Pantheon Report

Generated at 2018-03-14 15:50:34 (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 @ f12c42a2c63fdd9a862ee0a466895f379b6623
third_party/calibrated_koho @ 3cb73c0d1c0322c2fae446ea37a522e53227db50
  M datagrump/sender.cc
third_party/fillp @ 828bfb95fd494149b5cecc90f281d1c69ae1a5c6
third_party/genericCC @ 9249eea3238475c4d8cca143d28df70b6f6c4a2
third_party/indigo @ a9b2060d394da2e8987e893e3eca2a6e7cd0ab9
third_party/indigo-1-layer-128-unit @ 3ae9e4df4230db7484501f82e8b377695f2f66d
third_party/indigo-1-layer-32-unit @ 2601c92e4aa9d55d38dc4dfe0edc090c077e64d
third_party/indigo-1-layer-32-unit-no-calib @ 1f3a7f75b41135ed5b540c0fd350593528e2a5f
third_party/indigo-no-calib @ 7224f2202ea8a044d8306fa0b983d84360c53d89
third_party/koho_cc @ f0f2e693303ae82ea8086928eac4f1983a681
  M datagrump/sender.cc
third_party/libupnp @ b3465b942e2826f2b179eab4a90646a6b7c8f3c
third_party/pantheon-tunnel @ f1053193c2861659ba9013db2674cfcf993
third_party/pcc @ 1af6958f0a66d18b623c901a554ec872b4981e1
  M receiver/src/buffer.h
  M receiver/src/core.cpp
  M sender/src/buffer.h
  M sender/src/core.cpp
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc97f83f2f42
third_party/scream @ c3370dfd7bd17265a79ab3e0416ad235f965885
third_party/sourdough @ f1a14bffe749737437f61b1eaee3b267c4e681
third_party/sprout @ 6f2efe6e08d91066a90f023df375eee2665089ce
  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 @ 7a4b53e75b4a6f665f4580192120401784ce3
third_party/webrtc @ a488197ddd041ace68a42849b2540ad834825f42
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)
<table>
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<th># runs</th>
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<th>mean 95th-%ile delay (ms)</th>
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<td>Vivace-loss</td>
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<td>260.57</td>
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<td>219.64</td>
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<td>Vivace-LTE</td>
<td>10</td>
<td>259.82</td>
<td>229.20</td>
<td>173.58</td>
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</table>
Run 1: Statistics of TCP BBR

Start at: 2018-03-14 07:07:41
End at: 2018-03-14 07:08:11

# Below is generated by plot.py at 2018-03-14 13:13:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 394.50 Mbit/s
95th percentile per-packet one-way delay: 72.182 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 206.56 Mbit/s
95th percentile per-packet one-way delay: 69.733 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 193.71 Mbit/s
95th percentile per-packet one-way delay: 72.405 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 179.76 Mbit/s
95th percentile per-packet one-way delay: 75.086 ms
Loss rate: 1.30%
Run 1: Report of TCP BBR — Data Link

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

- Flow 1 ingress (mean 206.65 Mbit/s)
- Flow 1 egress (mean 206.56 Mbit/s)
- Flow 2 ingress (mean 193.90 Mbit/s)
- Flow 2 egress (mean 193.71 Mbit/s)
- Flow 3 ingress (mean 180.21 Mbit/s)
- Flow 3 egress (mean 179.76 Mbit/s)
Run 2: Statistics of TCP BBR

Start at: 2018-03-14 07:24:42
End at: 2018-03-14 07:25:12

# Below is generated by plot.py at 2018-03-14 13:14:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 402.75 Mbit/s
95th percentile per-packet one-way delay: 71.148 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 204.83 Mbit/s
95th percentile per-packet one-way delay: 69.502 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 203.40 Mbit/s
95th percentile per-packet one-way delay: 71.461 ms
Loss rate: 0.60%
-- Flow 3:
Average throughput: 190.69 Mbit/s
95th percentile per-packet one-way delay: 73.094 ms
Loss rate: 1.21%
Run 2: Report of TCP BBR — Data Link

Graph 1: Throughput over time for each flow.

Graph 2: Per-packet one-way delay for each flow.

Legend:
- Flow 1 ingress (mean 204.92 Mbit/s)
- Flow 1 egress (mean 204.83 Mbit/s)
- Flow 2 ingress (mean 203.53 Mbit/s)
- Flow 2 egress (mean 203.40 Mbit/s)
- Flow 3 ingress (mean 190.01 Mbit/s)
- Flow 3 egress (mean 190.69 Mbit/s)

Legend for delay:
- Flow 1 (95th percentile 69.50 ms)
- Flow 2 (95th percentile 71.46 ms)
- Flow 3 (95th percentile 73.09 ms)
Run 3: Statistics of TCP BBR

Start at: 2018-03-14 07:41:41
End at: 2018-03-14 07:42:11

# Below is generated by plot.py at 2018-03-14 13:14:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 387.34 Mbit/s
95th percentile per-packet one-way delay: 74.614 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 200.42 Mbit/s
95th percentile per-packet one-way delay: 73.125 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 190.84 Mbit/s
95th percentile per-packet one-way delay: 74.803 ms
Loss rate: 0.60%
-- Flow 3:
Average throughput: 182.89 Mbit/s
95th percentile per-packet one-way delay: 76.742 ms
Loss rate: 1.24%
Run 3: Report of TCP BBR — Data Link

![Graph 1: Throughput (Mbps)]

- Flow 1 ingress (mean 200.37 Mbps)
- Flow 1 egress (mean 200.42 Mbps)
- Flow 2 ingress (mean 190.99 Mbps)
- Flow 2 egress (mean 190.84 Mbps)
- Flow 3 ingress (mean 183.14 Mbps)
- Flow 3 egress (mean 182.89 Mbps)

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

- Flow 1 (95th percentile 73.12 ms)
- Flow 2 (95th percentile 74.80 ms)
- Flow 3 (95th percentile 76.74 ms)
Run 4: Statistics of TCP BBR

Start at: 2018-03-14 07:58:43
End at: 2018-03-14 07:59:13

# Below is generated by plot.py at 2018-03-14 13:14:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 395.58 Mbit/s
95th percentile per-packet one-way delay: 78.716 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 199.32 Mbit/s
95th percentile per-packet one-way delay: 77.420 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 204.79 Mbit/s
95th percentile per-packet one-way delay: 79.539 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 182.90 Mbit/s
95th percentile per-packet one-way delay: 79.476 ms
Loss rate: 1.36%
Run 4: Report of TCP BBR — Data Link

![Graph of Throughput vs Time](image1)

- Flow 1 ingress (mean 199.42 Mbit/s)
- Flow 1 egress (mean 199.32 Mbit/s)
- Flow 2 ingress (mean 204.99 Mbit/s)
- Flow 2 egress (mean 204.79 Mbit/s)
- Flow 3 ingress (mean 183.60 Mbit/s)
- Flow 3 egress (mean 182.99 Mbit/s)

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

- Flow 1 (95th percentile 77.42 ms)
- Flow 2 (95th percentile 79.54 ms)
- Flow 3 (95th percentile 79.48 ms)
Run 5: Statistics of TCP BBR

Start at: 2018-03-14 08:15:40
End at: 2018-03-14 08:16:10

# Below is generated by plot.py at 2018-03-14 13:14:08
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 397.08 Mbit/s
  95th percentile per-packet one-way delay: 73.945 ms
  Loss rate: 0.62%
-- Flow 1:
  Average throughput: 206.22 Mbit/s
  95th percentile per-packet one-way delay: 72.334 ms
  Loss rate: 0.41%
-- Flow 2:
  Average throughput: 197.85 Mbit/s
  95th percentile per-packet one-way delay: 74.103 ms
  Loss rate: 0.62%
-- Flow 3:
  Average throughput: 180.33 Mbit/s
  95th percentile per-packet one-way delay: 75.769 ms
  Loss rate: 1.36%
Run 5: Report of TCP BBR — Data Link
Run 6: Statistics of TCP BBR

Start at: 2018-03-14 08:32:28
End at: 2018-03-14 08:32:58

# Below is generated by plot.py at 2018-03-14 13:14:08
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 397.44 Mbit/s
  95th percentile per-packet one-way delay: 72.936 ms
  Loss rate: 0.59%
-- Flow 1:
  Average throughput: 201.93 Mbit/s
  95th percentile per-packet one-way delay: 71.187 ms
  Loss rate: 0.40%
-- Flow 2:
  Average throughput: 205.77 Mbit/s
  95th percentile per-packet one-way delay: 72.163 ms
  Loss rate: 0.54%
-- Flow 3:
  Average throughput: 178.30 Mbit/s
  95th percentile per-packet one-way delay: 75.581 ms
  Loss rate: 1.37%
Run 6: Report of TCP BBR — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 202.07 Mbps)
  - Flow 1 egress (mean 201.93 Mbps)
  - Flow 2 ingress (mean 205.82 Mbps)
  - Flow 2 egress (mean 205.77 Mbps)
  - Flow 3 ingress (mean 178.78 Mbps)
  - Flow 3 egress (mean 178.30 Mbps)

- **Round-trip time (ms):**
  - Flow 1 (95th percentile 71.19 ms)
  - Flow 2 (95th percentile 72.16 ms)
  - Flow 3 (95th percentile 75.58 ms)
Run 7: Statistics of TCP BBR

Start at: 2018-03-14 08:49:34
End at: 2018-03-14 08:50:04

# Below is generated by plot.py at 2018-03-14 13:14:08
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 396.00 Mbit/s
  95th percentile per-packet one-way delay: 71.599 ms
  Loss rate: 0.59%
-- Flow 1:
  Average throughput: 201.91 Mbit/s
  95th percentile per-packet one-way delay: 70.294 ms
  Loss rate: 0.37%
-- Flow 2:
  Average throughput: 201.28 Mbit/s
  95th percentile per-packet one-way delay: 71.132 ms
  Loss rate: 0.57%
-- Flow 3:
  Average throughput: 183.14 Mbit/s
  95th percentile per-packet one-way delay: 74.157 ms
  Loss rate: 1.34%
Run 7: Report of TCP BBR — Data Link

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

Legend:
- Flow 1 ingress (mean 201.97 Mbit/s)
- Flow 1 egress (mean 201.91 Mbit/s)
- Flow 2 ingress (mean 201.41 Mbit/s)
- Flow 2 egress (mean 201.28 Mbit/s)
- Flow 3 ingress (mean 183.72 Mbit/s)
- Flow 3 egress (mean 183.14 Mbit/s)
Run 8: Statistics of TCP BBR

Start at: 2018-03-14 09:07:02
End at: 2018-03-14 09:07:32

# Below is generated by plot.py at 2018-03-14 13:14:08
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 391.11 Mbit/s
  95th percentile per-packet one-way delay: 75.210 ms
  Loss rate: 0.57%
-- Flow 1:
  Average throughput: 203.70 Mbit/s
  95th percentile per-packet one-way delay: 73.313 ms
  Loss rate: 0.36%
-- Flow 2:
  Average throughput: 191.28 Mbit/s
  95th percentile per-packet one-way delay: 75.308 ms
  Loss rate: 0.57%
-- Flow 3:
  Average throughput: 182.99 Mbit/s
  95th percentile per-packet one-way delay: 77.660 ms
  Loss rate: 1.30%
Run 8: Report of TCP BBR — Data Link
Run 9: Statistics of TCP BBR

Start at: 2018-03-14 09:24:10
End at: 2018-03-14 09:24:40

# Below is generated by plot.py at 2018-03-14 13:21:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 383.47 Mbit/s
95th percentile per-packet one-way delay: 73.895 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 204.54 Mbit/s
95th percentile per-packet one-way delay: 71.666 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 189.70 Mbit/s
95th percentile per-packet one-way delay: 73.917 ms
Loss rate: 0.58%
-- Flow 3:
Average throughput: 160.41 Mbit/s
95th percentile per-packet one-way delay: 76.079 ms
Loss rate: 1.47%
Run 9: Report of TCP BBR — Data Link

*Graph 1: Throughput vs. Time (Mbps)*

*Graph 2: Per-packet one-way delay (ms)*
Run 10: Statistics of TCP BBR

Start at: 2018-03-14 09:41:06
End at: 2018-03-14 09:41:36

# Below is generated by plot.py at 2018-03-14 13:22:11
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 386.04 Mbit/s
  95th percentile per-packet one-way delay: 73.618 ms
  Loss rate: 0.59%
-- Flow 1:
  Average throughput: 203.01 Mbit/s
  95th percentile per-packet one-way delay: 71.741 ms
  Loss rate: 0.38%
-- Flow 2:
  Average throughput: 187.87 Mbit/s
  95th percentile per-packet one-way delay: 73.914 ms
  Loss rate: 0.60%
-- Flow 3:
  Average throughput: 176.67 Mbit/s
  95th percentile per-packet one-way delay: 75.883 ms
  Loss rate: 1.27%
Run 10: Report of TCP BBR — Data Link

![Throughput Graph](image)

- Flow 1 ingress (mean 203.07 Mbit/s)
- Flow 1 egress (mean 203.01 Mbit/s)
- Flow 2 ingress (mean 188.02 Mbit/s)
- Flow 2 egress (mean 187.87 Mbit/s)
- Flow 3 ingress (mean 177.13 Mbit/s)
- Flow 3 egress (mean 176.67 Mbit/s)

![Delay Graph](image)

- Flow 1 (95th percentile 71.74 ms)
- Flow 2 (95th percentile 73.91 ms)
- Flow 3 (95th percentile 75.88 ms)
Run 1: Statistics of TCP Cubic

Start at: 2018-03-14 07:20:09
End at: 2018-03-14 07:20:39

# Below is generated by plot.py at 2018-03-14 13:22:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 300.67 Mbit/s
95th percentile per-packet one-way delay: 61.833 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 167.68 Mbit/s
95th percentile per-packet one-way delay: 62.299 ms
Loss rate: 0.28%
-- Flow 2:
Average throughput: 139.19 Mbit/s
95th percentile per-packet one-way delay: 61.400 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 123.21 Mbit/s
95th percentile per-packet one-way delay: 59.404 ms
Loss rate: 0.84%
Run 1: Report of TCP Cubic — Data Link

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

- **Throughput (Mbps):**
  - *Flow 1 ingress (mean 167.57 Mbps)*
  - *Flow 1 egress (mean 167.68 Mbps)*
  - *Flow 2 ingress (mean 139.28 Mbps)*
  - *Flow 2 egress (mean 139.19 Mbps)*
  - *Flow 3 ingress (mean 122.60 Mbps)*
  - *Flow 3 egress (mean 123.21 Mbps)*

- **Per-packet one-way delay (ms):**
  - *Flow 1 (95th percentile 62.30 ms)*
  - *Flow 2 (95th percentile 61.40 ms)*
  - *Flow 3 (95th percentile 59.40 ms)*

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Run 2: Statistics of TCP Cubic

Start at: 2018-03-14 07:37:09
End at: 2018-03-14 07:37:39

# Below is generated by plot.py at 2018-03-14 13:22:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 308.50 Mbit/s
95th percentile per-packet one-way delay: 62.644 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 169.93 Mbit/s
95th percentile per-packet one-way delay: 62.518 ms
Loss rate: 0.48%
-- Flow 2:
Average throughput: 144.94 Mbit/s
95th percentile per-packet one-way delay: 62.499 ms
Loss rate: 0.38%
-- Flow 3:
Average throughput: 128.60 Mbit/s
95th percentile per-packet one-way delay: 63.318 ms
Loss rate: 1.22%
Run 2: Report of TCP Cubic — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 170.15 Mbps)
Flow 1 egress (mean 169.93 Mbps)
Flow 2 ingress (mean 144.73 Mbps)
Flow 2 egress (mean 144.94 Mbps)
Flow 3 ingress (mean 126.82 Mbps)
Flow 3 egress (mean 126.60 Mbps)

Per packet end-to-end delay (ms)

Time (s)

Flow 1 (95th percentile 62.52 ms)
Flow 2 (95th percentile 62.50 ms)
Flow 3 (95th percentile 63.32 ms)
Run 3: Statistics of TCP Cubic

Start at: 2018-03-14 07:54:12
End at: 2018-03-14 07:54:42

# Below is generated by plot.py at 2018-03-14 13:22:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 342.29 Mbit/s
95th percentile per-packet one-way delay: 73.194 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 159.49 Mbit/s
95th percentile per-packet one-way delay: 71.957 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 180.38 Mbit/s
95th percentile per-packet one-way delay: 73.446 ms
Loss rate: 0.43%
-- Flow 3:
Average throughput: 191.37 Mbit/s
95th percentile per-packet one-way delay: 75.330 ms
Loss rate: 1.26%
Run 3: Report of TCP Cubic — Data Link

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

- Flow 1 ingress (mean 159.42 Mbit/s)
- Flow 1 egress (mean 159.49 Mbit/s)
- Flow 2 ingress (mean 180.15 Mbit/s)
- Flow 2 egress (mean 180.38 Mbit/s)
- Flow 3 ingress (mean 191.87 Mbit/s)
- Flow 3 egress (mean 191.37 Mbit/s)

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

- Flow 1 (95th percentile 71.96 ms)
- Flow 2 (95th percentile 73.45 ms)
- Flow 3 (95th percentile 75.33 ms)
Run 4: Statistics of TCP Cubic

Start at: 2018-03-14 08:11:12  
End at: 2018-03-14 08:11:42

# Below is generated by plot.py at 2018-03-14 13:22:11  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 249.24 Mbit/s  
95th percentile per-packet one-way delay: 58.465 ms  
Loss rate: 0.50%  
-- Flow 1:  
Average throughput: 157.48 Mbit/s  
95th percentile per-packet one-way delay: 59.605 ms  
Loss rate: 0.33%  
-- Flow 2:  
Average throughput: 135.71 Mbit/s  
95th percentile per-packet one-way delay: 55.714 ms  
Loss rate: 0.73%  
-- Flow 3:  
Average throughput: 4.89 Mbit/s  
95th percentile per-packet one-way delay: 56.635 ms  
Loss rate: 4.37%
Run 4: Report of TCP Cubic — Data Link

Throughput (Mb/s)

Time (s)

Flow 1 ingress (mean 157.43 Mb/s)
Flow 1 egress (mean 157.48 Mb/s)
Flow 2 ingress (mean 135.99 Mb/s)
Flow 2 egress (mean 135.71 Mb/s)
Flow 3 ingress (mean 5.96 Mb/s)
Flow 3 egress (mean 4.89 Mb/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 59.60 ms)
Flow 2 (95th percentile 55.71 ms)
Flow 3 (95th percentile 56.63 ms)
Run 5: Statistics of TCP Cubic

Start at: 2018-03-14 08:28:08
End at: 2018-03-14 08:28:38

# Below is generated by plot.py at 2018-03-14 13:22:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 256.25 Mbit/s
95th percentile per-packet one-way delay: 60.619 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 135.29 Mbit/s
95th percentile per-packet one-way delay: 61.431 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 131.76 Mbit/s
95th percentile per-packet one-way delay: 58.944 ms
Loss rate: 0.38%
-- Flow 3:
Average throughput: 101.53 Mbit/s
95th percentile per-packet one-way delay: 60.013 ms
Loss rate: 1.23%
Run 5: Report of TCP Cubic — Data Link

[Graph showing throughput vs time for different flows with mean throughputs indicated]

[Graph showing packet round-trip delay vs time for different flows with 95th percentile delays indicated]
Run 6: Statistics of TCP Cubic

Start at: 2018-03-14 08:45:02
End at: 2018-03-14 08:45:32

# Below is generated by plot.py at 2018-03-14 13:22:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 268.31 Mbit/s
95th percentile per-packet one-way delay: 62.045 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 138.90 Mbit/s
95th percentile per-packet one-way delay: 62.116 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 146.03 Mbit/s
95th percentile per-packet one-way delay: 62.204 ms
Loss rate: 0.57%
-- Flow 3:
Average throughput: 98.51 Mbit/s
95th percentile per-packet one-way delay: 61.104 ms
Loss rate: 1.35%
Run 6: Report of TCP Cubic — Data Link

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

- Flow 1 ingress (mean 138.91 Mbit/s)
- Flow 1 egress (mean 138.90 Mbit/s)
- Flow 2 ingress (mean 146.04 Mbit/s)
- Flow 2 egress (mean 146.03 Mbit/s)
- Flow 3 ingress (mean 98.81 Mbit/s)
- Flow 3 egress (mean 98.51 Mbit/s)

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

- Flow 1 (95th percentile 62.12 ms)
- Flow 2 (95th percentile 62.20 ms)
- Flow 3 (95th percentile 61.10 ms)
Run 7: Statistics of TCP Cubic

Start at: 2018-03-14 09:02:14
End at: 2018-03-14 09:02:44

# Below is generated by plot.py at 2018-03-14 13:25:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 297.40 Mbit/s
95th percentile per-packet one-way delay: 62.647 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 144.45 Mbit/s
95th percentile per-packet one-way delay: 62.739 ms
Loss rate: 0.53%
-- Flow 2:
Average throughput: 183.17 Mbit/s
95th percentile per-packet one-way delay: 62.595 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 94.96 Mbit/s
95th percentile per-packet one-way delay: 62.614 ms
Loss rate: 1.21%
Run 7: Report of TCP Cubic — Data Link

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

Legend:
- Flow 1 ingress (mean 144.71 Mbit/s)
- Flow 1 egress (mean 144.45 Mbit/s)
- Flow 2 ingress (mean 182.98 Mbit/s)
- Flow 2 egress (mean 183.17 Mbit/s)
- Flow 3 ingress (mean 95.12 Mbit/s)
- Flow 3 egress (mean 94.96 Mbit/s)

- Flow 1 (95th percentile 62.74 ms)
- Flow 2 (95th percentile 62.59 ms)
- Flow 3 (95th percentile 62.61 ms)
Run 8: Statistics of TCP Cubic

Start at: 2018-03-14 09:19:42
End at: 2018-03-14 09:20:12

# Below is generated by plot.py at 2018-03-14 13:26:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 290.61 Mbit/s
95th percentile per-packet one-way delay: 61.416 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 156.30 Mbit/s
95th percentile per-packet one-way delay: 62.553 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 119.03 Mbit/s
95th percentile per-packet one-way delay: 60.028 ms
Loss rate: 0.76%
-- Flow 3:
Average throughput: 167.88 Mbit/s
95th percentile per-packet one-way delay: 59.537 ms
Loss rate: 1.22%
Run 8: Report of TCP Cubic — Data Link
Run 9: Statistics of TCP Cubic

Start at: 2018-03-14 09:36:45
End at: 2018-03-14 09:37:15

# Below is generated by plot.py at 2018-03-14 13:26:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 291.57 Mbit/s
95th percentile per-packet one-way delay: 61.184 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 149.62 Mbit/s
95th percentile per-packet one-way delay: 62.421 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 152.31 Mbit/s
95th percentile per-packet one-way delay: 60.174 ms
Loss rate: 0.71%
-- Flow 3:
Average throughput: 123.89 Mbit/s
95th percentile per-packet one-way delay: 58.878 ms
Loss rate: 1.23%
Run 9: Report of TCP Cubic — Data Link

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

Throughput (Mbit/s) vs. Time (s):
- Flow 1 ingress (mean 149.61 Mbit/s)
- Flow 1 egress (mean 149.62 Mbit/s)
- Flow 2 ingress (mean 152.60 Mbit/s)
- Flow 2 egress (mean 152.31 Mbit/s)
- Flow 3 ingress (mean 124.12 Mbit/s)
- Flow 3 egress (mean 123.89 Mbit/s)

Per-packet one-way delay (ms) vs. Time (s):
- Flow 1 (95th percentile 62.42 ms)
- Flow 2 (95th percentile 60.17 ms)
- Flow 3 (95th percentile 58.88 ms)
Run 10: Statistics of TCP Cubic

Start at: 2018-03-14 09:53:28
End at: 2018-03-14 09:53:58

# Below is generated by plot.py at 2018-03-14 13:26:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 263.29 Mbit/s
95th percentile per-packet one-way delay: 58.254 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 127.45 Mbit/s
95th percentile per-packet one-way delay: 58.050 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 144.56 Mbit/s
95th percentile per-packet one-way delay: 58.399 ms
Loss rate: 0.72%
-- Flow 3:
Average throughput: 121.01 Mbit/s
95th percentile per-packet one-way delay: 58.635 ms
Loss rate: 1.24%
Run 10: Report of TCP Cubic — Data Link

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

- Flow 1 ingress (mean 127.48 Mbps)
- Flow 1 egress (mean 127.45 Mbps)
- Flow 2 ingress (mean 144.87 Mbps)
- Flow 2 egress (mean 144.56 Mbps)
- Flow 3 ingress (mean 121.39 Mbps)
- Flow 3 egress (mean 121.01 Mbps)

![Flow 1 (95th percentile 58.05 ms)](image)
- Flow 2 (95th percentile 58.40 ms)
- Flow 3 (95th percentile 58.63 ms)
Run 1: Statistics of LEDBAT

Start at: 2018-03-14 07:11:29
End at: 2018-03-14 07:11:59

# Below is generated by plot.py at 2018-03-14 13:26:18
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 48.07 Mbit/s
  95th percentile per-packet one-way delay: 55.070 ms
  Loss rate: 0.91%
-- Flow 1:
  Average throughput: 31.56 Mbit/s
  95th percentile per-packet one-way delay: 55.118 ms
  Loss rate: 0.71%
-- Flow 2:
  Average throughput: 20.08 Mbit/s
  95th percentile per-packet one-way delay: 55.034 ms
  Loss rate: 1.08%
-- Flow 3:
  Average throughput: 9.91 Mbit/s
  95th percentile per-packet one-way delay: 54.534 ms
  Loss rate: 2.18%
Run 1: Report of LEDBAT — Data Link

- **Graph 1:**
  - X-axis: Time (s)
  - Y-axis: Throughput (Mbit/s)
  - Legend:
    - Flow 1 ingress (mean 31.67 Mbit/s)
    - Flow 1 egress (mean 31.56 Mbit/s)
    - Flow 2 ingress (mean 20.19 Mbit/s)
    - Flow 2 egress (mean 20.08 Mbit/s)
    - Flow 3 ingress (mean 10.02 Mbit/s)
    - Flow 3 egress (mean 9.91 Mbit/s)

- **Graph 2:**
  - X-axis: Time (s)
  - Y-axis: Per-packet one-way delay (ms)
  - Legend:
    - Flow 1 (95th percentile 55.12 ms)
    - Flow 2 (95th percentile 55.03 ms)
    - Flow 3 (95th percentile 54.53 ms)
Run 2: Statistics of LEDBAT

Start at: 2018-03-14 07:28:31
End at: 2018-03-14 07:29:01

# Below is generated by plot.py at 2018-03-14 13:26:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 48.47 Mbit/s
95th percentile per-packet one-way delay: 54.757 ms
Loss rate: 0.91%
-- Flow 1:
Average throughput: 31.01 Mbit/s
95th percentile per-packet one-way delay: 54.735 ms
Loss rate: 0.70%
-- Flow 2:
Average throughput: 21.30 Mbit/s
95th percentile per-packet one-way delay: 54.819 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 10.20 Mbit/s
95th percentile per-packet one-way delay: 54.717 ms
Loss rate: 2.17%
Run 2: Report of LEDBAT — Data Link

![Graph 1: Throughput vs Time]

- **Flow 1 ingress** (mean 31.12 Mbit/s)
- **Flow 1 egress** (mean 31.01 Mbit/s)
- **Flow 2 ingress** (mean 21.41 Mbit/s)
- **Flow 2 egress** (mean 21.30 Mbit/s)
- **Flow 3 ingress** (mean 10.31 Mbit/s)
- **Flow 3 egress** (mean 10.20 Mbit/s)

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

- **Flow 1** (95th percentile 54.73 ms)
- **Flow 2** (95th percentile 54.82 ms)
- **Flow 3** (95th percentile 54.72 ms)
Run 3: Statistics of LEDBAT

Start at: 2018-03-14 07:45:27
End at: 2018-03-14 07:45:57

# Below is generated by plot.py at 2018-03-14 13:26:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 49.19 Mbit/s
95th percentile per-packet one-way delay: 54.860 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 31.87 Mbit/s
95th percentile per-packet one-way delay: 54.893 ms
Loss rate: 0.69%
-- Flow 2:
Average throughput: 21.14 Mbit/s
95th percentile per-packet one-way delay: 54.865 ms
Loss rate: 1.07%
-- Flow 3:
Average throughput: 10.10 Mbit/s
95th percentile per-packet one-way delay: 54.550 ms
Loss rate: 2.19%
Run 3: Report of LEDBAT — Data Link
Run 4: Statistics of LEDBAT

Start at: 2018-03-14 08:02:31
End at: 2018-03-14 08:03:01

# Below is generated by plot.py at 2018-03-14 13:26:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 48.91 Mbit/s
95th percentile per-packet one-way delay: 55.135 ms
Loss rate: 0.91%
-- Flow 1:
Average throughput: 31.97 Mbit/s
95th percentile per-packet one-way delay: 55.317 ms
Loss rate: 0.70%
-- Flow 2:
Average throughput: 20.38 Mbit/s
95th percentile per-packet one-way delay: 54.774 ms
Loss rate: 1.07%
-- Flow 3:
Average throughput: 10.51 Mbit/s
95th percentile per-packet one-way delay: 55.196 ms
Loss rate: 2.16%
Run 4: Report of LEDBAT — Data Link

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

- Flow 1 ingress (mean 32.09 Mbit/s)
- Flow 1 egress (mean 31.97 Mbit/s)
- Flow 2 ingress (mean 20.49 Mbit/s)
- Flow 2 egress (mean 20.38 Mbit/s)
- Flow 3 ingress (mean 10.60 Mbit/s)
- Flow 3 egress (mean 10.51 Mbit/s)

![Graph showing per-packet one-way delay over time.](image)

- Flow 1 (95th percentile 55.32 ms)
- Flow 2 (95th percentile 54.77 ms)
- Flow 3 (95th percentile 55.20 ms)
Run 5: Statistics of LEDBAT

Start at: 2018-03-14 08:19:26
End at: 2018-03-14 08:19:56

# Below is generated by plot.py at 2018-03-14 13:26:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 48.24 Mbit/s
95th percentile per-packet one-way delay: 54.834 ms
Loss rate: 0.91%
-- Flow 1:
Average throughput: 30.82 Mbit/s
95th percentile per-packet one-way delay: 54.871 ms
Loss rate: 0.71%
-- Flow 2:
Average throughput: 21.28 Mbit/s
95th percentile per-packet one-way delay: 54.639 ms
Loss rate: 1.06%
-- Flow 3:
Average throughput: 10.06 Mbit/s
95th percentile per-packet one-way delay: 55.199 ms
Loss rate: 2.20%
Run 5: Report of LEDBAT — Data Link

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

Throughput (Mbps/s)

- Flow 1 ingress (mean 30.93 Mbps/s)
- Flow 1 egress (mean 30.82 Mbps/s)
- Flow 2 ingress (mean 21.40 Mbps/s)
- Flow 2 egress (mean 21.28 Mbps/s)
- Flow 3 ingress (mean 10.17 Mbps/s)
- Flow 3 egress (mean 10.06 Mbps/s)

Packet round-trip time (ms)

- Flow 1 (95th percentile 54.87 ms)
- Flow 2 (95th percentile 54.64 ms)
- Flow 3 (95th percentile 55.20 ms)
Run 6: Statistics of LEDBAT

Start at: 2018-03-14 08:36:18
End at: 2018-03-14 08:36:49

# Below is generated by plot.py at 2018-03-14 13:26:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 48.20 Mbit/s
95th percentile per-packet one-way delay: 54.862 ms
Loss rate: 0.91%
-- Flow 1:
Average throughput: 30.50 Mbit/s
95th percentile per-packet one-way delay: 54.820 ms
Loss rate: 0.71%
-- Flow 2:
Average throughput: 21.75 Mbit/s
95th percentile per-packet one-way delay: 55.128 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 9.90 Mbit/s
95th percentile per-packet one-way delay: 54.326 ms
Loss rate: 2.18%
Run 6: Report of LEDBAT — Data Link
Run 7: Statistics of LEDBAT

Start at: 2018-03-14 08:53:28
End at: 2018-03-14 08:53:58

# Below is generated by plot.py at 2018-03-14 13:26:18
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 49.16 Mbit/s
  95th percentile per-packet one-way delay: 54.763 ms
  Loss rate: 0.91%
-- Flow 1:
  Average throughput: 31.97 Mbit/s
  95th percentile per-packet one-way delay: 54.697 ms
  Loss rate: 0.70%
-- Flow 2:
  Average throughput: 20.69 Mbit/s
  95th percentile per-packet one-way delay: 54.915 ms
  Loss rate: 1.07%
-- Flow 3:
  Average throughput: 10.55 Mbit/s
  95th percentile per-packet one-way delay: 54.523 ms
  Loss rate: 2.12%
Run 7: Report of LEDBAT — Data Link

Throughput (Mbps)

- Flow 1 ingress (mean 32.08 Mbit/s)
- Flow 1 egress (mean 31.97 Mbit/s)
- Flow 2 ingress (mean 20.80 Mbit/s)
- Flow 2 egress (mean 20.69 Mbit/s)
- Flow 3 ingress (mean 10.67 Mbit/s)
- Flow 3 egress (mean 10.55 Mbit/s)

Per-packet round-trip delay (ms)

- Flow 1 (95th percentile 54.70 ms)
- Flow 2 (95th percentile 54.91 ms)
- Flow 3 (95th percentile 54.52 ms)
Run 8: Statistics of LEDBAT

Start at: 2018-03-14 09:10:44
End at: 2018-03-14 09:11:14

# Below is generated by plot.py at 2018-03-14 13:26:18
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 47.04 Mbit/s
  95th percentile per-packet one-way delay: 54.965 ms
  Loss rate: 0.92%
-- Flow 1:
  Average throughput: 30.20 Mbit/s
  95th percentile per-packet one-way delay: 54.954 ms
  Loss rate: 0.71%
-- Flow 2:
  Average throughput: 20.23 Mbit/s
  95th percentile per-packet one-way delay: 54.956 ms
  Loss rate: 1.08%
-- Flow 3:
  Average throughput: 10.53 Mbit/s
  95th percentile per-packet one-way delay: 55.100 ms
  Loss rate: 2.11%
Run 8: Report of LEDBAT — Data Link
Run 9: Statistics of LEDBAT

Start at: 2018-03-14 09:28:01
End at: 2018-03-14 09:28:31

# Below is generated by plot.py at 2018-03-14 13:26:18
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 45.54 Mbit/s
  95th percentile per-packet one-way delay: 55.144 ms
  Loss rate: 0.84%
-- Flow 1:
  Average throughput: 31.14 Mbit/s
  95th percentile per-packet one-way delay: 55.206 ms
  Loss rate: 0.70%
-- Flow 2:
  Average throughput: 16.95 Mbit/s
  95th percentile per-packet one-way delay: 55.015 ms
  Loss rate: 0.83%
-- Flow 3:
  Average throughput: 9.84 Mbit/s
  95th percentile per-packet one-way delay: 54.711 ms
  Loss rate: 2.17%
Run 9: Report of LEDBAT — Data Link

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

- Flow 1 ingress (mean 31.26 Mbit/s)
- Flow 1 egress (mean 31.14 Mbit/s)
- Flow 2 ingress (mean 17.00 Mbit/s)
- Flow 2 egress (mean 16.95 Mbit/s)
- Flow 3 ingress (mean 9.95 Mbit/s)
- Flow 3 egress (mean 9.84 Mbit/s)

- Flow 1 (95th percentile 55.21 ms)
- Flow 2 (95th percentile 55.02 ms)
- Flow 3 (95th percentile 54.71 ms)
Run 10: Statistics of LEDBAT

Start at: 2018-03-14 09:44:51
End at: 2018-03-14 09:45:21

# Below is generated by plot.py at 2018-03-14 13:26:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 38.92 Mbit/s
95th percentile per-packet one-way delay: 54.814 ms
Loss rate: 0.93%
-- Flow 1:
Average throughput: 22.45 Mbit/s
95th percentile per-packet one-way delay: 54.756 ms
Loss rate: 0.65%
-- Flow 2:
Average throughput: 19.79 Mbit/s
95th percentile per-packet one-way delay: 54.990 ms
Loss rate: 1.08%
-- Flow 3:
Average throughput: 10.21 Mbit/s
95th percentile per-packet one-way delay: 54.069 ms
Loss rate: 2.18%
Run 10: Report of LEDBAT — Data Link

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

- Flow 1 ingress (mean 22.52 Mbit/s)
- Flow 1 egress (mean 22.45 Mbit/s)
- Flow 2 ingress (mean 19.91 Mbit/s)
- Flow 2 egress (mean 19.79 Mbit/s)
- Flow 3 ingress (mean 10.32 Mbit/s)
- Flow 3 egress (mean 10.21 Mbit/s)

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

- Flow 1 (95th percentile 54.76 ms)
- Flow 2 (95th percentile 54.99 ms)
- Flow 3 (95th percentile 54.07 ms)
Run 1: Statistics of PCC

Start at: 2018-03-14 07:08:40
End at: 2018-03-14 07:09:10

# Below is generated by plot.py at 2018-03-14 13:36:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 550.38 Mbit/s
95th percentile per-packet one-way delay: 148.735 ms
Loss rate: 0.54%

-- Flow 1:
Average throughput: 502.09 Mbit/s
95th percentile per-packet one-way delay: 148.338 ms
Loss rate: 0.53%

-- Flow 2:
Average throughput: 64.74 Mbit/s
95th percentile per-packet one-way delay: 150.044 ms
Loss rate: 0.52%

-- Flow 3:
Average throughput: 16.76 Mbit/s
95th percentile per-packet one-way delay: 156.662 ms
Loss rate: 1.15%
Run 1: Report of PCC — Data Link

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

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

Start at: 2018-03-14 07:25:41
End at: 2018-03-14 07:26:11

# Below is generated by plot.py at 2018-03-14 13:36:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 530.97 Mbit/s
95th percentile per-packet one-way delay: 180.280 ms
Loss rate: 1.14%
-- Flow 1:
Average throughput: 507.92 Mbit/s
95th percentile per-packet one-way delay: 180.285 ms
Loss rate: 1.15%
-- Flow 2:
Average throughput: 32.61 Mbit/s
95th percentile per-packet one-way delay: 180.248 ms
Loss rate: 0.82%
-- Flow 3:
Average throughput: 4.31 Mbit/s
95th percentile per-packet one-way delay: 88.717 ms
Loss rate: 1.12%
Run 2: Report of PCC — Data Link
Run 3: Statistics of PCC

Start at: 2018-03-14 07:42:40
End at: 2018-03-14 07:43:10

# Below is generated by plot.py at 2018-03-14 13:36:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 512.59 Mbit/s
95th percentile per-packet one-way delay: 93.980 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 456.25 Mbit/s
95th percentile per-packet one-way delay: 94.620 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 80.99 Mbit/s
95th percentile per-packet one-way delay: 91.336 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 8.09 Mbit/s
95th percentile per-packet one-way delay: 92.819 ms
Loss rate: 1.05%
Run 3: Report of PCC — Data Link

Graph 1: Throughput (Mbps)
- Flow 1 ingress (mean 456.42 Mbps)
- Flow 1 egress (mean 456.25 Mbps)
- Flow 2 ingress (mean 81.07 Mbps)
- Flow 2 egress (mean 80.99 Mbps)
- Flow 3 ingress (mean 8.99 Mbps)
- Flow 3 egress (mean 8.09 Mbps)

Graph 2: Per-packet one-way delay (ms)
- Flow 1 (95th percentile 94.62 ms)
- Flow 2 (95th percentile 91.34 ms)
- Flow 3 (95th percentile 92.82 ms)
Run 4: Statistics of PCC

Start at: 2018-03-14 07:59:41
End at: 2018-03-14 08:00:11

# Below is generated by plot.py at 2018-03-14 13:36:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 510.52 Mbit/s
95th percentile per-packet one-way delay: 171.626 ms
Loss rate: 2.28%
-- Flow 1:
Average throughput: 474.86 Mbit/s
95th percentile per-packet one-way delay: 173.814 ms
Loss rate: 2.37%
-- Flow 2:
Average throughput: 23.61 Mbit/s
95th percentile per-packet one-way delay: 92.309 ms
Loss rate: 0.66%
-- Flow 3:
Average throughput: 61.53 Mbit/s
95th percentile per-packet one-way delay: 98.491 ms
Loss rate: 1.21%
Run 4: Report of PCC — Data Link

![Graph showing data link performance metrics for different flows.]
Run 5: Statistics of PCC

Start at: 2018-03-14 08:16:39
End at: 2018-03-14 08:17:09

# Below is generated by plot.py at 2018-03-14 13:37:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 532.27 Mbit/s
95th percentile per-packet one-way delay: 160.794 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 499.92 Mbit/s
95th percentile per-packet one-way delay: 160.834 ms
Loss rate: 0.56%
-- Flow 2:
Average throughput: 46.71 Mbit/s
95th percentile per-packet one-way delay: 160.166 ms
Loss rate: 1.84%
-- Flow 3:
Average throughput: 4.28 Mbit/s
95th percentile per-packet one-way delay: 132.293 ms
Loss rate: 1.32%
Run 5: Report of PCC — Data Link
Run 6: Statistics of PCC

Start at: 2018-03-14 08:33:27
End at: 2018-03-14 08:33:57

# Below is generated by plot.py at 2018-03-14 13:37:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 508.25 Mbit/s
95th percentile per-packet one-way delay: 178.792 ms
Loss rate: 1.24%
-- Flow 1:
Average throughput: 438.98 Mbit/s
95th percentile per-packet one-way delay: 178.592 ms
Loss rate: 1.03%
-- Flow 2:
Average throughput: 44.37 Mbit/s
95th percentile per-packet one-way delay: 178.812 ms
Loss rate: 1.91%
-- Flow 3:
Average throughput: 121.65 Mbit/s
95th percentile per-packet one-way delay: 179.130 ms
Loss rate: 3.03%
Run 6: Report of PCC — Data Link

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

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![Graph 2: Per-packet one-way delay (ms)](image2)
Run 7: Statistics of PCC

Start at: 2018-03-14 08:50:35
End at: 2018-03-14 08:51:05

# Below is generated by plot.py at 2018-03-14 13:38:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 547.12 Mbit/s
95th percentile per-packet one-way delay: 175.654 ms
Loss rate: 3.32%
-- Flow 1:
Average throughput: 472.15 Mbit/s
95th percentile per-packet one-way delay: 176.243 ms
Loss rate: 3.28%
-- Flow 2:
Average throughput: 111.95 Mbit/s
95th percentile per-packet one-way delay: 173.221 ms
Loss rate: 3.53%
-- Flow 3:
Average throughput: 2.07 Mbit/s
95th percentile per-packet one-way delay: 168.926 ms
Loss rate: 3.06%
Run 7: Report of PCC — Data Link

![Graph showing throughput and packet delay over time for different flows.](image)
Run 8: Statistics of PCC

Start at: 2018-03-14 09:08:00
End at: 2018-03-14 09:08:31

# Below is generated by plot.py at 2018-03-14 13:38:33
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 543.98 Mbit/s
  95th percentile per-packet one-way delay: 229.178 ms
  Loss rate: 2.51%
-- Flow 1:
  Average throughput: 539.80 Mbit/s
  95th percentile per-packet one-way delay: 229.929 ms
  Loss rate: 2.51%
-- Flow 2:
  Average throughput: 4.17 Mbit/s
  95th percentile per-packet one-way delay: 174.063 ms
  Loss rate: 1.15%
-- Flow 3:
  Average throughput: 4.31 Mbit/s
  95th percentile per-packet one-way delay: 173.867 ms
  Loss rate: 2.01%
Run 8: Report of PCC — Data Link

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[Diagram showing throughput and per-packet one-way delay over time for different flows, with annotations for flow mean and 95th percentile values.]
Run 9: Statistics of PCC

Start at: 2018-03-14 09:25:09
End at: 2018-03-14 09:25:39

# Below is generated by plot.py at 2018-03-14 13:48:04
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 527.03 Mbit/s
  95th percentile per-packet one-way delay: 180.364 ms
  Loss rate: 1.56%
-- Flow 1:
  Average throughput: 499.78 Mbit/s
  95th percentile per-packet one-way delay: 180.334 ms
  Loss rate: 1.55%
-- Flow 2:
  Average throughput: 33.31 Mbit/s
  95th percentile per-packet one-way delay: 180.498 ms
  Loss rate: 1.42%
-- Flow 3:
  Average throughput: 16.08 Mbit/s
  95th percentile per-packet one-way delay: 181.046 ms
  Loss rate: 3.25%
Run 9: Report of PCC — Data Link

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

- Flow 1 ingress (mean 505.88 Mbps)
- Flow 1 egress (mean 499.78 Mbps)
- Flow 2 ingress (mean 33.62 Mbps)
- Flow 2 egress (mean 33.31 Mbps)
- Flow 3 ingress (mean 16.44 Mbps)
- Flow 3 egress (mean 16.08 Mbps)

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

- Flow 1 (95th percentile 180.33 ms)
- Flow 2 (95th percentile 180.50 ms)
- Flow 3 (95th percentile 181.05 ms)
Run 10: Statistics of PCC

Start at: 2018-03-14 09:42:04
End at: 2018-03-14 09:42:34

# Below is generated by plot.py at 2018-03-14 13:48:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 547.66 Mbit/s
95th percentile per-packet one-way delay: 165.038 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 504.82 Mbit/s
95th percentile per-packet one-way delay: 165.217 ms
Loss rate: 0.55%
-- Flow 2:
Average throughput: 62.75 Mbit/s
95th percentile per-packet one-way delay: 164.202 ms
Loss rate: 0.60%
-- Flow 3:
Average throughput: 3.95 Mbit/s
95th percentile per-packet one-way delay: 128.334 ms
Loss rate: 1.17%
Run 10: Report of PCC — Data Link
Run 1: Statistics of QUIC Cubic

Start at: 2018-03-14 07:18:43
End at: 2018-03-14 07:19:13

# Below is generated by plot.py at 2018-03-14 13:48:29
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 122.18 Mbit/s
  95th percentile per-packet one-way delay: 53.728 ms
  Loss rate: 0.68%
-- Flow 1:
  Average throughput: 66.06 Mbit/s
  95th percentile per-packet one-way delay: 49.963 ms
  Loss rate: 0.32%
-- Flow 2:
  Average throughput: 53.03 Mbit/s
  95th percentile per-packet one-way delay: 50.012 ms
  Loss rate: 0.60%
-- Flow 3:
  Average throughput: 64.01 Mbit/s
  95th percentile per-packet one-way delay: 53.803 ms
  Loss rate: 1.93%
Run 1: Report of QUIC Cubic — Data Link

![Graph showing network performance metrics over time]

Legend:
- Flow 1 ingress (mean 66.04 Mbit/s)
- Flow 1 egress (mean 66.06 Mbit/s)
- Flow 2 ingress (mean 53.06 Mbit/s)
- Flow 2 egress (mean 53.03 Mbit/s)
- Flow 3 ingress (mean 64.55 Mbit/s)
- Flow 3 egress (mean 64.01 Mbit/s)

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

Legend:
- Flow 1 (95th percentile 49.96 ms)
- Flow 2 (95th percentile 50.01 ms)
- Flow 3 (95th percentile 53.80 ms)
Run 2: Statistics of QUIC Cubic

Start at: 2018-03-14 07:35:44
End at: 2018-03-14 07:36:14

# Below is generated by plot.py at 2018-03-14 13:48:29
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 104.00 Mbit/s
  95th percentile per-packet one-way delay: 53.619 ms
  Loss rate: 0.74%
-- Flow 1:
  Average throughput: 48.72 Mbit/s
  95th percentile per-packet one-way delay: 53.542 ms
  Loss rate: 0.41%
-- Flow 2:
  Average throughput: 54.53 Mbit/s
  95th percentile per-packet one-way delay: 53.634 ms
  Loss rate: 0.88%
-- Flow 3:
  Average throughput: 58.41 Mbit/s
  95th percentile per-packet one-way delay: 53.654 ms
  Loss rate: 1.33%
Run 2: Report of QUIC Cubic — Data Link
Run 3: Statistics of QUIC Cubic

Start at: 2018-03-14 07:52:45
End at: 2018-03-14 07:53:15

# Below is generated by plot.py at 2018-03-14 13:48:29
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 130.47 Mbit/s
  95th percentile per-packet one-way delay: 53.711 ms
  Loss rate: 0.53%
-- Flow 1:
  Average throughput: 72.96 Mbit/s
  95th percentile per-packet one-way delay: 50.030 ms
  Loss rate: 0.35%
-- Flow 2:
  Average throughput: 63.64 Mbit/s
  95th percentile per-packet one-way delay: 50.224 ms
  Loss rate: 0.53%
-- Flow 3:
  Average throughput: 46.59 Mbit/s
  95th percentile per-packet one-way delay: 53.795 ms
  Loss rate: 1.41%
Run 3: Report of QUIC Cubic — Data Link

![Graphs showing network performance metrics]

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 72.97 Mbps)
Flow 1 egress (mean 72.96 Mbps)
Flow 2 ingress (mean 63.64 Mbps)
Flow 2 egress (mean 63.64 Mbps)
Flow 3 ingress (mean 46.74 Mbps)
Flow 3 egress (mean 46.59 Mbps)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 50.03 ms)
Flow 2 (95th percentile 50.22 ms)
Flow 3 (95th percentile 53.80 ms)
Run 4: Statistics of QUIC Cubic

Start at: 2018-03-14 08:09:46
End at: 2018-03-14 08:10:16

# Below is generated by plot.py at 2018-03-14 13:48:29
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 130.25 Mbit/s
  95th percentile per-packet one-way delay: 53.559 ms
  Loss rate: 0.66%
-- Flow 1:
  Average throughput: 64.19 Mbit/s
  95th percentile per-packet one-way delay: 53.580 ms
  Loss rate: 0.51%
-- Flow 2:
  Average throughput: 71.84 Mbit/s
  95th percentile per-packet one-way delay: 53.478 ms
  Loss rate: 0.64%
-- Flow 3:
  Average throughput: 56.23 Mbit/s
  95th percentile per-packet one-way delay: 53.570 ms
  Loss rate: 1.21%
Run 4: Report of QUIC Cubic — Data Link

![Graphs showing network performance metrics over time]

- Flow 1 ingress (mean 64.29 Mbit/s)
- Flow 1 egress (mean 64.19 Mbit/s)
- Flow 2 ingress (mean 71.94 Mbit/s)
- Flow 2 egress (mean 71.84 Mbit/s)
- Flow 3 ingress (mean 56.32 Mbit/s)
- Flow 3 egress (mean 56.23 Mbit/s)
Run 5: Statistics of QUIC Cubic

Start at: 2018-03-14 08:26:43
End at: 2018-03-14 08:27:13

# Below is generated by plot.py at 2018-03-14 13:48:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 113.98 Mbit/s
95th percentile per-packet one-way delay: 53.728 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 61.54 Mbit/s
95th percentile per-packet one-way delay: 53.660 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 47.82 Mbit/s
95th percentile per-packet one-way delay: 53.777 ms
Loss rate: 0.92%
-- Flow 3:
Average throughput: 63.15 Mbit/s
95th percentile per-packet one-way delay: 50.053 ms
Loss rate: 0.12%
Run 5: Report of QUIC Cubic — Data Link
Run 6: Statistics of QUIC Cubic

Start at: 2018-03-14 08:43:37
End at: 2018-03-14 08:44:07

# Below is generated by plot.py at 2018-03-14 13:48:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 106.32 Mbit/s
95th percentile per-packet one-way delay: 53.774 ms
Loss rate: 0.92%
-- Flow 1:
Average throughput: 60.76 Mbit/s
95th percentile per-packet one-way delay: 53.711 ms
Loss rate: 0.50%
-- Flow 2:
Average throughput: 47.08 Mbit/s
95th percentile per-packet one-way delay: 53.761 ms
Loss rate: 1.28%
-- Flow 3:
Average throughput: 44.05 Mbit/s
95th percentile per-packet one-way delay: 53.859 ms
Loss rate: 1.94%
Run 6: Report of QUIC Cubic — Data Link
Run 7: Statistics of QUIC Cubic

Start at: 2018-03-14 09:00:48
End at: 2018-03-14 09:01:18

# Below is generated by plot.py at 2018-03-14 13:48:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 124.08 Mbit/s
95th percentile per-packet one-way delay: 53.607 ms
Loss rate: 0.62%

-- Flow 1:
Average throughput: 62.64 Mbit/s
95th percentile per-packet one-way delay: 53.637 ms
Loss rate: 0.51%

-- Flow 2:
Average throughput: 68.94 Mbit/s
95th percentile per-packet one-way delay: 53.184 ms
Loss rate: 0.53%

-- Flow 3:
Average throughput: 47.84 Mbit/s
95th percentile per-packet one-way delay: 50.625 ms
Loss rate: 1.29%
Run 7: Report of QUIC Cubic — Data Link
Run 8: Statistics of QUIC Cubic

Start at: 2018-03-14 09:18:17
End at: 2018-03-14 09:18:47

# Below is generated by plot.py at 2018-03-14 13:48:29
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 107.69 Mbit/s
  95th percentile per-packet one-way delay: 53.575 ms
  Loss rate: 0.48%
-- Flow 1:
  Average throughput: 62.63 Mbit/s
  95th percentile per-packet one-way delay: 50.017 ms
  Loss rate: 0.48%
-- Flow 2:
  Average throughput: 57.72 Mbit/s
  95th percentile per-packet one-way delay: 53.618 ms
  Loss rate: 0.58%
-- Flow 3:
  Average throughput: 20.74 Mbit/s
  95th percentile per-packet one-way delay: 50.377 ms
  Loss rate: 0.00%
Run 8: Report of QUIC Cubic — Data Link

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

![Graph 2: Packet Delay vs. Time](image)
Run 9: Statistics of QUIC Cubic

Start at: 2018-03-14 09:35:19
End at: 2018-03-14 09:35:49

# Below is generated by plot.py at 2018-03-14 13:48:29
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 118.41 Mbit/s
  95th percentile per-packet one-way delay: 53.635 ms
  Loss rate: 0.64%
-- Flow 1:
  Average throughput: 64.64 Mbit/s
  95th percentile per-packet one-way delay: 50.016 ms
  Loss rate: 0.29%
-- Flow 2:
  Average throughput: 64.03 Mbit/s
  95th percentile per-packet one-way delay: 53.647 ms
  Loss rate: 0.71%
-- Flow 3:
  Average throughput: 34.72 Mbit/s
  95th percentile per-packet one-way delay: 53.700 ms
  Loss rate: 2.33%
Run 9: Report of QUIC Cubic — Data Link
Run 10: Statistics of QUIC Cubic

Start at: 2018-03-14 09:52:04
End at: 2018-03-14 09:52:34

# Below is generated by plot.py at 2018-03-14 13:48:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 99.72 Mbit/s
95th percentile per-packet one-way delay: 53.550 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 50.42 Mbit/s
95th percentile per-packet one-way delay: 50.300 ms
Loss rate: 0.57%
-- Flow 2:
Average throughput: 43.67 Mbit/s
95th percentile per-packet one-way delay: 53.600 ms
Loss rate: 0.83%
-- Flow 3:
Average throughput: 61.52 Mbit/s
95th percentile per-packet one-way delay: 50.343 ms
Loss rate: 0.00%
Run 1: Statistics of SCReAM

Start at: 2018-03-14 07:09:39
End at: 2018-03-14 07:10:09

# Below is generated by plot.py at 2018-03-14 13:48:29
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 53.936 ms
  Loss rate: 0.45%
-- Flow 1:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 53.935 ms
  Loss rate: 0.25%
-- Flow 2:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 53.948 ms
  Loss rate: 0.42%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 50.570 ms
  Loss rate: 1.11%
Run 1: Report of SCReAM — Data Link

Throughput (Mbps)

Time (s)

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

Per-packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 59.94 ms)
Flow 2 (95th percentile 53.95 ms)
Flow 3 (95th percentile 50.57 ms)
Run 2: Statistics of SCReAM

Start at: 2018-03-14 07:26:39
End at: 2018-03-14 07:27:09

# Below is generated by plot.py at 2018-03-14 13:48:29
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 53.890 ms
  Loss rate: 0.46%
-- Flow 1:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 53.807 ms
  Loss rate: 0.25%
-- Flow 2:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 53.923 ms
  Loss rate: 0.42%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 50.396 ms
  Loss rate: 1.11%
Run 2: Report of SCReAM — Data Link

![Graph showing throughput and packet delay over time]

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

- **Packet one-way delay (ms):**
  - Flow 1 (95th percentile 53.81 ms)
  - Flow 2 (95th percentile 53.92 ms)
  - Flow 3 (95th percentile 50.40 ms)
Run 3: Statistics of SCReAM

Start at: 2018-03-14 07:43:37
End at: 2018-03-14 07:44:07

# Below is generated by plot.py at 2018-03-14 13:48:29
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.42 Mbit/s
  95th percentile per-packet one-way delay: 53.957 ms
  Loss rate: 0.46%
-- Flow 1:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 53.975 ms
  Loss rate: 0.26%
-- Flow 2:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 53.903 ms
  Loss rate: 0.43%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 53.764 ms
  Loss rate: 1.10%
Run 4: Statistics of SCReAM

Start at: 2018-03-14 08:00:39
End at: 2018-03-14 08:01:09

# Below is generated by plot.py at 2018-03-14 13:48:29
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.42 Mbit/s
  95th percentile per-packet one-way delay: 53.719 ms
  Loss rate: 0.46%
-- Flow 1:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 53.730 ms
  Loss rate: 0.25%
-- Flow 2:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 53.712 ms
  Loss rate: 0.42%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 50.580 ms
  Loss rate: 1.11%
Run 4: Report of SCReAM — Data Link

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

- **Flow 1 ingress (mean 0.21 Mbps)**
- **Flow 1 egress (mean 0.21 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 of Per-packet one way delay (ms) vs Time (s)](image2)

- **Flow 1 (95th percentile 53.73 ms)**
- **Flow 2 (95th percentile 53.71 ms)**
- **Flow 3 (95th percentile 50.58 ms)**
Run 5: Statistics of SCReAM

Start at: 2018-03-14 08:17:37
End at: 2018-03-14 08:18:07

# Below is generated by plot.py at 2018-03-14 13:48:29
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 53.872 ms
  Loss rate: 0.52%
-- Flow 1:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 53.893 ms
  Loss rate: 0.25%
-- Flow 2:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 53.708 ms
  Loss rate: 0.63%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 53.656 ms
  Loss rate: 1.11%
Run 5: Report of SCReAM — Data Link

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

- Flow 1 ingress (mean 0.21 Mbit/s)
- Flow 1 egress (mean 0.21 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)

- Flow 1 (95th percentile 53.89 ms)
- Flow 2 (95th percentile 53.71 ms)
- Flow 3 (95th percentile 53.66 ms)

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Run 6: Statistics of SCReAM

Start at: 2018-03-14 08:34:25
End at: 2018-03-14 08:34:55

# Below is generated by plot.py at 2018-03-14 13:48:29
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 50.472 ms
  Loss rate: 0.46%
-- Flow 1:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 50.182 ms
  Loss rate: 0.26%
-- Flow 2:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 50.507 ms
  Loss rate: 0.43%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 50.143 ms
  Loss rate: 1.10%
Run 6: Report of SCReAM — Data Link
Run 7: Statistics of SCReAM

Start at: 2018-03-14 08:51:34
End at: 2018-03-14 08:52:04

# Below is generated by plot.py at 2018-03-14 13:48:29
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 53.879 ms
  Loss rate: 0.46%
-- Flow 1:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 53.900 ms
  Loss rate: 0.25%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 53.288 ms
  Loss rate: 0.43%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 50.448 ms
  Loss rate: 1.11%
Run 7: Report of SCReAM — Data Link

Throughput (Mbits/s)

Time (s)

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

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 53.90 ms), Flow 2 (95th percentile 53.29 ms),
Flow 3 (95th percentile 50.45 ms)
Run 8: Statistics of SCReAM

Start at: 2018-03-14 09:08:59
End at: 2018-03-14 09:09:29

# Below is generated by plot.py at 2018-03-14 13:48:29
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 53.762 ms
  Loss rate: 0.46%
-- Flow 1:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 53.390 ms
  Loss rate: 0.26%
-- Flow 2:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 53.782 ms
  Loss rate: 0.43%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 50.294 ms
  Loss rate: 1.11%
Run 9: Statistics of SCReAM

Start at: 2018-03-14 09:26:07
End at: 2018-03-14 09:26:37

# Below is generated by plot.py at 2018-03-14 13:48:29
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 53.868 ms
  Loss rate: 0.52%
-- Flow 1:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 53.884 ms
  Loss rate: 0.38%
-- Flow 2:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 53.835 ms
  Loss rate: 0.42%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 50.410 ms
  Loss rate: 1.11%
Run 9: Report of SCReAM — Data Link
Run 10: Statistics of SCReAM

Start at: 2018-03-14 09:43:03
End at: 2018-03-14 09:43:33

# Below is generated by plot.py at 2018-03-14 13:48:29
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 53.703 ms
  Loss rate: 0.45%
-- Flow 1:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 50.297 ms
  Loss rate: 0.25%
-- Flow 2:
  Average throughput: 0.21 Mbit/s
  95th percentile per-packet one-way delay: 50.108 ms
  Loss rate: 0.43%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 53.741 ms
  Loss rate: 1.11%
Run 10: Report of SCReAM — Data Link

![Graph showing network traffic and delay](image)

- **Throughput**: The graph on the top shows the throughput over time for different network flows, with labels indicating ingress and egress speeds.
- **Per-packet one-way delay**: The graph on the bottom illustrates the per-packet one-way delay for each flow, with percentile delays marked.

### Key Observations
- **Flow 1**: Mean of 0.21 Mbps, 95th percentile at 50.30 ms.
- **Flow 2**: Mean of 0.21 Mbps, 95th percentile at 50.11 ms.
- **Flow 3**: Mean of 0.22 Mbps, 95th percentile at 51.74 ms.
Run 1: Statistics of WebRTC media

Start at: 2018-03-14 07:19:29
End at: 2018-03-14 07:19:59

# Below is generated by plot.py at 2018-03-14 13:48:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 4.37 Mbit/s
  95th percentile per-packet one-way delay: 53.933 ms
  Loss rate: 0.67%
-- Flow 1:
  Average throughput: 2.29 Mbit/s
  95th percentile per-packet one-way delay: 53.944 ms
  Loss rate: 0.48%
-- Flow 2:
  Average throughput: 1.46 Mbit/s
  95th percentile per-packet one-way delay: 53.933 ms
  Loss rate: 0.48%
-- Flow 3:
  Average throughput: 0.63 Mbit/s
  95th percentile per-packet one-way delay: 53.557 ms
  Loss rate: 1.81%
Run 1: Report of WebRTC media — Data Link
Run 2: Statistics of WebRTC media

Start at: 2018-03-14 07:36:29
End at: 2018-03-14 07:36:59

# Below is generated by plot.py at 2018-03-14 13:48:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.36 Mbit/s
95th percentile per-packet one-way delay: 53.733 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 2.29 Mbit/s
95th percentile per-packet one-way delay: 50.192 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 1.46 Mbit/s
95th percentile per-packet one-way delay: 53.771 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 0.64 Mbit/s
95th percentile per-packet one-way delay: 53.651 ms
Loss rate: 1.06%
Run 2: Report of WebRTC media — Data Link

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

- **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 1.46 Mbps)
  - Flow 3 ingress (mean 0.64 Mbps)
  - Flow 3 egress (mean 0.64 Mbps)

- **Delay (ms):**
  - Flow 1 (95th percentile 50.19 ms)
  - Flow 2 (95th percentile 53.77 ms)
  - Flow 3 (95th percentile 53.65 ms)
Run 3: Statistics of WebRTC media

Start at: 2018-03-14 07:53:32
End at: 2018-03-14 07:54:02

# Below is generated by plot.py at 2018-03-14 13:48:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 4.37 Mbit/s
  95th percentile per-packet one-way delay: 53.221 ms
  Loss rate: 0.65%
-- Flow 1:
  Average throughput: 2.29 Mbit/s
  95th percentile per-packet one-way delay: 53.235 ms
  Loss rate: 0.45%
-- Flow 2:
  Average throughput: 1.48 Mbit/s
  95th percentile per-packet one-way delay: 50.115 ms
  Loss rate: 0.71%
-- Flow 3:
  Average throughput: 0.63 Mbit/s
  95th percentile per-packet one-way delay: 53.608 ms
  Loss rate: 1.21%
Run 3: Report of WebRTC media — Data Link
Run 4: Statistics of WebRTC media

Start at: 2018-03-14 08:10:32
End at: 2018-03-14 08:11:02

# Below is generated by plot.py at 2018-03-14 13:48:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 4.19 Mbit/s
  95th percentile per-packet one-way delay: 53.693 ms
  Loss rate: 0.85%
  -- Flow 1:
  Average throughput: 2.08 Mbit/s
  95th percentile per-packet one-way delay: 53.746 ms
  Loss rate: 0.90%
  -- Flow 2:
  Average throughput: 1.48 Mbit/s
  95th percentile per-packet one-way delay: 50.185 ms
  Loss rate: 0.68%
  -- Flow 3:
  Average throughput: 0.66 Mbit/s
  95th percentile per-packet one-way delay: 53.093 ms
  Loss rate: 1.08%
Run 4: Report of WebRTC media — Data Link
Run 5: Statistics of WebRTC media

Start at: 2018-03-14 08:27:29
End at: 2018-03-14 08:27:59

# Below is generated by plot.py at 2018-03-14 13:48:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 4.36 Mbit/s
  95th percentile per-packet one-way delay: 53.973 ms
  Loss rate: 0.56%
-- Flow 1:
  Average throughput: 2.29 Mbit/s
  95th percentile per-packet one-way delay: 53.977 ms
  Loss rate: 0.31%
-- Flow 2:
  Average throughput: 1.46 Mbit/s
  95th percentile per-packet one-way delay: 53.981 ms
  Loss rate: 0.51%
-- Flow 3:
  Average throughput: 0.63 Mbit/s
  95th percentile per-packet one-way delay: 53.838 ms
  Loss rate: 1.58%
Run 5: Report of WebRTC media — Data Link

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

- **Flow 1** (ingress: mean 2.29 Mbit/s, egress: mean 2.29 Mbit/s)
- **Flow 2** (ingress: mean 1.46 Mbit/s, egress: mean 1.46 Mbit/s)
- **Flow 3** (ingress: mean 0.64 Mbit/s, egress: mean 0.63 Mbit/s)

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

- **Flow 1** (95th percentile: 53.98 ms)
- **Flow 2** (95th percentile: 53.98 ms)
- **Flow 3** (95th percentile: 53.84 ms)
Run 6: Statistics of WebRTC media

Start at: 2018-03-14 08:44:22
End at: 2018-03-14 08:44:52

# Below is generated by plot.py at 2018-03-14 13:48:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 4.33 Mbit/s
  95th percentile per-packet one-way delay: 53.879 ms
  Loss rate: 0.59%
-- Flow 1:
  Average throughput: 2.28 Mbit/s
  95th percentile per-packet one-way delay: 53.913 ms
  Loss rate: 0.31%
-- Flow 2:
  Average throughput: 1.46 Mbit/s
  95th percentile per-packet one-way delay: 50.332 ms
  Loss rate: 0.73%
-- Flow 3:
  Average throughput: 0.63 Mbit/s
  95th percentile per-packet one-way delay: 53.661 ms
  Loss rate: 1.27%
Run 6: Report of WebRTC media — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 2.27 Mbps)
Flow 1 egress (mean 2.28 Mbps)
Flow 2 ingress (mean 1.46 Mbps)
Flow 2 egress (mean 1.46 Mbps)
Flow 3 ingress (mean 0.03 Mbps)
Flow 3 egress (mean 0.03 Mbps)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 53.91 ms)
Flow 2 (95th percentile 50.33 ms)
Flow 3 (95th percentile 53.66 ms)
Run 7: Statistics of WebRTC media

Start at: 2018-03-14 09:01:34
End at: 2018-03-14 09:02:04

# Below is generated by plot.py at 2018-03-14 13:48:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.36 Mbit/s
95th percentile per-packet one-way delay: 53.953 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 2.29 Mbit/s
95th percentile per-packet one-way delay: 53.820 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 1.45 Mbit/s
95th percentile per-packet one-way delay: 54.001 ms
Loss rate: 0.78%
-- Flow 3:
Average throughput: 0.65 Mbit/s
95th percentile per-packet one-way delay: 53.668 ms
Loss rate: 1.02%
Run 7: Report of WebRTC media — Data Link

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

- Flow 1 ingress (mean 2.29 Mbps)
- Flow 1 egress (mean 2.29 Mbps)
- Flow 2 ingress (mean 1.46 Mbps)
- Flow 2 egress (mean 1.45 Mbps)
- Flow 3 ingress (mean 0.65 Mbps)
- Flow 3 egress (mean 0.65 Mbps)

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

- Flow 1 (95th percentile 53.82 ms)
- Flow 2 (95th percentile 54.00 ms)
- Flow 3 (95th percentile 53.67 ms)
Run 8: Statistics of WebRTC media

Start at: 2018-03-14 09:19:03
End at: 2018-03-14 09:19:33

# Below is generated by plot.py at 2018-03-14 13:48:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 4.57 Mbit/s
  95th percentile per-packet one-way delay: 53.881 ms
  Loss rate: 1.41%
-- Flow 1:
  Average throughput: 2.49 Mbit/s
  95th percentile per-packet one-way delay: 53.883 ms
  Loss rate: 1.83%
-- Flow 2:
  Average throughput: 1.46 Mbit/s
  95th percentile per-packet one-way delay: 53.895 ms
  Loss rate: 0.72%
-- Flow 3:
  Average throughput: 0.65 Mbit/s
  95th percentile per-packet one-way delay: 50.751 ms
  Loss rate: 1.32%
Run 8: Report of WebRTC media — Data Link

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**Throughput (Mbps)**

- **Flow 1**: Mean ingress 2.52 Mbps, egress 2.49 Mbps
- **Flow 2**: Mean ingress 1.47 Mbps, egress 1.46 Mbps
- **Flow 3**: Mean ingress 0.66 Mbps, egress 0.65 Mbps

**Packet One-Way Delay (ms)**

- **Flow 1**: 95th percentile 53.88 ms
- **Flow 2**: 95th percentile 53.90 ms
- **Flow 3**: 95th percentile 50.75 ms
Run 9: Statistics of WebRTC media

Start at: 2018-03-14 09:36:05
End at: 2018-03-14 09:36:35

# Below is generated by plot.py at 2018-03-14 13:48:30
# Datalink statistics
  -- Total of 3 flows:
  Average throughput: 4.27 Mbit/s
  95th percentile per-packet one-way delay: 53.885 ms
  Loss rate: 0.70%
-- Flow 1:
  Average throughput: 2.18 Mbit/s
  95th percentile per-packet one-way delay: 50.148 ms
  Loss rate: 0.46%
-- Flow 2:
  Average throughput: 1.47 Mbit/s
  95th percentile per-packet one-way delay: 53.930 ms
  Loss rate: 0.71%
-- Flow 3:
  Average throughput: 0.65 Mbit/s
  95th percentile per-packet one-way delay: 52.923 ms
  Loss rate: 1.50%
Run 9: Report of WebRTC media — Data Link

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

Start at: 2018-03-14 09:52:48  
End at: 2018-03-14 09:53:18

# Below is generated by plot.py at 2018-03-14 13:48:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 4.38 Mbit/s
  95th percentile per-packet one-way delay: 53.788 ms
  Loss rate: 0.55%
-- Flow 1:
  Average throughput: 2.29 Mbit/s
  95th percentile per-packet one-way delay: 53.409 ms
  Loss rate: 0.30%
-- Flow 2:
  Average throughput: 1.47 Mbit/s
  95th percentile per-packet one-way delay: 53.814 ms
  Loss rate: 0.48%
-- Flow 3:
  Average throughput: 0.64 Mbit/s
  95th percentile per-packet one-way delay: 53.848 ms
  Loss rate: 1.59%
Run 10: Report of WebRTC media — Data Link

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

- 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 0.65 Mbit/s)
- Flow 3 egress (mean 0.64 Mbit/s)
Run 1: Statistics of Sprout

Start at: 2018-03-14 07:13:25
End at: 2018-03-14 07:13:55

# Below is generated by plot.py at 2018-03-14 13:48:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 15.23 Mbit/s
  95th percentile per-packet one-way delay: 54.475 ms
  Loss rate: 0.66%
-- Flow 1:
  Average throughput: 7.65 Mbit/s
  95th percentile per-packet one-way delay: 54.466 ms
  Loss rate: 0.43%
-- Flow 2:
  Average throughput: 7.80 Mbit/s
  95th percentile per-packet one-way delay: 54.538 ms
  Loss rate: 0.63%
-- Flow 3:
  Average throughput: 7.32 Mbit/s
  95th percentile per-packet one-way delay: 54.413 ms
  Loss rate: 1.45%
Run 1: Report of Sprout — Data Link
Run 2: Statistics of Sprout

Start at: 2018-03-14 07:30:27
End at: 2018-03-14 07:30:57

# Below is generated by plot.py at 2018-03-14 13:48:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 15.33 Mbit/s
  95th percentile per-packet one-way delay: 54.430 ms
  Loss rate: 0.23%
-- Flow 1:
  Average throughput: 7.81 Mbit/s
  95th percentile per-packet one-way delay: 54.391 ms
  Loss rate: 0.03%
-- Flow 2:
  Average throughput: 7.59 Mbit/s
  95th percentile per-packet one-way delay: 54.469 ms
  Loss rate: 0.03%
-- Flow 3:
  Average throughput: 7.59 Mbit/s
  95th percentile per-packet one-way delay: 54.482 ms
  Loss rate: 1.27%
Run 2: Report of Sprout — Data Link

Graph showing throughput and delay over time for different flows.

- Flow 1 ingress (mean 7.80 Mbit/s)
- Flow 1 egress (mean 7.81 Mbit/s)
- Flow 2 ingress (mean 7.36 Mbit/s)
- Flow 2 egress (mean 7.39 Mbit/s)
- Flow 3 ingress (mean 7.59 Mbit/s)
- Flow 3 egress (mean 7.59 Mbit/s)
Run 3: Statistics of Sprout

Start at: 2018-03-14 07:47:22
End at: 2018-03-14 07:47:52

# Below is generated by plot.py at 2018-03-14 13:48:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.09 Mbit/s
95th percentile per-packet one-way delay: 54.442 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 7.68 Mbit/s
95th percentile per-packet one-way delay: 54.431 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 7.65 Mbit/s
95th percentile per-packet one-way delay: 54.369 ms
Loss rate: 0.66%
-- Flow 3:
Average throughput: 7.14 Mbit/s
95th percentile per-packet one-way delay: 54.822 ms
Loss rate: 1.10%
Run 3: Report of Sprout — Data Link

**Graph 1:**
- **Throughput:** Mbit/s
- **Time (s):** 0 to 30

**Legend:**
- Flow 1 ingress (mean 7.70 Mbit/s)
- Flow 1 egress (mean 7.68 Mbit/s)
- Flow 2 ingress (mean 7.67 Mbit/s)
- Flow 2 egress (mean 7.65 Mbit/s)
- Flow 3 ingress (mean 7.16 Mbit/s)
- Flow 3 egress (mean 7.14 Mbit/s)

**Graph 2:**
- **Per packet one way delay:** ms
- **Time (s):** 0 to 30

**Legend:**
- Flow 1 (95th percentile 54.43 ms)
- Flow 2 (95th percentile 54.37 ms)
- Flow 3 (95th percentile 54.82 ms)
Run 4: Statistics of Sprout

Start at: 2018-03-14 08:04:27
End at: 2018-03-14 08:04:57

# Below is generated by plot.py at 2018-03-14 13:48:30
# Datalink statistics
-- Total of 3 flows:
   Average throughput: 15.22 Mbit/s
   95th percentile per-packet one-way delay: 54.337 ms
   Loss rate: 0.60%
-- Flow 1:
   Average throughput: 7.67 Mbit/s
   95th percentile per-packet one-way delay: 54.367 ms
   Loss rate: 0.40%
-- Flow 2:
   Average throughput: 7.71 Mbit/s
   95th percentile per-packet one-way delay: 54.250 ms
   Loss rate: 0.55%
-- Flow 3:
   Average throughput: 7.44 Mbit/s
   95th percentile per-packet one-way delay: 54.364 ms
   Loss rate: 1.36%
Run 5: Statistics of Sprout

Start at: 2018-03-14 08:21:24
End at: 2018-03-14 08:21:54

# Below is generated by plot.py at 2018-03-14 13:48:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 15.25 Mbit/s
  95th percentile per-packet one-way delay: 54.376 ms
  Loss rate: 0.64%
-- Flow 1:
  Average throughput: 7.76 Mbit/s
  95th percentile per-packet one-way delay: 54.375 ms
  Loss rate: 0.43%
-- Flow 2:
  Average throughput: 7.61 Mbit/s
  95th percentile per-packet one-way delay: 54.383 ms
  Loss rate: 0.64%
-- Flow 3:
  Average throughput: 7.46 Mbit/s
  95th percentile per-packet one-way delay: 54.358 ms
  Loss rate: 1.32%
Run 5: Report of Sprout — Data Link

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

Legend:
- Flow 1 ingress (mean 7.76 Mbit/s)
- Flow 1 egress (mean 7.76 Mbit/s)
- Flow 2 ingress (mean 7.63 Mbit/s)
- Flow 2 egress (mean 7.61 Mbit/s)
- Flow 3 ingress (mean 7.47 Mbit/s)
- Flow 3 egress (mean 7.46 Mbit/s)
Run 6: Statistics of Sprout

Start at: 2018-03-14 08:38:15
End at: 2018-03-14 08:38:45

# Below is generated by plot.py at 2018-03-14 13:48:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.41 Mbit/s
95th percentile per-packet one-way delay: 54.501 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 7.87 Mbit/s
95th percentile per-packet one-way delay: 54.524 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 7.73 Mbit/s
95th percentile per-packet one-way delay: 54.366 ms
Loss rate: 0.17%
-- Flow 3:
Average throughput: 7.39 Mbit/s
95th percentile per-packet one-way delay: 54.594 ms
Loss rate: 1.33%
Run 6: Report of Sprout — Data Link

Throughput (Mbit/s)

Time (s)

- Flow 1 ingress (mean 7.86 Mbit/s)
- Flow 1 egress (mean 7.87 Mbit/s)
- Flow 2 ingress (mean 7.72 Mbit/s)
- Flow 2 egress (mean 7.73 Mbit/s)
- Flow 3 ingress (mean 7.40 Mbit/s)
- Flow 3 egress (mean 7.39 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

- Flow 1 (95th percentile 54.52 ms)
- Flow 2 (95th percentile 54.37 ms)
- Flow 3 (95th percentile 54.59 ms)
Run 7: Statistics of Sprout

Start at: 2018-03-14 08:55:26
End at: 2018-03-14 08:55:57

# Below is generated by plot.py at 2018-03-14 13:48:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 15.30 Mbit/s
  95th percentile per-packet one-way delay: 54.543 ms
  Loss rate: 0.56%
-- Flow 1:
  Average throughput: 7.75 Mbit/s
  95th percentile per-packet one-way delay: 54.561 ms
  Loss rate: 0.42%
-- Flow 2:
  Average throughput: 7.71 Mbit/s
  95th percentile per-packet one-way delay: 54.560 ms
  Loss rate: 0.48%
-- Flow 3:
  Average throughput: 7.47 Mbit/s
  95th percentile per-packet one-way delay: 54.468 ms
  Loss rate: 1.15%
Run 7: Report of Sprout — Data Link

![Graph(107,117),(892,783)
Run 8: Statistics of Sprout

Start at: 2018-03-14 09:12:53
End at: 2018-03-14 09:13:23

# Below is generated by plot.py at 2018-03-14 13:48:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 15.04 Mbit/s
  95th percentile per-packet one-way delay: 54.447 ms
  Loss rate: 0.61%
-- Flow 1:
  Average throughput: 7.81 Mbit/s
  95th percentile per-packet one-way delay: 54.479 ms
  Loss rate: 0.41%
-- Flow 2:
  Average throughput: 7.59 Mbit/s
  95th percentile per-packet one-way delay: 54.415 ms
  Loss rate: 0.55%
-- Flow 3:
  Average throughput: 6.73 Mbit/s
  95th percentile per-packet one-way delay: 54.369 ms
  Loss rate: 1.46%
Run 8: Report of Sprout — Data Link
Run 9: Statistics of Sprout

Start at: 2018-03-14 09:29:54
End at: 2018-03-14 09:30:24

# Below is generated by plot.py at 2018-03-14 13:48:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.27 Mbit/s
95th percentile per-packet one-way delay: 54.644 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 7.85 Mbit/s
95th percentile per-packet one-way delay: 54.670 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 7.51 Mbit/s
95th percentile per-packet one-way delay: 54.633 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 7.50 Mbit/s
95th percentile per-packet one-way delay: 54.563 ms
Loss rate: 1.34%
Run 10: Statistics of Sprout

Start at: 2018-03-14 09:46:41
End at: 2018-03-14 09:47:11

# Below is generated by plot.py at 2018-03-14 13:48:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 15.43 Mbit/s
  95th percentile per-packet one-way delay: 54.385 ms
  Loss rate: 0.55%
-- Flow 1:
  Average throughput: 7.85 Mbit/s
  95th percentile per-packet one-way delay: 54.491 ms
  Loss rate: 0.35%
-- Flow 2:
  Average throughput: 7.70 Mbit/s
  95th percentile per-packet one-way delay: 54.080 ms
  Loss rate: 0.65%
-- Flow 3:
  Average throughput: 7.56 Mbit/s
  95th percentile per-packet one-way delay: 54.121 ms
  Loss rate: 0.94%
Run 10: Report of Sprout — Data Link

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**Throughput Chart:**
- **Flow 1 ingress (mean 7.85 Mbit/s)**
- **Flow 1 egress (mean 7.85 Mbit/s)**
- **Flow 2 ingress (mean 7.71 Mbit/s)**
- **Flow 2 egress (mean 7.70 Mbit/s)**
- **Flow 3 ingress (mean 7.57 Mbit/s)**
- **Flow 3 egress (mean 7.56 Mbit/s)**

**Per-packet round-trip time chart:**
- **Flow 1 (95th percentile 54.49 ms)**
- **Flow 2 (95th percentile 54.08 ms)**
- **Flow 3 (95th percentile 54.12 ms)**
Run 1: Statistics of TaoVA-100x

Start at: 2018-03-14 07:05:36
End at: 2018-03-14 07:06:06

# Below is generated by plot.py at 2018-03-14 13:55:10
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 298.26 Mbit/s
  95th percentile per-packet one-way delay: 57.132 ms
  Loss rate: 0.43%
-- Flow 1:
  Average throughput: 205.52 Mbit/s
  95th percentile per-packet one-way delay: 56.569 ms
  Loss rate: 0.16%
-- Flow 2:
  Average throughput: 32.17 Mbit/s
  95th percentile per-packet one-way delay: 59.531 ms
  Loss rate: 0.22%
-- Flow 3:
  Average throughput: 217.72 Mbit/s
  95th percentile per-packet one-way delay: 57.634 ms
  Loss rate: 1.27%
Run 1: Report of TaoVA-100x — Data Link

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

- Flow 1 ingress (mean 205.11 Mbit/s)
- Flow 1 egress (mean 205.52 Mbit/s)
- Flow 2 ingress (mean 32.08 Mbit/s)
- Flow 2 egress (mean 32.17 Mbit/s)
- Flow 3 ingress (mean 218.10 Mbit/s)
- Flow 3 egress (mean 217.72 Mbit/s)
Run 2: Statistics of TaoVA-100x

Start at: 2018-03-14 07:22:43
End at: 2018-03-14 07:23:13

# Below is generated by plot.py at 2018-03-14 13:55:10
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 252.03 Mbit/s
  95th percentile per-packet one-way delay: 53.920 ms
  Loss rate: 0.39%
  -- Flow 1:
    Average throughput: 223.37 Mbit/s
    95th percentile per-packet one-way delay: 53.835 ms
    Loss rate: 0.00%
  -- Flow 2:
    Average throughput: 219.00 Mbit/s
    95th percentile per-packet one-way delay: 53.996 ms
    Loss rate: 0.63%
  -- Flow 3:
    Average throughput: 13.95 Mbit/s
    95th percentile per-packet one-way delay: 53.761 ms
    Loss rate: 1.09%
Run 2: Report of TaoVA-100x — Data Link

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

Legend:
- Flow 1 ingress (mean 223.43 Mbit/s)
- Flow 1 egress (mean 223.37 Mbit/s)
- Flow 2 ingress (mean 219.23 Mbit/s)
- Flow 2 egress (mean 219.00 Mbit/s)
- Flow 3 ingress (mean 13.96 Mbit/s)
- Flow 3 egress (mean 13.95 Mbit/s)
Run 3: Statistics of TaoVA-100x

Start at: 2018-03-14 07:39:51
End at: 2018-03-14 07:40:21

# Below is generated by plot.py at 2018-03-14 13:55:10
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 107.03 Mbit/s
  95th percentile per-packet one-way delay: 53.965 ms
  Loss rate: 0.95%
-- Flow 1:
  Average throughput: 18.13 Mbit/s
  95th percentile per-packet one-way delay: 53.642 ms
  Loss rate: 0.28%
-- Flow 2:
  Average throughput: 18.26 Mbit/s
  95th percentile per-packet one-way delay: 53.637 ms
  Loss rate: 0.40%
-- Flow 3:
  Average throughput: 233.34 Mbit/s
  95th percentile per-packet one-way delay: 54.051 ms
  Loss rate: 1.20%
Run 3: Report of TaoVA-100x — Data Link
Run 4: Statistics of TaoVA-100x

Start at: 2018-03-14 07:56:53
End at: 2018-03-14 07:57:23

# Below is generated by plot.py at 2018-03-14 13:55:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 115.67 Mbit/s
95th percentile per-packet one-way delay: 53.839 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 234.97 Mbit/s
95th percentile per-packet one-way delay: 53.887 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 27.29 Mbit/s
95th percentile per-packet one-way delay: 53.659 ms
Loss rate: 0.27%
-- Flow 3:
Average throughput: 19.98 Mbit/s
95th percentile per-packet one-way delay: 53.612 ms
Loss rate: 0.75%
Run 4: Report of TaoVA-100x — Data Link

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

- Flow 1 ingress (mean 235.04 Mbit/s)
- Flow 1 egress (mean 234.97 Mbit/s)
- Flow 2 ingress (mean 27.23 Mbit/s)
- Flow 2 egress (mean 19.93 Mbit/s)
- Flow 3 ingress (mean 27.29 Mbit/s)
- Flow 3 egress (mean 19.98 Mbit/s)

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

- Flow 1 (95th percentile 53.89 ms)
- Flow 2 (95th percentile 53.66 ms)
- Flow 3 (95th percentile 53.61 ms)
Run 5: Statistics of TaoVA-100x

Start at: 2018-03-14 08:13:44
End at: 2018-03-14 08:14:14

# Below is generated by plot.py at 2018-03-14 13:55:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 183.40 Mbit/s
95th percentile per-packet one-way delay: 53.876 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 160.60 Mbit/s
95th percentile per-packet one-way delay: 53.883 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 14.43 Mbit/s
95th percentile per-packet one-way delay: 53.595 ms
Loss rate: 0.43%
-- Flow 3:
Average throughput: 47.36 Mbit/s
95th percentile per-packet one-way delay: 53.814 ms
Loss rate: 0.00%
Run 5: Report of TaoVA-100x — Data Link
Run 6: Statistics of TaoVA-100x

Start at: 2018-03-14 08:30:40
End at: 2018-03-14 08:31:10

# Below is generated by plot.py at 2018-03-14 13:55:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 118.16 Mbit/s
95th percentile per-packet one-way delay: 53.840 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 25.20 Mbit/s
95th percentile per-packet one-way delay: 53.755 ms
Loss rate: 0.20%
-- Flow 2:
Average throughput: 26.98 Mbit/s
95th percentile per-packet one-way delay: 53.796 ms
Loss rate: 0.28%
-- Flow 3:
Average throughput: 227.94 Mbit/s
95th percentile per-packet one-way delay: 53.901 ms
Loss rate: 1.20%
Run 6: Report of TaoVA-100x — Data Link
Run 7: Statistics of TaoVA-100x

Start at: 2018-03-14 08:47:36
End at: 2018-03-14 08:48:06

# Below is generated by plot.py at 2018-03-14 13:56:53
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 221.15 Mbit/s
  95th percentile per-packet one-way delay: 64.083 ms
  Loss rate: 0.73%
-- Flow 1:
  Average throughput: 17.86 Mbit/s
  95th percentile per-packet one-way delay: 53.865 ms
  Loss rate: 0.28%
-- Flow 2:
  Average throughput: 225.61 Mbit/s
  95th percentile per-packet one-way delay: 61.215 ms
  Loss rate: 0.59%
-- Flow 3:
  Average throughput: 162.07 Mbit/s
  95th percentile per-packet one-way delay: 71.608 ms
  Loss rate: 1.25%
Run 7: Report of TaoVA-100x — Data Link
Run 8: Statistics of TaoVA-100x

Start at: 2018-03-14 09:04:55  
End at: 2018-03-14 09:05:25

# Below is generated by plot.py at 2018-03-14 13:59:58  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 290.51 Mbit/s  
95th percentile per-packet one-way delay: 58.521 ms  
Loss rate: 0.61%  
-- Flow 1:  
Average throughput: 209.51 Mbit/s  
95th percentile per-packet one-way delay: 54.009 ms  
Loss rate: 0.38%  
-- Flow 2:  
Average throughput: 16.44 Mbit/s  
95th percentile per-packet one-way delay: 53.880 ms  
Loss rate: 0.44%  
-- Flow 3:  
Average throughput: 212.98 Mbit/s  
95th percentile per-packet one-way delay: 67.376 ms  
Loss rate: 1.31%

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Run 8: Report of TaoVA-100x — Data Link

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

![Graph 2: Per-packet one-way delay (ms)](image2)
Run 9: Statistics of TaoVA-100x

Start at: 2018-03-14 09:22:20  
End at: 2018-03-14 09:22:50

# Below is generated by plot.py at 2018-03-14 13:59:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 121.83 Mbit/s  
95th percentile per-packet one-way delay: 53.810 ms  
Loss rate: 0.83%
-- Flow 1:
Average throughput: 22.56 Mbit/s  
95th percentile per-packet one-way delay: 53.754 ms  
Loss rate: 0.22%
-- Flow 2:
Average throughput: 77.23 Mbit/s  
95th percentile per-packet one-way delay: 53.771 ms  
Loss rate: 0.00%
-- Flow 3:
Average throughput: 231.35 Mbit/s  
95th percentile per-packet one-way delay: 53.851 ms  
Loss rate: 1.25%
Run 9: Report of TaoVA-100x — Data Link
Run 10: Statistics of TaoVA-100x

Start at: 2018-03-14 09:39:18
End at: 2018-03-14 09:39:48

# Below is generated by plot.py at 2018-03-14 13:59:58
# Datalink statistics
-- Total of 3 flows:
 Average throughput: 92.86 Mbit/s
 95th percentile per-packet one-way delay: 54.038 ms
 Loss rate: 1.01%
-- Flow 1:
 Average throughput: 15.10 Mbit/s
 95th percentile per-packet one-way delay: 53.845 ms
 Loss rate: 0.32%
-- Flow 2:
 Average throughput: 59.13 Mbit/s
 95th percentile per-packet one-way delay: 53.909 ms
 Loss rate: 0.00%
-- Flow 3:
 Average throughput: 225.35 Mbit/s
 95th percentile per-packet one-way delay: 54.091 ms
 Loss rate: 1.19%
Run 10: Report of TaoVA-100x — Data Link
Run 1: Statistics of TCP Vegas

Start at: 2018-03-14 07:21:03
End at: 2018-03-14 07:21:33

# Below is generated by plot.py at 2018-03-14 13:59:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 127.57 Mbit/s
95th percentile per-packet one-way delay: 55.066 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 65.15 Mbit/s
95th percentile per-packet one-way delay: 54.908 ms
Loss rate: 0.58%
-- Flow 2:
Average throughput: 57.82 Mbit/s
95th percentile per-packet one-way delay: 55.514 ms
Loss rate: 0.45%
-- Flow 3:
Average throughput: 73.07 Mbit/s
95th percentile per-packet one-way delay: 54.888 ms
Loss rate: 1.17%
Run 1: Report of TCP Vegas — Data Link
Run 2: Statistics of TCP Vegas

Start at: 2018-03-14 07:38:04
End at: 2018-03-14 07:38:34

# Below is generated by plot.py at 2018-03-14 13:59:58
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 245.41 Mbit/s
  95th percentile per-packet one-way delay: 62.201 ms
  Loss rate: 0.33%
-- Flow 1:
  Average throughput: 82.24 Mbit/s
  95th percentile per-packet one-way delay: 60.127 ms
  Loss rate: 0.29%
-- Flow 2:
  Average throughput: 206.21 Mbit/s
  95th percentile per-packet one-way delay: 62.740 ms
  Loss rate: 0.18%
-- Flow 3:
  Average throughput: 80.98 Mbit/s
  95th percentile per-packet one-way delay: 60.926 ms
  Loss rate: 1.20%
Run 2: Report of TCP Vegas — Data Link

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

- **Flow 1** ( ingress mean 82.21 Mbit/s, egress mean 82.24 Mbit/s)
- **Flow 2** ( ingress mean 205.39 Mbit/s, egress mean 206.21 Mbit/s)
- **Flow 3** ( ingress mean 81.10 Mbit/s, egress mean 80.98 Mbit/s)

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

- **Flow 1** (95th percentile 60.13 ms)
- **Flow 2** (95th percentile 62.74 ms)
- **Flow 3** (95th percentile 60.93 ms)
Run 3: Statistics of TCP Vegas

Start at: 2018-03-14 07:55:09
End at: 2018-03-14 07:55:39

# Below is generated by plot.py at 2018-03-14 13:59:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 194.18 Mbit/s
95th percentile per-packet one-way delay: 55.089 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 165.99 Mbit/s
95th percentile per-packet one-way delay: 54.897 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 7.71 Mbit/s
95th percentile per-packet one-way delay: 54.142 ms
Loss rate: 0.73%
-- Flow 3:
Average throughput: 70.10 Mbit/s
95th percentile per-packet one-way delay: 60.465 ms
Loss rate: 1.10%
Run 3: Report of TCP Vegas — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 165.99 Mbps)
  - Flow 1 egress (mean 165.99 Mbps)
  - Flow 2 ingress (mean 7.73 Mbps)
  - Flow 2 egress (mean 7.71 Mbps)
  - Flow 3 ingress (mean 70.11 Mbps)
  - Flow 3 egress (mean 70.10 Mbps)

- **Per-packet one-way delay (ms):**
  - Flow 1 (95th percentile 54.90 ms)
  - Flow 2 (95th percentile 54.14 ms)
  - Flow 3 (95th percentile 60.47 ms)
Run 4: Statistics of TCP Vegas

Start at: 2018-03-14 08:12:04
End at: 2018-03-14 08:12:34

# Below is generated by plot.py at 2018-03-14 13:59:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 113.25 Mbit/s
95th percentile per-packet one-way delay: 56.067 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 49.27 Mbit/s
95th percentile per-packet one-way delay: 56.727 ms
Loss rate: 0.24%
-- Flow 2:
Average throughput: 64.01 Mbit/s
95th percentile per-packet one-way delay: 55.775 ms
Loss rate: 0.53%
-- Flow 3:
Average throughput: 65.27 Mbit/s
95th percentile per-packet one-way delay: 55.540 ms
Loss rate: 1.18%
Run 4: Report of TCP Vegas — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 49.22 Mbps)  Flow 1 egress (mean 49.27 Mbps)
Flow 2 ingress (mean 65.98 Mbps)  Flow 2 egress (mean 64.01 Mbps)
Flow 3 ingress (mean 65.33 Mbps)  Flow 3 egress (mean 65.27 Mbps)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 56.73 ms)  Flow 2 (95th percentile 55.77 ms)  Flow 3 (95th percentile 55.54 ms)
Run 5: Statistics of TCP Vegas

Start at: 2018-03-14 08:29:01
End at: 2018-03-14 08:29:31

# Below is generated by plot.py at 2018-03-14 13:59:58
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 60.60 Mbit/s
  95th percentile per-packet one-way delay: 54.956 ms
  Loss rate: 0.60%
  -- Flow 1:
  Average throughput: 18.38 Mbit/s
  95th percentile per-packet one-way delay: 54.504 ms
  Loss rate: 0.34%
  -- Flow 2:
  Average throughput: 31.60 Mbit/s
  95th percentile per-packet one-way delay: 54.549 ms
  Loss rate: 0.41%
  -- Flow 3:
  Average throughput: 64.41 Mbit/s
  95th percentile per-packet one-way delay: 57.869 ms
  Loss rate: 1.00%
Run 5: Report of TCP Vegas — Data Link
Run 6: Statistics of TCP Vegas

Start at: 2018-03-14 08:45:55
End at: 2018-03-14 08:46:25

# Below is generated by plot.py at 2018-03-14 13:59:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 143.94 Mbit/s
95th percentile per-packet one-way delay: 55.777 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 51.68 Mbit/s
95th percentile per-packet one-way delay: 55.566 ms
Loss rate: 0.24%
-- Flow 2:
Average throughput: 70.73 Mbit/s
95th percentile per-packet one-way delay: 57.208 ms
Loss rate: 0.53%
-- Flow 3:
Average throughput: 138.07 Mbit/s
95th percentile per-packet one-way delay: 55.180 ms
Loss rate: 1.18%
Run 6: Report of TCP Vegas — Data Link
Run 7: Statistics of TCP Vegas

Start at: 2018-03-14 09:03:09
End at: 2018-03-14 09:03:39

# Below is generated by plot.py at 2018-03-14 14:00:02
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 247.00 Mbit/s
  95th percentile per-packet one-way delay: 61.333 ms
  Loss rate: 0.45%
-- Flow 1:
  Average throughput: 215.56 Mbit/s
  95th percentile per-packet one-way delay: 61.458 ms
  Loss rate: 0.37%
-- Flow 2:
  Average throughput: 18.06 Mbit/s
  95th percentile per-packet one-way delay: 59.469 ms
  Loss rate: 0.76%
-- Flow 3:
  Average throughput: 59.03 Mbit/s
  95th percentile per-packet one-way delay: 59.996 ms
  Loss rate: 1.06%
Run 7: Report of TCP Vegas — Data Link
Run 8: Statistics of TCP Vegas

Start at: 2018-03-14 09:20:37
End at: 2018-03-14 09:21:07

# Below is generated by plot.py at 2018-03-14 14:00:02
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 170.96 Mbit/s
  95th percentile per-packet one-way delay: 60.736 ms
  Loss rate: 0.50%
-- Flow 1:
  Average throughput: 74.57 Mbit/s
  95th percentile per-packet one-way delay: 56.788 ms
  Loss rate: 0.42%
-- Flow 2:
  Average throughput: 115.89 Mbit/s
  95th percentile per-packet one-way delay: 62.291 ms
  Loss rate: 0.40%
-- Flow 3:
  Average throughput: 58.94 Mbit/s
  95th percentile per-packet one-way delay: 55.415 ms
  Loss rate: 1.20%
Run 8: Report of TCP Vegas — Data Link

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

Flow 1 ingress (mean 74.63 Mbit/s)
Flow 1 egress (mean 74.57 Mbit/s)
Flow 2 ingress (mean 115.74 Mbit/s)
Flow 2 egress (mean 115.89 Mbit/s)
Flow 3 ingress (mean 59.03 Mbit/s)
Flow 3 egress (mean 58.94 Mbit/s)
Run 9: Statistics of TCP Vegas

Start at: 2018-03-14 09:37:39
End at: 2018-03-14 09:38:09

# Below is generated by plot.py at 2018-03-14 14:00:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 107.16 Mbit/s
95th percentile per-packet one-way delay: 54.856 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 72.85 Mbit/s
95th percentile per-packet one-way delay: 54.801 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 34.00 Mbit/s
95th percentile per-packet one-way delay: 54.889 ms
Loss rate: 0.47%
-- Flow 3:
Average throughput: 35.76 Mbit/s
95th percentile per-packet one-way delay: 55.102 ms
Loss rate: 0.96%
Run 9: Report of TCP Vegas — Data Link
Run 10: Statistics of TCP Vegas

Start at: 2018-03-14 09:54:22
End at: 2018-03-14 09:54:52

# Below is generated by plot.py at 2018-03-14 14:00:02
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 146.09 Mbit/s
  95th percentile per-packet one-way delay: 54.661 ms
  Loss rate: 0.54%
-- Flow 1:
  Average throughput: 82.57 Mbit/s
  95th percentile per-packet one-way delay: 54.614 ms
  Loss rate: 0.29%
-- Flow 2:
  Average throughput: 41.50 Mbit/s
  95th percentile per-packet one-way delay: 54.529 ms
  Loss rate: 0.56%
-- Flow 3:
  Average throughput: 109.23 Mbit/s
  95th percentile per-packet one-way delay: 54.944 ms
  Loss rate: 1.07%
Run 10: Report of TCP Vegas — Data Link
Run 1: Statistics of Verus

Start at: 2018-03-14 07:06:43
End at: 2018-03-14 07:07:13

# Below is generated by plot.py at 2018-03-14 14:02:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 274.72 Mbit/s
95th percentile per-packet one-way delay: 153.392 ms
Loss rate: 2.00%
-- Flow 1:
Average throughput: 145.92 Mbit/s
95th percentile per-packet one-way delay: 128.486 ms
Loss rate: 1.02%
-- Flow 2:
Average throughput: 165.60 Mbit/s
95th percentile per-packet one-way delay: 195.013 ms
Loss rate: 3.60%
-- Flow 3:
Average throughput: 59.14 Mbit/s
95th percentile per-packet one-way delay: 131.173 ms
Loss rate: 0.02%
Run 1: Report of Verus — Data Link

![Graph of network throughput and packet delay over time](image-url)
Run 2: Statistics of Verus

Start at: 2018-03-14 07:23:44
End at: 2018-03-14 07:24:14

# Below is generated by plot.py at 2018-03-14 14:02:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 278.06 Mbit/s
95th percentile per-packet one-way delay: 158.878 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 177.78 Mbit/s
95th percentile per-packet one-way delay: 162.606 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 107.05 Mbit/s
95th percentile per-packet one-way delay: 159.259 ms
Loss rate: 0.97%
-- Flow 3:
Average throughput: 88.75 Mbit/s
95th percentile per-packet one-way delay: 140.000 ms
Loss rate: 2.78%
Run 2: Report of Verus — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 178.14 Mbps)
Flow 1 egress (mean 177.78 Mbps)
Flow 2 ingress (mean 107.54 Mbps)
Flow 2 egress (mean 107.05 Mbps)
Flow 3 ingress (mean 90.77 Mbps)
Flow 3 egress (mean 98.75 Mbps)

Per-packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 162.61 ms)
Flow 2 (95th percentile 159.26 ms)
Flow 3 (95th percentile 140.00 ms)
Run 3: Statistics of Verus

Start at: 2018-03-14 07:40:40
End at: 2018-03-14 07:41:10

# Below is generated by plot.py at 2018-03-14 14:04:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 326.90 Mbit/s
95th percentile per-packet one-way delay: 188.082 ms
Loss rate: 1.35%
-- Flow 1:
Average throughput: 153.57 Mbit/s
95th percentile per-packet one-way delay: 125.844 ms
Loss rate: 0.60%
-- Flow 2:
Average throughput: 218.91 Mbit/s
95th percentile per-packet one-way delay: 227.681 ms
Loss rate: 2.36%
-- Flow 3:
Average throughput: 84.99 Mbit/s
95th percentile per-packet one-way delay: 160.683 ms
Loss rate: 0.16%
Run 3: Report of Verus — Data Link

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

- Flow 1 ingress (mean 153.96 Mbit/s)
- Flow 1 egress (mean 153.57 Mbit/s)
- Flow 2 ingress (mean 225.20 Mbit/s)
- Flow 2 egress (mean 218.91 Mbit/s)
- Flow 3 ingress (mean 83.71 Mbit/s)
- Flow 3 egress (mean 84.99 Mbit/s)

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

- Flow 1 (95th percentile 125.94 ms)
- Flow 2 (95th percentile 227.68 ms)
- Flow 3 (95th percentile 160.68 ms)
Run 4: Statistics of Verus

Start at: 2018-03-14 07:57:42
End at: 2018-03-14 07:58:12

# Below is generated by plot.py at 2018-03-14 14:04:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 310.18 Mbit/s
95th percentile per-packet one-way delay: 126.898 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 174.60 Mbit/s
95th percentile per-packet one-way delay: 118.062 ms
Loss rate: 0.50%
-- Flow 2:
Average throughput: 154.14 Mbit/s
95th percentile per-packet one-way delay: 143.679 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 101.24 Mbit/s
95th percentile per-packet one-way delay: 119.228 ms
Loss rate: 0.94%
Run 4: Report of Verus — Data Link
Run 5: Statistics of Verus

Start at: 2018-03-14 08:14:39
End at: 2018-03-14 08:15:09

# Below is generated by plot.py at 2018-03-14 14:06:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 324.17 Mbit/s
95th percentile per-packet one-way delay: 95.751 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 199.05 Mbit/s
95th percentile per-packet one-way delay: 91.950 ms
Loss rate: 0.23%
-- Flow 2:
Average throughput: 151.13 Mbit/s
95th percentile per-packet one-way delay: 105.718 ms
Loss rate: 1.03%
-- Flow 3:
Average throughput: 76.39 Mbit/s
95th percentile per-packet one-way delay: 91.346 ms
Loss rate: 0.28%
Run 5: Report of Verus — Data Link

![Graph](image1)

![Graph](image2)

- Flow 1 ingress (mean 198.48 Mbit/s)
- Flow 1 egress (mean 199.05 Mbit/s)
- Flow 2 ingress (mean 151.88 Mbit/s)
- Flow 2 egress (mean 151.13 Mbit/s)
- Flow 3 ingress (mean 75.76 Mbit/s)
- Flow 3 egress (mean 76.39 Mbit/s)

- Flow 1 (95th percentile 91.95 ms)
- Flow 2 (95th percentile 105.72 ms)
- Flow 3 (95th percentile 91.35 ms)
Run 6: Statistics of Verus

Start at: 2018-03-14 08:31:30
End at: 2018-03-14 08:32:00

# Below is generated by plot.py at 2018-03-14 14:06:17
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 291.15 Mbit/s
  95th percentile per-packet one-way delay: 161.151 ms
  Loss rate: 0.70%
-- Flow 1:
  Average throughput: 208.90 Mbit/s
  95th percentile per-packet one-way delay: 168.712 ms
  Loss rate: 0.39%
-- Flow 2:
  Average throughput: 92.87 Mbit/s
  95th percentile per-packet one-way delay: 116.764 ms
  Loss rate: 1.19%
-- Flow 3:
  Average throughput: 62.57 Mbit/s
  95th percentile per-packet one-way delay: 225.314 ms
  Loss rate: 2.37%
Run 6: Report of Verus — Data Link
Run 7: Statistics of Verus

Start at: 2018-03-14 08:48:36
End at: 2018-03-14 08:49:06

# Below is generated by plot.py at 2018-03-14 14:06:19
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 277.31 Mbit/s
  95th percentile per-packet one-way delay: 94.481 ms
  Loss rate: 0.48%
  -- Flow 1:
   Average throughput: 160.02 Mbit/s
   95th percentile per-packet one-way delay: 94.633 ms
   Loss rate: 0.66%
  -- Flow 2:
   Average throughput: 141.01 Mbit/s
   95th percentile per-packet one-way delay: 93.792 ms
   Loss rate: 0.28%
  -- Flow 3:
   Average throughput: 72.43 Mbit/s
   95th percentile per-packet one-way delay: 95.106 ms
   Loss rate: 0.04%
Run 7: Report of Verus — Data Link

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![Graphs showing throughput and per-packet wire delay.](image)

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Run 8: Statistics of Verus

Start at: 2018-03-14 09:05:59
End at: 2018-03-14 09:06:29

# Below is generated by plot.py at 2018-03-14 14:08:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 347.73 Mbit/s
95th percentile per-packet one-way delay: 194.422 ms
Loss rate: 1.25%
-- Flow 1:
Average throughput: 217.18 Mbit/s
95th percentile per-packet one-way delay: 197.791 ms
Loss rate: 0.81%
-- Flow 2:
Average throughput: 165.72 Mbit/s
95th percentile per-packet one-way delay: 189.591 ms
Loss rate: 1.91%
-- Flow 3:
Average throughput: 72.12 Mbit/s
95th percentile per-packet one-way delay: 132.969 ms
Loss rate: 2.34%
Run 8: Report of Verus — Data Link
Run 9: Statistics of Verus

Start at: 2018-03-14 09:23:10
End at: 2018-03-14 09:23:40

# Below is generated by plot.py at 2018-03-14 14:10:00
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 317.82 Mbit/s
  95th percentile per-packet one-way delay: 233.663 ms
  Loss rate: 3.14%
-- Flow 1:
  Average throughput: 164.18 Mbit/s
  95th percentile per-packet one-way delay: 175.788 ms
  Loss rate: 1.67%
-- Flow 2:
  Average throughput: 195.74 Mbit/s
  95th percentile per-packet one-way delay: 268.784 ms
  Loss rate: 4.47%
-- Flow 3:
  Average throughput: 73.26 Mbit/s
  95th percentile per-packet one-way delay: 155.756 ms
  Loss rate: 5.62%
Run 9: Report of Verus — Data Link

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

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

Start at: 2018-03-14 09:40:06
End at: 2018-03-14 09:40:36

# Below is generated by plot.py at 2018-03-14 14:10:00
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 302.47 Mbit/s
  95th percentile per-packet one-way delay: 117.525 ms
  Loss rate: 0.36%
-- Flow 1:
  Average throughput: 182.00 Mbit/s
  95th percentile per-packet one-way delay: 97.745 ms
  Loss rate: 0.03%
-- Flow 2:
  Average throughput: 136.45 Mbit/s
  95th percentile per-packet one-way delay: 117.148 ms
  Loss rate: 0.48%
-- Flow 3:
  Average throughput: 90.43 Mbit/s
  95th percentile per-packet one-way delay: 205.929 ms
  Loss rate: 1.95%
Run 10: Report of Verus — Data Link

![Graph showing throughput and per-packet round-trip delay over time for different flows with mean throughput of Flow 1 ingress at 181.97 Mbit/s, Flow 1 egress at 182.00 Mbit/s, Flow 2 ingress at 136.37 Mbit/s, Flow 2 egress at 136.45 Mbit/s, Flow 3 ingress at 91.24 Mbit/s, and Flow 3 egress at 90.43 Mbit/s.]
Run 1: Statistics of Copa

Start at: 2018-03-14 07:21:49
End at: 2018-03-14 07:22:19

# Below is generated by plot.py at 2018-03-14 14:11:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 171.02 Mbit/s
95th percentile per-packet one-way delay: 53.786 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 82.69 Mbit/s
95th percentile per-packet one-way delay: 53.678 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 93.87 Mbit/s
95th percentile per-packet one-way delay: 53.665 ms
Loss rate: 0.43%
-- Flow 3:
Average throughput: 79.01 Mbit/s
95th percentile per-packet one-way delay: 121.315 ms
Loss rate: 1.07%
Run 1: Report of Copa — Data Link
Run 2: Statistics of Copa

Start at: 2018-03-14 07:38:56
End at: 2018-03-14 07:39:26

# Below is generated by plot.py at 2018-03-14 14:11:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 156.00 Mbit/s
95th percentile per-packet one-way delay: 53.913 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 76.37 Mbit/s
95th percentile per-packet one-way delay: 53.935 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 68.06 Mbit/s
95th percentile per-packet one-way delay: 53.952 ms
Loss rate: 0.35%
-- Flow 3:
Average throughput: 104.59 Mbit/s
95th percentile per-packet one-way delay: 53.729 ms
Loss rate: 0.88%
Run 2: Report of Copa — Data Link

---

[Graphs showing network throughput and packet delay over time for different flows with specified mean throughputs.]
Run 3: Statistics of Copa

Start at: 2018-03-14 07:55:57
End at: 2018-03-14 07:56:27

# Below is generated by plot.py at 2018-03-14 14:13:56
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 196.53 Mbit/s
  95th percentile per-packet one-way delay: 53.637 ms
  Loss rate: 0.45%
-- Flow 1:
  Average throughput: 104.13 Mbit/s
  95th percentile per-packet one-way delay: 53.647 ms
  Loss rate: 0.30%
-- Flow 2:
  Average throughput: 98.83 Mbit/s
  95th percentile per-packet one-way delay: 53.629 ms
  Loss rate: 0.49%
-- Flow 3:
  Average throughput: 81.30 Mbit/s
  95th percentile per-packet one-way delay: 53.618 ms
  Loss rate: 0.93%
Run 3: Report of Copa — Data Link
Run 4: Statistics of Copa

Start at: 2018-03-14 08:12:50
End at: 2018-03-14 08:13:20

# Below is generated by plot.py at 2018-03-14 14:13:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 160.94 Mbit/s
95th percentile per-packet one-way delay: 53.846 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 95.62 Mbit/s
95th percentile per-packet one-way delay: 53.768 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 80.26 Mbit/s
95th percentile per-packet one-way delay: 53.841 ms
Loss rate: 0.38%
-- Flow 3:
Average throughput: 36.39 Mbit/s
95th percentile per-packet one-way delay: 54.263 ms
Loss rate: 1.78%
Run 4: Report of Copa — Data Link

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

Legend:
- Flow 1 ingress (mean 95.62 Mbit/s)
- Flow 1 egress (mean 95.62 Mbit/s)
- Flow 2 ingress (mean 80.15 Mbit/s)
- Flow 2 egress (mean 80.26 Mbit/s)
- Flow 3 ingress (mean 36.66 Mbit/s)
- Flow 3 egress (mean 36.39 Mbit/s)
Run 5: Statistics of Copa

Start at: 2018-03-14 08:29:43
End at: 2018-03-14 08:30:13

# Below is generated by plot.py at 2018-03-14 14:16:39
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 235.56 Mbit/s
  95th percentile per-packet one-way delay: 224.232 ms
  Loss rate: 18.97%
-- Flow 1:
  Average throughput: 250.12 Mbit/s
  95th percentile per-packet one-way delay: 231.130 ms
  Loss rate: 21.47%
-- Flow 2:
  Average throughput: 41.16 Mbit/s
  95th percentile per-packet one-way delay: 114.248 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 61.69 Mbit/s
  95th percentile per-packet one-way delay: 55.213 ms
  Loss rate: 0.47%
Run 5: Report of Copa — Data Link

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

**Throughput (Mbps):**
- Flow 1 ingress (mean 318.98 Mbps)
- Flow 1 egress (mean 250.12 Mbps)
- Flow 2 ingress (mean 41.33 Mbps)
- Flow 2 egress (mean 41.16 Mbps)
- Flow 3 ingress (mean 61.17 Mbps)
- Flow 3 egress (mean 61.69 Mbps)

**One-way delay (ms):**
- Flow 1 (95th percentile 231.13 ms)
- Flow 2 (95th percentile 114.25 ms)
- Flow 3 (95th percentile 55.21 ms)
Run 6: Statistics of Copa

Start at: 2018-03-14 08:46:42
End at: 2018-03-14 08:47:12

# Below is generated by plot.py at 2018-03-14 14:16:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 143.84 Mbit/s
95th percentile per-packet one-way delay: 53.958 ms
Loss rate: 1.07%
-- Flow 1:
Average throughput: 78.20 Mbit/s
95th percentile per-packet one-way delay: 53.869 ms
Loss rate: 0.46%
-- Flow 2:
Average throughput: 60.89 Mbit/s
95th percentile per-packet one-way delay: 54.184 ms
Loss rate: 1.02%
-- Flow 3:
Average throughput: 76.46 Mbit/s
95th percentile per-packet one-way delay: 53.823 ms
Loss rate: 2.96%
Run 6: Report of Copa — Data Link

![Graph of network throughput and per-packet one-way delay for Flow 1, Flow 2, and Flow 3.]

- **Flow 1**: Ingress (mean 78.30 Mbit/s), Egress (mean 78.20 Mbit/s)
- **Flow 2**: Ingress (mean 61.20 Mbit/s), Egress (mean 60.89 Mbit/s)
- **Flow 3**: Ingress (mean 76.00 Mbit/s), Egress (mean 76.46 Mbit/s)
Run 7: Statistics of Copa

Start at: 2018-03-14 09:04:00
End at: 2018-03-14 09:04:30

# Below is generated by plot.py at 2018-03-14 14:16:39
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 161.53 Mbit/s
  95th percentile per-packet one-way delay: 53.883 ms
  Loss rate: 0.41%
-- Flow 1:
  Average throughput: 83.66 Mbit/s
  95th percentile per-packet one-way delay: 53.943 ms
  Loss rate: 0.24%
-- Flow 2:
  Average throughput: 69.28 Mbit/s
  95th percentile per-packet one-way delay: 53.833 ms
  Loss rate: 0.06%
-- Flow 3:
  Average throughput: 96.66 Mbit/s
  95th percentile per-packet one-way delay: 53.714 ms
  Loss rate: 1.33%
Run 7: Report of Copa — Data Link

![Graph 1: Throughput (Mbps)]

- Flow 1 ingress (mean 83.58 Mbps)
- Flow 1 egress (mean 83.66 Mbps)
- Flow 2 ingress (mean 66.97 Mbps)
- Flow 2 egress (mean 69.28 Mbps)
- Flow 3 ingress (mean 96.96 Mbps)
- Flow 3 egress (mean 96.66 Mbps)

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

- Flow 1 (95th percentile 53.94 ms)
- Flow 2 (95th percentile 53.83 ms)
- Flow 3 (95th percentile 53.71 ms)
Run 8: Statistics of Copa

Start at: 2018-03-14 09:21:26
End at: 2018-03-14 09:21:56

# Below is generated by plot.py at 2018-03-14 14:17:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 175.12 Mbit/s
95th percentile per-packet one-way delay: 53.937 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 96.44 Mbit/s
95th percentile per-packet one-way delay: 53.844 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 73.27 Mbit/s
95th percentile per-packet one-way delay: 54.062 ms
Loss rate: 0.36%
-- Flow 3:
Average throughput: 91.24 Mbit/s
95th percentile per-packet one-way delay: 53.865 ms
Loss rate: 0.95%
Run 8: Report of Copa — Data Link

![Data Link Graph]

- Flow 1 ingress (mean 96.44 Mbit/s)
- Flow 1 egress (mean 96.44 Mbit/s)
- Flow 2 ingress (mean 73.14 Mbit/s)
- Flow 2 egress (mean 73.27 Mbit/s)
- Flow 3 ingress (mean 91.10 Mbit/s)
- Flow 3 egress (mean 91.24 Mbit/s)

![Packet Delay Graph]

- Flow 1 (95th percentile 53.84 ms)
- Flow 2 (95th percentile 54.06 ms)
- Flow 3 (95th percentile 53.87 ms)
Run 9: Statistics of Copa

Start at: 2018-03-14 09:38:24
End at: 2018-03-14 09:38:54

# Below is generated by plot.py at 2018-03-14 14:18:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 178.53 Mbit/s
95th percentile per-packet one-way delay: 53.900 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 97.24 Mbit/s
95th percentile per-packet one-way delay: 53.859 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 72.15 Mbit/s
95th percentile per-packet one-way delay: 53.981 ms
Loss rate: 0.38%
-- Flow 3:
Average throughput: 101.60 Mbit/s
95th percentile per-packet one-way delay: 53.921 ms
Loss rate: 0.93%
Run 9: Report of Copa — Data Link
Run 10: Statistics of Copa

Start at: 2018-03-14 09:55:09
End at: 2018-03-14 09:55:39

# Below is generated by plot.py at 2018-03-14 14:21:43
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 263.41 Mbit/s
  95th percentile per-packet one-way delay: 119.937 ms
  Loss rate: 2.51%
-- Flow 1:
  Average throughput: 95.22 Mbit/s
  95th percentile per-packet one-way delay: 53.881 ms
  Loss rate: 0.47%
-- Flow 2:
  Average throughput: 84.18 Mbit/s
  95th percentile per-packet one-way delay: 54.446 ms
  Loss rate: 0.42%
-- Flow 3:
  Average throughput: 341.44 Mbit/s
  95th percentile per-packet one-way delay: 138.662 ms
  Loss rate: 5.15%

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Run 10: Report of Copa — Data Link

![Graph showing throughput and per-packet one way delay for different flows over time.](image1)

- Flow 1 ingress (mean 95.34 Mbps)
- Flow 1 egress (mean 95.22 Mbps)
- Flow 2 ingress (mean 84.07 Mbps)
- Flow 2 egress (mean 84.18 Mbps)
- Flow 3 ingress (mean 356.39 Mbps)
- Flow 3 egress (mean 341.44 Mbps)

![Graph showing per-packet one way delay for different flows over time.](image2)

- Flow 1 (95th percentile 53.88 ms)
- Flow 2 (95th percentile 54.45 ms)
- Flow 3 (95th percentile 138.66 ms)
Run 1: Statistics of FillP

Start at: 2018-03-14 07:16:11
End at: 2018-03-14 07:16:41

# Below is generated by plot.py at 2018-03-14 14:45:51
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1354.32 Mbit/s
  95th percentile per-packet one-way delay: 183.286 ms
  Loss rate: 10.16%
-- Flow 1:
  Average throughput: 705.44 Mbit/s
  95th percentile per-packet one-way delay: 203.555 ms
  Loss rate: 10.80%
-- Flow 2:
  Average throughput: 659.31 Mbit/s
  95th percentile per-packet one-way delay: 168.832 ms
  Loss rate: 9.36%
-- Flow 3:
  Average throughput: 646.50 Mbit/s
  95th percentile per-packet one-way delay: 179.845 ms
  Loss rate: 9.62%
Run 1: Report of FillP — Data Link

![Graph 1: Throughput (Mbps/sec)]

- Flow 1 Ingress (mean 788.16 Mbps/sec)
- Flow 1 Egress (mean 705.44 Mbps/sec)
- Flow 2 Ingress (mean 723.55 Mbps/sec)
- Flow 2 Egress (mean 659.31 Mbps/sec)
- Flow 3 Ingress (mean 707.55 Mbps/sec)
- Flow 3 Egress (mean 646.50 Mbps/sec)

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

- Flow 1 (95th percentile 203.56 ms)
- Flow 2 (95th percentile 168.83 ms)
- Flow 3 (95th percentile 179.84 ms)
Run 2: Statistics of FillP

Start at: 2018-03-14 07:33:12
End at: 2018-03-14 07:33:42

# Below is generated by plot.py at 2018-03-14 14:47:29
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1363.47 Mbit/s
  95th percentile per-packet one-way delay: 162.143 ms
  Loss rate: 10.66%
  -- Flow 1:
  Average throughput: 708.75 Mbit/s
  95th percentile per-packet one-way delay: 163.715 ms
  Loss rate: 12.85%
  -- Flow 2:
  Average throughput: 674.70 Mbit/s
  95th percentile per-packet one-way delay: 163.874 ms
  Loss rate: 10.88%
  -- Flow 3:
  Average throughput: 627.82 Mbit/s
  95th percentile per-packet one-way delay: 136.035 ms
  Loss rate: 1.64%
Run 2: Report of FillP — Data Link

![Data Link Throughput Chart]

![Data Link Delay Chart]

Flow 1 Ingress (mean 810.29 Mbit/s)  Flow 1 Egress (mean 708.75 Mbit/s)
Flow 2 Ingress (mean 753.10 Mbit/s)  Flow 2 Egress (mean 674.70 Mbit/s)
Flow 3 Ingress (mean 631.53 Mbit/s)  Flow 3 Egress (mean 627.82 Mbit/s)

Flow 1 (95th percentile 163.72 ms)  Flow 2 (95th percentile 163.87 ms)  Flow 3 (95th percentile 116.03 ms)
Run 3: Statistics of FillP

Start at: 2018-03-14 07:50:11
End at: 2018-03-14 07:50:41

# Below is generated by plot.py at 2018-03-14 14:49:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1418.80 Mbit/s
95th percentile per-packet one-way delay: 166.203 ms
Loss rate: 10.49%
-- Flow 1:
Average throughput: 735.64 Mbit/s
95th percentile per-packet one-way delay: 154.782 ms
Loss rate: 10.88%
-- Flow 2:
Average throughput: 714.99 Mbit/s
95th percentile per-packet one-way delay: 153.998 ms
Loss rate: 8.15%
-- Flow 3:
Average throughput: 633.17 Mbit/s
95th percentile per-packet one-way delay: 191.024 ms
Loss rate: 14.15%
Run 3: Report of FillP — Data Link
Run 4: Statistics of FillP

Start at: 2018-03-14 08:07:14
End at: 2018-03-14 08:07:44

# Below is generated by plot.py at 2018-03-14 14:49:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1314.58 Mbit/s
95th percentile per-packet one-way delay: 256.946 ms
Loss rate: 10.69%
-- Flow 1:
Average throughput: 651.45 Mbit/s
95th percentile per-packet one-way delay: 176.107 ms
Loss rate: 9.44%
-- Flow 2:
Average throughput: 692.82 Mbit/s
95th percentile per-packet one-way delay: 294.229 ms
Loss rate: 10.77%
-- Flow 3:
Average throughput: 618.05 Mbit/s
95th percentile per-packet one-way delay: 179.972 ms
Loss rate: 14.33%
Run 4: Report of FillP — Data Link

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

- Flow 1 ingress (mean 716.85 Mbit/s) — Flow 1 egress (mean 651.45 Mbit/s)
- Flow 2 ingress (mean 772.51 Mbit/s) — Flow 2 egress (mean 692.82 Mbit/s)
- Flow 3 ingress (mean 713.66 Mbit/s) — Flow 3 egress (mean 618.05 Mbit/s)

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

- Flow 1 (95th percentile 176.11 ms) — Flow 2 (95th percentile 294.23 ms) — Flow 3 (95th percentile 179.97 ms)
Run 5: Statistics of FillP

Start at: 2018-03-14 08:24:10
End at: 2018-03-14 08:24:40

# Below is generated by plot.py at 2018-03-14 14:50:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1383.29 Mbit/s
95th percentile per-packet one-way delay: 155.145 ms
Loss rate: 8.61%
-- Flow 1:
Average throughput: 712.50 Mbit/s
95th percentile per-packet one-way delay: 156.845 ms
Loss rate: 10.71%
-- Flow 2:
Average throughput: 695.99 Mbit/s
95th percentile per-packet one-way delay: 150.048 ms
Loss rate: 6.22%
-- Flow 3:
Average throughput: 635.29 Mbit/s
95th percentile per-packet one-way delay: 154.898 ms
Loss rate: 6.36%
Run 5: Report of FillP — Data Link

![Graph 1: Throughput vs Time]

- **Flow 1 Ingress (mean 795.13 Mb/s)**
- **Flow 1 Egress (mean 712.30 Mb/s)**
- **Flow 2 Ingress (mean 738.15 Mb/s)**
- **Flow 2 Egress (mean 695.99 Mb/s)**
- **Flow 3 Ingress (mean 671.35 Mb/s)**
- **Flow 3 Egress (mean 635.29 Mb/s)**

![Graph 2: Per-Packet Delay vs Time]

- **Flow 1 (95th percentile 156.84 ms)**
- **Flow 2 (95th percentile 150.05 ms)**
- **Flow 3 (95th percentile 154.90 ms)**
Run 6: Statistics of FillP

Start at: 2018-03-14 08:41:05
End at: 2018-03-14 08:41:35

# Below is generated by plot.py at 2018-03-14 14:51:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1388.06 Mbit/s
95th percentile per-packet one-way delay: 157.243 ms
Loss rate: 10.67%
-- Flow 1:
Average throughput: 717.68 Mbit/s
95th percentile per-packet one-way delay: 155.464 ms
Loss rate: 11.01%
-- Flow 2:
Average throughput: 675.88 Mbit/s
95th percentile per-packet one-way delay: 162.194 ms
Loss rate: 11.70%
-- Flow 3:
Average throughput: 675.42 Mbit/s
95th percentile per-packet one-way delay: 155.830 ms
Loss rate: 7.33%
Run 6: Report of FillP — Data Link

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

- Blue dotted line: Flow 1 Ingress (mean 805.54 Mbps/s)
- Green dotted line: Flow 2 Ingress (mean 763.20 Mbps/s)
- Red dotted line: Flow 3 Ingress (mean 720.59 Mbps/s)
- Blue solid line: Flow 1 Egress (mean 717.68 Mbps/s)
- Green solid line: Flow 2 Egress (mean 675.88 Mbps/s)
- Red solid line: Flow 3 Egress (mean 675.42 Mbps/s)

![Graph 2: Packet Loss Rate vs Time (s)]

- Blue colored circles: Flow 1 (95th percentile 155.46 ms)
- Green colored circles: Flow 2 (95th percentile 162.19 ms)
- Red colored circles: Flow 3 (95th percentile 155.83 ms)
Run 7: Statistics of FillP

Start at: 2018-03-14 08:58:14
End at: 2018-03-14 08:58:44

# Below is generated by plot.py at 2018-03-14 14:51:53
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1345.08 Mbit/s
  95th percentile per-packet one-way delay: 192.172 ms
  Loss rate: 11.61%
-- Flow 1:
  Average throughput: 637.06 Mbit/s
  95th percentile per-packet one-way delay: 199.638 ms
  Loss rate: 15.45%
-- Flow 2:
  Average throughput: 791.06 Mbit/s
  95th percentile per-packet one-way delay: 162.376 ms
  Loss rate: 5.92%
-- Flow 3:
  Average throughput: 555.61 Mbit/s
  95th percentile per-packet one-way delay: 196.120 ms
  Loss rate: 12.97%
Run 7: Report of FillP — Data Link

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

- Blue dashed line: Flow 1 ingress (mean 750.82 Mbps/s)
- Blue solid line: Flow 1 egress (mean 637.06 Mbps/s)
- Red dashed line: Flow 2 ingress (mean 836.33 Mbps/s)
- Red solid line: Flow 2 egress (mean 792.06 Mbps/s)
- Green dashed line: Flow 3 ingress (mean 631.41 Mbps/s)
- Green solid line: Flow 3 egress (mean 555.63 Mbps/s)

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

- Blue line: Flow 1 (95th percentile 199.64 ms)
- Green line: Flow 2 (95th percentile 162.38 ms)
- Red line: Flow 3 (95th percentile 196.12 ms)

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Run 8: Statistics of FillP

Start at: 2018-03-14 09:15:43
End at: 2018-03-14 09:16:13

# Below is generated by plot.py at 2018-03-14 14:58:54
# Datalink statistics
-- Total of 3 flows:
    Average throughput: 1396.30 Mbit/s
    95th percentile per-packet one-way delay: 168.845 ms
    Loss rate: 9.36%
-- Flow 1:
    Average throughput: 747.65 Mbit/s
    95th percentile per-packet one-way delay: 166.267 ms
    Loss rate: 11.17%
-- Flow 2:
    Average throughput: 668.38 Mbit/s
    95th percentile per-packet one-way delay: 192.399 ms
    Loss rate: 9.11%
-- Flow 3:
    Average throughput: 624.38 Mbit/s
    95th percentile per-packet one-way delay: 148.954 ms
    Loss rate: 2.74%
Run 8: Report of FillP — Data Link
Run 9: Statistics of FillP

Start at: 2018-03-14 09:32:46
End at: 2018-03-14 09:33:16

# Below is generated by plot.py at 2018-03-14 15:20:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1326.84 Mbit/s
95th percentile per-packet one-way delay: 245.199 ms
Loss rate: 13.38%
-- Flow 1:
Average throughput: 687.09 Mbit/s
95th percentile per-packet one-way delay: 159.641 ms
Loss rate: 13.42%
-- Flow 2:
Average throughput: 666.40 Mbit/s
95th percentile per-packet one-way delay: 296.382 ms
Loss rate: 14.76%
-- Flow 3:
Average throughput: 598.67 Mbit/s
95th percentile per-packet one-way delay: 241.080 ms
Loss rate: 9.94%
Run 9: Report of FillP — Data Link

Throughput (Mbps/s)

Time (s)

Flow 1 ingress (mean 790.68 Mbps/s)  Flow 1 egress (mean 687.09 Mbps/s)
Flow 2 ingress (mean 777.63 Mbps/s)  Flow 2 egress (mean 666.40 Mbps/s)
Flow 3 ingress (mean 657.34 Mbps/s)  Flow 3 egress (mean 598.67 Mbps/s)

Delay (ms)

Time (s)

Flow 1 (95th percentile 159.64 ms)  Flow 2 (95th percentile 296.38 ms)  Flow 3 (95th percentile 241.08 ms)
Run 10: Statistics of FillP

Start at: 2018-03-14 09:49:32
End at: 2018-03-14 09:50:02

# Below is generated by plot.py at 2018-03-14 15:23:26
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1386.28 Mbit/s
  95th percentile per-packet one-way delay: 216.830 ms
  Loss rate: 9.92%
-- Flow 1:
  Average throughput: 695.82 Mbit/s
  95th percentile per-packet one-way delay: 186.679 ms
  Loss rate: 10.38%
-- Flow 2:
  Average throughput: 692.97 Mbit/s
  95th percentile per-packet one-way delay: 245.492 ms
  Loss rate: 9.88%
-- Flow 3:
  Average throughput: 700.70 Mbit/s
  95th percentile per-packet one-way delay: 162.045 ms
  Loss rate: 8.59%
Run 10: Report of FillIP — Data Link

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

![Graph 2: Delay vs Time](image2)
Run 1: Statistics of Indigo-1-32

Start at: 2018-03-14 07:17:42
End at: 2018-03-14 07:18:12

# Below is generated by plot.py at 2018-03-14 15:23:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 331.23 Mbit/s
95th percentile per-packet one-way delay: 55.337 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 178.16 Mbit/s
95th percentile per-packet one-way delay: 54.675 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 157.78 Mbit/s
95th percentile per-packet one-way delay: 55.433 ms
Loss rate: 0.51%
-- Flow 3:
Average throughput: 149.84 Mbit/s
95th percentile per-packet one-way delay: 56.746 ms
Loss rate: 1.29%
Run 2: Statistics of Indigo-1-32

Start at: 2018-03-14 07:34:43
End at: 2018-03-14 07:35:13

# Below is generated by plot.py at 2018-03-14 15:23:26
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 329.23 Mbit/s
  95th percentile per-packet one-way delay: 55.239 ms
  Loss rate: 0.75%
-- Flow 1:
  Average throughput: 180.87 Mbit/s
  95th percentile per-packet one-way delay: 55.006 ms
  Loss rate: 0.43%
-- Flow 2:
  Average throughput: 157.54 Mbit/s
  95th percentile per-packet one-way delay: 55.542 ms
  Loss rate: 0.83%
-- Flow 3:
  Average throughput: 135.41 Mbit/s
  95th percentile per-packet one-way delay: 55.325 ms
  Loss rate: 1.87%
Run 2: Report of Indigo-1-32 — Data Link

---

### Throughput (Mbps)

- **Flow 1 ingress** (mean 181.00 Mbps)
- **Flow 1 egress** (mean 180.87 Mbps)
- **Flow 2 ingress** (mean 158.19 Mbps)
- **Flow 2 egress** (mean 157.54 Mbps)
- **Flow 3 ingress** (mean 136.50 Mbps)
- **Flow 3 egress** (mean 135.41 Mbps)

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

- **Flow 1** (95th percentile 55.01 ms)
- **Flow 2** (95th percentile 55.54 ms)
- **Flow 3** (95th percentile 55.33 ms)
Run 3: Statistics of Indigo-1-32

Start at: 2018-03-14 07:51:44
End at: 2018-03-14 07:52:14

# Below is generated by plot.py at 2018-03-14 15:23:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 328.26 Mbit/s
95th percentile per-packet one-way delay: 54.719 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 176.92 Mbit/s
95th percentile per-packet one-way delay: 54.535 ms
Loss rate: 0.29%
-- Flow 2:
Average throughput: 159.88 Mbit/s
95th percentile per-packet one-way delay: 54.839 ms
Loss rate: 0.51%
-- Flow 3:
Average throughput: 140.57 Mbit/s
95th percentile per-packet one-way delay: 54.872 ms
Loss rate: 1.17%
Run 3: Report of Indigo-1-32 — Data Link

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

- Flow 1 ingress (mean 176.77 Mbit/s)
- Flow 1 egress (mean 176.92 Mbit/s)
- Flow 2 ingress (mean 159.81 Mbit/s)
- Flow 2 egress (mean 159.88 Mbit/s)
- Flow 3 ingress (mean 140.76 Mbit/s)
- Flow 3 egress (mean 140.57 Mbit/s)

Per-packet one-way delay (ms):
- Flow 1 (95th percentile 54.53 ms)
- Flow 2 (95th percentile 54.84 ms)
- Flow 3 (95th percentile 54.87 ms)
Run 4: Statistics of Indigo-1-32

Start at: 2018-03-14 08:08:44
End at: 2018-03-14 08:09:14

# Below is generated by plot.py at 2018-03-14 15:23:26
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 341.13 Mbit/s
  95th percentile per-packet one-way delay: 54.752 ms
  Loss rate: 0.45%
-- Flow 1:
  Average throughput: 185.39 Mbit/s
  95th percentile per-packet one-way delay: 54.541 ms
  Loss rate: 0.28%
-- Flow 2:
  Average throughput: 162.85 Mbit/s
  95th percentile per-packet one-way delay: 54.871 ms
  Loss rate: 0.48%
-- Flow 3:
  Average throughput: 146.83 Mbit/s
  95th percentile per-packet one-way delay: 55.042 ms
  Loss rate: 1.04%
Run 4: Report of Indigo-1-32 — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 185.24 Mbit/s)
Flow 1 egress (mean 185.39 Mbit/s)
Flow 2 ingress (mean 182.77 Mbit/s)
Flow 2 egress (mean 162.85 Mbit/s)
Flow 3 ingress (mean 146.75 Mbit/s)
Flow 3 egress (mean 146.83 Mbit/s)

Per packet one-way delay (ms)

Flow 1 (95th percentile 54.54 ms)
Flow 2 (95th percentile 54.87 ms)
Flow 3 (95th percentile 55.04 ms)
Run 5: Statistics of Indigo-1-32

Start at: 2018-03-14 08:25:42
End at: 2018-03-14 08:26:12

# Below is generated by plot.py at 2018-03-14 15:23:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 327.68 Mbit/s
95th percentile per-packet one-way delay: 54.681 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 180.38 Mbit/s
95th percentile per-packet one-way delay: 54.488 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 154.54 Mbit/s
95th percentile per-packet one-way delay: 54.665 ms
Loss rate: 0.37%
-- Flow 3:
Average throughput: 137.91 Mbit/s
95th percentile per-packet one-way delay: 55.559 ms
Loss rate: 1.33%
Run 5: Report of Indigo-1-32 — Data Link

![Data Link Graph](image)

![Per-packet Round Trip Time Graph](image)
Run 6: Statistics of Indigo-1-32

Start at: 2018-03-14 08:42:37
End at: 2018-03-14 08:43:07

# Below is generated by plot.py at 2018-03-14 15:23:26
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 322.14 Mbit/s
  95th percentile per-packet one-way delay: 55.060 ms
  Loss rate: 0.48%
-- Flow 1:
  Average throughput: 182.51 Mbit/s
  95th percentile per-packet one-way delay: 54.876 ms
  Loss rate: 0.33%
-- Flow 2:
  Average throughput: 142.09 Mbit/s
  95th percentile per-packet one-way delay: 55.141 ms
  Loss rate: 0.46%
-- Flow 3:
  Average throughput: 141.87 Mbit/s
  95th percentile per-packet one-way delay: 55.376 ms
  Loss rate: 1.10%
Run 6: Report of Indigo-1-32 — Data Link
Run 7: Statistics of Indigo-1-32

Start at: 2018-03-14 08:59:46
End at: 2018-03-14 09:00:16

# Below is generated by plot.py at 2018-03-14 15:23:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 328.60 Mbit/s
95th percentile per-packet one-way delay: 56.226 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 179.37 Mbit/s
95th percentile per-packet one-way delay: 55.320 ms
Loss rate: 0.29%
-- Flow 2:
Average throughput: 158.31 Mbit/s
95th percentile per-packet one-way delay: 57.832 ms
Loss rate: 0.47%
-- Flow 3:
Average throughput: 138.85 Mbit/s
95th percentile per-packet one-way delay: 56.791 ms
Loss rate: 1.32%
Run 7: Report of Indigo-1-32 — Data Link

![Data Link Graph]
Run 8: Statistics of Indigo-1-32

Start at: 2018-03-14 09:17:16
End at: 2018-03-14 09:17:46

# Below is generated by plot.py at 2018-03-14 15:23:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 344.06 Mbit/s
95th percentile per-packet one-way delay: 55.830 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 187.25 Mbit/s
95th percentile per-packet one-way delay: 55.262 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 166.13 Mbit/s
95th percentile per-packet one-way delay: 56.533 ms
Loss rate: 0.48%
-- Flow 3:
Average throughput: 143.30 Mbit/s
95th percentile per-packet one-way delay: 56.063 ms
Loss rate: 1.39%
Run 8: Report of Indigo-1-32 — Data Link
Run 9: Statistics of Indigo-1-32

Start at: 2018-03-14 09:34:18
End at: 2018-03-14 09:34:48

# Below is generated by plot.py at 2018-03-14 15:23:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 333.57 Mbit/s
95th percentile per-packet one-way delay: 56.000 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 180.24 Mbit/s
95th percentile per-packet one-way delay: 55.654 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 157.79 Mbit/s
95th percentile per-packet one-way delay: 56.140 ms
Loss rate: 0.53%
-- Flow 3:
Average throughput: 150.47 Mbit/s
95th percentile per-packet one-way delay: 56.519 ms
Loss rate: 1.26%
Run 9: Report of Indigo-1-32 — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 180.30 Mbit/s)
Flow 1 egress (mean 180.24 Mbit/s)
Flow 2 ingress (mean 157.76 Mbit/s)
Flow 2 egress (mean 157.79 Mbit/s)
Flow 3 ingress (mean 150.75 Mbit/s)
Flow 3 egress (mean 150.47 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 55.65 ms)
Flow 2 (95th percentile 56.14 ms)
Flow 3 (95th percentile 56.52 ms)
Run 10: Statistics of Indigo-1-32

Start at: 2018-03-14 09:51:04
End at: 2018-03-14 09:51:34

# Below is generated by plot.py at 2018-03-14 15:23:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 313.57 Mbit/s
95th percentile per-packet one-way delay: 54.340 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 169.94 Mbit/s
95th percentile per-packet one-way delay: 54.168 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 148.30 Mbit/s
95th percentile per-packet one-way delay: 54.463 ms
Loss rate: 0.51%
-- Flow 3:
Average throughput: 140.33 Mbit/s
95th percentile per-packet one-way delay: 54.596 ms
Loss rate: 1.14%
Run 10: Report of Indigo-1-32 — Data Link
Run 1: Statistics of Vivace-latency

Start at: 2018-03-14 07:14:04
End at: 2018-03-14 07:14:34

# Below is generated by plot.py at 2018-03-14 15:23:26
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 383.11 Mbit/s
  95th percentile per-packet one-way delay: 53.937 ms
  Loss rate: 0.40%
  -- Flow 1:
  Average throughput: 237.47 Mbit/s
  95th percentile per-packet one-way delay: 53.918 ms
  Loss rate: 0.40%
  -- Flow 2:
  Average throughput: 200.37 Mbit/s
  95th percentile per-packet one-way delay: 53.914 ms
  Loss rate: 0.23%
  -- Flow 3:
  Average throughput: 38.98 Mbit/s
  95th percentile per-packet one-way delay: 54.079 ms
  Loss rate: 2.04%
Run 1: Report of Vivace-latency — Data Link

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

Flow 1 ingress (mean 237.59 Mbit/s)  
Flow 1 egress (mean 237.47 Mbit/s)  
Flow 2 ingress (mean 199.79 Mbit/s)  
Flow 2 egress (mean 200.37 Mbit/s)  
Flow 3 ingress (mean 39.36 Mbit/s)  
Flow 3 egress (mean 38.98 Mbit/s)

Flow 1 (95th percentile 53.92 ms)  
Flow 2 (95th percentile 53.91 ms)  
Flow 3 (95th percentile 54.08 ms)
Run 2: Statistics of Vivace-latency

Start at: 2018-03-14 07:31:07
End at: 2018-03-14 07:31:37

# Below is generated by plot.py at 2018-03-14 15:23:26
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 385.54 Mbit/s
  95th percentile per-packet one-way delay: 53.709 ms
  Loss rate: 0.44%
-- Flow 1:
  Average throughput: 231.37 Mbit/s
  95th percentile per-packet one-way delay: 53.787 ms
  Loss rate: 0.36%
-- Flow 2:
  Average throughput: 189.81 Mbit/s
  95th percentile per-packet one-way delay: 51.237 ms
  Loss rate: 0.37%
-- Flow 3:
  Average throughput: 86.58 Mbit/s
  95th percentile per-packet one-way delay: 50.577 ms
  Loss rate: 1.44%
Run 2: Report of Vivace-latency — Data Link
Run 3: Statistics of Vivace-latency

Start at: 2018-03-14 07:48:02
End at: 2018-03-14 07:48:32

# Below is generated by plot.py at 2018-03-14 15:23:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 436.82 Mbit/s
95th percentile per-packet one-way delay: 54.205 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 256.13 Mbit/s
95th percentile per-packet one-way delay: 54.823 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 231.95 Mbit/s
95th percentile per-packet one-way delay: 51.014 ms
Loss rate: 0.60%
-- Flow 3:
Average throughput: 82.14 Mbit/s
95th percentile per-packet one-way delay: 50.319 ms
Loss rate: 1.19%
Run 3: Report of Vivace-latency — Data Link
Run 4: Statistics of Vivace-latency

Start at: 2018-03-14 08:05:08
End at: 2018-03-14 08:05:38

# Below is generated by plot.py at 2018-03-14 15:23:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 409.86 Mbit/s
95th percentile per-packet one-way delay: 57.609 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 261.23 Mbit/s
95th percentile per-packet one-way delay: 53.940 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 212.54 Mbit/s
95th percentile per-packet one-way delay: 97.286 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 23.35 Mbit/s
95th percentile per-packet one-way delay: 50.503 ms
Loss rate: 2.63%
Run 4: Report of Vivace-latency — Data Link

![Graph showing throughput and per-packet round trips for different flows.]

- **Flow 1 ingress** (mean 261.40 Mbps)
- **Flow 1 egress** (mean 261.23 Mbps)
- **Flow 2 ingress** (mean 212.30 Mbps)
- **Flow 2 egress** (mean 212.54 Mbps)
- **Flow 3 ingress** (mean 23.74 Mbps)
- **Flow 3 egress** (mean 23.35 Mbps)
Run 5: Statistics of Vivace-latency

Start at: 2018-03-14 08:22:04
End at: 2018-03-14 08:22:34

# Below is generated by plot.py at 2018-03-14 15:23:26
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 385.28 Mbit/s
  95th percentile per-packet one-way delay: 54.115 ms
  Loss rate: 2.21%
-- Flow 1:
  Average throughput: 236.54 Mbit/s
  95th percentile per-packet one-way delay: 53.801 ms
  Loss rate: 0.35%
-- Flow 2:
  Average throughput: 180.82 Mbit/s
  95th percentile per-packet one-way delay: 57.248 ms
  Loss rate: 5.87%
-- Flow 3:
  Average throughput: 88.03 Mbit/s
  95th percentile per-packet one-way delay: 54.006 ms
  Loss rate: 1.37%
Run 6: Statistics of Vivace-latency

Start at: 2018-03-14 08:38:55
End at: 2018-03-14 08:39:25

# Below is generated by plot.py at 2018-03-14 15:23:26
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 434.80 Mbit/s
  95th percentile per-packet one-way delay: 54.426 ms
  Loss rate: 0.51%
-- Flow 1:
  Average throughput: 232.84 Mbit/s
  95th percentile per-packet one-way delay: 54.913 ms
  Loss rate: 0.27%
-- Flow 2:
  Average throughput: 229.29 Mbit/s
  95th percentile per-packet one-way delay: 53.013 ms
  Loss rate: 0.57%
-- Flow 3:
  Average throughput: 152.61 Mbit/s
  95th percentile per-packet one-way delay: 51.528 ms
  Loss rate: 1.44%
Run 6: Report of Vivace-latency — Data Link

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

Throughput (Mbps):
- Flow 1 ingress (mean 232.63 Mbps)
- Flow 1 egress (mean 232.84 Mbps)
- Flow 2 ingress (mean 229.39 Mbps)
- Flow 2 egress (mean 229.29 Mbps)
- Flow 3 ingress (mean 153.20 Mbps)
- Flow 3 egress (mean 152.61 Mbps)

Packet Delay (ms):
- Flow 1 (95th percentile 54.91 ms)
- Flow 2 (95th percentile 53.01 ms)
- Flow 3 (95th percentile 51.53 ms)
Run 7: Statistics of Vivace-latency

Start at: 2018-03-14 08:56:07
End at: 2018-03-14 08:56:37

# Below is generated by plot.py at 2018-03-14 15:23:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 406.91 Mbit/s
95th percentile per-packet one-way delay: 54.832 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 240.98 Mbit/s
95th percentile per-packet one-way delay: 51.784 ms
Loss rate: 0.29%
-- Flow 2:
Average throughput: 235.96 Mbit/s
95th percentile per-packet one-way delay: 77.518 ms
Loss rate: 0.49%
-- Flow 3:
Average throughput: 28.74 Mbit/s
95th percentile per-packet one-way delay: 54.151 ms
Loss rate: 2.21%
Run 7: Report of Vivace-latency — Data Link

[Graph showing throughput and per-packet one-way delay over time for different flows with mean and 95th percentile values provided.

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Run 8: Statistics of Vivace-latency

Start at: 2018-03-14 09:13:33
End at: 2018-03-14 09:14:03

# Below is generated by plot.py at 2018-03-14 15:23:26
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 448.08 Mbit/s
  95th percentile per-packet one-way delay: 55.457 ms
  Loss rate: 0.52%
-- Flow 1:
  Average throughput: 251.59 Mbit/s
  95th percentile per-packet one-way delay: 55.375 ms
  Loss rate: 0.33%
-- Flow 2:
  Average throughput: 212.49 Mbit/s
  95th percentile per-packet one-way delay: 55.396 ms
  Loss rate: 0.44%
-- Flow 3:
  Average throughput: 170.13 Mbit/s
  95th percentile per-packet one-way delay: 56.025 ms
  Loss rate: 1.59%
Run 8: Report of Vivace-latency — Data Link

![Graph representing throughput and packet loss over time for three flows.]

**Throughput (Mbps):**
- **Flow 1 Ingress**: Mean 251.54 Mbps
- **Flow 1 Egress**: Mean 251.59 Mbps
- **Flow 2 Ingress**: Mean 212.35 Mbps
- **Flow 2 Egress**: Mean 212.49 Mbps
- **Flow 3 Ingress**: Mean 170.96 Mbps
- **Flow 3 Egress**: Mean 170.13 Mbps

**Per-packet one-way delay (ms):**
- **Flow 1 (95th percentile):** 55.38 ms
- **Flow 2 (95th percentile):** 55.40 ms
- **Flow 3 (95th percentile):** 56.02 ms

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Run 9: Statistics of Vivace-latency

Start at: 2018-03-14 09:30:34
End at: 2018-03-14 09:31:04

# Below is generated by plot.py at 2018-03-14 15:25:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 480.58 Mbit/s
95th percentile per-packet one-way delay: 69.261 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 277.72 Mbit/s
95th percentile per-packet one-way delay: 79.540 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 221.72 Mbit/s
95th percentile per-packet one-way delay: 54.943 ms
Loss rate: 0.51%
-- Flow 3:
Average throughput: 171.20 Mbit/s
95th percentile per-packet one-way delay: 56.470 ms
Loss rate: 1.37%
Run 9: Report of Vivace-latency — Data Link

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

- *Flow 1 ingress (mean 277.68 Mbit/s)*
- *Flow 1 egress (mean 277.72 Mbit/s)*
- *Flow 2 ingress (mean 221.66 Mbit/s)*
- *Flow 2 egress (mean 221.72 Mbit/s)*
- *Flow 3 ingress (mean 171.67 Mbit/s)*
- *Flow 3 egress (mean 171.20 Mbit/s)*
Run 10: Statistics of Vivace-latency

Start at: 2018-03-14 09:47:22
End at: 2018-03-14 09:47:52

# Below is generated by plot.py at 2018-03-14 15:26:19
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 459.35 Mbit/s
  95th percentile per-packet one-way delay: 56.321 ms
  Loss rate: 0.55%
-- Flow 1:
  Average throughput: 243.29 Mbit/s
  95th percentile per-packet one-way delay: 55.268 ms
  Loss rate: 0.38%
-- Flow 2:
  Average throughput: 241.93 Mbit/s
  95th percentile per-packet one-way delay: 81.249 ms
  Loss rate: 0.60%
-- Flow 3:
  Average throughput: 169.94 Mbit/s
  95th percentile per-packet one-way delay: 52.178 ms
  Loss rate: 1.18%
Run 10: Report of Vivace-latency — Data Link

![Graph 1: Throughput (Mbps)]

![Graph 2: Per-packet one-way delay (ms)]
Run 1: Statistics of Vivace-loss

Start at: 2018-03-14 07:12:12
End at: 2018-03-14 07:12:42

# Below is generated by plot.py at 2018-03-14 15:27:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 498.50 Mbit/s
95th percentile per-packet one-way delay: 61.011 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 251.39 Mbit/s
95th percentile per-packet one-way delay: 60.136 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 248.34 Mbit/s
95th percentile per-packet one-way delay: 52.174 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 251.62 Mbit/s
95th percentile per-packet one-way delay: 78.220 ms
Loss rate: 1.40%
Run 1: Report of Vivace-loss — Data Link

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

- **Throughput**: Flow 1 ingress (mean 251.37 Mbps), Flow 1 egress (mean 251.39 Mbps), Flow 2 ingress (mean 248.58 Mbps), Flow 2 egress (mean 248.34 Mbps), Flow 3 ingress (mean 252.41 Mbps), Flow 3 egress (mean 251.62 Mbps)

- **Packet Loss**: Flow 1 (95th percentile 60.14 ms), Flow 2 (95th percentile 52.17 ms), Flow 3 (95th percentile 78.22 ms)
Run 2: Statistics of Vivace-loss

Start at: 2018-03-14 07:29:13  
End at: 2018-03-14 07:29:43

# Below is generated by plot.py at 2018-03-14 15:29:06 
# Datalink statistics
-- Total of 3 flows: 
Average throughput: 514.05 Mbit/s 
95th percentile per-packet one-way delay: 63.100 ms 
Loss rate: 0.71%
-- Flow 1: 
Average throughput: 261.78 Mbit/s 
95th percentile per-packet one-way delay: 67.232 ms 
Loss rate: 0.44%
-- Flow 2: 
Average throughput: 262.56 Mbit/s 
95th percentile per-packet one-way delay: 58.205 ms 
Loss rate: 0.68%
-- Flow 3: 
Average throughput: 238.55 Mbit/s 
95th percentile per-packet one-way delay: 70.263 ms 
Loss rate: 1.68%
Run 2: Report of Vivace-loss — Data Link

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

**Throughput (Mbps)**
- **Flow 1 ingress** (mean 261.99 Mbps)
- **Flow 1 egress** (mean 261.78 Mbps)
- **Flow 2 ingress** (mean 262.91 Mbps)
- **Flow 2 egress** (mean 262.56 Mbps)
- **Flow 3 ingress** (mean 239.96 Mbps)
- **Flow 3 egress** (mean 238.55 Mbps)

**Packet delay (ms)**
- **Flow 1** (95th percentile 67.23 ms)
- **Flow 2** (95th percentile 58.20 ms)
- **Flow 3** (95th percentile 70.26 ms)
Run 3: Statistics of Vivace-loss

Start at: 2018-03-14 07:46:09
End at: 2018-03-14 07:46:39

# Below is generated by plot.py at 2018-03-14 15:30:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 498.40 Mbit/s
95th percentile per-packet one-way delay: 67.161 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 257.57 Mbit/s
95th percentile per-packet one-way delay: 54.964 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 231.03 Mbit/s
95th percentile per-packet one-way delay: 50.183 ms
Loss rate: 0.59%
-- Flow 3:
Average throughput: 268.19 Mbit/s
95th percentile per-packet one-way delay: 103.428 ms
Loss rate: 1.42%
Run 3: Report of Vivace-loss — Data Link

![Graph of Throughput (Mbps) vs Time (s) for different flows]

- Flow 1 ingress (mean 257.54 Mbps)
- Flow 1 egress (mean 257.57 Mbps)
- Flow 2 ingress (mean 231.17 Mbps)
- Flow 2 egress (mean 231.03 Mbps)
- Flow 3 ingress (mean 269.14 Mbps)
- Flow 3 egress (mean 268.19 Mbps)

![Graph of Per-packet one-way delay (ms) vs Time (s) for different flows]

- Flow 1 (95th percentile 54.96 ms)
- Flow 2 (95th percentile 50.18 ms)
- Flow 3 (95th percentile 103.43 ms)
Run 4: Statistics of Vivace-loss

Start at: 2018-03-14 08:03:13
End at: 2018-03-14 08:03:43

# Below is generated by plot.py at 2018-03-14 15:33:35
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 517.20 Mbit/s
  95th percentile per-packet one-way delay: 107.986 ms
  Loss rate: 1.19%
-- Flow 1:
  Average throughput: 292.69 Mbit/s
  95th percentile per-packet one-way delay: 204.187 ms
  Loss rate: 1.46%
-- Flow 2:
  Average throughput: 248.00 Mbit/s
  95th percentile per-packet one-way delay: 54.922 ms
  Loss rate: 0.56%
-- Flow 3:
  Average throughput: 184.31 Mbit/s
  95th percentile per-packet one-way delay: 61.160 ms
  Loss rate: 1.57%
Run 4: Report of Vivace-loss — Data Link
Run 5: Statistics of Vivace-loss

Start at: 2018-03-14 08:20:09
End at: 2018-03-14 08:20:39

# Below is generated by plot.py at 2018-03-14 15:36:20
# Datalink statistics
-- Total of 3 flows:
 Average throughput: 546.53 Mbit/s
 95th percentile per-packet one-way delay: 154.511 ms
 Loss rate: 0.61%
-- Flow 1:
 Average throughput: 282.06 Mbit/s
 95th percentile per-packet one-way delay: 244.508 ms
 Loss rate: 0.44%
-- Flow 2:
 Average throughput: 293.88 Mbit/s
 95th percentile per-packet one-way delay: 138.670 ms
 Loss rate: 0.60%
-- Flow 3:
 Average throughput: 212.68 Mbit/s
 95th percentile per-packet one-way delay: 65.518 ms
 Loss rate: 1.31%
Run 5: Report of Vivace-loss — Data Link
Run 6: Statistics of Vivace-loss

Start at: 2018-03-14 08:37:01
End at: 2018-03-14 08:37:31

# Below is generated by plot.py at 2018-03-14 15:36:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 494.06 Mbit/s
95th percentile per-packet one-way delay: 62.250 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 268.49 Mbit/s
95th percentile per-packet one-way delay: 62.317 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 238.75 Mbit/s
95th percentile per-packet one-way delay: 56.173 ms
Loss rate: 0.68%
-- Flow 3:
Average throughput: 205.34 Mbit/s
95th percentile per-packet one-way delay: 70.485 ms
Loss rate: 1.74%
Run 6: Report of Vivace-loss — Data Link

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

- Flow 1 ingress (mean 268.53 Mbit/s)
- Flow 2 ingress (mean 239.07 Mbit/s)
- Flow 3 ingress (mean 296.64 Mbit/s)
- Flow 1 egress (mean 268.49 Mbit/s)
- Flow 2 egress (mean 238.75 Mbit/s)
- Flow 3 egress (mean 205.34 Mbit/s)

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

- Flow 1 (95th percentile 62.32 ms)
- Flow 2 (95th percentile 56.17 ms)
- Flow 3 (95th percentile 70.48 ms)
Run 7: Statistics of Vivace-loss

Start at: 2018-03-14 08:54:10
End at: 2018-03-14 08:54:40

# Below is generated by plot.py at 2018-03-14 15:37:56
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 506.46 Mbit/s
  95th percentile per-packet one-way delay: 101.997 ms
  Loss rate: 2.19%
-- Flow 1:
  Average throughput: 254.75 Mbit/s
  95th percentile per-packet one-way delay: 64.969 ms
  Loss rate: 0.22%
-- Flow 2:
  Average throughput: 267.41 Mbit/s
  95th percentile per-packet one-way delay: 139.052 ms
  Loss rate: 5.40%
-- Flow 3:
  Average throughput: 227.40 Mbit/s
  95th percentile per-packet one-way delay: 71.357 ms
  Loss rate: 0.86%
Run 7: Report of Vivace-loss — Data Link

![Graph 1: Throughput (Mbps)]

- Flow 1 ingress (mean 254.43 Mbps)
- Flow 1 egress (mean 254.75 Mbps)
- Flow 2 ingress (mean 281.19 Mbps)
- Flow 2 egress (mean 267.41 Mbps)
- Flow 3 ingress (mean 226.86 Mbps)
- Flow 3 egress (mean 227.40 Mbps)

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

- Flow 1 (95th percentile 64.97 ms)
- Flow 2 (95th percentile 139.05 ms)
- Flow 3 (95th percentile 71.36 ms)
Run 8: Statistics of Vivace-loss

Start at: 2018-03-14 09:11:26
End at: 2018-03-14 09:11:56

# Below is generated by plot.py at 2018-03-14 15:38:57
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 520.60 Mbit/s
  95th percentile per-packet one-way delay: 121.337 ms
  Loss rate: 0.95%
-- Flow 1:
  Average throughput: 279.12 Mbit/s
  95th percentile per-packet one-way delay: 97.811 ms
  Loss rate: 0.61%
-- Flow 2:
  Average throughput: 250.71 Mbit/s
  95th percentile per-packet one-way delay: 55.285 ms
  Loss rate: 0.61%
-- Flow 3:
  Average throughput: 230.46 Mbit/s
  95th percentile per-packet one-way delay: 234.539 ms
  Loss rate: 2.93%
Run 8: Report of Vivace-loss — Data Link

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

**Throughput Graph**
- Flow 1 ingress (mean 279.85 Mbit/s)
- Flow 1 egress (mean 279.12 Mbit/s)
- Flow 2 ingress (mean 250.94 Mbit/s)
- Flow 2 egress (mean 250.71 Mbit/s)
- Flow 3 ingress (mean 234.80 Mbit/s)
- Flow 3 egress (mean 230.46 Mbit/s)

**Packet Delay Graph**
- Flow 1 (95th percentile 97.81 ms)
- Flow 2 (95th percentile 55.28 ms)
- Flow 3 (95th percentile 234.54 ms)
Run 9: Statistics of Vivace-loss

Start at: 2018-03-14 09:28:43
End at: 2018-03-14 09:29:13

# Below is generated by plot.py at 2018-03-14 15:38:57
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 466.59 Mbit/s
  95th percentile per-packet one-way delay: 75.339 ms
  Loss rate: 1.11%
-- Flow 1:
  Average throughput: 225.65 Mbit/s
  95th percentile per-packet one-way delay: 117.021 ms
  Loss rate: 1.47%
-- Flow 2:
  Average throughput: 260.38 Mbit/s
  95th percentile per-packet one-way delay: 64.353 ms
  Loss rate: 0.72%
-- Flow 3:
  Average throughput: 208.92 Mbit/s
  95th percentile per-packet one-way delay: 103.476 ms
  Loss rate: 0.93%
Run 9: Report of Vivace-loss — Data Link

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

- Flow 1 ingress (mean 238.28 Mbit/s)
- Flow 1 egress (mean 225.65 Mbit/s)
- Flow 2 ingress (mean 260.94 Mbit/s)
- Flow 2 egress (mean 260.38 Mbit/s)
- Flow 3 ingress (mean 208.62 Mbit/s)
- Flow 3 egress (mean 208.92 Mbit/s)

- Flow 1 (95th percentile 117.02 ms)
- Flow 2 (95th percentile 64.35 ms)
- Flow 3 (95th percentile 103.48 ms)
Run 10: Statistics of Vivace-loss

Start at: 2018-03-14 09:45:33
End at: 2018-03-14 09:46:03

# Below is generated by plot.py at 2018-03-14 15:39:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 441.13 Mbit/s
95th percentile per-packet one-way delay: 54.778 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 232.19 Mbit/s
95th percentile per-packet one-way delay: 53.527 ms
Loss rate: 0.20%
-- Flow 2:
Average throughput: 232.10 Mbit/s
95th percentile per-packet one-way delay: 55.208 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 168.93 Mbit/s
95th percentile per-packet one-way delay: 94.131 ms
Loss rate: 1.48%
Run 10: Report of Vivace-loss — Data Link

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

- **Flow 1 ingress (mean 231.86 Mbit/s)**
- **Flow 1 egress (mean 232.19 Mbit/s)**
- **Flow 2 ingress (mean 231.77 Mbit/s)**
- **Flow 2 egress (mean 232.10 Mbit/s)**
- **Flow 3 ingress (mean 169.57 Mbit/s)**
- **Flow 3 egress (mean 168.93 Mbit/s)**
Run 1: Statistics of Vivace-LTE

Start at: 2018-03-14 07:10:18
End at: 2018-03-14 07:10:48

# Below is generated by plot.py at 2018-03-14 15:42:32
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 469.96 Mbit/s
  95th percentile per-packet one-way delay: 57.682 ms
  Loss rate: 0.74%
-- Flow 1:
  Average throughput: 260.29 Mbit/s
  95th percentile per-packet one-way delay: 58.397 ms
  Loss rate: 0.57%
-- Flow 2:
  Average throughput: 230.09 Mbit/s
  95th percentile per-packet one-way delay: 55.601 ms
  Loss rate: 0.62%
-- Flow 3:
  Average throughput: 174.59 Mbit/s
  95th percentile per-packet one-way delay: 65.792 ms
  Loss rate: 1.83%
Run 1: Report of Vivace-LTE — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 260.89 Mbps)  Flow 1 egress (mean 260.29 Mbps)
Flow 2 ingress (mean 230.20 Mbps)  Flow 2 egress (mean 230.09 Mbps)
Flow 3 ingress (mean 175.99 Mbps)  Flow 3 egress (mean 174.59 Mbps)

Packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 58.40 ms)  Flow 2 (95th percentile 55.60 ms)  Flow 3 (95th percentile 65.79 ms)
Run 2: Statistics of Vivace-LTE

Start at: 2018-03-14 07:27:18
End at: 2018-03-14 07:27:48

# Below is generated by plot.py at 2018-03-14 15:45:32
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 492.73 Mbit/s
  95th percentile per-packet one-way delay: 57.367 ms
  Loss rate: 0.57%
-- Flow 1:
  Average throughput: 283.28 Mbit/s
  95th percentile per-packet one-way delay: 80.398 ms
  Loss rate: 0.46%
-- Flow 2:
  Average throughput: 232.14 Mbit/s
  95th percentile per-packet one-way delay: 51.395 ms
  Loss rate: 0.45%
-- Flow 3:
  Average throughput: 170.23 Mbit/s
  95th percentile per-packet one-way delay: 56.017 ms
  Loss rate: 1.46%
Run 2: Report of Vivace-LTE — Data Link

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

![Graph 2: Per-packet round-trip delay over Time](image)
Run 3: Statistics of Vivace-LTE

Start at: 2018-03-14 07:44:17
End at: 2018-03-14 07:44:47

# Below is generated by plot.py at 2018-03-14 15:46:24
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 453.32 Mbit/s
  95th percentile per-packet one-way delay: 54.834 ms
  Loss rate: 0.65%
-- Flow 1:
  Average throughput: 252.09 Mbit/s
  95th percentile per-packet one-way delay: 55.135 ms
  Loss rate: 0.36%
-- Flow 2:
  Average throughput: 212.61 Mbit/s
  95th percentile per-packet one-way delay: 54.812 ms
  Loss rate: 0.64%
-- Flow 3:
  Average throughput: 184.47 Mbit/s
  95th percentile per-packet one-way delay: 53.702 ms
  Loss rate: 1.88%
Run 3: Report of Vivace-LTE — Data Link

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

- Flow 1 ingress (mean 252.12 Mb/s)
- Flow 1 egress (mean 252.09 Mb/s)
- Flow 2 ingress (mean 212.81 Mb/s)
- Flow 2 egress (mean 212.61 Mb/s)
- Flow 3 ingress (mean 185.09 Mb/s)
- Flow 3 egress (mean 184.47 Mb/s)

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

- Flow 1 (95th percentile 55.13 ms)
- Flow 2 (95th percentile 54.81 ms)
- Flow 3 (95th percentile 53.70 ms)
Run 4: Statistics of Vivace-LTE

Start at: 2018-03-14 08:01:18
End at: 2018-03-14 08:01:48

# Below is generated by plot.py at 2018-03-14 15:47:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 487.80 Mbit/s
95th percentile per-packet one-way delay: 119.871 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 251.62 Mbit/s
95th percentile per-packet one-way delay: 55.861 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 275.57 Mbit/s
95th percentile per-packet one-way delay: 159.798 ms
Loss rate: 0.88%
-- Flow 3:
Average throughput: 163.70 Mbit/s
95th percentile per-packet one-way delay: 66.793 ms
Loss rate: 1.46%
Run 4: Report of Vivace-LTE — Data Link

![Graphs showing data link performance metrics for different flows.]
Run 5: Statistics of Vivace-LTE

Start at: 2018-03-14 08:18:16
End at: 2018-03-14 08:18:46

# Below is generated by plot.py at 2018-03-14 15:48:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 442.17 Mbit/s
95th percentile per-packet one-way delay: 55.677 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 244.97 Mbit/s
95th percentile per-packet one-way delay: 55.249 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 209.38 Mbit/s
95th percentile per-packet one-way delay: 57.270 ms
Loss rate: 0.38%
-- Flow 3:
Average throughput: 178.55 Mbit/s
95th percentile per-packet one-way delay: 50.765 ms
Loss rate: 1.43%
Run 5: Report of Vivace-LTE — Data Link

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

- Flow 1 ingress (mean 245.12 Mbit/s)
- Flow 1 egress (mean 244.97 Mbit/s)
- Flow 2 ingress (mean 209.05 Mbit/s)
- Flow 2 egress (mean 209.38 Mbit/s)
- Flow 3 ingress (mean 179.23 Mbit/s)
- Flow 3 egress (mean 178.55 Mbit/s)
Run 6: Statistics of Vivace-LTE

Start at: 2018-03-14 08:35:04  
End at: 2018-03-14 08:35:34

# Below is generated by plot.py at 2018-03-14 15:49:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 507.46 Mbit/s
95th percentile per-packet one-way delay: 56.336 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 295.20 Mbit/s
95th percentile per-packet one-way delay: 57.120 ms
Loss rate: 0.28%
-- Flow 2:
Average throughput: 230.68 Mbit/s
95th percentile per-packet one-way delay: 55.311 ms
Loss rate: 0.65%
-- Flow 3:
Average throughput: 181.01 Mbit/s
95th percentile per-packet one-way delay: 55.773 ms
Loss rate: 1.66%
Run 6: Report of Vivace-LTE — Data Link

![Graph of throughput and packet delay over time for different flows.](image-url)
Run 7: Statistics of Vivace-LTE

Start at: 2018-03-14 08:52:13
End at: 2018-03-14 08:52:43

# Below is generated by plot.py at 2018-03-14 15:49:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 519.31 Mbit/s
  95th percentile per-packet one-way delay: 111.940 ms
  Loss rate: 0.56%
-- Flow 1:
  Average throughput: 278.58 Mbit/s
  95th percentile per-packet one-way delay: 58.928 ms
  Loss rate: 0.38%
-- Flow 2:
  Average throughput: 279.00 Mbit/s
  95th percentile per-packet one-way delay: 165.291 ms
  Loss rate: 0.58%
-- Flow 3:
  Average throughput: 170.09 Mbit/s
  95th percentile per-packet one-way delay: 52.660 ms
  Loss rate: 1.35%
Run 7: Report of Vivace-LTE — Data Link

[Graphs showing throughput and per-packet end-to-end delay over time for different flows.]
Run 8: Statistics of Vivace-LTE

Start at: 2018-03-14 09:09:38
End at: 2018-03-14 09:10:08

# Below is generated by plot.py at 2018-03-14 15:49:30
# Datalink statistics
-- Total of 3 flows:
 Average throughput: 373.83 Mbit/s
 95th percentile per-packet one-way delay: 54.083 ms
 Loss rate: 0.62%
-- Flow 1:
 Average throughput: 208.12 Mbit/s
 95th percentile per-packet one-way delay: 56.098 ms
 Loss rate: 0.53%
-- Flow 2:
 Average throughput: 165.76 Mbit/s
 95th percentile per-packet one-way delay: 50.421 ms
 Loss rate: 0.51%
-- Flow 3:
 Average throughput: 170.89 Mbit/s
 95th percentile per-packet one-way delay: 54.101 ms
 Loss rate: 1.21%
Run 8: Report of Vivace-LTE — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 208.49 Mbps)
  - Flow 1 egress (mean 208.12 Mbps)
  - Flow 2 ingress (mean 165.76 Mbps)
  - Flow 2 egress (mean 165.76 Mbps)
  - Flow 3 ingress (mean 171.18 Mbps)
  - Flow 3 egress (mean 170.89 Mbps)

- **One-way delay (ms):**
  - Flow 1 (95th percentile 56.10 ms)
  - Flow 2 (95th percentile 50.42 ms)
  - Flow 3 (95th percentile 54.10 ms)
Run 9: Statistics of Vivace-LTE

Start at: 2018-03-14 09:26:46
End at: 2018-03-14 09:27:16

# Below is generated by plot.py at 2018-03-14 15:50:27
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 516.48 Mbit/s
  95th percentile per-packet one-way delay: 59.539 ms
  Loss rate: 0.54%
-- Flow 1:
  Average throughput: 299.89 Mbit/s
  95th percentile per-packet one-way delay: 60.658 ms
  Loss rate: 0.32%
-- Flow 2:
  Average throughput: 239.63 Mbit/s
  95th percentile per-packet one-way delay: 60.056 ms
  Loss rate: 0.61%
-- Flow 3:
  Average throughput: 176.43 Mbit/s
  95th percentile per-packet one-way delay: 54.339 ms
  Loss rate: 1.45%
Run 9: Report of Vivace-LTE — Data Link
Run 10: Statistics of Vivace-LTE

Start at: 2018-03-14 09:43:43
End at: 2018-03-14 09:44:13

# Below is generated by plot.py at 2018-03-14 15:50:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 417.60 Mbit/s
95th percentile per-packet one-way delay: 54.230 ms
Loss rate: 1.86%
-- Flow 1:
Average throughput: 224.12 Mbit/s
95th percentile per-packet one-way delay: 54.249 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 217.09 Mbit/s
95th percentile per-packet one-way delay: 50.697 ms
Loss rate: 4.21%
-- Flow 3:
Average throughput: 165.85 Mbit/s
95th percentile per-packet one-way delay: 55.607 ms
Loss rate: 1.57%
Run 10: Report of Vivace-LTE — Data Link