Pantheon Report

Generated at 2018-03-15 03:54:08 (UTC).

Data path: GCE London Ethernet (remote) → GCE Sydney Ethernet (local).

Repeated the test of 17 congestion control schemes 10 times.
Each test lasted for 30 seconds running 3 flows with 10-second interval between two flows.

Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

Tested BBR with qdisc of Fair Queuing (fq), and other schemes with the default Linux qdisc (pfifo_fast).

Git summary:
branch: master @ f12c42a2c63fdd9a862eeafa0468859bf379b6623
third_party/calibrated_koho @ 3cb73c0d1c0322cddf4e46ea37a522e53227db50
M datagrump/sender.cc
third_party/fillp @ 828bbf95f4941149b5ce0f90f281d1c69aae1a56c6
third_party/genericCC @ 9249eaa3238475c4c88c1a443d26d7f0b66f6a4a2
third_party/indigo @ a92060d39e4da2e8987e893e3ecc2a6c7cd0ab9
third_party/indigo-1-layer-128-unit @ 3ae9e4e42230d7484501f82ce0b377695f2f66d
third_party/indigo-1-layer-32-unit @ 2601c92e4aa9d58d38dc4de25edf0e90c077e64d
third_party/indigo-1-layer-32-unit-no-calib @ 1f3a7f75b41135ed5b540c0fd3505939528e2af
third_party/indigo-no-calib @ 7224f2202e8a04dd306fa0b983ad8360c53d89
third_party/koho_cc @ f0f2e69303ae8e82ea088e6928eac4f1083a6681
M datagrump/sender.cc
third_party/libutp @ b3465b942e2826f2b17eaaab4a9065e6eb7cf3cf
third_party/pantheon-tunnel @ fb1053193c2861da659ba9013db26744ccfcff
third_party/pcc @ 1afcc958fa0d6d18b623c091a555f5e872b4981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/proto-quic @ 77961f1a82733a86b421f1bc8143eb978f3c9f4
third_party/scream @ c3370f6d7bd17265a979eab34e40166ad23f5965885
third_party/sourdough @ f1a14bf7e749737437f61beaeeb302677cde681
third_party/sprout @ 6f2e26e6e088d91066a9f023df375ee2655089c
M src/examples/cellsimg.cc
M src/examples/sproutbt2.cc
M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6coa261149af26295625939f9a494
M src/verus.h
M tools/plot.py
third_party/vivace @ 7a4ba531e75b4a6f66f5c4580192120401784ce3
third_party/webrtc @ a488197dd041ace68a42849b2540ad834825f42
test from GCE London Ethernet to GCE Sydney Ethernet, 10 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)
<table>
<thead>
<tr>
<th>scheme</th>
<th># runs</th>
<th>mean avg tput (Mbit/s)</th>
<th>mean 95th-%ile delay (ms)</th>
<th>mean loss rate (%)</th>
</tr>
</thead>
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<td>flow 2</td>
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<tr>
<td>TCP BBR</td>
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<td>72.29</td>
<td>70.36</td>
<td>63.46</td>
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<td>TCP Cubic</td>
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<td>74.28</td>
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<td>LEDBAT</td>
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<td>PCC</td>
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<td>QUIC Cubic</td>
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<td>48.49</td>
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<td>SCReAM</td>
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<td>0.21</td>
<td>0.21</td>
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<td>WebRTC media</td>
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<td>2.02</td>
<td>1.27</td>
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<td>Sprout</td>
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<td>0.41</td>
<td>0.40</td>
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<td>TaoVA-100x</td>
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<td>80.88</td>
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<td>109.92</td>
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<td>Verus</td>
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<td>146.24</td>
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<tr>
<td>Copa</td>
<td>10</td>
<td>62.51</td>
<td>67.25</td>
<td>56.80</td>
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<td>FillP</td>
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<td>688.69</td>
<td>648.68</td>
<td>604.22</td>
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<td>Indigo-1-32</td>
<td>10</td>
<td>144.80</td>
<td>155.89</td>
<td>140.60</td>
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<tr>
<td>Vivace-latency</td>
<td>10</td>
<td>224.78</td>
<td>204.83</td>
<td>107.86</td>
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<td>Vivace-loss</td>
<td>10</td>
<td>164.59</td>
<td>154.83</td>
<td>135.71</td>
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<tr>
<td>Vivace-LTE</td>
<td>10</td>
<td>234.32</td>
<td>170.91</td>
<td>129.61</td>
</tr>
</tbody>
</table>
Run 1: Statistics of TCP BBR

Start at: 2018-03-14 18:46:05
End at: 2018-03-14 18:46:35

# Below is generated by plot.py at 2018-03-15 01:43:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 139.27 Mbit/s
95th percentile per-packet one-way delay: 136.178 ms
Loss rate: 1.59%
-- Flow 1:
Average throughput: 71.88 Mbit/s
95th percentile per-packet one-way delay: 136.175 ms
Loss rate: 1.07%
-- Flow 2:
Average throughput: 71.00 Mbit/s
95th percentile per-packet one-way delay: 136.155 ms
Loss rate: 1.55%
-- Flow 3:
Average throughput: 62.30 Mbit/s
95th percentile per-packet one-way delay: 136.225 ms
Loss rate: 3.49%
Run 1: Report of TCP BBR — Data Link
Run 2: Statistics of TCP BBR

Start at: 2018-03-14 19:06:21
End at: 2018-03-14 19:06:51

# Below is generated by plot.py at 2018-03-15 01:43:02
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 138.87 Mbit/s
  95th percentile per-packet one-way delay: 136.771 ms
  Loss rate: 1.62%
-- Flow 1:
  Average throughput: 71.95 Mbit/s
  95th percentile per-packet one-way delay: 136.745 ms
  Loss rate: 1.11%
-- Flow 2:
  Average throughput: 70.15 Mbit/s
  95th percentile per-packet one-way delay: 136.780 ms
  Loss rate: 1.61%
-- Flow 3:
  Average throughput: 63.22 Mbit/s
  95th percentile per-packet one-way delay: 136.821 ms
  Loss rate: 3.41%
Run 2: Report of TCP BBR — Data Link
Run 3: Statistics of TCP BBR

Start at: 2018-03-14 19:26:22
End at: 2018-03-14 19:26:52

# Below is generated by plot.py at 2018-03-15 01:43:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 139.60 Mbit/s
95th percentile per-packet one-way delay: 136.880 ms
Loss rate: 1.53%
-- Flow 1:
Average throughput: 72.42 Mbit/s
95th percentile per-packet one-way delay: 136.853 ms
Loss rate: 0.99%
-- Flow 2:
Average throughput: 69.92 Mbit/s
95th percentile per-packet one-way delay: 136.863 ms
Loss rate: 1.53%
-- Flow 3:
Average throughput: 64.06 Mbit/s
95th percentile per-packet one-way delay: 136.959 ms
Loss rate: 3.36%
Run 3: Report of TCP BBR — Data Link

![Graph of Throughput (Mb/s) over Time (s)]

- **Flow 1 ingress**: mean 72.46 Mb/s
- **Flow 1 egress**: mean 72.42 Mb/s
- **Flow 2 ingress**: mean 70.02 Mb/s
- **Flow 2 egress**: mean 69.92 Mb/s
- **Flow 3 ingress**: mean 64.47 Mb/s
- **Flow 3 egress**: mean 64.06 Mb/s

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

- **Flow 1 (95th percentile)**: 136.85 ms
- **Flow 2 (95th percentile)**: 136.86 ms
- **Flow 3 (95th percentile)**: 136.96 ms
Run 4: Statistics of TCP BBR

Start at: 2018-03-14 19:46:05
End at: 2018-03-14 19:46:35

# Below is generated by plot.py at 2018-03-15 01:43:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 138.86 Mbit/s
95th percentile per-packet one-way delay: 136.884 ms
Loss rate: 1.54%
-- Flow 1:
Average throughput: 71.97 Mbit/s
95th percentile per-packet one-way delay: 136.878 ms
Loss rate: 0.99%
-- Flow 2:
Average throughput: 69.43 Mbit/s
95th percentile per-packet one-way delay: 136.876 ms
Loss rate: 1.55%
-- Flow 3:
Average throughput: 64.07 Mbit/s
95th percentile per-packet one-way delay: 136.924 ms
Loss rate: 3.39%
Run 4: Report of TCP BBR — Data Link

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

- Flow 1 ingress (mean 72.02 Mbit/s)
- Flow 1 egress (mean 71.97 Mbit/s)
- Flow 2 ingress (mean 69.67 Mbit/s)
- Flow 2 egress (mean 69.45 Mbit/s)
- Flow 3 ingress (mean 64.51 Mbit/s)
- Flow 3 egress (mean 64.07 Mbit/s)
Run 5: Statistics of TCP BBR

Start at: 2018-03-14 20:06:13
End at: 2018-03-14 20:06:43

# Below is generated by plot.py at 2018-03-15 01:43:06
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 140.25 Mbit/s
  95th percentile per-packet one-way delay: 136.743 ms
  Loss rate: 1.52%
-- Flow 1:
  Average throughput: 73.70 Mbit/s
  95th percentile per-packet one-way delay: 136.721 ms
  Loss rate: 0.97%
-- Flow 2:
  Average throughput: 69.19 Mbit/s
  95th percentile per-packet one-way delay: 136.734 ms
  Loss rate: 1.54%
-- Flow 3:
  Average throughput: 63.57 Mbit/s
  95th percentile per-packet one-way delay: 136.831 ms
  Loss rate: 3.36%
Run 5: Report of TCP BBR — Data Link
Run 6: Statistics of TCP BBR

Start at: 2018-03-14 20:26:23
End at: 2018-03-14 20:26:53

# Below is generated by plot.py at 2018-03-15 01:43:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 141.00 Mbit/s
95th percentile per-packet one-way delay: 136.087 ms
Loss rate: 1.53%
-- Flow 1:
Average throughput: 72.17 Mbit/s
95th percentile per-packet one-way delay: 136.080 ms
Loss rate: 1.03%
-- Flow 2:
Average throughput: 72.72 Mbit/s
95th percentile per-packet one-way delay: 136.084 ms
Loss rate: 1.47%
-- Flow 3:
Average throughput: 63.35 Mbit/s
95th percentile per-packet one-way delay: 136.119 ms
Loss rate: 3.37%
Run 6: Report of TCP BBR — Data Link

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

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Run 7: Statistics of TCP BBR

Start at: 2018-03-14 20:46:30
End at: 2018-03-14 20:47:00

# Below is generated by plot.py at 2018-03-15 01:43:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 139.18 Mbit/s
95th percentile per-packet one-way delay: 135.964 ms
Loss rate: 1.65%
-- Flow 1:
Average throughput: 72.24 Mbit/s
95th percentile per-packet one-way delay: 135.952 ms
Loss rate: 1.08%
-- Flow 2:
Average throughput: 70.17 Mbit/s
95th percentile per-packet one-way delay: 135.974 ms
Loss rate: 1.71%
-- Flow 3:
Average throughput: 63.15 Mbit/s
95th percentile per-packet one-way delay: 135.982 ms
Loss rate: 3.44%
Run 7: Report of TCP BBR — Data Link

Throughput (Mbps)

Time (s)

- Flow 1 ingress (mean 72.36 Mb/s)
- Flow 1 egress (mean 72.24 Mb/s)
- Flow 2 ingress (mean 70.32 Mb/s)
- Flow 2 egress (mean 70.17 Mb/s)
- Flow 3 ingress (mean 63.91 Mb/s)
- Flow 3 egress (mean 63.15 Mb/s)

Per-packet one-way delay (ms)

Time (s)

- Flow 1 (95th percentile 135.95 ms)
- Flow 2 (95th percentile 135.97 ms)
- Flow 3 (95th percentile 135.98 ms)
Run 8: Statistics of TCP BBR

Start at: 2018-03-14 21:06:07
End at: 2018-03-14 21:06:37

# Below is generated by plot.py at 2018-03-15 01:43:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 139.28 Mbit/s
95th percentile per-packet one-way delay: 135.898 ms
Loss rate: 1.54%
-- Flow 1:
Average throughput: 72.12 Mbit/s
95th percentile per-packet one-way delay: 135.909 ms
Loss rate: 1.01%
-- Flow 2:
Average throughput: 70.26 Mbit/s
95th percentile per-packet one-way delay: 135.880 ms
Loss rate: 1.52%
-- Flow 3:
Average throughput: 63.28 Mbit/s
95th percentile per-packet one-way delay: 135.892 ms
Loss rate: 3.36%
Run 8: Report of TCP BBR — Data Link
Run 9: Statistics of TCP BBR

Start at: 2018-03-14 21:25:59
End at: 2018-03-14 21:26:29

# Below is generated by plot.py at 2018-03-15 01:46:03
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 139.44 Mbit/s
  95th percentile per-packet one-way delay: 135.976 ms
  Loss rate: 1.59%
-- Flow 1:
  Average throughput: 72.18 Mbit/s
  95th percentile per-packet one-way delay: 135.975 ms
  Loss rate: 0.99%
-- Flow 2:
  Average throughput: 70.00 Mbit/s
  95th percentile per-packet one-way delay: 135.944 ms
  Loss rate: 1.71%
-- Flow 3:
  Average throughput: 64.26 Mbit/s
  95th percentile per-packet one-way delay: 136.033 ms
  Loss rate: 3.35%
Run 10: Statistics of TCP BBR

Start at: 2018-03-14 21:46:09
End at: 2018-03-14 21:46:39

# Below is generated by plot.py at 2018-03-15 01:46:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 139.72 Mbit/s
95th percentile per-packet one-way delay: 136.740 ms
Loss rate: 1.65%
-- Flow 1:
Average throughput: 72.31 Mbit/s
95th percentile per-packet one-way delay: 136.709 ms
Loss rate: 1.10%
-- Flow 2:
Average throughput: 70.80 Mbit/s
95th percentile per-packet one-way delay: 136.814 ms
Loss rate: 1.69%
-- Flow 3:
Average throughput: 63.35 Mbit/s
95th percentile per-packet one-way delay: 136.111 ms
Loss rate: 3.43%
Run 10: Report of TCP BBR — Data Link
Run 1: Statistics of TCP Cubic

Start at: 2018-03-14 18:50:10
End at: 2018-03-14 18:50:40

# Below is generated by plot.py at 2018-03-15 01:46:05
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 115.10 Mbit/s
  95th percentile per-packet one-way delay: 146.449 ms
  Loss rate: 2.02%
-- Flow 1:
  Average throughput: 83.08 Mbit/s
  95th percentile per-packet one-way delay: 146.344 ms
  Loss rate: 1.07%
-- Flow 2:
  Average throughput: 13.45 Mbit/s
  95th percentile per-packet one-way delay: 142.431 ms
  Loss rate: 6.65%
-- Flow 3:
  Average throughput: 72.33 Mbit/s
  95th percentile per-packet one-way delay: 148.708 ms
  Loss rate: 3.55%
Run 1: Report of TCP Cubic — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 83.20 Mbit/s)  
Flow 1 egress (mean 83.08 Mbit/s)  
Flow 2 ingress (mean 14.21 Mbit/s)  
Flow 2 egress (mean 13.45 Mbit/s)  
Flow 3 ingress (mean 72.91 Mbit/s)  
Flow 3 egress (mean 72.33 Mbit/s)

Per-packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 146.34 ms)  
Flow 2 (95th percentile 142.43 ms)  
Flow 3 (95th percentile 148.71 ms)
Run 2: Statistics of TCP Cubic

Start at: 2018-03-14 19:10:30
End at: 2018-03-14 19:11:00

# Below is generated by plot.py at 2018-03-15 01:46:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 130.62 Mbit/s
95th percentile per-packet one-way delay: 147.119 ms
Loss rate: 1.88%
-- Flow 1:
Average throughput: 53.72 Mbit/s
95th percentile per-packet one-way delay: 145.102 ms
Loss rate: 1.46%
-- Flow 2:
Average throughput: 80.99 Mbit/s
95th percentile per-packet one-way delay: 148.036 ms
Loss rate: 1.56%
-- Flow 3:
Average throughput: 71.66 Mbit/s
95th percentile per-packet one-way delay: 148.121 ms
Loss rate: 3.54%
Run 2: Report of TCP Cubic — Data Link
Run 3: Statistics of TCP Cubic

Start at: 2018-03-14 19:30:33
End at: 2018-03-14 19:31:04

# Below is generated by plot.py at 2018-03-15 01:46:24
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 147.03 Mbit/s
  95th percentile per-packet one-way delay: 146.366 ms
  Loss rate: 1.41%
-- Flow 1:
  Average throughput: 83.47 Mbit/s
  95th percentile per-packet one-way delay: 146.272 ms
  Loss rate: 1.00%
-- Flow 2:
  Average throughput: 61.46 Mbit/s
  95th percentile per-packet one-way delay: 145.997 ms
  Loss rate: 1.04%
-- Flow 3:
  Average throughput: 71.87 Mbit/s
  95th percentile per-packet one-way delay: 147.547 ms
  Loss rate: 3.54%
Run 3: Report of TCP Cubic — Data Link

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

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Run 4: Statistics of TCP Cubic

Start at: 2018-03-14 19:50:16
End at: 2018-03-14 19:50:46

# Below is generated by plot.py at 2018-03-15 01:46:24
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 91.03 Mbit/s
  95th percentile per-packet one-way delay: 147.748 ms
  Loss rate: 1.18%
  -- Flow 1:
  Average throughput: 80.34 Mbit/s
  95th percentile per-packet one-way delay: 148.209 ms
  Loss rate: 0.41%
  -- Flow 2:
  Average throughput: 16.14 Mbit/s
  95th percentile per-packet one-way delay: 143.330 ms
  Loss rate: 6.25%
  -- Flow 3:
  Average throughput: 1.25 Mbit/s
  95th percentile per-packet one-way delay: 137.220 ms
  Loss rate: 11.22%
Run 4: Report of TCP Cubic — Data Link

![Graph of throughput and delay for TCP Cubic flows]

- Flow 1 ingress (mean 79.90 Mbit/s)
- Flow 1 egress (mean 80.34 Mbit/s)
- Flow 2 ingress (mean 16.97 Mbit/s)
- Flow 2 egress (mean 16.14 Mbit/s)
- Flow 3 ingress (mean 1.37 Mbit/s)
- Flow 3 egress (mean 1.25 Mbit/s)

![Graph of per-packet one-way delay for TCP Cubic flows]

- Flow 1 (95th percentile 148.21 ms)
- Flow 2 (95th percentile 143.33 ms)
- Flow 3 (95th percentile 137.22 ms)
Run 5: Statistics of TCP Cubic

Start at: 2018-03-14 20:10:21
End at: 2018-03-14 20:10:51

# Below is generated by plot.py at 2018-03-15 01:46:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 137.94 Mbit/s
95th percentile per-packet one-way delay: 145.385 ms
Loss rate: 1.58%
-- Flow 1:
Average throughput: 83.79 Mbit/s
95th percentile per-packet one-way delay: 145.593 ms
Loss rate: 0.99%
-- Flow 2:
Average throughput: 47.36 Mbit/s
95th percentile per-packet one-way delay: 142.456 ms
Loss rate: 1.67%
-- Flow 3:
Average throughput: 72.04 Mbit/s
95th percentile per-packet one-way delay: 145.758 ms
Loss rate: 3.54%
Run 5: Report of TCP Cubic — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 83.85 Mbps)
  - Flow 1 egress (mean 83.79 Mbps)
  - Flow 2 ingress (mean 47.49 Mbps)
  - Flow 2 egress (mean 47.36 Mbps)
  - Flow 3 ingress (mean 72.62 Mbps)
  - Flow 3 egress (mean 72.04 Mbps)

- **Per-packet one-way delay (ms):**
  - Flow 1 (95th percentile 145.59 ms)
  - Flow 2 (95th percentile 142.46 ms)
  - Flow 3 (95th percentile 145.76 ms)
Run 6: Statistics of TCP Cubic

Start at: 2018-03-14 20:30:34
End at: 2018-03-14 20:31:04

# Below is generated by plot.py at 2018-03-15 01:46:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 131.77 Mbit/s
95th percentile per-packet one-way delay: 146.951 ms
Loss rate: 0.89%
-- Flow 1:
Average throughput: 69.17 Mbit/s
95th percentile per-packet one-way delay: 146.230 ms
Loss rate: 0.56%
-- Flow 2:
Average throughput: 78.47 Mbit/s
95th percentile per-packet one-way delay: 147.664 ms
Loss rate: 0.67%
-- Flow 3:
Average throughput: 34.41 Mbit/s
95th percentile per-packet one-way delay: 146.871 ms
Loss rate: 3.79%
Run 6: Report of TCP Cubic — Data Link
Run 7: Statistics of TCP Cubic

Start at: 2018-03-14 20:50:39
End at: 2018-03-14 20:51:09

# Below is generated by plot.py at 2018-03-15 01:47:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 104.58 Mbit/s
95th percentile per-packet one-way delay: 146.477 ms
Loss rate: 1.92%

-- Flow 1:
Average throughput: 53.97 Mbit/s
95th percentile per-packet one-way delay: 145.138 ms
Loss rate: 1.45%

-- Flow 2:
Average throughput: 42.26 Mbit/s
95th percentile per-packet one-way delay: 146.038 ms
Loss rate: 1.48%

-- Flow 3:
Average throughput: 71.13 Mbit/s
95th percentile per-packet one-way delay: 148.603 ms
Loss rate: 3.55%
Run 7: Report of TCP Cubic — Data Link

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

- Flow 1 ingress (mean 54.27 Mbit/s)
- Flow 1 egress (mean 53.97 Mbit/s)
- Flow 2 ingress (mean 42.24 Mbit/s)
- Flow 2 egress (mean 42.26 Mbit/s)
- Flow 3 ingress (mean 71.70 Mbit/s)
- Flow 3 egress (mean 71.13 Mbit/s)

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

- Flow 1 (95th percentile 145.14 ms)
- Flow 2 (95th percentile 146.04 ms)
- Flow 3 (95th percentile 148.60 ms)
Run 8: Statistics of TCP Cubic

Start at: 2018-03-14 21:10:17
End at: 2018-03-14 21:10:47

# Below is generated by plot.py at 2018-03-15 01:48:44
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 147.28 Mbit/s
  95th percentile per-packet one-way delay: 147.950 ms
  Loss rate: 1.47%
-- Flow 1:
  Average throughput: 71.83 Mbit/s
  95th percentile per-packet one-way delay: 146.160 ms
  Loss rate: 0.75%
-- Flow 2:
  Average throughput: 80.11 Mbit/s
  95th percentile per-packet one-way delay: 148.472 ms
  Loss rate: 1.51%
-- Flow 3:
  Average throughput: 70.06 Mbit/s
  95th percentile per-packet one-way delay: 151.533 ms
  Loss rate: 3.60%
Run 8: Report of TCP Cubic — Data Link

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

- Flow 1 ingress (mean 71.71 Mbit/s)
- Flow 1 egress (mean 71.83 Mbit/s)
- Flow 2 ingress (mean 80.27 Mbit/s)
- Flow 2 egress (mean 80.11 Mbit/s)
- Flow 3 ingress (mean 70.65 Mbit/s)
- Flow 3 egress (mean 70.06 Mbit/s)
Run 9: Statistics of TCP Cubic

Start at: 2018-03-14 21:30:10
End at: 2018-03-14 21:30:40

# Below is generated by plot.py at 2018-03-15 01:48:44
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 115.14 Mbit/s
  95th percentile per-packet one-way delay: 146.240 ms
  Loss rate: 1.64%
  -- Flow 1:
  Average throughput: 79.86 Mbit/s
  95th percentile per-packet one-way delay: 145.571 ms
  Loss rate: 0.43%
  -- Flow 2:
  Average throughput: 18.95 Mbit/s
  95th percentile per-packet one-way delay: 146.914 ms
  Loss rate: 5.53%
  -- Flow 3:
  Average throughput: 71.31 Mbit/s
  95th percentile per-packet one-way delay: 150.914 ms
  Loss rate: 3.56%
Run 9: Report of TCP Cubic — Data Link

The graphs depict the throughput and per-packet one-way delay over time for three flows. The graphs show the following:

**Throughput (Mbps):**
- Flow 1 ingress (mean 79.50 Mbps)
- Flow 1 egress (mean 79.86 Mbps)
- Flow 2 ingress (mean 19.79 Mbps)
- Flow 2 egress (mean 18.95 Mbps)
- Flow 3 ingress (mean 71.89 Mbps)
- Flow 3 egress (mean 71.31 Mbps)

**Per-packet one-way delay (ms):**
- Flow 1 (95th percentile 145.57 ms)
- Flow 2 (95th percentile 146.91 ms)
- Flow 3 (95th percentile 150.91 ms)
Run 10: Statistics of TCP Cubic

Start at: 2018-03-14 21:50:18
End at: 2018-03-14 21:50:48

# Below is generated by plot.py at 2018-03-15 01:48:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 115.09 Mbit/s
95th percentile per-packet one-way delay: 147.209 ms
Loss rate: 1.98%
-- Flow 1:
Average throughput: 83.56 Mbit/s
95th percentile per-packet one-way delay: 147.075 ms
Loss rate: 1.00%
-- Flow 2:
Average throughput: 13.54 Mbit/s
95th percentile per-packet one-way delay: 142.121 ms
Loss rate: 6.64%
-- Flow 3:
Average throughput: 72.20 Mbit/s
95th percentile per-packet one-way delay: 148.288 ms
Loss rate: 3.52%
Run 10: Report of TCP Cubic — Data Link

![Graphs showing throughput and per-packet one-way delay over time for different flows.]
Run 1: Statistics of LEDBAT

Start at: 2018-03-14 19:01:10
End at: 2018-03-14 19:01:40

# Below is generated by plot.py at 2018-03-15 01:48:44
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.88 Mbit/s
  95th percentile per-packet one-way delay: 136.790 ms
  Loss rate: 3.53%
-- Flow 1:
  Average throughput: 0.24 Mbit/s
  95th percentile per-packet one-way delay: 136.478 ms
  Loss rate: 0.80%
-- Flow 2:
  Average throughput: 0.23 Mbit/s
  95th percentile per-packet one-way delay: 136.470 ms
  Loss rate: 1.23%
-- Flow 3:
  Average throughput: 1.51 Mbit/s
  95th percentile per-packet one-way delay: 136.851 ms
  Loss rate: 5.51%
Run 1: Report of LEDBAT — Data Link
Run 2: Statistics of LEDBAT

Start at: 2018-03-14 19:21:07
End at: 2018-03-14 19:21:37

# Below is generated by plot.py at 2018-03-15 01:48:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 6.99 Mbit/s
95th percentile per-packet one-way delay: 136.433 ms
Loss rate: 2.14%
-- Flow 1:
Average throughput: 4.79 Mbit/s
95th percentile per-packet one-way delay: 136.666 ms
Loss rate: 1.84%
-- Flow 2:
Average throughput: 3.19 Mbit/s
95th percentile per-packet one-way delay: 136.188 ms
Loss rate: 2.74%
-- Flow 3:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 135.614 ms
Loss rate: 3.26%
Run 2: Report of LEDBAT — Data Link

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

- Flow 1 ingress (mean 4.83 Mbps/s)
- Flow 1 egress (mean 4.79 Mbps/s)
- Flow 2 ingress (mean 3.23 Mbps/s)
- Flow 2 egress (mean 3.19 Mbps/s)
- Flow 3 ingress (mean 0.36 Mbps/s)
- Flow 3 egress (mean 0.36 Mbps/s)

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

- Flow 1 (95th percentile 136.67 ms)
- Flow 2 (95th percentile 136.19 ms)
- Flow 3 (95th percentile 115.61 ms)
Run 3: Statistics of LEDBAT

Start at: 2018-03-14 19:40:58
End at: 2018-03-14 19:41:28

# Below is generated by plot.py at 2018-03-15 01:48:44
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 7.09 Mbit/s
  95th percentile per-packet one-way delay: 138.075 ms
  Loss rate: 2.37%
-- Flow 1:
  Average throughput: 4.60 Mbit/s
  95th percentile per-packet one-way delay: 138.188 ms
  Loss rate: 1.87%
-- Flow 2:
  Average throughput: 3.16 Mbit/s
  95th percentile per-packet one-way delay: 137.800 ms
  Loss rate: 2.74%
-- Flow 3:
  Average throughput: 1.26 Mbit/s
  95th percentile per-packet one-way delay: 137.365 ms
  Loss rate: 5.92%
Run 3: Report of LEDBAT — Data Link

![Graph of throughput over time for different flows with various ingress and egress mean speeds.]

![Graph of packet round-trip delay over time for different flows with various 95th percentile delays.]

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Run 4: Statistics of LEDBAT

Start at: 2018-03-14 20:00:55
End at: 2018-03-14 20:01:25

# Below is generated by plot.py at 2018-03-15 01:48:44
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 5.40 Mbit/s
  95th percentile per-packet one-way delay: 137.631 ms
  Loss rate: 2.72%
-- Flow 1:
  Average throughput: 3.73 Mbit/s
  95th percentile per-packet one-way delay: 137.707 ms
  Loss rate: 2.06%
-- Flow 2:
  Average throughput: 1.80 Mbit/s
  95th percentile per-packet one-way delay: 137.287 ms
  Loss rate: 3.56%
-- Flow 3:
  Average throughput: 1.51 Mbit/s
  95th percentile per-packet one-way delay: 137.019 ms
  Loss rate: 5.57%
Run 4: Report of LEDBAT — Data Link

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

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Flow 1 ingress (mean 3.77 Mbit/s)  Flow 1 egress (mean 3.73 Mbit/s)
Flow 2 ingress (mean 1.84 Mbit/s)  Flow 2 egress (mean 1.80 Mbit/s)
Flow 3 ingress (mean 1.56 Mbit/s)  Flow 3 egress (mean 1.51 Mbit/s)
Run 5: Statistics of LEDBAT

Start at: 2018-03-14 20:21:08
End at: 2018-03-14 20:21:38

# Below is generated by plot.py at 2018-03-15 01:48:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 6.60 Mbit/s
95th percentile per-packet one-way delay: 137.147 ms
Loss rate: 2.43%
-- Flow 1:
Average throughput: 4.80 Mbit/s
95th percentile per-packet one-way delay: 137.202 ms
Loss rate: 1.83%
-- Flow 2:
Average throughput: 2.04 Mbit/s
95th percentile per-packet one-way delay: 137.020 ms
Loss rate: 3.34%
-- Flow 3:
Average throughput: 1.52 Mbit/s
95th percentile per-packet one-way delay: 136.733 ms
Loss rate: 5.55%
Run 5: Report of LEDBAT — Data Link
Run 6: Statistics of LEDBAT

Start at: 2018-03-14 20:41:15
End at: 2018-03-14 20:41:45

# Below is generated by plot.py at 2018-03-15 01:48:44
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 5.14 Mbit/s
  95th percentile per-packet one-way delay: 137.467 ms
  Loss rate: 2.06%
-- Flow 1:
  Average throughput: 4.77 Mbit/s
  95th percentile per-packet one-way delay: 137.493 ms
  Loss rate: 1.83%
-- Flow 2:
  Average throughput: 0.30 Mbit/s
  95th percentile per-packet one-way delay: 136.853 ms
  Loss rate: 1.97%
-- Flow 3:
  Average throughput: 0.53 Mbit/s
  95th percentile per-packet one-way delay: 137.099 ms
  Loss rate: 8.07%
Run 6: Report of LEDBAT — Data Link

![Graph 1](image1)

![Graph 2](image2)
Run 7: Statistics of LEDBAT

Start at: 2018-03-14 21:00:51
End at: 2018-03-14 21:01:21

# Below is generated by plot.py at 2018-03-15 01:48:44
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 5.06 Mbit/s
  95th percentile per-packet one-way delay: 137.263 ms
  Loss rate: 1.99%
-- Flow 1:
  Average throughput: 4.80 Mbit/s
  95th percentile per-packet one-way delay: 137.275 ms
  Loss rate: 1.83%
-- Flow 2:
  Average throughput: 0.30 Mbit/s
  95th percentile per-packet one-way delay: 136.632 ms
  Loss rate: 5.26%
-- Flow 3:
  Average throughput: 0.27 Mbit/s
  95th percentile per-packet one-way delay: 136.738 ms
  Loss rate: 2.61%
Run 7: Report of LEDBAT — Data Link
Run 8: Statistics of LEDBAT

Start at: 2018-03-14 21:20:46
End at: 2018-03-14 21:21:16

# Below is generated by plot.py at 2018-03-15 01:48:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 5.48 Mbit/s
95th percentile per-packet one-way delay: 137.050 ms
Loss rate: 2.26%
-- Flow 1:
Average throughput: 4.80 Mbit/s
95th percentile per-packet one-way delay: 137.080 ms
Loss rate: 1.83%
-- Flow 2:
Average throughput: 0.33 Mbit/s
95th percentile per-packet one-way delay: 136.680 ms
Loss rate: 3.79%
-- Flow 3:
Average throughput: 1.52 Mbit/s
95th percentile per-packet one-way delay: 136.537 ms
Loss rate: 5.55%
Run 8: Report of LEDBAT — Data Link
Run 9: Statistics of LEDBAT

Start at: 2018-03-14 21:40:57
End at: 2018-03-14 21:41:27

# Below is generated by plot.py at 2018-03-15 01:48:44
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 7.16 Mbit/s
  95th percentile per-packet one-way delay: 137.865 ms
  Loss rate: 2.31%
-- Flow 1:
  Average throughput: 4.79 Mbit/s
  95th percentile per-packet one-way delay: 137.881 ms
  Loss rate: 1.83%
-- Flow 2:
  Average throughput: 3.18 Mbit/s
  95th percentile per-packet one-way delay: 137.803 ms
  Loss rate: 2.74%
-- Flow 3:
  Average throughput: 0.90 Mbit/s
  95th percentile per-packet one-way delay: 137.404 ms
  Loss rate: 6.84%
Run 9: Report of LEDBAT — Data Link
Run 10: Statistics of LEDBAT

Start at: 2018-03-14 22:00:36
End at: 2018-03-14 22:01:06

# Below is generated by plot.py at 2018-03-15 01:48:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.23 Mbit/s
95th percentile per-packet one-way delay: 137.828 ms
Loss rate: 2.35%
-- Flow 1:
Average throughput: 4.75 Mbit/s
95th percentile per-packet one-way delay: 137.959 ms
Loss rate: 1.84%
-- Flow 2:
Average throughput: 3.08 Mbit/s
95th percentile per-packet one-way delay: 137.653 ms
Loss rate: 2.77%
-- Flow 3:
Average throughput: 1.48 Mbit/s
95th percentile per-packet one-way delay: 137.429 ms
Loss rate: 5.57%
Run 10: Report of LEADBAT — Data Link

Throughput (Mbps)

Flow 1 ingress (mean 4.72 Mbps/s)  
Flow 1 egress (mean 4.75 Mbps/s)  
Flow 2 ingress (mean 3.12 Mbps/s)  
Flow 2 egress (mean 3.06 Mbps/s)  
Flow 3 ingress (mean 1.32 Mbps/s)  
Flow 3 egress (mean 1.46 Mbps/s)

Delay (ms)

Flow 1 (95th percentile 137.96 ms)  
Flow 2 (95th percentile 137.85 ms)  
Flow 3 (95th percentile 137.43 ms)
Run 1: Statistics of PCC

Start at: 2018-03-14 18:57:17
End at: 2018-03-14 18:57:47

# Below is generated by plot.py at 2018-03-15 01:58:41
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 541.96 Mbit/s
  95th percentile per-packet one-way delay: 267.142 ms
  Loss rate: 3.95%
-- Flow 1:
  Average throughput: 440.95 Mbit/s
  95th percentile per-packet one-way delay: 273.349 ms
  Loss rate: 3.95%
-- Flow 2:
  Average throughput: 120.01 Mbit/s
  95th percentile per-packet one-way delay: 256.617 ms
  Loss rate: 4.15%
-- Flow 3:
  Average throughput: 66.05 Mbit/s
  95th percentile per-packet one-way delay: 209.626 ms
  Loss rate: 3.21%
Run 1: Report of PCC — Data Link

![Graph 1](image1)

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

Start at: 2018-03-14 19:17:23
End at: 2018-03-14 19:17:53

# Below is generated by plot.py at 2018-03-15 01:59:00
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 555.11 Mbit/s
  95th percentile per-packet one-way delay: 214.863 ms
  Loss rate: 2.24%
-- Flow 1:
  Average throughput: 468.99 Mbit/s
  95th percentile per-packet one-way delay: 214.913 ms
  Loss rate: 2.19%
-- Flow 2:
  Average throughput: 128.00 Mbit/s
  95th percentile per-packet one-way delay: 214.799 ms
  Loss rate: 2.46%
-- Flow 3:
  Average throughput: 4.48 Mbit/s
  95th percentile per-packet one-way delay: 185.092 ms
  Loss rate: 2.63%
Run 2: Report of PCC — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 475.11 Mbps)
  - Flow 1 egress (mean 468.99 Mbps)
  - Flow 2 ingress (mean 129.42 Mbps)
  - Flow 2 egress (mean 128.00 Mbps)
  - Flow 3 ingress (mean 4.47 Mbps)
  - Flow 3 egress (mean 4.48 Mbps)

- **Packet Delay (ms):**
  - Flow 1 95th percentile 214.91 ms
  - Flow 2 95th percentile 214.80 ms
  - Flow 3 95th percentile 185.09 ms
Run 3: Statistics of PCC

Start at: 2018-03-14 19:37:12
End at: 2018-03-14 19:37:42

# Below is generated by plot.py at 2018-03-15 01:59:00
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 530.85 Mbit/s
  95th percentile per-packet one-way delay: 341.022 ms
  Loss rate: 4.34%
  -- Flow 1:
    Average throughput: 465.80 Mbit/s
    95th percentile per-packet one-way delay: 344.270 ms
    Loss rate: 4.47%
  -- Flow 2:
    Average throughput: 67.13 Mbit/s
    95th percentile per-packet one-way delay: 252.118 ms
    Loss rate: 2.50%
  -- Flow 3:
    Average throughput: 64.15 Mbit/s
    95th percentile per-packet one-way delay: 250.385 ms
    Loss rate: 5.24%
Run 3: Report of PCC — Data Link

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

- Flow 1 Ingress (mean 465.11 Mbit/s)
- Flow 1 Egress (mean 465.80 Mbit/s)
- Flow 2 Ingress (mean 67.90 Mbit/s)
- Flow 2 Egress (mean 67.13 Mbit/s)
- Flow 3 Ingress (mean 65.85 Mbit/s)
- Flow 3 Egress (mean 64.15 Mbit/s)

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

- Flow 1 (95th percentile 344.27 ms)
- Flow 2 (95th percentile 252.12 ms)
- Flow 3 (95th percentile 250.38 ms)
Run 4: Statistics of PCC

Start at: 2018-03-14 19:57:09
End at: 2018-03-14 19:57:39

# Below is generated by plot.py at 2018-03-15 01:59:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 552.28 Mbit/s
95th percentile per-packet one-way delay: 279.920 ms
Loss rate: 10.45%
-- Flow 1:
Average throughput: 411.45 Mbit/s
95th percentile per-packet one-way delay: 298.538 ms
Loss rate: 9.12%
-- Flow 2:
Average throughput: 118.40 Mbit/s
95th percentile per-packet one-way delay: 250.116 ms
Loss rate: 8.73%
-- Flow 3:
Average throughput: 193.67 Mbit/s
95th percentile per-packet one-way delay: 259.598 ms
Loss rate: 20.01%
Run 4: Report of PCC — Data Link

**Throughput** (Mbit/s)

- **Flow 1 Ingress** (mean 488.55 Mbit/s)
- **Flow 1 Egress** (mean 411.45 Mbit/s)
- **Flow 2 Ingress** (mean 127.91 Mbit/s)
- **Flow 2 Egress** (mean 118.40 Mbit/s)
- **Flow 3 Ingress** (mean 235.36 Mbit/s)
- **Flow 3 Egress** (mean 193.67 Mbit/s)

**Percentile Delay (ms)**

- **Flow 1 (95th percentile 298.54 ms)**
- **Flow 2 (95th percentile 250.12 ms)**
- **Flow 3 (95th percentile 259.60 ms)**
Run 5: Statistics of PCC

Start at: 2018-03-14 20:17:12
End at: 2018-03-14 20:17:42

# Below is generated by plot.py at 2018-03-15 02:00:12
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 567.76 Mbit/s
  95th percentile per-packet one-way delay: 277.947 ms
  Loss rate: 3.66%
-- Flow 1:
  Average throughput: 463.87 Mbit/s
  95th percentile per-packet one-way delay: 283.117 ms
  Loss rate: 3.36%
-- Flow 2:
  Average throughput: 126.88 Mbit/s
  95th percentile per-packet one-way delay: 249.457 ms
  Loss rate: 4.65%
-- Flow 3:
  Average throughput: 62.26 Mbit/s
  95th percentile per-packet one-way delay: 252.658 ms
  Loss rate: 6.38%
Run 5: Report of PCC — Data Link
Run 6: Statistics of PCC

Start at: 2018-03-14 20:37:29
End at: 2018-03-14 20:37:59

# Below is generated by plot.py at 2018-03-15 02:00:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 554.67 Mbit/s
  95th percentile per-packet one-way delay: 285.561 ms
  Loss rate: 3.65%
  -- Flow 1:
  Average throughput: 490.91 Mbit/s
  95th percentile per-packet one-way delay: 290.008 ms
  Loss rate: 3.61%
  -- Flow 2:
  Average throughput: 65.88 Mbit/s
  95th percentile per-packet one-way delay: 250.221 ms
  Loss rate: 2.73%
  -- Flow 3:
  Average throughput: 62.83 Mbit/s
  95th percentile per-packet one-way delay: 251.618 ms
  Loss rate: 6.37%
Run 6: Report of PCC — Data Link

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

- Flow 1 ingress (mean 304.68 Mbit/s)
- Flow 1 egress (mean 490.91 Mbit/s)
- Flow 2 ingress (mean 66.79 Mbit/s)
- Flow 2 egress (mean 65.88 Mbit/s)
- Flow 3 ingress (mean 65.27 Mbit/s)
- Flow 3 egress (mean 62.83 Mbit/s)
Run 7: Statistics of PCC

Start at: 2018-03-14 20:57:04
End at: 2018-03-14 20:57:34

# Below is generated by plot.py at 2018-03-15 02:01:15
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 571.49 Mbit/s
  95th percentile per-packet one-way delay: 289.460 ms
  Loss rate: 2.80%
-- Flow 1:
  Average throughput: 486.59 Mbit/s
  95th percentile per-packet one-way delay: 293.476 ms
  Loss rate: 2.72%
-- Flow 2:
  Average throughput: 127.18 Mbit/s
  95th percentile per-packet one-way delay: 246.413 ms
  Loss rate: 3.30%
-- Flow 3:
  Average throughput: 2.42 Mbit/s
  95th percentile per-packet one-way delay: 244.669 ms
  Loss rate: 2.76%
Run 7: Report of PCC — Data Link
Run 8: Statistics of PCC

Start at: 2018-03-14 21:16:51
End at: 2018-03-14 21:17:21

# Below is generated by plot.py at 2018-03-15 02:01:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 537.72 Mbit/s
95th percentile per-packet one-way delay: 366.394 ms
Loss rate: 4.99%
-- Flow 1:
Average throughput: 475.13 Mbit/s
95th percentile per-packet one-way delay: 368.014 ms
Loss rate: 5.07%
-- Flow 2:
Average throughput: 64.89 Mbit/s
95th percentile per-packet one-way delay: 250.731 ms
Loss rate: 2.99%
-- Flow 3:
Average throughput: 60.75 Mbit/s
95th percentile per-packet one-way delay: 252.819 ms
Loss rate: 7.33%
Run 8: Report of PCC — Data Link

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

- Flow 1 Ingress (mean 495.91 Mbit/s)
- Flow 1 Egress (mean 475.13 Mbit/s)
- Flow 2 Ingress (mean 65.97 Mbit/s)
- Flow 2 Egress (mean 64.89 Mbit/s)
- Flow 3 Ingress (mean 63.72 Mbit/s)
- Flow 3 Egress (mean 60.75 Mbit/s)

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

- Flow 1 (95th percentile 368.01 ms)
- Flow 2 (95th percentile 250.73 ms)
- Flow 3 (95th percentile 252.02 ms)
Run 9: Statistics of PCC

Start at: 2018-03-14 21:37:04
End at: 2018-03-14 21:37:34

# Below is generated by plot.py at 2018-03-15 02:09:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 509.68 Mbit/s
95th percentile per-packet one-way delay: 287.475 ms
Loss rate: 5.16%
-- Flow 1:
Average throughput: 417.50 Mbit/s
95th percentile per-packet one-way delay: 289.672 ms
Loss rate: 4.13%
-- Flow 2:
Average throughput: 33.78 Mbit/s
95th percentile per-packet one-way delay: 245.671 ms
Loss rate: 3.59%
-- Flow 3:
Average throughput: 216.15 Mbit/s
95th percentile per-packet one-way delay: 255.052 ms
Loss rate: 11.31%
Run 9: Report of PCC — Data Link

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

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

Legend:
- Flow 1 Ingress (mean 431.47 Mbit/s)
- Flow 1 Egress (mean 417.50 Mbit/s)
- Flow 2 Ingress (mean 34.57 Mbit/s)
- Flow 2 Egress (mean 33.78 Mbit/s)
- Flow 3 Ingress (mean 236.95 Mbit/s)
- Flow 3 Egress (mean 216.15 Mbit/s)
- Flow 1 (95th percentile 289.67 ms)
- Flow 2 (95th percentile 245.67 ms)
- Flow 3 (95th percentile 255.05 ms)
Run 10: Statistics of PCC

Start at: 2018-03-14 21:56:46
End at: 2018-03-14 21:57:16

# Below is generated by plot.py at 2018-03-15 02:10:58
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 559.83 Mbit/s
  95th percentile per-packet one-way delay: 314.291 ms
  Loss rate: 4.92%
-- Flow 1:
  Average throughput: 475.97 Mbit/s
  95th percentile per-packet one-way delay: 326.539 ms
  Loss rate: 5.05%
-- Flow 2:
  Average throughput: 70.13 Mbit/s
  95th percentile per-packet one-way delay: 240.648 ms
  Loss rate: 2.16%
-- Flow 3:
  Average throughput: 116.51 Mbit/s
  95th percentile per-packet one-way delay: 244.867 ms
  Loss rate: 6.52%
Run 10: Report of PCC — Data Link

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

- Flow 1 Ingress (mean 496.68 Mb/s)
- Flow 1 Egress (mean 475.97 Mb/s)
- Flow 2 Ingress (mean 70.72 Mb/s)
- Flow 2 Egress (mean 70.13 Mb/s)
- Flow 3 Ingress (mean 121.16 Mb/s)
- Flow 3 Egress (mean 116.81 Mb/s)

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

- Flow 1 (95th percentile 326.54 ms)
- Flow 2 (95th percentile 240.65 ms)
- Flow 3 (95th percentile 244.87 ms)
Run 1: Statistics of QUIC Cubic

Start at: 2018-03-14 18:49:17
End at: 2018-03-14 18:49:47

# Below is generated by plot.py at 2018-03-15 02:10:58
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 57.70 Mbit/s
  95th percentile per-packet one-way delay: 135.421 ms
  Loss rate: 1.91%
-- Flow 1:
  Average throughput: 0.03 Mbit/s
  95th percentile per-packet one-way delay: 137.264 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 61.94 Mbit/s
  95th percentile per-packet one-way delay: 135.307 ms
  Loss rate: 0.74%
-- Flow 3:
  Average throughput: 47.43 Mbit/s
  95th percentile per-packet one-way delay: 135.474 ms
  Loss rate: 4.83%
Run 1: Report of QUIC Cubic — Data Link

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

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 0.03 Mbps)
Flow 1 egress (mean 0.03 Mbps)
Flow 2 ingress (mean 60.12 Mbps)
Flow 2 egress (mean 61.94 Mbps)
Flow 3 ingress (mean 48.47 Mbps)
Flow 3 egress (mean 47.43 Mbps)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 137.26 ms)
Flow 2 (95th percentile 135.31 ms)
Flow 3 (95th percentile 135.47 ms)
Run 2: Statistics of QUIC Cubic

Start at: 2018-03-14 19:09:34
End at: 2018-03-14 19:10:04

# Below is generated by plot.py at 2018-03-15 02:10:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 105.91 Mbit/s
95th percentile per-packet one-way delay: 136.351 ms
Loss rate: 1.60%
-- Flow 1:
Average throughput: 46.38 Mbit/s
95th percentile per-packet one-way delay: 135.055 ms
Loss rate: 1.19%
-- Flow 2:
Average throughput: 61.95 Mbit/s
95th percentile per-packet one-way delay: 136.391 ms
Loss rate: 0.85%
-- Flow 3:
Average throughput: 60.20 Mbit/s
95th percentile per-packet one-way delay: 135.387 ms
Loss rate: 4.07%
Run 3: Statistics of QUIC Cubic

Start at: 2018-03-14 19:29:37
End at: 2018-03-14 19:30:07

# Below is generated by plot.py at 2018-03-15 02:10:58
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 116.36 Mbit/s
  95th percentile per-packet one-way delay: 136.626 ms
  Loss rate: 1.48%
-- Flow 1:
  Average throughput: 57.86 Mbit/s
  95th percentile per-packet one-way delay: 136.654 ms
  Loss rate: 1.23%
-- Flow 2:
  Average throughput: 61.45 Mbit/s
  95th percentile per-packet one-way delay: 135.455 ms
  Loss rate: 0.72%
-- Flow 3:
  Average throughput: 56.99 Mbit/s
  95th percentile per-packet one-way delay: 135.497 ms
  Loss rate: 3.82%
Run 3: Report of QUIC Cubic — Data Link

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

- Flow 1 ingress (mean 58.05 Mbit/s)
- Flow 1 egress (mean 57.86 Mbit/s)
- Flow 2 ingress (mean 60.20 Mbit/s)
- Flow 2 egress (mean 61.45 Mbit/s)
- Flow 3 ingress (mean 57.62 Mbit/s)
- Flow 3 egress (mean 56.99 Mbit/s)

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

- Flow 1 (95th percentile 136.65 ms)
- Flow 2 (95th percentile 135.46 ms)
- Flow 3 (95th percentile 135.50 ms)
Run 4: Statistics of QUIC Cubic

Start at: 2018-03-14 19:49:20
End at: 2018-03-14 19:49:50

# Below is generated by plot.py at 2018-03-15 02:10:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 113.59 Mbit/s
95th percentile per-packet one-way delay: 136.948 ms
Loss rate: 0.93%
-- Flow 1:
Average throughput: 61.82 Mbit/s
95th percentile per-packet one-way delay: 136.876 ms
Loss rate: 1.32%
-- Flow 2:
Average throughput: 62.04 Mbit/s
95th percentile per-packet one-way delay: 136.991 ms
Loss rate: 0.39%
-- Flow 3:
Average throughput: 36.53 Mbit/s
95th percentile per-packet one-way delay: 135.107 ms
Loss rate: 0.68%
Run 4: Report of QUIC Cubic — Data Link

![Graph 1](image1.png)

![Graph 2](image2.png)
Run 5: Statistics of QUIC Cubic

Start at: 2018-03-14 20:09:26
End at: 2018-03-14 20:09:56

# Below is generated by plot.py at 2018-03-15 02:10:58
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 98.68 Mbit/s
  95th percentile per-packet one-way delay: 141.129 ms
  Loss rate: 1.15%
-- Flow 1:
  Average throughput: 52.83 Mbit/s
  95th percentile per-packet one-way delay: 136.508 ms
  Loss rate: 0.01%
-- Flow 2:
  Average throughput: 51.50 Mbit/s
  95th percentile per-packet one-way delay: 141.184 ms
  Loss rate: 2.33%
-- Flow 3:
  Average throughput: 36.41 Mbit/s
  95th percentile per-packet one-way delay: 137.002 ms
  Loss rate: 2.72%
Run 5: Report of QUIC Cubic — Data Link
Run 6: Statistics of QUIC Cubic

Start at: 2018-03-14 20:29:37
End at: 2018-03-14 20:30:07

# Below is generated by plot.py at 2018-03-15 02:10:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 110.85 Mbit/s
95th percentile per-packet one-way delay: 136.754 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 58.98 Mbit/s
95th percentile per-packet one-way delay: 136.775 ms
Loss rate: 1.38%
-- Flow 2:
Average throughput: 60.51 Mbit/s
95th percentile per-packet one-way delay: 135.619 ms
Loss rate: 0.69%
-- Flow 3:
Average throughput: 36.53 Mbit/s
95th percentile per-packet one-way delay: 135.635 ms
Loss rate: 0.62%
Run 6: Report of QUIC Cubic — Data Link

![Graph showing data link performance metrics for different flows with throughput and one-way delay timecourses over time.](image)
Run 7: Statistics of QUIC Cubic

Start at: 2018-03-14 20:49:44
End at: 2018-03-14 20:50:14

# Below is generated by plot.py at 2018-03-15 02:10:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.79 Mbit/s
95th percentile per-packet one-way delay: 136.700 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 41.51 Mbit/s
95th percentile per-packet one-way delay: 135.463 ms
Loss rate: 0.15%
-- Flow 2:
Average throughput: 60.76 Mbit/s
95th percentile per-packet one-way delay: 136.735 ms
Loss rate: 0.66%
-- Flow 3:
Average throughput: 34.41 Mbit/s
95th percentile per-packet one-way delay: 136.671 ms
Loss rate: 0.39%
Run 7: Report of QUIC Cubic — Data Link
Run 8: Statistics of QUIC Cubic

Start at: 2018-03-14 21:09:20
End at: 2018-03-14 21:09:50

# Below is generated by plot.py at 2018-03-15 02:10:58
# Datalink statistics
-- Total of 3 flows:
   Average throughput: 110.12 Mbit/s
   95th percentile per-packet one-way delay: 136.636 ms
   Loss rate: 0.79%
-- Flow 1:
   Average throughput: 58.25 Mbit/s
   95th percentile per-packet one-way delay: 136.666 ms
   Loss rate: 1.20%
-- Flow 2:
   Average throughput: 61.96 Mbit/s
   95th percentile per-packet one-way delay: 135.770 ms
   Loss rate: 0.20%
-- Flow 3:
   Average throughput: 36.83 Mbit/s
   95th percentile per-packet one-way delay: 135.778 ms
   Loss rate: 0.71%
Run 8: Report of QUIC Cubic — Data Link
Run 9: Statistics of QUIC Cubic

Start at: 2018-03-14 21:29:14
End at: 2018-03-14 21:29:44

# Below is generated by plot.py at 2018-03-15 02:10:58
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 114.32 Mbit/s
  95th percentile per-packet one-way delay: 136.720 ms
  Loss rate: 0.79%
-- Flow 1:
  Average throughput: 63.30 Mbit/s
  95th percentile per-packet one-way delay: 135.724 ms
  Loss rate: 1.28%
-- Flow 2:
  Average throughput: 60.47 Mbit/s
  95th percentile per-packet one-way delay: 136.759 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 34.37 Mbit/s
  95th percentile per-packet one-way delay: 136.498 ms
  Loss rate: 0.76%
Run 9: Report of QUIC Cubic — Data Link

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

- Flow 1 ingress (mean 63.53 Mbit/s)
- Flow 1 egress (mean 63.30 Mbit/s)
- Flow 2 ingress (mean 60.47 Mbit/s)
- Flow 2 egress (mean 60.47 Mbit/s)
- Flow 3 ingress (mean 33.67 Mbit/s)
- Flow 3 egress (mean 34.37 Mbit/s)

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

- Flow 1 (95th percentile 135.72 ms)
- Flow 2 (95th percentile 136.76 ms)
- Flow 3 (95th percentile 136.50 ms)
Run 10: Statistics of QUIC Cubic

Start at: 2018-03-14 21:49:22
End at: 2018-03-14 21:49:52

# Below is generated by plot.py at 2018-03-15 02:10:58
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 103.44 Mbit/s
  95th percentile per-packet one-way delay: 140.767 ms
  Loss rate: 1.36%
-- Flow 1:
  Average throughput: 43.97 Mbit/s
  95th percentile per-packet one-way delay: 140.807 ms
  Loss rate: 1.45%
-- Flow 2:
  Average throughput: 61.19 Mbit/s
  95th percentile per-packet one-way delay: 136.859 ms
  Loss rate: 0.29%
-- Flow 3:
  Average throughput: 60.92 Mbit/s
  95th percentile per-packet one-way delay: 136.155 ms
  Loss rate: 3.23%
Run 10: Report of QUIC Cubic — Data Link

[Graphs showing throughput and per-packet one-way delay over time for different flows, with legends indicating typical throughput and 95th percentile delays.]
Run 1: Statistics of SCReAM

Start at: 2018-03-14 18:52:32
End at: 2018-03-14 18:53:02

# Below is generated by plot.py at 2018-03-15 02:10:58
# Datalink statistics
  -- Total of 3 flows:
  Average throughput: 0.44 Mbit/s
  95th percentile per-packet one-way delay: 136.273 ms
  Loss rate: 1.37%
  -- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 134.881 ms
  Loss rate: 0.90%
  -- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 136.298 ms
  Loss rate: 1.42%
  -- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 135.753 ms
  Loss rate: 2.63%
Run 1: Report of SCReAM — Data Link

---

**Graph 1:**

- **X-axis:** Time (s)
- **Y-axis:** Throughput (Mbit/s)
- Lines represent:
  - Flow 1 ingress (mean 0.22 Mbit/s)
  - Flow 1 egress (mean 0.22 Mbit/s)
  - Flow 2 ingress (mean 0.22 Mbit/s)
  - Flow 2 egress (mean 0.22 Mbit/s)
  - Flow 3 ingress (mean 0.22 Mbit/s)
  - Flow 3 egress (mean 0.22 Mbit/s)

---

**Graph 2:**

- **X-axis:** Time (s)
- **Y-axis:** Per-packet one-way delay (ms)
- Points represent:
  - Flow 1 (95th percentile 134.88 ms)
  - Flow 2 (95th percentile 136.30 ms)
  - Flow 3 (95th percentile 135.75 ms)

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Run 2: Statistics of SCReAM

Start at: 2018-03-14 19:12:43
End at: 2018-03-14 19:13:13

# Below is generated by plot.py at 2018-03-15 02:10:58
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 136.953 ms
  Loss rate: 1.37%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 135.909 ms
  Loss rate: 0.90%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 135.490 ms
  Loss rate: 1.42%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 137.001 ms
  Loss rate: 2.63%
Run 2: Report of SCReAM — Data Link
Run 3: Statistics of SCReAM

Start at: 2018-03-14 19:32:24
End at: 2018-03-14 19:32:54

# Below is generated by plot.py at 2018-03-15 02:10:58
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 137.106 ms
  Loss rate: 1.30%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 137.045 ms
  Loss rate: 0.77%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 137.136 ms
  Loss rate: 1.42%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 136.816 ms
  Loss rate: 2.63%
Run 3: Report of SCReAM — Data Link
Run 4: Statistics of SCReAM

Start at: 2018-03-14 19:52:38
End at: 2018-03-14 19:53:08

# Below is generated by plot.py at 2018-03-15 02:10:58
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 141.312 ms
  Loss rate: 1.36%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 141.336 ms
  Loss rate: 0.90%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 136.924 ms
  Loss rate: 1.42%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 137.232 ms
  Loss rate: 2.63%
Run 4: Report of SCReAM — Data Link

[Graph showing throughput over time for different flows]

[Graph showing packet round-trip delay over time for different flows]
Run 5: Statistics of SCReAM

Start at: 2018-03-14 20:12:30
End at: 2018-03-14 20:13:00

# Below is generated by plot.py at 2018-03-15 02:10:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 137.143 ms
Loss rate: 1.37%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 137.175 ms
Loss rate: 0.90%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.740 ms
Loss rate: 1.42%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 135.653 ms
Loss rate: 2.63%
Run 5: Report of SCReAM — Data Link

[Graph showing throughput and latency over time for different flows, with legends indicating flow types and their respective mean throughput and latency values.]
Run 6: Statistics of SCReAM

Start at: 2018-03-14 20:32:53
End at: 2018-03-14 20:33:23

# Below is generated by plot.py at 2018-03-15 02:10:58
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 136.877 ms
  Loss rate: 1.30%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 135.870 ms
  Loss rate: 0.77%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 136.898 ms
  Loss rate: 1.42%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 135.836 ms
  Loss rate: 2.63%
Run 6: Report of SCReAM — Data Link

![Graph of throughput over time for different flows]

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

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

- Flow 1 (95th percentile 135.87 ms)
- Flow 2 (95th percentile 136.90 ms)
- Flow 3 (95th percentile 135.84 ms)
Run 7: Statistics of SCReAM

Start at: 2018-03-14 20:52:30
End at: 2018-03-14 20:53:00

# Below is generated by plot.py at 2018-03-15 02:10:58
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 136.905 ms
  Loss rate: 1.30%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 136.921 ms
  Loss rate: 0.77%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 136.840 ms
  Loss rate: 1.42%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 136.665 ms
  Loss rate: 2.63%
Run 7: Report of SCReAM — Data Link
Run 8: Statistics of SCReAM

Start at: 2018-03-14 21:12:14
End at: 2018-03-14 21:12:44

# Below is generated by plot.py at 2018-03-15 02:10:58
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.41 Mbit/s
  95th percentile per-packet one-way delay: 137.009 ms
  Loss rate: 1.21%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 136.881 ms
  Loss rate: 0.77%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 137.042 ms
  Loss rate: 1.42%
-- Flow 3:
  Average throughput: 0.16 Mbit/s
  95th percentile per-packet one-way delay: 136.879 ms
  Loss rate: 2.46%
Run 8: Report of SCReAM — Data Link

![Throughput Graph](image)

- 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 0.19 Mbit/s)
- Flow 3 egress (mean 0.16 Mbit/s)

![Round-Trip Time Graph](image)

- Flow 1 (95th percentile 136.88 ms)
- Flow 2 (95th percentile 137.04 ms)
- Flow 3 (95th percentile 136.88 ms)
Run 9: Statistics of SCReAM

Start at: 2018-03-14 21:32:15
End at: 2018-03-14 21:32:45

# Below is generated by plot.py at 2018-03-15 02:10:58
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.40 Mbit/s
  95th percentile per-packet one-way delay: 140.823 ms
  Loss rate: 1.28%
  -- Flow 1:
    Average throughput: 0.22 Mbit/s
    95th percentile per-packet one-way delay: 136.760 ms
    Loss rate: 0.77%
  -- Flow 2:
    Average throughput: 0.17 Mbit/s
    95th percentile per-packet one-way delay: 140.870 ms
    Loss rate: 1.39%
  -- Flow 3:
    Average throughput: 0.22 Mbit/s
    95th percentile per-packet one-way delay: 135.548 ms
    Loss rate: 2.63%
Run 9: Report of SCReAM — Data Link

[Graph showing throughput and packet delay over time for different flows.]
Run 10: Statistics of SCReAM

Start at: 2018-03-14 21:52:11  
End at: 2018-03-14 21:52:41

# Below is generated by plot.py at 2018-03-15 02:10:59  
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s  
  95th percentile per-packet one-way delay: 136.501 ms  
  Loss rate: 1.37%
-- Flow 1:
  Average throughput: 0.22 Mbit/s  
  95th percentile per-packet one-way delay: 136.534 ms  
  Loss rate: 0.90%
-- Flow 2:
  Average throughput: 0.22 Mbit/s  
  95th percentile per-packet one-way delay: 136.130 ms  
  Loss rate: 1.42%
-- Flow 3:
  Average throughput: 0.22 Mbit/s  
  95th percentile per-packet one-way delay: 135.523 ms  
  Loss rate: 2.63%
Run 1: Statistics of WebRTC media

Start at: 2018-03-14 18:54:10
End at: 2018-03-14 18:54:40

# Below is generated by plot.py at 2018-03-15 02:10:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.89 Mbit/s
95th percentile per-packet one-way delay: 139.941 ms
Loss rate: 2.06%
-- Flow 1:
Average throughput: 1.89 Mbit/s
95th percentile per-packet one-way delay: 139.982 ms
Loss rate: 1.52%
-- Flow 2:
Average throughput: 1.50 Mbit/s
95th percentile per-packet one-way delay: 135.912 ms
Loss rate: 1.65%
-- Flow 3:
Average throughput: 0.50 Mbit/s
95th percentile per-packet one-way delay: 137.106 ms
Loss rate: 5.25%
Run 1: Report of WebRTC media — Data Link

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

Legend:
- Flow 1 ingress (mean 1.90 Mbps)
- Flow 1 egress (mean 1.89 Mbps)
- Flow 2 ingress (mean 1.51 Mbps)
- Flow 2 egress (mean 1.50 Mbps)
- Flow 3 ingress (mean 0.52 Mbps)
- Flow 3 egress (mean 0.50 Mbps)

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

Legend:
- Flow 1 (95th percentile 139.98 ms)
- Flow 2 (95th percentile 135.91 ms)
- Flow 3 (95th percentile 137.11 ms)
Run 2: Statistics of WebRTC media

Start at: 2018-03-14 19:14:21
End at: 2018-03-14 19:14:51

# Below is generated by plot.py at 2018-03-15 02:10:59
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 3.68 Mbit/s
  95th percentile per-packet one-way delay: 137.032 ms
  Loss rate: 1.80%
-- Flow 1:
  Average throughput: 2.04 Mbit/s
  95th percentile per-packet one-way delay: 135.575 ms
  Loss rate: 1.03%
-- Flow 2:
  Average throughput: 1.25 Mbit/s
  95th percentile per-packet one-way delay: 137.096 ms
  Loss rate: 1.95%
-- Flow 3:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 135.920 ms
  Loss rate: 4.98%
Run 2: Report of WebRTC media — Data Link

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

Flow 1 ingress (mean 2.04 Mbit/s)
Flow 1 egress (mean 2.04 Mbit/s)
Flow 2 ingress (mean 1.26 Mbit/s)
Flow 2 egress (mean 1.25 Mbit/s)
Flow 3 ingress (mean 0.45 Mbit/s)
Flow 3 egress (mean 0.43 Mbit/s)
Run 3: Statistics of WebRTC media

Start at: 2018-03-14 19:34:02
End at: 2018-03-14 19:34:32

# Below is generated by plot.py at 2018-03-15 02:10:59
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 3.67 Mbit/s
  95th percentile per-packet one-way delay: 137.138 ms
  Loss rate: 1.80%
-- Flow 1:
  Average throughput: 2.04 Mbit/s
  95th percentile per-packet one-way delay: 136.937 ms
  Loss rate: 1.06%
-- Flow 2:
  Average throughput: 1.25 Mbit/s
  95th percentile per-packet one-way delay: 137.204 ms
  Loss rate: 1.72%
-- Flow 3:
  Average throughput: 0.42 Mbit/s
  95th percentile per-packet one-way delay: 136.788 ms
  Loss rate: 5.62%
Run 3: Report of WebRTC media — Data Link
Run 4: Statistics of WebRTC media

Start at: 2018-03-14 19:54:15
End at: 2018-03-14 19:54:45

# Below is generated by plot.py at 2018-03-15 02:10:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.68 Mbit/s
95th percentile per-packet one-way delay: 137.160 ms
Loss rate: 1.80%
-- Flow 1:
Average throughput: 2.04 Mbit/s
95th percentile per-packet one-way delay: 135.984 ms
Loss rate: 1.05%
-- Flow 2:
Average throughput: 1.25 Mbit/s
95th percentile per-packet one-way delay: 137.214 ms
Loss rate: 1.87%
-- Flow 3:
Average throughput: 0.42 Mbit/s
95th percentile per-packet one-way delay: 136.961 ms
Loss rate: 5.19%
Run 4: Report of WebRTC media — Data Link

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

- Flow 1 ingress (mean 2.04 Mbit/s)
- Flow 1 egress (mean 2.04 Mbit/s)
- Flow 2 ingress (mean 1.27 Mbit/s)
- Flow 2 egress (mean 1.25 Mbit/s)
- Flow 3 ingress (mean 0.44 Mbit/s)
- Flow 3 egress (mean 0.42 Mbit/s)
Run 5: Statistics of WebRTC media

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

# Below is generated by plot.py at 2018-03-15 02:10:59
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 3.69 Mbit/s
  95th percentile per-packet one-way delay: 136.477 ms
  Loss rate: 1.76%
-- Flow 1:
  Average throughput: 2.04 Mbit/s
  95th percentile per-packet one-way delay: 135.980 ms
  Loss rate: 1.06%
-- Flow 2:
  Average throughput: 1.25 Mbit/s
  95th percentile per-packet one-way delay: 136.129 ms
  Loss rate: 1.86%
-- Flow 3:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 136.601 ms
  Loss rate: 4.76%
Run 5: Report of WebRTC media — Data Link

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

Legend:
- Flow 1 ingress (mean 2.05 Mbit/s)
- Flow 1 egress (mean 2.04 Mbit/s)
- Flow 2 ingress (mean 1.27 Mbit/s)
- Flow 2 egress (mean 1.25 Mbit/s)
- Flow 3 ingress (mean 0.44 Mbit/s)
- Flow 3 egress (mean 0.43 Mbit/s)

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

Legend:
- Flow 1 (95th percentile 135.98 ms)
- Flow 2 (95th percentile 136.13 ms)
- Flow 3 (95th percentile 136.60 ms)
Run 6: Statistics of WebRTC media

Start at: 2018-03-14 20:34:31
End at: 2018-03-14 20:35:01

# Below is generated by plot.py at 2018-03-15 02:10:59
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 3.68 Mbit/s
  95th percentile per-packet one-way delay: 137.076 ms
  Loss rate: 1.80%
-- Flow 1:
  Average throughput: 2.04 Mbit/s
  95th percentile per-packet one-way delay: 137.091 ms
  Loss rate: 1.06%
-- Flow 2:
  Average throughput: 1.25 Mbit/s
  95th percentile per-packet one-way delay: 136.446 ms
  Loss rate: 1.93%
-- Flow 3:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 137.121 ms
  Loss rate: 4.86%
Run 6: Report of WebRTC media — Data Link
Run 7: Statistics of WebRTC media

Start at: 2018-03-14 20:54:08
End at: 2018-03-14 20:54:38

# Below is generated by plot.py at 2018-03-15 02:10:59
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 3.67 Mbit/s
  95th percentile per-packet one-way delay: 139.192 ms
  Loss rate: 1.83%
-- Flow 1:
  Average throughput: 2.03 Mbit/s
  95th percentile per-packet one-way delay: 139.221 ms
  Loss rate: 1.08%
-- Flow 2:
  Average throughput: 1.25 Mbit/s
  95th percentile per-packet one-way delay: 136.967 ms
  Loss rate: 1.96%
-- Flow 3:
  Average throughput: 0.42 Mbit/s
  95th percentile per-packet one-way delay: 136.899 ms
  Loss rate: 4.99%
Run 7: Report of WebRTC media — Data Link
Run 8: Statistics of WebRTC media

Start at: 2018-03-14 21:13:51
End at: 2018-03-14 21:14:21

# Below is generated by plot.py at 2018-03-15 02:10:59
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 3.66 Mbit/s
  95th percentile per-packet one-way delay: 136.916 ms
  Loss rate: 1.93%
-- Flow 1:
  Average throughput: 2.04 Mbit/s
  95th percentile per-packet one-way delay: 136.004 ms
  Loss rate: 1.08%
-- Flow 2:
  Average throughput: 1.25 Mbit/s
  95th percentile per-packet one-way delay: 136.963 ms
  Loss rate: 1.96%
-- Flow 3:
  Average throughput: 0.42 Mbit/s
  95th percentile per-packet one-way delay: 136.282 ms
  Loss rate: 5.94%
Run 8: Report of WebRTC media — Data Link

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

![Graph 2: Delay (ms)](image2)
Run 9: Statistics of WebRTC media

Start at: 2018-03-14 21:33:53
End at: 2018-03-14 21:34:23

# Below is generated by plot.py at 2018-03-15 02:10:59
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 3.68 Mbit/s
  95th percentile per-packet one-way delay: 137.091 ms
  Loss rate: 1.84%
-- Flow 1:
  Average throughput: 2.04 Mbit/s
  95th percentile per-packet one-way delay: 137.118 ms
  Loss rate: 1.02%
-- Flow 2:
  Average throughput: 1.25 Mbit/s
  95th percentile per-packet one-way delay: 136.715 ms
  Loss rate: 1.93%
-- Flow 3:
  Average throughput: 0.42 Mbit/s
  95th percentile per-packet one-way delay: 137.016 ms
  Loss rate: 5.47%
Run 9: Report of WebRTC media — Data Link

![Graph 1: Throughput (Mbps) vs Time (s) for different flows.](image1)

- Flow 1 ingress (mean 2.05 Mbps)
- Flow 1 egress (mean 2.04 Mbps)
- Flow 2 ingress (mean 1.27 Mbps)
- Flow 2 egress (mean 1.25 Mbps)
- Flow 3 ingress (mean 0.44 Mbps)
- Flow 3 egress (mean 0.42 Mbps)

![Graph 2: Per-packet round-trip delay (ms) vs Time (s) for different flows.](image2)

- Flow 1 (95th percentile 137.12 ms)
- Flow 2 (95th percentile 138.72 ms)
- Flow 3 (95th percentile 137.02 ms)
Run 10: Statistics of WebRTC media

Start at: 2018-03-14 21:53:48
End at: 2018-03-14 21:54:18

# Below is generated by plot.py at 2018-03-15 02:10:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.68 Mbit/s
95th percentile per-packet one-way delay: 136.860 ms
Loss rate: 1.85%
-- Flow 1:
Average throughput: 2.04 Mbit/s
95th percentile per-packet one-way delay: 136.754 ms
Loss rate: 1.04%
-- Flow 2:
Average throughput: 1.25 Mbit/s
95th percentile per-packet one-way delay: 135.972 ms
Loss rate: 1.91%
-- Flow 3:
Average throughput: 0.42 Mbit/s
95th percentile per-packet one-way delay: 137.018 ms
Loss rate: 5.56%
Run 10: Report of WebRTC media — Data Link

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

- **Flow 1 ingress** (mean 2.05 Mbps)
- **Flow 1 egress** (mean 2.04 Mbps)
- **Flow 2 ingress** (mean 1.26 Mbps)
- **Flow 2 egress** (mean 1.25 Mbps)
- **Flow 3 ingress** (mean 0.44 Mbps)
- **Flow 3 egress** (mean 0.42 Mbps)

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

- **Flow 1** (95th percentile 136.75 ms)
- **Flow 2** (95th percentile 135.97 ms)
- **Flow 3** (95th percentile 137.02 ms)

143
Run 1: Statistics of Sprout

Start at: 2018-03-14 18:53:21
End at: 2018-03-14 18:53:51

# Below is generated by plot.py at 2018-03-15 02:10:59
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.82 Mbit/s
  95th percentile per-packet one-way delay: 136.283 ms
  Loss rate: 1.15%
-- Flow 1:
  Average throughput: 0.42 Mbit/s
  95th percentile per-packet one-way delay: 136.182 ms
  Loss rate: 0.97%
-- Flow 2:
  Average throughput: 0.36 Mbit/s
  95th percentile per-packet one-way delay: 136.113 ms
  Loss rate: 0.98%
-- Flow 3:
  Average throughput: 0.51 Mbit/s
  95th percentile per-packet one-way delay: 136.782 ms
  Loss rate: 1.85%
Run 1: Report of Sprout — Data Link
Run 2: Statistics of Sprout

Start at: 2018-03-14 19:13:32
End at: 2018-03-14 19:14:02

# Below is generated by plot.py at 2018-03-15 02:10:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.92 Mbit/s
95th percentile per-packet one-way delay: 137.038 ms
Loss rate: 1.14%
-- Flow 1:
Average throughput: 0.41 Mbit/s
95th percentile per-packet one-way delay: 136.811 ms
Loss rate: 0.68%
-- Flow 2:
Average throughput: 0.54 Mbit/s
95th percentile per-packet one-way delay: 136.924 ms
Loss rate: 1.29%
-- Flow 3:
Average throughput: 0.47 Mbit/s
95th percentile per-packet one-way delay: 139.965 ms
Loss rate: 1.99%
Run 2: Report of Sprout — Data Link
Run 3: Statistics of Sprout

Start at: 2018-03-14 19:33:13
End at: 2018-03-14 19:33:43

# Below is generated by plot.py at 2018-03-15 02:10:59
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.94 Mbit/s
  95th percentile per-packet one-way delay: 140.776 ms
  Loss rate: 0.94%
-- Flow 1:
  Average throughput: 0.50 Mbit/s
  95th percentile per-packet one-way delay: 135.769 ms
  Loss rate: 0.03%
-- Flow 2:
  Average throughput: 0.37 Mbit/s
  95th percentile per-packet one-way delay: 140.823 ms
  Loss rate: 1.42%
-- Flow 3:
  Average throughput: 0.61 Mbit/s
  95th percentile per-packet one-way delay: 136.823 ms
  Loss rate: 2.58%
Run 3: Report of Sprout — Data Link

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

- Flow 1 ingress (mean 0.49 Mbit/s)
- Flow 1 egress (mean 0.50 Mbit/s)
- Flow 2 ingress (mean 0.37 Mbit/s)
- Flow 2 egress (mean 0.37 Mbit/s)
- Flow 3 ingress (mean 0.61 Mbit/s)
- Flow 3 egress (mean 0.61 Mbit/s)

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

- Flow 1 (95th percentile 135.77 ms)
- Flow 2 (95th percentile 140.82 ms)
- Flow 3 (95th percentile 136.82 ms)
Run 4: Statistics of Sprout

Start at: 2018-03-14 19:53:27
End at: 2018-03-14 19:53:57

# Below is generated by plot.py at 2018-03-15 02:10:59
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.81 Mbit/s
  95th percentile per-packet one-way delay: 141.062 ms
  Loss rate: 1.23%
-- Flow 1:
  Average throughput: 0.37 Mbit/s
  95th percentile per-packet one-way delay: 136.908 ms
  Loss rate: 0.83%
-- Flow 2:
  Average throughput: 0.46 Mbit/s
  95th percentile per-packet one-way delay: 141.122 ms
  Loss rate: 1.16%
-- Flow 3:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 136.937 ms
  Loss rate: 2.43%
Run 4: Report of Sprout — Data Link

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

- **Flow 1 ingress (mean 0.37 Mbit/s)**
- **Flow 1 egress (mean 0.37 Mbit/s)**
- **Flow 2 ingress (mean 0.46 Mbit/s)**
- **Flow 2 egress (mean 0.46 Mbit/s)**
- **Flow 3 ingress (mean 0.43 Mbit/s)**
- **Flow 3 egress (mean 0.43 Mbit/s)**

**Throughput (Mbps)**

**Time (s)**

**Packet delay (ms)**

- **Flow 1 (95th percentile 136.91 ms)**
- **Flow 2 (95th percentile 141.12 ms)**
- **Flow 3 (95th percentile 136.84 ms)**
Run 5: Statistics of Sprout

Start at: 2018-03-14 20:13:19
End at: 2018-03-14 20:13:49

# Below is generated by plot.py at 2018-03-15 02:10:59
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.76 Mbit/s
  95th percentile per-packet one-way delay: 141.000 ms
  Loss rate: 1.33%
-- Flow 1:
  Average throughput: 0.41 Mbit/s
  95th percentile per-packet one-way delay: 136.208 ms
  Loss rate: 0.85%
-- Flow 2:
  Average throughput: 0.34 Mbit/s
  95th percentile per-packet one-way delay: 136.373 ms
  Loss rate: 1.10%
-- Flow 3:
  Average throughput: 0.39 Mbit/s
  95th percentile per-packet one-way delay: 141.077 ms
  Loss rate: 3.22%
Run 5: Report of Sprout — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 0.41 Mbit/s)
  - Flow 1 egress (mean 0.41 Mbit/s)
  - Flow 2 ingress (mean 0.34 Mbit/s)
  - Flow 2 egress (mean 0.34 Mbit/s)
  - Flow 3 ingress (mean 0.40 Mbit/s)
  - Flow 3 egress (mean 0.39 Mbit/s)

- **Packet one-way delay (ms):**
  - Flow 1 (95th percentile 136.21 ms)
  - Flow 2 (95th percentile 136.37 ms)
  - Flow 3 (95th percentile 141.08 ms)
Run 6: Statistics of Sprout

Start at: 2018-03-14 20:33:42
End at: 2018-03-14 20:34:12

# Below is generated by plot.py at 2018-03-15 02:10:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.82 Mbit/s
95th percentile per-packet one-way delay: 136.608 ms
Loss rate: 1.37%
-- Flow 1:
Average throughput: 0.38 Mbit/s
95th percentile per-packet one-way delay: 136.623 ms
Loss rate: 0.92%
-- Flow 2:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 136.579 ms
Loss rate: 1.32%
-- Flow 3:
Average throughput: 0.54 Mbit/s
95th percentile per-packet one-way delay: 136.569 ms
Loss rate: 2.39%
Run 6: Report of Sprout — Data Link

---

Throughput (Mbps)

- Flow 1 ingress (mean 0.38 Mbps)
- Flow 2 ingress (mean 0.40 Mbps)
- Flow 3 ingress (mean 0.54 Mbps)
- Flow 1 egress (mean 0.38 Mbps)
- Flow 2 egress (mean 0.40 Mbps)
- Flow 3 egress (mean 0.54 Mbps)

Time (s)

Packetizing one-way delay (ms)

- Flow 1 (95th percentile 136.62 ms)
- Flow 2 (95th percentile 136.58 ms)
- Flow 3 (95th percentile 136.57 ms)
Run 7: Statistics of Sprout

Start at: 2018-03-14 20:53:19
End at: 2018-03-14 20:53:49

# Below is generated by plot.py at 2018-03-15 02:10:59
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.71 Mbit/s
  95th percentile per-packet one-way delay: 139.141 ms
  Loss rate: 1.57%
-- Flow 1:
  Average throughput: 0.35 Mbit/s
  95th percentile per-packet one-way delay: 136.689 ms
  Loss rate: 1.00%
-- Flow 2:
  Average throughput: 0.39 Mbit/s
  95th percentile per-packet one-way delay: 139.199 ms
  Loss rate: 1.66%
-- Flow 3:
  Average throughput: 0.34 Mbit/s
  95th percentile per-packet one-way delay: 136.807 ms
  Loss rate: 3.16%
Run 7: Report of Sprout — Data Link
Run 8: Statistics of Sprout

Start at: 2018-03-14 21:13:02
End at: 2018-03-14 21:13:32

# Below is generated by plot.py at 2018-03-15 02:10:59
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.85 Mbit/s
  95th percentile per-packet one-way delay: 136.770 ms
  Loss rate: 0.95%
-- Flow 1:
  Average throughput: 0.41 Mbit/s
  95th percentile per-packet one-way delay: 136.840 ms
  Loss rate: 0.95%
-- Flow 2:
  Average throughput: 0.39 Mbit/s
  95th percentile per-packet one-way delay: 135.979 ms
  Loss rate: 0.27%
-- Flow 3:
  Average throughput: 0.56 Mbit/s
  95th percentile per-packet one-way delay: 136.746 ms
  Loss rate: 1.91%
Run 8: Report of Sprout — Data Link
Run 9: Statistics of Sprout

Start at: 2018-03-14 21:33:04
End at: 2018-03-14 21:33:34

# Below is generated by plot.py at 2018-03-15 02:10:59
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.80 Mbit/s
  95th percentile per-packet one-way delay: 136.797 ms
  Loss rate: 1.44%
-- Flow 1:
  Average throughput: 0.40 Mbit/s
  95th percentile per-packet one-way delay: 136.765 ms
  Loss rate: 0.96%
-- Flow 2:
  Average throughput: 0.38 Mbit/s
  95th percentile per-packet one-way delay: 136.738 ms
  Loss rate: 1.53%
-- Flow 3:
  Average throughput: 0.46 Mbit/s
  95th percentile per-packet one-way delay: 136.946 ms
  Loss rate: 2.58%
Run 9: Report of Sprout — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 0.40 Mbps)  
Flow 1 egress (mean 0.40 Mbps)  
Flow 2 ingress (mean 0.38 Mbps)  
Flow 2 egress (mean 0.38 Mbps)  
Flow 3 ingress (mean 0.46 Mbps)  
Flow 3 egress (mean 0.46 Mbps)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 136.76 ms)  
Flow 2 (95th percentile 136.74 ms)  
Flow 3 (95th percentile 136.95 ms)
Run 10: Statistics of Sprout

Start at: 2018-03-14 21:53:00
End at: 2018-03-14 21:53:30

# Below is generated by plot.py at 2018-03-15 02:10:59
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.79 Mbit/s
  95th percentile per-packet one-way delay: 136.903 ms
  Loss rate: 1.38%
-- Flow 1:
  Average throughput: 0.41 Mbit/s
  95th percentile per-packet one-way delay: 136.849 ms
  Loss rate: 0.86%
-- Flow 2:
  Average throughput: 0.36 Mbit/s
  95th percentile per-packet one-way delay: 136.949 ms
  Loss rate: 0.87%
-- Flow 3:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 136.913 ms
  Loss rate: 3.71%
Run 10: Report of Sprout — Data Link

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

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 0.41 Mbit/s)
Flow 1 egress (mean 0.41 Mbit/s)
Flow 2 ingress (mean 0.36 Mbit/s)
Flow 2 egress (mean 0.36 Mbit/s)
Flow 3 ingress (mean 0.44 Mbit/s)
Flow 3 egress (mean 0.43 Mbit/s)

End-to-end one-way delay (ms)

Time (s)

Flow 1 (95th percentile 136.85 ms)
Flow 2 (95th percentile 136.95 ms)
Flow 3 (95th percentile 136.91 ms)
Run 1: Statistics of TaoVA-100x

Start at: 2018-03-14 18:51:07
End at: 2018-03-14 18:51:37

# Below is generated by plot.py at 2018-03-15 02:18:06
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 332.38 Mbit/s
  95th percentile per-packet one-way delay: 143.212 ms
  Loss rate: 1.26%
-- Flow 1:
  Average throughput: 179.09 Mbit/s
  95th percentile per-packet one-way delay: 136.828 ms
  Loss rate: 0.66%
-- Flow 2:
  Average throughput: 162.01 Mbit/s
  95th percentile per-packet one-way delay: 147.816 ms
  Loss rate: 1.64%
-- Flow 3:
  Average throughput: 140.67 Mbit/s
  95th percentile per-packet one-way delay: 154.689 ms
  Loss rate: 2.63%
Run 1: Report of TaoVA-100x — Data Link

Graphs showing throughput and per-packet one-way delay for three flows (1, 2, and 3) over time.
Run 2: Statistics of TaoVA-100x

Start at: 2018-03-14 19:11:27
End at: 2018-03-14 19:11:57

# Below is generated by plot.py at 2018-03-15 02:18:06
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 247.54 Mbit/s
  95th percentile per-packet one-way delay: 136.810 ms
  Loss rate: 0.96%
-- Flow 1:
  Average throughput: 186.37 Mbit/s
  95th percentile per-packet one-way delay: 136.700 ms
  Loss rate: 1.15%
-- Flow 2:
  Average throughput: 85.97 Mbit/s
  95th percentile per-packet one-way delay: 136.865 ms
  Loss rate: 0.18%
-- Flow 3:
  Average throughput: 13.01 Mbit/s
  95th percentile per-packet one-way delay: 135.824 ms
  Loss rate: 2.84%
Run 2: Report of TaoVA-100x — Data Link

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

- **Flow 1 ingress** (mean 186.80 Mbit/s)
- **Flow 1 egress** (mean 186.37 Mbit/s)
- **Flow 2 ingress** (mean 84.95 Mbit/s)
- **Flow 2 egress** (mean 85.97 Mbit/s)
- **Flow 3 ingress** (mean 13.02 Mbit/s)
- **Flow 3 egress** (mean 13.01 Mbit/s)

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

- **Flow 1 (95th percentile 136.70 ms)**
- **Flow 2 (95th percentile 136.87 ms)**
- **Flow 3 (95th percentile 135.82 ms)**
Run 3: Statistics of TaoVA-100x

Start at: 2018-03-14 19:31:32
End at: 2018-03-14 19:32:02

# Below is generated by plot.py at 2018-03-15 02:18:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 22.65 Mbit/s
95th percentile per-packet one-way delay: 136.820 ms
Loss rate: 1.25%
-- Flow 1:
Average throughput: 10.12 Mbit/s
95th percentile per-packet one-way delay: 136.854 ms
Loss rate: 0.66%
-- Flow 2:
Average throughput: 12.87 Mbit/s
95th percentile per-packet one-way delay: 136.719 ms
Loss rate: 1.25%
-- Flow 3:
Average throughput: 12.29 Mbit/s
95th percentile per-packet one-way delay: 136.715 ms
Loss rate: 2.72%
Run 3: Report of TaoVA-100x — Data Link

![Graph](image)
Run 4: Statistics of TaoVA-100x

Start at: 2018-03-14 19:51:11
End at: 2018-03-14 19:51:41

# Below is generated by plot.py at 2018-03-15 02:18:59
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 349.31 Mbit/s
  95th percentile per-packet one-way delay: 139.899 ms
  Loss rate: 1.10%
-- Flow 1:
  Average throughput: 180.22 Mbit/s
  95th percentile per-packet one-way delay: 137.650 ms
  Loss rate: 0.42%
-- Flow 2:
  Average throughput: 174.93 Mbit/s
  95th percentile per-packet one-way delay: 145.662 ms
  Loss rate: 0.65%
-- Flow 3:
  Average throughput: 164.27 Mbit/s
  95th percentile per-packet one-way delay: 139.560 ms
  Loss rate: 4.22%
Run 4: Report of TaoVA-100x — Data Link
Run 5: Statistics of TaoVA-100x

Start at: 2018-03-14 20:11:19
End at: 2018-03-14 20:11:49

# Below is generated by plot.py at 2018-03-15 02:18:59
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 200.67 Mbit/s
  95th percentile per-packet one-way delay: 137.039 ms
  Loss rate: 2.19%
-- Flow 1:
  Average throughput: 11.44 Mbit/s
  95th percentile per-packet one-way delay: 136.154 ms
  Loss rate: 0.50%
-- Flow 2:
  Average throughput: 199.36 Mbit/s
  95th percentile per-packet one-way delay: 137.038 ms
  Loss rate: 1.64%
-- Flow 3:
  Average throughput: 175.45 Mbit/s
  95th percentile per-packet one-way delay: 137.304 ms
  Loss rate: 3.74%
Run 5: Report of TaoVA-100x — Data Link

![Throughput and Delay Graphs]

<table>
<thead>
<tr>
<th>Throughput (Mbps)</th>
<th>Time (s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow 1 ingress (mean 11.39 Mbps)</td>
<td>0</td>
</tr>
<tr>
<td>Flow 1 egress (mean 11.44 Mbps)</td>
<td>10</td>
</tr>
<tr>
<td>Flow 2 ingress (mean 199.90 Mbps)</td>
<td>15</td>
</tr>
<tr>
<td>Flow 2 egress (mean 199.36 Mbps)</td>
<td>20</td>
</tr>
<tr>
<td>Flow 3 ingress (mean 177.28 Mbps)</td>
<td>25</td>
</tr>
<tr>
<td>Flow 3 egress (mean 175.45 Mbps)</td>
<td>30</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Per-packet one-way delay (ms)</th>
<th>Time (s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow 1 (95th percentile 136.15 ms)</td>
<td>0</td>
</tr>
<tr>
<td>Flow 2 (95th percentile 137.04 ms)</td>
<td>10</td>
</tr>
<tr>
<td>Flow 3 (95th percentile 137.30 ms)</td>
<td>15</td>
</tr>
</tbody>
</table>
Run 6: Statistics of TaoVA-100x

Start at: 2018-03-14 20:31:31
End at: 2018-03-14 20:32:01

# Below is generated by plot.py at 2018-03-15 02:18:59
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 298.63 Mbit/s
  95th percentile per-packet one-way delay: 143.280 ms
  Loss rate: 1.08%
-- Flow 1:
  Average throughput: 193.36 Mbit/s
  95th percentile per-packet one-way delay: 146.551 ms
  Loss rate: 1.05%
-- Flow 2:
  Average throughput: 119.13 Mbit/s
  95th percentile per-packet one-way delay: 137.693 ms
  Loss rate: 0.16%
-- Flow 3:
  Average throughput: 80.95 Mbit/s
  95th percentile per-packet one-way delay: 142.853 ms
  Loss rate: 3.97%
Run 6: Report of TaoVA-100x — Data Link

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

- Flow 1 ingress (mean 193.67 Mbps)
- Flow 1 egress (mean 193.36 Mbps)
- Flow 2 ingress (mean 117.69 Mbps)
- Flow 2 egress (mean 119.13 Mbps)
- Flow 3 ingress (mean 81.05 Mbps)
- Flow 3 egress (mean 80.95 Mbps)

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

- Flow 1 (95th percentile 146.55 ms)
- Flow 2 (95th percentile 137.69 ms)
- Flow 3 (95th percentile 142.85 ms)
Run 7: Statistics of TaoVA-100x

Start at: 2018-03-14 20:51:34
End at: 2018-03-14 20:52:04

# Below is generated by plot.py at 2018-03-15 02:18:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 60.09 Mbit/s
95th percentile per-packet one-way delay: 136.782 ms
Loss rate: 3.98%
-- Flow 1:
Average throughput: 13.29 Mbit/s
95th percentile per-packet one-way delay: 136.823 ms
Loss rate: 0.91%
-- Flow 2:
Average throughput: 13.18 Mbit/s
95th percentile per-packet one-way delay: 136.471 ms
Loss rate: 1.39%
-- Flow 3:
Average throughput: 117.04 Mbit/s
95th percentile per-packet one-way delay: 136.499 ms
Loss rate: 5.57%
Run 7: Report of TaoVA-100x — Data Link
Run 8: Statistics of TaoVA-100x

Start at: 2018-03-14 21:11:15
End at: 2018-03-14 21:11:45

# Below is generated by plot.py at 2018-03-15 02:18:59
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 82.64 Mbit/s
  95th percentile per-packet one-way delay: 136.803 ms
  Loss rate: 2.88%
-- Flow 1:
  Average throughput: 13.03 Mbit/s
  95th percentile per-packet one-way delay: 136.642 ms
  Loss rate: 0.94%
-- Flow 2:
  Average throughput: 13.16 Mbit/s
  95th percentile per-packet one-way delay: 137.251 ms
  Loss rate: 1.41%
-- Flow 3:
  Average throughput: 187.36 Mbit/s
  95th percentile per-packet one-way delay: 136.793 ms
  Loss rate: 3.49%
Run 8: Report of TaoVA-100x — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 13.03 Mbit/s)  Flow 1 egress (mean 13.03 Mbit/s)
Flow 2 ingress (mean 13.17 Mbit/s)  Flow 2 egress (mean 13.16 Mbit/s)
Flow 3 ingress (mean 188.83 Mbit/s)  Flow 3 egress (mean 187.36 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 136.64 ms)  Flow 2 (95th percentile 137.25 ms)  Flow 3 (95th percentile 136.79 ms)
Run 9: Statistics of TaoVA-100x

Start at: 2018-03-14 21:31:07
End at: 2018-03-14 21:31:37

# Below is generated by plot.py at 2018-03-15 02:18:59
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 179.75 Mbit/s
  95th percentile per-packet one-way delay: 137.777 ms
  Loss rate: 2.43%
-- Flow 1:
  Average throughput: 12.85 Mbit/s
  95th percentile per-packet one-way delay: 136.963 ms
  Loss rate: 0.95%
-- Flow 2:
  Average throughput: 155.96 Mbit/s
  95th percentile per-packet one-way delay: 140.700 ms
  Loss rate: 2.06%
-- Flow 3:
  Average throughput: 195.28 Mbit/s
  95th percentile per-packet one-way delay: 136.593 ms
  Loss rate: 3.31%
Run 9: Report of TaoVA-100x — Data Link

![Throughput Graph]

- Flow 1 ingress (mean 12.86 Mbit/s)
- Flow 1 egress (mean 12.85 Mbit/s)
- Flow 2 ingress (mean 157.01 Mbit/s)
- Flow 2 egress (mean 155.96 Mbit/s)
- Flow 3 ingress (mean 196.39 Mbit/s)
- Flow 3 egress (mean 195.28 Mbit/s)

![Delay Graph]

- Flow 1 (95th percentile 136.96 ms)
- Flow 2 (95th percentile 140.70 ms)
- Flow 3 (95th percentile 136.59 ms)
Run 10: Statistics of TaoVA-100x

Start at: 2018-03-14 21:51:15
End at: 2018-03-14 21:51:45

# Below is generated by plot.py at 2018-03-15 02:18:59
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 68.44 Mbit/s
  95th percentile per-packet one-way delay: 140.707 ms
  Loss rate: 0.25%
-- Flow 1:
  Average throughput: 9.00 Mbit/s
  95th percentile per-packet one-way delay: 140.647 ms
  Loss rate: 0.52%
-- Flow 2:
  Average throughput: 154.28 Mbit/s
  95th percentile per-packet one-way delay: 140.717 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 12.90 Mbit/s
  95th percentile per-packet one-way delay: 136.640 ms
  Loss rate: 2.87%
Run 10: Report of TaoVA-100x — Data Link
Run 1: Statistics of TCP Vegas

Start at: 2018-03-14 18:54:59
End at: 2018-03-14 18:55:29

# Below is generated by plot.py at 2018-03-15 02:18:59
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 142.57 Mbit/s
  95th percentile per-packet one-way delay: 144.381 ms
  Loss rate: 1.30%
-- Flow 1:
  Average throughput: 82.58 Mbit/s
  95th percentile per-packet one-way delay: 144.217 ms
  Loss rate: 0.99%
-- Flow 2:
  Average throughput: 79.43 Mbit/s
  95th percentile per-packet one-way delay: 144.504 ms
  Loss rate: 1.53%
-- Flow 3:
  Average throughput: 24.97 Mbit/s
  95th percentile per-packet one-way delay: 146.500 ms
  Loss rate: 2.90%
Run 1: Report of TCP Vegas — Data Link
Run 2: Statistics of TCP Vegas

Start at: 2018-03-14 19:15:10
End at: 2018-03-14 19:15:40

# Below is generated by plot.py at 2018-03-15 02:18:59
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 131.91 Mbit/s
  95th percentile per-packet one-way delay: 148.834 ms
  Loss rate: 1.18%
-- Flow 1:
  Average throughput: 70.49 Mbit/s
  95th percentile per-packet one-way delay: 148.118 ms
  Loss rate: 0.60%
-- Flow 2:
  Average throughput: 78.96 Mbit/s
  95th percentile per-packet one-way delay: 149.791 ms
  Loss rate: 1.56%
-- Flow 3:
  Average throughput: 28.84 Mbit/s
  95th percentile per-packet one-way delay: 140.722 ms
  Loss rate: 3.32%
Run 2: Report of TCP Vegas — Data Link
Run 3: Statistics of TCP Vegas

Start at: 2018-03-14 19:34:51
End at: 2018-03-14 19:35:21

# Below is generated by plot.py at 2018-03-15 02:18:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 157.82 Mbit/s
95th percentile per-packet one-way delay: 144.722 ms
Loss rate: 1.60%
-- Flow 1:
Average throughput: 82.04 Mbit/s
95th percentile per-packet one-way delay: 144.972 ms
Loss rate: 1.07%
-- Flow 2:
Average throughput: 79.85 Mbit/s
95th percentile per-packet one-way delay: 144.094 ms
Loss rate: 1.52%
-- Flow 3:
Average throughput: 71.02 Mbit/s
95th percentile per-packet one-way delay: 145.030 ms
Loss rate: 3.62%
Run 3: Report of TCP Vegas — Data Link

![Graph of Throughput (Mbps) over Time (s)](image)

- Flow 1 ingress (mean 82.17 Mbps)
- Flow 1 egress (mean 82.04 Mbps)
- Flow 2 ingress (mean 79.99 Mbps)
- Flow 2 egress (mean 79.85 Mbps)
- Flow 3 ingress (mean 71.70 Mbps)
- Flow 3 egress (mean 71.02 Mbps)

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

- Flow 1 (95th percentile 144.97 ms)
- Flow 2 (95th percentile 144.09 ms)
- Flow 3 (95th percentile 145.03 ms)

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Run 4: Statistics of TCP Vegas

Start at: 2018-03-14 19:55:05
End at: 2018-03-14 19:55:35

# Below is generated by plot.py at 2018-03-15 02:18:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.53 Mbit/s
95th percentile per-packet one-way delay: 144.154 ms
Loss rate: 1.80%
-- Flow 1:
Average throughput: 34.50 Mbit/s
95th percentile per-packet one-way delay: 143.332 ms
Loss rate: 0.92%
-- Flow 2:
Average throughput: 40.01 Mbit/s
95th percentile per-packet one-way delay: 141.011 ms
Loss rate: 1.52%
-- Flow 3:
Average throughput: 72.32 Mbit/s
95th percentile per-packet one-way delay: 145.926 ms
Loss rate: 3.36%
Run 4: Report of TCP Vegas — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 34.49 Mbit/s)
Flow 1 egress (mean 34.50 Mbit/s)
Flow 2 ingress (mean 40.07 Mbit/s)
Flow 2 egress (mean 40.01 Mbit/s)
Flow 3 ingress (mean 72.79 Mbit/s)
Flow 3 egress (mean 72.32 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 143.33 ms)
Flow 2 (95th percentile 141.01 ms)
Flow 3 (95th percentile 145.93 ms)
Run 5: Statistics of TCP Vegas

Start at: 2018-03-14 20:14:57
End at: 2018-03-14 20:15:27

# Below is generated by plot.py at 2018-03-15 02:18:59
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 109.71 Mbit/s
  95th percentile per-packet one-way delay: 146.417 ms
  Loss rate: 1.31%
  -- Flow 1:
  Average throughput: 36.41 Mbit/s
  95th percentile per-packet one-way delay: 146.397 ms
  Loss rate: 0.93%
  -- Flow 2:
  Average throughput: 75.56 Mbit/s
  95th percentile per-packet one-way delay: 145.823 ms
  Loss rate: 0.58%
  -- Flow 3:
  Average throughput: 71.43 Mbit/s
  95th percentile per-packet one-way delay: 147.772 ms
  Loss rate: 3.39%
Run 5: Report of TCP Vegas — Data Link
Run 6: Statistics of TCP Vegas

Start at: 2018-03-14 20:35:20
End at: 2018-03-14 20:35:50

# Below is generated by plot.py at 2018-03-15 02:19:15
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 103.56 Mbit/s
  95th percentile per-packet one-way delay: 148.156 ms
  Loss rate: 1.56%
-- Flow 1:
  Average throughput: 80.12 Mbit/s
  95th percentile per-packet one-way delay: 147.993 ms
  Loss rate: 1.00%
-- Flow 2:
  Average throughput: 1.41 Mbit/s
  95th percentile per-packet one-way delay: 142.227 ms
  Loss rate: 3.31%
-- Flow 3:
  Average throughput: 70.24 Mbit/s
  95th percentile per-packet one-way delay: 149.026 ms
  Loss rate: 3.41%
Run 6: Report of TCP Vegas — Data Link

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

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

- **Flow 1 ingress (mean 80.20 Mbit/s)**
- **Flow 1 egress (mean 80.12 Mbit/s)**
- **Flow 2 ingress (mean 1.44 Mbit/s)**
- **Flow 2 egress (mean 1.41 Mbit/s)**
- **Flow 3 ingress (mean 70.74 Mbit/s)**
- **Flow 3 egress (mean 70.24 Mbit/s)**
Run 7: Statistics of TCP Vegas

Start at: 2018-03-14 20:54:57
End at: 2018-03-14 20:55:27

# Below is generated by plot.py at 2018-03-15 02:19:48
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 130.33 Mbit/s
  95th percentile per-packet one-way delay: 148.463 ms
  Loss rate: 1.41%
-- Flow 1:
  Average throughput: 65.37 Mbit/s
  95th percentile per-packet one-way delay: 143.287 ms
  Loss rate: 1.00%
-- Flow 2:
  Average throughput: 78.01 Mbit/s
  95th percentile per-packet one-way delay: 149.559 ms
  Loss rate: 1.70%
-- Flow 3:
  Average throughput: 41.26 Mbit/s
  95th percentile per-packet one-way delay: 155.762 ms
  Loss rate: 2.27%
Run 7: Report of TCP Vegas — Data Link

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

Start at: 2018-03-14 21:14:40
End at: 2018-03-14 21:15:10

# Below is generated by plot.py at 2018-03-15 02:19:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.89 Mbit/s
95th percentile per-packet one-way delay: 145.325 ms
Loss rate: 1.49%
-- Flow 1:
Average throughput: 51.76 Mbit/s
95th percentile per-packet one-way delay: 141.291 ms
Loss rate: 0.60%
-- Flow 2:
Average throughput: 31.46 Mbit/s
95th percentile per-packet one-way delay: 142.324 ms
Loss rate: 1.46%
-- Flow 3:
Average throughput: 69.84 Mbit/s
95th percentile per-packet one-way delay: 147.999 ms
Loss rate: 3.51%
Run 8: Report of TCP Vegas — Data Link
Run 9: Statistics of TCP Vegas

Start at: 2018-03-14 21:34:42
End at: 2018-03-14 21:35:12

# Below is generated by plot.py at 2018-03-15 02:20:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 134.68 Mbit/s
  95th percentile per-packet one-way delay: 146.498 ms
  Loss rate: 1.22%
-- Flow 1:
  Average throughput: 82.49 Mbit/s
  95th percentile per-packet one-way delay: 145.898 ms
  Loss rate: 1.00%
-- Flow 2:
  Average throughput: 79.70 Mbit/s
  95th percentile per-packet one-way delay: 147.073 ms
  Loss rate: 1.55%
-- Flow 3:
  Average throughput: 0.91 Mbit/s
  95th percentile per-packet one-way delay: 139.383 ms
  Loss rate: 5.18%
Run 9: Report of TCP Vegas — Data Link

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

![Graph 2: Per-packet one-way delay (ms)](image2)
Run 10: Statistics of TCP Vegas

Start at: 2018-03-14 21:54:38
End at: 2018-03-14 21:55:08

# Below is generated by plot.py at 2018-03-15 02:20:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 66.03 Mbit/s
95th percentile per-packet one-way delay: 146.215 ms
Loss rate: 1.32%
-- Flow 1:
Average throughput: 50.18 Mbit/s
95th percentile per-packet one-way delay: 146.497 ms
Loss rate: 0.65%
-- Flow 2:
Average throughput: 1.42 Mbit/s
95th percentile per-packet one-way delay: 136.274 ms
Loss rate: 3.24%
-- Flow 3:
Average throughput: 45.90 Mbit/s
95th percentile per-packet one-way delay: 139.007 ms
Loss rate: 3.41%
Run 10: Report of TCP Vegas — Data Link
Run 1: Statistics of Verus

Start at: 2018-03-14 19:01:59
End at: 2018-03-14 19:02:29

# Below is generated by plot.py at 2018-03-15 02:22:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 186.15 Mbit/s
95th percentile per-packet one-way delay: 254.398 ms
Loss rate: 3.41%
-- Flow 1:
Average throughput: 80.59 Mbit/s
95th percentile per-packet one-way delay: 203.549 ms
Loss rate: 1.14%
-- Flow 2:
Average throughput: 151.91 Mbit/s
95th percentile per-packet one-way delay: 299.907 ms
Loss rate: 5.02%
-- Flow 3:
Average throughput: 15.63 Mbit/s
95th percentile per-packet one-way delay: 187.934 ms
Loss rate: 5.91%
Run 1: Report of Verus — Data Link

![Throughput Graph]

- **Flow 1 ingress** (mean 80.76 Mbit/s)
- **Flow 1 egress** (mean 80.59 Mbit/s)
- **Flow 2 ingress** (mean 157.76 Mbit/s)
- **Flow 2 egress** (mean 151.91 Mbit/s)
- **Flow 3 ingress** (mean 16.01 Mbit/s)
- **Flow 3 egress** (mean 15.63 Mbit/s)

![Packet Delay Graph]

- **Flow 1** (95th percentile 203.55 ms)
- **Flow 2** (95th percentile 299.91 ms)
- **Flow 3** (95th percentile 187.93 ms)

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Run 2: Statistics of Verus

Start at: 2018-03-14 19:21:57
End at: 2018-03-14 19:22:27

# Below is generated by plot.py at 2018-03-15 02:23:23
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 237.30 Mbit/s
  95th percentile per-packet one-way delay: 230.684 ms
  Loss rate: 1.54%
-- Flow 1:
  Average throughput: 155.94 Mbit/s
  95th percentile per-packet one-way delay: 225.684 ms
  Loss rate: 1.96%
-- Flow 2:
  Average throughput: 111.49 Mbit/s
  95th percentile per-packet one-way delay: 233.461 ms
  Loss rate: 0.72%
-- Flow 3:
  Average throughput: 27.41 Mbit/s
  95th percentile per-packet one-way delay: 287.933 ms
  Loss rate: 1.08%
Run 2: Report of Verus — Data Link

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**Throughput (Mbps)**

- Blue dashed line: Flow 1 ingress (mean 156.39 Mbps)
- Blue solid line: Flow 1 egress (mean 155.94 Mbps)
- Green dashed line: Flow 2 ingress (mean 110.75 Mbps)
- Green solid line: Flow 2 egress (mean 111.49 Mbps)
- Gray dashed line: Flow 3 ingress (mean 26.91 Mbps)
- Gray solid line: Flow 3 egress (mean 27.41 Mbps)

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

- Red circle: Flow 1 (95th percentile 225.68 ms)
- Green circle: Flow 2 (95th percentile 233.46 ms)
- Black circle: Flow 3 (95th percentile 287.93 ms)
Run 3: Statistics of Verus

Start at: 2018-03-14 19:41:48
End at: 2018-03-14 19:42:18

# Below is generated by plot.py at 2018-03-15 02:23:23
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 164.86 Mbit/s
  95th percentile per-packet one-way delay: 241.849 ms
  Loss rate: 3.03%
-- Flow 1:
  Average throughput: 108.87 Mbit/s
  95th percentile per-packet one-way delay: 176.291 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 44.95 Mbit/s
  95th percentile per-packet one-way delay: 208.203 ms
  Loss rate: 2.57%
-- Flow 3:
  Average throughput: 83.07 Mbit/s
  95th percentile per-packet one-way delay: 362.557 ms
  Loss rate: 14.19%
Run 3: Report of Verus — Data Link

![Graph](image)

Flow 1 ingress (mean 107.83 Mbit/s)
Flow 1 egress (mean 108.87 Mbit/s)
Flow 2 ingress (mean 45.48 Mbit/s)
Flow 2 egress (mean 44.95 Mbit/s)
Flow 3 ingress (mean 92.30 Mbit/s)
Flow 3 egress (mean 83.07 Mbit/s)

![Graph](image)

Flow 1 (95th percentile 176.29 ms)
Flow 2 (95th percentile 208.20 ms)
Flow 3 (95th percentile 362.56 ms)
Run 4: Statistics of Verus

Start at: 2018-03-14 20:01:45
End at: 2018-03-14 20:02:15

# Below is generated by plot.py at 2018-03-15 02:25:17
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 270.67 Mbit/s
  95th percentile per-packet one-way delay: 334.613 ms
  Loss rate: 6.85%
-- Flow 1:
  Average throughput: 139.81 Mbit/s
  95th percentile per-packet one-way delay: 263.445 ms
  Loss rate: 3.65%
-- Flow 2:
  Average throughput: 141.72 Mbit/s
  95th percentile per-packet one-way delay: 387.123 ms
  Loss rate: 12.46%
-- Flow 3:
  Average throughput: 117.72 Mbit/s
  95th percentile per-packet one-way delay: 247.091 ms
  Loss rate: 3.37%
Run 4: Report of Verus — Data Link

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

Graph 1: Throughput vs Time (Mbit/s)
- Flow 1 ingress (mean 144.07 Mbit/s)
- Flow 1 egress (mean 139.81 Mbit/s)
- Flow 2 ingress (mean 163.40 Mbit/s)
- Flow 2 egress (mean 141.72 Mbit/s)
- Flow 3 ingress (mean 116.85 Mbit/s)
- Flow 3 egress (mean 117.72 Mbit/s)

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

Graph 2: Delay vs Time (ms)
- Flow 1 (95th percentile 263.44 ms)
- Flow 2 (95th percentile 387.12 ms)
- Flow 3 (95th percentile 247.09 ms)

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Run 5: Statistics of Verus

Start at: 2018-03-14 20:21:58
End at: 2018-03-14 20:22:28

# Below is generated by plot.py at 2018-03-15 02:25:17
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 187.84 Mbit/s
  95th percentile per-packet one-way delay: 290.228 ms
  Loss rate: 4.66%
-- Flow 1:
  Average throughput: 136.00 Mbit/s
  95th percentile per-packet one-way delay: 286.686 ms
  Loss rate: 5.06%
-- Flow 2:
  Average throughput: 65.66 Mbit/s
  95th percentile per-packet one-way delay: 326.363 ms
  Loss rate: 4.29%
-- Flow 3:
  Average throughput: 27.87 Mbit/s
  95th percentile per-packet one-way delay: 265.730 ms
  Loss rate: 0.17%
Run 5: Report of Verus — Data Link

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

- Flow 1 ingress (mean 142.63 Mbit/s)
- Flow 1 egress (mean 136.00 Mbit/s)
- Flow 2 ingress (mean 67.66 Mbit/s)
- Flow 2 egress (mean 65.66 Mbit/s)
- Flow 3 ingress (mean 27.14 Mbit/s)
- Flow 3 egress (mean 27.87 Mbit/s)

- Flow 1 (95th percentile 286.69 ms)
- Flow 2 (95th percentile 326.36 ms)
- Flow 3 (95th percentile 265.73 ms)
Run 6: Statistics of Verus

Start at: 2018-03-14 20:42:04
End at: 2018-03-14 20:42:35

# Below is generated by plot.py at 2018-03-15 02:26:31
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 300.78 Mbit/s
  95th percentile per-packet one-way delay: 223.943 ms
  Loss rate: 1.88%
-- Flow 1:
  Average throughput: 237.74 Mbit/s
  95th percentile per-packet one-way delay: 196.697 ms
  Loss rate: 1.17%
-- Flow 2:
  Average throughput: 74.11 Mbit/s
  95th percentile per-packet one-way delay: 294.942 ms
  Loss rate: 4.93%
-- Flow 3:
  Average throughput: 43.30 Mbit/s
  95th percentile per-packet one-way delay: 227.919 ms
  Loss rate: 2.92%
Run 6: Report of Verus — Data Link

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

Legend:
- Flow 1 ingress (mean 238.35 Mbit/s)
- Flow 1 egress (mean 237.74 Mbit/s)
- Flow 2 ingress (mean 77.30 Mbit/s)
- Flow 2 egress (mean 74.11 Mbit/s)
- Flow 3 ingress (mean 43.32 Mbit/s)
- Flow 3 egress (mean 43.30 Mbit/s)
Run 7: Statistics of Verus

Start at: 2018-03-14 21:01:40
End at: 2018-03-14 21:02:11

# Below is generated by plot.py at 2018-03-15 02:26:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 269.13 Mbit/s
95th percentile per-packet one-way delay: 352.896 ms
Loss rate: 5.18%
-- Flow 1:
Average throughput: 172.48 Mbit/s
95th percentile per-packet one-way delay: 223.424 ms
Loss rate: 1.75%
-- Flow 2:
Average throughput: 132.66 Mbit/s
95th percentile per-packet one-way delay: 378.511 ms
Loss rate: 11.46%
-- Flow 3:
Average throughput: 27.99 Mbit/s
95th percentile per-packet one-way delay: 238.961 ms
Loss rate: 2.97%
Run 7: Report of Verus — Data Link
Run 8: Statistics of Verus

Start at: 2018-03-14 21:21:36
End at: 2018-03-14 21:22:06

# Below is generated by plot.py at 2018-03-15 02:26:31
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 243.00 Mbit/s
  95th percentile per-packet one-way delay: 232.491 ms
  Loss rate: 1.06%
-- Flow 1:
  Average throughput: 160.26 Mbit/s
  95th percentile per-packet one-way delay: 203.212 ms
  Loss rate: 0.19%
-- Flow 2:
  Average throughput: 54.71 Mbit/s
  95th percentile per-packet one-way delay: 205.759 ms
  Loss rate: 1.89%
-- Flow 3:
  Average throughput: 144.16 Mbit/s
  95th percentile per-packet one-way delay: 322.856 ms
  Loss rate: 3.31%
Run 8: Report of Verus — Data Link

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**Graph 1:**
- **Y-axis:** Throughput (Mbps)
- **X-axis:** Time (s)

Legend:
- Flow 1 ingress (mean 159.80 Mbps)
- Flow 1 egress (mean 160.26 Mbps)
- Flow 2 ingress (mean 55.00 Mbps)
- Flow 2 egress (mean 54.71 Mbps)
- Flow 3 ingress (mean 143.58 Mbps)
- Flow 3 egress (mean 144.16 Mbps)

**Graph 2:**
- **Y-axis:** Per-packet one-way delay (ms)
- **X-axis:** Time (s)

Legend:
- Flow 1 (95th percentile 203.21 ms)
- Flow 2 (95th percentile 205.76 ms)
- Flow 3 (95th percentile 322.86 ms)

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Run 9: Statistics of Verus

Start at: 2018-03-14 21:41:47
End at: 2018-03-14 21:42:17

# Below is generated by plot.py at 2018-03-15 02:28:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 251.38 Mbit/s
95th percentile per-packet one-way delay: 231.029 ms
Loss rate: 3.29%
-- Flow 1:
Average throughput: 152.42 Mbit/s
95th percentile per-packet one-way delay: 201.071 ms
Loss rate: 3.60%
-- Flow 2:
Average throughput: 104.89 Mbit/s
95th percentile per-packet one-way delay: 216.681 ms
Loss rate: 2.31%
-- Flow 3:
Average throughput: 90.83 Mbit/s
95th percentile per-packet one-way delay: 240.374 ms
Loss rate: 3.94%
Run 9: Report of Verus — Data Link
Run 10: Statistics of Verus

Start at: 2018-03-14 22:01:26
End at: 2018-03-14 22:01:56

# Below is generated by plot.py at 2018-03-15 02:28:09
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 174.42 Mbit/s
  95th percentile per-packet one-way delay: 353.089 ms
  Loss rate: 6.68%
-- Flow 1:
  Average throughput: 118.28 Mbit/s
  95th percentile per-packet one-way delay: 362.156 ms
  Loss rate: 8.48%
-- Flow 2:
  Average throughput: 37.74 Mbit/s
  95th percentile per-packet one-way delay: 164.035 ms
  Loss rate: 0.34%
-- Flow 3:
  Average throughput: 98.84 Mbit/s
  95th percentile per-packet one-way delay: 238.914 ms
  Loss rate: 4.48%
Run 10: Report of Verus — Data Link

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

- Flow 1 ingress (mean 127.31 Mbit/s)
- Flow 1 egress (mean 118.28 Mbit/s)
- Flow 2 ingress (mean 36.97 Mbit/s)
- Flow 2 egress (mean 37.74 Mbit/s)
- Flow 3 ingress (mean 100.63 Mbit/s)
- Flow 3 egress (mean 98.84 Mbit/s)

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

- Flow 1 (95th percentile 362.16 ms)
- Flow 2 (95th percentile 164.03 ms)
- Flow 3 (95th percentile 238.91 ms)
Run 1: Statistics of Copa

Start at: 2018-03-14 18:47:03
End at: 2018-03-14 18:47:33

# Below is generated by plot.py at 2018-03-15 02:28:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 132.62 Mbit/s
95th percentile per-packet one-way delay: 136.287 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 66.18 Mbit/s
95th percentile per-packet one-way delay: 136.047 ms
Loss rate: 0.61%
-- Flow 2:
Average throughput: 66.05 Mbit/s
95th percentile per-packet one-way delay: 136.430 ms
Loss rate: 1.04%
-- Flow 3:
Average throughput: 69.83 Mbit/s
95th percentile per-packet one-way delay: 135.953 ms
Loss rate: 0.30%
Run 1: Report of Copa — Data Link

![Graph of data link throughput and packet delay](image-url)
Run 2: Statistics of Copa

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

# Below is generated by plot.py at 2018-03-15 02:28:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 120.02 Mbit/s
95th percentile per-packet one-way delay: 136.566 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 66.49 Mbit/s
95th percentile per-packet one-way delay: 136.508 ms
Loss rate: 0.74%
-- Flow 2:
Average throughput: 65.66 Mbit/s
95th percentile per-packet one-way delay: 139.755 ms
Loss rate: 0.20%
-- Flow 3:
Average throughput: 30.81 Mbit/s
95th percentile per-packet one-way delay: 135.529 ms
Loss rate: 3.67%
Run 2: Report of Copa — Data Link
Run 3: Statistics of Copa

Start at: 2018-03-14 19:27:20
End at: 2018-03-14 19:27:50

# Below is generated by plot.py at 2018-03-15 02:30:43
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 128.74 Mbit/s
  95th percentile per-packet one-way delay: 136.972 ms
  Loss rate: 1.06%
-- Flow 1:
  Average throughput: 70.31 Mbit/s
  95th percentile per-packet one-way delay: 137.012 ms
  Loss rate: 0.21%
-- Flow 2:
  Average throughput: 69.45 Mbit/s
  95th percentile per-packet one-way delay: 136.915 ms
  Loss rate: 1.46%
-- Flow 3:
  Average throughput: 38.21 Mbit/s
  95th percentile per-packet one-way delay: 136.847 ms
  Loss rate: 4.20%
Run 3: Report of Copa — Data Link

---

**Graph 1:**
- **X-axis:** Time (s)
- **Y-axis:** Throughput (Mbit/s)
- **Legend:**
  - Flow 1 ingress (mean 69.82 Mbit/s)
  - Flow 1 egress (mean 70.31 Mbit/s)
  - Flow 2 ingress (mean 69.51 Mbit/s)
  - Flow 2 egress (mean 69.45 Mbit/s)
  - Flow 3 ingress (mean 38.78 Mbit/s)
  - Flow 3 egress (mean 38.21 Mbit/s)

**Graph 2:**
- **X-axis:** Time (s)
- **Y-axis:** Per-packet one-way delay (μs)
- **Legend:**
  - Flow 1 (95th percentile 137.01 ms)
  - Flow 2 (95th percentile 136.91 ms)
  - Flow 3 (95th percentile 136.85 ms)
Run 4: Statistics of Copa

Start at: 2018-03-14 19:47:03
End at: 2018-03-14 19:47:33

# Below is generated by plot.py at 2018-03-15 02:31:14
# Datalink statistics
-- Total of 3 flows:
 Average throughput: 129.41 Mbit/s
 95th percentile per-packet one-way delay: 136.872 ms
 Loss rate: 1.28%
-- Flow 1:
 Average throughput: 59.70 Mbit/s
 95th percentile per-packet one-way delay: 136.919 ms
 Loss rate: 0.43%
-- Flow 2:
 Average throughput: 72.03 Mbit/s
 95th percentile per-packet one-way delay: 136.706 ms
 Loss rate: 1.71%
-- Flow 3:
 Average throughput: 67.51 Mbit/s
 95th percentile per-packet one-way delay: 136.493 ms
 Loss rate: 2.62%
Run 4: Report of Copa — Data Link

---

**Graph 1:**
- **Y-axis:** Throughput (Mbps)
- **X-axis:** Time (s)
- Lines represent:
  - Flow 1 Ingress (mean 59.40 Mbps)
  - Flow 1 Egress (mean 59.70 Mbps)
  - Flow 2 Ingress (mean 72.28 Mbps)
  - Flow 2 Egress (mean 72.05 Mbps)
  - Flow 3 Ingress (mean 67.40 Mbps)
  - Flow 3 Egress (mean 67.51 Mbps)

**Graph 2:**
- **Y-axis:** Per-packet one-way delay (ms)
- **X-axis:** Time (s)
- Points represent:
  - Flow 1 (95th percentile 136.92 ms)
  - Flow 2 (95th percentile 136.71 ms)
  - Flow 3 (95th percentile 136.49 ms)
Run 5: Statistics of Copa

Start at: 2018-03-14 20:07:11
End at: 2018-03-14 20:07:41

# Below is generated by plot.py at 2018-03-15 02:31:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 129.03 Mbit/s
95th percentile per-packet one-way delay: 140.950 ms
Loss rate: 1.09%
-- Flow 1:
Average throughput: 65.49 Mbit/s
95th percentile per-packet one-way delay: 141.001 ms
Loss rate: 0.15%
-- Flow 2:
Average throughput: 67.87 Mbit/s
95th percentile per-packet one-way delay: 135.818 ms
Loss rate: 1.00%
-- Flow 3:
Average throughput: 57.32 Mbit/s
95th percentile per-packet one-way delay: 136.051 ms
Loss rate: 4.46%
Run 5: Report of Copa — Data Link

![Throughput Graph](image1)

![Per-packet Delay Graph](image2)

- Flow 1 ingress (mean 64.99 Mbit/s)
- Flow 1 egress (mean 65.49 Mbit/s)
- Flow 2 ingress (mean 67.62 Mbit/s)
- Flow 2 egress (mean 67.87 Mbit/s)
- Flow 3 ingress (mean 56.35 Mbit/s)
- Flow 3 egress (mean 57.32 Mbit/s)

- Flow 1 (95th percentile 141.00 ms)
- Flow 2 (95th percentile 135.82 ms)
- Flow 3 (95th percentile 136.05 ms)
Run 6: Statistics of Copa

Start at: 2018-03-14 20:27:21
End at: 2018-03-14 20:27:51

# Below is generated by plot.py at 2018-03-15 02:31:38
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 125.50 Mbit/s
  95th percentile per-packet one-way delay: 139.034 ms
  Loss rate: 1.88%
-- Flow 1:
  Average throughput: 62.85 Mbit/s
  95th percentile per-packet one-way delay: 139.103 ms
  Loss rate: 0.65%
-- Flow 2:
  Average throughput: 61.27 Mbit/s
  95th percentile per-packet one-way delay: 135.823 ms
  Loss rate: 2.63%
-- Flow 3:
  Average throughput: 67.82 Mbit/s
  95th percentile per-packet one-way delay: 135.660 ms
  Loss rate: 3.93%
Run 7: Statistics of Copa

Start at: 2018-03-14 20:47:28
End at: 2018-03-14 20:47:58

# Below is generated by plot.py at 2018-03-15 02:31:38
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 115.15 Mbit/s
  95th percentile per-packet one-way delay: 136.772 ms
  Loss rate: 1.61%
-- Flow 1:
  Average throughput: 55.63 Mbit/s
  95th percentile per-packet one-way delay: 136.466 ms
  Loss rate: 0.86%
-- Flow 2:
  Average throughput: 70.80 Mbit/s
  95th percentile per-packet one-way delay: 136.486 ms
  Loss rate: 1.55%
-- Flow 3:
  Average throughput: 38.72 Mbit/s
  95th percentile per-packet one-way delay: 137.135 ms
  Loss rate: 4.96%
Run 7: Report of Copa — Data Link

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

- **Flow 1 ingress (mean 55.60 Mbps)**
- **Flow 1 egress (mean 55.63 Mbps)**
- **Flow 2 ingress (mean 70.92 Mbps)**
- **Flow 2 egress (mean 70.80 Mbps)**
- **Flow 3 ingress (mean 39.62 Mbps)**
- **Flow 3 egress (mean 38.72 Mbps)**

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

- **Flow 1 (95th percentile 136.47 ms)**
- **Flow 2 (95th percentile 136.49 ms)**
- **Flow 3 (95th percentile 137.13 ms)**
Run 8: Statistics of Copa

Start at: 2018-03-14 21:07:05
End at: 2018-03-14 21:07:35

# Below is generated by plot.py at 2018-03-15 02:33:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 125.43 Mbit/s
95th percentile per-packet one-way delay: 136.745 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 64.95 Mbit/s
95th percentile per-packet one-way delay: 136.679 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 60.88 Mbit/s
95th percentile per-packet one-way delay: 136.791 ms
Loss rate: 0.55%
-- Flow 3:
Average throughput: 61.91 Mbit/s
95th percentile per-packet one-way delay: 136.705 ms
Loss rate: 4.44%
Run 8: Report of Copa — Data Link

![Graphs showing throughput and packet one-way delay over time for different flows.](image-url)
Run 9: Statistics of Copa

Start at: 2018-03-14 21:26:57
End at: 2018-03-14 21:27:27

# Below is generated by plot.py at 2018-03-15 02:34:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 133.09 Mbit/s
95th percentile per-packet one-way delay: 136.190 ms
Loss rate: 1.23%
-- Flow 1:
Average throughput: 69.11 Mbit/s
95th percentile per-packet one-way delay: 135.833 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 62.26 Mbit/s
95th percentile per-packet one-way delay: 136.339 ms
Loss rate: 1.55%
-- Flow 3:
Average throughput: 69.82 Mbit/s
95th percentile per-packet one-way delay: 135.698 ms
Loss rate: 3.27%
Run 9: Report of Copa — Data Link

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

![Graph 2: Per-packet one-way delay over Time](image2)
Run 10: Statistics of Copa

Start at: 2018-03-14 21:47:07
End at: 2018-03-14 21:47:37

# Below is generated by plot.py at 2018-03-15 02:34:00
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 116.36 Mbit/s
  95th percentile per-packet one-way delay: 136.868 ms
  Loss rate: 0.97%
-- Flow 1:
  Average throughput: 44.34 Mbit/s
  95th percentile per-packet one-way delay: 136.759 ms
  Loss rate: 0.59%
-- Flow 2:
  Average throughput: 76.27 Mbit/s
  95th percentile per-packet one-way delay: 136.943 ms
  Loss rate: 1.33%
-- Flow 3:
  Average throughput: 66.06 Mbit/s
  95th percentile per-packet one-way delay: 135.833 ms
  Loss rate: 0.86%
Run 10: Report of Copa — Data Link

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

- Flow 1 ingress (mean 44.16 Mbit/s)
- Flow 1 egress (mean 44.34 Mbit/s)
- Flow 2 ingress (mean 76.24 Mbit/s)
- Flow 2 egress (mean 76.27 Mbit/s)
- Flow 3 ingress (mean 64.80 Mbit/s)
- Flow 3 egress (mean 66.06 Mbit/s)
Run 1: Statistics of FillP

Start at: 2018-03-14 18:42:43
End at: 2018-03-14 18:43:13

# Below is generated by plot.py at 2018-03-15 03:04:27
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1368.11 Mbit/s
  95th percentile per-packet one-way delay: 249.936 ms
  Loss rate: 13.70%
-- Flow 1:
  Average throughput: 720.94 Mbit/s
  95th percentile per-packet one-way delay: 238.812 ms
  Loss rate: 11.73%
-- Flow 2:
  Average throughput: 691.88 Mbit/s
  95th percentile per-packet one-way delay: 253.469 ms
  Loss rate: 14.59%
-- Flow 3:
  Average throughput: 581.72 Mbit/s
  95th percentile per-packet one-way delay: 261.939 ms
  Loss rate: 18.61%
Run 1: Report of FillP — Data Link

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

Legend:
- Flow 1 ingress (mean 809.24 Mb/s)
- Flow 1 egress (mean 720.94 Mb/s)
- Flow 2 ingress (mean 798.87 Mb/s)
- Flow 2 egress (mean 693.88 Mb/s)
- Flow 3 ingress (mean 694.71 Mb/s)
- Flow 3 egress (mean 581.72 Mb/s)
Run 2: Statistics of FillP

Start at: 2018-03-14 19:03:05
End at: 2018-03-14 19:03:35

# Below is generated by plot.py at 2018-03-15 03:04:27
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1291.18 Mbit/s
  95th percentile per-packet one-way delay: 249.485 ms
  Loss rate: 14.55%
-- Flow 1:
  Average throughput: 677.20 Mbit/s
  95th percentile per-packet one-way delay: 245.564 ms
  Loss rate: 12.70%
-- Flow 2:
  Average throughput: 619.58 Mbit/s
  95th percentile per-packet one-way delay: 254.967 ms
  Loss rate: 16.48%
-- Flow 3:
  Average throughput: 626.38 Mbit/s
  95th percentile per-packet one-way delay: 258.176 ms
  Loss rate: 16.54%
Run 2: Report of FillP — Data Link

![Graph of Throughput vs Time for different flows]

- Flow 1 ingress (mean 768.78 Mb/s)
- Flow 1 egress (mean 677.20 Mb/s)
- Flow 2 ingress (mean 731.67 Mb/s)
- Flow 2 egress (mean 619.58 Mb/s)
- Flow 3 ingress (mean 729.69 Mb/s)
- Flow 3 egress (mean 626.38 Mb/s)

![Graph of Delay vs Time for different flows]

- Flow 1 (95th percentile 245.56 ms)
- Flow 2 (95th percentile 254.97 ms)
- Flow 3 (95th percentile 250.18 ms)
Run 3: Statistics of FillP

Start at: 2018-03-14 19:23:07
End at: 2018-03-14 19:23:37

# Below is generated by plot.py at 2018-03-15 03:04:48
# Datalink statistics
-- Total of 3 flows:
   Average throughput: 1354.84 Mbit/s
   95th percentile per-packet one-way delay: 239.034 ms
   Loss rate: 12.91%
   -- Flow 1:
      Average throughput: 706.10 Mbit/s
      95th percentile per-packet one-way delay: 233.787 ms
      Loss rate: 11.87%
   -- Flow 2:
      Average throughput: 651.11 Mbit/s
      95th percentile per-packet one-way delay: 243.601 ms
      Loss rate: 15.01%
   -- Flow 3:
      Average throughput: 669.62 Mbit/s
      95th percentile per-packet one-way delay: 246.521 ms
      Loss rate: 11.93%
Run 3: Report of FillP — Data Link
Run 4: Statistics of FillP

Start at: 2018-03-14 19:42:52
End at: 2018-03-14 19:43:22

# Below is generated by plot.py at 2018-03-15 03:04:48
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1240.34 Mbit/s
  95th percentile per-packet one-way delay: 365.125 ms
  Loss rate: 14.03%
-- Flow 1:
  Average throughput: 671.41 Mbit/s
  95th percentile per-packet one-way delay: 246.542 ms
  Loss rate: 13.33%
-- Flow 2:
  Average throughput: 586.58 Mbit/s
  95th percentile per-packet one-way delay: 376.985 ms
  Loss rate: 16.65%
-- Flow 3:
  Average throughput: 555.82 Mbit/s
  95th percentile per-packet one-way delay: 387.773 ms
  Loss rate: 10.66%
Run 4: Report of FillP — Data Link
Run 5: Statistics of FillP

Start at: 2018-03-14 20:02:58
End at: 2018-03-14 20:03:28

# Below is generated by plot.py at 2018-03-15 03:04:48
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1339.95 Mbit/s
  95th percentile per-packet one-way delay: 254.599 ms
  Loss rate: 14.04%
-- Flow 1:
  Average throughput: 699.84 Mbit/s
  95th percentile per-packet one-way delay: 241.164 ms
  Loss rate: 13.01%
-- Flow 2:
  Average throughput: 658.28 Mbit/s
  95th percentile per-packet one-way delay: 254.784 ms
  Loss rate: 14.33%
-- Flow 3:
  Average throughput: 629.31 Mbit/s
  95th percentile per-packet one-way delay: 291.080 ms
  Loss rate: 16.79%
Run 5: Report of FillP — Data Link

![Graph 1: Throughput (Mb/s)](image1)

![Graph 2: Per-packet end-to-end delay (ms)](image2)
Run 6: Statistics of FillP

Start at: 2018-03-14 20:23:04
End at: 2018-03-14 20:23:34

# Below is generated by plot.py at 2018-03-15 03:06:38
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1325.10 Mbit/s
  95th percentile per-packet one-way delay: 253.567 ms
  Loss rate: 15.11%
-- Flow 1:
  Average throughput: 686.68 Mbit/s
  95th percentile per-packet one-way delay: 251.868 ms
  Loss rate: 14.32%
-- Flow 2:
  Average throughput: 639.00 Mbit/s
  95th percentile per-packet one-way delay: 253.515 ms
  Loss rate: 16.65%
-- Flow 3:
  Average throughput: 661.40 Mbit/s
  95th percentile per-packet one-way delay: 258.001 ms
  Loss rate: 14.54%
Run 6: Report of FillP — Data Link
Run 7: Statistics of FillP

Start at: 2018-03-14 20:43:19
End at: 2018-03-14 20:43:49

# Below is generated by plot.py at 2018-03-15 03:06:38
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1285.67 Mbit/s
  95th percentile per-packet one-way delay: 366.039 ms
  Loss rate: 13.79%
-- Flow 1:
  Average throughput: 679.67 Mbit/s
  95th percentile per-packet one-way delay: 310.905 ms
  Loss rate: 13.38%
-- Flow 2:
  Average throughput: 667.81 Mbit/s
  95th percentile per-packet one-way delay: 365.025 ms
  Loss rate: 11.38%
-- Flow 3:
  Average throughput: 503.39 Mbit/s
  95th percentile per-packet one-way delay: 428.786 ms
  Loss rate: 21.10%
Run 7: Report of FillP — Data Link

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

![Graph 2: Delay vs Time](image2)
Run 8: Statistics of FillP

Start at: 2018-03-14 21:02:54
End at: 2018-03-14 21:03:24

# Below is generated by plot.py at 2018-03-15 03:07:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1313.58 Mbit/s
95th percentile per-packet one-way delay: 247.257 ms
Loss rate: 14.83%
-- Flow 1:
Average throughput: 676.70 Mbit/s
95th percentile per-packet one-way delay: 241.092 ms
Loss rate: 13.87%
-- Flow 2:
Average throughput: 665.89 Mbit/s
95th percentile per-packet one-way delay: 246.514 ms
Loss rate: 14.27%
-- Flow 3:
Average throughput: 604.07 Mbit/s
95th percentile per-packet one-way delay: 259.674 ms
Loss rate: 19.16%
Run 8: Report of FillP — Data Link

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

- Flow 1 ingress (mean 778.44 Mbps/s)
- Flow 1 egress (mean 676.70 Mbps/s)
- Flow 2 ingress (mean 765.95 Mbps/s)
- Flow 2 egress (mean 665.89 Mbps/s)
- Flow 3 ingress (mean 726.35 Mbps/s)
- Flow 3 egress (mean 604.07 Mbps/s)

![Graph 2: Per packet error vs Time (s)]

- Flow 1 (95th percentile 241.09 ms)
- Flow 2 (95th percentile 246.51 ms)
- Flow 3 (95th percentile 259.67 ms)
Run 9: Statistics of FillP

Start at: 2018-03-14 21:22:46
End at: 2018-03-14 21:23:16

# Below is generated by plot.py at 2018-03-15 03:36:41
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1342.56 Mbit/s
  95th percentile per-packet one-way delay: 246.677 ms
  Loss rate: 12.85%
  -- Flow 1:
  Average throughput: 681.31 Mbit/s
  95th percentile per-packet one-way delay: 243.363 ms
  Loss rate: 12.48%
  -- Flow 2:
  Average throughput: 694.02 Mbit/s
  95th percentile per-packet one-way delay: 244.536 ms
  Loss rate: 12.16%
  -- Flow 3:
  Average throughput: 619.89 Mbit/s
  95th percentile per-packet one-way delay: 264.084 ms
  Loss rate: 15.58%
Run 9: Report of FillP — Data Link
Run 10: Statistics of FillIP

Start at: 2018-03-14 21:42:58
End at: 2018-03-14 21:43:28

# Below is generated by plot.py at 2018-03-15 03:36:41
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1284.51 Mbit/s
  95th percentile per-packet one-way delay: 257.817 ms
  Loss rate: 15.23%
-- Flow 1:
  Average throughput: 687.04 Mbit/s
  95th percentile per-packet one-way delay: 241.176 ms
  Loss rate: 12.58%
-- Flow 2:
  Average throughput: 612.62 Mbit/s
  95th percentile per-packet one-way delay: 266.245 ms
  Loss rate: 16.68%
-- Flow 3:
  Average throughput: 590.59 Mbit/s
  95th percentile per-packet one-way delay: 268.293 ms
  Loss rate: 20.93%
Run 10: Report of FillIP — Data Link
Run 1: Statistics of Indigo-1-32

Start at: 2018-03-14 18:59:56
End at: 2018-03-14 19:00:26

# Below is generated by plot.py at 2018-03-15 03:36:41
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 291.31 Mbit/s
  95th percentile per-packet one-way delay: 138.607 ms
  Loss rate: 1.54%
-- Flow 1:
  Average throughput: 132.56 Mbit/s
  95th percentile per-packet one-way delay: 137.969 ms
  Loss rate: 0.95%
-- Flow 2:
  Average throughput: 165.69 Mbit/s
  95th percentile per-packet one-way delay: 138.337 ms
  Loss rate: 1.38%
-- Flow 3:
  Average throughput: 152.93 Mbit/s
  95th percentile per-packet one-way delay: 140.960 ms
  Loss rate: 3.41%
Run 1: Report of Indigo-1-32 — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 132.59 Mbps)
  - Flow 1 egress (mean 132.56 Mbps)
  - Flow 2 ingress (mean 165.68 Mbps)
  - Flow 2 egress (mean 165.69 Mbps)
  - Flow 3 ingress (mean 153.90 Mbps)
  - Flow 3 egress (mean 152.93 Mbps)

- **Packet Delay (ms):**
  - Flow 1 (95th percentile 137.97 ms)
  - Flow 2 (95th percentile 138.34 ms)
  - Flow 3 (95th percentile 140.96 ms)
Run 2: Statistics of Indigo-1-32

Start at: 2018-03-14 19:19:56
End at: 2018-03-14 19:20:26

# Below is generated by plot.py at 2018-03-15 03:36:42
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 272.47 Mbit/s
  95th percentile per-packet one-way delay: 137.493 ms
  Loss rate: 1.58%
-- Flow 1:
  Average throughput: 133.06 Mbit/s
  95th percentile per-packet one-way delay: 137.371 ms
  Loss rate: 0.98%
-- Flow 2:
  Average throughput: 137.80 Mbit/s
  95th percentile per-packet one-way delay: 137.648 ms
  Loss rate: 1.44%
-- Flow 3:
  Average throughput: 150.90 Mbit/s
  95th percentile per-packet one-way delay: 137.656 ms
  Loss rate: 3.43%
Run 2: Report of Indigo-1-32 — Data Link
Run 3: Statistics of Indigo-1-32

Start at: 2018-03-14 19:39:48
End at: 2018-03-14 19:40:18

# Below is generated by plot.py at 2018-03-15 03:36:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 254.90 Mbit/s
95th percentile per-packet one-way delay: 138.949 ms
Loss rate: 1.45%
-- Flow 1:
Average throughput: 130.50 Mbit/s
95th percentile per-packet one-way delay: 138.457 ms
Loss rate: 0.91%
-- Flow 2:
Average throughput: 123.94 Mbit/s
95th percentile per-packet one-way delay: 138.586 ms
Loss rate: 1.48%
-- Flow 3:
Average throughput: 132.07 Mbit/s
95th percentile per-packet one-way delay: 141.444 ms
Loss rate: 3.01%
Run 3: Report of Indigo-1-32 — Data Link
Run 4: Statistics of Indigo-1-32

Start at: 2018-03-14 19:59:43
End at: 2018-03-14 20:00:13

# Below is generated by plot.py at 2018-03-15 03:36:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 277.33 Mbit/s
95th percentile per-packet one-way delay: 139.081 ms
Loss rate: 1.45%
-- Flow 1:
Average throughput: 133.00 Mbit/s
95th percentile per-packet one-way delay: 138.819 ms
Loss rate: 0.98%
-- Flow 2:
Average throughput: 166.00 Mbit/s
95th percentile per-packet one-way delay: 139.335 ms
Loss rate: 1.29%
-- Flow 3:
Average throughput: 107.83 Mbit/s
95th percentile per-packet one-way delay: 139.468 ms
Loss rate: 3.69%
Run 4: Report of Indigo-1-32 — Data Link

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

- Flow 1 ingress (mean 133.15 Mbps)
- Flow 1 egress (mean 133.00 Mbps)
- Flow 2 ingress (mean 165.87 Mbps)
- Flow 2 egress (mean 166.00 Mbps)
- Flow 3 ingress (mean 108.84 Mbps)
- Flow 3 egress (mean 107.83 Mbps)

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

- Flow 1 (95th percentile 138.82 ms)
- Flow 2 (95th percentile 139.34 ms)
- Flow 3 (95th percentile 139.47 ms)

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Run 5: Statistics of Indigo-1-32

Start at: 2018-03-14 20:19:52
End at: 2018-03-14 20:20:22

# Below is generated by plot.py at 2018-03-15 03:36:42
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 330.24 Mbit/s
  95th percentile per-packet one-way delay: 139.032 ms
  Loss rate: 1.35%
-- Flow 1:
  Average throughput: 173.67 Mbit/s
  95th percentile per-packet one-way delay: 137.979 ms
  Loss rate: 0.82%
-- Flow 2:
  Average throughput: 165.33 Mbit/s
  95th percentile per-packet one-way delay: 140.158 ms
  Loss rate: 1.32%
-- Flow 3:
  Average throughput: 147.17 Mbit/s
  95th percentile per-packet one-way delay: 143.046 ms
  Loss rate: 3.33%
Run 6: Statistics of Indigo-1-32

Start at: 2018-03-14 20:40:02
End at: 2018-03-14 20:40:32

# Below is generated by plot.py at 2018-03-15 03:36:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 281.05 Mbit/s
95th percentile per-packet one-way delay: 139.035 ms
Loss rate: 1.48%
-- Flow 1:
Average throughput: 134.26 Mbit/s
95th percentile per-packet one-way delay: 138.930 ms
Loss rate: 0.97%
-- Flow 2:
Average throughput: 168.91 Mbit/s
95th percentile per-packet one-way delay: 139.062 ms
Loss rate: 1.38%
-- Flow 3:
Average throughput: 110.21 Mbit/s
95th percentile per-packet one-way delay: 139.250 ms
Loss rate: 3.65%
Run 6: Report of Indigo-1-32 — Data Link
Run 7: Statistics of Indigo-1-32

Start at: 2018-03-14 20:59:39
End at: 2018-03-14 21:00:09

# Below is generated by plot.py at 2018-03-15 03:36:42
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 266.49 Mbit/s
  95th percentile per-packet one-way delay: 138.422 ms
  Loss rate: 1.61%
-- Flow 1:
  Average throughput: 133.01 Mbit/s
  95th percentile per-packet one-way delay: 137.775 ms
  Loss rate: 0.98%
-- Flow 2:
  Average throughput: 128.82 Mbit/s
  95th percentile per-packet one-way delay: 138.612 ms
  Loss rate: 1.53%
-- Flow 3:
  Average throughput: 150.24 Mbit/s
  95th percentile per-packet one-way delay: 139.392 ms
  Loss rate: 3.47%
Run 7: Report of Indigo-1-32 — Data Link

![Graphs showing data link performance metrics, including throughput and packet delay over time.]
Run 8: Statistics of Indigo-1-32

Start at: 2018-03-14 21:19:30
End at: 2018-03-14 21:20:00

# Below is generated by plot.py at 2018-03-15 03:36:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 329.78 Mbit/s
95th percentile per-packet one-way delay: 138.326 ms
Loss rate: 1.35%
-- Flow 1:
Average throughput: 170.89 Mbit/s
95th percentile per-packet one-way delay: 137.486 ms
Loss rate: 0.80%
-- Flow 2:
Average throughput: 166.00 Mbit/s
95th percentile per-packet one-way delay: 141.117 ms
Loss rate: 1.27%
-- Flow 3:
Average throughput: 153.43 Mbit/s
95th percentile per-packet one-way delay: 140.272 ms
Loss rate: 3.39%
Run 8: Report of Indigo-1-32 — Data Link

[Graph showing throughput and per-packet one-way delay over time for different flows, with annotations for the mean throughputs and 95th percentile delays.]
Run 9: Statistics of Indigo-1-32

Start at: 2018-03-14 21:39:40
End at: 2018-03-14 21:40:10

# Below is generated by plot.py at 2018-03-15 03:36:42
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 334.68 Mbit/s
  95th percentile per-packet one-way delay: 138.649 ms
  Loss rate: 1.35%
-- Flow 1:
  Average throughput: 173.75 Mbit/s
  95th percentile per-packet one-way delay: 138.289 ms
  Loss rate: 0.81%
-- Flow 2:
  Average throughput: 171.55 Mbit/s
  95th percentile per-packet one-way delay: 139.195 ms
  Loss rate: 1.37%
-- Flow 3:
  Average throughput: 149.71 Mbit/s
  95th percentile per-packet one-way delay: 138.656 ms
  Loss rate: 3.22%
Run 10: Statistics of Indigo-1-32

Start at: 2018-03-14 21:59:23
End at: 2018-03-14 21:59:53

# Below is generated by plot.py at 2018-03-15 03:36:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 291.06 Mbit/s
95th percentile per-packet one-way delay: 139.872 ms
Loss rate: 1.50%
-- Flow 1:
Average throughput: 133.30 Mbit/s
95th percentile per-packet one-way delay: 138.744 ms
Loss rate: 0.97%
-- Flow 2:
Average throughput: 164.87 Mbit/s
95th percentile per-packet one-way delay: 143.311 ms
Loss rate: 1.29%
-- Flow 3:
Average throughput: 151.49 Mbit/s
95th percentile per-packet one-way delay: 141.352 ms
Loss rate: 3.37%
Run 10: Report of Indigo-1-32 — Data Link

Graph 1: Throughput (Mbps) vs Time (s)
- Flow 1 ingress (mean 133.30 Mbps)
- Flow 1 egress (mean 133.30 Mbps)
- Flow 2 ingress (mean 164.71 Mbps)
- Flow 2 egress (mean 164.87 Mbps)
- Flow 3 ingress (mean 152.40 Mbps)
- Flow 3 egress (mean 151.49 Mbps)

Graph 2: Per-packet one-way delay (ms) vs Time (s)
- Flow 1 (95th percentile 138.74 ms)
- Flow 2 (95th percentile 143.31 ms)
- Flow 3 (95th percentile 141.35 ms)
Run 1: Statistics of Vivace-latency

Start at: 2018-03-14 18:58:30
End at: 2018-03-14 18:59:00

# Below is generated by plot.py at 2018-03-15 03:36:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 448.83 Mbit/s
95th percentile per-packet one-way delay: 238.696 ms
Loss rate: 1.53%
-- Flow 1:
Average throughput: 247.86 Mbit/s
95th percentile per-packet one-way delay: 256.830 ms
Loss rate: 1.04%
-- Flow 2:
Average throughput: 249.42 Mbit/s
95th percentile per-packet one-way delay: 193.744 ms
Loss rate: 1.56%
-- Flow 3:
Average throughput: 110.55 Mbit/s
95th percentile per-packet one-way delay: 276.659 ms
Loss rate: 4.61%
Run 1: Report of Vivace-latency — Data Link

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

- Flow 1 ingress (mean 248.21 Mbit/s)
- Flow 1 egress (mean 247.86 Mbit/s)
- Flow 2 ingress (mean 249.83 Mbit/s)
- Flow 2 egress (mean 249.42 Mbit/s)
- Flow 3 ingress (mean 112.65 Mbit/s)
- Flow 3 egress (mean 110.55 Mbit/s)

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

- Flow 1 (95th percentile 256.83 ms)
- Flow 2 (95th percentile 193.74 ms)
- Flow 3 (95th percentile 276.66 ms)
Run 2: Statistics of Vivace-latency

Start at: 2018-03-14 19:18:37
End at: 2018-03-14 19:19:07

# Below is generated by plot.py at 2018-03-15 03:36:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 340.93 Mbit/s
95th percentile per-packet one-way delay: 330.070 ms
Loss rate: 4.22%
-- Flow 1:
Average throughput: 192.51 Mbit/s
95th percentile per-packet one-way delay: 414.922 ms
Loss rate: 2.95%
-- Flow 2:
Average throughput: 175.95 Mbit/s
95th percentile per-packet one-way delay: 173.282 ms
Loss rate: 2.75%
-- Flow 3:
Average throughput: 99.19 Mbit/s
95th percentile per-packet one-way delay: 364.889 ms
Loss rate: 15.53%
Run 2: Report of Vivace-latency — Data Link
Run 3: Statistics of Vivace-latency

Start at: 2018-03-14 19:38:24
End at: 2018-03-14 19:38:55

# Below is generated by plot.py at 2018-03-15 03:36:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 403.36 Mbit/s
95th percentile per-packet one-way delay: 178.759 ms
Loss rate: 2.47%
-- Flow 1:
Average throughput: 241.89 Mbit/s
95th percentile per-packet one-way delay: 226.745 ms
Loss rate: 2.00%
-- Flow 2:
Average throughput: 180.78 Mbit/s
95th percentile per-packet one-way delay: 143.297 ms
Loss rate: 2.66%
-- Flow 3:
Average throughput: 129.77 Mbit/s
95th percentile per-packet one-way delay: 152.264 ms
Loss rate: 4.61%
Run 3: Report of Vivace-latency — Data Link

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

Flow 1 ingress (mean 244.56 Mbit/s)  
Flow 1 egress (mean 241.89 Mbit/s)  
Flow 2 ingress (mean 183.16 Mbit/s)  
Flow 2 egress (mean 160.78 Mbit/s)  
Flow 3 ingress (mean 132.26 Mbit/s)  
Flow 3 egress (mean 129.77 Mbit/s)
Run 4: Statistics of Vivace-latency

Start at: 2018-03-14 19:58:24
End at: 2018-03-14 19:58:54

# Below is generated by plot.py at 2018-03-15 03:36:42
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 348.30 Mbit/s
  95th percentile per-packet one-way delay: 169.604 ms
  Loss rate: 3.22%
  -- Flow 1:
    Average throughput: 156.71 Mbit/s
    95th percentile per-packet one-way delay: 241.557 ms
    Loss rate: 4.47%
  -- Flow 2:
    Average throughput: 231.05 Mbit/s
    95th percentile per-packet one-way delay: 166.079 ms
    Loss rate: 1.42%
  -- Flow 3:
    Average throughput: 119.93 Mbit/s
    95th percentile per-packet one-way delay: 145.042 ms
    Loss rate: 5.03%
Run 5: Statistics of Vivace-latency

Start at: 2018-03-14 20:18:26
End at: 2018-03-14 20:18:56

# Below is generated by plot.py at 2018-03-15 03:36:42
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 429.81 Mbit/s
  95th percentile per-packet one-way delay: 266.040 ms
  Loss rate: 2.16%
  -- Flow 1:
    Average throughput: 237.28 Mbit/s
    95th percentile per-packet one-way delay: 185.080 ms
    Loss rate: 0.98%
  -- Flow 2:
    Average throughput: 233.15 Mbit/s
    95th percentile per-packet one-way delay: 340.735 ms
    Loss rate: 3.36%
  -- Flow 3:
    Average throughput: 118.42 Mbit/s
    95th percentile per-packet one-way delay: 192.768 ms
    Loss rate: 4.48%
Run 5: Report of Vivace-latency — Data Link
Run 6: Statistics of Vivace-latency

Start at: 2018-03-14 20:38:43  
End at: 2018-03-14 20:39:13

# Below is generated by plot.py at 2018-03-15 03:36:42  
# Datalink statistics
-- Total of 3 flows: 
  Average throughput: 362.21 Mbit/s  
  95th percentile per-packet one-way delay: 143.190 ms  
  Loss rate: 1.35%  
-- Flow 1: 
  Average throughput: 220.97 Mbit/s  
  95th percentile per-packet one-way delay: 144.288 ms  
  Loss rate: 1.10%  
-- Flow 2: 
  Average throughput: 182.35 Mbit/s  
  95th percentile per-packet one-way delay: 144.368 ms  
  Loss rate: 1.28%  
-- Flow 3: 
  Average throughput: 64.12 Mbit/s  
  95th percentile per-packet one-way delay: 137.073 ms  
  Loss rate: 4.43%
Run 6: Report of Vivace-latency — Data Link

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

*Flow 1 ingress (mean 221.38 Mbit/s)*
*Flow 1 egress (mean 220.97 Mbit/s)*
*Flow 2 ingress (mean 182.16 Mbit/s)*
*Flow 2 egress (mean 182.35 Mbit/s)*
*Flow 3 ingress (mean 65.26 Mbit/s)*
*Flow 3 egress (mean 64.12 Mbit/s)*

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

*Flow 1 (95th percentile 144.29 ms)*
*Flow 2 (95th percentile 144.37 ms)*
*Flow 3 (95th percentile 137.07 ms)*
Run 7: Statistics of Vivace-latency

Start at: 2018-03-14 20:58:18
End at: 2018-03-14 20:58:48

# Below is generated by plot.py at 2018-03-15 03:36:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 384.75 Mbit/s
95th percentile per-packet one-way delay: 196.526 ms
Loss rate: 2.68%
-- Flow 1:
Average throughput: 216.55 Mbit/s
95th percentile per-packet one-way delay: 241.927 ms
Loss rate: 2.66%
-- Flow 2:
Average throughput: 197.11 Mbit/s
95th percentile per-packet one-way delay: 145.589 ms
Loss rate: 2.11%
-- Flow 3:
Average throughput: 117.03 Mbit/s
95th percentile per-packet one-way delay: 178.197 ms
Loss rate: 4.67%
Run 7: Report of Vivace-latency — Data Link
Run 8: Statistics of Vivace-latency

Start at: 2018-03-14 21:18:04
End at: 2018-03-14 21:18:34

# Below is generated by plot.py at 2018-03-15 03:36:42
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 423.87 Mbit/s
  95th percentile per-packet one-way delay: 287.043 ms
  Loss rate: 3.34%
-- Flow 1:
  Average throughput: 236.39 Mbit/s
  95th percentile per-packet one-way delay: 301.096 ms
  Loss rate: 3.13%
-- Flow 2:
  Average throughput: 240.87 Mbit/s
  95th percentile per-packet one-way delay: 218.866 ms
  Loss rate: 0.79%
-- Flow 3:
  Average throughput: 87.14 Mbit/s
  95th percentile per-packet one-way delay: 345.310 ms
  Loss rate: 16.89%
Run 8: Report of Vivace-latency — Data Link
Run 9: Statistics of Vivace-latency

Start at: 2018-03-14 21:38:16
End at: 2018-03-14 21:38:46

# Below is generated by plot.py at 2018-03-15 03:36:42
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 418.57 Mbit/s
  95th percentile per-packet one-way delay: 215.559 ms
  Loss rate: 2.60%
-- Flow 1:
  Average throughput: 255.99 Mbit/s
  95th percentile per-packet one-way delay: 270.476 ms
  Loss rate: 2.37%
-- Flow 2:
  Average throughput: 186.15 Mbit/s
  95th percentile per-packet one-way delay: 181.443 ms
  Loss rate: 2.56%
-- Flow 3:
  Average throughput: 122.29 Mbit/s
  95th percentile per-packet one-way delay: 143.917 ms
  Loss rate: 4.25%
Run 9: Report of Vivace-latency — Data Link

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

- **Throughput:**
  - Flow 1 ingress (mean 259.79 Mbit/s)
  - Flow 2 ingress (mean 188.39 Mbit/s)
  - Flow 3 ingress (mean 124.25 Mbit/s)
  - Flow 1 egress (mean 255.99 Mbit/s)
  - Flow 2 egress (mean 186.15 Mbit/s)
  - Flow 3 egress (mean 122.29 Mbit/s)

- **Packet Delay:**
  - Flow 1 (95th percentile 270.48 ms)
  - Flow 2 (95th percentile 181.44 ms)
  - Flow 3 (95th percentile 142.92 ms)
Run 10: Statistics of Vivace-latency

Start at: 2018-03-14 21:58:01
End at: 2018-03-14 21:58:31

# Below is generated by plot.py at 2018-03-15 03:36:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 390.70 Mbit/s
95th percentile per-packet one-way delay: 236.026 ms
Loss rate: 1.67%
-- Flow 1:
 Average throughput: 241.69 Mbit/s
95th percentile per-packet one-way delay: 296.538 ms
Loss rate: 1.46%
-- Flow 2:
 Average throughput: 171.48 Mbit/s
95th percentile per-packet one-way delay: 139.226 ms
Loss rate: 1.16%
-- Flow 3:
 Average throughput: 110.18 Mbit/s
95th percentile per-packet one-way delay: 178.203 ms
Loss rate: 4.64%
Run 10: Report of Vivace-latency — Data Link

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

**Throughput (Mbps)**

- Flow 1 ingress (mean 243.02 Mbps)
- Flow 1 egress (mean 241.69 Mbps)
- Flow 2 ingress (mean 171.10 Mbps)
- Flow 2 egress (mean 171.48 Mbps)
- Flow 3 ingress (mean 112.13 Mbps)
- Flow 3 egress (mean 110.16 Mbps)

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

- Flow 1 (95th percentile 296.54 ms)
- Flow 2 (95th percentile 139.23 ms)
- Flow 3 (95th percentile 178.20 ms)
Run 1: Statistics of Vivace-loss

Start at: 2018-03-14 18:55:58
End at: 2018-03-14 18:56:28

# Below is generated by plot.py at 2018-03-15 03:36:42
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 345.02 Mbit/s
  95th percentile per-packet one-way delay: 292.701 ms
  Loss rate: 6.39%
-- Flow 1:
  Average throughput: 121.86 Mbit/s
  95th percentile per-packet one-way delay: 300.892 ms
  Loss rate: 9.60%
-- Flow 2:
  Average throughput: 272.79 Mbit/s
  95th percentile per-packet one-way delay: 288.702 ms
  Loss rate: 2.13%
-- Flow 3:
  Average throughput: 145.96 Mbit/s
  95th percentile per-packet one-way delay: 291.415 ms
  Loss rate: 12.55%
Run 1: Report of Vivace-loss — Data Link

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

- Flow 1 ingress (mean 133.57 Mbit/s)
- Flow 1 egress (mean 121.86 Mbit/s)
- Flow 2 ingress (mean 269.79 Mbit/s)
- Flow 2 egress (mean 272.79 Mbit/s)
- Flow 3 ingress (mean 162.27 Mbit/s)
- Flow 3 egress (mean 145.96 Mbit/s)

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

- Flow 1 (95th percentile 300.89 ms)
- Flow 2 (95th percentile 288.70 ms)
- Flow 3 (95th percentile 291.42 ms)
Run 2: Statistics of Vivace-loss

Start at: 2018-03-14 19:16:08
End at: 2018-03-14 19:16:38

# Below is generated by plot.py at 2018-03-15 03:36:42
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 289.10 Mbit/s
  95th percentile per-packet one-way delay: 303.276 ms
  Loss rate: 8.72%
-- Flow 1:
  Average throughput: 114.62 Mbit/s
  95th percentile per-packet one-way delay: 310.388 ms
  Loss rate: 9.96%
-- Flow 2:
  Average throughput: 197.61 Mbit/s
  95th percentile per-packet one-way delay: 278.765 ms
  Loss rate: 7.73%
-- Flow 3:
  Average throughput: 135.21 Mbit/s
  95th percentile per-packet one-way delay: 331.458 ms
  Loss rate: 8.35%
Run 2: Report of Vivace-loss — Data Link
Run 3: Statistics of Vivace-loss

Start at: 2018-03-14 19:35:50
End at: 2018-03-14 19:36:20

# Below is generated by plot.py at 2018-03-15 03:41:38
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 390.34 Mbit/s
  95th percentile per-packet one-way delay: 305.118 ms
  Loss rate: 6.36%
-- Flow 1:
  Average throughput: 290.02 Mbit/s
  95th percentile per-packet one-way delay: 303.085 ms
  Loss rate: 4.25%
-- Flow 2:
  Average throughput: 83.15 Mbit/s
  95th percentile per-packet one-way delay: 327.320 ms
  Loss rate: 17.64%
-- Flow 3:
  Average throughput: 140.28 Mbit/s
  95th percentile per-packet one-way delay: 204.413 ms
  Loss rate: 3.93%
Run 3: Report of Vivace-loss — Data Link

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

- Flow 1 ingress (mean 390.10 Mbit/s)
- Flow 1 egress (mean 290.02 Mbit/s)
- Flow 2 ingress (mean 99.57 Mbit/s)
- Flow 2 egress (mean 83.15 Mbit/s)
- Flow 3 ingress (mean 141.94 Mbit/s)
- Flow 3 egress (mean 140.28 Mbit/s)

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

- Flow 1 (95th percentile 303.08 ms)
- Flow 2 (95th percentile 327.32 ms)
- Flow 3 (95th percentile 204.41 ms)
Run 4: Statistics of Vivace-loss

End at: 2018-03-14 19:56:29

# Below is generated by plot.py at 2018-03-15 03:41:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 231.71 Mbit/s
95th percentile per-packet one-way delay: 299.470 ms
Loss rate: 10.25%
-- Flow 1:
Average throughput: 126.86 Mbit/s
95th percentile per-packet one-way delay: 297.085 ms
Loss rate: 10.52%
-- Flow 2:
Average throughput: 82.72 Mbit/s
95th percentile per-packet one-way delay: 309.749 ms
Loss rate: 13.64%
-- Flow 3:
Average throughput: 155.34 Mbit/s
95th percentile per-packet one-way delay: 262.693 ms
Loss rate: 5.47%
Run 4: Report of Vivace-loss — Data Link

![Graph showing throughput and delay for different flow ingress and egress over time, with specific mean values provided.](image_url)
Run 5: Statistics of Vivace-loss

Start at: 2018-03-14 20:15:52
End at: 2018-03-14 20:16:22

# Below is generated by plot.py at 2018-03-15 03:43:54
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 348.25 Mbit/s
  95th percentile per-packet one-way delay: 272.444 ms
  Loss rate: 6.96%
-- Flow 1:
  Average throughput: 158.11 Mbit/s
  95th percentile per-packet one-way delay: 291.890 ms
  Loss rate: 9.56%
-- Flow 2:
  Average throughput: 197.69 Mbit/s
  95th percentile per-packet one-way delay: 204.356 ms
  Loss rate: 2.17%
-- Flow 3:
  Average throughput: 183.84 Mbit/s
  95th percentile per-packet one-way delay: 273.881 ms
  Loss rate: 9.78%
Run 5: Report of Vivace-loss — Data Link

Graph 1: Throughput (Mbps)

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

Legend:
- Flow 1 ingress (mean 173.22 Mbps)
- Flow 1 egress (mean 158.11 Mbps)
- Flow 2 ingress (mean 199.29 Mbps)
- Flow 2 egress (mean 197.09 Mbps)
- Flow 3 ingress (mean 190.11 Mbps)
- Flow 3 egress (mean 183.64 Mbps)
- Flow 1 (95th percentile 291.89 ms)
- Flow 2 (95th percentile 204.36 ms)
- Flow 3 (95th percentile 273.88 ms)
Run 6: Statistics of Vivace-loss

Start at: 2018-03-14 20:36:16
End at: 2018-03-14 20:36:46

# Below is generated by plot.py at 2018-03-15 03:43:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 264.44 Mbit/s
95th percentile per-packet one-way delay: 303.376 ms
Loss rate: 10.78%
-- Flow 1:
Average throughput: 157.84 Mbit/s
95th percentile per-packet one-way delay: 281.017 ms
Loss rate: 7.32%
-- Flow 2:
Average throughput: 116.56 Mbit/s
95th percentile per-packet one-way delay: 306.992 ms
Loss rate: 9.29%
-- Flow 3:
Average throughput: 91.29 Mbit/s
95th percentile per-packet one-way delay: 372.572 ms
Loss rate: 28.17%
Run 6: Report of Vivace-loss — Data Link
Run 7: Statistics of Vivace-loss

Start at: 2018-03-14 20:55:54
End at: 2018-03-14 20:56:24

# Below is generated by plot.py at 2018-03-15 03:43:54
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 229.95 Mbit/s
  95th percentile per-packet one-way delay: 283.547 ms
  Loss rate: 8.27%
-- Flow 1:
  Average throughput: 125.69 Mbit/s
  95th percentile per-packet one-way delay: 316.145 ms
  Loss rate: 10.69%
-- Flow 2:
  Average throughput: 105.69 Mbit/s
  95th percentile per-packet one-way delay: 139.053 ms
  Loss rate: 1.91%
-- Flow 3:
  Average throughput: 106.36 Mbit/s
  95th percentile per-packet one-way delay: 301.491 ms
  Loss rate: 11.19%
Run 7: Report of Vivace-loss — Data Link

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

- Flow 1 ingress (mean 139.41 Mbit/s)
- Flow 1 egress (mean 125.69 Mbit/s)
- Flow 2 ingress (mean 106.26 Mbit/s)
- Flow 2 egress (mean 105.69 Mbit/s)
- Flow 3 ingress (mean 116.42 Mbit/s)
- Flow 3 egress (mean 106.36 Mbit/s)

![Graphs showing throughputs for different flows.]

- Flow 1 95th percentile: 316.14 ms
- Flow 2 95th percentile: 139.05 ms
- Flow 3 95th percentile: 301.49 ms
Run 8: Statistics of Vivace-loss

Start at: 2018-03-14 21:15:35
End at: 2018-03-14 21:16:05

# Below is generated by plot.py at 2018-03-15 03:43:54
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 303.10 Mbit/s
  95th percentile per-packet one-way delay: 200.185 ms
  Loss rate: 6.53%
-- Flow 1:
  Average throughput: 122.80 Mbit/s
  95th percentile per-packet one-way delay: 295.749 ms
  Loss rate: 10.86%
-- Flow 2:
  Average throughput: 189.24 Mbit/s
  95th percentile per-packet one-way delay: 143.787 ms
  Loss rate: 1.92%
-- Flow 3:
  Average throughput: 170.36 Mbit/s
  95th percentile per-packet one-way delay: 183.199 ms
  Loss rate: 6.40%
Run 8: Report of Vivace-loss — Data Link

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

- **Throughput Graph**
  - Flow 1 ingress (mean 136.49 Mbit/s)
  - Flow 1 egress (mean 122.80 Mbit/s)
  - Flow 2 ingress (mean 190.27 Mbit/s)
  - Flow 2 egress (mean 189.24 Mbit/s)
  - Flow 3 ingress (mean 176.99 Mbit/s)
  - Flow 3 egress (mean 170.36 Mbit/s)

- **Packet Loss Graph**
  - Flow 1 (95th percentile 295.75 ms)
  - Flow 2 (95th percentile 143.79 ms)
  - Flow 3 (95th percentile 183.20 ms)
Run 9: Statistics of Vivace-loss

Start at: 2018-03-14 21:35:40
End at: 2018-03-14 21:36:10

# Below is generated by plot.py at 2018-03-15 03:46:16
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 412.44 Mbit/s
  95th percentile per-packet one-way delay: 313.983 ms
  Loss rate: 5.77%
-- Flow 1:
  Average throughput: 291.07 Mbit/s
  95th percentile per-packet one-way delay: 316.369 ms
  Loss rate: 5.79%
-- Flow 2:
  Average throughput: 113.02 Mbit/s
  95th percentile per-packet one-way delay: 293.894 ms
  Loss rate: 4.86%
-- Flow 3:
  Average throughput: 144.17 Mbit/s
  95th percentile per-packet one-way delay: 281.430 ms
  Loss rate: 7.05%
Run 9: Report of Vivace-loss — Data Link
Run 10: Statistics of Vivace-loss

End at: 2018-03-14 21:56:01

# Below is generated by plot.py at 2018-03-15 03:46:16
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 290.17 Mbit/s
  95th percentile per-packet one-way delay: 291.029 ms
  Loss rate: 6.76%
-- Flow 1:
  Average throughput: 137.05 Mbit/s
  95th percentile per-packet one-way delay: 292.185 ms
  Loss rate: 8.24%
-- Flow 2:
  Average throughput: 189.80 Mbit/s
  95th percentile per-packet one-way delay: 146.023 ms
  Loss rate: 2.35%
-- Flow 3:
  Average throughput: 84.27 Mbit/s
  95th percentile per-packet one-way delay: 374.816 ms
  Loss rate: 17.30%
Run 10: Report of Vivace-loss — Data Link
Run 1: Statistics of Vivace-LTE

Start at: 2018-03-14 18:44:36
End at: 2018-03-14 18:45:06

# Below is generated by plot.py at 2018-03-15 03:51:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 470.64 Mbit/s
95th percentile per-packet one-way delay: 335.743 ms
Loss rate: 3.67%
-- Flow 1:
Average throughput: 304.18 Mbit/s
95th percentile per-packet one-way delay: 338.889 ms
Loss rate: 4.14%
-- Flow 2:
Average throughput: 191.41 Mbit/s
95th percentile per-packet one-way delay: 166.034 ms
Loss rate: 2.27%
-- Flow 3:
Average throughput: 122.35 Mbit/s
95th percentile per-packet one-way delay: 219.022 ms
Loss rate: 4.50%
Run 1: Report of Vivace-LTE — Data Link

![Graph of throughput and per-packet one-way delay over time for different flows.]
Run 2: Statistics of Vivace-LTE

Start at: 2018-03-14 19:04:56
End at: 2018-03-14 19:05:26

# Below is generated by plot.py at 2018-03-15 03:51:24
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 408.70 Mbit/s
  95th percentile per-packet one-way delay: 240.876 ms
  Loss rate: 2.62%
-- Flow 1:
  Average throughput: 252.98 Mbit/s
  95th percentile per-packet one-way delay: 251.065 ms
  Loss rate: 2.55%
-- Flow 2:
  Average throughput: 180.62 Mbit/s
  95th percentile per-packet one-way delay: 147.576 ms
  Loss rate: 2.06%
-- Flow 3:
  Average throughput: 112.15 Mbit/s
  95th percentile per-packet one-way delay: 235.613 ms
  Loss rate: 4.94%
Run 2: Report of Vivace-LTE — Data Link

![Throughput Graph](image)

- **Flow 1 ingress (mean 257.22 Mbit/s)**
- **Flow 1 egress (mean 252.98 Mbit/s)**
- **Flow 2 ingress (mean 181.87 Mbit/s)**
- **Flow 2 egress (mean 180.62 Mbit/s)**
- **Flow 3 ingress (mean 114.69 Mbit/s)**
- **Flow 3 egress (mean 112.15 Mbit/s)**

![Delay Graph](image)

- **Flow 1 (95th percentile 251.06 ms)**
- **Flow 2 (95th percentile 147.58 ms)**
- **Flow 3 (95th percentile 235.61 ms)**
Run 3: Statistics of Vivace-LTE

Start at: 2018-03-14 19:25:00
End at: 2018-03-14 19:25:30

# Below is generated by plot.py at 2018-03-15 03:51:24
# Datalink statistics
  -- Total of 3 flows:
    Average throughput: 374.61 Mbit/s
    95th percentile per-packet one-way delay: 304.260 ms
    Loss rate: 5.32%
  -- Flow 1:
    Average throughput: 239.95 Mbit/s
    95th percentile per-packet one-way delay: 313.798 ms
    Loss rate: 3.98%
  -- Flow 2:
    Average throughput: 115.69 Mbit/s
    95th percentile per-packet one-way delay: 298.132 ms
    Loss rate: 7.02%
  -- Flow 3:
    Average throughput: 179.90 Mbit/s
    95th percentile per-packet one-way delay: 291.970 ms
    Loss rate: 8.37%
Run 3: Report of Vivace-LTE — Data Link

![Graphs showing network throughput and per-packet one-way delay over time for different flows.](image-url)
Run 4: Statistics of Vivace-LTE

Start at: 2018-03-14 19:44:42
End at: 2018-03-14 19:45:12

# Below is generated by plot.py at 2018-03-15 03:51:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 397.01 Mbit/s
95th percentile per-packet one-way delay: 204.187 ms
Loss rate: 3.47%
-- Flow 1:
Average throughput: 244.18 Mbit/s
95th percentile per-packet one-way delay: 170.471 ms
Loss rate: 2.31%
-- Flow 2:
Average throughput: 188.04 Mbit/s
95th percentile per-packet one-way delay: 147.587 ms
Loss rate: 2.13%
-- Flow 3:
Average throughput: 88.01 Mbit/s
95th percentile per-packet one-way delay: 355.452 ms
Loss rate: 16.90%
Run 4: Report of Vivace-LTE — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 247.63 Mbit/s)
Flow 1 egress (mean 244.18 Mbit/s)
Flow 2 ingress (mean 189.44 Mbit/s)
Flow 2 egress (mean 188.04 Mbit/s)
Flow 3 ingress (mean 102.96 Mbit/s)
Flow 3 egress (mean 88.01 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 170.47 ms)
Flow 2 (95th percentile 147.59 ms)
Flow 3 (95th percentile 355.45 ms)
Run 5: Statistics of Vivace-LTE

Start at: 2018-03-14 20:04:52
End at: 2018-03-14 20:05:22

# Below is generated by plot.py at 2018-03-15 03:51:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 365.92 Mbit/s
95th percentile per-packet one-way delay: 249.229 ms
Loss rate: 3.71%
-- Flow 1:
Average throughput: 207.67 Mbit/s
95th percentile per-packet one-way delay: 202.484 ms
Loss rate: 3.09%
-- Flow 2:
Average throughput: 188.01 Mbit/s
95th percentile per-packet one-way delay: 210.644 ms
Loss rate: 1.74%
-- Flow 3:
Average throughput: 104.86 Mbit/s
95th percentile per-packet one-way delay: 343.177 ms
Loss rate: 13.44%
Run 5: Report of Vivace-LTE — Data Link

Graph 1: Throughput (Mbps/s) vs. Time (s)
- Flow 1 ingress (mean 212.34 Mbps/s)
- Flow 1 egress (mean 207.67 Mbps/s)
- Flow 2 ingress (mean 188.72 Mbps/s)
- Flow 2 egress (mean 188.01 Mbps/s)
- Flow 3 ingress (mean 117.80 Mbps/s)
- Flow 3 egress (mean 104.96 Mbps/s)

Graph 2: Per-packet one-way delay (ms) vs. Time (s)
- Flow 1 (95th percentile 202.48 ms)
- Flow 2 (95th percentile 210.64 ms)
- Flow 3 (95th percentile 343.18 ms)
Run 6: Statistics of Vivace-LTE

Start at: 2018-03-14 20:24:57
End at: 2018-03-14 20:25:27

# Below is generated by plot.py at 2018-03-15 03:52:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 441.09 Mbit/s
95th percentile per-packet one-way delay: 315.992 ms
Loss rate: 4.81%
-- Flow 1:
Average throughput: 225.92 Mbit/s
95th percentile per-packet one-way delay: 203.763 ms
Loss rate: 2.56%
-- Flow 2:
Average throughput: 245.67 Mbit/s
95th percentile per-packet one-way delay: 327.924 ms
Loss rate: 6.85%
-- Flow 3:
Average throughput: 166.05 Mbit/s
95th percentile per-packet one-way delay: 243.218 ms
Loss rate: 7.73%
Run 6: Report of Vivace-LTE — Data Link
Run 7: Statistics of Vivace-LTE

Start at: 2018-03-14 20:45:11
End at: 2018-03-14 20:45:41

# Below is generated by plot.py at 2018-03-15 03:52:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 336.80 Mbit/s
95th percentile per-packet one-way delay: 239.930 ms
Loss rate: 3.06%
-- Flow 1:
Average throughput: 157.20 Mbit/s
95th percentile per-packet one-way delay: 266.675 ms
Loss rate: 4.69%
-- Flow 2:
Average throughput: 192.02 Mbit/s
95th percentile per-packet one-way delay: 177.057 ms
Loss rate: 2.08%
-- Flow 3:
Average throughput: 163.68 Mbit/s
95th percentile per-packet one-way delay: 258.445 ms
Loss rate: 0.40%
Run 7: Report of Vivace-LTE — Data Link
Run 8: Statistics of Vivace-LTE

Start at: 2018-03-14 21:04:45
End at: 2018-03-14 21:05:15

# Below is generated by plot.py at 2018-03-15 03:53:21
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 380.74 Mbit/s
  95th percentile per-packet one-way delay: 331.865 ms
  Loss rate: 2.76%
-- Flow 1:
  Average throughput: 223.49 Mbit/s
  95th percentile per-packet one-way delay: 342.234 ms
  Loss rate: 2.88%
-- Flow 2:
  Average throughput: 185.16 Mbit/s
  95th percentile per-packet one-way delay: 145.821 ms
  Loss rate: 1.93%
-- Flow 3:
  Average throughput: 107.74 Mbit/s
  95th percentile per-packet one-way delay: 225.824 ms
  Loss rate: 4.83%
Run 8: Report of Vivace-LTE — Data Link

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

Legend:
- Flow 1 ingress (mean 228.01 Mbit/s)
- Flow 1 egress (mean 223.49 Mbit/s)
- Flow 2 ingress (mean 186.20 Mbit/s)
- Flow 2 egress (mean 185.16 Mbit/s)
- Flow 3 ingress (mean 110.06 Mbit/s)
- Flow 3 egress (mean 107.74 Mbit/s)

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

Legend:
- Flow 1 (95th percentile 342.23 ms)
- Flow 2 (95th percentile 145.82 ms)
- Flow 3 (95th percentile 225.82 ms)
Run 9: Statistics of Vivace-LTE

Start at: 2018-03-14 21:24:39
End at: 2018-03-14 21:25:09

# Below is generated by plot.py at 2018-03-15 03:53:59
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 361.41 Mbit/s
  95th percentile per-packet one-way delay: 256.990 ms
  Loss rate: 2.88%
-- Flow 1:
  Average throughput: 251.14 Mbit/s
  95th percentile per-packet one-way delay: 198.649 ms
  Loss rate: 1.56%
-- Flow 2:
  Average throughput: 114.11 Mbit/s
  95th percentile per-packet one-way delay: 297.864 ms
  Loss rate: 3.54%
-- Flow 3:
  Average throughput: 107.73 Mbit/s
  95th percentile per-packet one-way delay: 328.342 ms
  Loss rate: 10.20%
Run 9: Report of Vivace-LTE — Data Link

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

**Throughput (Mbps)**
- Flow 1 ingress (mean 252.80 Mbps)
- Flow 2 ingress (mean 116.69 Mbps)
- Flow 3 ingress (mean 116.63 Mbps)
- Flow 1 egress (mean 251.14 Mbps)
- Flow 2 egress (mean 114.11 Mbps)
- Flow 3 egress (mean 107.73 Mbps)

**Per-packet one-way delay (ms)**
- Flow 1 (95th percentile 198.65 ms)
- Flow 2 (95th percentile 297.86 ms)
- Flow 3 (95th percentile 320.34 ms)
Run 10: Statistics of Vivace-LTE

Start at: 2018-03-14 21:44:49
End at: 2018-03-14 21:45:19

# Below is generated by plot.py at 2018-03-15 03:54:04
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 354.55 Mbit/s
  95th percentile per-packet one-way delay: 309.074 ms
  Loss rate: 2.81%
-- Flow 1:
  Average throughput: 236.54 Mbit/s
  95th percentile per-packet one-way delay: 318.106 ms
  Loss rate: 2.48%
-- Flow 2:
  Average throughput: 108.33 Mbit/s
  95th percentile per-packet one-way delay: 151.138 ms
  Loss rate: 1.70%
-- Flow 3:
  Average throughput: 143.59 Mbit/s
  95th percentile per-packet one-way delay: 280.669 ms
  Loss rate: 6.06%
Run 10: Report of Vivace-LTE — Data Link

![Graph showing data link performance over time with throughput and per-packet one-way delay metrics for different flows.]