Pantheon Report

Generated at 2018-01-27 06:33:52 (UTC).
Data path: GCE Sydney Ethernet (local) → GCE London Ethernet (remote).
Repeated the test of 15 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 @ f23294ec38436c9f802847d477a41b7343ec76e6
third_party/calibrated_koho @ 3cb73c0d1c03222cdfe446ea37a522e53227db50
  M datagrup/sender.cc
third_party/fillp @ ec958532521d05048c4d4152fa2240af546e67
third_party/genericCC @ 80b516c448f795f6e9675f7177b696c226f707da8
third_party/indigo @ a9b2060d39e4da2e8987e893e6e86e67
  M datagrup/sender.cc
third_party/indigo-1-layer-128-unit @ 3ae9e4ef4230db7484501f82e8b3776f6f26f6d
third_party/indigo-1-layer-32-unit @ 2601c92e4aa9df3d85c4044dfe0edcbf900c77e67d4
third_party/indigo-1-layer-32-unit-no-calib @ 1f3a7f75a113e6d5b40c0f3505939528e2a5f
third_party/indigo-no-calib @ 722af2202e8a0442d30ef0a0b93a88360c53d89
third_party/koho_cc @ 10f2e693303ae82e808e6928eac4f1083a6681
  M datagrup/sender.cc
third_party/libutp @ b3465b942e2826f2b217eaab44a906ce6b7c3cfc
third_party/pantheon-tunnel @ f1053193c2861a659ba9013db26744cc1cf4993
third_party/pcc @ 1afac950fa066d18b63c091a55fe872b4981e1
  M receiver/src/buffer.h
  M receiver/src/core.cpp
  M sender/src/buffer.h
  M sender/src/core.cpp
third_party/proto-quic @ 77961f1a82733a86b421bc81843cb9f7853c4f24
third_party/scream @ 8c370ffdf7dd172s65a79aeb304016ad235f956885
third_party/sourdough @ f1a1b5fe749737437f6b1eaaee3b267cde681
third_party/sprout @ 6f2e6e08389d1066a9f023df3733ee2665089ce
  M src/examples/cellsim.cc
  M src/examples/sproutbt2.cc
  M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562539f9a494
  M src/verus.hpp
  M tools/plot.py
third_party/vivace @ 423c8ca3e8ea1d599e7b5c7f75835e8a2b6b5ac6
third_party/webRTC @ 4881973dd01ace68a40248b2540d834825f42
test from GCE Sydney Ethernet to GCE London 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>42.73</td>
<td>44.19</td>
<td>53.95</td>
</tr>
<tr>
<td>TCP Cubic</td>
<td>10</td>
<td>28.86</td>
<td>53.64</td>
<td>42.05</td>
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<tr>
<td>LEDBAT</td>
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<td>2.05</td>
<td>1.60</td>
<td>0.98</td>
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<td>PCC</td>
<td>10</td>
<td>367.76</td>
<td>183.58</td>
<td>124.96</td>
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<tr>
<td>QUIC Cubic</td>
<td>0</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>SCReAM</td>
<td>10</td>
<td>0.22</td>
<td>0.22</td>
<td>0.22</td>
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<tr>
<td>WebRTC media</td>
<td>6</td>
<td>1.66</td>
<td>1.00</td>
<td>0.28</td>
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<tr>
<td>Sprout</td>
<td>10</td>
<td>0.39</td>
<td>0.46</td>
<td>0.46</td>
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<tr>
<td>TaoVA-100x</td>
<td>10</td>
<td>104.80</td>
<td>87.88</td>
<td>83.06</td>
</tr>
<tr>
<td>TCP Vegas</td>
<td>10</td>
<td>21.20</td>
<td>39.61</td>
<td>46.56</td>
</tr>
<tr>
<td>Verus</td>
<td>10</td>
<td>131.97</td>
<td>92.87</td>
<td>51.54</td>
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<tr>
<td>Copa</td>
<td>7</td>
<td>51.37</td>
<td>41.26</td>
<td>19.72</td>
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<tr>
<td>Indigo-2-256</td>
<td>10</td>
<td>139.99</td>
<td>134.43</td>
<td>112.25</td>
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<tr>
<td>Indigo-1-32</td>
<td>10</td>
<td>160.92</td>
<td>147.86</td>
<td>130.49</td>
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<tr>
<td>Indigo-1-128</td>
<td>10</td>
<td>136.10</td>
<td>131.02</td>
<td>114.52</td>
</tr>
</tbody>
</table>

**Note:**
- The table compares various network schemes, including TCP BBR, TCP Cubic, LEDBAT, PCC, QUIC Cubic, SCReAM, WebRTC media, Sprout, TaoVA-100x, TCP Vegas, Verus, Copa, Indigo-2-256, Indigo-1-32, and Indigo-1-128.
- The columns represent the mean average throughput (Mbit/s), mean 95th-percentile delay (ms), and mean loss rate (%).
- Each scheme's performance is evaluated across multiple runs.
Run 1: Statistics of TCP BBR

Start at: 2018-01-27 02:28:21
End at: 2018-01-27 02:28:51

# Below is generated by plot.py at 2018-01-27 05:48:52
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 104.27 Mbit/s
  95th percentile per-packet one-way delay: 148.522 ms
  Loss rate: 0.24%
-- Flow 1:
  Average throughput: 46.84 Mbit/s
  95th percentile per-packet one-way delay: 148.678 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 51.53 Mbit/s
  95th percentile per-packet one-way delay: 148.169 ms
  Loss rate: 0.73%
-- Flow 3:
  Average throughput: 71.53 Mbit/s
  95th percentile per-packet one-way delay: 149.034 ms
  Loss rate: 0.00%
Run 1: Report of TCP BBR — Data Link

![Graph of throughput vs time for different flows]

- Flow 1 ingress (mean 46.84 Mbit/s)
- Flow 1 egress (mean 46.84 Mbit/s)
- Flow 2 ingress (mean 51.92 Mbit/s)
- Flow 2 egress (mean 51.53 Mbit/s)
- Flow 3 ingress (mean 71.57 Mbit/s)
- Flow 3 egress (mean 71.53 Mbit/s)

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

- Flow 1 (95th percentile 148.68 ms)
- Flow 2 (95th percentile 148.17 ms)
- Flow 3 (95th percentile 149.03 ms)
Run 2: Statistics of TCP BBR

Start at: 2018-01-27 02:44:20
End at: 2018-01-27 02:44:50

# Below is generated by plot.py at 2018-01-27 05:48:52
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 95.18 Mbit/s
  95th percentile per-packet one-way delay: 151.740 ms
  Loss rate: 0.02%
-- Flow 1:
  Average throughput: 43.67 Mbit/s
  95th percentile per-packet one-way delay: 151.940 ms
  Loss rate: 0.04%
-- Flow 2:
  Average throughput: 59.45 Mbit/s
  95th percentile per-packet one-way delay: 151.251 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 36.97 Mbit/s
  95th percentile per-packet one-way delay: 153.059 ms
  Loss rate: 0.00%
Run 2: Report of TCP BBR — Data Link

![Graph of Throughput vs Time](image1)

- **Throughput (Mbps)**
  - Flow 1 ingress (mean 43.68 Mbps)
  - Flow 1 egress (mean 43.67 Mbps)
  - Flow 2 ingress (mean 59.47 Mbps)
  - Flow 2 egress (mean 59.45 Mbps)
  - Flow 3 ingress (mean 36.99 Mbps)
  - Flow 3 egress (mean 36.97 Mbps)

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

- Flow 1 (95th percentile 151.94 ms)
- Flow 2 (95th percentile 151.25 ms)
- Flow 3 (95th percentile 153.06 ms)
Run 3: Statistics of TCP BBR

Start at: 2018-01-27 03:00:19
End at: 2018-01-27 03:00:49

# Below is generated by plot.py at 2018-01-27 05:48:52
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 83.17 Mbit/s
  95th percentile per-packet one-way delay: 149.209 ms
  Loss rate: 0.95%
  -- Flow 1:
  Average throughput: 38.20 Mbit/s
  95th percentile per-packet one-way delay: 147.024 ms
  Loss rate: 0.04%
  -- Flow 2:
  Average throughput: 33.30 Mbit/s
  95th percentile per-packet one-way delay: 149.890 ms
  Loss rate: 3.42%
  -- Flow 3:
  Average throughput: 70.73 Mbit/s
  95th percentile per-packet one-way delay: 152.387 ms
  Loss rate: 0.00%
Run 3: Report of TCP BBR — Data Link
Run 4: Statistics of TCP BBR

Start at: 2018-01-27 03:16:58
End at: 2018-01-27 03:17:28

# Below is generated by plot.py at 2018-01-27 05:48:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 75.15 Mbit/s
95th percentile per-packet one-way delay: 164.108 ms
Loss rate: 1.16%
-- Flow 1:
Average throughput: 36.46 Mbit/s
95th percentile per-packet one-way delay: 166.398 ms
Loss rate: 1.57%
-- Flow 2:
Average throughput: 40.28 Mbit/s
95th percentile per-packet one-way delay: 160.763 ms
Loss rate: 1.00%
-- Flow 3:
Average throughput: 36.29 Mbit/s
95th percentile per-packet one-way delay: 162.870 ms
Loss rate: 0.28%
Run 4: Report of TCP BBR — Data Link
Run 5: Statistics of TCP BBR

Start at: 2018-01-27 03:32:51
End at: 2018-01-27 03:33:21

# Below is generated by plot.py at 2018-01-27 05:48:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.82 Mbit/s
95th percentile per-packet one-way delay: 149.657 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 47.86 Mbit/s
95th percentile per-packet one-way delay: 149.640 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 40.50 Mbit/s
95th percentile per-packet one-way delay: 149.469 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 70.79 Mbit/s
95th percentile per-packet one-way delay: 150.125 ms
Loss rate: 0.00%
Run 5: Report of TCP BBR — Data Link
Run 6: Statistics of TCP BBR

Start at: 2018-01-27 03:49:06
End at: 2018-01-27 03:49:36

# Below is generated by plot.py at 2018-01-27 05:48:52
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 83.90 Mbit/s
  95th percentile per-packet one-way delay: 154.317 ms
  Loss rate: 0.09%
-- Flow 1:
  Average throughput: 41.13 Mbit/s
  95th percentile per-packet one-way delay: 154.093 ms
  Loss rate: 0.03%
-- Flow 2:
  Average throughput: 39.62 Mbit/s
  95th percentile per-packet one-way delay: 156.333 ms
  Loss rate: 0.03%
-- Flow 3:
  Average throughput: 50.47 Mbit/s
  95th percentile per-packet one-way delay: 150.577 ms
  Loss rate: 0.36%
Run 6: Report of TCP BBR — Data Link

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

Start at: 2018-01-27 04:05:20
End at: 2018-01-27 04:05:50

# Below is generated by plot.py at 2018-01-27 05:48:52
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 90.40 Mbit/s
  95th percentile per-packet one-way delay: 149.937 ms
  Loss rate: 1.54%
-- Flow 1:
  Average throughput: 39.86 Mbit/s
  95th percentile per-packet one-way delay: 149.053 ms
  Loss rate: 2.63%
-- Flow 2:
  Average throughput: 55.32 Mbit/s
  95th percentile per-packet one-way delay: 149.343 ms
  Loss rate: 0.63%
-- Flow 3:
  Average throughput: 42.69 Mbit/s
  95th percentile per-packet one-way delay: 153.789 ms
  Loss rate: 0.81%
Run 7: Report of TCP BBR — Data Link

![Graph showing throughput and per-packet one-way delay over time for three different flows with their respective ingress and egress throughput averages.]

- Flow 1 ingress (mean 40.94 Mbit/s)
- Flow 1 egress (mean 39.86 Mbit/s)
- Flow 2 ingress (mean 55.67 Mbit/s)
- Flow 2 egress (mean 55.32 Mbit/s)
- Flow 3 ingress (mean 43.05 Mbit/s)
- Flow 3 egress (mean 42.69 Mbit/s)
Run 8: Statistics of TCP BBR

End at: 2018-01-27 04:21:54

# Below is generated by plot.py at 2018-01-27 05:48:52
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 89.63 Mbit/s
  95th percentile per-packet one-way delay: 159.280 ms
  Loss rate: 0.48%
-- Flow 1:
  Average throughput: 45.62 Mbit/s
  95th percentile per-packet one-way delay: 160.731 ms
  Loss rate: 0.43%
-- Flow 2:
  Average throughput: 40.56 Mbit/s
  95th percentile per-packet one-way delay: 156.728 ms
  Loss rate: 0.84%
-- Flow 3:
  Average throughput: 51.90 Mbit/s
  95th percentile per-packet one-way delay: 158.749 ms
  Loss rate: 0.03%
Run 8: Report of TCP BBR — Data Link
Run 9: Statistics of TCP BBR

Start at: 2018-01-27 04:37:50
End at: 2018-01-27 04:38:20

# Below is generated by plot.py at 2018-01-27 05:49:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 81.72 Mbit/s
95th percentile per-packet one-way delay: 148.327 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 44.04 Mbit/s
95th percentile per-packet one-way delay: 147.845 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 38.19 Mbit/s
95th percentile per-packet one-way delay: 147.877 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 38.01 Mbit/s
95th percentile per-packet one-way delay: 153.798 ms
Loss rate: 0.01%
Run 9: Report of TCP BBR — Data Link

[Graphs showing throughput and per-packet one-way delay over time for different flows, with annotations for mean throughput and 95th percentile delay.]
Run 10: Statistics of TCP BBR

Start at: 2018-01-27 04:54:01
End at: 2018-01-27 04:54:31

# Below is generated by plot.py at 2018-01-27 05:50:07
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 94.93 Mbit/s
  95th percentile per-packet one-way delay: 151.806 ms
  Loss rate: 0.02%
-- Flow 1:
  Average throughput: 43.67 Mbit/s
  95th percentile per-packet one-way delay: 151.344 ms
  Loss rate: 0.02%
-- Flow 2:
  Average throughput: 43.11 Mbit/s
  95th percentile per-packet one-way delay: 153.441 ms
  Loss rate: 0.05%
-- Flow 3:
  Average throughput: 70.07 Mbit/s
  95th percentile per-packet one-way delay: 150.165 ms
  Loss rate: 0.00%
Run 10: Report of TCP BBR — Data Link
Run 1: Statistics of TCP Cubic

Start at: 2018-01-27 02:25:06
End at: 2018-01-27 02:25:36

# Below is generated by plot.py at 2018-01-27 05:50:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 80.52 Mbit/s
95th percentile per-packet one-way delay: 160.244 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 31.70 Mbit/s
95th percentile per-packet one-way delay: 156.481 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 53.07 Mbit/s
95th percentile per-packet one-way delay: 164.184 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 40.71 Mbit/s
95th percentile per-packet one-way delay: 155.050 ms
Loss rate: 0.03%
Run 1: Report of TCP Cubic — Data Link

**Throughput (Mbps):**
- Flow 1 ingress (mean 31.73 Mbps)
- Flow 1 egress (mean 31.70 Mbps)
- Flow 2 ingress (mean 53.08 Mbps)
- Flow 2 egress (mean 53.07 Mbps)
- Flow 3 ingress (mean 40.71 Mbps)
- Flow 3 egress (mean 40.71 Mbps)

**Per-packet one-way delay (ms):**
- Flow 1 (95th percentile 156.48 ms)
- Flow 2 (95th percentile 164.18 ms)
- Flow 3 (95th percentile 155.05 ms)
Run 2: Statistics of TCP Cubic

Start at: 2018-01-27 02:40:59
End at: 2018-01-27 02:41:29

# Below is generated by plot.py at 2018-01-27 05:50:07
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 60.34 Mbit/s
  95th percentile per-packet one-way delay: 147.378 ms
  Loss rate: 0.56%
-- Flow 1:
  Average throughput: 13.87 Mbit/s
  95th percentile per-packet one-way delay: 141.041 ms
  Loss rate: 2.35%
-- Flow 2:
  Average throughput: 50.58 Mbit/s
  95th percentile per-packet one-way delay: 147.740 ms
  Loss rate: 0.01%
-- Flow 3:
  Average throughput: 38.75 Mbit/s
  95th percentile per-packet one-way delay: 151.934 ms
  Loss rate: 0.02%
Run 3: Statistics of TCP Cubic

Start at: 2018-01-27 02:56:54  
End at: 2018-01-27 02:57:24  

# Below is generated by plot.py at 2018-01-27 05:50:07  
# Datalink statistics  
-- Total of 3 flows:  
  Average throughput: 64.01 Mbit/s  
  95th percentile per-packet one-way delay: 144.760 ms  
  Loss rate: 0.07%  
- Flow 1:  
  Average throughput: 6.97 Mbit/s  
  95th percentile per-packet one-way delay: 141.460 ms  
  Loss rate: 0.64%  
- Flow 2:  
  Average throughput: 50.71 Mbit/s  
  95th percentile per-packet one-way delay: 144.741 ms  
  Loss rate: 0.00%  
- Flow 3:  
  Average throughput: 71.70 Mbit/s  
  95th percentile per-packet one-way delay: 145.036 ms  
  Loss rate: 0.00%
Run 3: Report of TCP Cubic — Data Link
Run 4: Statistics of TCP Cubic

Start at: 2018-01-27 03:13:39
End at: 2018-01-27 03:14:09

# Below is generated by plot.py at 2018-01-27 05:50:07
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 70.02 Mbit/s
  95th percentile per-packet one-way delay: 154.860 ms
  Loss rate: 0.04%
  -- Flow 1:
  Average throughput: 45.46 Mbit/s
  95th percentile per-packet one-way delay: 147.036 ms
  Loss rate: 0.03%
  -- Flow 2:
  Average throughput: 14.03 Mbit/s
  95th percentile per-packet one-way delay: 141.531 ms
  Loss rate: 0.00%
  -- Flow 3:
  Average throughput: 45.94 Mbit/s
  95th percentile per-packet one-way delay: 172.479 ms
  Loss rate: 0.07%
Run 4: Report of TCP Cubic — Data Link

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

- **Flow 1 ingress (mean 45.47 Mbit/s)**
- **Flow 1 egress (mean 45.46 Mbit/s)**
- **Flow 2 ingress (mean 14.03 Mbit/s)**
- **Flow 2 egress (mean 14.03 Mbit/s)**
- **Flow 3 ingress (mean 45.97 Mbit/s)**
- **Flow 3 egress (mean 45.94 Mbit/s)**

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

- **Flow 1 (95th percentile 147.04 ms)**
- **Flow 2 (95th percentile 141.53 ms)**
- **Flow 3 (95th percentile 172.48 ms)**
Run 5: Statistics of TCP Cubic

Start at: 2018-01-27 03:29:28
End at: 2018-01-27 03:29:58

# Below is generated by plot.py at 2018-01-27 05:50:36
# Datalink statistics
-- Total of 3 flows:
   Average throughput: 105.63 Mbit/s
   95th percentile per-packet one-way delay: 146.430 ms
   Loss rate: 0.01%
   -- Flow 1:
   Average throughput: 51.60 Mbit/s
   95th percentile per-packet one-way delay: 145.814 ms
   Loss rate: 0.02%
   -- Flow 2:
   Average throughput: 81.05 Mbit/s
   95th percentile per-packet one-way delay: 147.408 ms
   Loss rate: 0.00%
   -- Flow 3:
   Average throughput: 1.56 Mbit/s
   95th percentile per-packet one-way delay: 144.230 ms
   Loss rate: 0.08%
Run 5: Report of TCP Cubic — Data Link
Run 6: Statistics of TCP Cubic

Start at: 2018-01-27 03:45:42
End at: 2018-01-27 03:46:12

# Below is generated by plot.py at 2018-01-27 05:50:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 113.92 Mbit/s
95th percentile per-packet one-way delay: 151.947 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 53.35 Mbit/s
95th percentile per-packet one-way delay: 150.401 ms
Loss rate: 1.30%
-- Flow 2:
Average throughput: 62.79 Mbit/s
95th percentile per-packet one-way delay: 152.939 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 56.78 Mbit/s
95th percentile per-packet one-way delay: 153.198 ms
Loss rate: 0.02%
Run 6: Report of TCP Cubic — Data Link

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**Throughput (Mbps)**

- Flow 1 ingress (mean 54.06 Mbps)
- Flow 1 egress (mean 53.35 Mbps)
- Flow 2 ingress (mean 62.81 Mbps)
- Flow 2 egress (mean 62.79 Mbps)
- Flow 3 ingress (mean 56.79 Mbps)
- Flow 3 egress (mean 56.78 Mbps)

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

- Flow 1 (95th percentile 150.40 ms)
- Flow 2 (95th percentile 152.94 ms)
- Flow 3 (95th percentile 153.20 ms)
Run 7: Statistics of TCP Cubic

Start at: 2018-01-27 04:01:53
End at: 2018-01-27 04:02:23

# Below is generated by plot.py at 2018-01-27 05:51:12
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 92.10 Mbit/s
  95th percentile per-packet one-way delay: 152.901 ms
  Loss rate: 0.02%
-- Flow 1:
  Average throughput: 24.83 Mbit/s
  95th percentile per-packet one-way delay: 146.150 ms
  Loss rate: 0.05%
-- Flow 2:
  Average throughput: 79.01 Mbit/s
  95th percentile per-packet one-way delay: 154.102 ms
  Loss rate: 0.01%
-- Flow 3:
  Average throughput: 45.65 Mbit/s
  95th percentile per-packet one-way delay: 155.439 ms
  Loss rate: 0.00%
Run 7: Report of TCP Cubic — Data Link

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

- Flow 1 ingress (mean 24.84 Mbit/s)
- Flow 1 egress (mean 24.83 Mbit/s)
- Flow 2 ingress (mean 79.02 Mbit/s)
- Flow 2 egress (mean 79.01 Mbit/s)
- Flow 3 ingress (mean 45.64 Mbit/s)
- Flow 3 egress (mean 45.65 Mbit/s)

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

- Flow 1 (95th percentile 146.15 ms)
- Flow 2 (95th percentile 154.10 ms)
- Flow 3 (95th percentile 155.44 ms)
Run 8: Statistics of TCP Cubic

Start at: 2018-01-27 04:18:02
End at: 2018-01-27 04:18:32

# Below is generated by plot.py at 2018-01-27 05:51:19
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 94.50 Mbit/s
  95th percentile per-packet one-way delay: 156.044 ms
  Loss rate: 0.02%
-- Flow 1:
  Average throughput: 29.83 Mbit/s
  95th percentile per-packet one-way delay: 150.847 ms
  Loss rate: 0.06%
-- Flow 2:
  Average throughput: 79.92 Mbit/s
  95th percentile per-packet one-way delay: 157.490 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 36.17 Mbit/s
  95th percentile per-packet one-way delay: 148.144 ms
  Loss rate: 0.01%
Run 9: Statistics of TCP Cubic

Start at: 2018-01-27 04:34:25
End at: 2018-01-27 04:34:55

# Below is generated by plot.py at 2018-01-27 05:51:19
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 69.63 Mbit/s
  95th percentile per-packet one-way delay: 152.567 ms
  Loss rate: 0.44%
-- Flow 1:
  Average throughput: 25.90 Mbit/s
  95th percentile per-packet one-way delay: 149.689 ms
  Loss rate: 1.03%
-- Flow 2:
  Average throughput: 46.93 Mbit/s
  95th percentile per-packet one-way delay: 153.123 ms
  Loss rate: 0.07%
-- Flow 3:
  Average throughput: 37.71 Mbit/s
  95th percentile per-packet one-way delay: 155.676 ms
  Loss rate: 0.15%
Run 9: Report of TCP Cubic — Data Link
Run 10: Statistics of TCP Cubic

Start at: 2018-01-27 04:50:41
End at: 2018-01-27 04:51:11

# Below is generated by plot.py at 2018-01-27 05:51:19
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 32.21 Mbit/s
  95th percentile per-packet one-way delay: 152.791 ms
  Loss rate: 0.02%
-- Flow 1:
  Average throughput: 5.08 Mbit/s
  95th percentile per-packet one-way delay: 138.260 ms
  Loss rate: 0.09%
-- Flow 2:
  Average throughput: 18.31 Mbit/s
  95th percentile per-packet one-way delay: 144.273 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 45.58 Mbit/s
  95th percentile per-packet one-way delay: 156.190 ms
  Loss rate: 0.00%
Run 10: Report of TCP Cubic — Data Link

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

- Flow 1 ingress (mean 5.08 Mbit/s)
- Flow 1 egress (mean 5.08 Mbit/s)
- Flow 2 ingress (mean 18.31 Mbit/s)
- Flow 2 egress (mean 18.31 Mbit/s)
- Flow 3 ingress (mean 45.58 Mbit/s)
- Flow 3 egress (mean 45.58 Mbit/s)
Run 1: Statistics of LEDBAT

Start at: 2018-01-27 02:24:16
End at: 2018-01-27 02:24:46

# Below is generated by plot.py at 2018-01-27 05:51:19
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 6.28 Mbit/s
  95th percentile per-packet one-way delay: 138.594 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 4.81 Mbit/s
  95th percentile per-packet one-way delay: 138.810 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 1.60 Mbit/s
  95th percentile per-packet one-way delay: 137.883 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 1.24 Mbit/s
  95th percentile per-packet one-way delay: 138.034 ms
  Loss rate: 0.00%
Run 1: Report of LEDBAT — Data Link

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

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

Legend:
- Flow 1 ingress (mean 4.81 Mbit/s)
- Flow 1 egress (mean 4.81 Mbit/s)
- Flow 2 ingress (mean 1.60 Mbit/s)
- Flow 2 egress (mean 1.60 Mbit/s)
- Flow 3 ingress (mean 1.24 Mbit/s)
- Flow 3 egress (mean 1.24 Mbit/s)

Legend for Packet One-Way Delay:
- Flow 1 (95th percentile 138.81 ms)
- Flow 2 (95th percentile 137.88 ms)
- Flow 3 (95th percentile 138.03 ms)
Run 2: Statistics of LEDBAT

Start at: 2018-01-27 02:40:10
End at: 2018-01-27 02:40:40

# Below is generated by plot.py at 2018-01-27 05:51:19
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 2.05 Mbit/s
  95th percentile per-packet one-way delay: 137.084 ms
  Loss rate: 0.17%
-- Flow 1:
  Average throughput: 1.05 Mbit/s
  95th percentile per-packet one-way delay: 137.315 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.93 Mbit/s
  95th percentile per-packet one-way delay: 136.849 ms
  Loss rate: 0.38%
-- Flow 3:
  Average throughput: 1.19 Mbit/s
  95th percentile per-packet one-way delay: 137.114 ms
  Loss rate: 0.30%
Run 2: Report of LEDBAT — Data Link

[Graph showing throughput and packet one-way delay over time for different flows.]
Run 3: Statistics of LEDBAT

Start at: 2018-01-27 02:56:04
End at: 2018-01-27 02:56:34

# Below is generated by plot.py at 2018-01-27 05:51:19
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1.82 Mbit/s
  95th percentile per-packet one-way delay: 137.170 ms
  Loss rate: 0.15%
-- Flow 1:
  Average throughput: 1.20 Mbit/s
  95th percentile per-packet one-way delay: 137.363 ms
  Loss rate: 0.23%
-- Flow 2:
  Average throughput: 0.25 Mbit/s
  95th percentile per-packet one-way delay: 136.996 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 1.41 Mbit/s
  95th percentile per-packet one-way delay: 136.965 ms
  Loss rate: 0.00%
Run 3: Report of LEDBAT — Data Link

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

- Flow 1 ingress (mean 1.20 Mbit/s)
- Flow 1 egress (mean 1.20 Mbit/s)
- Flow 2 ingress (mean 0.25 Mbit/s)
- Flow 2 egress (mean 0.25 Mbit/s)
- Flow 3 ingress (mean 1.41 Mbit/s)
- Flow 3 egress (mean 1.41 Mbit/s)
Run 4: Statistics of LEDBAT

Start at: 2018-01-27 03:12:50
End at: 2018-01-27 03:13:20

# Below is generated by plot.py at 2018-01-27 05:51:19
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 3.32 Mbit/s
  95th percentile per-packet one-way delay: 138.026 ms
  Loss rate: 0.61%
-- Flow 1:
  Average throughput: 2.41 Mbit/s
  95th percentile per-packet one-way delay: 138.078 ms
  Loss rate: 0.39%
-- Flow 2:
  Average throughput: 1.13 Mbit/s
  95th percentile per-packet one-way delay: 137.734 ms
  Loss rate: 1.45%
-- Flow 3:
  Average throughput: 0.51 Mbit/s
  95th percentile per-packet one-way delay: 137.458 ms
  Loss rate: 0.00%
Run 4: Report of LEDBAT — Data Link

![Run 4: Report of LEDBAT — Data Link](image-url)
Run 5: Statistics of LEDBAT

Start at: 2018-01-27 03:28:38
End at: 2018-01-27 03:29:08

# Below is generated by plot.py at 2018-01-27 05:51:19
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 4.09 Mbit/s
  95th percentile per-packet one-way delay: 137.855 ms
  Loss rate: 0.04%
-- Flow 1:
  Average throughput: 2.55 Mbit/s
  95th percentile per-packet one-way delay: 137.901 ms
  Loss rate: 0.06%
-- Flow 2:
  Average throughput: 1.85 Mbit/s
  95th percentile per-packet one-way delay: 137.739 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 1.00 Mbit/s
  95th percentile per-packet one-way delay: 137.419 ms
  Loss rate: 0.00%
Run 6: Statistics of LEDBAT

Start at: 2018-01-27 03:44:53
End at: 2018-01-27 03:45:23

# Below is generated by plot.py at 2018-01-27 05:51:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.57 Mbit/s
95th percentile per-packet one-way delay: 139.243 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 2.53 Mbit/s
95th percentile per-packet one-way delay: 139.302 ms
Loss rate: 0.19%
-- Flow 2:
Average throughput: 2.64 Mbit/s
95th percentile per-packet one-way delay: 139.104 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 0.88 Mbit/s
95th percentile per-packet one-way delay: 138.175 ms
Loss rate: 1.59%
Run 6: Report of LEDBAT — Data Link
Run 7: Statistics of LEDBAT

Start at: 2018-01-27 04:01:04
End at: 2018-01-27 04:01:34

# Below is generated by plot.py at 2018-01-27 05:51:19
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 2.44 Mbit/s
  95th percentile per-packet one-way delay: 138.036 ms
  Loss rate: 0.38%
-- Flow 1:
  Average throughput: 1.04 Mbit/s
  95th percentile per-packet one-way delay: 137.889 ms
  Loss rate: 0.78%
-- Flow 2:
  Average throughput: 1.34 Mbit/s
  95th percentile per-packet one-way delay: 138.110 ms
  Loss rate: 0.13%
-- Flow 3:
  Average throughput: 1.56 Mbit/s
  95th percentile per-packet one-way delay: 138.142 ms
  Loss rate: 0.00%
Run 7: Report of LEDBAT — Data Link

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

Start at: 2018-01-27 04:17:13
End at: 2018-01-27 04:17:43

# Below is generated by plot.py at 2018-01-27 05:51:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.38 Mbit/s
95th percentile per-packet one-way delay: 138.682 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 1.89 Mbit/s
95th percentile per-packet one-way delay: 138.629 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.75 Mbit/s
95th percentile per-packet one-way delay: 138.774 ms
Loss rate: 1.14%
-- Flow 3:
Average throughput: 1.02 Mbit/s
95th percentile per-packet one-way delay: 138.417 ms
Loss rate: 0.00%
Run 8: Report of LEDBAT — Data Link
Run 9: Statistics of LEDBAT

Start at: 2018-01-27 04:33:36
End at: 2018-01-27 04:34:06

# Below is generated by plot.py at 2018-01-27 05:51:19
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 4.06 Mbit/s
  95th percentile per-packet one-way delay: 138.527 ms
  Loss rate: 0.50%
-- Flow 1:
  Average throughput: 1.77 Mbit/s
  95th percentile per-packet one-way delay: 138.329 ms
  Loss rate: 1.06%
-- Flow 2:
  Average throughput: 2.47 Mbit/s
  95th percentile per-packet one-way delay: 138.729 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.82 Mbit/s
  95th percentile per-packet one-way delay: 137.941 ms
  Loss rate: 0.44%
Run 9: Report of LEDBAT — Data Link
Run 10: Statistics of LEDBAT

Start at: 2018-01-27 04:49:52
End at: 2018-01-27 04:50:22

# Below is generated by plot.py at 2018-01-27 05:51:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.65 Mbit/s
95th percentile per-packet one-way delay: 137.970 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 1.21 Mbit/s
95th percentile per-packet one-way delay: 137.990 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 2.06 Mbit/s
95th percentile per-packet one-way delay: 137.927 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.324 ms
Loss rate: 0.00%
Run 10: Report of LEDBAT — Data Link

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

Start at: 2018-01-27 02:27:06
End at: 2018-01-27 02:27:36

# Below is generated by plot.py at 2018-01-27 05:59:03
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 528.20 Mbit/s
  95th percentile per-packet one-way delay: 361.614 ms
  Loss rate: 9.74%
-- Flow 1:
  Average throughput: 368.12 Mbit/s
  95th percentile per-packet one-way delay: 374.235 ms
  Loss rate: 10.45%
-- Flow 2:
  Average throughput: 239.94 Mbit/s
  95th percentile per-packet one-way delay: 245.348 ms
  Loss rate: 8.06%
-- Flow 3:
  Average throughput: 2.14 Mbit/s
  95th percentile per-packet one-way delay: 244.529 ms
  Loss rate: 8.22%
Run 1: Report of PCC — Data Link

![Graph showing network performance metrics over time for different flows.]

- **Flow 1 Ingress**: Mean 411.05 Mbit/s
- **Flow 1 Egress**: Mean 368.12 Mbit/s
- **Flow 2 Ingress**: Mean 260.95 Mbit/s
- **Flow 2 Egress**: Mean 239.94 Mbit/s
- **Flow 3 Ingress**: Mean 2.33 Mbit/s
- **Flow 3 Egress**: Mean 2.14 Mbit/s

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

- **Flow 1**: 95th percentile 374.24 ms
- **Flow 2**: 95th percentile 245.35 ms
- **Flow 3**: 95th percentile 244.53 ms
Run 2: Statistics of PCC

Start at: 2018-01-27 02:43:06
End at: 2018-01-27 02:43:36

# Below is generated by plot.py at 2018-01-27 05:59:03
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 536.80 Mbit/s
  95th percentile per-packet one-way delay: 249.068 ms
  Loss rate: 2.24%
-- Flow 1:
  Average throughput: 360.22 Mbit/s
  95th percentile per-packet one-way delay: 252.749 ms
  Loss rate: 2.11%
-- Flow 2:
  Average throughput: 151.03 Mbit/s
  95th percentile per-packet one-way delay: 232.141 ms
  Loss rate: 1.37%
-- Flow 3:
  Average throughput: 231.91 Mbit/s
  95th percentile per-packet one-way delay: 242.531 ms
  Loss rate: 3.96%
Run 2: Report of PCC — Data Link

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

Legend:
- Flow 1 Ingress (mean 368.06 Mbit/s)
- Flow 1 Egress (mean 360.22 Mbit/s)
- Flow 2 Ingress (mean 153.14 Mbit/s)
- Flow 2 Egress (mean 153.03 Mbit/s)
- Flow 3 Ingress (mean 241.61 Mbit/s)
- Flow 3 Egress (mean 231.91 Mbit/s)

Legend for packet delay:
- Flow 1 (95th percentile 252.75 ms)
- Flow 2 (95th percentile 232.14 ms)
- Flow 3 (95th percentile 242.53 ms)
Run 3: Statistics of PCC

Start at: 2018-01-27 02:59:02
End at: 2018-01-27 02:59:32

# Below is generated by plot.py at 2018-01-27 06:00:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 583.55 Mbit/s
  95th percentile per-packet one-way delay: 332.576 ms
  Loss rate: 5.05%
-- Flow 1:
  Average throughput: 474.43 Mbit/s
  95th percentile per-packet one-way delay: 336.886 ms
  Loss rate: 5.77%
-- Flow 2:
  Average throughput: 132.96 Mbit/s
  95th percentile per-packet one-way delay: 236.921 ms
  Loss rate: 1.71%
-- Flow 3:
  Average throughput: 63.45 Mbit/s
  95th percentile per-packet one-way delay: 237.419 ms
  Loss rate: 2.16%
Run 3: Report of PCC — Data Link

![Graphs showing throughput and packet loss over time for different flows.](image-url)
Run 4: Statistics of PCC

Start at: 2018-01-27 03:15:46
End at: 2018-01-27 03:16:16

# Below is generated by plot.py at 2018-01-27 06:00:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 454.64 Mbit/s
95th percentile per-packet one-way delay: 285.995 ms
Loss rate: 3.35%
-- Flow 1:
Average throughput: 244.44 Mbit/s
95th percentile per-packet one-way delay: 289.858 ms
Loss rate: 2.88%
-- Flow 2:
Average throughput: 257.09 Mbit/s
95th percentile per-packet one-way delay: 292.716 ms
Loss rate: 4.23%
-- Flow 3:
Average throughput: 119.16 Mbit/s
95th percentile per-packet one-way delay: 239.270 ms
Loss rate: 2.36%
Run 4: Report of PCC — Data Link

![Graph showing throughput and packet delay over time for different flows with mean throughputs and 95th percentile delays provided.]

- Flow 1 ingress (mean 251.66 Mbit/s)
- Flow 1 egress (mean 244.44 Mbit/s)
- Flow 2 ingress (mean 268.47 Mbit/s)
- Flow 2 egress (mean 257.09 Mbit/s)
- Flow 3 ingress (mean 122.03 Mbit/s)
- Flow 3 egress (mean 119.16 Mbit/s)
Run 5: Statistics of PCC

Start at: 2018-01-27 03:31:37
End at: 2018-01-27 03:32:07

# Below is generated by plot.py at 2018-01-27 06:00:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 523.17 Mbit/s
  95th percentile per-packet one-way delay: 250.365 ms
  Loss rate: 4.65%
-- Flow 1:
  Average throughput: 366.21 Mbit/s
  95th percentile per-packet one-way delay: 250.711 ms
  Loss rate: 5.23%
-- Flow 2:
  Average throughput: 123.02 Mbit/s
  95th percentile per-packet one-way delay: 249.837 ms
  Loss rate: 2.92%
-- Flow 3:
  Average throughput: 228.55 Mbit/s
  95th percentile per-packet one-way delay: 243.344 ms
  Loss rate: 3.63%
Run 5: Report of PCC — Data Link

Throughput (Mbps)

Time (s)

Flow 1 Ingress (mean 386.39 Mbps)
Flow 1 Egress (mean 366.21 Mbps)
Flow 2 Ingress (mean 126.71 Mbps)
Flow 2 Egress (mean 123.02 Mbps)
Flow 3 Ingress (mean 237.18 Mbps)
Flow 3 Egress (mean 228.55 Mbps)

Packet per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 250.71 ms)
Flow 2 (95th percentile 249.84 ms)
Flow 3 (95th percentile 243.34 ms)
Run 6: Statistics of PCC

Start at: 2018-01-27 03:47:50
End at: 2018-01-27 03:48:20

# Below is generated by plot.py at 2018-01-27 06:00:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 539.22 Mbit/s
95th percentile per-packet one-way delay: 284.487 ms
Loss rate: 5.89%
-- Flow 1:
Average throughput: 409.21 Mbit/s
95th percentile per-packet one-way delay: 300.084 ms
Loss rate: 7.33%
-- Flow 2:
Average throughput: 136.59 Mbit/s
95th percentile per-packet one-way delay: 213.099 ms
Loss rate: 0.65%
-- Flow 3:
Average throughput: 119.54 Mbit/s
95th percentile per-packet one-way delay: 227.733 ms
Loss rate: 1.90%
Run 6: Report of PCC — Data Link

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

Flow 1 Ingress (mean 441.66 Mbit/s) vs. Egress (mean 409.21 Mbit/s).
Flow 2 Ingress (mean 137.31 Mbit/s) vs. Egress (mean 136.59 Mbit/s).
Flow 3 Ingress (mean 121.81 Mbit/s) vs. Egress (mean 119.54 Mbit/s).

Packet latency in ms:
Flow 1 (95th percentile 300.08 ms),
Flow 2 (95th percentile 213.10 ms),
Flow 3 (95th percentile 227.73 ms).
Run 7: Statistics of PCC

Start at: 2018-01-27 04:04:02
End at: 2018-01-27 04:04:32

# Below is generated by plot.py at 2018-01-27 06:01:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 580.67 Mbit/s
95th percentile per-packet one-way delay: 274.842 ms
Loss rate: 11.02%
-- Flow 1:
Average throughput: 411.59 Mbit/s
95th percentile per-packet one-way delay: 278.977 ms
Loss rate: 9.12%
-- Flow 2:
Average throughput: 130.33 Mbit/s
95th percentile per-packet one-way delay: 257.175 ms
Loss rate: 8.22%
-- Flow 3:
Average throughput: 250.71 Mbit/s
95th percentile per-packet one-way delay: 274.472 ms
Loss rate: 21.69%
Run 7: Report of PCC — Data Link

![Throughput Graph]

- **Flow 1 Ingress (mean 452.89 Mbit/s)**
- **Flow 1 Egress (mean 411.59 Mbit/s)**
- **Flow 2 Ingress (mean 142.03 Mbit/s)**
- **Flow 2 Egress (mean 130.33 Mbit/s)**
- **Flow 3 Ingress (mean 319.88 Mbit/s)**
- **Flow 3 Egress (mean 250.71 Mbit/s)**

![Delay Graph]

- **Flow 1 (95th percentile 278.98 ms)**
- **Flow 2 (95th percentile 257.18 ms)**
- **Flow 3 (95th percentile 274.47 ms)**
Run 8: Statistics of PCC

Start at: 2018-01-27 04:20:11
End at: 2018-01-27 04:20:41

# Below is generated by plot.py at 2018-01-27 06:01:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 493.11 Mbit/s
95th percentile per-packet one-way delay: 309.885 ms
Loss rate: 7.88%
-- Flow 1:
Average throughput: 349.72 Mbit/s
95th percentile per-packet one-way delay: 322.244 ms
Loss rate: 8.66%
-- Flow 2:
Average throughput: 211.49 Mbit/s
95th percentile per-packet one-way delay: 252.869 ms
Loss rate: 5.99%
-- Flow 3:
Average throughput: 8.48 Mbit/s
95th percentile per-packet one-way delay: 241.039 ms
Loss rate: 1.81%
Run 8: Report of PCC — Data Link
Run 9: Statistics of PCC

Start at: 2018-01-27 04:36:33
End at: 2018-01-27 04:37:03

# Below is generated by plot.py at 2018-01-27 06:08:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 552.60 Mbit/s
95th percentile per-packet one-way delay: 260.214 ms
Loss rate: 5.66%
-- Flow 1:
Average throughput: 324.80 Mbit/s
95th percentile per-packet one-way delay: 285.128 ms
Loss rate: 6.57%
-- Flow 2:
Average throughput: 232.49 Mbit/s
95th percentile per-packet one-way delay: 243.688 ms
Loss rate: 4.56%
-- Flow 3:
Average throughput: 223.60 Mbit/s
95th percentile per-packet one-way delay: 241.248 ms
Loss rate: 3.84%
Run 9: Report of PCC — Data Link
Run 10: Statistics of PCC

Start at: 2018-01-27 04:52:47
End at: 2018-01-27 04:53:17

# Below is generated by plot.py at 2018-01-27 06:08:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 516.34 Mbit/s
95th percentile per-packet one-way delay: 292.148 ms
Loss rate: 9.43%
-- Flow 1:
Average throughput: 368.85 Mbit/s
95th percentile per-packet one-way delay: 300.540 ms
Loss rate: 9.56%
-- Flow 2:
Average throughput: 220.87 Mbit/s
95th percentile per-packet one-way delay: 254.831 ms
Loss rate: 9.13%
-- Flow 3:
Average throughput: 2.08 Mbit/s
95th percentile per-packet one-way delay: 250.283 ms
Loss rate: 10.25%
Run 10: Report of PCC — Data Link

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

Legend for throughput graph:
- Blue dashed line: Flow 1 ingress (mean 407.86 Mbps)
- Blue solid line: Flow 1 egress (mean 368.85 Mbps)
- Green dashed line: Flow 2 ingress (mean 243.07 Mbps)
- Green solid line: Flow 2 egress (mean 220.87 Mbps)
- Red dashed line: Flow 3 ingress (mean 2.32 Mbps)
- Red solid line: Flow 3 egress (mean 2.08 Mbps)

Legend for packet delay graph:
- Blue dashed line: Flow 1 (95th percentile 300.54 ms)
- Green dashed line: Flow 2 (95th percentile 254.83 ms)
- Red dashed line: Flow 3 (95th percentile 250.28 ms)
Run 1: Statistics of QUIC Cubic

Start at: 2018-01-27 02:15:34
End at: 2018-01-27 02:16:04
Run 1: Report of QUIC Cubic — Data Link
Run 2: Statistics of QUIC Cubic

Start at: 2018-01-27 02:31:18
End at: 2018-01-27 02:31:48
Run 2: Report of QUIC Cubic — Data Link

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**Graph 1:**
Throughput (Mb/s) vs. Time (s)
- Flow 1 ingress (mean 0.11 Mb/s)
- Flow 1 egress (mean 0.11 Mb/s)
- Flow 2 ingress (mean 0.08 Mb/s)
- Flow 2 egress (mean 0.08 Mb/s)
- Flow 3 ingress (mean 0.11 Mb/s)
- Flow 3 egress (mean 0.11 Mb/s)

**Graph 2:**
Per-packet one-way delay (ms) vs. Time (s)
- Flow 1 (95th percentile 135.85 ms)
- Flow 2 (95th percentile 136.28 ms)
- Flow 3 (95th percentile 136.76 ms)
Run 3: Statistics of QUIC Cubic

Start at: 2018-01-27 02:47:17
End at: 2018-01-27 02:47:47
Run 3: Report of QUIC Cubic — Data Link
Run 4: Statistics of QUIC Cubic

Start at: 2018-01-27 03:03:17
End at: 2018-01-27 03:03:47
Run 4: Report of QUIC Cubic — Data Link
Run 5: Statistics of QUIC Cubic

Start at: 2018-01-27 03:19:54
End at: 2018-01-27 03:20:24
Run 6: Statistics of QUIC Cubic

Start at: 2018-01-27 03:35:49
End at: 2018-01-27 03:36:19
Run 6: Report of QUIC Cubic — Data Link

![Graph of Throughput and Latency](image1)

![Graph of Per-packet one-way delay](image2)
Run 7: Statistics of QUIC Cubic

Start at: 2018-01-27 03:52:03
End at: 2018-01-27 03:52:33
Run 7: Report of QUIC Cubic — Data Link
Run 8: Statistics of QUIC Cubic

Start at: 2018-01-27 04:08:18
End at: 2018-01-27 04:08:48
Run 8: Report of QUIC Cubic — Data Link

1. Throughput (Mbps)
   - Flow 1 ingress (mean 0.11 Mbps)
   - Flow 1 egress (mean 0.11 Mbps)
   - Flow 2 ingress (mean 0.11 Mbps)
   - Flow 2 egress (mean 0.11 Mbps)
   - Flow 3 ingress (mean 0.11 Mbps)
   - Flow 3 egress (mean 0.11 Mbps)

2. Packet Delay (ms)
   - Flow 1 (95th percentile 137.30 ms)
   - Flow 2 (95th percentile 136.76 ms)
   - Flow 3 (95th percentile 137.90 ms)
Run 9: Statistics of QUIC Cubic

Start at: 2018-01-27 04:24:21
End at: 2018-01-27 04:24:51
Run 9: Report of QUIC Cubic — Data Link
Run 10: Statistics of QUIC Cubic

Start at: 2018-01-27 04:40:46
End at: 2018-01-27 04:41:16
Run 10: Report of QUIC Cubic — Data Link
Run 1: Statistics of SCReAM

Start at: 2018-01-27 02:14:46
End at: 2018-01-27 02:15:16

# Below is generated by plot.py at 2018-01-27 06:08:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 137.039 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 137.056 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 135.867 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 137.038 ms
Loss rate: 0.00%
Run 1: Report of SCReAM — Data Link
Run 2: Statistics of SCReAM

Start at: 2018-01-27 02:30:29
End at: 2018-01-27 02:30:59

# Below is generated by plot.py at 2018-01-27 06:08:24
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.44 Mbit/s
  95th percentile per-packet one-way delay: 136.716 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 136.748 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 135.936 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 136.415 ms
  Loss rate: 0.00%
Run 2: Report of SCReAM — Data Link

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

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

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

- Flow 1 (95th percentile 136.75 ms)
- Flow 2 (95th percentile 135.94 ms)
- Flow 3 (95th percentile 136.41 ms)
Run 3: Statistics of SCReAM

Start at: 2018-01-27 02:46:28
End at: 2018-01-27 02:46:58

# Below is generated by plot.py at 2018-01-27 06:08:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 137.170 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.141 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 137.082 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 137.304 ms
Loss rate: 0.00%
Run 3: Report of SCReAM — Data Link
Run 4: Statistics of SCReAM

Start at: 2018-01-27 03:02:28
End at: 2018-01-27 03:02:58

# Below is generated by plot.py at 2018-01-27 06:08:24
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.44 Mbit/s
  95th percentile per-packet one-way delay: 137.209 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 136.471 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 136.491 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 137.279 ms
  Loss rate: 0.00%
Run 4: Report of SCReAM — Data Link

![Graph showing throughput and delay](image)

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

- **Perceived End-to-End Delay (ms)**
  - Flow 1: 95th percentile 136.47 ms
  - Flow 2: 95th percentile 136.49 ms
  - Flow 3: 95th percentile 137.28 ms

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Run 5: Statistics of SCReAM

Start at: 2018-01-27 03:19:05
End at: 2018-01-27 03:19:35

# Below is generated by plot.py at 2018-01-27 06:08:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 137.211 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.508 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 137.301 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.348 ms
Loss rate: 0.00%
Run 5: Report of SCReAM — Data Link

![Throughput Graph](image1)

![Packet Delay Graph](image2)
Run 6: Statistics of SCReAM

Start at: 2018-01-27 03:35:00
End at: 2018-01-27 03:35:30

# Below is generated by plot.py at 2018-01-27 06:08:24
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.44 Mbit/s
  95th percentile per-packet one-way delay: 137.206 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 136.453 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 137.237 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 137.161 ms
  Loss rate: 0.00%
Run 6: Report of SCReAM — Data Link

![Chart 1: Throughput (Mbps)]

![Chart 2: Per-Circuit One-Way Delay (ms)]
Run 7: Statistics of SCReAM

Start at: 2018-01-27 03:51:14
End at: 2018-01-27 03:51:44

# Below is generated by plot.py at 2018-01-27 06:08:24
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.44 Mbit/s
  95th percentile per-packet one-way delay: 137.450 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 137.138 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 137.495 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 137.389 ms
  Loss rate: 0.00%
Run 7: Report of SCReAM — Data Link

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

![Graph showing packet delay distribution over time](image2)
Run 8: Statistics of SCReAM

Start at: 2018-01-27 04:07:29
End at: 2018-01-27 04:07:59

# Below is generated by plot.py at 2018-01-27 06:08:24
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.44 Mbit/s
  95th percentile per-packet one-way delay: 136.873 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 136.872 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 136.832 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 136.898 ms
  Loss rate: 0.00%
Run 9: Statistics of SCReAM

End at: 2018-01-27 04:24:02

# Below is generated by plot.py at 2018-01-27 06:08:24
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.44 Mbit/s
  95th percentile per-packet one-way delay: 137.333 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 136.803 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 137.387 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 137.292 ms
  Loss rate: 0.00%
Run 10: Statistics of SCReAM

End at: 2018-01-27 04:40:28

# Below is generated by plot.py at 2018-01-27 06:08:24
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.44 Mbit/s
  95th percentile per-packet one-way delay: 137.032 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 136.843 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 137.079 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.22 Mbit/s
  95th percentile per-packet one-way delay: 136.487 ms
  Loss rate: 0.00%
Run 10: Report of SCReAM — Data Link

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

- **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: Perceived one-way delay (ms) over Time (s)]

- **Flow 1** (95th percentile 136.84 ms)
- **Flow 2** (95th percentile 137.08 ms)
- **Flow 3** (95th percentile 136.49 ms)
Run 1: Statistics of WebRTC media

Start at: 2018-01-27 02:18:39
End at: 2018-01-27 02:19:09

# Below is generated by plot.py at 2018-01-27 06:08:24
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 3.98 Mbit/s
  95th percentile per-packet one-way delay: 136.975 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 2.15 Mbit/s
  95th percentile per-packet one-way delay: 137.025 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 1.42 Mbit/s
  95th percentile per-packet one-way delay: 135.538 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.41 Mbit/s
  95th percentile per-packet one-way delay: 136.267 ms
  Loss rate: 0.00%
Run 1: Report of WebRTC media — Data Link
Run 2: Statistics of WebRTC media

Start at: 2018-01-27 02:34:24
End at: 2018-01-27 02:34:54

# Below is generated by plot.py at 2018-01-27 06:08:24
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 3.46 Mbit/s
  95th percentile per-packet one-way delay: 137.117 ms
  Loss rate: 0.00%
  -- Flow 1:
  Average throughput: 1.97 Mbit/s
  95th percentile per-packet one-way delay: 137.151 ms
  Loss rate: 0.00%
  -- Flow 2:
  Average throughput: 1.17 Mbit/s
  95th percentile per-packet one-way delay: 136.771 ms
  Loss rate: 0.00%
  -- Flow 3:
  Average throughput: 0.35 Mbit/s
  95th percentile per-packet one-way delay: 136.742 ms
  Loss rate: 0.00%
Run 2: Report of WebRTC media — Data Link
Run 3: Statistics of WebRTC media

Start at: 2018-01-27 02:50:28
End at: 2018-01-27 02:50:58

# Below is generated by plot.py at 2018-01-27 06:08:24
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 3.29 Mbit/s
  95th percentile per-packet one-way delay: 137.131 ms
  Loss rate: 0.01%
-- Flow 1:
  Average throughput: 1.92 Mbit/s
  95th percentile per-packet one-way delay: 137.167 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 1.11 Mbit/s
  95th percentile per-packet one-way delay: 136.745 ms
  Loss rate: 0.03%
-- Flow 3:
  Average throughput: 0.29 Mbit/s
  95th percentile per-packet one-way delay: 137.119 ms
  Loss rate: 0.00%
Run 3: Report of WebRTC media — Data Link

Throughput vs. Time

Flow 1 ingress (mean 1.92 Mbit/s)  
Flow 1 egress (mean 1.92 Mbit/s)  
Flow 2 ingress (mean 1.11 Mbit/s)  
Flow 2 egress (mean 1.11 Mbit/s)  
Flow 3 ingress (mean 0.29 Mbit/s)  
Flow 3 egress (mean 0.29 Mbit/s)

Pre-packet one-way delay vs. Time

Flow 1 (95th percentile 137.17 ms)  
Flow 2 (95th percentile 136.75 ms)  
Flow 3 (95th percentile 137.12 ms)
Run 4: Statistics of WebRTC media

Start at: 2018-01-27 03:06:47
End at: 2018-01-27 03:07:17
Run 4: Report of WebRTC media — Data Link
Run 5: Statistics of WebRTC media

End at: 2018-01-27 03:23:29

# Below is generated by plot.py at 2018-01-27 06:08:24
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 3.27 Mbit/s
  95th percentile per-packet one-way delay: 137.177 ms
  Loss rate: 0.01%
-- Flow 1:
  Average throughput: 1.93 Mbit/s
  95th percentile per-packet one-way delay: 136.621 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 1.09 Mbit/s
  95th percentile per-packet one-way delay: 137.330 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.27 Mbit/s
  95th percentile per-packet one-way delay: 138.461 ms
  Loss rate: 0.11%
Run 5: Report of WebRTC media — Data Link
Run 6: Statistics of WebRTC media

Start at: 2018-01-27 03:38:59
End at: 2018-01-27 03:39:29
Figure is missing
Run 7: Statistics of WebRTC media

Start at: 2018-01-27 03:55:15
End at: 2018-01-27 03:55:45
Run 7: Report of WebRTC media — Data Link
Run 8: Statistics of WebRTC media

Start at: 2018-01-27 04:11:35
End at: 2018-01-27 04:12:05
Run 8: Report of WebRTC media — Data Link
Run 9: Statistics of WebRTC media

Start at: 2018-01-27 04:27:45
End at: 2018-01-27 04:28:15

# Below is generated by plot.py at 2018-01-27 06:08:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.53 Mbit/s
95th percentile per-packet one-way delay: 137.497 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.00 Mbit/s
95th percentile per-packet one-way delay: 137.535 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.20 Mbit/s
95th percentile per-packet one-way delay: 136.005 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.35 Mbit/s
95th percentile per-packet one-way delay: 137.044 ms
Loss rate: 0.00%
Run 9: Report of WebRTC media — Data Link

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

- Flow 1 ingress (mean 2.00 Mbit/s)
- Flow 1 egress (mean 2.00 Mbit/s)
- Flow 2 ingress (mean 1.20 Mbit/s)
- Flow 2 egress (mean 1.20 Mbit/s)
- Flow 3 ingress (mean 0.35 Mbit/s)
- Flow 3 egress (mean 0.35 Mbit/s)

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

- Flow 1 (95th percentile 137.53 ms)
- Flow 2 (95th percentile 138.00 ms)
- Flow 3 (95th percentile 137.04 ms)
Run 10: Statistics of WebRTC media

End at: 2018-01-27 04:44:25

# Below is generated by plot.py at 2018-01-27 06:08:24
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.00 Mbit/s
  95th percentile per-packet one-way delay: 137.321 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.00 Mbit/s
  95th percentile per-packet one-way delay: 137.356 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.00 Mbit/s
  95th percentile per-packet one-way delay: 136.821 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.00 Mbit/s
  95th percentile per-packet one-way delay: 137.021 ms
  Loss rate: 0.00%
Run 10: Report of WebRTC media — Data Link

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

- Flow 1 ingress (mean 0.00 Mbit/s)
- Flow 1 egress (mean 0.00 Mbit/s)
- Flow 2 ingress (mean 0.00 Mbit/s)
- Flow 2 egress (mean 0.00 Mbit/s)
- Flow 3 ingress (mean 0.00 Mbit/s)
- Flow 3 egress (mean 0.00 Mbit/s)

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

- Flow 1 (95th percentile 137.36 ms)
- Flow 2 (95th percentile 136.82 ms)
- Flow 3 (95th percentile 137.02 ms)
Run 1: Statistics of Sprout

Start at: 2018-01-27 02:21:41
End at: 2018-01-27 02:22:11

# Below is generated by plot.py at 2018-01-27 06:08:24
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.83 Mbit/s
  95th percentile per-packet one-way delay: 137.208 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.40 Mbit/s
  95th percentile per-packet one-way delay: 137.372 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.45 Mbit/s
  95th percentile per-packet one-way delay: 136.975 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.41 Mbit/s
  95th percentile per-packet one-way delay: 137.244 ms
  Loss rate: 0.00%
Run 1: Report of Sprout — Data Link

![Graph showing network performance metrics over time]

- Flow 1 ingress (mean 0.40 Mbit/s)
- Flow 2 ingress (mean 0.45 Mbit/s)
- Flow 3 ingress (mean 0.41 Mbit/s)
- Flow 1 egress (mean 0.40 Mbit/s)
- Flow 2 egress (mean 0.45 Mbit/s)
- Flow 3 egress (mean 0.41 Mbit/s)

![Graph showing packet delay over time]

- Flow 1 (95th percentile 137.37 ms)
- Flow 2 (95th percentile 136.97 ms)
- Flow 3 (95th percentile 137.24 ms)
Run 2: Statistics of Sprout

Start at: 2018-01-27 02:37:29
End at: 2018-01-27 02:37:59

# Below is generated by plot.py at 2018-01-27 06:08:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.78 Mbit/s
95th percentile per-packet one-way delay: 136.968 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 136.850 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 137.021 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.46 Mbit/s
95th percentile per-packet one-way delay: 136.337 ms
Loss rate: 0.00%
Run 2: Report of Sprout — Data Link

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

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Run 3: Statistics of Sprout

Start at: 2018-01-27 02:53:25
End at: 2018-01-27 02:53:55

# Below is generated by plot.py at 2018-01-27 06:08:24
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.88 Mbit/s
  95th percentile per-packet one-way delay: 137.156 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.39 Mbit/s
  95th percentile per-packet one-way delay: 137.150 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.52 Mbit/s
  95th percentile per-packet one-way delay: 137.239 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 137.121 ms
  Loss rate: 0.00%
Run 3: Report of Sprout — Data Link

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

- Flow 1 ingress (mean 0.39 Mbit/s)
- Flow 1 egress (mean 0.39 Mbit/s)
- Flow 2 ingress (mean 0.52 Mbit/s)
- Flow 2 egress (mean 0.52 Mbit/s)
- Flow 3 ingress (mean 0.43 Mbit/s)
- Flow 3 egress (mean 0.43 Mbit/s)
Run 4: Statistics of Sprout

Start at: 2018-01-27 03:10:06  
End at: 2018-01-27 03:10:36

# Below is generated by plot.py at 2018-01-27 06:08:24
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.74 Mbit/s
  95th percentile per-packet one-way delay: 137.011 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.37 Mbit/s
  95th percentile per-packet one-way delay: 137.002 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.39 Mbit/s
  95th percentile per-packet one-way delay: 137.021 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.34 Mbit/s
  95th percentile per-packet one-way delay: 137.011 ms
  Loss rate: 0.00%
Run 4: Report of Sprout — Data Link
Run 5: Statistics of Sprout

Start at: 2018-01-27 03:26:06
End at: 2018-01-27 03:26:36

# Below is generated by plot.py at 2018-01-27 06:08:24
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 1.09 Mbit/s
  95th percentile per-packet one-way delay: 137.407 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 137.604 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.73 Mbit/s
  95th percentile per-packet one-way delay: 137.114 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.54 Mbit/s
  95th percentile per-packet one-way delay: 137.674 ms
  Loss rate: 0.00%
Run 5: Report of Sprout — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 0.43 Mbit/s)
  - Flow 1 egress (mean 0.43 Mbit/s)
  - Flow 2 ingress (mean 0.73 Mbit/s)
  - Flow 2 egress (mean 0.73 Mbit/s)
  - Flow 3 ingress (mean 0.54 Mbit/s)
  - Flow 3 egress (mean 0.54 Mbit/s)

- **Packet Delay (ms):**
  - Flow 1 (95th percentile 137.60 ms)
  - Flow 2 (95th percentile 137.11 ms)
  - Flow 3 (95th percentile 137.67 ms)
Run 6: Statistics of Sprout

Start at: 2018-01-27 03:42:10
End at: 2018-01-27 03:42:40

# Below is generated by plot.py at 2018-01-27 06:08:24
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.79 Mbit/s
  95th percentile per-packet one-way delay: 137.530 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.39 Mbit/s
  95th percentile per-packet one-way delay: 137.510 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.39 Mbit/s
  95th percentile per-packet one-way delay: 137.547 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.42 Mbit/s
  95th percentile per-packet one-way delay: 137.561 ms
  Loss rate: 0.00%
Run 6: Report of Sprout — Data Link

Graph 1: Throughput (Mbps)

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

Flow 1 ingress (mean 0.39 Mbps) - Flow 1 egress (mean 0.39 Mbps)
Flow 2 ingress (mean 0.39 Mbps) - Flow 2 egress (mean 0.39 Mbps)
Flow 3 ingress (mean 0.42 Mbps) - Flow 3 egress (mean 0.42 Mbps)
Run 7: Statistics of Sprout

Start at: 2018-01-27 03:58:25
End at: 2018-01-27 03:58:55

# Below is generated by plot.py at 2018-01-27 06:08:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.80 Mbit/s
95th percentile per-packet one-way delay: 137.052 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 137.019 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.42 Mbit/s
95th percentile per-packet one-way delay: 137.085 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.47 Mbit/s
95th percentile per-packet one-way delay: 137.077 ms
Loss rate: 0.00%
Run 7: Report of Sprout — Data Link

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

- Flow 1 ingress (mean 0.36 Mbps)
- Flow 1 egress (mean 0.36 Mbps)
- Flow 2 ingress (mean 0.42 Mbps)
- Flow 2 egress (mean 0.42 Mbps)
- Flow 3 ingress (mean 0.47 Mbps)
- Flow 3 egress (mean 0.47 Mbps)

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

- Flow 1 (95th percentile 137.02 ms)
- Flow 2 (95th percentile 137.09 ms)
- Flow 3 (95th percentile 137.08 ms)
Run 8: Statistics of Sprout

Start at: 2018-01-27 04:14:43
End at: 2018-01-27 04:15:13

# Below is generated by plot.py at 2018-01-27 06:08:24
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.93 Mbit/s
  95th percentile per-packet one-way delay: 137.311 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.37 Mbit/s
  95th percentile per-packet one-way delay: 137.370 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.57 Mbit/s
  95th percentile per-packet one-way delay: 137.098 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.56 Mbit/s
  95th percentile per-packet one-way delay: 137.175 ms
  Loss rate: 0.00%
Run 8: Report of Sprout — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 0.37 Mbps)
  - Flow 1 egress (mean 0.37 Mbps)
  - Flow 2 ingress (mean 0.57 Mbps)
  - Flow 2 egress (mean 0.57 Mbps)
  - Flow 3 ingress (mean 0.56 Mbps)
  - Flow 3 egress (mean 0.56 Mbps)

- **End-to-end delay (ms):**
  - Flow 1 (95th percentile 137.37 ms)
  - Flow 2 (95th percentile 137.10 ms)
  - Flow 3 (95th percentile 137.18 ms)
Run 9: Statistics of Sprout

Start at: 2018-01-27 04:30:56
End at: 2018-01-27 04:31:26

# Below is generated by plot.py at 2018-01-27 06:08:24
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.83 Mbit/s
  95th percentile per-packet one-way delay: 137.189 ms
  Loss rate: 0.10%
-- Flow 1:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 136.990 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.34 Mbit/s
  95th percentile per-packet one-way delay: 137.222 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.52 Mbit/s
  95th percentile per-packet one-way delay: 137.234 ms
  Loss rate: 0.46%
Run 9: Report of Sprout — Data Link

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

Legend:
- Flow 1 ingress (mean 0.43 Mbit/s)
- Flow 1 egress (mean 0.43 Mbit/s)
- Flow 2 ingress (mean 0.34 Mbit/s)
- Flow 2 egress (mean 0.34 Mbit/s)
- Flow 3 ingress (mean 0.33 Mbit/s)
- Flow 3 egress (mean 0.52 Mbit/s)

![Graph showing packet round-trip time over time for various data flows.]

Legend:
- Flow 1 (95th percentile 136.99 ms)
- Flow 2 (95th percentile 137.22 ms)
- Flow 3 (95th percentile 137.23 ms)
Run 10: Statistics of Sprout

Start at: 2018-01-27 04:47:07
End at: 2018-01-27 04:47:37

# Below is generated by plot.py at 2018-01-27 06:08:24
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 0.80 Mbit/s
  95th percentile per-packet one-way delay: 137.302 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.38 Mbit/s
  95th percentile per-packet one-way delay: 137.338 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.42 Mbit/s
  95th percentile per-packet one-way delay: 137.023 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.43 Mbit/s
  95th percentile per-packet one-way delay: 137.190 ms
  Loss rate: 0.00%
Run 10: Report of Sprout — Data Link

Throughput (Mbit/s)

Flow 1 ingress (mean 0.38 Mbit/s)
Flow 1 egress (mean 0.38 Mbit/s)
Flow 2 ingress (mean 0.42 Mbit/s)
Flow 2 egress (mean 0.42 Mbit/s)
Flow 3 ingress (mean 0.43 Mbit/s)
Flow 3 egress (mean 0.43 Mbit/s)

Percent one way delay (ms)

Flow 1 (95th percentile 137.34 ms)
Flow 2 (95th percentile 137.02 ms)
Flow 3 (95th percentile 137.19 ms)
Run 1: Statistics of TaoVA-100x

Start at: 2018-01-27 02:17:34
End at: 2018-01-27 02:18:04

# Below is generated by plot.py at 2018-01-27 06:08:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 134.68 Mbit/s
95th percentile per-packet one-way delay: 146.202 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.43 Mbit/s
95th percentile per-packet one-way delay: 137.069 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 173.98 Mbit/s
95th percentile per-packet one-way delay: 144.778 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 47.98 Mbit/s
95th percentile per-packet one-way delay: 178.611 ms
Loss rate: 0.00%
Run 1: Report of TaoVA-100x — Data Link

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

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

Start at: 2018-01-27 02:33:19
End at: 2018-01-27 02:33:49

# Below is generated by plot.py at 2018-01-27 06:08:24
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 144.43 Mbit/s
  95th percentile per-packet one-way delay: 179.789 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 107.85 Mbit/s
  95th percentile per-packet one-way delay: 178.068 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 12.90 Mbit/s
  95th percentile per-packet one-way delay: 136.630 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 99.75 Mbit/s
  95th percentile per-packet one-way delay: 184.451 ms
  Loss rate: 0.00%
Run 2: Report of TaoVA-100x — Data Link

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

- **Flow 1 ingress** (mean 107.84 Mbit/s)
- **Flow 1 egress** (mean 107.85 Mbit/s)
- **Flow 2 ingress** (mean 12.90 Mbit/s)
- **Flow 2 egress** (mean 12.90 Mbit/s)
- **Flow 3 ingress** (mean 99.75 Mbit/s)
- **Flow 3 egress** (mean 99.75 Mbit/s)

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

- **Flow 1** (95th percentile 178.07 ms)
- **Flow 2** (95th percentile 136.63 ms)
- **Flow 3** (95th percentile 184.45 ms)
Run 3: Statistics of TaoVA-100x

Start at: 2018-01-27 02:49:20
End at: 2018-01-27 02:49:50

# Below is generated by plot.py at 2018-01-27 06:08:24
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 170.76 Mbit/s
  95th percentile per-packet one-way delay: 170.185 ms
  Loss rate: 0.02%
-- Flow 1:
  Average throughput: 121.95 Mbit/s
  95th percentile per-packet one-way delay: 167.164 ms
  Loss rate: 0.02%
-- Flow 2:
  Average throughput: 35.47 Mbit/s
  95th percentile per-packet one-way delay: 194.457 ms
  Loss rate: 0.04%
-- Flow 3:
  Average throughput: 91.81 Mbit/s
  95th percentile per-packet one-way delay: 168.880 ms
  Loss rate: 0.03%
Run 3: Report of TaoVA-100x — Data Link

![Graph showing throughput and packet delay over time]

- **Throughput**:
  - Flow 1 ingress (mean 121.97 Mbit/s)
  - Flow 1 egress (mean 121.95 Mbit/s)
  - Flow 2 ingress (mean 35.48 Mbit/s)
  - Flow 2 egress (mean 35.47 Mbit/s)
  - Flow 3 ingress (mean 91.84 Mbit/s)
  - Flow 3 egress (mean 91.81 Mbit/s)

- **Delay**:
  - Flow 1 (95th percentile 167.16 ms)
  - Flow 2 (95th percentile 194.46 ms)
  - Flow 3 (95th percentile 168.88 ms)
Run 4: Statistics of TaoVA-100x

Start at: 2018-01-27 03:05:22
End at: 2018-01-27 03:05:52

# Below is generated by plot.py at 2018-01-27 06:09:56
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 335.07 Mbit/s
  95th percentile per-packet one-way delay: 145.469 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 191.32 Mbit/s
  95th percentile per-packet one-way delay: 148.171 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 176.47 Mbit/s
  95th percentile per-packet one-way delay: 141.686 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 107.74 Mbit/s
  95th percentile per-packet one-way delay: 137.773 ms
  Loss rate: 0.01%
Run 4: Report of TaoVA-100x — Data Link

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

![Graph 2: Per-packet one-way delay (ms)](image2)
Run 5: Statistics of TaoVA-100x

Start at: 2018-01-27 03:21:56
End at: 2018-01-27 03:22:26

# Below is generated by plot.py at 2018-01-27 06:09:56
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 113.67 Mbit/s
  95th percentile per-packet one-way delay: 157.589 ms
  Loss rate: 0.04%
-- Flow 1:
  Average throughput: 50.14 Mbit/s
  95th percentile per-packet one-way delay: 151.876 ms
  Loss rate: 0.05%
-- Flow 2:
  Average throughput: 93.46 Mbit/s
  95th percentile per-packet one-way delay: 161.217 ms
  Loss rate: 0.04%
-- Flow 3:
  Average throughput: 12.48 Mbit/s
  95th percentile per-packet one-way delay: 137.371 ms
  Loss rate: 0.01%
Run 5: Report of TaoVA-100x — Data Link

---

**Throughput (Mbps)**

- **Flow 1 ingress (mean 50.17 Mbps)**
- **Flow 1 egress (mean 50.14 Mbps)**
- **Flow 2 ingress (mean 93.49 Mbps)**
- **Flow 2 egress (mean 93.46 Mbps)**
- **Flow 3 ingress (mean 12.48 Mbps)**
- **Flow 3 egress (mean 12.48 Mbps)**

---

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

- **Flow 1 (95th percentile 151.08 ms)**
- **Flow 2 (95th percentile 161.22 ms)**
- **Flow 3 (95th percentile 137.37 ms)**
Run 6: Statistics of TaoVA-100x

Start at: 2018-01-27 03:37:53
End at: 2018-01-27 03:38:23

# Below is generated by plot.py at 2018-01-27 06:09:56
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 151.85 Mbit/s
  95th percentile per-packet one-way delay: 155.834 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 12.63 Mbit/s
  95th percentile per-packet one-way delay: 137.158 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 145.38 Mbit/s
  95th percentile per-packet one-way delay: 162.288 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 162.10 Mbit/s
  95th percentile per-packet one-way delay: 146.655 ms
  Loss rate: 0.00%
Run 6: Report of TaoVA-100x — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 12.63 Mbit/s)  Flow 1 egress (mean 12.63 Mbit/s)
Flow 2 ingress (mean 145.26 Mbit/s)  Flow 2 egress (mean 145.38 Mbit/s)
Flow 3 ingress (mean 162.09 Mbit/s)  Flow 3 egress (mean 162.10 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 137.16 ms)  Flow 2 (95th percentile 162.29 ms)  Flow 3 (95th percentile 146.66 ms)
Run 7: Statistics of TaoVA-100x

Start at: 2018-01-27 03:54:06
End at: 2018-01-27 03:54:36

# Below is generated by plot.py at 2018-01-27 06:09:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 190.75 Mbit/s
95th percentile per-packet one-way delay: 139.208 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 179.77 Mbit/s
95th percentile per-packet one-way delay: 139.815 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 11.61 Mbit/s
95th percentile per-packet one-way delay: 136.899 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 12.44 Mbit/s
95th percentile per-packet one-way delay: 137.015 ms
Loss rate: 0.00%
Run 7: Report of TaoVA-100x — Data Link

![Graph of Throughput and Per-packet one-way delay](image)

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 179.77 Mbps)
  - Flow 1 egress (mean 179.77 Mbps)
  - Flow 2 ingress (mean 11.00 Mbps)
  - Flow 2 egress (mean 11.01 Mbps)
  - Flow 3 ingress (mean 12.44 Mbps)
  - Flow 3 egress (mean 12.44 Mbps)

- **Per-packet one-way delay (ms):**
  - Flow 1 (95th percentile 139.91 ms)
  - Flow 2 (95th percentile 136.90 ms)
  - Flow 3 (95th percentile 137.01 ms)
Run 8: Statistics of TaoVA-100x

Start at: 2018-01-27 04:10:23
End at: 2018-01-27 04:10:53

# Below is generated by plot.py at 2018-01-27 06:09:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 205.12 Mbit/s
95th percentile per-packet one-way delay: 151.603 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 153.10 Mbit/s
95th percentile per-packet one-way delay: 153.840 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 17.47 Mbit/s
95th percentile per-packet one-way delay: 137.519 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 143.73 Mbit/s
95th percentile per-packet one-way delay: 143.307 ms
Loss rate: 0.00%
Run 8: Report of TaoVA-100x — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 153.34 Mbps)  
Flow 1 egress (mean 153.10 Mbps)
Flow 2 ingress (mean 17.48 Mbps)  
Flow 2 egress (mean 17.47 Mbps)
Flow 3 ingress (mean 143.79 Mbps)  
Flow 3 egress (mean 143.73 Mbps)

Delay (ms)

Time (s)

Flow 1 (95th percentile 153.84 ms)  
Flow 2 (95th percentile 137.52 ms)  
Flow 3 (95th percentile 143.31 ms)
Run 9: Statistics of TaoVA-100x

Start at: 2018-01-27 04:26:27
End at: 2018-01-27 04:26:57

# Below is generated by plot.py at 2018-01-27 06:12:21
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 277.32 Mbit/s
  95th percentile per-packet one-way delay: 137.334 ms
  Loss rate: 0.08%
-- Flow 1:
  Average throughput: 208.71 Mbit/s
  95th percentile per-packet one-way delay: 137.573 ms
  Loss rate: 0.11%
-- Flow 2:
  Average throughput: 44.94 Mbit/s
  95th percentile per-packet one-way delay: 137.364 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 140.30 Mbit/s
  95th percentile per-packet one-way delay: 136.748 ms
  Loss rate: 0.01%
Run 9: Report of TaoVA-100x — Data Link
Run 10: Statistics of TaoVA-100x

End at: 2018-01-27 04:43:22

# Below is generated by plot.py at 2018-01-27 06:12:21
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 123.84 Mbit/s
  95th percentile per-packet one-way delay: 137.129 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 13.09 Mbit/s
  95th percentile per-packet one-way delay: 137.259 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 167.15 Mbit/s
  95th percentile per-packet one-way delay: 137.111 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 12.31 Mbit/s
  95th percentile per-packet one-way delay: 136.064 ms
  Loss rate: 0.00%
Run 10: Report of TaoVA-100x — Data Link

Throughput (Mbps)

0 5 10 15 20 25
Time (s)

Flow 1 ingress (mean 13.09 Mbps)  Flow 1 egress (mean 13.09 Mbps)
Flow 2 ingress (mean 167.15 Mbps)  Flow 2 egress (mean 167.15 Mbps)
Flow 3 ingress (mean 12.31 Mbps)  Flow 3 egress (mean 12.31 Mbps)

Delay (ms)

0 5 10 15 20 25
Time (s)

Flow 1 (95th percentile 137.26 ms)  Flow 2 (95th percentile 137.11 ms)  Flow 3 (95th percentile 136.06 ms)
Run 1: Statistics of TCP Vegas

Start at: 2018-01-27 02:23:23
End at: 2018-01-27 02:23:53

# Below is generated by plot.py at 2018-01-27 06:12:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 39.19 Mbit/s
95th percentile per-packet one-way delay: 143.580 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 2.47 Mbit/s
95th percentile per-packet one-way delay: 137.769 ms
Loss rate: 1.15%
-- Flow 2:
Average throughput: 34.69 Mbit/s
95th percentile per-packet one-way delay: 144.177 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 41.06 Mbit/s
95th percentile per-packet one-way delay: 144.361 ms
Loss rate: 0.00%
Run 1: Report of TCP Vegas — Data Link

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

Legend:
- Flow 1 ingress (mean 2.50 Mbit/s)
- Flow 1 egress (mean 2.47 Mbit/s)
- Flow 2 ingress (mean 34.70 Mbit/s)
- Flow 2 egress (mean 34.69 Mbit/s)
- Flow 3 ingress (mean 41.06 Mbit/s)
- Flow 3 egress (mean 41.06 Mbit/s)
Run 2: Statistics of TCP Vegas

Start at: 2018-01-27 02:39:14
End at: 2018-01-27 02:39:44

# Below is generated by plot.py at 2018-01-27 06:12:21
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 106.45 Mbit/s
  95th percentile per-packet one-way delay: 147.233 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 61.34 Mbit/s
  95th percentile per-packet one-way delay: 145.205 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 33.54 Mbit/s
  95th percentile per-packet one-way delay: 151.380 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 69.28 Mbit/s
  95th percentile per-packet one-way delay: 148.665 ms
  Loss rate: 0.00%
Run 2: Report of TCP Vegas — Data Link

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

**Throughput (Mbps):**
- Flow 1 ingress (mean 61.34 Mbps)
- Flow 1 egress (mean 61.34 Mbps)
- Flow 2 ingress (mean 33.54 Mbps)
- Flow 2 egress (mean 33.54 Mbps)
- Flow 3 ingress (mean 69.18 Mbps)
- Flow 3 egress (mean 69.28 Mbps)

**Delay (ms):**
- Flow 1 (95th percentile 145.21 ms)
- Flow 2 (95th percentile 151.38 ms)
- Flow 3 (95th percentile 148.66 ms)
Run 3: Statistics of TCP Vegas

Start at: 2018-01-27 02:55:12
End at: 2018-01-27 02:55:42

# Below is generated by plot.py at 2018-01-27 06:12:21
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 39.21 Mbit/s
  95th percentile per-packet one-way delay: 141.074 ms
  Loss rate: 1.43%
-- Flow 1:
  Average throughput: 11.73 Mbit/s
  95th percentile per-packet one-way delay: 142.387 ms
  Loss rate: 4.56%
-- Flow 2:
  Average throughput: 19.62 Mbit/s
  95th percentile per-packet one-way delay: 138.430 ms
  Loss rate: 0.06%
-- Flow 3:
  Average throughput: 43.34 Mbit/s
  95th percentile per-packet one-way delay: 141.054 ms
  Loss rate: 0.00%
Run 3: Report of TCP Vegas — Data Link

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

<table>
<thead>
<tr>
<th>Flow 1 ingress (mean 12.27 Mbit/s)</th>
<th>Flow 1 egress (mean 11.73 Mbit/s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow 2 ingress (mean 19.63 Mbit/s)</td>
<td>Flow 2 egress (mean 19.62 Mbit/s)</td>
</tr>
<tr>
<td>Flow 3 ingress (mean 43.31 Mbit/s)</td>
<td>Flow 3 egress (mean 43.34 Mbit/s)</td>
</tr>
</tbody>
</table>

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

- Flow 1 (95th percentile 142.39 ms)
- Flow 2 (95th percentile 138.43 ms)
- Flow 3 (95th percentile 141.05 ms)
Run 4: Statistics of TCP Vegas

Start at: 2018-01-27 03:11:58
End at: 2018-01-27 03:12:28

# Below is generated by plot.py at 2018-01-27 06:12:21
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 28.09 Mbit/s
  95th percentile per-packet one-way delay: 146.818 ms
  Loss rate: 0.08%
-- Flow 1:
  Average throughput: 2.90 Mbit/s
  95th percentile per-packet one-way delay: 138.183 ms
  Loss rate: 0.52%
-- Flow 2:
  Average throughput: 22.33 Mbit/s
  95th percentile per-packet one-way delay: 139.906 ms
  Loss rate: 0.05%
-- Flow 3:
  Average throughput: 31.31 Mbit/s
  95th percentile per-packet one-way delay: 150.866 ms
  Loss rate: 0.00%
Run 4: Report of TCP Vegas — Data Link

![Graph 1: Throughput (Mbps)]

![Graph 2: Per-packet round-trip delay (ms)]
Run 5: Statistics of TCP Vegas

Start at: 2018-01-27 03:27:44
End at: 2018-01-27 03:28:14

# Below is generated by plot.py at 2018-01-27 06:12:21
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 84.24 Mbit/s
  95th percentile per-packet one-way delay: 146.131 ms
  Loss rate: 0.00%
  -- Flow 1:
  Average throughput: 31.33 Mbit/s
  95th percentile per-packet one-way delay: 144.388 ms
  Loss rate: 0.00%
  -- Flow 2:
  Average throughput: 79.62 Mbit/s
  95th percentile per-packet one-way delay: 146.840 ms
  Loss rate: 0.00%
  -- Flow 3:
  Average throughput: 0.86 Mbit/s
  95th percentile per-packet one-way delay: 144.751 ms
  Loss rate: 0.70%
Run 5: Report of TCP Vegas — Data Link
Run 6: Statistics of TCP Vegas

Start at: 2018-01-27 03:44:00
End at: 2018-01-27 03:44:30

# Below is generated by plot.py at 2018-01-27 06:12:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 39.63 Mbit/s
95th percentile per-packet one-way delay: 151.247 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 2.32 Mbit/s
95th percentile per-packet one-way delay: 142.574 ms
Loss rate: 0.62%
-- Flow 2:
Average throughput: 42.44 Mbit/s
95th percentile per-packet one-way delay: 152.762 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 27.40 Mbit/s
95th percentile per-packet one-way delay: 144.525 ms
Loss rate: 0.12%
Run 6: Report of TCP Vegas — Data Link
Run 7: Statistics of TCP Vegas

Start at: 2018-01-27 04:00:11
End at: 2018-01-27 04:00:41

# Below is generated by plot.py at 2018-01-27 06:12:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 43.99 Mbit/s
95th percentile per-packet one-way delay: 145.549 ms
Loss rate: 1.47%
-- Flow 1:
Average throughput: 12.85 Mbit/s
95th percentile per-packet one-way delay: 143.030 ms
Loss rate: 1.34%
-- Flow 2:
Average throughput: 22.61 Mbit/s
95th percentile per-packet one-way delay: 139.648 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 48.53 Mbit/s
95th percentile per-packet one-way delay: 149.556 ms
Loss rate: 2.89%
Run 7: Report of TCP Vegas — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 13.02 Mbit/s)  Flow 1 egress (mean 12.85 Mbit/s)
Flow 2 ingress (mean 22.61 Mbit/s)  Flow 2 egress (mean 22.61 Mbit/s)
Flow 3 ingress (mean 49.97 Mbit/s)  Flow 3 egress (mean 48.53 Mbit/s)

Per-packet one-way delay (ms)

Time (s)

Flow 1 (95th percentile 143.03 ms)  Flow 2 (95th percentile 139.65 ms)  Flow 3 (95th percentile 149.56 ms)
Run 8: Statistics of TCP Vegas

Start at: 2018-01-27 04:16:21
End at: 2018-01-27 04:16:51

# Below is generated by plot.py at 2018-01-27 06:12:21
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 42.56 Mbit/s
  95th percentile per-packet one-way delay: 146.322 ms
  Loss rate: 0.08%
-- Flow 1:
  Average throughput: 3.04 Mbit/s
  95th percentile per-packet one-way delay: 138.132 ms
  Loss rate: 0.84%
-- Flow 2:
  Average throughput: 28.15 Mbit/s
  95th percentile per-packet one-way delay: 140.359 ms
  Loss rate: 0.03%
-- Flow 3:
  Average throughput: 62.72 Mbit/s
  95th percentile per-packet one-way delay: 148.583 ms
  Loss rate: 0.02%
Run 8: Report of TCP Vegas — Data Link

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

- Flow 1 ingress (mean 3.07 Mbit/s)
- Flow 1 egress (mean 3.04 Mbit/s)
- Flow 2 ingress (mean 28.16 Mbit/s)
- Flow 2 egress (mean 28.15 Mbit/s)
- Flow 3 ingress (mean 62.73 Mbit/s)
- Flow 3 egress (mean 62.72 Mbit/s)

Flow 1 (95th percentile 138.13 ms)
Flow 2 (95th percentile 140.36 ms)
Flow 3 (95th percentile 140.58 ms)
Run 9: Statistics of TCP Vegas

Start at: 2018-01-27 04:32:39
End at: 2018-01-27 04:33:09

# Below is generated by plot.py at 2018-01-27 06:12:21
# Datalink statistics
-- Total of 3 flows:
   Average throughput: 108.96 Mbit/s
   95th percentile per-packet one-way delay: 154.125 ms
   Loss rate: 0.00%
-- Flow 1:
   Average throughput: 32.84 Mbit/s
   95th percentile per-packet one-way delay: 146.817 ms
   Loss rate: 0.01%
-- Flow 2:
   Average throughput: 79.99 Mbit/s
   95th percentile per-packet one-way delay: 152.532 ms
   Loss rate: 0.00%
-- Flow 3:
   Average throughput: 69.76 Mbit/s
   95th percentile per-packet one-way delay: 160.930 ms
   Loss rate: 0.00%
Run 9: Report of TCP Vegas — Data Link

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

- Flow 1 ingress (mean 32.85 Mbps)
- Flow 1 egress (mean 32.84 Mbps)
- Flow 2 ingress (mean 80.02 Mbps)
- Flow 2 egress (mean 79.99 Mbps)
- Flow 3 ingress (mean 69.87 Mbps)
- Flow 3 egress (mean 69.76 Mbps)

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

- Flow 1 (95th percentile 146.82 ms)
- Flow 2 (95th percentile 152.53 ms)
- Flow 3 (95th percentile 160.93 ms)
Run 10: Statistics of TCP Vegas

End at: 2018-01-27 04:49:27

# Below is generated by plot.py at 2018-01-27 06:12:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.45 Mbit/s
95th percentile per-packet one-way delay: 148.662 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 51.13 Mbit/s
95th percentile per-packet one-way delay: 146.642 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 33.14 Mbit/s
95th percentile per-packet one-way delay: 151.309 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 71.38 Mbit/s
95th percentile per-packet one-way delay: 151.732 ms
Loss rate: 0.00%
Run 10: Report of TCP Vegas — Data Link
Run 1: Statistics of Verus

Start at: 2018-01-27 02:19:28
End at: 2018-01-27 02:19:58

# Below is generated by plot.py at 2018-01-27 06:12:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 141.69 Mbit/s
95th percentile per-packet one-way delay: 273.998 ms
Loss rate: 3.07%
-- Flow 1:
Average throughput: 19.24 Mbit/s
95th percentile per-packet one-way delay: 374.424 ms
Loss rate: 9.27%
-- Flow 2:
Average throughput: 179.90 Mbit/s
95th percentile per-packet one-way delay: 255.361 ms
Loss rate: 1.77%
-- Flow 3:
Average throughput: 10.14 Mbit/s
95th percentile per-packet one-way delay: 146.563 ms
Loss rate: 10.77%
Run 1: Report of Verus — Data Link

![Graph 1: Throughput (Mbps)]

- Flow 1 ingress (mean 21.20 Mbps)
- Flow 1 egress (mean 19.24 Mbps)
- Flow 2 ingress (mean 183.14 Mbps)
- Flow 2 egress (mean 179.90 Mbps)
- Flow 3 ingress (mean 11.38 Mbps)
- Flow 3 egress (mean 10.14 Mbps)

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

- Flow 1 (95th percentile 374.42 ms)
- Flow 2 (95th percentile 255.36 ms)
- Flow 3 (95th percentile 146.56 ms)
Run 2: Statistics of Verus

Start at: 2018-01-27 02:35:14
End at: 2018-01-27 02:35:44

# Below is generated by plot.py at 2018-01-27 06:12:21
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 150.19 Mbit/s
  95th percentile per-packet one-way delay: 280.780 ms
  Loss rate: 4.02%
-- Flow 1:
  Average throughput: 87.27 Mbit/s
  95th percentile per-packet one-way delay: 309.353 ms
  Loss rate: 6.56%
-- Flow 2:
  Average throughput: 72.10 Mbit/s
  95th percentile per-packet one-way delay: 175.767 ms
  Loss rate: 0.34%
-- Flow 3:
  Average throughput: 48.37 Mbit/s
  95th percentile per-packet one-way delay: 256.565 ms
  Loss rate: 0.01%
Run 2: Report of Verus — Data Link

![Graph showing throughput and latency over time.]

**Throughput (Mbps):**
- Flow 1 ingress (mean 93.25 Mbps)
- Flow 1 egress (mean 87.27 Mbps)
- Flow 2 ingress (mean 72.34 Mbps)
- Flow 2 egress (mean 72.10 Mbps)
- Flow 3 ingress (mean 48.35 Mbps)
- Flow 3 egress (mean 48.37 Mbps)

**Per-packet one-way delay (ms):**
- Flow 1 (95th percentile 309.35 ms)
- Flow 2 (95th percentile 175.77 ms)
- Flow 3 (95th percentile 256.56 ms)
Run 3: Statistics of Verus

Start at: 2018-01-27 02:51:17
End at: 2018-01-27 02:51:47

# Below is generated by plot.py at 2018-01-27 06:12:21
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 118.39 Mbit/s
  95th percentile per-packet one-way delay: 247.424 ms
  Loss rate: 0.92%
-- Flow 1:
  Average throughput: 68.09 Mbit/s
  95th percentile per-packet one-way delay: 215.824 ms
  Loss rate: 1.15%
-- Flow 2:
  Average throughput: 64.92 Mbit/s
  95th percentile per-packet one-way delay: 290.337 ms
  Loss rate: 0.71%
-- Flow 3:
  Average throughput: 24.11 Mbit/s
  95th percentile per-packet one-way delay: 276.654 ms
  Loss rate: 0.00%
Run 3: Report of Verus — Data Link
Run 4: Statistics of Verus

Start at: 2018-01-27 03:07:36
End at: 2018-01-27 03:08:06

# Below is generated by plot.py at 2018-01-27 06:15:18
# Datalink statistics

-- Total of 3 flows:
Average throughput: 325.80 Mbit/s
95th percentile per-packet one-way delay: 334.781 ms
Loss rate: 5.41%

-- Flow 1:
Average throughput: 254.01 Mbit/s
95th percentile per-packet one-way delay: 341.490 ms
Loss rate: 5.88%

-- Flow 2:
Average throughput: 93.39 Mbit/s
95th percentile per-packet one-way delay: 308.683 ms
Loss rate: 4.31%

-- Flow 3:
Average throughput: 33.15 Mbit/s
95th percentile per-packet one-way delay: 205.909 ms
Loss rate: 0.08%
Run 4: Report of Verus — Data Link

![Graphs showing throughput and per-packet one-way delay]
Run 5: Statistics of Verus

Start at: 2018-01-27 03:23:48
End at: 2018-01-27 03:24:18

# Below is generated by plot.py at 2018-01-27 06:15:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 194.63 Mbit/s
95th percentile per-packet one-way delay: 273.424 ms
Loss rate: 3.99%
-- Flow 1:
Average throughput: 120.63 Mbit/s
95th percentile per-packet one-way delay: 297.694 ms
Loss rate: 6.17%
-- Flow 2:
Average throughput: 94.42 Mbit/s
95th percentile per-packet one-way delay: 268.803 ms
Loss rate: 0.24%
-- Flow 3:
Average throughput: 35.72 Mbit/s
95th percentile per-packet one-way delay: 169.080 ms
Loss rate: 0.05%
Run 5: Report of Verus — Data Link

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

- **Flow 1 ingress (mean 128.62 Mbit/s)**
- **Flow 1 egress (mean 120.63 Mbit/s)**
- **Flow 2 ingress (mean 94.64 Mbit/s)**
- **Flow 2 egress (mean 94.42 Mbit/s)**
- **Flow 3 ingress (mean 35.75 Mbit/s)**
- **Flow 3 egress (mean 35.72 Mbit/s)**
Run 6: Statistics of Verus

Start at: 2018-01-27 03:39:47
End at: 2018-01-27 03:40:17

# Below is generated by plot.py at 2018-01-27 06:15:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 268.64 Mbit/s
95th percentile per-packet one-way delay: 329.253 ms
Loss rate: 10.94%
-- Flow 1:
Average throughput: 212.97 Mbit/s
95th percentile per-packet one-way delay: 335.771 ms
Loss rate: 12.96%
-- Flow 2:
Average throughput: 48.23 Mbit/s
95th percentile per-packet one-way delay: 308.189 ms
Loss rate: 3.01%
-- Flow 3:
Average throughput: 73.31 Mbit/s
95th percentile per-packet one-way delay: 237.448 ms
Loss rate: 1.16%
Run 6: Report of Verus — Data Link

![Throughput Graph](image)

- Flow 1 ingress (mean 244.76 Mbit/s)
- Flow 1 egress (mean 212.97 Mbit/s)
- Flow 2 ingress (mean 49.73 Mbit/s)
- Flow 2 egress (mean 48.23 Mbit/s)
- Flow 3 ingress (mean 74.21 Mbit/s)
- Flow 3 egress (mean 73.31 Mbit/s)

![Delay Graph](image)

- Flow 1 (95th percentile 335.77 ms)
- Flow 2 (95th percentile 308.19 ms)
- Flow 3 (95th percentile 237.45 ms)

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Run 7: Statistics of Verus

Start at: 2018-01-27 03:56:03
End at: 2018-01-27 03:56:33

# Below is generated by plot.py at 2018-01-27 06:15:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 251.50 Mbit/s
95th percentile per-packet one-way delay: 324.990 ms
Loss rate: 10.68%
-- Flow 1:
Average throughput: 182.16 Mbit/s
95th percentile per-packet one-way delay: 349.968 ms
Loss rate: 13.48%
-- Flow 2:
Average throughput: 87.01 Mbit/s
95th percentile per-packet one-way delay: 213.737 ms
Loss rate: 2.69%
-- Flow 3:
Average throughput: 36.46 Mbit/s
95th percentile per-packet one-way delay: 291.755 ms
Loss rate: 1.08%
Run 7: Report of Verus — Data Link

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

Flow 1 ingress (mean 210.38 Mbps) | Flow 1 egress (mean 182.16 Mbps)
Flow 2 ingress (mean 89.42 Mbps) | Flow 2 egress (mean 87.01 Mbps)
Flow 3 ingress (mean 36.93 Mbps) | Flow 3 egress (mean 36.46 Mbps)

Flow 1 (95th percentile 349.97 ms) | Flow 2 (95th percentile 213.74 ms) | Flow 3 (95th percentile 291.75 ms)
Run 8: Statistics of Verus

Start at: 2018-01-27 04:12:23
End at: 2018-01-27 04:12:53

# Below is generated by plot.py at 2018-01-27 06:15:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 190.55 Mbit/s
95th percentile per-packet one-way delay: 301.798 ms
Loss rate: 4.04%
-- Flow 1:
Average throughput: 122.53 Mbit/s
95th percentile per-packet one-way delay: 246.574 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 86.17 Mbit/s
95th percentile per-packet one-way delay: 380.828 ms
Loss rate: 11.97%
-- Flow 3:
Average throughput: 35.23 Mbit/s
95th percentile per-packet one-way delay: 257.115 ms
Loss rate: 1.60%
Run 8: Report of Verus — Data Link

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

- Flow 1 ingress (mean 122.67 Mbit/s)
- Flow 1 egress (mean 122.53 Mbit/s)
- Flow 2 ingress (mean 98.56 Mbit/s)
- Flow 2 egress (mean 86.17 Mbit/s)
- Flow 3 ingress (mean 35.82 Mbit/s)
- Flow 3 egress (mean 35.23 Mbit/s)

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

- Flow 1 (95th percentile 246.57 ms)
- Flow 2 (95th percentile 380.83 ms)
- Flow 3 (95th percentile 257.12 ms)
Run 9: Statistics of Verus

Start at: 2018-01-27 04:28:34
End at: 2018-01-27 04:29:04

# Below is generated by plot.py at 2018-01-27 06:15:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 221.85 Mbit/s
  95th percentile per-packet one-way delay: 298.935 ms
  Loss rate: 6.22%
  -- Flow 1:
  Average throughput: 155.26 Mbit/s
  95th percentile per-packet one-way delay: 319.210 ms
  Loss rate: 7.63%
  -- Flow 2:
  Average throughput: 31.37 Mbit/s
  95th percentile per-packet one-way delay: 205.210 ms
  Loss rate: 1.07%
  -- Flow 3:
  Average throughput: 140.95 Mbit/s
  95th percentile per-packet one-way delay: 242.242 ms
  Loss rate: 3.48%
Run 9: Report of Verus — Data Link

![Graph showing throughput and per-packet delay over time for different flows.](image-url)
Run 10: Statistics of Verus

Start at: 2018-01-27 04:44:43
End at: 2018-01-27 04:45:13

# Below is generated by plot.py at 2018-01-27 06:16:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 236.09 Mbit/s
95th percentile per-packet one-way delay: 258.373 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 97.52 Mbit/s
95th percentile per-packet one-way delay: 193.937 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 171.18 Mbit/s
95th percentile per-packet one-way delay: 266.846 ms
Loss rate: 1.17%
-- Flow 3:
Average throughput: 77.98 Mbit/s
95th percentile per-packet one-way delay: 332.475 ms
Loss rate: 0.20%
Run 10: Report of Verus — Data Link
Run 1: Statistics of Copa

Start at: 2018-01-27 02:22:30
End at: 2018-01-27 02:23:00
Run 1: Report of Copa — Data Link

Figure is missing

Figure is missing
Run 2: Statistics of Copa

Start at: 2018-01-27 02:38:18
End at: 2018-01-27 02:38:48

# Below is generated by plot.py at 2018-01-27 06:16:18
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 65.44 Mbit/s
  95th percentile per-packet one-way delay: 136.757 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 24.36 Mbit/s
  95th percentile per-packet one-way delay: 136.687 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 61.42 Mbit/s
  95th percentile per-packet one-way delay: 136.770 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 5.86 Mbit/s
  95th percentile per-packet one-way delay: 136.929 ms
  Loss rate: 0.00%
Run 2: Report of Copa — Data Link

Throughput (Mbit/s)

Time (s)

Flow 1 ingress (mean 24.36 Mbit/s) — Flow 1 egress (mean 24.36 Mbit/s)
Flow 2 ingress (mean 61.42 Mbit/s) — Flow 2 egress (mean 61.42 Mbit/s)
Flow 3 ingress (mean 5.96 Mbit/s) — Flow 3 egress (mean 5.96 Mbit/s)

Per packet one way delay (ms)

Time (s)

Flow 1 (95th percentile 136.69 ms) — Flow 2 (95th percentile 136.77 ms) — Flow 3 (95th percentile 136.93 ms)
Run 3: Statistics of Copa

Start at: 2018-01-27 02:54:14
End at: 2018-01-27 02:54:44

# Below is generated by plot.py at 2018-01-27 06:16:18
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 74.49 Mbit/s
  95th percentile per-packet one-way delay: 137.074 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 61.78 Mbit/s
  95th percentile per-packet one-way delay: 137.090 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.12 Mbit/s
  95th percentile per-packet one-way delay: 136.110 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 44.77 Mbit/s
  95th percentile per-packet one-way delay: 136.544 ms
  Loss rate: 0.00%
Run 3: Report of Copa — Data Link
Run 4: Statistics of Copa

Start at: 2018-01-27 03:10:55
End at: 2018-01-27 03:11:25

# Below is generated by plot.py at 2018-01-27 06:17:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 122.72 Mbit/s
95th percentile per-packet one-way delay: 137.058 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 75.64 Mbit/s
95th percentile per-packet one-way delay: 137.085 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 55.66 Mbit/s
95th percentile per-packet one-way delay: 136.637 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 39.93 Mbit/s
95th percentile per-packet one-way delay: 136.565 ms
Loss rate: 0.00%
Run 4: Report of Copa — Data Link

![Graph showing network throughput and packet delay over time for different flows.](image-url)
Run 5: Statistics of Copa

Start at: 2018-01-27 03:26:55
End at: 2018-01-27 03:27:25
Run 5: Report of Copa — Data Link

Figure is missing

Figure is missing
Run 6: Statistics of Copa

Start at: 2018-01-27 03:42:59
End at: 2018-01-27 03:43:29

# Below is generated by plot.py at 2018-01-27 06:17:47
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 103.79 Mbit/s
  95th percentile per-packet one-way delay: 137.219 ms
  Loss rate: 0.00%
  -- Flow 1:
  Average throughput: 74.02 Mbit/s
  95th percentile per-packet one-way delay: 137.105 ms
  Loss rate: 0.00%
  -- Flow 2:
  Average throughput: 46.39 Mbit/s
  95th percentile per-packet one-way delay: 137.364 ms
  Loss rate: 0.00%
  -- Flow 3:
  Average throughput: 0.12 Mbit/s
  95th percentile per-packet one-way delay: 137.082 ms
  Loss rate: 0.00%
Run 6: Report of Copa — Data Link

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

- Flow 1 ingress (mean 74.02 Mbit/s)
- Flow 1 egress (mean 74.02 Mbit/s)
- Flow 2 ingress (mean 46.39 Mbit/s)
- Flow 2 egress (mean 46.39 Mbit/s)
- Flow 3 ingress (mean 0.12 Mbit/s)
- Flow 3 egress (mean 0.12 Mbit/s)
Run 7: Statistics of Copa

Start at: 2018-01-27 03:59:14
End at: 2018-01-27 03:59:44

# Below is generated by plot.py at 2018-01-27 06:17:47
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 78.97 Mbit/s
  95th percentile per-packet one-way delay: 136.647 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 78.97 Mbit/s
  95th percentile per-packet one-way delay: 136.647 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 0.15 Mbit/s
  95th percentile per-packet one-way delay: 136.955 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.14 Mbit/s
  95th percentile per-packet one-way delay: 137.048 ms
  Loss rate: 0.00%
Run 7: Report of Copa — Data Link
Run 8: Statistics of Copa

Start at: 2018-01-27 04:15:32
End at: 2018-01-27 04:16:02
Run 8: Report of Copa — Data Link

Figure is missing

Figure is missing
Run 9: Statistics of Copa

Start at: 2018-01-27 04:31:45
End at: 2018-01-27 04:32:15

# Below is generated by plot.py at 2018-01-27 06:17:47
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 40.98 Mbit/s
  95th percentile per-packet one-way delay: 136.769 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 0.14 Mbit/s
  95th percentile per-packet one-way delay: 137.324 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 63.83 Mbit/s
  95th percentile per-packet one-way delay: 136.769 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 0.14 Mbit/s
  95th percentile per-packet one-way delay: 137.510 ms
  Loss rate: 0.00%
Run 9: Report of Copa — Data Link

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

- Flow 1 ingress (mean 0.14 Mbit/s)
- Flow 1 egress (mean 0.14 Mbit/s)
- Flow 2 ingress (mean 63.83 Mbit/s)
- Flow 2 egress (mean 63.83 Mbit/s)
- Flow 3 ingress (mean 0.14 Mbit/s)
- Flow 3 egress (mean 0.14 Mbit/s)

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

- Flow 1 (95th percentile 137.32 ms)
- Flow 2 (95th percentile 136.77 ms)
- Flow 3 (95th percentile 137.51 ms)
Run 10: Statistics of Copa

Start at: 2018-01-27 04:47:56
End at: 2018-01-27 04:48:26

# Below is generated by plot.py at 2018-01-27 06:18:12
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 97.32 Mbit/s
  95th percentile per-packet one-way delay: 137.212 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 44.68 Mbit/s
  95th percentile per-packet one-way delay: 136.709 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 61.23 Mbit/s
  95th percentile per-packet one-way delay: 137.283 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 47.05 Mbit/s
  95th percentile per-packet one-way delay: 136.721 ms
  Loss rate: 0.00%
Run 10: Report of Copa — Data Link
Run 1: Statistics of Indigo-2-256

Start at: 2018-01-27 02:20:30
End at: 2018-01-27 02:21:00

# Below is generated by plot.py at 2018-01-27 06:19:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 263.74 Mbit/s
95th percentile per-packet one-way delay: 162.251 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 139.50 Mbit/s
95th percentile per-packet one-way delay: 159.760 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 137.64 Mbit/s
95th percentile per-packet one-way delay: 171.284 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 110.13 Mbit/s
95th percentile per-packet one-way delay: 146.010 ms
Loss rate: 0.02%
Run 1: Report of Indigo-2-256 — Data Link
Run 2: Statistics of Indigo-2-256

Start at: 2018-01-27 02:36:16
End at: 2018-01-27 02:36:46

# Below is generated by plot.py at 2018-01-27 06:20:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 278.41 Mbit/s
95th percentile per-packet one-way delay: 137.894 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 152.29 Mbit/s
95th percentile per-packet one-way delay: 137.411 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 132.60 Mbit/s
95th percentile per-packet one-way delay: 137.928 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 120.29 Mbit/s
95th percentile per-packet one-way delay: 141.301 ms
Loss rate: 0.01%
Run 2: Report of Indigo-2-256 — Data Link

---

**Throughput (Mbps)**

![Graph showing throughput over time](image1)

- Flow 1 ingress (mean 152.29 Mbps)
- Flow 1 egress (mean 152.29 Mbps)
- Flow 2 ingress (mean 132.60 Mbps)
- Flow 2 egress (mean 132.60 Mbps)
- Flow 3 ingress (mean 120.31 Mbps)
- Flow 3 egress (mean 120.29 Mbps)

---

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

![Graph showing per-packet delay over time](image2)

- Flow 1 (95th percentile 137.41 ms)
- Flow 2 (95th percentile 137.93 ms)
- Flow 3 (95th percentile 141.30 ms)

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Run 3: Statistics of Indigo-2-256

Start at: 2018-01-27 02:52:17
End at: 2018-01-27 02:52:47

# Below is generated by plot.py at 2018-01-27 06:20:08
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 223.22 Mbit/s
  95th percentile per-packet one-way delay: 151.949 ms
  Loss rate: 0.31%
-- Flow 1:
  Average throughput: 92.86 Mbit/s
  95th percentile per-packet one-way delay: 155.368 ms
  Loss rate: 0.46%
-- Flow 2:
  Average throughput: 140.09 Mbit/s
  95th percentile per-packet one-way delay: 150.453 ms
  Loss rate: 0.27%
-- Flow 3:
  Average throughput: 120.60 Mbit/s
  95th percentile per-packet one-way delay: 152.308 ms
  Loss rate: 0.01%
Run 3: Report of Indigo-2-256 — Data Link

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

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

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Run 4: Statistics of Indigo-2-256

Start at: 2018-01-27 03:08:53
End at: 2018-01-27 03:09:23

# Below is generated by plot.py at 2018-01-27 06:21:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 274.45 Mbit/s
95th percentile per-packet one-way delay: 148.325 ms
Loss rate: 0.21%
-- Flow 1:
Average throughput: 143.75 Mbit/s
95th percentile per-packet one-way delay: 148.424 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 140.47 Mbit/s
95th percentile per-packet one-way delay: 147.568 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 120.15 Mbit/s
95th percentile per-packet one-way delay: 150.560 ms
Loss rate: 0.05%
Run 4: Report of Indigo-2-256 — Data Link

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

- **Throughput (Mbps)**: Measured at 144.24 Mbps for Flow 1 ingress and 143.75 Mbps for Flow 1 egress, 140.56 Mbps for Flow 2 ingress and 140.47 Mbps for Flow 2 egress, 120.20 Mbps for Flow 3 ingress and 120.13 Mbps for Flow 3 egress.

- **Packet Delay (ms)**: 95th percentile delay for Flow 1 is 148.42 ms, Flow 2 is 147.57 ms, and Flow 3 is 150.56 ms.

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Run 5: Statistics of Indigo-2-256

Start at: 2018-01-27 03:24:54
End at: 2018-01-27 03:25:24

# Below is generated by plot.py at 2018-01-27 06:21:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 260.77 Mbit/s
95th percentile per-packet one-way delay: 161.711 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 141.56 Mbit/s
95th percentile per-packet one-way delay: 155.558 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 129.76 Mbit/s
95th percentile per-packet one-way delay: 171.581 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 108.86 Mbit/s
95th percentile per-packet one-way delay: 163.367 ms
Loss rate: 0.02%
Run 5: Report of Indigo-2-256 — Data Link

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

- **Throughput Graph**: Display of throughput (in Mbps) over time (in seconds) for various flows.
  - Flow 1 ingress (mean 141.59 Mbps)
  - Flow 1 egress (mean 141.56 Mbps)
  - Flow 2 ingress (mean 129.78 Mbps)
  - Flow 2 egress (mean 129.76 Mbps)
  - Flow 3 ingress (mean 108.88 Mbps)
  - Flow 3 egress (mean 108.86 Mbps)

- **Delay Graph**: Display of per-packet delay (in ms) over time (in seconds) for different flows.
  - Flow 1 (95th percentile 155.56 ms)
  - Flow 2 (95th percentile 171.58 ms)
  - Flow 3 (95th percentile 163.37 ms)
Run 6: Statistics of Indigo-2-256

Start at: 2018-01-27 03:40:59
End at: 2018-01-27 03:41:29

# Below is generated by plot.py at 2018-01-27 06:21:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 246.45 Mbit/s
95th percentile per-packet one-way delay: 153.458 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 130.00 Mbit/s
95th percentile per-packet one-way delay: 152.745 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 141.23 Mbit/s
95th percentile per-packet one-way delay: 151.426 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 74.62 Mbit/s
95th percentile per-packet one-way delay: 158.543 ms
Loss rate: 0.05%
Run 6: Report of Indigo-2-256 — Data Link

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

Throughput (Mbps) vs. Time (s)

Packet size (ms) vs. Time (s)

Legend:
- Flow 1 ingress (mean 130.52 Mbps)
- Flow 1 egress (mean 130.00 Mbps)
- Flow 2 ingress (mean 141.24 Mbps)
- Flow 2 egress (mean 141.23 Mbps)
- Flow 3 ingress (mean 74.62 Mbps)
- Flow 3 egress (mean 74.62 Mbps)

Flow 1 (95th percentile 152.75 ms)
Flow 2 (95th percentile 151.43 ms)
Flow 3 (95th percentile 150.54 ms)
Run 7: Statistics of Indigo-2-256

Start at: 2018-01-27 03:57:15
End at: 2018-01-27 03:57:45

# Below is generated by plot.py at 2018-01-27 06:21:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 250.93 Mbit/s
95th percentile per-packet one-way delay: 138.761 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 151.35 Mbit/s
95th percentile per-packet one-way delay: 138.389 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 94.70 Mbit/s
95th percentile per-packet one-way delay: 156.069 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 116.88 Mbit/s
95th percentile per-packet one-way delay: 137.408 ms
Loss rate: 0.01%
Run 7: Report of Indigo-2-256 — Data Link

Throughput (Mbps)

Time (s)

Flow 1 ingress (mean 151.41 Mbit/s)
Flow 2 ingress (mean 94.72 Mbit/s)
Flow 3 ingress (mean 116.88 Mbit/s)
Flow 1 egress (mean 151.35 Mbit/s)
Flow 2 egress (mean 94.70 Mbit/s)
Flow 3 egress (mean 116.88 Mbit/s)

Per-packet time/size/delay (ms)

Time (s)

Flow 1 (95th percentile 138.39 ms)
Flow 2 (95th percentile 156.07 ms)
Flow 3 (95th percentile 137.41 ms)
Run 8: Statistics of Indigo-2-256

Start at: 2018-01-27 04:13:30
End at: 2018-01-27 04:14:00

# Below is generated by plot.py at 2018-01-27 06:23:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 279.33 Mbit/s
95th percentile per-packet one-way delay: 145.145 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 150.04 Mbit/s
95th percentile per-packet one-way delay: 145.157 ms
Loss rate: 0.17%
-- Flow 2:
Average throughput: 140.16 Mbit/s
95th percentile per-packet one-way delay: 145.824 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 115.39 Mbit/s
95th percentile per-packet one-way delay: 143.894 ms
Loss rate: 0.73%
Run 8: Report of Indigo-2-256 — Data Link

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

- Flow 1 ingress (mean 150.24 Mbit/s)
- Flow 1 egress (mean 150.04 Mbit/s)
- Flow 2 ingress (mean 140.75 Mbit/s)
- Flow 2 egress (mean 140.16 Mbit/s)
- Flow 3 ingress (mean 116.25 Mbit/s)
- Flow 3 egress (mean 115.39 Mbit/s)

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

- Flow 1 (95th percentile 145.16 ms)
- Flow 2 (95th percentile 145.82 ms)
- Flow 3 (95th percentile 143.89 ms)
Run 9: Statistics of Indigo-2-256

Start at: 2018-01-27 04:29:43
End at: 2018-01-27 04:30:13

# Below is generated by plot.py at 2018-01-27 06:24:18
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 277.54 Mbit/s
  95th percentile per-packet one-way delay: 144.777 ms
  Loss rate: 0.06%
-- Flow 1:
  Average throughput: 147.41 Mbit/s
  95th percentile per-packet one-way delay: 140.294 ms
  Loss rate: 0.01%
-- Flow 2:
  Average throughput: 142.92 Mbit/s
  95th percentile per-packet one-way delay: 148.399 ms
  Loss rate: 0.15%
-- Flow 3:
  Average throughput: 112.57 Mbit/s
  95th percentile per-packet one-way delay: 169.212 ms
  Loss rate: 0.02%
Run 9: Report of Indigo-2-256 — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 147.43 Mbps)
  - Flow 1 egress (mean 147.41 Mbps)
  - Flow 2 ingress (mean 143.15 Mbps)
  - Flow 2 egress (mean 142.92 Mbps)
  - Flow 3 ingress (mean 112.59 Mbps)
  - Flow 3 egress (mean 112.57 Mbps)

- **Packet Delay (ms):**
  - Flow 1 (95th percentile 140.29 ms)
  - Flow 2 (95th percentile 148.40 ms)
  - Flow 3 (95th percentile 169.21 ms)
Run 10: Statistics of Indigo-2-256

Start at: 2018-01-27 04:45:54
End at: 2018-01-27 04:46:24

# Below is generated by plot.py at 2018-01-27 06:24:31
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 286.35 Mbit/s
  95th percentile per-packet one-way delay: 138.264 ms
  Loss rate: 0.01%
  -- Flow 1:
  Average throughput: 151.13 Mbit/s
  95th percentile per-packet one-way delay: 137.954 ms
  Loss rate: 0.01%
  -- Flow 2:
  Average throughput: 144.71 Mbit/s
  95th percentile per-packet one-way delay: 137.999 ms
  Loss rate: 0.01%
  -- Flow 3:
  Average throughput: 122.99 Mbit/s
  95th percentile per-packet one-way delay: 139.352 ms
  Loss rate: 0.00%
Run 10: Report of Indigo-2-256 — Data Link

throughput plot

per-packet delay plot

Flow 1 ingress (mean 151.14 Mbit/s)  Flow 1 egress (mean 151.13 Mbit/s)
Flow 2 ingress (mean 144.71 Mbit/s)  Flow 2 egress (mean 144.71 Mbit/s)
Flow 3 ingress (mean 122.98 Mbit/s)  Flow 3 egress (mean 122.99 Mbit/s)

Flow 1 (95th percentile 137.95 ms)  Flow 2 (95th percentile 138.00 ms)  Flow 3 (95th percentile 139.35 ms)
Run 1: Statistics of Indigo-1-32

Start at: 2018-01-27 02:16:23
End at: 2018-01-27 02:16:53

# Below is generated by plot.py at 2018-01-27 06:24:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 259.57 Mbit/s
95th percentile per-packet one-way delay: 142.262 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 126.88 Mbit/s
95th percentile per-packet one-way delay: 139.708 ms
Loss rate: 1.12%
-- Flow 2:
Average throughput: 126.66 Mbit/s
95th percentile per-packet one-way delay: 140.046 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 153.72 Mbit/s
95th percentile per-packet one-way delay: 153.698 ms
Loss rate: 0.01%
Run 1: Report of Indigo-1-32 — Data Link

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

- Flow 1 ingress (mean 128.33 Mbit/s)
- Flow 1 egress (mean 126.88 Mbit/s)
- Flow 2 ingress (mean 126.68 Mbit/s)
- Flow 2 egress (mean 126.66 Mbit/s)
- Flow 3 ingress (mean 153.78 Mbit/s)
- Flow 3 egress (mean 153.72 Mbit/s)
Run 2: Statistics of Indigo-1-32

Start at: 2018-01-27 02:32:06
End at: 2018-01-27 02:32:36

# Below is generated by plot.py at 2018-01-27 06:25:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 285.37 Mbit/s
95th percentile per-packet one-way delay: 146.932 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 155.25 Mbit/s
95th percentile per-packet one-way delay: 144.219 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 145.69 Mbit/s
95th percentile per-packet one-way delay: 148.346 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 106.67 Mbit/s
95th percentile per-packet one-way delay: 151.133 ms
Loss rate: 0.01%
Run 2: Report of Indigo-1-32 — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 155.26 Mbps)
  - Flow 1 egress (mean 155.25 Mbps)
  - Flow 2 ingress (mean 145.70 Mbps)
  - Flow 2 egress (mean 145.69 Mbps)
  - Flow 3 ingress (mean 106.67 Mbps)
  - Flow 3 egress (mean 106.67 Mbps)

- **Packet Delay (ms):**
  - Flow 1 (95th percentile 144.22 ms)
  - Flow 2 (95th percentile 148.35 ms)
  - Flow 3 (95th percentile 151.13 ms)
Run 3: Statistics of Indigo-1-32

Start at: 2018-01-27 02:48:06
End at: 2018-01-27 02:48:36

# Below is generated by plot.py at 2018-01-27 06:26:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 290.75 Mbit/s
95th percentile per-packet one-way delay: 149.354 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 154.72 Mbit/s
95th percentile per-packet one-way delay: 147.155 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 155.25 Mbit/s
95th percentile per-packet one-way delay: 149.331 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 108.09 Mbit/s
95th percentile per-packet one-way delay: 158.112 ms
Loss rate: 0.02%
Run 3: Report of Indigo-1-32 — Data Link

Throughput (Mb/s)

Time (s)

Flow 1 ingress (mean 154.74 Mb/s)  Flow 1 egress (mean 154.72 Mb/s)
Flow 2 ingress (mean 155.27 Mb/s)  Flow 2 egress (mean 155.25 Mb/s)
Flow 3 ingress (mean 108.11 Mb/s)  Flow 3 egress (mean 108.09 Mb/s)

Per-packet one-way delay (ms)

Time (s)
Run 4: Statistics of Indigo-1-32

Start at: 2018-01-27 03:04:06
End at: 2018-01-27 03:04:36

# Below is generated by plot.py at 2018-01-27 06:26:58
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 319.55 Mbit/s
  95th percentile per-packet one-way delay: 142.090 ms
  Loss rate: 0.08%
-- Flow 1:
  Average throughput: 160.09 Mbit/s
  95th percentile per-packet one-way delay: 143.211 ms
  Loss rate: 0.15%
-- Flow 2:
  Average throughput: 169.11 Mbit/s
  95th percentile per-packet one-way delay: 142.249 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 150.45 Mbit/s
  95th percentile per-packet one-way delay: 137.841 ms
  Loss rate: 0.01%
Run 4: Report of Indigo-1-32 — Data Link

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

- **Throughput (Mbps):**
  - Flow 1 ingress (mean 160.13 Mbps)
  - Flow 1 egress (mean 160.09 Mbps)
  - Flow 2 ingress (mean 169.11 Mbps)
  - Flow 2 egress (mean 169.11 Mbps)
  - Flow 3 ingress (mean 150.44 Mbps)
  - Flow 3 egress (mean 150.45 Mbps)

- **Round-trip delay (ms):**
  - Flow 1 (95th percentile 143.21 ms)
  - Flow 2 (95th percentile 142.25 ms)
  - Flow 3 (95th percentile 137.84 ms)
Run 5: Statistics of Indigo-1-32

Start at: 2018-01-27 03:20:43
End at: 2018-01-27 03:21:13

# Below is generated by plot.py at 2018-01-27 06:26:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 279.08 Mbit/s
95th percentile per-packet one-way delay: 145.710 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 162.72 Mbit/s
95th percentile per-packet one-way delay: 144.017 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 124.72 Mbit/s
95th percentile per-packet one-way delay: 147.500 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 108.14 Mbit/s
95th percentile per-packet one-way delay: 151.678 ms
Loss rate: 0.12%
Run 5: Report of Indigo-1-32 — Data Link

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

- Flow 1 (mean 162.74 Mbps) and Flow 3 (mean 108.29 Mbps) have similar ingress and egress rates.
- Flow 2 (mean 124.75 Mbps) shows the highest peak but stabilizes later compared to the other two.

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Run 6: Statistics of Indigo-1-32

Start at: 2018-01-27 03:36:38
End at: 2018-01-27 03:37:08

# Below is generated by plot.py at 2018-01-27 06:28:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 305.65 Mbit/s
95th percentile per-packet one-way delay: 140.018 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 173.13 Mbit/s
95th percentile per-packet one-way delay: 138.766 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 128.90 Mbit/s
95th percentile per-packet one-way delay: 141.180 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 149.37 Mbit/s
95th percentile per-packet one-way delay: 150.299 ms
Loss rate: 0.01%
Run 6: Report of Indigo-1-32 — Data Link

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

- **Flow 1 ingress (mean 173.15 Mbit/s)**
- **Flow 1 egress (mean 173.13 Mbit/s)**
- **Flow 2 ingress (mean 128.92 Mbit/s)**
- **Flow 2 egress (mean 128.90 Mbit/s)**
- **Flow 3 ingress (mean 149.39 Mbit/s)**
- **Flow 3 egress (mean 149.37 Mbit/s)**

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

- **Flow 1 (95th percentile 138.77 ms)**
- **Flow 2 (95th percentile 141.18 ms)**
- **Flow 3 (95th percentile 150.30 ms)**
Run 7: Statistics of Indigo-1-32

Start at: 2018-01-27 03:52:52
End at: 2018-01-27 03:53:22

# Below is generated by plot.py at 2018-01-27 06:29:21
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 297.07 Mbit/s
  95th percentile per-packet one-way delay: 139.938 ms
  Loss rate: 0.36%
-- Flow 1:
  Average throughput: 162.23 Mbit/s
  95th percentile per-packet one-way delay: 138.972 ms
  Loss rate: 0.34%
-- Flow 2:
  Average throughput: 129.20 Mbit/s
  95th percentile per-packet one-way delay: 140.844 ms
  Loss rate: 0.62%
-- Flow 3:
  Average throughput: 154.40 Mbit/s
  95th percentile per-packet one-way delay: 141.153 ms
  Loss rate: 0.00%
Run 7: Report of Indigo-1-32 — Data Link

![Graph of throughput and packet delay over time for flows 1, 2, and 3.]

- **Flow 1 Ingress** (mean 162.78 Mbit/s)
- **Flow 1 Egress** (mean 162.23 Mbit/s)
- **Flow 2 Ingress** (mean 130.00 Mbit/s)
- **Flow 2 Egress** (mean 129.26 Mbit/s)
- **Flow 3 Ingress** (mean 154.40 Mbit/s)
- **Flow 3 Egress** (mean 154.40 Mbit/s)

![Graph of packet delay over time for flows 1, 2, and 3.]

- **Flow 1 95th percentile** 138.97 ms
- **Flow 2 95th percentile** 140.84 ms
- **Flow 3 95th percentile** 141.15 ms
Run 8: Statistics of Indigo-1-32

Start at: 2018-01-27 04:09:07
End at: 2018-01-27 04:09:37

# Below is generated by plot.py at 2018-01-27 06:29:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 318.37 Mbit/s
95th percentile per-packet one-way delay: 139.194 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 160.88 Mbit/s
95th percentile per-packet one-way delay: 138.592 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 163.91 Mbit/s
95th percentile per-packet one-way delay: 140.418 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 153.85 Mbit/s
95th percentile per-packet one-way delay: 139.483 ms
Loss rate: 0.00%
Run 8: Report of Indigo-1-32 — Data Link

Throughput (Mbit/s)

0 5 10 15 20 25 30
Time (s)

Flow 1 ingress (mean 160.88 Mbit/s)
Flow 1 egress (mean 160.88 Mbit/s)
Flow 2 ingress (mean 163.90 Mbit/s)
Flow 2 egress (mean 163.91 Mbit/s)
Flow 3 ingress (mean 153.86 Mbit/s)
Flow 3 egress (mean 153.85 Mbit/s)

Per packet one-way delay (ms)

0 5 10 15 20 25 30
Time (s)

Flow 1 (95th percentile 138.59 ms)
Flow 2 (95th percentile 140.42 ms)
Flow 3 (95th percentile 139.48 ms)
Run 9: Statistics of Indigo-1-32

Start at: 2018-01-27 04:25:10
End at: 2018-01-27 04:25:40

# Below is generated by plot.py at 2018-01-27 06:29:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 321.42 Mbit/s
95th percentile per-packet one-way delay: 141.867 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 175.15 Mbit/s
95th percentile per-packet one-way delay: 141.103 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 168.79 Mbit/s
95th percentile per-packet one-way delay: 143.758 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 108.86 Mbit/s
95th percentile per-packet one-way delay: 139.383 ms
Loss rate: 0.00%
Run 9: Report of Indigo-1-32 — Data Link

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

Flow 1 ingress (mean 175.17 Mbit/s)
Flow 1 egress (mean 175.15 Mbit/s)
Flow 2 ingress (mean 168.80 Mbit/s)
Flow 2 egress (mean 168.79 Mbit/s)
Flow 3 ingress (mean 108.86 Mbit/s)
Flow 3 egress (mean 108.86 Mbit/s)

Flow 1 (95th percentile 141.10 ms)
Flow 2 (95th percentile 143.76 ms)
Flow 3 (95th percentile 139.38 ms)
Run 10: Statistics of Indigo-1-32

Start at: 2018-01-27 04:41:35
End at: 2018-01-27 04:42:05

# Below is generated by plot.py at 2018-01-27 06:31:07
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 323.95 Mbit/s
  95th percentile per-packet one-way delay: 138.007 ms
  Loss rate: 0.00%
-- Flow 1:
  Average throughput: 178.19 Mbit/s
  95th percentile per-packet one-way delay: 137.558 ms
  Loss rate: 0.00%
-- Flow 2:
  Average throughput: 166.37 Mbit/s
  95th percentile per-packet one-way delay: 138.356 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 111.36 Mbit/s
  95th percentile per-packet one-way delay: 139.317 ms
  Loss rate: 0.02%
Run 10: Report of Indigo-1-32 — Data Link

![Throughput Graph](image)

![Packet Delay Graph](image)

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Run 1: Statistics of Indigo-1-128

Start at: 2018-01-27 02:13:34
End at: 2018-01-27 02:14:04

# Below is generated by plot.py at 2018-01-27 06:31:07
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 261.58 Mbit/s
  95th percentile per-packet one-way delay: 149.695 ms
  Loss rate: 0.04%
-- Flow 1:
  Average throughput: 135.81 Mbit/s
  95th percentile per-packet one-way delay: 150.115 ms
  Loss rate: 0.04%
-- Flow 2:
  Average throughput: 134.89 Mbit/s
  95th percentile per-packet one-way delay: 148.658 ms
  Loss rate: 0.03%
-- Flow 3:
  Average throughput: 114.60 Mbit/s
  95th percentile per-packet one-way delay: 152.995 ms
  Loss rate: 0.04%
Run 1: Report of Indigo-1-128 — Data Link
Run 2: Statistics of Indigo-1-128

Start at: 2018-01-27 02:29:18
End at: 2018-01-27 02:29:48

# Below is generated by plot.py at 2018-01-27 06:31:07
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 254.49 Mbit/s
  95th percentile per-packet one-way delay: 146.103 ms
  Loss rate: 0.04%
-- Flow 1:
  Average throughput: 131.73 Mbit/s
  95th percentile per-packet one-way delay: 148.009 ms
  Loss rate: 0.03%
-- Flow 2:
  Average throughput: 128.93 Mbit/s
  95th percentile per-packet one-way delay: 144.116 ms
  Loss rate: 0.07%
-- Flow 3:
  Average throughput: 118.33 Mbit/s
  95th percentile per-packet one-way delay: 143.408 ms
  Loss rate: 0.00%
Run 2: Report of Indigo-1-128 — Data Link

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

- Flow 1 ingress (mean 131.77 Mbit/s)
- Flow 1 egress (mean 131.73 Mbit/s)
- Flow 2 ingress (mean 129.02 Mbit/s)
- Flow 2 egress (mean 128.93 Mbit/s)
- Flow 3 ingress (mean 117.66 Mbit/s)
- Flow 3 egress (mean 118.33 Mbit/s)

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

- Flow 1 (95th percentile 148.01 ms)
- Flow 2 (95th percentile 144.12 ms)
- Flow 3 (95th percentile 143.41 ms)
Run 3: Statistics of Indigo-1-128

Start at: 2018-01-27 02:45:17
End at: 2018-01-27 02:45:47

# Below is generated by plot.py at 2018-01-27 06:31:30
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 259.73 Mbit/s
  95th percentile per-packet one-way delay: 150.966 ms
  Loss rate: 0.02%
-- Flow 1:
  Average throughput: 136.17 Mbit/s
  95th percentile per-packet one-way delay: 148.861 ms
  Loss rate: 0.03%
-- Flow 2:
  Average throughput: 134.27 Mbit/s
  95th percentile per-packet one-way delay: 152.074 ms
  Loss rate: 0.00%
-- Flow 3:
  Average throughput: 110.03 Mbit/s
  95th percentile per-packet one-way delay: 158.567 ms
  Loss rate: 0.00%
Run 3: Report of Indigo-1-128 — Data Link

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

Flow 1 ingress (mean 136.22 Mbit/s)  
Flow 1 egress (mean 136.17 Mbit/s)  
Flow 2 ingress (mean 134.34 Mbit/s)  
Flow 2 egress (mean 134.27 Mbit/s)  
Flow 3 ingress (mean 110.03 Mbit/s)  
Flow 3 egress (mean 110.03 Mbit/s)
Run 4: Statistics of Indigo-1-128

Start at: 2018-01-27 03:01:16
End at: 2018-01-27 03:01:46

# Below is generated by plot.py at 2018-01-27 06:32:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 265.45 Mbit/s
95th percentile per-packet one-way delay: 145.696 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 139.10 Mbit/s
95th percentile per-packet one-way delay: 143.829 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 137.52 Mbit/s
95th percentile per-packet one-way delay: 147.985 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 111.70 Mbit/s
95th percentile per-packet one-way delay: 147.212 ms
Loss rate: 0.02%
Run 4: Report of Indigo-1-128 — Data Link
Run 5: Statistics of Indigo-1-128

Start at: 2018-01-27 03:17:55  
End at: 2018-01-27 03:18:25

# Below is generated by plot.py at 2018-01-27 06:33:15
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 252.33 Mbit/s
  95th percentile per-packet one-way delay: 158.869 ms
  Loss rate: 0.13%
-- Flow 1:
  Average throughput: 133.36 Mbit/s
  95th percentile per-packet one-way delay: 154.241 ms
  Loss rate: 0.17%
-- Flow 2:
  Average throughput: 128.49 Mbit/s
  95th percentile per-packet one-way delay: 153.255 ms
  Loss rate: 0.06%
-- Flow 3:
  Average throughput: 109.82 Mbit/s
  95th percentile per-packet one-way delay: 174.814 ms
  Loss rate: 0.12%
Run 5: Report of Indigo-1-128 — Data Link
Run 6: Statistics of Indigo-1-128

Start at: 2018-01-27 03:33:49
End at: 2018-01-27 03:34:19

# Below is generated by plot.py at 2018-01-27 06:33:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 260.74 Mbit/s
95th percentile per-packet one-way delay: 149.913 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 136.67 Mbit/s
95th percentile per-packet one-way delay: 145.702 ms
Loss rate: 0.62%
-- Flow 2:
Average throughput: 133.14 Mbit/s
95th percentile per-packet one-way delay: 153.225 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 114.77 Mbit/s
95th percentile per-packet one-way delay: 153.148 ms
Loss rate: 0.01%
Run 6: Report of Indigo-1-128 — Data Link

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

Legend:
- Flow 1 ingress (mean 137.53 Mbps)
- Flow 1 egress (mean 136.67 Mbps)
- Flow 2 ingress (mean 135.37 Mbps)
- Flow 2 egress (mean 133.14 Mbps)
- Flow 3 ingress (mean 114.77 Mbps)
- Flow 3 egress (mean 114.77 Mbps)

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

Legend:
- Flow 1 (95th percentile 145.70 ms)
- Flow 2 (95th percentile 153.22 ms)
- Flow 3 (95th percentile 153.15 ms)
Run 7: Statistics of Indigo-1-128

Start at: 2018-01-27 03:50:02
End at: 2018-01-27 03:50:33

# Below is generated by plot.py at 2018-01-27 06:33:27
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 259.06 Mbit/s
  95th percentile per-packet one-way delay: 152.209 ms
  Loss rate: 0.01%
-- Flow 1:
  Average throughput: 137.39 Mbit/s
  95th percentile per-packet one-way delay: 154.003 ms
  Loss rate: 0.01%
-- Flow 2:
  Average throughput: 130.25 Mbit/s
  95th percentile per-packet one-way delay: 146.419 ms
  Loss rate: 0.01%
-- Flow 3:
  Average throughput: 112.65 Mbit/s
  95th percentile per-packet one-way delay: 154.861 ms
  Loss rate: 0.00%
Run 7: Report of Indigo-1-128 — Data Link
Run 8: Statistics of Indigo-1-128

Start at: 2018-01-27 04:06:17
End at: 2018-01-27 04:06:47

# Below is generated by plot.py at 2018-01-27 06:33:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 265.84 Mbit/s
  95th percentile per-packet one-way delay: 144.771 ms
  Loss rate: 0.01%
  -- Flow 1:
  Average throughput: 145.12 Mbit/s
  95th percentile per-packet one-way delay: 145.494 ms
  Loss rate: 0.01%
  -- Flow 2:
  Average throughput: 125.95 Mbit/s
  95th percentile per-packet one-way delay: 142.055 ms
  Loss rate: 0.00%
  -- Flow 3:
  Average throughput: 117.10 Mbit/s
  95th percentile per-packet one-way delay: 150.494 ms
  Loss rate: 0.02%
Run 8: Report of Indigo-1-128 — Data Link

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

- **Throughput (Mbps)**
  - Flow 1 ingress (mean 145.12 Mbps)
  - Flow 1 egress (mean 145.12 Mbps)
  - Flow 2 ingress (mean 125.95 Mbps)
  - Flow 2 egress (mean 125.95 Mbps)
  - Flow 3 ingress (mean 117.14 Mbps)
  - Flow 3 egress (mean 117.10 Mbps)

- **Per-packet one-way delay (ms)**
  - Flow 1 (95th percentile 145.49 ms)
  - Flow 2 (95th percentile 142.06 ms)
  - Flow 3 (95th percentile 150.49 ms)

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Run 9: Statistics of Indigo-1-128


# Below is generated by plot.py at 2018-01-27 06:33:49
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 254.77 Mbit/s
  95th percentile per-packet one-way delay: 142.286 ms
  Loss rate: 0.04%
-- Flow 1:
  Average throughput: 134.12 Mbit/s
  95th percentile per-packet one-way delay: 140.377 ms
  Loss rate: 0.06%
-- Flow 2:
  Average throughput: 126.56 Mbit/s
  95th percentile per-packet one-way delay: 142.507 ms
  Loss rate: 0.02%
-- Flow 3:
  Average throughput: 118.46 Mbit/s
  95th percentile per-packet one-way delay: 145.586 ms
  Loss rate: 0.03%
Run 9: Report of Indigo-1-128 — Data Link
Run 10: Statistics of Indigo-1-128

Start at: 2018-01-27 04:38:46
End at: 2018-01-27 04:39:16

# Below is generated by plot.py at 2018-01-27 06:33:51
# Datalink statistics
-- Total of 3 flows:
  Average throughput: 255.06 Mbit/s
  95th percentile per-packet one-way delay: 143.614 ms
  Loss rate: 0.01%
-- Flow 1:
  Average throughput: 131.52 Mbit/s
  95th percentile per-packet one-way delay: 144.031 ms
  Loss rate: 0.01%
-- Flow 2:
  Average throughput: 130.24 Mbit/s
  95th percentile per-packet one-way delay: 143.229 ms
  Loss rate: 0.01%
-- Flow 3:
  Average throughput: 117.76 Mbit/s
  95th percentile per-packet one-way delay: 143.403 ms
  Loss rate: 0.00%
Run 10: Report of Indigo-1-128 — Data Link

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