

Pantheon Report

Generated at 2018-11-30 03:09:47 (UTC).

Data path: AWS India 2 on **ens5** (*local*) → Saudi Arabia on **enp2s0** (*remote*).

Repeated the test of 18 congestion control schemes 5 times.

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

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

System info:

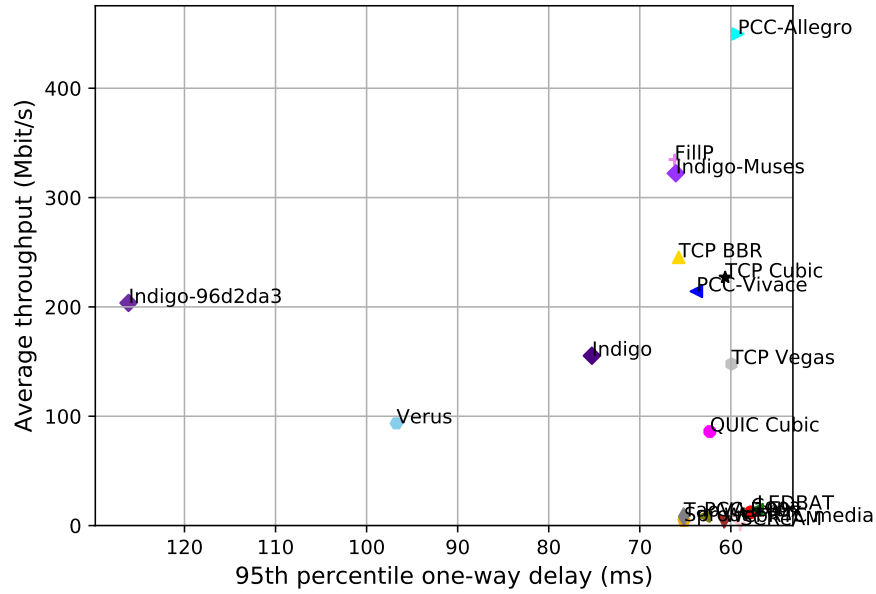
```
Linux 4.15.0-1023-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

Git summary:

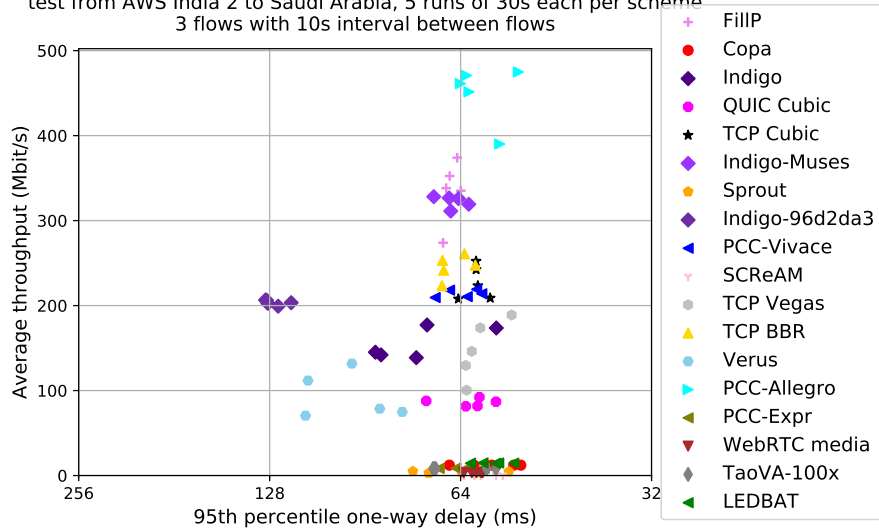
```
branch: muses @ 794ca3866981572cb73700a276691acf79c60f2b
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecd90c077e64d
third_party/indigo-96d2da3 @ 8413272d46f8aa0bcb967ed7048b6a8f994abb95
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 65ac1b19bbefed0c6349ae986009b4fa8643c40a
third_party/pantheon-tunnel @ f866d3f58d27afd942717625ee3a354cc2e802bd
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quick @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2
M src/ScreamClient
M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
M src/examples/cellsim.cc
M src/examples/sproutbt2.cc
M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
M src/verus.hpp
M tools/plot.py
```

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

test from AWS India 2 to Saudi Arabia, 5 runs of 30s each per scheme
 3 flows with 10s interval between flows (mean of all runs by scheme)



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



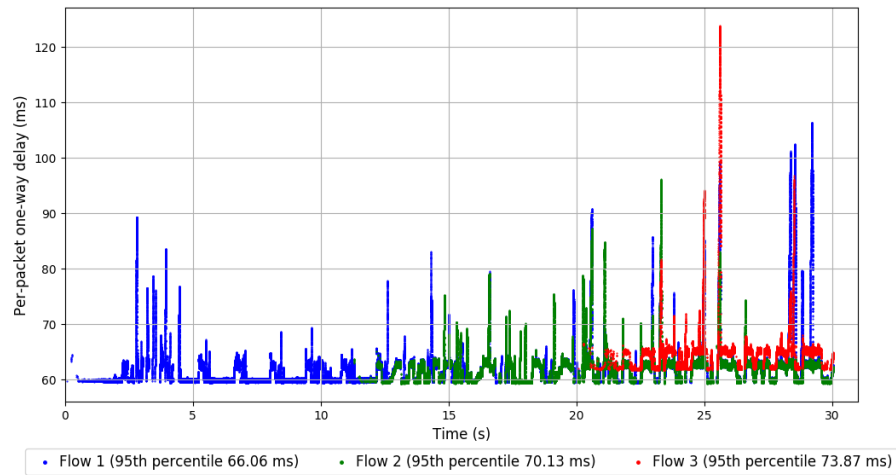
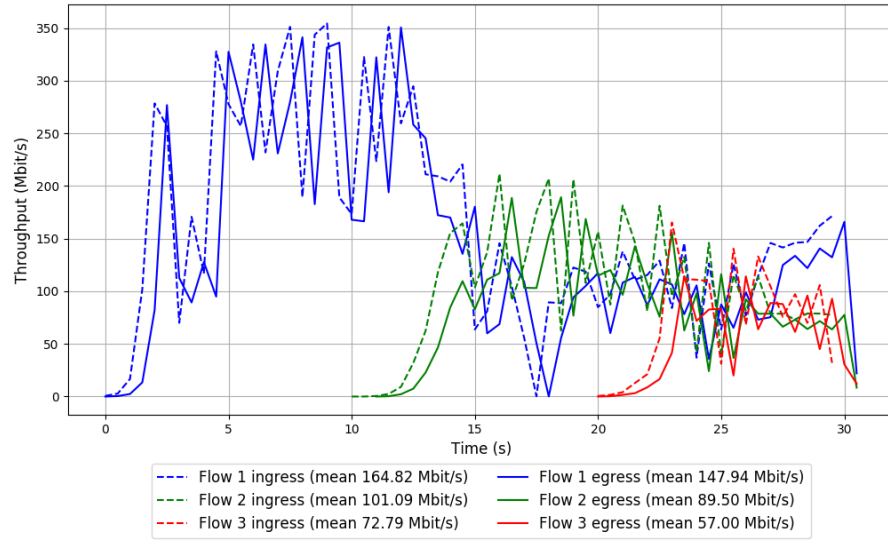
scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	5	195.33	55.86	43.13	66.07	62.27	63.14	10.61	16.60	20.78
Copa	5	8.53	5.53	0.02	58.08	57.24	59.03	68.29	75.14	94.63
TCP Cubic	5	147.66	74.74	88.82	60.70	59.79	59.88	0.98	1.00	1.61
FillP	5	219.45	120.42	107.45	65.50	66.54	65.86	22.25	24.29	25.36
Indigo	5	74.73	90.79	64.52	71.46	78.22	81.45	9.95	16.91	31.84
Indigo-96d2da3	5	118.55	95.56	69.52	124.01	128.79	125.02	41.65	43.97	46.01
LEDBAT	5	9.45	6.29	3.09	57.52	56.37	55.41	0.00	0.00	0.00
Indigo-Muses	5	304.95	21.58	10.92	66.09	64.55	65.23	31.22	45.97	48.08
PCC-Allegro	5	416.60	29.42	41.03	58.64	59.09	59.23	4.59	2.25	3.96
PCC-Expr	5	0.01	10.33	5.22	64.78	62.94	62.96	83.43	30.92	29.41
QUIC Cubic	5	48.63	42.79	27.78	60.89	61.72	64.50	0.00	0.00	0.00
SCReAM	5	0.22	0.22	0.22	57.81	57.51	57.67	0.00	0.00	0.00
Sprout	5	2.23	2.16	1.13	64.68	64.78	62.10	0.00	0.00	0.00
TaoVA-100x	5	0.00	9.48	5.90	60.58	66.98	59.47	95.92	27.35	19.33
TCP Vegas	5	81.09	54.85	90.64	60.22	59.42	60.29	1.65	2.31	2.58
Verus	5	58.20	33.70	44.77	99.59	85.81	79.53	51.61	41.24	44.70
PCC-Vivace	5	190.78	27.81	15.02	63.75	64.19	64.14	1.28	0.73	0.78
WebRTC media	5	1.83	1.17	0.40	60.30	60.55	59.91	0.00	0.00	0.00

Run 1: Statistics of TCP BBR

Start at: 2018-11-29 23:58:21
End at: 2018-11-29 23:58:51
Local clock offset: -0.967 ms
Remote clock offset: -38.984 ms

Below is generated by plot.py at 2018-11-30 02:51:50
Datalink statistics
-- Total of 3 flows:
Average throughput: 223.45 Mbit/s
95th percentile per-packet one-way delay: 68.467 ms
Loss rate: 12.83%
-- Flow 1:
Average throughput: 147.94 Mbit/s
95th percentile per-packet one-way delay: 66.061 ms
Loss rate: 10.23%
-- Flow 2:
Average throughput: 89.50 Mbit/s
95th percentile per-packet one-way delay: 70.134 ms
Loss rate: 16.01%
-- Flow 3:
Average throughput: 57.00 Mbit/s
95th percentile per-packet one-way delay: 73.868 ms
Loss rate: 21.67%

Run 1: Report of TCP BBR — Data Link

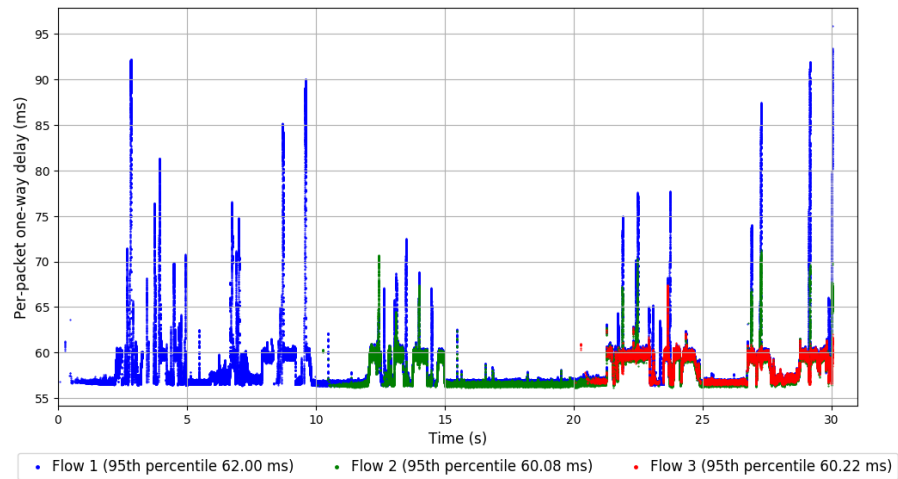
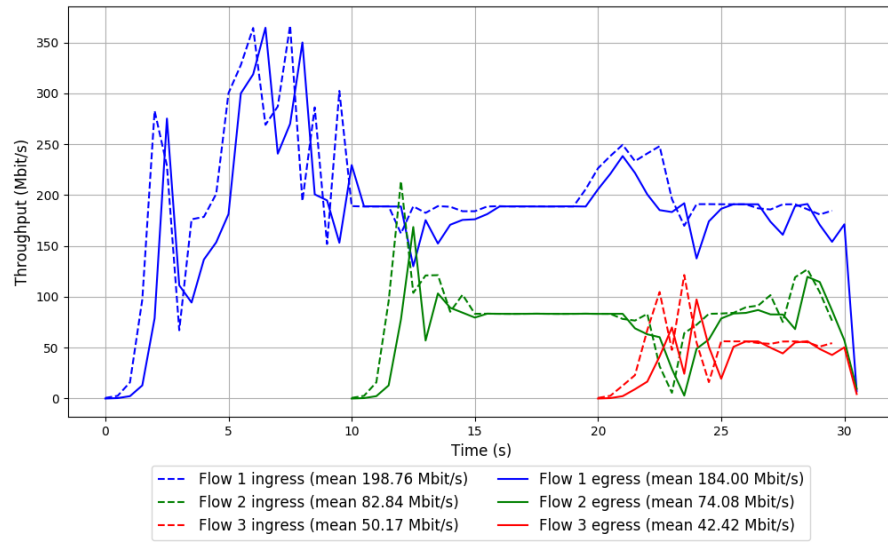


Run 2: Statistics of TCP BBR

Start at: 2018-11-30 00:31:19
End at: 2018-11-30 00:31:49
Local clock offset: -1.793 ms
Remote clock offset: -40.66 ms

Below is generated by plot.py at 2018-11-30 02:52:02
Datalink statistics
-- Total of 3 flows:
Average throughput: 247.50 Mbit/s
95th percentile per-packet one-way delay: 60.664 ms
Loss rate: 8.54%
-- Flow 1:
Average throughput: 184.00 Mbit/s
95th percentile per-packet one-way delay: 61.998 ms
Loss rate: 7.40%
-- Flow 2:
Average throughput: 74.08 Mbit/s
95th percentile per-packet one-way delay: 60.083 ms
Loss rate: 10.54%
-- Flow 3:
Average throughput: 42.42 Mbit/s
95th percentile per-packet one-way delay: 60.222 ms
Loss rate: 15.42%

Run 2: Report of TCP BBR — Data Link

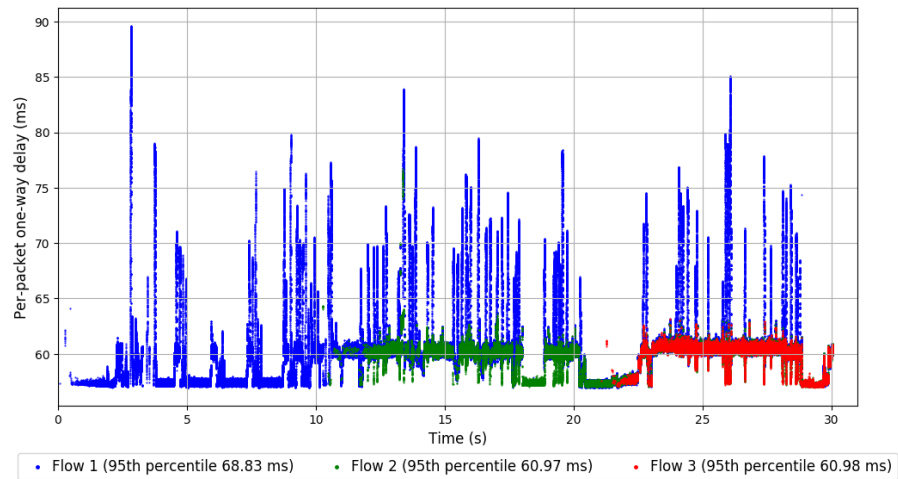
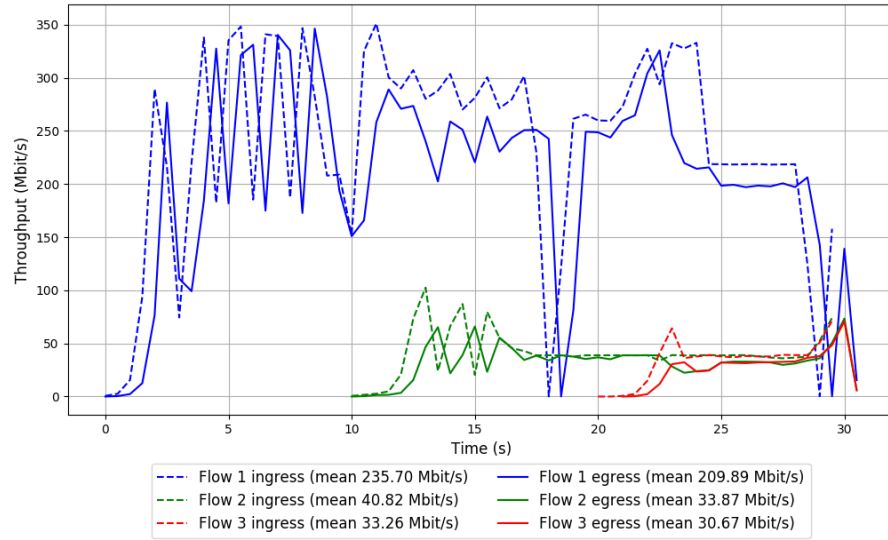


Run 3: Statistics of TCP BBR

Start at: 2018-11-30 01:09:11
End at: 2018-11-30 01:09:41
Local clock offset: 0.488 ms
Remote clock offset: -39.151 ms

Below is generated by plot.py at 2018-11-30 02:52:02
Datalink statistics
-- Total of 3 flows:
Average throughput: 241.62 Mbit/s
95th percentile per-packet one-way delay: 68.055 ms
Loss rate: 11.79%
-- Flow 1:
Average throughput: 209.89 Mbit/s
95th percentile per-packet one-way delay: 68.828 ms
Loss rate: 10.94%
-- Flow 2:
Average throughput: 33.87 Mbit/s
95th percentile per-packet one-way delay: 60.974 ms
Loss rate: 17.02%
-- Flow 3:
Average throughput: 30.67 Mbit/s
95th percentile per-packet one-way delay: 60.983 ms
Loss rate: 17.14%

Run 3: Report of TCP BBR — Data Link

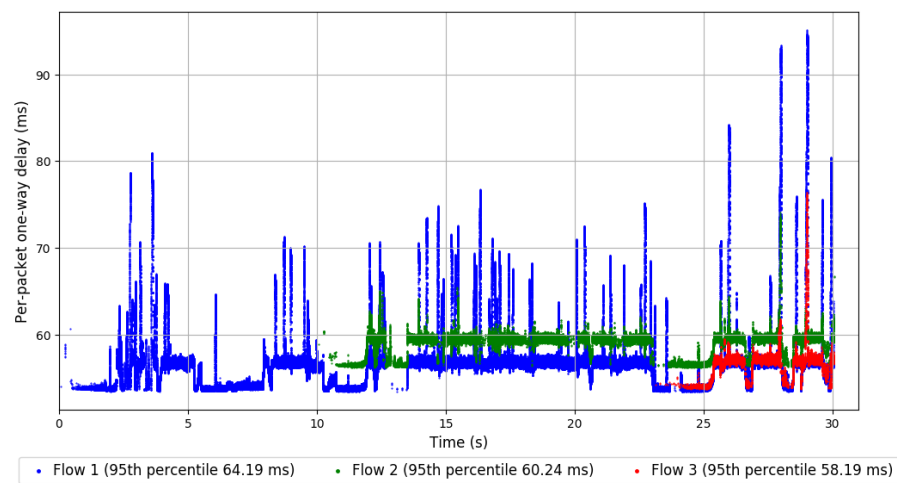
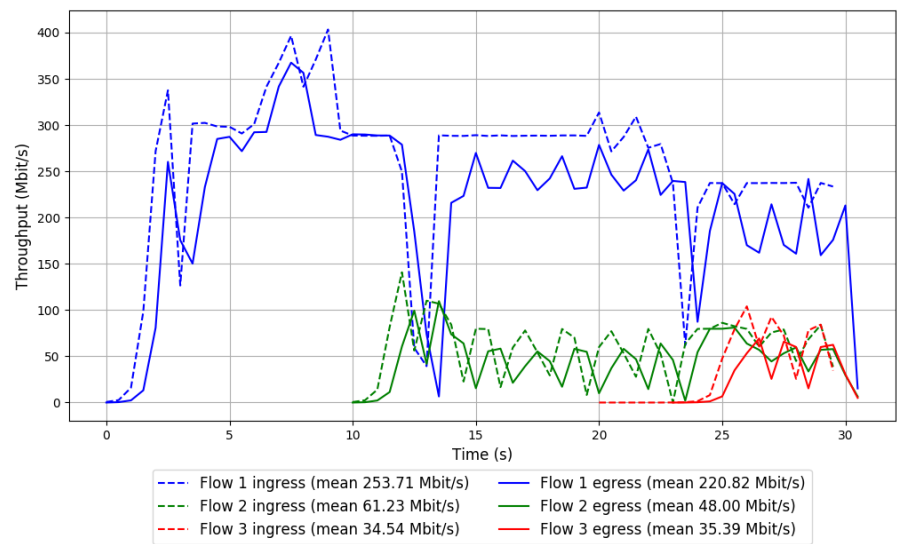


Run 4: Statistics of TCP BBR

Start at: 2018-11-30 01:52:14
End at: 2018-11-30 01:52:44
Local clock offset: 2.162 ms
Remote clock offset: -42.683 ms

Below is generated by plot.py at 2018-11-30 02:52:17
Datalink statistics
-- Total of 3 flows:
Average throughput: 260.94 Mbit/s
95th percentile per-packet one-way delay: 63.107 ms
Loss rate: 14.69%
-- Flow 1:
Average throughput: 220.82 Mbit/s
95th percentile per-packet one-way delay: 64.192 ms
Loss rate: 12.95%
-- Flow 2:
Average throughput: 48.00 Mbit/s
95th percentile per-packet one-way delay: 60.241 ms
Loss rate: 21.58%
-- Flow 3:
Average throughput: 35.39 Mbit/s
95th percentile per-packet one-way delay: 58.193 ms
Loss rate: 28.82%

Run 4: Report of TCP BBR — Data Link

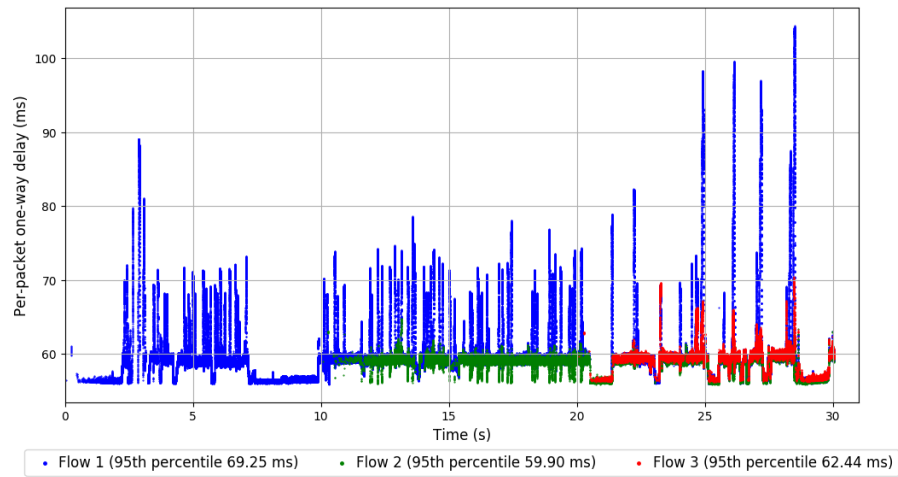
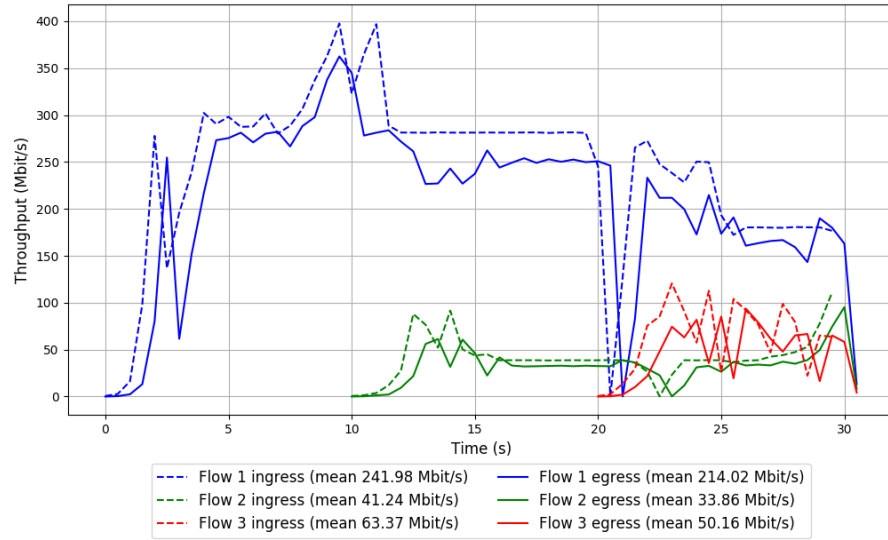


Run 5: Statistics of TCP BBR

Start at: 2018-11-30 02:24:47
End at: 2018-11-30 02:25:17
Local clock offset: -0.224 ms
Remote clock offset: -42.946 ms

Below is generated by plot.py at 2018-11-30 02:52:17
Datalink statistics
-- Total of 3 flows:
Average throughput: 253.25 Mbit/s
95th percentile per-packet one-way delay: 68.350 ms
Loss rate: 12.82%
-- Flow 1:
Average throughput: 214.02 Mbit/s
95th percentile per-packet one-way delay: 69.254 ms
Loss rate: 11.54%
-- Flow 2:
Average throughput: 33.86 Mbit/s
95th percentile per-packet one-way delay: 59.896 ms
Loss rate: 17.87%
-- Flow 3:
Average throughput: 50.16 Mbit/s
95th percentile per-packet one-way delay: 62.441 ms
Loss rate: 20.84%

Run 5: Report of TCP BBR — Data Link

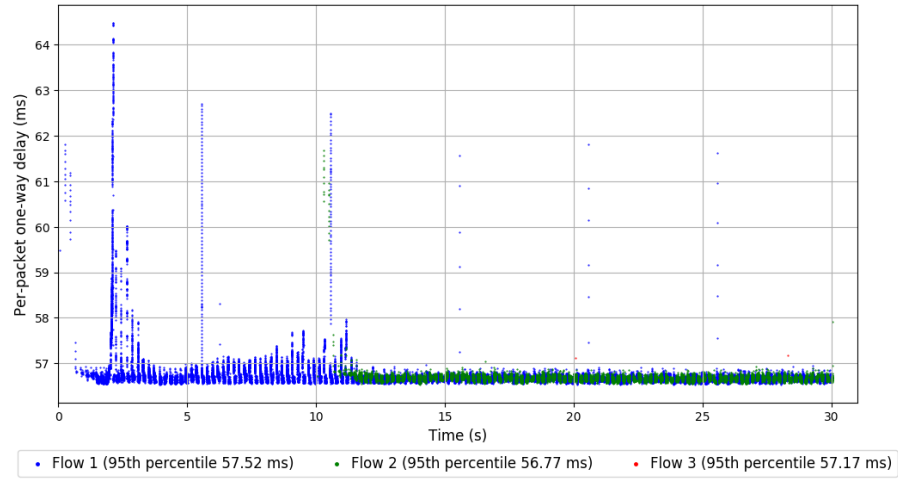
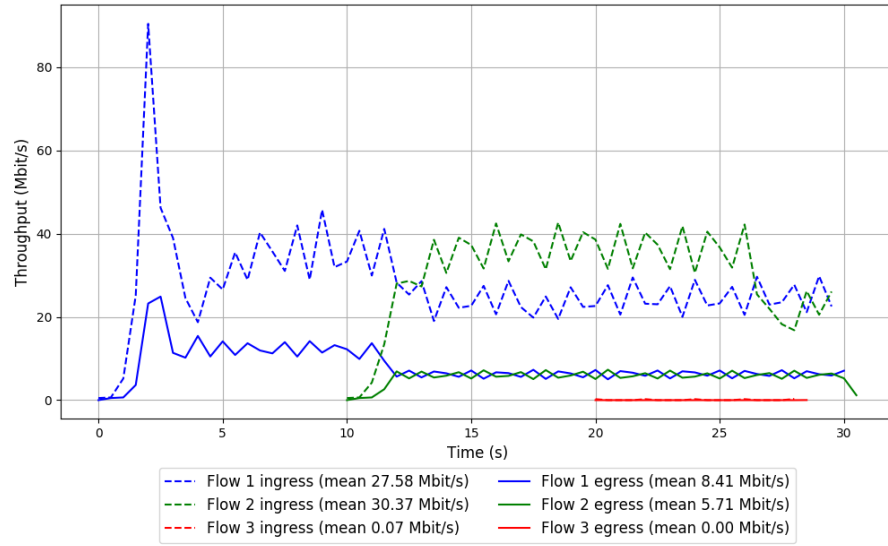


Run 1: Statistics of Copa

Start at: 2018-11-30 00:10:50
End at: 2018-11-30 00:11:20
Local clock offset: -1.287 ms
Remote clock offset: -41.401 ms

Below is generated by plot.py at 2018-11-30 02:52:17
Datalink statistics
-- Total of 3 flows:
Average throughput: 12.20 Mbit/s
95th percentile per-packet one-way delay: 57.142 ms
Loss rate: 74.47%
-- Flow 1:
Average throughput: 8.41 Mbit/s
95th percentile per-packet one-way delay: 57.520 ms
Loss rate: 69.50%
-- Flow 2:
Average throughput: 5.71 Mbit/s
95th percentile per-packet one-way delay: 56.773 ms
Loss rate: 81.21%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 57.175 ms
Loss rate: 97.92%

Run 1: Report of Copa — Data Link

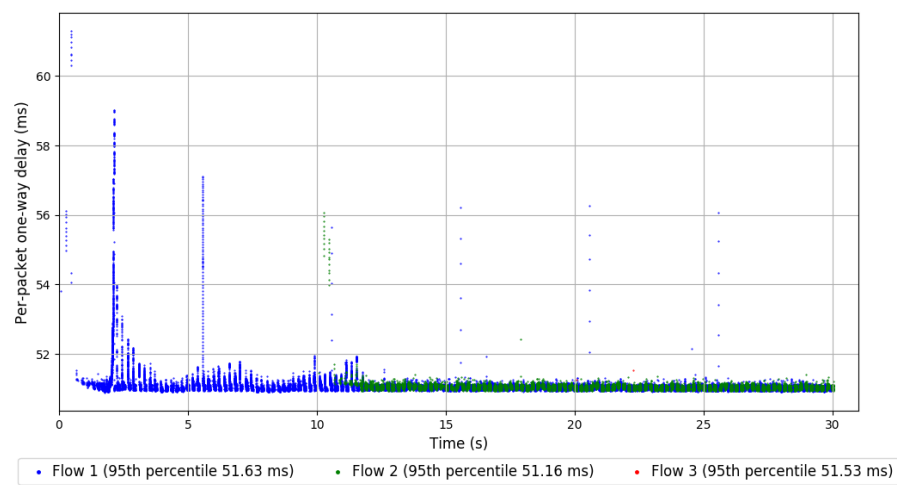
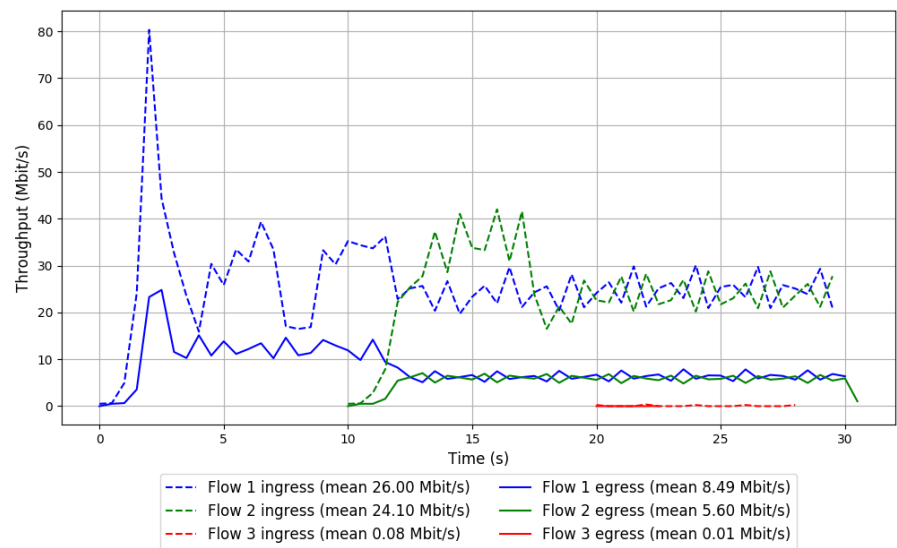


Run 2: Statistics of Copa

Start at: 2018-11-30 00:44:08
End at: 2018-11-30 00:44:38
Local clock offset: -0.475 ms
Remote clock offset: -44.222 ms

Below is generated by plot.py at 2018-11-30 02:52:17
Datalink statistics
-- Total of 3 flows:
Average throughput: 12.20 Mbit/s
95th percentile per-packet one-way delay: 51.438 ms
Loss rate: 70.96%
-- Flow 1:
Average throughput: 8.49 Mbit/s
95th percentile per-packet one-way delay: 51.629 ms
Loss rate: 67.36%
-- Flow 2:
Average throughput: 5.60 Mbit/s
95th percentile per-packet one-way delay: 51.163 ms
Loss rate: 76.75%
-- Flow 3:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 51.529 ms
Loss rate: 98.03%

Run 2: Report of Copa — Data Link

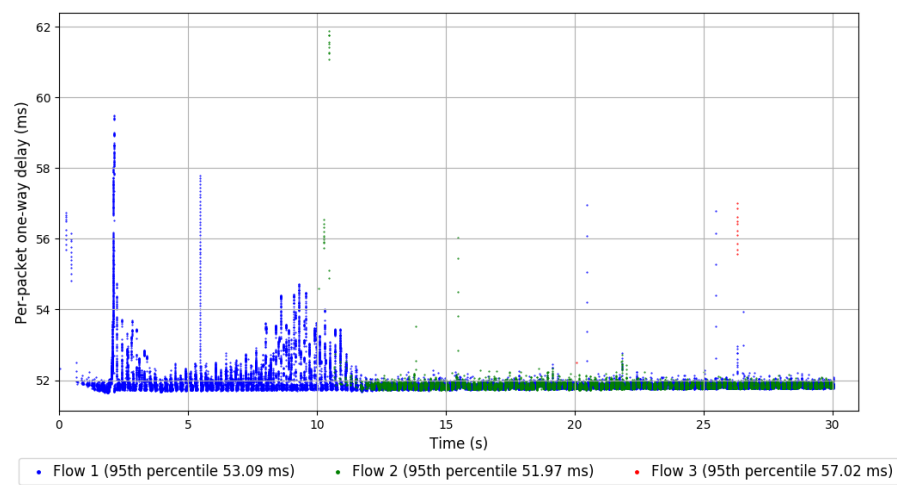
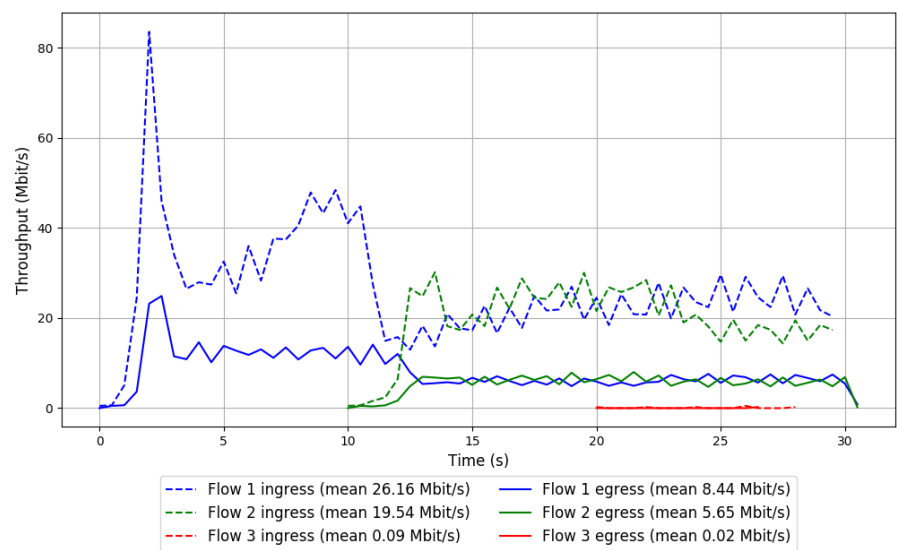


Run 3: Statistics of Copa

Start at: 2018-11-30 01:21:39
End at: 2018-11-30 01:22:09
Local clock offset: 2.433 ms
Remote clock offset: -43.295 ms

Below is generated by plot.py at 2018-11-30 02:52:17
Datalink statistics
-- Total of 3 flows:
Average throughput: 12.20 Mbit/s
95th percentile per-packet one-way delay: 52.769 ms
Loss rate: 68.86%
-- Flow 1:
Average throughput: 8.44 Mbit/s
95th percentile per-packet one-way delay: 53.088 ms
Loss rate: 67.75%
-- Flow 2:
Average throughput: 5.65 Mbit/s
95th percentile per-packet one-way delay: 51.974 ms
Loss rate: 71.08%
-- Flow 3:
Average throughput: 0.02 Mbit/s
95th percentile per-packet one-way delay: 57.020 ms
Loss rate: 83.49%

Run 3: Report of Copa — Data Link

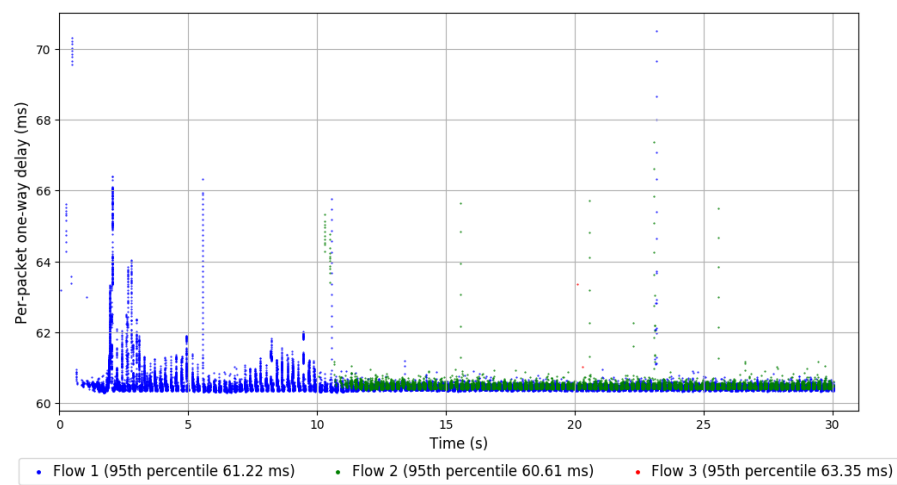
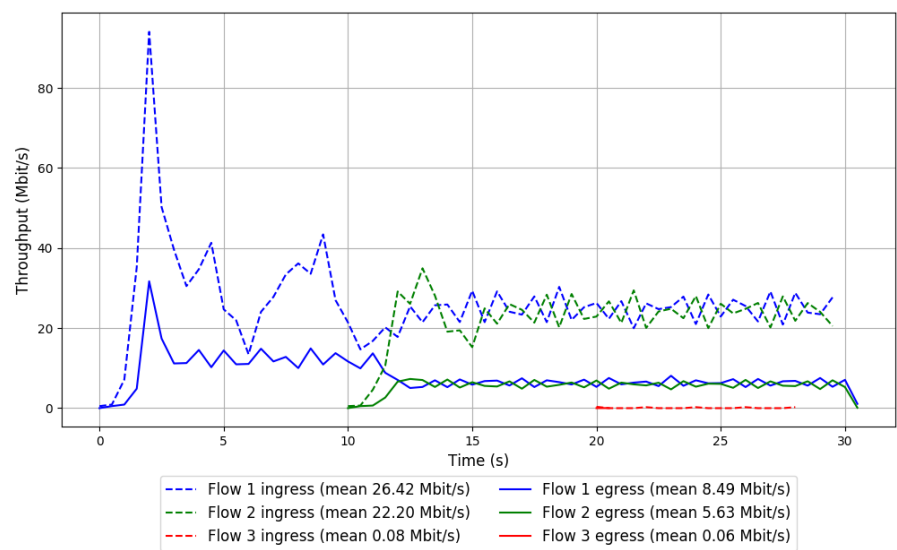


Run 4: Statistics of Copa

Start at: 2018-11-30 02:04:59
End at: 2018-11-30 02:05:29
Local clock offset: -0.729 ms
Remote clock offset: -38.894 ms

Below is generated by plot.py at 2018-11-30 02:52:17
Datalink statistics
-- Total of 3 flows:
Average throughput: 12.24 Mbit/s
95th percentile per-packet one-way delay: 60.989 ms
Loss rate: 70.31%
-- Flow 1:
Average throughput: 8.49 Mbit/s
95th percentile per-packet one-way delay: 61.216 ms
Loss rate: 67.87%
-- Flow 2:
Average throughput: 5.63 Mbit/s
95th percentile per-packet one-way delay: 60.614 ms
Loss rate: 74.63%
-- Flow 3:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 63.352 ms
Loss rate: 97.99%

Run 4: Report of Copa — Data Link

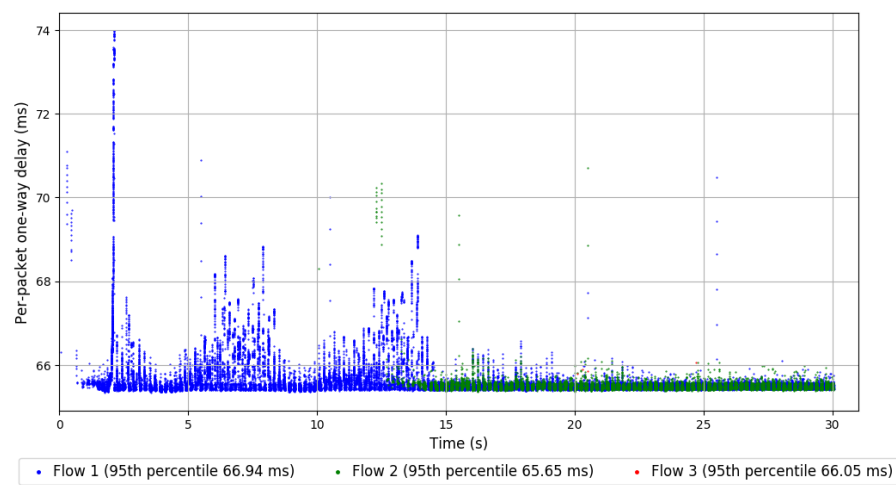
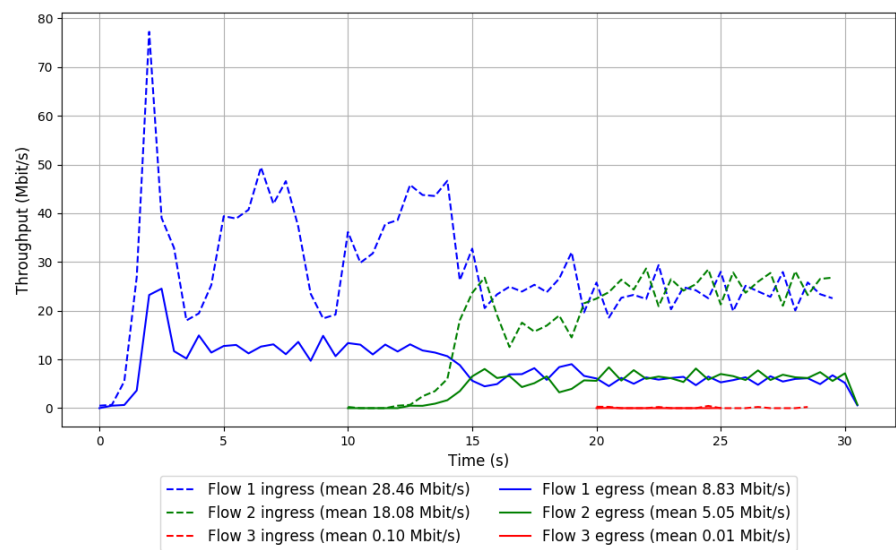


Run 5: Statistics of Copa

Start at: 2018-11-30 02:37:27
End at: 2018-11-30 02:37:57
Local clock offset: 0.993 ms
Remote clock offset: -32.886 ms

Below is generated by plot.py at 2018-11-30 02:52:17
Datalink statistics
-- Total of 3 flows:
Average throughput: 12.20 Mbit/s
95th percentile per-packet one-way delay: 66.670 ms
Loss rate: 69.90%
-- Flow 1:
Average throughput: 8.83 Mbit/s
95th percentile per-packet one-way delay: 66.943 ms
Loss rate: 68.97%
-- Flow 2:
Average throughput: 5.05 Mbit/s
95th percentile per-packet one-way delay: 65.654 ms
Loss rate: 72.05%
-- Flow 3:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 66.054 ms
Loss rate: 95.72%

Run 5: Report of Copa — Data Link

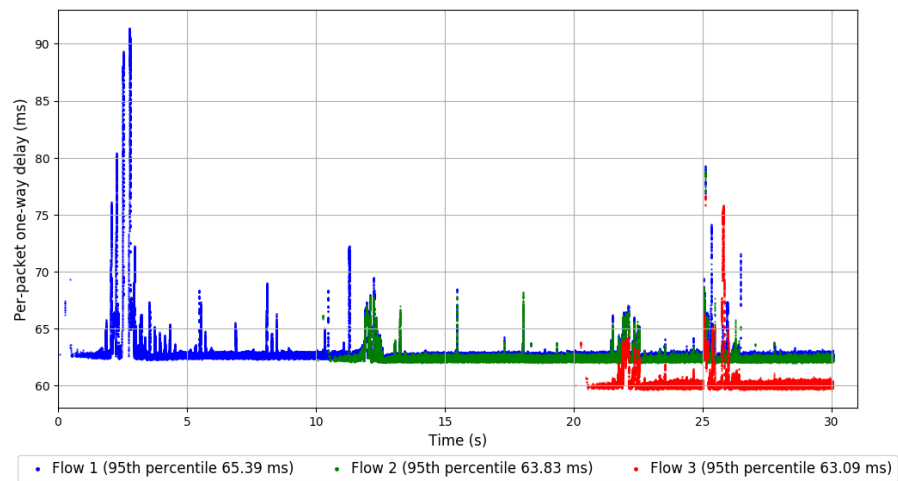
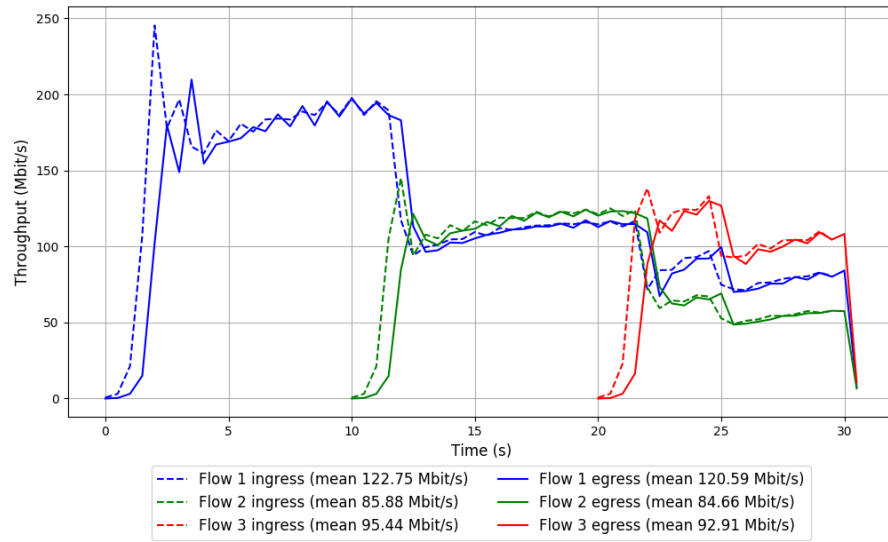


Run 1: Statistics of TCP Cubic

Start at: 2018-11-29 23:55:02
End at: 2018-11-29 23:55:32
Local clock offset: -0.312 ms
Remote clock offset: -38.298 ms

Below is generated by plot.py at 2018-11-30 02:52:17
Datalink statistics
-- Total of 3 flows:
Average throughput: 207.89 Mbit/s
95th percentile per-packet one-way delay: 64.518 ms
Loss rate: 1.80%
-- Flow 1:
Average throughput: 120.59 Mbit/s
95th percentile per-packet one-way delay: 65.387 ms
Loss rate: 1.76%
-- Flow 2:
Average throughput: 84.66 Mbit/s
95th percentile per-packet one-way delay: 63.833 ms
Loss rate: 1.42%
-- Flow 3:
Average throughput: 92.91 Mbit/s
95th percentile per-packet one-way delay: 63.091 ms
Loss rate: 2.65%

Run 1: Report of TCP Cubic — Data Link

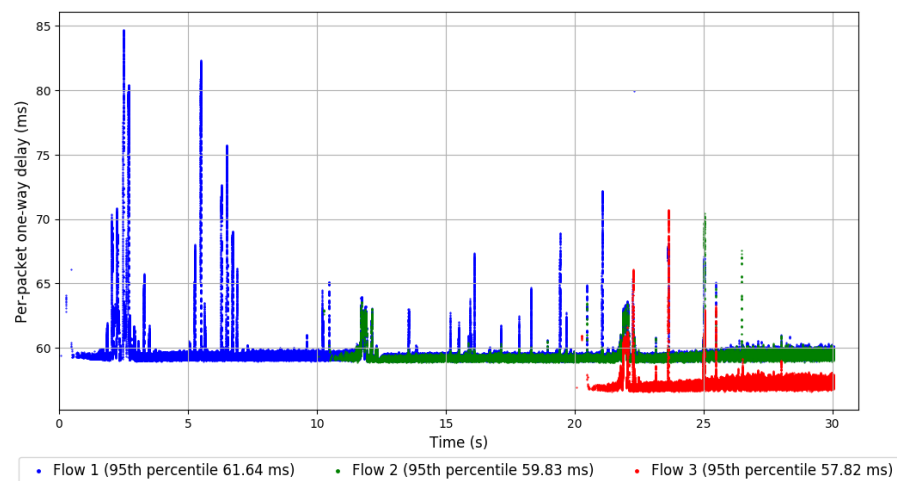
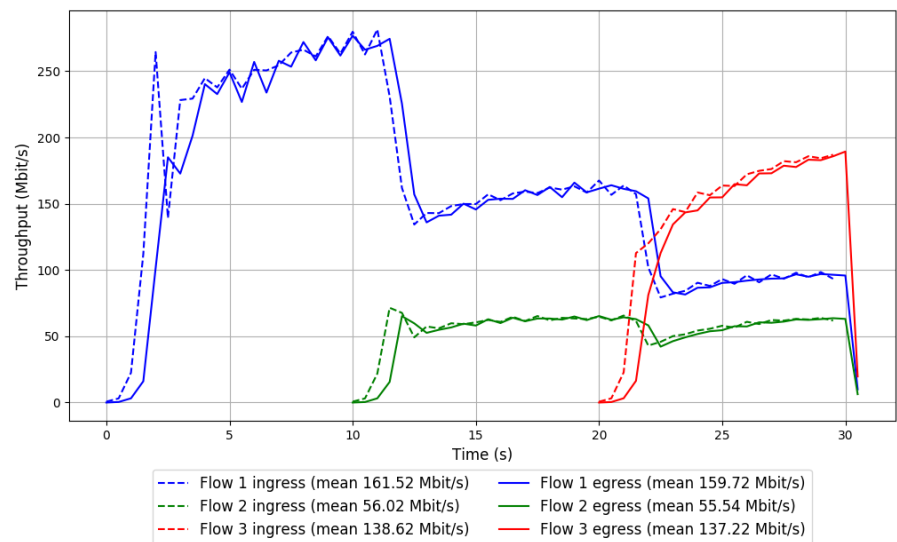


Run 2: Statistics of TCP Cubic

Start at: 2018-11-30 00:27:33
End at: 2018-11-30 00:28:03
Local clock offset: -1.332 ms
Remote clock offset: -40.018 ms

Below is generated by plot.py at 2018-11-30 02:52:24
Datalink statistics
-- Total of 3 flows:
Average throughput: 242.38 Mbit/s
95th percentile per-packet one-way delay: 60.496 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 159.72 Mbit/s
95th percentile per-packet one-way delay: 61.640 ms
Loss rate: 1.11%
-- Flow 2:
Average throughput: 55.54 Mbit/s
95th percentile per-packet one-way delay: 59.833 ms
Loss rate: 0.86%
-- Flow 3:
Average throughput: 137.22 Mbit/s
95th percentile per-packet one-way delay: 57.820 ms
Loss rate: 1.00%

Run 2: Report of TCP Cubic — Data Link

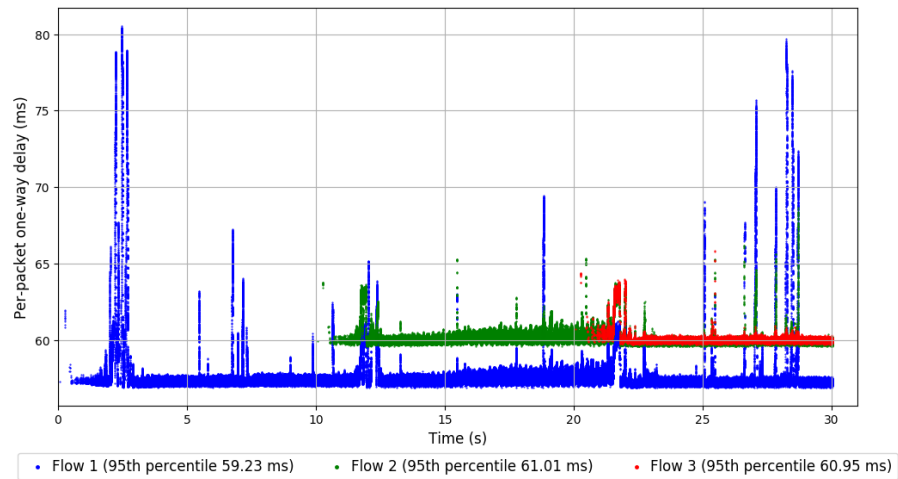
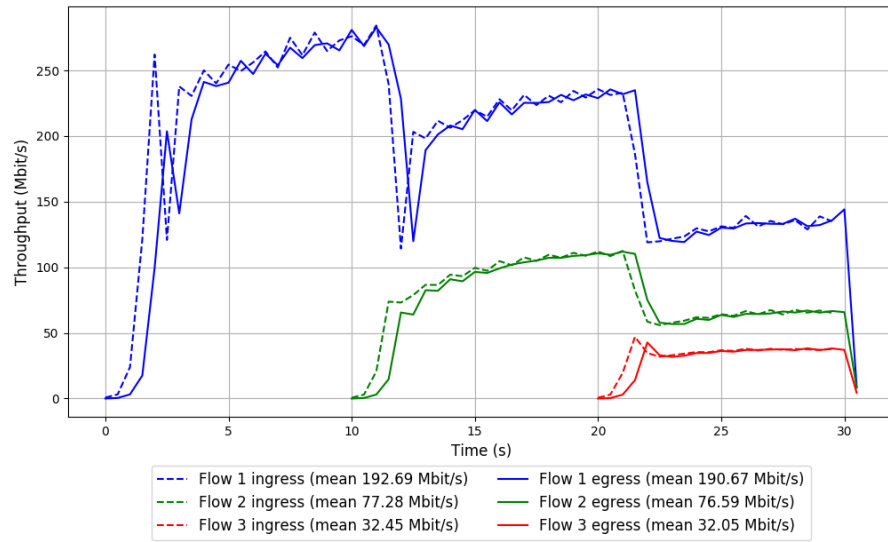


Run 3: Statistics of TCP Cubic

Start at: 2018-11-30 01:05:44
End at: 2018-11-30 01:06:14
Local clock offset: 1.076 ms
Remote clock offset: -38.453 ms

Below is generated by plot.py at 2018-11-30 02:52:30
Datalink statistics
-- Total of 3 flows:
Average throughput: 252.32 Mbit/s
95th percentile per-packet one-way delay: 60.504 ms
Loss rate: 1.02%
-- Flow 1:
Average throughput: 190.67 Mbit/s
95th percentile per-packet one-way delay: 59.227 ms
Loss rate: 1.05%
-- Flow 2:
Average throughput: 76.59 Mbit/s
95th percentile per-packet one-way delay: 61.005 ms
Loss rate: 0.89%
-- Flow 3:
Average throughput: 32.05 Mbit/s
95th percentile per-packet one-way delay: 60.948 ms
Loss rate: 1.24%

Run 3: Report of TCP Cubic — Data Link

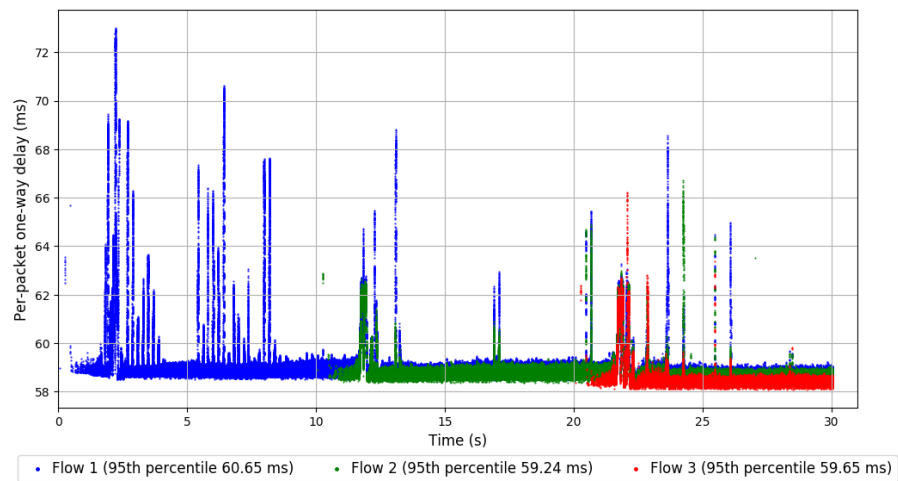
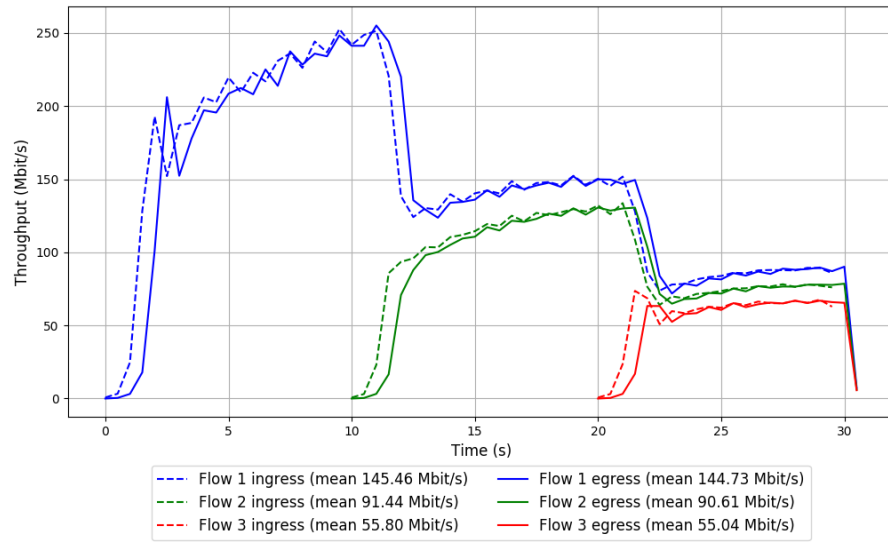


Run 4: Statistics of TCP Cubic

Start at: 2018-11-30 01:48:52
End at: 2018-11-30 01:49:22
Local clock offset: 1.159 ms
Remote clock offset: -38.944 ms

Below is generated by plot.py at 2018-11-30 02:54:04
Datalink statistics
-- Total of 3 flows:
Average throughput: 223.40 Mbit/s
95th percentile per-packet one-way delay: 60.117 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 144.73 Mbit/s
95th percentile per-packet one-way delay: 60.649 ms
Loss rate: 0.50%
-- Flow 2:
Average throughput: 90.61 Mbit/s
95th percentile per-packet one-way delay: 59.242 ms
Loss rate: 0.91%
-- Flow 3:
Average throughput: 55.04 Mbit/s
95th percentile per-packet one-way delay: 59.652 ms
Loss rate: 1.36%

Run 4: Report of TCP Cubic — Data Link

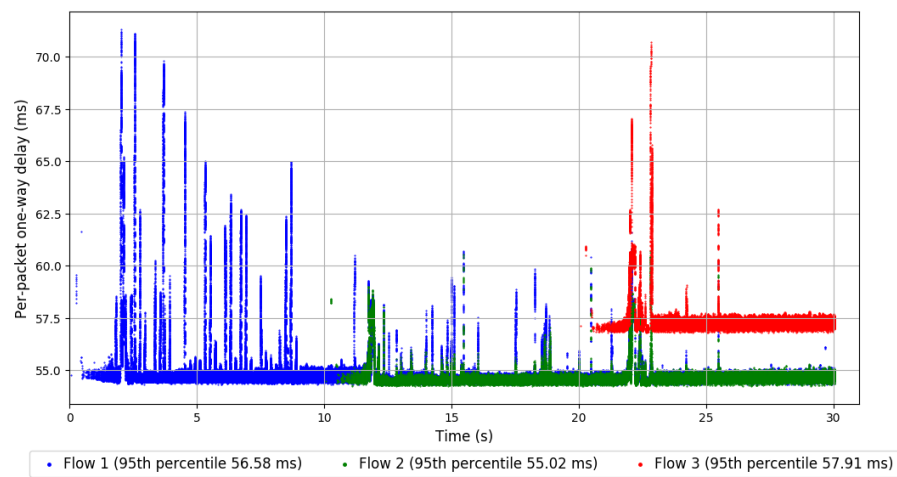
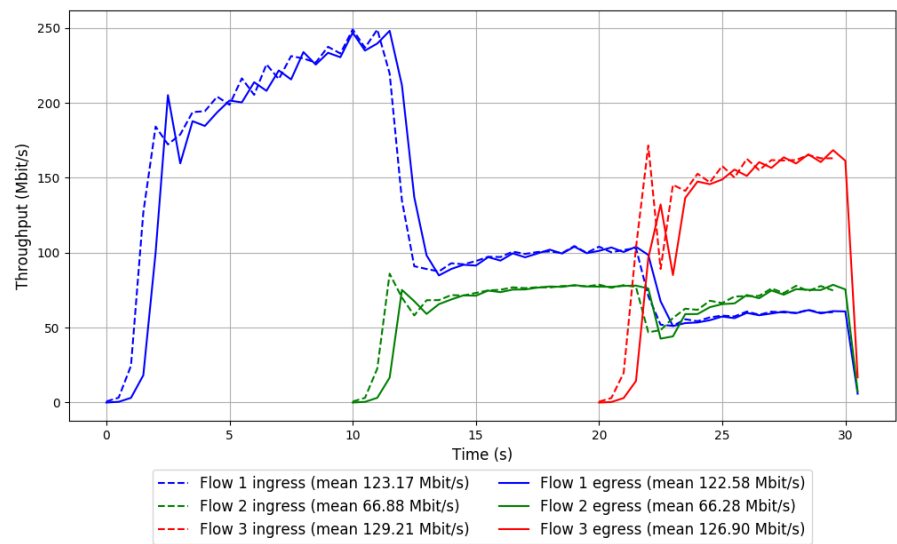


Run 5: Statistics of TCP Cubic

Start at: 2018-11-30 02:21:28
End at: 2018-11-30 02:21:58
Local clock offset: 1.147 ms
Remote clock offset: -43.33 ms

Below is generated by plot.py at 2018-11-30 02:54:04
Datalink statistics
-- Total of 3 flows:
Average throughput: 208.91 Mbit/s
95th percentile per-packet one-way delay: 57.480 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 122.58 Mbit/s
95th percentile per-packet one-way delay: 56.581 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 66.28 Mbit/s
95th percentile per-packet one-way delay: 55.017 ms
Loss rate: 0.90%
-- Flow 3:
Average throughput: 126.90 Mbit/s
95th percentile per-packet one-way delay: 57.911 ms
Loss rate: 1.78%

Run 5: Report of TCP Cubic — Data Link

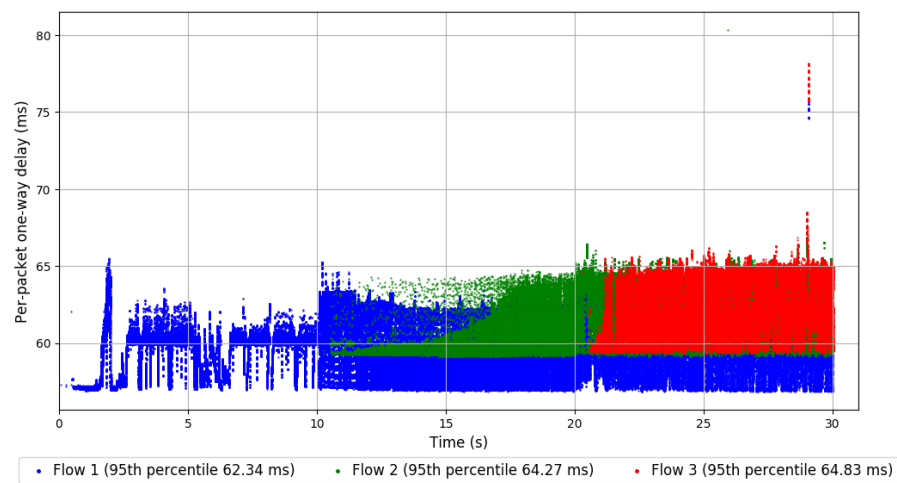
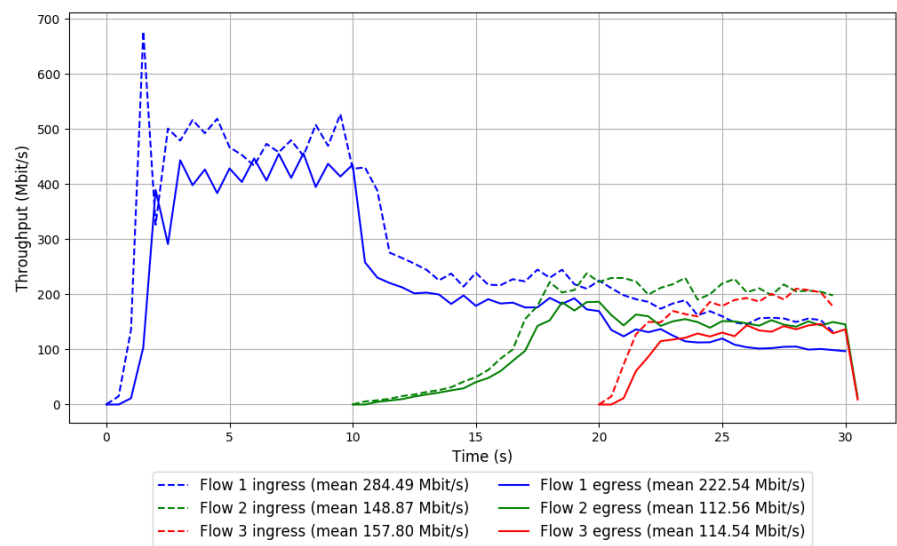


Run 1: Statistics of FillP

Start at: 2018-11-29 23:48:59
End at: 2018-11-29 23:49:29
Local clock offset: 1.365 ms
Remote clock offset: -40.432 ms

Below is generated by plot.py at 2018-11-30 02:57:00
Datalink statistics
-- Total of 3 flows:
Average throughput: 335.17 Mbit/s
95th percentile per-packet one-way delay: 63.937 ms
Loss rate: 23.05%
-- Flow 1:
Average throughput: 222.54 Mbit/s
95th percentile per-packet one-way delay: 62.340 ms
Loss rate: 21.78%
-- Flow 2:
Average throughput: 112.56 Mbit/s
95th percentile per-packet one-way delay: 64.273 ms
Loss rate: 24.38%
-- Flow 3:
Average throughput: 114.54 Mbit/s
95th percentile per-packet one-way delay: 64.835 ms
Loss rate: 27.42%

Run 1: Report of FillP — Data Link

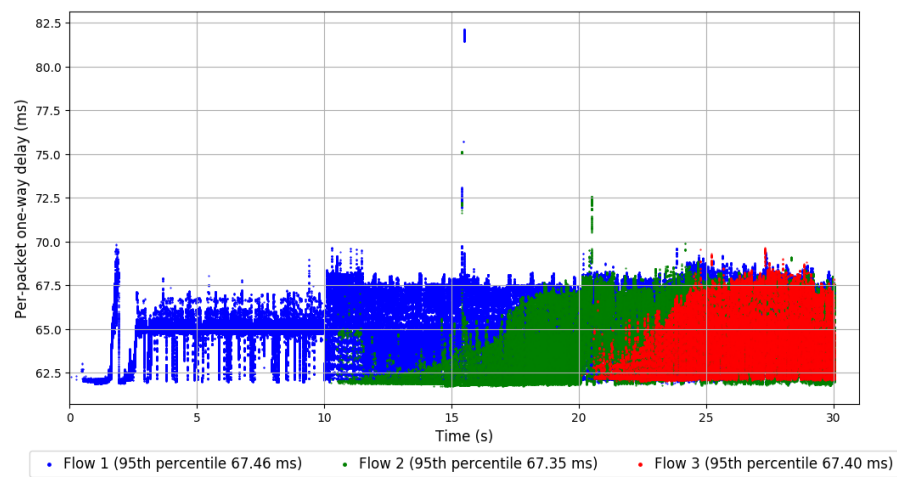
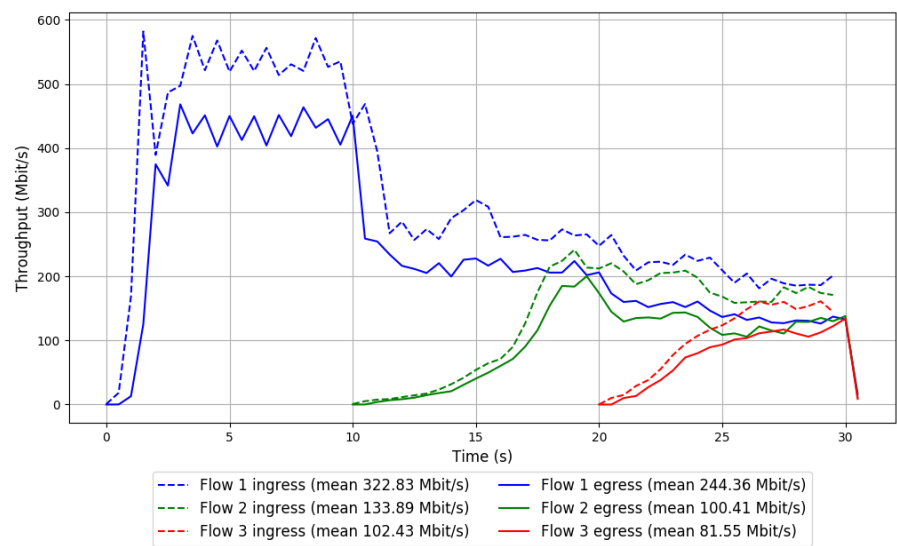


Run 2: Statistics of FillP

Start at: 2018-11-30 00:21:11
End at: 2018-11-30 00:21:41
Local clock offset: -3.175 ms
Remote clock offset: -36.9 ms

Below is generated by plot.py at 2018-11-30 02:57:05
Datalink statistics
-- Total of 3 flows:
Average throughput: 338.21 Mbit/s
95th percentile per-packet one-way delay: 67.430 ms
Loss rate: 24.14%
-- Flow 1:
Average throughput: 244.36 Mbit/s
95th percentile per-packet one-way delay: 67.462 ms
Loss rate: 24.30%
-- Flow 2:
Average throughput: 100.41 Mbit/s
95th percentile per-packet one-way delay: 67.346 ms
Loss rate: 25.02%
-- Flow 3:
Average throughput: 81.55 Mbit/s
95th percentile per-packet one-way delay: 67.403 ms
Loss rate: 20.38%

Run 2: Report of FillP — Data Link

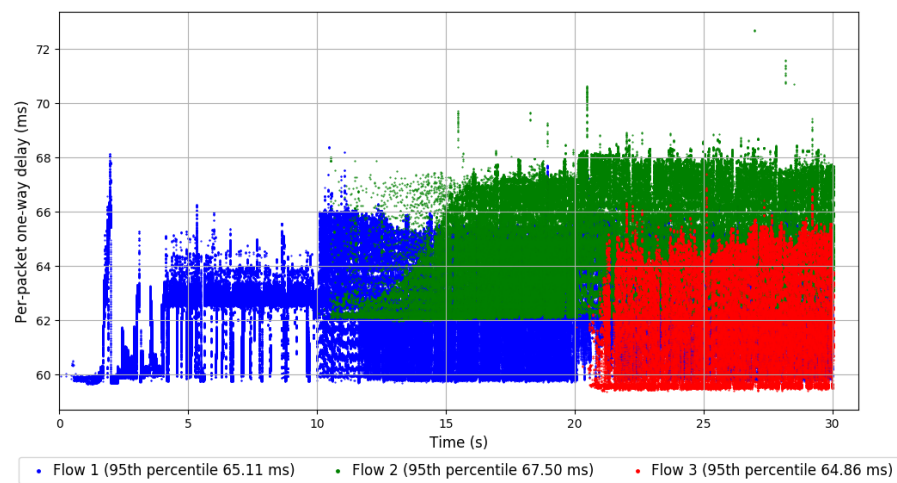
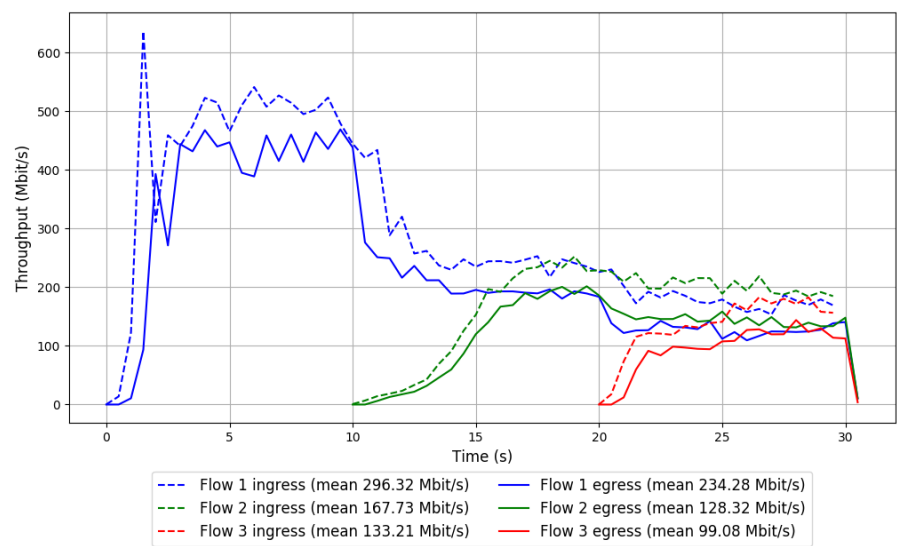


Run 3: Statistics of FillP

Start at: 2018-11-30 00:54:21
End at: 2018-11-30 00:54:51
Local clock offset: -2.689 ms
Remote clock offset: -38.864 ms

Below is generated by plot.py at 2018-11-30 02:57:22
Datalink statistics
-- Total of 3 flows:
Average throughput: 352.50 Mbit/s
95th percentile per-packet one-way delay: 66.588 ms
Loss rate: 22.02%
-- Flow 1:
Average throughput: 234.28 Mbit/s
95th percentile per-packet one-way delay: 65.106 ms
Loss rate: 20.93%
-- Flow 2:
Average throughput: 128.32 Mbit/s
95th percentile per-packet one-way delay: 67.496 ms
Loss rate: 23.49%
-- Flow 3:
Average throughput: 99.08 Mbit/s
95th percentile per-packet one-way delay: 64.860 ms
Loss rate: 25.63%

Run 3: Report of FillP — Data Link



Run 4: Statistics of FillP

Start at: 2018-11-30 01:37:32

End at: 2018-11-30 01:38:02

Local clock offset: -0.672 ms

Remote clock offset: -36.3 ms

Below is generated by plot.py at 2018-11-30 02:57:22

Datalink statistics

-- Total of 3 flows:

Average throughput: 273.92 Mbit/s

95th percentile per-packet one-way delay: 68.198 ms

Loss rate: 22.65%

-- Flow 1:

Average throughput: 152.72 Mbit/s

95th percentile per-packet one-way delay: 67.961 ms

Loss rate: 20.95%

-- Flow 2:

Average throughput: 120.91 Mbit/s

95th percentile per-packet one-way delay: 68.435 ms

Loss rate: 23.62%

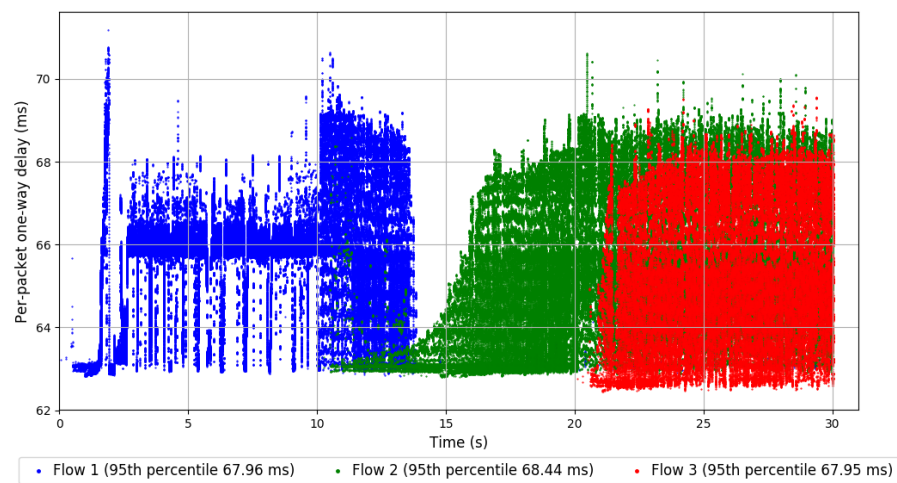
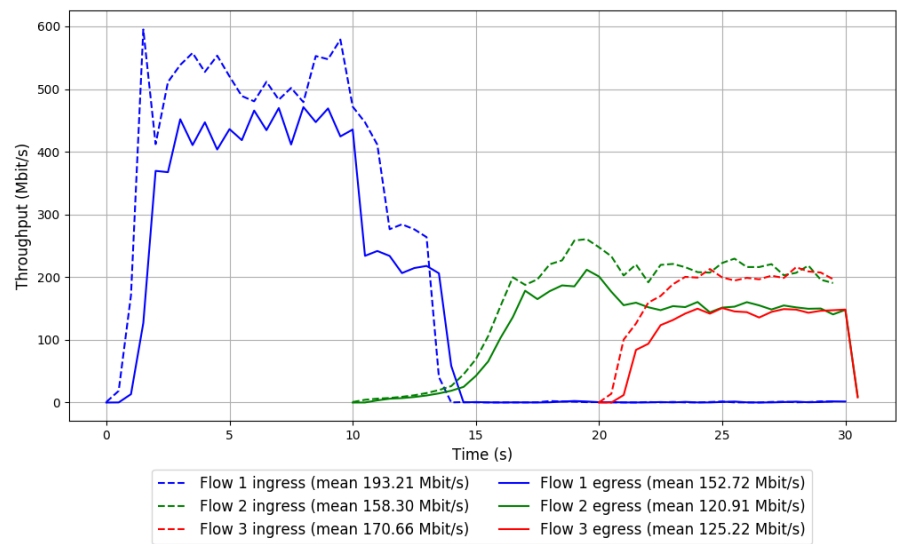
-- Flow 3:

Average throughput: 125.22 Mbit/s

95th percentile per-packet one-way delay: 67.946 ms

Loss rate: 26.60%

Run 4: Report of FillP — Data Link

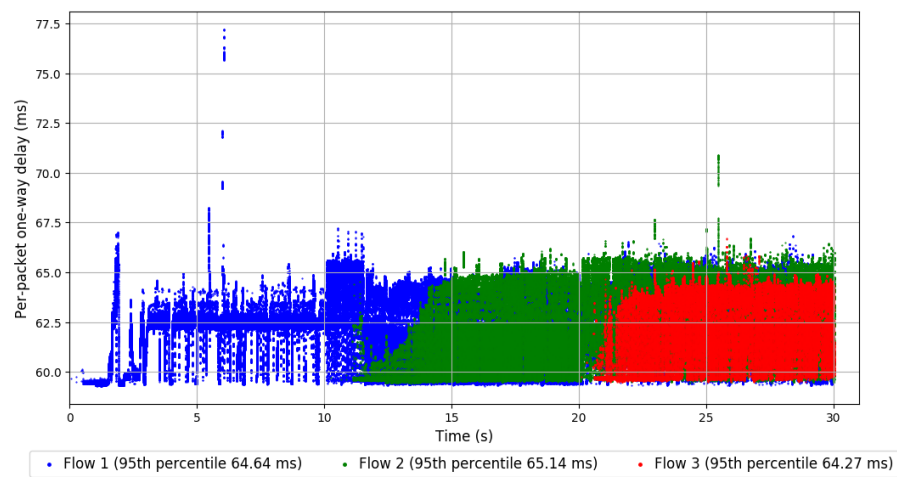
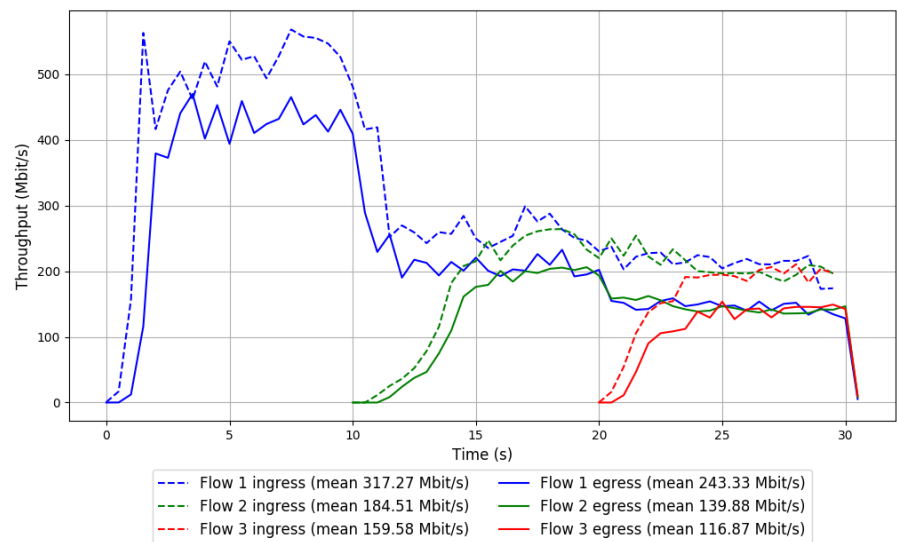


Run 5: Statistics of FillP

Start at: 2018-11-30 02:15:15
End at: 2018-11-30 02:15:45
Local clock offset: 1.422 ms
Remote clock offset: -37.642 ms

Below is generated by plot.py at 2018-11-30 02:58:03
Datalink statistics
-- Total of 3 flows:
Average throughput: 374.05 Mbit/s
95th percentile per-packet one-way delay: 64.791 ms
Loss rate: 24.09%
-- Flow 1:
Average throughput: 243.33 Mbit/s
95th percentile per-packet one-way delay: 64.644 ms
Loss rate: 23.31%
-- Flow 2:
Average throughput: 139.88 Mbit/s
95th percentile per-packet one-way delay: 65.142 ms
Loss rate: 24.94%
-- Flow 3:
Average throughput: 116.87 Mbit/s
95th percentile per-packet one-way delay: 64.269 ms
Loss rate: 26.77%

Run 5: Report of FillP — Data Link

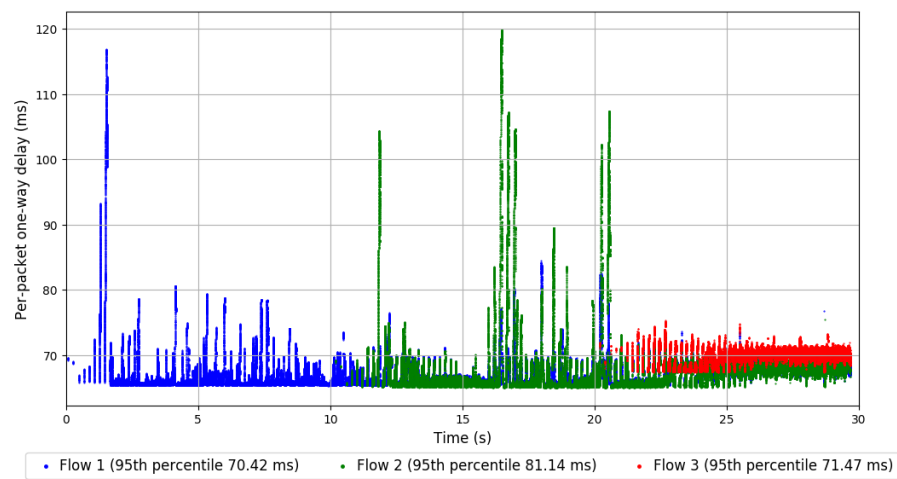
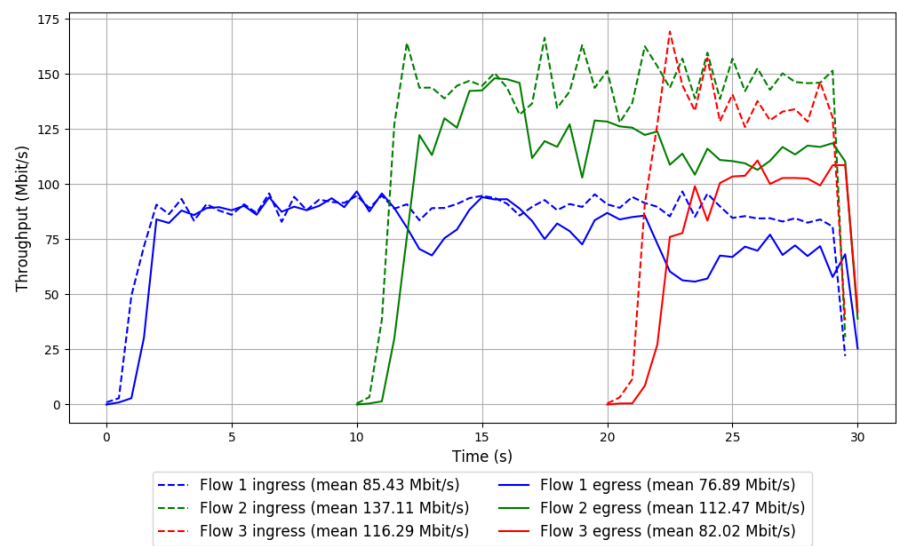


Run 1: Statistics of Indigo

Start at: 2018-11-30 00:14:11
End at: 2018-11-30 00:14:41
Local clock offset: -0.579 ms
Remote clock offset: -31.906 ms

Below is generated by plot.py at 2018-11-30 02:58:03
Datalink statistics
-- Total of 3 flows:
Average throughput: 177.18 Mbit/s
95th percentile per-packet one-way delay: 72.293 ms
Loss rate: 16.79%
-- Flow 1:
Average throughput: 76.89 Mbit/s
95th percentile per-packet one-way delay: 70.415 ms
Loss rate: 10.00%
-- Flow 2:
Average throughput: 112.47 Mbit/s
95th percentile per-packet one-way delay: 81.140 ms
Loss rate: 17.98%
-- Flow 3:
Average throughput: 82.02 Mbit/s
95th percentile per-packet one-way delay: 71.466 ms
Loss rate: 29.49%

Run 1: Report of Indigo — Data Link

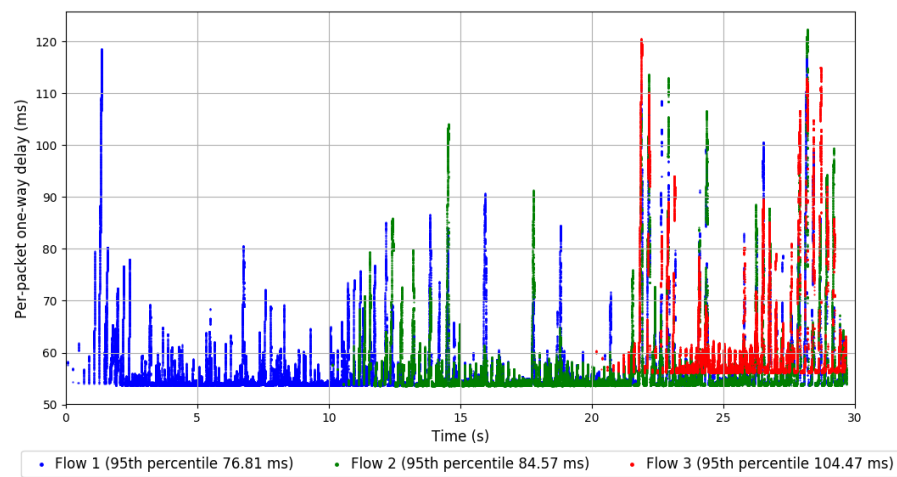
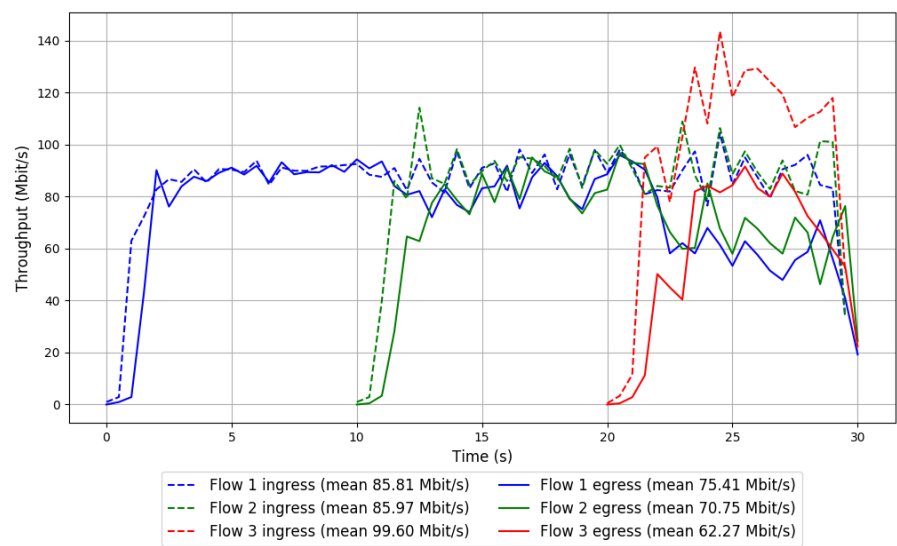


Run 2: Statistics of Indigo

Start at: 2018-11-30 00:47:30
End at: 2018-11-30 00:48:00
Local clock offset: -1.139 ms
Remote clock offset: -42.11 ms

Below is generated by plot.py at 2018-11-30 02:58:03
Datalink statistics
-- Total of 3 flows:
Average throughput: 142.00 Mbit/s
95th percentile per-packet one-way delay: 85.432 ms
Loss rate: 18.57%
-- Flow 1:
Average throughput: 75.41 Mbit/s
95th percentile per-packet one-way delay: 76.814 ms
Loss rate: 12.12%
-- Flow 2:
Average throughput: 70.75 Mbit/s
95th percentile per-packet one-way delay: 84.573 ms
Loss rate: 17.71%
-- Flow 3:
Average throughput: 62.27 Mbit/s
95th percentile per-packet one-way delay: 104.472 ms
Loss rate: 37.47%

Run 2: Report of Indigo — Data Link

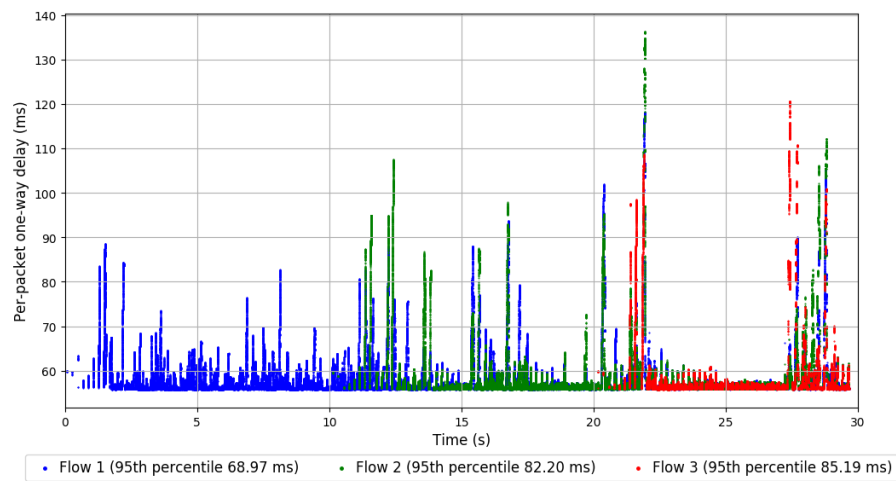
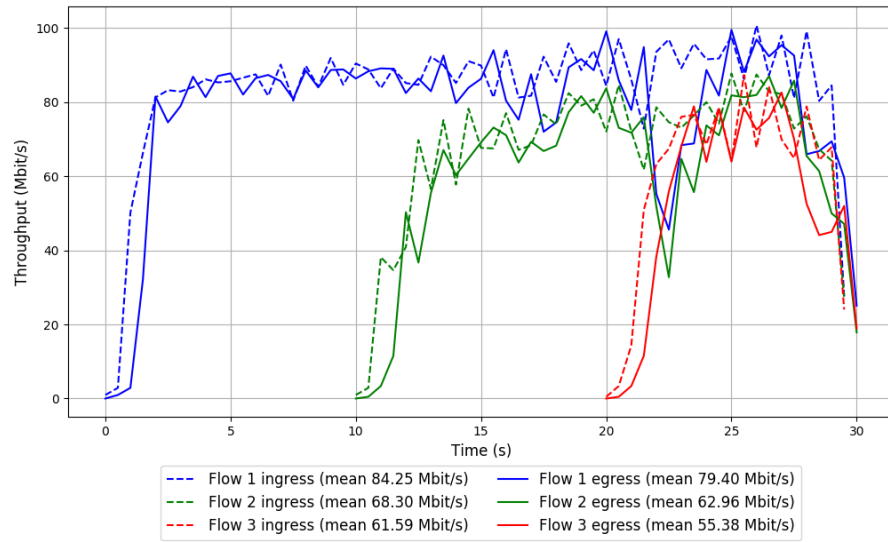


Run 3: Statistics of Indigo

Start at: 2018-11-30 01:25:02
End at: 2018-11-30 01:25:32
Local clock offset: -1.119 ms
Remote clock offset: -43.185 ms

Below is generated by plot.py at 2018-11-30 02:58:03
Datalink statistics
-- Total of 3 flows:
Average throughput: 138.72 Mbit/s
95th percentile per-packet one-way delay: 75.167 ms
Loss rate: 6.96%
-- Flow 1:
Average throughput: 79.40 Mbit/s
95th percentile per-packet one-way delay: 68.966 ms
Loss rate: 5.76%
-- Flow 2:
Average throughput: 62.96 Mbit/s
95th percentile per-packet one-way delay: 82.203 ms
Loss rate: 7.84%
-- Flow 3:
Average throughput: 55.38 Mbit/s
95th percentile per-packet one-way delay: 85.187 ms
Loss rate: 10.08%

Run 3: Report of Indigo — Data Link

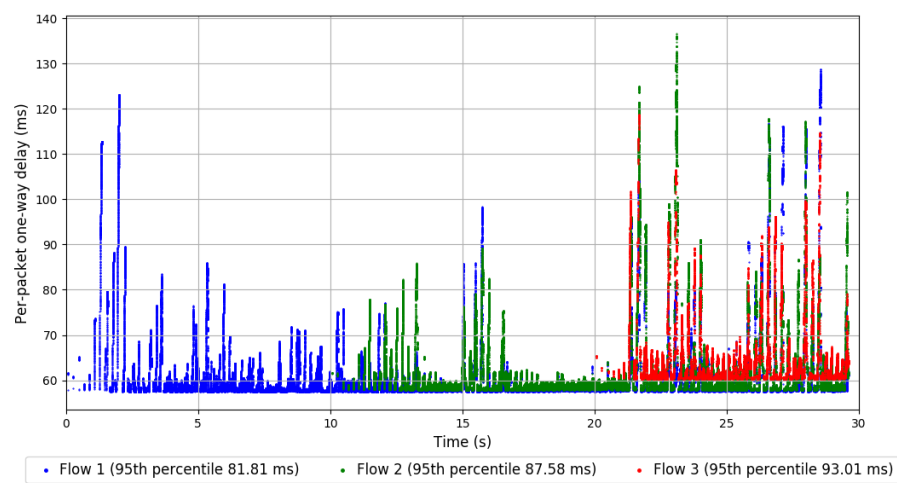
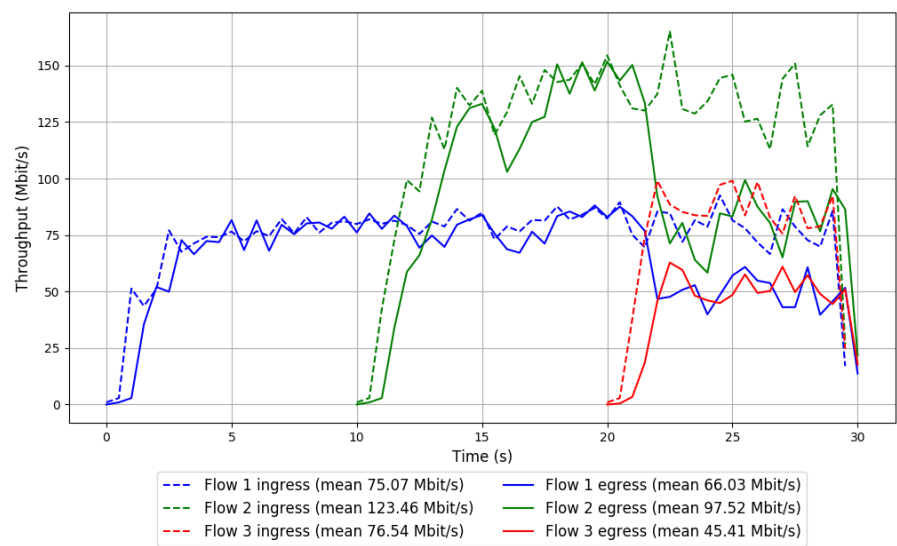


Run 4: Statistics of Indigo

Start at: 2018-11-30 02:08:21
End at: 2018-11-30 02:08:51
Local clock offset: 1.572 ms
Remote clock offset: -39.046 ms

Below is generated by plot.py at 2018-11-30 02:58:03
Datalink statistics
-- Total of 3 flows:
Average throughput: 145.13 Mbit/s
95th percentile per-packet one-way delay: 87.195 ms
Loss rate: 19.97%
-- Flow 1:
Average throughput: 66.03 Mbit/s
95th percentile per-packet one-way delay: 81.812 ms
Loss rate: 12.03%
-- Flow 2:
Average throughput: 97.52 Mbit/s
95th percentile per-packet one-way delay: 87.585 ms
Loss rate: 21.01%
-- Flow 3:
Average throughput: 45.41 Mbit/s
95th percentile per-packet one-way delay: 93.014 ms
Loss rate: 40.68%

Run 4: Report of Indigo — Data Link

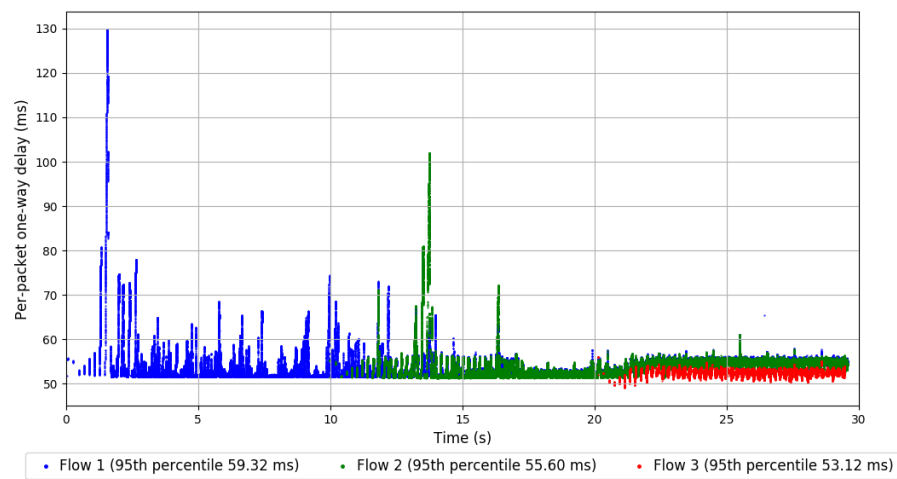
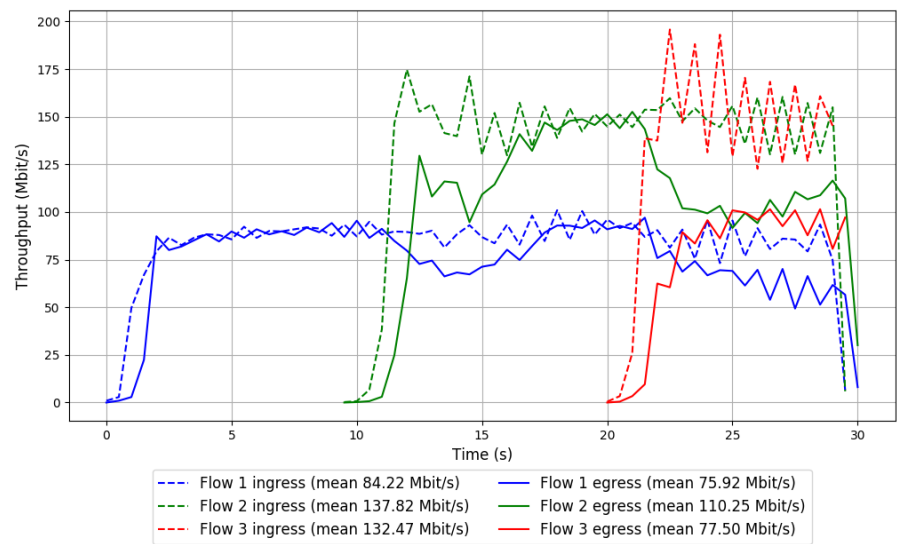


Run 5: Statistics of Indigo

Start at: 2018-11-30 02:40:49
End at: 2018-11-30 02:41:19
Local clock offset: 4.666 ms
Remote clock offset: -45.897 ms

Below is generated by plot.py at 2018-11-30 02:58:03
Datalink statistics
-- Total of 3 flows:
Average throughput: 173.62 Mbit/s
95th percentile per-packet one-way delay: 56.222 ms
Loss rate: 20.21%
-- Flow 1:
Average throughput: 75.92 Mbit/s
95th percentile per-packet one-way delay: 59.317 ms
Loss rate: 9.86%
-- Flow 2:
Average throughput: 110.25 Mbit/s
95th percentile per-packet one-way delay: 55.605 ms
Loss rate: 19.99%
-- Flow 3:
Average throughput: 77.50 Mbit/s
95th percentile per-packet one-way delay: 53.117 ms
Loss rate: 41.49%

Run 5: Report of Indigo — Data Link

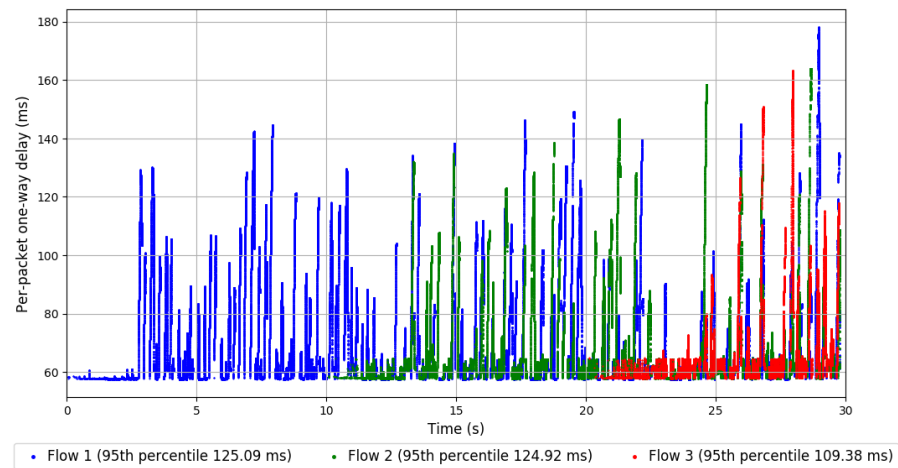
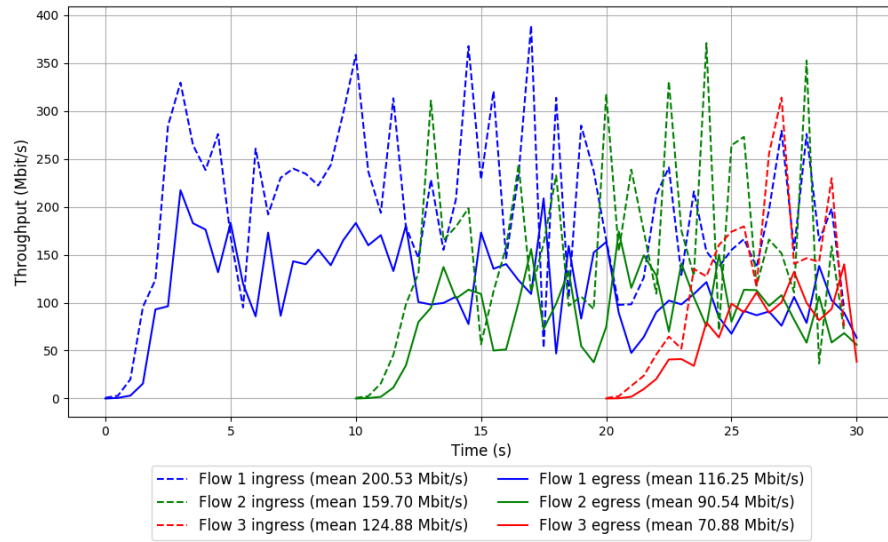


Run 1: Statistics of Indigo-96d2da3

Start at: 2018-11-30 00:12:11
End at: 2018-11-30 00:12:41
Local clock offset: -0.303 ms
Remote clock offset: -38.929 ms

Below is generated by plot.py at 2018-11-30 02:58:39
Datalink statistics
-- Total of 3 flows:
Average throughput: 199.24 Mbit/s
95th percentile per-packet one-way delay: 124.100 ms
Loss rate: 42.52%
-- Flow 1:
Average throughput: 116.25 Mbit/s
95th percentile per-packet one-way delay: 125.088 ms
Loss rate: 42.02%
-- Flow 2:
Average throughput: 90.54 Mbit/s
95th percentile per-packet one-way delay: 124.923 ms
Loss rate: 43.30%
-- Flow 3:
Average throughput: 70.88 Mbit/s
95th percentile per-packet one-way delay: 109.379 ms
Loss rate: 43.00%

Run 1: Report of Indigo-96d2da3 — Data Link

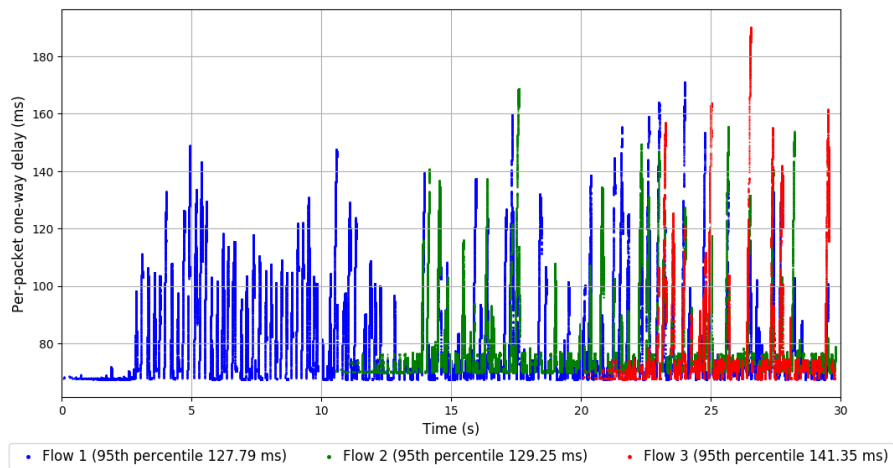
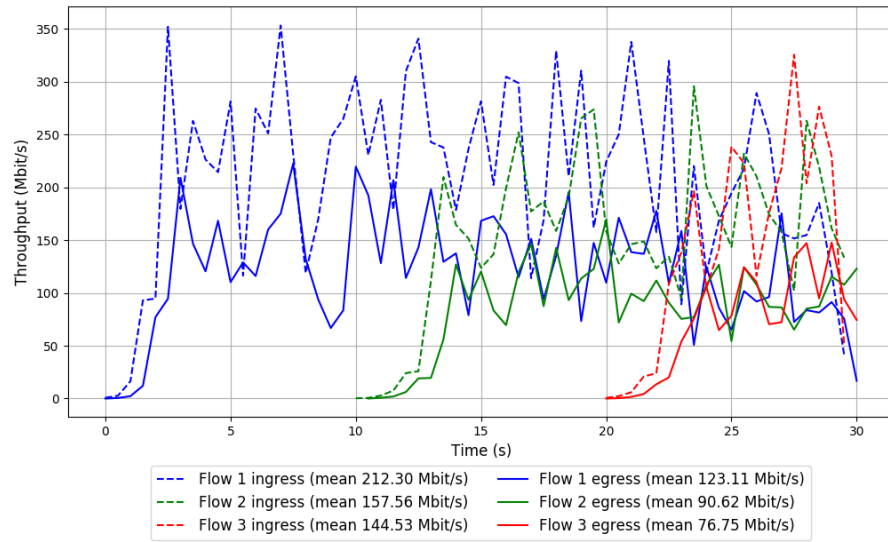


Run 2: Statistics of Indigo-96d2da3

Start at: 2018-11-30 00:45:28
End at: 2018-11-30 00:45:58
Local clock offset: -3.309 ms
Remote clock offset: -30.474 ms

Below is generated by plot.py at 2018-11-30 02:59:09
Datalink statistics
-- Total of 3 flows:
Average throughput: 206.38 Mbit/s
95th percentile per-packet one-way delay: 129.485 ms
Loss rate: 42.77%
-- Flow 1:
Average throughput: 123.11 Mbit/s
95th percentile per-packet one-way delay: 127.793 ms
Loss rate: 42.00%
-- Flow 2:
Average throughput: 90.62 Mbit/s
95th percentile per-packet one-way delay: 129.251 ms
Loss rate: 42.46%
-- Flow 3:
Average throughput: 76.75 Mbit/s
95th percentile per-packet one-way delay: 141.352 ms
Loss rate: 46.89%

Run 2: Report of Indigo-96d2da3 — Data Link

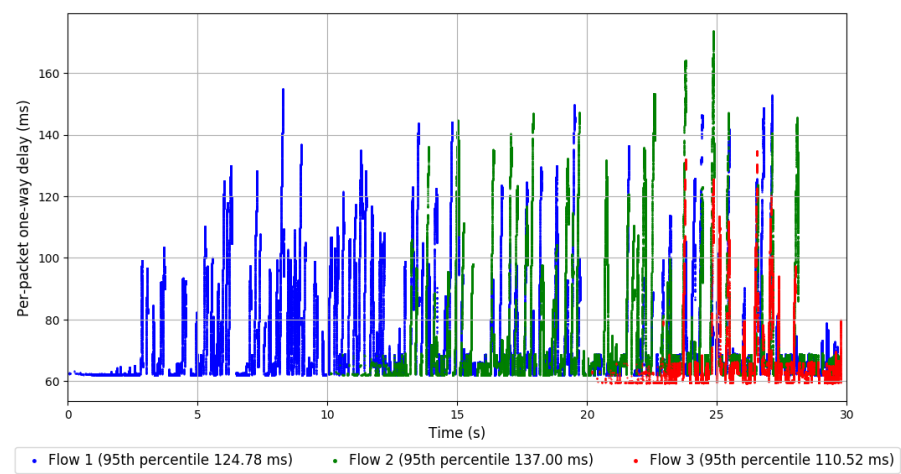
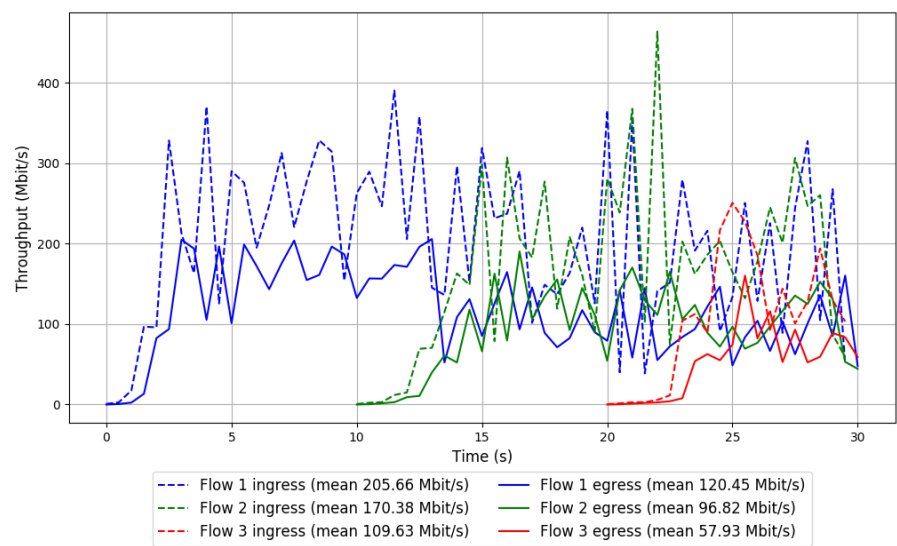


Run 3: Statistics of Indigo-96d2da3

Start at: 2018-11-30 01:23:00
End at: 2018-11-30 01:23:30
Local clock offset: -1.459 ms
Remote clock offset: -39.632 ms

Below is generated by plot.py at 2018-11-30 02:59:09
Datalink statistics
-- Total of 3 flows:
Average throughput: 202.63 Mbit/s
95th percentile per-packet one-way delay: 128.833 ms
Loss rate: 42.56%
-- Flow 1:
Average throughput: 120.45 Mbit/s
95th percentile per-packet one-way delay: 124.779 ms
Loss rate: 41.42%
-- Flow 2:
Average throughput: 96.82 Mbit/s
95th percentile per-packet one-way delay: 137.003 ms
Loss rate: 43.18%
-- Flow 3:
Average throughput: 57.93 Mbit/s
95th percentile per-packet one-way delay: 110.520 ms
Loss rate: 47.15%

Run 3: Report of Indigo-96d2da3 — Data Link

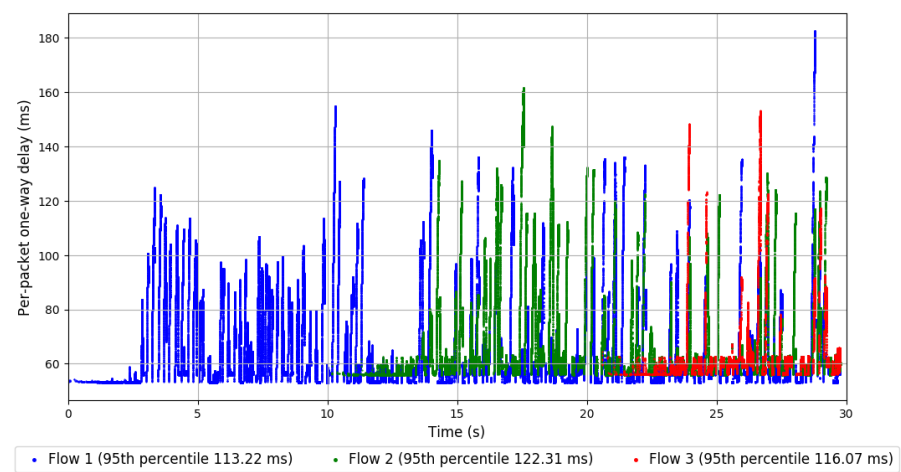
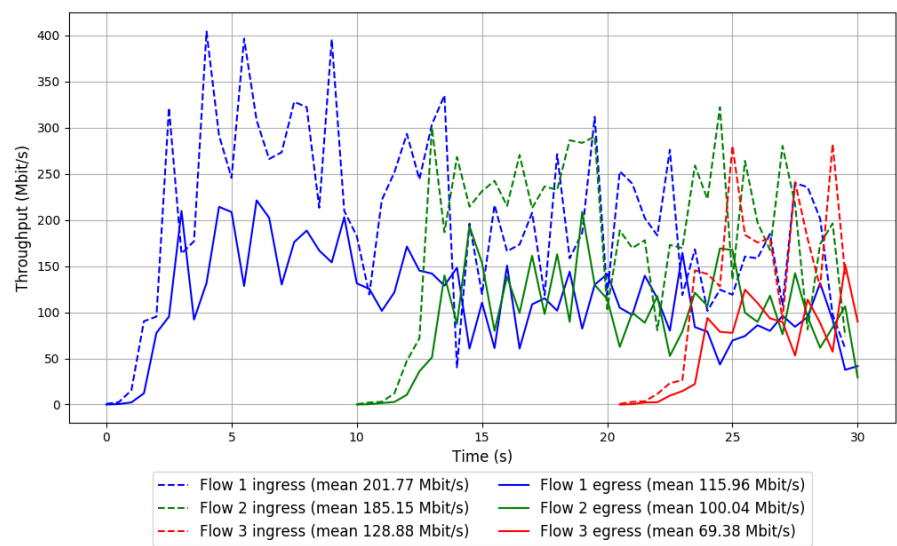


Run 4: Statistics of Indigo-96d2da3

Start at: 2018-11-30 02:06:19
End at: 2018-11-30 02:06:49
Local clock offset: 1.171 ms
Remote clock offset: -43.943 ms

Below is generated by plot.py at 2018-11-30 02:59:48
Datalink statistics
-- Total of 3 flows:
Average throughput: 203.39 Mbit/s
95th percentile per-packet one-way delay: 118.373 ms
Loss rate: 44.08%
-- Flow 1:
Average throughput: 115.96 Mbit/s
95th percentile per-packet one-way delay: 113.219 ms
Loss rate: 42.52%
-- Flow 2:
Average throughput: 100.04 Mbit/s
95th percentile per-packet one-way delay: 122.310 ms
Loss rate: 45.96%
-- Flow 3:
Average throughput: 69.38 Mbit/s
95th percentile per-packet one-way delay: 116.073 ms
Loss rate: 46.20%

Run 4: Report of Indigo-96d2da3 — Data Link

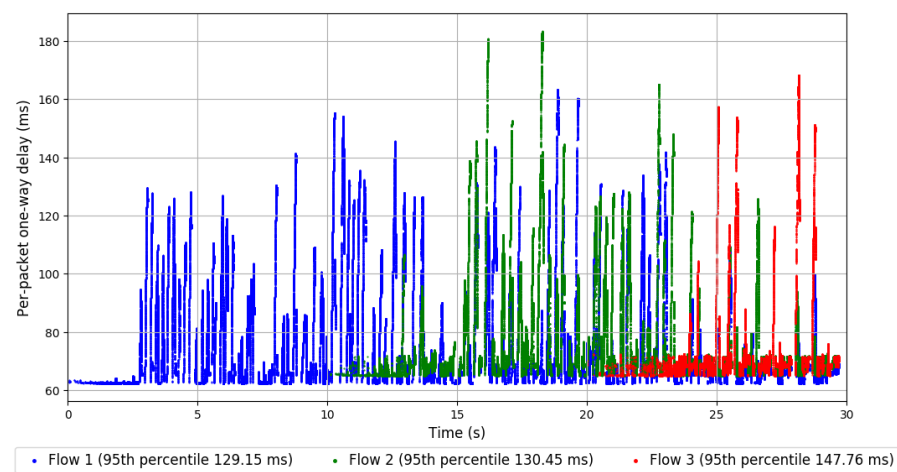
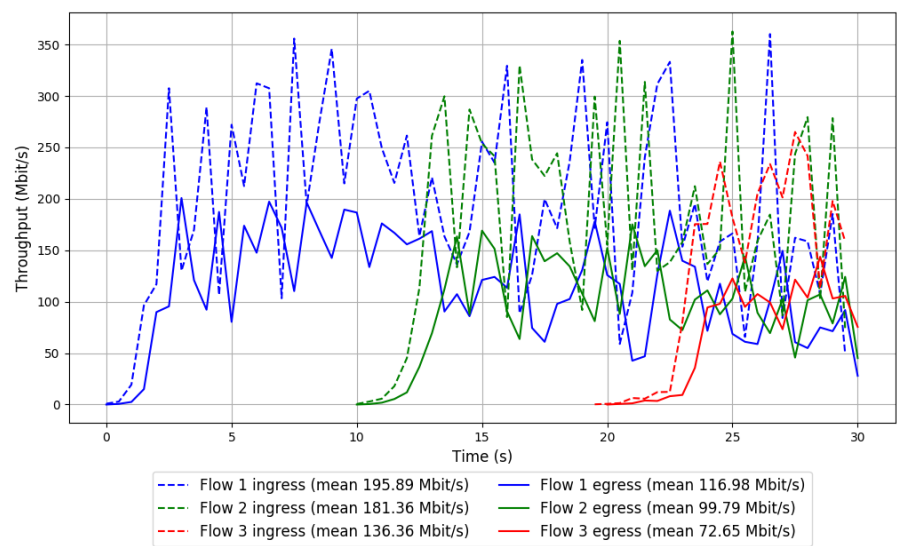


Run 5: Statistics of Indigo-96d2da3

Start at: 2018-11-30 02:38:47
End at: 2018-11-30 02:39:17
Local clock offset: 1.815 ms
Remote clock offset: -34.976 ms

Below is generated by plot.py at 2018-11-30 02:59:54
Datalink statistics
-- Total of 3 flows:
Average throughput: 206.51 Mbit/s
95th percentile per-packet one-way delay: 129.939 ms
Loss rate: 42.64%
-- Flow 1:
Average throughput: 116.98 Mbit/s
95th percentile per-packet one-way delay: 129.151 ms
Loss rate: 40.27%
-- Flow 2:
Average throughput: 99.79 Mbit/s
95th percentile per-packet one-way delay: 130.449 ms
Loss rate: 44.96%
-- Flow 3:
Average throughput: 72.65 Mbit/s
95th percentile per-packet one-way delay: 147.759 ms
Loss rate: 46.81%

Run 5: Report of Indigo-96d2da3 — Data Link

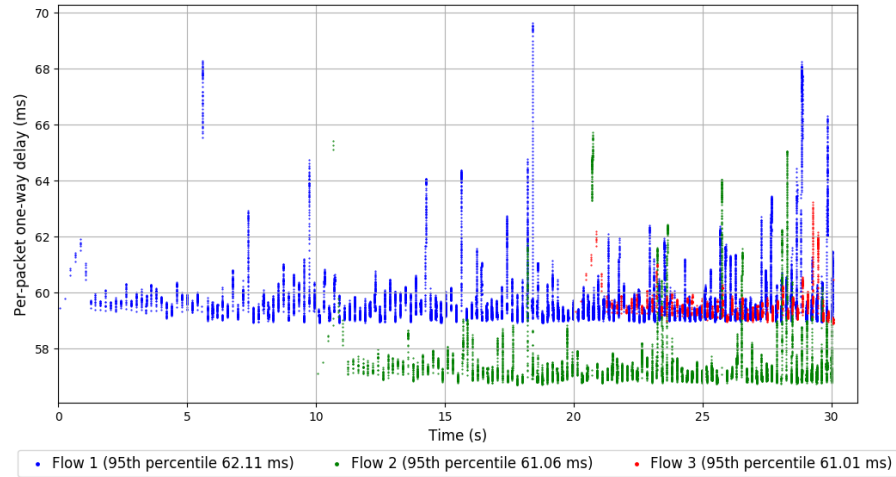
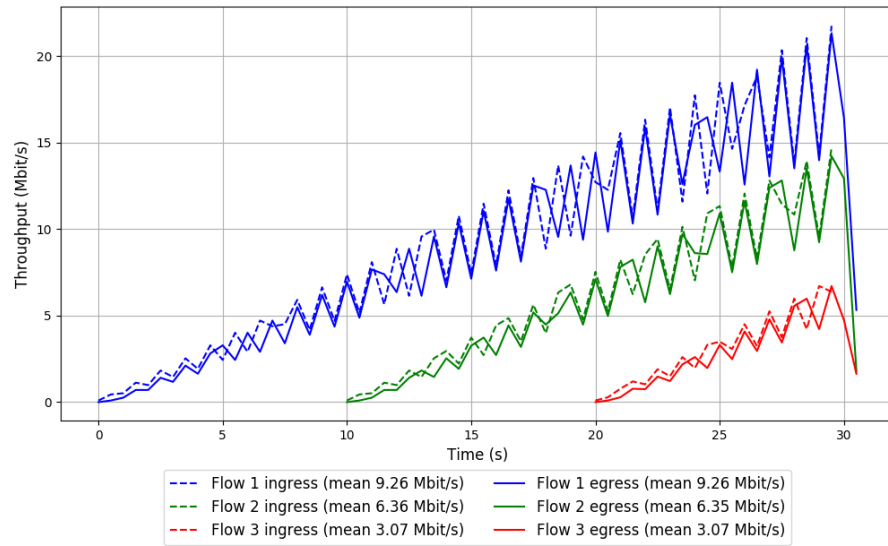


Run 1: Statistics of LEDBAT

Start at: 2018-11-30 00:00:34
End at: 2018-11-30 00:01:04
Local clock offset: -2.689 ms
Remote clock offset: -43.395 ms

Below is generated by plot.py at 2018-11-30 02:59:54
Datalink statistics
-- Total of 3 flows:
Average throughput: 14.50 Mbit/s
95th percentile per-packet one-way delay: 61.751 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.26 Mbit/s
95th percentile per-packet one-way delay: 62.111 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 6.35 Mbit/s
95th percentile per-packet one-way delay: 61.057 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 3.07 Mbit/s
95th percentile per-packet one-way delay: 61.007 ms
Loss rate: 0.00%

Run 1: Report of LEDBAT — Data Link

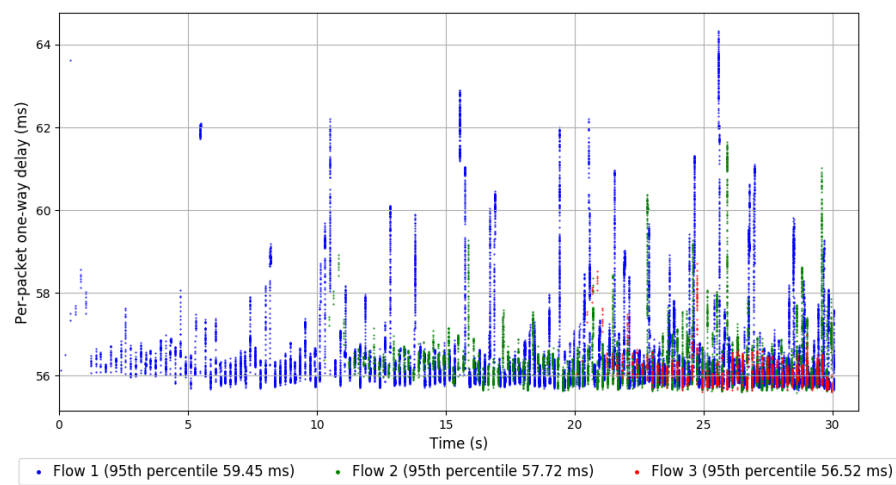
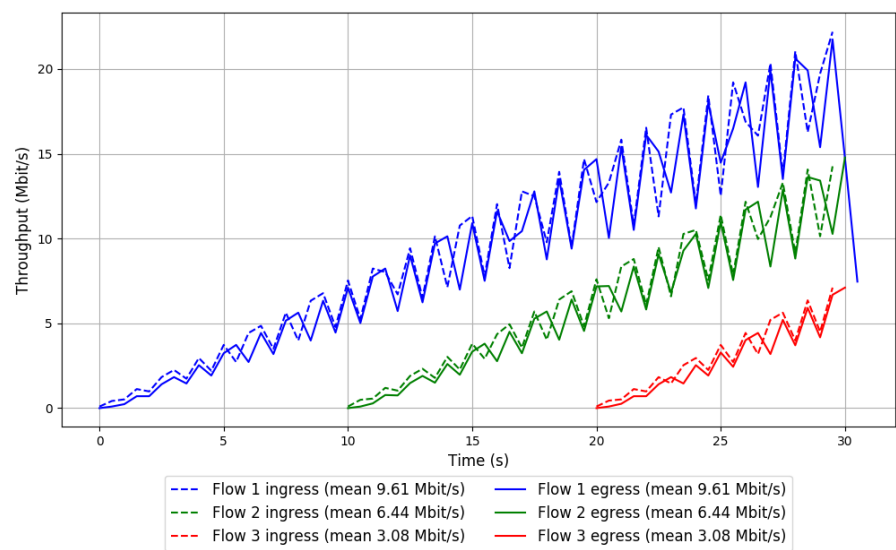


Run 2: Statistics of LEDBAT

Start at: 2018-11-30 00:33:34
End at: 2018-11-30 00:34:04
Local clock offset: -1.807 ms
Remote clock offset: -41.32 ms

Below is generated by plot.py at 2018-11-30 02:59:54
Datalink statistics
-- Total of 3 flows:
Average throughput: 14.90 Mbit/s
95th percentile per-packet one-way delay: 58.999 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.61 Mbit/s
95th percentile per-packet one-way delay: 59.448 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 6.44 Mbit/s
95th percentile per-packet one-way delay: 57.719 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 3.08 Mbit/s
95th percentile per-packet one-way delay: 56.518 ms
Loss rate: 0.00%

Run 2: Report of LEDBAT — Data Link

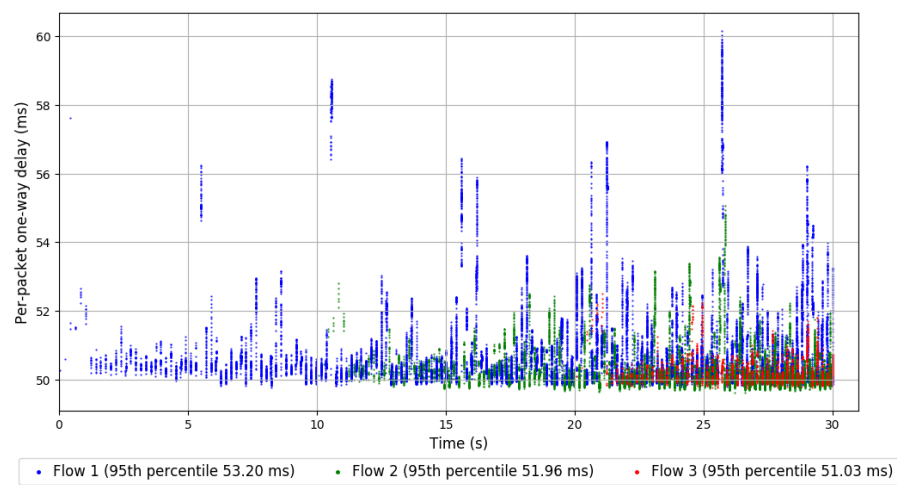
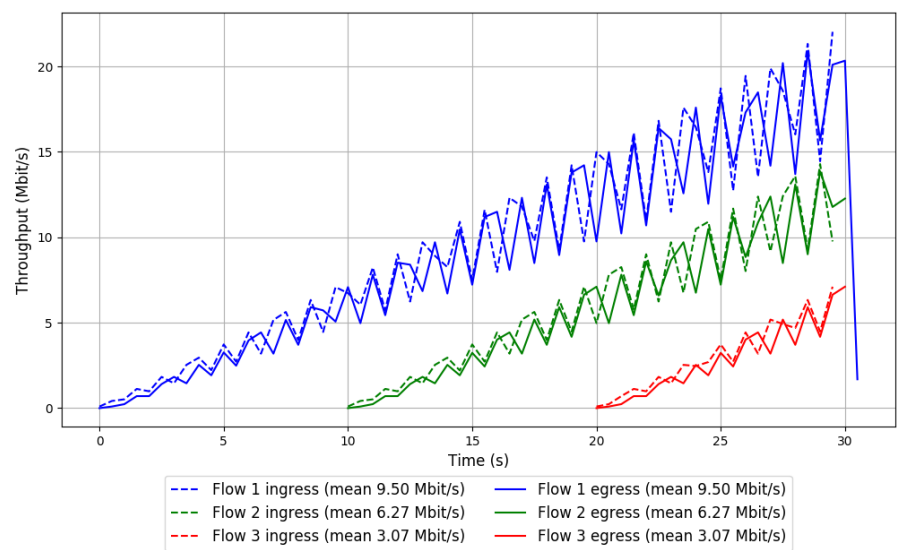


Run 3: Statistics of LEDBAT

Start at: 2018-11-30 01:11:29
End at: 2018-11-30 01:11:59
Local clock offset: 0.407 ms
Remote clock offset: -46.488 ms

Below is generated by plot.py at 2018-11-30 02:59:54
Datalink statistics
-- Total of 3 flows:
Average throughput: 14.67 Mbit/s
95th percentile per-packet one-way delay: 52.766 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.50 Mbit/s
95th percentile per-packet one-way delay: 53.200 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 6.27 Mbit/s
95th percentile per-packet one-way delay: 51.956 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 3.07 Mbit/s
95th percentile per-packet one-way delay: 51.028 ms
Loss rate: 0.00%

Run 3: Report of LEDBAT — Data Link

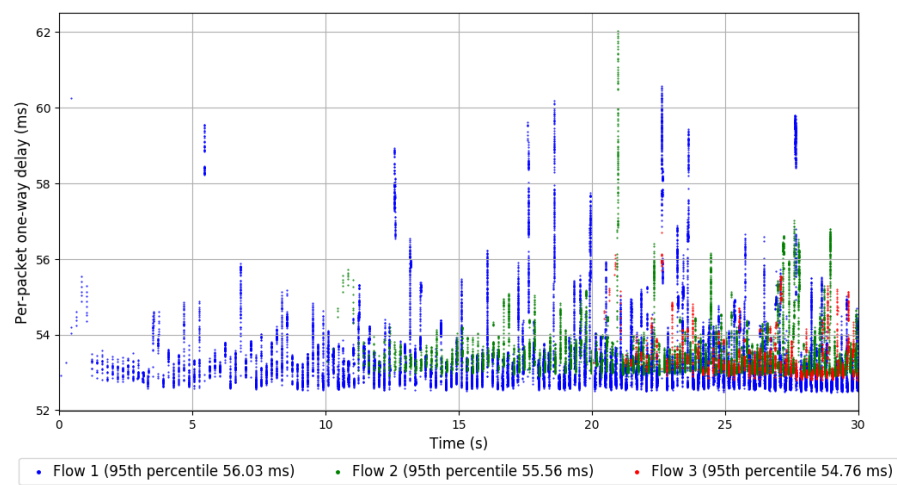
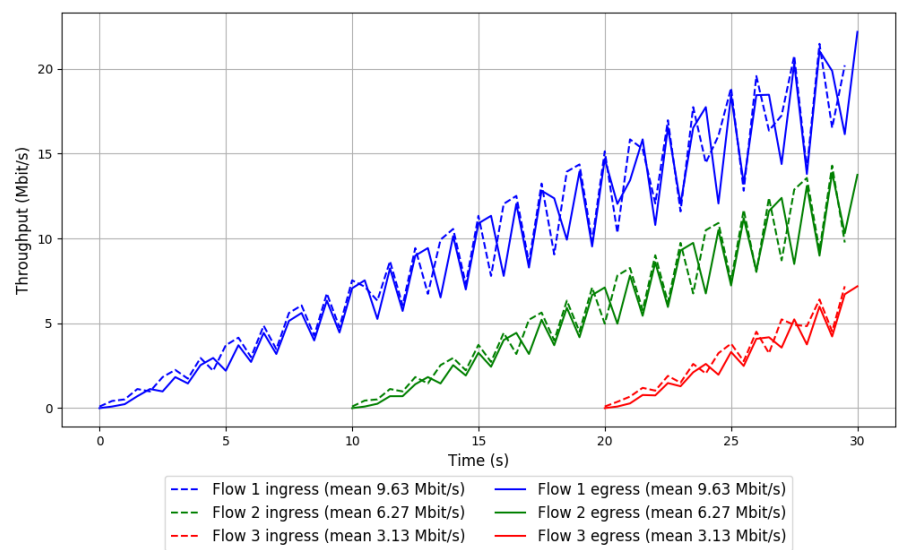


Run 4: Statistics of LEDBAT

Start at: 2018-11-30 01:54:39
End at: 2018-11-30 01:55:09
Local clock offset: -0.601 ms
Remote clock offset: -46.052 ms

Below is generated by plot.py at 2018-11-30 02:59:54
Datalink statistics
-- Total of 3 flows:
Average throughput: 14.82 Mbit/s
95th percentile per-packet one-way delay: 55.734 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.63 Mbit/s
95th percentile per-packet one-way delay: 56.029 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 6.27 Mbit/s
95th percentile per-packet one-way delay: 55.560 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 3.13 Mbit/s
95th percentile per-packet one-way delay: 54.756 ms
Loss rate: 0.00%

Run 4: Report of LEDBAT — Data Link

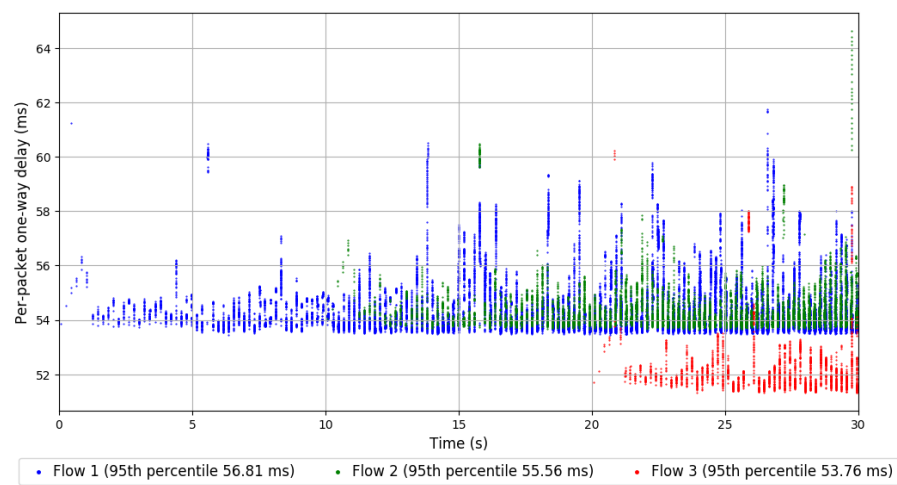
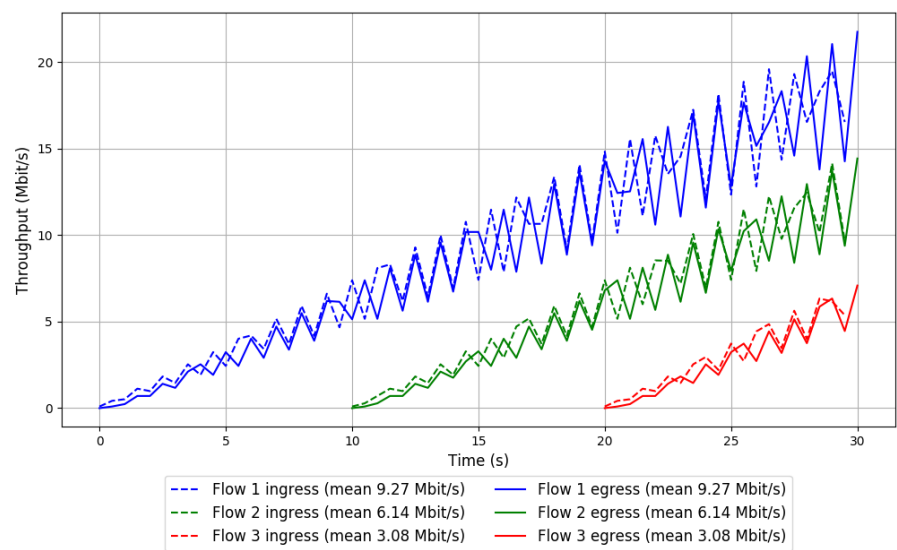


Run 5: Statistics of LEDBAT

Start at: 2018-11-30 02:27:12
End at: 2018-11-30 02:27:42
Local clock offset: 1.436 ms
Remote clock offset: -46.014 ms

Below is generated by plot.py at 2018-11-30 02:59:54
Datalink statistics
-- Total of 3 flows:
Average throughput: 14.37 Mbit/s
95th percentile per-packet one-way delay: 56.368 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.27 Mbit/s
95th percentile per-packet one-way delay: 56.811 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 6.14 Mbit/s
95th percentile per-packet one-way delay: 55.562 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 3.08 Mbit/s
95th percentile per-packet one-way delay: 53.764 ms
Loss rate: 0.00%

Run 5: Report of LEDBAT — Data Link

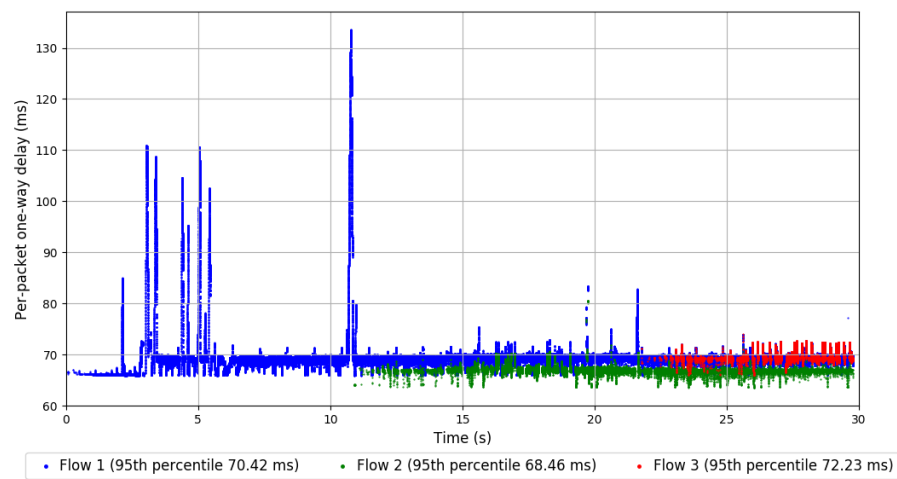
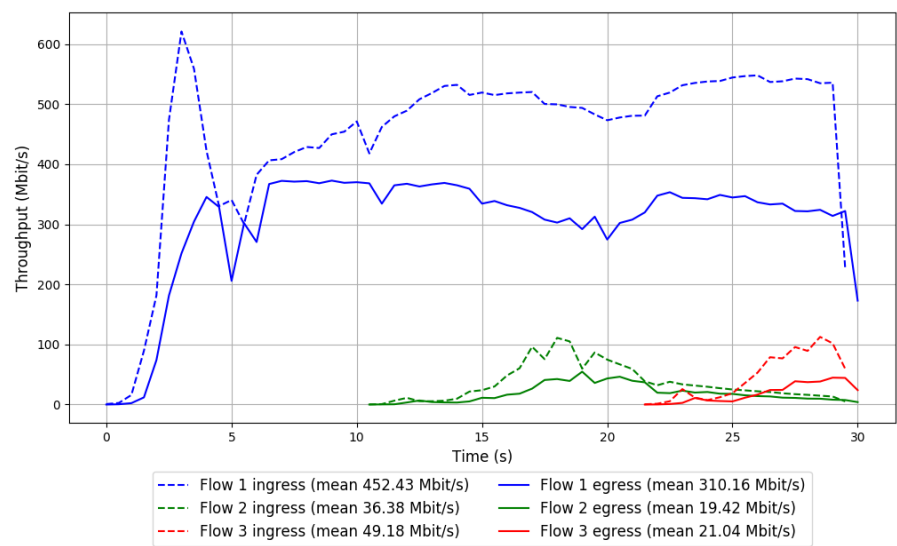


Run 1: Statistics of Indigo-Muses

Start at: 2018-11-30 00:05:07
End at: 2018-11-30 00:05:37
Local clock offset: -1.138 ms
Remote clock offset: -34.705 ms

Below is generated by plot.py at 2018-11-30 03:02:07
Datalink statistics
-- Total of 3 flows:
Average throughput: 328.14 Mbit/s
95th percentile per-packet one-way delay: 70.544 ms
Loss rate: 32.86%
-- Flow 1:
Average throughput: 310.16 Mbit/s
95th percentile per-packet one-way delay: 70.422 ms
Loss rate: 31.44%
-- Flow 2:
Average throughput: 19.42 Mbit/s
95th percentile per-packet one-way delay: 68.458 ms
Loss rate: 46.63%
-- Flow 3:
Average throughput: 21.04 Mbit/s
95th percentile per-packet one-way delay: 72.227 ms
Loss rate: 57.23%

Run 1: Report of Indigo-Muses — Data Link

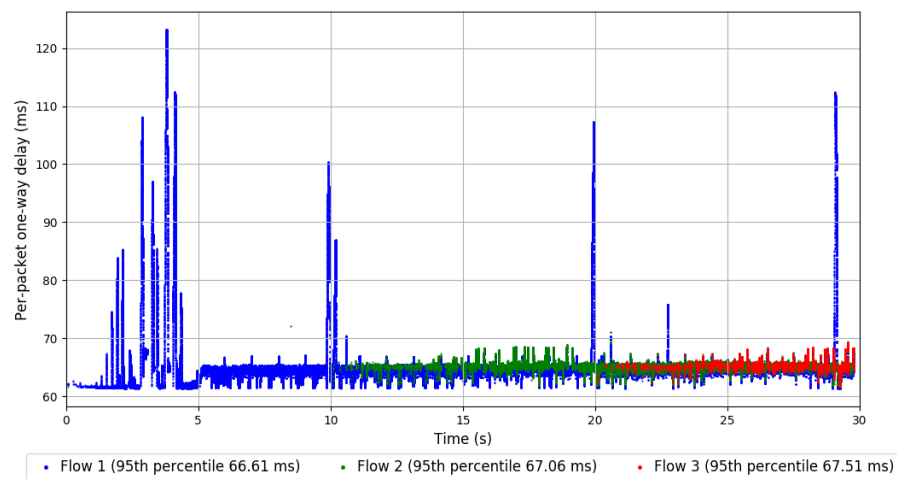
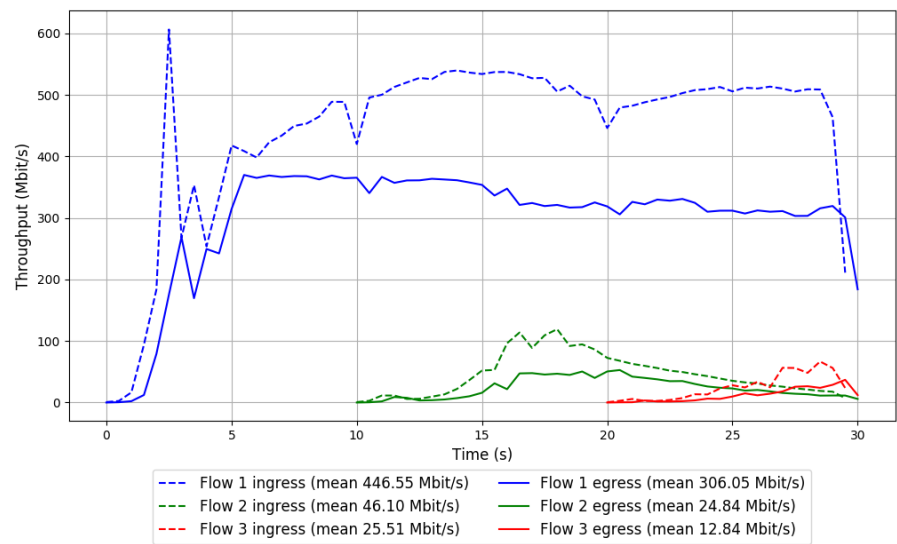


Run 2: Statistics of Indigo-Muses

Start at: 2018-11-30 00:38:02
End at: 2018-11-30 00:38:32
Local clock offset: -0.043 ms
Remote clock offset: -33.22 ms

Below is generated by plot.py at 2018-11-30 03:02:07
Datalink statistics
-- Total of 3 flows:
Average throughput: 326.68 Mbit/s
95th percentile per-packet one-way delay: 66.717 ms
Loss rate: 32.69%
-- Flow 1:
Average throughput: 306.05 Mbit/s
95th percentile per-packet one-way delay: 66.608 ms
Loss rate: 31.46%
-- Flow 2:
Average throughput: 24.84 Mbit/s
95th percentile per-packet one-way delay: 67.059 ms
Loss rate: 46.10%
-- Flow 3:
Average throughput: 12.84 Mbit/s
95th percentile per-packet one-way delay: 67.507 ms
Loss rate: 49.67%

Run 2: Report of Indigo-Muses — Data Link

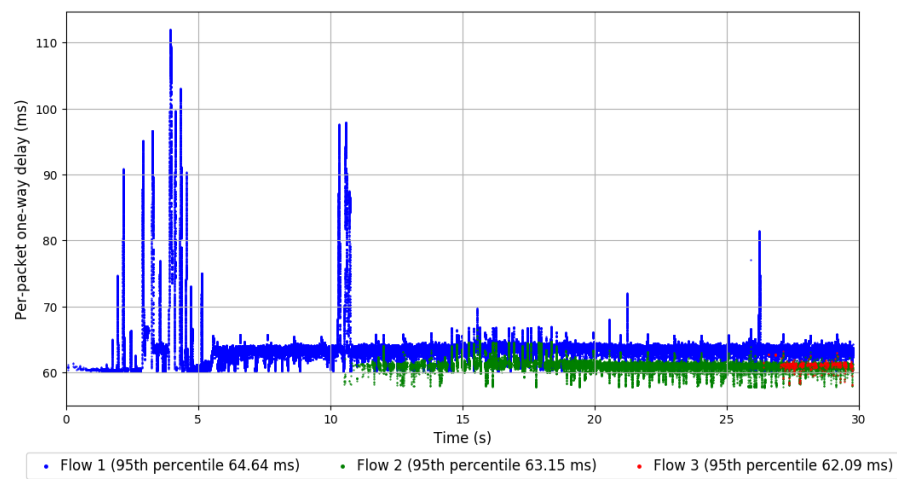
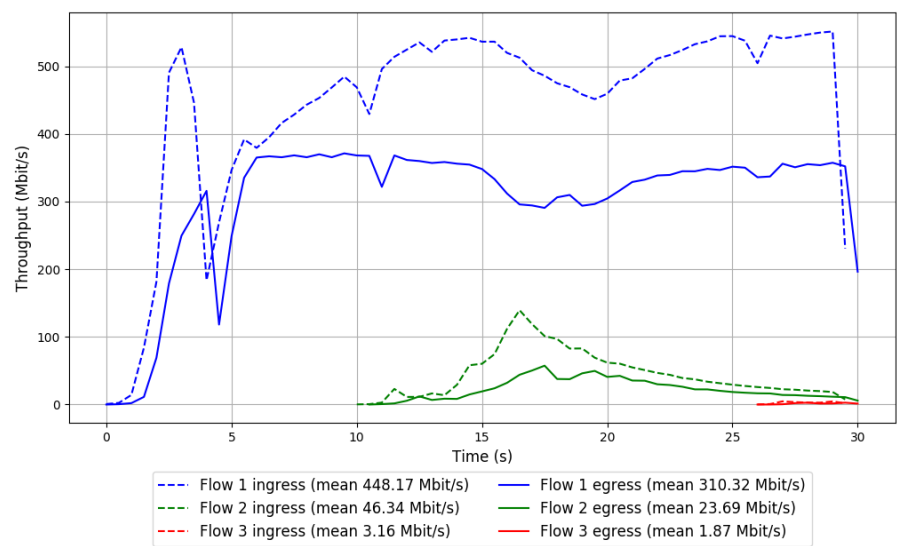


Run 3: Statistics of Indigo-Muses

Start at: 2018-11-30 01:15:48
End at: 2018-11-30 01:16:18
Local clock offset: 2.504 ms
Remote clock offset: -36.659 ms

Below is generated by plot.py at 2018-11-30 03:02:09
Datalink statistics
-- Total of 3 flows:
Average throughput: 325.87 Mbit/s
95th percentile per-packet one-way delay: 64.504 ms
Loss rate: 31.89%
-- Flow 1:
Average throughput: 310.32 Mbit/s
95th percentile per-packet one-way delay: 64.643 ms
Loss rate: 30.75%
-- Flow 2:
Average throughput: 23.69 Mbit/s
95th percentile per-packet one-way delay: 63.154 ms
Loss rate: 48.87%
-- Flow 3:
Average throughput: 1.87 Mbit/s
95th percentile per-packet one-way delay: 62.087 ms
Loss rate: 40.72%

Run 3: Report of Indigo-Muses — Data Link

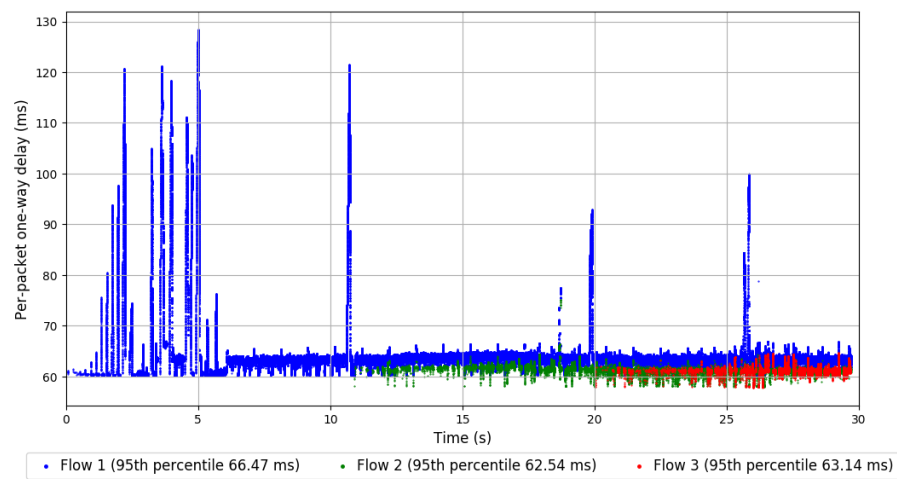
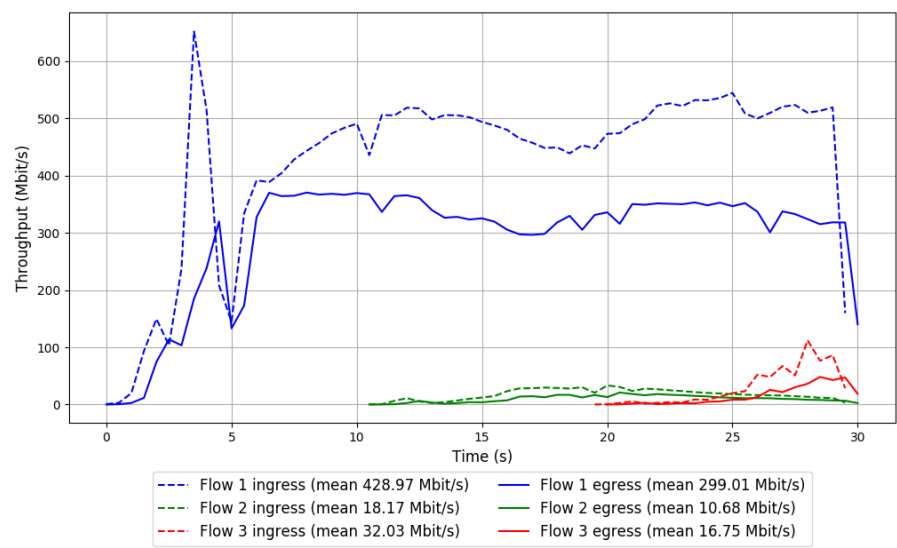


Run 4: Statistics of Indigo-Muses

Start at: 2018-11-30 01:59:03
End at: 2018-11-30 01:59:33
Local clock offset: 0.464 ms
Remote clock offset: -40.054 ms

Below is generated by plot.py at 2018-11-30 03:02:32
Datalink statistics
-- Total of 3 flows:
Average throughput: 311.23 Mbit/s
95th percentile per-packet one-way delay: 66.334 ms
Loss rate: 30.97%
-- Flow 1:
Average throughput: 299.01 Mbit/s
95th percentile per-packet one-way delay: 66.468 ms
Loss rate: 30.29%
-- Flow 2:
Average throughput: 10.68 Mbit/s
95th percentile per-packet one-way delay: 62.541 ms
Loss rate: 41.19%
-- Flow 3:
Average throughput: 16.75 Mbit/s
95th percentile per-packet one-way delay: 63.142 ms
Loss rate: 47.68%

Run 4: Report of Indigo-Muses — Data Link

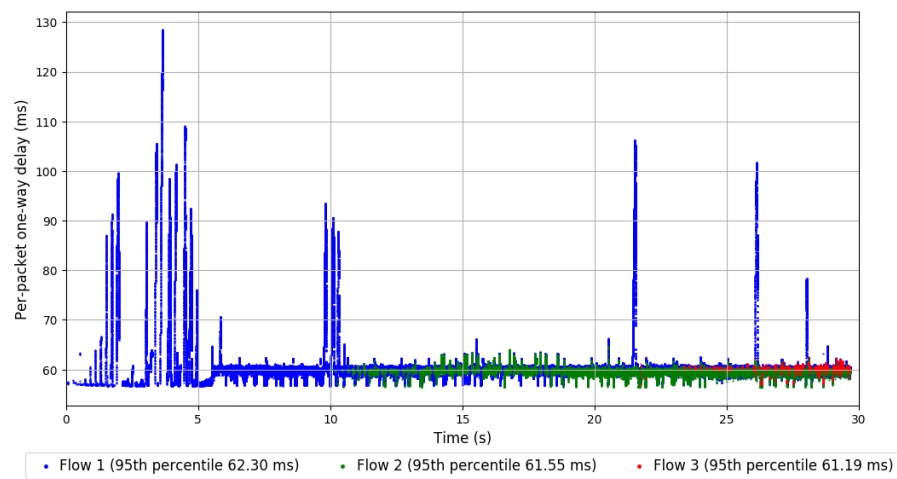
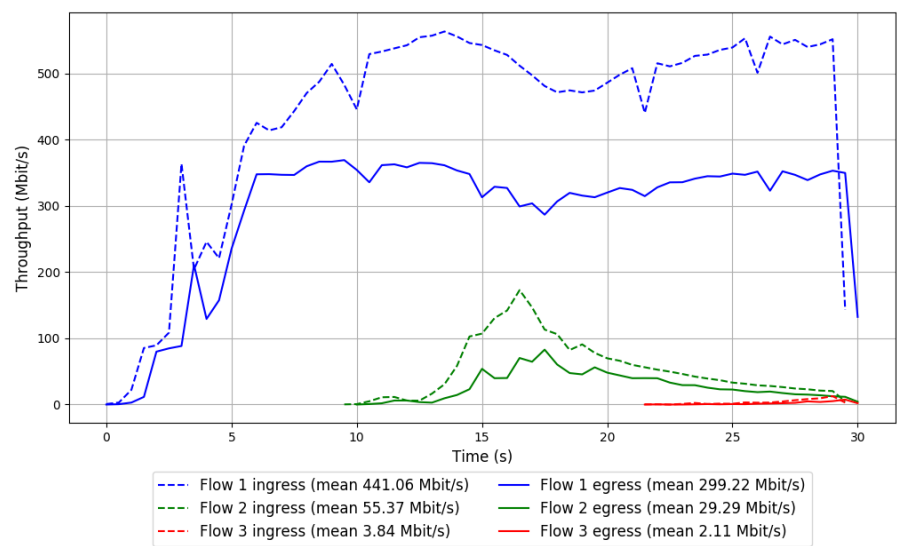


Run 5: Statistics of Indigo-Muses

Start at: 2018-11-30 02:31:49
End at: 2018-11-30 02:32:19
Local clock offset: 4.056 ms
Remote clock offset: -38.136 ms

Below is generated by plot.py at 2018-11-30 03:03:26
Datalink statistics
-- Total of 3 flows:
Average throughput: 319.24 Mbit/s
95th percentile per-packet one-way delay: 62.128 ms
Loss rate: 33.33%
-- Flow 1:
Average throughput: 299.22 Mbit/s
95th percentile per-packet one-way delay: 62.300 ms
Loss rate: 32.15%
-- Flow 2:
Average throughput: 29.29 Mbit/s
95th percentile per-packet one-way delay: 61.553 ms
Loss rate: 47.08%
-- Flow 3:
Average throughput: 2.11 Mbit/s
95th percentile per-packet one-way delay: 61.186 ms
Loss rate: 45.09%

Run 5: Report of Indigo-Muses — Data Link

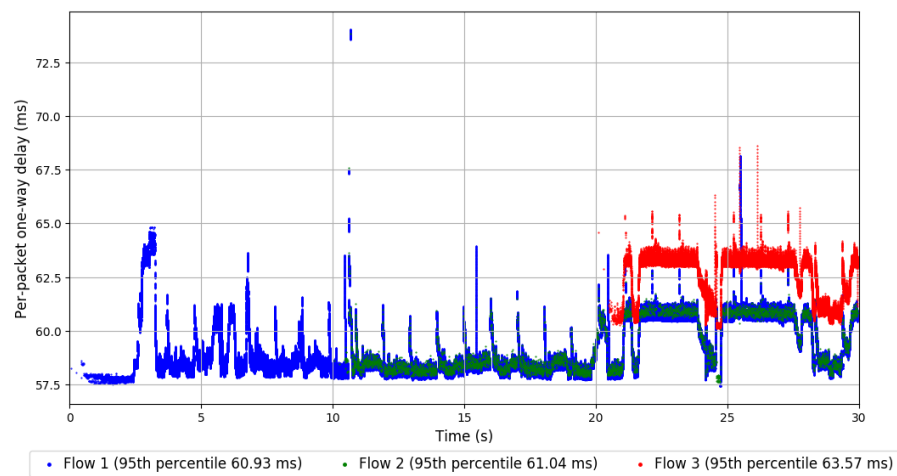
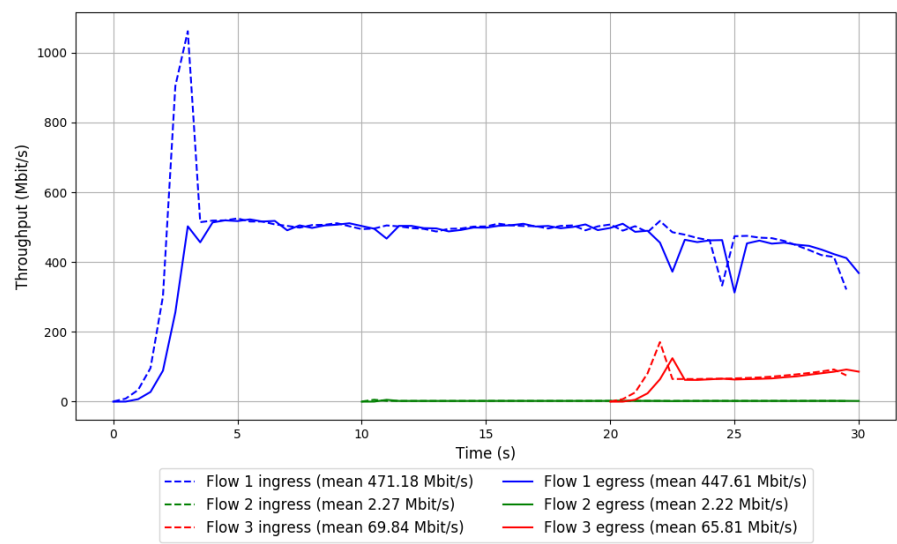


Run 1: Statistics of PCC-Allegro

Start at: 2018-11-29 23:51:17
End at: 2018-11-29 23:51:47
Local clock offset: -0.084 ms
Remote clock offset: -40.66 ms

Below is generated by plot.py at 2018-11-30 03:04:55
Datalink statistics
-- Total of 3 flows:
Average throughput: 470.74 Mbit/s
95th percentile per-packet one-way delay: 62.640 ms
Loss rate: 5.02%
-- Flow 1:
Average throughput: 447.61 Mbit/s
95th percentile per-packet one-way delay: 60.926 ms
Loss rate: 4.99%
-- Flow 2:
Average throughput: 2.22 Mbit/s
95th percentile per-packet one-way delay: 61.036 ms
Loss rate: 2.15%
-- Flow 3:
Average throughput: 65.81 Mbit/s
95th percentile per-packet one-way delay: 63.571 ms
Loss rate: 5.79%

Run 1: Report of PCC-Allegro — Data Link



Run 2: Statistics of PCC-Allegro

Start at: 2018-11-30 00:23:51

End at: 2018-11-30 00:24:21

Local clock offset: -3.444 ms

Remote clock offset: -40.479 ms

Below is generated by plot.py at 2018-11-30 03:05:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 451.48 Mbit/s

95th percentile per-packet one-way delay: 62.095 ms

Loss rate: 4.76%

-- Flow 1:

Average throughput: 419.14 Mbit/s

95th percentile per-packet one-way delay: 62.116 ms

Loss rate: 4.94%

-- Flow 2:

Average throughput: 32.98 Mbit/s

95th percentile per-packet one-way delay: 61.680 ms

Loss rate: 2.06%

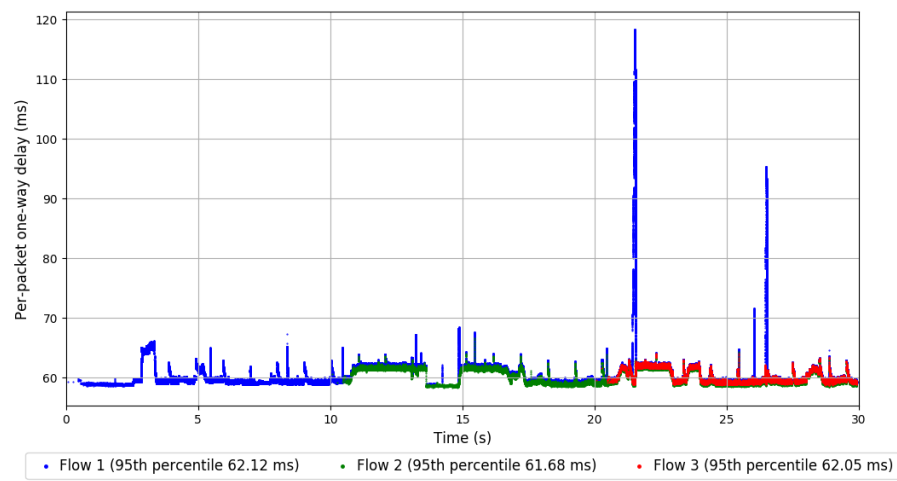
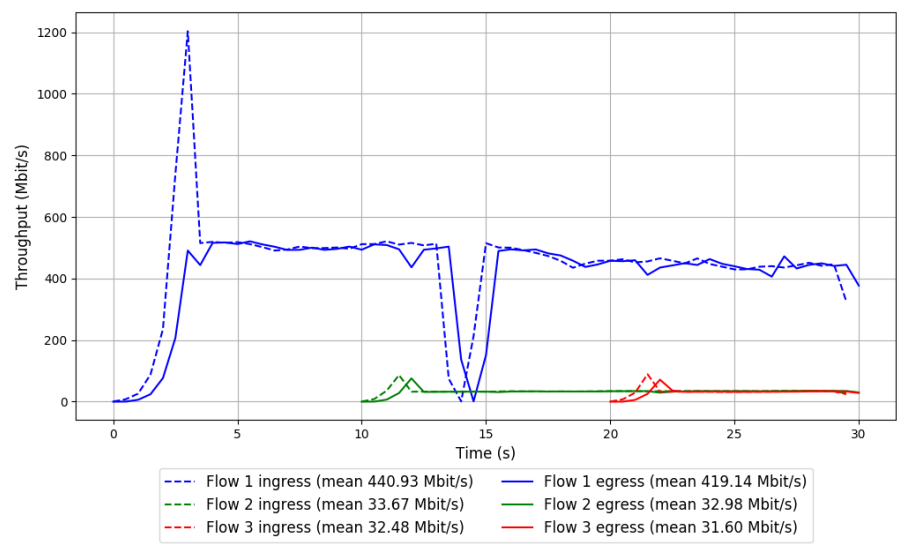
-- Flow 3:

Average throughput: 31.60 Mbit/s

95th percentile per-packet one-way delay: 62.052 ms

Loss rate: 2.74%

Run 2: Report of PCC-Allegro — Data Link

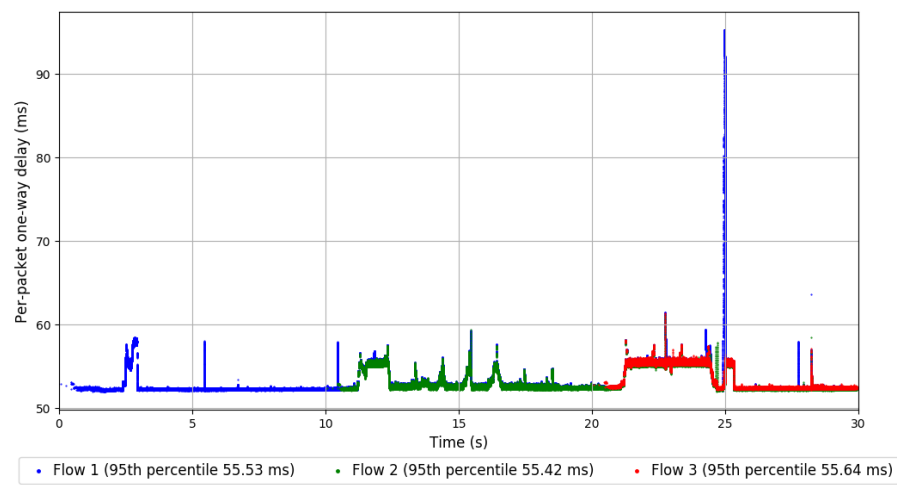
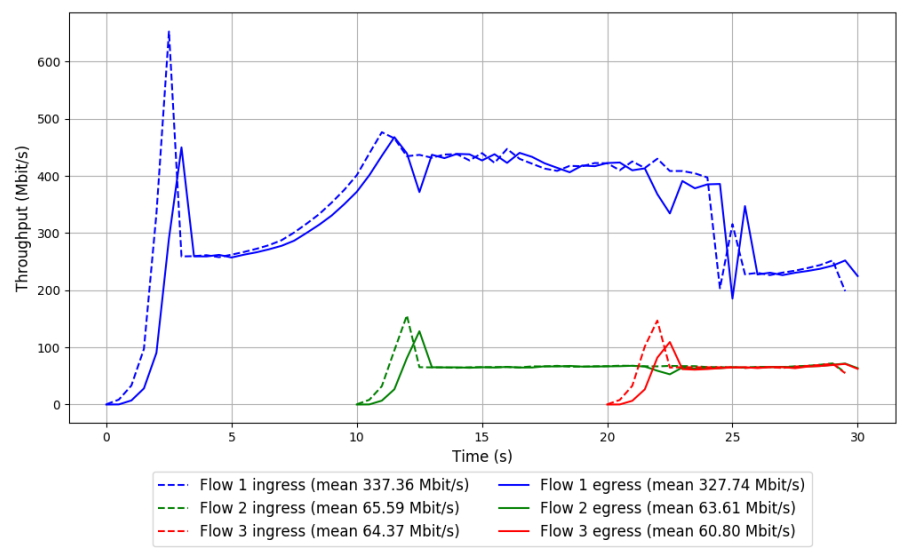


Run 3: Statistics of PCC-Allegro

Start at: 2018-11-30 01:02:11
End at: 2018-11-30 01:02:41
Local clock offset: -0.583 ms
Remote clock offset: -44.89 ms

Below is generated by plot.py at 2018-11-30 03:05:18
Datalink statistics
-- Total of 3 flows:
Average throughput: 390.08 Mbit/s
95th percentile per-packet one-way delay: 55.533 ms
Loss rate: 3.01%
-- Flow 1:
Average throughput: 327.74 Mbit/s
95th percentile per-packet one-way delay: 55.529 ms
Loss rate: 2.85%
-- Flow 2:
Average throughput: 63.61 Mbit/s
95th percentile per-packet one-way delay: 55.421 ms
Loss rate: 3.02%
-- Flow 3:
Average throughput: 60.80 Mbit/s
95th percentile per-packet one-way delay: 55.637 ms
Loss rate: 5.55%

Run 3: Report of PCC-Allegro — Data Link

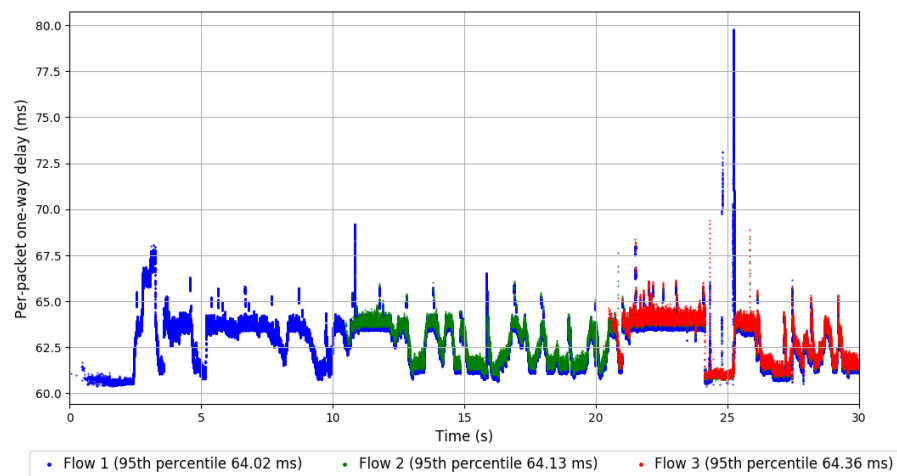
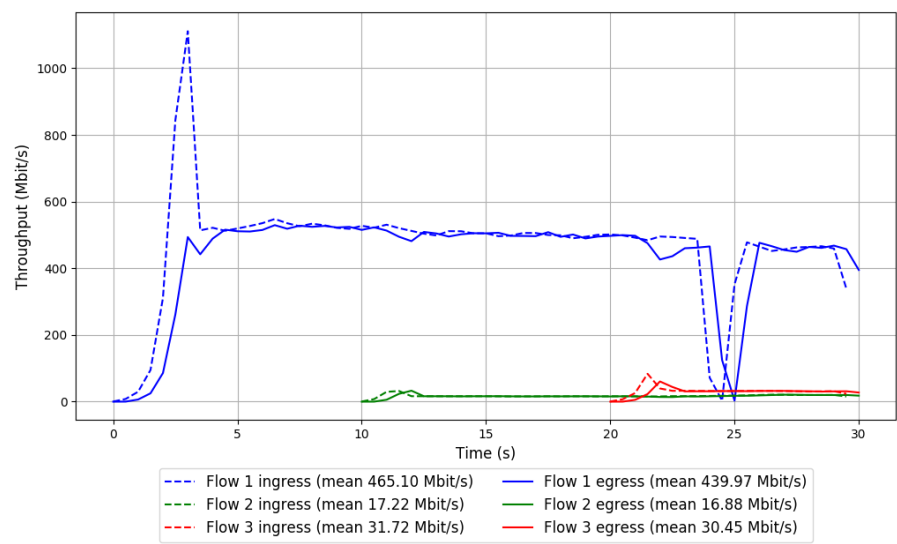


Run 4: Statistics of PCC-Allegro

Start at: 2018-11-30 01:39:40
End at: 2018-11-30 01:40:10
Local clock offset: 1.592 ms
Remote clock offset: -36.406 ms

Below is generated by plot.py at 2018-11-30 03:07:57
Datalink statistics
-- Total of 3 flows:
Average throughput: 461.24 Mbit/s
95th percentile per-packet one-way delay: 64.055 ms
Loss rate: 5.29%
-- Flow 1:
Average throughput: 439.97 Mbit/s
95th percentile per-packet one-way delay: 64.019 ms
Loss rate: 5.40%
-- Flow 2:
Average throughput: 16.88 Mbit/s
95th percentile per-packet one-way delay: 64.127 ms
Loss rate: 1.98%
-- Flow 3:
Average throughput: 30.45 Mbit/s
95th percentile per-packet one-way delay: 64.355 ms
Loss rate: 4.03%

Run 4: Report of PCC-Allegro — Data Link

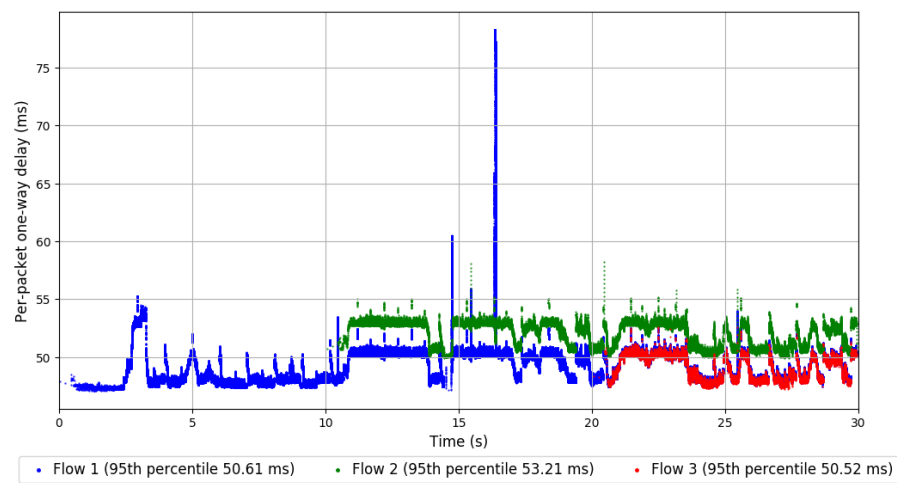
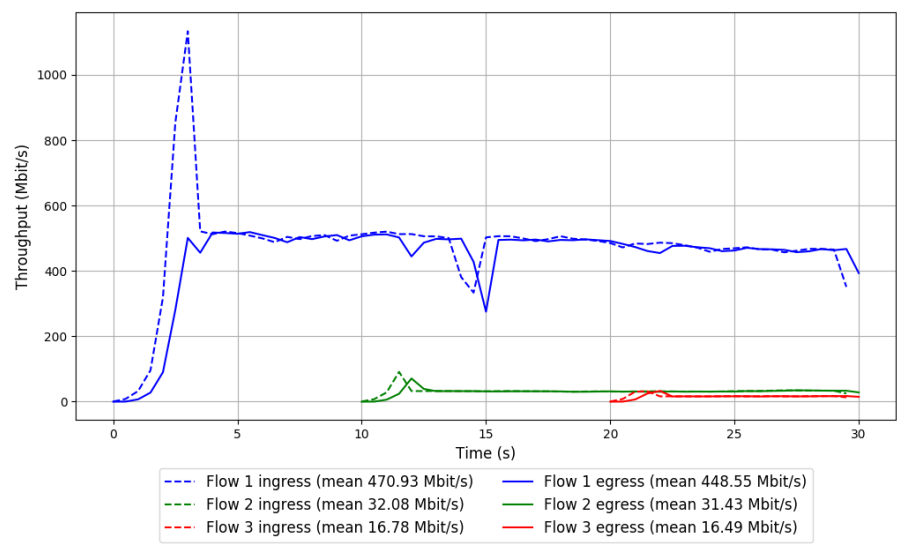


Run 5: Statistics of PCC-Allegro

Start at: 2018-11-30 02:17:42
End at: 2018-11-30 02:18:12
Local clock offset: 4.08 ms
Remote clock offset: -47.281 ms

Below is generated by plot.py at 2018-11-30 03:08:09
Datalink statistics
-- Total of 3 flows:
Average throughput: 474.88 Mbit/s
95th percentile per-packet one-way delay: 51.882 ms
Loss rate: 4.59%
-- Flow 1:
Average throughput: 448.55 Mbit/s
95th percentile per-packet one-way delay: 50.607 ms
Loss rate: 4.75%
-- Flow 2:
Average throughput: 31.43 Mbit/s
95th percentile per-packet one-way delay: 53.207 ms
Loss rate: 2.03%
-- Flow 3:
Average throughput: 16.49 Mbit/s
95th percentile per-packet one-way delay: 50.522 ms
Loss rate: 1.69%

Run 5: Report of PCC-Allegro — Data Link

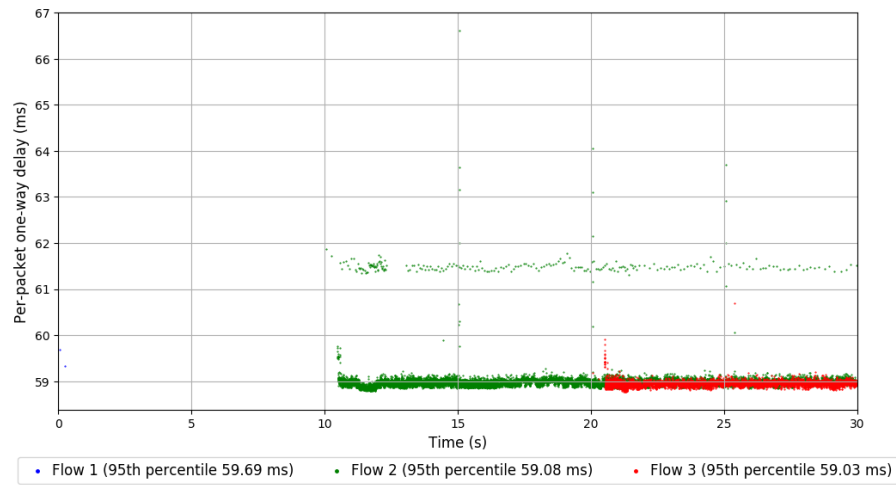
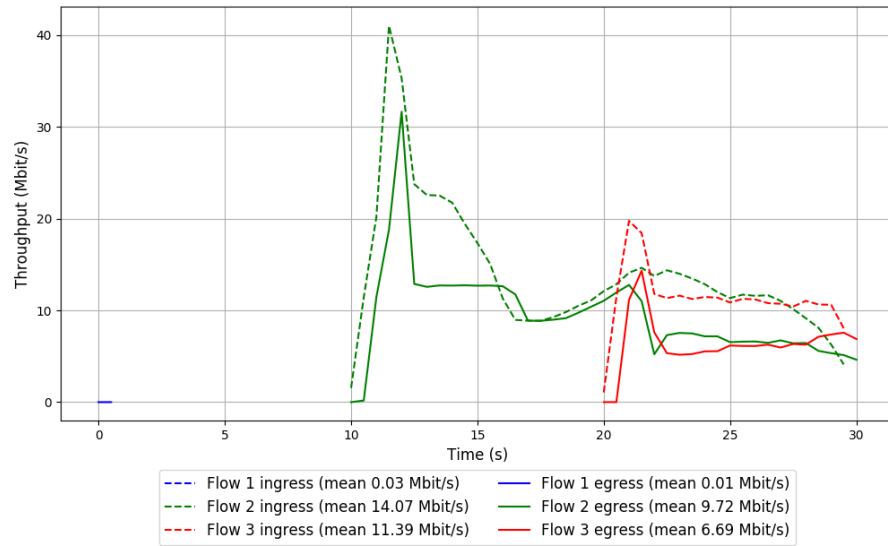


```
Run 1: Statistics of PCC-Expr

Start at: 2018-11-30 00:03:48
End at: 2018-11-30 00:04:18
Local clock offset: -0.417 ms
Remote clock offset: -38.639 ms

# Below is generated by plot.py at 2018-11-30 03:08:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.67 Mbit/s
95th percentile per-packet one-way delay: 59.070 ms
Loss rate: 33.91%
-- Flow 1:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 59.691 ms
Loss rate: 85.71%
-- Flow 2:
Average throughput: 9.72 Mbit/s
95th percentile per-packet one-way delay: 59.078 ms
Loss rate: 30.93%
-- Flow 3:
Average throughput: 6.69 Mbit/s
95th percentile per-packet one-way delay: 59.034 ms
Loss rate: 41.31%
```

Run 1: Report of PCC-Expr — Data Link

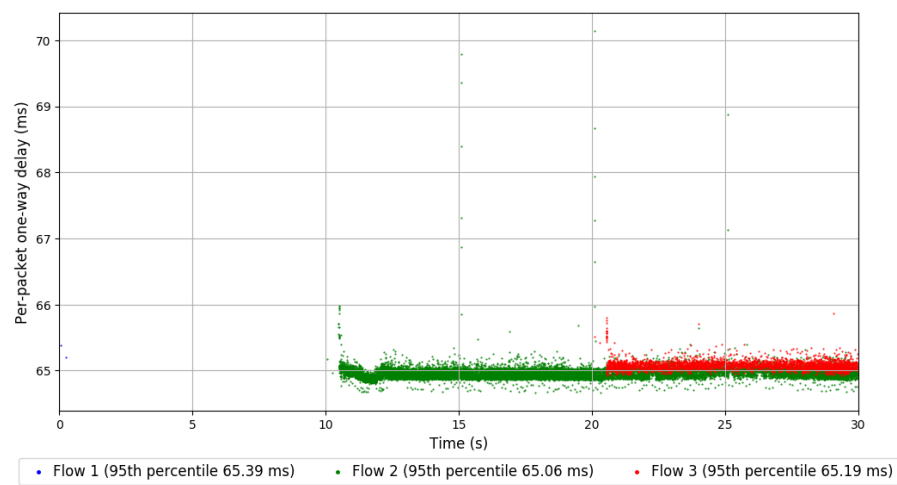
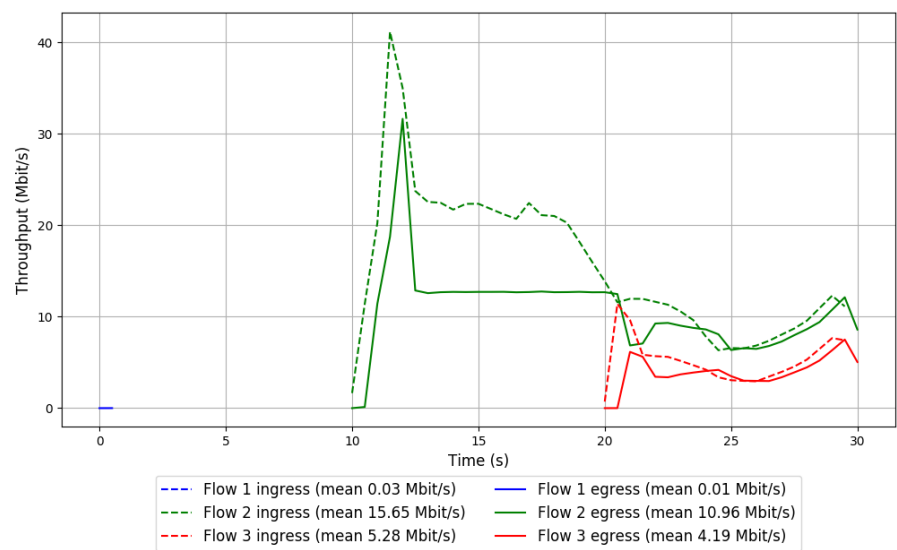


Run 2: Statistics of PCC-Expr

Start at: 2018-11-30 00:36:44
End at: 2018-11-30 00:37:14
Local clock offset: -2.386 ms
Remote clock offset: -32.487 ms

Below is generated by plot.py at 2018-11-30 03:08:09
Datalink statistics
-- Total of 3 flows:
Average throughput: 8.67 Mbit/s
95th percentile per-packet one-way delay: 65.119 ms
Loss rate: 28.62%
-- Flow 1:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 65.387 ms
Loss rate: 85.71%
-- Flow 2:
Average throughput: 10.96 Mbit/s
95th percentile per-packet one-way delay: 65.065 ms
Loss rate: 29.96%
-- Flow 3:
Average throughput: 4.19 Mbit/s
95th percentile per-packet one-way delay: 65.185 ms
Loss rate: 20.59%

Run 2: Report of PCC-Expr — Data Link

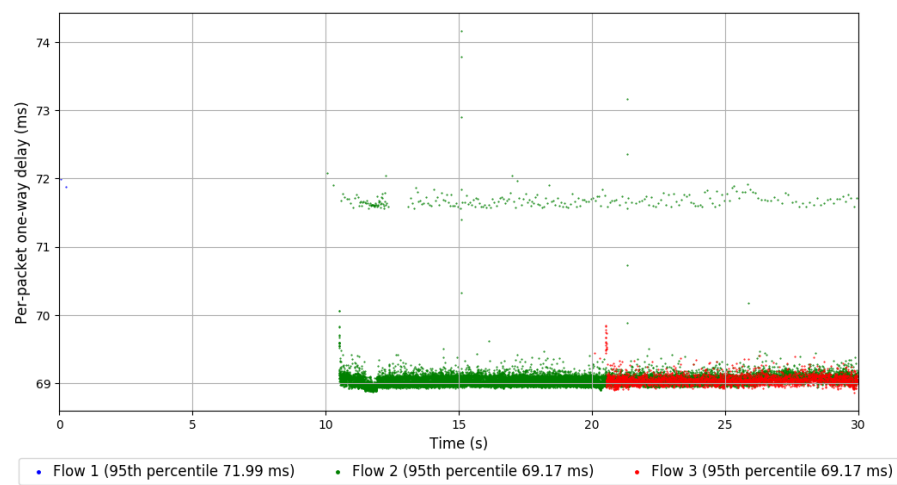
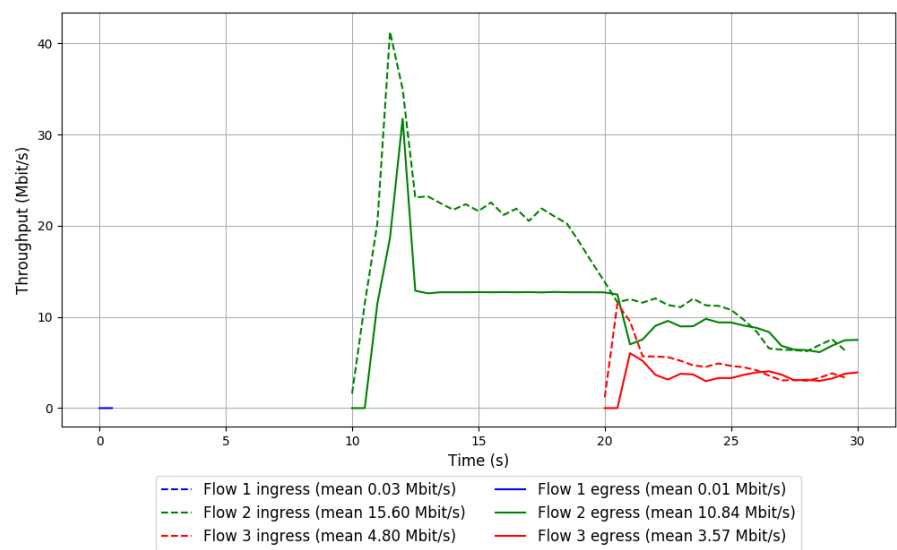


Run 3: Statistics of PCC-Expr

Start at: 2018-11-30 01:14:30
End at: 2018-11-30 01:15:00
Local clock offset: -8.102 ms
Remote clock offset: -35.989 ms

Below is generated by plot.py at 2018-11-30 03:08:09
Datalink statistics
-- Total of 3 flows:
Average throughput: 8.39 Mbit/s
95th percentile per-packet one-way delay: 69.169 ms
Loss rate: 29.90%
-- Flow 1:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 71.988 ms
Loss rate: 85.71%
-- Flow 2:
Average throughput: 10.84 Mbit/s
95th percentile per-packet one-way delay: 69.169 ms
Loss rate: 30.53%
-- Flow 3:
Average throughput: 3.57 Mbit/s
95th percentile per-packet one-way delay: 69.169 ms
Loss rate: 25.76%

Run 3: Report of PCC-Expr — Data Link

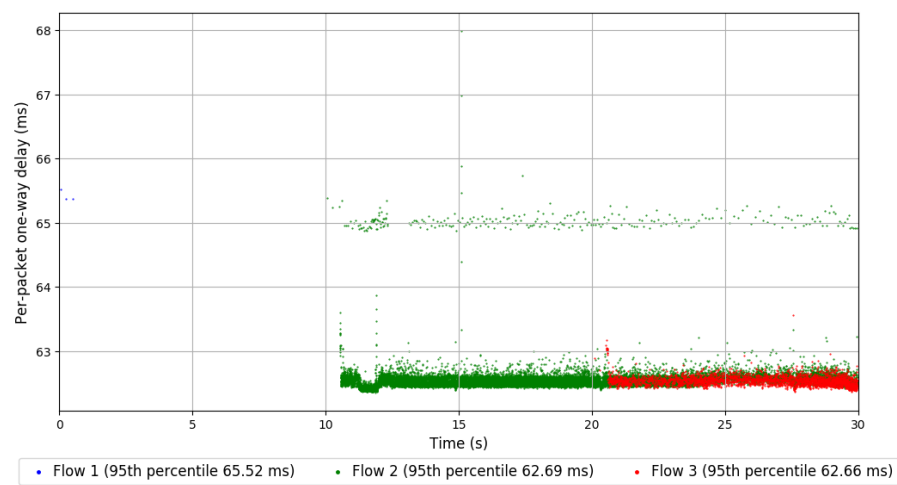
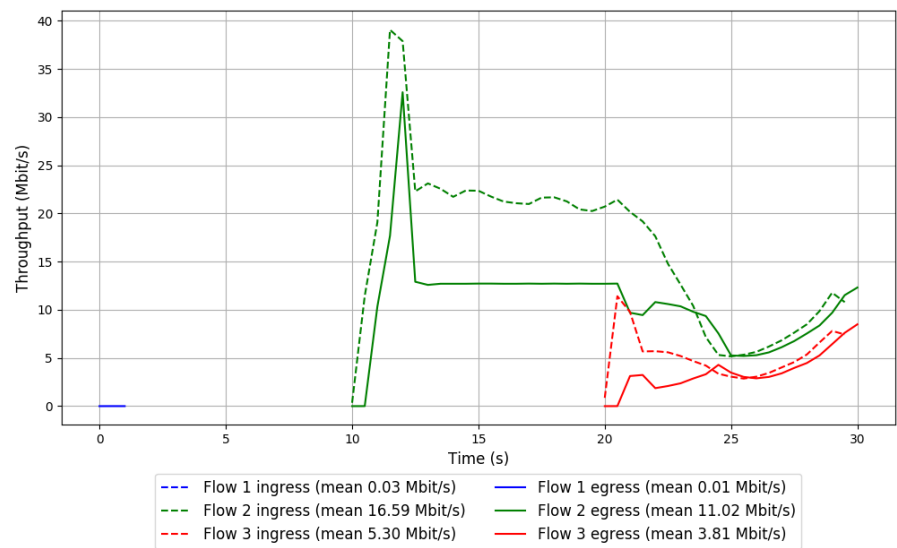


Run 4: Statistics of PCC-Expr

Start at: 2018-11-30 01:57:45
End at: 2018-11-30 01:58:15
Local clock offset: -0.805 ms
Remote clock offset: -36.831 ms

Below is generated by plot.py at 2018-11-30 03:08:09
Datalink statistics
-- Total of 3 flows:
Average throughput: 8.59 Mbit/s
95th percentile per-packet one-way delay: 62.681 ms
Loss rate: 32.85%
-- Flow 1:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 65.520 ms
Loss rate: 80.00%
-- Flow 2:
Average throughput: 11.02 Mbit/s
95th percentile per-packet one-way delay: 62.686 ms
Loss rate: 33.60%
-- Flow 3:
Average throughput: 3.81 Mbit/s
95th percentile per-packet one-way delay: 62.656 ms
Loss rate: 28.15%

Run 4: Report of PCC-Expr — Data Link

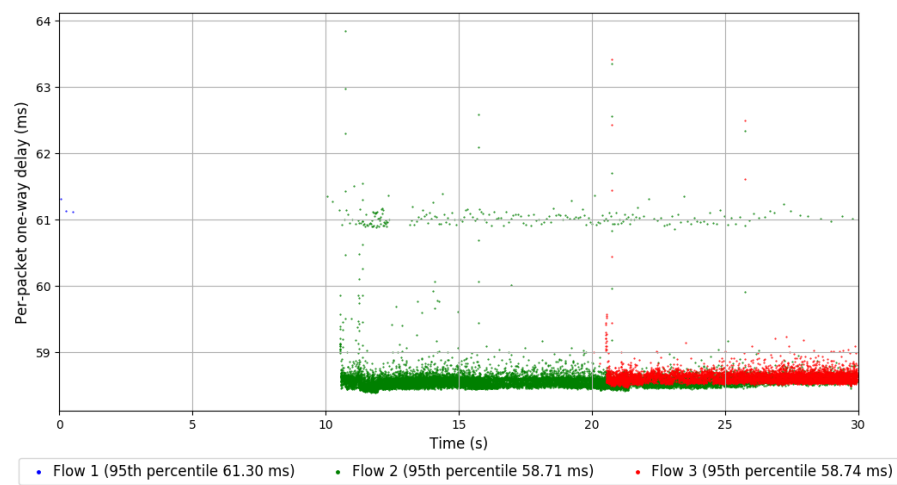
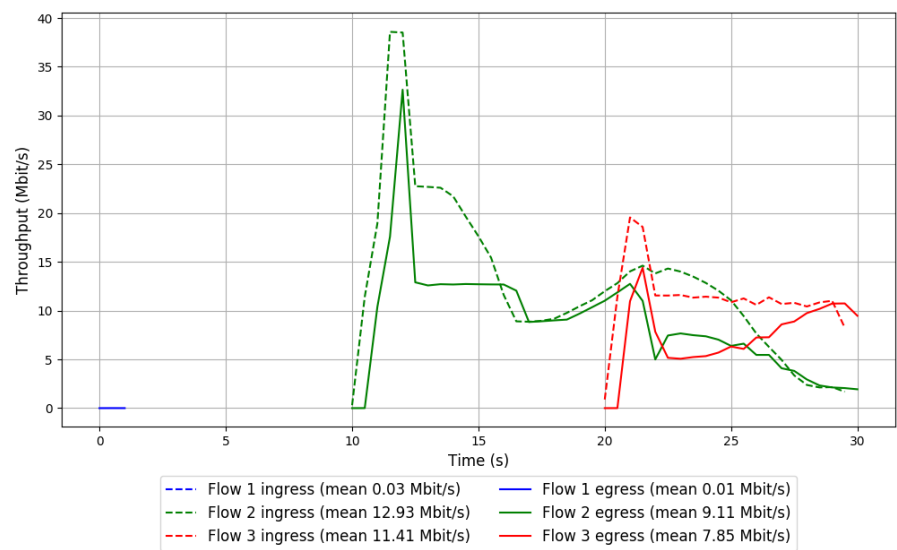


Run 5: Statistics of PCC-Expr

Start at: 2018-11-30 02:30:30
End at: 2018-11-30 02:31:00
Local clock offset: 2.905 ms
Remote clock offset: -37.506 ms

Below is generated by plot.py at 2018-11-30 03:08:09
Datalink statistics
-- Total of 3 flows:
Average throughput: 8.65 Mbit/s
95th percentile per-packet one-way delay: 58.728 ms
Loss rate: 30.08%
-- Flow 1:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 61.305 ms
Loss rate: 80.00%
-- Flow 2:
Average throughput: 9.11 Mbit/s
95th percentile per-packet one-way delay: 58.712 ms
Loss rate: 29.57%
-- Flow 3:
Average throughput: 7.85 Mbit/s
95th percentile per-packet one-way delay: 58.744 ms
Loss rate: 31.24%

Run 5: Report of PCC-Expr — Data Link

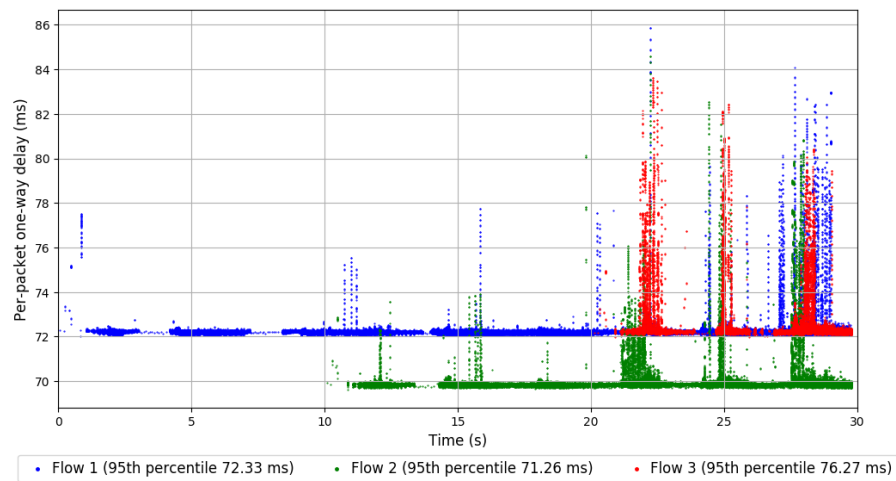
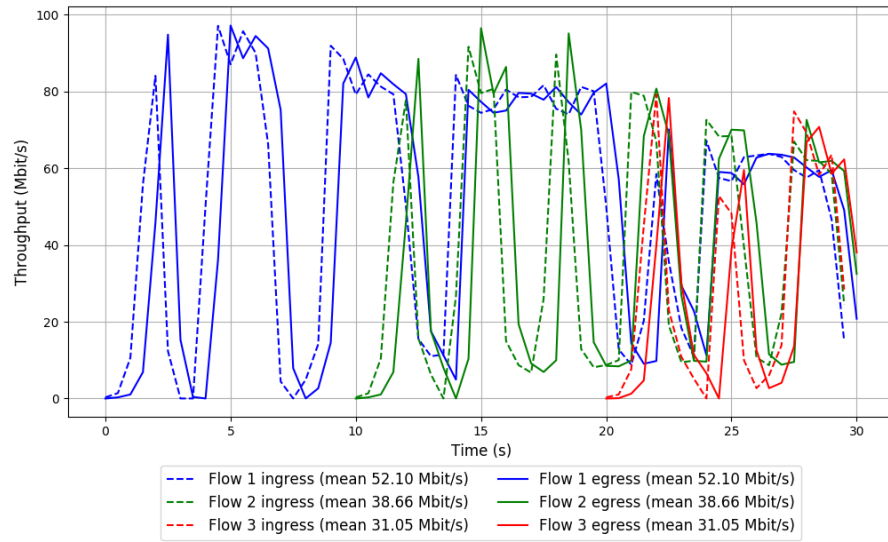


Run 1: Statistics of QUIC Cubic

Start at: 2018-11-30 00:07:35
End at: 2018-11-30 00:08:05
Local clock offset: -3.999 ms
Remote clock offset: -30.999 ms

Below is generated by plot.py at 2018-11-30 03:08:09
Datalink statistics
-- Total of 3 flows:
Average throughput: 87.84 Mbit/s
95th percentile per-packet one-way delay: 72.503 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 52.10 Mbit/s
95th percentile per-packet one-way delay: 72.331 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 38.66 Mbit/s
95th percentile per-packet one-way delay: 71.257 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 31.05 Mbit/s
95th percentile per-packet one-way delay: 76.269 ms
Loss rate: 0.00%

Run 1: Report of QUIC Cubic — Data Link

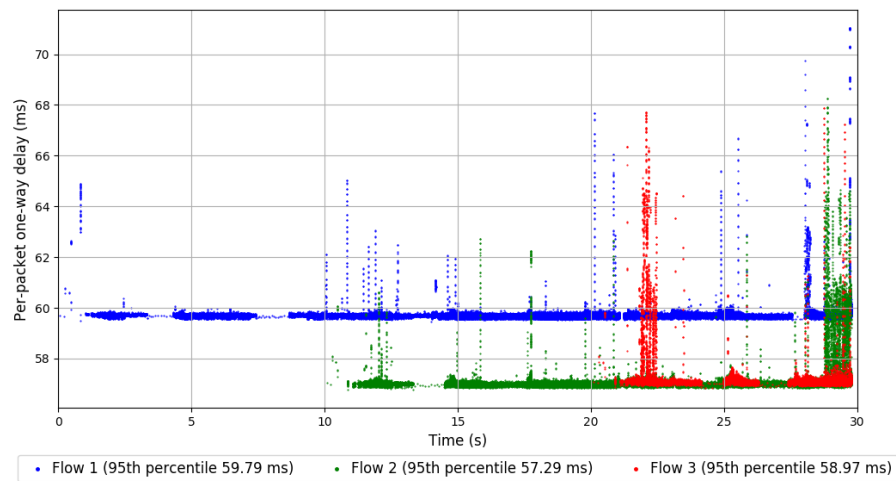
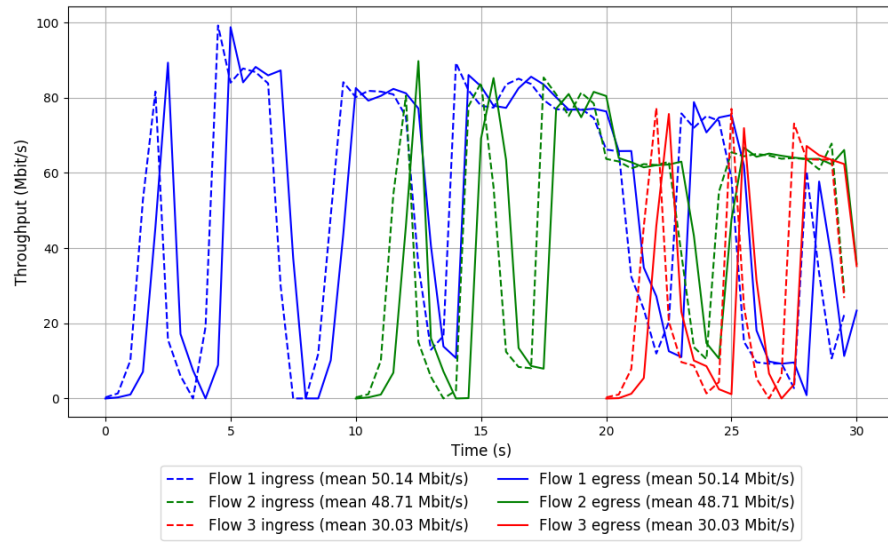


Run 2: Statistics of QUIC Cubic

Start at: 2018-11-30 00:40:50
End at: 2018-11-30 00:41:20
Local clock offset: 0.082 ms
Remote clock offset: -37.691 ms

Below is generated by plot.py at 2018-11-30 03:08:09
Datalink statistics
-- Total of 3 flows:
Average throughput: 92.18 Mbit/s
95th percentile per-packet one-way delay: 59.769 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 50.14 Mbit/s
95th percentile per-packet one-way delay: 59.787 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 48.71 Mbit/s
95th percentile per-packet one-way delay: 57.292 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 30.03 Mbit/s
95th percentile per-packet one-way delay: 58.969 ms
Loss rate: 0.00%

Run 2: Report of QUIC Cubic — Data Link

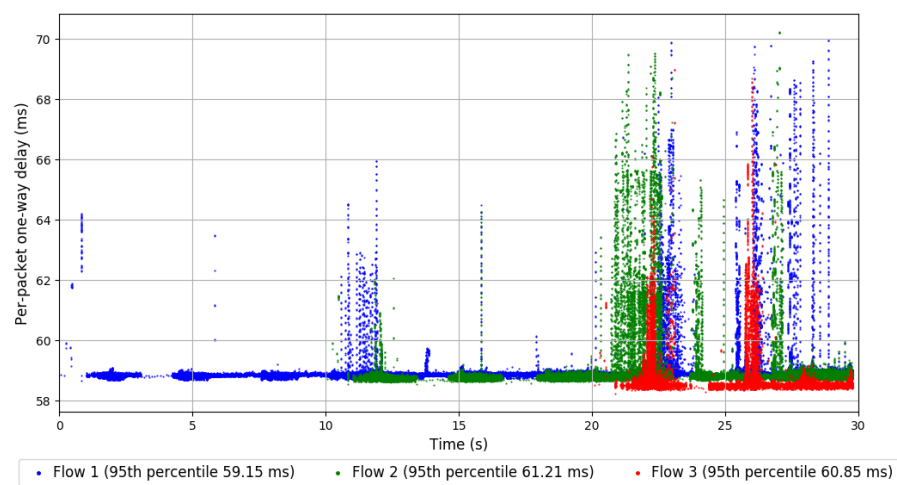
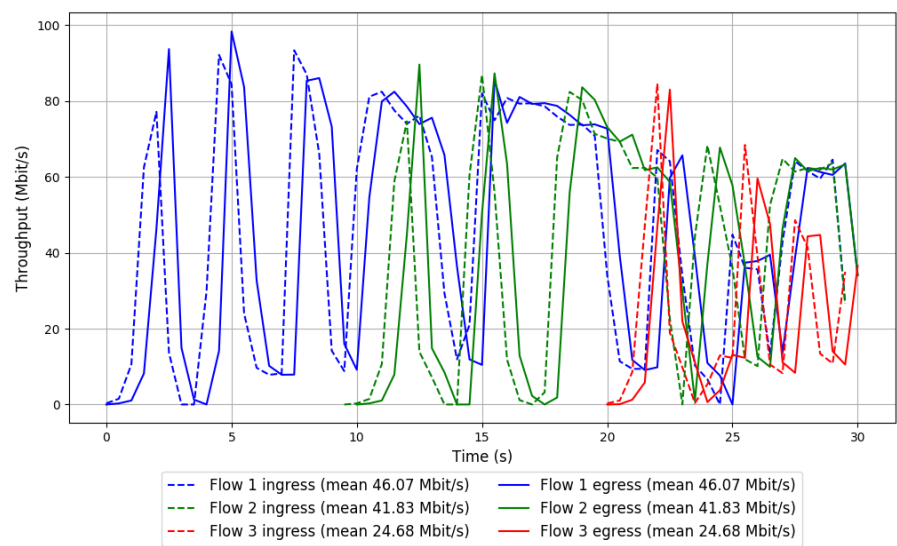


Run 3: Statistics of QUIC Cubic

Start at: 2018-11-30 01:18:15
End at: 2018-11-30 01:18:45
Local clock offset: -0.79 ms
Remote clock offset: -39.04 ms

Below is generated by plot.py at 2018-11-30 03:08:09
Datalink statistics
-- Total of 3 flows:
Average throughput: 81.84 Mbit/s
95th percentile per-packet one-way delay: 60.189 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 46.07 Mbit/s
95th percentile per-packet one-way delay: 59.149 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 41.83 Mbit/s
95th percentile per-packet one-way delay: 61.212 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 24.68 Mbit/s
95th percentile per-packet one-way delay: 60.847 ms
Loss rate: 0.00%

Run 3: Report of QUIC Cubic — Data Link

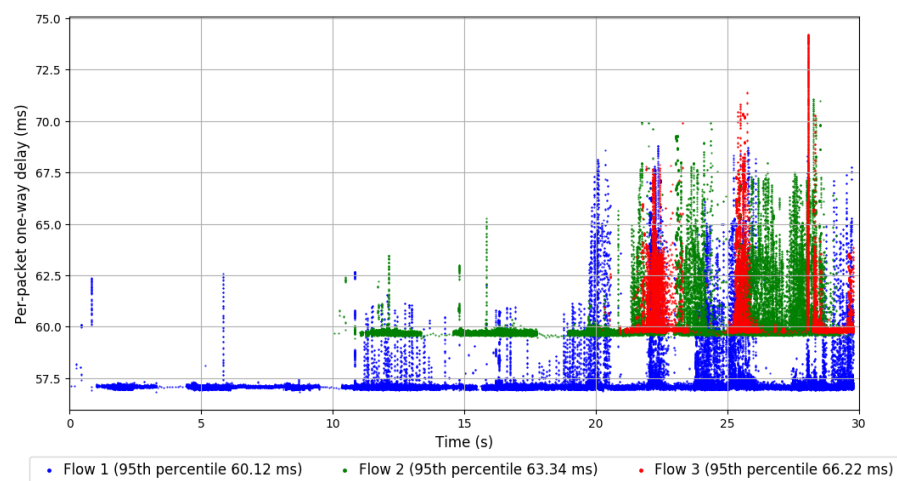
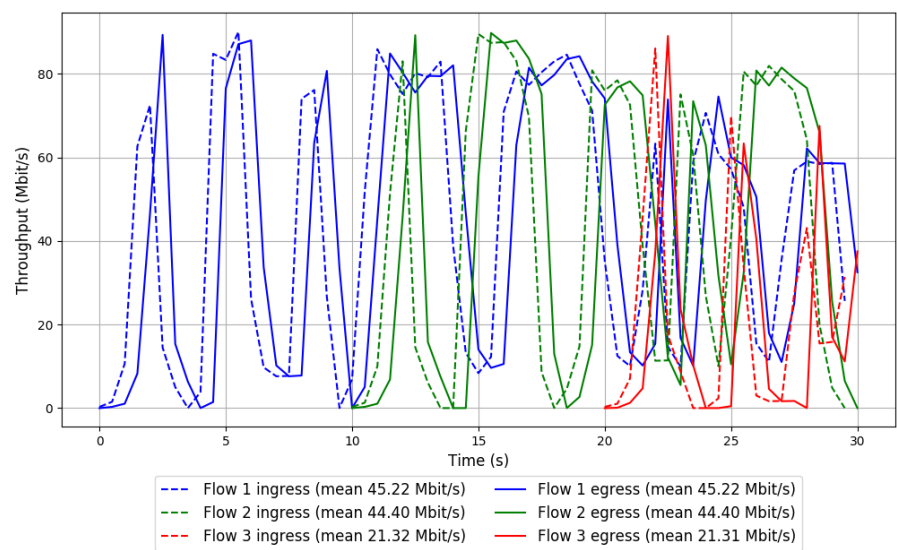


Run 4: Statistics of QUIC Cubic

Start at: 2018-11-30 02:01:26
End at: 2018-11-30 02:01:57
Local clock offset: -0.321 ms
Remote clock offset: -41.624 ms

Below is generated by plot.py at 2018-11-30 03:08:09
Datalink statistics
-- Total of 3 flows:
Average throughput: 81.49 Mbit/s
95th percentile per-packet one-way delay: 62.802 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 45.22 Mbit/s
95th percentile per-packet one-way delay: 60.122 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 44.40 Mbit/s
95th percentile per-packet one-way delay: 63.340 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 21.31 Mbit/s
95th percentile per-packet one-way delay: 66.217 ms
Loss rate: 0.01%

Run 4: Report of QUIC Cubic — Data Link

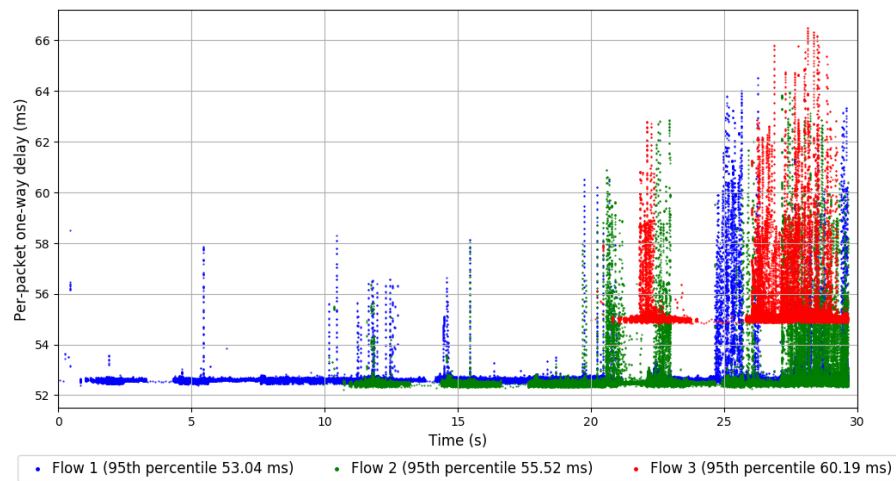
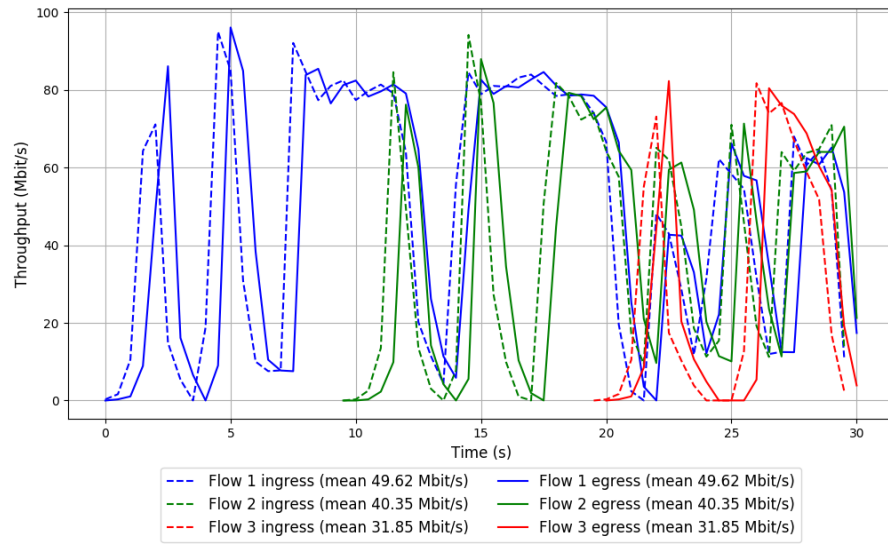


Run 5: Statistics of QUIC Cubic

Start at: 2018-11-30 02:34:14
End at: 2018-11-30 02:34:44
Local clock offset: 3.041 ms
Remote clock offset: -43.593 ms

Below is generated by plot.py at 2018-11-30 03:08:09
Datalink statistics
-- Total of 3 flows:
Average throughput: 86.86 Mbit/s
95th percentile per-packet one-way delay: 56.284 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 49.62 Mbit/s
95th percentile per-packet one-way delay: 53.036 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 40.35 Mbit/s
95th percentile per-packet one-way delay: 55.518 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 31.85 Mbit/s
95th percentile per-packet one-way delay: 60.189 ms
Loss rate: 0.00%

Run 5: Report of QUIC Cubic — Data Link

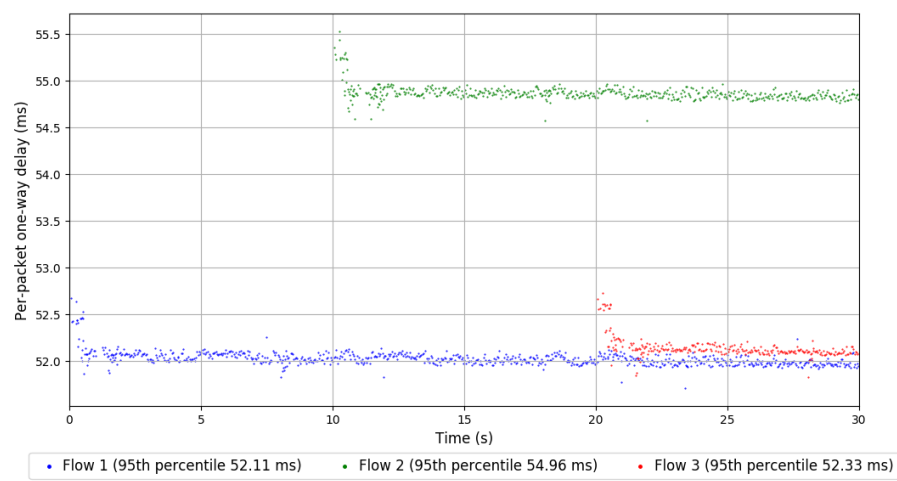
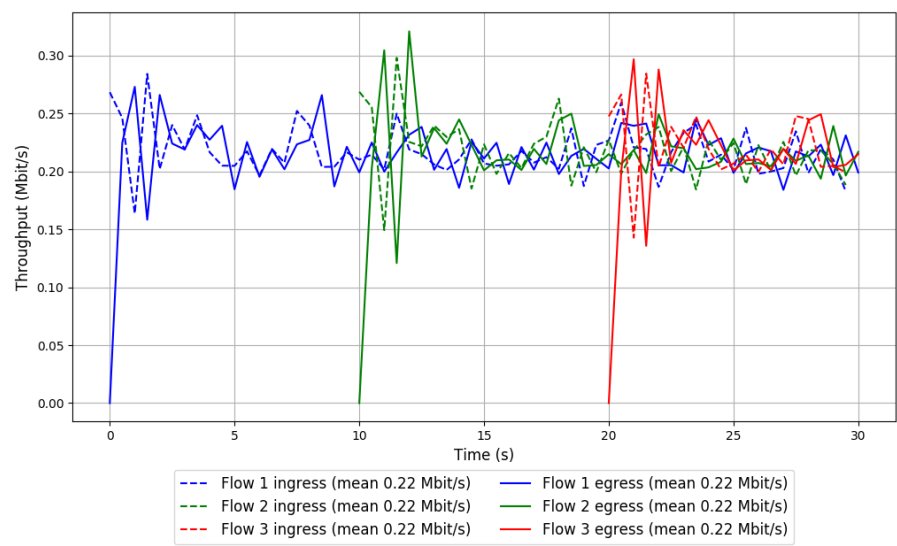


```
Run 1: Statistics of SReAM

Start at: 2018-11-29 23:53:46
End at: 2018-11-29 23:54:16
Local clock offset: -1.141 ms
Remote clock offset: -47.188 ms

# Below is generated by plot.py at 2018-11-30 03:08:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 54.916 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 52.113 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 54.957 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 52.327 ms
Loss rate: 0.00%
```

Run 1: Report of SReAM — Data Link

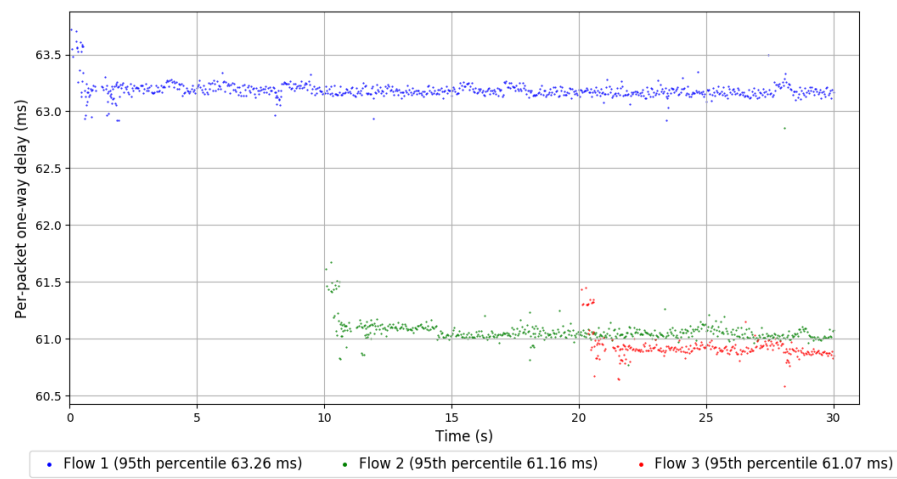
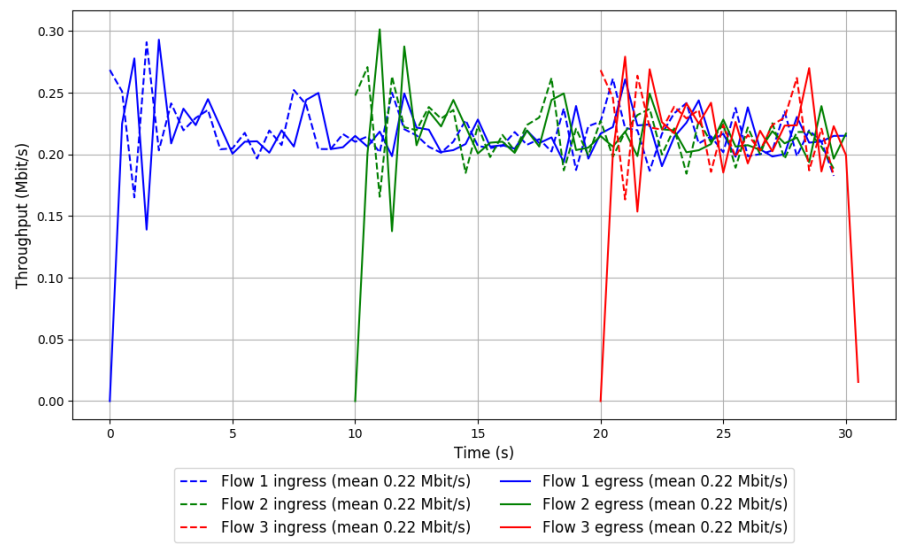


Run 2: Statistics of SReAM

Start at: 2018-11-30 00:26:17
End at: 2018-11-30 00:26:47
Local clock offset: 0.503 ms
Remote clock offset: -34.265 ms

Below is generated by plot.py at 2018-11-30 03:08:09
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 63.242 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.262 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.162 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.073 ms
Loss rate: 0.00%

Run 2: Report of SReAM — Data Link

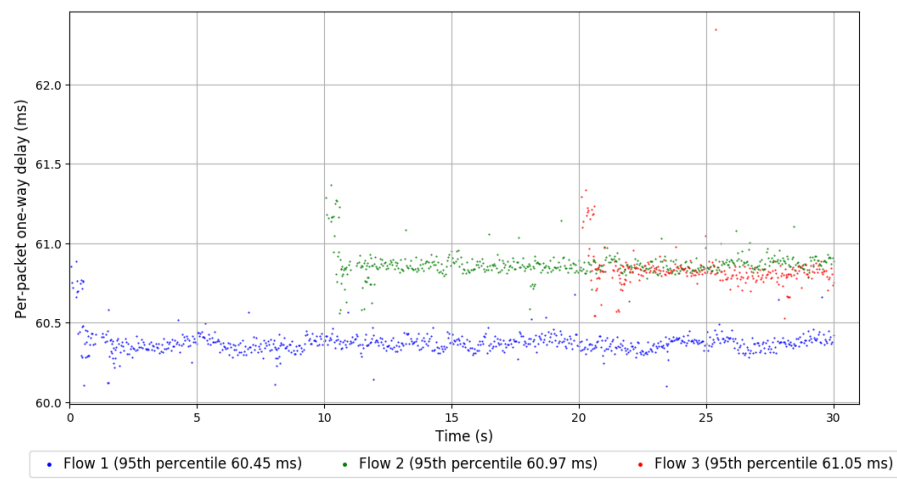
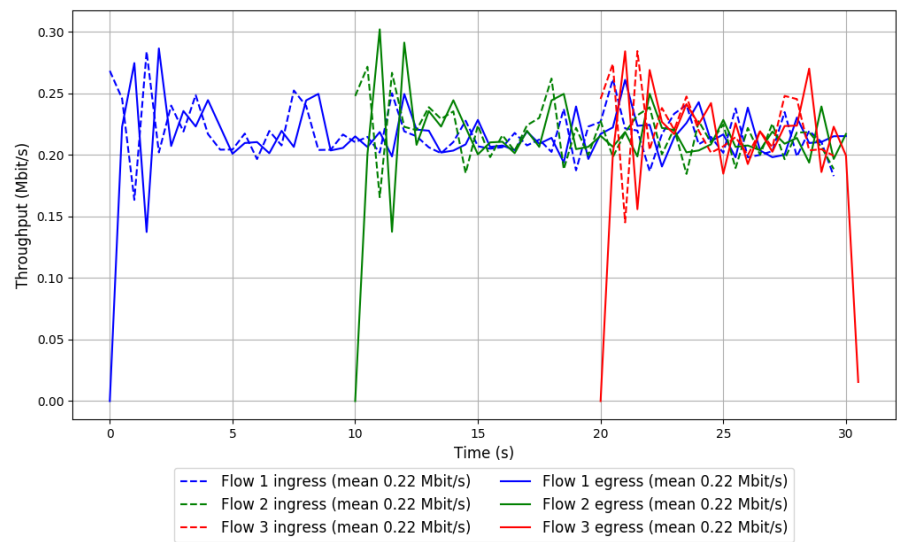


Run 3: Statistics of SReAM

Start at: 2018-11-30 01:04:28
End at: 2018-11-30 01:04:58
Local clock offset: -1.803 ms
Remote clock offset: -37.807 ms

Below is generated by plot.py at 2018-11-30 03:08:09
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 60.915 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 60.446 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 60.965 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.045 ms
Loss rate: 0.00%

Run 3: Report of SReAM — Data Link

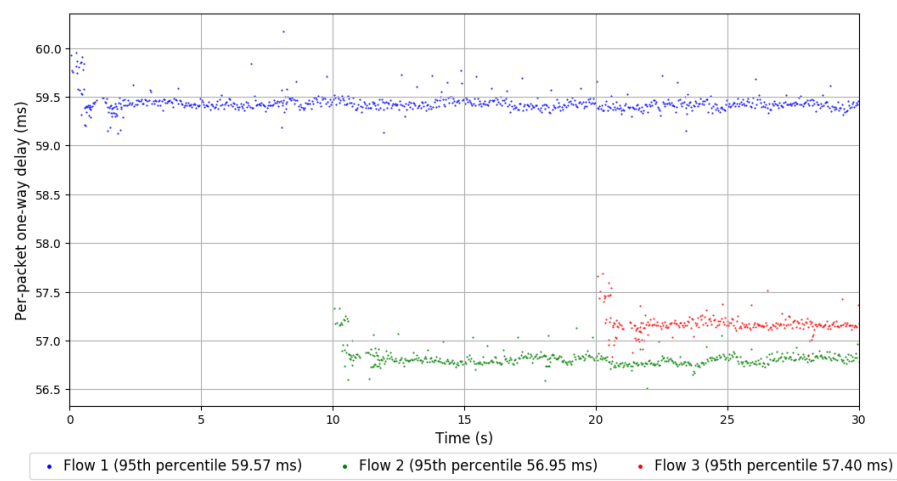
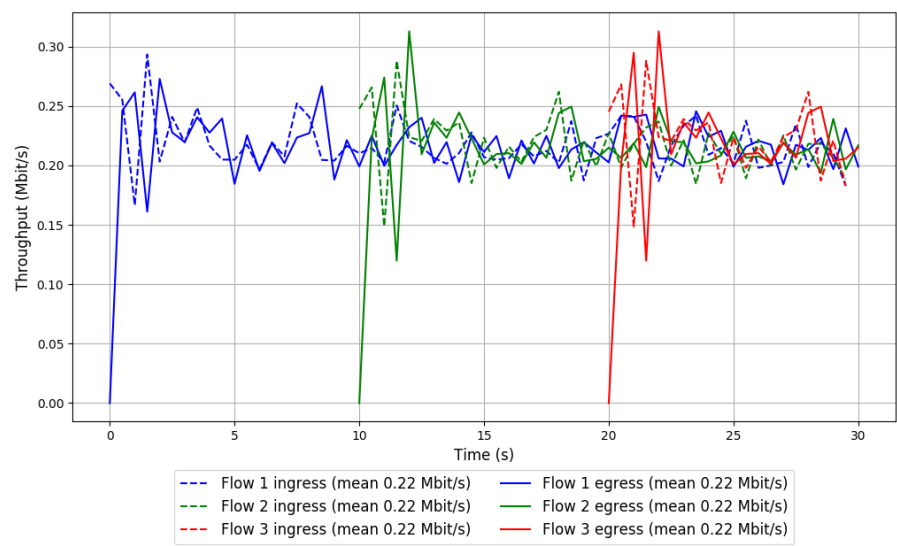


Run 4: Statistics of SReAM

Start at: 2018-11-30 01:47:36
End at: 2018-11-30 01:48:06
Local clock offset: 3.046 ms
Remote clock offset: -39.046 ms

Below is generated by plot.py at 2018-11-30 03:08:09
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 59.489 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 59.570 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 56.950 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 57.400 ms
Loss rate: 0.00%

Run 4: Report of SReAM — Data Link

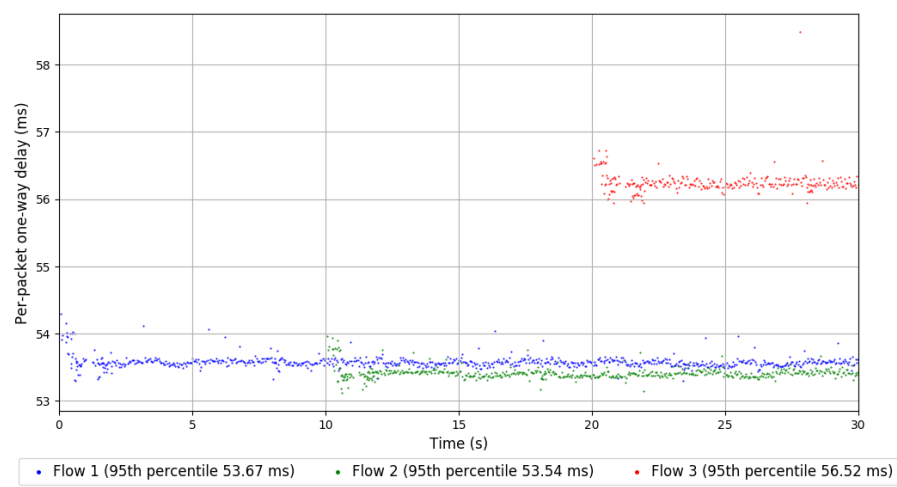
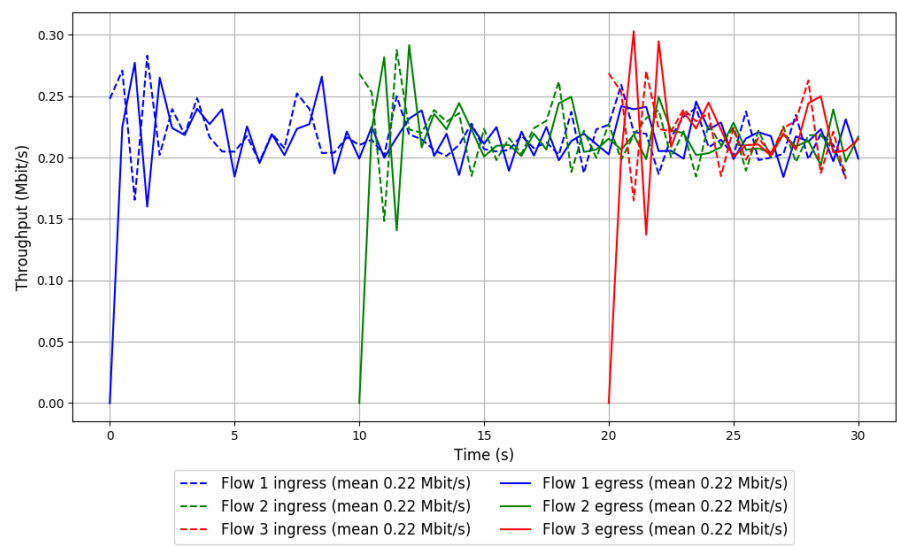


Run 5: Statistics of SReAM

Start at: 2018-11-30 02:20:11
End at: 2018-11-30 02:20:42
Local clock offset: 4.05 ms
Remote clock offset: -41.38 ms

Below is generated by plot.py at 2018-11-30 03:08:09
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 56.274 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 53.669 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 53.536 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 56.524 ms
Loss rate: 0.00%

Run 5: Report of SReAM — Data Link

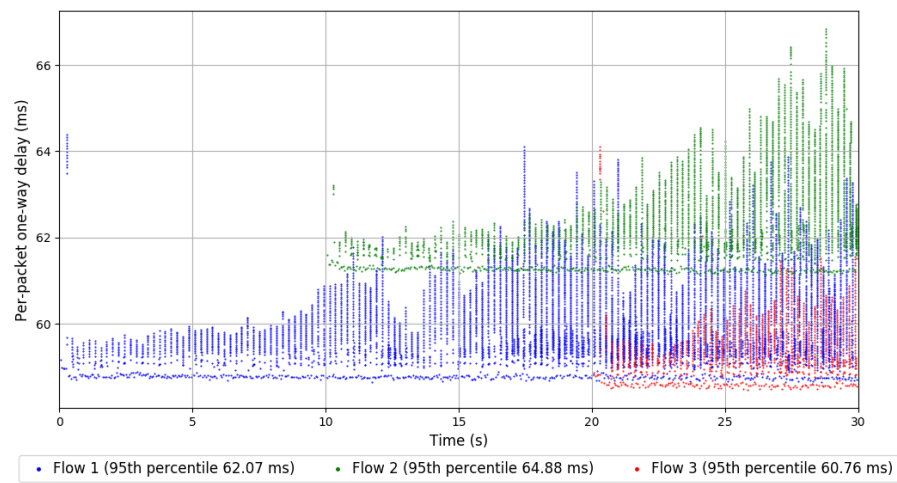
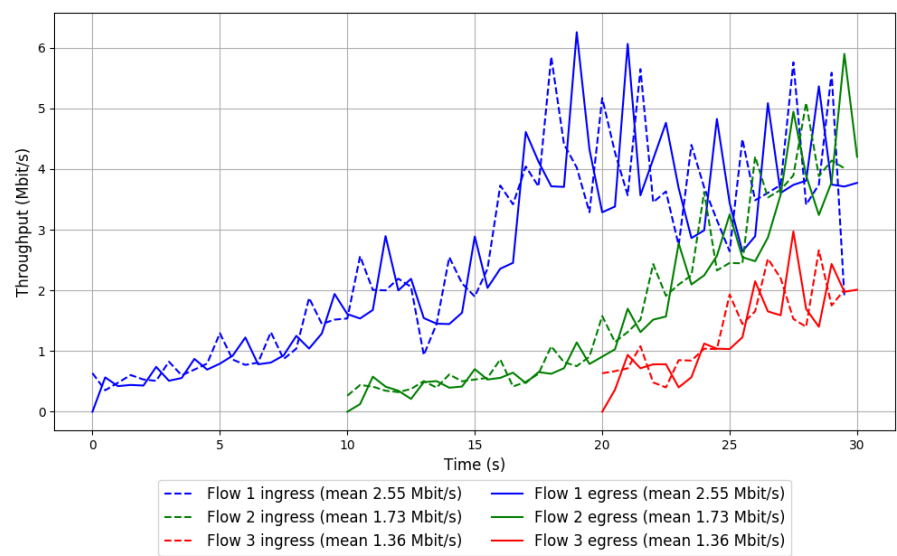


Run 1: Statistics of Sprout

Start at: 2018-11-29 23:57:03
End at: 2018-11-29 23:57:33
Local clock offset: -1.045 ms
Remote clock offset: -39.93 ms

Below is generated by plot.py at 2018-11-30 03:08:09
Datalink statistics
-- Total of 3 flows:
Average throughput: 4.15 Mbit/s
95th percentile per-packet one-way delay: 63.801 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.55 Mbit/s
95th percentile per-packet one-way delay: 62.066 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.73 Mbit/s
95th percentile per-packet one-way delay: 64.875 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 1.36 Mbit/s
95th percentile per-packet one-way delay: 60.762 ms
Loss rate: 0.00%

Run 1: Report of Sprout — Data Link

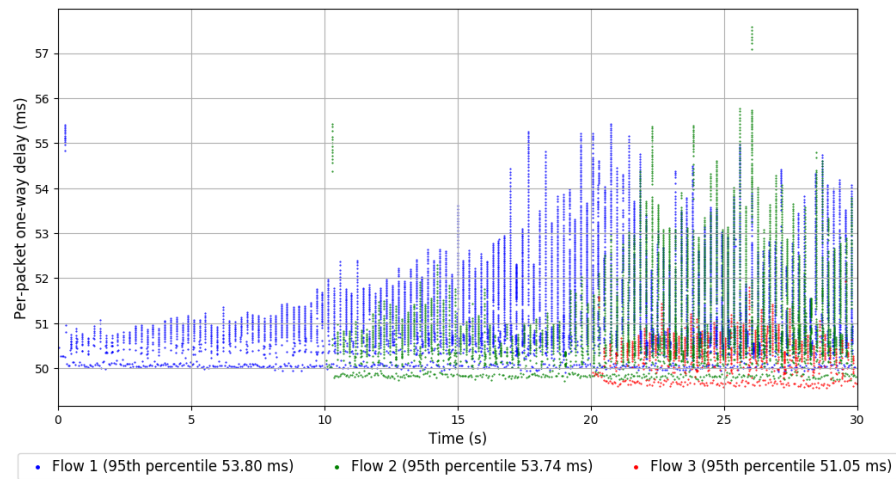
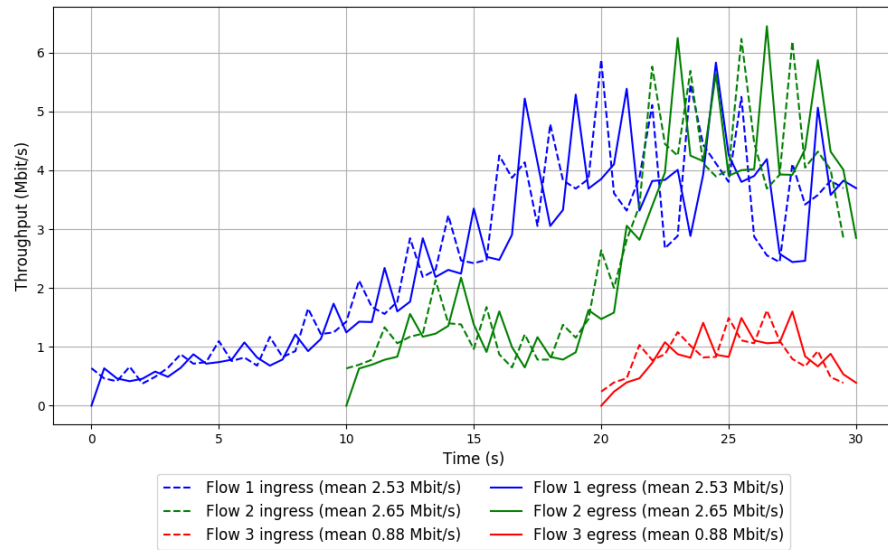


Run 2: Statistics of Sprout

Start at: 2018-11-30 00:29:40
End at: 2018-11-30 00:30:10
Local clock offset: -0.575 ms
Remote clock offset: -45.871 ms

```
# Below is generated by plot.py at 2018-11-30 03:08:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.58 Mbit/s
95th percentile per-packet one-way delay: 53.719 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.53 Mbit/s
95th percentile per-packet one-way delay: 53.805 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 2.65 Mbit/s
95th percentile per-packet one-way delay: 53.744 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.88 Mbit/s
95th percentile per-packet one-way delay: 51.051 ms
Loss rate: 0.00%
```

Run 2: Report of Sprout — Data Link

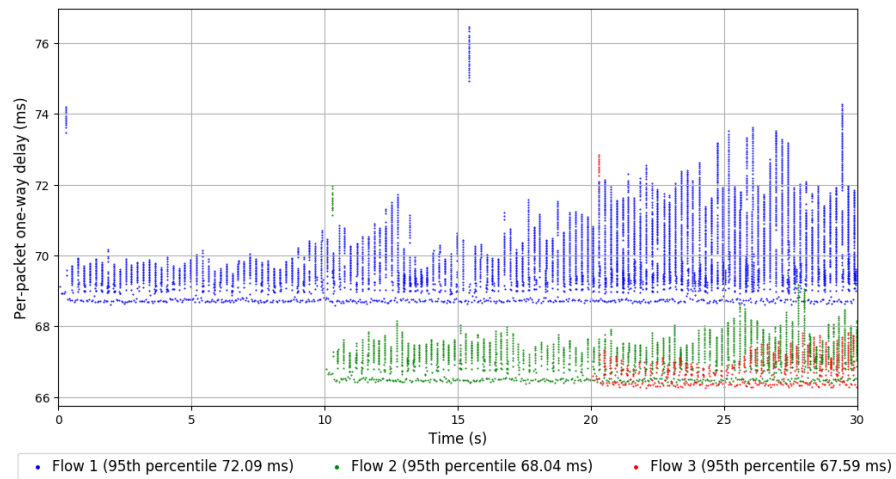
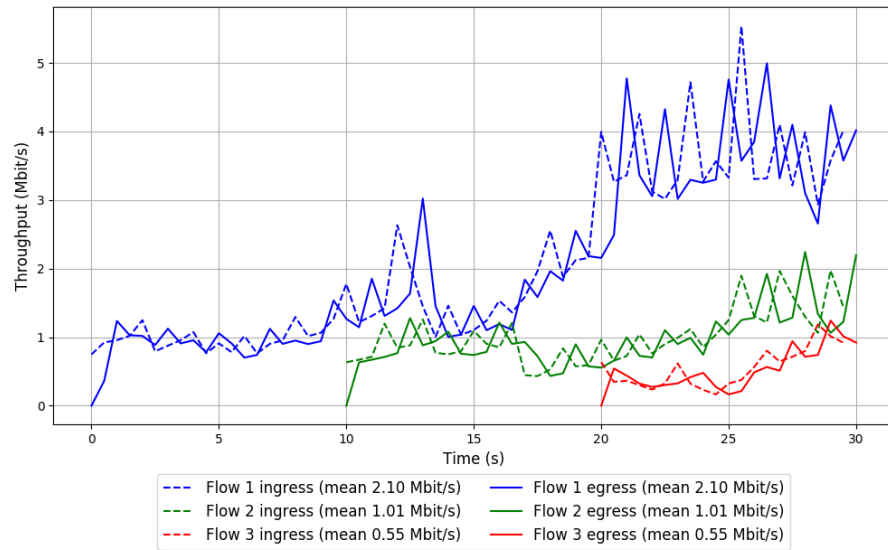


Run 3: Statistics of Sprout

Start at: 2018-11-30 01:07:54
End at: 2018-11-30 01:08:24
Local clock offset: -1.02 ms
Remote clock offset: -31.284 ms

```
# Below is generated by plot.py at 2018-11-30 03:08:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.95 Mbit/s
95th percentile per-packet one-way delay: 71.848 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.10 Mbit/s
95th percentile per-packet one-way delay: 72.094 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.01 Mbit/s
95th percentile per-packet one-way delay: 68.043 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.55 Mbit/s
95th percentile per-packet one-way delay: 67.590 ms
Loss rate: 0.00%
```

Run 3: Report of Sprout — Data Link

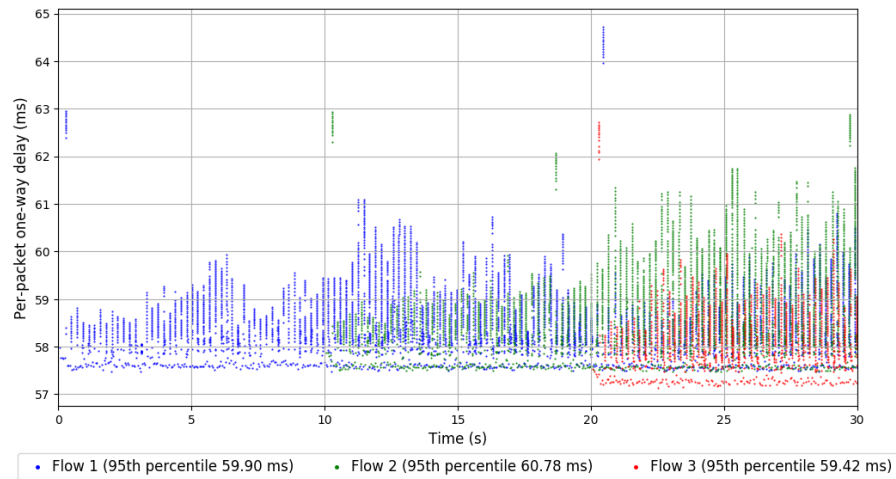
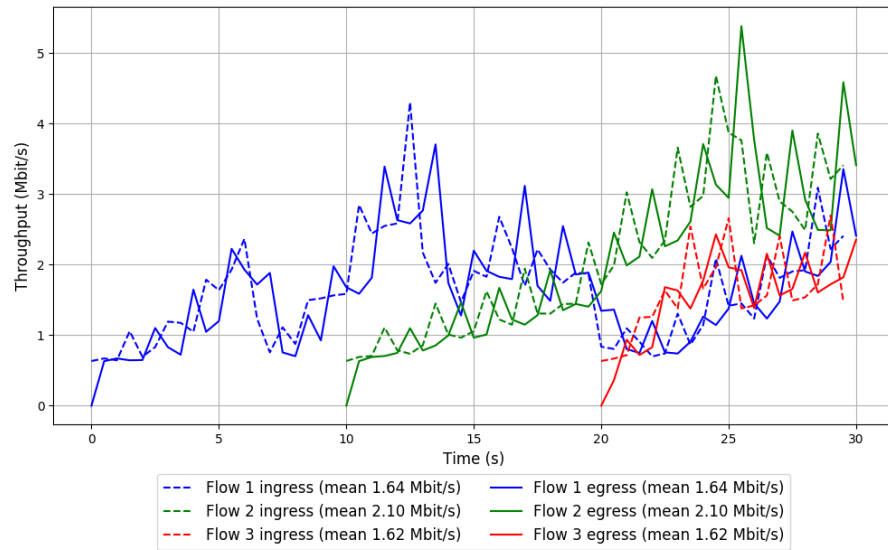


Run 4: Statistics of Sprout

Start at: 2018-11-30 01:50:56
End at: 2018-11-30 01:51:26
Local clock offset: 2.818 ms
Remote clock offset: -38.102 ms

```
# Below is generated by plot.py at 2018-11-30 03:08:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.57 Mbit/s
95th percentile per-packet one-way delay: 60.282 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.64 Mbit/s
95th percentile per-packet one-way delay: 59.898 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 2.10 Mbit/s
95th percentile per-packet one-way delay: 60.783 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 1.62 Mbit/s
95th percentile per-packet one-way delay: 59.420 ms
Loss rate: 0.00%
```

Run 4: Report of Sprout — Data Link

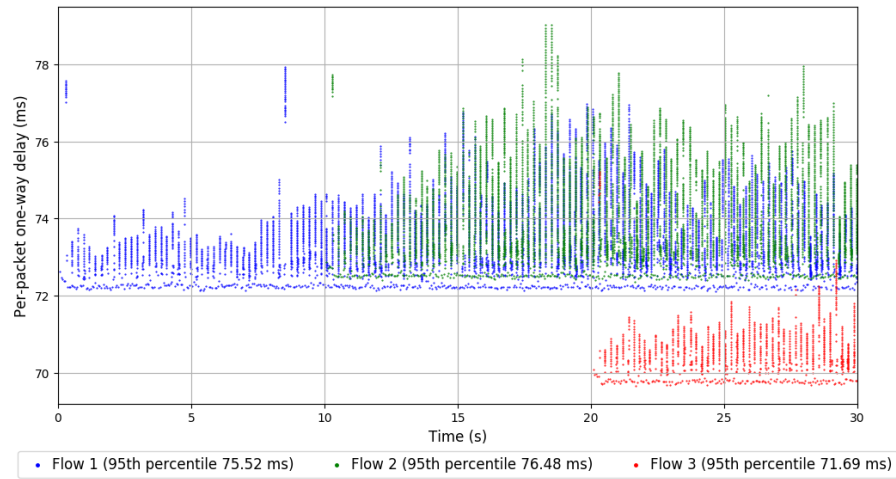
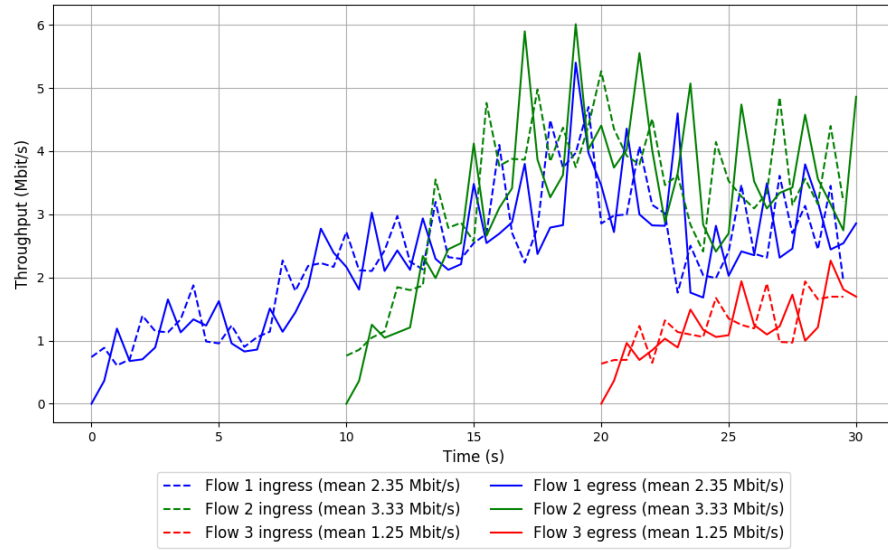


Run 5: Statistics of Sprout

Start at: 2018-11-30 02:23:29
End at: 2018-11-30 02:23:59
Local clock offset: -1.386 ms
Remote clock offset: -30.327 ms

Below is generated by plot.py at 2018-11-30 03:08:09
Datalink statistics
-- Total of 3 flows:
Average throughput: 4.98 Mbit/s
95th percentile per-packet one-way delay: 76.105 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.35 Mbit/s
95th percentile per-packet one-way delay: 75.524 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 3.33 Mbit/s
95th percentile per-packet one-way delay: 76.480 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 1.25 Mbit/s
95th percentile per-packet one-way delay: 71.694 ms
Loss rate: 0.00%

Run 5: Report of Sprout — Data Link

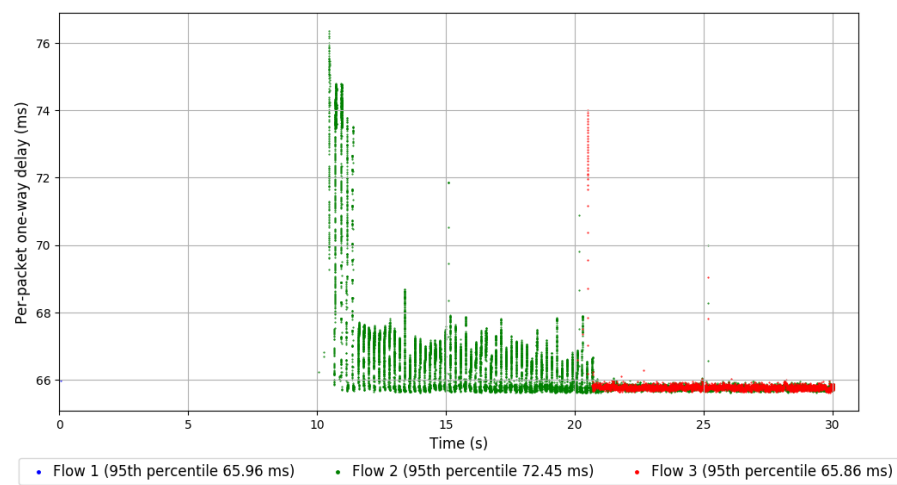
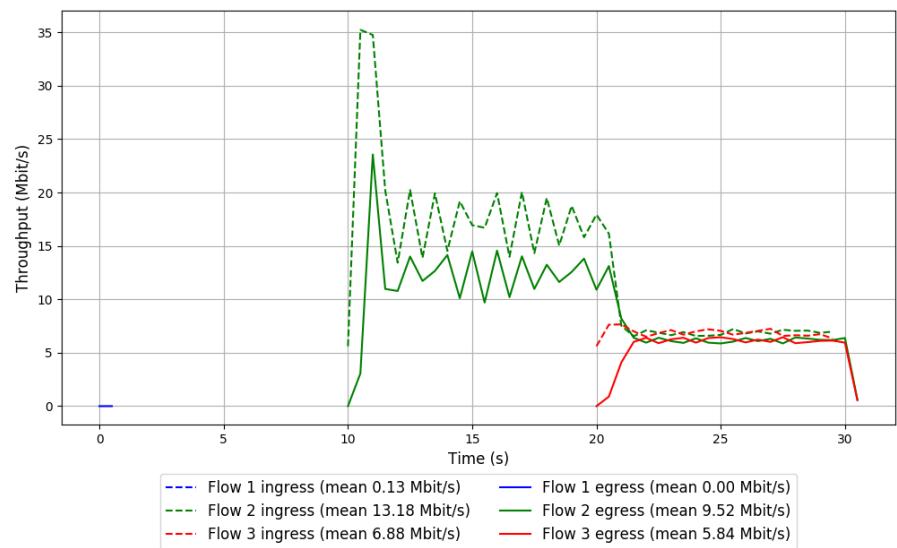


```
Run 1: Statistics of TaoVA-100x

Start at: 2018-11-30 00:16:17
End at: 2018-11-30 00:16:47
Local clock offset: -3.611 ms
Remote clock offset: -34.049 ms

# Below is generated by plot.py at 2018-11-30 03:08:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.28 Mbit/s
95th percentile per-packet one-way delay: 70.704 ms
Loss rate: 25.17%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 65.962 ms
Loss rate: 95.92%
-- Flow 2:
Average throughput: 9.52 Mbit/s
95th percentile per-packet one-way delay: 72.450 ms
Loss rate: 27.79%
-- Flow 3:
Average throughput: 5.84 Mbit/s
95th percentile per-packet one-way delay: 65.864 ms
Loss rate: 15.11%
```

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

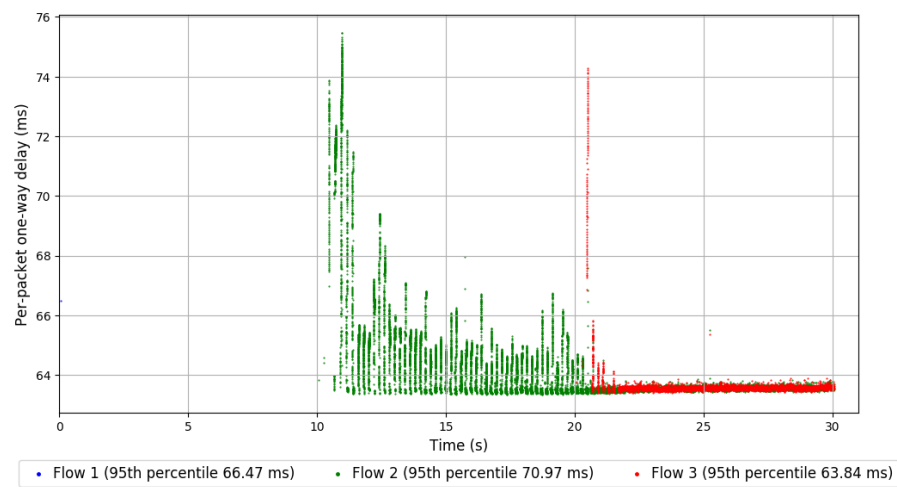
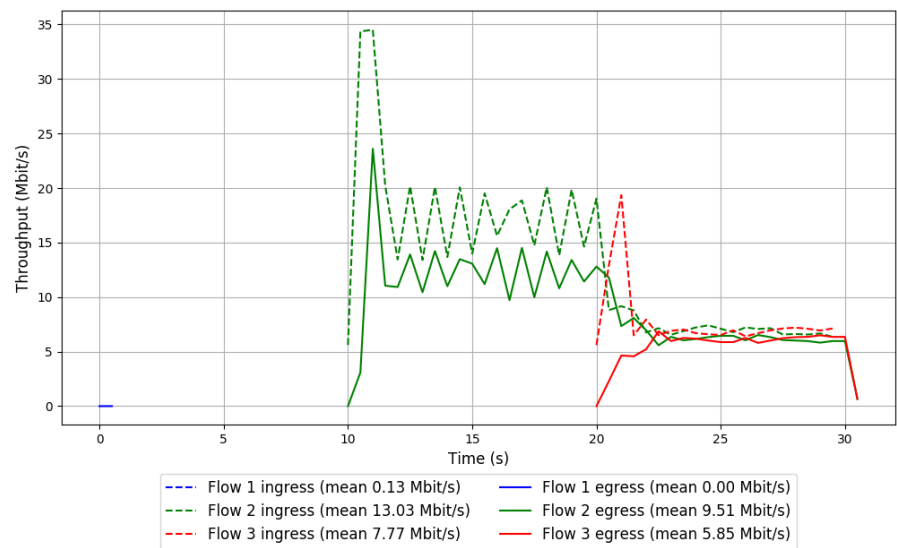


Run 2: Statistics of TaoVA-100x

Start at: 2018-11-30 00:49:25
End at: 2018-11-30 00:49:55
Local clock offset: -3.188 ms
Remote clock offset: -34.953 ms

Below is generated by plot.py at 2018-11-30 03:08:09
Datalink statistics
-- Total of 3 flows:
Average throughput: 8.28 Mbit/s
95th percentile per-packet one-way delay: 70.064 ms
Loss rate: 26.48%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 66.475 ms
Loss rate: 95.92%
-- Flow 2:
Average throughput: 9.51 Mbit/s
95th percentile per-packet one-way delay: 70.970 ms
Loss rate: 26.97%
-- Flow 3:
Average throughput: 5.85 Mbit/s
95th percentile per-packet one-way delay: 63.838 ms
Loss rate: 24.80%

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

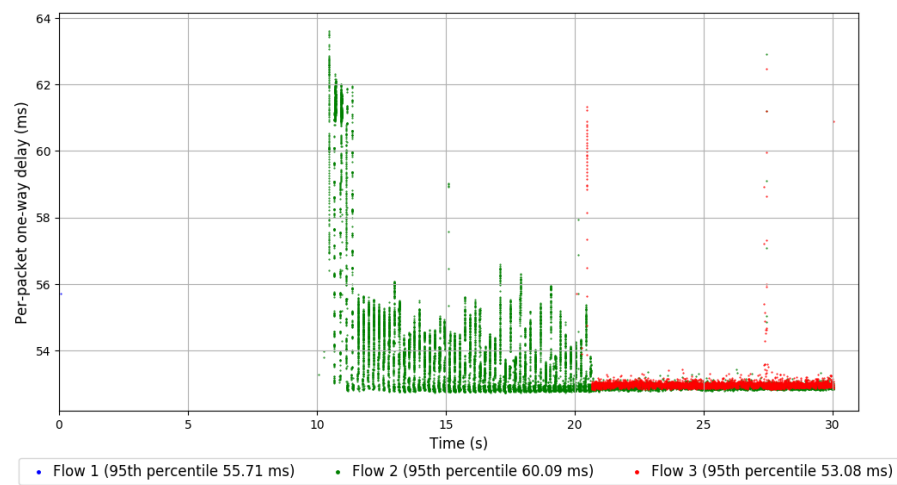
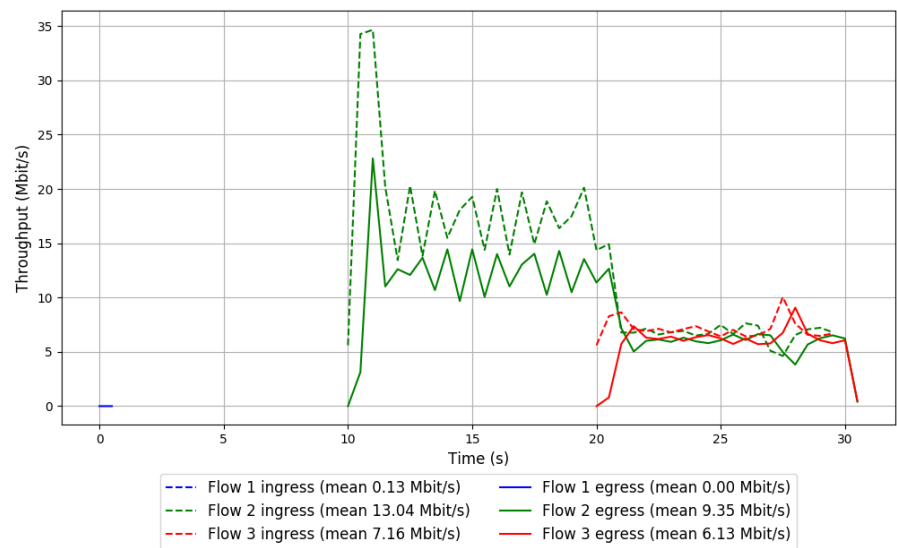


Run 3: Statistics of TaoVA-100x

Start at: 2018-11-30 01:26:56
End at: 2018-11-30 01:27:26
Local clock offset: -0.041 ms
Remote clock offset: -45.301 ms

Below is generated by plot.py at 2018-11-30 03:08:09
Datalink statistics
-- Total of 3 flows:
Average throughput: 8.27 Mbit/s
95th percentile per-packet one-way delay: 58.217 ms
Loss rate: 25.28%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 55.713 ms
Loss rate: 95.92%
-- Flow 2:
Average throughput: 9.35 Mbit/s
95th percentile per-packet one-way delay: 60.095 ms
Loss rate: 28.28%
-- Flow 3:
Average throughput: 6.13 Mbit/s
95th percentile per-packet one-way delay: 53.084 ms
Loss rate: 14.29%

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

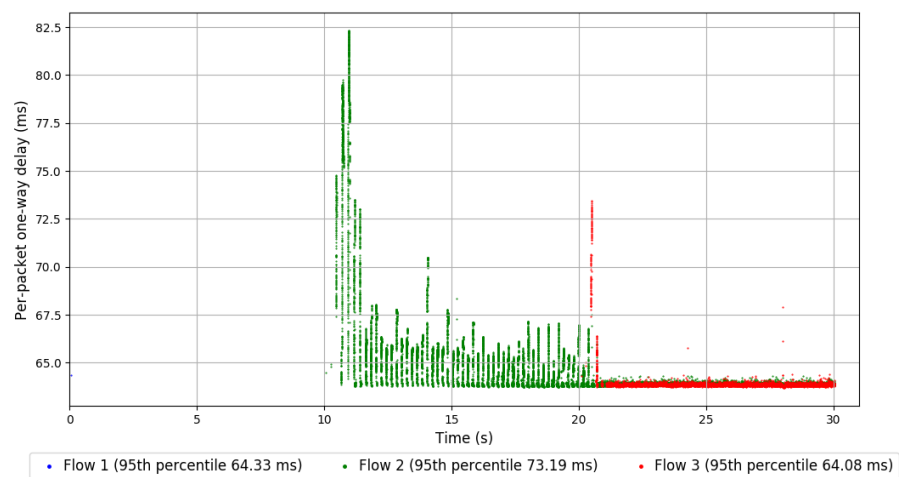
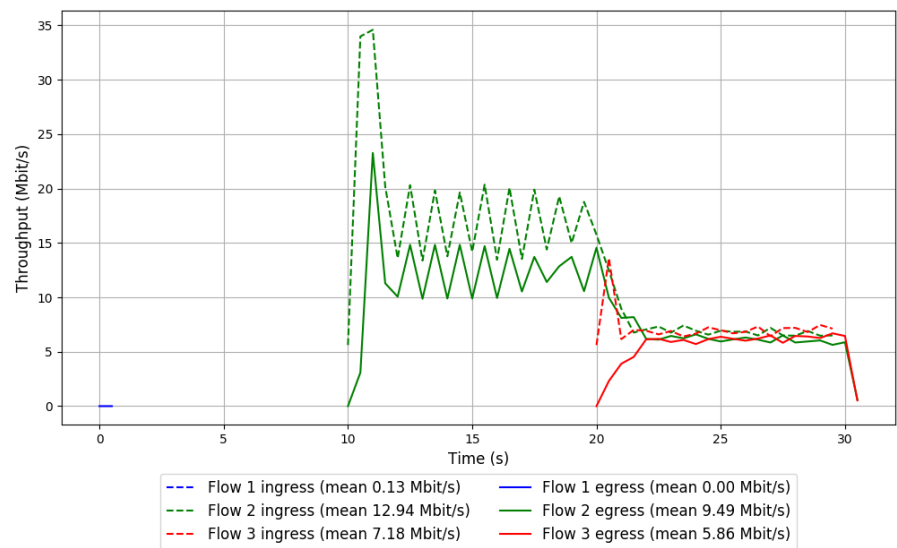


Run 4: Statistics of TaoVA-100x

Start at: 2018-11-30 02:10:18
End at: 2018-11-30 02:10:48
Local clock offset: -1.237 ms
Remote clock offset: -36.13 ms

Below is generated by plot.py at 2018-11-30 03:08:09
Datalink statistics
-- Total of 3 flows:
Average throughput: 8.27 Mbit/s
95th percentile per-packet one-way delay: 70.584 ms
Loss rate: 24.88%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 64.329 ms
Loss rate: 95.92%
-- Flow 2:
Average throughput: 9.49 Mbit/s
95th percentile per-packet one-way delay: 73.190 ms
Loss rate: 26.67%
-- Flow 3:
Average throughput: 5.86 Mbit/s
95th percentile per-packet one-way delay: 64.079 ms
Loss rate: 18.40%

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

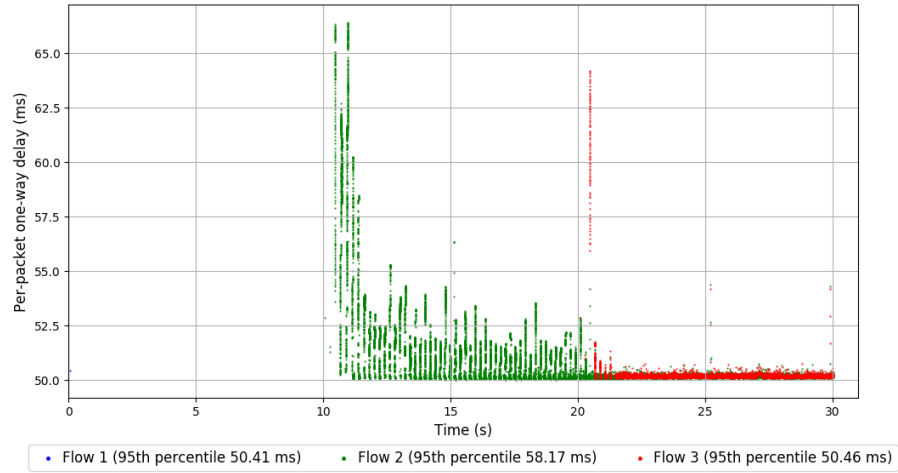
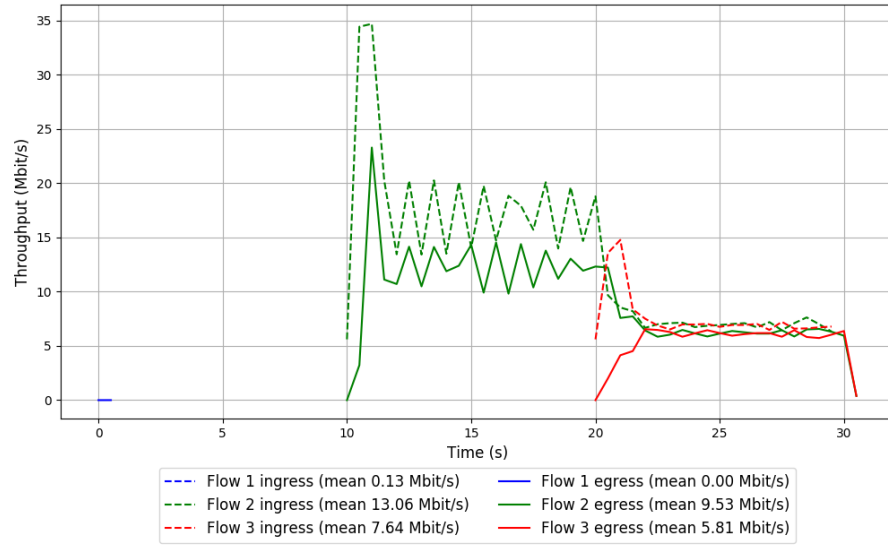


Run 5: Statistics of TaoVA-100x

Start at: 2018-11-30 02:43:15
End at: 2018-11-30 02:43:45
Local clock offset: 2.648 ms
Remote clock offset: -46.808 ms

Below is generated by plot.py at 2018-11-30 03:08:09
Datalink statistics
-- Total of 3 flows:
Average throughput: 8.27 Mbit/s
95th percentile per-packet one-way delay: 56.309 ms
Loss rate: 26.38%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 50.412 ms
Loss rate: 95.92%
-- Flow 2:
Average throughput: 9.53 Mbit/s
95th percentile per-packet one-way delay: 58.175 ms
Loss rate: 27.05%
-- Flow 3:
Average throughput: 5.81 Mbit/s
95th percentile per-packet one-way delay: 50.464 ms
Loss rate: 24.05%

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

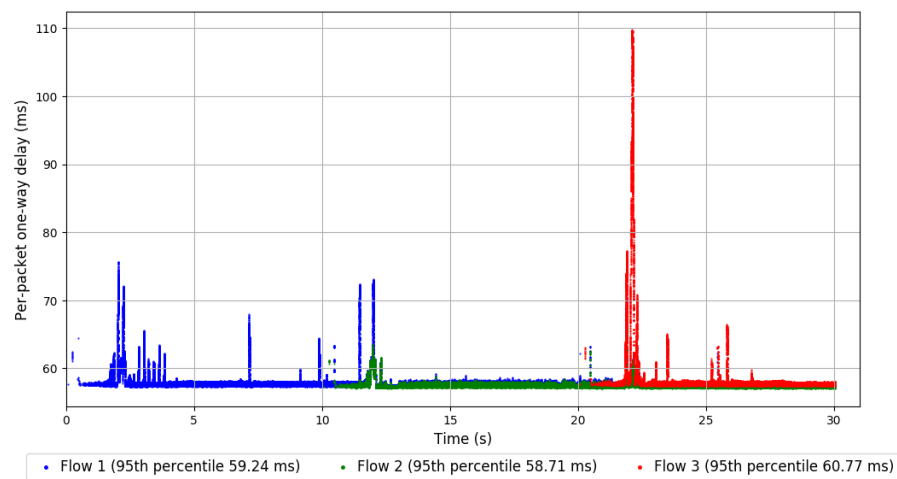
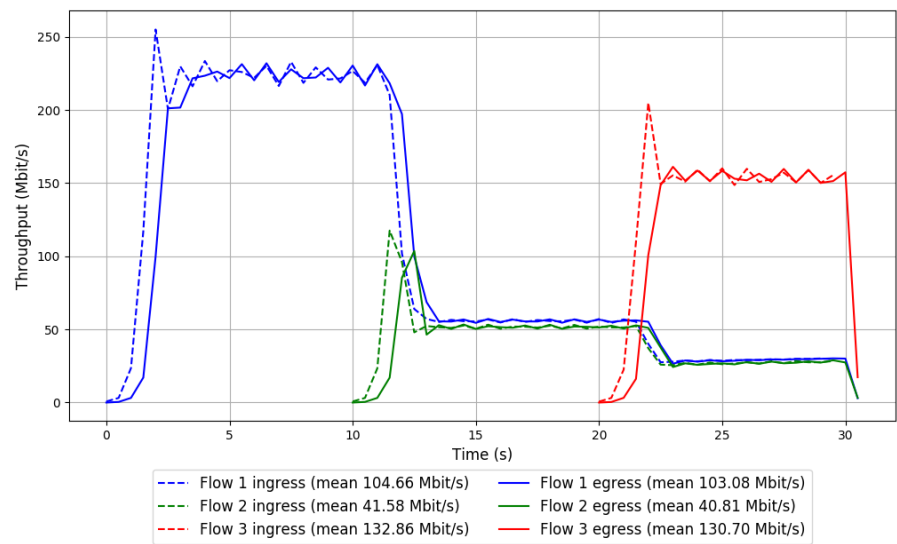


Run 1: Statistics of TCP Vegas

Start at: 2018-11-30 00:01:55
End at: 2018-11-30 00:02:25
Local clock offset: -2.762 ms
Remote clock offset: -42.698 ms

Below is generated by plot.py at 2018-11-30 03:08:09
Datalink statistics
-- Total of 3 flows:
Average throughput: 173.77 Mbit/s
95th percentile per-packet one-way delay: 59.583 ms
Loss rate: 1.59%
-- Flow 1:
Average throughput: 103.08 Mbit/s
95th percentile per-packet one-way delay: 59.241 ms
Loss rate: 1.51%
-- Flow 2:
Average throughput: 40.81 Mbit/s
95th percentile per-packet one-way delay: 58.710 ms
Loss rate: 1.84%
-- Flow 3:
Average throughput: 130.70 Mbit/s
95th percentile per-packet one-way delay: 60.772 ms
Loss rate: 1.62%

Run 1: Report of TCP Vegas — Data Link

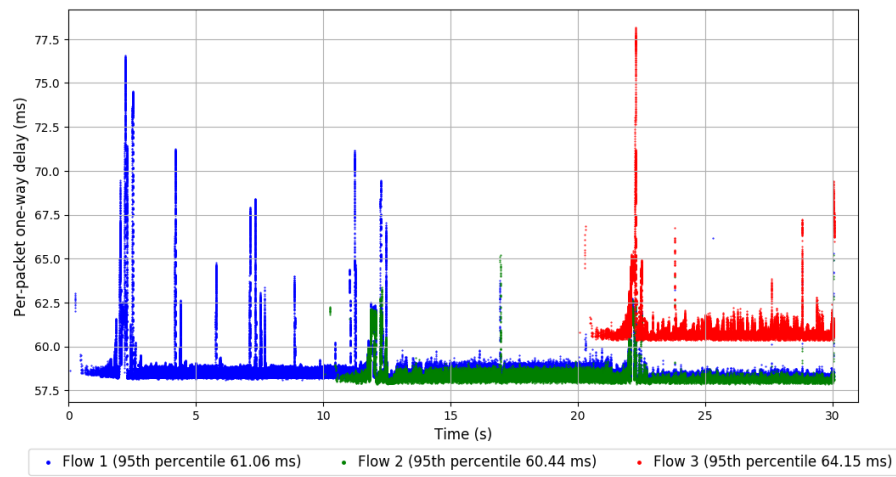
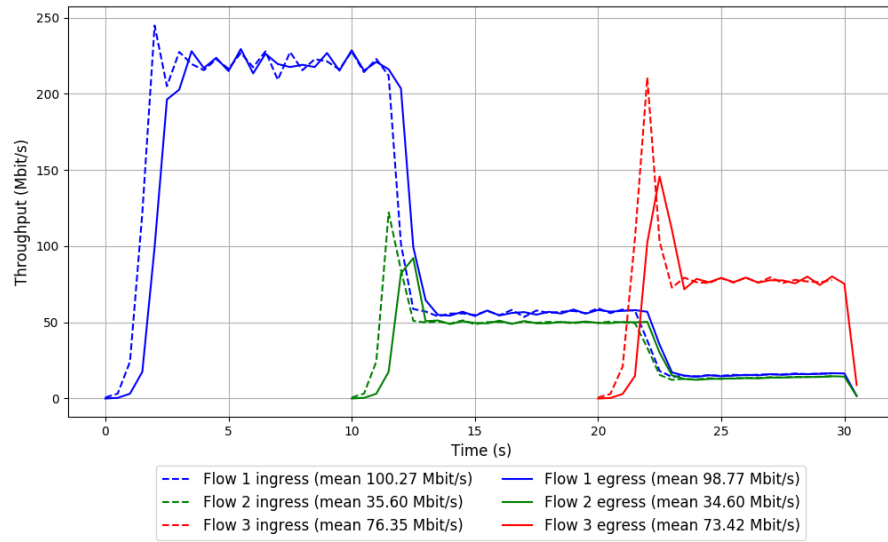


Run 2: Statistics of TCP Vegas

Start at: 2018-11-30 00:34:56
End at: 2018-11-30 00:35:26
Local clock offset: -0.804 ms
Remote clock offset: -37.798 ms

Below is generated by plot.py at 2018-11-30 03:08:09
Datalink statistics
-- Total of 3 flows:
Average throughput: 146.22 Mbit/s
95th percentile per-packet one-way delay: 61.461 ms
Loss rate: 2.10%
-- Flow 1:
Average throughput: 98.77 Mbit/s
95th percentile per-packet one-way delay: 61.062 ms
Loss rate: 1.50%
-- Flow 2:
Average throughput: 34.60 Mbit/s
95th percentile per-packet one-way delay: 60.440 ms
Loss rate: 2.82%
-- Flow 3:
Average throughput: 73.42 Mbit/s
95th percentile per-packet one-way delay: 64.152 ms
Loss rate: 3.83%

Run 2: Report of TCP Vegas — Data Link

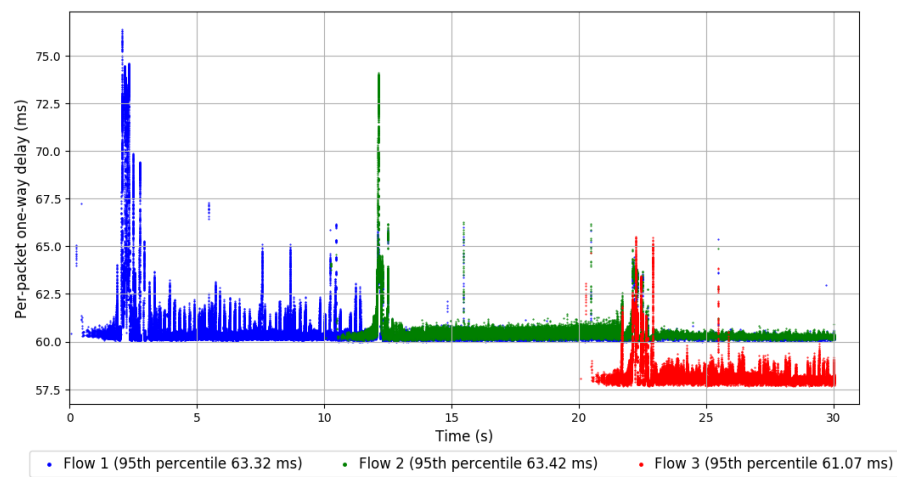
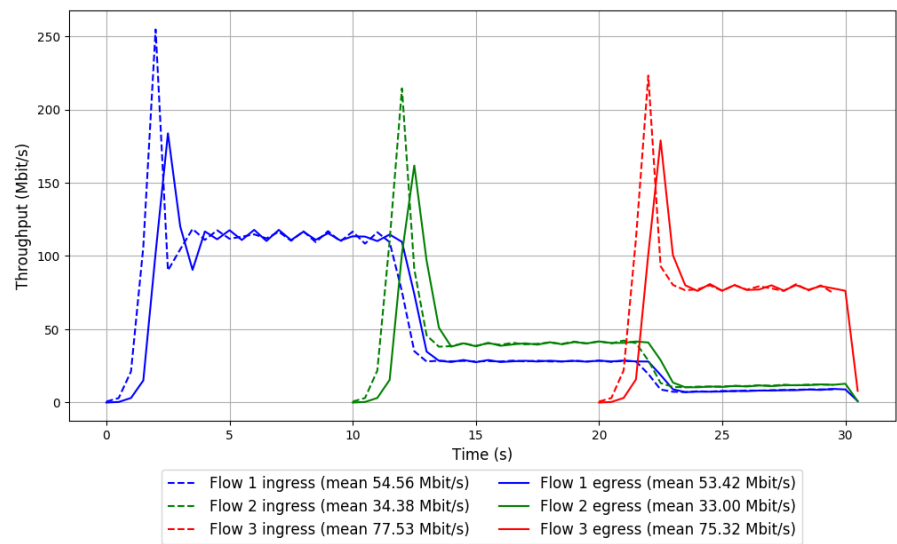


Run 3: Statistics of TCP Vegas

Start at: 2018-11-30 01:12:50
End at: 2018-11-30 01:13:20
Local clock offset: -0.357 ms
Remote clock offset: -39.346 ms

Below is generated by plot.py at 2018-11-30 03:08:09
Datalink statistics
-- Total of 3 flows:
Average throughput: 100.45 Mbit/s
95th percentile per-packet one-way delay: 62.626 ms
Loss rate: 2.71%
-- Flow 1:
Average throughput: 53.42 Mbit/s
95th percentile per-packet one-way delay: 63.323 ms
Loss rate: 2.09%
-- Flow 2:
Average throughput: 33.00 Mbit/s
95th percentile per-packet one-way delay: 63.419 ms
Loss rate: 4.01%
-- Flow 3:
Average throughput: 75.32 Mbit/s
95th percentile per-packet one-way delay: 61.072 ms
Loss rate: 2.85%

Run 3: Report of TCP Vegas — Data Link

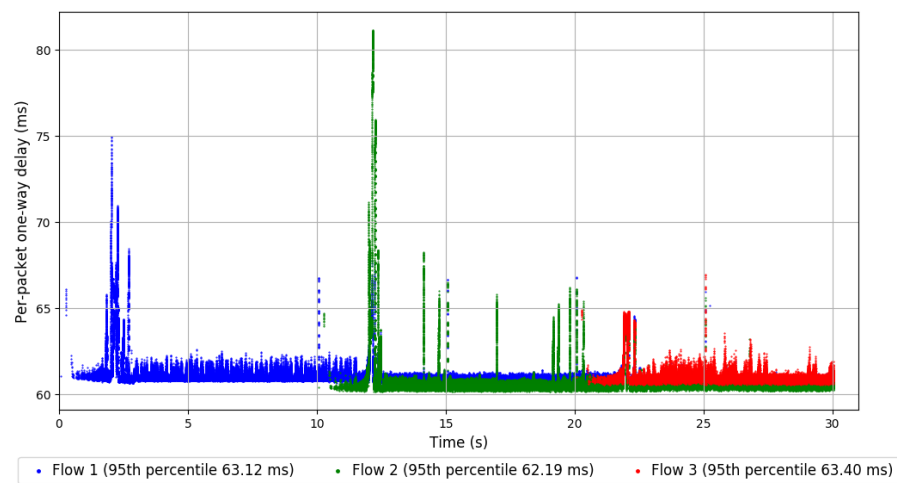
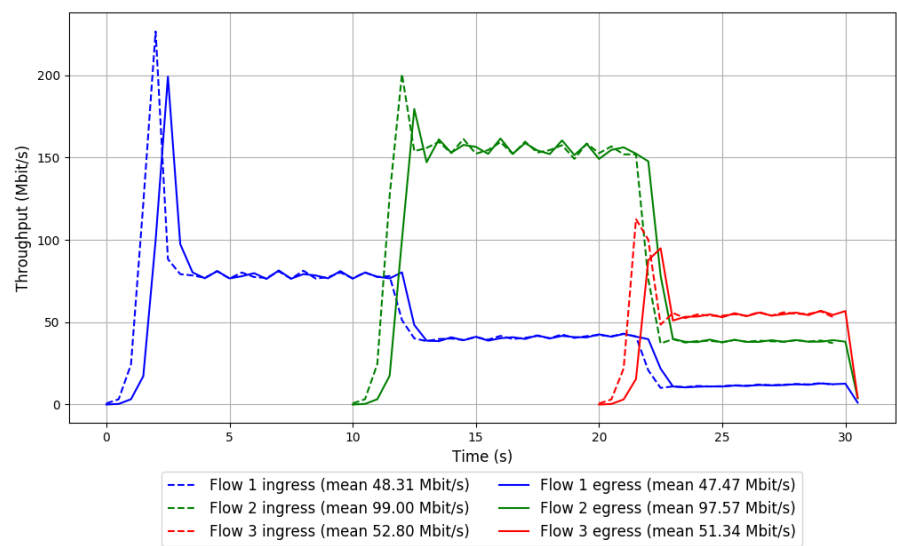


Run 4: Statistics of TCP Vegas

Start at: 2018-11-30 01:56:00
End at: 2018-11-30 01:56:30
Local clock offset: -0.585 ms
Remote clock offset: -38.522 ms

Below is generated by plot.py at 2018-11-30 03:08:09
Datalink statistics
-- Total of 3 flows:
Average throughput: 129.54 Mbit/s
95th percentile per-packet one-way delay: 62.796 ms
Loss rate: 1.72%
-- Flow 1:
Average throughput: 47.47 Mbit/s
95th percentile per-packet one-way delay: 63.118 ms
Loss rate: 1.73%
-- Flow 2:
Average throughput: 97.57 Mbit/s
95th percentile per-packet one-way delay: 62.190 ms
Loss rate: 1.44%
-- Flow 3:
Average throughput: 51.34 Mbit/s
95th percentile per-packet one-way delay: 63.397 ms
Loss rate: 2.76%

Run 4: Report of TCP Vegas — Data Link

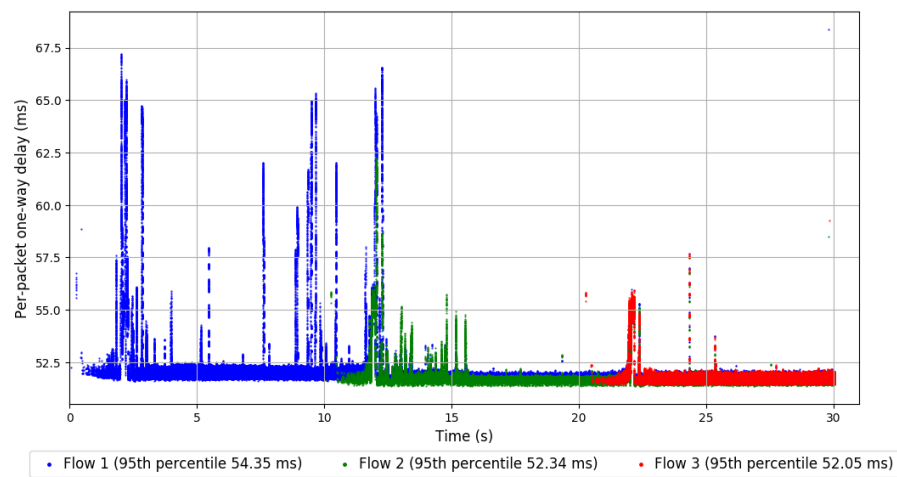
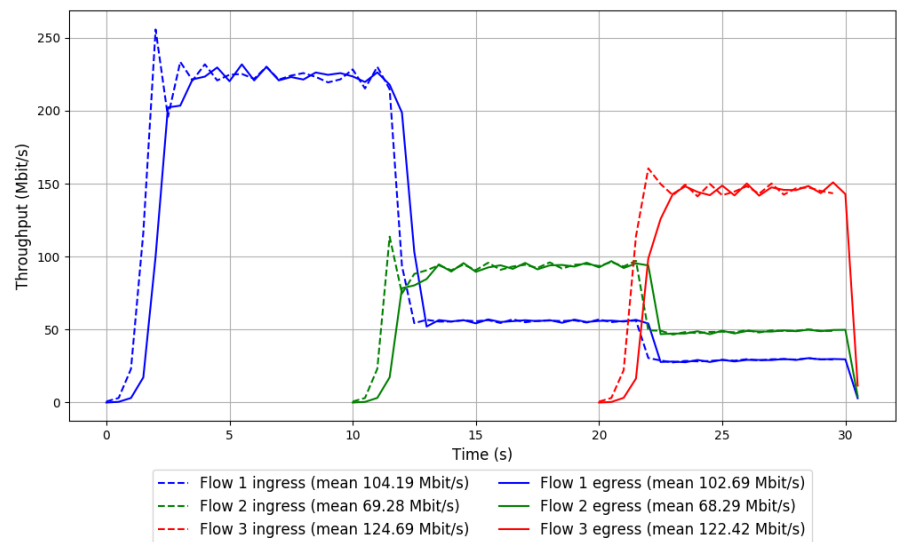


Run 5: Statistics of TCP Vegas

Start at: 2018-11-30 02:28:33
End at: 2018-11-30 02:29:03
Local clock offset: -6.873 ms
Remote clock offset: -54.165 ms

Below is generated by plot.py at 2018-11-30 03:08:09
Datalink statistics
-- Total of 3 flows:
Average throughput: 188.88 Mbit/s
95th percentile per-packet one-way delay: 53.174 ms
Loss rate: 1.52%
-- Flow 1:
Average throughput: 102.69 Mbit/s
95th percentile per-packet one-way delay: 54.352 ms
Loss rate: 1.43%
-- Flow 2:
Average throughput: 68.29 Mbit/s
95th percentile per-packet one-way delay: 52.340 ms
Loss rate: 1.44%
-- Flow 3:
Average throughput: 122.42 Mbit/s
95th percentile per-packet one-way delay: 52.050 ms
Loss rate: 1.82%

Run 5: Report of TCP Vegas — Data Link

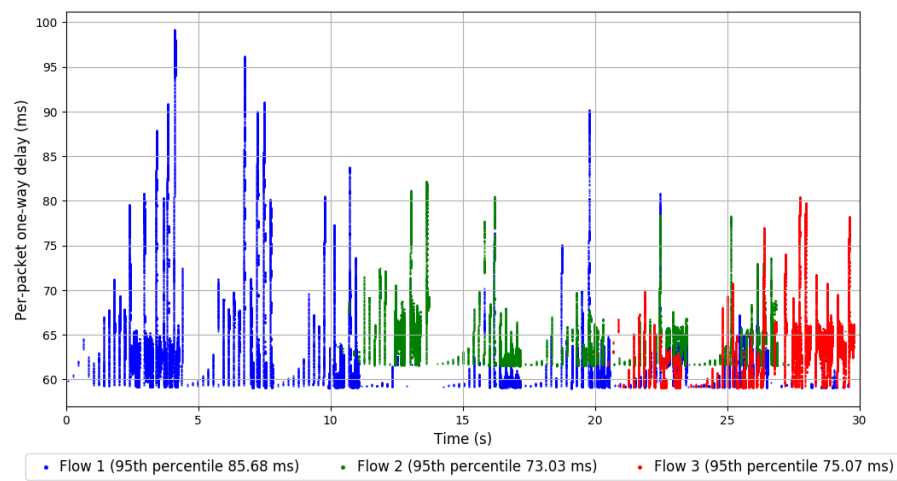
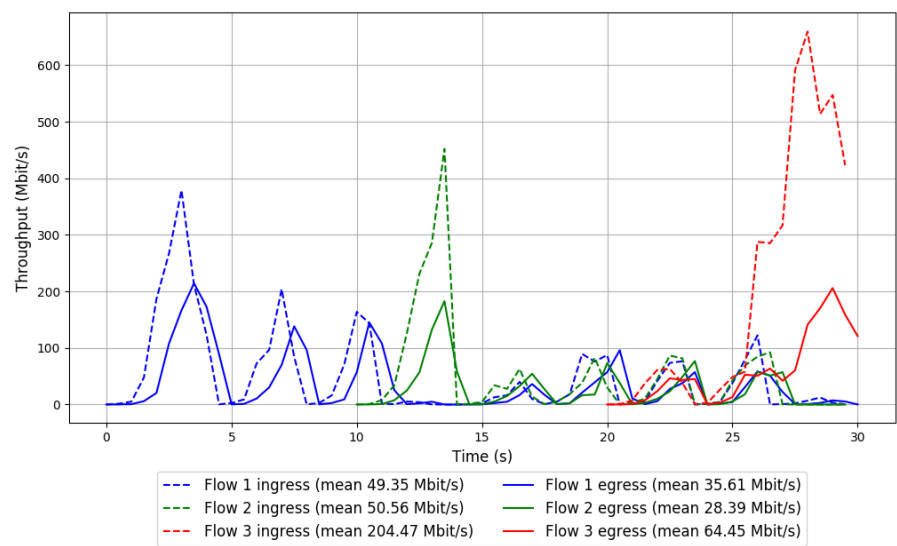


Run 1: Statistics of Verus

Start at: 2018-11-30 00:09:11
End at: 2018-11-30 00:09:41
Local clock offset: -1.337 ms
Remote clock offset: -39.039 ms

Below is generated by plot.py at 2018-11-30 03:08:09
Datalink statistics
-- Total of 3 flows:
Average throughput: 74.89 Mbit/s
95th percentile per-packet one-way delay: 79.085 ms
Loss rate: 49.86%
-- Flow 1:
Average throughput: 35.61 Mbit/s
95th percentile per-packet one-way delay: 85.679 ms
Loss rate: 28.32%
-- Flow 2:
Average throughput: 28.39 Mbit/s
95th percentile per-packet one-way delay: 73.032 ms
Loss rate: 44.42%
-- Flow 3:
Average throughput: 64.45 Mbit/s
95th percentile per-packet one-way delay: 75.067 ms
Loss rate: 68.48%

Run 1: Report of Verus — Data Link

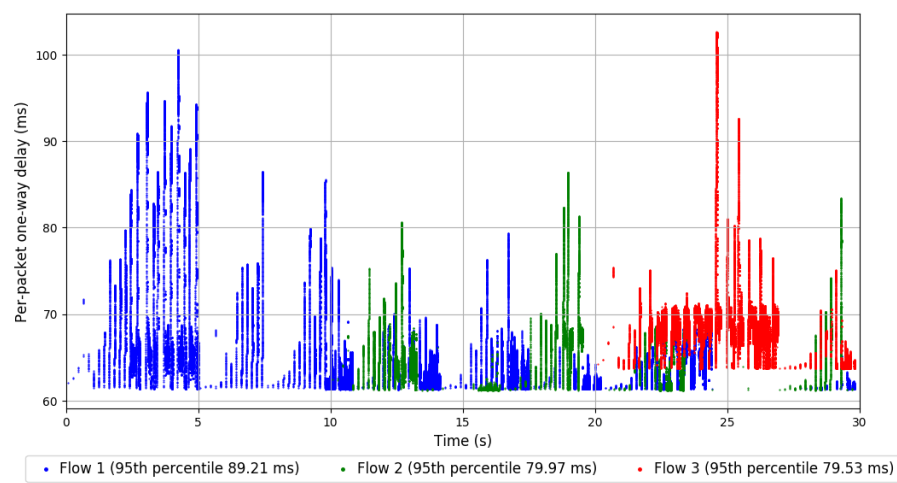
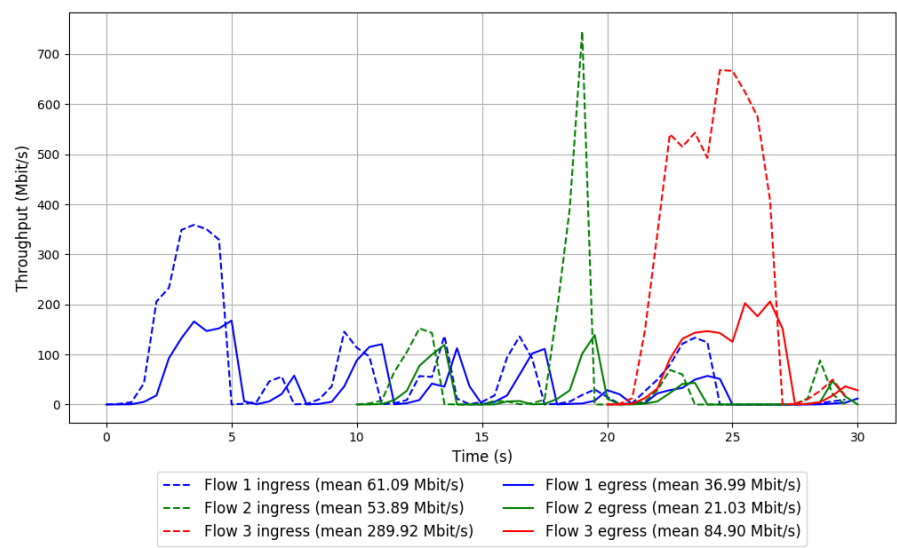


Run 2: Statistics of Verus

Start at: 2018-11-30 00:42:28
End at: 2018-11-30 00:42:58
Local clock offset: -3.018 ms
Remote clock offset: -36.583 ms

Below is generated by plot.py at 2018-11-30 03:08:09
Datalink statistics
-- Total of 3 flows:
Average throughput: 78.63 Mbit/s
95th percentile per-packet one-way delay: 85.831 ms
Loss rate: 58.93%
-- Flow 1:
Average throughput: 36.99 Mbit/s
95th percentile per-packet one-way delay: 89.209 ms
Loss rate: 39.46%
-- Flow 2:
Average throughput: 21.03 Mbit/s
95th percentile per-packet one-way delay: 79.971 ms
Loss rate: 60.97%
-- Flow 3:
Average throughput: 84.90 Mbit/s
95th percentile per-packet one-way delay: 79.529 ms
Loss rate: 70.72%

Run 2: Report of Verus — Data Link

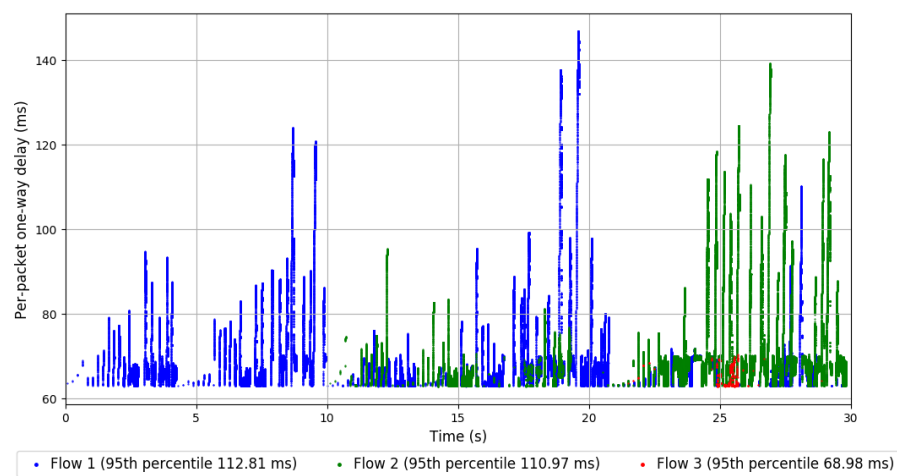
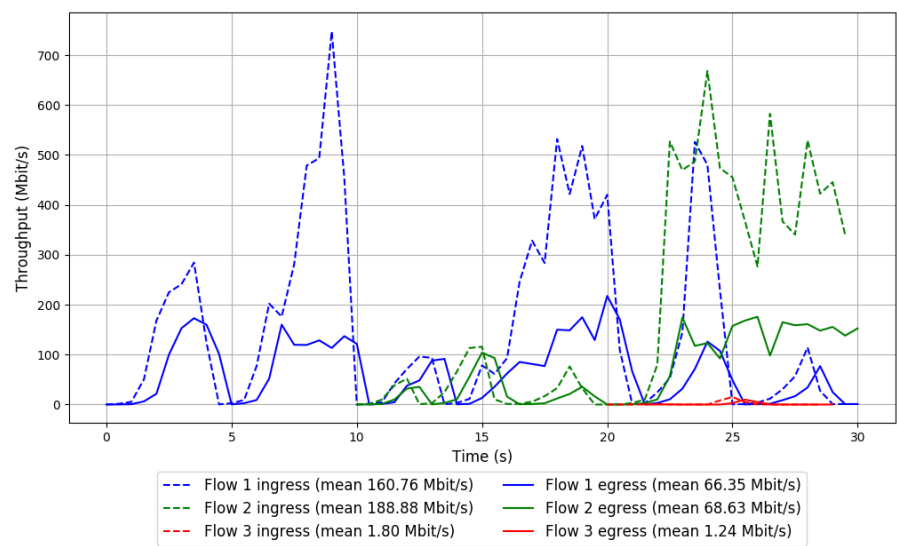


Run 3: Statistics of Verus

Start at: 2018-11-30 01:19:49
End at: 2018-11-30 01:20:19
Local clock offset: 1.378 ms
Remote clock offset: -32.923 ms

Below is generated by plot.py at 2018-11-30 03:08:25
Datalink statistics
-- Total of 3 flows:
Average throughput: 111.77 Mbit/s
95th percentile per-packet one-way delay: 111.372 ms
Loss rate: 60.85%
-- Flow 1:
Average throughput: 66.35 Mbit/s
95th percentile per-packet one-way delay: 112.810 ms
Loss rate: 58.72%
-- Flow 2:
Average throughput: 68.63 Mbit/s
95th percentile per-packet one-way delay: 110.968 ms
Loss rate: 63.66%
-- Flow 3:
Average throughput: 1.24 Mbit/s
95th percentile per-packet one-way delay: 68.977 ms
Loss rate: 39.39%

Run 3: Report of Verus — Data Link

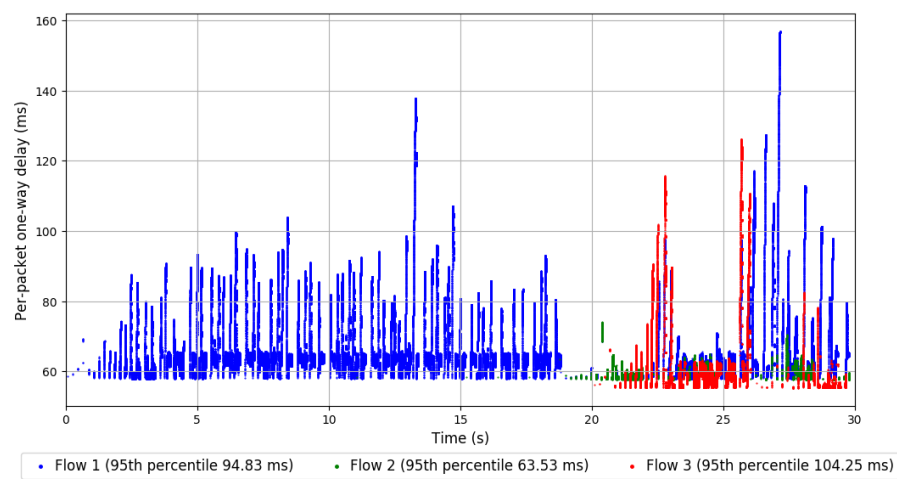
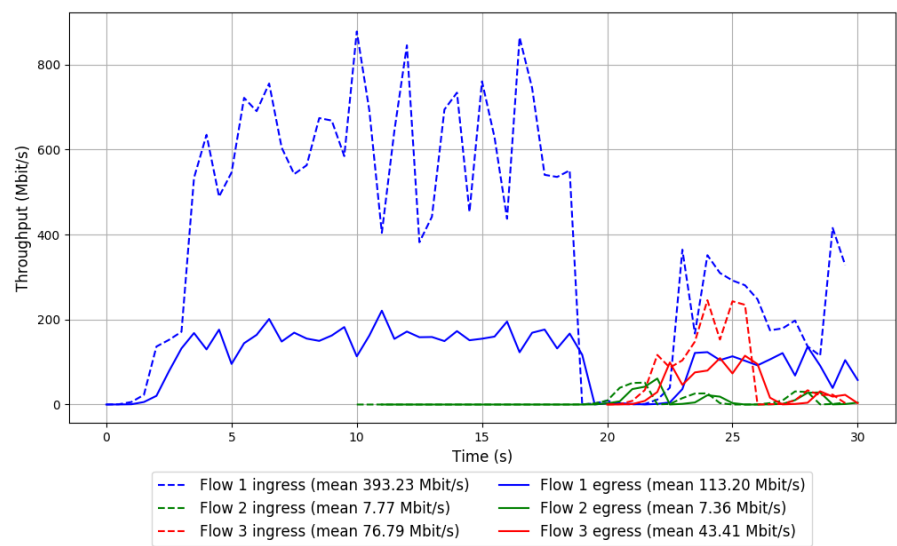


Run 4: Statistics of Verus

Start at: 2018-11-30 02:03:01
End at: 2018-11-30 02:03:31
Local clock offset: -0.034 ms
Remote clock offset: -43.192 ms

Below is generated by plot.py at 2018-11-30 03:09:00
Datalink statistics
-- Total of 3 flows:
Average throughput: 131.77 Mbit/s
95th percentile per-packet one-way delay: 94.966 ms
Loss rate: 68.84%
-- Flow 1:
Average throughput: 113.20 Mbit/s
95th percentile per-packet one-way delay: 94.833 ms
Loss rate: 71.21%
-- Flow 2:
Average throughput: 7.36 Mbit/s
95th percentile per-packet one-way delay: 63.528 ms
Loss rate: 10.10%
-- Flow 3:
Average throughput: 43.41 Mbit/s
95th percentile per-packet one-way delay: 104.254 ms
Loss rate: 43.50%

Run 4: Report of Verus — Data Link

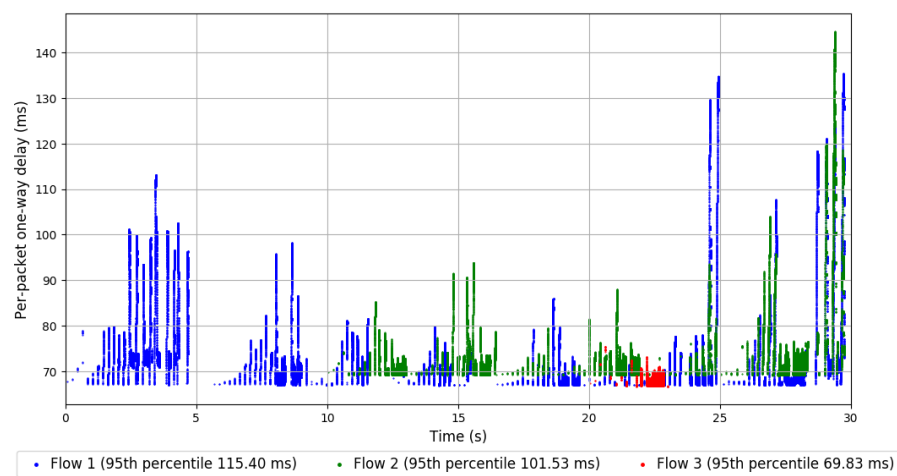
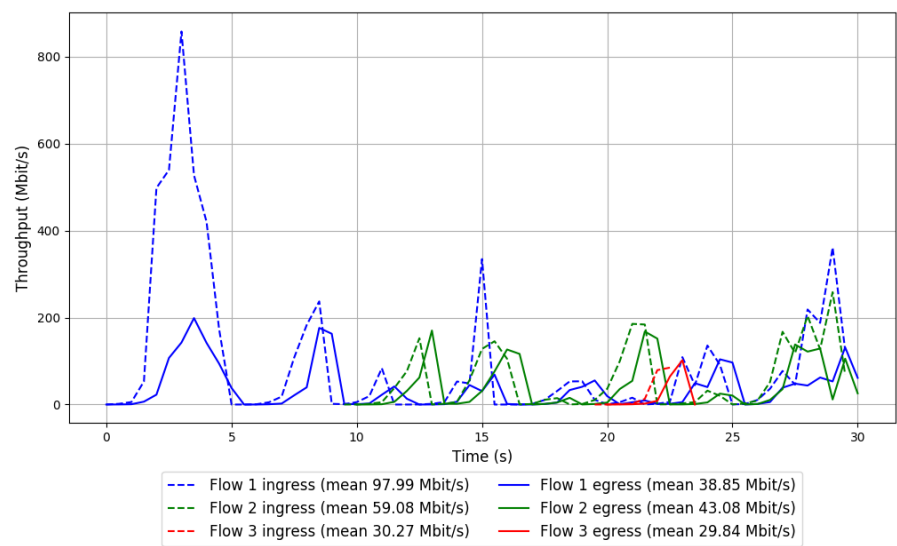


Run 5: Statistics of Verus

Start at: 2018-11-30 02:35:49
End at: 2018-11-30 02:36:19
Local clock offset: 0.4 ms
Remote clock offset: -32.029 ms

Below is generated by plot.py at 2018-11-30 03:09:00
Datalink statistics
-- Total of 3 flows:
Average throughput: 70.47 Mbit/s
95th percentile per-packet one-way delay: 112.348 ms
Loss rate: 49.77%
-- Flow 1:
Average throughput: 38.85 Mbit/s
95th percentile per-packet one-way delay: 115.404 ms
Loss rate: 60.36%
-- Flow 2:
Average throughput: 43.08 Mbit/s
95th percentile per-packet one-way delay: 101.530 ms
Loss rate: 27.06%
-- Flow 3:
Average throughput: 29.84 Mbit/s
95th percentile per-packet one-way delay: 69.826 ms
Loss rate: 1.43%

Run 5: Report of Verus — Data Link

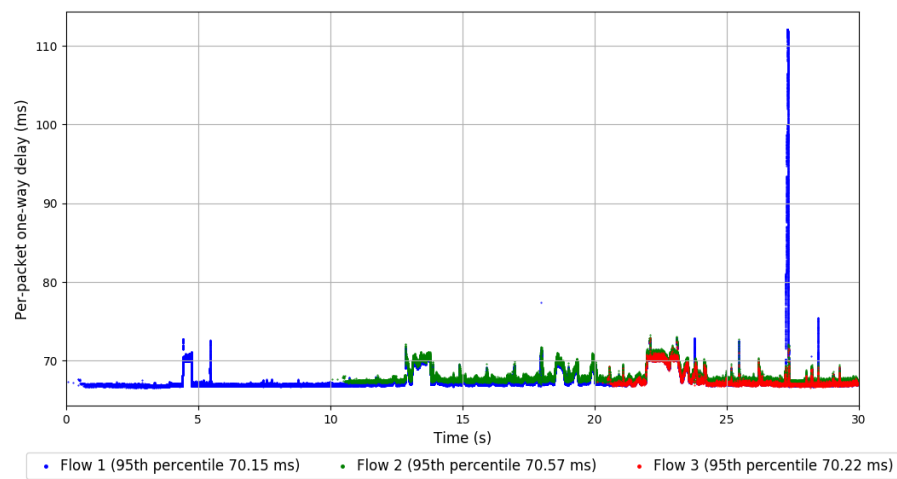
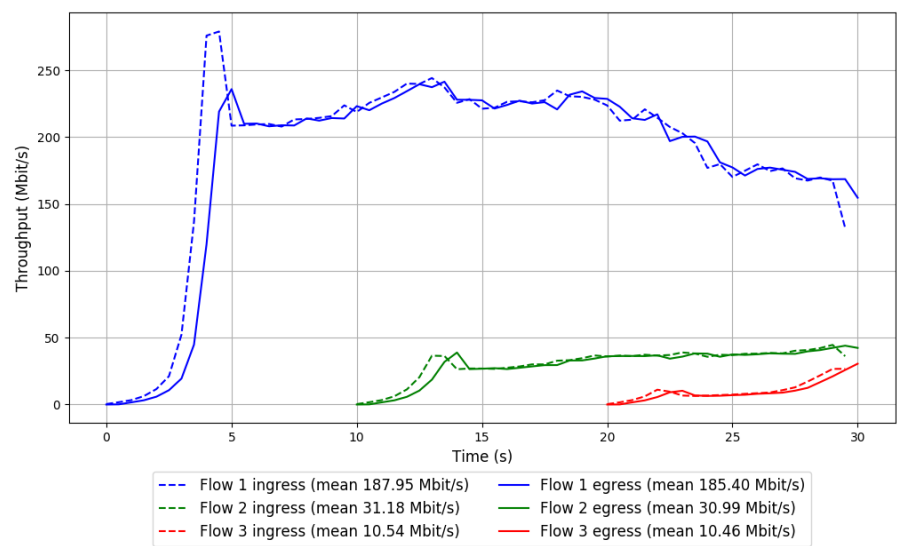


Run 1: Statistics of PCC-Vivace

Start at: 2018-11-30 00:17:36
End at: 2018-11-30 00:18:06
Local clock offset: -3.536 ms
Remote clock offset: -32.438 ms

Below is generated by plot.py at 2018-11-30 03:09:20
Datalink statistics
-- Total of 3 flows:
Average throughput: 209.46 Mbit/s
95th percentile per-packet one-way delay: 70.197 ms
Loss rate: 1.28%
-- Flow 1:
Average throughput: 185.40 Mbit/s
95th percentile per-packet one-way delay: 70.151 ms
Loss rate: 1.36%
-- Flow 2:
Average throughput: 30.99 Mbit/s
95th percentile per-packet one-way delay: 70.569 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 10.46 Mbit/s
95th percentile per-packet one-way delay: 70.224 ms
Loss rate: 0.71%

Run 1: Report of PCC-Vivace — Data Link

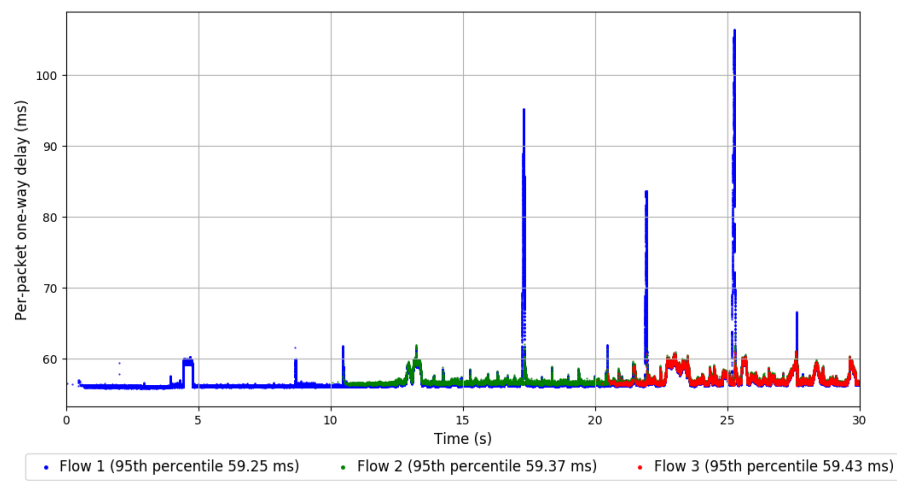
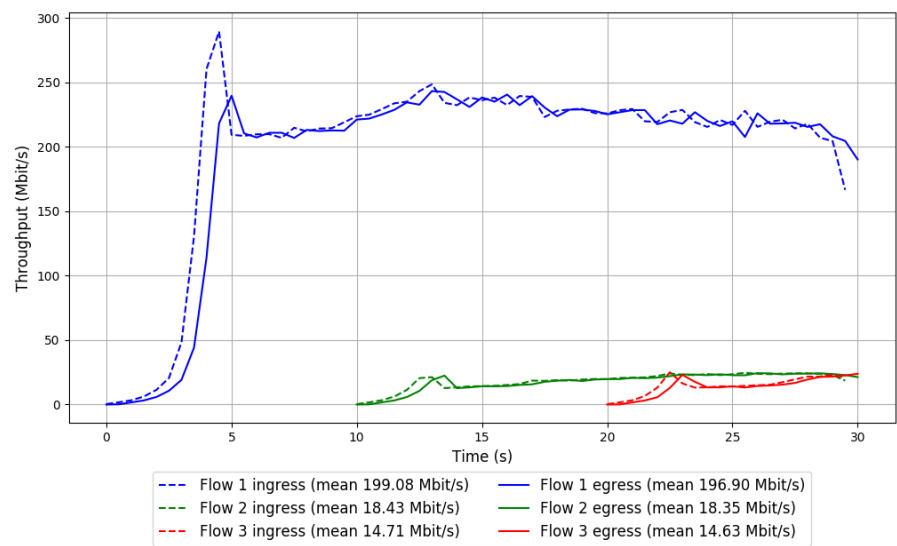


Run 2: Statistics of PCC-Vivace

Start at: 2018-11-30 00:50:45
End at: 2018-11-30 00:51:15
Local clock offset: -1.334 ms
Remote clock offset: -40.449 ms

Below is generated by plot.py at 2018-11-30 03:09:38
Datalink statistics
-- Total of 3 flows:
Average throughput: 213.93 Mbit/s
95th percentile per-packet one-way delay: 59.258 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 196.90 Mbit/s
95th percentile per-packet one-way delay: 59.246 ms
Loss rate: 1.10%
-- Flow 2:
Average throughput: 18.35 Mbit/s
95th percentile per-packet one-way delay: 59.368 ms
Loss rate: 0.43%
-- Flow 3:
Average throughput: 14.63 Mbit/s
95th percentile per-packet one-way delay: 59.428 ms
Loss rate: 0.56%

Run 2: Report of PCC-Vivace — Data Link

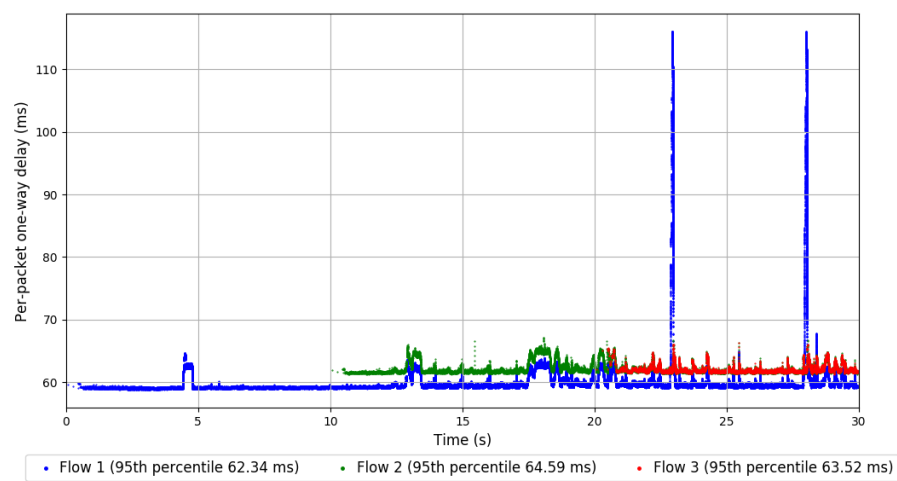
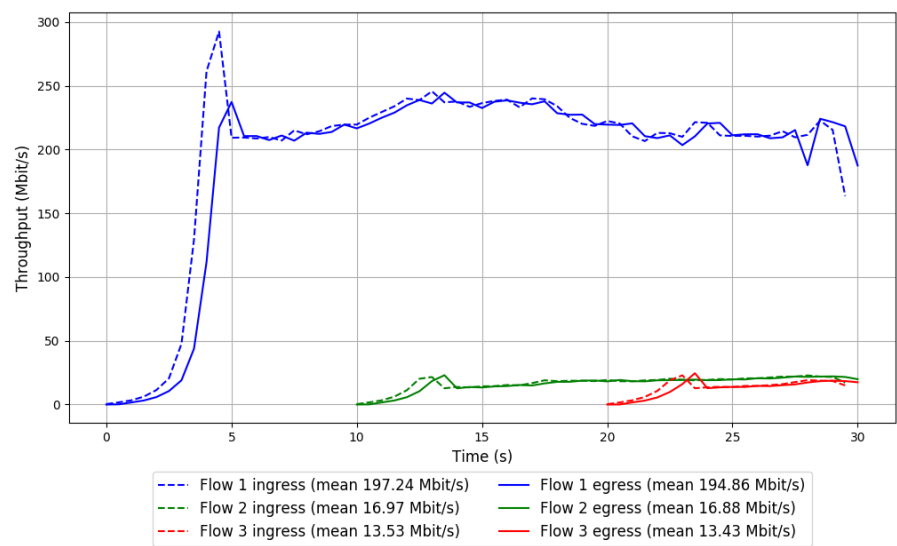


Run 3: Statistics of PCC-Vivace

Start at: 2018-11-30 01:28:16
End at: 2018-11-30 01:28:46
Local clock offset: 0.817 ms
Remote clock offset: -38.379 ms

Below is generated by plot.py at 2018-11-30 03:09:42
Datalink statistics
-- Total of 3 flows:
Average throughput: 210.51 Mbit/s
95th percentile per-packet one-way delay: 62.484 ms
Loss rate: 1.16%
-- Flow 1:
Average throughput: 194.86 Mbit/s
95th percentile per-packet one-way delay: 62.336 ms
Loss rate: 1.20%
-- Flow 2:
Average throughput: 16.88 Mbit/s
95th percentile per-packet one-way delay: 64.587 ms
Loss rate: 0.55%
-- Flow 3:
Average throughput: 13.43 Mbit/s
95th percentile per-packet one-way delay: 63.525 ms
Loss rate: 0.75%

Run 3: Report of PCC-Vivace — Data Link

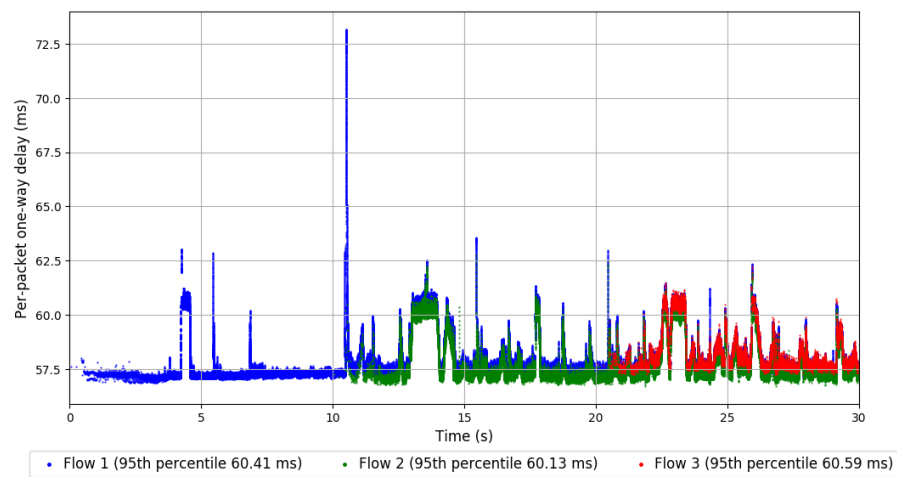
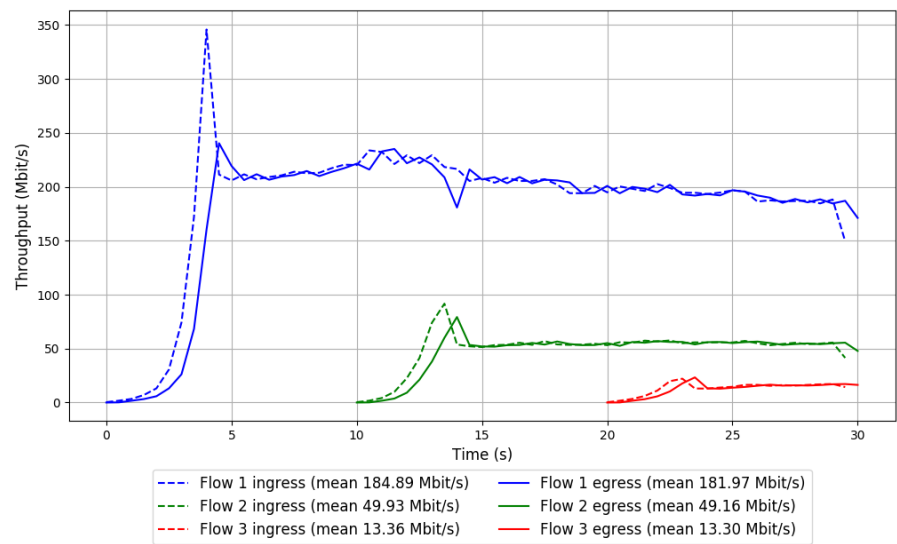


Run 4: Statistics of PCC-Vivace

Start at: 2018-11-30 02:11:38
End at: 2018-11-30 02:12:08
Local clock offset: 1.902 ms
Remote clock offset: -39.702 ms

Below is generated by plot.py at 2018-11-30 03:09:45
Datalink statistics
-- Total of 3 flows:
Average throughput: 219.06 Mbit/s
95th percentile per-packet one-way delay: 60.387 ms
Loss rate: 1.55%
-- Flow 1:
Average throughput: 181.97 Mbit/s
95th percentile per-packet one-way delay: 60.409 ms
Loss rate: 1.58%
-- Flow 2:
Average throughput: 49.16 Mbit/s
95th percentile per-packet one-way delay: 60.134 ms
Loss rate: 1.55%
-- Flow 3:
Average throughput: 13.30 Mbit/s
95th percentile per-packet one-way delay: 60.590 ms
Loss rate: 0.50%

Run 4: Report of PCC-Vivace — Data Link

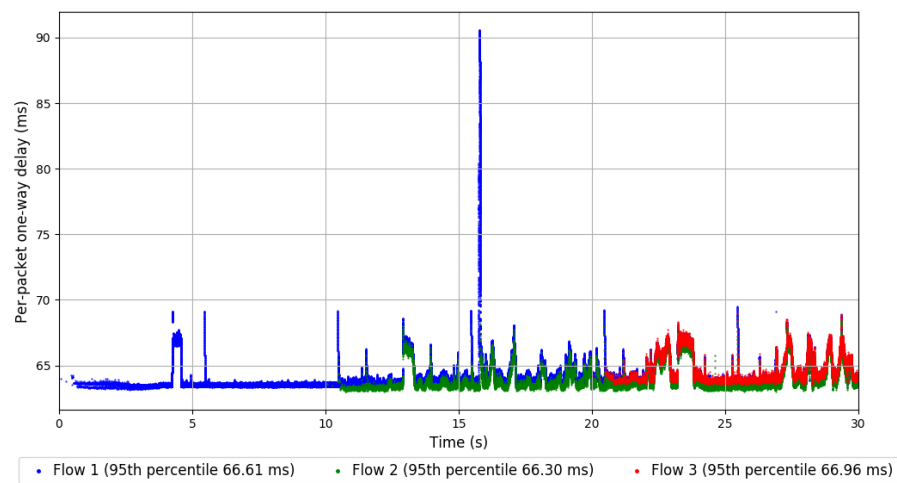
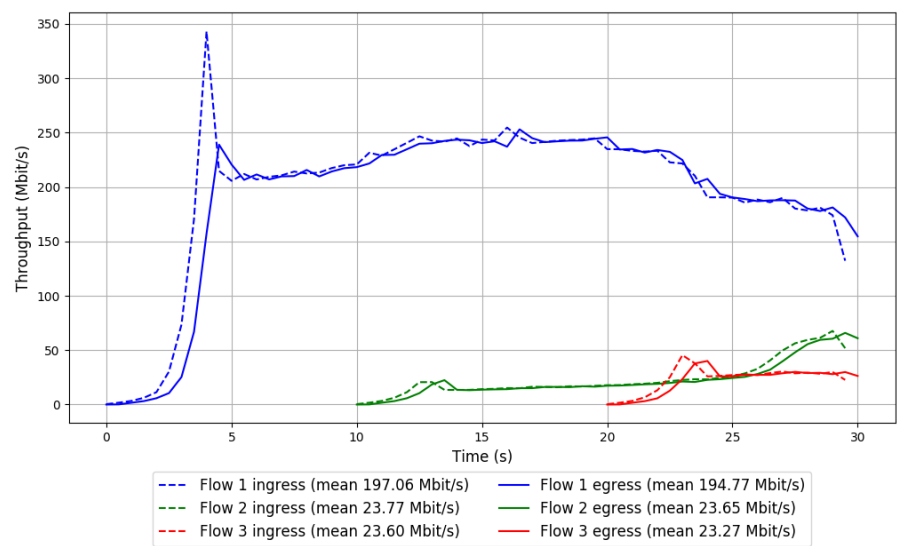


Run 5: Statistics of PCC-Vivace

Start at: 2018-11-30 02:44:34
End at: 2018-11-30 02:45:04
Local clock offset: 1.051 ms
Remote clock offset: -34.954 ms

Below is generated by plot.py at 2018-11-30 03:09:46
Datalink statistics
-- Total of 3 flows:
Average throughput: 218.18 Mbit/s
95th percentile per-packet one-way delay: 66.619 ms
Loss rate: 1.12%
-- Flow 1:
Average throughput: 194.77 Mbit/s
95th percentile per-packet one-way delay: 66.612 ms
Loss rate: 1.16%
-- Flow 2:
Average throughput: 23.65 Mbit/s
95th percentile per-packet one-way delay: 66.303 ms
Loss rate: 0.48%
-- Flow 3:
Average throughput: 23.27 Mbit/s
95th percentile per-packet one-way delay: 66.956 ms
Loss rate: 1.40%

Run 5: Report of PCC-Vivace — Data Link

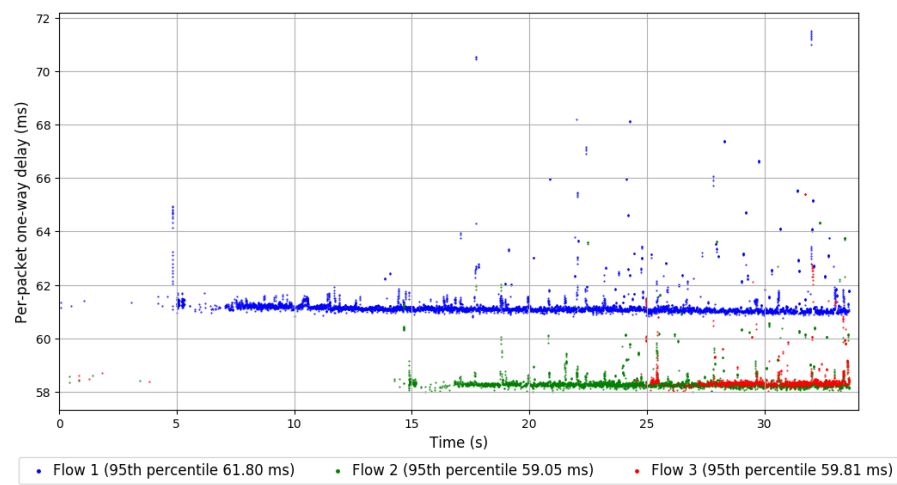
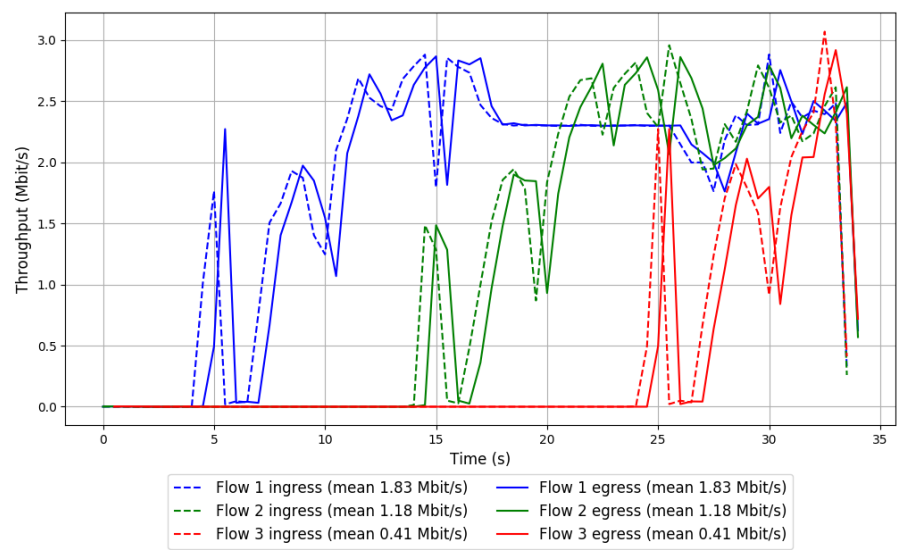


Run 1: Statistics of WebRTC media

Start at: 2018-11-29 23:47:41
End at: 2018-11-29 23:48:11
Local clock offset: 0.298 ms
Remote clock offset: -40.392 ms

Below is generated by plot.py at 2018-11-30 03:09:46
Datalink statistics
-- Total of 3 flows:
Average throughput: 3.39 Mbit/s
95th percentile per-packet one-way delay: 61.455 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.83 Mbit/s
95th percentile per-packet one-way delay: 61.803 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.18 Mbit/s
95th percentile per-packet one-way delay: 59.055 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.41 Mbit/s
95th percentile per-packet one-way delay: 59.809 ms
Loss rate: 0.00%

Run 1: Report of WebRTC media — Data Link

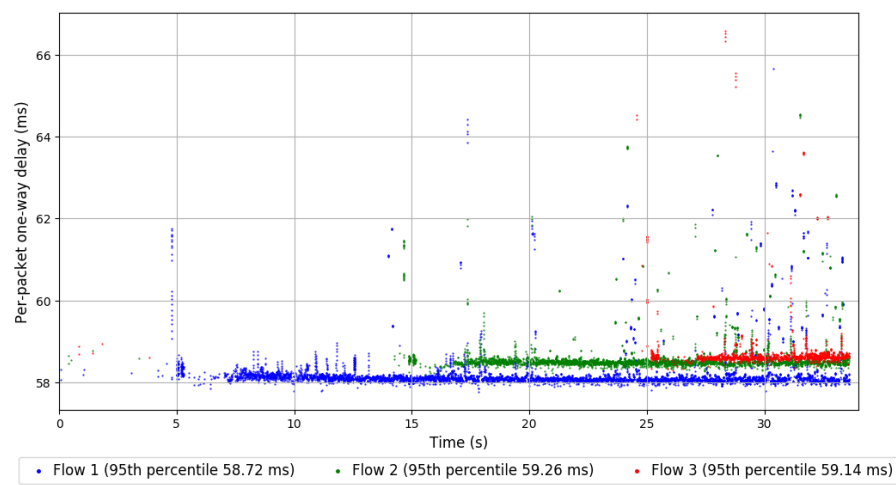
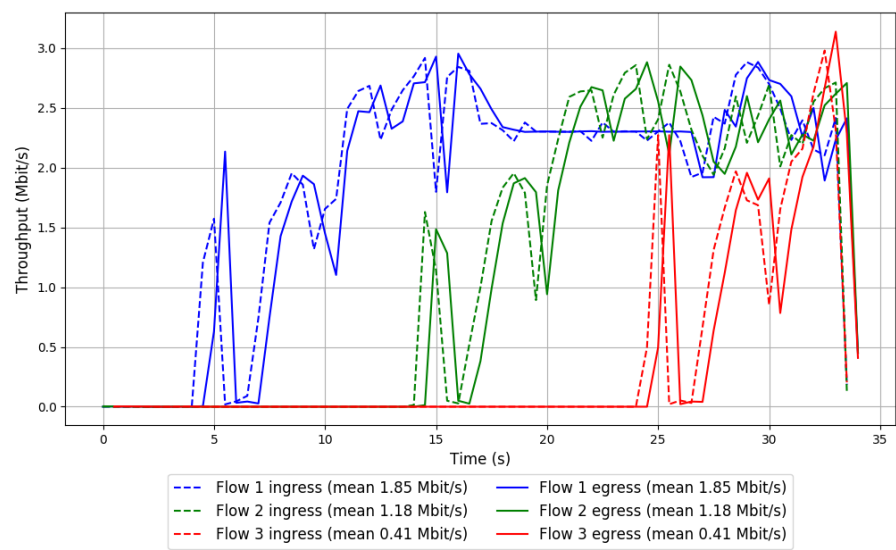


Run 2: Statistics of WebRTC media

Start at: 2018-11-30 00:19:53
End at: 2018-11-30 00:20:23
Local clock offset: -3.209 ms
Remote clock offset: -40.664 ms

Below is generated by plot.py at 2018-11-30 03:09:46
Datalink statistics
-- Total of 3 flows:
Average throughput: 3.41 Mbit/s
95th percentile per-packet one-way delay: 59.053 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.85 Mbit/s
95th percentile per-packet one-way delay: 58.719 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.18 Mbit/s
95th percentile per-packet one-way delay: 59.263 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.41 Mbit/s
95th percentile per-packet one-way delay: 59.143 ms
Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link

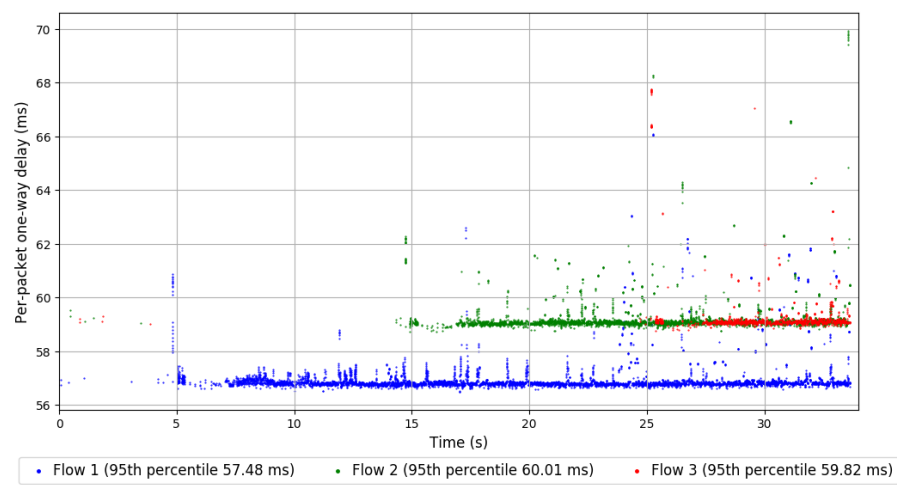
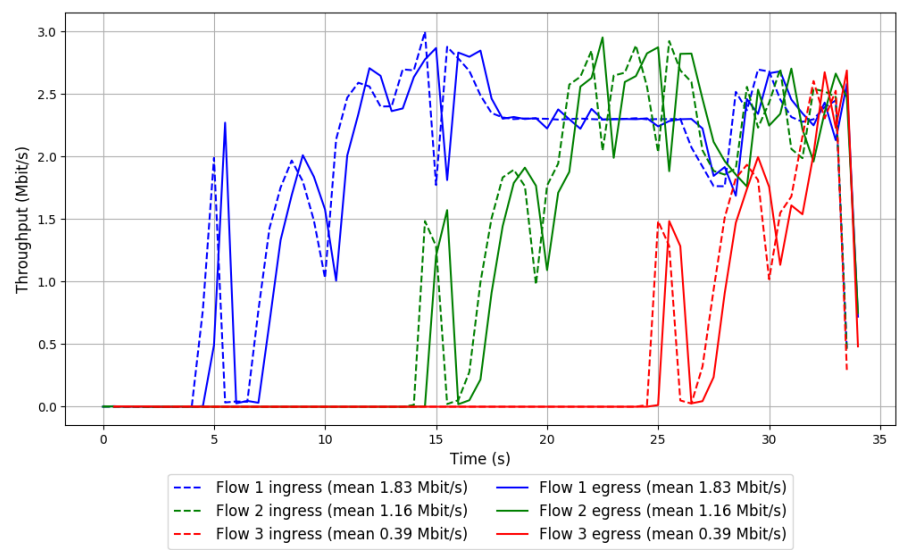


Run 3: Statistics of WebRTC media

Start at: 2018-11-30 00:53:03
End at: 2018-11-30 00:53:33
Local clock offset: -1.145 ms
Remote clock offset: -40.401 ms

Below is generated by plot.py at 2018-11-30 03:09:46
Datalink statistics
-- Total of 3 flows:
Average throughput: 3.34 Mbit/s
95th percentile per-packet one-way delay: 59.414 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.83 Mbit/s
95th percentile per-packet one-way delay: 57.482 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.16 Mbit/s
95th percentile per-packet one-way delay: 60.012 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.39 Mbit/s
95th percentile per-packet one-way delay: 59.821 ms
Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link

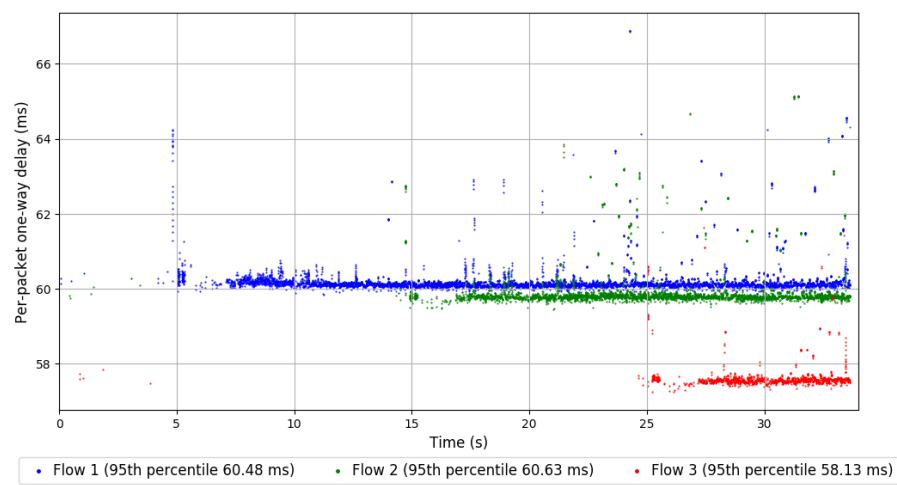
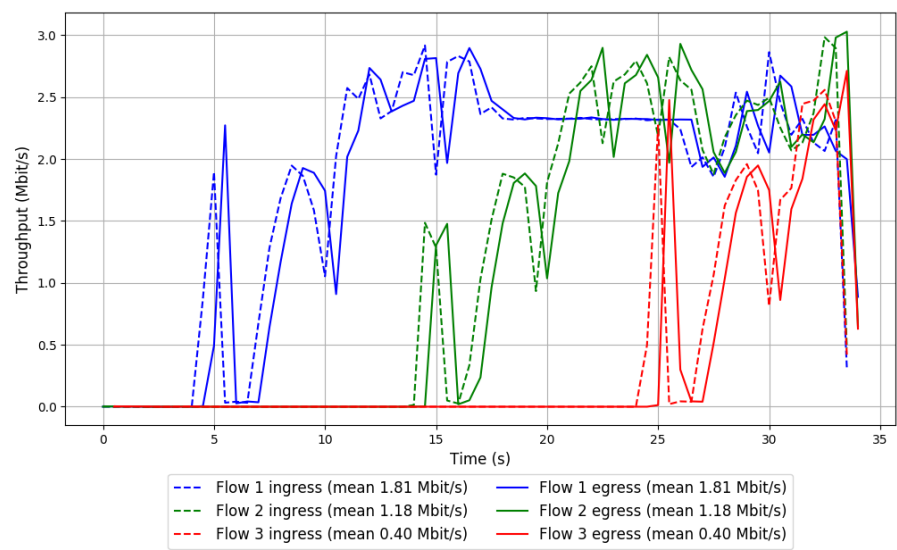


Run 4: Statistics of WebRTC media

Start at: 2018-11-30 01:36:12
End at: 2018-11-30 01:36:42
Local clock offset: 0.802 ms
Remote clock offset: -40.403 ms

Below is generated by plot.py at 2018-11-30 03:09:46
Datalink statistics
-- Total of 3 flows:
Average throughput: 3.36 Mbit/s
95th percentile per-packet one-way delay: 60.429 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.81 Mbit/s
95th percentile per-packet one-way delay: 60.479 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.18 Mbit/s
95th percentile per-packet one-way delay: 60.627 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 58.129 ms
Loss rate: 0.00%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-11-30 02:13:57
End at: 2018-11-30 02:14:27
Local clock offset: -1.565 ms
Remote clock offset: -38.026 ms

Below is generated by plot.py at 2018-11-30 03:09:46
Datalink statistics
-- Total of 3 flows:
Average throughput: 3.35 Mbit/s
95th percentile per-packet one-way delay: 63.294 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.81 Mbit/s
95th percentile per-packet one-way delay: 63.025 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.16 Mbit/s
95th percentile per-packet one-way delay: 63.795 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 62.645 ms
Loss rate: 0.00%

Run 5: Report of WebRTC media — Data Link

