Pantheon Report

Generated at 2018-04-19 02:54:45 (UTC).
Data path: GCE Tokyo Ethernet (remote) → GCE Iowa Ethernet (local).
Repeated the test of 16 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 @ b3d6e7098641364fd3a292656a51aa81e316d0b4
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446eaa37a522e53227db50
M datagrupm/sender.cc
third_party/fillp @ 11f8c46a2bf1dc797253db7e8ca04076272ba44
third_party/genericCC @ d223989828276afa83a807da6e0341dc0c7b89aec
third_party/indigo @ a9b2060d39e4da2e8987e893e3eca2a6c7cd0ab9
third_party/indigo-1-layer-128-unit @ 3ae9e4e4230db7484501f82ce8b377695f266d
third_party/indigo-1-layer-32-unit @ 2601c92e4aaa9d58d38dc4dfe0ecdfb90c77e64d
third_party/indigo-1-layer-32-unit-no-calib @ 1f3a7f75b41135ed5b650c0fd3505939528e2a5f
third_party/indigo-no-calib @ 7224f2202e8a044d8306fa0b983ad84360c53d89
third_party/koho_cc @ f0f2e693303aee82ea808e6928eac4f1083a6681
M datagrupm/sender.cc
third_party/libutp @ b3465b942e2826f2b179eaaab4a906ce6bb7c73fcf
third_party/pantheon-tunnel @ fb1053193c2861da659ba9013db26744ccf993
third_party/pcc @ 1afcc958fa066d18b623c091a55feca7872b4981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8ac08f92b24ef2b9f74ab
third_party/proto-quic @ 7796f1fa82733a86b42f1bc8143ebc978f0c3fc
third_party/scream @ c3370fd7bd17265a79aeb34e4016ad23f5965885
third_party/sourdough @ f1a14bffe749737437f61beaeeb30b267bed81
third_party/sprout @ 6f2efe6e6088d91066a9f023df375ee2665089ce
M src/examples/cellsim.cc
M src/examples/sproutbt2.cc
M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
M src/verus.hpp
M tools/plot.py
third_party/vivace @ 7a4ba531e75b4a6f66f5c4580192120401784ce3
third_party/webrtc @ f271183af822ee5e0031620f4bebf38aedc5581
test from GCE Tokyo Ethernet to GCE Iowa 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>
<tbody>
<tr>
<td></td>
<td></td>
<td>flow 1</td>
<td>flow 2</td>
<td>flow 3</td>
</tr>
<tr>
<td>TCP BBR</td>
<td>10</td>
<td>173.59</td>
<td>170.72</td>
<td>162.29</td>
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<tr>
<td>TCP Cubic</td>
<td>10</td>
<td>130.08</td>
<td>107.70</td>
<td>63.67</td>
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<td>21.30</td>
<td>13.88</td>
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<td>115.71</td>
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<td>46.69</td>
<td>33.59</td>
<td>23.90</td>
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<td>150.87</td>
<td>154.28</td>
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<td>63.47</td>
<td>58.97</td>
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<td>Verus</td>
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<td>170.41</td>
<td>128.56</td>
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<td>Copa</td>
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<td>71.18</td>
<td>71.43</td>
<td>47.18</td>
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<td>685.85</td>
<td>666.40</td>
<td>468.37</td>
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<td>165.11</td>
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<td>PCC-Vivace</td>
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<td>PCC-Expr</td>
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<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
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</table>
Run 1: Statistics of TCP BBR

Start at: 2018-04-18 19:45:31  
End at: 2018-04-18 19:46:01

# Below is generated by plot.py at 2018-04-19 01:10:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 339.48 Mbit/s
95th percentile per-packet one-way delay: 67.112 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 173.49 Mbit/s
95th percentile per-packet one-way delay: 65.909 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 168.58 Mbit/s
95th percentile per-packet one-way delay: 68.695 ms
Loss rate: 0.71%
-- Flow 3:
Average throughput: 164.48 Mbit/s
95th percentile per-packet one-way delay: 65.473 ms
Loss rate: 1.39%
Run 1: Report of TCP BBR — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 173.65 Mbps)  Flow 1 egress (mean 173.49 Mbps)
Flow 2 ingress (mean 168.58 Mbps)  Flow 2 egress (mean 168.58 Mbps)
Flow 3 ingress (mean 164.70 Mbps)  Flow 3 egress (mean 164.40 Mbps)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 65.91 ms)  Flow 2 (95th percentile 68.49 ms)  Flow 3 (95th percentile 65.47 ms)
Run 2: Statistics of TCP BBR

Start at: 2018-04-18 20:01:26
End at: 2018-04-18 20:01:56

# Below is generated by plot.py at 2018-04-19 01:11:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 338.19 Mbit/s
95th percentile per-packet one-way delay: 66.509 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 174.12 Mbit/s
95th percentile per-packet one-way delay: 66.434 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 167.18 Mbit/s
95th percentile per-packet one-way delay: 66.402 ms
Loss rate: 0.67%
-- Flow 3:
Average throughput: 161.26 Mbit/s
95th percentile per-packet one-way delay: 66.957 ms
Loss rate: 1.44%
Run 2: Report of TCP BBR — Data Link
Run 3: Statistics of TCP BBR

Start at: 2018-04-18 20:17:30
End at: 2018-04-18 20:18:00

# Below is generated by plot.py at 2018-04-19 01:11:01
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 339.78 Mbit/s
  95th percentile per-packet one-way delay: 69.929 ms
  Loss rate: 0.67%
-- Flow 1:
  Average throughput: 173.89 Mbit/s
  95th percentile per-packet one-way delay: 68.129 ms
  Loss rate: 0.44%
-- Flow 2:
  Average throughput: 169.38 Mbit/s
  95th percentile per-packet one-way delay: 70.687 ms
  Loss rate: 0.68%
-- Flow 3:
  Average throughput: 162.24 Mbit/s
  95th percentile per-packet one-way delay: 71.302 ms
  Loss rate: 1.41%
Run 3: Report of TCP BBR — Data Link
Run 4: Statistics of TCP BBR

End at: 2018-04-18 20:33:53

# Below is generated by plot.py at 2018-04-19 01:11:03
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 339.17 Mbit/s
  95th percentile per-packet one-way delay: 72.750 ms
  Loss rate: 0.67%
  -- Flow 1:
  Average throughput: 174.21 Mbit/s
  95th percentile per-packet one-way delay: 71.672 ms
  Loss rate: 0.43%
  -- Flow 2:
  Average throughput: 167.76 Mbit/s
  95th percentile per-packet one-way delay: 72.840 ms
  Loss rate: 0.64%
  -- Flow 3:
  Average throughput: 162.83 Mbit/s
  95th percentile per-packet one-way delay: 73.611 ms
  Loss rate: 1.51%
Run 4: Report of TCP BBR — Data Link

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

![Graph 2: Per-packet one-way delay](image2)
Run 5: Statistics of TCP BBR

Start at: 2018-04-18 20:49:16
End at: 2018-04-18 20:49:46

# Below is generated by plot.py at 2018-04-19 01:11:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 337.49 Mbit/s
95th percentile per-packet one-way delay: 64.810 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 172.21 Mbit/s
95th percentile per-packet one-way delay: 64.428 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 168.40 Mbit/s
95th percentile per-packet one-way delay: 65.233 ms
Loss rate: 0.67%
-- Flow 3:
Average throughput: 162.59 Mbit/s
95th percentile per-packet one-way delay: 64.918 ms
Loss rate: 1.40%
Run 5: Report of TCP BBR — Data Link

Graphs showing throughput and packet delay over time for three flows, with mean throughput and 95th percentile delay for each flow indicated.

- Flow 1: Ingress 172.23 Mbps, Egress 172.21 Mbps
- Flow 2: Ingress 168.45 Mbps, Egress 168.40 Mbps
- Flow 3: Ingress 162.77 Mbps, Egress 162.59 Mbps

Throughput (Mbps)

Packet delay (ms)

Flow 1 (95th percentile 64.43 ms)  Flow 2 (95th percentile 65.23 ms)  Flow 3 (95th percentile 64.92 ms)
Run 6: Statistics of TCP BBR

Start at: 2018-04-18 21:05:09
End at: 2018-04-18 21:05:39

# Below is generated by plot.py at 2018-04-19 01:11:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 350.99 Mbit/s
95th percentile per-packet one-way delay: 70.895 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 179.33 Mbit/s
95th percentile per-packet one-way delay: 70.368 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 174.14 Mbit/s
95th percentile per-packet one-way delay: 70.277 ms
Loss rate: 0.66%
-- Flow 3:
Average throughput: 170.44 Mbit/s
95th percentile per-packet one-way delay: 72.140 ms
Loss rate: 1.35%
Run 6: Report of TCP BBR — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 179.34 Mbps)
  - Flow 1 egress (mean 179.33 Mbps)
  - Flow 2 ingress (mean 174.17 Mbps)
  - Flow 2 egress (mean 174.14 Mbps)
  - Flow 3 ingress (mean 170.53 Mbps)
  - Flow 3 egress (mean 170.44 Mbps)

- **Per-packet one-way delay (ms):**
  - Flow 1 (95th percentile 70.37 ms)
  - Flow 2 (95th percentile 70.28 ms)
  - Flow 3 (95th percentile 72.14 ms)
Run 7: Statistics of TCP BBR


# Below is generated by plot.py at 2018-04-19 01:11:15
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 342.71 Mbit/s
  95th percentile per-packet one-way delay: 74.084 ms
  Loss rate: 0.68%
-- Flow 1:
  Average throughput: 171.82 Mbit/s
  95th percentile per-packet one-way delay: 72.554 ms
  Loss rate: 0.47%
-- Flow 2:
  Average throughput: 178.64 Mbit/s
  95th percentile per-packet one-way delay: 75.091 ms
  Loss rate: 0.65%
-- Flow 3:
  Average throughput: 159.15 Mbit/s
  95th percentile per-packet one-way delay: 74.801 ms
  Loss rate: 1.43%
Run 7: Report of TCP BBR — Data Link

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

- Flow 1 ingress (mean 171.86 Mbit/s)
- Flow 1 egress (mean 171.82 Mbit/s)
- Flow 2 ingress (mean 178.65 Mbit/s)
- Flow 2 egress (mean 178.64 Mbit/s)
- Flow 3 ingress (mean 159.37 Mbit/s)
- Flow 3 egress (mean 159.15 Mbit/s)

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

- Flow 1 (95th percentile 72.55 ms)
- Flow 2 (95th percentile 75.09 ms)
- Flow 3 (95th percentile 74.80 ms)
Run 8: Statistics of TCP BBR

End at: 2018-04-18 21:37:17

# Below is generated by plot.py at 2018-04-19 01:11:15
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 335.88 Mbit/s
  95th percentile per-packet one-way delay: 70.665 ms
  Loss rate: 0.70%
-- Flow 1:
  Average throughput: 171.93 Mbit/s
  95th percentile per-packet one-way delay: 68.733 ms
  Loss rate: 0.44%
-- Flow 2:
  Average throughput: 171.57 Mbit/s
  95th percentile per-packet one-way delay: 72.321 ms
  Loss rate: 0.67%
-- Flow 3:
  Average throughput: 151.96 Mbit/s
  95th percentile per-packet one-way delay: 72.389 ms
  Loss rate: 1.63%
Run 9: Statistics of TCP BBR


# Below is generated by plot.py at 2018-04-19 01:17:26
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 339.24 Mbit/s
  95th percentile per-packet one-way delay: 71.279 ms
  Loss rate: 0.67%
-- Flow 1:
  Average throughput: 173.66 Mbit/s
  95th percentile per-packet one-way delay: 69.110 ms
  Loss rate: 0.44%
-- Flow 2:
  Average throughput: 168.15 Mbit/s
  95th percentile per-packet one-way delay: 71.779 ms
  Loss rate: 0.69%
-- Flow 3:
  Average throughput: 163.92 Mbit/s
  95th percentile per-packet one-way delay: 72.947 ms
  Loss rate: 1.39%
Run 9: Report of TCP BBR — Data Link

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

- Flow 1 ingress (mean 173.69 Mbit/s) vs. Flow 1 egress (mean 173.66 Mbit/s)
- Flow 2 ingress (mean 168.50 Mbit/s) vs. Flow 2 egress (mean 168.15 Mbit/s)
- Flow 3 ingress (mean 164.10 Mbit/s) vs. Flow 3 egress (mean 163.92 Mbit/s)
Run 10: Statistics of TCP BBR

Start at: 2018-04-18 22:08:19
End at: 2018-04-18 22:08:49

# Below is generated by plot.py at 2018-04-19 01:17:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 340.37 Mbit/s
95th percentile per-packet one-way delay: 67.931 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 171.29 Mbit/s
95th percentile per-packet one-way delay: 66.983 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 173.44 Mbit/s
95th percentile per-packet one-way delay: 68.751 ms
Loss rate: 0.69%
-- Flow 3:
Average throughput: 164.03 Mbit/s
95th percentile per-packet one-way delay: 68.524 ms
Loss rate: 1.49%
Run 10: Report of TCP BBR — Data Link

![Graph showing throughput over time for different flows with their respective ingress and egress bandwidths.](image-url)

![Graph showing per-packet one-way delays for different flows.](image-url)
Run 1: Statistics of TCP Cubic

End at: 2018-04-18 19:47:01

# Below is generated by plot.py at 2018-04-19 01:17:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 219.73 Mbit/s
95th percentile per-packet one-way delay: 70.881 ms
Loss rate: 0.97%
-- Flow 1:
Average throughput: 135.02 Mbit/s
95th percentile per-packet one-way delay: 71.118 ms
Loss rate: 1.12%
-- Flow 2:
Average throughput: 125.51 Mbit/s
95th percentile per-packet one-way delay: 70.298 ms
Loss rate: 0.66%
-- Flow 3:
Average throughput: 4.07 Mbit/s
95th percentile per-packet one-way delay: 64.052 ms
Loss rate: 4.71%
Run 1: Report of TCP Cubic — Data Link

![Graph of Throughput vs Time for TCP Cubic]

- **Throughput**: Throughput is measured in Mbit/s (Megabits per second).
- **Time (s)**: The x-axis represents time in seconds, ranging from 0 to 30.
- **Flow 1 Ingress**: Blue dashed line, mean 135.99 Mbit/s.
- **Flow 1 Egress**: Blue solid line, mean 135.52 Mbit/s.
- **Flow 2 Ingress**: Green dashed line, mean 125.54 Mbit/s.
- **Flow 2 Egress**: Green solid line, mean 125.51 Mbit/s.
- **Flow 3 Ingress**: Red dashed line, mean 4.22 Mbit/s.
- **Flow 3 Egress**: Red solid line, mean 4.07 Mbit/s.

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

- **Per-packet one-way delay**: Delay is measured in milliseconds (ms).
- **Flow 1 95th percentile**: 71.12 ms.
- **Flow 2 95th percentile**: 70.30 ms.
- **Flow 3 95th percentile**: 64.05 ms.
Run 2: Statistics of TCP Cubic

Start at: 2018-04-18 20:02:25
End at: 2018-04-18 20:02:55

# Below is generated by plot.py at 2018-04-19 01:17:28
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 289.87 Mbit/s
  95th percentile per-packet one-way delay: 72.519 ms
  Loss rate: 0.53%
-- Flow 1:
  Average throughput: 139.64 Mbit/s
  95th percentile per-packet one-way delay: 71.280 ms
  Loss rate: 0.50%
-- Flow 2:
  Average throughput: 172.72 Mbit/s
  95th percentile per-packet one-way delay: 74.150 ms
  Loss rate: 0.28%
-- Flow 3:
  Average throughput: 108.23 Mbit/s
  95th percentile per-packet one-way delay: 69.725 ms
  Loss rate: 1.46%
Run 2: Report of TCP Cubic — Data Link

![Graph showing throughput and packet delay over time for different flows.](image-url)
Run 3: Statistics of TCP Cubic

Start at: 2018-04-18 20:18:29
End at: 2018-04-18 20:18:59

# Below is generated by plot.py at 2018-04-19 01:17:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 252.75 Mbit/s
95th percentile per-packet one-way delay: 72.367 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 139.71 Mbit/s
95th percentile per-packet one-way delay: 73.963 ms
Loss rate: 0.59%
-- Flow 2:
Average throughput: 116.43 Mbit/s
95th percentile per-packet one-way delay: 69.443 ms
Loss rate: 0.82%
-- Flow 3:
Average throughput: 109.34 Mbit/s
95th percentile per-packet one-way delay: 69.178 ms
Loss rate: 1.52%
Run 3: Report of TCP Cubic — Data Link
Run 4: Statistics of TCP Cubic

Start at: 2018-04-18 20:34:22
End at: 2018-04-18 20:34:52

# Below is generated by plot.py at 2018-04-19 01:17:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 205.59 Mbit/s
95th percentile per-packet one-way delay: 71.146 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 149.98 Mbit/s
95th percentile per-packet one-way delay: 71.545 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 41.48 Mbit/s
95th percentile per-packet one-way delay: 63.063 ms
Loss rate: 2.67%
-- Flow 3:
Average throughput: 85.36 Mbit/s
95th percentile per-packet one-way delay: 65.941 ms
Loss rate: 1.42%
Run 5: Statistics of TCP Cubic

Start at: 2018-04-18 20:50:15
End at: 2018-04-18 20:50:45

# Below is generated by plot.py at 2018-04-19 01:17:28
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 228.99 Mbit/s
  95th percentile per-packet one-way delay: 67.198 ms
  Loss rate: 0.78%
  -- Flow 1:
  Average throughput: 110.36 Mbit/s
  95th percentile per-packet one-way delay: 66.866 ms
  Loss rate: 0.36%
  -- Flow 2:
  Average throughput: 101.65 Mbit/s
  95th percentile per-packet one-way delay: 67.389 ms
  Loss rate: 0.85%
  -- Flow 3:
  Average throughput: 155.74 Mbit/s
  95th percentile per-packet one-way delay: 67.253 ms
  Loss rate: 1.57%
Run 5: Report of TCP Cubic — Data Link

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

- **Flow 1 ingress (mean 110.30 Mbit/s)**
- **Flow 1 egress (mean 110.36 Mbit/s)**
- **Flow 2 ingress (mean 101.87 Mbit/s)**
- **Flow 2 egress (mean 101.05 Mbit/s)**
- **Flow 3 ingress (mean 156.18 Mbit/s)**
- **Flow 3 egress (mean 155.74 Mbit/s)**

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

- **Flow 1 (95th percentile 66.87 ms)**
- **Flow 2 (95th percentile 67.39 ms)**
- **Flow 3 (95th percentile 67.25 ms)**
Run 6: Statistics of TCP Cubic

Start at: 2018-04-18 21:06:09
End at: 2018-04-18 21:06:39

# Below is generated by plot.py at 2018-04-19 01:17:28
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 181.99 Mbit/s
  95th percentile per-packet one-way delay: 65.772 ms
  Loss rate: 0.57%
-- Flow 1:
  Average throughput: 107.95 Mbit/s
  95th percentile per-packet one-way delay: 65.755 ms
  Loss rate: 0.48%
-- Flow 2:
  Average throughput: 109.66 Mbit/s
  95th percentile per-packet one-way delay: 65.878 ms
  Loss rate: 0.62%
-- Flow 3:
  Average throughput: 3.89 Mbit/s
  95th percentile per-packet one-way delay: 64.262 ms
  Loss rate: 4.89%
Run 6: Report of TCP Cubic — Data Link

![Graph showing throughput and packet delay](image_url)
Run 7: Statistics of TCP Cubic

Start at: 2018-04-18 21:22:02

# Below is generated by plot.py at 2018-04-19 01:18:07
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 177.08 Mbit/s
  95th percentile per-packet one-way delay: 69.464 ms
  Loss rate: 0.95%
  -- Flow 1:
  Average throughput: 123.51 Mbit/s
  95th percentile per-packet one-way delay: 69.934 ms
  Loss rate: 0.40%
  -- Flow 2:
  Average throughput: 41.06 Mbit/s
  95th percentile per-packet one-way delay: 67.607 ms
  Loss rate: 2.89%
  -- Flow 3:
  Average throughput: 80.27 Mbit/s
  95th percentile per-packet one-way delay: 68.956 ms
  Loss rate: 1.43%
Run 7: Report of TCP Cubic — Data Link
Run 8: Statistics of TCP Cubic

End at: 2018-04-18 21:38:16

# Below is generated by plot.py at 2018-04-19 01:18:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 192.22 Mbit/s
95th percentile per-packet one-way delay: 68.652 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 113.87 Mbit/s
95th percentile per-packet one-way delay: 69.164 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 116.27 Mbit/s
95th percentile per-packet one-way delay: 67.706 ms
Loss rate: 0.82%
-- Flow 3:
Average throughput: 3.41 Mbit/s
95th percentile per-packet one-way delay: 67.899 ms
Loss rate: 5.29%
Run 8: Report of TCP Cubic — Data Link
Run 9: Statistics of TCP Cubic


# Below is generated by plot.py at 2018-04-19 01:19:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 213.05 Mbit/s
95th percentile per-packet one-way delay: 69.577 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 140.66 Mbit/s
95th percentile per-packet one-way delay: 69.762 ms
Loss rate: 0.59%
-- Flow 2:
Average throughput: 107.47 Mbit/s
95th percentile per-packet one-way delay: 68.805 ms
Loss rate: 0.84%
-- Flow 3:
Average throughput: 3.97 Mbit/s
95th percentile per-packet one-way delay: 66.813 ms
Loss rate: 4.75%
Run 9: Report of TCP Cubic — Data Link

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

Legend:
- Flow 1 ingress (mean 140.92 Mbit/s)
- Flow 1 egress (mean 140.66 Mbit/s)
- Flow 2 ingress (mean 107.66 Mbit/s)
- Flow 2 egress (mean 107.47 Mbit/s)
- Flow 3 ingress (mean 4.12 Mbit/s)
- Flow 3 egress (mean 3.97 Mbit/s)

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

Legend:
- Flow 1 (95th percentile 69.76 ms)
- Flow 2 (95th percentile 68.81 ms)
- Flow 3 (95th percentile 66.81 ms)
Run 10: Statistics of TCP Cubic

Start at: 2018-04-18 22:09:19
End at: 2018-04-18 22:09:49

# Below is generated by plot.py at 2018-04-19 01:20:14
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 263.21 Mbit/s
  95th percentile per-packet one-way delay: 73.271 ms
  Loss rate: 0.60%
-- Flow 1:
  Average throughput: 140.06 Mbit/s
  95th percentile per-packet one-way delay: 73.138 ms
  Loss rate: 0.58%
-- Flow 2:
  Average throughput: 144.70 Mbit/s
  95th percentile per-packet one-way delay: 73.741 ms
  Loss rate: 0.38%
-- Flow 3:
  Average throughput: 82.40 Mbit/s
  95th percentile per-packet one-way delay: 72.765 ms
  Loss rate: 1.45%
Run 10: Report of TCP Cubic — Data Link
Run 1: Statistics of LEDBAT

End at: 2018-04-18 19:43:11

# Below is generated by plot.py at 2018-04-19 01:20:14
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 27.11 Mbit/s
  95th percentile per-packet one-way delay: 65.621 ms
  Loss rate: 1.22%
-- Flow 1:
  Average throughput: 15.18 Mbit/s
  95th percentile per-packet one-way delay: 65.699 ms
  Loss rate: 0.97%
-- Flow 2:
  Average throughput: 14.58 Mbit/s
  95th percentile per-packet one-way delay: 65.576 ms
  Loss rate: 1.29%
-- Flow 3:
  Average throughput: 6.86 Mbit/s
  95th percentile per-packet one-way delay: 65.415 ms
  Loss rate: 2.64%
Run 1: Report of LEDBAT — Data Link

[Graph showing throughput over time with different flow rates and delays indicated]
Run 2: Statistics of LEDBAT

Start at: 2018-04-18 19:58:35
End at: 2018-04-18 19:59:05

# Below is generated by plot.py at 2018-04-19 01:20:14
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 31.60 Mbit/s
  95th percentile per-packet one-way delay: 64.939 ms
  Loss rate: 1.05%
-- Flow 1:
  Average throughput: 21.63 Mbit/s
  95th percentile per-packet one-way delay: 65.020 ms
  Loss rate: 0.86%
-- Flow 2:
  Average throughput: 11.55 Mbit/s
  95th percentile per-packet one-way delay: 64.837 ms
  Loss rate: 1.12%
-- Flow 3:
  Average throughput: 7.17 Mbit/s
  95th percentile per-packet one-way delay: 64.531 ms
  Loss rate: 2.61%
Run 2: Report of LEDBAT — Data Link

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

- **Flow 1 ingress** (mean 21.73 Mbit/s)
- **Flow 1 egress** (mean 21.63 Mbit/s)
- **Flow 2 ingress** (mean 11.60 Mbit/s)
- **Flow 2 egress** (mean 11.55 Mbit/s)
- **Flow 3 ingress** (mean 7.27 Mbit/s)
- **Flow 3 egress** (mean 7.17 Mbit/s)

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

- **Flow 1** (95th percentile 65.02 ms)
- **Flow 2** (95th percentile 64.84 ms)
- **Flow 3** (95th percentile 64.53 ms)
Run 3: Statistics of LEDBAT

Start at: 2018-04-18 20:14:39
End at: 2018-04-18 20:15:09

# Below is generated by plot.py at 2018-04-19 01:20:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 34.57 Mbit/s
95th percentile per-packet one-way delay: 64.807 ms
Loss rate: 1.09%
-- Flow 1:
Average throughput: 21.97 Mbit/s
95th percentile per-packet one-way delay: 65.078 ms
Loss rate: 0.85%
-- Flow 2:
Average throughput: 15.36 Mbit/s
95th percentile per-packet one-way delay: 64.427 ms
Loss rate: 1.26%
-- Flow 3:
Average throughput: 7.48 Mbit/s
95th percentile per-packet one-way delay: 63.114 ms
Loss rate: 2.54%
Run 3: Report of LEDBAT — Data Link

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

- Flow 1 ingress (mean 22.07 Mbit/s)
- Flow 1 egress (mean 21.97 Mbit/s)
- Flow 2 ingress (mean 15.45 Mbit/s)
- Flow 2 egress (mean 15.36 Mbit/s)
- Flow 3 ingress (mean 7.58 Mbit/s)
- Flow 3 egress (mean 7.48 Mbit/s)

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

- Flow 1 (95th percentile 65.00 ms)
- Flow 2 (95th percentile 64.43 ms)
- Flow 3 (95th percentile 63.11 ms)
Run 4: Statistics of LEDBAT

Start at: 2018-04-18 20:30:32
End at: 2018-04-18 20:31:02

# Below is generated by plot.py at 2018-04-19 01:20:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 34.30 Mbit/s
95th percentile per-packet one-way delay: 64.800 ms
Loss rate: 1.09%
-- Flow 1:
Average throughput: 22.09 Mbit/s
95th percentile per-packet one-way delay: 64.948 ms
Loss rate: 0.85%
-- Flow 2:
Average throughput: 14.78 Mbit/s
95th percentile per-packet one-way delay: 64.611 ms
Loss rate: 1.28%
-- Flow 3:
Average throughput: 7.37 Mbit/s
95th percentile per-packet one-way delay: 64.248 ms
Loss rate: 2.56%
Run 4: Report of LEDBAT — Data Link
Run 5: Statistics of LEDBAT

Start at: 2018-04-18 20:46:26
End at: 2018-04-18 20:46:56

# Below is generated by plot.py at 2018-04-19 01:20:14
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 32.65 Mbit/s
  95th percentile per-packet one-way delay: 64.867 ms
  Loss rate: 1.11%
-- Flow 1:
  Average throughput: 21.82 Mbit/s
  95th percentile per-packet one-way delay: 64.886 ms
  Loss rate: 0.85%
-- Flow 2:
  Average throughput: 12.76 Mbit/s
  95th percentile per-packet one-way delay: 64.855 ms
  Loss rate: 1.37%
-- Flow 3:
  Average throughput: 7.31 Mbit/s
  95th percentile per-packet one-way delay: 64.805 ms
  Loss rate: 2.57%
Run 5: Report of LEDBAT — Data Link

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

- Blue dashed line: Flow 1 ingress (mean 21.91 Mbit/s)
- Blue solid line: Flow 1 egress (mean 21.82 Mbit/s)
- Green dashed line: Flow 2 ingress (mean 12.85 Mbit/s)
- Green solid line: Flow 2 egress (mean 12.76 Mbit/s)
- Red dashed line: Flow 3 ingress (mean 7.40 Mbit/s)
- Red solid line: Flow 3 egress (mean 7.31 Mbit/s)

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

- Blue circle: Flow 1 (95th percentile 64.89 ms)
- Green circle: Flow 2 (95th percentile 64.86 ms)
- Red circle: Flow 3 (95th percentile 64.81 ms)
Run 6: Statistics of LEDBAT

Start at: 2018-04-18 21:02:22
End at: 2018-04-18 21:02:52

# Below is generated by plot.py at 2018-04-19 01:20:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 33.63 Mbit/s
95th percentile per-packet one-way delay: 64.628 ms
Loss rate: 1.08%
-- Flow 1:
Average throughput: 22.20 Mbit/s
95th percentile per-packet one-way delay: 64.572 ms
Loss rate: 0.84%
-- Flow 2:
Average throughput: 14.47 Mbit/s
95th percentile per-packet one-way delay: 64.714 ms
Loss rate: 1.28%
-- Flow 3:
Average throughput: 5.64 Mbit/s
95th percentile per-packet one-way delay: 64.648 ms
Loss rate: 2.91%
Run 6: Report of LEDBAT — Data Link
Run 7: Statistics of LEDBAT

Start at: 2018-04-18 21:18:15
End at: 2018-04-18 21:18:45

# Below is generated by plot.py at 2018-04-19 01:20:14
# Datalink statistics
-- Total of 3 flows:
    Average throughput: 33.54 Mbit/s
    95th percentile per-packet one-way delay: 64.570 ms
    Loss rate: 1.10%
-- Flow 1:
    Average throughput: 21.74 Mbit/s
    95th percentile per-packet one-way delay: 64.475 ms
    Loss rate: 0.85%
-- Flow 2:
    Average throughput: 14.50 Mbit/s
    95th percentile per-packet one-way delay: 64.731 ms
    Loss rate: 1.28%
-- Flow 3:
    Average throughput: 6.82 Mbit/s
    95th percentile per-packet one-way delay: 65.085 ms
    Loss rate: 2.64%
Run 7: Report of LEDBAT — Data Link
Run 8: Statistics of LEDBAT

End at: 2018-04-18 21:34:27

# Below is generated by plot.py at 2018-04-19 01:20:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 33.46 Mbit/s
95th percentile per-packet one-way delay: 65.159 ms
Loss rate: 1.10%
-- Flow 1:
Average throughput: 21.46 Mbit/s
95th percentile per-packet one-way delay: 65.100 ms
Loss rate: 0.86%
-- Flow 2:
Average throughput: 14.73 Mbit/s
95th percentile per-packet one-way delay: 65.501 ms
Loss rate: 1.26%
-- Flow 3:
Average throughput: 7.04 Mbit/s
95th percentile per-packet one-way delay: 64.616 ms
Loss rate: 2.62%
Run 9: Statistics of LEDBAT

End at: 2018-04-18 21:50:05

# Below is generated by plot.py at 2018-04-19 01:20:14
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 34.11 Mbit/s
  95th percentile per-packet one-way delay: 65.182 ms
  Loss rate: 1.09%
-- Flow 1:
  Average throughput: 22.07 Mbit/s
  95th percentile per-packet one-way delay: 65.239 ms
  Loss rate: 0.85%
-- Flow 2:
  Average throughput: 14.73 Mbit/s
  95th percentile per-packet one-way delay: 65.029 ms
  Loss rate: 1.28%
-- Flow 3:
  Average throughput: 7.02 Mbit/s
  95th percentile per-packet one-way delay: 64.914 ms
  Loss rate: 2.61%
Run 9: Report of LEDBAT — Data Link
Run 10: Statistics of LEDBAT

Start at: 2018-04-18 22:05:29
End at: 2018-04-18 22:05:59

# Below is generated by plot.py at 2018-04-19 01:20:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 32.53 Mbit/s
95th percentile per-packet one-way delay: 64.272 ms
Loss rate: 1.07%
-- Flow 1:
Average throughput: 22.84 Mbit/s
95th percentile per-packet one-way delay: 64.393 ms
Loss rate: 0.83%
-- Flow 2:
Average throughput: 11.31 Mbit/s
95th percentile per-packet one-way delay: 64.033 ms
Loss rate: 1.29%
-- Flow 3:
Average throughput: 6.72 Mbit/s
95th percentile per-packet one-way delay: 63.192 ms
Loss rate: 2.67%
Run 10: Report of LEDBAT — Data Link

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**Graph 1:**

- **Throughput (Mbit/s):** Shows the throughput over time for different flows.
- **Time (s):** X-axis represents time in seconds.
- **Legend:**
  - Flow 1 ingress (mean 22.93 Mbit/s)
  - Flow 1 egress (mean 22.84 Mbit/s)
  - Flow 2 ingress (mean 11.39 Mbit/s)
  - Flow 2 egress (mean 11.31 Mbit/s)
  - Flow 3 ingress (mean 6.82 Mbit/s)
  - Flow 3 egress (mean 6.72 Mbit/s)

**Graph 2:**

- **Per packet round trip delay (ms):** Shows the round trip delay for different flows over time.
- **Time (s):** X-axis represents time in seconds.
- **Legend:**
  - Flow 1 (95th percentile 64.39 ms)
  - Flow 2 (95th percentile 64.03 ms)
  - Flow 3 (95th percentile 61.19 ms)
Run 1: Statistics of PCC-Allegro

Start at: 2018-04-18 19:52:05
End at: 2018-04-18 19:52:35

# Below is generated by plot.py at 2018-04-19 01:28:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 568.22 Mbit/s
95th percentile per-packet one-way delay: 173.789 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 470.13 Mbit/s
95th percentile per-packet one-way delay: 173.800 ms
Loss rate: 0.79%
-- Flow 2:
Average throughput: 145.45 Mbit/s
95th percentile per-packet one-way delay: 173.745 ms
Loss rate: 0.94%
-- Flow 3:
Average throughput: 5.19 Mbit/s
95th percentile per-packet one-way delay: 174.200 ms
Loss rate: 3.02%
Run 1: Report of PCC-Allegro — Data Link
Run 2: Statistics of PCC-Allegro

Start at: 2018-04-18 20:08:08
End at: 2018-04-18 20:08:38

# Below is generated by plot.py at 2018-04-19 01:29:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 597.11 Mbit/s
95th percentile per-packet one-way delay: 195.279 ms
Loss rate: 1.95%
-- Flow 1:
Average throughput: 555.88 Mbit/s
95th percentile per-packet one-way delay: 198.065 ms
Loss rate: 2.01%
-- Flow 2:
Average throughput: 59.97 Mbit/s
95th percentile per-packet one-way delay: 167.967 ms
Loss rate: 1.06%
-- Flow 3:
Average throughput: 4.43 Mbit/s
95th percentile per-packet one-way delay: 140.359 ms
Loss rate: 1.29%
Run 2: Report of PCC-Allegro — Data Link
Run 3: Statistics of PCC-Allegro

Start at: 2018-04-18 20:24:06
End at: 2018-04-18 20:24:36

# Below is generated by plot.py at 2018-04-19 01:29:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 498.68 Mbit/s
95th percentile per-packet one-way delay: 271.744 ms
Loss rate: 6.14%
-- Flow 1:
Average throughput: 397.77 Mbit/s
95th percentile per-packet one-way delay: 283.762 ms
Loss rate: 6.20%
-- Flow 2:
Average throughput: 123.70 Mbit/s
95th percentile per-packet one-way delay: 208.708 ms
Loss rate: 5.67%
-- Flow 3:
Average throughput: 58.05 Mbit/s
95th percentile per-packet one-way delay: 209.155 ms
Loss rate: 6.92%
Run 3: Report of PCC-Allegro — Data Link

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

- **Flow 1 ingress** (mean 422.24 Mbit/s)
- **Flow 1 egress** (mean 397.77 Mbit/s)
- **Flow 2 ingress** (mean 136.34 Mbit/s)
- **Flow 2 egress** (mean 123.70 Mbit/s)
- **Flow 3 ingress** (mean 63.55 Mbit/s)
- **Flow 3 egress** (mean 59.05 Mbit/s)

- **Flow 1 (95th percentile 283.76 ms)**
- **Flow 2 (95th percentile 208.71 ms)**
- **Flow 3 (95th percentile 209.16 ms)**
Run 4: Statistics of PCC-Allegro

End at: 2018-04-18 20:40:23

# Below is generated by plot.py at 2018-04-19 01:29:36
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 595.63 Mbit/s
  95th percentile per-packet one-way delay: 175.767 ms
  Loss rate: 1.33%
-- Flow 1:
  Average throughput: 501.83 Mbit/s
  95th percentile per-packet one-way delay: 177.957 ms
  Loss rate: 1.34%
-- Flow 2:
  Average throughput: 139.38 Mbit/s
  95th percentile per-packet one-way delay: 171.690 ms
  Loss rate: 1.25%
-- Flow 3:
  Average throughput: 4.11 Mbit/s
  95th percentile per-packet one-way delay: 172.124 ms
  Loss rate: 2.26%
Run 4: Report of PCC-Allegro — Data Link

![Throughput Graph](image)

![Delay Graph](image)

- Flow 1 (ingress mean 506.51 Mbit/s)
- Flow 1 (egress mean 501.83 Mbit/s)
- Flow 2 (ingress mean 140.27 Mbit/s)
- Flow 2 (egress mean 139.38 Mbit/s)
- Flow 3 (ingress mean 4.15 Mbit/s)
- Flow 3 (egress mean 4.11 Mbit/s)
Run 5: Statistics of PCC-Allegro

End at: 2018-04-18 20:56:27

# Below is generated by plot.py at 2018-04-19 01:29:36
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 577.88 Mbit/s
  95th percentile per-packet one-way delay: 178.041 ms
  Loss rate: 1.89%
-- Flow 1:
  Average throughput: 494.91 Mbit/s
  95th percentile per-packet one-way delay: 178.402 ms
  Loss rate: 1.98%
-- Flow 2:
  Average throughput: 123.04 Mbit/s
  95th percentile per-packet one-way delay: 176.584 ms
  Loss rate: 1.34%
-- Flow 3:
  Average throughput: 4.23 Mbit/s
  95th percentile per-packet one-way delay: 177.962 ms
  Loss rate: 2.87%
Run 5: Report of PCC-Allegro — Data Link

![Graph 1: Throughput (Mbps)]

![Graph 2: One-packet one-way delay (ms)]
Run 6: Statistics of PCC-Allegro

End at: 2018-04-18 21:12:14

# Below is generated by plot.py at 2018-04-19 01:29:36
# Datalink statistics
  -- Total of 3 flows:
    Average throughput: 553.94 Mbit/s
    95th percentile per-packet one-way delay: 183.837 ms
    Loss rate: 1.36%
    -- Flow 1:
    Average throughput: 469.81 Mbit/s
    95th percentile per-packet one-way delay: 183.731 ms
    Loss rate: 1.18%
    -- Flow 2:
    Average throughput: 111.32 Mbit/s
    95th percentile per-packet one-way delay: 183.935 ms
    Loss rate: 2.14%
    -- Flow 3:
    Average throughput: 31.60 Mbit/s
    95th percentile per-packet one-way delay: 184.654 ms
    Loss rate: 3.51%
Run 6: Report of PCC-Allegro — Data Link

Throughput (Mbit/s)

0 5 10 15 20 25 30

Time (s)

Flow 1 ingress (mean 473.41 Mbit/s)
Flow 1 egress (mean 469.81 Mbit/s)
Flow 2 ingress (mean 113.02 Mbit/s)
Flow 2 egress (mean 111.32 Mbit/s)
Flow 3 ingress (mean 32.33 Mbit/s)
Flow 3 egress (mean 31.60 Mbit/s)

One packet one way delay (ms)

0 5 10 15 20 25 30

Time (s)

Flow 1 (95th percentile 183.73 ms)
Flow 2 (95th percentile 183.94 ms)
Flow 3 (95th percentile 184.65 ms)
Run 7: Statistics of PCC-Allegro


# Below is generated by plot.py at 2018-04-19 01:30:27
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 589.23 Mbit/s
  95th percentile per-packet one-way delay: 175.038 ms
  Loss rate: 2.15%
-- Flow 1:
  Average throughput: 501.57 Mbit/s
  95th percentile per-packet one-way delay: 175.319 ms
  Loss rate: 2.03%
-- Flow 2:
  Average throughput: 130.26 Mbit/s
  95th percentile per-packet one-way delay: 173.848 ms
  Loss rate: 2.82%
-- Flow 3:
  Average throughput: 4.25 Mbit/s
  95th percentile per-packet one-way delay: 158.636 ms
  Loss rate: 2.89%
Run 7: Report of PCC-Allegro — Data Link

**Throughput (Mbps):**
- **Flow 1 Ingress:** (mean 599.79 Mbps)
- **Flow 1 Egress:** (mean 501.57 Mbps)
- **Flow 2 Ingress:** (mean 133.18 Mbps)
- **Flow 2 Egress:** (mean 130.26 Mbps)
- **Flow 3 Ingress:** (mean 4.32 Mbps)
- **Flow 3 Egress:** (mean 4.25 Mbps)

**Per-packet one-way delay (ms):**
- **Flow 1:** (95th percentile 175.32 ms)
- **Flow 2:** (95th percentile 173.85 ms)
- **Flow 3:** (95th percentile 158.64 ms)
Run 8: Statistics of PCC-Allegro

End at: 2018-04-18 21:43:36

# Below is generated by plot.py at 2018-04-19 01:30:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 541.48 Mbit/s
95th percentile per-packet one-way delay: 208.499 ms
Loss rate: 3.85%
-- Flow 1:
Average throughput: 448.58 Mbit/s
95th percentile per-packet one-way delay: 208.149 ms
Loss rate: 3.68%
-- Flow 2:
Average throughput: 132.33 Mbit/s
95th percentile per-packet one-way delay: 209.142 ms
Loss rate: 4.62%
-- Flow 3:
Average throughput: 15.80 Mbit/s
95th percentile per-packet one-way delay: 210.094 ms
Loss rate: 5.52%
Run 8: Report of PCC-Allegro — Data Link

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

Legend:
- Flow 1 ingress (mean 463.72 Mbit/s)
- Flow 1 egress (mean 448.58 Mbit/s)
- Flow 2 ingress (mean 137.84 Mbit/s)
- Flow 2 egress (mean 132.33 Mbit/s)
- Flow 3 ingress (mean 16.51 Mbit/s)
- Flow 3 egress (mean 15.80 Mbit/s)

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Run 9: Statistics of PCC-Allegro


# Below is generated by plot.py at 2018-04-19 01:38:36
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 576.01 Mbit/s
  95th percentile per-packet one-way delay: 140.506 ms
  Loss rate: 1.69%
-- Flow 1:
  Average throughput: 509.49 Mbit/s
  95th percentile per-packet one-way delay: 139.929 ms
  Loss rate: 1.45%
-- Flow 2:
  Average throughput: 98.24 Mbit/s
  95th percentile per-packet one-way delay: 183.549 ms
  Loss rate: 3.51%
-- Flow 3:
  Average throughput: 4.39 Mbit/s
  95th percentile per-packet one-way delay: 162.566 ms
  Loss rate: 4.36%
Run 9: Report of PCC-Allegro — Data Link

[Graph showing throughput and packet loss over time for different flows]
Run 10: Statistics of PCC-Allegro


# Below is generated by plot.py at 2018-04-19 01:39:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 562.72 Mbit/s
  95th percentile per-packet one-way delay: 244.855 ms
  Loss rate: 3.28%
-- Flow 1:
  Average throughput: 463.43 Mbit/s
  95th percentile per-packet one-way delay: 257.927 ms
  Loss rate: 3.28%
-- Flow 2:
  Average throughput: 93.38 Mbit/s
  95th percentile per-packet one-way delay: 166.920 ms
  Loss rate: 2.37%
-- Flow 3:
  Average throughput: 114.55 Mbit/s
  95th percentile per-packet one-way delay: 167.316 ms
  Loss rate: 4.79%
Run 10: Report of PCC-Allegro — Data Link

![Graphs showing data link performance metrics including throughput and packet delay over time.]

Legend:
- Flow 1 ingress (mean 477.17 Mbit/s)
- Flow 1 egress (mean 463.43 Mbit/s)
- Flow 2 ingress (mean 95.03 Mbit/s)
- Flow 2 egress (mean 93.38 Mbit/s)
- Flow 3 ingress (mean 118.79 Mbit/s)
- Flow 3 egress (mean 114.55 Mbit/s)
Run 1: Statistics of QUIC Cubic

Start at: 2018-04-18 19:49:45
End at: 2018-04-18 19:50:15

# Below is generated by plot.py at 2018-04-19 01:39:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 79.21 Mbit/s
  95th percentile per-packet one-way delay: 63.766 ms
  Loss rate: 0.56%
-- Flow 1:
  Average throughput: 48.00 Mbit/s
  95th percentile per-packet one-way delay: 63.569 ms
  Loss rate: 0.77%
-- Flow 2:
  Average throughput: 32.12 Mbit/s
  95th percentile per-packet one-way delay: 63.904 ms
  Loss rate: 0.14%
-- Flow 3:
  Average throughput: 21.37 Mbit/s
  95th percentile per-packet one-way delay: 63.559 ms
  Loss rate: 0.50%
Run 1: Report of QUIC Cubic — Data Link

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

- **Flow 1** (ingress mean 48.15 Mbit/s, egress mean 48.00 Mbit/s)
- **Flow 2** (ingress mean 31.97 Mbit/s, egress mean 32.12 Mbit/s)
- **Flow 3** (ingress mean 21.22 Mbit/s, egress mean 21.37 Mbit/s)
Run 2: Statistics of QUIC Cubic

Start at: 2018-04-18 20:05:50
End at: 2018-04-18 20:06:20

# Below is generated by plot.py at 2018-04-19 01:39:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 75.67 Mbit/s
95th percentile per-packet one-way delay: 63.878 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 45.41 Mbit/s
95th percentile per-packet one-way delay: 63.843 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 31.45 Mbit/s
95th percentile per-packet one-way delay: 63.978 ms
Loss rate: 0.20%
-- Flow 3:
Average throughput: 28.78 Mbit/s
95th percentile per-packet one-way delay: 62.159 ms
Loss rate: 3.00%
Run 2: Report of QUIC Cubic — Data Link

---

![Throughput Graph](image1)

**Throughput (Mbps)**

- **Flow 1 Ingress** (mean 45.51 Mbps)
- **Flow 1 Egress** (mean 45.41 Mbps)
- **Flow 2 Ingress** (mean 31.32 Mbps)
- **Flow 2 Egress** (mean 31.45 Mbps)
- **Flow 3 Ingress** (mean 29.30 Mbps)
- **Flow 3 Egress** (mean 20.78 Mbps)

![Round-Trip Time Graph](image2)

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

- **Flow 1** (95th percentile 63.84 ms)
- **Flow 2** (95th percentile 63.98 ms)
- **Flow 3** (95th percentile 62.16 ms)

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Run 3: Statistics of QUIC Cubic


# Below is generated by plot.py at 2018-04-19 01:39:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 70.82 Mbit/s
95th percentile per-packet one-way delay: 63.881 ms
Loss rate: 0.91%
-- Flow 1:
Average throughput: 42.87 Mbit/s
95th percentile per-packet one-way delay: 63.606 ms
Loss rate: 0.60%
-- Flow 2:
Average throughput: 28.42 Mbit/s
95th percentile per-packet one-way delay: 64.032 ms
Loss rate: 0.46%
-- Flow 3:
Average throughput: 27.81 Mbit/s
95th percentile per-packet one-way delay: 63.649 ms
Loss rate: 3.27%
Run 3: Report of QUIC Cubic — Data Link
Run 4: Statistics of QUIC Cubic

Start at: 2018-04-18 20:37:31
End at: 2018-04-18 20:38:01

# Below is generated by plot.py at 2018-04-19 01:39:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 86.69 Mbit/s
  95th percentile per-packet one-way delay: 63.850 ms
  Loss rate: 0.93%
-- Flow 1:
  Average throughput: 55.13 Mbit/s
  95th percentile per-packet one-way delay: 63.891 ms
  Loss rate: 0.60%
-- Flow 2:
  Average throughput: 36.63 Mbit/s
  95th percentile per-packet one-way delay: 63.814 ms
  Loss rate: 0.94%
-- Flow 3:
  Average throughput: 22.26 Mbit/s
  95th percentile per-packet one-way delay: 63.625 ms
  Loss rate: 3.30%
Run 4: Report of QUIC Cubic — Data Link

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

- **Flow 1 ingress (mean 55.22 Mbit/s)**
- **Flow 1 egress (mean 55.13 Mbit/s)**
- **Flow 2 ingress (mean 36.74 Mbit/s)**
- **Flow 2 egress (mean 36.63 Mbit/s)**
- **Flow 3 ingress (mean 22.73 Mbit/s)**
- **Flow 3 egress (mean 22.26 Mbit/s)**
Run 5: Statistics of QUIC Cubic

End at: 2018-04-18 20:54:05

# Below is generated by plot.py at 2018-04-19 01:39:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 83.35 Mbit/s
  95th percentile per-packet one-way delay: 63.672 ms
  Loss rate: 0.93%
-- Flow 1:
  Average throughput: 49.92 Mbit/s
  95th percentile per-packet one-way delay: 63.697 ms
  Loss rate: 0.53%
-- Flow 2:
  Average throughput: 39.61 Mbit/s
  95th percentile per-packet one-way delay: 63.650 ms
  Loss rate: 0.96%
-- Flow 3:
  Average throughput: 21.86 Mbit/s
  95th percentile per-packet one-way delay: 61.923 ms
  Loss rate: 3.58%
Run 5: Report of QUIC Cubic — Data Link

![Graph of Throughput](image1)

![Graph of Per-packet one-way delay](image2)
Run 6: Statistics of QUIC Cubic

End at: 2018-04-18 21:09:54

# Below is generated by plot.py at 2018-04-19 01:39:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 74.24 Mbit/s
95th percentile per-packet one-way delay: 63.878 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 46.73 Mbit/s
95th percentile per-packet one-way delay: 63.662 ms
Loss rate: 0.75%
-- Flow 2:
Average throughput: 31.38 Mbit/s
95th percentile per-packet one-way delay: 64.064 ms
Loss rate: 0.29%
-- Flow 3:
Average throughput: 20.48 Mbit/s
95th percentile per-packet one-way delay: 63.691 ms
Loss rate: 0.80%
Run 6: Report of QUIC Cubic — Data Link

Graph 1: Throughput (Mbps) vs Time (s)
- Flow 1 ingress (mean 46.89 Mbps)
- Flow 1 egress (mean 46.73 Mbps)
- Flow 2 ingress (mean 31.27 Mbps)
- Flow 2 egress (mean 31.38 Mbps)
- Flow 3 ingress (mean 20.38 Mbps)
- Flow 3 egress (mean 20.48 Mbps)

Graph 2: Per-packet one-way delay (ms) vs Time (s)
- Flow 1 (95th percentile 63.66 ms)
- Flow 2 (95th percentile 64.06 ms)
- Flow 3 (95th percentile 63.69 ms)
Run 7: Statistics of QUIC Cubic


# Below is generated by plot.py at 2018-04-19 01:39:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 75.36 Mbit/s
  95th percentile per-packet one-way delay: 63.925 ms
  Loss rate: 0.87%
-- Flow 1:
  Average throughput: 45.90 Mbit/s
  95th percentile per-packet one-way delay: 63.942 ms
  Loss rate: 0.62%
-- Flow 2:
  Average throughput: 31.20 Mbit/s
  95th percentile per-packet one-way delay: 63.928 ms
  Loss rate: 0.28%
-- Flow 3:
  Average throughput: 26.81 Mbit/s
  95th percentile per-packet one-way delay: 61.782 ms
  Loss rate: 3.52%
Run 7: Report of QUIC Cubic — Data Link

![Graph showing throughput and per-packet one-way delay for different flows. The graphs illustrate the performance of QUIC Cubic data link in terms of throughput and packet delay across multiple flows over time.](image-url)
Run 8: Statistics of QUIC Cubic


# Below is generated by plot.py at 2018-04-19 01:39:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.87 Mbit/s
95th percentile per-packet one-way delay: 63.623 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 45.23 Mbit/s
95th percentile per-packet one-way delay: 63.677 ms
Loss rate: 0.57%
-- Flow 2:
Average throughput: 39.12 Mbit/s
95th percentile per-packet one-way delay: 61.914 ms
Loss rate: 1.01%
-- Flow 3:
Average throughput: 23.53 Mbit/s
95th percentile per-packet one-way delay: 63.589 ms
Loss rate: 3.30%
Run 8: Report of QUIC Cubic — Data Link

![First Diagram](#)

![Second Diagram](#)
Run 9: Statistics of QUIC Cubic

Start at: 2018-04-18 21:56:42
End at: 2018-04-18 21:57:12

# Below is generated by plot.py at 2018-04-19 01:39:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 74.05 Mbit/s
  95th percentile per-packet one-way delay: 63.638 ms
  Loss rate: 0.93%
-- Flow 1:
  Average throughput: 43.66 Mbit/s
  95th percentile per-packet one-way delay: 61.817 ms
  Loss rate: 0.56%
-- Flow 2:
  Average throughput: 31.34 Mbit/s
  95th percentile per-packet one-way delay: 63.651 ms
  Loss rate: 0.93%
-- Flow 3:
  Average throughput: 29.45 Mbit/s
  95th percentile per-packet one-way delay: 63.893 ms
  Loss rate: 2.55%
Run 9: Report of QUIC Cubic — Data Link

### Throughput (Mbit/s)

- **Flow 1 ingress** (mean 43.72 Mbit/s)
- **Flow 1 egress** (mean 43.66 Mbit/s)
- **Flow 2 ingress** (mean 31.44 Mbit/s)
- **Flow 2 egress** (mean 31.34 Mbit/s)
- **Flow 3 ingress** (mean 29.84 Mbit/s)
- **Flow 3 egress** (mean 29.45 Mbit/s)

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

- **Flow 1** (95th percentile 61.62 ms)
- **Flow 2** (95th percentile 63.65 ms)
- **Flow 3** (95th percentile 63.89 ms)
Run 10: Statistics of QUIC Cubic

Start at: 2018-04-18 22:12:36

# Below is generated by plot.py at 2018-04-19 01:39:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 72.46 Mbit/s
95th percentile per-packet one-way delay: 63.812 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 44.08 Mbit/s
95th percentile per-packet one-way delay: 63.847 ms
Loss rate: 0.73%
-- Flow 2:
Average throughput: 34.63 Mbit/s
95th percentile per-packet one-way delay: 63.653 ms
Loss rate: 1.14%
-- Flow 3:
Average throughput: 16.61 Mbit/s
95th percentile per-packet one-way delay: 63.782 ms
Loss rate: 0.66%
Run 10: Report of QUIC Cubic — Data Link
Run 1: Statistics of SCReAM

Start at: 2018-04-18 19:39:52
End at: 2018-04-18 19:40:22

# Below is generated by plot.py at 2018-04-19 01:39:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 63.535 ms
  Loss rate: 0.59%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 62.172 ms
  Loss rate: 0.38%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 63.574 ms
  Loss rate: 0.63%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 63.479 ms
  Loss rate: 1.10%
Run 1: Report of SCReAM — Data Link
Run 2: Statistics of SCReAM

End at: 2018-04-18 19:56:13

# Below is generated by plot.py at 2018-04-19 01:39:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 63.860 ms
  Loss rate: 0.65%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 63.886 ms
  Loss rate: 0.51%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 61.863 ms
  Loss rate: 0.63%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 63.767 ms
  Loss rate: 1.10%
Run 2: Report of SCReAM — Data Link

![Graph showing throughput and packet delay over time for different flows]
Run 3: Statistics of SCReAM

Start at: 2018-04-18 20:11:46
End at: 2018-04-18 20:12:16

# Below is generated by plot.py at 2018-04-19 01:39:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 63.883 ms
  Loss rate: 0.59%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 63.867 ms
  Loss rate: 0.38%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 63.904 ms
  Loss rate: 0.63%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 63.668 ms
  Loss rate: 1.10%
Run 4: Statistics of SCReAM


# Below is generated by plot.py at 2018-04-19 01:39:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile perpacket one-way delay: 63.866 ms
  Loss rate: 0.59%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile perpacket one-way delay: 63.898 ms
  Loss rate: 0.38%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile perpacket one-way delay: 63.805 ms
  Loss rate: 0.63%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile perpacket one-way delay: 63.620 ms
  Loss rate: 1.10%
Run 4: Report of SCReAM — Data Link

![Graphs showing throughput and packet loss over time for different flows.](image-url)
Run 5: Statistics of SCReAM

Start at: 2018-04-18 20:43:34
End at: 2018-04-18 20:44:04

# Below is generated by plot.py at 2018-04-19 01:39:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 63.851 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.892 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.673 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.629 ms
Loss rate: 1.10%
Run 5: Report of SCReAM — Data Link

![Graph showing throughput and delay over time for different flows.](image)
Run 6: Statistics of SCReAM

End at: 2018-04-18 21:00:05

# Below is generated by plot.py at 2018-04-19 01:39:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 63.788 ms
  Loss rate: 0.59%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 62.005 ms
  Loss rate: 0.38%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 63.817 ms
  Loss rate: 0.63%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 63.788 ms
  Loss rate: 1.10%
Run 6: Report of SCReAM — Data Link
Run 7: Statistics of SCReAM

End at: 2018-04-18 21:15:52

# Below is generated by plot.py at 2018-04-19 01:39:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 63.643 ms
  Loss rate: 0.65%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 63.660 ms
  Loss rate: 0.51%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 62.048 ms
  Loss rate: 0.63%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 63.493 ms
  Loss rate: 1.10%
Run 7: Report of SCReAM — Data Link
Run 8: Statistics of SCReAM

Start at: 2018-04-18 21:31:05

# Below is generated by plot.py at 2018-04-19 01:39:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 63.579 ms
  Loss rate: 0.59%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 63.576 ms
  Loss rate: 0.38%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 63.660 ms
  Loss rate: 0.63%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 63.572 ms
  Loss rate: 1.10%
Run 8: Report of SCReAM — Data Link

![Graph 1](Image 1)

![Graph 2](Image 2)
Run 9: Statistics of SCReAM

End at: 2018-04-18 21:47:16

# Below is generated by plot.py at 2018-04-19 01:39:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 63.655 ms
  Loss rate: 0.59%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 61.881 ms
  Loss rate: 0.38%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 61.842 ms
  Loss rate: 0.63%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 63.709 ms
  Loss rate: 1.10%
Run 9: Report of SCReAM — Data Link

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

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

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

- Flow 1 (95th percentile 61.88 ms)
- Flow 2 (95th percentile 61.84 ms)
- Flow 3 (95th percentile 61.71 ms)
Run 10: Statistics of SCReAM

Start at: 2018-04-18 22:02:38
End at: 2018-04-18 22:03:08

# Below is generated by plot.py at 2018-04-19 01:39:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 63.963 ms
  Loss rate: 0.59%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 64.012 ms
  Loss rate: 0.38%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 63.602 ms
  Loss rate: 0.63%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 63.815 ms
  Loss rate: 1.10%
Run 1: Statistics of WebRTC media

Start at: 2018-04-18 19:40:32
End at: 2018-04-18 19:41:02

# Below is generated by plot.py at 2018-04-19 01:39:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.16 Mbit/s
  95th percentile per-packet one-way delay: 63.830 ms
  Loss rate: 0.18%
-- Flow 1:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 63.801 ms
  Loss rate: 0.15%
-- Flow 2:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 63.919 ms
  Loss rate: 0.15%
-- Flow 3:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 63.758 ms
  Loss rate: 0.24%
Run 1: Report of WebRTC media — Data Link
Run 2: Statistics of WebRTC media

Start at: 2018-04-18 19:56:24
End at: 2018-04-18 19:56:54

# Below is generated by plot.py at 2018-04-19 01:39:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 64.208 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 64.109 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 64.179 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 64.300 ms
Loss rate: 0.24%
Run 3: Statistics of WebRTC media

Start at: 2018-04-18 20:12:27
End at: 2018-04-18 20:12:57

# Below is generated by plot.py at 2018-04-19 01:39:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 64.217 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 63.975 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 64.196 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 64.605 ms
Loss rate: 0.16%
Run 3: Report of WebRTC media — Data Link
Run 4: Statistics of WebRTC media

End at: 2018-04-18 20:28:54

# Below is generated by plot.py at 2018-04-19 01:39:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 63.954 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 63.633 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 64.008 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 64.010 ms
Loss rate: 0.16%
Run 4: Report of WebRTC media — Data Link

[Graph showing throughput and packet delay over time for different flows.]
Run 5: Statistics of WebRTC media

Start at: 2018-04-18 20:44:15
End at: 2018-04-18 20:44:45

# Below is generated by plot.py at 2018-04-19 01:39:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 63.976 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 64.148 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 63.794 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 63.853 ms
Loss rate: 0.16%
Run 5: Report of WebRTC media — Data Link
Run 6: Statistics of WebRTC media

Start at: 2018-04-18 21:00:16
End at: 2018-04-18 21:00:46

# Below is generated by plot.py at 2018-04-19 01:39:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.17 Mbit/s
  95th percentile per-packet one-way delay: 63.785 ms
  Loss rate: 0.05%
-- Flow 1:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 63.809 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 63.788 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 63.750 ms
  Loss rate: 0.16%
Run 6: Report of WebRTC media — Data Link
Run 7: Statistics of WebRTC media

Start at: 2018-04-18 21:16:02
End at: 2018-04-18 21:16:32

# Below is generated by plot.py at 2018-04-19 01:39:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.16 Mbit/s
  95th percentile per-packet one-way delay: 64.049 ms
  Loss rate: 0.09%
-- Flow 1:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 64.005 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 64.068 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 63.960 ms
  Loss rate: 0.28%
Run 7: Report of WebRTC media — Data Link
Run 8: Statistics of WebRTC media

End at: 2018-04-18 21:32:16

# Below is generated by plot.py at 2018-04-19 01:39:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.16 Mbit/s
  95th percentile per-packet one-way delay: 63.906 ms
  Loss rate: 0.05%
-- Flow 1:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 63.705 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 63.928 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 64.001 ms
  Loss rate: 0.16%
Run 8: Report of WebRTC media — Data Link

![Graph 1: Throughput (Mbps)]

![Graph 2: Per-packet round trip delay (ms)]
Run 9: Statistics of WebRTC media


# Below is generated by plot.py at 2018-04-19 01:39:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.16 Mbit/s
  95th percentile per-packet one-way delay: 63.753 ms
  Loss rate: 0.07%
-- Flow 1:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 63.576 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.06 Mbit/s
  95th percentile per-packet one-way delay: 63.891 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.05 Mbit/s
  95th percentile per-packet one-way delay: 63.745 ms
  Loss rate: 0.24%
Run 9: Report of WebRTC media — Data Link
Run 10: Statistics of WebRTC media

Start at: 2018-04-18 22:03:18
End at: 2018-04-18 22:03:48

# Below is generated by plot.py at 2018-04-19 01:39:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 63.864 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 63.765 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 64.022 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 63.965 ms
Loss rate: 0.16%
Run 10: Report of WebRTC media — Data Link

![Throughput Graph](image)

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

![Delay Graph](image)

- Flow 1 (95th percentile 63.77 ms)
- Flow 2 (95th percentile 64.02 ms)
- Flow 3 (95th percentile 63.97 ms)
Run 1: Statistics of Sprout

End at: 2018-04-18 19:41:43

# Below is generated by plot.py at 2018-04-19 01:39:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 12.66 Mbit/s
  95th percentile per-packet one-way delay: 64.780 ms
  Loss rate: 0.72%
-- Flow 1:
  Average throughput: 6.52 Mbit/s
  95th percentile per-packet one-way delay: 64.849 ms
  Loss rate: 0.48%
-- Flow 2:
  Average throughput: 6.34 Mbit/s
  95th percentile per-packet one-way delay: 64.772 ms
  Loss rate: 0.73%
-- Flow 3:
  Average throughput: 5.91 Mbit/s
  95th percentile per-packet one-way delay: 64.474 ms
  Loss rate: 1.50%
Run 1: Report of Sprout — Data Link

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

![Graph 2: Packet Delay](image2)
Run 2: Statistics of Sprout

Start at: 2018-04-18 19:57:04
End at: 2018-04-18 19:57:34

# Below is generated by plot.py at 2018-04-19 01:39:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.86 Mbit/s
95th percentile per-packet one-way delay: 64.618 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 6.54 Mbit/s
95th percentile per-packet one-way delay: 64.640 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 6.49 Mbit/s
95th percentile per-packet one-way delay: 64.604 ms
Loss rate: 0.60%
-- Flow 3:
Average throughput: 6.15 Mbit/s
95th percentile per-packet one-way delay: 64.536 ms
Loss rate: 1.46%
Run 2: Report of Sprout — Data Link

- Throughput (Mbps)
- Time (s)
- Flow 1 ingress (mean 6.54 Mbit/s)
- Flow 1 egress (mean 6.54 Mbit/s)
- Flow 2 ingress (mean 6.49 Mbit/s)
- Flow 2 egress (mean 6.49 Mbit/s)
- Flow 3 ingress (mean 6.16 Mbit/s)
- Flow 3 egress (mean 6.15 Mbit/s)

- Per packet size [bytes]
- Time (s)
- Flow 1 (95th percentile 64.64 ms)
- Flow 2 (95th percentile 64.60 ms)
- Flow 3 (95th percentile 64.54 ms)
Run 3: Statistics of Sprout


# Below is generated by plot.py at 2018-04-19 01:39:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.70 Mbit/s
95th percentile per-packet one-way delay: 64.830 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 6.48 Mbit/s
95th percentile per-packet one-way delay: 64.892 ms
Loss rate: 0.17%
-- Flow 2:
Average throughput: 6.33 Mbit/s
95th percentile per-packet one-way delay: 64.822 ms
Loss rate: 0.74%
-- Flow 3:
Average throughput: 6.16 Mbit/s
95th percentile per-packet one-way delay: 64.772 ms
Loss rate: 1.59%
Run 3: Report of Sprout — Data Link
Run 4: Statistics of Sprout

Start at: 2018-04-18 20:29:04
End at: 2018-04-18 20:29:34

# Below is generated by plot.py at 2018-04-19 01:39:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 12.72 Mbit/s
  95th percentile per-packet one-way delay: 64.690 ms
  Loss rate: 0.75%
-- Flow 1:
  Average throughput: 6.51 Mbit/s
  95th percentile per-packet one-way delay: 64.693 ms
  Loss rate: 0.44%
-- Flow 2:
  Average throughput: 6.42 Mbit/s
  95th percentile per-packet one-way delay: 64.728 ms
  Loss rate: 0.84%
-- Flow 3:
  Average throughput: 5.96 Mbit/s
  95th percentile per-packet one-way delay: 64.619 ms
  Loss rate: 1.56%
Run 4: Report of Sprout — Data Link
Run 5: Statistics of Sprout

Start at: 2018-04-18 20:44:55
End at: 2018-04-18 20:45:25

# Below is generated by plot.py at 2018-04-19 01:39:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 12.78 Mbit/s
  95th percentile per-packet one-way delay: 64.713 ms
  Loss rate: 0.67%
-- Flow 1:
  Average throughput: 6.48 Mbit/s
  95th percentile per-packet one-way delay: 64.679 ms
  Loss rate: 0.47%
-- Flow 2:
  Average throughput: 6.45 Mbit/s
  95th percentile per-packet one-way delay: 64.814 ms
  Loss rate: 0.59%
-- Flow 3:
  Average throughput: 6.18 Mbit/s
  95th percentile per-packet one-way delay: 64.660 ms
  Loss rate: 1.45%
Run 5: Report of Sprout — Data Link
Run 6: Statistics of Sprout

Start at: 2018-04-18 21:00:56
End at: 2018-04-18 21:01:26

# Below is generated by plot.py at 2018-04-19 01:39:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.82 Mbit/s
95th percentile per-packet one-way delay: 64.651 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 6.56 Mbit/s
95th percentile per-packet one-way delay: 64.630 ms
Loss rate: 0.23%
-- Flow 2:
Average throughput: 6.46 Mbit/s
95th percentile per-packet one-way delay: 64.746 ms
Loss rate: 0.76%
-- Flow 3:
Average throughput: 6.07 Mbit/s
95th percentile per-packet one-way delay: 64.197 ms
Loss rate: 1.82%
Run 6: Report of Sprout — Data Link

[Graph showing throughput and packet delay over time for different data flows]
Run 7: Statistics of Sprout


# Below is generated by plot.py at 2018-04-19 01:39:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.01 Mbit/s
95th percentile per-packet one-way delay: 64.408 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 6.65 Mbit/s
95th percentile per-packet one-way delay: 64.302 ms
Loss rate: 0.48%
-- Flow 2:
Average throughput: 6.52 Mbit/s
95th percentile per-packet one-way delay: 64.369 ms
Loss rate: 0.75%
-- Flow 3:
Average throughput: 6.26 Mbit/s
95th percentile per-packet one-way delay: 64.558 ms
Loss rate: 1.34%
Run 7: Report of Sprout — Data Link
Run 8: Statistics of Sprout

End at: 2018-04-18 21:32:56

# Below is generated by plot.py at 2018-04-19 01:39:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 12.63 Mbit/s
  95th percentile per-packet one-way delay: 64.558 ms
  Loss rate: 0.83%
-- Flow 1:
  Average throughput: 6.56 Mbit/s
  95th percentile per-packet one-way delay: 64.487 ms
  Loss rate: 0.57%
-- Flow 2:
  Average throughput: 6.05 Mbit/s
  95th percentile per-packet one-way delay: 64.514 ms
  Loss rate: 0.74%
-- Flow 3:
  Average throughput: 6.31 Mbit/s
  95th percentile per-packet one-way delay: 64.682 ms
  Loss rate: 1.82%
Run 8: Report of Sprout — Data Link
Run 9: Statistics of Sprout


# Below is generated by plot.py at 2018-04-19 01:39:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.71 Mbit/s
95th percentile per-packet one-way delay: 64.915 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 6.45 Mbit/s
95th percentile per-packet one-way delay: 64.936 ms
Loss rate: 0.49%
-- Flow 2:
Average throughput: 6.36 Mbit/s
95th percentile per-packet one-way delay: 64.908 ms
Loss rate: 0.79%
-- Flow 3:
Average throughput: 6.30 Mbit/s
95th percentile per-packet one-way delay: 64.871 ms
Loss rate: 1.55%
Run 9: Report of Sprout — Data Link

![Throughput and Latency Graphs]

**Throughput (Mbps):**
- Flow 1 ingress (mean 6.45 Mbit/s)
- Flow 1 egress (mean 6.45 Mbit/s)
- Flow 2 ingress (mean 6.36 Mbit/s)
- Flow 2 egress (mean 6.36 Mbit/s)
- Flow 3 ingress (mean 6.31 Mbit/s)
- Flow 3 egress (mean 6.30 Mbit/s)

**Per Packet One Way Delay (ms):**
- Flow 1 (95th percentile 64.94 ms)
- Flow 2 (95th percentile 64.91 ms)
- Flow 3 (95th percentile 64.87 ms)
Run 10: Statistics of Sprout

Start at: 2018-04-18 22:03:58
End at: 2018-04-18 22:04:28

# Below is generated by plot.py at 2018-04-19 01:39:30
# Datalink statistics
# Total of 3 flows:
- Average throughput: 12.91 Mbit/s
- 95th percentile per-packet one-way delay: 64.546 ms
- Loss rate: 0.50%
  -- Flow 1:
  - Average throughput: 6.53 Mbit/s
  - 95th percentile per-packet one-way delay: 64.554 ms
  - Loss rate: 0.49%
  -- Flow 2:
  - Average throughput: 6.51 Mbit/s
  - 95th percentile per-packet one-way delay: 64.408 ms
  - Loss rate: 0.09%
  -- Flow 3:
  - Average throughput: 6.33 Mbit/s
  - 95th percentile per-packet one-way delay: 64.741 ms
  - Loss rate: 1.38%
Run 10: Report of Sprout — Data Link

![Graph of Throughput and Delay](image)

- **Throughput (Mbps)**
- **Time (s)**

**Throughput Graph**:
- Flow 1 ingress (mean 6.54 Mbit/s)
- Flow 1 egress (mean 6.53 Mbit/s)
- Flow 2 ingress (mean 6.47 Mbit/s)
- Flow 2 egress (mean 6.51 Mbit/s)
- Flow 3 ingress (mean 6.36 Mbit/s)
- Flow 3 egress (mean 6.33 Mbit/s)

**Delay Graph**:
- Flow 1 (95th percentile 64.55 ms)
- Flow 2 (95th percentile 64.41 ms)
- Flow 3 (95th percentile 64.74 ms)
Run 1: Statistics of TaoVA-100x

End at: 2018-04-18 19:47:53

# Below is generated by plot.py at 2018-04-19 01:45:08
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 339.03 Mbit/s
  95th percentile per-packet one-way delay: 70.803 ms
  Loss rate: 0.50%
-- Flow 1:
  Average throughput: 159.27 Mbit/s
  95th percentile per-packet one-way delay: 64.346 ms
  Loss rate: 0.24%
-- Flow 2:
  Average throughput: 185.35 Mbit/s
  95th percentile per-packet one-way delay: 80.754 ms
  Loss rate: 0.68%
-- Flow 3:
  Average throughput: 172.75 Mbit/s
  95th percentile per-packet one-way delay: 65.800 ms
  Loss rate: 0.86%
Run 1: Report of TaoVA-100x — Data Link
Run 2: Statistics of TaoVA-100x

Start at: 2018-04-18 20:03:22
End at: 2018-04-18 20:03:52

# Below is generated by plot.py at 2018-04-19 01:46:17
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 372.74 Mbit/s
  95th percentile per-packet one-way delay: 72.631 ms
  Loss rate: 0.47%
-- Flow 1:
  Average throughput: 207.83 Mbit/s
  95th percentile per-packet one-way delay: 68.984 ms
  Loss rate: 0.22%
-- Flow 2:
  Average throughput: 173.02 Mbit/s
  95th percentile per-packet one-way delay: 71.879 ms
  Loss rate: 0.37%
-- Flow 3:
  Average throughput: 152.07 Mbit/s
  95th percentile per-packet one-way delay: 82.838 ms
  Loss rate: 1.70%
Run 2: Report of TaoVA-100x — Data Link

![Graph 1: Throughput vs Time]

- Flow 1 ingress (mean 207.42 Mbit/s)
- Flow 1 egress (mean 207.83 Mbit/s)
- Flow 2 ingress (mean 172.53 Mbit/s)
- Flow 2 egress (mean 173.02 Mbit/s)
- Flow 3 ingress (mean 152.71 Mbit/s)
- Flow 3 egress (mean 152.07 Mbit/s)

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

- Flow 1 (95th percentile 68.98 ms)
- Flow 2 (95th percentile 71.88 ms)
- Flow 3 (95th percentile 82.84 ms)
Run 3: Statistics of TaoVA-100x

End at: 2018-04-18 20:19:55

# Below is generated by plot.py at 2018-04-19 01:46:17
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 281.99 Mbit/s
  95th percentile per-packet one-way delay: 65.767 ms
  Loss rate: 0.68%
-- Flow 1:
  Average throughput: 173.51 Mbit/s
  95th percentile per-packet one-way delay: 66.705 ms
  Loss rate: 0.54%
-- Flow 2:
  Average throughput: 104.89 Mbit/s
  95th percentile per-packet one-way delay: 64.326 ms
  Loss rate: 0.59%
-- Flow 3:
  Average throughput: 118.26 Mbit/s
  95th percentile per-packet one-way delay: 64.306 ms
  Loss rate: 1.43%
Run 3: Report of TaoVA-100x — Data Link

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

- **Flow 1 ingress** (mean 173.73 Mbit/s)
- **Flow 1 egress** (mean 173.51 Mbit/s)
- **Flow 2 ingress** (mean 104.85 Mbit/s)
- **Flow 2 egress** (mean 104.89 Mbit/s)
- **Flow 3 ingress** (mean 118.44 Mbit/s)
- **Flow 3 egress** (mean 118.26 Mbit/s)

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

- *Flow 1* (95th percentile 66.70 ms)
- *Flow 2* (95th percentile 64.33 ms)
- *Flow 3* (95th percentile 64.31 ms)
Run 4: Statistics of TaoVA-100x

Start at: 2018-04-18 20:35:15
End at: 2018-04-18 20:35:45

# Below is generated by plot.py at 2018-04-19 01:46:17
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 248.56 Mbit/s
  95th percentile per-packet one-way delay: 65.985 ms
  Loss rate: 0.79%
-- Flow 1:
  Average throughput: 95.71 Mbit/s
  95th percentile per-packet one-way delay: 63.893 ms
  Loss rate: 0.41%
-- Flow 2:
  Average throughput: 138.09 Mbit/s
  95th percentile per-packet one-way delay: 69.302 ms
  Loss rate: 0.80%
-- Flow 3:
  Average throughput: 185.92 Mbit/s
  95th percentile per-packet one-way delay: 67.436 ms
  Loss rate: 1.36%
Run 4: Report of TaoVA-100x — Data Link

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

- Flow 1 ingress (mean 95.70 Mbit/s)
- Flow 1 egress (mean 95.71 Mbit/s)
- Flow 2 ingress (mean 138.32 Mbit/s)
- Flow 2 egress (mean 138.09 Mbit/s)
- Flow 3 ingress (mean 186.14 Mbit/s)
- Flow 3 egress (mean 185.92 Mbit/s)

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

- Flow 1 (95th percentile 63.89 ms)
- Flow 2 (95th percentile 69.30 ms)
- Flow 3 (95th percentile 67.44 ms)
Run 5: Statistics of TaoVA-100x

Start at: 2018-04-18 20:51:09
End at: 2018-04-18 20:51:39

# Below is generated by plot.py at 2018-04-19 01:46:17
# Datalink statistics
  -- Total of 3 flows:
    Average throughput: 307.04 Mbit/s
    95th percentile per-packet one-way delay: 64.877 ms
    Loss rate: 0.56%
  -- Flow 1:
    Average throughput: 151.32 Mbit/s
    95th percentile per-packet one-way delay: 64.769 ms
    Loss rate: 0.25%
  -- Flow 2:
    Average throughput: 174.63 Mbit/s
    95th percentile per-packet one-way delay: 65.448 ms
    Loss rate: 0.82%
  -- Flow 3:
    Average throughput: 121.02 Mbit/s
    95th percentile per-packet one-way delay: 64.358 ms
    Loss rate: 0.96%
Run 6: Statistics of TaoVA-100x

Start at: 2018-04-18 21:07:00
End at: 2018-04-18 21:07:30

# Below is generated by plot.py at 2018-04-19 01:46:17
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 314.75 Mbit/s
  95th percentile per-packet one-way delay: 71.709 ms
  Loss rate: 0.65%
-- Flow 1:
  Average throughput: 127.42 Mbit/s
  95th percentile per-packet one-way delay: 64.784 ms
  Loss rate: 0.30%
-- Flow 2:
  Average throughput: 193.45 Mbit/s
  95th percentile per-packet one-way delay: 69.587 ms
  Loss rate: 0.58%
-- Flow 3:
  Average throughput: 179.40 Mbit/s
  95th percentile per-packet one-way delay: 84.082 ms
  Loss rate: 1.52%
Run 6: Report of TaoVA-100x — Data Link

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

- **Flow 1 ingress** (mean 127.27 Mbit/s)
- **Flow 1 egress** (mean 127.42 Mbit/s)
- **Flow 2 ingress** (mean 193.34 Mbit/s)
- **Flow 2 egress** (mean 193.45 Mbit/s)
- **Flow 3 ingress** (mean 179.66 Mbit/s)
- **Flow 3 egress** (mean 179.40 Mbit/s)
Run 7: Statistics of TaoVA-100x


# Below is generated by plot.py at 2018-04-19 01:47:33
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 228.39 Mbit/s
  95th percentile per-packet one-way delay: 65.833 ms
  Loss rate: 0.50%
-- Flow 1:
  Average throughput: 100.47 Mbit/s
  95th percentile per-packet one-way delay: 63.851 ms
  Loss rate: 0.38%
-- Flow 2:
  Average throughput: 114.50 Mbit/s
  95th percentile per-packet one-way delay: 65.872 ms
  Loss rate: 0.50%
-- Flow 3:
  Average throughput: 158.06 Mbit/s
  95th percentile per-packet one-way delay: 73.344 ms
  Loss rate: 0.73%
Run 7: Report of TaoVA-100x — Data Link

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

- Flow 1 ingress (mean 100.42 Mbit/s)
- Flow 1 egress (mean 100.47 Mbit/s)
- Flow 2 ingress (mean 114.34 Mbit/s)
- Flow 2 egress (mean 114.50 Mbit/s)
- Flow 3 ingress (mean 157.17 Mbit/s)
- Flow 3 egress (mean 158.06 Mbit/s)

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

- Flow 1 (95th percentile 63.85 ms)
- Flow 2 (95th percentile 67.87 ms)
- Flow 3 (95th percentile 73.34 ms)
Run 8: Statistics of TaoVA-100x

End at: 2018-04-18 21:39:08

# Below is generated by plot.py at 2018-04-19 01:47:33
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 103.15 Mbit/s
  95th percentile per-packet one-way delay: 63.863 ms
  Loss rate: 0.79%
-- Flow 1:
  Average throughput: 12.89 Mbit/s
  95th percentile per-packet one-way delay: 63.740 ms
  Loss rate: 0.45%
-- Flow 2:
  Average throughput: 88.78 Mbit/s
  95th percentile per-packet one-way delay: 63.900 ms
  Loss rate: 0.65%
-- Flow 3:
  Average throughput: 95.05 Mbit/s
  95th percentile per-packet one-way delay: 63.740 ms
  Loss rate: 1.21%
Run 9: Statistics of TaoVA-100x

Start at: 2018-04-18 21:54:17
End at: 2018-04-18 21:54:47

# Below is generated by plot.py at 2018-04-19 01:53:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 336.15 Mbit/s
  95th percentile per-packet one-way delay: 67.292 ms
  Loss rate: 0.56%
-- Flow 1:
  Average throughput: 159.39 Mbit/s
  95th percentile per-packet one-way delay: 65.512 ms
  Loss rate: 0.24%
-- Flow 2:
  Average throughput: 173.07 Mbit/s
  95th percentile per-packet one-way delay: 69.672 ms
  Loss rate: 0.71%
-- Flow 3:
  Average throughput: 188.46 Mbit/s
  95th percentile per-packet one-way delay: 66.010 ms
  Loss rate: 1.11%
Run 9: Report of TaoVA-100x — Data Link
Run 10: Statistics of TaoVA-100x

Start at: 2018-04-18 22:10:15
End at: 2018-04-18 22:10:45

# Below is generated by plot.py at 2018-04-19 01:53:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 290.07 Mbit/s
  95th percentile per-packet one-way delay: 70.901 ms
  Loss rate: 0.49%
-- Flow 1:
  Average throughput: 125.60 Mbit/s
  95th percentile per-packet one-way delay: 64.088 ms
  Loss rate: 0.30%
-- Flow 2:
  Average throughput: 162.94 Mbit/s
  95th percentile per-packet one-way delay: 66.296 ms
  Loss rate: 0.35%
-- Flow 3:
  Average throughput: 171.85 Mbit/s
  95th percentile per-packet one-way delay: 83.733 ms
  Loss rate: 1.16%
Run 10: Report of TaoVA-100x — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 125.45 Mbps)
  - Flow 1 egress (mean 125.60 Mbps)
  - Flow 2 ingress (mean 162.50 Mbps)
  - Flow 2 egress (mean 162.94 Mbps)
  - Flow 3 ingress (mean 171.28 Mbps)
  - Flow 3 egress (mean 171.85 Mbps)

- **Per-packet one-way delay (ms):**
  - Flow 1 (95th percentile 64.09 ms)
  - Flow 2 (95th percentile 66.30 ms)
  - Flow 3 (95th percentile 83.73 ms)
Run 1: Statistics of TCP Vegas

Start at: 2018-04-18 19:41:54
End at: 2018-04-18 19:42:24

# Below is generated by plot.py at 2018-04-19 01:53:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 115.47 Mbit/s
  95th percentile per-packet one-way delay: 64.759 ms
  Loss rate: 0.65%
-- Flow 1:
  Average throughput: 72.92 Mbit/s
  95th percentile per-packet one-way delay: 64.737 ms
  Loss rate: 0.44%
-- Flow 2:
  Average throughput: 37.63 Mbit/s
  95th percentile per-packet one-way delay: 64.370 ms
  Loss rate: 0.72%
-- Flow 3:
  Average throughput: 53.58 Mbit/s
  95th percentile per-packet one-way delay: 65.715 ms
  Loss rate: 1.41%
Run 1: Report of TCP Vegas — Data Link

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

- Flow 1 ingress (mean 72.94 Mbit/s)
- Flow 1 egress (mean 72.92 Mbit/s)
- Flow 2 ingress (mean 37.63 Mbit/s)
- Flow 2 egress (mean 37.63 Mbit/s)
- Flow 3 ingress (mean 53.67 Mbit/s)
- Flow 3 egress (mean 53.58 Mbit/s)

- Flow 1 (95th percentile 64.74 ms)
- Flow 2 (95th percentile 64.37 ms)
- Flow 3 (95th percentile 65.72 ms)
Run 2: Statistics of TCP Vegas

Start at: 2018-04-18 19:57:45
End at: 2018-04-18 19:58:15

# Below is generated by plot.py at 2018-04-19 01:53:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 161.12 Mbit/s
95th percentile per-packet one-way delay: 71.807 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 64.41 Mbit/s
95th percentile per-packet one-way delay: 66.952 ms
Loss rate: 0.46%
-- Flow 2:
Average throughput: 120.13 Mbit/s
95th percentile per-packet one-way delay: 73.589 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 51.81 Mbit/s
95th percentile per-packet one-way delay: 66.780 ms
Loss rate: 1.34%
Run 2: Report of TCP Vegas — Data Link

![Graph of throughput vs time for different flows]

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

Flow 1 ingress (mean 64.43 Mbit/s), Flow 1 egress (mean 64.41 Mbit/s), Flow 2 ingress (mean 119.83 Mbit/s), Flow 2 egress (mean 120.13 Mbit/s), Flow 3 ingress (mean 51.69 Mbit/s), Flow 3 egress (mean 51.81 Mbit/s)
Run 3: Statistics of TCP Vegas

End at: 2018-04-18 20:14:19

# Below is generated by plot.py at 2018-04-19 01:53:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 158.33 Mbit/s
95th percentile per-packet one-way delay: 67.880 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 93.81 Mbit/s
95th percentile per-packet one-way delay: 65.232 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 60.58 Mbit/s
95th percentile per-packet one-way delay: 71.884 ms
Loss rate: 0.54%
-- Flow 3:
Average throughput: 74.11 Mbit/s
95th percentile per-packet one-way delay: 66.301 ms
Loss rate: 1.30%
Run 3: Report of TCP Vegas — Data Link

![Graph showing throughput and per-packet one way delay for different flows during a 30-second interval.]

- **Throughput:**
  - **Flow 1 ingress (mean 93.96 Mbit/s)**
  - **Flow 1 egress (mean 93.81 Mbit/s)**
  - **Flow 2 ingress (mean 60.51 Mbit/s)**
  - **Flow 2 egress (mean 60.55 Mbit/s)**
  - **Flow 3 ingress (mean 73.97 Mbit/s)**
  - **Flow 3 egress (mean 74.11 Mbit/s)**

- **Per-packet one way delay:**
  - **Flow 1 (95th percentile 65.23 ms)**
  - **Flow 2 (95th percentile 71.88 ms)**
  - **Flow 3 (95th percentile 66.30 ms)**
Run 4: Statistics of TCP Vegas

Start at: 2018-04-18 20:29:45
End at: 2018-04-18 20:30:15

# Below is generated by plot.py at 2018-04-19 01:53:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 107.85 Mbit/s
  95th percentile per-packet one-way delay: 65.907 ms
  Loss rate: 0.66%
-- Flow 1:
  Average throughput: 53.21 Mbit/s
  95th percentile per-packet one-way delay: 65.705 ms
  Loss rate: 0.56%
-- Flow 2:
  Average throughput: 61.18 Mbit/s
  95th percentile per-packet one-way delay: 65.331 ms
  Loss rate: 0.63%
-- Flow 3:
  Average throughput: 42.91 Mbit/s
  95th percentile per-packet one-way delay: 69.158 ms
  Loss rate: 1.16%
Run 4: Report of TCP Vegas — Data Link

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

Start at: 2018-04-18 20:45:37
End at: 2018-04-18 20:46:07

# Below is generated by plot.py at 2018-04-19 01:53:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 160.61 Mbit/s
  95th percentile per-packet one-way delay: 65.435 ms
  Loss rate: 0.58%
-- Flow 1:
  Average throughput: 110.41 Mbit/s
  95th percentile per-packet one-way delay: 64.924 ms
  Loss rate: 0.45%
-- Flow 2:
  Average throughput: 47.66 Mbit/s
  95th percentile per-packet one-way delay: 68.896 ms
  Loss rate: 0.55%
-- Flow 3:
  Average throughput: 56.57 Mbit/s
  95th percentile per-packet one-way delay: 65.695 ms
  Loss rate: 1.38%
Run 5: Report of TCP Vegas — Data Link

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

- Flow 1 ingress (mean 110.44 Mbit/s)
- Flow 1 egress (mean 110.41 Mbit/s)
- Flow 2 ingress (mean 47.62 Mbit/s)
- Flow 2 egress (mean 47.66 Mbit/s)
- Flow 3 ingress (mean 56.63 Mbit/s)
- Flow 3 egress (mean 56.57 Mbit/s)
Run 6: Statistics of TCP Vegas

Start at: 2018-04-18 21:01:38
End at: 2018-04-18 21:02:08

# Below is generated by plot.py at 2018-04-19 01:53:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 75.70 Mbit/s
  95th percentile per-packet one-way delay: 64.207 ms
  Loss rate: 0.80%
-- Flow 1:
  Average throughput: 29.96 Mbit/s
  95th percentile per-packet one-way delay: 64.080 ms
  Loss rate: 0.42%
-- Flow 2:
  Average throughput: 28.19 Mbit/s
  95th percentile per-packet one-way delay: 64.551 ms
  Loss rate: 0.56%
-- Flow 3:
  Average throughput: 82.33 Mbit/s
  95th percentile per-packet one-way delay: 63.899 ms
  Loss rate: 1.39%
Run 6: Report of TCP Vegas — Data Link

![Graph of TCP Vegas data link performance](image-url)

- **Throughput (Mbit/s)**
  - Flow 1 ingress (mean 29.96 Mbit/s)
  - Flow 1 egress (mean 29.96 Mbit/s)
  - Flow 2 ingress (mean 28.14 Mbit/s)
  - Flow 2 egress (mean 28.19 Mbit/s)
  - Flow 3 ingress (mean 62.22 Mbit/s)
  - Flow 3 egress (mean 62.33 Mbit/s)

- **Per-packet one-way delay (ms)**
  - Flow 1 (95th percentile 64.08 ms)
  - Flow 2 (95th percentile 64.55 ms)
  - Flow 3 (95th percentile 63.90 ms)
Run 7: Statistics of TCP Vegas

End at: 2018-04-18 21:17:54

# Below is generated by plot.py at 2018-04-19 01:53:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 182.66 Mbit/s
  95th percentile per-packet one-way delay: 69.481 ms
  Loss rate: 0.44%
-- Flow 1:
  Average throughput: 105.01 Mbit/s
  95th percentile per-packet one-way delay: 70.249 ms
  Loss rate: 0.22%
-- Flow 2:
  Average throughput: 90.94 Mbit/s
  95th percentile per-packet one-way delay: 65.032 ms
  Loss rate: 0.60%
-- Flow 3:
  Average throughput: 52.40 Mbit/s
  95th percentile per-packet one-way delay: 68.986 ms
  Loss rate: 1.25%
Run 7: Report of TCP Vegas — Data Link

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

- **Throughput (Mbps):**
  - **Flow 1 ingress (mean 104.80 Mbps):**
  - **Flow 1 egress (mean 105.01 Mbps):**
  - **Flow 2 ingress (mean 90.99 Mbps):**
  - **Flow 2 egress (mean 90.94 Mbps):**
  - **Flow 3 ingress (mean 52.39 Mbps):**
  - **Flow 3 egress (mean 52.40 Mbps):**

- **Per-packet one-way delay (ms):**
  - **Flow 1 (95th percentile 70.25 ms):**
  - **Flow 2 (95th percentile 65.03 ms):**
  - **Flow 3 (95th percentile 68.99 ms):**
Run 8: Statistics of TCP Vegas

End at: 2018-04-18 21:33:37

# Below is generated by plot.py at 2018-04-19 01:53:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 146.16 Mbit/s
  95th percentile per-packet one-way delay: 64.432 ms
  Loss rate: 0.55%
-- Flow 1:
  Average throughput: 105.81 Mbit/s
  95th percentile per-packet one-way delay: 64.194 ms
  Loss rate: 0.39%
-- Flow 2:
  Average throughput: 30.82 Mbit/s
  95th percentile per-packet one-way delay: 64.219 ms
  Loss rate: 0.60%
-- Flow 3:
  Average throughput: 60.46 Mbit/s
  95th percentile per-packet one-way delay: 68.941 ms
  Loss rate: 1.35%
Run 8: Report of TCP Vegas — Data Link
Run 9: Statistics of TCP Vegas

End at: 2018-04-18 21:49:18

# Below is generated by plot.py at 2018-04-19 01:53:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.59 Mbit/s
95th percentile per-packet one-way delay: 65.484 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 37.55 Mbit/s
95th percentile per-packet one-way delay: 64.846 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 62.51 Mbit/s
95th percentile per-packet one-way delay: 65.096 ms
Loss rate: 0.60%
-- Flow 3:
Average throughput: 56.41 Mbit/s
95th percentile per-packet one-way delay: 71.167 ms
Loss rate: 1.31%
Run 9: Report of TCP Vegas — Data Link

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

- Throughput (Mbps):
  - Flow 1 ingress (mean 37.53 Mbps)
  - Flow 1 egress (mean 37.55 Mbps)
  - Flow 2 ingress (mean 62.49 Mbps)
  - Flow 2 egress (mean 62.51 Mbps)
  - Flow 3 ingress (mean 56.43 Mbps)
  - Flow 3 egress (mean 56.41 Mbps)

- Packet Delay (ms):
  - Flow 1 (95th percentile 64.85 ms)
  - Flow 2 (95th percentile 65.10 ms)
  - Flow 3 (95th percentile 71.17 ms)
Run 10: Statistics of TCP Vegas

Start at: 2018-04-18 22:04:40
End at: 2018-04-18 22:05:10

# Below is generated by plot.py at 2018-04-19 01:53:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 144.33 Mbit/s
  95th percentile per-packet one-way delay: 64.057 ms
  Loss rate: 0.68%
-- Flow 1:
  Average throughput: 61.73 Mbit/s
  95th percentile per-packet one-way delay: 63.791 ms
  Loss rate: 0.47%
-- Flow 2:
  Average throughput: 95.10 Mbit/s
  95th percentile per-packet one-way delay: 64.087 ms
  Loss rate: 0.68%
-- Flow 3:
  Average throughput: 59.16 Mbit/s
  95th percentile per-packet one-way delay: 66.195 ms
  Loss rate: 1.32%
Run 10: Report of TCP Vegas — Data Link
Run 1: Statistics of Verus

End at: 2018-04-18 19:43:54

# Below is generated by plot.py at 2018-04-19 01:53:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 283.38 Mbit/s
95th percentile per-packet one-way delay: 124.832 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 138.56 Mbit/s
95th percentile per-packet one-way delay: 100.999 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 158.90 Mbit/s
95th percentile per-packet one-way delay: 140.695 ms
Loss rate: 1.20%
-- Flow 3:
Average throughput: 121.52 Mbit/s
95th percentile per-packet one-way delay: 137.779 ms
Loss rate: 2.68%
Run 1: Report of Verus — Data Link

![Graph of network throughput and per-packet one-way delay over time for three flows: Flow 1 (mean 137.07 Mbit/s), Flow 2 (mean 159.84 Mbit/s), Flow 3 (mean 121.24 Mbit/s), and per-packet one-way delay for each flow with 95th percentile values: Flow 1 (95th percentile 101.00 ms), Flow 2 (95th percentile 140.69 ms), Flow 3 (95th percentile 137.78 ms).]
Run 2: Statistics of Verus

Start at: 2018-04-18 19:59:18
End at: 2018-04-18 19:59:48

# Below is generated by plot.py at 2018-04-19 01:55:19
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 309.25 Mbit/s
  95th percentile per-packet one-way delay: 123.750 ms
  Loss rate: 0.83%
-- Flow 1:
  Average throughput: 170.06 Mbit/s
  95th percentile per-packet one-way delay: 133.798 ms
  Loss rate: 0.40%
-- Flow 2:
  Average throughput: 155.47 Mbit/s
  95th percentile per-packet one-way delay: 110.606 ms
  Loss rate: 0.72%
-- Flow 3:
  Average throughput: 108.95 Mbit/s
  95th percentile per-packet one-way delay: 117.191 ms
  Loss rate: 3.11%
Run 2: Report of Verus — Data Link
Run 3: Statistics of Verus

Start at: 2018-04-18 20:15:22
End at: 2018-04-18 20:15:52

# Below is generated by plot.py at 2018-04-19 01:55:19
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 279.93 Mbit/s
  95th percentile per-packet one-way delay: 181.959 ms
  Loss rate: 0.83%
-- Flow 1:
  Average throughput: 187.30 Mbit/s
  95th percentile per-packet one-way delay: 188.225 ms
  Loss rate: 0.77%
-- Flow 2:
  Average throughput: 69.32 Mbit/s
  95th percentile per-packet one-way delay: 104.494 ms
  Loss rate: 0.02%
-- Flow 3:
  Average throughput: 142.21 Mbit/s
  95th percentile per-packet one-way delay: 194.153 ms
  Loss rate: 1.86%
Run 3: Report of Verus — Data Link

![Graph 1: Throughput (Mbps)]

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

Start at: 2018-04-18 20:31:16
End at: 2018-04-18 20:31:46

# Below is generated by plot.py at 2018-04-19 01:55:57
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 300.76 Mbit/s
  95th percentile per-packet one-way delay: 248.826 ms
  Loss rate: 4.70%
  -- Flow 1:
  Average throughput: 209.03 Mbit/s
  95th percentile per-packet one-way delay: 251.923 ms
  Loss rate: 5.88%
  -- Flow 2:
  Average throughput: 108.84 Mbit/s
  95th percentile per-packet one-way delay: 244.773 ms
  Loss rate: 1.82%
  -- Flow 3:
  Average throughput: 59.38 Mbit/s
  95th percentile per-packet one-way delay: 112.502 ms
  Loss rate: 2.10%
Run 4: Report of Verus — Data Link

![Graph showing throughput and packet delay over time for flows 1 to 3.]
Run 5: Statistics of Verus

Start at: 2018-04-18 20:47:09
End at: 2018-04-18 20:47:39

# Below is generated by plot.py at 2018-04-19 01:55:57
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 288.68 Mbit/s
  95th percentile per-packet one-way delay: 152.165 ms
  Loss rate: 0.83%
-- Flow 1:
  Average throughput: 173.81 Mbit/s
  95th percentile per-packet one-way delay: 159.761 ms
  Loss rate: 0.23%
-- Flow 2:
  Average throughput: 145.26 Mbit/s
  95th percentile per-packet one-way delay: 139.888 ms
  Loss rate: 1.27%
-- Flow 3:
  Average throughput: 58.87 Mbit/s
  95th percentile per-packet one-way delay: 118.150 ms
  Loss rate: 3.86%
Run 5: Report of Verus — Data Link

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

- **Flow 1 ingress** (mean 172.63 Mbps)
- **Flow 1 egress** (mean 173.81 Mbps)
- **Flow 2 ingress** (mean 146.46 Mbps)
- **Flow 2 egress** (mean 145.26 Mbps)
- **Flow 3 ingress** (mean 60.13 Mbps)
- **Flow 3 egress** (mean 58.87 Mbps)

![Graph of Per-packet End-to-End Delay (ms) over Time (s)]

- **Flow 1** (95th percentile 159.76 ms)
- **Flow 2** (95th percentile 139.89 ms)
- **Flow 3** (95th percentile 118.15 ms)
Run 6: Statistics of Verus

Start at: 2018-04-18 21:03:05
End at: 2018-04-18 21:03:35

# Below is generated by plot.py at 2018-04-19 01:56:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 280.72 Mbit/s
95th percentile per-packet one-way delay: 133.168 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 158.06 Mbit/s
95th percentile per-packet one-way delay: 135.687 ms
Loss rate: 0.86%
-- Flow 2:
Average throughput: 134.11 Mbit/s
95th percentile per-packet one-way delay: 102.469 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 102.18 Mbit/s
95th percentile per-packet one-way delay: 180.707 ms
Loss rate: 1.90%
Run 6: Report of Verus — Data Link
Run 7: Statistics of Verus

End at: 2018-04-18 21:19:29

# Below is generated by plot.py at 2018-04-19 01:58:05
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 254.82 Mbit/s
  95th percentile per-packet one-way delay: 198.746 ms
  Loss rate: 2.26%
  -- Flow 1:
    Average throughput: 137.49 Mbit/s
    95th percentile per-packet one-way delay: 119.237 ms
    Loss rate: 0.63%
  -- Flow 2:
    Average throughput: 97.83 Mbit/s
    95th percentile per-packet one-way delay: 164.176 ms
    Loss rate: 1.57%
  -- Flow 3:
    Average throughput: 159.05 Mbit/s
    95th percentile per-packet one-way delay: 273.262 ms
    Loss rate: 7.11%
Run 7: Report of Verus — Data Link

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

- Flow 1 ingress (mean 137.77 Mbit/s)
- Flow 1 egress (mean 137.49 Mbit/s)
- Flow 2 ingress (mean 99.23 Mbit/s)
- Flow 2 egress (mean 97.83 Mbit/s)
- Flow 3 ingress (mean 169.01 Mbit/s)
- Flow 3 egress (mean 159.05 Mbit/s)

![Graph 2: Packet Delay over Time](image2.png)

- Flow 1 (95th percentile 119.24 ms)
- Flow 2 (95th percentile 164.18 ms)
- Flow 3 (95th percentile 273.26 ms)
Run 8: Statistics of Verus

Start at: 2018-04-18 21:34:40
End at: 2018-04-18 21:35:10

# Below is generated by plot.py at 2018-04-19 01:59:20
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 304.01 Mbit/s
  95th percentile per-packet one-way delay: 197.616 ms
  Loss rate: 1.38%
-- Flow 1:
  Average throughput: 181.14 Mbit/s
  95th percentile per-packet one-way delay: 143.961 ms
  Loss rate: 0.99%
-- Flow 2:
  Average throughput: 165.36 Mbit/s
  95th percentile per-packet one-way delay: 253.694 ms
  Loss rate: 1.62%
-- Flow 3:
  Average throughput: 39.75 Mbit/s
  95th percentile per-packet one-way delay: 157.938 ms
  Loss rate: 4.65%
Run 8: Report of Verus — Data Link

Throughput (Mbit/s) vs Time (s)

- Flow 1 ingress (mean 182.16 Mbit/s)
- Flow 1 egress (mean 181.14 Mbit/s)
- Flow 2 ingress (mean 169.44 Mbit/s)
- Flow 2 egress (mean 165.36 Mbit/s)
- Flow 3 ingress (mean 41.09 Mbit/s)
- Flow 3 egress (mean 39.75 Mbit/s)

Per-packet one-way delay (ms) vs Time (s)

- Flow 1 (95th percentile 143.96 ms)
- Flow 2 (95th percentile 253.69 ms)
- Flow 3 (95th percentile 157.94 ms)
Run 9: Statistics of Verus

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

# Below is generated by plot.py at 2018-04-19 02:00:01
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 300.37 Mbit/s
  95th percentile per-packet one-way delay: 233.780 ms
  Loss rate: 2.45%
-- Flow 1:
  Average throughput: 150.39 Mbit/s
  95th percentile per-packet one-way delay: 127.973 ms
  Loss rate: 0.20%
-- Flow 2:
  Average throughput: 176.57 Mbit/s
  95th percentile per-packet one-way delay: 313.238 ms
  Loss rate: 4.56%
-- Flow 3:
  Average throughput: 102.60 Mbit/s
  95th percentile per-packet one-way delay: 181.479 ms
  Loss rate: 4.79%
Run 9: Report of Verus — Data Link
Run 10: Statistics of Verus

Start at: 2018-04-18 22:06:12
End at: 2018-04-18 22:06:42

# Below is generated by plot.py at 2018-04-19 02:00:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 294.40 Mbit/s
95th percentile per-packet one-way delay: 197.104 ms
Loss rate: 1.56%
-- Flow 1:
Average throughput: 198.25 Mbit/s
95th percentile per-packet one-way delay: 161.905 ms
Loss rate: 0.61%
-- Flow 2:
Average throughput: 73.91 Mbit/s
95th percentile per-packet one-way delay: 249.967 ms
Loss rate: 4.82%
-- Flow 3:
Average throughput: 145.25 Mbit/s
95th percentile per-packet one-way delay: 227.487 ms
Loss rate: 2.01%
Run 10: Report of Verus — Data Link

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

- Flow 1 ingress (mean 198.10 Mbps)
- Flow 1 egress (mean 198.25 Mbps)
- Flow 2 ingress (mean 77.17 Mbps)
- Flow 2 egress (mean 73.91 Mbps)
- Flow 3 ingress (mean 146.02 Mbps)
- Flow 3 egress (mean 145.25 Mbps)

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

- Flow 1 (95th percentile 161.91 ms)
- Flow 2 (95th percentile 249.97 ms)
- Flow 3 (95th percentile 227.49 ms)
Run 1: Statistics of Copa

Start at: 2018-04-18 19:51:10
End at: 2018-04-18 19:51:40

# Below is generated by plot.py at 2018-04-19 02:00:37
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 142.59 Mbit/s
  95th percentile per-packet one-way delay: 64.121 ms
  Loss rate: 0.58%
-- Flow 1:
  Average throughput: 77.76 Mbit/s
  95th percentile per-packet one-way delay: 64.075 ms
  Loss rate: 0.34%
-- Flow 2:
  Average throughput: 66.88 Mbit/s
  95th percentile per-packet one-way delay: 64.146 ms
  Loss rate: 0.58%
-- Flow 3:
  Average throughput: 62.03 Mbit/s
  95th percentile per-packet one-way delay: 64.189 ms
  Loss rate: 1.48%
Run 1: Report of Copa — Data Link

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

- Flow 1 ingress (mean 77.70 Mbit/s)
- Flow 1 egress (mean 77.76 Mbit/s)
- Flow 2 ingress (mean 66.86 Mbit/s)
- Flow 2 egress (mean 66.88 Mbit/s)
- Flow 3 ingress (mean 62.16 Mbit/s)
- Flow 3 egress (mean 62.03 Mbit/s)
Run 2: Statistics of Copa

Start at: 2018-04-18 20:07:16
End at: 2018-04-18 20:07:46

# Below is generated by plot.py at 2018-04-19 02:00:37
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 118.58 Mbit/s
  95th percentile per-packet one-way delay: 63.935 ms
  Loss rate: 0.60%
-- Flow 1:
  Average throughput: 72.01 Mbit/s
  95th percentile per-packet one-way delay: 63.777 ms
  Loss rate: 0.32%
-- Flow 2:
  Average throughput: 52.74 Mbit/s
  95th percentile per-packet one-way delay: 64.029 ms
  Loss rate: 0.88%
-- Flow 3:
  Average throughput: 35.10 Mbit/s
  95th percentile per-packet one-way delay: 64.315 ms
  Loss rate: 1.50%
Run 2: Report of Copa — Data Link
Run 3: Statistics of Copa

End at: 2018-04-18 20:23:42

# Below is generated by plot.py at 2018-04-19 02:00:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 127.03 Mbit/s
95th percentile per-packet one-way delay: 64.039 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 70.80 Mbit/s
95th percentile per-packet one-way delay: 63.969 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 69.33 Mbit/s
95th percentile per-packet one-way delay: 64.056 ms
Loss rate: 0.60%
-- Flow 3:
Average throughput: 30.97 Mbit/s
95th percentile per-packet one-way delay: 64.351 ms
Loss rate: 2.13%
Run 3: Report of Copa — Data Link
Run 4: Statistics of Copa

Start at: 2018-04-18 20:38:58

# Below is generated by plot.py at 2018-04-19 02:01:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 145.53 Mbit/s
95th percentile per-packet one-way delay: 63.919 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 60.77 Mbit/s
95th percentile per-packet one-way delay: 64.121 ms
Loss rate: 0.24%
-- Flow 2:
Average throughput: 90.05 Mbit/s
95th percentile per-packet one-way delay: 63.614 ms
Loss rate: 0.28%
-- Flow 3:
Average throughput: 75.87 Mbit/s
95th percentile per-packet one-way delay: 63.570 ms
Loss rate: 1.28%
Run 4: Report of Copa — Data Link

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

- Flow 1 ingress (mean 60.65 Mbps)
- Flow 1 egress (mean 60.77 Mbps)
- Flow 2 ingress (mean 89.72 Mbps)
- Flow 2 egress (mean 90.05 Mbps)
- Flow 3 ingress (mean 75.88 Mbps)
- Flow 3 egress (mean 75.87 Mbps)

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

- Flow 1 (95th percentile 64.12 ms)
- Flow 2 (95th percentile 63.61 ms)
- Flow 3 (95th percentile 63.57 ms)
Run 5: Statistics of Copa


# Below is generated by plot.py at 2018-04-19 02:03:56
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 152.27 Mbit/s
  95th percentile per-packet one-way delay: 63.775 ms
  Loss rate: 0.40%
-- Flow 1:
  Average throughput: 81.00 Mbit/s
  95th percentile per-packet one-way delay: 63.763 ms
  Loss rate: 0.07%
-- Flow 2:
  Average throughput: 76.59 Mbit/s
  95th percentile per-packet one-way delay: 63.781 ms
  Loss rate: 0.47%
-- Flow 3:
  Average throughput: 62.15 Mbit/s
  95th percentile per-packet one-way delay: 63.800 ms
  Loss rate: 1.54%
Run 5: Report of Copa — Data Link
Run 6: Statistics of Copa

Start at: 2018-04-18 21:10:49
End at: 2018-04-18 21:11:20

# Below is generated by plot.py at 2018-04-19 02:04:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 133.84 Mbit/s
95th percentile per-packet one-way delay: 63.588 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 73.55 Mbit/s
95th percentile per-packet one-way delay: 63.533 ms
Loss rate: 0.23%
-- Flow 2:
Average throughput: 78.62 Mbit/s
95th percentile per-packet one-way delay: 63.570 ms
Loss rate: 0.57%
-- Flow 3:
Average throughput: 24.60 Mbit/s
95th percentile per-packet one-way delay: 64.471 ms
Loss rate: 2.78%
Run 6: Report of Copa — Data Link

[Graphs showing network performance metrics with overlay lines for different flows and markers indicating 95th percentile delay for each flow.]
Run 7: Statistics of Copa

Start at: 2018-04-18 21:26:31
End at: 2018-04-18 21:27:01

# Below is generated by plot.py at 2018-04-19 02:04:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 126.91 Mbit/s
95th percentile per-packet one-way delay: 63.917 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 63.76 Mbit/s
95th percentile per-packet one-way delay: 63.927 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 80.76 Mbit/s
95th percentile per-packet one-way delay: 63.701 ms
Loss rate: 0.66%
-- Flow 3:
Average throughput: 28.96 Mbit/s
95th percentile per-packet one-way delay: 64.393 ms
Loss rate: 1.62%
Run 7: Report of Copa — Data Link

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

### Throughput (Mbps)
- **Flow 1 ingress (mean 63.76 Mbps)**
- **Flow 1 egress (mean 63.76 Mbps)**
- **Flow 2 ingress (mean 80.78 Mbps)**
- **Flow 2 egress (mean 80.78 Mbps)**
- **Flow 3 ingress (mean 26.98 Mbps)**
- **Flow 3 egress (mean 26.98 Mbps)**

### Latency (ms)
- **Flow 1 (95th percentile 63.93 ms)**
- **Flow 2 (95th percentile 63.70 ms)**
- **Flow 3 (95th percentile 64.39 ms)**
Run 8: Statistics of Copa


# Below is generated by plot.py at 2018-04-19 02:05:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 154.68 Mbit/s
95th percentile per-packet one-way delay: 63.665 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 77.86 Mbit/s
95th percentile per-packet one-way delay: 63.662 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 85.57 Mbit/s
95th percentile per-packet one-way delay: 63.656 ms
Loss rate: 0.50%
-- Flow 3:
Average throughput: 60.73 Mbit/s
95th percentile per-packet one-way delay: 63.708 ms
Loss rate: 2.28%
Run 8: Report of Copa — Data Link

![Graph showing throughput and per-packet one-way delay over time. The graphs display various flow data, including ingress and egress throughput with different mean values for each flow.]
Run 9: Statistics of Copa

Start at: 2018-04-18 21:58:07
End at: 2018-04-18 21:58:37

# Below is generated by plot.py at 2018-04-19 02:05:23
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 108.90 Mbit/s
  95th percentile per-packet one-way delay: 63.901 ms
  Loss rate: 0.55%
-- Flow 1:
  Average throughput: 61.71 Mbit/s
  95th percentile per-packet one-way delay: 63.844 ms
  Loss rate: 0.39%
-- Flow 2:
  Average throughput: 51.65 Mbit/s
  95th percentile per-packet one-way delay: 63.871 ms
  Loss rate: 0.14%
-- Flow 3:
  Average throughput: 39.23 Mbit/s
  95th percentile per-packet one-way delay: 64.145 ms
  Loss rate: 2.42%
Run 9: Report of Copa — Data Link

Graph 1: Throughput (Mbps)
- Flow 1 ingress (mean 61.68 Mbps)
- Flow 1 egress (mean 61.71 Mbps)
- Flow 2 ingress (mean 51.40 Mbps)
- Flow 2 egress (mean 51.65 Mbps)
- Flow 3 ingress (mean 39.68 Mbps)
- Flow 3 egress (mean 39.23 Mbps)

Graph 2: Per-packet one-way delay (ms)
- Flow 1 (95th percentile 63.84 ms)
- Flow 2 (95th percentile 63.87 ms)
- Flow 3 (95th percentile 64.14 ms)

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Run 10: Statistics of Copa

Start at: 2018-04-18 22:14:01

# Below is generated by plot.py at 2018-04-19 02:05:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 130.94 Mbit/s
95th percentile per-packet one-way delay: 63.799 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 72.54 Mbit/s
95th percentile per-packet one-way delay: 63.697 ms
Loss rate: 0.17%
-- Flow 2:
Average throughput: 62.13 Mbit/s
95th percentile per-packet one-way delay: 63.830 ms
Loss rate: 0.83%
-- Flow 3:
Average throughput: 52.19 Mbit/s
95th percentile per-packet one-way delay: 63.921 ms
Loss rate: 1.52%
Run 10: Report of Copa — Data Link

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

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 72.36 Mbps)
Flow 1 egress (mean 72.54 Mbps)
Flow 2 ingress (mean 62.25 Mbps)
Flow 2 egress (mean 62.13 Mbps)
Flow 3 ingress (mean 52.32 Mbps)
Flow 3 egress (mean 52.19 Mbps)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 63.70 ms)
Flow 2 (95th percentile 63.83 ms)
Flow 3 (95th percentile 63.92 ms)

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Run 1: Statistics of FillP

Start at: 2018-04-18 19:37:16
End at: 2018-04-18 19:37:46

# Below is generated by plot.py at 2018-04-19 02:27:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1327.31 Mbit/s
95th percentile per-packet one-way delay: 181.534 ms
Loss rate: 7.71%
-- Flow 1:
Average throughput: 763.75 Mbit/s
95th percentile per-packet one-way delay: 170.345 ms
Loss rate: 5.57%
-- Flow 2:
Average throughput: 564.46 Mbit/s
95th percentile per-packet one-way delay: 190.946 ms
Loss rate: 11.78%
-- Flow 3:
Average throughput: 575.96 Mbit/s
95th percentile per-packet one-way delay: 184.201 ms
Loss rate: 7.74%
Run 1: Report of FillP — Data Link

![Graph showing throughput and delay between flows](Figure)
Run 2: Statistics of FillP

Start at: 2018-04-18 19:53:08
End at: 2018-04-18 19:53:38

# Below is generated by plot.py at 2018-04-19 02:28:09
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1285.13 Mbit/s
  95th percentile per-packet one-way delay: 188.028 ms
  Loss rate: 9.25%
-- Flow 1:
  Average throughput: 655.66 Mbit/s
  95th percentile per-packet one-way delay: 174.842 ms
  Loss rate: 6.46%
-- Flow 2:
  Average throughput: 694.37 Mbit/s
  95th percentile per-packet one-way delay: 190.753 ms
  Loss rate: 10.58%
-- Flow 3:
  Average throughput: 511.93 Mbit/s
  95th percentile per-packet one-way delay: 205.242 ms
  Loss rate: 15.64%
Run 2: Report of FillP — Data Link

![Graph 1: Throughput (Mbps)]

- Flow 1 Ingress (mean 698.01 Mbps)
- Flow 1 Egress (mean 655.66 Mbps)
- Flow 2 Ingress (mean 771.63 Mbps)
- Flow 2 Egress (mean 694.37 Mbps)
- Flow 3 Ingress (mean 599.16 Mbps)
- Flow 3 Egress (mean 511.93 Mbps)

![Graph 2: Per Packet One Way Delay (ms)]

- Flow 1 (95th percentile 174.84 ms)
- Flow 2 (95th percentile 190.75 ms)
- Flow 3 (95th percentile 205.24 ms)
Run 3: Statistics of FillP

End at: 2018-04-18 20:09:43

# Below is generated by plot.py at 2018-04-19 02:29:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1243.25 Mbit/s
95th percentile per-packet one-way delay: 182.801 ms
Loss rate: 9.08%
-- Flow 1:
Average throughput: 672.87 Mbit/s
95th percentile per-packet one-way delay: 180.315 ms
Loss rate: 10.00%
-- Flow 2:
Average throughput: 724.78 Mbit/s
95th percentile per-packet one-way delay: 169.905 ms
Loss rate: 6.18%
-- Flow 3:
Average throughput: 270.92 Mbit/s
95th percentile per-packet one-way delay: 203.151 ms
Loss rate: 16.60%
Run 3: Report of FillP — Data Link

![Graph of Throughput vs Time](image1)

- **Flow 1 ingress (mean 744.49 Mbit/s)**
- **Flow 1 egress (mean 672.87 Mbit/s)**
- **Flow 2 ingress (mean 787.65 Mbit/s)**
- **Flow 2 egress (mean 724.78 Mbit/s)**
- **Flow 3 ingress (mean 320.80 Mbit/s)**
- **Flow 3 egress (mean 270.92 Mbit/s)**

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

- **Flow 1 (95th percentile 180.31 ms)**
- **Flow 2 (95th percentile 169.91 ms)**
- **Flow 3 (95th percentile 203.15 ms)**
Run 4: Statistics of FillP

End at: 2018-04-18 20:25:37

# Below is generated by plot.py at 2018-04-19 02:29:42
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1275.34 Mbit/s
  95th percentile per-packet one-way delay: 187.468 ms
  Loss rate: 9.03%
-- Flow 1:
  Average throughput: 688.80 Mbit/s
  95th percentile per-packet one-way delay: 170.506 ms
  Loss rate: 6.87%
-- Flow 2:
  Average throughput: 625.41 Mbit/s
  95th percentile per-packet one-way delay: 194.869 ms
  Loss rate: 9.93%
-- Flow 3:
  Average throughput: 521.41 Mbit/s
  95th percentile per-packet one-way delay: 218.757 ms
  Loss rate: 14.95%
Run 4: Report of FillP — Data Link

- Flow 1 Ingress (mean 736.43 Mbit/s)
- Flow 1 Egress (mean 688.80 Mbit/s)
- Flow 2 Ingress (mean 689.92 Mbit/s)
- Flow 2 Egress (mean 625.43 Mbit/s)
- Flow 3 Ingress (mean 605.10 Mbit/s)
- Flow 3 Egress (mean 521.41 Mbit/s)

- Flow 1 (95th percentile 170.51 ms)
- Flow 2 (95th percentile 194.87 ms)
- Flow 3 (95th percentile 218.76 ms)
Run 5: Statistics of FillP

Start at: 2018-04-18 20:40:58
End at: 2018-04-18 20:41:28

# Below is generated by plot.py at 2018-04-19 02:30:15
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1294.52 Mbit/s
  95th percentile per-packet one-way delay: 196.353 ms
  Loss rate: 10.51%
-- Flow 1:
  Average throughput: 685.30 Mbit/s
  95th percentile per-packet one-way delay: 194.300 ms
  Loss rate: 9.23%
-- Flow 2:
  Average throughput: 648.31 Mbit/s
  95th percentile per-packet one-way delay: 199.017 ms
  Loss rate: 10.49%
-- Flow 3:
  Average throughput: 544.22 Mbit/s
  95th percentile per-packet one-way delay: 198.298 ms
  Loss rate: 15.19%
Run 5: Report of FillP — Data Link

Throughput (Mbps/s)

Time (s)

Flow 1 ingress (mean 751.71 Mbps/s)
Flow 1 egress (mean 685.30 Mbps/s)
Flow 2 ingress (mean 719.58 Mbps/s)
Flow 2 egress (mean 648.31 Mbps/s)
Flow 3 ingress (mean 633.21 Mbps/s)
Flow 3 egress (mean 544.22 Mbps/s)

Delay (ms)

Time (s)

Flow 1 (95th percentile 194.30 ms)
Flow 2 (95th percentile 199.02 ms)
Flow 3 (95th percentile 198.30 ms)
Run 6: Statistics of FillP

Start at: 2018-04-18 20:57:00
End at: 2018-04-18 20:57:31

# Below is generated by plot.py at 2018-04-19 02:30:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1306.91 Mbit/s
95th percentile per-packet one-way delay: 168.648 ms
Loss rate: 6.70%
-- Flow 1:
Average throughput: 715.02 Mbit/s
95th percentile per-packet one-way delay: 159.249 ms
Loss rate: 6.46%
-- Flow 2:
Average throughput: 735.70 Mbit/s
95th percentile per-packet one-way delay: 166.135 ms
Loss rate: 5.44%
-- Flow 3:
Average throughput: 313.02 Mbit/s
95th percentile per-packet one-way delay: 199.526 ms
Loss rate: 13.71%
Run 6: Report of FillP — Data Link

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

- Flow 1 Ingress (mean 761.16 Mb/s)
- Flow 1 Egress (mean 715.02 Mb/s)
- Flow 2 Ingress (mean 773.06 Mb/s)
- Flow 2 Egress (mean 735.70 Mb/s)
- Flow 3 Ingress (mean 358.07 Mb/s)
- Flow 3 Egress (mean 313.02 Mb/s)

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

- Flow 1 (95th percentile 159.25 ms)
- Flow 2 (95th percentile 166.13 ms)
- Flow 3 (95th percentile 199.53 ms)

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Run 7: Statistics of FillP


# Below is generated by plot.py at 2018-04-19 02:31:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1289.79 Mbit/s
95th percentile per-packet one-way delay: 187.248 ms
Loss rate: 10.38%
-- Flow 1:
Average throughput: 678.31 Mbit/s
95th percentile per-packet one-way delay: 179.593 ms
Loss rate: 9.01%
-- Flow 2:
Average throughput: 647.10 Mbit/s
95th percentile per-packet one-way delay: 191.650 ms
Loss rate: 10.05%
-- Flow 3:
Average throughput: 553.32 Mbit/s
95th percentile per-packet one-way delay: 204.695 ms
Loss rate: 15.85%
Run 7: Report of FillP — Data Link
Run 8: Statistics of FillP

End at: 2018-04-18 21:29:00

# Below is generated by plot.py at 2018-04-19 02:31:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1229.55 Mbit/s
95th percentile per-packet one-way delay: 180.243 ms
Loss rate: 8.05%
-- Flow 1:
Average throughput: 642.23 Mbit/s
95th percentile per-packet one-way delay: 178.205 ms
Loss rate: 6.56%
-- Flow 2:
Average throughput: 757.14 Mbit/s
95th percentile per-packet one-way delay: 175.515 ms
Loss rate: 8.42%
-- Flow 3:
Average throughput: 257.02 Mbit/s
95th percentile per-packet one-way delay: 210.098 ms
Loss rate: 16.19%
Run 8: Report of FillP — Data Link

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

- Flow 1 Ingress (mean 684.43 Mbps/s)
- Flow 1 Egress (mean 642.23 Mbps/s)
- Flow 2 Ingress (mean 821.41 Mbps/s)
- Flow 2 Egress (mean 757.14 Mbps/s)
- Flow 3 Ingress (mean 302.76 Mbps/s)
- Flow 3 Egress (mean 257.02 Mbps/s)

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

- Flow 1 (95th percentile 178.21 ms)
- Flow 2 (95th percentile 175.51 ms)
- Flow 3 (95th percentile 210.10 ms)
Run 9: Statistics of FillP

Start at: 2018-04-18 21:44:09
End at: 2018-04-18 21:44:39

# Below is generated by plot.py at 2018-04-19 02:53:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1335.34 Mbit/s
95th percentile per-packet one-way delay: 172.894 ms
Loss rate: 7.55%
-- Flow 1:
Average throughput: 694.12 Mbit/s
95th percentile per-packet one-way delay: 174.767 ms
Loss rate: 7.59%
-- Flow 2:
Average throughput: 672.92 Mbit/s
95th percentile per-packet one-way delay: 166.648 ms
Loss rate: 6.22%
-- Flow 3:
Average throughput: 592.46 Mbit/s
95th percentile per-packet one-way delay: 177.099 ms
Loss rate: 10.34%
Run 9: Report of FillP — Data Link

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

- Flow 1 ingress (mean 247.96 Mbit/s)
- Flow 1 egress (mean 694.12 Mbit/s)
- Flow 2 ingress (mean 713.06 Mbit/s)
- Flow 2 egress (mean 672.92 Mbit/s)
- Flow 3 ingress (mean 652.29 Mbit/s)
- Flow 3 egress (mean 592.46 Mbit/s)

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

- Flow 1 (95th percentile 174.77 ms)
- Flow 2 (95th percentile 166.65 ms)
- Flow 3 (95th percentile 177.10 ms)
Run 10: Statistics of FillP

Start at: 2018-04-18 22:00:03
End at: 2018-04-18 22:00:33

# Below is generated by plot.py at 2018-04-19 02:53:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1235.51 Mbit/s
95th percentile per-packet one-way delay: 273.351 ms
Loss rate: 7.79%
-- Flow 1:
Average throughput: 662.49 Mbit/s
95th percentile per-packet one-way delay: 287.087 ms
Loss rate: 8.15%
-- Flow 2:
Average throughput: 593.78 Mbit/s
95th percentile per-packet one-way delay: 192.237 ms
Loss rate: 7.82%
-- Flow 3:
Average throughput: 543.39 Mbit/s
95th percentile per-packet one-way delay: 282.854 ms
Loss rate: 6.35%
Run 10: Report of FillP — Data Link
Run 1: Statistics of Indigo-1-32

Start at: 2018-04-18 19:44:26
End at: 2018-04-18 19:44:56

# Below is generated by plot.py at 2018-04-19 02:53:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 346.89 Mbit/s
  95th percentile per-packet one-way delay: 65.043 ms
  Loss rate: 0.83%
-- Flow 1:
  Average throughput: 185.59 Mbit/s
  95th percentile per-packet one-way delay: 65.205 ms
  Loss rate: 0.52%
-- Flow 2:
  Average throughput: 173.98 Mbit/s
  95th percentile per-packet one-way delay: 65.268 ms
  Loss rate: 0.80%
-- Flow 3:
  Average throughput: 141.77 Mbit/s
  95th percentile per-packet one-way delay: 64.246 ms
  Loss rate: 2.11%
Run 1: Report of Indigo-1-32 — Data Link

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

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 185.77 Mbps)
Flow 1 egress (mean 185.59 Mbps)
Flow 2 ingress (mean 174.27 Mbps)
Flow 2 egress (mean 173.98 Mbps)
Flow 3 ingress (mean 142.98 Mbps)
Flow 3 egress (mean 141.77 Mbps)

Packet loss per second (ms)

Time (s)

Flow 1 (95th percentile 65.20 ms)
Flow 2 (95th percentile 65.27 ms)
Flow 3 (95th percentile 64.25 ms)
Run 2: Statistics of Indigo-1-32

Start at: 2018-04-18 20:00:21
End at: 2018-04-18 20:00:51

# Below is generated by plot.py at 2018-04-19 02:53:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 335.26 Mbit/s
  95th percentile per-packet one-way delay: 65.754 ms
  Loss rate: 0.63%
-- Flow 1:
  Average throughput: 177.05 Mbit/s
  95th percentile per-packet one-way delay: 65.124 ms
  Loss rate: 0.38%
-- Flow 2:
  Average throughput: 169.74 Mbit/s
  95th percentile per-packet one-way delay: 67.449 ms
  Loss rate: 0.68%
-- Flow 3:
  Average throughput: 141.23 Mbit/s
  95th percentile per-packet one-way delay: 64.682 ms
  Loss rate: 1.45%
Run 2: Report of Indigo-1-32 — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 176.97 Mbps)
Flow 1 egress (mean 177.05 Mbps)
Flow 2 ingress (mean 170.46 Mbps)
Flow 2 egress (mean 169.74 Mbps)
Flow 3 ingress (mean 141.47 Mbps)
Flow 3 egress (mean 141.23 Mbps)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 65.12 ms)
Flow 2 (95th percentile 67.45 ms)
Flow 3 (95th percentile 64.68 ms)
Run 3: Statistics of Indigo-1-32

End at: 2018-04-18 20:16:54

# Below is generated by plot.py at 2018-04-19 02:53:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 354.30 Mbit/s
95th percentile per-packet one-way delay: 65.470 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 194.60 Mbit/s
95th percentile per-packet one-way delay: 65.570 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 171.07 Mbit/s
95th percentile per-packet one-way delay: 65.823 ms
Loss rate: 0.47%
-- Flow 3:
Average throughput: 142.70 Mbit/s
95th percentile per-packet one-way delay: 64.356 ms
Loss rate: 1.40%
Run 3: Report of Indigo-1-32 — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 194.47 Mbit/s)
Flow 1 egress (mean 194.60 Mbit/s)
Flow 2 ingress (mean 170.77 Mbit/s)
Flow 2 egress (mean 171.07 Mbit/s)
Flow 3 ingress (mean 142.82 Mbit/s)
Flow 3 egress (mean 142.79 Mbit/s)

Per packet one way delay (ms)

Flow 1 (95th percentile 65.57 ms)
Flow 2 (95th percentile 65.82 ms)
Flow 3 (95th percentile 64.36 ms)

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Run 4: Statistics of Indigo-1-32

Start at: 2018-04-18 20:32:19
End at: 2018-04-18 20:32:49

# Below is generated by plot.py at 2018-04-19 02:53:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 334.48 Mbit/s
95th percentile per-packet one-way delay: 65.145 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 188.06 Mbit/s
95th percentile per-packet one-way delay: 65.209 ms
Loss rate: 0.28%
-- Flow 2:
Average throughput: 153.47 Mbit/s
95th percentile per-packet one-way delay: 65.519 ms
Loss rate: 0.58%
-- Flow 3:
Average throughput: 137.98 Mbit/s
95th percentile per-packet one-way delay: 64.052 ms
Loss rate: 1.46%
Run 4: Report of Indigo-1-32 — Data Link
Run 5: Statistics of Indigo-1-32


# Below is generated by plot.py at 2018-04-19 02:53:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 338.38 Mbit/s
  95th percentile per-packet one-way delay: 64.542 ms
  Loss rate: 0.54%
-- Flow 1:
  Average throughput: 182.34 Mbit/s
  95th percentile per-packet one-way delay: 64.245 ms
  Loss rate: 0.33%
-- Flow 2:
  Average throughput: 165.11 Mbit/s
  95th percentile per-packet one-way delay: 65.538 ms
  Loss rate: 0.53%
-- Flow 3:
  Average throughput: 143.82 Mbit/s
  95th percentile per-packet one-way delay: 64.023 ms
  Loss rate: 1.36%
Run 5: Report of Indigo-1-32 — Data Link

![Data Link Throughput Graph]

![Data Link Delay Graph]

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Run 6: Statistics of Indigo-1-32

Start at: 2018-04-18 21:04:06
End at: 2018-04-18 21:04:36

# Below is generated by plot.py at 2018-04-19 02:53:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 306.24 Mbit/s
95th percentile per-packet one-way delay: 64.617 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 164.71 Mbit/s
95th percentile per-packet one-way delay: 64.467 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 149.55 Mbit/s
95th percentile per-packet one-way delay: 65.183 ms
Loss rate: 0.66%
-- Flow 3:
Average throughput: 132.03 Mbit/s
95th percentile per-packet one-way delay: 64.232 ms
Loss rate: 1.29%
Run 6: Report of Indigo-1-32 — Data Link

![Graph 1: Throughput vs Time]

- **Flow 1 ingress (mean 164.66 Mbit/s)**
- **Flow 1 egress (mean 164.71 Mbit/s)**
- **Flow 2 ingress (mean 149.56 Mbit/s)**
- **Flow 2 egress (mean 149.55 Mbit/s)**
- **Flow 3 ingress (mean 131.99 Mbit/s)**
- **Flow 3 egress (mean 132.03 Mbit/s)**

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

- **Flow 1 (95th percentile 64.47 ms)**
- **Flow 2 (95th percentile 65.18 ms)**
- **Flow 3 (95th percentile 64.23 ms)**
Run 7: Statistics of Indigo-1-32


# Below is generated by plot.py at 2018-04-19 02:53:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 339.69 Mbit/s
95th percentile per-packet one-way delay: 65.453 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 184.59 Mbit/s
95th percentile per-packet one-way delay: 65.959 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 165.99 Mbit/s
95th percentile per-packet one-way delay: 65.359 ms
Loss rate: 0.54%
-- Flow 3:
Average throughput: 140.49 Mbit/s
95th percentile per-packet one-way delay: 64.465 ms
Loss rate: 1.43%
Run 7: Report of Indigo-1-32 — Data Link
Run 8: Statistics of Indigo-1-32

Start at: 2018-04-18 21:35:42
End at: 2018-04-18 21:36:12

# Below is generated by plot.py at 2018-04-19 02:53:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 335.06 Mbit/s
95th percentile per-packet one-way delay: 66.789 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 184.26 Mbit/s
95th percentile per-packet one-way delay: 65.914 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 158.52 Mbit/s
95th percentile per-packet one-way delay: 69.962 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 142.59 Mbit/s
95th percentile per-packet one-way delay: 64.590 ms
Loss rate: 1.46%
Run 8: Report of Indigo-1-32 — Data Link

![Graph of Throughput vs Time]

- **Flow 1 ingress (mean 184.27 Mbit/s)**
- **Flow 1 egress (mean 184.26 Mbit/s)**
- **Flow 2 ingress (mean 158.47 Mbit/s)**
- **Flow 2 egress (mean 158.52 Mbit/s)**
- **Flow 3 ingress (mean 142.80 Mbit/s)**
- **Flow 3 egress (mean 142.59 Mbit/s)**

![Graph of Per-packet size vs Delay]

- **Flow 1 (95th percentile 65.91 ms)**
- **Flow 2 (95th percentile 69.96 ms)**
- **Flow 3 (95th percentile 64.59 ms)**

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Run 9: Statistics of Indigo-1-32

End at: 2018-04-18 21:51:51

# Below is generated by plot.py at 2018-04-19 02:53:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 336.13 Mbit/s
  95th percentile per-packet one-way delay: 64.575 ms
  Loss rate: 0.53%
-- Flow 1:
  Average throughput: 181.66 Mbit/s
  95th percentile per-packet one-way delay: 64.485 ms
  Loss rate: 0.32%
-- Flow 2:
  Average throughput: 167.44 Mbit/s
  95th percentile per-packet one-way delay: 65.016 ms
  Loss rate: 0.61%
-- Flow 3:
  Average throughput: 135.20 Mbit/s
  95th percentile per-packet one-way delay: 63.913 ms
  Loss rate: 1.22%
Run 9: Report of Indigo-1-32 — Data Link

Throughput (Mbps):
- Flow 1 ingress (mean 181.46 Mbps)
- Flow 1 egress (mean 181.66 Mbps)
- Flow 2 ingress (mean 167.38 Mbps)
- Flow 2 egress (mean 167.44 Mbps)
- Flow 3 ingress (mean 135.07 Mbps)
- Flow 3 egress (mean 135.20 Mbps)

Per-packet one-way delay (ms):
- Flow 1 (95th percentile 64.48 ms)
- Flow 2 (95th percentile 65.02 ms)
- Flow 3 (95th percentile 63.91 ms)

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Run 10: Statistics of Indigo-1-32

End at: 2018-04-18 22:07:43

# Below is generated by plot.py at 2018-04-19 02:53:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 357.48 Mbit/s
  95th percentile per-packet one-way delay: 65.067 ms
  Loss rate: 0.56%
-- Flow 1:
  Average throughput: 195.01 Mbit/s
  95th percentile per-packet one-way delay: 64.403 ms
  Loss rate: 0.36%
-- Flow 2:
  Average throughput: 176.20 Mbit/s
  95th percentile per-packet one-way delay: 66.696 ms
  Loss rate: 0.54%
-- Flow 3:
  Average throughput: 142.64 Mbit/s
  95th percentile per-packet one-way delay: 64.799 ms
  Loss rate: 1.48%
Run 10: Report of Indigo-1-32 — Data Link

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

- **Throughput**
  - Flow 1 ingress (mean 194.88 Mbit/s)
  - Flow 1 egress (mean 195.01 Mbit/s)
  - Flow 2 ingress (mean 176.02 Mbit/s)
  - Flow 2 egress (mean 176.20 Mbit/s)
  - Flow 3 ingress (mean 142.89 Mbit/s)
  - Flow 3 egress (mean 142.64 Mbit/s)

- **Packet delay**
  - Flow 1 (95th percentile 64.40 ms)
  - Flow 2 (95th percentile 66.70 ms)
  - Flow 3 (95th percentile 64.80 ms)
Run 1: Statistics of PCC-Vivace

End at: 2018-04-18 19:49:06

# Below is generated by plot.py at 2018-04-19 02:53:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 370.53 Mbit/s
  95th percentile per-packet one-way delay: 64.349 ms
  Loss rate: 0.58%
-- Flow 1:
  Average throughput: 228.50 Mbit/s
  95th percentile per-packet one-way delay: 63.984 ms
  Loss rate: 0.43%
-- Flow 2:
  Average throughput: 200.65 Mbit/s
  95th percentile per-packet one-way delay: 65.739 ms
  Loss rate: 0.66%
-- Flow 3:
  Average throughput: 27.47 Mbit/s
  95th percentile per-packet one-way delay: 63.787 ms
  Loss rate: 3.11%
Run 2: Statistics of PCC-Vivace

Start at: 2018-04-18 20:04:39
End at: 2018-04-18 20:05:09

# Below is generated by plot.py at 2018-04-19 02:53:50
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 412.82 Mbit/s
  95th percentile per-packet one-way delay: 65.869 ms
  Loss rate: 0.61%
-- Flow 1:
  Average throughput: 227.43 Mbit/s
  95th percentile per-packet one-way delay: 65.614 ms
  Loss rate: 0.33%
-- Flow 2:
  Average throughput: 201.50 Mbit/s
  95th percentile per-packet one-way delay: 65.168 ms
  Loss rate: 0.63%
-- Flow 3:
  Average throughput: 158.68 Mbit/s
  95th percentile per-packet one-way delay: 71.321 ms
  Loss rate: 1.74%
Run 2: Report of PCC-Vivace — Data Link

[Graph showing throughput and packet delay over time for different flows with mean values and 95th percentile delays for each flow.]

- Flow 1 ingress (mean 227.22 Mbit/s)
- Flow 1 egress (mean 227.43 Mbit/s)
- Flow 2 ingress (mean 201.51 Mbit/s)
- Flow 2 egress (mean 201.50 Mbit/s)
- Flow 3 ingress (mean 159.40 Mbit/s)
- Flow 3 egress (mean 158.68 Mbit/s)
Run 3: Statistics of PCC-Vivace

Start at: 2018-04-18 20:20:32
End at: 2018-04-18 20:21:02

# Below is generated by plot.py at 2018-04-19 02:53:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 453.88 Mbit/s
95th percentile per-packet one-way delay: 69.654 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 277.78 Mbit/s
95th percentile per-packet one-way delay: 74.225 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 193.25 Mbit/s
95th percentile per-packet one-way delay: 65.479 ms
Loss rate: 0.66%
-- Flow 3:
Average throughput: 147.03 Mbit/s
95th percentile per-packet one-way delay: 67.196 ms
Loss rate: 1.74%
Run 3: Report of PCC-Vivace — Data Link

![Graph of Throughput and Packet Loss](image)

- Flow 1 ingress (mean 277.76 Mbit/s)
- Flow 1 egress (mean 277.78 Mbit/s)
- Flow 2 ingress (mean 193.29 Mbit/s)
- Flow 2 egress (mean 193.25 Mbit/s)
- Flow 3 ingress (mean 147.69 Mbit/s)
- Flow 3 egress (mean 147.03 Mbit/s)

![Graph of Packet Loss](image)

- Flow 1 (95th percentile 74.22 ms)
- Flow 2 (95th percentile 65.48 ms)
- Flow 3 (95th percentile 67.20 ms)
Run 4: Statistics of PCC-Vivace

Start at: 2018-04-18 20:36:19
End at: 2018-04-18 20:36:49

# Below is generated by plot.py at 2018-04-19 02:53:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 428.99 Mbit/s
95th percentile per-packet one-way delay: 68.069 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 233.95 Mbit/s
95th percentile per-packet one-way delay: 65.501 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 249.95 Mbit/s
95th percentile per-packet one-way delay: 79.433 ms
Loss rate: 0.70%
-- Flow 3:
Average throughput: 91.16 Mbit/s
95th percentile per-packet one-way delay: 64.061 ms
Loss rate: 1.86%
Run 4: Report of PCC-Vivace — Data Link
Run 5: Statistics of PCC-Vivace

Start at: 2018-04-18 20:52:19
End at: 2018-04-18 20:52:49

# Below is generated by plot.py at 2018-04-19 02:53:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 476.37 Mbit/s
95th percentile per-packet one-way delay: 105.108 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 275.92 Mbit/s
95th percentile per-packet one-way delay: 87.688 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 225.08 Mbit/s
95th percentile per-packet one-way delay: 135.503 ms
Loss rate: 0.83%
-- Flow 3:
Average throughput: 156.85 Mbit/s
95th percentile per-packet one-way delay: 70.536 ms
Loss rate: 1.82%
Run 5: Report of PCC-Vivace — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 275.62 Mbps)  Flow 1 egress (mean 275.92 Mbps)
Flow 2 ingress (mean 225.50 Mbps)  Flow 2 egress (mean 225.08 Mbps)
Flow 3 ingress (mean 157.68 Mbps)  Flow 3 egress (mean 156.85 Mbps)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 87.69 ms)  Flow 2 (95th percentile 135.50 ms)  Flow 3 (95th percentile 70.54 ms)
Run 6: Statistics of PCC-Vivace

Start at: 2018-04-18 21:08:11
End at: 2018-04-18 21:08:41

# Below is generated by plot.py at 2018-04-19 02:53:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 435.28 Mbit/s
95th percentile per-packet one-way delay: 65.936 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 225.16 Mbit/s
95th percentile per-packet one-way delay: 64.724 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 233.69 Mbit/s
95th percentile per-packet one-way delay: 69.572 ms
Loss rate: 0.77%
-- Flow 3:
Average throughput: 169.37 Mbit/s
95th percentile per-packet one-way delay: 64.502 ms
Loss rate: 2.10%
Run 6: Report of PCC-Vivace — Data Link
Run 7: Statistics of PCC-Vivace


# Below is generated by plot.py at 2018-04-19 02:53:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 407.52 Mbit/s
95th percentile per-packet one-way delay: 65.564 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 233.75 Mbit/s
95th percentile per-packet one-way delay: 65.280 ms
Loss rate: 0.59%
-- Flow 2:
Average throughput: 216.36 Mbit/s
95th percentile per-packet one-way delay: 66.245 ms
Loss rate: 0.65%
-- Flow 3:
Average throughput: 92.94 Mbit/s
95th percentile per-packet one-way delay: 62.524 ms
Loss rate: 1.68%
Run 7: Report of PCC-Vivace — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 234.12 Mbps)  Flow 1 egress (mean 233.75 Mbps)
Flow 2 ingress (mean 216.40 Mbps)  Flow 2 egress (mean 216.36 Mbps)
Flow 3 ingress (mean 93.30 Mbps)   Flow 3 egress (mean 92.94 Mbps)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 65.28 ms)  Flow 2 (95th percentile 66.25 ms)  Flow 3 (95th percentile 62.52 ms)
Run 8: Statistics of PCC-Vivace

End at: 2018-04-18 21:40:00

# Below is generated by plot.py at 2018-04-19 02:53:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 452.38 Mbit/s
95th percentile per-packet one-way delay: 83.469 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 253.86 Mbit/s
95th percentile per-packet one-way delay: 96.244 ms
Loss rate: 0.23%
-- Flow 2:
Average throughput: 214.64 Mbit/s
95th percentile per-packet one-way delay: 67.603 ms
Loss rate: 0.82%
-- Flow 3:
Average throughput: 172.28 Mbit/s
95th percentile per-packet one-way delay: 78.801 ms
Loss rate: 1.81%
Run 8: Report of PCC-Vivace — Data Link
Run 9: Statistics of PCC-Vivace

End at: 2018-04-18 21:56:00

# Below is generated by plot.py at 2018-04-19 02:54:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 415.90 Mbit/s
95th percentile per-packet one-way delay: 88.957 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 250.11 Mbit/s
95th percentile per-packet one-way delay: 96.694 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 205.93 Mbit/s
95th percentile per-packet one-way delay: 80.124 ms
Loss rate: 0.53%
-- Flow 3:
Average throughput: 89.75 Mbit/s
95th percentile per-packet one-way delay: 63.475 ms
Loss rate: 1.77%
Run 9: Report of PCC-Vivace — Data Link

![Graph 1: Throughput (Mbps)]

- Flow 1 ingress (mean 250.10 Mbps)
- Flow 1 egress (mean 250.11 Mbps)
- Flow 2 ingress (mean 205.76 Mbps)
- Flow 2 egress (mean 205.93 Mbps)
- Flow 3 ingress (mean 90.19 Mbps)
- Flow 3 egress (mean 90.75 Mbps)

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

- Flow 1 (95th percentile 96.69 ms)
- Flow 2 (95th percentile 80.12 ms)
- Flow 3 (95th percentile 63.48 ms)
Run 10: Statistics of PCC-Vivace


# Below is generated by plot.py at 2018-04-19 02:54:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 430.60 Mbit/s
95th percentile per-packet one-way delay: 66.906 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 247.45 Mbit/s
95th percentile per-packet one-way delay: 68.640 ms
Loss rate: 0.53%
-- Flow 2:
Average throughput: 194.57 Mbit/s
95th percentile per-packet one-way delay: 64.594 ms
Loss rate: 0.46%
-- Flow 3:
Average throughput: 166.03 Mbit/s
95th percentile per-packet one-way delay: 66.883 ms
Loss rate: 1.79%
Run 10: Report of PCC-Vivace — Data Link

![Graph showing throughput and per-packet round-trip delay over time]

**Throughput (Mbps):**
- Flow 1 ingress (mean 247.72 Mbps)
- Flow 1 egress (mean 247.45 Mbps)
- Flow 2 ingress (mean 194.25 Mbps)
- Flow 2 egress (mean 194.57 Mbps)
- Flow 3 ingress (mean 167.00 Mbps)
- Flow 3 egress (mean 166.03 Mbps)

**Per-packet round-trip delay (ms):**
- Flow 1 (95th percentile 68.64 ms)
- Flow 2 (95th percentile 64.59 ms)
- Flow 3 (95th percentile 68.88 ms)
Run 1: Statistics of PCC-Expr

Start at: 2018-04-18 19:50:30
End at: 2018-04-18 19:51:00
Run 1: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing
Run 2: Statistics of PCC-Expr

Start at: 2018-04-18 20:06:35
End at: 2018-04-18 20:07:05
Run 2: Report of PCC-Expr — Data Link

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Run 3: Statistics of PCC-Expr

End at: 2018-04-18 20:23:01
Run 3: Report of PCC-Expr — Data Link

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Run 4: Statistics of PCC-Expr

Start at: 2018-04-18 20:38:17
End at: 2018-04-18 20:38:47
Run 4: Report of PCC-Expr — Data Link

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Figure is missing
Run 5: Statistics of PCC-Expr

Start at: 2018-04-18 20:54:20
End at: 2018-04-18 20:54:50
Run 5: Report of PCC-Expr — Data Link

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Figure is missing
Run 6: Statistics of PCC-Expr

Start at: 2018-04-18 21:10:09
End at: 2018-04-18 21:10:39
Run 6: Report of PCC-Expr — Data Link

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Figure is missing
Run 7: Statistics of PCC-Expr

End at: 2018-04-18 21:26:21
Run 7: Report of PCC-Expr — Data Link

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Figure is missing
Run 8: Statistics of PCC-Expr

End at: 2018-04-18 21:41:59
Run 9: Statistics of PCC-Expr

Run 9: Report of PCC-Expr — Data Link

Figure is missing

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Run 10: Statistics of PCC-Expr

Run 10: Report of PCC-Expr — Data Link

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