Pantheon Report

Generated at 2018-04-11 03:06:54 (UTC).
Data path: AWS Korea Ethernet (local) \(\rightarrow\) China Ethernet (remote).
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).
NTP offsets were measured against ntp.nict.jp and have been applied to correct the timestamps in logs.

Git summary:
branch: master @ eb420b5be9bafccd22cf68b99ff5a2000462fc59
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
M datagrump/sender.cc
third_party/fillp @ 11f8c46a2bf1dc797253db7e8ca04076272b2a44
third_party/genericCC @ 9249eea3238475c4d8ca143d28df70bff6c4a2
third_party/indigo @ a9b2060d39e4da2e8987e993e3eca2a6c7cd0ab9
third_party/indigo-1-layer-128-unit @ 3ae9e4ef4230db7484501f82ce8b377695f266d
third_party/indigo-1-layer-32-unit @ 2601c92e49aa958d38dc4defe0ecbdf90c077e64d
third_party/indigo-1-layer-32-unit-no-calib @ 1f3a7f75b41135ed5b540c0fd3505939528e2a5f
third_party/indigo-no-calib @ 7224f2202e8a044d8306fa0b983ad84360c53d89
third_party/koho_cc @ f0f2e693303aee82ea808e6928eac4f1083a6681
M datagrump/sender.cc
third_party/libutp @ b3465b942e2826f2b17eab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ fb1053193c2861da659ba9013db26744ccfc993
third_party/pcc @ 1af955f8a0d66d18b623c091a55fec872b4981e1
M receiver/src/buffer.h
M receiver/src/core.c
M sender/src/buffer.h
M sender/src/core.c
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3c4f42
third_party/scream @ c3370fd7bd17265a79aeab34e4016ad23f9565885
third_party/sourdough @ 1f1a14bffe749737437f61b1eaeb30b267dee681
third_party/sprout @ 6f2e8f66e088d91066a9f23d3f75b49f8e57ce2665089ce
M src/examples/cellsim.cc
M src/examples/sproutbt2.cc
M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a26114a9af2629562939f9a494
M src/verus.hpp
M tools/plot.py
third_party/vivace @ 7a4ba531e75b4a6f66f5c4580192120401784ce3
third_party/webrtc @ f271183af822ee5d003620f4bebef38a65c5b81
test from AWS Korea Ethernet to China 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>
<th>mean avg tput (Mbit/s)</th>
<th>mean 95th-%ile delay (ms)</th>
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<td>Vivace-latency</td>
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<td>Vivace-loss</td>
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<td>68.81</td>
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<td>Vivace-LTE</td>
<td>10</td>
<td>66.02</td>
<td>13.40</td>
<td>4.59</td>
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</table>
Run 1: Statistics of TCP BBR

Start at: 2018-04-10 22:24:56
End at: 2018-04-10 22:25:26
Local clock offset: 1.746 ms
Remote clock offset: 1.861 ms

# Below is generated by plot.py at 2018-04-11 02:46:36
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 77.69 Mbit/s
  95th percentile per-packet one-way delay: 163.508 ms
  Loss rate: 10.71%
-- Flow 1:
  Average throughput: 50.85 Mbit/s
  95th percentile per-packet one-way delay: 159.314 ms
  Loss rate: 10.11%
-- Flow 2:
  Average throughput: 30.03 Mbit/s
  95th percentile per-packet one-way delay: 166.077 ms
  Loss rate: 9.89%
-- Flow 3:
  Average throughput: 20.61 Mbit/s
  95th percentile per-packet one-way delay: 167.776 ms
  Loss rate: 17.06%
Run 1: Report of TCP BBR — Data Link
Run 2: Statistics of TCP BBR

Start at: 2018-04-10 22:49:21
End at: 2018-04-10 22:49:51
Local clock offset: 1.555 ms
Remote clock offset: 2.518 ms

# Below is generated by plot.py at 2018-04-11 02:46:39
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 78.24 Mbit/s
  95th percentile per-packet one-way delay: 164.797 ms
  Loss rate: 10.63%
-- Flow 1:
  Average throughput: 49.40 Mbit/s
  95th percentile per-packet one-way delay: 165.425 ms
  Loss rate: 8.91%
-- Flow 2:
  Average throughput: 31.03 Mbit/s
  95th percentile per-packet one-way delay: 161.624 ms
  Loss rate: 12.14%
-- Flow 3:
  Average throughput: 24.55 Mbit/s
  95th percentile per-packet one-way delay: 160.229 ms
  Loss rate: 16.48%
Run 3: Statistics of TCP BBR

Start at: 2018-04-10 23:13:54
End at: 2018-04-10 23:14:24
Local clock offset: 1.729 ms
Remote clock offset: 2.732 ms

# Below is generated by plot.py at 2018-04-11 02:46:39
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 80.57 Mbit/s
  95th percentile per-packet one-way delay: 161.636 ms
  Loss rate: 7.42%
-- Flow 1:
  Average throughput: 53.91 Mbit/s
  95th percentile per-packet one-way delay: 161.423 ms
  Loss rate: 6.63%
-- Flow 2:
  Average throughput: 27.91 Mbit/s
  95th percentile per-packet one-way delay: 161.929 ms
  Loss rate: 9.14%
-- Flow 3:
  Average throughput: 24.22 Mbit/s
  95th percentile per-packet one-way delay: 161.959 ms
  Loss rate: 8.63%
Run 3: Report of TCP BBR — Data Link

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

![Graph 2: Per-packet one-way delay (ms) vs. Time (s)]
Run 4: Statistics of TCP BBR

Start at: 2018-04-10 23:38:19
End at: 2018-04-10 23:38:49
Local clock offset: 1.865 ms
Remote clock offset: 2.446 ms

# Below is generated by plot.py at 2018-04-11 02:46:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.40 Mbit/s
95th percentile per-packet one-way delay: 165.561 ms
Loss rate: 8.78%
-- Flow 1:
Average throughput: 51.34 Mbit/s
95th percentile per-packet one-way delay: 161.884 ms
Loss rate: 7.66%
-- Flow 2:
Average throughput: 28.14 Mbit/s
95th percentile per-packet one-way delay: 167.483 ms
Loss rate: 9.86%
-- Flow 3:
Average throughput: 25.05 Mbit/s
95th percentile per-packet one-way delay: 164.822 ms
Loss rate: 12.92%
Run 5: Statistics of TCP BBR

Start at: 2018-04-11 00:02:42
End at: 2018-04-11 00:03:12
Local clock offset: 1.93 ms
Remote clock offset: 7.56 ms

# Below is generated by plot.py at 2018-04-11 02:46:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 81.31 Mbit/s
95th percentile per-packet one-way delay: 164.436 ms
Loss rate: 9.92%
-- Flow 1:
Average throughput: 52.27 Mbit/s
95th percentile per-packet one-way delay: 164.038 ms
Loss rate: 8.57%
-- Flow 2:
Average throughput: 33.04 Mbit/s
95th percentile per-packet one-way delay: 164.705 ms
Loss rate: 11.80%
-- Flow 3:
Average throughput: 21.22 Mbit/s
95th percentile per-packet one-way delay: 165.291 ms
Loss rate: 13.64%
Run 6: Statistics of TCP BBR

Start at: 2018-04-11 00:27:14
End at: 2018-04-11 00:27:44
Local clock offset: 3.487 ms
Remote clock offset: 4.413 ms

# Below is generated by plot.py at 2018-04-11 02:46:41
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 80.96 Mbit/s
  95th percentile per-packet one-way delay: 164.678 ms
  Loss rate: 9.59%
-- Flow 1:
  Average throughput: 49.78 Mbit/s
  95th percentile per-packet one-way delay: 163.440 ms
  Loss rate: 9.13%
-- Flow 2:
  Average throughput: 36.54 Mbit/s
  95th percentile per-packet one-way delay: 166.222 ms
  Loss rate: 10.14%
-- Flow 3:
  Average throughput: 20.59 Mbit/s
  95th percentile per-packet one-way delay: 164.542 ms
  Loss rate: 10.91%
Run 6: Report of TCP BBR — Data Link
Run 7: Statistics of TCP BBR

Start at: 2018-04-11 00:51:52
End at: 2018-04-11 00:52:22
Local clock offset: 37.465 ms
Remote clock offset: -0.124 ms

# Below is generated by plot.py at 2018-04-11 02:46:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.20 Mbit/s
95th percentile per-packet one-way delay: 161.548 ms
Loss rate: 10.62%
-- Flow 1:
Average throughput: 50.97 Mbit/s
95th percentile per-packet one-way delay: 162.037 ms
Loss rate: 9.32%
-- Flow 2:
Average throughput: 30.99 Mbit/s
95th percentile per-packet one-way delay: 161.017 ms
Loss rate: 11.58%
-- Flow 3:
Average throughput: 22.85 Mbit/s
95th percentile per-packet one-way delay: 160.029 ms
Loss rate: 16.24%
Run 7: Report of TCP BBR — Data Link
Run 8: Statistics of TCP BBR

Start at: 2018-04-11 01:16:25
End at: 2018-04-11 01:16:55
Local clock offset: 49.858 ms
Remote clock offset: 0.372 ms

# Below is generated by plot.py at 2018-04-11 02:46:41
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 78.77 Mbit/s
  95th percentile per-packet one-way delay: 166.081 ms
  Loss rate: 8.33%
-- Flow 1:
  Average throughput: 49.24 Mbit/s
  95th percentile per-packet one-way delay: 165.663 ms
  Loss rate: 7.70%
-- Flow 2:
  Average throughput: 32.67 Mbit/s
  95th percentile per-packet one-way delay: 165.565 ms
  Loss rate: 9.21%
-- Flow 3:
  Average throughput: 23.41 Mbit/s
  95th percentile per-packet one-way delay: 168.386 ms
  Loss rate: 9.79%
Run 8: Report of TCP BBR — Data Link
Run 9: Statistics of TCP BBR

Start at: 2018-04-11 01:41:06
End at: 2018-04-11 01:41:36
Local clock offset: 42.392 ms
Remote clock offset: 11.349 ms

# Below is generated by plot.py at 2018-04-11 02:48:05
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 80.04 Mbit/s
  95th percentile per-packet one-way delay: 159.926 ms
  Loss rate: 9.42%
-- Flow 1:
  Average throughput: 50.80 Mbit/s
  95th percentile per-packet one-way delay: 158.888 ms
  Loss rate: 8.10%
-- Flow 2:
  Average throughput: 32.54 Mbit/s
  95th percentile per-packet one-way delay: 160.894 ms
  Loss rate: 9.97%
-- Flow 3:
  Average throughput: 22.76 Mbit/s
  95th percentile per-packet one-way delay: 163.068 ms
  Loss rate: 16.05%
Run 9: Report of TCP BBR — Data Link

![Graph 1](image1)

![Graph 2](image2)

Legend:
- Flow 1 ingress (mean 55.30 Mbit/s)
- Flow 1 egress (mean 50.80 Mbit/s)
- Flow 2 ingress (mean 36.15 Mbit/s)
- Flow 2 egress (mean 32.54 Mbit/s)
- Flow 3 ingress (mean 27.14 Mbit/s)
- Flow 3 egress (mean 22.76 Mbit/s)

Legend:
- Flow 1 (95th percentile 158.89 ms)
- Flow 2 (95th percentile 160.89 ms)
- Flow 3 (95th percentile 163.07 ms)
Run 10: Statistics of TCP BBR

Start at: 2018-04-11 02:05:28  
End at: 2018-04-11 02:05:58  
Local clock offset: 24.42 ms  
Remote clock offset: 12.517 ms

# Below is generated by plot.py at 2018-04-11 02:48:05  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 79.08 Mbit/s  
95th percentile per-packet one-way delay: 170.793 ms  
Loss rate: 7.64%  
-- Flow 1:  
Average throughput: 50.90 Mbit/s  
95th percentile per-packet one-way delay: 169.436 ms  
Loss rate: 7.49%  
-- Flow 2:  
Average throughput: 37.89 Mbit/s  
95th percentile per-packet one-way delay: 174.589 ms  
Loss rate: 8.33%  
-- Flow 3:  
Average throughput: 8.88 Mbit/s  
95th percentile per-packet one-way delay: 175.951 ms  
Loss rate: 4.17%
Run 10: Report of TCP BBR — Data Link

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

- Flow 1 ingress (mean 55.02 Mbps)
- Flow 1 egress (mean 50.90 Mbps)
- Flow 2 ingress (mean 41.33 Mbps)
- Flow 2 egress (mean 37.89 Mbps)
- Flow 3 ingress (mean 9.26 Mbps)
- Flow 3 egress (mean 8.68 Mbps)

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

- Flow 1 (95th percentile 169.44 ms)
- Flow 2 (95th percentile 174.59 ms)
- Flow 3 (95th percentile 175.95 ms)

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Run 1: Statistics of TCP Cubic

Start at: 2018-04-10 22:19:21
End at: 2018-04-10 22:19:51
Local clock offset: 1.824 ms
Remote clock offset: 0.633 ms

# Below is generated by plot.py at 2018-04-11 02:48:05
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 24.47 Mbit/s
  95th percentile per-packet one-way delay: 158.698 ms
  Loss rate: 0.58%
-- Flow 1:
  Average throughput: 10.98 Mbit/s
  95th percentile per-packet one-way delay: 159.652 ms
  Loss rate: 0.47%
-- Flow 2:
  Average throughput: 16.10 Mbit/s
  95th percentile per-packet one-way delay: 156.602 ms
  Loss rate: 0.56%
-- Flow 3:
  Average throughput: 8.37 Mbit/s
  95th percentile per-packet one-way delay: 154.966 ms
  Loss rate: 1.11%
Run 1: Report of TCP Cubic — Data Link
Run 2: Statistics of TCP Cubic

End at: 2018-04-10 22:44:25
Local clock offset: 1.253 ms
Remote clock offset: 2.843 ms

# Below is generated by plot.py at 2018-04-11 02:48:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.70 Mbit/s
95th percentile per-packet one-way delay: 154.987 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 8.33 Mbit/s
95th percentile per-packet one-way delay: 155.493 ms
Loss rate: 0.54%
-- Flow 2:
Average throughput: 8.22 Mbit/s
95th percentile per-packet one-way delay: 153.965 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 8.77 Mbit/s
95th percentile per-packet one-way delay: 155.420 ms
Loss rate: 1.09%
Run 2: Report of TCP Cubic — Data Link

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

- Flow 1 ingress (mean 8.38 Mbit/s)
- Flow 2 ingress (mean 8.27 Mbit/s)
- Flow 3 ingress (mean 8.87 Mbit/s)

- Flow 1 egress (mean 8.33 Mbit/s)
- Flow 2 egress (mean 8.22 Mbit/s)
- Flow 3 egress (mean 8.77 Mbit/s)

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

- Flow 1 (95th percentile 155.49 ms)
- Flow 2 (95th percentile 153.97 ms)
- Flow 3 (95th percentile 155.42 ms)
Run 3: Statistics of TCP Cubic

Start at: 2018-04-10 23:08:20
End at: 2018-04-10 23:08:50
Local clock offset: 1.916 ms
Remote clock offset: 2.781 ms

# Below is generated by plot.py at 2018-04-11 02:48:05
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 28.98 Mbit/s
  95th percentile per-packet one-way delay: 155.563 ms
  Loss rate: 0.40%
-- Flow 1:
  Average throughput: 18.94 Mbit/s
  95th percentile per-packet one-way delay: 155.533 ms
  Loss rate: 0.25%
-- Flow 2:
  Average throughput: 10.84 Mbit/s
  95th percentile per-packet one-way delay: 155.601 ms
  Loss rate: 0.45%
-- Flow 3:
  Average throughput: 8.61 Mbit/s
  95th percentile per-packet one-way delay: 155.853 ms
  Loss rate: 1.33%
Run 3: Report of TCP Cubic — Data Link
Run 4: Statistics of TCP Cubic

Start at: 2018-04-10 23:32:52
End at: 2018-04-10 23:33:22
Local clock offset: 1.867 ms
Remote clock offset: 2.39 ms

# Below is generated by plot.py at 2018-04-11 02:48:05
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 25.04 Mbit/s
  95th percentile per-packet one-way delay: 157.433 ms
  Loss rate: 0.50%
-- Flow 1:
  Average throughput: 17.55 Mbit/s
  95th percentile per-packet one-way delay: 156.713 ms
  Loss rate: 0.42%
-- Flow 2:
  Average throughput: 8.58 Mbit/s
  95th percentile per-packet one-way delay: 155.064 ms
  Loss rate: 0.74%
-- Flow 3:
  Average throughput: 5.37 Mbit/s
  95th percentile per-packet one-way delay: 158.834 ms
  Loss rate: 0.58%
Run 4: Report of TCP Cubic — Data Link

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

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

Legend:
- Blue dotted line: Flow 1 ingress (mean 17.63 Mbps)
- Blue solid line: Flow 1 egress (mean 17.55 Mbps)
- Green dotted line: Flow 2 ingress (mean 8.65 Mbps)
- Green solid line: Flow 2 egress (mean 8.58 Mbps)
- Red dotted line: Flow 3 ingress (mean 5.40 Mbps)
- Red solid line: Flow 3 egress (mean 5.37 Mbps)
Run 5: Statistics of TCP Cubic

Start at: 2018-04-10 23:57:15
End at: 2018-04-10 23:57:45
Local clock offset: 2.031 ms
Remote clock offset: 6.473 ms

# Below is generated by plot.py at 2018-04-11 02:48:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 22.16 Mbit/s
95th percentile per-packet one-way delay: 155.118 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 10.84 Mbit/s
95th percentile per-packet one-way delay: 153.025 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 12.49 Mbit/s
95th percentile per-packet one-way delay: 155.780 ms
Loss rate: 0.47%
-- Flow 3:
Average throughput: 9.06 Mbit/s
95th percentile per-packet one-way delay: 156.710 ms
Loss rate: 1.17%
Run 5: Report of TCP Cubic — Data Link

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

- **Throughput (Mbps)**: The graph illustrates the throughput (in Mbps) over time for each flow, with different lines representing different flows.
  - Flow 1 ingress (mean 10.88 Mbps)
  - Flow 1 egress (mean 10.84 Mbps)
  - Flow 2 ingress (mean 12.55 Mbps)
  - Flow 2 egress (mean 12.49 Mbps)
  - Flow 3 ingress (mean 9.16 Mbps)
  - Flow 3 egress (mean 9.06 Mbps)

- **Packet Delay (ms)**: The graph also shows the packet delay (in ms) over time for each flow, with different markers indicating different flows.
  - Flow 1 (95th percentile 153.03 ms)
  - Flow 2 (95th percentile 155.78 ms)
  - Flow 3 (95th percentile 156.71 ms)
Run 6: Statistics of TCP Cubic

Start at: 2018-04-11 00:21:48
End at: 2018-04-11 00:22:18
Local clock offset: 2.099 ms
Remote clock offset: 8.315 ms

# Below is generated by plot.py at 2018-04-11 02:48:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 39.79 Mbit/s
95th percentile per-packet one-way delay: 157.617 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 28.64 Mbit/s
95th percentile per-packet one-way delay: 157.824 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 12.40 Mbit/s
95th percentile per-packet one-way delay: 156.485 ms
Loss rate: 0.55%
-- Flow 3:
Average throughput: 8.75 Mbit/s
95th percentile per-packet one-way delay: 156.098 ms
Loss rate: 0.49%
Run 6: Report of TCP Cubic — Data Link

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

- **Flow 1 Ingress** (mean 28.69 Mbit/s)
- **Flow 1 Egress** (mean 28.64 Mbit/s)
- **Flow 2 Ingress** (mean 12.47 Mbit/s)
- **Flow 2 Egress** (mean 12.40 Mbit/s)
- **Flow 3 Ingress** (mean 8.80 Mbit/s)
- **Flow 3 Egress** (mean 8.75 Mbit/s)

![Graph 2: Per-Packet One-Way Delay vs Time](image2)

- **Flow 1 (95th percentile 157.82 ms)**
- **Flow 2 (95th percentile 156.49 ms)**
- **Flow 3 (95th percentile 156.10 ms)**
Run 7: Statistics of TCP Cubic

Start at: 2018-04-11 00:46:17
End at: 2018-04-11 00:46:47
Local clock offset: 33.55 ms
Remote clock offset: 0.266 ms

# Below is generated by plot.py at 2018-04-11 02:48:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 31.34 Mbit/s
95th percentile per-packet one-way delay: 156.795 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 22.16 Mbit/s
95th percentile per-packet one-way delay: 156.826 ms
Loss rate: 0.22%
-- Flow 2:
Average throughput: 9.50 Mbit/s
95th percentile per-packet one-way delay: 156.041 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 8.61 Mbit/s
95th percentile per-packet one-way delay: 157.604 ms
Loss rate: 1.39%
Run 7: Report of TCP Cubic — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 22.21 Mbit/s)
Flow 1 egress (mean 22.16 Mbit/s)
Flow 2 ingress (mean 9.57 Mbit/s)
Flow 2 egress (mean 9.50 Mbit/s)
Flow 3 ingress (mean 8.73 Mbit/s)
Flow 3 egress (mean 8.61 Mbit/s)

Per-packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 156.83 ms)
Flow 2 (95th percentile 156.04 ms)
Flow 3 (95th percentile 157.60 ms)
Run 8: Statistics of TCP Cubic

Start at: 2018-04-11 01:11:01
End at: 2018-04-11 01:11:31
Local clock offset: 47.297 ms
Remote clock offset: 0.285 ms

# Below is generated by plot.py at 2018-04-11 02:48:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 32.18 Mbit/s
95th percentile per-packet one-way delay: 156.631 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 24.43 Mbit/s
95th percentile per-packet one-way delay: 156.712 ms
Loss rate: 0.24%
-- Flow 2:
Average throughput: 7.37 Mbit/s
95th percentile per-packet one-way delay: 155.483 ms
Loss rate: 0.86%
-- Flow 3:
Average throughput: 8.57 Mbit/s
95th percentile per-packet one-way delay: 156.192 ms
Loss rate: 1.25%
Run 8: Report of TCP Cubic — Data Link

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

- **Flow 1 Ingress (mean 24.49 Mbit/s)**
- **Flow 1 Egress (mean 24.43 Mbit/s)**
- **Flow 2 Ingress (mean 7.43 Mbit/s)**
- **Flow 2 Egress (mean 7.37 Mbit/s)**
- **Flow 3 Ingress (mean 8.68 Mbit/s)**
- **Flow 3 Egress (mean 8.37 Mbit/s)**
Run 9: Statistics of TCP Cubic

Start at: 2018-04-11 01:35:29
End at: 2018-04-11 01:35:59
Local clock offset: 58.709 ms
Remote clock offset: 7.897 ms

# Below is generated by plot.py at 2018-04-11 02:48:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.77 Mbit/s
95th percentile per-packet one-way delay: 154.694 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 16.91 Mbit/s
95th percentile per-packet one-way delay: 154.510 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 6.37 Mbit/s
95th percentile per-packet one-way delay: 152.241 ms
Loss rate: 1.54%
-- Flow 3:
Average throughput: 7.90 Mbit/s
95th percentile per-packet one-way delay: 156.068 ms
Loss rate: 0.44%
Run 9: Report of TCP Cubic — Data Link
Run 10: Statistics of TCP Cubic

Start at: 2018-04-11 02:00:02  
End at: 2018-04-11 02:00:32  
Local clock offset: 25.792 ms  
Remote clock offset: 16.712 ms

# Below is generated by plot.py at 2018-04-11 02:48:05  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 24.97 Mbit/s  
95th percentile per-packet one-way delay: 156.770 ms  
Loss rate: 0.51%  
-- Flow 1:  
Average throughput: 13.44 Mbit/s  
95th percentile per-packet one-way delay: 155.085 ms  
Loss rate: 0.37%  
-- Flow 2:  
Average throughput: 13.53 Mbit/s  
95th percentile per-packet one-way delay: 157.912 ms  
Loss rate: 0.51%  
-- Flow 3:  
Average throughput: 7.62 Mbit/s  
95th percentile per-packet one-way delay: 157.599 ms  
Loss rate: 1.27%
Run 10: Report of TCP Cubic — Data Link
Run 1: Statistics of LEDBAT

Start at: 2018-04-10 22:34:31
End at: 2018-04-10 22:35:01
Local clock offset: 1.51 ms
Remote clock offset: 3.186 ms

# Below is generated by plot.py at 2018-04-11 02:48:05
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 14.93 Mbit/s
  95th percentile per-packet one-way delay: 154.457 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 9.70 Mbit/s
  95th percentile per-packet one-way delay: 154.335 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 6.32 Mbit/s
  95th percentile per-packet one-way delay: 154.644 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 3.11 Mbit/s
  95th percentile per-packet one-way delay: 153.546 ms
  Loss rate: 0.00%
Run 1: Report of LEDBAT — Data Link

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

- Flow 1 ingress (mean 9.70 Mbit/s)
- Flow 1 egress (mean 9.70 Mbit/s)
- Flow 2 ingress (mean 6.32 Mbit/s)
- Flow 2 egress (mean 6.32 Mbit/s)
- Flow 3 ingress (mean 3.11 Mbit/s)
- Flow 3 egress (mean 3.11 Mbit/s)
Run 2: Statistics of LEDEBAT

Start at: 2018-04-10 22:58:56
End at: 2018-04-10 22:59:26
Local clock offset: 1.822 ms
Remote clock offset: 2.495 ms

# Below is generated by plot.py at 2018-04-11 02:48:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.92 Mbit/s
95th percentile per-packet one-way delay: 157.404 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.70 Mbit/s
95th percentile per-packet one-way delay: 154.975 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 6.39 Mbit/s
95th percentile per-packet one-way delay: 153.982 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 2.97 Mbit/s
95th percentile per-packet one-way delay: 158.867 ms
Loss rate: 0.00%
Run 2: Report of LEDBAT — Data Link
Run 3: Statistics of LEDBAT

End at: 2018-04-10 23:23:59
Local clock offset: 2.028 ms
Remote clock offset: 2.323 ms

# Below is generated by plot.py at 2018-04-11 02:48:05
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 15.03 Mbit/s
  95th percentile per-packet one-way delay: 155.506 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 9.78 Mbit/s
  95th percentile per-packet one-way delay: 153.367 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 6.42 Mbit/s
  95th percentile per-packet one-way delay: 155.246 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 3.04 Mbit/s
  95th percentile per-packet one-way delay: 156.525 ms
  Loss rate: 0.00%
Run 3: Report of LEDBAT — Data Link

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

Legend:
- Flow 1 ingress (mean 9.78 Mbit/s)
- Flow 1 egress (mean 9.78 Mbit/s)
- Flow 2 ingress (mean 6.42 Mbit/s)
- Flow 2 egress (mean 6.42 Mbit/s)
- Flow 3 ingress (mean 3.04 Mbit/s)
- Flow 3 egress (mean 3.04 Mbit/s)

Graph 1: Throughput vs. Time

Graph 2: Per-packet round-trip time vs. Time

Legend for packet round-trip time:
- Flow 1 (95th percentile 153.37 ms)
- Flow 2 (95th percentile 155.25 ms)
- Flow 3 (95th percentile 156.53 ms)
Run 4: Statistics of LEDBAT

Start at: 2018-04-10 23:47:52
End at: 2018-04-10 23:48:22
Local clock offset: 2.086 ms
Remote clock offset: 3.453 ms

# Below is generated by plot.py at 2018-04-11 02:48:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.80 Mbit/s
95th percentile per-packet one-way delay: 155.436 ms
Loss rate: 0.00%

-- Flow 1:
Average throughput: 9.64 Mbit/s
95th percentile per-packet one-way delay: 154.838 ms
Loss rate: 0.00%

-- Flow 2:
Average throughput: 6.26 Mbit/s
95th percentile per-packet one-way delay: 155.855 ms
Loss rate: 0.00%

-- Flow 3:
Average throughput: 3.10 Mbit/s
95th percentile per-packet one-way delay: 152.820 ms
Loss rate: 0.00%
Run 4: Report of LEDBAT — Data Link
Run 5: Statistics of LEDBAT

Start at: 2018-04-11 00:12:26
End at: 2018-04-11 00:12:56
Local clock offset: 2.157 ms
Remote clock offset: 8.961 ms

# Below is generated by plot.py at 2018-04-11 02:48:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.83 Mbit/s
95th percentile per-packet one-way delay: 154.986 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.57 Mbit/s
95th percentile per-packet one-way delay: 155.104 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 6.39 Mbit/s
95th percentile per-packet one-way delay: 153.840 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 3.08 Mbit/s
95th percentile per-packet one-way delay: 154.725 ms
Loss rate: 0.00%
Run 5: Report of LEDBAT — Data Link

\begin{figure}
\centering
\includegraphics[width=\textwidth]{Run_5_Report_of_LEDBAT_Data_Link}
\caption{Throughput and Delay for Run 5}
\end{figure}
Run 6: Statistics of LEDBAT

Start at: 2018-04-11 00:36:54
End at: 2018-04-11 00:37:24
Local clock offset: 24.344 ms
Remote clock offset: 1.416 ms

# Below is generated by plot.py at 2018-04-11 02:48:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.02 Mbit/s
95th percentile per-packet one-way delay: 154.859 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.76 Mbit/s
95th percentile per-packet one-way delay: 154.841 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 6.39 Mbit/s
95th percentile per-packet one-way delay: 154.904 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 3.17 Mbit/s
95th percentile per-packet one-way delay: 154.059 ms
Loss rate: 0.00%
Run 6: Report of LEDBAT — Data Link
Run 7: Statistics of LEDBAT

Start at: 2018-04-11 01:01:37
End at: 2018-04-11 01:02:07
Local clock offset: 42.823 ms
Remote clock offset: 0.207 ms

# Below is generated by plot.py at 2018-04-11 02:48:05
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 15.12 Mbit/s
  95th percentile per-packet one-way delay: 153.542 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 9.85 Mbit/s
  95th percentile per-packet one-way delay: 153.096 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 6.41 Mbit/s
  95th percentile per-packet one-way delay: 153.721 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 3.15 Mbit/s
  95th percentile per-packet one-way delay: 153.021 ms
  Loss rate: 0.00%
Run 7: Report of LEDBAT — Data Link

![Graph 1](image1)

![Graph 2](image2)
Run 8: Statistics of LEDBAT

Start at: 2018-04-11 01:25:56
End at: 2018-04-11 01:26:26
Local clock offset: 54.311 ms
Remote clock offset: 0.323 ms

# Below is generated by plot.py at 2018-04-11 02:48:05
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 14.87 Mbit/s
  95th percentile per-packet one-way delay: 155.788 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 9.61 Mbit/s
  95th percentile per-packet one-way delay: 156.022 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 6.39 Mbit/s
  95th percentile per-packet one-way delay: 155.524 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 3.10 Mbit/s
  95th percentile per-packet one-way delay: 154.664 ms
  Loss rate: 0.00%
Run 8: Report of LEDBAT — Data Link

![Graph showing throughput and packet delay over time for different flows.]
Run 9: Statistics of LEDBAT

Start at: 2018-04-11 01:50:39
End at: 2018-04-11 01:51:09
Local clock offset: 30.573 ms
Remote clock offset: 14.709 ms

# Below is generated by plot.py at 2018-04-11 02:48:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.91 Mbit/s
95th percentile per-packet one-way delay: 154.114 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.70 Mbit/s
95th percentile per-packet one-way delay: 153.499 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 6.32 Mbit/s
95th percentile per-packet one-way delay: 155.007 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 3.06 Mbit/s
95th percentile per-packet one-way delay: 154.815 ms
Loss rate: 0.00%
Run 9: Report of LEDBAT — Data Link
Run 10: Statistics of LEDBAT

Start at: 2018-04-11 02:14:57
End at: 2018-04-11 02:15:27
Local clock offset: 15.053 ms
Remote clock offset: 3.757 ms

# Below is generated by plot.py at 2018-04-11 02:48:06
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 14.74 Mbit/s
  95th percentile per-packet one-way delay: 155.759 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 9.55 Mbit/s
  95th percentile per-packet one-way delay: 155.865 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 6.33 Mbit/s
  95th percentile per-packet one-way delay: 155.270 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 2.95 Mbit/s
  95th percentile per-packet one-way delay: 156.429 ms
  Loss rate: 0.00%
Run 10: Report of LEDBAT — Data Link
Run 1: Statistics of PCC

Start at: 2018-04-10 22:20:39
End at: 2018-04-10 22:21:09
Local clock offset: 1.547 ms
Remote clock offset: 0.957 ms

# Below is generated by plot.py at 2018-04-11 02:49:15
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 84.96 Mbit/s
  95th percentile per-packet one-way delay: 166.071 ms
  Loss rate: 3.37%
  -- Flow 1:
  Average throughput: 73.72 Mbit/s
  95th percentile per-packet one-way delay: 164.974 ms
  Loss rate: 3.24%
  -- Flow 2:
  Average throughput: 14.86 Mbit/s
  95th percentile per-packet one-way delay: 169.191 ms
  Loss rate: 4.39%
  -- Flow 3:
  Average throughput: 4.12 Mbit/s
  95th percentile per-packet one-way delay: 166.272 ms
  Loss rate: 2.92%
Run 1: Report of PCC — Data Link
Run 2: Statistics of PCC

Start at: 2018-04-10 22:45:13
End at: 2018-04-10 22:45:43
Local clock offset: 1.452 ms
Remote clock offset: 2.76 ms

# Below is generated by plot.py at 2018-04-11 02:49:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.06 Mbit/s
95th percentile per-packet one-way delay: 162.188 ms
Loss rate: 2.24%
-- Flow 1:
Average throughput: 79.09 Mbit/s
95th percentile per-packet one-way delay: 162.186 ms
Loss rate: 2.23%
-- Flow 2:
Average throughput: 8.40 Mbit/s
95th percentile per-packet one-way delay: 161.965 ms
Loss rate: 2.53%
-- Flow 3:
Average throughput: 4.21 Mbit/s
95th percentile per-packet one-way delay: 167.064 ms
Loss rate: 1.26%
Run 2: Report of PCC — Data Link

![Graph showing data link throughput and per-packet one-way delay for flows 1, 2, and 3 over time.](image)

Flow 1 ingress (mean 80.89 Mbit/s) vs. Flow 1 egress (mean 79.09 Mbit/s)
Flow 2 ingress (mean 8.02 Mbit/s) vs. Flow 2 egress (mean 8.40 Mbit/s)
Flow 3 ingress (mean 4.27 Mbit/s) vs. Flow 3 egress (mean 4.21 Mbit/s)

Per-packet one-way delay for flows 1, 2, and 3:
Flow 1 (95th percentile 162.19 ms) vs. Flow 2 (95th percentile 161.97 ms) vs. Flow 3 (95th percentile 167.06 ms)
Run 3: Statistics of PCC

Start at: 2018-04-10 23:09:39
End at: 2018-04-10 23:10:09
Local clock offset: 1.88 ms
Remote clock offset: 2.801 ms

# Below is generated by plot.py at 2018-04-11 02:49:20
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 84.55 Mbit/s
  95th percentile per-packet one-way delay: 162.297 ms
  Loss rate: 2.12%
-- Flow 1:
  Average throughput: 81.49 Mbit/s
  95th percentile per-packet one-way delay: 162.226 ms
  Loss rate: 2.10%
-- Flow 2:
  Average throughput: 2.17 Mbit/s
  95th percentile per-packet one-way delay: 162.674 ms
  Loss rate: 3.25%
-- Flow 3:
  Average throughput: 4.91 Mbit/s
  95th percentile per-packet one-way delay: 162.599 ms
  Loss rate: 1.94%
Run 3: Report of PCC — Data Link
Run 4: Statistics of PCC

Start at: 2018-04-10 23:34:10
End at: 2018-04-10 23:34:41
Local clock offset: 1.948 ms
Remote clock offset: 2.33 ms

# Below is generated by plot.py at 2018-04-11 02:49:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.41 Mbit/s
95th percentile per-packet one-way delay: 166.268 ms
Loss rate: 2.51%
-- Flow 1:
Average throughput: 79.63 Mbit/s
95th percentile per-packet one-way delay: 166.065 ms
Loss rate: 2.44%
-- Flow 2:
Average throughput: 8.12 Mbit/s
95th percentile per-packet one-way delay: 167.812 ms
Loss rate: 3.37%
-- Flow 3:
Average throughput: 4.20 Mbit/s
95th percentile per-packet one-way delay: 169.136 ms
Loss rate: 3.42%
Run 4: Report of PCC — Data Link
Run 5: Statistics of PCC

Start at: 2018-04-10 23:58:33
End at: 2018-04-10 23:59:03
Local clock offset: 1.988 ms
Remote clock offset: 6.918 ms

# Below is generated by plot.py at 2018-04-11 02:49:26
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 86.65 Mbit/s
  95th percentile per-packet one-way delay: 164.656 ms
  Loss rate: 3.30%
-- Flow 1:
  Average throughput: 80.11 Mbit/s
  95th percentile per-packet one-way delay: 164.562 ms
  Loss rate: 3.07%
-- Flow 2:
  Average throughput: 7.85 Mbit/s
  95th percentile per-packet one-way delay: 166.686 ms
  Loss rate: 6.10%
-- Flow 3:
  Average throughput: 4.01 Mbit/s
  95th percentile per-packet one-way delay: 166.315 ms
  Loss rate: 5.90%
Run 5: Report of PCC — Data Link

![Graph showing network throughput and per-packet one-way delay for different flows.]
Run 6: Statistics of PCC

Start at: 2018-04-11 00:23:07
End at: 2018-04-11 00:23:37
Local clock offset: 2.125 ms
Remote clock offset: 7.096 ms

# Below is generated by plot.py at 2018-04-11 02:49:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.90 Mbit/s
95th percentile per-packet one-way delay: 169.498 ms
Loss rate: 2.57%
-- Flow 1:
Average throughput: 79.28 Mbit/s
95th percentile per-packet one-way delay: 169.588 ms
Loss rate: 2.53%
-- Flow 2:
Average throughput: 7.94 Mbit/s
95th percentile per-packet one-way delay: 164.834 ms
Loss rate: 3.27%
-- Flow 3:
Average throughput: 4.07 Mbit/s
95th percentile per-packet one-way delay: 166.189 ms
Loss rate: 2.08%
Run 6: Report of PCC — Data Link

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**Graph 1:**
- **Throughput (Mbps):**
  - Flow 1 ingress (mean 81.38 Mbps)
  - Flow 1 egress (mean 79.28 Mbps)
  - Flow 2 ingress (mean 8.21 Mbps)
  - Flow 2 egress (mean 7.94 Mbps)
  - Flow 3 ingress (mean 4.16 Mbps)
  - Flow 3 egress (mean 4.07 Mbps)

**Graph 2:**
- **Packet-critical one-way delay (ms):**
  - Flow 1 (95th percentile 169.59 ms)
  - Flow 2 (95th percentile 164.83 ms)
  - Flow 3 (95th percentile 166.19 ms)
Run 7: Statistics of PCC

Start at: 2018-04-11 00:47:36
End at: 2018-04-11 00:48:06
Local clock offset: 34.636 ms
Remote clock offset: 0.161 ms

# Below is generated by plot.py at 2018-04-11 02:49:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.57 Mbit/s
95th percentile per-packet one-way delay: 166.029 ms
Loss rate: 2.99%
-- Flow 1:
Average throughput: 78.34 Mbit/s
95th percentile per-packet one-way delay: 166.057 ms
Loss rate: 2.87%
-- Flow 2:
Average throughput: 8.30 Mbit/s
95th percentile per-packet one-way delay: 165.634 ms
Loss rate: 4.17%
-- Flow 3:
Average throughput: 8.25 Mbit/s
95th percentile per-packet one-way delay: 163.456 ms
Loss rate: 4.29%
Run 7: Report of PCC — Data Link

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

- **Throughput (Mb/s):**
  - Flow 1 ingress (mean 80.65 Mb/s)
  - Flow 1 egress (mean 78.34 Mb/s)
  - Flow 2 ingress (mean 8.66 Mb/s)
  - Flow 2 egress (mean 8.30 Mb/s)
  - Flow 3 ingress (mean 8.65 Mb/s)
  - Flow 3 egress (mean 8.25 Mb/s)

- **Per-packet one-way delay (ms):**
  - Flow 1 (95th percentile 166.06 ms)
  - Flow 2 (95th percentile 165.63 ms)
  - Flow 3 (95th percentile 163.46 ms)
Run 8: Statistics of PCC

Start at: 2018-04-11 01:12:20
End at: 2018-04-11 01:12:50
Local clock offset: 47.93 ms
Remote clock offset: 0.262 ms

# Below is generated by plot.py at 2018-04-11 02:49:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.46 Mbit/s
95th percentile per-packet one-way delay: 165.866 ms
Loss rate: 3.36%
-- Flow 1:
Average throughput: 77.44 Mbit/s
95th percentile per-packet one-way delay: 165.691 ms
Loss rate: 3.24%
-- Flow 2:
Average throughput: 9.60 Mbit/s
95th percentile per-packet one-way delay: 169.109 ms
Loss rate: 4.64%
-- Flow 3:
Average throughput: 7.99 Mbit/s
95th percentile per-packet one-way delay: 167.470 ms
Loss rate: 3.71%
Run 8: Report of PCC — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 80.04 Mbps)  
Flow 1 egress (mean 77.44 Mbps)  
Flow 2 ingress (mean 10.07 Mbps)  
Flow 2 egress (mean 9.60 Mbps)  
Flow 3 ingress (mean 8.30 Mbps)  
Flow 3 egress (mean 7.99 Mbps)

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

Time (s)

Flow 1 (95th percentile 165.69 ms)  
Flow 2 (95th percentile 169.11 ms)  
Flow 3 (95th percentile 167.47 ms)
Run 9: Statistics of PCC

Start at: 2018-04-11 01:36:48
End at: 2018-04-11 01:37:18
Local clock offset: 53.523 ms
Remote clock offset: 8.947 ms

# Below is generated by plot.py at 2018-04-11 02:50:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.78 Mbit/s
95th percentile per-packet one-way delay: 161.643 ms
Loss rate: 3.37%
-- Flow 1:
Average throughput: 79.66 Mbit/s
95th percentile per-packet one-way delay: 161.668 ms
Loss rate: 3.23%
-- Flow 2:
Average throughput: 8.21 Mbit/s
95th percentile per-packet one-way delay: 160.248 ms
Loss rate: 4.96%
-- Flow 3:
Average throughput: 2.00 Mbit/s
95th percentile per-packet one-way delay: 159.818 ms
Loss rate: 5.65%
Run 9: Report of PCC — Data Link

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

- Flow 1 ingress (mean 82.33 Mb/s)
- Flow 1 egress (mean 79.66 Mb/s)
- Flow 2 ingress (mean 8.64 Mb/s)
- Flow 2 egress (mean 8.21 Mb/s)
- Flow 3 ingress (mean 2.12 Mb/s)
- Flow 3 egress (mean 2.00 Mb/s)

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

- Flow 1 (95th percentile 161.67 ms)
- Flow 2 (95th percentile 160.25 ms)
- Flow 3 (95th percentile 159.82 ms)
Run 10: Statistics of PCC

Start at: 2018-04-11 02:01:20
End at: 2018-04-11 02:01:50
Local clock offset: 25.653 ms
Remote clock offset: 17.113 ms

# Below is generated by plot.py at 2018-04-11 02:50:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.21 Mbit/s
95th percentile per-packet one-way delay: 169.485 ms
Loss rate: 3.65%
-- Flow 1:
Average throughput: 78.39 Mbit/s
95th percentile per-packet one-way delay: 169.541 ms
Loss rate: 3.46%
-- Flow 2:
Average throughput: 7.76 Mbit/s
95th percentile per-packet one-way delay: 165.823 ms
Loss rate: 5.42%
-- Flow 3:
Average throughput: 8.08 Mbit/s
95th percentile per-packet one-way delay: 160.654 ms
Loss rate: 5.71%
Run 10: Report of PCC — Data Link

![Graph of data transmission and latency](image-url)

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 81.21 Mbps)
  - Flow 2 ingress (mean 8.20 Mbps)
  - Flow 3 ingress (mean 8.57 Mbps)
  - Flow 1 egress (mean 78.39 Mbps)
  - Flow 2 egress (mean 7.76 Mbps)
  - Flow 3 egress (mean 8.08 Mbps)

- **Packet Delivery One-Way Delay (ms):**
  - Flow 1 (95th percentile 169.54 ms)
  - Flow 2 (95th percentile 180.82 ms)
  - Flow 3 (95th percentile 160.65 ms)
Run 1: Statistics of QUIC Cubic

Start at: 2018-04-10 22:38:32
End at: 2018-04-10 22:39:02
Local clock offset: 1.562 ms
Remote clock offset: 3.31 ms

# Below is generated by plot.py at 2018-04-11 02:50:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 47.14 Mbit/s
95th percentile per-packet one-way delay: 159.751 ms
Loss rate: 2.34%
-- Flow 1:
Average throughput: 23.64 Mbit/s
95th percentile per-packet one-way delay: 159.936 ms
Loss rate: 2.35%
-- Flow 2:
Average throughput: 22.86 Mbit/s
95th percentile per-packet one-way delay: 158.106 ms
Loss rate: 2.98%
-- Flow 3:
Average throughput: 25.57 Mbit/s
95th percentile per-packet one-way delay: 160.982 ms
Loss rate: 1.10%
Run 1: Report of QUIC Cubic — Data Link

![Graph of throughput and round-trip time over time for different flows.]
Run 2: Statistics of QUIC Cubic

Start at: 2018-04-10 23:02:57
End at: 2018-04-10 23:03:27
Local clock offset: 1.95 ms
Remote clock offset: 2.62 ms

# Below is generated by plot.py at 2018-04-11 02:50:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 50.11 Mbit/s
95th percentile per-packet one-way delay: 158.071 ms
Loss rate: 0.96%
-- Flow 1:
Average throughput: 30.31 Mbit/s
95th percentile per-packet one-way delay: 157.988 ms
Loss rate: 1.26%
-- Flow 2:
Average throughput: 18.40 Mbit/s
95th percentile per-packet one-way delay: 158.963 ms
Loss rate: 0.45%
-- Flow 3:
Average throughput: 23.54 Mbit/s
95th percentile per-packet one-way delay: 158.148 ms
Loss rate: 0.58%
Run 2: Report of QUIC Cubic — Data Link
Run 3: Statistics of QUIC Cubic

Start at: 2018-04-10 23:27:30
End at: 2018-04-10 23:28:00
Local clock offset: 1.821 ms
Remote clock offset: 2.368 ms

# Below is generated by plot.py at 2018-04-11 02:50:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 44.62 Mbit/s
95th percentile per-packet one-way delay: 159.085 ms
Loss rate: 3.38%
-- Flow 1:
Average throughput: 28.45 Mbit/s
95th percentile per-packet one-way delay: 158.666 ms
Loss rate: 1.69%
-- Flow 2:
Average throughput: 18.58 Mbit/s
95th percentile per-packet one-way delay: 159.894 ms
Loss rate: 5.42%
-- Flow 3:
Average throughput: 11.95 Mbit/s
95th percentile per-packet one-way delay: 158.060 ms
Loss rate: 8.67%
Run 3: Report of QUIC Cubic — Data Link

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

- **Throughput (Mbps)**: The graphs show the throughput in Mbps over time for each flow. The throughput for each flow is indicated by different line styles.
  - **Flow 1 ingress (mean 28.94 Mbps)**
  - **Flow 1 egress (mean 28.45 Mbps)**
  - **Flow 2 ingress (mean 19.85 Mbps)**
  - **Flow 2 egress (mean 18.58 Mbps)**
  - **Flow 3 ingress (mean 13.08 Mbps)**
  - **Flow 3 egress (mean 11.95 Mbps)**

- **One-way delay (ms)**: The graphs also show the one-way delay in ms over time for each flow. The delay for each flow is indicated by different symbols.
  - **Flow 1 (95th percentile 158.67 ms)**
  - **Flow 2 (95th percentile 159.89 ms)**
  - **Flow 3 (95th percentile 150.06 ms)**
Run 4: Statistics of QUIC Cubic

Start at: 2018-04-10 23:51:53
End at: 2018-04-10 23:52:23
Local clock offset: 1.931 ms
Remote clock offset: 5.015 ms

# Below is generated by plot.py at 2018-04-11 02:50:54
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 37.78 Mbit/s
  95th percentile per-packet one-way delay: 159.412 ms
  Loss rate: 4.69%
-- Flow 1:
  Average throughput: 26.65 Mbit/s
  95th percentile per-packet one-way delay: 158.234 ms
  Loss rate: 3.21%
-- Flow 2:
  Average throughput: 15.78 Mbit/s
  95th percentile per-packet one-way delay: 160.012 ms
  Loss rate: 8.51%
-- Flow 3:
  Average throughput: 2.16 Mbit/s
  95th percentile per-packet one-way delay: 156.940 ms
  Loss rate: 0.93%
Run 4: Report of QUIC Cubic — Data Link

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

- Blue: Flow 1 ingress (mean 27.53 Mbit/s)
- Blue dashed: Flow 1 egress (mean 26.65 Mbit/s)
- Green: Flow 2 ingress (mean 17.25 Mbit/s)
- Green dashed: Flow 2 egress (mean 15.78 Mbit/s)
- Red: Flow 3 ingress (mean 2.18 Mbit/s)
- Red dashed: Flow 3 egress (mean 2.16 Mbit/s)

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

- Blue: Flow 1 (95th percentile 158.23 ms)
- Green: Flow 2 (95th percentile 160.01 ms)
- Red: Flow 3 (95th percentile 156.94 ms)
Run 5: Statistics of QUIC Cubic

Start at: 2018-04-11 00:16:26
End at: 2018-04-11 00:16:56
Local clock offset: 1.952 ms
Remote clock offset: 9.527 ms

# Below is generated by plot.py at 2018-04-11 02:50:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 53.86 Mbit/s
95th percentile per-packet one-way delay: 160.080 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 31.55 Mbit/s
95th percentile per-packet one-way delay: 159.600 ms
Loss rate: 0.84%
-- Flow 2:
Average throughput: 28.07 Mbit/s
95th percentile per-packet one-way delay: 162.211 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 11.66 Mbit/s
95th percentile per-packet one-way delay: 157.284 ms
Loss rate: 0.16%
Run 5: Report of QUIC Cubic — Data Link
Run 6: Statistics of QUIC Cubic

Start at: 2018-04-11 00:40:54
End at: 2018-04-11 00:41:24
Local clock offset: 28.898 ms
Remote clock offset: 0.731 ms

# Below is generated by plot.py at 2018-04-11 02:50:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 52.47 Mbit/s
95th percentile per-packet one-way delay: 160.690 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 28.05 Mbit/s
95th percentile per-packet one-way delay: 161.394 ms
Loss rate: 1.49%
-- Flow 2:
Average throughput: 26.74 Mbit/s
95th percentile per-packet one-way delay: 157.602 ms
Loss rate: 0.66%
-- Flow 3:
Average throughput: 20.86 Mbit/s
95th percentile per-packet one-way delay: 157.176 ms
Loss rate: 0.23%
Run 6: Report of QUIC Cubic — Data Link

[Graphs showing throughput and per-packet end-to-end delays over time for different flows.]
Run 7: Statistics of QUIC Cubic

Start at: 2018-04-11 01:05:38
End at: 2018-04-11 01:06:08
Local clock offset: 44.623 ms
Remote clock offset: 0.285 ms

# Below is generated by plot.py at 2018-04-11 02:51:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 51.96 Mbit/s
95th percentile per-packet one-way delay: 158.612 ms
Loss rate: 1.45%
-- Flow 1:
Average throughput: 28.82 Mbit/s
95th percentile per-packet one-way delay: 159.579 ms
Loss rate: 2.28%
-- Flow 2:
Average throughput: 26.57 Mbit/s
95th percentile per-packet one-way delay: 156.225 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 17.20 Mbit/s
95th percentile per-packet one-way delay: 157.222 ms
Loss rate: 0.42%
Run 7: Report of QUIC Cubic — Data Link

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

- **Flow 1** ingress (mean 29.49 Mbps)
- **Flow 1** egress (mean 28.82 Mbps)
- **Flow 2** ingress (mean 26.68 Mbps)
- **Flow 2** egress (mean 26.57 Mbps)
- **Flow 3** ingress (mean 17.26 Mbps)
- **Flow 3** egress (mean 17.20 Mbps)

![Graph 2: One-way delay (ms) vs Time (s) for different flows]

- **Flow 1** (95th percentile 159.58 ms)
- **Flow 2** (95th percentile 156.22 ms)
- **Flow 3** (95th percentile 157.22 ms)
Run 8: Statistics of QUIC Cubic

Start at: 2018-04-11 01:30:05
End at: 2018-04-11 01:30:35
Local clock offset: 56.199 ms
Remote clock offset: 2.689 ms

# Below is generated by plot.py at 2018-04-11 02:51:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 51.62 Mbit/s
95th percentile per-packet one-way delay: 158.300 ms
Loss rate: 1.35%
-- Flow 1:
Average throughput: 30.73 Mbit/s
95th percentile per-packet one-way delay: 157.125 ms
Loss rate: 2.08%
-- Flow 2:
Average throughput: 29.01 Mbit/s
95th percentile per-packet one-way delay: 160.087 ms
Loss rate: 0.28%
-- Flow 3:
Average throughput: 5.28 Mbit/s
95th percentile per-packet one-way delay: 157.831 ms
Loss rate: 0.09%
Run 8: Report of QUIC Cubic — Data Link

![Graph of Throughput (Mbps)]

- Flow 1 ingress (mean 31.39 Mbps)
- Flow 1 egress (mean 30.73 Mbps)
- Flow 2 ingress (mean 29.10 Mbps)
- Flow 2 egress (mean 29.01 Mbps)
- Flow 3 ingress (mean 5.29 Mbps)
- Flow 3 egress (mean 5.28 Mbps)

![Graph of Per-packet round-trip delay (ms)]

- Flow 1 (95th percentile 157.12 ms)
- Flow 2 (95th percentile 160.09 ms)
- Flow 3 (95th percentile 157.83 ms)
Run 9: Statistics of QUIC Cubic

Start at: 2018-04-11 01:54:40
End at: 2018-04-11 01:55:10
Local clock offset: 27.966 ms
Remote clock offset: 15.64 ms

# Below is generated by plot.py at 2018-04-11 02:51:21
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 41.50 Mbit/s
  95th percentile per-packet one-way delay: 162.493 ms
  Loss rate: 1.23%
-- Flow 1:
  Average throughput: 24.81 Mbit/s
  95th percentile per-packet one-way delay: 162.900 ms
  Loss rate: 1.06%
-- Flow 2:
  Average throughput: 14.32 Mbit/s
  95th percentile per-packet one-way delay: 156.935 ms
  Loss rate: 1.17%
-- Flow 3:
  Average throughput: 22.33 Mbit/s
  95th percentile per-packet one-way delay: 159.663 ms
  Loss rate: 1.87%
Run 9: Report of QUIC Cubic — Data Link
Run 10: Statistics of QUIC Cubic

Start at: 2018-04-11 02:19:38  
End at: 2018-04-11 02:20:08  
Local clock offset: 10.275 ms  
Remote clock offset: 1.716 ms

# Below is generated by plot.py at 2018-04-11 02:51:25  
# Datalink statistics

-- Total of 3 flows:  
Average throughput: 50.49 Mbit/s  
95th percentile per-packet one-way delay: 156.935 ms  
Loss rate: 1.55%  

-- Flow 1:  
Average throughput: 29.37 Mbit/s  
95th percentile per-packet one-way delay: 156.857 ms  
Loss rate: 2.25%  

-- Flow 2:  
Average throughput: 27.74 Mbit/s  
95th percentile per-packet one-way delay: 157.752 ms  
Loss rate: 0.57%  

-- Flow 3:  
Average throughput: 8.48 Mbit/s  
95th percentile per-packet one-way delay: 157.910 ms  
Loss rate: 0.39%
Run 10: Report of QUIC Cubic — Data Link

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

- **Flow 1 ingress** (mean 30.05 Mbps)
- **Flow 1 egress** (mean 29.37 Mbps)
- **Flow 2 ingress** (mean 27.91 Mbps)
- **Flow 2 egress** (mean 27.74 Mbps)
- **Flow 3 ingress** (mean 8.52 Mbps)
- **Flow 3 egress** (mean 8.46 Mbps)

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

- **Flow 1** (95th percentile 156.86 ms)
- **Flow 2** (95th percentile 157.75 ms)
- **Flow 3** (95th percentile 157.91 ms)
Run 1: Statistics of SCReAM

Start at: 2018-04-10 22:16:41
End at: 2018-04-10 22:17:11
Local clock offset: 1.686 ms
Remote clock offset: -0.218 ms

# Below is generated by plot.py at 2018-04-11 02:51:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 155.225 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 153.571 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 155.285 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 153.107 ms
Loss rate: 0.00%
Run 1: Report of SCReAM — Data Link

![Graph of throughput vs time showing fluctuations and mean throughput of 0.22 Mbps for each flow.]

![Graph of per-packet one-way delay vs time showing variability and 95th percentile delay of approximately 153 ms for each flow.]
Run 2: Statistics of SCReAM

Start at: 2018-04-10 22:41:14
End at: 2018-04-10 22:41:44
Local clock offset: 1.444 ms
Remote clock offset: 3.055 ms

# Below is generated by plot.py at 2018-04-11 02:51:25
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.44 Mbit/s
  95th percentile per-packet one-way delay: 153.541 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 152.845 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 152.979 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 153.661 ms
  Loss rate: 0.00%
Run 2: Report of SCReAM — Data Link

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

- **Throughput**: Shows the rate at which data is transmitted over the data link.
  - Flow 1 ingress (mean 0.22 Mbit/s)
  - Flow 1 egress (mean 0.22 Mbit/s)
  - Flow 2 ingress (mean 0.22 Mbit/s)
  - Flow 2 egress (mean 0.22 Mbit/s)
  - Flow 3 ingress (mean 0.22 Mbit/s)
  - Flow 3 egress (mean 0.22 Mbit/s)

- **Per-packet one-way delay**: Shows the time it takes for each packet to travel from the source to the destination.
  - Flow 1 (95th percentile 152.94 ms)
  - Flow 2 (95th percentile 152.98 ms)
  - Flow 3 (95th percentile 153.66 ms)
Run 3: Statistics of SCReAM

Start at: 2018-04-10 23:05:40
End at: 2018-04-10 23:06:10
Local clock offset: 1.808 ms
Remote clock offset: 2.705 ms

# Below is generated by plot.py at 2018-04-11 02:51:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 154.382 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 154.121 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 154.417 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 152.933 ms
Loss rate: 0.00%
Run 3: Report of SCReAM — Data Link

![Graph 1: Throughput (Mbps) over time for different flows]

![Graph 2: Percentile one-way delay (ms) over time for different flows]

Flow 1 ingress (mean 0.22 Mbps)
Flow 1 egress (mean 0.22 Mbps)
Flow 2 ingress (mean 0.22 Mbps)
Flow 2 egress (mean 0.22 Mbps)
Flow 3 ingress (mean 0.22 Mbps)
Flow 3 egress (mean 0.22 Mbps)

Flow 1 (95th percentile 154.12 ms)
Flow 2 (95th percentile 154.42 ms)
Flow 3 (95th percentile 152.93 ms)
Run 4: Statistics of SCReAM

Start at: 2018-04-10 23:30:12
End at: 2018-04-10 23:30:42
Local clock offset: 2.009 ms
Remote clock offset: 2.356 ms

# Below is generated by plot.py at 2018-04-11 02:51:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 153.637 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 152.475 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 153.286 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 153.694 ms
Loss rate: 0.00%
Run 4: Report of SCReAM — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 0.22 Mbps)
  - Flow 1 egress (mean 0.22 Mbps)
  - Flow 2 ingress (mean 0.22 Mbps)
  - Flow 2 egress (mean 0.22 Mbps)
  - Flow 3 ingress (mean 0.22 Mbps)
  - Flow 3 egress (mean 0.22 Mbps)

- **Packet Delay (ms):**
  - Flow 1 (95th percentile 152.47 ms)
  - Flow 2 (95th percentile 153.29 ms)
  - Flow 3 (95th percentile 153.69 ms)
Run 5: Statistics of SCReAM

Start at: 2018-04-10 23:54:35
End at: 2018-04-10 23:55:05
Local clock offset: 2.001 ms
Remote clock offset: 5.858 ms

# Below is generated by plot.py at 2018-04-11 02:51:25
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.44 Mbit/s
  95th percentile per-packet one-way delay: 153.316 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 152.527 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 153.405 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 152.784 ms
  Loss rate: 0.00%
Run 5: Report of SCReAM — Data Link

[Graphs showing throughput and packet delay over time for different flows.]
Run 6: Statistics of SCReAM

Start at: 2018-04-11 00:19:09
End at: 2018-04-11 00:19:39
Local clock offset: 1.986 ms
Remote clock offset: 9.748 ms

# Below is generated by plot.py at 2018-04-11 02:51:25
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.44 Mbit/s
  95th percentile per-packet one-way delay: 155.074 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 155.099 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 154.481 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 152.495 ms
  Loss rate: 0.00%
Run 6: Report of SCReAM — Data Link

The diagrams show the throughput and packet delay for different flows over time. The upper graph displays the throughput in Mbps, while the lower graph shows the per-packet one-way delay in ms for three distinct flows, each with a 95th percentile delay indicated.
Run 7: Statistics of SCReAM

Start at: 2018-04-11 00:43:37
End at: 2018-04-11 00:44:07
Local clock offset: 31.371 ms
Remote clock offset: 0.52 ms

# Below is generated by plot.py at 2018-04-11 02:51:25
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.44 Mbit/s
  95th percentile per-packet one-way delay: 158.682 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 153.909 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 158.729 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 154.206 ms
  Loss rate: 0.00%
Run 7: Report of SCReAM — Data Link
Run 8: Statistics of SCReAM

Start at: 2018-04-11 01:08:21
End at: 2018-04-11 01:08:51
Local clock offset: 46.029 ms
Remote clock offset: 0.259 ms

# Below is generated by plot.py at 2018-04-11 02:51:25
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.44 Mbit/s
  95th percentile per-packet one-way delay: 154.708 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 152.496 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 153.759 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 154.790 ms
  Loss rate: 0.00%
Run 8: Report of SCReAM — Data Link

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

Throughput (Mbps)

Time (s)

Packet delay (ms)

Time (s)
Run 9: Statistics of SCReAM

Start at: 2018-04-11 01:32:49
End at: 2018-04-11 01:33:19
Local clock offset: 57.349 ms
Remote clock offset: 5.55 ms

# Below is generated by plot.py at 2018-04-11 02:51:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 153.190 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 152.145 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 152.863 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 153.332 ms
Loss rate: 0.00%
Run 9: Report of SCReAM — Data Link
Run 10: Statistics of SCReAM

Start at: 2018-04-11 01:57:22
End at: 2018-04-11 01:57:52
Local clock offset: 26.981 ms
Remote clock offset: 16.224 ms

# Below is generated by plot.py at 2018-04-11 02:51:25
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.44 Mbit/s
  95th percentile per-packet one-way delay: 152.591 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 152.634 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 152.183 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 151.702 ms
  Loss rate: 0.00%
Run 10: Report of SCReAM — Data Link

![Graph showing throughput and packet delay](image-url)
Run 1: Statistics of WebRTC media

Start at: 2018-04-10 22:37:16
End at: 2018-04-10 22:37:46
Local clock offset: 1.442 ms
Remote clock offset: 3.437 ms

# Below is generated by plot.py at 2018-04-11 02:51:25
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.16 Mbit/s
  95th percentile per-packet one-way delay: 158.544 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 159.125 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 154.428 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 155.229 ms
  Loss rate: 0.00%
Run 1: Report of WebRTC media — Data Link

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

- Flow 1 ingress (mean 0.06 Mbit/s)
- Flow 1 egress (mean 0.06 Mbit/s)
- Flow 2 ingress (mean 0.06 Mbit/s)
- Flow 2 egress (mean 0.06 Mbit/s)
- Flow 3 ingress (mean 0.05 Mbit/s)
- Flow 3 egress (mean 0.05 Mbit/s)

![Graph showing packet loss and delay for different flows]

- Flow 1 (95th percentile 159.12 ms)
- Flow 2 (95th percentile 154.43 ms)
- Flow 3 (95th percentile 155.23 ms)
Run 2: Statistics of WebRTC media

Start at: 2018-04-10 23:01:41
End at: 2018-04-10 23:02:11
Local clock offset: 1.726 ms
Remote clock offset: 2.653 ms

# Below is generated by plot.py at 2018-04-11 02:51:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 156.123 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 153.717 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 155.470 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 156.897 ms
Loss rate: 0.00%
Run 2: Report of WebRTC media — Data Link

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

Legend:
- Flow 1 ingress (mean 0.06 Mbit/s)
- Flow 1 egress (mean 0.06 Mbit/s)
- Flow 2 ingress (mean 0.06 Mbit/s)
- Flow 2 egress (mean 0.06 Mbit/s)
- Flow 3 ingress (mean 0.05 Mbit/s)
- Flow 3 egress (mean 0.05 Mbit/s)

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

Legend:
- Flow 1 (95th percentile 153.72 ms)
- Flow 2 (95th percentile 155.47 ms)
- Flow 3 (95th percentile 156.90 ms)
Run 3: Statistics of WebRTC media

Start at: 2018-04-10 23:26:13
End at: 2018-04-10 23:26:43
Local clock offset: 1.945 ms
Remote clock offset: 2.356 ms

# Below is generated by plot.py at 2018-04-11 02:51:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 154.856 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 154.683 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 155.094 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 154.175 ms
Loss rate: 0.00%
Run 3: Report of WebRTC media — Data Link

**Throughput (Mbit/s)**

- **Flow 1 ingress (mean 0.06 Mbit/s)**
- **Flow 1 egress (mean 0.06 Mbit/s)**
- **Flow 2 ingress (mean 0.06 Mbit/s)**
- **Flow 2 egress (mean 0.06 Mbit/s)**
- **Flow 3 ingress (mean 0.05 Mbit/s)**
- **Flow 3 egress (mean 0.05 Mbit/s)**

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

- **Flow 1 (95th percentile 154.68 ms)**
- **Flow 2 (95th percentile 155.09 ms)**
- **Flow 3 (95th percentile 154.10 ms)**
Run 4: Statistics of WebRTC media

Start at: 2018-04-10 23:50:36
End at: 2018-04-10 23:51:06
Local clock offset: 2.013 ms
Remote clock offset: 4.54 ms

# Below is generated by plot.py at 2018-04-11 02:51:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 154.727 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 153.936 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 154.333 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 155.734 ms
Loss rate: 0.00%
Run 4: Report of WebRTC media — Data Link
Run 5: Statistics of WebRTC media

Start at: 2018-04-11 00:15:10
End at: 2018-04-11 00:15:40
Local clock offset: 1.891 ms
Remote clock offset: 9.254 ms

# Below is generated by plot.py at 2018-04-11 02:51:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 156.064 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 153.704 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 156.506 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 155.380 ms
Loss rate: 0.00%
Run 5: Report of WebRTC media — Data Link
Run 6: Statistics of WebRTC media

Start at: 2018-04-11 00:39:38
End at: 2018-04-11 00:40:08
Local clock offset: 27.538 ms
Remote clock offset: 0.928 ms

# Below is generated by plot.py at 2018-04-11 02:51:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 155.584 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 155.998 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 154.730 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 154.806 ms
Loss rate: 0.00%
Run 6: Report of WebRTC media — Data Link

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

- Flow 1 ingress (mean 0.06 Mbps)
- Flow 1 egress (mean 0.06 Mbps)
- Flow 2 ingress (mean 0.06 Mbps)
- Flow 2 egress (mean 0.06 Mbps)
- Flow 3 ingress (mean 0.05 Mbps)
- Flow 3 egress (mean 0.05 Mbps)

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

- Flow 1 (95th percentile 156.00 ms)
- Flow 2 (95th percentile 154.73 ms)
- Flow 3 (95th percentile 154.81 ms)
Run 7: Statistics of WebRTC media

Start at: 2018-04-11 01:04:22
End at: 2018-04-11 01:04:52
Local clock offset: 43.9 ms
Remote clock offset: 0.286 ms

# Below is generated by plot.py at 2018-04-11 02:51:25
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.16 Mbit/s
  95th percentile per-packet one-way delay: 156.436 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 155.357 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 154.972 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 157.399 ms
  Loss rate: 0.00%
Run 7: Report of WebRTC media — Data Link

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

- Flow 1 ingress (mean 0.06 Mbit/s)
- Flow 1 egress (mean 0.06 Mbit/s)
- Flow 2 ingress (mean 0.06 Mbit/s)
- Flow 2 egress (mean 0.06 Mbit/s)
- Flow 3 ingress (mean 0.05 Mbit/s)
- Flow 3 egress (mean 0.05 Mbit/s)

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

- Flow 1 (95th percentile 155.36 ms)
- Flow 2 (95th percentile 154.97 ms)
- Flow 3 (95th percentile 157.40 ms)
Run 8: Statistics of WebRTC media

Start at: 2018-04-11 01:28:48
End at: 2018-04-11 01:29:18
Local clock offset: 55.63 ms
Remote clock offset: 0.928 ms

# Below is generated by plot.py at 2018-04-11 02:51:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 158.944 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 154.859 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 159.462 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 154.403 ms
Loss rate: 0.00%
Run 8: Report of WebRTC media — Data Link
Run 9: Statistics of WebRTC media

Start at: 2018-04-11 01:53:24
End at: 2018-04-11 01:53:54
Local clock offset: 29.021 ms
Remote clock offset: 15.288 ms

# Below is generated by plot.py at 2018-04-11 02:51:25
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.16 Mbit/s
  95th percentile per-packet one-way delay: 154.596 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 154.643 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 154.825 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 153.943 ms
  Loss rate: 0.00%
Run 9: Report of WebRTC media — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 0.06 Mbps)
  - Flow 1 egress (mean 0.06 Mbps)
  - Flow 2 ingress (mean 0.06 Mbps)
  - Flow 2 egress (mean 0.06 Mbps)
  - Flow 3 ingress (mean 0.05 Mbps)
  - Flow 3 egress (mean 0.05 Mbps)

- **Packet one-way delay (ms):**
  - Flow 1 (95th percentile 154.64 ms)
  - Flow 2 (95th percentile 154.82 ms)
  - Flow 3 (95th percentile 153.94 ms)
Run 10: Statistics of WebRTC media

/home/ubuntu/pantheon_data/2018-04-10T22-14-AWS-Korea-to-China-10-runs-3-flows/webrtc_stats_
Run 10: Report of WebRTC media — Data Link

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Run 1: Statistics of Sprout

Start at: 2018-04-10 22:26:19
End at: 2018-04-10 22:26:49
Local clock offset: 1.697 ms
Remote clock offset: 2.121 ms

# Below is generated by plot.py at 2018-04-11 02:51:25
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 2.09 Mbit/s
  95th percentile per-packet one-way delay: 157.069 ms
  Loss rate: 0.94%
-- Flow 1:
  Average throughput: 1.25 Mbit/s
  95th percentile per-packet one-way delay: 157.665 ms
  Loss rate: 1.57%
-- Flow 2:
  Average throughput: 0.89 Mbit/s
  95th percentile per-packet one-way delay: 153.721 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.76 Mbit/s
  95th percentile per-packet one-way delay: 153.834 ms
  Loss rate: 0.00%
Run 1: Report of Sprout — Data Link
Run 2: Statistics of Sprout

Start at: 2018-04-10 22:50:44
End at: 2018-04-10 22:51:14
Local clock offset: 1.605 ms
Remote clock offset: 2.601 ms

# Below is generated by plot.py at 2018-04-11 02:51:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.14 Mbit/s
95th percentile per-packet one-way delay: 161.967 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 1.44 Mbit/s
95th percentile per-packet one-way delay: 157.806 ms
Loss rate: 0.69%
-- Flow 2:
Average throughput: 2.02 Mbit/s
95th percentile per-packet one-way delay: 162.803 ms
Loss rate: 0.93%
-- Flow 3:
Average throughput: 1.06 Mbit/s
95th percentile per-packet one-way delay: 154.916 ms
Loss rate: 0.00%
Run 2: Report of Sprout — Data Link
Run 3: Statistics of Sprout

Start at: 2018-04-10 23:15:17
End at: 2018-04-10 23:15:47
Local clock offset: 1.895 ms
Remote clock offset: 2.611 ms

# Below is generated by plot.py at 2018-04-11 02:51:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.86 Mbit/s
95th percentile per-packet one-way delay: 157.761 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.81 Mbit/s
95th percentile per-packet one-way delay: 153.736 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.73 Mbit/s
95th percentile per-packet one-way delay: 154.463 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 1.71 Mbit/s
95th percentile per-packet one-way delay: 158.575 ms
Loss rate: 0.00%
Run 4: Statistics of Sprout

Start at: 2018-04-10 23:39:42
End at: 2018-04-10 23:40:12
Local clock offset: 1.885 ms
Remote clock offset: 2.318 ms

# Below is generated by plot.py at 2018-04-11 02:51:25
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 3.15 Mbit/s
  95th percentile per-packet one-way delay: 161.216 ms
  Loss rate: 0.38%
-- Flow 1:
  Average throughput: 1.22 Mbit/s
  95th percentile per-packet one-way delay: 155.035 ms
  Loss rate: 0.01%
-- Flow 2:
  Average throughput: 2.15 Mbit/s
  95th percentile per-packet one-way delay: 161.939 ms
  Loss rate: 0.43%
-- Flow 3:
  Average throughput: 1.53 Mbit/s
  95th percentile per-packet one-way delay: 158.561 ms
  Loss rate: 1.10%
Run 4: Report of Sprout — Data Link
Run 5: Statistics of Sprout

Start at: 2018-04-11 00:04:05
End at: 2018-04-11 00:04:35
Local clock offset: 2.059 ms
Remote clock offset: 7.859 ms

# Below is generated by plot.py at 2018-04-11 02:51:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.49 Mbit/s
95th percentile per-packet one-way delay: 155.933 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.75 Mbit/s
95th percentile per-packet one-way delay: 154.702 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.72 Mbit/s
95th percentile per-packet one-way delay: 153.955 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.79 Mbit/s
95th percentile per-packet one-way delay: 156.915 ms
Loss rate: 0.00%
Run 5: Report of Sprout — Data Link

![Graph 1: Throughput (Mbps)]

![Graph 2: Per-packet one-way delay (ms)]
Run 6: Statistics of Sprout

Start at: 2018-04-11 00:28:37
End at: 2018-04-11 00:29:07
Local clock offset: 8.326 ms
Remote clock offset: 3.799 ms

# Below is generated by plot.py at 2018-04-11 02:51:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.85 Mbit/s
95th percentile per-packet one-way delay: 156.601 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.10 Mbit/s
95th percentile per-packet one-way delay: 155.582 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.75 Mbit/s
95th percentile per-packet one-way delay: 157.019 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.74 Mbit/s
95th percentile per-packet one-way delay: 156.452 ms
Loss rate: 0.00%
Run 6: Report of Sprout — Data Link

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

- Flow 1 ingress (mean 1.10 Mbps)
- Flow 1 egress (mean 1.10 Mbps)
- Flow 2 ingress (mean 0.75 Mbps)
- Flow 2 egress (mean 0.75 Mbps)
- Flow 3 ingress (mean 0.74 Mbps)
- Flow 3 egress (mean 0.74 Mbps)

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

- Flow 1 (95th percentile 155.58 ms)
- Flow 2 (95th percentile 157.02 ms)
- Flow 3 (95th percentile 156.45 ms)
Run 7: Statistics of Sprout

Start at: 2018-04-11 00:53:15
End at: 2018-04-11 00:53:45
Local clock offset: 38.318 ms
Remote clock offset: -0.248 ms

# Below is generated by plot.py at 2018-04-11 02:51:25
# Datalink statistics
-- Total of 3 flows:
   Average throughput: 2.02 Mbit/s
   95th percentile per-packet one-way delay: 156.144 ms
   Loss rate: 0.00%
-- Flow 1:
   Average throughput: 1.02 Mbit/s
   95th percentile per-packet one-way delay: 155.214 ms
   Loss rate: 0.00%
-- Flow 2:
   Average throughput: 1.14 Mbit/s
   95th percentile per-packet one-way delay: 156.650 ms
   Loss rate: 0.00%
-- Flow 3:
   Average throughput: 0.74 Mbit/s
   95th percentile per-packet one-way delay: 156.121 ms
   Loss rate: 0.00%
Run 7: Report of Sprout — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 1.02 Mbps)  Flow 1 egress (mean 1.02 Mbps)
Flow 2 ingress (mean 1.14 Mbps)  Flow 2 egress (mean 1.14 Mbps)
Flow 3 ingress (mean 0.74 Mbps)  Flow 3 egress (mean 0.74 Mbps)

Per-packet one way delay (ms)

Flow 1 (95th percentile 155.21 ms)  Flow 2 (95th percentile 156.65 ms)  Flow 3 (95th percentile 156.12 ms)
Run 8: Statistics of Sprout

Start at: 2018-04-11 01:17:47
End at: 2018-04-11 01:18:17
Local clock offset: 50.552 ms
Remote clock offset: 0.269 ms

# Below is generated by plot.py at 2018-04-11 02:51:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.26 Mbit/s
95th percentile per-packet one-way delay: 158.142 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 0.97 Mbit/s
95th percentile per-packet one-way delay: 154.422 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.53 Mbit/s
95th percentile per-packet one-way delay: 159.017 ms
Loss rate: 0.78%
-- Flow 3:
Average throughput: 0.85 Mbit/s
95th percentile per-packet one-way delay: 156.341 ms
Loss rate: 0.00%
Run 8: Report of Sprout — Data Link

[Graph showing throughput and per-packet one-way delay over time for different flows.]
Run 9: Statistics of Sprout

Start at: 2018-04-11 01:42:29
End at: 2018-04-11 01:42:59
Local clock offset: 40.245 ms
Remote clock offset: 11.837 ms

# Below is generated by plot.py at 2018-04-11 02:51:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.43 Mbit/s
95th percentile per-packet one-way delay: 157.875 ms
Loss rate: 2.35%
-- Flow 1:
Average throughput: 2.53 Mbit/s
95th percentile per-packet one-way delay: 158.130 ms
Loss rate: 3.16%
-- Flow 2:
Average throughput: 0.81 Mbit/s
95th percentile per-packet one-way delay: 153.536 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 1.07 Mbit/s
95th percentile per-packet one-way delay: 153.007 ms
Loss rate: 0.00%
Run 9: Report of Sprout — Data Link
Run 10: Statistics of Sprout

Start at: 2018-04-11 02:06:50
End at: 2018-04-11 02:07:20
Local clock offset: 24.26 ms
Remote clock offset: 10.837 ms

# Below is generated by plot.py at 2018-04-11 02:51:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.39 Mbit/s
95th percentile per-packet one-way delay: 162.945 ms
Loss rate: 1.57%
-- Flow 1:
Average throughput: 1.73 Mbit/s
95th percentile per-packet one-way delay: 158.851 ms
Loss rate: 1.08%
-- Flow 2:
Average throughput: 2.16 Mbit/s
95th percentile per-packet one-way delay: 163.729 ms
Loss rate: 2.38%
-- Flow 3:
Average throughput: 0.67 Mbit/s
95th percentile per-packet one-way delay: 155.929 ms
Loss rate: 0.00%
Run 10: Report of Sprout — Data Link
Run 1: Statistics of TaoVA-100x

Start at: 2018-04-10 22:28:54
End at: 2018-04-10 22:29:24
Local clock offset: 1.438 ms
Remote clock offset: 2.596 ms

# Below is generated by plot.py at 2018-04-11 02:52:19
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 43.82 Mbit/s
  95th percentile per-packet one-way delay: 162.470 ms
  Loss rate: 6.78%
-- Flow 1:
  Average throughput: 32.95 Mbit/s
  95th percentile per-packet one-way delay: 162.728 ms
  Loss rate: 6.58%
-- Flow 2:
  Average throughput: 10.46 Mbit/s
  95th percentile per-packet one-way delay: 161.640 ms
  Loss rate: 6.95%
-- Flow 3:
  Average throughput: 11.95 Mbit/s
  95th percentile per-packet one-way delay: 161.447 ms
  Loss rate: 8.11%
Run 1: Report of TaoVA-100x — Data Link

The graphs depict the throughput and end-to-end delay for different flows over time. The graphs show fluctuations in throughput and delay, with some periods of high activity followed by stabilization.
Run 2: Statistics of TaoVA-100x

End at: 2018-04-10 22:53:50
Local clock offset: 1.514 ms
Remote clock offset: 2.566 ms

# Below is generated by plot.py at 2018-04-11 02:52:19
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 32.72 Mbit/s
  95th percentile per-packet one-way delay: 163.270 ms
  Loss rate: 8.37%
-- Flow 1:
  Average throughput: 19.43 Mbit/s
  95th percentile per-packet one-way delay: 163.636 ms
  Loss rate: 9.03%
-- Flow 2:
  Average throughput: 11.61 Mbit/s
  95th percentile per-packet one-way delay: 161.588 ms
  Loss rate: 5.54%
-- Flow 3:
  Average throughput: 16.74 Mbit/s
  95th percentile per-packet one-way delay: 163.254 ms
  Loss rate: 9.86%
Run 2: Report of TaoVA-100x — Data Link
Run 3: Statistics of TaoVA-100x

Start at: 2018-04-10 23:17:52
End at: 2018-04-10 23:18:22
Local clock offset: 1.907 ms
Remote clock offset: 2.535 ms

# Below is generated by plot.py at 2018-04-11 02:52:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 32.59 Mbit/s
95th percentile per-packet one-way delay: 161.146 ms
Loss rate: 10.10%
-- Flow 1:
Average throughput: 21.36 Mbit/s
95th percentile per-packet one-way delay: 161.411 ms
Loss rate: 11.11%
-- Flow 2:
Average throughput: 13.08 Mbit/s
95th percentile per-packet one-way delay: 159.888 ms
Loss rate: 8.51%
-- Flow 3:
Average throughput: 10.22 Mbit/s
95th percentile per-packet one-way delay: 161.281 ms
Loss rate: 7.16%
Run 3: Report of TaoVA-100x — Data Link

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

- Flow 1 ingress (mean 24.03 Mbit/s)
- Flow 1 egress (mean 21.36 Mbit/s)
- Flow 2 ingress (mean 12.87 Mbit/s)
- Flow 2 egress (mean 13.08 Mbit/s)
- Flow 3 ingress (mean 11.01 Mbit/s)
- Flow 3 egress (mean 10.22 Mbit/s)

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

- Flow 1 (95th percentile 161.41 ms)
- Flow 2 (95th percentile 159.89 ms)
- Flow 3 (95th percentile 161.28 ms)
Run 4: Statistics of TaoVA-100x

Start at: 2018-04-10 23:42:16
End at: 2018-04-10 23:42:46
Local clock offset: 1.996 ms
Remote clock offset: 2.482 ms

# Below is generated by plot.py at 2018-04-11 02:52:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 41.97 Mbit/s
95th percentile per-packet one-way delay: 168.799 ms
Loss rate: 7.31%
-- Flow 1:
Average throughput: 16.08 Mbit/s
95th percentile per-packet one-way delay: 164.708 ms
Loss rate: 9.51%
-- Flow 2:
Average throughput: 33.79 Mbit/s
95th percentile per-packet one-way delay: 169.568 ms
Loss rate: 5.89%
-- Flow 3:
Average throughput: 10.23 Mbit/s
95th percentile per-packet one-way delay: 172.418 ms
Loss rate: 5.78%
Run 4: Report of TaoVA-100x — Data Link
Run 5: Statistics of TaoVA-100x

Start at: 2018-04-11 00:06:40  
End at: 2018-04-11 00:07:10  
Local clock offset: 2.15 ms  
Remote clock offset: 8.278 ms

# Below is generated by plot.py at 2018-04-11 02:52:35  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 45.60 Mbit/s  
95th percentile per-packet one-way delay: 164.936 ms  
Loss rate: 8.19%  
-- Flow 1:  
Average throughput: 21.62 Mbit/s  
95th percentile per-packet one-way delay: 165.183 ms  
Loss rate: 7.25%  
-- Flow 2:  
Average throughput: 28.63 Mbit/s  
95th percentile per-packet one-way delay: 165.013 ms  
Loss rate: 7.82%  
-- Flow 3:  
Average throughput: 15.23 Mbit/s  
95th percentile per-packet one-way delay: 163.878 ms  
Loss rate: 13.24%
Run 5: Report of TaoVA-100x — Data Link

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

- Flow 1 ingress (mean 23.31 Mbps/s)
- Flow 1 egress (mean 21.62 Mbps/s)
- Flow 2 ingress (mean 31.07 Mbps/s)
- Flow 2 egress (mean 28.63 Mbps/s)
- Flow 3 ingress (mean 17.54 Mbps/s)
- Flow 3 egress (mean 15.23 Mbps/s)

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

- Flow 1 (95th percentile 165.18 ms)
- Flow 2 (95th percentile 165.01 ms)
- Flow 3 (95th percentile 163.88 ms)
Run 6: Statistics of TaoVA-100x

Start at: 2018-04-11 00:31:12
End at: 2018-04-11 00:31:42
Local clock offset: 14.643 ms
Remote clock offset: 2.777 ms

# Below is generated by plot.py at 2018-04-11 02:52:35
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 39.15 Mbit/s
  95th percentile per-packet one-way delay: 166.383 ms
  Loss rate: 9.89%
-- Flow 1:
  Average throughput: 22.27 Mbit/s
  95th percentile per-packet one-way delay: 165.191 ms
  Loss rate: 10.30%
-- Flow 2:
  Average throughput: 18.26 Mbit/s
  95th percentile per-packet one-way delay: 166.551 ms
  Loss rate: 9.28%
-- Flow 3:
  Average throughput: 14.23 Mbit/s
  95th percentile per-packet one-way delay: 172.916 ms
  Loss rate: 9.54%
Run 6: Report of TaoVA-100x — Data Link

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

- **Flow 1 ingress**: mean 24.84 Mbit/s
- **Flow 1 egress**: mean 22.27 Mbit/s
- **Flow 2 ingress**: mean 20.14 Mbit/s
- **Flow 2 egress**: mean 18.26 Mbit/s
- **Flow 3 ingress**: mean 15.76 Mbit/s
- **Flow 3 egress**: mean 14.23 Mbit/s

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

- **Flow 1 (95th percentile) 165.19 ms**
- **Flow 2 (95th percentile) 166.55 ms**
- **Flow 3 (95th percentile) 172.92 ms**
Run 7: Statistics of TaoVA-100x

Start at: 2018-04-11 00:55:50
End at: 2018-04-11 00:56:20
Local clock offset: 39.637 ms
Remote clock offset: -0.065 ms

# Below is generated by plot.py at 2018-04-11 02:52:35
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 33.37 Mbit/s
  95th percentile per-packet one-way delay: 163.307 ms
  Loss rate: 10.32%
-- Flow 1:
  Average throughput: 21.34 Mbit/s
  95th percentile per-packet one-way delay: 163.668 ms
  Loss rate: 10.89%
-- Flow 2:
  Average throughput: 7.88 Mbit/s
  95th percentile per-packet one-way delay: 160.659 ms
  Loss rate: 5.97%
-- Flow 3:
  Average throughput: 20.64 Mbit/s
  95th percentile per-packet one-way delay: 162.534 ms
  Loss rate: 11.69%
Run 8: Statistics of TaoVA-100x

Start at: 2018-04-11 01:20:22
End at: 2018-04-11 01:20:52
Local clock offset: 51.861 ms
Remote clock offset: 0.296 ms

# Below is generated by plot.py at 2018-04-11 02:52:51
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 47.01 Mbit/s
  95th percentile per-packet one-way delay: 171.065 ms
  Loss rate: 4.31%
-- Flow 1:
  Average throughput: 36.97 Mbit/s
  95th percentile per-packet one-way delay: 169.921 ms
  Loss rate: 3.19%
-- Flow 2:
  Average throughput: 12.38 Mbit/s
  95th percentile per-packet one-way delay: 174.352 ms
  Loss rate: 8.47%
-- Flow 3:
  Average throughput: 5.43 Mbit/s
  95th percentile per-packet one-way delay: 173.898 ms
  Loss rate: 6.89%
Run 8: Report of TaoVA-100x — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 38.19 Mbps)
Flow 1 egress (mean 36.97 Mbps)
Flow 2 ingress (mean 13.33 Mbps)
Flow 2 egress (mean 12.38 Mbps)
Flow 3 ingress (mean 5.83 Mbps)
Flow 3 egress (mean 5.43 Mbps)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 169.92 ms)
Flow 2 (95th percentile 174.35 ms)
Flow 3 (95th percentile 173.90 ms)
Run 9: Statistics of TaoVA-100x

Start at: 2018-04-11 01:45:05
End at: 2018-04-11 01:45:35
Local clock offset: 36.219 ms
Remote clock offset: 12.985 ms

# Below is generated by plot.py at 2018-04-11 02:53:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 32.05 Mbit/s
95th percentile per-packet one-way delay: 158.853 ms
Loss rate: 4.84%
-- Flow 1:
Average throughput: 15.24 Mbit/s
95th percentile per-packet one-way delay: 158.271 ms
Loss rate: 3.42%
-- Flow 2:
Average throughput: 16.21 Mbit/s
95th percentile per-packet one-way delay: 159.248 ms
Loss rate: 7.37%
-- Flow 3:
Average throughput: 18.12 Mbit/s
95th percentile per-packet one-way delay: 158.294 ms
Loss rate: 3.68%
Run 9: Report of TaoVA-100x — Data Link
Run 10: Statistics of TaoVA-100x

Start at: 2018-04-11 02:09:25
End at: 2018-04-11 02:09:55
Local clock offset: 23.365 ms
Remote clock offset: 7.891 ms

# Below is generated by plot.py at 2018-04-11 02:53:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 36.57 Mbit/s
95th percentile per-packet one-way delay: 168.328 ms
Loss rate: 8.46%
-- Flow 1:
Average throughput: 16.80 Mbit/s
95th percentile per-packet one-way delay: 164.935 ms
Loss rate: 8.36%
-- Flow 2:
Average throughput: 21.98 Mbit/s
95th percentile per-packet one-way delay: 169.859 ms
Loss rate: 8.87%
-- Flow 3:
Average throughput: 15.55 Mbit/s
95th percentile per-packet one-way delay: 168.971 ms
Loss rate: 7.62%
Run 10: Report of TaoVA-100x — Data Link
Run 1: Statistics of TCP Vegas

End at: 2018-04-10 22:28:06
Local clock offset: 1.564 ms
Remote clock offset: 2.306 ms

# Below is generated by plot.py at 2018-04-11 02:53:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 11.93 Mbit/s
95th percentile per-packet one-way delay: 156.009 ms
Loss rate: 0.81%
-- Flow 1:
Average throughput: 6.68 Mbit/s
95th percentile per-packet one-way delay: 154.459 ms
Loss rate: 0.56%
-- Flow 2:
Average throughput: 5.44 Mbit/s
95th percentile per-packet one-way delay: 156.294 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 4.92 Mbit/s
95th percentile per-packet one-way delay: 156.691 ms
Loss rate: 2.63%
Run 1: Report of TCP Vegas — Data Link
Run 2: Statistics of TCP Vegas

Start at: 2018-04-10 22:52:01
End at: 2018-04-10 22:52:31
Local clock offset: 1.572 ms
Remote clock offset: 2.653 ms

# Below is generated by plot.py at 2018-04-11 02:53:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 21.60 Mbit/s
95th percentile per-packet one-way delay: 154.127 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 11.89 Mbit/s
95th percentile per-packet one-way delay: 154.123 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 10.45 Mbit/s
95th percentile per-packet one-way delay: 153.879 ms
Loss rate: 0.49%
-- Flow 3:
Average throughput: 8.31 Mbit/s
95th percentile per-packet one-way delay: 156.151 ms
Loss rate: 1.04%
Run 2: Report of TCP Vegas — Data Link

[Graph showing throughput and delay over time with different flow rates and percentiles marked]
Run 3: Statistics of TCP Vegas

Start at: 2018-04-10 23:16:34  
End at: 2018-04-10 23:17:04  
Local clock offset: 1.776 ms  
Remote clock offset: 2.566 ms

# Below is generated by plot.py at 2018-04-11 02:53:16  
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.59 Mbit/s  
95th percentile per-packet one-way delay: 156.115 ms  
Loss rate: 0.40%
-- Flow 1:
Average throughput: 9.07 Mbit/s  
95th percentile per-packet one-way delay: 154.985 ms  
Loss rate: 0.12%
-- Flow 2:
Average throughput: 10.09 Mbit/s  
95th percentile per-packet one-way delay: 156.497 ms  
Loss rate: 0.48%
-- Flow 3:
Average throughput: 8.47 Mbit/s  
95th percentile per-packet one-way delay: 156.153 ms  
Loss rate: 1.11%
Run 3: Report of TCP Vegas — Data Link

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

**Throughput (Mbps):**
- **Flow 1 ingress** (mean 9.08 Mbps)
- **Flow 1 egress** (mean 9.07 Mbps)
- **Flow 2 ingress** (mean 10.14 Mbps)
- **Flow 2 egress** (mean 10.09 Mbps)
- **Flow 3 ingress** (mean 8.57 Mbps)
- **Flow 3 egress** (mean 8.47 Mbps)

**Round-trip delay (ms):**
- **Flow 1** (95th percentile 154.99 ms)
- **Flow 2** (95th percentile 156.50 ms)
- **Flow 3** (95th percentile 156.15 ms)
Run 4: Statistics of TCP Vegas

Start at: 2018-04-10 23:40:59
End at: 2018-04-10 23:41:29
Local clock offset: 1.842 ms
Remote clock offset: 2.381 ms

# Below is generated by plot.py at 2018-04-11 02:53:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 10.46 Mbit/s
95th percentile per-packet one-way delay: 158.787 ms
Loss rate: 1.00%
-- Flow 1:
Average throughput: 5.58 Mbit/s
95th percentile per-packet one-way delay: 155.125 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 4.88 Mbit/s
95th percentile per-packet one-way delay: 160.934 ms
Loss rate: 1.12%
-- Flow 3:
Average throughput: 4.97 Mbit/s
95th percentile per-packet one-way delay: 157.354 ms
Loss rate: 3.01%
Run 4: Report of TCP Vegas — Data Link
Run 5: Statistics of TCP Vegas

Start at: 2018-04-11 00:05:22
End at: 2018-04-11 00:05:52
Local clock offset: 1.895 ms
Remote clock offset: 7.985 ms

# Below is generated by plot.py at 2018-04-11 02:53:16
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 18.87 Mbit/s
  95th percentile per-packet one-way delay: 154.959 ms
  Loss rate: 0.55%
-- Flow 1:
  Average throughput: 8.90 Mbit/s
  95th percentile per-packet one-way delay: 154.112 ms
  Loss rate: 0.35%
-- Flow 2:
  Average throughput: 10.42 Mbit/s
  95th percentile per-packet one-way delay: 155.573 ms
  Loss rate: 0.49%
-- Flow 3:
  Average throughput: 9.20 Mbit/s
  95th percentile per-packet one-way delay: 157.048 ms
  Loss rate: 1.27%
Run 5: Report of TCP Vegas — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 8.93 Mbit/s)
  - Flow 1 egress (mean 8.90 Mbit/s)
  - Flow 2 ingress (mean 10.42 Mbit/s)
  - Flow 2 egress (mean 10.42 Mbit/s)
  - Flow 3 ingress (mean 9.32 Mbit/s)
  - Flow 3 egress (mean 9.20 Mbit/s)

- **Packet One-way Delay (ms):**
  - Flow 1 (95th percentile 154.11 ms)
  - Flow 2 (95th percentile 155.57 ms)
  - Flow 3 (95th percentile 157.05 ms)
Run 6: Statistics of TCP Vegas

Start at: 2018-04-11 00:29:54
End at: 2018-04-11 00:30:24
Local clock offset: 11.218 ms
Remote clock offset: 3.268 ms

# Below is generated by plot.py at 2018-04-11 02:53:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.71 Mbit/s
95th percentile per-packet one-way delay: 158.039 ms
Loss rate: 0.41%
-- Flow 1:
Average throughput: 9.14 Mbit/s
95th percentile per-packet one-way delay: 157.053 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 10.12 Mbit/s
95th percentile per-packet one-way delay: 158.103 ms
Loss rate: 0.47%
-- Flow 3:
Average throughput: 8.58 Mbit/s
95th percentile per-packet one-way delay: 159.096 ms
Loss rate: 1.08%
Run 6: Report of TCP Vegas — Data Link
Run 7: Statistics of TCP Vegas

Start at: 2018-04-11 00:54:32
End at: 2018-04-11 00:55:02
Local clock offset: 38.845 ms
Remote clock offset: -0.25 ms

# Below is generated by plot.py at 2018-04-11 02:53:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.90 Mbit/s
95th percentile per-packet one-way delay: 155.081 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 11.81 Mbit/s
95th percentile per-packet one-way delay: 155.066 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 8.18 Mbit/s
95th percentile per-packet one-way delay: 154.599 ms
Loss rate: 0.72%
-- Flow 3:
Average throughput: 4.96 Mbit/s
95th percentile per-packet one-way delay: 157.670 ms
Loss rate: 3.55%
Run 7: Report of TCP Vegas — Data Link

Throughput (Mbps):

- Flow 1 ingress (mean 11.84 Mbps)
- Flow 1 egress (mean 11.81 Mbps)
- Flow 2 ingress (mean 8.24 Mbps)
- Flow 2 egress (mean 8.18 Mbps)
- Flow 3 ingress (mean 5.15 Mbps)
- Flow 3 egress (mean 4.96 Mbps)

Per-packet one-way delay (ms):

- Flow 1 (95th percentile 155.07 ms)
- Flow 2 (95th percentile 154.60 ms)
- Flow 3 (95th percentile 157.67 ms)
Run 8: Statistics of TCP Vegas

Start at: 2018-04-11 01:19:04
End at: 2018-04-11 01:19:34
Local clock offset: 51.254 ms
Remote clock offset: 0.271 ms

# Below is generated by plot.py at 2018-04-11 02:53:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 17.38 Mbit/s
95th percentile per-packet one-way delay: 154.919 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 8.17 Mbit/s
95th percentile per-packet one-way delay: 155.282 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 9.62 Mbit/s
95th percentile per-packet one-way delay: 154.969 ms
Loss rate: 0.43%
-- Flow 3:
Average throughput: 8.52 Mbit/s
95th percentile per-packet one-way delay: 153.937 ms
Loss rate: 1.07%
Run 8: Report of TCP Vegas — Data Link

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

- Flow 1 ingress (mean 8.20 Mbit/s)
- Flow 1 egress (mean 8.17 Mbit/s)
- Flow 2 ingress (mean 9.66 Mbit/s)
- Flow 2 egress (mean 9.62 Mbit/s)
- Flow 3 ingress (mean 8.62 Mbit/s)
- Flow 3 egress (mean 8.52 Mbit/s)

- Flow 1 (95th percentile 155.28 ms)
- Flow 2 (95th percentile 154.97 ms)
- Flow 3 (95th percentile 153.04 ms)
Run 9: Statistics of TCP Vegas

Start at: 2018-04-11 01:43:46
End at: 2018-04-11 01:44:16
Local clock offset: 37.782 ms
Remote clock offset: 12.607 ms

# Below is generated by plot.py at 2018-04-11 02:53:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 21.94 Mbit/s
95th percentile per-packet one-way delay: 153.585 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 12.26 Mbit/s
95th percentile per-packet one-way delay: 153.655 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 10.35 Mbit/s
95th percentile per-packet one-way delay: 152.775 ms
Loss rate: 0.49%
-- Flow 3:
Average throughput: 8.48 Mbit/s
95th percentile per-packet one-way delay: 154.370 ms
Loss rate: 1.05%
Run 9: Report of TCP Vegas — Data Link

![Throughput Graph](image1)

![Per-packet One-way Delay Graph](image2)
Run 10: Statistics of TCP Vegas

Start at: 2018-04-11 02:08:07
End at: 2018-04-11 02:08:37
Local clock offset: 23.91 ms
Remote clock offset: 9.061 ms

# Below is generated by plot.py at 2018-04-11 02:53:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 17.71 Mbit/s
95th percentile per-packet one-way delay: 155.595 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 8.01 Mbit/s
95th percentile per-packet one-way delay: 155.707 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 10.38 Mbit/s
95th percentile per-packet one-way delay: 154.651 ms
Loss rate: 0.46%
-- Flow 3:
Average throughput: 8.42 Mbit/s
95th percentile per-packet one-way delay: 157.303 ms
Loss rate: 1.01%
Run 10: Report of TCP Vegas — Data Link
Run 1: Statistics of Verus

Start at: 2018-04-10 22:22:00
End at: 2018-04-10 22:22:30
Local clock offset: 1.565 ms
Remote clock offset: 1.396 ms

# Below is generated by plot.py at 2018-04-11 02:54:36
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 38.53 Mbit/s
  95th percentile per-packet one-way delay: 231.869 ms
  Loss rate: 87.24%
-- Flow 1:
  Average throughput: 23.47 Mbit/s
  95th percentile per-packet one-way delay: 235.924 ms
  Loss rate: 86.35%
-- Flow 2:
  Average throughput: 23.15 Mbit/s
  95th percentile per-packet one-way delay: 220.563 ms
  Loss rate: 88.82%
-- Flow 3:
  Average throughput: 1.91 Mbit/s
  95th percentile per-packet one-way delay: 160.957 ms
  Loss rate: 18.69%
Run 1: Report of Verus — Data Link

![Throughput Graph](chart1)

![Delay Graph](chart2)

Legend:
- Flow 1 Ingress (mean 172.02 Mbit/s)
- Flow 1 Egress (mean 23.47 Mbit/s)
- Flow 2 Ingress (mean 196.53 Mbit/s)
- Flow 2 Egress (mean 23.15 Mbit/s)
- Flow 3 Ingress (mean 2.35 Mbit/s)
- Flow 3 Egress (mean 1.91 Mbit/s)

Legend:
- Flow 1 (95th percentile 235.92 ms)
- Flow 2 (95th percentile 220.56 ms)
- Flow 3 (95th percentile 160.96 ms)
Run 2: Statistics of Verus

Start at: 2018-04-10 22:46:34
End at: 2018-04-10 22:47:04
Local clock offset: 1.507 ms
Remote clock offset: 2.725 ms

# Below is generated by plot.py at 2018-04-11 02:54:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 40.13 Mbit/s
95th percentile per-packet one-way delay: 209.245 ms
Loss rate: 81.55%
-- Flow 1:
Average throughput: 27.67 Mbit/s
95th percentile per-packet one-way delay: 207.299 ms
Loss rate: 81.10%
-- Flow 2:
Average throughput: 16.28 Mbit/s
95th percentile per-packet one-way delay: 221.759 ms
Loss rate: 84.27%
-- Flow 3:
Average throughput: 6.86 Mbit/s
95th percentile per-packet one-way delay: 161.093 ms
Loss rate: 35.15%
Run 2: Report of Verus — Data Link
Run 3: Statistics of Verus

Start at: 2018-04-10 23:10:59
End at: 2018-04-10 23:11:29
Local clock offset: 1.796 ms
Remote clock offset: 2.832 ms

# Below is generated by plot.py at 2018-04-11 02:54:36
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 33.58 Mbit/s
  95th percentile per-packet one-way delay: 209.588 ms
  Loss rate: 82.36%
-- Flow 1:
  Average throughput: 28.17 Mbit/s
  95th percentile per-packet one-way delay: 211.211 ms
  Loss rate: 84.48%
-- Flow 2:
  Average throughput: 6.02 Mbit/s
  95th percentile per-packet one-way delay: 159.641 ms
  Loss rate: 32.29%
-- Flow 3:
  Average throughput: 6.19 Mbit/s
  95th percentile per-packet one-way delay: 164.913 ms
  Loss rate: 53.65%
Run 3: Report of Verus — Data Link

---

[Graph showing network traffic over time for different flows, with legends indicating mean throughput and 95th percentile delay.]
Run 4: Statistics of Verus

Start at: 2018-04-10 23:35:31
End at: 2018-04-10 23:36:01
Local clock offset: 2.102 ms
Remote clock offset: 2.335 ms

# Below is generated by plot.py at 2018-04-11 02:54:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 36.91 Mbit/s
95th percentile per-packet one-way delay: 243.495 ms
Loss rate: 86.83%
-- Flow 1:
Average throughput: 30.86 Mbit/s
95th percentile per-packet one-way delay: 244.250 ms
Loss rate: 87.42%
-- Flow 2:
Average throughput: 6.70 Mbit/s
95th percentile per-packet one-way delay: 246.493 ms
Loss rate: 87.54%
-- Flow 3:
Average throughput: 8.17 Mbit/s
95th percentile per-packet one-way delay: 157.732 ms
Loss rate: 32.90%
Run 4: Report of Verus — Data Link

![Throughput Graph]

- **Flow 1** ingress (mean 245.36 Mbit/s) - Flow 1 egress (mean 30.88 Mbit/s)
- **Flow 2** ingress (mean 50.90 Mbit/s) - Flow 2 egress (mean 6.70 Mbit/s)
- **Flow 3** ingress (mean 9.63 Mbit/s) - Flow 3 egress (mean 8.17 Mbit/s)

![Delay Graph]

- **Flow 1** (95th percentile 244.25 ms)
- **Flow 2** (95th percentile 246.49 ms)
- **Flow 3** (95th percentile 157.73 ms)
Run 5: Statistics of Verus

Start at: 2018-04-10 23:59:54
End at: 2018-04-11 00:00:24
Local clock offset: 1.911 ms
Remote clock offset: 6.952 ms

# Below is generated by plot.py at 2018-04-11 02:54:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 41.90 Mbit/s
95th percentile per-packet one-way delay: 228.258 ms
Loss rate: 87.87%
-- Flow 1:
Average throughput: 42.81 Mbit/s
95th percentile per-packet one-way delay: 228.259 ms
Loss rate: 87.88%
-- Flow 2:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 205.383 ms
Loss rate: 66.67%
-- Flow 3:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 153.320 ms
Loss rate: 41.03%
Run 5: Report of Verus — Data Link
Run 6: Statistics of Verus

Start at: 2018-04-11 00:24:28
End at: 2018-04-11 00:24:58
Local clock offset: 1.833 ms
Remote clock offset: 6.07 ms

# Below is generated by plot.py at 2018-04-11 02:54:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 32.95 Mbit/s
95th percentile per-packet one-way delay: 220.318 ms
Loss rate: 84.05%
-- Flow 1:
Average throughput: 12.52 Mbit/s
95th percentile per-packet one-way delay: 193.382 ms
Loss rate: 73.15%
-- Flow 2:
Average throughput: 33.56 Mbit/s
95th percentile per-packet one-way delay: 227.910 ms
Loss rate: 87.48%
-- Flow 3:
Average throughput: 5.92 Mbit/s
95th percentile per-packet one-way delay: 159.818 ms
Loss rate: 31.55%
Run 6: Report of Verus — Data Link

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

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

Legend:
- Flow 1 ingress (mean 46.69 Mbit/s)
- Flow 1 egress (mean 12.52 Mbit/s)
- Flow 2 ingress (mean 251.19 Mbit/s)
- Flow 2 egress (mean 33.56 Mbit/s)
- Flow 3 ingress (mean 2.83 Mbit/s)
- Flow 3 egress (mean 5.92 Mbit/s)
- Flow 1 (95th percentile 193.38 ms)
- Flow 2 (95th percentile 227.91 ms)
- Flow 3 (95th percentile 159.82 ms)
Run 7: Statistics of Verus

Start at: 2018-04-11 00:48:57  
End at: 2018-04-11 00:49:27  
Local clock offset: 35.654 ms  
Remote clock offset: 0.03 ms  

# Below is generated by plot.py at 2018-04-11 02:54:56  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 37.53 Mbit/s  
95th percentile per-packet one-way delay: 233.445 ms  
Loss rate: 82.71%  
-- Flow 1:  
Average throughput: 22.28 Mbit/s  
95th percentile per-packet one-way delay: 220.399 ms  
Loss rate: 84.49%  
-- Flow 2:  
Average throughput: 15.92 Mbit/s  
95th percentile per-packet one-way delay: 250.830 ms  
Loss rate: 76.58%  
-- Flow 3:  
Average throughput: 14.37 Mbit/s  
95th percentile per-packet one-way delay: 256.866 ms  
Loss rate: 83.41%
Run 7: Report of Verus — Data Link

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

- **Flow 1 ingress** (mean 144.20 Mbit/s)
- **Flow 1 egress** (mean 22.28 Mbit/s)
- **Flow 2 ingress** (mean 68.10 Mbit/s)
- **Flow 2 egress** (mean 15.92 Mbit/s)
- **Flow 3 ingress** (mean 87.35 Mbit/s)
- **Flow 3 egress** (mean 14.37 Mbit/s)

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

- **Flow 1 (95th percentile 220.40 ms)**
- **Flow 2 (95th percentile 250.83 ms)**
- **Flow 3 (95th percentile 256.87 ms)**
Run 8: Statistics of Verus

Start at: 2018-04-11 01:13:40
End at: 2018-04-11 01:14:10
Local clock offset: 48.633 ms
Remote clock offset: 0.295 ms

# Below is generated by plot.py at 2018-04-11 02:54:56
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 32.72 Mbit/s
  95th percentile per-packet one-way delay: 221.104 ms
  Loss rate: 75.81%
-- Flow 1:
  Average throughput: 19.88 Mbit/s
  95th percentile per-packet one-way delay: 222.602 ms
  Loss rate: 77.89%
-- Flow 2:
  Average throughput: 16.00 Mbit/s
  95th percentile per-packet one-way delay: 220.973 ms
  Loss rate: 75.53%
-- Flow 3:
  Average throughput: 10.40 Mbit/s
  95th percentile per-packet one-way delay: 159.743 ms
  Loss rate: 35.83%
Run 8: Report of Verus — Data Link
Run 9: Statistics of Verus

Start at: 2018-04-11 01:38:09
End at: 2018-04-11 01:38:39
Local clock offset: 49.468 ms
Remote clock offset: 9.783 ms

# Below is generated by plot.py at 2018-04-11 02:56:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 45.32 Mbit/s
95th percentile per-packet one-way delay: 222.753 ms
Loss rate: 86.78%
-- Flow 1:
Average throughput: 32.96 Mbit/s
95th percentile per-packet one-way delay: 224.419 ms
Loss rate: 87.57%
-- Flow 2:
Average throughput: 25.26 Mbit/s
95th percentile per-packet one-way delay: 202.970 ms
Loss rate: 86.10%
-- Flow 3:
Average throughput: 5.59 Mbit/s
95th percentile per-packet one-way delay: 155.911 ms
Loss rate: 13.97%
Run 9: Report of Verus — Data Link

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

- **Flow 1 ingress** (mean 245.01 Mbit/s) vs. **Flow 1 egress** (mean 32.96 Mbit/s)
- **Flow 2 ingress** (mean 172.04 Mbit/s) vs. **Flow 2 egress** (mean 25.26 Mbit/s)
- **Flow 3 ingress** (mean 5.04 Mbit/s) vs. **Flow 3 egress** (mean 5.59 Mbit/s)

The graphs show variations in throughput and delay for each flow over time, indicating performance and potential bottlenecks.
Run 10: Statistics of Verus

Start at: 2018-04-11 02:02:41
End at: 2018-04-11 02:03:11
Local clock offset: 25.01 ms
Remote clock offset: 16.965 ms

# Below is generated by plot.py at 2018-04-11 02:56:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 38.21 Mbit/s
95th percentile per-packet one-way delay: 238.589 ms
Loss rate: 84.80%
-- Flow 1:
Average throughput: 22.79 Mbit/s
95th percentile per-packet one-way delay: 235.076 ms
Loss rate: 83.55%
-- Flow 2:
Average throughput: 4.47 Mbit/s
95th percentile per-packet one-way delay: 172.823 ms
Loss rate: 41.38%
-- Flow 3:
Average throughput: 40.21 Mbit/s
95th percentile per-packet one-way delay: 240.537 ms
Loss rate: 88.22%
Run 10: Report of Verus — Data Link
Run 1: Statistics of Copa

Start at: 2018-04-10 22:31:43
End at: 2018-04-10 22:32:13
Local clock offset: 1.563 ms
Remote clock offset: 2.838 ms

# Below is generated by plot.py at 2018-04-11 02:56:12
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 71.18 Mbit/s
  95th percentile per-packet one-way delay: 162.321 ms
  Loss rate: 0.17%
-- Flow 1:
  Average throughput: 46.73 Mbit/s
  95th percentile per-packet one-way delay: 160.787 ms
  Loss rate: 0.13%
-- Flow 2:
  Average throughput: 29.33 Mbit/s
  95th percentile per-packet one-way delay: 163.394 ms
  Loss rate: 0.21%
-- Flow 3:
  Average throughput: 14.83 Mbit/s
  95th percentile per-packet one-way delay: 164.903 ms
  Loss rate: 0.26%
Run 1: Report of Copa — Data Link

![Graph of Throughput vs Time](image)

- Flow 1 ingress (mean 46.79 Mbit/s)
- Flow 1 egress (mean 46.73 Mbit/s)
- Flow 2 ingress (mean 29.40 Mbit/s)
- Flow 2 egress (mean 29.33 Mbit/s)
- Flow 3 ingress (mean 14.87 Mbit/s)
- Flow 3 egress (mean 14.83 Mbit/s)

![Graph of Per-packet Round-trip time vs Time](image)

- Flow 1 (95th percentile 160.79 ms)
- Flow 2 (95th percentile 163.39 ms)
- Flow 3 (95th percentile 164.90 ms)
Run 2: Statistics of Copa

Start at: 2018-04-10 22:56:08  
End at: 2018-04-10 22:56:38  
Local clock offset: 1.806 ms  
Remote clock offset: 2.56 ms

# Below is generated by plot.py at 2018-04-11 02:56:13  
# Datalink statistics
-- Total of 3 flows:
Average throughput: 71.55 Mbit/s  
95th percentile per-packet one-way delay: 163.831 ms  
Loss rate: 0.11%
-- Flow 1:
Average throughput: 47.38 Mbit/s  
95th percentile per-packet one-way delay: 161.129 ms  
Loss rate: 0.07%
-- Flow 2:
Average throughput: 24.83 Mbit/s  
95th percentile per-packet one-way delay: 166.130 ms  
Loss rate: 0.16%
-- Flow 3:
Average throughput: 23.01 Mbit/s  
95th percentile per-packet one-way delay: 167.041 ms  
Loss rate: 0.28%
Run 2: Report of Copa — Data Link

![Graph showing throughput and packet delay](image-url)
Run 3: Statistics of Copa

Start at: 2018-04-10 23:20:40
End at: 2018-04-10 23:21:10
Local clock offset: 1.89 ms
Remote clock offset: 2.394 ms

# Below is generated by plot.py at 2018-04-11 02:56:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 74.47 Mbit/s
95th percentile per-packet one-way delay: 159.579 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 49.69 Mbit/s
95th percentile per-packet one-way delay: 158.713 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 28.49 Mbit/s
95th percentile per-packet one-way delay: 161.290 ms
Loss rate: 0.16%
-- Flow 3:
Average throughput: 17.50 Mbit/s
95th percentile per-packet one-way delay: 163.224 ms
Loss rate: 0.21%
Run 3: Report of Copa — Data Link
Run 4: Statistics of Copa

Start at: 2018-04-10 23:45:05
End at: 2018-04-10 23:45:35
Local clock offset: 1.907 ms
Remote clock offset: 2.43 ms

# Below is generated by plot.py at 2018-04-11 02:56:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 74.31 Mbit/s
95th percentile per-packet one-way delay: 161.751 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 53.03 Mbit/s
95th percentile per-packet one-way delay: 160.882 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 25.88 Mbit/s
95th percentile per-packet one-way delay: 163.595 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 12.20 Mbit/s
95th percentile per-packet one-way delay: 164.794 ms
Loss rate: 0.12%
Run 4: Report of Copa — Data Link

![Data Link Throughput Chart]

![Data Link Packet Delay Chart]
Run 5: Statistics of Copa

Start at: 2018-04-11 00:09:38
End at: 2018-04-11 00:10:08
Local clock offset: 2.01 ms
Remote clock offset: 8.585 ms

# Below is generated by plot.py at 2018-04-11 02:56:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 65.86 Mbit/s
95th percentile per-packet one-way delay: 160.162 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 43.29 Mbit/s
95th percentile per-packet one-way delay: 159.892 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 26.15 Mbit/s
95th percentile per-packet one-way delay: 160.516 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 15.52 Mbit/s
95th percentile per-packet one-way delay: 160.918 ms
Loss rate: 0.04%
Run 5: Report of Copa — Data Link

![Graph of throughput over time for different flows]

- **Flow 1 ingress (mean 43.31 Mbit/s)**
- **Flow 1 egress (mean 43.29 Mbit/s)**
- **Flow 2 ingress (mean 26.16 Mbit/s)**
- **Flow 2 egress (mean 26.15 Mbit/s)**
- **Flow 3 ingress (mean 15.53 Mbit/s)**
- **Flow 3 egress (mean 15.52 Mbit/s)**

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

- **Flow 1 (95th percentile 159.89 ms)**
- **Flow 2 (95th percentile 160.52 ms)**
- **Flow 3 (95th percentile 160.92 ms)**

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Run 6: Statistics of Copa

Start at: 2018-04-11 00:33:59
End at: 2018-04-11 00:34:29
Local clock offset: 19.819 ms
Remote clock offset: 1.991 ms

# Below is generated by plot.py at 2018-04-11 02:59:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.95 Mbit/s
95th percentile per-packet one-way delay: 274.104 ms
Loss rate: 82.34%
-- Flow 1:
Average throughput: 72.83 Mbit/s
95th percentile per-packet one-way delay: 274.127 ms
Loss rate: 83.29%
-- Flow 2:
Average throughput: 8.09 Mbit/s
95th percentile per-packet one-way delay: 170.452 ms
Loss rate: 9.47%
-- Flow 3:
Average throughput: 0.00 Mbit/s
Run 6: Report of Copa — Data Link

![Throughput Chart](chart1.png)

![Round-Trip Time Chart](chart2.png)
Run 7: Statistics of Copa

Start at: 2018-04-11 00:58:38
End at: 2018-04-11 00:59:08
Local clock offset: 40.88 ms
Remote clock offset: -0.029 ms

# Below is generated by plot.py at 2018-04-11 03:01:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 75.97 Mbit/s
95th percentile per-packet one-way delay: 280.509 ms
Loss rate: 86.80%
-- Flow 1:
Average throughput: 48.78 Mbit/s
95th percentile per-packet one-way delay: 279.898 ms
Loss rate: 81.19%
-- Flow 2:
Average throughput: 40.73 Mbit/s
95th percentile per-packet one-way delay: 280.860 ms
Loss rate: 91.39%
-- Flow 3:
Average throughput: 0.64 Mbit/s
95th percentile per-packet one-way delay: 188.115 ms
Loss rate: 81.28%
Run 7: Report of Copa — Data Link

[Graphs showing throughput and per-packet delay over time for different flows, with annotations for mean and 95th percentile values.]
Run 8: Statistics of Copa

Start at: 2018-04-11 01:23:10
End at: 2018-04-11 01:23:40
Local clock offset: 53.14 ms
Remote clock offset: 0.188 ms

# Below is generated by plot.py at 2018-04-11 03:01:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 61.73 Mbit/s
95th percentile per-packet one-way delay: 159.049 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 39.97 Mbit/s
95th percentile per-packet one-way delay: 157.021 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 25.05 Mbit/s
95th percentile per-packet one-way delay: 161.102 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 15.27 Mbit/s
95th percentile per-packet one-way delay: 162.757 ms
Loss rate: 0.14%
Run 8: Report of Copa — Data Link

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

Legend:
- Flow 1 Ingress (mean 40.00 Mbit/s)
- Flow 1 Egress (mean 39.97 Mbit/s)
- Flow 2 Ingress (mean 25.08 Mbit/s)
- Flow 2 Egress (mean 25.05 Mbit/s)
- Flow 3 Ingress (mean 15.30 Mbit/s)
- Flow 3 Egress (mean 15.27 Mbit/s)
Run 9: Statistics of Copa

Start at: 2018-04-11 01:47:53
End at: 2018-04-11 01:48:23
Local clock offset: 32.909 ms
Remote clock offset: 13.926 ms

# Below is generated by plot.py at 2018-04-11 03:01:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 62.57 Mbit/s
95th percentile per-packet one-way delay: 154.921 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 43.95 Mbit/s
95th percentile per-packet one-way delay: 153.808 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 19.74 Mbit/s
95th percentile per-packet one-way delay: 155.834 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 16.50 Mbit/s
95th percentile per-packet one-way delay: 155.662 ms
Loss rate: 0.05%
Run 9: Report of Copa — Data Link

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

- Flow 1 ingress (mean 43.95 Mbit/s)
- Flow 1 egress (mean 43.95 Mbit/s)
- Flow 2 ingress (mean 19.74 Mbit/s)
- Flow 2 egress (mean 19.74 Mbit/s)
- Flow 3 ingress (mean 16.51 Mbit/s)
- Flow 3 egress (mean 16.50 Mbit/s)

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

- Flow 1 (95th percentile 153.81 ms)
- Flow 2 (95th percentile 155.83 ms)
- Flow 3 (95th percentile 155.66 ms)
Run 10: Statistics of Copa

Start at: 2018-04-11 02:12:11
End at: 2018-04-11 02:12:41
Local clock offset: 18.99 ms
Remote clock offset: 5.576 ms

# Below is generated by plot.py at 2018-04-11 03:01:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 61.63 Mbit/s
95th percentile per-packet one-way delay: 159.821 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 41.94 Mbit/s
95th percentile per-packet one-way delay: 155.396 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 21.41 Mbit/s
95th percentile per-packet one-way delay: 164.124 ms
Loss rate: 0.13%
-- Flow 3:
Average throughput: 16.33 Mbit/s
95th percentile per-packet one-way delay: 166.923 ms
Loss rate: 0.23%
Run 10: Report of Copa — Data Link

![Throughput Graph](image1)

![Packet Delay Graph](image2)

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Run 1: Statistics of FillP

Start at: 2018-04-10 22:15:18
End at: 2018-04-10 22:15:48
Local clock offset: 1.75 ms
Remote clock offset: -0.721 ms

# Below is generated by plot.py at 2018-04-11 03:01:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 80.82 Mbit/s
95th percentile per-packet one-way delay: 175.689 ms
Loss rate: 26.23%
-- Flow 1:
Average throughput: 33.51 Mbit/s
95th percentile per-packet one-way delay: 177.029 ms
Loss rate: 18.13%
-- Flow 2:
Average throughput: 42.58 Mbit/s
95th percentile per-packet one-way delay: 175.789 ms
Loss rate: 31.75%
-- Flow 3:
Average throughput: 57.19 Mbit/s
95th percentile per-packet one-way delay: 173.526 ms
Loss rate: 30.00%
Run 1: Report of FillP — Data Link
Run 2: Statistics of FillP

End at: 2018-04-10 22:40:23
Local clock offset: 1.515 ms
Remote clock offset: 3.173 ms

# Below is generated by plot.py at 2018-04-11 03:01:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.05 Mbit/s
95th percentile per-packet one-way delay: 172.875 ms
Loss rate: 20.84%
-- Flow 1:
Average throughput: 50.95 Mbit/s
95th percentile per-packet one-way delay: 165.124 ms
Loss rate: 18.14%
-- Flow 2:
Average throughput: 26.41 Mbit/s
95th percentile per-packet one-way delay: 178.167 ms
Loss rate: 28.45%
-- Flow 3:
Average throughput: 28.88 Mbit/s
95th percentile per-packet one-way delay: 172.653 ms
Loss rate: 19.16%
Run 2: Report of FillP — Data Link
Run 3: Statistics of FillP

Start at: 2018-04-10 23:04:18
End at: 2018-04-10 23:04:48
Local clock offset: 1.899 ms
Remote clock offset: 2.696 ms

# Below is generated by plot.py at 2018-04-11 03:01:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 81.70 Mbit/s
95th percentile per-packet one-way delay: 172.871 ms
Loss rate: 22.08%
-- Flow 1:
Average throughput: 33.13 Mbit/s
95th percentile per-packet one-way delay: 169.371 ms
Loss rate: 17.84%
-- Flow 2:
Average throughput: 46.65 Mbit/s
95th percentile per-packet one-way delay: 173.456 ms
Loss rate: 26.40%
-- Flow 3:
Average throughput: 52.93 Mbit/s
95th percentile per-packet one-way delay: 174.983 ms
Loss rate: 21.57%
Run 3: Report of FillP — Data Link

![Graph showing throughput and packet one-way delay over time for different flows.](image-url)
Run 4: Statistics of FillP

Start at: 2018-04-10 23:28:50
End at: 2018-04-10 23:29:20
Local clock offset: 2.061 ms
Remote clock offset: 2.4 ms

# Below is generated by plot.py at 2018-04-11 03:01:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 82.76 Mbit/s
95th percentile per-packet one-way delay: 172.209 ms
Loss rate: 21.23%
-- Flow 1:
Average throughput: 33.35 Mbit/s
95th percentile per-packet one-way delay: 168.348 ms
Loss rate: 18.14%
-- Flow 2:
Average throughput: 42.56 Mbit/s
95th percentile per-packet one-way delay: 171.875 ms
Loss rate: 24.32%
-- Flow 3:
Average throughput: 63.55 Mbit/s
95th percentile per-packet one-way delay: 173.962 ms
Loss rate: 21.61%
Run 4: Report of FillP — Data Link

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### Throughput [Mbps]

- **Flow 1 ingress** (mean 40.75 Mbps)
- **Flow 1 egress** (mean 33.35 Mbps)
- **Flow 2 ingress** (mean 56.25 Mbps)
- **Flow 2 egress** (mean 42.56 Mbps)
- **Flow 3 ingress** (mean 81.16 Mbps)
- **Flow 3 egress** (mean 63.55 Mbps)

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### Per-packet one-way delay [ms]

- **Flow 1** (95th percentile 168.35 ms)
- **Flow 2** (95th percentile 171.88 ms)
- **Flow 3** (95th percentile 173.96 ms)
Run 5: Statistics of FillP

End at: 2018-04-10 23:53:43
Local clock offset: 2.072 ms
Remote clock offset: 5.429 ms

# Below is generated by plot.py at 2018-04-11 03:01:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.09 Mbit/s
95th percentile per-packet one-way delay: 172.116 ms
Loss rate: 19.42%
-- Flow 1:
Average throughput: 45.40 Mbit/s
95th percentile per-packet one-way delay: 170.263 ms
Loss rate: 16.92%
-- Flow 2:
Average throughput: 31.36 Mbit/s
95th percentile per-packet one-way delay: 173.614 ms
Loss rate: 24.04%
-- Flow 3:
Average throughput: 56.79 Mbit/s
95th percentile per-packet one-way delay: 172.349 ms
Loss rate: 19.85%
Run 6: Statistics of FillP

Start at: 2018-04-11 00:17:47
End at: 2018-04-11 00:18:17
Local clock offset: 2.038 ms
Remote clock offset: 9.6 ms

# Below is generated by plot.py at 2018-04-11 03:01:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.29 Mbit/s
95th percentile per-packet one-way delay: 169.440 ms
Loss rate: 18.63%
-- Flow 1:
Average throughput: 36.68 Mbit/s
95th percentile per-packet one-way delay: 165.702 ms
Loss rate: 16.54%
-- Flow 2:
Average throughput: 50.65 Mbit/s
95th percentile per-packet one-way delay: 169.834 ms
Loss rate: 17.23%
-- Flow 3:
Average throughput: 44.93 Mbit/s
95th percentile per-packet one-way delay: 172.713 ms
Loss rate: 26.03%
Run 6: Report of FillP — Data Link

![Graph 1: Throughput (Mbps)]

- Flow 1 ingress (mean 43.96 Mbps)
- Flow 1 egress (mean 36.68 Mbps)
- Flow 2 ingress (mean 61.20 Mbps)
- Flow 2 egress (mean 50.65 Mbps)
- Flow 3 ingress (mean 60.76 Mbps)
- Flow 3 egress (mean 44.93 Mbps)

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

- Flow 1 (95th percentile 165.70 ms)
- Flow 2 (95th percentile 169.83 ms)
- Flow 3 (95th percentile 172.71 ms)
Run 7: Statistics of FillP

Start at: 2018-04-11 00:42:15
End at: 2018-04-11 00:42:45
Local clock offset: 30.29 ms
Remote clock offset: 0.671 ms

# Below is generated by plot.py at 2018-04-11 03:01:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 82.89 Mbit/s
95th percentile per-packet one-way delay: 170.783 ms
Loss rate: 17.89%
-- Flow 1:
Average throughput: 49.52 Mbit/s
95th percentile per-packet one-way delay: 165.362 ms
Loss rate: 15.78%
-- Flow 2:
Average throughput: 27.19 Mbit/s
95th percentile per-packet one-way delay: 174.637 ms
Loss rate: 27.26%
-- Flow 3:
Average throughput: 46.09 Mbit/s
95th percentile per-packet one-way delay: 166.557 ms
Loss rate: 11.54%
Run 7: Report of FillP — Data Link
Run 8: Statistics of FillP

Start at: 2018-04-11 01:06:59
End at: 2018-04-11 01:07:29
Local clock offset: 45.317 ms
Remote clock offset: 0.253 ms

# Below is generated by plot.py at 2018-04-11 03:01:45
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 85.16 Mbit/s
  95th percentile per-packet one-way delay: 166.621 ms
  Loss rate: 17.11%
-- Flow 1:
  Average throughput: 33.29 Mbit/s
  95th percentile per-packet one-way delay: 170.082 ms
  Loss rate: 18.49%
-- Flow 2:
  Average throughput: 58.99 Mbit/s
  95th percentile per-packet one-way delay: 166.718 ms
  Loss rate: 16.34%
-- Flow 3:
  Average throughput: 37.97 Mbit/s
  95th percentile per-packet one-way delay: 166.179 ms
  Loss rate: 15.75%
Run 8: Report of FillP — Data Link

Throughput (Mbit/s)

Per packet one way delay (ms)

Flow 1 ingress (mean 40.85 Mbit/s)  Flow 1 egress (mean 33.29 Mbit/s)
Flow 2 ingress (mean 70.53 Mbit/s)  Flow 2 egress (mean 58.99 Mbit/s)
Flow 3 ingress (mean 45.09 Mbit/s)  Flow 3 egress (mean 37.97 Mbit/s)
Run 9: Statistics of FillP

Start at: 2018-04-11 01:31:26
End at: 2018-04-11 01:31:56
Local clock offset: 56.824 ms
Remote clock offset: 4.152 ms

# Below is generated by plot.py at 2018-04-11 03:01:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.73 Mbit/s
95th percentile per-packet one-way delay: 173.073 ms
Loss rate: 21.17%
-- Flow 1:
Average throughput: 33.10 Mbit/s
95th percentile per-packet one-way delay: 171.442 ms
Loss rate: 19.75%
-- Flow 2:
Average throughput: 50.21 Mbit/s
95th percentile per-packet one-way delay: 173.901 ms
Loss rate: 24.67%
-- Flow 3:
Average throughput: 51.96 Mbit/s
95th percentile per-packet one-way delay: 173.772 ms
Loss rate: 16.46%
Run 9: Report of FillP — Data Link

Throughput (Mbps)

Flow 1 ingress (mean 41.24 Mbit/s)  
Flow 1 egress (mean 33.10 Mbit/s)  
Flow 2 ingress (mean 66.65 Mbit/s)  
Flow 2 egress (mean 50.21 Mbit/s)  
Flow 3 ingress (mean 62.20 Mbit/s)  
Flow 3 egress (mean 51.96 Mbit/s)

Per packet one way delay (ms)

Flow 1 (95th percentile 171.44 ms)  
Flow 2 (95th percentile 173.90 ms)  
Flow 3 (95th percentile 173.77 ms)
Run 10: Statistics of FillP

Start at: 2018-04-11 01:56:00
End at: 2018-04-11 01:56:30
Local clock offset: 27.377 ms
Remote clock offset: 15.91 ms

# Below is generated by plot.py at 2018-04-11 03:01:45
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 81.87 Mbit/s
  95th percentile per-packet one-way delay: 168.729 ms
  Loss rate: 16.29%
-- Flow 1:
  Average throughput: 33.24 Mbit/s
  95th percentile per-packet one-way delay: 167.956 ms
  Loss rate: 17.44%
-- Flow 2:
  Average throughput: 50.37 Mbit/s
  95th percentile per-packet one-way delay: 172.463 ms
  Loss rate: 17.15%
-- Flow 3:
  Average throughput: 45.58 Mbit/s
  95th percentile per-packet one-way delay: 160.576 ms
  Loss rate: 11.53%
Run 10: Report of FillP — Data Link

![Graph of Throughput and Delay](image)

- Flow 1 ingress (mean 40.26 Mbit/s)
- Flow 1 egress (mean 33.24 Mbit/s)
- Flow 2 ingress (mean 60.80 Mbit/s)
- Flow 2 egress (mean 50.37 Mbit/s)
- Flow 3 ingress (mean 51.53 Mbit/s)
- Flow 3 egress (mean 45.58 Mbit/s)

![Graph of Packet Delay](image)

- Flow 1 (95th percentile 167.96 ms)
- Flow 2 (95th percentile 172.46 ms)
- Flow 3 (95th percentile 160.58 ms)
Run 1: Statistics of Indigo-1-32

Start at: 2018-04-10 22:35:49
End at: 2018-04-10 22:36:19
Local clock offset: 1.43 ms
Remote clock offset: 3.344 ms

# Below is generated by plot.py at 2018-04-11 03:01:45
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 89.50 Mbit/s
  95th percentile per-packet one-way delay: 165.624 ms
  Loss rate: 65.08%
-- Flow 1:
  Average throughput: 57.13 Mbit/s
  95th percentile per-packet one-way delay: 164.736 ms
  Loss rate: 56.26%
-- Flow 2:
  Average throughput: 27.32 Mbit/s
  95th percentile per-packet one-way delay: 165.983 ms
  Loss rate: 75.43%
-- Flow 3:
  Average throughput: 47.41 Mbit/s
  95th percentile per-packet one-way delay: 164.360 ms
  Loss rate: 72.50%
Run 1: Report of Indigo-1-32 — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 130.67 Mbps) | Flow 1 egress (mean 57.13 Mbps)
Flow 2 ingress (mean 111.22 Mbps) | Flow 2 egress (mean 27.32 Mbps)
Flow 3 ingress (mean 172.42 Mbps) | Flow 3 egress (mean 47.41 Mbps)

Packet delay (ms)

Time (s)

Flow 1 (95th percentile 164.74 ms) | Flow 2 (95th percentile 165.98 ms) | Flow 3 (95th percentile 164.36 ms)
Run 2: Statistics of Indigo-1-32

Start at: 2018-04-10 23:00:14  
End at: 2018-04-10 23:00:44  
Local clock offset: 1.743 ms  
Remote clock offset: 2.583 ms

# Below is generated by plot.py at 2018-04-11 03:01:45  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 88.14 Mbit/s  
95th percentile per-packet one-way delay: 166.587 ms  
Loss rate: 63.78%  
-- Flow 1:  
Average throughput: 62.79 Mbit/s  
95th percentile per-packet one-way delay: 166.510 ms  
Loss rate: 52.46%  
-- Flow 2:  
Average throughput: 27.62 Mbit/s  
95th percentile per-packet one-way delay: 166.610 ms  
Loss rate: 76.26%  
-- Flow 3:  
Average throughput: 22.55 Mbit/s  
95th percentile per-packet one-way delay: 168.973 ms  
Loss rate: 79.27%
Run 2: Report of Indigo-1-32 — Data Link

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

- **Flow 1 ingress (mean 132.12 Mbit/s)**
- **Flow 1 egress (mean 62.79 Mbit/s)**
- **Flow 2 ingress (mean 116.38 Mbit/s)**
- **Flow 2 egress (mean 27.62 Mbit/s)**
- **Flow 3 ingress (mean 108.75 Mbit/s)**
- **Flow 3 egress (mean 22.55 Mbit/s)**
Run 3: Statistics of Indigo-1-32

Start at: 2018-04-10 23:24:47
End at: 2018-04-10 23:25:17
Local clock offset: 1.947 ms
Remote clock offset: 2.309 ms

# Below is generated by plot.py at 2018-04-11 03:01:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.93 Mbit/s
95th percentile per-packet one-way delay: 164.978 ms
Loss rate: 64.66%
-- Flow 1:
Average throughput: 61.05 Mbit/s
95th percentile per-packet one-way delay: 164.968 ms
Loss rate: 52.19%
-- Flow 2:
Average throughput: 27.73 Mbit/s
95th percentile per-packet one-way delay: 164.883 ms
Loss rate: 75.79%
-- Flow 3:
Average throughput: 27.00 Mbit/s
95th percentile per-packet one-way delay: 167.649 ms
Loss rate: 81.12%
Run 3: Report of Indigo-1-32 — Data Link
Run 4: Statistics of Indigo-1-32

Start at: 2018-04-10 23:49:10
End at: 2018-04-10 23:49:40
Local clock offset: 2.057 ms
Remote clock offset: 4.027 ms

# Below is generated by plot.py at 2018-04-11 03:01:45
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 88.64 Mbit/s
  95th percentile per-packet one-way delay: 164.860 ms
  Loss rate: 64.58%
-- Flow 1:
  Average throughput: 60.97 Mbit/s
  95th percentile per-packet one-way delay: 164.730 ms
  Loss rate: 53.84%
-- Flow 2:
  Average throughput: 30.24 Mbit/s
  95th percentile per-packet one-way delay: 164.932 ms
  Loss rate: 76.04%
-- Flow 3:
  Average throughput: 23.96 Mbit/s
  95th percentile per-packet one-way delay: 164.796 ms
  Loss rate: 77.86%
Run 4: Report of Indigo-1-32 — Data Link

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

![Graph 2: Per-packet one-way delay vs Time](image2)
Run 5: Statistics of Indigo-1-32

Start at: 2018-04-11 00:13:44
End at: 2018-04-11 00:14:14
Local clock offset: 1.823 ms
Remote clock offset: 9.099 ms

# Below is generated by plot.py at 2018-04-11 03:01:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.68 Mbit/s
95th percentile per-packet one-way delay: 165.225 ms
Loss rate: 58.59%
-- Flow 1:
Average throughput: 56.95 Mbit/s
95th percentile per-packet one-way delay: 164.978 ms
Loss rate: 52.75%
-- Flow 2:
Average throughput: 31.41 Mbit/s
95th percentile per-packet one-way delay: 166.381 ms
Loss rate: 59.90%
-- Flow 3:
Average throughput: 29.32 Mbit/s
95th percentile per-packet one-way delay: 165.089 ms
Loss rate: 75.76%
Run 5: Report of Indigo-1-32 — Data Link
Run 6: Statistics of Indigo-1-32

Start at: 2018-04-11 00:38:12
End at: 2018-04-11 00:38:42
Local clock offset: 25.937 ms
Remote clock offset: 1.209 ms

# Below is generated by plot.py at 2018-04-11 03:01:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.33 Mbit/s
95th percentile per-packet one-way delay: 166.908 ms
Loss rate: 62.27%
-- Flow 1:
Average throughput: 65.10 Mbit/s
95th percentile per-packet one-way delay: 162.647 ms
Loss rate: 50.55%
-- Flow 2:
Average throughput: 25.90 Mbit/s
95th percentile per-packet one-way delay: 168.645 ms
Loss rate: 75.86%
-- Flow 3:
Average throughput: 22.75 Mbit/s
95th percentile per-packet one-way delay: 162.346 ms
Loss rate: 78.88%
Run 6: Report of Indigo-1-32 — Data Link
Run 7: Statistics of Indigo-1-32

Start at: 2018-04-11 01:02:56
End at: 2018-04-11 01:03:26
Local clock offset: 43.413 ms
Remote clock offset: 0.202 ms

# Below is generated by plot.py at 2018-04-11 03:02:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.49 Mbit/s
95th percentile per-packet one-way delay: 167.626 ms
Loss rate: 62.75%
-- Flow 1:
Average throughput: 63.02 Mbit/s
95th percentile per-packet one-way delay: 168.015 ms
Loss rate: 50.01%
-- Flow 2:
Average throughput: 28.19 Mbit/s
95th percentile per-packet one-way delay: 164.612 ms
Loss rate: 76.03%
-- Flow 3:
Average throughput: 21.44 Mbit/s
95th percentile per-packet one-way delay: 164.468 ms
Loss rate: 79.71%
Run 7: Report of Indigo-1-32 — Data Link

![Data Link Throughput Graph]

- Flow 1 ingress (mean 126.07 Mbit/s)
- Flow 1 egress (mean 63.02 Mbit/s)
- Flow 2 ingress (mean 117.61 Mbit/s)
- Flow 2 egress (mean 26.19 Mbit/s)
- Flow 3 ingress (mean 105.69 Mbit/s)
- Flow 3 egress (mean 21.44 Mbit/s)

![Data Link Delay Graph]

- Flow 1 (95th percentile 168.01 ms)
- Flow 2 (95th percentile 164.61 ms)
- Flow 3 (95th percentile 164.47 ms)
Run 8: Statistics of Indigo-1-32

Start at: 2018-04-11 01:27:14
End at: 2018-04-11 01:27:44
Local clock offset: 54.915 ms
Remote clock offset: 0.166 ms

# Below is generated by plot.py at 2018-04-11 03:03:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.34 Mbit/s
95th percentile per-packet one-way delay: 163.403 ms
Loss rate: 63.47%
-- Flow 1:
Average throughput: 62.64 Mbit/s
95th percentile per-packet one-way delay: 162.843 ms
Loss rate: 52.06%
-- Flow 2:
Average throughput: 29.70 Mbit/s
95th percentile per-packet one-way delay: 163.941 ms
Loss rate: 75.44%
-- Flow 3:
Average throughput: 24.53 Mbit/s
95th percentile per-packet one-way delay: 162.233 ms
Loss rate: 79.16%
Run 8: Report of Indigo-1-32 — Data Link

![Graph 1](image1)

![Graph 2](image2)
Run 9: Statistics of Indigo-1-32

Start at: 2018-04-11 01:51:58
End at: 2018-04-11 01:52:28
Local clock offset: 29.531 ms
Remote clock offset: 14.948 ms

# Below is generated by plot.py at 2018-04-11 03:03:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.19 Mbit/s
95th percentile per-packet one-way delay: 163.651 ms
Loss rate: 63.12%
-- Flow 1:
Average throughput: 59.66 Mbit/s
95th percentile per-packet one-way delay: 163.536 ms
Loss rate: 54.04%
-- Flow 2:
Average throughput: 36.56 Mbit/s
95th percentile per-packet one-way delay: 165.660 ms
Loss rate: 73.50%
-- Flow 3:
Average throughput: 19.31 Mbit/s
95th percentile per-packet one-way delay: 167.047 ms
Loss rate: 74.16%
Run 9: Report of Indigo-1-32 — Data Link

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

- **Flow 1 ingress (mean 129.86 Mbps)**
- **Flow 1 egress (mean 59.66 Mbps)**
- **Flow 2 ingress (mean 137.96 Mbps)**
- **Flow 2 egress (mean 36.56 Mbps)**
- **Flow 3 ingress (mean 74.75 Mbps)**
- **Flow 3 egress (mean 19.31 Mbps)**

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

- **Flow 1 (95th percentile 163.54 ms)**
- **Flow 2 (95th percentile 165.66 ms)**
- **Flow 3 (95th percentile 167.05 ms)**
Run 10: Statistics of Indigo-1-32

Start at: 2018-04-11 02:16:15
End at: 2018-04-11 02:16:45
Local clock offset: 13.413 ms
Remote clock offset: 3.127 ms
Run 10: Report of Indigo-1-32 — Data Link

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Run 1: Statistics of Vivace-latency

End at: 2018-04-10 22:24:02
Local clock offset: 1.439 ms
Remote clock offset: 1.642 ms

# Below is generated by plot.py at 2018-04-11 03:03:13
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 76.01 Mbit/s
  95th percentile per-packet one-way delay: 164.518 ms
  Loss rate: 0.64%
-- Flow 1:
  Average throughput: 65.52 Mbit/s
  95th percentile per-packet one-way delay: 164.483 ms
  Loss rate: 0.60%
-- Flow 2:
  Average throughput: 13.88 Mbit/s
  95th percentile per-packet one-way delay: 164.856 ms
  Loss rate: 0.91%
-- Flow 3:
  Average throughput: 3.82 Mbit/s
  95th percentile per-packet one-way delay: 161.371 ms
  Loss rate: 0.95%
Run 1: Report of Vivace-latency — Data Link
Run 2: Statistics of Vivace-latency

Start at: 2018-04-10 22:47:57
Local clock offset: 1.475 ms
Remote clock offset: 2.656 ms

# Below is generated by plot.py at 2018-04-11 03:03:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.21 Mbit/s
95th percentile per-packet one-way delay: 159.846 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 65.81 Mbit/s
95th percentile per-packet one-way delay: 159.887 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 14.46 Mbit/s
95th percentile per-packet one-way delay: 159.332 ms
Loss rate: 0.32%
-- Flow 3:
Average throughput: 2.41 Mbit/s
95th percentile per-packet one-way delay: 159.399 ms
Loss rate: 0.36%
Run 2: Report of Vivace-latency — Data Link

![Graph showing throughput and packet delay](image1)

![Graph showing packet delay](image2)

Flow 1 ingress (mean 66.03 Mbit/s)
Flow 1 egress (mean 65.81 Mbit/s)
Flow 2 ingress (mean 14.91 Mbit/s)
Flow 2 egress (mean 14.46 Mbit/s)
Flow 3 ingress (mean 2.42 Mbit/s)
Flow 3 egress (mean 2.41 Mbit/s)
Run 3: Statistics of Vivace-latency

Start at: 2018-04-10 23:12:29
End at: 2018-04-10 23:12:59
Local clock offset: 1.778 ms
Remote clock offset: 2.851 ms

# Below is generated by plot.py at 2018-04-11 03:03:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.96 Mbit/s
95th percentile per-packet one-way delay: 160.463 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 67.85 Mbit/s
95th percentile per-packet one-way delay: 160.409 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 9.07 Mbit/s
95th percentile per-packet one-way delay: 160.697 ms
Loss rate: 1.00%
-- Flow 3:
Average throughput: 9.32 Mbit/s
95th percentile per-packet one-way delay: 162.051 ms
Loss rate: 2.58%
Run 3: Report of Vivace-latency — Data Link
Run 4: Statistics of Vivace-latency

Start at: 2018-04-10 23:36:55
End at: 2018-04-10 23:37:25
Local clock offset: 1.987 ms
Remote clock offset: 2.374 ms

# Below is generated by plot.py at 2018-04-11 03:03:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 75.90 Mbit/s
95th percentile per-packet one-way delay: 159.085 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 67.85 Mbit/s
95th percentile per-packet one-way delay: 159.147 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 10.19 Mbit/s
95th percentile per-packet one-way delay: 157.914 ms
Loss rate: 0.32%
-- Flow 3:
Average throughput: 3.87 Mbit/s
95th percentile per-packet one-way delay: 156.016 ms
Loss rate: 0.09%
Run 4: Report of Vivace-latency — Data Link

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

- **Flow 1 Ingress** (mean 68.06 Mbps)
- **Flow 1 Egress** (mean 67.85 Mbps)
- **Flow 2 Ingress** (mean 10.22 Mbps)
- **Flow 2 Egress** (mean 10.19 Mbps)
- **Flow 3 Ingress** (mean 3.88 Mbps)
- **Flow 3 Egress** (mean 3.87 Mbps)

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

- **Flow 1** (95th percentile 159.15 ms)
- **Flow 2** (95th percentile 157.91 ms)
- **Flow 3** (95th percentile 156.02 ms)
Run 5: Statistics of Vivace-latency

Start at: 2018-04-11 00:01:18
End at: 2018-04-11 00:01:48
Local clock offset: 1.872 ms
Remote clock offset: 7.299 ms

# Below is generated by plot.py at 2018-04-11 03:03:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.18 Mbit/s
95th percentile per-packet one-way delay: 159.941 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 67.05 Mbit/s
95th percentile per-packet one-way delay: 159.668 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 11.13 Mbit/s
95th percentile per-packet one-way delay: 162.009 ms
Loss rate: 0.32%
-- Flow 3:
Average throughput: 5.25 Mbit/s
95th percentile per-packet one-way delay: 160.298 ms
Loss rate: 0.16%
Run 5: Report of Vivace-latency — Data Link
Run 6: Statistics of Vivace-latency

Start at: 2018-04-11 00:25:51
End at: 2018-04-11 00:26:21
Local clock offset: 2.069 ms
Remote clock offset: 5.178 ms

# Below is generated by plot.py at 2018-04-11 03:03:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 75.80 Mbit/s
95th percentile per-packet one-way delay: 159.380 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 68.05 Mbit/s
95th percentile per-packet one-way delay: 159.318 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 9.12 Mbit/s
95th percentile per-packet one-way delay: 160.051 ms
Loss rate: 1.09%
-- Flow 3:
Average throughput: 5.11 Mbit/s
95th percentile per-packet one-way delay: 159.458 ms
Loss rate: 0.35%
Run 6: Report of Vivace-latency — Data Link

![Graph showing throughput and delay over time for different flows with specific mean values.](image)

![Graph showing per-packet one-way delay for different flows with specific percentiles.](image)
Run 7: Statistics of Vivace-latency

Start at: 2018-04-11 00:50:28
End at: 2018-04-11 00:50:58
Local clock offset: 36.429 ms
Remote clock offset: -0.051 ms

# Below is generated by plot.py at 2018-04-11 03:03:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 72.98 Mbit/s
95th percentile per-packet one-way delay: 169.420 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 67.81 Mbit/s
95th percentile per-packet one-way delay: 169.131 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 6.06 Mbit/s
95th percentile per-packet one-way delay: 171.322 ms
Loss rate: 0.23%
-- Flow 3:
Average throughput: 3.47 Mbit/s
95th percentile per-packet one-way delay: 172.359 ms
Loss rate: 0.37%
Run 8: Statistics of Vivace-latency

Start at: 2018-04-11 01:15:01
End at: 2018-04-11 01:15:31
Local clock offset: 49.281 ms
Remote clock offset: 0.357 ms

# Below is generated by plot.py at 2018-04-11 03:03:45
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 75.93 Mbit/s
  95th percentile per-packet one-way delay: 160.587 ms
  Loss rate: 0.22%
-- Flow 1:
  Average throughput: 69.72 Mbit/s
  95th percentile per-packet one-way delay: 159.427 ms
  Loss rate: 0.22%
-- Flow 2:
  Average throughput: 7.07 Mbit/s
  95th percentile per-packet one-way delay: 164.939 ms
  Loss rate: 0.23%
-- Flow 3:
  Average throughput: 4.58 Mbit/s
  95th percentile per-packet one-way delay: 172.564 ms
  Loss rate: 0.24%
Run 8: Report of Vivace-latency — Data Link

Throughput vs Time (s)

Flow 1 ingress (mean 69.90 Mbit/s)  Flow 1 egress (mean 69.72 Mbit/s)
Flow 2 ingress (mean 7.09 Mbit/s)  Flow 2 egress (mean 7.07 Mbit/s)
Flow 3 ingress (mean 4.59 Mbit/s)  Flow 3 egress (mean 4.58 Mbit/s)

Per-packet one-way delay (ms)

Flow 1 (95th percentile 159.43 ms)  Flow 2 (95th percentile 164.94 ms)  Flow 3 (95th percentile 172.56 ms)
Run 9: Statistics of Vivace-latency

Start at: 2018-04-11 01:39:41
End at: 2018-04-11 01:40:11
Local clock offset: 45.534 ms
Remote clock offset: 10.74 ms

# Below is generated by plot.py at 2018-04-11 03:03:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 74.99 Mbit/s
95th percentile per-packet one-way delay: 162.500 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 53.91 Mbit/s
95th percentile per-packet one-way delay: 162.540 ms
Loss rate: 0.72%
-- Flow 2:
Average throughput: 28.91 Mbit/s
95th percentile per-packet one-way delay: 163.084 ms
Loss rate: 0.92%
-- Flow 3:
Average throughput: 5.61 Mbit/s
95th percentile per-packet one-way delay: 157.800 ms
Loss rate: 0.36%
Run 9: Report of Vivace-latency — Data Link

![Graph 1: Throughput](image1)

![Graph 2: Packet Delay](image2)
Run 10: Statistics of Vivace-latency

Start at: 2018-04-11 02:04:04
End at: 2018-04-11 02:04:34
Local clock offset: 24.555 ms
Remote clock offset: 14.335 ms

# Below is generated by plot.py at 2018-04-11 03:04:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.79 Mbit/s
95th percentile per-packet one-way delay: 163.474 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 64.97 Mbit/s
95th percentile per-packet one-way delay: 164.142 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 14.32 Mbit/s
95th percentile per-packet one-way delay: 161.127 ms
Loss rate: 0.87%
-- Flow 3:
Average throughput: 6.99 Mbit/s
95th percentile per-packet one-way delay: 162.450 ms
Loss rate: 1.11%
Run 1: Statistics of Vivace-loss

Start at: 2018-04-10 22:17:57
End at: 2018-04-10 22:18:27
Local clock offset: 1.77 ms
Remote clock offset: -10.337 ms

# Below is generated by plot.py at 2018-04-11 03:04:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.84 Mbit/s
95th percentile per-packet one-way delay: 151.768 ms
Loss rate: 2.04%
-- Flow 1:
Average throughput: 68.64 Mbit/s
95th percentile per-packet one-way delay: 151.780 ms
Loss rate: 1.59%
-- Flow 2:
Average throughput: 12.18 Mbit/s
95th percentile per-packet one-way delay: 151.010 ms
Loss rate: 5.52%
-- Flow 3:
Average throughput: 3.32 Mbit/s
95th percentile per-packet one-way delay: 152.095 ms
Loss rate: 3.32%
Run 1: Report of Vivace-loss — Data Link
Run 2: Statistics of Vivace-loss

End at: 2018-04-10 22:43:01
Local clock offset: 1.385 ms
Remote clock offset: 2.88 ms

# Below is generated by plot.py at 2018-04-11 03:04:31
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 78.28 Mbit/s
  95th percentile per-packet one-way delay: 168.541 ms
  Loss rate: 1.38%
-- Flow 1:
  Average throughput: 68.91 Mbit/s
  95th percentile per-packet one-way delay: 168.201 ms
  Loss rate: 1.20%
-- Flow 2:
  Average throughput: 12.39 Mbit/s
  95th percentile per-packet one-way delay: 171.490 ms
  Loss rate: 2.53%
-- Flow 3:
  Average throughput: 3.48 Mbit/s
  95th percentile per-packet one-way delay: 168.335 ms
  Loss rate: 4.11%
Run 2: Report of Vivace-loss — Data Link

![Graph 1: Throughput (Mbps/s) vs Time (s)]
- **Flow 1 ingress (mean 69.77 Mbps/s)**
- **Flow 1 egress (mean 68.91 Mbps/s)**
- **Flow 2 ingress (mean 12.72 Mbps/s)**
- **Flow 2 egress (mean 12.39 Mbps/s)**
- **Flow 3 ingress (mean 3.63 Mbps/s)**
- **Flow 3 egress (mean 3.48 Mbps/s)**

![Graph 2: Per packet one-way delay (ms) vs Time (s)]
- **Flow 1 (95th percentile 168.20 ms)**
- **Flow 2 (95th percentile 171.49 ms)**
- **Flow 3 (95th percentile 168.34 ms)**

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Run 3: Statistics of Vivace-loss

Start at: 2018-04-10 23:06:57
End at: 2018-04-10 23:07:27
Local clock offset: 1.991 ms
Remote clock offset: 2.735 ms

# Below is generated by plot.py at 2018-04-11 03:04:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.84 Mbit/s
95th percentile per-packet one-way delay: 162.309 ms
Loss rate: 1.01%
-- Flow 1:
Average throughput: 71.60 Mbit/s
95th percentile per-packet one-way delay: 162.216 ms
Loss rate: 0.83%
-- Flow 2:
Average throughput: 7.76 Mbit/s
95th percentile per-packet one-way delay: 163.384 ms
Loss rate: 3.11%
-- Flow 3:
Average throughput: 3.31 Mbit/s
95th percentile per-packet one-way delay: 160.335 ms
Loss rate: 2.57%
Run 3: Report of Vivace-loss — Data Link

![Graph 1: Throughput (Mbps)]

- **Flow 1 ingress (mean 72.22 Mbps)**
- **Flow 1 egress (mean 71.60 Mbps)**
- **Flow 2 ingress (mean 8.01 Mbps)**
- **Flow 2 egress (mean 7.76 Mbps)**
- **Flow 3 ingress (mean 3.39 Mbps)**
- **Flow 3 egress (mean 3.31 Mbps)**

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

- **Flow 1 (95th percentile 162.22 ms)**
- **Flow 2 (95th percentile 163.38 ms)**
- **Flow 3 (95th percentile 160.34 ms)**
Run 4: Statistics of Vivace-loss

Start at: 2018-04-10 23:31:29
End at: 2018-04-10 23:31:59
Local clock offset: 1.88 ms
Remote clock offset: 2.402 ms

# Below is generated by plot.py at 2018-04-11 03:04:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.10 Mbit/s
95th percentile per-packet one-way delay: 176.320 ms
Loss rate: 2.48%
-- Flow 1:
Average throughput: 64.86 Mbit/s
95th percentile per-packet one-way delay: 176.171 ms
Loss rate: 2.24%
-- Flow 2:
Average throughput: 14.97 Mbit/s
95th percentile per-packet one-way delay: 176.958 ms
Loss rate: 3.85%
-- Flow 3:
Average throughput: 3.99 Mbit/s
95th percentile per-packet one-way delay: 177.255 ms
Loss rate: 3.83%
Run 4: Report of Vivace-loss — Data Link
Run 5: Statistics of Vivace-loss

Start at: 2018-04-10 23:55:52
End at: 2018-04-10 23:56:22
Local clock offset: 1.912 ms
Remote clock offset: 6.235 ms

# Below is generated by plot.py at 2018-04-11 03:05:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.47 Mbit/s
95th percentile per-packet one-way delay: 163.134 ms
Loss rate: 1.24%
-- Flow 1:
Average throughput: 70.57 Mbit/s
95th percentile per-packet one-way delay: 162.370 ms
Loss rate: 1.04%
-- Flow 2:
Average throughput: 8.91 Mbit/s
95th percentile per-packet one-way delay: 162.893 ms
Loss rate: 2.83%
-- Flow 3:
Average throughput: 6.00 Mbit/s
95th percentile per-packet one-way delay: 168.032 ms
Loss rate: 3.51%
Run 5: Report of Vivace-loss — Data Link

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

![Graph 2: Per-packet one-way delay (ms)](image2)
Run 6: Statistics of Vivace-loss

Start at: 2018-04-11 00:20:25
End at: 2018-04-11 00:20:55
Local clock offset: 1.928 ms
Remote clock offset: 9.577 ms

# Below is generated by plot.py at 2018-04-11 03:05:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.05 Mbit/s
95th percentile per-packet one-way delay: 162.049 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 70.24 Mbit/s
95th percentile per-packet one-way delay: 161.798 ms
Loss rate: 0.78%
-- Flow 2:
Average throughput: 10.85 Mbit/s
95th percentile per-packet one-way delay: 163.212 ms
Loss rate: 1.46%
-- Flow 3:
Average throughput: 1.90 Mbit/s
95th percentile per-packet one-way delay: 163.270 ms
Loss rate: 5.34%
Run 6: Report of Vivace-loss — Data Link

![Throughput Graph]

![Delay Graph]
Run 7: Statistics of Vivace-loss

Start at: 2018-04-11 00:44:54
End at: 2018-04-11 00:45:24
Local clock offset: 32.547 ms
Remote clock offset: 0.458 ms

# Below is generated by plot.py at 2018-04-11 03:05:05
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 77.90 Mbit/s
  95th percentile per-packet one-way delay: 162.422 ms
  Loss rate: 1.02%
-- Flow 1:
  Average throughput: 70.81 Mbit/s
  95th percentile per-packet one-way delay: 162.213 ms
  Loss rate: 0.87%
-- Flow 2:
  Average throughput: 8.34 Mbit/s
  95th percentile per-packet one-way delay: 163.241 ms
  Loss rate: 2.59%
-- Flow 3:
  Average throughput: 4.69 Mbit/s
  95th percentile per-packet one-way delay: 162.192 ms
  Loss rate: 2.19%
Run 7: Report of Vivace-loss — Data Link

Throughput (Mbps) vs Time (s)

Flow 1 ingress (mean 71.43 Mbps)  Flow 2 ingress (mean 8.56 Mbps)
Flow 1 egress (mean 70.81 Mbps)  Flow 2 egress (mean 8.34 Mbps)
Flow 3 ingress (mean 4.90 Mbps)  Flow 3 egress (mean 4.69 Mbps)

Packet delay (ms) vs Time (s)

Flow 1 (95th percentile 162.21 ms)  Flow 2 (95th percentile 163.24 ms)  Flow 3 (95th percentile 162.19 ms)
Run 8: Statistics of Vivace-loss

Start at: 2018-04-11 01:09:37
End at: 2018-04-11 01:10:08
Local clock offset: 46.647 ms
Remote clock offset: 0.312 ms

# Below is generated by plot.py at 2018-04-11 03:05:40
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 77.60 Mbit/s
  95th percentile per-packet one-way delay: 166.273 ms
  Loss rate: 1.59%
-- Flow 1:
  Average throughput: 67.02 Mbit/s
  95th percentile per-packet one-way delay: 166.323 ms
  Loss rate: 1.19%
-- Flow 2:
  Average throughput: 14.81 Mbit/s
  95th percentile per-packet one-way delay: 165.244 ms
  Loss rate: 4.05%
-- Flow 3:
  Average throughput: 2.20 Mbit/s
  95th percentile per-packet one-way delay: 164.319 ms
  Loss rate: 4.50%
Run 8: Report of Vivace-loss — Data Link
Run 9: Statistics of Vivace-loss

Start at: 2018-04-11 01:34:06
End at: 2018-04-11 01:34:36
Local clock offset: 57.971 ms
Remote clock offset: 6.892 ms

# Below is generated by plot.py at 2018-04-11 03:05:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.26 Mbit/s
95th percentile per-packet one-way delay: 159.570 ms
Loss rate: 0.94%
-- Flow 1:
Average throughput: 69.85 Mbit/s
95th percentile per-packet one-way delay: 158.388 ms
Loss rate: 0.86%
-- Flow 2:
Average throughput: 10.03 Mbit/s
95th percentile per-packet one-way delay: 160.189 ms
Loss rate: 1.72%
-- Flow 3:
Average throughput: 2.24 Mbit/s
95th percentile per-packet one-way delay: 160.342 ms
Loss rate: 1.74%
Run 9: Report of Vivace-loss — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 70.47 Mbps)
Flow 1 egress (mean 69.85 Mbps)
Flow 2 ingress (mean 10.21 Mbps)
Flow 2 egress (mean 10.03 Mbps)
Flow 3 ingress (mean 2.28 Mbps)
Flow 3 egress (mean 2.24 Mbps)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 158.39 ms)
Flow 2 (95th percentile 160.19 ms)
Flow 3 (95th percentile 160.34 ms)
Run 10: Statistics of Vivace-loss

Start at: 2018-04-11 01:58:39
End at: 2018-04-11 01:59:09
Local clock offset: 26.38 ms
Remote clock offset: 16.542 ms

# Below is generated by plot.py at 2018-04-11 03:05:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.32 Mbit/s
95th percentile per-packet one-way delay: 166.239 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 65.63 Mbit/s
95th percentile per-packet one-way delay: 166.356 ms
Loss rate: 0.87%
-- Flow 2:
Average throughput: 14.15 Mbit/s
95th percentile per-packet one-way delay: 163.078 ms
Loss rate: 1.52%
-- Flow 3:
Average throughput: 3.91 Mbit/s
95th percentile per-packet one-way delay: 162.749 ms
Loss rate: 2.86%
Run 10: Report of Vivace-loss — Data Link

Throughput (Mbit/s)

<table>
<thead>
<tr>
<th>Flow</th>
<th>Type</th>
<th>Mean Throughput</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow 1</td>
<td>ingress</td>
<td>66.21 Mbit/s</td>
</tr>
<tr>
<td>Flow 2</td>
<td>ingress</td>
<td>14.37 Mbit/s</td>
</tr>
<tr>
<td>Flow 3</td>
<td>ingress</td>
<td>4.02 Mbit/s</td>
</tr>
</tbody>
</table>

Delay (ms)

<table>
<thead>
<tr>
<th>Flow</th>
<th>95th Percentile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow 1</td>
<td>166.36 ms</td>
</tr>
<tr>
<td>Flow 2</td>
<td>163.08 ms</td>
</tr>
<tr>
<td>Flow 3</td>
<td>162.75 ms</td>
</tr>
</tbody>
</table>
Run 1: Statistics of Vivace-LTE

Start at: 2018-04-10 22:33:08
End at: 2018-04-10 22:33:38
Local clock offset: 1.486 ms
Remote clock offset: 3.074 ms

# Below is generated by plot.py at 2018-04-11 03:05:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.31 Mbit/s
95th percentile per-packet one-way delay: 162.502 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 69.88 Mbit/s
95th percentile per-packet one-way delay: 162.562 ms
Loss rate: 0.53%
-- Flow 2:
Average throughput: 9.58 Mbit/s
95th percentile per-packet one-way delay: 159.930 ms
Loss rate: 1.02%
-- Flow 3:
Average throughput: 3.22 Mbit/s
95th percentile per-packet one-way delay: 162.451 ms
Loss rate: 1.99%
Run 1: Report of Vivace-LTE — Data Link
Run 2: Statistics of Vivace-LTE

Start at: 2018-04-10 22:57:33
End at: 2018-04-10 22:58:03
Local clock offset: 1.654 ms
Remote clock offset: 2.561 ms

# Below is generated by plot.py at 2018-04-11 03:06:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.15 Mbit/s
95th percentile per-packet one-way delay: 163.591 ms
Loss rate: 1.22%
-- Flow 1:
Average throughput: 65.28 Mbit/s
95th percentile per-packet one-way delay: 163.597 ms
Loss rate: 1.04%
-- Flow 2:
Average throughput: 16.07 Mbit/s
95th percentile per-packet one-way delay: 163.032 ms
Loss rate: 1.99%
-- Flow 3:
Average throughput: 6.61 Mbit/s
95th percentile per-packet one-way delay: 164.833 ms
Loss rate: 2.63%
Run 2: Report of Vivace-LTE — Data Link

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

- **Flow 1 Ingress**: mean 65.97 Mbit/s
- **Flow 1 Egress**: mean 65.28 Mbit/s
- **Flow 2 Ingress**: mean 16.40 Mbit/s
- **Flow 2 Egress**: mean 16.07 Mbit/s
- **Flow 3 Ingress**: mean 6.79 Mbit/s
- **Flow 3 Egress**: mean 6.61 Mbit/s

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

- **Flow 1 95th percentile**: 163.60 ms
- **Flow 2 95th percentile**: 163.03 ms
- **Flow 3 95th percentile**: 164.03 ms
Run 3: Statistics of Vivace-LTE

Start at: 2018-04-10 23:22:05
Local clock offset: 1.984 ms
Remote clock offset: 2.35 ms

# Below is generated by plot.py at 2018-04-11 03:06:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.13 Mbit/s
95th percentile per-packet one-way delay: 162.161 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 69.84 Mbit/s
95th percentile per-packet one-way delay: 162.154 ms
Loss rate: 0.52%
-- Flow 2:
Average throughput: 9.71 Mbit/s
95th percentile per-packet one-way delay: 162.405 ms
Loss rate: 1.15%
-- Flow 3:
Average throughput: 2.55 Mbit/s
95th percentile per-packet one-way delay: 162.837 ms
Loss rate: 2.21%
Run 3: Report of Vivace-LTE — Data Link

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

Legend:
- Blue dashed line: Flow 1 ingress (mean 70.22 Mbit/s)
- Blue solid line: Flow 1 egress (mean 69.84 Mbit/s)
- Green dashed line: Flow 2 ingress (mean 9.62 Mbit/s)
- Green solid line: Flow 2 egress (mean 9.71 Mbit/s)
- Red dashed line: Flow 3 ingress (mean 2.61 Mbit/s)
- Red solid line: Flow 3 egress (mean 2.55 Mbit/s)
Run 4: Statistics of Vivace-LTE

Start at: 2018-04-10 23:46:29
End at: 2018-04-10 23:46:59
Local clock offset: 2.132 ms
Remote clock offset: 2.739 ms

# Below is generated by plot.py at 2018-04-11 03:06:20
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 71.40 Mbit/s
  95th percentile per-packet one-way delay: 172.169 ms
  Loss rate: 0.57%
-- Flow 1:
  Average throughput: 58.33 Mbit/s
  95th percentile per-packet one-way delay: 172.056 ms
  Loss rate: 0.56%
-- Flow 2:
  Average throughput: 16.24 Mbit/s
  95th percentile per-packet one-way delay: 172.850 ms
  Loss rate: 0.63%
-- Flow 3:
  Average throughput: 6.85 Mbit/s
  95th percentile per-packet one-way delay: 171.959 ms
  Loss rate: 0.64%
Run 4: Report of Vivace-LTE — Data Link
Run 5: Statistics of Vivace-LTE

Start at: 2018-04-11 00:11:02  
End at: 2018-04-11 00:11:32  
Local clock offset: 1.947 ms  
Remote clock offset: 8.781 ms  

# Below is generated by plot.py at 2018-04-11 03:06:22  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 76.66 Mbit/s  
95th percentile per-packet one-way delay: 163.312 ms  
Loss rate: 1.75%  
-- Flow 1:  
Average throughput: 58.55 Mbit/s  
95th percentile per-packet one-way delay: 162.016 ms  
Loss rate: 1.51%  
-- Flow 2:  
Average throughput: 26.11 Mbit/s  
95th percentile per-packet one-way delay: 163.653 ms  
Loss rate: 2.42%  
-- Flow 3:  
Average throughput: 2.29 Mbit/s  
95th percentile per-packet one-way delay: 163.635 ms  
Loss rate: 4.53%
Run 5: Report of Vivace-LTE — Data Link

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

- Flow 1 ingress (mean 59.45 Mbps/s)
- Flow 1 egress (mean 58.55 Mbps/s)
- Flow 2 ingress (mean 26.76 Mbps/s)
- Flow 2 egress (mean 26.11 Mbps/s)
- Flow 3 ingress (mean 2.40 Mbps/s)
- Flow 3 egress (mean 2.29 Mbps/s)

![Graph 2: Packet Size vs Time (ms)]

- Flow 1 (95th percentile 162.02 ms)
- Flow 2 (95th percentile 163.65 ms)
- Flow 3 (95th percentile 163.63 ms)
Run 6: Statistics of Vivace-LTE

Start at: 2018-04-11 00:35:31
End at: 2018-04-11 00:36:01
Local clock offset: 22.187 ms
Remote clock offset: 1.699 ms

# Below is generated by plot.py at 2018-04-11 03:06:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 75.92 Mbit/s
95th percentile per-packet one-way delay: 171.441 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 67.17 Mbit/s
95th percentile per-packet one-way delay: 171.704 ms
Loss rate: 0.82%
-- Flow 2:
Average throughput: 9.59 Mbit/s
95th percentile per-packet one-way delay: 170.267 ms
Loss rate: 1.45%
-- Flow 3:
Average throughput: 7.19 Mbit/s
95th percentile per-packet one-way delay: 161.651 ms
Loss rate: 1.80%
Run 7: Statistics of Vivace-LTE

Start at: 2018-04-11 01:00:14
End at: 2018-04-11 01:00:44
Local clock offset: 41.947 ms
Remote clock offset: 0.146 ms

# Below is generated by plot.py at 2018-04-11 03:06:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.16 Mbit/s
95th percentile per-packet one-way delay: 161.932 ms
Loss rate: 0.81%
-- Flow 1:
Average throughput: 68.54 Mbit/s
95th percentile per-packet one-way delay: 161.541 ms
Loss rate: 0.71%
-- Flow 2:
Average throughput: 11.69 Mbit/s
95th percentile per-packet one-way delay: 163.016 ms
Loss rate: 1.39%
-- Flow 3:
Average throughput: 5.61 Mbit/s
95th percentile per-packet one-way delay: 163.389 ms
Loss rate: 1.98%
Run 7: Report of Vivace-LTE — Data Link

![Data Link Throughput Graph]

- Flow 1 ingress (mean 69.04 Mb/s)
- Flow 1 egress (mean 68.54 Mb/s)
- Flow 2 ingress (mean 11.86 Mb/s)
- Flow 2 egress (mean 11.69 Mb/s)
- Flow 3 ingress (mean 3.73 Mb/s)
- Flow 3 egress (mean 5.61 Mb/s)

![Data Link Delay Graph]

- Flow 1 (95th percentile 161.54 ms)
- Flow 2 (95th percentile 163.02 ms)
- Flow 3 (95th percentile 163.39 ms)
Run 8: Statistics of Vivace-LTE

Start at: 2018-04-11 01:24:33
End at: 2018-04-11 01:25:03
Local clock offset: 53.575 ms
Remote clock offset: 0.283 ms

# Below is generated by plot.py at 2018-04-11 03:06:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 74.25 Mbit/s
95th percentile per-packet one-way delay: 164.854 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 62.54 Mbit/s
95th percentile per-packet one-way delay: 165.055 ms
Loss rate: 0.73%
-- Flow 2:
Average throughput: 15.65 Mbit/s
95th percentile per-packet one-way delay: 164.504 ms
Loss rate: 1.01%
-- Flow 3:
Average throughput: 3.95 Mbit/s
95th percentile per-packet one-way delay: 163.681 ms
Loss rate: 1.77%
Run 8: Report of Vivace-LTE — Data Link

```

```

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Run 9: Statistics of Vivace-LTE

Start at: 2018-04-11 01:49:16
End at: 2018-04-11 01:49:46
Local clock offset: 31.476 ms
Remote clock offset: 14.286 ms

# Below is generated by plot.py at 2018-04-11 03:06:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.77 Mbit/s
95th percentile per-packet one-way delay: 163.310 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 70.24 Mbit/s
95th percentile per-packet one-way delay: 163.141 ms
Loss rate: 0.74%
-- Flow 2:
Average throughput: 8.95 Mbit/s
95th percentile per-packet one-way delay: 164.972 ms
Loss rate: 1.94%
-- Flow 3:
Average throughput: 4.78 Mbit/s
95th percentile per-packet one-way delay: 162.640 ms
Loss rate: 2.13%
Run 9: Report of Vivace-LTE — Data Link
Run 10: Statistics of Vivace-LTE

Start at: 2018-04-11 02:13:34
End at: 2018-04-11 02:14:04
Local clock offset: 16.827 ms
Remote clock offset: 4.519 ms

# Below is generated by plot.py at 2018-04-11 03:06:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.70 Mbit/s
95th percentile per-packet one-way delay: 167.149 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 69.85 Mbit/s
95th percentile per-packet one-way delay: 167.619 ms
Loss rate: 0.72%
-- Flow 2:
Average throughput: 10.39 Mbit/s
95th percentile per-packet one-way delay: 164.160 ms
Loss rate: 1.36%
-- Flow 3:
Average throughput: 2.86 Mbit/s
95th percentile per-packet one-way delay: 163.728 ms
Loss rate: 1.61%
Run 10: Report of Vivace-LTE — Data Link

![Graph 1: Throughput (Mbps)]

- Flow 1 ingress (mean 70.38 Mbps)
- Flow 1 egress (mean 69.85 Mbps)
- Flow 2 ingress (mean 10.53 Mbps)
- Flow 2 egress (mean 10.39 Mbps)
- Flow 3 ingress (mean 2.91 Mbps)
- Flow 3 egress (mean 2.86 Mbps)

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

- Flow 1 (95th percentile 167.62 ms)
- Flow 2 (95th percentile 164.16 ms)
- Flow 3 (95th percentile 163.73 ms)