

Pantheon Report

Generated at 2018-07-17 16:10:09 (UTC).

Data path: AWS Brazil 2 Ethernet (*local*) → Colombia ppp0 ppp0 (*remote*).

Repeated the test of 17 congestion control schemes 3 times.

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

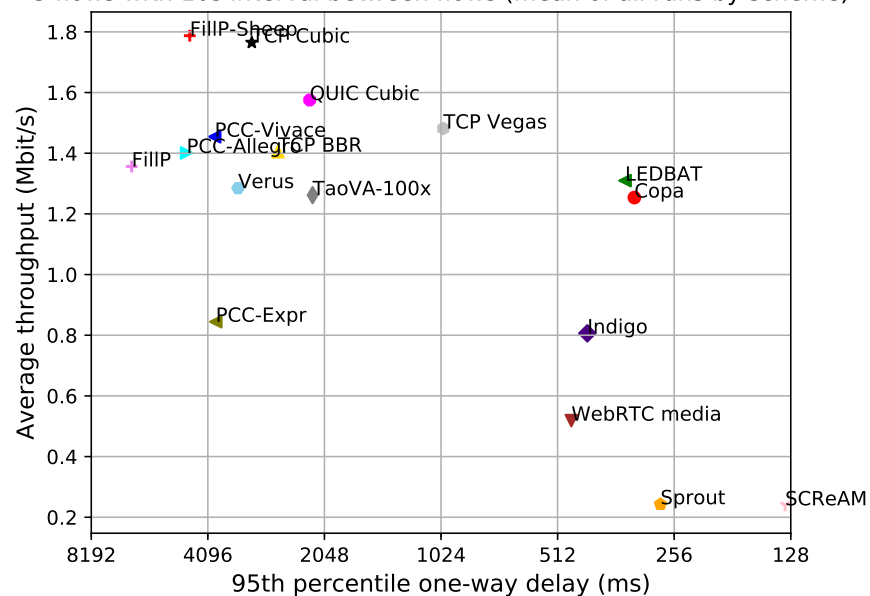
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

NTP offsets were measured against `gps.ntp.br` and have been applied to correct the timestamps in logs.

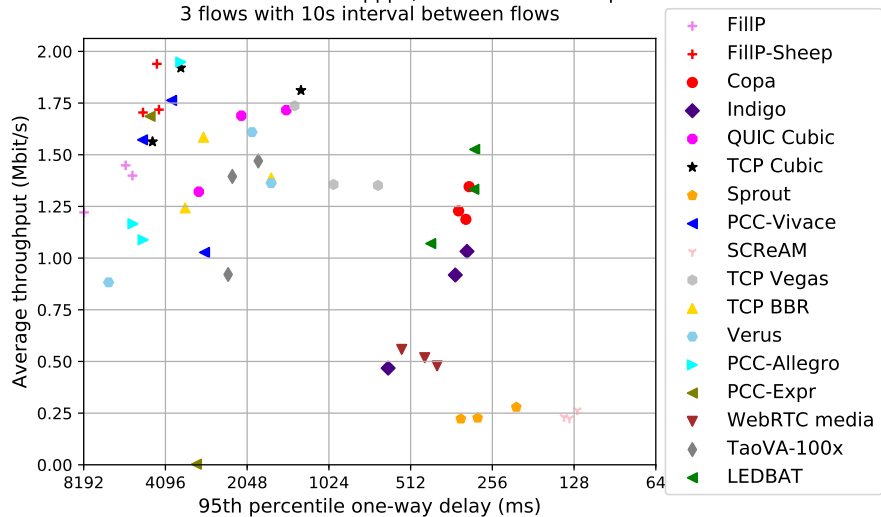
Git summary:

```
branch: master @ f7befc2d8410f41949e0ad8143a9aab40bab7edb
third_party/fillp @ d47f4fa1b454a5e3c0537115c5a28436dbd4b834
third_party/fillp-sheep @ daed0c84f98531712514b2231f43ec6901114ffe
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ 6f038ed31259d366f9840f65b82cbe8f464b1b39
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
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 ppp0, 3 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 ppp0, 3 runs of 30s each per scheme
 3 flows with 10s interval between flows



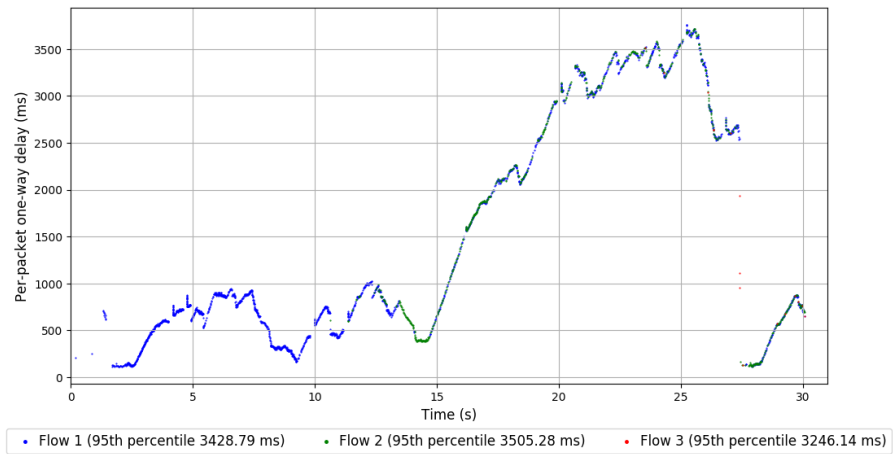
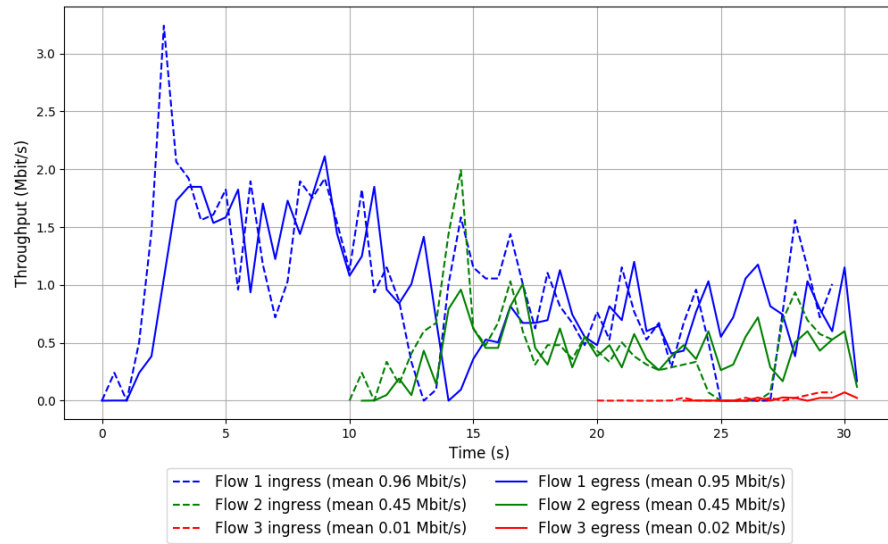
scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	3	1.01	0.58	0.19	2651.75	2727.76	2810.85	4.63	8.50	33.68
Copa	3	0.68	0.57	0.58	328.33	327.50	322.54	0.34	0.73	1.29
TCP Cubic	3	1.36	0.55	0.19	3105.97	3075.83	2557.33	12.37	13.52	42.73
FillP	3	1.36	0.01	0.01	6436.24	6343.98	5178.21	93.60	24.78	80.81
FillP-Sheep	3	1.19	0.99	0.00	4491.17	4542.65	4467.78	36.09	56.70	99.18
Indigo	3	0.48	0.27	0.43	445.67	404.13	463.10	0.33	0.33	0.52
LEDBAT	3	0.85	0.53	0.33	334.88	348.25	381.57	0.17	0.97	2.51
PCC-Allegro	3	0.54	1.12	0.40	4266.40	4380.72	4277.52	13.62	27.64	45.82
PCC-Expr	2	0.84	0.01	0.01	2459.40	3475.99	2347.62	35.16	32.63	38.85
QUIC Cubic	3	1.20	0.48	0.17	2152.81	2323.16	2494.88	4.33	11.05	29.91
SCReAM	3	0.08	0.16	0.15	122.70	132.38	133.34	0.13	0.41	0.75
Sprout	3	0.12	0.12	0.14	250.71	318.23	313.78	0.23	0.20	0.58
TaoVA-100x	3	0.72	0.56	0.55	1696.32	2237.29	2554.24	1.47	2.80	9.57
TCP Vegas	3	1.03	0.52	0.37	976.92	1060.05	1007.75	1.08	3.43	1.55
Verus	3	1.23	0.08	0.03	3256.95	3484.59	1400.52	2.34	2.97	24.95
PCC-Vivace	3	0.63	1.23	0.00	3831.36	3945.94	3602.96	20.11	24.30	14.31
WebRTC media	3	0.23	0.20	0.10	455.19	507.84	409.11	0.69	0.21	1.16

Run 1: Statistics of TCP BBR

Start at: 2018-07-17 15:21:30
End at: 2018-07-17 15:22:00
Local clock offset: -2.081 ms
Remote clock offset: 11.042 ms

Below is generated by plot.py at 2018-07-17 16:09:29
Datalink statistics
-- Total of 3 flows:
Average throughput: 1.24 Mbit/s
95th percentile per-packet one-way delay: 3463.801 ms
Loss rate: 2.52%
-- Flow 1:
Average throughput: 0.95 Mbit/s
95th percentile per-packet one-way delay: 3428.792 ms
Loss rate: 2.00%
-- Flow 2:
Average throughput: 0.45 Mbit/s
95th percentile per-packet one-way delay: 3505.279 ms
Loss rate: 3.83%
-- Flow 3:
Average throughput: 0.02 Mbit/s
95th percentile per-packet one-way delay: 3246.144 ms
Loss rate: 24.14%

Run 1: Report of TCP BBR — Data Link

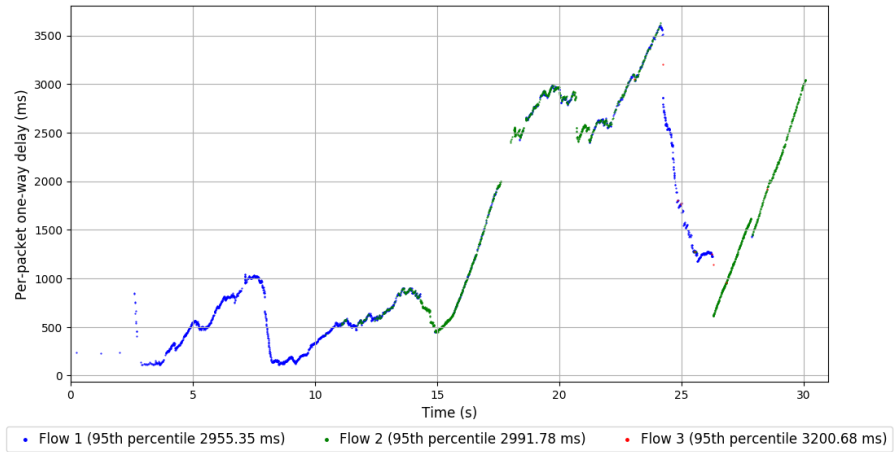
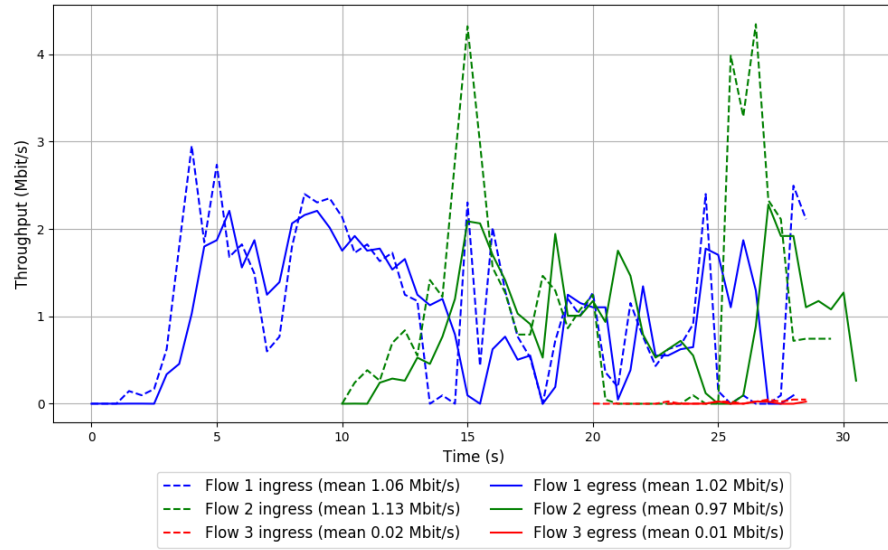


Run 2: Statistics of TCP BBR

Start at: 2018-07-17 15:42:10
End at: 2018-07-17 15:42:40
Local clock offset: -2.737 ms
Remote clock offset: 15.052 ms

Below is generated by plot.py at 2018-07-17 16:09:30
Datalink statistics
-- Total of 3 flows:
Average throughput: 1.58 Mbit/s
95th percentile per-packet one-way delay: 2966.365 ms
Loss rate: 11.34%
-- Flow 1:
Average throughput: 1.02 Mbit/s
95th percentile per-packet one-way delay: 2955.346 ms
Loss rate: 7.89%
-- Flow 2:
Average throughput: 0.97 Mbit/s
95th percentile per-packet one-way delay: 2991.775 ms
Loss rate: 15.71%
-- Flow 3:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 3200.680 ms
Loss rate: 61.58%

Run 2: Report of TCP BBR — Data Link

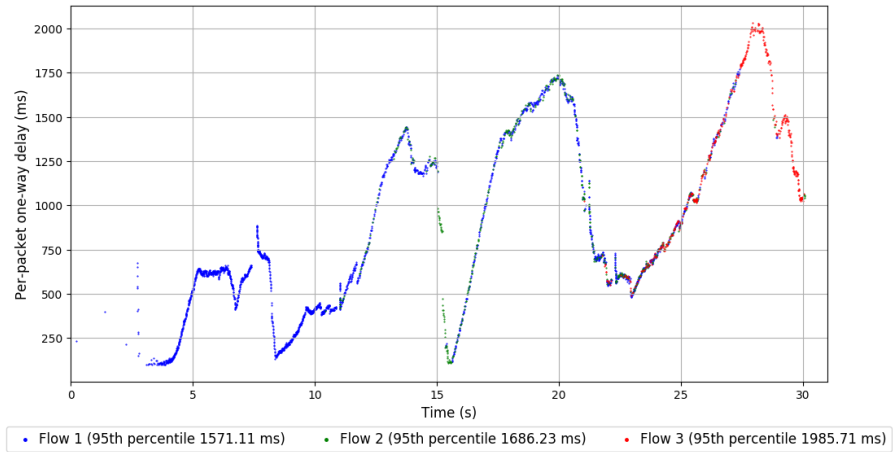
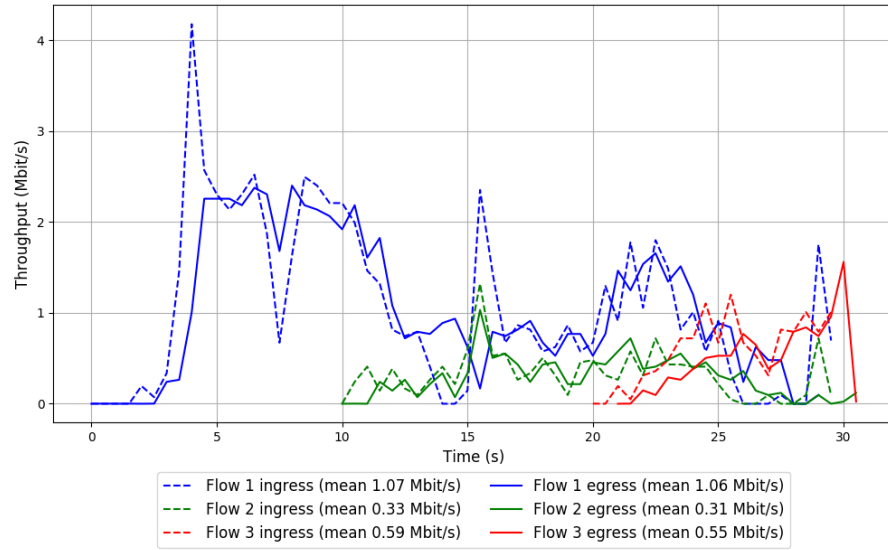


Run 3: Statistics of TCP BBR

Start at: 2018-07-17 16:02:43
End at: 2018-07-17 16:03:13
Local clock offset: -2.819 ms
Remote clock offset: 10.736 ms

Below is generated by plot.py at 2018-07-17 16:09:30
Datalink statistics
-- Total of 3 flows:
Average throughput: 1.39 Mbit/s
95th percentile per-packet one-way delay: 1671.172 ms
Loss rate: 5.79%
-- Flow 1:
Average throughput: 1.06 Mbit/s
95th percentile per-packet one-way delay: 1571.114 ms
Loss rate: 3.99%
-- Flow 2:
Average throughput: 0.31 Mbit/s
95th percentile per-packet one-way delay: 1686.230 ms
Loss rate: 5.95%
-- Flow 3:
Average throughput: 0.55 Mbit/s
95th percentile per-packet one-way delay: 1985.712 ms
Loss rate: 15.33%

Run 3: Report of TCP BBR — Data Link



Run 1: Statistics of Copa

Start at: 2018-07-17 15:14:16

End at: 2018-07-17 15:14:46

Local clock offset: -2.344 ms

Remote clock offset: 5.337 ms

Below is generated by plot.py at 2018-07-17 16:09:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.35 Mbit/s

95th percentile per-packet one-way delay: 311.802 ms

Loss rate: 0.86%

-- Flow 1:

Average throughput: 0.79 Mbit/s

95th percentile per-packet one-way delay: 282.568 ms

Loss rate: 0.54%

-- Flow 2:

Average throughput: 0.54 Mbit/s

95th percentile per-packet one-way delay: 327.292 ms

Loss rate: 0.96%

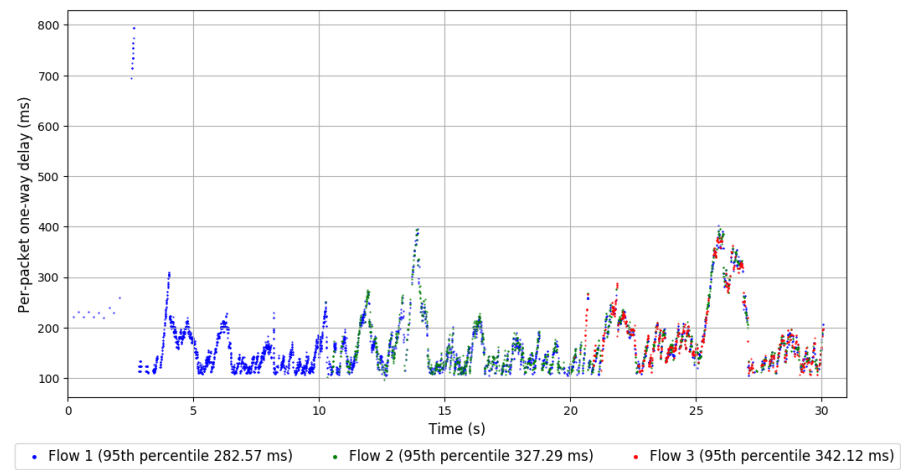
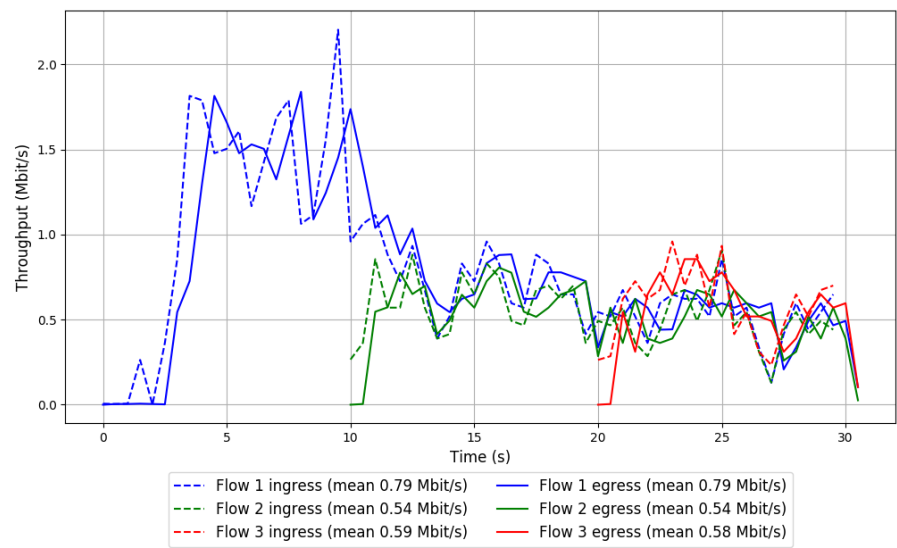
-- Flow 3:

Average throughput: 0.58 Mbit/s

95th percentile per-packet one-way delay: 342.123 ms

Loss rate: 1.99%

Run 1: Report of Copa — Data Link

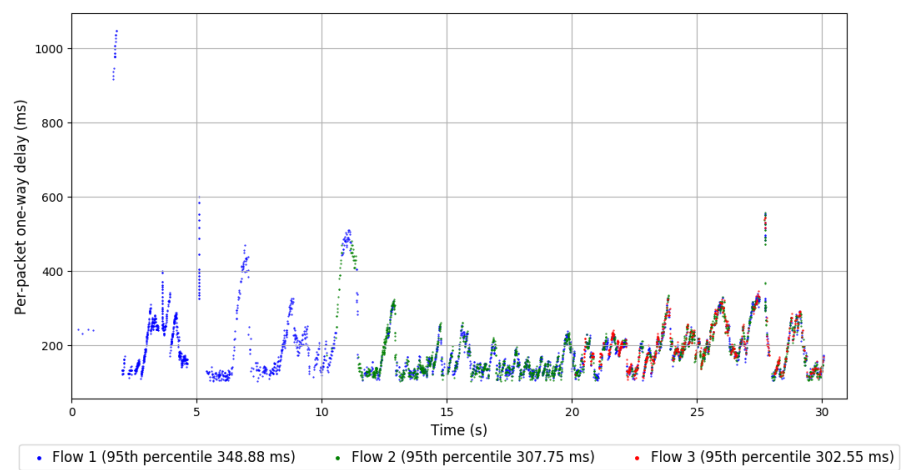
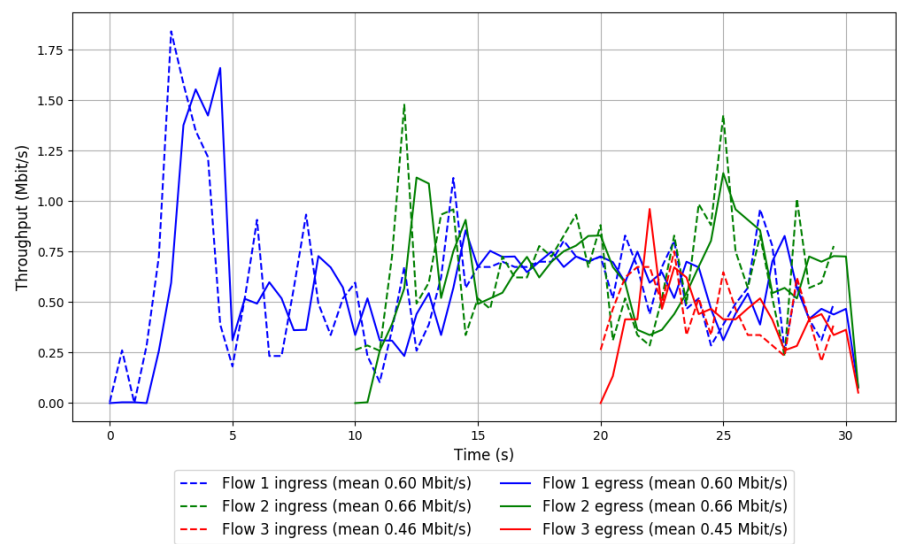


Run 2: Statistics of Copa

Start at: 2018-07-17 15:34:55
End at: 2018-07-17 15:35:25
Local clock offset: -2.515 ms
Remote clock offset: 10.413 ms

Below is generated by plot.py at 2018-07-17 16:09:32
Datalink statistics
-- Total of 3 flows:
Average throughput: 1.19 Mbit/s
95th percentile per-packet one-way delay: 320.461 ms
Loss rate: 0.74%
-- Flow 1:
Average throughput: 0.60 Mbit/s
95th percentile per-packet one-way delay: 348.877 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 0.66 Mbit/s
95th percentile per-packet one-way delay: 307.747 ms
Loss rate: 0.98%
-- Flow 3:
Average throughput: 0.45 Mbit/s
95th percentile per-packet one-way delay: 302.551 ms
Loss rate: 1.14%

Run 2: Report of Copa — Data Link

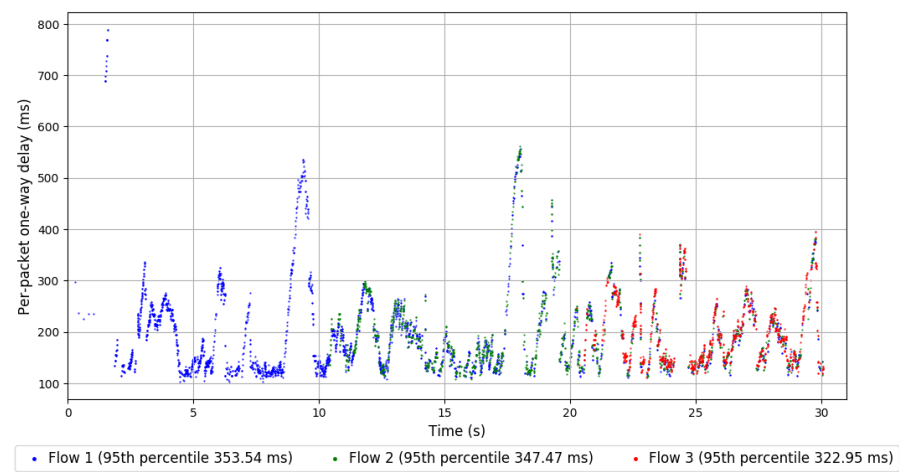
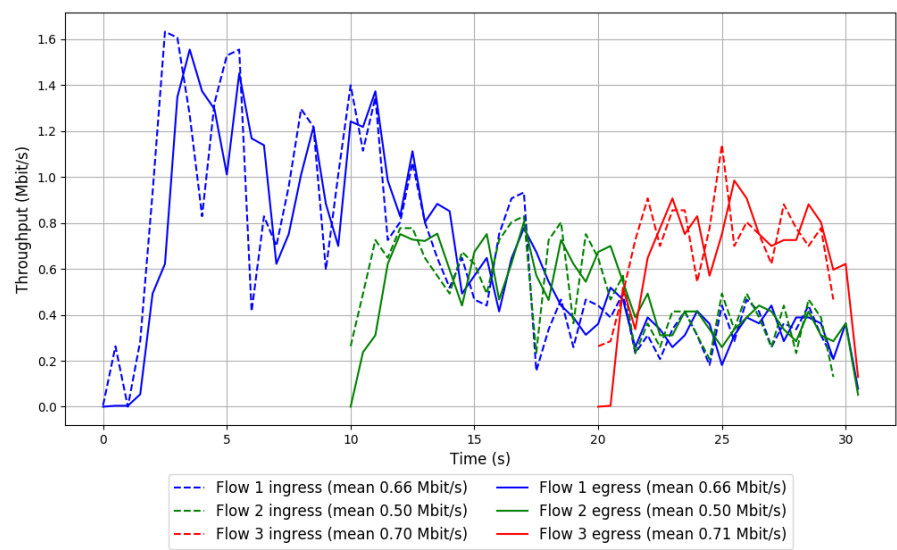


Run 3: Statistics of Copa

Start at: 2018-07-17 15:55:30
End at: 2018-07-17 15:56:00
Local clock offset: -2.674 ms
Remote clock offset: 15.244 ms

Below is generated by plot.py at 2018-07-17 16:09:32
Datalink statistics
-- Total of 3 flows:
Average throughput: 1.23 Mbit/s
95th percentile per-packet one-way delay: 340.919 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 0.66 Mbit/s
95th percentile per-packet one-way delay: 353.539 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 0.50 Mbit/s
95th percentile per-packet one-way delay: 347.467 ms
Loss rate: 0.25%
-- Flow 3:
Average throughput: 0.71 Mbit/s
95th percentile per-packet one-way delay: 322.948 ms
Loss rate: 0.74%

Run 3: Report of Copa — Data Link

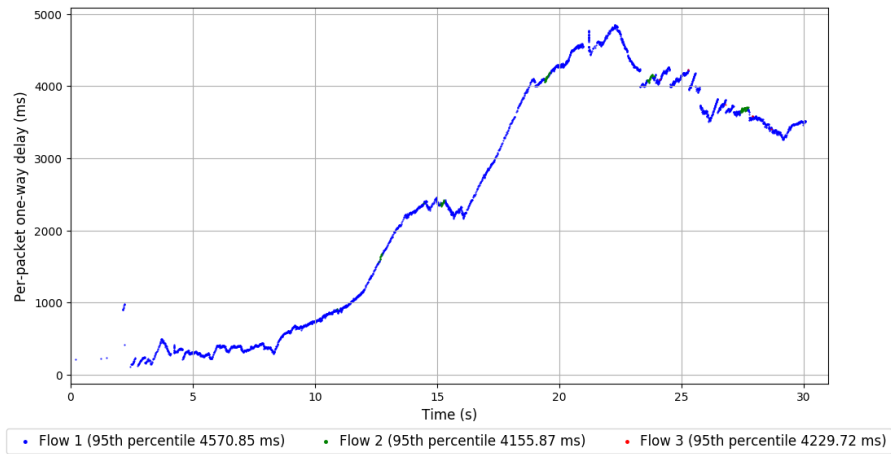
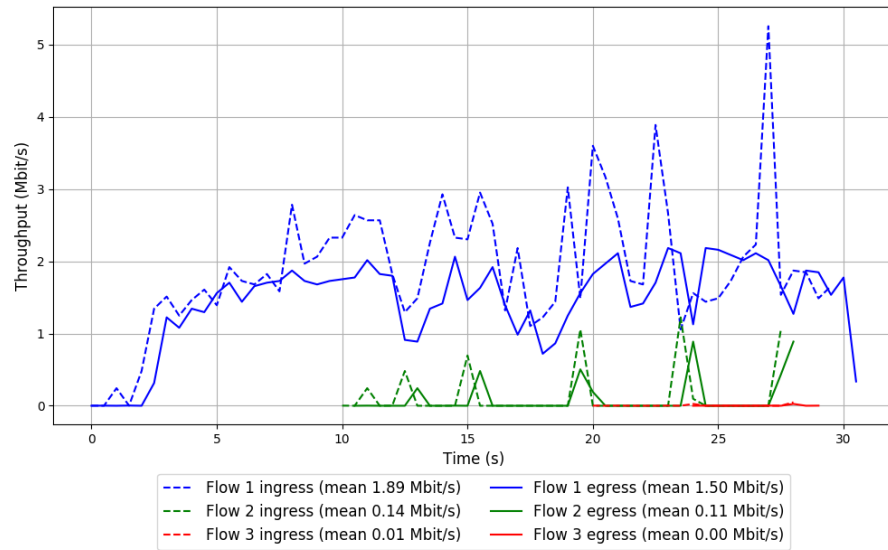


Run 1: Statistics of TCP Cubic

Start at: 2018-07-17 15:22:44
End at: 2018-07-17 15:23:14
Local clock offset: -2.12 ms
Remote clock offset: 12.248 ms

Below is generated by plot.py at 2018-07-17 16:09:32
Datalink statistics
-- Total of 3 flows:
Average throughput: 1.56 Mbit/s
95th percentile per-packet one-way delay: 4570.297 ms
Loss rate: 21.22%
-- Flow 1:
Average throughput: 1.50 Mbit/s
95th percentile per-packet one-way delay: 4570.854 ms
Loss rate: 21.02%
-- Flow 2:
Average throughput: 0.11 Mbit/s
95th percentile per-packet one-way delay: 4155.872 ms
Loss rate: 25.21%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 4229.716 ms
Loss rate: 61.12%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2018-07-17 15:43:22

End at: 2018-07-17 15:43:52

Local clock offset: -2.642 ms

Remote clock offset: 15.23 ms

Below is generated by plot.py at 2018-07-17 16:09:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.92 Mbit/s

95th percentile per-packet one-way delay: 3594.510 ms

Loss rate: 13.81%

-- Flow 1:

Average throughput: 1.34 Mbit/s

95th percentile per-packet one-way delay: 3509.092 ms

Loss rate: 14.04%

-- Flow 2:

Average throughput: 0.83 Mbit/s

95th percentile per-packet one-way delay: 3744.434 ms

Loss rate: 11.30%

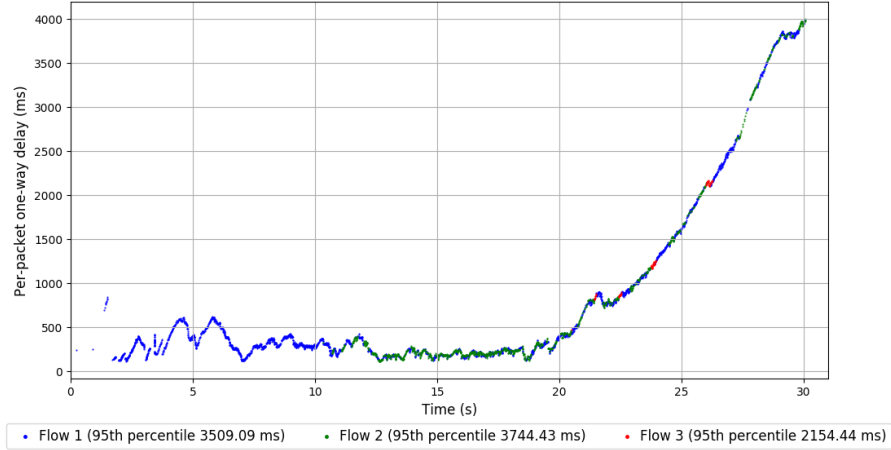
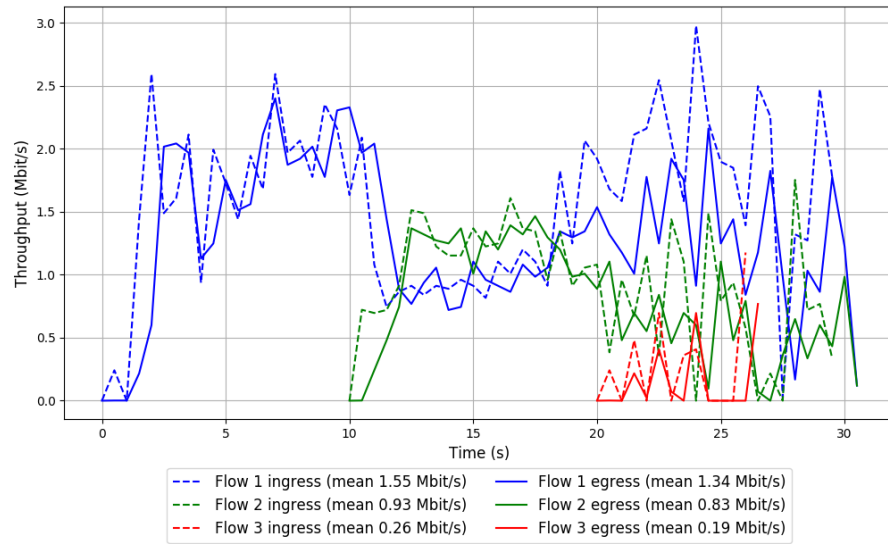
-- Flow 3:

Average throughput: 0.19 Mbit/s

95th percentile per-packet one-way delay: 2154.439 ms

Loss rate: 34.97%

Run 2: Report of TCP Cubic — Data Link

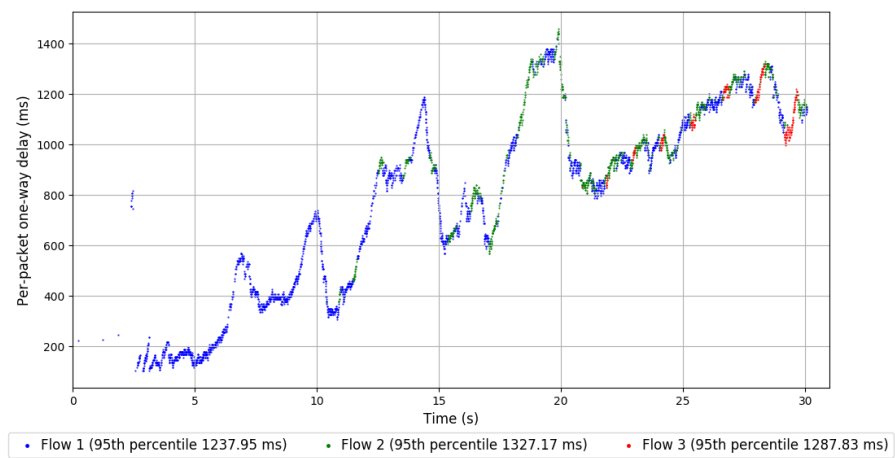
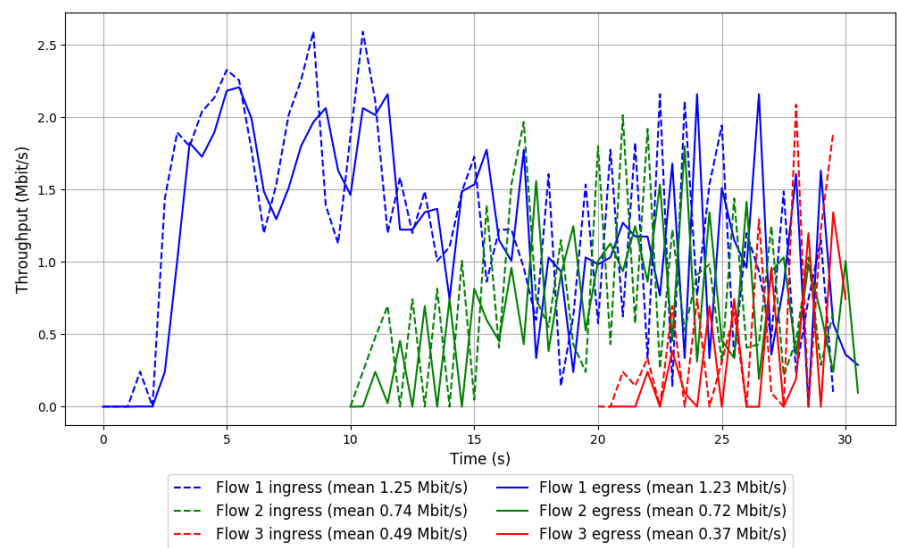


Run 3: Statistics of TCP Cubic

Start at: 2018-07-17 16:03:55
End at: 2018-07-17 16:04:25
Local clock offset: -2.836 ms
Remote clock offset: 10.643 ms

Below is generated by plot.py at 2018-07-17 16:09:34
Datalink statistics
-- Total of 3 flows:
Average throughput: 1.81 Mbit/s
95th percentile per-packet one-way delay: 1297.717 ms
Loss rate: 5.14%
-- Flow 1:
Average throughput: 1.23 Mbit/s
95th percentile per-packet one-way delay: 1237.952 ms
Loss rate: 2.06%
-- Flow 2:
Average throughput: 0.72 Mbit/s
95th percentile per-packet one-way delay: 1327.174 ms
Loss rate: 4.05%
-- Flow 3:
Average throughput: 0.37 Mbit/s
95th percentile per-packet one-way delay: 1287.829 ms
Loss rate: 32.09%

Run 3: Report of TCP Cubic — Data Link

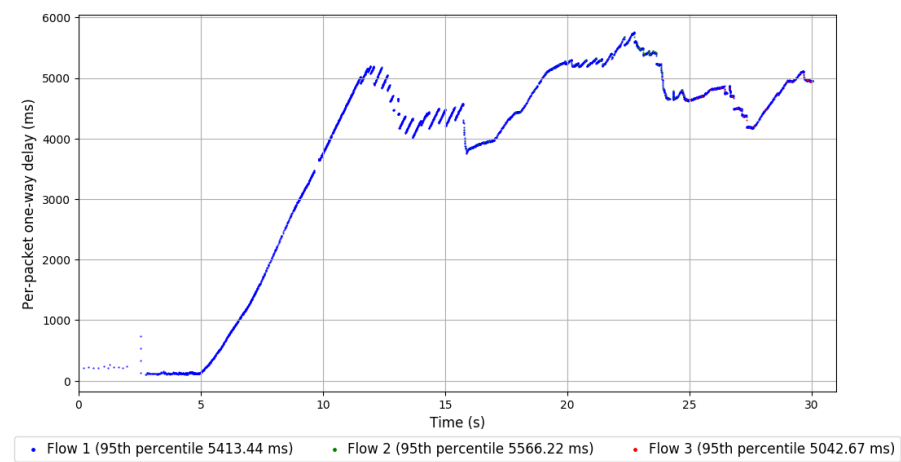
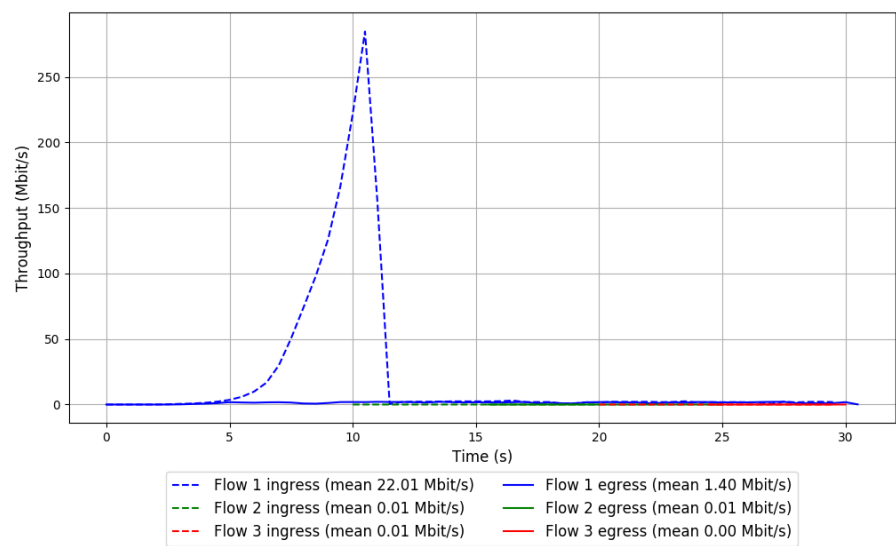


Run 1: Statistics of FillP

Start at: 2018-07-17 15:19:05
End at: 2018-07-17 15:19:35
Local clock offset: -2.233 ms
Remote clock offset: 11.624 ms

Below is generated by plot.py at 2018-07-17 16:09:49
Datalink statistics
-- Total of 3 flows:
Average throughput: 1.40 Mbit/s
95th percentile per-packet one-way delay: 5418.888 ms
Loss rate: 93.67%
-- Flow 1:
Average throughput: 1.40 Mbit/s
95th percentile per-packet one-way delay: 5413.442 ms
Loss rate: 93.68%
-- Flow 2:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 5566.221 ms
Loss rate: 10.27%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 5042.671 ms
Loss rate: 71.84%

Run 1: Report of FillP — Data Link



Run 2: Statistics of FillP

Start at: 2018-07-17 15:39:45

End at: 2018-07-17 15:40:15

Local clock offset: -2.685 ms

Remote clock offset: 14.65 ms

Below is generated by plot.py at 2018-07-17 16:09:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.22 Mbit/s

95th percentile per-packet one-way delay: 8167.271 ms

Loss rate: 93.37%

-- Flow 1:

Average throughput: 1.22 Mbit/s

95th percentile per-packet one-way delay: 8154.139 ms

Loss rate: 93.38%

-- Flow 2:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 8276.600 ms

Loss rate: 50.00%

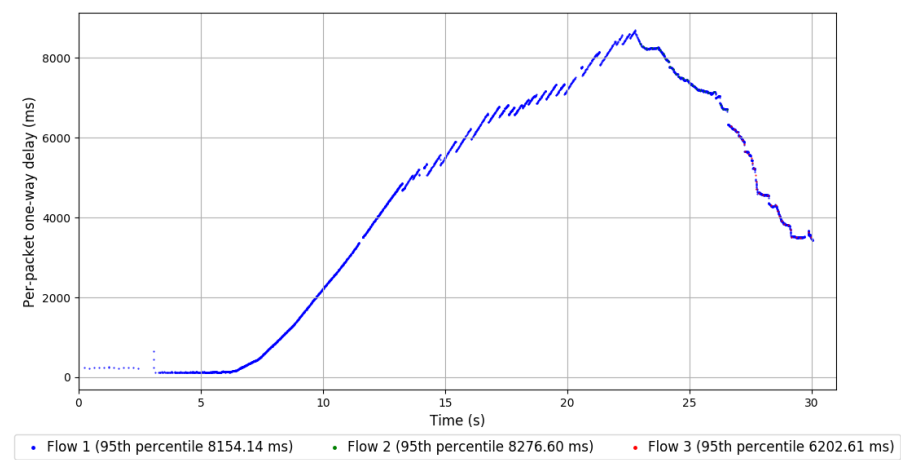
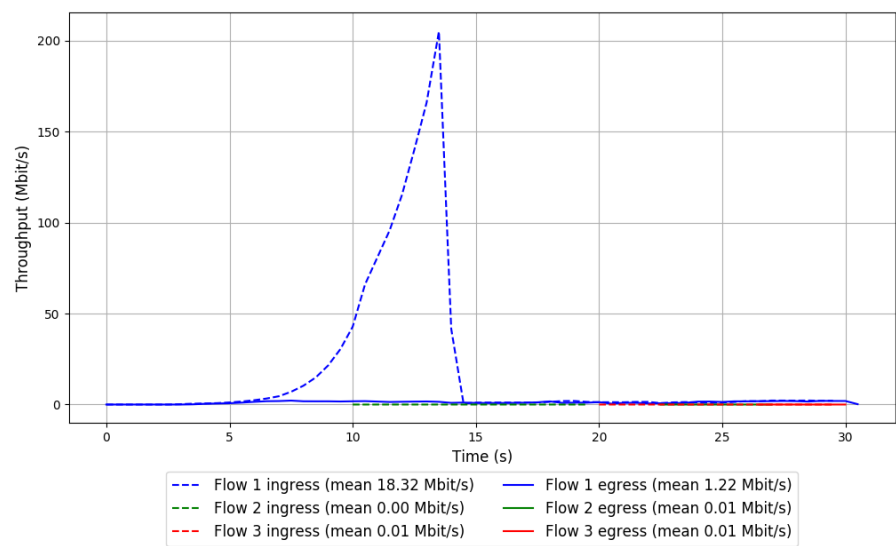
-- Flow 3:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 6202.613 ms

Loss rate: 74.12%

Run 2: Report of FillP — Data Link

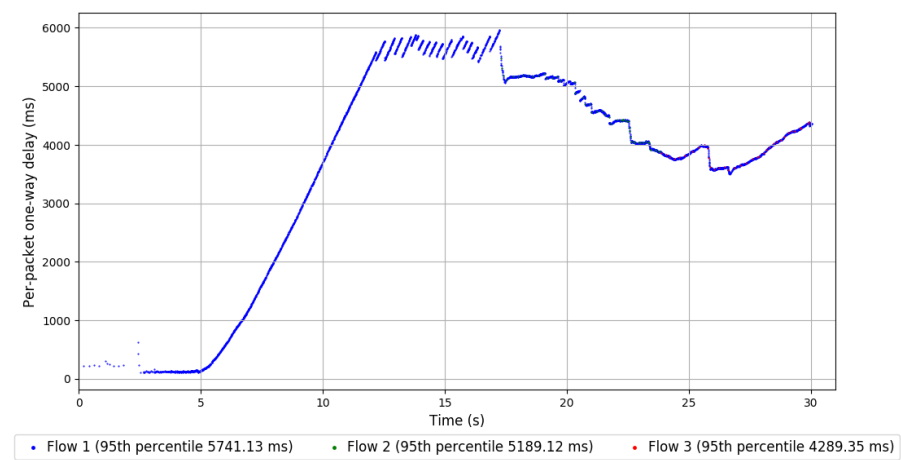
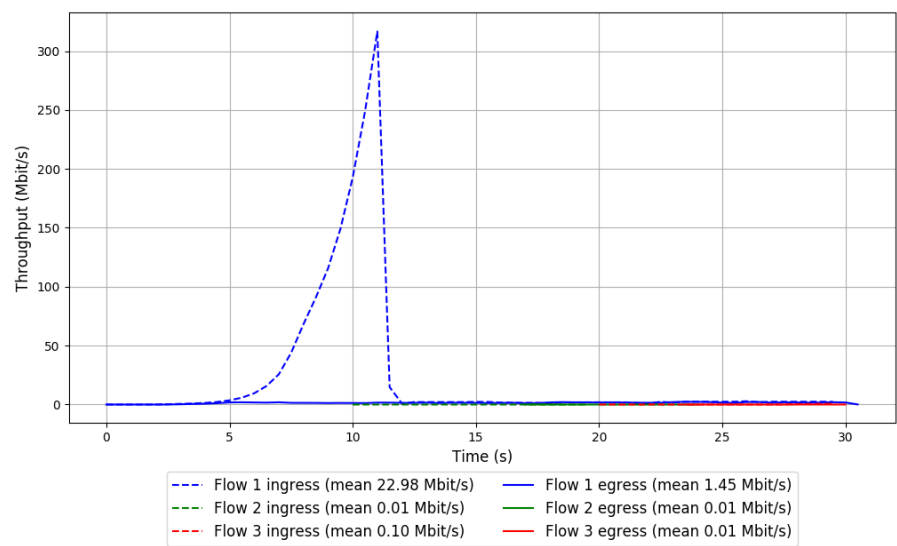


Run 3: Statistics of FillP

Start at: 2018-07-17 16:00:19
End at: 2018-07-17 16:00:49
Local clock offset: -2.853 ms
Remote clock offset: 15.49 ms

Below is generated by plot.py at 2018-07-17 16:09:52
Datalink statistics
-- Total of 3 flows:
Average throughput: 1.45 Mbit/s
95th percentile per-packet one-way delay: 5740.056 ms
Loss rate: 93.73%
-- Flow 1:
Average throughput: 1.45 Mbit/s
95th percentile per-packet one-way delay: 5741.126 ms
Loss rate: 93.74%
-- Flow 2:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 5189.125 ms
Loss rate: 14.07%
-- Flow 3:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 4289.354 ms
Loss rate: 96.48%

Run 3: Report of FillP — Data Link

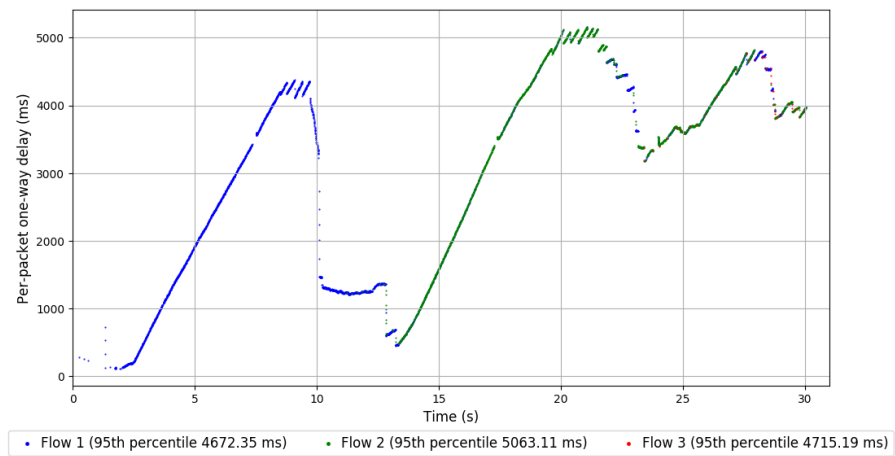
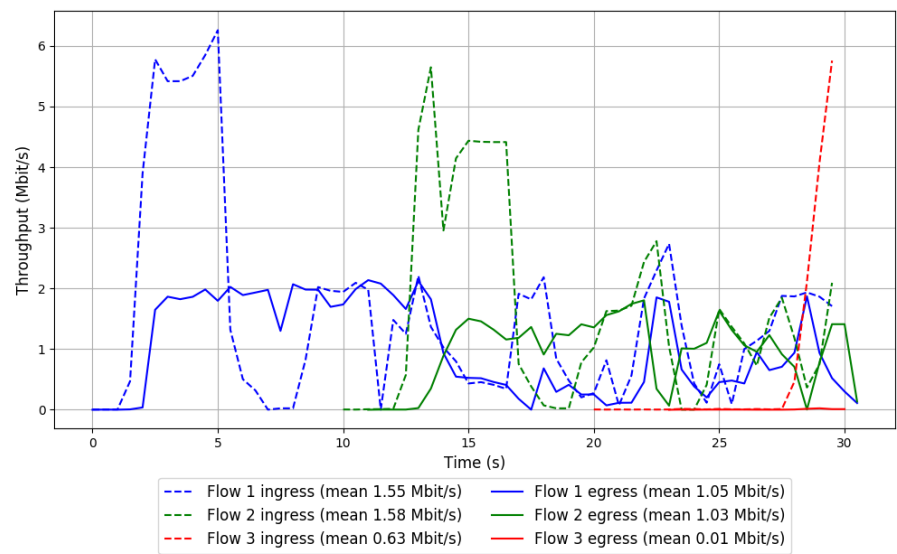


Run 1: Statistics of FillP-Sheep

Start at: 2018-07-17 15:27:36
End at: 2018-07-17 15:28:06
Local clock offset: -2.136 ms
Remote clock offset: 13.125 ms

Below is generated by plot.py at 2018-07-17 16:09:52
Datalink statistics
-- Total of 3 flows:
Average throughput: 1.70 Mbit/s
95th percentile per-packet one-way delay: 4954.101 ms
Loss rate: 39.77%
-- Flow 1:
Average throughput: 1.05 Mbit/s
95th percentile per-packet one-way delay: 4672.348 ms
Loss rate: 32.42%
-- Flow 2:
Average throughput: 1.03 Mbit/s
95th percentile per-packet one-way delay: 5063.110 ms
Loss rate: 38.77%
-- Flow 3:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 4715.188 ms
Loss rate: 99.31%

Run 1: Report of FillP-Sheep — Data Link

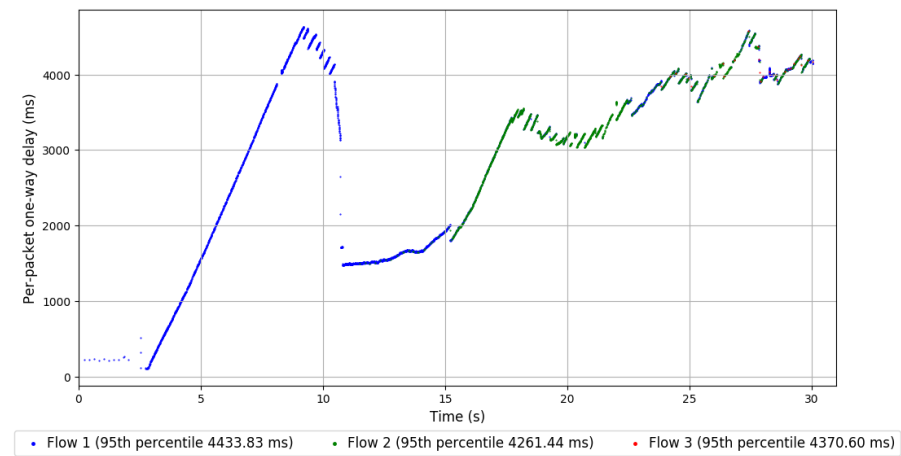
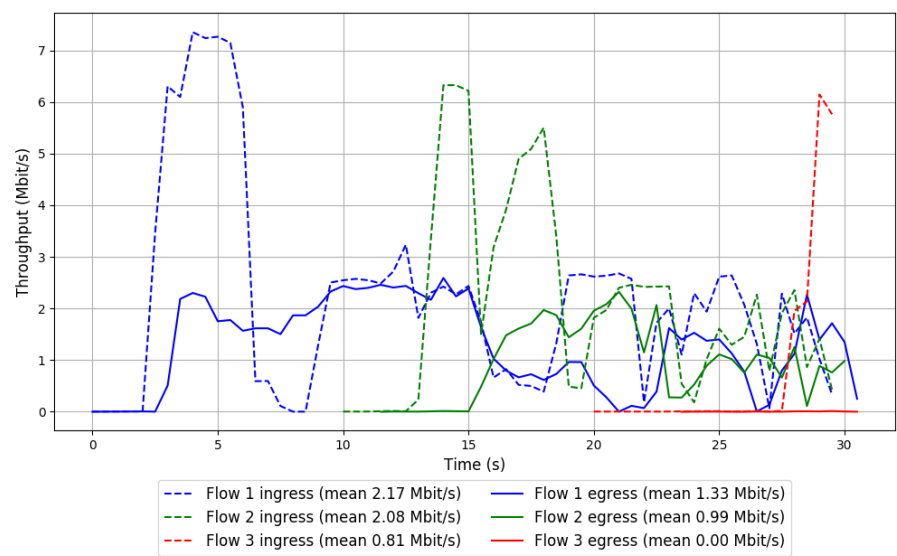


Run 2: Statistics of FillP-Sheep

Start at: 2018-07-17 15:48:15
End at: 2018-07-17 15:48:45
Local clock offset: -2.744 ms
Remote clock offset: 15.098 ms

Below is generated by plot.py at 2018-07-17 16:09:52
Datalink statistics
-- Total of 3 flows:
Average throughput: 1.94 Mbit/s
95th percentile per-packet one-way delay: 4402.852 ms
Loss rate: 49.50%
-- Flow 1:
Average throughput: 1.33 Mbit/s
95th percentile per-packet one-way delay: 4433.833 ms
Loss rate: 39.11%
-- Flow 2:
Average throughput: 0.99 Mbit/s
95th percentile per-packet one-way delay: 4261.440 ms
Loss rate: 56.03%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 4370.602 ms
Loss rate: 99.63%

Run 2: Report of FillP-Sheep — Data Link

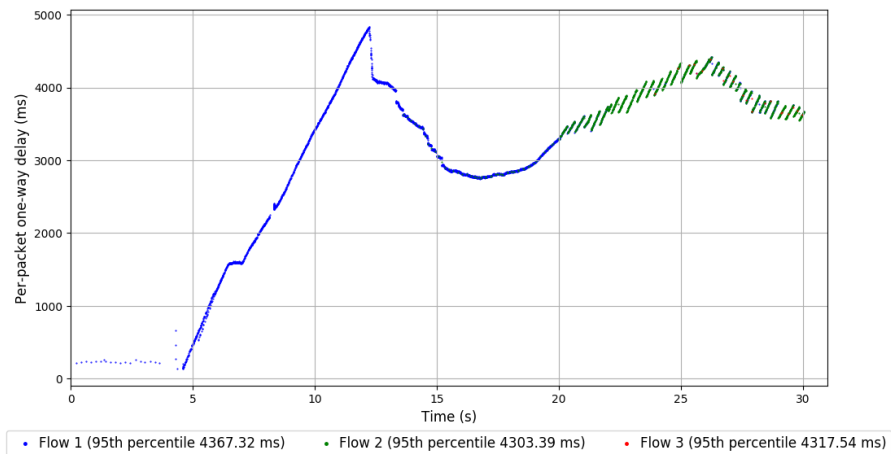
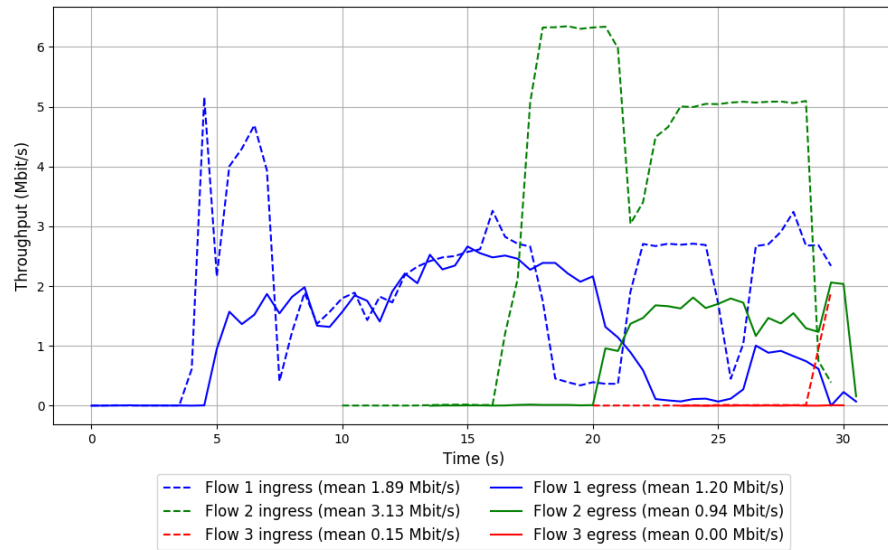


Run 3: Statistics of FillP-Sheep

Start at: 2018-07-17 16:08:46
End at: 2018-07-17 16:09:16
Local clock offset: -2.962 ms
Remote clock offset: 12.291 ms

Below is generated by plot.py at 2018-07-17 16:09:52
Datalink statistics
-- Total of 3 flows:
Average throughput: 1.72 Mbit/s
95th percentile per-packet one-way delay: 4326.522 ms
Loss rate: 57.49%
-- Flow 1:
Average throughput: 1.20 Mbit/s
95th percentile per-packet one-way delay: 4367.318 ms
Loss rate: 36.73%
-- Flow 2:
Average throughput: 0.94 Mbit/s
95th percentile per-packet one-way delay: 4303.388 ms
Loss rate: 75.31%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 4317.543 ms
Loss rate: 98.60%

Run 3: Report of FillP-Sheep — Data Link

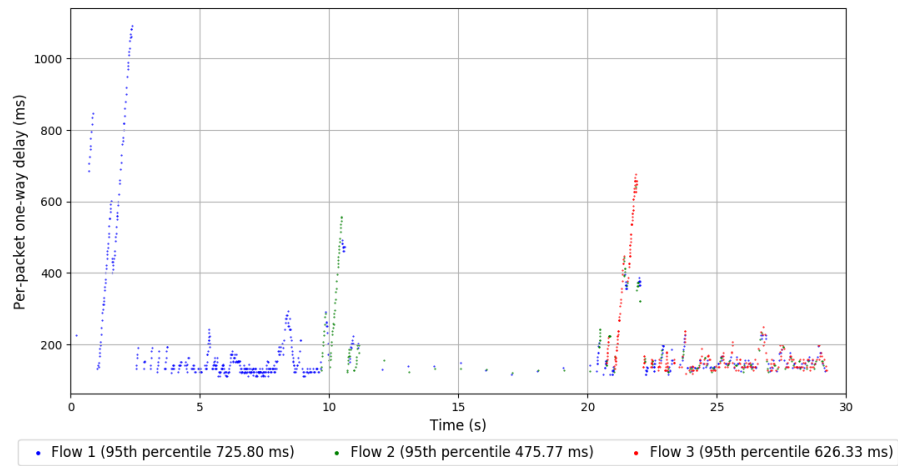
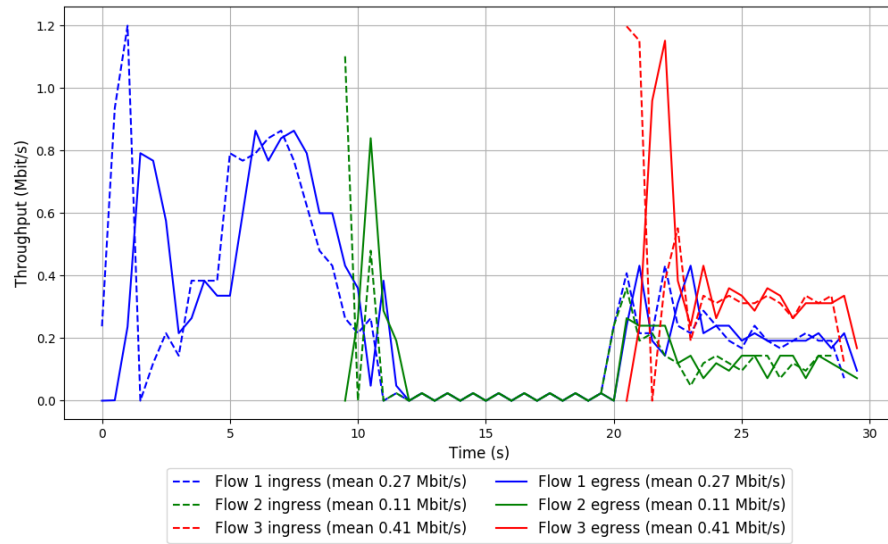


```
Run 1: Statistics of Indigo

Start at: 2018-07-17 15:10:40
End at: 2018-07-17 15:11:10
Local clock offset: -2.527 ms
Remote clock offset: 8.892 ms

# Below is generated by plot.py at 2018-07-17 16:09:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.47 Mbit/s
95th percentile per-packet one-way delay: 619.548 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 0.27 Mbit/s
95th percentile per-packet one-way delay: 725.801 ms
Loss rate: 0.15%
-- Flow 2:
Average throughput: 0.11 Mbit/s
95th percentile per-packet one-way delay: 475.767 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.41 Mbit/s
95th percentile per-packet one-way delay: 626.333 ms
Loss rate: 0.68%
```

Run 1: Report of Indigo — Data Link



Run 2: Statistics of Indigo

Start at: 2018-07-17 15:31:19

End at: 2018-07-17 15:31:49

Local clock offset: -2.397 ms

Remote clock offset: 8.738 ms

Below is generated by plot.py at 2018-07-17 16:09:52

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.03 Mbit/s

95th percentile per-packet one-way delay: 317.410 ms

Loss rate: 0.32%

-- Flow 1:

Average throughput: 0.62 Mbit/s

95th percentile per-packet one-way delay: 287.318 ms

Loss rate: 0.13%

-- Flow 2:

Average throughput: 0.38 Mbit/s

95th percentile per-packet one-way delay: 341.399 ms

Loss rate: 0.81%

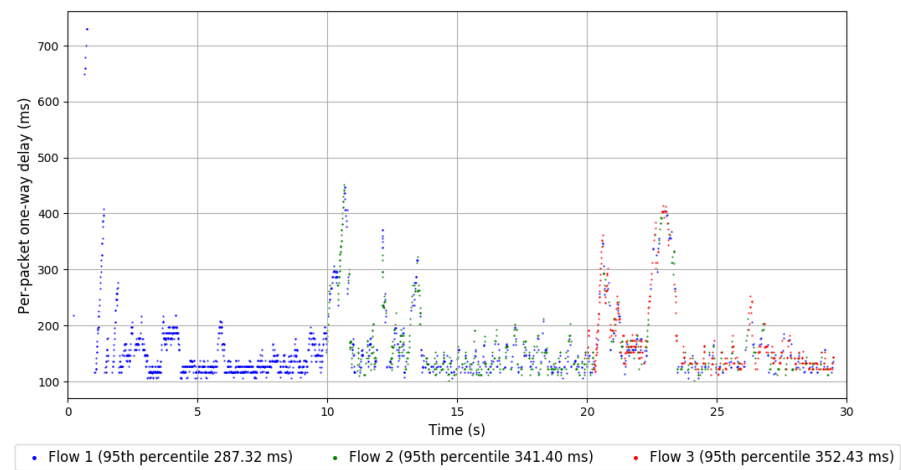
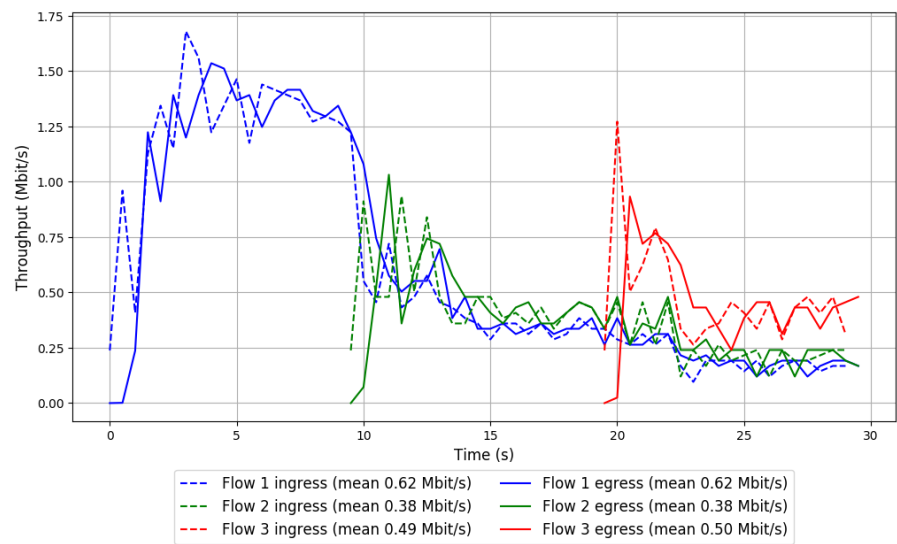
-- Flow 3:

Average throughput: 0.50 Mbit/s

95th percentile per-packet one-way delay: 352.428 ms

Loss rate: 0.25%

Run 2: Report of Indigo — Data Link

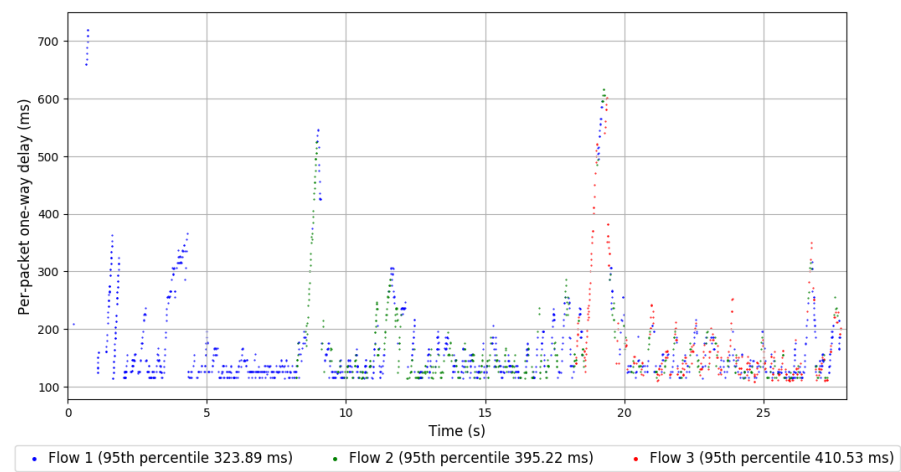
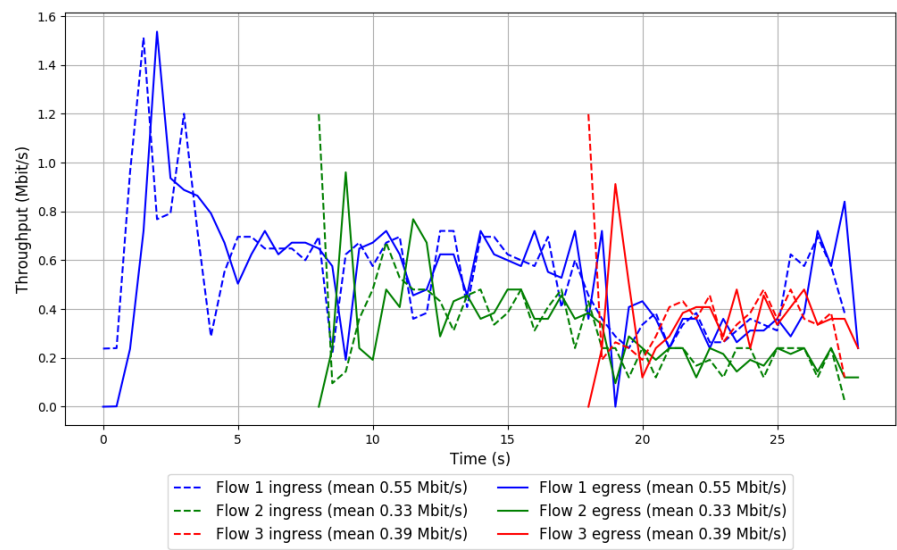


Run 3: Statistics of Indigo

Start at: 2018-07-17 15:51:55
End at: 2018-07-17 15:52:25
Local clock offset: -2.663 ms
Remote clock offset: 10.109 ms

```
# Below is generated by plot.py at 2018-07-17 16:09:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.92 Mbit/s
95th percentile per-packet one-way delay: 350.489 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 0.55 Mbit/s
95th percentile per-packet one-way delay: 323.888 ms
Loss rate: 0.71%
-- Flow 2:
Average throughput: 0.33 Mbit/s
95th percentile per-packet one-way delay: 395.219 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 0.39 Mbit/s
95th percentile per-packet one-way delay: 410.531 ms
Loss rate: 0.64%
```

Run 3: Report of Indigo — Data Link



Run 1: Statistics of LEDBAT

Start at: 2018-07-17 15:13:04

End at: 2018-07-17 15:13:34

Local clock offset: -2.372 ms

Remote clock offset: 10.87 ms

Below is generated by plot.py at 2018-07-17 16:09:52

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.53 Mbit/s

95th percentile per-packet one-way delay: 297.469 ms

Loss rate: 0.69%

-- Flow 1:

Average throughput: 1.09 Mbit/s

95th percentile per-packet one-way delay: 292.747 ms

Loss rate: 0.14%

-- Flow 2:

Average throughput: 0.45 Mbit/s

95th percentile per-packet one-way delay: 318.644 ms

Loss rate: 0.91%

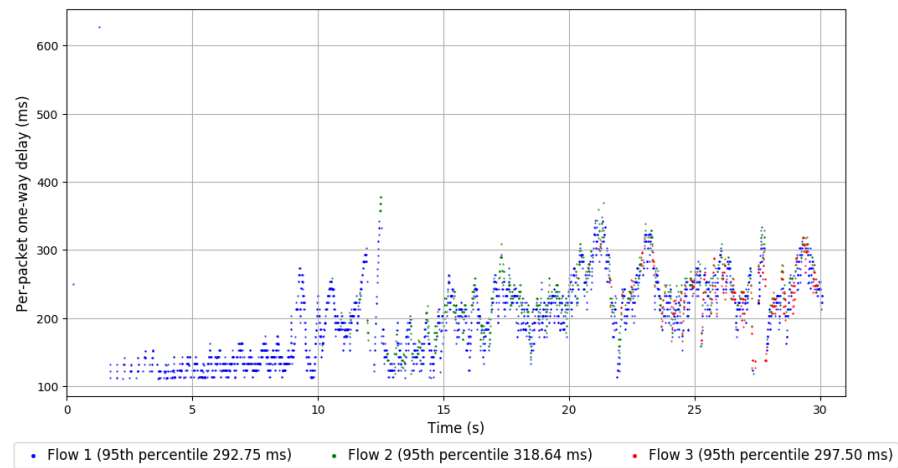
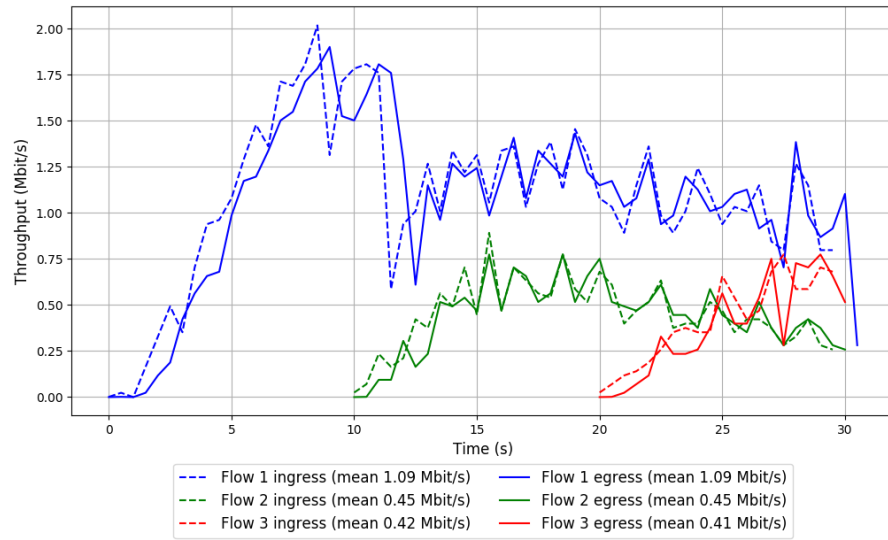
-- Flow 3:

Average throughput: 0.41 Mbit/s

95th percentile per-packet one-way delay: 297.496 ms

Loss rate: 4.51%

Run 1: Report of LEDBAT — Data Link

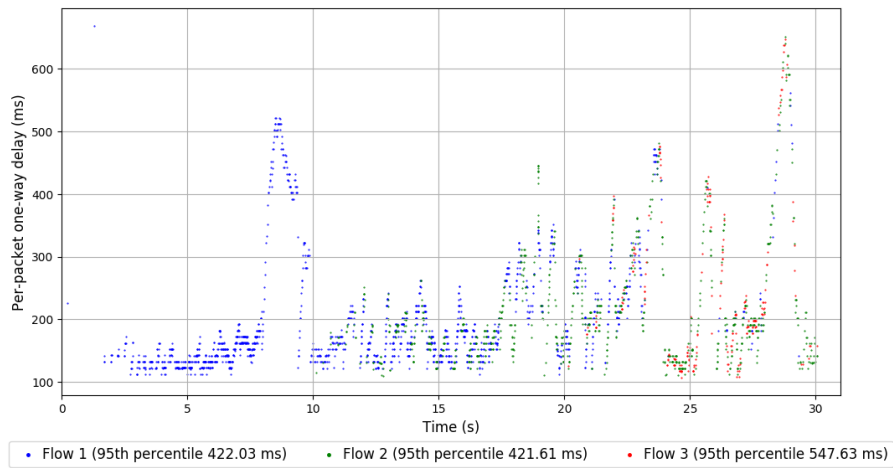
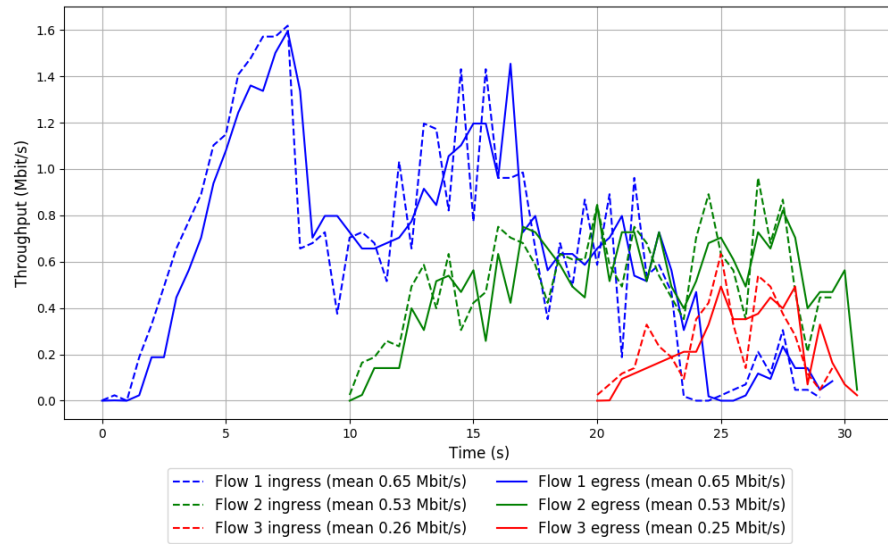


Run 2: Statistics of LEDBAT

Start at: 2018-07-17 15:33:43
End at: 2018-07-17 15:34:13
Local clock offset: -2.488 ms
Remote clock offset: 10.231 ms

Below is generated by plot.py at 2018-07-17 16:09:52
Datalink statistics
-- Total of 3 flows:
Average throughput: 1.07 Mbit/s
95th percentile per-packet one-way delay: 431.704 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 0.65 Mbit/s
95th percentile per-packet one-way delay: 422.028 ms
Loss rate: 0.19%
-- Flow 2:
Average throughput: 0.53 Mbit/s
95th percentile per-packet one-way delay: 421.611 ms
Loss rate: 0.33%
-- Flow 3:
Average throughput: 0.25 Mbit/s
95th percentile per-packet one-way delay: 547.633 ms
Loss rate: 0.93%

Run 2: Report of LEDBAT — Data Link

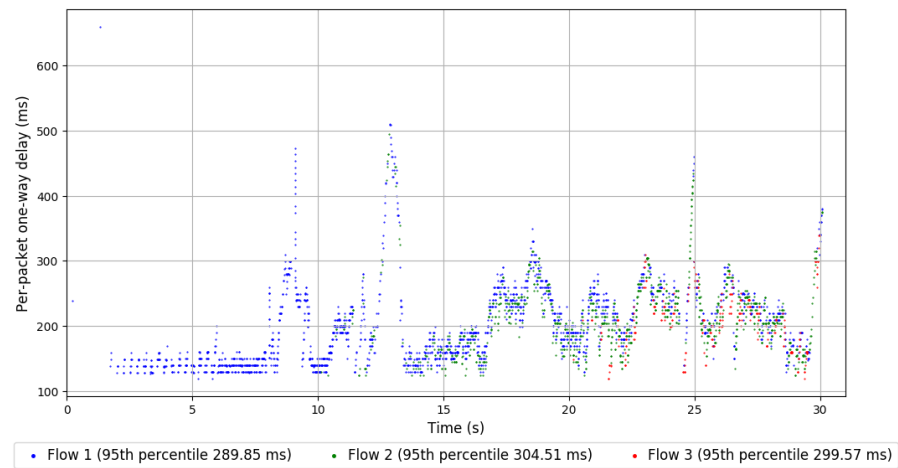
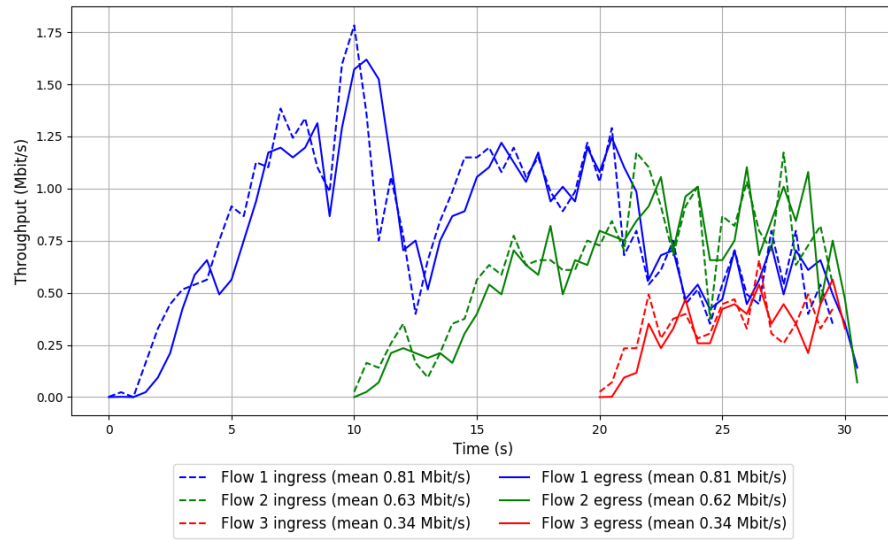


Run 3: Statistics of LEDBAT

Start at: 2018-07-17 15:54:18
End at: 2018-07-17 15:54:48
Local clock offset: -2.669 ms
Remote clock offset: 15.159 ms

Below is generated by plot.py at 2018-07-17 16:09:52
Datalink statistics
-- Total of 3 flows:
Average throughput: 1.33 Mbit/s
95th percentile per-packet one-way delay: 299.569 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 0.81 Mbit/s
95th percentile per-packet one-way delay: 289.850 ms
Loss rate: 0.19%
-- Flow 2:
Average throughput: 0.62 Mbit/s
95th percentile per-packet one-way delay: 304.506 ms
Loss rate: 1.68%
-- Flow 3:
Average throughput: 0.34 Mbit/s
95th percentile per-packet one-way delay: 299.569 ms
Loss rate: 2.08%

Run 3: Report of LEDBAT — Data Link

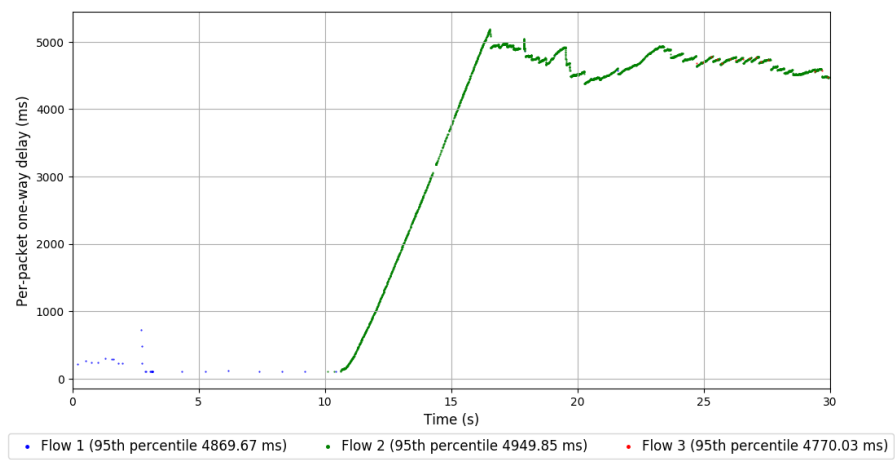
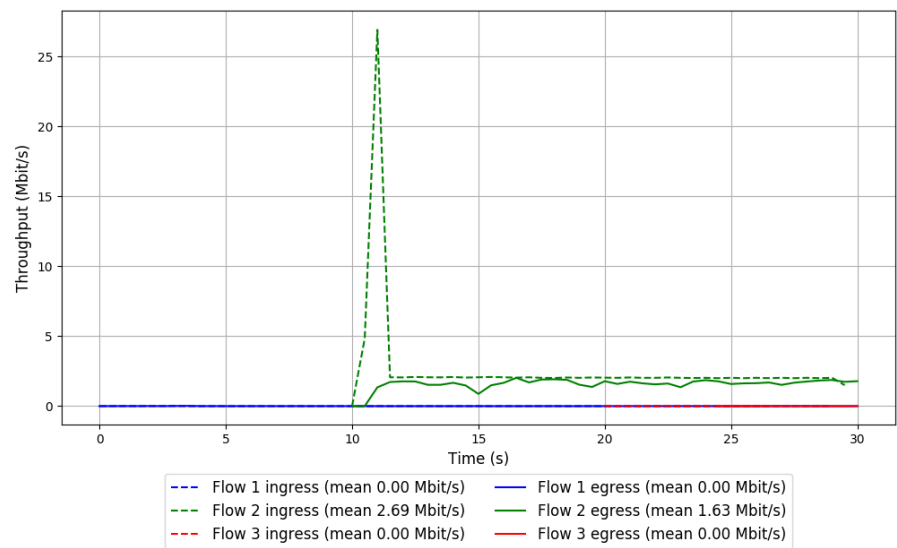


```
Run 1: Statistics of PCC-Allegro

Start at: 2018-07-17 15:08:14
End at: 2018-07-17 15:08:44
Local clock offset: -2.661 ms
Remote clock offset: 4.577 ms

# Below is generated by plot.py at 2018-07-17 16:09:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.09 Mbit/s
95th percentile per-packet one-way delay: 4949.378 ms
Loss rate: 39.39%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 4869.666 ms
Loss rate: 10.47%
-- Flow 2:
Average throughput: 1.63 Mbit/s
95th percentile per-packet one-way delay: 4949.845 ms
Loss rate: 39.42%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 4770.026 ms
Loss rate: 28.02%
```

Run 1: Report of PCC-Allegro — Data Link



Run 2: Statistics of PCC-Allegro

Start at: 2018-07-17 15:28:51

End at: 2018-07-17 15:29:21

Local clock offset: -2.235 ms

Remote clock offset: 9.573 ms

Below is generated by plot.py at 2018-07-17 16:09:52

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.17 Mbit/s

95th percentile per-packet one-way delay: 5396.807 ms

Loss rate: 29.61%

-- Flow 1:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 4960.998 ms

Loss rate: 10.88%

-- Flow 2:

Average throughput: 1.74 Mbit/s

95th percentile per-packet one-way delay: 5400.507 ms

Loss rate: 29.63%

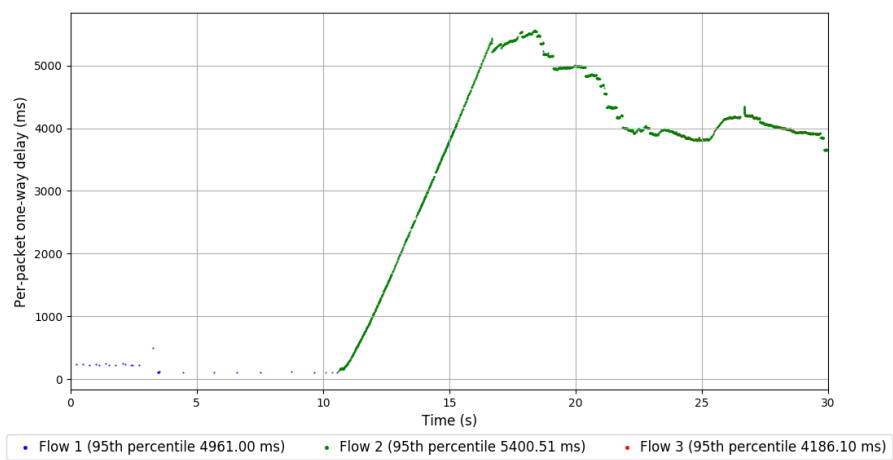
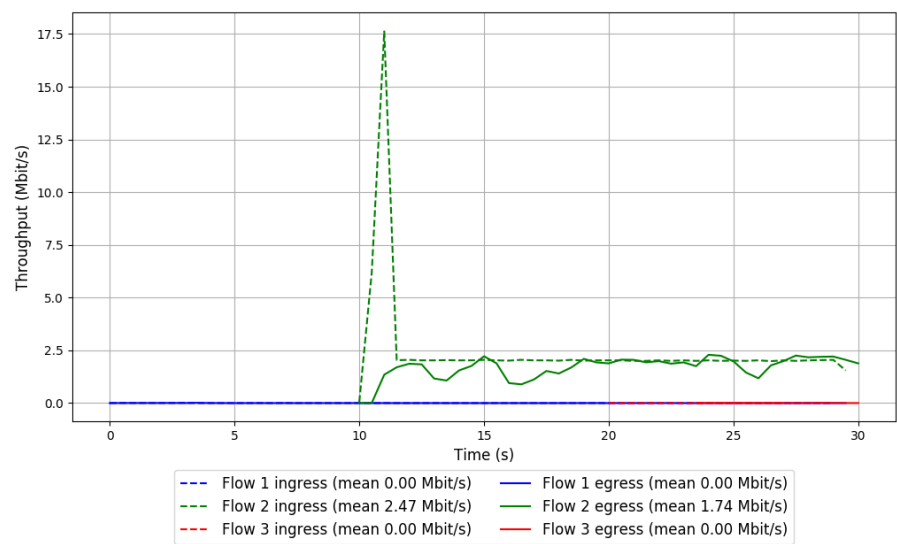
-- Flow 3:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 4186.098 ms

Loss rate: 10.61%

Run 2: Report of PCC-Allegro — Data Link

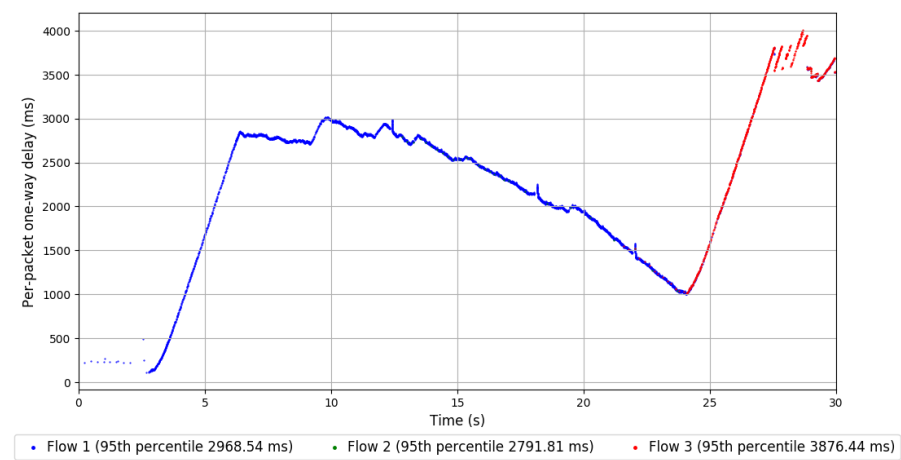
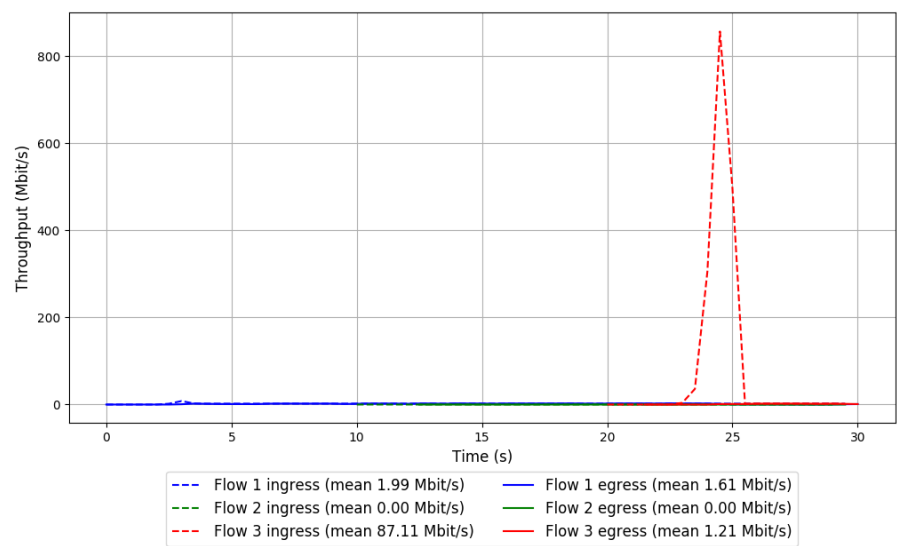


Run 3: Statistics of PCC-Allegro

Start at: 2018-07-17 15:49:27
End at: 2018-07-17 15:49:57
Local clock offset: -2.678 ms
Remote clock offset: 14.003 ms

Below is generated by plot.py at 2018-07-17 16:10:06
Datalink statistics
-- Total of 3 flows:
Average throughput: 1.95 Mbit/s
95th percentile per-packet one-way delay: 3596.776 ms
Loss rate: 93.69%
-- Flow 1:
Average throughput: 1.61 Mbit/s
95th percentile per-packet one-way delay: 2968.538 ms
Loss rate: 19.50%
-- Flow 2:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 2791.808 ms
Loss rate: 13.87%
-- Flow 3:
Average throughput: 1.21 Mbit/s
95th percentile per-packet one-way delay: 3876.444 ms
Loss rate: 98.82%

Run 3: Report of PCC-Allegro — Data Link



Run 1: Statistics of PCC-Expr

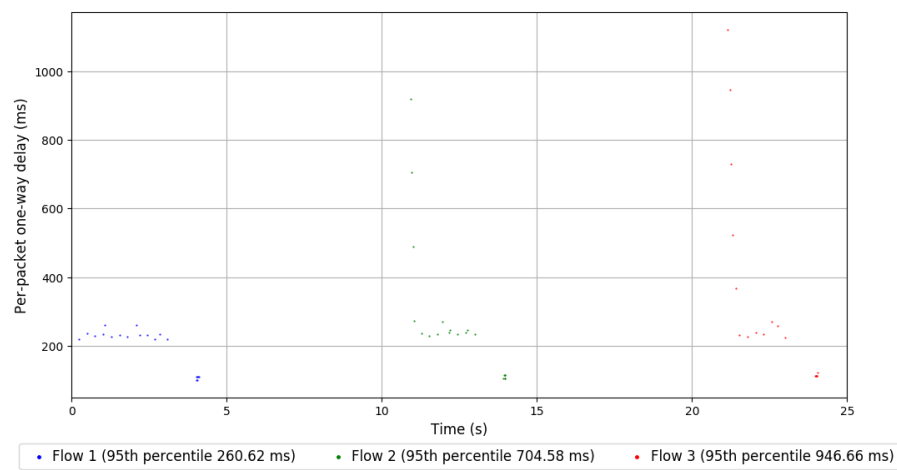
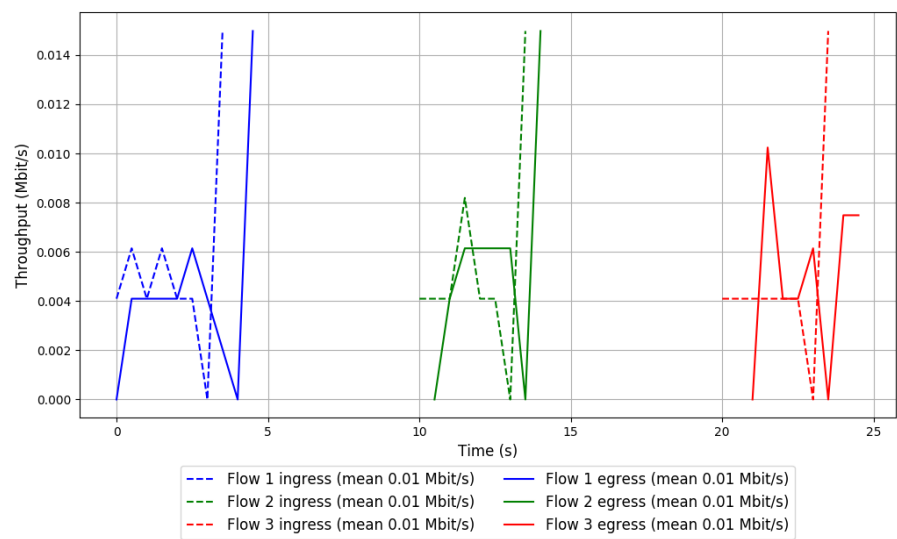
Start at: 2018-07-17 15:26:23

End at: 2018-07-17 15:26:53

Local clock offset: -2.068 ms

Remote clock offset: 12.973 ms

Run 1: Report of PCC-Expr — Data Link

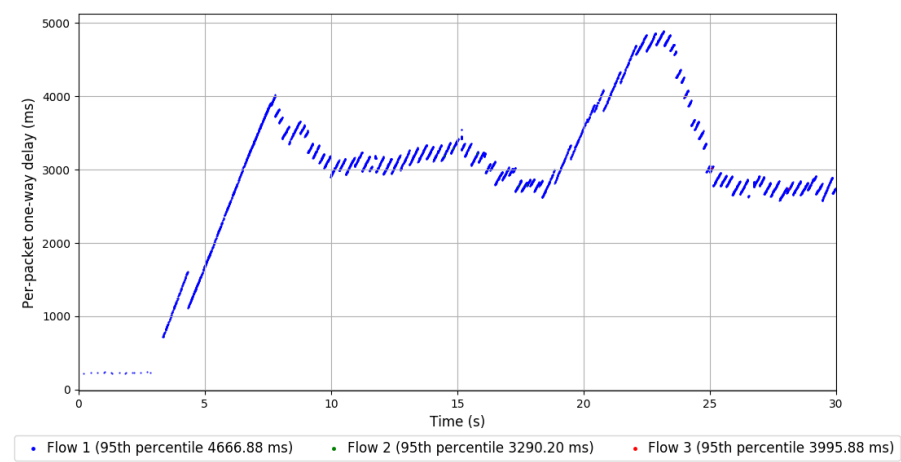
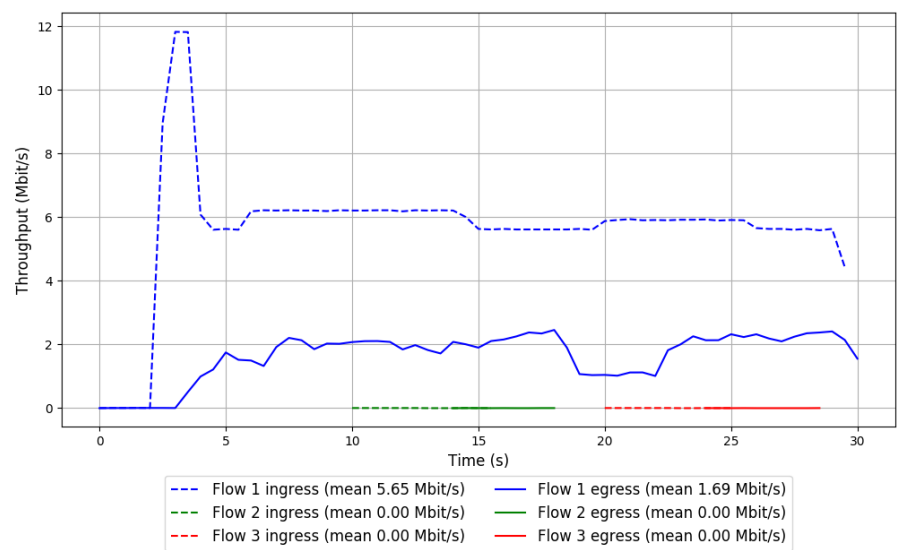


Run 2: Statistics of PCC-Expr

Start at: 2018-07-17 15:47:01
End at: 2018-07-17 15:47:31
Local clock offset: -2.68 ms
Remote clock offset: 11.074 ms

Below is generated by plot.py at 2018-07-17 16:10:06
Datalink statistics
-- Total of 3 flows:
Average throughput: 1.69 Mbit/s
95th percentile per-packet one-way delay: 4665.794 ms
Loss rate: 70.31%
-- Flow 1:
Average throughput: 1.69 Mbit/s
95th percentile per-packet one-way delay: 4666.879 ms
Loss rate: 70.31%
-- Flow 2:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 3290.201 ms
Loss rate: 65.27%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 3995.880 ms
Loss rate: 77.71%

Run 2: Report of PCC-Expr — Data Link

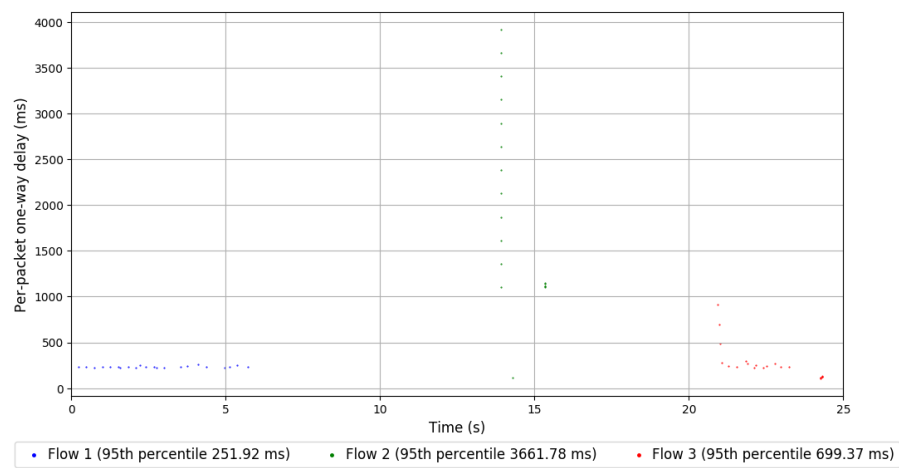
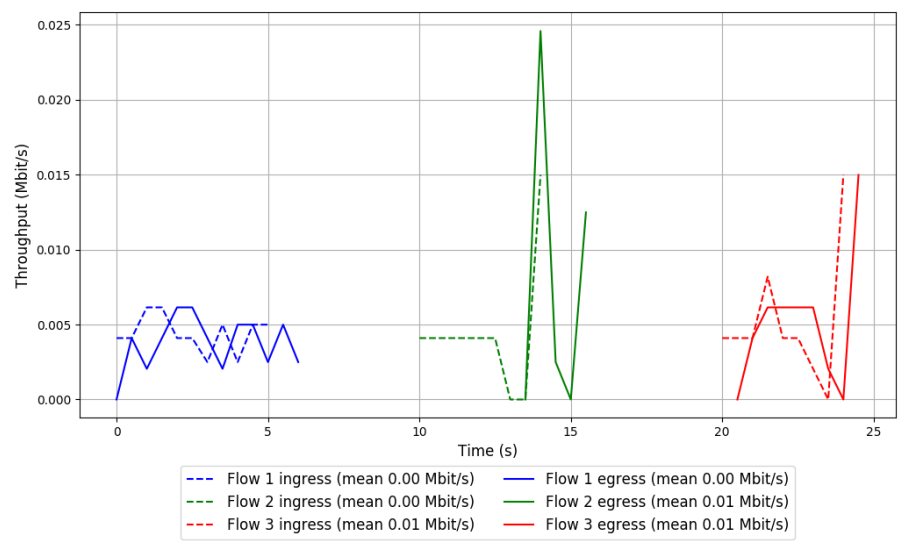


Run 3: Statistics of PCC-Expr

Start at: 2018-07-17 16:07:34
End at: 2018-07-17 16:08:04
Local clock offset: -2.94 ms
Remote clock offset: 11.009 ms

Below is generated by plot.py at 2018-07-17 16:10:06
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 3149.831 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 251.916 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 3661.778 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 699.368 ms
Loss rate: 0.00%

Run 3: Report of PCC-Expr — Data Link



Run 1: Statistics of QUIC Cubic

Start at: 2018-07-17 15:23:56

End at: 2018-07-17 15:24:26

Local clock offset: -2.093 ms

Remote clock offset: 8.868 ms

Below is generated by plot.py at 2018-07-17 16:10:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.69 Mbit/s

95th percentile per-packet one-way delay: 2150.625 ms

Loss rate: 5.64%

-- Flow 1:

Average throughput: 1.32 Mbit/s

95th percentile per-packet one-way delay: 2111.263 ms

Loss rate: 3.82%

-- Flow 2:

Average throughput: 0.48 Mbit/s

95th percentile per-packet one-way delay: 2187.284 ms

Loss rate: 9.15%

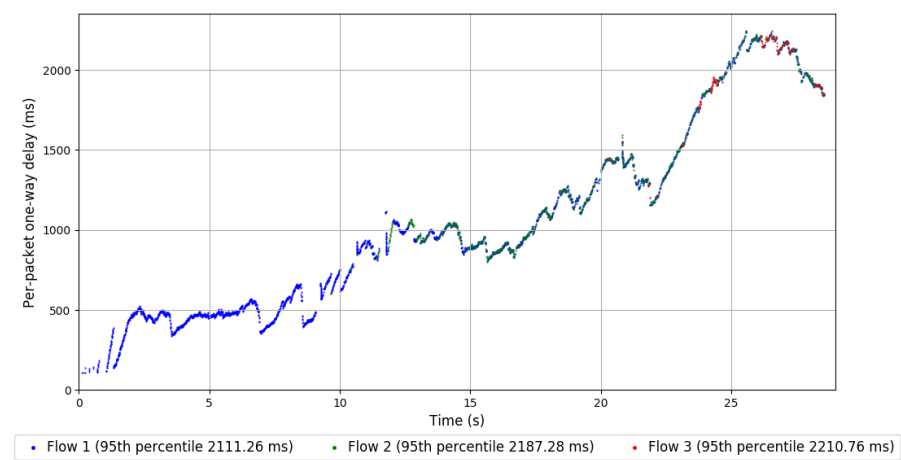
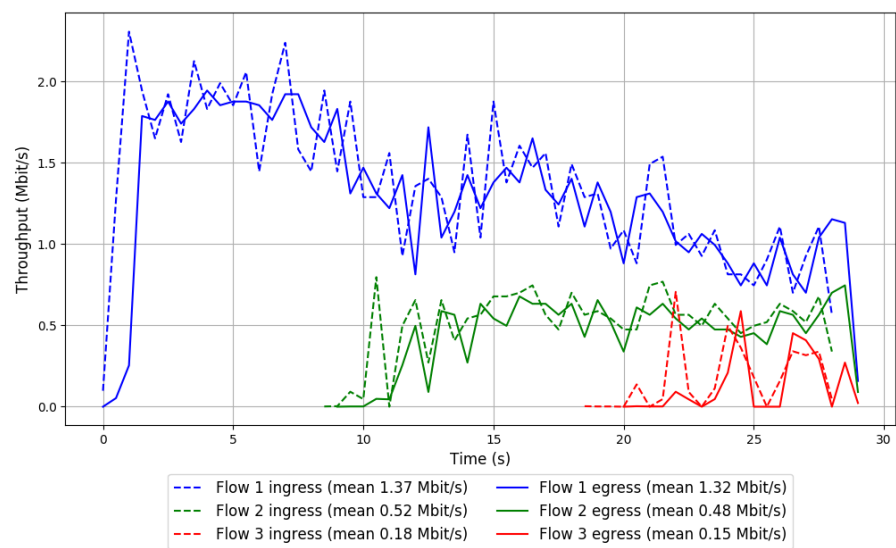
-- Flow 3:

Average throughput: 0.15 Mbit/s

95th percentile per-packet one-way delay: 2210.757 ms

Loss rate: 27.12%

Run 1: Report of QUIC Cubic — Data Link

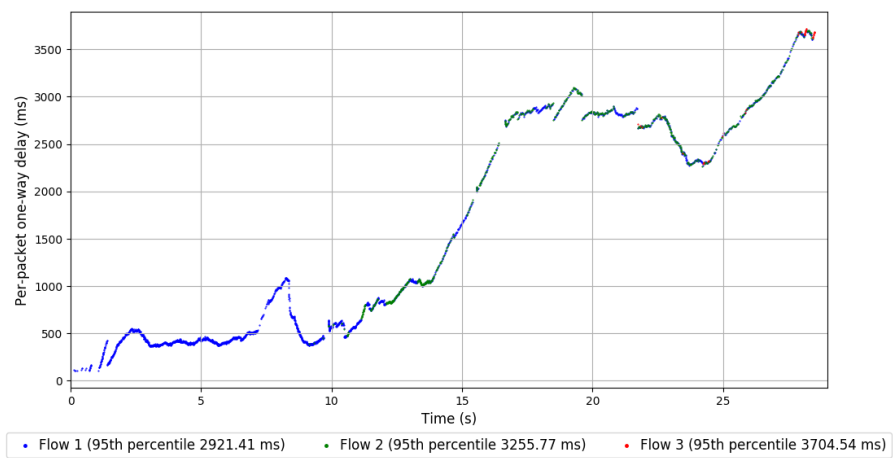
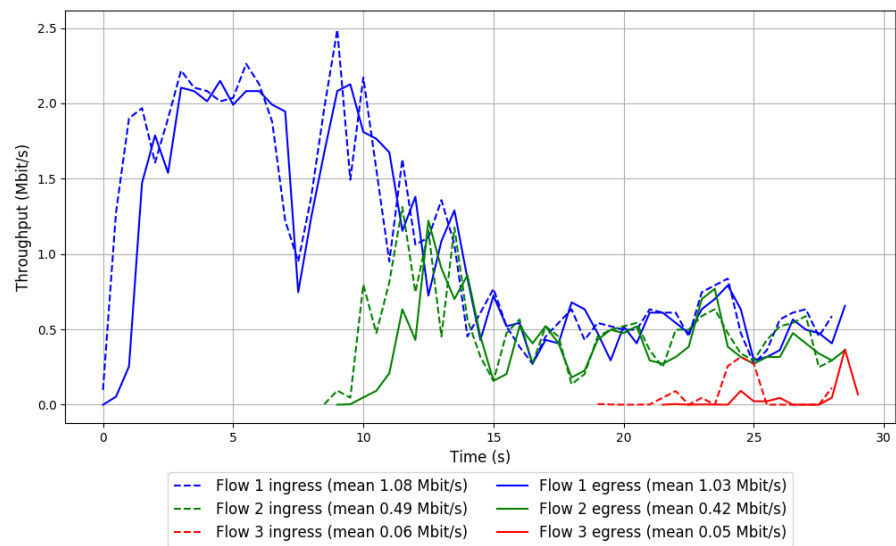


Run 2: Statistics of QUIC Cubic

Start at: 2018-07-17 15:44:35
End at: 2018-07-17 15:45:05
Local clock offset: -2.662 ms
Remote clock offset: 10.215 ms

Below is generated by plot.py at 2018-07-17 16:10:06
Datalink statistics
-- Total of 3 flows:
Average throughput: 1.32 Mbit/s
95th percentile per-packet one-way delay: 3086.545 ms
Loss rate: 8.60%
-- Flow 1:
Average throughput: 1.03 Mbit/s
95th percentile per-packet one-way delay: 2921.411 ms
Loss rate: 5.84%
-- Flow 2:
Average throughput: 0.42 Mbit/s
95th percentile per-packet one-way delay: 3255.768 ms
Loss rate: 15.46%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 3704.536 ms
Loss rate: 41.41%

Run 2: Report of QUIC Cubic — Data Link

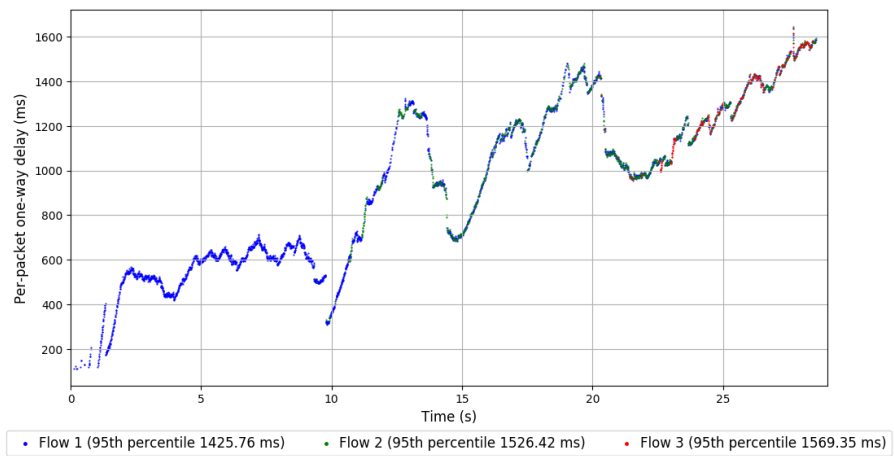
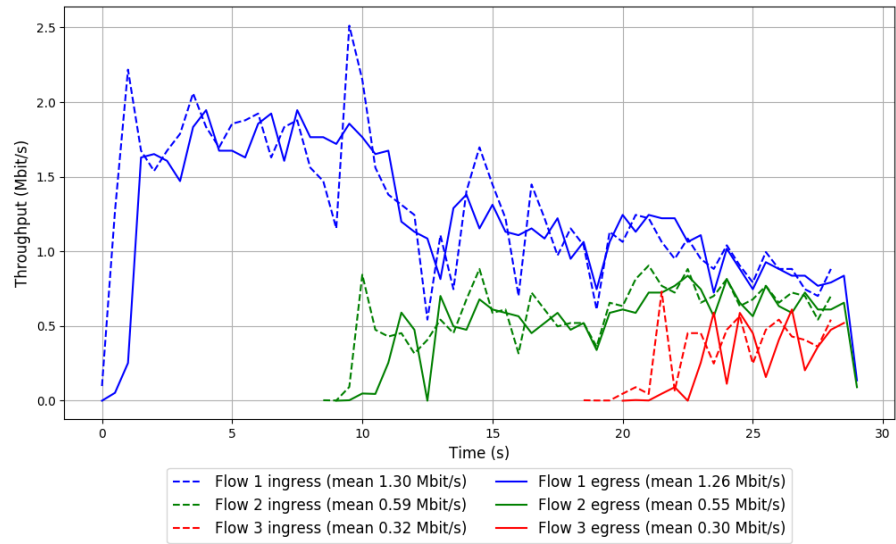


Run 3: Statistics of QUIC Cubic

Start at: 2018-07-17 16:05:10
End at: 2018-07-17 16:05:40
Local clock offset: -2.855 ms
Remote clock offset: 15.932 ms

Below is generated by plot.py at 2018-07-17 16:10:06
Datalink statistics
-- Total of 3 flows:
Average throughput: 1.72 Mbit/s
95th percentile per-packet one-way delay: 1469.508 ms
Loss rate: 5.58%
-- Flow 1:
Average throughput: 1.26 Mbit/s
95th percentile per-packet one-way delay: 1425.760 ms
Loss rate: 3.34%
-- Flow 2:
Average throughput: 0.55 Mbit/s
95th percentile per-packet one-way delay: 1526.425 ms
Loss rate: 8.55%
-- Flow 3:
Average throughput: 0.30 Mbit/s
95th percentile per-packet one-way delay: 1569.353 ms
Loss rate: 21.20%

Run 3: Report of QUIC Cubic — Data Link

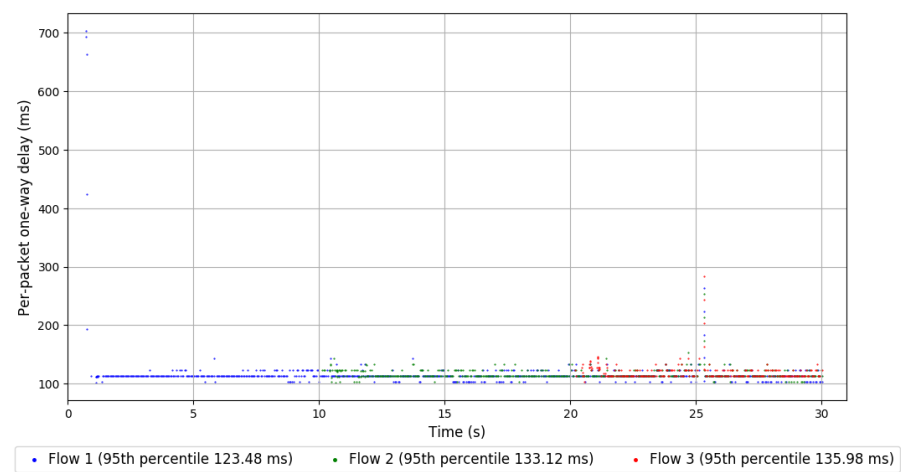
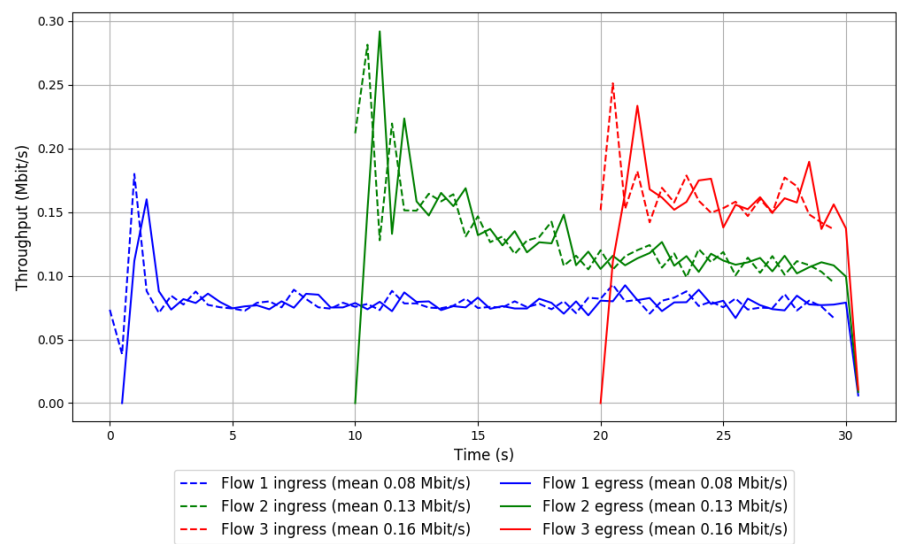


```
Run 1: Statistics of SCReAM

Start at: 2018-07-17 15:11:52
End at: 2018-07-17 15:12:22
Local clock offset: -2.508 ms
Remote clock offset: 4.465 ms

# Below is generated by plot.py at 2018-07-17 16:10:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 133.113 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 123.480 ms
Loss rate: 0.27%
-- Flow 2:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 133.121 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 135.980 ms
Loss rate: 0.89%
```

Run 1: Report of SCSReAM — Data Link

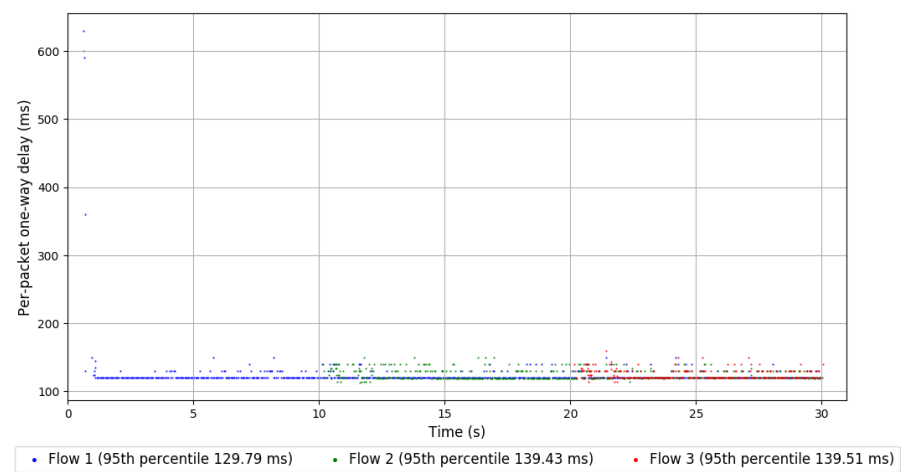
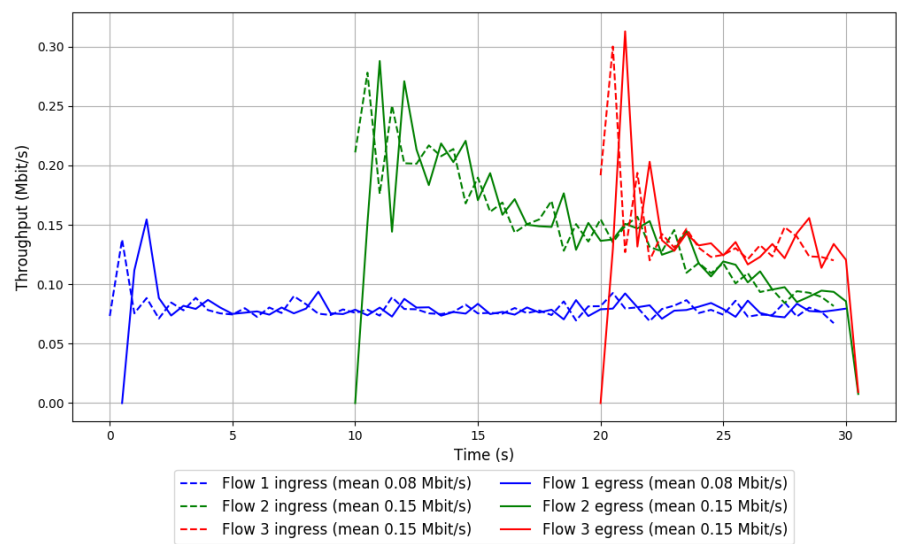


Run 2: Statistics of SCReAM

Start at: 2018-07-17 15:32:31
End at: 2018-07-17 15:33:01
Local clock offset: -2.445 ms
Remote clock offset: 15.018 ms

Below is generated by plot.py at 2018-07-17 16:10:06
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.23 Mbit/s
95th percentile per-packet one-way delay: 139.452 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 129.795 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 139.433 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 139.512 ms
Loss rate: 0.33%

Run 2: Report of SReAM — Data Link

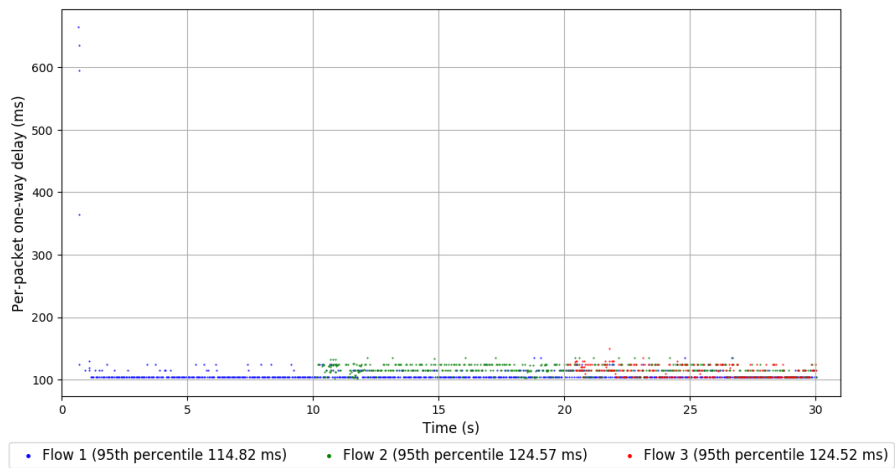
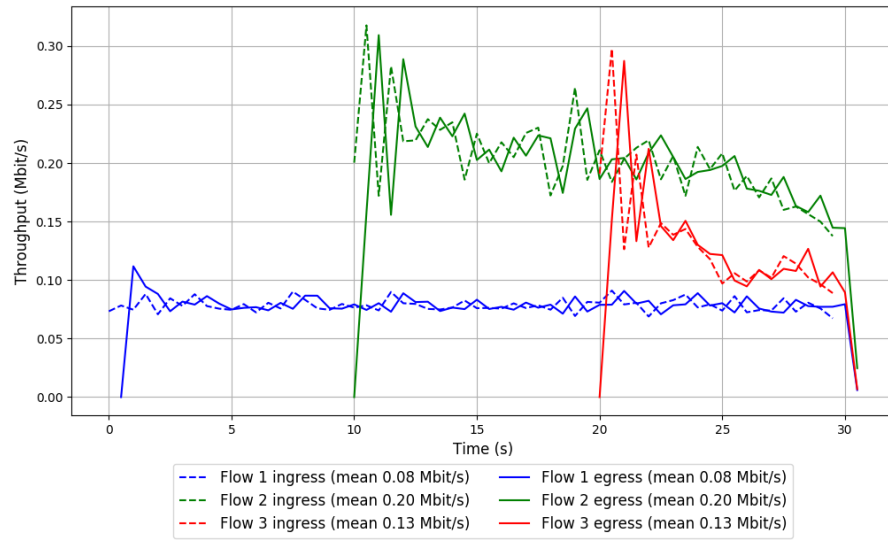


Run 3: Statistics of SReAM

Start at: 2018-07-17 15:53:07
End at: 2018-07-17 15:53:37
Local clock offset: -2.678 ms
Remote clock offset: 11.233 ms

Below is generated by plot.py at 2018-07-17 16:10:06
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.26 Mbit/s
95th percentile per-packet one-way delay: 124.529 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 114.820 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 124.573 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 124.521 ms
Loss rate: 1.02%

Run 3: Report of SReAM — Data Link

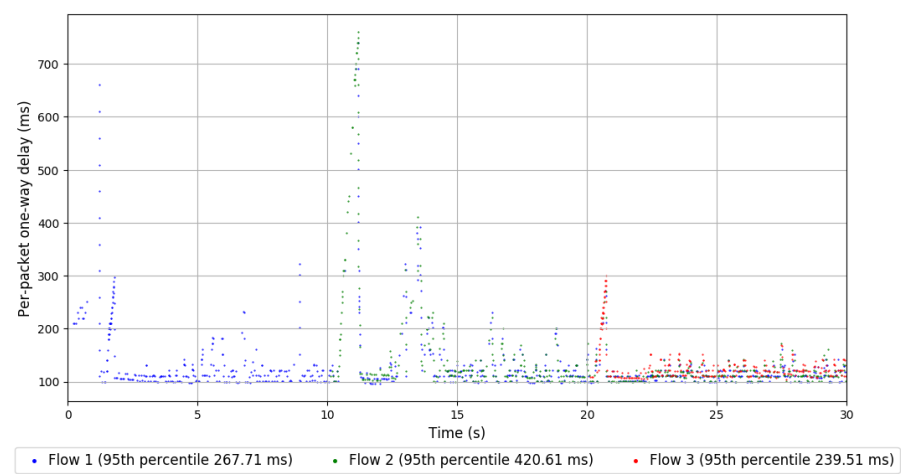
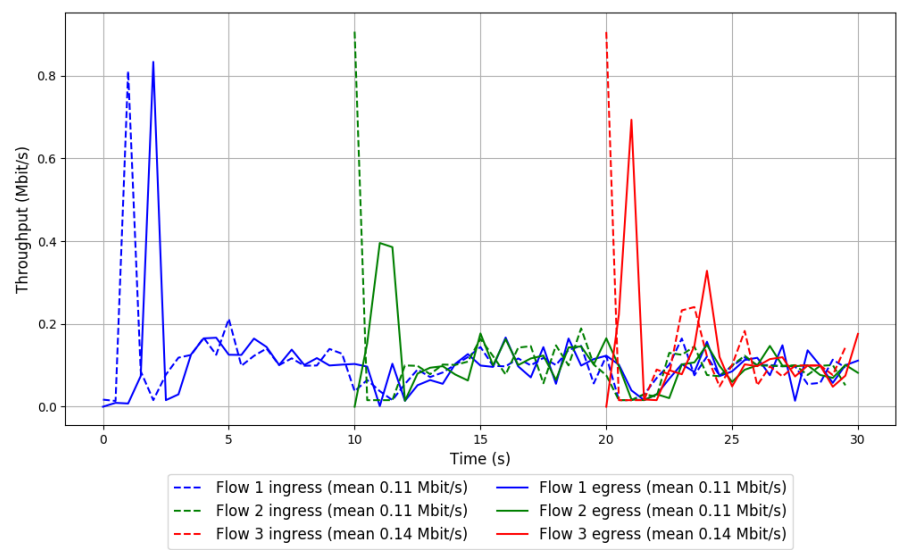


Run 1: Statistics of Sprout

Start at: 2018-07-17 15:15:28
End at: 2018-07-17 15:15:58
Local clock offset: -2.297 ms
Remote clock offset: 5.884 ms

Below is generated by plot.py at 2018-07-17 16:10:06
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.23 Mbit/s
95th percentile per-packet one-way delay: 289.988 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 0.11 Mbit/s
95th percentile per-packet one-way delay: 267.706 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.11 Mbit/s
95th percentile per-packet one-way delay: 420.613 ms
Loss rate: 0.57%
-- Flow 3:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 239.510 ms
Loss rate: 0.85%

Run 1: Report of Sprout — Data Link

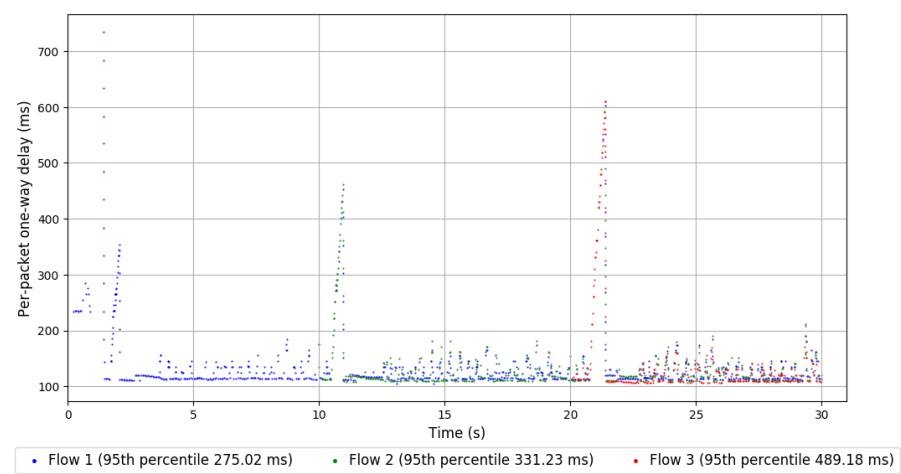
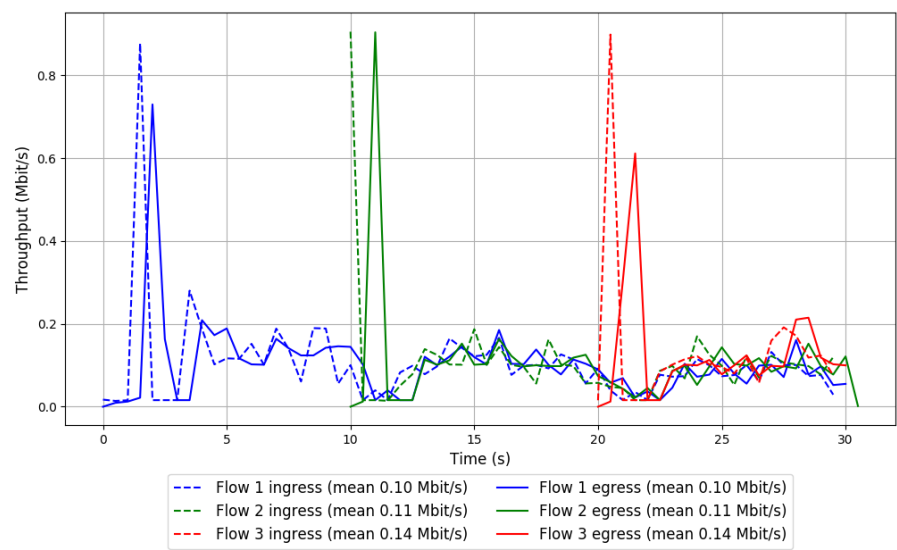


Run 2: Statistics of Sprout

Start at: 2018-07-17 15:36:07
End at: 2018-07-17 15:36:37
Local clock offset: -2.618 ms
Remote clock offset: 14.296 ms

Below is generated by plot.py at 2018-07-17 16:10:06
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 334.421 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 0.10 Mbit/s
95th percentile per-packet one-way delay: 275.018 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 0.11 Mbit/s
95th percentile per-packet one-way delay: 331.225 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 489.177 ms
Loss rate: 0.00%

Run 2: Report of Sprout — Data Link

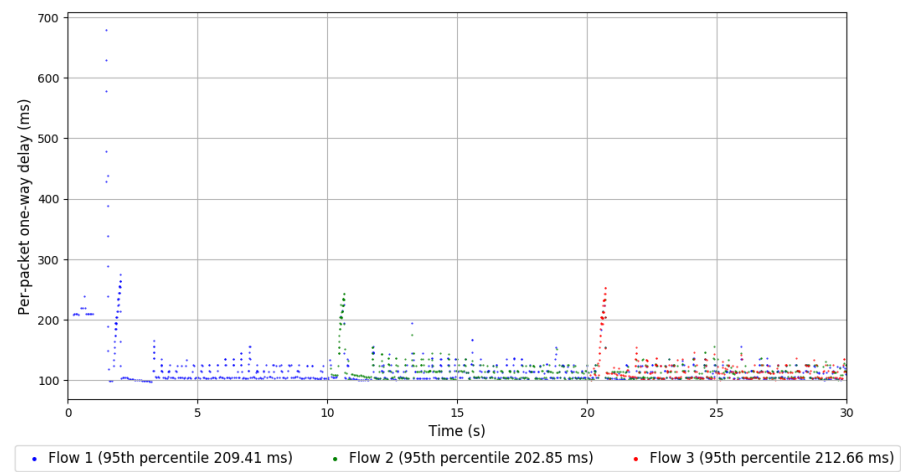
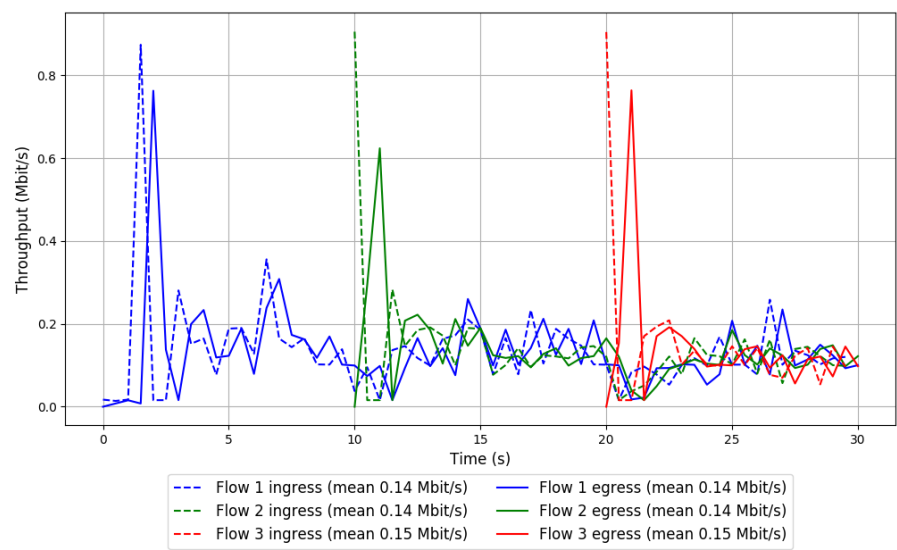


Run 3: Statistics of Sprout

Start at: 2018-07-17 15:56:42
End at: 2018-07-17 15:57:12
Local clock offset: -2.702 ms
Remote clock offset: 10.297 ms

```
# Below is generated by plot.py at 2018-07-17 16:10:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.28 Mbit/s
95th percentile per-packet one-way delay: 208.933 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 209.408 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 202.850 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 212.657 ms
Loss rate: 0.88%
```

Run 3: Report of Sprout — Data Link



Run 1: Statistics of TaoVA-100x

Start at: 2018-07-17 15:16:41

End at: 2018-07-17 15:17:11

Local clock offset: -2.249 ms

Remote clock offset: 7.353 ms

Below is generated by plot.py at 2018-07-17 16:10:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.47 Mbit/s

95th percentile per-packet one-way delay: 1863.033 ms

Loss rate: 2.52%

-- Flow 1:

Average throughput: 0.85 Mbit/s

95th percentile per-packet one-way delay: 1220.349 ms

Loss rate: 1.81%

-- Flow 2:

Average throughput: 0.66 Mbit/s

95th percentile per-packet one-way delay: 1979.149 ms

Loss rate: 4.10%

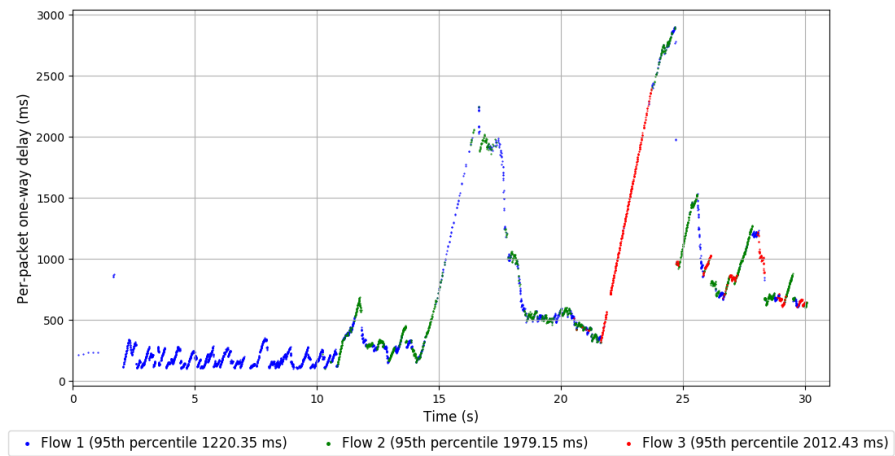
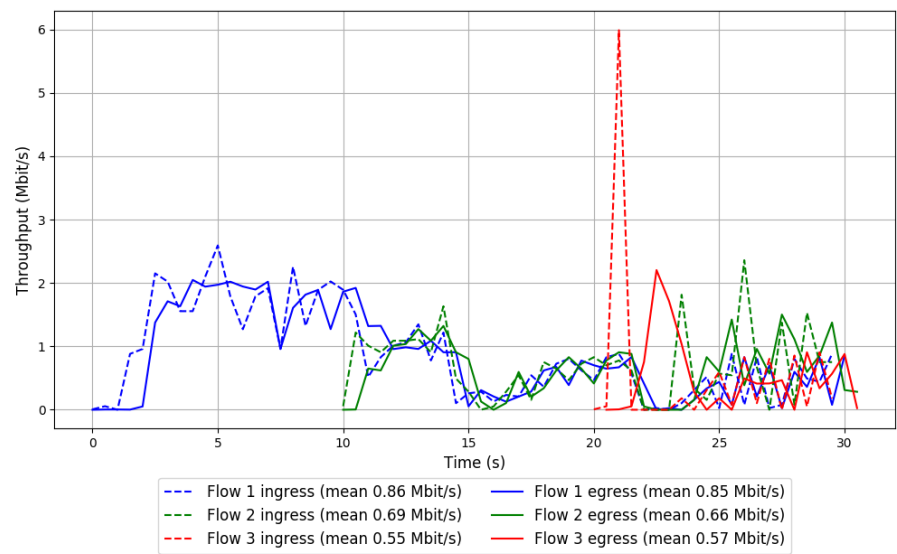
-- Flow 3:

Average throughput: 0.57 Mbit/s

95th percentile per-packet one-way delay: 2012.433 ms

Loss rate: 1.91%

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

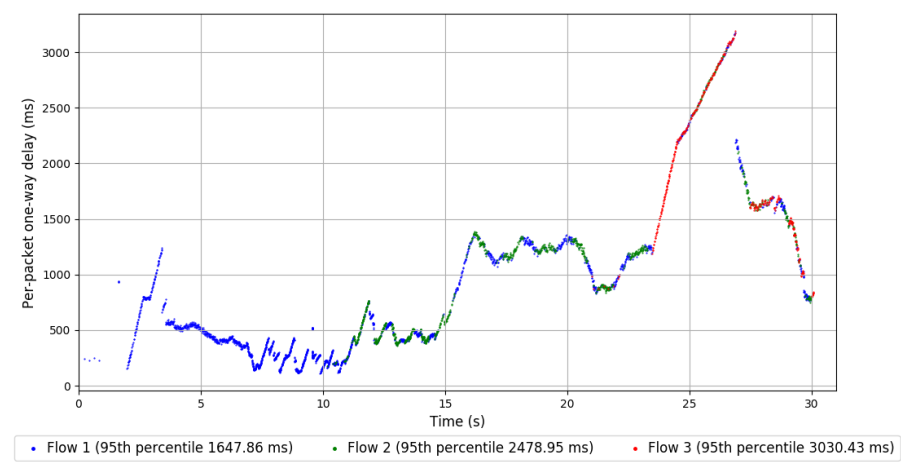
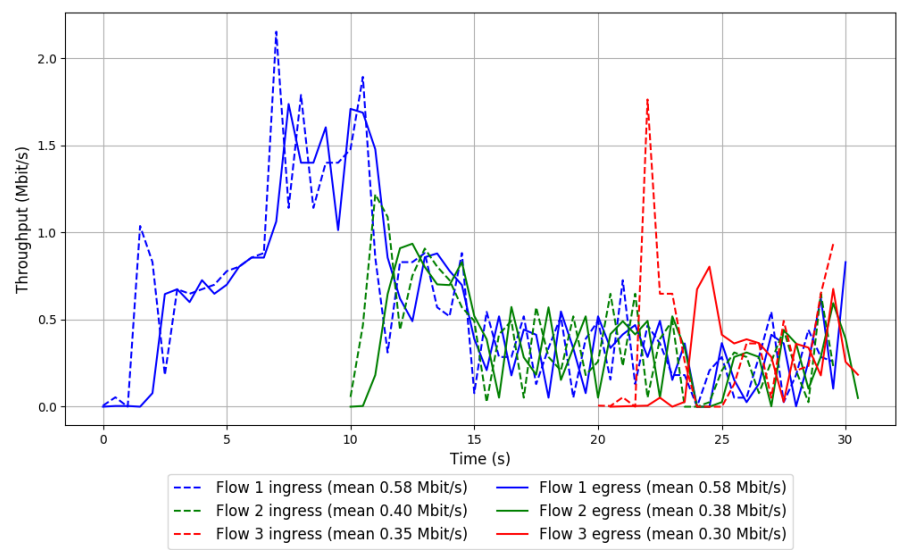


Run 2: Statistics of TaoVA-100x

Start at: 2018-07-17 15:37:19
End at: 2018-07-17 15:37:49
Local clock offset: -2.569 ms
Remote clock offset: 14.431 ms

Below is generated by plot.py at 2018-07-17 16:10:06
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.92 Mbit/s
95th percentile per-packet one-way delay: 2406.354 ms
Loss rate: 3.90%
-- Flow 1:
Average throughput: 0.58 Mbit/s
95th percentile per-packet one-way delay: 1647.861 ms
Loss rate: 0.91%
-- Flow 2:
Average throughput: 0.38 Mbit/s
95th percentile per-packet one-way delay: 2478.950 ms
Loss rate: 3.30%
-- Flow 3:
Average throughput: 0.30 Mbit/s
95th percentile per-packet one-way delay: 3030.427 ms
Loss rate: 20.54%

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

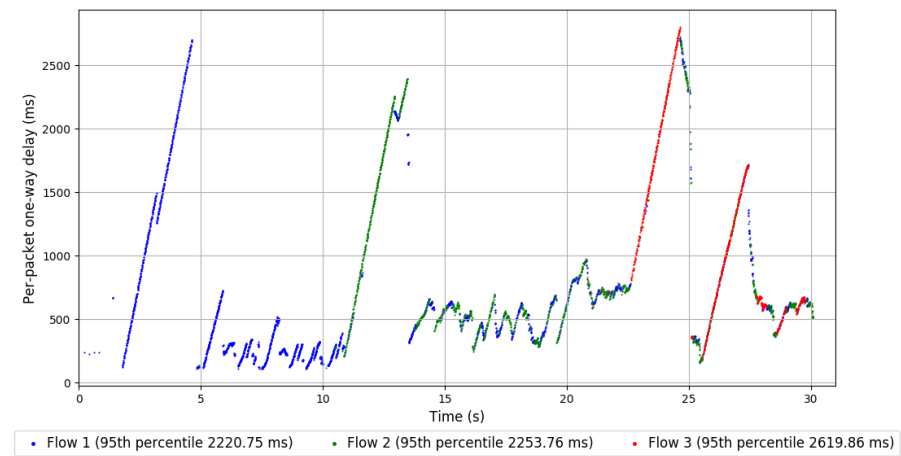
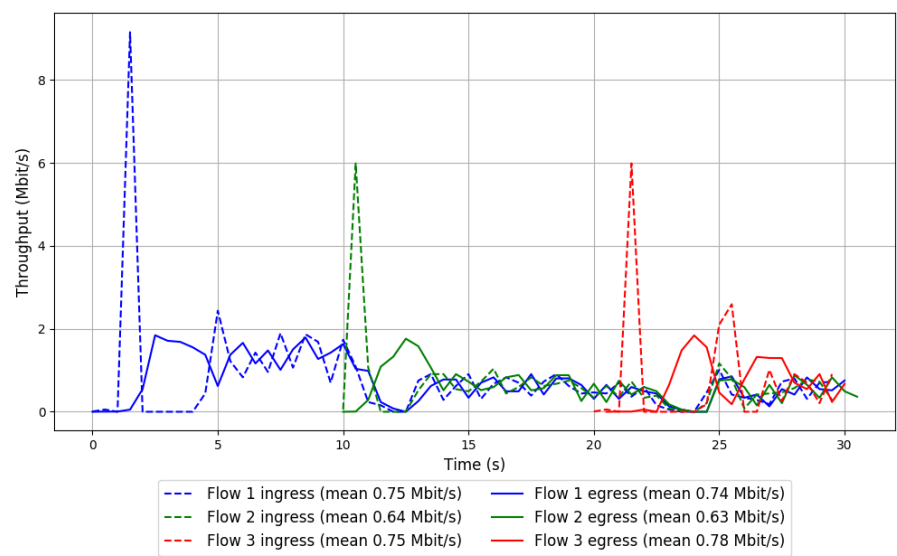


Run 3: Statistics of TaoVA-100x

Start at: 2018-07-17 15:57:54
End at: 2018-07-17 15:58:24
Local clock offset: -2.804 ms
Remote clock offset: 16.541 ms

Below is generated by plot.py at 2018-07-17 16:10:06
Datalink statistics
-- Total of 3 flows:
Average throughput: 1.39 Mbit/s
95th percentile per-packet one-way delay: 2322.550 ms
Loss rate: 2.28%
-- Flow 1:
Average throughput: 0.74 Mbit/s
95th percentile per-packet one-way delay: 2220.753 ms
Loss rate: 1.69%
-- Flow 2:
Average throughput: 0.63 Mbit/s
95th percentile per-packet one-way delay: 2253.762 ms
Loss rate: 1.01%
-- Flow 3:
Average throughput: 0.78 Mbit/s
95th percentile per-packet one-way delay: 2619.861 ms
Loss rate: 6.26%

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



Run 1: Statistics of TCP Vegas

Start at: 2018-07-17 15:09:27

End at: 2018-07-17 15:09:57

Local clock offset: -2.582 ms

Remote clock offset: 3.571 ms

Below is generated by plot.py at 2018-07-17 16:10:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.36 Mbit/s

95th percentile per-packet one-way delay: 984.690 ms

Loss rate: 2.29%

-- Flow 1:

Average throughput: 0.82 Mbit/s

95th percentile per-packet one-way delay: 969.527 ms

Loss rate: 1.68%

-- Flow 2:

Average throughput: 0.66 Mbit/s

95th percentile per-packet one-way delay: 994.837 ms

Loss rate: 3.60%

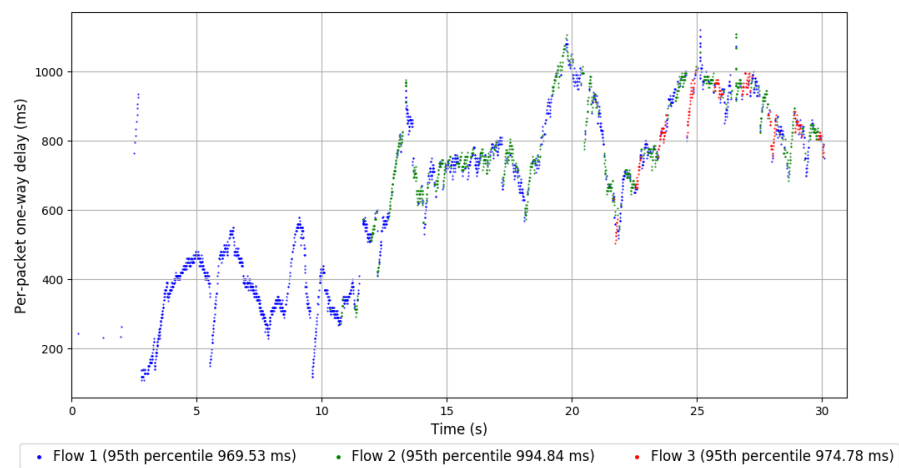
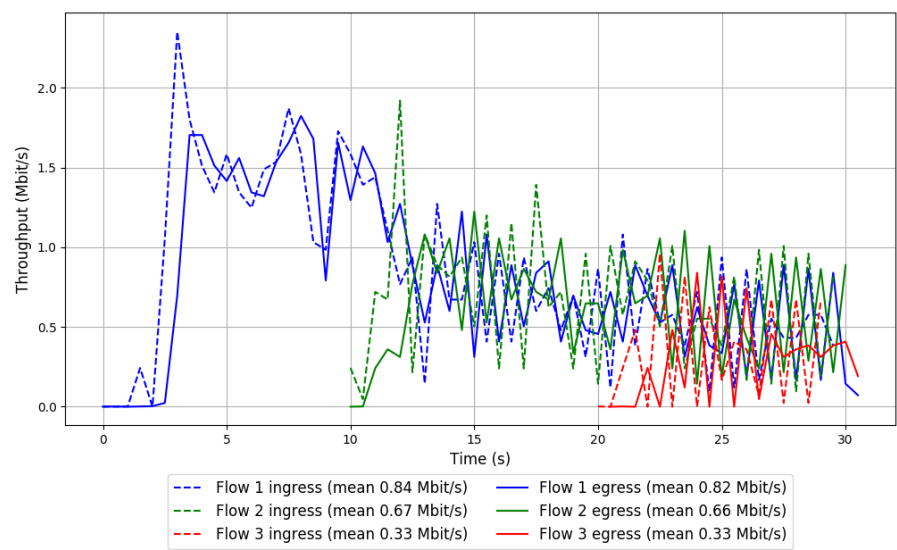
-- Flow 3:

Average throughput: 0.33 Mbit/s

95th percentile per-packet one-way delay: 974.778 ms

Loss rate: 1.55%

Run 1: Report of TCP Vegas — Data Link

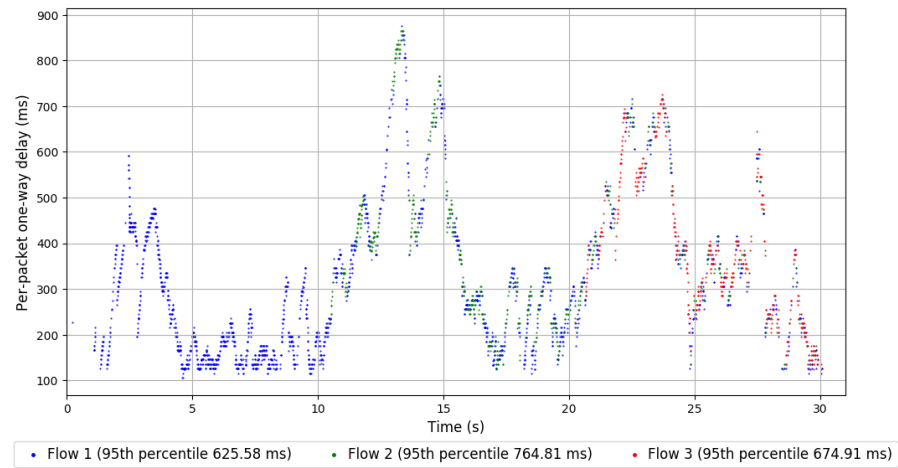
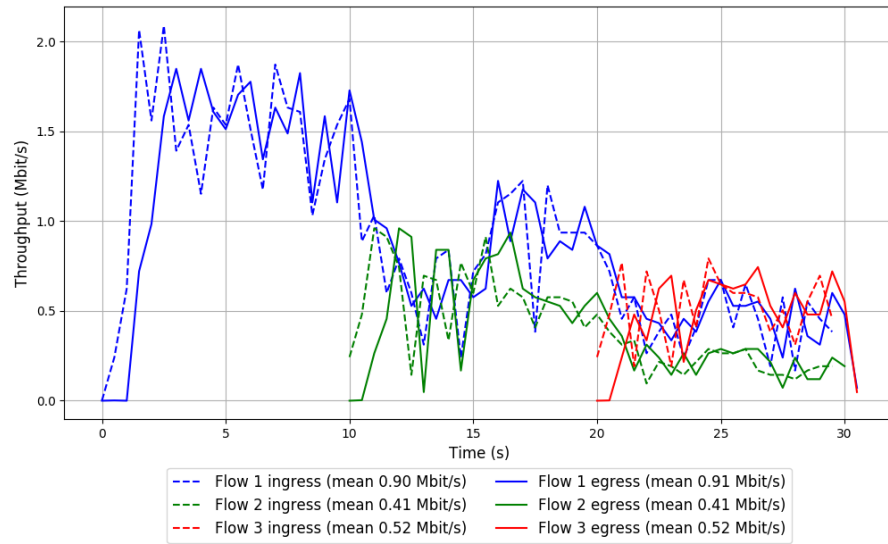


Run 2: Statistics of TCP Vegas

Start at: 2018-07-17 15:30:07
End at: 2018-07-17 15:30:37
Local clock offset: -2.332 ms
Remote clock offset: 12.306 ms

Below is generated by plot.py at 2018-07-17 16:10:06
Datalink statistics
-- Total of 3 flows:
Average throughput: 1.35 Mbit/s
95th percentile per-packet one-way delay: 675.087 ms
Loss rate: 0.21%
-- Flow 1:
Average throughput: 0.91 Mbit/s
95th percentile per-packet one-way delay: 625.582 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 0.41 Mbit/s
95th percentile per-packet one-way delay: 764.813 ms
Loss rate: 0.59%
-- Flow 3:
Average throughput: 0.52 Mbit/s
95th percentile per-packet one-way delay: 674.914 ms
Loss rate: 0.47%

Run 2: Report of TCP Vegas — Data Link

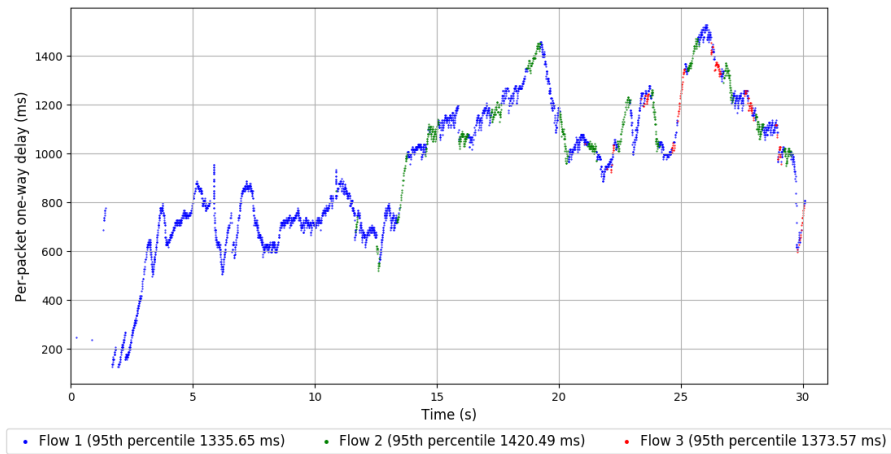
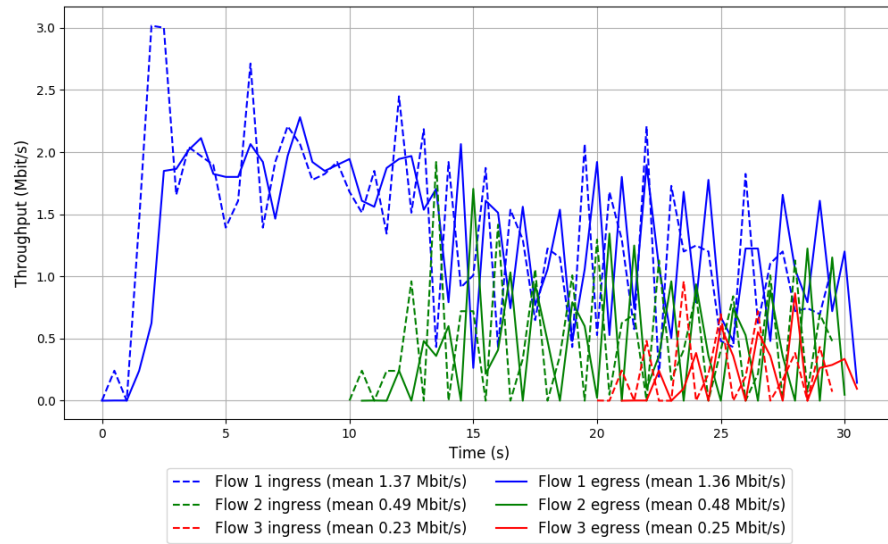


Run 3: Statistics of TCP Vegas

Start at: 2018-07-17 15:50:40
End at: 2018-07-17 15:51:10
Local clock offset: -2.656 ms
Remote clock offset: 14.099 ms

Below is generated by plot.py at 2018-07-17 16:10:06
Datalink statistics
-- Total of 3 flows:
Average throughput: 1.74 Mbit/s
95th percentile per-packet one-way delay: 1370.501 ms
Loss rate: 2.40%
-- Flow 1:
Average throughput: 1.36 Mbit/s
95th percentile per-packet one-way delay: 1335.654 ms
Loss rate: 1.52%
-- Flow 2:
Average throughput: 0.48 Mbit/s
95th percentile per-packet one-way delay: 1420.491 ms
Loss rate: 6.09%
-- Flow 3:
Average throughput: 0.25 Mbit/s
95th percentile per-packet one-way delay: 1373.572 ms
Loss rate: 2.63%

Run 3: Report of TCP Vegas — Data Link

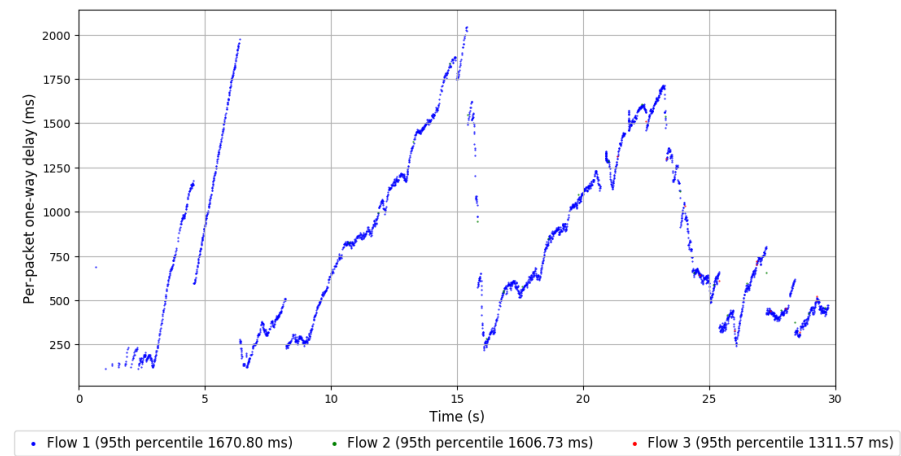
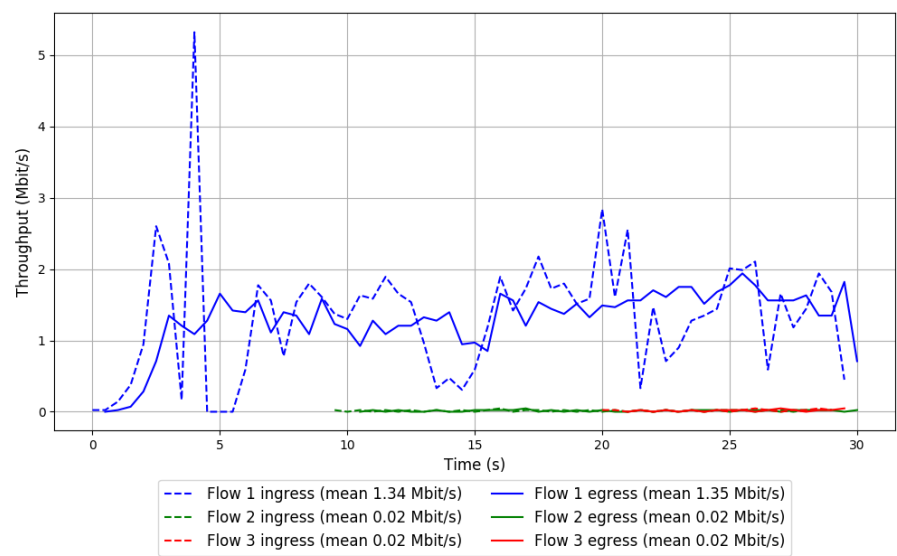


Run 1: Statistics of Verus

Start at: 2018-07-17 15:20:18
End at: 2018-07-17 15:20:48
Local clock offset: -2.189 ms
Remote clock offset: 13.016 ms

Below is generated by plot.py at 2018-07-17 16:10:06
Datalink statistics
-- Total of 3 flows:
Average throughput: 1.36 Mbit/s
95th percentile per-packet one-way delay: 1670.503 ms
Loss rate: 1.73%
-- Flow 1:
Average throughput: 1.35 Mbit/s
95th percentile per-packet one-way delay: 1670.799 ms
Loss rate: 1.73%
-- Flow 2:
Average throughput: 0.02 Mbit/s
95th percentile per-packet one-way delay: 1606.735 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.02 Mbit/s
95th percentile per-packet one-way delay: 1311.568 ms
Loss rate: 6.67%

Run 1: Report of Verus — Data Link

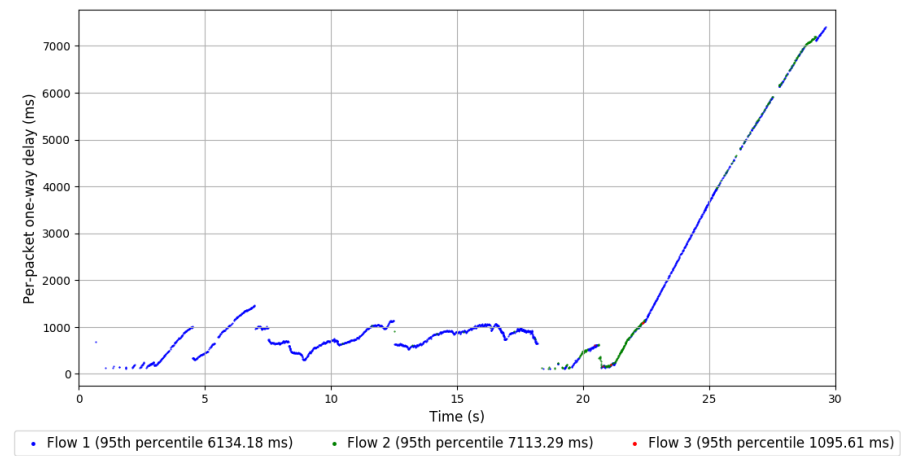
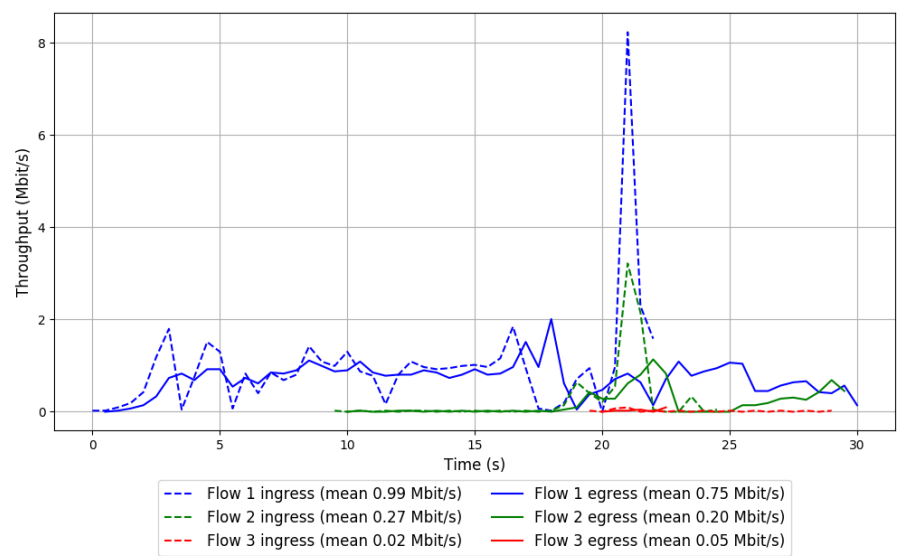


Run 2: Statistics of Verus

Start at: 2018-07-17 15:40:57
End at: 2018-07-17 15:41:27
Local clock offset: -2.706 ms
Remote clock offset: 11.021 ms

Below is generated by plot.py at 2018-07-17 16:10:06
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.88 Mbit/s
95th percentile per-packet one-way delay: 6631.252 ms
Loss rate: 3.01%
-- Flow 1:
Average throughput: 0.75 Mbit/s
95th percentile per-packet one-way delay: 6134.184 ms
Loss rate: 2.30%
-- Flow 2:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 7113.291 ms
Loss rate: 4.75%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 1095.608 ms
Loss rate: 50.00%

Run 2: Report of Verus — Data Link

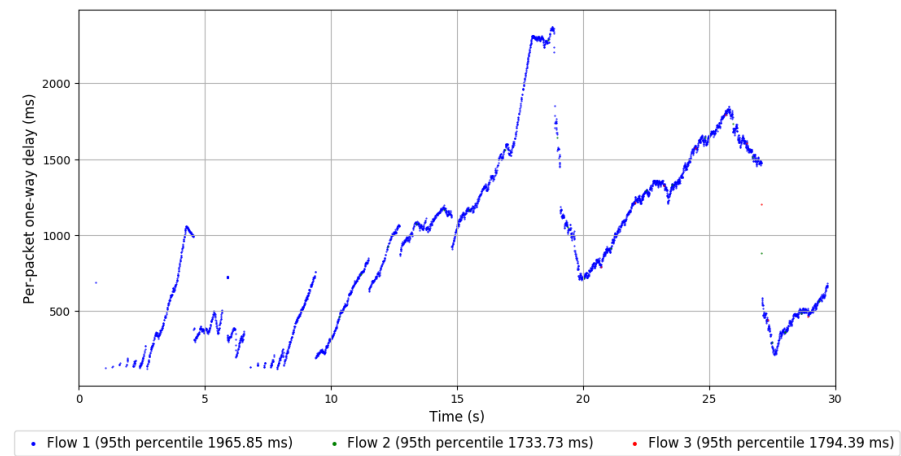
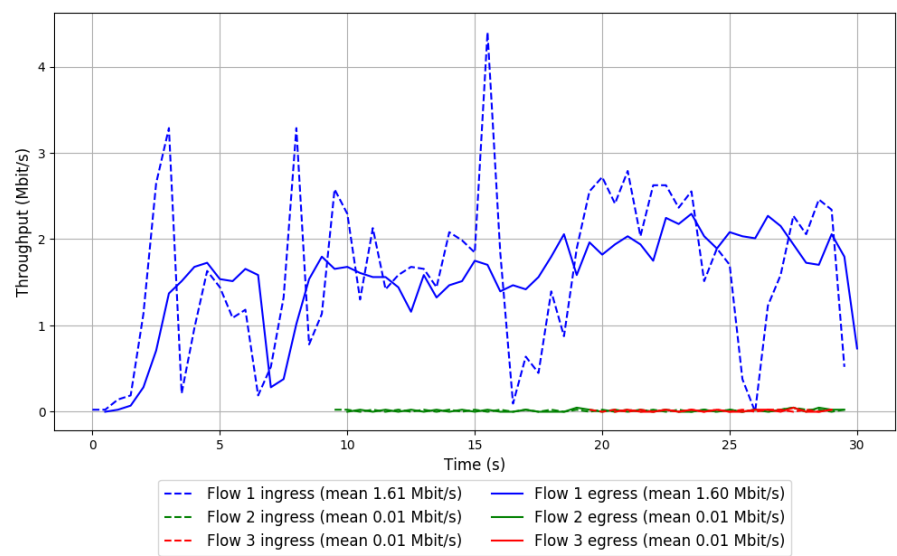


Run 3: Statistics of Verus

Start at: 2018-07-17 16:01:31
End at: 2018-07-17 16:02:01
Local clock offset: -2.807 ms
Remote clock offset: 16.703 ms

Below is generated by plot.py at 2018-07-17 16:10:06
Datalink statistics
-- Total of 3 flows:
Average throughput: 1.61 Mbit/s
95th percentile per-packet one-way delay: 1965.853 ms
Loss rate: 3.05%
-- Flow 1:
Average throughput: 1.60 Mbit/s
95th percentile per-packet one-way delay: 1965.853 ms
Loss rate: 3.00%
-- Flow 2:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 1733.733 ms
Loss rate: 4.17%
-- Flow 3:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 1794.392 ms
Loss rate: 18.18%

Run 3: Report of Verus — Data Link



Run 1: Statistics of PCC-Vivace

Start at: 2018-07-17 15:25:08

End at: 2018-07-17 15:25:38

Local clock offset: -2.046 ms

Remote clock offset: 13.76 ms

Below is generated by plot.py at 2018-07-17 16:10:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.76 Mbit/s

95th percentile per-packet one-way delay: 3887.107 ms

Loss rate: 28.30%

-- Flow 1:

Average throughput: 1.00 Mbit/s

95th percentile per-packet one-way delay: 3823.178 ms

Loss rate: 26.90%

-- Flow 2:

Average throughput: 1.15 Mbit/s

95th percentile per-packet one-way delay: 3908.472 ms

Loss rate: 30.06%

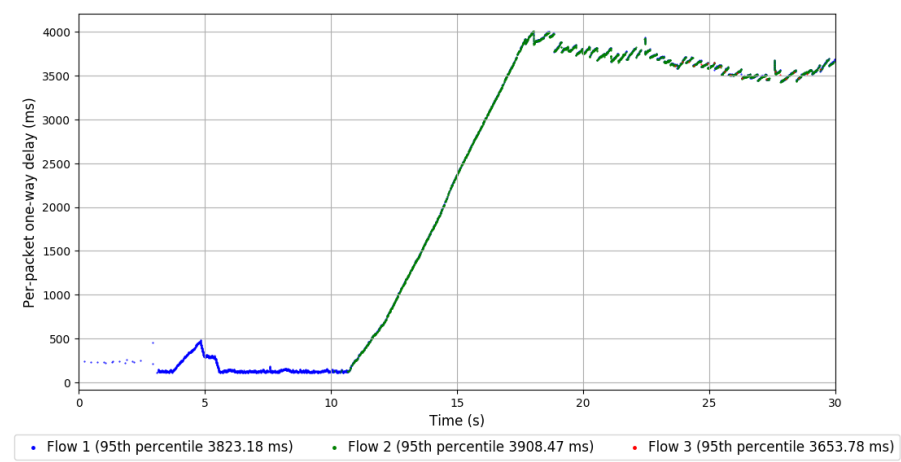
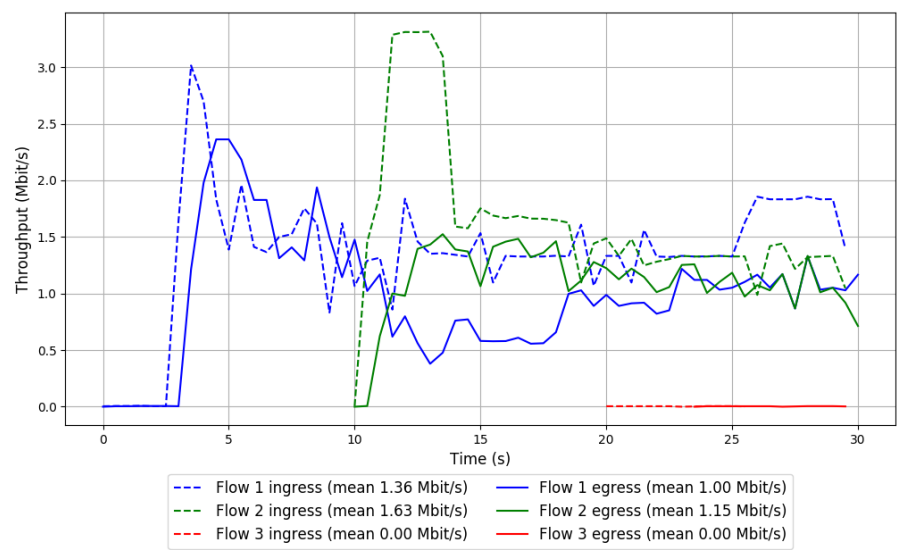
-- Flow 3:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 3653.782 ms

Loss rate: 0.00%

Run 1: Report of PCC-Vivace — Data Link

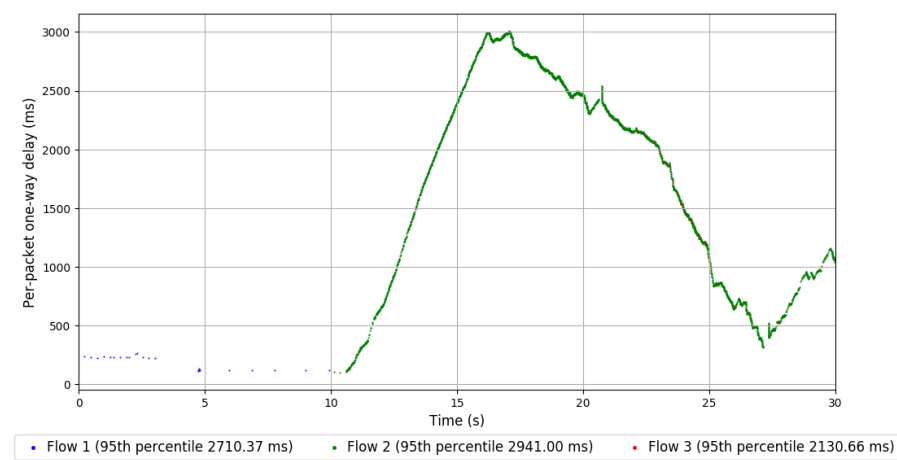
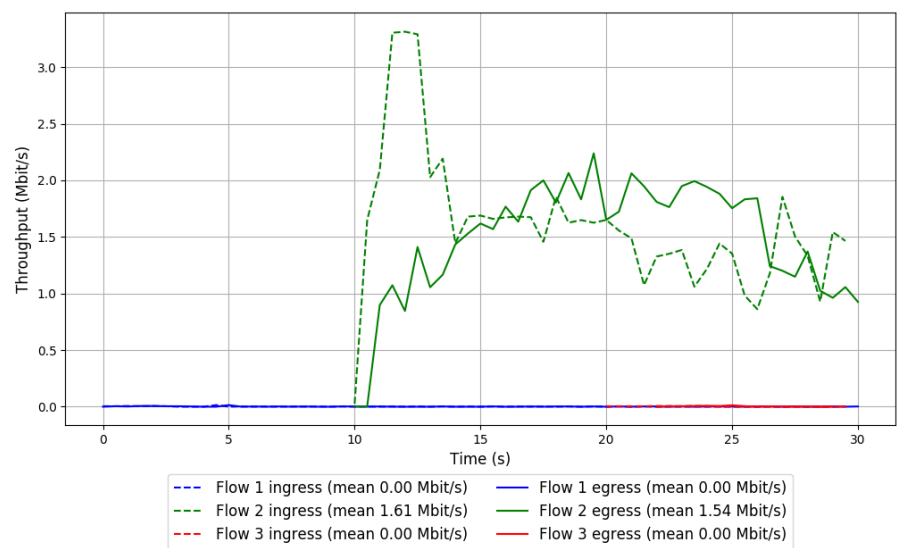


Run 2: Statistics of PCC-Vivace

Start at: 2018-07-17 15:45:48
End at: 2018-07-17 15:46:18
Local clock offset: -2.67 ms
Remote clock offset: 10.222 ms

Below is generated by plot.py at 2018-07-17 16:10:06
Datalink statistics
-- Total of 3 flows:
Average throughput: 1.03 Mbit/s
95th percentile per-packet one-way delay: 2940.202 ms
Loss rate: 5.02%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 2710.371 ms
Loss rate: 2.21%
-- Flow 2:
Average throughput: 1.54 Mbit/s
95th percentile per-packet one-way delay: 2941.001 ms
Loss rate: 5.02%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 2130.665 ms
Loss rate: 3.72%

Run 2: Report of PCC-Vivace — Data Link

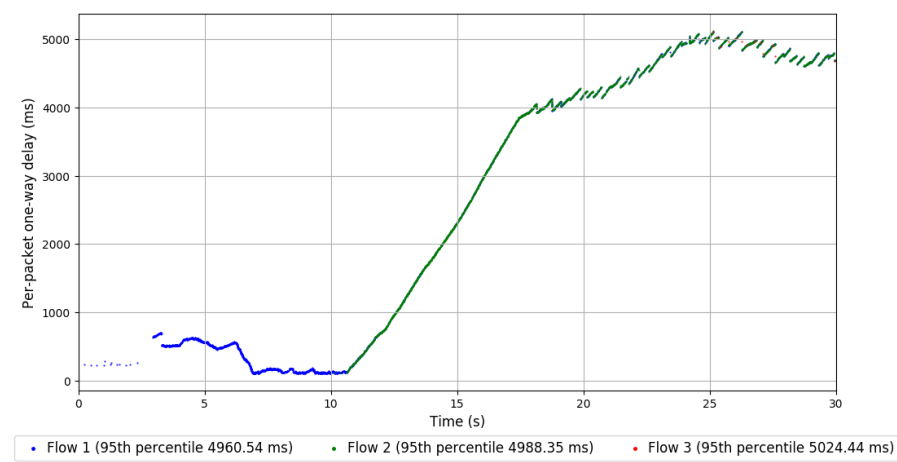
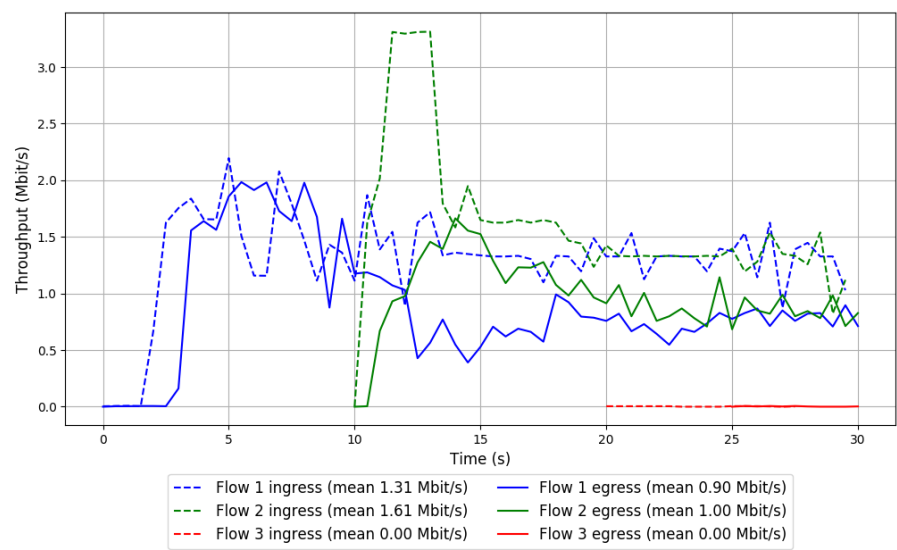


Run 3: Statistics of PCC-Vivace

Start at: 2018-07-17 16:06:22
End at: 2018-07-17 16:06:52
Local clock offset: -2.937 ms
Remote clock offset: 12.026 ms

```
# Below is generated by plot.py at 2018-07-17 16:10:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.57 Mbit/s
95th percentile per-packet one-way delay: 4974.396 ms
Loss rate: 34.20%
-- Flow 1:
Average throughput: 0.90 Mbit/s
95th percentile per-packet one-way delay: 4960.543 ms
Loss rate: 31.23%
-- Flow 2:
Average throughput: 1.00 Mbit/s
95th percentile per-packet one-way delay: 4988.351 ms
Loss rate: 37.81%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 5024.443 ms
Loss rate: 39.22%
```

Run 3: Report of PCC-Vivace — Data Link

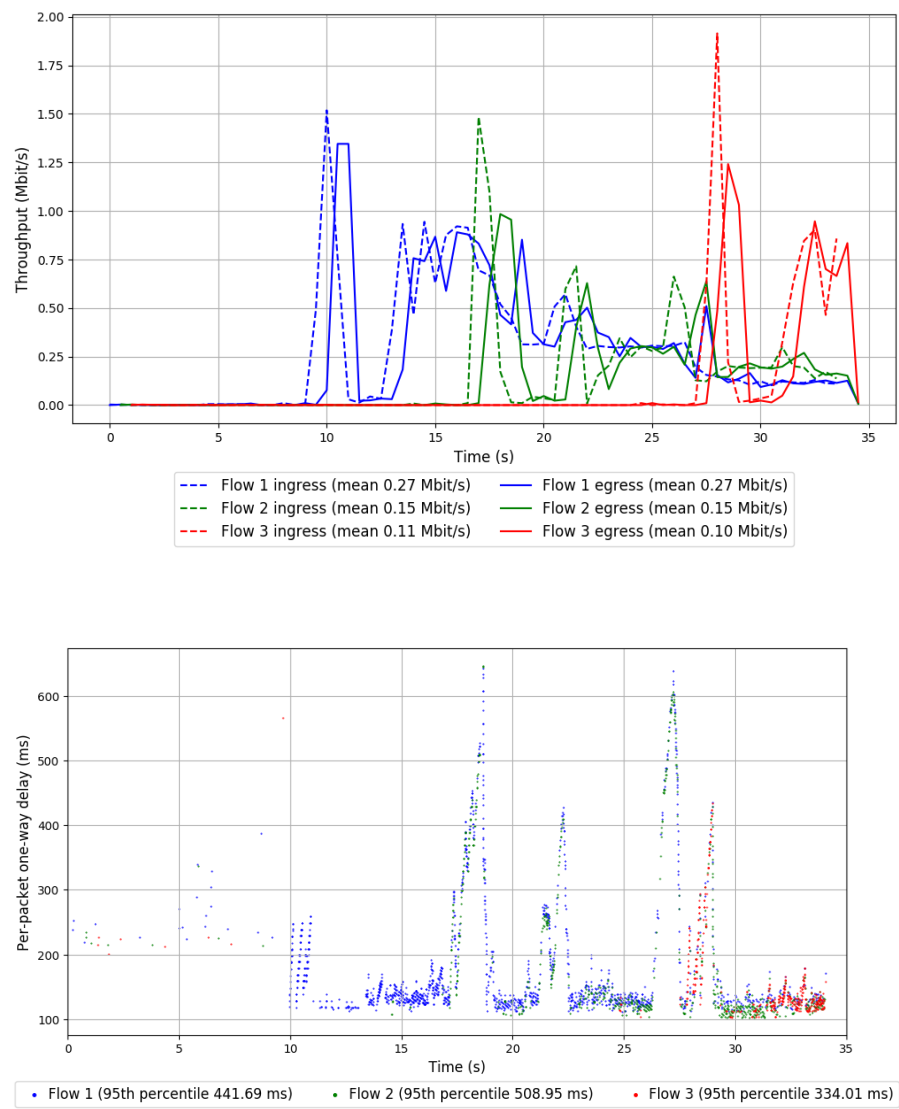


Run 1: Statistics of WebRTC media

Start at: 2018-07-17 15:17:53
End at: 2018-07-17 15:18:23
Local clock offset: -2.214 ms
Remote clock offset: 12.416 ms

Below is generated by plot.py at 2018-07-17 16:10:07
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.52 Mbit/s
95th percentile per-packet one-way delay: 454.318 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 0.27 Mbit/s
95th percentile per-packet one-way delay: 441.685 ms
Loss rate: 0.55%
-- Flow 2:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 508.952 ms
Loss rate: 0.16%
-- Flow 3:
Average throughput: 0.10 Mbit/s
95th percentile per-packet one-way delay: 334.015 ms
Loss rate: 1.79%

Run 1: Report of WebRTC media — Data Link

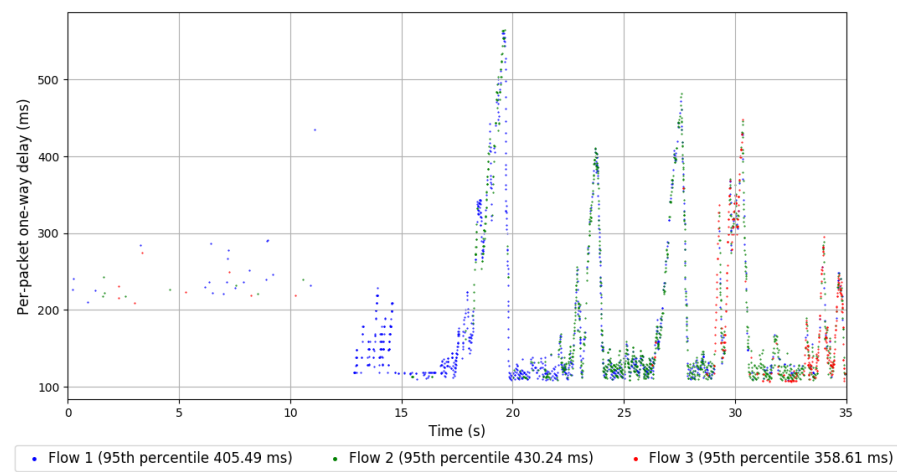
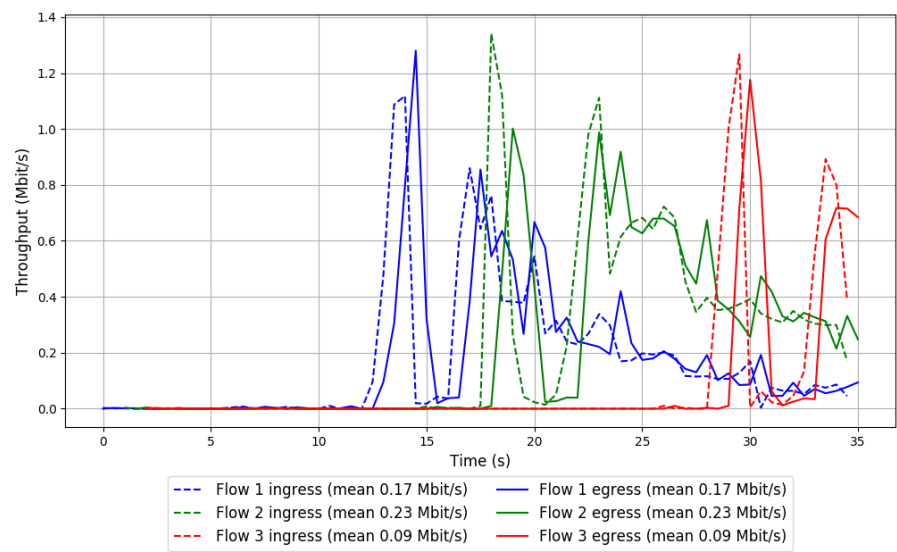


Run 2: Statistics of WebRTC media

Start at: 2018-07-17 15:38:33
End at: 2018-07-17 15:39:03
Local clock offset: -2.657 ms
Remote clock offset: 14.429 ms

Below is generated by plot.py at 2018-07-17 16:10:07
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.48 Mbit/s
95th percentile per-packet one-way delay: 409.021 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 405.488 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 0.23 Mbit/s
95th percentile per-packet one-way delay: 430.235 ms
Loss rate: 0.21%
-- Flow 3:
Average throughput: 0.09 Mbit/s
95th percentile per-packet one-way delay: 358.611 ms
Loss rate: 1.18%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2018-07-17 15:59:06
End at: 2018-07-17 15:59:36
Local clock offset: -2.83 ms
Remote clock offset: 16.607 ms

Below is generated by plot.py at 2018-07-17 16:10:07
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.56 Mbit/s
95th percentile per-packet one-way delay: 552.191 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 0.24 Mbit/s
95th percentile per-packet one-way delay: 518.402 ms
Loss rate: 1.04%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 584.342 ms
Loss rate: 0.27%
-- Flow 3:
Average throughput: 0.10 Mbit/s
95th percentile per-packet one-way delay: 534.705 ms
Loss rate: 0.52%

Run 3: Report of WebRTC media — Data Link

