

Pantheon Report

Generated at 2019-01-17 14:27:49 (UTC).

Data path: AWS Brazil 2 on **ens5** (*local*) → Colombia 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:

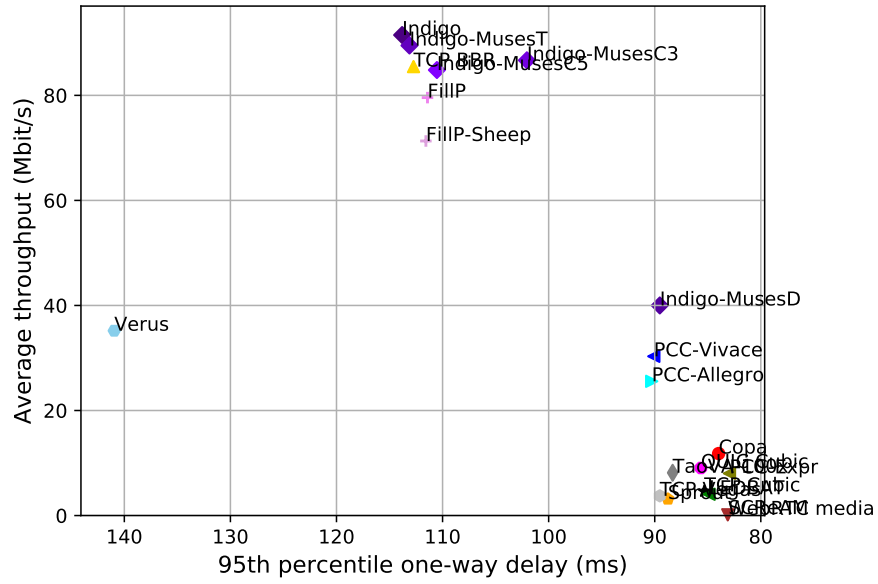
```
Linux 4.15.0-1031-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

Git summary:

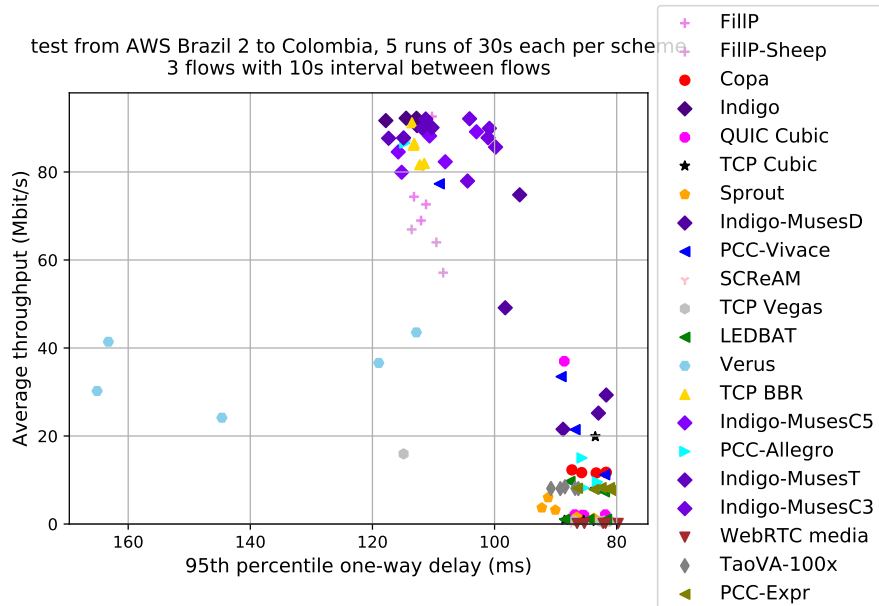
```
branch: muses @ c80a283586bf7b0cc1fe08c69c8f60d56498f81c
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecd90c077e64d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



test from AWS Brazil 2 to Colombia, 5 runs of 30s each per scheme
3 flows with 10s interval between flows



scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	5	50.45	37.18	30.85	111.73	111.73	111.72	12.84	19.12	25.93
Copa	5	8.60	4.25	1.15	84.35	82.86	83.83	75.33	79.62	76.53
TCP Cubic	5	2.54	2.33	1.56	84.71	83.85	83.81	3.58	3.86	3.51
FillP	5	46.18	38.38	23.70	110.61	111.34	111.46	17.76	25.86	23.89
FillP-Sheep	5	35.65	44.50	18.26	108.58	111.61	110.91	6.68	8.93	8.27
Indigo	5	66.07	26.43	25.01	113.30	113.46	113.07	11.59	30.43	67.27
Indigo-MusesC3	5	74.34	16.41	5.47	101.26	103.88	104.52	3.61	3.50	3.68
Indigo-MusesC5	5	73.55	15.28	4.36	110.39	110.74	111.08	4.97	9.60	6.79
Indigo-MusesD	5	26.00	18.99	5.34	89.12	89.10	88.03	3.58	3.53	3.45
Indigo-MusesT	5	81.20	10.72	4.34	112.99	113.67	112.61	5.62	5.48	6.72
LEDBAT	5	2.25	2.00	1.45	84.30	84.68	84.28	2.63	2.51	2.70
PCC-Allegro	5	18.12	8.82	4.76	90.09	89.63	89.73	4.09	4.17	4.42
PCC-Expr	5	0.01	8.75	6.68	82.88	82.95	82.97	85.71	37.02	37.64
QUIC Cubic	5	4.23	4.38	5.88	84.31	84.04	88.71	3.58	3.16	3.80
SCReAM	5	0.13	0.15	0.16	82.19	81.85	82.93	1.70	1.76	2.56
Sprout	5	1.58	1.68	1.38	88.14	88.30	86.92	3.44	3.13	3.88
TaoVA-100x	5	0.00	9.48	5.52	82.98	91.47	82.17	95.92	37.19	31.98
TCP Vegas	5	1.81	1.32	3.19	89.18	82.91	89.06	5.00	3.52	5.04
Verus	5	17.24	15.14	25.49	136.96	128.81	129.83	51.22	52.51	59.55
PCC-Vivace	5	19.55	12.46	7.52	88.62	90.84	88.29	3.46	3.41	3.45
WebRTC media	5	0.05	0.04	0.04	82.36	83.05	82.97	2.38	2.50	2.70

Run 1: Statistics of TCP BBR

Start at: 2019-01-17 12:30:40

End at: 2019-01-17 12:31:10

Local clock offset: -3.666 ms

Remote clock offset: 2.599 ms

Below is generated by plot.py at 2019-01-17 14:21:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 81.96 Mbit/s

95th percentile per-packet one-way delay: 111.503 ms

Loss rate: 17.23%

-- Flow 1:

Average throughput: 44.69 Mbit/s

95th percentile per-packet one-way delay: 111.596 ms

Loss rate: 13.88%

-- Flow 2:

Average throughput: 38.15 Mbit/s

95th percentile per-packet one-way delay: 110.124 ms

Loss rate: 18.79%

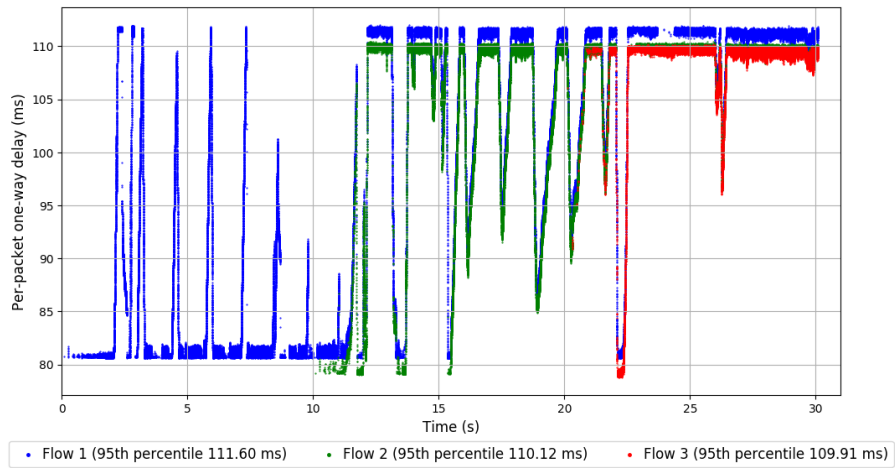
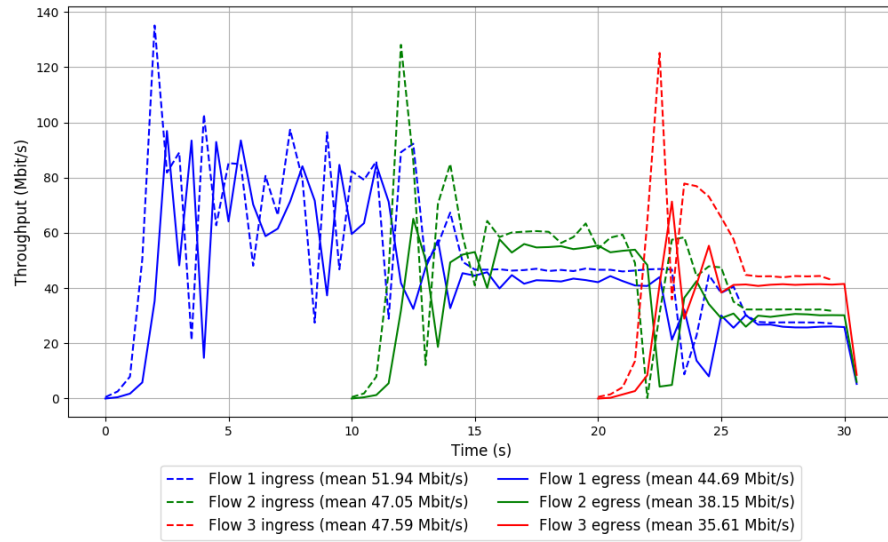
-- Flow 3:

Average throughput: 35.61 Mbit/s

95th percentile per-packet one-way delay: 109.905 ms

Loss rate: 25.14%

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2019-01-17 12:56:59

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

Local clock offset: -5.124 ms

Remote clock offset: 2.346 ms

Below is generated by plot.py at 2019-01-17 14:21:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 81.67 Mbit/s

95th percentile per-packet one-way delay: 112.249 ms

Loss rate: 16.28%

-- Flow 1:

Average throughput: 43.48 Mbit/s

95th percentile per-packet one-way delay: 112.352 ms

Loss rate: 12.50%

-- Flow 2:

Average throughput: 39.85 Mbit/s

95th percentile per-packet one-way delay: 110.704 ms

Loss rate: 17.47%

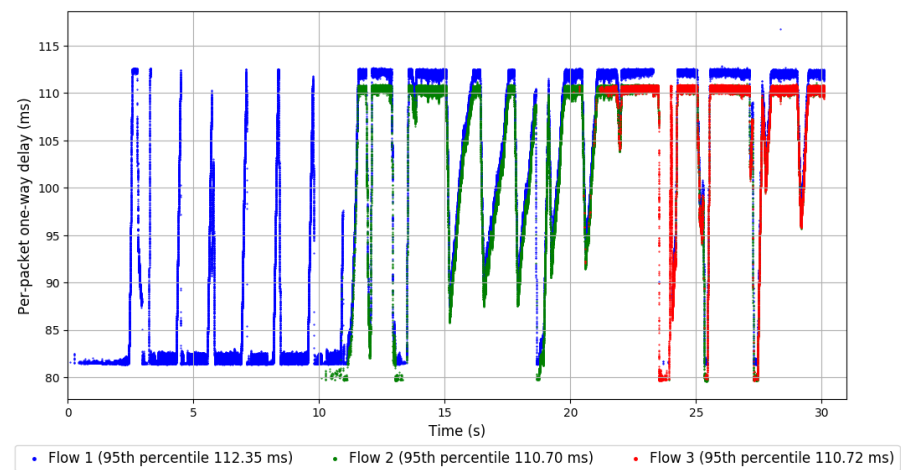
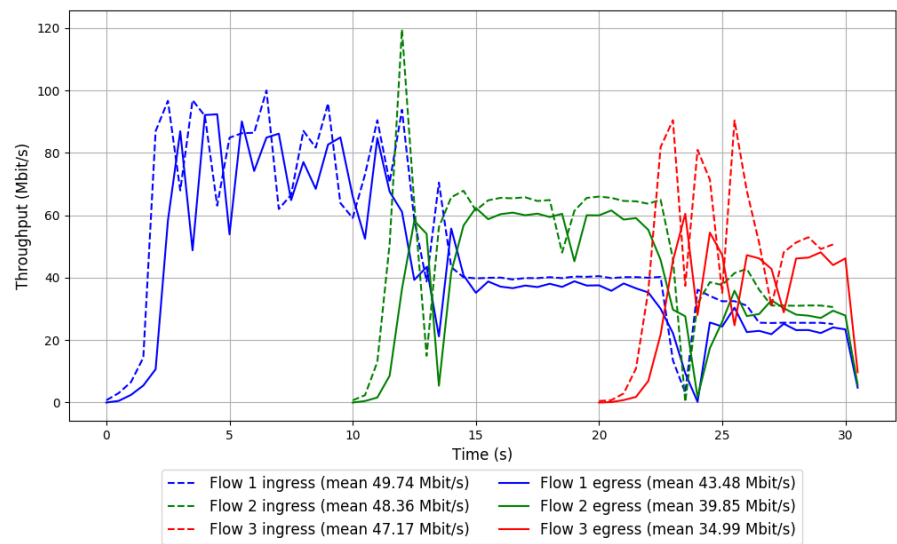
-- Flow 3:

Average throughput: 34.99 Mbit/s

95th percentile per-packet one-way delay: 110.723 ms

Loss rate: 25.82%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2019-01-17 13:23:18

End at: 2019-01-17 13:23:48

Local clock offset: -5.121 ms

Remote clock offset: 1.856 ms

Below is generated by plot.py at 2019-01-17 14:21:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 86.50 Mbit/s

95th percentile per-packet one-way delay: 113.167 ms

Loss rate: 16.77%

-- Flow 1:

Average throughput: 55.42 Mbit/s

95th percentile per-packet one-way delay: 111.827 ms

Loss rate: 13.10%

-- Flow 2:

Average throughput: 32.83 Mbit/s

95th percentile per-packet one-way delay: 112.526 ms

Loss rate: 20.11%

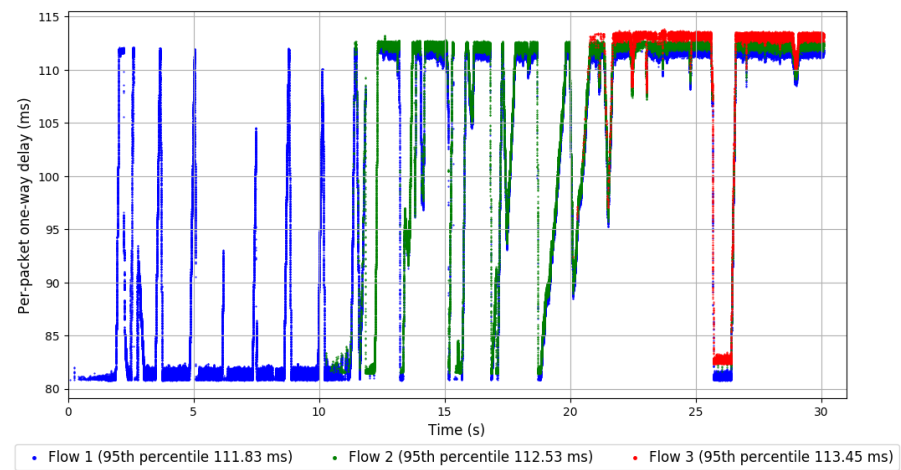
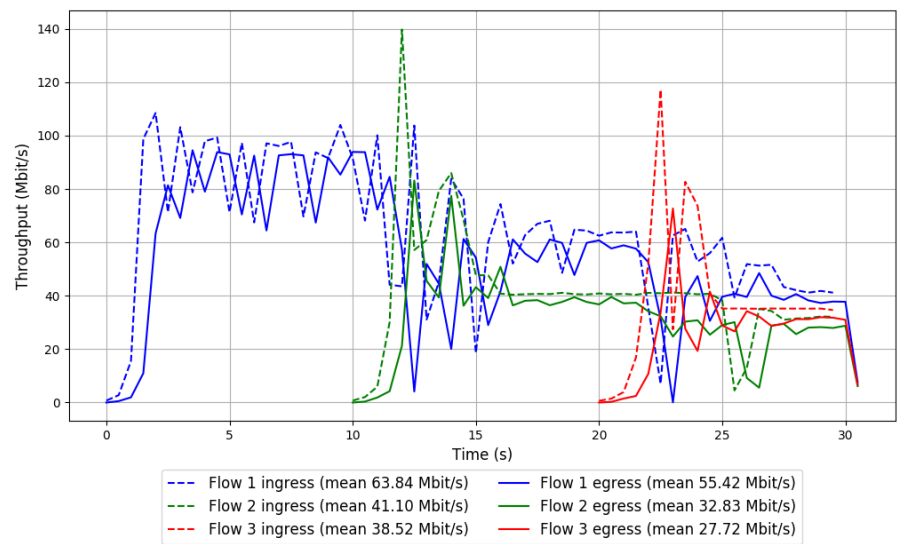
-- Flow 3:

Average throughput: 27.72 Mbit/s

95th percentile per-packet one-way delay: 113.450 ms

Loss rate: 27.89%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2019-01-17 13:49:42

End at: 2019-01-17 13:50:12

Local clock offset: -4.879 ms

Remote clock offset: 2.303 ms

Below is generated by plot.py at 2019-01-17 14:21:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 91.20 Mbit/s

95th percentile per-packet one-way delay: 113.517 ms

Loss rate: 15.19%

-- Flow 1:

Average throughput: 56.44 Mbit/s

95th percentile per-packet one-way delay: 112.162 ms

Loss rate: 11.95%

-- Flow 2:

Average throughput: 36.65 Mbit/s

95th percentile per-packet one-way delay: 111.932 ms

Loss rate: 18.85%

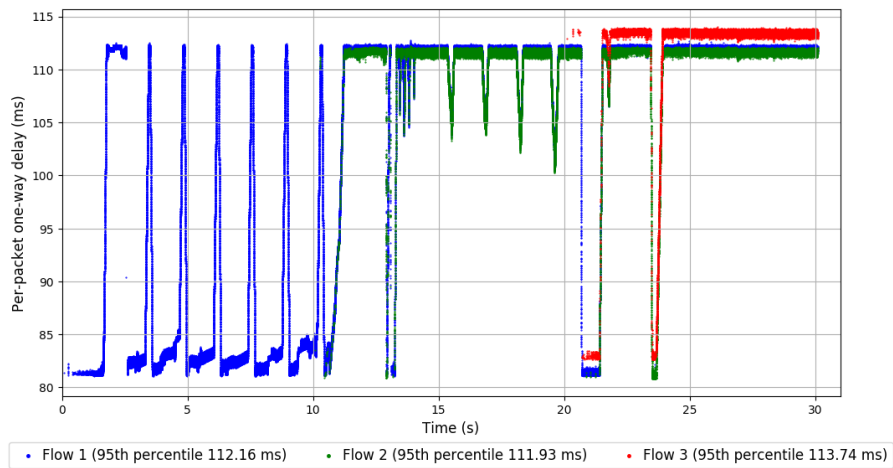
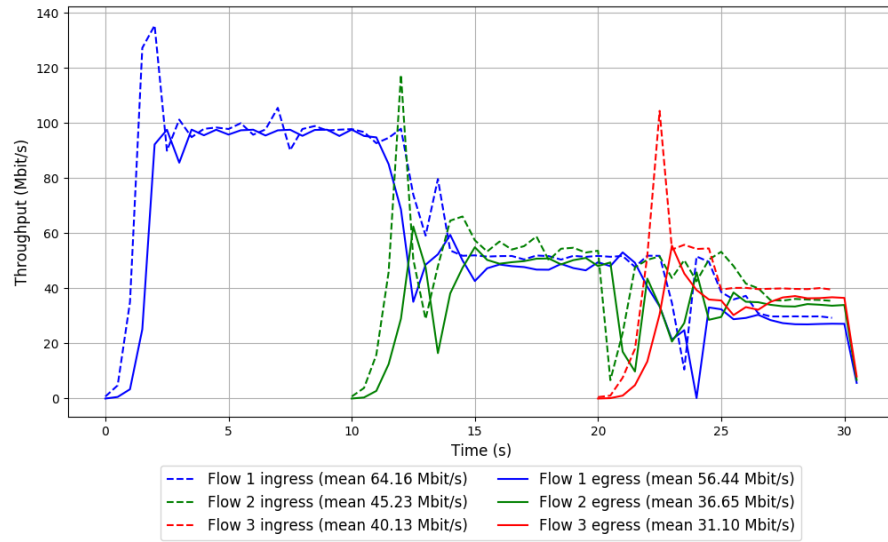
-- Flow 3:

Average throughput: 31.10 Mbit/s

95th percentile per-packet one-way delay: 113.738 ms

Loss rate: 22.49%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2019-01-17 14:16:27

End at: 2019-01-17 14:16:57

Local clock offset: -4.134 ms

Remote clock offset: 0.805 ms

Below is generated by plot.py at 2019-01-17 14:21:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 86.07 Mbit/s

95th percentile per-packet one-way delay: 113.255 ms

Loss rate: 16.86%

-- Flow 1:

Average throughput: 52.22 Mbit/s

95th percentile per-packet one-way delay: 110.701 ms

Loss rate: 12.76%

-- Flow 2:

Average throughput: 38.41 Mbit/s

95th percentile per-packet one-way delay: 113.365 ms

Loss rate: 20.40%

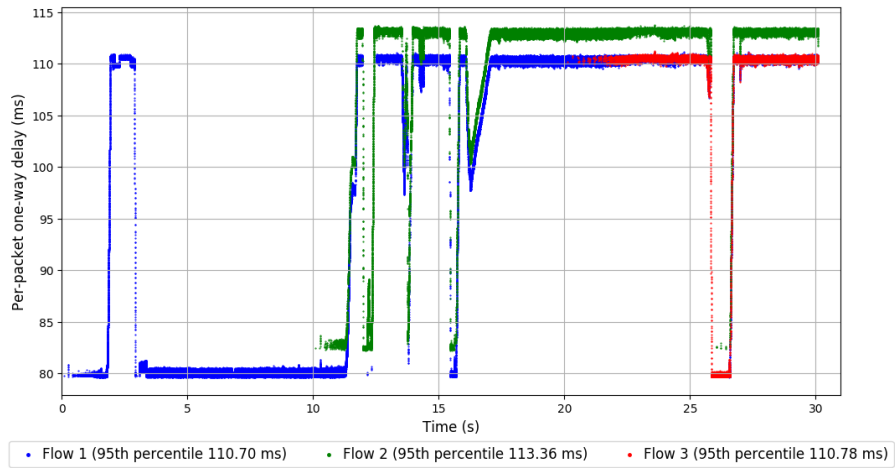
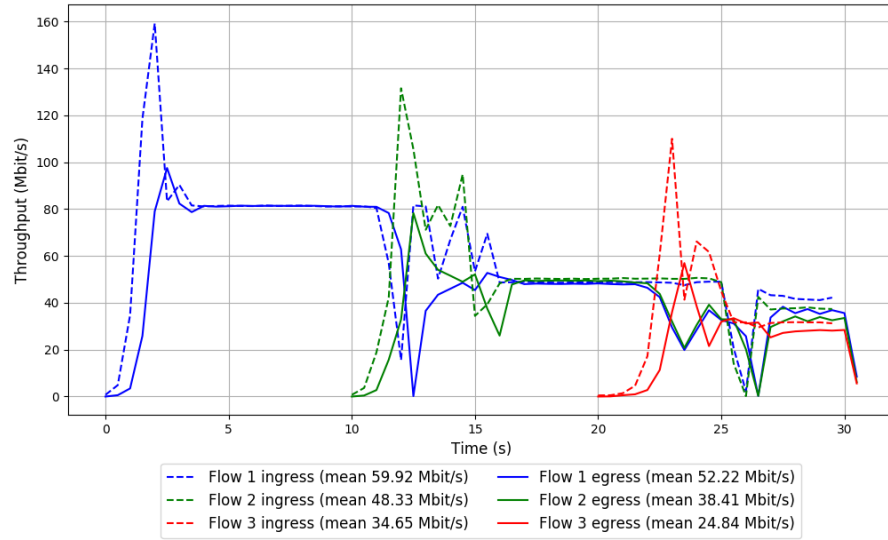
-- Flow 3:

Average throughput: 24.84 Mbit/s

95th percentile per-packet one-way delay: 110.775 ms

Loss rate: 28.30%

Run 5: Report of TCP BBR — Data Link



Run 1: Statistics of Copa

Start at: 2019-01-17 12:13:09

End at: 2019-01-17 12:13:39

Local clock offset: -3.22 ms

Remote clock offset: 3.956 ms

Below is generated by plot.py at 2019-01-17 14:21:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 11.71 Mbit/s

95th percentile per-packet one-way delay: 81.710 ms

Loss rate: 77.06%

-- Flow 1:

Average throughput: 9.22 Mbit/s

95th percentile per-packet one-way delay: 81.918 ms

Loss rate: 74.98%

-- Flow 2:

Average throughput: 3.68 Mbit/s

95th percentile per-packet one-way delay: 81.164 ms

Loss rate: 82.61%

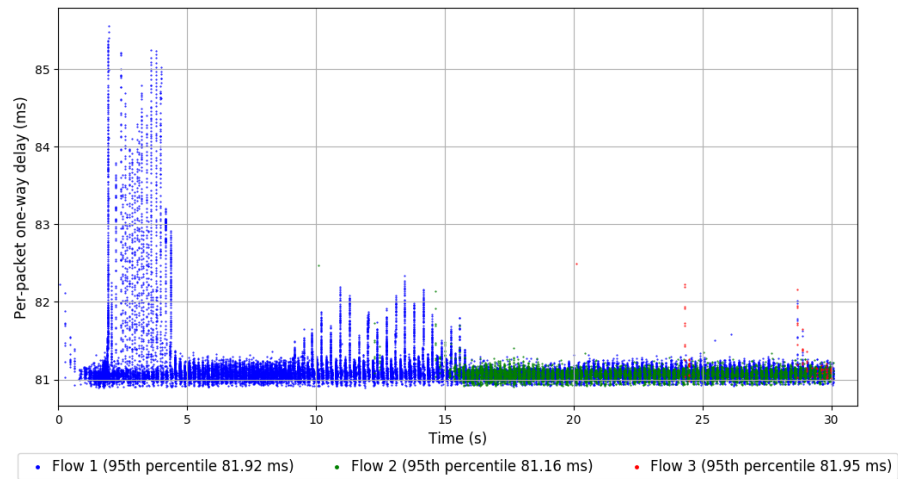
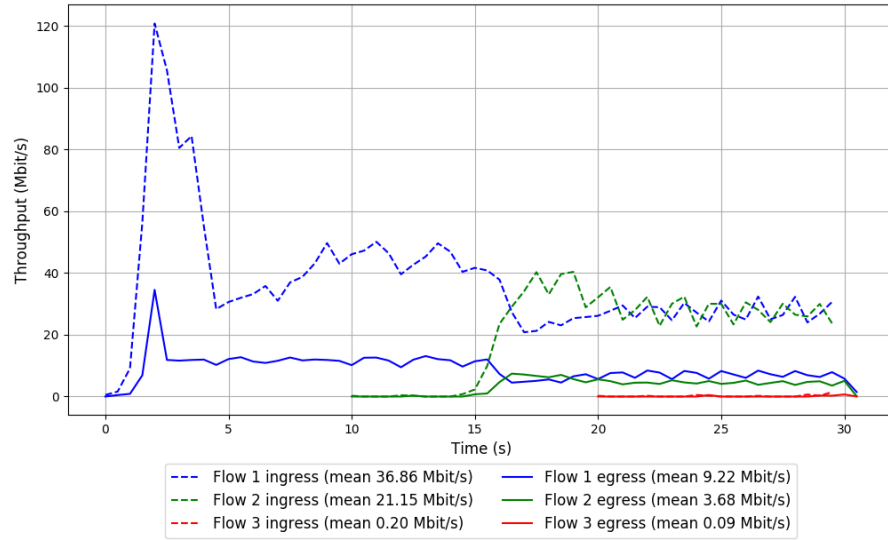
-- Flow 3:

Average throughput: 0.09 Mbit/s

95th percentile per-packet one-way delay: 81.950 ms

Loss rate: 53.39%

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2019-01-17 12:39:25

End at: 2019-01-17 12:39:55

Local clock offset: -4.711 ms

Remote clock offset: 7.514 ms

Below is generated by plot.py at 2019-01-17 14:21:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 11.68 Mbit/s

95th percentile per-packet one-way delay: 85.736 ms

Loss rate: 77.38%

-- Flow 1:

Average throughput: 11.27 Mbit/s

95th percentile per-packet one-way delay: 85.751 ms

Loss rate: 77.56%

-- Flow 2:

Average throughput: 0.61 Mbit/s

95th percentile per-packet one-way delay: 85.054 ms

Loss rate: 71.19%

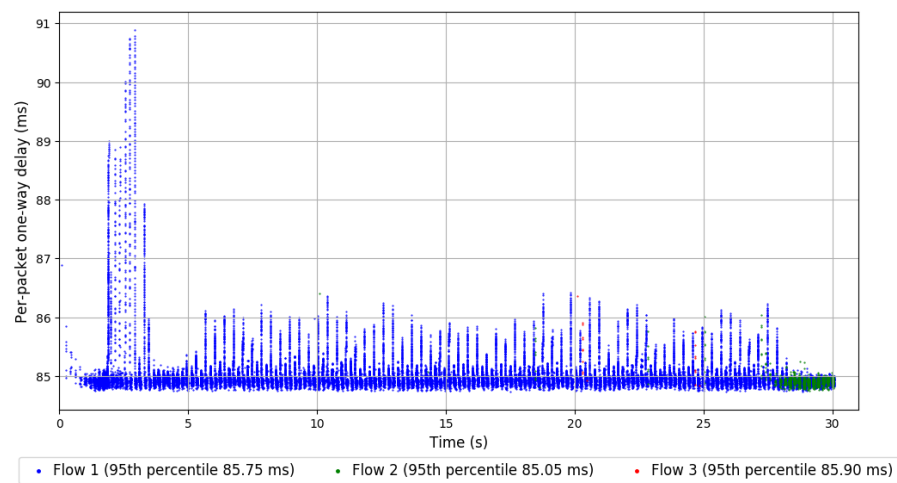
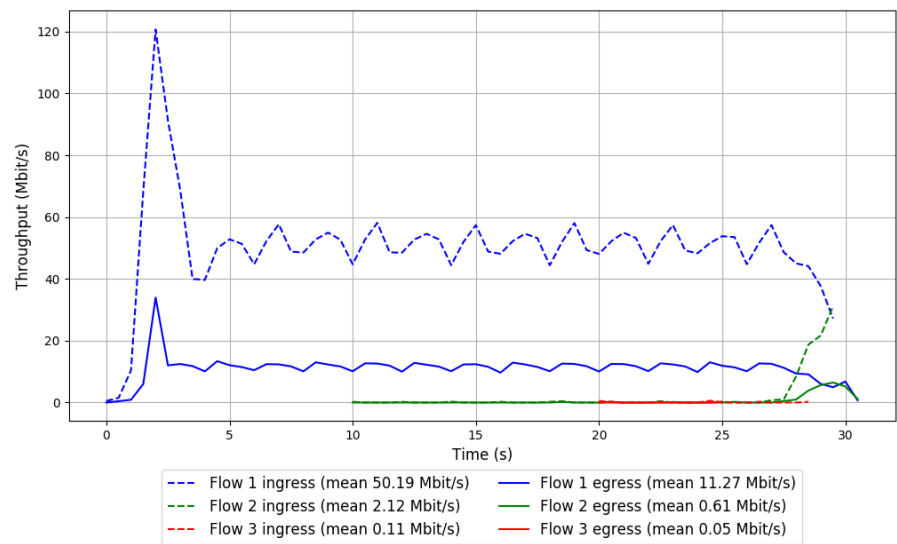
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 85.901 ms

Loss rate: 76.75%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2019-01-17 13:05:49

End at: 2019-01-17 13:06:19

Local clock offset: -5.194 ms

Remote clock offset: 2.157 ms

Below is generated by plot.py at 2019-01-17 14:21:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 11.74 Mbit/s

95th percentile per-packet one-way delay: 81.751 ms

Loss rate: 76.92%

-- Flow 1:

Average throughput: 7.59 Mbit/s

95th percentile per-packet one-way delay: 82.363 ms

Loss rate: 74.27%

-- Flow 2:

Average throughput: 6.20 Mbit/s

95th percentile per-packet one-way delay: 79.895 ms

Loss rate: 80.55%

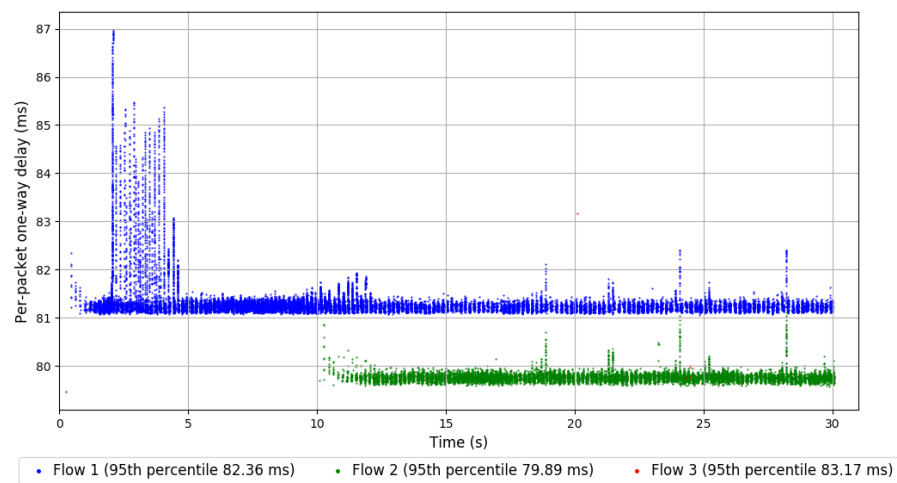
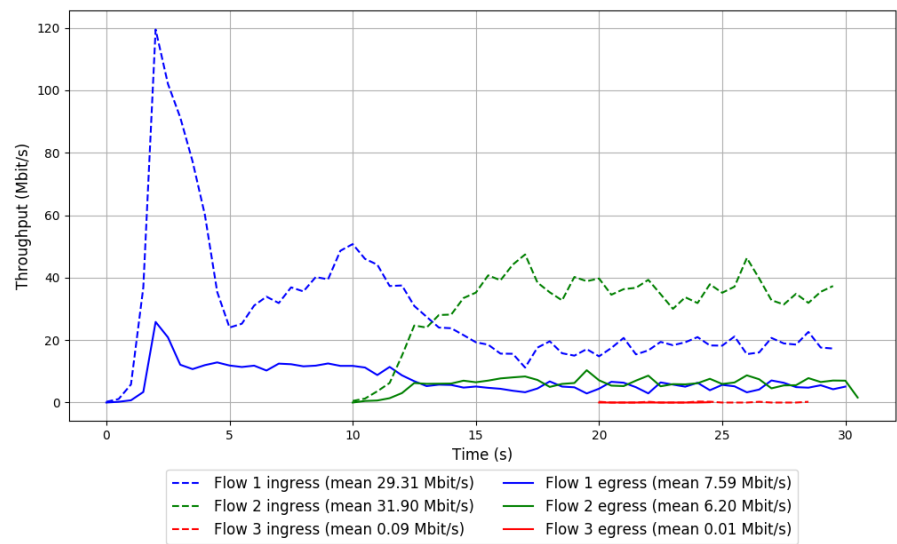
-- Flow 3:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 83.170 ms

Loss rate: 93.63%

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

Start at: 2019-01-17 13:32:08

End at: 2019-01-17 13:32:38

Local clock offset: -4.235 ms

Remote clock offset: 5.234 ms

Below is generated by plot.py at 2019-01-17 14:21:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 11.60 Mbit/s

95th percentile per-packet one-way delay: 83.358 ms

Loss rate: 76.98%

-- Flow 1:

Average throughput: 7.24 Mbit/s

95th percentile per-packet one-way delay: 83.908 ms

Loss rate: 73.82%

-- Flow 2:

Average throughput: 5.71 Mbit/s

95th percentile per-packet one-way delay: 83.161 ms

Loss rate: 81.18%

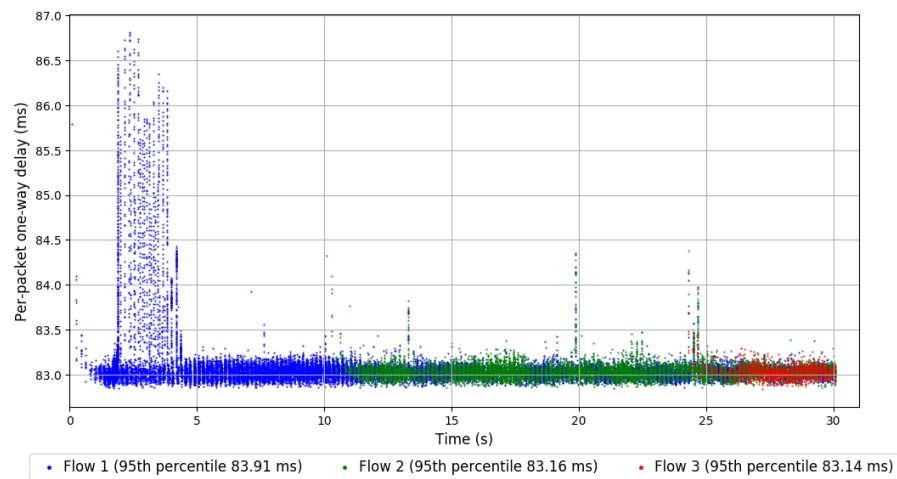
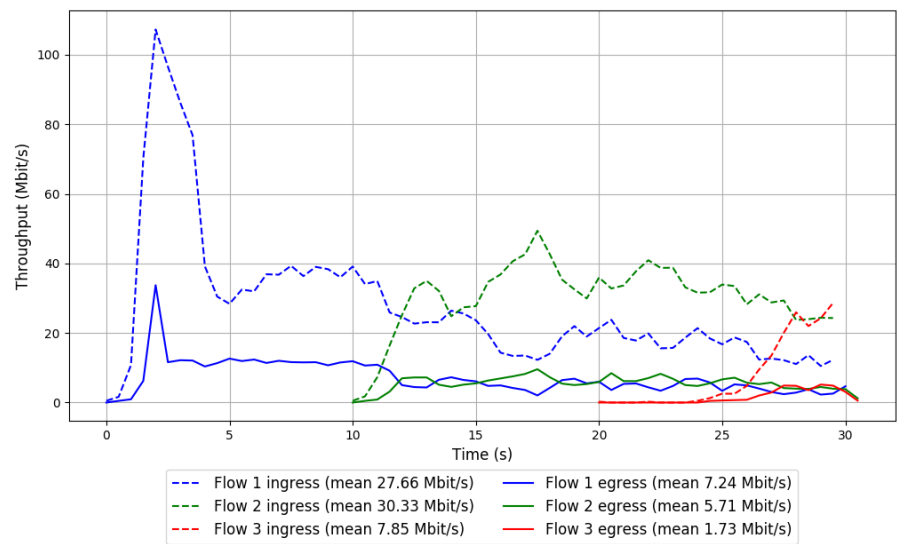
-- Flow 3:

Average throughput: 1.73 Mbit/s

95th percentile per-packet one-way delay: 83.145 ms

Loss rate: 77.94%

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2019-01-17 13:58:35

End at: 2019-01-17 13:59:05

Local clock offset: -4.402 ms

Remote clock offset: 6.026 ms

Below is generated by plot.py at 2019-01-17 14:21:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 12.30 Mbit/s

95th percentile per-packet one-way delay: 87.327 ms

Loss rate: 78.77%

-- Flow 1:

Average throughput: 7.66 Mbit/s

95th percentile per-packet one-way delay: 87.796 ms

Loss rate: 76.02%

-- Flow 2:

Average throughput: 5.04 Mbit/s

95th percentile per-packet one-way delay: 85.033 ms

Loss rate: 82.59%

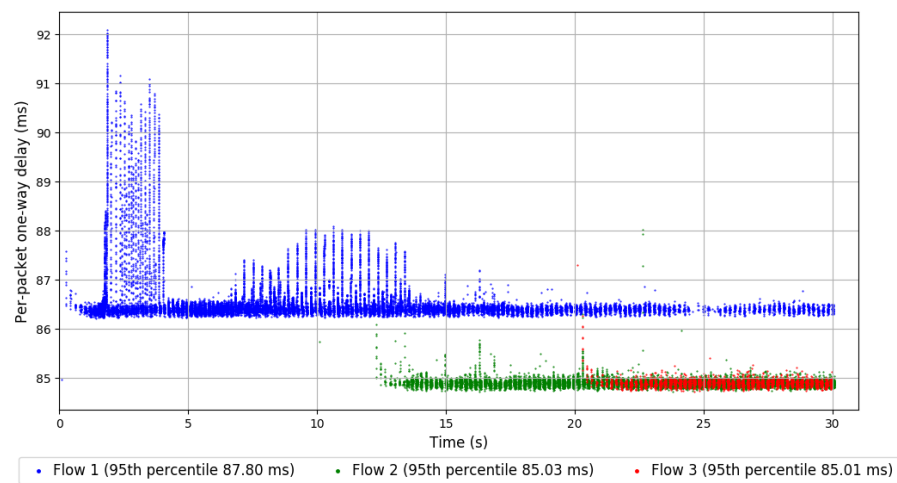
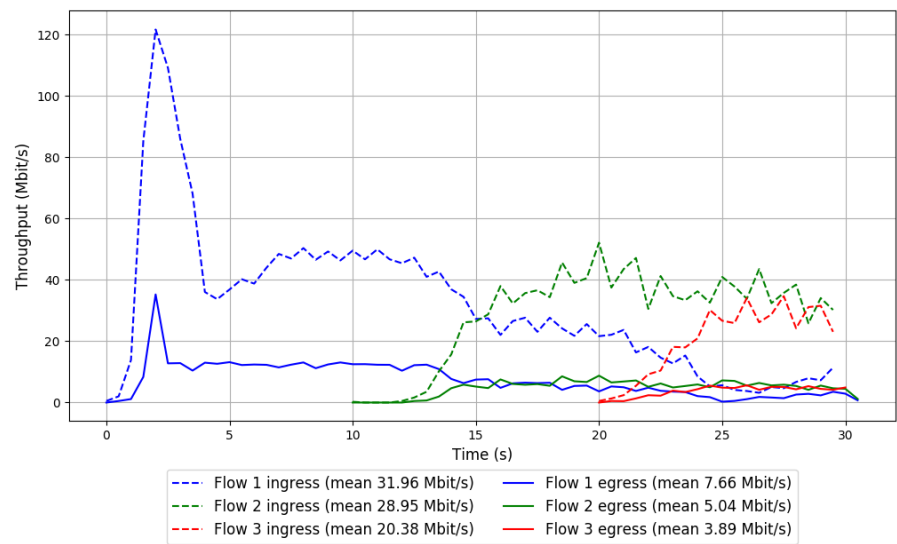
-- Flow 3:

Average throughput: 3.89 Mbit/s

95th percentile per-packet one-way delay: 85.008 ms

Loss rate: 80.92%

Run 5: Report of Copa — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2019-01-17 12:20:38

End at: 2019-01-17 12:21:08

Local clock offset: -2.931 ms

Remote clock offset: 3.878 ms

Below is generated by plot.py at 2019-01-17 14:21:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.62 Mbit/s

95th percentile per-packet one-way delay: 83.358 ms

Loss rate: 5.48%

-- Flow 1:

Average throughput: 0.32 Mbit/s

95th percentile per-packet one-way delay: 83.415 ms

Loss rate: 5.06%

-- Flow 2:

Average throughput: 0.29 Mbit/s

95th percentile per-packet one-way delay: 81.932 ms

Loss rate: 6.27%

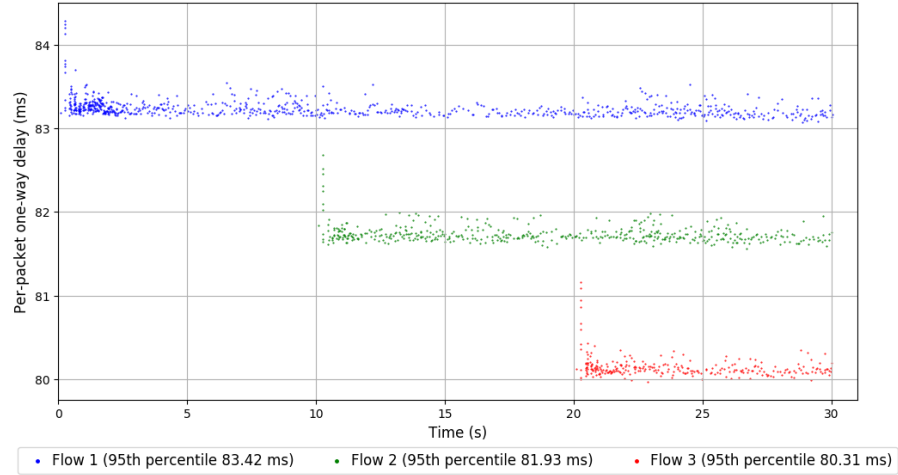
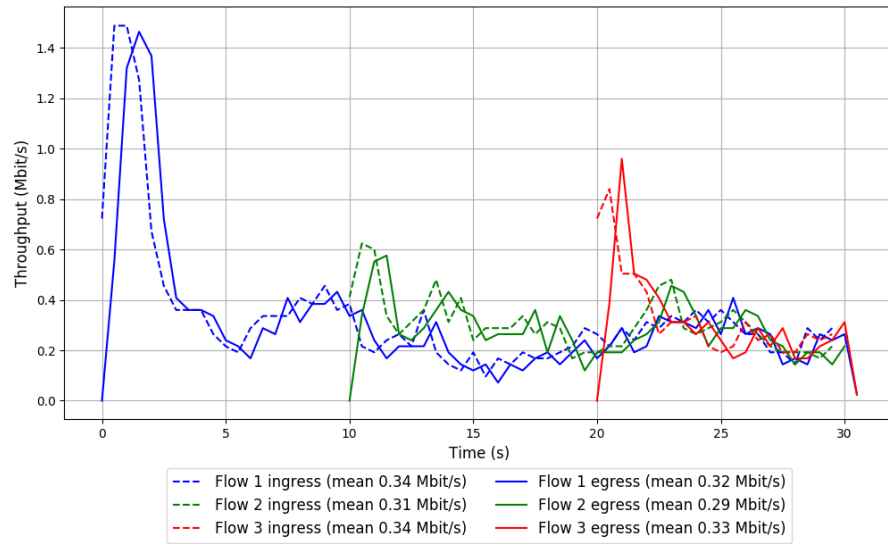
-- Flow 3:

Average throughput: 0.33 Mbit/s

95th percentile per-packet one-way delay: 80.315 ms

Loss rate: 5.28%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2019-01-17 12:46:58

End at: 2019-01-17 12:47:28

Local clock offset: -4.091 ms

Remote clock offset: 7.475 ms

Below is generated by plot.py at 2019-01-17 14:21:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.87 Mbit/s

95th percentile per-packet one-way delay: 85.873 ms

Loss rate: 4.11%

-- Flow 1:

Average throughput: 0.40 Mbit/s

95th percentile per-packet one-way delay: 85.929 ms

Loss rate: 3.93%

-- Flow 2:

Average throughput: 0.41 Mbit/s

95th percentile per-packet one-way delay: 84.486 ms

Loss rate: 3.97%

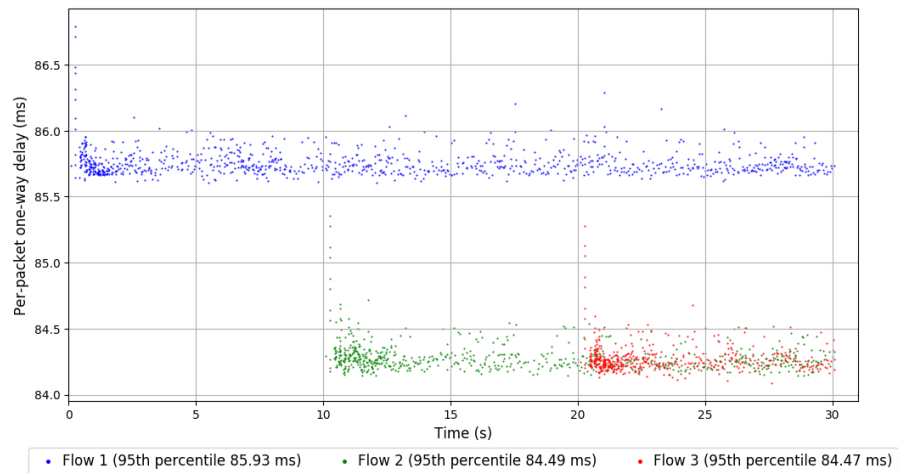
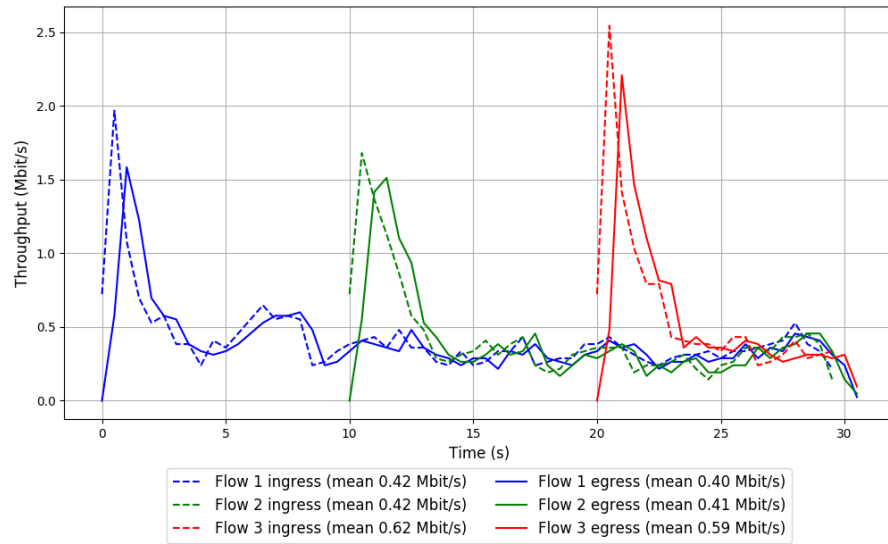
-- Flow 3:

Average throughput: 0.59 Mbit/s

95th percentile per-packet one-way delay: 84.472 ms

Loss rate: 4.70%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

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

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

Local clock offset: -5.347 ms

Remote clock offset: 7.275 ms

Below is generated by plot.py at 2019-01-17 14:21:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.83 Mbit/s

95th percentile per-packet one-way delay: 88.548 ms

Loss rate: 4.47%

-- Flow 1:

Average throughput: 0.34 Mbit/s

95th percentile per-packet one-way delay: 88.562 ms

Loss rate: 3.89%

-- Flow 2:

Average throughput: 0.42 Mbit/s

95th percentile per-packet one-way delay: 88.568 ms

Loss rate: 5.77%

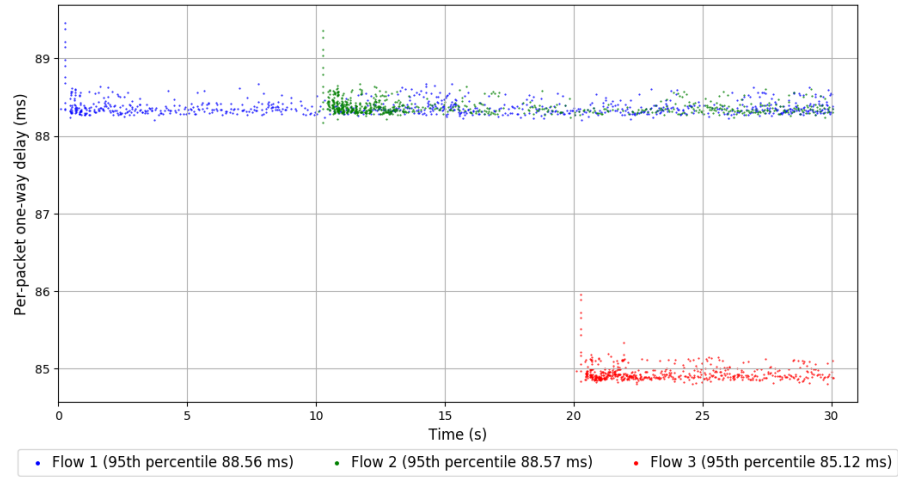
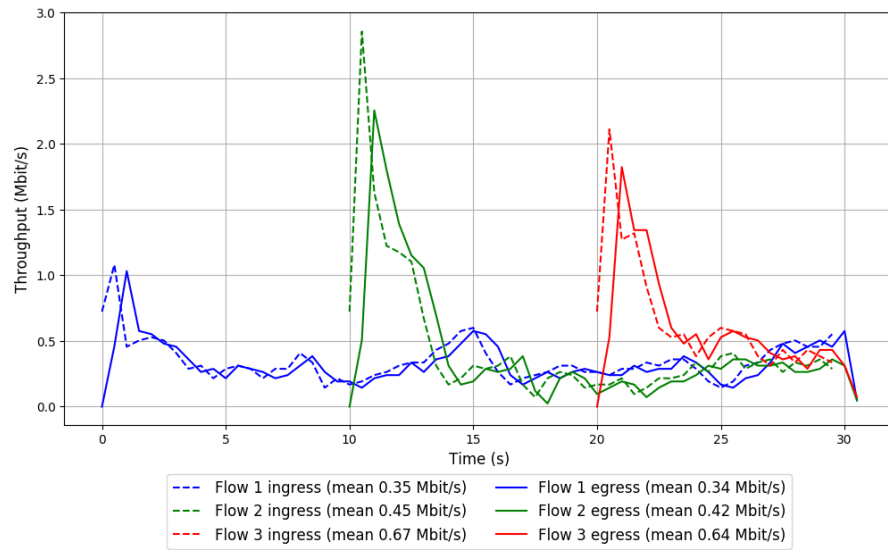
-- Flow 3:

Average throughput: 0.64 Mbit/s

95th percentile per-packet one-way delay: 85.116 ms

Loss rate: 3.62%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2019-01-17 13:39:38

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

Local clock offset: -4.974 ms

Remote clock offset: 5.024 ms

Below is generated by plot.py at 2019-01-17 14:21:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.84 Mbit/s

95th percentile per-packet one-way delay: 85.403 ms

Loss rate: 4.04%

-- Flow 1:

Average throughput: 0.33 Mbit/s

95th percentile per-packet one-way delay: 85.424 ms

Loss rate: 4.92%

-- Flow 2:

Average throughput: 0.48 Mbit/s

95th percentile per-packet one-way delay: 83.983 ms

Loss rate: 3.25%

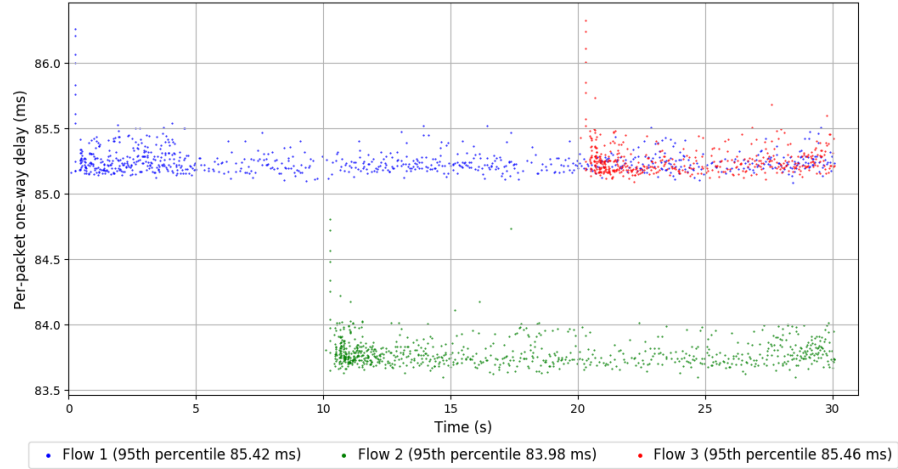
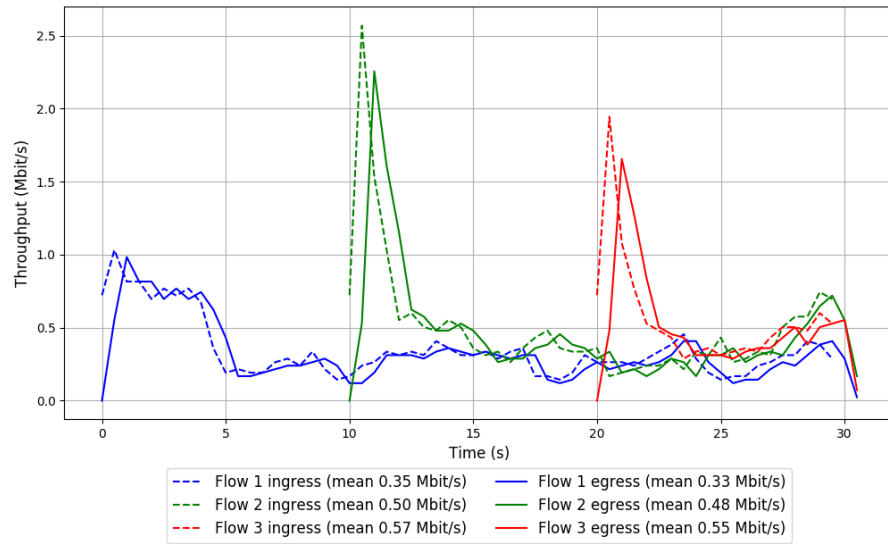
-- Flow 3:

Average throughput: 0.55 Mbit/s

95th percentile per-packet one-way delay: 85.457 ms

Loss rate: 3.81%

Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2019-01-17 14:06:10

End at: 2019-01-17 14:06:40

Local clock offset: -4.32 ms

Remote clock offset: 0.984 ms

Below is generated by plot.py at 2019-01-17 14:21:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 19.87 Mbit/s

95th percentile per-packet one-way delay: 83.504 ms

Loss rate: 0.10%

-- Flow 1:

Average throughput: 11.29 Mbit/s

95th percentile per-packet one-way delay: 80.197 ms

Loss rate: 0.12%

-- Flow 2:

Average throughput: 10.05 Mbit/s

95th percentile per-packet one-way delay: 80.266 ms

Loss rate: 0.05%

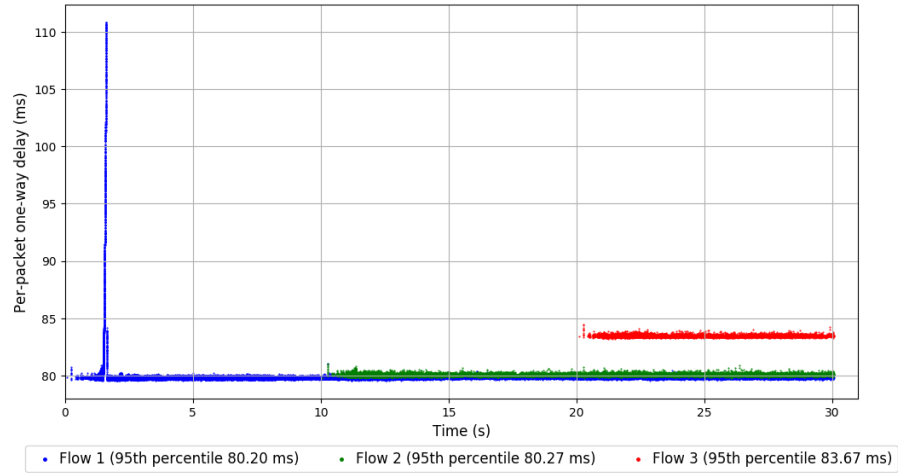
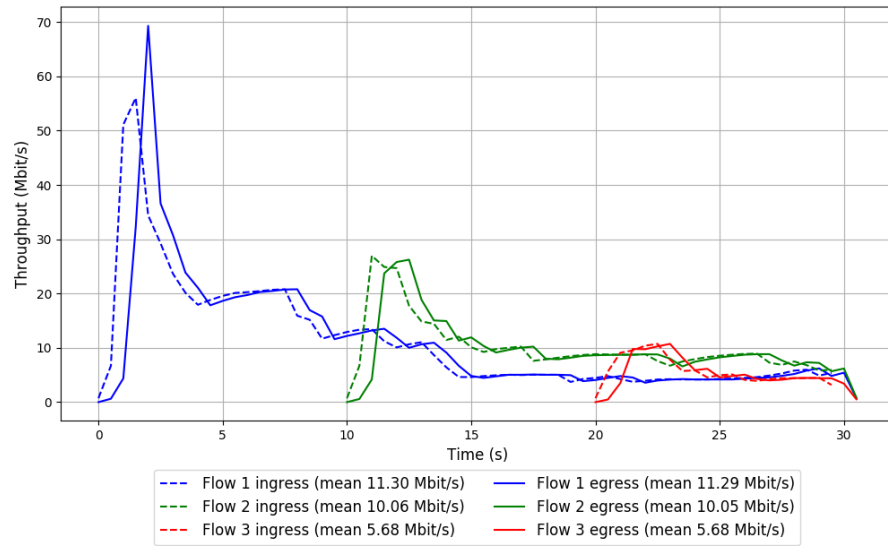
-- Flow 3:

Average throughput: 5.68 Mbit/s

95th percentile per-packet one-way delay: 83.673 ms

Loss rate: 0.13%

Run 5: Report of TCP Cubic — Data Link



Run 1: Statistics of FillP

Start at: 2019-01-17 12:33:14

End at: 2019-01-17 12:33:44

Local clock offset: -3.841 ms

Remote clock offset: 7.4 ms

Below is generated by plot.py at 2019-01-17 14:22:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 74.38 Mbit/s

95th percentile per-packet one-way delay: 113.201 ms

Loss rate: 20.99%

-- Flow 1:

Average throughput: 46.38 Mbit/s

95th percentile per-packet one-way delay: 113.272 ms

Loss rate: 16.48%

-- Flow 2:

Average throughput: 30.82 Mbit/s

95th percentile per-packet one-way delay: 112.015 ms

Loss rate: 30.30%

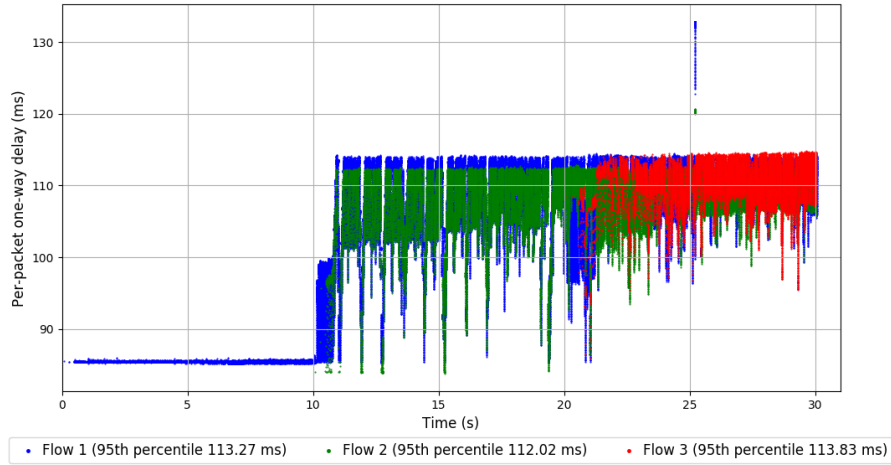
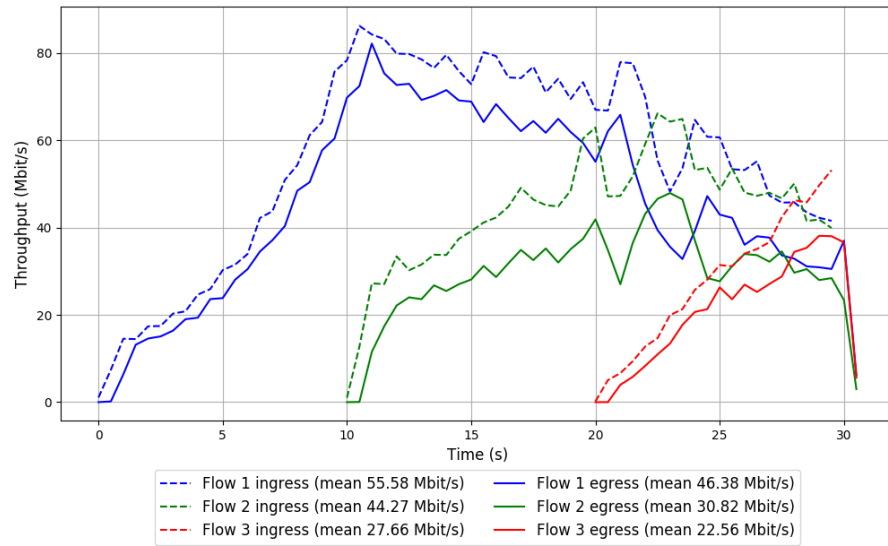
-- Flow 3:

Average throughput: 22.56 Mbit/s

95th percentile per-packet one-way delay: 113.830 ms

Loss rate: 18.41%

Run 1: Report of FillP — Data Link



Run 2: Statistics of FillP

Start at: 2019-01-17 12:59:37

End at: 2019-01-17 13:00:07

Local clock offset: -4.355 ms

Remote clock offset: 5.922 ms

Below is generated by plot.py at 2019-01-17 14:22:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 68.96 Mbit/s

95th percentile per-packet one-way delay: 112.044 ms

Loss rate: 21.98%

-- Flow 1:

Average throughput: 38.03 Mbit/s

95th percentile per-packet one-way delay: 112.023 ms

Loss rate: 17.07%

-- Flow 2:

Average throughput: 33.30 Mbit/s

95th percentile per-packet one-way delay: 111.980 ms

Loss rate: 28.61%

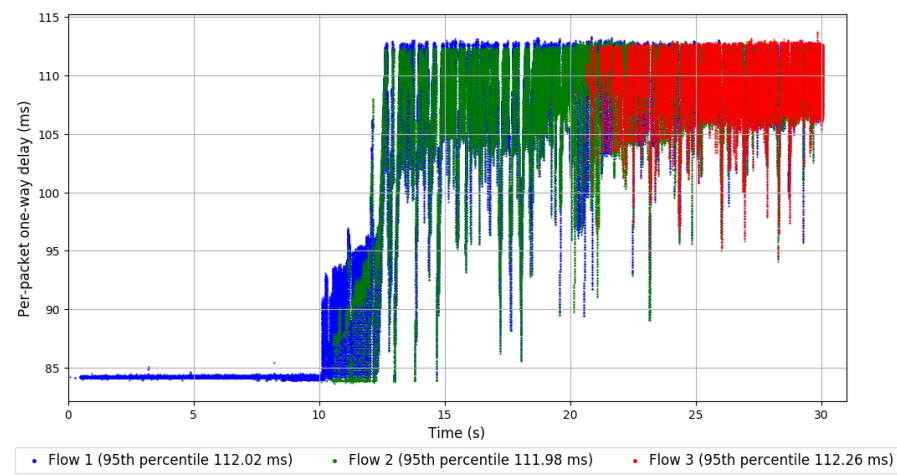
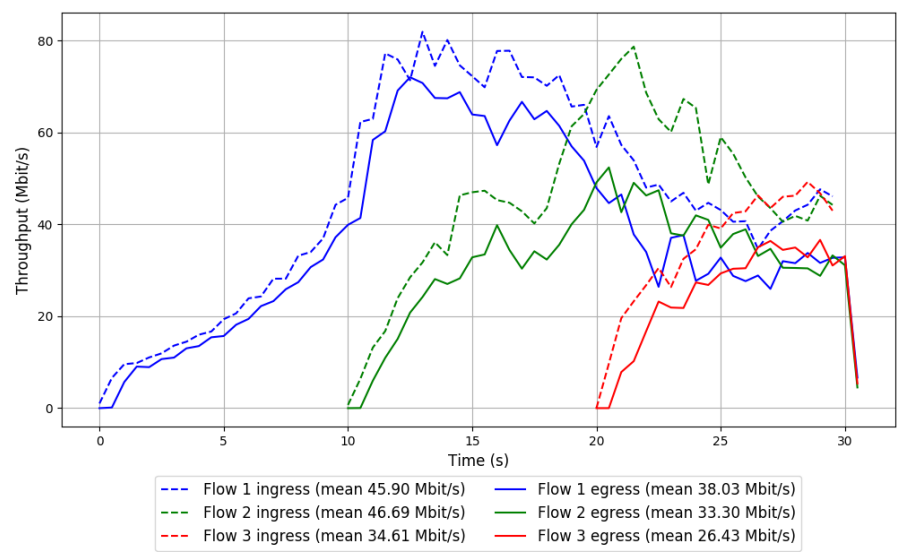
-- Flow 3:

Average throughput: 26.43 Mbit/s

95th percentile per-packet one-way delay: 112.261 ms

Loss rate: 23.66%

Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2019-01-17 13:25:57

End at: 2019-01-17 13:26:27

Local clock offset: -5.124 ms

Remote clock offset: 2.793 ms

Below is generated by plot.py at 2019-01-17 14:22:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 72.63 Mbit/s

95th percentile per-packet one-way delay: 111.221 ms

Loss rate: 21.85%

-- Flow 1:

Average throughput: 42.61 Mbit/s

95th percentile per-packet one-way delay: 111.014 ms

Loss rate: 20.07%

-- Flow 2:

Average throughput: 32.95 Mbit/s

95th percentile per-packet one-way delay: 111.171 ms

Loss rate: 25.62%

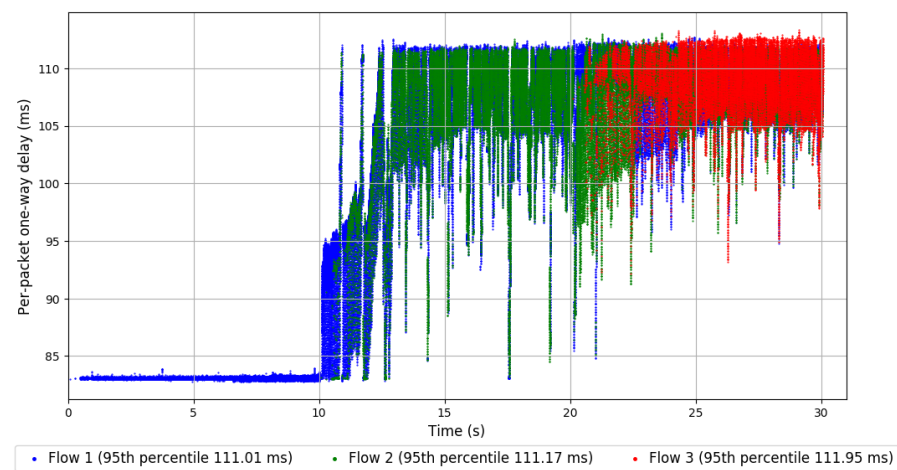
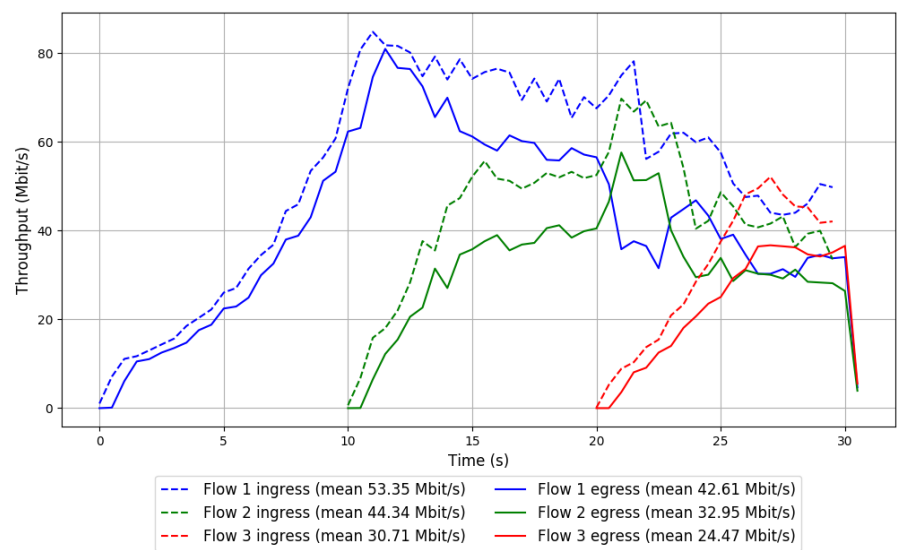
-- Flow 3:

Average throughput: 24.47 Mbit/s

95th percentile per-packet one-way delay: 111.950 ms

Loss rate: 20.30%

Run 3: Report of FillP — Data Link

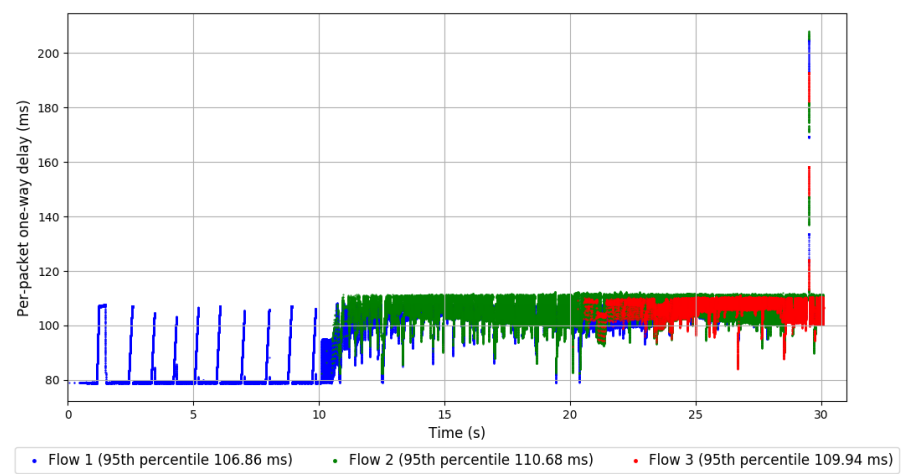
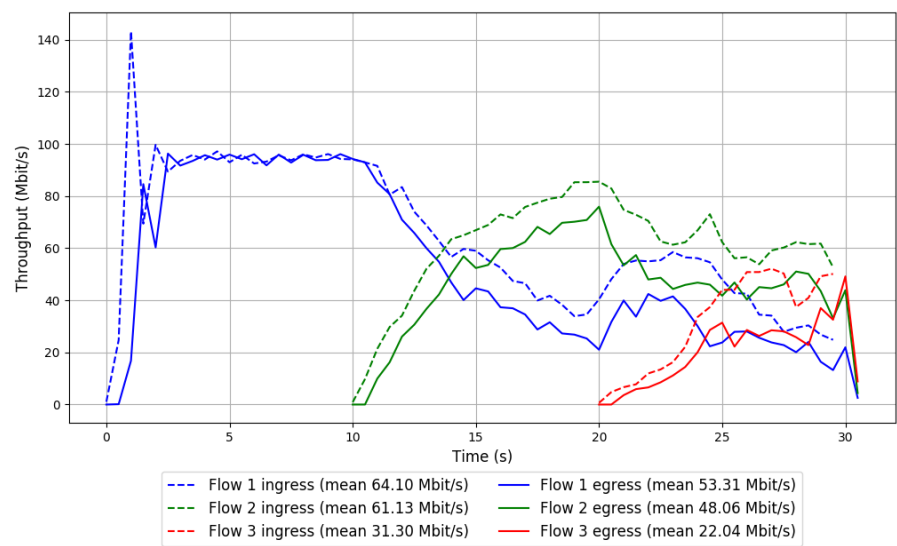


Run 4: Statistics of FillP

Start at: 2019-01-17 13:52:19
End at: 2019-01-17 13:52:49
Local clock offset: -3.887 ms
Remote clock offset: 1.048 ms

Below is generated by plot.py at 2019-01-17 14:23:10
Datalink statistics
-- Total of 3 flows:
Average throughput: 92.61 Mbit/s
95th percentile per-packet one-way delay: 110.248 ms
Loss rate: 19.52%
-- Flow 1:
Average throughput: 53.31 Mbit/s
95th percentile per-packet one-way delay: 106.863 ms
Loss rate: 16.78%
-- Flow 2:
Average throughput: 48.06 Mbit/s
95th percentile per-packet one-way delay: 110.677 ms
Loss rate: 21.28%
-- Flow 3:
Average throughput: 22.04 Mbit/s
95th percentile per-packet one-way delay: 109.938 ms
Loss rate: 29.50%

Run 4: Report of FillP — Data Link



Run 5: Statistics of FillP

Start at: 2019-01-17 14:19:06

End at: 2019-01-17 14:19:36

Local clock offset: -3.466 ms

Remote clock offset: 1.954 ms

Below is generated by plot.py at 2019-01-17 14:23:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 89.30 Mbit/s

95th percentile per-packet one-way delay: 110.392 ms

Loss rate: 21.09%

-- Flow 1:

Average throughput: 50.57 Mbit/s

95th percentile per-packet one-way delay: 109.876 ms

Loss rate: 18.41%

-- Flow 2:

Average throughput: 46.76 Mbit/s

95th percentile per-packet one-way delay: 110.867 ms

Loss rate: 23.48%

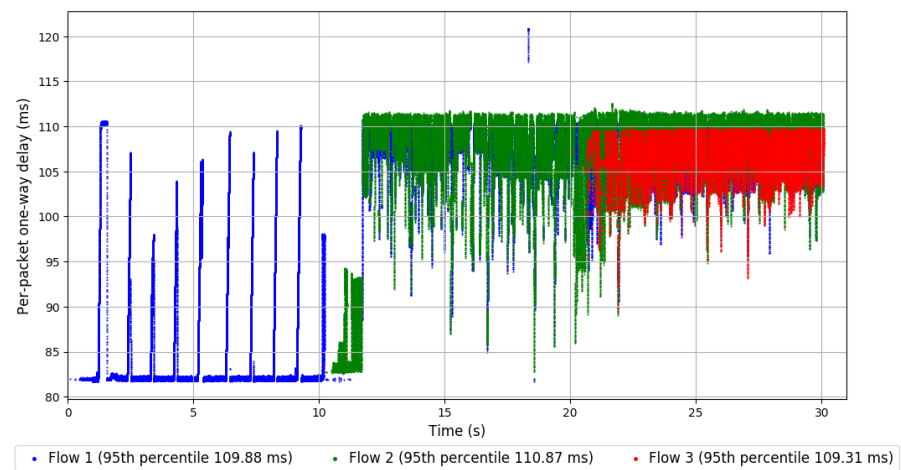
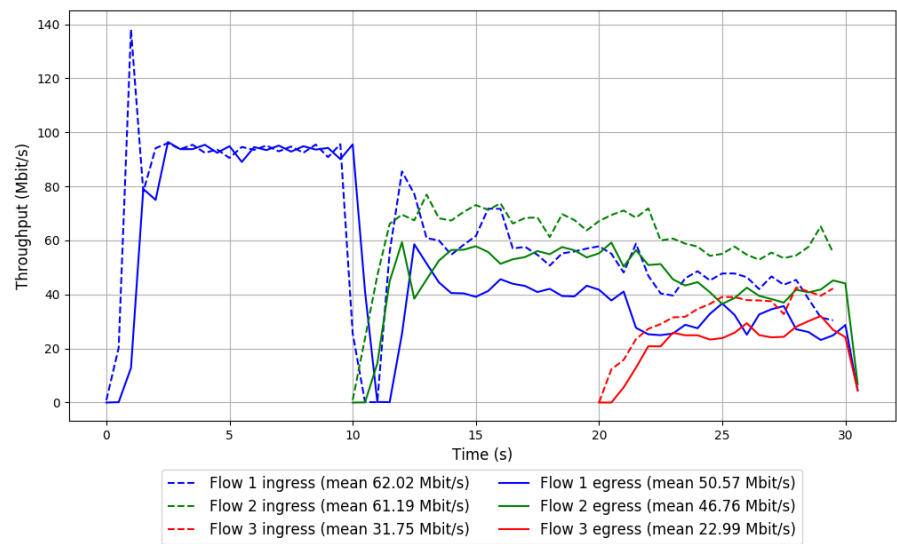
-- Flow 3:

Average throughput: 22.99 Mbit/s

95th percentile per-packet one-way delay: 109.307 ms

Loss rate: 27.60%

Run 5: Report of FillP — Data Link



Run 1: Statistics of FillP-Sheep

Start at: 2019-01-17 12:29:22

End at: 2019-01-17 12:29:52

Local clock offset: -3.669 ms

Remote clock offset: 7.43 ms

Below is generated by plot.py at 2019-01-17 14:23:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 66.94 Mbit/s

95th percentile per-packet one-way delay: 113.573 ms

Loss rate: 7.70%

-- Flow 1:

Average throughput: 46.80 Mbit/s

95th percentile per-packet one-way delay: 113.441 ms

Loss rate: 7.24%

-- Flow 2:

Average throughput: 23.38 Mbit/s

95th percentile per-packet one-way delay: 114.225 ms

Loss rate: 8.83%

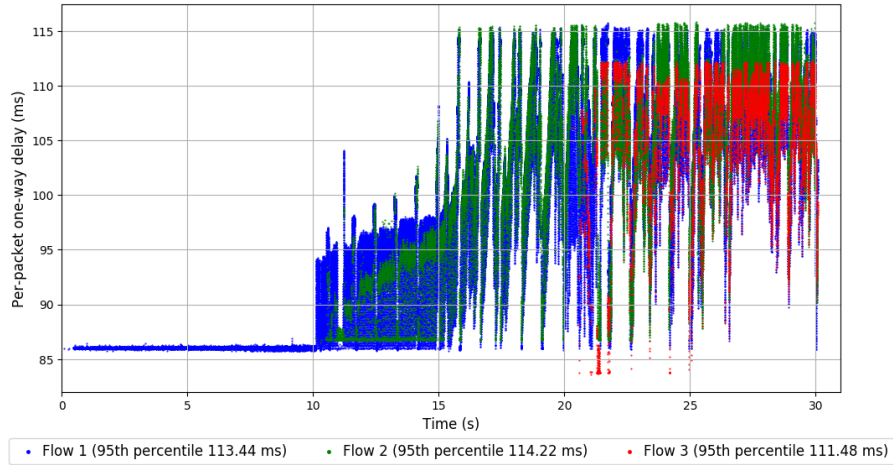
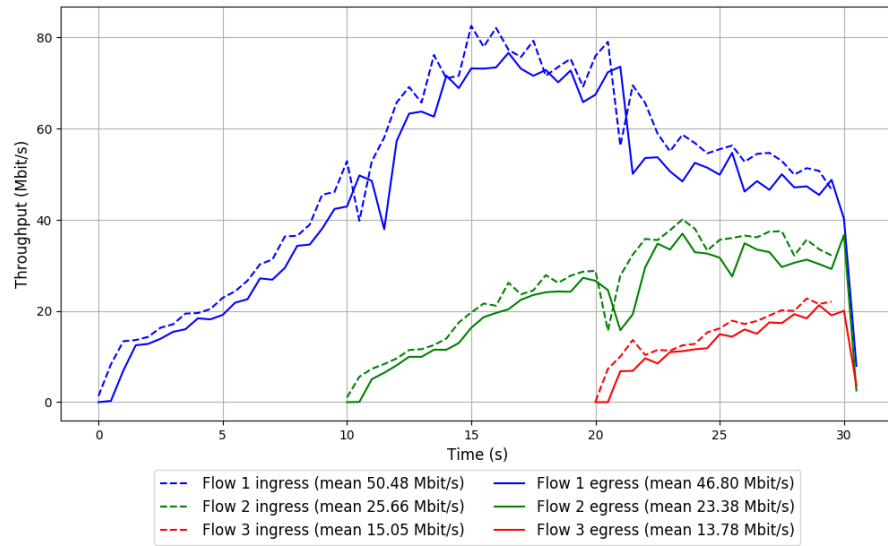
-- Flow 3:

Average throughput: 13.78 Mbit/s

95th percentile per-packet one-way delay: 111.484 ms

Loss rate: 8.40%

Run 1: Report of FillP-Sheep — Data Link



Run 2: Statistics of FillP-Sheep

Start at: 2019-01-17 12:55:43

End at: 2019-01-17 12:56:13

Local clock offset: -4.293 ms

Remote clock offset: 2.044 ms

Below is generated by plot.py at 2019-01-17 14:23:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 57.11 Mbit/s

95th percentile per-packet one-way delay: 108.409 ms

Loss rate: 10.40%

-- Flow 1:

Average throughput: 29.75 Mbit/s

95th percentile per-packet one-way delay: 108.826 ms

Loss rate: 9.63%

-- Flow 2:

Average throughput: 31.57 Mbit/s

95th percentile per-packet one-way delay: 107.956 ms

Loss rate: 12.42%

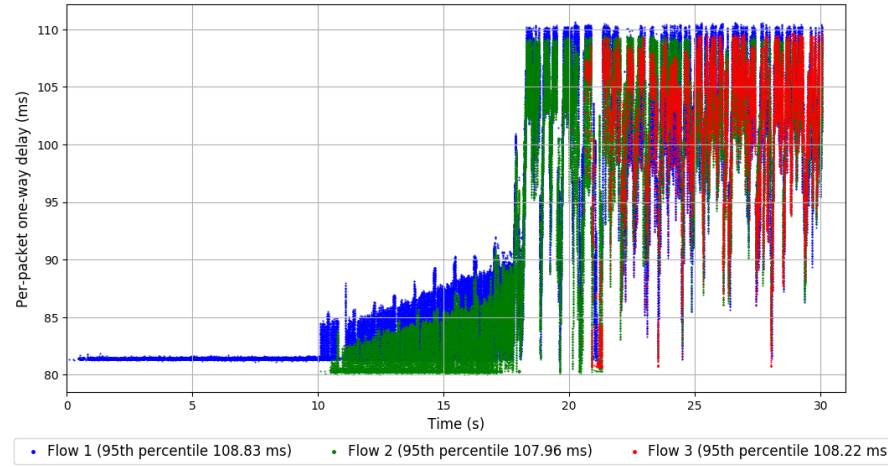
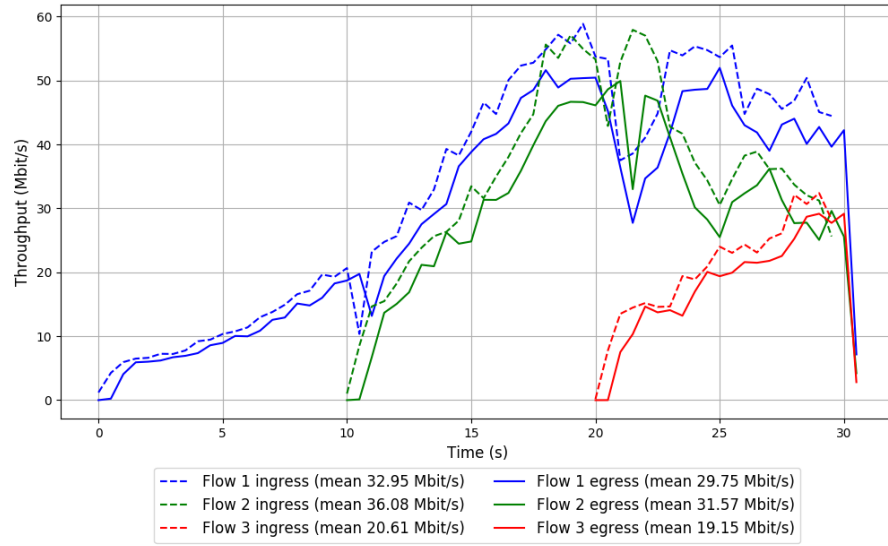
-- Flow 3:

Average throughput: 19.15 Mbit/s

95th percentile per-packet one-way delay: 108.219 ms

Loss rate: 7.03%

Run 2: Report of FillP-Sheep — Data Link



Run 3: Statistics of FillP-Sheep

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

End at: 2019-01-17 13:22:31

Local clock offset: -5.15 ms

Remote clock offset: 1.935 ms

Below is generated by plot.py at 2019-01-17 14:23:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 64.01 Mbit/s

95th percentile per-packet one-way delay: 109.532 ms

Loss rate: 8.92%

-- Flow 1:

Average throughput: 45.26 Mbit/s

95th percentile per-packet one-way delay: 109.643 ms

Loss rate: 7.98%

-- Flow 2:

Average throughput: 21.26 Mbit/s

95th percentile per-packet one-way delay: 109.195 ms

Loss rate: 12.99%

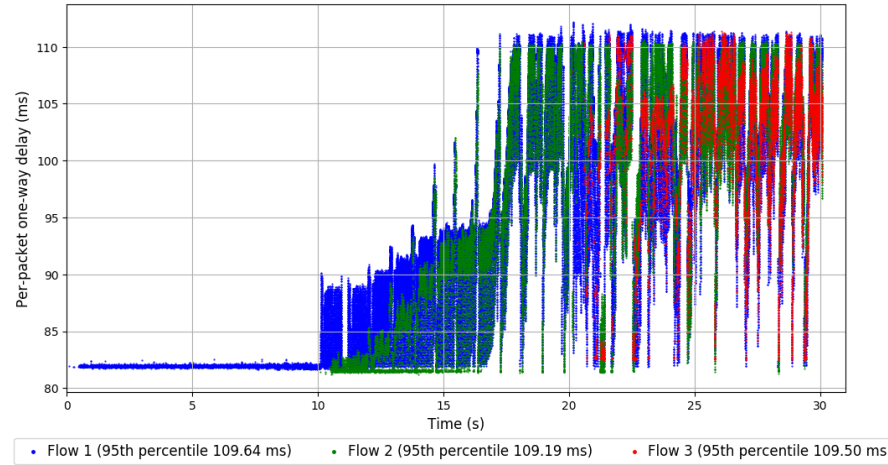
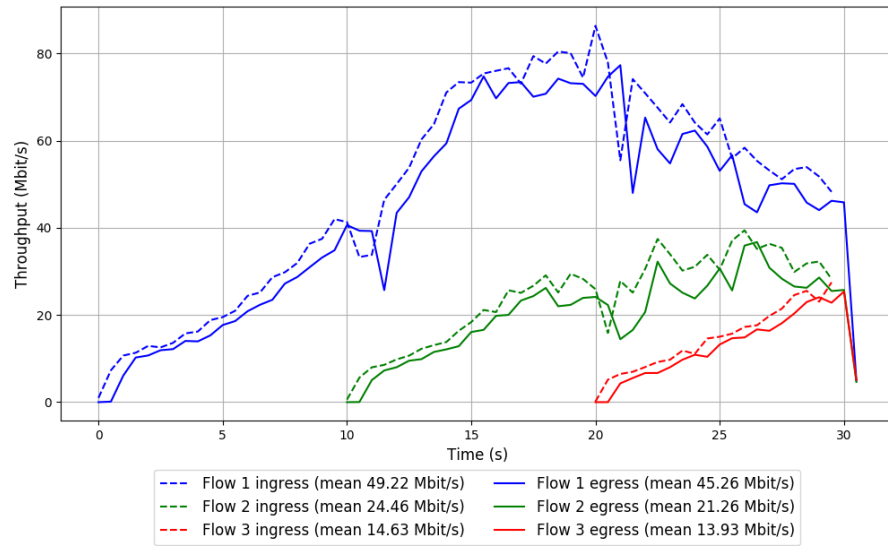
-- Flow 3:

Average throughput: 13.93 Mbit/s

95th percentile per-packet one-way delay: 109.499 ms

Loss rate: 4.78%

Run 3: Report of FillP-Sheep — Data Link



Run 4: Statistics of FillP-Sheep

Start at: 2019-01-17 13:48:25

End at: 2019-01-17 13:48:55

Local clock offset: -4.148 ms

Remote clock offset: 6.039 ms

Below is generated by plot.py at 2019-01-17 14:23:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 81.38 Mbit/s

95th percentile per-packet one-way delay: 111.790 ms

Loss rate: 4.29%

-- Flow 1:

Average throughput: 28.08 Mbit/s

95th percentile per-packet one-way delay: 109.271 ms

Loss rate: 4.83%

-- Flow 2:

Average throughput: 69.87 Mbit/s

95th percentile per-packet one-way delay: 111.868 ms

Loss rate: 3.02%

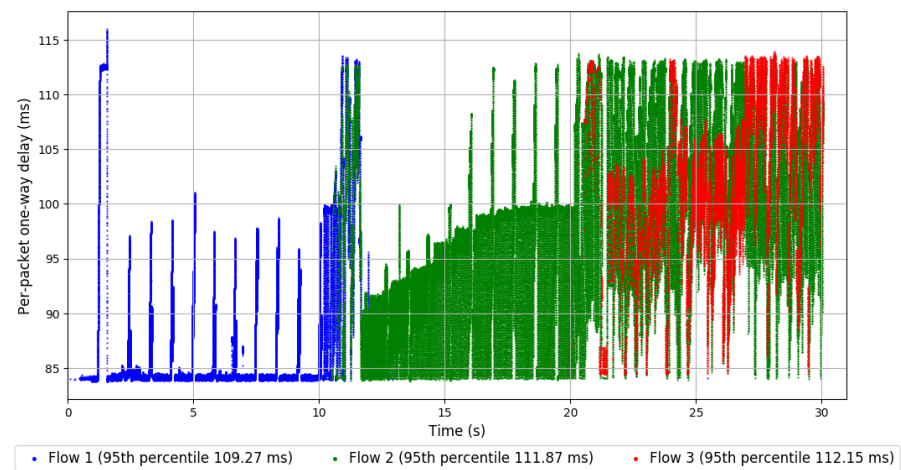
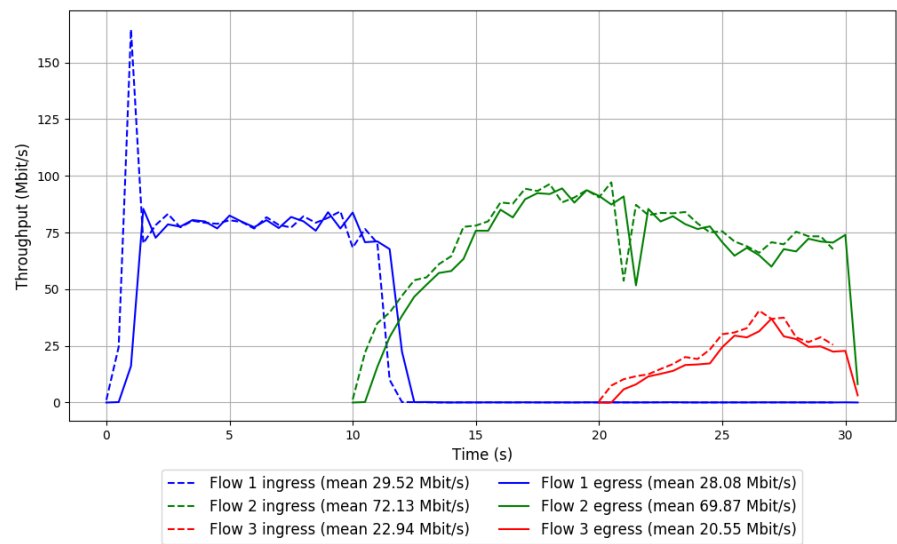
-- Flow 3:

Average throughput: 20.55 Mbit/s

95th percentile per-packet one-way delay: 112.148 ms

Loss rate: 10.26%

Run 4: Report of FillP-Sheep — Data Link



Run 5: Statistics of FillP-Sheep

Start at: 2019-01-17 14:15:08

End at: 2019-01-17 14:15:38

Local clock offset: -3.365 ms

Remote clock offset: 7.109 ms

Below is generated by plot.py at 2019-01-17 14:23:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 87.13 Mbit/s

95th percentile per-packet one-way delay: 114.559 ms

Loss rate: 6.57%

-- Flow 1:

Average throughput: 28.35 Mbit/s

95th percentile per-packet one-way delay: 101.699 ms

Loss rate: 3.70%

-- Flow 2:

Average throughput: 76.44 Mbit/s

95th percentile per-packet one-way delay: 114.820 ms

Loss rate: 7.40%

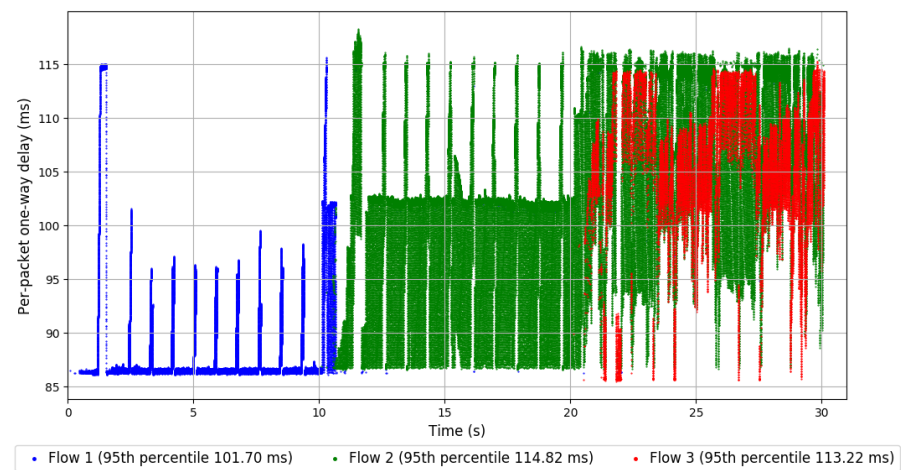
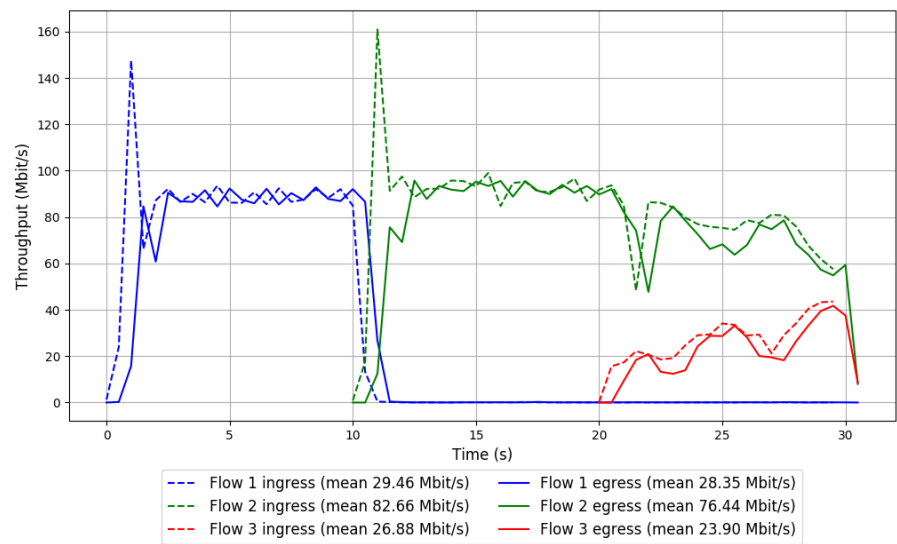
-- Flow 3:

Average throughput: 23.90 Mbit/s

95th percentile per-packet one-way delay: 113.218 ms

Loss rate: 10.89%

Run 5: Report of FillP-Sheep — Data Link



Run 1: Statistics of Indigo

Start at: 2019-01-17 12:25:38

End at: 2019-01-17 12:26:08

Local clock offset: -3.376 ms

Remote clock offset: 2.482 ms

Below is generated by plot.py at 2019-01-17 14:23:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 90.82 Mbit/s

95th percentile per-packet one-way delay: 111.290 ms

Loss rate: 14.01%

-- Flow 1:

Average throughput: 63.99 Mbit/s

95th percentile per-packet one-way delay: 110.988 ms

Loss rate: 10.66%

-- Flow 2:

Average throughput: 29.51 Mbit/s

95th percentile per-packet one-way delay: 111.418 ms

Loss rate: 18.75%

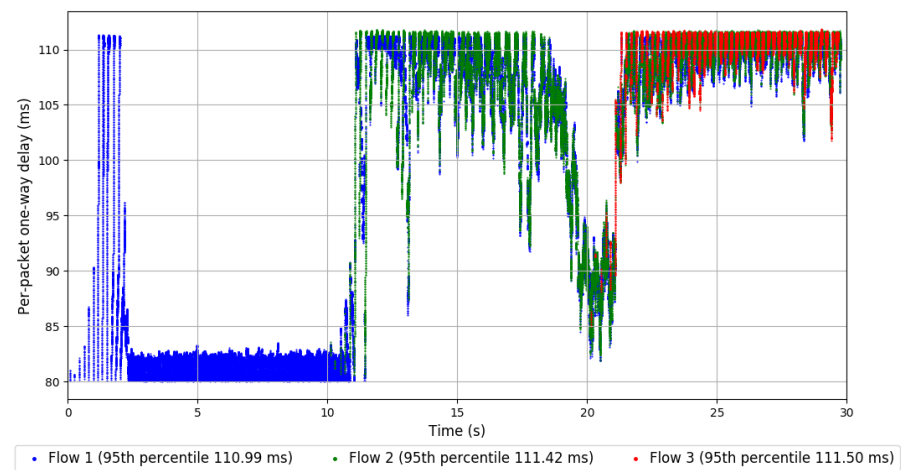
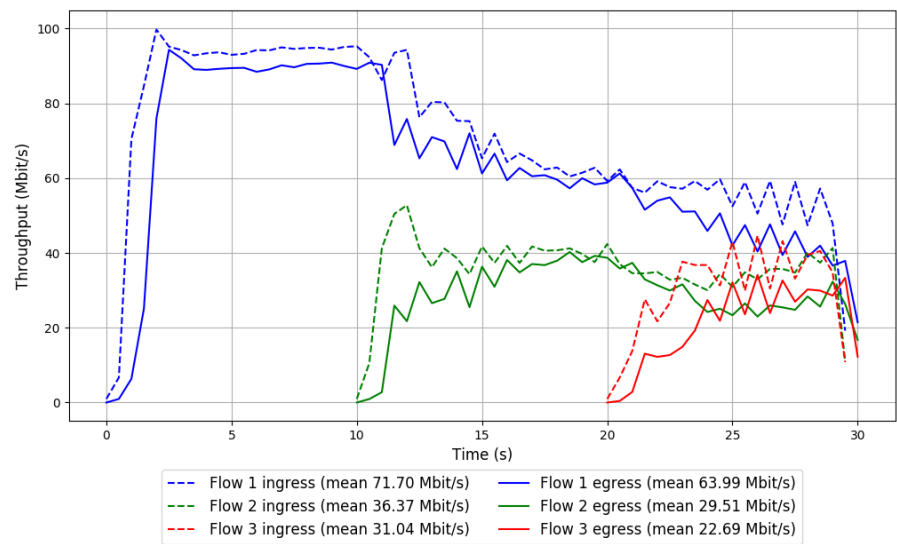
-- Flow 3:

Average throughput: 22.69 Mbit/s

95th percentile per-packet one-way delay: 111.504 ms

Loss rate: 26.69%

Run 1: Report of Indigo — Data Link



Run 2: Statistics of Indigo

Start at: 2019-01-17 12:51:58

End at: 2019-01-17 12:52:28

Local clock offset: -4.214 ms

Remote clock offset: 2.378 ms

Below is generated by plot.py at 2019-01-17 14:23:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 90.54 Mbit/s

95th percentile per-packet one-way delay: 112.692 ms

Loss rate: 30.80%

-- Flow 1:

Average throughput: 62.96 Mbit/s

95th percentile per-packet one-way delay: 112.810 ms

Loss rate: 13.39%

-- Flow 2:

Average throughput: 29.49 Mbit/s

95th percentile per-packet one-way delay: 111.635 ms

Loss rate: 25.50%

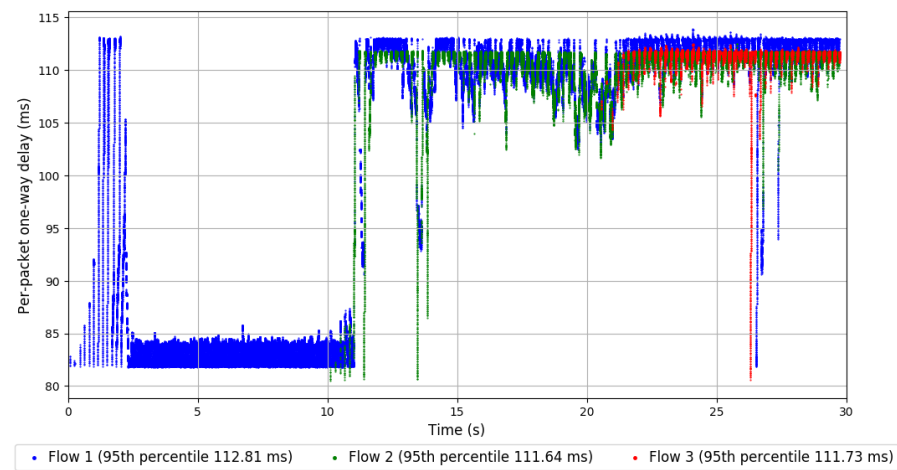
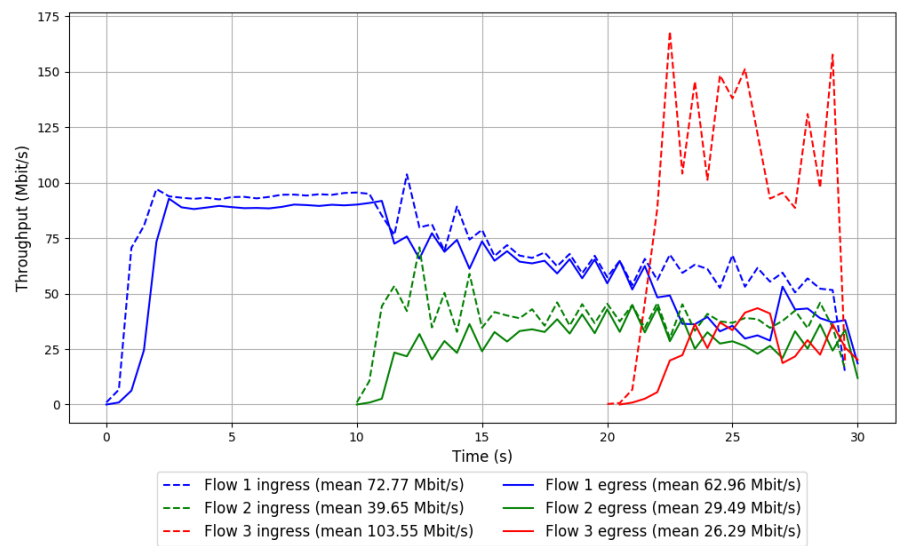
-- Flow 3:

Average throughput: 26.29 Mbit/s

95th percentile per-packet one-way delay: 111.732 ms

Loss rate: 74.60%

Run 2: Report of Indigo — Data Link



Run 3: Statistics of Indigo

Start at: 2019-01-17 13:18:16

End at: 2019-01-17 13:18:46

Local clock offset: -5.357 ms

Remote clock offset: 8.017 ms

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

Datalink statistics

-- Total of 3 flows:

Average throughput: 91.68 Mbit/s

95th percentile per-packet one-way delay: 117.806 ms

Loss rate: 34.26%

-- Flow 1:

Average throughput: 66.66 Mbit/s

95th percentile per-packet one-way delay: 117.888 ms

Loss rate: 13.14%

-- Flow 2:

Average throughput: 24.68 Mbit/s

95th percentile per-packet one-way delay: 116.891 ms

Loss rate: 34.84%

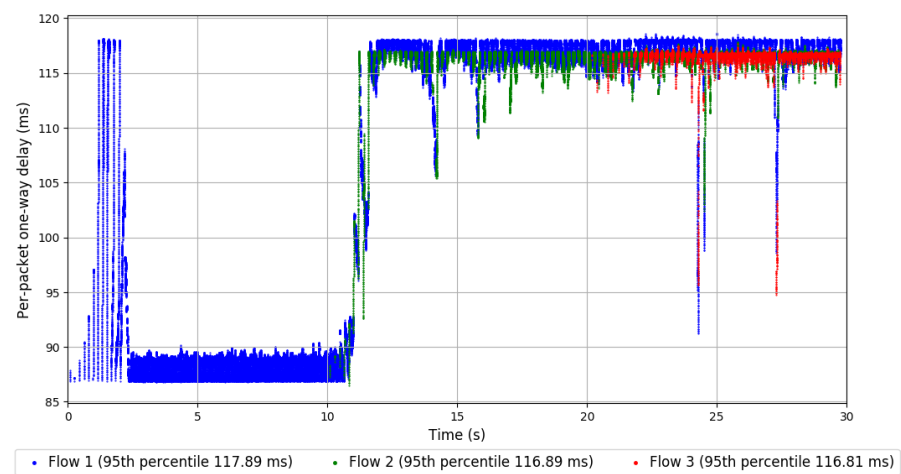
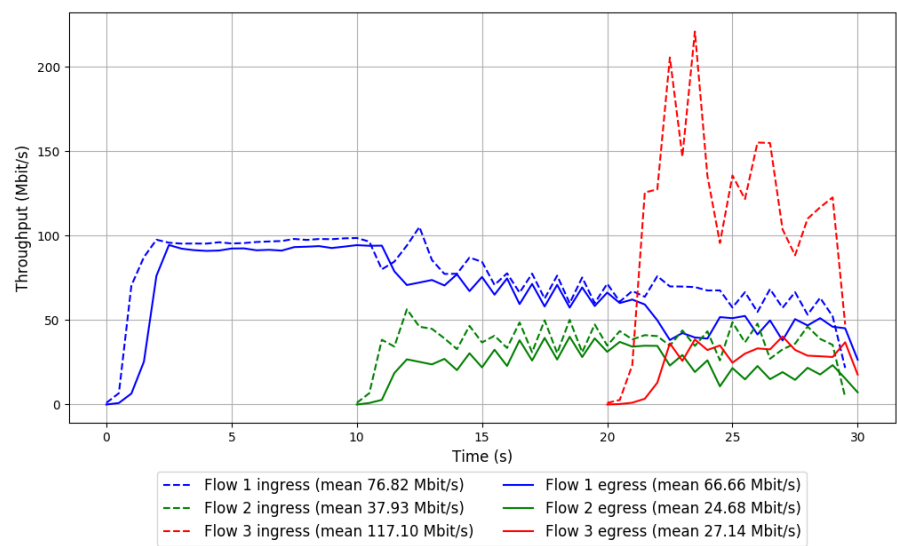
-- Flow 3:

Average throughput: 27.14 Mbit/s

95th percentile per-packet one-way delay: 116.814 ms

Loss rate: 76.82%

Run 3: Report of Indigo — Data Link



Run 4: Statistics of Indigo

Start at: 2019-01-17 13:44:38

End at: 2019-01-17 13:45:08

Local clock offset: -4.225 ms

Remote clock offset: 2.315 ms

Below is generated by plot.py at 2019-01-17 14:24:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 92.21 Mbit/s

95th percentile per-packet one-way delay: 112.785 ms

Loss rate: 33.67%

-- Flow 1:

Average throughput: 69.05 Mbit/s

95th percentile per-packet one-way delay: 112.684 ms

Loss rate: 9.54%

-- Flow 2:

Average throughput: 22.66 Mbit/s

95th percentile per-packet one-way delay: 112.763 ms

Loss rate: 41.11%

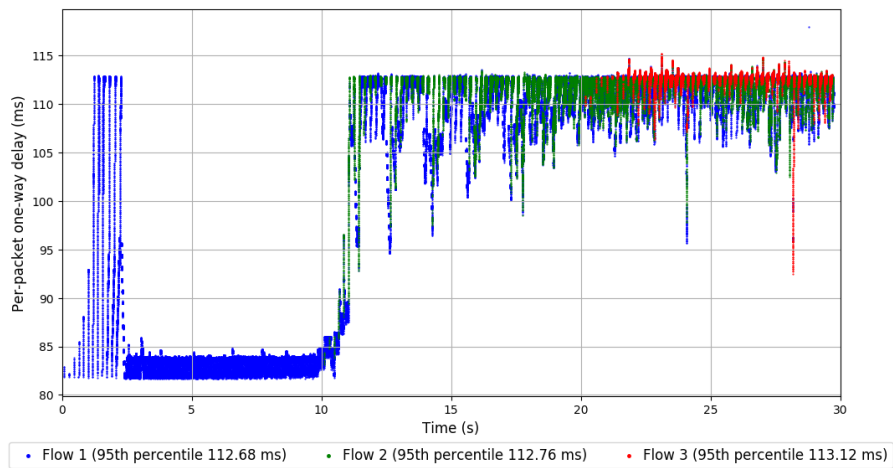
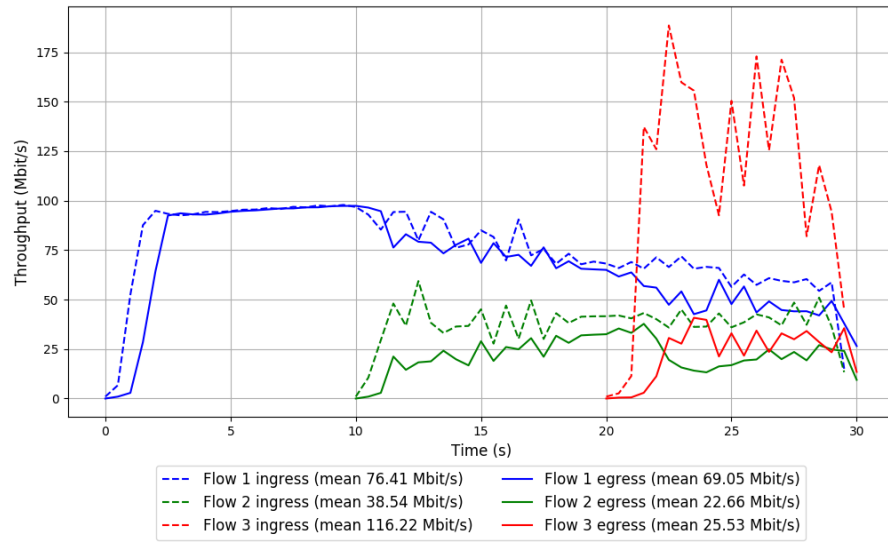
-- Flow 3:

Average throughput: 25.53 Mbit/s

95th percentile per-packet one-way delay: 113.118 ms

Loss rate: 78.03%

Run 4: Report of Indigo — Data Link



Run 5: Statistics of Indigo

Start at: 2019-01-17 14:11:17

End at: 2019-01-17 14:11:47

Local clock offset: -4.169 ms

Remote clock offset: 2.111 ms

Below is generated by plot.py at 2019-01-17 14:24:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 92.21 Mbit/s

95th percentile per-packet one-way delay: 114.481 ms

Loss rate: 33.88%

-- Flow 1:

Average throughput: 67.67 Mbit/s

95th percentile per-packet one-way delay: 112.151 ms

Loss rate: 11.22%

-- Flow 2:

Average throughput: 25.80 Mbit/s

95th percentile per-packet one-way delay: 114.587 ms

Loss rate: 31.97%

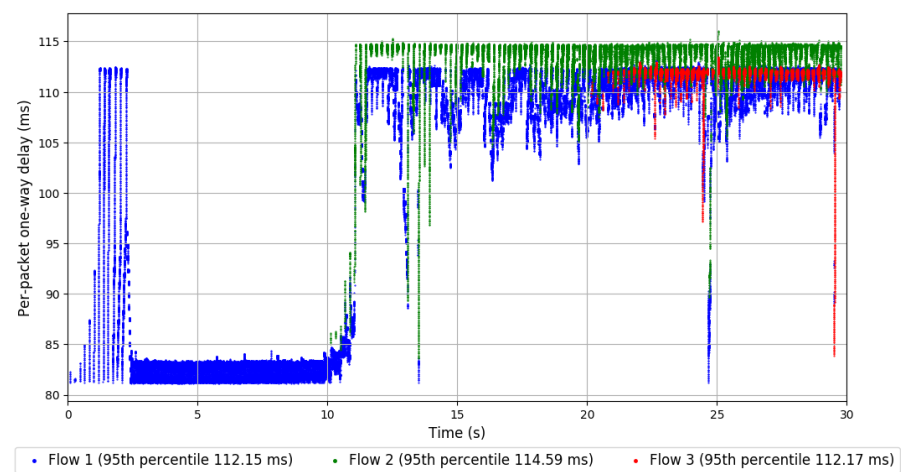
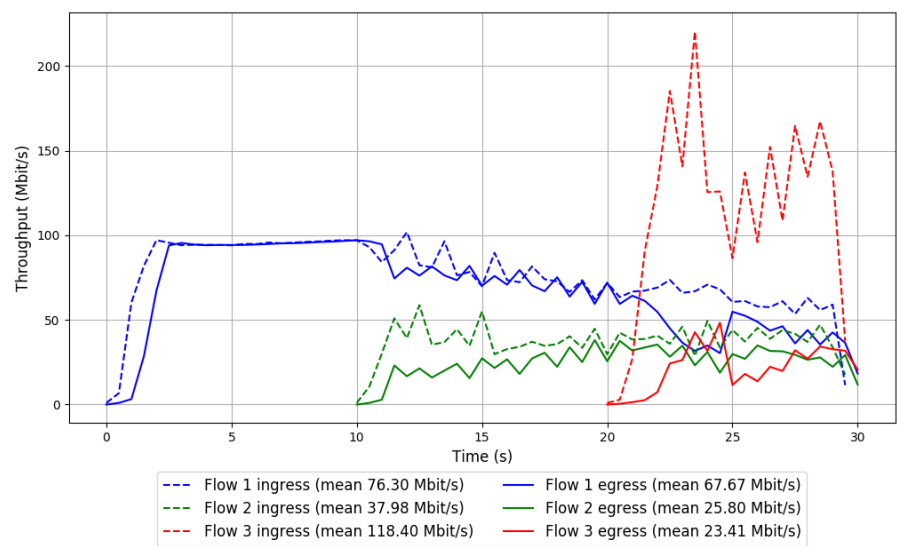
-- Flow 3:

Average throughput: 23.41 Mbit/s

95th percentile per-packet one-way delay: 112.174 ms

Loss rate: 80.22%

Run 5: Report of Indigo — Data Link



Run 1: Statistics of Indigo-MusesC3

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

End at: 2019-01-17 12:16:11

Local clock offset: -3.18 ms

Remote clock offset: 7.72 ms

Below is generated by plot.py at 2019-01-17 14:24:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 89.92 Mbit/s

95th percentile per-packet one-way delay: 100.844 ms

Loss rate: 4.55%

-- Flow 1:

Average throughput: 79.84 Mbit/s

95th percentile per-packet one-way delay: 100.074 ms

Loss rate: 4.57%

-- Flow 2:

Average throughput: 13.39 Mbit/s

95th percentile per-packet one-way delay: 103.671 ms

Loss rate: 4.34%

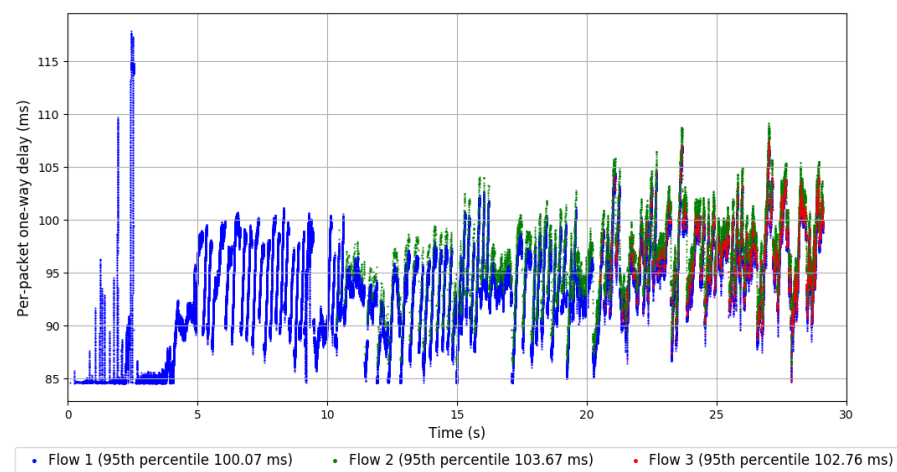
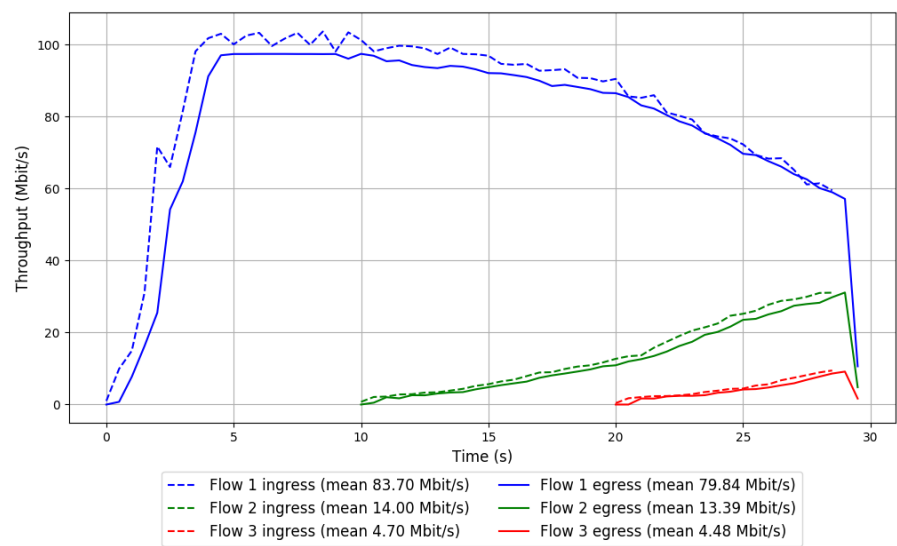
-- Flow 3:

Average throughput: 4.48 Mbit/s

95th percentile per-packet one-way delay: 102.759 ms

Loss rate: 4.55%

Run 1: Report of Indigo-MusesC3 — Data Link



Run 2: Statistics of Indigo-MusesC3

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

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

Local clock offset: -4.054 ms

Remote clock offset: 3.655 ms

Below is generated by plot.py at 2019-01-17 14:24:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 85.65 Mbit/s

95th percentile per-packet one-way delay: 99.831 ms

Loss rate: 4.80%

-- Flow 1:

Average throughput: 75.64 Mbit/s

95th percentile per-packet one-way delay: 99.795 ms

Loss rate: 4.78%

-- Flow 2:

Average throughput: 13.14 Mbit/s

95th percentile per-packet one-way delay: 99.871 ms

Loss rate: 4.87%

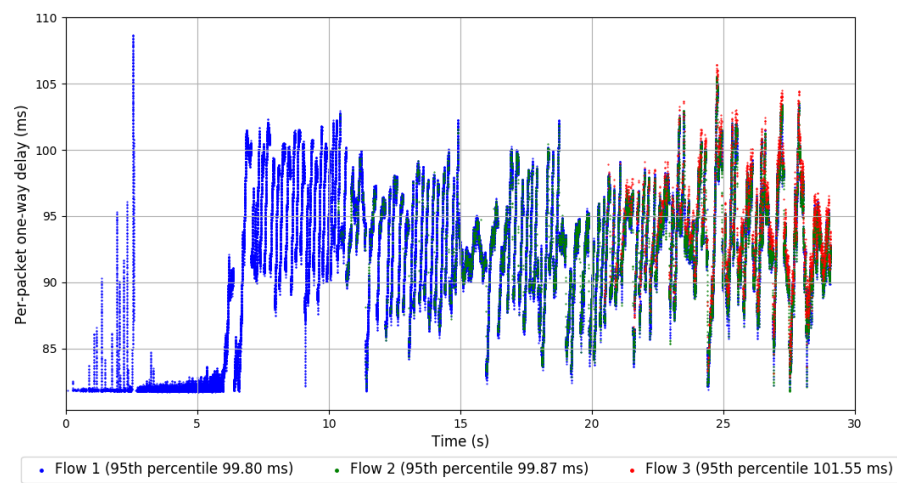
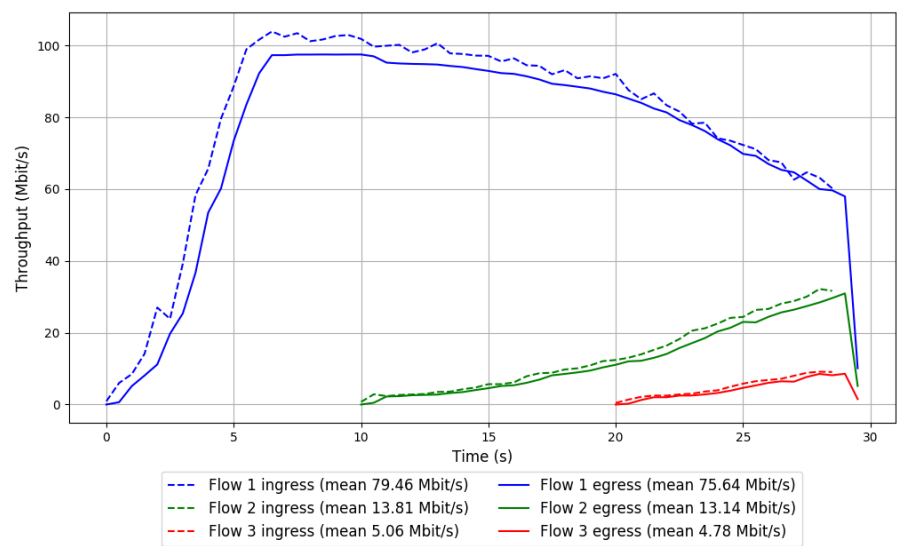
-- Flow 3:

Average throughput: 4.78 Mbit/s

95th percentile per-packet one-way delay: 101.553 ms

Loss rate: 5.53%

Run 2: Report of Indigo-MusesC3 — Data Link



Run 3: Statistics of Indigo-MusesC3

Start at: 2019-01-17 13:08:22

End at: 2019-01-17 13:08:52

Local clock offset: -4.477 ms

Remote clock offset: 3.465 ms

Below is generated by plot.py at 2019-01-17 14:24:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 77.95 Mbit/s

95th percentile per-packet one-way delay: 104.423 ms

Loss rate: 4.02%

-- Flow 1:

Average throughput: 66.28 Mbit/s

95th percentile per-packet one-way delay: 104.142 ms

Loss rate: 4.04%

-- Flow 2:

Average throughput: 15.57 Mbit/s

95th percentile per-packet one-way delay: 105.349 ms

Loss rate: 3.84%

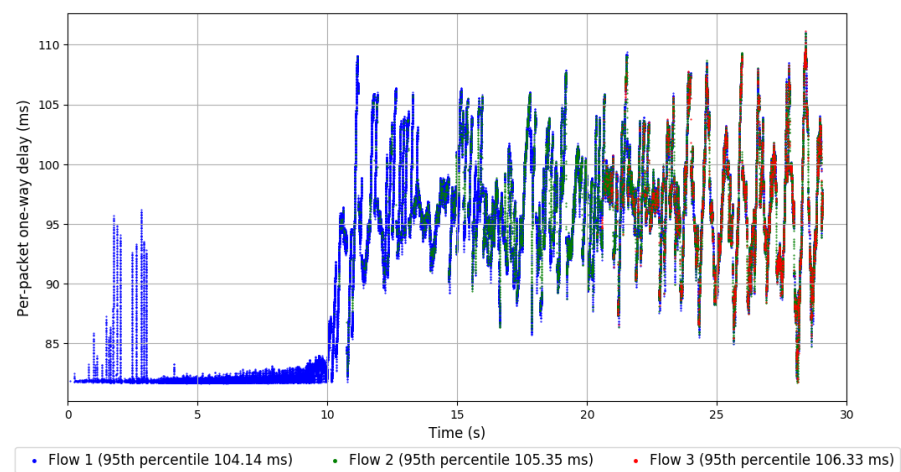
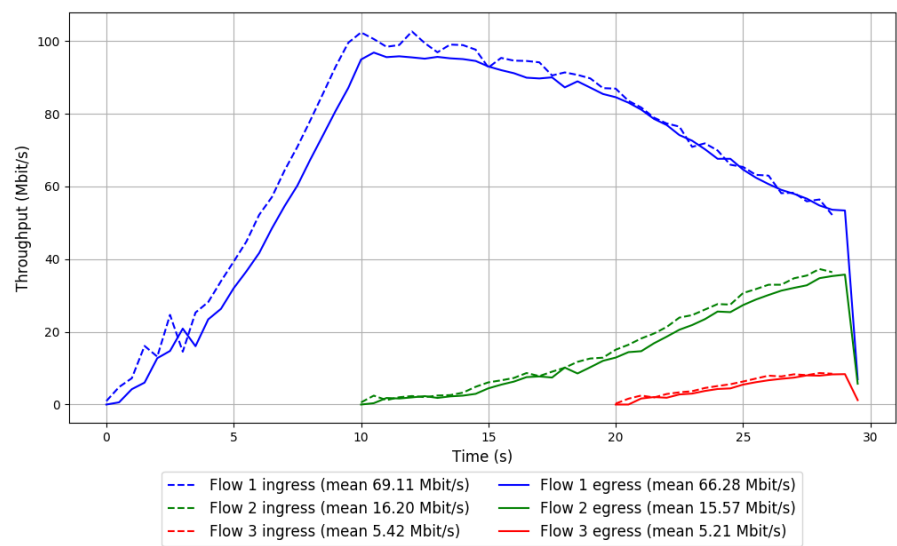
-- Flow 3:

Average throughput: 5.21 Mbit/s

95th percentile per-packet one-way delay: 106.330 ms

Loss rate: 3.92%

Run 3: Report of Indigo-MusesC3 — Data Link



Run 4: Statistics of Indigo-MusesC3

Start at: 2019-01-17 13:34:41

End at: 2019-01-17 13:35:11

Local clock offset: -4.223 ms

Remote clock offset: 6.595 ms

Below is generated by plot.py at 2019-01-17 14:24:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 87.78 Mbit/s

95th percentile per-packet one-way delay: 101.062 ms

Loss rate: 4.44%

-- Flow 1:

Average throughput: 76.34 Mbit/s

95th percentile per-packet one-way delay: 100.364 ms

Loss rate: 4.45%

-- Flow 2:

Average throughput: 14.73 Mbit/s

95th percentile per-packet one-way delay: 103.617 ms

Loss rate: 4.40%

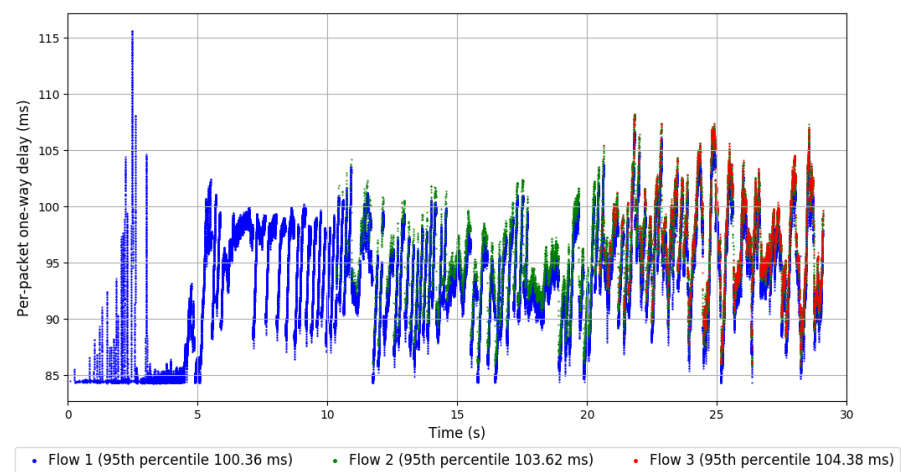
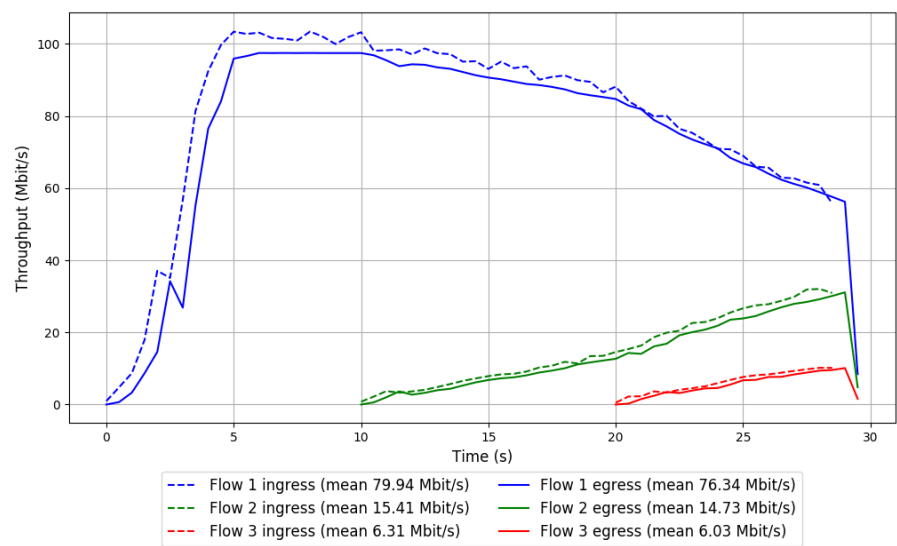
-- Flow 3:

Average throughput: 6.03 Mbit/s

95th percentile per-packet one-way delay: 104.382 ms

Loss rate: 4.26%

Run 4: Report of Indigo-MusesC3 — Data Link



Run 5: Statistics of Indigo-MusesC3

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

End at: 2019-01-17 14:01:36

Local clock offset: -3.653 ms

Remote clock offset: 2.231 ms

Below is generated by plot.py at 2019-01-17 14:24:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 92.09 Mbit/s

95th percentile per-packet one-way delay: 104.092 ms

Loss rate: 0.20%

-- Flow 1:

Average throughput: 73.60 Mbit/s

95th percentile per-packet one-way delay: 101.919 ms

Loss rate: 0.23%

-- Flow 2:

Average throughput: 25.20 Mbit/s

95th percentile per-packet one-way delay: 106.891 ms

Loss rate: 0.07%

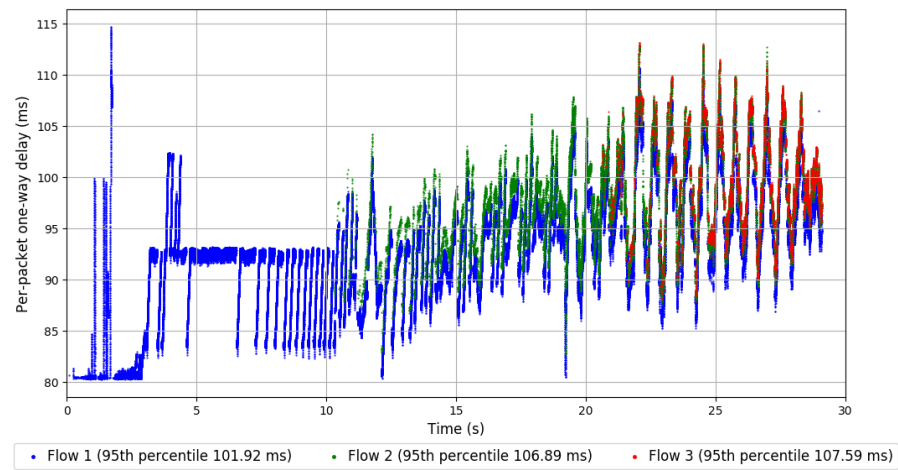
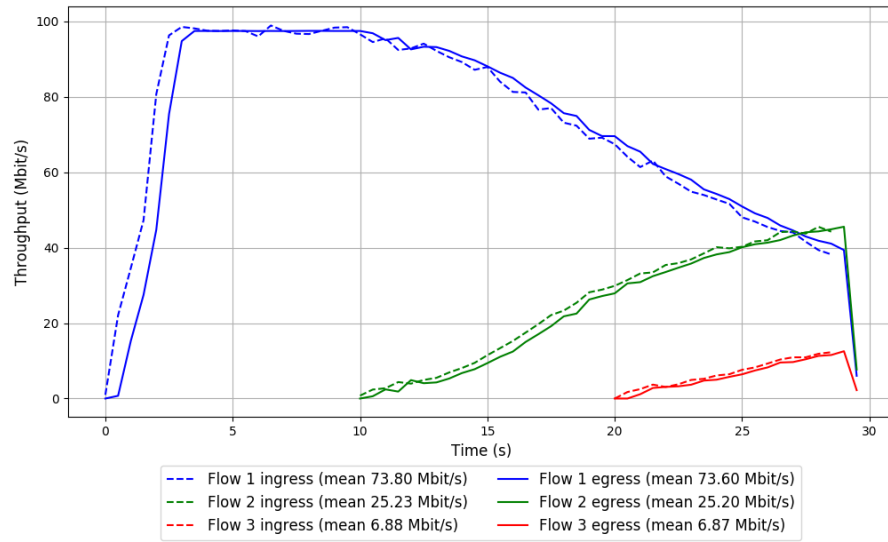
-- Flow 3:

Average throughput: 6.87 Mbit/s

95th percentile per-packet one-way delay: 107.586 ms

Loss rate: 0.16%

Run 5: Report of Indigo-MusesC3 — Data Link



Run 1: Statistics of Indigo-MusesC5

Start at: 2019-01-17 12:24:20

End at: 2019-01-17 12:24:50

Local clock offset: -3.332 ms

Remote clock offset: 7.35 ms

Below is generated by plot.py at 2019-01-17 14:25:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 79.94 Mbit/s

95th percentile per-packet one-way delay: 115.215 ms

Loss rate: 6.42%

-- Flow 1:

Average throughput: 68.52 Mbit/s

95th percentile per-packet one-way delay: 115.221 ms

Loss rate: 5.95%

-- Flow 2:

Average throughput: 16.63 Mbit/s

95th percentile per-packet one-way delay: 115.213 ms

Loss rate: 9.27%

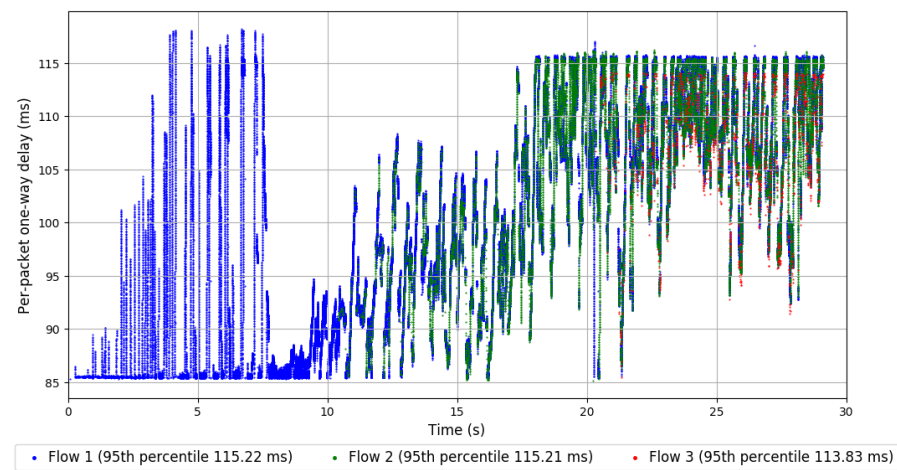
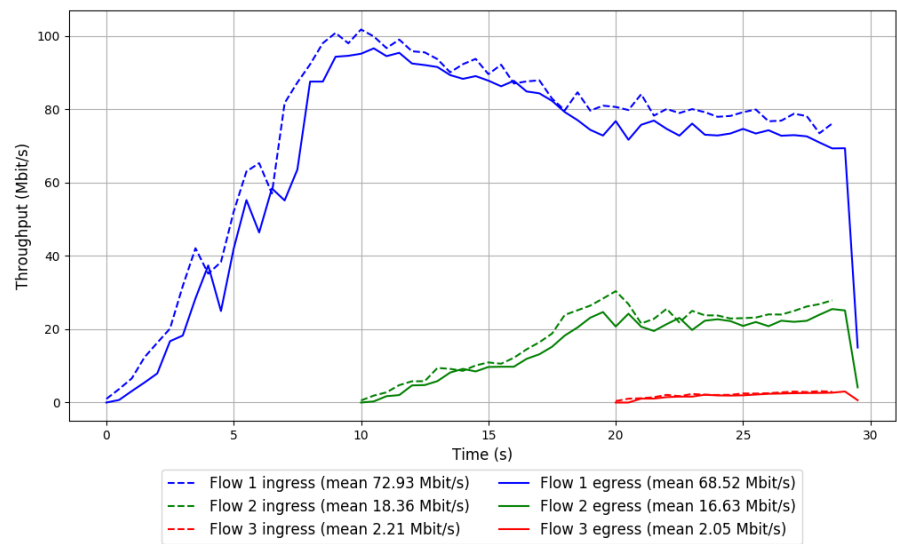
-- Flow 3:

Average throughput: 2.05 Mbit/s

95th percentile per-packet one-way delay: 113.833 ms

Loss rate: 7.31%

Run 1: Report of Indigo-MusesC5 — Data Link



Run 2: Statistics of Indigo-MusesC5

Start at: 2019-01-17 12:50:40

End at: 2019-01-17 12:51:10

Local clock offset: -4.187 ms

Remote clock offset: 3.383 ms

Below is generated by plot.py at 2019-01-17 14:25:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 89.14 Mbit/s

95th percentile per-packet one-way delay: 102.966 ms

Loss rate: 4.99%

-- Flow 1:

Average throughput: 80.83 Mbit/s

95th percentile per-packet one-way delay: 102.417 ms

Loss rate: 5.00%

-- Flow 2:

Average throughput: 8.71 Mbit/s

95th percentile per-packet one-way delay: 105.497 ms

Loss rate: 5.06%

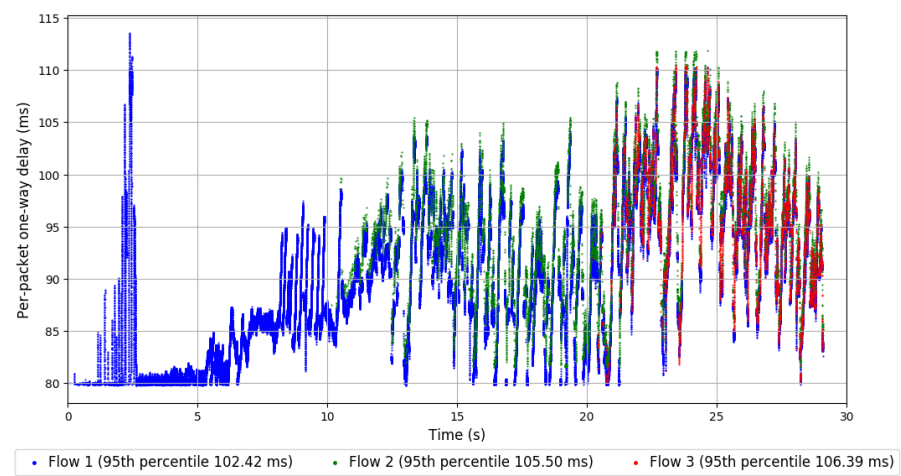
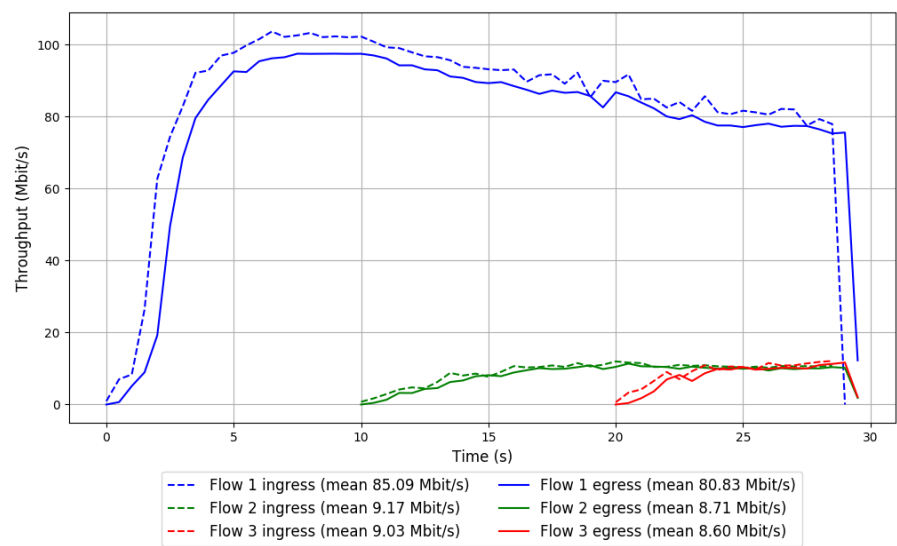
-- Flow 3:

Average throughput: 8.60 Mbit/s

95th percentile per-packet one-way delay: 106.391 ms

Loss rate: 4.78%

Run 2: Report of Indigo-MusesC5 — Data Link



Run 3: Statistics of Indigo-MusesC5

Start at: 2019-01-17 13:16:58

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

Local clock offset: -5.325 ms

Remote clock offset: 2.22 ms

Below is generated by plot.py at 2019-01-17 14:25:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 82.32 Mbit/s

95th percentile per-packet one-way delay: 108.074 ms

Loss rate: 5.34%

-- Flow 1:

Average throughput: 73.93 Mbit/s

95th percentile per-packet one-way delay: 107.956 ms

Loss rate: 5.42%

-- Flow 2:

Average throughput: 9.05 Mbit/s

95th percentile per-packet one-way delay: 107.924 ms

Loss rate: 4.32%

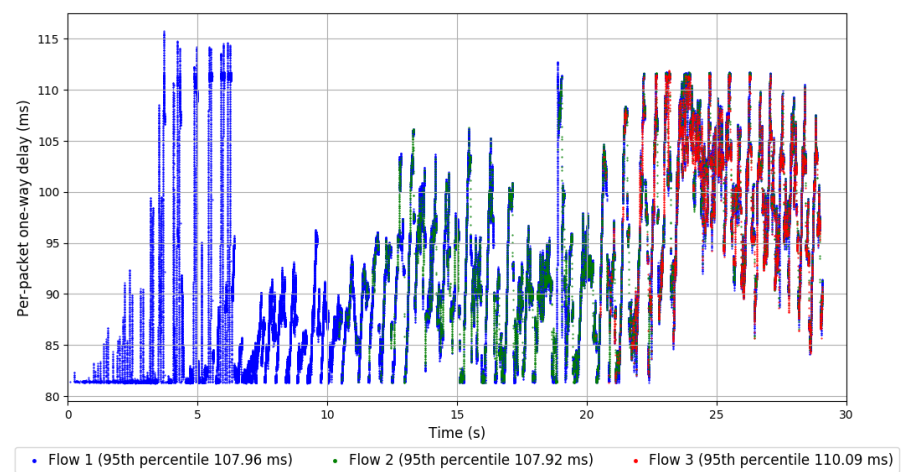
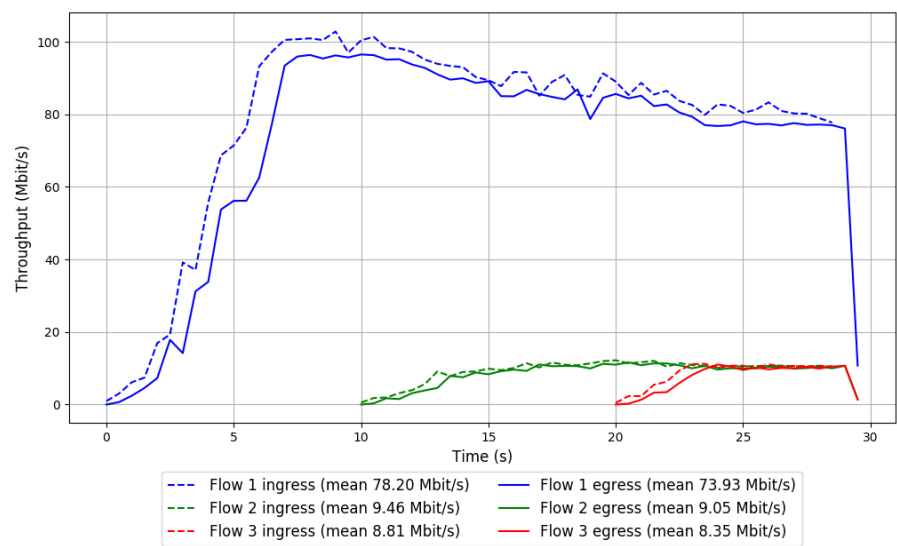
-- Flow 3:

Average throughput: 8.35 Mbit/s

95th percentile per-packet one-way delay: 110.088 ms

Loss rate: 5.26%

Run 3: Report of Indigo-MusesC5 — Data Link



Run 4: Statistics of Indigo-MusesC5

Start at: 2019-01-17 13:43:20

End at: 2019-01-17 13:43:50

Local clock offset: -4.199 ms

Remote clock offset: 6.34 ms

Below is generated by plot.py at 2019-01-17 14:25:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 84.56 Mbit/s

95th percentile per-packet one-way delay: 115.775 ms

Loss rate: 7.41%

-- Flow 1:

Average throughput: 70.08 Mbit/s

95th percentile per-packet one-way delay: 115.715 ms

Loss rate: 4.56%

-- Flow 2:

Average throughput: 21.62 Mbit/s

95th percentile per-packet one-way delay: 115.948 ms

Loss rate: 19.38%

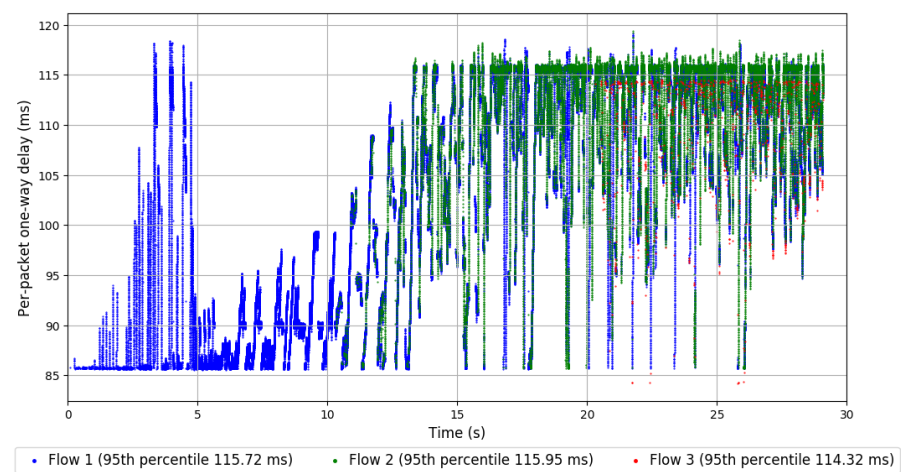
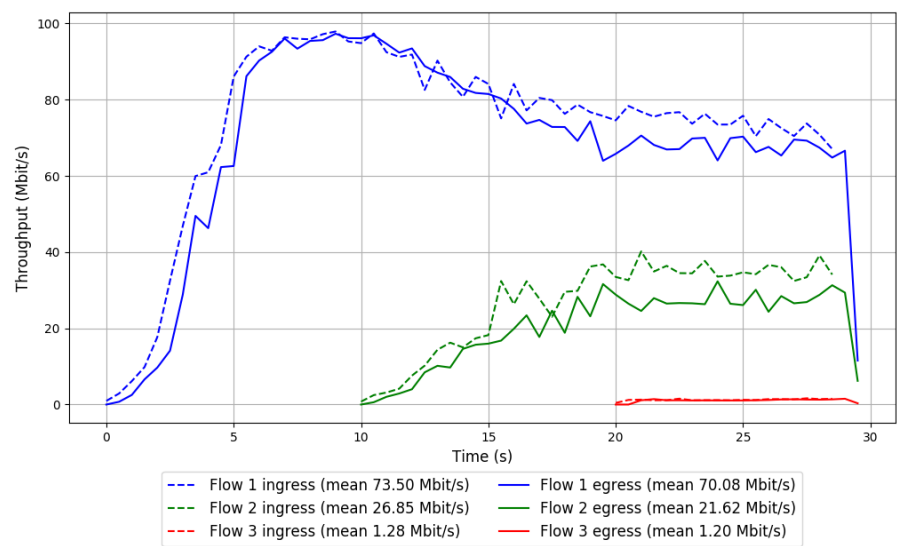
-- Flow 3:

Average throughput: 1.20 Mbit/s

95th percentile per-packet one-way delay: 114.321 ms

Loss rate: 6.65%

Run 4: Report of Indigo-MusesC5 — Data Link



Run 5: Statistics of Indigo-MusesC5

Start at: 2019-01-17 14:09:57

End at: 2019-01-17 14:10:27

Local clock offset: -3.411 ms

Remote clock offset: 1.019 ms

Below is generated by plot.py at 2019-01-17 14:25:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 88.18 Mbit/s

95th percentile per-packet one-way delay: 110.637 ms

Loss rate: 4.92%

-- Flow 1:

Average throughput: 74.38 Mbit/s

95th percentile per-packet one-way delay: 110.662 ms

Loss rate: 3.93%

-- Flow 2:

Average throughput: 20.37 Mbit/s

95th percentile per-packet one-way delay: 109.127 ms

Loss rate: 9.95%

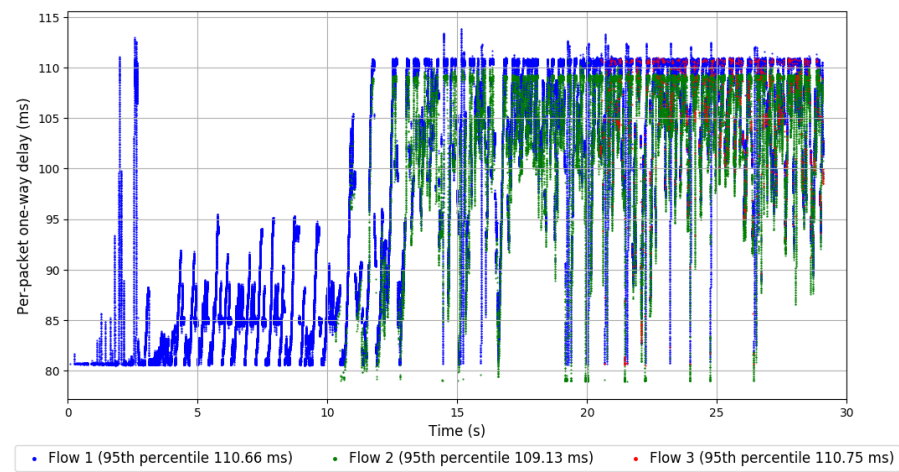
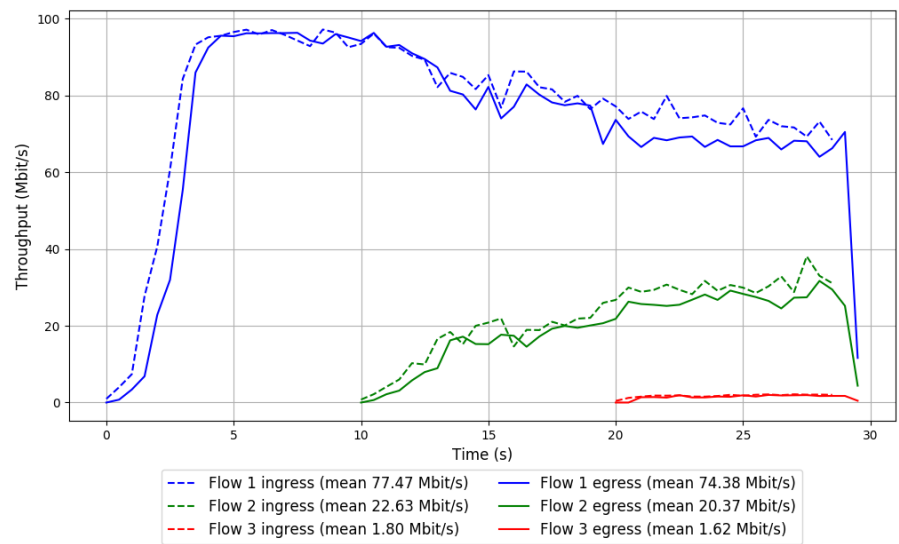
-- Flow 3:

Average throughput: 1.62 Mbit/s

95th percentile per-packet one-way delay: 110.748 ms

Loss rate: 9.97%

Run 5: Report of Indigo-MusesC5 — Data Link



Run 1: Statistics of Indigo-MusesD

Start at: 2019-01-17 12:21:50

End at: 2019-01-17 12:22:20

Local clock offset: -3.012 ms

Remote clock offset: 3.564 ms

Below is generated by plot.py at 2019-01-17 14:25:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 29.32 Mbit/s

95th percentile per-packet one-way delay: 81.711 ms

Loss rate: 4.31%

-- Flow 1:

Average throughput: 20.42 Mbit/s

95th percentile per-packet one-way delay: 81.107 ms

Loss rate: 4.27%

-- Flow 2:

Average throughput: 10.29 Mbit/s

95th percentile per-packet one-way delay: 81.848 ms

Loss rate: 4.36%

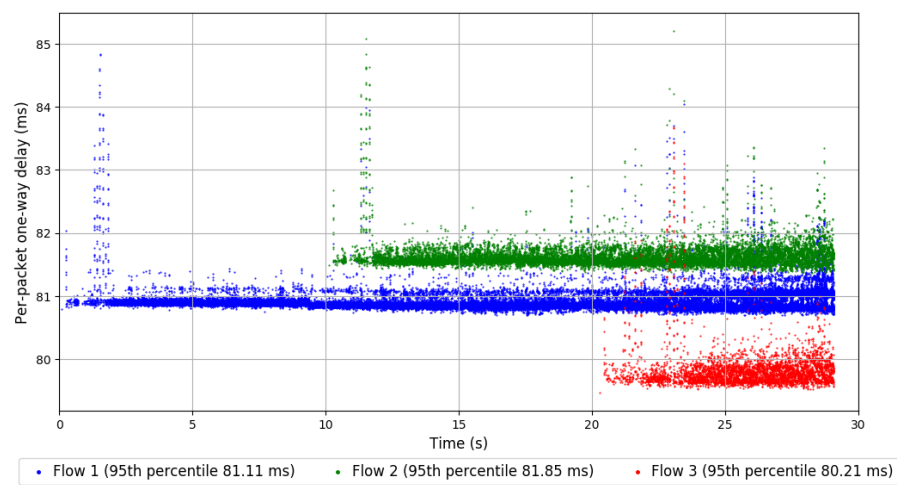
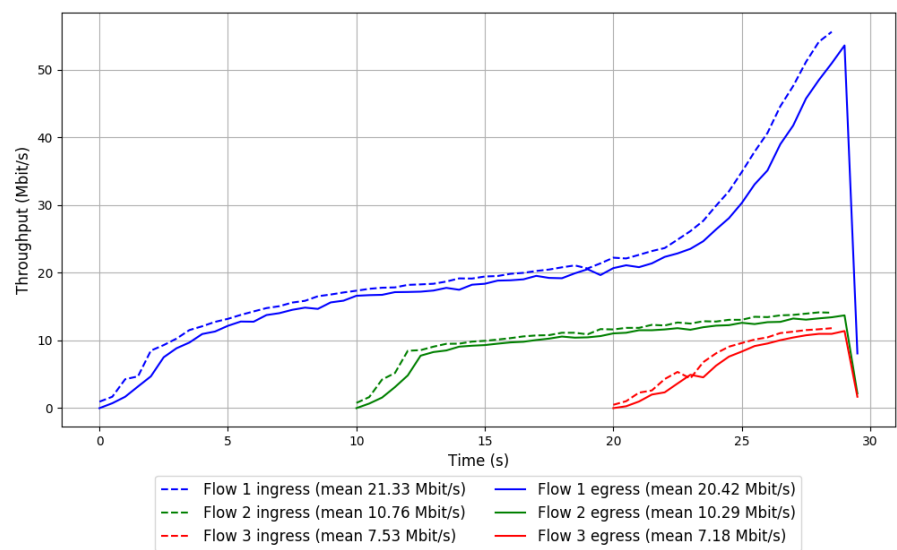
-- Flow 3:

Average throughput: 7.18 Mbit/s

95th percentile per-packet one-way delay: 80.207 ms

Loss rate: 4.60%

Run 1: Report of Indigo-MusesD — Data Link



Run 2: Statistics of Indigo-MusesD

Start at: 2019-01-17 12:48:11

End at: 2019-01-17 12:48:41

Local clock offset: -4.128 ms

Remote clock offset: 8.468 ms

Below is generated by plot.py at 2019-01-17 14:25:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 21.53 Mbit/s

95th percentile per-packet one-way delay: 88.780 ms

Loss rate: 4.67%

-- Flow 1:

Average throughput: 11.15 Mbit/s

95th percentile per-packet one-way delay: 86.500 ms

Loss rate: 4.76%

-- Flow 2:

Average throughput: 12.23 Mbit/s

95th percentile per-packet one-way delay: 88.869 ms

Loss rate: 4.60%

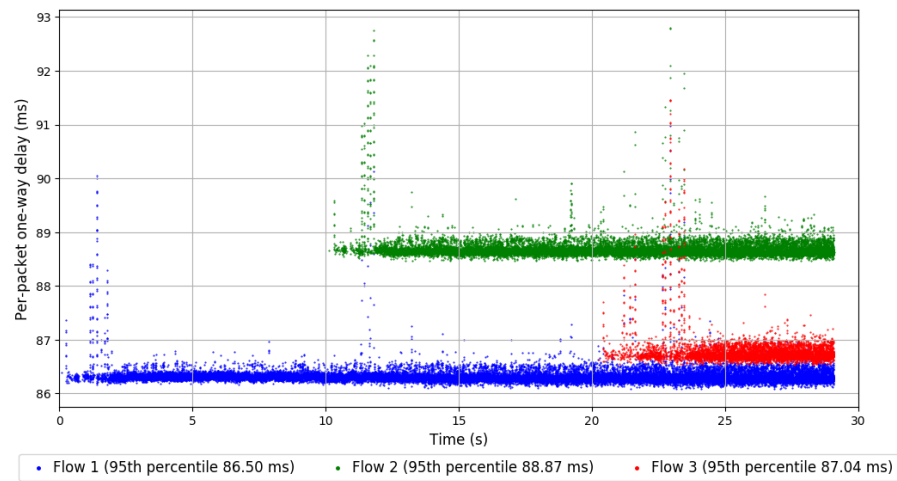
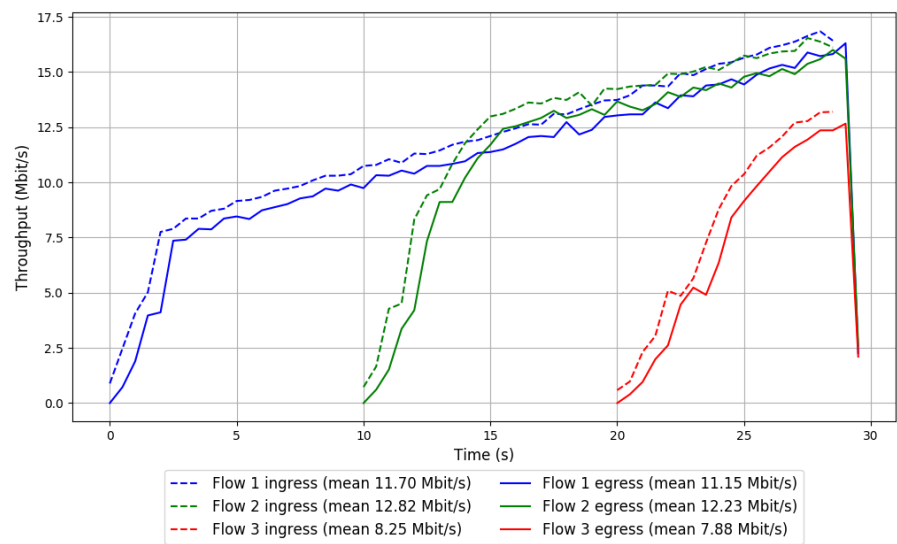
-- Flow 3:

Average throughput: 7.88 Mbit/s

95th percentile per-packet one-way delay: 87.039 ms

Loss rate: 4.50%

Run 2: Report of Indigo-MusesD — Data Link



Run 3: Statistics of Indigo-MusesD

Start at: 2019-01-17 13:14:30

End at: 2019-01-17 13:15:00

Local clock offset: -5.311 ms

Remote clock offset: 2.436 ms

Below is generated by plot.py at 2019-01-17 14:25:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 25.21 Mbit/s

95th percentile per-packet one-way delay: 82.988 ms

Loss rate: 4.38%

-- Flow 1:

Average throughput: 15.76 Mbit/s

95th percentile per-packet one-way delay: 83.017 ms

Loss rate: 4.48%

-- Flow 2:

Average throughput: 11.51 Mbit/s

95th percentile per-packet one-way delay: 82.849 ms

Loss rate: 4.23%

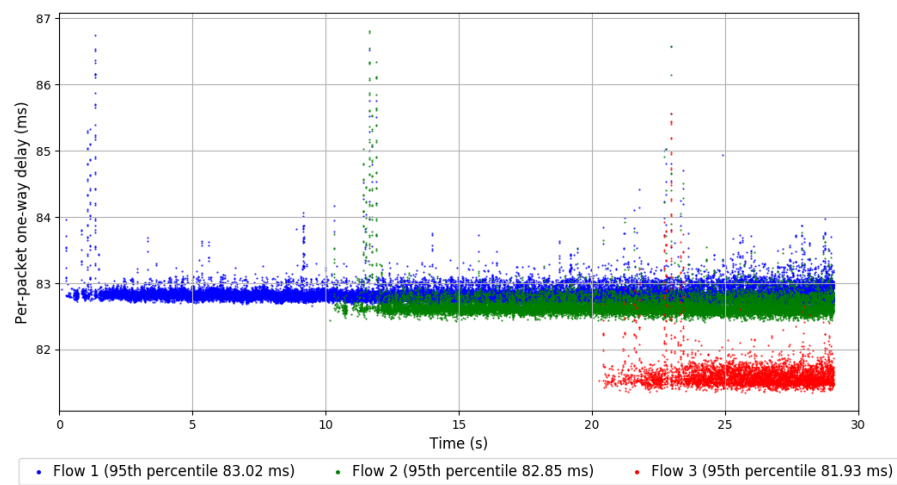
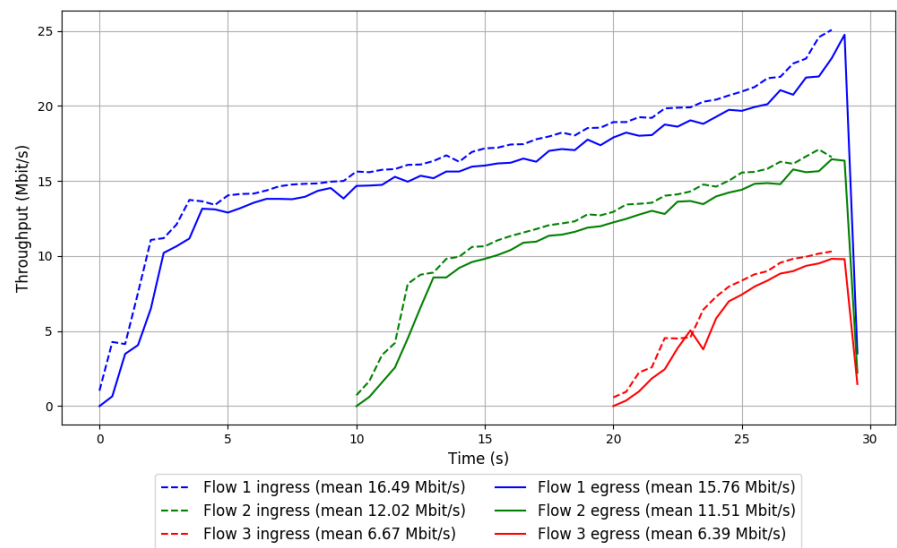
-- Flow 3:

Average throughput: 6.39 Mbit/s

95th percentile per-packet one-way delay: 81.928 ms

Loss rate: 4.19%

Run 3: Report of Indigo-MusesD — Data Link



Run 4: Statistics of Indigo-MusesD

Start at: 2019-01-17 13:40:51

End at: 2019-01-17 13:41:21

Local clock offset: -4.973 ms

Remote clock offset: 5.974 ms

Below is generated by plot.py at 2019-01-17 14:25:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 49.14 Mbit/s

95th percentile per-packet one-way delay: 98.251 ms

Loss rate: 4.41%

-- Flow 1:

Average throughput: 12.34 Mbit/s

95th percentile per-packet one-way delay: 98.970 ms

Loss rate: 4.34%

-- Flow 2:

Average throughput: 55.60 Mbit/s

95th percentile per-packet one-way delay: 98.039 ms

Loss rate: 4.45%

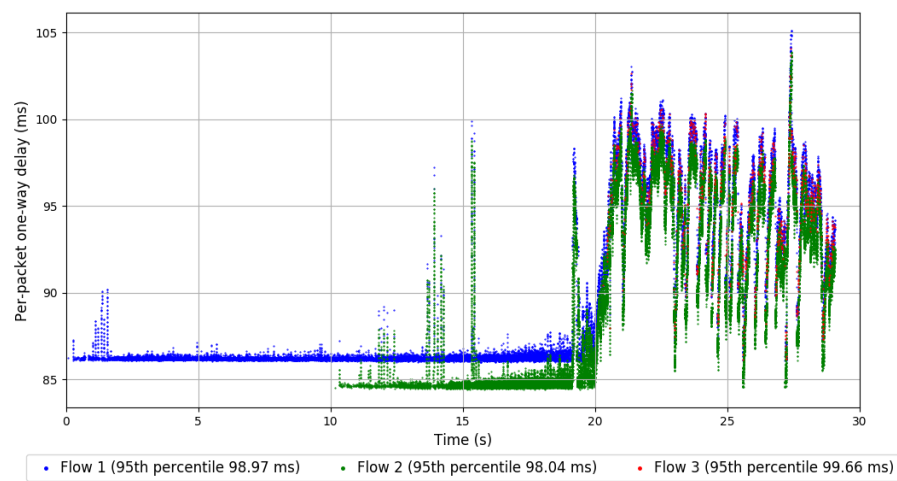
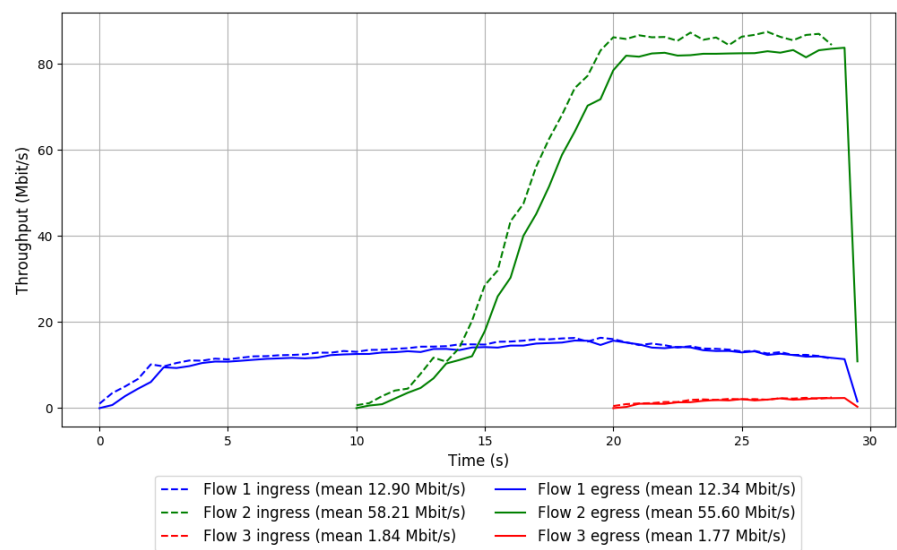
-- Flow 3:

Average throughput: 1.77 Mbit/s

95th percentile per-packet one-way delay: 99.664 ms

Loss rate: 3.91%

Run 4: Report of Indigo-MusesD — Data Link



Run 5: Statistics of Indigo-MusesD

Start at: 2019-01-17 14:07:24

End at: 2019-01-17 14:07:54

Local clock offset: -3.525 ms

Remote clock offset: 1.126 ms

Below is generated by plot.py at 2019-01-17 14:25:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 74.81 Mbit/s

95th percentile per-packet one-way delay: 95.886 ms

Loss rate: 0.06%

-- Flow 1:

Average throughput: 70.31 Mbit/s

95th percentile per-packet one-way delay: 95.986 ms

Loss rate: 0.06%

-- Flow 2:

Average throughput: 5.30 Mbit/s

95th percentile per-packet one-way delay: 93.919 ms

Loss rate: 0.01%

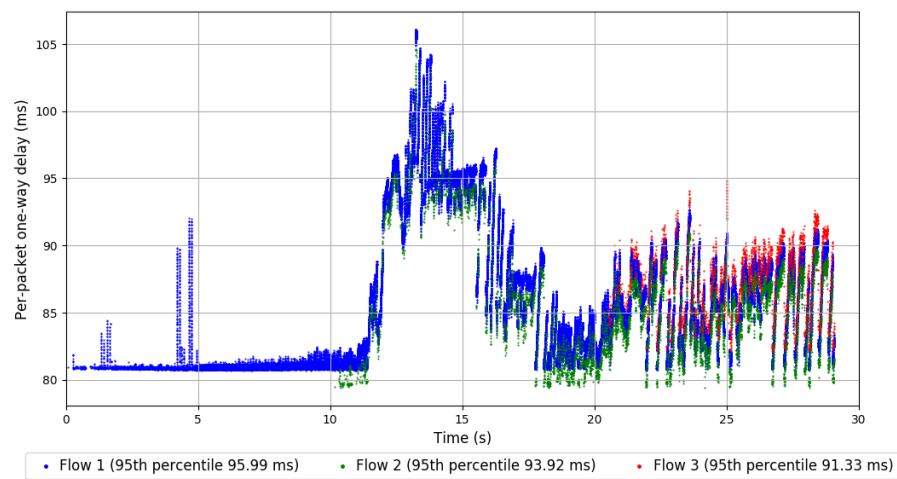
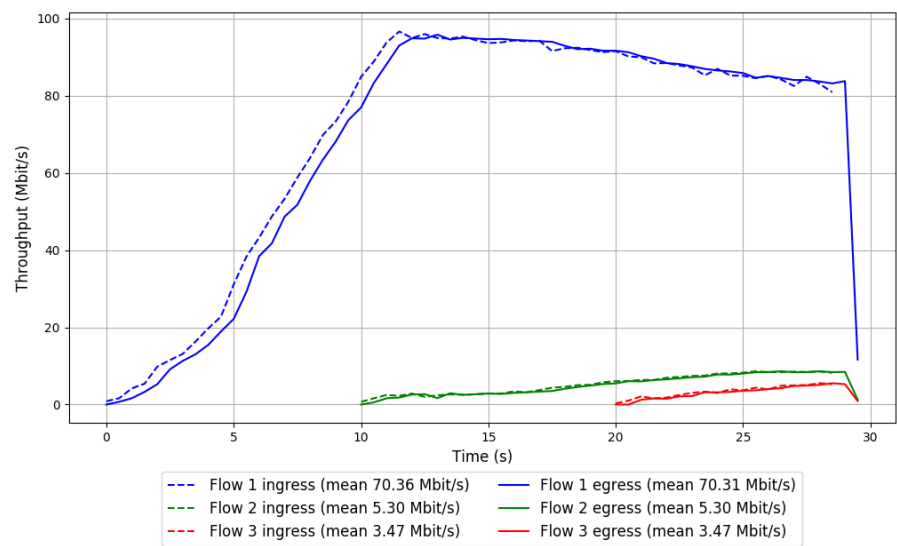
-- Flow 3:

Average throughput: 3.47 Mbit/s

95th percentile per-packet one-way delay: 91.332 ms

Loss rate: 0.04%

Run 5: Report of Indigo-MusesD — Data Link



Run 1: Statistics of Indigo-MusesT

Start at: 2019-01-17 12:14:23

End at: 2019-01-17 12:14:53

Local clock offset: -3.204 ms

Remote clock offset: 3.88 ms

Below is generated by plot.py at 2019-01-17 14:26:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 90.09 Mbit/s

95th percentile per-packet one-way delay: 110.236 ms

Loss rate: 4.74%

-- Flow 1:

Average throughput: 82.80 Mbit/s

95th percentile per-packet one-way delay: 109.721 ms

Loss rate: 4.72%

-- Flow 2:

Average throughput: 8.25 Mbit/s

95th percentile per-packet one-way delay: 111.267 ms

Loss rate: 4.82%

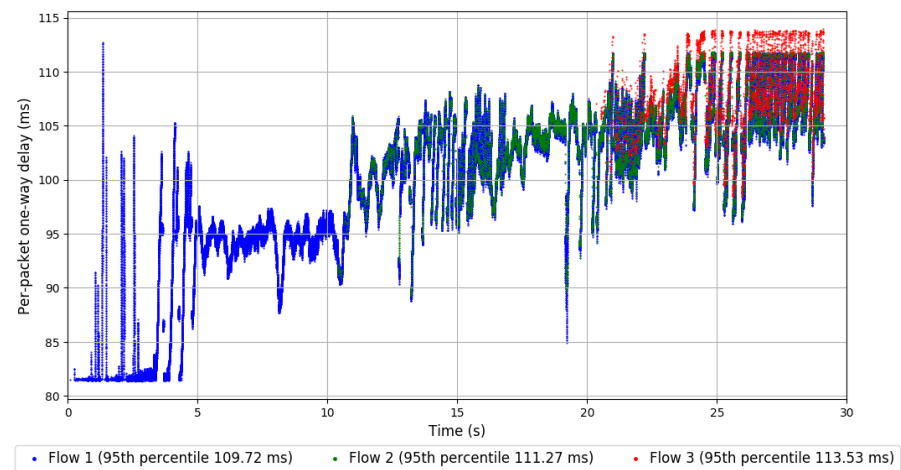
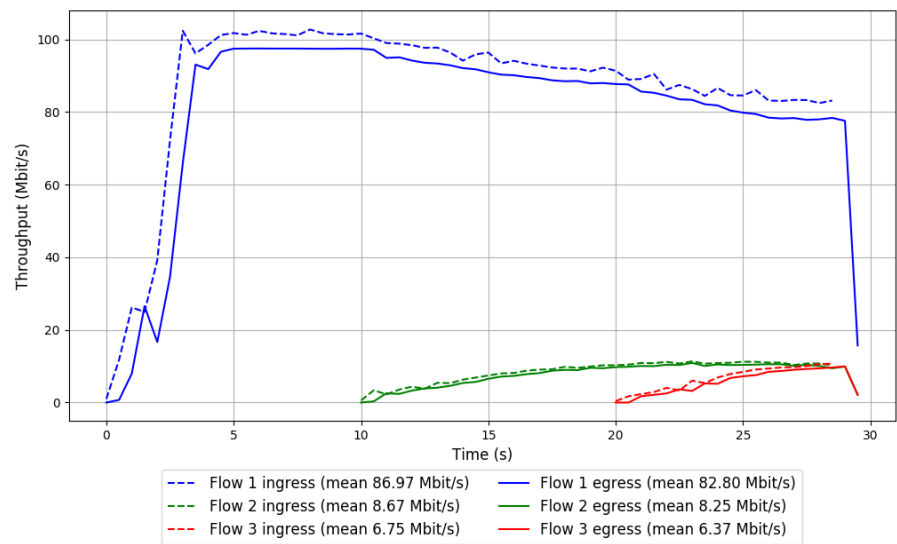
-- Flow 3:

Average throughput: 6.37 Mbit/s

95th percentile per-packet one-way delay: 113.531 ms

Loss rate: 5.70%

Run 1: Report of Indigo-MusesT — Data Link



Run 2: Statistics of Indigo-MusesT

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

End at: 2019-01-17 12:41:10

Local clock offset: -4.809 ms

Remote clock offset: 7.689 ms

Below is generated by plot.py at 2019-01-17 14:26:22

Datalink statistics

-- Total of 3 flows:

Average throughput: 87.65 Mbit/s

95th percentile per-packet one-way delay: 117.351 ms

Loss rate: 5.78%

-- Flow 1:

Average throughput: 79.24 Mbit/s

95th percentile per-packet one-way delay: 117.324 ms

Loss rate: 5.75%

-- Flow 2:

Average throughput: 11.77 Mbit/s

95th percentile per-packet one-way delay: 117.598 ms

Loss rate: 6.02%

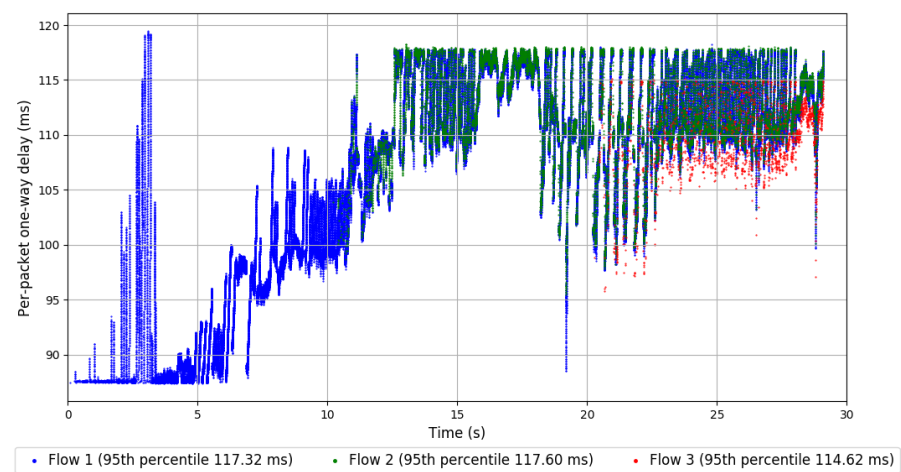
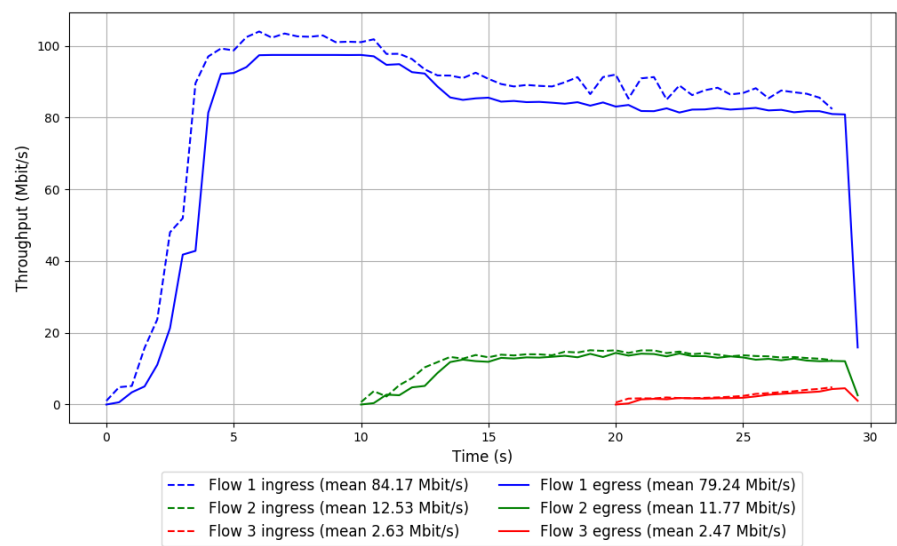
-- Flow 3:

Average throughput: 2.47 Mbit/s

95th percentile per-packet one-way delay: 114.618 ms

Loss rate: 5.91%

Run 2: Report of Indigo-MusesT — Data Link



Run 3: Statistics of Indigo-MusesT

Start at: 2019-01-17 13:07:03

End at: 2019-01-17 13:07:33

Local clock offset: -4.458 ms

Remote clock offset: 6.12 ms

Below is generated by plot.py at 2019-01-17 14:26:40

Datalink statistics

-- Total of 3 flows:

Average throughput: 92.04 Mbit/s

95th percentile per-packet one-way delay: 111.274 ms

Loss rate: 7.47%

-- Flow 1:

Average throughput: 84.19 Mbit/s

95th percentile per-packet one-way delay: 111.103 ms

Loss rate: 7.77%

-- Flow 2:

Average throughput: 9.62 Mbit/s

95th percentile per-packet one-way delay: 112.738 ms

Loss rate: 4.10%

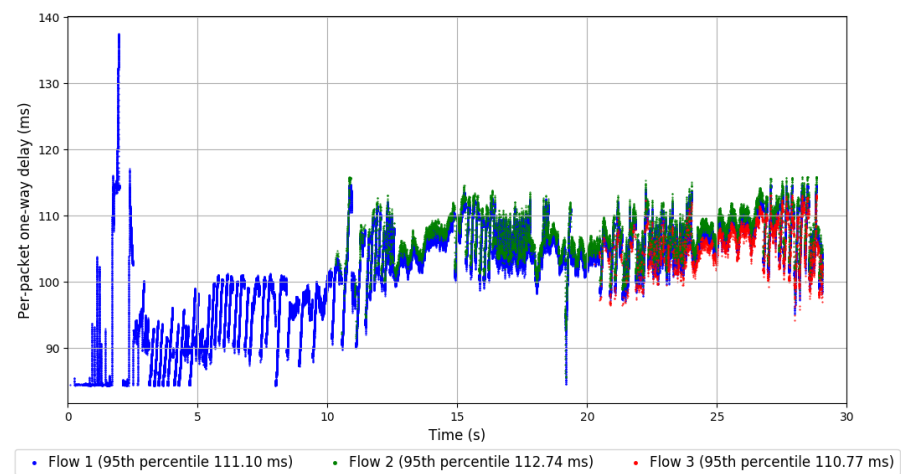
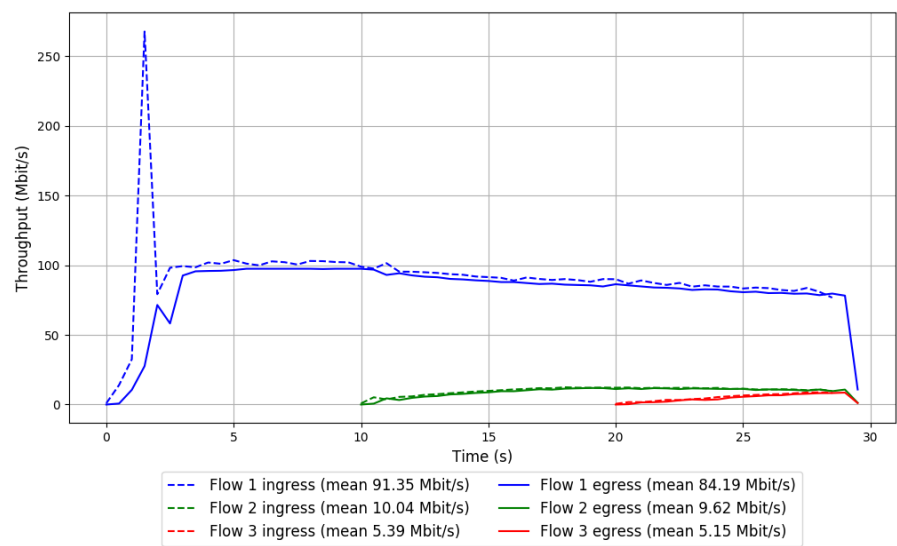
-- Flow 3:

Average throughput: 5.15 Mbit/s

95th percentile per-packet one-way delay: 110.771 ms

Loss rate: 4.54%

Run 3: Report of Indigo-MusesT — Data Link



Run 4: Statistics of Indigo-MusesT

Start at: 2019-01-17 13:33:23

End at: 2019-01-17 13:33:53

Local clock offset: -4.989 ms

Remote clock offset: 5.23 ms

Below is generated by plot.py at 2019-01-17 14:26:40

Datalink statistics

-- Total of 3 flows:

Average throughput: 87.75 Mbit/s

95th percentile per-packet one-way delay: 114.901 ms

Loss rate: 5.66%

-- Flow 1:

Average throughput: 81.60 Mbit/s

95th percentile per-packet one-way delay: 114.961 ms

Loss rate: 5.65%

-- Flow 2:

Average throughput: 6.84 Mbit/s

95th percentile per-packet one-way delay: 114.861 ms

Loss rate: 5.76%

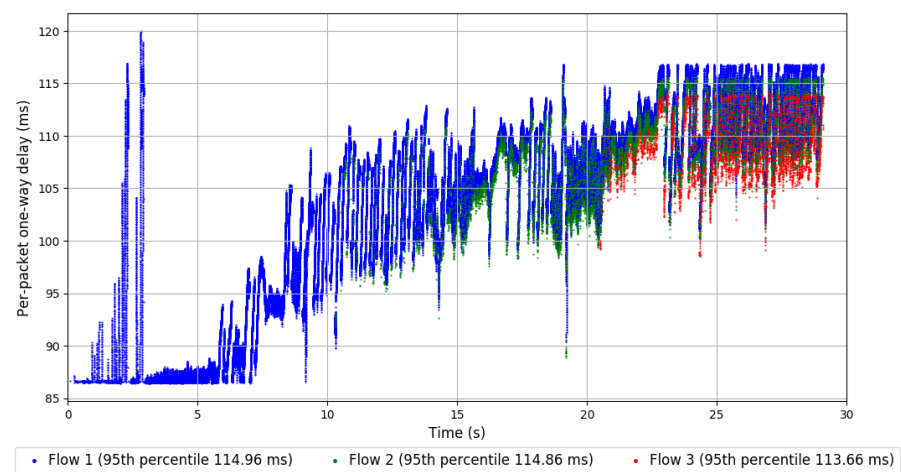
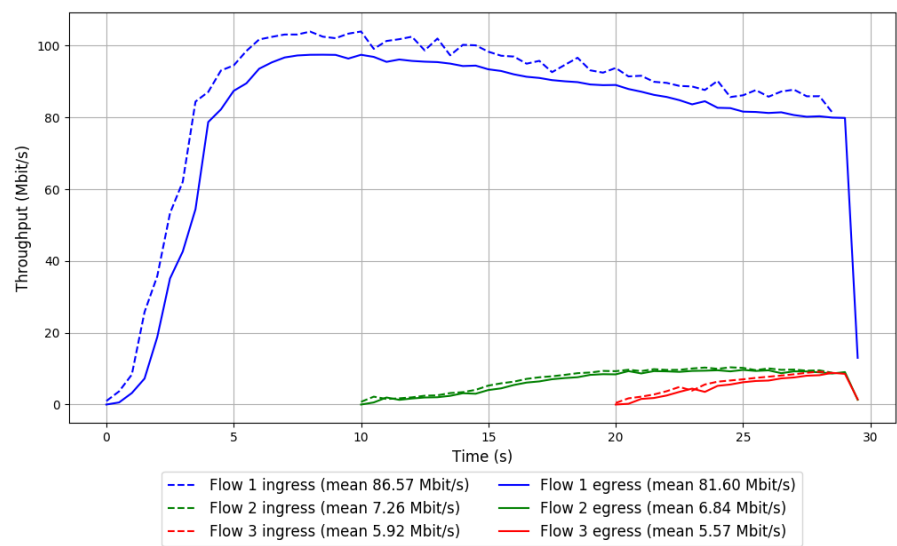
-- Flow 3:

Average throughput: 5.57 Mbit/s

95th percentile per-packet one-way delay: 113.661 ms

Loss rate: 5.87%

Run 4: Report of Indigo-MusesT — Data Link



Run 5: Statistics of Indigo-MusesT

Start at: 2019-01-17 13:59:49

End at: 2019-01-17 14:00:19

Local clock offset: -3.626 ms

Remote clock offset: 2.17 ms

Below is generated by plot.py at 2019-01-17 14:26:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 89.94 Mbit/s

95th percentile per-packet one-way delay: 111.843 ms

Loss rate: 4.60%

-- Flow 1:

Average throughput: 78.16 Mbit/s

95th percentile per-packet one-way delay: 111.832 ms

Loss rate: 4.23%

-- Flow 2:

Average throughput: 17.13 Mbit/s

95th percentile per-packet one-way delay: 111.904 ms

Loss rate: 6.71%

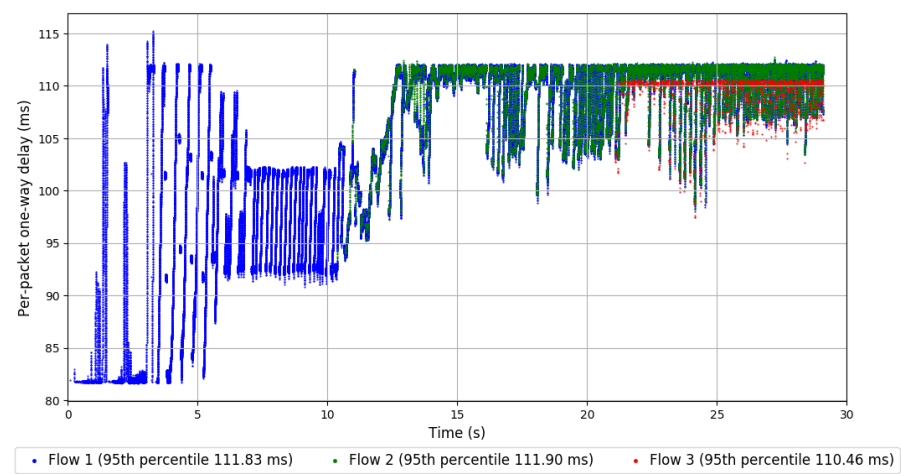
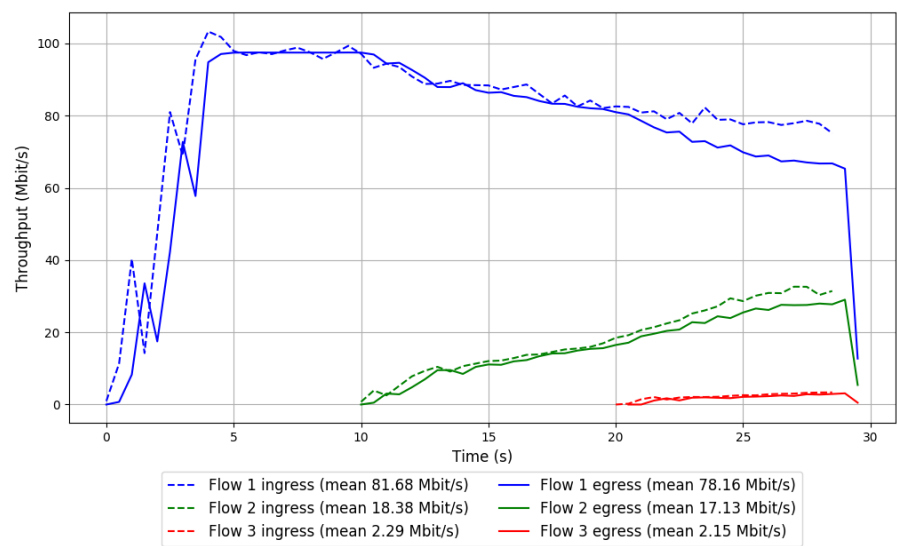
-- Flow 3:

Average throughput: 2.15 Mbit/s

95th percentile per-packet one-way delay: 110.462 ms

Loss rate: 11.57%

Run 5: Report of Indigo-MusesT — Data Link



Run 1: Statistics of LEDBAT

Start at: 2019-01-17 12:26:57

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

Local clock offset: -4.24 ms

Remote clock offset: 2.541 ms

Below is generated by plot.py at 2019-01-17 14:26:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.10 Mbit/s

95th percentile per-packet one-way delay: 81.665 ms

Loss rate: 4.41%

-- Flow 1:

Average throughput: 0.49 Mbit/s

95th percentile per-packet one-way delay: 81.330 ms

Loss rate: 5.07%

-- Flow 2:

Average throughput: 0.59 Mbit/s

95th percentile per-packet one-way delay: 81.789 ms

Loss rate: 3.76%

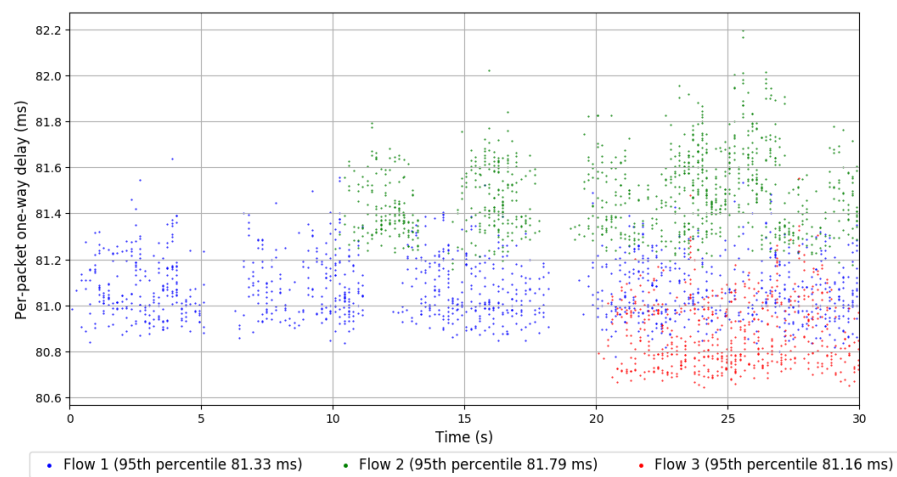
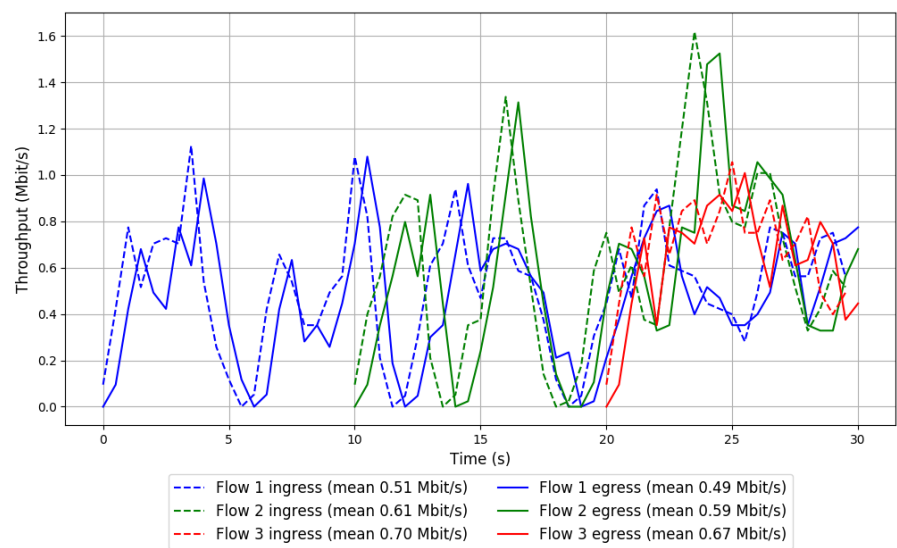
-- Flow 3:

Average throughput: 0.67 Mbit/s

95th percentile per-packet one-way delay: 81.162 ms

Loss rate: 4.10%

Run 1: Report of LEDBAT — Data Link



Run 2: Statistics of LEDBAT

Start at: 2019-01-17 12:53:18

End at: 2019-01-17 12:53:48

Local clock offset: -5.009 ms

Remote clock offset: 6.207 ms

Below is generated by plot.py at 2019-01-17 14:26:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.09 Mbit/s

95th percentile per-packet one-way delay: 84.538 ms

Loss rate: 4.54%

-- Flow 1:

Average throughput: 0.52 Mbit/s

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

Loss rate: 4.66%

-- Flow 2:

Average throughput: 0.66 Mbit/s

95th percentile per-packet one-way delay: 84.423 ms

Loss rate: 4.16%

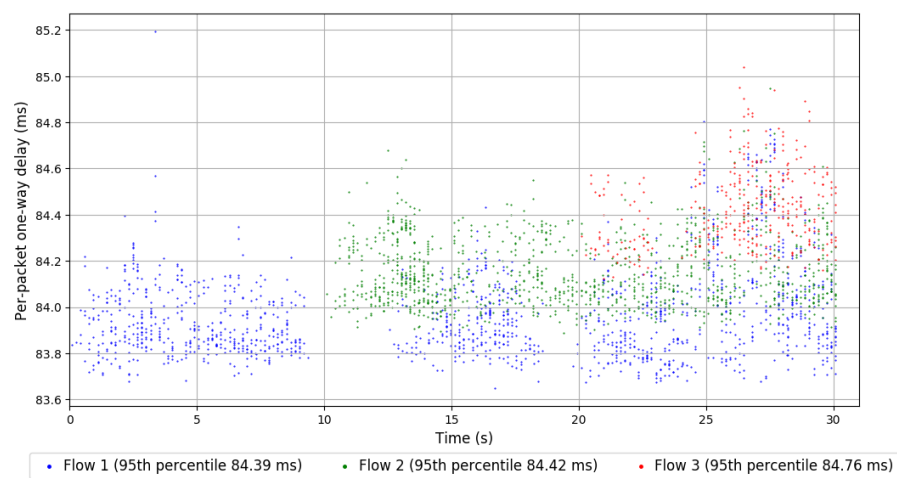
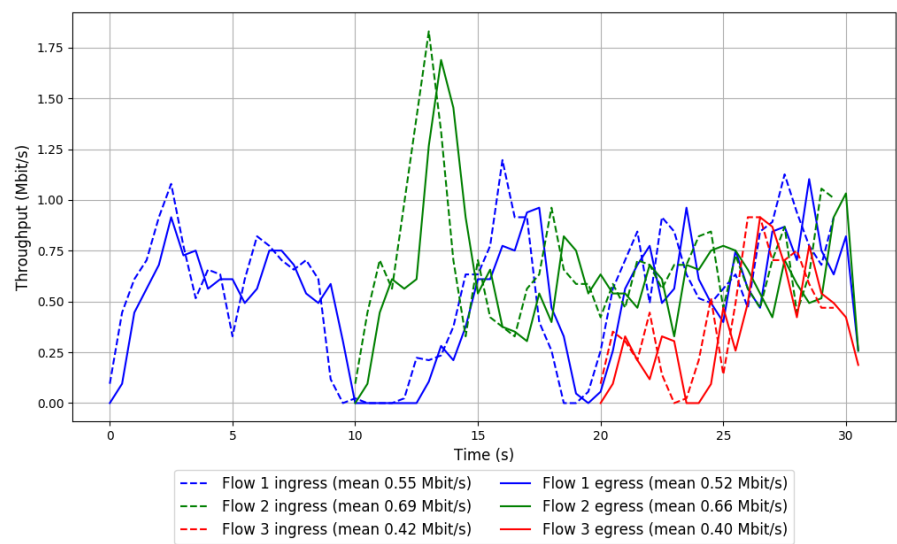
-- Flow 3:

Average throughput: 0.40 Mbit/s

95th percentile per-packet one-way delay: 84.757 ms

Loss rate: 5.28%

Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2019-01-17 13:19:36

End at: 2019-01-17 13:20:06

Local clock offset: -5.246 ms

Remote clock offset: 6.836 ms

Below is generated by plot.py at 2019-01-17 14:26:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.07 Mbit/s

95th percentile per-packet one-way delay: 88.530 ms

Loss rate: 3.84%

-- Flow 1:

Average throughput: 0.53 Mbit/s

95th percentile per-packet one-way delay: 86.734 ms

Loss rate: 3.33%

-- Flow 2:

Average throughput: 0.58 Mbit/s

95th percentile per-packet one-way delay: 88.599 ms

Loss rate: 4.49%

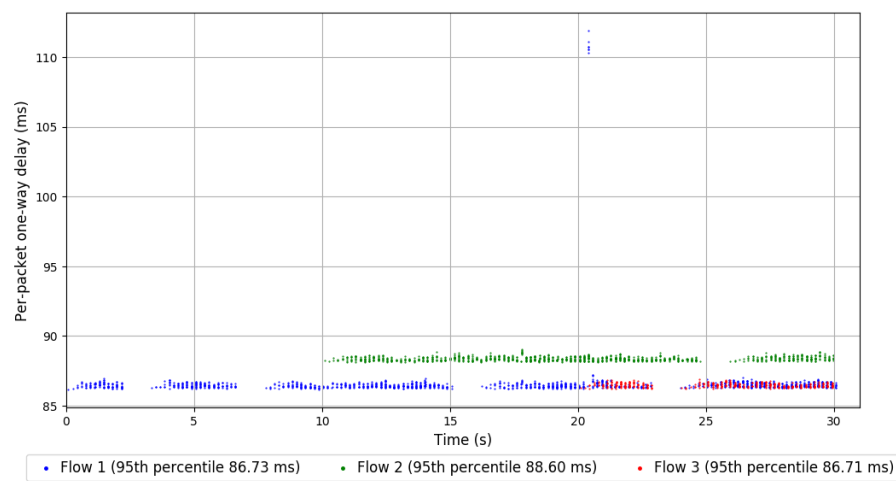
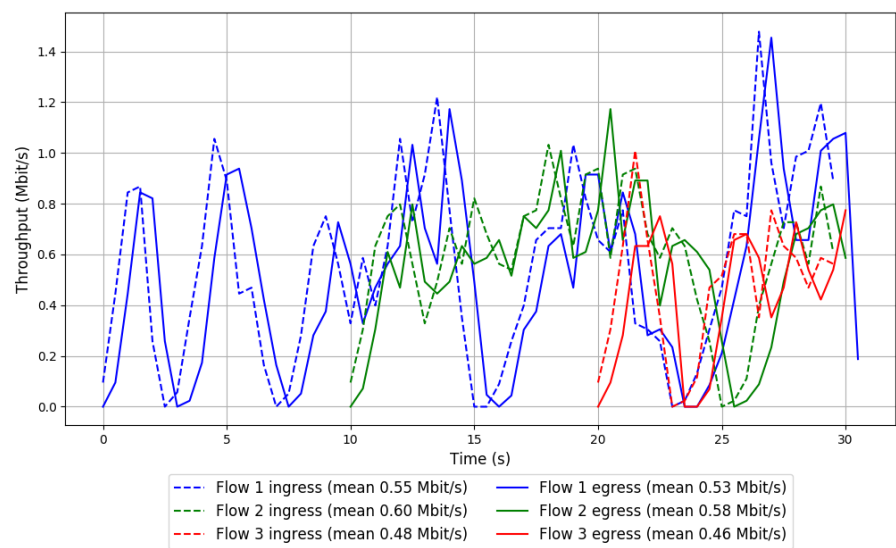
-- Flow 3:

Average throughput: 0.46 Mbit/s

95th percentile per-packet one-way delay: 86.708 ms

Loss rate: 3.95%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2019-01-17 13:45:59

End at: 2019-01-17 13:46:29

Local clock offset: -4.225 ms

Remote clock offset: 6.112 ms

Below is generated by plot.py at 2019-01-17 14:26:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 9.69 Mbit/s

95th percentile per-packet one-way delay: 87.658 ms

Loss rate: 0.05%

-- Flow 1:

Average throughput: 5.86 Mbit/s

95th percentile per-packet one-way delay: 88.476 ms

Loss rate: 0.03%

-- Flow 2:

Average throughput: 4.62 Mbit/s

95th percentile per-packet one-way delay: 86.572 ms

Loss rate: 0.05%

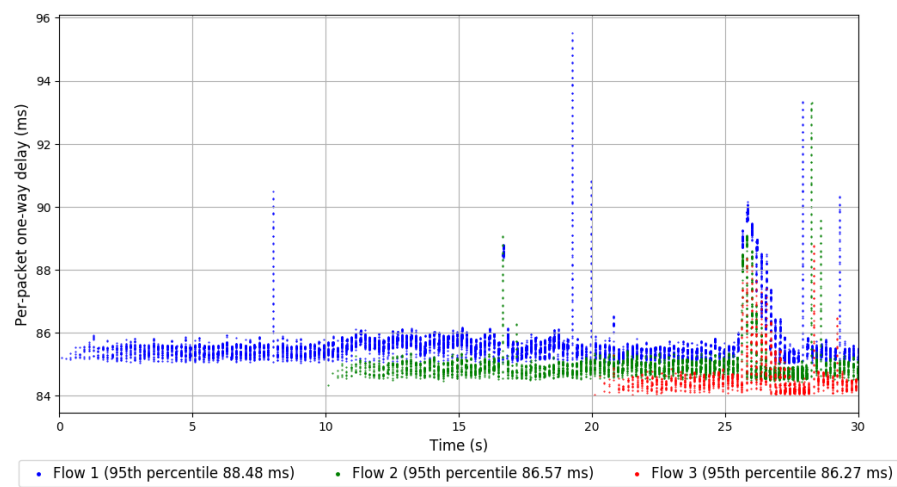
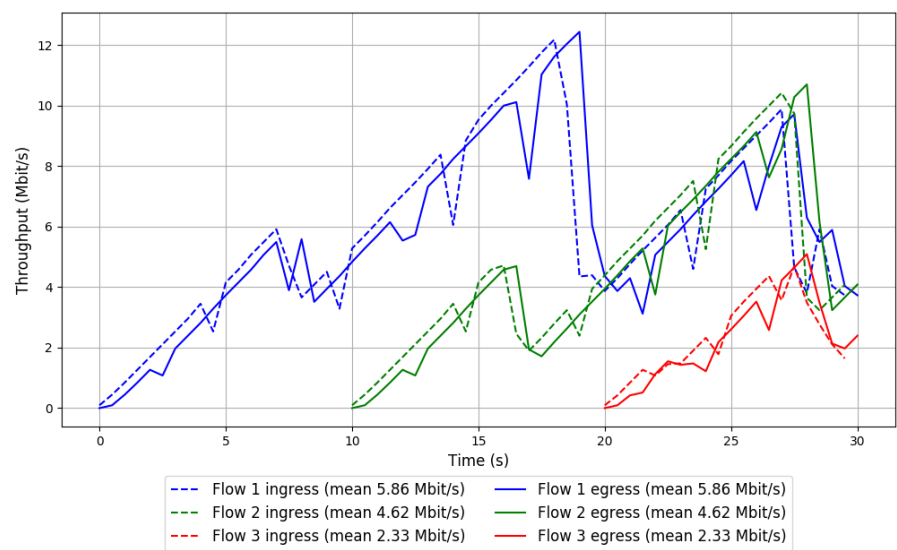
-- Flow 3:

Average throughput: 2.33 Mbit/s

95th percentile per-packet one-way delay: 86.271 ms

Loss rate: 0.15%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2019-01-17 14:12:43

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

Local clock offset: -3.393 ms

Remote clock offset: 0.996 ms

Below is generated by plot.py at 2019-01-17 14:26:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 7.32 Mbit/s

95th percentile per-packet one-way delay: 82.004 ms

Loss rate: 0.06%

-- Flow 1:

Average throughput: 3.86 Mbit/s

95th percentile per-packet one-way delay: 80.597 ms

Loss rate: 0.07%

-- Flow 2:

Average throughput: 3.54 Mbit/s

95th percentile per-packet one-way delay: 82.029 ms

Loss rate: 0.07%

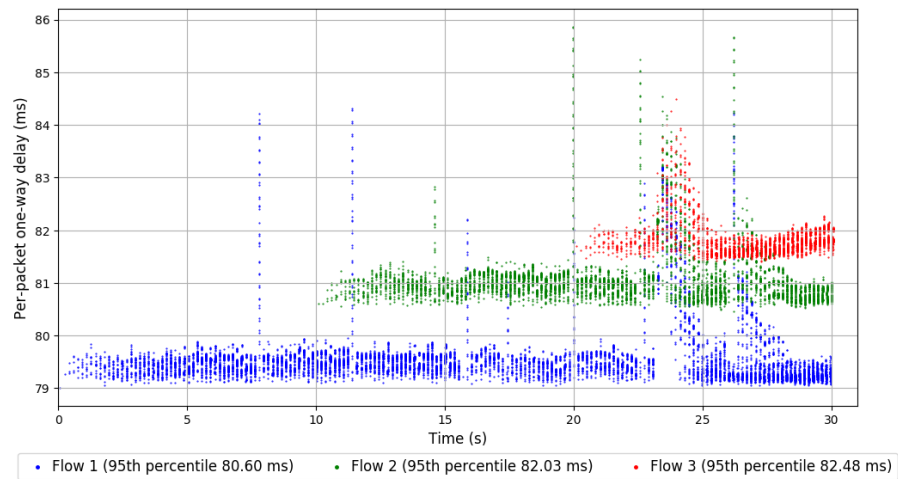
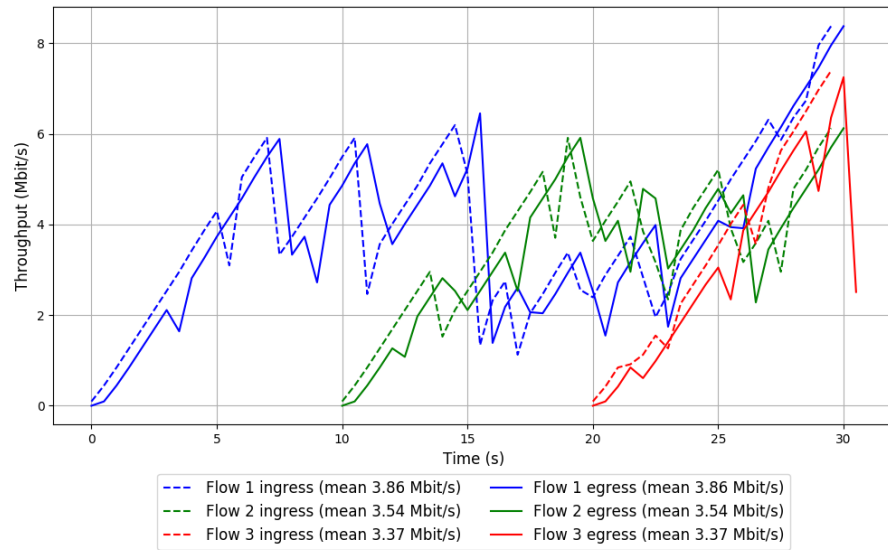
-- Flow 3:

Average throughput: 3.37 Mbit/s

95th percentile per-packet one-way delay: 82.481 ms

Loss rate: 0.03%

Run 5: Report of LEDBAT — Data Link



Run 1: Statistics of PCC-Allegro

Start at: 2019-01-17 12:19:25

End at: 2019-01-17 12:19:55

Local clock offset: -2.694 ms

Remote clock offset: 7.346 ms

Below is generated by plot.py at 2019-01-17 14:26:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.20 Mbit/s

95th percentile per-packet one-way delay: 85.391 ms

Loss rate: 4.60%

-- Flow 1:

Average throughput: 2.22 Mbit/s

95th percentile per-packet one-way delay: 85.396 ms

Loss rate: 4.60%

-- Flow 2:

Average throughput: 7.99 Mbit/s

95th percentile per-packet one-way delay: 85.389 ms

Loss rate: 4.59%

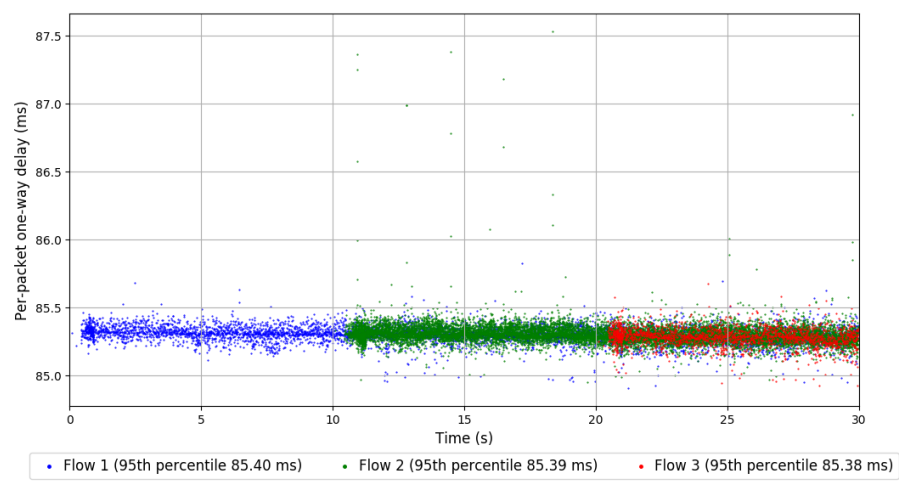
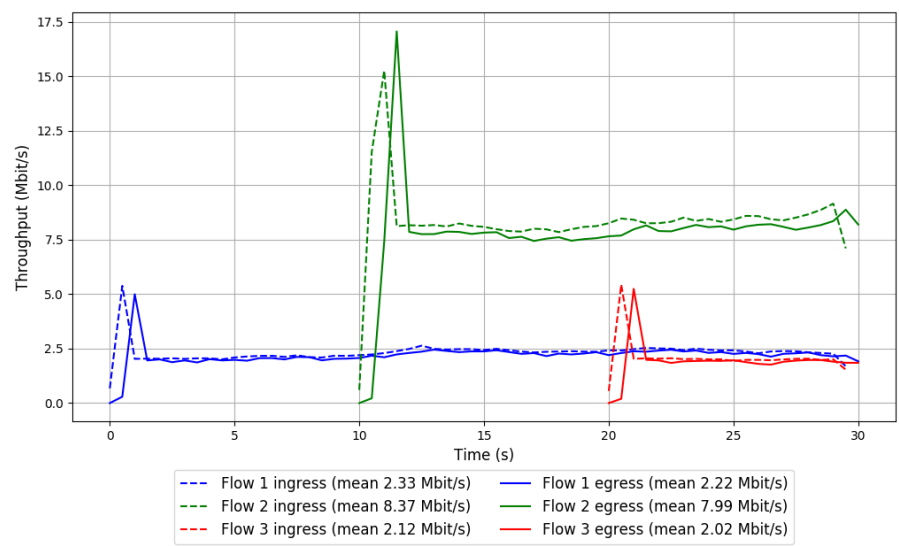
-- Flow 3:

Average throughput: 2.02 Mbit/s

95th percentile per-packet one-way delay: 85.383 ms

Loss rate: 4.66%

Run 1: Report of PCC-Allegro — Data Link



Run 2: Statistics of PCC-Allegro

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

End at: 2019-01-17 12:46:15

Local clock offset: -4.844 ms

Remote clock offset: 3.653 ms

Below is generated by plot.py at 2019-01-17 14:26:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 9.55 Mbit/s

95th percentile per-packet one-way delay: 83.158 ms

Loss rate: 4.55%

-- Flow 1:

Average throughput: 4.17 Mbit/s

95th percentile per-packet one-way delay: 83.183 ms

Loss rate: 4.52%

-- Flow 2:

Average throughput: 4.22 Mbit/s

95th percentile per-packet one-way delay: 82.756 ms

Loss rate: 4.57%

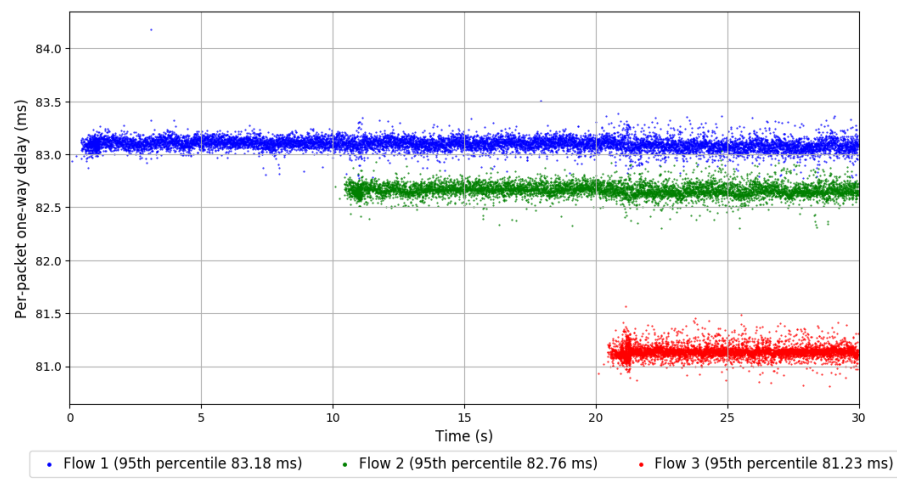
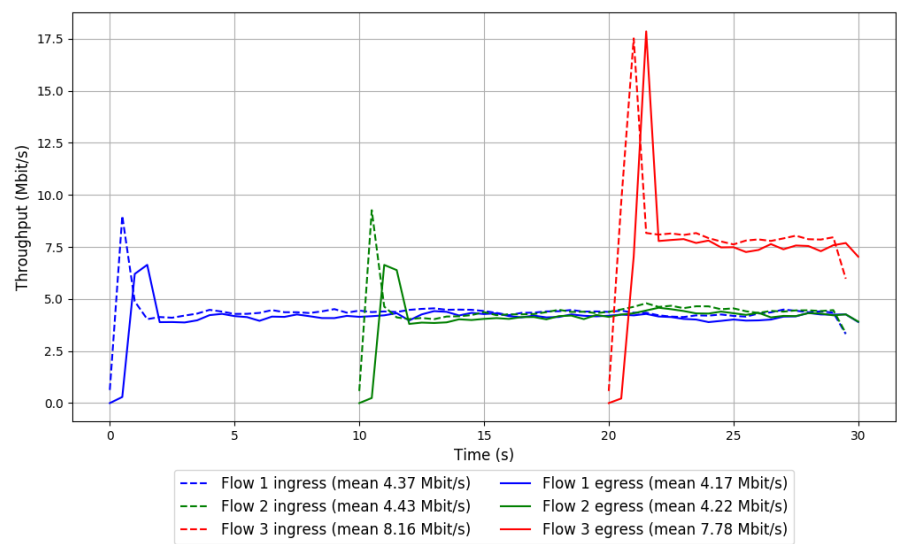
-- Flow 3:

Average throughput: 7.78 Mbit/s

95th percentile per-packet one-way delay: 81.231 ms

Loss rate: 4.59%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2019-01-17 13:12:04

End at: 2019-01-17 13:12:34

Local clock offset: -5.349 ms

Remote clock offset: 3.268 ms

Below is generated by plot.py at 2019-01-17 14:26:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.47 Mbit/s

95th percentile per-packet one-way delay: 82.499 ms

Loss rate: 4.11%

-- Flow 1:

Average throughput: 2.01 Mbit/s

95th percentile per-packet one-way delay: 82.549 ms

Loss rate: 4.35%

-- Flow 2:

Average throughput: 7.70 Mbit/s

95th percentile per-packet one-way delay: 80.906 ms

Loss rate: 4.05%

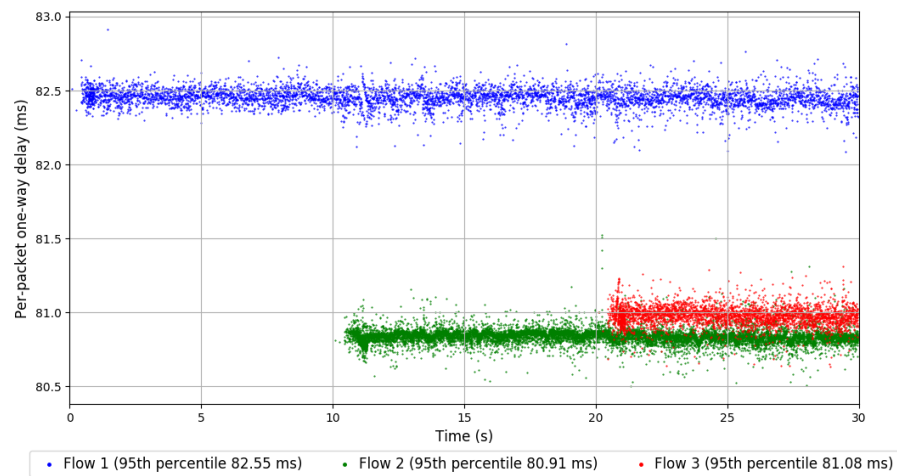
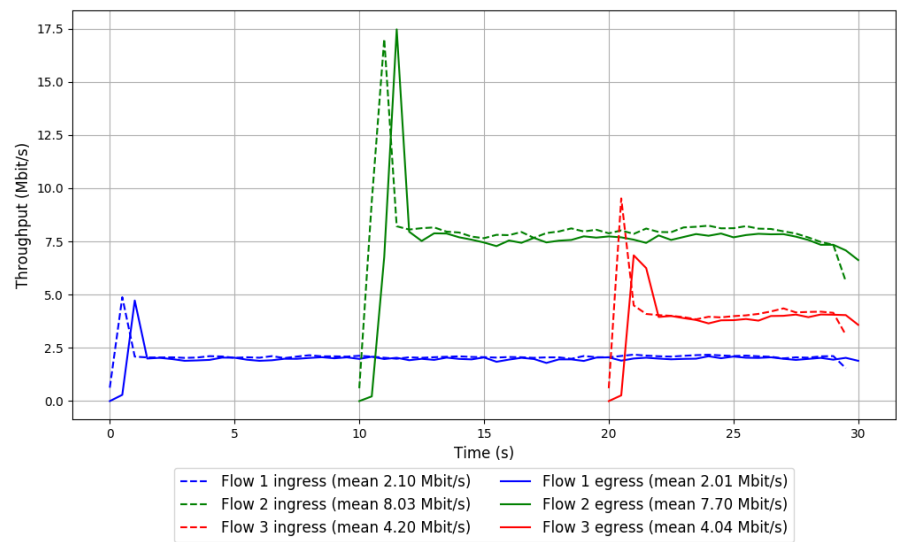
-- Flow 3:

Average throughput: 4.04 Mbit/s

95th percentile per-packet one-way delay: 81.079 ms

Loss rate: 3.95%

Run 3: Report of PCC-Allegro — Data Link



Run 4: Statistics of PCC-Allegro

Start at: 2019-01-17 13:38:24

End at: 2019-01-17 13:38:54

Local clock offset: -4.206 ms

Remote clock offset: 5.1 ms

Below is generated by plot.py at 2019-01-17 14:26:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.01 Mbit/s

95th percentile per-packet one-way delay: 85.669 ms

Loss rate: 4.78%

-- Flow 1:

Average throughput: 4.18 Mbit/s

95th percentile per-packet one-way delay: 84.649 ms

Loss rate: 4.60%

-- Flow 2:

Average throughput: 15.26 Mbit/s

95th percentile per-packet one-way delay: 85.686 ms

Loss rate: 4.91%

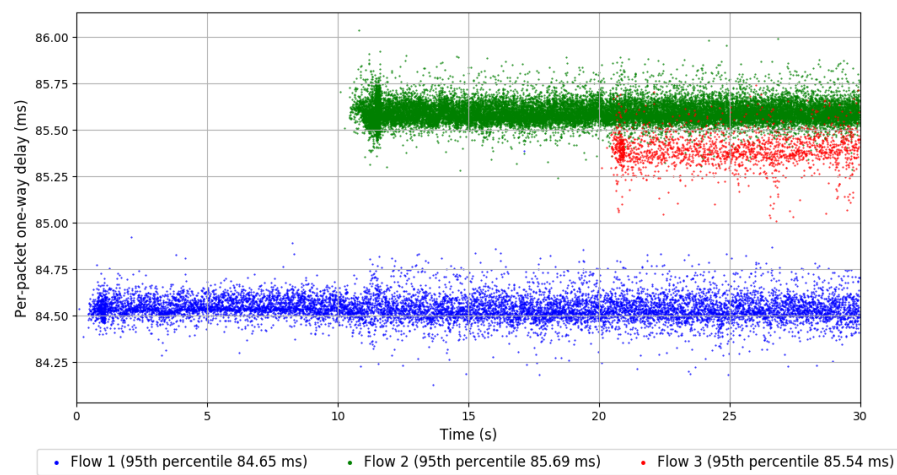
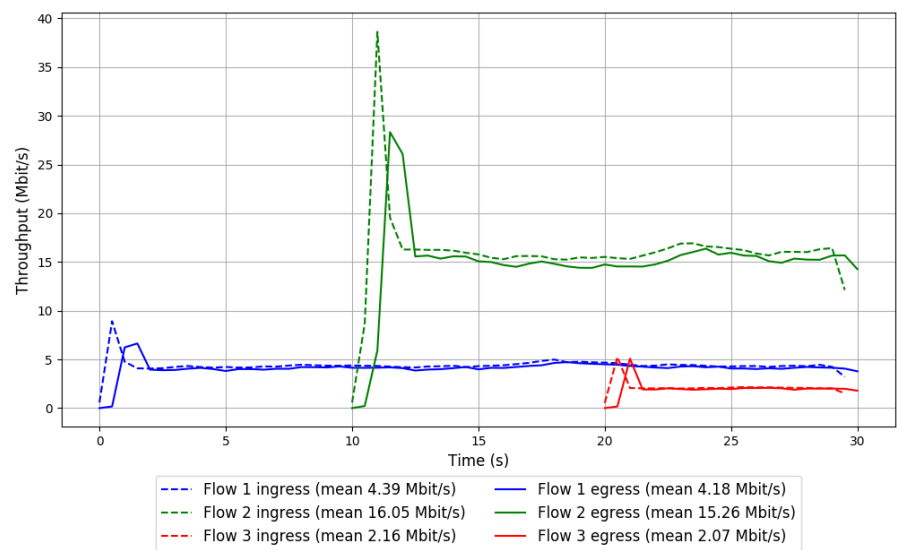
-- Flow 3:

Average throughput: 2.07 Mbit/s

95th percentile per-packet one-way delay: 85.540 ms

Loss rate: 4.06%

Run 4: Report of PCC-Allegro — Data Link



Run 5: Statistics of PCC-Allegro

Start at: 2019-01-17 14:04:53

End at: 2019-01-17 14:05:23

Local clock offset: -4.273 ms

Remote clock offset: 2.14 ms

Below is generated by plot.py at 2019-01-17 14:27:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 86.56 Mbit/s

95th percentile per-packet one-way delay: 114.695 ms

Loss rate: 2.50%

-- Flow 1:

Average throughput: 78.02 Mbit/s

95th percentile per-packet one-way delay: 114.687 ms

Loss rate: 2.40%

-- Flow 2:

Average throughput: 8.93 Mbit/s

95th percentile per-packet one-way delay: 113.423 ms

Loss rate: 2.72%

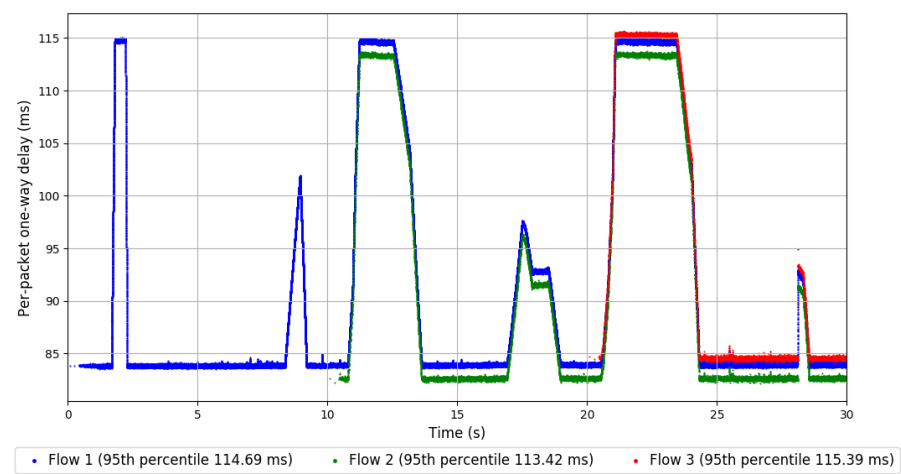
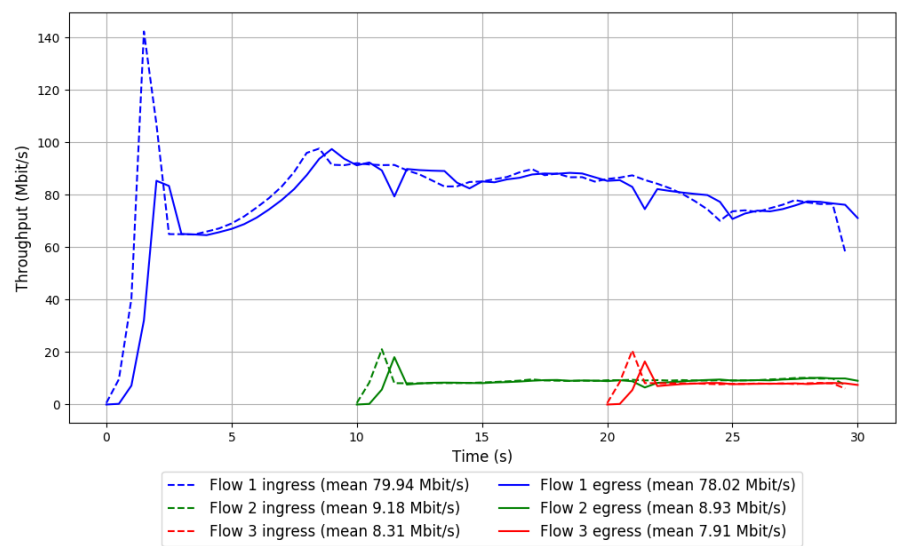
-- Flow 3:

Average throughput: 7.91 Mbit/s

95th percentile per-packet one-way delay: 115.393 ms

Loss rate: 4.85%

Run 5: Report of PCC-Allegro — Data Link

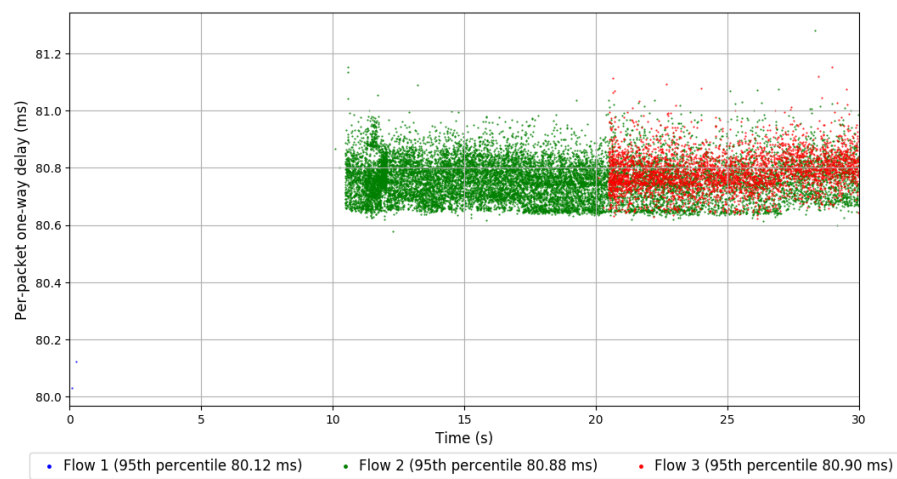
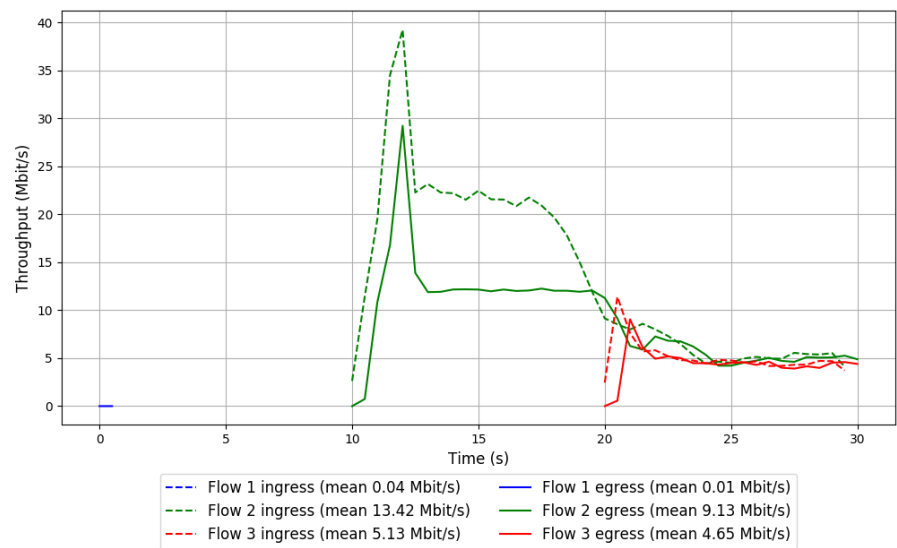



```
Run 1: Statistics of PCC-Expr

Start at: 2019-01-17 12:23:07
End at: 2019-01-17 12:23:37
Local clock offset: -3.147 ms
Remote clock offset: 2.751 ms

# Below is generated by plot.py at 2019-01-17 14:27:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.61 Mbit/s
95th percentile per-packet one-way delay: 80.884 ms
Loss rate: 28.36%
-- Flow 1:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 80.121 ms
Loss rate: 85.71%
-- Flow 2:
Average throughput: 9.13 Mbit/s
95th percentile per-packet one-way delay: 80.881 ms
Loss rate: 31.97%
-- Flow 3:
Average throughput: 4.65 Mbit/s
95th percentile per-packet one-way delay: 80.898 ms
Loss rate: 9.29%
```

Run 1: Report of PCC-Expr — Data Link



Run 2: Statistics of PCC-Expr

Start at: 2019-01-17 12:49:25

End at: 2019-01-17 12:49:55

Local clock offset: -4.923 ms

Remote clock offset: 3.411 ms

Below is generated by plot.py at 2019-01-17 14:27:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.27 Mbit/s

95th percentile per-packet one-way delay: 82.555 ms

Loss rate: 45.62%

-- Flow 1:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 80.951 ms

Loss rate: 85.71%

-- Flow 2:

Average throughput: 7.19 Mbit/s

95th percentile per-packet one-way delay: 82.551 ms

Loss rate: 40.84%

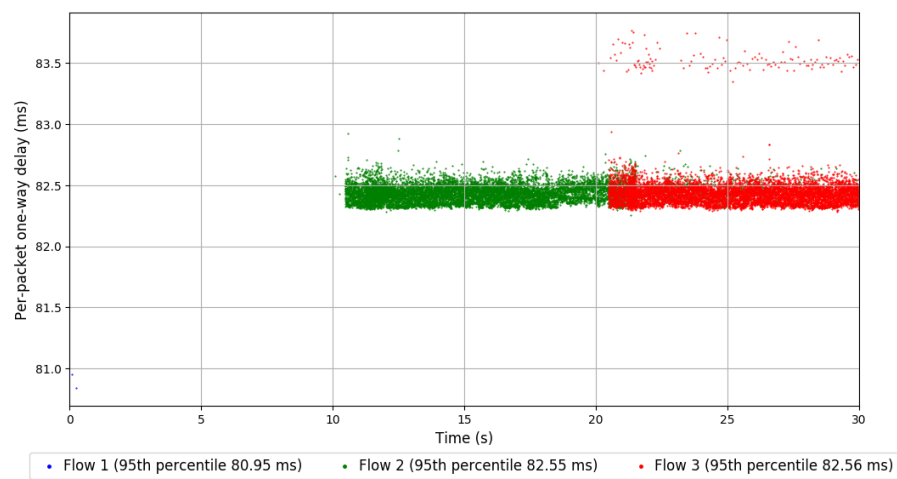
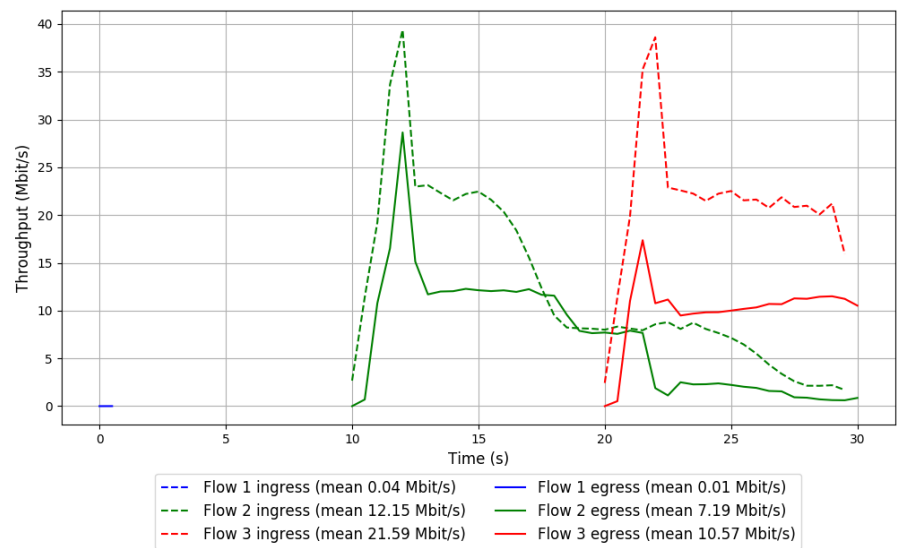
-- Flow 3:

Average throughput: 10.57 Mbit/s

95th percentile per-packet one-way delay: 82.562 ms

Loss rate: 51.03%

Run 2: Report of PCC-Expr — Data Link



Run 3: Statistics of PCC-Expr

Start at: 2019-01-17 13:15:45

End at: 2019-01-17 13:16:15

Local clock offset: -5.315 ms

Remote clock offset: 6.012 ms

Below is generated by plot.py at 2019-01-17 14:27:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 7.86 Mbit/s

95th percentile per-packet one-way delay: 83.730 ms

Loss rate: 38.20%

-- Flow 1:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 85.157 ms

Loss rate: 85.71%

-- Flow 2:

Average throughput: 6.52 Mbit/s

95th percentile per-packet one-way delay: 83.727 ms

Loss rate: 22.75%

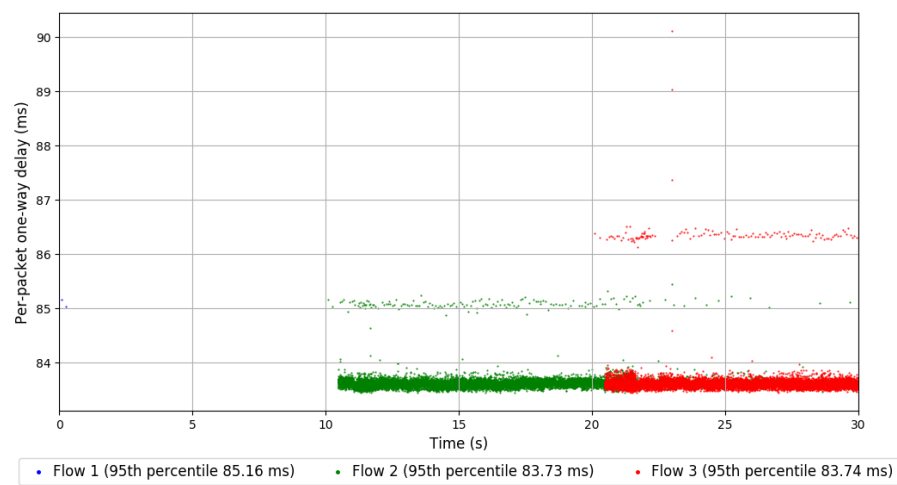
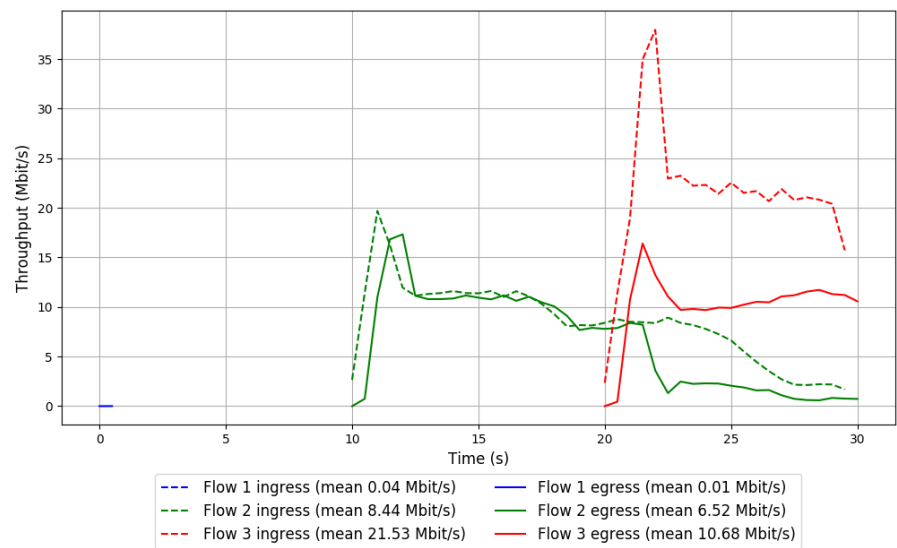
-- Flow 3:

Average throughput: 10.68 Mbit/s

95th percentile per-packet one-way delay: 83.736 ms

Loss rate: 50.40%

Run 3: Report of PCC-Expr — Data Link



Run 4: Statistics of PCC-Expr

Start at: 2019-01-17 13:42:06

End at: 2019-01-17 13:42:36

Local clock offset: -4.956 ms

Remote clock offset: 2.321 ms

Below is generated by plot.py at 2019-01-17 14:27:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.27 Mbit/s

95th percentile per-packet one-way delay: 81.179 ms

Loss rate: 60.06%

-- Flow 1:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 81.777 ms

Loss rate: 85.71%

-- Flow 2:

Average throughput: 10.75 Mbit/s

95th percentile per-packet one-way delay: 81.171 ms

Loss rate: 62.41%

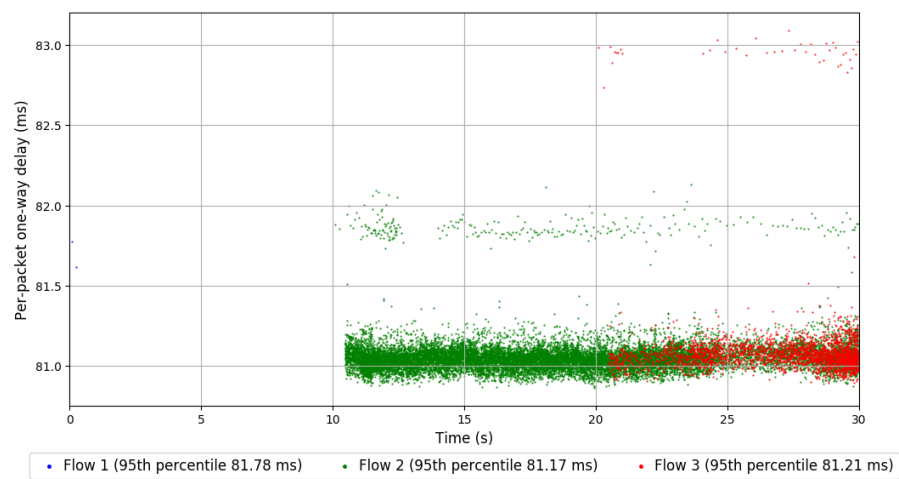
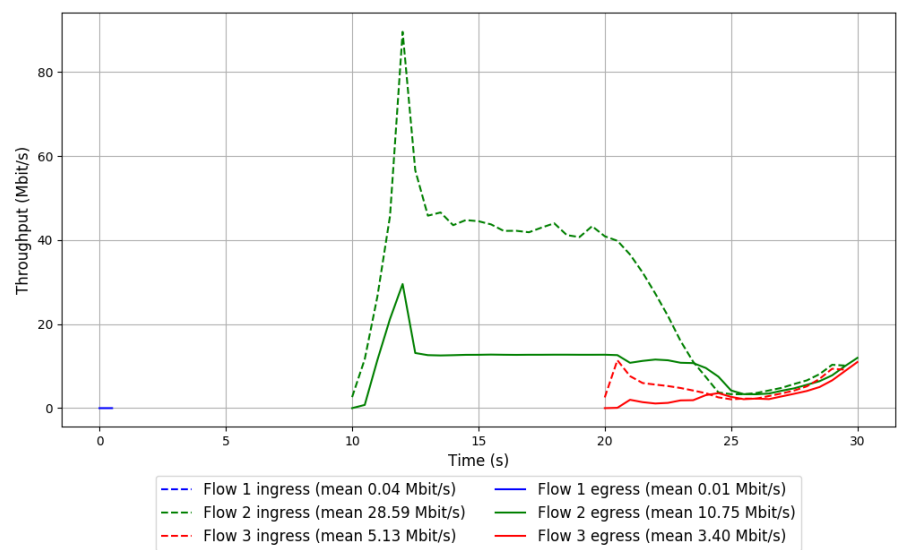
-- Flow 3:

Average throughput: 3.40 Mbit/s

95th percentile per-packet one-way delay: 81.213 ms

Loss rate: 33.74%

Run 4: Report of PCC-Expr — Data Link



Run 5: Statistics of PCC-Expr

Start at: 2019-01-17 14:08:43

End at: 2019-01-17 14:09:13

Local clock offset: -4.201 ms

Remote clock offset: 5.899 ms

Below is generated by plot.py at 2019-01-17 14:27:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.12 Mbit/s

95th percentile per-packet one-way delay: 86.433 ms

Loss rate: 30.52%

-- Flow 1:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 86.418 ms

Loss rate: 85.71%

-- Flow 2:

Average throughput: 10.17 Mbit/s

95th percentile per-packet one-way delay: 86.426 ms

Loss rate: 27.11%

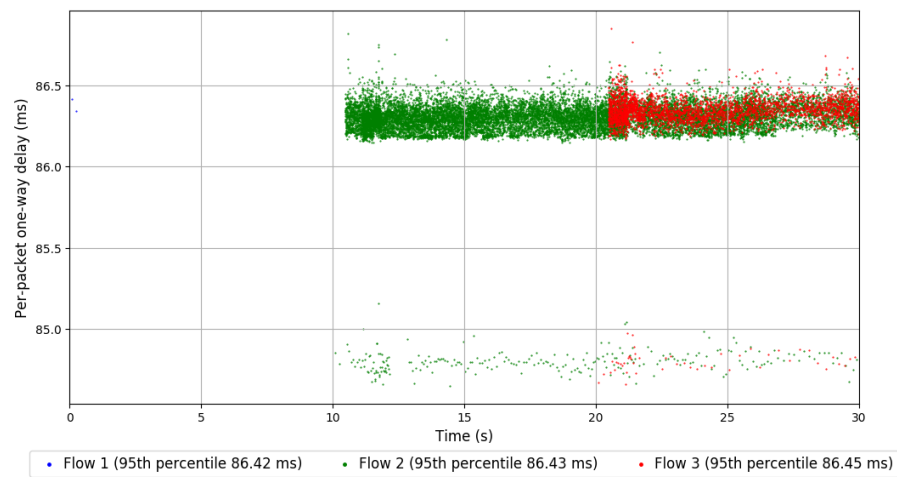
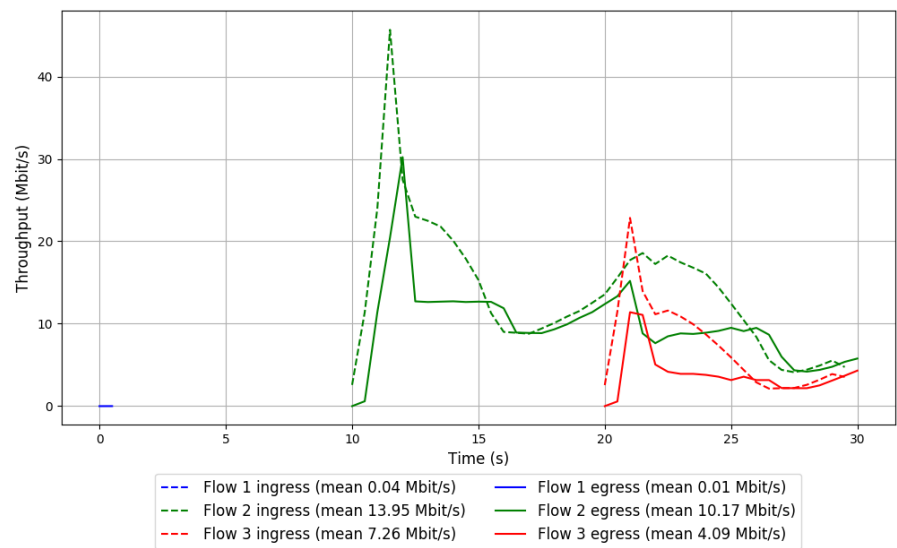
-- Flow 3:

Average throughput: 4.09 Mbit/s

95th percentile per-packet one-way delay: 86.455 ms

Loss rate: 43.73%

Run 5: Report of PCC-Expr — Data Link



Run 1: Statistics of QUIC Cubic

Start at: 2019-01-17 12:16:59

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

Local clock offset: -2.412 ms

Remote clock offset: 2.835 ms

Below is generated by plot.py at 2019-01-17 14:27:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 2.13 Mbit/s

95th percentile per-packet one-way delay: 81.859 ms

Loss rate: 3.91%

-- Flow 1:

Average throughput: 1.01 Mbit/s

95th percentile per-packet one-way delay: 79.399 ms

Loss rate: 3.85%

-- Flow 2:

Average throughput: 1.17 Mbit/s

95th percentile per-packet one-way delay: 79.144 ms

Loss rate: 3.78%

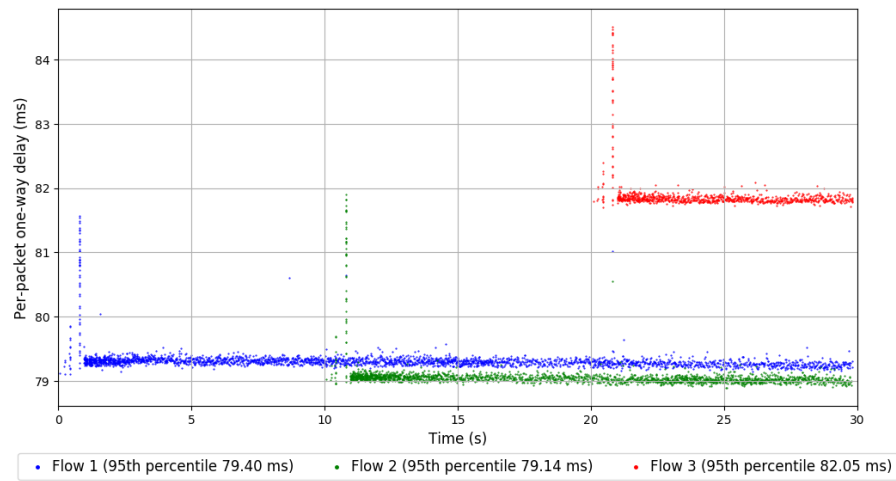
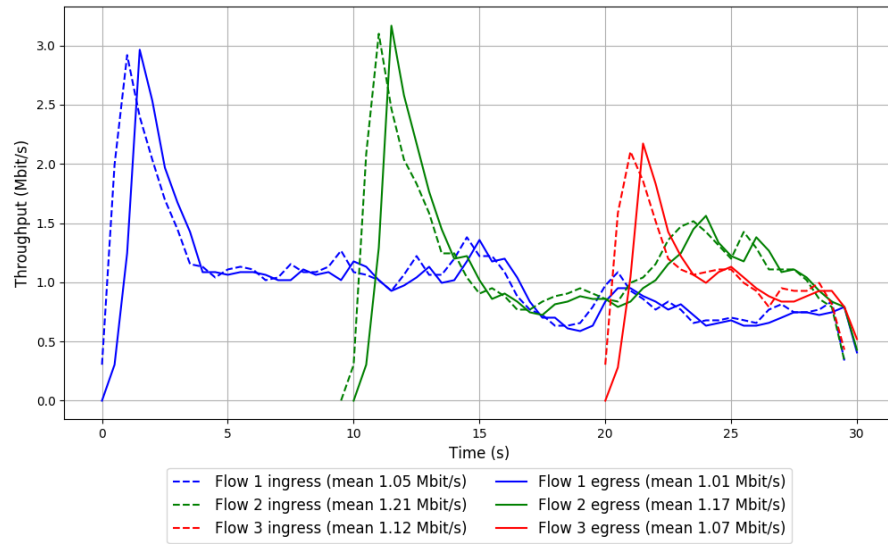
-- Flow 3:

Average throughput: 1.07 Mbit/s

95th percentile per-packet one-way delay: 82.049 ms

Loss rate: 4.36%

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2019-01-17 12:43:19

End at: 2019-01-17 12:43:49

Local clock offset: -4.042 ms

Remote clock offset: 7.18 ms

Below is generated by plot.py at 2019-01-17 14:27:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.99 Mbit/s

95th percentile per-packet one-way delay: 85.364 ms

Loss rate: 4.57%

-- Flow 1:

Average throughput: 0.91 Mbit/s

95th percentile per-packet one-way delay: 84.114 ms

Loss rate: 5.09%

-- Flow 2:

Average throughput: 1.01 Mbit/s

95th percentile per-packet one-way delay: 84.548 ms

Loss rate: 4.15%

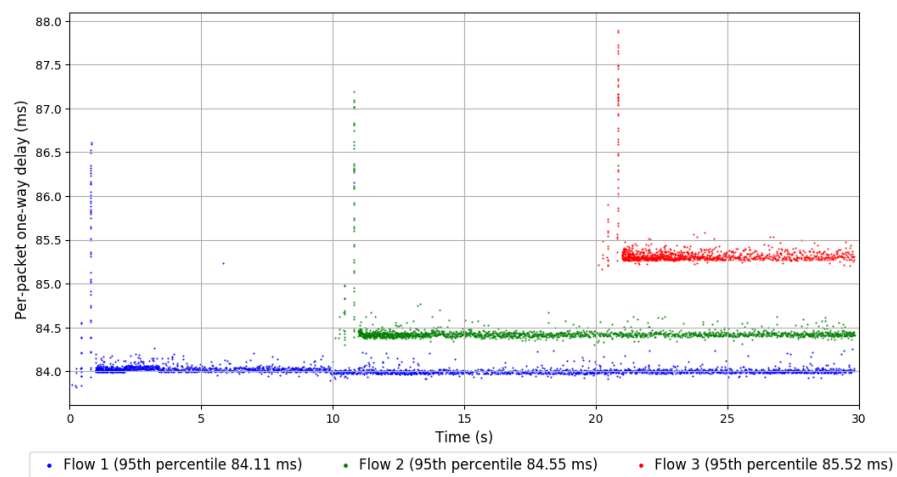
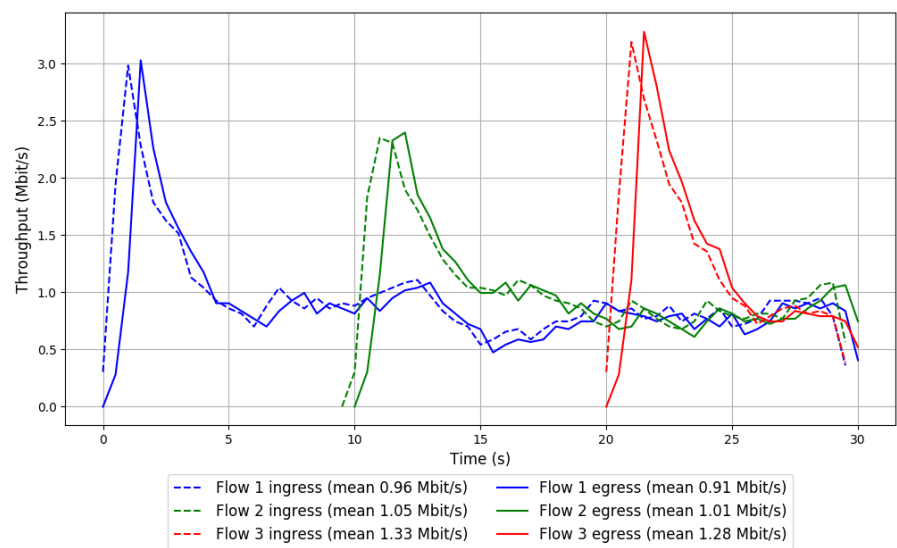
-- Flow 3:

Average throughput: 1.28 Mbit/s

95th percentile per-packet one-way delay: 85.516 ms

Loss rate: 4.10%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2019-01-17 13:09:39

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

Local clock offset: -4.488 ms

Remote clock offset: 7.202 ms

Below is generated by plot.py at 2019-01-17 14:27:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 2.02 Mbit/s

95th percentile per-packet one-way delay: 85.586 ms

Loss rate: 4.04%

-- Flow 1:

Average throughput: 0.93 Mbit/s

95th percentile per-packet one-way delay: 85.609 ms

Loss rate: 4.36%

-- Flow 2:

Average throughput: 1.07 Mbit/s

95th percentile per-packet one-way delay: 85.014 ms

Loss rate: 3.76%

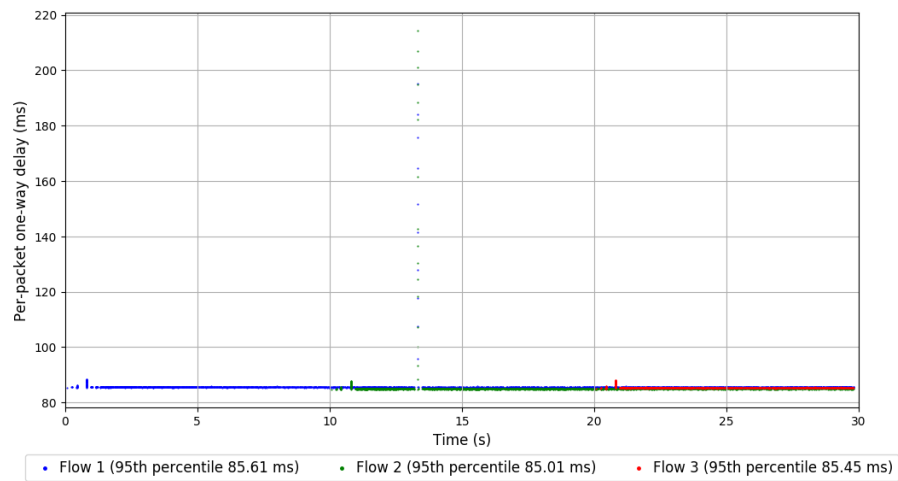
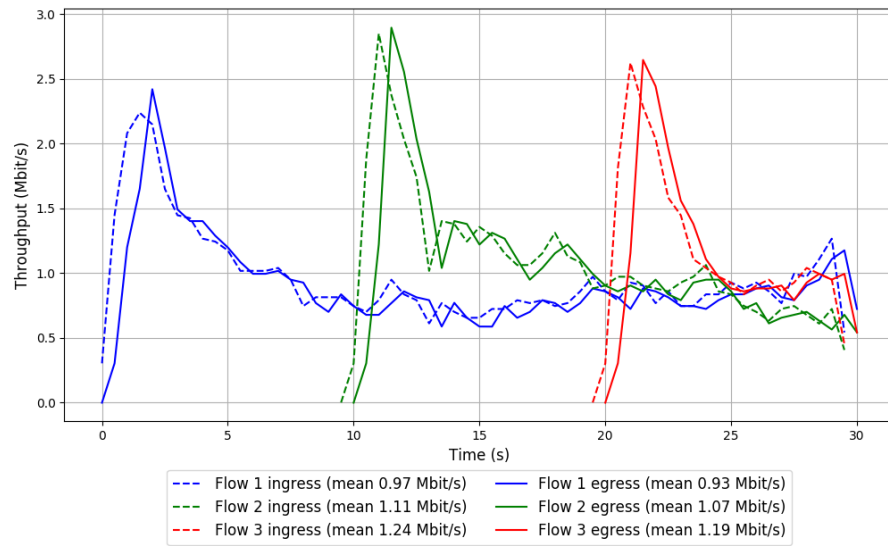
-- Flow 3:

Average throughput: 1.19 Mbit/s

95th percentile per-packet one-way delay: 85.446 ms

Loss rate: 3.76%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2019-01-17 13:35:59

End at: 2019-01-17 13:36:29

Local clock offset: -4.215 ms

Remote clock offset: 6.198 ms

Below is generated by plot.py at 2019-01-17 14:27:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 2.14 Mbit/s

95th percentile per-packet one-way delay: 86.861 ms

Loss rate: 4.13%

-- Flow 1:

Average throughput: 0.90 Mbit/s

95th percentile per-packet one-way delay: 85.997 ms

Loss rate: 4.27%

-- Flow 2:

Average throughput: 1.06 Mbit/s

95th percentile per-packet one-way delay: 86.957 ms

Loss rate: 3.91%

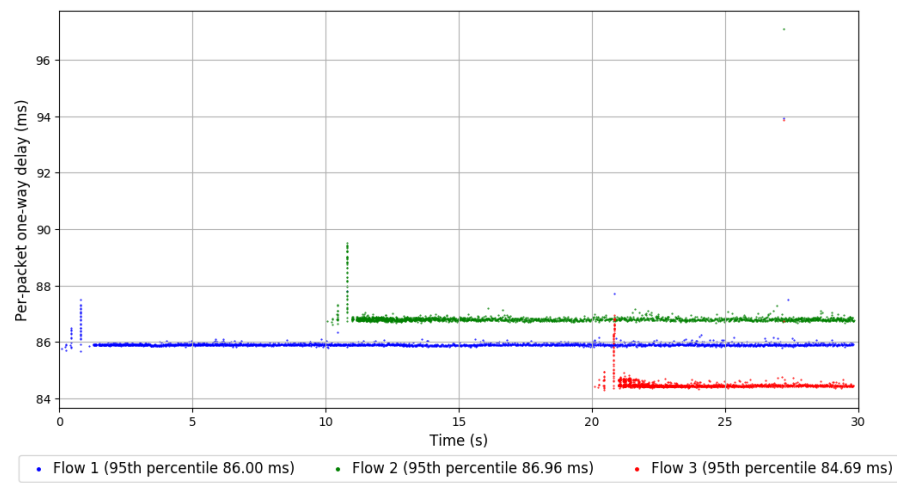
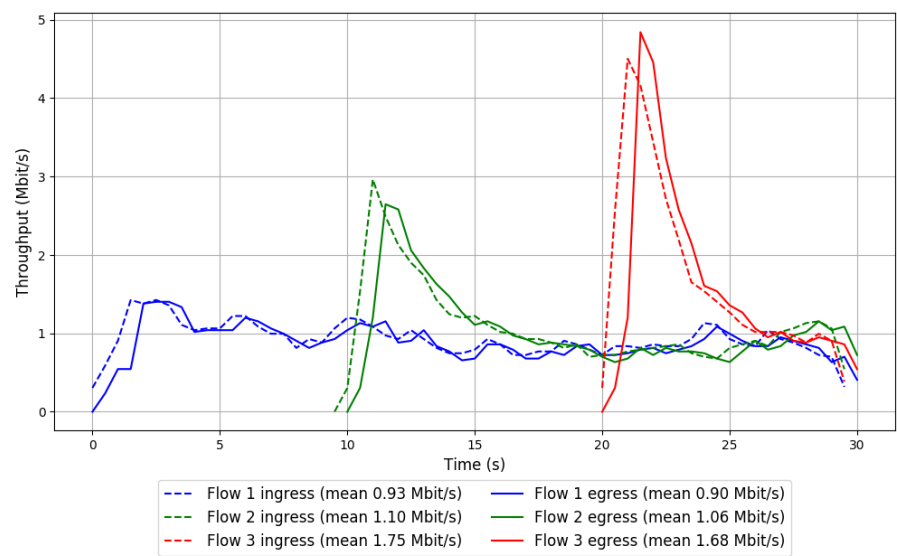
-- Flow 3:

Average throughput: 1.68 Mbit/s

95th percentile per-packet one-way delay: 84.689 ms

Loss rate: 4.19%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2019-01-17 14:02:24

End at: 2019-01-17 14:02:54

Local clock offset: -4.367 ms

Remote clock offset: 4.641 ms

Below is generated by plot.py at 2019-01-17 14:27:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 36.99 Mbit/s

95th percentile per-packet one-way delay: 88.576 ms

Loss rate: 0.77%

-- Flow 1:

Average throughput: 17.40 Mbit/s

95th percentile per-packet one-way delay: 86.417 ms

Loss rate: 0.33%

-- Flow 2:

Average throughput: 17.58 Mbit/s

95th percentile per-packet one-way delay: 84.549 ms

Loss rate: 0.18%

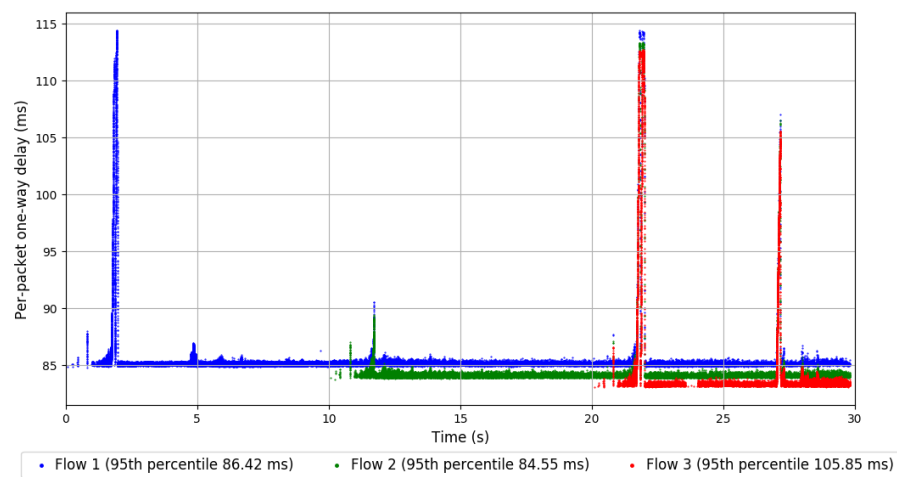
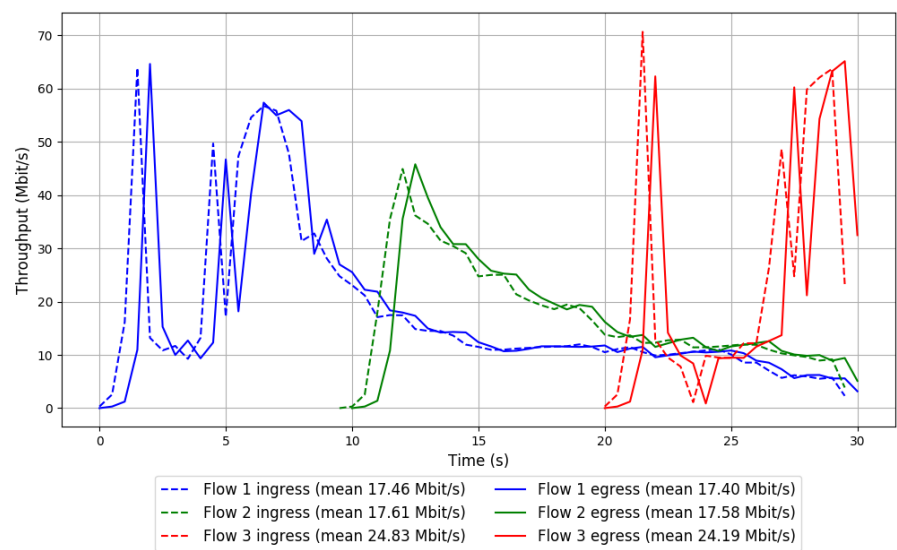
-- Flow 3:

Average throughput: 24.19 Mbit/s

95th percentile per-packet one-way delay: 105.852 ms

Loss rate: 2.59%

Run 5: Report of QUIC Cubic — Data Link

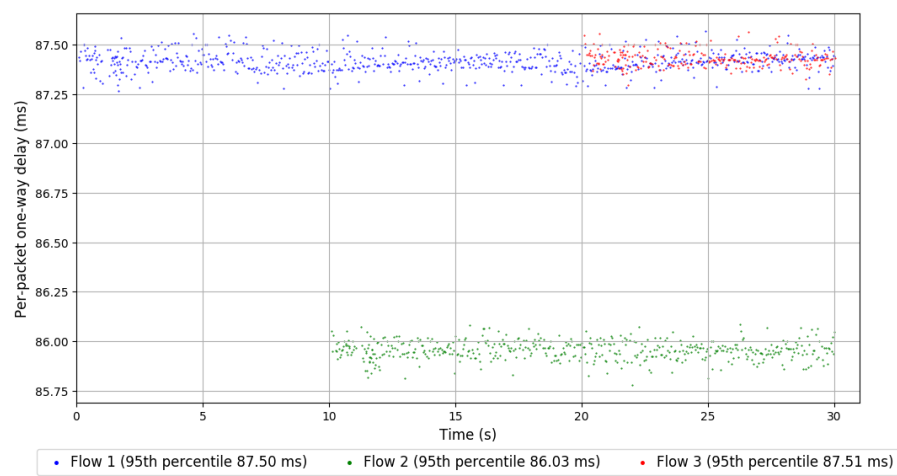
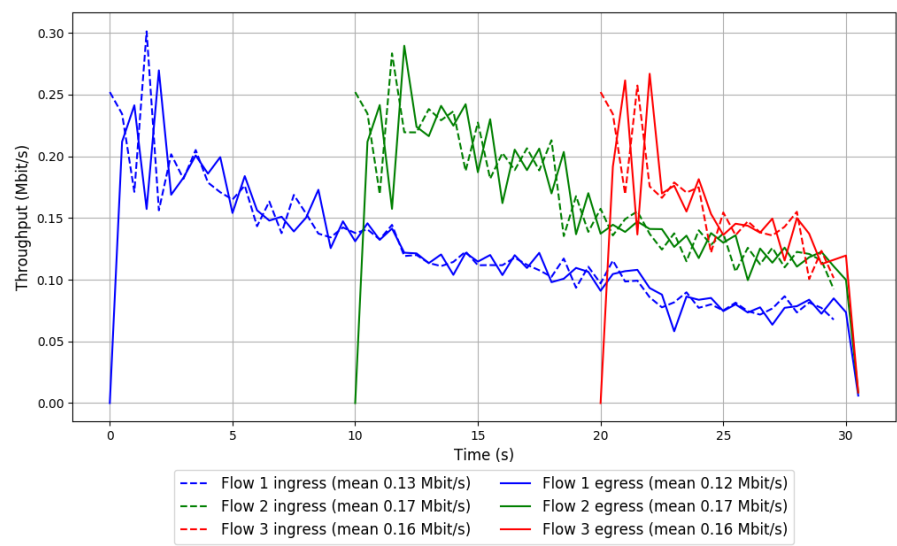


```
Run 1: Statistics of SCReAM

Start at: 2019-01-17 12:10:41
End at: 2019-01-17 12:11:11
Local clock offset: -3.22 ms
Remote clock offset: 9.022 ms

# Below is generated by plot.py at 2019-01-17 14:27:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.29 Mbit/s
95th percentile per-packet one-way delay: 87.495 ms
Loss rate: 1.75%
-- Flow 1:
Average throughput: 0.12 Mbit/s
95th percentile per-packet one-way delay: 87.500 ms
Loss rate: 1.86%
-- Flow 2:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 86.032 ms
Loss rate: 1.40%
-- Flow 3:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 87.507 ms
Loss rate: 2.20%
```

Run 1: Report of SReAM — Data Link

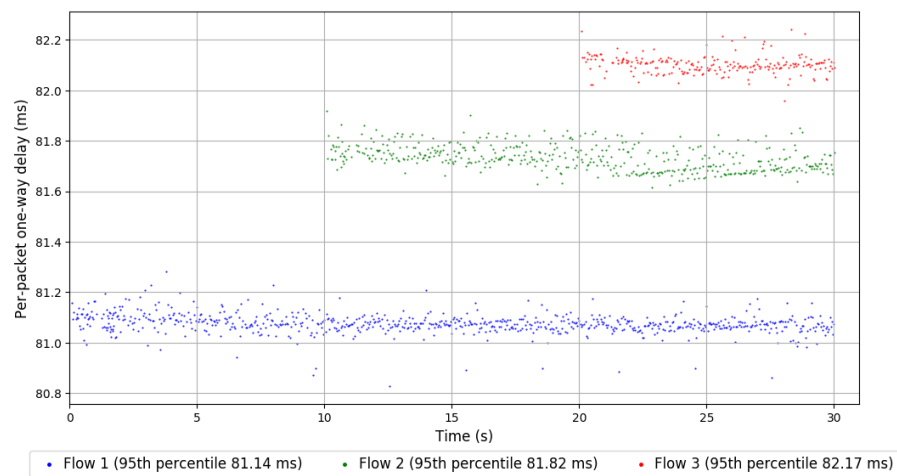
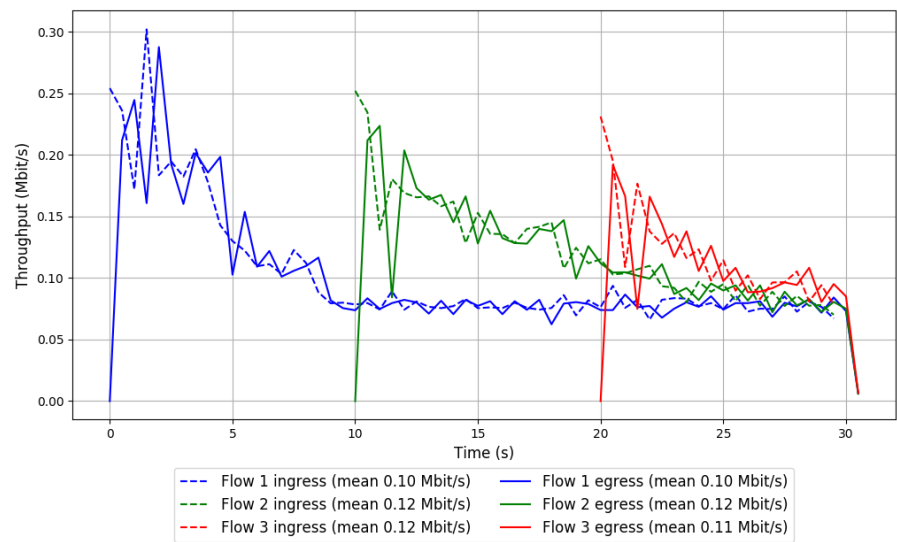


Run 2: Statistics of SReAM

Start at: 2019-01-17 12:37:00
End at: 2019-01-17 12:37:30
Local clock offset: -3.948 ms
Remote clock offset: 3.584 ms

Below is generated by plot.py at 2019-01-17 14:27:21
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 82.114 ms
Loss rate: 2.84%
-- Flow 1:
Average throughput: 0.10 Mbit/s
95th percentile per-packet one-way delay: 81.141 ms
Loss rate: 2.16%
-- Flow 2:
Average throughput: 0.12 Mbit/s
95th percentile per-packet one-way delay: 81.822 ms
Loss rate: 2.64%
-- Flow 3:
Average throughput: 0.11 Mbit/s
95th percentile per-packet one-way delay: 82.165 ms
Loss rate: 5.04%

Run 2: Report of SReAM — Data Link

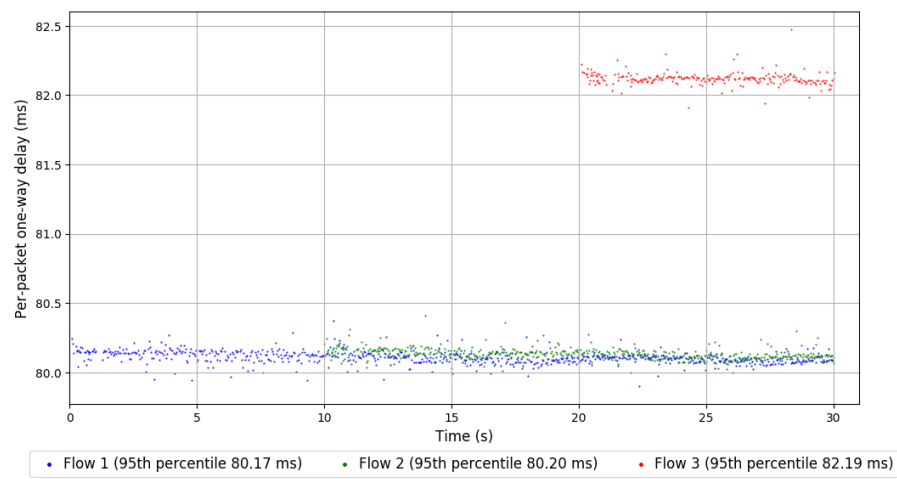
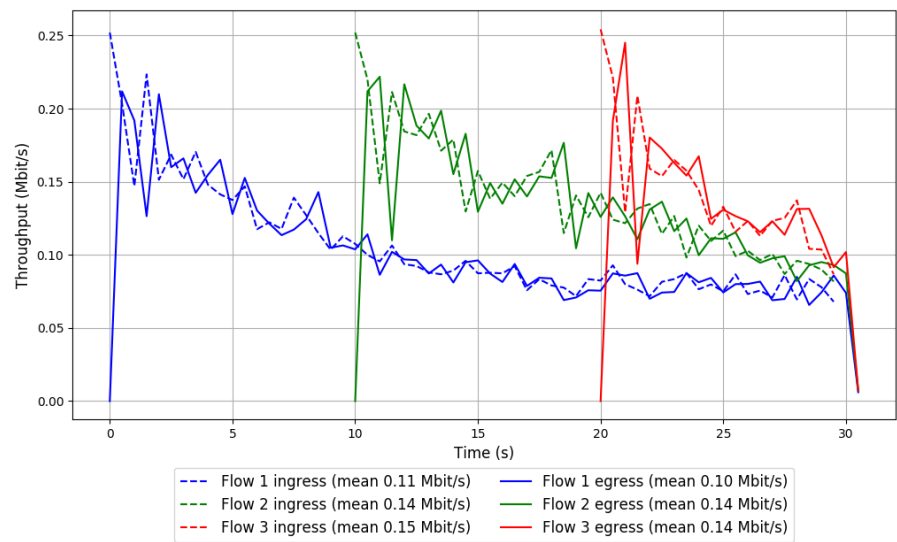


Run 3: Statistics of SCReAM

Start at: 2019-01-17 13:03:21
End at: 2019-01-17 13:03:51
Local clock offset: -4.399 ms
Remote clock offset: 3.476 ms

Below is generated by plot.py at 2019-01-17 14:27:21
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.24 Mbit/s
95th percentile per-packet one-way delay: 82.131 ms
Loss rate: 2.34%
-- Flow 1:
Average throughput: 0.10 Mbit/s
95th percentile per-packet one-way delay: 80.175 ms
Loss rate: 2.44%
-- Flow 2:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 80.202 ms
Loss rate: 2.07%
-- Flow 3:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 82.186 ms
Loss rate: 2.63%

Run 3: Report of SReAM — Data Link

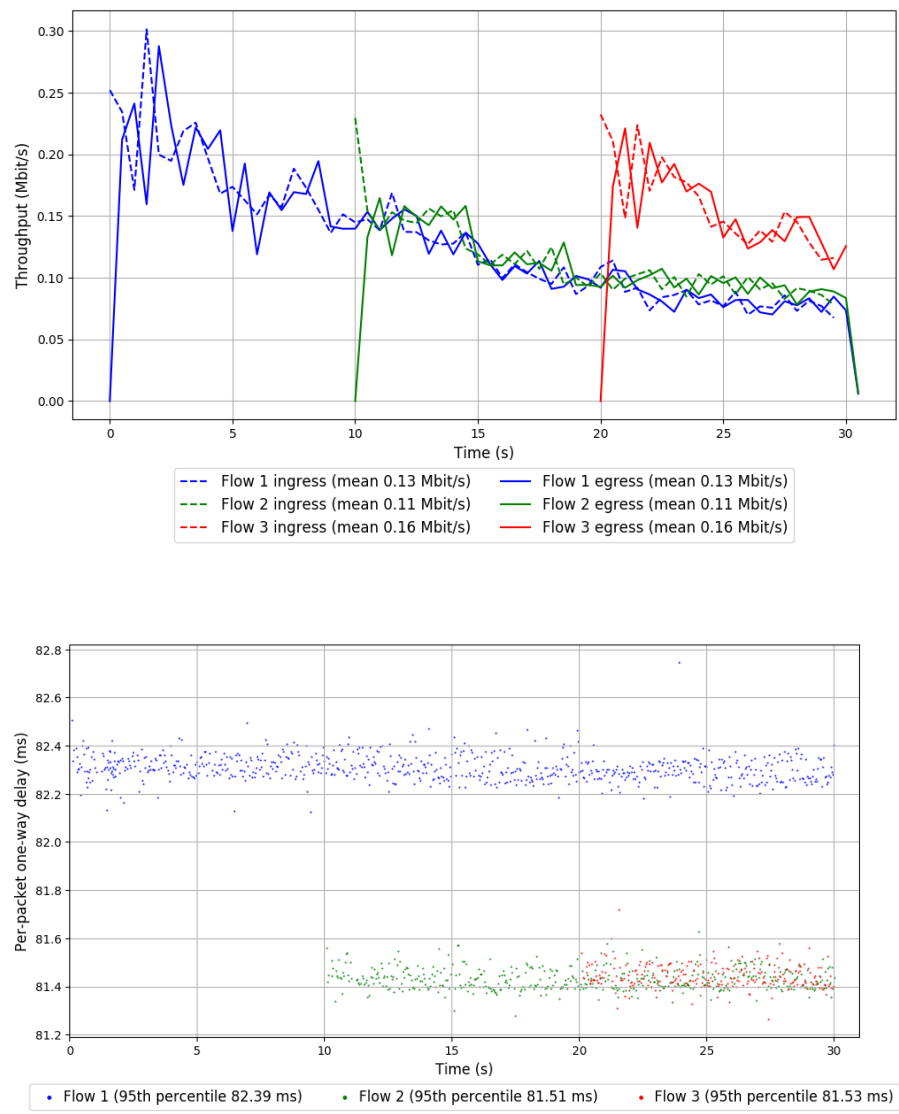


Run 4: Statistics of SCReAM

Start at: 2019-01-17 13:29:42
End at: 2019-01-17 13:30:12
Local clock offset: -5.022 ms
Remote clock offset: 1.484 ms

Below is generated by plot.py at 2019-01-17 14:27:21
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.25 Mbit/s
95th percentile per-packet one-way delay: 82.375 ms
Loss rate: 2.26%
-- Flow 1:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 82.395 ms
Loss rate: 1.74%
-- Flow 2:
Average throughput: 0.11 Mbit/s
95th percentile per-packet one-way delay: 81.509 ms
Loss rate: 2.70%
-- Flow 3:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 81.526 ms
Loss rate: 2.92%

Run 4: Report of SReAM — Data Link



Run 5: Statistics of SReAM

Start at: 2019-01-17 13:56:03

End at: 2019-01-17 13:56:33

Local clock offset: -4.48 ms

Remote clock offset: 0.839 ms

Below is generated by plot.py at 2019-01-17 14:27:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.41 Mbit/s

95th percentile per-packet one-way delay: 81.205 ms

Loss rate: 0.14%

-- Flow 1:

Average throughput: 0.19 Mbit/s

95th percentile per-packet one-way delay: 79.757 ms

Loss rate: 0.30%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 79.694 ms

Loss rate: 0.00%

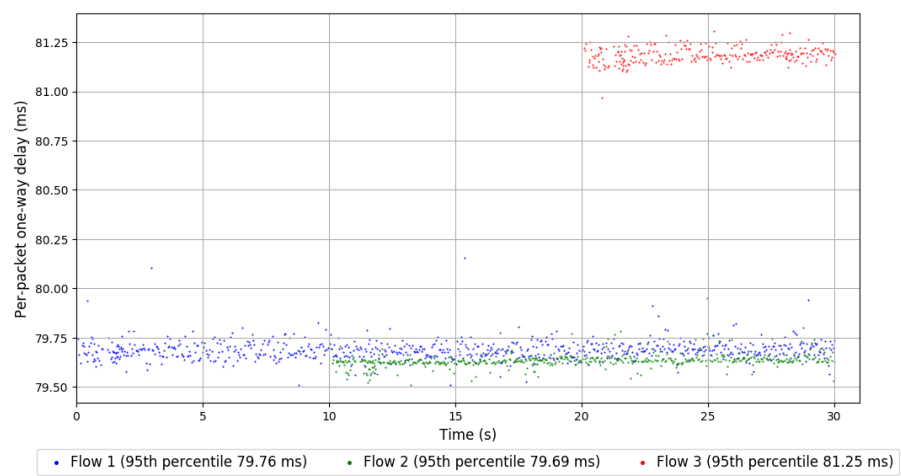
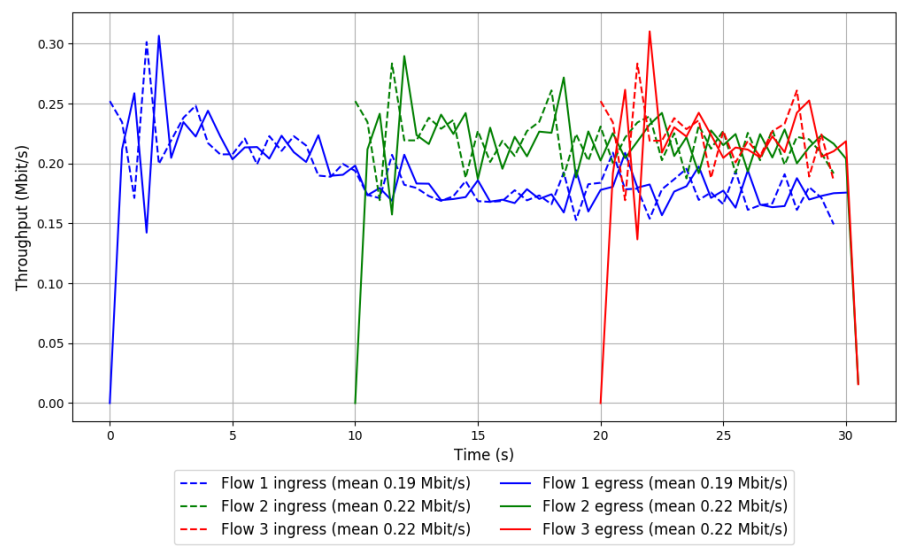
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 81.250 ms

Loss rate: 0.00%

Run 5: Report of SReAM — Data Link



Run 1: Statistics of Sprout

Start at: 2019-01-17 12:08:15

End at: 2019-01-17 12:08:45

Local clock offset: -2.495 ms

Remote clock offset: 8.152 ms

Below is generated by plot.py at 2019-01-17 14:27:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.56 Mbit/s

95th percentile per-packet one-way delay: 86.533 ms

Loss rate: 4.13%

-- Flow 1:

Average throughput: 0.95 Mbit/s

95th percentile per-packet one-way delay: 86.369 ms

Loss rate: 4.40%

-- Flow 2:

Average throughput: 0.55 Mbit/s

95th percentile per-packet one-way delay: 86.819 ms

Loss rate: 2.92%

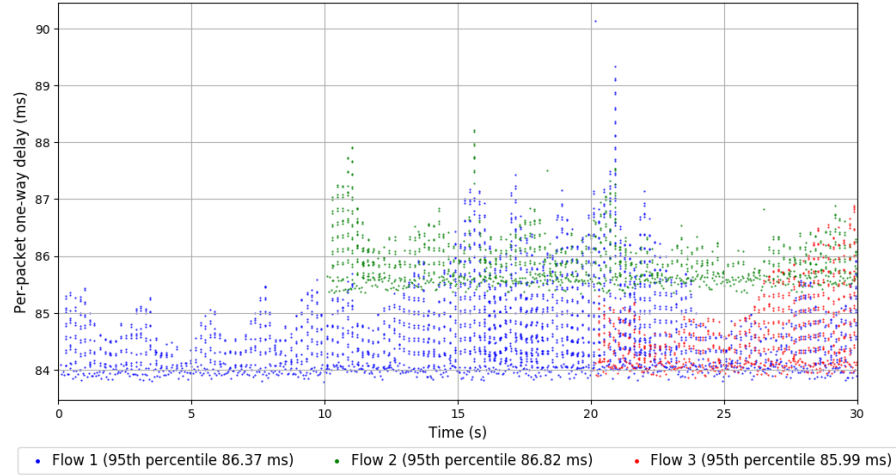
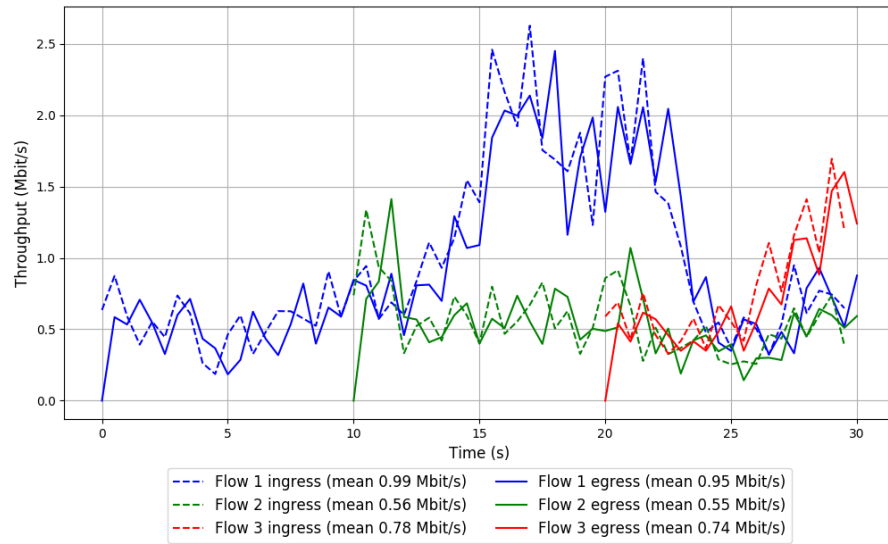
-- Flow 3:

Average throughput: 0.74 Mbit/s

95th percentile per-packet one-way delay: 85.994 ms

Loss rate: 4.85%

Run 1: Report of Sprout — Data Link

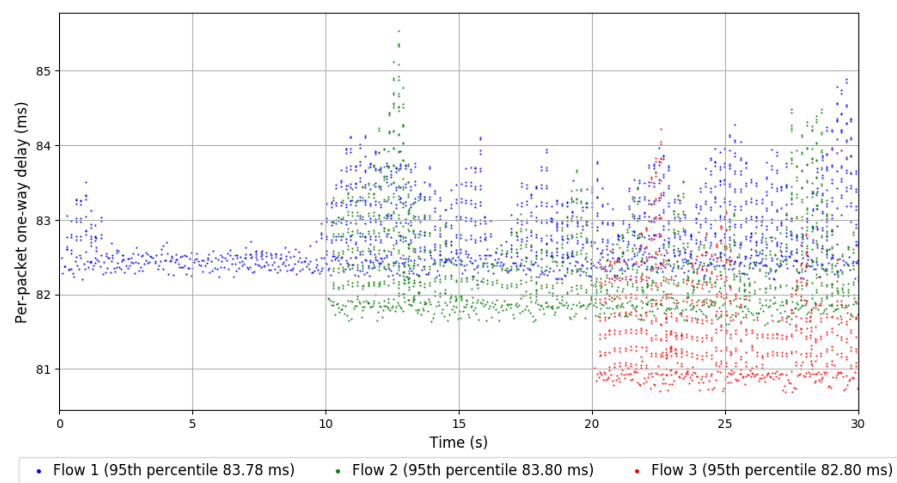
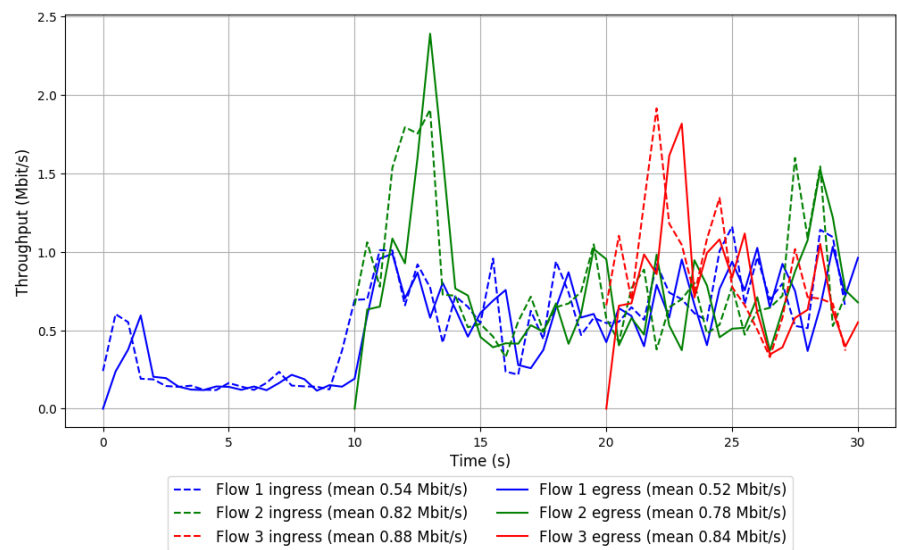


Run 2: Statistics of Sprout

Start at: 2019-01-17 12:34:33
End at: 2019-01-17 12:35:03
Local clock offset: -4.572 ms
Remote clock offset: 3.665 ms

Below is generated by plot.py at 2019-01-17 14:27:21
Datalink statistics
-- Total of 3 flows:
Average throughput: 1.32 Mbit/s
95th percentile per-packet one-way delay: 83.727 ms
Loss rate: 4.62%
-- Flow 1:
Average throughput: 0.52 Mbit/s
95th percentile per-packet one-way delay: 83.780 ms
Loss rate: 4.61%
-- Flow 2:
Average throughput: 0.78 Mbit/s
95th percentile per-packet one-way delay: 83.803 ms
Loss rate: 4.43%
-- Flow 3:
Average throughput: 0.84 Mbit/s
95th percentile per-packet one-way delay: 82.798 ms
Loss rate: 4.98%

Run 2: Report of Sprout — Data Link

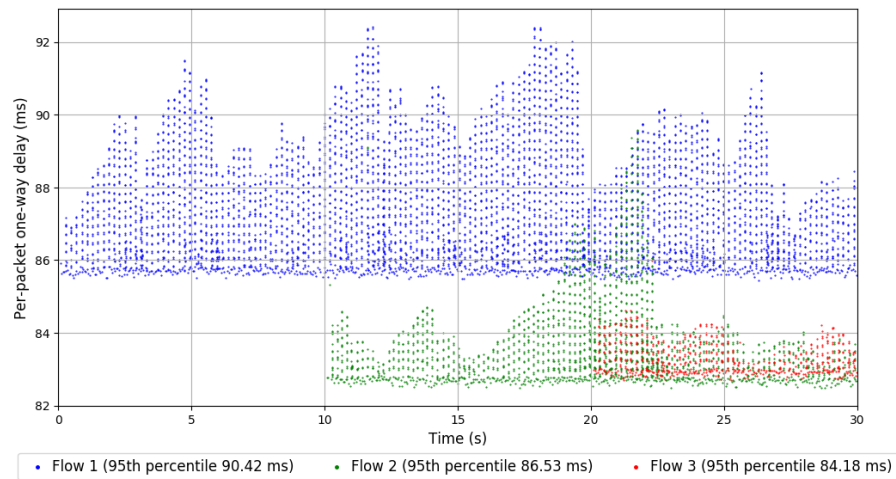
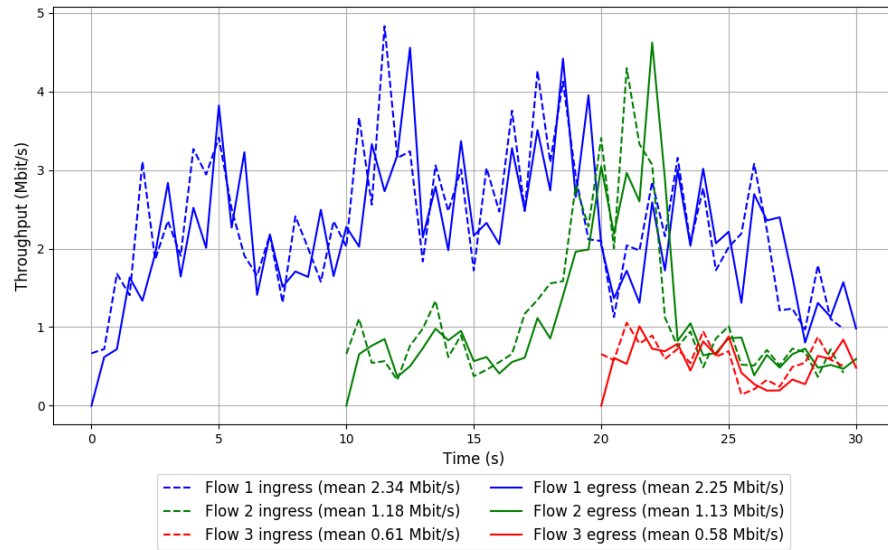


Run 3: Statistics of Sprout

Start at: 2019-01-17 13:00:55
End at: 2019-01-17 13:01:25
Local clock offset: -4.419 ms
Remote clock offset: 6.163 ms

```
# Below is generated by plot.py at 2019-01-17 14:27:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.19 Mbit/s
95th percentile per-packet one-way delay: 90.043 ms
Loss rate: 4.12%
-- Flow 1:
Average throughput: 2.25 Mbit/s
95th percentile per-packet one-way delay: 90.424 ms
Loss rate: 3.88%
-- Flow 2:
Average throughput: 1.13 Mbit/s
95th percentile per-packet one-way delay: 86.535 ms
Loss rate: 4.53%
-- Flow 3:
Average throughput: 0.58 Mbit/s
95th percentile per-packet one-way delay: 84.181 ms
Loss rate: 5.35%
```

Run 3: Report of Sprout — Data Link

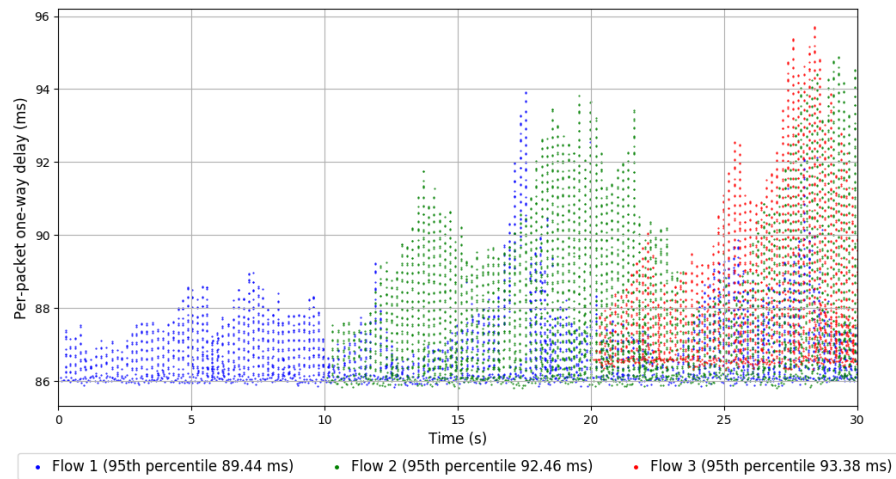
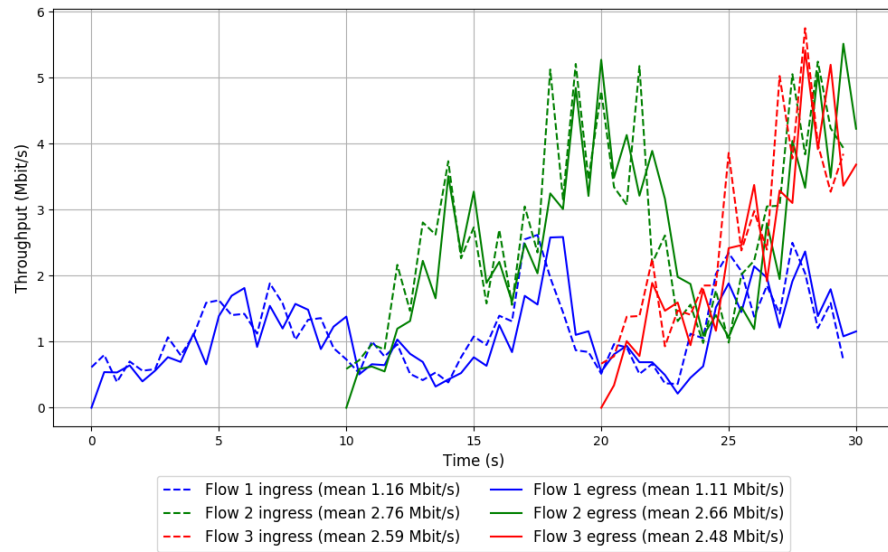


Run 4: Statistics of Sprout

Start at: 2019-01-17 13:27:15
End at: 2019-01-17 13:27:45
Local clock offset: -5.108 ms
Remote clock offset: 6.212 ms

```
# Below is generated by plot.py at 2019-01-17 14:27:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.69 Mbit/s
95th percentile per-packet one-way delay: 92.256 ms
Loss rate: 3.96%
-- Flow 1:
Average throughput: 1.11 Mbit/s
95th percentile per-packet one-way delay: 89.439 ms
Loss rate: 4.23%
-- Flow 2:
Average throughput: 2.66 Mbit/s
95th percentile per-packet one-way delay: 92.460 ms
Loss rate: 3.70%
-- Flow 3:
Average throughput: 2.48 Mbit/s
95th percentile per-packet one-way delay: 93.376 ms
Loss rate: 4.15%
```

Run 4: Report of Sprout — Data Link

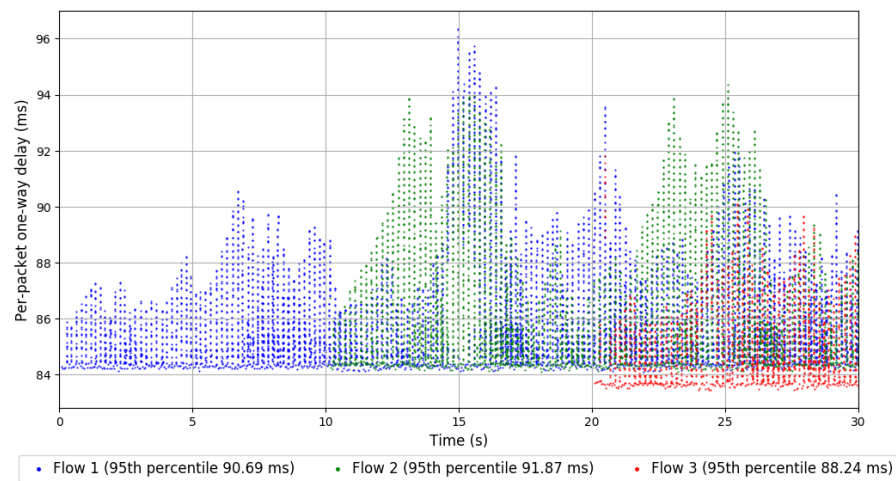
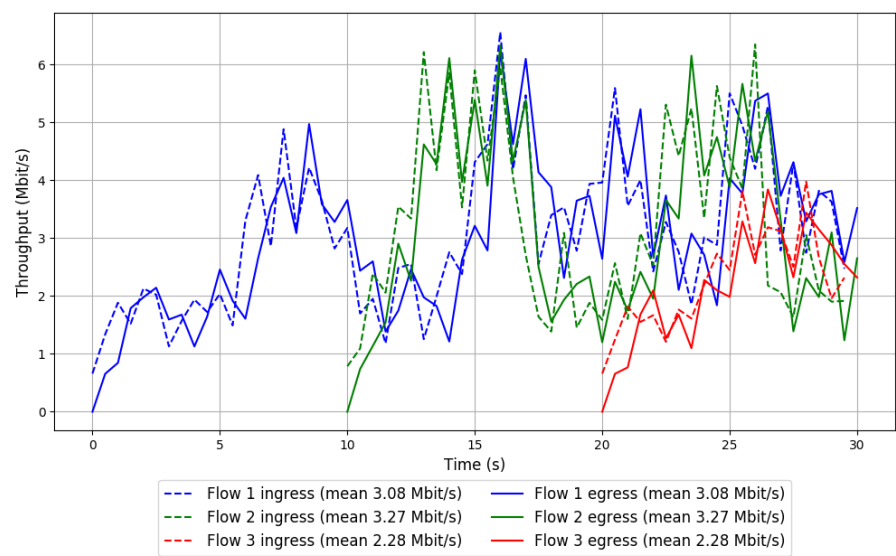


Run 5: Statistics of Sprout

Start at: 2019-01-17 13:53:37
End at: 2019-01-17 13:54:07
Local clock offset: -3.812 ms
Remote clock offset: 4.856 ms

Below is generated by plot.py at 2019-01-17 14:27:21
Datalink statistics
-- Total of 3 flows:
Average throughput: 6.01 Mbit/s
95th percentile per-packet one-way delay: 91.224 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 3.08 Mbit/s
95th percentile per-packet one-way delay: 90.689 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 3.27 Mbit/s
95th percentile per-packet one-way delay: 91.870 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 2.28 Mbit/s
95th percentile per-packet one-way delay: 88.238 ms
Loss rate: 0.05%

Run 5: Report of Sprout — Data Link



Run 1: Statistics of TaoVA-100x

Start at: 2019-01-17 12:09:28

End at: 2019-01-17 12:09:58

Local clock offset: -2.563 ms

Remote clock offset: 7.944 ms

Below is generated by plot.py at 2019-01-17 14:27:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.05 Mbit/s

95th percentile per-packet one-way delay: 89.232 ms

Loss rate: 36.85%

-- Flow 1:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 84.136 ms

Loss rate: 95.92%

-- Flow 2:

Average throughput: 9.22 Mbit/s

95th percentile per-packet one-way delay: 92.365 ms

Loss rate: 35.96%

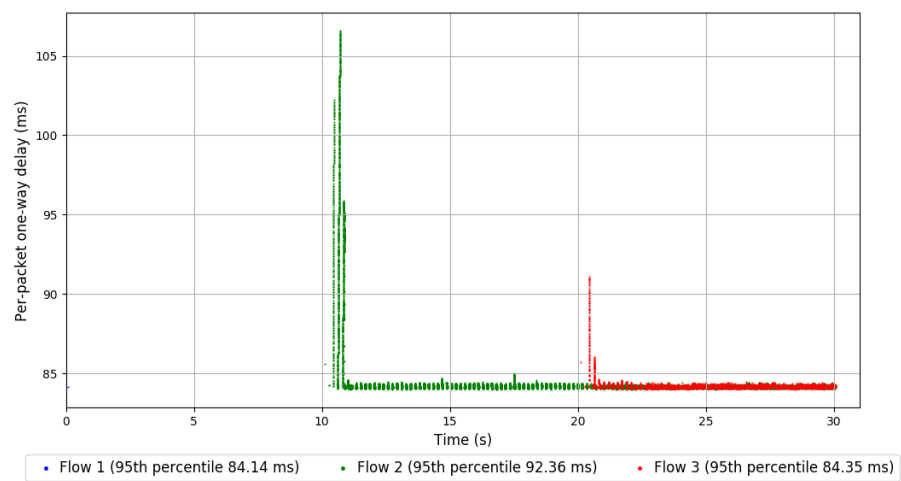
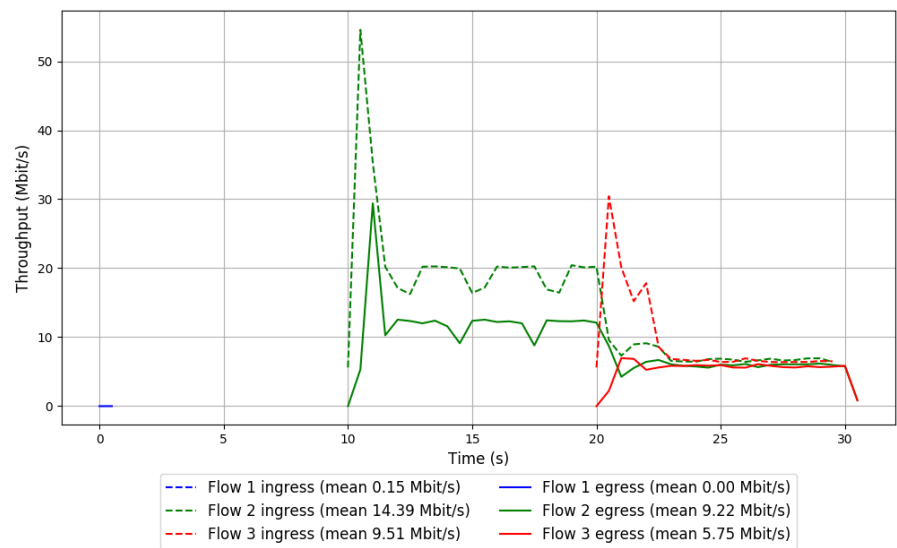
-- Flow 3:

Average throughput: 5.75 Mbit/s

95th percentile per-packet one-way delay: 84.346 ms

Loss rate: 39.56%

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



Run 2: Statistics of TaoVA-100x

Start at: 2019-01-17 12:35:45

End at: 2019-01-17 12:36:15

Local clock offset: -4.639 ms

Remote clock offset: 2.483 ms

Below is generated by plot.py at 2019-01-17 14:27:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.04 Mbit/s

95th percentile per-packet one-way delay: 86.279 ms

Loss rate: 51.31%

-- Flow 1:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 80.924 ms

Loss rate: 95.92%

-- Flow 2:

Average throughput: 9.89 Mbit/s

95th percentile per-packet one-way delay: 88.762 ms

Loss rate: 47.84%

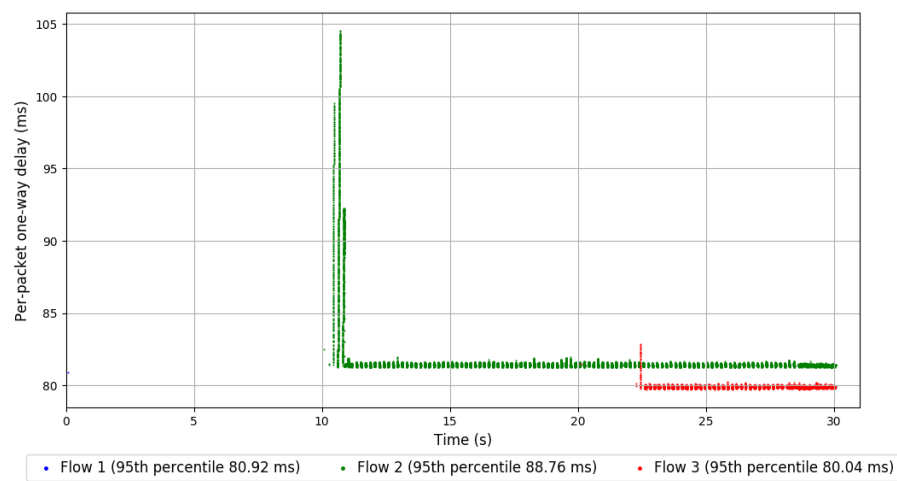
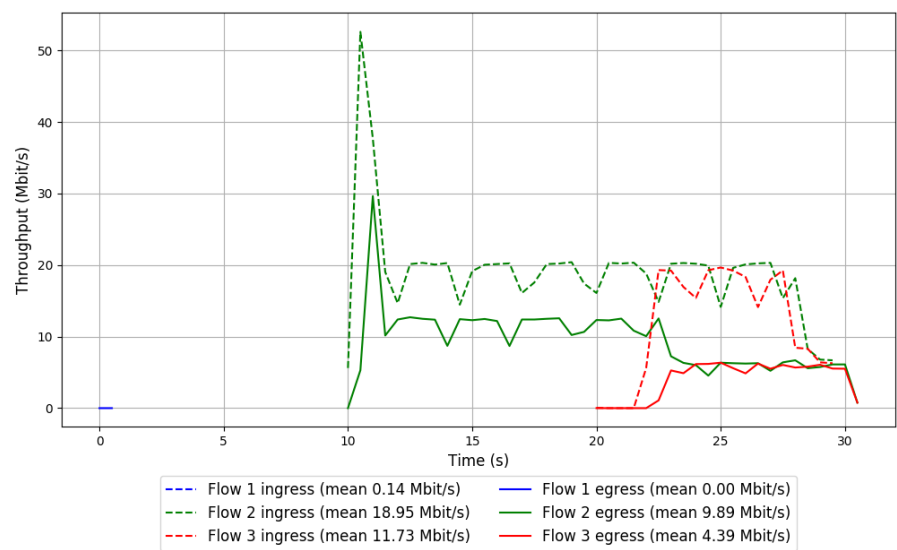
-- Flow 3:

Average throughput: 4.39 Mbit/s

95th percentile per-packet one-way delay: 80.036 ms

Loss rate: 62.56%

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



Run 3: Statistics of TaoVA-100x

Start at: 2019-01-17 13:02:08

End at: 2019-01-17 13:02:38

Local clock offset: -4.389 ms

Remote clock offset: 7.096 ms

Below is generated by plot.py at 2019-01-17 14:27:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.08 Mbit/s

95th percentile per-packet one-way delay: 90.764 ms

Loss rate: 31.07%

-- Flow 1:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 85.307 ms

Loss rate: 95.92%

-- Flow 2:

Average throughput: 9.29 Mbit/s

95th percentile per-packet one-way delay: 94.169 ms

Loss rate: 35.12%

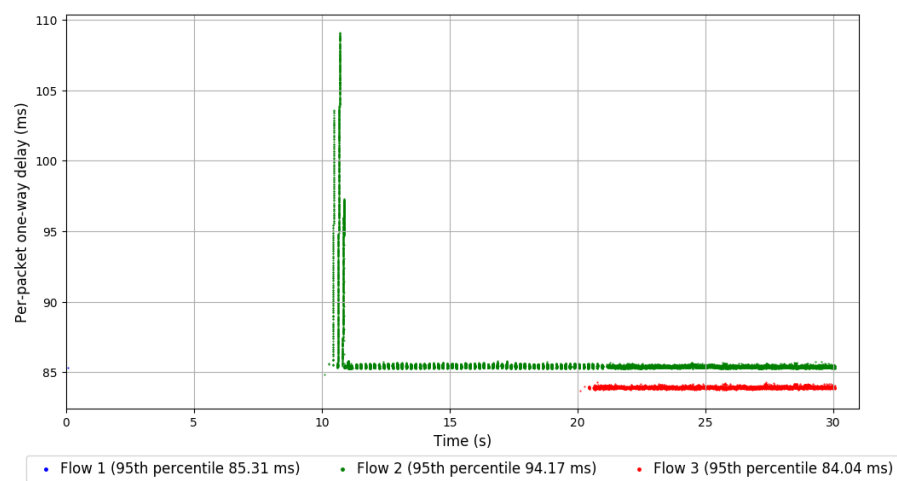
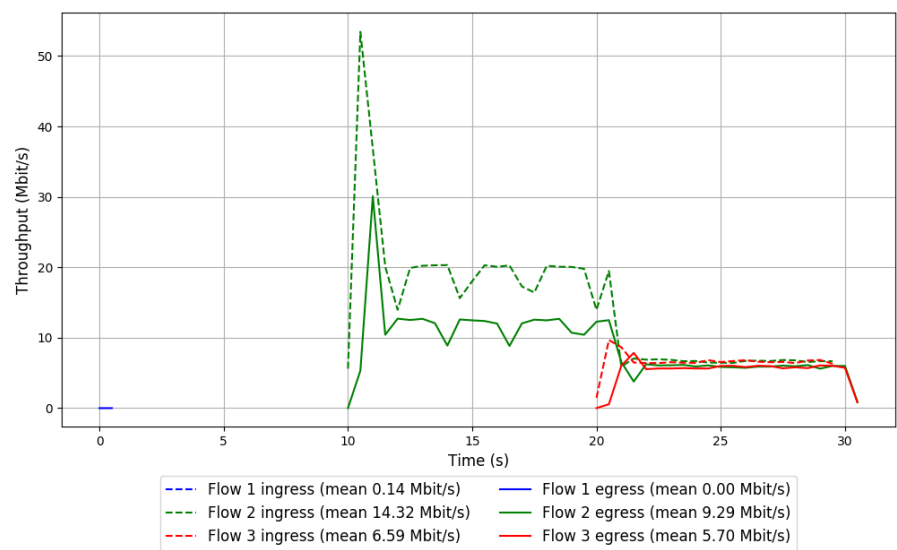
-- Flow 3:

Average throughput: 5.70 Mbit/s

95th percentile per-packet one-way delay: 84.042 ms

Loss rate: 13.38%

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



Run 4: Statistics of TaoVA-100x

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

End at: 2019-01-17 13:28:58

Local clock offset: -4.338 ms

Remote clock offset: 2.445 ms

Below is generated by plot.py at 2019-01-17 14:27:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.09 Mbit/s

95th percentile per-packet one-way delay: 86.807 ms

Loss rate: 31.37%

-- Flow 1:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 82.229 ms

Loss rate: 95.92%

-- Flow 2:

Average throughput: 9.31 Mbit/s

95th percentile per-packet one-way delay: 90.185 ms

Loss rate: 34.67%

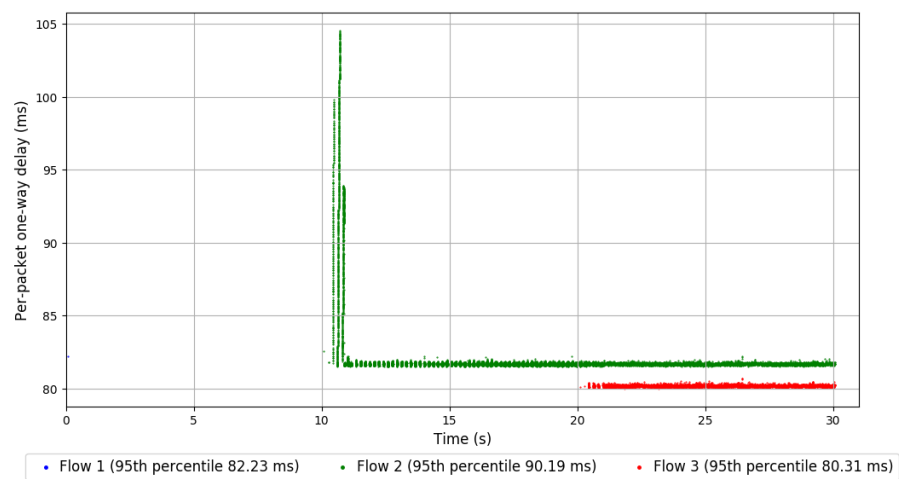
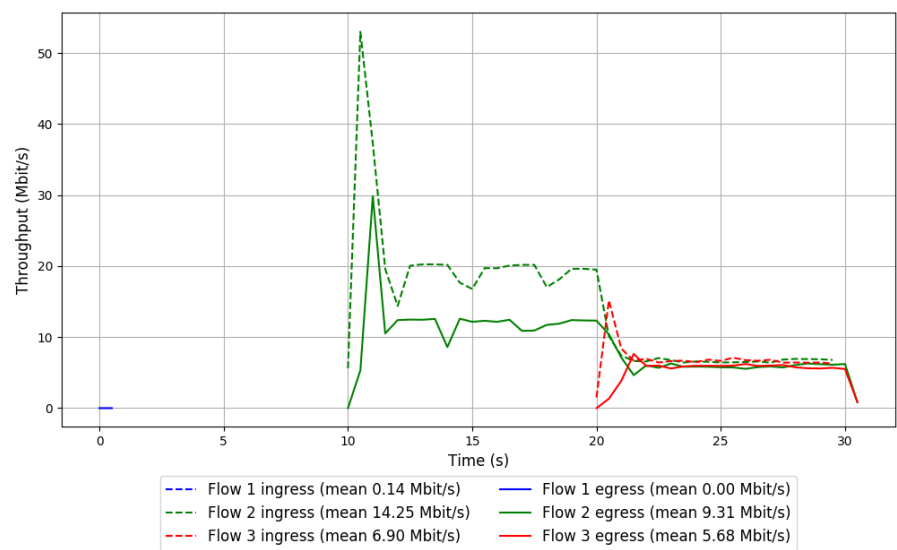
-- Flow 3:

Average throughput: 5.68 Mbit/s

95th percentile per-packet one-way delay: 80.310 ms

Loss rate: 17.70%

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



Run 5: Statistics of TaoVA-100x

Start at: 2019-01-17 13:54:50

End at: 2019-01-17 13:55:20

Local clock offset: -3.861 ms

Remote clock offset: 2.217 ms

Below is generated by plot.py at 2019-01-17 14:27:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.47 Mbit/s

95th percentile per-packet one-way delay: 88.480 ms

Loss rate: 31.09%

-- Flow 1:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 82.291 ms

Loss rate: 95.92%

-- Flow 2:

Average throughput: 9.68 Mbit/s

95th percentile per-packet one-way delay: 91.892 ms

Loss rate: 32.34%

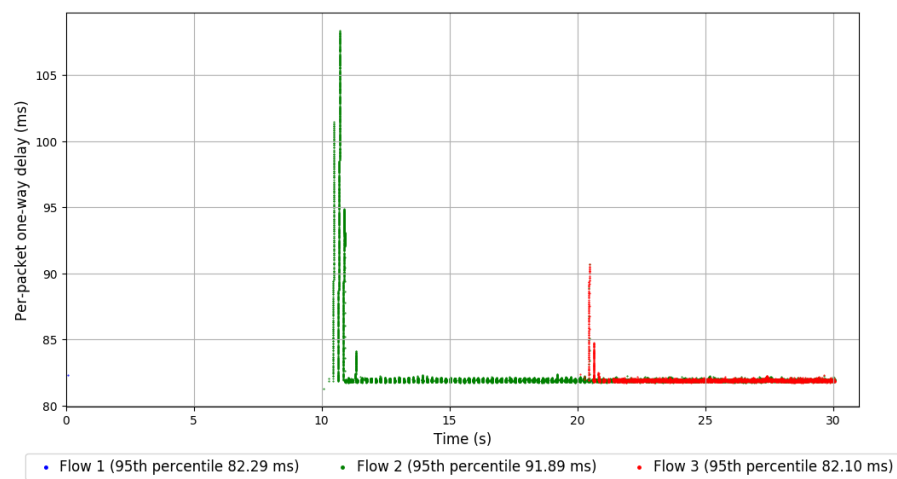
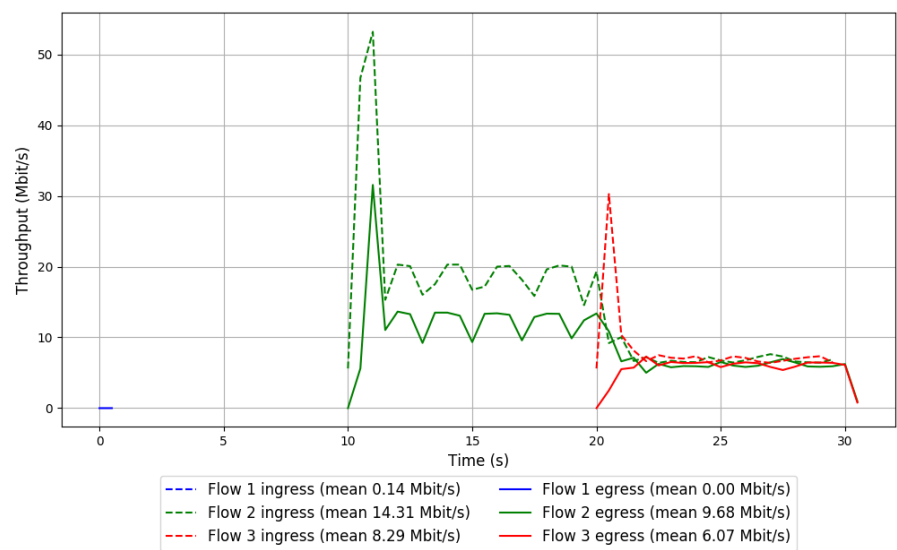
-- Flow 3:

Average throughput: 6.07 Mbit/s

95th percentile per-packet one-way delay: 82.103 ms

Loss rate: 26.71%

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



Run 1: Statistics of TCP Vegas

Start at: 2019-01-17 12:18:12

End at: 2019-01-17 12:18:42

Local clock offset: -2.571 ms

Remote clock offset: 3.572 ms

Below is generated by plot.py at 2019-01-17 14:27:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.69 Mbit/s

95th percentile per-packet one-way delay: 82.059 ms

Loss rate: 4.49%

-- Flow 1:

Average throughput: 0.28 Mbit/s

95th percentile per-packet one-way delay: 80.302 ms

Loss rate: 5.95%

-- Flow 2:

Average throughput: 0.42 Mbit/s

95th percentile per-packet one-way delay: 80.231 ms

Loss rate: 3.30%

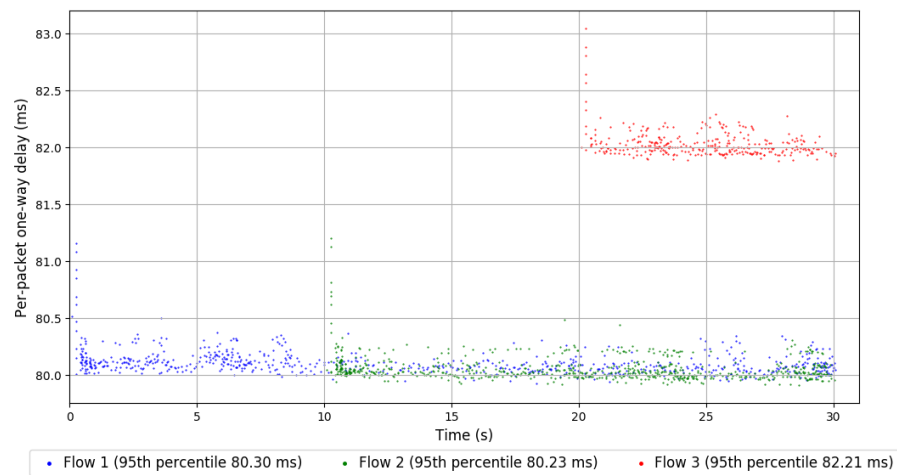
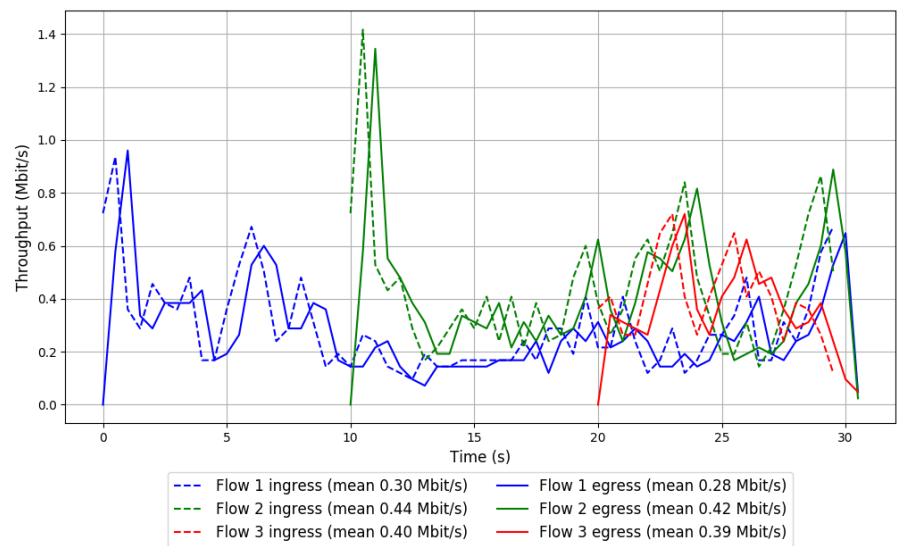
-- Flow 3:

Average throughput: 0.39 Mbit/s

95th percentile per-packet one-way delay: 82.207 ms

Loss rate: 3.87%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2019-01-17 12:44:32

End at: 2019-01-17 12:45:02

Local clock offset: -4.046 ms

Remote clock offset: 3.424 ms

Below is generated by plot.py at 2019-01-17 14:27:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.64 Mbit/s

95th percentile per-packet one-way delay: 82.683 ms

Loss rate: 4.94%

-- Flow 1:

Average throughput: 0.29 Mbit/s

95th percentile per-packet one-way delay: 82.296 ms

Loss rate: 4.84%

-- Flow 2:

Average throughput: 0.34 Mbit/s

95th percentile per-packet one-way delay: 82.744 ms

Loss rate: 4.67%

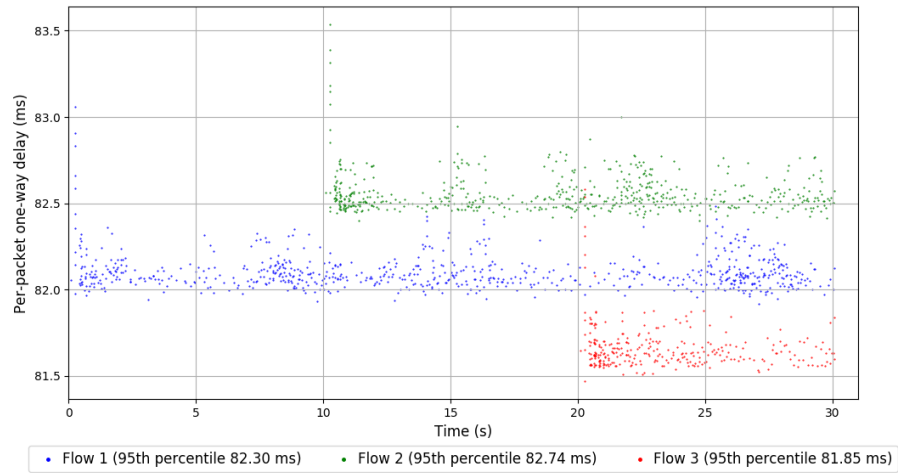
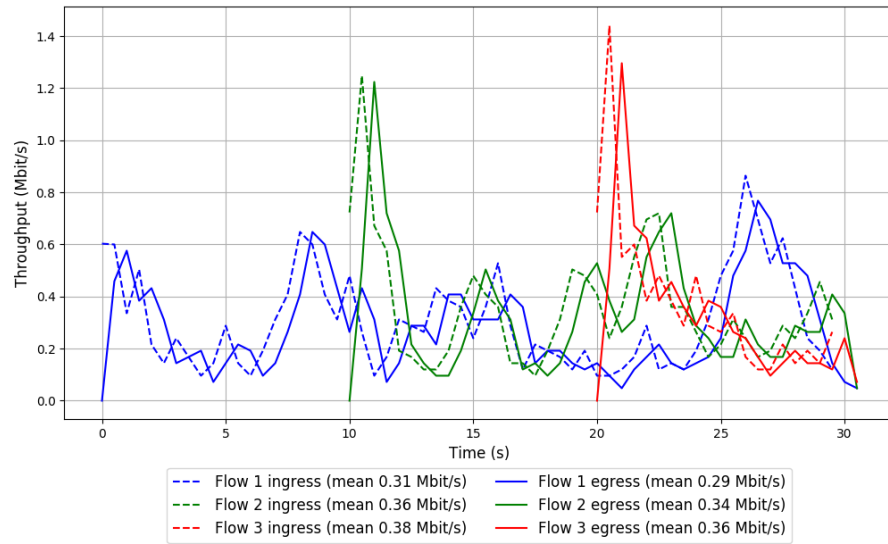
-- Flow 3:

Average throughput: 0.36 Mbit/s

95th percentile per-packet one-way delay: 81.847 ms

Loss rate: 5.69%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2019-01-17 13:10:52

End at: 2019-01-17 13:11:22

Local clock offset: -4.511 ms

Remote clock offset: 2.145 ms

Below is generated by plot.py at 2019-01-17 14:27:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.72 Mbit/s

95th percentile per-packet one-way delay: 81.032 ms

Loss rate: 4.69%

-- Flow 1:

Average throughput: 0.42 Mbit/s

95th percentile per-packet one-way delay: 79.818 ms

Loss rate: 4.31%

-- Flow 2:

Average throughput: 0.32 Mbit/s

95th percentile per-packet one-way delay: 81.155 ms

Loss rate: 5.00%

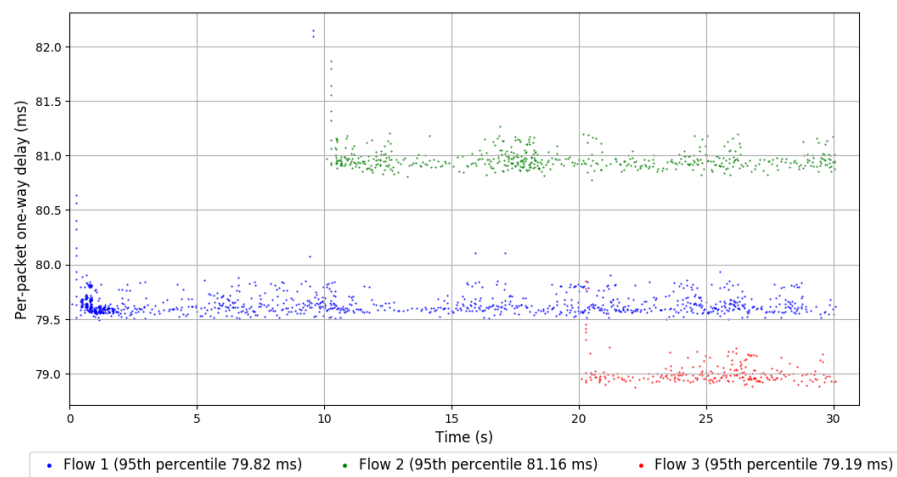
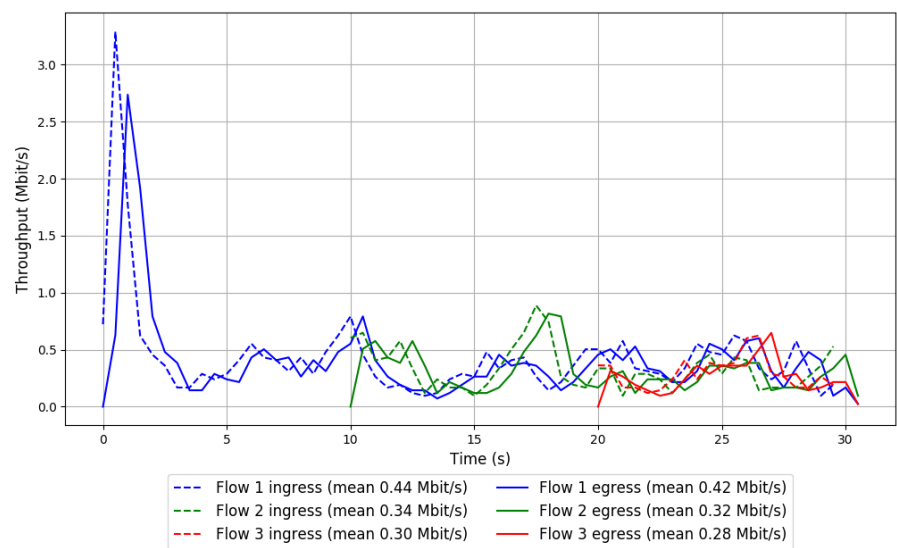
-- Flow 3:

Average throughput: 0.28 Mbit/s

95th percentile per-packet one-way delay: 79.189 ms

Loss rate: 5.69%

Run 3: Report of TCP Vegas — Data Link



Run 4: Statistics of TCP Vegas

Start at: 2019-01-17 13:37:12

End at: 2019-01-17 13:37:42

Local clock offset: -4.973 ms

Remote clock offset: 6.157 ms

Below is generated by plot.py at 2019-01-17 14:27:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.78 Mbit/s

95th percentile per-packet one-way delay: 86.962 ms

Loss rate: 4.67%

-- Flow 1:

Average throughput: 0.37 Mbit/s

95th percentile per-packet one-way delay: 87.011 ms

Loss rate: 5.27%

-- Flow 2:

Average throughput: 0.40 Mbit/s

95th percentile per-packet one-way delay: 84.832 ms

Loss rate: 4.47%

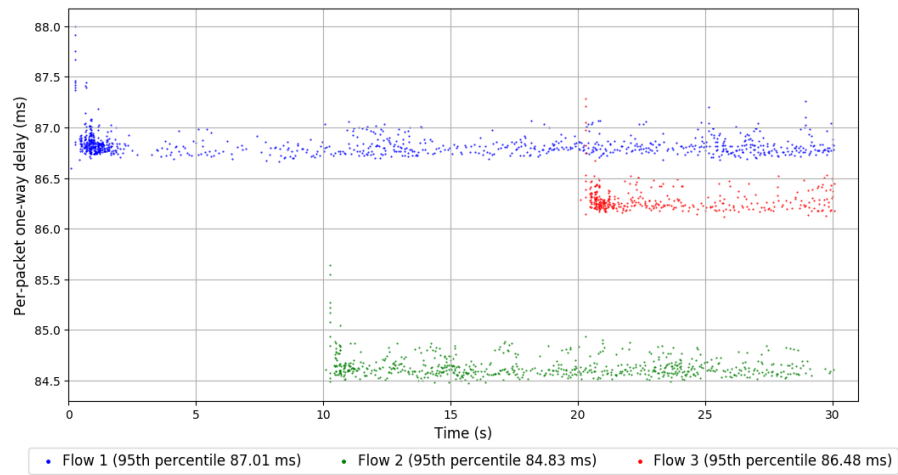
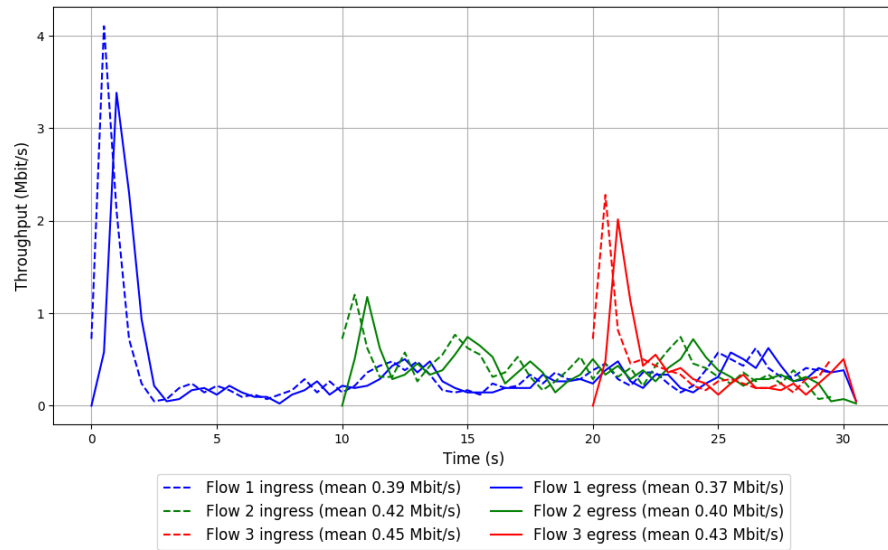
-- Flow 3:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 86.482 ms

Loss rate: 3.47%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2019-01-17 14:03:40

End at: 2019-01-17 14:04:10

Local clock offset: -3.594 ms

Remote clock offset: 6.915 ms

Below is generated by plot.py at 2019-01-17 14:27:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 15.94 Mbit/s

95th percentile per-packet one-way delay: 114.897 ms

Loss rate: 4.29%

-- Flow 1:

Average throughput: 7.70 Mbit/s

95th percentile per-packet one-way delay: 116.460 ms

Loss rate: 4.65%

-- Flow 2:

Average throughput: 5.13 Mbit/s

95th percentile per-packet one-way delay: 85.575 ms

Loss rate: 0.14%

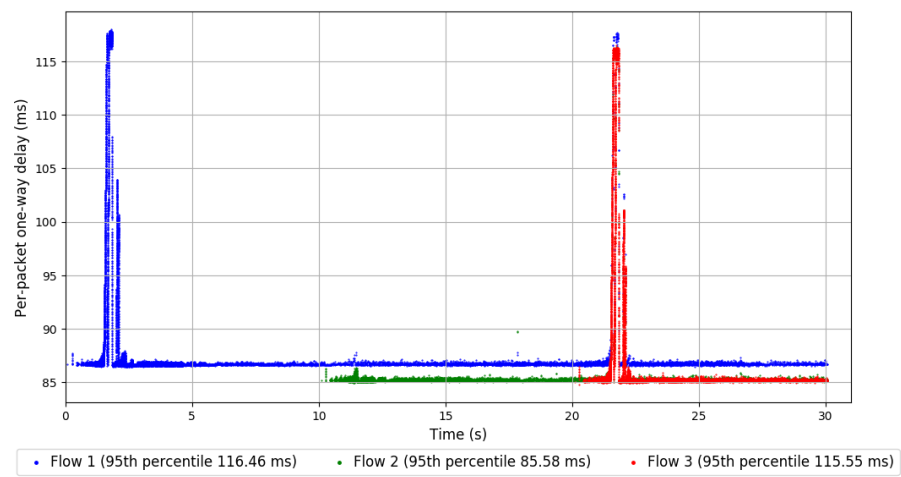
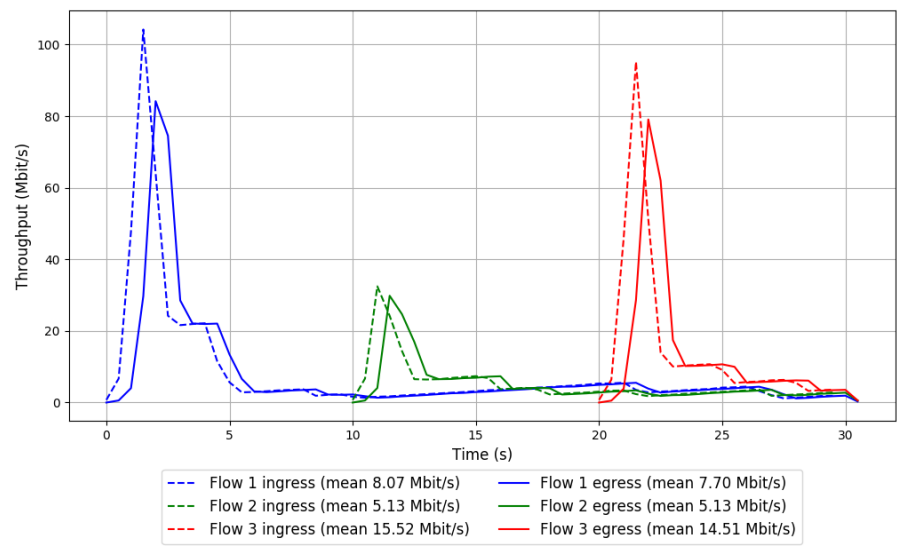
-- Flow 3:

Average throughput: 14.51 Mbit/s

95th percentile per-packet one-way delay: 115.551 ms

Loss rate: 6.47%

Run 5: Report of TCP Vegas — Data Link



Run 1: Statistics of Verus

Start at: 2019-01-17 12:31:59

End at: 2019-01-17 12:32:29

Local clock offset: -3.72 ms

Remote clock offset: 2.437 ms

Below is generated by plot.py at 2019-01-17 14:27:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 24.15 Mbit/s

95th percentile per-packet one-way delay: 144.653 ms

Loss rate: 53.84%

-- Flow 1:

Average throughput: 11.86 Mbit/s

95th percentile per-packet one-way delay: 180.452 ms

Loss rate: 65.52%

-- Flow 2:

Average throughput: 7.52 Mbit/s

95th percentile per-packet one-way delay: 108.914 ms

Loss rate: 12.60%

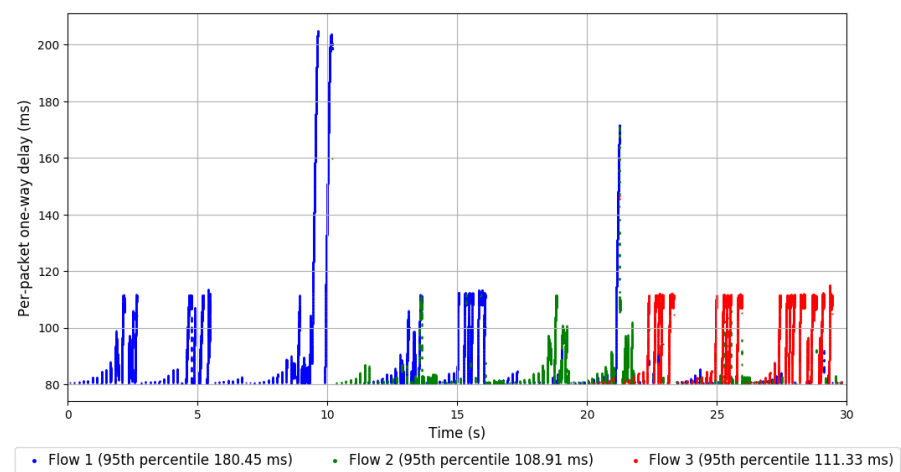
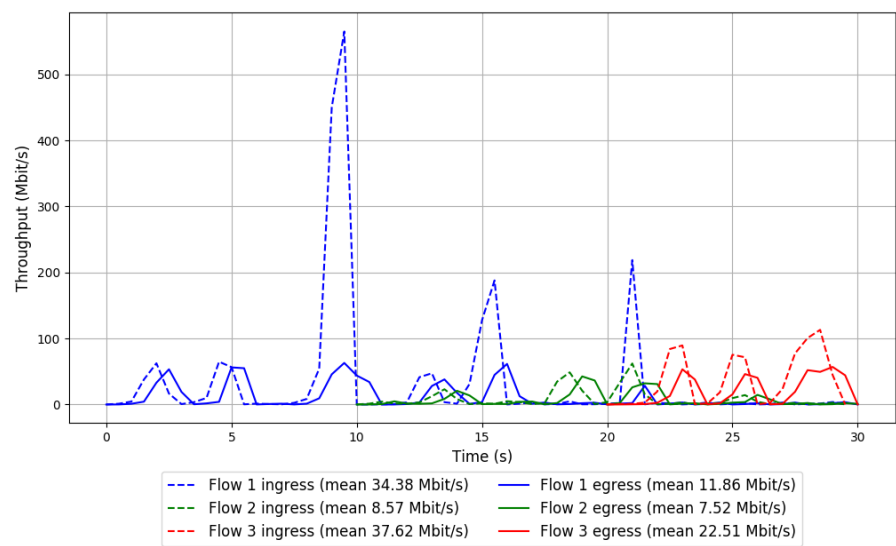
-- Flow 3:

Average throughput: 22.51 Mbit/s

95th percentile per-packet one-way delay: 111.332 ms

Loss rate: 40.17%

Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2019-01-17 12:58:20

End at: 2019-01-17 12:58:50

Local clock offset: -5.094 ms

Remote clock offset: 2.104 ms

Below is generated by plot.py at 2019-01-17 14:27:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 30.23 Mbit/s

95th percentile per-packet one-way delay: 165.089 ms

Loss rate: 75.91%

-- Flow 1:

Average throughput: 15.80 Mbit/s

95th percentile per-packet one-way delay: 165.620 ms

Loss rate: 75.05%

-- Flow 2:

Average throughput: 16.66 Mbit/s

95th percentile per-packet one-way delay: 168.842 ms

Loss rate: 77.19%

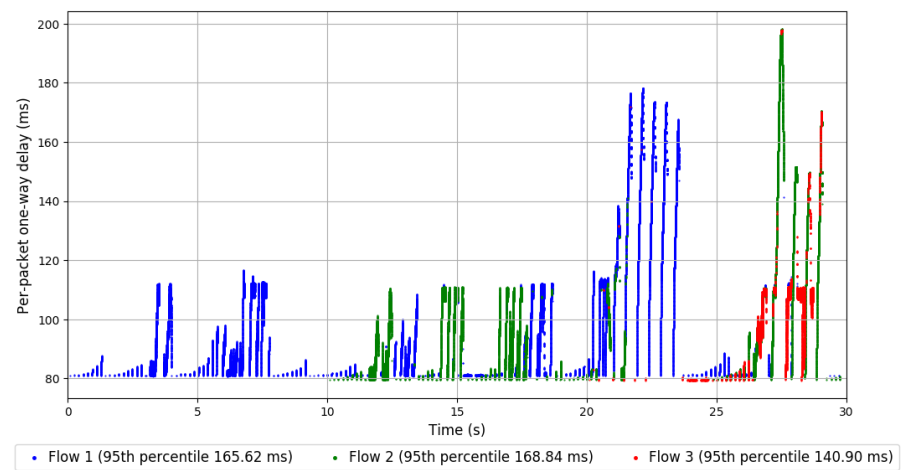
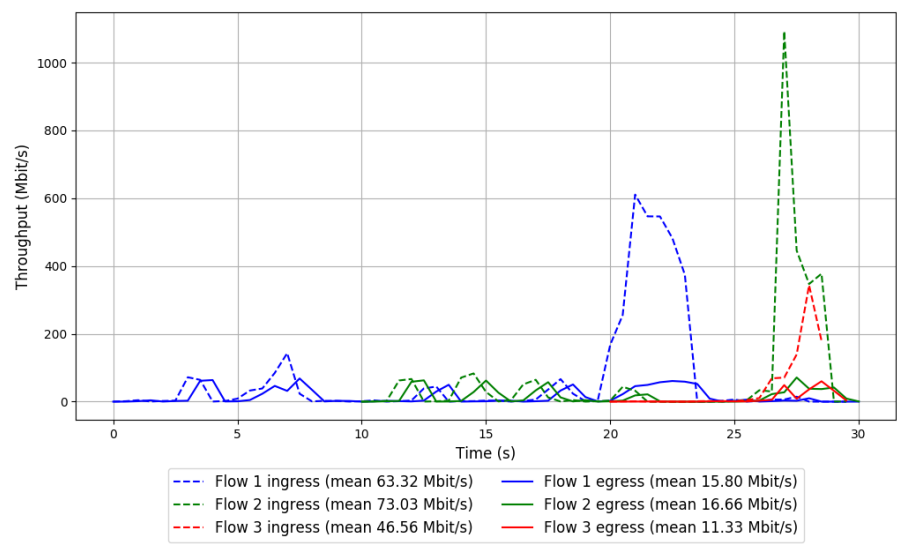
-- Flow 3:

Average throughput: 11.33 Mbit/s

95th percentile per-packet one-way delay: 140.903 ms

Loss rate: 75.43%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2019-01-17 13:24:38

End at: 2019-01-17 13:25:08

Local clock offset: -5.159 ms

Remote clock offset: 1.68 ms

Below is generated by plot.py at 2019-01-17 14:27:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 36.61 Mbit/s

95th percentile per-packet one-way delay: 118.969 ms

Loss rate: 82.48%

-- Flow 1:

Average throughput: 10.96 Mbit/s

95th percentile per-packet one-way delay: 110.607 ms

Loss rate: 30.55%

-- Flow 2:

Average throughput: 22.98 Mbit/s

95th percentile per-packet one-way delay: 128.150 ms

Loss rate: 86.47%

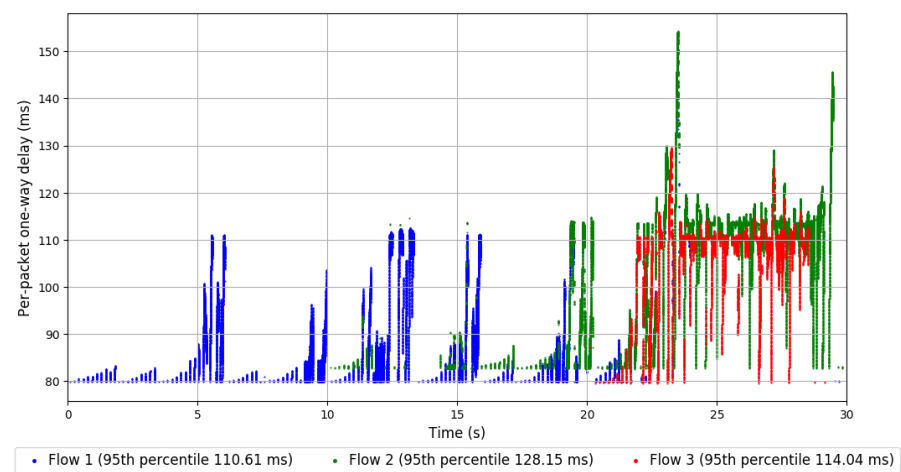
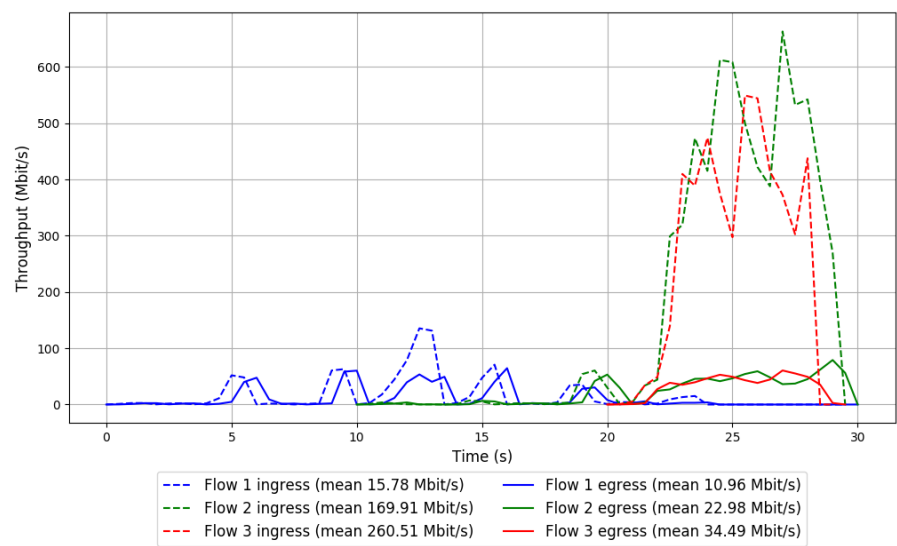
-- Flow 3:

Average throughput: 34.49 Mbit/s

95th percentile per-packet one-way delay: 114.043 ms

Loss rate: 87.02%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

Start at: 2019-01-17 13:51:02

End at: 2019-01-17 13:51:32

Local clock offset: -4.723 ms

Remote clock offset: 1.194 ms

Below is generated by plot.py at 2019-01-17 14:27:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 43.55 Mbit/s

95th percentile per-packet one-way delay: 112.804 ms

Loss rate: 43.57%

-- Flow 1:

Average throughput: 26.42 Mbit/s

95th percentile per-packet one-way delay: 111.489 ms

Loss rate: 38.60%

-- Flow 2:

Average throughput: 19.72 Mbit/s

95th percentile per-packet one-way delay: 123.797 ms

Loss rate: 56.18%

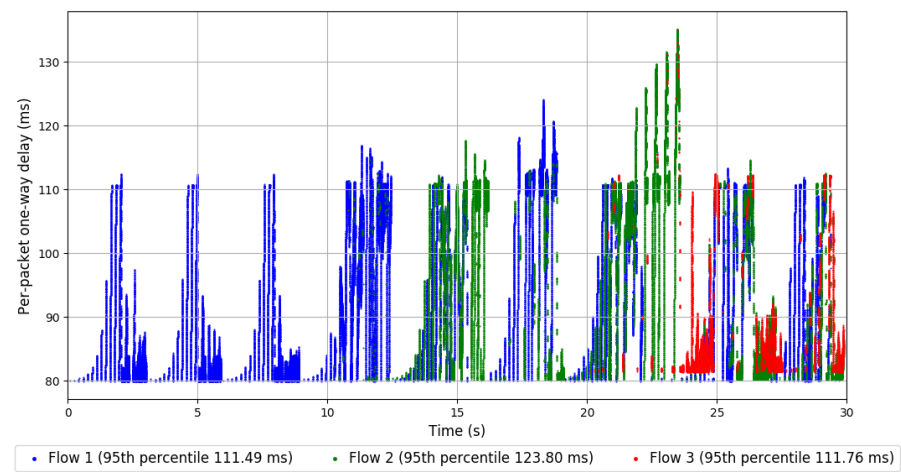
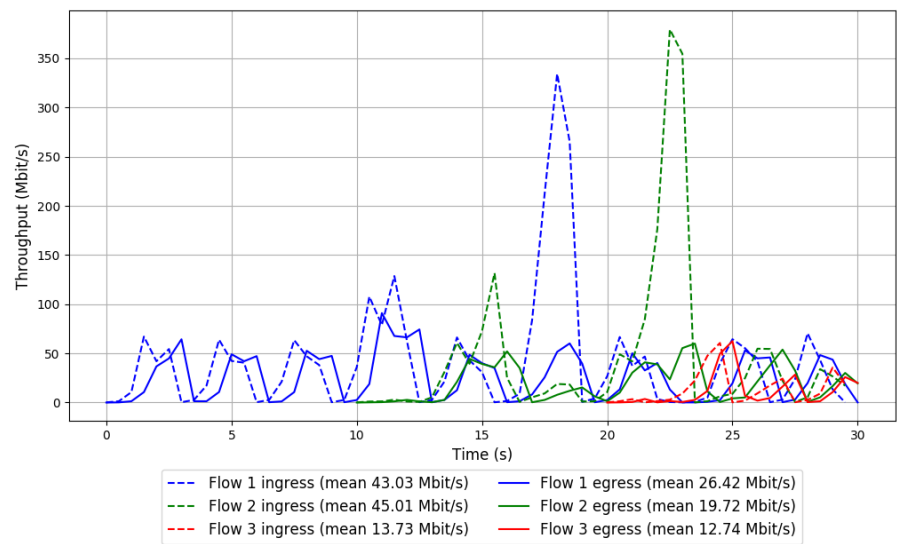
-- Flow 3:

Average throughput: 12.74 Mbit/s

95th percentile per-packet one-way delay: 111.764 ms

Loss rate: 7.13%

Run 4: Report of Verus — Data Link

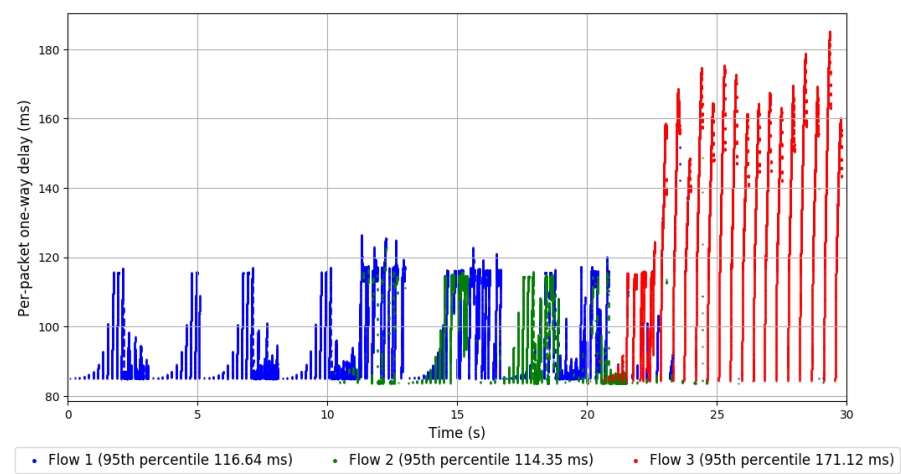
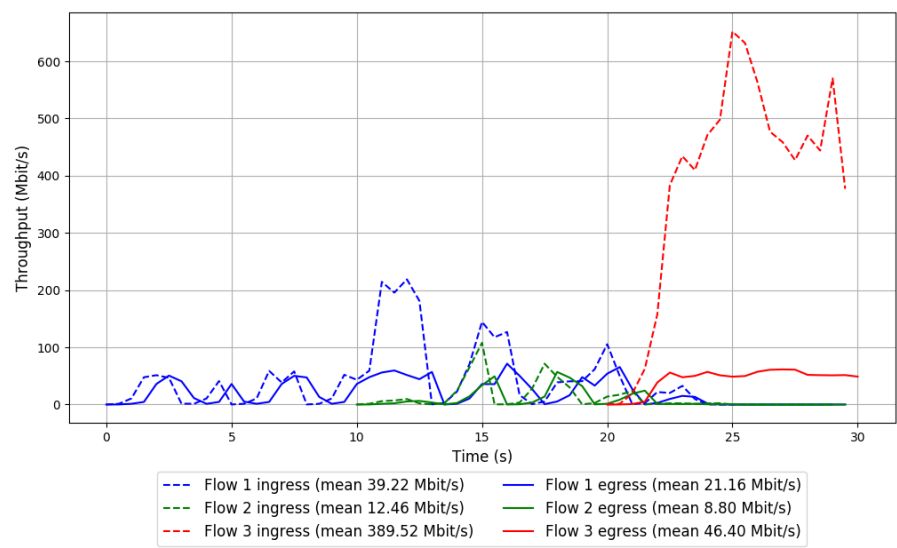


Run 5: Statistics of Verus

Start at: 2019-01-17 14:17:48
End at: 2019-01-17 14:18:18
Local clock offset: -4.105 ms
Remote clock offset: 4.84 ms

```
# Below is generated by plot.py at 2019-01-17 14:27:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 41.41 Mbit/s
95th percentile per-packet one-way delay: 163.245 ms
Loss rate: 76.05%
-- Flow 1:
Average throughput: 21.16 Mbit/s
95th percentile per-packet one-way delay: 116.635 ms
Loss rate: 46.38%
-- Flow 2:
Average throughput: 8.80 Mbit/s
95th percentile per-packet one-way delay: 114.349 ms
Loss rate: 30.12%
-- Flow 3:
Average throughput: 46.40 Mbit/s
95th percentile per-packet one-way delay: 171.116 ms
Loss rate: 88.02%
```

Run 5: Report of Verus — Data Link



Run 1: Statistics of PCC-Vivace

Start at: 2019-01-17 12:11:55

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

Local clock offset: -2.467 ms

Remote clock offset: 9.202 ms

Below is generated by plot.py at 2019-01-17 14:27:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 21.45 Mbit/s

95th percentile per-packet one-way delay: 86.816 ms

Loss rate: 4.11%

-- Flow 1:

Average throughput: 19.56 Mbit/s

95th percentile per-packet one-way delay: 86.769 ms

Loss rate: 4.12%

-- Flow 2:

Average throughput: 1.97 Mbit/s

95th percentile per-packet one-way delay: 85.613 ms

Loss rate: 4.00%

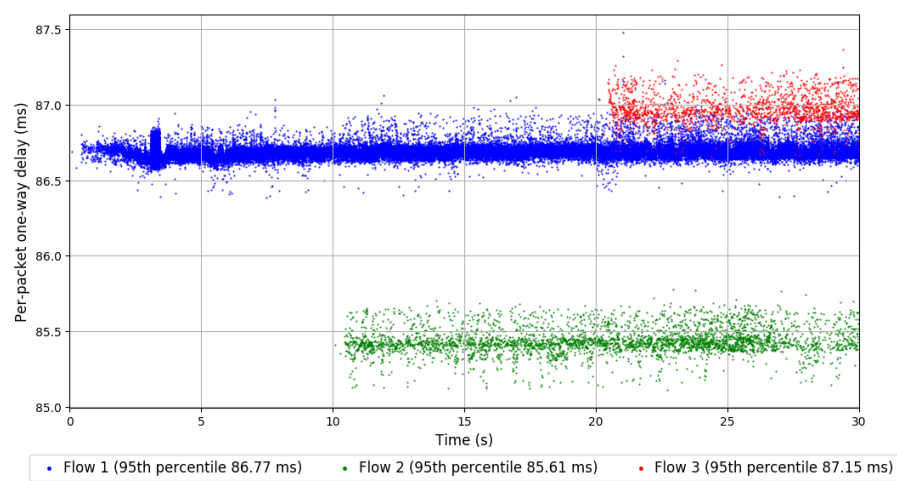
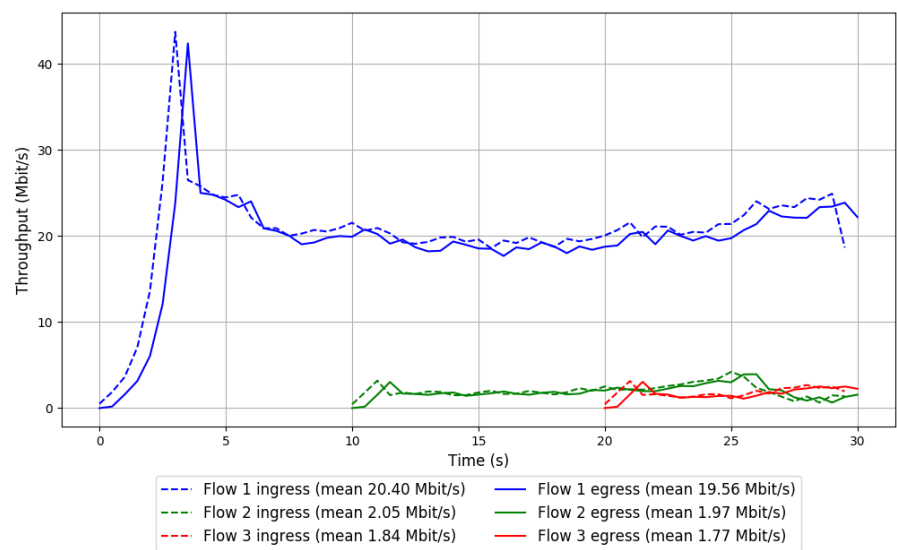
-- Flow 3:

Average throughput: 1.77 Mbit/s

95th percentile per-packet one-way delay: 87.150 ms

Loss rate: 4.09%

Run 1: Report of PCC-Vivace — Data Link



Run 2: Statistics of PCC-Vivace

Start at: 2019-01-17 12:38:12

End at: 2019-01-17 12:38:42

Local clock offset: -4.685 ms

Remote clock offset: 2.652 ms

Below is generated by plot.py at 2019-01-17 14:27:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.14 Mbit/s

95th percentile per-packet one-way delay: 83.523 ms

Loss rate: 4.41%

-- Flow 1:

Average throughput: 4.12 Mbit/s

95th percentile per-packet one-way delay: 83.551 ms

Loss rate: 4.50%

-- Flow 2:

Average throughput: 3.12 Mbit/s

95th percentile per-packet one-way delay: 81.382 ms

Loss rate: 4.36%

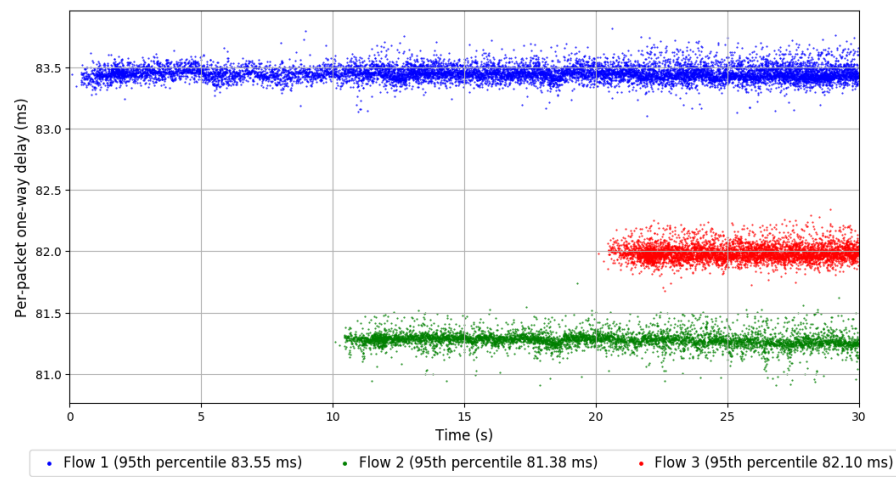
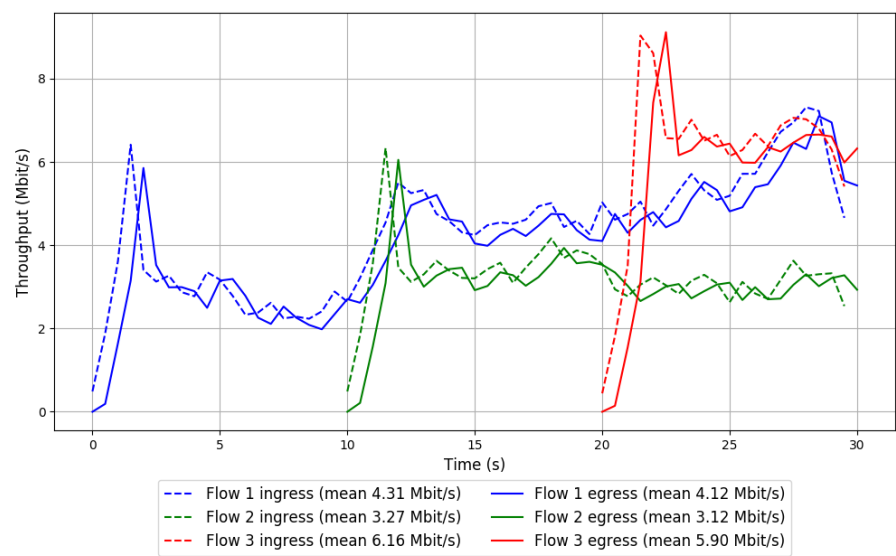
-- Flow 3:

Average throughput: 5.90 Mbit/s

95th percentile per-packet one-way delay: 82.102 ms

Loss rate: 4.28%

Run 2: Report of PCC-Vivace — Data Link



Run 3: Statistics of PCC-Vivace

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

End at: 2019-01-17 13:05:03

Local clock offset: -4.433 ms

Remote clock offset: 3.422 ms

Below is generated by plot.py at 2019-01-17 14:27:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 33.49 Mbit/s

95th percentile per-packet one-way delay: 89.101 ms

Loss rate: 4.36%

-- Flow 1:

Average throughput: 4.42 Mbit/s

95th percentile per-packet one-way delay: 83.222 ms

Loss rate: 4.34%

-- Flow 2:

Average throughput: 42.38 Mbit/s

95th percentile per-packet one-way delay: 94.012 ms

Loss rate: 4.36%

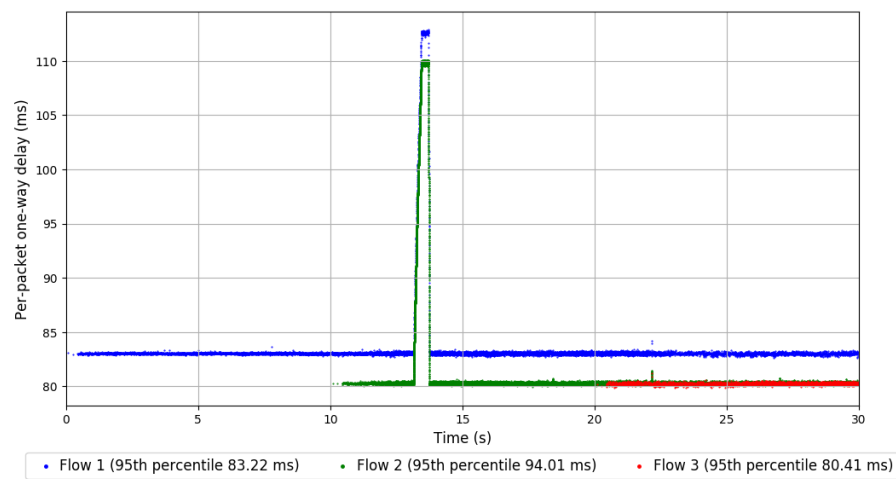
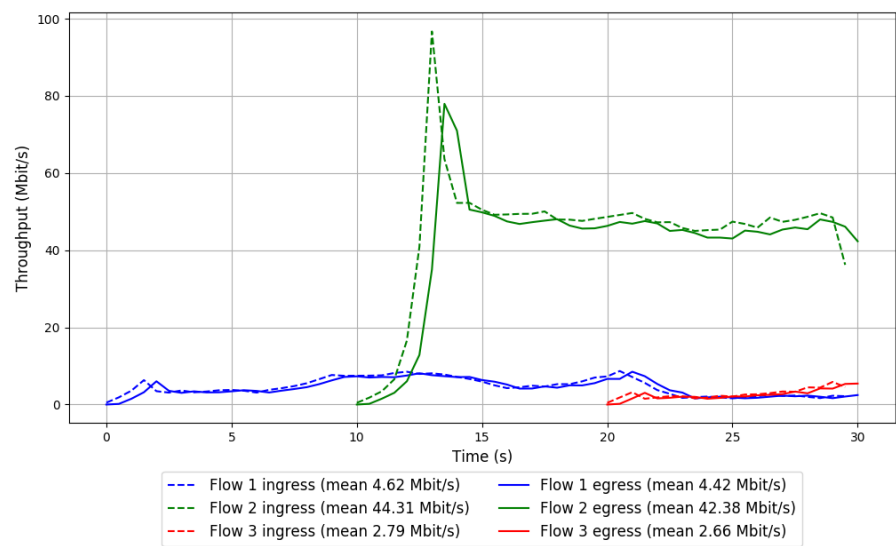
-- Flow 3:

Average throughput: 2.66 Mbit/s

95th percentile per-packet one-way delay: 80.408 ms

Loss rate: 4.45%

Run 3: Report of PCC-Vivace — Data Link



Run 4: Statistics of PCC-Vivace

Start at: 2019-01-17 13:30:54

End at: 2019-01-17 13:31:24

Local clock offset: -4.238 ms

Remote clock offset: 2.607 ms

Below is generated by plot.py at 2019-01-17 14:27:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 11.19 Mbit/s

95th percentile per-packet one-way delay: 81.954 ms

Loss rate: 4.12%

-- Flow 1:

Average throughput: 3.20 Mbit/s

95th percentile per-packet one-way delay: 81.906 ms

Loss rate: 4.21%

-- Flow 2:

Average throughput: 1.66 Mbit/s

95th percentile per-packet one-way delay: 81.988 ms

Loss rate: 4.16%

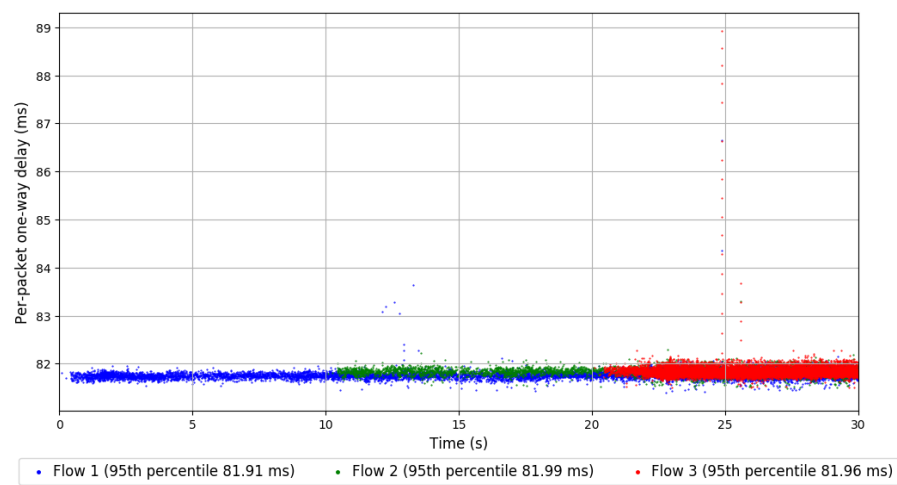
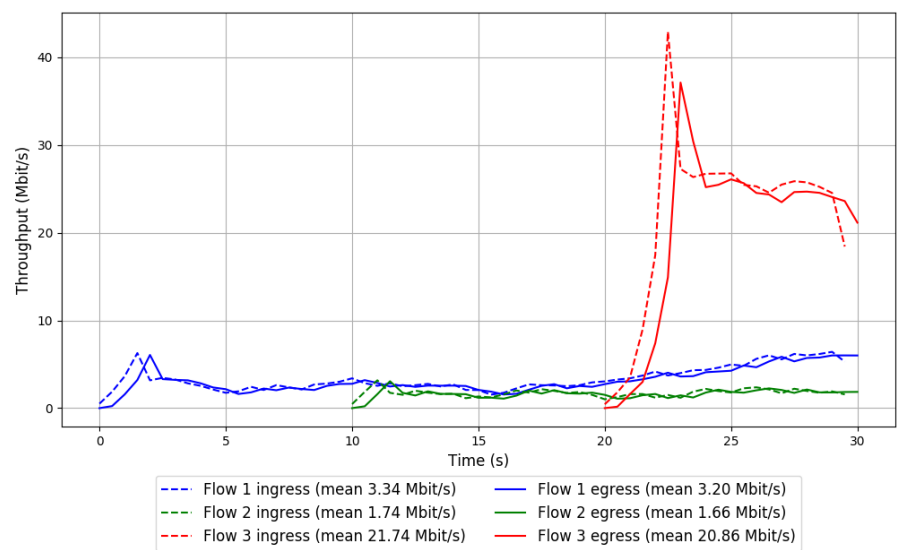
-- Flow 3:

Average throughput: 20.86 Mbit/s

95th percentile per-packet one-way delay: 81.964 ms

Loss rate: 4.07%

Run 4: Report of PCC-Vivace — Data Link



Run 5: Statistics of PCC-Vivace

Start at: 2019-01-17 13:57:16

End at: 2019-01-17 13:57:46

Local clock offset: -4.521 ms

Remote clock offset: 1.233 ms

Below is generated by plot.py at 2019-01-17 14:27:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 77.31 Mbit/s

95th percentile per-packet one-way delay: 109.052 ms

Loss rate: 0.14%

-- Flow 1:

Average throughput: 66.43 Mbit/s

95th percentile per-packet one-way delay: 107.672 ms

Loss rate: 0.13%

-- Flow 2:

Average throughput: 13.17 Mbit/s

95th percentile per-packet one-way delay: 111.202 ms

Loss rate: 0.19%

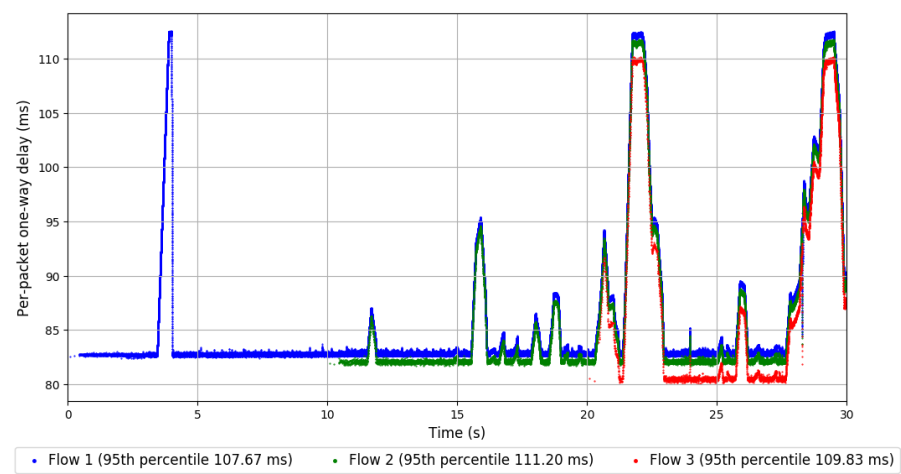
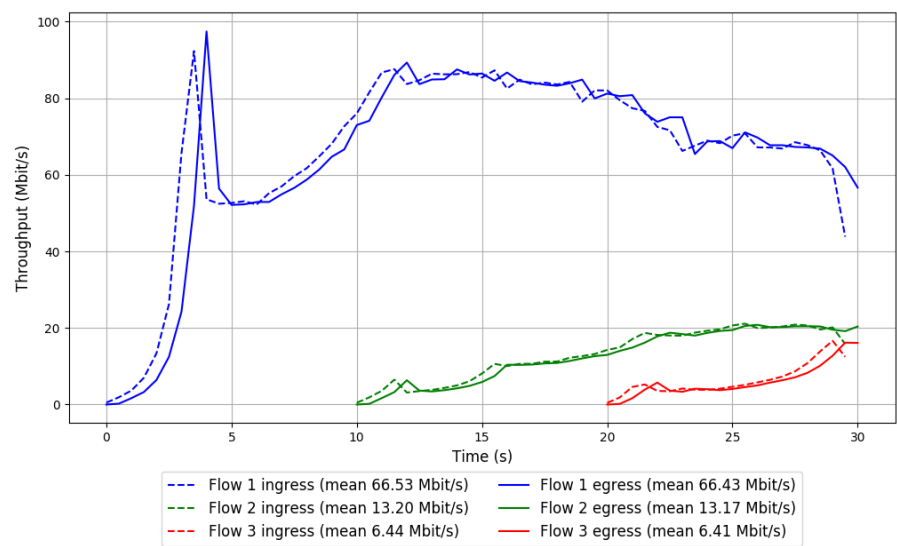
-- Flow 3:

Average throughput: 6.41 Mbit/s

95th percentile per-packet one-way delay: 109.832 ms

Loss rate: 0.36%

Run 5: Report of PCC-Vivace — Data Link



Run 1: Statistics of WebRTC media

Start at: 2019-01-17 12:28:10

End at: 2019-01-17 12:28:40

Local clock offset: -4.304 ms

Remote clock offset: 7.376 ms

Below is generated by plot.py at 2019-01-17 14:27:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.13 Mbit/s

95th percentile per-packet one-way delay: 86.484 ms

Loss rate: 2.70%

-- Flow 1:

Average throughput: 0.04 Mbit/s

95th percentile per-packet one-way delay: 85.016 ms

Loss rate: 4.65%

-- Flow 2:

Average throughput: 0.04 Mbit/s

95th percentile per-packet one-way delay: 86.796 ms

Loss rate: 0.89%

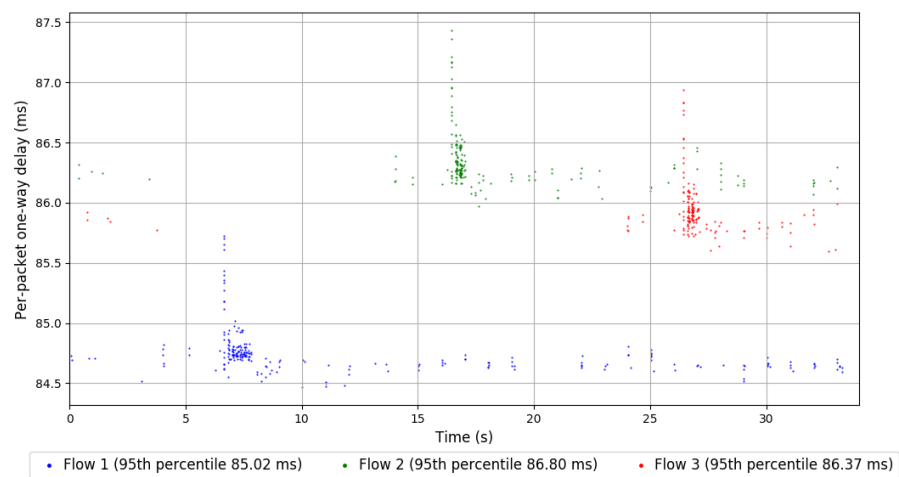
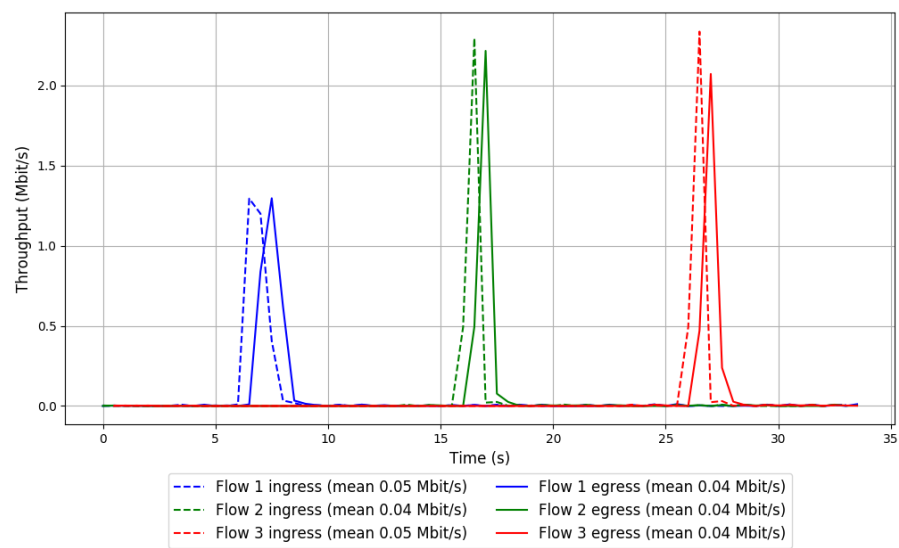
-- Flow 3:

Average throughput: 0.04 Mbit/s

95th percentile per-packet one-way delay: 86.374 ms

Loss rate: 2.45%

Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2019-01-17 12:54:31

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

Local clock offset: -4.282 ms

Remote clock offset: 2.339 ms

Below is generated by plot.py at 2019-01-17 14:27:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.13 Mbit/s

95th percentile per-packet one-way delay: 79.757 ms

Loss rate: 5.80%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 79.676 ms

Loss rate: 5.62%

-- Flow 2:

Average throughput: 0.04 Mbit/s

95th percentile per-packet one-way delay: 79.864 ms

Loss rate: 7.67%

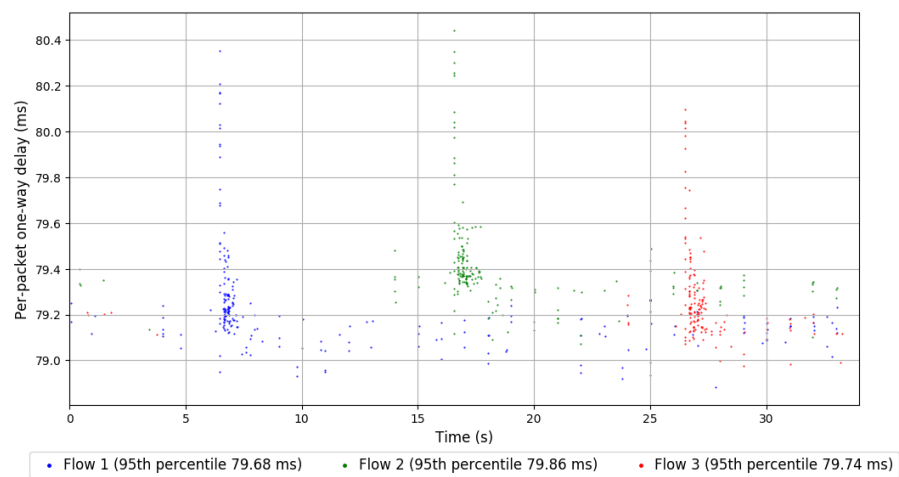
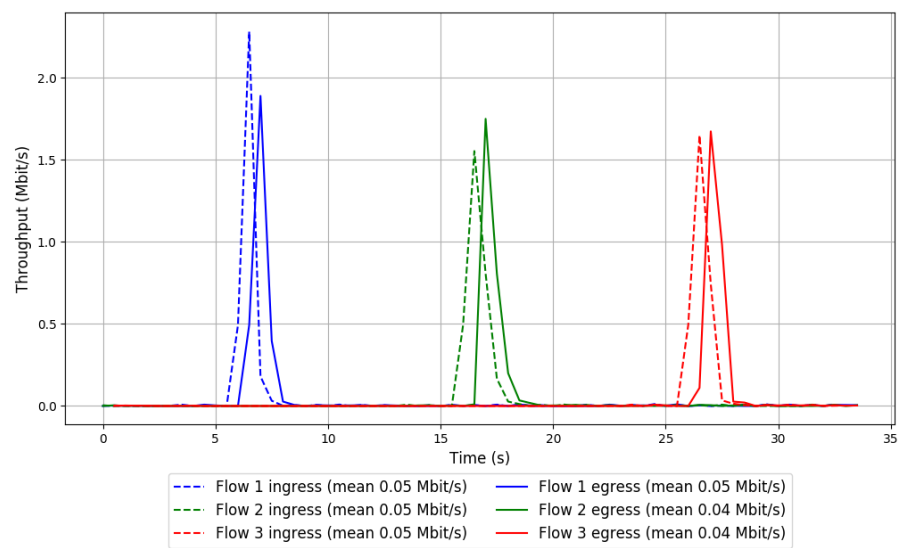
-- Flow 3:

Average throughput: 0.04 Mbit/s

95th percentile per-packet one-way delay: 79.743 ms

Loss rate: 4.02%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2019-01-17 13:20:49

End at: 2019-01-17 13:21:19

Local clock offset: -4.514 ms

Remote clock offset: 1.914 ms

Below is generated by plot.py at 2019-01-17 14:27:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.13 Mbit/s

95th percentile per-packet one-way delay: 81.830 ms

Loss rate: 4.22%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 80.787 ms

Loss rate: 1.64%

-- Flow 2:

Average throughput: 0.04 Mbit/s

95th percentile per-packet one-way delay: 82.064 ms

Loss rate: 3.96%

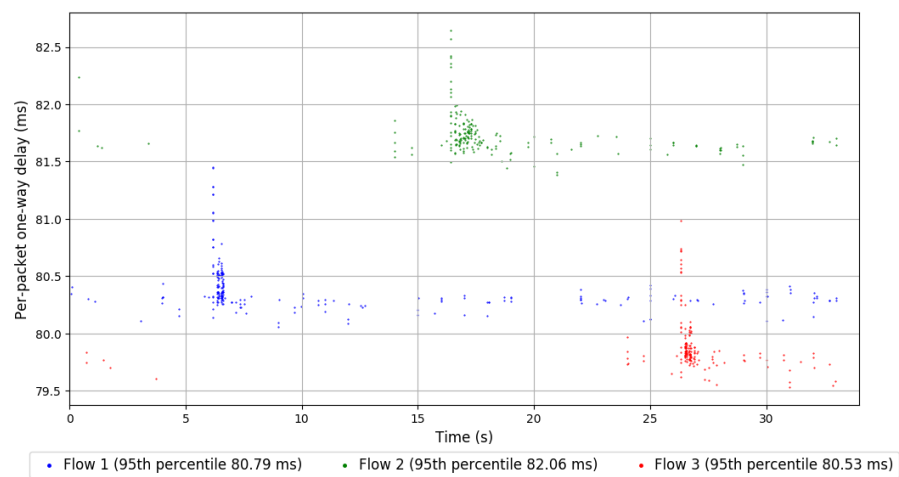
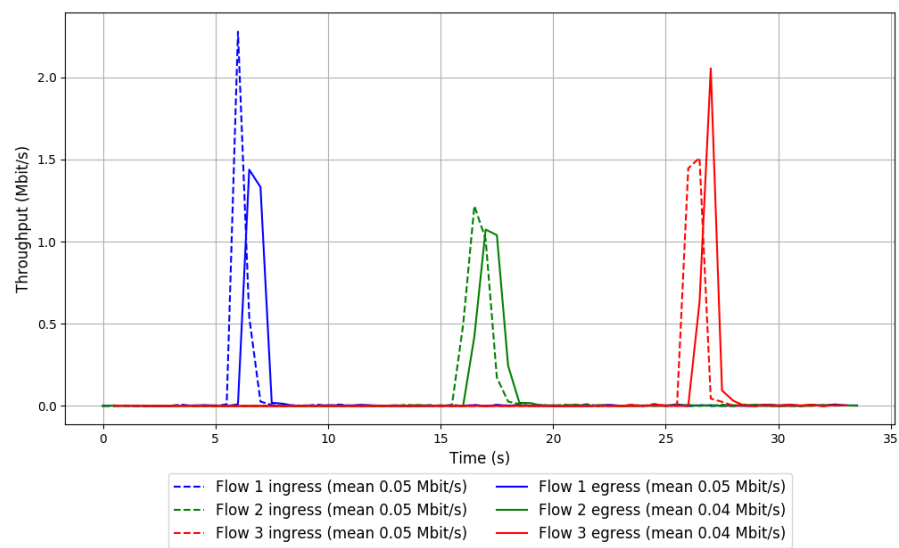
-- Flow 3:

Average throughput: 0.04 Mbit/s

95th percentile per-packet one-way delay: 80.529 ms

Loss rate: 7.01%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2019-01-17 13:47:12

End at: 2019-01-17 13:47:42

Local clock offset: -4.981 ms

Remote clock offset: 6.075 ms

Below is generated by plot.py at 2019-01-17 14:27:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.13 Mbit/s

95th percentile per-packet one-way delay: 85.297 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 85.165 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.04 Mbit/s

95th percentile per-packet one-way delay: 85.338 ms

Loss rate: 0.00%

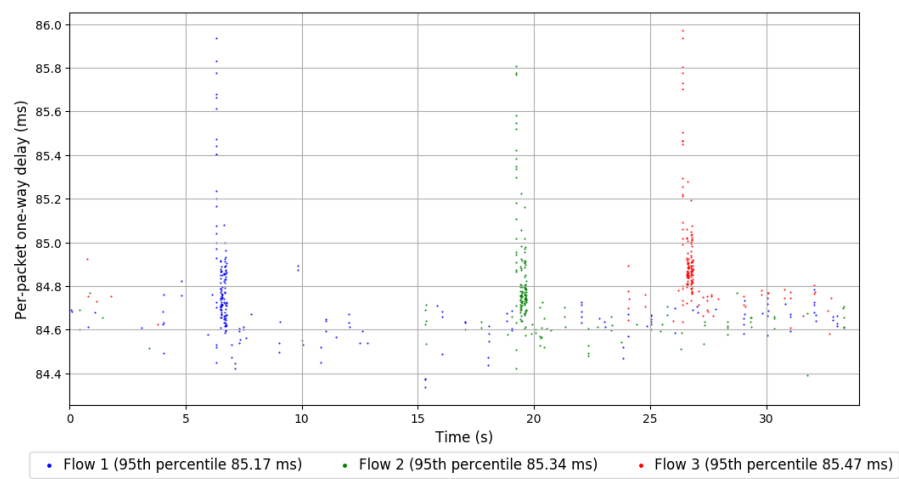
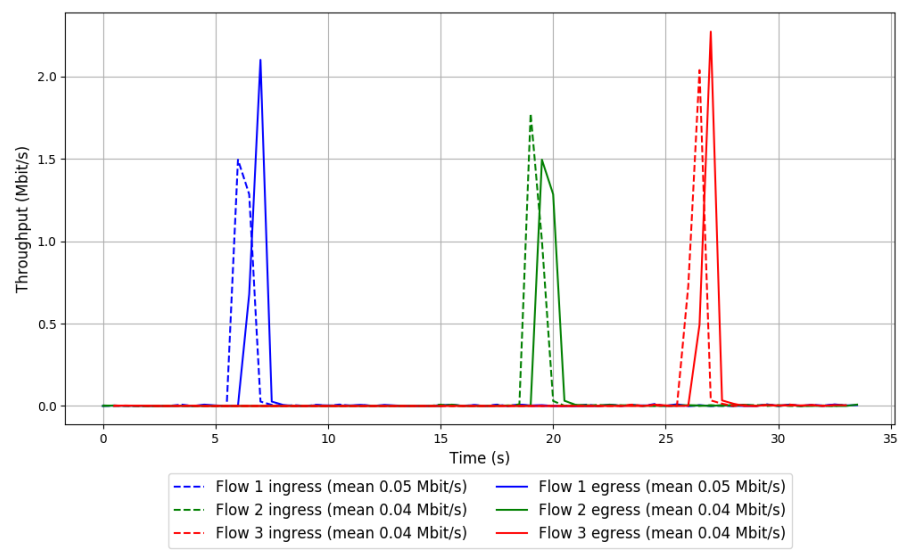
-- Flow 3:

Average throughput: 0.04 Mbit/s

95th percentile per-packet one-way delay: 85.466 ms

Loss rate: 0.00%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2019-01-17 14:13:56

End at: 2019-01-17 14:14:26

Local clock offset: -3.387 ms

Remote clock offset: 1.016 ms

Below is generated by plot.py at 2019-01-17 14:27:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.13 Mbit/s

95th percentile per-packet one-way delay: 82.228 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 81.174 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.04 Mbit/s

95th percentile per-packet one-way delay: 81.199 ms

Loss rate: 0.00%

-- Flow 3:

Average throughput: 0.04 Mbit/s

95th percentile per-packet one-way delay: 82.721 ms

Loss rate: 0.00%

Run 5: Report of WebRTC media — Data Link

