0.85%
-- Flow 2:
Average throughput: 259.90 Mbit/s
95th percentile per-packet one-way delay: 109.319 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 172.10 Mbit/s
95th percentile per-packet one-way delay: 52.588 ms
Loss rate: 1.94%
Run 1: Report of Vivace-latency — Data Link

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

- **Flow 1 ingress** (mean 300.89 Mbit/s)
- **Flow 1 egress** (mean 299.71 Mbit/s)
- **Flow 2 ingress** (mean 259.60 Mbit/s)
- **Flow 2 egress** (mean 259.90 Mbit/s)
- **Flow 3 ingress** (mean 171.25 Mbit/s)
- **Flow 3 egress** (mean 172.10 Mbit/s)
Run 2: Statistics of Vivace-latency

Start at: 2018-02-21 04:06:25
End at: 2018-02-21 04:06:55

# Below is generated by plot.py at 2018-02-21 11:37:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 482.81 Mbit/s
95th percentile per-packet one-way delay: 59.725 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 265.45 Mbit/s
95th percentile per-packet one-way delay: 57.004 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 314.12 Mbit/s
95th percentile per-packet one-way delay: 67.774 ms
Loss rate: 0.59%
-- Flow 3:
Average throughput: 26.55 Mbit/s
95th percentile per-packet one-way delay: 54.123 ms
Loss rate: 2.66%
Run 2: Report of Vivace-latency — Data Link

![Graph of throughput and per-packet one-way delay over time for different flows]
Run 3: Statistics of Vivace-latency

Start at: 2018-02-21 04:23:36
End at: 2018-02-21 04:24:06

# Below is generated by plot.py at 2018-02-21 11:37:36
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 505.66 Mbit/s
  95th percentile per-packet one-way delay: 52.802 ms
  Loss rate: 0.48%
-- Flow 1:
  Average throughput: 324.48 Mbit/s
  95th percentile per-packet one-way delay: 52.386 ms
  Loss rate: 0.38%
-- Flow 2:
  Average throughput: 261.62 Mbit/s
  95th percentile per-packet one-way delay: 51.023 ms
  Loss rate: 0.61%
-- Flow 3:
  Average throughput: 23.33 Mbit/s
  95th percentile per-packet one-way delay: 55.039 ms
  Loss rate: 2.14%
Run 3: Report of Vivace-latency — Data Link

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

- Flow 1 ingress (mean 324.52 Mbit/s)
- Flow 1 egress (mean 324.48 Mbit/s)
- Flow 2 ingress (mean 261.88 Mbit/s)
- Flow 2 egress (mean 261.62 Mbit/s)
- Flow 3 ingress (mean 23.38 Mbit/s)
- Flow 3 egress (mean 23.33 Mbit/s)

- Per-packet one-way delay (ms):
  - Flow 1 (95th percentile 52.39 ms)
  - Flow 2 (95th percentile 51.02 ms)
  - Flow 3 (95th percentile 55.04 ms)
Run 4: Statistics of Vivace-latency

Start at: 2018-02-21 04:41:29
End at: 2018-02-21 04:41:59

# Below is generated by plot.py at 2018-02-21 11:37:36
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 477.76 Mbit/s
  95th percentile per-packet one-way delay: 58.741 ms
  Loss rate: 0.39%
-- Flow 1:
  Average throughput: 315.63 Mbit/s
  95th percentile per-packet one-way delay: 65.941 ms
  Loss rate: 0.28%
-- Flow 2:
  Average throughput: 231.66 Mbit/s
  95th percentile per-packet one-way delay: 52.205 ms
  Loss rate: 0.56%
-- Flow 3:
  Average throughput: 26.28 Mbit/s
  95th percentile per-packet one-way delay: 54.061 ms
  Loss rate: 1.36%
Run 4: Report of Vivace-latency — Data Link

Throughput (Mbit/s)

<table>
<thead>
<tr>
<th>Flow</th>
<th>Ingress (Mean)</th>
<th>Egress (Mean)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow 1</td>
<td>315.43 Mbit/s</td>
<td>315.63 Mbit/s</td>
</tr>
<tr>
<td>Flow 2</td>
<td>231.74 Mbit/s</td>
<td>231.66 Mbit/s</td>
</tr>
<tr>
<td>Flow 3</td>
<td>26.35 Mbit/s</td>
<td>26.29 Mbit/s</td>
</tr>
</tbody>
</table>

Per-packet one-way delay (ms)

<table>
<thead>
<tr>
<th>Flow</th>
<th>95th Percentile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow 1</td>
<td>65.94 ms</td>
</tr>
<tr>
<td>Flow 2</td>
<td>52.20 ms</td>
</tr>
<tr>
<td>Flow 3</td>
<td>54.06 ms</td>
</tr>
</tbody>
</table>
Run 5: Statistics of Vivace-latency

Start at: 2018-02-21 04:58:40
End at: 2018-02-21 04:59:10

# Below is generated by plot.py at 2018-02-21 11:37:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 533.68 Mbit/s
95th percentile per-packet one-way delay: 61.660 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 354.36 Mbit/s
95th percentile per-packet one-way delay: 59.621 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 227.71 Mbit/s
95th percentile per-packet one-way delay: 102.167 ms
Loss rate: 0.59%
-- Flow 3:
Average throughput: 86.82 Mbit/s
95th percentile per-packet one-way delay: 54.203 ms
Loss rate: 1.69%
Run 5: Report of Vivace-latency — Data Link

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

Throughput (Mb/s)

- Flow 1 ingress (mean 354.21 Mb/s)
- Flow 1 egress (mean 354.36 Mb/s)
- Flow 2 ingress (mean 227.84 Mb/s)
- Flow 2 egress (mean 227.71 Mb/s)
- Flow 3 ingress (mean 87.43 Mb/s)
- Flow 3 egress (mean 86.82 Mb/s)

Packet per packet one way delay (ms)

- Flow 1 (95th percentile 59.62 ms)
- Flow 2 (95th percentile 102.17 ms)
- Flow 3 (95th percentile 54.20 ms)
Run 6: Statistics of Vivace-latency

Start at: 2018-02-21 05:16:40
End at: 2018-02-21 05:17:10

# Below is generated by plot.py at 2018-02-21 11:37:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 502.32 Mbit/s
95th percentile per-packet one-way delay: 58.927 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 280.81 Mbit/s
95th percentile per-packet one-way delay: 93.574 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 290.87 Mbit/s
95th percentile per-packet one-way delay: 53.114 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 87.48 Mbit/s
95th percentile per-packet one-way delay: 54.367 ms
Loss rate: 1.41%
Run 6: Report of Vivace-latency — Data Link
Run 7: Statistics of Vivace-latency

Start at: 2018-02-21 05:34:18
End at: 2018-02-21 05:34:48

# Below is generated by plot.py at 2018-02-21 11:38:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 569.21 Mbit/s
95th percentile per-packet one-way delay: 55.225 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 325.71 Mbit/s
95th percentile per-packet one-way delay: 54.988 ms
Loss rate: 0.27%
-- Flow 2:
Average throughput: 286.41 Mbit/s
95th percentile per-packet one-way delay: 54.341 ms
Loss rate: 0.25%
-- Flow 3:
Average throughput: 163.46 Mbit/s
95th percentile per-packet one-way delay: 76.481 ms
Loss rate: 1.81%
Run 7: Report of Vivace-latency — Data Link

![Graphs showing data link performance metrics over time]
Run 8: Statistics of Vivace-latency

Start at: 2018-02-21 05:52:01
End at: 2018-02-21 05:52:31

# Below is generated by plot.py at 2018-02-21 11:38:11
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 507.10 Mbit/s
  95th percentile per-packet one-way delay: 56.305 ms
  Loss rate: 0.52%
-- Flow 1:
  Average throughput: 318.73 Mbit/s
  95th percentile per-packet one-way delay: 56.889 ms
  Loss rate: 0.46%
-- Flow 2:
  Average throughput: 267.58 Mbit/s
  95th percentile per-packet one-way delay: 55.630 ms
  Loss rate: 0.52%
-- Flow 3:
  Average throughput: 32.89 Mbit/s
  95th percentile per-packet one-way delay: 51.472 ms
  Loss rate: 2.29%
Run 9: Statistics of Vivace-latency

Start at: 2018-02-21 06:09:30
End at: 2018-02-21 06:10:00

# Below is generated by plot.py at 2018-02-21 11:38:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 520.45 Mbit/s
95th percentile per-packet one-way delay: 70.571 ms
Loss rate: 1.02%
-- Flow 1:
Average throughput: 312.13 Mbit/s
95th percentile per-packet one-way delay: 122.034 ms
Loss rate: 1.26%
-- Flow 2:
Average throughput: 295.65 Mbit/s
95th percentile per-packet one-way delay: 53.502 ms
Loss rate: 0.55%
-- Flow 3:
Average throughput: 36.98 Mbit/s
95th percentile per-packet one-way delay: 54.208 ms
Loss rate: 2.19%
Run 9: Report of Vivace-latency — Data Link
Run 10: Statistics of Vivace-latency

Start at: 2018-02-21 06:26:55
End at: 2018-02-21 06:27:25

# Below is generated by plot.py at 2018-02-21 11:39:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 550.76 Mbit/s
95th percentile per-packet one-way delay: 62.501 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 337.88 Mbit/s
95th percentile per-packet one-way delay: 52.681 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 311.60 Mbit/s
95th percentile per-packet one-way delay: 108.060 ms
Loss rate: 0.89%
-- Flow 3:
Average throughput: 18.94 Mbit/s
95th percentile per-packet one-way delay: 54.788 ms
Loss rate: 1.81%
Run 10: Report of Vivace-latency — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 337.97 Mbps)  Flow 1 egress (mean 337.88 Mbps)
Flow 2 ingress (mean 312.76 Mbps)  Flow 2 egress (mean 311.60 Mbps)
Flow 3 ingress (mean 19.09 Mbps)  Flow 3 egress (mean 18.94 Mbps)

Per packet one way delay (ms)

Time (s)

• Flow 1 (95th percentile 52.60 ms)  • Flow 2 (95th percentile 108.06 ms)  • Flow 3 (95th percentile 54.79 ms)
Run 1: Statistics of Vivace-loss

Start at: 2018-02-21 03:46:58
End at: 2018-02-21 03:47:28

# Below is generated by plot.py at 2018-02-21 11:42:18
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 590.57 Mbit/s
  95th percentile per-packet one-way delay: 162.166 ms
  Loss rate: 2.33%
-- Flow 1:
  Average throughput: 316.46 Mbit/s
  95th percentile per-packet one-way delay: 140.015 ms
  Loss rate: 1.75%
-- Flow 2:
  Average throughput: 271.78 Mbit/s
  95th percentile per-packet one-way delay: 239.104 ms
  Loss rate: 3.19%
-- Flow 3:
  Average throughput: 287.32 Mbit/s
  95th percentile per-packet one-way delay: 145.884 ms
  Loss rate: 2.58%
Run 1: Report of Vivace-loss — Data Link
Run 2: Statistics of Vivace-loss

Start at: 2018-02-21 04:05:06
End at: 2018-02-21 04:05:36

# Below is generated by plot.py at 2018-02-21 11:43:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 586.69 Mbit/s
95th percentile per-packet one-way delay: 222.270 ms
Loss rate: 2.51%

-- Flow 1:
Average throughput: 314.71 Mbit/s
95th percentile per-packet one-way delay: 235.267 ms
Loss rate: 2.65%

-- Flow 2:
Average throughput: 319.43 Mbit/s
95th percentile per-packet one-way delay: 172.331 ms
Loss rate: 2.58%

-- Flow 3:
Average throughput: 184.50 Mbit/s
95th percentile per-packet one-way delay: 55.298 ms
Loss rate: 1.51%
Run 2: Report of Vivace-loss — Data Link

[Graphs showing throughput and per-packet one-way delay for different flows]
Run 3: Statistics of Vivace-loss

Start at: 2018-02-21 04:22:17
End at: 2018-02-21 04:22:47

# Below is generated by plot.py at 2018-02-21 11:47:07
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 582.99 Mbit/s
  95th percentile per-packet one-way delay: 217.039 ms
  Loss rate: 2.98%
-- Flow 1:
  Average throughput: 312.17 Mbit/s
  95th percentile per-packet one-way delay: 219.934 ms
  Loss rate: 4.67%
-- Flow 2:
  Average throughput: 321.29 Mbit/s
  95th percentile per-packet one-way delay: 217.126 ms
  Loss rate: 0.78%
-- Flow 3:
  Average throughput: 176.51 Mbit/s
  95th percentile per-packet one-way delay: 83.600 ms
  Loss rate: 1.59%
Run 3: Report of Vivace-loss — Data Link
Run 4: Statistics of Vivace-loss

Start at: 2018-02-21 04:40:11
End at: 2018-02-21 04:40:41

# Below is generated by plot.py at 2018-02-21 11:47:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 567.55 Mbit/s
95th percentile per-packet one-way delay: 209.675 ms
Loss rate: 2.07%
-- Flow 1:
Average throughput: 285.44 Mbit/s
95th percentile per-packet one-way delay: 193.097 ms
Loss rate: 1.53%
-- Flow 2:
Average throughput: 289.44 Mbit/s
95th percentile per-packet one-way delay: 196.660 ms
Loss rate: 2.83%
-- Flow 3:
Average throughput: 275.16 Mbit/s
95th percentile per-packet one-way delay: 226.987 ms
Loss rate: 2.15%
Run 4: Report of Vivace-loss — Data Link
Run 5: Statistics of Vivace-loss

Start at: 2018-02-21 04:57:20
End at: 2018-02-21 04:57:50

# Below is generated by plot.py at 2018-02-21 11:48:16
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 582.77 Mbit/s
  95th percentile per-packet one-way delay: 244.447 ms
  Loss rate: 2.03%
  -- Flow 1:
    Average throughput: 297.93 Mbit/s
    95th percentile per-packet one-way delay: 206.969 ms
    Loss rate: 1.48%
  -- Flow 2:
    Average throughput: 315.57 Mbit/s
    95th percentile per-packet one-way delay: 57.637 ms
    Loss rate: 0.60%
  -- Flow 3:
    Average throughput: 231.42 Mbit/s
    95th percentile per-packet one-way delay: 278.711 ms
    Loss rate: 7.73%
Run 6: Statistics of Vivace-loss

Start at: 2018-02-21 05:15:14
End at: 2018-02-21 05:15:44

# Below is generated by plot.py at 2018-02-21 11:50:36
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 685.92 Mbit/s
  95th percentile per-packet one-way delay: 209.801 ms
  Loss rate: 1.25%
-- Flow 1:
  Average throughput: 368.44 Mbit/s
  95th percentile per-packet one-way delay: 63.046 ms
  Loss rate: 0.32%
-- Flow 2:
  Average throughput: 340.12 Mbit/s
  95th percentile per-packet one-way delay: 234.384 ms
  Loss rate: 2.76%
-- Flow 3:
  Average throughput: 282.40 Mbit/s
  95th percentile per-packet one-way delay: 227.921 ms
  Loss rate: 1.17%
Run 6: Report of Vivace-loss — Data Link

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

Throughput (Mbps) vs Time (s):
- Flow 1 ingress (mean 368.29 Mbps)
- Flow 1 egress (mean 368.44 Mbps)
- Flow 2 ingress (mean 347.86 Mbps)
- Flow 2 egress (mean 340.12 Mbps)
- Flow 3 ingress (mean 285.70 Mbps)
- Flow 3 egress (mean 282.40 Mbps)

Packet delay (ms) vs Time (s):
- Flow 1 (95th percentile 63.05 ms)
- Flow 2 (95th percentile 234.38 ms)
- Flow 3 (95th percentile 227.92 ms)
Run 7: Statistics of Vivace-loss

Start at: 2018-02-21 05:32:58
End at: 2018-02-21 05:33:28

# Below is generated by plot.py at 2018-02-21 11:50:36
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 613.75 Mbit/s
  95th percentile per-packet one-way delay: 221.272 ms
  Loss rate: 1.78%
-- Flow 1:
  Average throughput: 337.16 Mbit/s
  95th percentile per-packet one-way delay: 66.297 ms
  Loss rate: 0.48%
-- Flow 2:
  Average throughput: 276.02 Mbit/s
  95th percentile per-packet one-way delay: 223.735 ms
  Loss rate: 1.04%
-- Flow 3:
  Average throughput: 286.75 Mbit/s
  95th percentile per-packet one-way delay: 284.627 ms
  Loss rate: 7.54%
Run 7: Report of Vivace-loss — Data Link

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**Throughput (Mbps)**

- **Flow 1 ingress** (mean 337.64 Mbps)
- **Flow 1 egress** (mean 337.16 Mbps)
- **Flow 2 ingress** (mean 277.50 Mbps)
- **Flow 2 egress** (mean 276.02 Mbps)
- **Flow 3 ingress** (mean 396.22 Mbps)
- **Flow 3 egress** (mean 286.75 Mbps)

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

- **Flow 1** (95th percentile 66.30 ms)
- **Flow 2** (95th percentile 223.74 ms)
- **Flow 3** (95th percentile 284.63 ms)

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Run 8: Statistics of Vivace-loss

Start at: 2018-02-21 05:50:41
End at: 2018-02-21 05:51:11

# Below is generated by plot.py at 2018-02-21 11:50:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 593.82 Mbit/s
95th percentile per-packet one-way delay: 188.655 ms
Loss rate: 4.58%
-- Flow 1:
Average throughput: 336.34 Mbit/s
95th percentile per-packet one-way delay: 188.476 ms
Loss rate: 6.44%
-- Flow 2:
Average throughput: 295.32 Mbit/s
95th percentile per-packet one-way delay: 237.395 ms
Loss rate: 2.18%
-- Flow 3:
Average throughput: 187.93 Mbit/s
95th percentile per-packet one-way delay: 64.392 ms
Loss rate: 1.61%
Run 8: Report of Vivace-loss — Data Link
Run 9: Statistics of Vivace-loss

Start at: 2018-02-21 06:08:07
End at: 2018-02-21 06:08:37

# Below is generated by plot.py at 2018-02-21 11:54:24
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 642.80 Mbit/s
  95th percentile per-packet one-way delay: 249.211 ms
  Loss rate: 3.16%
-- Flow 1:
  Average throughput: 359.48 Mbit/s
  95th percentile per-packet one-way delay: 187.112 ms
  Loss rate: 1.70%
-- Flow 2:
  Average throughput: 285.84 Mbit/s
  95th percentile per-packet one-way delay: 252.986 ms
  Loss rate: 2.98%
-- Flow 3:
  Average throughput: 292.94 Mbit/s
  95th percentile per-packet one-way delay: 272.836 ms
  Loss rate: 8.60%
Run 9: Report of Vivace-loss — Data Link
Run 10: Statistics of Vivace-loss

Start at: 2018-02-21 06:25:36
End at: 2018-02-21 06:26:06

# Below is generated by plot.py at 2018-02-21 11:54:39
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 590.78 Mbit/s
  95th percentile per-packet one-way delay: 217.541 ms
  Loss rate: 2.26%
-- Flow 1:
  Average throughput: 301.44 Mbit/s
  95th percentile per-packet one-way delay: 232.481 ms
  Loss rate: 2.26%
-- Flow 2:
  Average throughput: 286.85 Mbit/s
  95th percentile per-packet one-way delay: 222.556 ms
  Loss rate: 2.42%
-- Flow 3:
  Average throughput: 303.20 Mbit/s
  95th percentile per-packet one-way delay: 199.214 ms
  Loss rate: 2.00%
Run 10: Report of Vivace-loss — Data Link

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

- **Throughput Chart**
  - Flow 1 ingress (mean 307.27 Mbit/s)
  - Flow 1 egress (mean 301.44 Mbit/s)
  - Flow 2 ingress (mean 292.34 Mbit/s)
  - Flow 2 egress (mean 286.55 Mbit/s)
  - Flow 3 ingress (mean 305.95 Mbit/s)
  - Flow 3 egress (mean 303.20 Mbit/s)

- **Packet Delay Chart**
  - Flow 1 (95th percentile 232.48 ms)
  - Flow 2 (95th percentile 222.56 ms)
  - Flow 3 (95th percentile 199.21 ms)
Run 1: Statistics of Vivace-LTE

Start at: 2018-02-21 03:36:59
End at: 2018-02-21 03:37:29

# Below is generated by plot.py at 2018-02-21 11:59:16
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 666.83 Mbit/s
  95th percentile per-packet one-way delay: 203.239 ms
  Loss rate: 1.31%
-- Flow 1:
  Average throughput: 352.85 Mbit/s
  95th percentile per-packet one-way delay: 217.231 ms
  Loss rate: 1.44%
-- Flow 2:
  Average throughput: 335.12 Mbit/s
  95th percentile per-packet one-way delay: 170.772 ms
  Loss rate: 0.72%
-- Flow 3:
  Average throughput: 281.81 Mbit/s
  95th percentile per-packet one-way delay: 216.004 ms
  Loss rate: 2.21%
Run 1: Report of Vivace-LTE — Data Link
Run 2: Statistics of Vivace-LTE

Start at: 2018-02-21 03:55:15
End at: 2018-02-21 03:55:45

# Below is generated by plot.py at 2018-02-21 11:59:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 643.83 Mbit/s
95th percentile per-packet one-way delay: 167.967 ms
Loss rate: 0.94%
-- Flow 1:
Average throughput: 338.13 Mbit/s
95th percentile per-packet one-way delay: 117.480 ms
Loss rate: 0.62%
-- Flow 2:
Average throughput: 318.17 Mbit/s
95th percentile per-packet one-way delay: 255.734 ms
Loss rate: 1.56%
-- Flow 3:
Average throughput: 290.17 Mbit/s
95th percentile per-packet one-way delay: 147.988 ms
Loss rate: 0.71%
Run 2: Report of Vivace-LTE — Data Link

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

- **Flow 1 ingress (mean 339.02 Mbit/s)**
- **Flow 1 egress (mean 338.13 Mbit/s)**
- **Flow 2 ingress (mean 321.50 Mbit/s)**
- **Flow 2 egress (mean 318.17 Mbit/s)**
- **Flow 3 ingress (mean 298.90 Mbit/s)**
- **Flow 3 egress (mean 290.17 Mbit/s)**

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

- **Flow 1 (95th percentile 117.48 ms)**
- **Flow 2 (95th percentile 255.73 ms)**
- **Flow 3 (95th percentile 147.99 ms)**
Run 3: Statistics of Vivace-LTE

Start at: 2018-02-21 04:12:37
End at: 2018-02-21 04:13:07

# Below is generated by plot.py at 2018-02-21 11:59:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 632.56 Mbit/s
95th percentile per-packet one-way delay: 83.280 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 355.75 Mbit/s
95th percentile per-packet one-way delay: 94.913 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 327.61 Mbit/s
95th percentile per-packet one-way delay: 82.747 ms
Loss rate: 0.83%
-- Flow 3:
Average throughput: 182.64 Mbit/s
95th percentile per-packet one-way delay: 56.999 ms
Loss rate: 1.66%
Run 3: Report of Vivace-LTE — Data Link

![Graph of Throughput and Delay](image)

Throughput (Mb/s)

Time (s)

- Flow 1 ingress (mean 355.96 Mb/s)
- Flow 1 egress (mean 355.75 Mb/s)
- Flow 2 ingress (mean 328.59 Mb/s)
- Flow 2 egress (mean 327.61 Mb/s)
- Flow 3 ingress (mean 181.59 Mb/s)
- Flow 3 egress (mean 182.64 Mb/s)

Per-packet one-way delay (ms)

Time (s)

- Flow 1 (95th percentile 94.91 ms)
- Flow 2 (95th percentile 82.75 ms)
- Flow 3 (95th percentile 57.00 ms)
Run 4: Statistics of Vivace-LTE

Start at: 2018-02-21 04:30:18
End at: 2018-02-21 04:30:48

# Below is generated by plot.py at 2018-02-21 12:01:09
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 649.33 Mbit/s
  95th percentile per-packet one-way delay: 126.873 ms
  Loss rate: 0.68%
-- Flow 1:
  Average throughput: 370.36 Mbit/s
  95th percentile per-packet one-way delay: 147.457 ms
  Loss rate: 0.46%
-- Flow 2:
  Average throughput: 335.39 Mbit/s
  95th percentile per-packet one-way delay: 108.894 ms
  Loss rate: 0.76%
-- Flow 3:
  Average throughput: 173.12 Mbit/s
  95th percentile per-packet one-way delay: 56.001 ms
  Loss rate: 1.80%
Run 4: Report of Vivace-LTE — Data Link

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

- Flow 1 ingress (mean 370.76 Mb/s) vs. Flow 1 egress (mean 370.36 Mb/s)
- Flow 2 ingress (mean 336.13 Mb/s) vs. Flow 2 egress (mean 335.39 Mb/s)
- Flow 3 ingress (mean 174.44 Mb/s) vs. Flow 3 egress (mean 173.12 Mb/s)

![Graph showing per-packet one-way delay.]]

- Flow 1 (95th percentile 147.46 ms)
- Flow 2 (95th percentile 108.89 ms)
- Flow 3 (95th percentile 56.00 ms)
Run 5: Statistics of Vivace-LTE

Start at: 2018-02-21 04:47:38
End at: 2018-02-21 04:48:08

# Below is generated by plot.py at 2018-02-21 12:01:09
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 576.97 Mbit/s
  95th percentile per-packet one-way delay: 74.445 ms
  Loss rate: 0.56%
-- Flow 1:
  Average throughput: 361.13 Mbit/s
  95th percentile per-packet one-way delay: 78.200 ms
  Loss rate: 0.35%
-- Flow 2:
  Average throughput: 242.03 Mbit/s
  95th percentile per-packet one-way delay: 60.340 ms
  Loss rate: 0.72%
-- Flow 3:
  Average throughput: 169.43 Mbit/s
  95th percentile per-packet one-way delay: 77.009 ms
  Loss rate: 1.43%
Run 5: Report of Vivace-LTE — Data Link

![Graph of Throughput vs Time](image1)

![Graph of Per-packet end-to-end delay vs Time](image2)
Run 6: Statistics of Vivace-LTE

Start at: 2018-02-21 05:05:15
End at: 2018-02-21 05:05:45

# Below is generated by plot.py at 2018-02-21 12:02:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 689.67 Mbit/s
95th percentile per-packet one-way delay: 203.751 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 387.94 Mbit/s
95th percentile per-packet one-way delay: 168.679 ms
Loss rate: 0.60%
-- Flow 2:
Average throughput: 310.82 Mbit/s
95th percentile per-packet one-way delay: 246.059 ms
Loss rate: 0.94%
-- Flow 3:
Average throughput: 292.76 Mbit/s
95th percentile per-packet one-way delay: 151.518 ms
Loss rate: 2.56%
Run 6: Report of Vivace-LTE — Data Link

![Graph 1: Throughput vs Time]

- Flow 1 ingress (mean 388.89 Mbit/s)
- Flow 1 egress (mean 387.94 Mbit/s)
- Flow 2 ingress (mean 312.11 Mbit/s)
- Flow 2 egress (mean 310.82 Mbit/s)
- Flow 3 ingress (mean 297.26 Mbit/s)
- Flow 3 egress (mean 292.76 Mbit/s)

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

- Flow 1 (95th percentile 168.68 ms)
- Flow 2 (95th percentile 246.06 ms)
- Flow 3 (95th percentile 151.52 ms)
Run 7: Statistics of Vivace-LTE

Start at: 2018-02-21 05:23:01
End at: 2018-02-21 05:23:31

# Below is generated by plot.py at 2018-02-21 12:03:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 619.77 Mbit/s
95th percentile per-packet one-way delay: 110.929 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 391.52 Mbit/s
95th percentile per-packet one-way delay: 137.685 ms
Loss rate: 0.67%
-- Flow 2:
Average throughput: 259.59 Mbit/s
95th percentile per-packet one-way delay: 70.702 ms
Loss rate: 0.71%
-- Flow 3:
Average throughput: 171.68 Mbit/s
95th percentile per-packet one-way delay: 55.474 ms
Loss rate: 1.41%
Run 7: Report of Vivace-LTE — Data Link

Throughput (Mbps):

- Flow 1 ingress (mean 392.79 Mbps)
- Flow 1 egress (mean 391.52 Mbps)
- Flow 2 ingress (mean 260.02 Mbps)
- Flow 2 egress (mean 259.59 Mbps)
- Flow 3 ingress (mean 172.20 Mbps)
- Flow 3 egress (mean 171.68 Mbps)

Per-packet end-to-end delay (ms):

- Flow 1 (95th percentile 137.69 ms)
- Flow 2 (95th percentile 70.70 ms)
- Flow 3 (95th percentile 55.47 ms)
Run 8: Statistics of Vivace-LTE

Start at: 2018-02-21 05:40:46
End at: 2018-02-21 05:41:16

# Below is generated by plot.py at 2018-02-21 12:04:32
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 664.64 Mbit/s
  95th percentile per-packet one-way delay: 149.997 ms
  Loss rate: 0.62%
-- Flow 1:
  Average throughput: 353.11 Mbit/s
  95th percentile per-packet one-way delay: 145.932 ms
  Loss rate: 0.37%
-- Flow 2:
  Average throughput: 321.83 Mbit/s
  95th percentile per-packet one-way delay: 60.510 ms
  Loss rate: 0.56%
-- Flow 3:
  Average throughput: 300.94 Mbit/s
  95th percentile per-packet one-way delay: 209.032 ms
  Loss rate: 1.62%
Run 9: Statistics of Vivace-LTE

Start at: 2018-02-21 05:58:21
End at: 2018-02-21 05:58:51

# Below is generated by plot.py at 2018-02-21 12:05:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 624.81 Mbit/s
95th percentile per-packet one-way delay: 105.152 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 355.98 Mbit/s
95th percentile per-packet one-way delay: 136.403 ms
Loss rate: 0.69%
-- Flow 2:
Average throughput: 322.35 Mbit/s
95th percentile per-packet one-way delay: 71.536 ms
Loss rate: 0.53%
-- Flow 3:
Average throughput: 168.48 Mbit/s
95th percentile per-packet one-way delay: 54.862 ms
Loss rate: 1.27%
Run 9: Report of Vivace-LTE — Data Link

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

Throughput (Mbps):
- Flow 1 ingress (mean 357.20 Mbps)
- Flow 1 egress (mean 355.98 Mbps)
- Flow 2 ingress (mean 322.29 Mbps)
- Flow 2 egress (mean 322.35 Mbps)
- Flow 3 ingress (mean 168.65 Mbps)
- Flow 3 egress (mean 168.48 Mbps)

Packet delay (ms):
- Flow 1 (95th percentile 136.40 ms)
- Flow 2 (95th percentile 71.54 ms)
- Flow 3 (95th percentile 54.86 ms)
Run 10: Statistics of Vivace-LTE

Start at: 2018-02-21 06:15:45
End at: 2018-02-21 06:16:15

# Below is generated by plot.py at 2018-02-21 12:05:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 628.74 Mbit/s
95th percentile per-packet one-way delay: 179.218 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 344.18 Mbit/s
95th percentile per-packet one-way delay: 156.272 ms
Loss rate: 0.59%
-- Flow 2:
Average throughput: 294.58 Mbit/s
95th percentile per-packet one-way delay: 189.451 ms
Loss rate: 0.84%
-- Flow 3:
Average throughput: 273.27 Mbit/s
95th percentile per-packet one-way delay: 218.550 ms
Loss rate: 2.16%
Run 10: Report of Vivace-LTE — Data Link

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

- Flow 1 ingress (mean 345.04 Mbit/s)
- Flow 1 egress (mean 344.18 Mbit/s)
- Flow 2 ingress (mean 295.52 Mbit/s)
- Flow 2 egress (mean 294.58 Mbit/s)
- Flow 3 ingress (mean 276.31 Mbit/s)
- Flow 3 egress (mean 273.27 Mbit/s)

![Graph showing packet delay in one way delay (ms) over time for different flows.]

- Flow 1 (95th percentile 156.27 ms)
- Flow 2 (95th percentile 189.45 ms)
- Flow 3 (95th percentile 210.55 ms)