

## Pantheon Report

Generated at 2019-01-17 14:20:25 (UTC).

Data path: AWS Brazil 1 on `ens5` (*local*) → Brazil on `p4p1` (*remote*).

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 `gps.ntp.br` and have been applied to correct the timestamps in logs.

### System info:

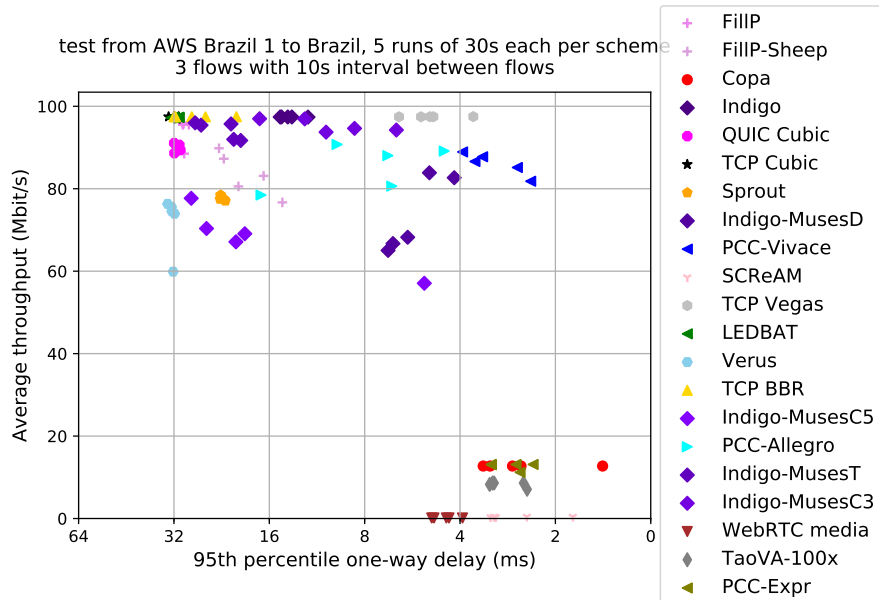
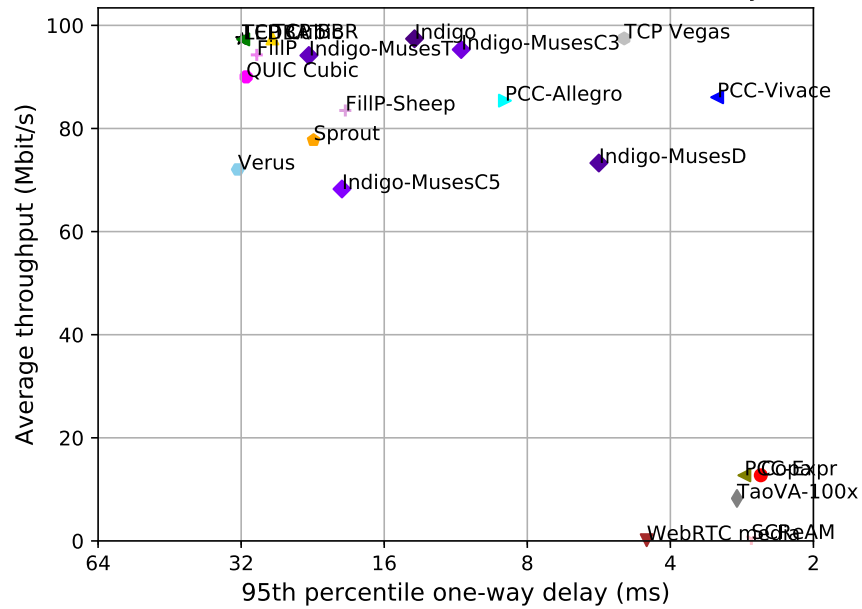
```
Linux 4.15.0-1031-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

### Git summary:

```
branch: muses @ c80a283586bf7b0cc1fe08c69c8f60d56498f81c
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecd90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ c3eee875824760ec5b2fd207fefe166e1afe2170
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 AWS Brazil 1 to Brazil, 5 runs of 30s each per scheme  
 3 flows with 10s interval between flows (mean of all runs by scheme)



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	67.90	28.82	31.18	27.21	24.91	29.65	0.24	0.09	0.56
Copa	5	10.81	2.45	1.27	2.60	2.29	2.57	65.94	81.92	86.51
TCP Cubic	5	62.22	40.14	25.33	31.62	31.78	32.14	0.04	0.04	0.06
FillP	5	49.04	55.06	25.82	29.31	29.56	28.90	12.38	17.78	31.12
FillP-Sheep	5	47.44	36.54	35.44	15.36	20.72	21.40	0.98	1.30	2.92
Indigo	5	46.92	42.60	68.43	11.39	13.72	14.79	0.00	0.00	0.01
Indigo-MusesC3	5	55.59	42.89	39.09	9.69	11.44	11.69	0.00	0.00	0.01
Indigo-MusesC5	5	35.63	33.64	35.48	18.19	19.88	20.48	0.00	0.03	0.02
Indigo-MusesD	5	42.71	36.93	21.72	4.88	5.57	6.24	0.00	0.00	0.02
Indigo-MusesT	5	58.74	43.77	23.20	21.24	23.81	25.72	0.04	0.10	0.24
LEDBAT	5	64.05	33.08	33.77	31.47	31.41	32.18	0.03	0.15	0.08
PCC-Allegro	5	69.67	18.36	10.65	7.17	13.82	17.56	0.02	0.07	0.15
PCC-Expr	5	8.15	4.67	4.44	4.60	2.21	1.89	28.75	27.84	25.50
QUIC Cubic	5	56.55	36.08	28.78	30.69	31.50	30.93	0.13	0.17	0.21
SCReAM	5	0.18	0.20	0.22	1.83	2.41	1.83	0.00	0.00	0.00
Sprout	5	43.39	36.59	30.31	20.39	22.38	24.96	0.01	0.00	0.00
TaoVA-100x	5	0.00	9.67	6.13	1.77	3.01	3.06	95.92	81.53	91.00
TCP Vegas	5	48.17	44.08	59.93	6.46	4.45	4.40	0.00	0.00	0.01
Verus	5	42.28	29.53	30.76	31.85	32.88	32.37	16.56	19.40	28.48
PCC-Vivace	5	53.80	36.36	24.42	2.82	3.54	2.98	0.00	0.00	0.00
WebRTC media	5	0.05	0.05	0.05	4.23	4.98	4.84	0.01	0.00	0.00



Run 1: Statistics of TCP BBR

Start at: 2019-01-17 12:14:02

End at: 2019-01-17 12:14:32

Local clock offset: -6.423 ms

Remote clock offset: 1.578 ms

# Below is generated by plot.py at 2019-01-17 14:10:03

# Datalink statistics

-- Total of 3 flows:

Average throughput: 97.47 Mbit/s

95th percentile per-packet one-way delay: 28.102 ms

Loss rate: 0.19%

-- Flow 1:

Average throughput: 64.84 Mbit/s

95th percentile per-packet one-way delay: 27.268 ms

Loss rate: 0.09%

-- Flow 2:

Average throughput: 20.94 Mbit/s

95th percentile per-packet one-way delay: 26.838 ms

Loss rate: 0.09%

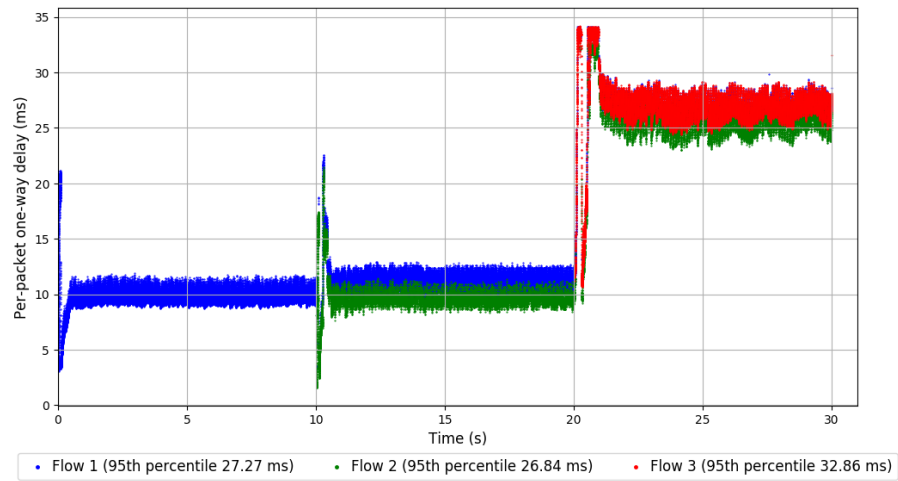
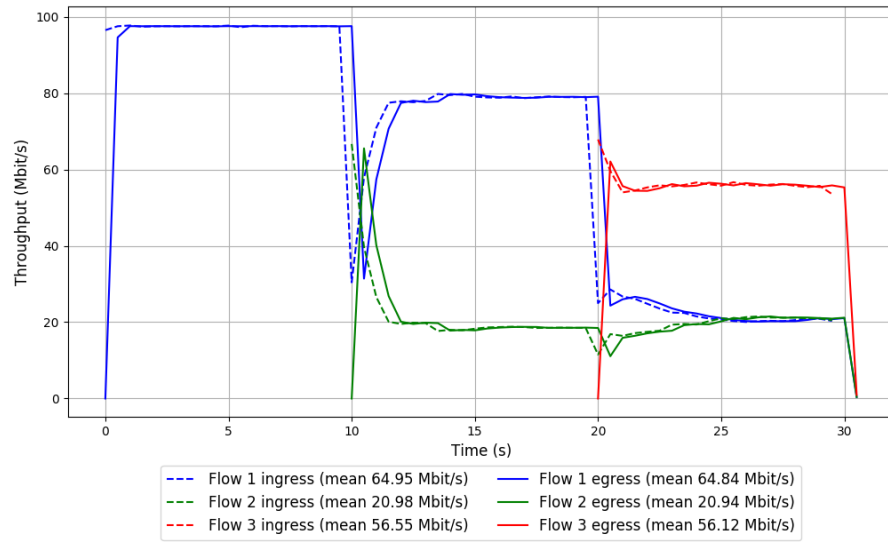
-- Flow 3:

Average throughput: 56.12 Mbit/s

95th percentile per-packet one-way delay: 32.861 ms

Loss rate: 0.58%

# Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2019-01-17 12:37:56

End at: 2019-01-17 12:38:26

Local clock offset: -4.784 ms

Remote clock offset: 1.317 ms

# Below is generated by plot.py at 2019-01-17 14:10:03

# Datalink statistics

-- Total of 3 flows:

Average throughput: 97.46 Mbit/s

95th percentile per-packet one-way delay: 31.976 ms

Loss rate: 0.59%

-- Flow 1:

Average throughput: 76.29 Mbit/s

95th percentile per-packet one-way delay: 32.108 ms

Loss rate: 0.59%

-- Flow 2:

Average throughput: 24.42 Mbit/s

95th percentile per-packet one-way delay: 31.713 ms

Loss rate: 0.25%

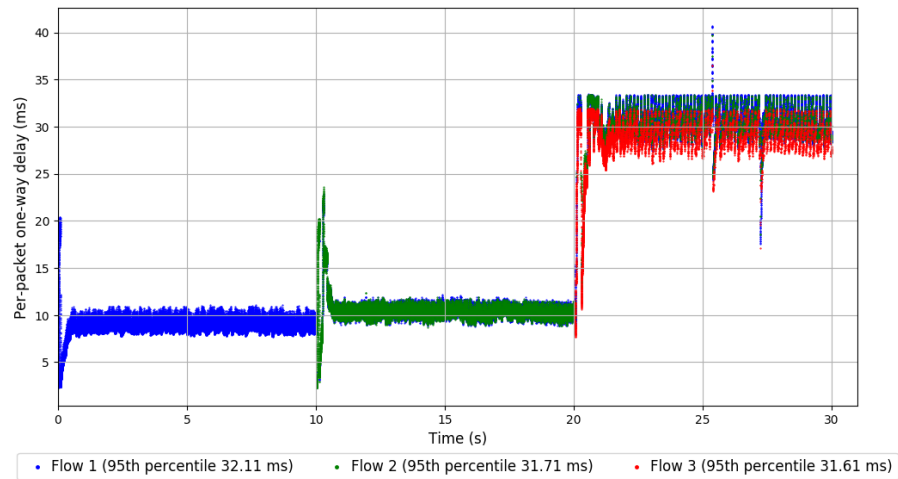
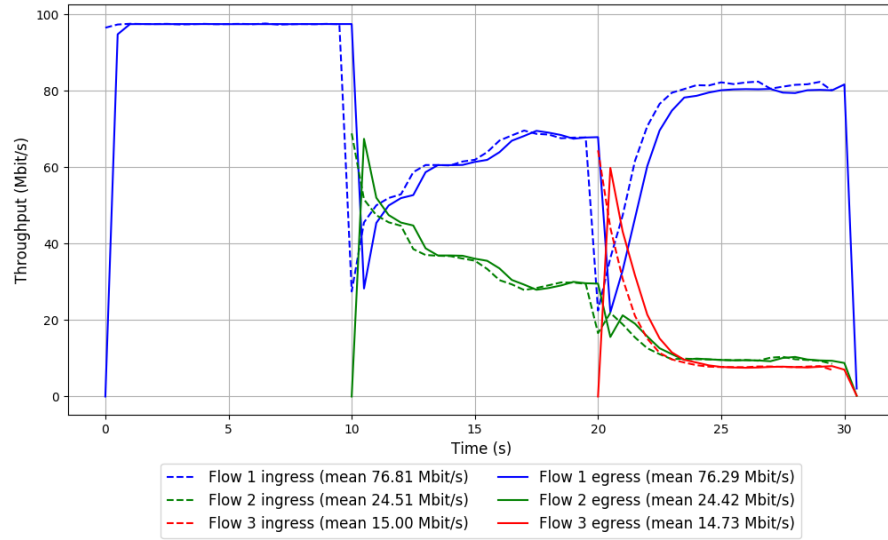
-- Flow 3:

Average throughput: 14.73 Mbit/s

95th percentile per-packet one-way delay: 31.615 ms

Loss rate: 1.61%

## Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2019-01-17 13:01:50

End at: 2019-01-17 13:02:20

Local clock offset: -4.662 ms

Remote clock offset: 1.224 ms

# Below is generated by plot.py at 2019-01-17 14:10:05

# Datalink statistics

-- Total of 3 flows:

Average throughput: 97.48 Mbit/s

95th percentile per-packet one-way delay: 31.668 ms

Loss rate: 0.32%

-- Flow 1:

Average throughput: 68.69 Mbit/s

95th percentile per-packet one-way delay: 32.089 ms

Loss rate: 0.43%

-- Flow 2:

Average throughput: 37.14 Mbit/s

95th percentile per-packet one-way delay: 21.685 ms

Loss rate: 0.02%

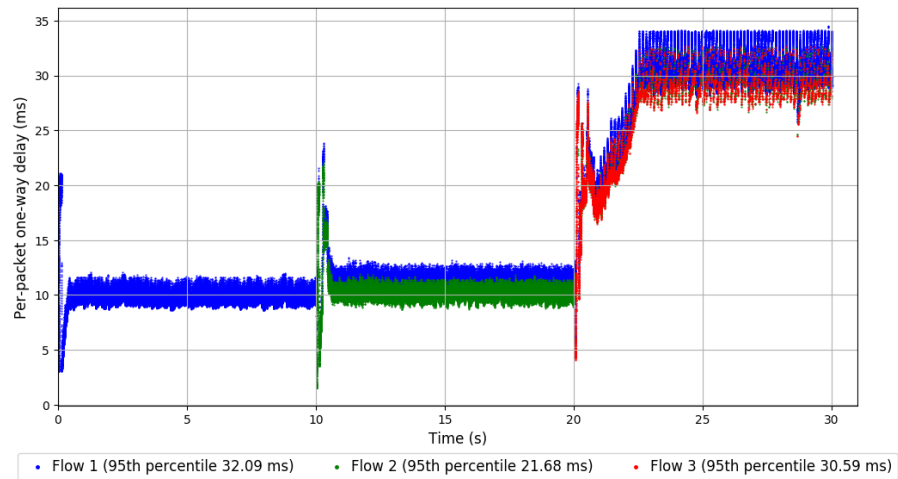
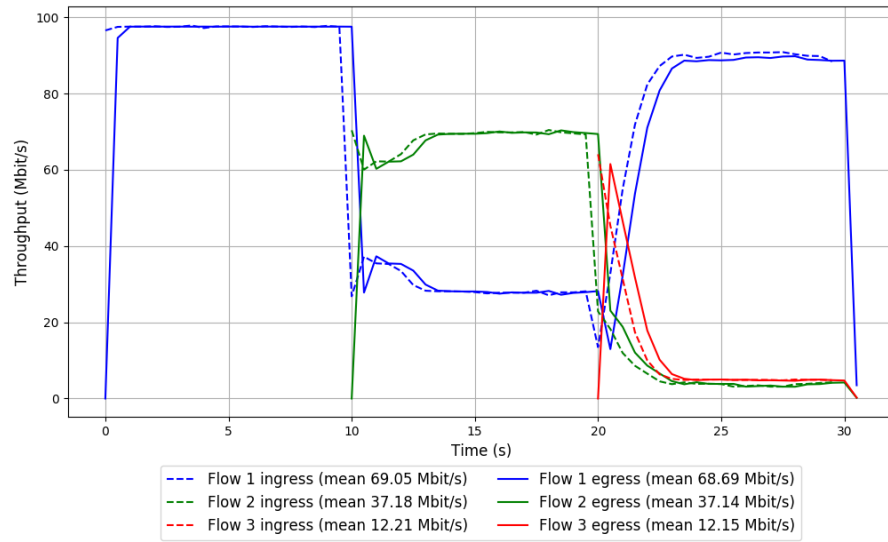
-- Flow 3:

Average throughput: 12.15 Mbit/s

95th percentile per-packet one-way delay: 30.589 ms

Loss rate: 0.32%

### Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2019-01-17 13:25:45

End at: 2019-01-17 13:26:15

Local clock offset: -5.064 ms

Remote clock offset: 1.476 ms

# Below is generated by plot.py at 2019-01-17 14:10:05

# Datalink statistics

-- Total of 3 flows:

Average throughput: 97.45 Mbit/s

95th percentile per-packet one-way delay: 25.445 ms

Loss rate: 0.12%

-- Flow 1:

Average throughput: 63.81 Mbit/s

95th percentile per-packet one-way delay: 24.540 ms

Loss rate: 0.07%

-- Flow 2:

Average throughput: 19.77 Mbit/s

95th percentile per-packet one-way delay: 24.100 ms

Loss rate: 0.09%

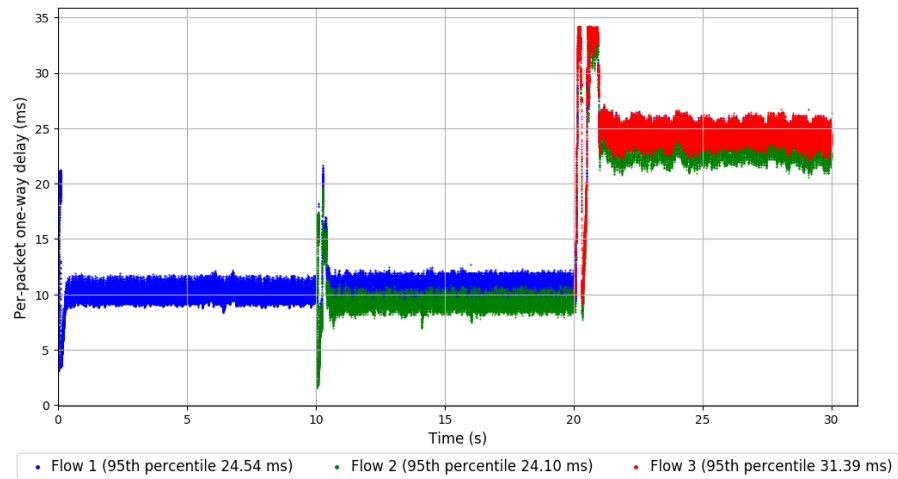
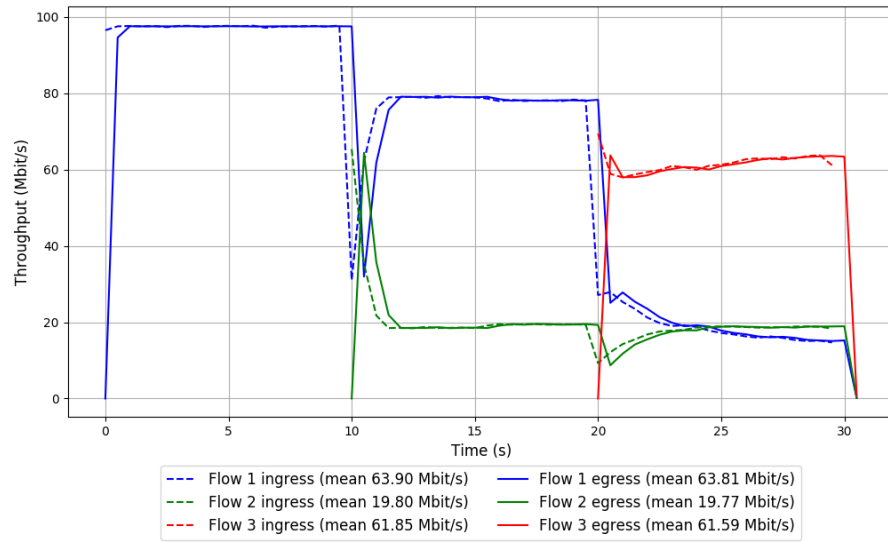
-- Flow 3:

Average throughput: 61.59 Mbit/s

95th percentile per-packet one-way delay: 31.389 ms

Loss rate: 0.30%

#### Run 4: Report of TCP BBR — Data Link





Run 5: Statistics of TCP BBR

Start at: 2019-01-17 13:49:39

End at: 2019-01-17 13:50:09

Local clock offset: -4.598 ms

Remote clock offset: 1.572 ms

# Below is generated by plot.py at 2019-01-17 14:10:05

# Datalink statistics

-- Total of 3 flows:

Average throughput: 97.47 Mbit/s

95th percentile per-packet one-way delay: 20.324 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 65.85 Mbit/s

95th percentile per-packet one-way delay: 20.067 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 41.83 Mbit/s

95th percentile per-packet one-way delay: 20.238 ms

Loss rate: 0.00%

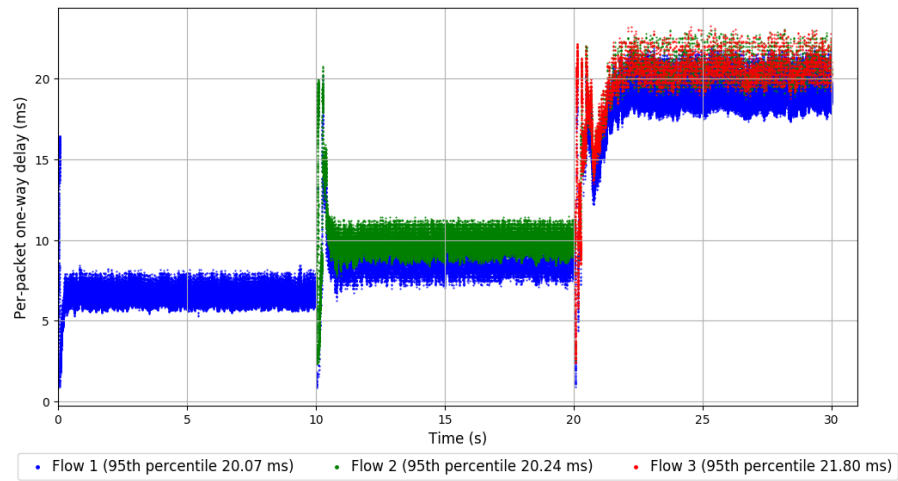
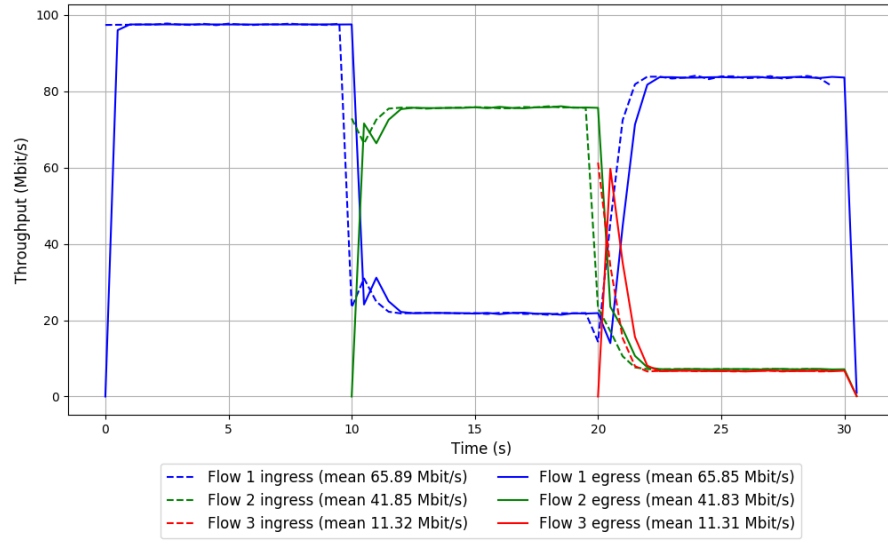
-- Flow 3:

Average throughput: 11.31 Mbit/s

95th percentile per-packet one-way delay: 21.798 ms

Loss rate: 0.00%

## Run 5: Report of TCP BBR — Data Link



Run 1: Statistics of Copa

Start at: 2019-01-17 12:19:45

End at: 2019-01-17 12:20:15

Local clock offset: -5.666 ms

Remote clock offset: 1.569 ms

# Below is generated by plot.py at 2019-01-17 14:10:05

# Datalink statistics

-- Total of 3 flows:

Average throughput: 12.73 Mbit/s

95th percentile per-packet one-way delay: 2.732 ms

Loss rate: 63.89%

-- Flow 1:

Average throughput: 12.72 Mbit/s

95th percentile per-packet one-way delay: 2.732 ms

Loss rate: 63.82%

-- Flow 2:

Average throughput: 0.02 Mbit/s

95th percentile per-packet one-way delay: 1.353 ms

Loss rate: 88.38%

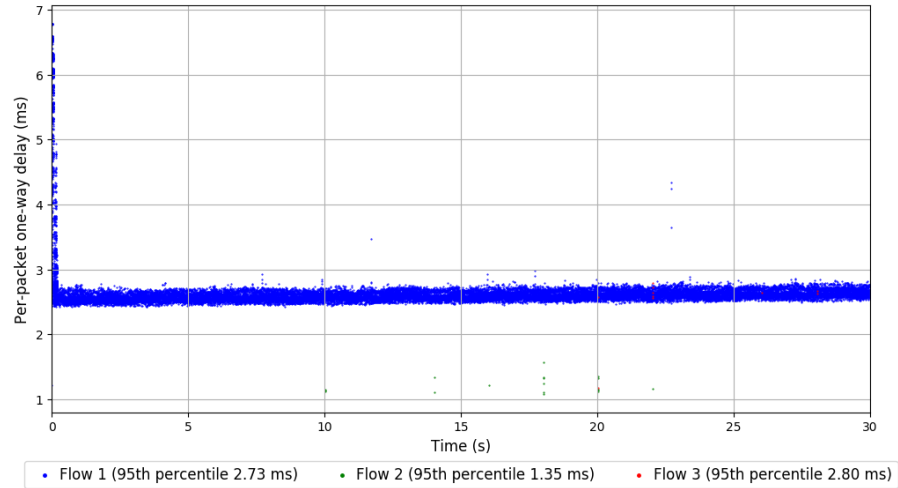
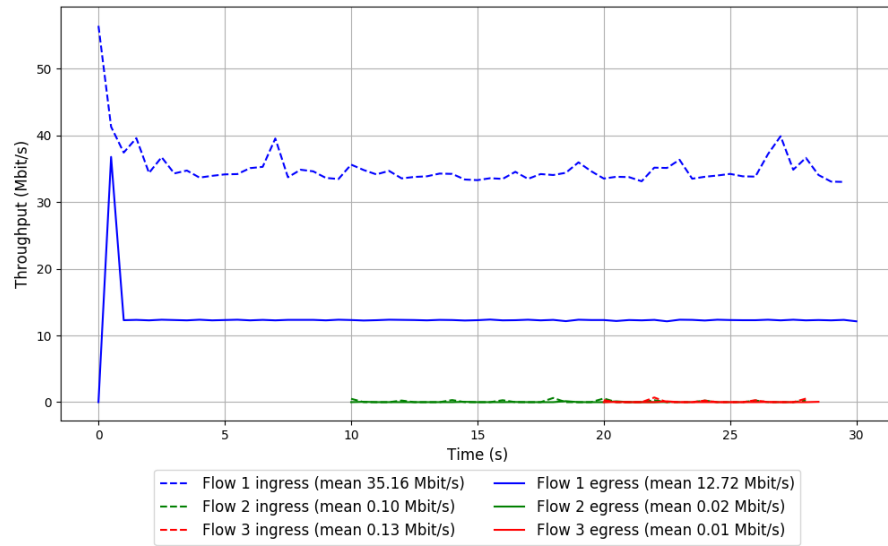
-- Flow 3:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 2.797 ms

Loss rate: 89.32%

## Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2019-01-17 12:43:39

End at: 2019-01-17 12:44:09

Local clock offset: -4.902 ms

Remote clock offset: 1.394 ms

# Below is generated by plot.py at 2019-01-17 14:10:05

# Datalink statistics

-- Total of 3 flows:

Average throughput: 12.73 Mbit/s

95th percentile per-packet one-way delay: 2.568 ms

Loss rate: 69.57%

-- Flow 1:

Average throughput: 7.67 Mbit/s

95th percentile per-packet one-way delay: 2.626 ms

Loss rate: 67.19%

-- Flow 2:

Average throughput: 5.42 Mbit/s

95th percentile per-packet one-way delay: 2.541 ms

Loss rate: 74.80%

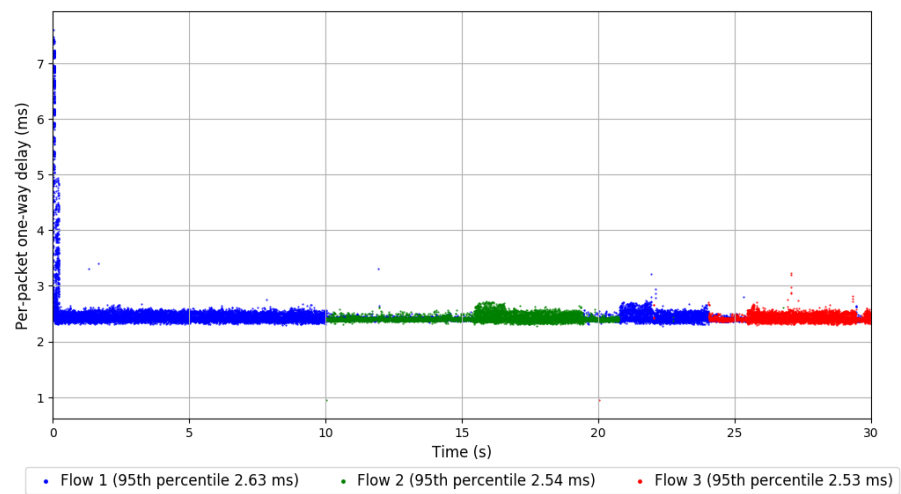
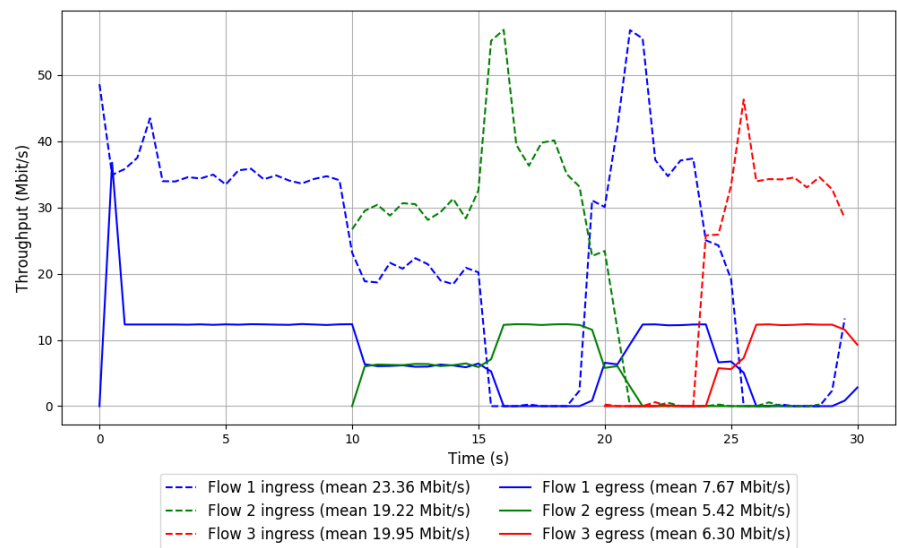
-- Flow 3:

Average throughput: 6.30 Mbit/s

95th percentile per-packet one-way delay: 2.529 ms

Loss rate: 68.42%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2019-01-17 13:07:34

End at: 2019-01-17 13:08:04

Local clock offset: -4.69 ms

Remote clock offset: 1.206 ms

# Below is generated by plot.py at 2019-01-17 14:10:05

# Datalink statistics

-- Total of 3 flows:

Average throughput: 12.73 Mbit/s

95th percentile per-packet one-way delay: 3.214 ms

Loss rate: 67.51%

-- Flow 1:

Average throughput: 10.71 Mbit/s

95th percentile per-packet one-way delay: 3.225 ms

Loss rate: 64.63%

-- Flow 2:

Average throughput: 3.09 Mbit/s

95th percentile per-packet one-way delay: 3.129 ms

Loss rate: 77.29%

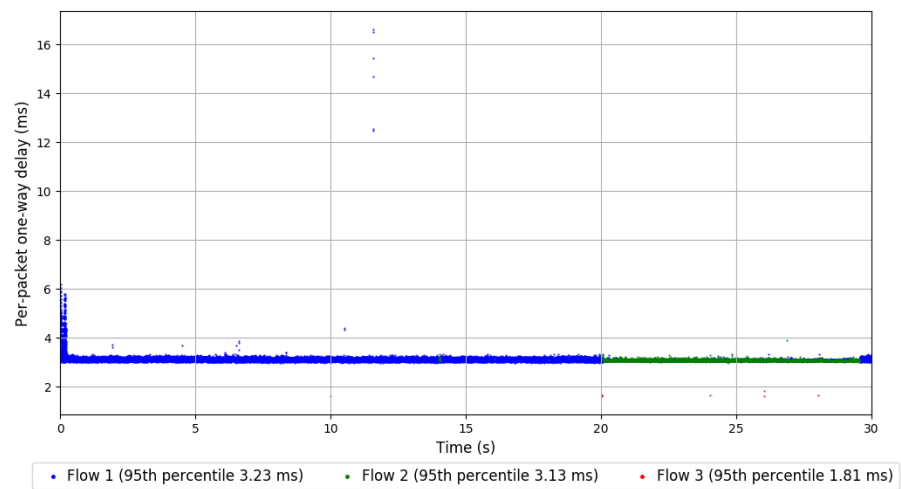
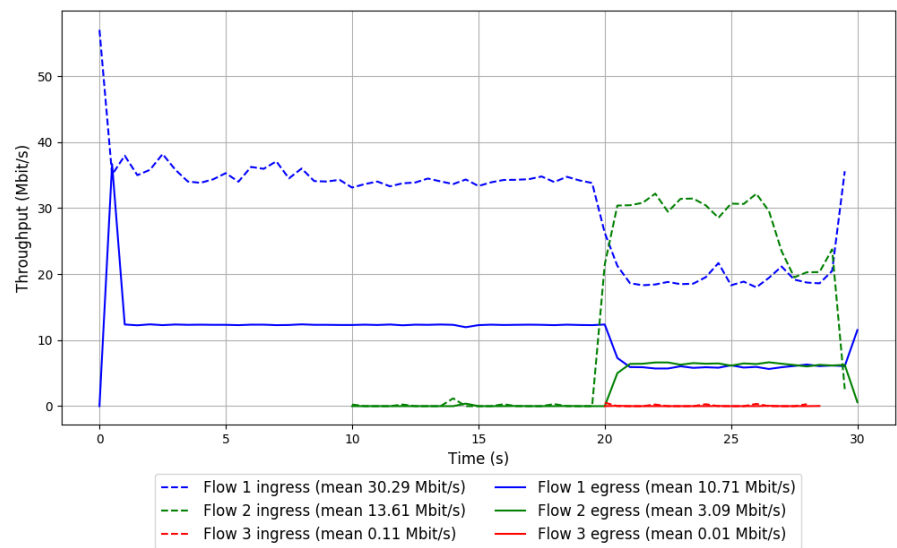
-- Flow 3:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 1.812 ms

Loss rate: 91.32%

Run 3: Report of Copa — Data Link





Run 4: Statistics of Copa

Start at: 2019-01-17 13:31:28

End at: 2019-01-17 13:31:58

Local clock offset: -5.328 ms

Remote clock offset: 1.561 ms

# Below is generated by plot.py at 2019-01-17 14:10:05

# Datalink statistics

-- Total of 3 flows:

Average throughput: 12.73 Mbit/s

95th percentile per-packet one-way delay: 3.381 ms

Loss rate: 68.50%

-- Flow 1:

Average throughput: 10.25 Mbit/s

95th percentile per-packet one-way delay: 3.390 ms

Loss rate: 66.21%

-- Flow 2:

Average throughput: 3.71 Mbit/s

95th percentile per-packet one-way delay: 3.351 ms

Loss rate: 75.35%

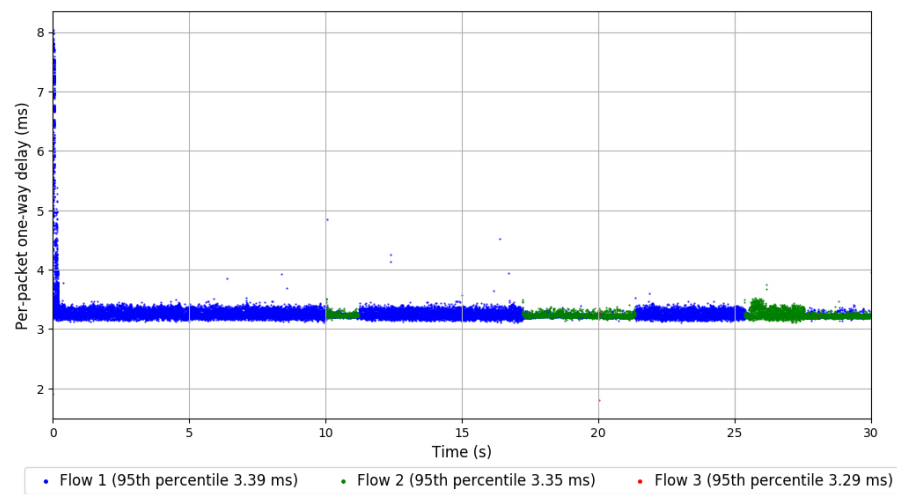
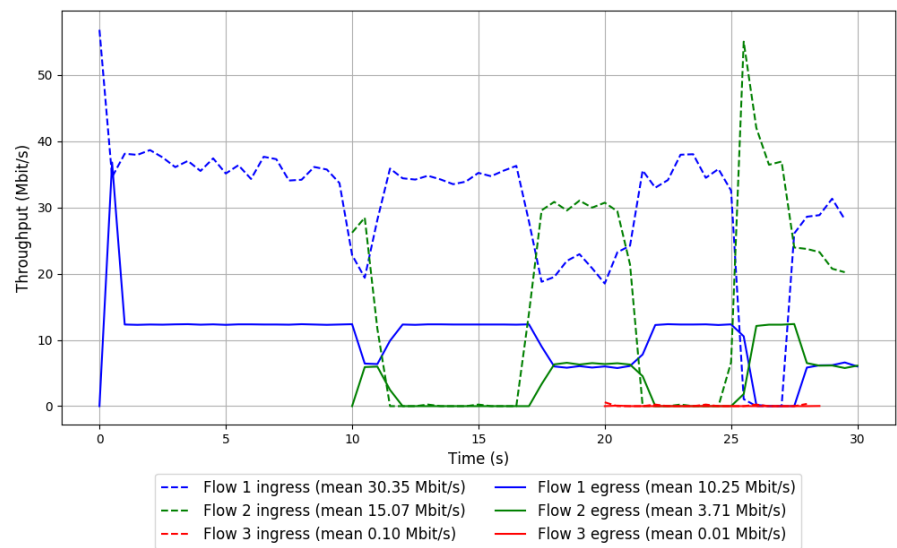
-- Flow 3:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 3.287 ms

Loss rate: 94.00%

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2019-01-17 13:55:23

End at: 2019-01-17 13:55:53

Local clock offset: -4.066 ms

Remote clock offset: 1.44 ms

# Below is generated by plot.py at 2019-01-17 14:10:05

# Datalink statistics

-- Total of 3 flows:

Average throughput: 12.73 Mbit/s

95th percentile per-packet one-way delay: 1.010 ms

Loss rate: 67.91%

-- Flow 1:

Average throughput: 12.72 Mbit/s

95th percentile per-packet one-way delay: 1.009 ms

Loss rate: 67.86%

-- Flow 2:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 1.070 ms

Loss rate: 93.78%

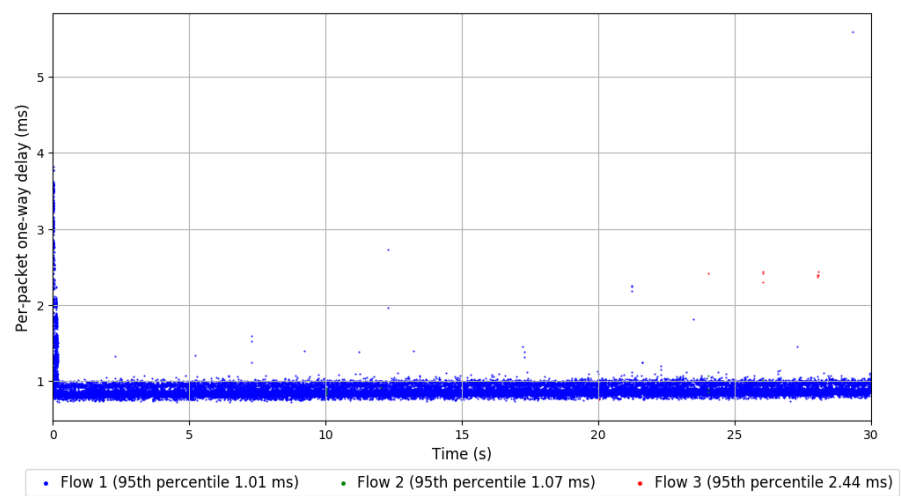
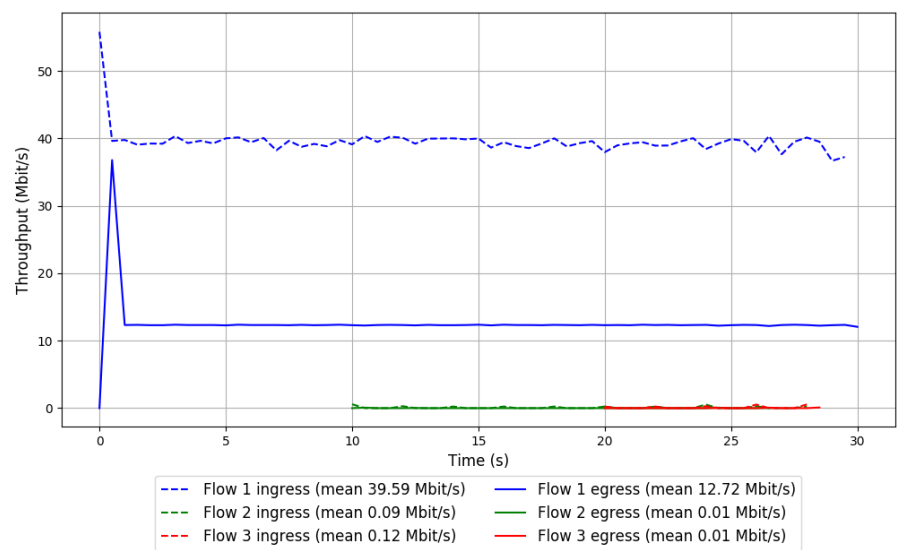
-- Flow 3:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 2.442 ms

Loss rate: 89.51%

Run 5: Report of Copa — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2019-01-17 12:16:17

End at: 2019-01-17 12:16:47

Local clock offset: -6.061 ms

Remote clock offset: 1.49 ms

# Below is generated by plot.py at 2019-01-17 14:10:20

# Datalink statistics

-- Total of 3 flows:

Average throughput: 97.47 Mbit/s

95th percentile per-packet one-way delay: 30.926 ms

Loss rate: 0.03%

-- Flow 1:

Average throughput: 55.80 Mbit/s

95th percentile per-packet one-way delay: 30.627 ms

Loss rate: 0.03%

-- Flow 2:

Average throughput: 50.46 Mbit/s

95th percentile per-packet one-way delay: 31.124 ms

Loss rate: 0.03%

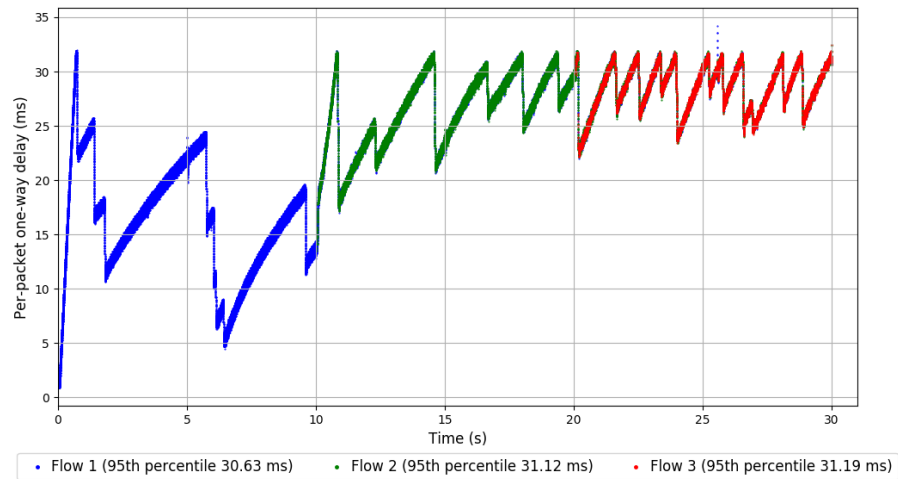
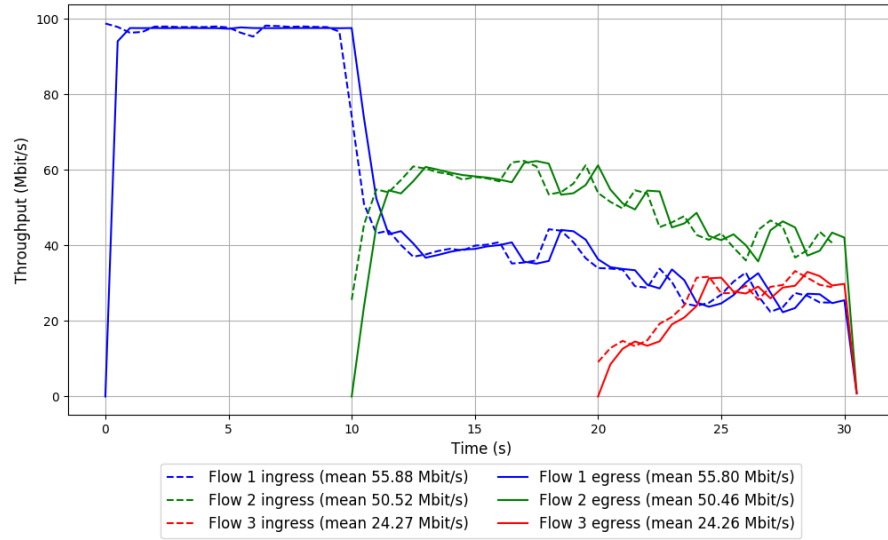
-- Flow 3:

Average throughput: 24.26 Mbit/s

95th percentile per-packet one-way delay: 31.188 ms

Loss rate: 0.05%

# Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2019-01-17 12:40:11

End at: 2019-01-17 12:40:41

Local clock offset: -4.843 ms

Remote clock offset: 1.254 ms

# Below is generated by plot.py at 2019-01-17 14:10:30

# Datalink statistics

-- Total of 3 flows:

Average throughput: 96.88 Mbit/s

95th percentile per-packet one-way delay: 31.310 ms

Loss rate: 0.05%

-- Flow 1:

Average throughput: 62.25 Mbit/s

95th percentile per-packet one-way delay: 31.042 ms

Loss rate: 0.05%

-- Flow 2:

Average throughput: 36.81 Mbit/s

95th percentile per-packet one-way delay: 31.111 ms

Loss rate: 0.05%

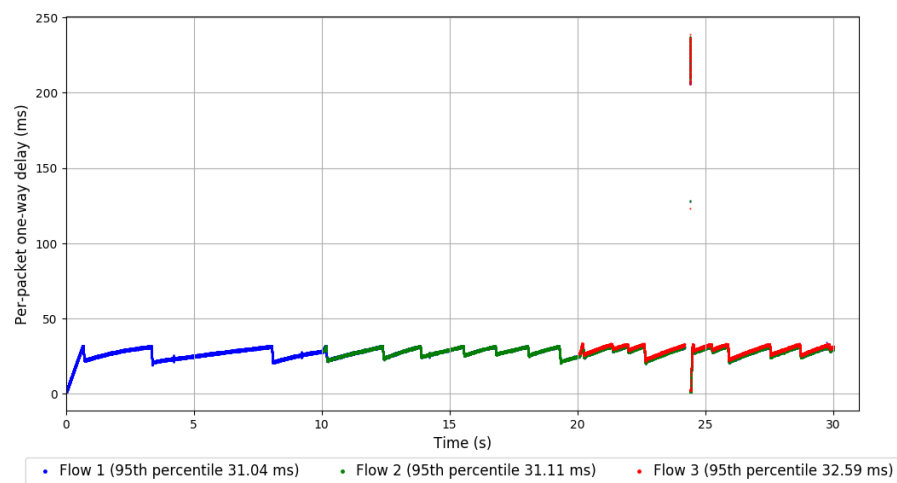
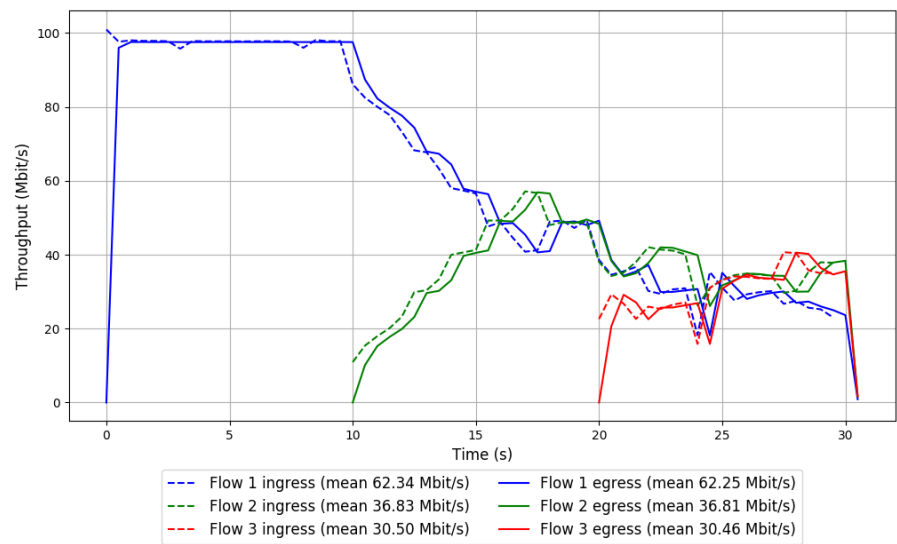
-- Flow 3:

Average throughput: 30.46 Mbit/s

95th percentile per-packet one-way delay: 32.592 ms

Loss rate: 0.08%

Run 2: Report of TCP Cubic — Data Link





Run 3: Statistics of TCP Cubic

Start at: 2019-01-17 13:04:06

End at: 2019-01-17 13:04:36

Local clock offset: -4.706 ms

Remote clock offset: 1.298 ms

# Below is generated by plot.py at 2019-01-17 14:10:31

# Datalink statistics

-- Total of 3 flows:

Average throughput: 97.46 Mbit/s

95th percentile per-packet one-way delay: 33.280 ms

Loss rate: 0.05%

-- Flow 1:

Average throughput: 65.95 Mbit/s

95th percentile per-packet one-way delay: 33.378 ms

Loss rate: 0.05%

-- Flow 2:

Average throughput: 33.33 Mbit/s

95th percentile per-packet one-way delay: 32.023 ms

Loss rate: 0.05%

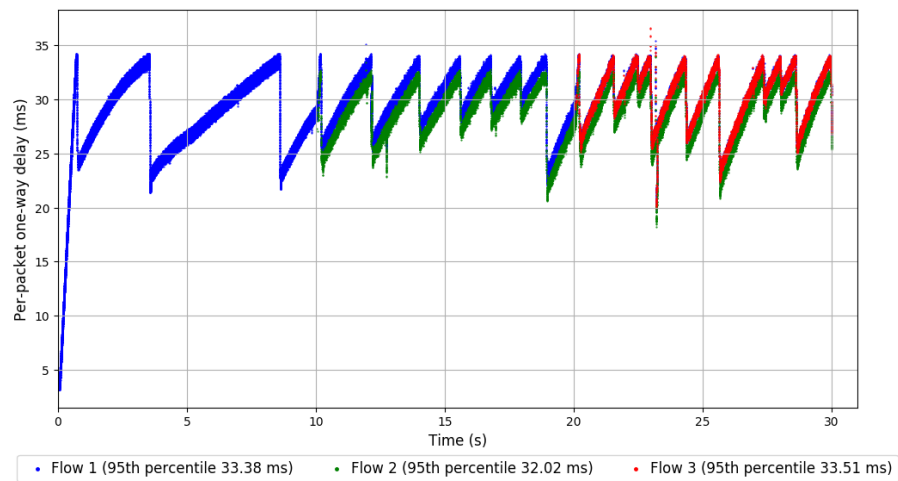
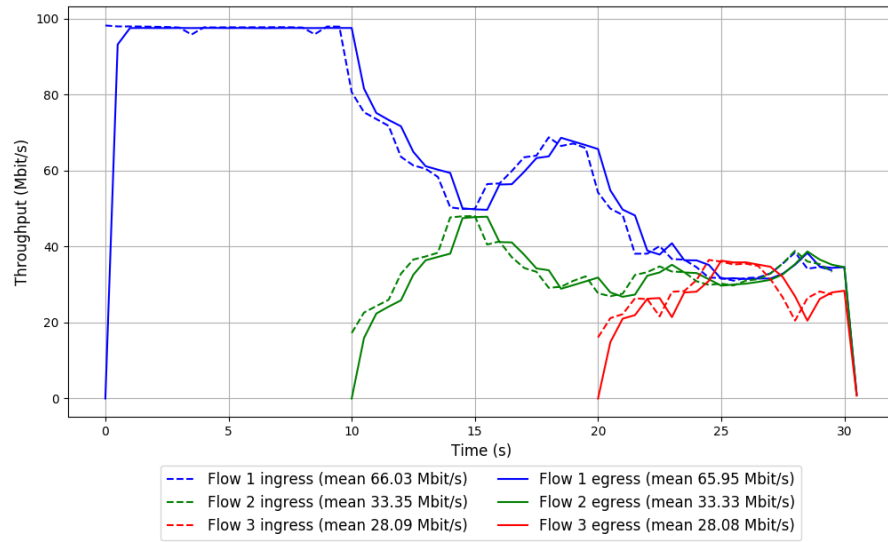
-- Flow 3:

Average throughput: 28.08 Mbit/s

95th percentile per-packet one-way delay: 33.514 ms

Loss rate: 0.07%

### Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2019-01-17 13:28:00

End at: 2019-01-17 13:28:30

Local clock offset: -5.156 ms

Remote clock offset: 1.467 ms

# Below is generated by plot.py at 2019-01-17 14:11:07

# Datalink statistics

-- Total of 3 flows:

Average throughput: 97.47 Mbit/s

95th percentile per-packet one-way delay: 31.905 ms

Loss rate: 0.03%

-- Flow 1:

Average throughput: 64.96 Mbit/s

95th percentile per-packet one-way delay: 31.867 ms

Loss rate: 0.03%

-- Flow 2:

Average throughput: 37.58 Mbit/s

95th percentile per-packet one-way delay: 31.923 ms

Loss rate: 0.02%

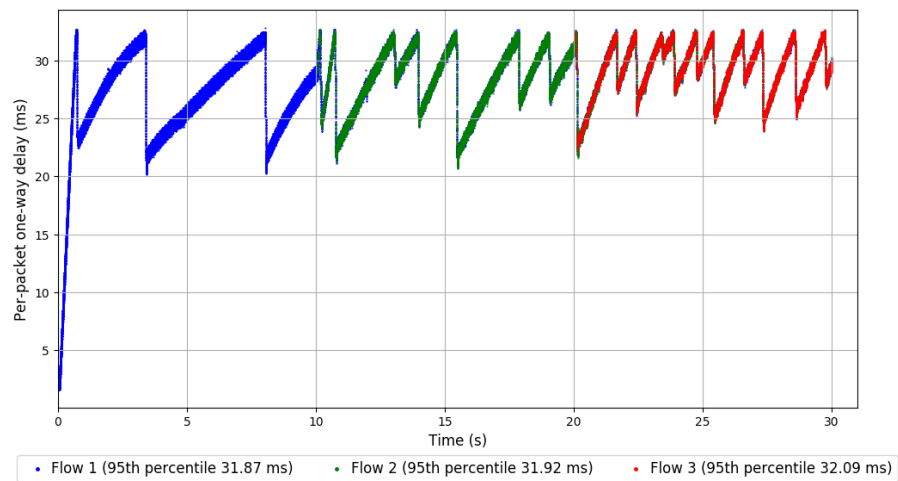
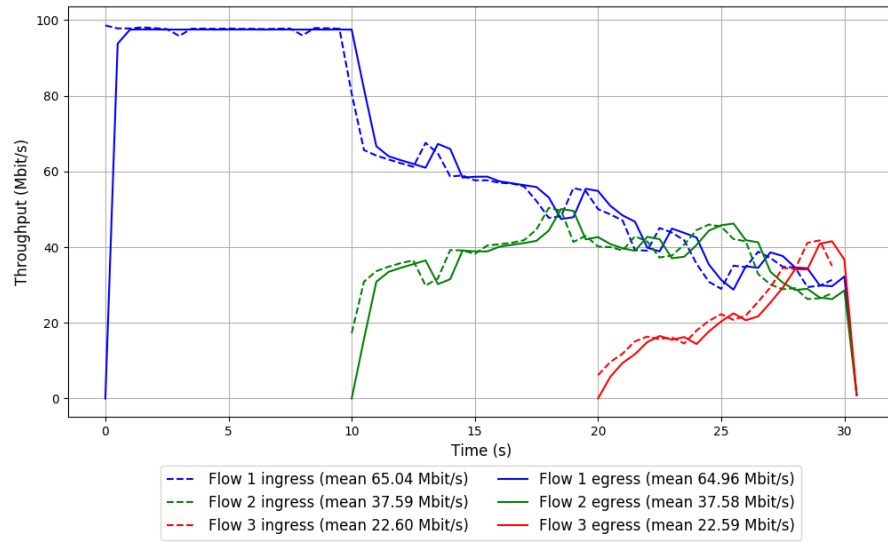
-- Flow 3:

Average throughput: 22.59 Mbit/s

95th percentile per-packet one-way delay: 32.095 ms

Loss rate: 0.04%

# Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2019-01-17 13:51:56

End at: 2019-01-17 13:52:26

Local clock offset: -4.342 ms

Remote clock offset: 1.562 ms

# Below is generated by plot.py at 2019-01-17 14:11:07

# Datalink statistics

-- Total of 3 flows:

Average throughput: 97.50 Mbit/s

95th percentile per-packet one-way delay: 32.007 ms

Loss rate: 0.04%

-- Flow 1:

Average throughput: 62.15 Mbit/s

95th percentile per-packet one-way delay: 31.172 ms

Loss rate: 0.04%

-- Flow 2:

Average throughput: 42.52 Mbit/s

95th percentile per-packet one-way delay: 32.713 ms

Loss rate: 0.03%

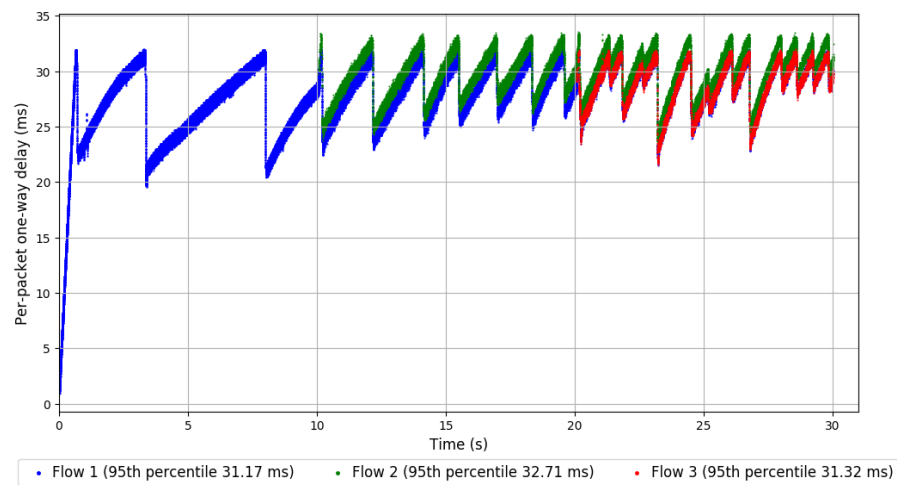
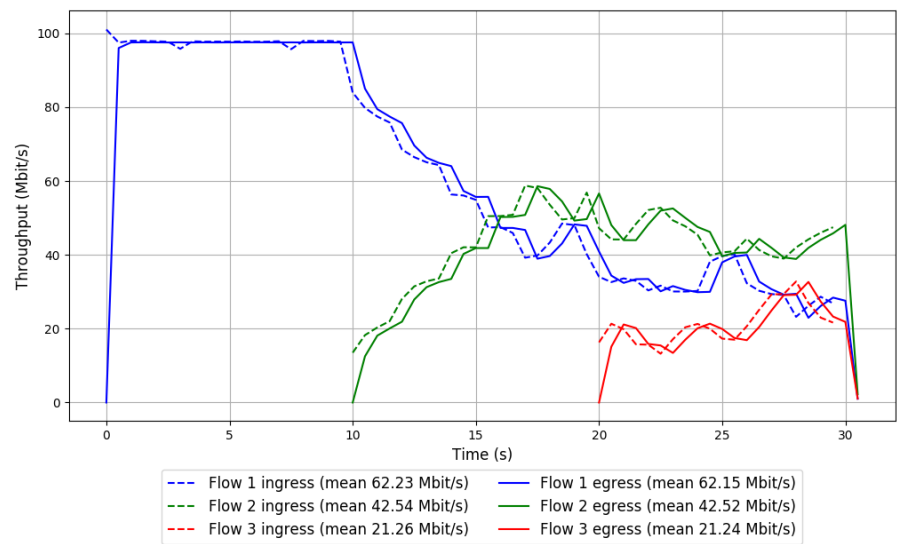
-- Flow 3:

Average throughput: 21.24 Mbit/s

95th percentile per-packet one-way delay: 31.316 ms

Loss rate: 0.08%

Run 5: Report of TCP Cubic — Data Link



Run 1: Statistics of FillP

Start at: 2019-01-17 12:27:42

End at: 2019-01-17 12:28:12

Local clock offset: -4.79 ms

Remote clock offset: 1.402 ms

# Below is generated by plot.py at 2019-01-17 14:11:27

# Datalink statistics

-- Total of 3 flows:

Average throughput: 95.53 Mbit/s

95th percentile per-packet one-way delay: 28.705 ms

Loss rate: 16.15%

-- Flow 1:

Average throughput: 48.45 Mbit/s

95th percentile per-packet one-way delay: 28.609 ms

Loss rate: 14.60%

-- Flow 2:

Average throughput: 67.17 Mbit/s

95th percentile per-packet one-way delay: 28.744 ms

Loss rate: 18.14%

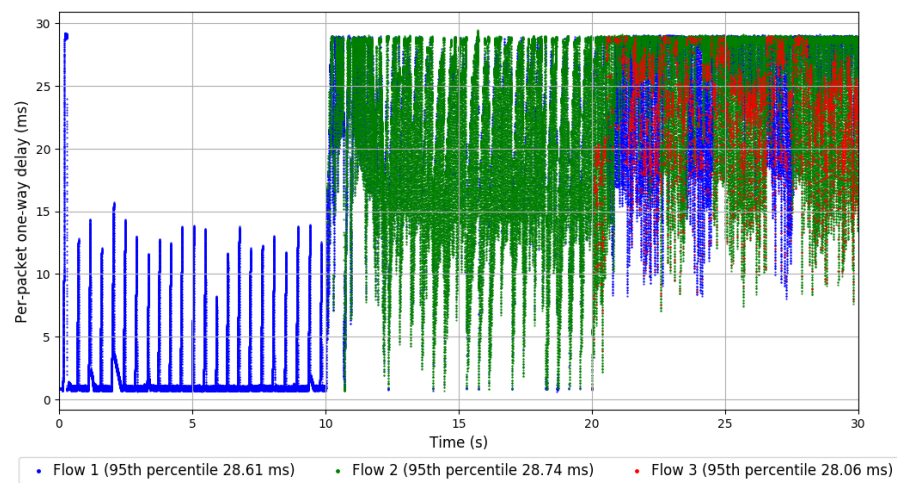
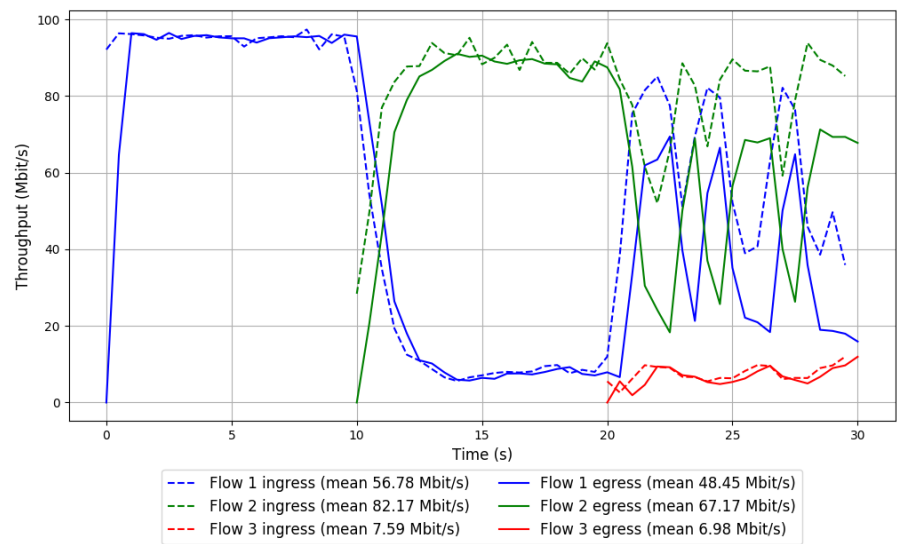
-- Flow 3:

Average throughput: 6.98 Mbit/s

95th percentile per-packet one-way delay: 28.058 ms

Loss rate: 8.01%

Run 1: Report of FillP — Data Link





Run 2: Statistics of FillP

Start at: 2019-01-17 12:51:36

End at: 2019-01-17 12:52:06

Local clock offset: -4.46 ms

Remote clock offset: 1.209 ms

# Below is generated by plot.py at 2019-01-17 14:11:29

# Datalink statistics

-- Total of 3 flows:

Average throughput: 95.52 Mbit/s

95th percentile per-packet one-way delay: 30.008 ms

Loss rate: 20.63%

-- Flow 1:

Average throughput: 47.87 Mbit/s

95th percentile per-packet one-way delay: 29.864 ms

Loss rate: 15.59%

-- Flow 2:

Average throughput: 56.25 Mbit/s

95th percentile per-packet one-way delay: 30.126 ms

Loss rate: 17.85%

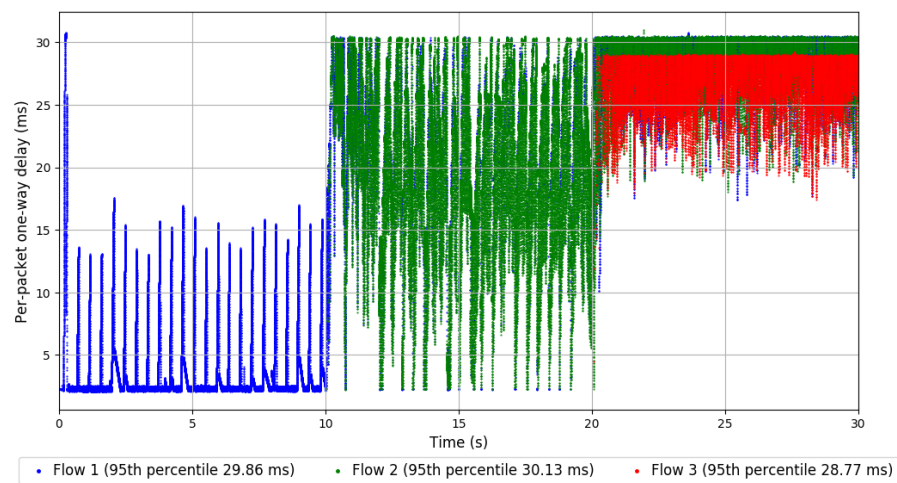
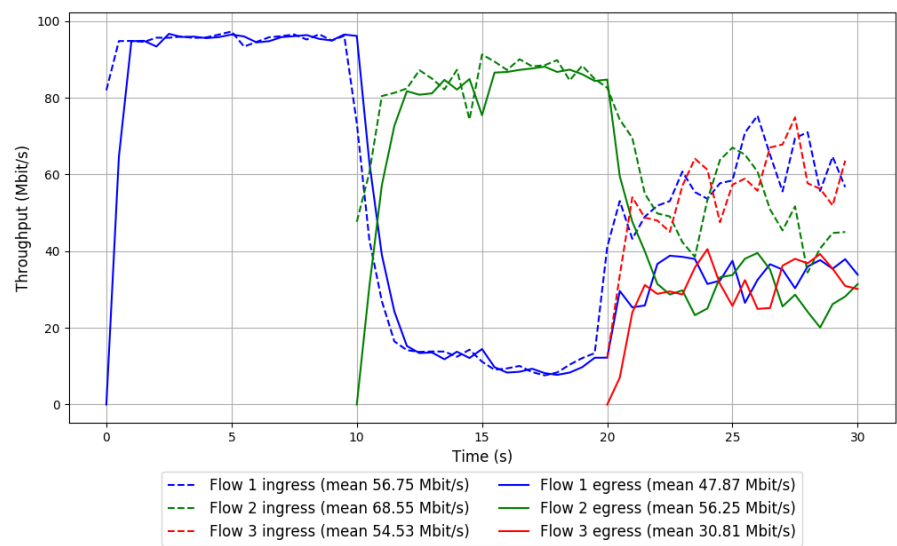
-- Flow 3:

Average throughput: 30.81 Mbit/s

95th percentile per-packet one-way delay: 28.770 ms

Loss rate: 43.47%

Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2019-01-17 13:15:31

End at: 2019-01-17 13:16:01

Local clock offset: -4.024 ms

Remote clock offset: 1.332 ms

# Below is generated by plot.py at 2019-01-17 14:11:29

# Datalink statistics

-- Total of 3 flows:

Average throughput: 88.51 Mbit/s

95th percentile per-packet one-way delay: 29.714 ms

Loss rate: 10.03%

-- Flow 1:

Average throughput: 54.37 Mbit/s

95th percentile per-packet one-way delay: 28.691 ms

Loss rate: 5.67%

-- Flow 2:

Average throughput: 37.82 Mbit/s

95th percentile per-packet one-way delay: 30.109 ms

Loss rate: 15.62%

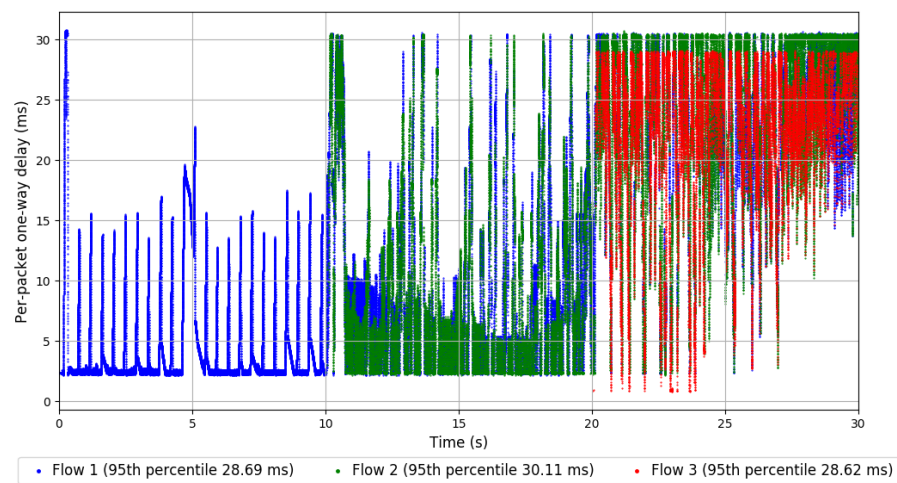
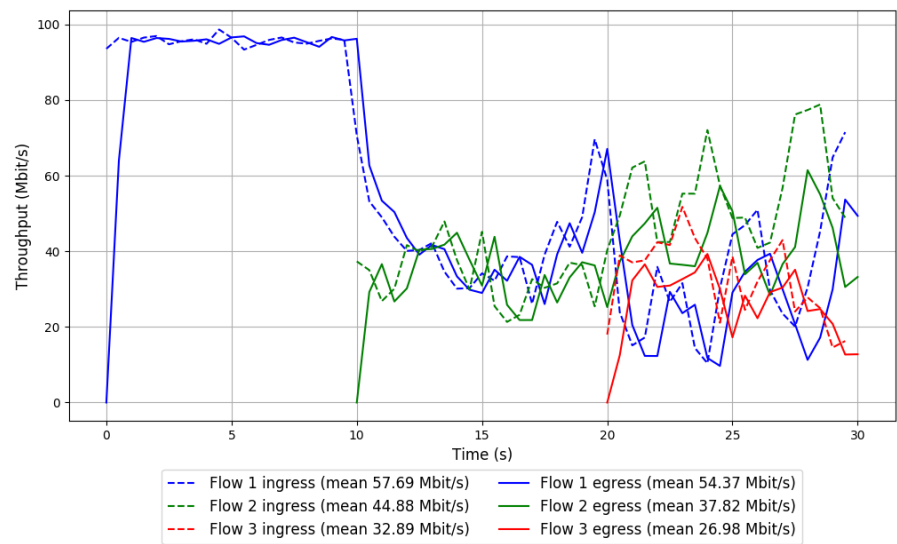
-- Flow 3:

Average throughput: 26.98 Mbit/s

95th percentile per-packet one-way delay: 28.618 ms

Loss rate: 17.82%

Run 3: Report of FillP — Data Link



Run 4: Statistics of FillP

Start at: 2019-01-17 13:39:25

End at: 2019-01-17 13:39:55

Local clock offset: -4.736 ms

Remote clock offset: 1.604 ms

# Below is generated by plot.py at 2019-01-17 14:11:46

# Datalink statistics

-- Total of 3 flows:

Average throughput: 96.02 Mbit/s

95th percentile per-packet one-way delay: 30.079 ms

Loss rate: 20.19%

-- Flow 1:

Average throughput: 45.12 Mbit/s

95th percentile per-packet one-way delay: 29.485 ms

Loss rate: 13.70%

-- Flow 2:

Average throughput: 60.40 Mbit/s

95th percentile per-packet one-way delay: 30.221 ms

Loss rate: 18.17%

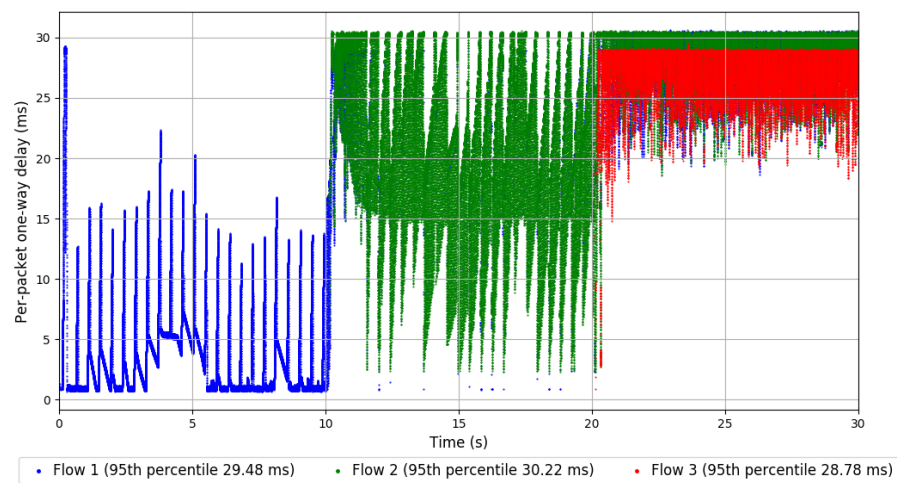
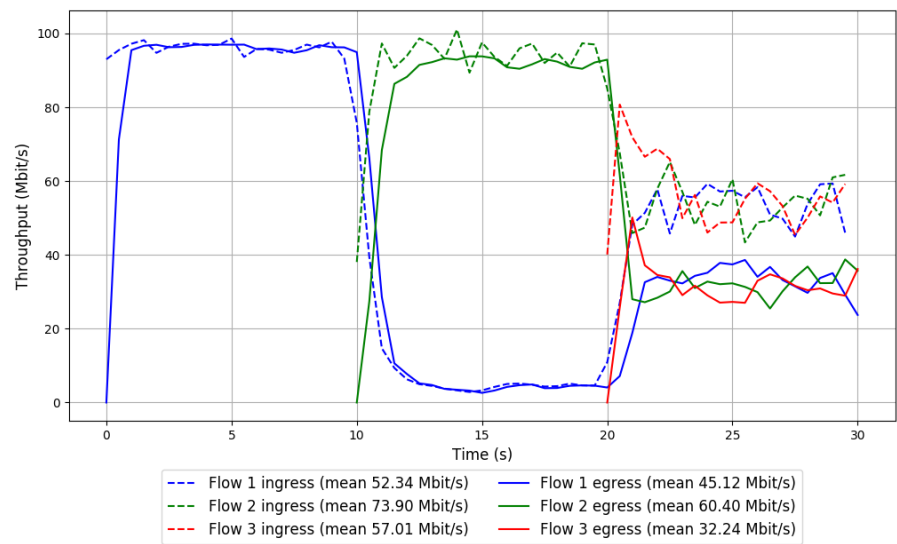
-- Flow 3:

Average throughput: 32.24 Mbit/s

95th percentile per-packet one-way delay: 28.784 ms

Loss rate: 43.40%

Run 4: Report of FillP — Data Link



Run 5: Statistics of FillP

Start at: 2019-01-17 14:03:20

End at: 2019-01-17 14:03:50

Local clock offset: -3.745 ms

Remote clock offset: 1.379 ms

# Below is generated by plot.py at 2019-01-17 14:11:57

# Datalink statistics

-- Total of 3 flows:

Average throughput: 95.78 Mbit/s

95th percentile per-packet one-way delay: 29.828 ms

Loss rate: 19.64%

-- Flow 1:

Average throughput: 49.40 Mbit/s

95th percentile per-packet one-way delay: 29.919 ms

Loss rate: 12.34%

-- Flow 2:

Average throughput: 53.68 Mbit/s

95th percentile per-packet one-way delay: 28.593 ms

Loss rate: 19.13%

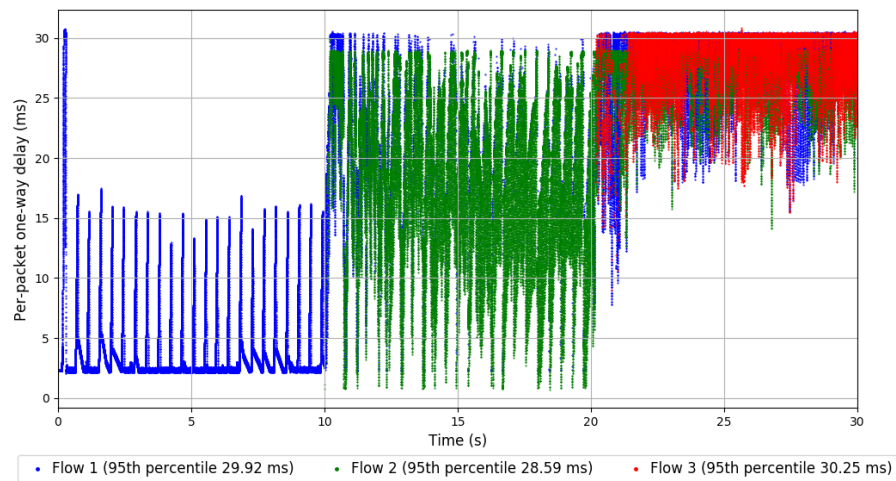
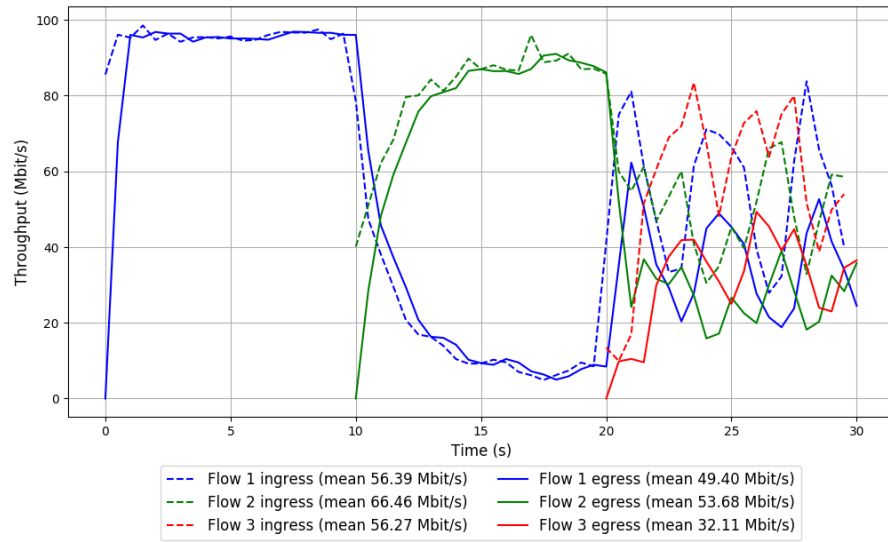
-- Flow 3:

Average throughput: 32.11 Mbit/s

95th percentile per-packet one-way delay: 30.246 ms

Loss rate: 42.91%

# Run 5: Report of FillP — Data Link





Run 1: Statistics of FillP-Sheep

Start at: 2019-01-17 12:24:17

End at: 2019-01-17 12:24:47

Local clock offset: -5.77 ms

Remote clock offset: 1.466 ms

# Below is generated by plot.py at 2019-01-17 14:11:57

# Datalink statistics

-- Total of 3 flows:

Average throughput: 87.27 Mbit/s

95th percentile per-packet one-way delay: 22.270 ms

Loss rate: 1.48%

-- Flow 1:

Average throughput: 40.14 Mbit/s

95th percentile per-packet one-way delay: 14.924 ms

Loss rate: 1.33%

-- Flow 2:

Average throughput: 42.83 Mbit/s

95th percentile per-packet one-way delay: 22.634 ms

Loss rate: 1.19%

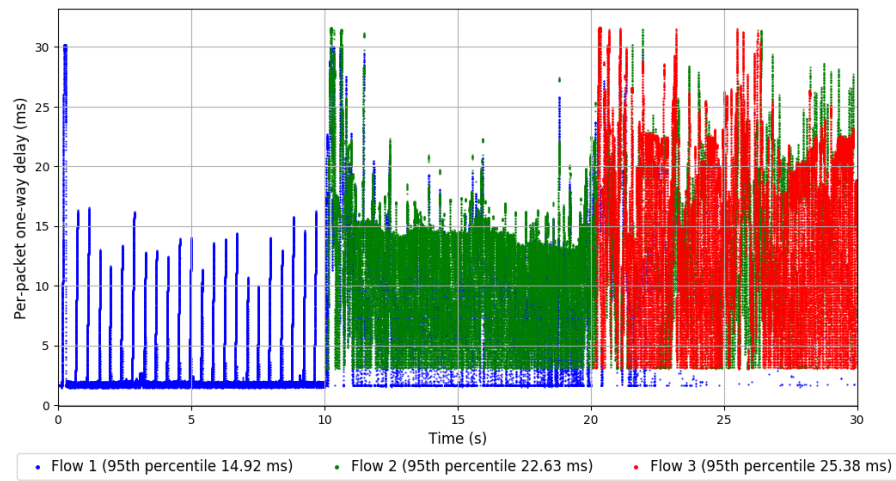
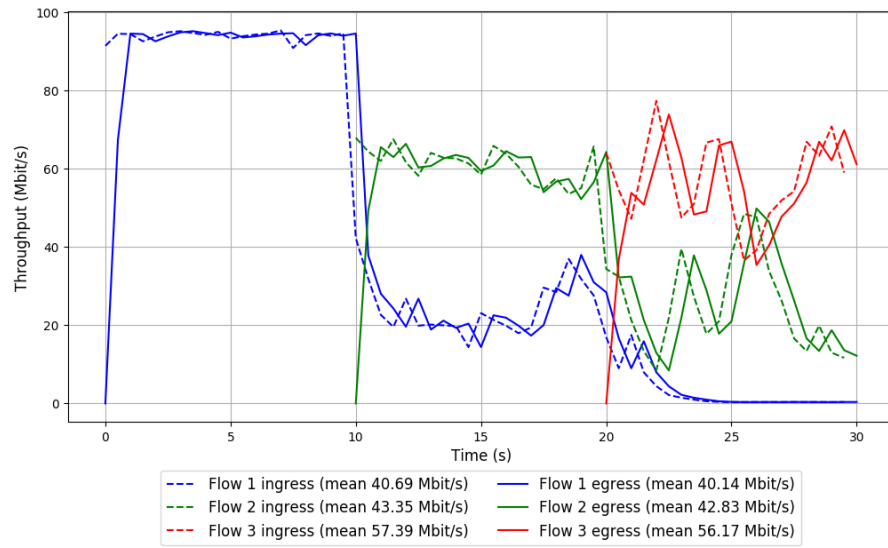
-- Flow 3:

Average throughput: 56.17 Mbit/s

95th percentile per-packet one-way delay: 25.383 ms

Loss rate: 2.23%

# Run 1: Report of FillP-Sheep — Data Link



Run 2: Statistics of FillP-Sheep

Start at: 2019-01-17 12:48:12

End at: 2019-01-17 12:48:42

Local clock offset: -4.934 ms

Remote clock offset: 1.297 ms

# Below is generated by plot.py at 2019-01-17 14:12:19

# Datalink statistics

-- Total of 3 flows:

Average throughput: 83.11 Mbit/s

95th percentile per-packet one-way delay: 16.683 ms

Loss rate: 1.19%

-- Flow 1:

Average throughput: 41.18 Mbit/s

95th percentile per-packet one-way delay: 13.425 ms

Loss rate: 1.10%

-- Flow 2:

Average throughput: 51.84 Mbit/s

95th percentile per-packet one-way delay: 18.259 ms

Loss rate: 0.59%

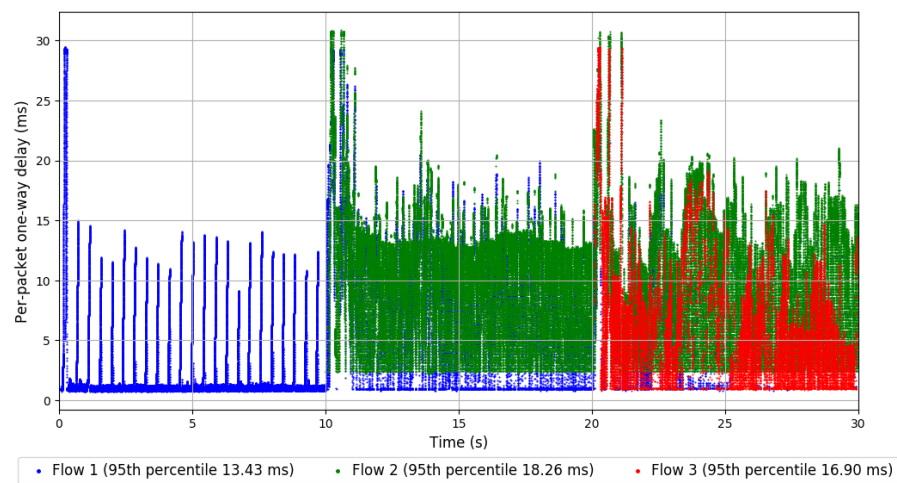
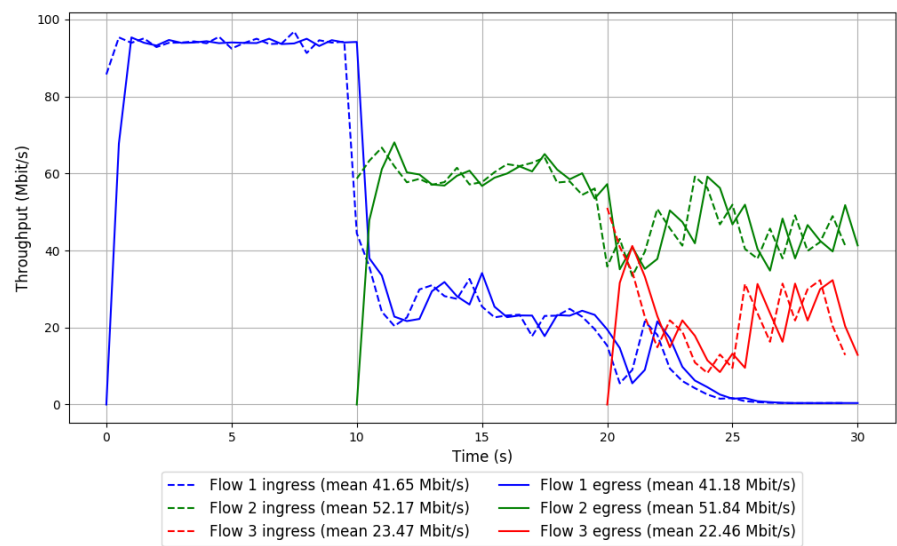
-- Flow 3:

Average throughput: 22.46 Mbit/s

95th percentile per-packet one-way delay: 16.898 ms

Loss rate: 4.35%

Run 2: Report of FillP-Sheep — Data Link



Run 3: Statistics of FillP-Sheep

Start at: 2019-01-17 13:12:06

End at: 2019-01-17 13:12:36

Local clock offset: -4.72 ms

Remote clock offset: 1.218 ms

# Below is generated by plot.py at 2019-01-17 14:12:23

# Datalink statistics

-- Total of 3 flows:

Average throughput: 89.81 Mbit/s

95th percentile per-packet one-way delay: 23.062 ms

Loss rate: 1.09%

-- Flow 1:

Average throughput: 56.89 Mbit/s

95th percentile per-packet one-way delay: 21.414 ms

Loss rate: 0.79%

-- Flow 2:

Average throughput: 38.03 Mbit/s

95th percentile per-packet one-way delay: 24.693 ms

Loss rate: 1.08%

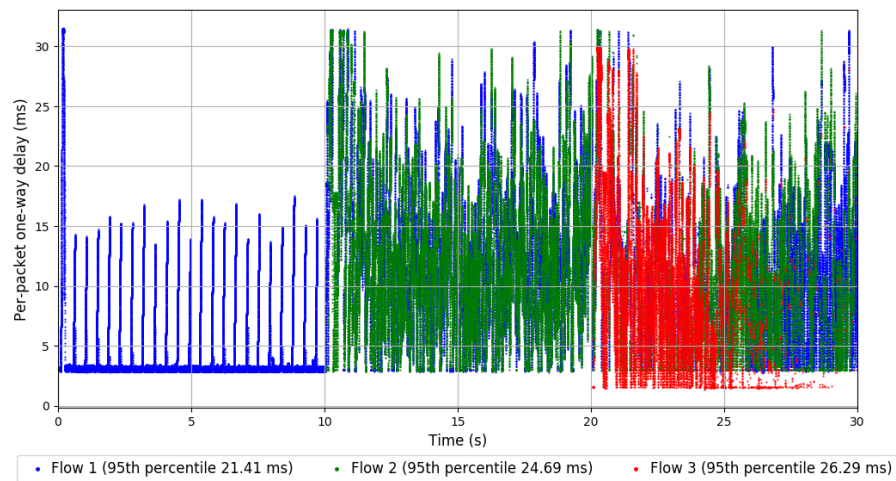
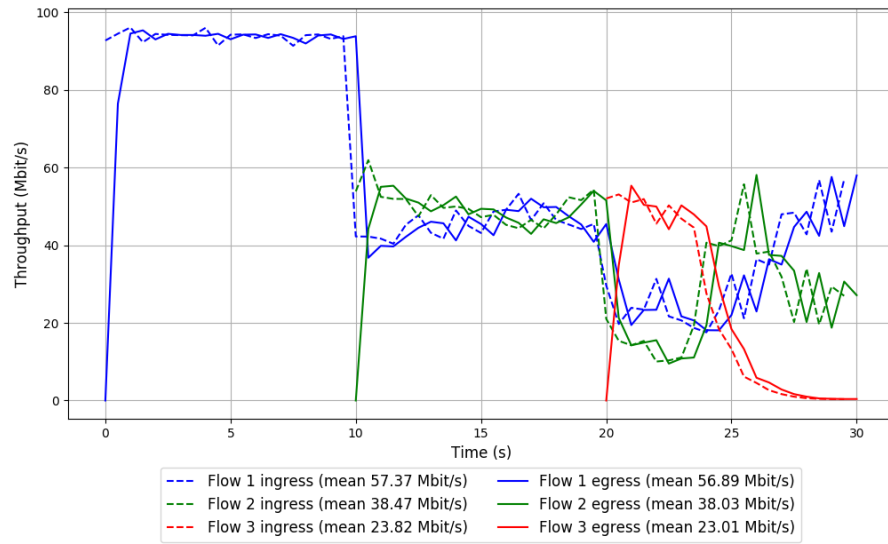
-- Flow 3:

Average throughput: 23.01 Mbit/s

95th percentile per-packet one-way delay: 26.290 ms

Loss rate: 3.29%

### Run 3: Report of FillP-Sheep — Data Link



Run 4: Statistics of FillP-Sheep

Start at: 2019-01-17 13:36:00

End at: 2019-01-17 13:36:30

Local clock offset: -4.65 ms

Remote clock offset: 1.518 ms

# Below is generated by plot.py at 2019-01-17 14:12:29

# Datalink statistics

-- Total of 3 flows:

Average throughput: 80.57 Mbit/s

95th percentile per-packet one-way delay: 20.027 ms

Loss rate: 1.23%

-- Flow 1:

Average throughput: 47.23 Mbit/s

95th percentile per-packet one-way delay: 14.147 ms

Loss rate: 0.67%

-- Flow 2:

Average throughput: 24.08 Mbit/s

95th percentile per-packet one-way delay: 21.126 ms

Loss rate: 2.51%

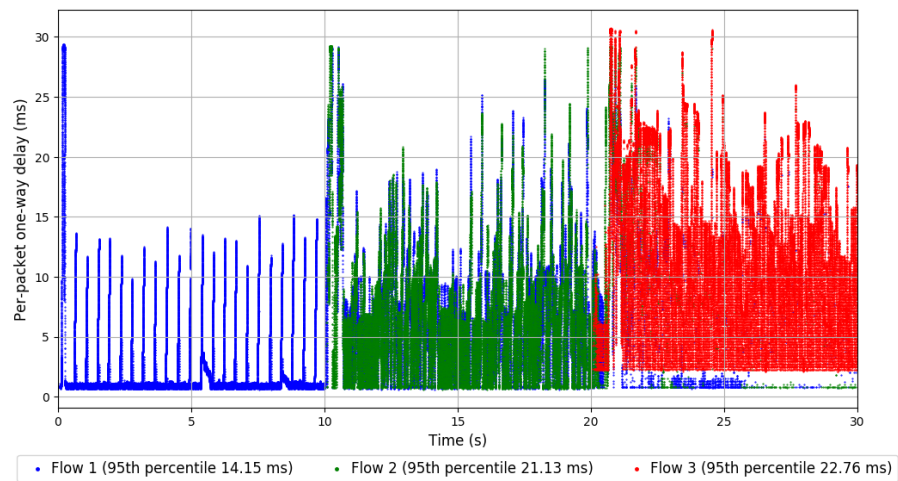
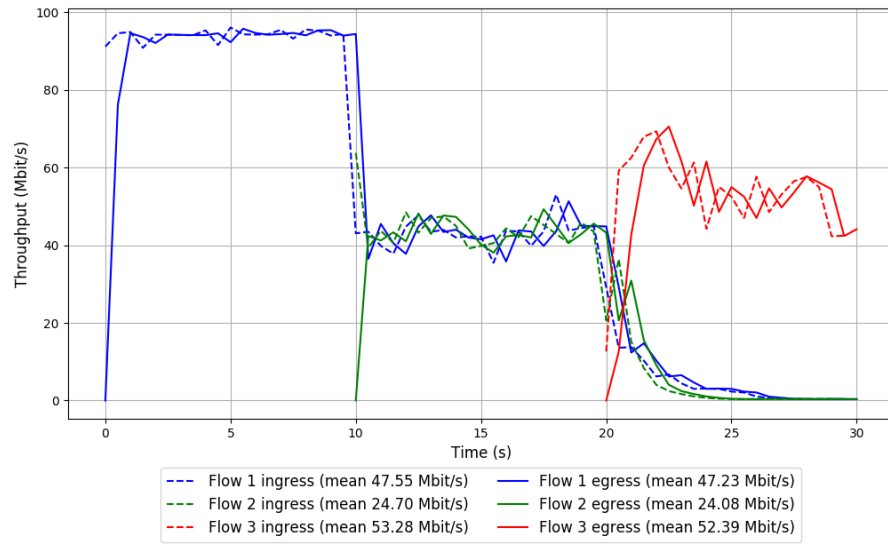
-- Flow 3:

Average throughput: 52.39 Mbit/s

95th percentile per-packet one-way delay: 22.764 ms

Loss rate: 1.54%

# Run 4: Report of FillP-Sheep — Data Link





Run 5: Statistics of FillP-Sheep

Start at: 2019-01-17 13:59:55

End at: 2019-01-17 14:00:25

Local clock offset: -3.833 ms

Remote clock offset: 1.518 ms

# Below is generated by plot.py at 2019-01-17 14:12:31

# Datalink statistics

-- Total of 3 flows:

Average throughput: 76.69 Mbit/s

95th percentile per-packet one-way delay: 14.552 ms

Loss rate: 1.27%

-- Flow 1:

Average throughput: 51.78 Mbit/s

95th percentile per-packet one-way delay: 12.873 ms

Loss rate: 1.02%

-- Flow 2:

Average throughput: 25.94 Mbit/s

95th percentile per-packet one-way delay: 16.887 ms

Loss rate: 1.12%

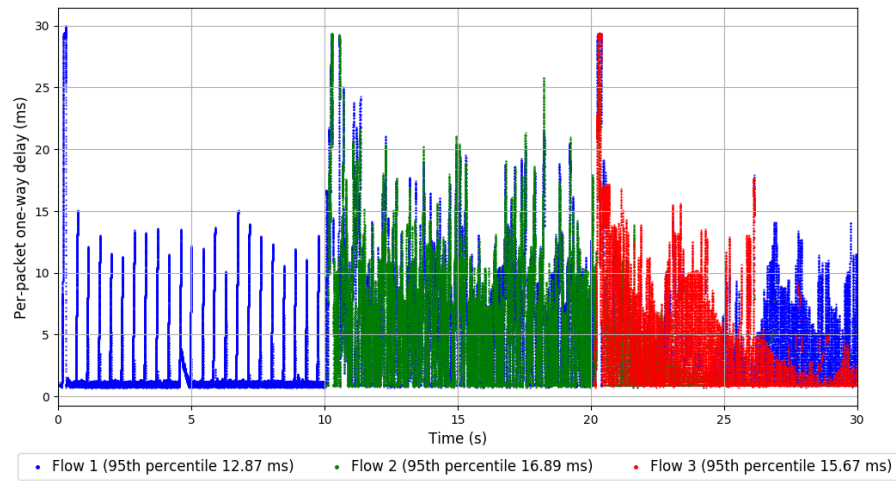
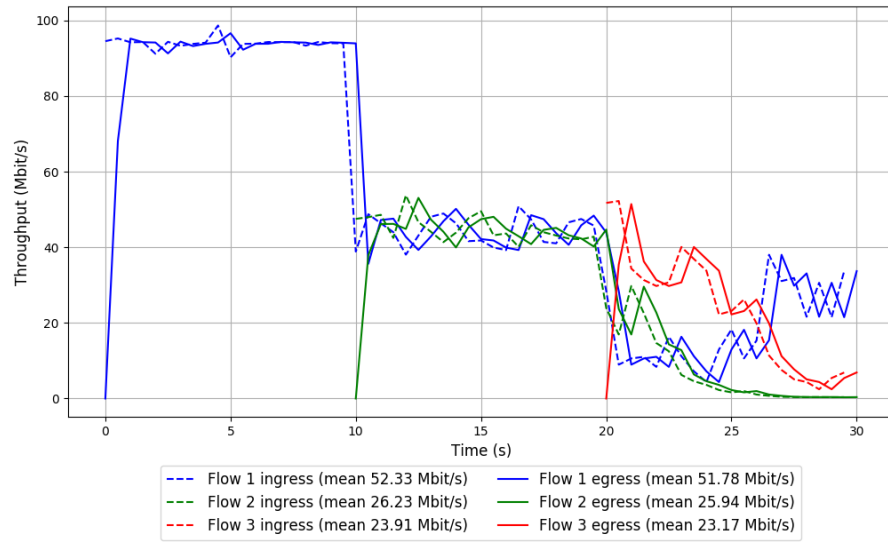
-- Flow 3:

Average throughput: 23.17 Mbit/s

95th percentile per-packet one-way delay: 15.670 ms

Loss rate: 3.20%

# Run 5: Report of FillP-Sheep — Data Link

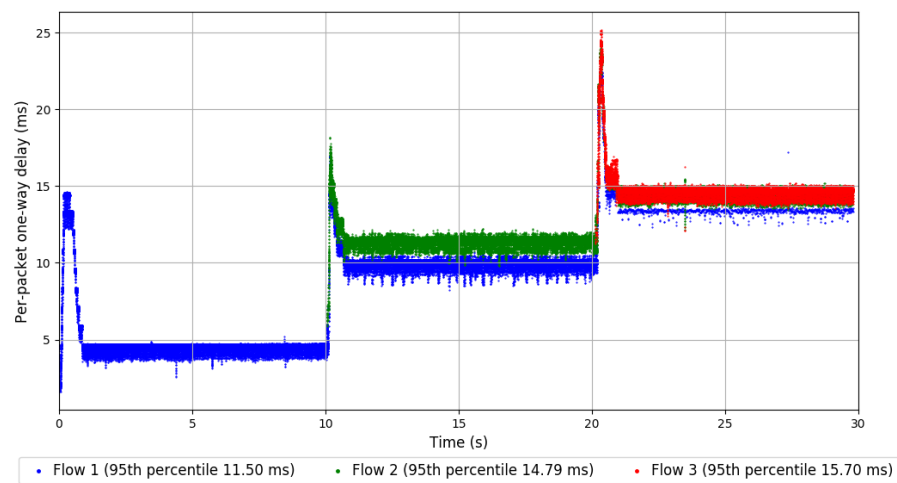
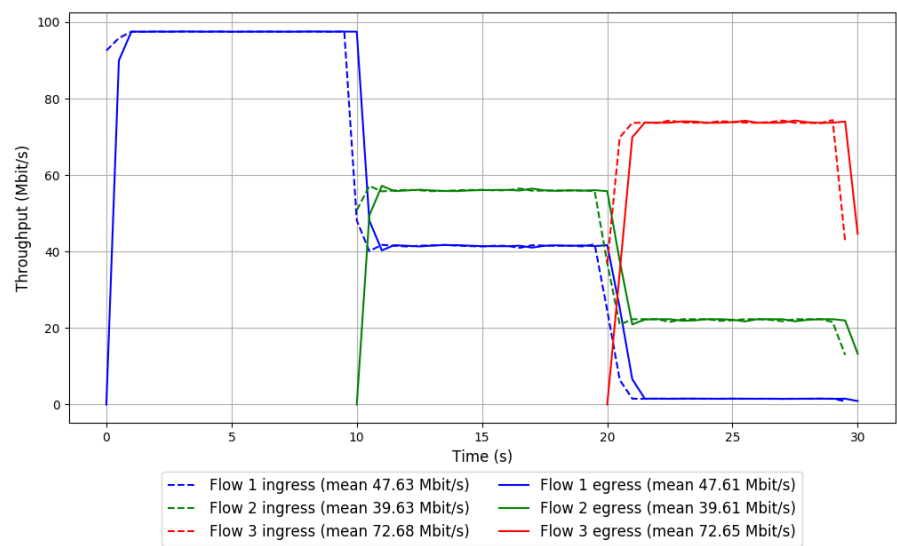


```
Run 1: Statistics of Indigo

Start at: 2019-01-17 12:17:26
End at: 2019-01-17 12:17:56
Local clock offset: -6.886 ms
Remote clock offset: 1.498 ms

# Below is generated by plot.py at 2019-01-17 14:12:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.40 Mbit/s
95th percentile per-packet one-way delay: 14.785 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 47.61 Mbit/s
95th percentile per-packet one-way delay: 11.503 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 39.61 Mbit/s
95th percentile per-packet one-way delay: 14.788 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 72.65 Mbit/s
95th percentile per-packet one-way delay: 15.699 ms
Loss rate: 0.02%
```

Run 1: Report of Indigo — Data Link

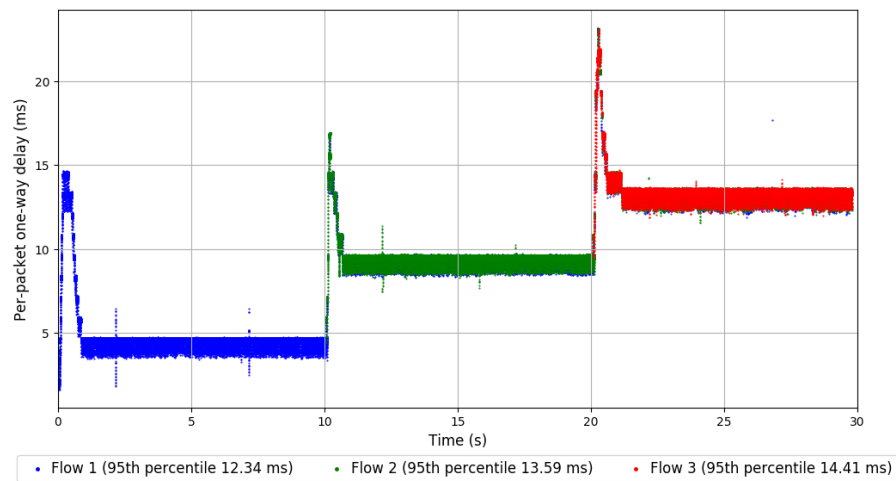
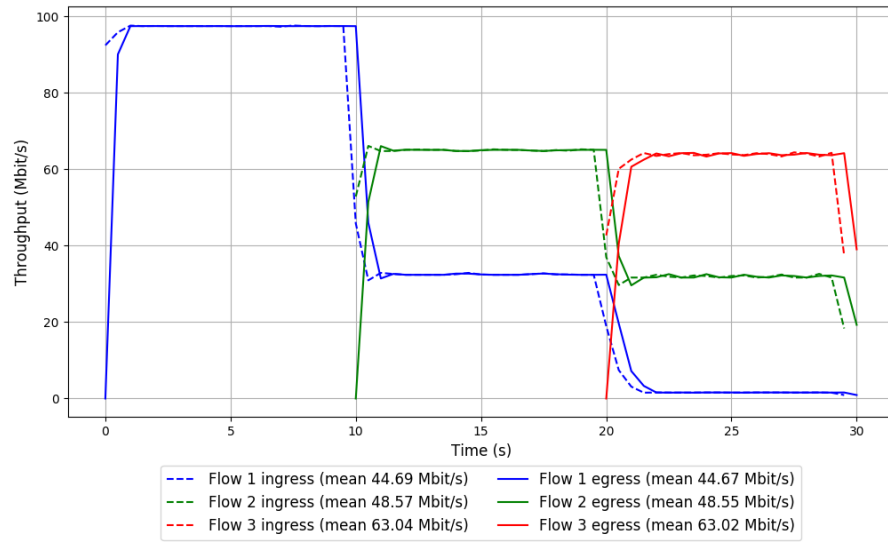


Run 2: Statistics of Indigo

Start at: 2019-01-17 12:41:21  
End at: 2019-01-17 12:41:51  
Local clock offset: -5.646 ms  
Remote clock offset: 1.356 ms

# Below is generated by plot.py at 2019-01-17 14:12:54  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 97.41 Mbit/s  
95th percentile per-packet one-way delay: 13.581 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 44.67 Mbit/s  
95th percentile per-packet one-way delay: 12.341 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 48.55 Mbit/s  
95th percentile per-packet one-way delay: 13.585 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 63.02 Mbit/s  
95th percentile per-packet one-way delay: 14.407 ms  
Loss rate: 0.00%

## Run 2: Report of Indigo — Data Link



Run 3: Statistics of Indigo

Start at: 2019-01-17 13:05:15

End at: 2019-01-17 13:05:45

Local clock offset: -4.655 ms

Remote clock offset: 1.272 ms

# Below is generated by plot.py at 2019-01-17 14:12:56

# Datalink statistics

-- Total of 3 flows:

Average throughput: 97.41 Mbit/s

95th percentile per-packet one-way delay: 14.640 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 47.43 Mbit/s

95th percentile per-packet one-way delay: 11.836 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 43.35 Mbit/s

95th percentile per-packet one-way delay: 14.642 ms

Loss rate: 0.00%

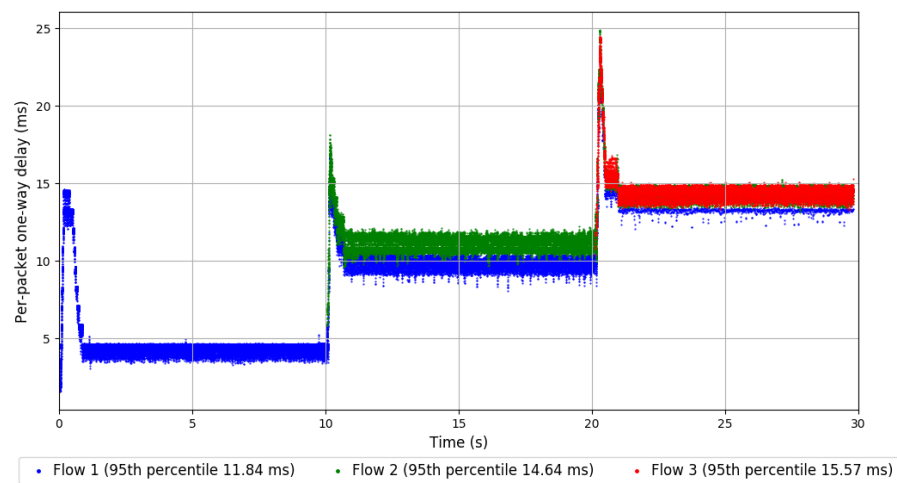
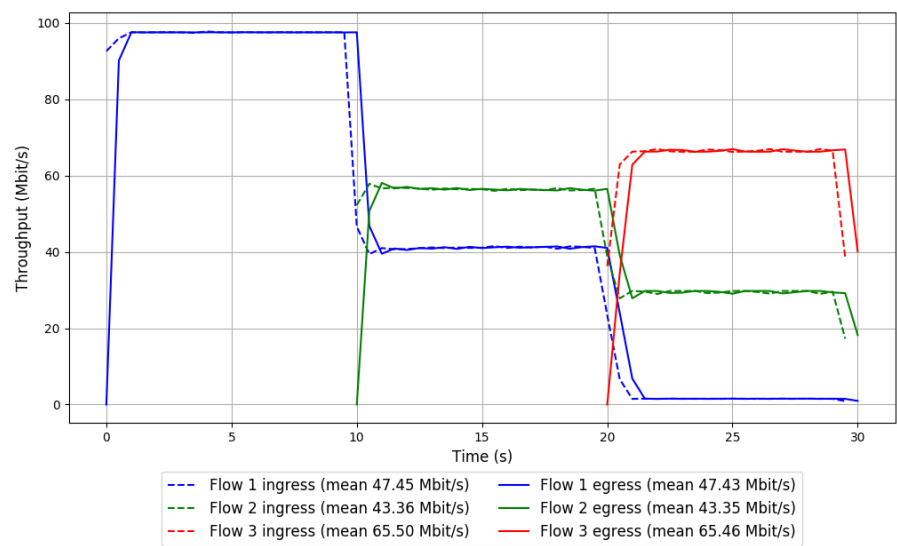
-- Flow 3:

Average throughput: 65.46 Mbit/s

95th percentile per-packet one-way delay: 15.575 ms

Loss rate: 0.02%

Run 3: Report of Indigo — Data Link



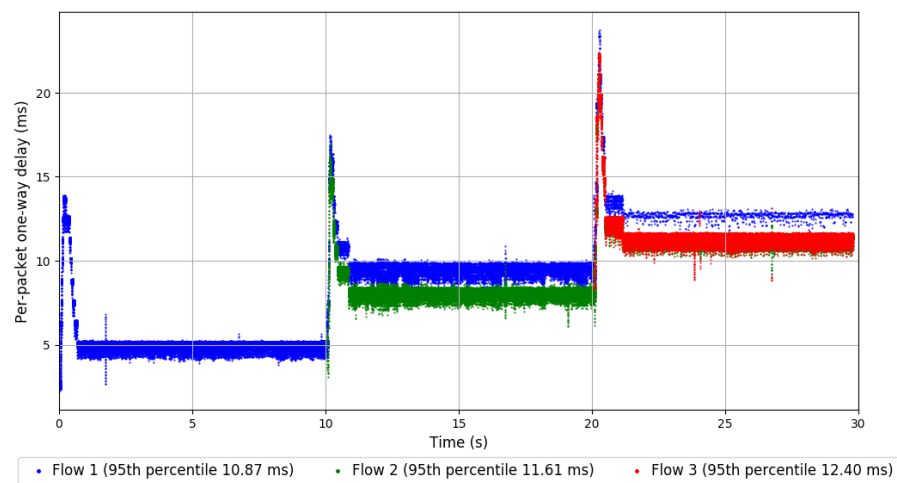
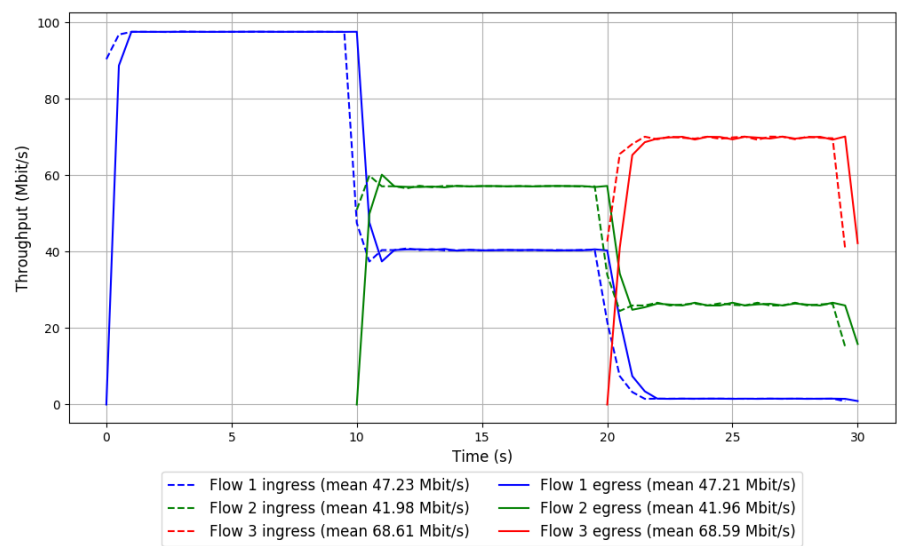


Run 4: Statistics of Indigo

Start at: 2019-01-17 13:29:10  
End at: 2019-01-17 13:29:40  
Local clock offset: -4.478 ms  
Remote clock offset: 1.505 ms

# Below is generated by plot.py at 2019-01-17 14:13:06  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 97.38 Mbit/s  
95th percentile per-packet one-way delay: 12.078 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 47.21 Mbit/s  
95th percentile per-packet one-way delay: 10.867 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 41.96 Mbit/s  
95th percentile per-packet one-way delay: 11.606 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 68.59 Mbit/s  
95th percentile per-packet one-way delay: 12.397 ms  
Loss rate: 0.00%

Run 4: Report of Indigo — Data Link



Run 5: Statistics of Indigo

Start at: 2019-01-17 13:53:05

End at: 2019-01-17 13:53:35

Local clock offset: -4.214 ms

Remote clock offset: 1.612 ms

# Below is generated by plot.py at 2019-01-17 14:13:28

# Datalink statistics

-- Total of 3 flows:

Average throughput: 97.40 Mbit/s

95th percentile per-packet one-way delay: 13.993 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 47.70 Mbit/s

95th percentile per-packet one-way delay: 10.421 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 39.55 Mbit/s

95th percentile per-packet one-way delay: 14.000 ms

Loss rate: 0.00%

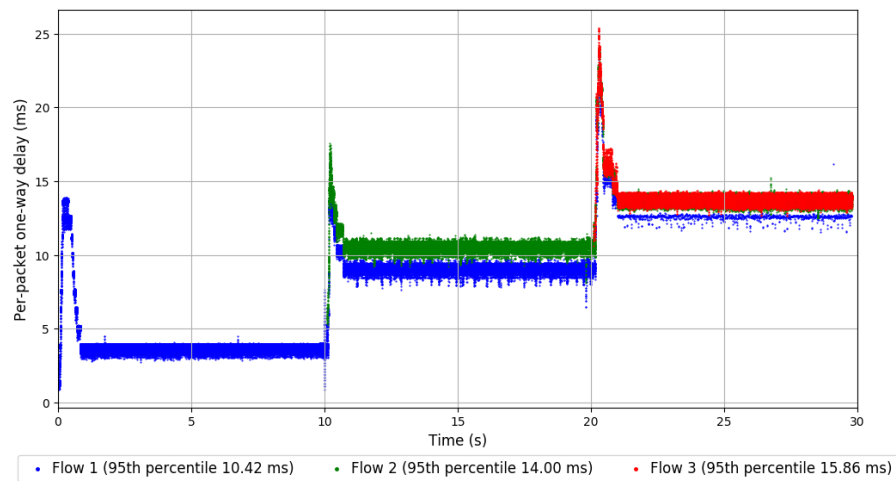
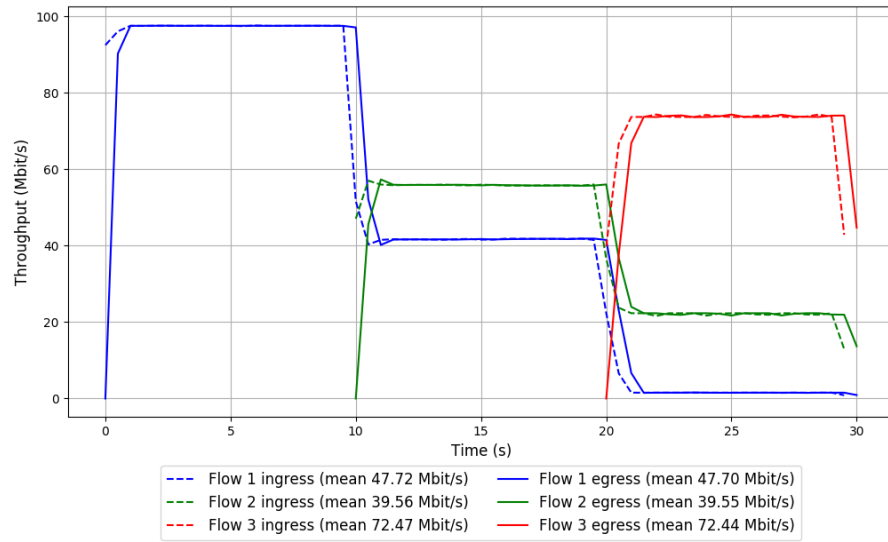
-- Flow 3:

Average throughput: 72.44 Mbit/s

95th percentile per-packet one-way delay: 15.862 ms

Loss rate: 0.01%

## Run 5: Report of Indigo — Data Link



Run 1: Statistics of Indigo-MusesC3

Start at: 2019-01-17 12:25:26

End at: 2019-01-17 12:25:56

Local clock offset: -5.754 ms

Remote clock offset: 1.373 ms

# Below is generated by plot.py at 2019-01-17 14:13:30

# Datalink statistics

-- Total of 3 flows:

Average throughput: 93.73 Mbit/s

95th percentile per-packet one-way delay: 10.592 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 45.59 Mbit/s

95th percentile per-packet one-way delay: 9.952 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 50.79 Mbit/s

95th percentile per-packet one-way delay: 11.521 ms

Loss rate: 0.00%

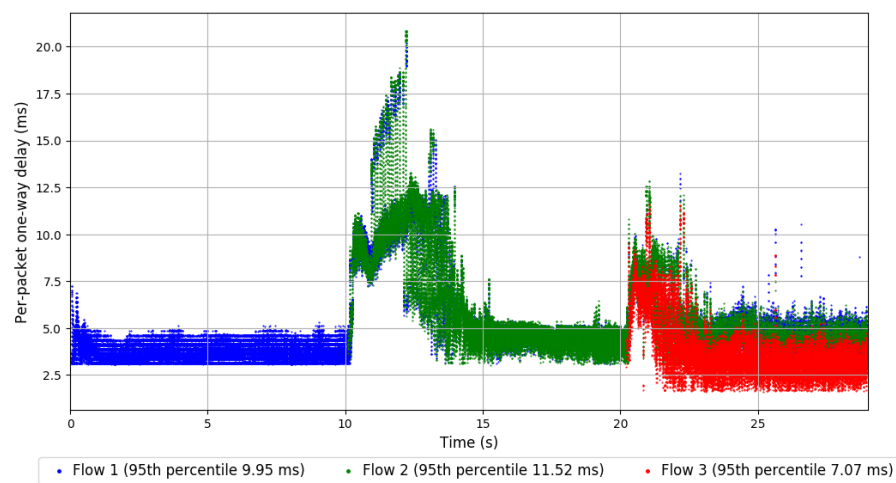
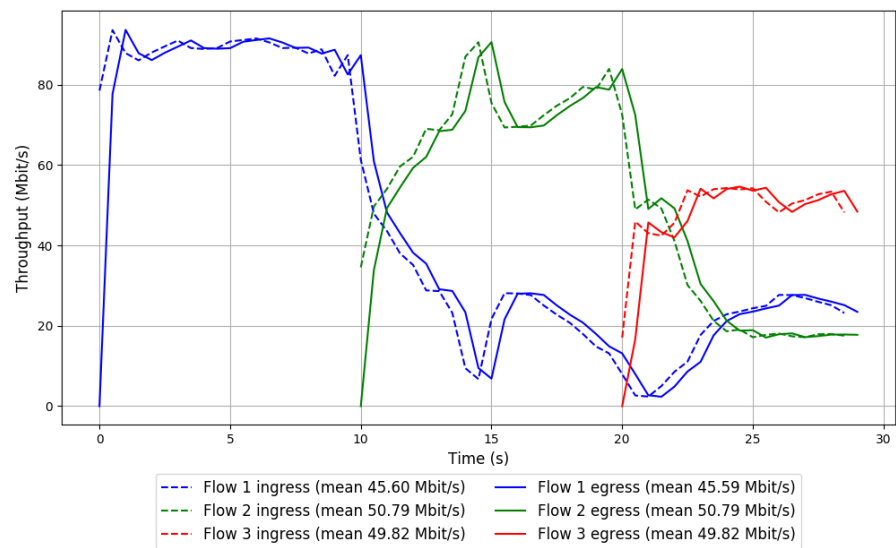
-- Flow 3:

Average throughput: 49.82 Mbit/s

95th percentile per-packet one-way delay: 7.067 ms

Loss rate: 0.00%

Run 1: Report of Indigo-MusesC3 — Data Link

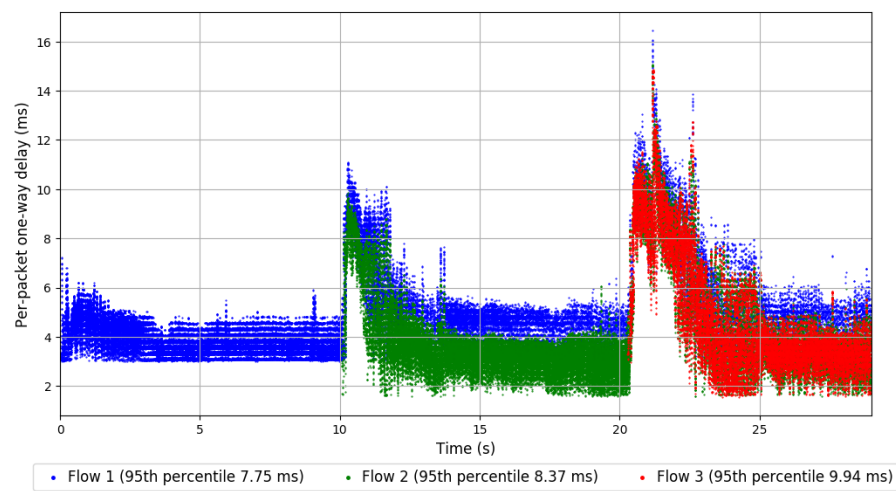
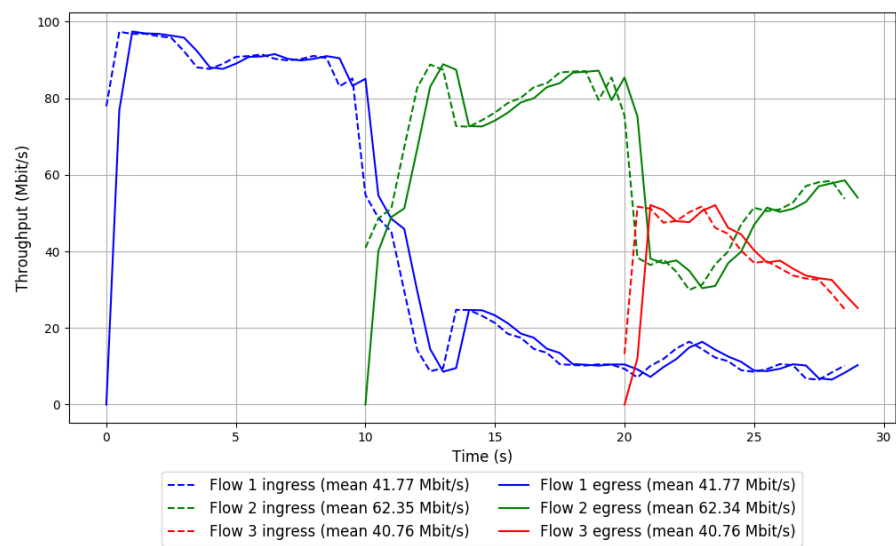


Run 2: Statistics of Indigo-MusesC3

Start at: 2019-01-17 12:49:20  
End at: 2019-01-17 12:49:50  
Local clock offset: -5.513 ms  
Remote clock offset: 1.217 ms

# Below is generated by plot.py at 2019-01-17 14:13:36  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 94.64 Mbit/s  
95th percentile per-packet one-way delay: 8.612 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 41.77 Mbit/s  
95th percentile per-packet one-way delay: 7.745 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 62.34 Mbit/s  
95th percentile per-packet one-way delay: 8.369 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 40.76 Mbit/s  
95th percentile per-packet one-way delay: 9.941 ms  
Loss rate: 0.00%

Run 2: Report of Indigo-MusesC3 — Data Link





Run 3: Statistics of Indigo-MusesC3

Start at: 2019-01-17 13:13:14

End at: 2019-01-17 13:13:44

Local clock offset: -4.747 ms

Remote clock offset: 1.315 ms

# Below is generated by plot.py at 2019-01-17 14:13:40

# Datalink statistics

-- Total of 3 flows:

Average throughput: 96.98 Mbit/s

95th percentile per-packet one-way delay: 17.172 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 77.62 Mbit/s

95th percentile per-packet one-way delay: 16.852 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 12.79 Mbit/s

95th percentile per-packet one-way delay: 17.750 ms

Loss rate: 0.00%

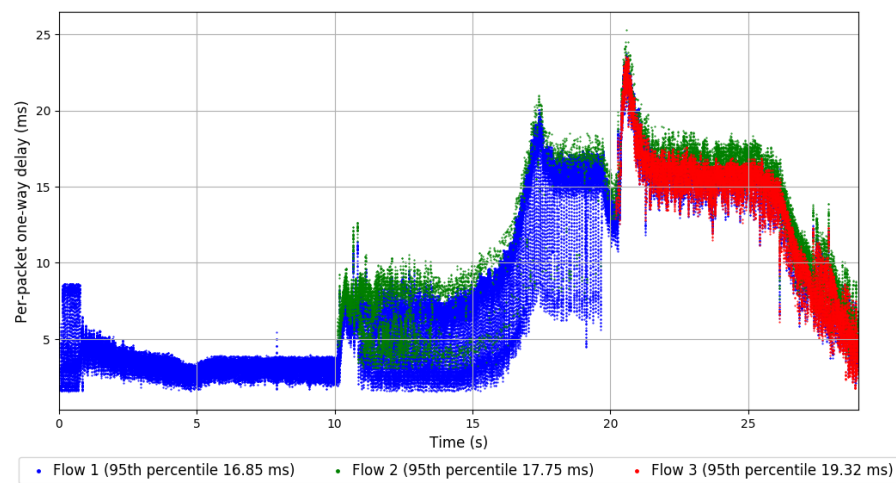
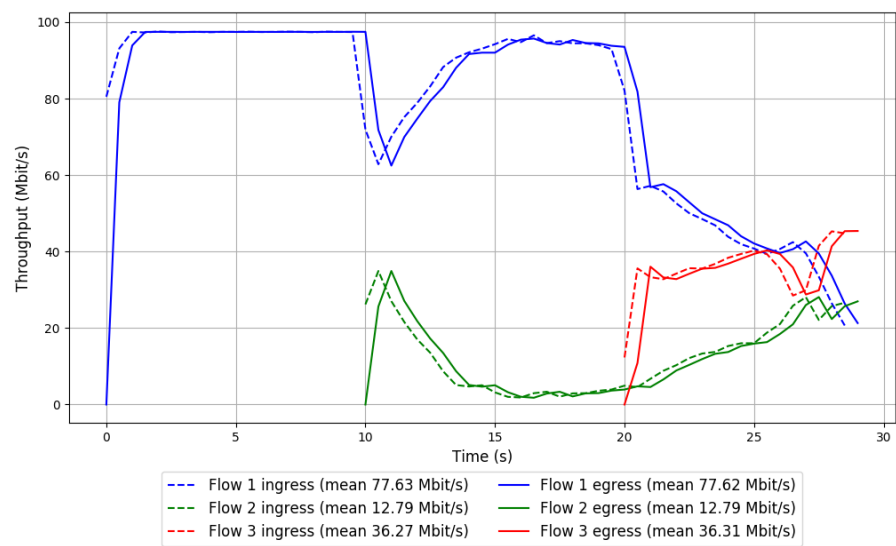
-- Flow 3:

Average throughput: 36.31 Mbit/s

95th percentile per-packet one-way delay: 19.325 ms

Loss rate: 0.00%

Run 3: Report of Indigo-MusesC3 — Data Link



Run 4: Statistics of Indigo-MusesC3

Start at: 2019-01-17 13:37:08

End at: 2019-01-17 13:37:38

Local clock offset: -4.681 ms

Remote clock offset: 1.44 ms

# Below is generated by plot.py at 2019-01-17 14:13:43

# Datalink statistics

-- Total of 3 flows:

Average throughput: 94.24 Mbit/s

95th percentile per-packet one-way delay: 6.354 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 47.03 Mbit/s

95th percentile per-packet one-way delay: 5.323 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 61.38 Mbit/s

95th percentile per-packet one-way delay: 6.669 ms

Loss rate: 0.01%

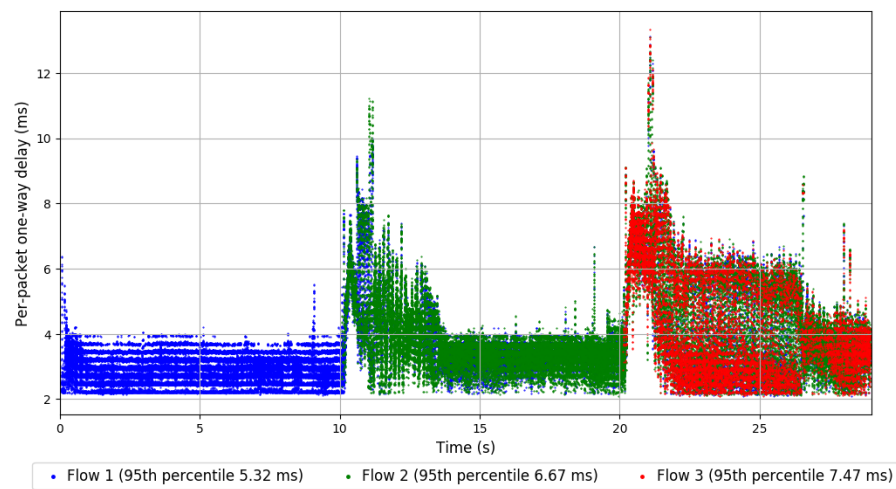
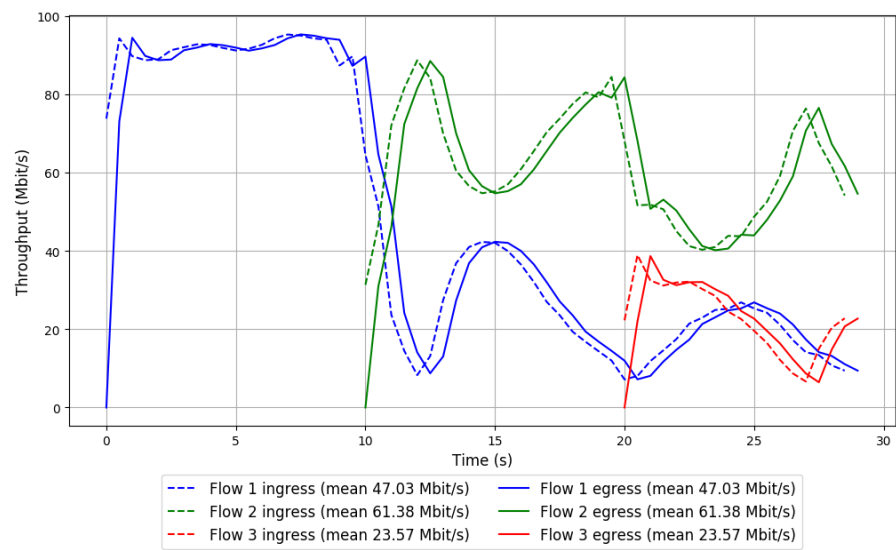
-- Flow 3:

Average throughput: 23.57 Mbit/s

95th percentile per-packet one-way delay: 7.475 ms

Loss rate: 0.03%

Run 4: Report of Indigo-MusesC3 — Data Link



Run 5: Statistics of Indigo-MusesC3

Start at: 2019-01-17 14:01:03

End at: 2019-01-17 14:01:33

Local clock offset: -3.886 ms

Remote clock offset: 1.447 ms

# Below is generated by plot.py at 2019-01-17 14:14:03

# Datalink statistics

-- Total of 3 flows:

Average throughput: 96.94 Mbit/s

95th percentile per-packet one-way delay: 12.370 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 65.93 Mbit/s

95th percentile per-packet one-way delay: 8.589 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 27.14 Mbit/s

95th percentile per-packet one-way delay: 12.880 ms

Loss rate: 0.00%

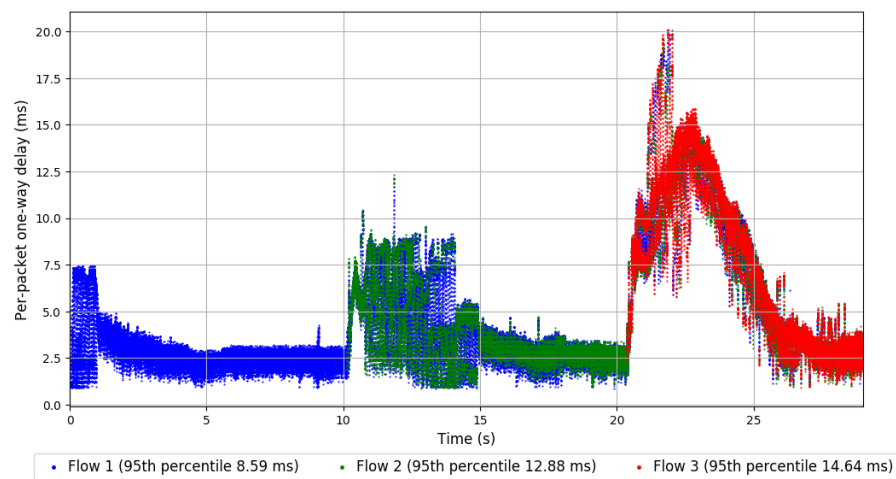
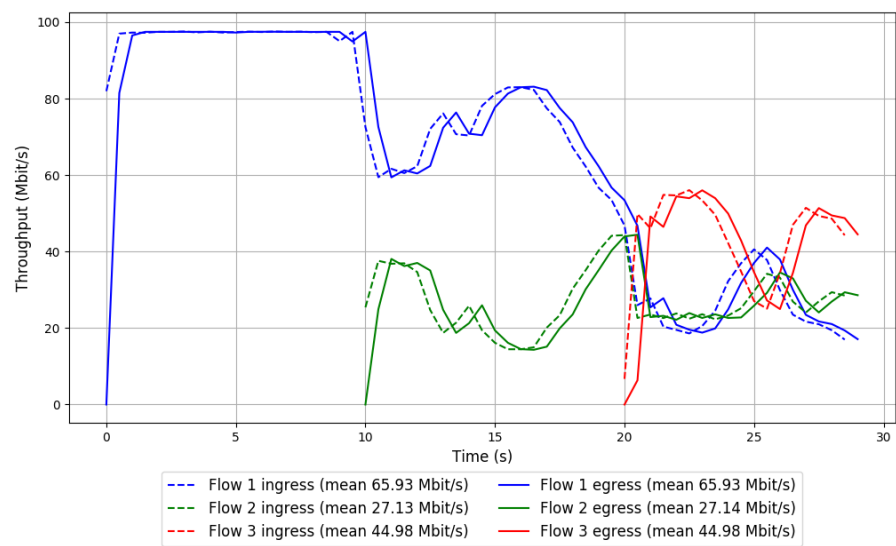
-- Flow 3:

Average throughput: 44.98 Mbit/s

95th percentile per-packet one-way delay: 14.645 ms

Loss rate: 0.00%

Run 5: Report of Indigo-MusesC3 — Data Link



Run 1: Statistics of Indigo-MusesC5

Start at: 2019-01-17 12:09:25

End at: 2019-01-17 12:09:55

Local clock offset: -5.733 ms

Remote clock offset: 1.527 ms

# Below is generated by plot.py at 2019-01-17 14:14:03

# Datalink statistics

-- Total of 3 flows:

Average throughput: 67.12 Mbit/s

95th percentile per-packet one-way delay: 20.397 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 34.98 Mbit/s

95th percentile per-packet one-way delay: 18.406 ms

Loss rate: 0.02%

-- Flow 2:

Average throughput: 35.18 Mbit/s

95th percentile per-packet one-way delay: 21.198 ms

Loss rate: 0.00%

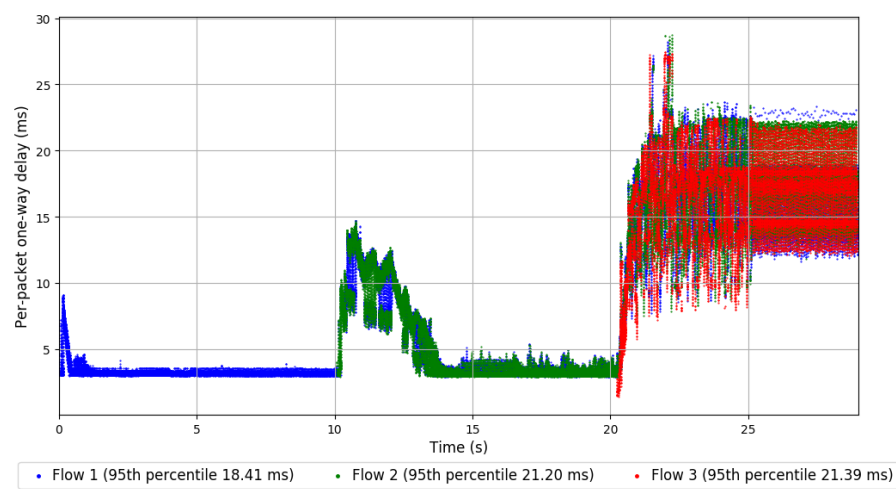
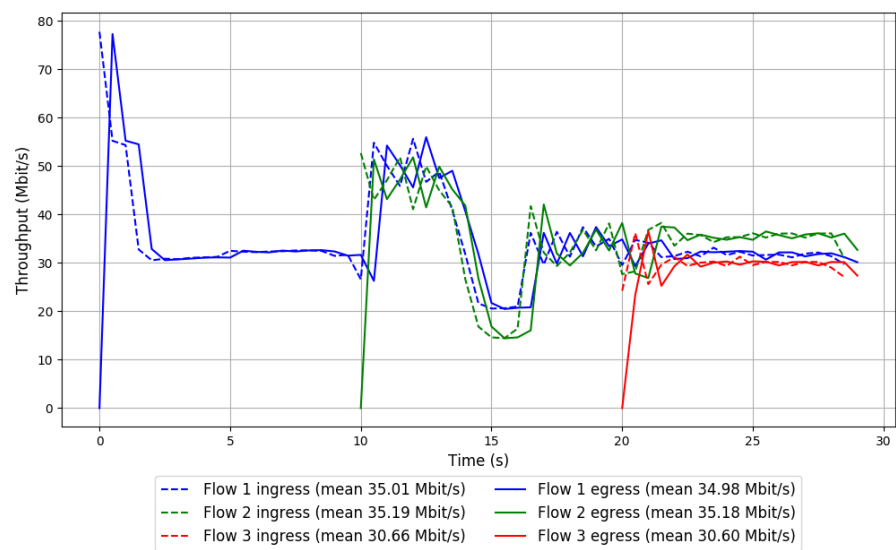
-- Flow 3:

Average throughput: 30.60 Mbit/s

95th percentile per-packet one-way delay: 21.393 ms

Loss rate: 0.00%

Run 1: Report of Indigo-MusesC5 — Data Link



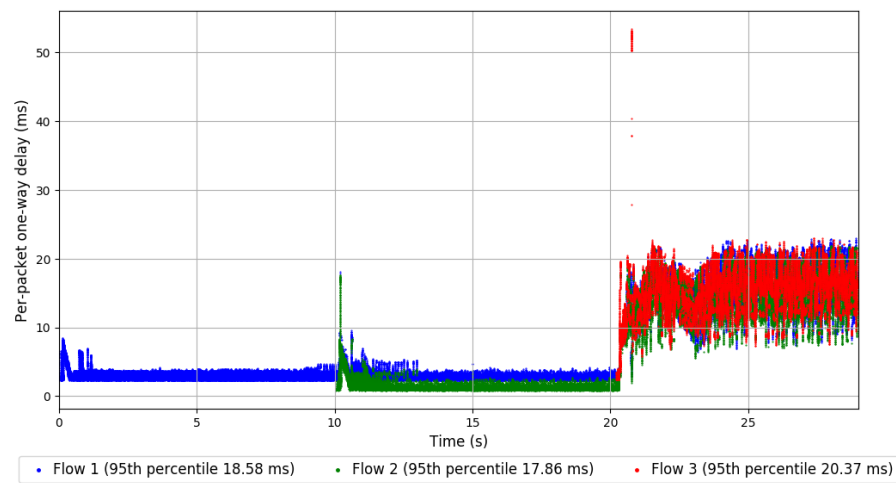
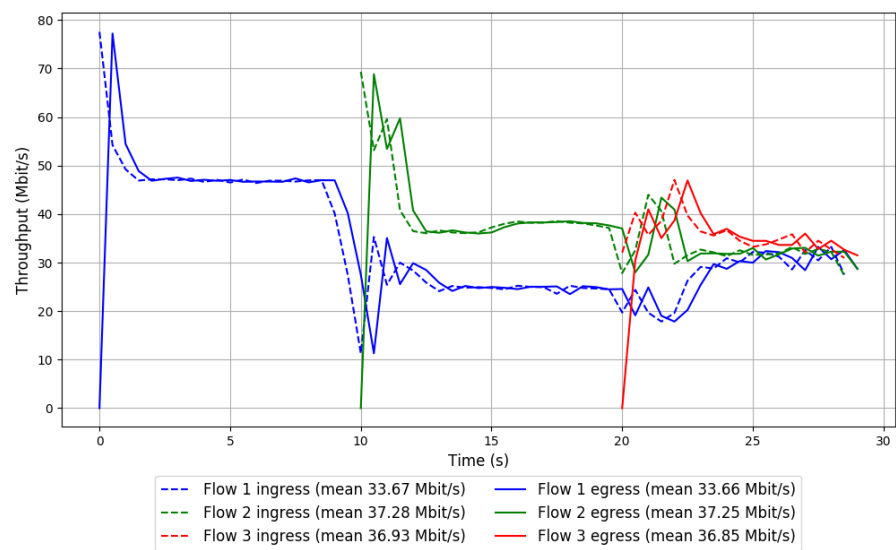


Run 2: Statistics of Indigo-MusesC5

Start at: 2019-01-17 12:33:19  
End at: 2019-01-17 12:33:49  
Local clock offset: -4.678 ms  
Remote clock offset: 1.453 ms

# Below is generated by plot.py at 2019-01-17 14:14:03  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 69.08 Mbit/s  
95th percentile per-packet one-way delay: 19.122 ms  
Loss rate: 0.01%  
-- Flow 1:  
Average throughput: 33.66 Mbit/s  
95th percentile per-packet one-way delay: 18.582 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 37.25 Mbit/s  
95th percentile per-packet one-way delay: 17.863 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 36.85 Mbit/s  
95th percentile per-packet one-way delay: 20.369 ms  
Loss rate: 0.06%

Run 2: Report of Indigo-MusesC5 — Data Link

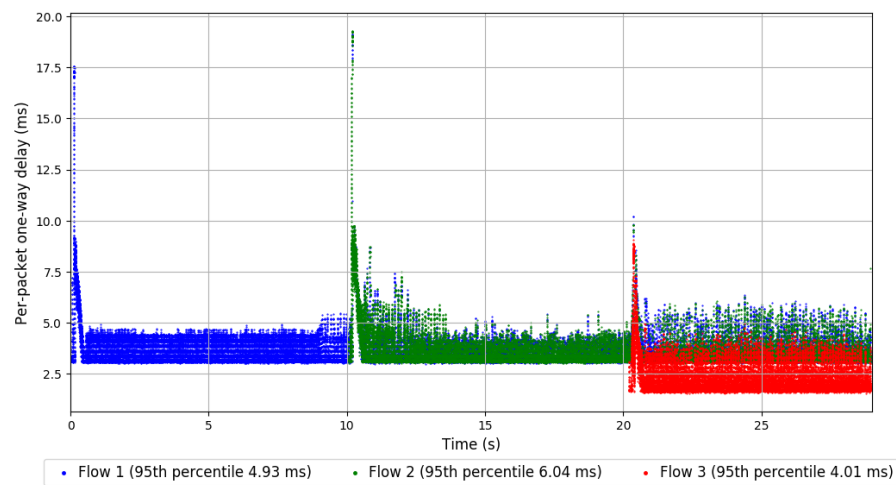
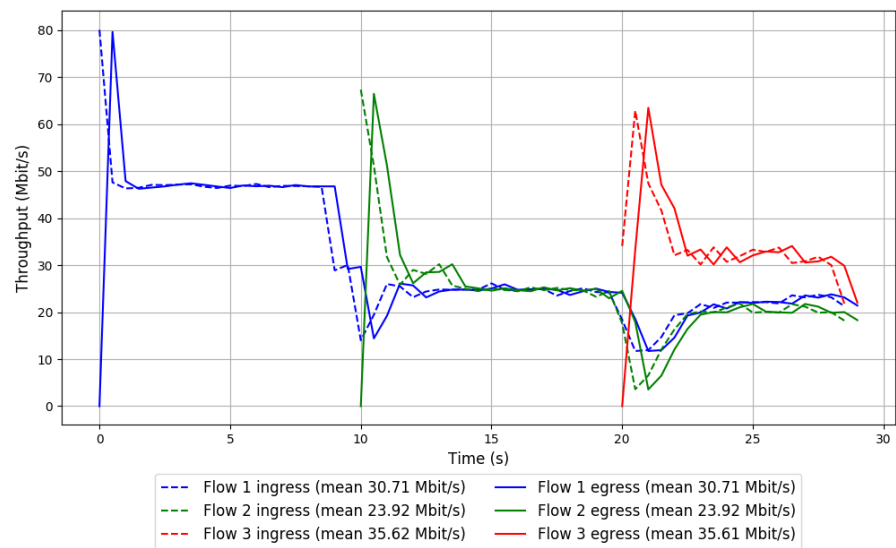


Run 3: Statistics of Indigo-MusesC5

Start at: 2019-01-17 12:57:14  
End at: 2019-01-17 12:57:44  
Local clock offset: -4.794 ms  
Remote clock offset: 1.296 ms

# Below is generated by plot.py at 2019-01-17 14:14:08  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 57.07 Mbit/s  
95th percentile per-packet one-way delay: 5.186 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 30.71 Mbit/s  
95th percentile per-packet one-way delay: 4.933 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 23.92 Mbit/s  
95th percentile per-packet one-way delay: 6.036 ms  
Loss rate: 0.01%  
-- Flow 3:  
Average throughput: 35.61 Mbit/s  
95th percentile per-packet one-way delay: 4.015 ms  
Loss rate: 0.00%

Run 3: Report of Indigo-MusesC5 — Data Link



Run 4: Statistics of Indigo-MusesC5

Start at: 2019-01-17 13:21:08

End at: 2019-01-17 13:21:39

Local clock offset: -4.942 ms

Remote clock offset: 1.38 ms

# Below is generated by plot.py at 2019-01-17 14:14:24

# Datalink statistics

-- Total of 3 flows:

Average throughput: 77.68 Mbit/s

95th percentile per-packet one-way delay: 28.222 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 42.69 Mbit/s

95th percentile per-packet one-way delay: 24.874 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 36.48 Mbit/s

95th percentile per-packet one-way delay: 29.234 ms

Loss rate: 0.04%

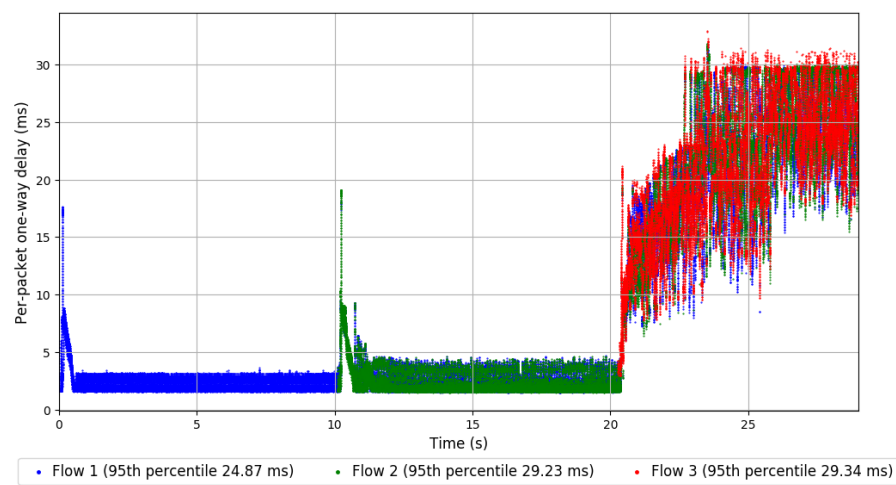
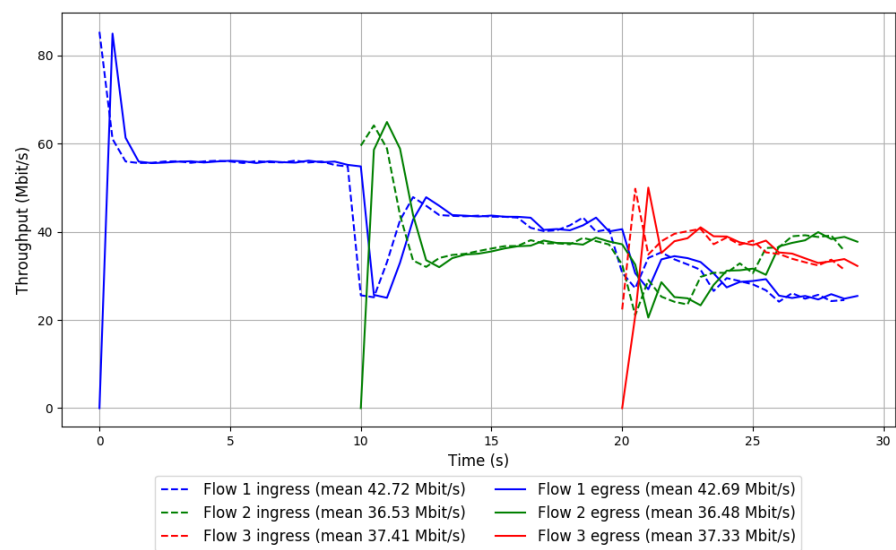
-- Flow 3:

Average throughput: 37.33 Mbit/s

95th percentile per-packet one-way delay: 29.339 ms

Loss rate: 0.02%

Run 4: Report of Indigo-MusesC5 — Data Link



Run 5: Statistics of Indigo-MusesC5

Start at: 2019-01-17 13:45:03

End at: 2019-01-17 13:45:33

Local clock offset: -5.717 ms

Remote clock offset: 1.606 ms

# Below is generated by plot.py at 2019-01-17 14:14:26

# Datalink statistics

-- Total of 3 flows:

Average throughput: 70.35 Mbit/s

95th percentile per-packet one-way delay: 25.256 ms

Loss rate: 0.05%

-- Flow 1:

Average throughput: 36.13 Mbit/s

95th percentile per-packet one-way delay: 24.150 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 35.35 Mbit/s

95th percentile per-packet one-way delay: 25.068 ms

Loss rate: 0.12%

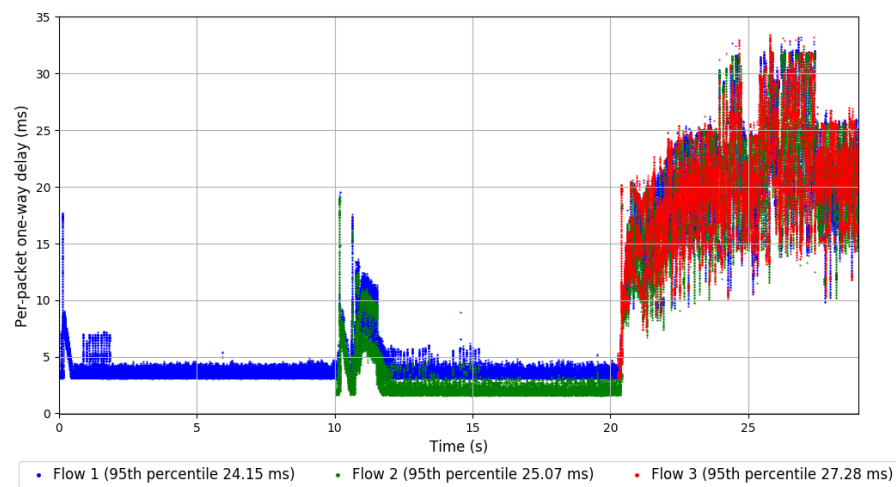
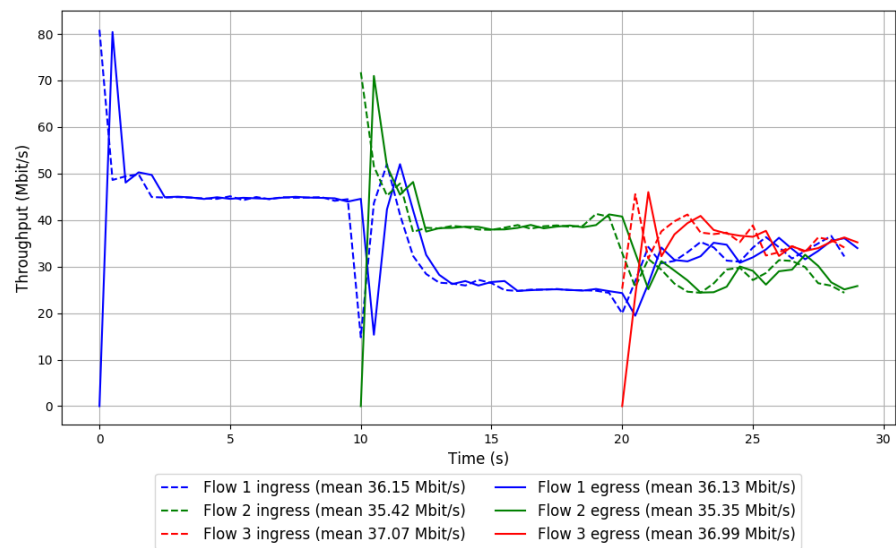
-- Flow 3:

Average throughput: 36.99 Mbit/s

95th percentile per-packet one-way delay: 27.280 ms

Loss rate: 0.04%

Run 5: Report of Indigo-MusesC5 — Data Link





Run 1: Statistics of Indigo-MusesD

Start at: 2019-01-17 12:29:57

End at: 2019-01-17 12:30:27

Local clock offset: -5.532 ms

Remote clock offset: 1.431 ms

# Below is generated by plot.py at 2019-01-17 14:14:30

# Datalink statistics

-- Total of 3 flows:

Average throughput: 68.23 Mbit/s

95th percentile per-packet one-way delay: 5.852 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 39.71 Mbit/s

95th percentile per-packet one-way delay: 5.898 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 37.52 Mbit/s

95th percentile per-packet one-way delay: 4.885 ms

Loss rate: 0.00%

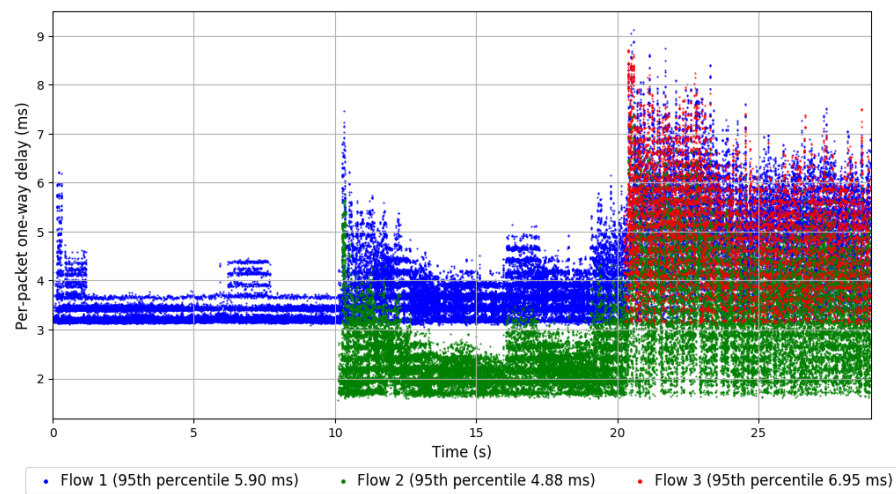
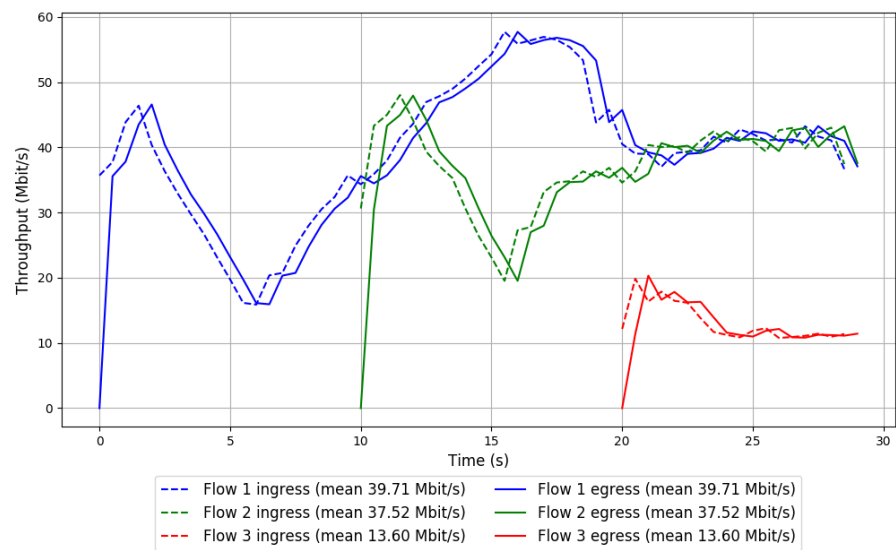
-- Flow 3:

Average throughput: 13.60 Mbit/s

95th percentile per-packet one-way delay: 6.952 ms

Loss rate: 0.00%

Run 1: Report of Indigo-MusesD — Data Link



Run 2: Statistics of Indigo-MusesD

Start at: 2019-01-17 12:53:51

End at: 2019-01-17 12:54:21

Local clock offset: -5.019 ms

Remote clock offset: 1.209 ms

# Below is generated by plot.py at 2019-01-17 14:14:32

# Datalink statistics

-- Total of 3 flows:

Average throughput: 66.70 Mbit/s

95th percentile per-packet one-way delay: 6.513 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 38.67 Mbit/s

95th percentile per-packet one-way delay: 6.462 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 35.47 Mbit/s

95th percentile per-packet one-way delay: 5.717 ms

Loss rate: 0.00%

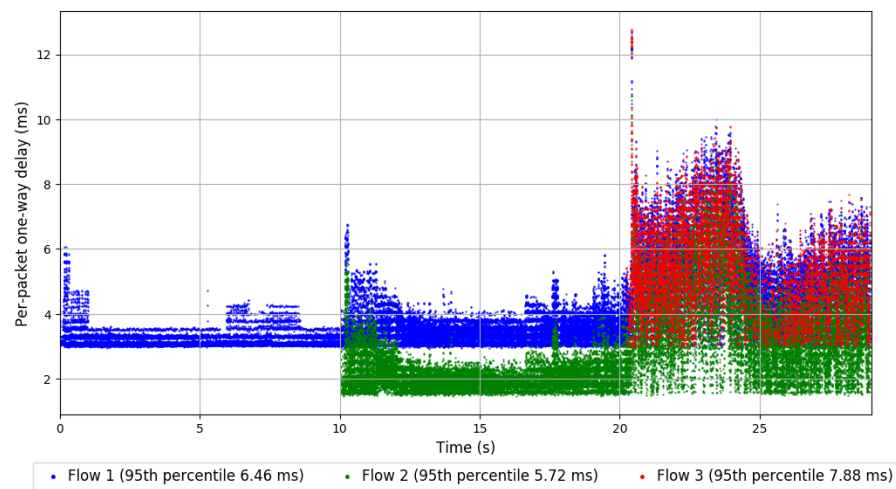
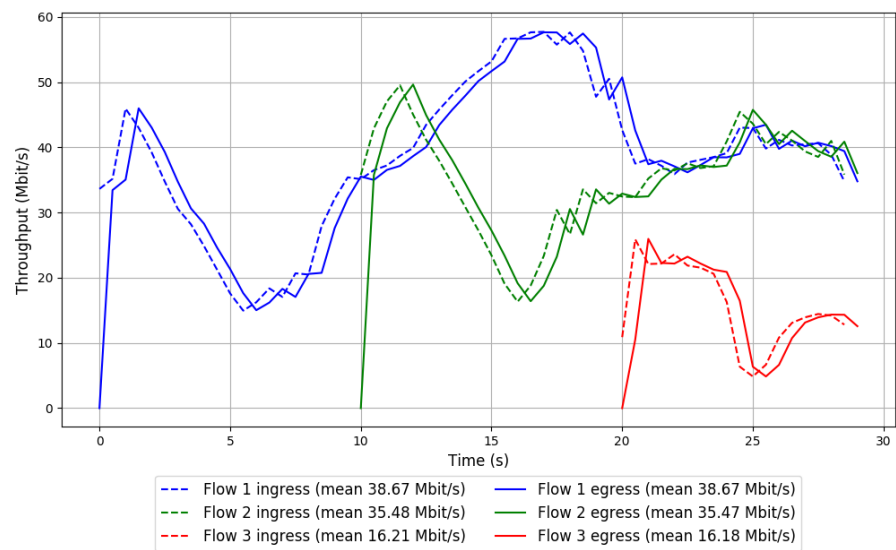
-- Flow 3:

Average throughput: 16.18 Mbit/s

95th percentile per-packet one-way delay: 7.878 ms

Loss rate: 0.11%

Run 2: Report of Indigo-MusesD — Data Link



Run 3: Statistics of Indigo-MusesD

Start at: 2019-01-17 13:17:45

End at: 2019-01-17 13:18:15

Local clock offset: -4.101 ms

Remote clock offset: 1.314 ms

# Below is generated by plot.py at 2019-01-17 14:14:45

# Datalink statistics

-- Total of 3 flows:

Average throughput: 82.67 Mbit/s

95th percentile per-packet one-way delay: 4.172 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 46.71 Mbit/s

95th percentile per-packet one-way delay: 2.726 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 41.66 Mbit/s

95th percentile per-packet one-way delay: 4.722 ms

Loss rate: 0.01%

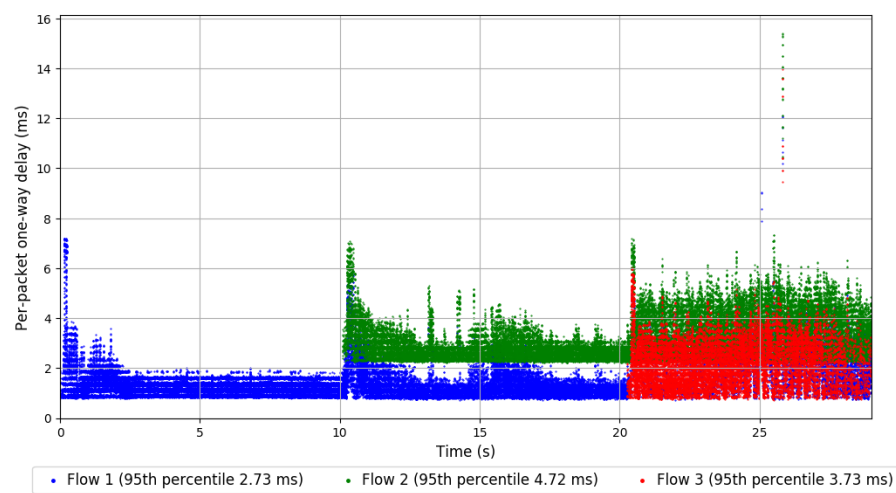
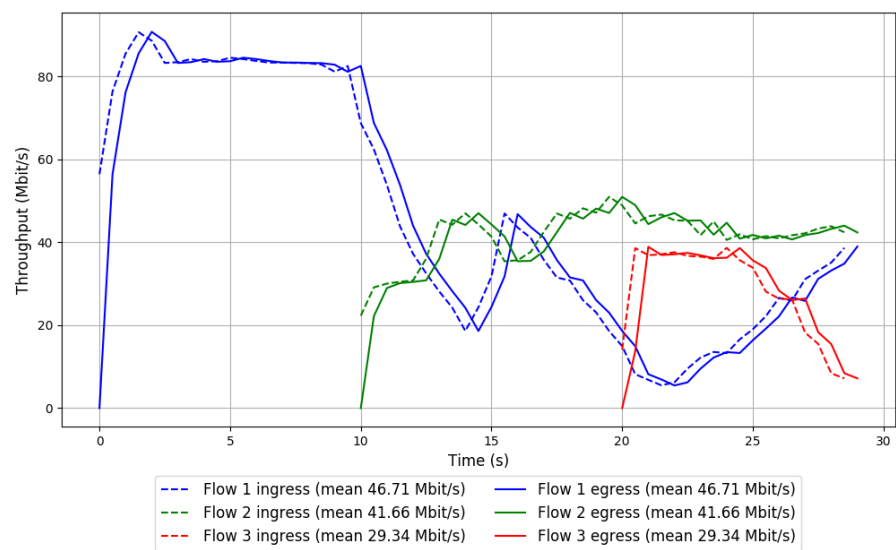
-- Flow 3:

Average throughput: 29.34 Mbit/s

95th percentile per-packet one-way delay: 3.732 ms

Loss rate: 0.00%

Run 3: Report of Indigo-MusesD — Data Link



Run 4: Statistics of Indigo-MusesD

Start at: 2019-01-17 13:41:39

End at: 2019-01-17 13:42:09

Local clock offset: -4.817 ms

Remote clock offset: 1.556 ms

# Below is generated by plot.py at 2019-01-17 14:14:58

# Datalink statistics

-- Total of 3 flows:

Average throughput: 83.87 Mbit/s

95th percentile per-packet one-way delay: 4.997 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 48.61 Mbit/s

95th percentile per-packet one-way delay: 2.833 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 38.50 Mbit/s

95th percentile per-packet one-way delay: 5.363 ms

Loss rate: 0.00%

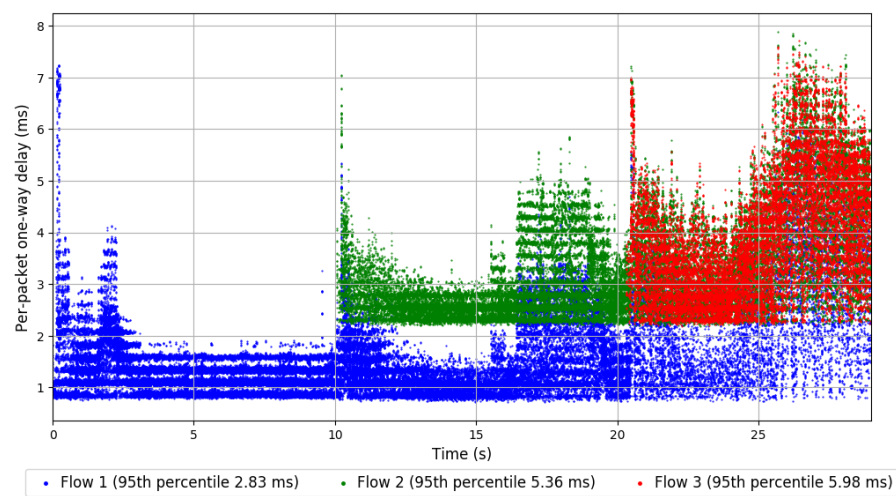
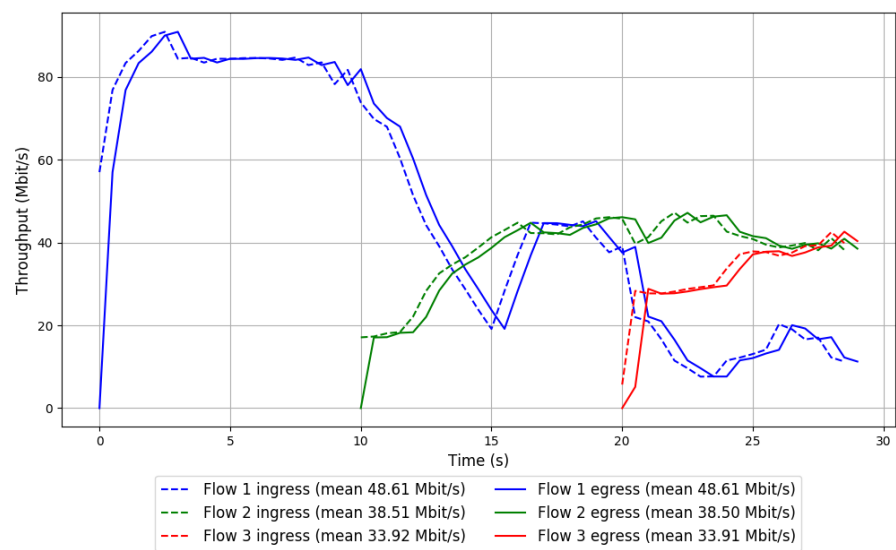
-- Flow 3:

Average throughput: 33.91 Mbit/s

95th percentile per-packet one-way delay: 5.982 ms

Loss rate: 0.00%

Run 4: Report of Indigo-MusesD — Data Link



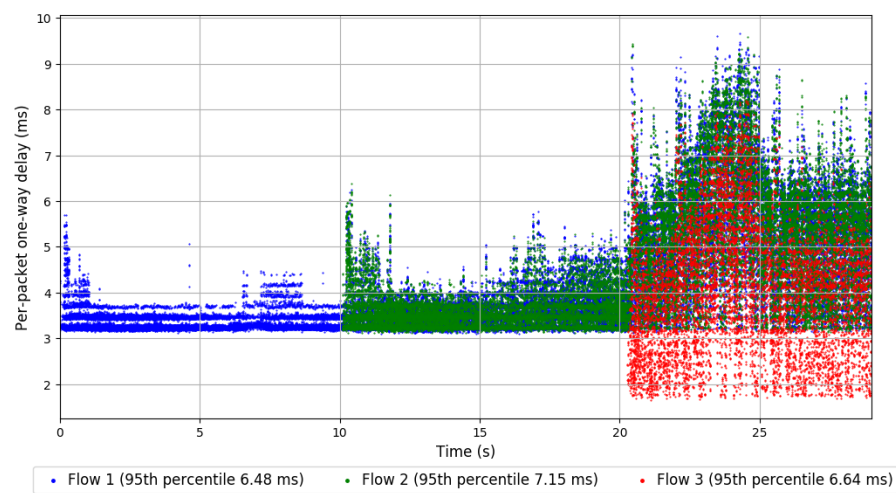
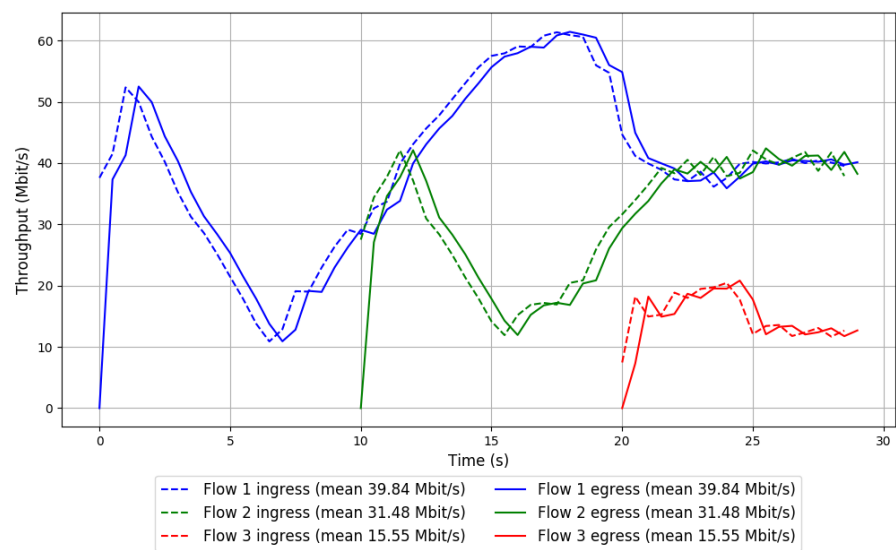


Run 5: Statistics of Indigo-MusesD

Start at: 2019-01-17 14:05:34  
End at: 2019-01-17 14:06:04  
Local clock offset: -4.496 ms  
Remote clock offset: 1.465 ms

```
# Below is generated by plot.py at 2019-01-17 14:14:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 65.04 Mbit/s
95th percentile per-packet one-way delay: 6.748 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 39.84 Mbit/s
95th percentile per-packet one-way delay: 6.477 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 31.48 Mbit/s
95th percentile per-packet one-way delay: 7.149 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 15.55 Mbit/s
95th percentile per-packet one-way delay: 6.644 ms
Loss rate: 0.00%
```

Run 5: Report of Indigo-MusesD — Data Link



Run 1: Statistics of Indigo-MusesT

Start at: 2019-01-17 12:11:43

End at: 2019-01-17 12:12:13

Local clock offset: -6.14 ms

Remote clock offset: 1.408 ms

# Below is generated by plot.py at 2019-01-17 14:15:16

# Datalink statistics

-- Total of 3 flows:

Average throughput: 95.41 Mbit/s

95th percentile per-packet one-way delay: 26.272 ms

Loss rate: 0.16%

-- Flow 1:

Average throughput: 58.59 Mbit/s

95th percentile per-packet one-way delay: 23.898 ms

Loss rate: 0.14%

-- Flow 2:

Average throughput: 44.26 Mbit/s

95th percentile per-packet one-way delay: 27.194 ms

Loss rate: 0.05%

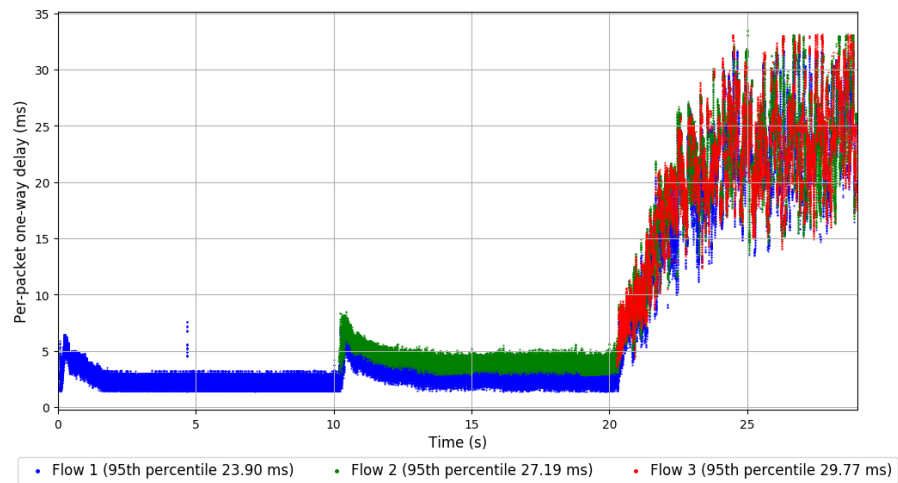
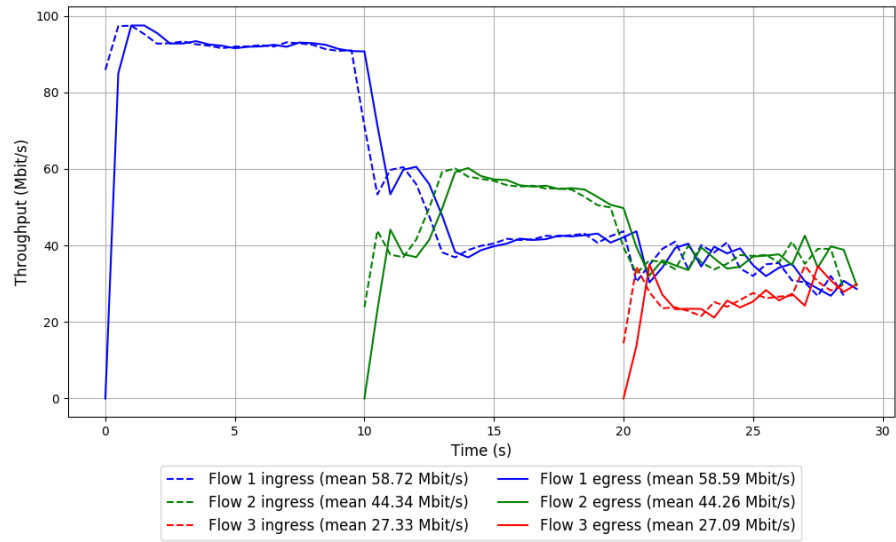
-- Flow 3:

Average throughput: 27.09 Mbit/s

95th percentile per-packet one-way delay: 29.769 ms

Loss rate: 0.65%

# Run 1: Report of Indigo-MusesT — Data Link



Run 2: Statistics of Indigo-MusesT

Start at: 2019-01-17 12:35:37

End at: 2019-01-17 12:36:07

Local clock offset: -5.443 ms

Remote clock offset: 1.387 ms

# Below is generated by plot.py at 2019-01-17 14:15:27

# Datalink statistics

-- Total of 3 flows:

Average throughput: 91.97 Mbit/s

95th percentile per-packet one-way delay: 20.725 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 55.21 Mbit/s

95th percentile per-packet one-way delay: 20.022 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 47.07 Mbit/s

95th percentile per-packet one-way delay: 20.867 ms

Loss rate: 0.00%

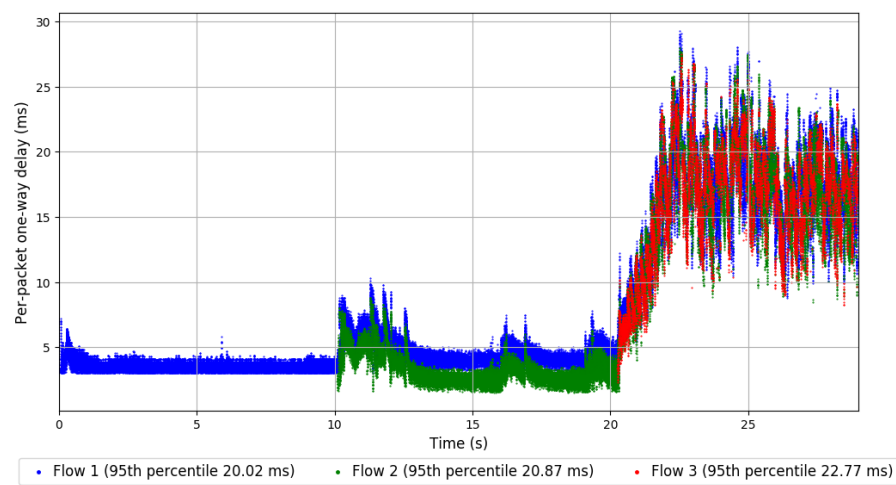
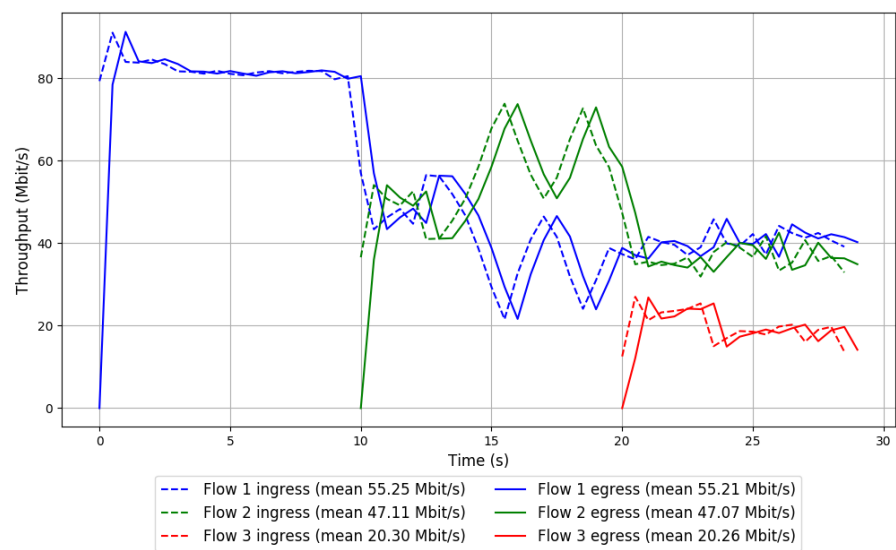
-- Flow 3:

Average throughput: 20.26 Mbit/s

95th percentile per-packet one-way delay: 22.775 ms

Loss rate: 0.00%

Run 2: Report of Indigo-MusesT — Data Link



Run 3: Statistics of Indigo-MusesT

Start at: 2019-01-17 12:59:32

End at: 2019-01-17 13:00:02

Local clock offset: -3.956 ms

Remote clock offset: 1.14 ms

# Below is generated by plot.py at 2019-01-17 14:15:32

# Datalink statistics

-- Total of 3 flows:

Average throughput: 95.71 Mbit/s

95th percentile per-packet one-way delay: 21.132 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 59.30 Mbit/s

95th percentile per-packet one-way delay: 19.048 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 47.40 Mbit/s

95th percentile per-packet one-way delay: 22.437 ms

Loss rate: 0.00%

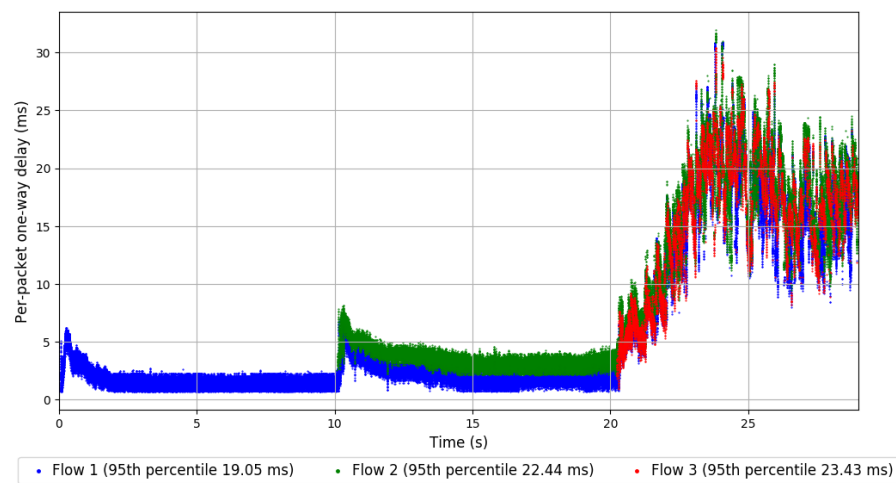
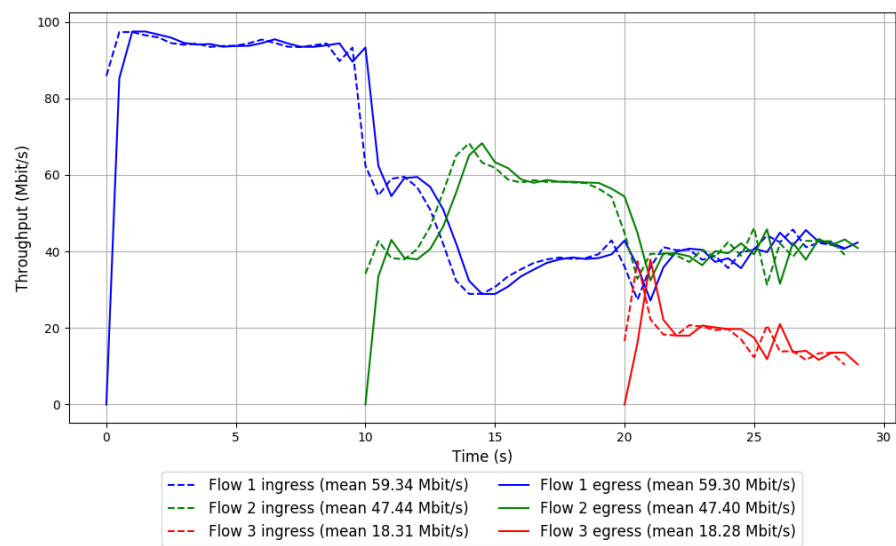
-- Flow 3:

Average throughput: 18.28 Mbit/s

95th percentile per-packet one-way delay: 23.428 ms

Loss rate: 0.00%

Run 3: Report of Indigo-MusesT — Data Link





Run 4: Statistics of Indigo-MusesT

Start at: 2019-01-17 13:23:27

End at: 2019-01-17 13:23:57

Local clock offset: -4.324 ms

Remote clock offset: 1.273 ms

# Below is generated by plot.py at 2019-01-17 14:15:32

# Datalink statistics

-- Total of 3 flows:

Average throughput: 91.71 Mbit/s

95th percentile per-packet one-way delay: 19.696 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 60.82 Mbit/s

95th percentile per-packet one-way delay: 18.729 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 38.77 Mbit/s

95th percentile per-packet one-way delay: 20.219 ms

Loss rate: 0.01%

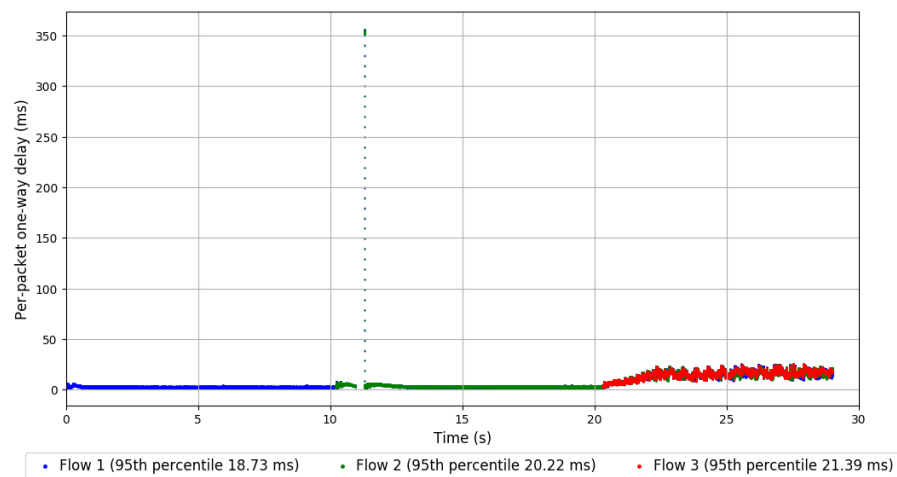
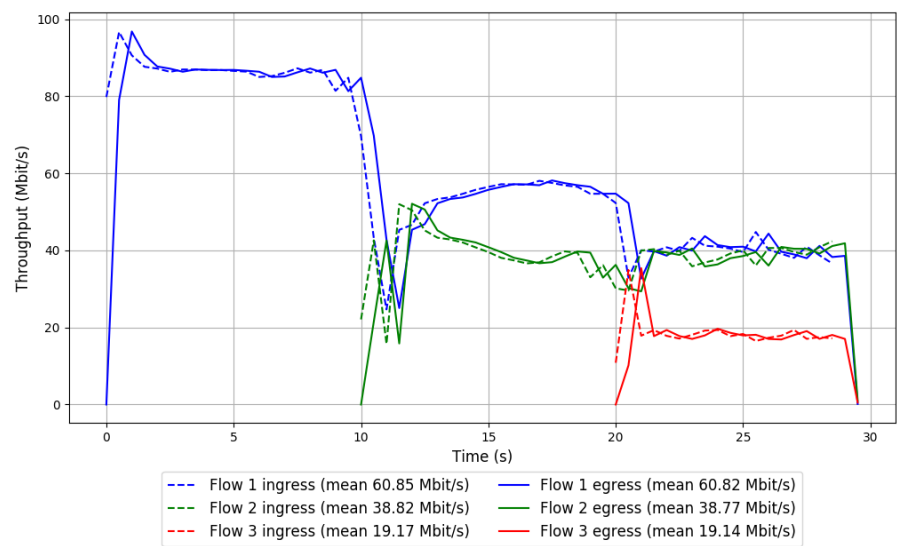
-- Flow 3:

Average throughput: 19.14 Mbit/s

95th percentile per-packet one-way delay: 21.393 ms

Loss rate: 0.00%

Run 4: Report of Indigo-MusesT — Data Link



Run 5: Statistics of Indigo-MusesT

Start at: 2019-01-17 13:47:21

End at: 2019-01-17 13:47:51

Local clock offset: -5.78 ms

Remote clock offset: 1.612 ms

# Below is generated by plot.py at 2019-01-17 14:15:37

# Datalink statistics

-- Total of 3 flows:

Average throughput: 95.99 Mbit/s

95th percentile per-packet one-way delay: 27.438 ms

Loss rate: 0.21%

-- Flow 1:

Average throughput: 59.77 Mbit/s

95th percentile per-packet one-way delay: 24.482 ms

Loss rate: 0.05%

-- Flow 2:

Average throughput: 41.36 Mbit/s

95th percentile per-packet one-way delay: 28.311 ms

Loss rate: 0.45%

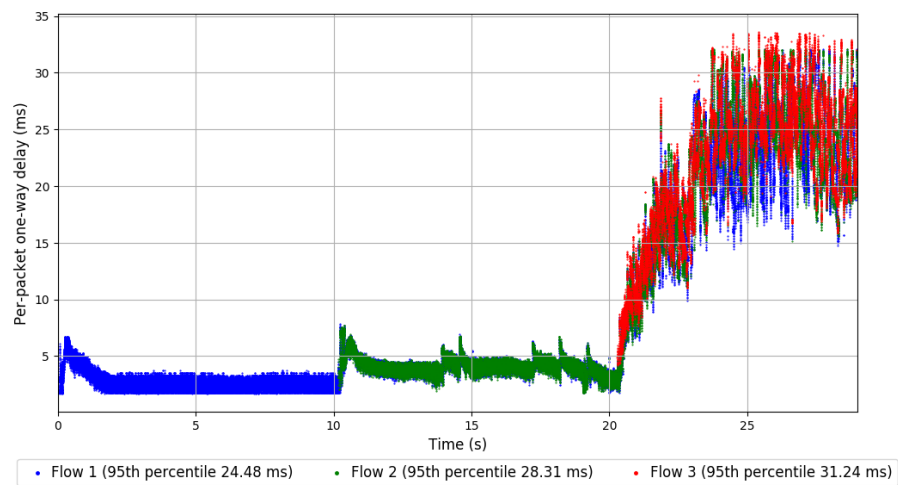
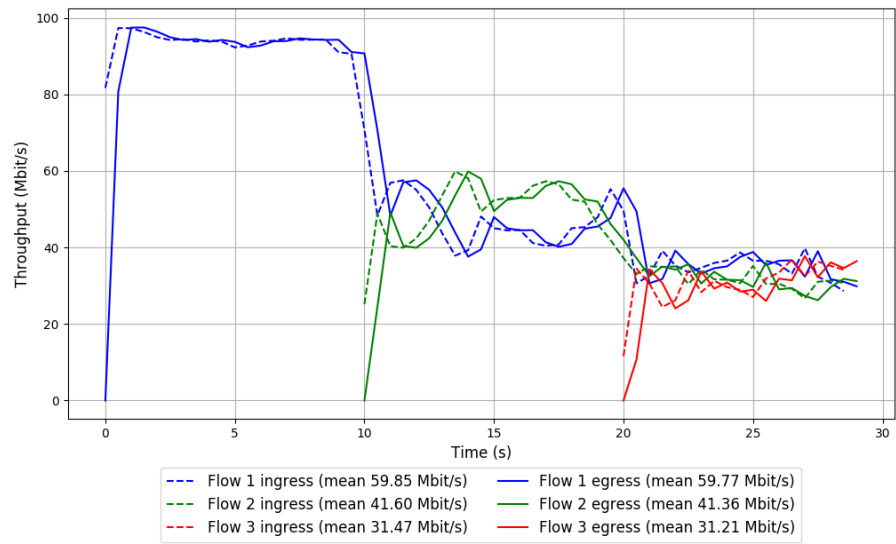
-- Flow 3:

Average throughput: 31.21 Mbit/s

95th percentile per-packet one-way delay: 31.243 ms

Loss rate: 0.56%

## Run 5: Report of Indigo-MusesT — Data Link

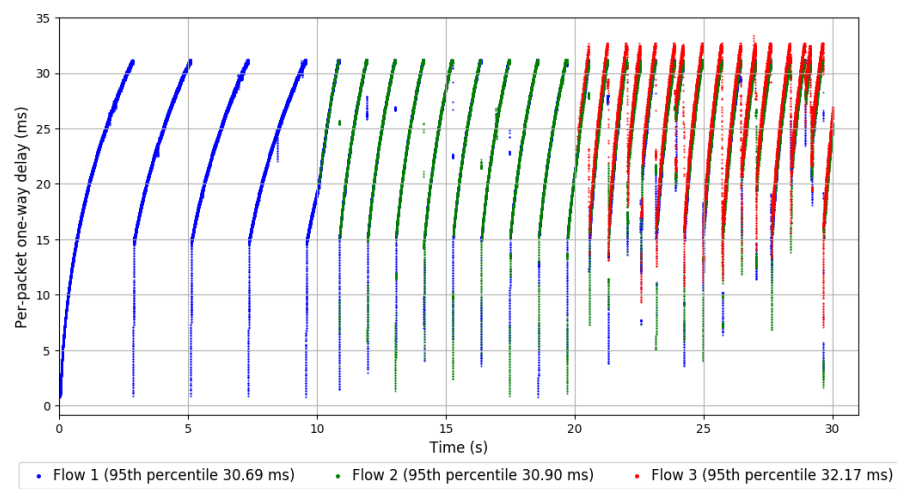
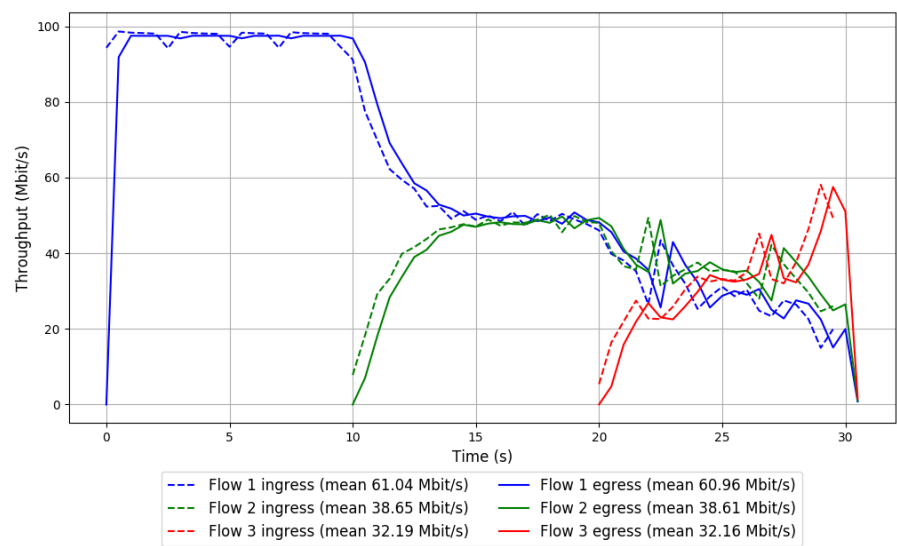


```
Run 1: Statistics of LEDBAT

Start at: 2019-01-17 12:23:07
End at: 2019-01-17 12:23:37
Local clock offset: -5.14 ms
Remote clock offset: 1.429 ms

# Below is generated by plot.py at 2019-01-17 14:15:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.33 Mbit/s
95th percentile per-packet one-way delay: 30.925 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 60.96 Mbit/s
95th percentile per-packet one-way delay: 30.692 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 38.61 Mbit/s
95th percentile per-packet one-way delay: 30.897 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 32.16 Mbit/s
95th percentile per-packet one-way delay: 32.171 ms
Loss rate: 0.07%
```

Run 1: Report of LEDBAT — Data Link



Run 2: Statistics of LEDBAT

Start at: 2019-01-17 12:47:01

End at: 2019-01-17 12:47:31

Local clock offset: -5.795 ms

Remote clock offset: 1.28 ms

# Below is generated by plot.py at 2019-01-17 14:15:58

# Datalink statistics

-- Total of 3 flows:

Average throughput: 97.21 Mbit/s

95th percentile per-packet one-way delay: 32.653 ms

Loss rate: 0.07%

-- Flow 1:

Average throughput: 70.87 Mbit/s

95th percentile per-packet one-way delay: 32.699 ms

Loss rate: 0.02%

-- Flow 2:

Average throughput: 22.83 Mbit/s

95th percentile per-packet one-way delay: 31.622 ms

Loss rate: 0.31%

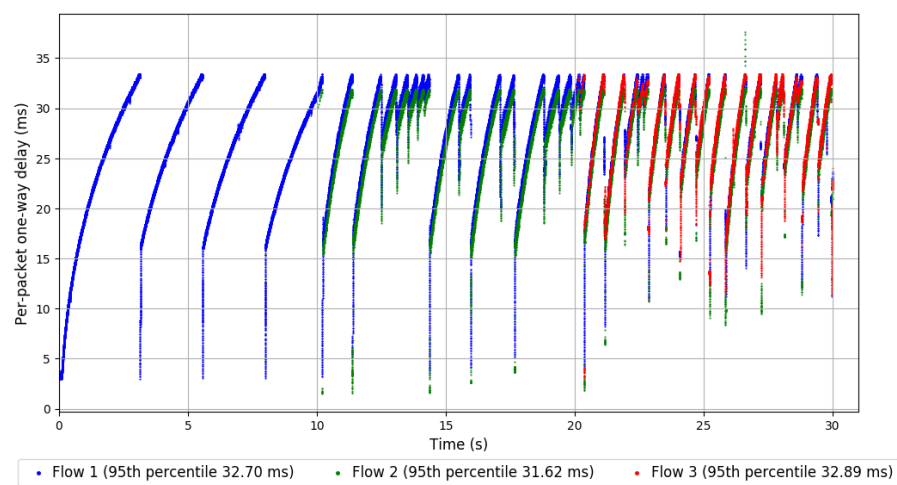
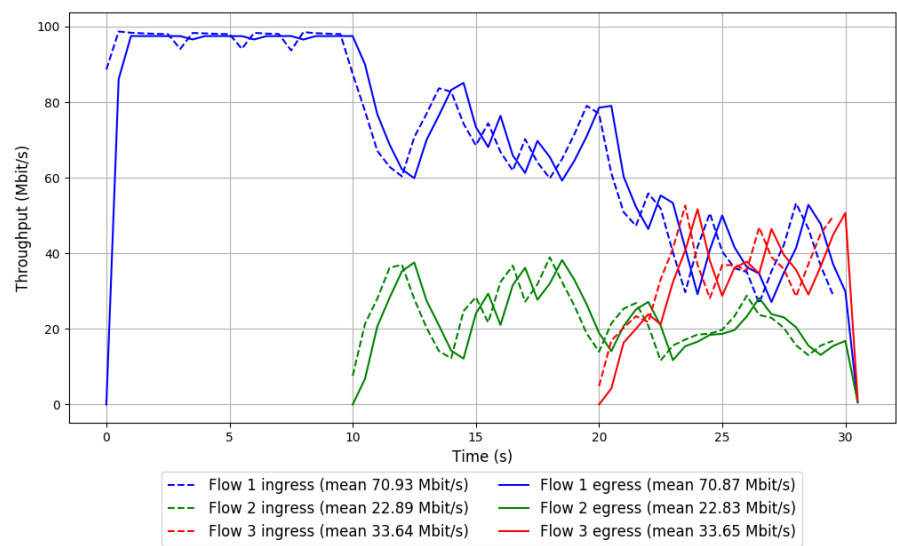
-- Flow 3:

Average throughput: 33.65 Mbit/s

95th percentile per-packet one-way delay: 32.893 ms

Loss rate: 0.09%

Run 2: Report of LEDBAT — Data Link





Run 3: Statistics of LEDBAT

Start at: 2019-01-17 13:10:55

End at: 2019-01-17 13:11:25

Local clock offset: -3.963 ms

Remote clock offset: 1.241 ms

# Below is generated by plot.py at 2019-01-17 14:16:06

# Datalink statistics

-- Total of 3 flows:

Average throughput: 97.22 Mbit/s

95th percentile per-packet one-way delay: 31.874 ms

Loss rate: 0.07%

-- Flow 1:

Average throughput: 68.04 Mbit/s

95th percentile per-packet one-way delay: 31.912 ms

Loss rate: 0.02%

-- Flow 2:

Average throughput: 25.03 Mbit/s

95th percentile per-packet one-way delay: 30.833 ms

Loss rate: 0.27%

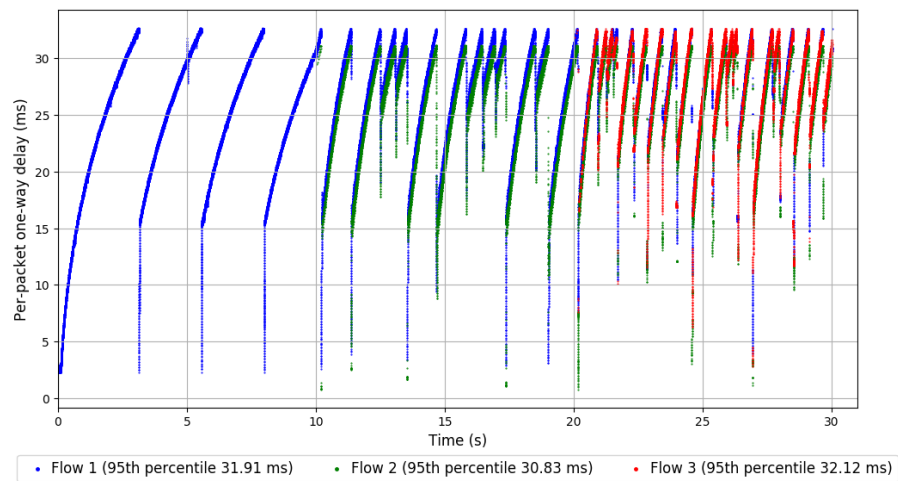
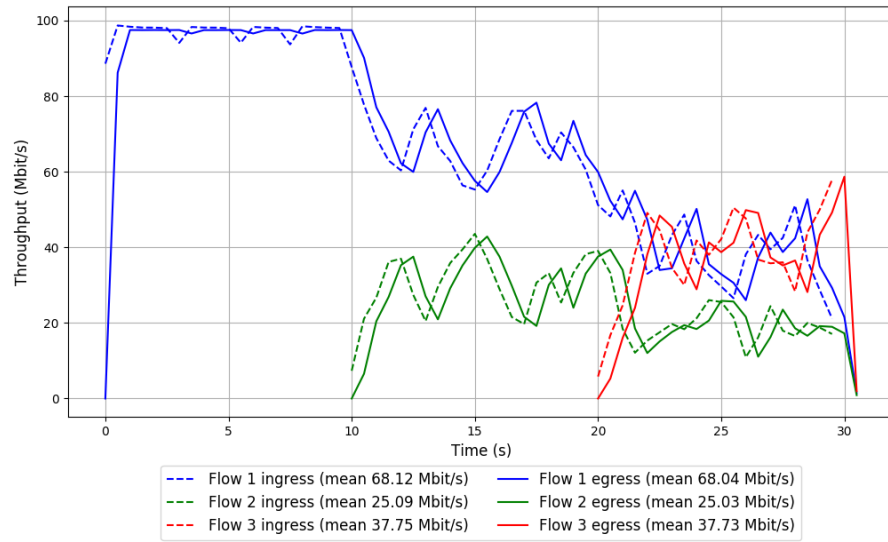
-- Flow 3:

Average throughput: 37.73 Mbit/s

95th percentile per-packet one-way delay: 32.119 ms

Loss rate: 0.07%

### Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2019-01-17 13:34:50

End at: 2019-01-17 13:35:20

Local clock offset: -5.384 ms

Remote clock offset: 1.524 ms

# Below is generated by plot.py at 2019-01-17 14:16:28

# Datalink statistics

-- Total of 3 flows:

Average throughput: 97.30 Mbit/s

95th percentile per-packet one-way delay: 32.140 ms

Loss rate: 0.05%

-- Flow 1:

Average throughput: 57.16 Mbit/s

95th percentile per-packet one-way delay: 31.393 ms

Loss rate: 0.05%

-- Flow 2:

Average throughput: 42.99 Mbit/s

95th percentile per-packet one-way delay: 32.865 ms

Loss rate: 0.05%

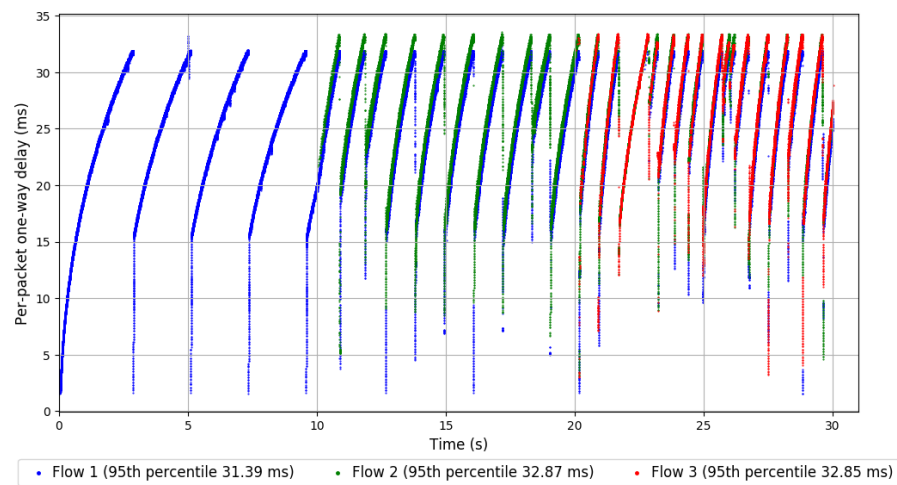
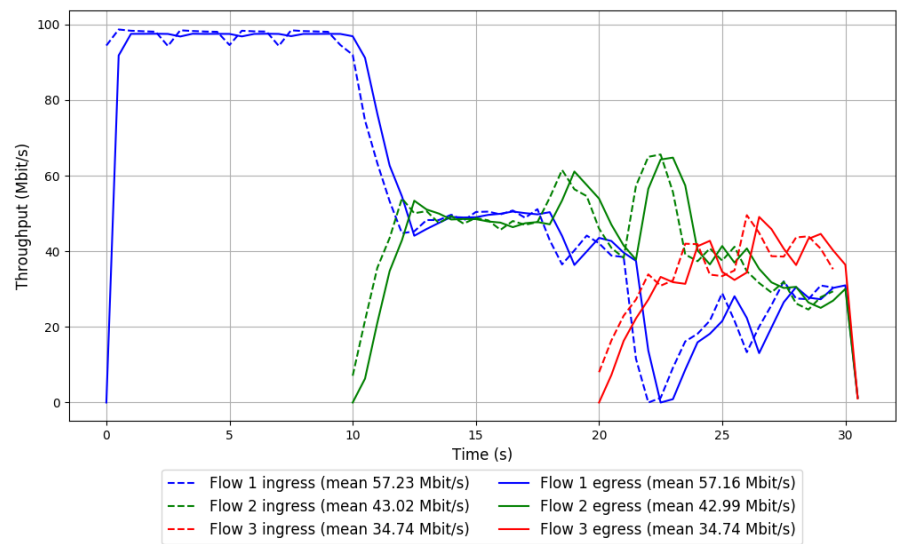
-- Flow 3:

Average throughput: 34.74 Mbit/s

95th percentile per-packet one-way delay: 32.851 ms

Loss rate: 0.07%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2019-01-17 13:58:45

End at: 2019-01-17 13:59:15

Local clock offset: -3.875 ms

Remote clock offset: 1.434 ms

# Below is generated by plot.py at 2019-01-17 14:16:40

# Datalink statistics

-- Total of 3 flows:

Average throughput: 97.30 Mbit/s

95th percentile per-packet one-way delay: 30.801 ms

Loss rate: 0.04%

-- Flow 1:

Average throughput: 63.24 Mbit/s

95th percentile per-packet one-way delay: 30.637 ms

Loss rate: 0.03%

-- Flow 2:

Average throughput: 35.96 Mbit/s

95th percentile per-packet one-way delay: 30.840 ms

Loss rate: 0.06%

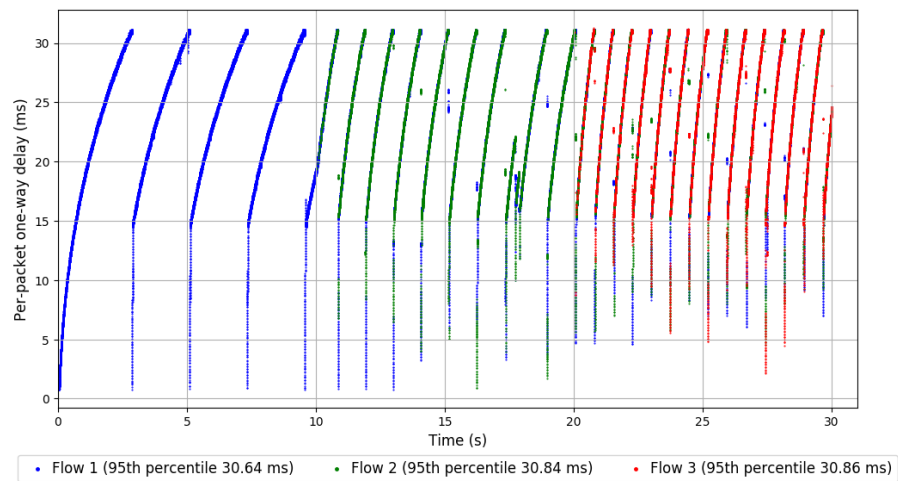
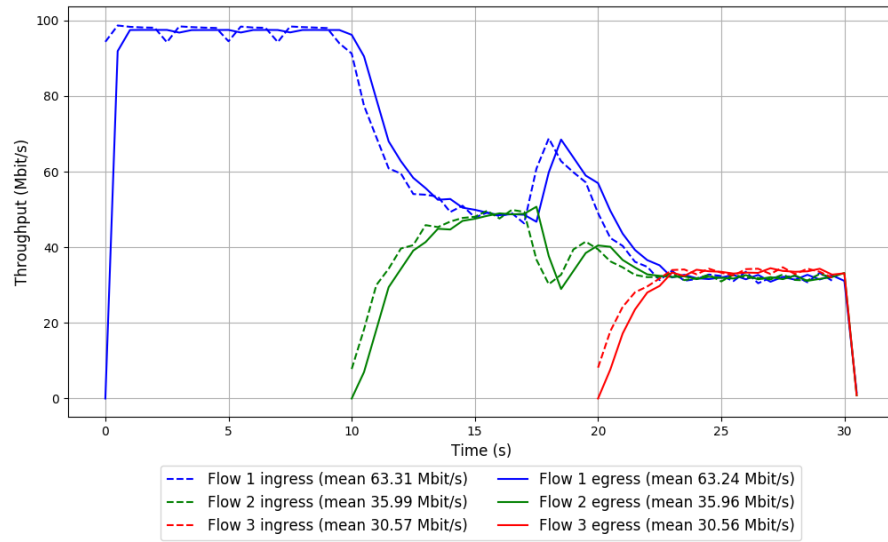
-- Flow 3:

Average throughput: 30.56 Mbit/s

95th percentile per-packet one-way delay: 30.857 ms

Loss rate: 0.09%

# Run 5: Report of LEDBAT — Data Link

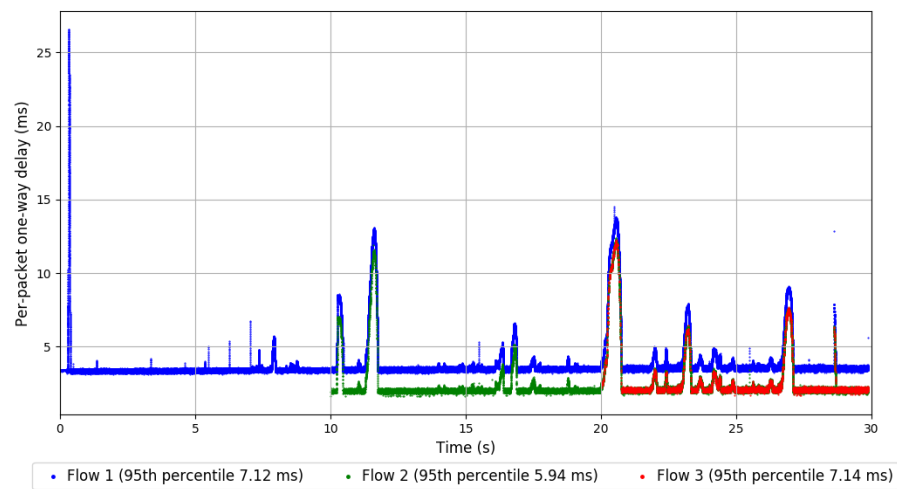
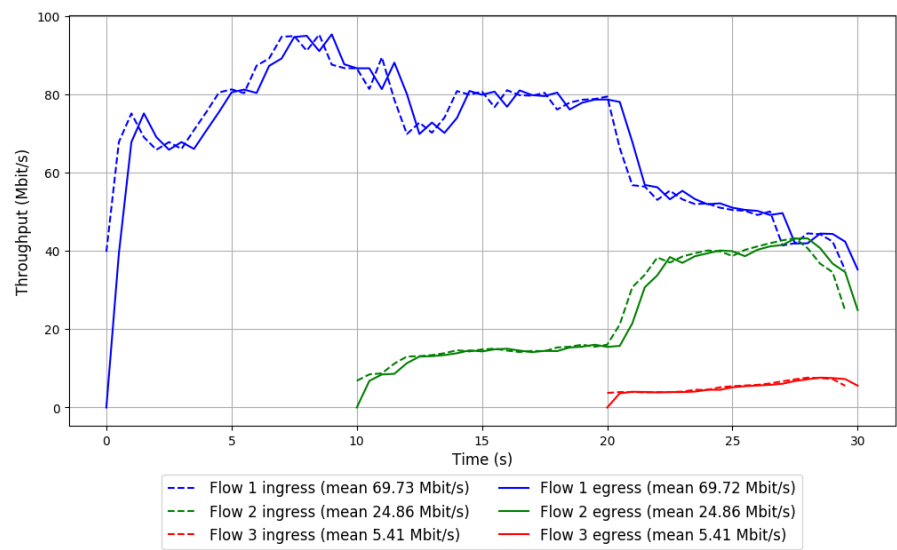


```
Run 1: Statistics of PCC-Allegro

Start at: 2019-01-17 12:18:37
End at: 2019-01-17 12:19:07
Local clock offset: -6.681 ms
Remote clock offset: 1.558 ms

# Below is generated by plot.py at 2019-01-17 14:16:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.04 Mbit/s
95th percentile per-packet one-way delay: 6.759 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 69.72 Mbit/s
95th percentile per-packet one-way delay: 7.125 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 24.86 Mbit/s
95th percentile per-packet one-way delay: 5.944 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 5.41 Mbit/s
95th percentile per-packet one-way delay: 7.141 ms
Loss rate: 0.00%
```

Run 1: Report of PCC-Allegro — Data Link





Run 2: Statistics of PCC-Allegro

Start at: 2019-01-17 12:42:31

End at: 2019-01-17 12:43:01

Local clock offset: -5.691 ms

Remote clock offset: 1.362 ms

# Below is generated by plot.py at 2019-01-17 14:16:40

# Datalink statistics

-- Total of 3 flows:

Average throughput: 78.47 Mbit/s

95th percentile per-packet one-way delay: 16.993 ms

Loss rate: 0.14%

-- Flow 1:

Average throughput: 47.12 Mbit/s

95th percentile per-packet one-way delay: 11.748 ms

Loss rate: 0.08%

-- Flow 2:

Average throughput: 41.17 Mbit/s

95th percentile per-packet one-way delay: 20.014 ms

Loss rate: 0.17%

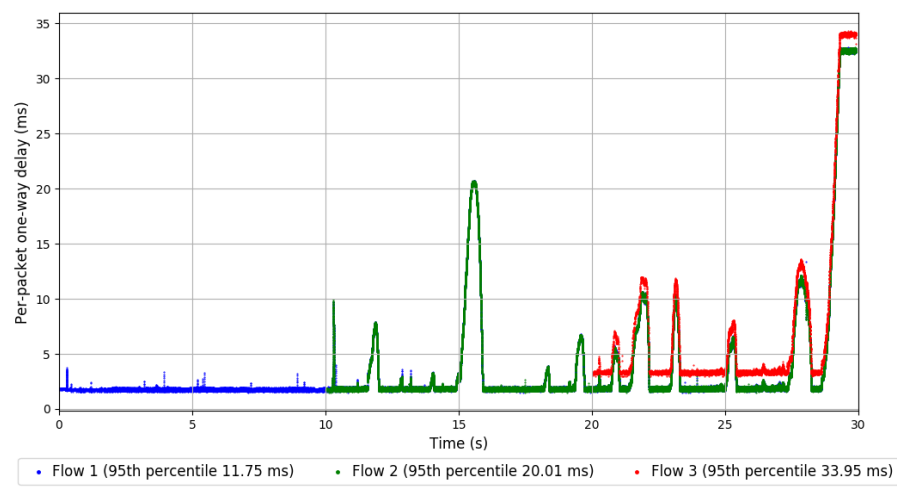
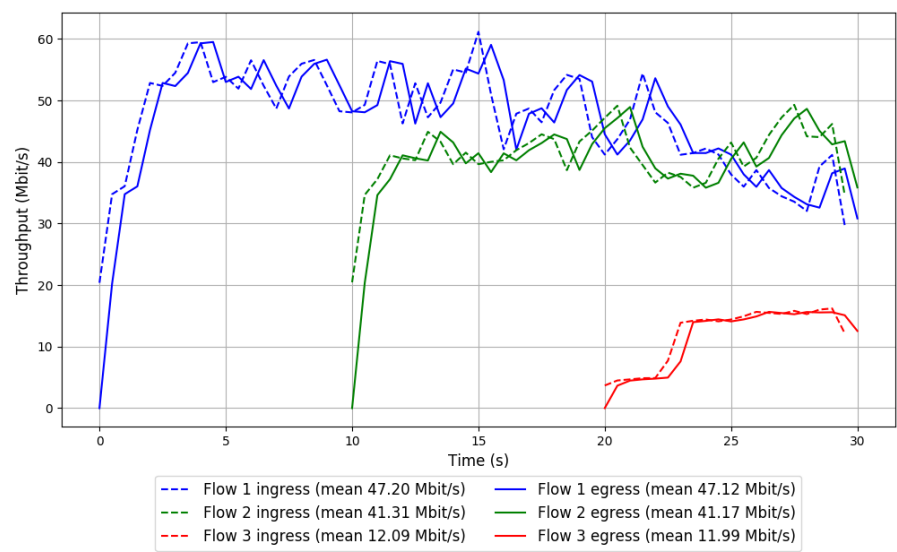
-- Flow 3:

Average throughput: 11.99 Mbit/s

95th percentile per-packet one-way delay: 33.946 ms

Loss rate: 0.53%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2019-01-17 13:06:26

End at: 2019-01-17 13:06:56

Local clock offset: -4.672 ms

Remote clock offset: 1.238 ms

# Below is generated by plot.py at 2019-01-17 14:16:45

# Datalink statistics

-- Total of 3 flows:

Average throughput: 89.13 Mbit/s

95th percentile per-packet one-way delay: 4.487 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 84.40 Mbit/s

95th percentile per-packet one-way delay: 4.505 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 5.09 Mbit/s

95th percentile per-packet one-way delay: 4.219 ms

Loss rate: 0.00%

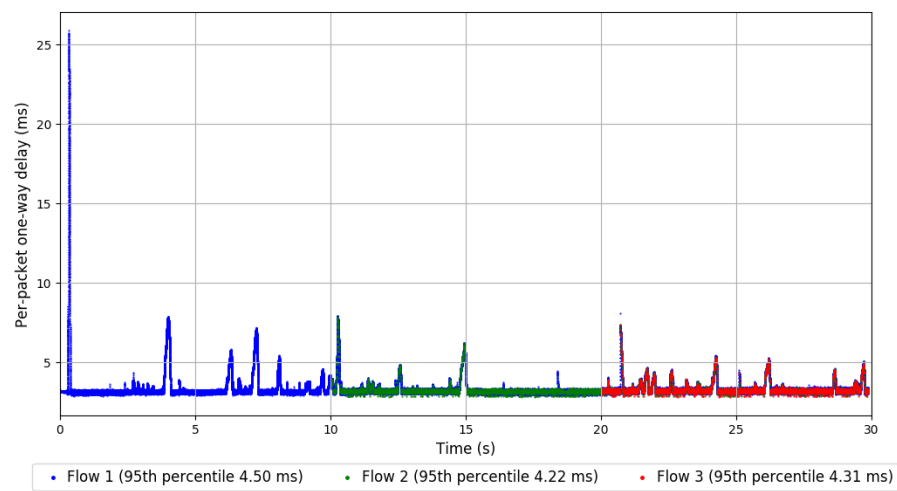
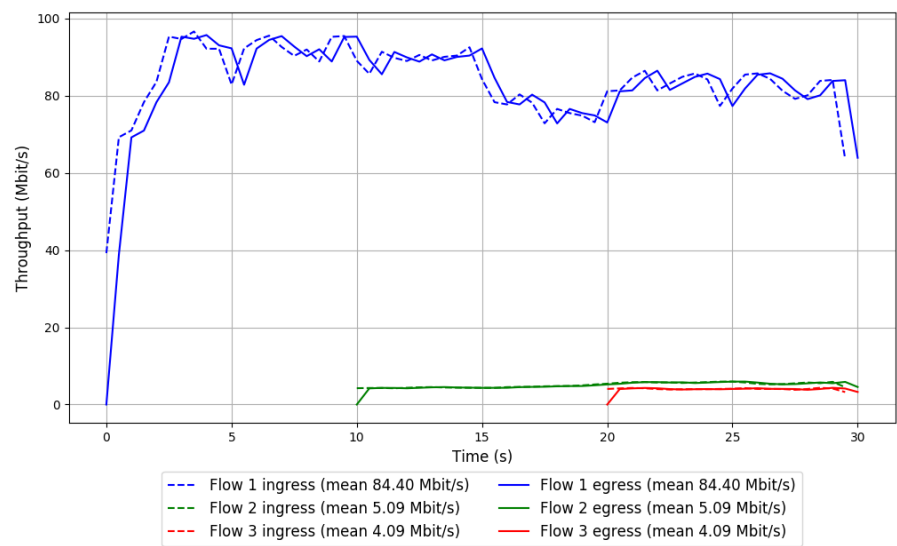
-- Flow 3:

Average throughput: 4.09 Mbit/s

95th percentile per-packet one-way delay: 4.310 ms

Loss rate: 0.00%

Run 3: Report of PCC-Allegro — Data Link



Run 4: Statistics of PCC-Allegro

Start at: 2019-01-17 13:30:20

End at: 2019-01-17 13:30:50

Local clock offset: -5.222 ms

Remote clock offset: 1.467 ms

# Below is generated by plot.py at 2019-01-17 14:17:07

# Datalink statistics

-- Total of 3 flows:

Average throughput: 90.74 Mbit/s

95th percentile per-packet one-way delay: 9.774 ms

Loss rate: 0.06%

-- Flow 1:

Average throughput: 77.17 Mbit/s

95th percentile per-packet one-way delay: 6.247 ms

Loss rate: 0.04%

-- Flow 2:

Average throughput: 9.17 Mbit/s

95th percentile per-packet one-way delay: 32.285 ms

Loss rate: 0.19%

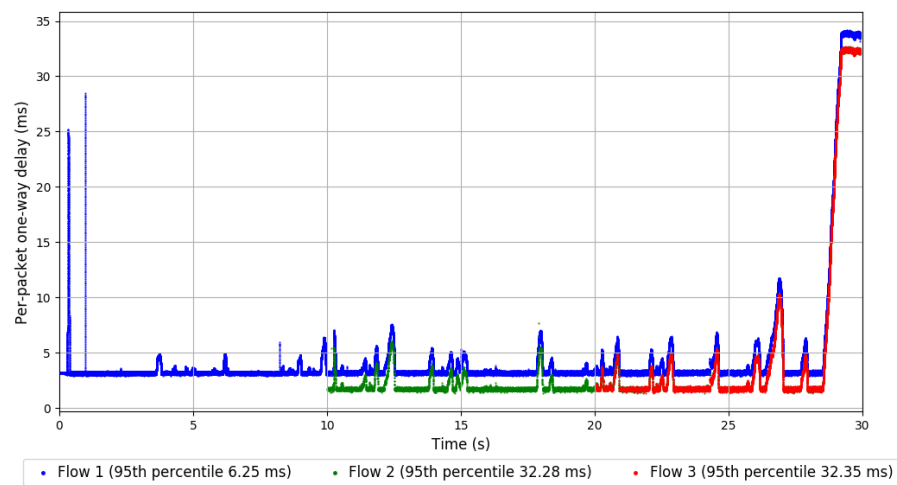
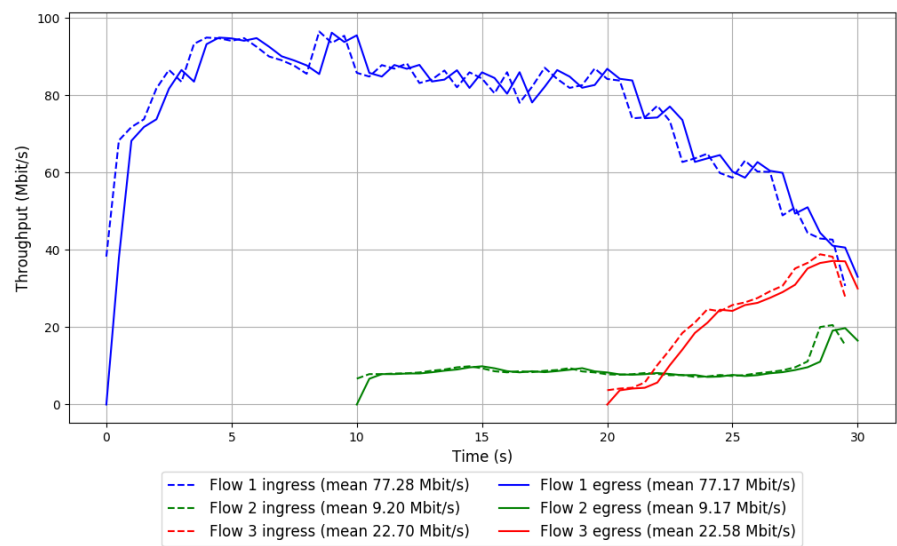
-- Flow 3:

Average throughput: 22.58 Mbit/s

95th percentile per-packet one-way delay: 32.354 ms

Loss rate: 0.21%

Run 4: Report of PCC-Allegro — Data Link



Run 5: Statistics of PCC-Allegro

Start at: 2019-01-17 13:54:16

End at: 2019-01-17 13:54:46

Local clock offset: -4.891 ms

Remote clock offset: 1.497 ms

# Below is generated by plot.py at 2019-01-17 14:17:07

# Datalink statistics

-- Total of 3 flows:

Average throughput: 80.62 Mbit/s

95th percentile per-packet one-way delay: 6.568 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 69.95 Mbit/s

95th percentile per-packet one-way delay: 6.237 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 11.51 Mbit/s

95th percentile per-packet one-way delay: 6.652 ms

Loss rate: 0.00%

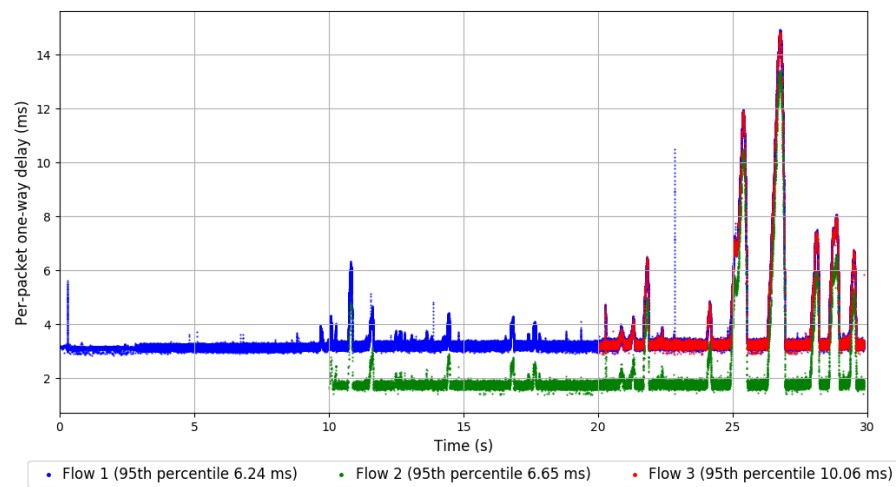
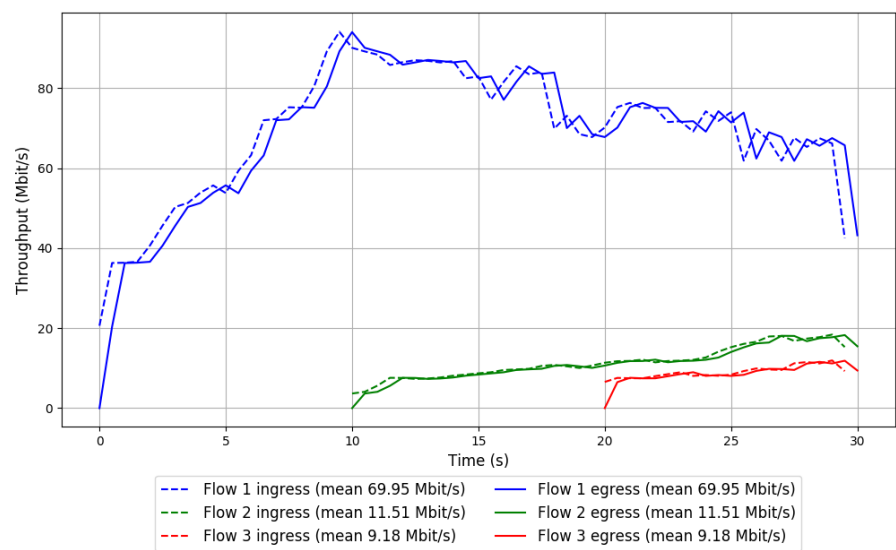
-- Flow 3:

Average throughput: 9.18 Mbit/s

95th percentile per-packet one-way delay: 10.059 ms

Loss rate: 0.00%

Run 5: Report of PCC-Allegro — Data Link



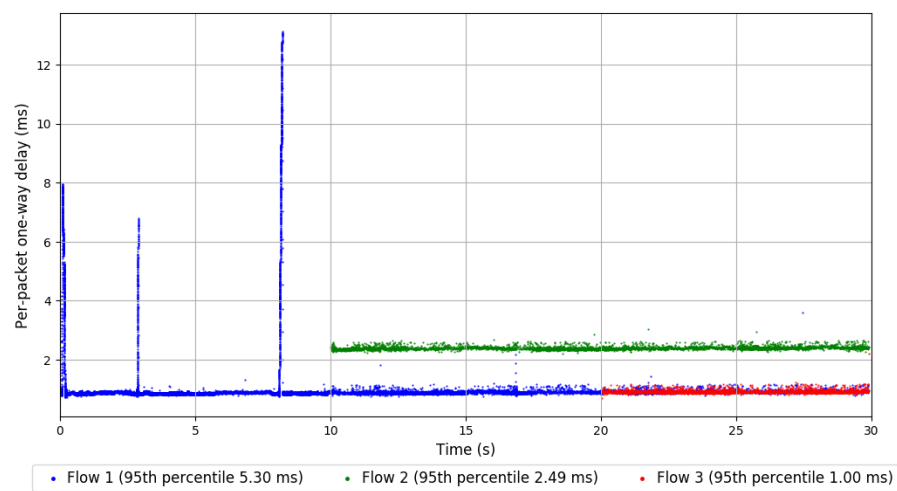
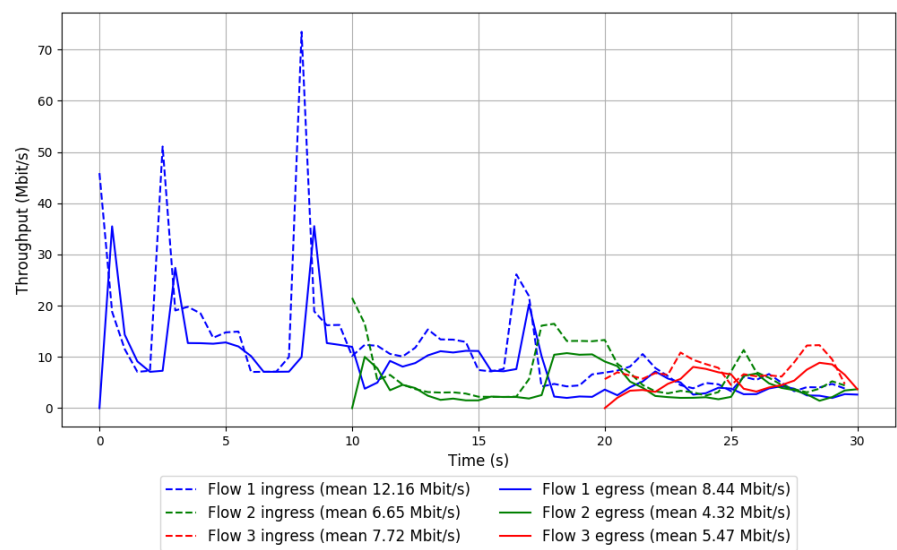


```
Run 1: Statistics of PCC-Expr

Start at: 2019-01-17 12:22:01
End at: 2019-01-17 12:22:31
Local clock offset: -5.275 ms
Remote clock offset: 1.381 ms

# Below is generated by plot.py at 2019-01-17 14:17:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.12 Mbit/s
95th percentile per-packet one-way delay: 2.663 ms
Loss rate: 31.43%
-- Flow 1:
Average throughput: 8.44 Mbit/s
95th percentile per-packet one-way delay: 5.299 ms
Loss rate: 30.56%
-- Flow 2:
Average throughput: 4.32 Mbit/s
95th percentile per-packet one-way delay: 2.487 ms
Loss rate: 35.10%
-- Flow 3:
Average throughput: 5.47 Mbit/s
95th percentile per-packet one-way delay: 1.002 ms
Loss rate: 29.21%
```

Run 1: Report of PCC-Expr — Data Link



Run 2: Statistics of PCC-Expr

Start at: 2019-01-17 12:45:55

End at: 2019-01-17 12:46:25

Local clock offset: -5.807 ms

Remote clock offset: 1.279 ms

# Below is generated by plot.py at 2019-01-17 14:17:07

# Datalink statistics

-- Total of 3 flows:

Average throughput: 13.12 Mbit/s

95th percentile per-packet one-way delay: 3.190 ms

Loss rate: 21.54%

-- Flow 1:

Average throughput: 9.47 Mbit/s

95th percentile per-packet one-way delay: 3.196 ms

Loss rate: 18.84%

-- Flow 2:

Average throughput: 3.95 Mbit/s

95th percentile per-packet one-way delay: 1.803 ms

Loss rate: 25.87%

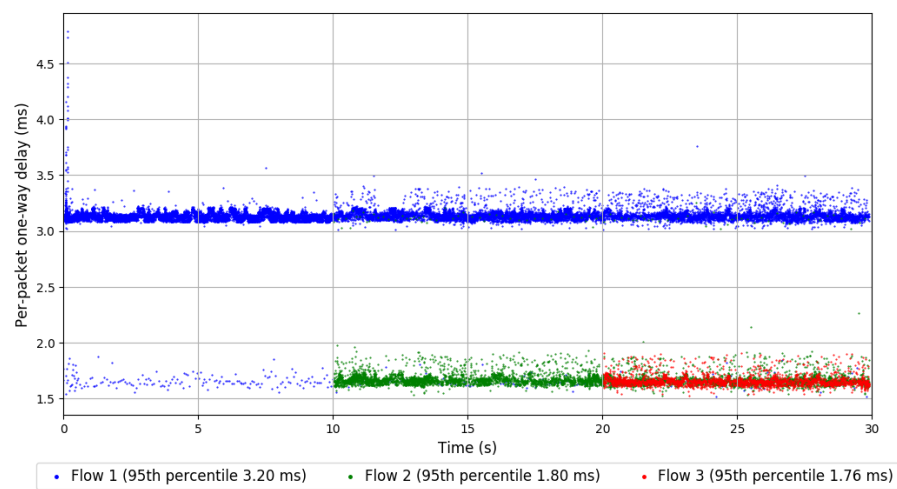
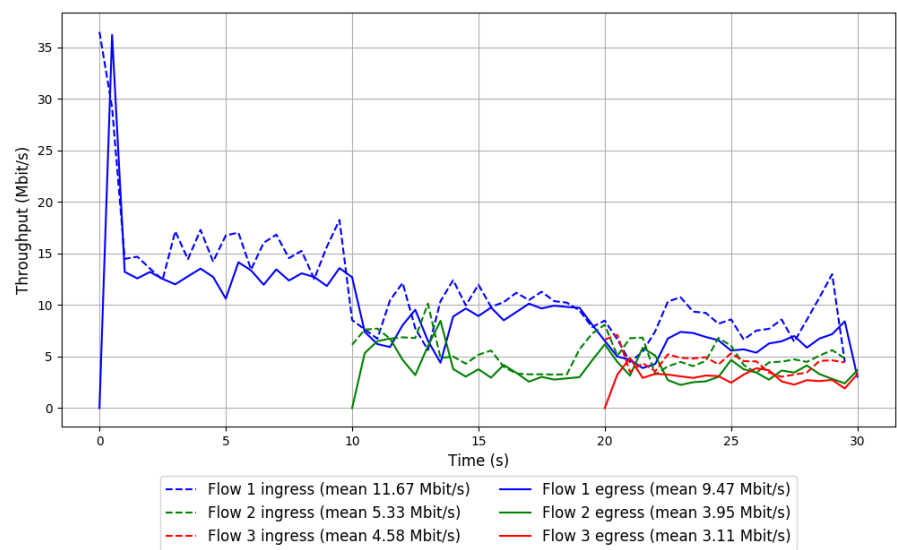
-- Flow 3:

Average throughput: 3.11 Mbit/s

95th percentile per-packet one-way delay: 1.761 ms

Loss rate: 32.27%

Run 2: Report of PCC-Expr — Data Link



Run 3: Statistics of PCC-Expr

Start at: 2019-01-17 13:09:49

End at: 2019-01-17 13:10:19

Local clock offset: -3.936 ms

Remote clock offset: 1.305 ms

# Below is generated by plot.py at 2019-01-17 14:17:07

# Datalink statistics

-- Total of 3 flows:

Average throughput: 11.20 Mbit/s

95th percentile per-packet one-way delay: 2.586 ms

Loss rate: 36.91%

-- Flow 1:

Average throughput: 5.22 Mbit/s

95th percentile per-packet one-way delay: 10.381 ms

Loss rate: 49.17%

-- Flow 2:

Average throughput: 6.91 Mbit/s

95th percentile per-packet one-way delay: 2.478 ms

Loss rate: 18.96%

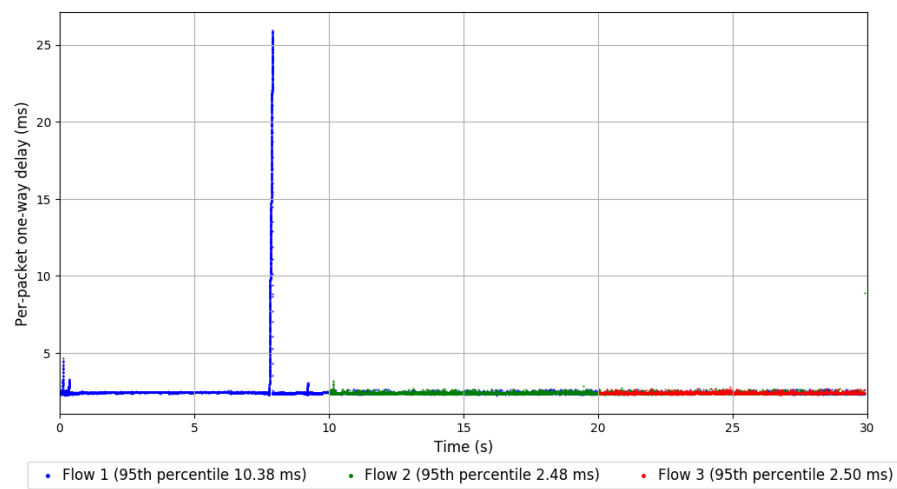
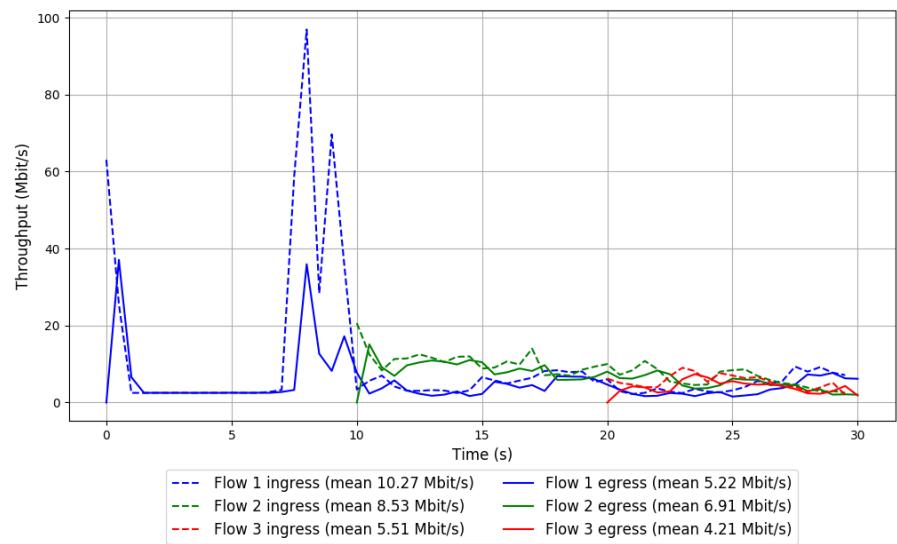
-- Flow 3:

Average throughput: 4.21 Mbit/s

95th percentile per-packet one-way delay: 2.496 ms

Loss rate: 23.60%

Run 3: Report of PCC-Expr — Data Link



Run 4: Statistics of PCC-Expr

Start at: 2019-01-17 13:33:44

End at: 2019-01-17 13:34:14

Local clock offset: -4.566 ms

Remote clock offset: 1.468 ms

# Below is generated by plot.py at 2019-01-17 14:17:07

# Datalink statistics

-- Total of 3 flows:

Average throughput: 13.12 Mbit/s

95th percentile per-packet one-way delay: 2.352 ms

Loss rate: 24.02%

-- Flow 1:

Average throughput: 9.10 Mbit/s

95th percentile per-packet one-way delay: 2.357 ms

Loss rate: 21.04%

-- Flow 2:

Average throughput: 4.33 Mbit/s

95th percentile per-packet one-way delay: 0.976 ms

Loss rate: 32.04%

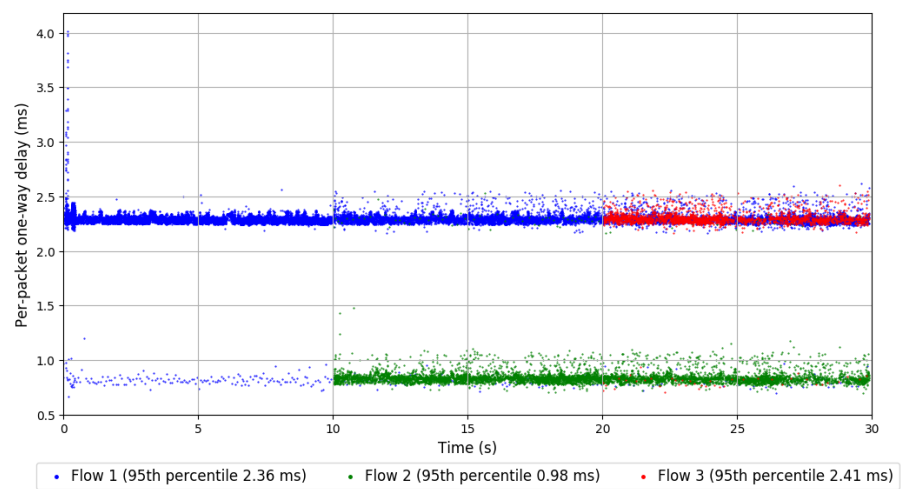
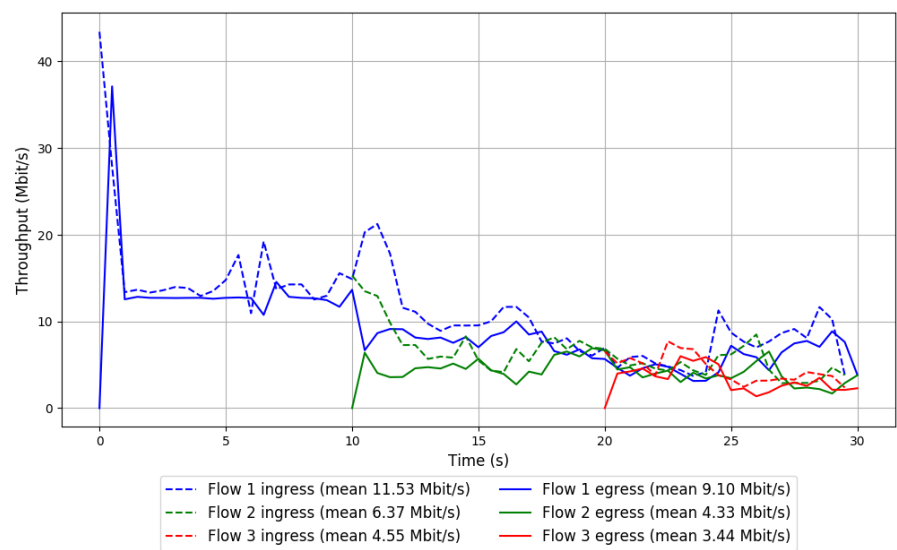
-- Flow 3:

Average throughput: 3.44 Mbit/s

95th percentile per-packet one-way delay: 2.412 ms

Loss rate: 24.29%

Run 4: Report of PCC-Expr — Data Link





Run 5: Statistics of PCC-Expr

Start at: 2019-01-17 13:57:39

End at: 2019-01-17 13:58:09

Local clock offset: -4.704 ms

Remote clock offset: 1.49 ms

# Below is generated by plot.py at 2019-01-17 14:17:07

# Datalink statistics

-- Total of 3 flows:

Average throughput: 13.04 Mbit/s

95th percentile per-packet one-way delay: 3.184 ms

Loss rate: 23.92%

-- Flow 1:

Average throughput: 8.53 Mbit/s

95th percentile per-packet one-way delay: 1.786 ms

Loss rate: 24.13%

-- Flow 2:

Average throughput: 3.82 Mbit/s

95th percentile per-packet one-way delay: 3.299 ms

Loss rate: 27.23%

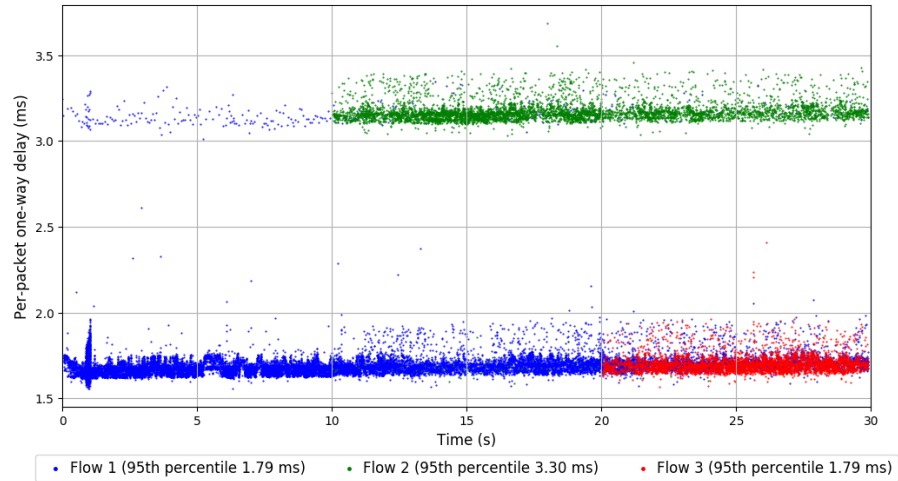
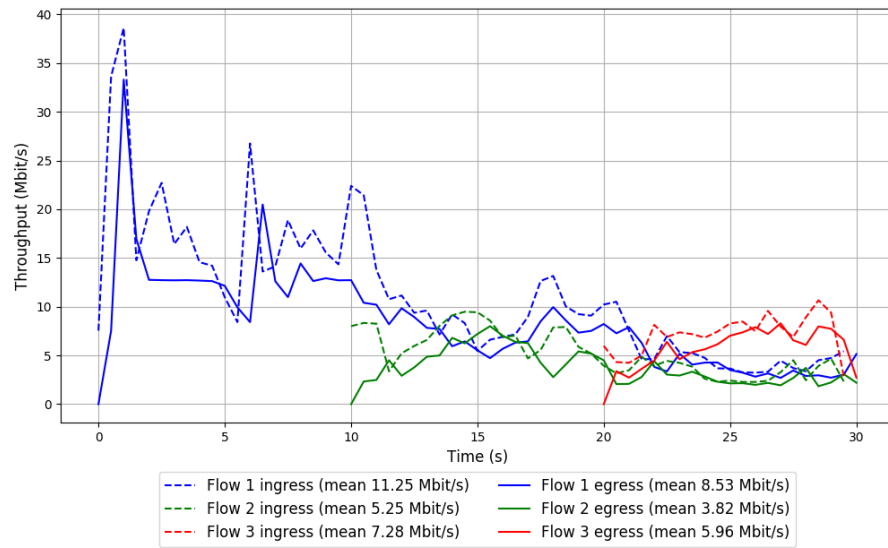
-- Flow 3:

Average throughput: 5.96 Mbit/s

95th percentile per-packet one-way delay: 1.794 ms

Loss rate: 18.15%

## Run 5: Report of PCC-Expr — Data Link



Run 1: Statistics of QUIC Cubic

Start at: 2019-01-17 12:12:53

End at: 2019-01-17 12:13:23

Local clock offset: -6.345 ms

Remote clock offset: 1.421 ms

# Below is generated by plot.py at 2019-01-17 14:17:46

# Datalink statistics

-- Total of 3 flows:

Average throughput: 88.63 Mbit/s

95th percentile per-packet one-way delay: 31.890 ms

Loss rate: 0.14%

-- Flow 1:

Average throughput: 55.65 Mbit/s

95th percentile per-packet one-way delay: 31.813 ms

Loss rate: 0.11%

-- Flow 2:

Average throughput: 35.37 Mbit/s

95th percentile per-packet one-way delay: 31.988 ms

Loss rate: 0.17%

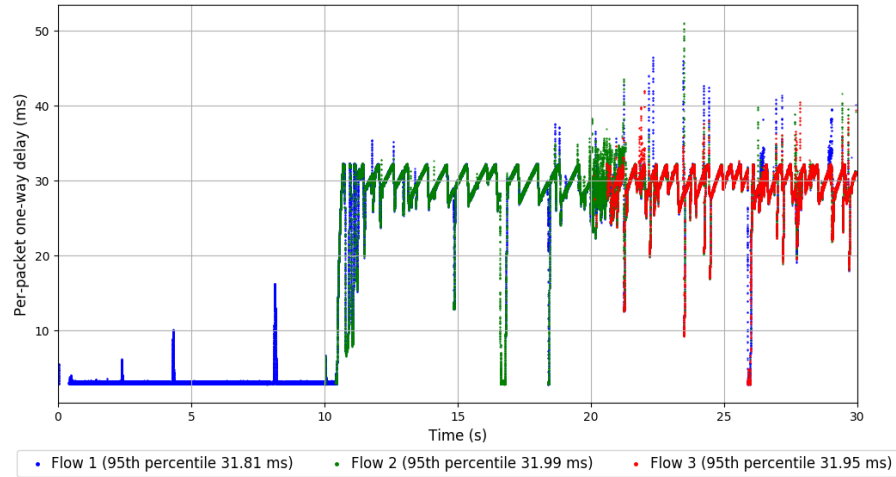
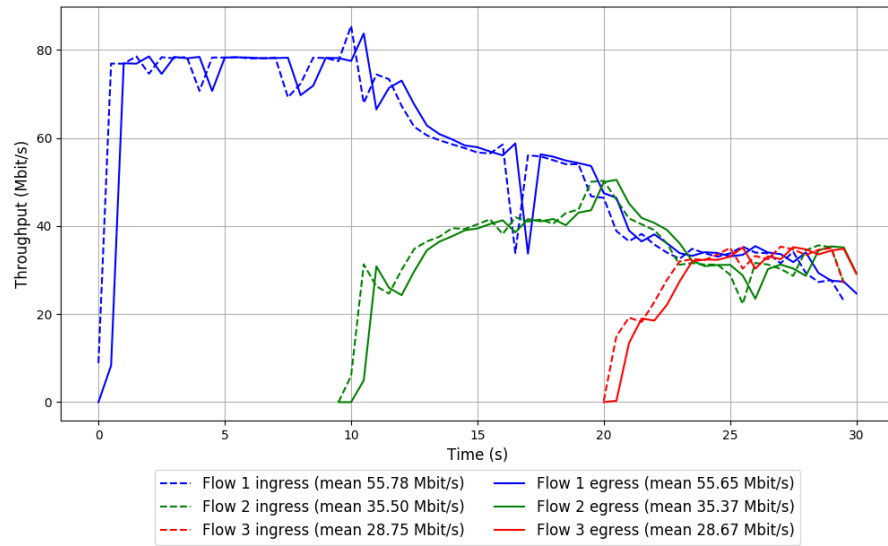
-- Flow 3:

Average throughput: 28.67 Mbit/s

95th percentile per-packet one-way delay: 31.947 ms

Loss rate: 0.19%

# Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2019-01-17 12:36:46

End at: 2019-01-17 12:37:16

Local clock offset: -5.468 ms

Remote clock offset: 1.376 ms

# Below is generated by plot.py at 2019-01-17 14:17:50

# Datalink statistics

-- Total of 3 flows:

Average throughput: 91.06 Mbit/s

95th percentile per-packet one-way delay: 31.946 ms

Loss rate: 0.16%

-- Flow 1:

Average throughput: 60.12 Mbit/s

95th percentile per-packet one-way delay: 31.893 ms

Loss rate: 0.14%

-- Flow 2:

Average throughput: 33.45 Mbit/s

95th percentile per-packet one-way delay: 32.123 ms

Loss rate: 0.21%

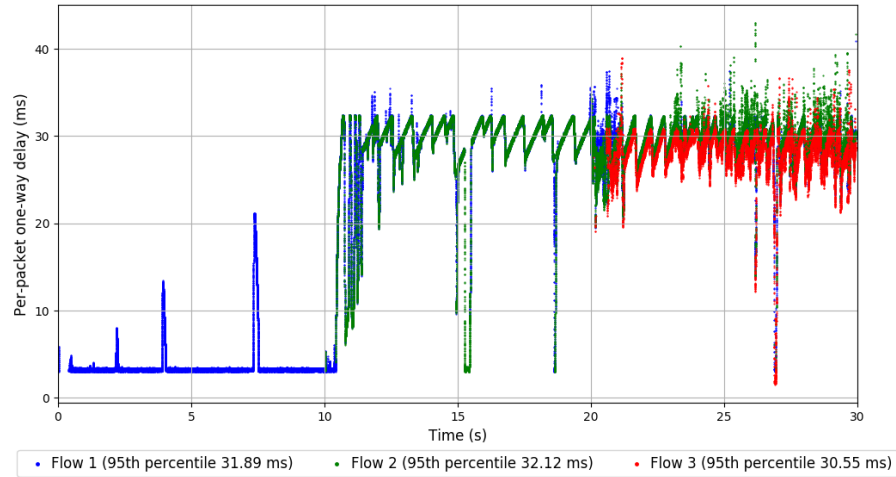
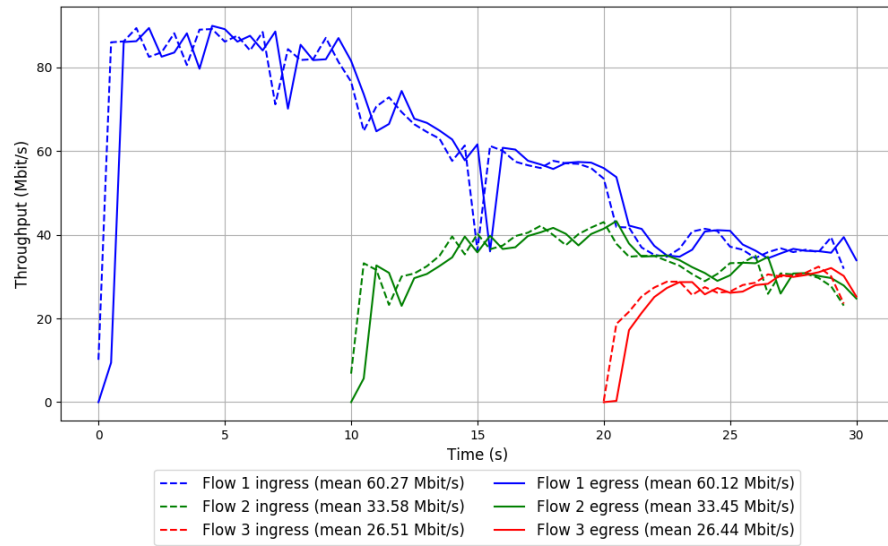
-- Flow 3:

Average throughput: 26.44 Mbit/s

95th percentile per-packet one-way delay: 30.549 ms

Loss rate: 0.23%

## Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2019-01-17 13:00:41

End at: 2019-01-17 13:01:11

Local clock offset: -4.711 ms

Remote clock offset: 1.226 ms

# Below is generated by plot.py at 2019-01-17 14:17:52

# Datalink statistics

-- Total of 3 flows:

Average throughput: 89.38 Mbit/s

95th percentile per-packet one-way delay: 30.548 ms

Loss rate: 0.10%

-- Flow 1:

Average throughput: 55.23 Mbit/s

95th percentile per-packet one-way delay: 30.450 ms

Loss rate: 0.08%

-- Flow 2:

Average throughput: 37.14 Mbit/s

95th percentile per-packet one-way delay: 30.588 ms

Loss rate: 0.12%

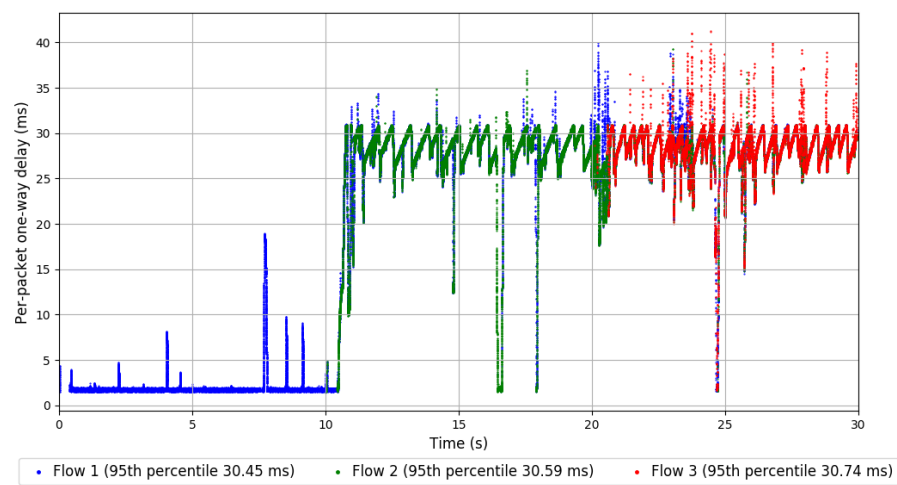
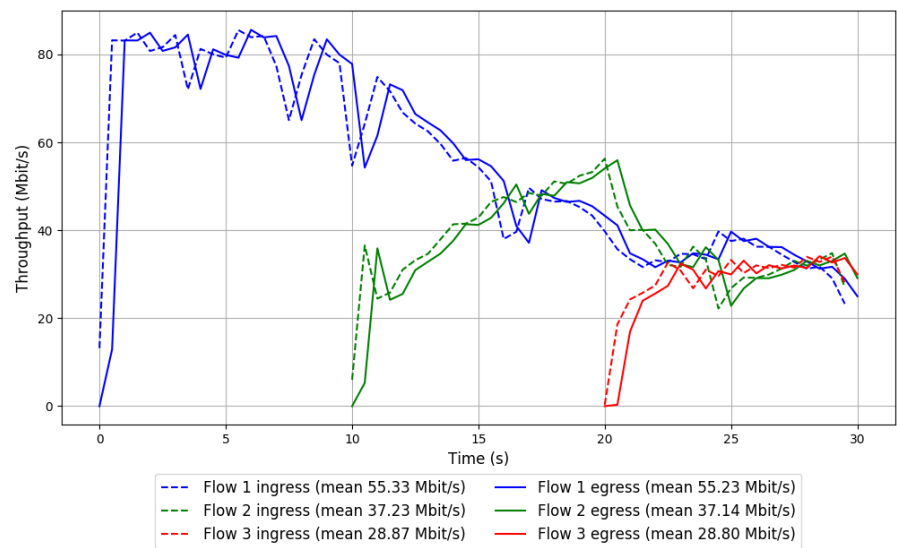
-- Flow 3:

Average throughput: 28.80 Mbit/s

95th percentile per-packet one-way delay: 30.740 ms

Loss rate: 0.21%

Run 3: Report of QUIC Cubic — Data Link





Run 4: Statistics of QUIC Cubic

Start at: 2019-01-17 13:24:36

End at: 2019-01-17 13:25:06

Local clock offset: -4.356 ms

Remote clock offset: 1.428 ms

# Below is generated by plot.py at 2019-01-17 14:17:55

# Datalink statistics

-- Total of 3 flows:

Average throughput: 90.34 Mbit/s

95th percentile per-packet one-way delay: 30.991 ms

Loss rate: 0.17%

-- Flow 1:

Average throughput: 56.21 Mbit/s

95th percentile per-packet one-way delay: 29.654 ms

Loss rate: 0.16%

-- Flow 2:

Average throughput: 36.57 Mbit/s

95th percentile per-packet one-way delay: 31.396 ms

Loss rate: 0.18%

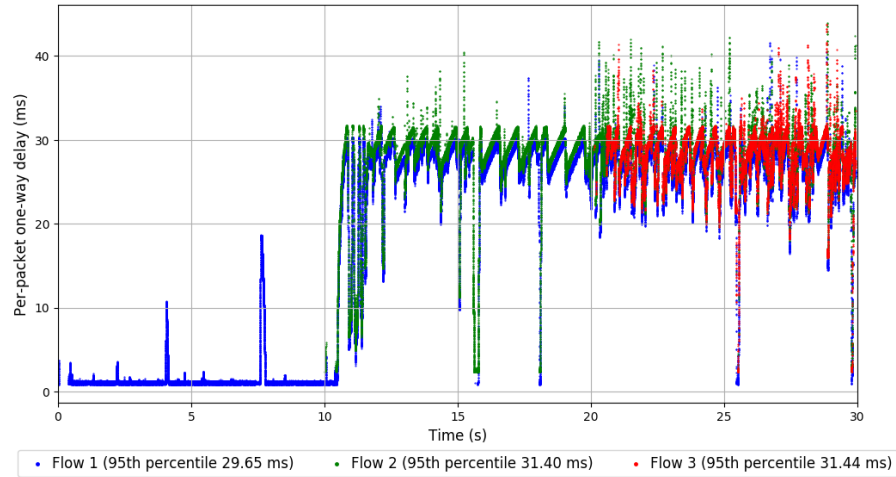
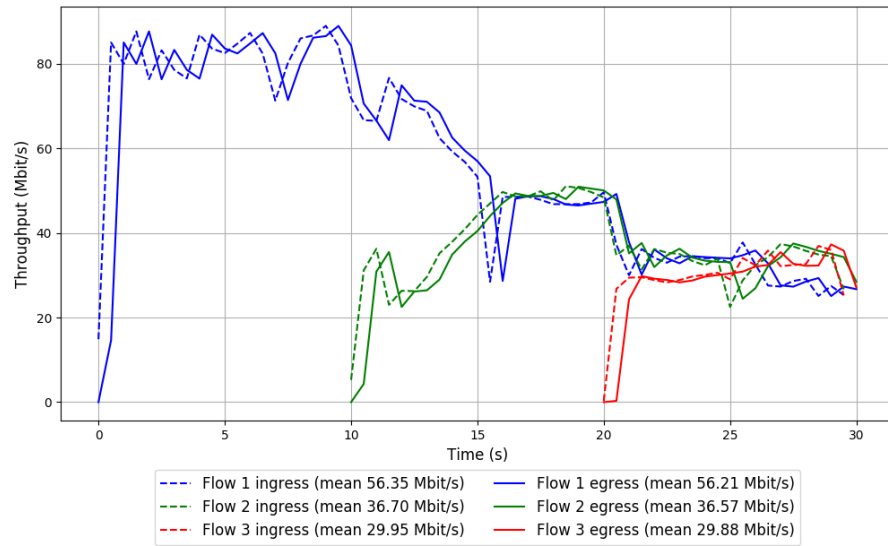
-- Flow 3:

Average throughput: 29.88 Mbit/s

95th percentile per-packet one-way delay: 31.436 ms

Loss rate: 0.20%

#### Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2019-01-17 13:48:30

End at: 2019-01-17 13:49:00

Local clock offset: -4.805 ms

Remote clock offset: 1.537 ms

# Below is generated by plot.py at 2019-01-17 14:17:58

# Datalink statistics

-- Total of 3 flows:

Average throughput: 90.63 Mbit/s

95th percentile per-packet one-way delay: 30.775 ms

Loss rate: 0.16%

-- Flow 1:

Average throughput: 55.52 Mbit/s

95th percentile per-packet one-way delay: 29.660 ms

Loss rate: 0.16%

-- Flow 2:

Average throughput: 37.86 Mbit/s

95th percentile per-packet one-way delay: 31.384 ms

Loss rate: 0.16%

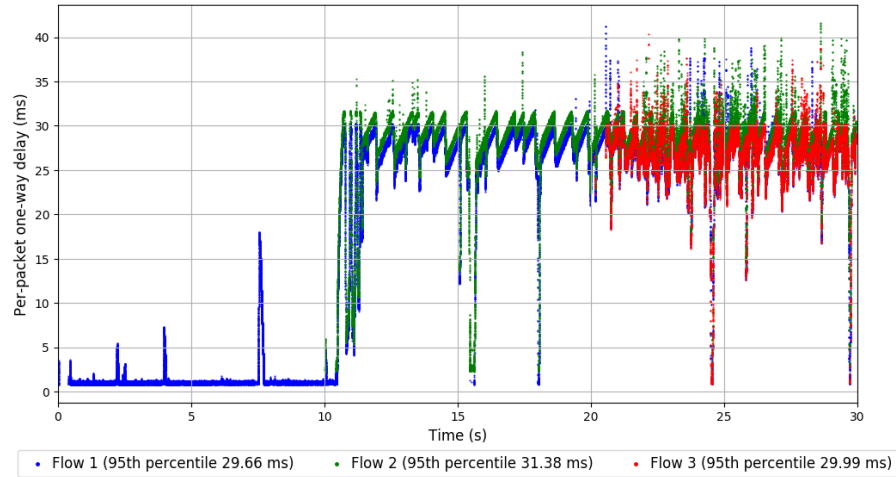
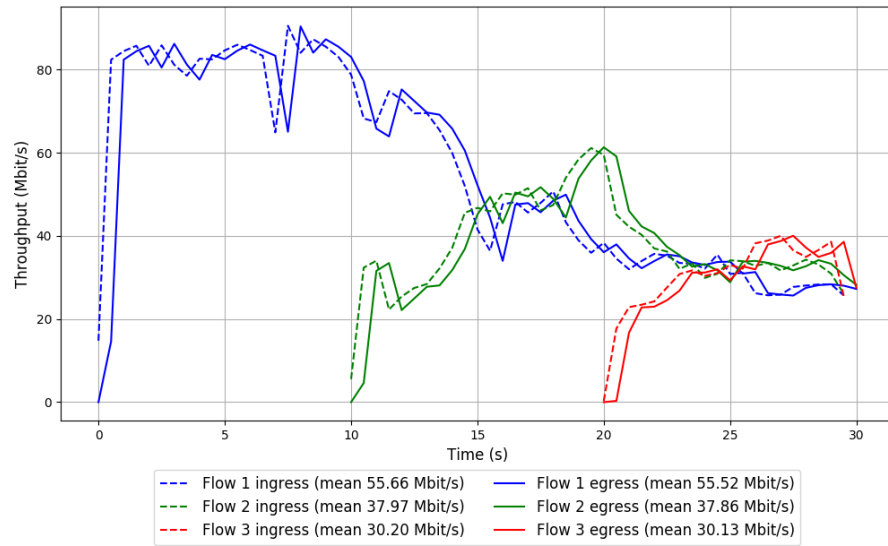
-- Flow 3:

Average throughput: 30.13 Mbit/s

95th percentile per-packet one-way delay: 29.994 ms

Loss rate: 0.20%

## Run 5: Report of QUIC Cubic — Data Link

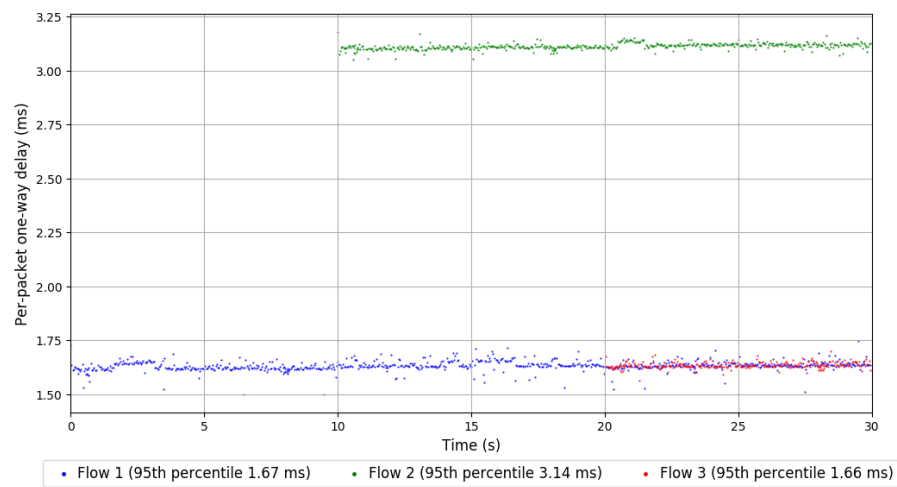
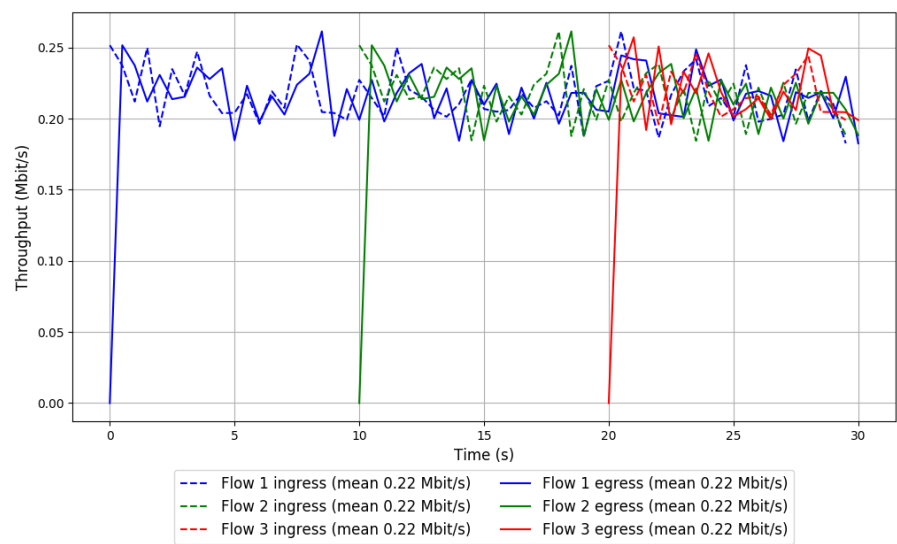


```
Run 1: Statistics of SReAM

Start at: 2019-01-17 12:28:51
End at: 2019-01-17 12:29:21
Local clock offset: -5.508 ms
Remote clock offset: 1.344 ms

# Below is generated by plot.py at 2019-01-17 14:17:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 3.125 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.666 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 3.136 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.659 ms
Loss rate: 0.00%
```

Run 1: Report of SReAM — Data Link



Run 2: Statistics of SReAM

Start at: 2019-01-17 12:52:46

End at: 2019-01-17 12:53:16

Local clock offset: -5.121 ms

Remote clock offset: 1.245 ms

# Below is generated by plot.py at 2019-01-17 14:17:58

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.32 Mbit/s

95th percentile per-packet one-way delay: 3.204 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 1.731 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.13 Mbit/s

95th percentile per-packet one-way delay: 1.729 ms

Loss rate: 0.00%

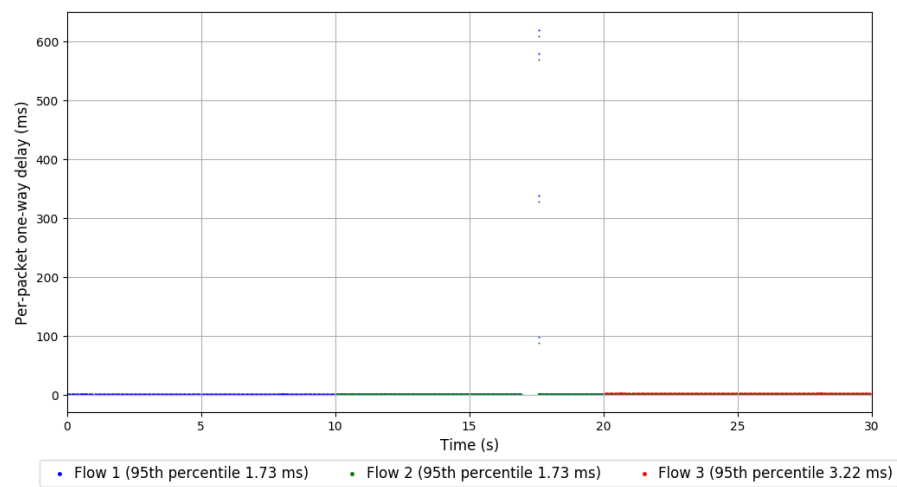
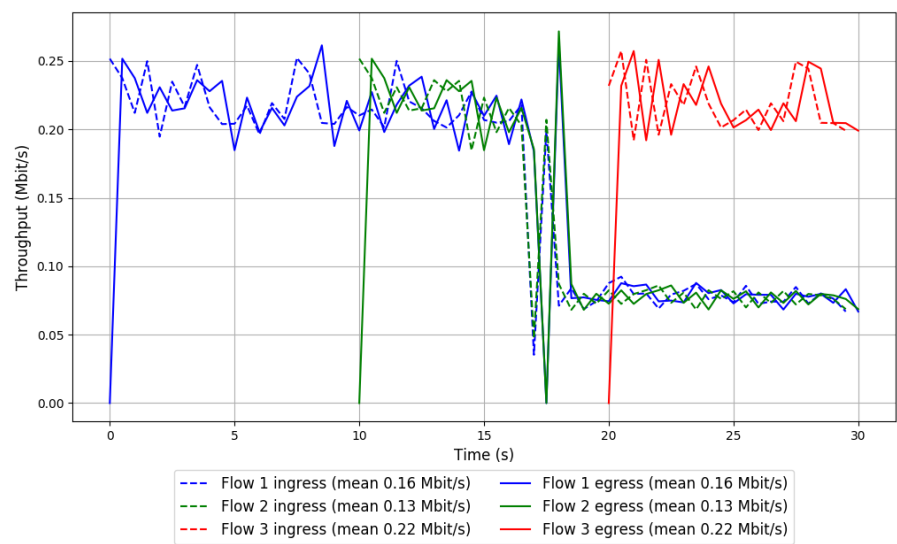
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 3.220 ms

Loss rate: 0.00%

Run 2: Report of SReAM — Data Link



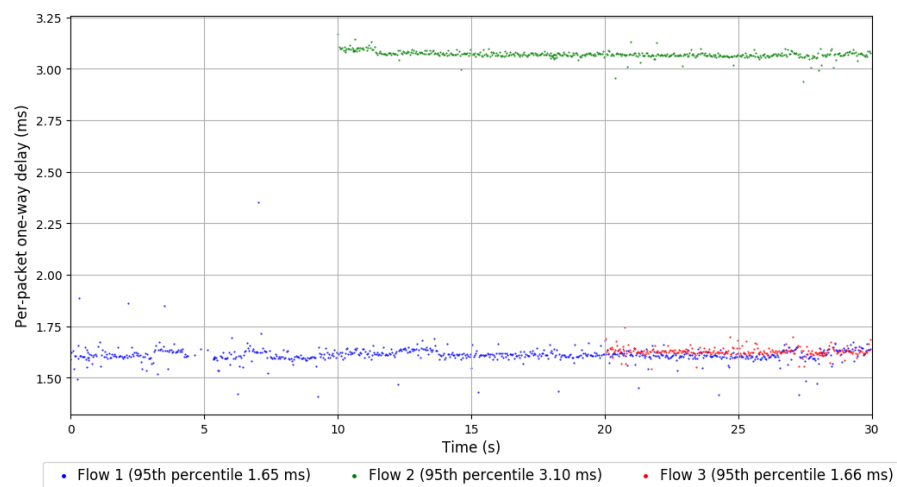
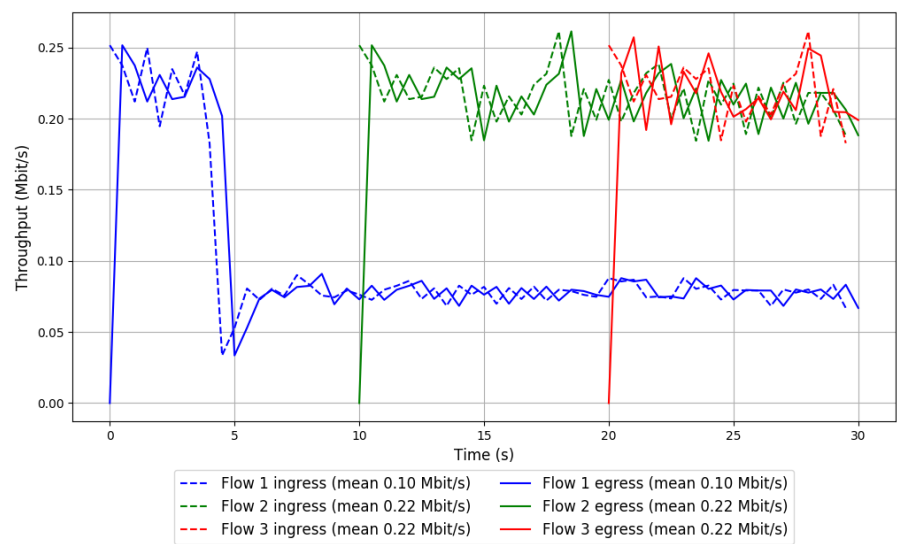


Run 3: Statistics of SReAM

Start at: 2019-01-17 13:16:40  
End at: 2019-01-17 13:17:10  
Local clock offset: -4.83 ms  
Remote clock offset: 1.24 ms

# Below is generated by plot.py at 2019-01-17 14:17:58  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.32 Mbit/s  
95th percentile per-packet one-way delay: 3.084 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.10 Mbit/s  
95th percentile per-packet one-way delay: 1.649 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 3.099 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 1.663 ms  
Loss rate: 0.00%

Run 3: Report of SReAM — Data Link



Run 4: Statistics of SReAM

Start at: 2019-01-17 13:40:34

End at: 2019-01-17 13:41:04

Local clock offset: -5.521 ms

Remote clock offset: 1.513 ms

# Below is generated by plot.py at 2019-01-17 14:17:58

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 1.634 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.644 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.628 ms

Loss rate: 0.00%

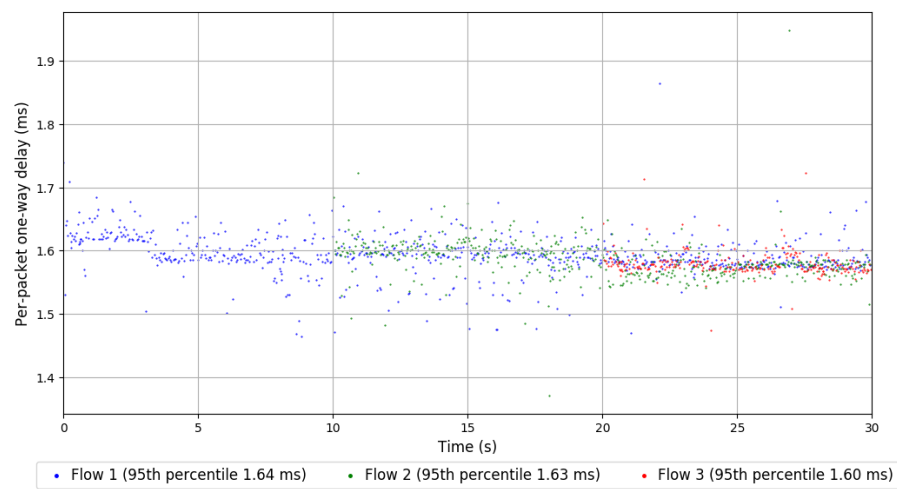
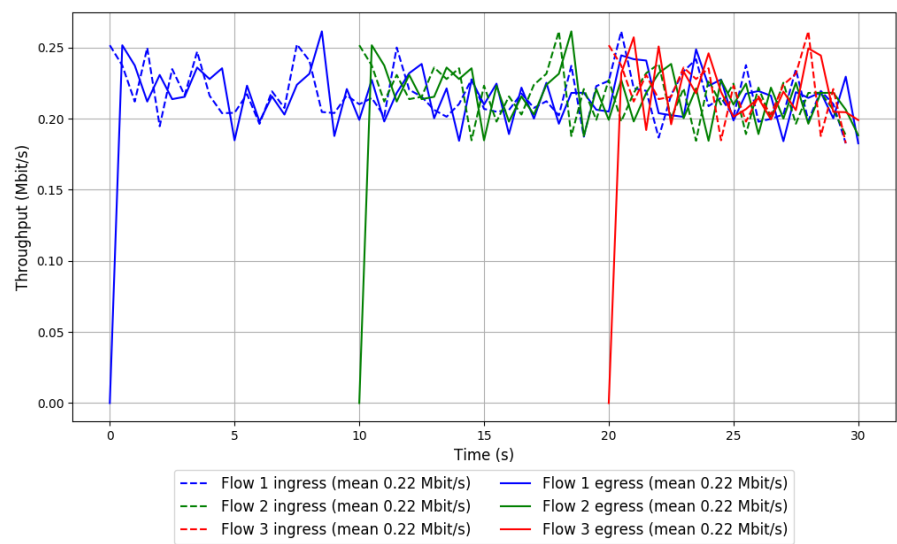
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.604 ms

Loss rate: 0.00%

Run 4: Report of SReAM — Data Link



Run 5: Statistics of SReAM

Start at: 2019-01-17 14:04:29

End at: 2019-01-17 14:04:59

Local clock offset: -3.699 ms

Remote clock offset: 1.442 ms

# Below is generated by plot.py at 2019-01-17 14:17:58

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 2.461 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 2.464 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 2.461 ms

Loss rate: 0.00%

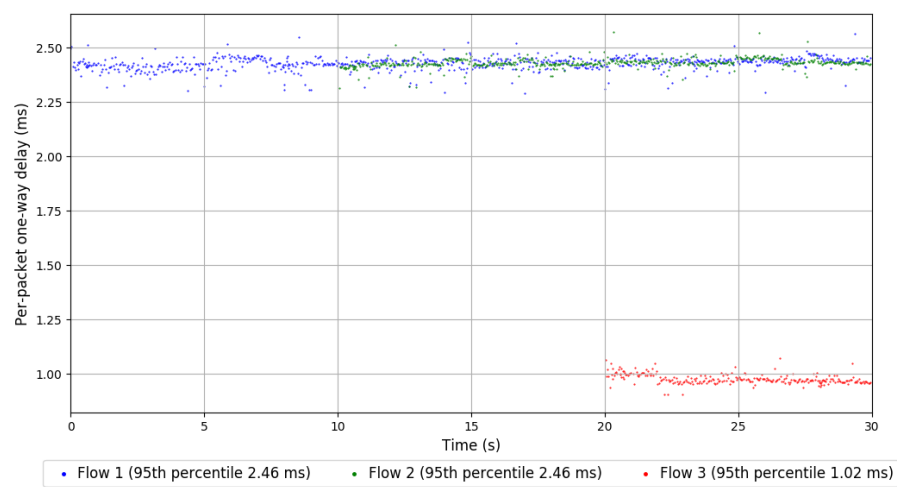
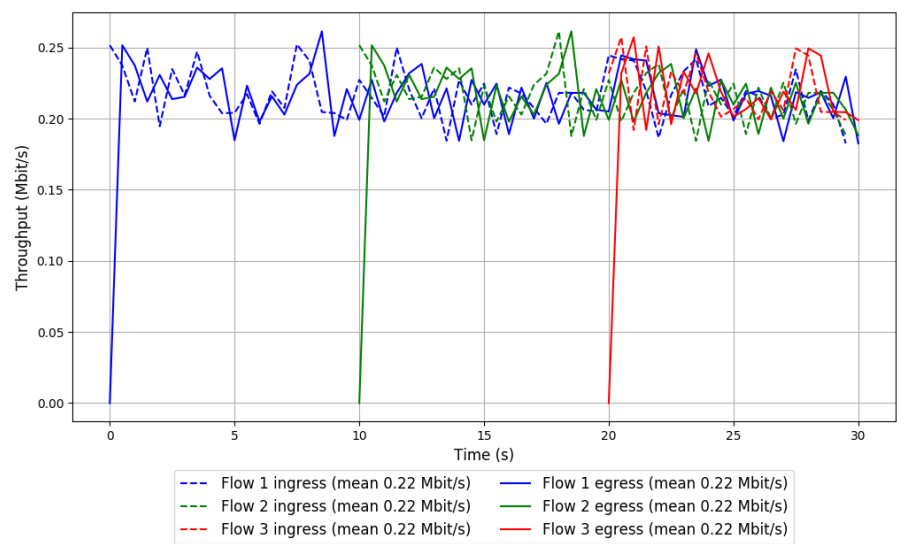
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.020 ms

Loss rate: 0.00%

Run 5: Report of SReAM — Data Link

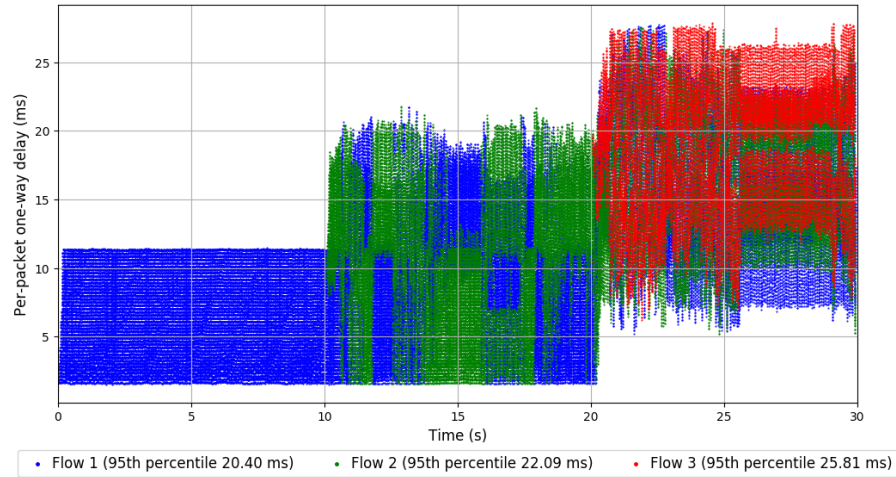
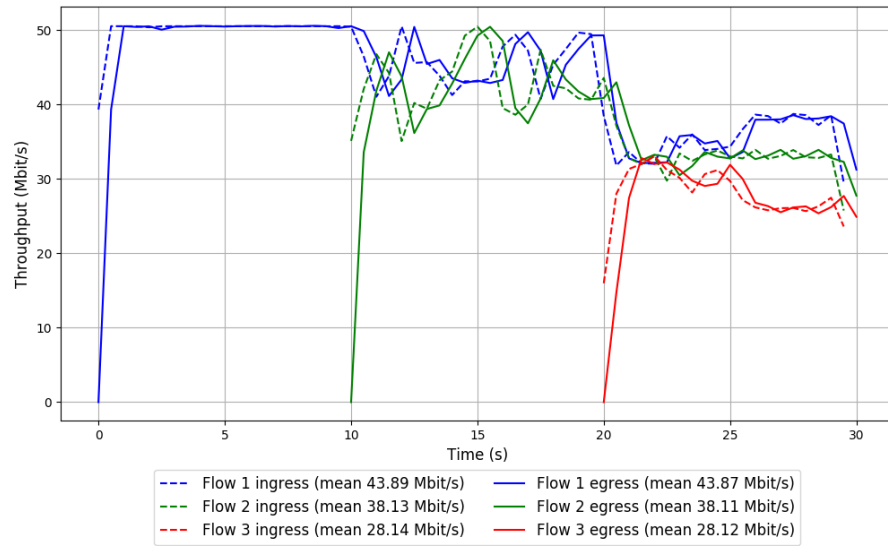


Run 1: Statistics of Sprout

Start at: 2019-01-17 12:26:35  
End at: 2019-01-17 12:27:05  
Local clock offset: -5.603 ms  
Remote clock offset: 1.391 ms

# Below is generated by plot.py at 2019-01-17 14:17:58  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 78.50 Mbit/s  
95th percentile per-packet one-way delay: 22.783 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 43.87 Mbit/s  
95th percentile per-packet one-way delay: 20.402 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 38.11 Mbit/s  
95th percentile per-packet one-way delay: 22.087 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 28.12 Mbit/s  
95th percentile per-packet one-way delay: 25.813 ms  
Loss rate: 0.00%

## Run 1: Report of Sprout — Data Link



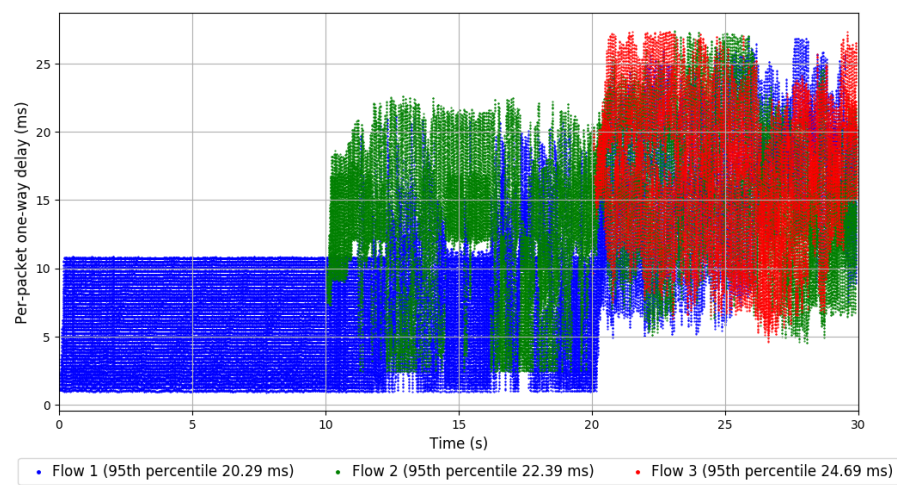
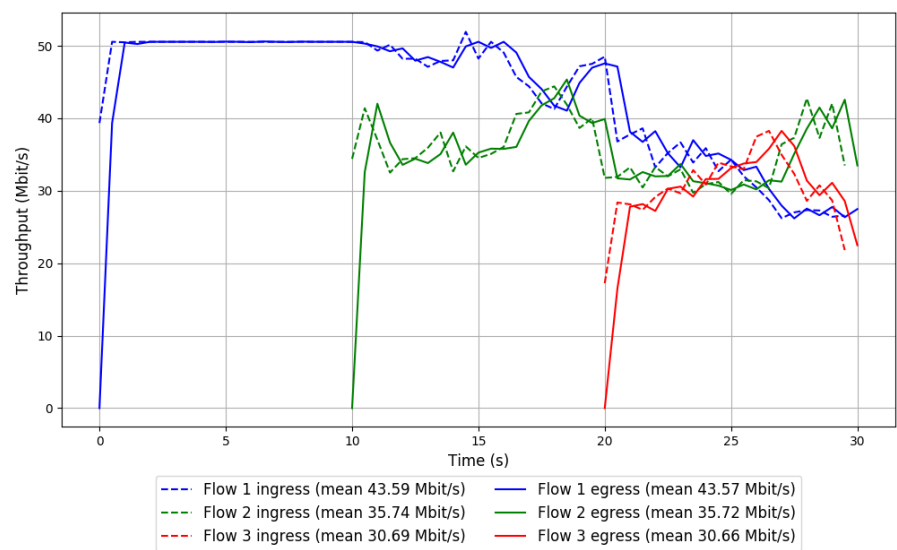


Run 2: Statistics of Sprout

Start at: 2019-01-17 12:50:29  
End at: 2019-01-17 12:50:59  
Local clock offset: -4.592 ms  
Remote clock offset: 1.349 ms

# Below is generated by plot.py at 2019-01-17 14:18:03  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 77.46 Mbit/s  
95th percentile per-packet one-way delay: 22.191 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 43.57 Mbit/s  
95th percentile per-packet one-way delay: 20.291 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 35.72 Mbit/s  
95th percentile per-packet one-way delay: 22.393 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 30.66 Mbit/s  
95th percentile per-packet one-way delay: 24.691 ms  
Loss rate: 0.00%

Run 2: Report of Sprout — Data Link

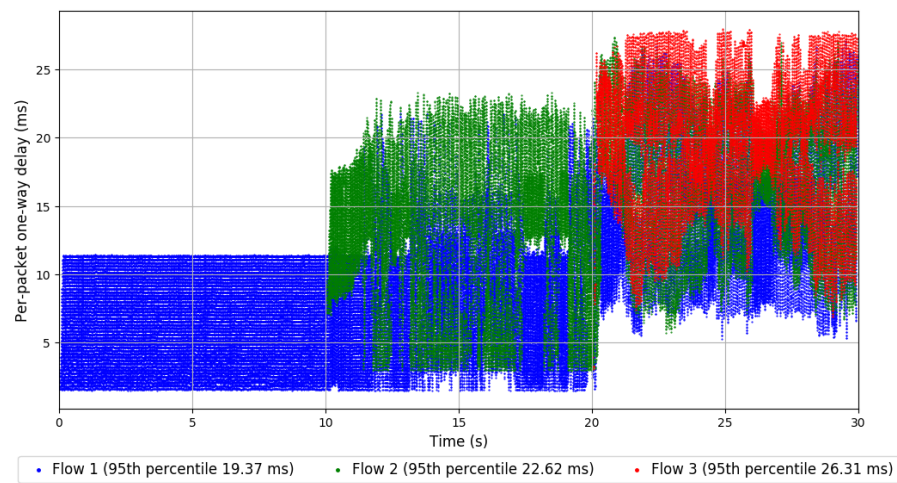
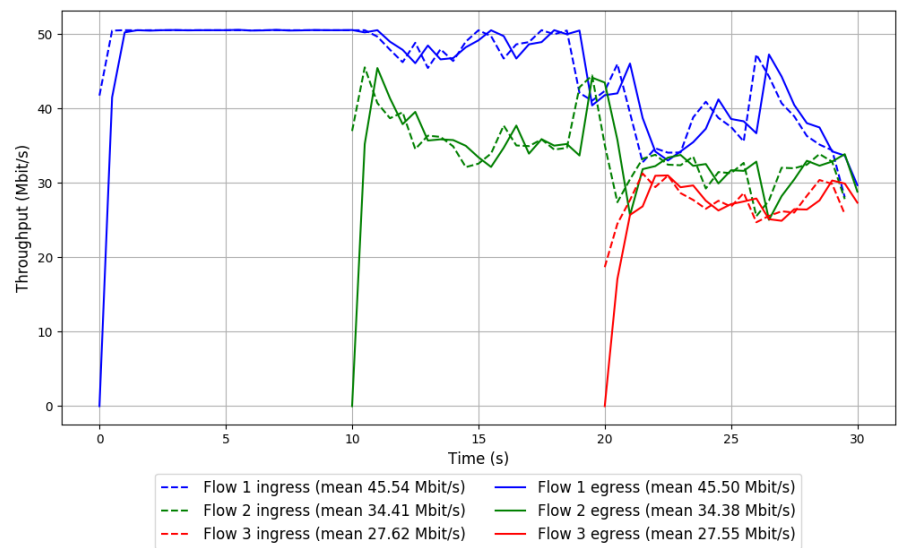


### Run 3: Statistics of Sprout

Start at: 2019-01-17 13:14:24  
End at: 2019-01-17 13:14:54  
Local clock offset: -4.776 ms  
Remote clock offset: 1.216 ms

```
# Below is generated by plot.py at 2019-01-17 14:18:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.49 Mbit/s
95th percentile per-packet one-way delay: 22.893 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 45.50 Mbit/s
95th percentile per-packet one-way delay: 19.366 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 34.38 Mbit/s
95th percentile per-packet one-way delay: 22.623 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 27.55 Mbit/s
95th percentile per-packet one-way delay: 26.312 ms
Loss rate: 0.00%
```

Run 3: Report of Sprout — Data Link

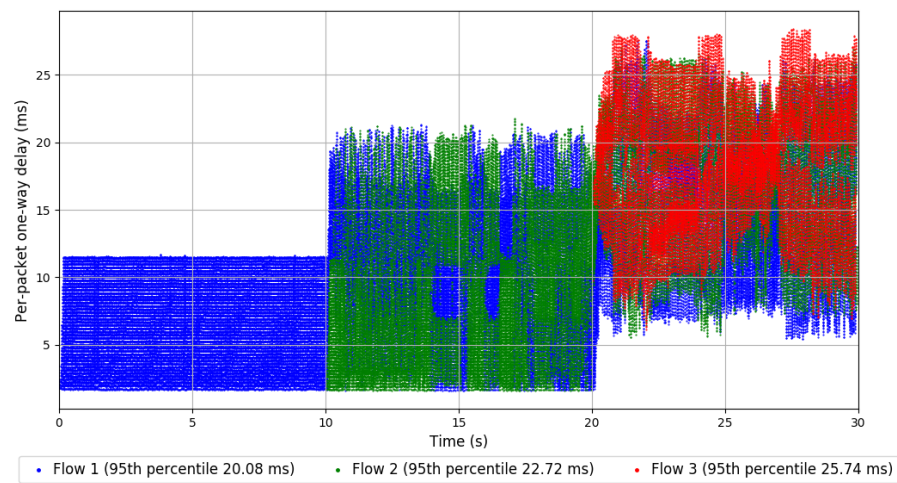
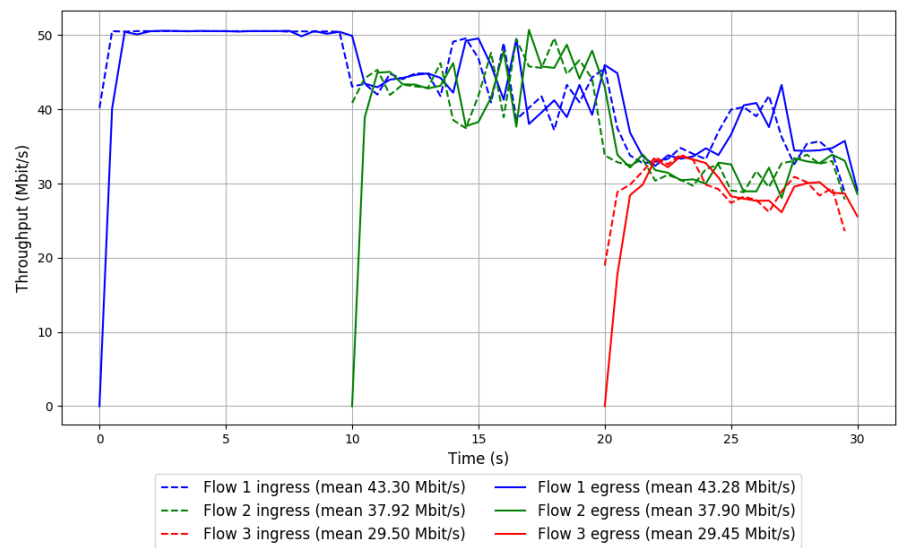


#### Run 4: Statistics of Sprout

Start at: 2019-01-17 13:38:17  
End at: 2019-01-17 13:38:47  
Local clock offset: -5.541 ms  
Remote clock offset: 1.545 ms

```
# Below is generated by plot.py at 2019-01-17 14:18:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.23 Mbit/s
95th percentile per-packet one-way delay: 22.789 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 43.28 Mbit/s
95th percentile per-packet one-way delay: 20.081 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 37.90 Mbit/s
95th percentile per-packet one-way delay: 22.721 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 29.45 Mbit/s
95th percentile per-packet one-way delay: 25.741 ms
Loss rate: 0.00%
```

Run 4: Report of Sprout — Data Link

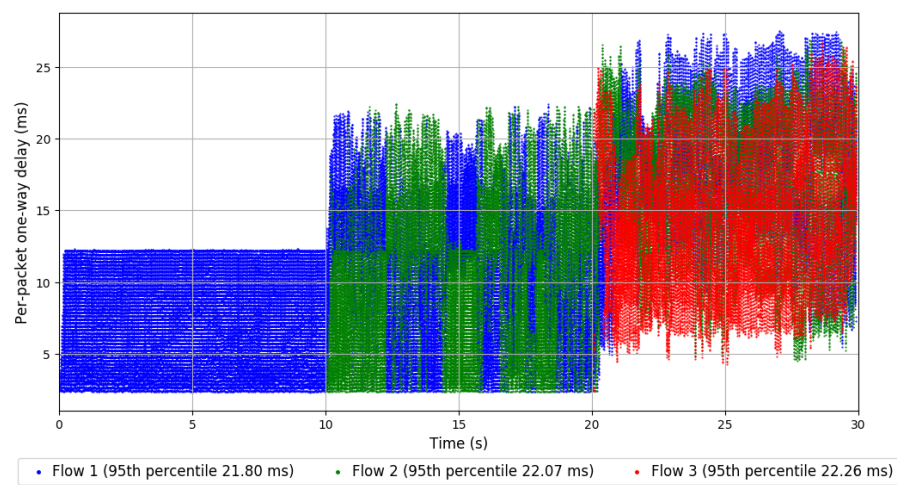
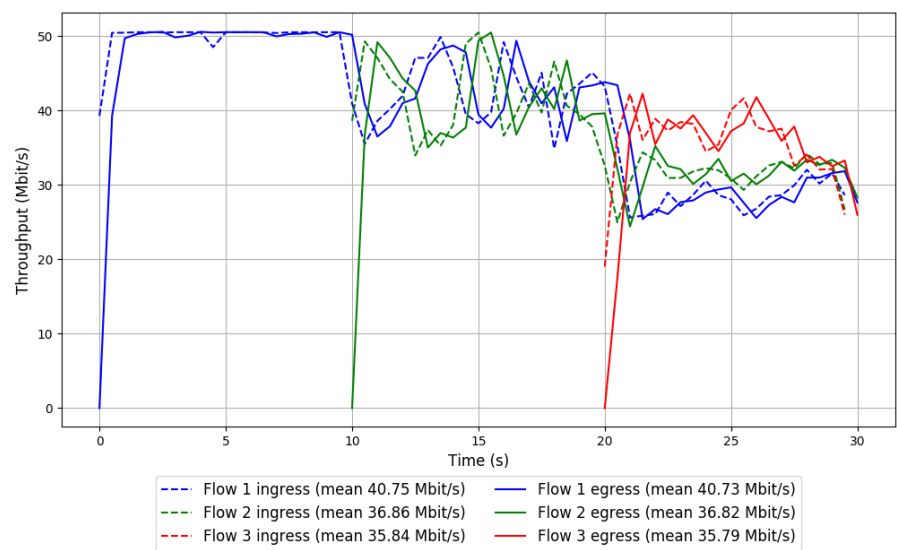


Run 5: Statistics of Sprout

Start at: 2019-01-17 14:02:12  
End at: 2019-01-17 14:02:42  
Local clock offset: -3.776 ms  
Remote clock offset: 1.487 ms

```
# Below is generated by plot.py at 2019-01-17 14:18:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.06 Mbit/s
95th percentile per-packet one-way delay: 22.023 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 40.73 Mbit/s
95th percentile per-packet one-way delay: 21.804 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 36.82 Mbit/s
95th percentile per-packet one-way delay: 22.067 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 35.79 Mbit/s
95th percentile per-packet one-way delay: 22.264 ms
Loss rate: 0.00%
```

Run 5: Report of Sprout — Data Link





Run 1: Statistics of TaoVA-100x

Start at: 2019-01-17 12:15:11

End at: 2019-01-17 12:15:41

Local clock offset: -6.662 ms

Remote clock offset: 1.568 ms

# Below is generated by plot.py at 2019-01-17 14:18:41

# Datalink statistics

-- Total of 3 flows:

Average throughput: 8.27 Mbit/s

95th percentile per-packet one-way delay: 3.225 ms

Loss rate: 83.97%

-- Flow 1:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 1.804 ms

Loss rate: 95.92%

-- Flow 2:

Average throughput: 12.41 Mbit/s

95th percentile per-packet one-way delay: 3.225 ms

Loss rate: 83.96%

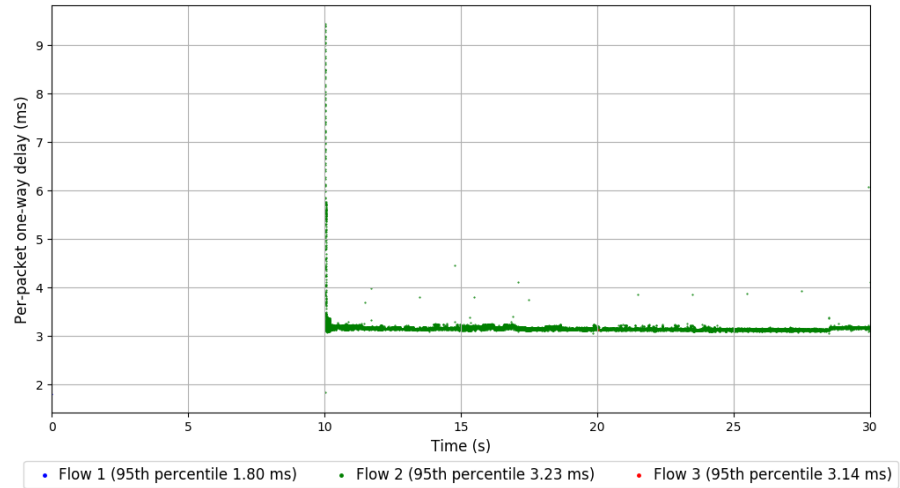
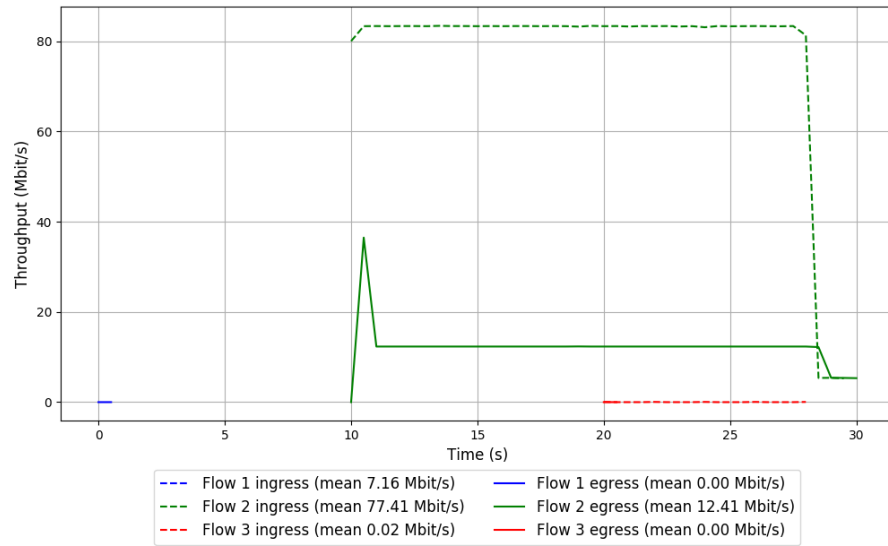
-- Flow 3:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 3.138 ms

Loss rate: 99.16%

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



Run 2: Statistics of TaoVA-100x

Start at: 2019-01-17 12:39:05

End at: 2019-01-17 12:39:35

Local clock offset: -5.517 ms

Remote clock offset: 1.385 ms

# Below is generated by plot.py at 2019-01-17 14:18:41

# Datalink statistics

-- Total of 3 flows:

Average throughput: 8.62 Mbit/s

95th percentile per-packet one-way delay: 3.122 ms

Loss rate: 84.15%

-- Flow 1:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 1.794 ms

Loss rate: 95.92%

-- Flow 2:

Average throughput: 11.58 Mbit/s

95th percentile per-packet one-way delay: 1.723 ms

Loss rate: 84.20%

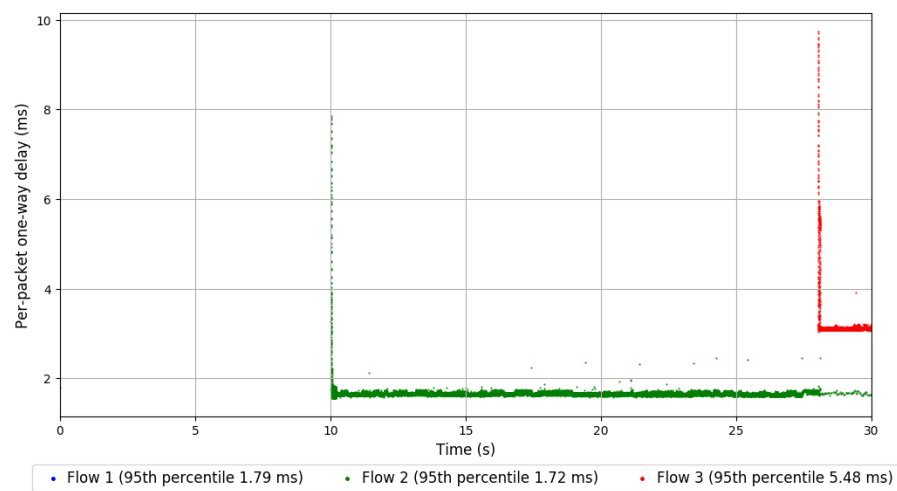
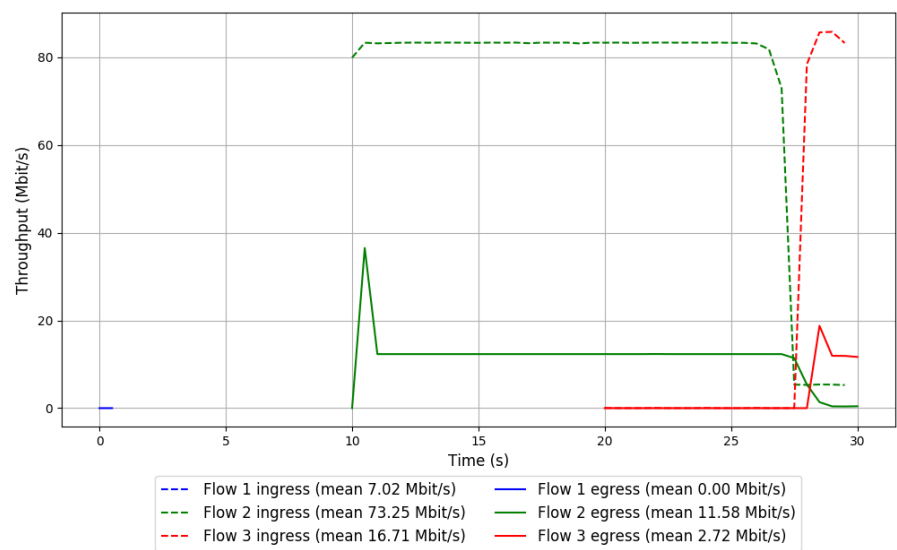
-- Flow 3:

Average throughput: 2.72 Mbit/s

95th percentile per-packet one-way delay: 5.480 ms

Loss rate: 83.71%

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



Run 3: Statistics of TaoVA-100x

Start at: 2019-01-17 13:03:00

End at: 2019-01-17 13:03:30

Local clock offset: -4.665 ms

Remote clock offset: 1.219 ms

# Below is generated by plot.py at 2019-01-17 14:18:41

# Datalink statistics

-- Total of 3 flows:

Average throughput: 8.62 Mbit/s

95th percentile per-packet one-way delay: 3.160 ms

Loss rate: 87.00%

-- Flow 1:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 3.227 ms

Loss rate: 95.92%

-- Flow 2:

Average throughput: 12.19 Mbit/s

95th percentile per-packet one-way delay: 3.160 ms

Loss rate: 84.25%

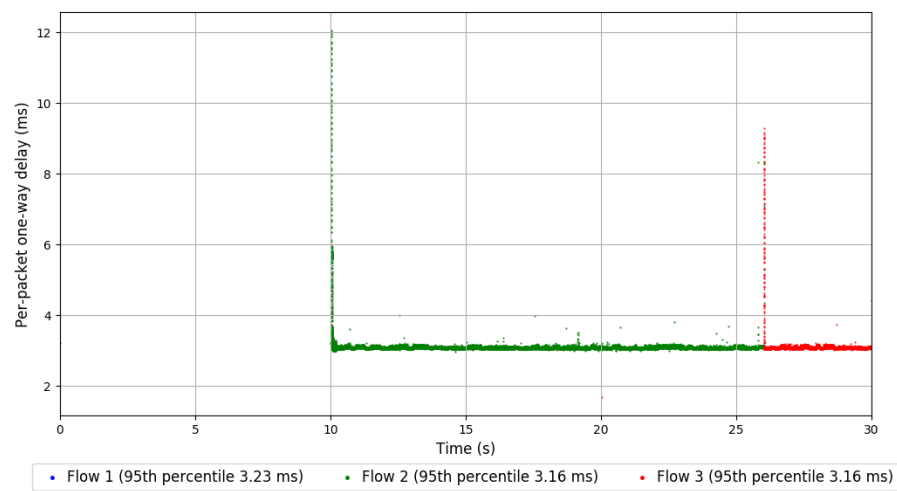
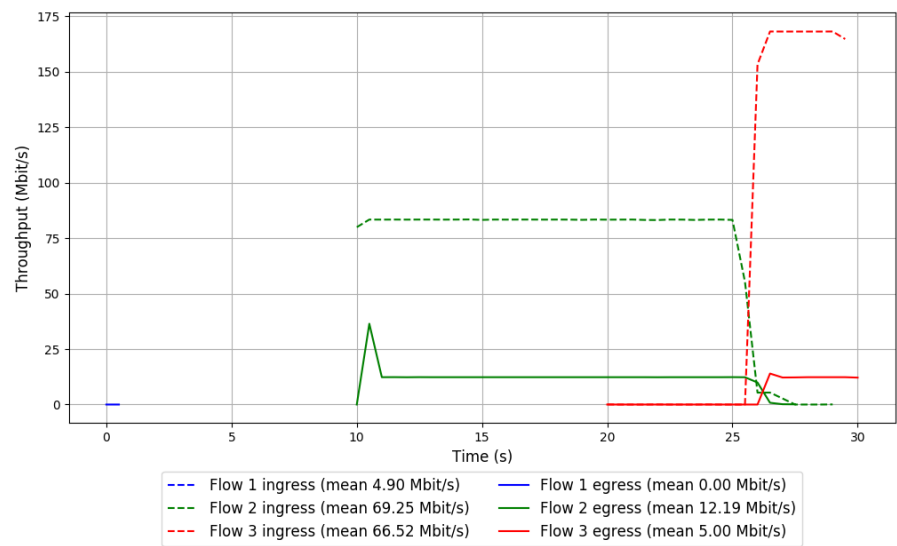
-- Flow 3:

Average throughput: 5.00 Mbit/s

95th percentile per-packet one-way delay: 3.162 ms

Loss rate: 92.48%

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



Run 4: Statistics of TaoVA-100x

Start at: 2019-01-17 13:26:54

End at: 2019-01-17 13:27:24

Local clock offset: -4.331 ms

Remote clock offset: 1.48 ms

# Below is generated by plot.py at 2019-01-17 14:18:41

# Datalink statistics

-- Total of 3 flows:

Average throughput: 7.10 Mbit/s

95th percentile per-packet one-way delay: 2.456 ms

Loss rate: 80.00%

-- Flow 1:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 1.003 ms

Loss rate: 95.92%

-- Flow 2:

Average throughput: 4.14 Mbit/s

95th percentile per-packet one-way delay: 4.416 ms

Loss rate: 64.85%

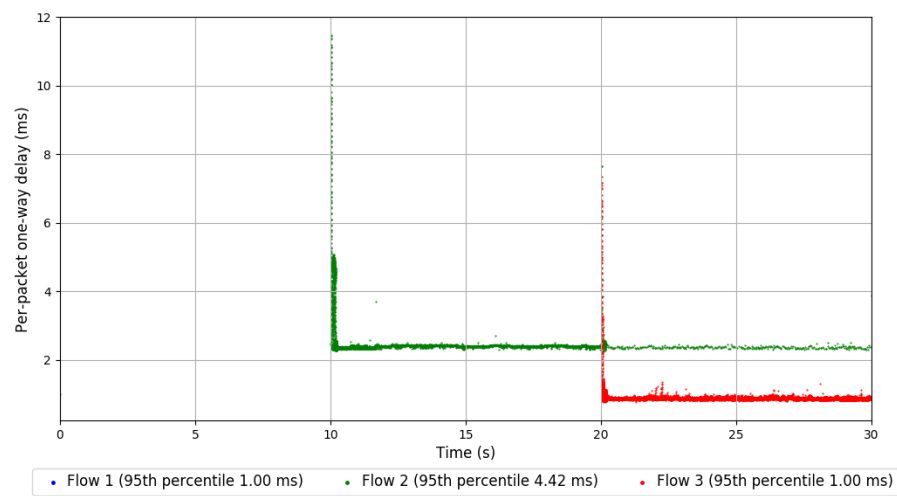
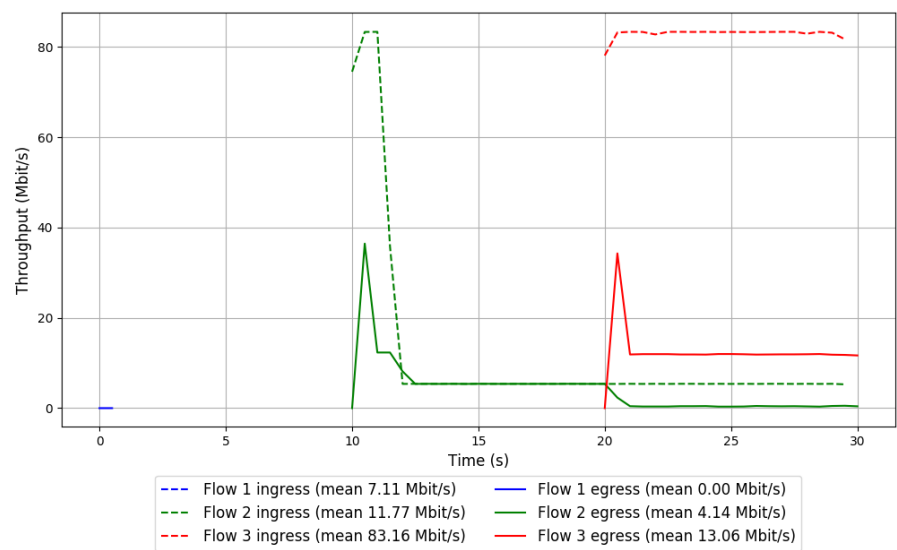
-- Flow 3:

Average throughput: 13.06 Mbit/s

95th percentile per-packet one-way delay: 0.999 ms

Loss rate: 84.30%

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





Run 5: Statistics of TaoVA-100x

Start at: 2019-01-17 13:50:49

End at: 2019-01-17 13:51:19

Local clock offset: -4.519 ms

Remote clock offset: 1.523 ms

# Below is generated by plot.py at 2019-01-17 14:18:41

# Datalink statistics

-- Total of 3 flows:

Average throughput: 8.62 Mbit/s

95th percentile per-packet one-way delay: 2.521 ms

Loss rate: 93.16%

-- Flow 1:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 1.046 ms

Loss rate: 95.92%

-- Flow 2:

Average throughput: 8.02 Mbit/s

95th percentile per-packet one-way delay: 2.526 ms

Loss rate: 90.37%

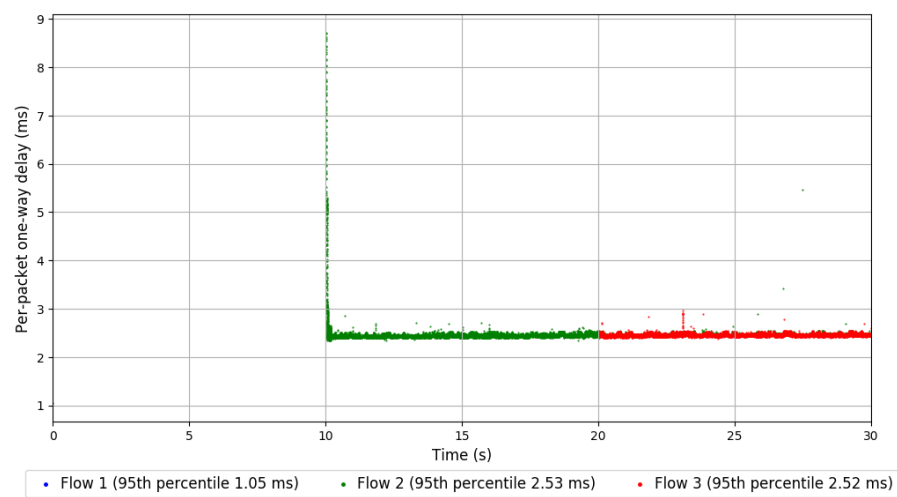
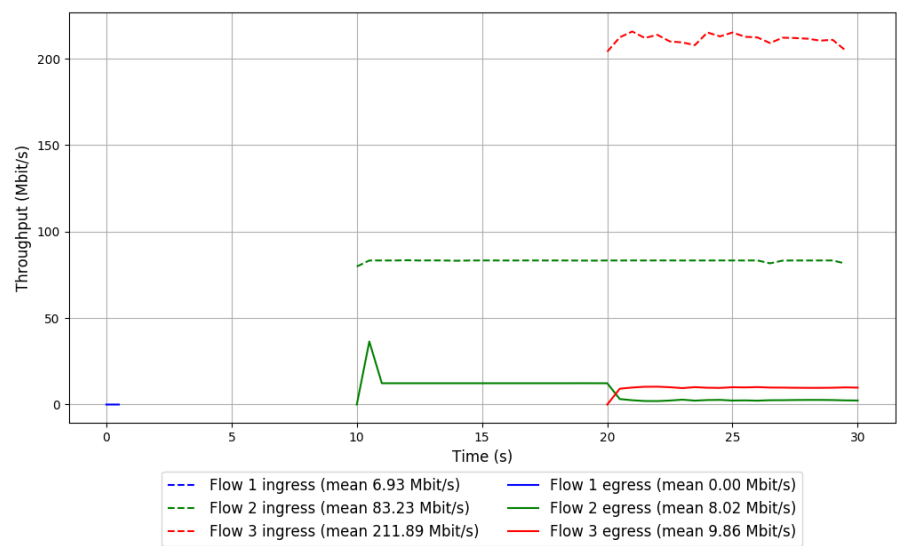
-- Flow 3:

Average throughput: 9.86 Mbit/s

95th percentile per-packet one-way delay: 2.517 ms

Loss rate: 95.35%

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



Run 1: Statistics of TCP Vegas

Start at: 2019-01-17 12:20:51

End at: 2019-01-17 12:21:21

Local clock offset: -5.481 ms

Remote clock offset: 1.475 ms

# Below is generated by plot.py at 2019-01-17 14:19:12

# Datalink statistics

-- Total of 3 flows:

Average throughput: 97.46 Mbit/s

95th percentile per-packet one-way delay: 4.855 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 47.14 Mbit/s

95th percentile per-packet one-way delay: 3.060 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 41.19 Mbit/s

95th percentile per-packet one-way delay: 4.801 ms

Loss rate: 0.00%

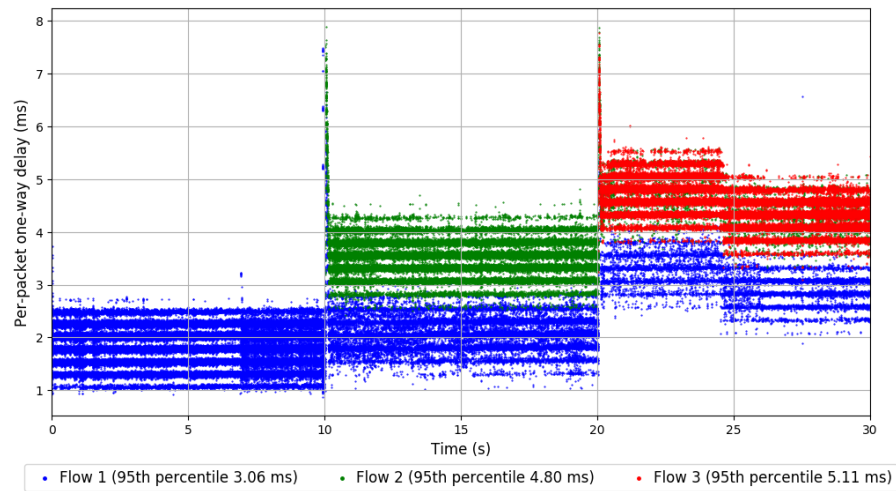
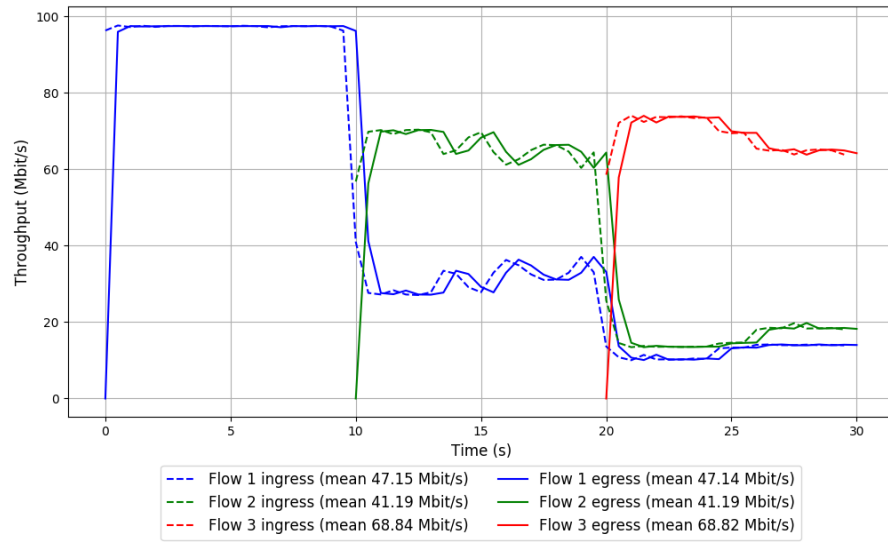
-- Flow 3:

Average throughput: 68.82 Mbit/s

95th percentile per-packet one-way delay: 5.114 ms

Loss rate: 0.01%

# Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2019-01-17 12:44:46

End at: 2019-01-17 12:45:16

Local clock offset: -5.712 ms

Remote clock offset: 1.294 ms

# Below is generated by plot.py at 2019-01-17 14:19:13

# Datalink statistics

-- Total of 3 flows:

Average throughput: 97.49 Mbit/s

95th percentile per-packet one-way delay: 3.633 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 42.91 Mbit/s

95th percentile per-packet one-way delay: 3.539 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 54.67 Mbit/s

95th percentile per-packet one-way delay: 3.617 ms

Loss rate: 0.00%

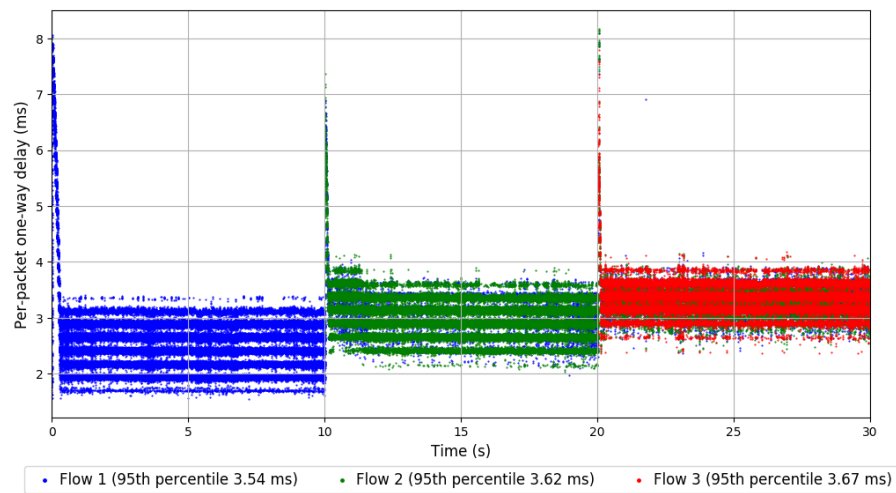
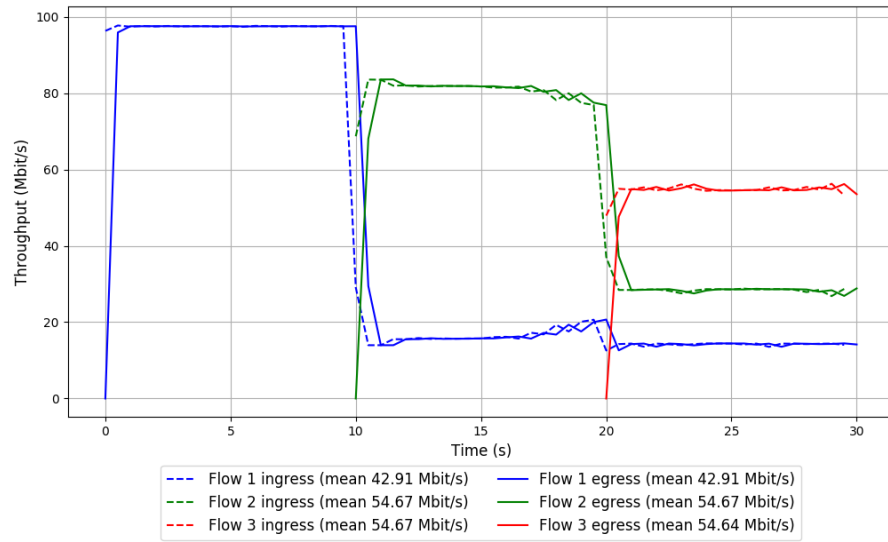
-- Flow 3:

Average throughput: 54.64 Mbit/s

95th percentile per-packet one-way delay: 3.671 ms

Loss rate: 0.01%

## Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2019-01-17 13:08:40

End at: 2019-01-17 13:09:10

Local clock offset: -4.68 ms

Remote clock offset: 1.308 ms

# Below is generated by plot.py at 2019-01-17 14:19:13

# Datalink statistics

-- Total of 3 flows:

Average throughput: 97.45 Mbit/s

95th percentile per-packet one-way delay: 6.233 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 54.02 Mbit/s

95th percentile per-packet one-way delay: 12.440 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 34.21 Mbit/s

95th percentile per-packet one-way delay: 3.839 ms

Loss rate: 0.00%

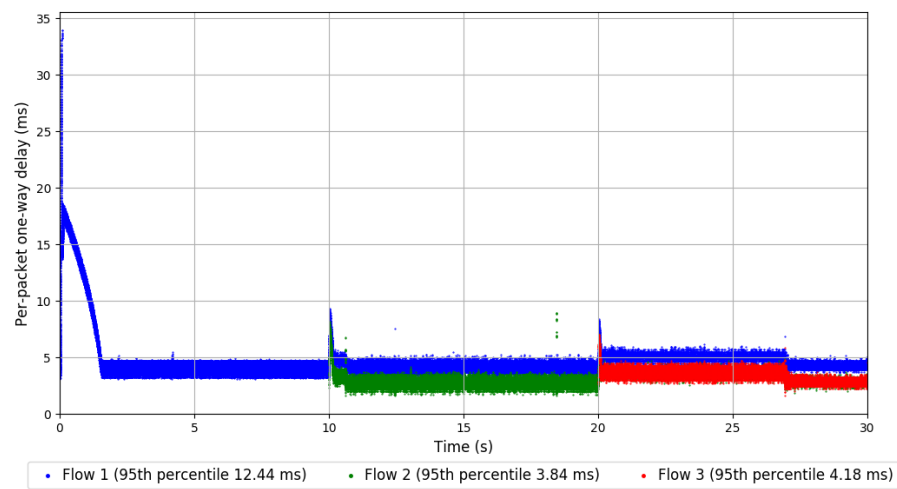
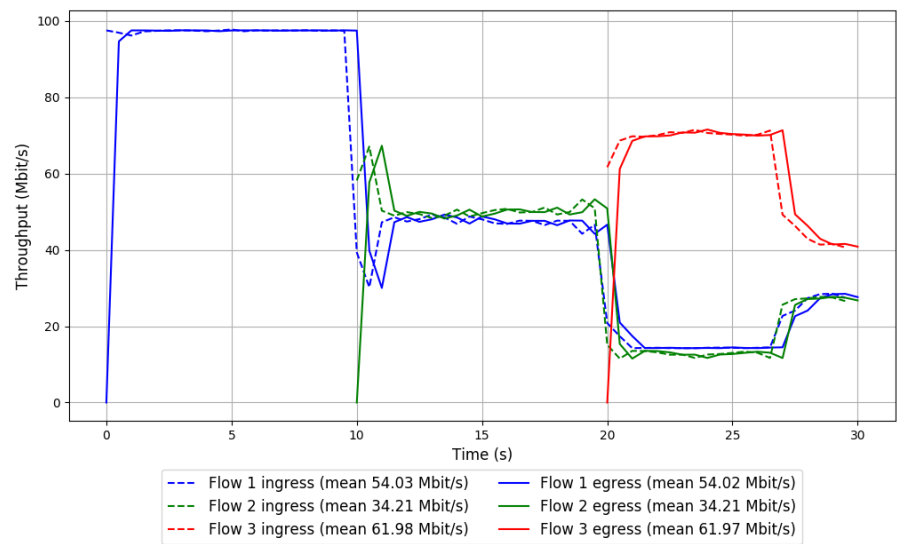
-- Flow 3:

Average throughput: 61.97 Mbit/s

95th percentile per-packet one-way delay: 4.185 ms

Loss rate: 0.00%

Run 3: Report of TCP Vegas — Data Link





Run 4: Statistics of TCP Vegas

Start at: 2019-01-17 13:32:34

End at: 2019-01-17 13:33:04

Local clock offset: -4.601 ms

Remote clock offset: 1.561 ms

# Below is generated by plot.py at 2019-01-17 14:19:15

# Datalink statistics

-- Total of 3 flows:

Average throughput: 97.47 Mbit/s

95th percentile per-packet one-way delay: 4.979 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 45.38 Mbit/s

95th percentile per-packet one-way delay: 3.254 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 43.36 Mbit/s

95th percentile per-packet one-way delay: 4.759 ms

Loss rate: 0.00%

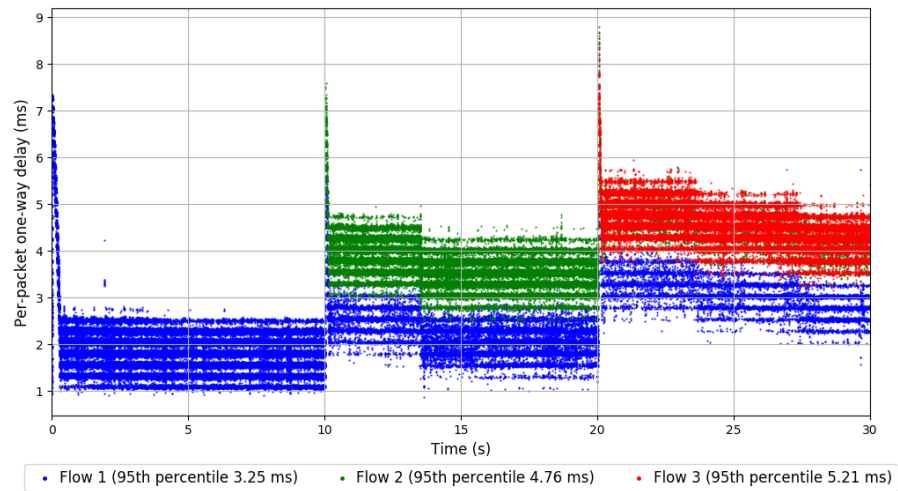
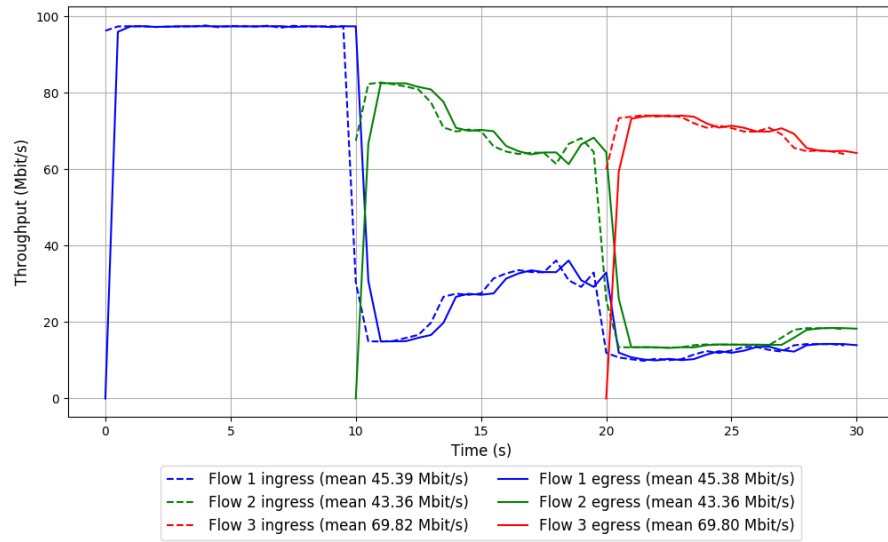
-- Flow 3:

Average throughput: 69.80 Mbit/s

95th percentile per-packet one-way delay: 5.213 ms

Loss rate: 0.02%

# Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2019-01-17 13:56:29

End at: 2019-01-17 13:57:00

Local clock offset: -4.81 ms

Remote clock offset: 1.516 ms

# Below is generated by plot.py at 2019-01-17 14:19:21

# Datalink statistics

-- Total of 3 flows:

Average throughput: 97.45 Mbit/s

95th percentile per-packet one-way delay: 5.311 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 51.40 Mbit/s

95th percentile per-packet one-way delay: 10.026 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 46.96 Mbit/s

95th percentile per-packet one-way delay: 5.239 ms

Loss rate: 0.00%

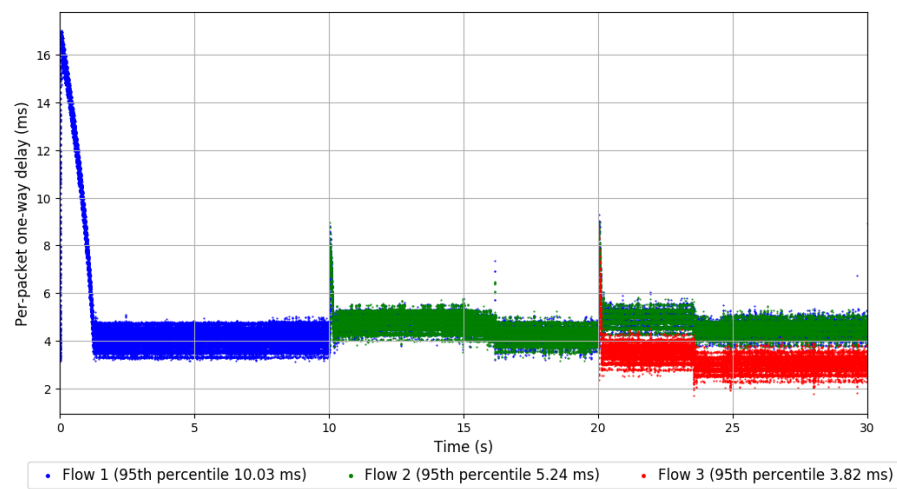
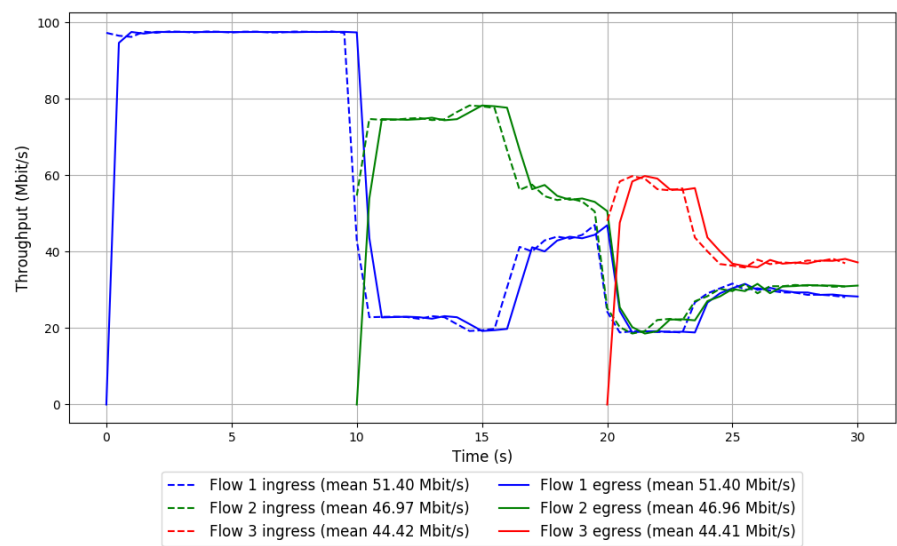
-- Flow 3:

Average throughput: 44.41 Mbit/s

95th percentile per-packet one-way delay: 3.823 ms

Loss rate: 0.01%

Run 5: Report of TCP Vegas — Data Link



Run 1: Statistics of Verus

Start at: 2019-01-17 12:08:16

End at: 2019-01-17 12:08:46

Local clock offset: -5.461 ms

Remote clock offset: 1.488 ms

# Below is generated by plot.py at 2019-01-17 14:19:31

# Datalink statistics

-- Total of 3 flows:

Average throughput: 75.60 Mbit/s

95th percentile per-packet one-way delay: 32.582 ms

Loss rate: 16.83%

-- Flow 1:

Average throughput: 43.86 Mbit/s

95th percentile per-packet one-way delay: 32.975 ms

Loss rate: 14.98%

-- Flow 2:

Average throughput: 31.03 Mbit/s

95th percentile per-packet one-way delay: 33.137 ms

Loss rate: 17.73%

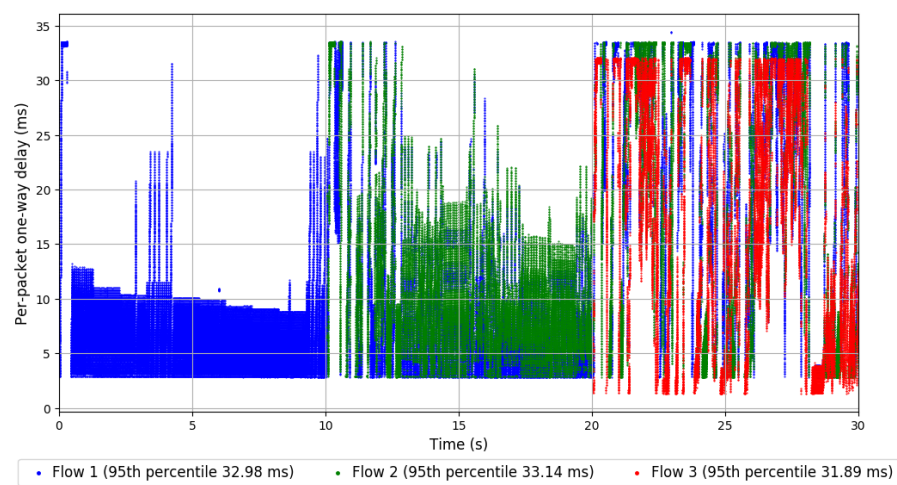
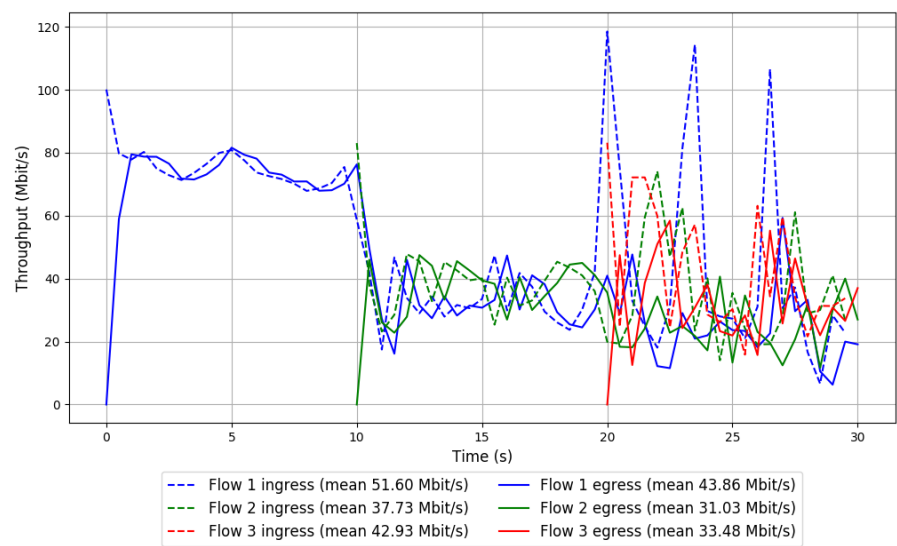
-- Flow 3:

Average throughput: 33.48 Mbit/s

95th percentile per-packet one-way delay: 31.892 ms

Loss rate: 21.92%

Run 1: Report of Verus — Data Link

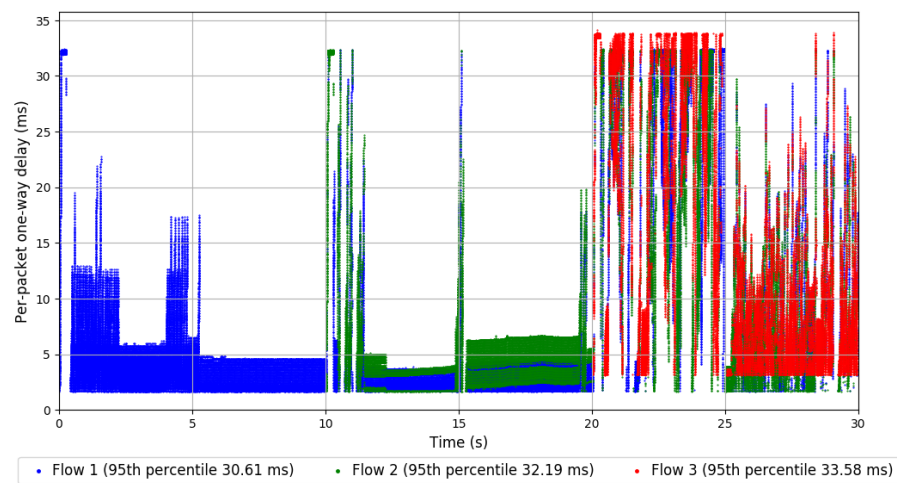
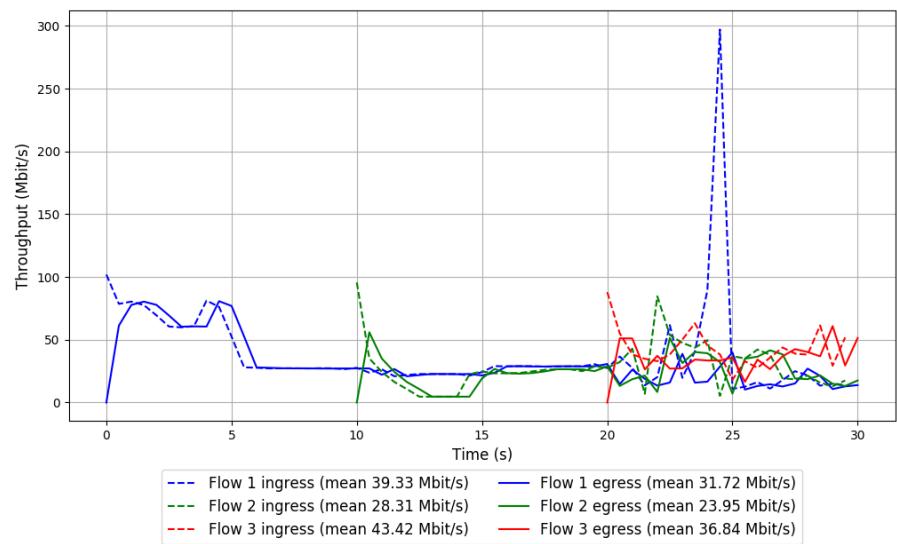


Run 2: Statistics of Verus

Start at: 2019-01-17 12:32:10  
End at: 2019-01-17 12:32:40  
Local clock offset: -5.482 ms  
Remote clock offset: 1.473 ms

# Below is generated by plot.py at 2019-01-17 14:19:31  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 59.88 Mbit/s  
95th percentile per-packet one-way delay: 32.184 ms  
Loss rate: 17.43%  
-- Flow 1:  
Average throughput: 31.72 Mbit/s  
95th percentile per-packet one-way delay: 30.614 ms  
Loss rate: 19.30%  
-- Flow 2:  
Average throughput: 23.95 Mbit/s  
95th percentile per-packet one-way delay: 32.189 ms  
Loss rate: 15.36%  
-- Flow 3:  
Average throughput: 36.84 Mbit/s  
95th percentile per-packet one-way delay: 33.583 ms  
Loss rate: 15.05%

Run 2: Report of Verus — Data Link



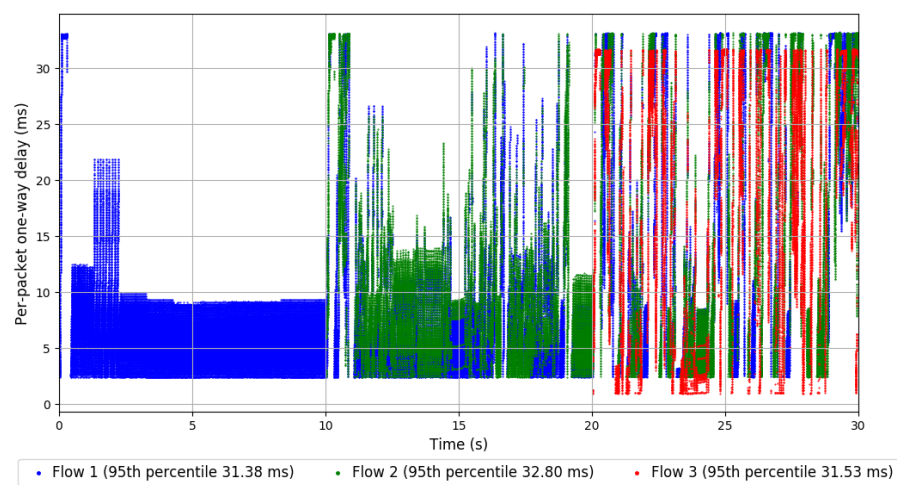
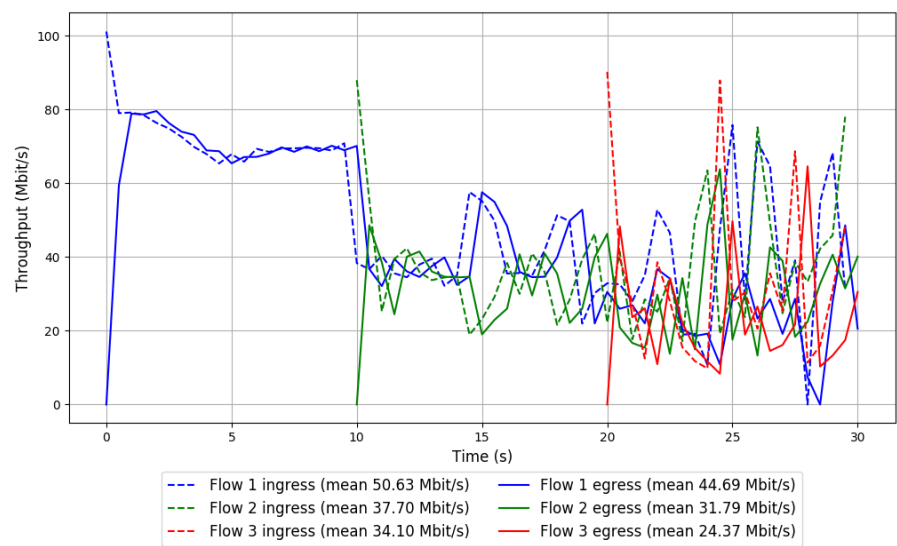


Run 3: Statistics of Verus

Start at: 2019-01-17 12:56:04  
End at: 2019-01-17 12:56:34  
Local clock offset: -4.169 ms  
Remote clock offset: 1.349 ms

# Below is generated by plot.py at 2019-01-17 14:19:39  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 73.94 Mbit/s  
95th percentile per-packet one-way delay: 31.855 ms  
Loss rate: 14.95%  
-- Flow 1:  
Average throughput: 44.69 Mbit/s  
95th percentile per-packet one-way delay: 31.376 ms  
Loss rate: 11.67%  
-- Flow 2:  
Average throughput: 31.79 Mbit/s  
95th percentile per-packet one-way delay: 32.805 ms  
Loss rate: 15.54%  
-- Flow 3:  
Average throughput: 24.37 Mbit/s  
95th percentile per-packet one-way delay: 31.531 ms  
Loss rate: 28.38%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

Start at: 2019-01-17 13:19:59

End at: 2019-01-17 13:20:29

Local clock offset: -4.978 ms

Remote clock offset: 1.343 ms

# Below is generated by plot.py at 2019-01-17 14:20:08

# Datalink statistics

-- Total of 3 flows:

Average throughput: 76.32 Mbit/s

95th percentile per-packet one-way delay: 33.512 ms

Loss rate: 20.96%

-- Flow 1:

Average throughput: 45.31 Mbit/s

95th percentile per-packet one-way delay: 31.837 ms

Loss rate: 13.58%

-- Flow 2:

Average throughput: 32.07 Mbit/s

95th percentile per-packet one-way delay: 33.584 ms

Loss rate: 19.49%

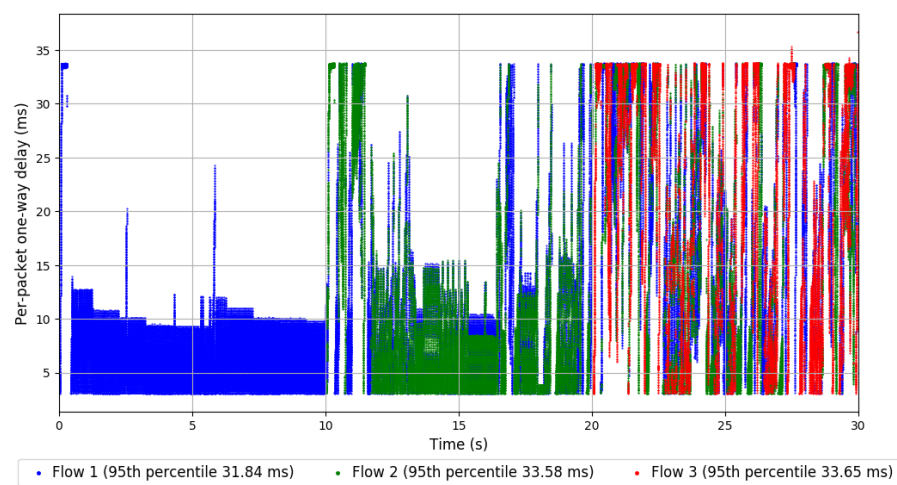
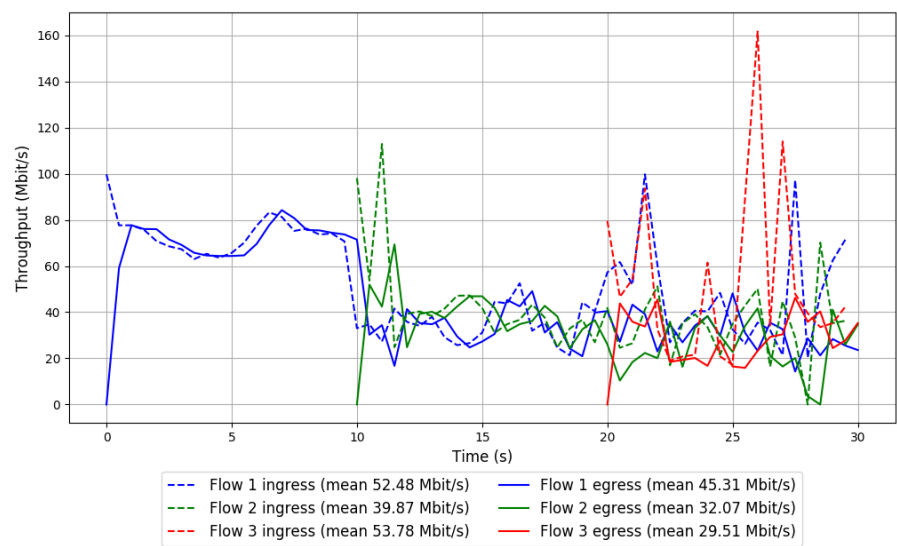
-- Flow 3:

Average throughput: 29.51 Mbit/s

95th percentile per-packet one-way delay: 33.653 ms

Loss rate: 44.95%

Run 4: Report of Verus — Data Link



Run 5: Statistics of Verus

Start at: 2019-01-17 13:43:53

End at: 2019-01-17 13:44:23

Local clock offset: -4.869 ms

Remote clock offset: 1.457 ms

# Below is generated by plot.py at 2019-01-17 14:20:10

# Datalink statistics

-- Total of 3 flows:

Average throughput: 74.52 Mbit/s

95th percentile per-packet one-way delay: 32.486 ms

Loss rate: 25.99%

-- Flow 1:

Average throughput: 45.83 Mbit/s

95th percentile per-packet one-way delay: 32.467 ms

Loss rate: 23.26%

-- Flow 2:

Average throughput: 28.83 Mbit/s

95th percentile per-packet one-way delay: 32.664 ms

Loss rate: 28.87%

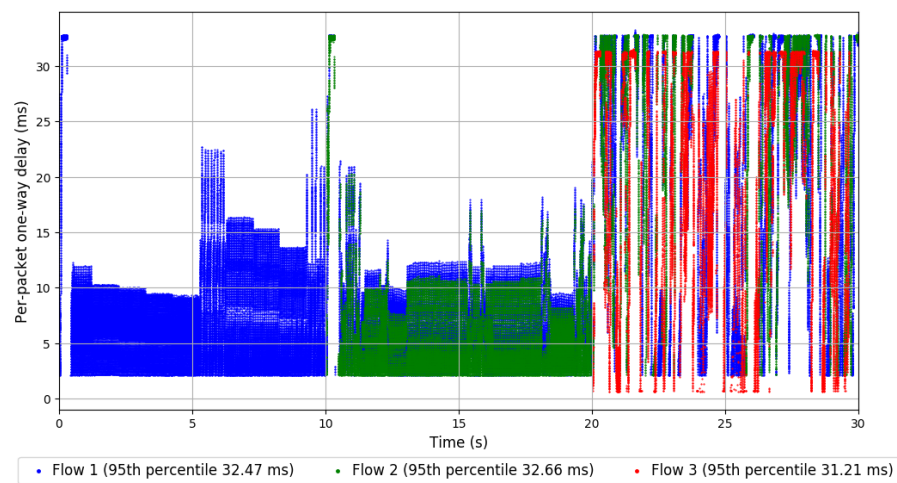
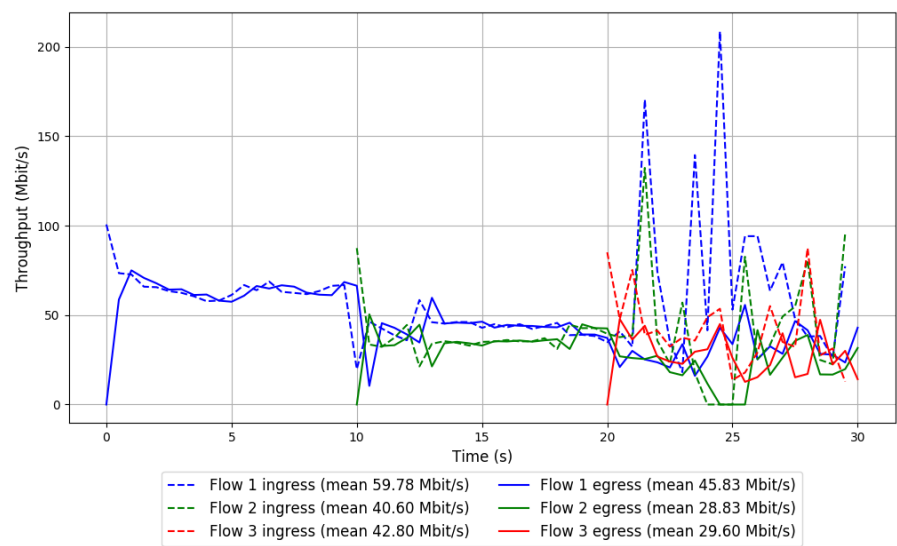
-- Flow 3:

Average throughput: 29.60 Mbit/s

95th percentile per-packet one-way delay: 31.213 ms

Loss rate: 32.08%

Run 5: Report of Verus — Data Link



Run 1: Statistics of PCC-Vivace

Start at: 2019-01-17 12:10:33

End at: 2019-01-17 12:11:03

Local clock offset: -5.896 ms

Remote clock offset: 1.561 ms

# Below is generated by plot.py at 2019-01-17 14:20:15

# Datalink statistics

-- Total of 3 flows:

Average throughput: 85.15 Mbit/s

95th percentile per-packet one-way delay: 2.638 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 53.13 Mbit/s

95th percentile per-packet one-way delay: 2.274 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 34.80 Mbit/s

95th percentile per-packet one-way delay: 3.299 ms

Loss rate: 0.00%

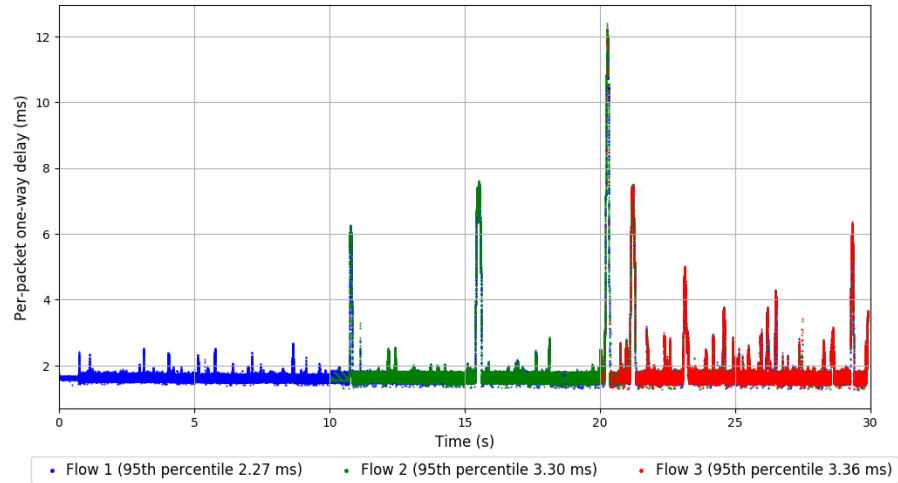
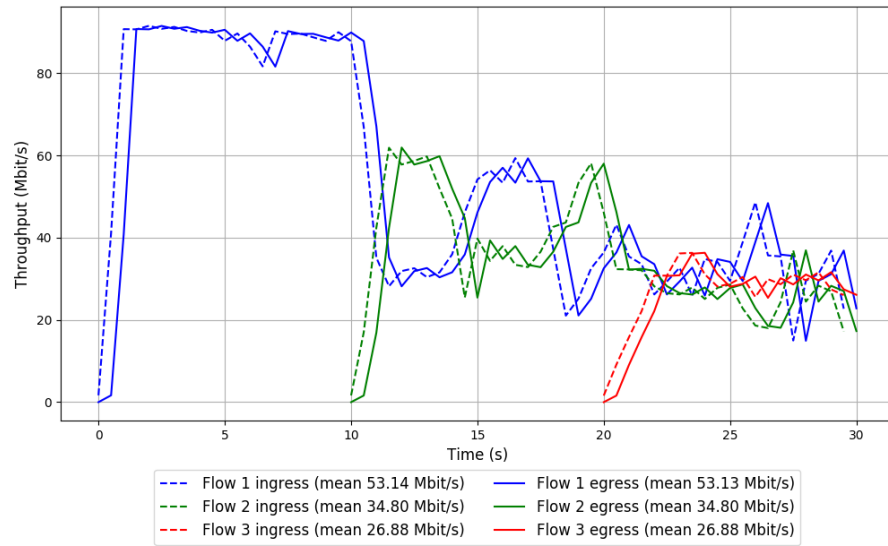
-- Flow 3:

Average throughput: 26.88 Mbit/s

95th percentile per-packet one-way delay: 3.362 ms

Loss rate: 0.00%

# Run 1: Report of PCC-Vivace — Data Link





Run 2: Statistics of PCC-Vivace

Start at: 2019-01-17 12:34:27

End at: 2019-01-17 12:34:57

Local clock offset: -5.498 ms

Remote clock offset: 1.371 ms

# Below is generated by plot.py at 2019-01-17 14:20:16

# Datalink statistics

-- Total of 3 flows:

Average throughput: 86.61 Mbit/s

95th percentile per-packet one-way delay: 3.590 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 50.13 Mbit/s

95th percentile per-packet one-way delay: 2.428 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 43.18 Mbit/s

95th percentile per-packet one-way delay: 4.162 ms

Loss rate: 0.01%

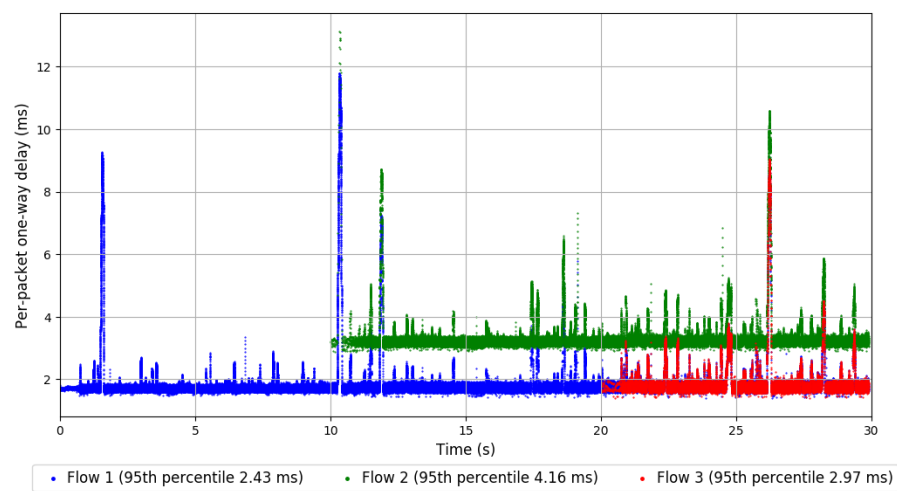
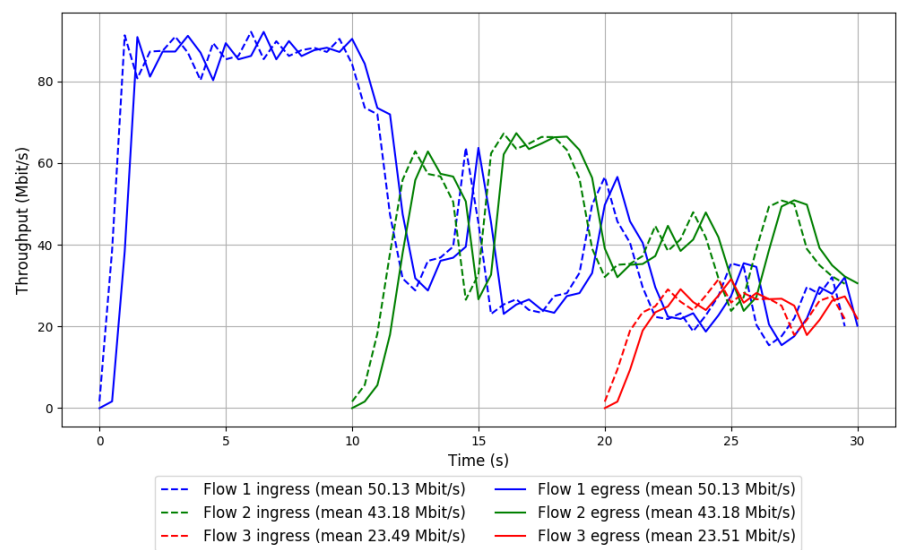
-- Flow 3:

Average throughput: 23.51 Mbit/s

95th percentile per-packet one-way delay: 2.973 ms

Loss rate: 0.00%

Run 2: Report of PCC-Vivace — Data Link



Run 3: Statistics of PCC-Vivace

Start at: 2019-01-17 12:58:22

End at: 2019-01-17 12:58:52

Local clock offset: -4.841 ms

Remote clock offset: 1.325 ms

# Below is generated by plot.py at 2019-01-17 14:20:21

# Datalink statistics

-- Total of 3 flows:

Average throughput: 88.93 Mbit/s

95th percentile per-packet one-way delay: 3.927 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 55.22 Mbit/s

95th percentile per-packet one-way delay: 3.756 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 38.00 Mbit/s

95th percentile per-packet one-way delay: 4.488 ms

Loss rate: 0.00%

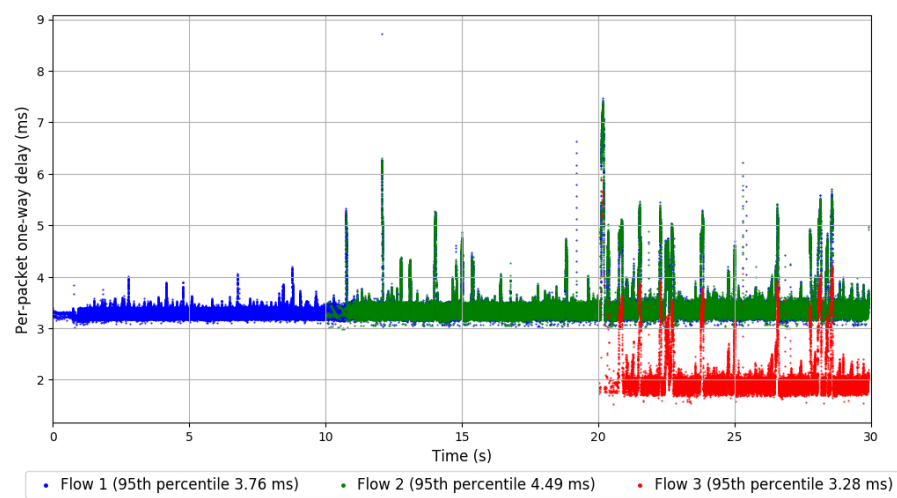
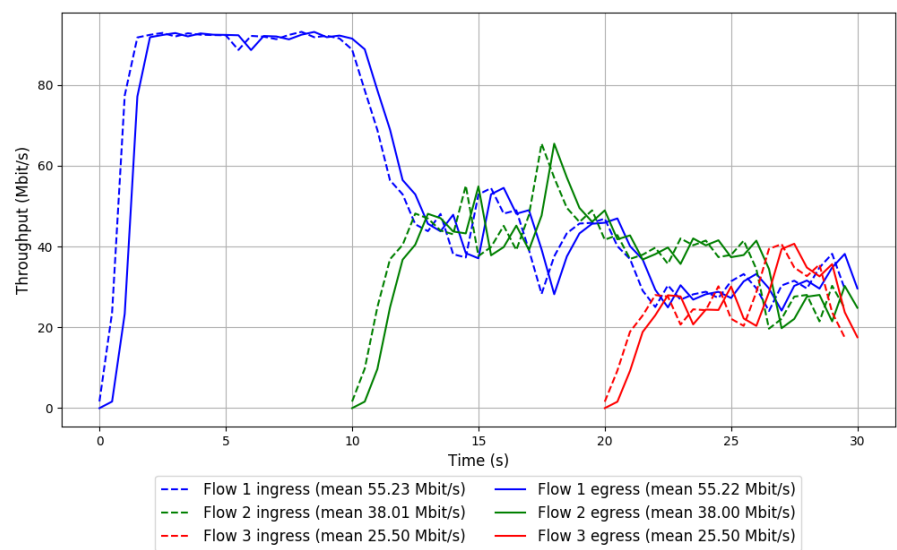
-- Flow 3:

Average throughput: 25.50 Mbit/s

95th percentile per-packet one-way delay: 3.283 ms

Loss rate: 0.00%

Run 3: Report of PCC-Vivace — Data Link



Run 4: Statistics of PCC-Vivace

Start at: 2019-01-17 13:22:17

End at: 2019-01-17 13:22:47

Local clock offset: -5.039 ms

Remote clock offset: 1.352 ms

# Below is generated by plot.py at 2019-01-17 14:20:22

# Datalink statistics

-- Total of 3 flows:

Average throughput: 81.81 Mbit/s

95th percentile per-packet one-way delay: 2.394 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 51.94 Mbit/s

95th percentile per-packet one-way delay: 2.144 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 32.45 Mbit/s

95th percentile per-packet one-way delay: 2.966 ms

Loss rate: 0.00%

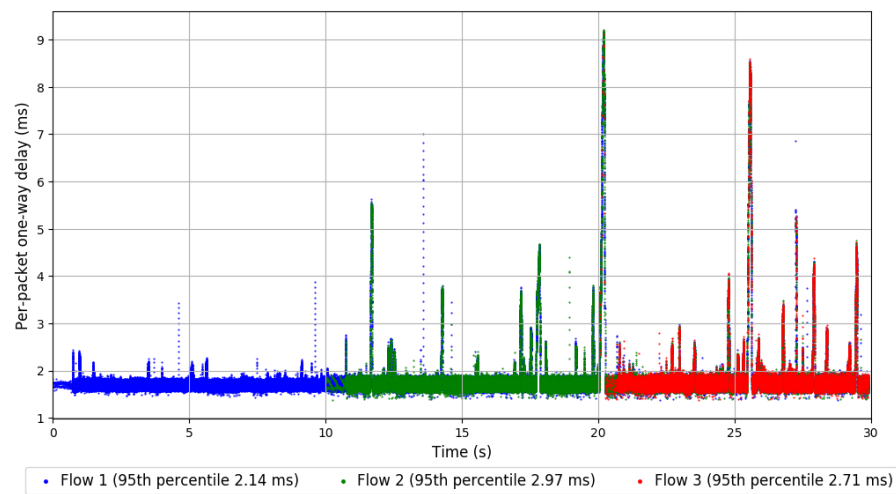
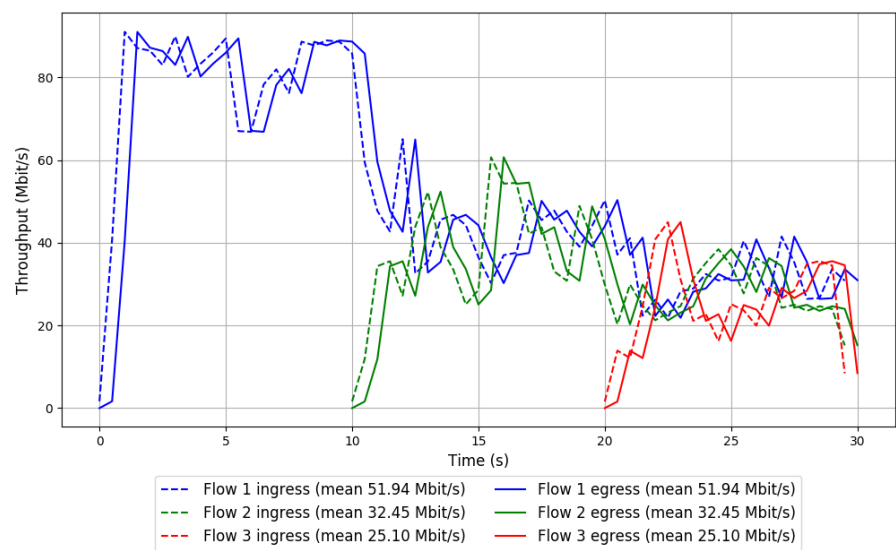
-- Flow 3:

Average throughput: 25.10 Mbit/s

95th percentile per-packet one-way delay: 2.712 ms

Loss rate: 0.00%

Run 4: Report of PCC-Vivace — Data Link



Run 5: Statistics of PCC-Vivace

Start at: 2019-01-17 13:46:11

End at: 2019-01-17 13:46:41

Local clock offset: -5.68 ms

Remote clock offset: 1.581 ms

# Below is generated by plot.py at 2019-01-17 14:20:23

# Datalink statistics

-- Total of 3 flows:

Average throughput: 87.76 Mbit/s

95th percentile per-packet one-way delay: 3.395 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 58.58 Mbit/s

95th percentile per-packet one-way delay: 3.517 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 33.37 Mbit/s

95th percentile per-packet one-way delay: 2.764 ms

Loss rate: 0.00%

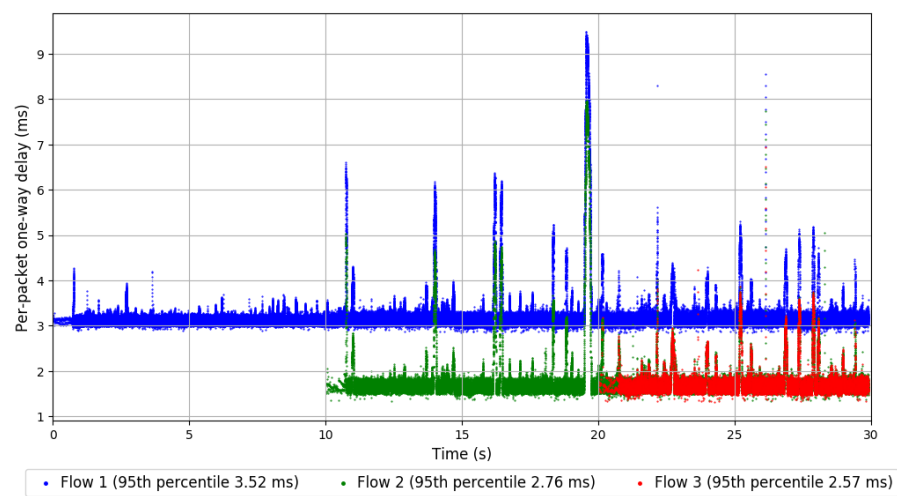
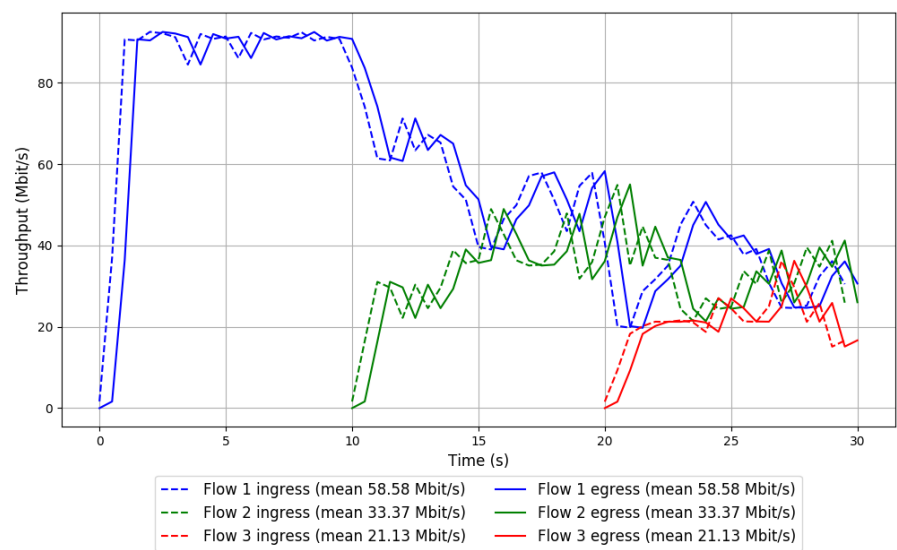
-- Flow 3:

Average throughput: 21.13 Mbit/s

95th percentile per-packet one-way delay: 2.573 ms

Loss rate: 0.00%

Run 5: Report of PCC-Vivace — Data Link





Run 1: Statistics of WebRTC media

Start at: 2019-01-17 12:31:05

End at: 2019-01-17 12:31:35

Local clock offset: -5.43 ms

Remote clock offset: 1.367 ms

# Below is generated by plot.py at 2019-01-17 14:20:23

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 4.334 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 4.381 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 4.117 ms

Loss rate: 0.00%

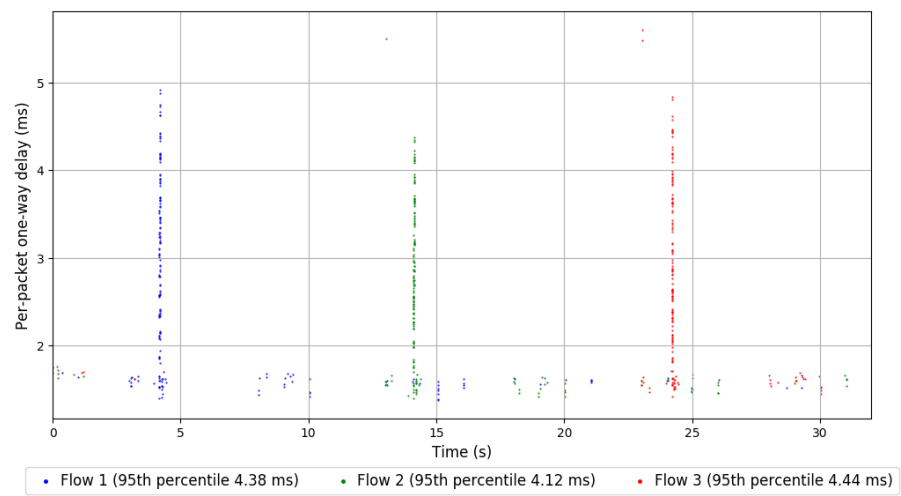
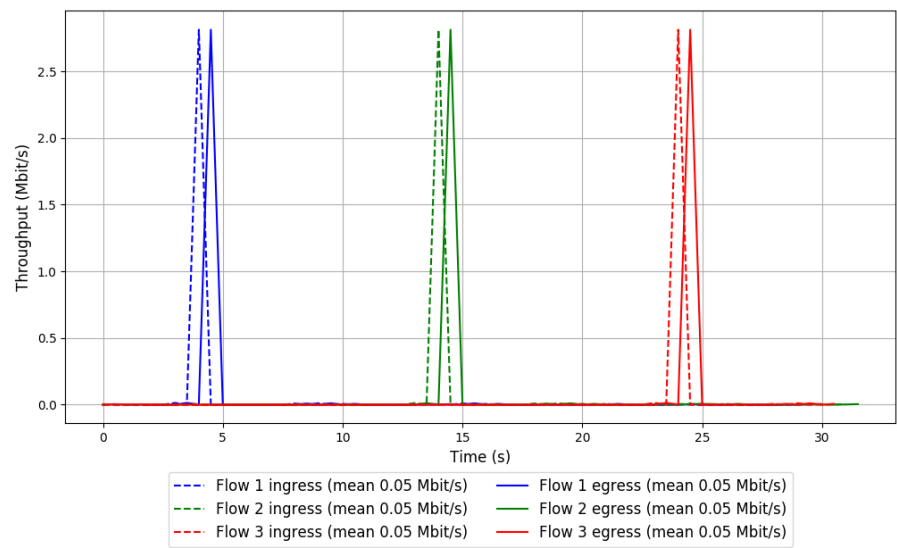
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 4.444 ms

Loss rate: 0.00%

Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2019-01-17 12:54:59

End at: 2019-01-17 12:55:29

Local clock offset: -5.007 ms

Remote clock offset: 1.341 ms

# Below is generated by plot.py at 2019-01-17 14:20:23

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 4.915 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 4.585 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 8.413 ms

Loss rate: 0.00%

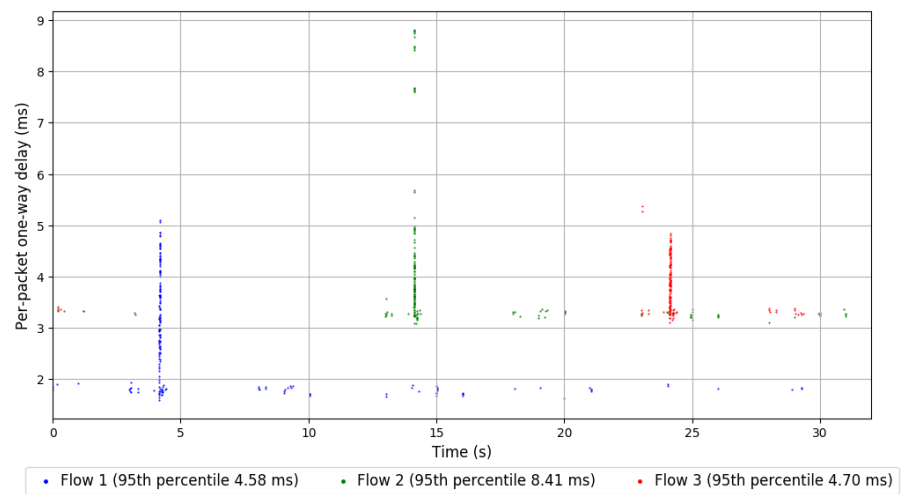
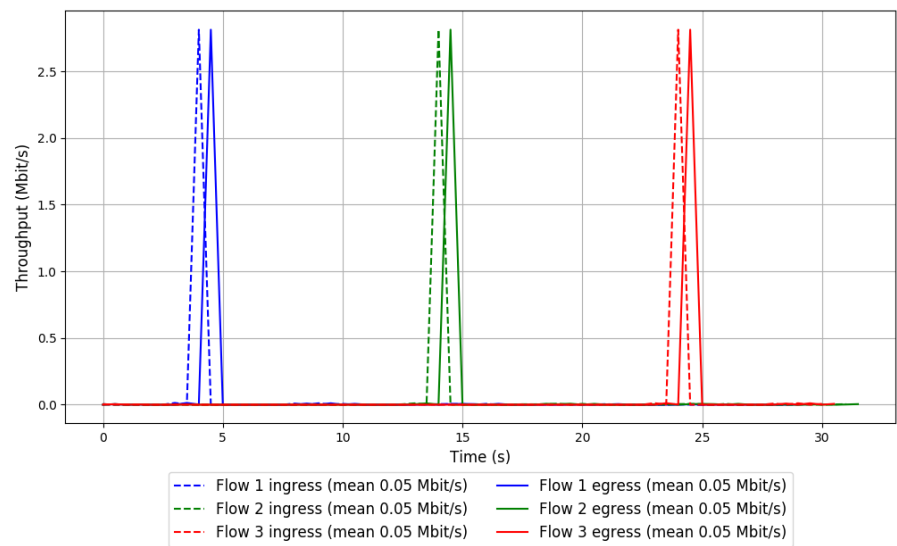
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 4.699 ms

Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2019-01-17 13:18:54

End at: 2019-01-17 13:19:24

Local clock offset: -4.127 ms

Remote clock offset: 1.299 ms

# Below is generated by plot.py at 2019-01-17 14:20:23

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 4.418 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 3.685 ms

Loss rate: 0.05%

-- Flow 2:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 3.929 ms

Loss rate: 0.00%

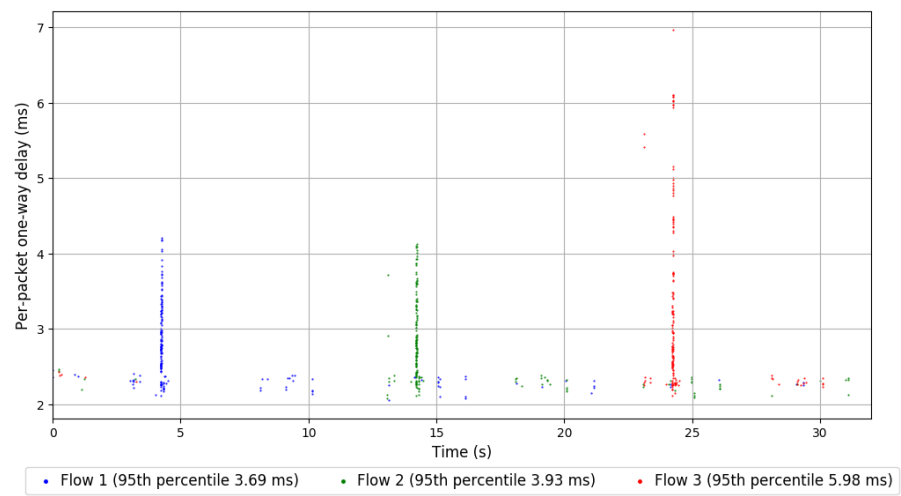
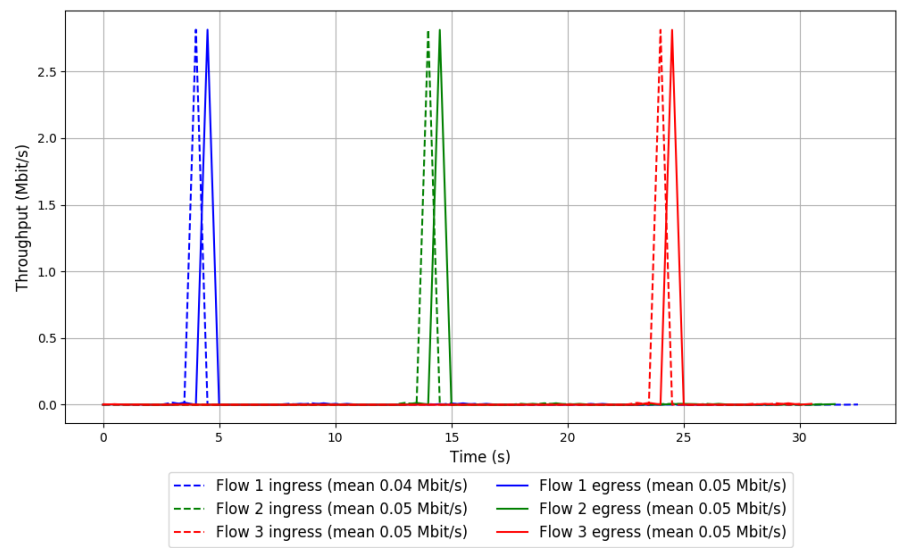
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 5.977 ms

Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2019-01-17 13:42:48

End at: 2019-01-17 13:43:18

Local clock offset: -5.591 ms

Remote clock offset: 1.618 ms

# Below is generated by plot.py at 2019-01-17 14:20:23

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 4.835 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 4.741 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 4.770 ms

Loss rate: 0.00%

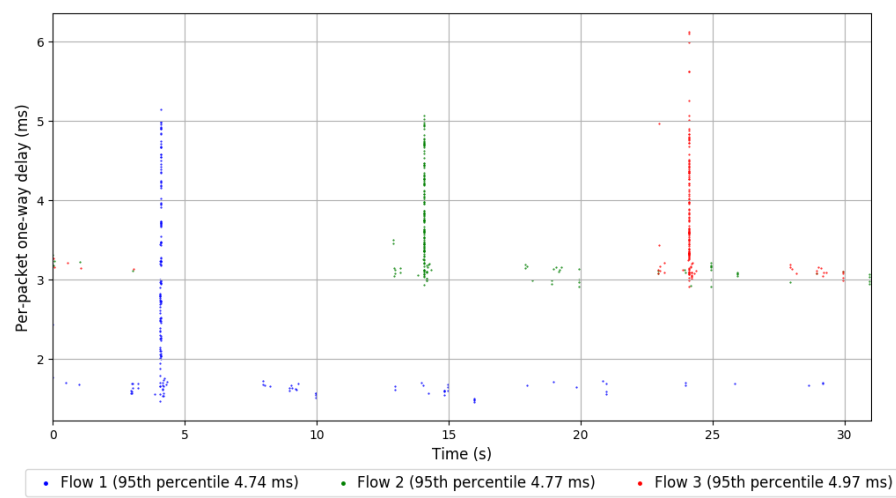
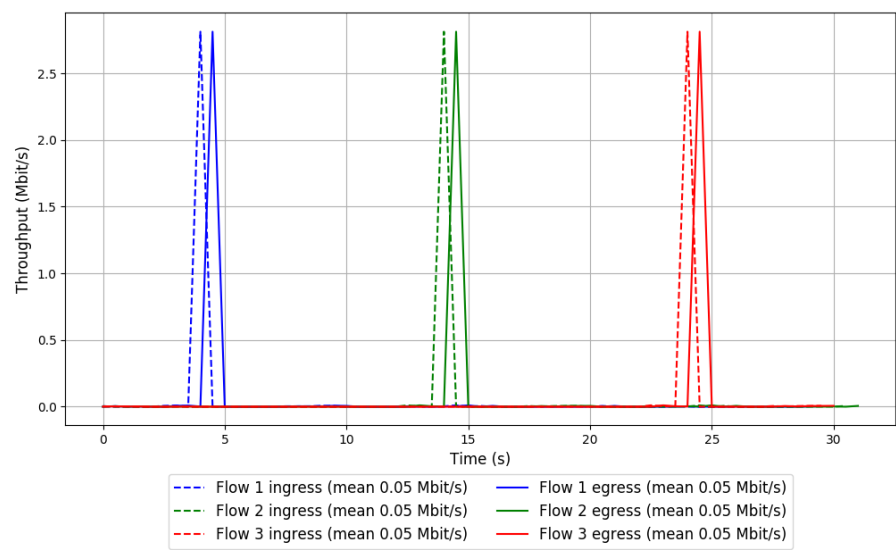
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 4.968 ms

Loss rate: 0.00%

Run 4: Report of WebRTC media — Data Link





Run 5: Statistics of WebRTC media

Start at: 2019-01-17 14:06:42

End at: 2019-01-17 14:07:12

Local clock offset: -3.669 ms

Remote clock offset: 1.374 ms

# Below is generated by plot.py at 2019-01-17 14:20:23

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 3.929 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 3.776 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 3.664 ms

Loss rate: 0.00%

-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 4.121 ms

Loss rate: 0.00%

Run 5: Report of WebRTC media — Data Link

