

Pantheon Report

Generated at 2018-10-26 05:03:20 (UTC).

Data path: AWS California 2 on **ens5** (*local*) → Mexico on **em1** (*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 **time.stanford.edu** and have been applied to correct the timestamps in logs.

System info:

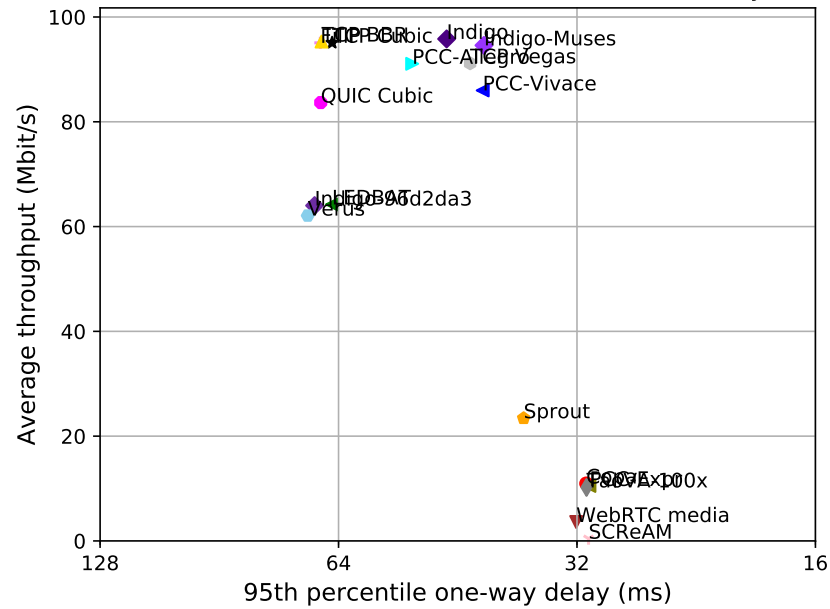
```
Linux 4.15.0-1023-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

Git summary:

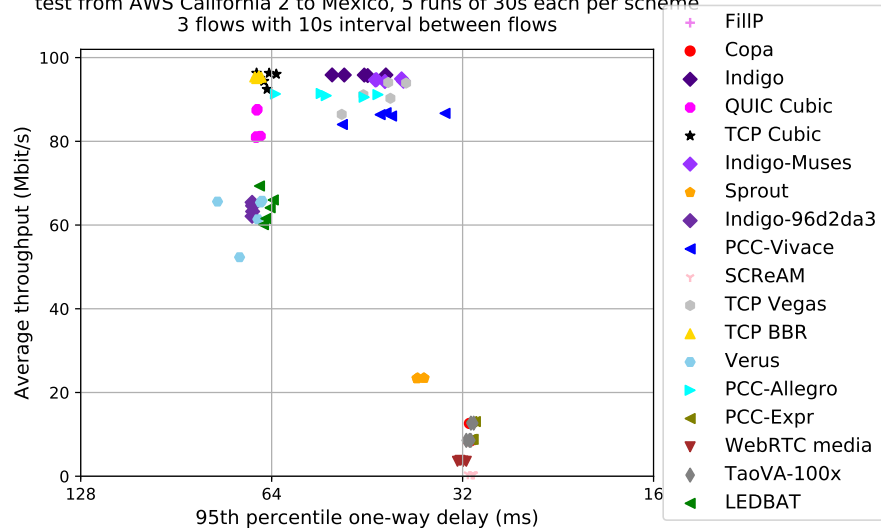
```
branch: muses @ 2e19c0464530faa92c63f8217c9971438a26a3be
third_party/fillp @ 5332fc9127c63565e13f4933b336c02d1aabdac6
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecd90c077e64d
third_party/indigo-96d2da3 @ 8413272d46f8aa0bcb967ed7048b6a8f994abb95
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 California 2 to Mexico, 5 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)



test from AWS California 2 to Mexico, 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	62.21	32.91	33.61	66.33	68.11	68.43	6.85	10.36	11.21
Copa	5	5.22	7.42	2.40	31.12	31.27	31.09	82.08	74.27	85.67
TCP Cubic	5	70.62	23.01	27.56	64.81	66.47	64.18	0.85	0.59	0.69
FillP	5	56.99	41.14	32.43	65.78	68.57	68.72	13.41	24.71	29.79
Indigo	5	66.60	29.87	28.86	44.55	49.56	49.28	0.02	0.02	0.00
Indigo-96d2da3	5	44.29	25.29	15.18	68.57	69.30	62.84	59.89	63.06	67.84
LEDBAT	5	40.51	26.94	17.84	63.81	66.15	61.75	0.13	0.24	0.28
Indigo-Muses	5	62.85	27.94	39.92	42.00	42.85	40.18	0.35	0.01	0.01
PCC-Allegro	5	81.76	9.67	8.74	51.26	52.91	54.74	1.33	0.98	1.73
PCC-Expr	5	3.43	7.91	5.52	30.74	30.86	30.89	70.35	48.78	35.92
QUIC Cubic	5	60.20	30.23	10.27	67.28	67.67	67.59	2.42	0.94	0.84
SCReAM	5	0.21	0.21	0.22	30.91	30.93	30.95	0.00	0.00	0.00
Sprout	5	11.83	11.72	11.51	37.23	37.50	37.64	0.01	0.01	0.06
TaoVA-100x	5	2.76	8.84	4.71	31.02	31.45	30.92	90.82	62.00	67.36
TCP Vegas	5	61.87	28.31	31.37	43.09	41.86	39.40	0.83	0.22	0.39
Verus	5	33.58	36.80	18.74	66.47	75.02	64.02	30.43	51.08	44.02
PCC-Vivace	5	67.20	21.99	12.62	40.95	44.50	47.08	0.00	0.00	0.01
WebRTC media	5	1.97	1.24	0.42	31.67	32.26	33.15	0.00	0.00	0.00

Run 1: Statistics of TCP BBR

Start at: 2018-10-26 03:10:27

End at: 2018-10-26 03:10:57

Local clock offset: 0.448 ms

Remote clock offset: -3.49 ms

Below is generated by plot.py at 2018-10-26 04:54:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 95.00 Mbit/s

95th percentile per-packet one-way delay: 67.559 ms

Loss rate: 8.34%

-- Flow 1:

Average throughput: 54.74 Mbit/s

95th percentile per-packet one-way delay: 66.379 ms

Loss rate: 6.41%

-- Flow 2:

Average throughput: 37.59 Mbit/s

95th percentile per-packet one-way delay: 68.514 ms

Loss rate: 10.80%

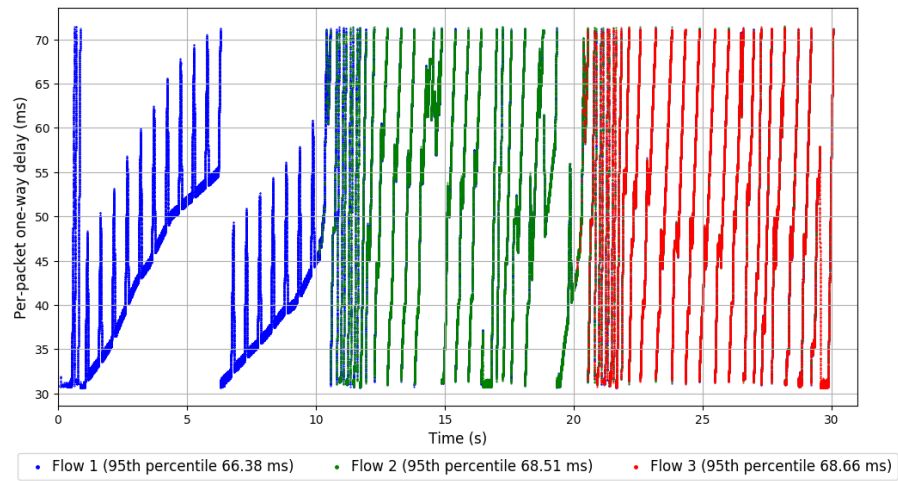
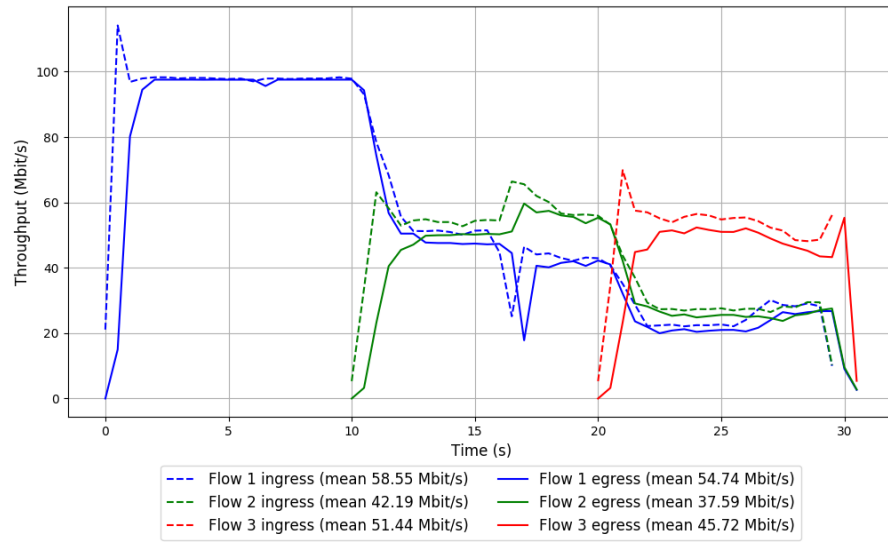
-- Flow 3:

Average throughput: 45.72 Mbit/s

95th percentile per-packet one-way delay: 68.661 ms

Loss rate: 10.93%

Run 1: Report of TCP BBR — Data Link

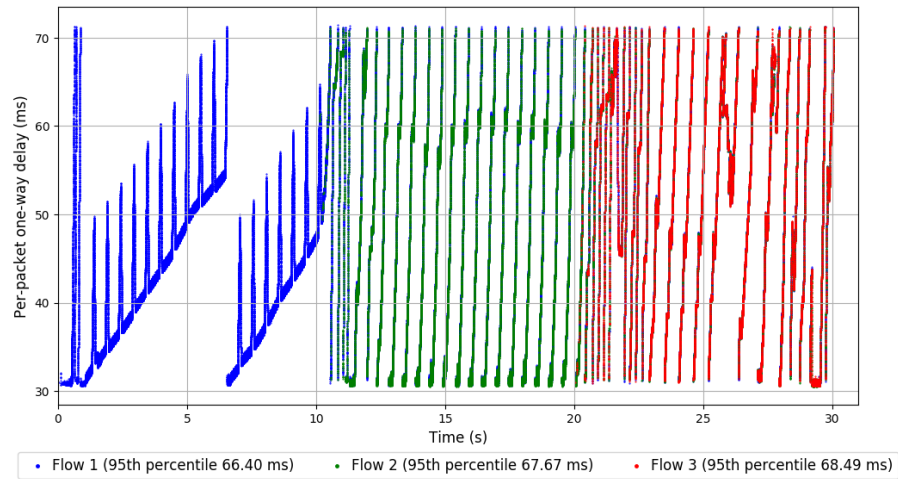
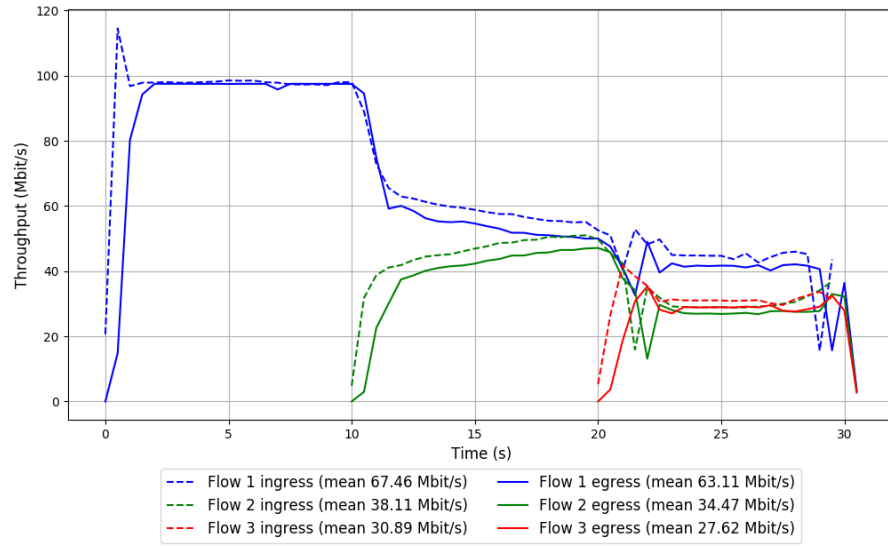


Run 2: Statistics of TCP BBR

Start at: 2018-10-26 03:34:59
End at: 2018-10-26 03:35:29
Local clock offset: 0.515 ms
Remote clock offset: -3.169 ms

Below is generated by plot.py at 2018-10-26 04:54:48
Datalink statistics
-- Total of 3 flows:
Average throughput: 95.27 Mbit/s
95th percentile per-packet one-way delay: 67.115 ms
Loss rate: 7.50%
-- Flow 1:
Average throughput: 63.11 Mbit/s
95th percentile per-packet one-way delay: 66.396 ms
Loss rate: 6.34%
-- Flow 2:
Average throughput: 34.47 Mbit/s
95th percentile per-packet one-way delay: 67.667 ms
Loss rate: 9.47%
-- Flow 3:
Average throughput: 27.62 Mbit/s
95th percentile per-packet one-way delay: 68.493 ms
Loss rate: 10.28%

Run 2: Report of TCP BBR — Data Link

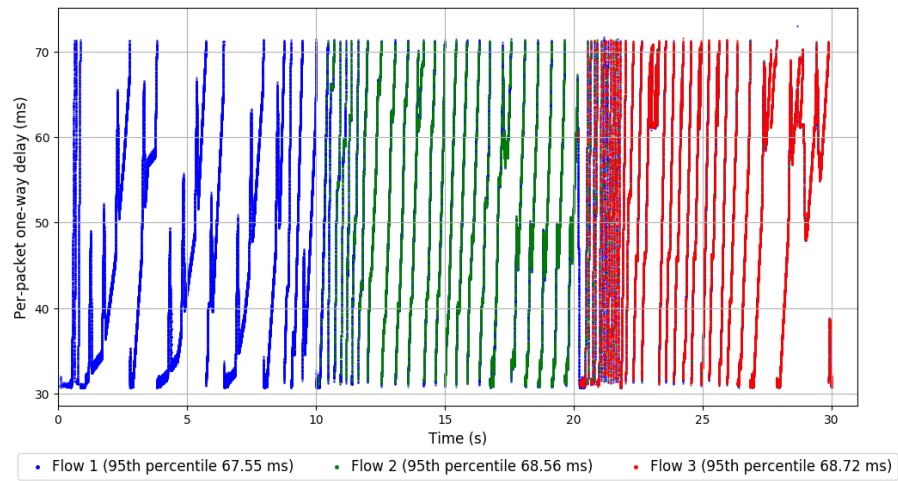
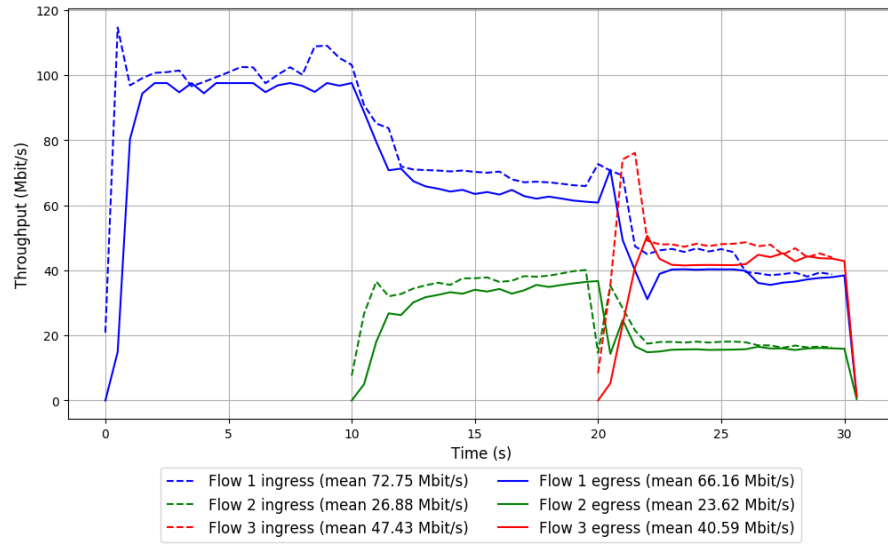


Run 3: Statistics of TCP BBR

Start at: 2018-10-26 03:59:28
End at: 2018-10-26 03:59:58
Local clock offset: 0.449 ms
Remote clock offset: -2.615 ms

Below is generated by plot.py at 2018-10-26 04:54:49
Datalink statistics
-- Total of 3 flows:
Average throughput: 95.38 Mbit/s
95th percentile per-packet one-way delay: 68.041 ms
Loss rate: 10.39%
-- Flow 1:
Average throughput: 66.16 Mbit/s
95th percentile per-packet one-way delay: 67.545 ms
Loss rate: 9.05%
-- Flow 2:
Average throughput: 23.62 Mbit/s
95th percentile per-packet one-way delay: 68.560 ms
Loss rate: 12.11%
-- Flow 3:
Average throughput: 40.59 Mbit/s
95th percentile per-packet one-way delay: 68.725 ms
Loss rate: 14.65%

Run 3: Report of TCP BBR — Data Link

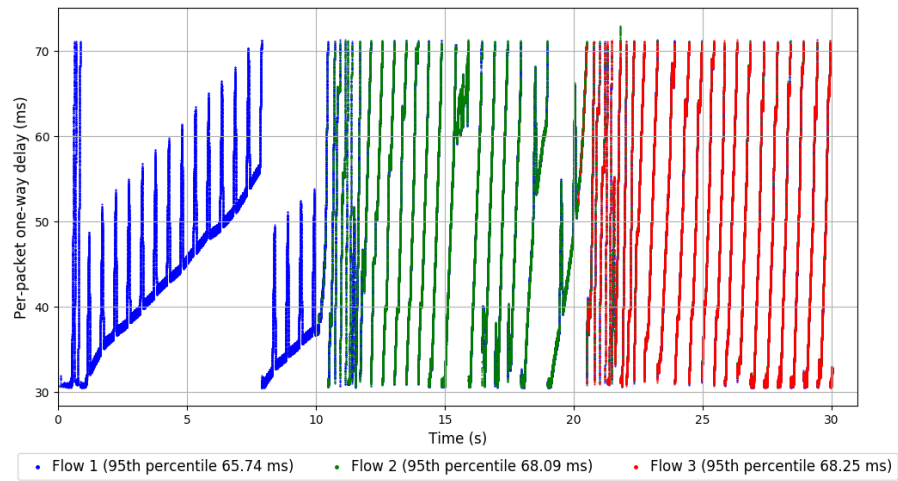
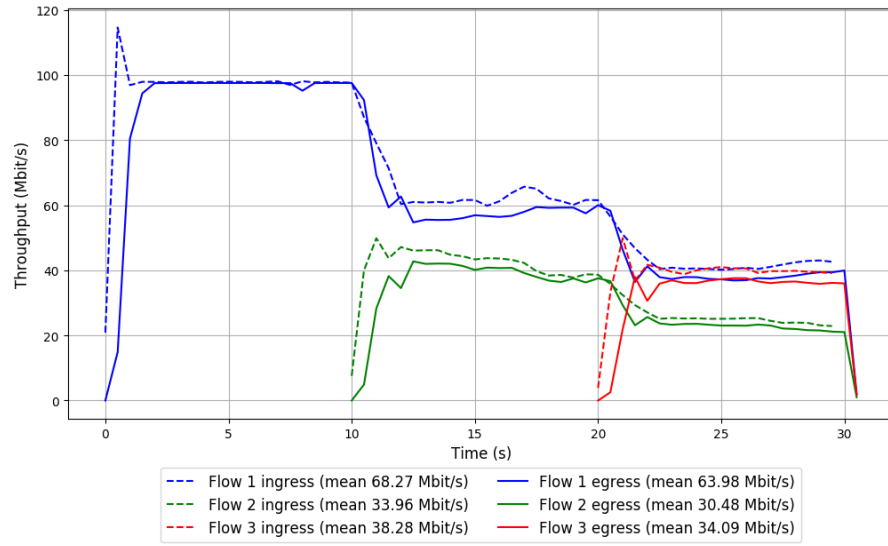


Run 4: Statistics of TCP BBR

Start at: 2018-10-26 04:24:22
End at: 2018-10-26 04:24:52
Local clock offset: -3.27 ms
Remote clock offset: -2.451 ms

Below is generated by plot.py at 2018-10-26 04:54:49
Datalink statistics
-- Total of 3 flows:
Average throughput: 95.60 Mbit/s
95th percentile per-packet one-way delay: 67.037 ms
Loss rate: 7.75%
-- Flow 1:
Average throughput: 63.98 Mbit/s
95th percentile per-packet one-way delay: 65.743 ms
Loss rate: 6.27%
-- Flow 2:
Average throughput: 30.48 Mbit/s
95th percentile per-packet one-way delay: 68.092 ms
Loss rate: 10.26%
-- Flow 3:
Average throughput: 34.09 Mbit/s
95th percentile per-packet one-way delay: 68.252 ms
Loss rate: 11.18%

Run 4: Report of TCP BBR — Data Link

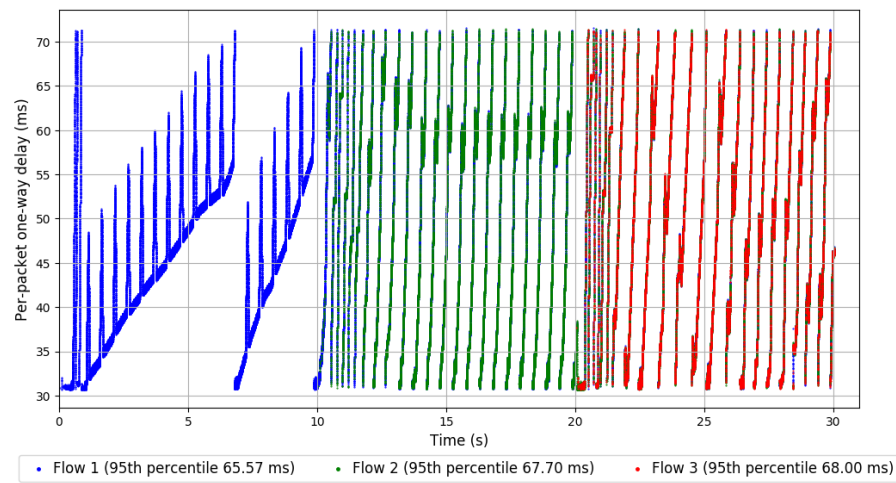
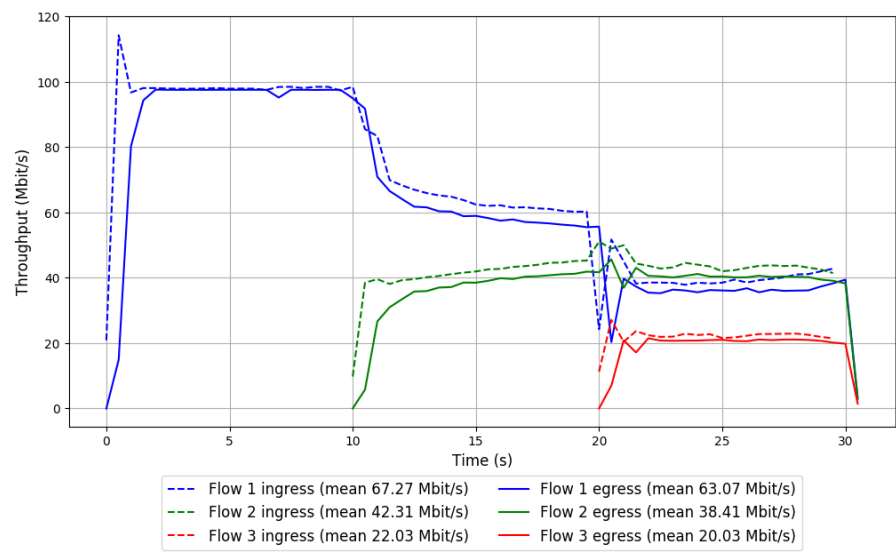


Run 5: Statistics of TCP BBR

Start at: 2018-10-26 04:48:50
End at: 2018-10-26 04:49:20
Local clock offset: -0.068 ms
Remote clock offset: -2.101 ms

Below is generated by plot.py at 2018-10-26 04:54:49
Datalink statistics
-- Total of 3 flows:
Average throughput: 95.34 Mbit/s
95th percentile per-packet one-way delay: 66.456 ms
Loss rate: 7.20%
-- Flow 1:
Average throughput: 63.07 Mbit/s
95th percentile per-packet one-way delay: 65.573 ms
Loss rate: 6.19%
-- Flow 2:
Average throughput: 38.41 Mbit/s
95th percentile per-packet one-way delay: 67.704 ms
Loss rate: 9.15%
-- Flow 3:
Average throughput: 20.03 Mbit/s
95th percentile per-packet one-way delay: 67.999 ms
Loss rate: 9.01%

Run 5: Report of TCP BBR — Data Link

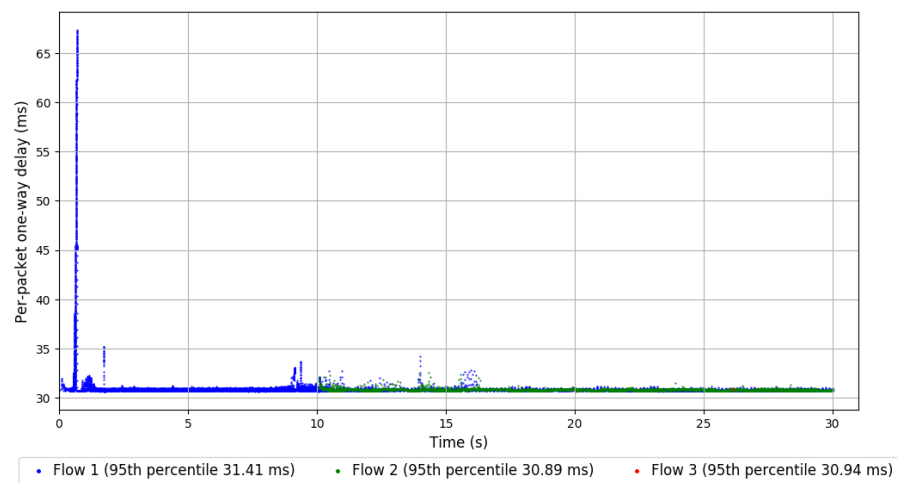
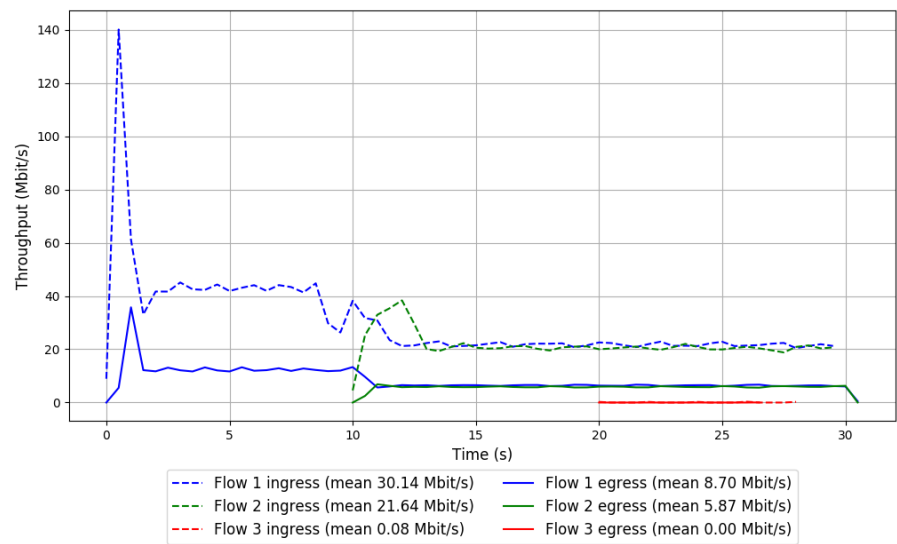


Run 1: Statistics of Copa

Start at: 2018-10-26 03:00:54
End at: 2018-10-26 03:01:24
Local clock offset: 0.463 ms
Remote clock offset: -3.715 ms

Below is generated by plot.py at 2018-10-26 04:54:49
Datalink statistics
-- Total of 3 flows:
Average throughput: 12.61 Mbit/s
95th percentile per-packet one-way delay: 31.062 ms
Loss rate: 71.70%
-- Flow 1:
Average throughput: 8.70 Mbit/s
95th percentile per-packet one-way delay: 31.411 ms
Loss rate: 71.12%
-- Flow 2:
Average throughput: 5.87 Mbit/s
95th percentile per-packet one-way delay: 30.885 ms
Loss rate: 72.88%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 30.940 ms
Loss rate: 96.07%

Run 1: Report of Copa — Data Link

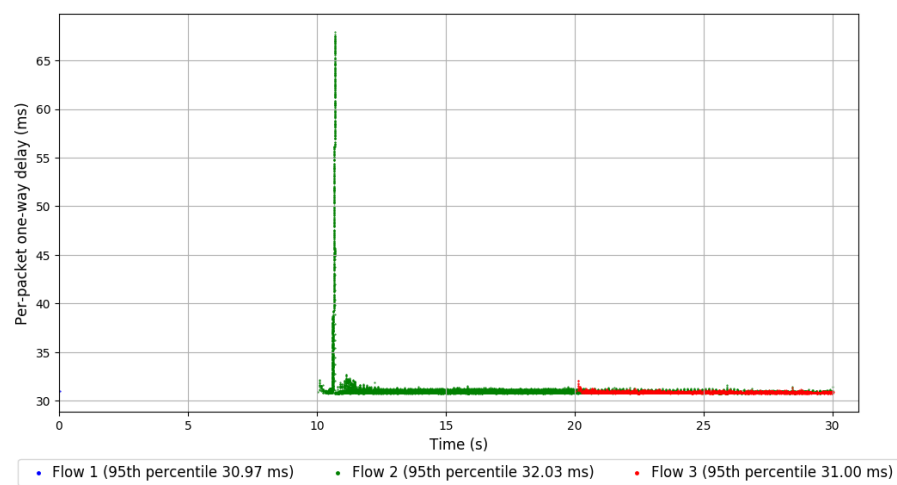
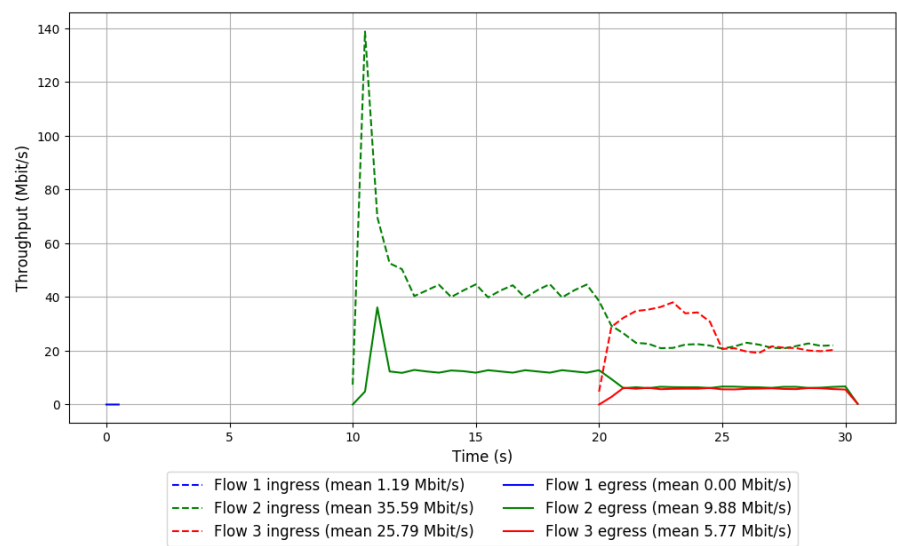


Run 2: Statistics of Copa

Start at: 2018-10-26 03:25:18
End at: 2018-10-26 03:25:48
Local clock offset: 0.509 ms
Remote clock offset: -3.196 ms

Below is generated by plot.py at 2018-10-26 04:54:49
Datalink statistics
-- Total of 3 flows:
Average throughput: 8.50 Mbit/s
95th percentile per-packet one-way delay: 31.380 ms
Loss rate: 73.67%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 30.969 ms
Loss rate: 98.80%
-- Flow 2:
Average throughput: 9.88 Mbit/s
95th percentile per-packet one-way delay: 32.034 ms
Loss rate: 72.24%
-- Flow 3:
Average throughput: 5.77 Mbit/s
95th percentile per-packet one-way delay: 31.005 ms
Loss rate: 77.62%

Run 2: Report of Copa — Data Link

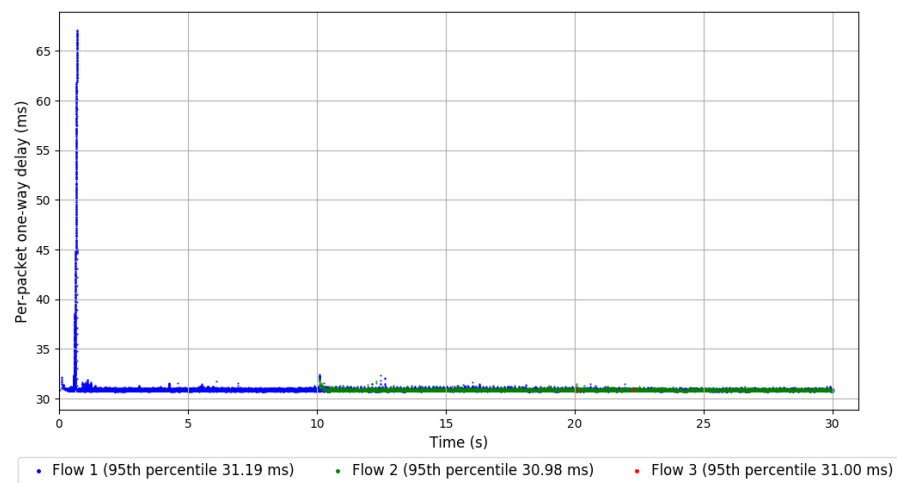
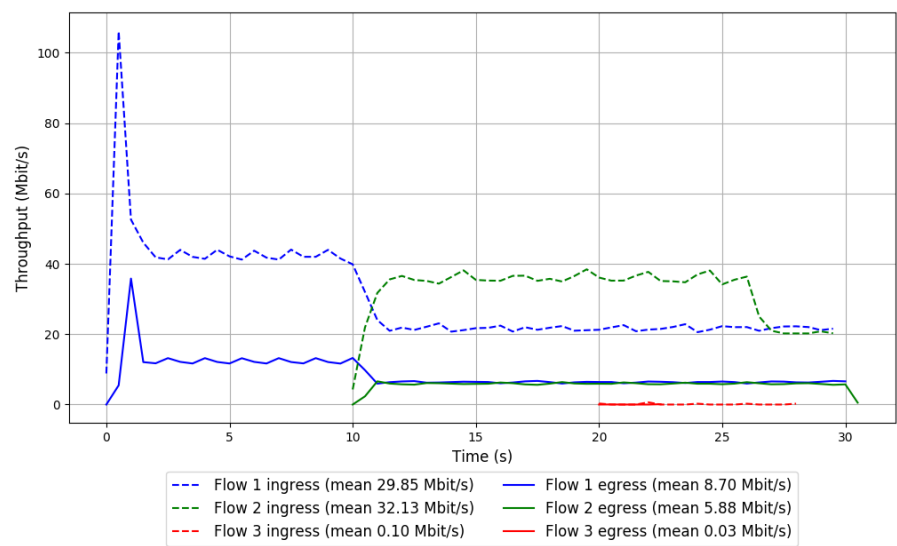


Run 3: Statistics of Copa

Start at: 2018-10-26 03:49:55
End at: 2018-10-26 03:50:25
Local clock offset: 0.463 ms
Remote clock offset: -2.781 ms

Below is generated by plot.py at 2018-10-26 04:54:49
Datalink statistics
-- Total of 3 flows:
Average throughput: 12.61 Mbit/s
95th percentile per-packet one-way delay: 31.072 ms
Loss rate: 75.39%
-- Flow 1:
Average throughput: 8.70 Mbit/s
95th percentile per-packet one-way delay: 31.191 ms
Loss rate: 70.86%
-- Flow 2:
Average throughput: 5.88 Mbit/s
95th percentile per-packet one-way delay: 30.979 ms
Loss rate: 81.69%
-- Flow 3:
Average throughput: 0.03 Mbit/s
95th percentile per-packet one-way delay: 30.999 ms
Loss rate: 92.53%

Run 3: Report of Copa — Data Link

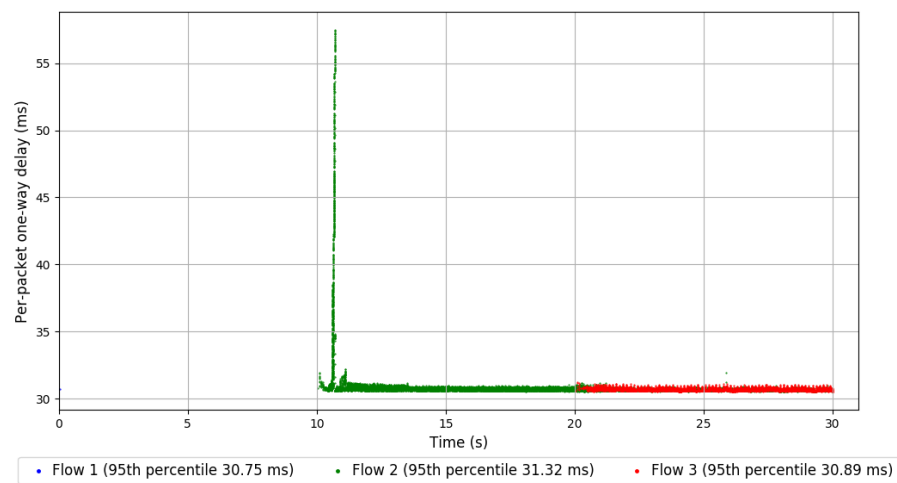
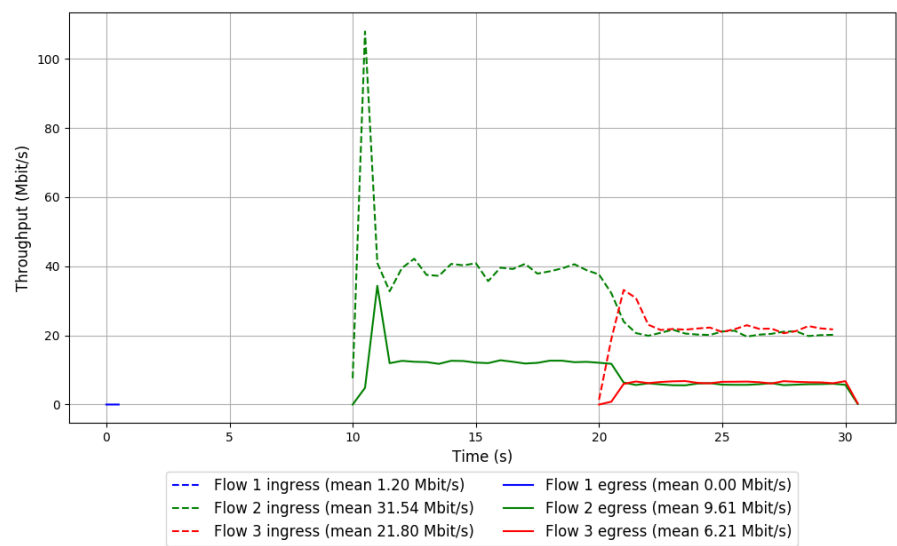


Run 4: Statistics of Copa

Start at: 2018-10-26 04:14:30
End at: 2018-10-26 04:15:00
Local clock offset: -2.376 ms
Remote clock offset: -2.514 ms

Below is generated by plot.py at 2018-10-26 04:54:49
Datalink statistics
-- Total of 3 flows:
Average throughput: 8.47 Mbit/s
95th percentile per-packet one-way delay: 31.041 ms
Loss rate: 70.03%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 30.745 ms
Loss rate: 98.80%
-- Flow 2:
Average throughput: 9.61 Mbit/s
95th percentile per-packet one-way delay: 31.320 ms
Loss rate: 69.53%
-- Flow 3:
Average throughput: 6.21 Mbit/s
95th percentile per-packet one-way delay: 30.885 ms
Loss rate: 71.50%

Run 4: Report of Copa — Data Link

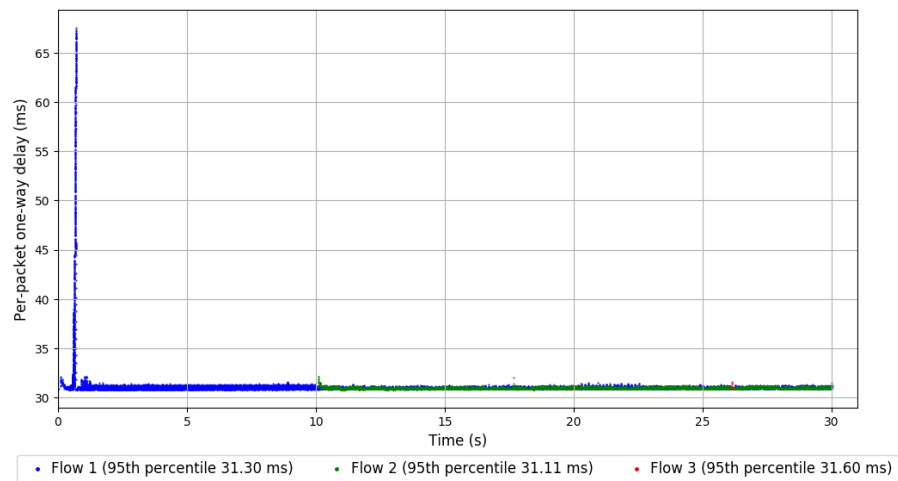
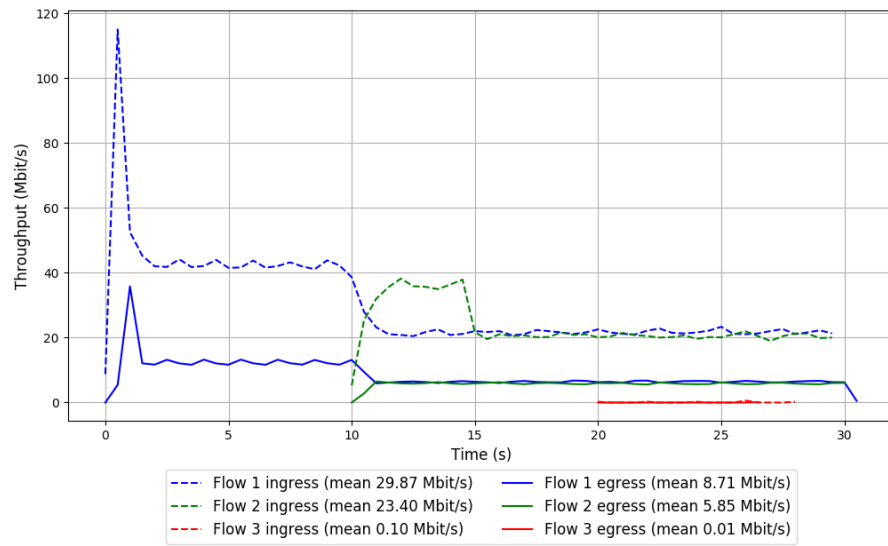


Run 5: Statistics of Copa

Start at: 2018-10-26 04:39:16
End at: 2018-10-26 04:39:46
Local clock offset: -1.291 ms
Remote clock offset: -2.242 ms

Below is generated by plot.py at 2018-10-26 04:54:49
Datalink statistics
-- Total of 3 flows:
Average throughput: 12.61 Mbit/s
95th percentile per-packet one-way delay: 31.223 ms
Loss rate: 72.27%
-- Flow 1:
Average throughput: 8.71 Mbit/s
95th percentile per-packet one-way delay: 31.297 ms
Loss rate: 70.83%
-- Flow 2:
Average throughput: 5.85 Mbit/s
95th percentile per-packet one-way delay: 31.108 ms
Loss rate: 74.99%
-- Flow 3:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 31.596 ms
Loss rate: 90.65%

Run 5: Report of Copa — Data Link

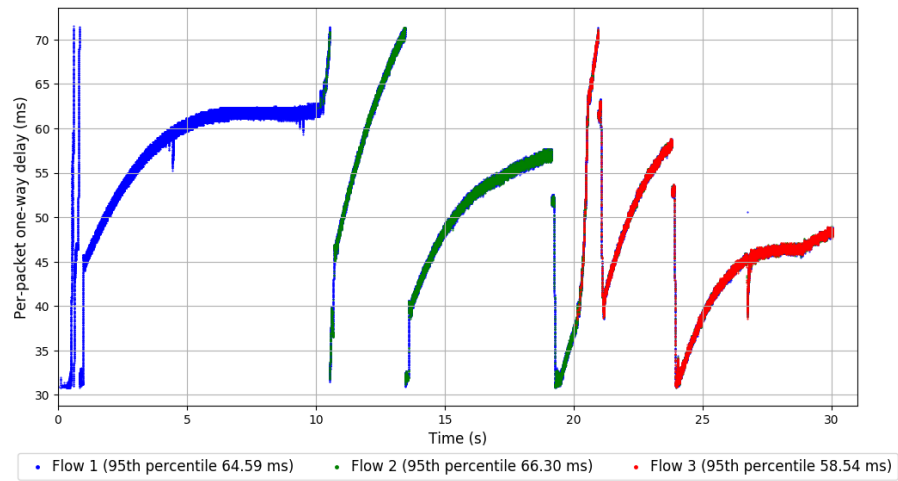
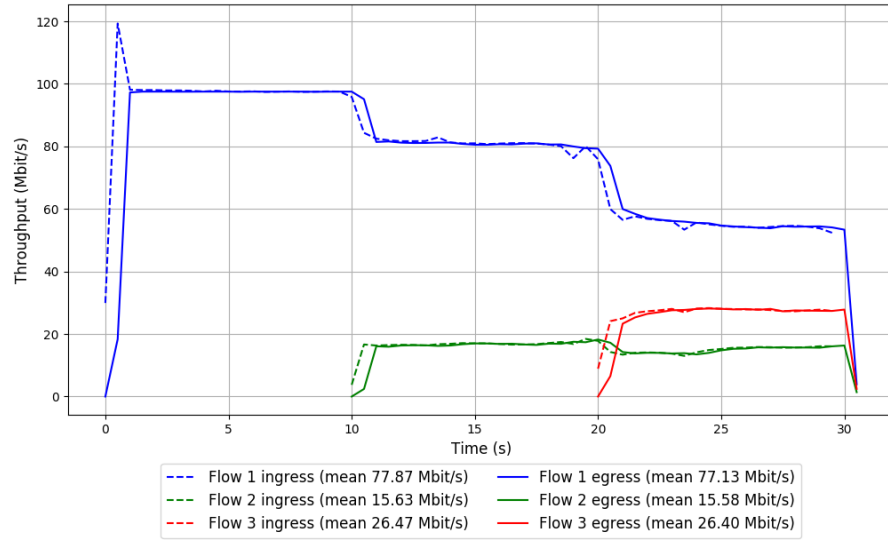


Run 1: Statistics of TCP Cubic

Start at: 2018-10-26 02:59:31
End at: 2018-10-26 03:00:01
Local clock offset: 0.431 ms
Remote clock offset: -3.578 ms

Below is generated by plot.py at 2018-10-26 04:55:06
Datalink statistics
-- Total of 3 flows:
Average throughput: 96.28 Mbit/s
95th percentile per-packet one-way delay: 64.574 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 77.13 Mbit/s
95th percentile per-packet one-way delay: 64.588 ms
Loss rate: 0.88%
-- Flow 2:
Average throughput: 15.58 Mbit/s
95th percentile per-packet one-way delay: 66.300 ms
Loss rate: 0.39%
-- Flow 3:
Average throughput: 26.40 Mbit/s
95th percentile per-packet one-way delay: 58.540 ms
Loss rate: 0.16%

Run 1: Report of TCP Cubic — Data Link

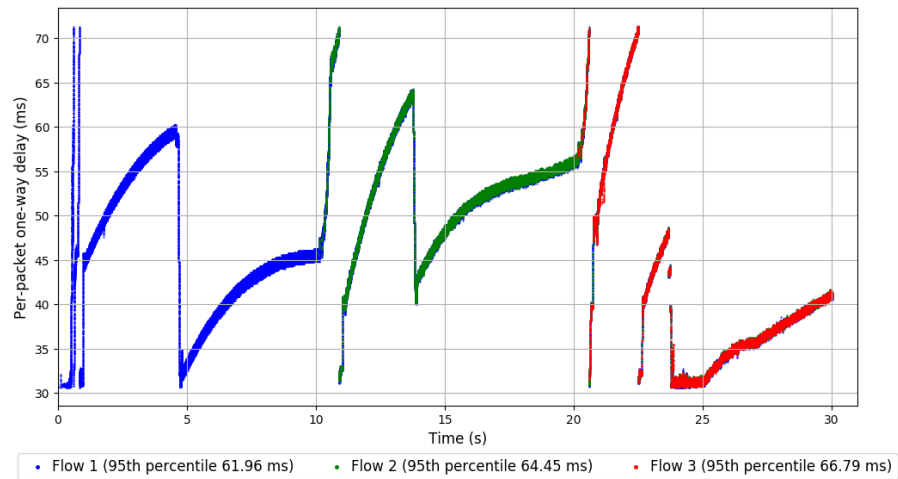
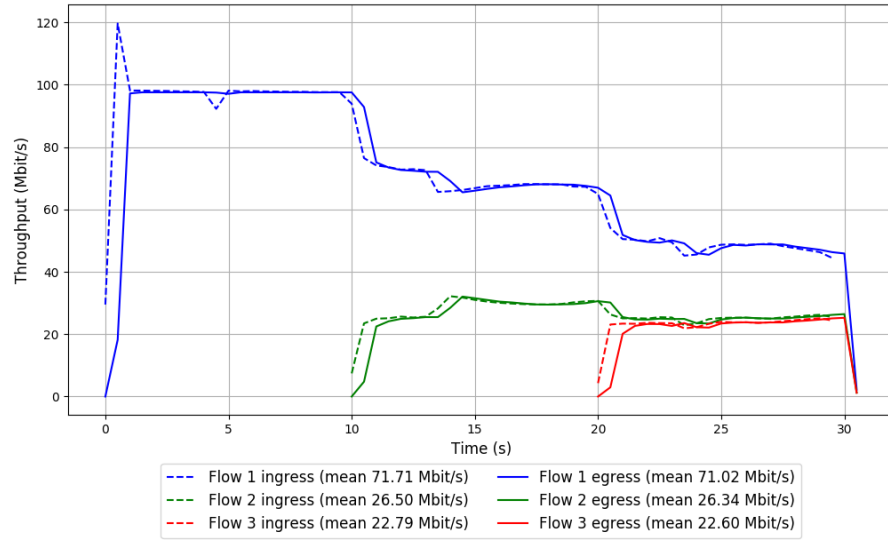


Run 2: Statistics of TCP Cubic

Start at: 2018-10-26 03:23:55
End at: 2018-10-26 03:24:25
Local clock offset: 0.51 ms
Remote clock offset: -3.283 ms

Below is generated by plot.py at 2018-10-26 04:55:10
Datalink statistics
-- Total of 3 flows:
Average throughput: 96.05 Mbit/s
95th percentile per-packet one-way delay: 62.926 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 71.02 Mbit/s
95th percentile per-packet one-way delay: 61.959 ms
Loss rate: 0.93%
-- Flow 2:
Average throughput: 26.34 Mbit/s
95th percentile per-packet one-way delay: 64.452 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 22.60 Mbit/s
95th percentile per-packet one-way delay: 66.787 ms
Loss rate: 1.02%

Run 2: Report of TCP Cubic — Data Link

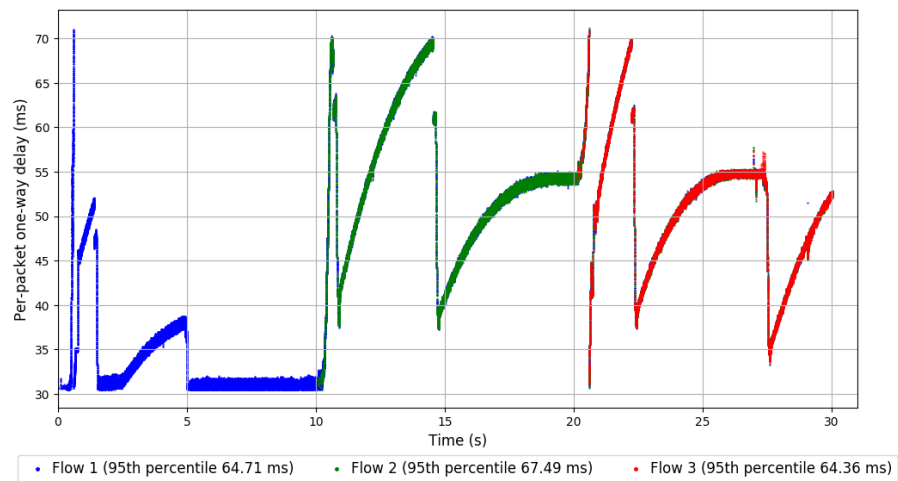
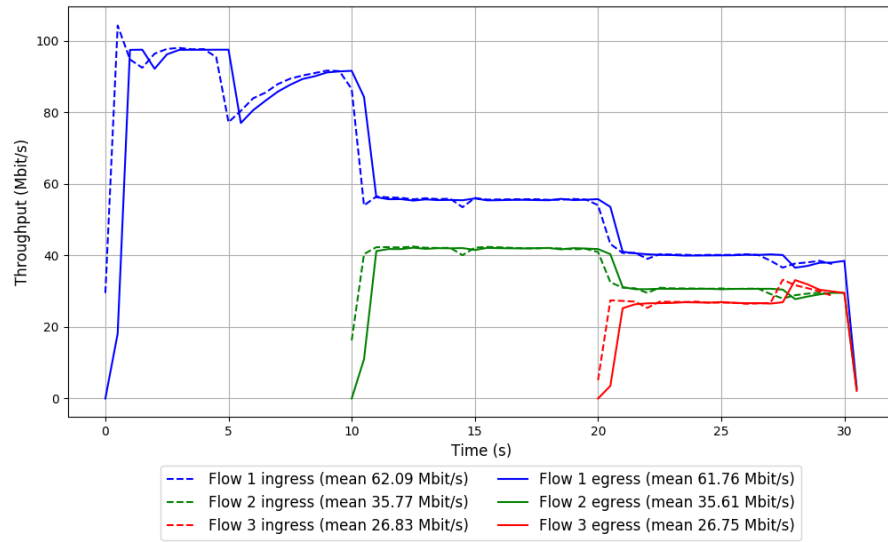


Run 3: Statistics of TCP Cubic

Start at: 2018-10-26 03:48:32
End at: 2018-10-26 03:49:02
Local clock offset: 0.467 ms
Remote clock offset: -3.006 ms

Below is generated by plot.py at 2018-10-26 04:55:17
Datalink statistics
-- Total of 3 flows:
Average throughput: 94.37 Mbit/s
95th percentile per-packet one-way delay: 65.844 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 61.76 Mbit/s
95th percentile per-packet one-way delay: 64.710 ms
Loss rate: 0.46%
-- Flow 2:
Average throughput: 35.61 Mbit/s
95th percentile per-packet one-way delay: 67.490 ms
Loss rate: 0.35%
-- Flow 3:
Average throughput: 26.75 Mbit/s
95th percentile per-packet one-way delay: 64.356 ms
Loss rate: 0.34%

Run 3: Report of TCP Cubic — Data Link

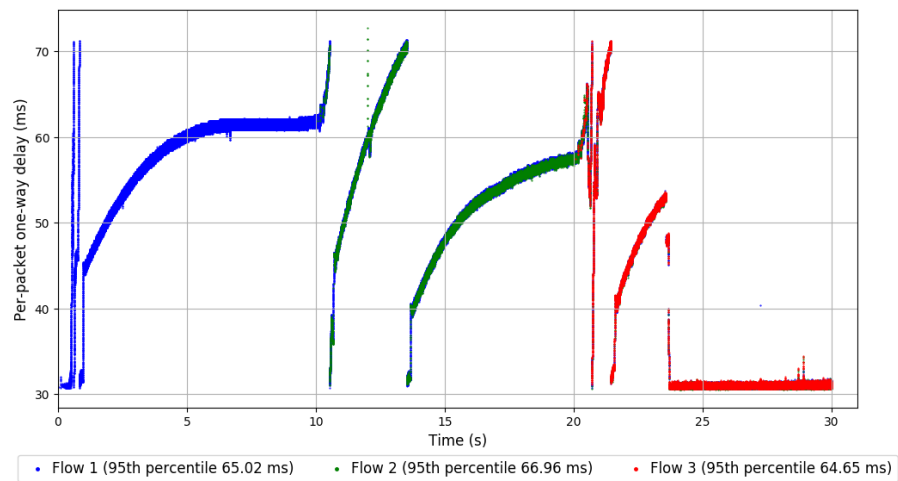
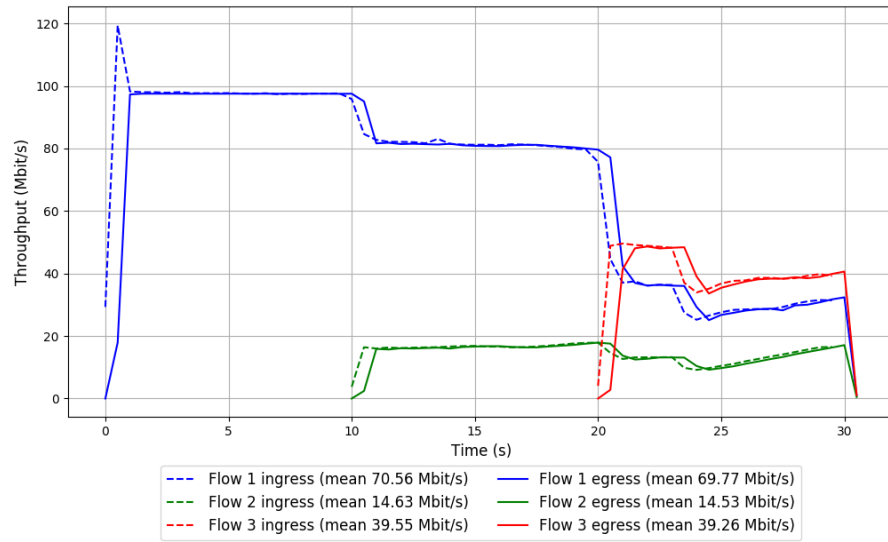


Run 4: Statistics of TCP Cubic

Start at: 2018-10-26 04:13:07
End at: 2018-10-26 04:13:37
Local clock offset: -2.224 ms
Remote clock offset: -2.517 ms

Below is generated by plot.py at 2018-10-26 04:55:51
Datalink statistics
-- Total of 3 flows:
Average throughput: 92.45 Mbit/s
95th percentile per-packet one-way delay: 65.065 ms
Loss rate: 1.06%
-- Flow 1:
Average throughput: 69.77 Mbit/s
95th percentile per-packet one-way delay: 65.016 ms
Loss rate: 1.11%
-- Flow 2:
Average throughput: 14.53 Mbit/s
95th percentile per-packet one-way delay: 66.958 ms
Loss rate: 0.79%
-- Flow 3:
Average throughput: 39.26 Mbit/s
95th percentile per-packet one-way delay: 64.648 ms
Loss rate: 1.00%

Run 4: Report of TCP Cubic — Data Link

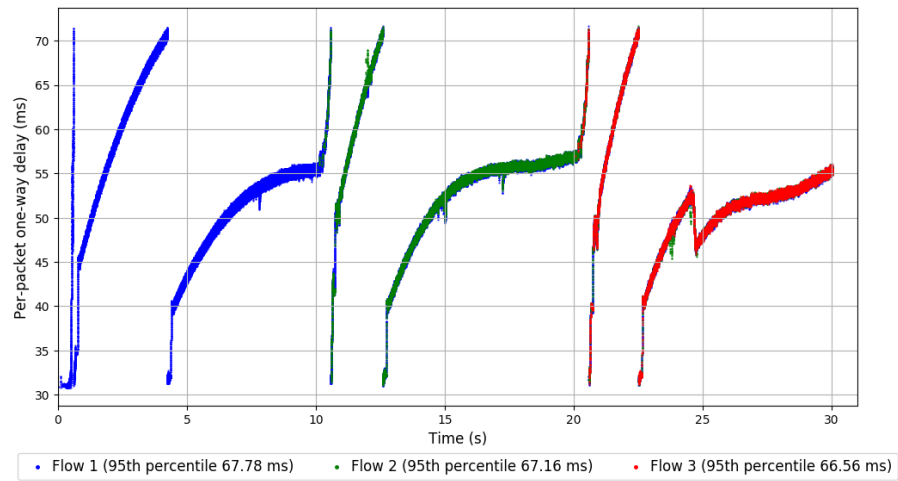
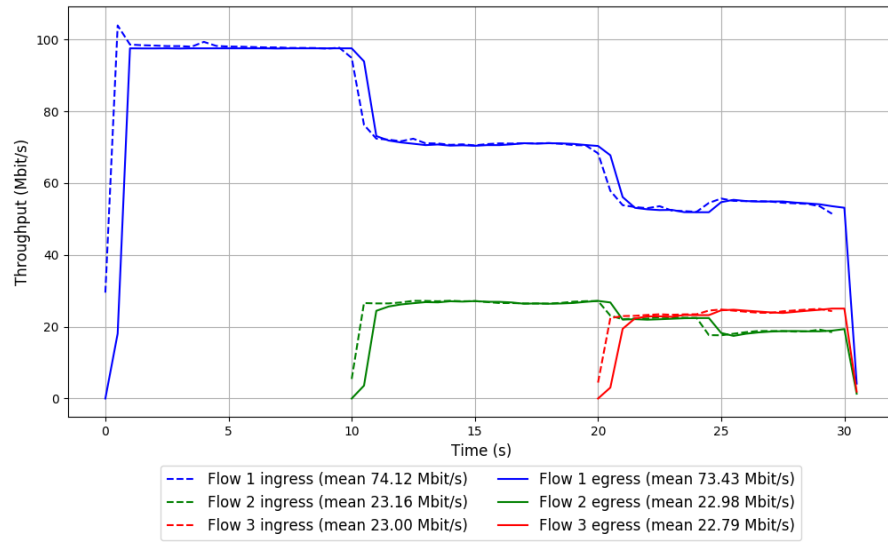


Run 5: Statistics of TCP Cubic

Start at: 2018-10-26 04:37:53
End at: 2018-10-26 04:38:23
Local clock offset: -1.655 ms
Remote clock offset: -2.301 ms

Below is generated by plot.py at 2018-10-26 04:55:56
Datalink statistics
-- Total of 3 flows:
Average throughput: 96.30 Mbit/s
95th percentile per-packet one-way delay: 67.606 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 73.43 Mbit/s
95th percentile per-packet one-way delay: 67.777 ms
Loss rate: 0.85%
-- Flow 2:
Average throughput: 22.98 Mbit/s
95th percentile per-packet one-way delay: 67.156 ms
Loss rate: 0.79%
-- Flow 3:
Average throughput: 22.79 Mbit/s
95th percentile per-packet one-way delay: 66.561 ms
Loss rate: 0.92%

Run 5: Report of TCP Cubic — Data Link

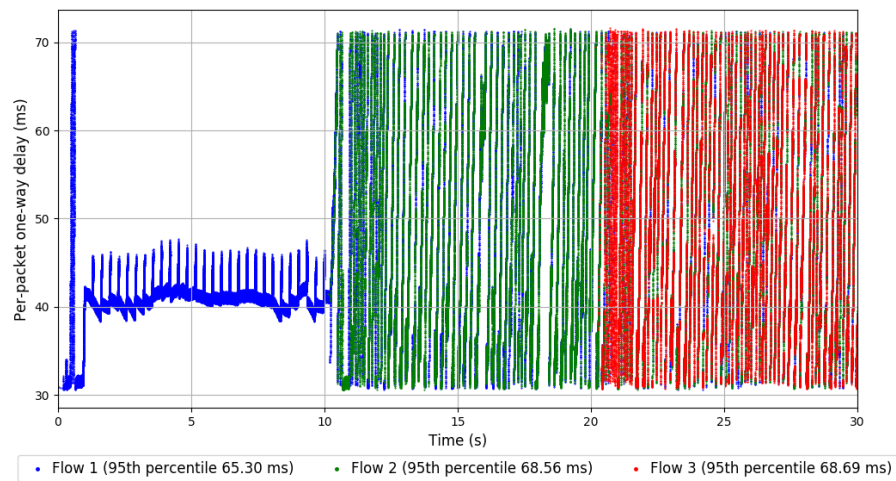
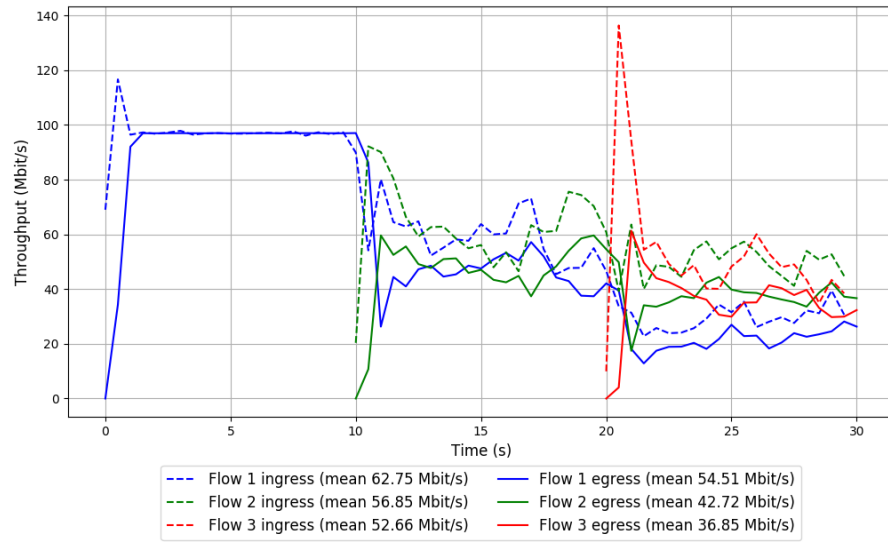


Run 1: Statistics of FillP

Start at: 2018-10-26 02:56:50
End at: 2018-10-26 02:57:20
Local clock offset: 0.349 ms
Remote clock offset: -3.676 ms

Below is generated by plot.py at 2018-10-26 04:56:19
Datalink statistics
-- Total of 3 flows:
Average throughput: 95.14 Mbit/s
95th percentile per-packet one-way delay: 67.423 ms
Loss rate: 19.39%
-- Flow 1:
Average throughput: 54.51 Mbit/s
95th percentile per-packet one-way delay: 65.303 ms
Loss rate: 13.11%
-- Flow 2:
Average throughput: 42.72 Mbit/s
95th percentile per-packet one-way delay: 68.564 ms
Loss rate: 24.86%
-- Flow 3:
Average throughput: 36.85 Mbit/s
95th percentile per-packet one-way delay: 68.693 ms
Loss rate: 30.11%

Run 1: Report of FillP — Data Link

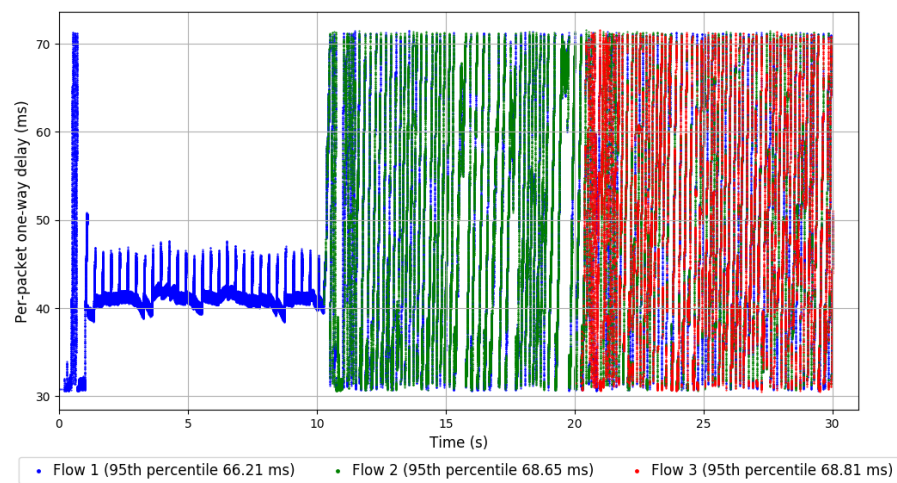
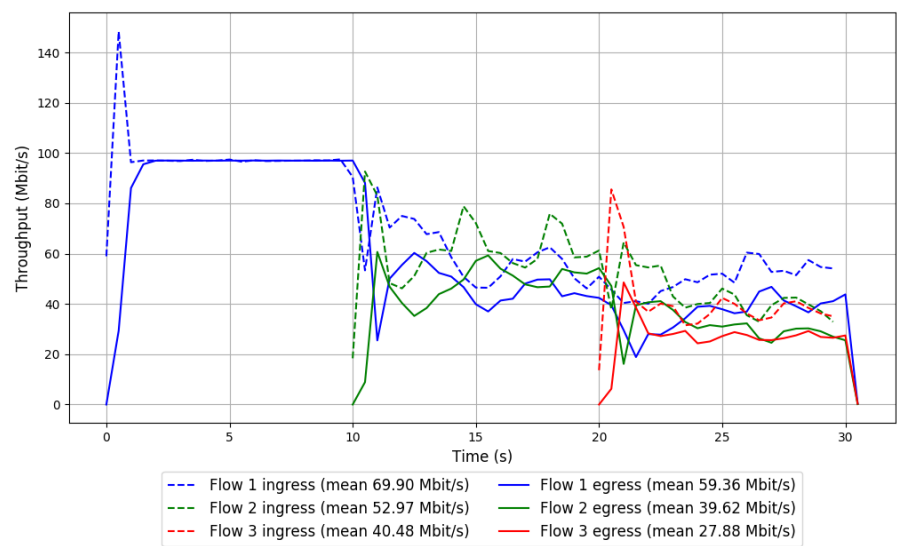


Run 2: Statistics of FillP

Start at: 2018-10-26 03:21:14
End at: 2018-10-26 03:21:44
Local clock offset: 0.474 ms
Remote clock offset: -3.265 ms

Below is generated by plot.py at 2018-10-26 04:56:20
Datalink statistics
-- Total of 3 flows:
Average throughput: 94.97 Mbit/s
95th percentile per-packet one-way delay: 67.599 ms
Loss rate: 19.85%
-- Flow 1:
Average throughput: 59.36 Mbit/s
95th percentile per-packet one-way delay: 66.214 ms
Loss rate: 15.02%
-- Flow 2:
Average throughput: 39.62 Mbit/s
95th percentile per-packet one-way delay: 68.646 ms
Loss rate: 25.18%
-- Flow 3:
Average throughput: 27.88 Mbit/s
95th percentile per-packet one-way delay: 68.805 ms
Loss rate: 31.01%

Run 2: Report of FillP — Data Link

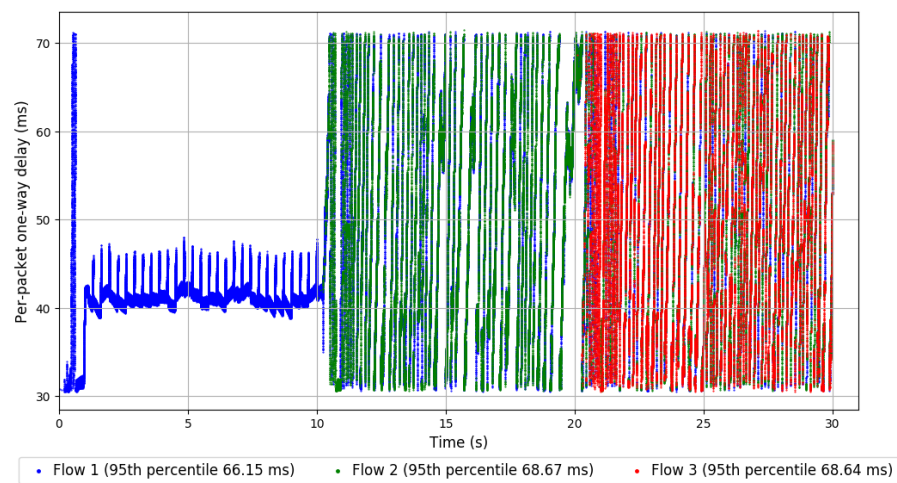
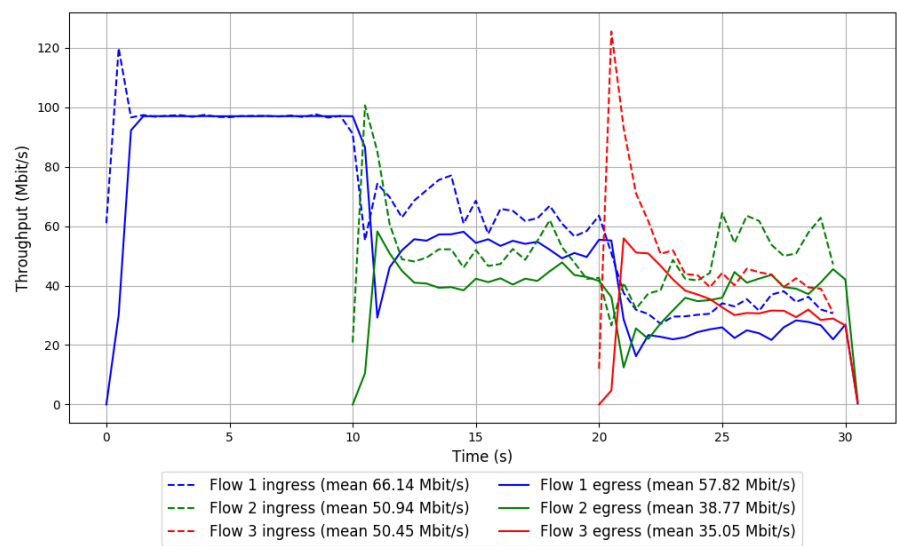


Run 3: Statistics of FillP

Start at: 2018-10-26 03:45:51
End at: 2018-10-26 03:46:21
Local clock offset: 0.473 ms
Remote clock offset: -2.824 ms

Below is generated by plot.py at 2018-10-26 04:56:21
Datalink statistics
-- Total of 3 flows:
Average throughput: 95.22 Mbit/s
95th percentile per-packet one-way delay: 67.540 ms
Loss rate: 18.38%
-- Flow 1:
Average throughput: 57.82 Mbit/s
95th percentile per-packet one-way delay: 66.149 ms
Loss rate: 12.50%
-- Flow 2:
Average throughput: 38.77 Mbit/s
95th percentile per-packet one-way delay: 68.670 ms
Loss rate: 23.83%
-- Flow 3:
Average throughput: 35.05 Mbit/s
95th percentile per-packet one-way delay: 68.644 ms
Loss rate: 30.59%

Run 3: Report of FillP — Data Link

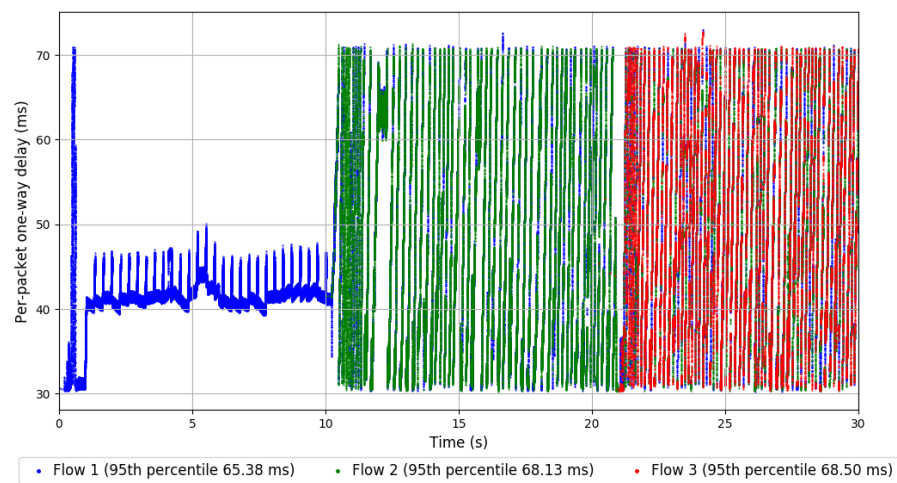
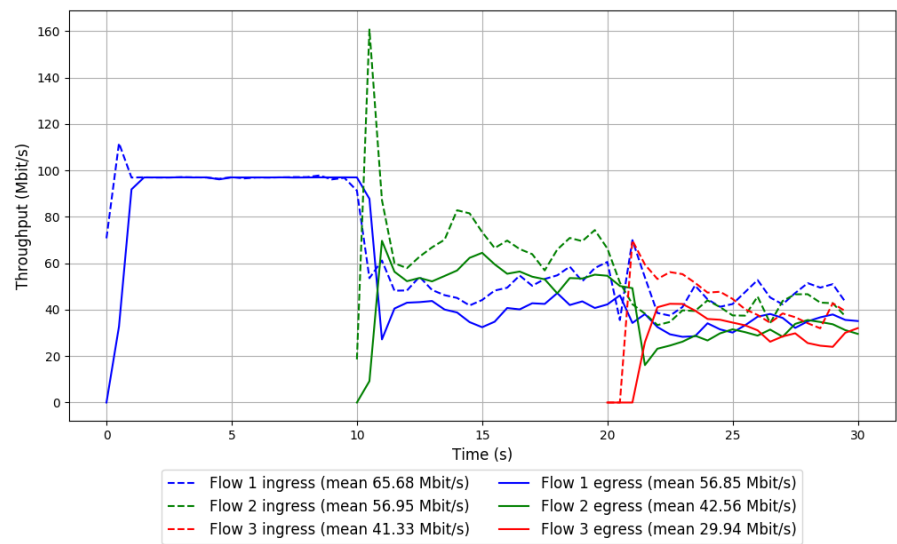


Run 4: Statistics of FillP

Start at: 2018-10-26 04:10:26
End at: 2018-10-26 04:10:56
Local clock offset: -1.79 ms
Remote clock offset: -2.682 ms

Below is generated by plot.py at 2018-10-26 04:56:37
Datalink statistics
-- Total of 3 flows:
Average throughput: 94.91 Mbit/s
95th percentile per-packet one-way delay: 67.095 ms
Loss rate: 19.05%
-- Flow 1:
Average throughput: 56.85 Mbit/s
95th percentile per-packet one-way delay: 65.379 ms
Loss rate: 13.40%
-- Flow 2:
Average throughput: 42.56 Mbit/s
95th percentile per-packet one-way delay: 68.133 ms
Loss rate: 25.25%
-- Flow 3:
Average throughput: 29.94 Mbit/s
95th percentile per-packet one-way delay: 68.496 ms
Loss rate: 29.00%

Run 4: Report of FillP — Data Link

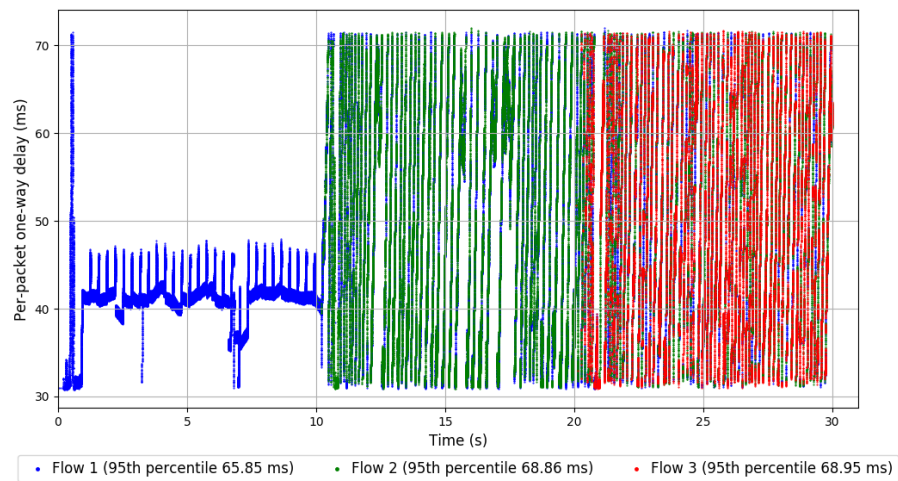
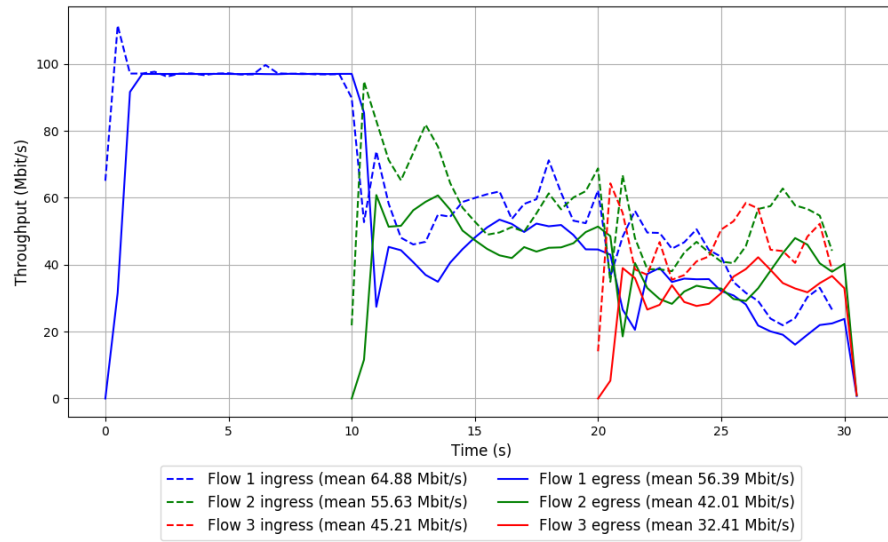


Run 5: Statistics of FillP

Start at: 2018-10-26 04:35:12
End at: 2018-10-26 04:35:42
Local clock offset: -2.333 ms
Remote clock offset: -2.251 ms

Below is generated by plot.py at 2018-10-26 04:56:41
Datalink statistics
-- Total of 3 flows:
Average throughput: 95.12 Mbit/s
95th percentile per-packet one-way delay: 67.711 ms
Loss rate: 18.57%
-- Flow 1:
Average throughput: 56.39 Mbit/s
95th percentile per-packet one-way delay: 65.852 ms
Loss rate: 13.00%
-- Flow 2:
Average throughput: 42.01 Mbit/s
95th percentile per-packet one-way delay: 68.857 ms
Loss rate: 24.41%
-- Flow 3:
Average throughput: 32.41 Mbit/s
95th percentile per-packet one-way delay: 68.950 ms
Loss rate: 28.24%

Run 5: Report of FillP — Data Link

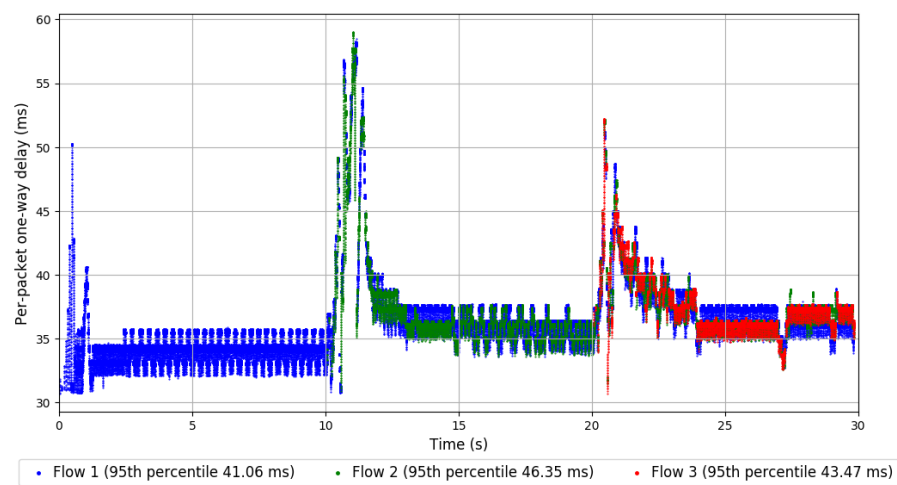
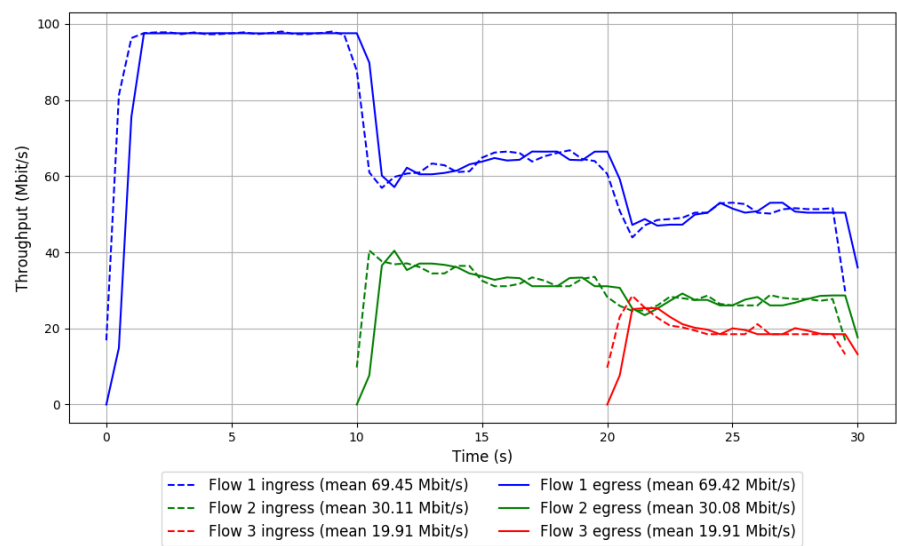



```
Run 1: Statistics of Indigo

Start at: 2018-10-26 03:13:11
End at: 2018-10-26 03:13:41
Local clock offset: 0.463 ms
Remote clock offset: -3.392 ms

# Below is generated by plot.py at 2018-10-26 04:56:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.86 Mbit/s
95th percentile per-packet one-way delay: 42.277 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 69.42 Mbit/s
95th percentile per-packet one-way delay: 41.060 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 30.08 Mbit/s
95th percentile per-packet one-way delay: 46.346 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 19.91 Mbit/s
95th percentile per-packet one-way delay: 43.468 ms
Loss rate: 0.00%
```

Run 1: Report of Indigo — Data Link

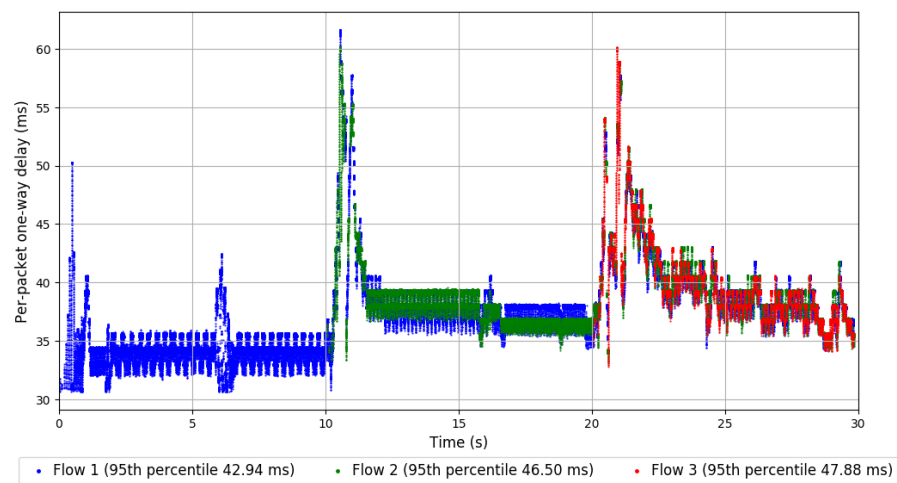
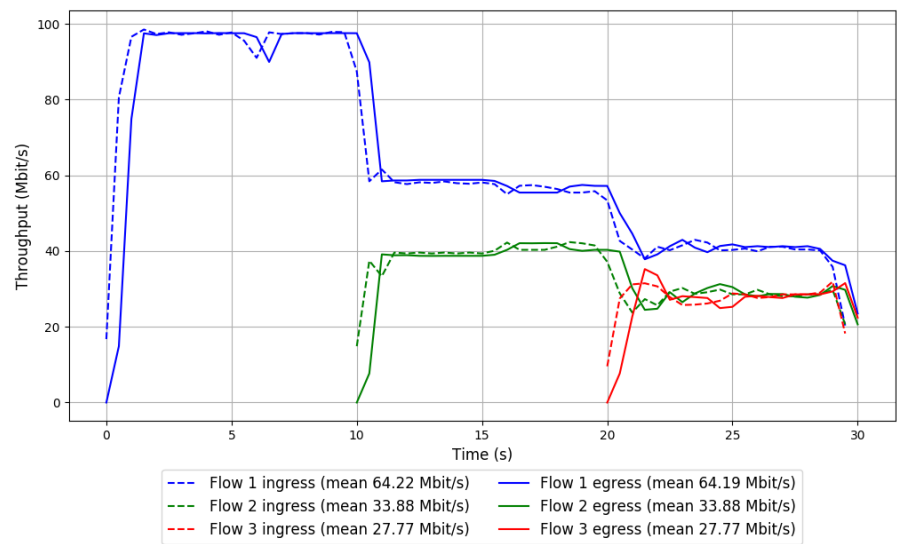


Run 2: Statistics of Indigo

Start at: 2018-10-26 03:37:46
End at: 2018-10-26 03:38:16
Local clock offset: 0.48 ms
Remote clock offset: -2.966 ms

Below is generated by plot.py at 2018-10-26 04:57:02
Datalink statistics
-- Total of 3 flows:
Average throughput: 95.70 Mbit/s
95th percentile per-packet one-way delay: 45.159 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 64.19 Mbit/s
95th percentile per-packet one-way delay: 42.936 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 33.88 Mbit/s
95th percentile per-packet one-way delay: 46.497 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 27.77 Mbit/s
95th percentile per-packet one-way delay: 47.877 ms
Loss rate: 0.00%

Run 2: Report of Indigo — Data Link

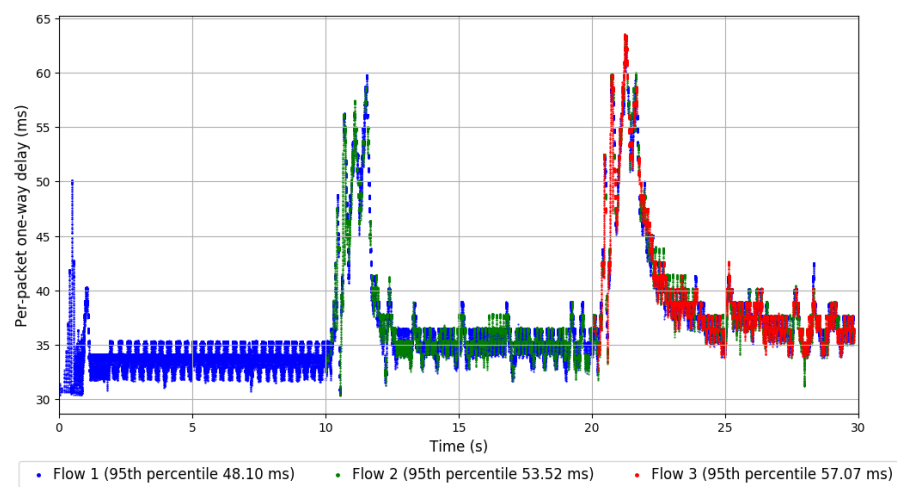
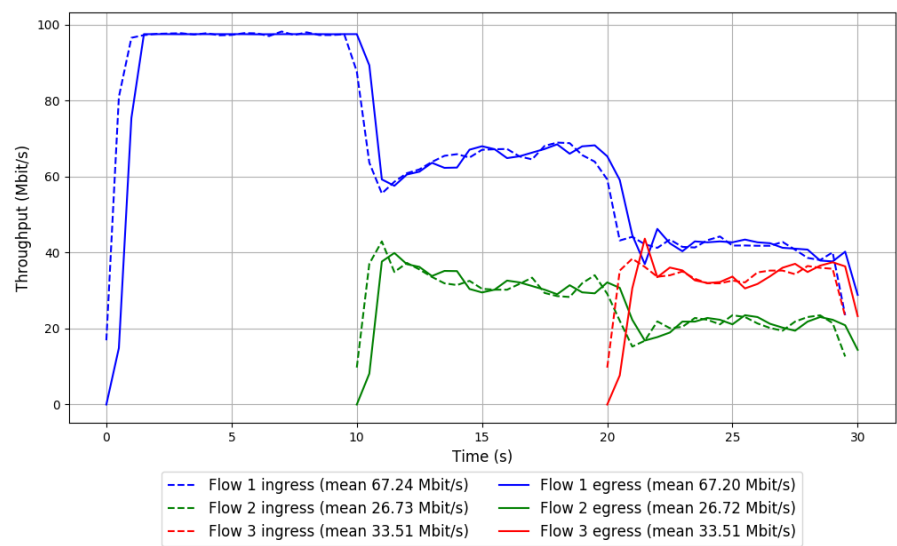


Run 3: Statistics of Indigo

Start at: 2018-10-26 04:02:13
End at: 2018-10-26 04:02:43
Local clock offset: 0.317 ms
Remote clock offset: -2.637 ms

Below is generated by plot.py at 2018-10-26 04:57:09
Datalink statistics
-- Total of 3 flows:
Average throughput: 95.86 Mbit/s
95th percentile per-packet one-way delay: 51.385 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 67.20 Mbit/s
95th percentile per-packet one-way delay: 48.100 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 26.72 Mbit/s
95th percentile per-packet one-way delay: 53.523 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 33.51 Mbit/s
95th percentile per-packet one-way delay: 57.072 ms
Loss rate: 0.00%

Run 3: Report of Indigo — Data Link



Run 4: Statistics of Indigo

Start at: 2018-10-26 04:27:07

End at: 2018-10-26 04:27:37

Local clock offset: -3.433 ms

Remote clock offset: -2.56 ms

Below is generated by plot.py at 2018-10-26 04:57:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 95.83 Mbit/s

95th percentile per-packet one-way delay: 45.724 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 66.03 Mbit/s

95th percentile per-packet one-way delay: 43.974 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 32.06 Mbit/s

95th percentile per-packet one-way delay: 49.839 ms

Loss rate: 0.00%

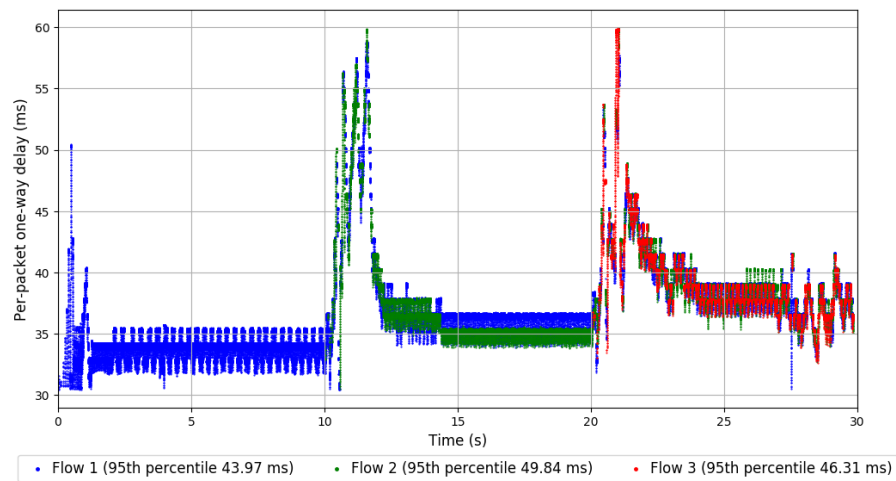
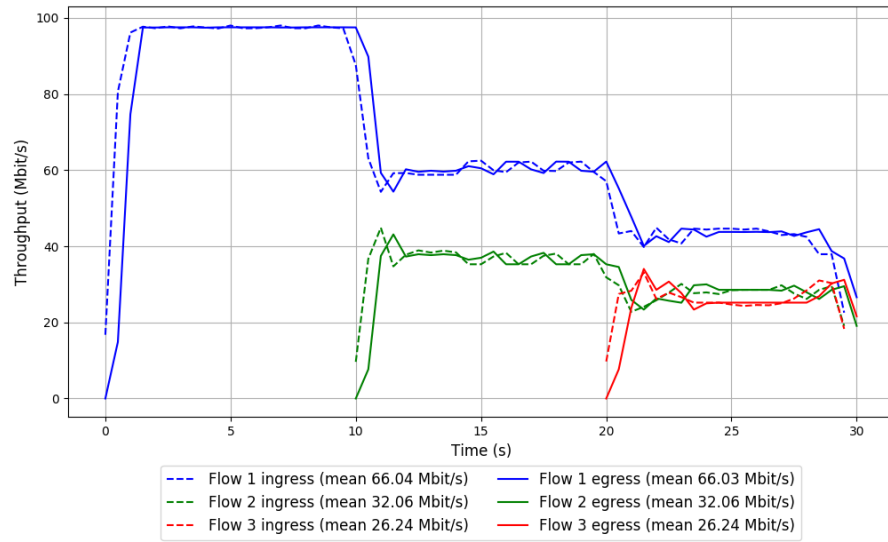
-- Flow 3:

Average throughput: 26.24 Mbit/s

95th percentile per-packet one-way delay: 46.309 ms

Loss rate: 0.00%

Run 4: Report of Indigo — Data Link

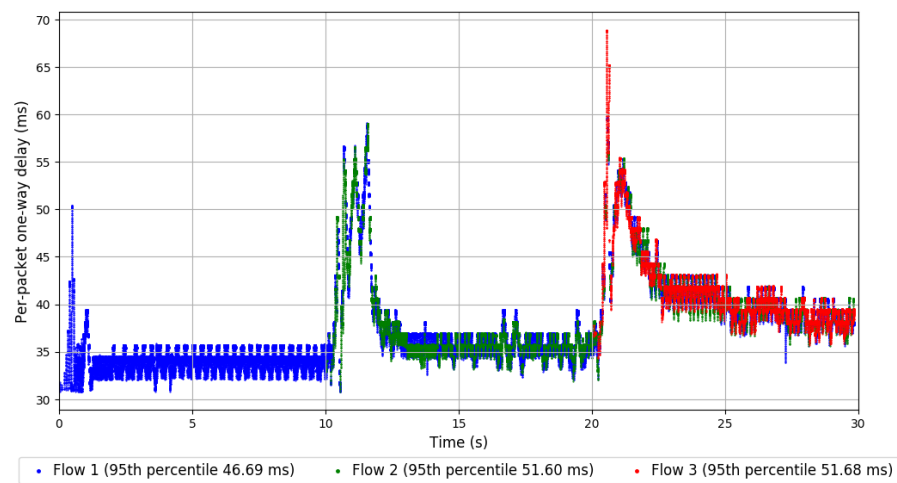
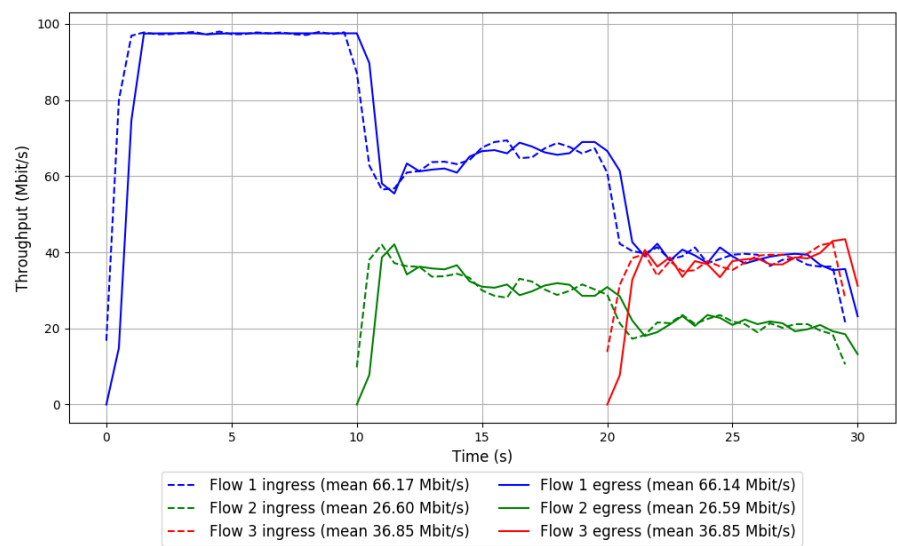


Run 5: Statistics of Indigo

Start at: 2018-10-26 04:51:35
End at: 2018-10-26 04:52:05
Local clock offset: 0.094 ms
Remote clock offset: -2.047 ms

Below is generated by plot.py at 2018-10-26 04:57:28
Datalink statistics
-- Total of 3 flows:
Average throughput: 95.84 Mbit/s
95th percentile per-packet one-way delay: 49.169 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 66.14 Mbit/s
95th percentile per-packet one-way delay: 46.693 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 26.59 Mbit/s
95th percentile per-packet one-way delay: 51.600 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 36.85 Mbit/s
95th percentile per-packet one-way delay: 51.677 ms
Loss rate: 0.00%

Run 5: Report of Indigo — Data Link

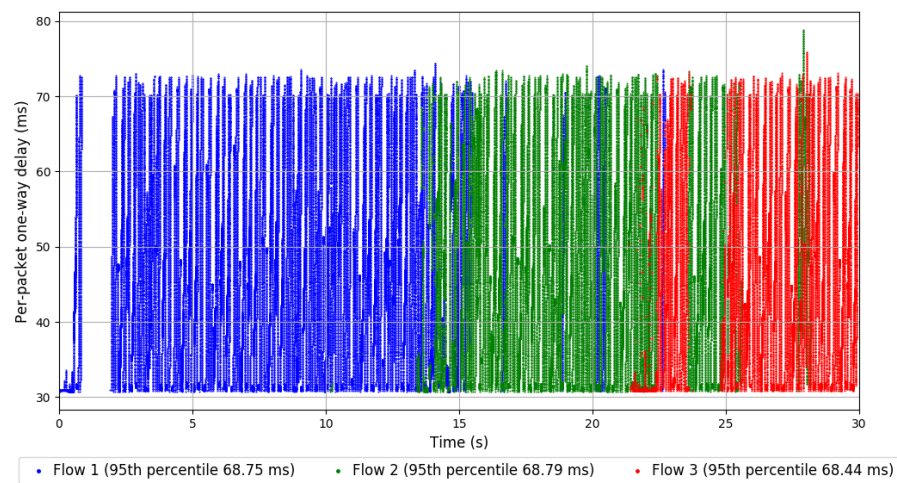
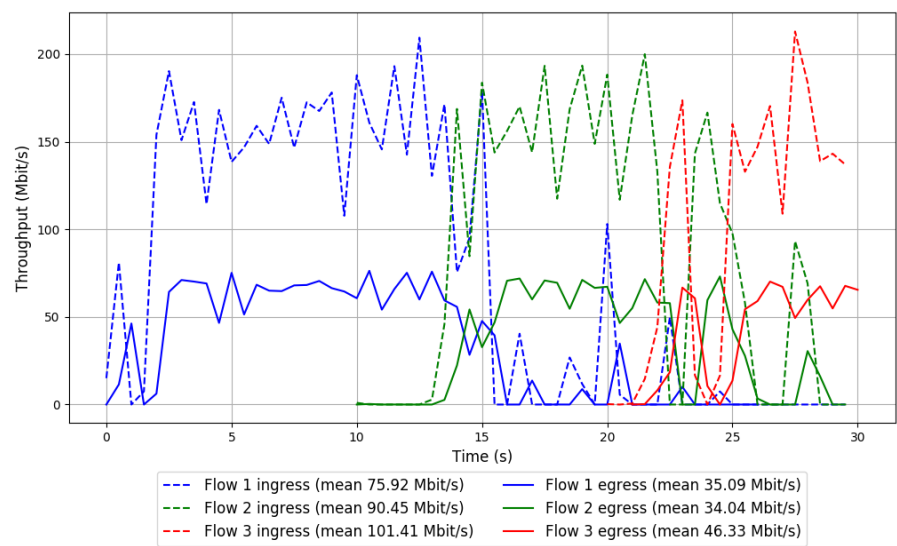


Run 1: Statistics of Indigo-96d2da3

Start at: 2018-10-26 02:51:29
End at: 2018-10-26 02:51:59
Local clock offset: 0.086 ms
Remote clock offset: -3.745 ms

Below is generated by plot.py at 2018-10-26 04:57:31
Datalink statistics
-- Total of 3 flows:
Average throughput: 65.42 Mbit/s
95th percentile per-packet one-way delay: 68.701 ms
Loss rate: 60.63%
-- Flow 1:
Average throughput: 35.09 Mbit/s
95th percentile per-packet one-way delay: 68.751 ms
Loss rate: 59.97%
-- Flow 2:
Average throughput: 34.04 Mbit/s
95th percentile per-packet one-way delay: 68.792 ms
Loss rate: 62.39%
-- Flow 3:
Average throughput: 46.33 Mbit/s
95th percentile per-packet one-way delay: 68.436 ms
Loss rate: 59.02%

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

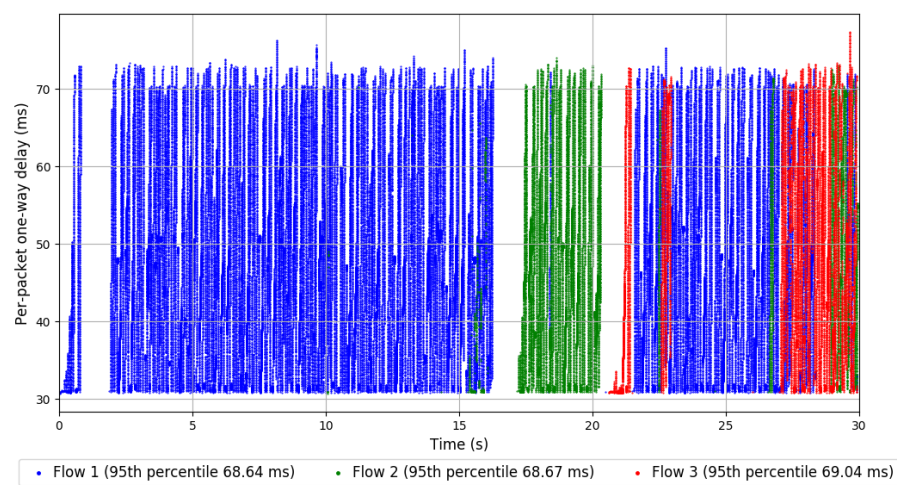
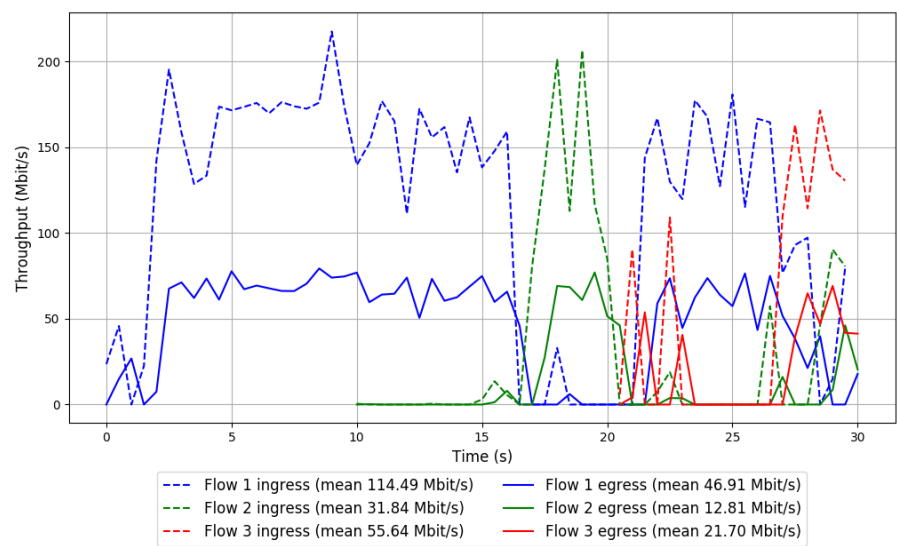


Run 2: Statistics of Indigo-96d2da3

Start at: 2018-10-26 03:15:53
End at: 2018-10-26 03:16:23
Local clock offset: 0.463 ms
Remote clock offset: -3.228 ms

Below is generated by plot.py at 2018-10-26 04:57:37
Datalink statistics
-- Total of 3 flows:
Average throughput: 62.10 Mbit/s
95th percentile per-packet one-way delay: 68.709 ms
Loss rate: 59.34%
-- Flow 1:
Average throughput: 46.91 Mbit/s
95th percentile per-packet one-way delay: 68.641 ms
Loss rate: 59.02%
-- Flow 2:
Average throughput: 12.81 Mbit/s
95th percentile per-packet one-way delay: 68.674 ms
Loss rate: 59.72%
-- Flow 3:
Average throughput: 21.70 Mbit/s
95th percentile per-packet one-way delay: 69.044 ms
Loss rate: 61.00%

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

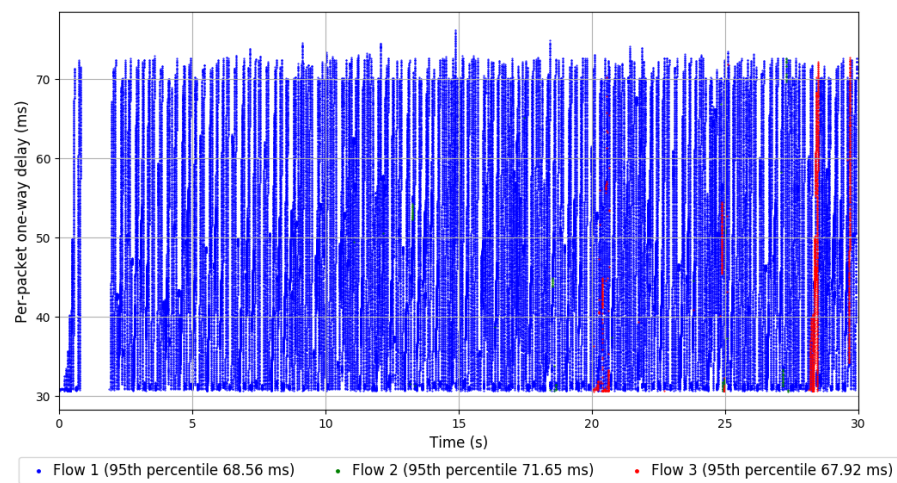
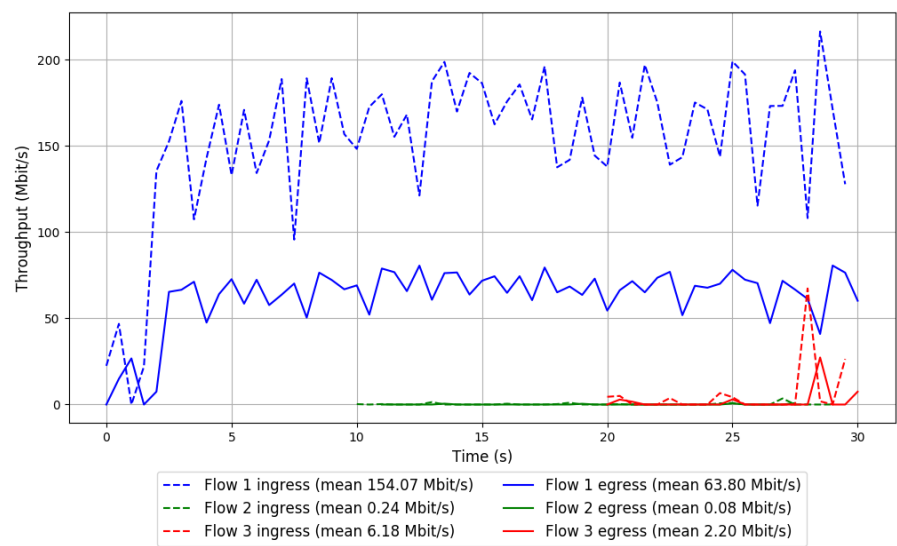


Run 3: Statistics of Indigo-96d2da3

Start at: 2018-10-26 03:40:30
End at: 2018-10-26 03:41:00
Local clock offset: 0.482 ms
Remote clock offset: -2.943 ms

Below is generated by plot.py at 2018-10-26 04:57:47
Datalink statistics
-- Total of 3 flows:
Average throughput: 64.55 Mbit/s
95th percentile per-packet one-way delay: 68.550 ms
Loss rate: 58.66%
-- Flow 1:
Average throughput: 63.80 Mbit/s
95th percentile per-packet one-way delay: 68.555 ms
Loss rate: 58.57%
-- Flow 2:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 71.647 ms
Loss rate: 71.36%
-- Flow 3:
Average throughput: 2.20 Mbit/s
95th percentile per-packet one-way delay: 67.920 ms
Loss rate: 64.59%

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

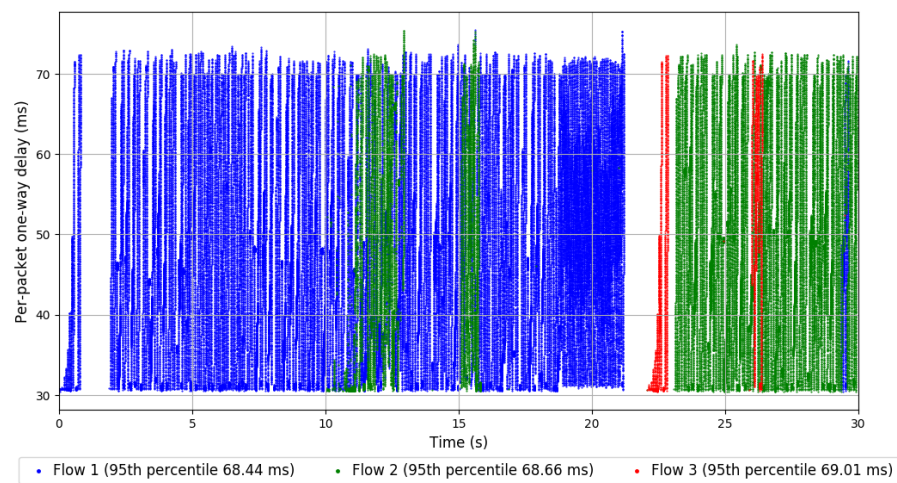
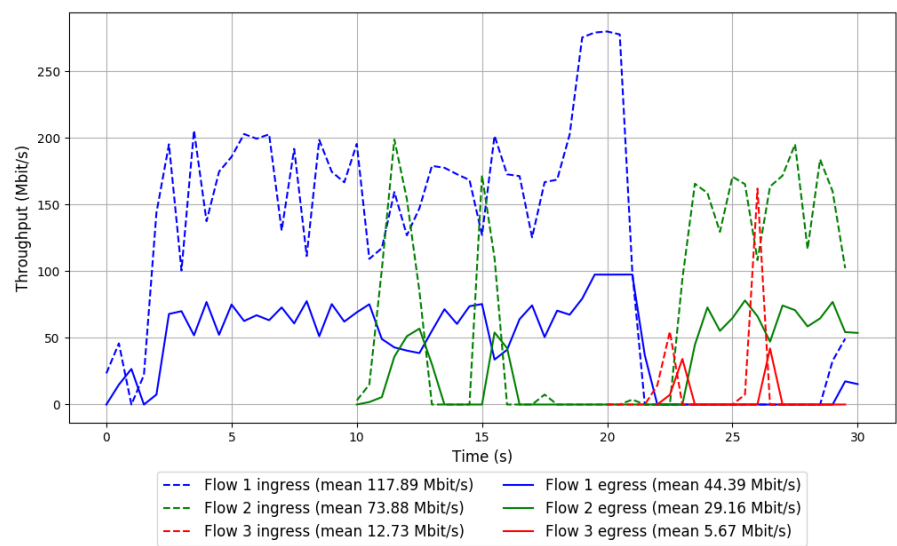


Run 4: Statistics of Indigo-96d2da3

Start at: 2018-10-26 04:04:58
End at: 2018-10-26 04:05:28
Local clock offset: -0.646 ms
Remote clock offset: -2.617 ms

Below is generated by plot.py at 2018-10-26 04:57:55
Datalink statistics
-- Total of 3 flows:
Average throughput: 64.73 Mbit/s
95th percentile per-packet one-way delay: 68.530 ms
Loss rate: 61.92%
-- Flow 1:
Average throughput: 44.39 Mbit/s
95th percentile per-packet one-way delay: 68.443 ms
Loss rate: 62.43%
-- Flow 2:
Average throughput: 29.16 Mbit/s
95th percentile per-packet one-way delay: 68.659 ms
Loss rate: 60.46%
-- Flow 3:
Average throughput: 5.67 Mbit/s
95th percentile per-packet one-way delay: 69.006 ms
Loss rate: 64.88%

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

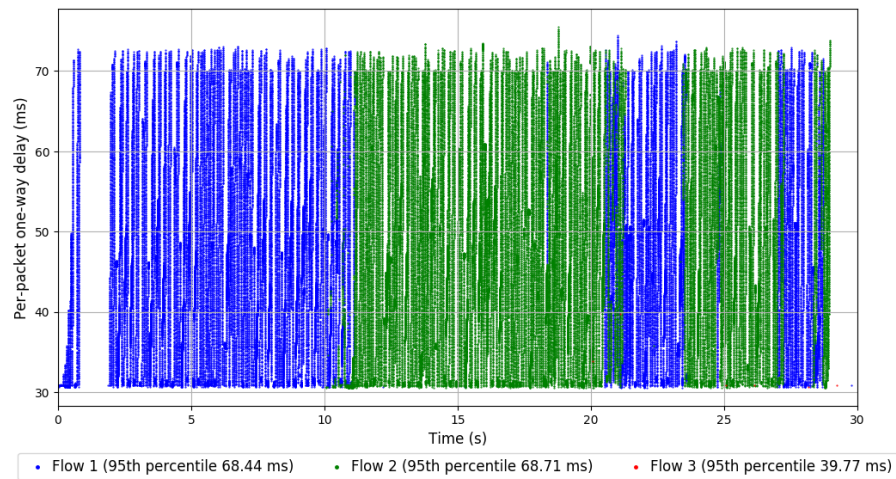
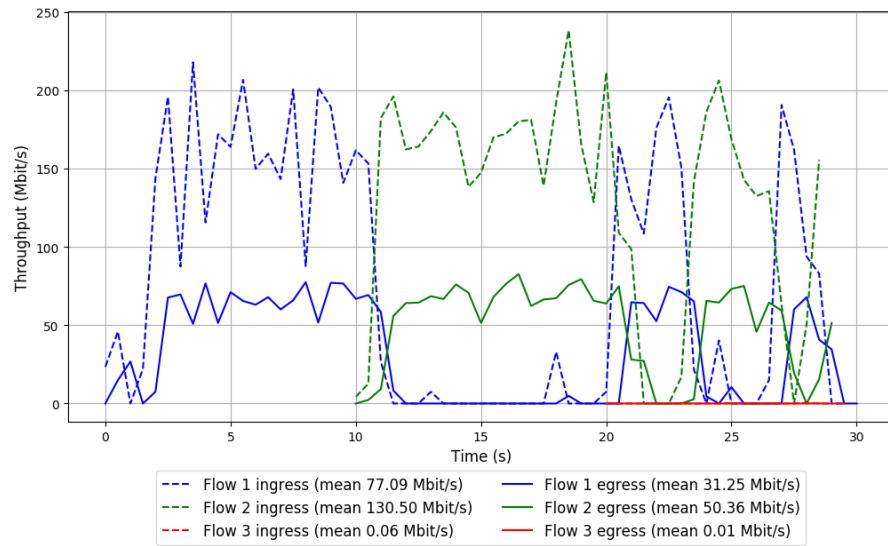


Run 5: Statistics of Indigo-96d2da3

Start at: 2018-10-26 04:29:50
End at: 2018-10-26 04:30:20
Local clock offset: -3.595 ms
Remote clock offset: -2.378 ms

Below is generated by plot.py at 2018-10-26 04:58:18
Datalink statistics
-- Total of 3 flows:
Average throughput: 63.24 Mbit/s
95th percentile per-packet one-way delay: 68.580 ms
Loss rate: 60.46%
-- Flow 1:
Average throughput: 31.25 Mbit/s
95th percentile per-packet one-way delay: 68.436 ms
Loss rate: 59.46%
-- Flow 2:
Average throughput: 50.36 Mbit/s
95th percentile per-packet one-way delay: 68.706 ms
Loss rate: 61.38%
-- Flow 3:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 39.769 ms
Loss rate: 89.69%

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

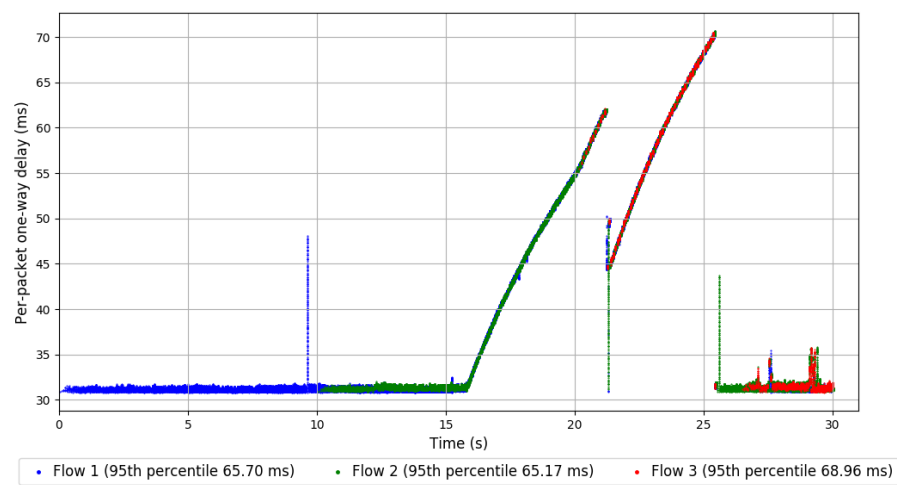
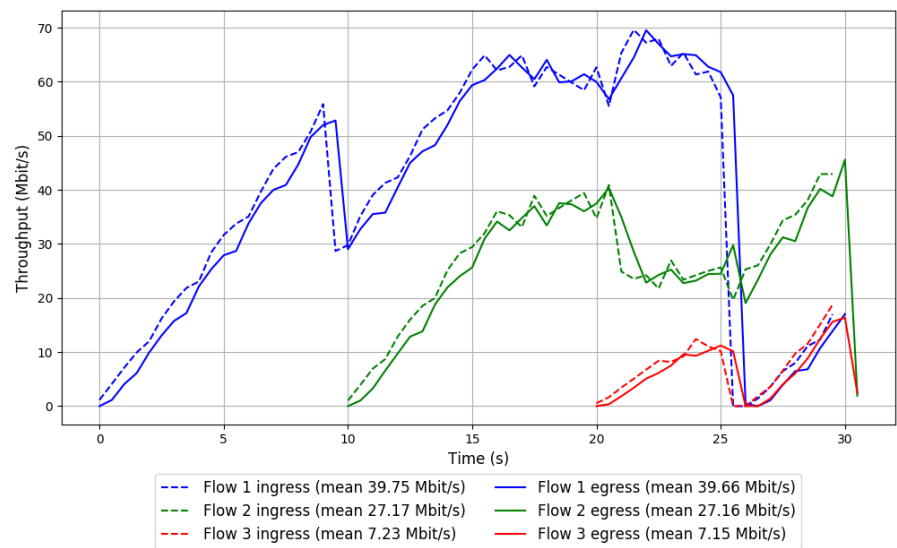


```
Run 1: Statistics of LEDBAT

Start at: 2018-10-26 02:55:29
End at: 2018-10-26 02:55:59
Local clock offset: 0.303 ms
Remote clock offset: -3.614 ms

# Below is generated by plot.py at 2018-10-26 04:58:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 60.09 Mbit/s
95th percentile per-packet one-way delay: 65.938 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 39.66 Mbit/s
95th percentile per-packet one-way delay: 65.696 ms
Loss rate: 0.23%
-- Flow 2:
Average throughput: 27.16 Mbit/s
95th percentile per-packet one-way delay: 65.174 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 7.15 Mbit/s
95th percentile per-packet one-way delay: 68.958 ms
Loss rate: 1.40%
```

Run 1: Report of LEDBAT — Data Link

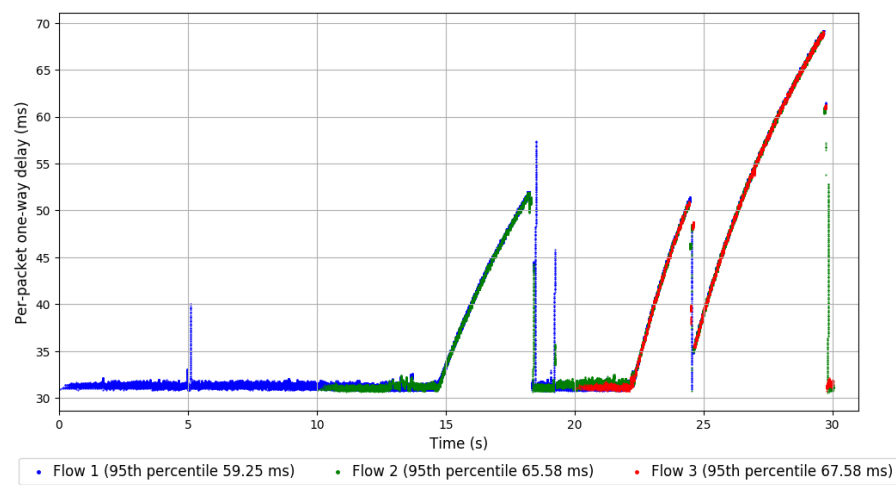
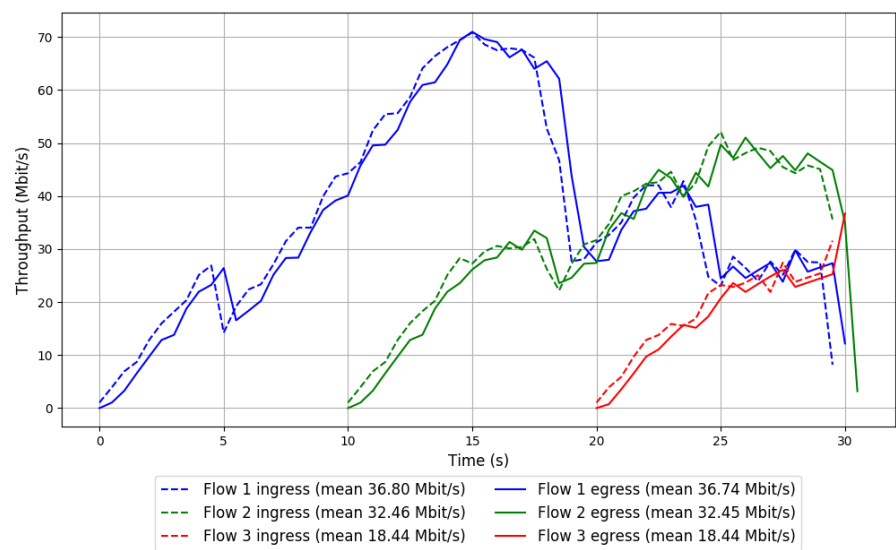


Run 2: Statistics of LEDBAT

Start at: 2018-10-26 03:19:52
End at: 2018-10-26 03:20:22
Local clock offset: 0.487 ms
Remote clock offset: -3.291 ms

Below is generated by plot.py at 2018-10-26 04:58:19
Datalink statistics
-- Total of 3 flows:
Average throughput: 64.13 Mbit/s
95th percentile per-packet one-way delay: 64.355 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 36.74 Mbit/s
95th percentile per-packet one-way delay: 59.253 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 32.45 Mbit/s
95th percentile per-packet one-way delay: 65.575 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 18.44 Mbit/s
95th percentile per-packet one-way delay: 67.575 ms
Loss rate: 0.00%

Run 2: Report of LEDBAT — Data Link

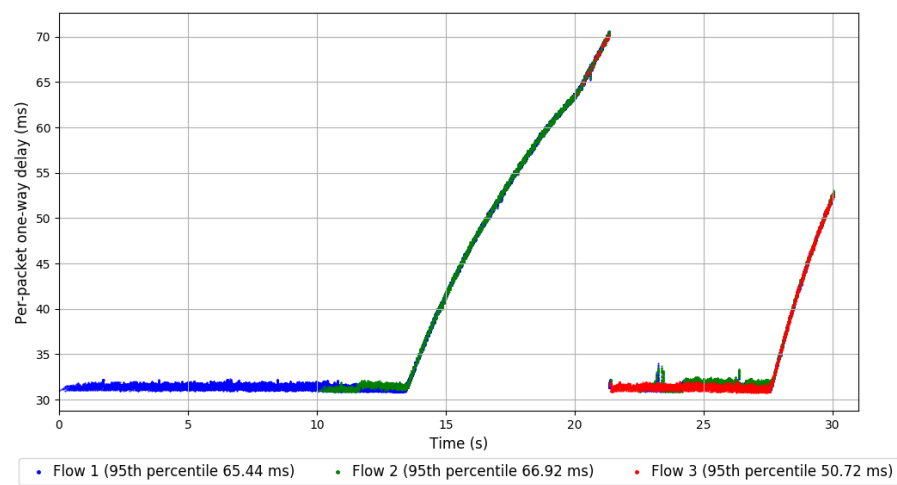
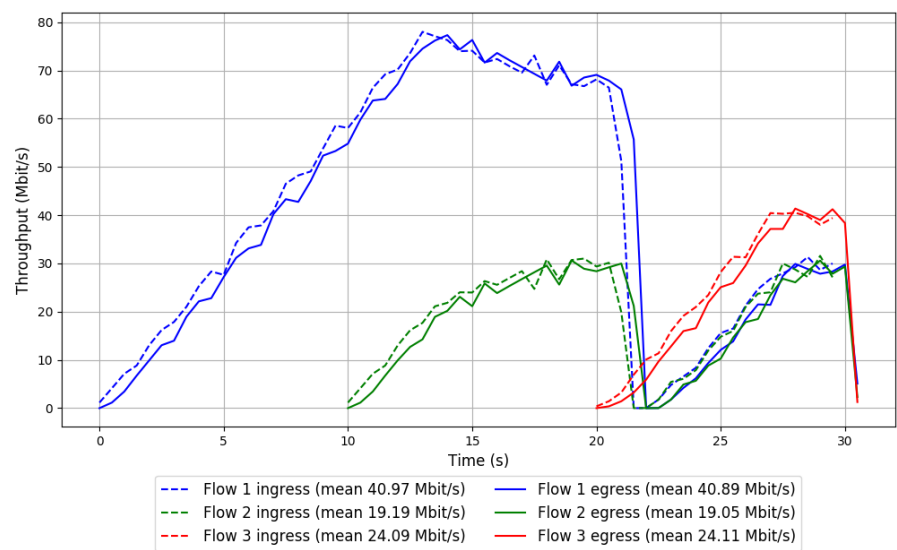


Run 3: Statistics of LEDBAT

Start at: 2018-10-26 03:44:29
End at: 2018-10-26 03:44:59
Local clock offset: 0.474 ms
Remote clock offset: -2.771 ms

Below is generated by plot.py at 2018-10-26 04:58:19
Datalink statistics
-- Total of 3 flows:
Average throughput: 61.55 Mbit/s
95th percentile per-packet one-way delay: 65.370 ms
Loss rate: 0.21%
-- Flow 1:
Average throughput: 40.89 Mbit/s
95th percentile per-packet one-way delay: 65.443 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 19.05 Mbit/s
95th percentile per-packet one-way delay: 66.918 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 24.11 Mbit/s
95th percentile per-packet one-way delay: 50.716 ms
Loss rate: 0.00%

Run 3: Report of LEDBAT — Data Link

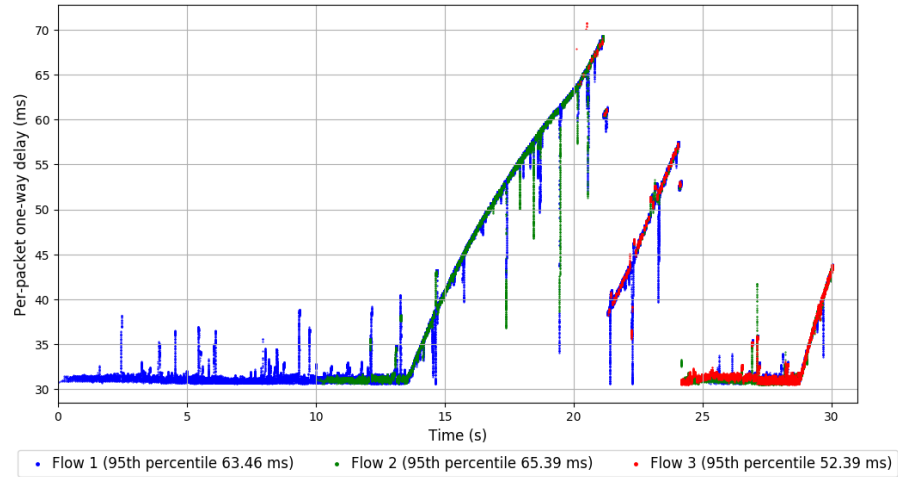
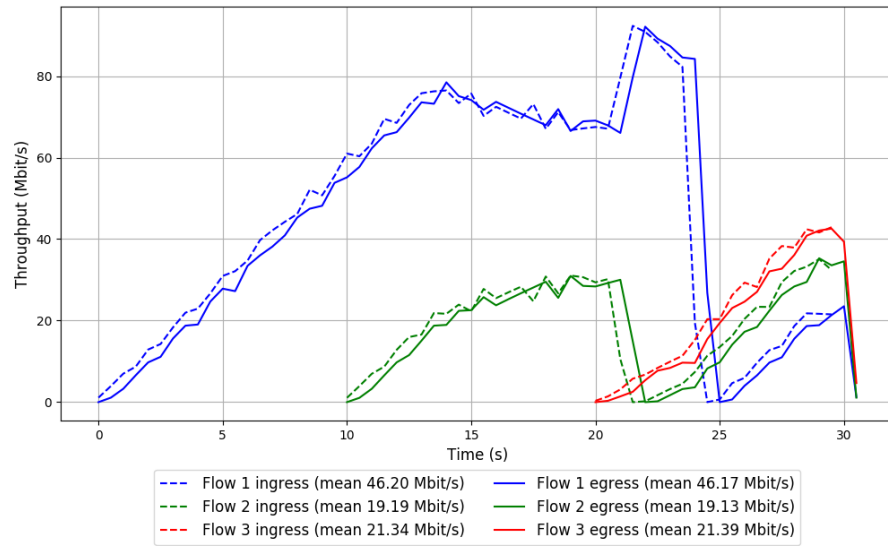


Run 4: Statistics of LEDBAT

Start at: 2018-10-26 04:09:03
End at: 2018-10-26 04:09:33
Local clock offset: -1.534 ms
Remote clock offset: -2.508 ms

Below is generated by plot.py at 2018-10-26 04:58:23
Datalink statistics
-- Total of 3 flows:
Average throughput: 65.99 Mbit/s
95th percentile per-packet one-way delay: 63.627 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 46.17 Mbit/s
95th percentile per-packet one-way delay: 63.459 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 19.13 Mbit/s
95th percentile per-packet one-way delay: 65.393 ms
Loss rate: 0.22%
-- Flow 3:
Average throughput: 21.39 Mbit/s
95th percentile per-packet one-way delay: 52.387 ms
Loss rate: 0.00%

Run 4: Report of LEDBAT — Data Link

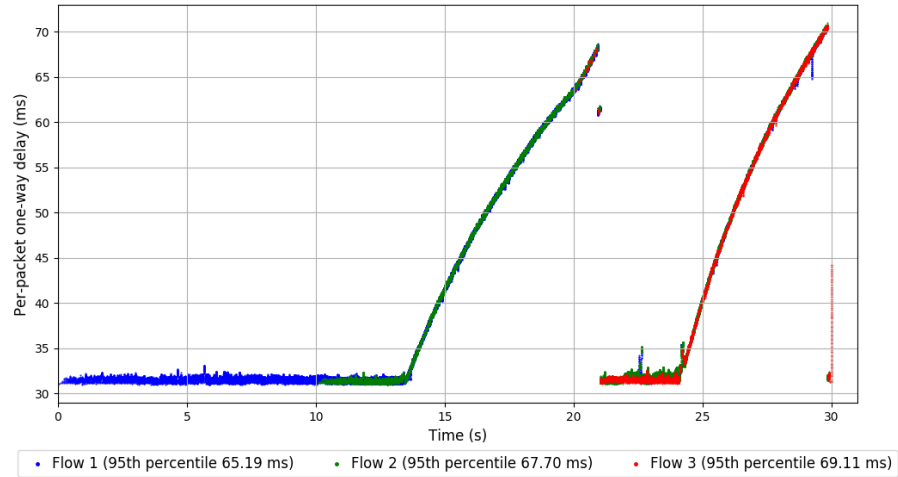
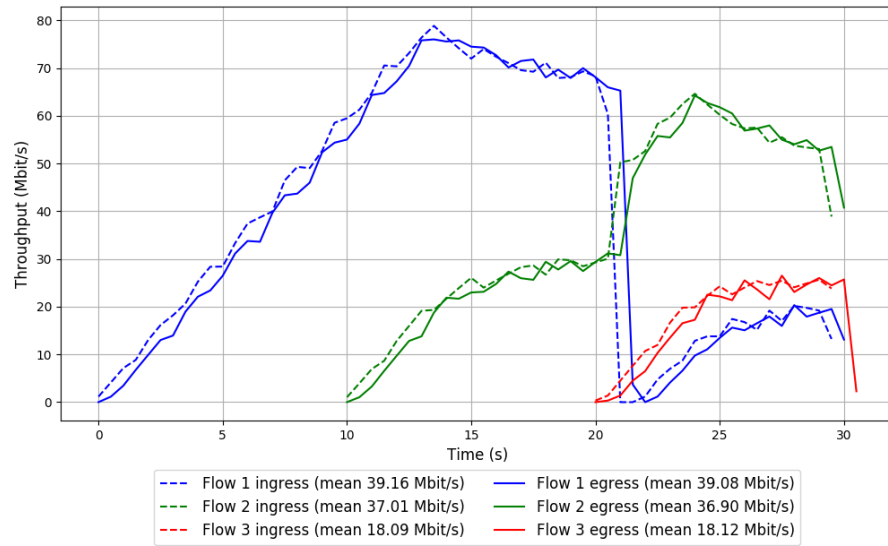


Run 5: Statistics of LEDBAT

Start at: 2018-10-26 04:33:50
End at: 2018-10-26 04:34:20
Local clock offset: -2.87 ms
Remote clock offset: -2.317 ms

Below is generated by plot.py at 2018-10-26 04:58:30
Datalink statistics
-- Total of 3 flows:
Average throughput: 69.33 Mbit/s
95th percentile per-packet one-way delay: 66.899 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 39.08 Mbit/s
95th percentile per-packet one-way delay: 65.195 ms
Loss rate: 0.19%
-- Flow 2:
Average throughput: 36.90 Mbit/s
95th percentile per-packet one-way delay: 67.705 ms
Loss rate: 0.31%
-- Flow 3:
Average throughput: 18.12 Mbit/s
95th percentile per-packet one-way delay: 69.108 ms
Loss rate: 0.01%

Run 5: Report of LEDBAT — Data Link



Run 1: Statistics of Indigo-Muses

Start at: 2018-10-26 03:06:21

End at: 2018-10-26 03:06:51

Local clock offset: 0.457 ms

Remote clock offset: -3.5 ms

Below is generated by plot.py at 2018-10-26 04:58:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 94.92 Mbit/s

95th percentile per-packet one-way delay: 39.937 ms

Loss rate: 0.42%

-- Flow 1:

Average throughput: 70.50 Mbit/s

95th percentile per-packet one-way delay: 40.575 ms

Loss rate: 0.56%

-- Flow 2:

Average throughput: 22.79 Mbit/s

95th percentile per-packet one-way delay: 39.390 ms

Loss rate: 0.01%

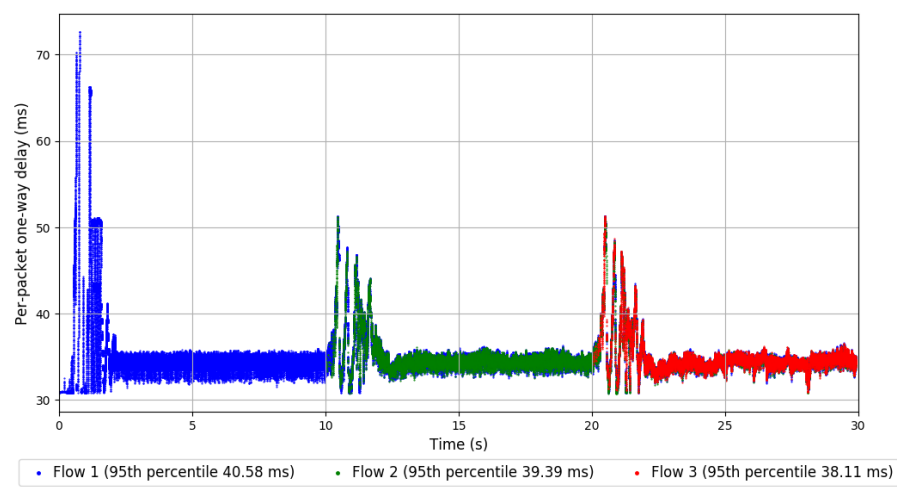
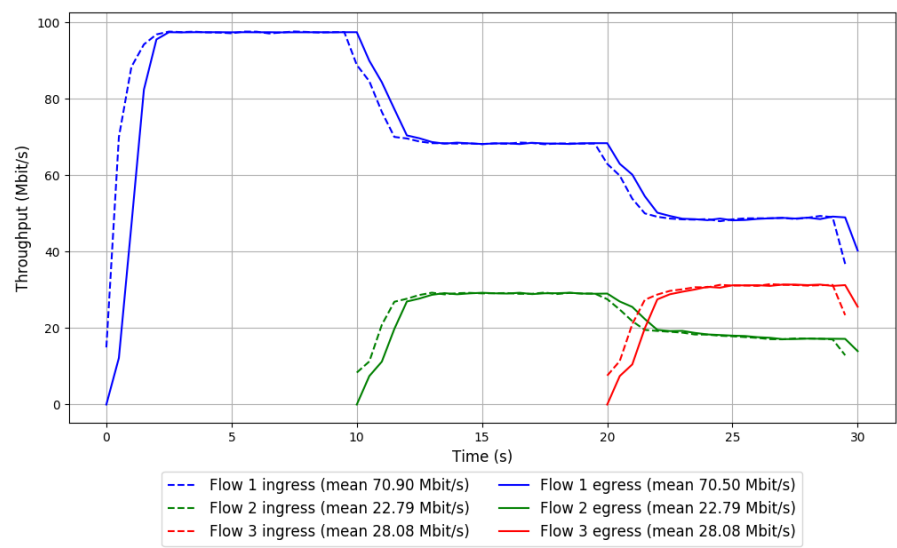
-- Flow 3:

Average throughput: 28.08 Mbit/s

95th percentile per-packet one-way delay: 38.110 ms

Loss rate: 0.00%

Run 1: Report of Indigo-Muses — Data Link

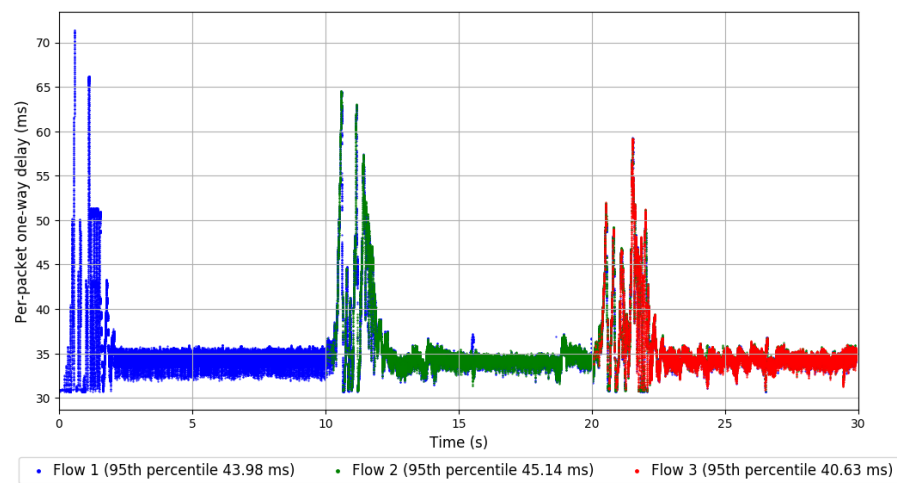
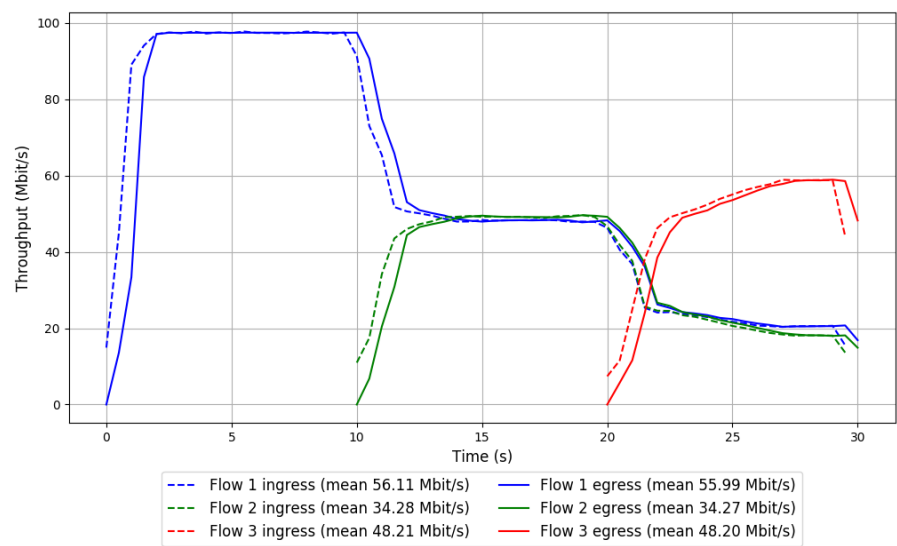


Run 2: Statistics of Indigo-Muses

Start at: 2018-10-26 03:30:53
End at: 2018-10-26 03:31:23
Local clock offset: 0.536 ms
Remote clock offset: -3.079 ms

Below is generated by plot.py at 2018-10-26 04:59:05
Datalink statistics
-- Total of 3 flows:
Average throughput: 94.66 Mbit/s
95th percentile per-packet one-way delay: 43.919 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 55.99 Mbit/s
95th percentile per-packet one-way delay: 43.983 ms
Loss rate: 0.19%
-- Flow 2:
Average throughput: 34.27 Mbit/s
95th percentile per-packet one-way delay: 45.138 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 48.20 Mbit/s
95th percentile per-packet one-way delay: 40.634 ms
Loss rate: 0.02%

Run 2: Report of Indigo-Muses — Data Link

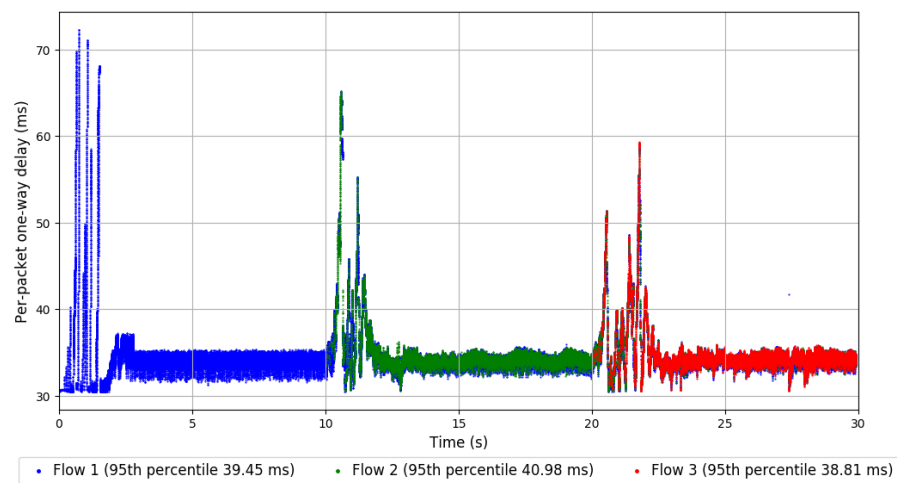
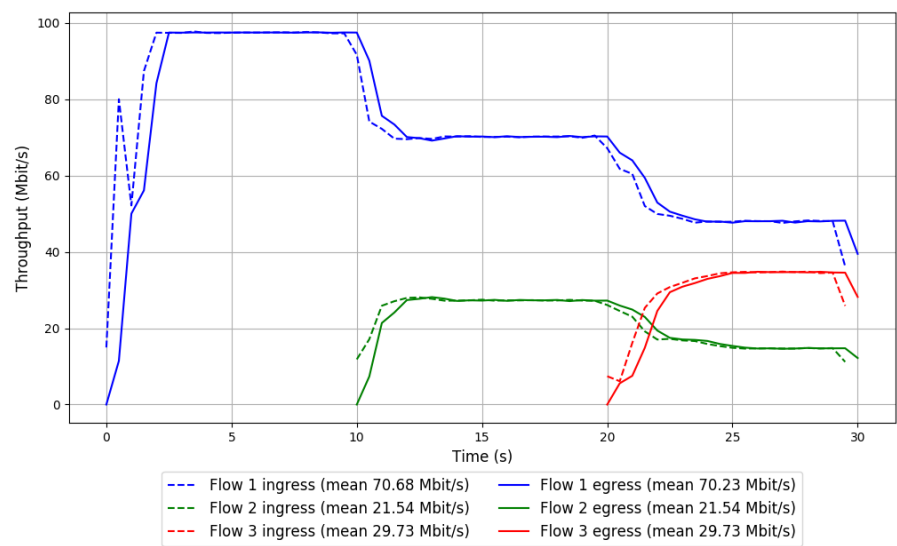


Run 3: Statistics of Indigo-Muses

Start at: 2018-10-26 03:55:23
End at: 2018-10-26 03:55:53
Local clock offset: 0.456 ms
Remote clock offset: -2.855 ms

Below is generated by plot.py at 2018-10-26 04:59:09
Datalink statistics
-- Total of 3 flows:
Average throughput: 94.35 Mbit/s
95th percentile per-packet one-way delay: 39.656 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 70.23 Mbit/s
95th percentile per-packet one-way delay: 39.445 ms
Loss rate: 0.62%
-- Flow 2:
Average throughput: 21.54 Mbit/s
95th percentile per-packet one-way delay: 40.980 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 29.73 Mbit/s
95th percentile per-packet one-way delay: 38.809 ms
Loss rate: 0.00%

Run 3: Report of Indigo-Muses — Data Link



Run 4: Statistics of Indigo-Muses

Start at: 2018-10-26 04:20:08

End at: 2018-10-26 04:20:38

Local clock offset: -2.952 ms

Remote clock offset: -2.66 ms

Below is generated by plot.py at 2018-10-26 04:59:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 94.29 Mbit/s

95th percentile per-packet one-way delay: 42.421 ms

Loss rate: 0.12%

-- Flow 1:

Average throughput: 61.55 Mbit/s

95th percentile per-packet one-way delay: 42.202 ms

Loss rate: 0.18%

-- Flow 2:

Average throughput: 26.79 Mbit/s

95th percentile per-packet one-way delay: 44.346 ms

Loss rate: 0.03%

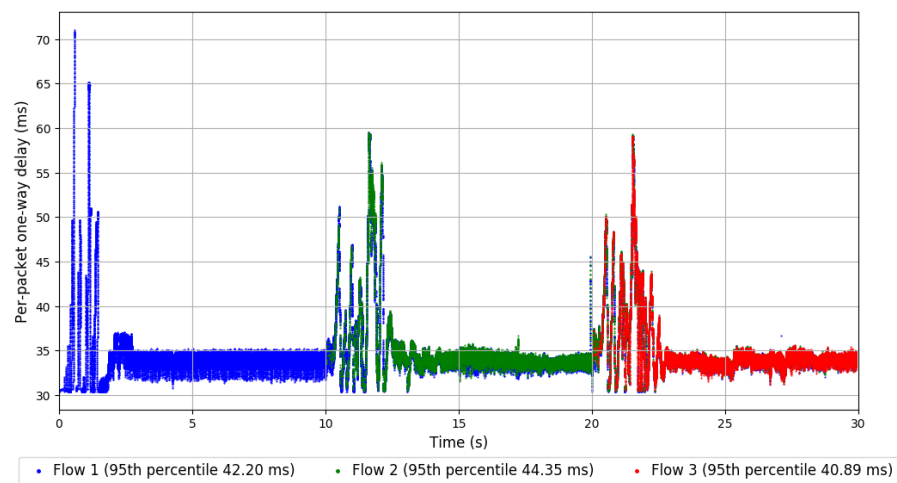
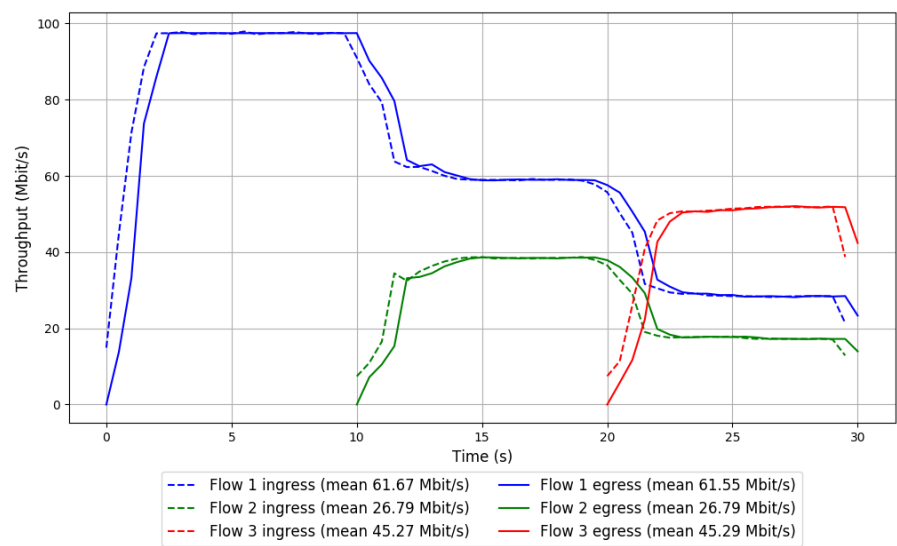
-- Flow 3:

Average throughput: 45.29 Mbit/s

95th percentile per-packet one-way delay: 40.891 ms

Loss rate: 0.00%

Run 4: Report of Indigo-Muses — Data Link



Run 5: Statistics of Indigo-Muses

Start at: 2018-10-26 04:44:46

End at: 2018-10-26 04:45:16

Local clock offset: -0.468 ms

Remote clock offset: -2.12 ms

Below is generated by plot.py at 2018-10-26 04:59:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 94.71 Mbit/s

95th percentile per-packet one-way delay: 43.745 ms

Loss rate: 0.11%

-- Flow 1:

Average throughput: 55.99 Mbit/s

95th percentile per-packet one-way delay: 43.789 ms

Loss rate: 0.19%

-- Flow 2:

Average throughput: 34.30 Mbit/s

95th percentile per-packet one-way delay: 44.372 ms

Loss rate: 0.00%

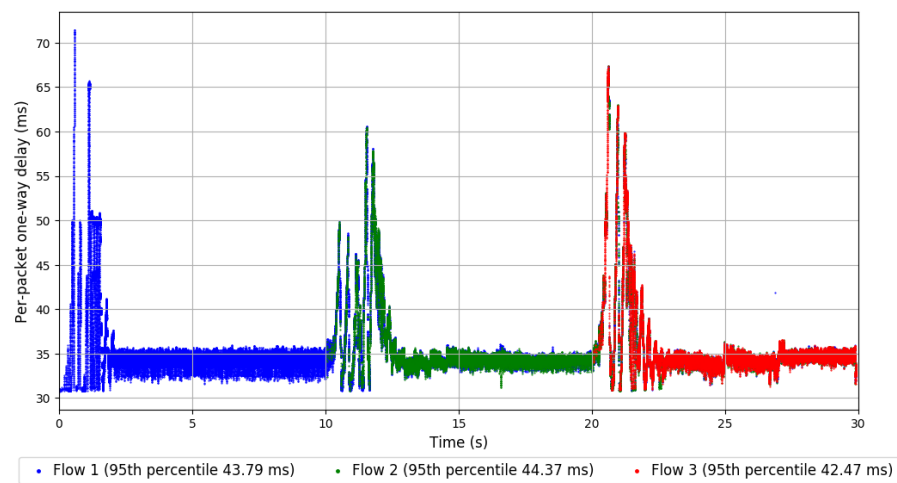
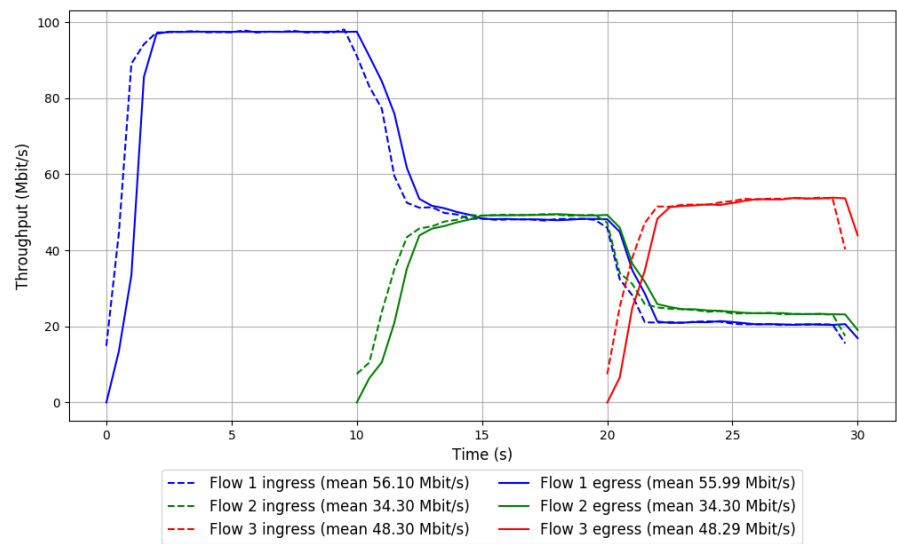
-- Flow 3:

Average throughput: 48.29 Mbit/s

95th percentile per-packet one-way delay: 42.465 ms

Loss rate: 0.01%

Run 5: Report of Indigo-Muses — Data Link

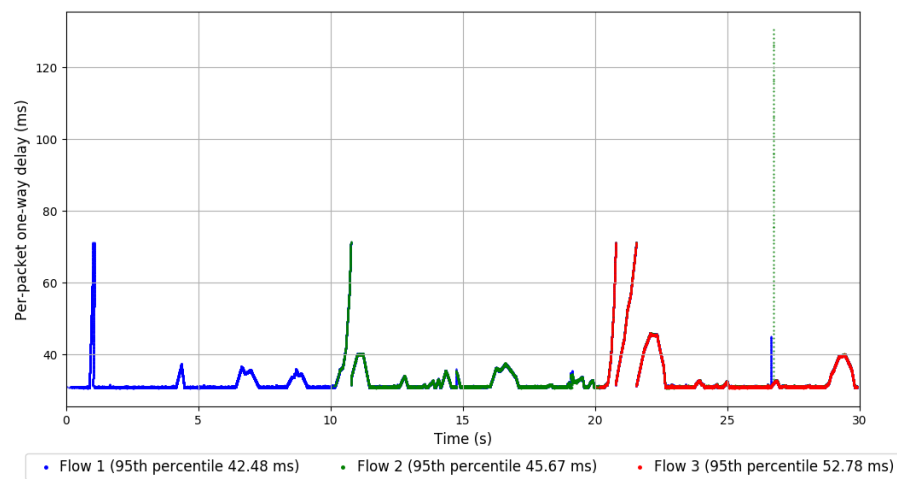
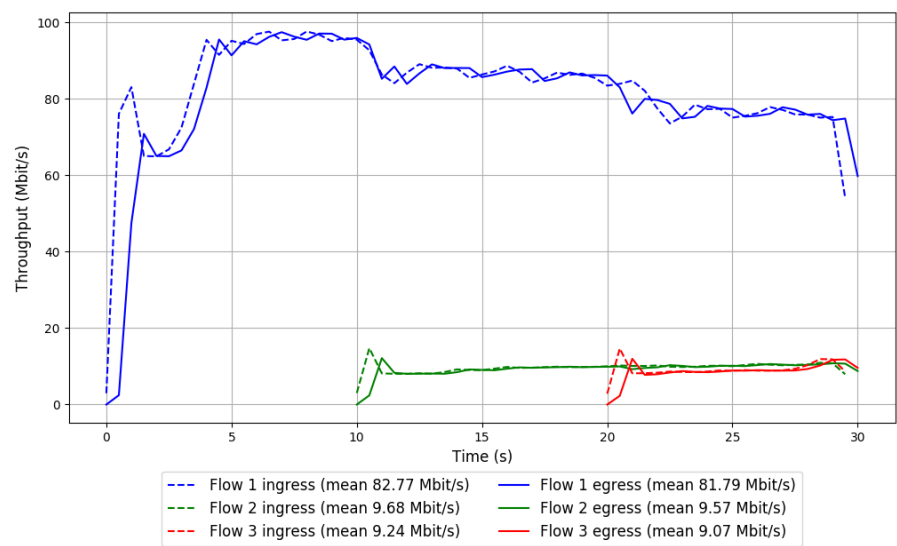


Run 1: Statistics of PCC-Allegro

Start at: 2018-10-26 03:11:50
End at: 2018-10-26 03:12:20
Local clock offset: 0.468 ms
Remote clock offset: -3.454 ms

Below is generated by plot.py at 2018-10-26 04:59:33
Datalink statistics
-- Total of 3 flows:
Average throughput: 91.15 Mbit/s
95th percentile per-packet one-way delay: 43.509 ms
Loss rate: 1.19%
-- Flow 1:
Average throughput: 81.79 Mbit/s
95th percentile per-packet one-way delay: 42.478 ms
Loss rate: 1.18%
-- Flow 2:
Average throughput: 9.57 Mbit/s
95th percentile per-packet one-way delay: 45.669 ms
Loss rate: 1.10%
-- Flow 3:
Average throughput: 9.07 Mbit/s
95th percentile per-packet one-way delay: 52.783 ms
Loss rate: 1.76%

Run 1: Report of PCC-Allegro — Data Link



Run 2: Statistics of PCC-Allegro

Start at: 2018-10-26 03:36:23

End at: 2018-10-26 03:36:53

Local clock offset: 0.511 ms

Remote clock offset: -2.94 ms

Below is generated by plot.py at 2018-10-26 04:59:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 90.91 Mbit/s

95th percentile per-packet one-way delay: 52.495 ms

Loss rate: 1.40%

-- Flow 1:

Average throughput: 80.57 Mbit/s

95th percentile per-packet one-way delay: 52.320 ms

Loss rate: 1.43%

-- Flow 2:

Average throughput: 11.18 Mbit/s

95th percentile per-packet one-way delay: 52.993 ms

Loss rate: 1.07%

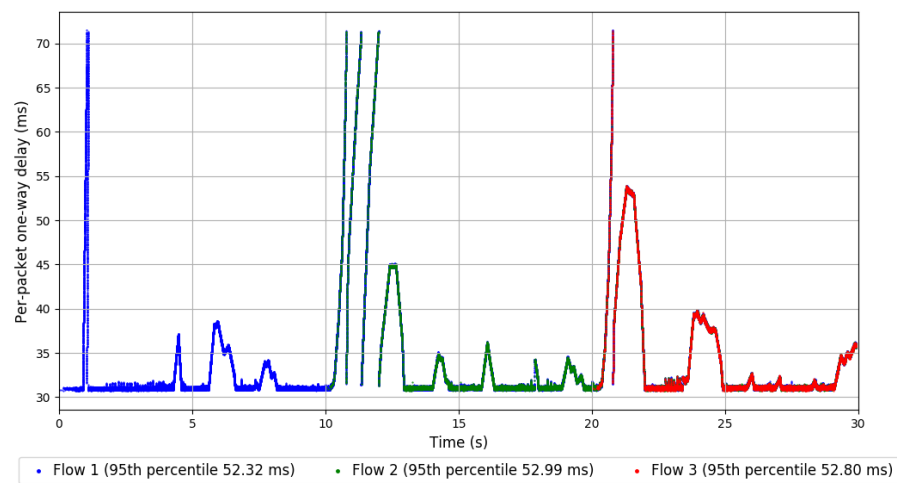
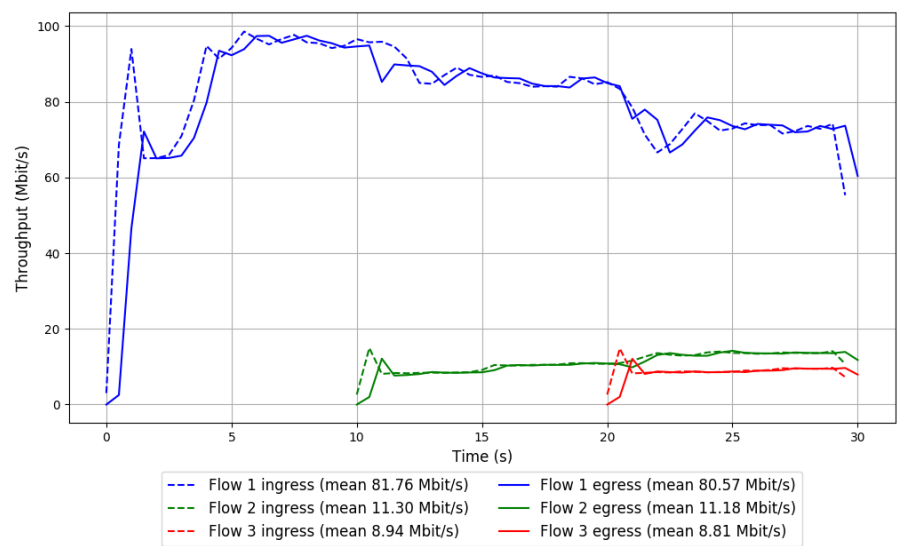
-- Flow 3:

Average throughput: 8.81 Mbit/s

95th percentile per-packet one-way delay: 52.803 ms

Loss rate: 1.47%

Run 2: Report of PCC-Allegro — Data Link

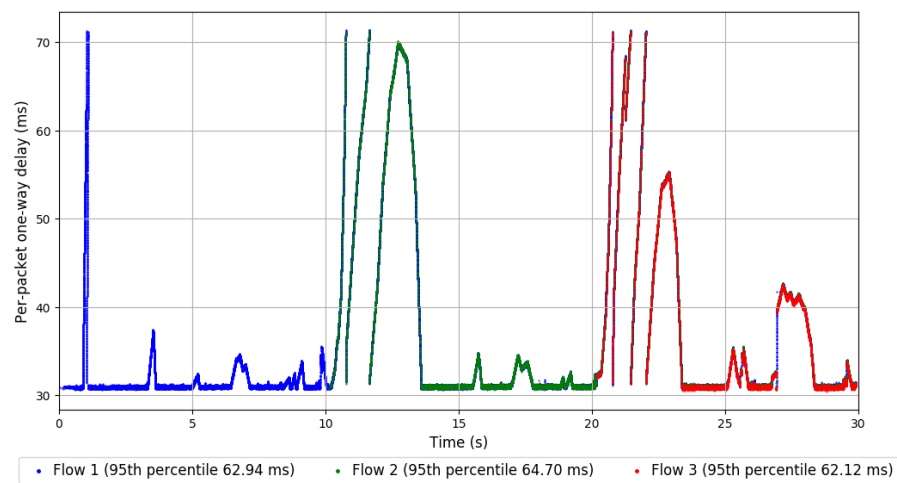
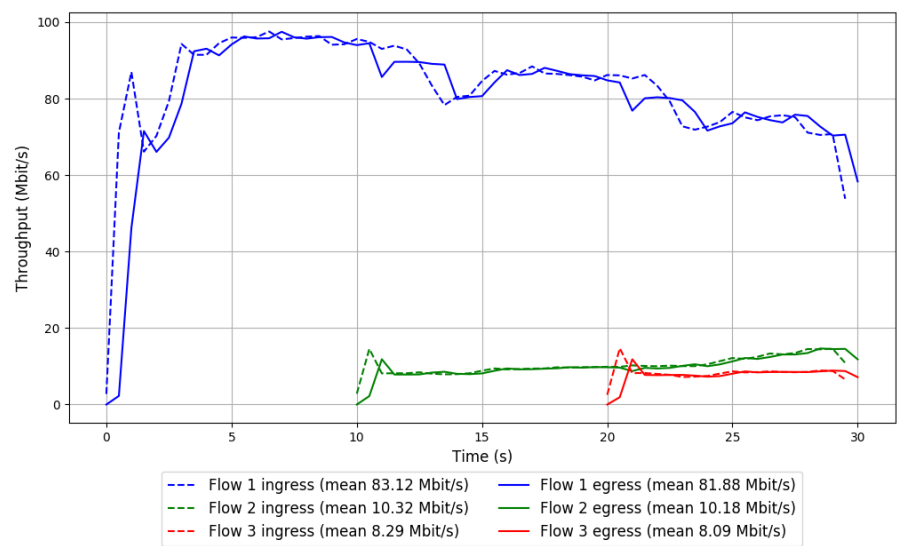


Run 3: Statistics of PCC-Allegro

Start at: 2018-10-26 04:00:52
End at: 2018-10-26 04:01:22
Local clock offset: 0.449 ms
Remote clock offset: -2.616 ms

Below is generated by plot.py at 2018-10-26 04:59:46
Datalink statistics
-- Total of 3 flows:
Average throughput: 91.32 Mbit/s
95th percentile per-packet one-way delay: 63.121 ms
Loss rate: 1.52%
-- Flow 1:
Average throughput: 81.88 Mbit/s
95th percentile per-packet one-way delay: 62.942 ms
Loss rate: 1.50%
-- Flow 2:
Average throughput: 10.18 Mbit/s
95th percentile per-packet one-way delay: 64.705 ms
Loss rate: 1.43%
-- Flow 3:
Average throughput: 8.09 Mbit/s
95th percentile per-packet one-way delay: 62.120 ms
Loss rate: 2.47%

Run 3: Report of PCC-Allegro — Data Link

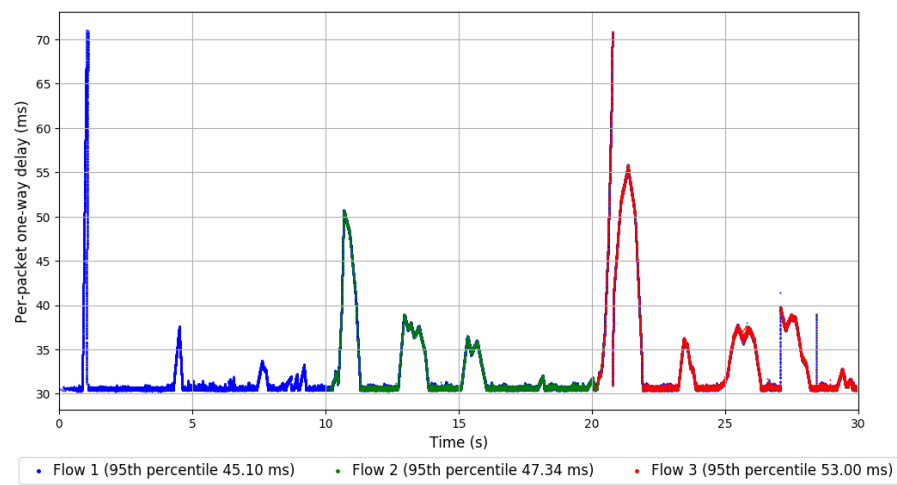
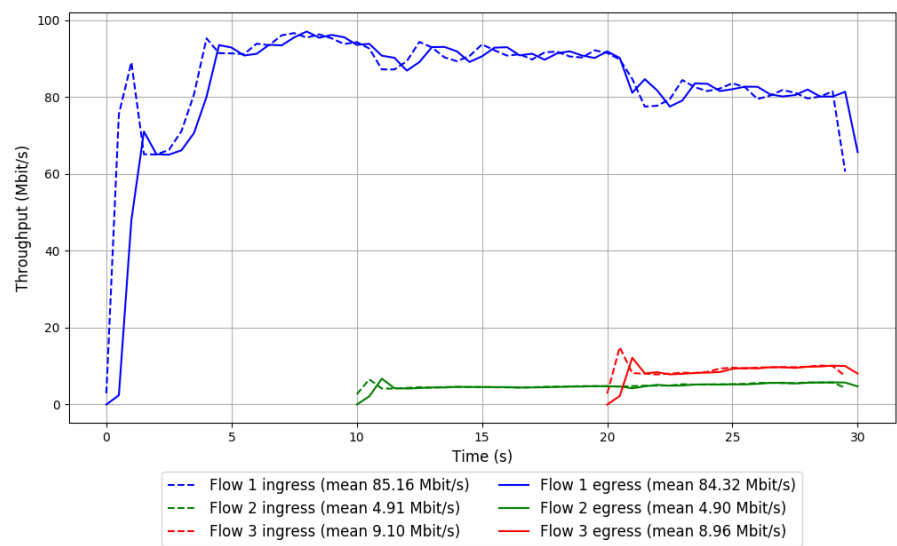


Run 4: Statistics of PCC-Allegro

Start at: 2018-10-26 04:25:46
End at: 2018-10-26 04:26:16
Local clock offset: -3.348 ms
Remote clock offset: -2.632 ms

Below is generated by plot.py at 2018-10-26 05:00:16
Datalink statistics
-- Total of 3 flows:
Average throughput: 90.53 Mbit/s
95th percentile per-packet one-way delay: 45.743 ms
Loss rate: 0.97%
-- Flow 1:
Average throughput: 84.32 Mbit/s
95th percentile per-packet one-way delay: 45.104 ms
Loss rate: 0.98%
-- Flow 2:
Average throughput: 4.90 Mbit/s
95th percentile per-packet one-way delay: 47.344 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 8.96 Mbit/s
95th percentile per-packet one-way delay: 53.003 ms
Loss rate: 1.46%

Run 4: Report of PCC-Allegro — Data Link

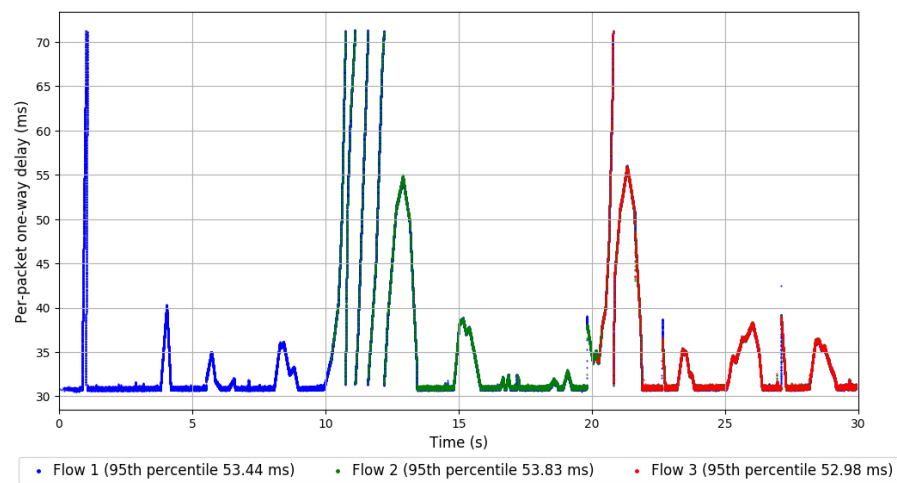
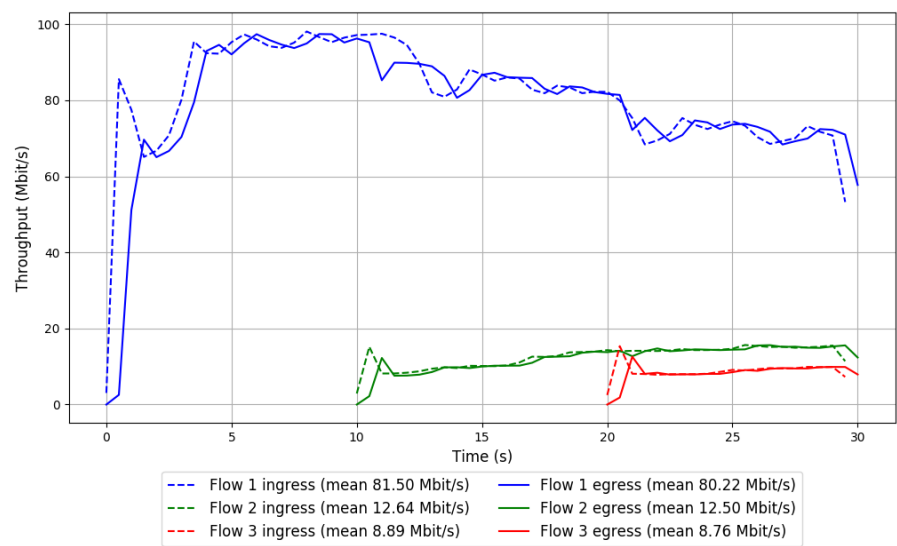


Run 5: Statistics of PCC-Allegro

Start at: 2018-10-26 04:50:13
End at: 2018-10-26 04:50:43
Local clock offset: 0.016 ms
Remote clock offset: -2.111 ms

Below is generated by plot.py at 2018-10-26 05:00:24
Datalink statistics
-- Total of 3 flows:
Average throughput: 91.42 Mbit/s
95th percentile per-packet one-way delay: 53.461 ms
Loss rate: 1.52%
-- Flow 1:
Average throughput: 80.22 Mbit/s
95th percentile per-packet one-way delay: 53.436 ms
Loss rate: 1.56%
-- Flow 2:
Average throughput: 12.50 Mbit/s
95th percentile per-packet one-way delay: 53.833 ms
Loss rate: 1.12%
-- Flow 3:
Average throughput: 8.76 Mbit/s
95th percentile per-packet one-way delay: 52.978 ms
Loss rate: 1.50%

Run 5: Report of PCC-Allegro — Data Link

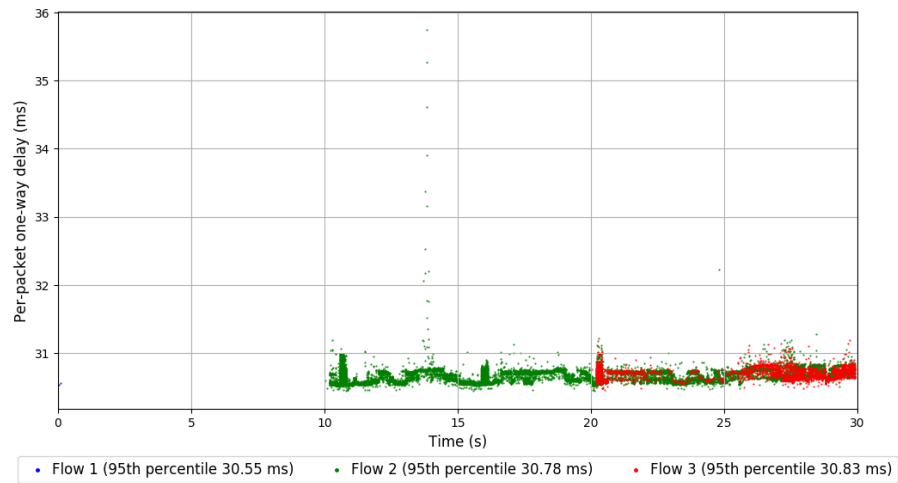
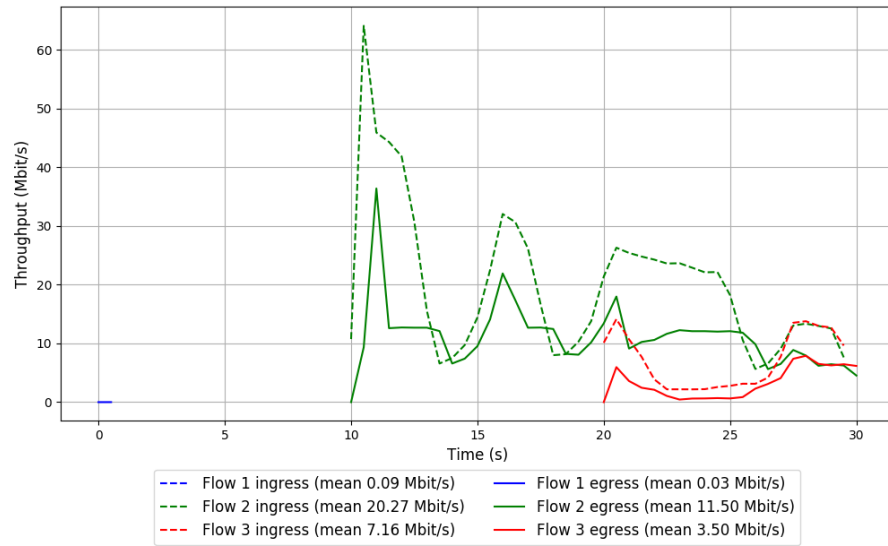


```
Run 1: Statistics of PCC-Expr

Start at: 2018-10-26 02:52:52
End at: 2018-10-26 02:53:22
Local clock offset: 0.182 ms
Remote clock offset: -3.954 ms

# Below is generated by plot.py at 2018-10-26 05:00:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.81 Mbit/s
95th percentile per-packet one-way delay: 30.801 ms
Loss rate: 44.43%
-- Flow 1:
Average throughput: 0.03 Mbit/s
95th percentile per-packet one-way delay: 30.555 ms
Loss rate: 85.71%
-- Flow 2:
Average throughput: 11.50 Mbit/s
95th percentile per-packet one-way delay: 30.781 ms
Loss rate: 43.26%
-- Flow 3:
Average throughput: 3.50 Mbit/s
95th percentile per-packet one-way delay: 30.832 ms
Loss rate: 51.07%
```

Run 1: Report of PCC-Expr — Data Link

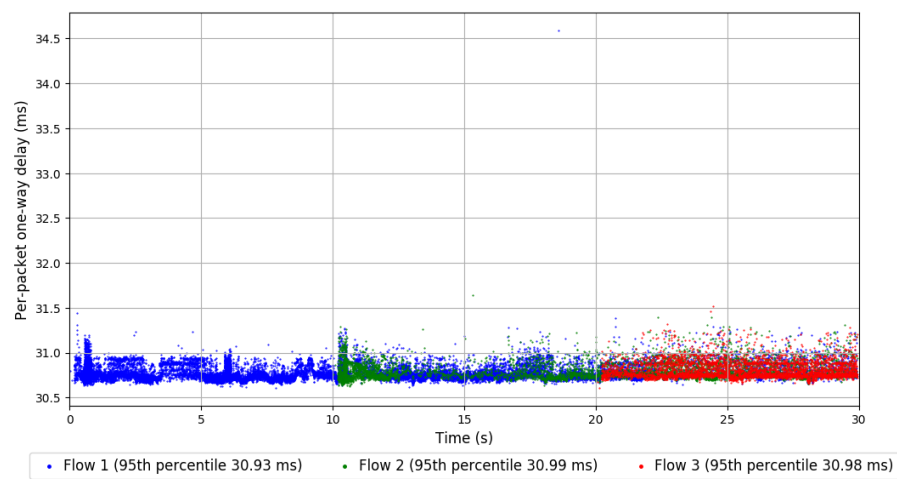
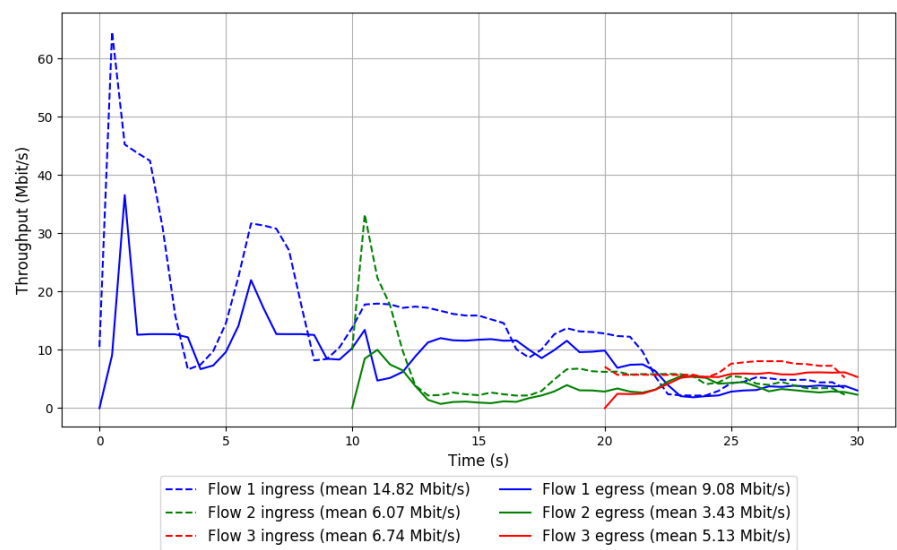


Run 2: Statistics of PCC-Expr

Start at: 2018-10-26 03:17:15
End at: 2018-10-26 03:17:45
Local clock offset: 0.502 ms
Remote clock offset: -3.359 ms

Below is generated by plot.py at 2018-10-26 05:00:24
Datalink statistics
-- Total of 3 flows:
Average throughput: 13.06 Mbit/s
95th percentile per-packet one-way delay: 30.948 ms
Loss rate: 38.04%
-- Flow 1:
Average throughput: 9.08 Mbit/s
95th percentile per-packet one-way delay: 30.934 ms
Loss rate: 38.69%
-- Flow 2:
Average throughput: 3.43 Mbit/s
95th percentile per-packet one-way delay: 30.991 ms
Loss rate: 43.46%
-- Flow 3:
Average throughput: 5.13 Mbit/s
95th percentile per-packet one-way delay: 30.985 ms
Loss rate: 23.87%

Run 2: Report of PCC-Expr — Data Link

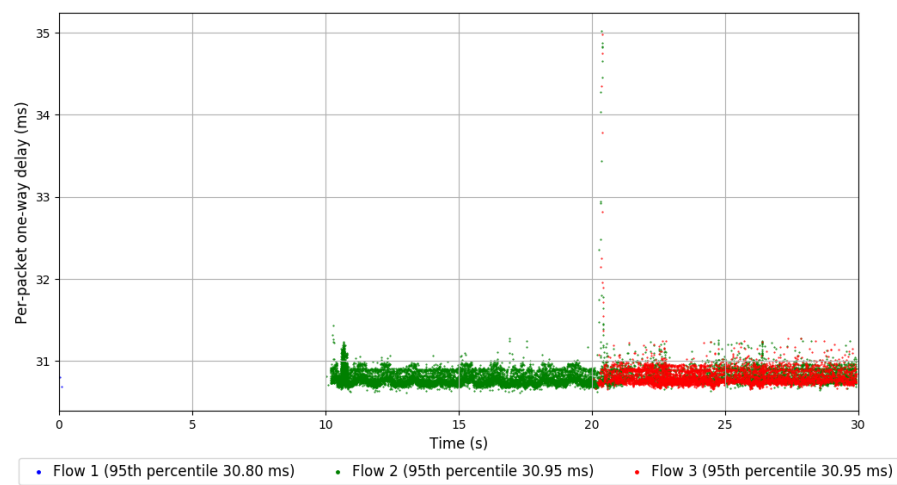
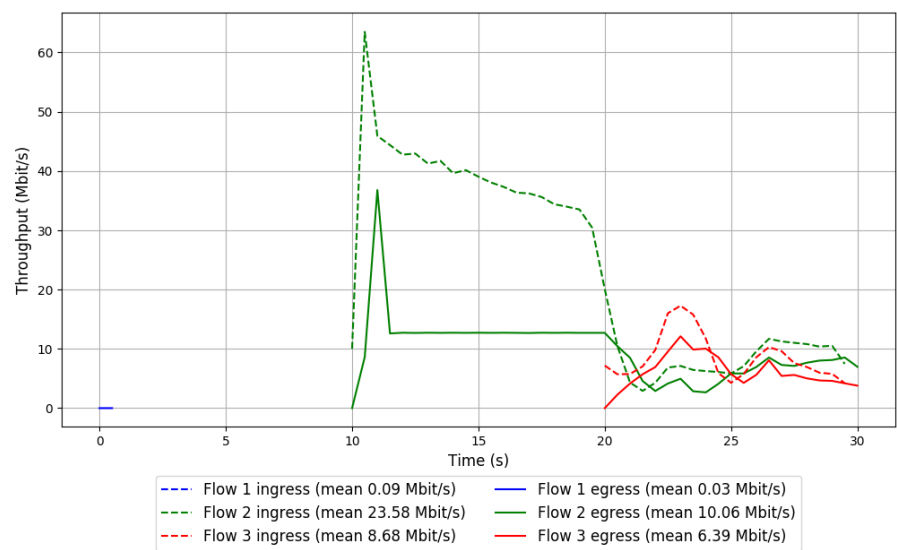


Run 3: Statistics of PCC-Expr

Start at: 2018-10-26 03:41:52
End at: 2018-10-26 03:42:22
Local clock offset: 0.478 ms
Remote clock offset: -2.927 ms

Below is generated by plot.py at 2018-10-26 05:00:24
Datalink statistics
-- Total of 3 flows:
Average throughput: 8.80 Mbit/s
95th percentile per-packet one-way delay: 30.949 ms
Loss rate: 52.54%
-- Flow 1:
Average throughput: 0.03 Mbit/s
95th percentile per-packet one-way delay: 30.801 ms
Loss rate: 85.71%
-- Flow 2:
Average throughput: 10.06 Mbit/s
95th percentile per-packet one-way delay: 30.947 ms
Loss rate: 57.33%
-- Flow 3:
Average throughput: 6.39 Mbit/s
95th percentile per-packet one-way delay: 30.951 ms
Loss rate: 26.30%

Run 3: Report of PCC-Expr — Data Link

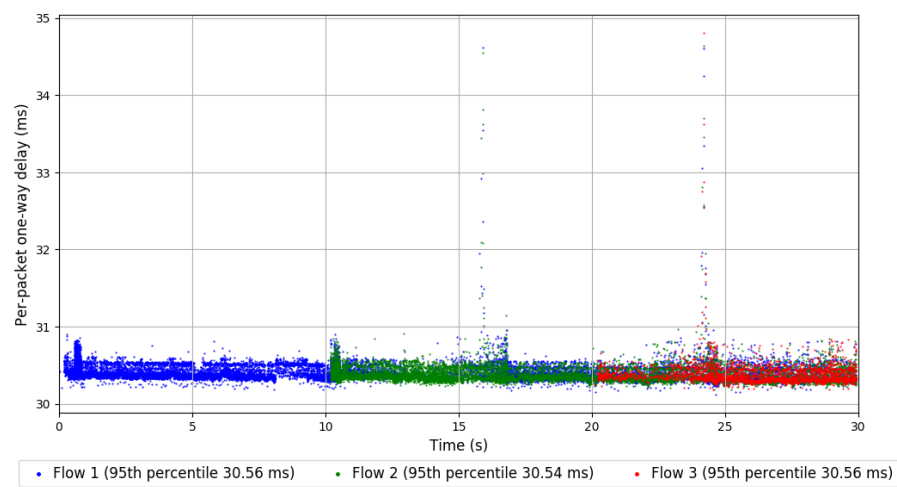
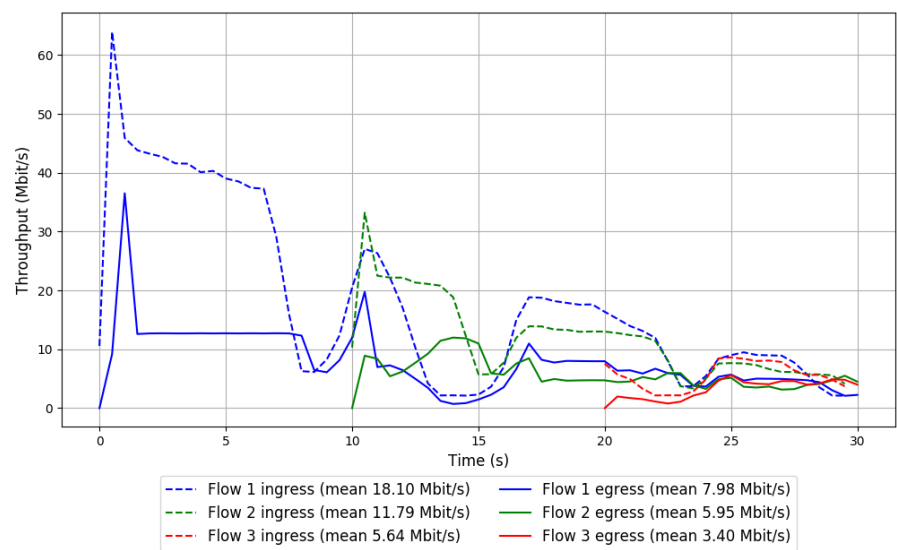


Run 4: Statistics of PCC-Expr

Start at: 2018-10-26 04:06:25
End at: 2018-10-26 04:06:55
Local clock offset: -0.979 ms
Remote clock offset: -2.784 ms

Below is generated by plot.py at 2018-10-26 05:00:24
Datalink statistics
-- Total of 3 flows:
Average throughput: 13.06 Mbit/s
95th percentile per-packet one-way delay: 30.553 ms
Loss rate: 53.04%
-- Flow 1:
Average throughput: 7.98 Mbit/s
95th percentile per-packet one-way delay: 30.558 ms
Loss rate: 55.91%
-- Flow 2:
Average throughput: 5.95 Mbit/s
95th percentile per-packet one-way delay: 30.541 ms
Loss rate: 49.57%
-- Flow 3:
Average throughput: 3.40 Mbit/s
95th percentile per-packet one-way delay: 30.558 ms
Loss rate: 39.79%

Run 4: Report of PCC-Expr — Data Link

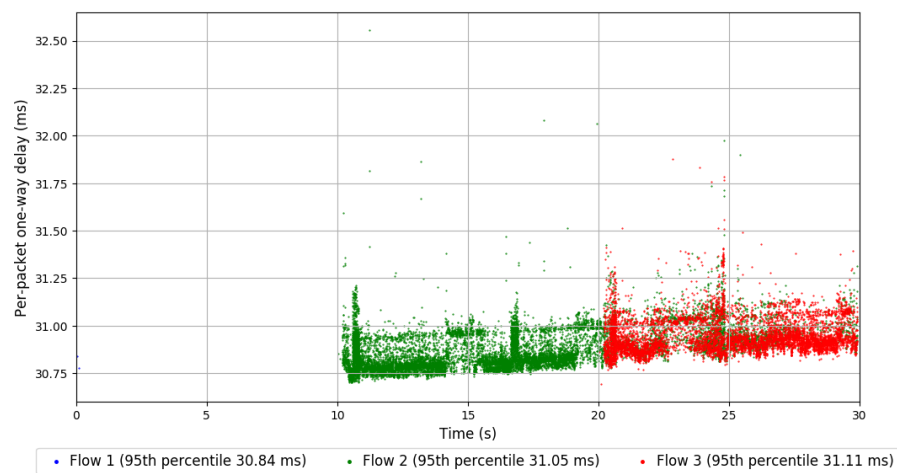
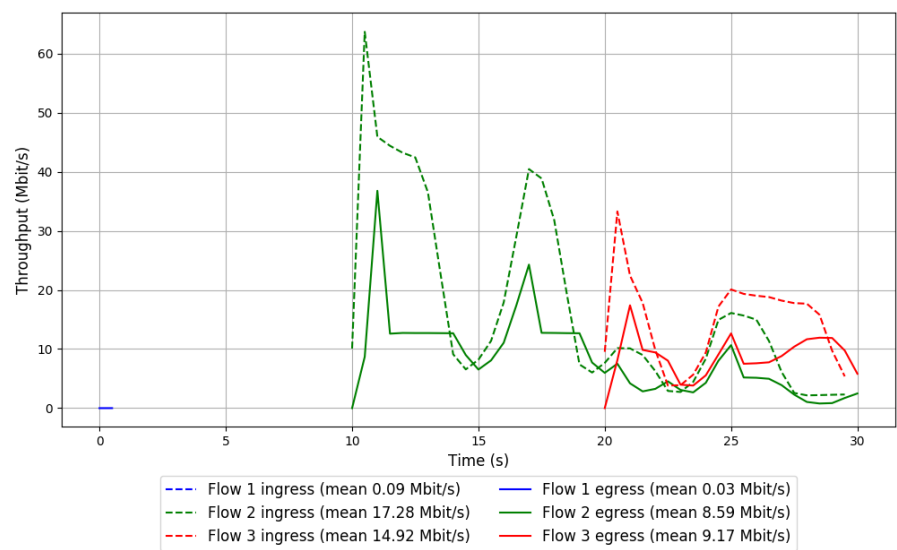


Run 5: Statistics of PCC-Expr

Start at: 2018-10-26 04:31:12
End at: 2018-10-26 04:31:42
Local clock offset: -3.692 ms
Remote clock offset: -2.371 ms

Below is generated by plot.py at 2018-10-26 05:00:24
Datalink statistics
-- Total of 3 flows:
Average throughput: 8.74 Mbit/s
95th percentile per-packet one-way delay: 31.077 ms
Loss rate: 46.76%
-- Flow 1:
Average throughput: 0.03 Mbit/s
95th percentile per-packet one-way delay: 30.841 ms
Loss rate: 85.71%
-- Flow 2:
Average throughput: 8.59 Mbit/s
95th percentile per-packet one-way delay: 31.051 ms
Loss rate: 50.26%
-- Flow 3:
Average throughput: 9.17 Mbit/s
95th percentile per-packet one-way delay: 31.108 ms
Loss rate: 38.58%

Run 5: Report of PCC-Expr — Data Link

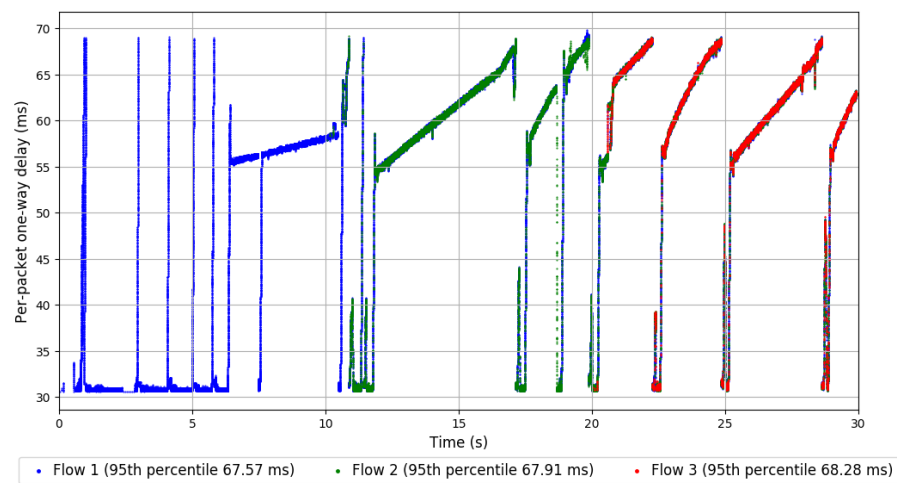
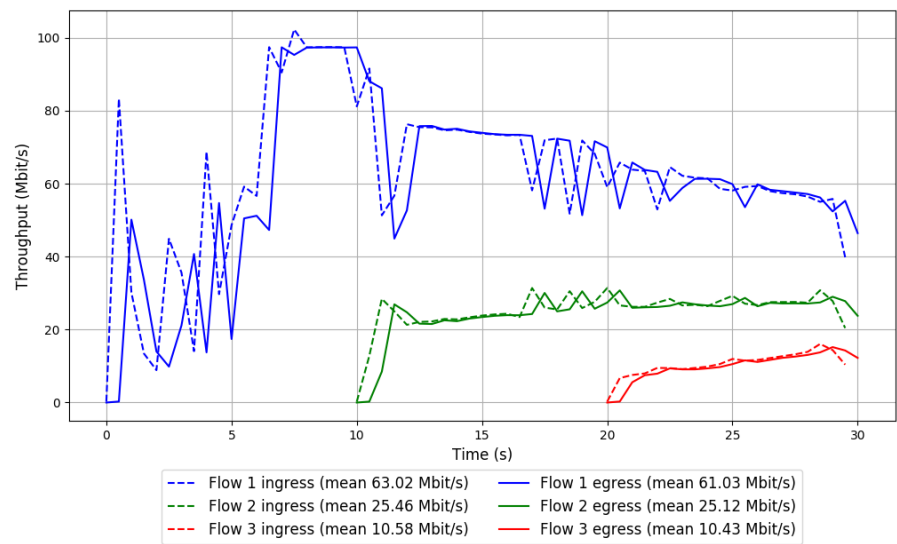


Run 1: Statistics of QUIC Cubic

Start at: 2018-10-26 03:02:13
End at: 2018-10-26 03:02:43
Local clock offset: 0.493 ms
Remote clock offset: -3.585 ms

Below is generated by plot.py at 2018-10-26 05:00:45
Datalink statistics
-- Total of 3 flows:
Average throughput: 81.15 Mbit/s
95th percentile per-packet one-way delay: 67.660 ms
Loss rate: 2.62%
-- Flow 1:
Average throughput: 61.03 Mbit/s
95th percentile per-packet one-way delay: 67.569 ms
Loss rate: 3.05%
-- Flow 2:
Average throughput: 25.12 Mbit/s
95th percentile per-packet one-way delay: 67.908 ms
Loss rate: 1.31%
-- Flow 3:
Average throughput: 10.43 Mbit/s
95th percentile per-packet one-way delay: 68.276 ms
Loss rate: 1.09%

Run 1: Report of QUIC Cubic — Data Link

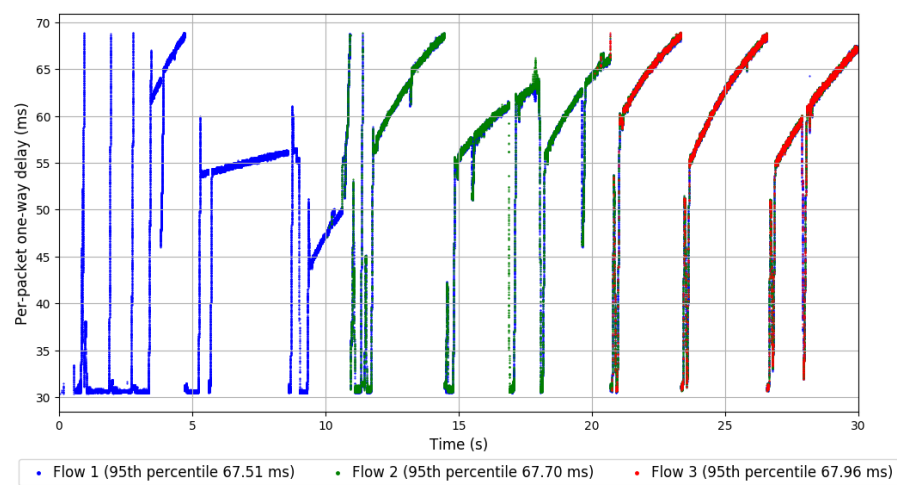
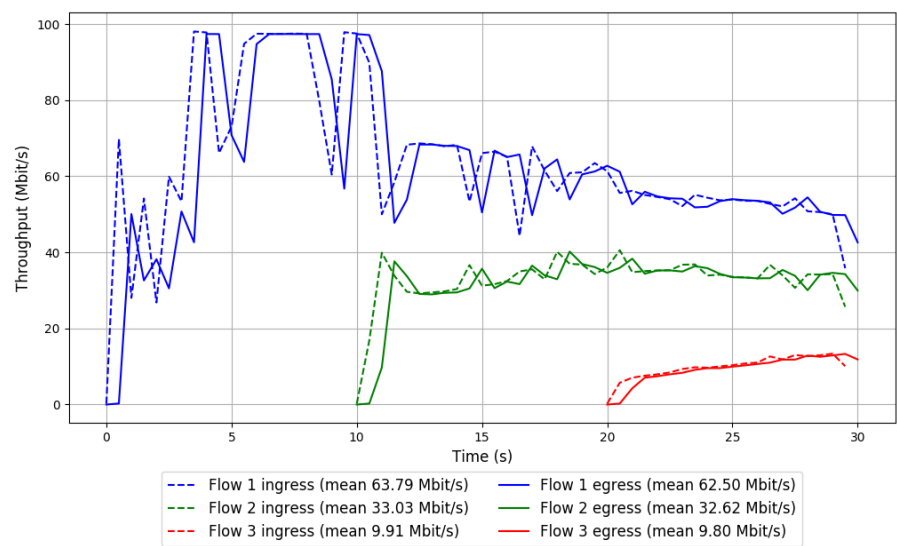


Run 2: Statistics of QUIC Cubic

Start at: 2018-10-26 03:26:37
End at: 2018-10-26 03:27:07
Local clock offset: 0.525 ms
Remote clock offset: -3.367 ms

Below is generated by plot.py at 2018-10-26 05:00:57
Datalink statistics
-- Total of 3 flows:
Average throughput: 87.40 Mbit/s
95th percentile per-packet one-way delay: 67.574 ms
Loss rate: 1.68%
-- Flow 1:
Average throughput: 62.50 Mbit/s
95th percentile per-packet one-way delay: 67.509 ms
Loss rate: 1.90%
-- Flow 2:
Average throughput: 32.62 Mbit/s
95th percentile per-packet one-way delay: 67.700 ms
Loss rate: 1.15%
-- Flow 3:
Average throughput: 9.80 Mbit/s
95th percentile per-packet one-way delay: 67.958 ms
Loss rate: 1.04%

Run 2: Report of QUIC Cubic — Data Link

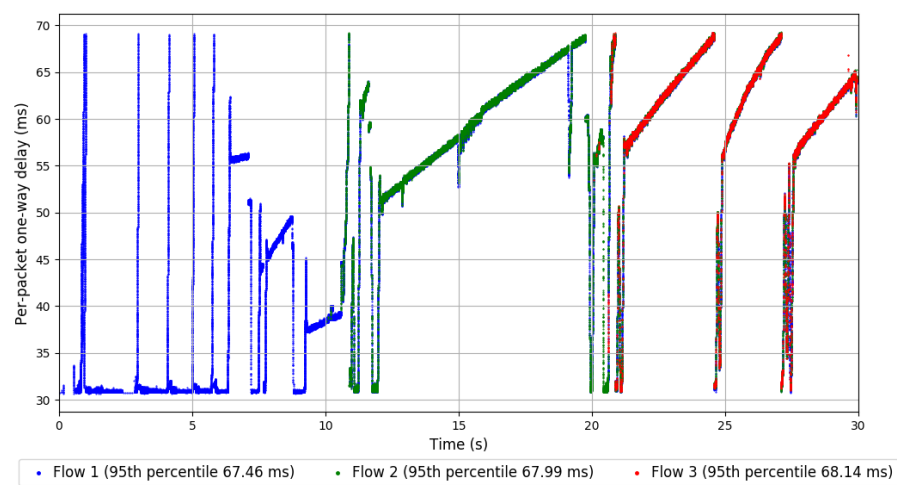
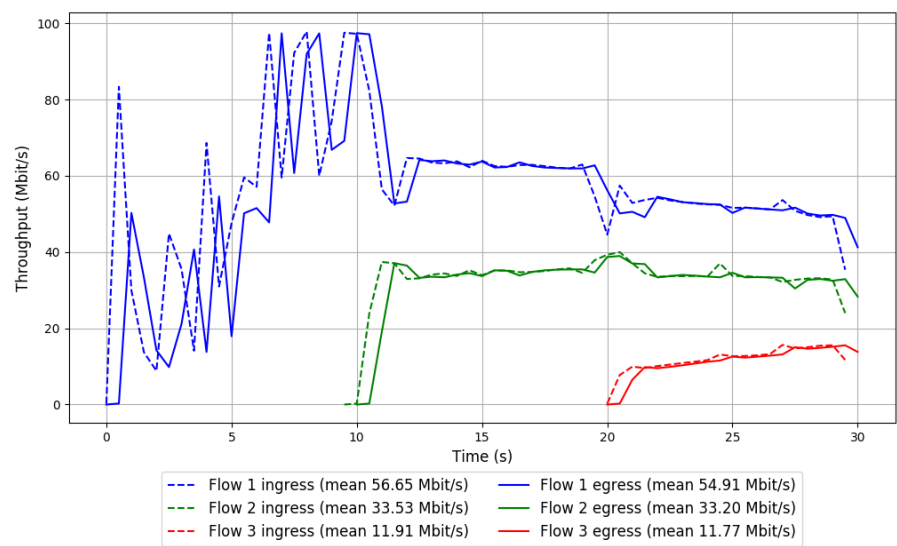


Run 3: Statistics of QUIC Cubic

Start at: 2018-10-26 03:51:15
End at: 2018-10-26 03:51:45
Local clock offset: 0.47 ms
Remote clock offset: -2.633 ms

Below is generated by plot.py at 2018-10-26 05:00:57
Datalink statistics
-- Total of 3 flows:
Average throughput: 80.88 Mbit/s
95th percentile per-packet one-way delay: 67.719 ms
Loss rate: 2.30%
-- Flow 1:
Average throughput: 54.91 Mbit/s
95th percentile per-packet one-way delay: 67.462 ms
Loss rate: 2.96%
-- Flow 2:
Average throughput: 33.20 Mbit/s
95th percentile per-packet one-way delay: 67.992 ms
Loss rate: 0.84%
-- Flow 3:
Average throughput: 11.77 Mbit/s
95th percentile per-packet one-way delay: 68.138 ms
Loss rate: 1.00%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2018-10-26 04:15:49

End at: 2018-10-26 04:16:19

Local clock offset: -2.535 ms

Remote clock offset: -2.64 ms

Below is generated by plot.py at 2018-10-26 05:00:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 81.25 Mbit/s

95th percentile per-packet one-way delay: 66.639 ms

Loss rate: 2.01%

-- Flow 1:

Average throughput: 55.70 Mbit/s

95th percentile per-packet one-way delay: 66.534 ms

Loss rate: 2.69%

-- Flow 2:

Average throughput: 33.44 Mbit/s

95th percentile per-packet one-way delay: 67.084 ms

Loss rate: 0.51%

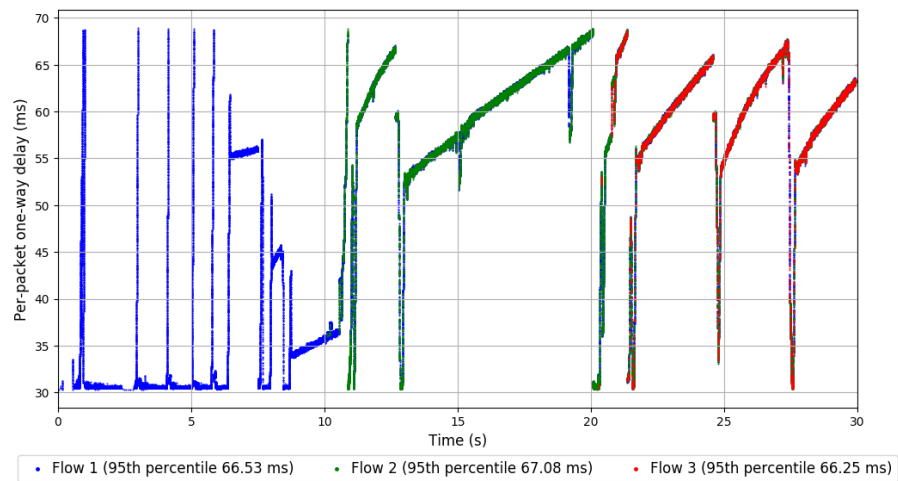
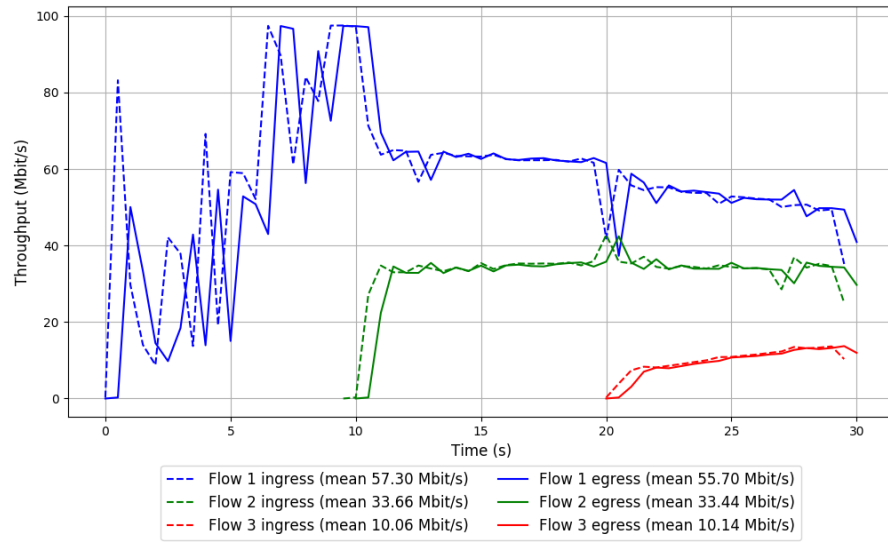
-- Flow 3:

Average throughput: 10.14 Mbit/s

95th percentile per-packet one-way delay: 66.252 ms

Loss rate: 0.38%

Run 4: Report of QUIC Cubic — Data Link

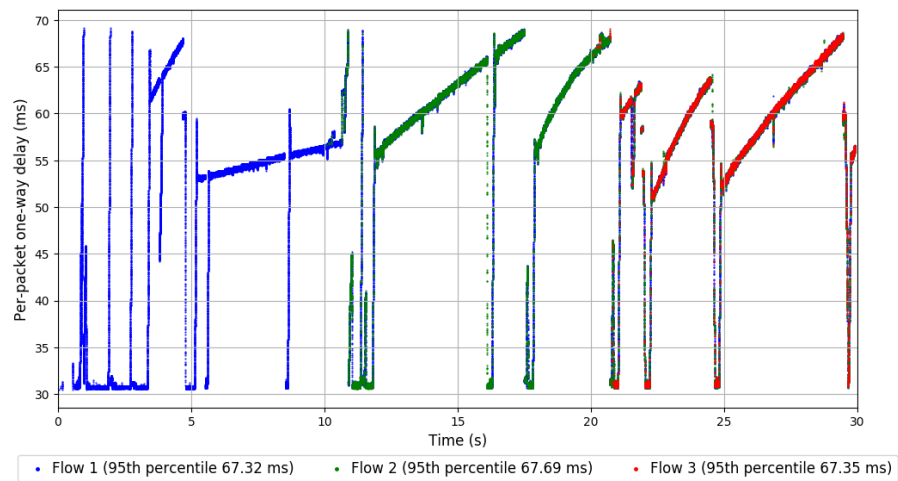
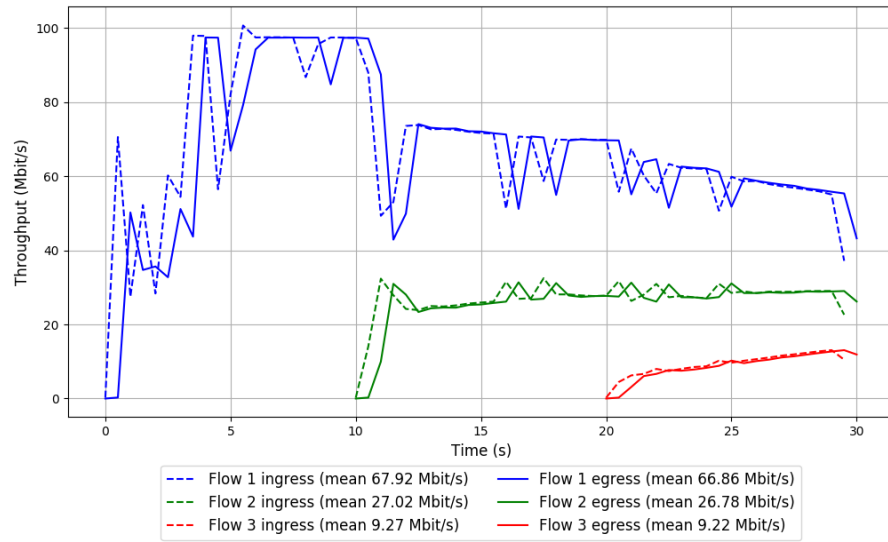


Run 5: Statistics of QUIC Cubic

Start at: 2018-10-26 04:40:36
End at: 2018-10-26 04:41:06
Local clock offset: -1.061 ms
Remote clock offset: -2.402 ms

Below is generated by plot.py at 2018-10-26 05:01:03
Datalink statistics
-- Total of 3 flows:
Average throughput: 87.66 Mbit/s
95th percentile per-packet one-way delay: 67.416 ms
Loss rate: 1.33%
-- Flow 1:
Average throughput: 66.86 Mbit/s
95th percentile per-packet one-way delay: 67.319 ms
Loss rate: 1.48%
-- Flow 2:
Average throughput: 26.78 Mbit/s
95th percentile per-packet one-way delay: 67.688 ms
Loss rate: 0.87%
-- Flow 3:
Average throughput: 9.22 Mbit/s
95th percentile per-packet one-way delay: 67.349 ms
Loss rate: 0.68%

Run 5: Report of QUIC Cubic — Data Link

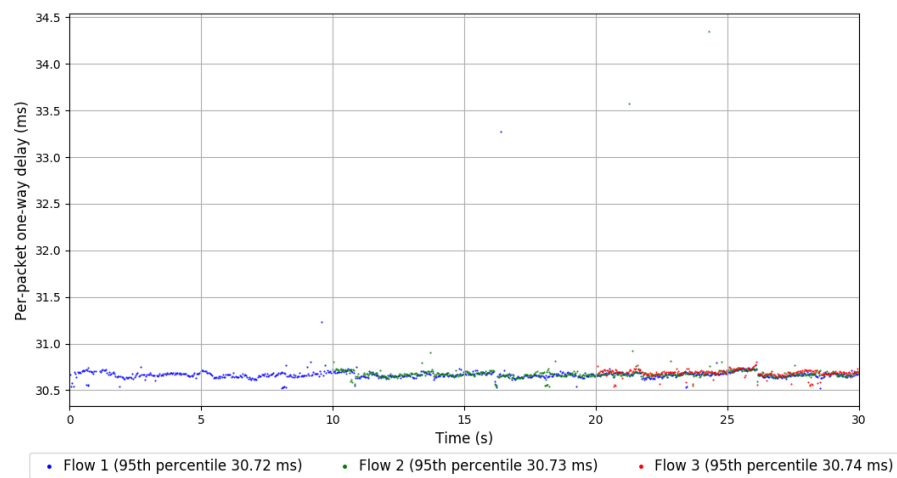
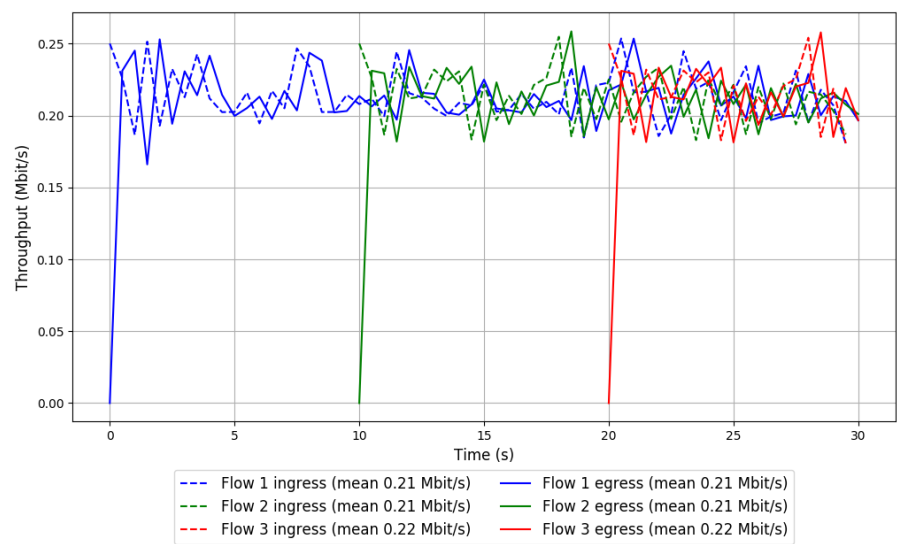


```
Run 1: Statistics of SReAM

Start at: 2018-10-26 02:54:11
End at: 2018-10-26 02:54:41
Local clock offset: 0.218 ms
Remote clock offset: -3.928 ms

# Below is generated by plot.py at 2018-10-26 05:01:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 30.726 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 30.718 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 30.725 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 30.738 ms
Loss rate: 0.00%
```

Run 1: Report of SReAM — Data Link

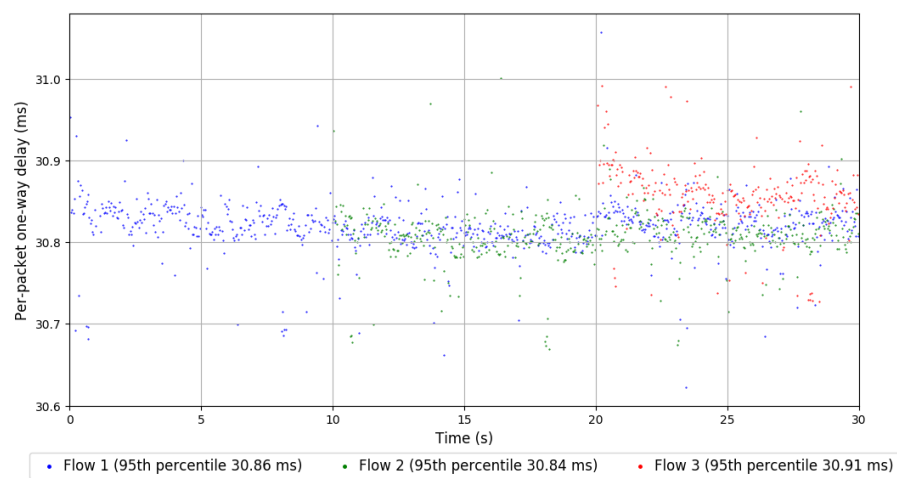
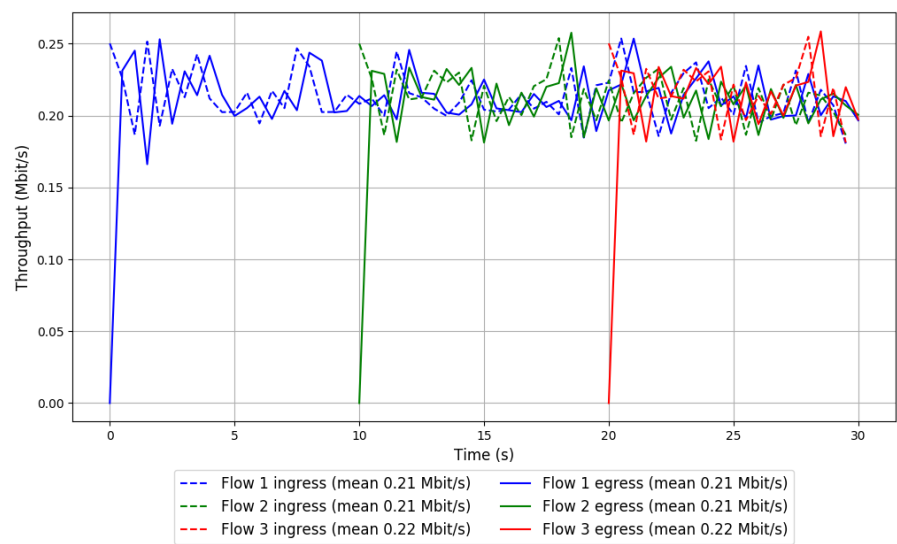


Run 2: Statistics of SReAM

Start at: 2018-10-26 03:18:34
End at: 2018-10-26 03:19:04
Local clock offset: 0.485 ms
Remote clock offset: -3.332 ms

Below is generated by plot.py at 2018-10-26 05:01:03
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 30.880 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 30.857 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 30.844 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 30.910 ms
Loss rate: 0.00%

Run 2: Report of SReAM — Data Link

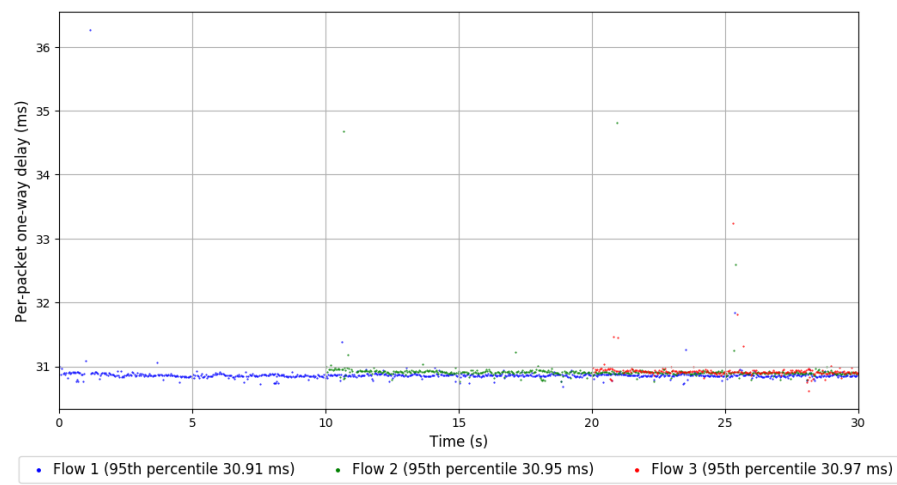
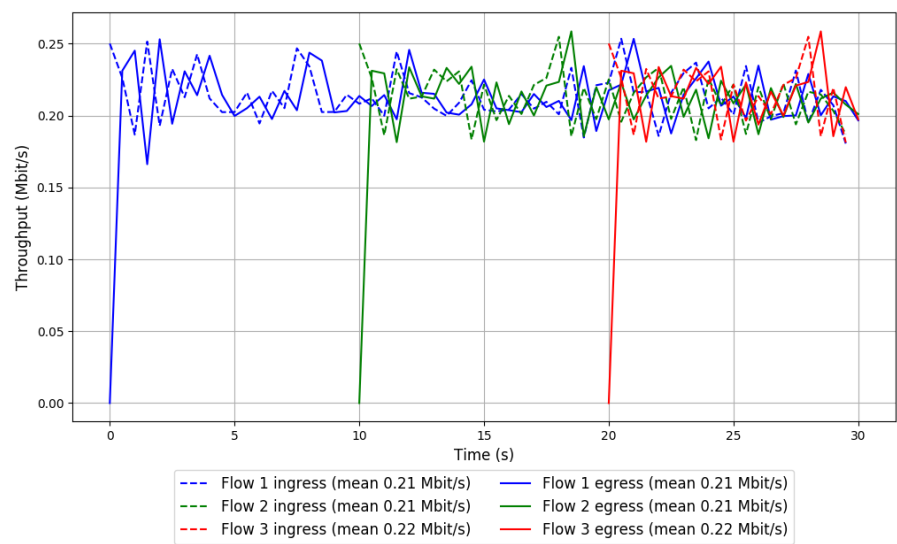


Run 3: Statistics of SReAM

Start at: 2018-10-26 03:43:11
End at: 2018-10-26 03:43:41
Local clock offset: 0.515 ms
Remote clock offset: -2.807 ms

Below is generated by plot.py at 2018-10-26 05:01:03
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 30.950 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 30.909 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 30.955 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 30.972 ms
Loss rate: 0.00%

Run 3: Report of SReAM — Data Link

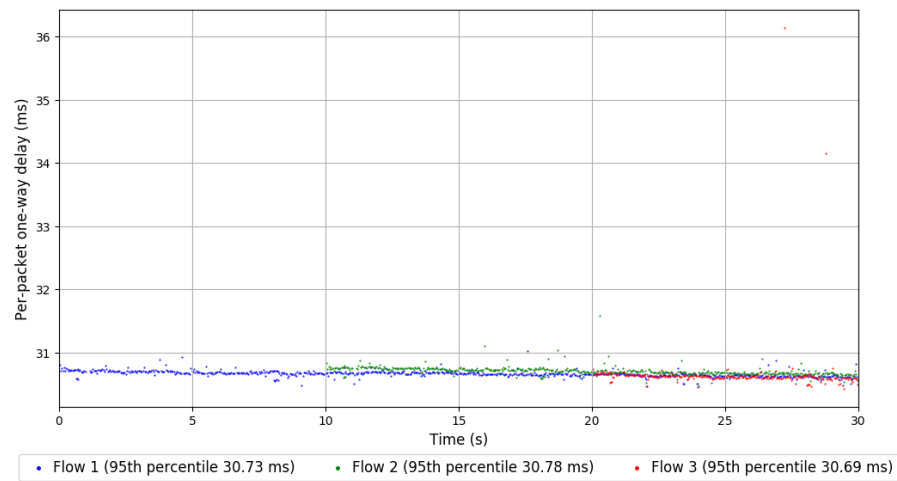
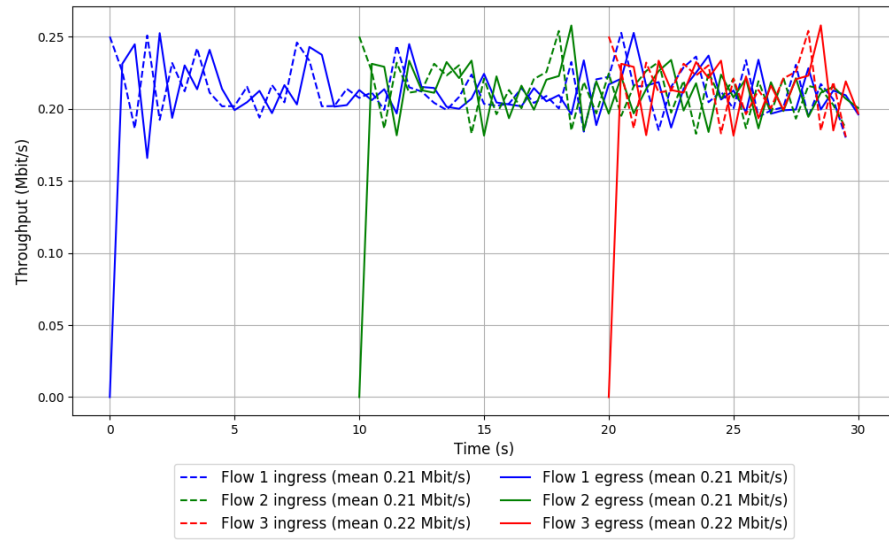


Run 4: Statistics of SReAM

Start at: 2018-10-26 04:07:45
End at: 2018-10-26 04:08:15
Local clock offset: -1.332 ms
Remote clock offset: -2.595 ms

Below is generated by plot.py at 2018-10-26 05:01:03
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 30.760 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 30.732 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 30.776 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 30.690 ms
Loss rate: 0.00%

Run 4: Report of SReAM — Data Link

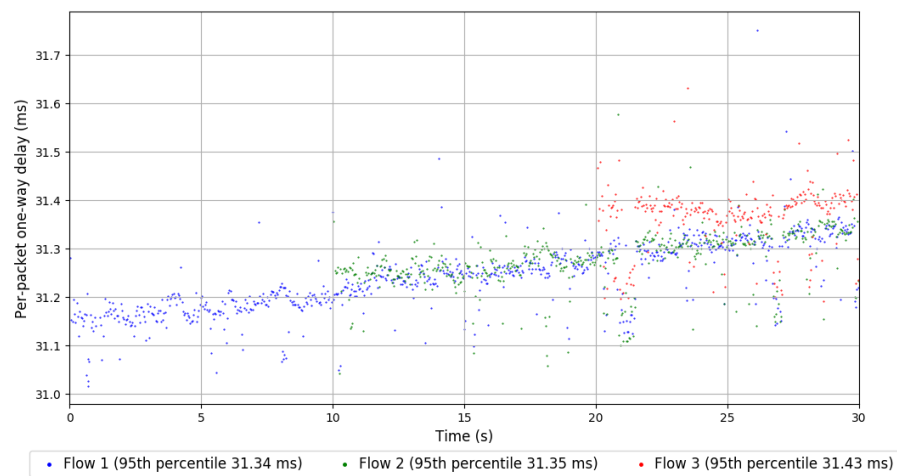
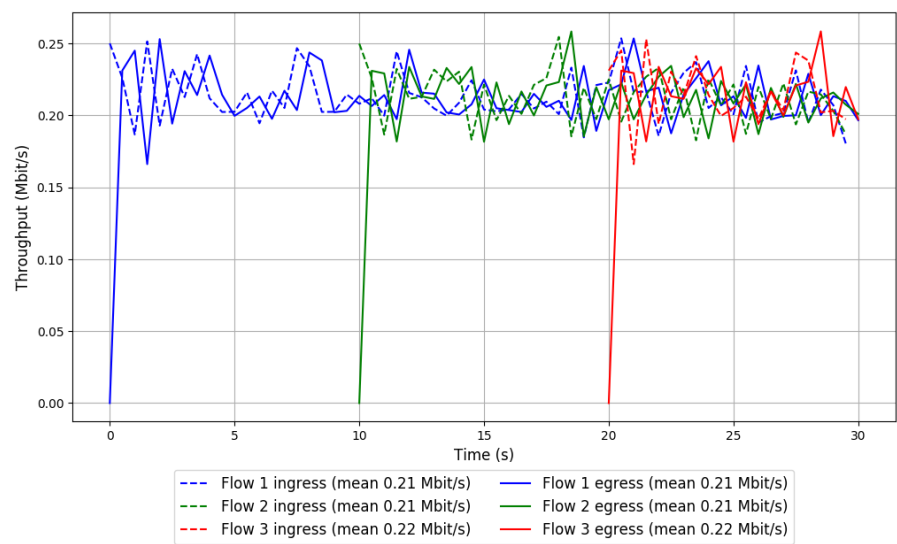


Run 5: Statistics of SReAM

Start at: 2018-10-26 04:32:31
End at: 2018-10-26 04:33:01
Local clock offset: -3.414 ms
Remote clock offset: -2.285 ms

Below is generated by plot.py at 2018-10-26 05:01:03
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 31.396 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 31.342 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 31.351 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 31.432 ms
Loss rate: 0.00%

Run 5: Report of SReAM — Data Link



Run 1: Statistics of Sprout

Start at: 2018-10-26 02:50:07

End at: 2018-10-26 02:50:37

Local clock offset: -0.002 ms

Remote clock offset: -3.71 ms

Below is generated by plot.py at 2018-10-26 05:01:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 23.51 Mbit/s

95th percentile per-packet one-way delay: 37.685 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 11.90 Mbit/s

95th percentile per-packet one-way delay: 37.256 ms

Loss rate: 0.02%

-- Flow 2:

Average throughput: 11.69 Mbit/s

95th percentile per-packet one-way delay: 38.523 ms

Loss rate: 0.00%

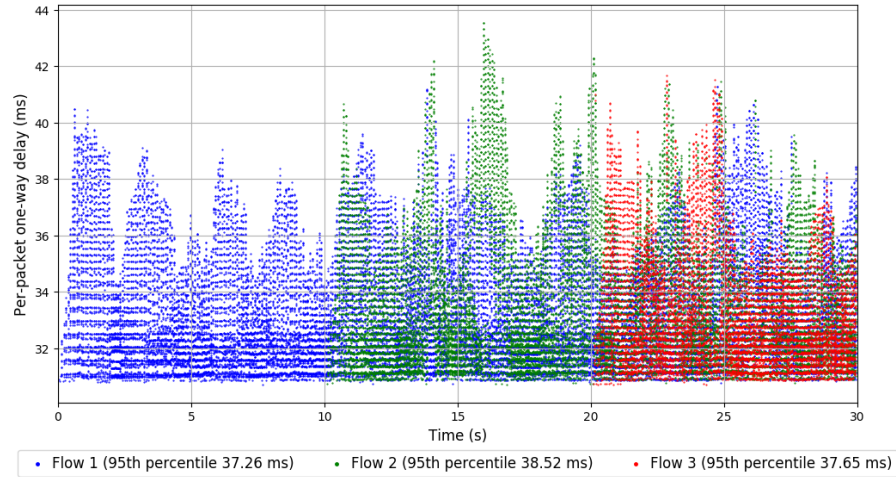
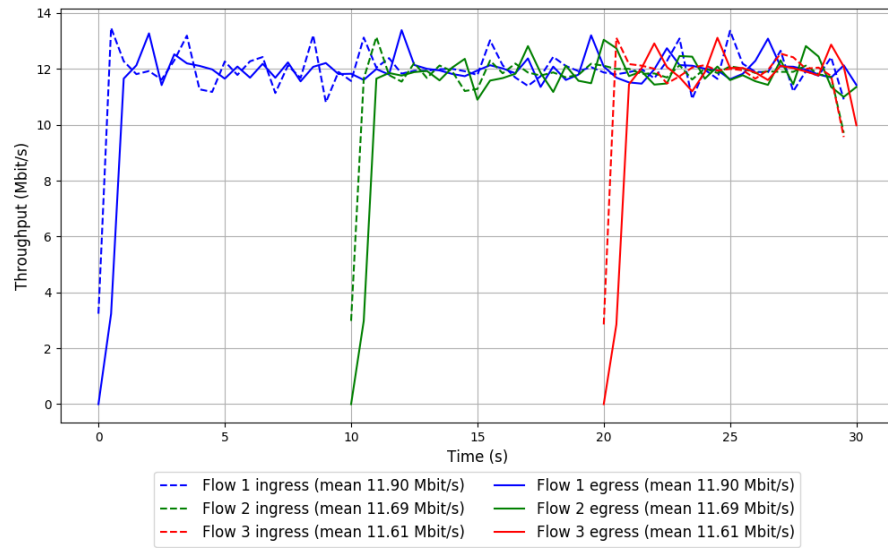
-- Flow 3:

Average throughput: 11.61 Mbit/s

95th percentile per-packet one-way delay: 37.653 ms

Loss rate: 0.00%

Run 1: Report of Sprout — Data Link

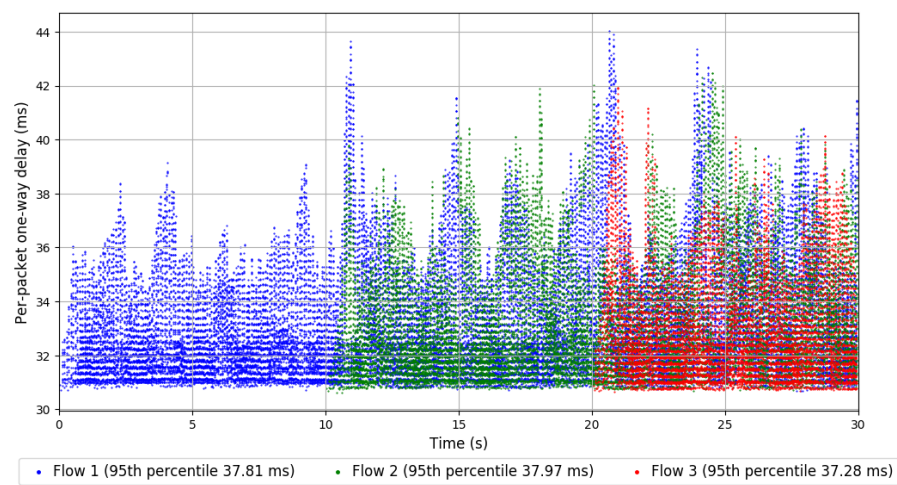
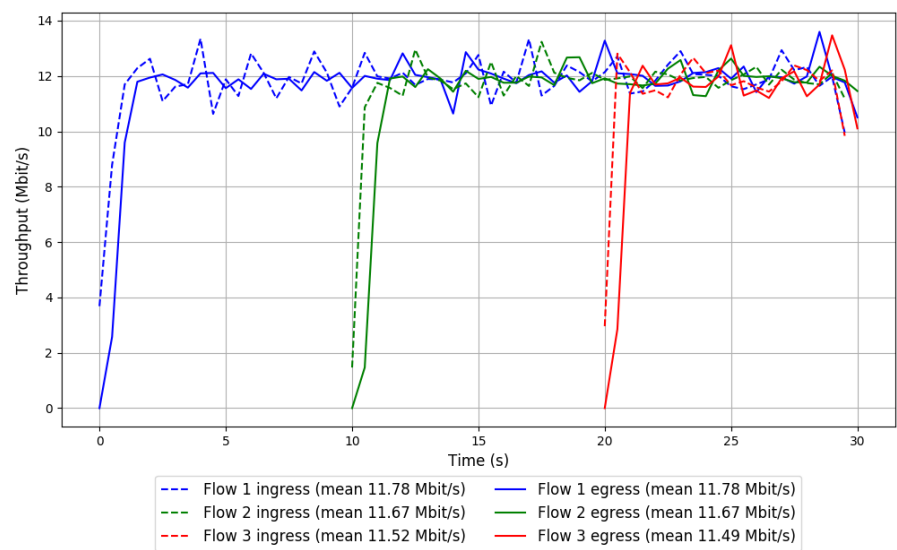


Run 2: Statistics of Sprout

Start at: 2018-10-26 03:14:34
End at: 2018-10-26 03:15:04
Local clock offset: 0.469 ms
Remote clock offset: -3.341 ms

```
# Below is generated by plot.py at 2018-10-26 05:01:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.34 Mbit/s
95th percentile per-packet one-way delay: 37.782 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 11.78 Mbit/s
95th percentile per-packet one-way delay: 37.807 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 11.67 Mbit/s
95th percentile per-packet one-way delay: 37.973 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 11.49 Mbit/s
95th percentile per-packet one-way delay: 37.282 ms
Loss rate: 0.28%
```

Run 2: Report of Sprout — Data Link

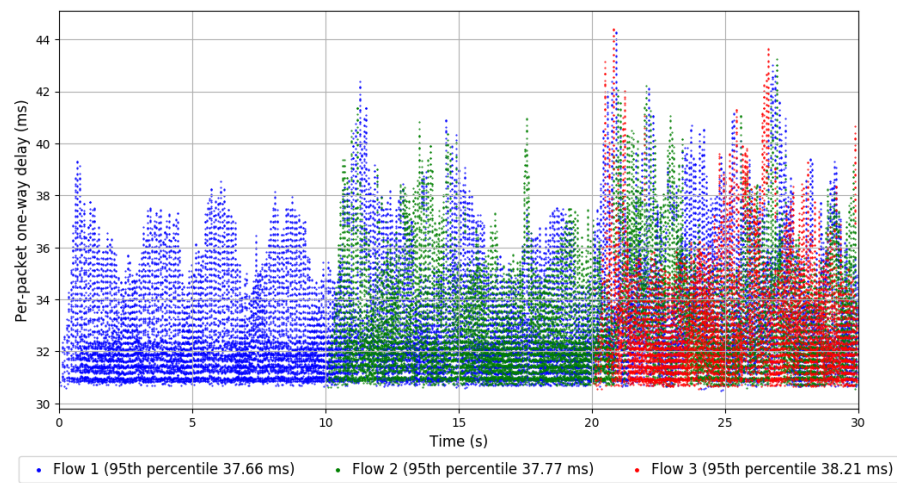
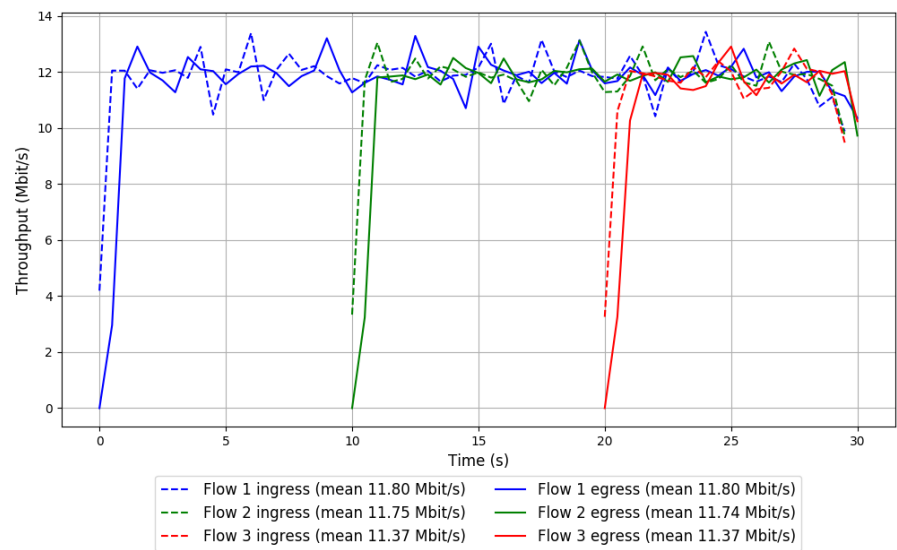


Run 3: Statistics of Sprout

Start at: 2018-10-26 03:39:11
End at: 2018-10-26 03:39:41
Local clock offset: 0.495 ms
Remote clock offset: -3.006 ms

Below is generated by plot.py at 2018-10-26 05:01:03
Datalink statistics
-- Total of 3 flows:
Average throughput: 23.35 Mbit/s
95th percentile per-packet one-way delay: 37.766 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 11.80 Mbit/s
95th percentile per-packet one-way delay: 37.658 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 11.74 Mbit/s
95th percentile per-packet one-way delay: 37.773 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 11.37 Mbit/s
95th percentile per-packet one-way delay: 38.211 ms
Loss rate: 0.00%

Run 3: Report of Sprout — Data Link

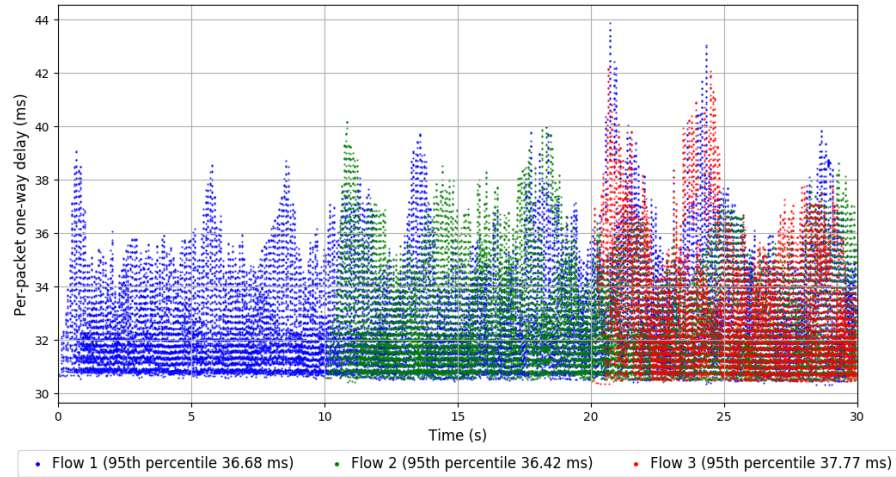
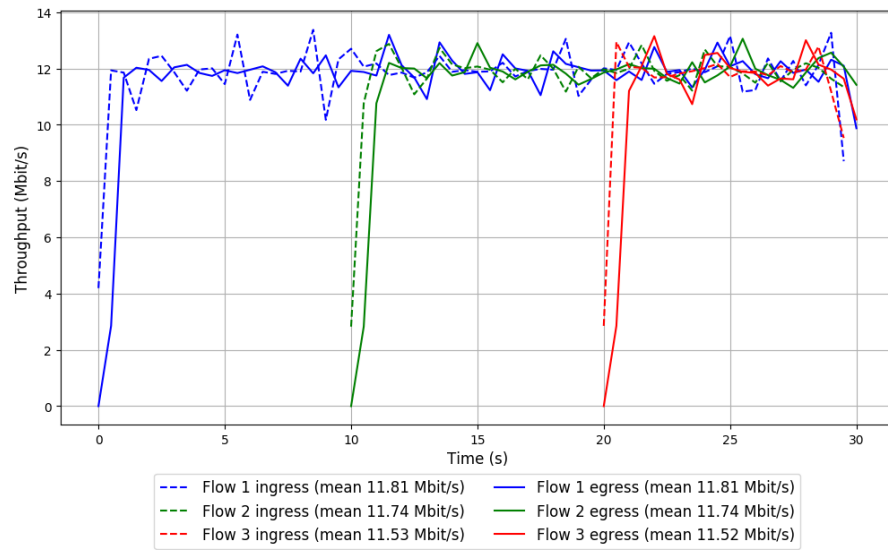


Run 4: Statistics of Sprout

Start at: 2018-10-26 04:03:38
End at: 2018-10-26 04:04:08
Local clock offset: -0.163 ms
Remote clock offset: -2.526 ms

Below is generated by plot.py at 2018-10-26 05:01:03
Datalink statistics
-- Total of 3 flows:
Average throughput: 23.42 Mbit/s
95th percentile per-packet one-way delay: 36.768 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 11.81 Mbit/s
95th percentile per-packet one-way delay: 36.682 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 11.74 Mbit/s
95th percentile per-packet one-way delay: 36.420 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 11.52 Mbit/s
95th percentile per-packet one-way delay: 37.766 ms
Loss rate: 0.00%

Run 4: Report of Sprout — Data Link

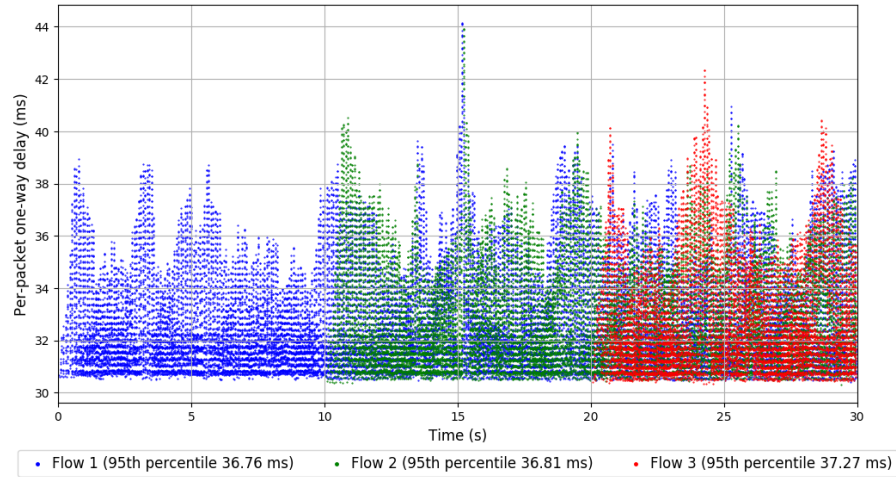
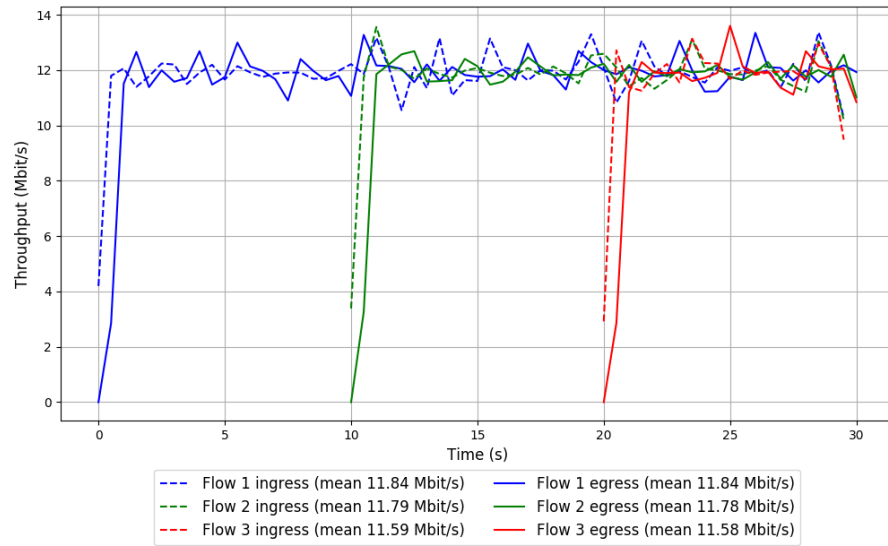


Run 5: Statistics of Sprout

Start at: 2018-10-26 04:28:31
End at: 2018-10-26 04:29:01
Local clock offset: -3.534 ms
Remote clock offset: -2.56 ms

```
# Below is generated by plot.py at 2018-10-26 05:01:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.50 Mbit/s
95th percentile per-packet one-way delay: 36.839 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 11.84 Mbit/s
95th percentile per-packet one-way delay: 36.761 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 11.78 Mbit/s
95th percentile per-packet one-way delay: 36.808 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 11.58 Mbit/s
95th percentile per-packet one-way delay: 37.265 ms
Loss rate: 0.00%
```

Run 5: Report of Sprout — Data Link

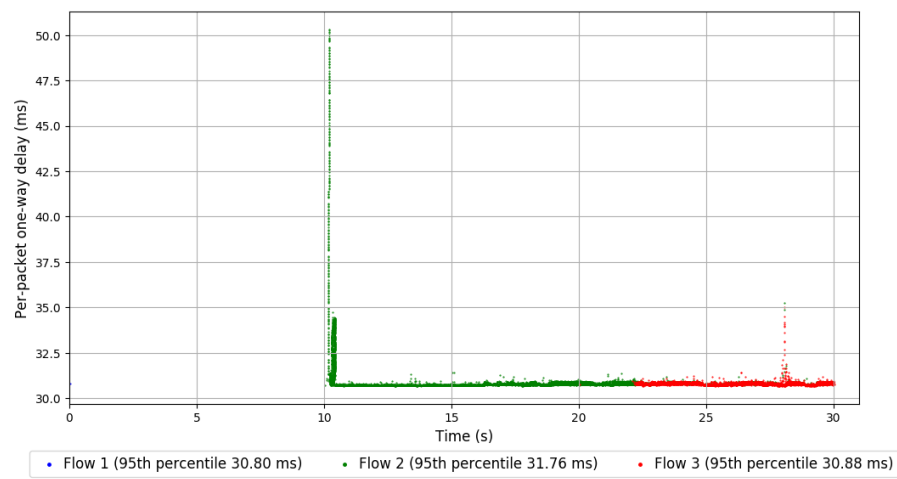
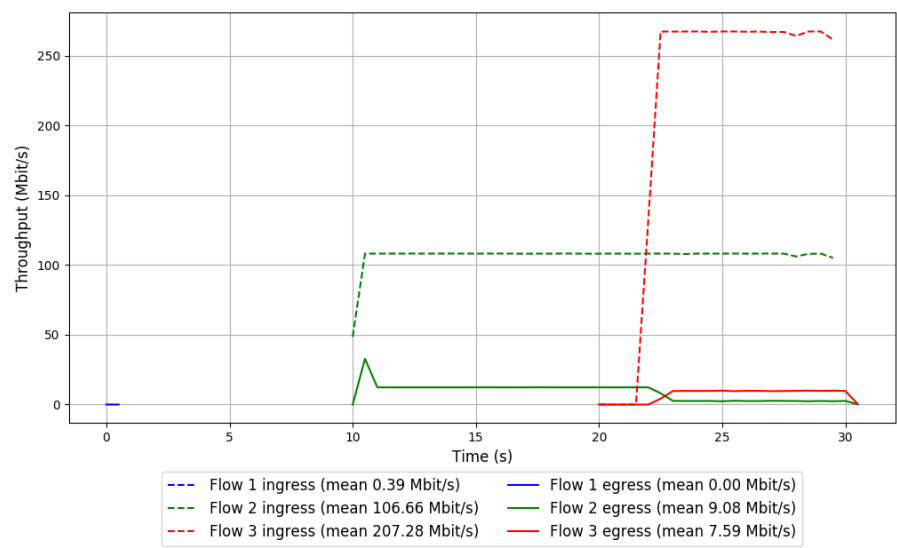


Run 1: Statistics of TaoVA-100x

Start at: 2018-10-26 03:09:06
End at: 2018-10-26 03:09:36
Local clock offset: 0.449 ms
Remote clock offset: -3.505 ms

Below is generated by plot.py at 2018-10-26 05:01:18
Datalink statistics
-- Total of 3 flows:
Average throughput: 8.57 Mbit/s
95th percentile per-packet one-way delay: 31.062 ms
Loss rate: 93.88%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 30.801 ms
Loss rate: 95.92%
-- Flow 2:
Average throughput: 9.08 Mbit/s
95th percentile per-packet one-way delay: 31.759 ms
Loss rate: 91.49%
-- Flow 3:
Average throughput: 7.59 Mbit/s
95th percentile per-packet one-way delay: 30.883 ms
Loss rate: 96.34%

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

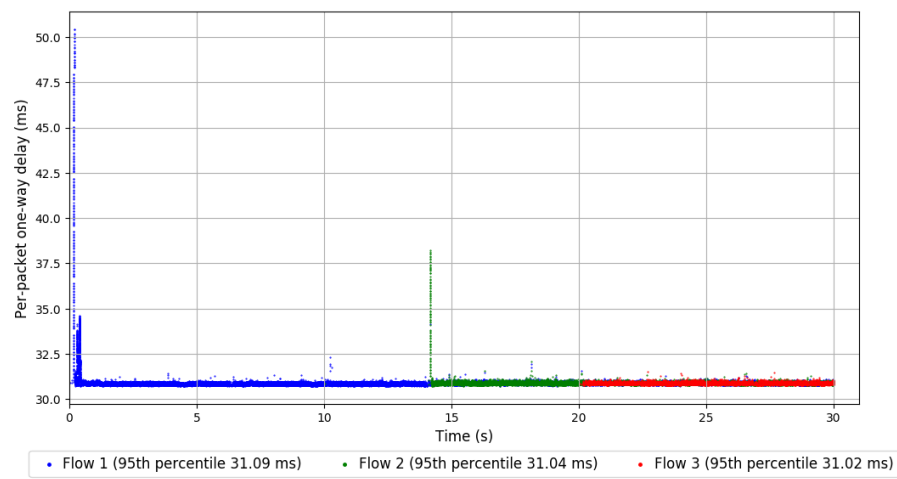
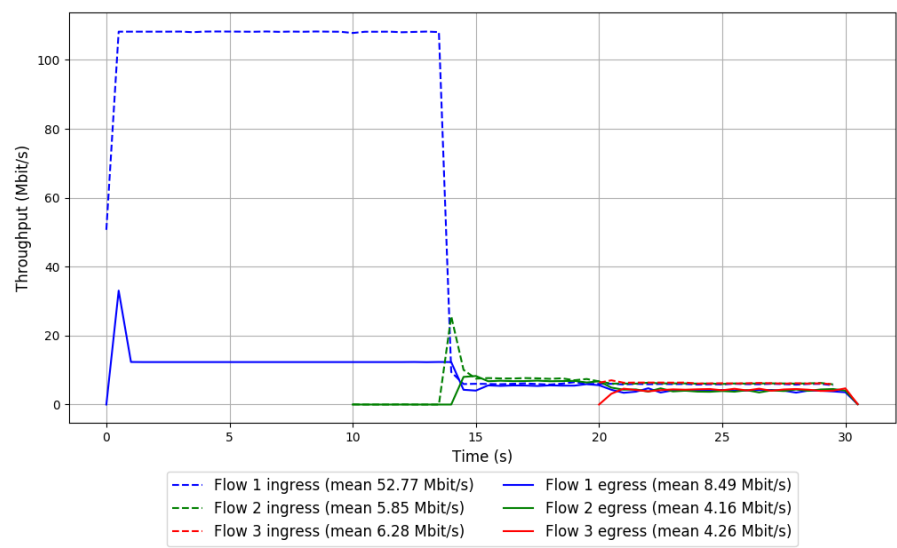


Run 2: Statistics of TaoVA-100x

Start at: 2018-10-26 03:33:39
End at: 2018-10-26 03:34:09
Local clock offset: 0.519 ms
Remote clock offset: -3.026 ms

Below is generated by plot.py at 2018-10-26 05:01:18
Datalink statistics
-- Total of 3 flows:
Average throughput: 12.68 Mbit/s
95th percentile per-packet one-way delay: 31.049 ms
Loss rate: 78.42%
-- Flow 1:
Average throughput: 8.49 Mbit/s
95th percentile per-packet one-way delay: 31.088 ms
Loss rate: 83.90%
-- Flow 2:
Average throughput: 4.16 Mbit/s
95th percentile per-packet one-way delay: 31.036 ms
Loss rate: 28.89%
-- Flow 3:
Average throughput: 4.26 Mbit/s
95th percentile per-packet one-way delay: 31.020 ms
Loss rate: 32.09%

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

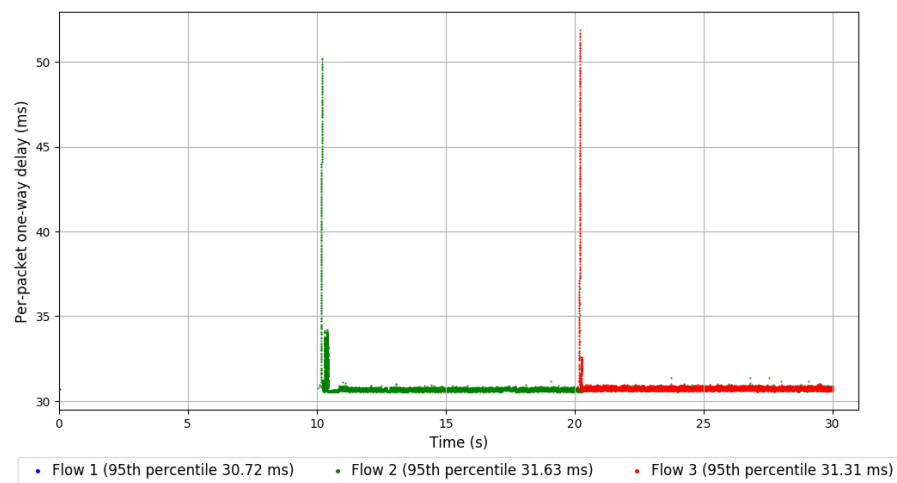
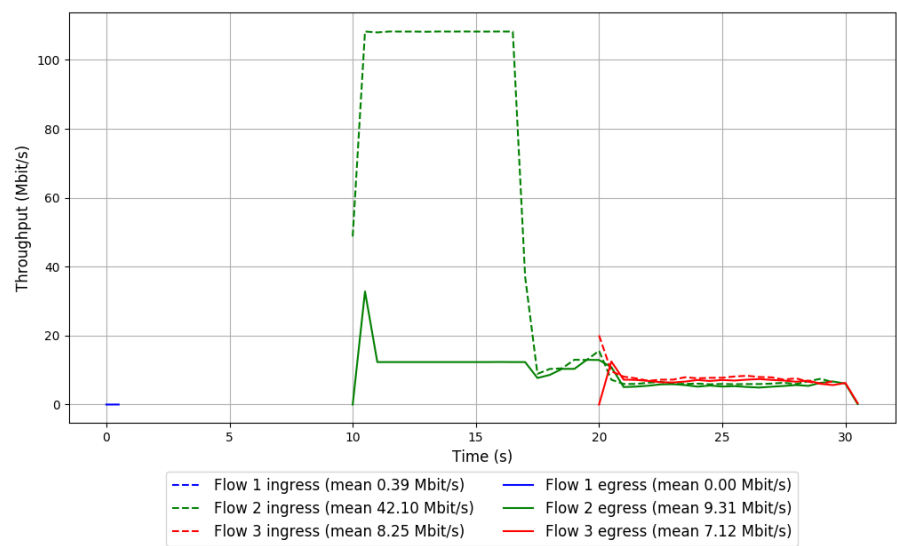


Run 3: Statistics of TaoVA-100x

Start at: 2018-10-26 03:58:09
End at: 2018-10-26 03:58:39
Local clock offset: 0.436 ms
Remote clock offset: -2.785 ms

Below is generated by plot.py at 2018-10-26 05:01:18
Datalink statistics
-- Total of 3 flows:
Average throughput: 8.57 Mbit/s
95th percentile per-packet one-way delay: 31.575 ms
Loss rate: 72.17%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 30.720 ms
Loss rate: 95.92%
-- Flow 2:
Average throughput: 9.31 Mbit/s
95th percentile per-packet one-way delay: 31.634 ms
Loss rate: 77.89%
-- Flow 3:
Average throughput: 7.12 Mbit/s
95th percentile per-packet one-way delay: 31.312 ms
Loss rate: 13.71%

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

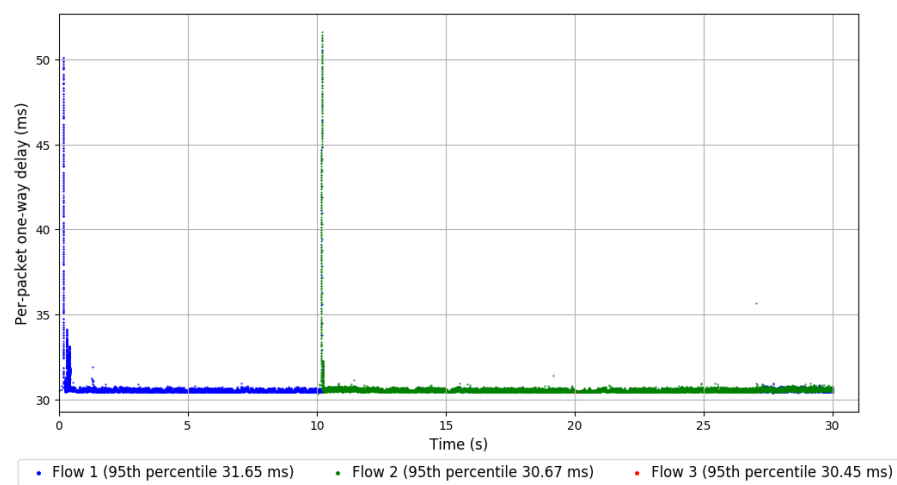
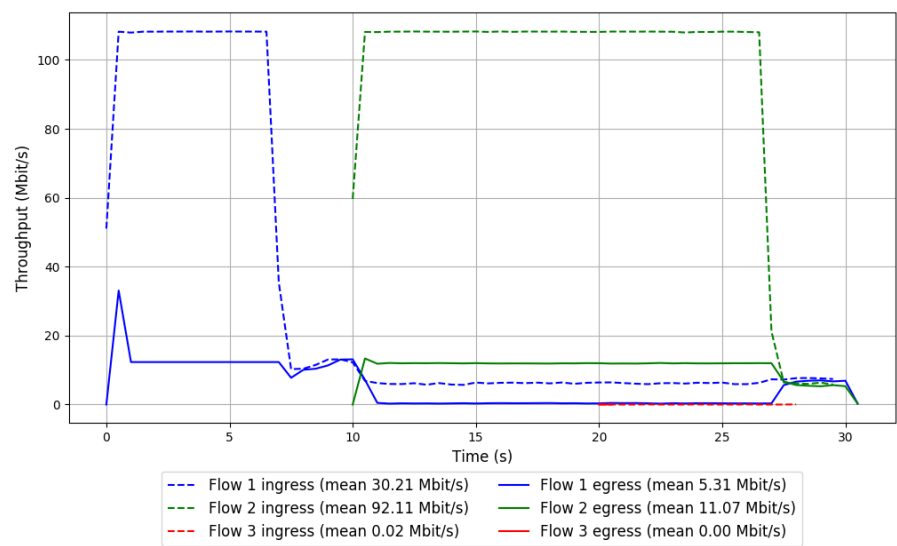


Run 4: Statistics of TaoVA-100x

Start at: 2018-10-26 04:23:01
End at: 2018-10-26 04:23:31
Local clock offset: -3.174 ms
Remote clock offset: -2.627 ms

Below is generated by plot.py at 2018-10-26 05:01:19
Datalink statistics
-- Total of 3 flows:
Average throughput: 12.68 Mbit/s
95th percentile per-packet one-way delay: 30.741 ms
Loss rate: 86.15%
-- Flow 1:
Average throughput: 5.31 Mbit/s
95th percentile per-packet one-way delay: 31.649 ms
Loss rate: 82.44%
-- Flow 2:
Average throughput: 11.07 Mbit/s
95th percentile per-packet one-way delay: 30.671 ms
Loss rate: 87.98%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 30.447 ms
Loss rate: 99.16%

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

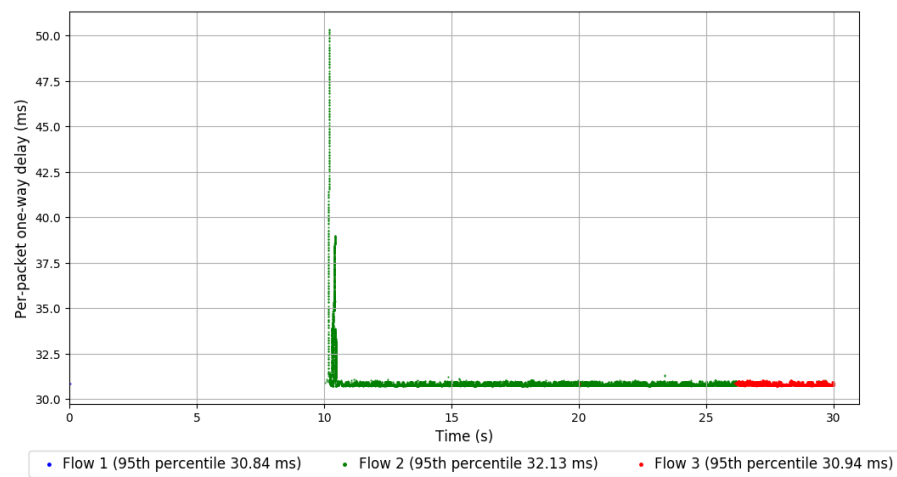
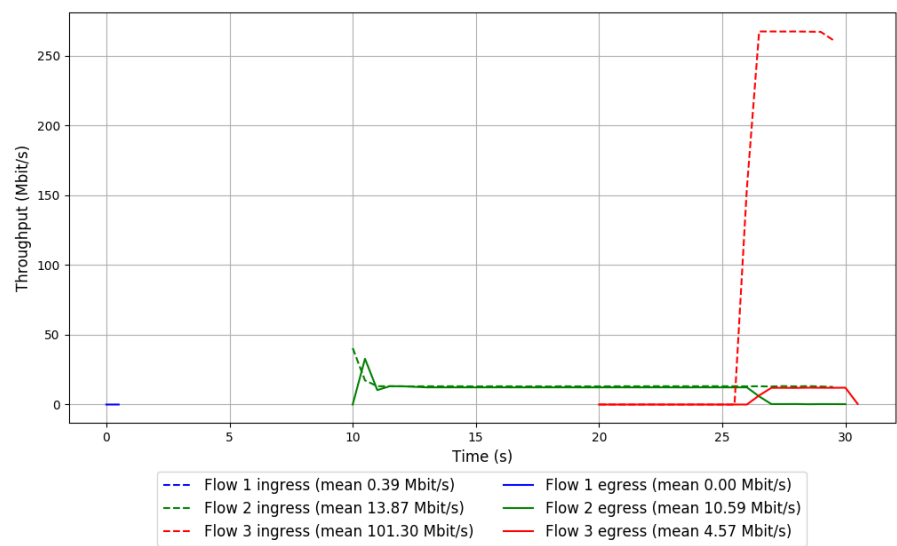


Run 5: Statistics of TaoVA-100x

Start at: 2018-10-26 04:47:31
End at: 2018-10-26 04:48:01
Local clock offset: -0.18 ms
Remote clock offset: -2.132 ms

Below is generated by plot.py at 2018-10-26 05:01:19
Datalink statistics
-- Total of 3 flows:
Average throughput: 8.57 Mbit/s
95th percentile per-packet one-way delay: 31.206 ms
Loss rate: 80.04%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 30.842 ms
Loss rate: 95.92%
-- Flow 2:
Average throughput: 10.59 Mbit/s
95th percentile per-packet one-way delay: 32.131 ms
Loss rate: 23.73%
-- Flow 3:
Average throughput: 4.57 Mbit/s
95th percentile per-packet one-way delay: 30.943 ms
Loss rate: 95.49%

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

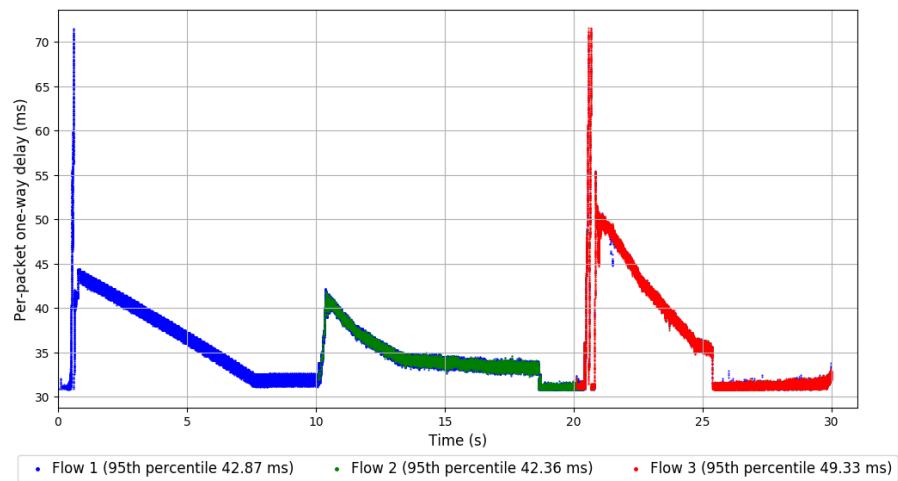
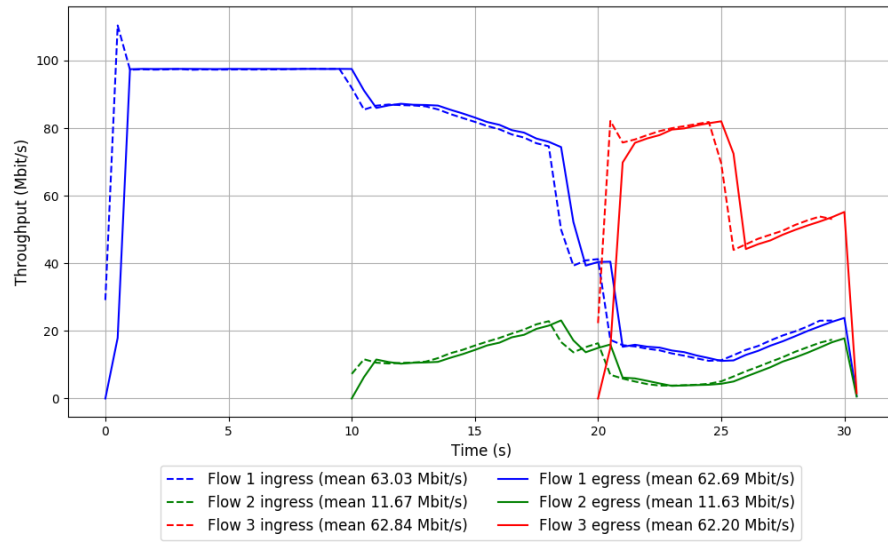


Run 1: Statistics of TCP Vegas

Start at: 2018-10-26 03:07:44
End at: 2018-10-26 03:08:14
Local clock offset: 0.455 ms
Remote clock offset: -3.432 ms

Below is generated by plot.py at 2018-10-26 05:01:59
Datalink statistics
-- Total of 3 flows:
Average throughput: 91.13 Mbit/s
95th percentile per-packet one-way delay: 45.874 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 62.69 Mbit/s
95th percentile per-packet one-way delay: 42.869 ms
Loss rate: 0.53%
-- Flow 2:
Average throughput: 11.63 Mbit/s
95th percentile per-packet one-way delay: 42.356 ms
Loss rate: 0.36%
-- Flow 3:
Average throughput: 62.20 Mbit/s
95th percentile per-packet one-way delay: 49.326 ms
Loss rate: 1.00%

Run 1: Report of TCP Vegas — Data Link

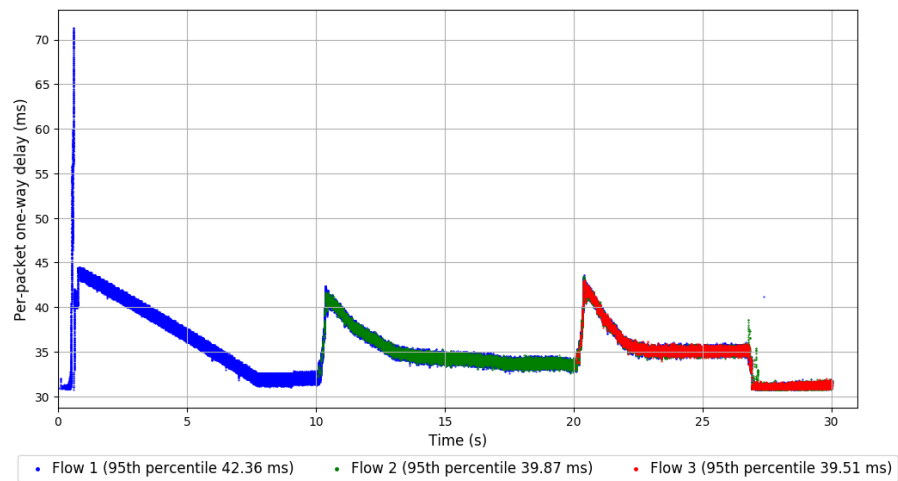
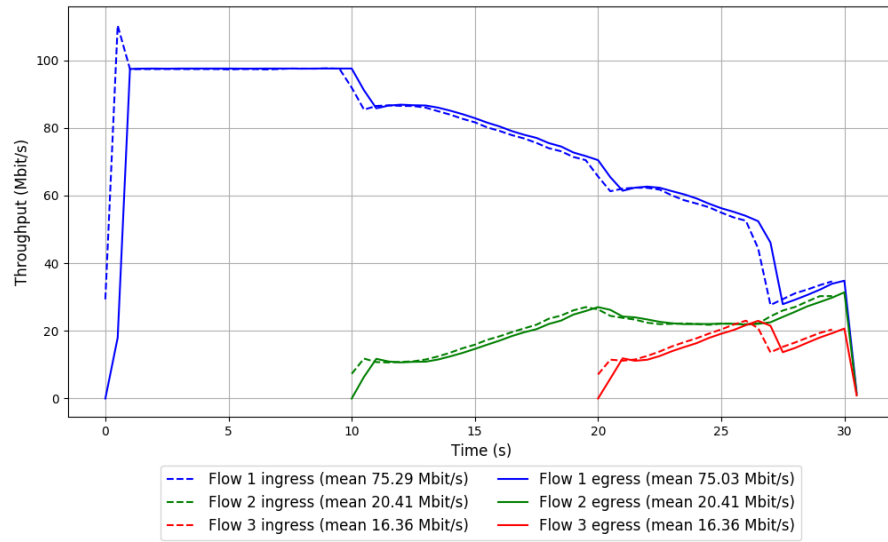


Run 2: Statistics of TCP Vegas

Start at: 2018-10-26 03:32:16
End at: 2018-10-26 03:32:46
Local clock offset: 0.546 ms
Remote clock offset: -2.985 ms

Below is generated by plot.py at 2018-10-26 05:02:04
Datalink statistics
-- Total of 3 flows:
Average throughput: 94.06 Mbit/s
95th percentile per-packet one-way delay: 41.925 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 75.03 Mbit/s
95th percentile per-packet one-way delay: 42.356 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 20.41 Mbit/s
95th percentile per-packet one-way delay: 39.869 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 16.36 Mbit/s
95th percentile per-packet one-way delay: 39.506 ms
Loss rate: 0.03%

Run 2: Report of TCP Vegas — Data Link

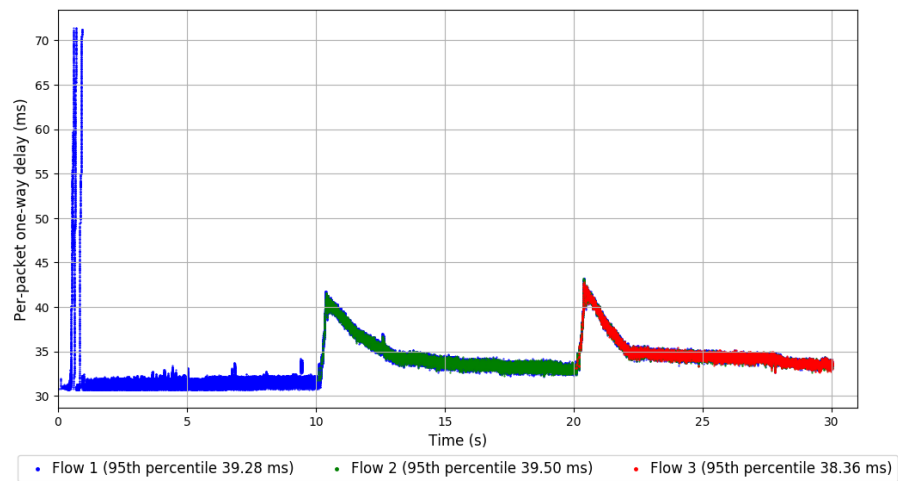
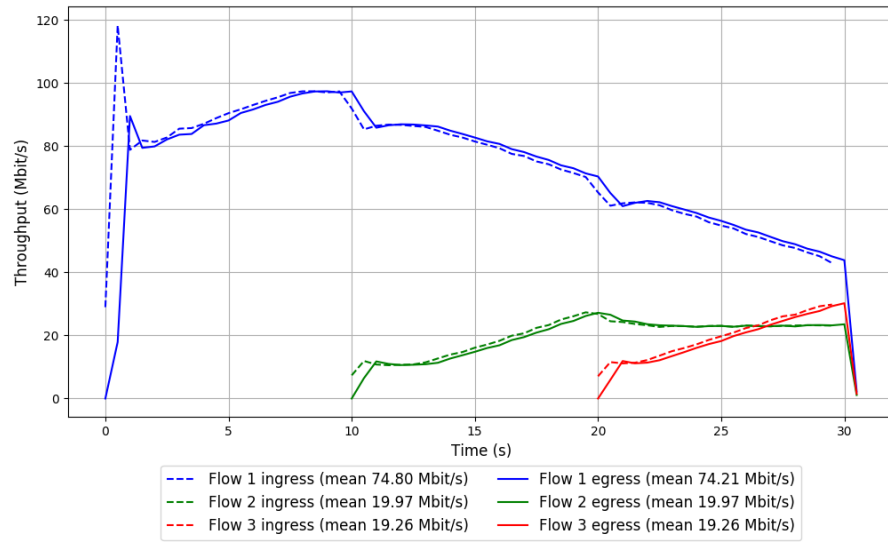


Run 3: Statistics of TCP Vegas

Start at: 2018-10-26 03:56:47
End at: 2018-10-26 03:57:17
Local clock offset: 0.449 ms
Remote clock offset: -2.709 ms

Below is generated by plot.py at 2018-10-26 05:02:10
Datalink statistics
-- Total of 3 flows:
Average throughput: 93.91 Mbit/s
95th percentile per-packet one-way delay: 39.284 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 74.21 Mbit/s
95th percentile per-packet one-way delay: 39.280 ms
Loss rate: 0.78%
-- Flow 2:
Average throughput: 19.97 Mbit/s
95th percentile per-packet one-way delay: 39.496 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 19.26 Mbit/s
95th percentile per-packet one-way delay: 38.361 ms
Loss rate: 0.00%

Run 3: Report of TCP Vegas — Data Link

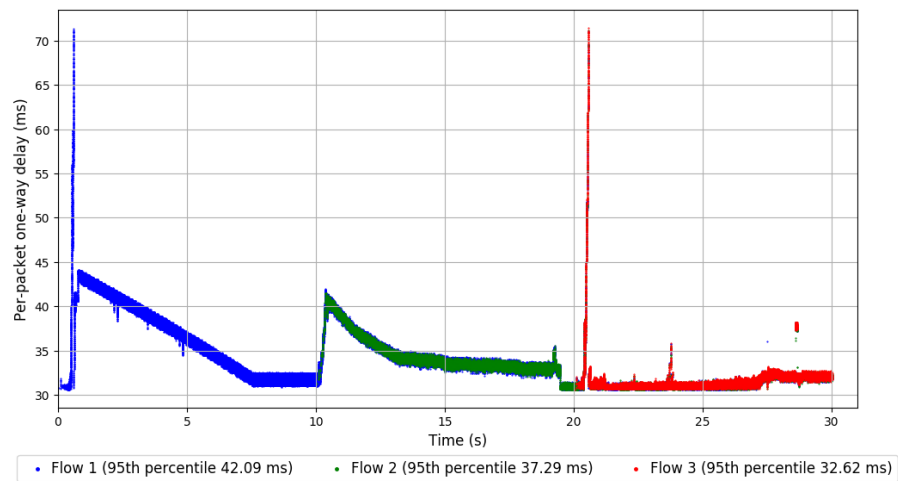
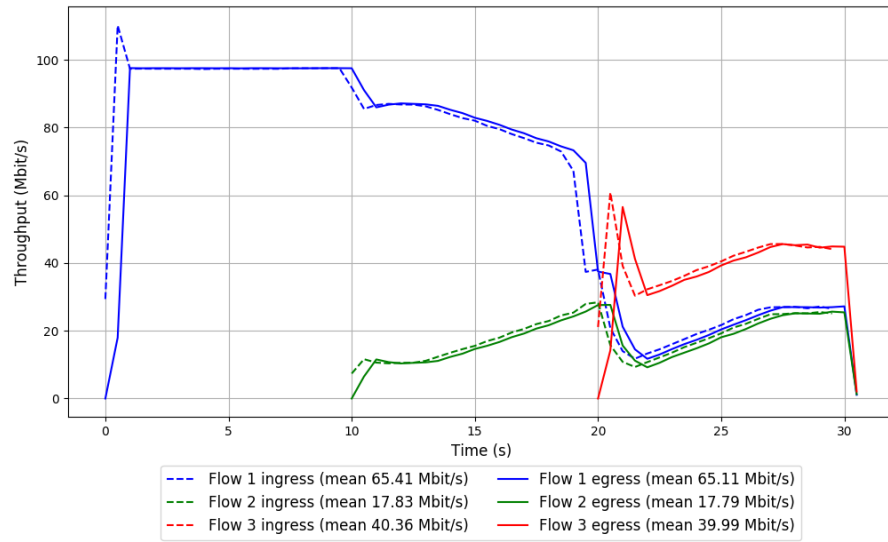


Run 4: Statistics of TCP Vegas

Start at: 2018-10-26 04:21:35
End at: 2018-10-26 04:22:05
Local clock offset: -3.046 ms
Remote clock offset: -2.429 ms

```
# Below is generated by plot.py at 2018-10-26 05:02:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.27 Mbit/s
95th percentile per-packet one-way delay: 41.588 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 65.11 Mbit/s
95th percentile per-packet one-way delay: 42.091 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 17.79 Mbit/s
95th percentile per-packet one-way delay: 37.288 ms
Loss rate: 0.25%
-- Flow 3:
Average throughput: 39.99 Mbit/s
95th percentile per-packet one-way delay: 32.619 ms
Loss rate: 0.91%
```

Run 4: Report of TCP Vegas — Data Link

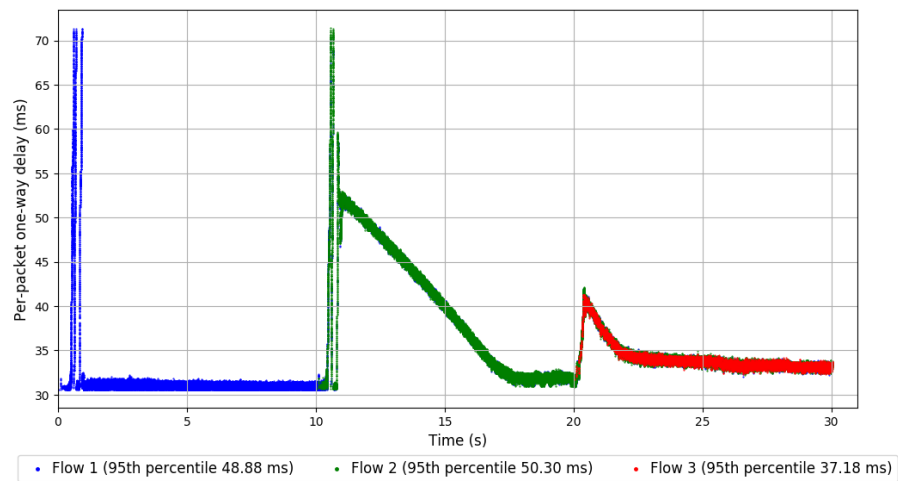
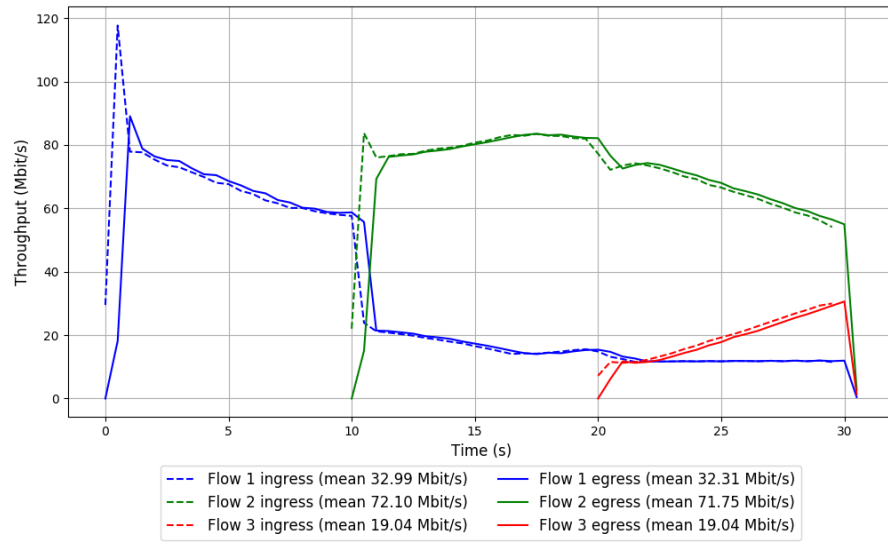


Run 5: Statistics of TCP Vegas

Start at: 2018-10-26 04:46:09
End at: 2018-10-26 04:46:39
Local clock offset: -0.344 ms
Remote clock offset: -2.301 ms

Below is generated by plot.py at 2018-10-26 05:02:10
Datalink statistics
-- Total of 3 flows:
Average throughput: 86.44 Mbit/s
95th percentile per-packet one-way delay: 49.625 ms
Loss rate: 1.03%
-- Flow 1:
Average throughput: 32.31 Mbit/s
95th percentile per-packet one-way delay: 48.878 ms
Loss rate: 2.04%
-- Flow 2:
Average throughput: 71.75 Mbit/s
95th percentile per-packet one-way delay: 50.300 ms
Loss rate: 0.47%
-- Flow 3:
Average throughput: 19.04 Mbit/s
95th percentile per-packet one-way delay: 37.180 ms
Loss rate: 0.00%

Run 5: Report of TCP Vegas — Data Link

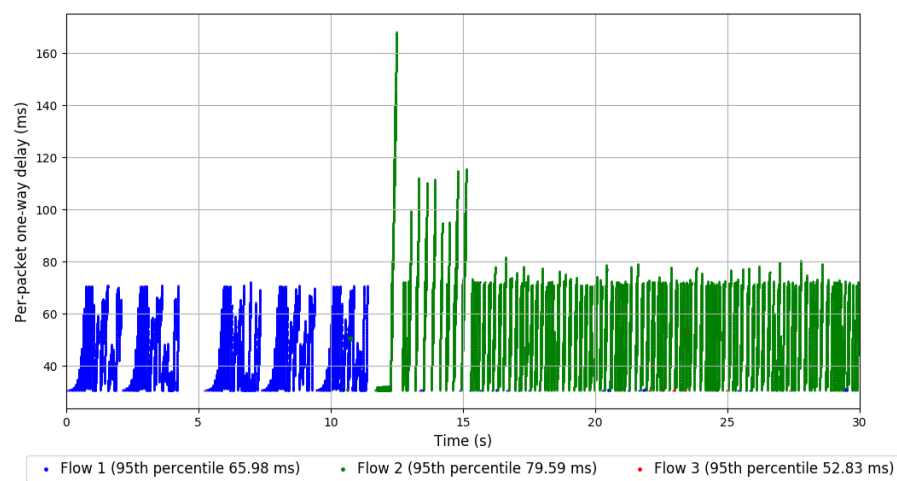
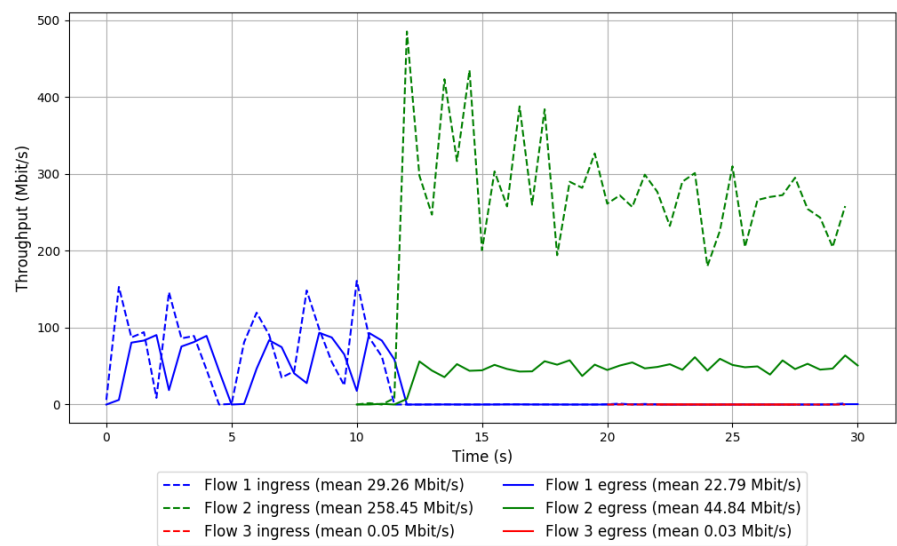


Run 1: Statistics of Verus

Start at: 2018-10-26 03:03:35
End at: 2018-10-26 03:04:05
Local clock offset: 0.475 ms
Remote clock offset: -3.603 ms

Below is generated by plot.py at 2018-10-26 05:02:21
Datalink statistics
-- Total of 3 flows:
Average throughput: 52.31 Mbit/s
95th percentile per-packet one-way delay: 71.903 ms
Loss rate: 73.93%
-- Flow 1:
Average throughput: 22.79 Mbit/s
95th percentile per-packet one-way delay: 65.979 ms
Loss rate: 22.28%
-- Flow 2:
Average throughput: 44.84 Mbit/s
95th percentile per-packet one-way delay: 79.586 ms
Loss rate: 82.63%
-- Flow 3:
Average throughput: 0.03 Mbit/s
95th percentile per-packet one-way delay: 52.827 ms
Loss rate: 68.42%

Run 1: Report of Verus — Data Link

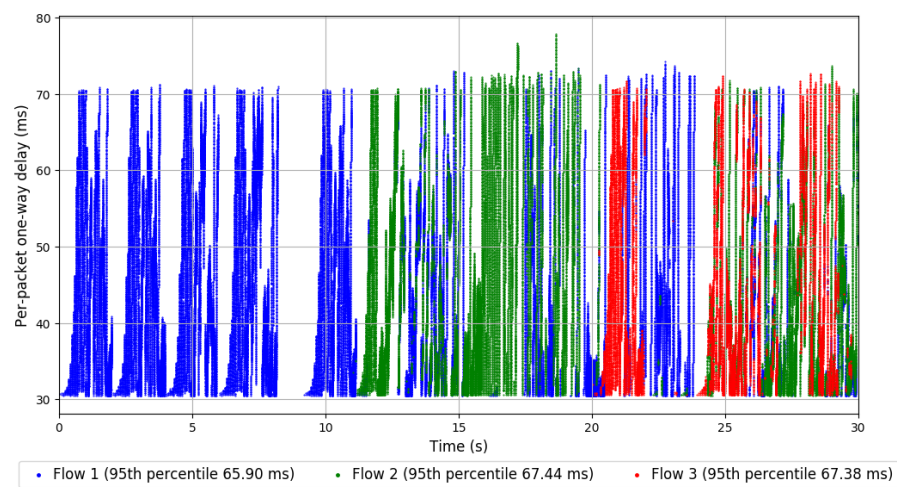
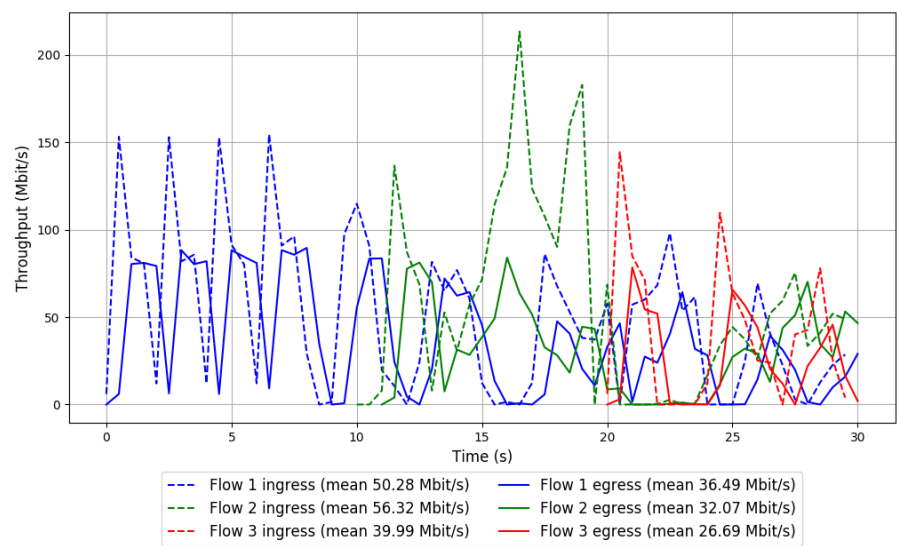


Run 2: Statistics of Verus

Start at: 2018-10-26 03:28:05
End at: 2018-10-26 03:28:35
Local clock offset: 0.534 ms
Remote clock offset: -3.348 ms

Below is generated by plot.py at 2018-10-26 05:02:21
Datalink statistics
-- Total of 3 flows:
Average throughput: 65.39 Mbit/s
95th percentile per-packet one-way delay: 66.651 ms
Loss rate: 35.07%
-- Flow 1:
Average throughput: 36.49 Mbit/s
95th percentile per-packet one-way delay: 65.901 ms
Loss rate: 27.37%
-- Flow 2:
Average throughput: 32.07 Mbit/s
95th percentile per-packet one-way delay: 67.444 ms
Loss rate: 45.88%
-- Flow 3:
Average throughput: 26.69 Mbit/s
95th percentile per-packet one-way delay: 67.375 ms
Loss rate: 33.71%

Run 2: Report of Verus — Data Link

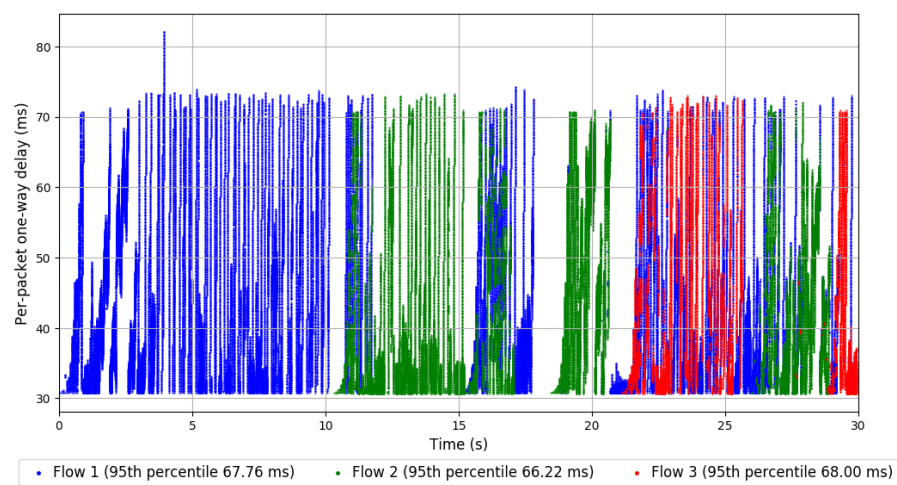
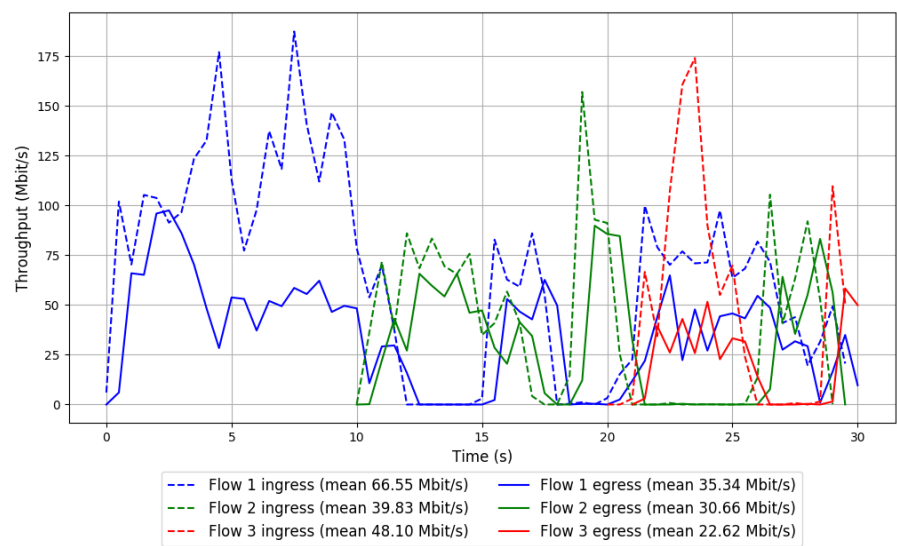


Run 3: Statistics of Verus

Start at: 2018-10-26 03:52:37
End at: 2018-10-26 03:53:07
Local clock offset: 0.462 ms
Remote clock offset: -2.705 ms

Below is generated by plot.py at 2018-10-26 05:02:21
Datalink statistics
-- Total of 3 flows:
Average throughput: 61.38 Mbit/s
95th percentile per-packet one-way delay: 67.296 ms
Loss rate: 42.90%
-- Flow 1:
Average throughput: 35.34 Mbit/s
95th percentile per-packet one-way delay: 67.759 ms
Loss rate: 46.90%
-- Flow 2:
Average throughput: 30.66 Mbit/s
95th percentile per-packet one-way delay: 66.223 ms
Loss rate: 23.28%
-- Flow 3:
Average throughput: 22.62 Mbit/s
95th percentile per-packet one-way delay: 67.996 ms
Loss rate: 57.71%

Run 3: Report of Verus — Data Link

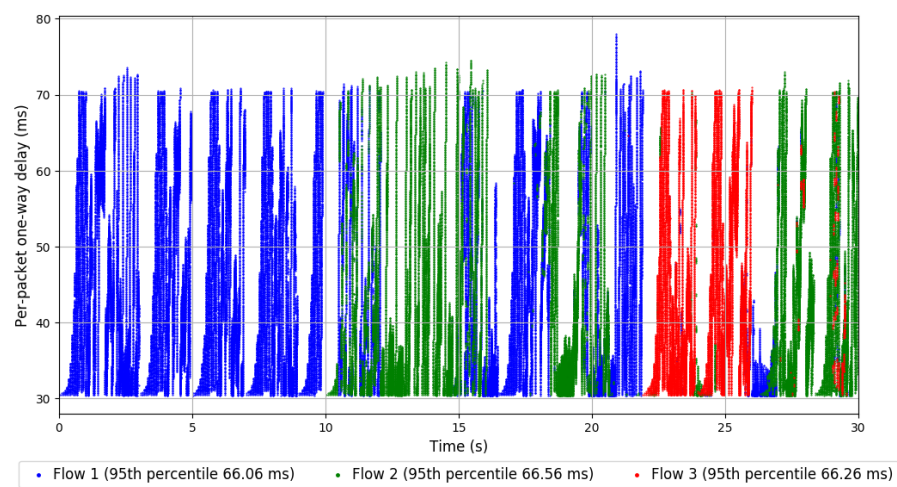
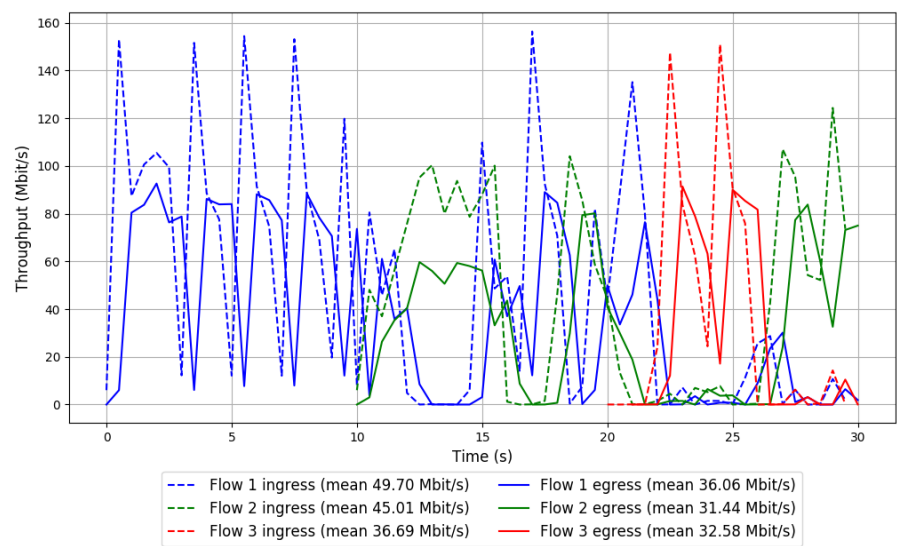


Run 4: Statistics of Verus

Start at: 2018-10-26 04:17:13
End at: 2018-10-26 04:17:43
Local clock offset: -2.706 ms
Remote clock offset: -2.662 ms

Below is generated by plot.py at 2018-10-26 05:02:50
Datalink statistics
-- Total of 3 flows:
Average throughput: 65.80 Mbit/s
95th percentile per-packet one-way delay: 66.268 ms
Loss rate: 27.54%
-- Flow 1:
Average throughput: 36.06 Mbit/s
95th percentile per-packet one-way delay: 66.065 ms
Loss rate: 27.40%
-- Flow 2:
Average throughput: 31.44 Mbit/s
95th percentile per-packet one-way delay: 66.558 ms
Loss rate: 30.01%
-- Flow 3:
Average throughput: 32.58 Mbit/s
95th percentile per-packet one-way delay: 66.256 ms
Loss rate: 21.68%

Run 4: Report of Verus — Data Link



Run 5: Statistics of Verus

Start at: 2018-10-26 04:41:58

End at: 2018-10-26 04:42:28

Local clock offset: -0.839 ms

Remote clock offset: -2.23 ms

Below is generated by plot.py at 2018-10-26 05:03:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 65.60 Mbit/s

95th percentile per-packet one-way delay: 77.892 ms

Loss rate: 59.06%

-- Flow 1:

Average throughput: 37.24 Mbit/s

95th percentile per-packet one-way delay: 66.636 ms

Loss rate: 28.22%

-- Flow 2:

Average throughput: 45.00 Mbit/s

95th percentile per-packet one-way delay: 95.298 ms

Loss rate: 73.61%

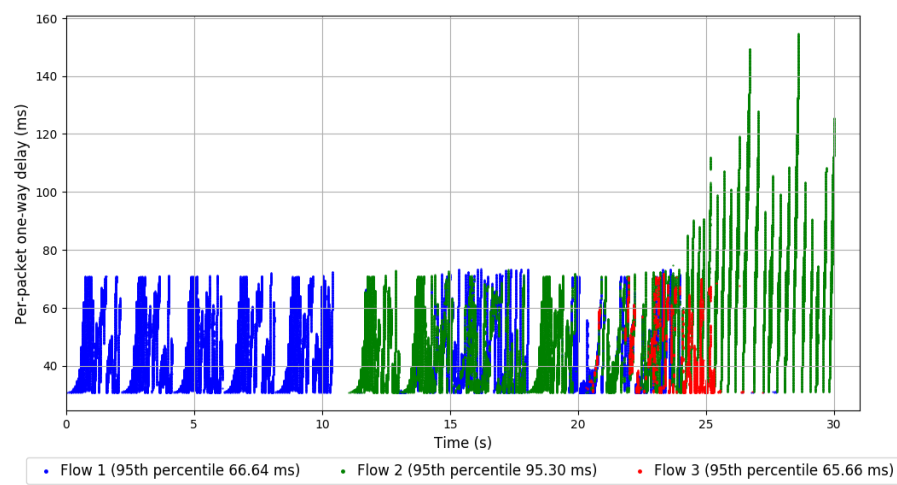
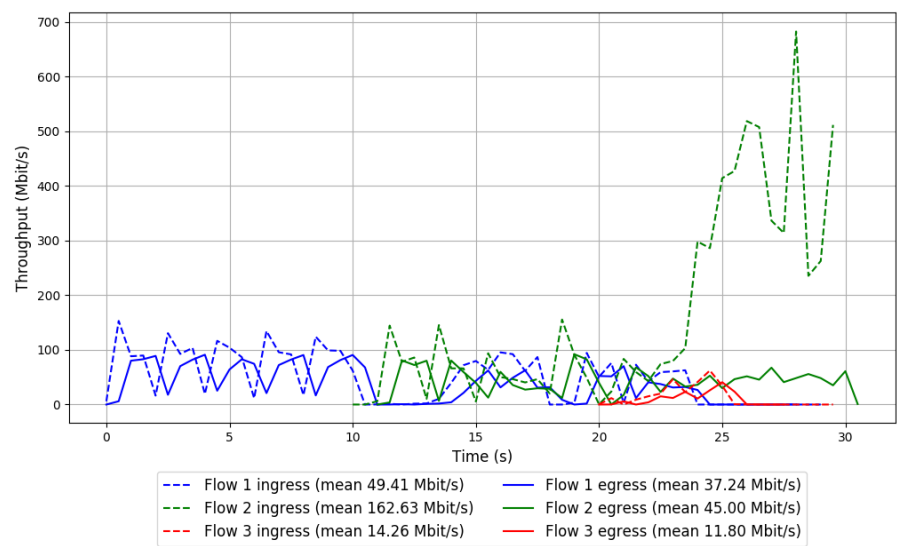
-- Flow 3:

Average throughput: 11.80 Mbit/s

95th percentile per-packet one-way delay: 65.663 ms

Loss rate: 38.58%

Run 5: Report of Verus — Data Link



Run 1: Statistics of PCC-Vivace

Start at: 2018-10-26 03:04:58

End at: 2018-10-26 03:05:28

Local clock offset: 0.459 ms

Remote clock offset: -3.55 ms

Below is generated by plot.py at 2018-10-26 05:03:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 84.02 Mbit/s

95th percentile per-packet one-way delay: 49.514 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 64.83 Mbit/s

95th percentile per-packet one-way delay: 49.302 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 20.10 Mbit/s

95th percentile per-packet one-way delay: 57.999 ms

Loss rate: 0.00%

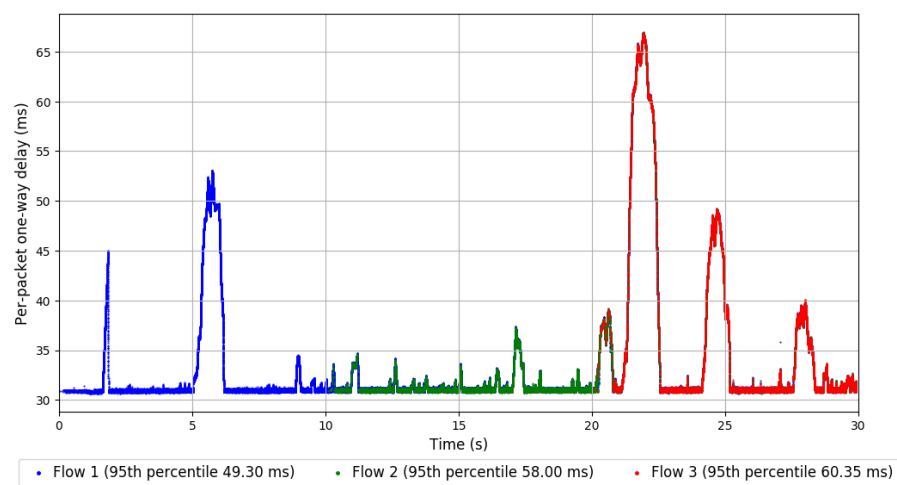
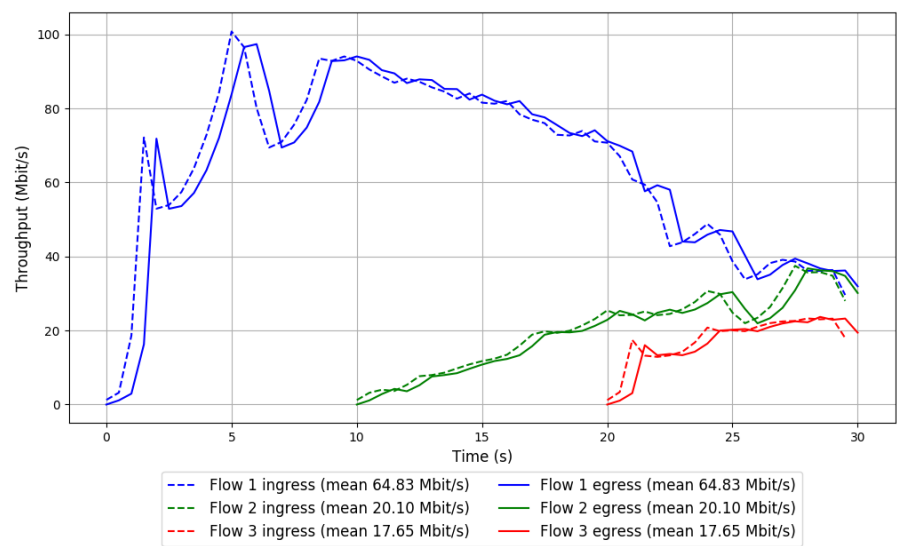
-- Flow 3:

Average throughput: 17.65 Mbit/s

95th percentile per-packet one-way delay: 60.347 ms

Loss rate: 0.00%

Run 1: Report of PCC-Vivace — Data Link

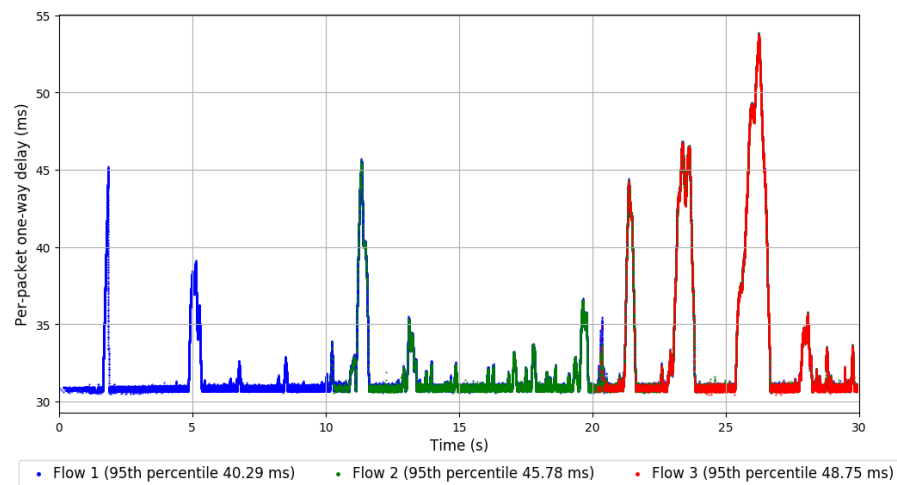
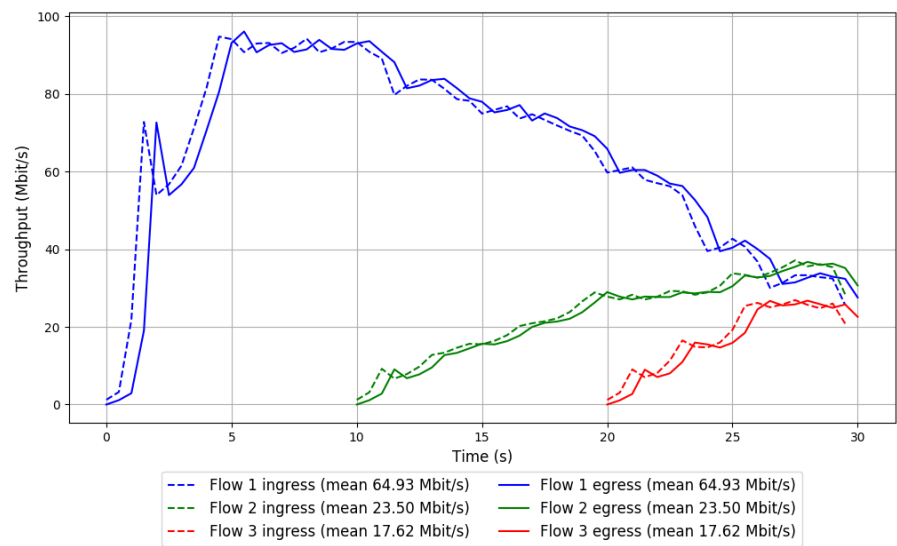


Run 2: Statistics of PCC-Vivace

Start at: 2018-10-26 03:29:28
End at: 2018-10-26 03:29:58
Local clock offset: 0.532 ms
Remote clock offset: -3.265 ms

Below is generated by plot.py at 2018-10-26 05:03:16
Datalink statistics
-- Total of 3 flows:
Average throughput: 86.37 Mbit/s
95th percentile per-packet one-way delay: 43.170 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 64.93 Mbit/s
95th percentile per-packet one-way delay: 40.286 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 23.50 Mbit/s
95th percentile per-packet one-way delay: 45.776 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 17.62 Mbit/s
95th percentile per-packet one-way delay: 48.750 ms
Loss rate: 0.00%

Run 2: Report of PCC-Vivace — Data Link

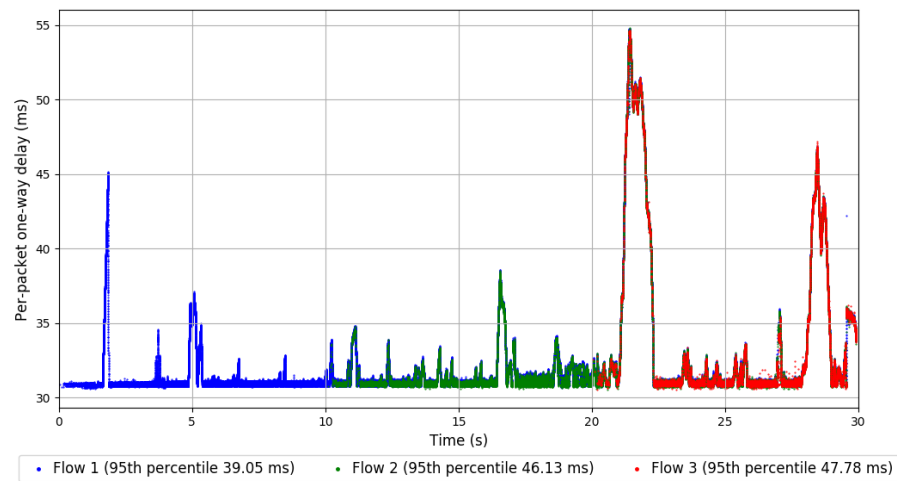
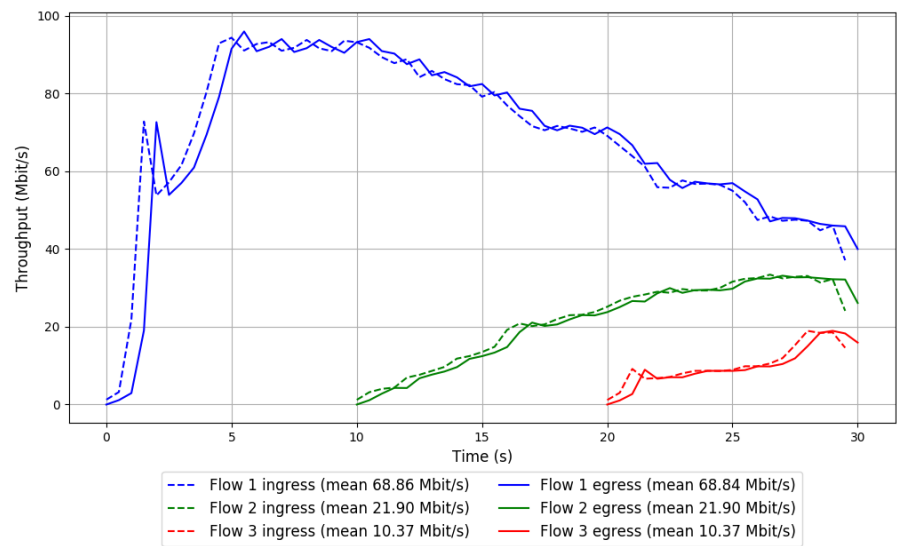


Run 3: Statistics of PCC-Vivace

Start at: 2018-10-26 03:53:59
End at: 2018-10-26 03:54:29
Local clock offset: 0.466 ms
Remote clock offset: -2.675 ms

Below is generated by plot.py at 2018-10-26 05:03:16
Datalink statistics
-- Total of 3 flows:
Average throughput: 86.83 Mbit/s
95th percentile per-packet one-way delay: 42.248 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 68.84 Mbit/s
95th percentile per-packet one-way delay: 39.048 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 21.90 Mbit/s
95th percentile per-packet one-way delay: 46.132 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 10.37 Mbit/s
95th percentile per-packet one-way delay: 47.783 ms
Loss rate: 0.00%

Run 3: Report of PCC-Vivace — Data Link

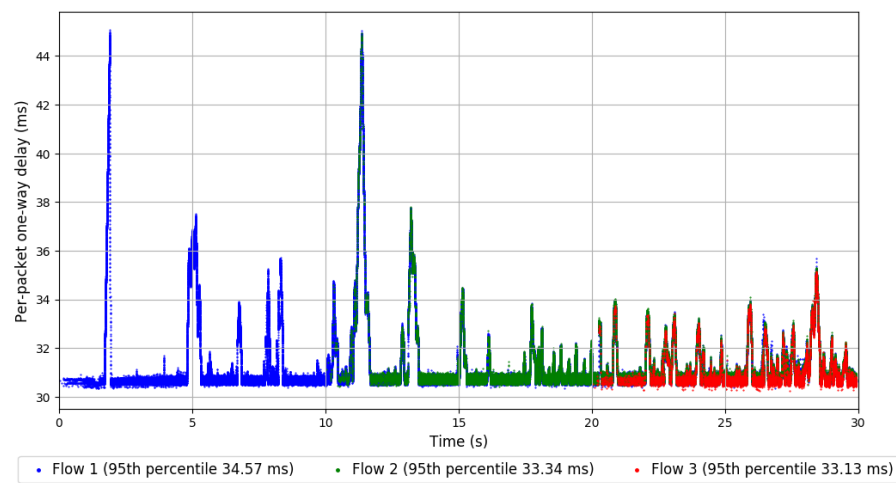
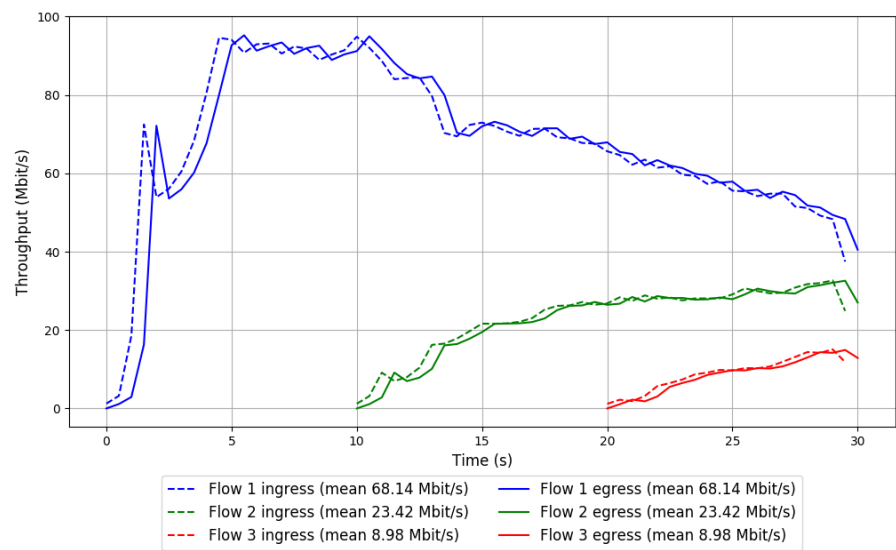


Run 4: Statistics of PCC-Vivace

Start at: 2018-10-26 04:18:39
End at: 2018-10-26 04:19:09
Local clock offset: -2.824 ms
Remote clock offset: -2.629 ms

Below is generated by plot.py at 2018-10-26 05:03:18
Datalink statistics
-- Total of 3 flows:
Average throughput: 86.68 Mbit/s
95th percentile per-packet one-way delay: 34.112 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 68.14 Mbit/s
95th percentile per-packet one-way delay: 34.570 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 23.42 Mbit/s
95th percentile per-packet one-way delay: 33.343 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 8.98 Mbit/s
95th percentile per-packet one-way delay: 33.130 ms
Loss rate: 0.01%

Run 4: Report of PCC-Vivace — Data Link

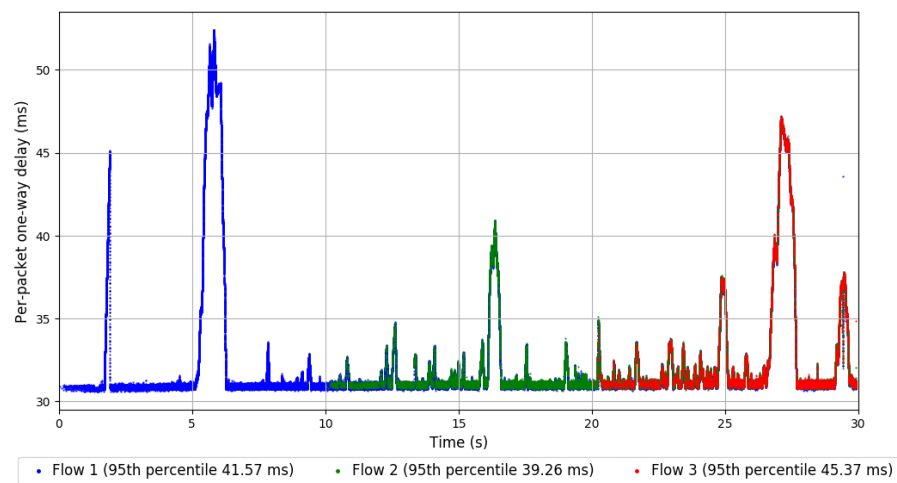
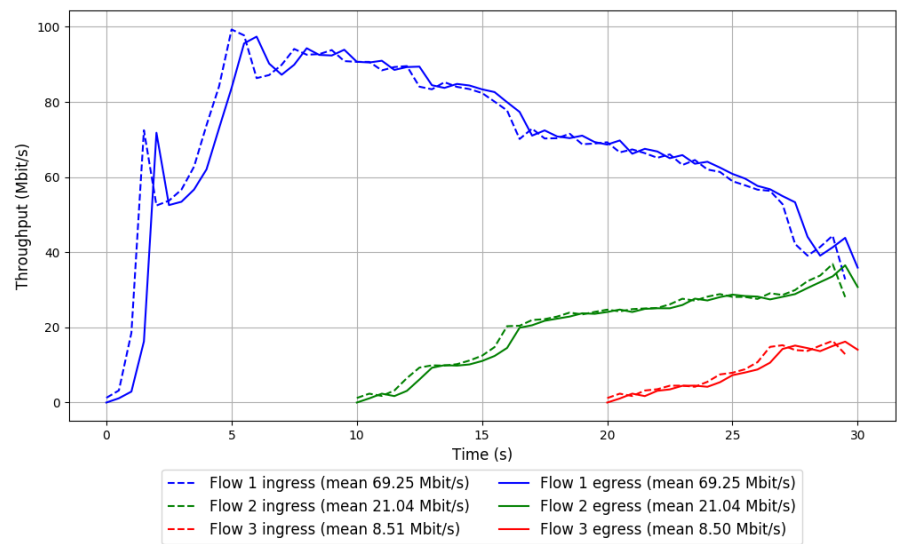


Run 5: Statistics of PCC-Vivace

Start at: 2018-10-26 04:43:22
End at: 2018-10-26 04:43:52
Local clock offset: -0.621 ms
Remote clock offset: -2.215 ms

Below is generated by plot.py at 2018-10-26 05:03:18
Datalink statistics
-- Total of 3 flows:
Average throughput: 86.04 Mbit/s
95th percentile per-packet one-way delay: 41.418 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 69.25 Mbit/s
95th percentile per-packet one-way delay: 41.566 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 21.04 Mbit/s
95th percentile per-packet one-way delay: 39.256 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 8.50 Mbit/s
95th percentile per-packet one-way delay: 45.369 ms
Loss rate: 0.03%

Run 5: Report of PCC-Vivace — Data Link



Run 1: Statistics of WebRTC media

Start at: 2018-10-26 02:58:12

End at: 2018-10-26 02:58:42

Local clock offset: 0.38 ms

Remote clock offset: -3.71 ms

Below is generated by plot.py at 2018-10-26 05:03:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.55 Mbit/s

95th percentile per-packet one-way delay: 31.930 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 1.92 Mbit/s

95th percentile per-packet one-way delay: 31.687 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.23 Mbit/s

95th percentile per-packet one-way delay: 32.076 ms

Loss rate: 0.00%

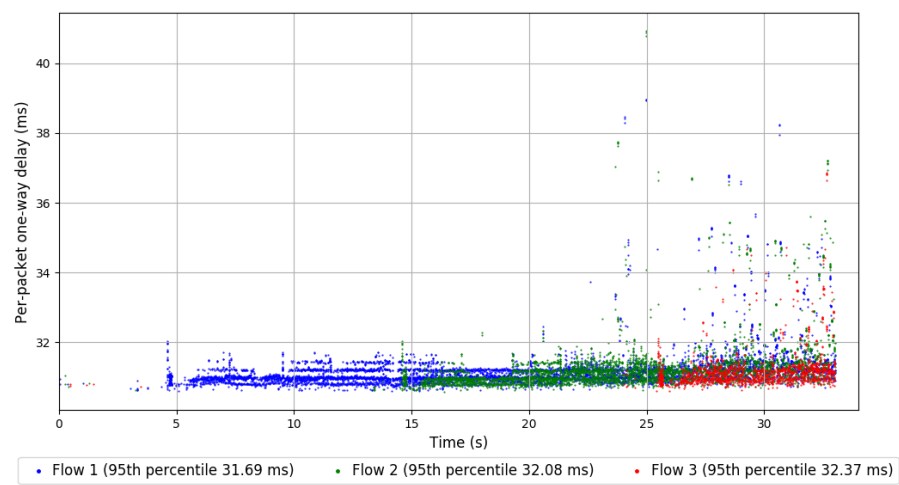
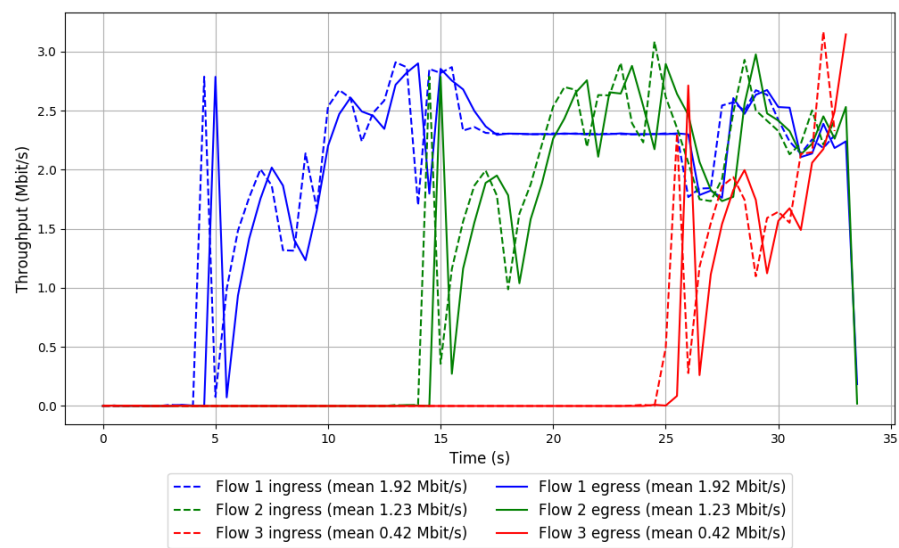
-- Flow 3:

Average throughput: 0.42 Mbit/s

95th percentile per-packet one-way delay: 32.374 ms

Loss rate: 0.00%

Run 1: Report of WebRTC media — Data Link

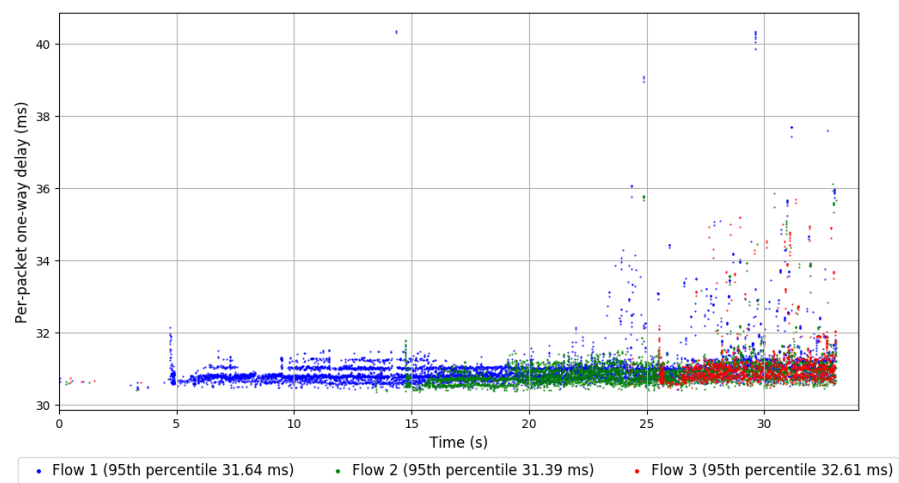
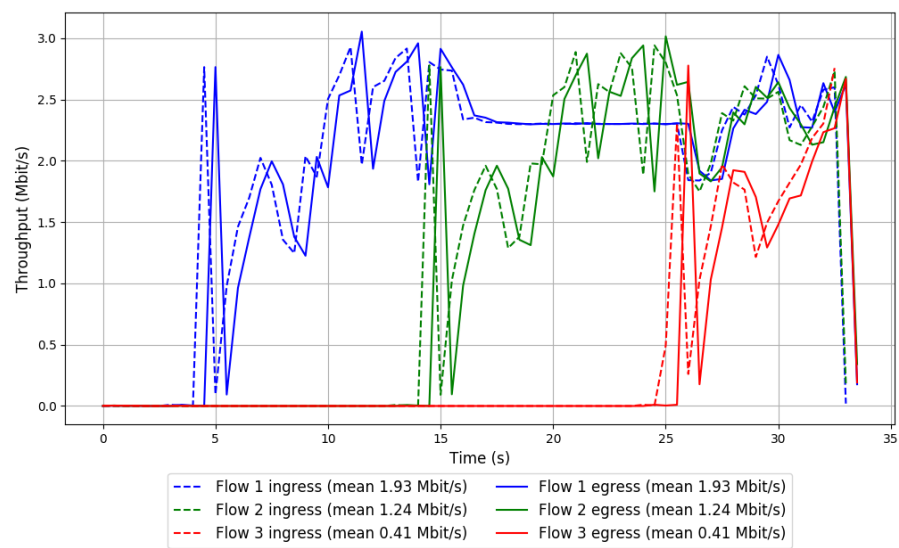


Run 2: Statistics of WebRTC media

Start at: 2018-10-26 03:22:37
End at: 2018-10-26 03:23:07
Local clock offset: 0.489 ms
Remote clock offset: -3.421 ms

Below is generated by plot.py at 2018-10-26 05:03:18
Datalink statistics
-- Total of 3 flows:
Average throughput: 3.56 Mbit/s
95th percentile per-packet one-way delay: 31.576 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 1.93 Mbit/s
95th percentile per-packet one-way delay: 31.645 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.24 Mbit/s
95th percentile per-packet one-way delay: 31.394 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 0.41 Mbit/s
95th percentile per-packet one-way delay: 32.612 ms
Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link

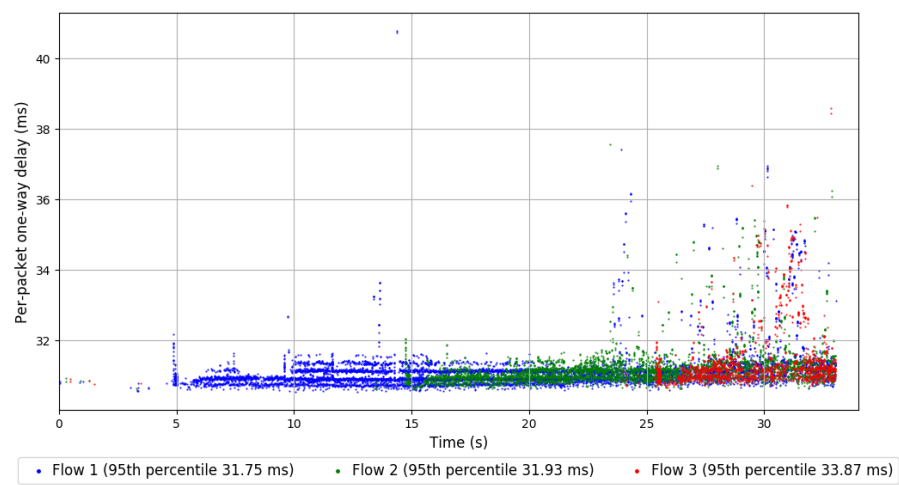
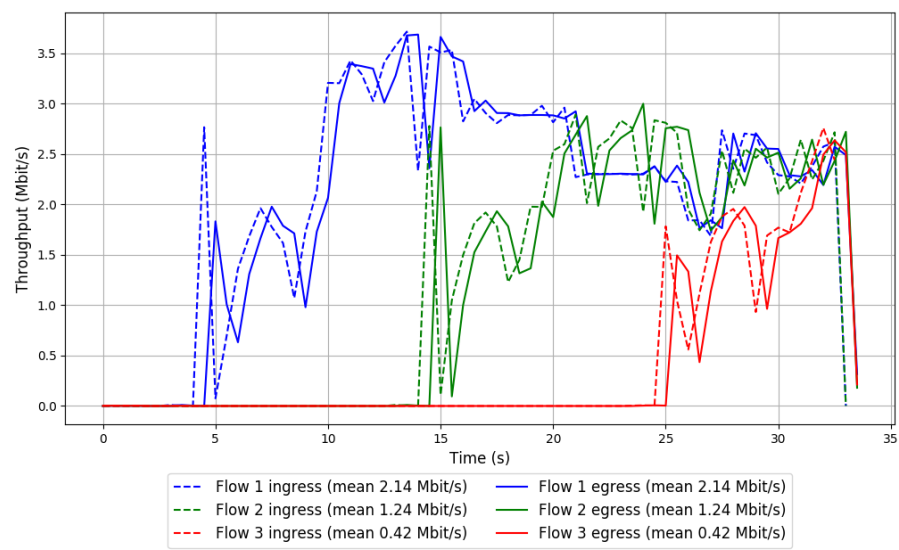


Run 3: Statistics of WebRTC media

Start at: 2018-10-26 03:47:14
End at: 2018-10-26 03:47:44
Local clock offset: 0.468 ms
Remote clock offset: -2.792 ms

Below is generated by plot.py at 2018-10-26 05:03:18
Datalink statistics
-- Total of 3 flows:
Average throughput: 3.78 Mbit/s
95th percentile per-packet one-way delay: 32.302 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 2.14 Mbit/s
95th percentile per-packet one-way delay: 31.747 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 1.24 Mbit/s
95th percentile per-packet one-way delay: 31.931 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.42 Mbit/s
95th percentile per-packet one-way delay: 33.867 ms
Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link

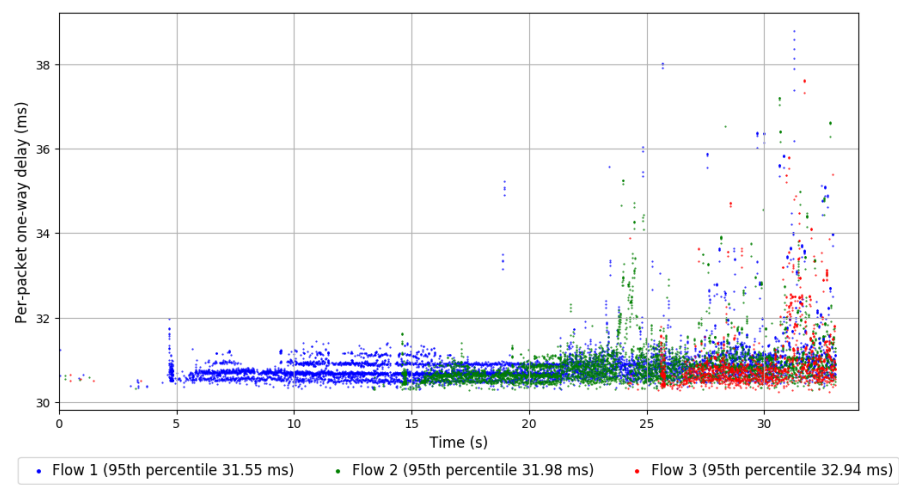
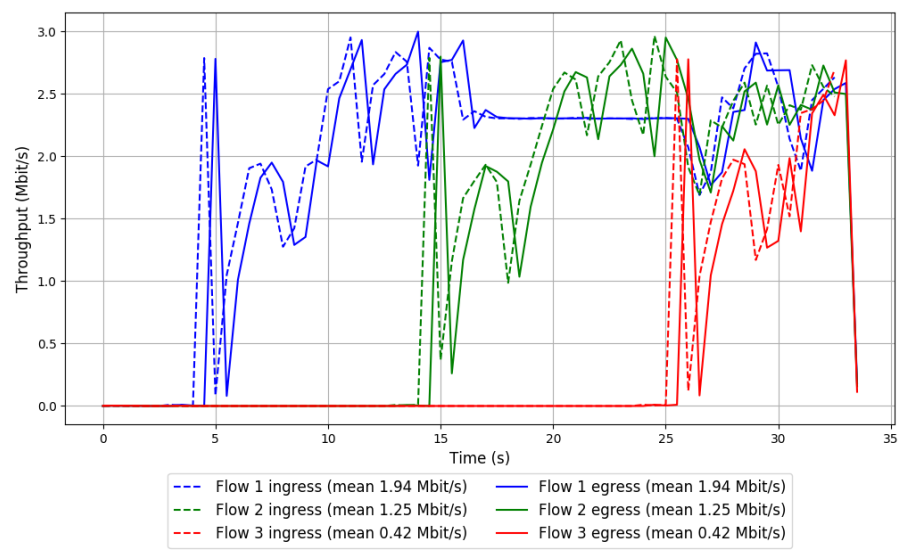


Run 4: Statistics of WebRTC media

Start at: 2018-10-26 04:11:49
End at: 2018-10-26 04:12:19
Local clock offset: -2.045 ms
Remote clock offset: -2.692 ms

Below is generated by plot.py at 2018-10-26 05:03:18
Datalink statistics
-- Total of 3 flows:
Average throughput: 3.59 Mbit/s
95th percentile per-packet one-way delay: 31.966 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.94 Mbit/s
95th percentile per-packet one-way delay: 31.549 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.25 Mbit/s
95th percentile per-packet one-way delay: 31.984 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.42 Mbit/s
95th percentile per-packet one-way delay: 32.941 ms
Loss rate: 0.00%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-10-26 04:36:34
End at: 2018-10-26 04:37:04
Local clock offset: -1.943 ms
Remote clock offset: -2.315 ms

Below is generated by plot.py at 2018-10-26 05:03:18
Datalink statistics
-- Total of 3 flows:
Average throughput: 3.57 Mbit/s
95th percentile per-packet one-way delay: 32.598 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.93 Mbit/s
95th percentile per-packet one-way delay: 31.743 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.25 Mbit/s
95th percentile per-packet one-way delay: 33.921 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.41 Mbit/s
95th percentile per-packet one-way delay: 33.959 ms
Loss rate: 0.00%

Run 5: Report of WebRTC media — Data Link

