

Pantheon Report

Generated at 2018-08-01 07:10:20 (UTC).

Data path: AWS India 1 Ethernet (*local*) → India 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.

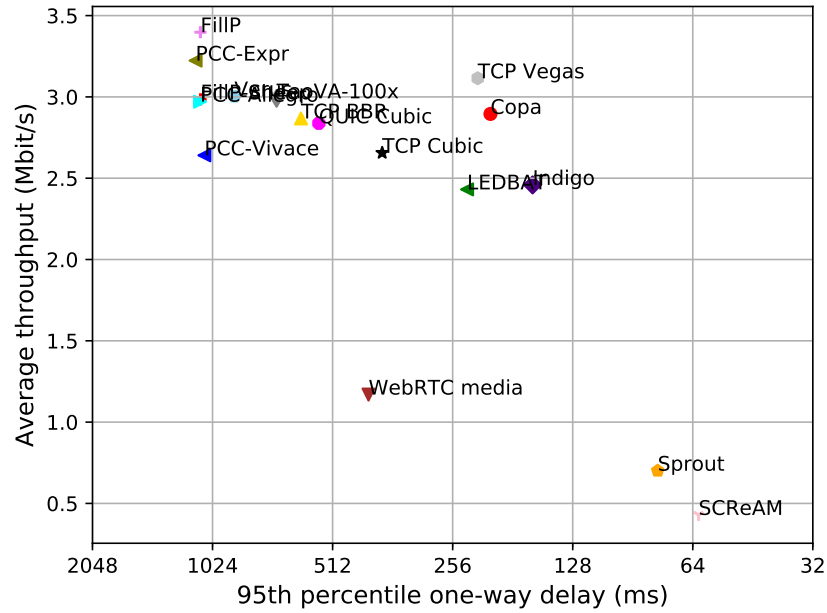
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

NTP offsets were measured against `nets.org.sg` and have been applied to correct the timestamps in logs.

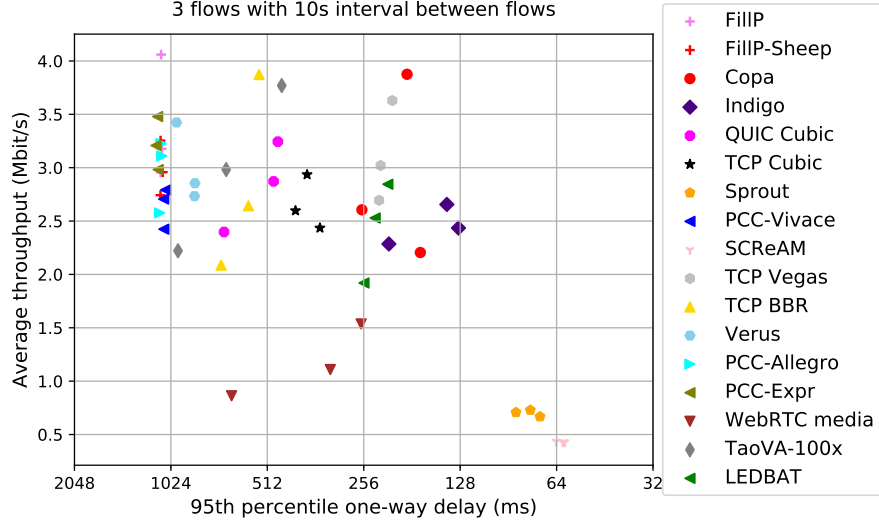
Git summary:

```
branch: master @ 640164b5b17c7c6561fff57729b3b5935d8596ce
third_party/fillp @ d47f4fa1b454a5e3c0537115c5a28436dbd4b834
third_party/fillp-sheep @ daed0c84f98531712514b2231f43ec6901114ffe
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf90c077e64d
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 India 1 to India ppp0, 3 runs of 30s each per scheme
 3 flows with 10s interval between flows (mean of all runs by scheme)



test from AWS India 1 to India ppp0, 3 runs of 30s each per scheme
 3 flows with 10s interval between flows



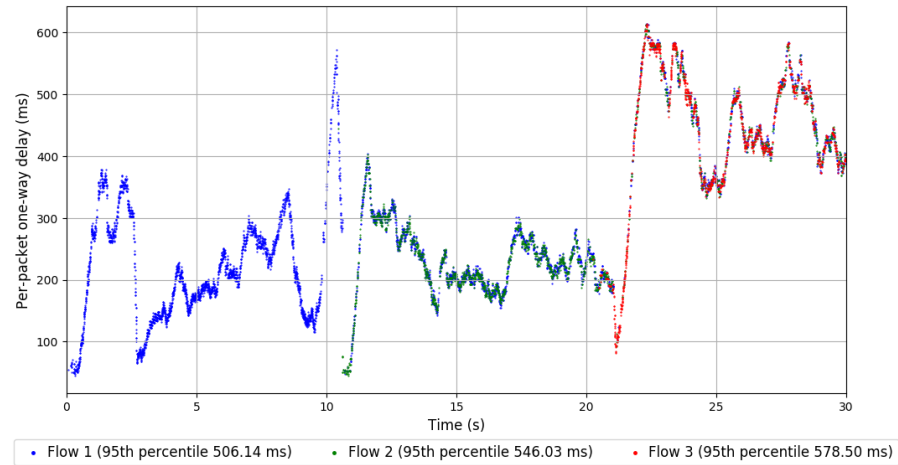
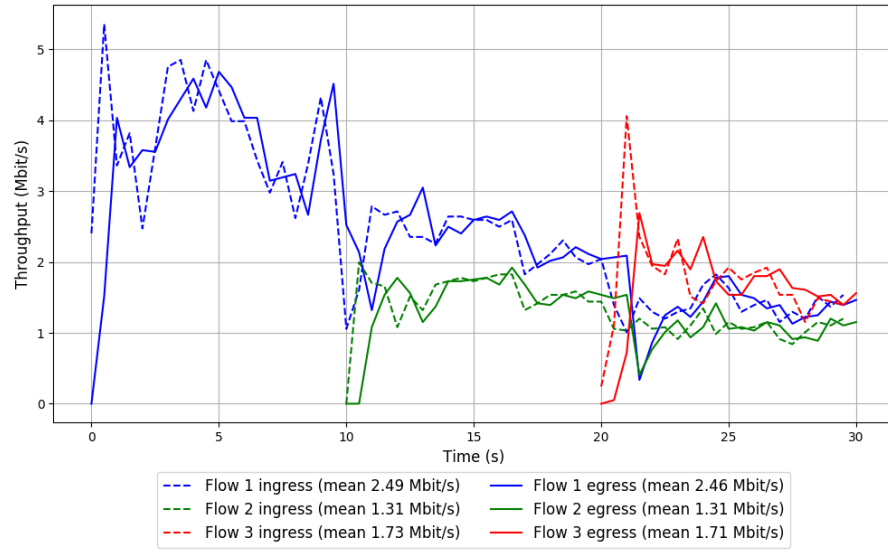
scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	3	1.80	0.93	1.40	598.22	650.22	601.36	1.41	2.42	3.82
Copa	3	1.85	1.18	0.80	175.15	224.27	227.80	0.21	0.43	1.12
TCP Cubic	3	1.56	1.07	1.19	332.94	400.72	425.77	0.60	1.87	2.53
FillP	3	2.47	1.00	1.04	1095.99	1095.86	1109.83	50.97	36.14	55.22
FillP-Sheep	3	1.75	1.18	1.47	1068.64	1095.79	1118.21	13.54	26.62	55.76
Indigo	3	1.22	1.13	1.50	126.38	206.10	260.89	0.21	0.27	0.79
LEDBAT	3	1.58	0.77	1.04	227.43	247.38	242.45	0.41	0.74	2.37
PCC-Allegro	3	1.61	1.52	1.18	1077.87	1087.11	1187.66	20.65	31.27	94.79
PCC-Expr	3	2.10	1.47	0.70	1119.58	1135.73	1135.32	57.29	79.47	86.31
QUIC Cubic	3	1.69	1.18	1.16	530.27	558.17	597.74	1.33	2.41	4.99
SCReAM	3	0.21	0.21	0.22	61.88	65.14	62.41	0.12	0.19	0.35
Sprout	3	0.33	0.37	0.37	78.71	80.51	77.81	0.01	0.06	0.43
TaoVA-100x	3	1.78	1.28	1.10	609.81	775.58	748.46	1.31	7.80	6.35
TCP Vegas	3	1.67	1.52	1.32	213.23	229.69	221.96	0.19	0.31	0.64
Verus	3	1.94	1.40	0.48	923.43	795.14	934.26	7.06	3.94	5.89
PCC-Vivace	3	1.47	1.20	1.17	1062.79	1071.84	1093.36	9.09	15.40	31.74
WebRTC media	3	0.56	0.42	0.20	509.86	327.97	267.30	1.30	0.32	1.14

Run 1: Statistics of TCP BBR

Start at: 2018-08-01 06:16:05
End at: 2018-08-01 06:16:35
Local clock offset: 0.974 ms
Remote clock offset: -7.533 ms

Below is generated by plot.py at 2018-08-01 07:09:36
Datalink statistics
-- Total of 3 flows:
Average throughput: 3.87 Mbit/s
95th percentile per-packet one-way delay: 543.157 ms
Loss rate: 1.79%
-- Flow 1:
Average throughput: 2.46 Mbit/s
95th percentile per-packet one-way delay: 506.141 ms
Loss rate: 1.25%
-- Flow 2:
Average throughput: 1.31 Mbit/s
95th percentile per-packet one-way delay: 546.033 ms
Loss rate: 2.25%
-- Flow 3:
Average throughput: 1.71 Mbit/s
95th percentile per-packet one-way delay: 578.505 ms
Loss rate: 3.41%

Run 1: Report of TCP BBR — Data Link

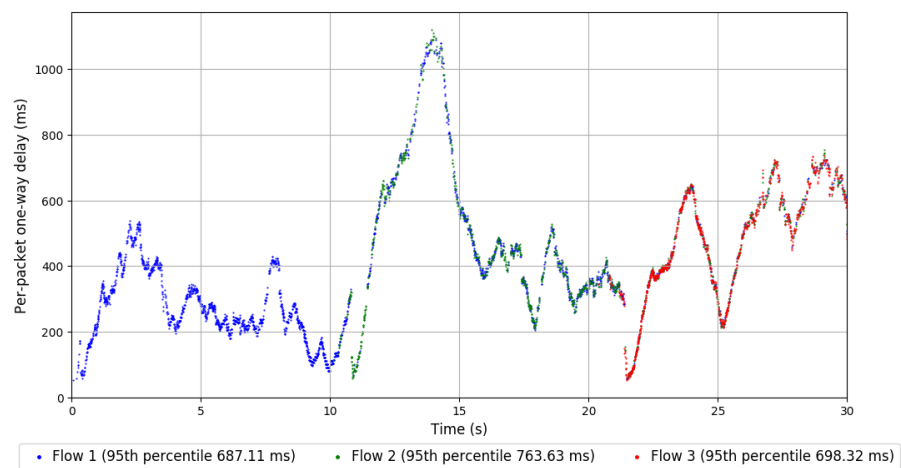
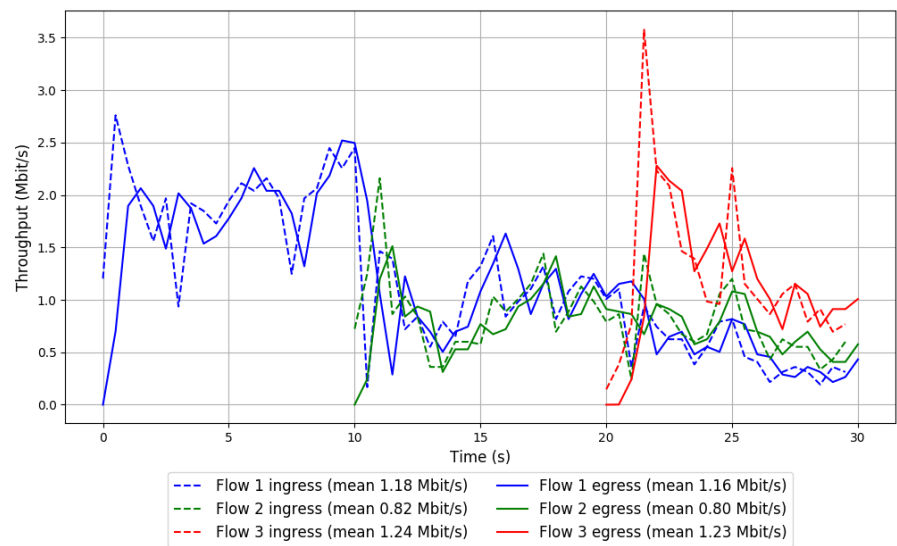


Run 2: Statistics of TCP BBR

Start at: 2018-08-01 06:34:50
End at: 2018-08-01 06:35:20
Local clock offset: 0.89 ms
Remote clock offset: -0.324 ms

Below is generated by plot.py at 2018-08-01 07:09:36
Datalink statistics
-- Total of 3 flows:
Average throughput: 2.09 Mbit/s
95th percentile per-packet one-way delay: 713.481 ms
Loss rate: 2.67%
-- Flow 1:
Average throughput: 1.16 Mbit/s
95th percentile per-packet one-way delay: 687.112 ms
Loss rate: 1.69%
-- Flow 2:
Average throughput: 0.80 Mbit/s
95th percentile per-packet one-way delay: 763.628 ms
Loss rate: 3.58%
-- Flow 3:
Average throughput: 1.23 Mbit/s
95th percentile per-packet one-way delay: 698.324 ms
Loss rate: 4.28%

Run 2: Report of TCP BBR — Data Link

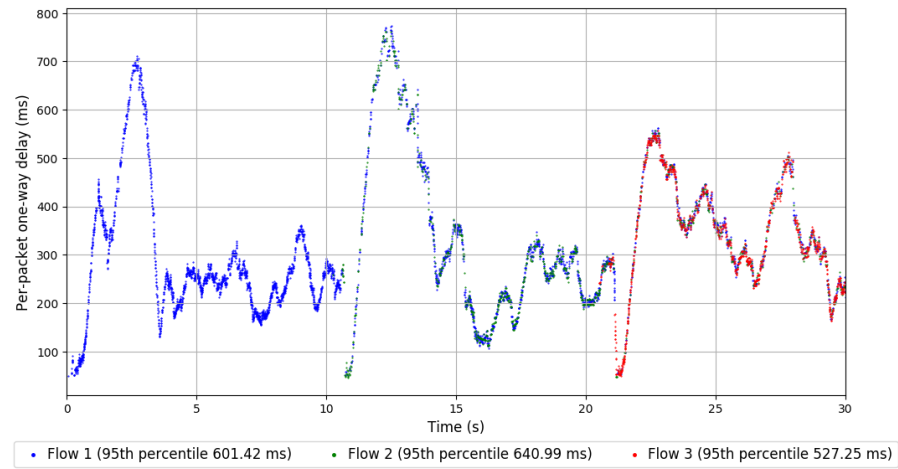
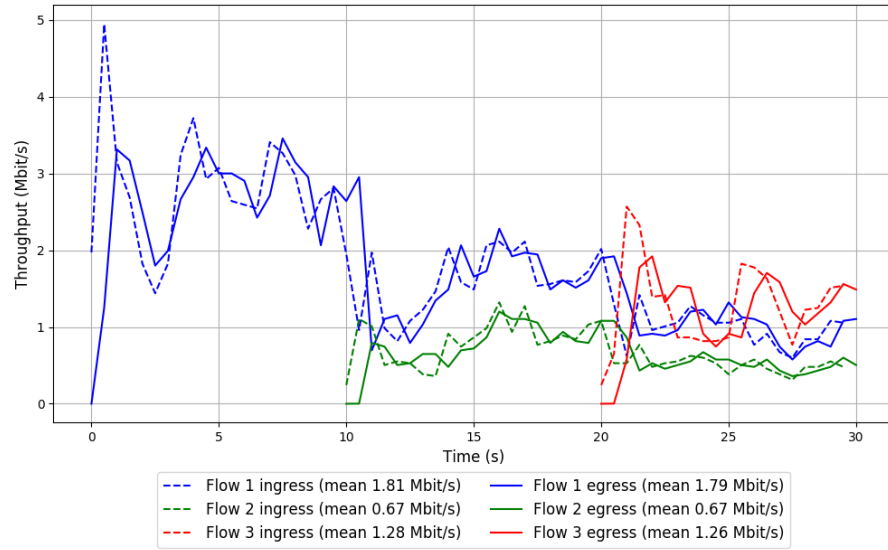


Run 3: Statistics of TCP BBR

Start at: 2018-08-01 06:53:36
End at: 2018-08-01 06:54:06
Local clock offset: 1.72 ms
Remote clock offset: -6.801 ms

Below is generated by plot.py at 2018-08-01 07:09:36
Datalink statistics
-- Total of 3 flows:
Average throughput: 2.64 Mbit/s
95th percentile per-packet one-way delay: 586.528 ms
Loss rate: 1.70%
-- Flow 1:
Average throughput: 1.79 Mbit/s
95th percentile per-packet one-way delay: 601.420 ms
Loss rate: 1.28%
-- Flow 2:
Average throughput: 0.67 Mbit/s
95th percentile per-packet one-way delay: 640.994 ms
Loss rate: 1.43%
-- Flow 3:
Average throughput: 1.26 Mbit/s
95th percentile per-packet one-way delay: 527.252 ms
Loss rate: 3.76%

Run 3: Report of TCP BBR — Data Link

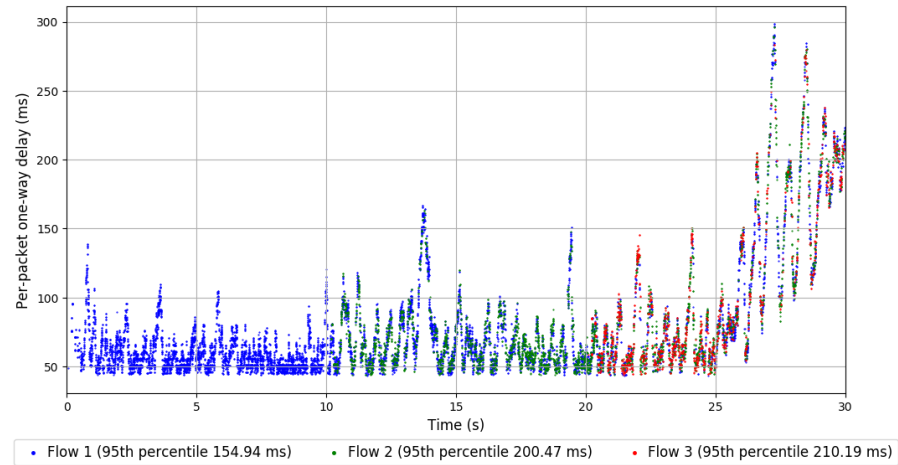
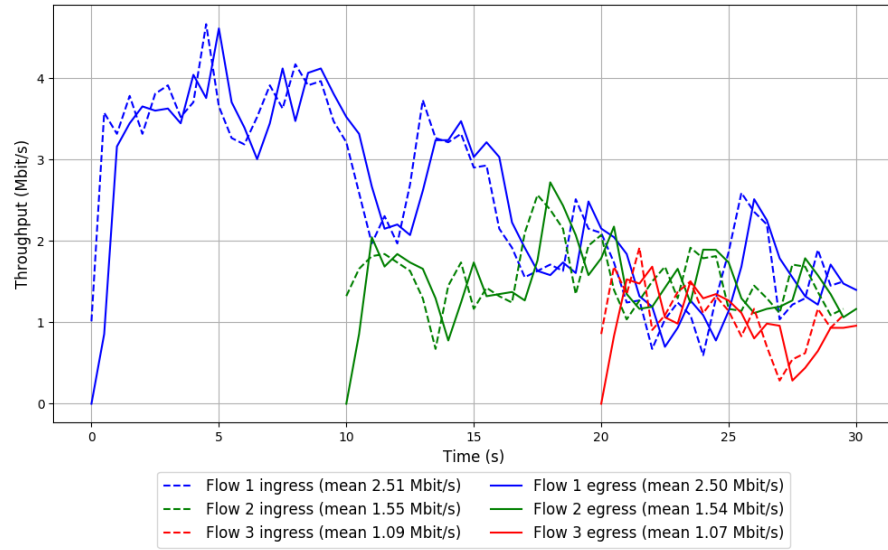


Run 1: Statistics of Copa

Start at: 2018-08-01 06:18:17
End at: 2018-08-01 06:18:47
Local clock offset: 2.826 ms
Remote clock offset: -7.387 ms

Below is generated by plot.py at 2018-08-01 07:09:41
Datalink statistics
-- Total of 3 flows:
Average throughput: 3.88 Mbit/s
95th percentile per-packet one-way delay: 187.538 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 2.50 Mbit/s
95th percentile per-packet one-way delay: 154.940 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 1.54 Mbit/s
95th percentile per-packet one-way delay: 200.467 ms
Loss rate: 0.85%
-- Flow 3:
Average throughput: 1.07 Mbit/s
95th percentile per-packet one-way delay: 210.191 ms
Loss rate: 2.52%

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2018-08-01 06:37:02

End at: 2018-08-01 06:37:32

Local clock offset: 0.455 ms

Remote clock offset: 0.967 ms

Below is generated by plot.py at 2018-08-01 07:09:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 2.61 Mbit/s

95th percentile per-packet one-way delay: 259.401 ms

Loss rate: 0.18%

-- Flow 1:

Average throughput: 1.58 Mbit/s

95th percentile per-packet one-way delay: 204.744 ms

Loss rate: 0.09%

-- Flow 2:

Average throughput: 1.22 Mbit/s

95th percentile per-packet one-way delay: 297.853 ms

Loss rate: 0.33%

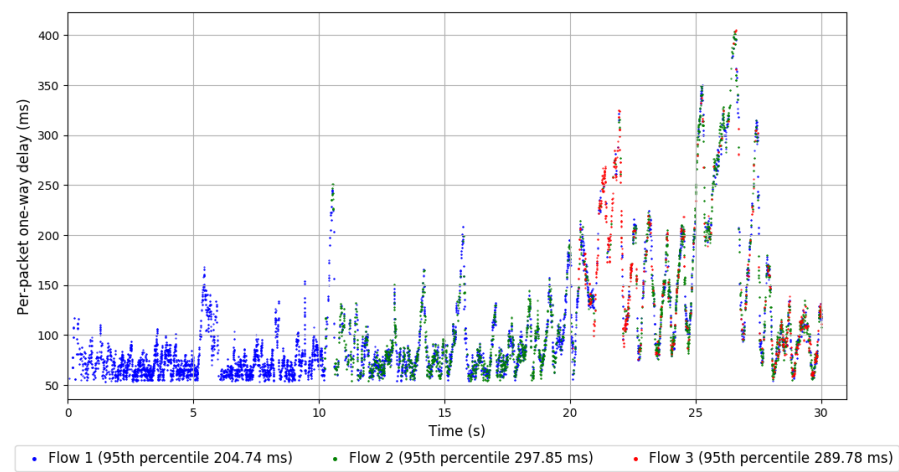
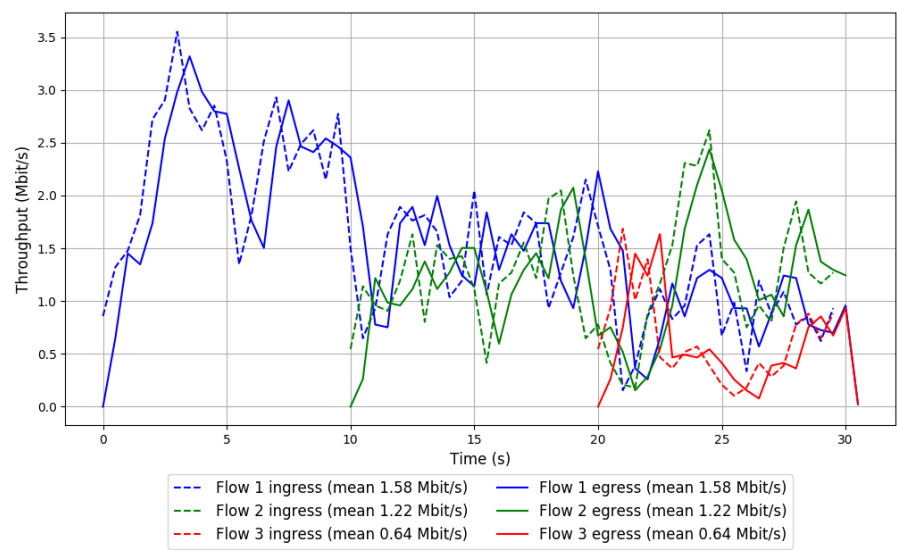
-- Flow 3:

Average throughput: 0.64 Mbit/s

95th percentile per-packet one-way delay: 289.782 ms

Loss rate: 0.27%

Run 2: Report of Copa — Data Link

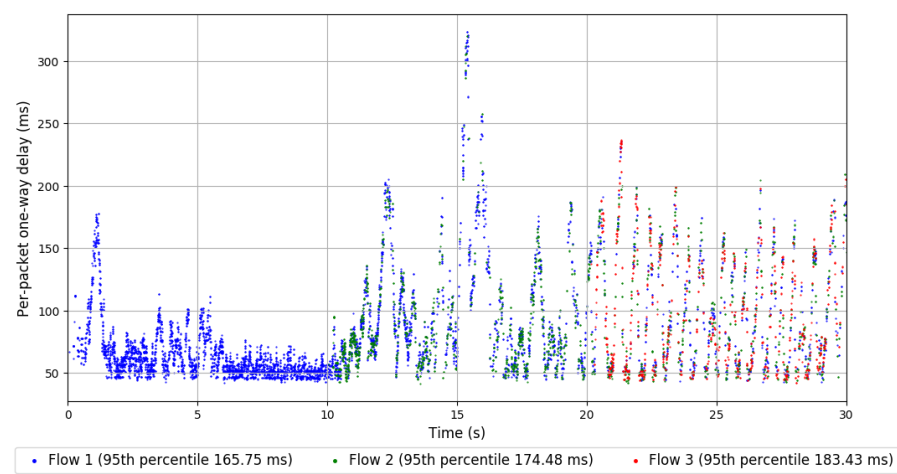
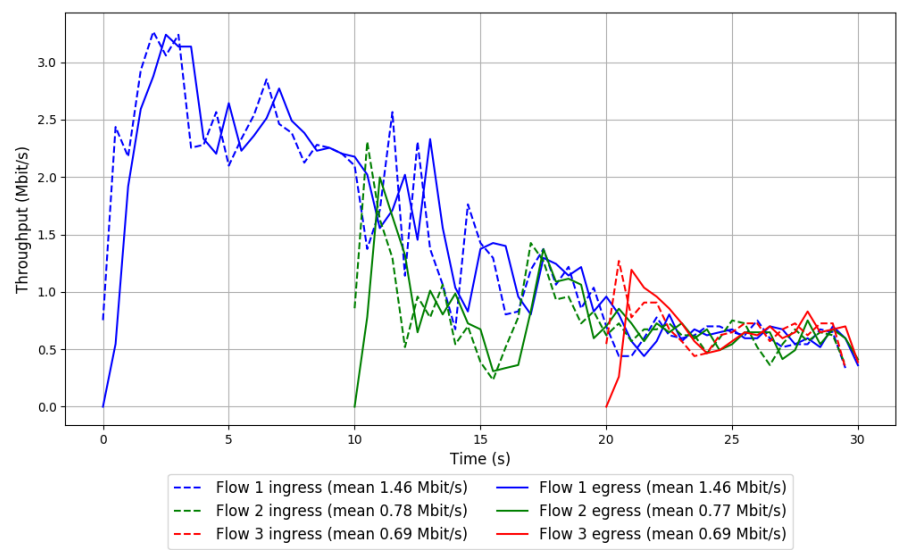


Run 3: Statistics of Copa

Start at: 2018-08-01 06:55:47
End at: 2018-08-01 06:56:17
Local clock offset: 1.011 ms
Remote clock offset: -7.149 ms

Below is generated by plot.py at 2018-08-01 07:09:41
Datalink statistics
-- Total of 3 flows:
Average throughput: 2.21 Mbit/s
95th percentile per-packet one-way delay: 170.441 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 1.46 Mbit/s
95th percentile per-packet one-way delay: 165.754 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 0.77 Mbit/s
95th percentile per-packet one-way delay: 174.477 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 0.69 Mbit/s
95th percentile per-packet one-way delay: 183.427 ms
Loss rate: 0.57%

Run 3: Report of Copa — Data Link

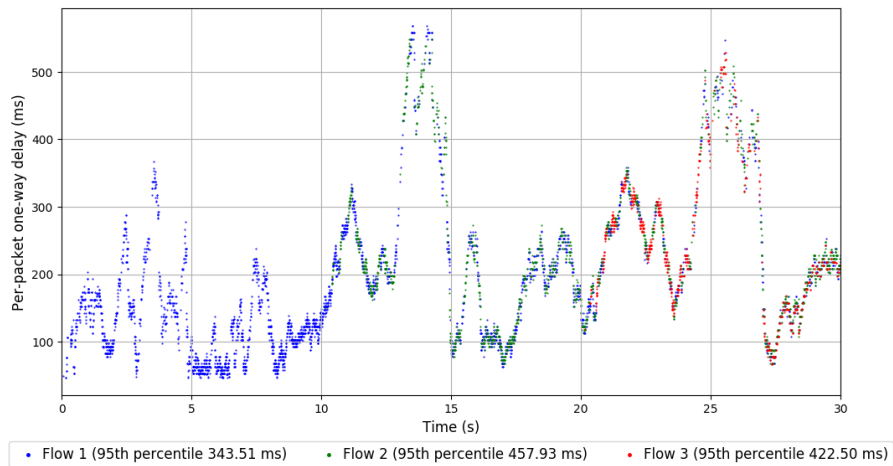
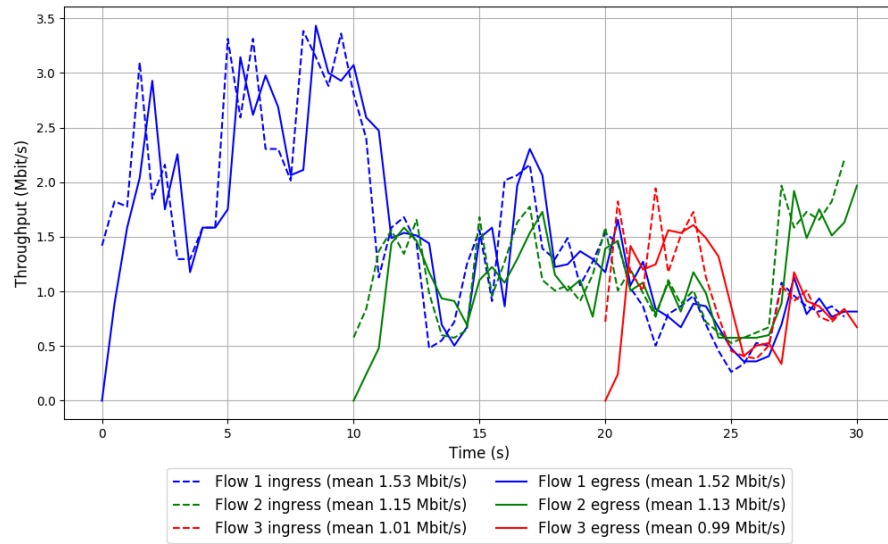


Run 1: Statistics of TCP Cubic

Start at: 2018-08-01 06:31:29
End at: 2018-08-01 06:31:59
Local clock offset: -0.634 ms
Remote clock offset: -6.892 ms

Below is generated by plot.py at 2018-08-01 07:09:41
Datalink statistics
-- Total of 3 flows:
Average throughput: 2.60 Mbit/s
95th percentile per-packet one-way delay: 418.100 ms
Loss rate: 1.46%
-- Flow 1:
Average throughput: 1.52 Mbit/s
95th percentile per-packet one-way delay: 343.513 ms
Loss rate: 0.60%
-- Flow 2:
Average throughput: 1.13 Mbit/s
95th percentile per-packet one-way delay: 457.928 ms
Loss rate: 2.56%
-- Flow 3:
Average throughput: 0.99 Mbit/s
95th percentile per-packet one-way delay: 422.501 ms
Loss rate: 2.87%

Run 1: Report of TCP Cubic — Data Link

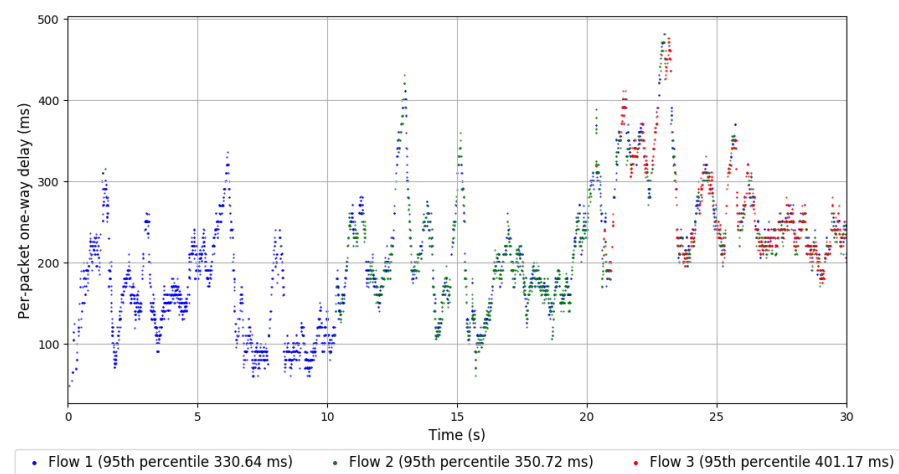
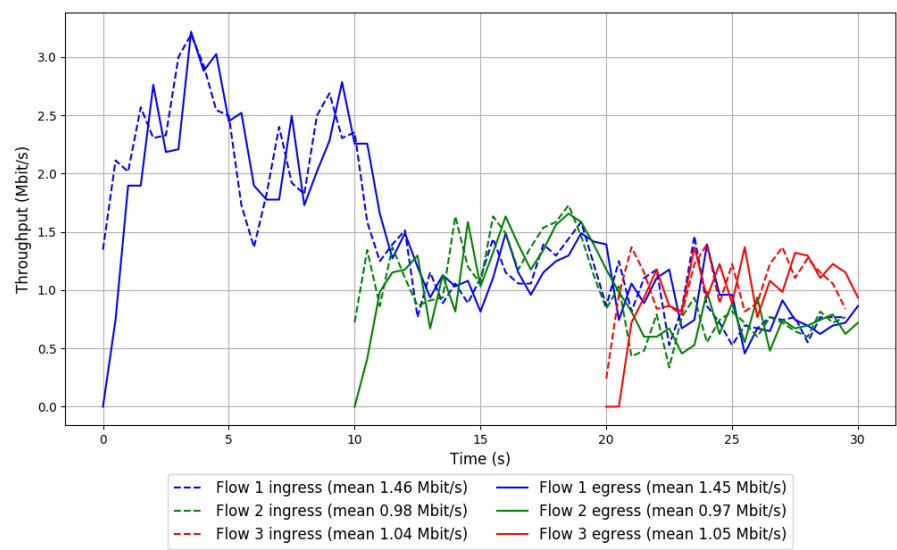


Run 2: Statistics of TCP Cubic

Start at: 2018-08-01 06:50:18
End at: 2018-08-01 06:50:48
Local clock offset: 1.821 ms
Remote clock offset: -7.057 ms

Below is generated by plot.py at 2018-08-01 07:09:41
Datalink statistics
-- Total of 3 flows:
Average throughput: 2.44 Mbit/s
95th percentile per-packet one-way delay: 350.755 ms
Loss rate: 1.12%
-- Flow 1:
Average throughput: 1.45 Mbit/s
95th percentile per-packet one-way delay: 330.645 ms
Loss rate: 0.63%
-- Flow 2:
Average throughput: 0.97 Mbit/s
95th percentile per-packet one-way delay: 350.724 ms
Loss rate: 1.53%
-- Flow 3:
Average throughput: 1.05 Mbit/s
95th percentile per-packet one-way delay: 401.167 ms
Loss rate: 2.44%

Run 2: Report of TCP Cubic — Data Link

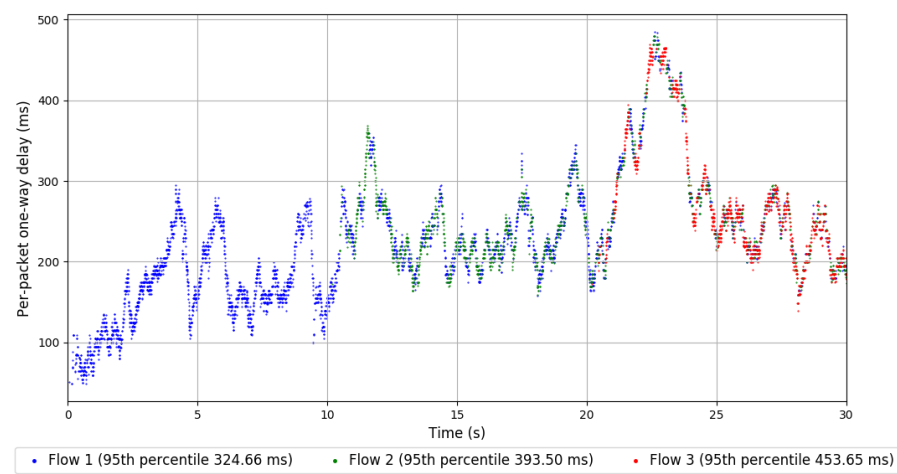
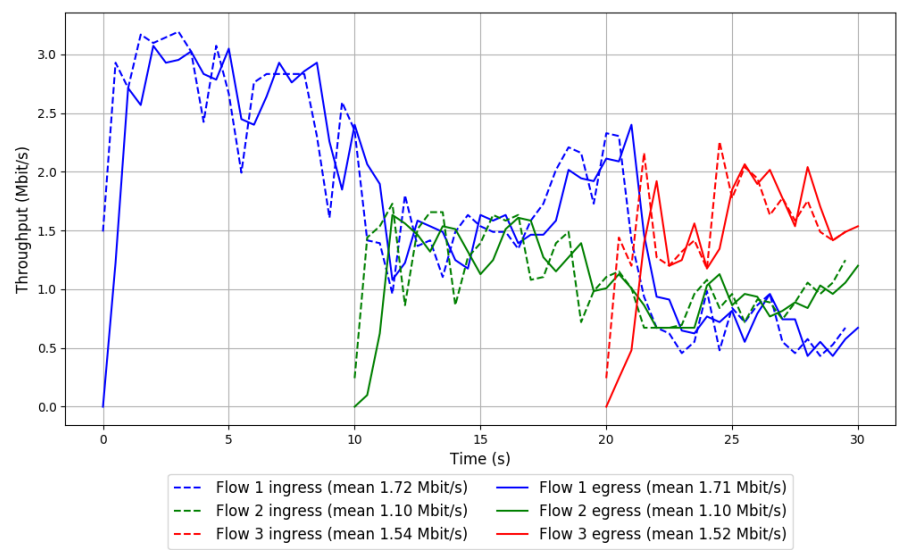


Run 3: Statistics of TCP Cubic

Start at: 2018-08-01 07:08:53
End at: 2018-08-01 07:09:23
Local clock offset: 0.695 ms
Remote clock offset: -4.417 ms

Below is generated by plot.py at 2018-08-01 07:09:41
Datalink statistics
-- Total of 3 flows:
Average throughput: 2.94 Mbit/s
95th percentile per-packet one-way delay: 384.687 ms
Loss rate: 1.09%
-- Flow 1:
Average throughput: 1.71 Mbit/s
95th percentile per-packet one-way delay: 324.664 ms
Loss rate: 0.56%
-- Flow 2:
Average throughput: 1.10 Mbit/s
95th percentile per-packet one-way delay: 393.495 ms
Loss rate: 1.52%
-- Flow 3:
Average throughput: 1.52 Mbit/s
95th percentile per-packet one-way delay: 453.650 ms
Loss rate: 2.28%

Run 3: Report of TCP Cubic — Data Link

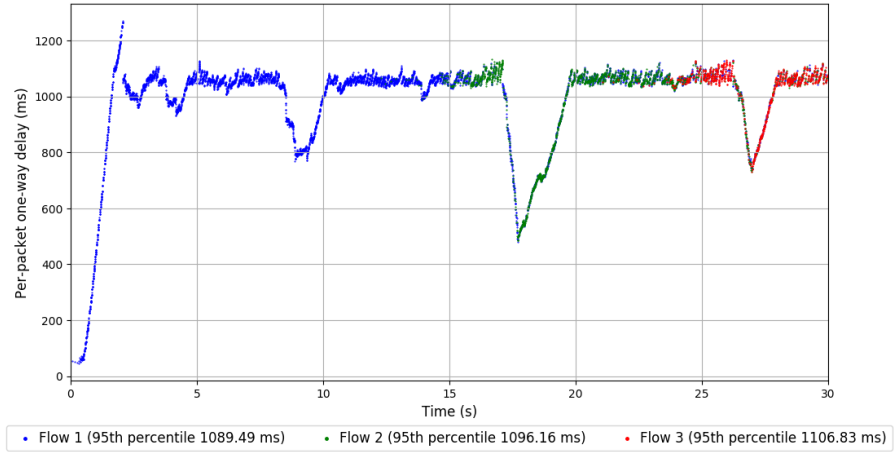
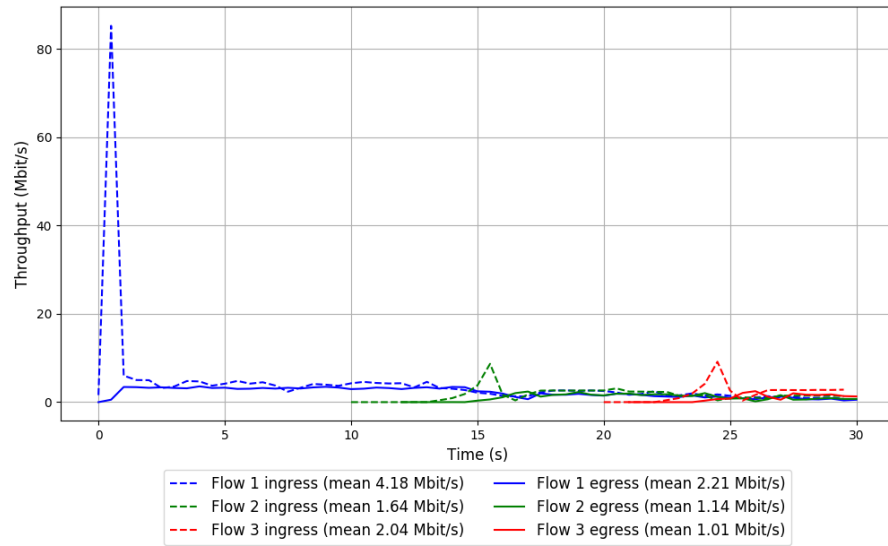


Run 1: Statistics of FillP

Start at: 2018-08-01 06:15:00
End at: 2018-08-01 06:15:30
Local clock offset: 1.751 ms
Remote clock offset: -8.125 ms

Below is generated by plot.py at 2018-08-01 07:09:43
Datalink statistics
-- Total of 3 flows:
Average throughput: 3.18 Mbit/s
95th percentile per-packet one-way delay: 1093.241 ms
Loss rate: 46.64%
-- Flow 1:
Average throughput: 2.21 Mbit/s
95th percentile per-packet one-way delay: 1089.492 ms
Loss rate: 47.32%
-- Flow 2:
Average throughput: 1.14 Mbit/s
95th percentile per-packet one-way delay: 1096.163 ms
Loss rate: 38.38%
-- Flow 3:
Average throughput: 1.01 Mbit/s
95th percentile per-packet one-way delay: 1106.833 ms
Loss rate: 55.78%

Run 1: Report of FillP — Data Link



Run 2: Statistics of FillP

Start at: 2018-08-01 06:33:43

End at: 2018-08-01 06:34:13

Local clock offset: 0.992 ms

Remote clock offset: -0.87 ms

Below is generated by plot.py at 2018-08-01 07:09:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 2.96 Mbit/s

95th percentile per-packet one-way delay: 1102.396 ms

Loss rate: 35.91%

-- Flow 1:

Average throughput: 2.08 Mbit/s

95th percentile per-packet one-way delay: 1101.074 ms

Loss rate: 33.18%

-- Flow 2:

Average throughput: 0.86 Mbit/s

95th percentile per-packet one-way delay: 1097.351 ms

Loss rate: 33.87%

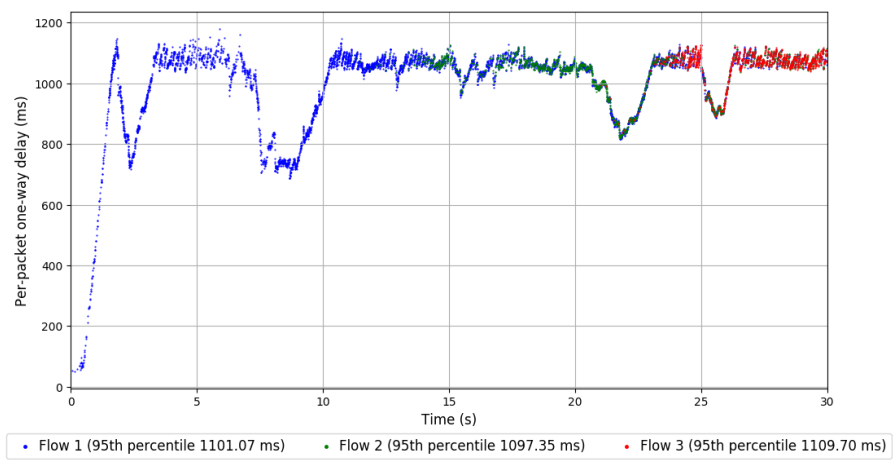
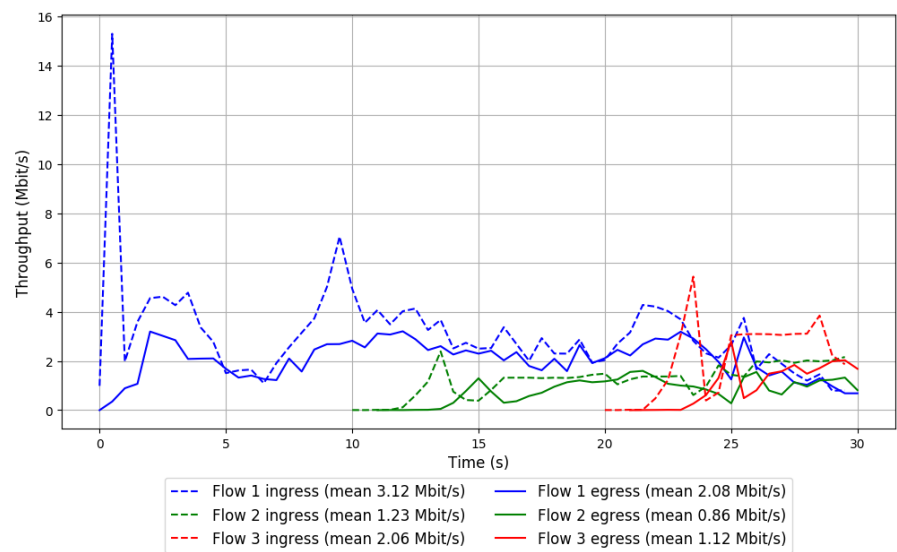
-- Flow 3:

Average throughput: 1.12 Mbit/s

95th percentile per-packet one-way delay: 1109.696 ms

Loss rate: 50.80%

Run 2: Report of FillP — Data Link

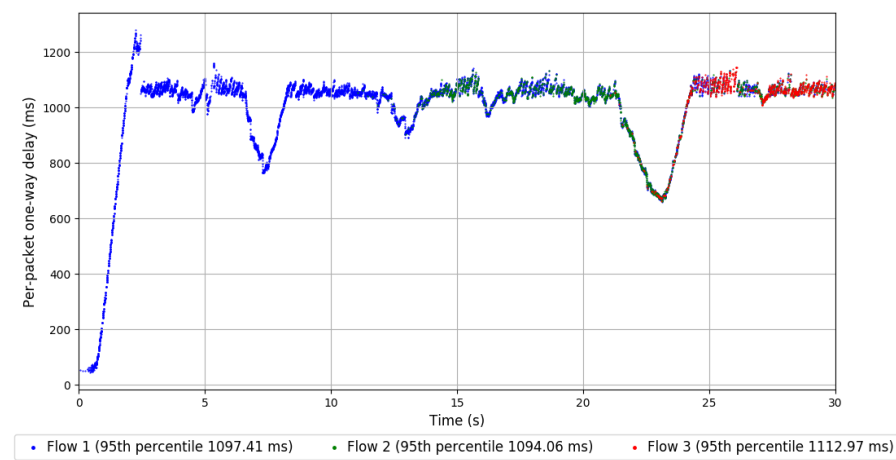
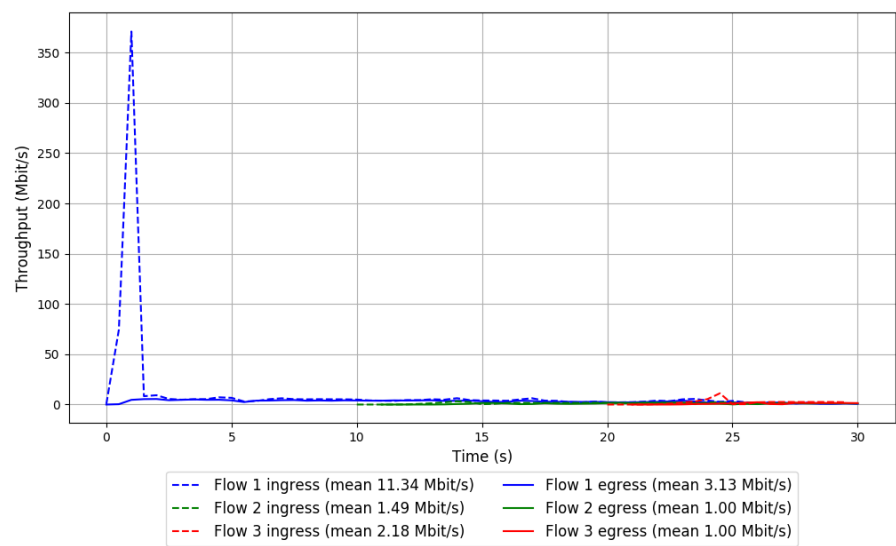


Run 3: Statistics of FillP

Start at: 2018-08-01 06:52:29
End at: 2018-08-01 06:52:59
Local clock offset: 2.191 ms
Remote clock offset: -4.079 ms

Below is generated by plot.py at 2018-08-01 07:09:50
Datalink statistics
-- Total of 3 flows:
Average throughput: 4.06 Mbit/s
95th percentile per-packet one-way delay: 1098.621 ms
Loss rate: 68.94%
-- Flow 1:
Average throughput: 3.13 Mbit/s
95th percentile per-packet one-way delay: 1097.413 ms
Loss rate: 72.42%
-- Flow 2:
Average throughput: 1.00 Mbit/s
95th percentile per-packet one-way delay: 1094.058 ms
Loss rate: 36.17%
-- Flow 3:
Average throughput: 1.00 Mbit/s
95th percentile per-packet one-way delay: 1112.967 ms
Loss rate: 59.09%

Run 3: Report of FillP — Data Link

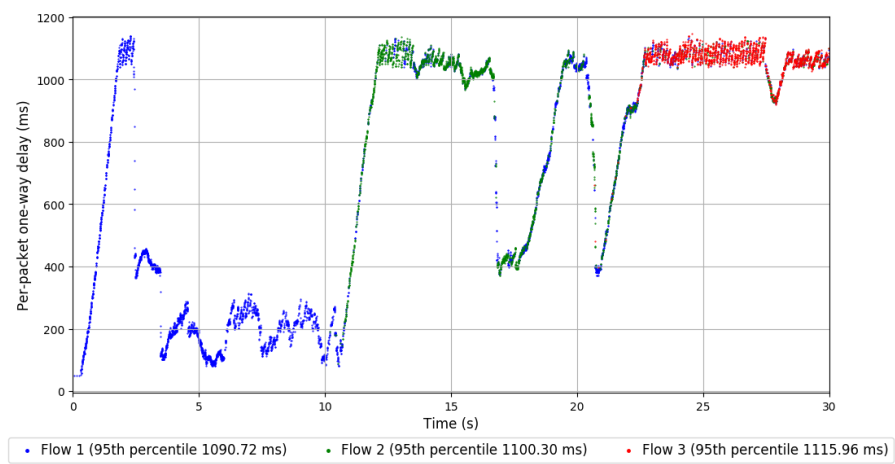
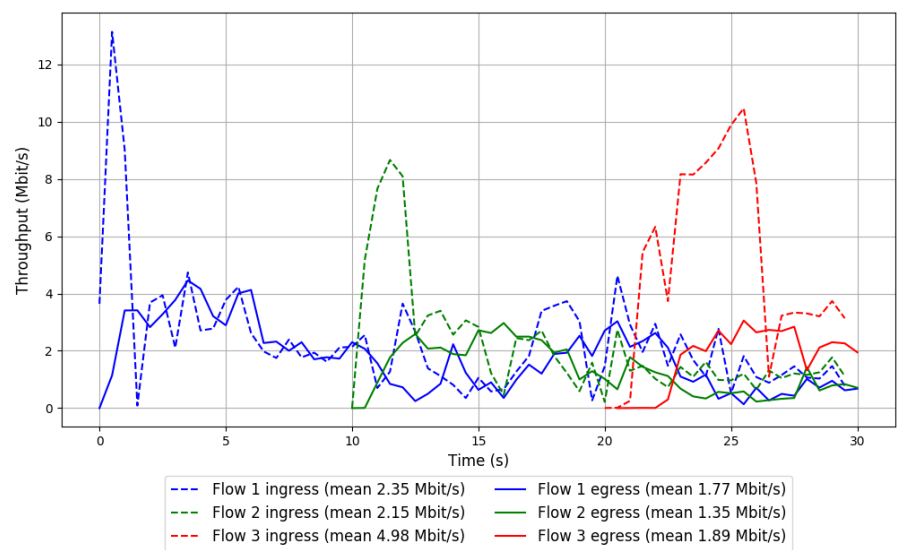


Run 1: Statistics of FillP-Sheep

Start at: 2018-08-01 06:17:11
End at: 2018-08-01 06:17:41
Local clock offset: 0.973 ms
Remote clock offset: -9.076 ms

Below is generated by plot.py at 2018-08-01 07:09:50
Datalink statistics
-- Total of 3 flows:
Average throughput: 3.25 Mbit/s
95th percentile per-packet one-way delay: 1102.870 ms
Loss rate: 40.22%
-- Flow 1:
Average throughput: 1.77 Mbit/s
95th percentile per-packet one-way delay: 1090.723 ms
Loss rate: 24.60%
-- Flow 2:
Average throughput: 1.35 Mbit/s
95th percentile per-packet one-way delay: 1100.300 ms
Loss rate: 37.92%
-- Flow 3:
Average throughput: 1.89 Mbit/s
95th percentile per-packet one-way delay: 1115.959 ms
Loss rate: 64.43%

Run 1: Report of FillP-Sheep — Data Link



Run 2: Statistics of FillP-Sheep

Start at: 2018-08-01 06:35:56

End at: 2018-08-01 06:36:26

Local clock offset: 0.872 ms

Remote clock offset: 5.919 ms

Below is generated by plot.py at 2018-08-01 07:09:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 2.74 Mbit/s

95th percentile per-packet one-way delay: 1103.645 ms

Loss rate: 21.40%

-- Flow 1:

Average throughput: 1.71 Mbit/s

95th percentile per-packet one-way delay: 1060.368 ms

Loss rate: 8.48%

-- Flow 2:

Average throughput: 1.05 Mbit/s

95th percentile per-packet one-way delay: 1102.722 ms

Loss rate: 22.20%

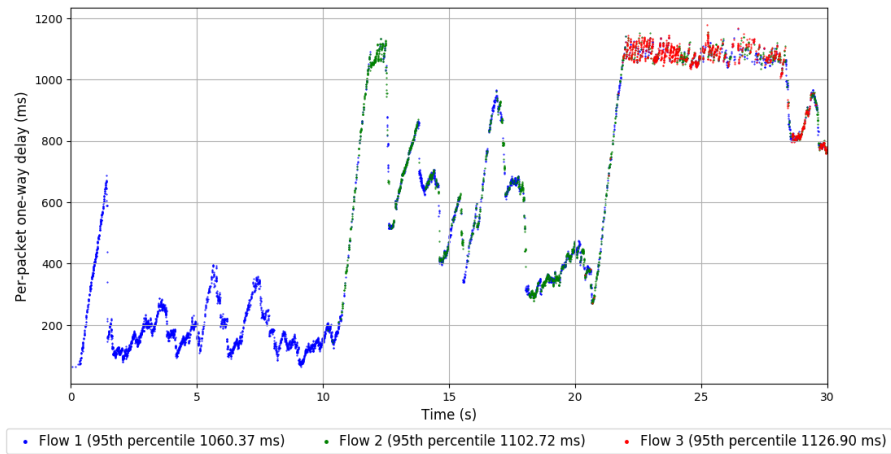
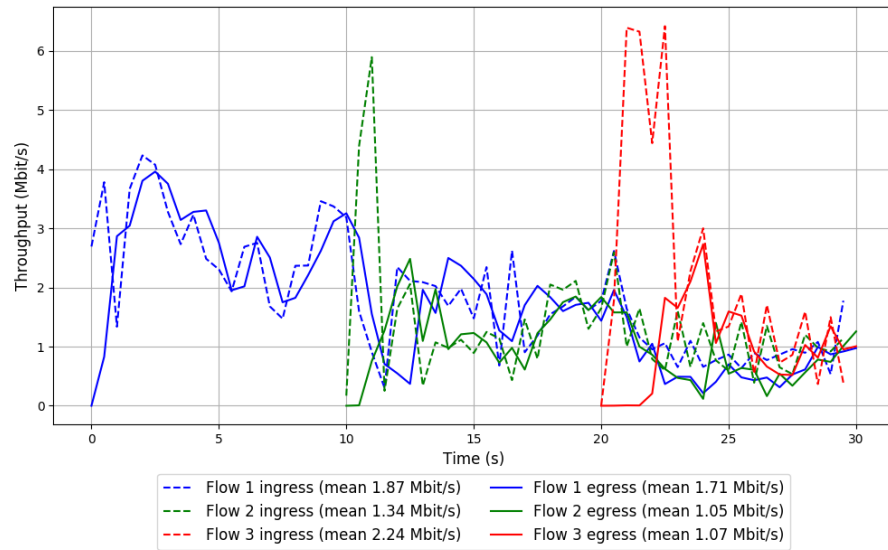
-- Flow 3:

Average throughput: 1.07 Mbit/s

95th percentile per-packet one-way delay: 1126.898 ms

Loss rate: 53.34%

Run 2: Report of FillP-Sheep — Data Link

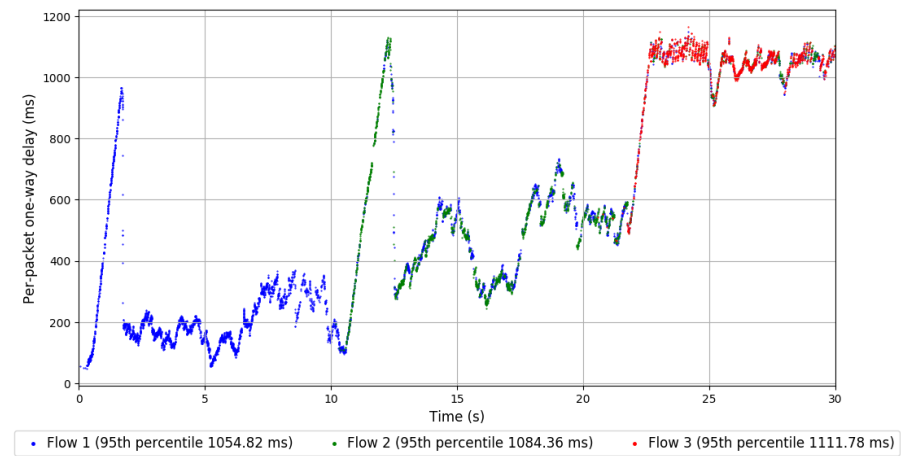
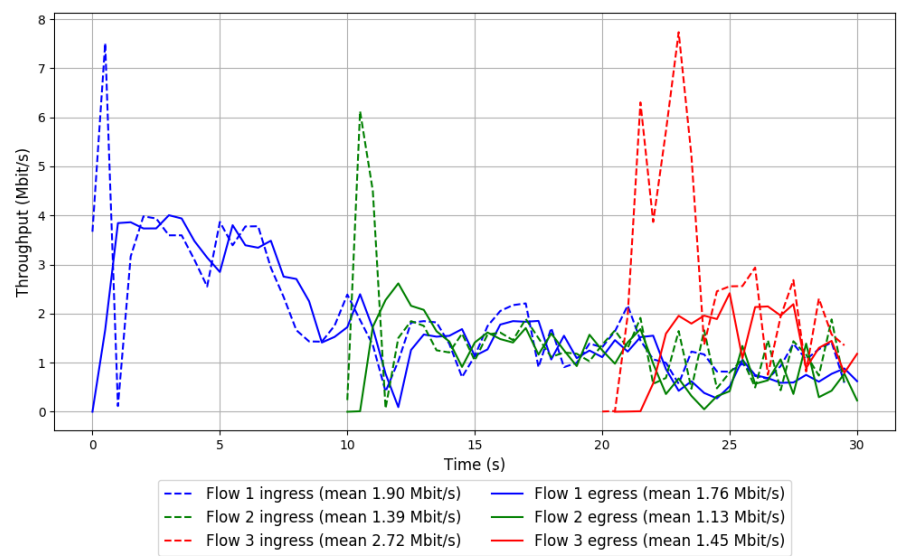


Run 3: Statistics of FillP-Sheep

Start at: 2018-08-01 06:54:42
End at: 2018-08-01 06:55:12
Local clock offset: 1.35 ms
Remote clock offset: -3.848 ms

Below is generated by plot.py at 2018-08-01 07:09:50
Datalink statistics
-- Total of 3 flows:
Average throughput: 2.96 Mbit/s
95th percentile per-packet one-way delay: 1085.615 ms
Loss rate: 20.74%
-- Flow 1:
Average throughput: 1.76 Mbit/s
95th percentile per-packet one-way delay: 1054.817 ms
Loss rate: 7.54%
-- Flow 2:
Average throughput: 1.13 Mbit/s
95th percentile per-packet one-way delay: 1084.359 ms
Loss rate: 19.74%
-- Flow 3:
Average throughput: 1.45 Mbit/s
95th percentile per-packet one-way delay: 1111.777 ms
Loss rate: 49.51%

Run 3: Report of FillP-Sheep — Data Link

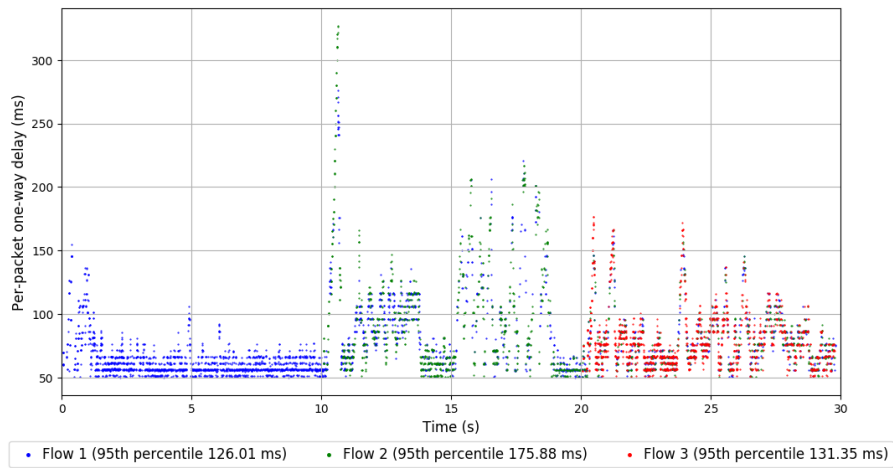
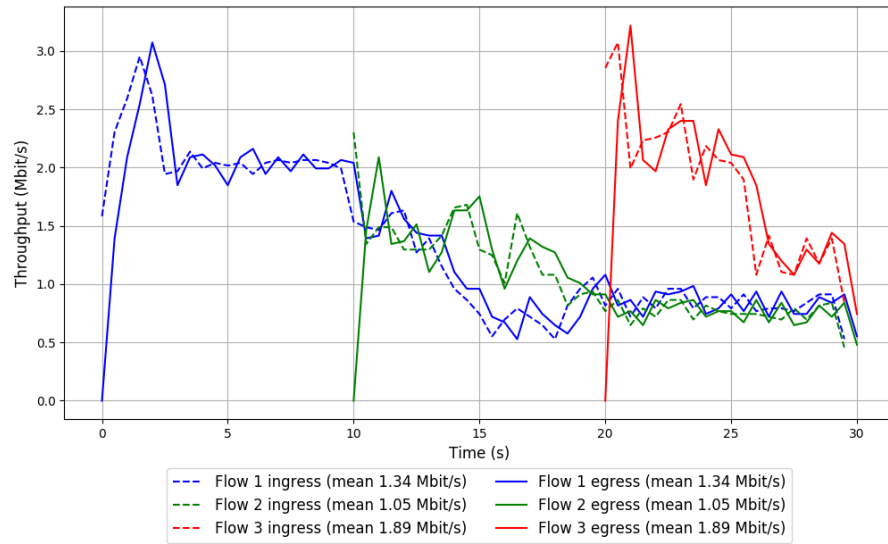


```
Run 1: Statistics of Indigo

Start at: 2018-08-01 06:27:05
End at: 2018-08-01 06:27:35
Local clock offset: 0.836 ms
Remote clock offset: -0.498 ms

# Below is generated by plot.py at 2018-08-01 07:09:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.66 Mbit/s
95th percentile per-packet one-way delay: 140.834 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 1.34 Mbit/s
95th percentile per-packet one-way delay: 126.010 ms
Loss rate: 0.21%
-- Flow 2:
Average throughput: 1.05 Mbit/s
95th percentile per-packet one-way delay: 175.883 ms
Loss rate: 0.35%
-- Flow 3:
Average throughput: 1.89 Mbit/s
95th percentile per-packet one-way delay: 131.352 ms
Loss rate: 0.52%
```

Run 1: Report of Indigo — Data Link



Run 2: Statistics of Indigo

Start at: 2018-08-01 06:45:57

End at: 2018-08-01 06:46:27

Local clock offset: 0.306 ms

Remote clock offset: -4.5 ms

Below is generated by plot.py at 2018-08-01 07:09:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 2.29 Mbit/s

95th percentile per-packet one-way delay: 213.660 ms

Loss rate: 0.26%

-- Flow 1:

Average throughput: 1.04 Mbit/s

95th percentile per-packet one-way delay: 137.799 ms

Loss rate: 0.08%

-- Flow 2:

Average throughput: 1.30 Mbit/s

95th percentile per-packet one-way delay: 152.784 ms

Loss rate: 0.28%

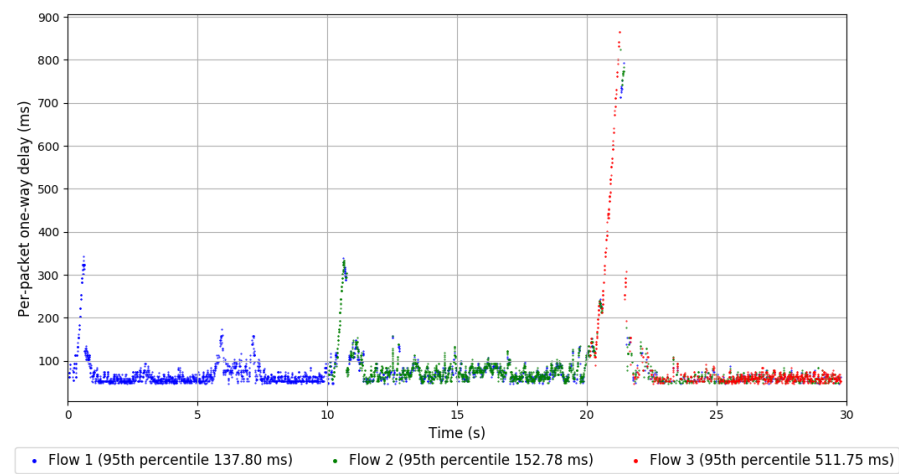
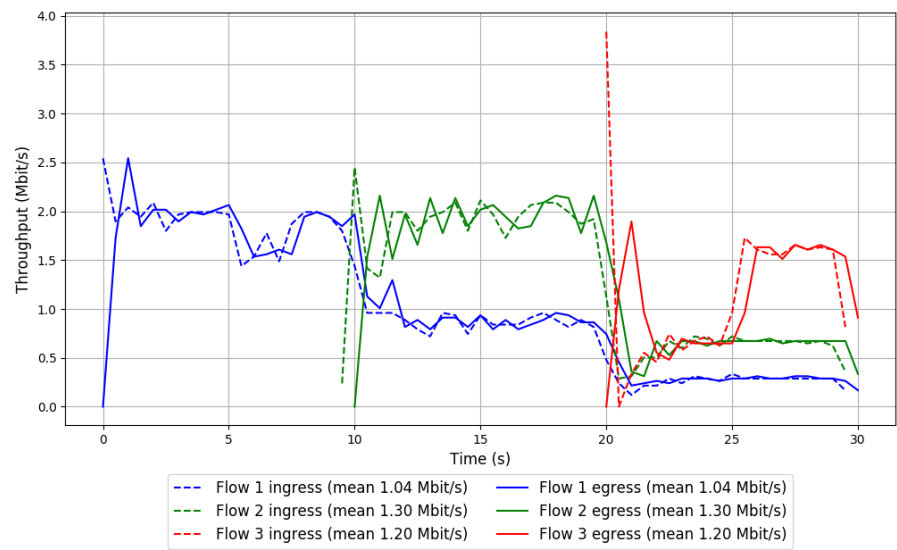
-- Flow 3:

Average throughput: 1.20 Mbit/s

95th percentile per-packet one-way delay: 511.750 ms

Loss rate: 0.72%

Run 2: Report of Indigo — Data Link

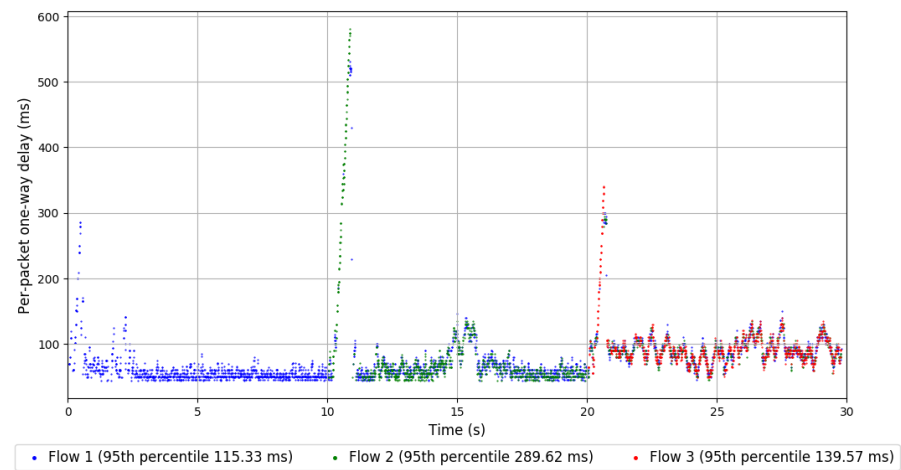
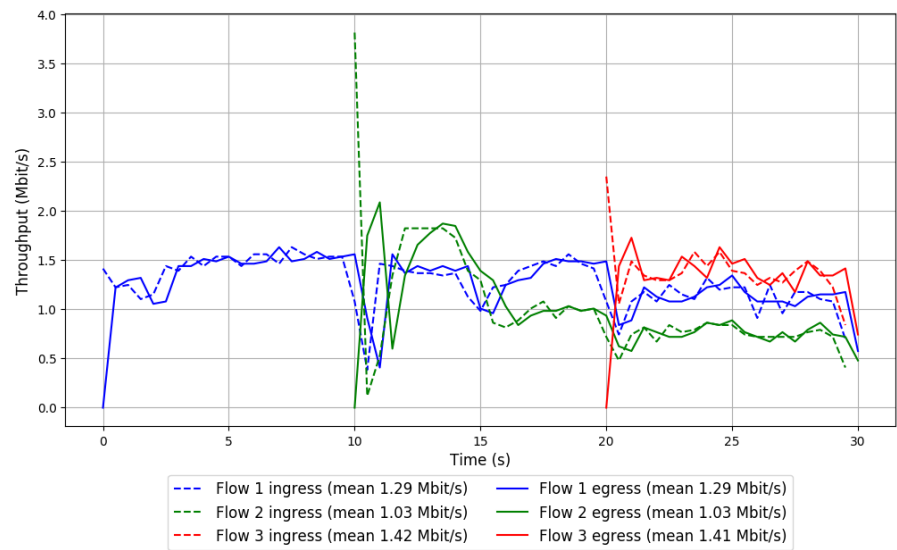


Run 3: Statistics of Indigo

Start at: 2018-08-01 07:04:32
End at: 2018-08-01 07:05:02
Local clock offset: 1.481 ms
Remote clock offset: -6.489 ms

Below is generated by plot.py at 2018-08-01 07:09:50
Datalink statistics
-- Total of 3 flows:
Average throughput: 2.43 Mbit/s
95th percentile per-packet one-way delay: 129.568 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 1.29 Mbit/s
95th percentile per-packet one-way delay: 115.328 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 1.03 Mbit/s
95th percentile per-packet one-way delay: 289.618 ms
Loss rate: 0.18%
-- Flow 3:
Average throughput: 1.41 Mbit/s
95th percentile per-packet one-way delay: 139.571 ms
Loss rate: 1.12%

Run 3: Report of Indigo — Data Link

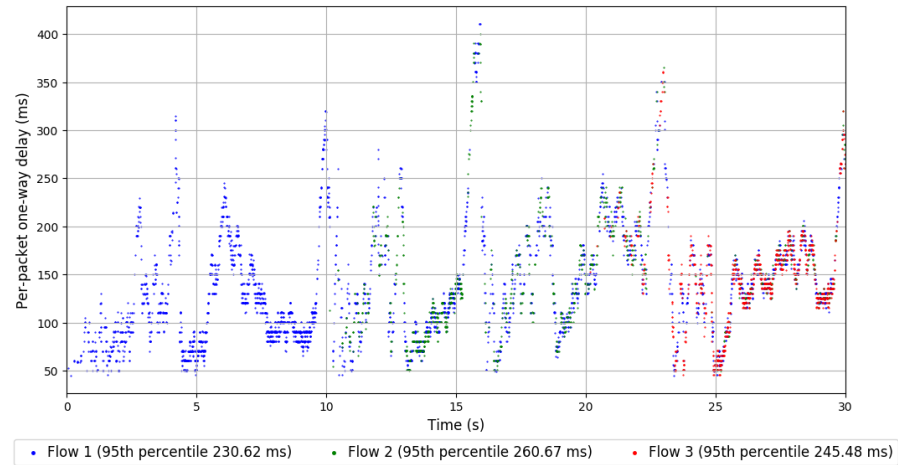
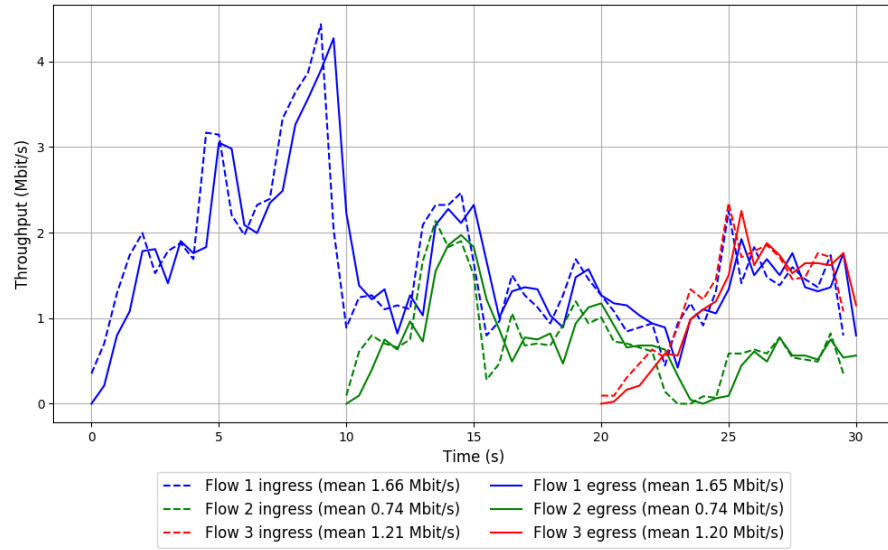


```
Run 1: Statistics of LEDBAT

Start at: 2018-08-01 06:28:12
End at: 2018-08-01 06:28:42
Local clock offset: -0.357 ms
Remote clock offset: -8.11 ms

# Below is generated by plot.py at 2018-08-01 07:09:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.53 Mbit/s
95th percentile per-packet one-way delay: 235.825 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 1.65 Mbit/s
95th percentile per-packet one-way delay: 230.620 ms
Loss rate: 0.59%
-- Flow 2:
Average throughput: 0.74 Mbit/s
95th percentile per-packet one-way delay: 260.671 ms
Loss rate: 0.48%
-- Flow 3:
Average throughput: 1.20 Mbit/s
95th percentile per-packet one-way delay: 245.479 ms
Loss rate: 1.57%
```


Run 1: Report of LEDBAT — Data Link

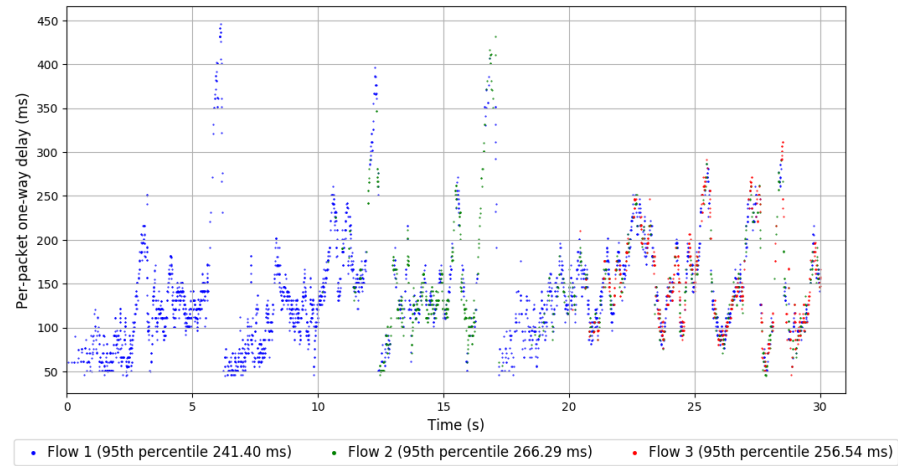
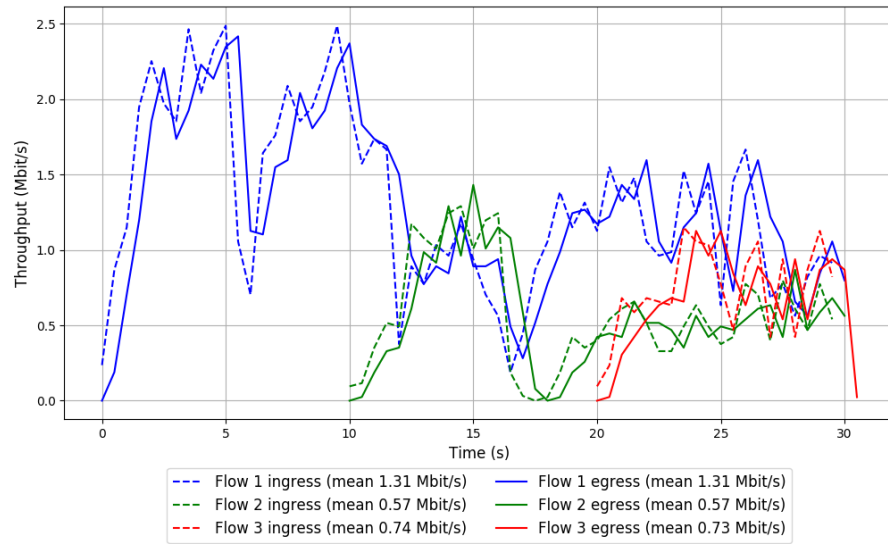


Run 2: Statistics of LEDBAT

Start at: 2018-08-01 06:47:02
End at: 2018-08-01 06:47:32
Local clock offset: 1.93 ms
Remote clock offset: -5.492 ms

Below is generated by plot.py at 2018-08-01 07:09:50
Datalink statistics
-- Total of 3 flows:
Average throughput: 1.92 Mbit/s
95th percentile per-packet one-way delay: 255.623 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 1.31 Mbit/s
95th percentile per-packet one-way delay: 241.397 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 0.57 Mbit/s
95th percentile per-packet one-way delay: 266.285 ms
Loss rate: 1.33%
-- Flow 3:
Average throughput: 0.73 Mbit/s
95th percentile per-packet one-way delay: 256.536 ms
Loss rate: 1.77%

Run 2: Report of LEDBAT — Data Link

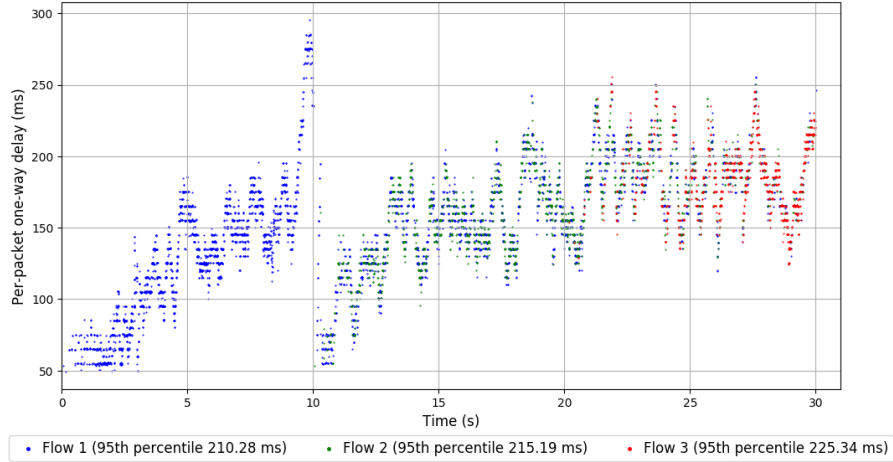
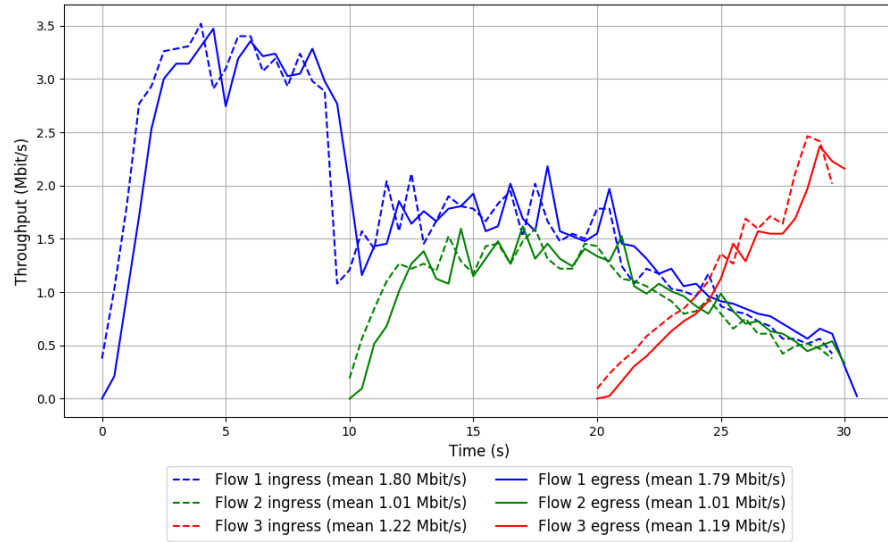


Run 3: Statistics of LEDBAT

Start at: 2018-08-01 07:05:37
End at: 2018-08-01 07:06:07
Local clock offset: -0.957 ms
Remote clock offset: -4.357 ms

Below is generated by plot.py at 2018-08-01 07:09:51
Datalink statistics
-- Total of 3 flows:
Average throughput: 2.84 Mbit/s
95th percentile per-packet one-way delay: 215.284 ms
Loss rate: 0.74%
-- Flow 1:
Average throughput: 1.79 Mbit/s
95th percentile per-packet one-way delay: 210.276 ms
Loss rate: 0.18%
-- Flow 2:
Average throughput: 1.01 Mbit/s
95th percentile per-packet one-way delay: 215.188 ms
Loss rate: 0.41%
-- Flow 3:
Average throughput: 1.19 Mbit/s
95th percentile per-packet one-way delay: 225.338 ms
Loss rate: 3.76%

Run 3: Report of LEDBAT — Data Link

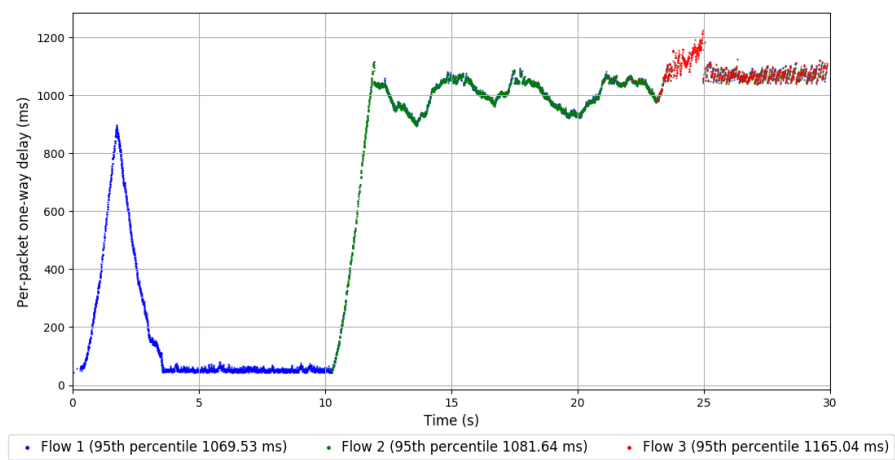
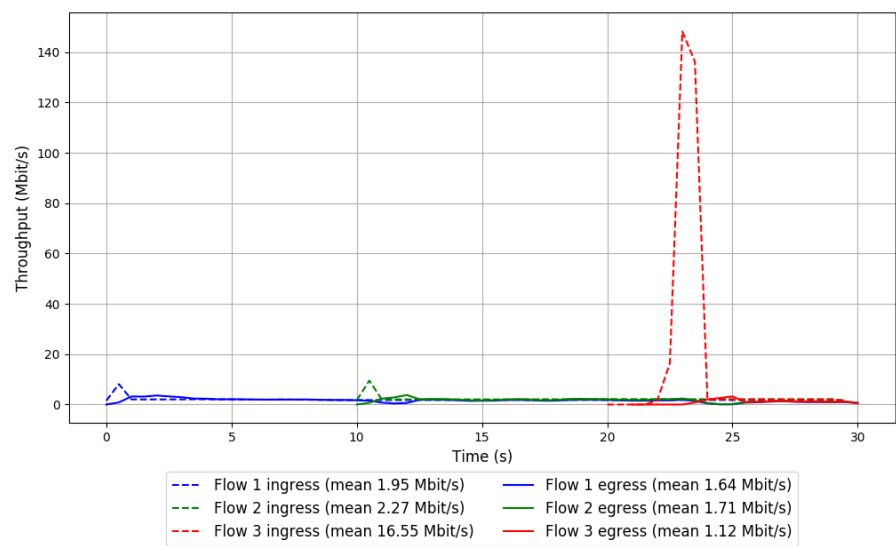


```
Run 1: Statistics of PCC-Allegro

Start at: 2018-08-01 06:24:52
End at: 2018-08-01 06:25:22
Local clock offset: 1.471 ms
Remote clock offset: -6.772 ms

# Below is generated by plot.py at 2018-08-01 07:09:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.11 Mbit/s
95th percentile per-packet one-way delay: 1093.131 ms
Loss rate: 65.20%
-- Flow 1:
Average throughput: 1.64 Mbit/s
95th percentile per-packet one-way delay: 1069.527 ms
Loss rate: 15.85%
-- Flow 2:
Average throughput: 1.71 Mbit/s
95th percentile per-packet one-way delay: 1081.642 ms
Loss rate: 24.86%
-- Flow 3:
Average throughput: 1.12 Mbit/s
95th percentile per-packet one-way delay: 1165.035 ms
Loss rate: 93.94%
```

Run 1: Report of PCC-Allegro — Data Link

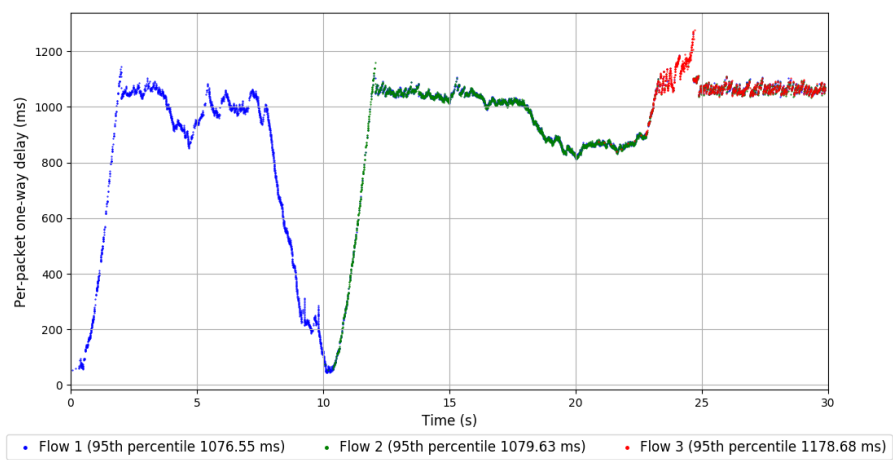
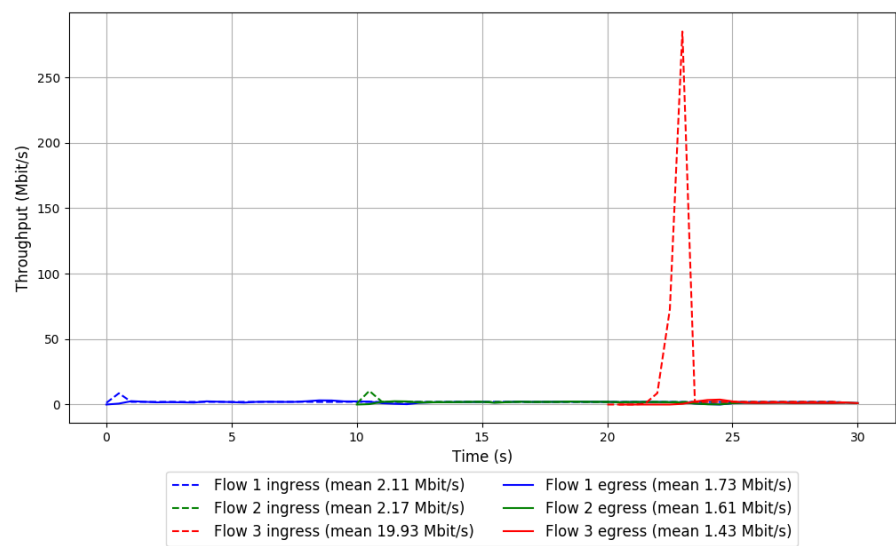


Run 2: Statistics of PCC-Allegro

Start at: 2018-08-01 06:43:45
End at: 2018-08-01 06:44:15
Local clock offset: 0.576 ms
Remote clock offset: -7.629 ms

Below is generated by plot.py at 2018-08-01 07:09:55
Datalink statistics
-- Total of 3 flows:
Average throughput: 3.23 Mbit/s
95th percentile per-packet one-way delay: 1097.664 ms
Loss rate: 68.20%
-- Flow 1:
Average throughput: 1.73 Mbit/s
95th percentile per-packet one-way delay: 1076.549 ms
Loss rate: 18.34%
-- Flow 2:
Average throughput: 1.61 Mbit/s
95th percentile per-packet one-way delay: 1079.633 ms
Loss rate: 26.12%
-- Flow 3:
Average throughput: 1.43 Mbit/s
95th percentile per-packet one-way delay: 1178.683 ms
Loss rate: 93.44%

Run 2: Report of PCC-Allegro — Data Link

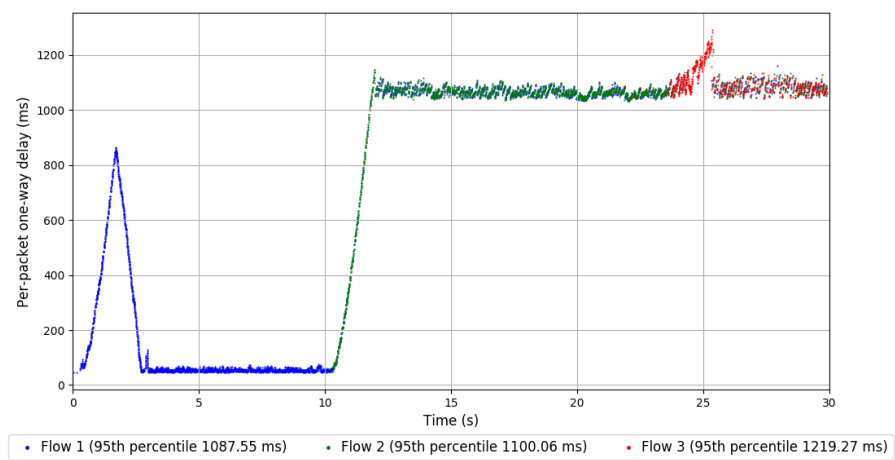
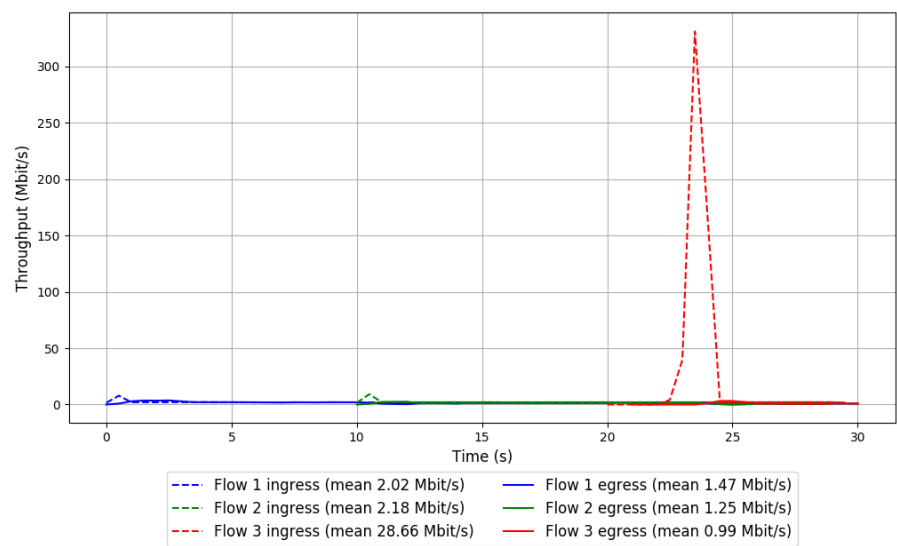


Run 3: Statistics of PCC-Allegro

Start at: 2018-08-01 07:02:21
End at: 2018-08-01 07:02:51
Local clock offset: 0.488 ms
Remote clock offset: -4.095 ms

Below is generated by plot.py at 2018-08-01 07:09:57
Datalink statistics
-- Total of 3 flows:
Average throughput: 2.58 Mbit/s
95th percentile per-packet one-way delay: 1110.057 ms
Loss rate: 80.09%
-- Flow 1:
Average throughput: 1.47 Mbit/s
95th percentile per-packet one-way delay: 1087.545 ms
Loss rate: 27.76%
-- Flow 2:
Average throughput: 1.25 Mbit/s
95th percentile per-packet one-way delay: 1100.062 ms
Loss rate: 42.84%
-- Flow 3:
Average throughput: 0.99 Mbit/s
95th percentile per-packet one-way delay: 1219.270 ms
Loss rate: 97.00%

Run 3: Report of PCC-Allegro — Data Link

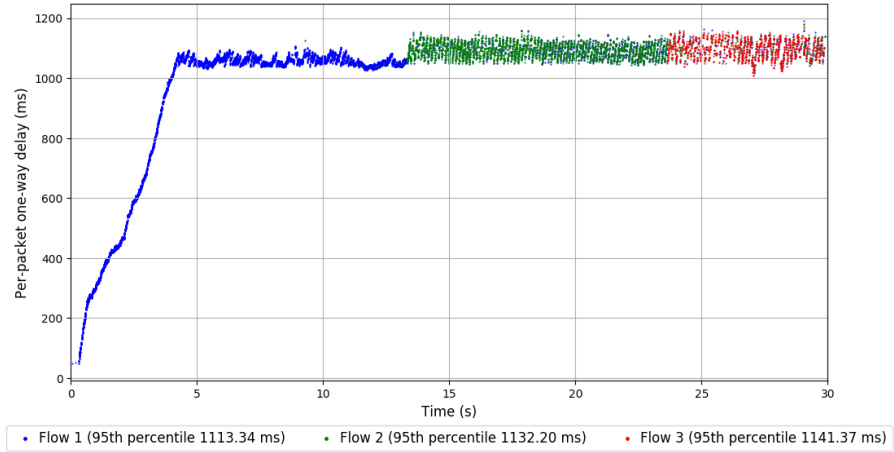
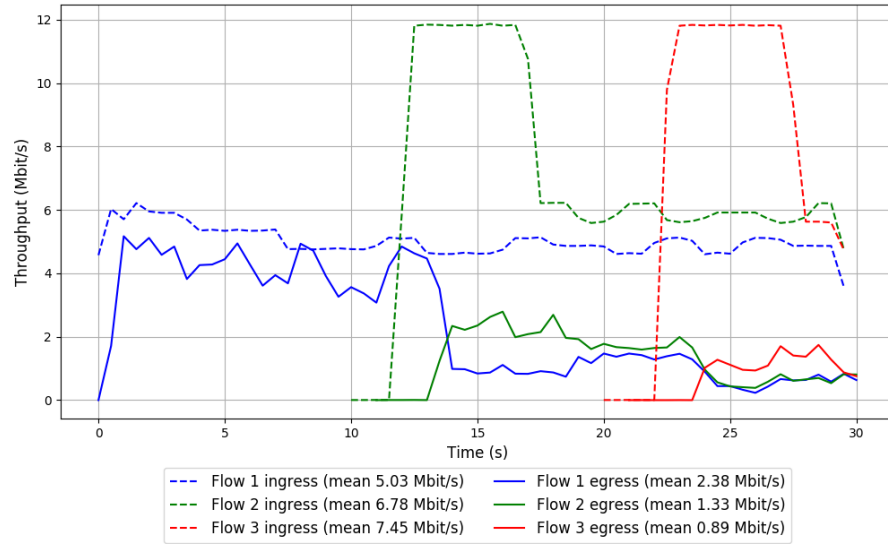


Run 1: Statistics of PCC-Expr

Start at: 2018-08-01 06:19:23
End at: 2018-08-01 06:19:53
Local clock offset: 1.547 ms
Remote clock offset: -7.155 ms

Below is generated by plot.py at 2018-08-01 07:10:07
Datalink statistics
-- Total of 3 flows:
Average throughput: 3.48 Mbit/s
95th percentile per-packet one-way delay: 1126.281 ms
Loss rate: 71.05%
-- Flow 1:
Average throughput: 2.38 Mbit/s
95th percentile per-packet one-way delay: 1113.335 ms
Loss rate: 52.70%
-- Flow 2:
Average throughput: 1.33 Mbit/s
95th percentile per-packet one-way delay: 1132.196 ms
Loss rate: 81.47%
-- Flow 3:
Average throughput: 0.89 Mbit/s
95th percentile per-packet one-way delay: 1141.372 ms
Loss rate: 89.45%

Run 1: Report of PCC-Expr — Data Link



Run 2: Statistics of PCC-Expr

Start at: 2018-08-01 06:38:09

End at: 2018-08-01 06:38:39

Local clock offset: 0.403 ms

Remote clock offset: 7.828 ms

Below is generated by plot.py at 2018-08-01 07:10:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.21 Mbit/s

95th percentile per-packet one-way delay: 1139.611 ms

Loss rate: 73.25%

-- Flow 1:

Average throughput: 2.06 Mbit/s

95th percentile per-packet one-way delay: 1128.724 ms

Loss rate: 59.08%

-- Flow 2:

Average throughput: 1.29 Mbit/s

95th percentile per-packet one-way delay: 1146.718 ms

Loss rate: 82.10%

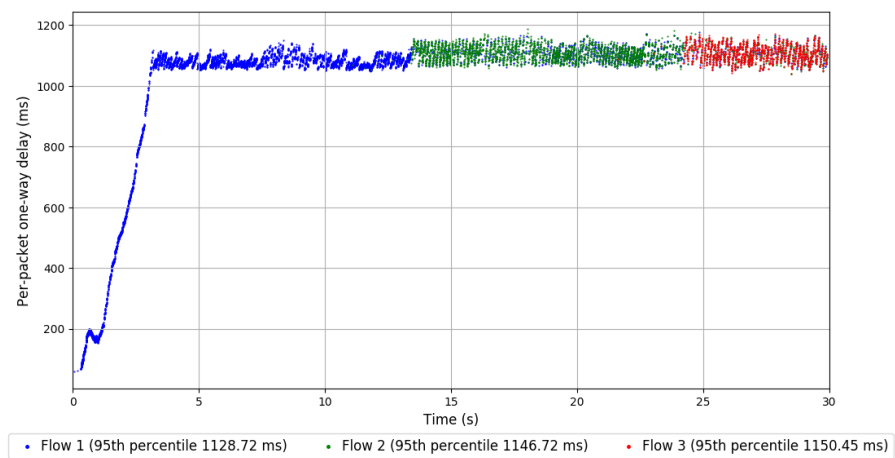
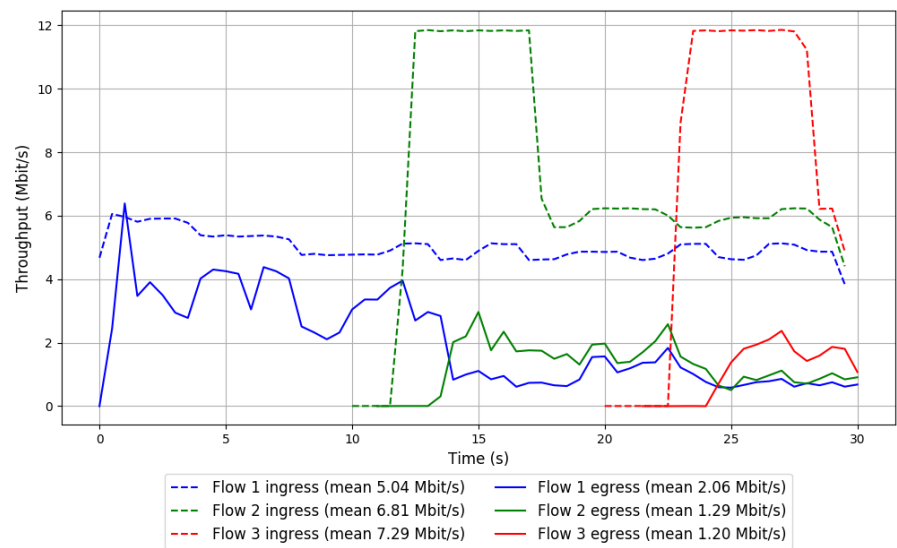
-- Flow 3:

Average throughput: 1.20 Mbit/s

95th percentile per-packet one-way delay: 1150.446 ms

Loss rate: 86.25%

Run 2: Report of PCC-Expr — Data Link

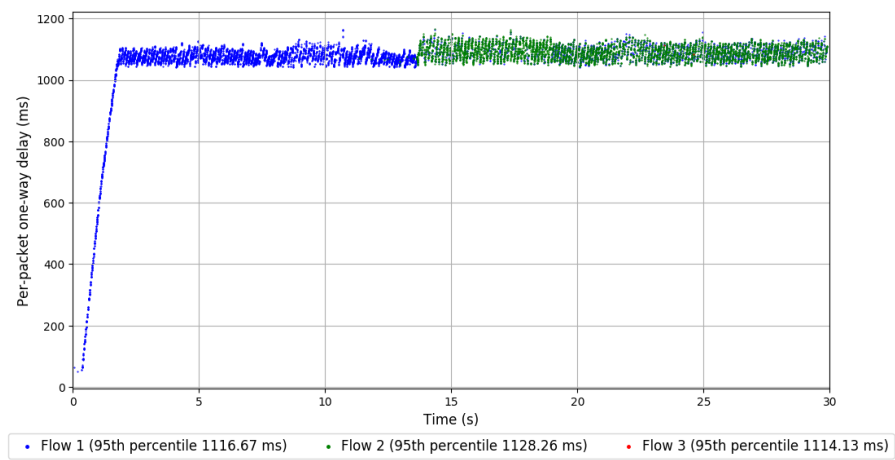
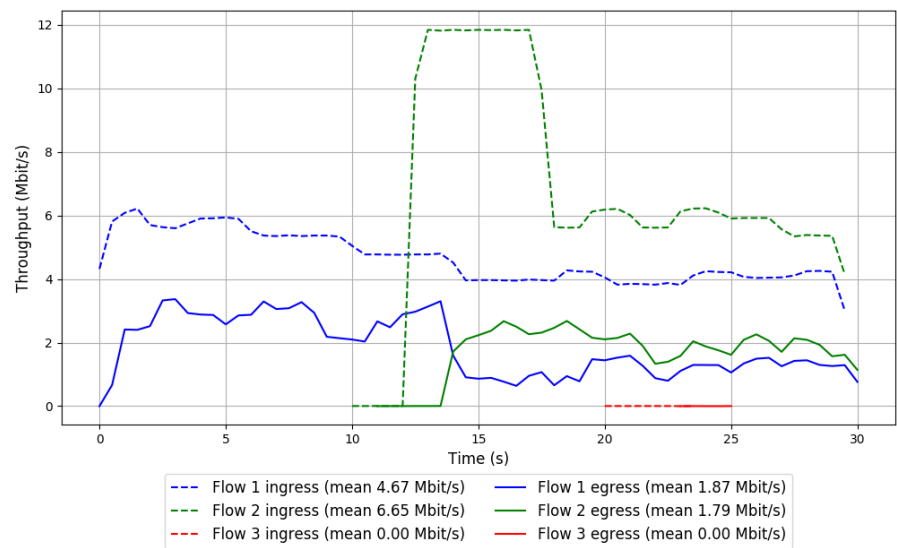


Run 3: Statistics of PCC-Expr

Start at: 2018-08-01 06:56:53
End at: 2018-08-01 06:57:23
Local clock offset: 0.246 ms
Remote clock offset: -4.989 ms

Below is generated by plot.py at 2018-08-01 07:10:07
Datalink statistics
-- Total of 3 flows:
Average throughput: 2.98 Mbit/s
95th percentile per-packet one-way delay: 1122.377 ms
Loss rate: 67.27%
-- Flow 1:
Average throughput: 1.87 Mbit/s
95th percentile per-packet one-way delay: 1116.672 ms
Loss rate: 60.09%
-- Flow 2:
Average throughput: 1.79 Mbit/s
95th percentile per-packet one-way delay: 1128.262 ms
Loss rate: 74.85%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 1114.128 ms
Loss rate: 83.22%

Run 3: Report of PCC-Expr — Data Link

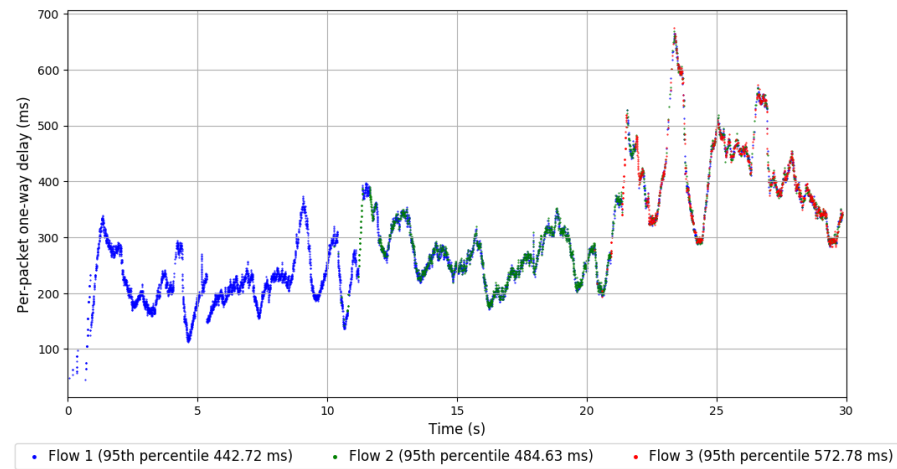
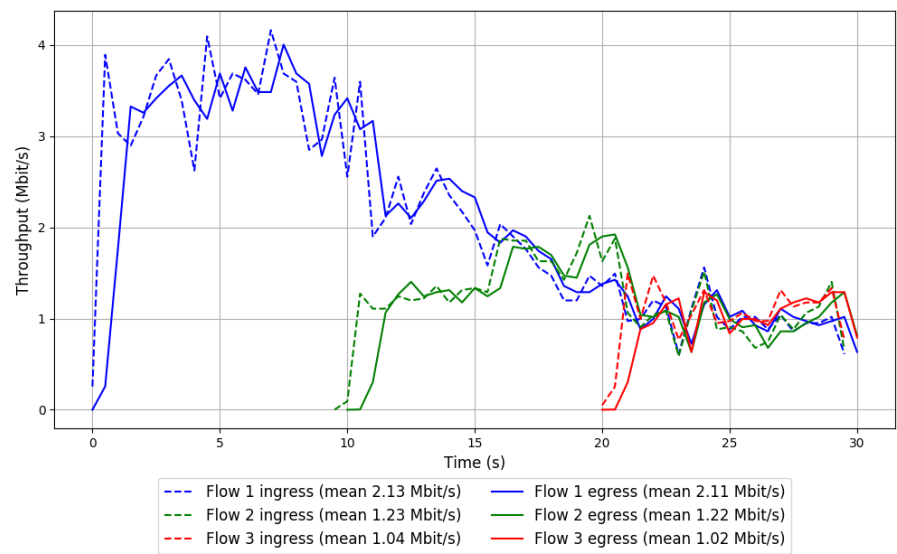


Run 1: Statistics of QUIC Cubic

Start at: 2018-08-01 06:20:29
End at: 2018-08-01 06:20:59
Local clock offset: 2.425 ms
Remote clock offset: -5.165 ms

Below is generated by plot.py at 2018-08-01 07:10:07
Datalink statistics
-- Total of 3 flows:
Average throughput: 3.24 Mbit/s
95th percentile per-packet one-way delay: 474.683 ms
Loss rate: 1.59%
-- Flow 1:
Average throughput: 2.11 Mbit/s
95th percentile per-packet one-way delay: 442.723 ms
Loss rate: 0.89%
-- Flow 2:
Average throughput: 1.22 Mbit/s
95th percentile per-packet one-way delay: 484.628 ms
Loss rate: 2.13%
-- Flow 3:
Average throughput: 1.02 Mbit/s
95th percentile per-packet one-way delay: 572.779 ms
Loss rate: 4.66%

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2018-08-01 06:39:17

End at: 2018-08-01 06:39:47

Local clock offset: 1.148 ms

Remote clock offset: 5.579 ms

Below is generated by plot.py at 2018-08-01 07:10:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 2.87 Mbit/s

95th percentile per-packet one-way delay: 489.325 ms

Loss rate: 2.12%

-- Flow 1:

Average throughput: 1.73 Mbit/s

95th percentile per-packet one-way delay: 490.093 ms

Loss rate: 1.36%

-- Flow 2:

Average throughput: 1.13 Mbit/s

95th percentile per-packet one-way delay: 485.190 ms

Loss rate: 2.68%

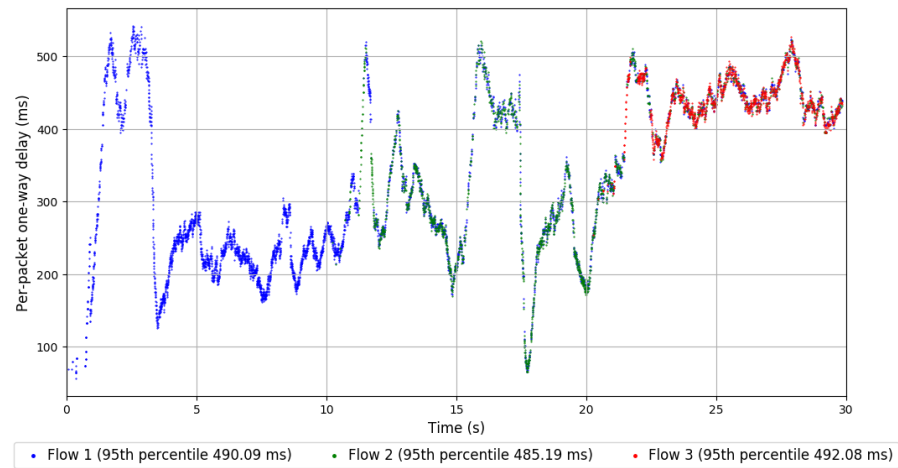
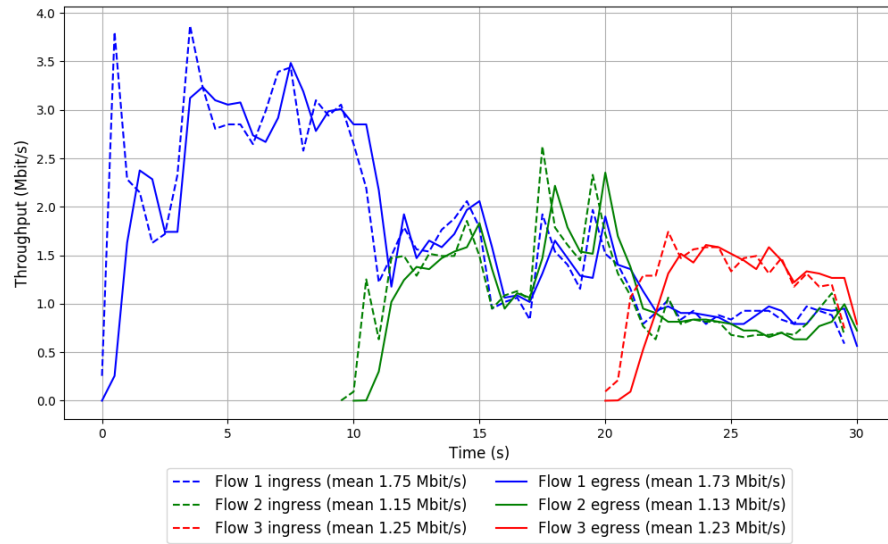
-- Flow 3:

Average throughput: 1.23 Mbit/s

95th percentile per-packet one-way delay: 492.082 ms

Loss rate: 4.33%

Run 2: Report of QUIC Cubic — Data Link

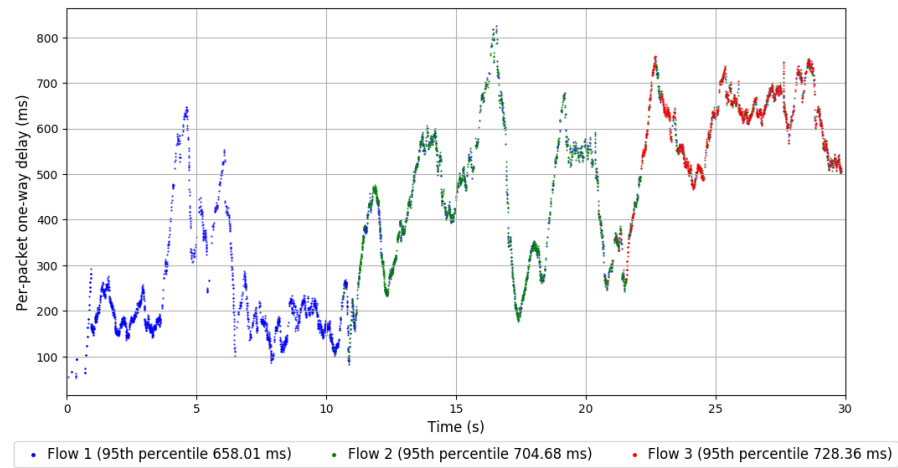
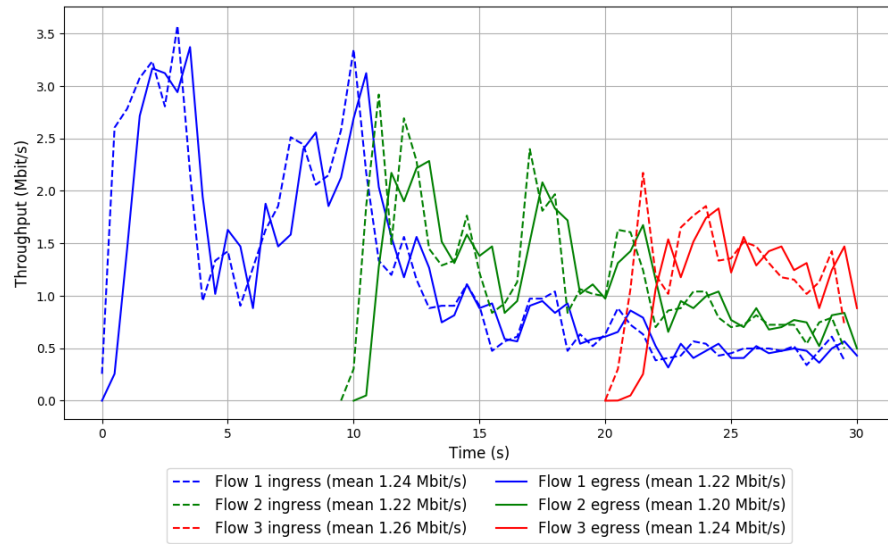


Run 3: Statistics of QUIC Cubic

Start at: 2018-08-01 06:57:59
End at: 2018-08-01 06:58:29
Local clock offset: 0.442 ms
Remote clock offset: -3.944 ms

Below is generated by plot.py at 2018-08-01 07:10:07
Datalink statistics
-- Total of 3 flows:
Average throughput: 2.40 Mbit/s
95th percentile per-packet one-way delay: 698.831 ms
Loss rate: 2.68%
-- Flow 1:
Average throughput: 1.22 Mbit/s
95th percentile per-packet one-way delay: 658.006 ms
Loss rate: 1.75%
-- Flow 2:
Average throughput: 1.20 Mbit/s
95th percentile per-packet one-way delay: 704.678 ms
Loss rate: 2.43%
-- Flow 3:
Average throughput: 1.24 Mbit/s
95th percentile per-packet one-way delay: 728.359 ms
Loss rate: 5.97%

Run 3: Report of QUIC Cubic — Data Link

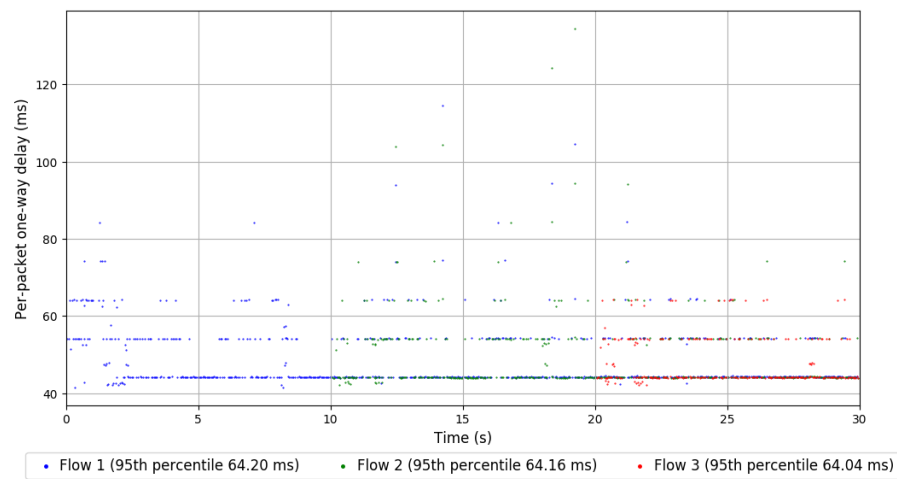
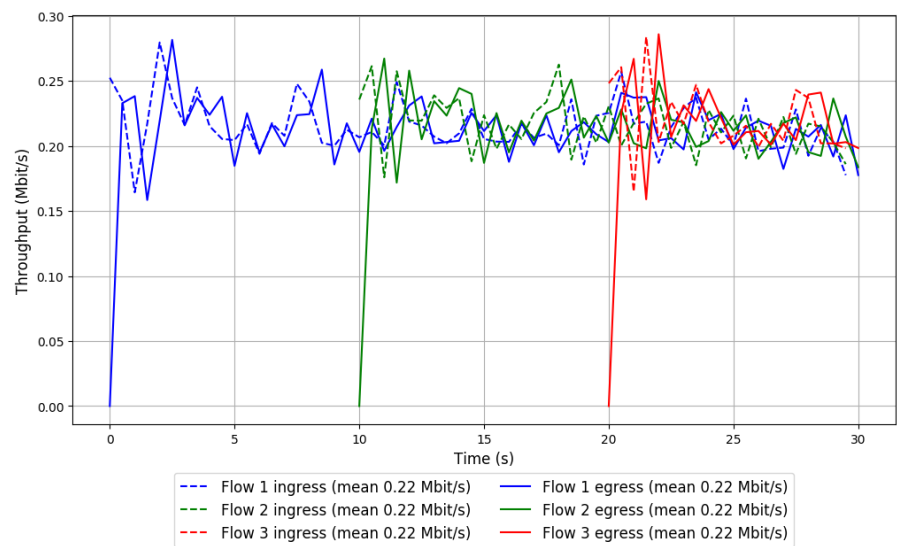


Run 1: Statistics of SReAM

Start at: 2018-08-01 06:29:17
End at: 2018-08-01 06:29:47
Local clock offset: 1.989 ms
Remote clock offset: -8.659 ms

Below is generated by plot.py at 2018-08-01 07:10:07
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 64.186 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 64.201 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 64.158 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 64.040 ms
Loss rate: 0.35%

Run 1: Report of SReAM — Data Link

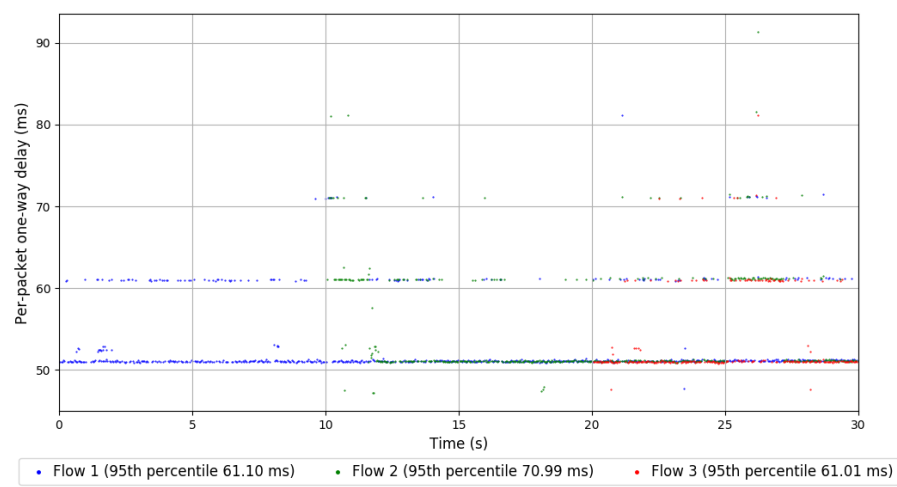
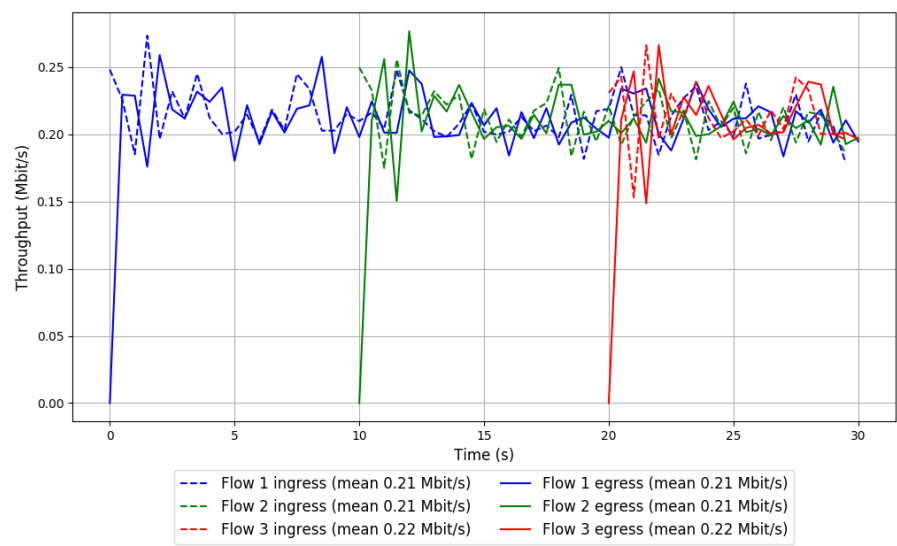


Run 2: Statistics of SReAM

Start at: 2018-08-01 06:48:08
End at: 2018-08-01 06:48:38
Local clock offset: -1.282 ms
Remote clock offset: -7.482 ms

Below is generated by plot.py at 2018-08-01 07:10:07
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 61.192 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 61.100 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 70.993 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.006 ms
Loss rate: 0.35%

Run 2: Report of SReAM — Data Link

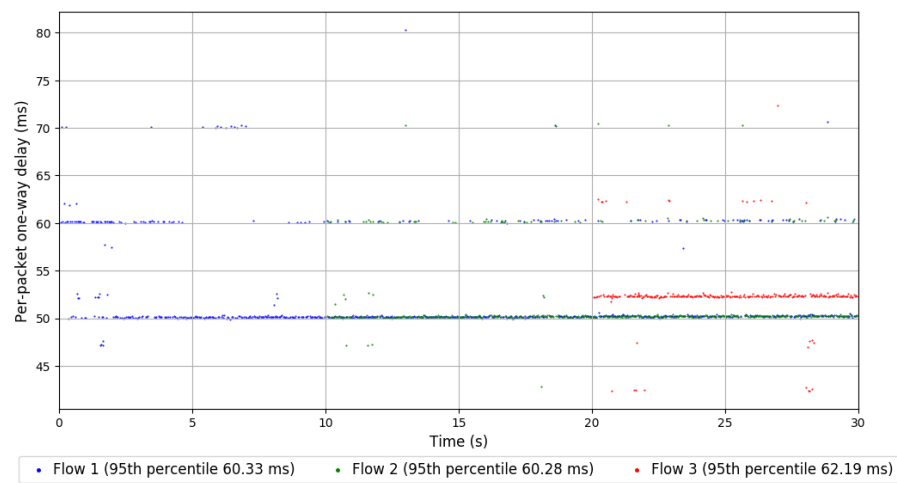
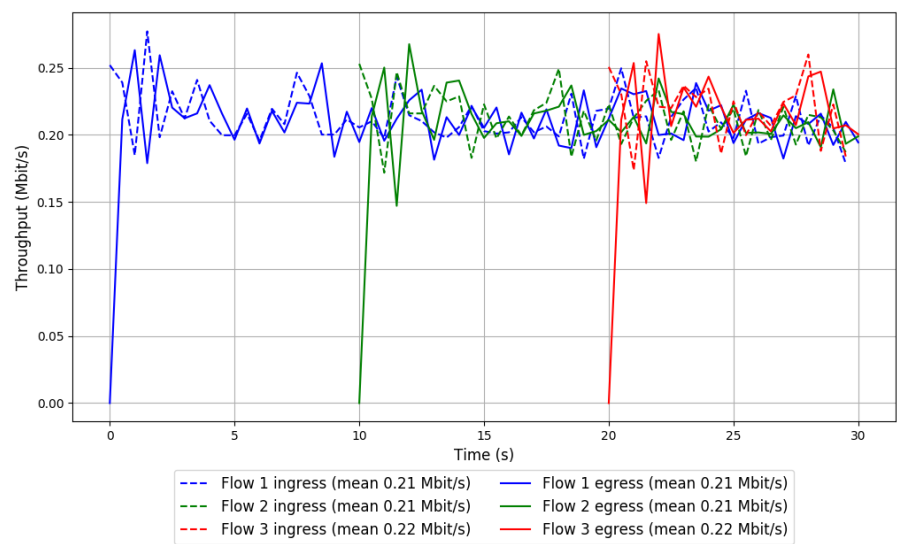


Run 3: Statistics of SReAM

Start at: 2018-08-01 07:06:43
End at: 2018-08-01 07:07:13
Local clock offset: 0.064 ms
Remote clock offset: -6.091 ms

Below is generated by plot.py at 2018-08-01 07:10:07
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 60.313 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 60.330 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 60.282 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 62.192 ms
Loss rate: 0.36%

Run 3: Report of SReAM — Data Link



Run 1: Statistics of Sprout

Start at: 2018-08-01 06:21:35

End at: 2018-08-01 06:22:05

Local clock offset: 3.09 ms

Remote clock offset: -9.02 ms

Below is generated by plot.py at 2018-08-01 07:10:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.67 Mbit/s

95th percentile per-packet one-way delay: 72.116 ms

Loss rate: 0.17%

-- Flow 1:

Average throughput: 0.31 Mbit/s

95th percentile per-packet one-way delay: 68.857 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 0.38 Mbit/s

95th percentile per-packet one-way delay: 74.322 ms

Loss rate: 0.16%

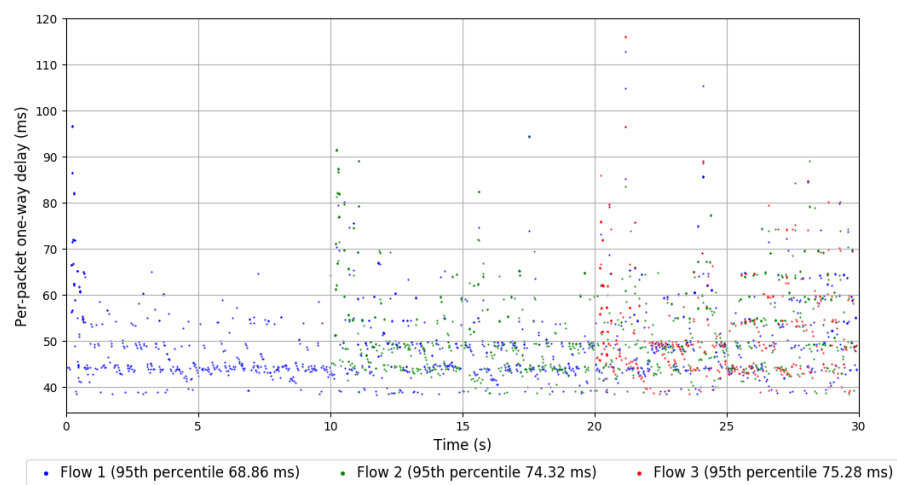
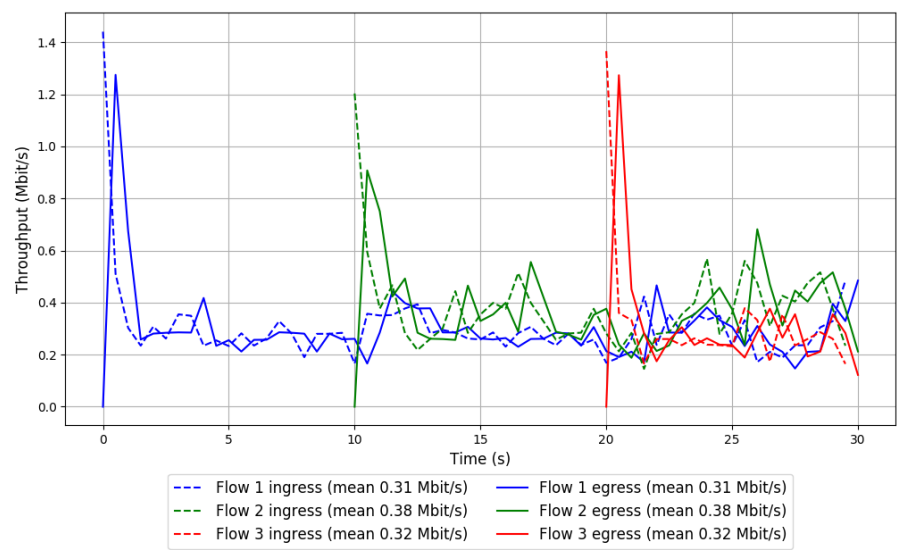
-- Flow 3:

Average throughput: 0.32 Mbit/s

95th percentile per-packet one-way delay: 75.278 ms

Loss rate: 0.69%

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2018-08-01 06:40:28

End at: 2018-08-01 06:40:58

Local clock offset: 1.02 ms

Remote clock offset: 5.934 ms

Below is generated by plot.py at 2018-08-01 07:10:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.71 Mbit/s

95th percentile per-packet one-way delay: 85.671 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 0.33 Mbit/s

95th percentile per-packet one-way delay: 85.778 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 0.37 Mbit/s

95th percentile per-packet one-way delay: 90.109 ms

Loss rate: 0.01%

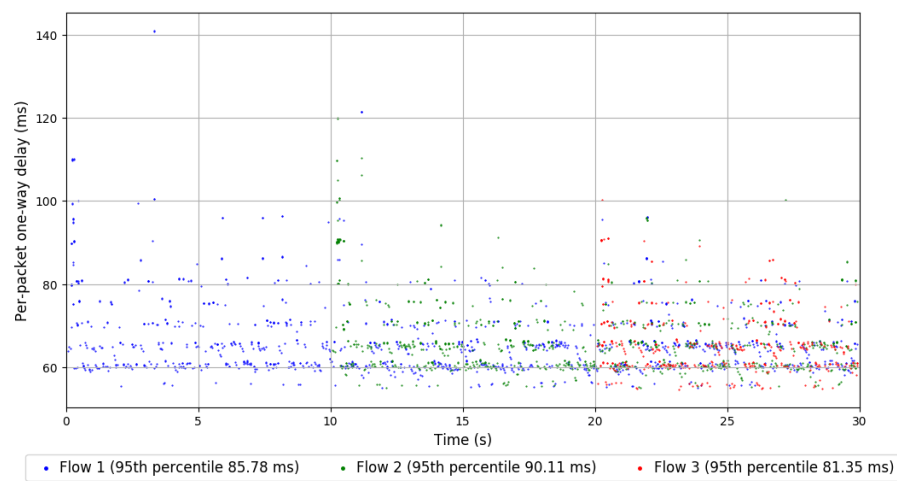
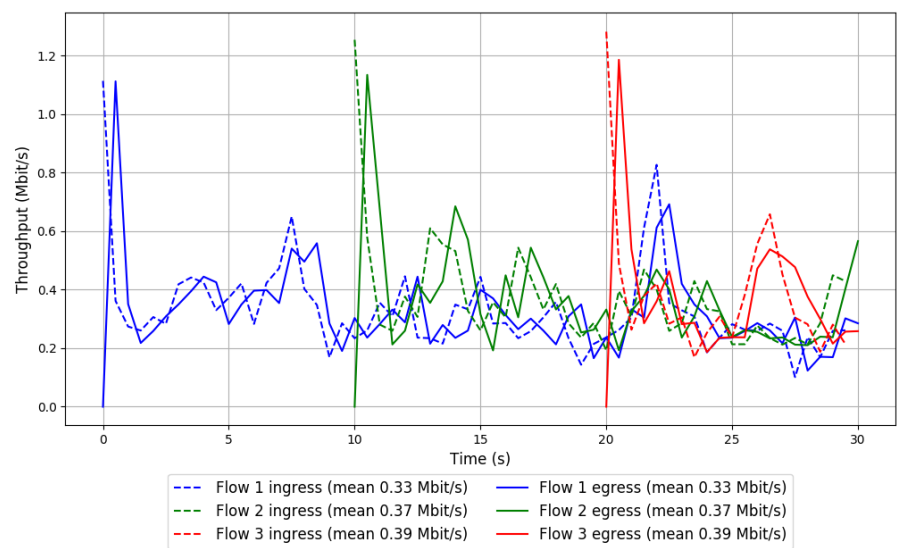
-- Flow 3:

Average throughput: 0.39 Mbit/s

95th percentile per-packet one-way delay: 81.350 ms

Loss rate: 0.02%

Run 2: Report of Sprout — Data Link

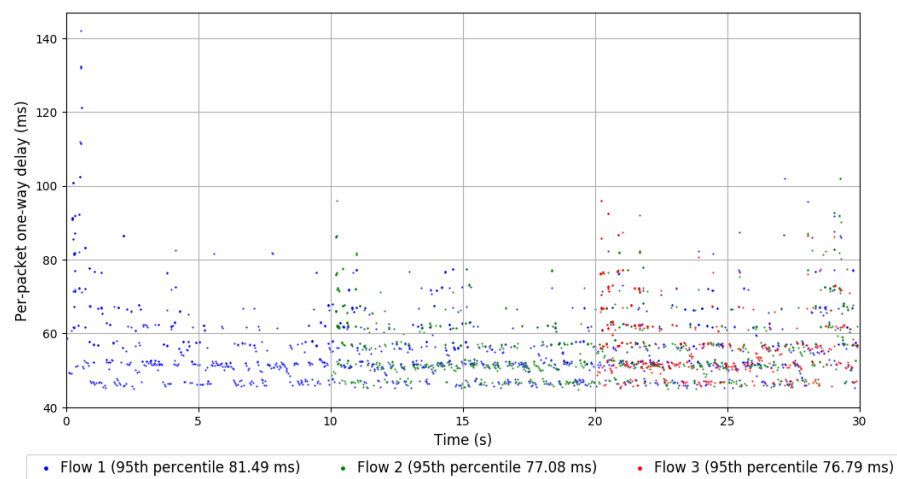
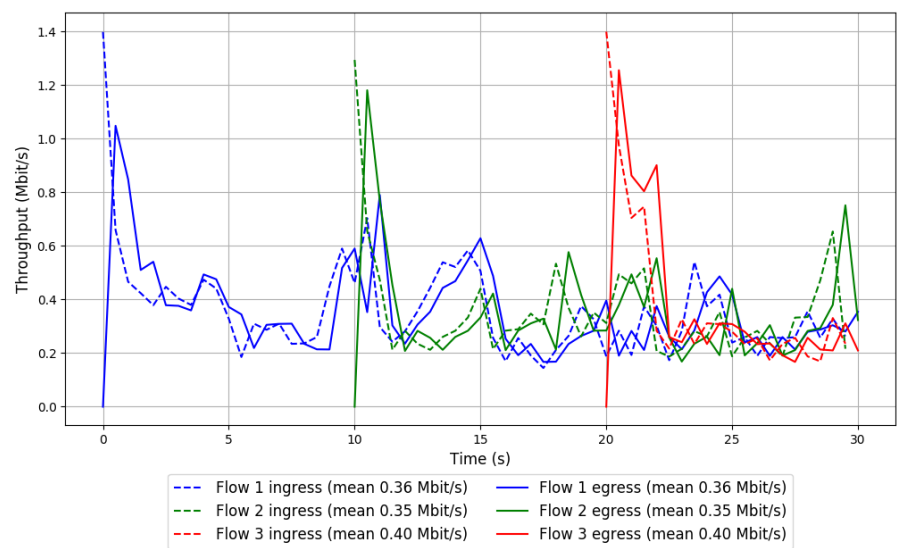


Run 3: Statistics of Sprout

Start at: 2018-08-01 06:59:04
End at: 2018-08-01 06:59:34
Local clock offset: 0.377 ms
Remote clock offset: -3.599 ms

```
# Below is generated by plot.py at 2018-08-01 07:10:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.73 Mbit/s
95th percentile per-packet one-way delay: 77.291 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 81.489 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 0.35 Mbit/s
95th percentile per-packet one-way delay: 77.085 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 76.793 ms
Loss rate: 0.59%
```

Run 3: Report of Sprout — Data Link



Run 1: Statistics of TaoVA-100x

Start at: 2018-08-01 06:13:54

End at: 2018-08-01 06:14:24

Local clock offset: 0.646 ms

Remote clock offset: -7.74 ms

Below is generated by plot.py at 2018-08-01 07:10:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.77 Mbit/s

95th percentile per-packet one-way delay: 461.514 ms

Loss rate: 1.47%

-- Flow 1:

Average throughput: 2.35 Mbit/s

95th percentile per-packet one-way delay: 390.843 ms

Loss rate: 0.95%

-- Flow 2:

Average throughput: 1.54 Mbit/s

95th percentile per-packet one-way delay: 416.235 ms

Loss rate: 2.16%

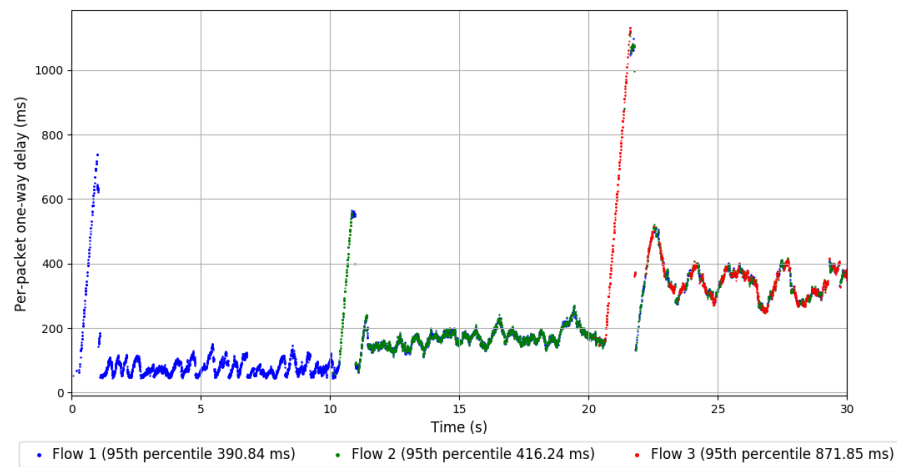
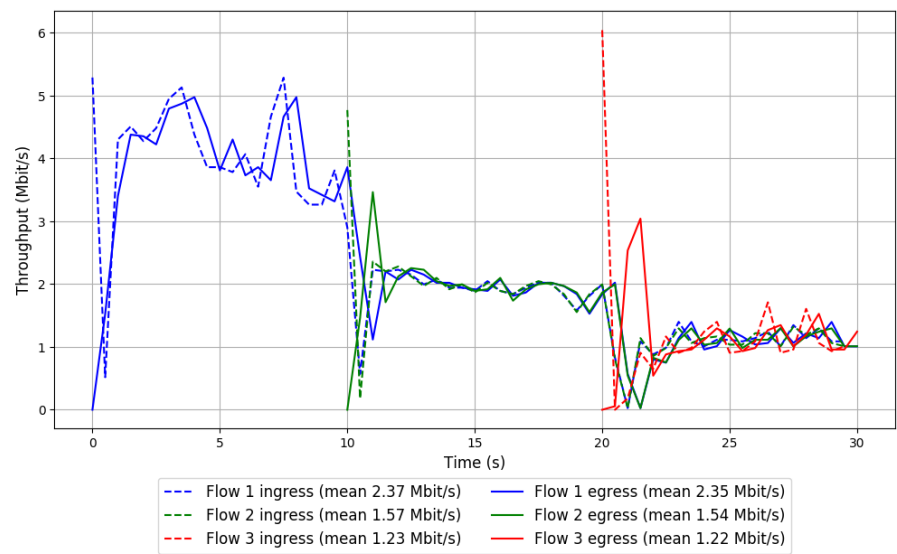
-- Flow 3:

Average throughput: 1.22 Mbit/s

95th percentile per-packet one-way delay: 871.850 ms

Loss rate: 2.63%

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



Run 2: Statistics of TaoVA-100x

Start at: 2018-08-01 06:32:36

End at: 2018-08-01 06:33:06

Local clock offset: -0.972 ms

Remote clock offset: 5.226 ms

Below is generated by plot.py at 2018-08-01 07:10:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 2.22 Mbit/s

95th percentile per-packet one-way delay: 972.945 ms

Loss rate: 5.79%

-- Flow 1:

Average throughput: 1.34 Mbit/s

95th percentile per-packet one-way delay: 944.335 ms

Loss rate: 2.14%

-- Flow 2:

Average throughput: 0.99 Mbit/s

95th percentile per-packet one-way delay: 1014.101 ms

Loss rate: 10.28%

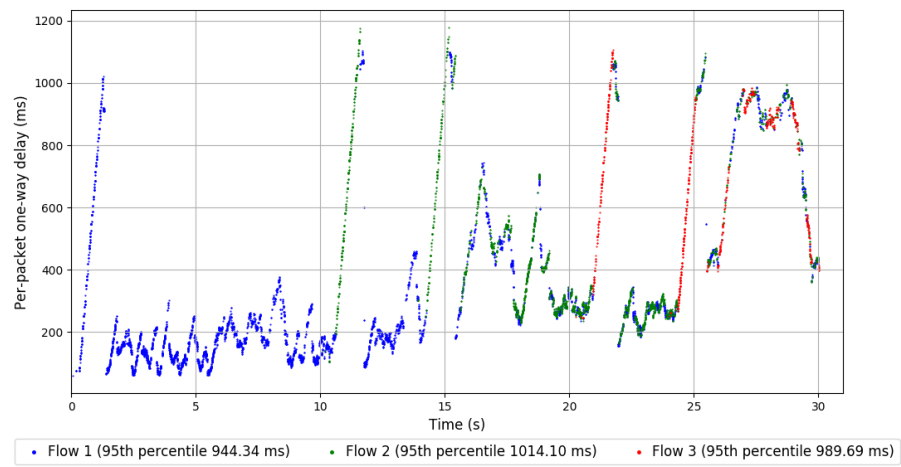
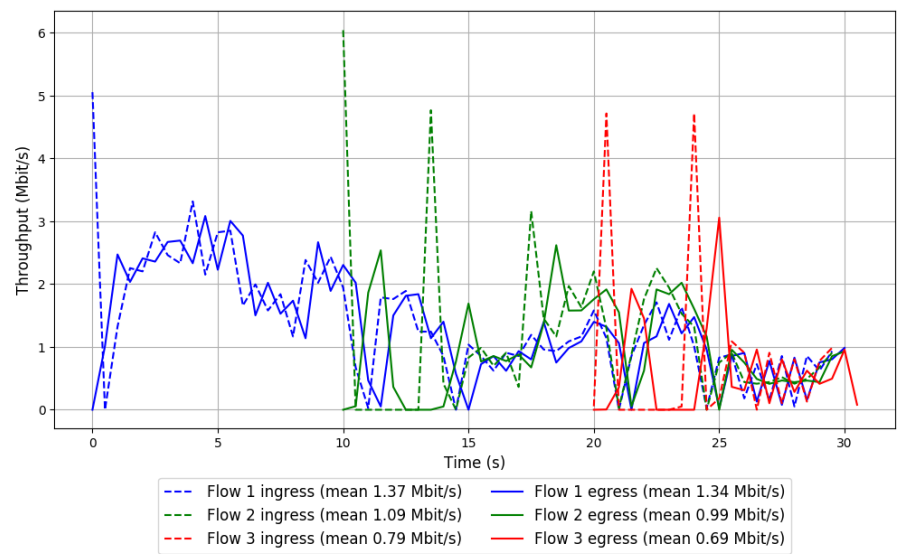
-- Flow 3:

Average throughput: 0.69 Mbit/s

95th percentile per-packet one-way delay: 989.694 ms

Loss rate: 12.56%

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

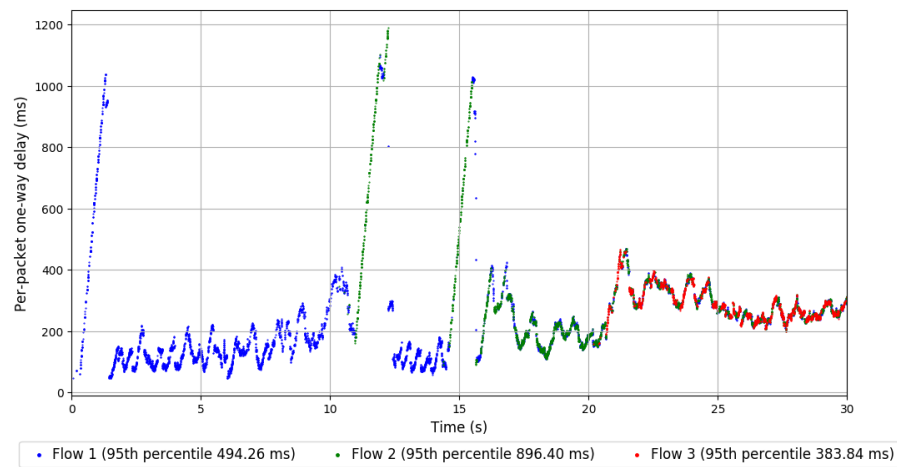
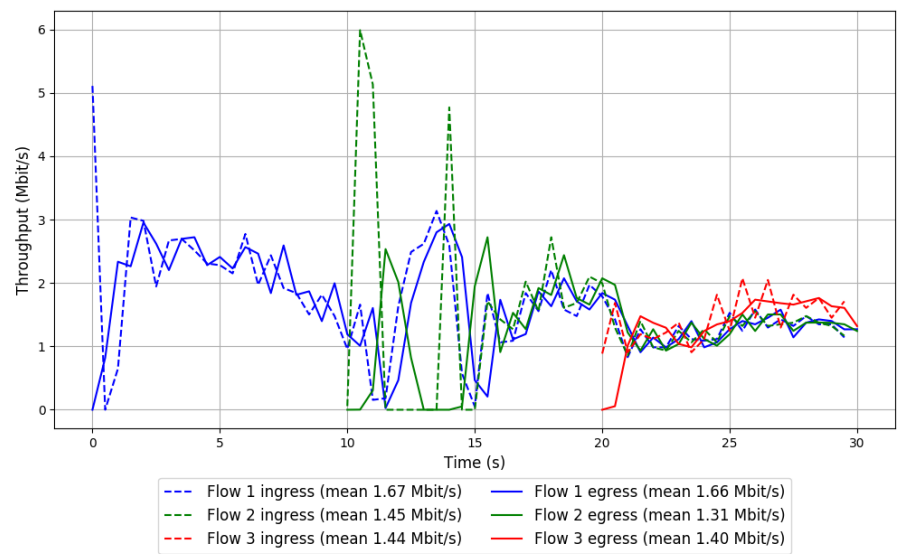


Run 3: Statistics of TaoVA-100x

Start at: 2018-08-01 06:51:24
End at: 2018-08-01 06:51:54
Local clock offset: 2.495 ms
Remote clock offset: -4.906 ms

Below is generated by plot.py at 2018-08-01 07:10:13
Datalink statistics
-- Total of 3 flows:
Average throughput: 2.98 Mbit/s
95th percentile per-packet one-way delay: 688.078 ms
Loss rate: 4.44%
-- Flow 1:
Average throughput: 1.66 Mbit/s
95th percentile per-packet one-way delay: 494.260 ms
Loss rate: 0.85%
-- Flow 2:
Average throughput: 1.31 Mbit/s
95th percentile per-packet one-way delay: 896.401 ms
Loss rate: 10.97%
-- Flow 3:
Average throughput: 1.40 Mbit/s
95th percentile per-packet one-way delay: 383.836 ms
Loss rate: 3.86%

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

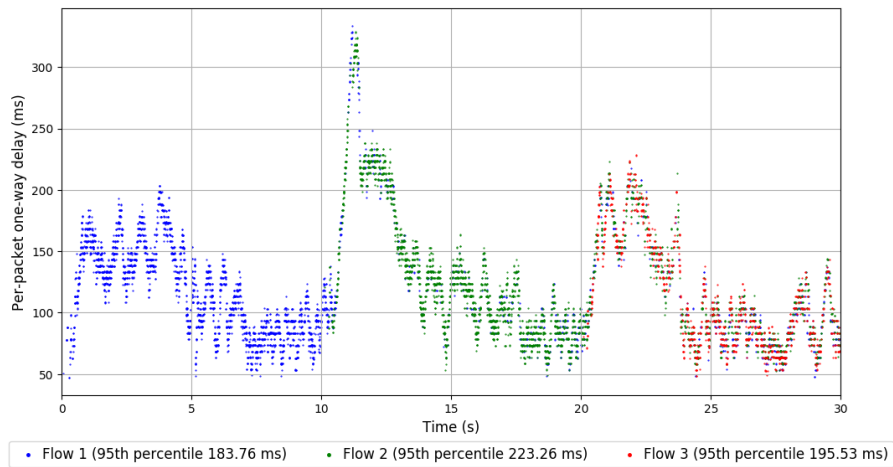
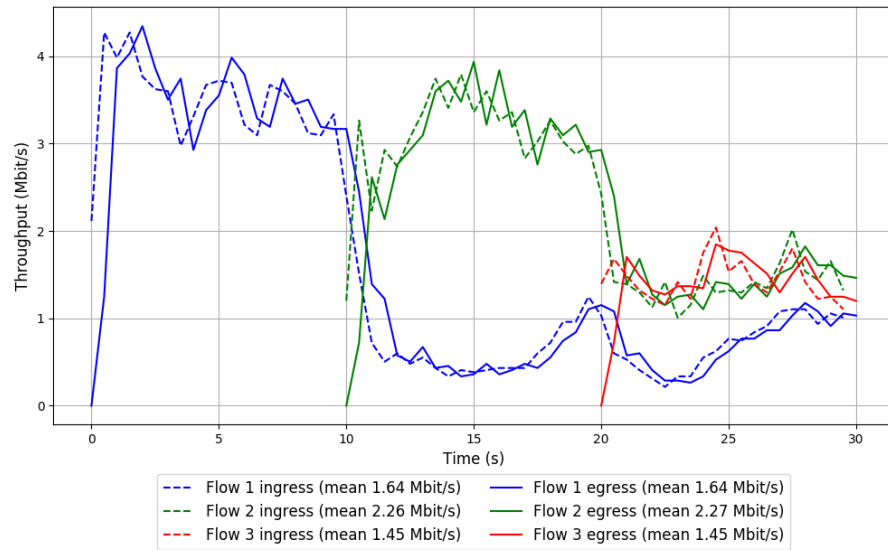


Run 1: Statistics of TCP Vegas

Start at: 2018-08-01 06:22:40
End at: 2018-08-01 06:23:10
Local clock offset: 1.02 ms
Remote clock offset: -8.458 ms

Below is generated by plot.py at 2018-08-01 07:10:13
Datalink statistics
-- Total of 3 flows:
Average throughput: 3.63 Mbit/s
95th percentile per-packet one-way delay: 208.520 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 1.64 Mbit/s
95th percentile per-packet one-way delay: 183.758 ms
Loss rate: 0.17%
-- Flow 2:
Average throughput: 2.27 Mbit/s
95th percentile per-packet one-way delay: 223.258 ms
Loss rate: 0.24%
-- Flow 3:
Average throughput: 1.45 Mbit/s
95th percentile per-packet one-way delay: 195.534 ms
Loss rate: 0.50%

Run 1: Report of TCP Vegas — Data Link

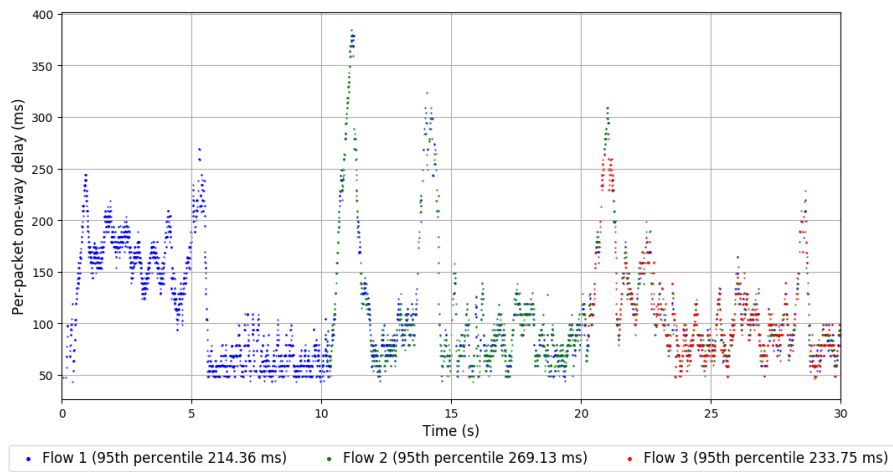
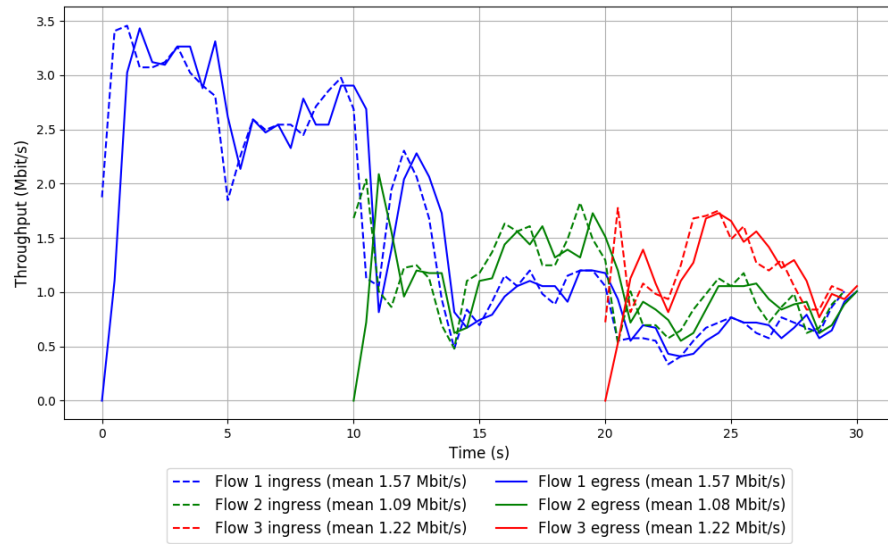


Run 2: Statistics of TCP Vegas

Start at: 2018-08-01 06:41:35
End at: 2018-08-01 06:42:05
Local clock offset: 1.276 ms
Remote clock offset: -6.926 ms

Below is generated by plot.py at 2018-08-01 07:10:13
Datalink statistics
-- Total of 3 flows:
Average throughput: 2.69 Mbit/s
95th percentile per-packet one-way delay: 229.188 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 1.57 Mbit/s
95th percentile per-packet one-way delay: 214.359 ms
Loss rate: 0.18%
-- Flow 2:
Average throughput: 1.08 Mbit/s
95th percentile per-packet one-way delay: 269.134 ms
Loss rate: 0.44%
-- Flow 3:
Average throughput: 1.22 Mbit/s
95th percentile per-packet one-way delay: 233.746 ms
Loss rate: 0.69%

Run 2: Report of TCP Vegas — Data Link

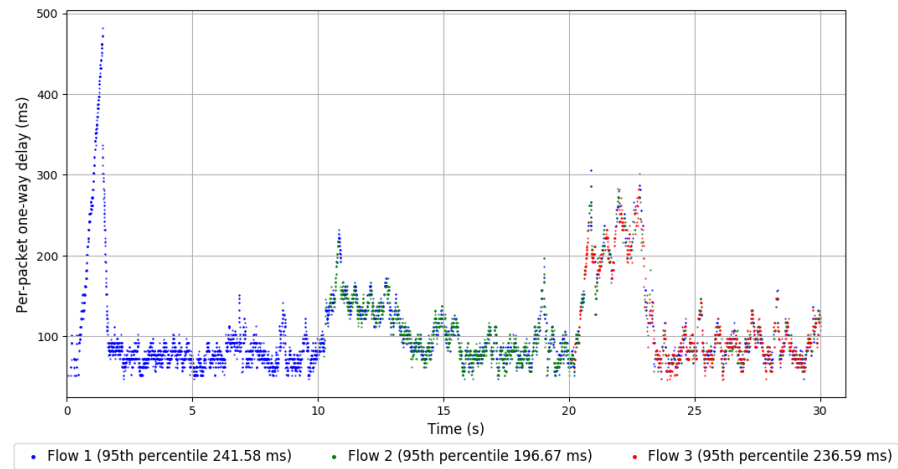
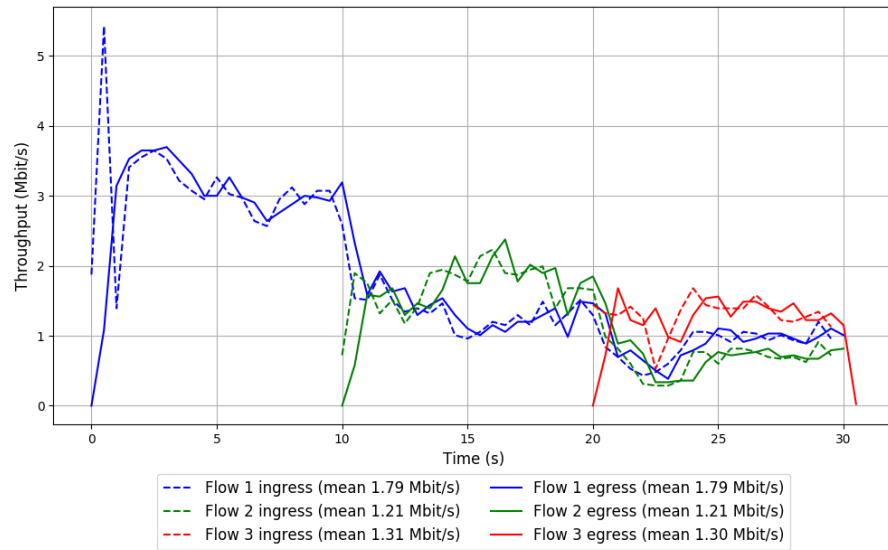


Run 3: Statistics of TCP Vegas

Start at: 2018-08-01 07:00:10
End at: 2018-08-01 07:00:40
Local clock offset: 0.492 ms
Remote clock offset: -4.952 ms

```
# Below is generated by plot.py at 2018-08-01 07:10:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.02 Mbit/s
95th percentile per-packet one-way delay: 226.763 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 1.79 Mbit/s
95th percentile per-packet one-way delay: 241.582 ms
Loss rate: 0.22%
-- Flow 2:
Average throughput: 1.21 Mbit/s
95th percentile per-packet one-way delay: 196.668 ms
Loss rate: 0.25%
-- Flow 3:
Average throughput: 1.30 Mbit/s
95th percentile per-packet one-way delay: 236.586 ms
Loss rate: 0.74%
```

Run 3: Report of TCP Vegas — Data Link

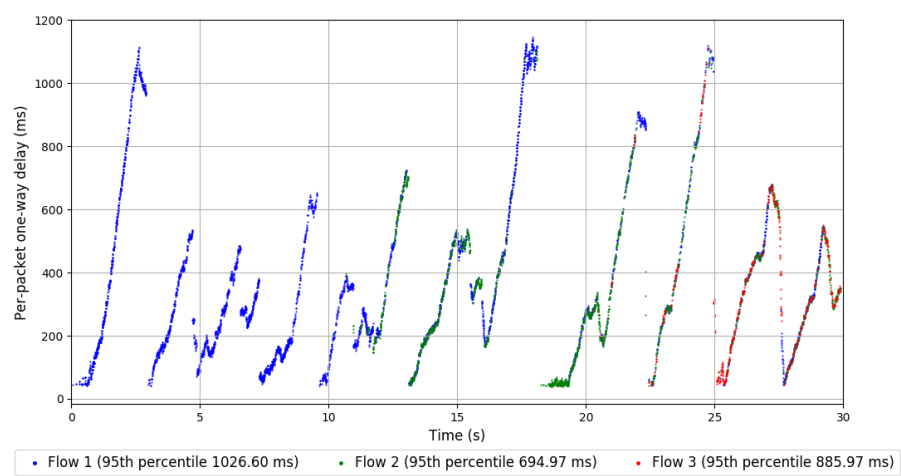
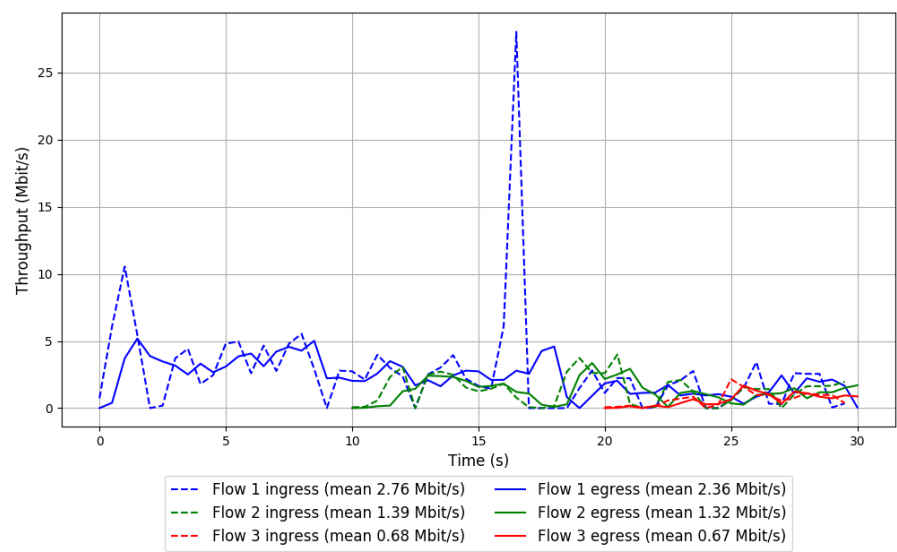


Run 1: Statistics of Verus

Start at: 2018-08-01 06:25:58
End at: 2018-08-01 06:26:28
Local clock offset: 3.275 ms
Remote clock offset: -8.276 ms

Below is generated by plot.py at 2018-08-01 07:10:15
Datalink statistics
-- Total of 3 flows:
Average throughput: 3.42 Mbit/s
95th percentile per-packet one-way delay: 983.281 ms
Loss rate: 12.56%
-- Flow 1:
Average throughput: 2.36 Mbit/s
95th percentile per-packet one-way delay: 1026.598 ms
Loss rate: 15.55%
-- Flow 2:
Average throughput: 1.32 Mbit/s
95th percentile per-packet one-way delay: 694.969 ms
Loss rate: 5.62%
-- Flow 3:
Average throughput: 0.67 Mbit/s
95th percentile per-packet one-way delay: 885.965 ms
Loss rate: 4.24%

Run 1: Report of Verus — Data Link

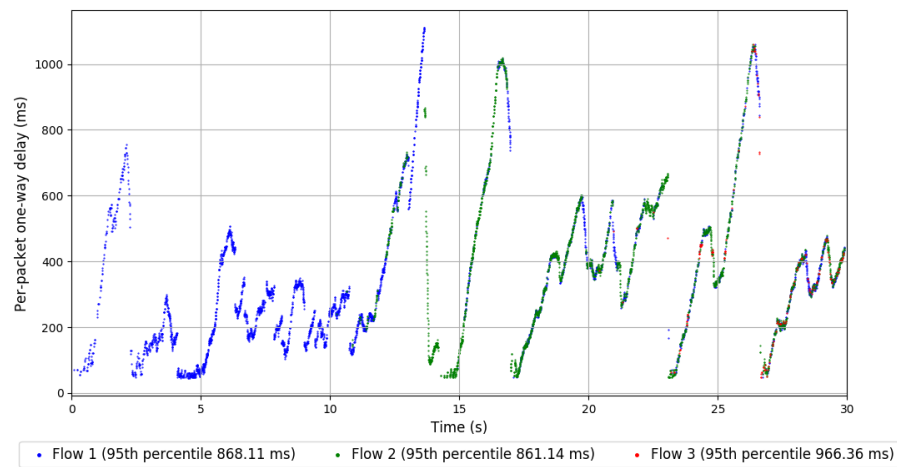
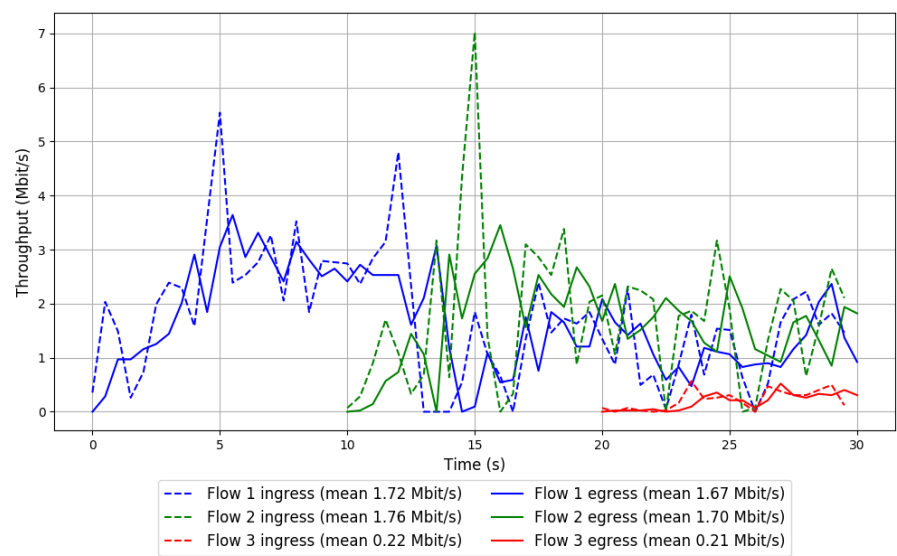


Run 2: Statistics of Verus

Start at: 2018-08-01 06:44:51
End at: 2018-08-01 06:45:21
Local clock offset: 0.89 ms
Remote clock offset: -5.307 ms

Below is generated by plot.py at 2018-08-01 07:10:15
Datalink statistics
-- Total of 3 flows:
Average throughput: 2.85 Mbit/s
95th percentile per-packet one-way delay: 861.311 ms
Loss rate: 3.90%
-- Flow 1:
Average throughput: 1.67 Mbit/s
95th percentile per-packet one-way delay: 868.110 ms
Loss rate: 3.63%
-- Flow 2:
Average throughput: 1.70 Mbit/s
95th percentile per-packet one-way delay: 861.139 ms
Loss rate: 4.04%
-- Flow 3:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 966.359 ms
Loss rate: 8.11%

Run 2: Report of Verus — Data Link

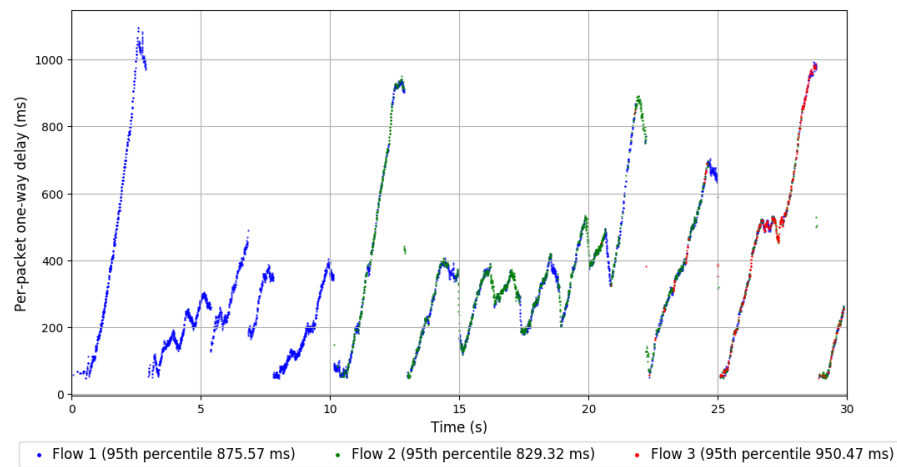
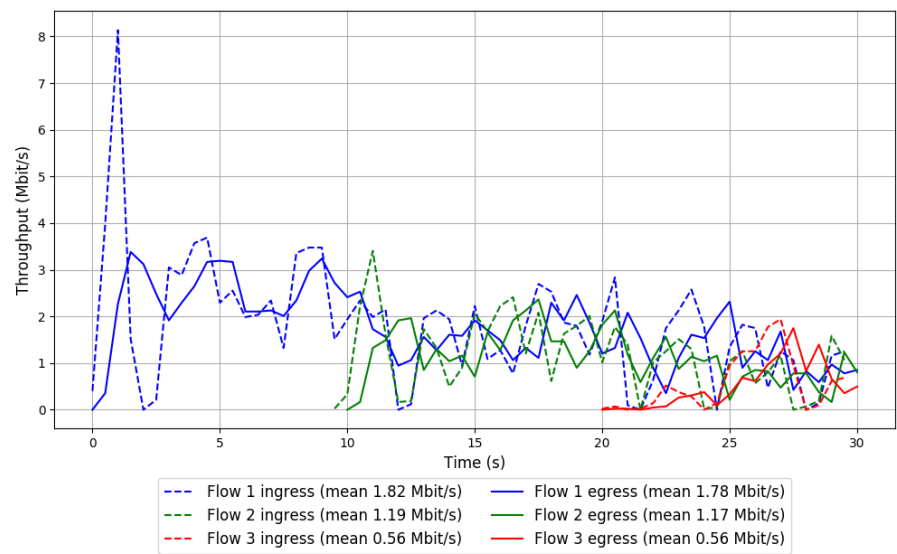


Run 3: Statistics of Verus

Start at: 2018-08-01 07:03:26
End at: 2018-08-01 07:03:56
Local clock offset: 0.342 ms
Remote clock offset: -3.853 ms

Below is generated by plot.py at 2018-08-01 07:10:15
Datalink statistics
-- Total of 3 flows:
Average throughput: 2.73 Mbit/s
95th percentile per-packet one-way delay: 863.906 ms
Loss rate: 2.27%
-- Flow 1:
Average throughput: 1.78 Mbit/s
95th percentile per-packet one-way delay: 875.573 ms
Loss rate: 2.01%
-- Flow 2:
Average throughput: 1.17 Mbit/s
95th percentile per-packet one-way delay: 829.324 ms
Loss rate: 2.16%
-- Flow 3:
Average throughput: 0.56 Mbit/s
95th percentile per-packet one-way delay: 950.471 ms
Loss rate: 5.33%

Run 3: Report of Verus — Data Link

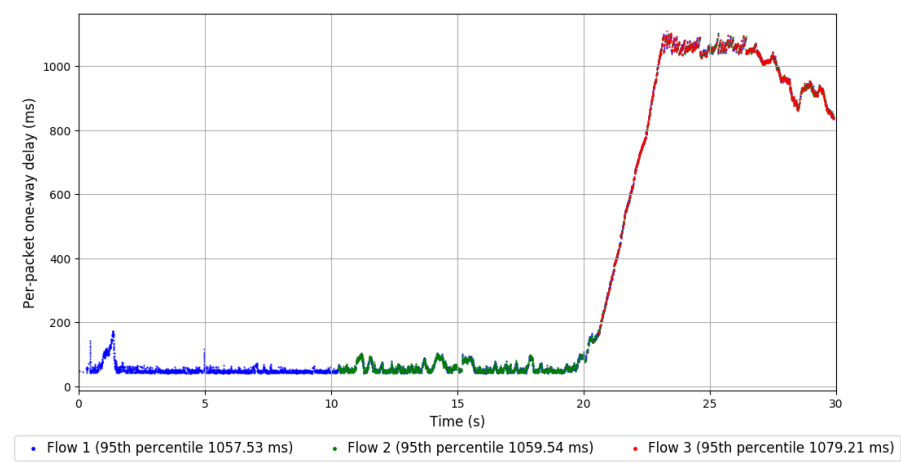
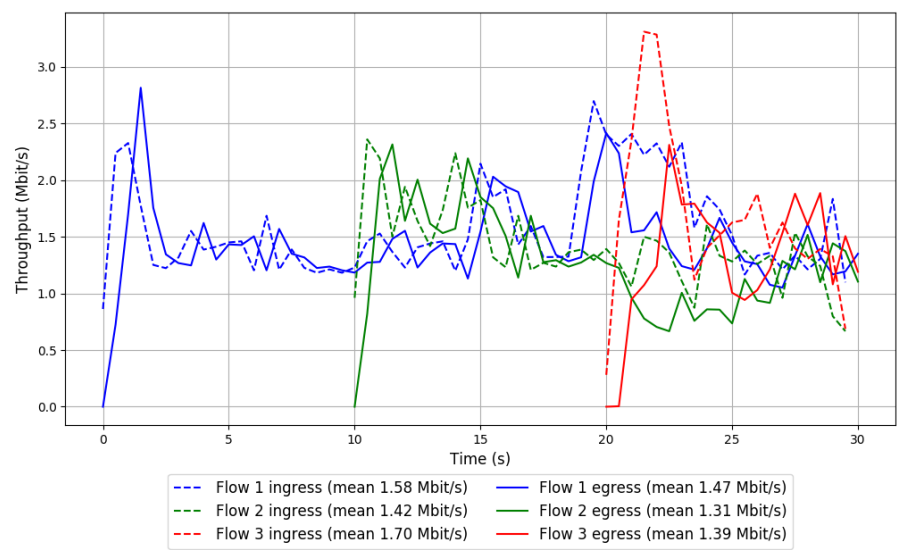


Run 1: Statistics of PCC-Vivace

Start at: 2018-08-01 06:23:46
End at: 2018-08-01 06:24:16
Local clock offset: 1.593 ms
Remote clock offset: -8.821 ms

Below is generated by plot.py at 2018-08-01 07:10:17
Datalink statistics
-- Total of 3 flows:
Average throughput: 2.79 Mbit/s
95th percentile per-packet one-way delay: 1063.709 ms
Loss rate: 9.74%
-- Flow 1:
Average throughput: 1.47 Mbit/s
95th percentile per-packet one-way delay: 1057.532 ms
Loss rate: 7.51%
-- Flow 2:
Average throughput: 1.31 Mbit/s
95th percentile per-packet one-way delay: 1059.544 ms
Loss rate: 7.85%
-- Flow 3:
Average throughput: 1.39 Mbit/s
95th percentile per-packet one-way delay: 1079.211 ms
Loss rate: 19.16%

Run 1: Report of PCC-Vivace — Data Link



Run 2: Statistics of PCC-Vivace

Start at: 2018-08-01 06:42:40

End at: 2018-08-01 06:43:10

Local clock offset: -0.821 ms

Remote clock offset: -4.57 ms

Below is generated by plot.py at 2018-08-01 07:10:17

Datalink statistics

-- Total of 3 flows:

Average throughput: 2.42 Mbit/s

95th percentile per-packet one-way delay: 1077.527 ms

Loss rate: 19.14%

-- Flow 1:

Average throughput: 1.33 Mbit/s

95th percentile per-packet one-way delay: 1065.929 ms

Loss rate: 11.31%

-- Flow 2:

Average throughput: 1.19 Mbit/s

95th percentile per-packet one-way delay: 1074.898 ms

Loss rate: 17.73%

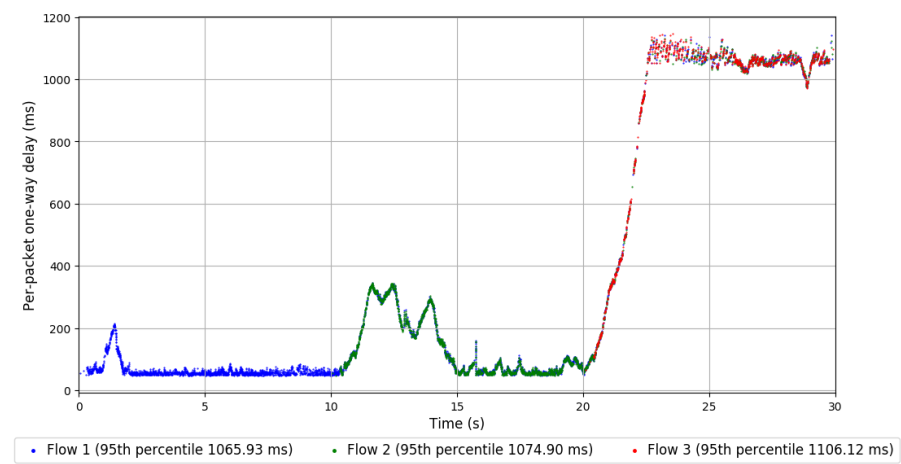
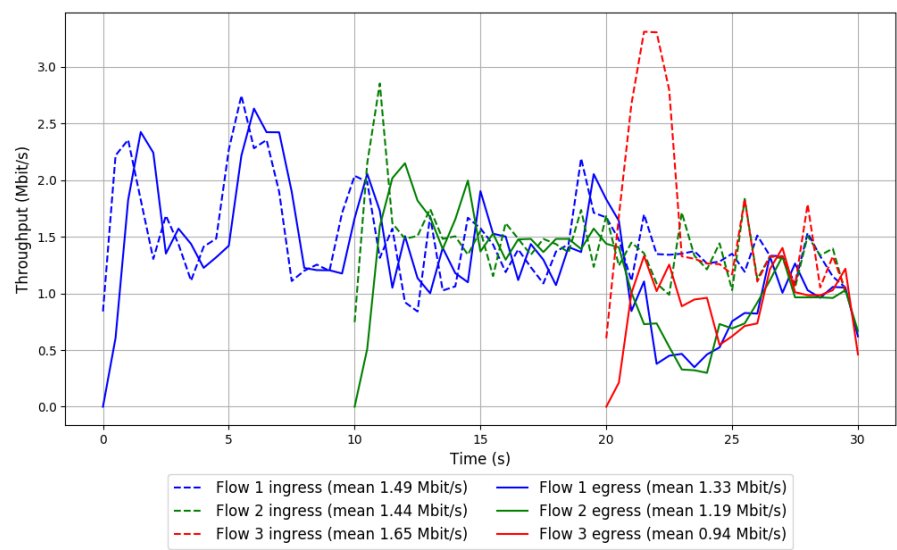
-- Flow 3:

Average throughput: 0.94 Mbit/s

95th percentile per-packet one-way delay: 1106.122 ms

Loss rate: 43.08%

Run 2: Report of PCC-Vivace — Data Link

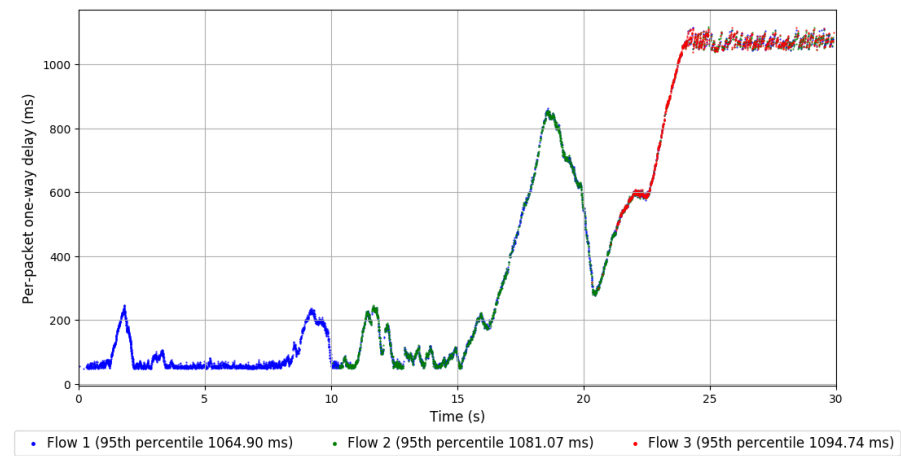
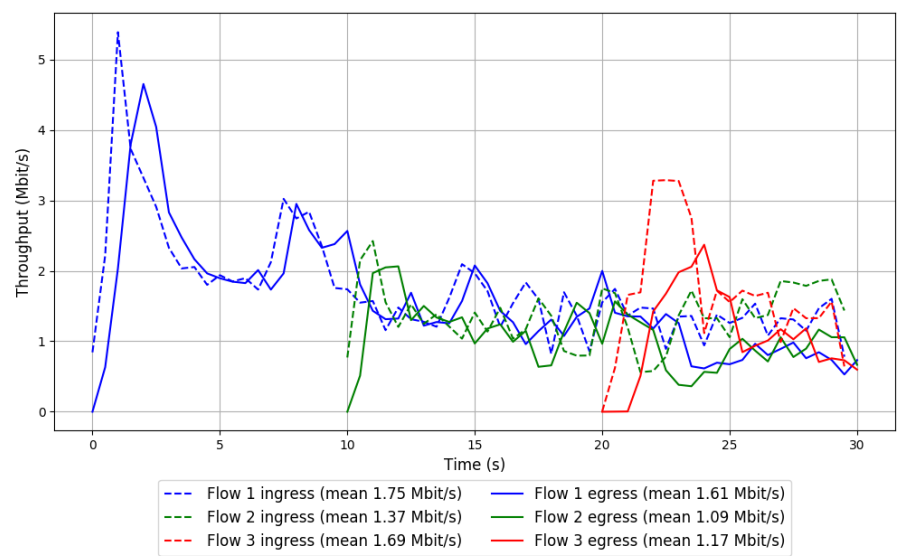


Run 3: Statistics of PCC-Vivace

Start at: 2018-08-01 07:01:15
End at: 2018-08-01 07:01:45
Local clock offset: -1.596 ms
Remote clock offset: -4.271 ms

Below is generated by plot.py at 2018-08-01 07:10:18
Datalink statistics
-- Total of 3 flows:
Average throughput: 2.71 Mbit/s
95th percentile per-packet one-way delay: 1078.688 ms
Loss rate: 16.13%
-- Flow 1:
Average throughput: 1.61 Mbit/s
95th percentile per-packet one-way delay: 1064.904 ms
Loss rate: 8.44%
-- Flow 2:
Average throughput: 1.09 Mbit/s
95th percentile per-packet one-way delay: 1081.071 ms
Loss rate: 20.62%
-- Flow 3:
Average throughput: 1.17 Mbit/s
95th percentile per-packet one-way delay: 1094.738 ms
Loss rate: 32.98%

Run 3: Report of PCC-Vivace — Data Link

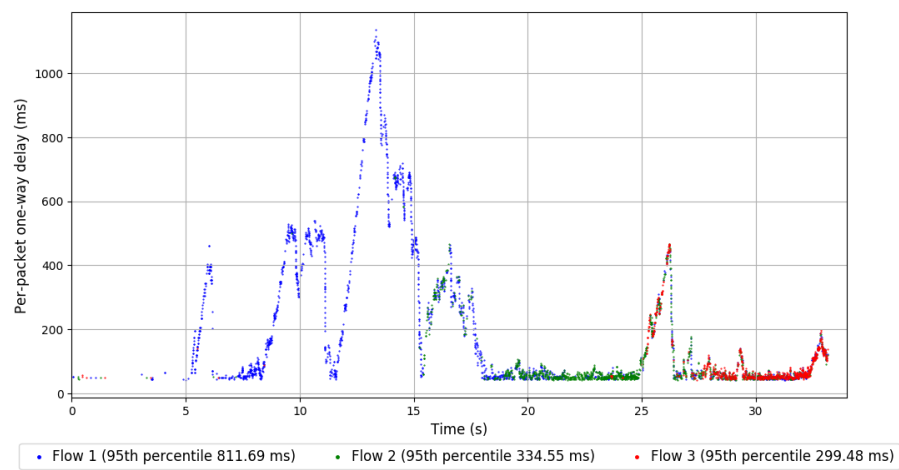
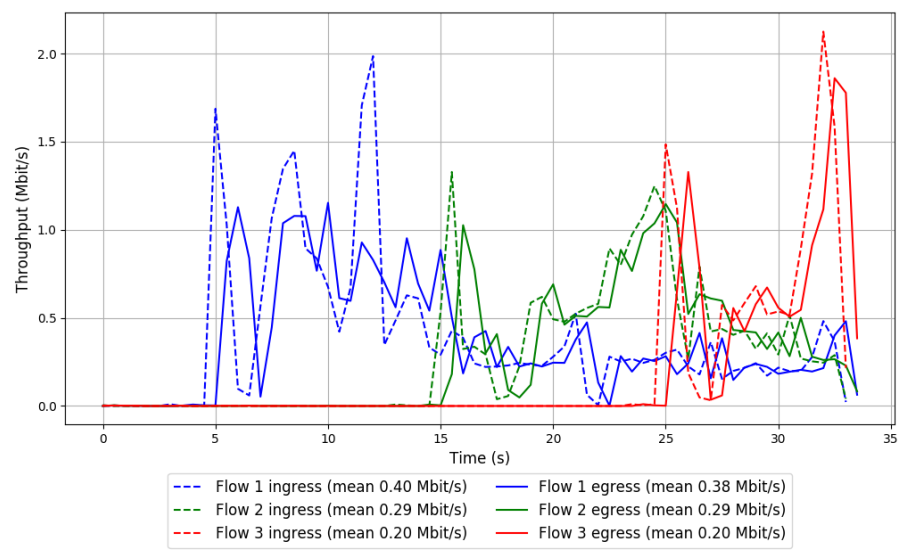


Run 1: Statistics of WebRTC media

Start at: 2018-08-01 06:30:23
End at: 2018-08-01 06:30:53
Local clock offset: 1.021 ms
Remote clock offset: -7.872 ms

Below is generated by plot.py at 2018-08-01 07:10:18
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.86 Mbit/s
95th percentile per-packet one-way delay: 661.950 ms
Loss rate: 2.05%
-- Flow 1:
Average throughput: 0.38 Mbit/s
95th percentile per-packet one-way delay: 811.694 ms
Loss rate: 3.51%
-- Flow 2:
Average throughput: 0.29 Mbit/s
95th percentile per-packet one-way delay: 334.550 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 299.482 ms
Loss rate: 1.29%

Run 1: Report of WebRTC media — Data Link

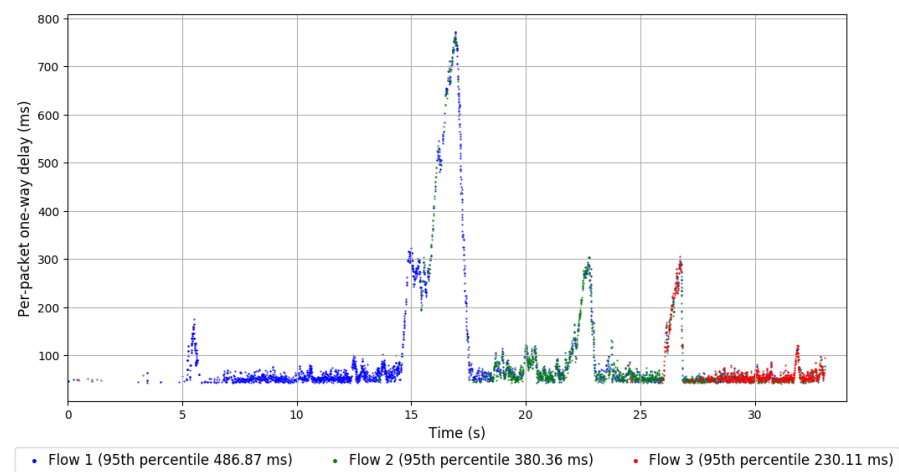
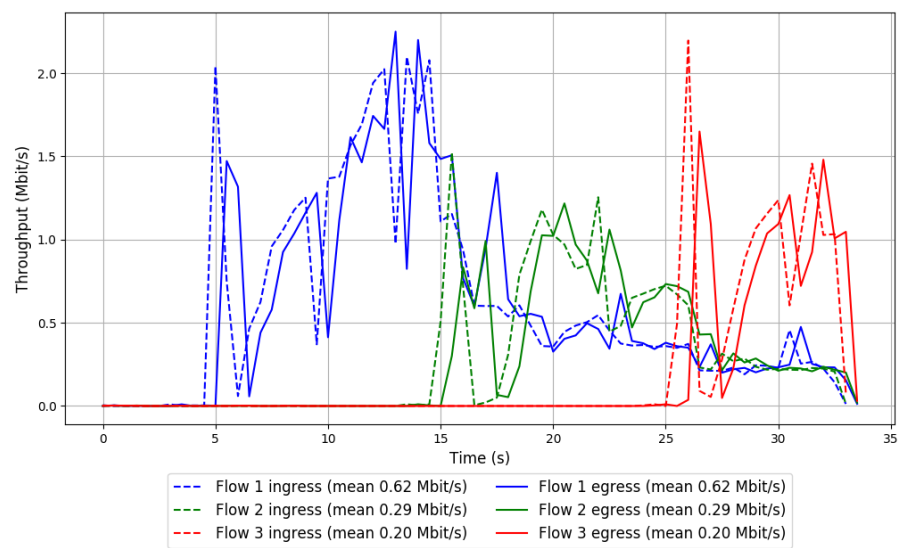


Run 2: Statistics of WebRTC media

Start at: 2018-08-01 06:49:13
End at: 2018-08-01 06:49:43
Local clock offset: 1.312 ms
Remote clock offset: -7.413 ms

Below is generated by plot.py at 2018-08-01 07:10:18
Datalink statistics
-- Total of 3 flows:
Average throughput: 1.11 Mbit/s
95th percentile per-packet one-way delay: 325.512 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 0.62 Mbit/s
95th percentile per-packet one-way delay: 486.872 ms
Loss rate: 0.27%
-- Flow 2:
Average throughput: 0.29 Mbit/s
95th percentile per-packet one-way delay: 380.359 ms
Loss rate: 0.23%
-- Flow 3:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 230.114 ms
Loss rate: 1.16%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2018-08-01 07:07:48
End at: 2018-08-01 07:08:18
Local clock offset: 0.598 ms
Remote clock offset: -5.927 ms

Below is generated by plot.py at 2018-08-01 07:10:18
Datalink statistics
-- Total of 3 flows:
Average throughput: 1.54 Mbit/s
95th percentile per-packet one-way delay: 260.790 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 0.67 Mbit/s
95th percentile per-packet one-way delay: 231.017 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 0.68 Mbit/s
95th percentile per-packet one-way delay: 268.995 ms
Loss rate: 0.16%
-- Flow 3:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 272.299 ms
Loss rate: 0.96%

Run 3: Report of WebRTC media — Data Link

