

Pantheon Report

Generated at 2019-03-27 15:42:36 (UTC).

Data path: GCE Tokyo on ens4 (*remote*) →GCE Iowa on ens4 (*local*).

Repeated the test of 21 congestion control schemes 5 times.

Each test lasted for 30 seconds running 3 flows with 10-second interval between two flows.

NTP offsets were measured against `time.google.com` and have been applied to correct the timestamps in logs.

System info:

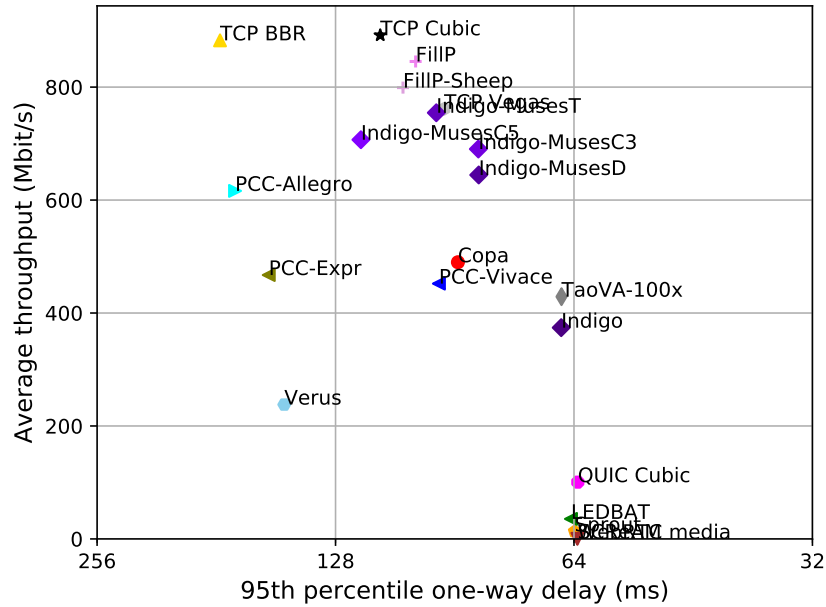
```
Linux 4.15.0-1028-gcp
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

Git summary:

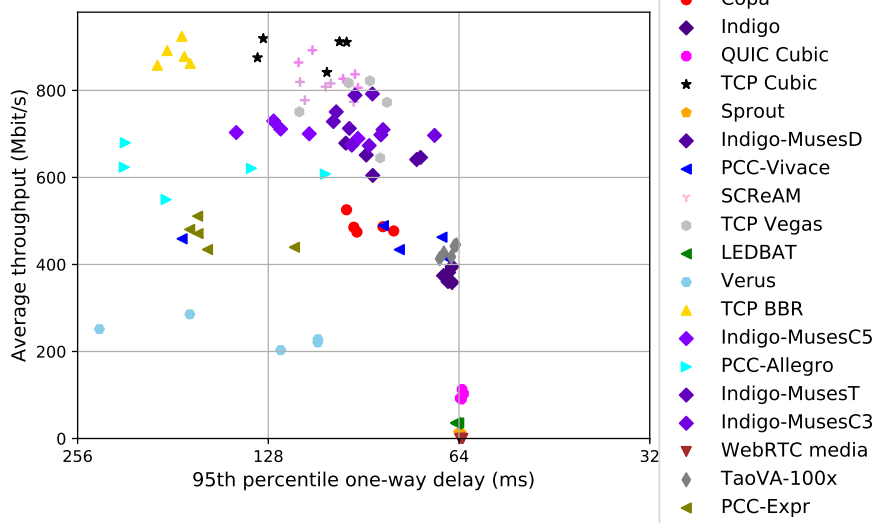
```
branch: muses @ 7a686f7c2ed0a333082c0bab1fa5c921ab47e6ee
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 5ce721187ad823da20955337730c746486ca4966
third_party/pantheon-tunnel @ f866d3f58d27afd942717625ee3a354cc2e802bd
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quick @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2
M src/ScreamClient
M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
M src/examples/cellsim.cc
M src/examples/sproutbt2.cc
M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
M src/verus.hpp
M tools/plot.py
```

third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851

test from GCE Tokyo to GCE Iowa, 5 runs of 30s each per scheme
 3 flows with 10s interval between flows (mean of all runs by scheme)



test from GCE Tokyo to GCE Iowa, 5 runs of 30s each per scheme
 3 flows with 10s interval between flows



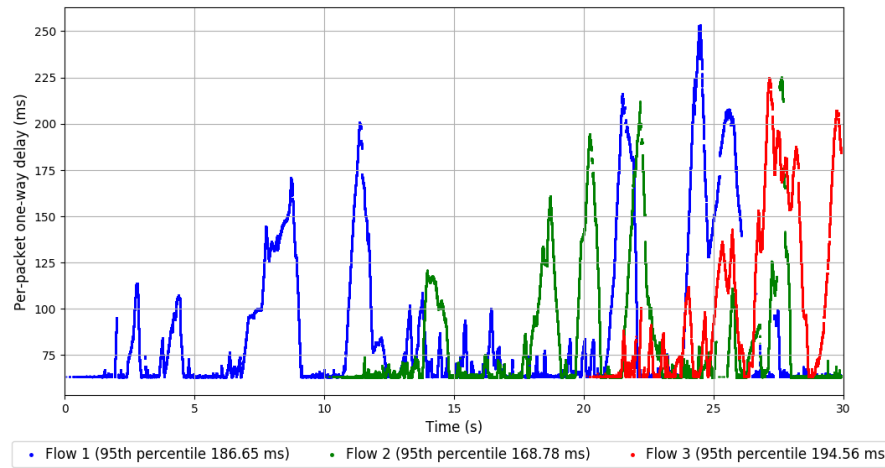
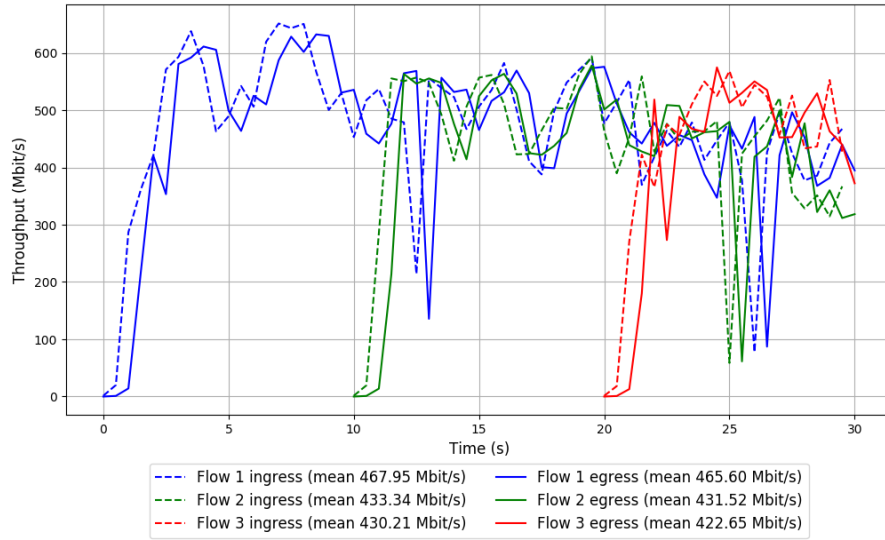
| scheme | # runs | mean avg tput (Mbit/s) | | | mean 95th-%ile delay (ms) | | | mean loss rate (%) | | |
|----------------|--------|------------------------|--------|--------|---------------------------|--------|--------|--------------------|--------|--------|
| | | flow 1 | flow 2 | flow 3 | flow 1 | flow 2 | flow 3 | flow 1 | flow 2 | flow 3 |
| TCP BBR | 5 | 462.18 | 442.36 | 384.26 | 184.57 | 155.77 | 197.89 | 1.15 | 1.15 | 2.75 |
| Copa | 5 | 255.36 | 233.11 | 241.75 | 88.48 | 87.28 | 97.61 | 0.38 | 0.60 | 1.32 |
| TCP Cubic | 5 | 470.85 | 433.08 | 403.67 | 117.08 | 101.53 | 118.10 | 0.42 | 0.61 | 1.48 |
| FillP | 5 | 530.44 | 345.54 | 260.60 | 107.28 | 68.14 | 77.50 | 0.85 | 0.53 | 1.41 |
| FillP-Sheep | 5 | 502.11 | 326.66 | 244.16 | 112.94 | 66.93 | 66.51 | 0.88 | 0.57 | 1.39 |
| Indigo | 5 | 200.08 | 183.39 | 157.26 | 66.46 | 66.62 | 65.59 | 0.41 | 0.67 | 1.48 |
| Indigo-MusesC3 | 5 | 403.50 | 349.53 | 233.93 | 89.30 | 77.33 | 68.60 | 0.35 | 0.59 | 2.17 |
| Indigo-MusesC5 | 5 | 429.67 | 367.70 | 151.52 | 118.39 | 118.70 | 67.02 | 0.44 | 0.59 | 2.11 |
| Indigo-MusesD | 5 | 386.86 | 318.67 | 200.73 | 87.22 | 83.31 | 66.37 | 0.39 | 0.68 | 2.30 |
| Indigo-MusesT | 5 | 446.60 | 380.71 | 242.79 | 104.12 | 82.66 | 69.67 | 0.36 | 0.72 | 2.30 |
| LEDBAT | 5 | 22.72 | 15.43 | 7.58 | 64.74 | 64.30 | 63.99 | 0.77 | 1.26 | 2.56 |
| PCC-Allegro | 5 | 345.54 | 290.84 | 241.11 | 181.72 | 155.04 | 130.60 | 5.38 | 1.30 | 1.54 |
| PCC-Expr | 5 | 269.88 | 227.64 | 141.70 | 156.17 | 129.91 | 75.20 | 1.60 | 1.43 | 1.58 |
| QUIC Cubic | 5 | 60.04 | 47.24 | 24.54 | 63.16 | 63.22 | 63.06 | 0.60 | 0.93 | 1.36 |
| SCReAM | 5 | 0.22 | 0.22 | 0.22 | 63.26 | 63.04 | 63.27 | 0.38 | 0.61 | 1.31 |
| Sprout | 5 | 6.78 | 6.69 | 6.51 | 63.91 | 63.82 | 63.78 | 0.46 | 0.74 | 1.43 |
| TaoVA-100x | 5 | 219.27 | 213.28 | 206.04 | 65.86 | 67.59 | 66.53 | 0.43 | 0.56 | 1.15 |
| TCP Vegas | 5 | 382.04 | 402.33 | 339.78 | 80.67 | 95.55 | 104.02 | 0.34 | 0.50 | 1.53 |
| Verus | 5 | 134.44 | 115.98 | 81.41 | 158.91 | 122.74 | 139.41 | 1.57 | 0.84 | 2.46 |
| PCC-Vivace | 5 | 258.95 | 224.61 | 134.88 | 98.31 | 76.51 | 81.75 | 0.58 | 0.84 | 2.07 |
| WebRTC media | 5 | 0.05 | 0.05 | 0.05 | 63.38 | 63.23 | 63.16 | 0.00 | 0.00 | 0.00 |

Run 1: Statistics of TCP BBR

Start at: 2019-03-27 10:01:40
End at: 2019-03-27 10:02:10
Local clock offset: -0.17 ms
Remote clock offset: -0.024 ms

```
# Below is generated by plot.py at 2019-03-27 13:34:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 891.63 Mbit/s
95th percentile per-packet one-way delay: 184.855 ms
Loss rate: 1.30%
-- Flow 1:
Average throughput: 465.60 Mbit/s
95th percentile per-packet one-way delay: 186.653 ms
Loss rate: 0.92%
-- Flow 2:
Average throughput: 431.52 Mbit/s
95th percentile per-packet one-way delay: 168.783 ms
Loss rate: 1.06%
-- Flow 3:
Average throughput: 422.65 Mbit/s
95th percentile per-packet one-way delay: 194.563 ms
Loss rate: 3.01%
```

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2019-03-27 10:38:08

End at: 2019-03-27 10:38:38

Local clock offset: -0.103 ms

Remote clock offset: -0.24 ms

Below is generated by plot.py at 2019-03-27 13:34:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 924.44 Mbit/s

95th percentile per-packet one-way delay: 175.292 ms

Loss rate: 1.79%

-- Flow 1:

Average throughput: 473.67 Mbit/s

95th percentile per-packet one-way delay: 175.143 ms

Loss rate: 1.34%

-- Flow 2:

Average throughput: 479.69 Mbit/s

95th percentile per-packet one-way delay: 144.425 ms

Loss rate: 1.47%

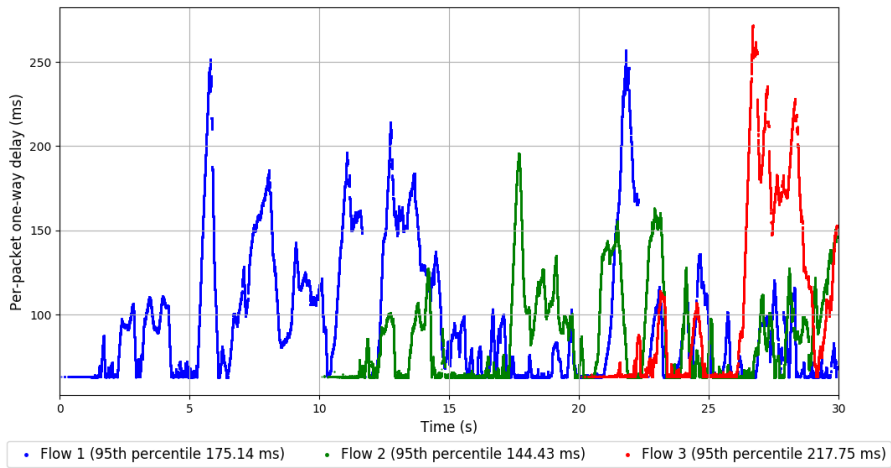
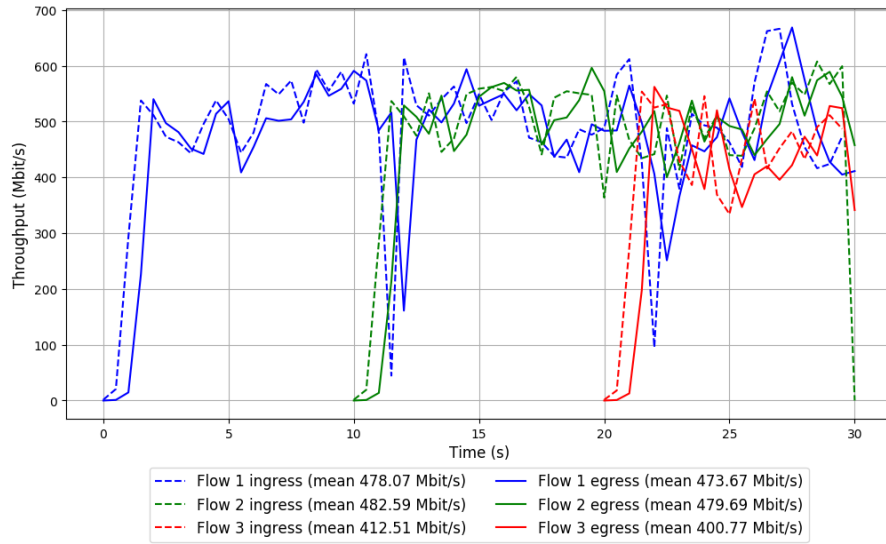
-- Flow 3:

Average throughput: 400.77 Mbit/s

95th percentile per-packet one-way delay: 217.745 ms

Loss rate: 4.10%

Run 2: Report of TCP BBR — Data Link

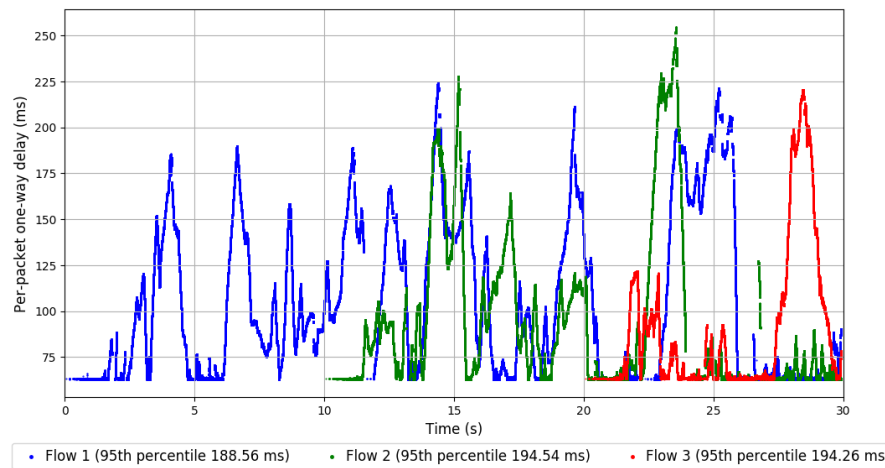
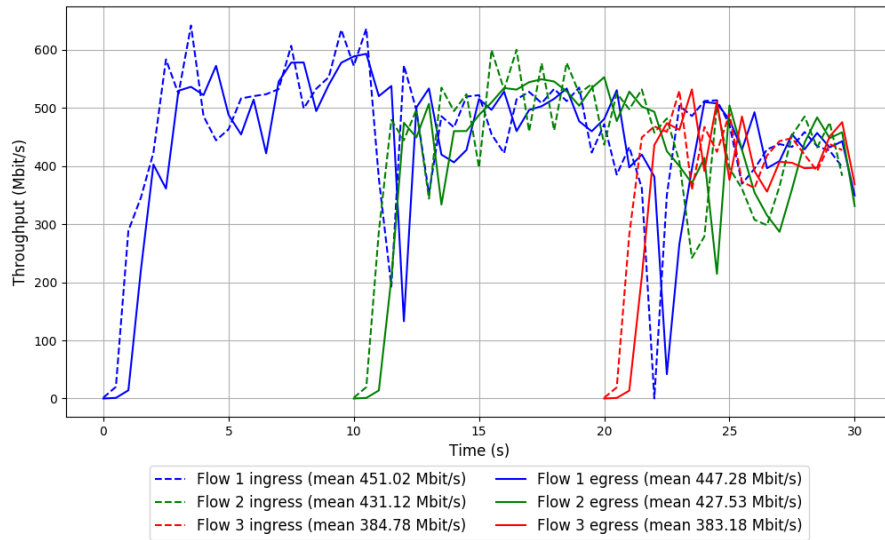


Run 3: Statistics of TCP BBR

Start at: 2019-03-27 11:14:28
End at: 2019-03-27 11:14:58
Local clock offset: -0.052 ms
Remote clock offset: -0.095 ms

```
# Below is generated by plot.py at 2019-03-27 13:34:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 857.77 Mbit/s
95th percentile per-packet one-way delay: 191.543 ms
Loss rate: 1.38%
-- Flow 1:
Average throughput: 447.28 Mbit/s
95th percentile per-packet one-way delay: 188.559 ms
Loss rate: 1.25%
-- Flow 2:
Average throughput: 427.53 Mbit/s
95th percentile per-packet one-way delay: 194.536 ms
Loss rate: 1.46%
-- Flow 3:
Average throughput: 383.18 Mbit/s
95th percentile per-packet one-way delay: 194.261 ms
Loss rate: 1.69%
```

Run 3: Report of TCP BBR — Data Link

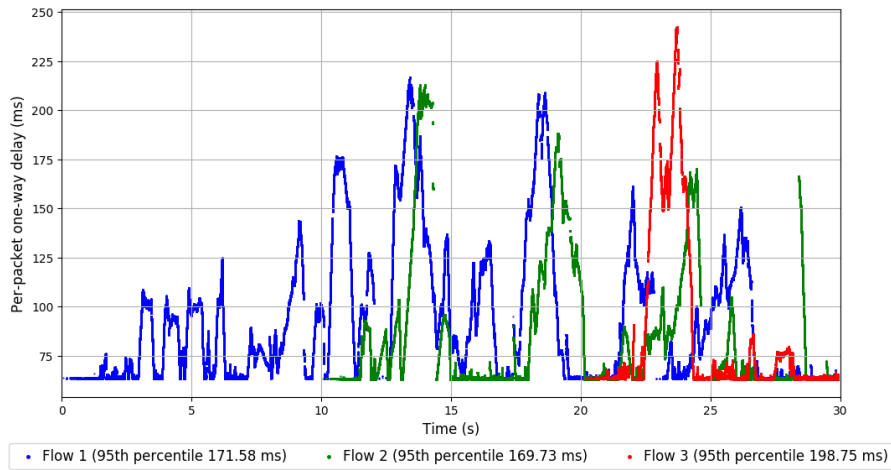
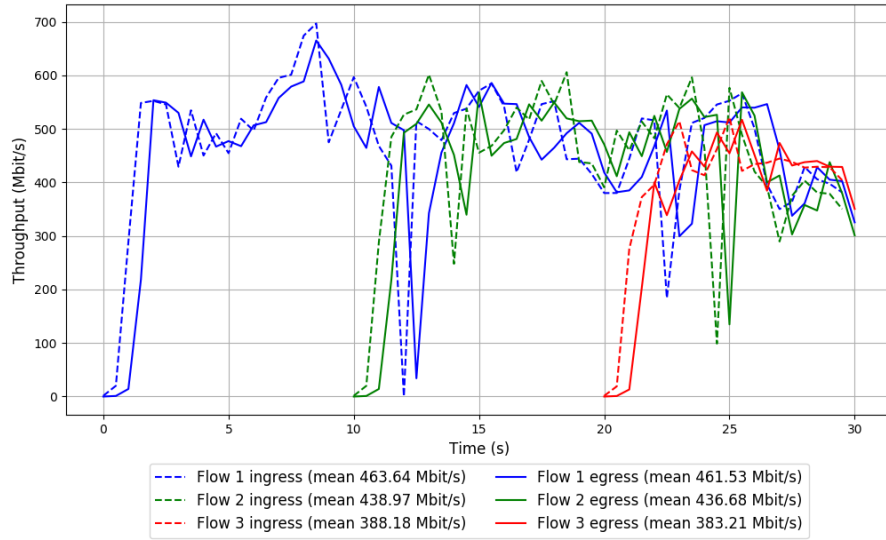


Run 4: Statistics of TCP BBR

Start at: 2019-03-27 11:51:56
End at: 2019-03-27 11:52:26
Local clock offset: 0.003 ms
Remote clock offset: -0.276 ms

```
# Below is generated by plot.py at 2019-03-27 13:34:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 878.11 Mbit/s
95th percentile per-packet one-way delay: 173.654 ms
Loss rate: 1.21%
-- Flow 1:
Average throughput: 461.53 Mbit/s
95th percentile per-packet one-way delay: 171.582 ms
Loss rate: 0.88%
-- Flow 2:
Average throughput: 436.68 Mbit/s
95th percentile per-packet one-way delay: 169.734 ms
Loss rate: 1.15%
-- Flow 3:
Average throughput: 383.21 Mbit/s
95th percentile per-packet one-way delay: 198.752 ms
Loss rate: 2.53%
```

Run 4: Report of TCP BBR — Data Link

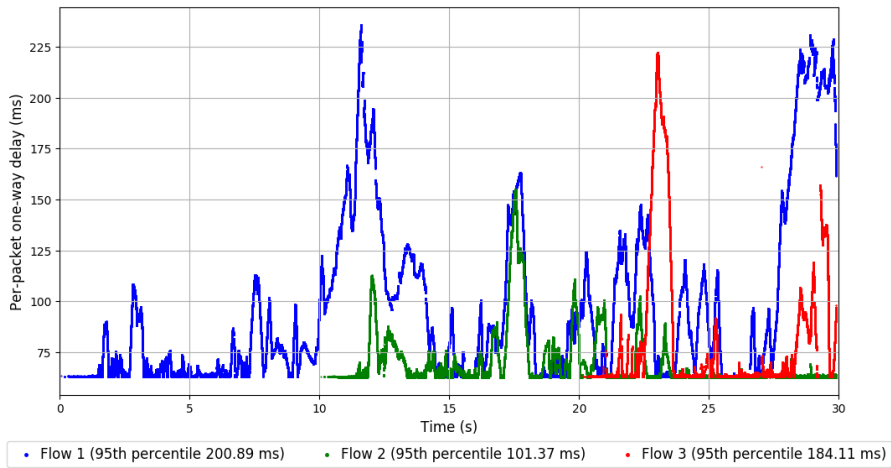
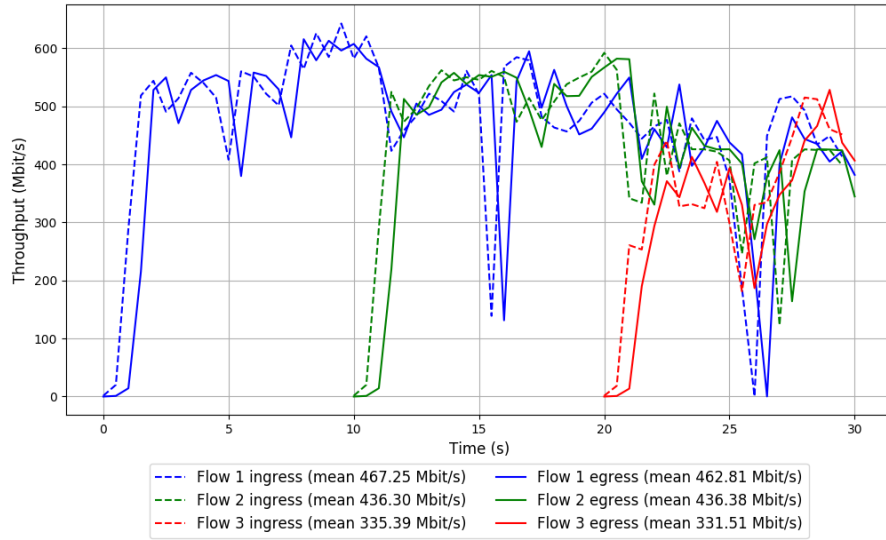


Run 5: Statistics of TCP BBR

Start at: 2019-03-27 12:28:18
End at: 2019-03-27 12:28:48
Local clock offset: -0.141 ms
Remote clock offset: -0.305 ms

```
# Below is generated by plot.py at 2019-03-27 13:34:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 862.08 Mbit/s
95th percentile per-packet one-way delay: 170.036 ms
Loss rate: 1.25%
-- Flow 1:
Average throughput: 462.81 Mbit/s
95th percentile per-packet one-way delay: 200.892 ms
Loss rate: 1.37%
-- Flow 2:
Average throughput: 436.38 Mbit/s
95th percentile per-packet one-way delay: 101.368 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 331.51 Mbit/s
95th percentile per-packet one-way delay: 184.108 ms
Loss rate: 2.40%
```

Run 5: Report of TCP BBR — Data Link



Run 1: Statistics of Copa

Start at: 2019-03-27 10:03:47
End at: 2019-03-27 10:04:17
Local clock offset: -0.148 ms
Remote clock offset: -0.349 ms

Below is generated by plot.py at 2019-03-27 13:34:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 476.99 Mbit/s
95th percentile per-packet one-way delay: 81.145 ms
Loss rate: 0.60%

-- Flow 1:

Average throughput: 242.71 Mbit/s
95th percentile per-packet one-way delay: 73.198 ms
Loss rate: 0.28%

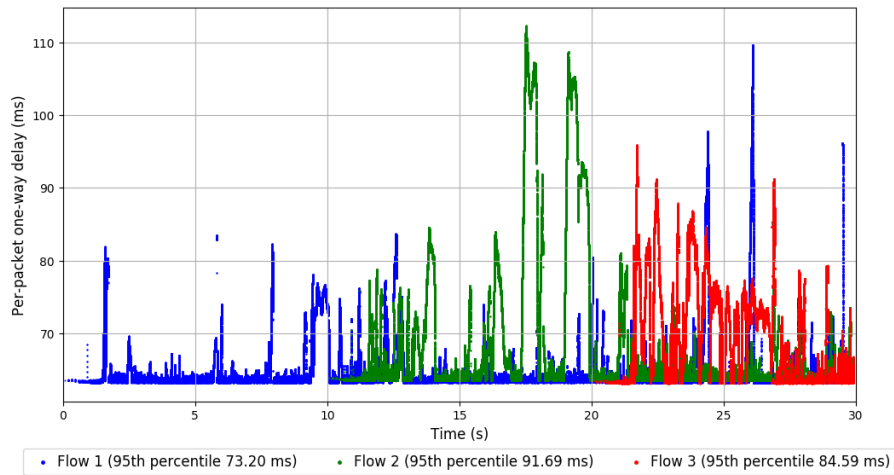
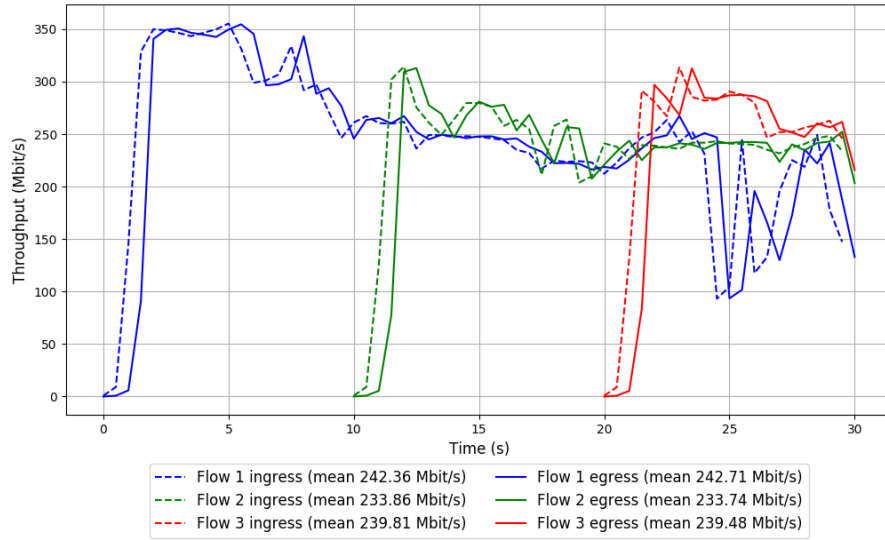
-- Flow 2:

Average throughput: 233.74 Mbit/s
95th percentile per-packet one-way delay: 91.685 ms
Loss rate: 0.68%

-- Flow 3:

Average throughput: 239.48 Mbit/s
95th percentile per-packet one-way delay: 84.593 ms
Loss rate: 1.40%

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2019-03-27 10:40:14
End at: 2019-03-27 10:40:44
Local clock offset: -0.074 ms
Remote clock offset: -0.165 ms

Below is generated by plot.py at 2019-03-27 13:35:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 525.72 Mbit/s
95th percentile per-packet one-way delay: 96.328 ms
Loss rate: 0.70%

-- Flow 1:

Average throughput: 277.48 Mbit/s
95th percentile per-packet one-way delay: 98.603 ms
Loss rate: 0.46%

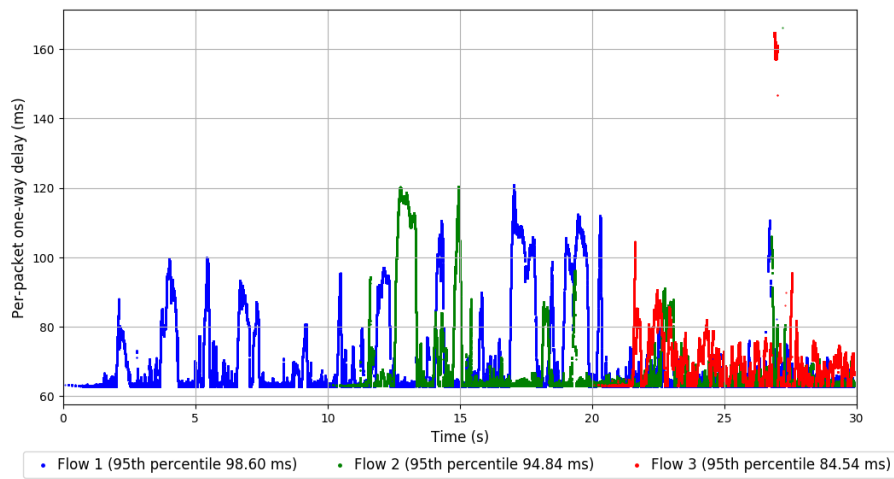
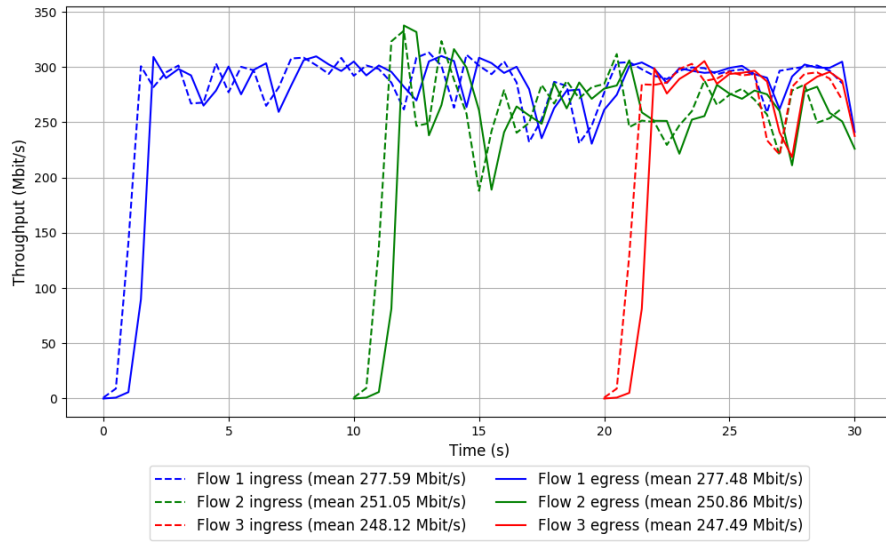
-- Flow 2:

Average throughput: 250.86 Mbit/s
95th percentile per-packet one-way delay: 94.836 ms
Loss rate: 0.71%

-- Flow 3:

Average throughput: 247.49 Mbit/s
95th percentile per-packet one-way delay: 84.544 ms
Loss rate: 1.52%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2019-03-27 11:16:35

End at: 2019-03-27 11:17:05

Local clock offset: -0.068 ms

Remote clock offset: 0.245 ms

Below is generated by plot.py at 2019-03-27 13:35:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 474.52 Mbit/s

95th percentile per-packet one-way delay: 92.760 ms

Loss rate: 0.38%

-- Flow 1:

Average throughput: 247.95 Mbit/s

95th percentile per-packet one-way delay: 90.481 ms

Loss rate: 0.36%

-- Flow 2:

Average throughput: 233.95 Mbit/s

95th percentile per-packet one-way delay: 91.082 ms

Loss rate: 0.28%

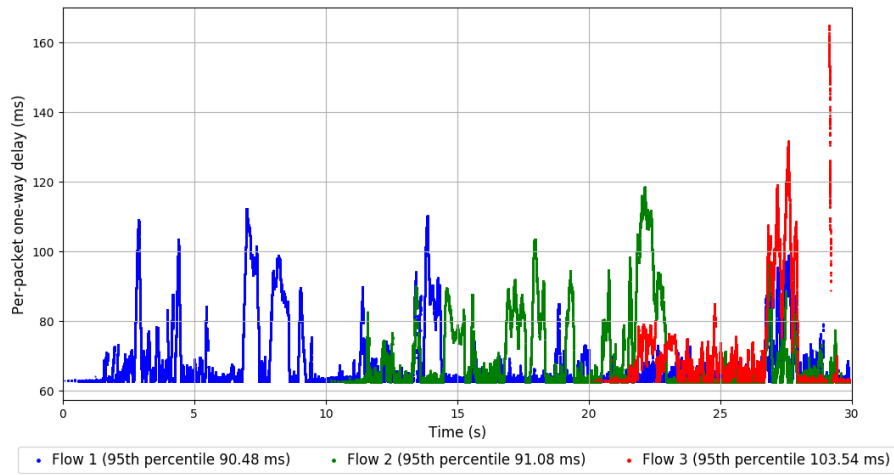
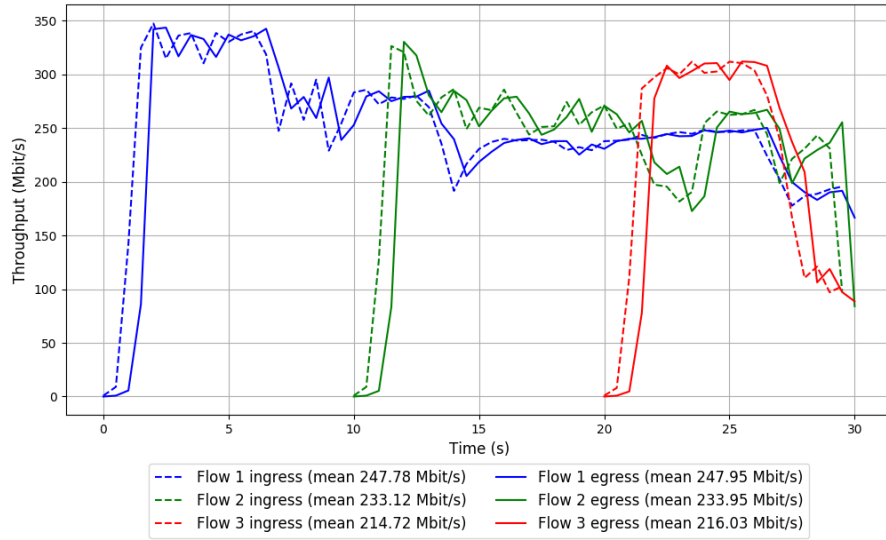
-- Flow 3:

Average throughput: 216.03 Mbit/s

95th percentile per-packet one-way delay: 103.538 ms

Loss rate: 0.68%

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

Start at: 2019-03-27 11:54:04

End at: 2019-03-27 11:54:34

Local clock offset: 0.01 ms

Remote clock offset: -0.19 ms

Below is generated by plot.py at 2019-03-27 13:48:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 486.85 Mbit/s

95th percentile per-packet one-way delay: 84.388 ms

Loss rate: 0.70%

-- Flow 1:

Average throughput: 247.44 Mbit/s

95th percentile per-packet one-way delay: 84.750 ms

Loss rate: 0.47%

-- Flow 2:

Average throughput: 225.91 Mbit/s

95th percentile per-packet one-way delay: 72.058 ms

Loss rate: 0.63%

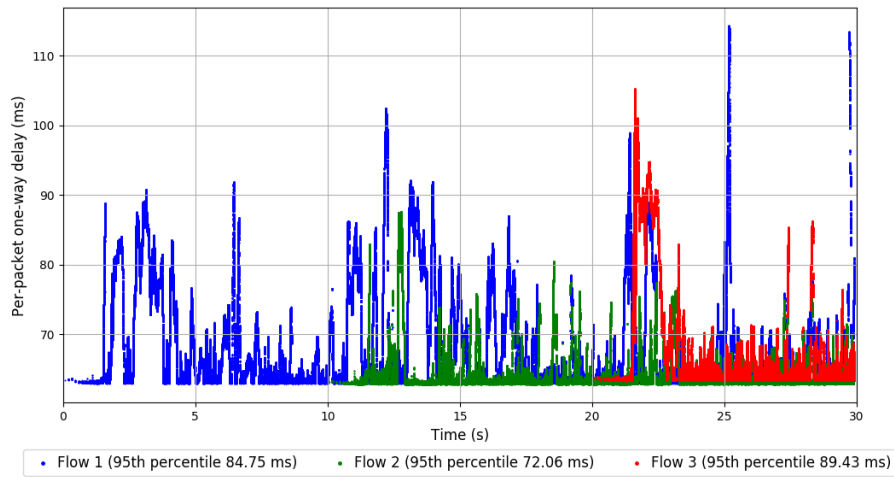
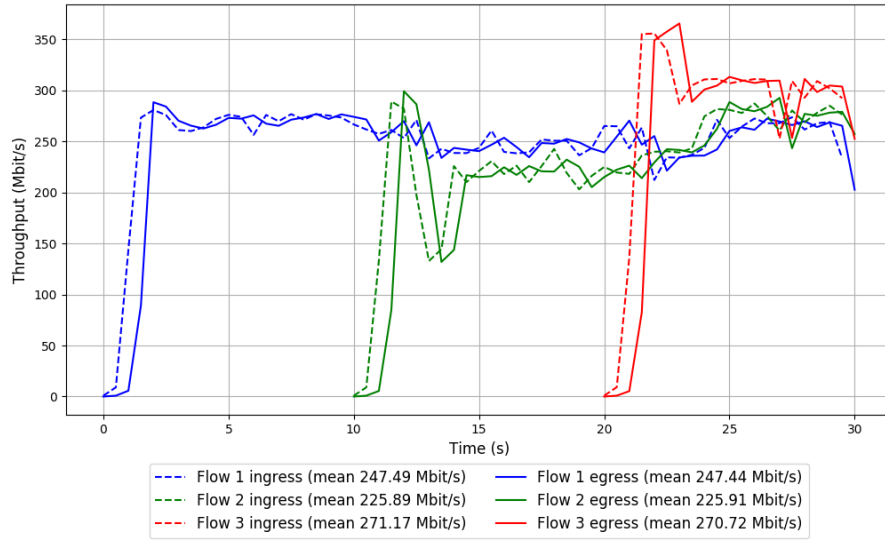
-- Flow 3:

Average throughput: 270.72 Mbit/s

95th percentile per-packet one-way delay: 89.432 ms

Loss rate: 1.44%

Run 4: Report of Copa — Data Link

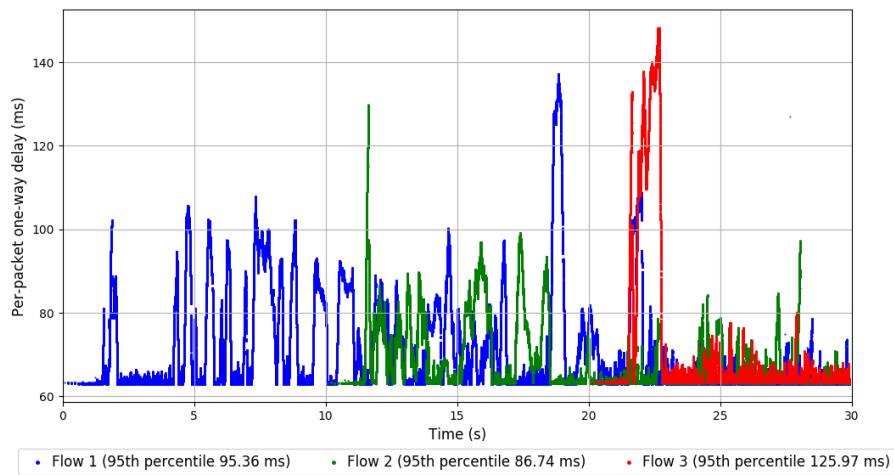
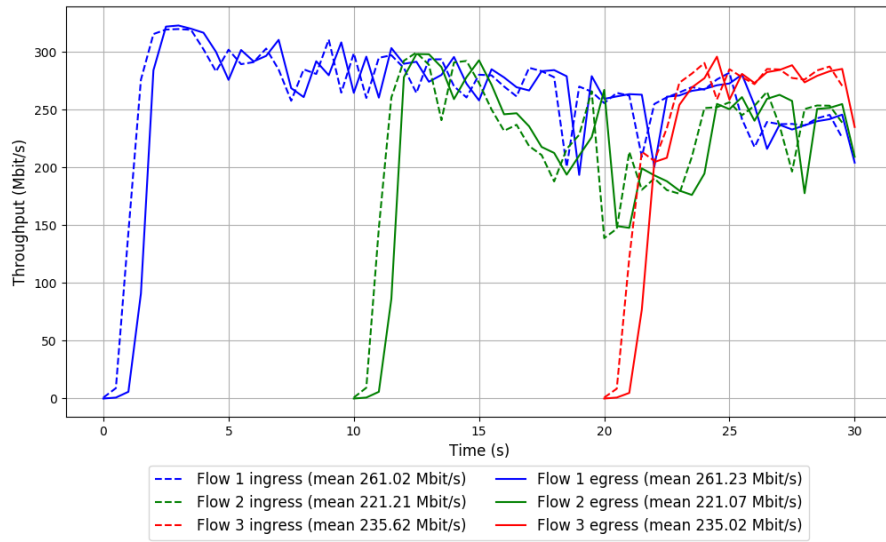


Run 5: Statistics of Copa

Start at: 2019-03-27 12:30:26
End at: 2019-03-27 12:30:56
Local clock offset: -0.113 ms
Remote clock offset: -0.402 ms

```
# Below is generated by plot.py at 2019-03-27 13:49:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 485.55 Mbit/s
95th percentile per-packet one-way delay: 93.806 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 261.23 Mbit/s
95th percentile per-packet one-way delay: 95.360 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 221.07 Mbit/s
95th percentile per-packet one-way delay: 86.741 ms
Loss rate: 0.70%
-- Flow 3:
Average throughput: 235.02 Mbit/s
95th percentile per-packet one-way delay: 125.967 ms
Loss rate: 1.54%
```

Run 5: Report of Copa — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2019-03-27 10:22:41
End at: 2019-03-27 10:23:11
Local clock offset: -0.15 ms
Remote clock offset: -0.153 ms

Below is generated by plot.py at 2019-03-27 13:49:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 875.21 Mbit/s
95th percentile per-packet one-way delay: 133.099 ms
Loss rate: 0.65%

-- Flow 1:

Average throughput: 451.99 Mbit/s
95th percentile per-packet one-way delay: 131.576 ms
Loss rate: 0.39%

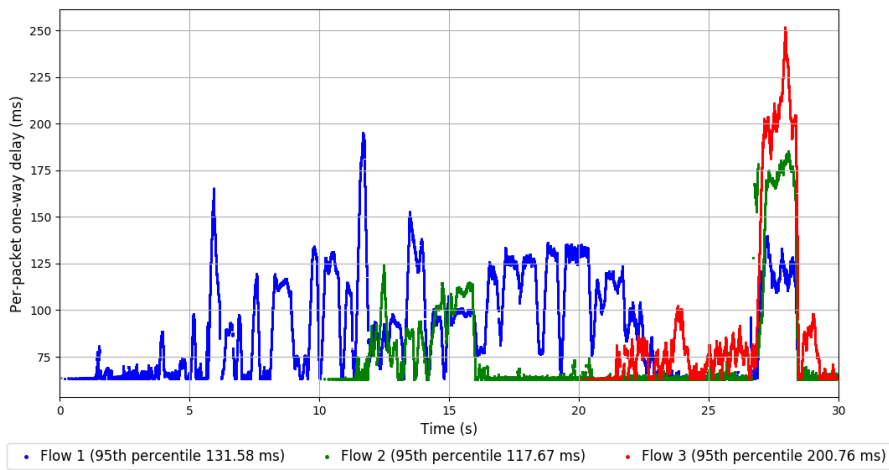
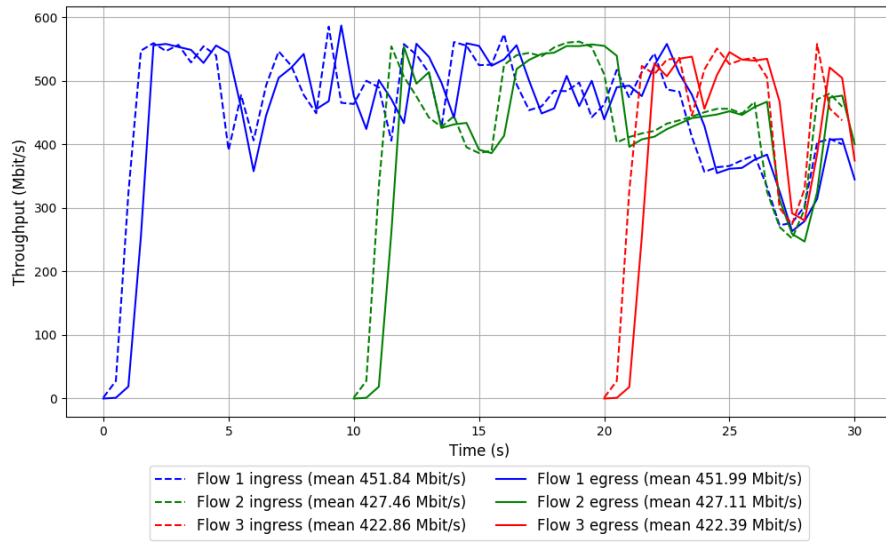
-- Flow 2:

Average throughput: 427.11 Mbit/s
95th percentile per-packet one-way delay: 117.670 ms
Loss rate: 0.71%

-- Flow 3:

Average throughput: 422.39 Mbit/s
95th percentile per-packet one-way delay: 200.762 ms
Loss rate: 1.37%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2019-03-27 10:59:08

End at: 2019-03-27 10:59:38

Local clock offset: -0.097 ms

Remote clock offset: 0.171 ms

Below is generated by plot.py at 2019-03-27 13:50:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 919.25 Mbit/s

95th percentile per-packet one-way delay: 130.341 ms

Loss rate: 0.58%

-- Flow 1:

Average throughput: 506.77 Mbit/s

95th percentile per-packet one-way delay: 151.975 ms

Loss rate: 0.41%

-- Flow 2:

Average throughput: 409.94 Mbit/s

95th percentile per-packet one-way delay: 129.797 ms

Loss rate: 0.45%

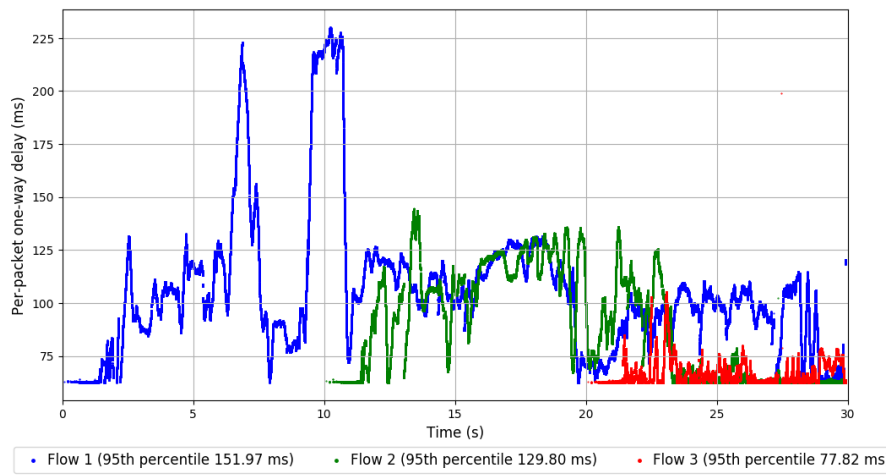
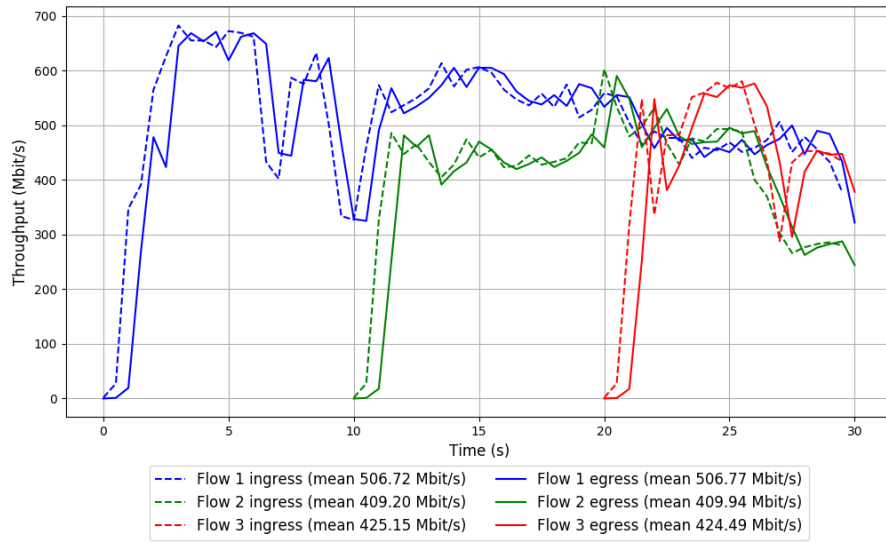
-- Flow 3:

Average throughput: 424.49 Mbit/s

95th percentile per-packet one-way delay: 77.824 ms

Loss rate: 1.43%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2019-03-27 11:35:46
End at: 2019-03-27 11:36:16
Local clock offset: -0.046 ms
Remote clock offset: -0.109 ms

Below is generated by plot.py at 2019-03-27 13:50:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 912.16 Mbit/s
95th percentile per-packet one-way delay: 98.819 ms
Loss rate: 0.64%

-- Flow 1:

Average throughput: 465.89 Mbit/s
95th percentile per-packet one-way delay: 97.795 ms
Loss rate: 0.33%

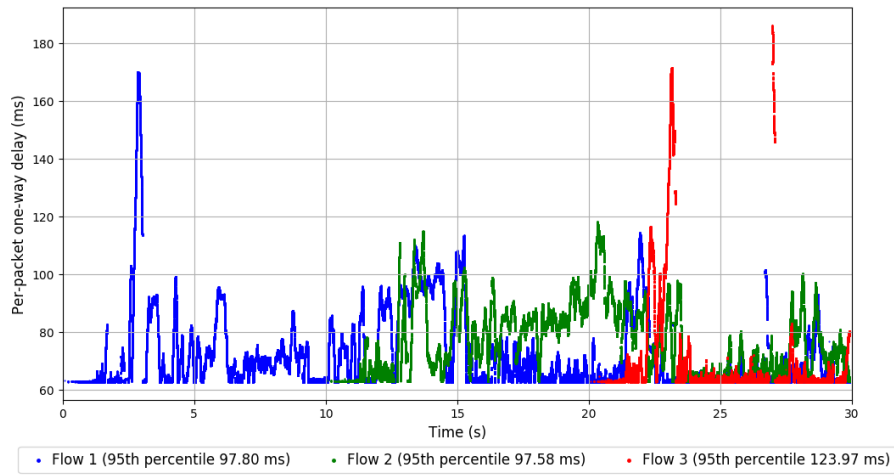
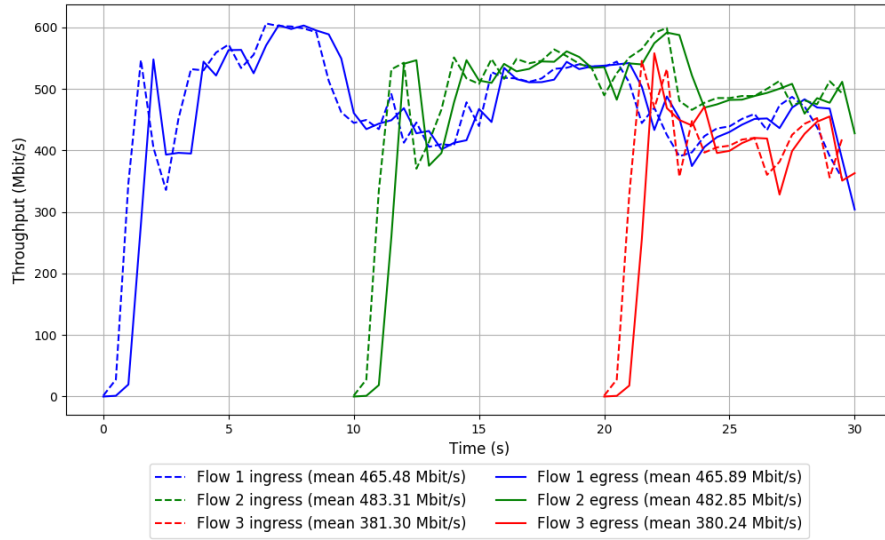
-- Flow 2:

Average throughput: 482.85 Mbit/s
95th percentile per-packet one-way delay: 97.576 ms
Loss rate: 0.72%

-- Flow 3:

Average throughput: 380.24 Mbit/s
95th percentile per-packet one-way delay: 123.975 ms
Loss rate: 1.53%

Run 3: Report of TCP Cubic — Data Link

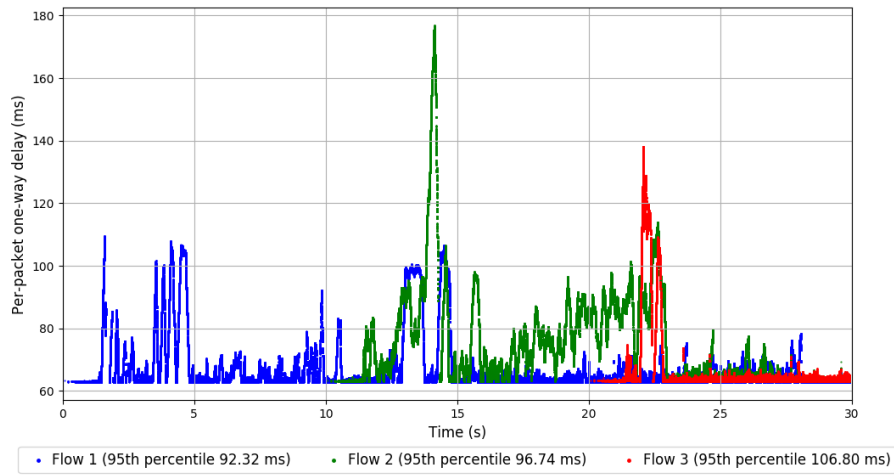
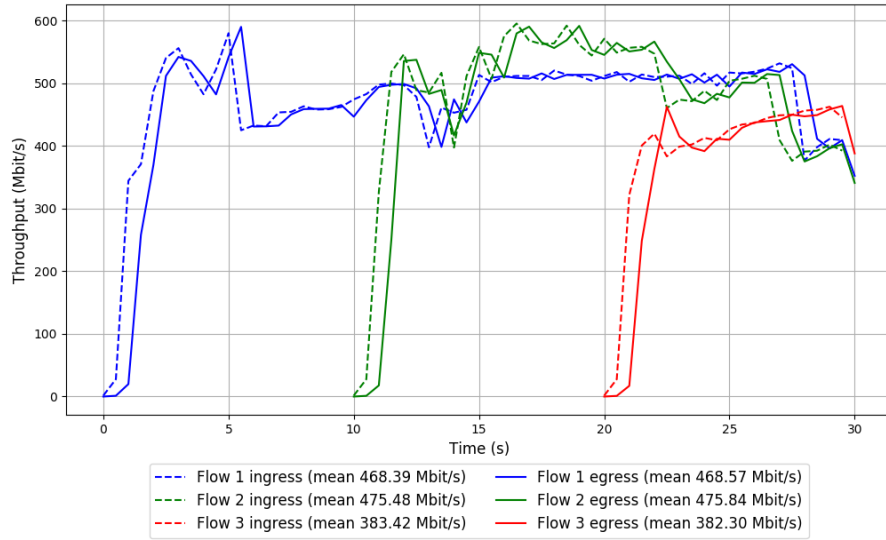


Run 4: Statistics of TCP Cubic

Start at: 2019-03-27 12:13:05
End at: 2019-03-27 12:13:35
Local clock offset: -0.11 ms
Remote clock offset: -0.271 ms

```
# Below is generated by plot.py at 2019-03-27 13:50:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 910.85 Mbit/s
95th percentile per-packet one-way delay: 96.304 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 468.57 Mbit/s
95th percentile per-packet one-way delay: 92.321 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 475.84 Mbit/s
95th percentile per-packet one-way delay: 96.736 ms
Loss rate: 0.55%
-- Flow 3:
Average throughput: 382.30 Mbit/s
95th percentile per-packet one-way delay: 106.800 ms
Loss rate: 1.56%
```

Run 4: Report of TCP Cubic — Data Link

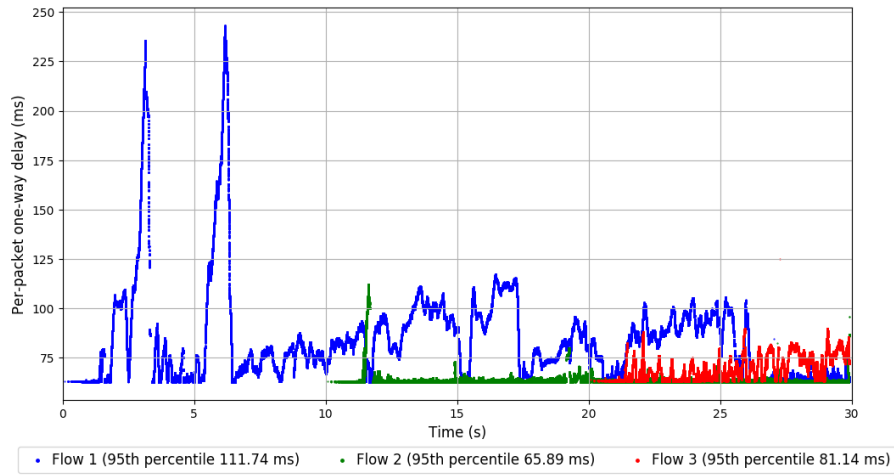
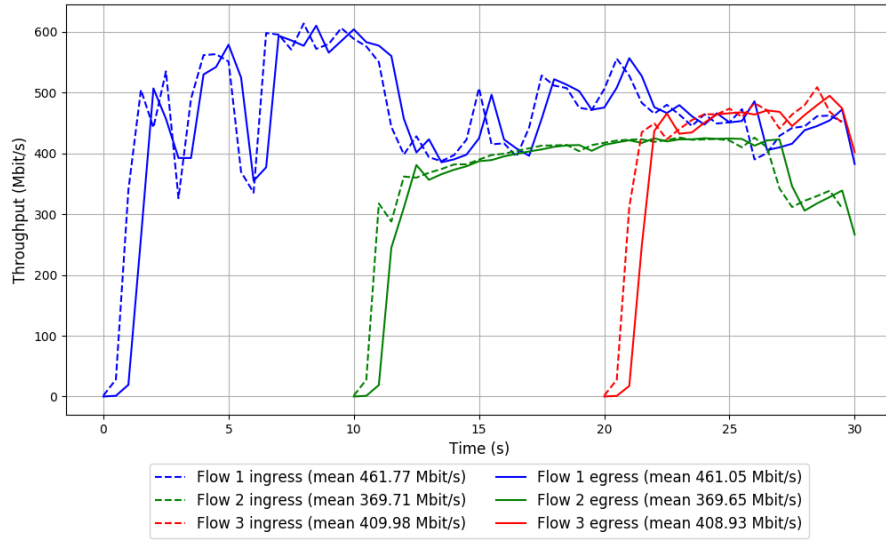


Run 5: Statistics of TCP Cubic

Start at: 2019-03-27 12:49:28
End at: 2019-03-27 12:49:58
Local clock offset: -0.173 ms
Remote clock offset: -0.049 ms

```
# Below is generated by plot.py at 2019-03-27 13:50:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 841.54 Mbit/s
95th percentile per-packet one-way delay: 103.457 ms
Loss rate: 0.74%
-- Flow 1:
Average throughput: 461.05 Mbit/s
95th percentile per-packet one-way delay: 111.740 ms
Loss rate: 0.58%
-- Flow 2:
Average throughput: 369.65 Mbit/s
95th percentile per-packet one-way delay: 65.889 ms
Loss rate: 0.60%
-- Flow 3:
Average throughput: 408.93 Mbit/s
95th percentile per-packet one-way delay: 81.140 ms
Loss rate: 1.53%
```

Run 5: Report of TCP Cubic — Data Link



Run 1: Statistics of FillP

Start at: 2019-03-27 10:20:51
End at: 2019-03-27 10:21:21
Local clock offset: -0.073 ms
Remote clock offset: -0.095 ms

Below is generated by plot.py at 2019-03-27 13:54:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 864.28 Mbit/s
95th percentile per-packet one-way delay: 114.685 ms
Loss rate: 1.31%

-- Flow 1:

Average throughput: 549.37 Mbit/s
95th percentile per-packet one-way delay: 119.319 ms
Loss rate: 1.65%

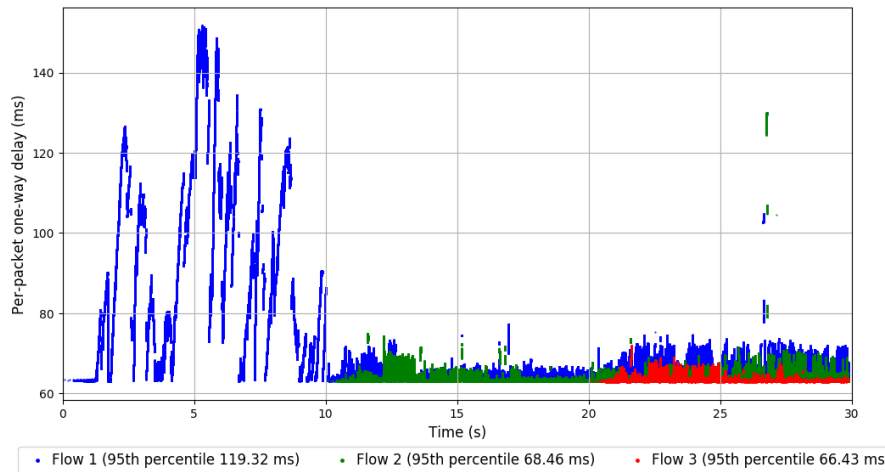
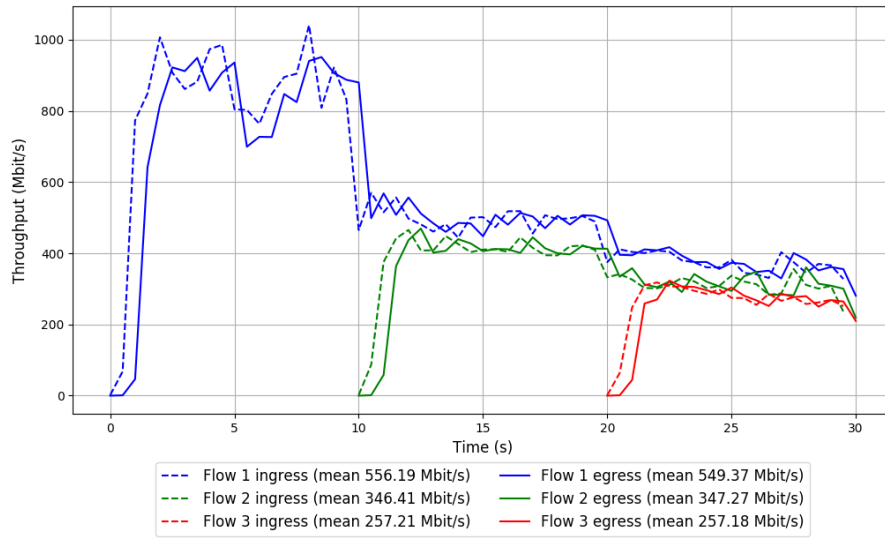
-- Flow 2:

Average throughput: 347.27 Mbit/s
95th percentile per-packet one-way delay: 68.461 ms
Loss rate: 0.45%

-- Flow 3:

Average throughput: 257.18 Mbit/s
95th percentile per-packet one-way delay: 66.431 ms
Loss rate: 1.46%

Run 1: Report of FillP — Data Link



Run 2: Statistics of FillP

Start at: 2019-03-27 10:57:18
End at: 2019-03-27 10:57:48
Local clock offset: -0.117 ms
Remote clock offset: -0.056 ms

Below is generated by plot.py at 2019-03-27 14:07:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 892.51 Mbit/s
95th percentile per-packet one-way delay: 109.039 ms
Loss rate: 1.03%

-- Flow 1:

Average throughput: 554.45 Mbit/s
95th percentile per-packet one-way delay: 115.806 ms
Loss rate: 1.14%

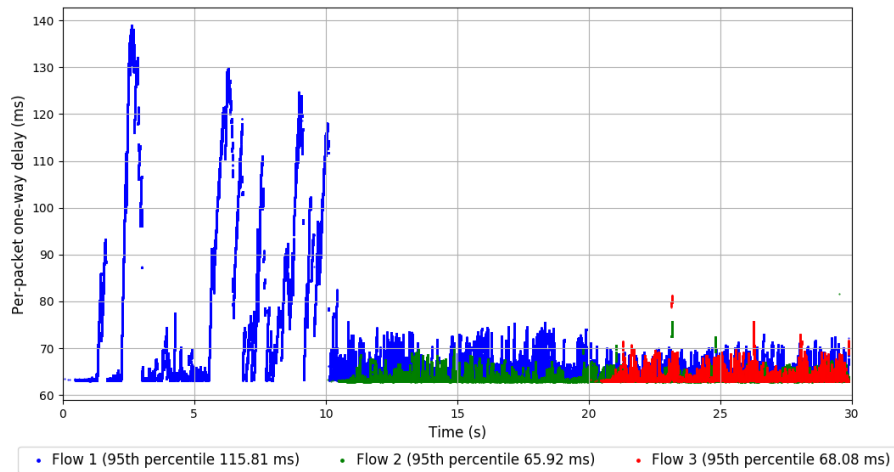
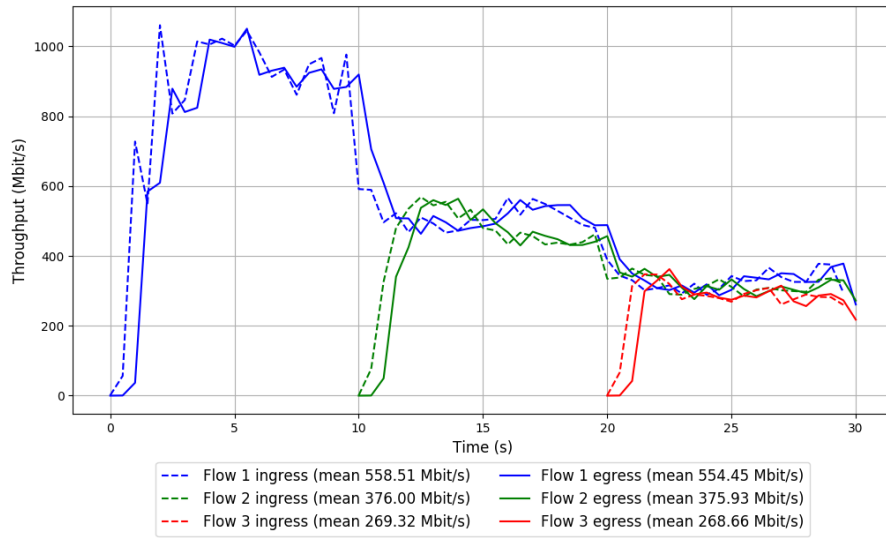
-- Flow 2:

Average throughput: 375.93 Mbit/s
95th percentile per-packet one-way delay: 65.923 ms
Loss rate: 0.59%

-- Flow 3:

Average throughput: 268.66 Mbit/s
95th percentile per-packet one-way delay: 68.076 ms
Loss rate: 1.61%

Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2019-03-27 11:33:56
End at: 2019-03-27 11:34:26
Local clock offset: 0.003 ms
Remote clock offset: -0.223 ms

Below is generated by plot.py at 2019-03-27 14:07:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 806.13 Mbit/s
95th percentile per-packet one-way delay: 92.408 ms
Loss rate: 0.52%

-- Flow 1:

Average throughput: 502.52 Mbit/s
95th percentile per-packet one-way delay: 102.073 ms
Loss rate: 0.38%

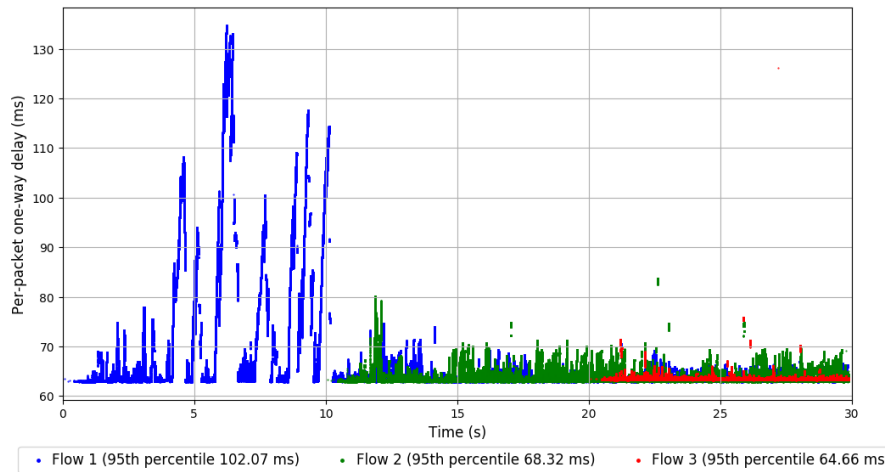
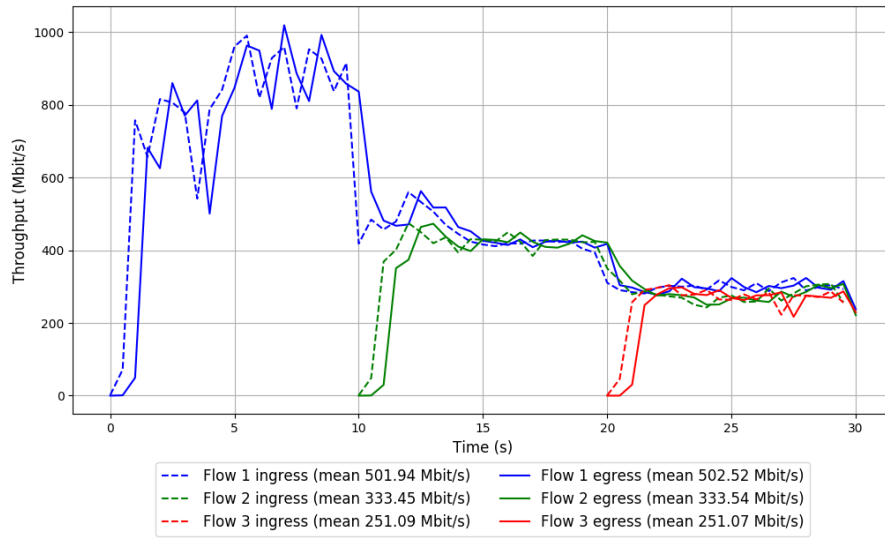
-- Flow 2:

Average throughput: 333.54 Mbit/s
95th percentile per-packet one-way delay: 68.317 ms
Loss rate: 0.54%

-- Flow 3:

Average throughput: 251.07 Mbit/s
95th percentile per-packet one-way delay: 64.659 ms
Loss rate: 1.36%

Run 3: Report of FillP — Data Link



Run 4: Statistics of FillP

Start at: 2019-03-27 12:11:16
End at: 2019-03-27 12:11:46
Local clock offset: -0.07 ms
Remote clock offset: -0.219 ms

Below is generated by plot.py at 2019-03-27 14:07:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 826.78 Mbit/s
95th percentile per-packet one-way delay: 97.531 ms
Loss rate: 0.69%

-- Flow 1:

Average throughput: 521.55 Mbit/s
95th percentile per-packet one-way delay: 105.486 ms
Loss rate: 0.58%

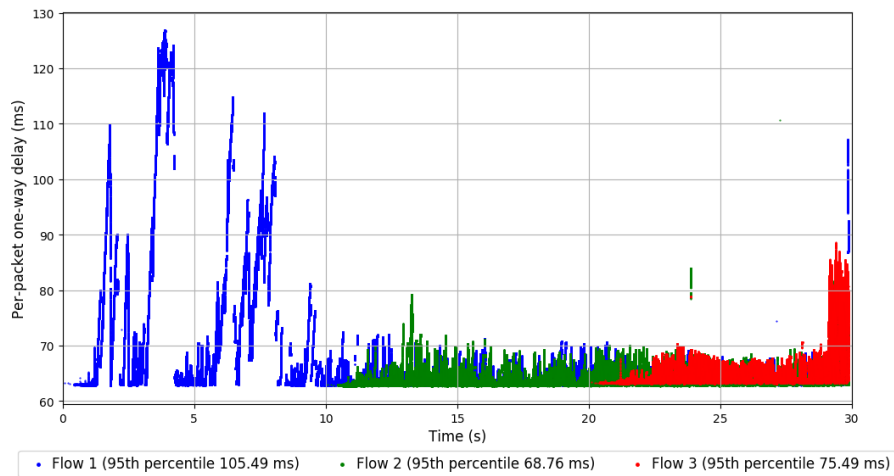
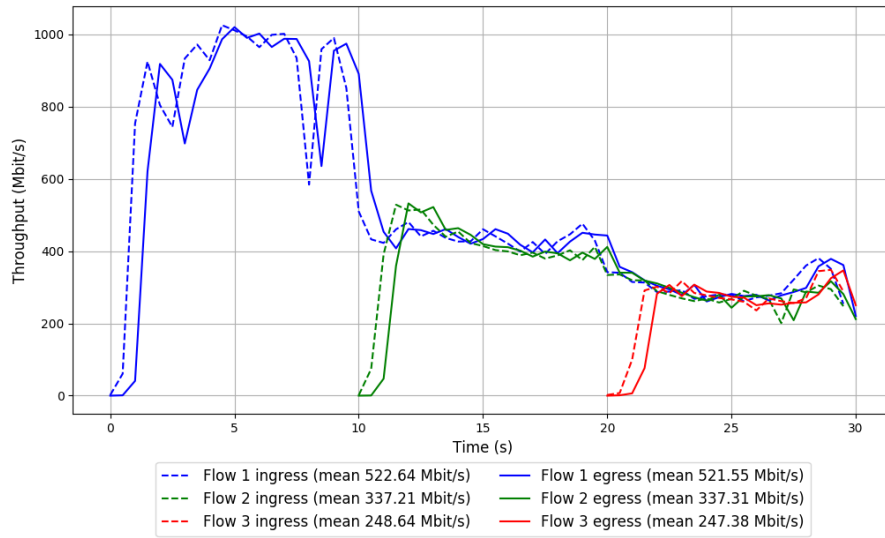
-- Flow 2:

Average throughput: 337.31 Mbit/s
95th percentile per-packet one-way delay: 68.757 ms
Loss rate: 0.56%

-- Flow 3:

Average throughput: 247.38 Mbit/s
95th percentile per-packet one-way delay: 75.487 ms
Loss rate: 1.78%

Run 4: Report of FillP — Data Link



Run 5: Statistics of FillP

Start at: 2019-03-27 12:47:37
End at: 2019-03-27 12:48:07
Local clock offset: -0.114 ms
Remote clock offset: -0.179 ms

Below is generated by plot.py at 2019-03-27 14:07:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 837.12 Mbit/s
95th percentile per-packet one-way delay: 93.410 ms
Loss rate: 0.53%

-- Flow 1:

Average throughput: 524.29 Mbit/s
95th percentile per-packet one-way delay: 93.721 ms
Loss rate: 0.49%

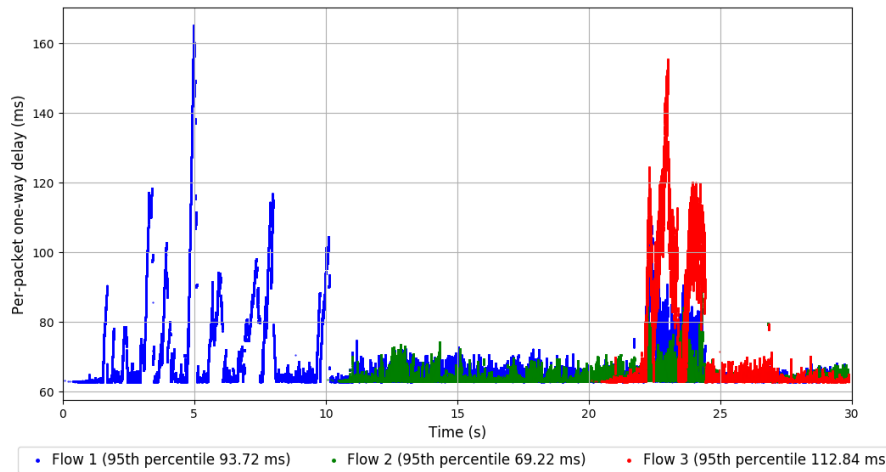
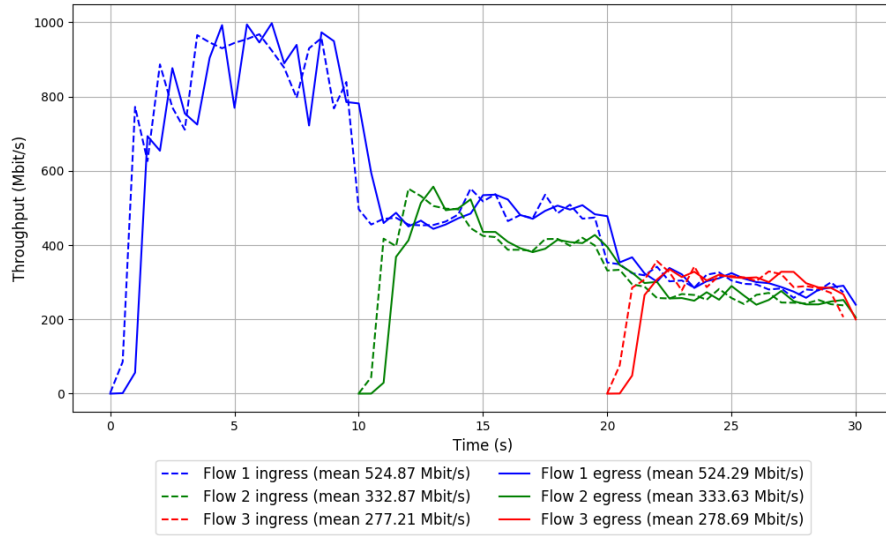
-- Flow 2:

Average throughput: 333.63 Mbit/s
95th percentile per-packet one-way delay: 69.221 ms
Loss rate: 0.50%

-- Flow 3:

Average throughput: 278.69 Mbit/s
95th percentile per-packet one-way delay: 112.843 ms
Loss rate: 0.82%

Run 5: Report of FillP — Data Link

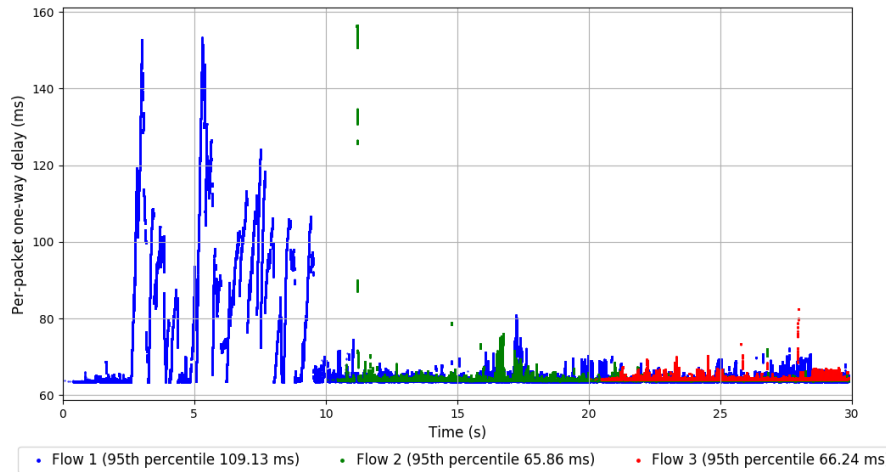
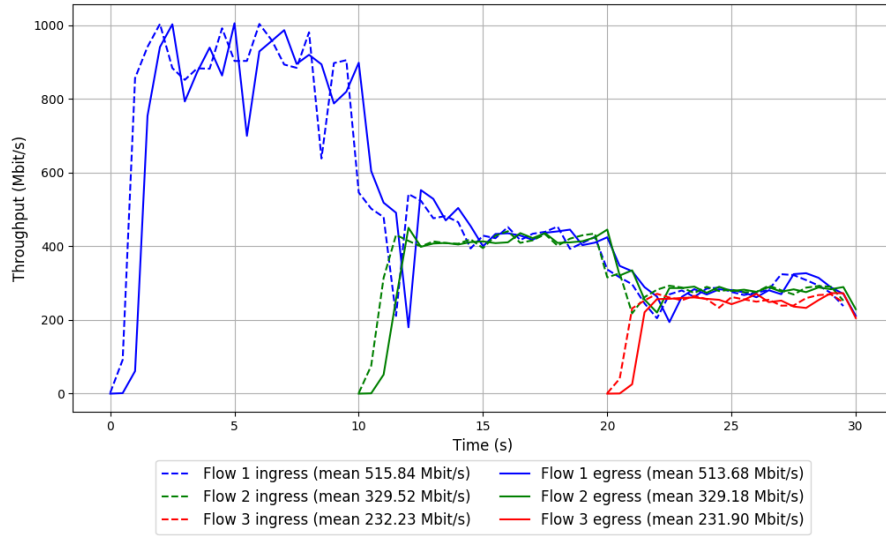


Run 1: Statistics of FillP-Sheep

Start at: 2019-03-27 10:28:37
End at: 2019-03-27 10:29:07
Local clock offset: -0.076 ms
Remote clock offset: -0.519 ms

Below is generated by plot.py at 2019-03-27 14:07:28
Datalink statistics
-- Total of 3 flows:
Average throughput: 808.30 Mbit/s
95th percentile per-packet one-way delay: 103.966 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 513.68 Mbit/s
95th percentile per-packet one-way delay: 109.128 ms
Loss rate: 0.85%
-- Flow 2:
Average throughput: 329.18 Mbit/s
95th percentile per-packet one-way delay: 65.861 ms
Loss rate: 0.68%
-- Flow 3:
Average throughput: 231.90 Mbit/s
95th percentile per-packet one-way delay: 66.242 ms
Loss rate: 1.63%

Run 1: Report of FillP-Sheep — Data Link



Run 2: Statistics of FillP-Sheep

Start at: 2019-03-27 11:05:05

End at: 2019-03-27 11:05:35

Local clock offset: -0.097 ms

Remote clock offset: 0.003 ms

Below is generated by plot.py at 2019-03-27 14:07:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 816.17 Mbit/s

95th percentile per-packet one-way delay: 102.038 ms

Loss rate: 0.56%

-- Flow 1:

Average throughput: 512.14 Mbit/s

95th percentile per-packet one-way delay: 108.057 ms

Loss rate: 0.40%

-- Flow 2:

Average throughput: 333.50 Mbit/s

95th percentile per-packet one-way delay: 67.460 ms

Loss rate: 0.57%

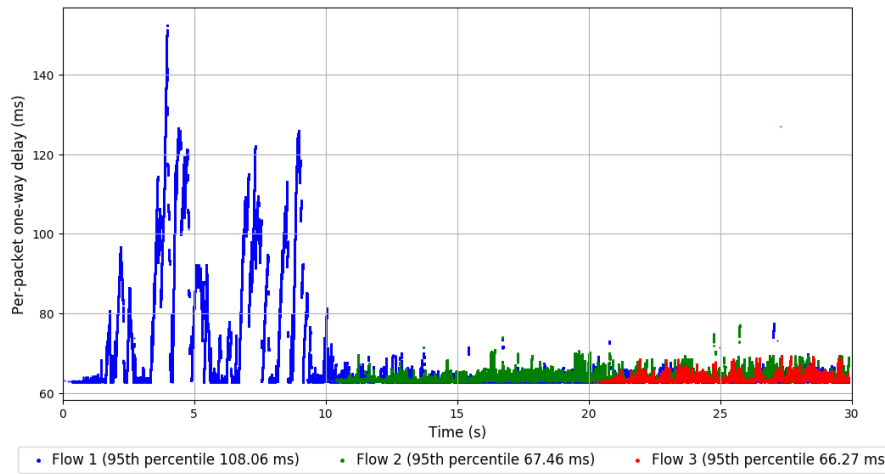
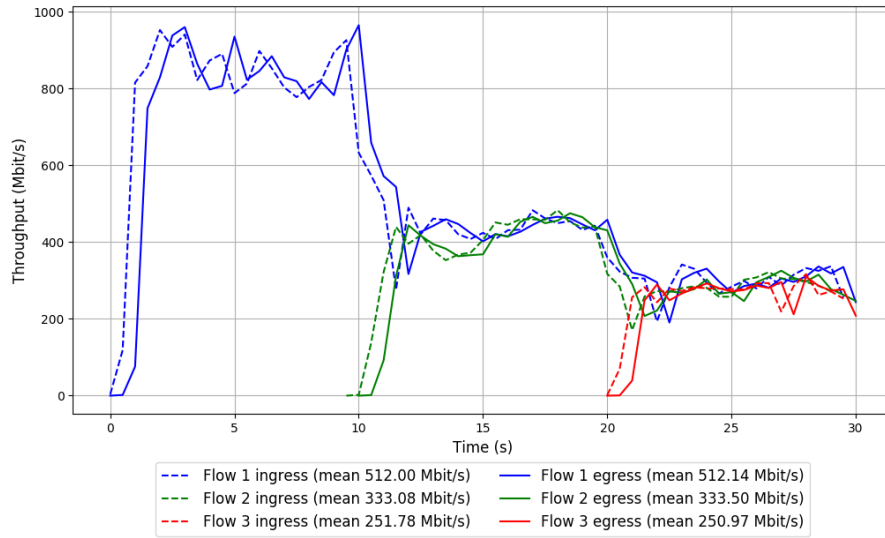
-- Flow 3:

Average throughput: 250.97 Mbit/s

95th percentile per-packet one-way delay: 66.271 ms

Loss rate: 1.48%

Run 2: Report of FillP-Sheep — Data Link

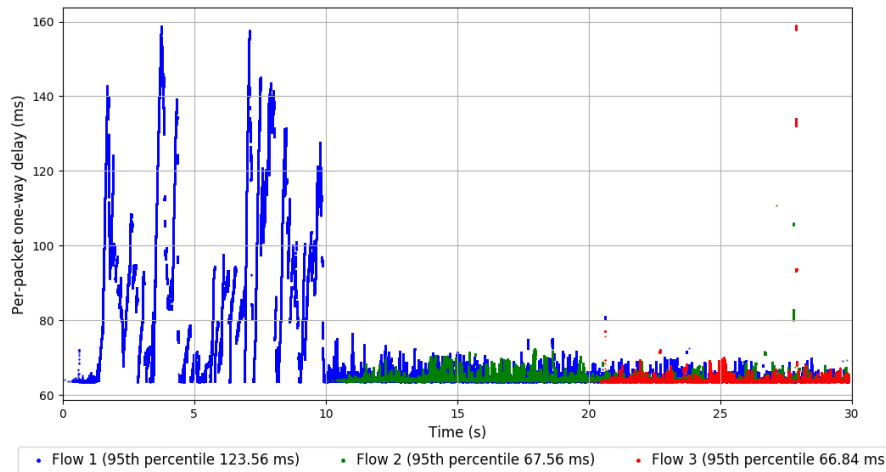
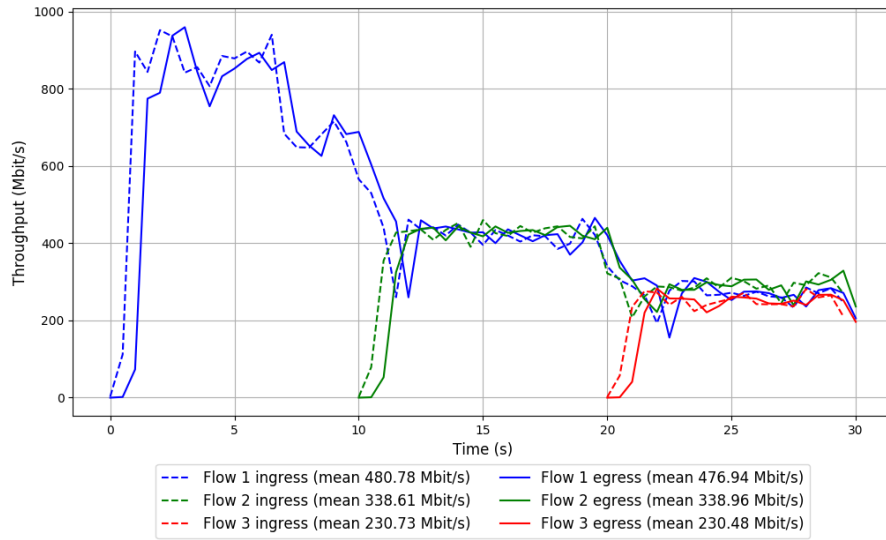


Run 3: Statistics of FillP-Sheep

Start at: 2019-03-27 11:42:04
End at: 2019-03-27 11:42:34
Local clock offset: -0.011 ms
Remote clock offset: -0.643 ms

```
# Below is generated by plot.py at 2019-03-27 14:07:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 777.58 Mbit/s
95th percentile per-packet one-way delay: 112.087 ms
Loss rate: 1.03%
-- Flow 1:
Average throughput: 476.94 Mbit/s
95th percentile per-packet one-way delay: 123.565 ms
Loss rate: 1.22%
-- Flow 2:
Average throughput: 338.96 Mbit/s
95th percentile per-packet one-way delay: 67.562 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 230.48 Mbit/s
95th percentile per-packet one-way delay: 66.845 ms
Loss rate: 1.19%
```

Run 3: Report of FillP-Sheep — Data Link

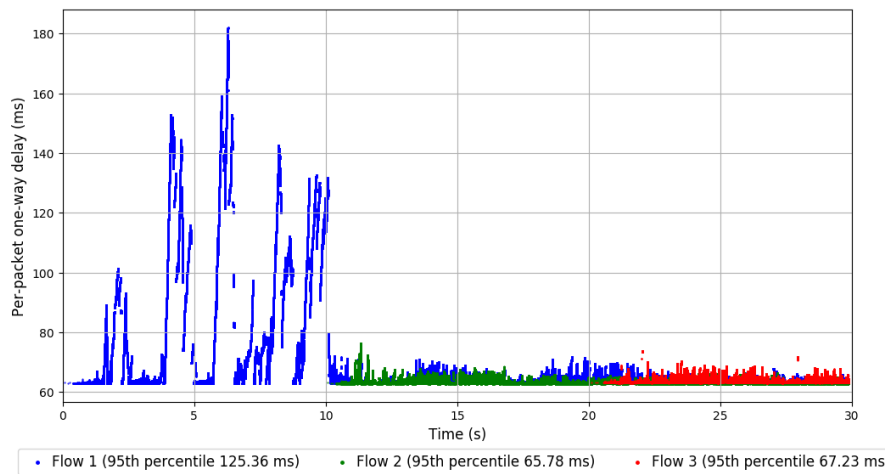
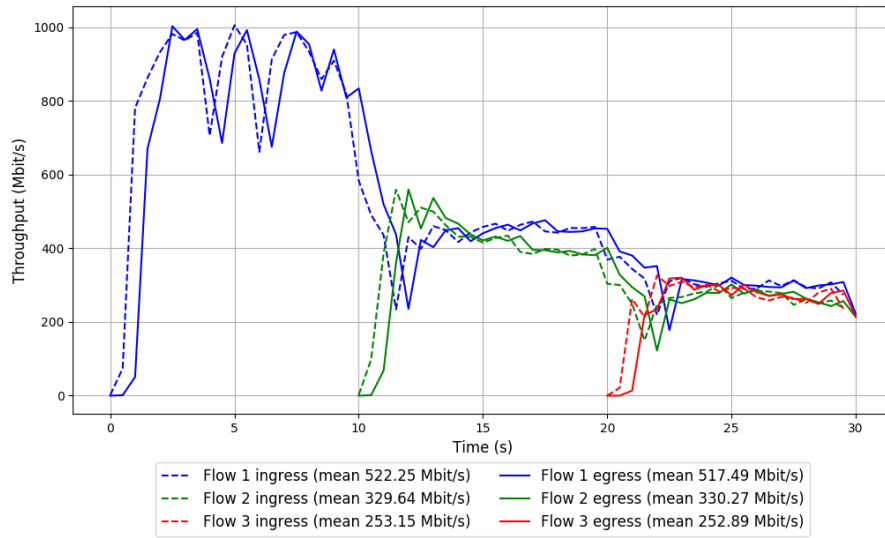


Run 4: Statistics of FillP-Sheep

Start at: 2019-03-27 12:18:56
End at: 2019-03-27 12:19:26
Local clock offset: -0.103 ms
Remote clock offset: -0.295 ms

```
# Below is generated by plot.py at 2019-03-27 14:12:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 819.48 Mbit/s
95th percentile per-packet one-way delay: 114.091 ms
Loss rate: 1.13%
-- Flow 1:
Average throughput: 517.49 Mbit/s
95th percentile per-packet one-way delay: 125.356 ms
Loss rate: 1.38%
-- Flow 2:
Average throughput: 330.27 Mbit/s
95th percentile per-packet one-way delay: 65.781 ms
Loss rate: 0.48%
-- Flow 3:
Average throughput: 252.89 Mbit/s
95th percentile per-packet one-way delay: 67.228 ms
Loss rate: 1.25%
```

Run 4: Report of FillP-Sheep — Data Link



Run 5: Statistics of FillP-Sheep

Start at: 2019-03-27 12:55:23
End at: 2019-03-27 12:55:53
Local clock offset: -0.11 ms
Remote clock offset: -0.019 ms

Below is generated by plot.py at 2019-03-27 14:22:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 773.95 Mbit/s
95th percentile per-packet one-way delay: 93.854 ms
Loss rate: 0.63%

-- Flow 1:

Average throughput: 490.32 Mbit/s
95th percentile per-packet one-way delay: 98.584 ms
Loss rate: 0.53%

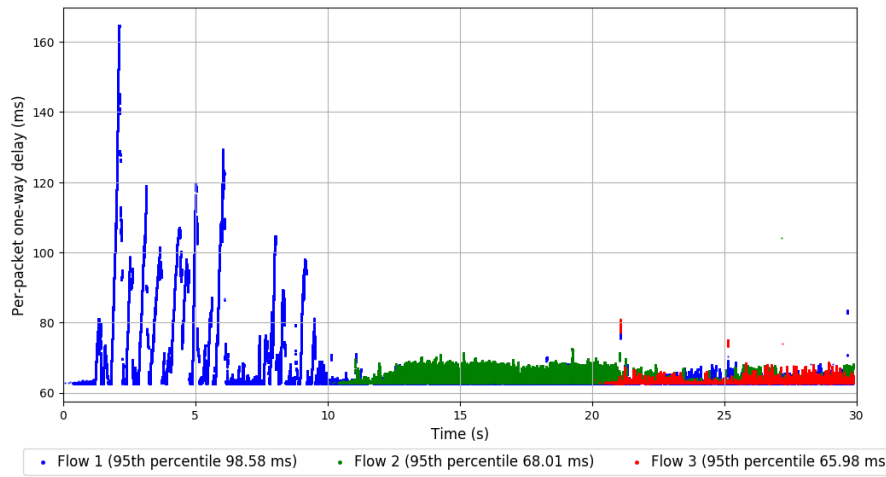
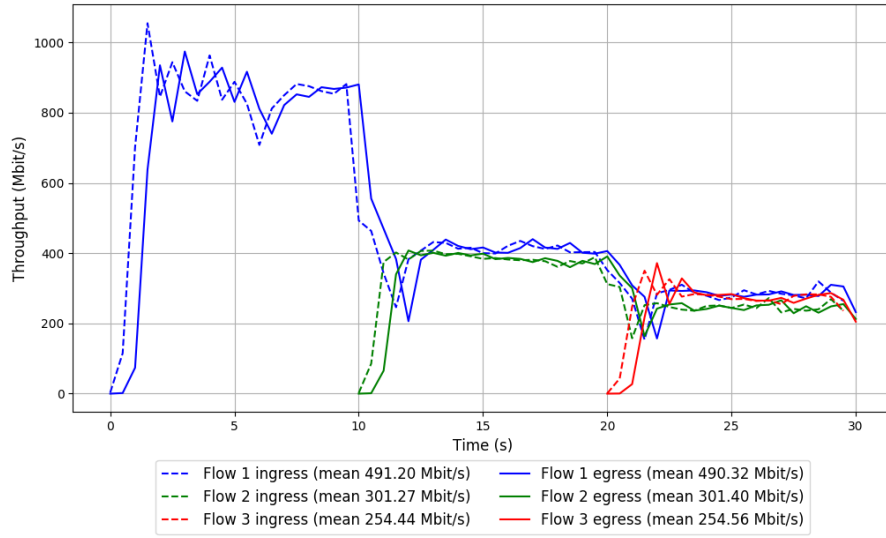
-- Flow 2:

Average throughput: 301.40 Mbit/s
95th percentile per-packet one-way delay: 68.006 ms
Loss rate: 0.54%

-- Flow 3:

Average throughput: 254.56 Mbit/s
95th percentile per-packet one-way delay: 65.982 ms
Loss rate: 1.39%

Run 5: Report of FillP-Sheep — Data Link



Run 1: Statistics of Indigo

Start at: 2019-03-27 10:19:03
End at: 2019-03-27 10:19:33
Local clock offset: -0.09 ms
Remote clock offset: -0.085 ms

Below is generated by plot.py at 2019-03-27 14:22:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 395.05 Mbit/s
95th percentile per-packet one-way delay: 65.632 ms
Loss rate: 0.60%

-- Flow 1:

Average throughput: 210.00 Mbit/s
95th percentile per-packet one-way delay: 65.026 ms
Loss rate: 0.39%

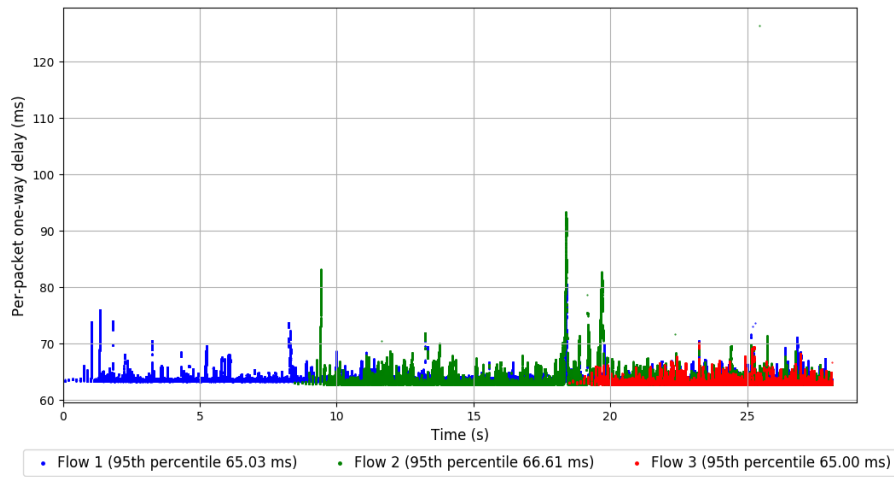
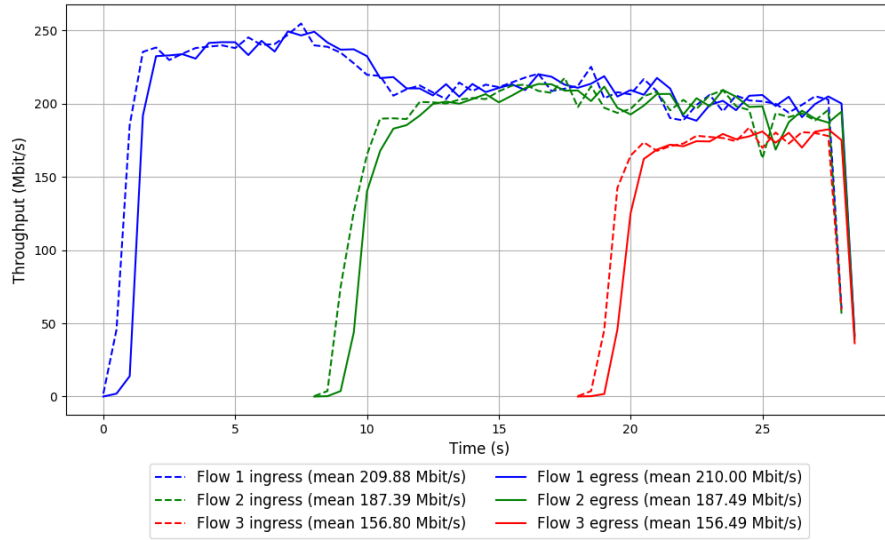
-- Flow 2:

Average throughput: 187.49 Mbit/s
95th percentile per-packet one-way delay: 66.612 ms
Loss rate: 0.59%

-- Flow 3:

Average throughput: 156.49 Mbit/s
95th percentile per-packet one-way delay: 64.999 ms
Loss rate: 1.47%

Run 1: Report of Indigo — Data Link



Run 2: Statistics of Indigo

Start at: 2019-03-27 10:55:30

End at: 2019-03-27 10:56:00

Local clock offset: -0.116 ms

Remote clock offset: -0.84 ms

Below is generated by plot.py at 2019-03-27 14:22:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 360.68 Mbit/s

95th percentile per-packet one-way delay: 66.614 ms

Loss rate: 0.66%

-- Flow 1:

Average throughput: 191.73 Mbit/s

95th percentile per-packet one-way delay: 66.672 ms

Loss rate: 0.42%

-- Flow 2:

Average throughput: 176.96 Mbit/s

95th percentile per-packet one-way delay: 66.971 ms

Loss rate: 0.70%

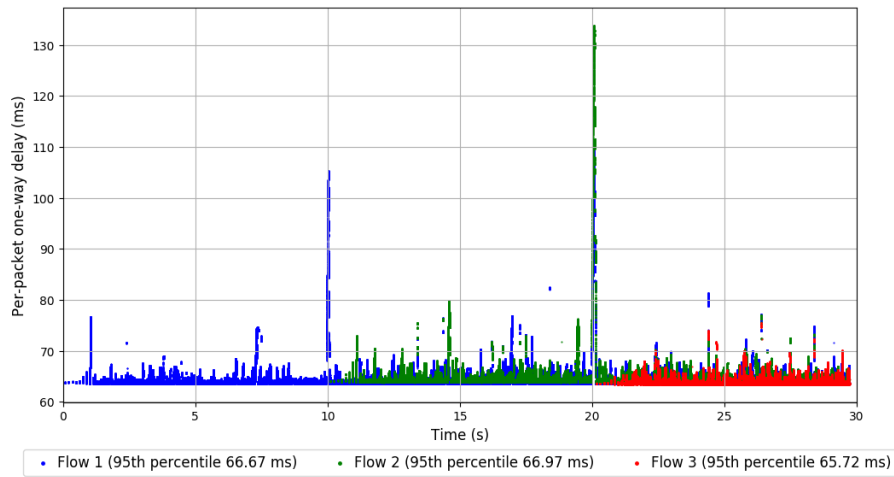
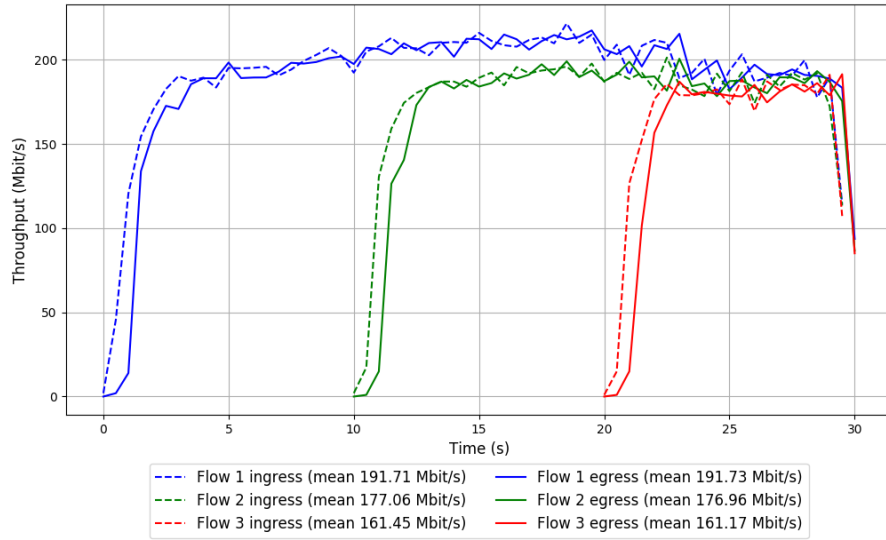
-- Flow 3:

Average throughput: 161.17 Mbit/s

95th percentile per-packet one-way delay: 65.722 ms

Loss rate: 1.48%

Run 2: Report of Indigo — Data Link



Run 3: Statistics of Indigo

Start at: 2019-03-27 11:32:02
End at: 2019-03-27 11:32:32
Local clock offset: -0.032 ms
Remote clock offset: -0.048 ms

Below is generated by plot.py at 2019-03-27 14:22:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 381.78 Mbit/s
95th percentile per-packet one-way delay: 66.488 ms
Loss rate: 0.69%

-- Flow 1:

Average throughput: 204.90 Mbit/s
95th percentile per-packet one-way delay: 67.292 ms
Loss rate: 0.44%

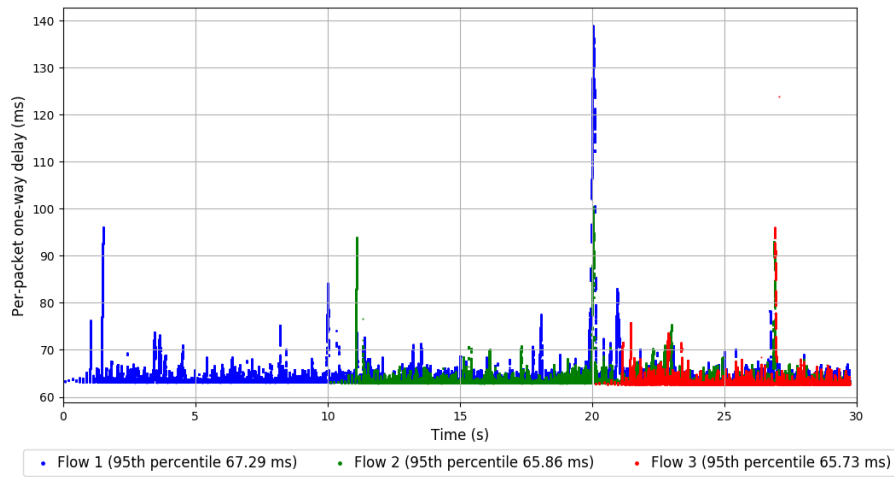
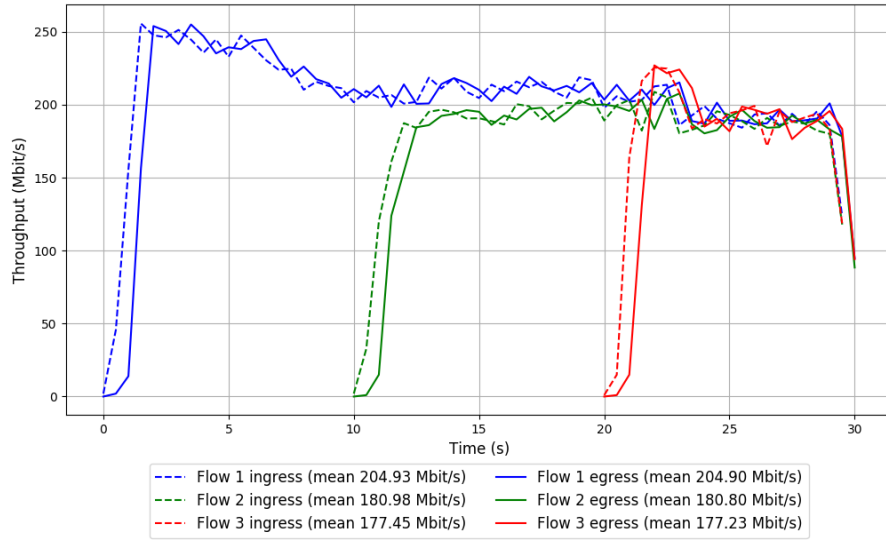
-- Flow 2:

Average throughput: 180.80 Mbit/s
95th percentile per-packet one-way delay: 65.859 ms
Loss rate: 0.74%

-- Flow 3:

Average throughput: 177.23 Mbit/s
95th percentile per-packet one-way delay: 65.732 ms
Loss rate: 1.45%

Run 3: Report of Indigo — Data Link



Run 4: Statistics of Indigo

Start at: 2019-03-27 12:09:28
End at: 2019-03-27 12:09:58
Local clock offset: -0.094 ms
Remote clock offset: -0.274 ms

Below is generated by plot.py at 2019-03-27 14:22:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 358.64 Mbit/s
95th percentile per-packet one-way delay: 65.663 ms
Loss rate: 0.61%

-- Flow 1:

Average throughput: 188.28 Mbit/s
95th percentile per-packet one-way delay: 65.383 ms
Loss rate: 0.39%

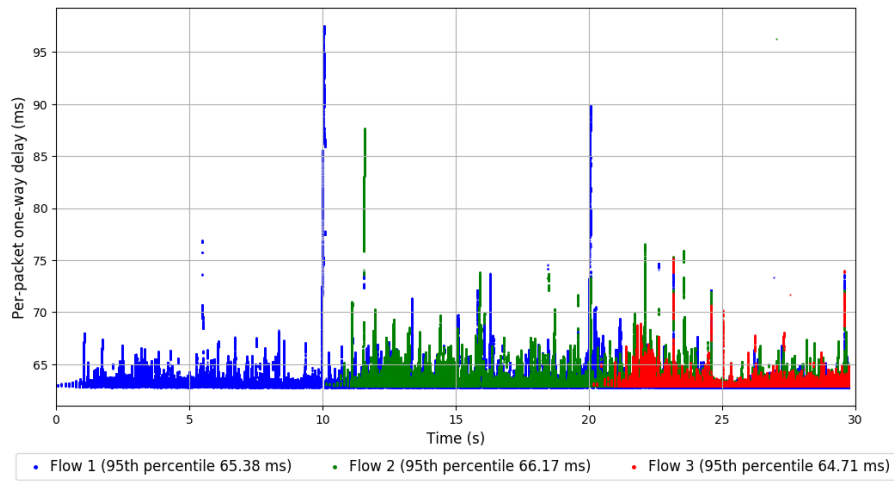
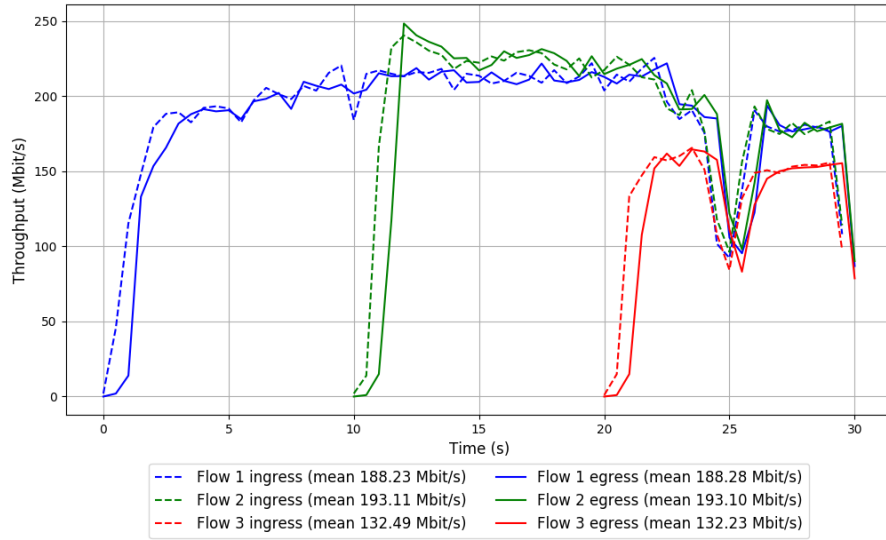
-- Flow 2:

Average throughput: 193.10 Mbit/s
95th percentile per-packet one-way delay: 66.166 ms
Loss rate: 0.63%

-- Flow 3:

Average throughput: 132.23 Mbit/s
95th percentile per-packet one-way delay: 64.712 ms
Loss rate: 1.49%

Run 4: Report of Indigo — Data Link



Run 5: Statistics of Indigo

Start at: 2019-03-27 12:45:42
End at: 2019-03-27 12:46:12
Local clock offset: -0.133 ms
Remote clock offset: -0.069 ms

Below is generated by plot.py at 2019-03-27 14:22:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 374.26 Mbit/s
95th percentile per-packet one-way delay: 67.714 ms
Loss rate: 0.64%

-- Flow 1:

Average throughput: 205.48 Mbit/s
95th percentile per-packet one-way delay: 67.951 ms
Loss rate: 0.42%

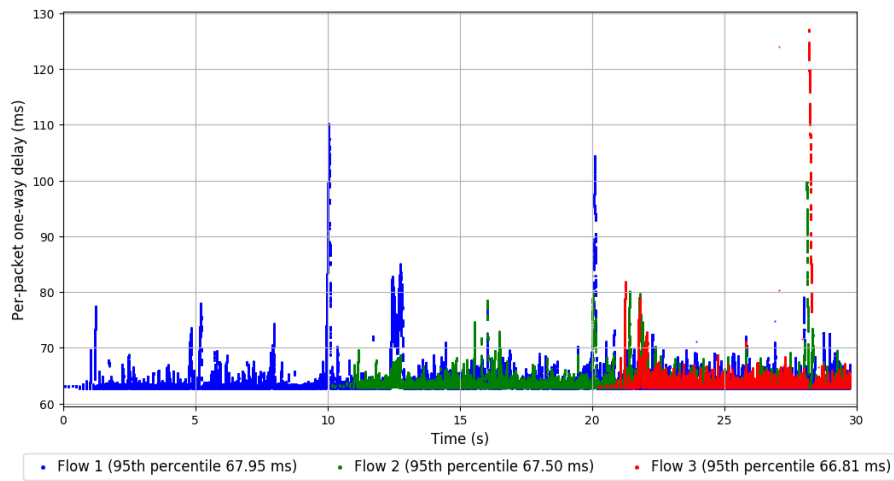
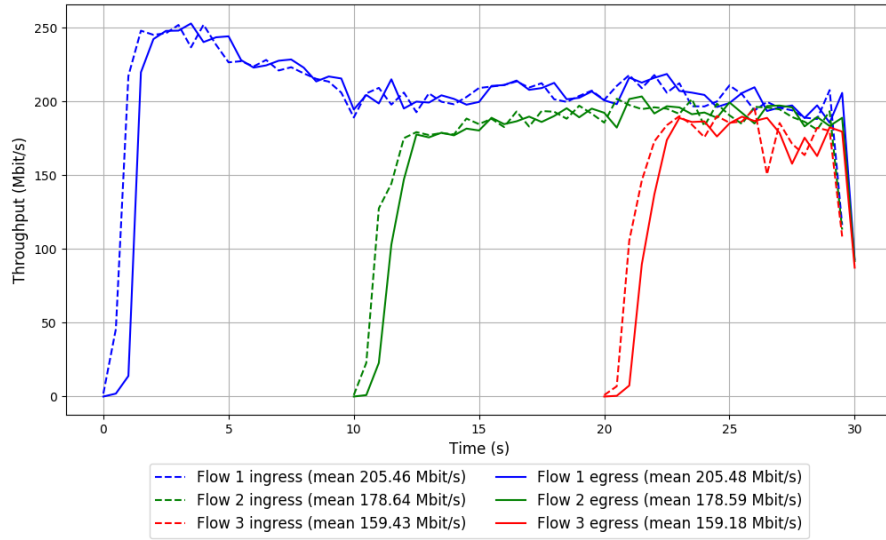
-- Flow 2:

Average throughput: 178.59 Mbit/s
95th percentile per-packet one-way delay: 67.500 ms
Loss rate: 0.67%

-- Flow 3:

Average throughput: 159.18 Mbit/s
95th percentile per-packet one-way delay: 66.807 ms
Loss rate: 1.49%

Run 5: Report of Indigo — Data Link



Run 1: Statistics of Indigo-MusesC3

Start at: 2019-03-27 10:13:40

End at: 2019-03-27 10:14:10

Local clock offset: -0.13 ms

Remote clock offset: 0.086 ms

Below is generated by plot.py at 2019-03-27 14:22:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 696.58 Mbit/s

95th percentile per-packet one-way delay: 69.952 ms

Loss rate: 0.59%

-- Flow 1:

Average throughput: 405.59 Mbit/s

95th percentile per-packet one-way delay: 71.750 ms

Loss rate: 0.37%

-- Flow 2:

Average throughput: 342.92 Mbit/s

95th percentile per-packet one-way delay: 68.414 ms

Loss rate: 0.66%

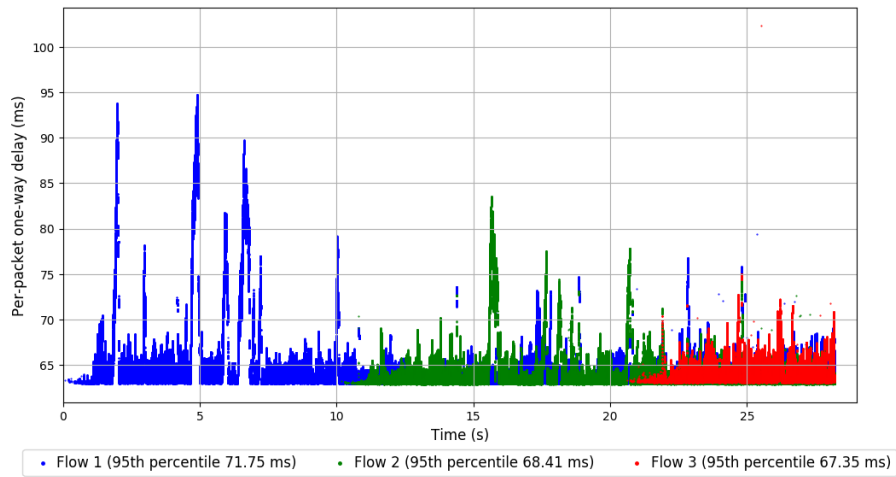
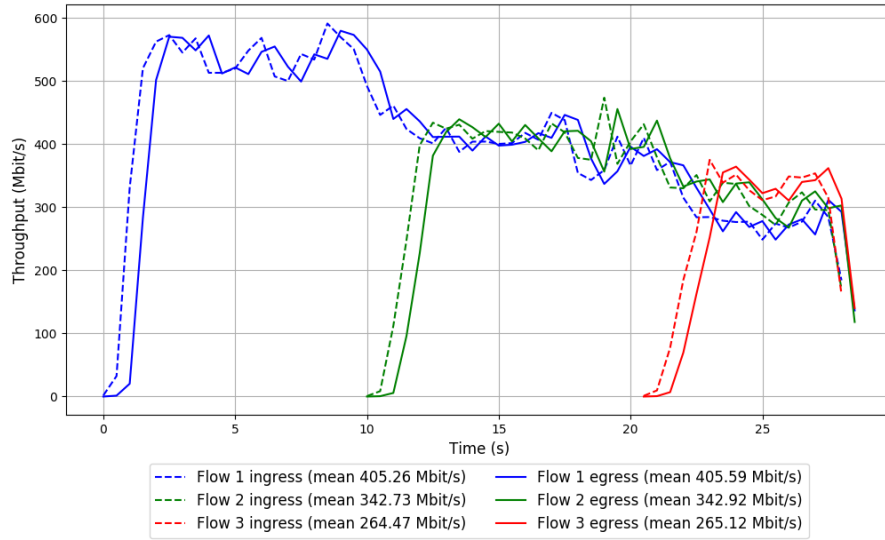
-- Flow 3:

Average throughput: 265.12 Mbit/s

95th percentile per-packet one-way delay: 67.352 ms

Loss rate: 1.59%

Run 1: Report of Indigo-MusesC3 — Data Link



Run 2: Statistics of Indigo-MusesC3

Start at: 2019-03-27 10:50:04
End at: 2019-03-27 10:50:34
Local clock offset: -0.099 ms
Remote clock offset: -0.106 ms

Below is generated by plot.py at 2019-03-27 14:26:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 709.90 Mbit/s
95th percentile per-packet one-way delay: 84.372 ms
Loss rate: 0.61%

-- Flow 1:

Average throughput: 412.79 Mbit/s
95th percentile per-packet one-way delay: 93.294 ms
Loss rate: 0.37%

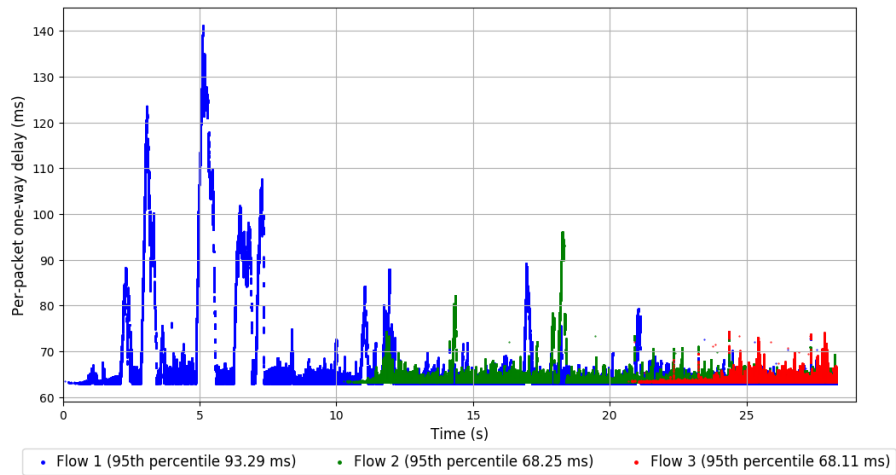
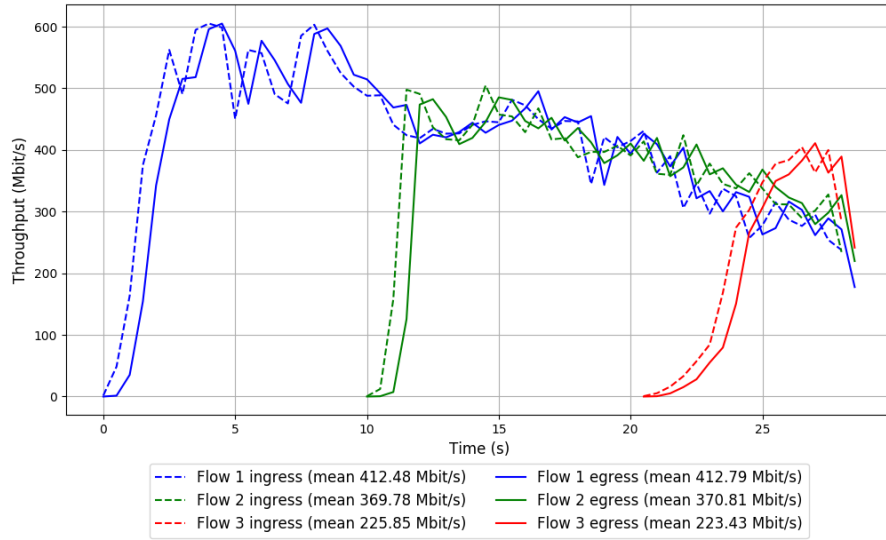
-- Flow 2:

Average throughput: 370.81 Mbit/s
95th percentile per-packet one-way delay: 68.246 ms
Loss rate: 0.46%

-- Flow 3:

Average throughput: 223.43 Mbit/s
95th percentile per-packet one-way delay: 68.115 ms
Loss rate: 2.81%

Run 2: Report of Indigo-MusesC3 — Data Link



Run 3: Statistics of Indigo-MusesC3

Start at: 2019-03-27 11:26:19
End at: 2019-03-27 11:26:49
Local clock offset: -0.035 ms
Remote clock offset: -0.216 ms

Below is generated by plot.py at 2019-03-27 14:30:22

Datalink statistics

-- Total of 3 flows:

Average throughput: 697.91 Mbit/s
95th percentile per-packet one-way delay: 85.023 ms
Loss rate: 0.57%

-- Flow 1:

Average throughput: 413.50 Mbit/s
95th percentile per-packet one-way delay: 84.805 ms
Loss rate: 0.26%

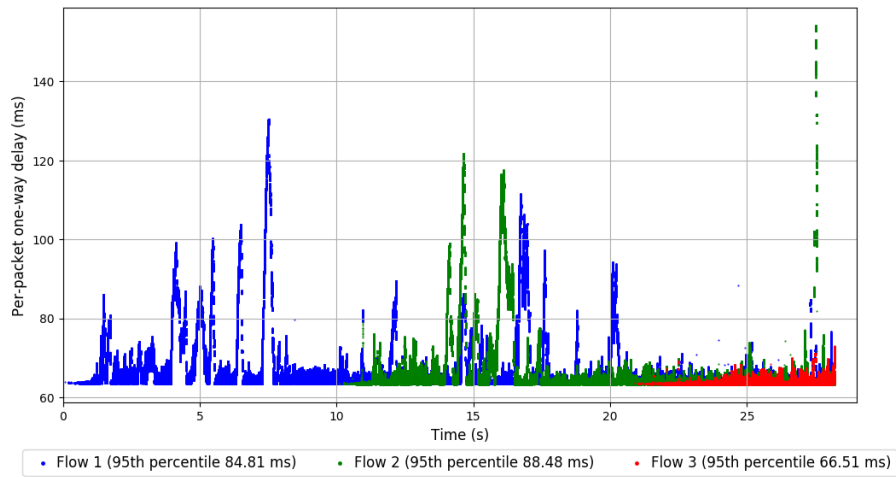
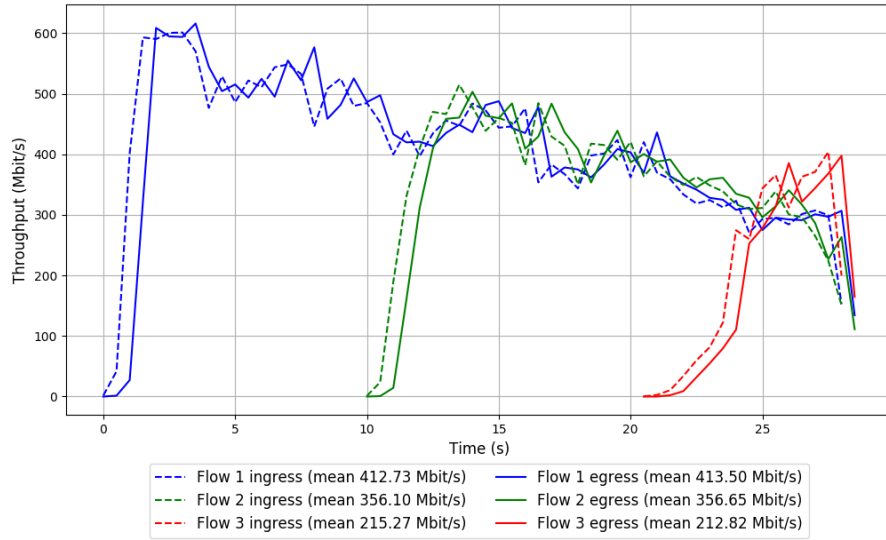
-- Flow 2:

Average throughput: 356.65 Mbit/s
95th percentile per-packet one-way delay: 88.476 ms
Loss rate: 0.56%

-- Flow 3:

Average throughput: 212.82 Mbit/s
95th percentile per-packet one-way delay: 66.506 ms
Loss rate: 2.82%

Run 3: Report of Indigo-MusesC3 — Data Link



Run 4: Statistics of Indigo-MusesC3

Start at: 2019-03-27 12:03:46
End at: 2019-03-27 12:04:16
Local clock offset: -0.048 ms
Remote clock offset: -0.091 ms

Below is generated by plot.py at 2019-03-27 14:30:22

Datalink statistics

-- Total of 3 flows:

Average throughput: 674.23 Mbit/s
95th percentile per-packet one-way delay: 94.510 ms
Loss rate: 0.56%

-- Flow 1:

Average throughput: 397.15 Mbit/s
95th percentile per-packet one-way delay: 102.788 ms
Loss rate: 0.40%

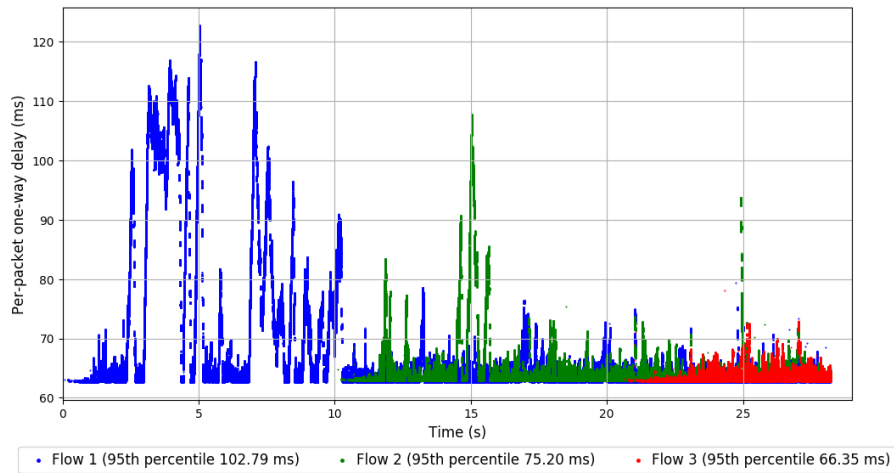
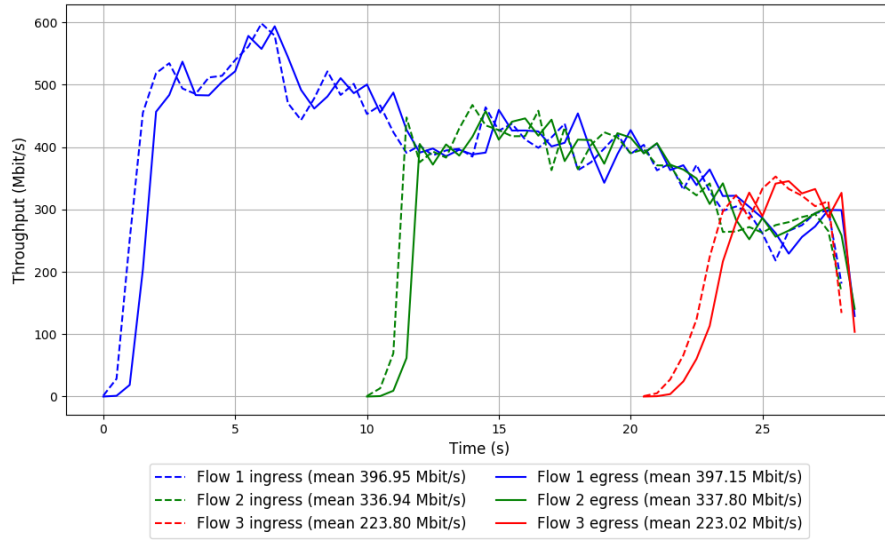
-- Flow 2:

Average throughput: 337.80 Mbit/s
95th percentile per-packet one-way delay: 75.197 ms
Loss rate: 0.49%

-- Flow 3:

Average throughput: 223.02 Mbit/s
95th percentile per-packet one-way delay: 66.354 ms
Loss rate: 1.95%

Run 4: Report of Indigo-MusesC3 — Data Link



Run 5: Statistics of Indigo-MusesC3

Start at: 2019-03-27 12:40:14
End at: 2019-03-27 12:40:44
Local clock offset: -0.118 ms
Remote clock offset: -0.941 ms

Below is generated by plot.py at 2019-03-27 14:30:22

Datalink statistics

-- Total of 3 flows:

Average throughput: 673.27 Mbit/s
95th percentile per-packet one-way delay: 88.702 ms
Loss rate: 0.61%

-- Flow 1:

Average throughput: 388.45 Mbit/s
95th percentile per-packet one-way delay: 93.879 ms
Loss rate: 0.34%

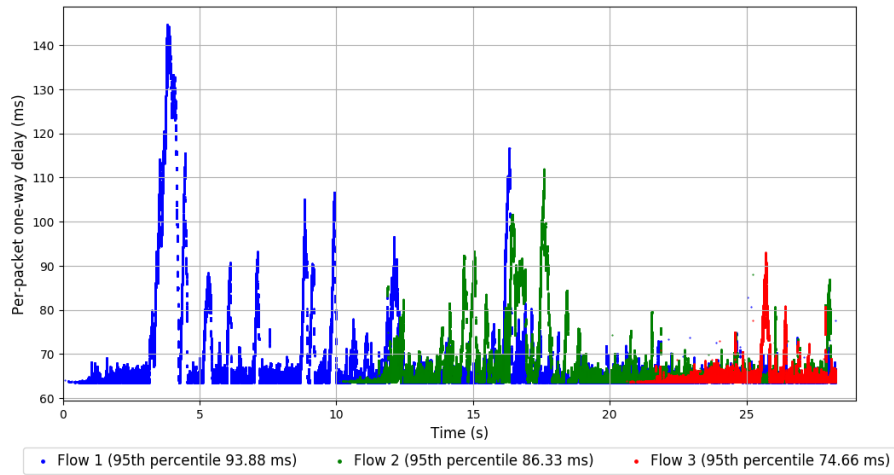
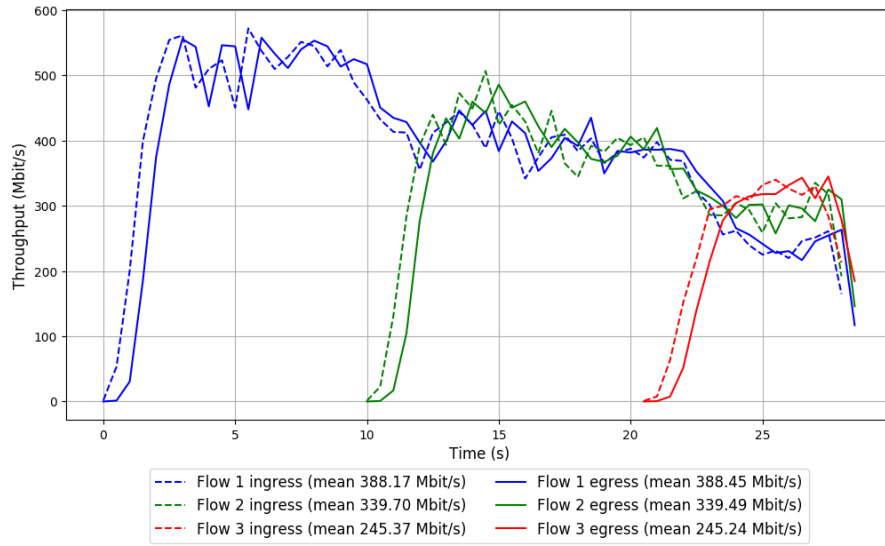
-- Flow 2:

Average throughput: 339.49 Mbit/s
95th percentile per-packet one-way delay: 86.332 ms
Loss rate: 0.76%

-- Flow 3:

Average throughput: 245.24 Mbit/s
95th percentile per-packet one-way delay: 74.657 ms
Loss rate: 1.67%

Run 5: Report of Indigo-MusesC3 — Data Link

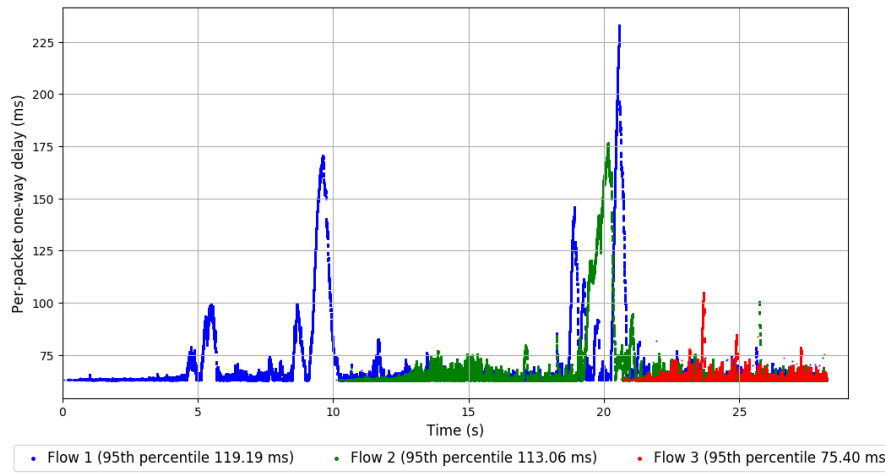
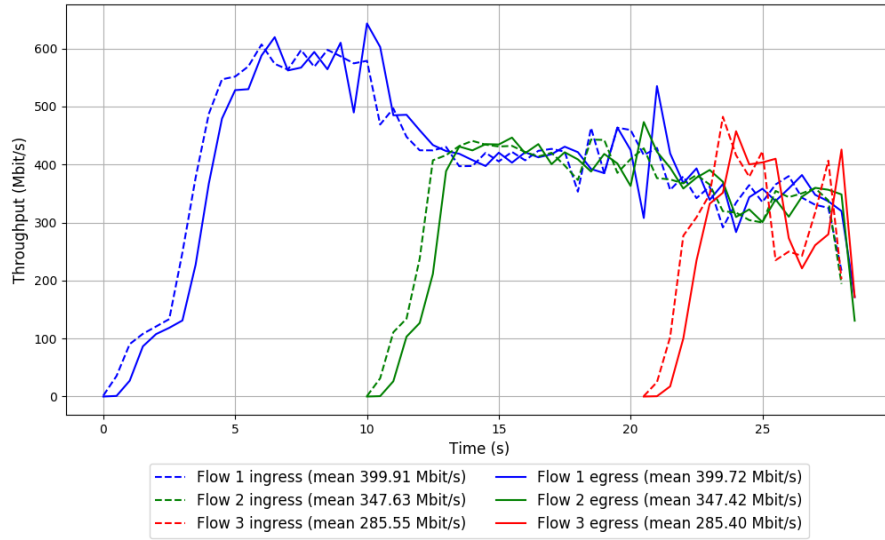


Run 1: Statistics of Indigo-MusesC5

Start at: 2019-03-27 10:31:40
End at: 2019-03-27 10:32:10
Local clock offset: -0.076 ms
Remote clock offset: -0.072 ms

```
# Below is generated by plot.py at 2019-03-27 14:31:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 700.34 Mbit/s
95th percentile per-packet one-way delay: 110.304 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 399.72 Mbit/s
95th percentile per-packet one-way delay: 119.186 ms
Loss rate: 0.50%
-- Flow 2:
Average throughput: 347.42 Mbit/s
95th percentile per-packet one-way delay: 113.057 ms
Loss rate: 0.76%
-- Flow 3:
Average throughput: 285.40 Mbit/s
95th percentile per-packet one-way delay: 75.399 ms
Loss rate: 1.76%
```

Run 1: Report of Indigo-MusesC5 — Data Link



Run 2: Statistics of Indigo-MusesC5

Start at: 2019-03-27 11:08:09

End at: 2019-03-27 11:08:39

Local clock offset: -0.093 ms

Remote clock offset: 0.23 ms

Below is generated by plot.py at 2019-03-27 14:31:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 689.52 Mbit/s

95th percentile per-packet one-way delay: 92.425 ms

Loss rate: 0.46%

-- Flow 1:

Average throughput: 407.25 Mbit/s

95th percentile per-packet one-way delay: 98.764 ms

Loss rate: 0.34%

-- Flow 2:

Average throughput: 397.88 Mbit/s

95th percentile per-packet one-way delay: 89.378 ms

Loss rate: 0.50%

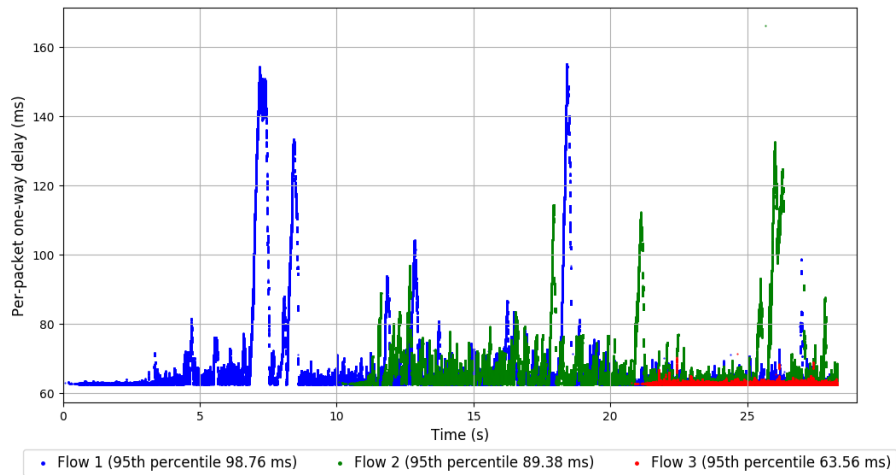
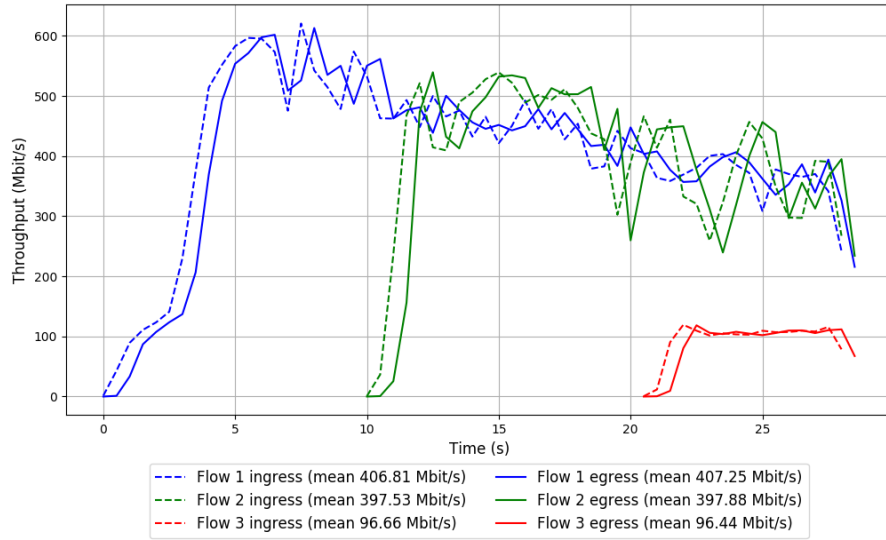
-- Flow 3:

Average throughput: 96.44 Mbit/s

95th percentile per-packet one-way delay: 63.561 ms

Loss rate: 1.82%

Run 2: Report of Indigo-MusesC5 — Data Link

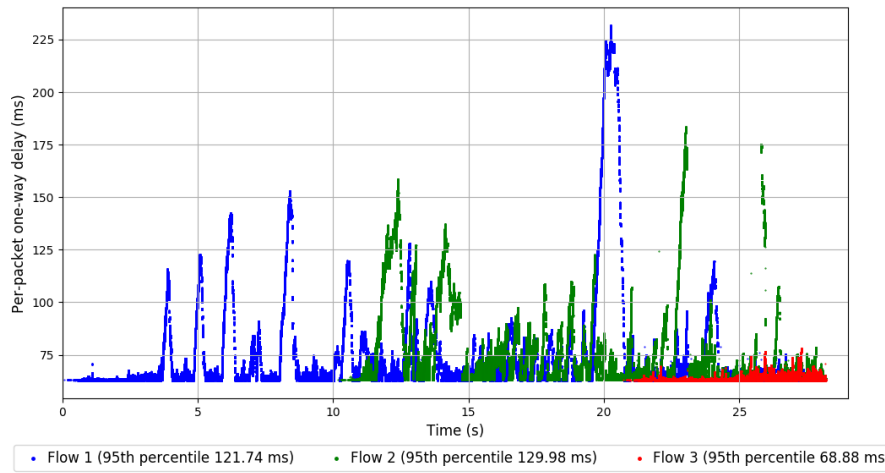
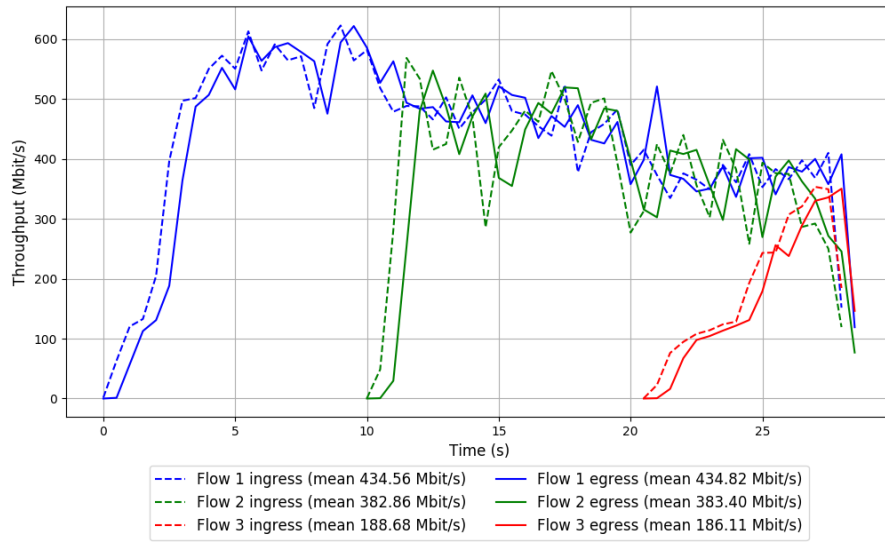


Run 3: Statistics of Indigo-MusesC5

Start at: 2019-03-27 11:45:10
End at: 2019-03-27 11:45:40
Local clock offset: 0.003 ms
Remote clock offset: -0.046 ms

```
# Below is generated by plot.py at 2019-03-27 14:32:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 729.76 Mbit/s
95th percentile per-packet one-way delay: 125.568 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 434.82 Mbit/s
95th percentile per-packet one-way delay: 121.742 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 383.40 Mbit/s
95th percentile per-packet one-way delay: 129.984 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 186.11 Mbit/s
95th percentile per-packet one-way delay: 68.884 ms
Loss rate: 3.04%
```

Run 3: Report of Indigo-MusesC5 — Data Link

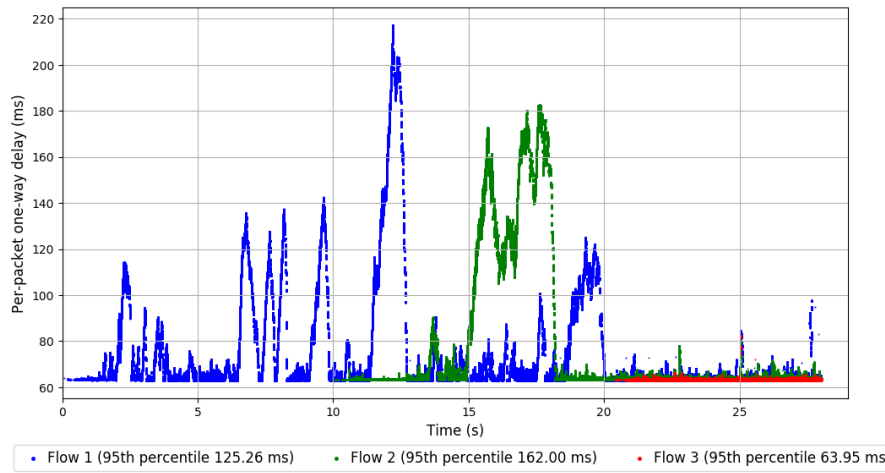
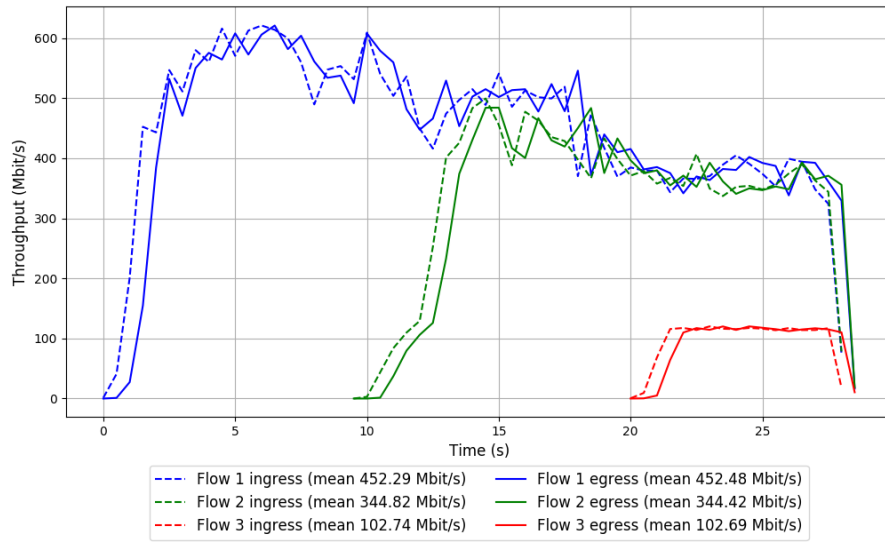


Run 4: Statistics of Indigo-MusesC5

Start at: 2019-03-27 12:22:00
End at: 2019-03-27 12:22:30
Local clock offset: -0.109 ms
Remote clock offset: -0.429 ms

```
# Below is generated by plot.py at 2019-03-27 14:35:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 703.30 Mbit/s
95th percentile per-packet one-way delay: 143.818 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 452.48 Mbit/s
95th percentile per-packet one-way delay: 125.262 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 344.42 Mbit/s
95th percentile per-packet one-way delay: 162.004 ms
Loss rate: 0.81%
-- Flow 3:
Average throughput: 102.69 Mbit/s
95th percentile per-packet one-way delay: 63.953 ms
Loss rate: 1.67%
```

Run 4: Report of Indigo-MusesC5 — Data Link



Run 5: Statistics of Indigo-MusesC5

Start at: 2019-03-27 12:58:28

End at: 2019-03-27 12:58:58

Local clock offset: -0.14 ms

Remote clock offset: 0.136 ms

Below is generated by plot.py at 2019-03-27 14:40:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 711.21 Mbit/s

95th percentile per-packet one-way delay: 122.393 ms

Loss rate: 0.50%

-- Flow 1:

Average throughput: 454.08 Mbit/s

95th percentile per-packet one-way delay: 126.998 ms

Loss rate: 0.52%

-- Flow 2:

Average throughput: 365.38 Mbit/s

95th percentile per-packet one-way delay: 99.055 ms

Loss rate: 0.30%

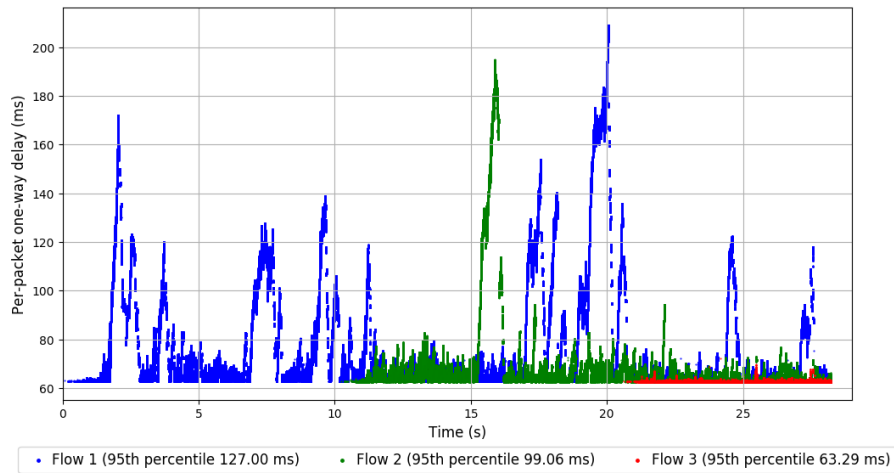
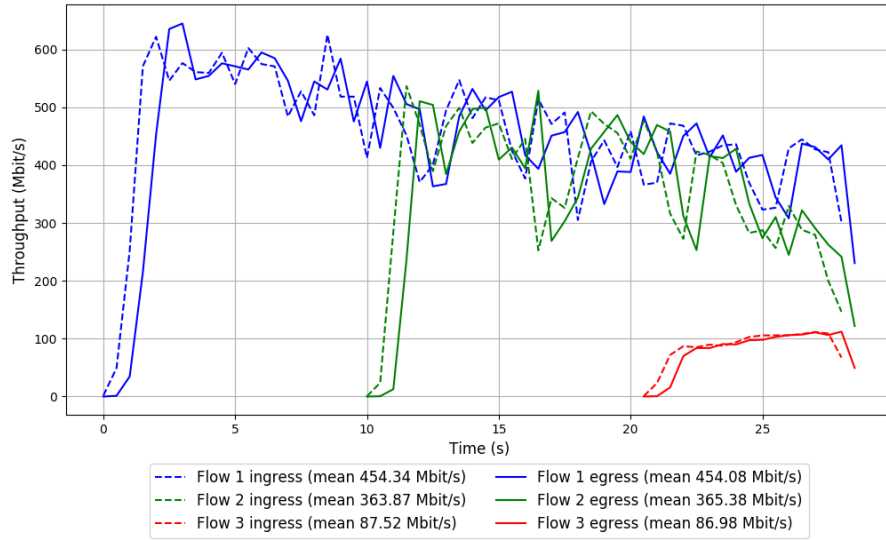
-- Flow 3:

Average throughput: 86.98 Mbit/s

95th percentile per-packet one-way delay: 63.290 ms

Loss rate: 2.27%

Run 5: Report of Indigo-MusesC5 — Data Link



Run 1: Statistics of Indigo-MusesD

Start at: 2019-03-27 10:17:18
End at: 2019-03-27 10:17:48
Local clock offset: -0.095 ms
Remote clock offset: -0.186 ms

Below is generated by plot.py at 2019-03-27 14:41:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 645.98 Mbit/s
95th percentile per-packet one-way delay: 73.615 ms
Loss rate: 0.68%

-- Flow 1:

Average throughput: 380.08 Mbit/s
95th percentile per-packet one-way delay: 71.626 ms
Loss rate: 0.41%

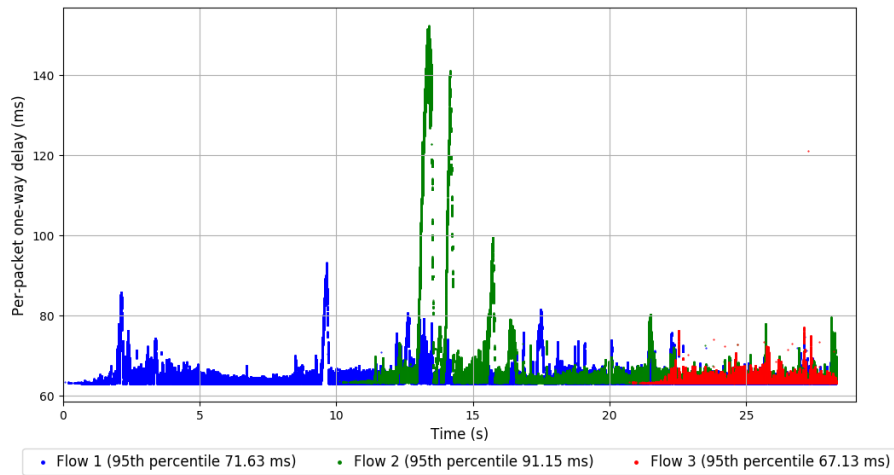
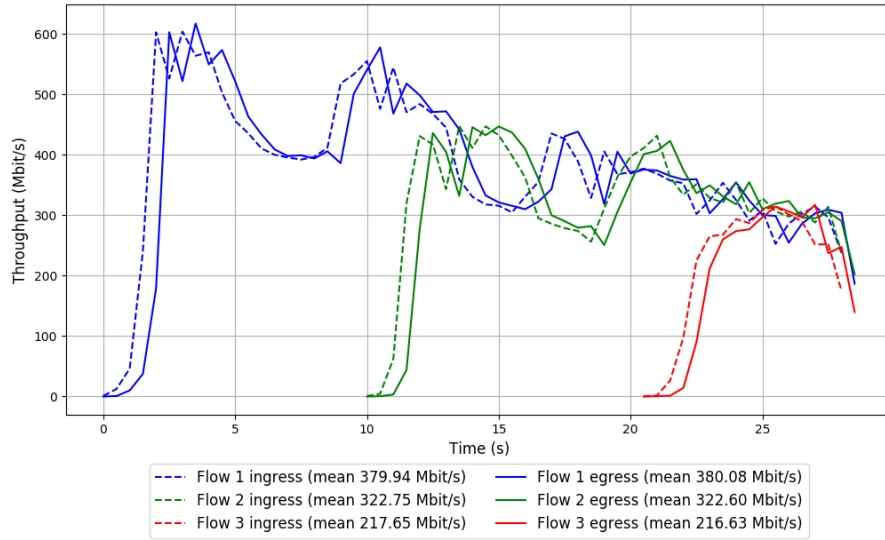
-- Flow 2:

Average throughput: 322.60 Mbit/s
95th percentile per-packet one-way delay: 91.146 ms
Loss rate: 0.74%

-- Flow 3:

Average throughput: 216.63 Mbit/s
95th percentile per-packet one-way delay: 67.131 ms
Loss rate: 2.16%

Run 1: Report of Indigo-MusesD — Data Link

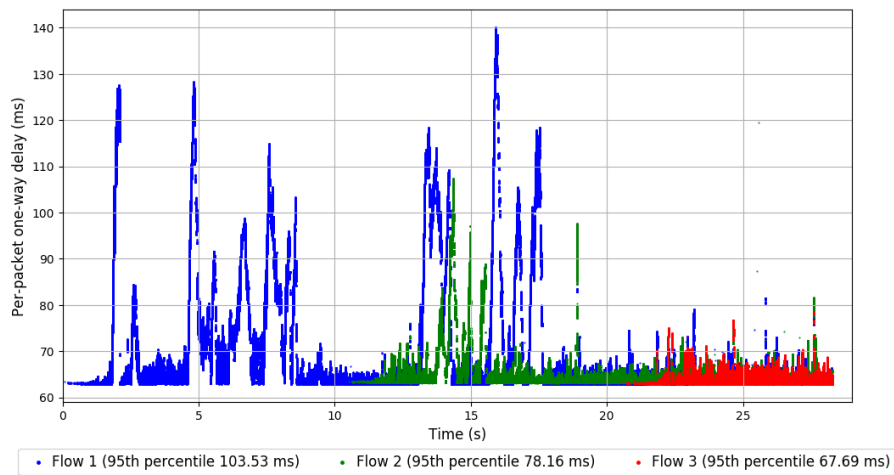
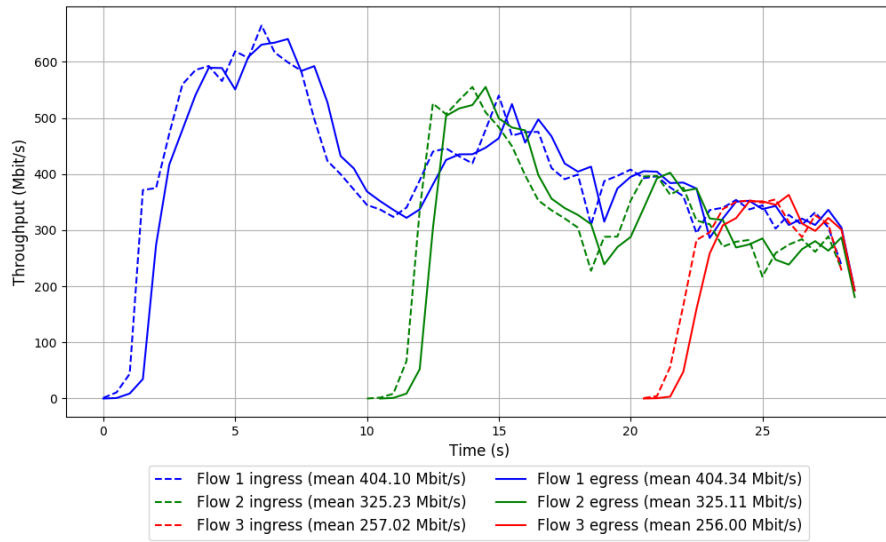


Run 2: Statistics of Indigo-MusesD

Start at: 2019-03-27 10:53:44
End at: 2019-03-27 10:54:14
Local clock offset: -0.07 ms
Remote clock offset: -0.052 ms

```
# Below is generated by plot.py at 2019-03-27 14:42:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 678.85 Mbit/s
95th percentile per-packet one-way delay: 96.590 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 404.34 Mbit/s
95th percentile per-packet one-way delay: 103.531 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 325.11 Mbit/s
95th percentile per-packet one-way delay: 78.163 ms
Loss rate: 0.76%
-- Flow 3:
Average throughput: 256.00 Mbit/s
95th percentile per-packet one-way delay: 67.688 ms
Loss rate: 2.05%
```

Run 2: Report of Indigo-MusesD — Data Link

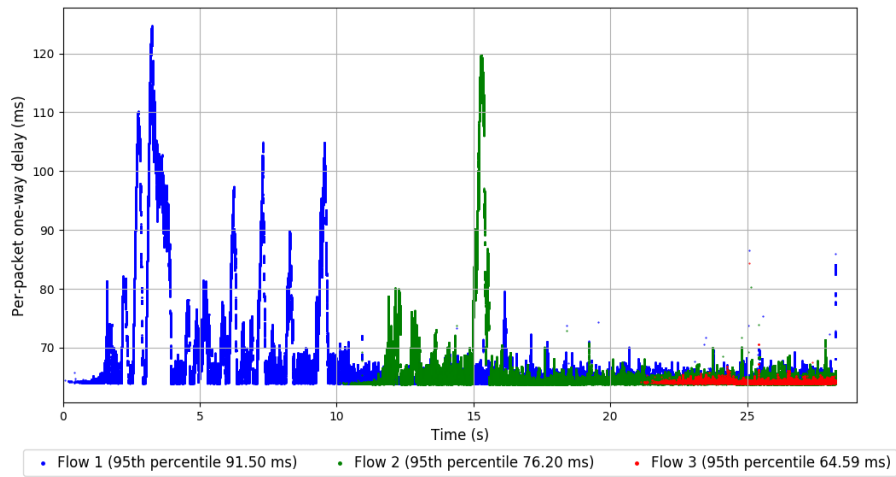
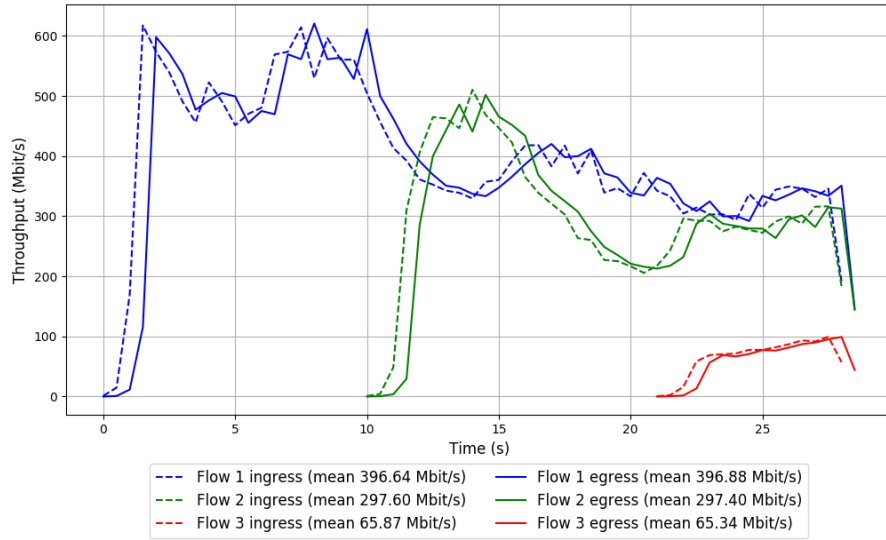


Run 3: Statistics of Indigo-MusesD

Start at: 2019-03-27 11:30:11
End at: 2019-03-27 11:30:41
Local clock offset: -0.014 ms
Remote clock offset: -0.916 ms

```
# Below is generated by plot.py at 2019-03-27 14:42:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 604.73 Mbit/s
95th percentile per-packet one-way delay: 87.572 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 396.88 Mbit/s
95th percentile per-packet one-way delay: 91.497 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 297.40 Mbit/s
95th percentile per-packet one-way delay: 76.202 ms
Loss rate: 0.76%
-- Flow 3:
Average throughput: 65.34 Mbit/s
95th percentile per-packet one-way delay: 64.590 ms
Loss rate: 2.58%
```

Run 3: Report of Indigo-MusesD — Data Link

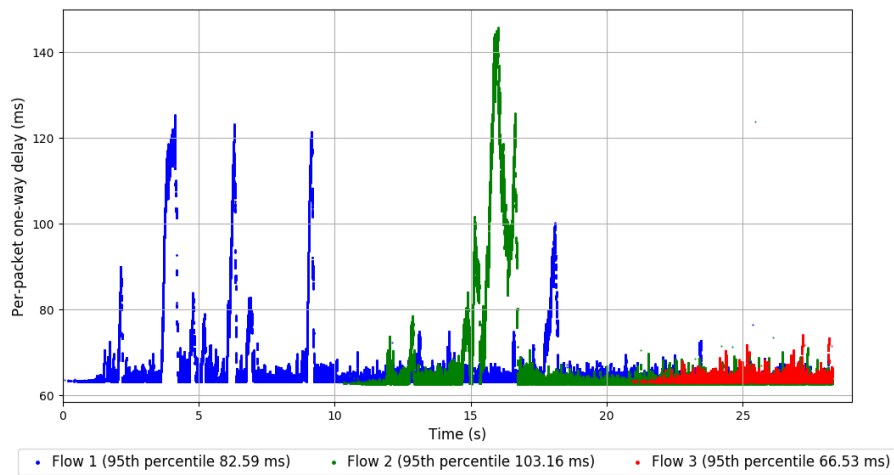
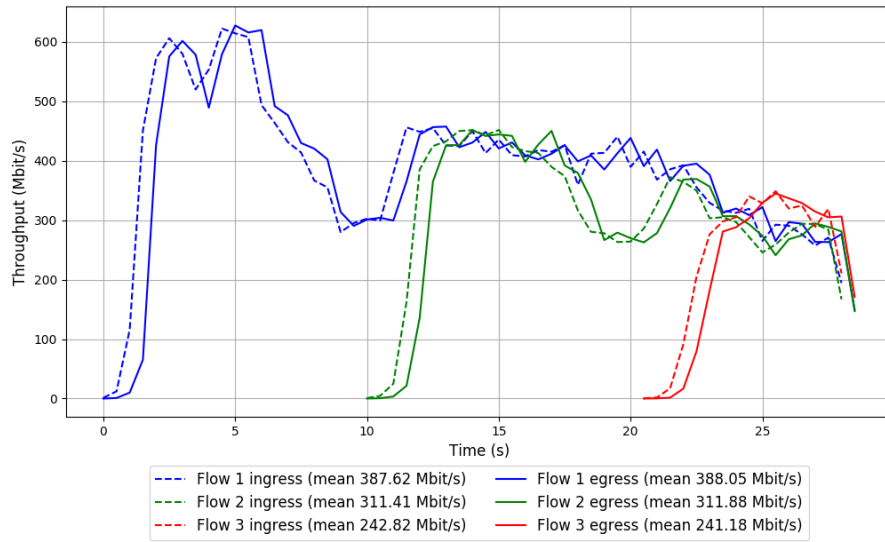


Run 4: Statistics of Indigo-MusesD

Start at: 2019-03-27 12:07:34
End at: 2019-03-27 12:08:04
Local clock offset: -0.117 ms
Remote clock offset: -0.163 ms

```
# Below is generated by plot.py at 2019-03-27 14:42:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 651.52 Mbit/s
95th percentile per-packet one-way delay: 89.674 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 388.05 Mbit/s
95th percentile per-packet one-way delay: 82.593 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 311.88 Mbit/s
95th percentile per-packet one-way delay: 103.164 ms
Loss rate: 0.55%
-- Flow 3:
Average throughput: 241.18 Mbit/s
95th percentile per-packet one-way delay: 66.531 ms
Loss rate: 2.34%
```

Run 4: Report of Indigo-MusesD — Data Link



Run 5: Statistics of Indigo-MusesD

Start at: 2019-03-27 12:43:51

End at: 2019-03-27 12:44:21

Local clock offset: -0.116 ms

Remote clock offset: 0.066 ms

Below is generated by plot.py at 2019-03-27 14:42:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 641.14 Mbit/s

95th percentile per-packet one-way delay: 74.651 ms

Loss rate: 0.66%

-- Flow 1:

Average throughput: 364.95 Mbit/s

95th percentile per-packet one-way delay: 86.874 ms

Loss rate: 0.42%

-- Flow 2:

Average throughput: 336.36 Mbit/s

95th percentile per-packet one-way delay: 67.868 ms

Loss rate: 0.58%

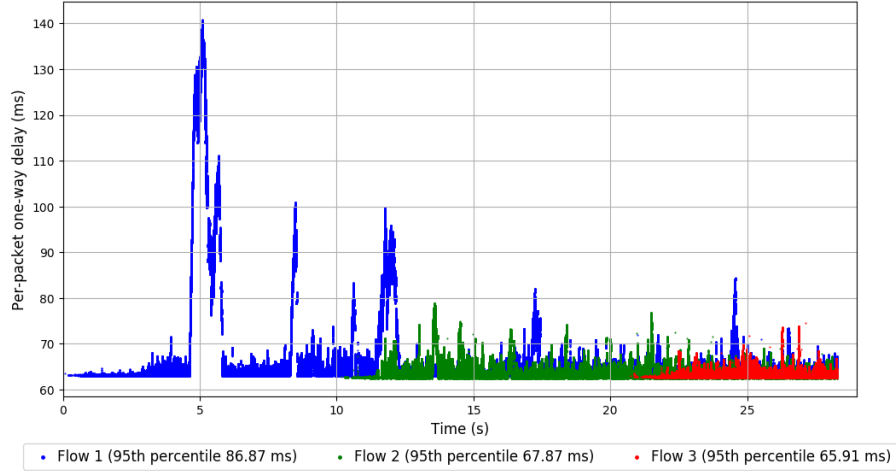
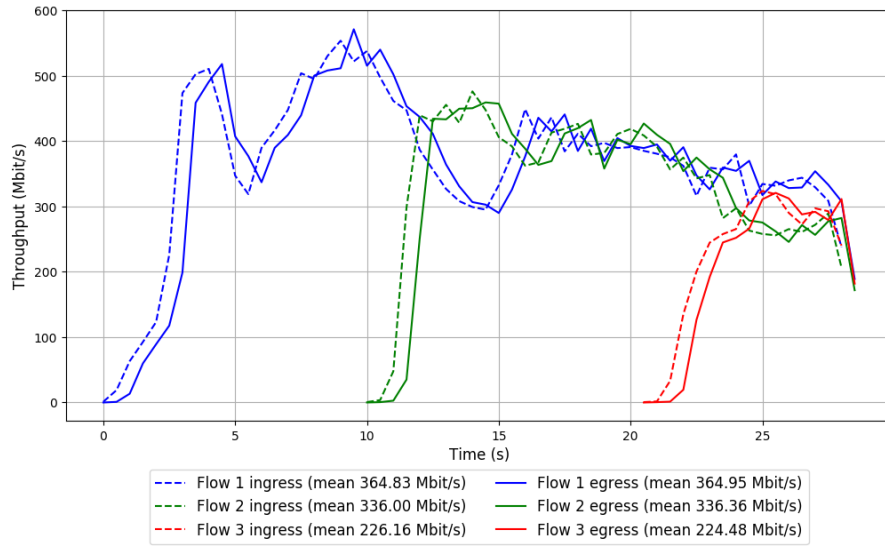
-- Flow 3:

Average throughput: 224.48 Mbit/s

95th percentile per-packet one-way delay: 65.908 ms

Loss rate: 2.37%

Run 5: Report of Indigo-MusesD — Data Link



Run 1: Statistics of Indigo-MuseST

Start at: 2019-03-27 10:15:27

End at: 2019-03-27 10:15:57

Local clock offset: -0.108 ms

Remote clock offset: 0.258 ms

Below is generated by plot.py at 2019-03-27 14:46:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 791.96 Mbit/s

95th percentile per-packet one-way delay: 87.680 ms

Loss rate: 0.65%

-- Flow 1:

Average throughput: 466.61 Mbit/s

95th percentile per-packet one-way delay: 96.852 ms

Loss rate: 0.42%

-- Flow 2:

Average throughput: 390.69 Mbit/s

95th percentile per-packet one-way delay: 75.483 ms

Loss rate: 0.50%

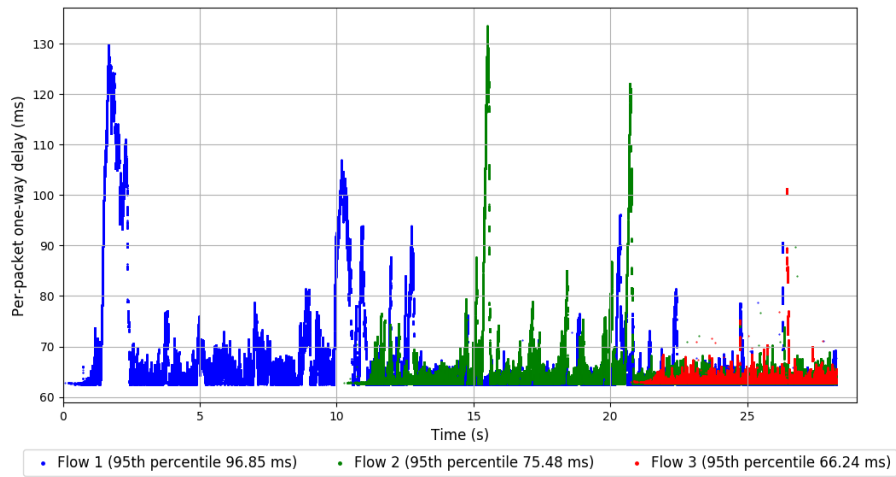
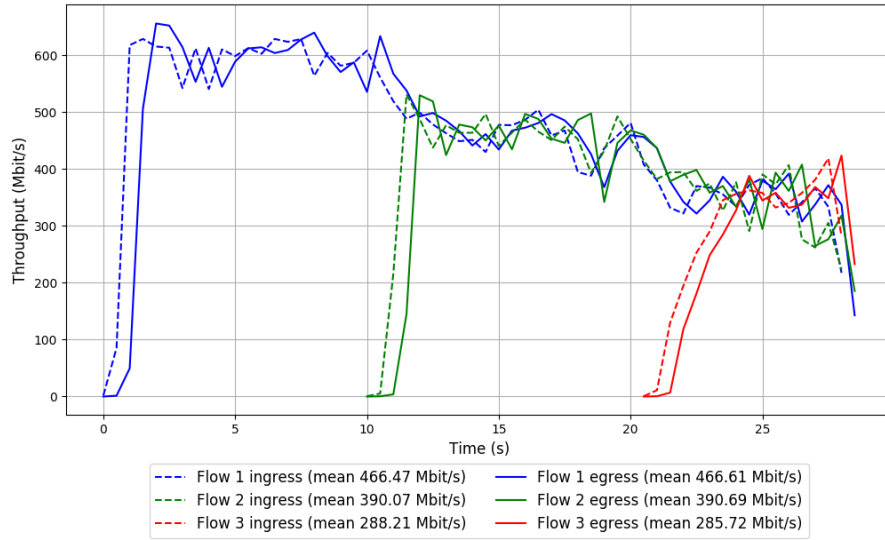
-- Flow 3:

Average throughput: 285.72 Mbit/s

95th percentile per-packet one-way delay: 66.244 ms

Loss rate: 2.55%

Run 1: Report of Indigo-MusesT — Data Link



Run 2: Statistics of Indigo-MuseST

Start at: 2019-03-27 10:51:53

End at: 2019-03-27 10:52:23

Local clock offset: -0.091 ms

Remote clock offset: 0.164 ms

Below is generated by plot.py at 2019-03-27 14:49:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 788.86 Mbit/s

95th percentile per-packet one-way delay: 93.408 ms

Loss rate: 0.70%

-- Flow 1:

Average throughput: 462.59 Mbit/s

95th percentile per-packet one-way delay: 97.363 ms

Loss rate: 0.36%

-- Flow 2:

Average throughput: 398.92 Mbit/s

95th percentile per-packet one-way delay: 85.486 ms

Loss rate: 0.74%

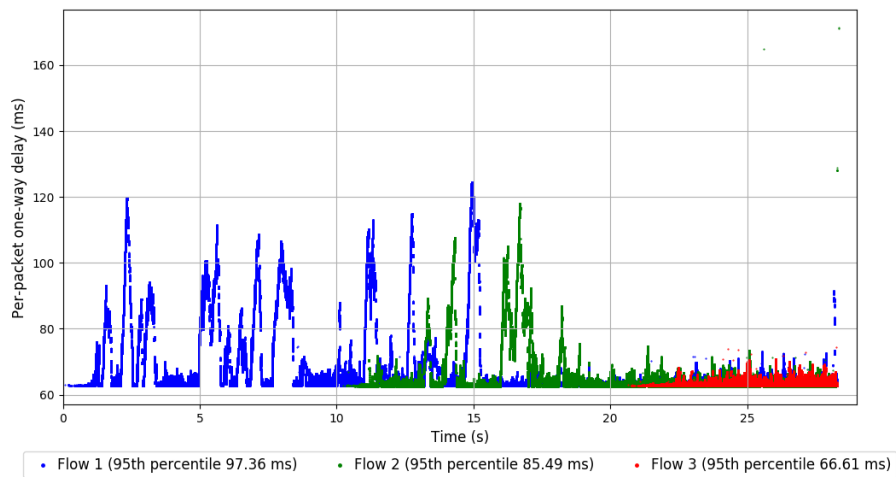
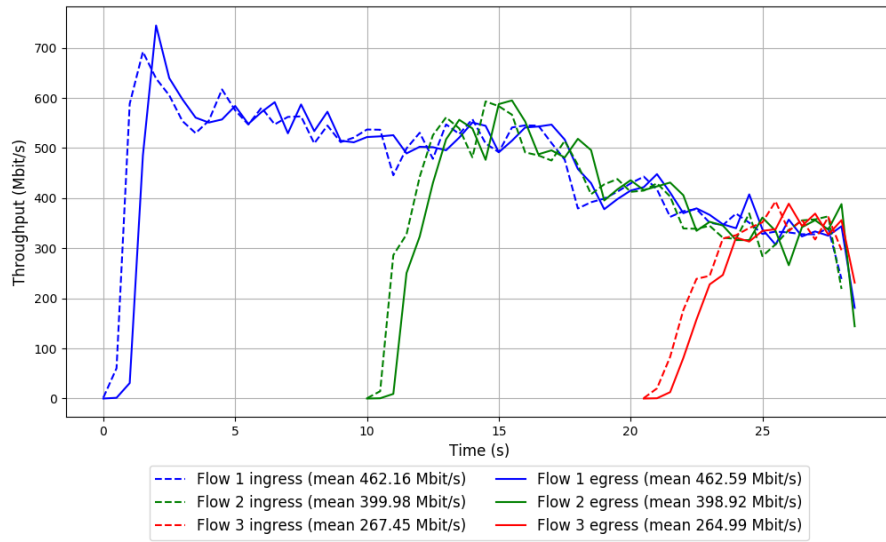
-- Flow 3:

Average throughput: 264.99 Mbit/s

95th percentile per-packet one-way delay: 66.609 ms

Loss rate: 2.68%

Run 2: Report of Indigo-MusesT — Data Link

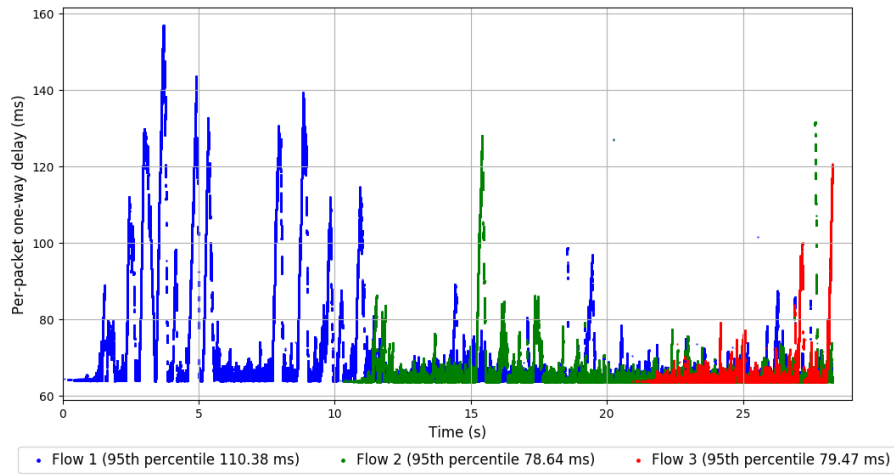
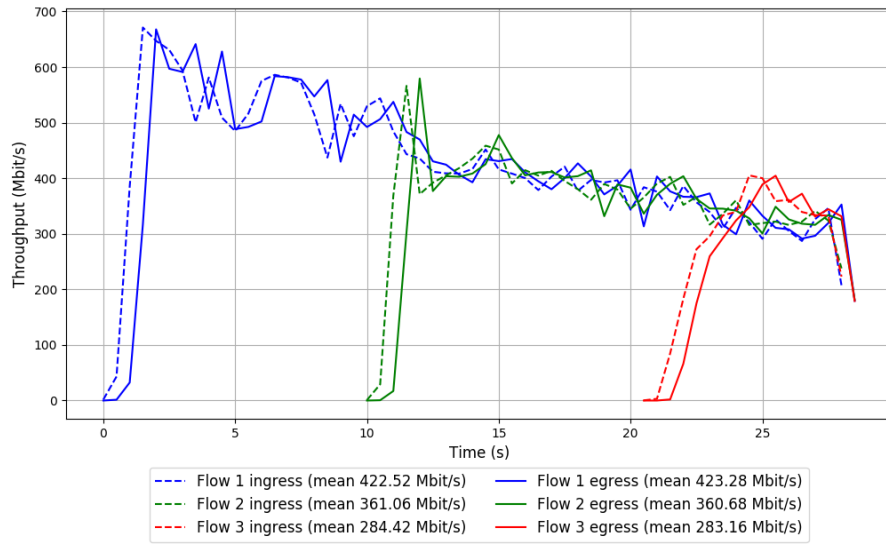


Run 3: Statistics of Indigo-MuseST

Start at: 2019-03-27 11:28:12
End at: 2019-03-27 11:28:42
Local clock offset: -0.024 ms
Remote clock offset: -0.746 ms

```
# Below is generated by plot.py at 2019-03-27 14:52:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 728.44 Mbit/s
95th percentile per-packet one-way delay: 101.049 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 423.28 Mbit/s
95th percentile per-packet one-way delay: 110.375 ms
Loss rate: 0.28%
-- Flow 2:
Average throughput: 360.68 Mbit/s
95th percentile per-packet one-way delay: 78.645 ms
Loss rate: 0.80%
-- Flow 3:
Average throughput: 283.16 Mbit/s
95th percentile per-packet one-way delay: 79.472 ms
Loss rate: 2.12%
```

Run 3: Report of Indigo-MusesT — Data Link

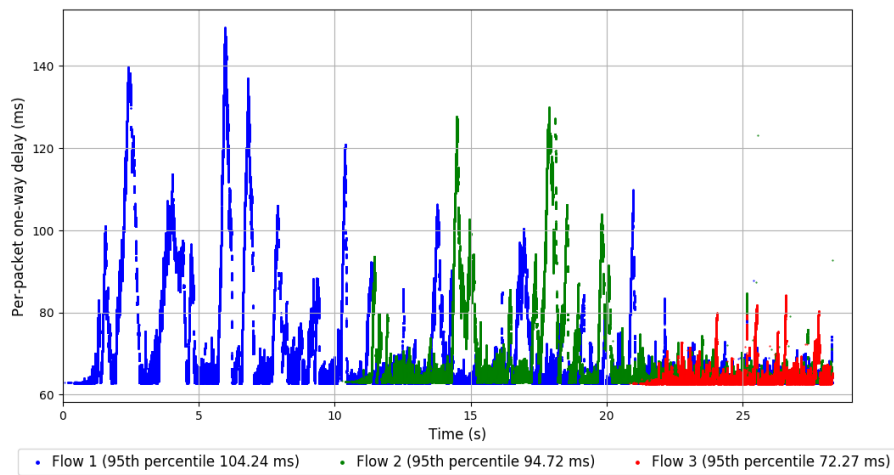
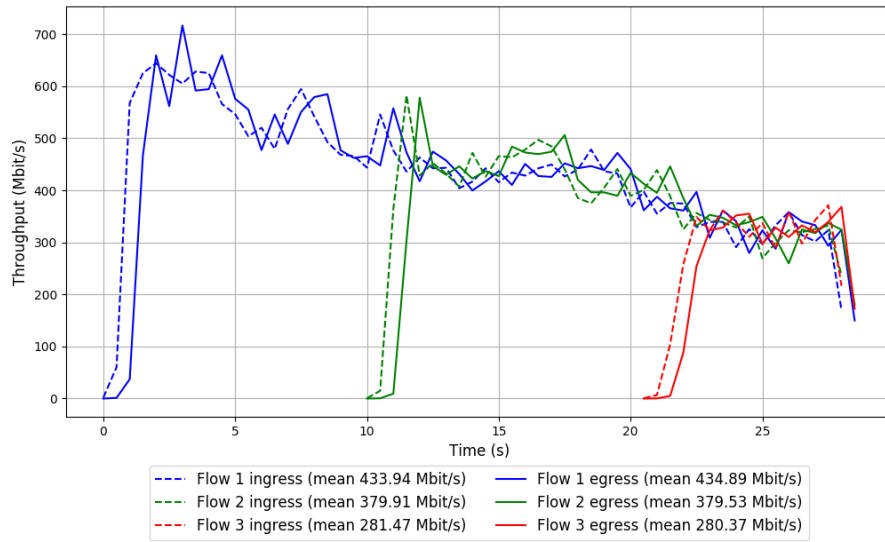


Run 4: Statistics of Indigo-MuseST

Start at: 2019-03-27 12:05:36
End at: 2019-03-27 12:06:06
Local clock offset: -0.074 ms
Remote clock offset: -0.064 ms

```
# Below is generated by plot.py at 2019-03-27 14:53:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 750.83 Mbit/s
95th percentile per-packet one-way delay: 100.002 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 434.89 Mbit/s
95th percentile per-packet one-way delay: 104.244 ms
Loss rate: 0.24%
-- Flow 2:
Average throughput: 379.53 Mbit/s
95th percentile per-packet one-way delay: 94.724 ms
Loss rate: 0.69%
-- Flow 3:
Average throughput: 280.37 Mbit/s
95th percentile per-packet one-way delay: 72.268 ms
Loss rate: 2.12%
```

Run 4: Report of Indigo-MusesT — Data Link

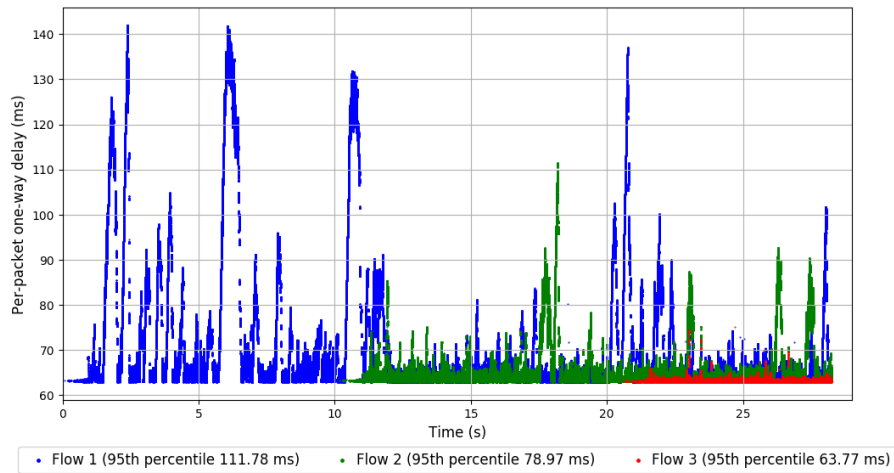
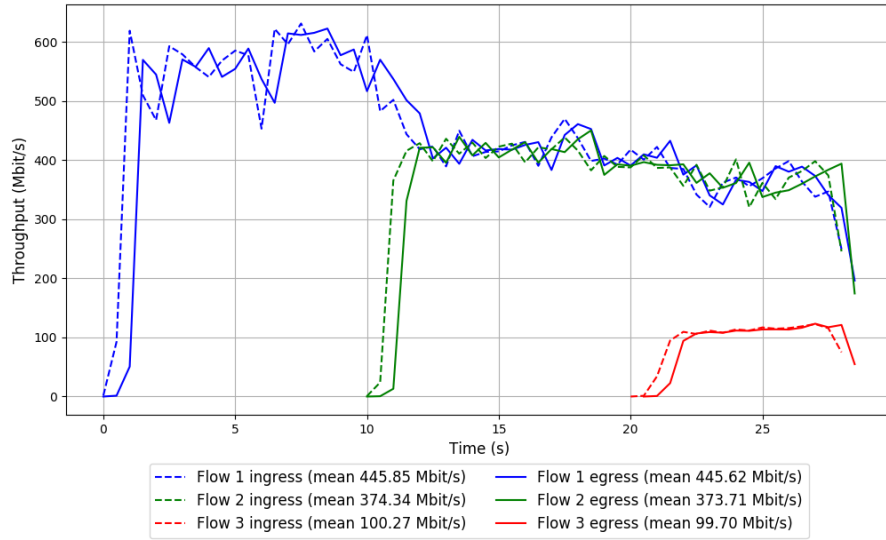


Run 5: Statistics of Indigo-MuseST

Start at: 2019-03-27 12:42:02
End at: 2019-03-27 12:42:32
Local clock offset: -0.15 ms
Remote clock offset: -0.248 ms

```
# Below is generated by plot.py at 2019-03-27 14:53:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 712.67 Mbit/s
95th percentile per-packet one-way delay: 95.353 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 445.62 Mbit/s
95th percentile per-packet one-way delay: 111.783 ms
Loss rate: 0.48%
-- Flow 2:
Average throughput: 373.71 Mbit/s
95th percentile per-packet one-way delay: 78.968 ms
Loss rate: 0.86%
-- Flow 3:
Average throughput: 99.70 Mbit/s
95th percentile per-packet one-way delay: 63.773 ms
Loss rate: 2.05%
```

Run 5: Report of Indigo-MusesT — Data Link



Run 1: Statistics of LEDBAT

Start at: 2019-03-27 10:30:24
End at: 2019-03-27 10:30:54
Local clock offset: -0.069 ms
Remote clock offset: -0.718 ms

Below is generated by plot.py at 2019-03-27 14:53:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 36.06 Mbit/s
95th percentile per-packet one-way delay: 64.760 ms
Loss rate: 1.08%

-- Flow 1:

Average throughput: 23.29 Mbit/s
95th percentile per-packet one-way delay: 64.878 ms
Loss rate: 0.84%

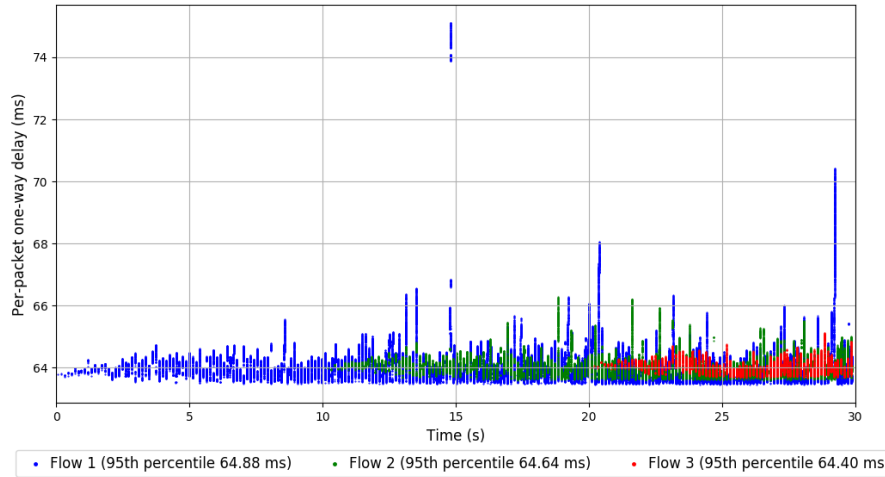
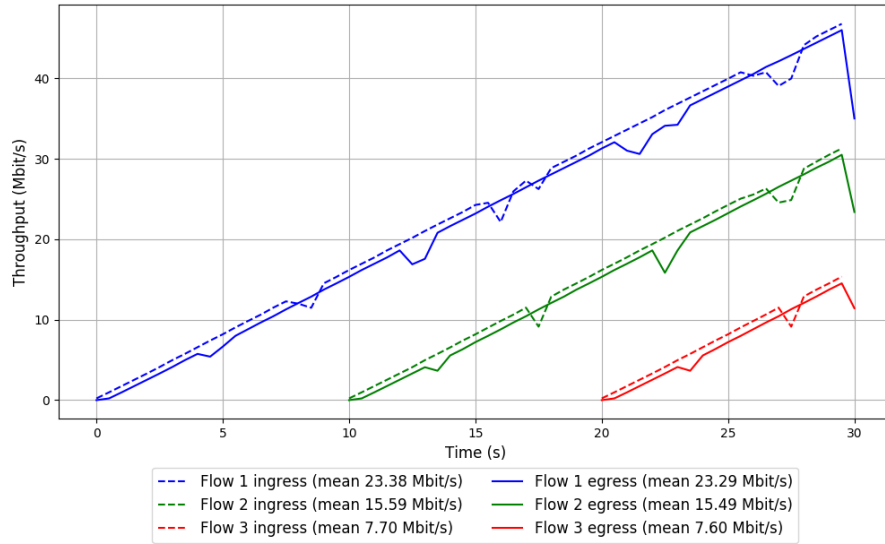
-- Flow 2:

Average throughput: 15.49 Mbit/s
95th percentile per-packet one-way delay: 64.637 ms
Loss rate: 1.27%

-- Flow 3:

Average throughput: 7.60 Mbit/s
95th percentile per-packet one-way delay: 64.398 ms
Loss rate: 2.57%

Run 1: Report of LEDBAT — Data Link



Run 2: Statistics of LEDBAT

Start at: 2019-03-27 11:06:52

End at: 2019-03-27 11:07:22

Local clock offset: -0.07 ms

Remote clock offset: 0.019 ms

Below is generated by plot.py at 2019-03-27 14:53:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 33.58 Mbit/s

95th percentile per-packet one-way delay: 64.523 ms

Loss rate: 0.90%

-- Flow 1:

Average throughput: 20.86 Mbit/s

95th percentile per-packet one-way delay: 64.807 ms

Loss rate: 0.51%

-- Flow 2:

Average throughput: 15.47 Mbit/s

95th percentile per-packet one-way delay: 63.967 ms

Loss rate: 1.27%

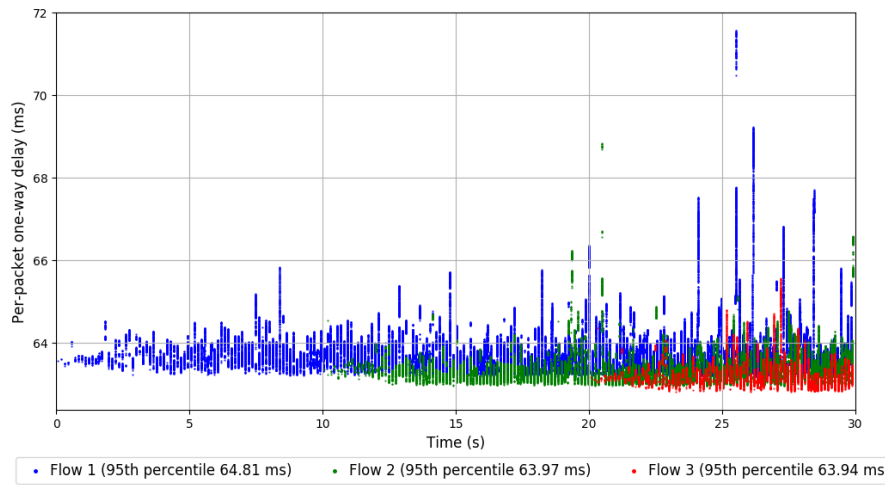
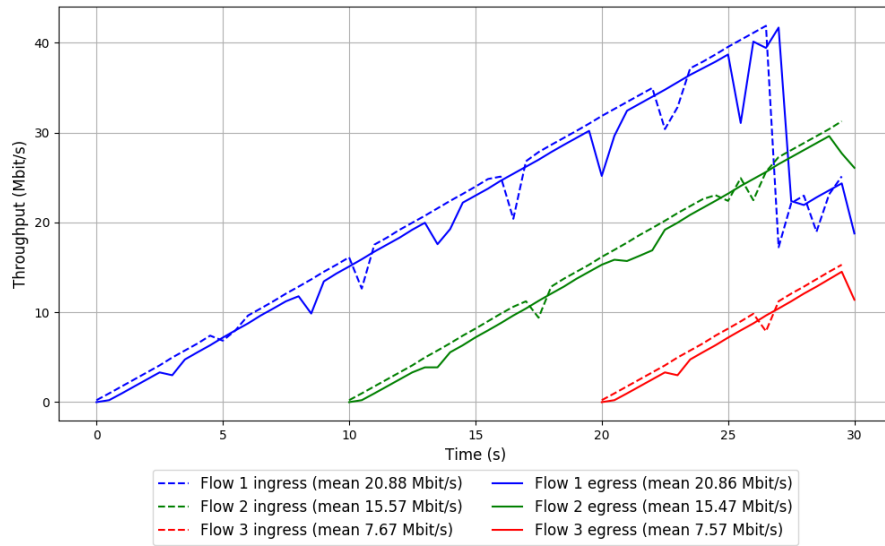
-- Flow 3:

Average throughput: 7.57 Mbit/s

95th percentile per-packet one-way delay: 63.936 ms

Loss rate: 2.56%

Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2019-03-27 11:43:53
End at: 2019-03-27 11:44:23
Local clock offset: -0.008 ms
Remote clock offset: -0.018 ms

Below is generated by plot.py at 2019-03-27 14:53:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 35.80 Mbit/s
95th percentile per-packet one-way delay: 64.685 ms
Loss rate: 1.08%

-- Flow 1:

Average throughput: 23.09 Mbit/s
95th percentile per-packet one-way delay: 65.033 ms
Loss rate: 0.84%

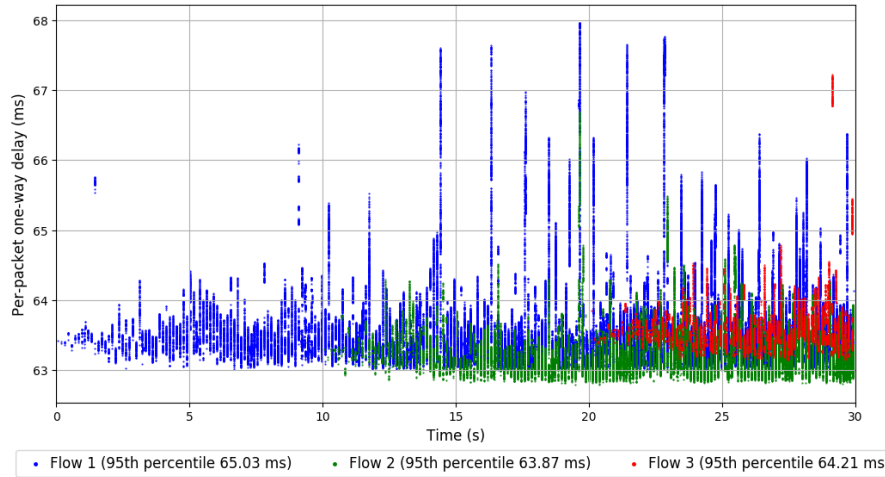
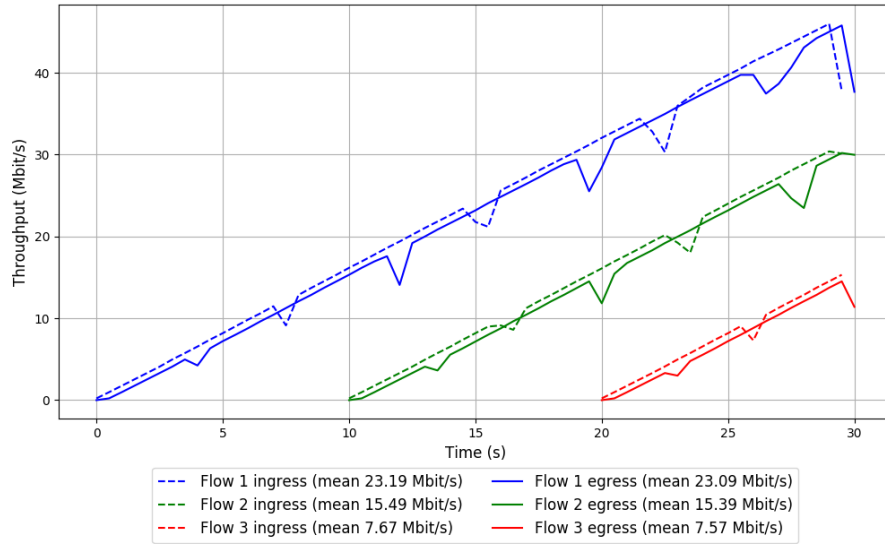
-- Flow 2:

Average throughput: 15.39 Mbit/s
95th percentile per-packet one-way delay: 63.870 ms
Loss rate: 1.26%

-- Flow 3:

Average throughput: 7.57 Mbit/s
95th percentile per-packet one-way delay: 64.207 ms
Loss rate: 2.57%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2019-03-27 12:20:44
End at: 2019-03-27 12:21:14
Local clock offset: -0.118 ms
Remote clock offset: -0.378 ms

Below is generated by plot.py at 2019-03-27 14:53:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 36.00 Mbit/s
95th percentile per-packet one-way delay: 64.078 ms
Loss rate: 1.08%

-- Flow 1:

Average throughput: 23.25 Mbit/s
95th percentile per-packet one-way delay: 64.091 ms
Loss rate: 0.84%

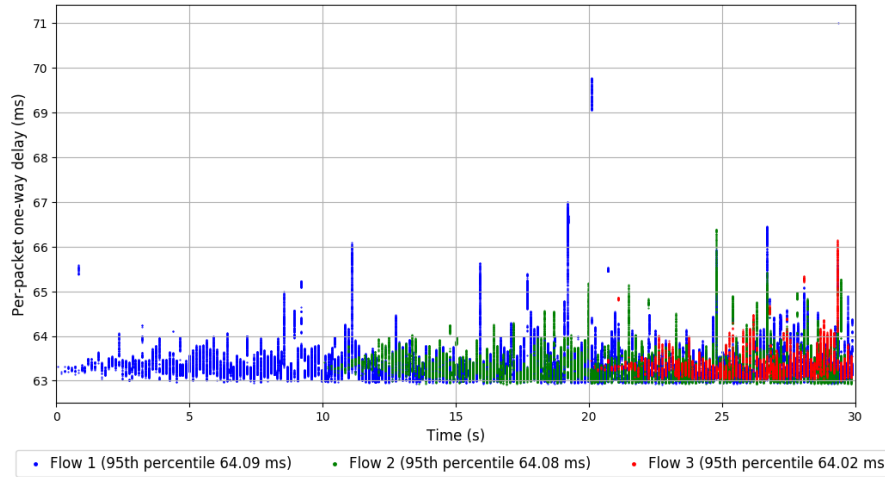
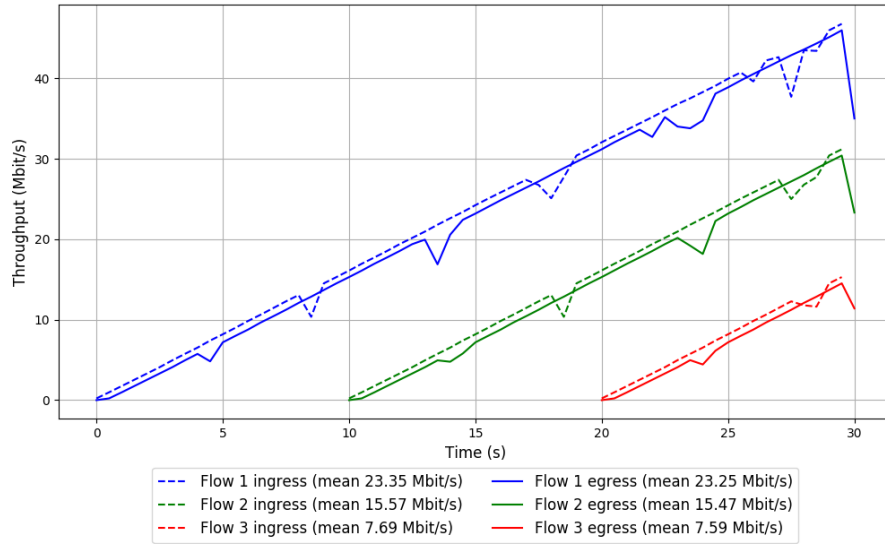
-- Flow 2:

Average throughput: 15.47 Mbit/s
95th percentile per-packet one-way delay: 64.084 ms
Loss rate: 1.27%

-- Flow 3:

Average throughput: 7.59 Mbit/s
95th percentile per-packet one-way delay: 64.022 ms
Loss rate: 2.56%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2019-03-27 12:57:12

End at: 2019-03-27 12:57:42

Local clock offset: -0.113 ms

Remote clock offset: 0.003 ms

Below is generated by plot.py at 2019-03-27 14:53:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 35.80 Mbit/s

95th percentile per-packet one-way delay: 64.812 ms

Loss rate: 1.07%

-- Flow 1:

Average throughput: 23.12 Mbit/s

95th percentile per-packet one-way delay: 64.888 ms

Loss rate: 0.84%

-- Flow 2:

Average throughput: 15.35 Mbit/s

95th percentile per-packet one-way delay: 64.957 ms

Loss rate: 1.23%

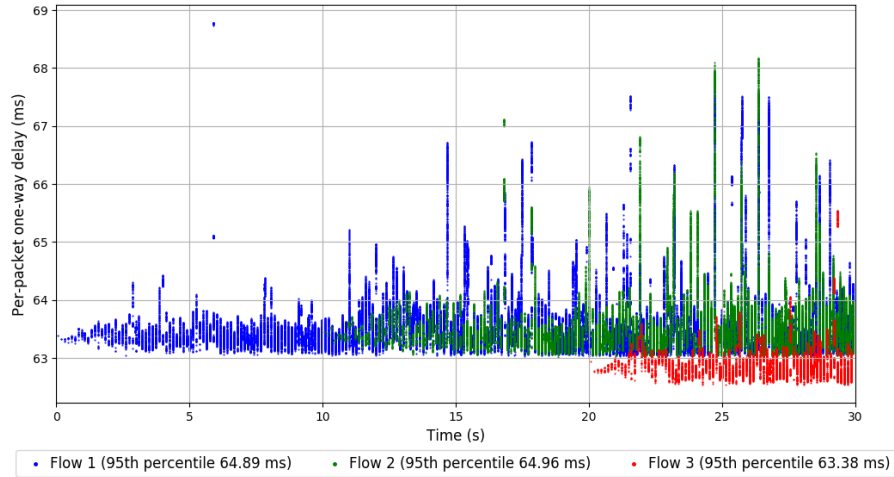
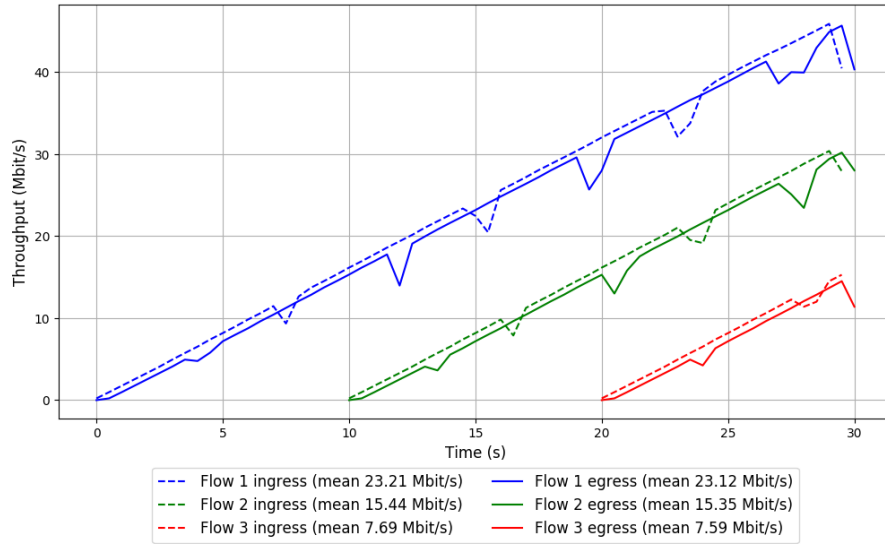
-- Flow 3:

Average throughput: 7.59 Mbit/s

95th percentile per-packet one-way delay: 63.381 ms

Loss rate: 2.56%

Run 5: Report of LEDBAT — Data Link



Run 1: Statistics of PCC-Allegro

Start at: 2019-03-27 10:26:37
End at: 2019-03-27 10:27:07
Local clock offset: -0.101 ms
Remote clock offset: -0.057 ms

Below is generated by plot.py at 2019-03-27 15:07:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 679.64 Mbit/s
95th percentile per-packet one-way delay: 215.280 ms
Loss rate: 6.28%

-- Flow 1:

Average throughput: 391.35 Mbit/s
95th percentile per-packet one-way delay: 220.015 ms
Loss rate: 9.62%

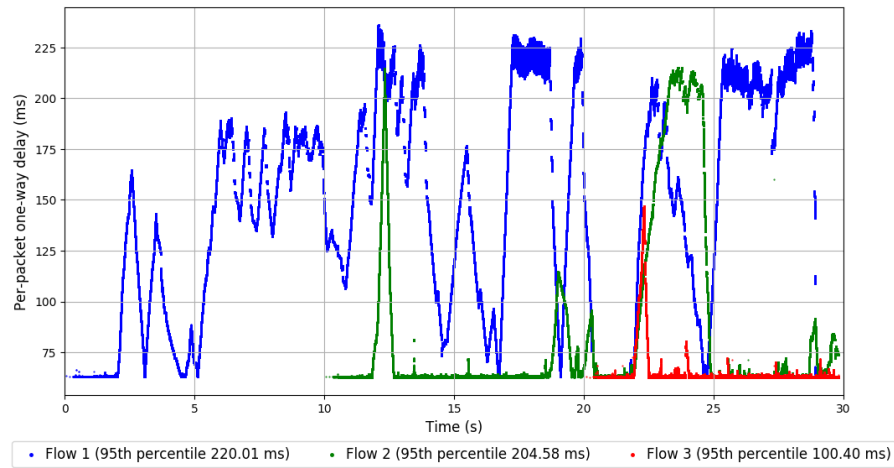
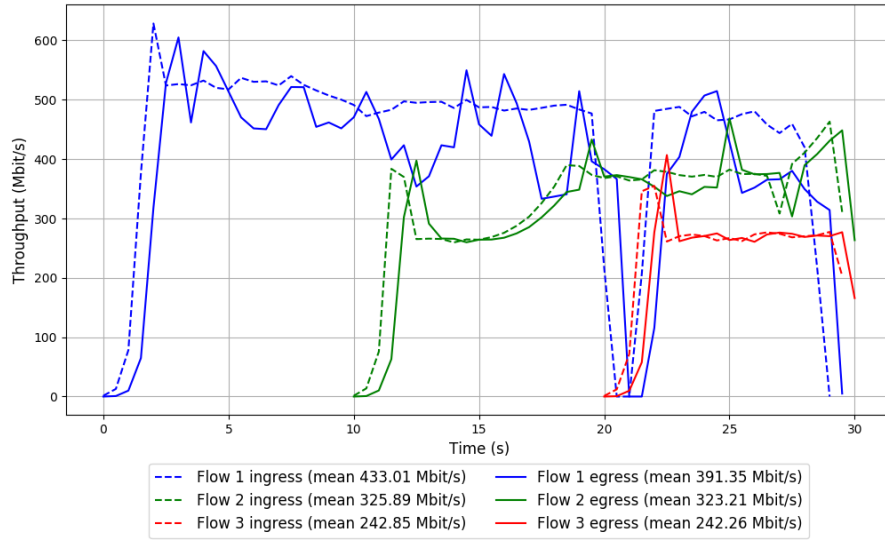
-- Flow 2:

Average throughput: 323.21 Mbit/s
95th percentile per-packet one-way delay: 204.583 ms
Loss rate: 1.46%

-- Flow 3:

Average throughput: 242.26 Mbit/s
95th percentile per-packet one-way delay: 100.396 ms
Loss rate: 1.52%

Run 1: Report of PCC-Allegro — Data Link

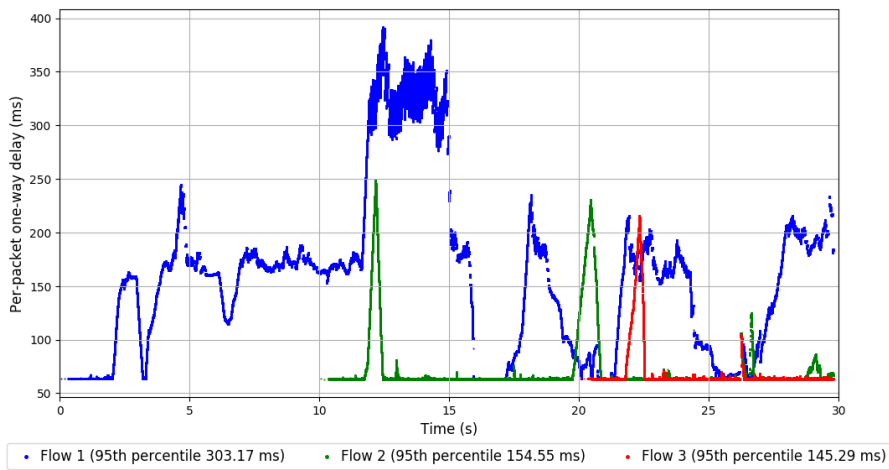
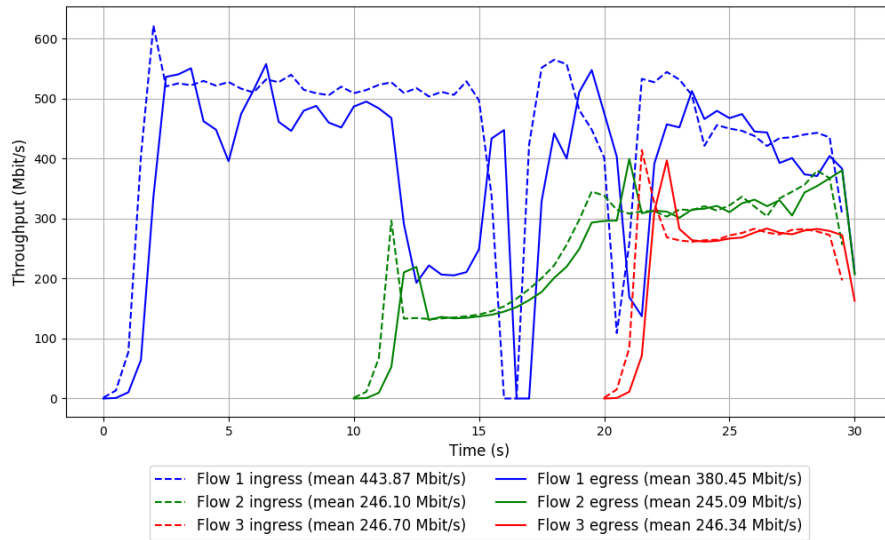


Run 2: Statistics of PCC-Allegro

Start at: 2019-03-27 11:03:07
End at: 2019-03-27 11:03:37
Local clock offset: -0.063 ms
Remote clock offset: -0.108 ms

Below is generated by plot.py at 2019-03-27 15:07:10
Datalink statistics
-- Total of 3 flows:
Average throughput: 623.59 Mbit/s
95th percentile per-packet one-way delay: 216.088 ms
Loss rate: 9.86%
-- Flow 1:
Average throughput: 380.45 Mbit/s
95th percentile per-packet one-way delay: 303.165 ms
Loss rate: 14.65%
-- Flow 2:
Average throughput: 245.09 Mbit/s
95th percentile per-packet one-way delay: 154.546 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 246.34 Mbit/s
95th percentile per-packet one-way delay: 145.293 ms
Loss rate: 1.43%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2019-03-27 11:39:57

End at: 2019-03-27 11:40:27

Local clock offset: 0.006 ms

Remote clock offset: 0.151 ms

Below is generated by plot.py at 2019-03-27 15:07:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 549.24 Mbit/s

95th percentile per-packet one-way delay: 185.552 ms

Loss rate: 1.35%

-- Flow 1:

Average throughput: 300.11 Mbit/s

95th percentile per-packet one-way delay: 141.536 ms

Loss rate: 1.29%

-- Flow 2:

Average throughput: 258.86 Mbit/s

95th percentile per-packet one-way delay: 251.223 ms

Loss rate: 1.75%

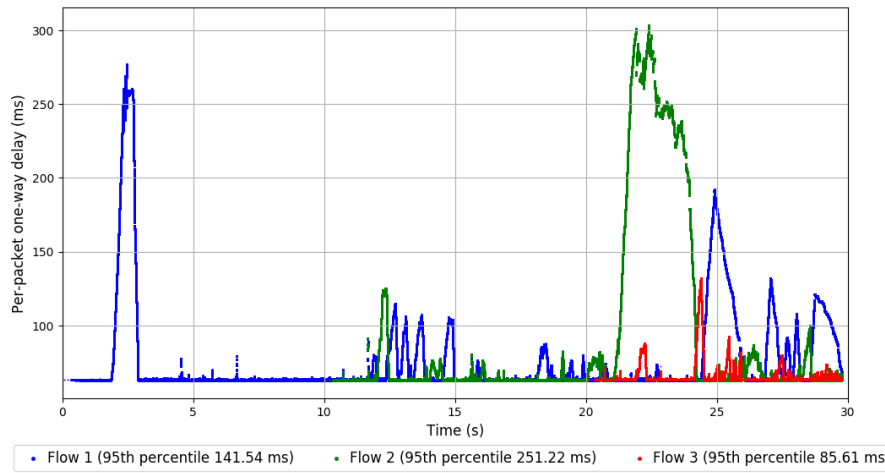
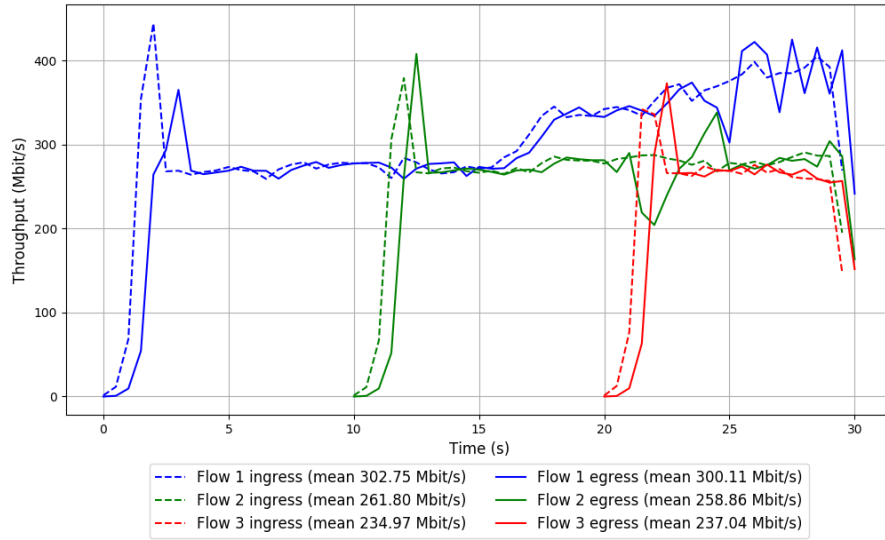
-- Flow 3:

Average throughput: 237.04 Mbit/s

95th percentile per-packet one-way delay: 85.606 ms

Loss rate: 0.71%

Run 3: Report of PCC-Allegro — Data Link

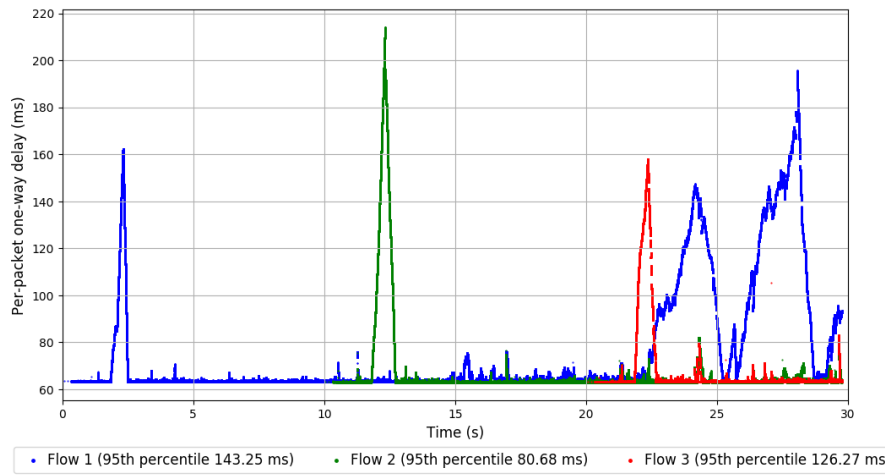
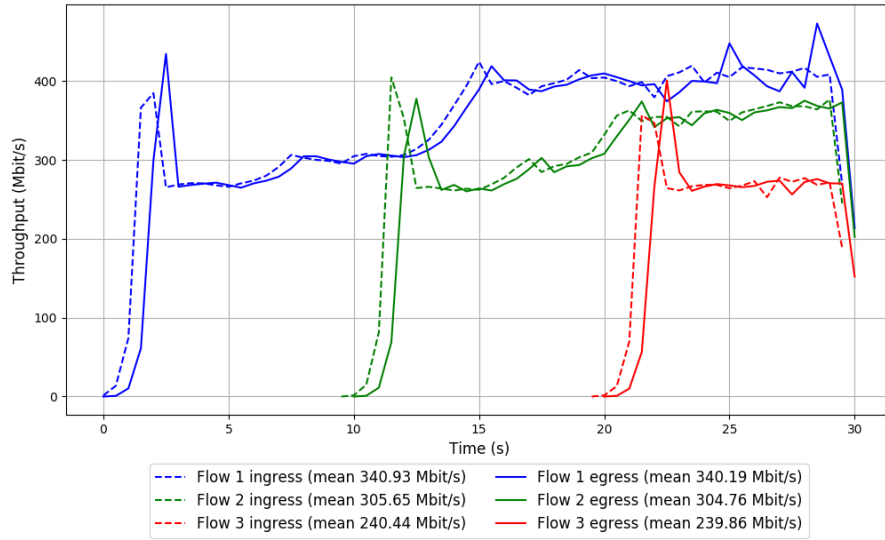


Run 4: Statistics of PCC-Allegro

Start at: 2019-03-27 12:17:01
End at: 2019-03-27 12:17:31
Local clock offset: -0.124 ms
Remote clock offset: -0.418 ms

```
# Below is generated by plot.py at 2019-03-27 15:07:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 620.86 Mbit/s
95th percentile per-packet one-way delay: 136.101 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 340.19 Mbit/s
95th percentile per-packet one-way delay: 143.251 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 304.76 Mbit/s
95th percentile per-packet one-way delay: 80.676 ms
Loss rate: 0.93%
-- Flow 3:
Average throughput: 239.86 Mbit/s
95th percentile per-packet one-way delay: 126.271 ms
Loss rate: 1.52%
```

Run 4: Report of PCC-Allegro — Data Link

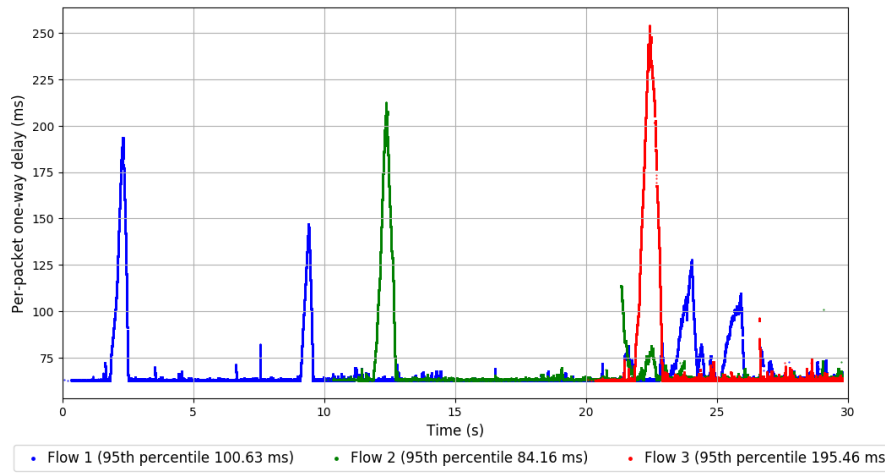
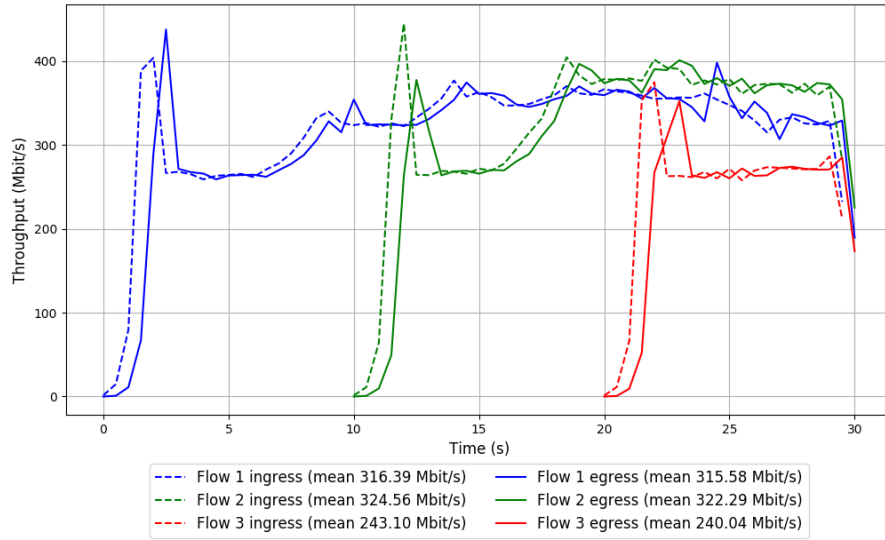


Run 5: Statistics of PCC-Allegro

Start at: 2019-03-27 12:53:26
End at: 2019-03-27 12:53:56
Local clock offset: -0.135 ms
Remote clock offset: -0.165 ms

```
# Below is generated by plot.py at 2019-03-27 15:10:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 607.76 Mbit/s
95th percentile per-packet one-way delay: 104.029 ms
Loss rate: 1.15%
-- Flow 1:
Average throughput: 315.58 Mbit/s
95th percentile per-packet one-way delay: 100.634 ms
Loss rate: 0.68%
-- Flow 2:
Average throughput: 322.29 Mbit/s
95th percentile per-packet one-way delay: 84.161 ms
Loss rate: 1.33%
-- Flow 3:
Average throughput: 240.04 Mbit/s
95th percentile per-packet one-way delay: 195.455 ms
Loss rate: 2.54%
```

Run 5: Report of PCC-Allegro — Data Link



Run 1: Statistics of PCC-Expr

Start at: 2019-03-27 10:24:39

End at: 2019-03-27 10:25:10

Local clock offset: -0.104 ms

Remote clock offset: 0.033 ms

Below is generated by plot.py at 2019-03-27 15:10:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 480.48 Mbit/s

95th percentile per-packet one-way delay: 170.360 ms

Loss rate: 1.57%

-- Flow 1:

Average throughput: 259.94 Mbit/s

95th percentile per-packet one-way delay: 142.941 ms

Loss rate: 1.18%

-- Flow 2:

Average throughput: 284.09 Mbit/s

95th percentile per-packet one-way delay: 180.091 ms

Loss rate: 2.09%

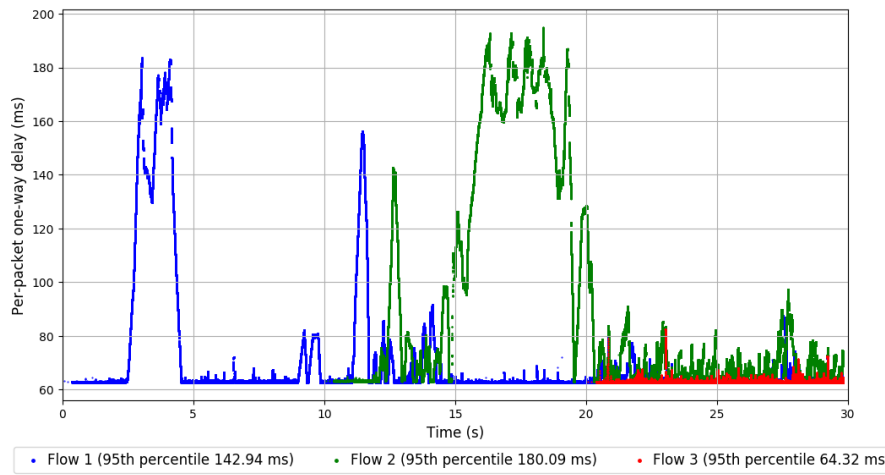
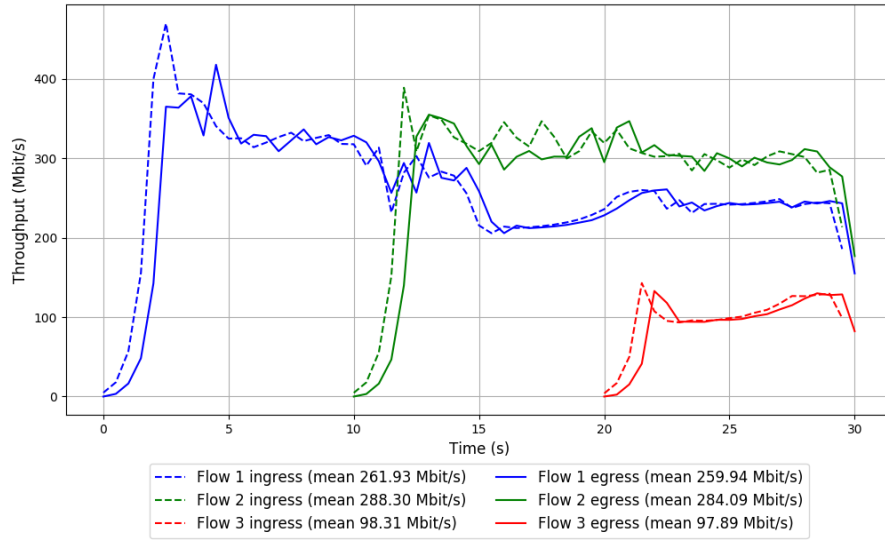
-- Flow 3:

Average throughput: 97.89 Mbit/s

95th percentile per-packet one-way delay: 64.324 ms

Loss rate: 1.70%

Run 1: Report of PCC-Expr — Data Link

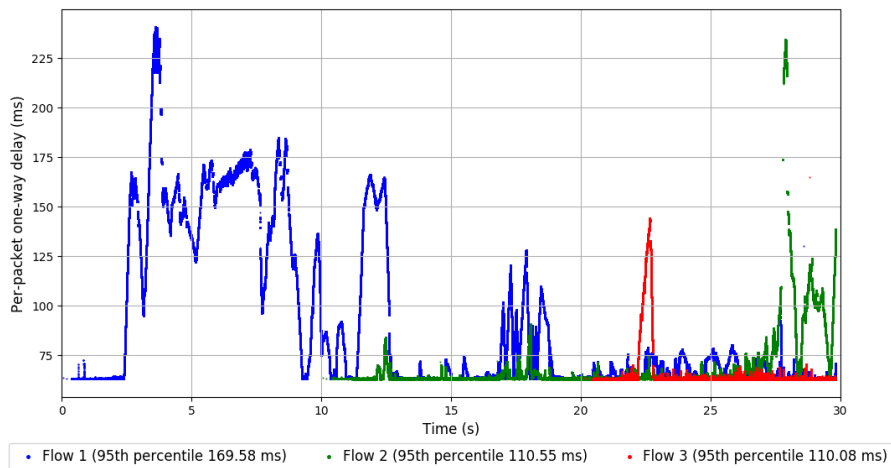
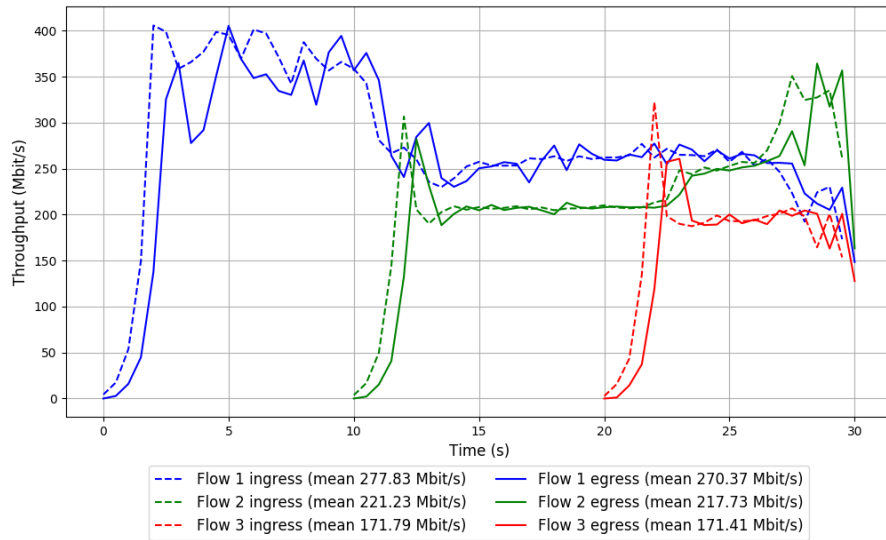


Run 2: Statistics of PCC-Expr

Start at: 2019-03-27 11:01:10
End at: 2019-03-27 11:01:40
Local clock offset: -0.08 ms
Remote clock offset: -0.106 ms

```
# Below is generated by plot.py at 2019-03-27 15:10:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 470.93 Mbit/s
95th percentile per-packet one-way delay: 165.249 ms
Loss rate: 2.64%
-- Flow 1:
Average throughput: 270.37 Mbit/s
95th percentile per-packet one-way delay: 169.581 ms
Loss rate: 3.10%
-- Flow 2:
Average throughput: 217.73 Mbit/s
95th percentile per-packet one-way delay: 110.553 ms
Loss rate: 2.21%
-- Flow 3:
Average throughput: 171.41 Mbit/s
95th percentile per-packet one-way delay: 110.079 ms
Loss rate: 1.51%
```

Run 2: Report of PCC-Expr — Data Link



Run 3: Statistics of PCC-Expr

Start at: 2019-03-27 11:37:53

End at: 2019-03-27 11:38:23

Local clock offset: 0.007 ms

Remote clock offset: 0.042 ms

Below is generated by plot.py at 2019-03-27 15:10:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 434.34 Mbit/s

95th percentile per-packet one-way delay: 159.672 ms

Loss rate: 1.24%

-- Flow 1:

Average throughput: 243.33 Mbit/s

95th percentile per-packet one-way delay: 159.764 ms

Loss rate: 1.03%

-- Flow 2:

Average throughput: 204.10 Mbit/s

95th percentile per-packet one-way delay: 200.886 ms

Loss rate: 1.52%

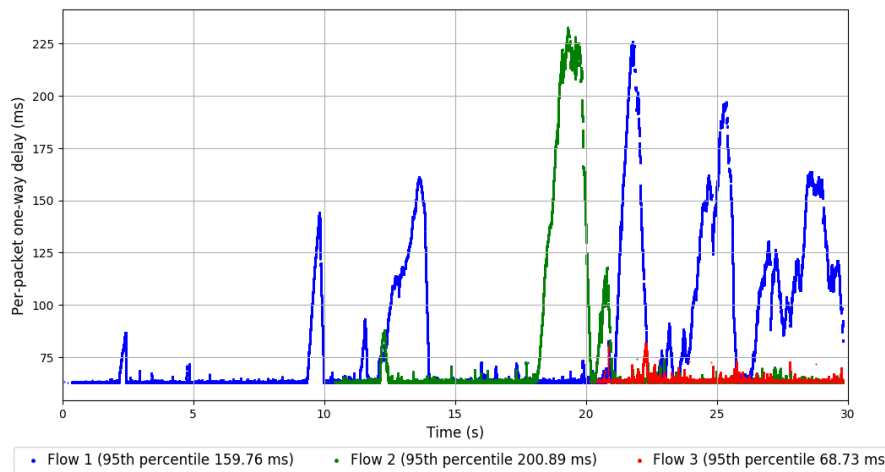
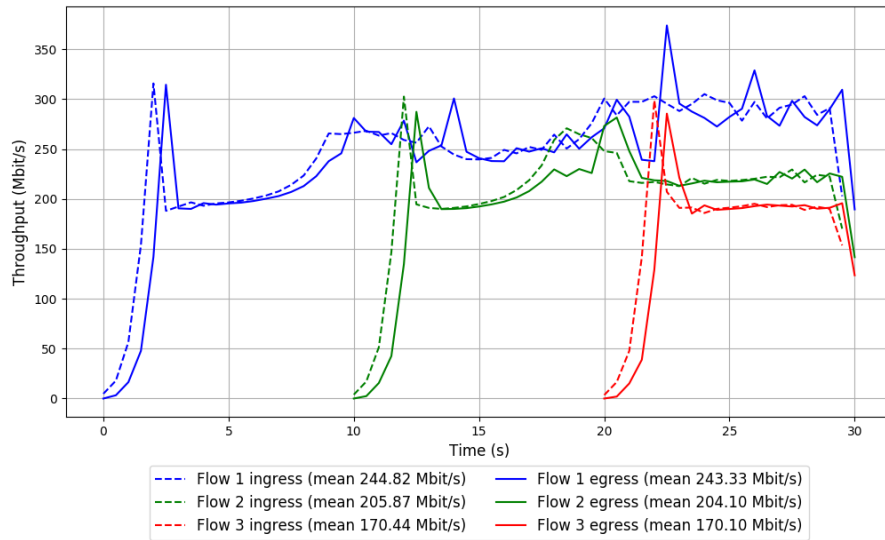
-- Flow 3:

Average throughput: 170.10 Mbit/s

95th percentile per-packet one-way delay: 68.734 ms

Loss rate: 1.48%

Run 3: Report of PCC-Expr — Data Link

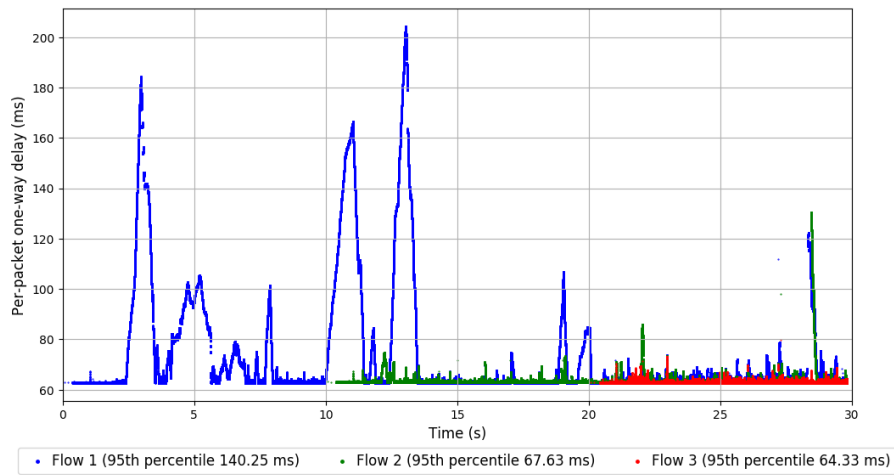
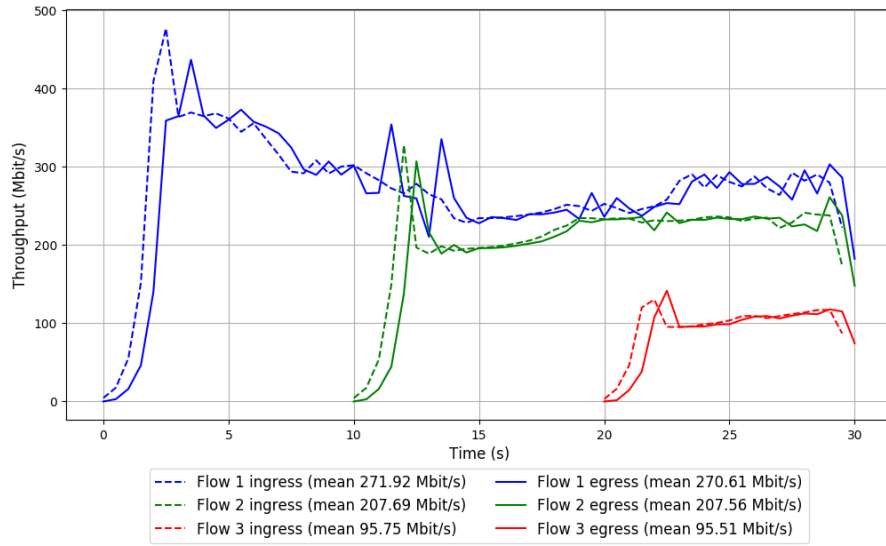


Run 4: Statistics of PCC-Expr

Start at: 2019-03-27 12:15:07
End at: 2019-03-27 12:15:37
Local clock offset: -0.101 ms
Remote clock offset: -0.195 ms

```
# Below is generated by plot.py at 2019-03-27 15:17:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 439.56 Mbit/s
95th percentile per-packet one-way delay: 116.410 ms
Loss rate: 0.89%
-- Flow 1:
Average throughput: 270.61 Mbit/s
95th percentile per-packet one-way delay: 140.253 ms
Loss rate: 0.91%
-- Flow 2:
Average throughput: 207.56 Mbit/s
95th percentile per-packet one-way delay: 67.628 ms
Loss rate: 0.69%
-- Flow 3:
Average throughput: 95.51 Mbit/s
95th percentile per-packet one-way delay: 64.330 ms
Loss rate: 1.56%
```

Run 4: Report of PCC-Expr — Data Link



Run 5: Statistics of PCC-Expr

Start at: 2019-03-27 12:51:24
End at: 2019-03-27 12:51:54
Local clock offset: -0.162 ms
Remote clock offset: -0.357 ms

Below is generated by plot.py at 2019-03-27 15:23:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 511.04 Mbit/s
95th percentile per-packet one-way delay: 165.514 ms
Loss rate: 1.45%

-- Flow 1:

Average throughput: 305.16 Mbit/s
95th percentile per-packet one-way delay: 168.301 ms
Loss rate: 1.80%

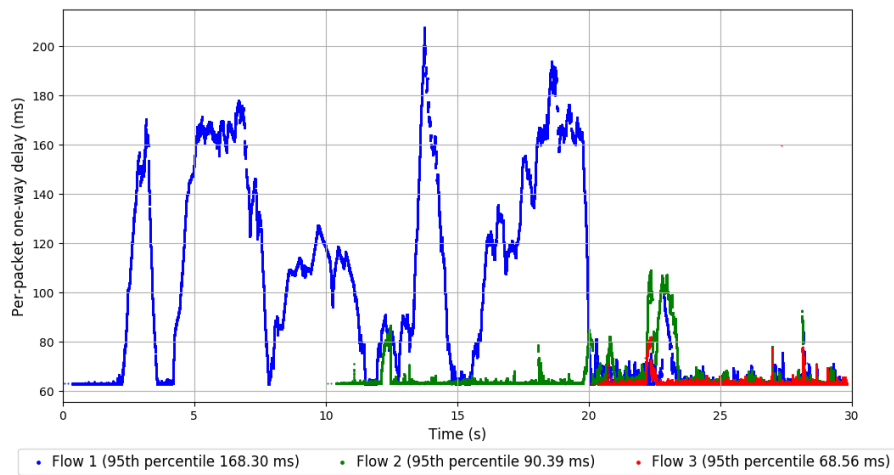
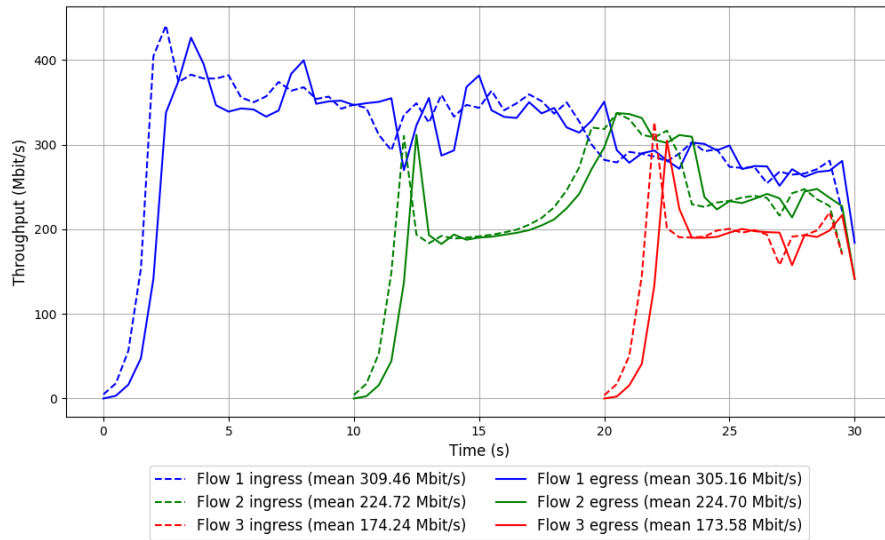
-- Flow 2:

Average throughput: 224.70 Mbit/s
95th percentile per-packet one-way delay: 90.385 ms
Loss rate: 0.65%

-- Flow 3:

Average throughput: 173.58 Mbit/s
95th percentile per-packet one-way delay: 68.558 ms
Loss rate: 1.66%

Run 5: Report of PCC-Expr — Data Link



Run 1: Statistics of QUIC Cubic

Start at: 2019-03-27 10:09:11

End at: 2019-03-27 10:09:41

Local clock offset: -0.111 ms

Remote clock offset: 0.103 ms

Below is generated by plot.py at 2019-03-27 15:23:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 113.15 Mbit/s

95th percentile per-packet one-way delay: 63.316 ms

Loss rate: 0.55%

-- Flow 1:

Average throughput: 57.39 Mbit/s

95th percentile per-packet one-way delay: 63.370 ms

Loss rate: 0.54%

-- Flow 2:

Average throughput: 49.20 Mbit/s

95th percentile per-packet one-way delay: 63.128 ms

Loss rate: 0.85%

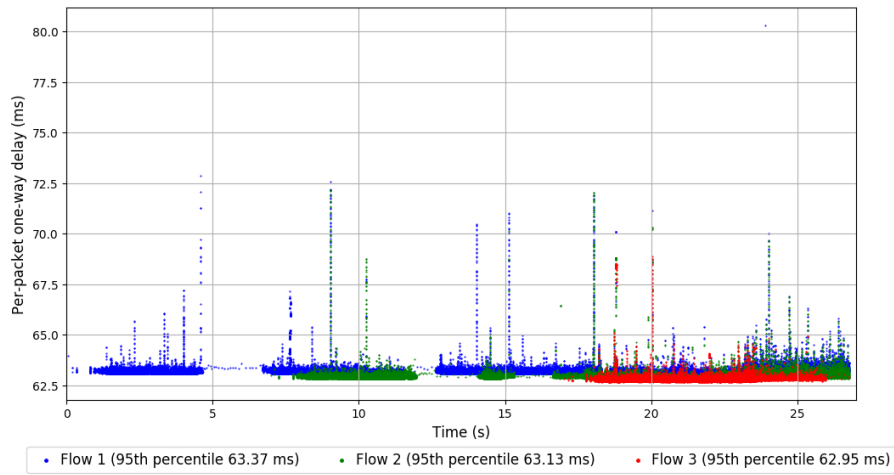
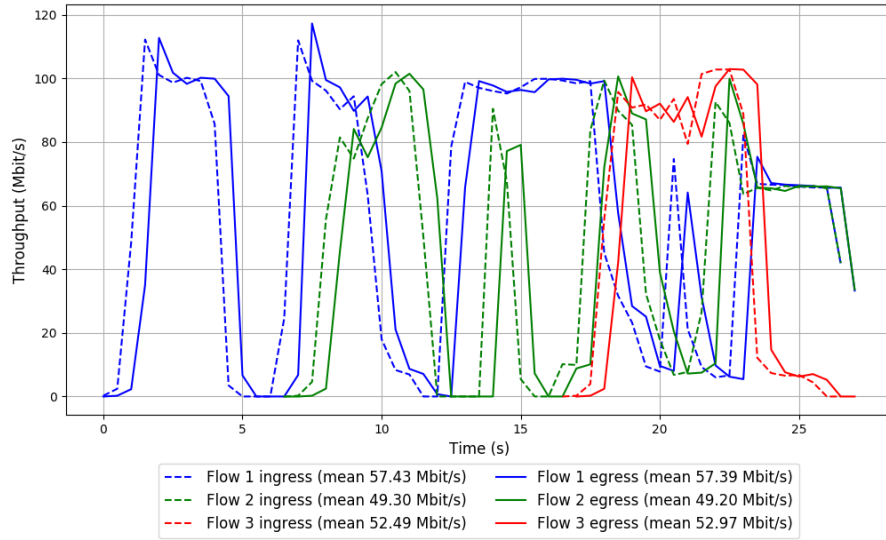
-- Flow 3:

Average throughput: 52.97 Mbit/s

95th percentile per-packet one-way delay: 62.955 ms

Loss rate: 0.00%

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2019-03-27 10:45:33
End at: 2019-03-27 10:46:03
Local clock offset: -0.075 ms
Remote clock offset: -0.286 ms

Below is generated by plot.py at 2019-03-27 15:23:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 92.52 Mbit/s
95th percentile per-packet one-way delay: 63.753 ms
Loss rate: 1.06%

-- Flow 1:

Average throughput: 62.67 Mbit/s
95th percentile per-packet one-way delay: 63.135 ms
Loss rate: 0.58%

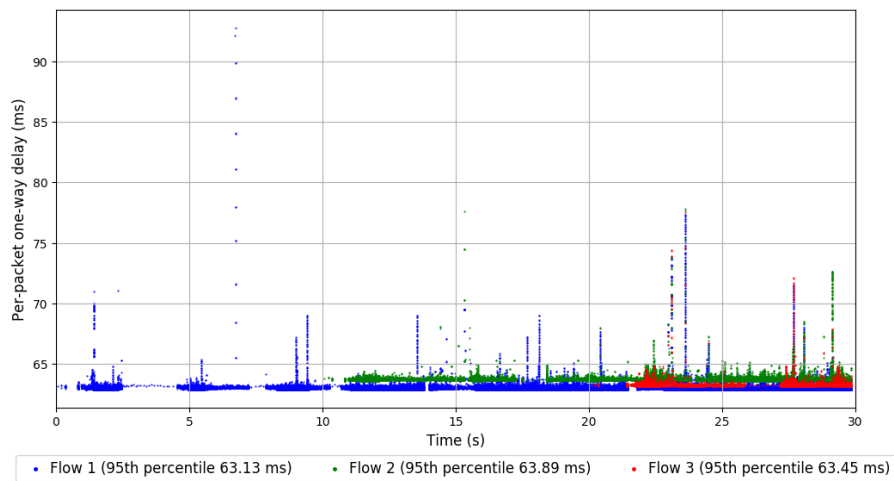
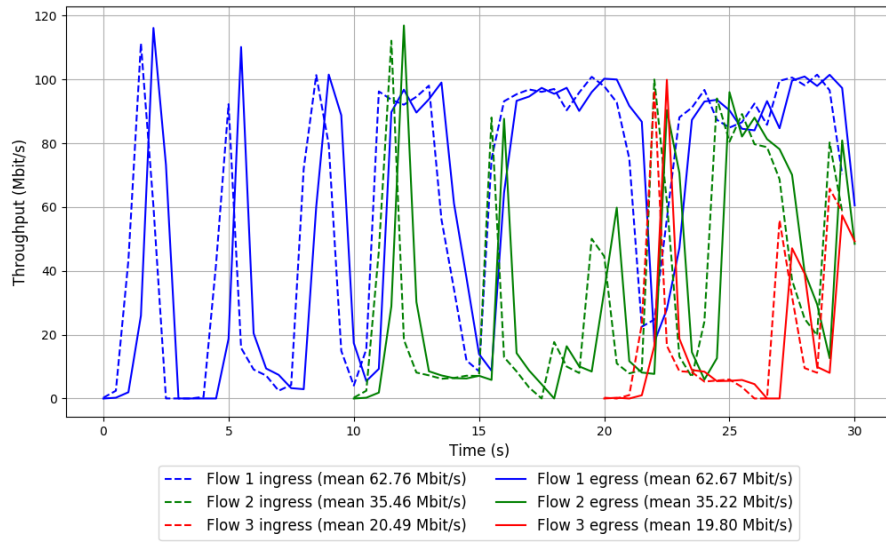
-- Flow 2:

Average throughput: 35.22 Mbit/s
95th percentile per-packet one-way delay: 63.892 ms
Loss rate: 1.30%

-- Flow 3:

Average throughput: 19.80 Mbit/s
95th percentile per-packet one-way delay: 63.450 ms
Loss rate: 4.66%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2019-03-27 11:21:45

End at: 2019-03-27 11:22:15

Local clock offset: -0.052 ms

Remote clock offset: 0.425 ms

Below is generated by plot.py at 2019-03-27 15:23:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 102.01 Mbit/s

95th percentile per-packet one-way delay: 62.961 ms

Loss rate: 0.78%

-- Flow 1:

Average throughput: 62.71 Mbit/s

95th percentile per-packet one-way delay: 63.000 ms

Loss rate: 0.62%

-- Flow 2:

Average throughput: 51.63 Mbit/s

95th percentile per-packet one-way delay: 62.704 ms

Loss rate: 1.05%

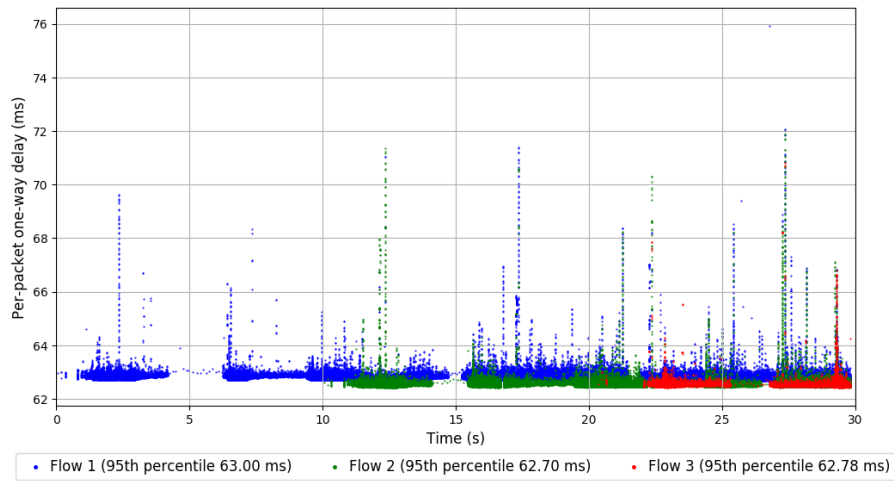
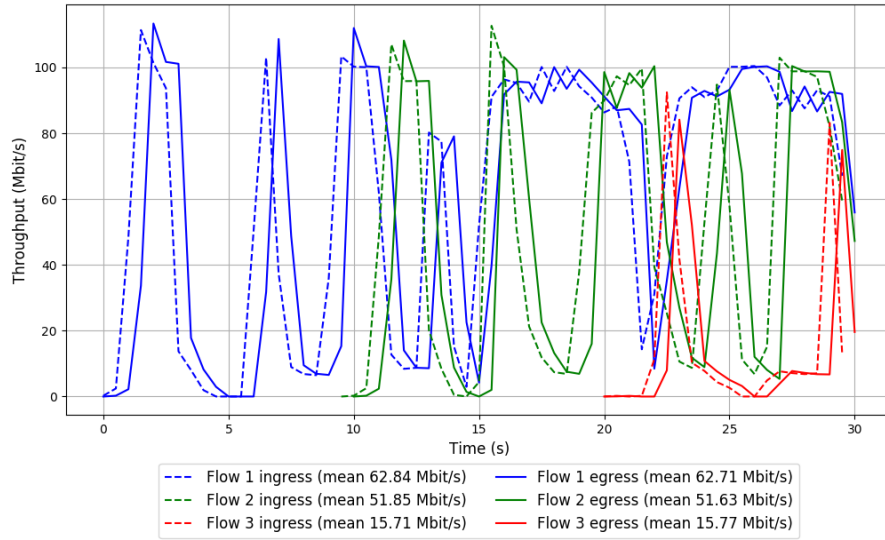
-- Flow 3:

Average throughput: 15.77 Mbit/s

95th percentile per-packet one-way delay: 62.783 ms

Loss rate: 0.95%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2019-03-27 11:59:16
End at: 2019-03-27 11:59:46
Local clock offset: -0.04 ms
Remote clock offset: -0.315 ms

Below is generated by plot.py at 2019-03-27 15:23:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 90.33 Mbit/s
95th percentile per-packet one-way delay: 63.424 ms
Loss rate: 0.46%

-- Flow 1:

Average throughput: 48.46 Mbit/s
95th percentile per-packet one-way delay: 63.256 ms
Loss rate: 0.68%

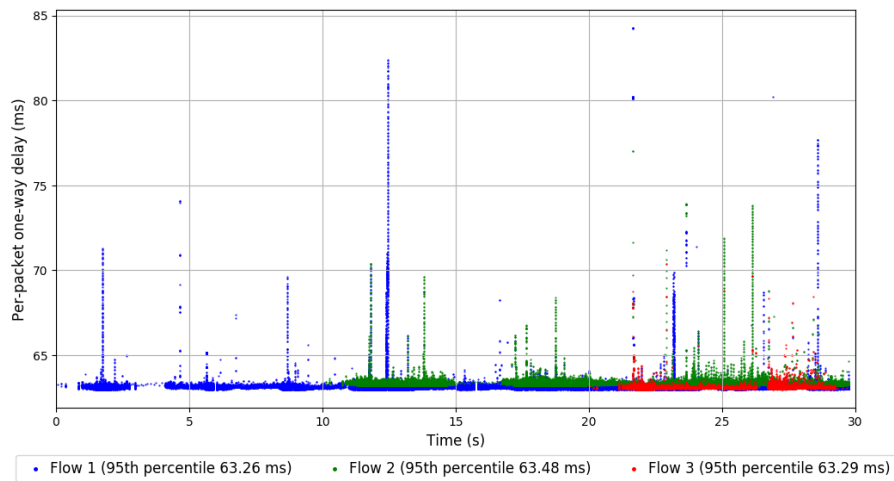
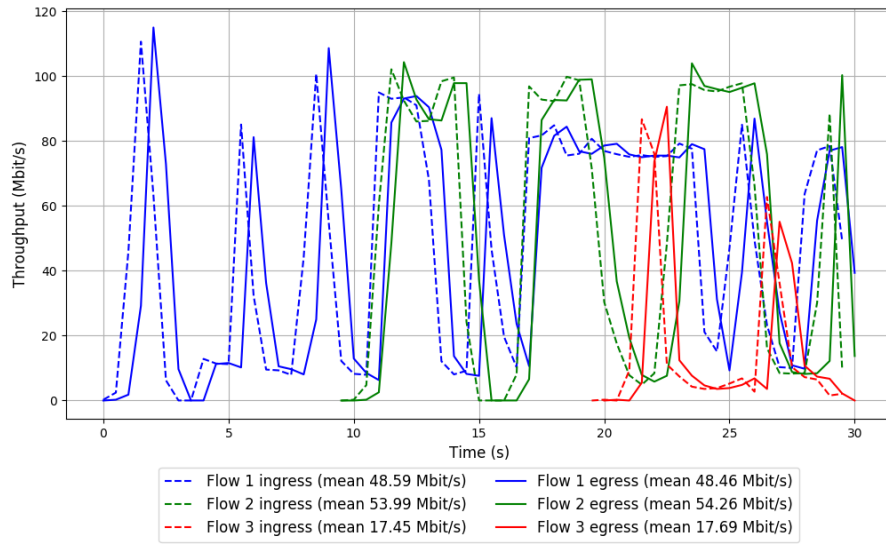
-- Flow 2:

Average throughput: 54.26 Mbit/s
95th percentile per-packet one-way delay: 63.481 ms
Loss rate: 0.15%

-- Flow 3:

Average throughput: 17.69 Mbit/s
95th percentile per-packet one-way delay: 63.292 ms
Loss rate: 0.61%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2019-03-27 12:35:52
End at: 2019-03-27 12:36:22
Local clock offset: -0.131 ms
Remote clock offset: -0.093 ms

Below is generated by plot.py at 2019-03-27 15:23:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 104.79 Mbit/s
95th percentile per-packet one-way delay: 63.016 ms
Loss rate: 0.79%

-- Flow 1:

Average throughput: 68.96 Mbit/s
95th percentile per-packet one-way delay: 63.039 ms
Loss rate: 0.59%

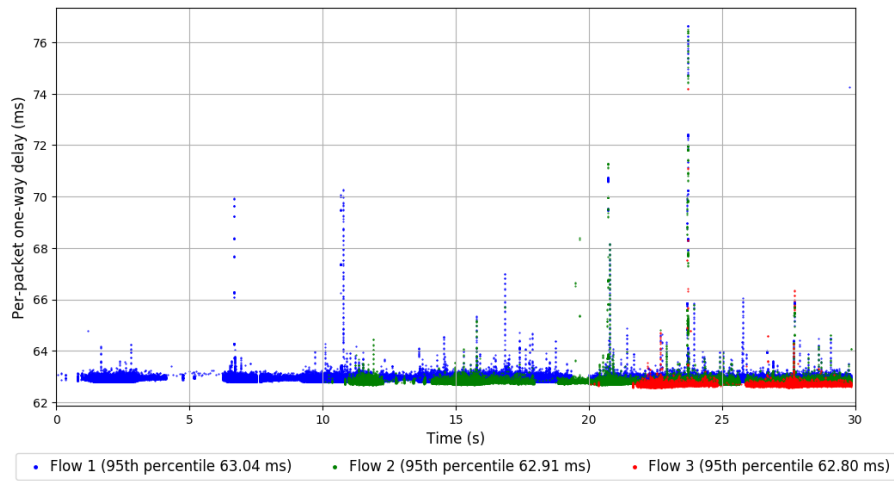
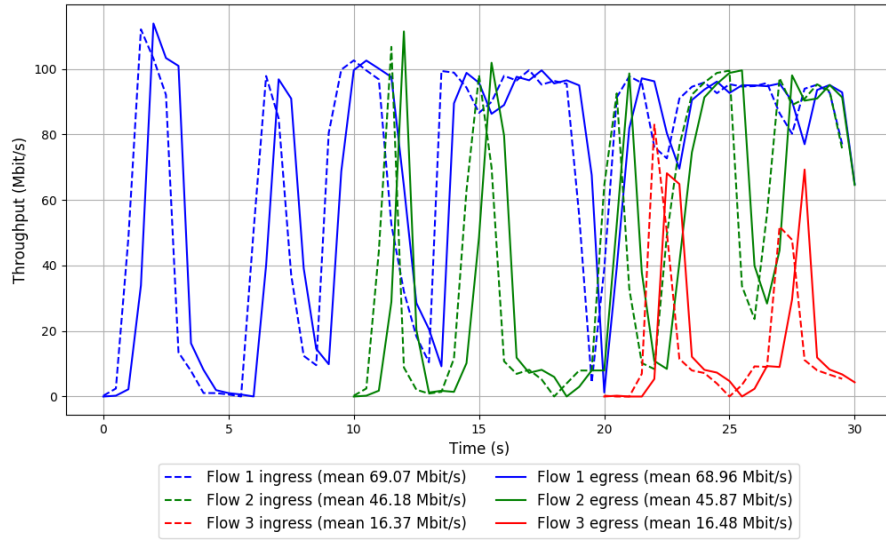
-- Flow 2:

Average throughput: 45.87 Mbit/s
95th percentile per-packet one-way delay: 62.912 ms
Loss rate: 1.29%

-- Flow 3:

Average throughput: 16.48 Mbit/s
95th percentile per-packet one-way delay: 62.798 ms
Loss rate: 0.59%

Run 5: Report of QUIC Cubic — Data Link



Run 1: Statistics of SCReAM

Start at: 2019-03-27 10:12:28

End at: 2019-03-27 10:12:58

Local clock offset: -0.13 ms

Remote clock offset: 0.271 ms

Below is generated by plot.py at 2019-03-27 15:23:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 63.221 ms

Loss rate: 0.64%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 63.263 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 62.921 ms

Loss rate: 0.61%

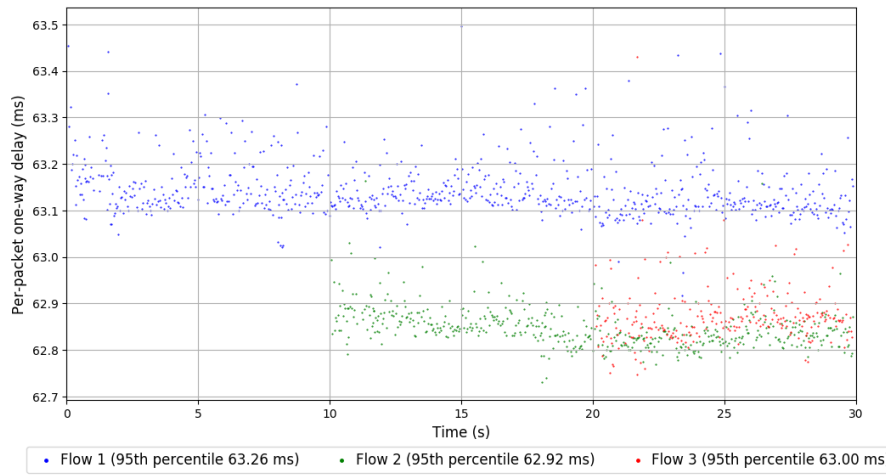
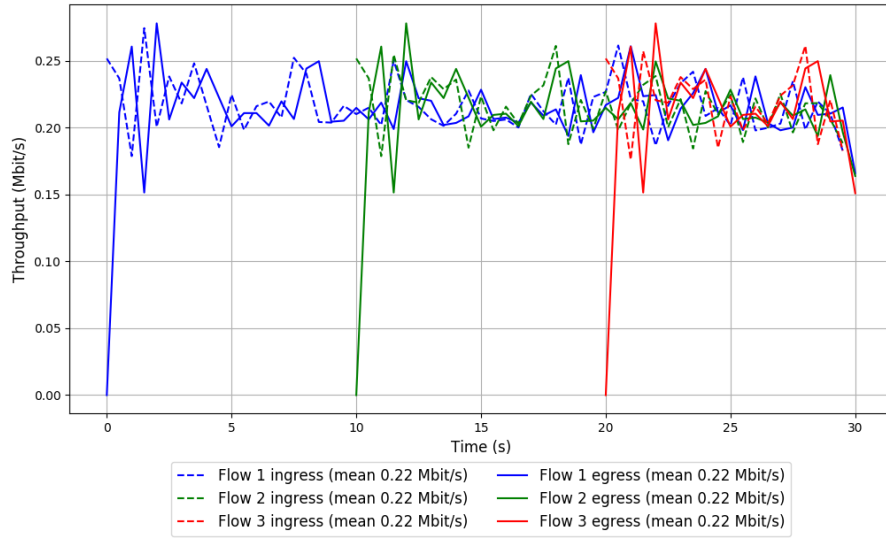
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 63.000 ms

Loss rate: 1.45%

Run 1: Report of SCReAM — Data Link



Run 2: Statistics of SCReAM

Start at: 2019-03-27 10:48:51

End at: 2019-03-27 10:49:21

Local clock offset: -0.121 ms

Remote clock offset: 0.061 ms

Below is generated by plot.py at 2019-03-27 15:23:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 63.088 ms

Loss rate: 0.58%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 63.107 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 62.884 ms

Loss rate: 0.61%

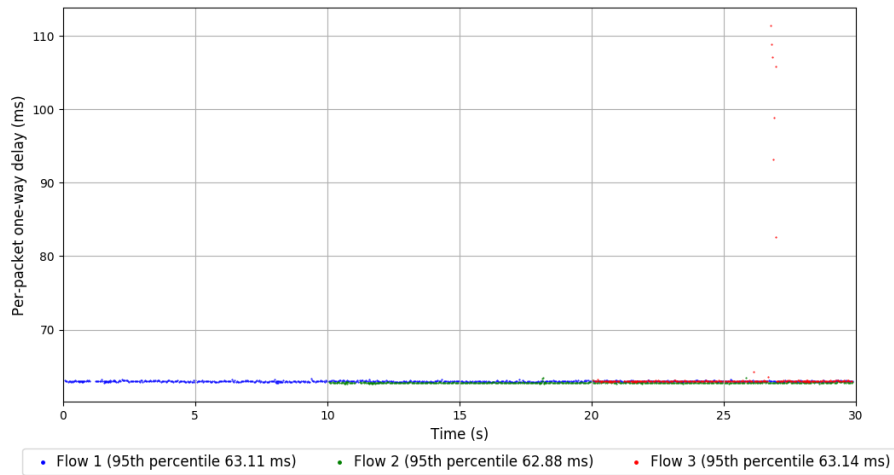
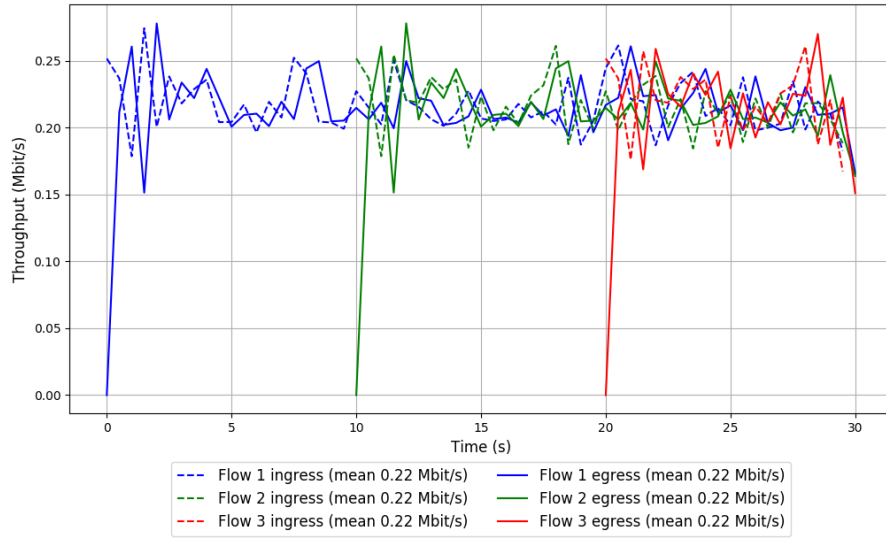
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 63.143 ms

Loss rate: 1.10%

Run 2: Report of SCReAM — Data Link



Run 3: Statistics of SCReAM

Start at: 2019-03-27 11:25:06

End at: 2019-03-27 11:25:36

Local clock offset: -0.055 ms

Remote clock offset: 0.142 ms

Below is generated by plot.py at 2019-03-27 15:23:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 63.333 ms

Loss rate: 0.64%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 63.375 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 62.910 ms

Loss rate: 0.61%

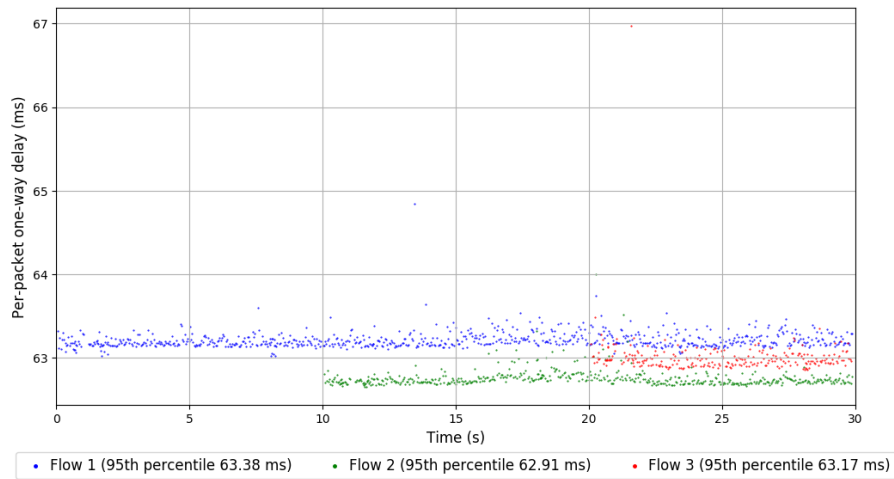
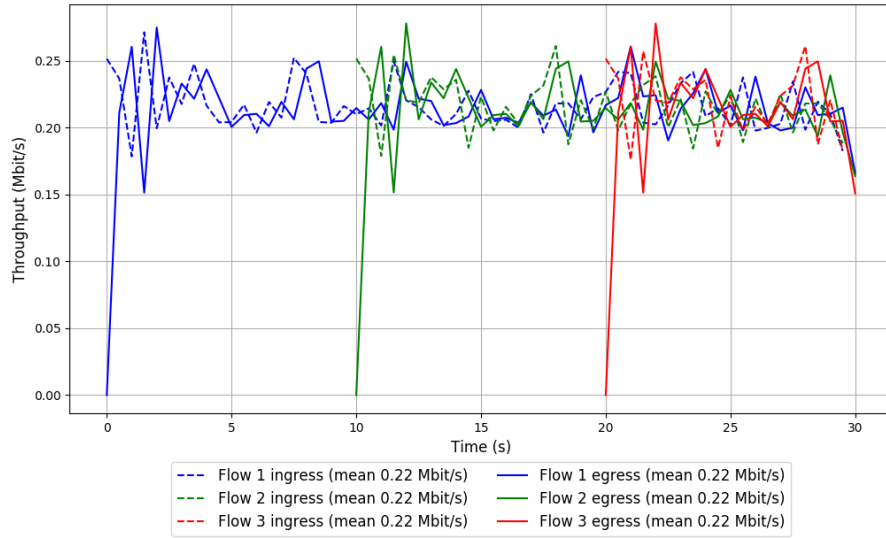
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 63.174 ms

Loss rate: 1.45%

Run 3: Report of SCReAM — Data Link



Run 4: Statistics of SCReAM

Start at: 2019-03-27 12:02:34
End at: 2019-03-27 12:03:04
Local clock offset: -0.076 ms
Remote clock offset: -0.125 ms

Below is generated by plot.py at 2019-03-27 15:23:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 63.562 ms

Loss rate: 0.64%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 63.178 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 63.344 ms

Loss rate: 0.63%

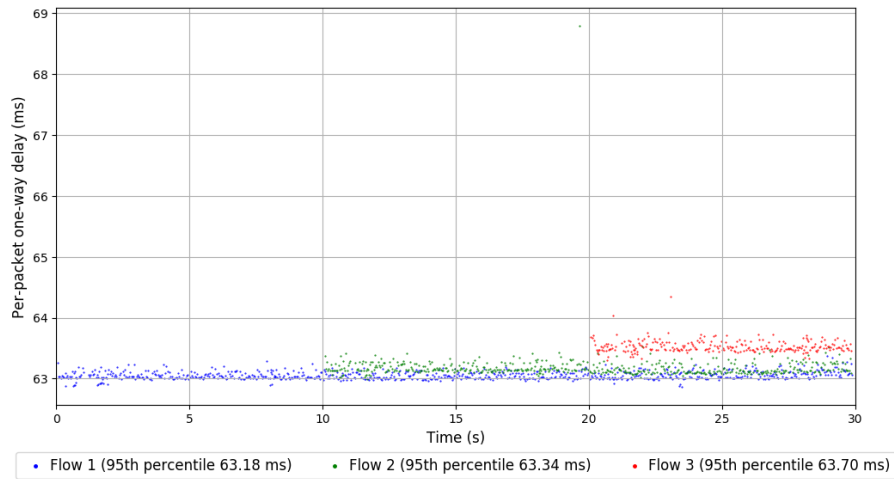
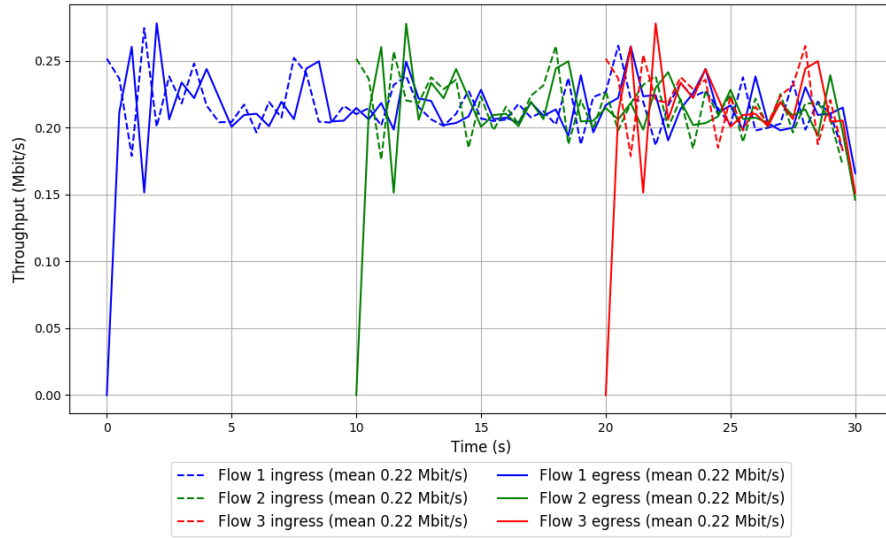
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 63.695 ms

Loss rate: 1.45%

Run 4: Report of SCReAM — Data Link



Run 5: Statistics of SCReAM

Start at: 2019-03-27 12:39:02

End at: 2019-03-27 12:39:32

Local clock offset: -0.151 ms

Remote clock offset: -0.32 ms

Below is generated by plot.py at 2019-03-27 15:23:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 63.349 ms

Loss rate: 0.58%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 63.366 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 63.147 ms

Loss rate: 0.61%

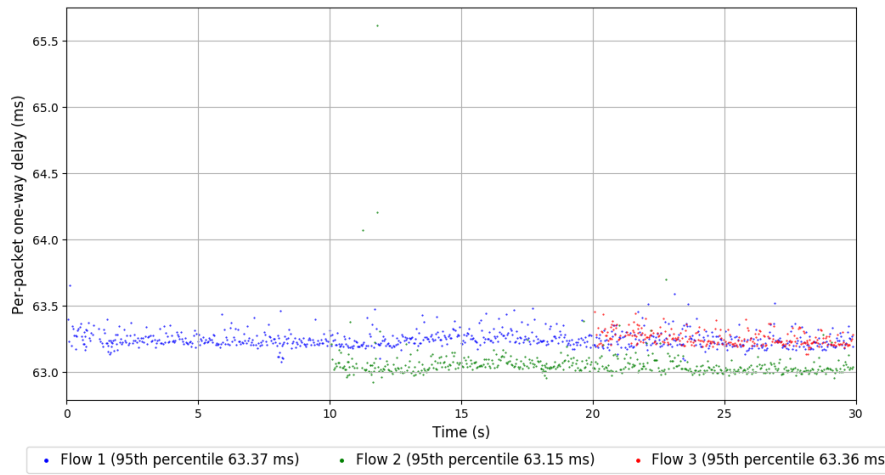
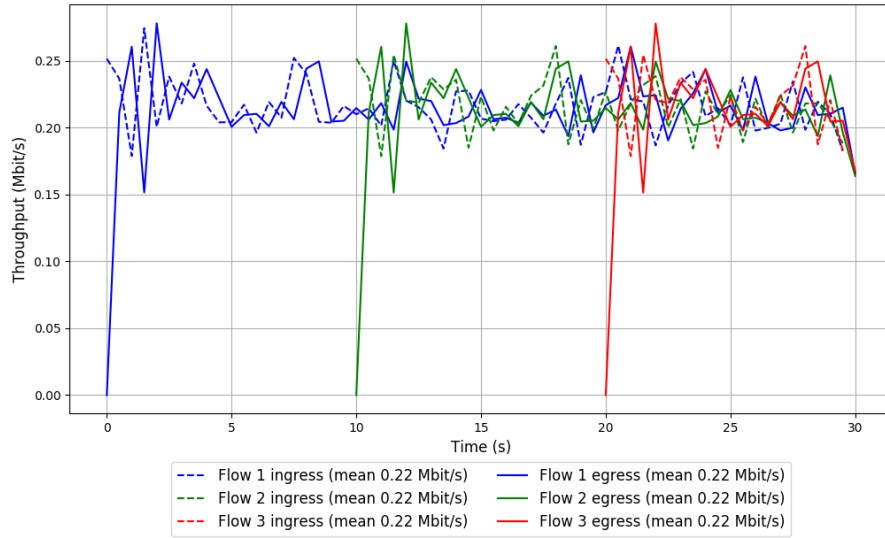
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 63.357 ms

Loss rate: 1.08%

Run 5: Report of SCReAM — Data Link



Run 1: Statistics of Sprout

Start at: 2019-03-27 10:05:55

End at: 2019-03-27 10:06:25

Local clock offset: -0.155 ms

Remote clock offset: 0.308 ms

Below is generated by plot.py at 2019-03-27 15:23:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 13.40 Mbit/s

95th percentile per-packet one-way delay: 63.535 ms

Loss rate: 0.73%

-- Flow 1:

Average throughput: 6.80 Mbit/s

95th percentile per-packet one-way delay: 63.302 ms

Loss rate: 0.51%

-- Flow 2:

Average throughput: 6.74 Mbit/s

95th percentile per-packet one-way delay: 63.645 ms

Loss rate: 0.73%

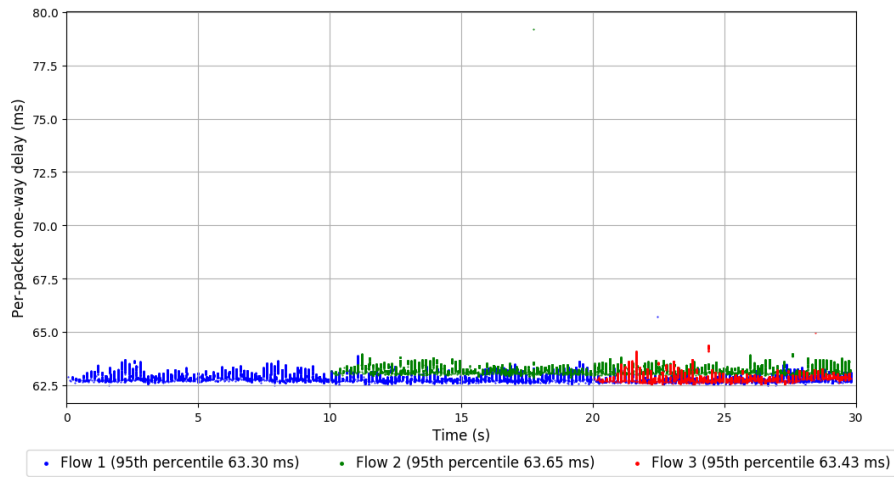
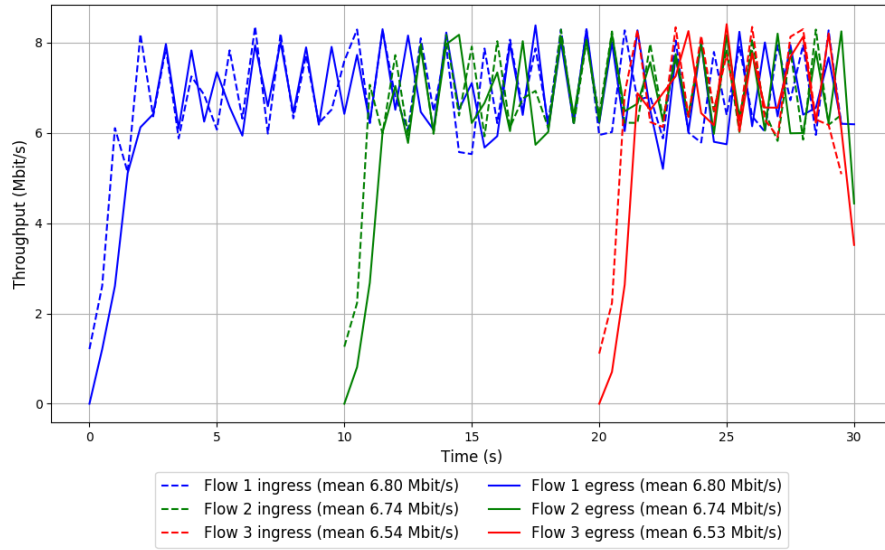
-- Flow 3:

Average throughput: 6.53 Mbit/s

95th percentile per-packet one-way delay: 63.428 ms

Loss rate: 1.42%

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2019-03-27 10:42:17
End at: 2019-03-27 10:42:47
Local clock offset: -0.092 ms
Remote clock offset: -0.367 ms

Below is generated by plot.py at 2019-03-27 15:23:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 13.24 Mbit/s
95th percentile per-packet one-way delay: 64.033 ms
Loss rate: 0.74%

-- Flow 1:

Average throughput: 6.80 Mbit/s
95th percentile per-packet one-way delay: 64.035 ms
Loss rate: 0.46%

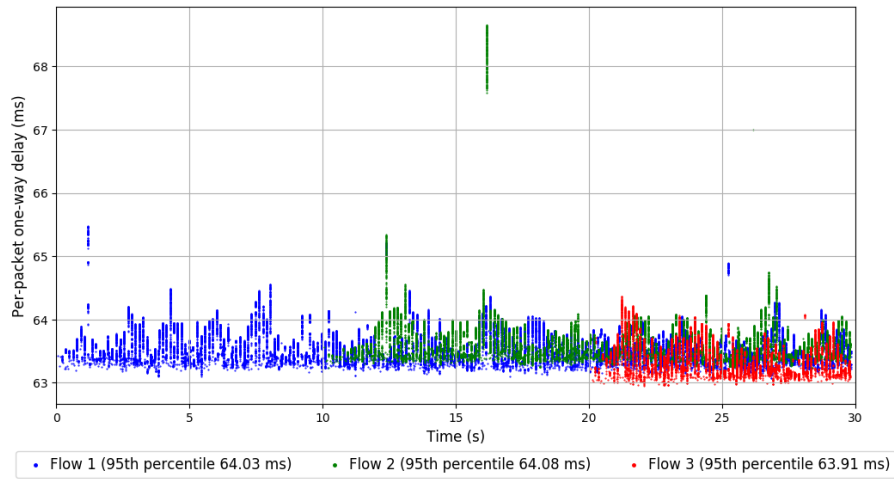
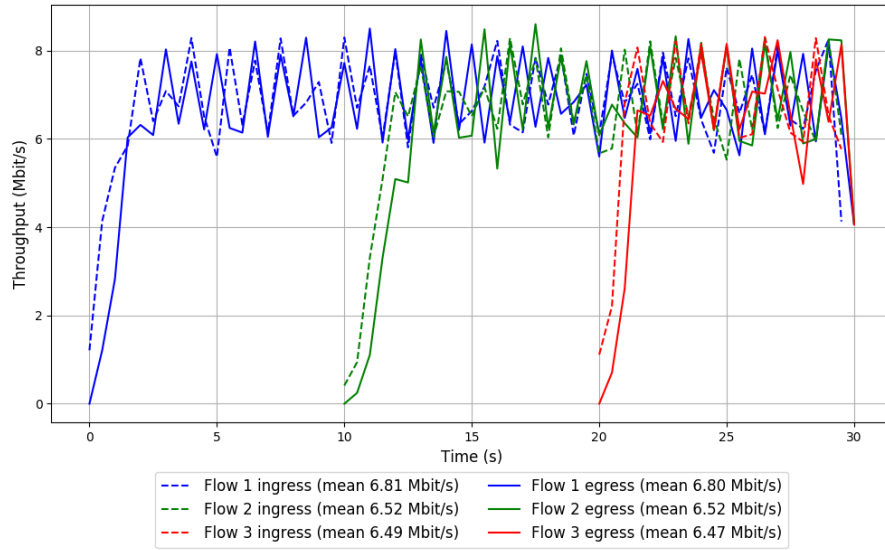
-- Flow 2:

Average throughput: 6.52 Mbit/s
95th percentile per-packet one-way delay: 64.082 ms
Loss rate: 0.77%

-- Flow 3:

Average throughput: 6.47 Mbit/s
95th percentile per-packet one-way delay: 63.908 ms
Loss rate: 1.56%

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2019-03-27 11:18:35

End at: 2019-03-27 11:19:05

Local clock offset: -0.064 ms

Remote clock offset: 0.066 ms

Below is generated by plot.py at 2019-03-27 15:23:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 13.27 Mbit/s

95th percentile per-packet one-way delay: 63.888 ms

Loss rate: 0.76%

-- Flow 1:

Average throughput: 6.69 Mbit/s

95th percentile per-packet one-way delay: 63.962 ms

Loss rate: 0.50%

-- Flow 2:

Average throughput: 6.71 Mbit/s

95th percentile per-packet one-way delay: 63.784 ms

Loss rate: 0.77%

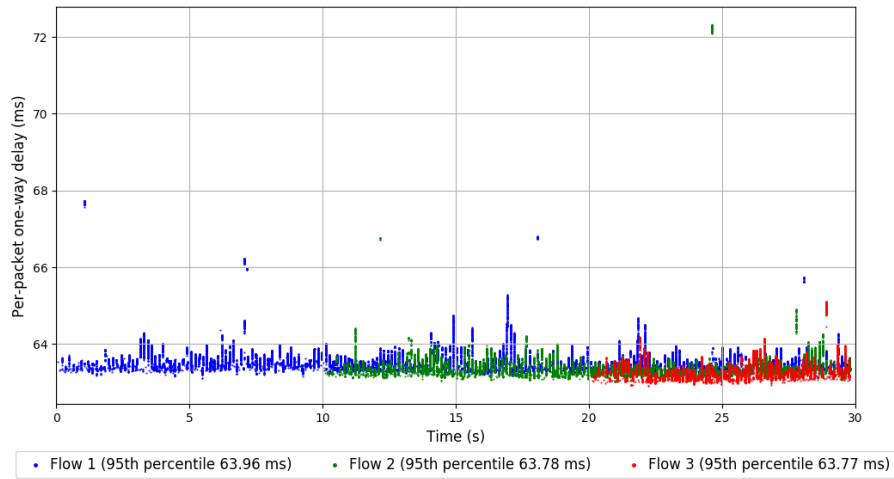
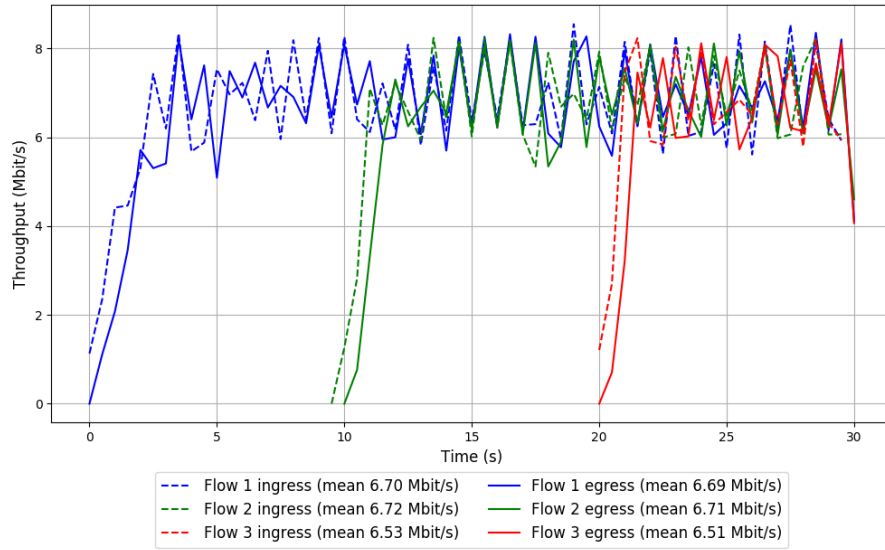
-- Flow 3:

Average throughput: 6.51 Mbit/s

95th percentile per-packet one-way delay: 63.769 ms

Loss rate: 1.56%

Run 3: Report of Sprout — Data Link



Run 4: Statistics of Sprout

Start at: 2019-03-27 11:56:05
End at: 2019-03-27 11:56:35
Local clock offset: -0.017 ms
Remote clock offset: -0.078 ms

Below is generated by plot.py at 2019-03-27 15:23:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 13.34 Mbit/s
95th percentile per-packet one-way delay: 63.915 ms
Loss rate: 0.69%

-- Flow 1:

Average throughput: 6.78 Mbit/s
95th percentile per-packet one-way delay: 64.027 ms
Loss rate: 0.35%

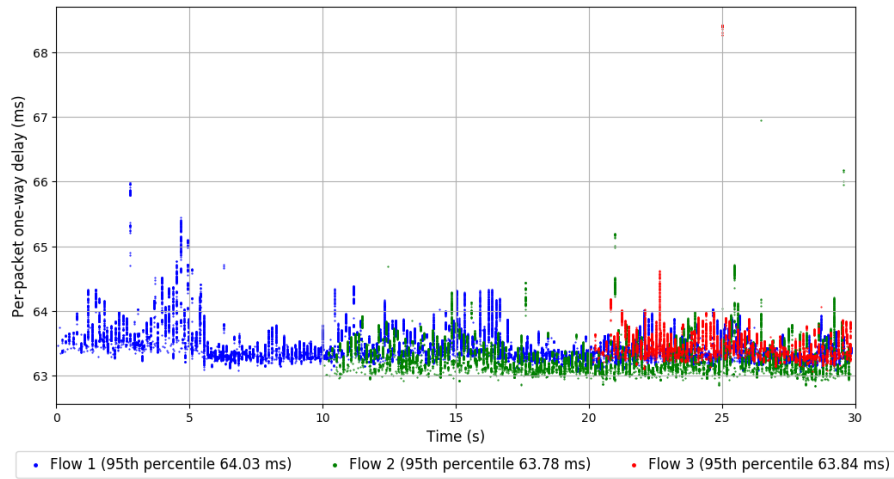
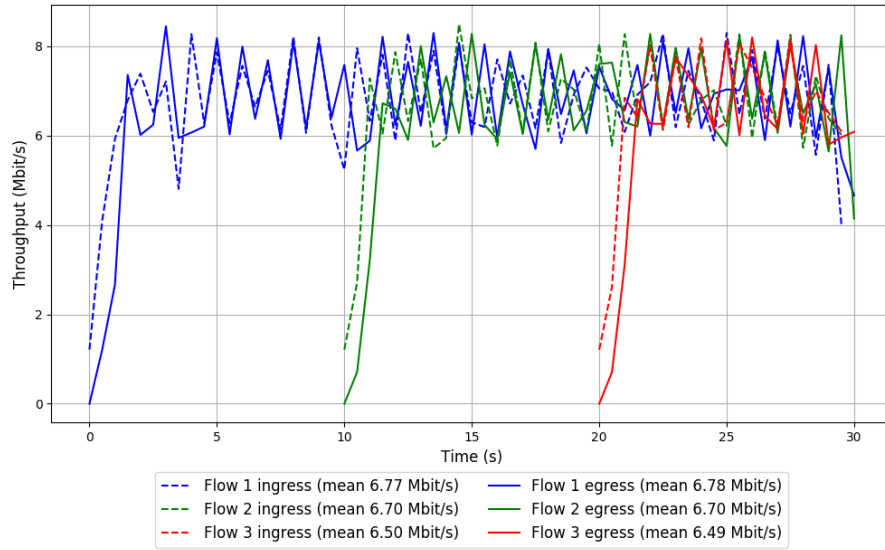
-- Flow 2:

Average throughput: 6.70 Mbit/s
95th percentile per-packet one-way delay: 63.780 ms
Loss rate: 0.77%

-- Flow 3:

Average throughput: 6.49 Mbit/s
95th percentile per-packet one-way delay: 63.835 ms
Loss rate: 1.59%

Run 4: Report of Sprout — Data Link



Run 5: Statistics of Sprout

Start at: 2019-03-27 12:32:37
End at: 2019-03-27 12:33:07
Local clock offset: -0.127 ms
Remote clock offset: -0.418 ms

Below is generated by plot.py at 2019-03-27 15:23:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 13.45 Mbit/s
95th percentile per-packet one-way delay: 64.080 ms
Loss rate: 0.64%

-- Flow 1:

Average throughput: 6.81 Mbit/s
95th percentile per-packet one-way delay: 64.233 ms
Loss rate: 0.50%

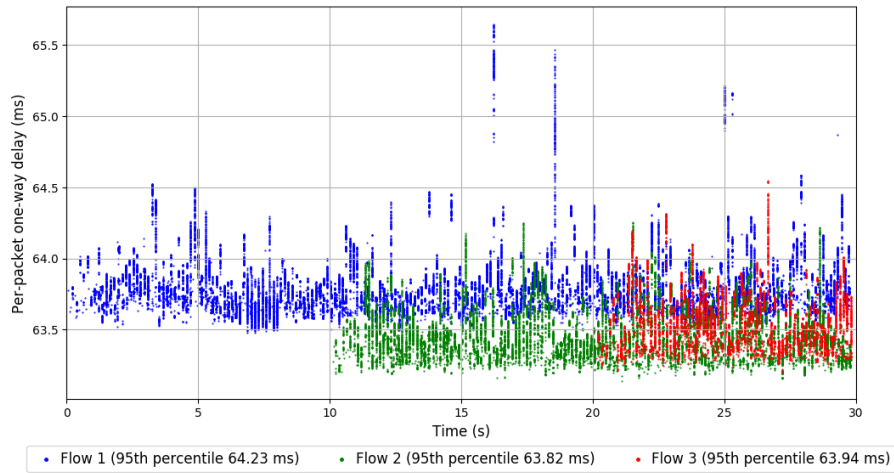
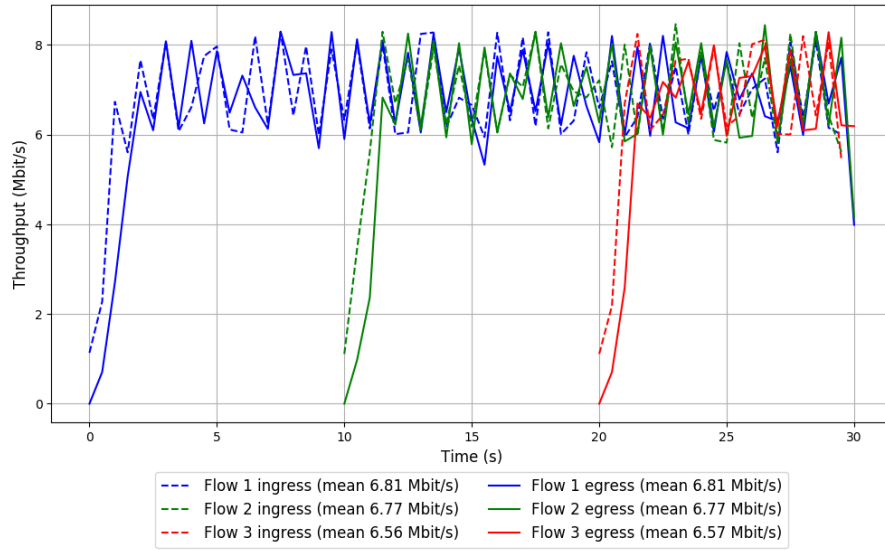
-- Flow 2:

Average throughput: 6.77 Mbit/s
95th percentile per-packet one-way delay: 63.824 ms
Loss rate: 0.67%

-- Flow 3:

Average throughput: 6.57 Mbit/s
95th percentile per-packet one-way delay: 63.944 ms
Loss rate: 1.03%

Run 5: Report of Sprout — Data Link



Run 1: Statistics of TaoVA-100x

Start at: 2019-03-27 10:07:09

End at: 2019-03-27 10:07:39

Local clock offset: -0.153 ms

Remote clock offset: 0.231 ms

Below is generated by plot.py at 2019-03-27 15:25:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 442.18 Mbit/s

95th percentile per-packet one-way delay: 65.098 ms

Loss rate: 0.45%

-- Flow 1:

Average throughput: 223.10 Mbit/s

95th percentile per-packet one-way delay: 65.049 ms

Loss rate: 0.44%

-- Flow 2:

Average throughput: 224.43 Mbit/s

95th percentile per-packet one-way delay: 65.102 ms

Loss rate: 0.39%

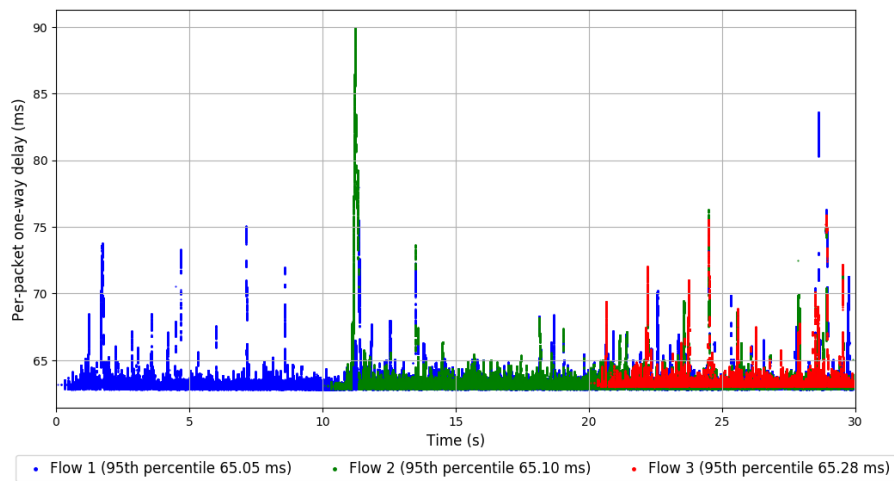
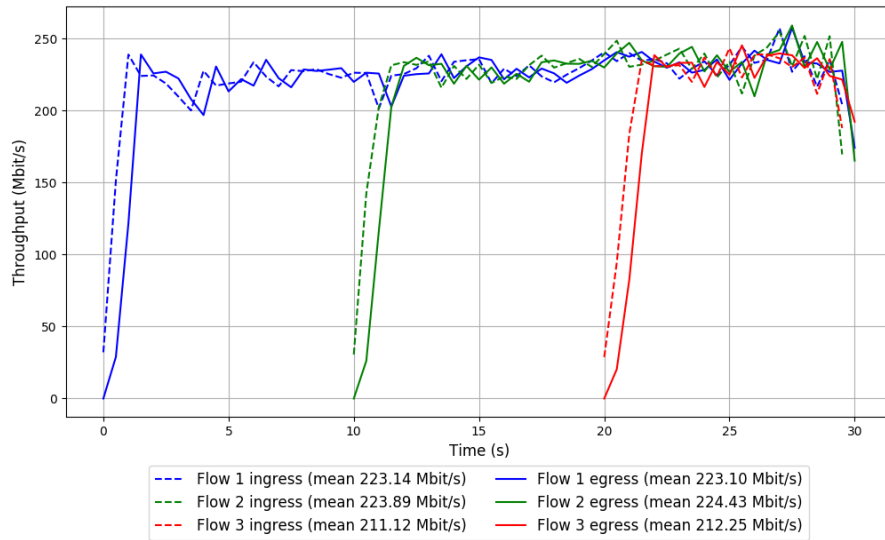
-- Flow 3:

Average throughput: 212.25 Mbit/s

95th percentile per-packet one-way delay: 65.278 ms

Loss rate: 0.65%

Run 1: Report of TaoVA-100x — Data Link



Run 2: Statistics of TaoVA-100x

Start at: 2019-03-27 10:43:31
End at: 2019-03-27 10:44:01
Local clock offset: -0.072 ms
Remote clock offset: -0.137 ms

Below is generated by plot.py at 2019-03-27 15:25:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 445.26 Mbit/s
95th percentile per-packet one-way delay: 64.623 ms
Loss rate: 0.66%

-- Flow 1:

Average throughput: 223.99 Mbit/s
95th percentile per-packet one-way delay: 65.437 ms
Loss rate: 0.43%

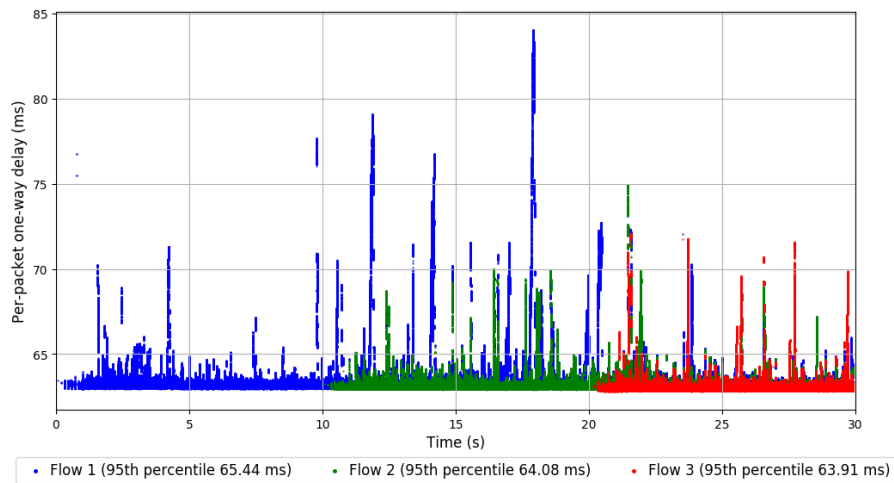
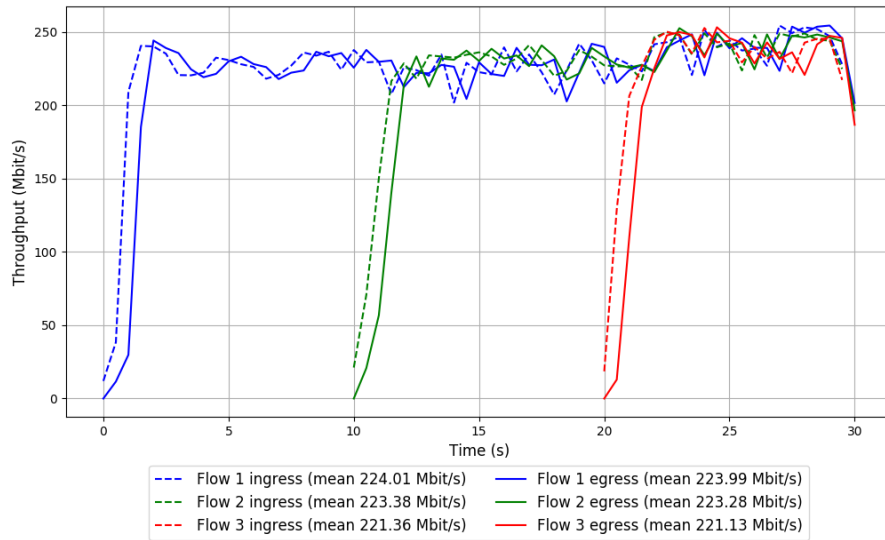
-- Flow 2:

Average throughput: 223.28 Mbit/s
95th percentile per-packet one-way delay: 64.085 ms
Loss rate: 0.68%

-- Flow 3:

Average throughput: 221.13 Mbit/s
95th percentile per-packet one-way delay: 63.915 ms
Loss rate: 1.36%

Run 2: Report of TaoVA-100x — Data Link



Run 3: Statistics of TaoVA-100x

Start at: 2019-03-27 11:19:49

End at: 2019-03-27 11:20:19

Local clock offset: -0.053 ms

Remote clock offset: 0.112 ms

Below is generated by plot.py at 2019-03-27 15:25:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 417.63 Mbit/s

95th percentile per-packet one-way delay: 65.800 ms

Loss rate: 0.69%

-- Flow 1:

Average throughput: 215.82 Mbit/s

95th percentile per-packet one-way delay: 66.289 ms

Loss rate: 0.45%

-- Flow 2:

Average throughput: 209.40 Mbit/s

95th percentile per-packet one-way delay: 65.320 ms

Loss rate: 0.73%

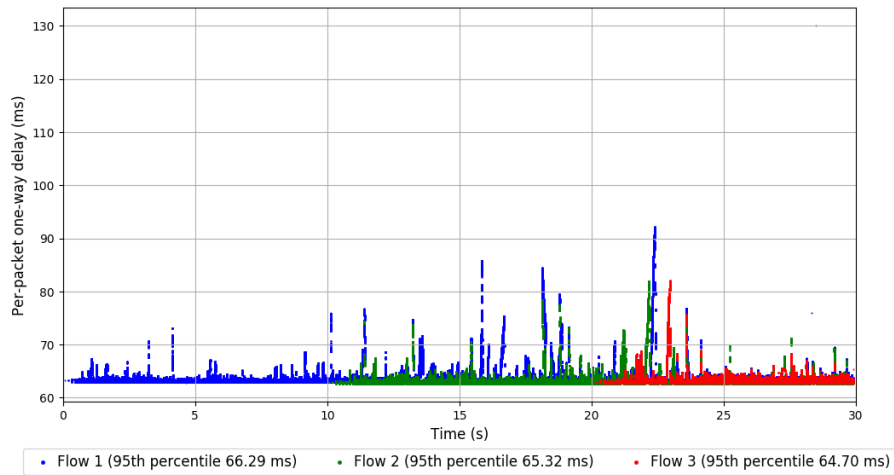
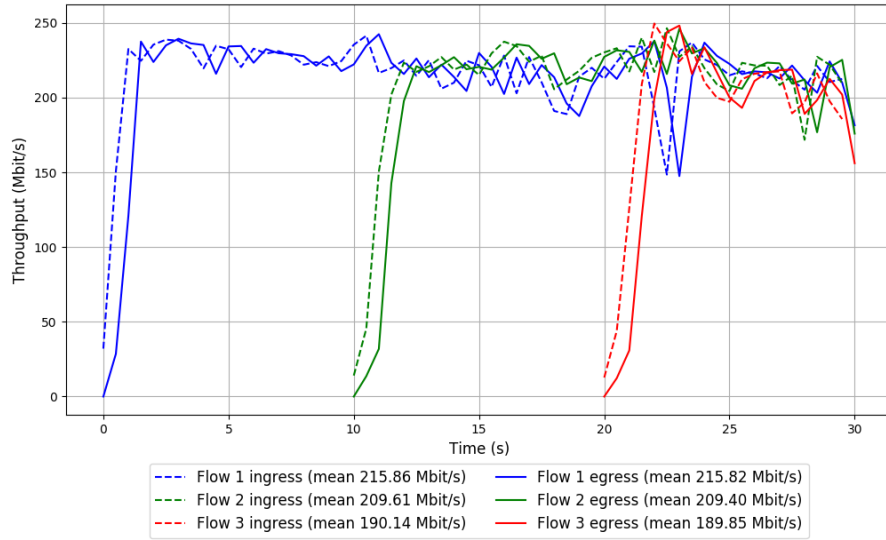
-- Flow 3:

Average throughput: 189.85 Mbit/s

95th percentile per-packet one-way delay: 64.700 ms

Loss rate: 1.41%

Run 3: Report of TaoVA-100x — Data Link

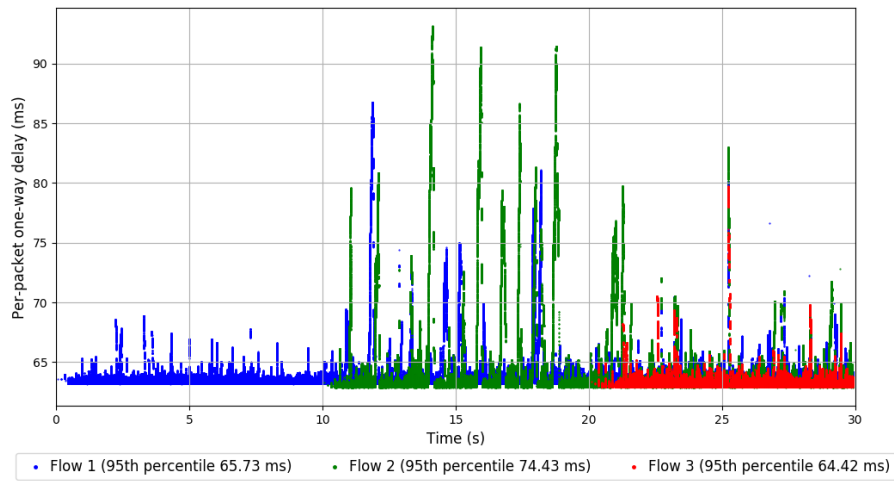
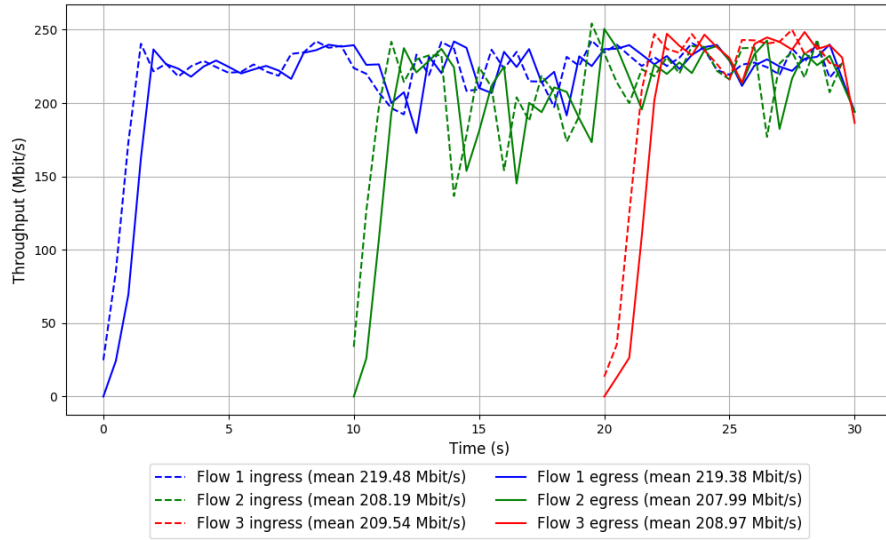


Run 4: Statistics of TaoVA-100x

Start at: 2019-03-27 11:57:19
End at: 2019-03-27 11:57:49
Local clock offset: -0.032 ms
Remote clock offset: -0.097 ms

Below is generated by plot.py at 2019-03-27 15:25:48
Datalink statistics
-- Total of 3 flows:
Average throughput: 426.38 Mbit/s
95th percentile per-packet one-way delay: 67.627 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 219.38 Mbit/s
95th percentile per-packet one-way delay: 65.734 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 207.99 Mbit/s
95th percentile per-packet one-way delay: 74.431 ms
Loss rate: 0.73%
-- Flow 3:
Average throughput: 208.97 Mbit/s
95th percentile per-packet one-way delay: 64.421 ms
Loss rate: 1.55%

Run 4: Report of TaoVA-100x — Data Link



Run 5: Statistics of TaoVA-100x

Start at: 2019-03-27 12:33:51
End at: 2019-03-27 12:34:21
Local clock offset: -0.131 ms
Remote clock offset: -0.209 ms

Below is generated by plot.py at 2019-03-27 15:25:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 413.11 Mbit/s
95th percentile per-packet one-way delay: 68.686 ms
Loss rate: 0.40%

-- Flow 1:

Average throughput: 214.06 Mbit/s
95th percentile per-packet one-way delay: 66.801 ms
Loss rate: 0.36%

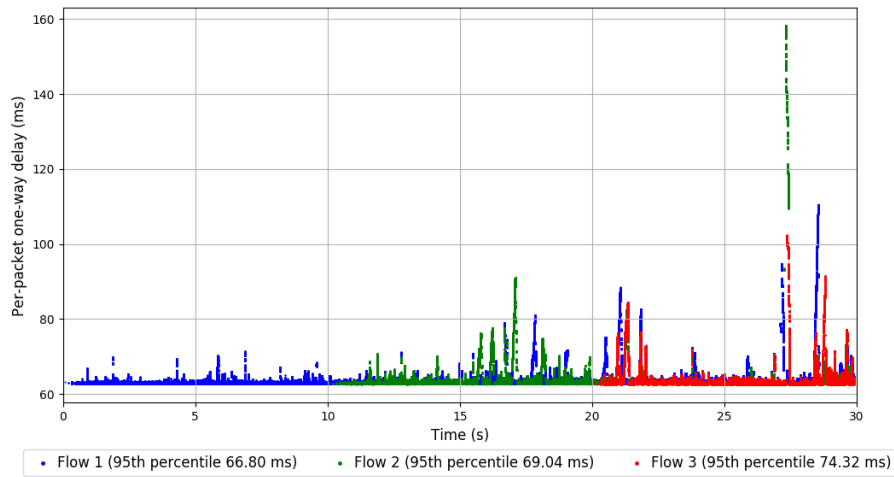
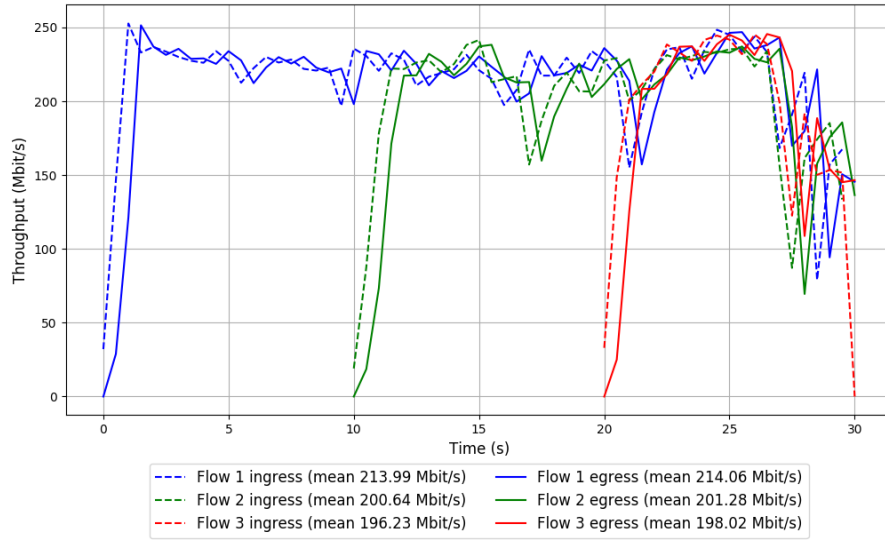
-- Flow 2:

Average throughput: 201.28 Mbit/s
95th percentile per-packet one-way delay: 69.036 ms
Loss rate: 0.29%

-- Flow 3:

Average throughput: 198.02 Mbit/s
95th percentile per-packet one-way delay: 74.319 ms
Loss rate: 0.76%

Run 5: Report of TaoVA-100x — Data Link



Run 1: Statistics of TCP Vegas

Start at: 2019-03-27 10:10:30

End at: 2019-03-27 10:11:00

Local clock offset: -0.154 ms

Remote clock offset: 0.704 ms

Below is generated by plot.py at 2019-03-27 15:25:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 772.58 Mbit/s

95th percentile per-packet one-way delay: 83.171 ms

Loss rate: 0.50%

-- Flow 1:

Average throughput: 440.36 Mbit/s

95th percentile per-packet one-way delay: 72.694 ms

Loss rate: 0.44%

-- Flow 2:

Average throughput: 394.90 Mbit/s

95th percentile per-packet one-way delay: 86.566 ms

Loss rate: 0.37%

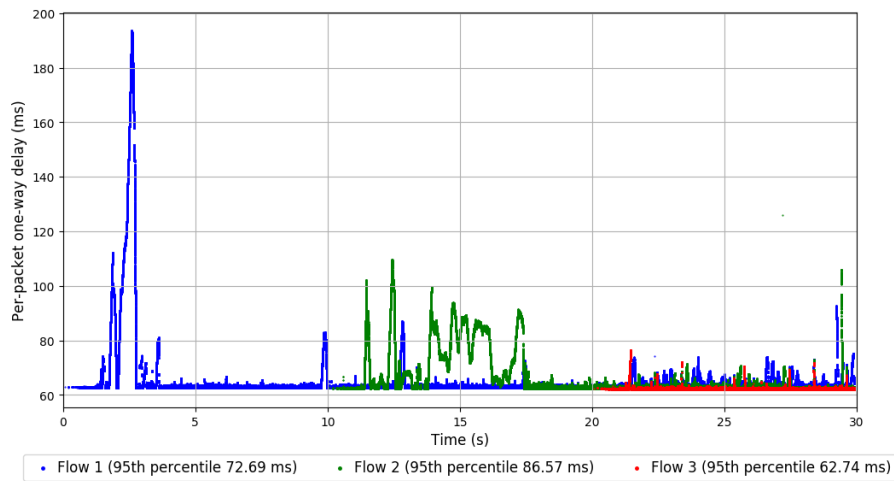
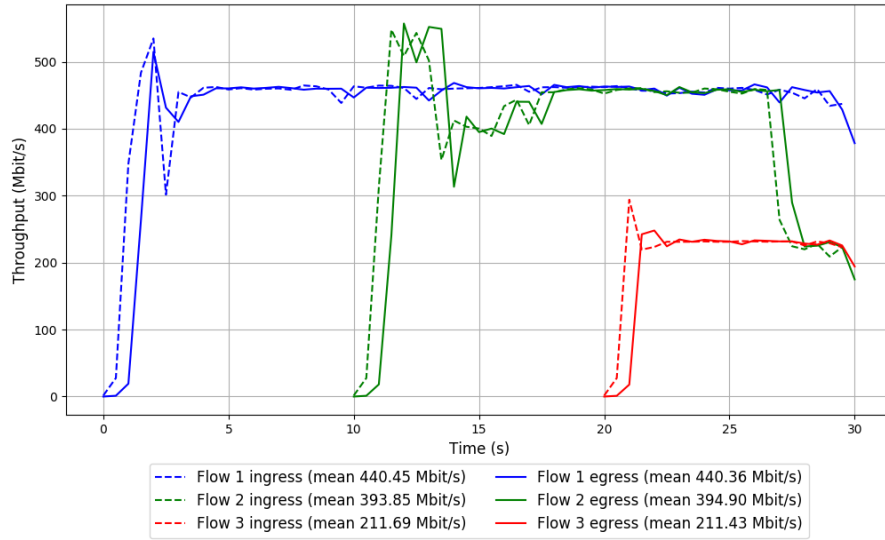
-- Flow 3:

Average throughput: 211.43 Mbit/s

95th percentile per-packet one-way delay: 62.737 ms

Loss rate: 1.38%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2019-03-27 10:46:52

End at: 2019-03-27 10:47:22

Local clock offset: -0.072 ms

Remote clock offset: -0.27 ms

Below is generated by plot.py at 2019-03-27 15:34:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 822.05 Mbit/s

95th percentile per-packet one-way delay: 88.475 ms

Loss rate: 0.68%

-- Flow 1:

Average throughput: 425.82 Mbit/s

95th percentile per-packet one-way delay: 90.248 ms

Loss rate: 0.43%

-- Flow 2:

Average throughput: 402.15 Mbit/s

95th percentile per-packet one-way delay: 82.241 ms

Loss rate: 0.68%

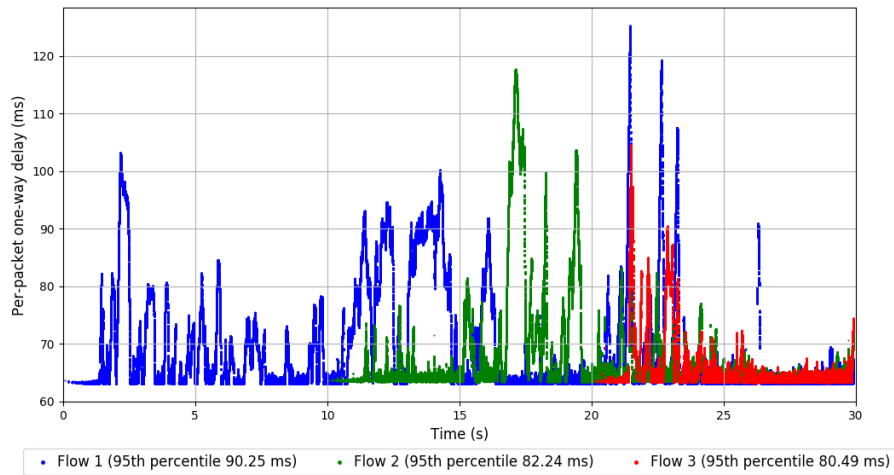
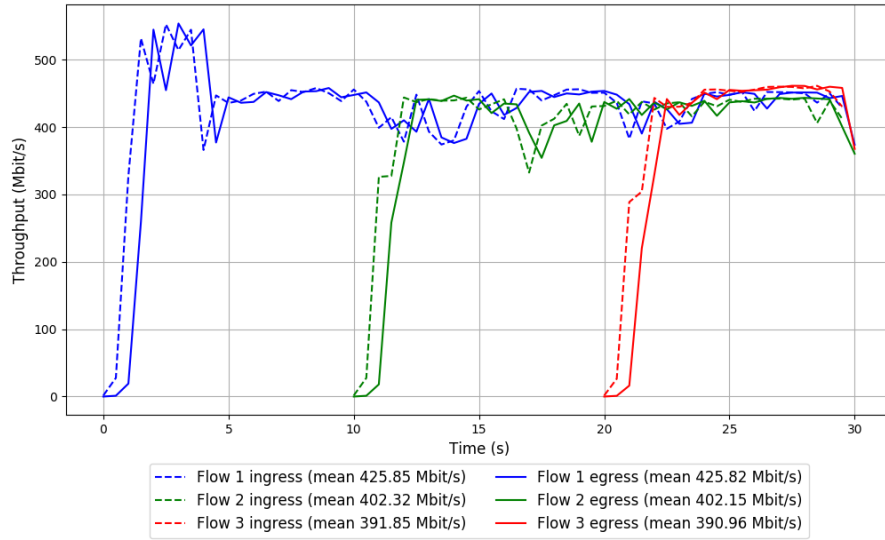
-- Flow 3:

Average throughput: 390.96 Mbit/s

95th percentile per-packet one-way delay: 80.492 ms

Loss rate: 1.50%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2019-03-27 11:23:08

End at: 2019-03-27 11:23:38

Local clock offset: -0.06 ms

Remote clock offset: 0.036 ms

Below is generated by plot.py at 2019-03-27 15:37:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 750.82 Mbit/s

95th percentile per-packet one-way delay: 114.349 ms

Loss rate: 0.50%

-- Flow 1:

Average throughput: 398.29 Mbit/s

95th percentile per-packet one-way delay: 78.036 ms

Loss rate: 0.24%

-- Flow 2:

Average throughput: 382.33 Mbit/s

95th percentile per-packet one-way delay: 116.107 ms

Loss rate: 0.38%

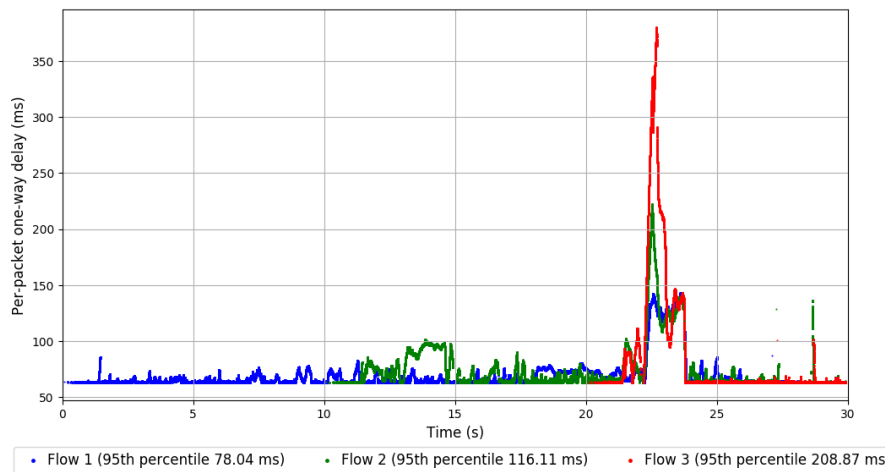
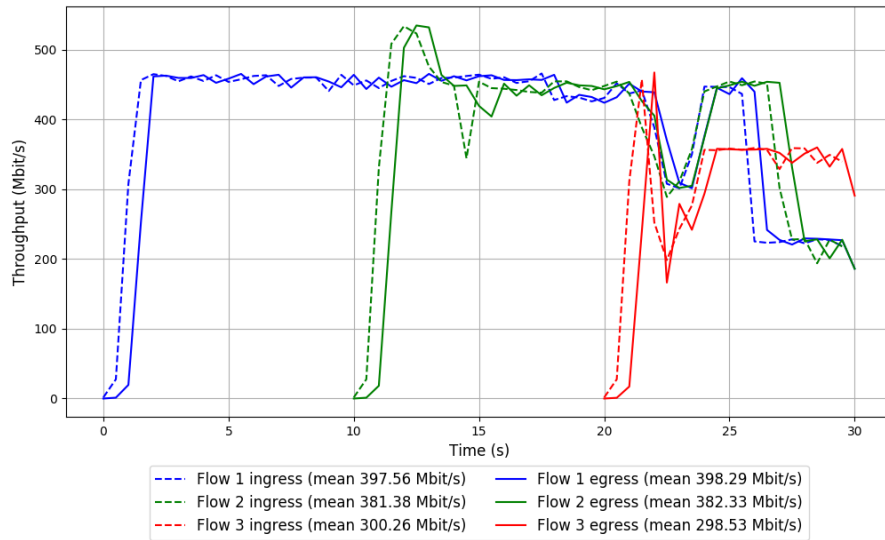
-- Flow 3:

Average throughput: 298.53 Mbit/s

95th percentile per-packet one-way delay: 208.870 ms

Loss rate: 1.85%

Run 3: Report of TCP Vegas — Data Link



Run 4: Statistics of TCP Vegas

Start at: 2019-03-27 12:00:35

End at: 2019-03-27 12:01:05

Local clock offset: -0.063 ms

Remote clock offset: -0.16 ms

Below is generated by plot.py at 2019-03-27 15:39:52

Datalink statistics

-- Total of 3 flows:

Average throughput: 817.06 Mbit/s

95th percentile per-packet one-way delay: 95.561 ms

Loss rate: 0.47%

-- Flow 1:

Average throughput: 410.25 Mbit/s

95th percentile per-packet one-way delay: 96.084 ms

Loss rate: 0.23%

-- Flow 2:

Average throughput: 419.54 Mbit/s

95th percentile per-packet one-way delay: 103.375 ms

Loss rate: 0.35%

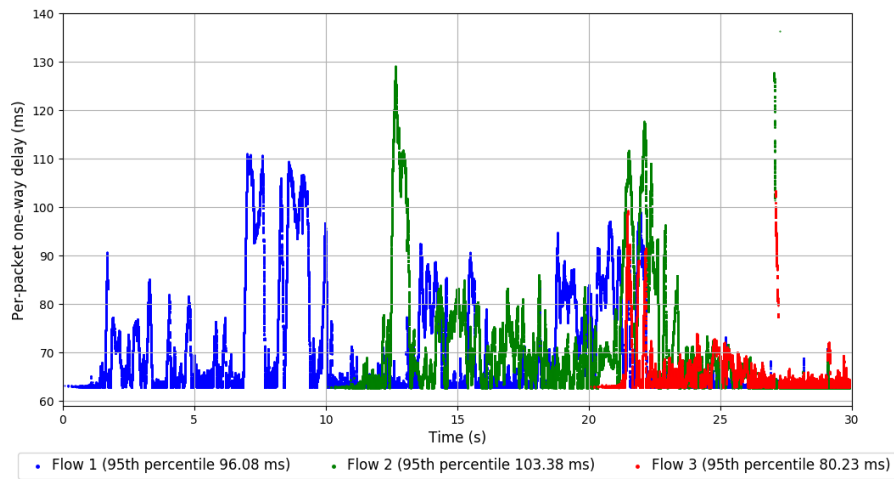
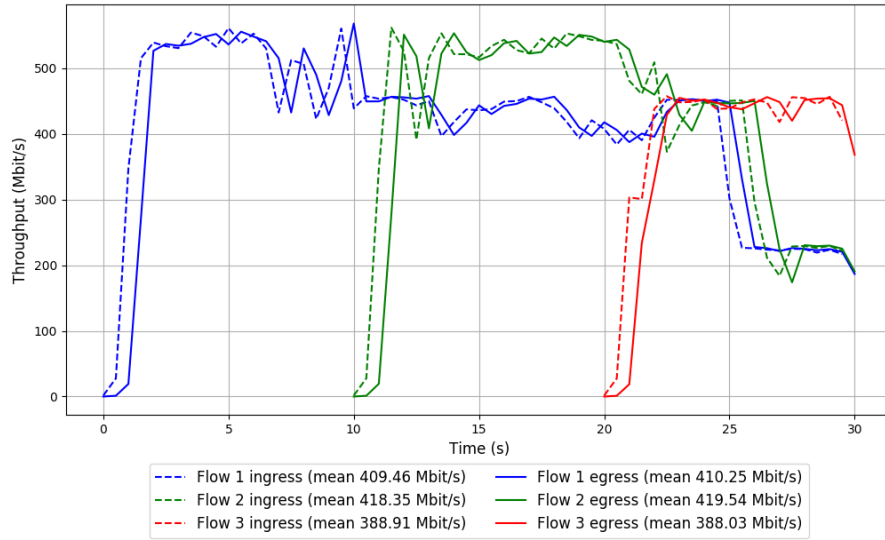
-- Flow 3:

Average throughput: 388.03 Mbit/s

95th percentile per-packet one-way delay: 80.228 ms

Loss rate: 1.49%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2019-03-27 12:37:12
End at: 2019-03-27 12:37:42
Local clock offset: -0.108 ms
Remote clock offset: -0.389 ms

Below is generated by plot.py at 2019-03-27 15:39:52

Datalink statistics

-- Total of 3 flows:

Average throughput: 644.85 Mbit/s
95th percentile per-packet one-way delay: 85.233 ms
Loss rate: 0.74%

-- Flow 1:

Average throughput: 235.48 Mbit/s
95th percentile per-packet one-way delay: 66.297 ms
Loss rate: 0.38%

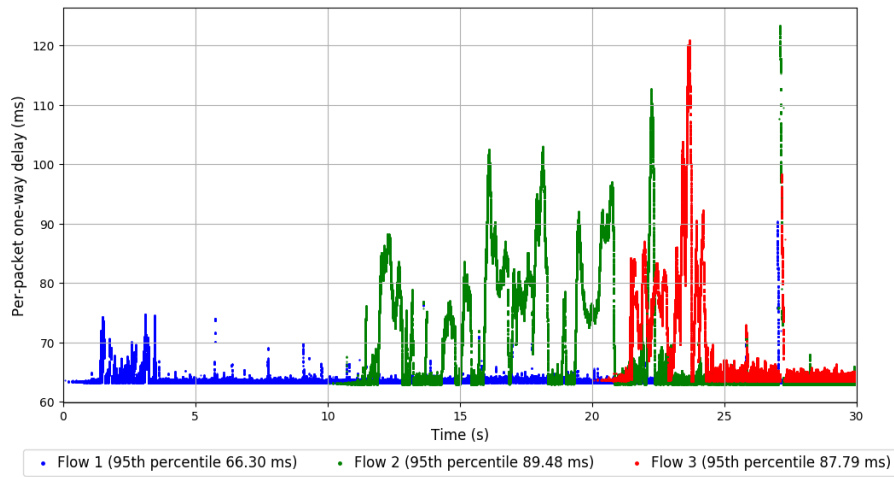
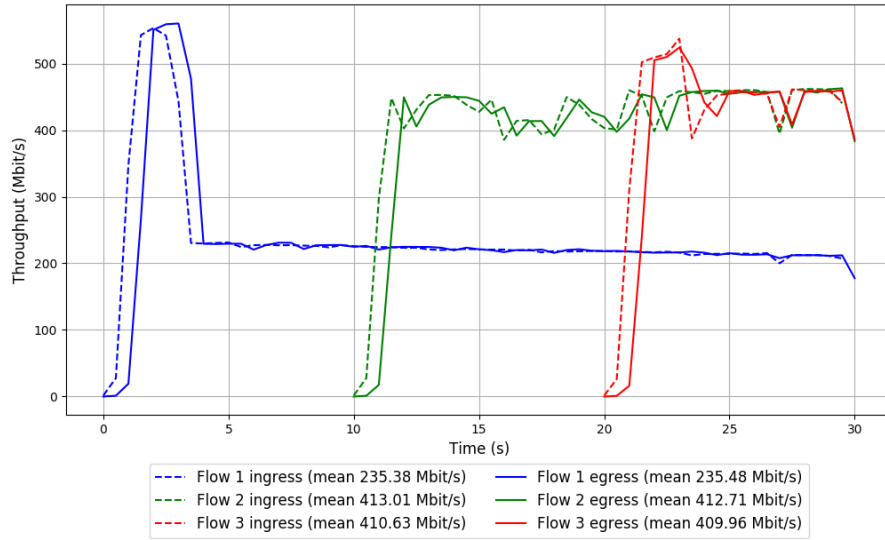
-- Flow 2:

Average throughput: 412.71 Mbit/s
95th percentile per-packet one-way delay: 89.483 ms
Loss rate: 0.71%

-- Flow 3:

Average throughput: 409.96 Mbit/s
95th percentile per-packet one-way delay: 87.786 ms
Loss rate: 1.43%

Run 5: Report of TCP Vegas — Data Link

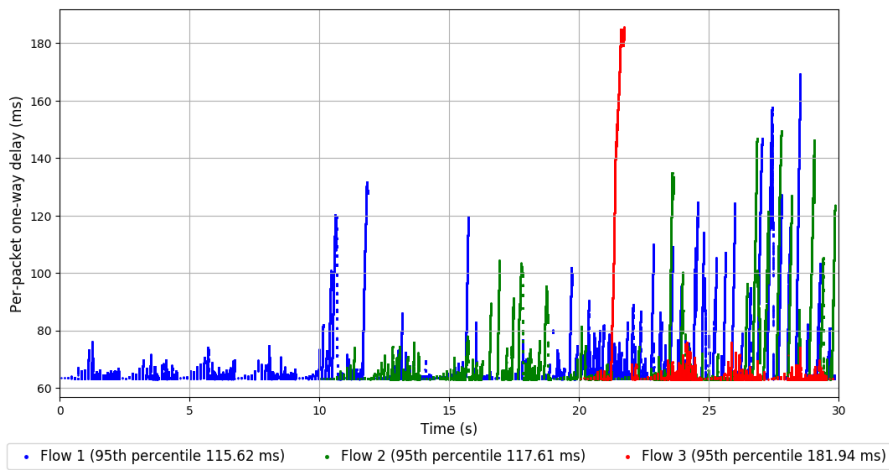
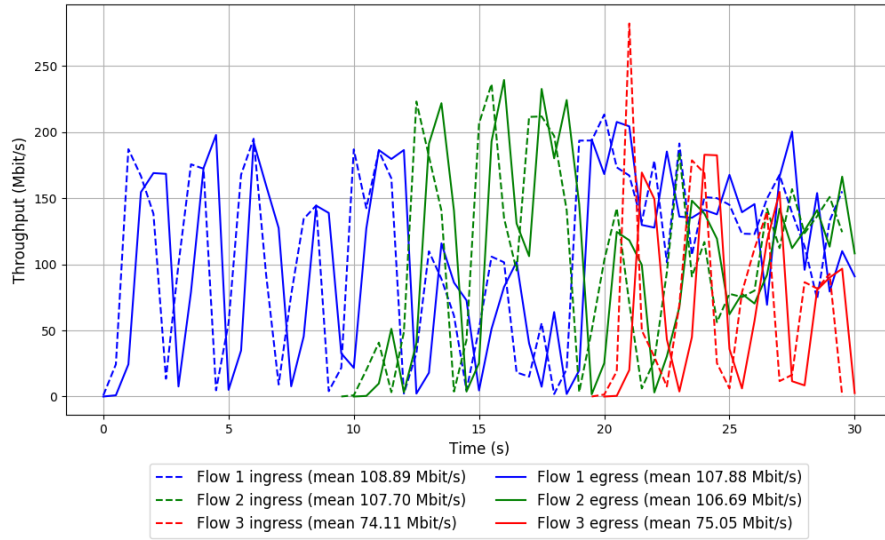


Run 1: Statistics of Verus

Start at: 2019-03-27 09:57:09
End at: 2019-03-27 09:57:39
Local clock offset: -0.137 ms
Remote clock offset: -0.074 ms

```
# Below is generated by plot.py at 2019-03-27 15:39:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 203.24 Mbit/s
95th percentile per-packet one-way delay: 122.342 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 107.88 Mbit/s
95th percentile per-packet one-way delay: 115.618 ms
Loss rate: 1.38%
-- Flow 2:
Average throughput: 106.69 Mbit/s
95th percentile per-packet one-way delay: 117.611 ms
Loss rate: 0.89%
-- Flow 3:
Average throughput: 75.05 Mbit/s
95th percentile per-packet one-way delay: 181.939 ms
Loss rate: 0.03%
```

Run 1: Report of Verus — Data Link

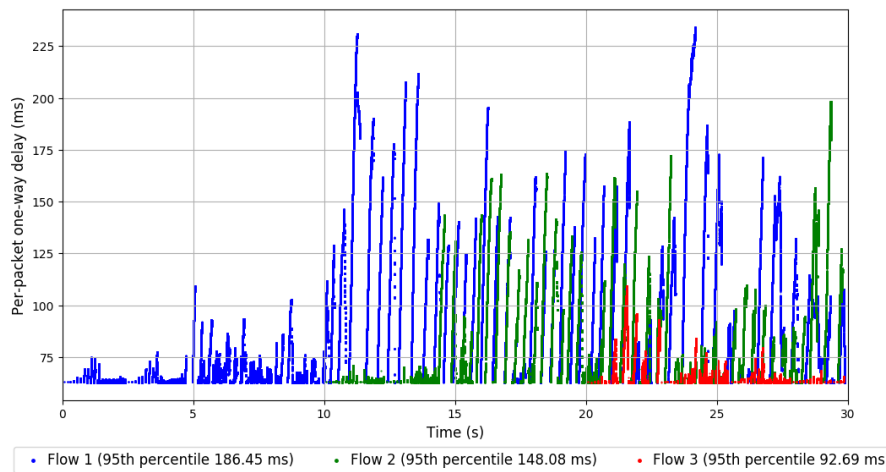
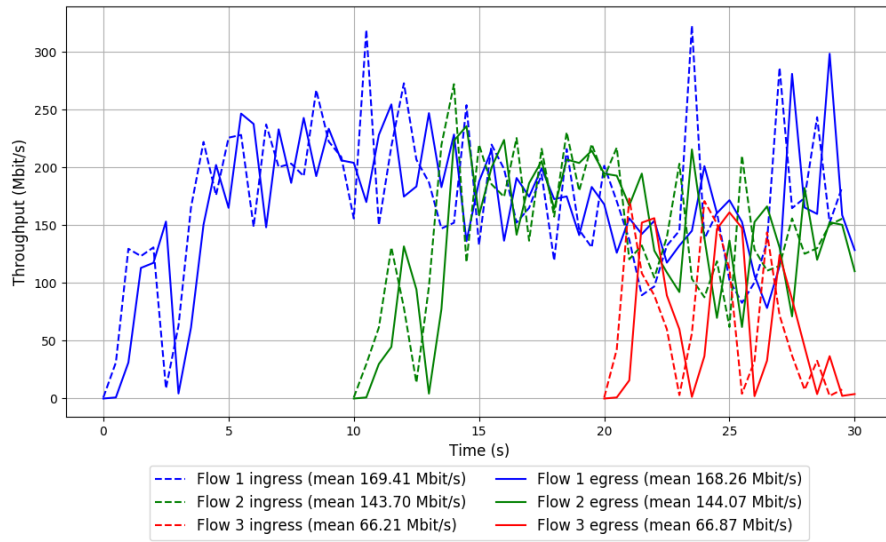


Run 2: Statistics of Verus

Start at: 2019-03-27 10:33:28
End at: 2019-03-27 10:33:58
Local clock offset: -0.095 ms
Remote clock offset: -0.113 ms

```
# Below is generated by plot.py at 2019-03-27 15:39:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 285.49 Mbit/s
95th percentile per-packet one-way delay: 170.254 ms
Loss rate: 0.94%
-- Flow 1:
Average throughput: 168.26 Mbit/s
95th percentile per-packet one-way delay: 186.448 ms
Loss rate: 1.10%
-- Flow 2:
Average throughput: 144.07 Mbit/s
95th percentile per-packet one-way delay: 148.076 ms
Loss rate: 0.79%
-- Flow 3:
Average throughput: 66.87 Mbit/s
95th percentile per-packet one-way delay: 92.690 ms
Loss rate: 0.30%
```

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2019-03-27 11:09:56

End at: 2019-03-27 11:10:26

Local clock offset: -0.091 ms

Remote clock offset: -0.08 ms

Below is generated by plot.py at 2019-03-27 15:39:52

Datalink statistics

-- Total of 3 flows:

Average throughput: 220.89 Mbit/s

95th percentile per-packet one-way delay: 106.944 ms

Loss rate: 0.98%

-- Flow 1:

Average throughput: 124.79 Mbit/s

95th percentile per-packet one-way delay: 118.091 ms

Loss rate: 0.41%

-- Flow 2:

Average throughput: 117.04 Mbit/s

95th percentile per-packet one-way delay: 91.902 ms

Loss rate: 1.06%

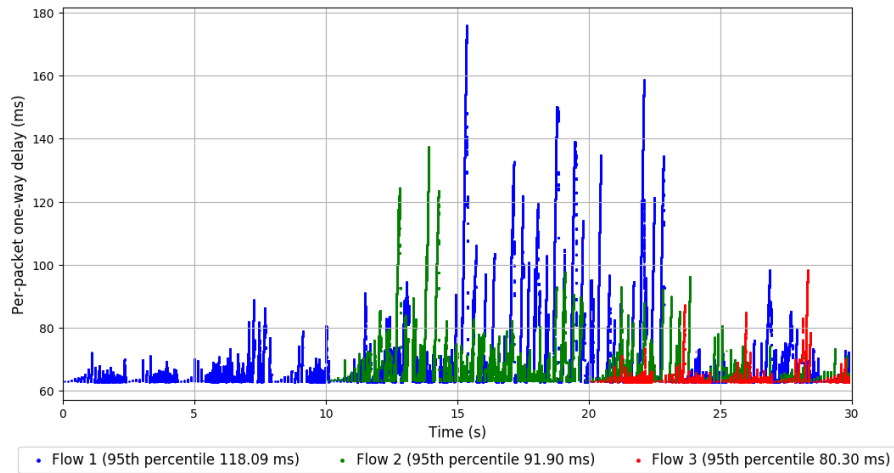
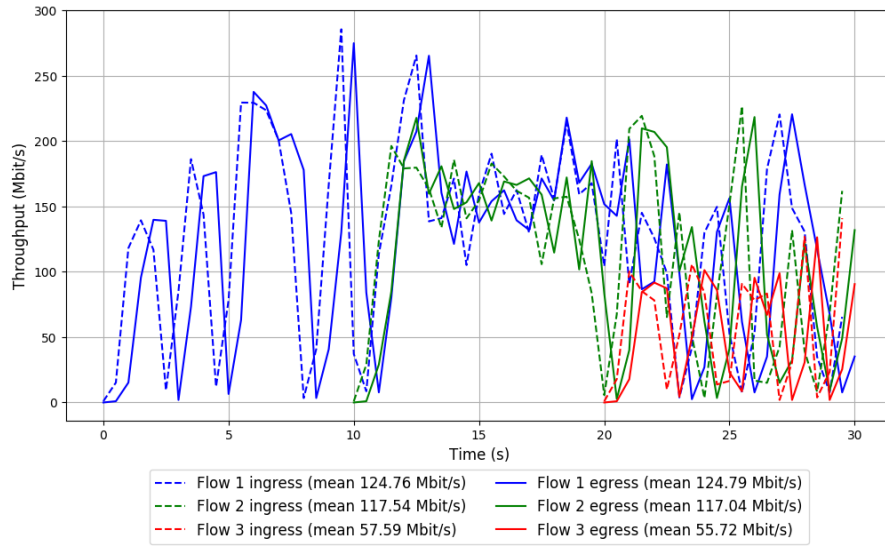
-- Flow 3:

Average throughput: 55.72 Mbit/s

95th percentile per-packet one-way delay: 80.303 ms

Loss rate: 4.44%

Run 3: Report of Verus — Data Link

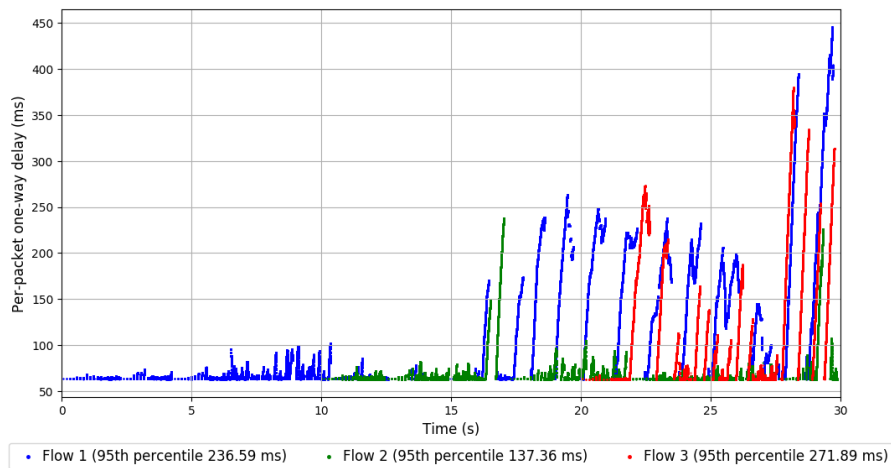
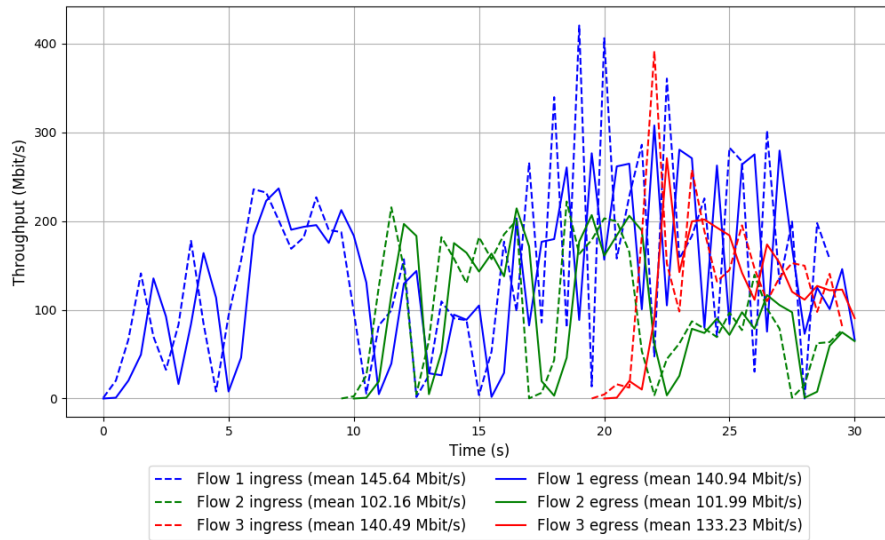


Run 4: Statistics of Verus

Start at: 2019-03-27 11:47:10
End at: 2019-03-27 11:47:40
Local clock offset: 0.006 ms
Remote clock offset: -0.213 ms

```
# Below is generated by plot.py at 2019-03-27 15:39:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 251.51 Mbit/s
95th percentile per-packet one-way delay: 236.502 ms
Loss rate: 2.70%
-- Flow 1:
Average throughput: 140.94 Mbit/s
95th percentile per-packet one-way delay: 236.594 ms
Loss rate: 2.10%
-- Flow 2:
Average throughput: 101.99 Mbit/s
95th percentile per-packet one-way delay: 137.359 ms
Loss rate: 0.77%
-- Flow 3:
Average throughput: 133.23 Mbit/s
95th percentile per-packet one-way delay: 271.890 ms
Loss rate: 7.35%
```

Run 4: Report of Verus — Data Link

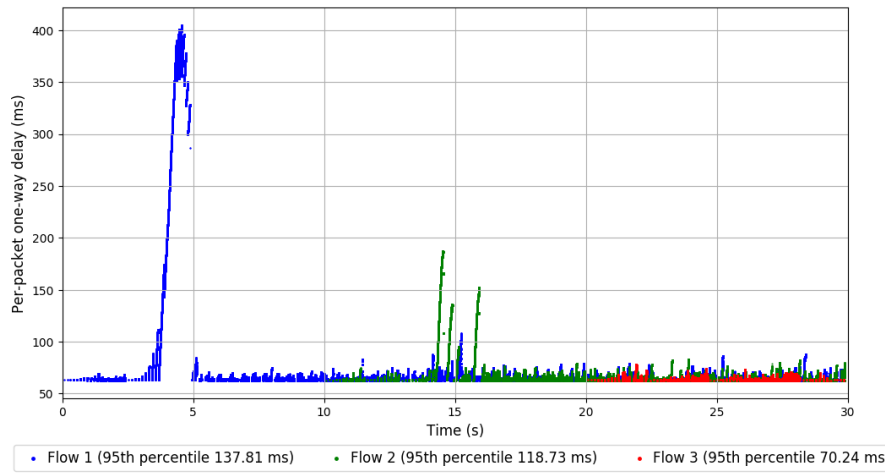
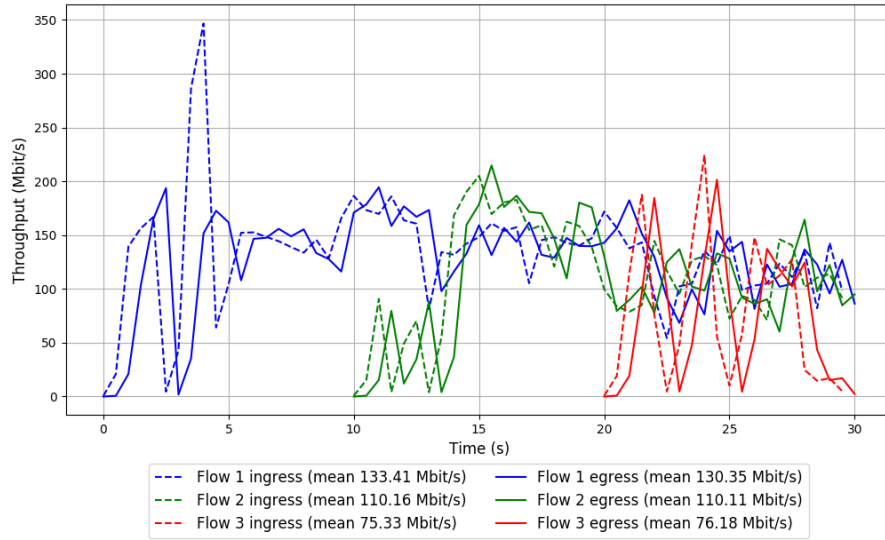


Run 5: Statistics of Verus

Start at: 2019-03-27 12:23:47
End at: 2019-03-27 12:24:17
Local clock offset: -0.118 ms
Remote clock offset: -0.345 ms

```
# Below is generated by plot.py at 2019-03-27 15:40:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 228.32 Mbit/s
95th percentile per-packet one-way delay: 106.868 ms
Loss rate: 1.87%
-- Flow 1:
Average throughput: 130.35 Mbit/s
95th percentile per-packet one-way delay: 137.811 ms
Loss rate: 2.85%
-- Flow 2:
Average throughput: 110.11 Mbit/s
95th percentile per-packet one-way delay: 118.730 ms
Loss rate: 0.68%
-- Flow 3:
Average throughput: 76.18 Mbit/s
95th percentile per-packet one-way delay: 70.236 ms
Loss rate: 0.18%
```

Run 5: Report of Verus — Data Link

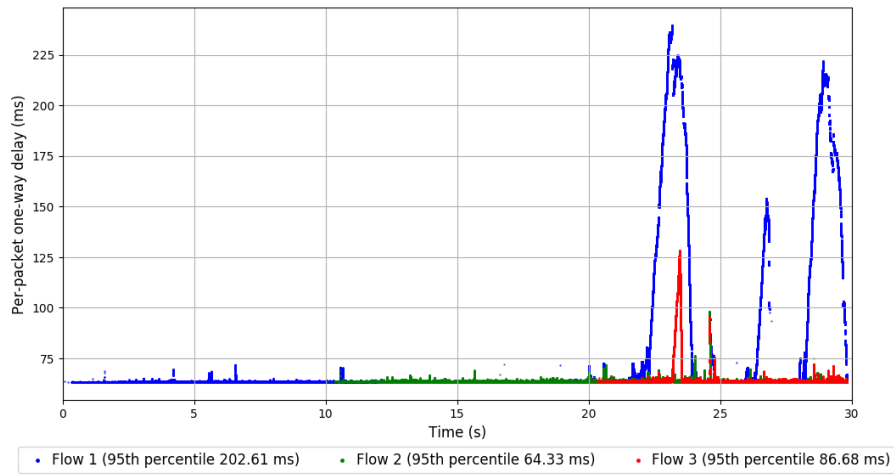
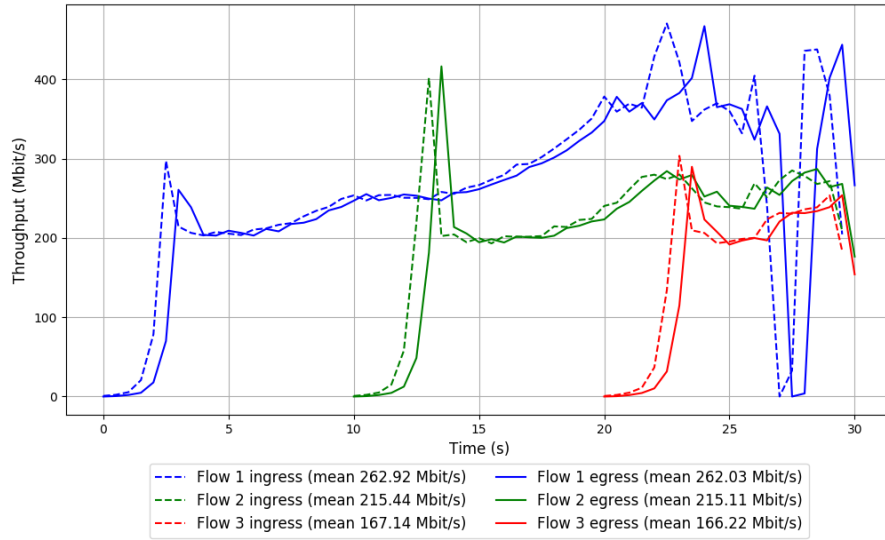


Run 1: Statistics of PCC-Vivace

Start at: 2019-03-27 09:58:42
End at: 2019-03-27 09:59:12
Local clock offset: -0.151 ms
Remote clock offset: -0.075 ms

```
# Below is generated by plot.py at 2019-03-27 15:41:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 459.04 Mbit/s
95th percentile per-packet one-way delay: 175.121 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 262.03 Mbit/s
95th percentile per-packet one-way delay: 202.613 ms
Loss rate: 0.76%
-- Flow 2:
Average throughput: 215.11 Mbit/s
95th percentile per-packet one-way delay: 64.329 ms
Loss rate: 0.79%
-- Flow 3:
Average throughput: 166.22 Mbit/s
95th percentile per-packet one-way delay: 86.677 ms
Loss rate: 1.84%
```

Run 1: Report of PCC-Vivace — Data Link



Run 2: Statistics of PCC-Vivace

Start at: 2019-03-27 10:35:09
End at: 2019-03-27 10:35:39
Local clock offset: -0.086 ms
Remote clock offset: -0.082 ms

Below is generated by plot.py at 2019-03-27 15:42:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 489.29 Mbit/s
95th percentile per-packet one-way delay: 84.254 ms
Loss rate: 0.68%

-- Flow 1:

Average throughput: 256.70 Mbit/s
95th percentile per-packet one-way delay: 65.962 ms
Loss rate: 0.57%

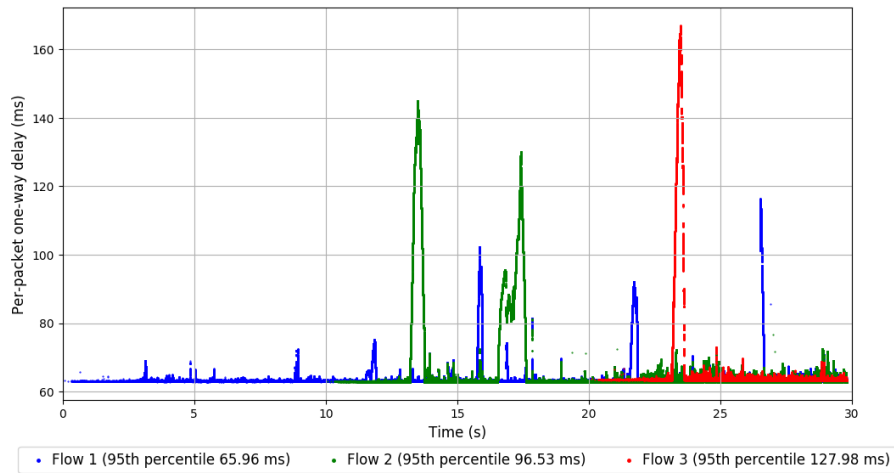
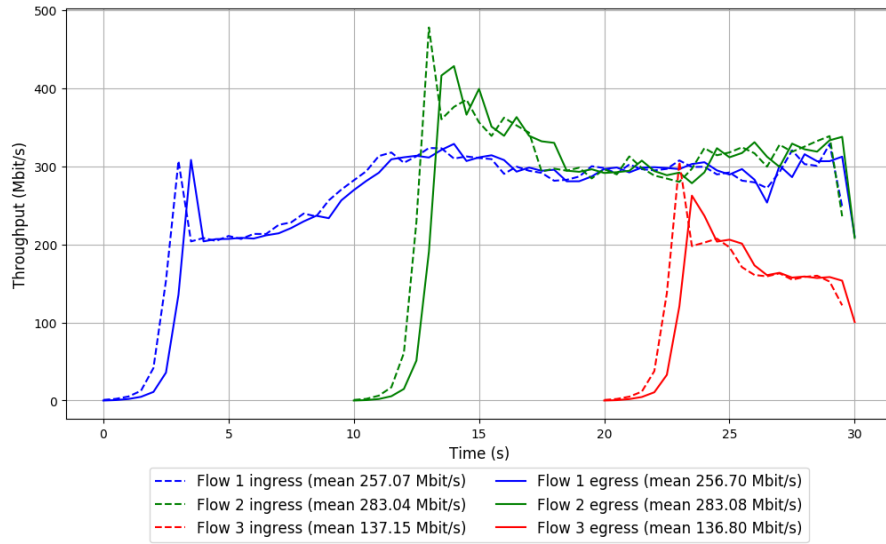
-- Flow 2:

Average throughput: 283.08 Mbit/s
95th percentile per-packet one-way delay: 96.531 ms
Loss rate: 0.62%

-- Flow 3:

Average throughput: 136.80 Mbit/s
95th percentile per-packet one-way delay: 127.976 ms
Loss rate: 1.53%

Run 2: Report of PCC-Vivace — Data Link



Run 3: Statistics of PCC-Vivace

Start at: 2019-03-27 11:11:31
End at: 2019-03-27 11:12:01
Local clock offset: -0.06 ms
Remote clock offset: -0.097 ms

Below is generated by plot.py at 2019-03-27 15:42:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 434.09 Mbit/s
95th percentile per-packet one-way delay: 79.514 ms
Loss rate: 0.77%

-- Flow 1:

Average throughput: 294.27 Mbit/s
95th percentile per-packet one-way delay: 82.843 ms
Loss rate: 0.46%

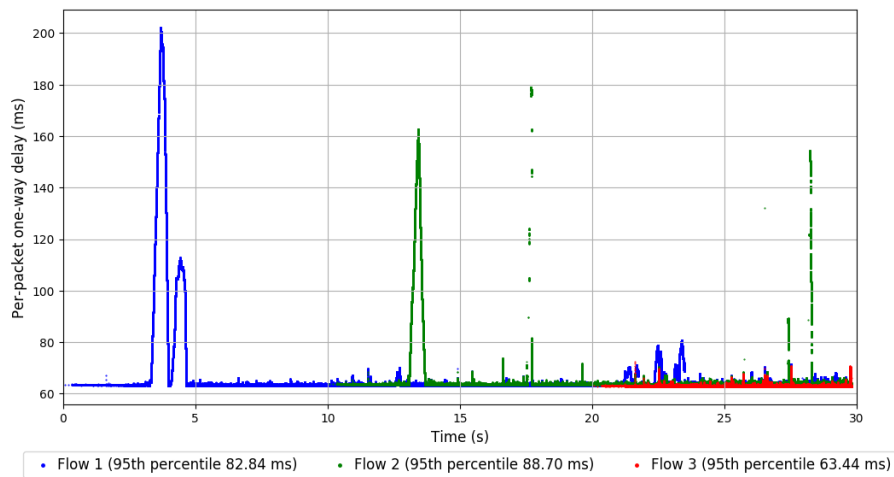
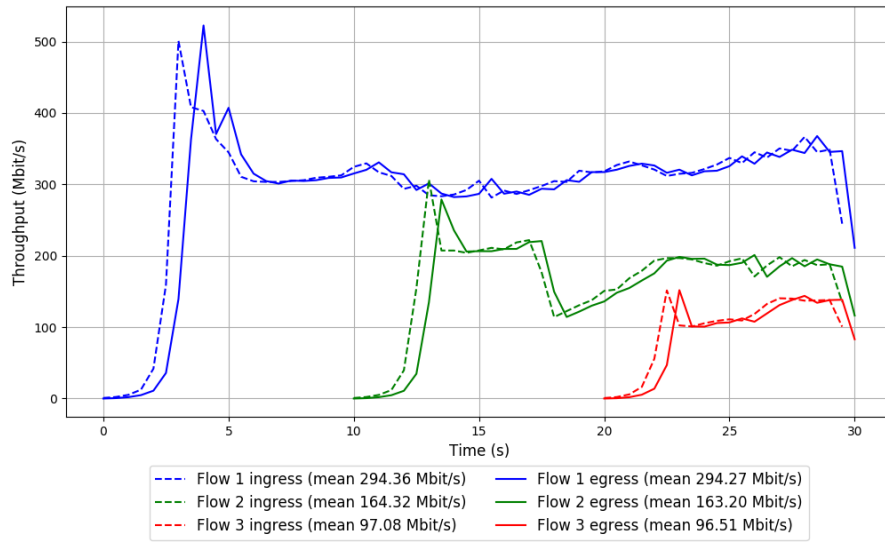
-- Flow 2:

Average throughput: 163.20 Mbit/s
95th percentile per-packet one-way delay: 88.704 ms
Loss rate: 1.32%

-- Flow 3:

Average throughput: 96.51 Mbit/s
95th percentile per-packet one-way delay: 63.443 ms
Loss rate: 1.82%

Run 3: Report of PCC-Vivace — Data Link



Run 4: Statistics of PCC-Vivace

Start at: 2019-03-27 11:48:52

End at: 2019-03-27 11:49:22

Local clock offset: 0.029 ms

Remote clock offset: -0.05 ms

Below is generated by plot.py at 2019-03-27 15:42:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 462.64 Mbit/s

95th percentile per-packet one-way delay: 68.100 ms

Loss rate: 0.86%

-- Flow 1:

Average throughput: 252.34 Mbit/s

95th percentile per-packet one-way delay: 68.226 ms

Loss rate: 0.48%

-- Flow 2:

Average throughput: 228.74 Mbit/s

95th percentile per-packet one-way delay: 68.837 ms

Loss rate: 0.67%

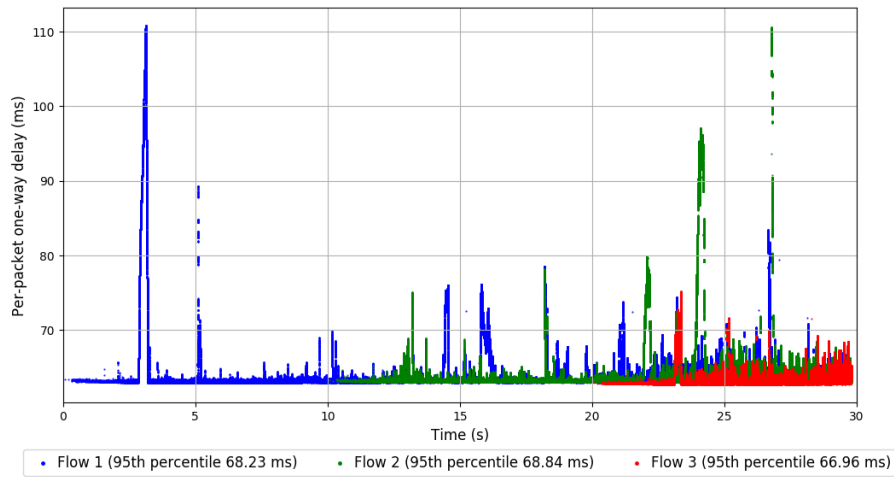
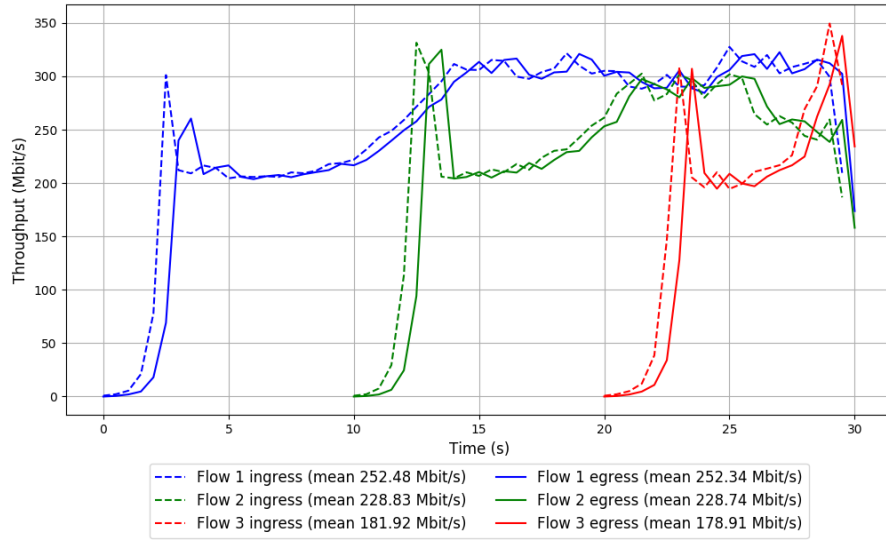
-- Flow 3:

Average throughput: 178.91 Mbit/s

95th percentile per-packet one-way delay: 66.959 ms

Loss rate: 2.92%

Run 4: Report of PCC-Vivace — Data Link

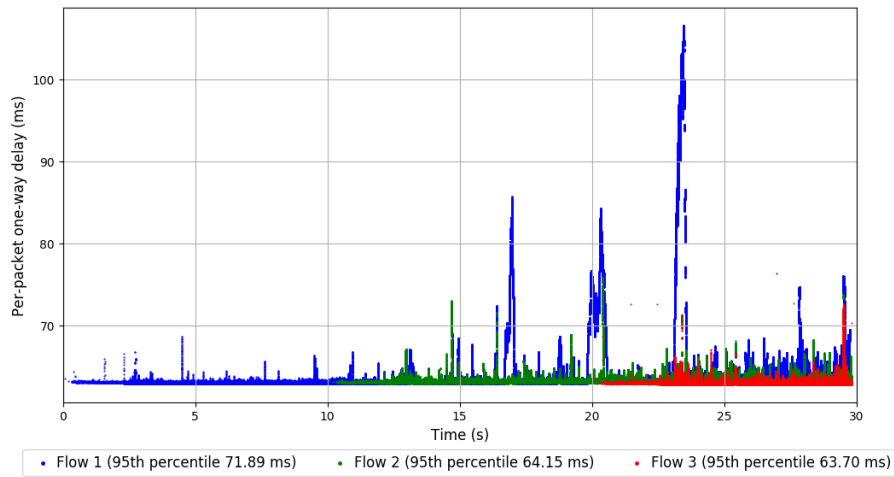
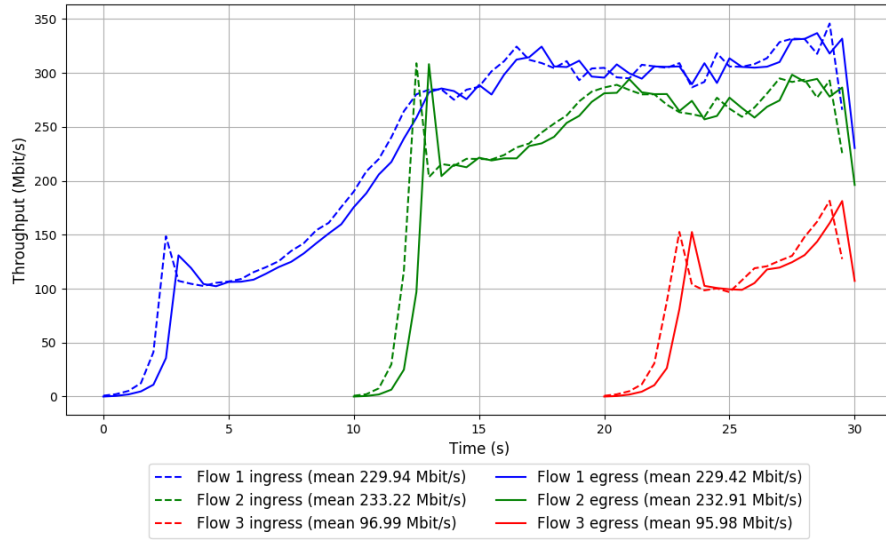


Run 5: Statistics of PCC-Vivace

Start at: 2019-03-27 12:25:23
End at: 2019-03-27 12:25:53
Local clock offset: -0.119 ms
Remote clock offset: -0.255 ms

```
# Below is generated by plot.py at 2019-03-27 15:42:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 415.27 Mbit/s
95th percentile per-packet one-way delay: 66.939 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 229.42 Mbit/s
95th percentile per-packet one-way delay: 71.895 ms
Loss rate: 0.65%
-- Flow 2:
Average throughput: 232.91 Mbit/s
95th percentile per-packet one-way delay: 64.149 ms
Loss rate: 0.78%
-- Flow 3:
Average throughput: 95.98 Mbit/s
95th percentile per-packet one-way delay: 63.697 ms
Loss rate: 2.25%
```

Run 5: Report of PCC-Vivace — Data Link



Run 1: Statistics of WebRTC media

Start at: 2019-03-27 10:00:27

End at: 2019-03-27 10:00:57

Local clock offset: -0.164 ms

Remote clock offset: 0.038 ms

Below is generated by plot.py at 2019-03-27 15:42:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 63.281 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 63.379 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 63.191 ms

Loss rate: 0.00%

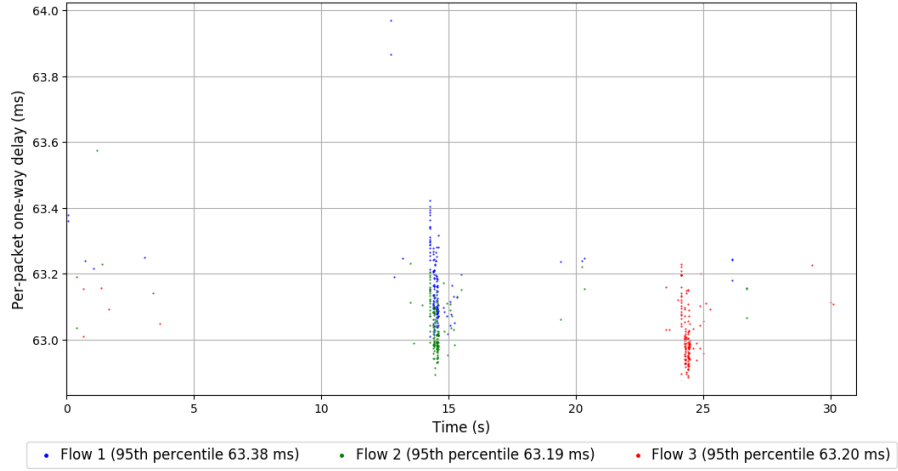
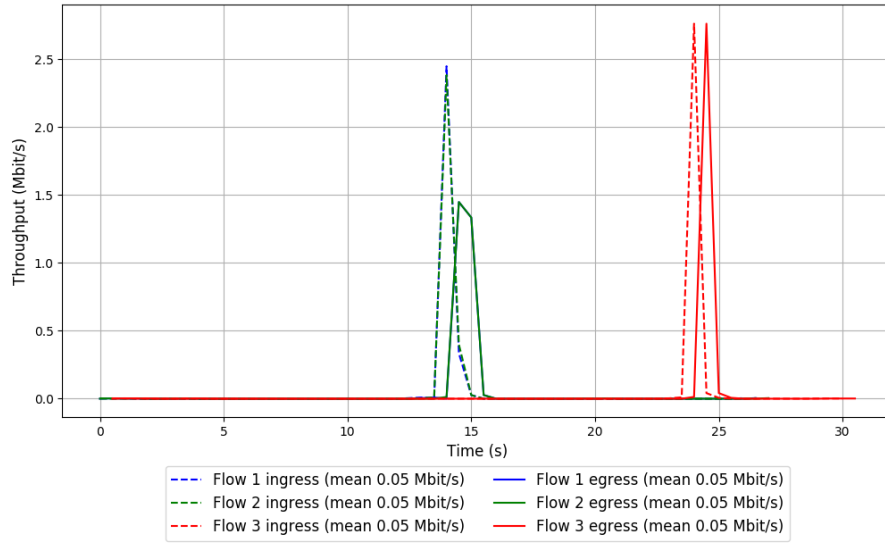
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 63.197 ms

Loss rate: 0.00%

Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2019-03-27 10:36:56

End at: 2019-03-27 10:37:26

Local clock offset: -0.11 ms

Remote clock offset: 0.108 ms

Below is generated by plot.py at 2019-03-27 15:42:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 63.120 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 62.879 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 62.941 ms

Loss rate: 0.00%

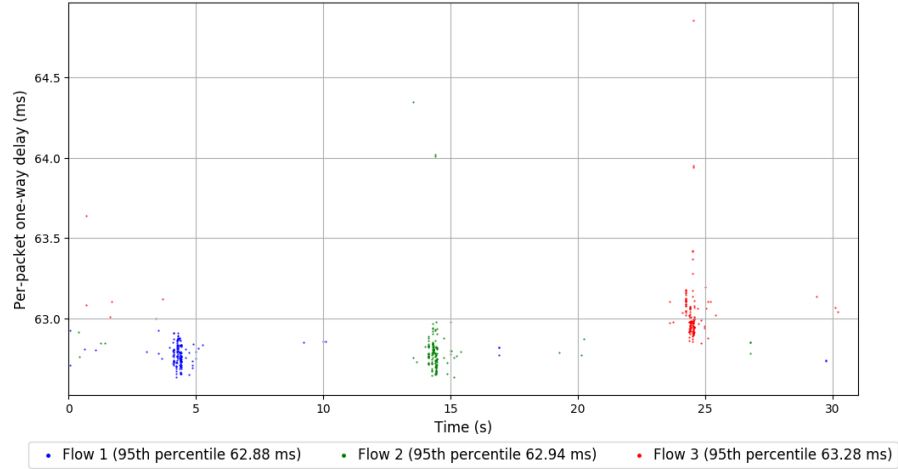
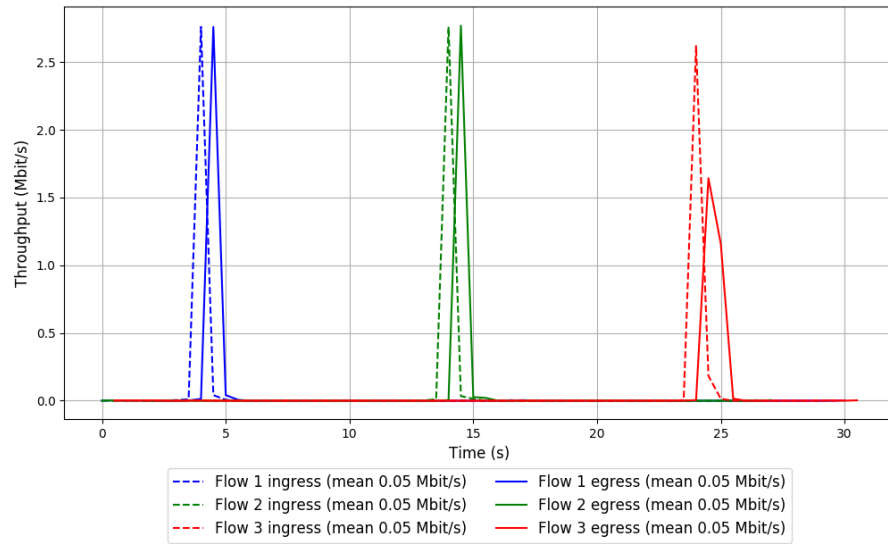
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 63.282 ms

Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2019-03-27 11:13:16

End at: 2019-03-27 11:13:46

Local clock offset: -0.041 ms

Remote clock offset: 0.13 ms

Below is generated by plot.py at 2019-03-27 15:42:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 63.333 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 63.362 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 63.304 ms

Loss rate: 0.00%

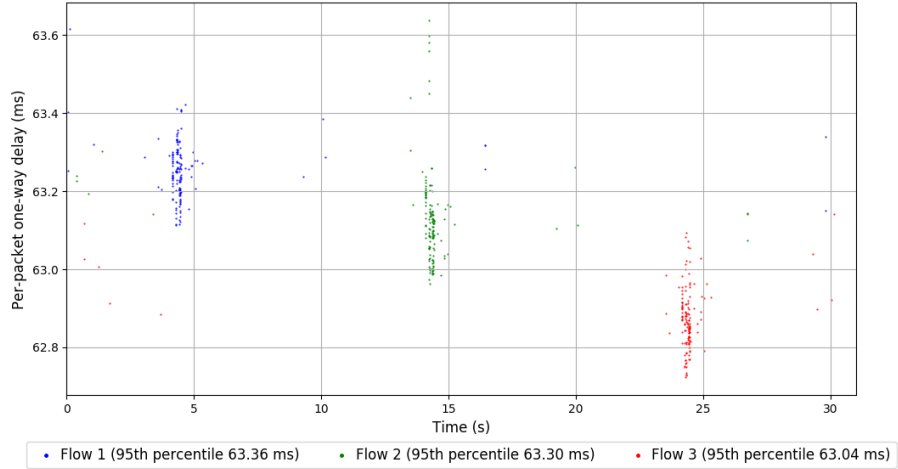
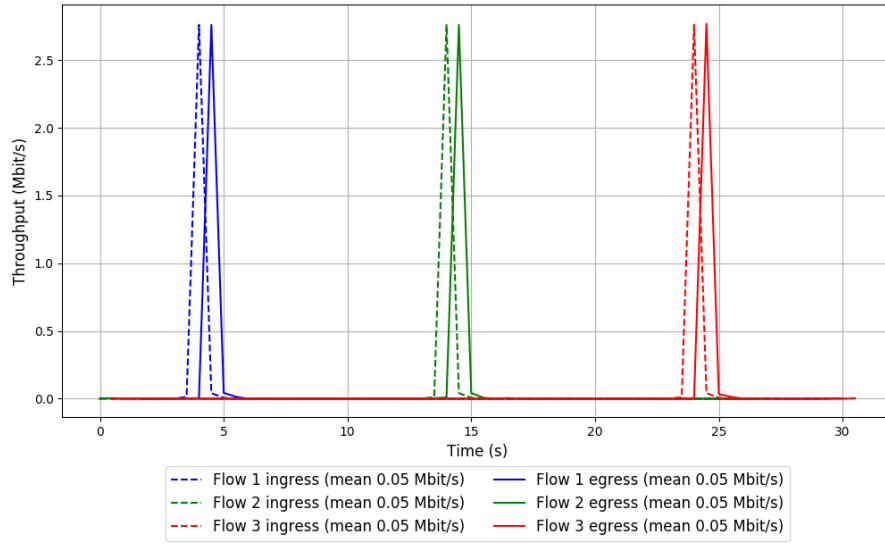
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 63.038 ms

Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2019-03-27 11:50:44

End at: 2019-03-27 11:51:14

Local clock offset: 0.025 ms

Remote clock offset: 0.001 ms

Below is generated by plot.py at 2019-03-27 15:42:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 63.332 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 63.423 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 63.283 ms

Loss rate: 0.00%

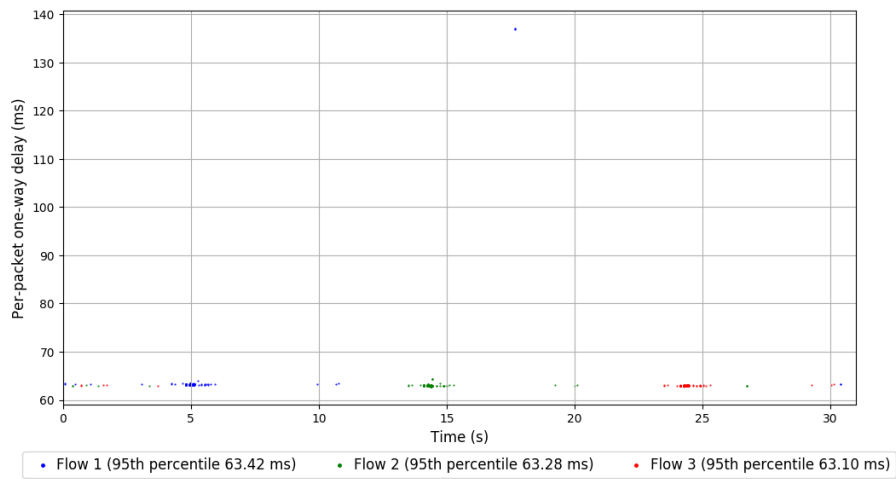
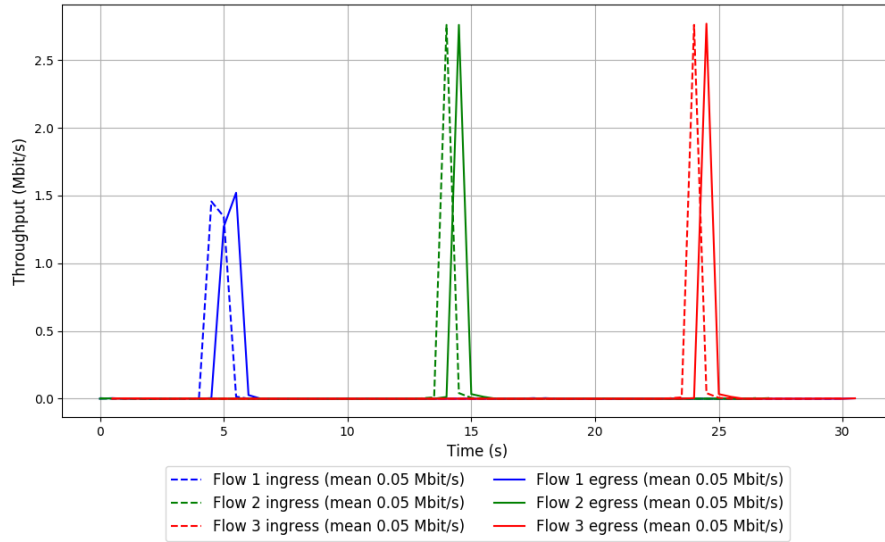
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 63.104 ms

Loss rate: 0.00%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2019-03-27 12:27:05
End at: 2019-03-27 12:27:35
Local clock offset: -0.177 ms
Remote clock offset: -0.431 ms

```
# Below is generated by plot.py at 2019-03-27 15:42:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 63.810 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 63.857 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 63.435 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 63.175 ms
Loss rate: 0.00%
```

Run 5: Report of WebRTC media — Data Link

