

Pantheon Report

Generated at 2018-09-07 16:21:06 (UTC).

Data path: AWS India 1 on `ens5` (*local*) → India 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 `nets.org.sg` and have been applied to correct the timestamps in logs.

System info:

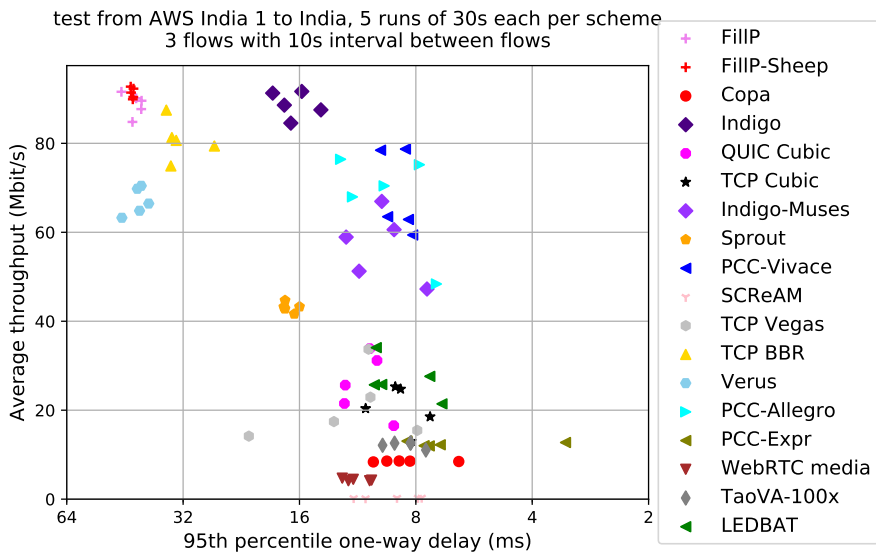
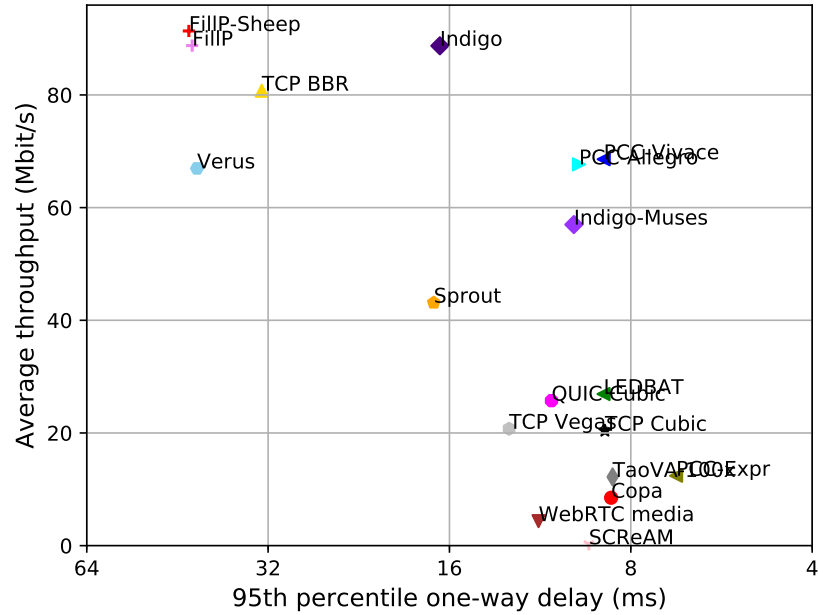
```
Linux 4.15.0-1020-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
net.ipv4.tcp_mem = 536870912 536870912 536870912
```

Git summary:

```
branch: muses @ e0a9b05ad97d268013b7cc9a9c95637b593a1b4c
third_party/fillp @ d47f4fa1b454a5e3c0537115c5a28436dbd4b834
third_party/fillp-sheep @ daed0c84f98531712514b2231f43ec6901114ffe
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf5e58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 7631aea3923a3598767c87765ae5103aca0678d3
third_party/pantheon-tunnel @ cbfce6db5ff5740dafa1771f813cd646339e1952
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
  M receiver/src/buffer.h
  M receiver/src/core.cpp
  M sender/src/buffer.h
  M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quick @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2
  M src/ScreamClient
  M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
  M src/examples/cellsim.cc
  M src/examples/sproutbt2.cc
  M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
  M src/verus.hpp
```

```
M tools/plot.py
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851
```

test from AWS India 1 to India, 5 runs of 30s each per scheme
 3 flows with 10s interval between flows (mean of all runs by scheme)



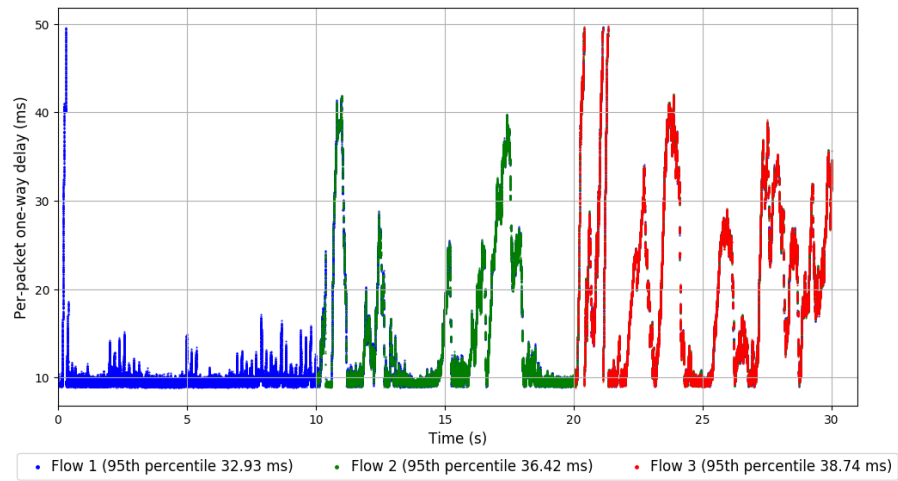
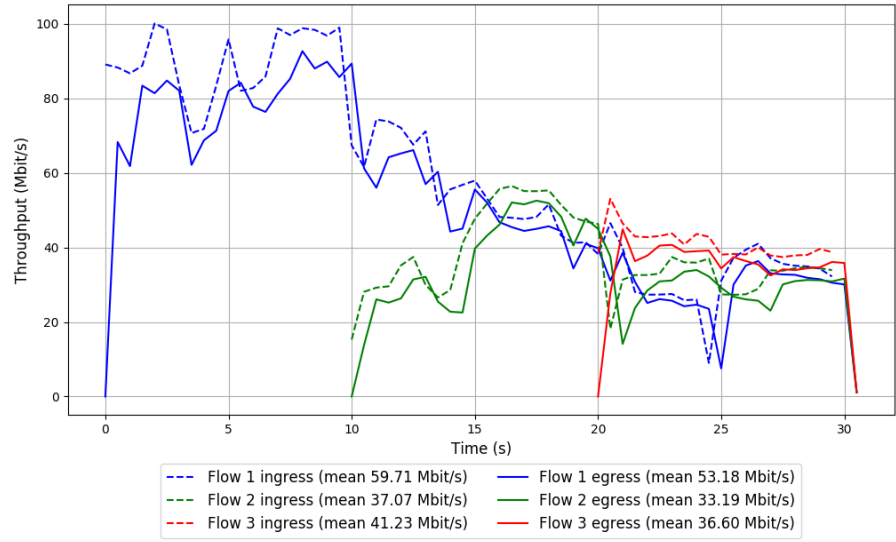
scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	5	47.10	34.11	32.87	28.62	34.89	35.67	12.37	13.38	13.48
Copa	5	0.00	10.24	5.21	7.91	12.26	7.25	98.49	68.27	73.53
TCP Cubic	5	11.11	10.00	7.89	8.35	8.88	8.44	0.64	0.75	1.22
FillP	5	55.43	37.85	24.80	41.40	43.64	44.90	23.96	31.72	34.58
FillP-Sheep	5	54.39	39.21	32.77	42.26	43.71	44.82	20.44	25.29	31.72
Indigo	5	52.62	37.54	35.06	15.83	16.61	17.91	9.71	10.20	11.32
LEDBAT	5	15.54	11.84	11.13	8.74	8.66	9.35	0.91	1.36	1.19
Indigo-Muses	5	16.65	38.25	45.48	8.96	9.83	9.80	5.07	7.86	8.51
PCC-Allegro	5	57.71	12.08	5.88	9.58	9.71	12.36	8.54	9.05	8.99
PCC-Expr	5	7.88	4.99	3.63	6.76	6.70	6.73	28.13	24.19	25.68
QUIC Cubic	5	13.69	11.60	13.11	9.73	9.30	13.58	3.77	3.36	3.80
SCReAM	5	0.11	0.13	0.18	8.90	8.92	8.73	1.73	1.32	1.51
Sprout	5	22.37	20.99	20.58	16.46	17.09	17.65	4.46	5.53	7.52
TaoVA-100x	5	7.45	6.48	4.28	8.79	9.60	9.32	87.01	81.44	84.08
TCP Vegas	5	10.94	10.20	8.75	14.39	11.71	9.49	1.59	1.64	1.99
Verus	5	45.14	22.52	22.39	38.58	45.62	42.02	27.39	49.23	40.81
PCC-Vivace	5	49.36	20.93	16.09	8.76	8.05	10.67	6.77	6.51	7.22
WebRTC media	5	2.41	1.49	0.46	11.23	11.39	11.45	0.77	0.86	1.24

Run 1: Statistics of TCP BBR

Start at: 2018-09-07 14:40:31
End at: 2018-09-07 14:41:01
Local clock offset: 0.584 ms
Remote clock offset: -3.988 ms

Below is generated by plot.py at 2018-09-07 16:14:55
Datalink statistics
-- Total of 3 flows:
Average throughput: 87.48 Mbit/s
95th percentile per-packet one-way delay: 35.365 ms
Loss rate: 10.76%
-- Flow 1:
Average throughput: 53.18 Mbit/s
95th percentile per-packet one-way delay: 32.933 ms
Loss rate: 10.87%
-- Flow 2:
Average throughput: 33.19 Mbit/s
95th percentile per-packet one-way delay: 36.417 ms
Loss rate: 10.36%
-- Flow 3:
Average throughput: 36.60 Mbit/s
95th percentile per-packet one-way delay: 38.738 ms
Loss rate: 11.02%

Run 1: Report of TCP BBR — Data Link

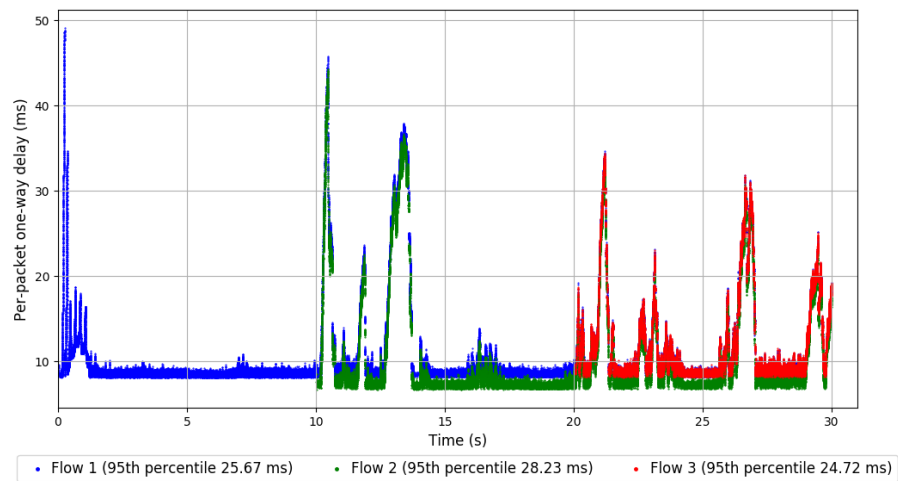
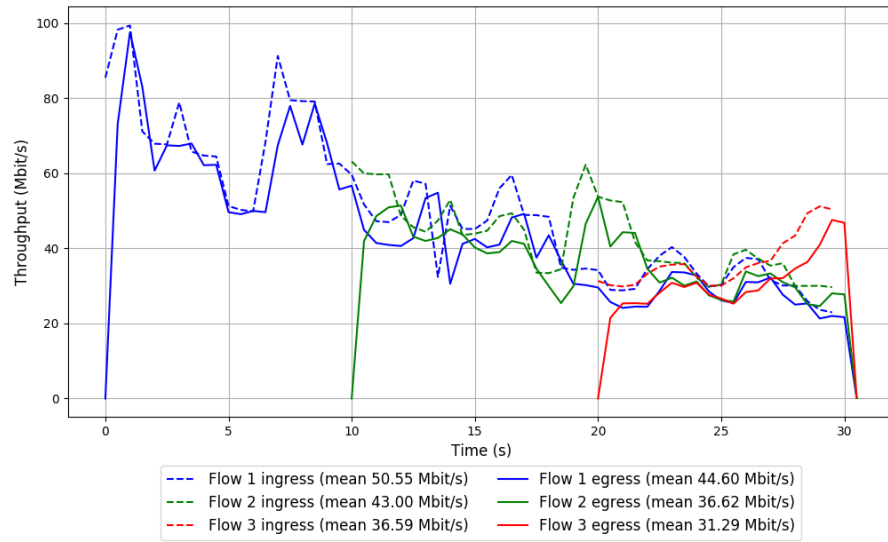


Run 2: Statistics of TCP BBR

Start at: 2018-09-07 15:01:19
End at: 2018-09-07 15:01:49
Local clock offset: 0.622 ms
Remote clock offset: -4.804 ms

Below is generated by plot.py at 2018-09-07 16:14:55
Datalink statistics
-- Total of 3 flows:
Average throughput: 79.40 Mbit/s
95th percentile per-packet one-way delay: 26.561 ms
Loss rate: 13.06%
-- Flow 1:
Average throughput: 44.60 Mbit/s
95th percentile per-packet one-way delay: 25.674 ms
Loss rate: 11.75%
-- Flow 2:
Average throughput: 36.62 Mbit/s
95th percentile per-packet one-way delay: 28.231 ms
Loss rate: 14.81%
-- Flow 3:
Average throughput: 31.29 Mbit/s
95th percentile per-packet one-way delay: 24.717 ms
Loss rate: 14.41%

Run 2: Report of TCP BBR — Data Link

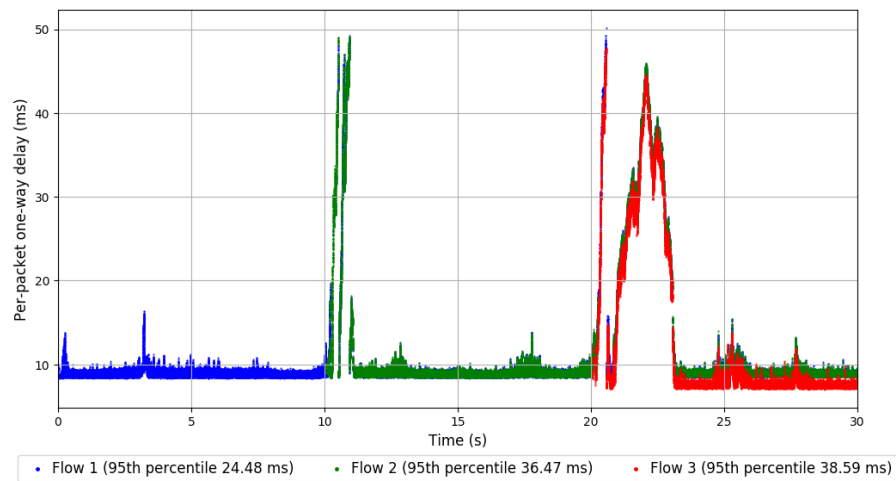
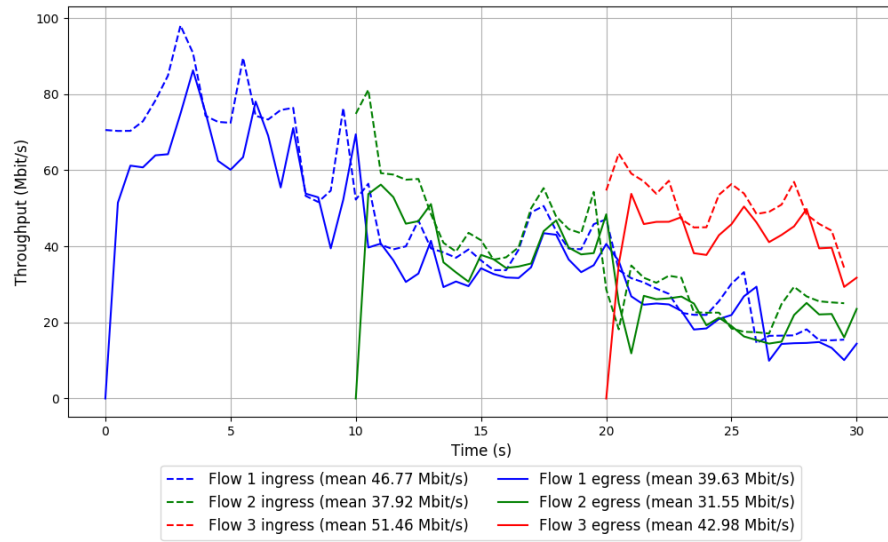


Run 3: Statistics of TCP BBR

Start at: 2018-09-07 15:22:21
End at: 2018-09-07 15:22:51
Local clock offset: 0.399 ms
Remote clock offset: -5.267 ms

Below is generated by plot.py at 2018-09-07 16:14:55
Datalink statistics
-- Total of 3 flows:
Average throughput: 74.92 Mbit/s
95th percentile per-packet one-way delay: 34.423 ms
Loss rate: 15.95%
-- Flow 1:
Average throughput: 39.63 Mbit/s
95th percentile per-packet one-way delay: 24.480 ms
Loss rate: 15.28%
-- Flow 2:
Average throughput: 31.55 Mbit/s
95th percentile per-packet one-way delay: 36.472 ms
Loss rate: 16.81%
-- Flow 3:
Average throughput: 42.98 Mbit/s
95th percentile per-packet one-way delay: 38.589 ms
Loss rate: 16.49%

Run 3: Report of TCP BBR — Data Link

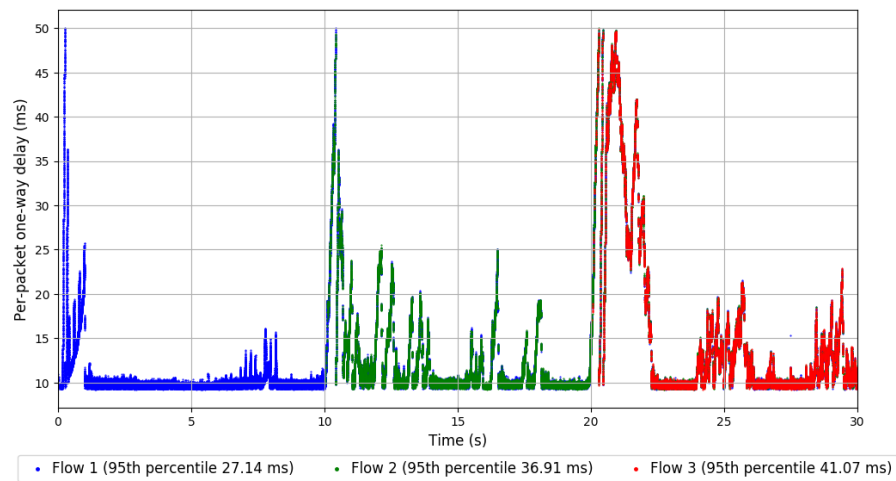
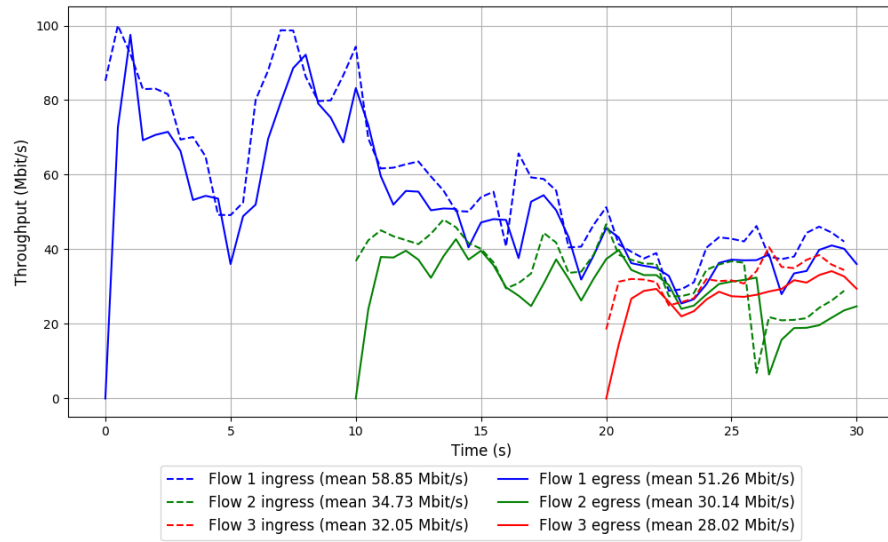


Run 4: Statistics of TCP BBR

Start at: 2018-09-07 15:43:08
End at: 2018-09-07 15:43:38
Local clock offset: -0.498 ms
Remote clock offset: -5.721 ms

Below is generated by plot.py at 2018-09-07 16:14:55
Datalink statistics
-- Total of 3 flows:
Average throughput: 80.67 Mbit/s
95th percentile per-packet one-way delay: 33.346 ms
Loss rate: 12.96%
-- Flow 1:
Average throughput: 51.26 Mbit/s
95th percentile per-packet one-way delay: 27.143 ms
Loss rate: 12.91%
-- Flow 2:
Average throughput: 30.14 Mbit/s
95th percentile per-packet one-way delay: 36.914 ms
Loss rate: 13.23%
-- Flow 3:
Average throughput: 28.02 Mbit/s
95th percentile per-packet one-way delay: 41.066 ms
Loss rate: 12.64%

Run 4: Report of TCP BBR — Data Link

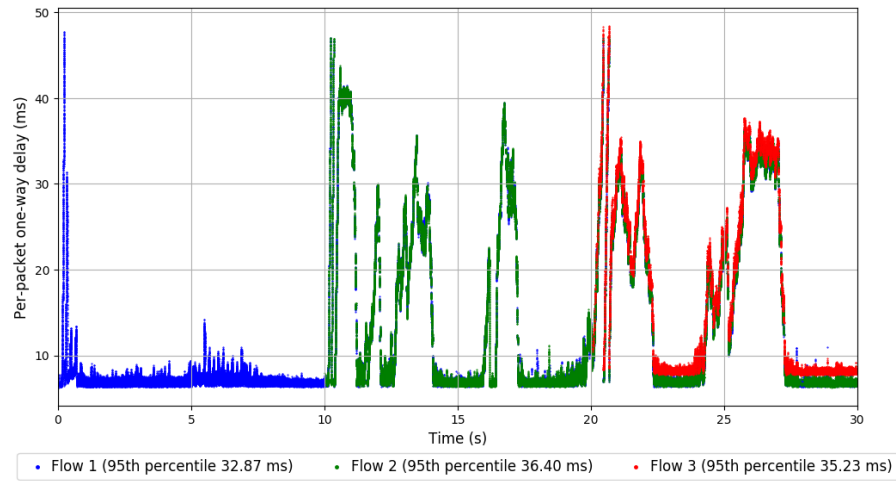
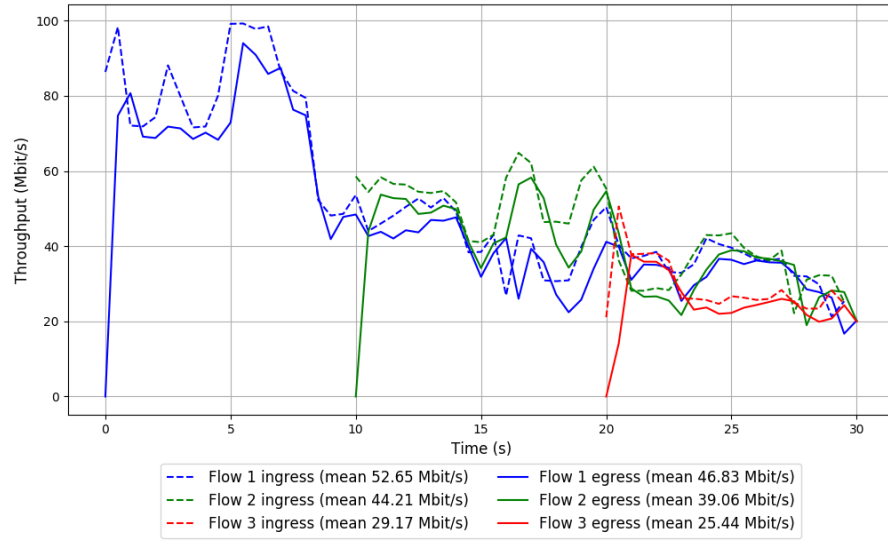


Run 5: Statistics of TCP BBR

Start at: 2018-09-07 16:03:59
End at: 2018-09-07 16:04:29
Local clock offset: 1.433 ms
Remote clock offset: -5.464 ms

Below is generated by plot.py at 2018-09-07 16:14:55
Datalink statistics
-- Total of 3 flows:
Average throughput: 81.30 Mbit/s
95th percentile per-packet one-way delay: 34.217 ms
Loss rate: 11.44%
-- Flow 1:
Average throughput: 46.83 Mbit/s
95th percentile per-packet one-way delay: 32.866 ms
Loss rate: 11.06%
-- Flow 2:
Average throughput: 39.06 Mbit/s
95th percentile per-packet one-way delay: 36.403 ms
Loss rate: 11.67%
-- Flow 3:
Average throughput: 25.44 Mbit/s
95th percentile per-packet one-way delay: 35.228 ms
Loss rate: 12.83%

Run 5: Report of TCP BBR — Data Link

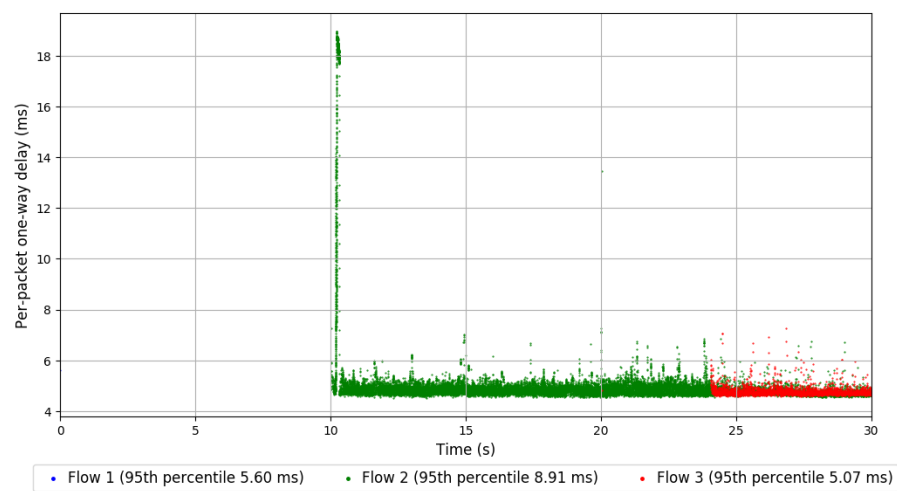
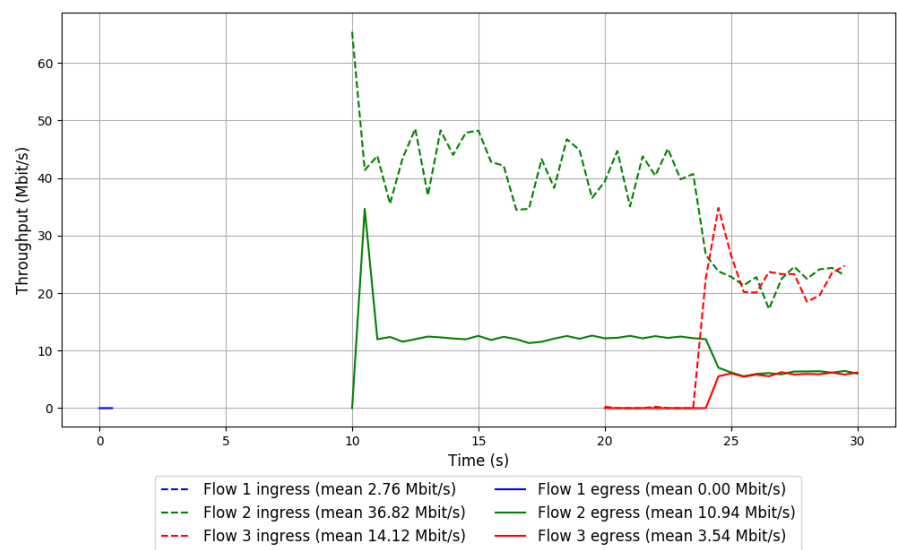


Run 1: Statistics of Copa

Start at: 2018-09-07 14:38:17
End at: 2018-09-07 14:38:47
Local clock offset: 3.289 ms
Remote clock offset: -4.224 ms

Below is generated by plot.py at 2018-09-07 16:14:55
Datalink statistics
-- Total of 3 flows:
Average throughput: 8.46 Mbit/s
95th percentile per-packet one-way delay: 6.195 ms
Loss rate: 71.04%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 5.603 ms
Loss rate: 98.60%
-- Flow 2:
Average throughput: 10.94 Mbit/s
95th percentile per-packet one-way delay: 8.914 ms
Loss rate: 70.30%
-- Flow 3:
Average throughput: 3.54 Mbit/s
95th percentile per-packet one-way delay: 5.073 ms
Loss rate: 74.92%

Run 1: Report of Copa — Data Link

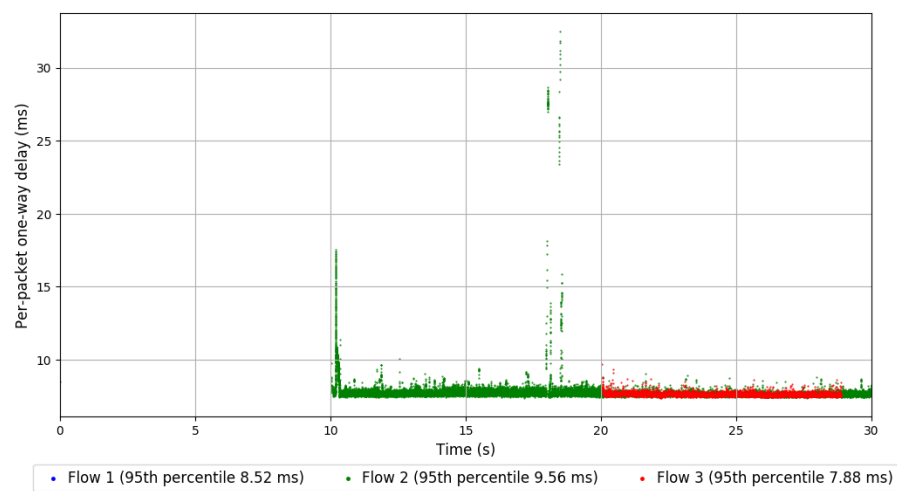
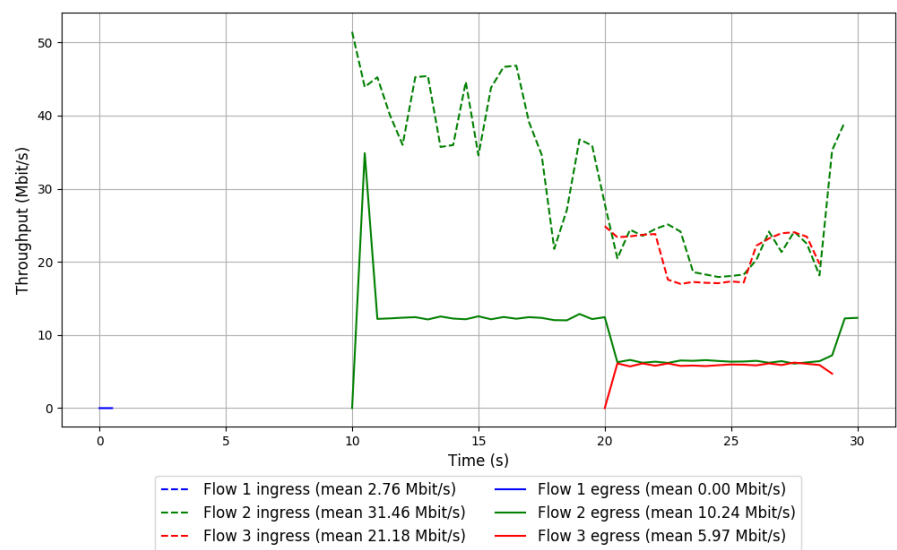


Run 2: Statistics of Copa

Start at: 2018-09-07 14:59:06
End at: 2018-09-07 14:59:36
Local clock offset: -0.061 ms
Remote clock offset: -4.766 ms

Below is generated by plot.py at 2018-09-07 16:14:55
Datalink statistics
-- Total of 3 flows:
Average throughput: 8.58 Mbit/s
95th percentile per-packet one-way delay: 8.835 ms
Loss rate: 68.49%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 8.516 ms
Loss rate: 98.60%
-- Flow 2:
Average throughput: 10.24 Mbit/s
95th percentile per-packet one-way delay: 9.563 ms
Loss rate: 67.46%
-- Flow 3:
Average throughput: 5.97 Mbit/s
95th percentile per-packet one-way delay: 7.876 ms
Loss rate: 71.90%

Run 2: Report of Copa — Data Link

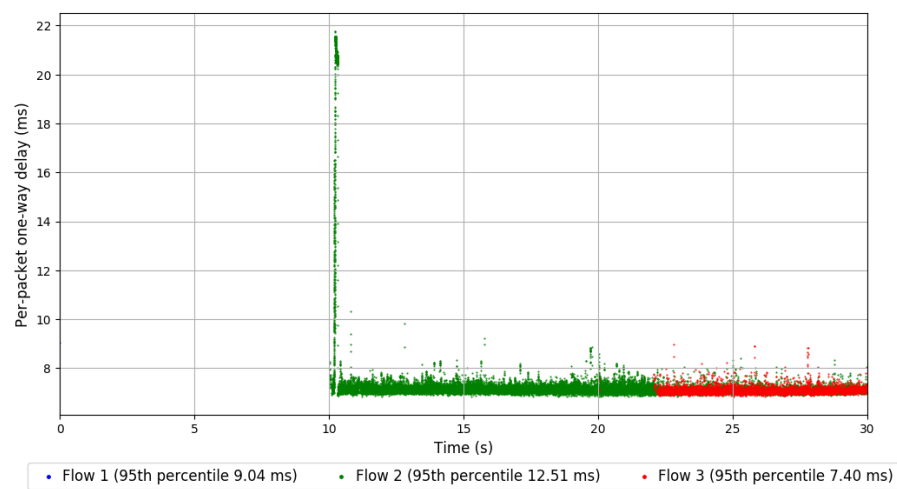
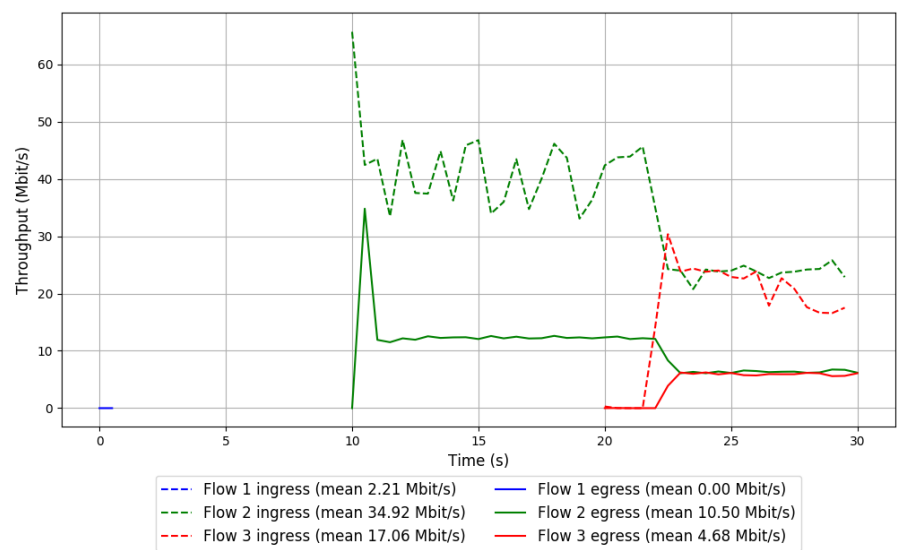


Run 3: Statistics of Copa

Start at: 2018-09-07 15:20:07
End at: 2018-09-07 15:20:37
Local clock offset: 0.036 ms
Remote clock offset: -5.693 ms

Below is generated by plot.py at 2018-09-07 16:14:55
Datalink statistics
-- Total of 3 flows:
Average throughput: 8.55 Mbit/s
95th percentile per-packet one-way delay: 8.284 ms
Loss rate: 70.46%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 9.036 ms
Loss rate: 98.33%
-- Flow 2:
Average throughput: 10.50 Mbit/s
95th percentile per-packet one-way delay: 12.513 ms
Loss rate: 69.94%
-- Flow 3:
Average throughput: 4.68 Mbit/s
95th percentile per-packet one-way delay: 7.400 ms
Loss rate: 72.59%

Run 3: Report of Copa — Data Link

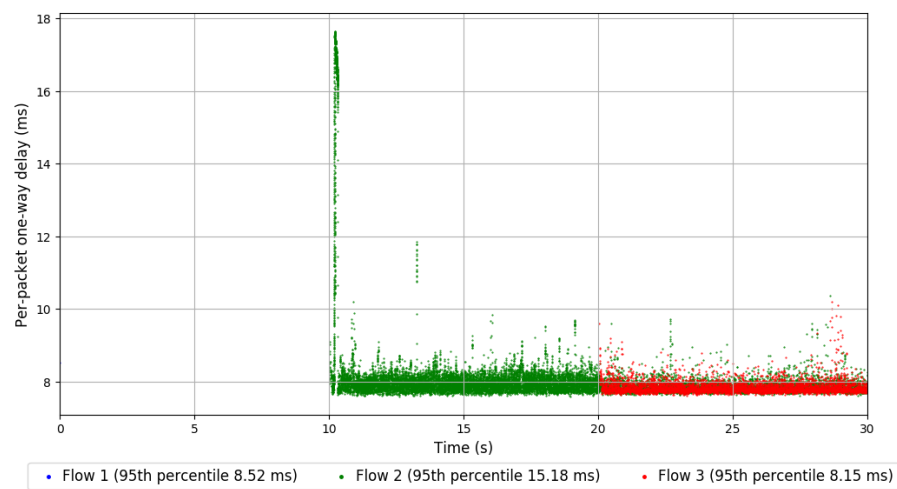
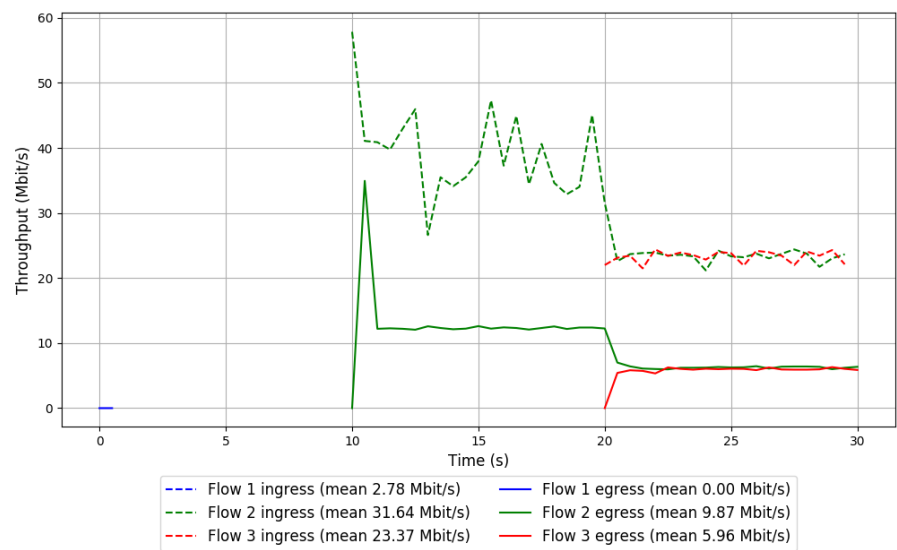


Run 4: Statistics of Copa

Start at: 2018-09-07 15:40:54
End at: 2018-09-07 15:41:24
Local clock offset: 0.313 ms
Remote clock offset: -5.122 ms

Below is generated by plot.py at 2018-09-07 16:14:55
Datalink statistics
-- Total of 3 flows:
Average throughput: 8.55 Mbit/s
95th percentile per-packet one-way delay: 9.510 ms
Loss rate: 70.34%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 8.521 ms
Loss rate: 98.60%
-- Flow 2:
Average throughput: 9.87 Mbit/s
95th percentile per-packet one-way delay: 15.176 ms
Loss rate: 68.81%
-- Flow 3:
Average throughput: 5.96 Mbit/s
95th percentile per-packet one-way delay: 8.150 ms
Loss rate: 74.49%

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2018-09-07 16:01:46

End at: 2018-09-07 16:02:16

Local clock offset: 1.19 ms

Remote clock offset: -4.85 ms

Below is generated by plot.py at 2018-09-07 16:14:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.37 Mbit/s

95th percentile per-packet one-way delay: 10.304 ms

Loss rate: 67.42%

-- Flow 1:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 7.883 ms

Loss rate: 98.33%

-- Flow 2:

Average throughput: 9.63 Mbit/s

95th percentile per-packet one-way delay: 15.153 ms

Loss rate: 64.83%

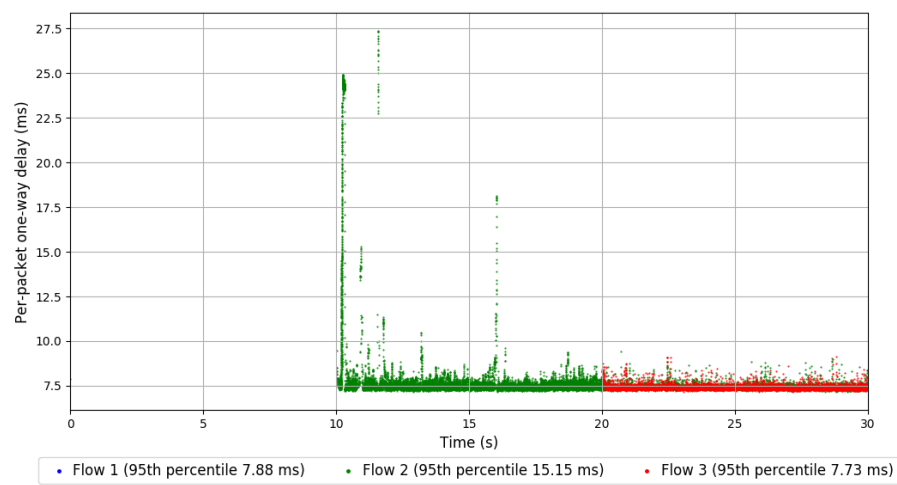
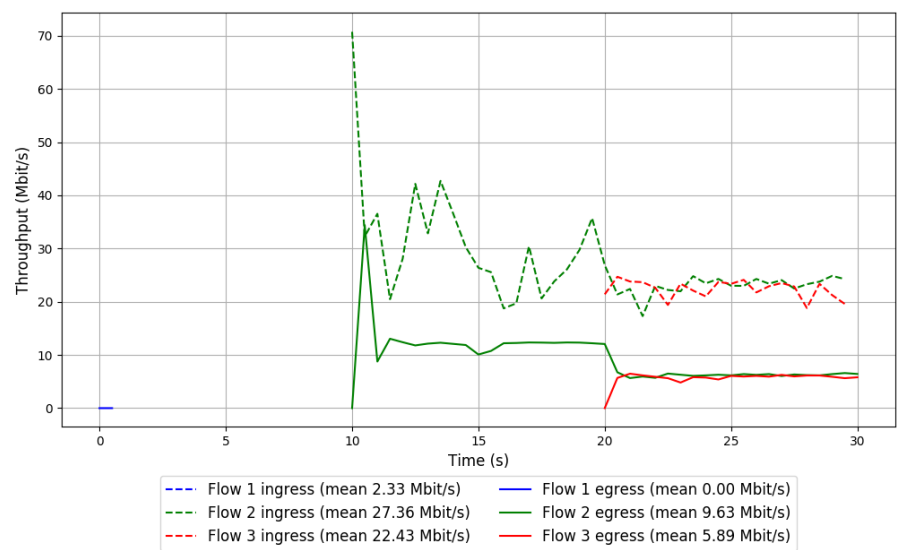
-- Flow 3:

Average throughput: 5.89 Mbit/s

95th percentile per-packet one-way delay: 7.730 ms

Loss rate: 73.75%

Run 5: Report of Copa — Data Link

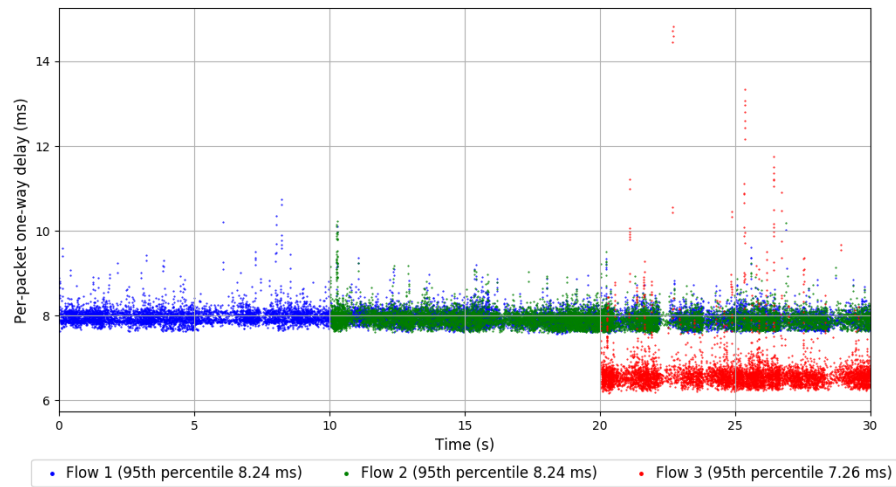
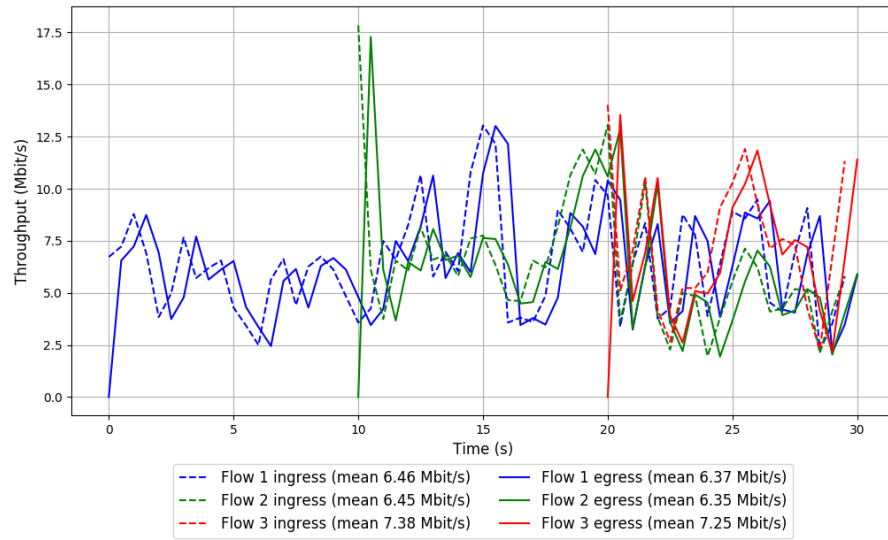


Run 1: Statistics of TCP Cubic

Start at: 2018-09-07 14:45:12
End at: 2018-09-07 14:45:42
Local clock offset: 1.296 ms
Remote clock offset: -4.675 ms

Below is generated by plot.py at 2018-09-07 16:14:55
Datalink statistics
-- Total of 3 flows:
Average throughput: 13.01 Mbit/s
95th percentile per-packet one-way delay: 8.222 ms
Loss rate: 1.45%
-- Flow 1:
Average throughput: 6.37 Mbit/s
95th percentile per-packet one-way delay: 8.240 ms
Loss rate: 1.28%
-- Flow 2:
Average throughput: 6.35 Mbit/s
95th percentile per-packet one-way delay: 8.240 ms
Loss rate: 1.50%
-- Flow 3:
Average throughput: 7.25 Mbit/s
95th percentile per-packet one-way delay: 7.262 ms
Loss rate: 1.83%

Run 1: Report of TCP Cubic — Data Link

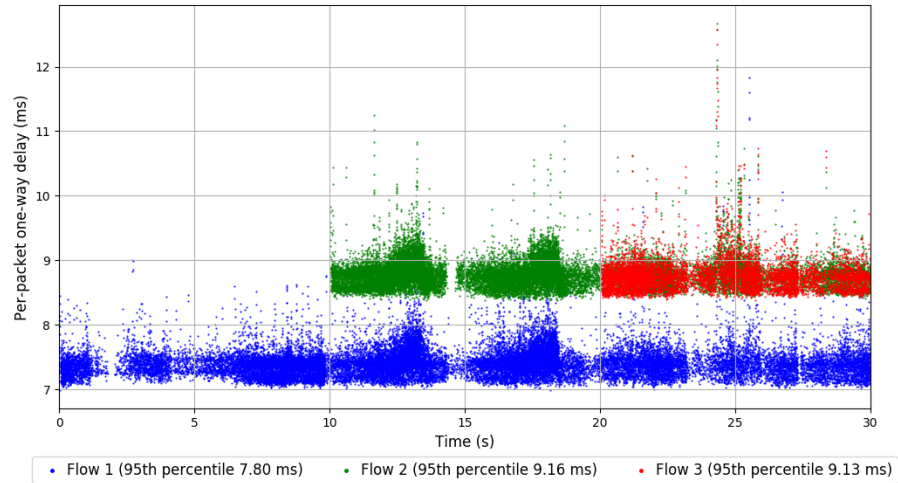
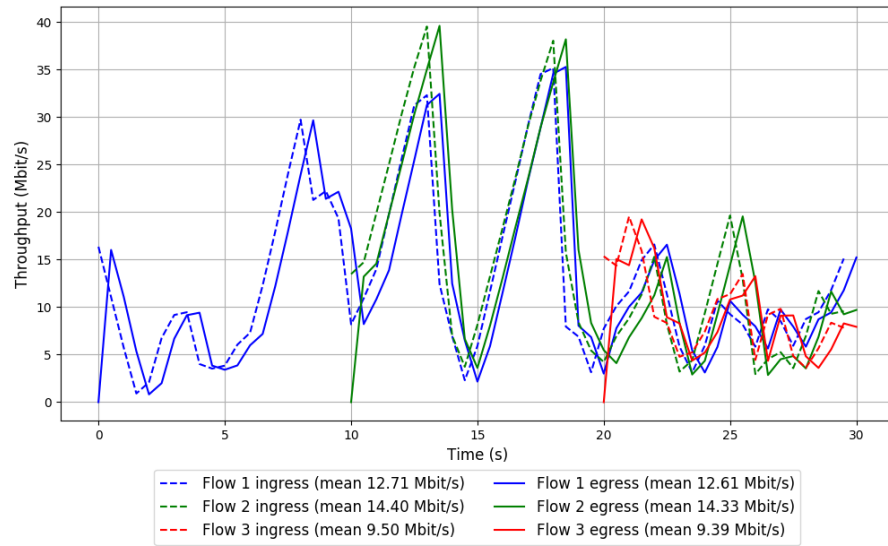


Run 2: Statistics of TCP Cubic

Start at: 2018-09-07 15:06:01
End at: 2018-09-07 15:06:31
Local clock offset: 0.514 ms
Remote clock offset: -4.663 ms

Below is generated by plot.py at 2018-09-07 16:14:55
Datalink statistics
-- Total of 3 flows:
Average throughput: 25.28 Mbit/s
95th percentile per-packet one-way delay: 9.041 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 12.61 Mbit/s
95th percentile per-packet one-way delay: 7.804 ms
Loss rate: 0.73%
-- Flow 2:
Average throughput: 14.33 Mbit/s
95th percentile per-packet one-way delay: 9.164 ms
Loss rate: 0.49%
-- Flow 3:
Average throughput: 9.39 Mbit/s
95th percentile per-packet one-way delay: 9.133 ms
Loss rate: 1.19%

Run 2: Report of TCP Cubic — Data Link

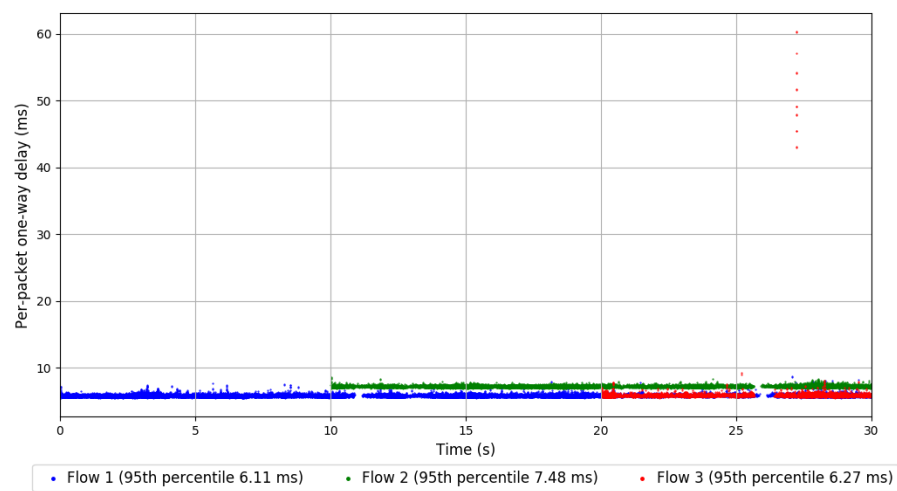
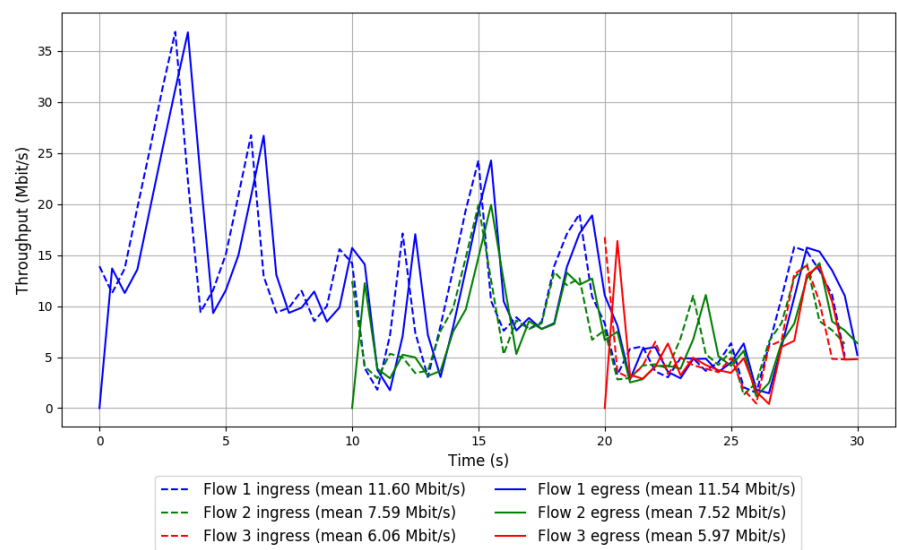


Run 3: Statistics of TCP Cubic

Start at: 2018-09-07 15:26:58
End at: 2018-09-07 15:27:28
Local clock offset: 2.137 ms
Remote clock offset: -5.161 ms

Below is generated by plot.py at 2018-09-07 16:14:55
Datalink statistics
-- Total of 3 flows:
Average throughput: 18.53 Mbit/s
95th percentile per-packet one-way delay: 7.349 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 11.54 Mbit/s
95th percentile per-packet one-way delay: 6.113 ms
Loss rate: 0.50%
-- Flow 2:
Average throughput: 7.52 Mbit/s
95th percentile per-packet one-way delay: 7.484 ms
Loss rate: 0.90%
-- Flow 3:
Average throughput: 5.97 Mbit/s
95th percentile per-packet one-way delay: 6.272 ms
Loss rate: 1.51%

Run 3: Report of TCP Cubic — Data Link

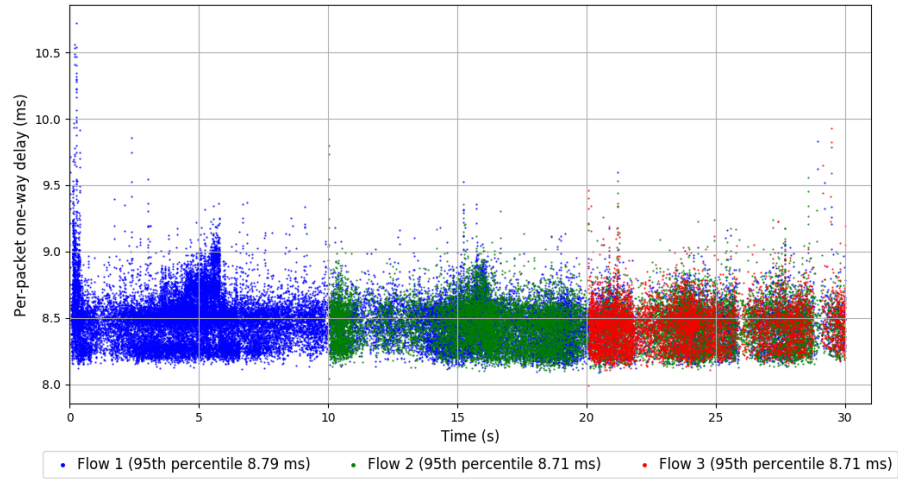
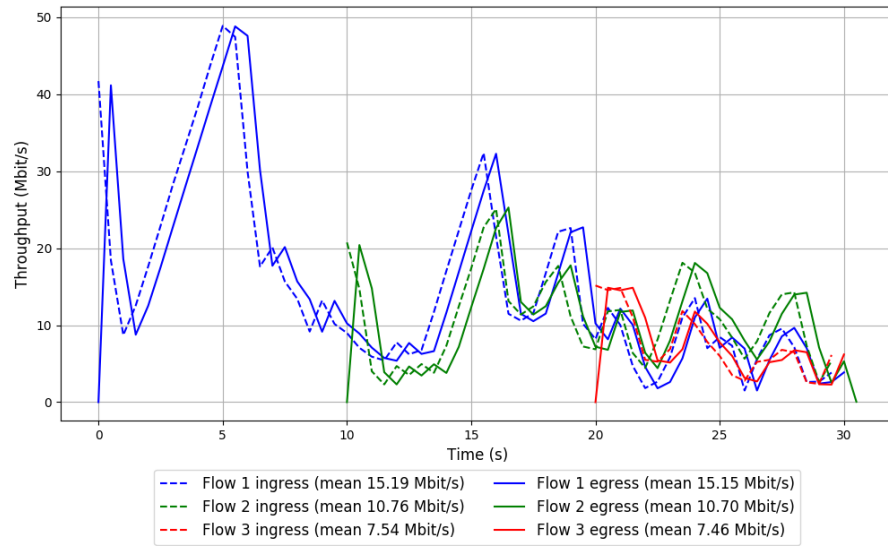


Run 4: Statistics of TCP Cubic

Start at: 2018-09-07 15:47:47
End at: 2018-09-07 15:48:17
Local clock offset: 0.987 ms
Remote clock offset: -5.333 ms

Below is generated by plot.py at 2018-09-07 16:14:55
Datalink statistics
-- Total of 3 flows:
Average throughput: 24.75 Mbit/s
95th percentile per-packet one-way delay: 8.761 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 15.15 Mbit/s
95th percentile per-packet one-way delay: 8.793 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 10.70 Mbit/s
95th percentile per-packet one-way delay: 8.706 ms
Loss rate: 0.55%
-- Flow 3:
Average throughput: 7.46 Mbit/s
95th percentile per-packet one-way delay: 8.711 ms
Loss rate: 1.01%

Run 4: Report of TCP Cubic — Data Link

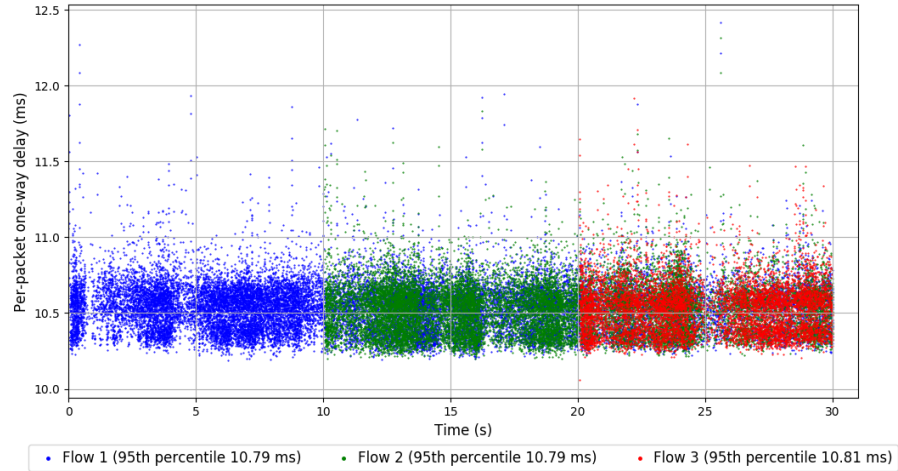
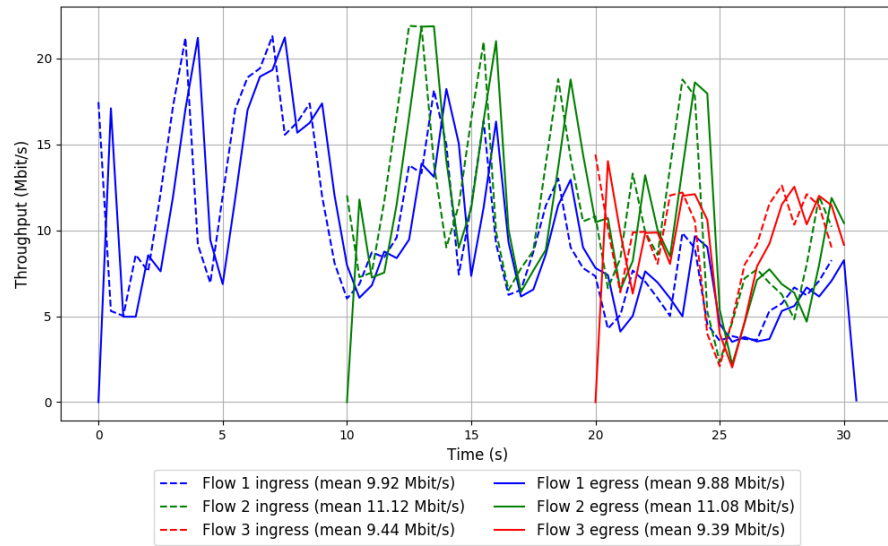


Run 5: Statistics of TCP Cubic

Start at: 2018-09-07 16:08:38
End at: 2018-09-07 16:09:08
Local clock offset: -0.425 ms
Remote clock offset: -4.827 ms

Below is generated by plot.py at 2018-09-07 16:14:55
Datalink statistics
-- Total of 3 flows:
Average throughput: 20.39 Mbit/s
95th percentile per-packet one-way delay: 10.790 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 9.88 Mbit/s
95th percentile per-packet one-way delay: 10.785 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 11.08 Mbit/s
95th percentile per-packet one-way delay: 10.790 ms
Loss rate: 0.31%
-- Flow 3:
Average throughput: 9.39 Mbit/s
95th percentile per-packet one-way delay: 10.810 ms
Loss rate: 0.56%

Run 5: Report of TCP Cubic — Data Link

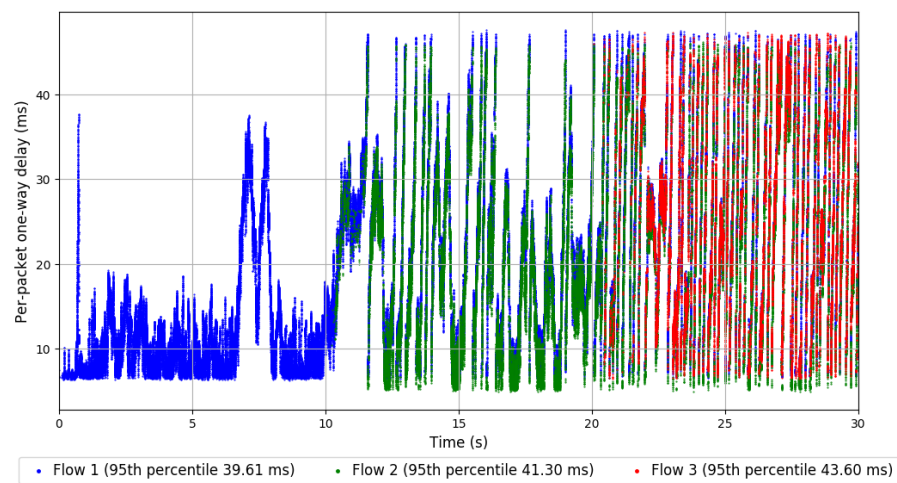
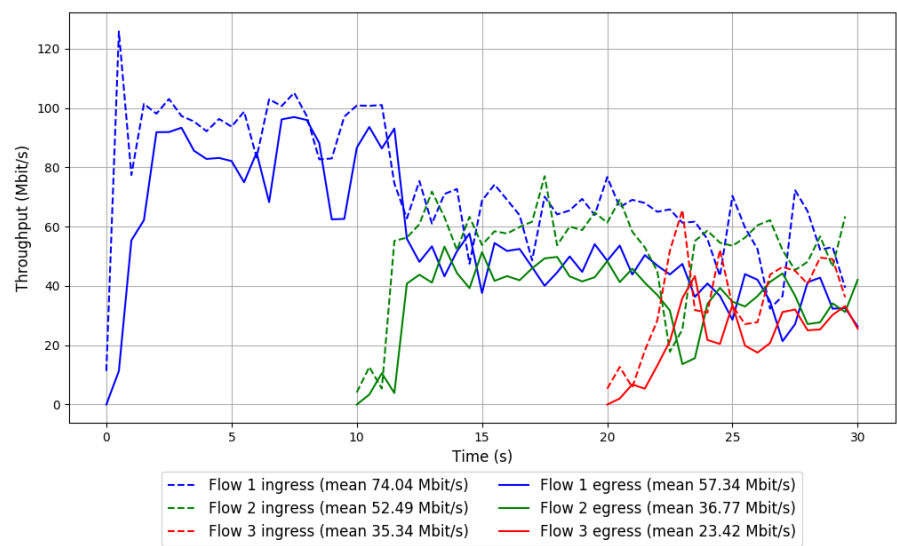


Run 1: Statistics of FillP

Start at: 2018-09-07 14:46:19
End at: 2018-09-07 14:46:49
Local clock offset: 2.075 ms
Remote clock offset: -4.908 ms

Below is generated by plot.py at 2018-09-07 16:15:51
Datalink statistics
-- Total of 3 flows:
Average throughput: 89.58 Mbit/s
95th percentile per-packet one-way delay: 40.988 ms
Loss rate: 25.73%
-- Flow 1:
Average throughput: 57.34 Mbit/s
95th percentile per-packet one-way delay: 39.614 ms
Loss rate: 22.49%
-- Flow 2:
Average throughput: 36.77 Mbit/s
95th percentile per-packet one-way delay: 41.297 ms
Loss rate: 29.88%
-- Flow 3:
Average throughput: 23.42 Mbit/s
95th percentile per-packet one-way delay: 43.600 ms
Loss rate: 33.83%

Run 1: Report of FillP — Data Link

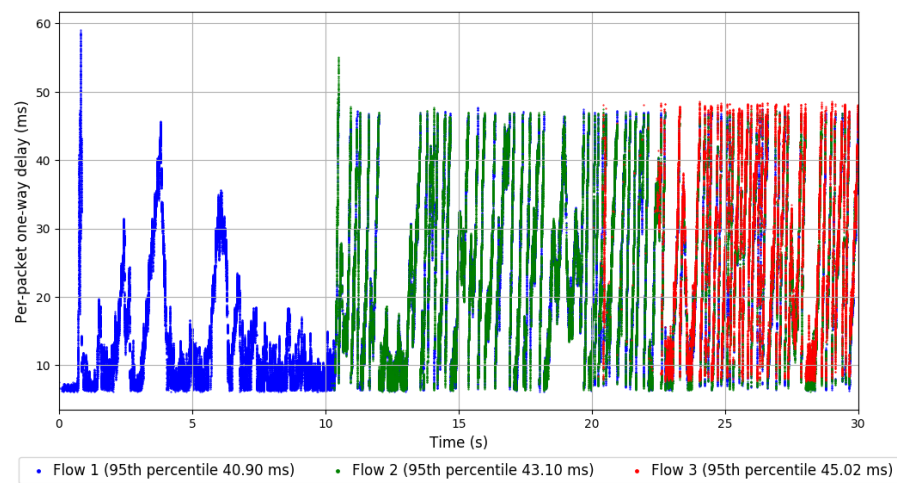
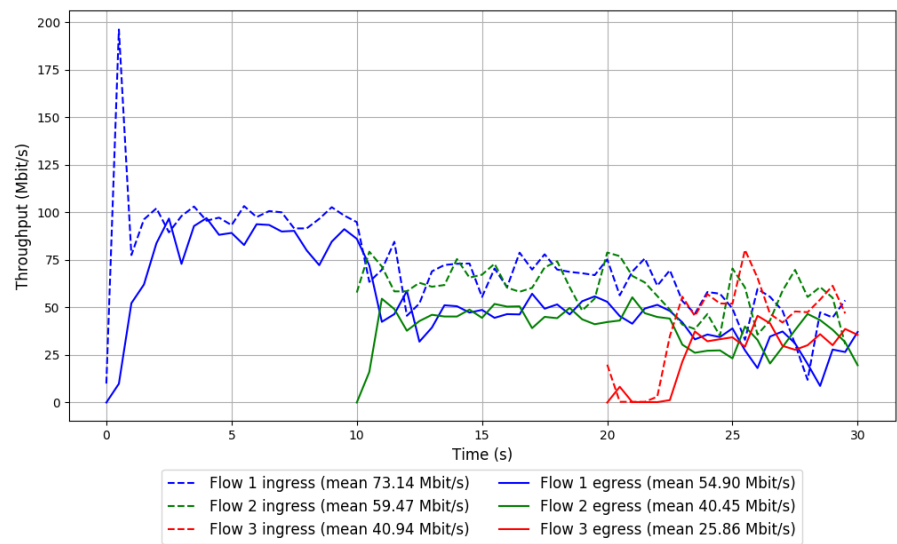


Run 2: Statistics of FillP

Start at: 2018-09-07 15:07:09
End at: 2018-09-07 15:07:39
Local clock offset: 0.517 ms
Remote clock offset: -5.308 ms

Below is generated by plot.py at 2018-09-07 16:15:55
Datalink statistics
-- Total of 3 flows:
Average throughput: 90.12 Mbit/s
95th percentile per-packet one-way delay: 42.340 ms
Loss rate: 28.62%
-- Flow 1:
Average throughput: 54.90 Mbit/s
95th percentile per-packet one-way delay: 40.900 ms
Loss rate: 24.90%
-- Flow 2:
Average throughput: 40.45 Mbit/s
95th percentile per-packet one-way delay: 43.105 ms
Loss rate: 32.64%
-- Flow 3:
Average throughput: 25.86 Mbit/s
95th percentile per-packet one-way delay: 45.021 ms
Loss rate: 36.88%

Run 2: Report of FillP — Data Link

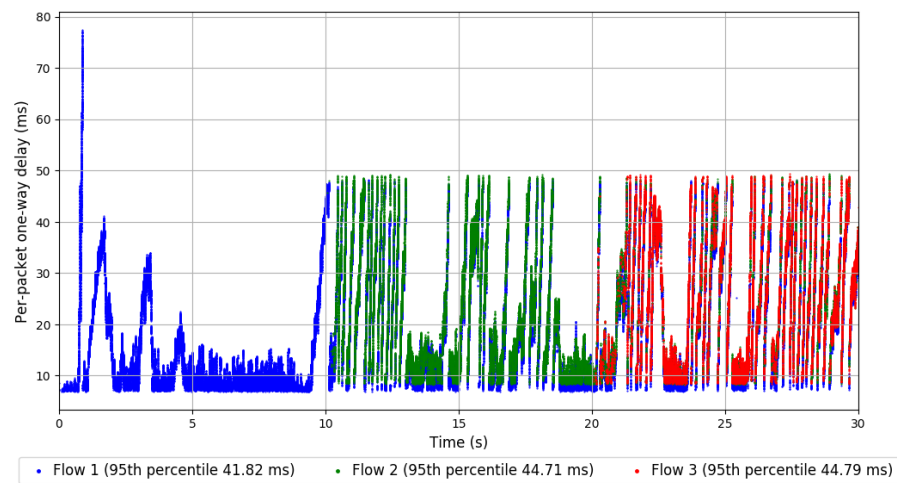
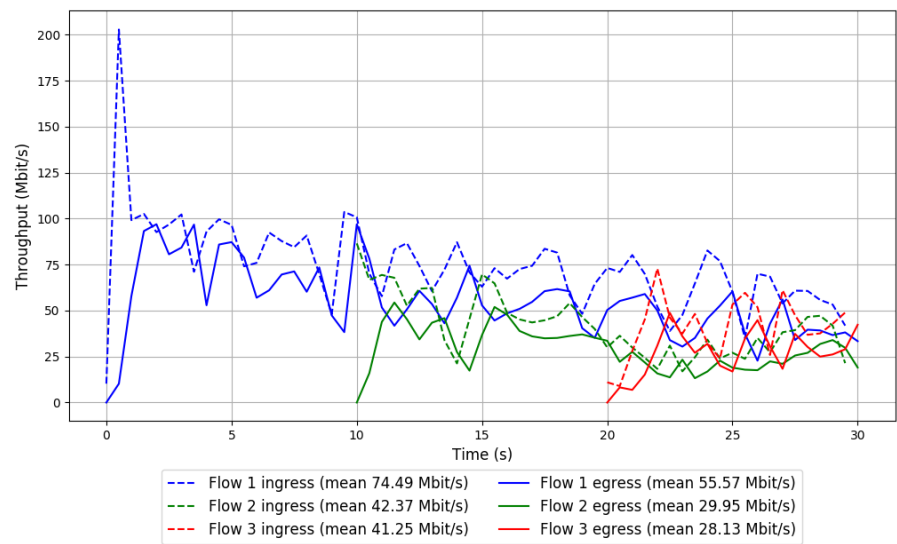


Run 3: Statistics of FillP

Start at: 2018-09-07 15:28:05
End at: 2018-09-07 15:28:35
Local clock offset: 1.212 ms
Remote clock offset: -4.561 ms

Below is generated by plot.py at 2018-09-07 16:16:01
Datalink statistics
-- Total of 3 flows:
Average throughput: 84.81 Mbit/s
95th percentile per-packet one-way delay: 43.273 ms
Loss rate: 27.04%
-- Flow 1:
Average throughput: 55.57 Mbit/s
95th percentile per-packet one-way delay: 41.816 ms
Loss rate: 25.33%
-- Flow 2:
Average throughput: 29.95 Mbit/s
95th percentile per-packet one-way delay: 44.707 ms
Loss rate: 29.36%
-- Flow 3:
Average throughput: 28.13 Mbit/s
95th percentile per-packet one-way delay: 44.787 ms
Loss rate: 31.58%

Run 3: Report of FillP — Data Link

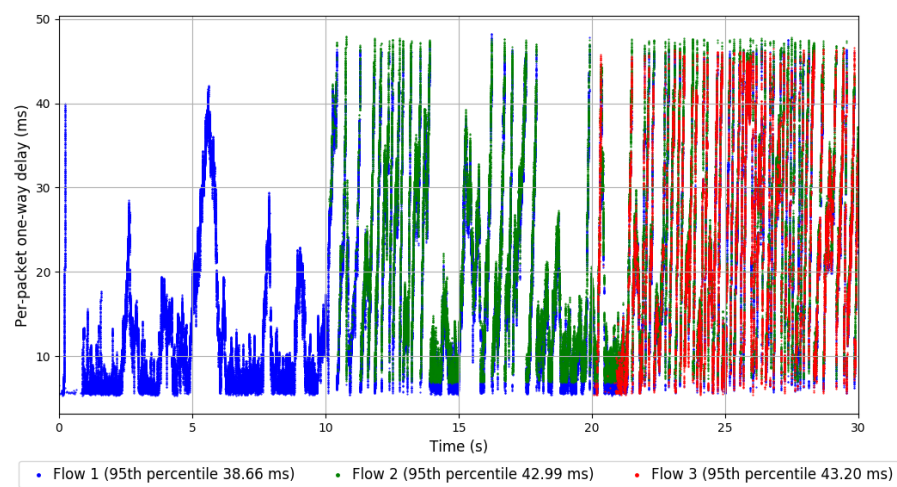
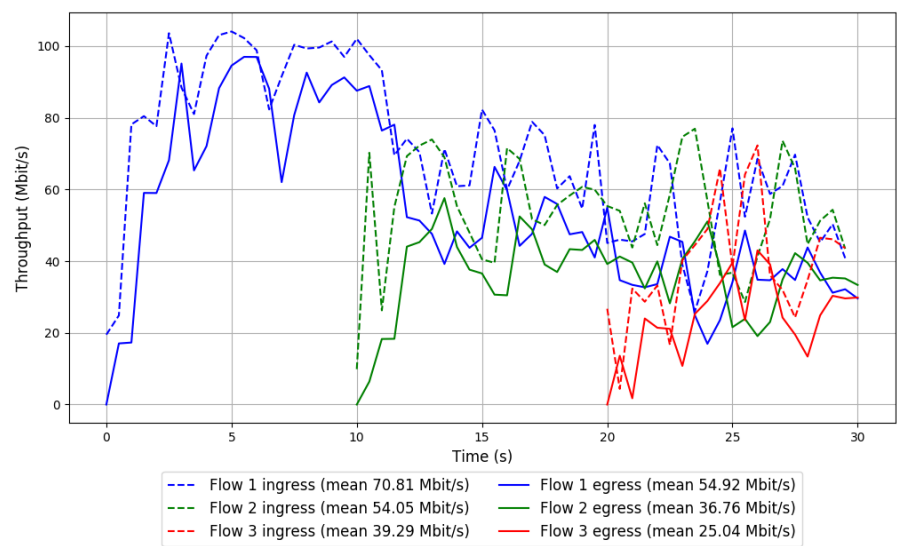


Run 4: Statistics of FillP

Start at: 2018-09-07 15:48:59
End at: 2018-09-07 15:49:29
Local clock offset: 2.602 ms
Remote clock offset: -4.577 ms

Below is generated by plot.py at 2018-09-07 16:16:09
Datalink statistics
-- Total of 3 flows:
Average throughput: 87.69 Mbit/s
95th percentile per-packet one-way delay: 41.067 ms
Loss rate: 26.73%
-- Flow 1:
Average throughput: 54.92 Mbit/s
95th percentile per-packet one-way delay: 38.663 ms
Loss rate: 22.37%
-- Flow 2:
Average throughput: 36.76 Mbit/s
95th percentile per-packet one-way delay: 42.992 ms
Loss rate: 31.91%
-- Flow 3:
Average throughput: 25.04 Mbit/s
95th percentile per-packet one-way delay: 43.203 ms
Loss rate: 36.16%

Run 4: Report of FillP — Data Link

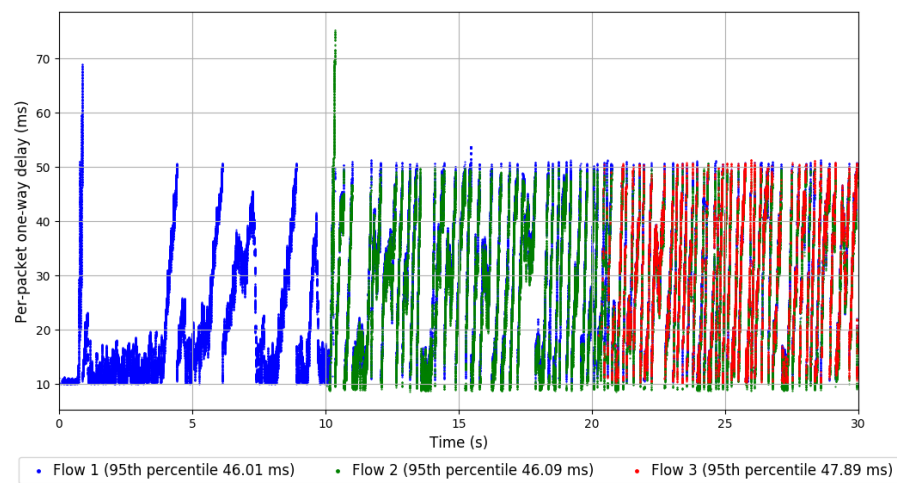
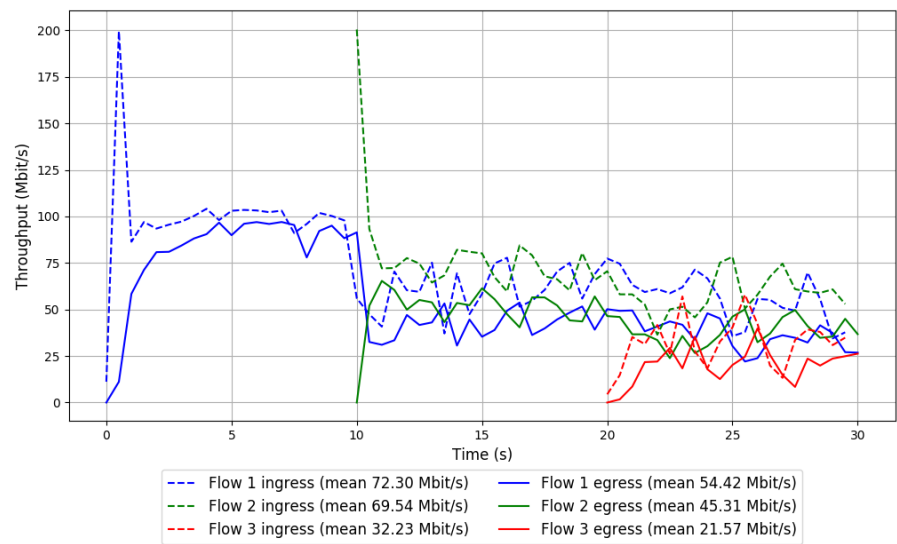


Run 5: Statistics of FillP

Start at: 2018-09-07 16:09:46
End at: 2018-09-07 16:10:16
Local clock offset: -0.285 ms
Remote clock offset: -4.672 ms

Below is generated by plot.py at 2018-09-07 16:16:16
Datalink statistics
-- Total of 3 flows:
Average throughput: 91.59 Mbit/s
95th percentile per-packet one-way delay: 46.212 ms
Loss rate: 29.13%
-- Flow 1:
Average throughput: 54.42 Mbit/s
95th percentile per-packet one-way delay: 46.011 ms
Loss rate: 24.71%
-- Flow 2:
Average throughput: 45.31 Mbit/s
95th percentile per-packet one-way delay: 46.087 ms
Loss rate: 34.81%
-- Flow 3:
Average throughput: 21.57 Mbit/s
95th percentile per-packet one-way delay: 47.886 ms
Loss rate: 34.44%

Run 5: Report of FillP — Data Link

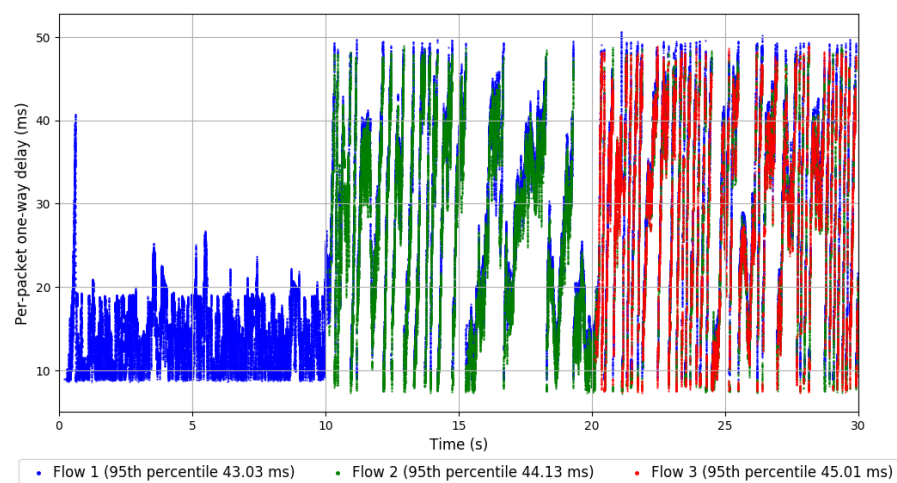
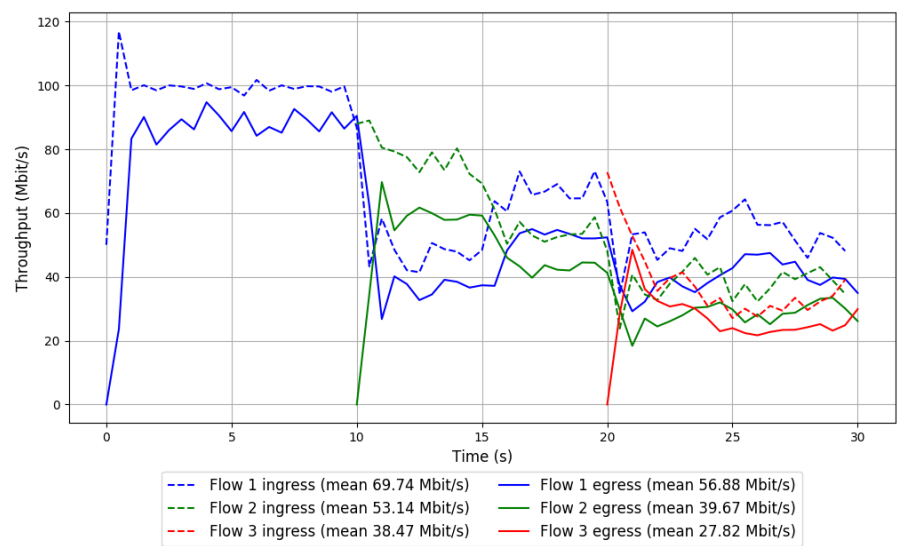


Run 1: Statistics of FillP-Sheep

Start at: 2018-09-07 14:32:17
End at: 2018-09-07 14:32:47
Local clock offset: 0.963 ms
Remote clock offset: -3.497 ms

Below is generated by plot.py at 2018-09-07 16:16:16
Datalink statistics
-- Total of 3 flows:
Average throughput: 92.75 Mbit/s
95th percentile per-packet one-way delay: 43.727 ms
Loss rate: 21.82%
-- Flow 1:
Average throughput: 56.88 Mbit/s
95th percentile per-packet one-way delay: 43.032 ms
Loss rate: 18.96%
-- Flow 2:
Average throughput: 39.67 Mbit/s
95th percentile per-packet one-way delay: 44.128 ms
Loss rate: 25.37%
-- Flow 3:
Average throughput: 27.82 Mbit/s
95th percentile per-packet one-way delay: 45.009 ms
Loss rate: 27.62%

Run 1: Report of FillP-Sheep — Data Link

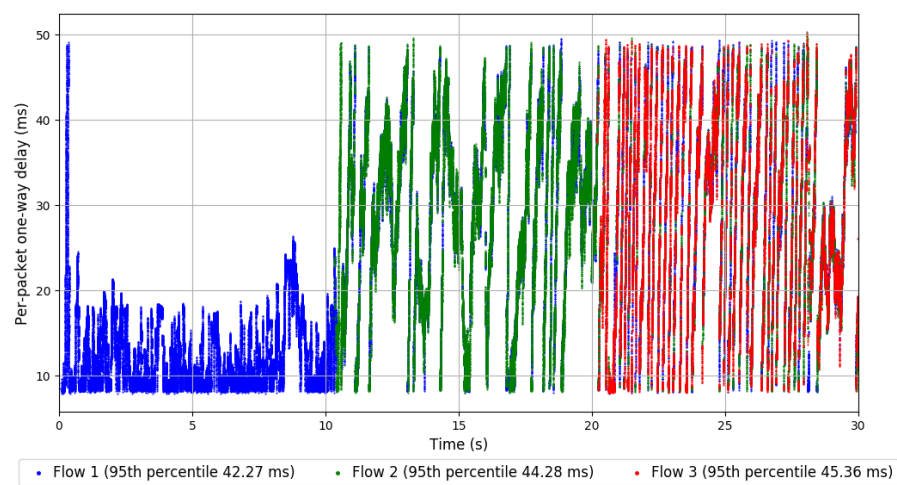
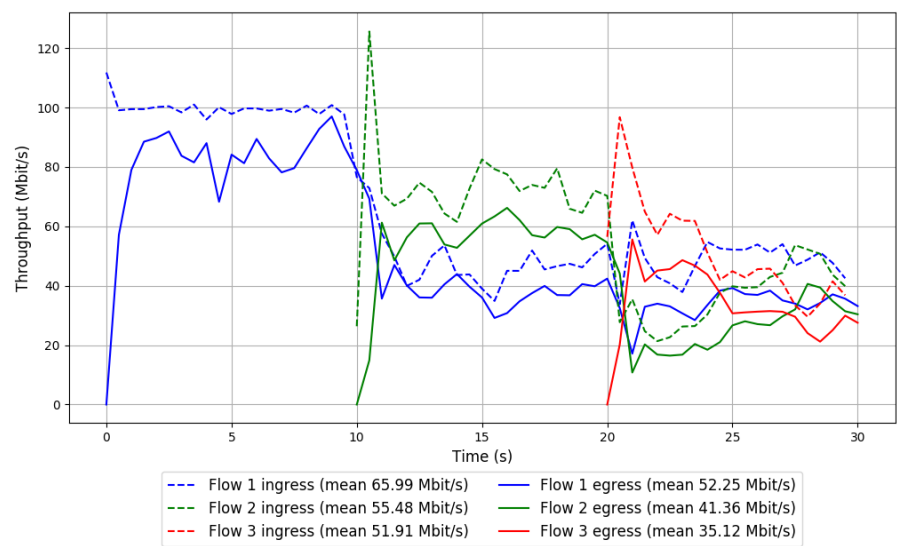


Run 2: Statistics of FillP-Sheep

Start at: 2018-09-07 14:53:13
End at: 2018-09-07 14:53:43
Local clock offset: -0.268 ms
Remote clock offset: -4.194 ms

Below is generated by plot.py at 2018-09-07 16:16:16
Datalink statistics
-- Total of 3 flows:
Average throughput: 91.41 Mbit/s
95th percentile per-packet one-way delay: 43.630 ms
Loss rate: 23.88%
-- Flow 1:
Average throughput: 52.25 Mbit/s
95th percentile per-packet one-way delay: 42.273 ms
Loss rate: 20.80%
-- Flow 2:
Average throughput: 41.36 Mbit/s
95th percentile per-packet one-way delay: 44.285 ms
Loss rate: 25.43%
-- Flow 3:
Average throughput: 35.12 Mbit/s
95th percentile per-packet one-way delay: 45.359 ms
Loss rate: 32.36%

Run 2: Report of FillP-Sheep — Data Link

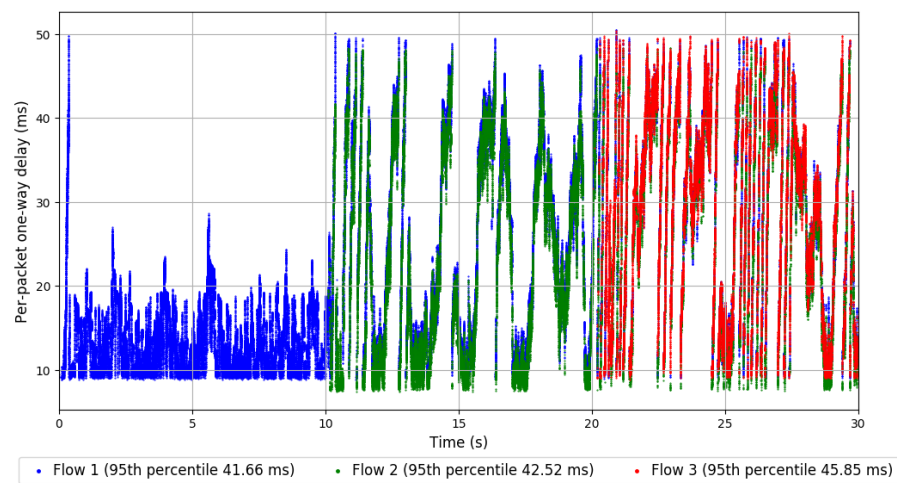
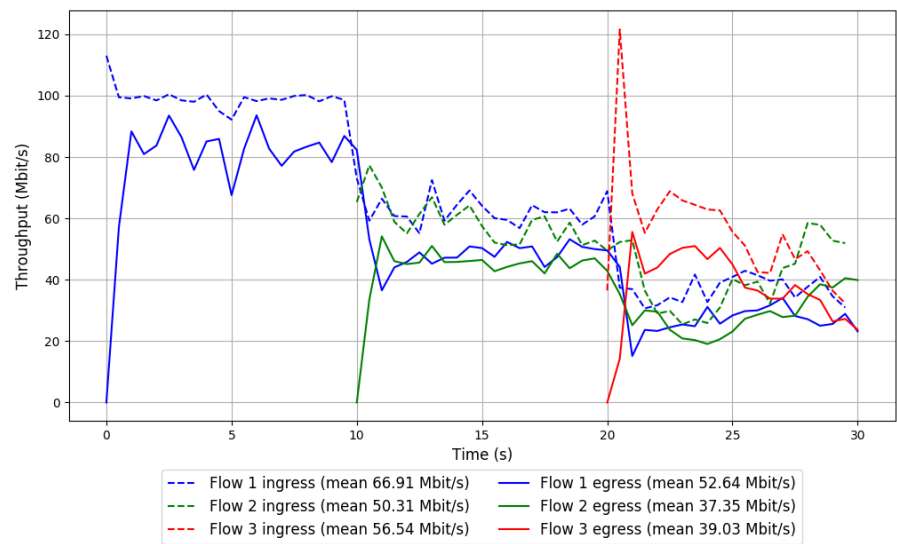


Run 3: Statistics of FillP-Sheep

Start at: 2018-09-07 15:14:12
End at: 2018-09-07 15:14:42
Local clock offset: 0.248 ms
Remote clock offset: -4.321 ms

Below is generated by plot.py at 2018-09-07 16:16:20
Datalink statistics
-- Total of 3 flows:
Average throughput: 90.42 Mbit/s
95th percentile per-packet one-way delay: 43.057 ms
Loss rate: 24.10%
-- Flow 1:
Average throughput: 52.64 Mbit/s
95th percentile per-packet one-way delay: 41.655 ms
Loss rate: 21.31%
-- Flow 2:
Average throughput: 37.35 Mbit/s
95th percentile per-packet one-way delay: 42.525 ms
Loss rate: 25.76%
-- Flow 3:
Average throughput: 39.03 Mbit/s
95th percentile per-packet one-way delay: 45.854 ms
Loss rate: 31.10%

Run 3: Report of FillP-Sheep — Data Link

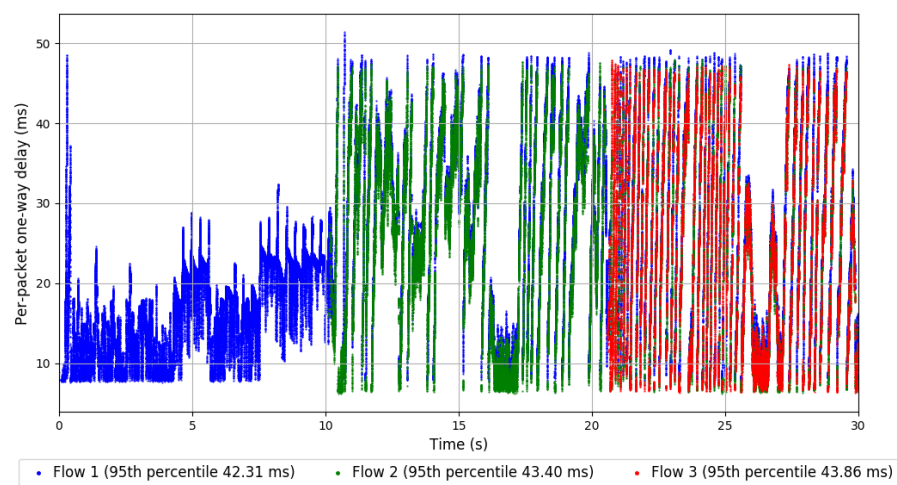
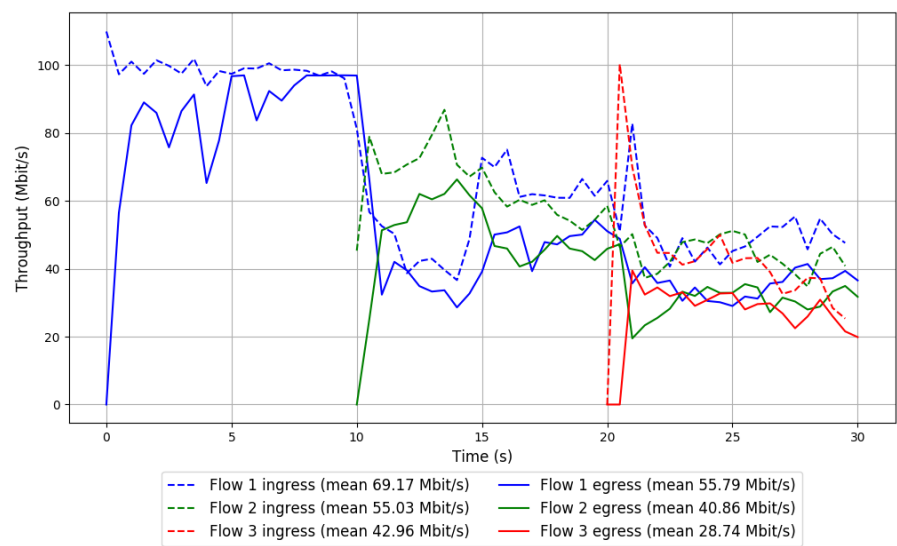


Run 4: Statistics of FillP-Sheep

Start at: 2018-09-07 15:35:00
End at: 2018-09-07 15:35:30
Local clock offset: 1.141 ms
Remote clock offset: -5.394 ms

Below is generated by plot.py at 2018-09-07 16:17:26
Datalink statistics
-- Total of 3 flows:
Average throughput: 92.29 Mbit/s
95th percentile per-packet one-way delay: 43.007 ms
Loss rate: 23.12%
-- Flow 1:
Average throughput: 55.79 Mbit/s
95th percentile per-packet one-way delay: 42.310 ms
Loss rate: 19.33%
-- Flow 2:
Average throughput: 40.86 Mbit/s
95th percentile per-packet one-way delay: 43.399 ms
Loss rate: 25.78%
-- Flow 3:
Average throughput: 28.74 Mbit/s
95th percentile per-packet one-way delay: 43.864 ms
Loss rate: 34.64%

Run 4: Report of FillP-Sheep — Data Link

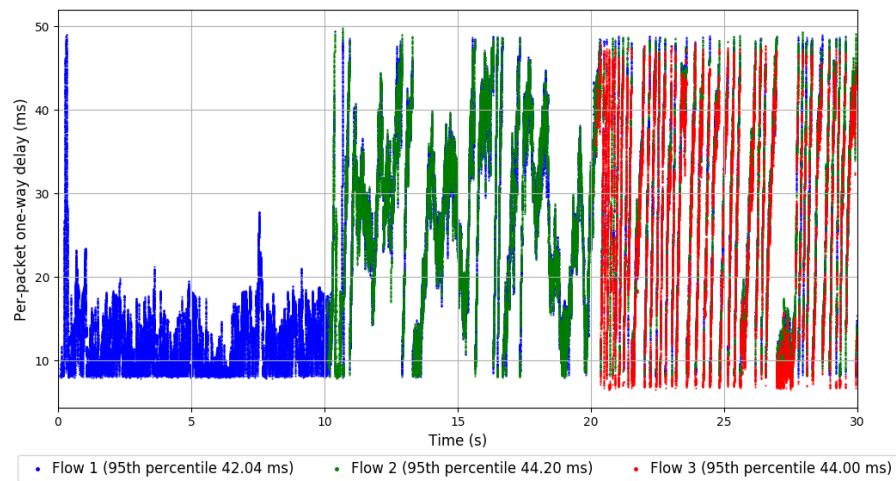
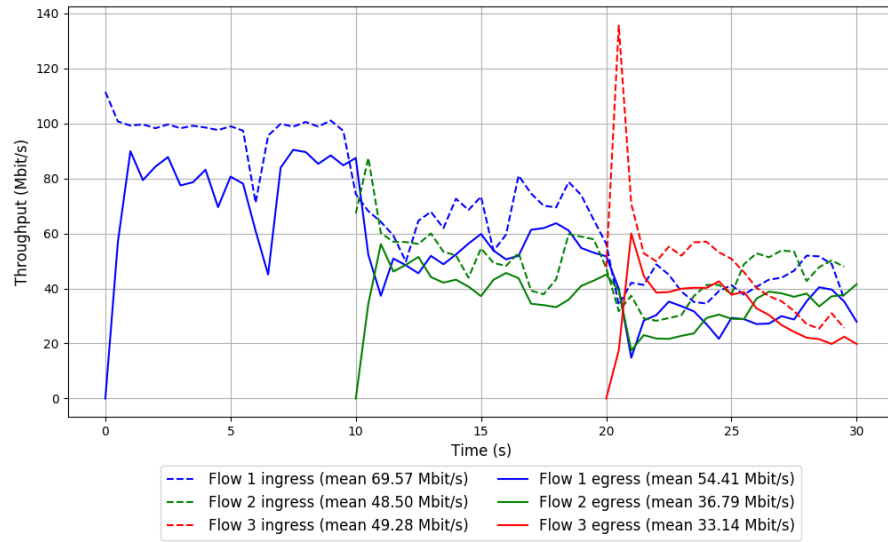


Run 5: Statistics of FillP-Sheep

Start at: 2018-09-07 15:55:53
End at: 2018-09-07 15:56:23
Local clock offset: 1.43 ms
Remote clock offset: -5.053 ms

Below is generated by plot.py at 2018-09-07 16:17:27
Datalink statistics
-- Total of 3 flows:
Average throughput: 89.90 Mbit/s
95th percentile per-packet one-way delay: 43.186 ms
Loss rate: 23.96%
-- Flow 1:
Average throughput: 54.41 Mbit/s
95th percentile per-packet one-way delay: 42.038 ms
Loss rate: 21.78%
-- Flow 2:
Average throughput: 36.79 Mbit/s
95th percentile per-packet one-way delay: 44.197 ms
Loss rate: 24.13%
-- Flow 3:
Average throughput: 33.14 Mbit/s
95th percentile per-packet one-way delay: 43.997 ms
Loss rate: 32.87%

Run 5: Report of FillP-Sheep — Data Link

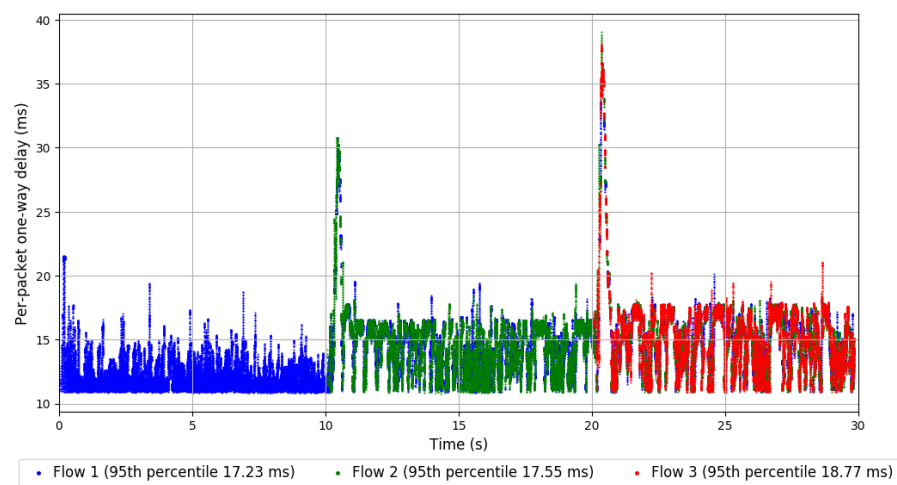
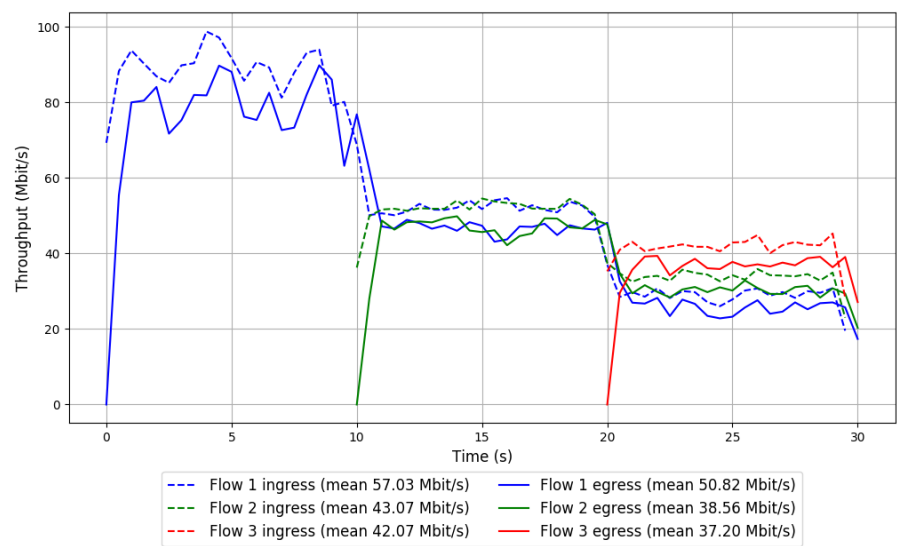


Run 1: Statistics of Indigo

Start at: 2018-09-07 14:35:52
End at: 2018-09-07 14:36:22
Local clock offset: -1.424 ms
Remote clock offset: -3.945 ms

Below is generated by plot.py at 2018-09-07 16:17:27
Datalink statistics
-- Total of 3 flows:
Average throughput: 88.59 Mbit/s
95th percentile per-packet one-way delay: 17.510 ms
Loss rate: 10.85%
-- Flow 1:
Average throughput: 50.82 Mbit/s
95th percentile per-packet one-way delay: 17.229 ms
Loss rate: 10.87%
-- Flow 2:
Average throughput: 38.56 Mbit/s
95th percentile per-packet one-way delay: 17.548 ms
Loss rate: 10.46%
-- Flow 3:
Average throughput: 37.20 Mbit/s
95th percentile per-packet one-way delay: 18.772 ms
Loss rate: 11.61%

Run 1: Report of Indigo — Data Link

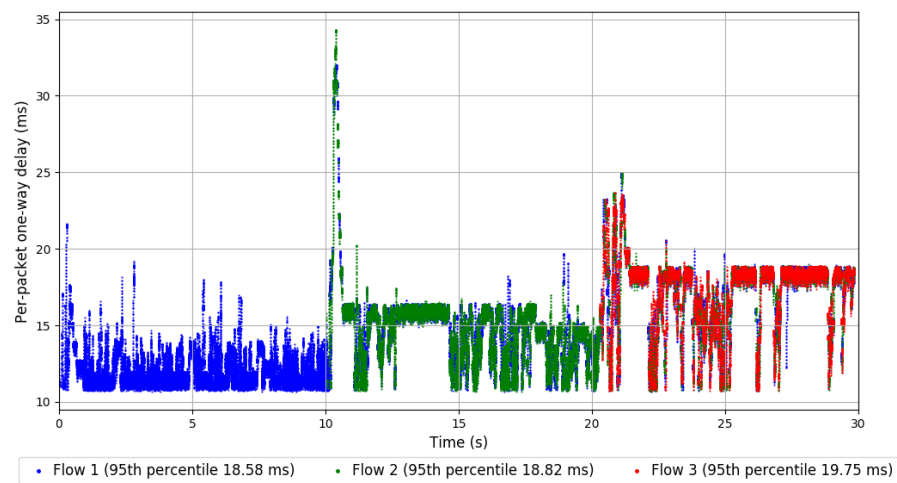
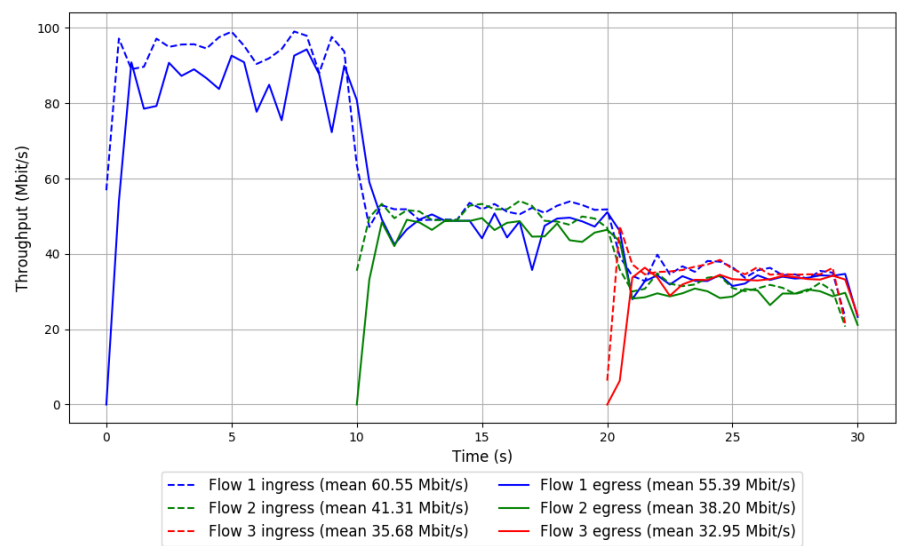


Run 2: Statistics of Indigo

Start at: 2018-09-07 14:56:41
End at: 2018-09-07 14:57:11
Local clock offset: -1.571 ms
Remote clock offset: -4.375 ms

Below is generated by plot.py at 2018-09-07 16:17:27
Datalink statistics
-- Total of 3 flows:
Average throughput: 91.29 Mbit/s
95th percentile per-packet one-way delay: 18.769 ms
Loss rate: 8.13%
-- Flow 1:
Average throughput: 55.39 Mbit/s
95th percentile per-packet one-way delay: 18.579 ms
Loss rate: 8.51%
-- Flow 2:
Average throughput: 38.20 Mbit/s
95th percentile per-packet one-way delay: 18.819 ms
Loss rate: 7.51%
-- Flow 3:
Average throughput: 32.95 Mbit/s
95th percentile per-packet one-way delay: 19.753 ms
Loss rate: 7.63%

Run 2: Report of Indigo — Data Link

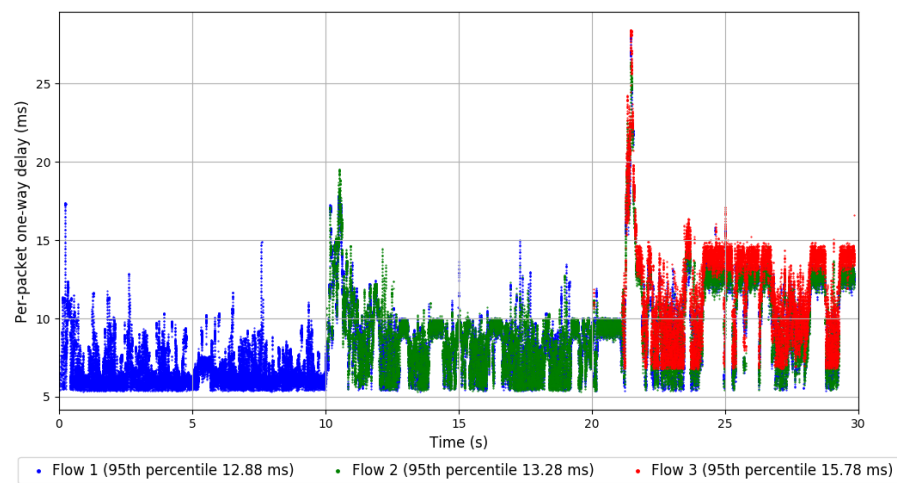
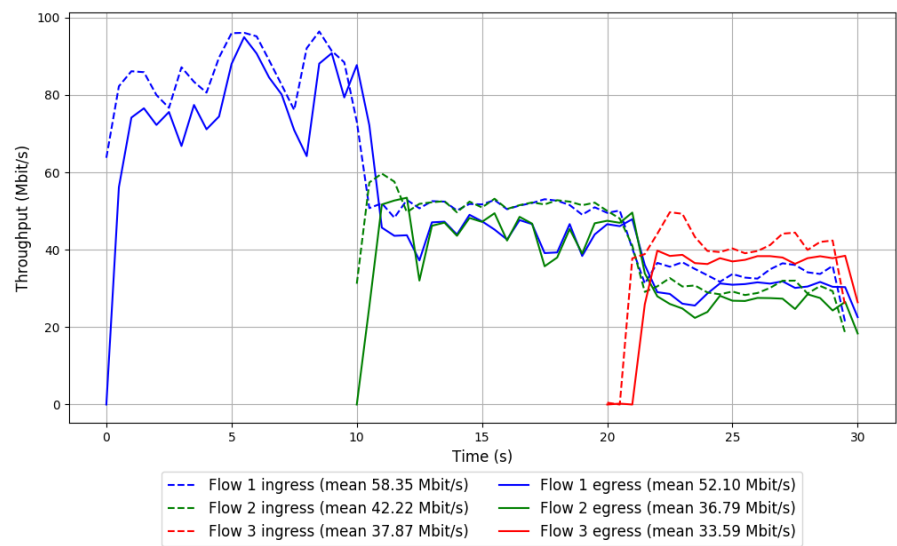


Run 3: Statistics of Indigo

Start at: 2018-09-07 15:17:41
End at: 2018-09-07 15:18:11
Local clock offset: 1.83 ms
Remote clock offset: -5.277 ms

Below is generated by plot.py at 2018-09-07 16:17:27
Datalink statistics
-- Total of 3 flows:
Average throughput: 87.52 Mbit/s
95th percentile per-packet one-way delay: 14.083 ms
Loss rate: 11.38%
-- Flow 1:
Average throughput: 52.10 Mbit/s
95th percentile per-packet one-way delay: 12.881 ms
Loss rate: 10.69%
-- Flow 2:
Average throughput: 36.79 Mbit/s
95th percentile per-packet one-way delay: 13.279 ms
Loss rate: 12.85%
-- Flow 3:
Average throughput: 33.59 Mbit/s
95th percentile per-packet one-way delay: 15.776 ms
Loss rate: 11.26%

Run 3: Report of Indigo — Data Link

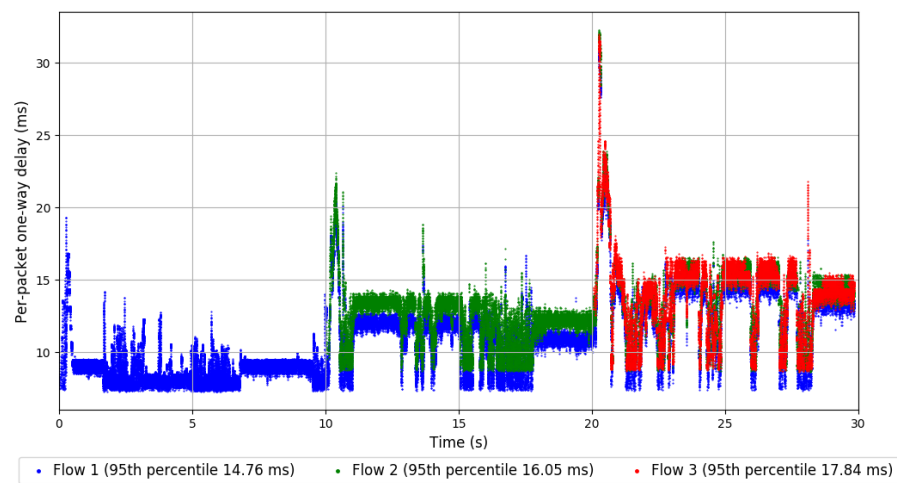
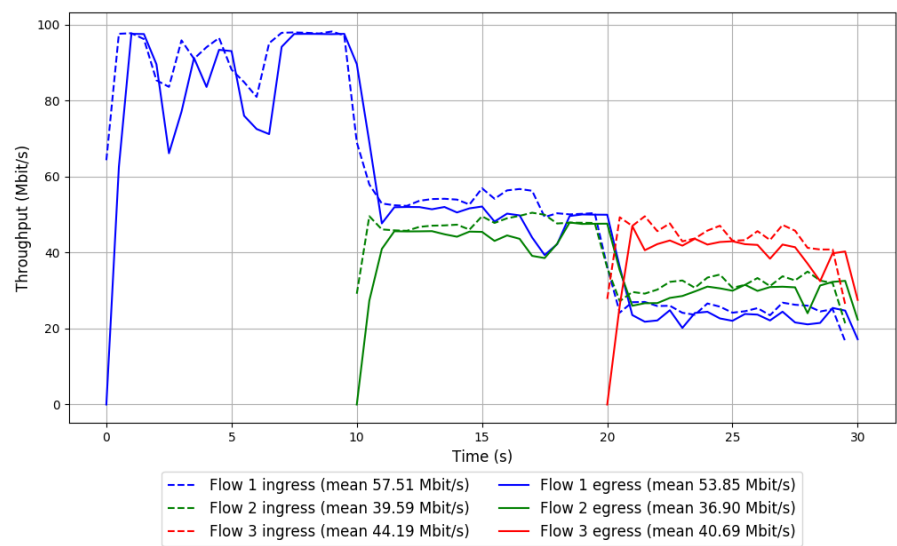


Run 4: Statistics of Indigo

Start at: 2018-09-07 15:38:29
End at: 2018-09-07 15:38:59
Local clock offset: 0.479 ms
Remote clock offset: -5.239 ms

Below is generated by plot.py at 2018-09-07 16:17:27
Datalink statistics
-- Total of 3 flows:
Average throughput: 91.67 Mbit/s
95th percentile per-packet one-way delay: 15.782 ms
Loss rate: 6.68%
-- Flow 1:
Average throughput: 53.85 Mbit/s
95th percentile per-packet one-way delay: 14.757 ms
Loss rate: 6.33%
-- Flow 2:
Average throughput: 36.90 Mbit/s
95th percentile per-packet one-way delay: 16.051 ms
Loss rate: 6.77%
-- Flow 3:
Average throughput: 40.69 Mbit/s
95th percentile per-packet one-way delay: 17.844 ms
Loss rate: 7.91%

Run 4: Report of Indigo — Data Link

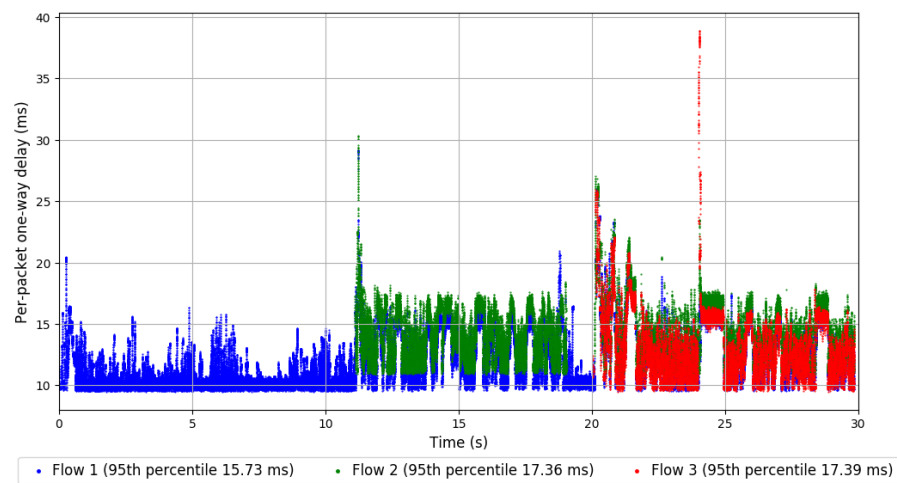
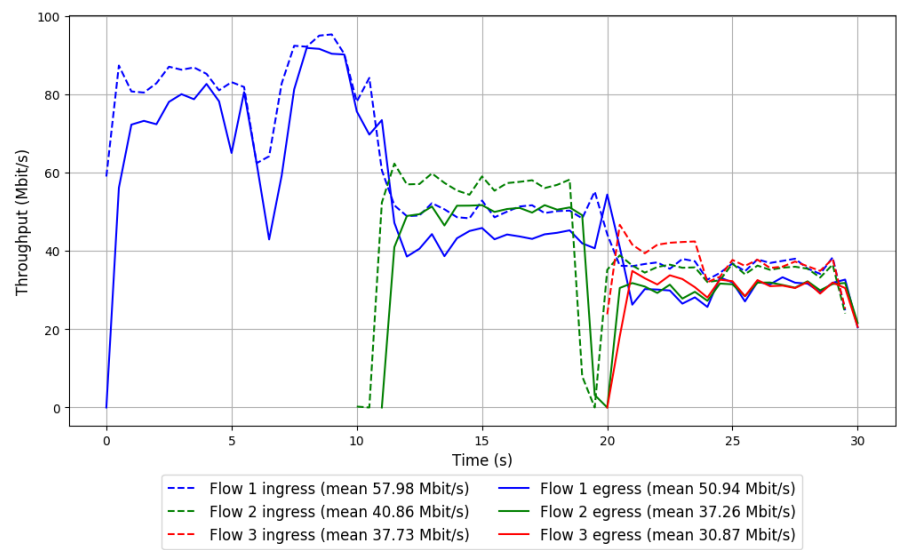


Run 5: Statistics of Indigo

Start at: 2018-09-07 15:59:22
End at: 2018-09-07 15:59:52
Local clock offset: -1.118 ms
Remote clock offset: -4.808 ms

Below is generated by plot.py at 2018-09-07 16:17:27
Datalink statistics
-- Total of 3 flows:
Average throughput: 84.55 Mbit/s
95th percentile per-packet one-way delay: 16.846 ms
Loss rate: 13.26%
-- Flow 1:
Average throughput: 50.94 Mbit/s
95th percentile per-packet one-way delay: 15.726 ms
Loss rate: 12.15%
-- Flow 2:
Average throughput: 37.26 Mbit/s
95th percentile per-packet one-way delay: 17.356 ms
Loss rate: 13.39%
-- Flow 3:
Average throughput: 30.87 Mbit/s
95th percentile per-packet one-way delay: 17.389 ms
Loss rate: 18.17%

Run 5: Report of Indigo — Data Link

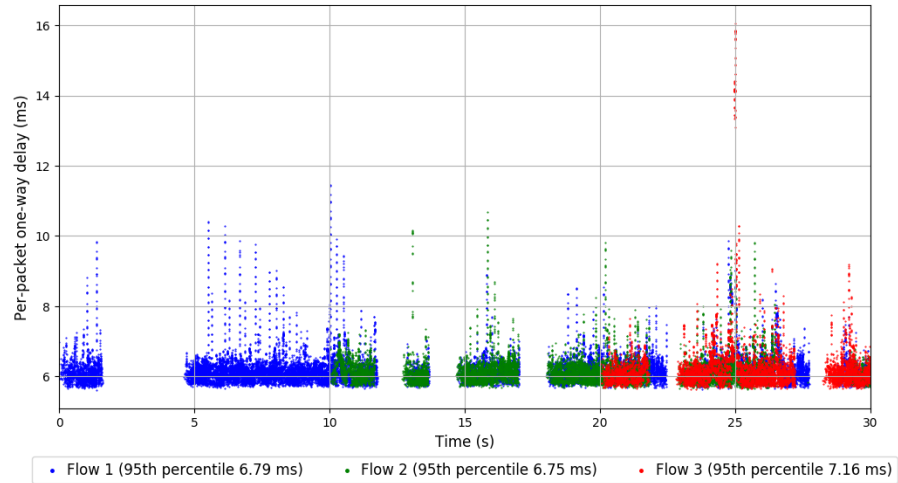
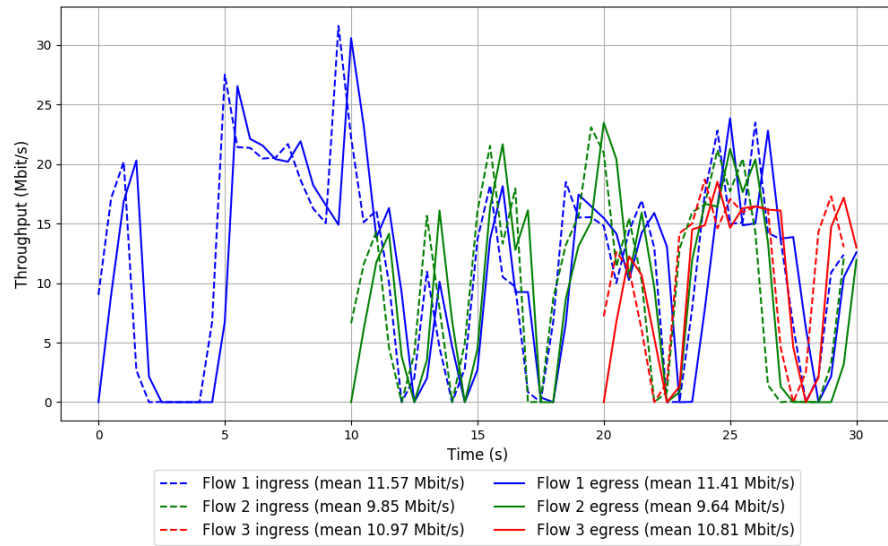


```
Run 1: Statistics of LEDBAT

Start at: 2018-09-07 14:28:50
End at: 2018-09-07 14:29:20
Local clock offset: 3.004 ms
Remote clock offset: -3.162 ms

# Below is generated by plot.py at 2018-09-07 16:17:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 21.42 Mbit/s
95th percentile per-packet one-way delay: 6.849 ms
Loss rate: 1.63%
-- Flow 1:
Average throughput: 11.41 Mbit/s
95th percentile per-packet one-way delay: 6.792 ms
Loss rate: 1.42%
-- Flow 2:
Average throughput: 9.64 Mbit/s
95th percentile per-packet one-way delay: 6.755 ms
Loss rate: 2.08%
-- Flow 3:
Average throughput: 10.81 Mbit/s
95th percentile per-packet one-way delay: 7.161 ms
Loss rate: 1.47%
```

Run 1: Report of LEDBAT — Data Link

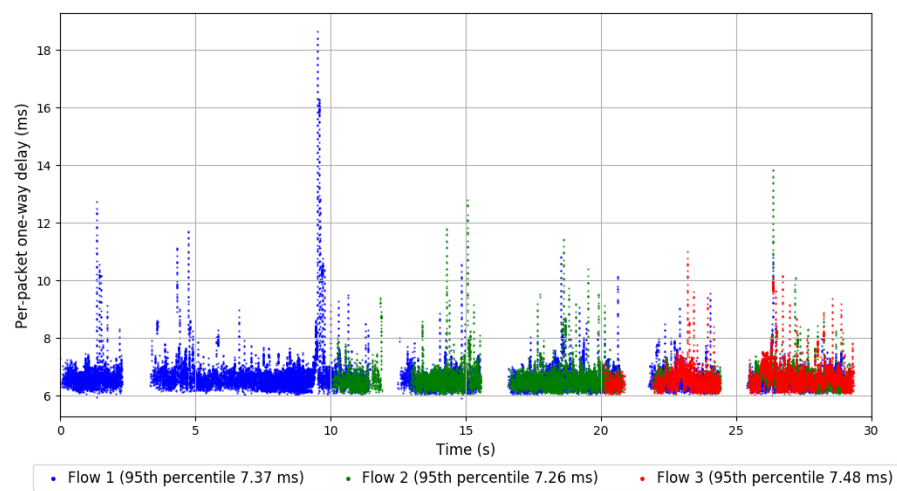
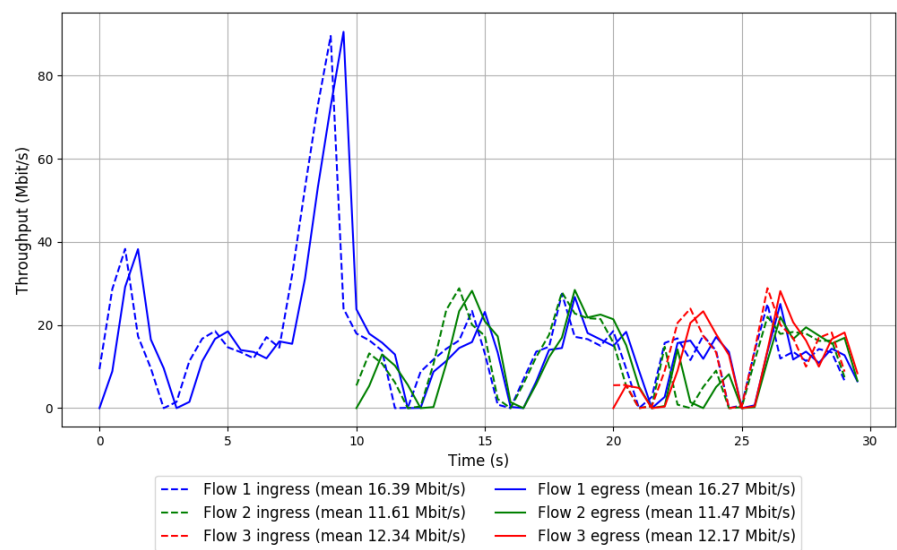


Run 2: Statistics of LEDBAT

Start at: 2018-09-07 14:49:49
End at: 2018-09-07 14:50:19
Local clock offset: 2.161 ms
Remote clock offset: -5.275 ms

Below is generated by plot.py at 2018-09-07 16:17:27
Datalink statistics
-- Total of 3 flows:
Average throughput: 27.61 Mbit/s
95th percentile per-packet one-way delay: 7.363 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 16.27 Mbit/s
95th percentile per-packet one-way delay: 7.371 ms
Loss rate: 0.83%
-- Flow 2:
Average throughput: 11.47 Mbit/s
95th percentile per-packet one-way delay: 7.262 ms
Loss rate: 1.34%
-- Flow 3:
Average throughput: 12.17 Mbit/s
95th percentile per-packet one-way delay: 7.478 ms
Loss rate: 1.39%

Run 2: Report of LEDBAT — Data Link

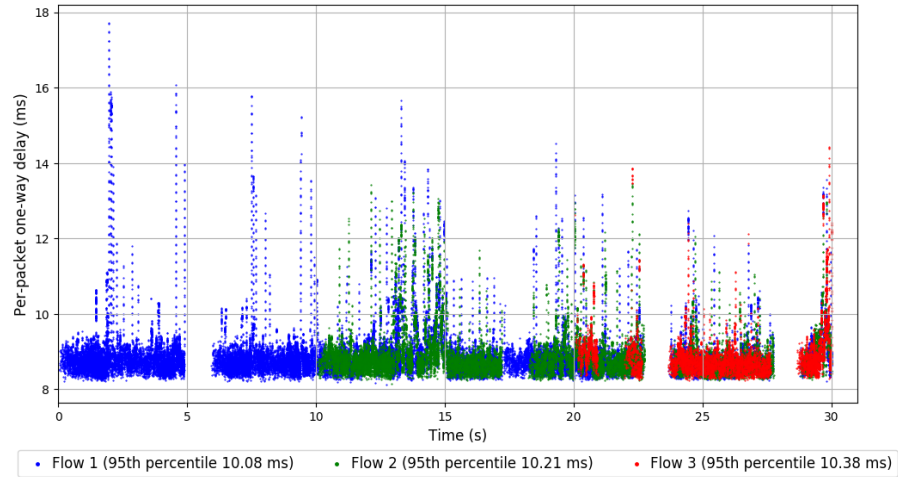
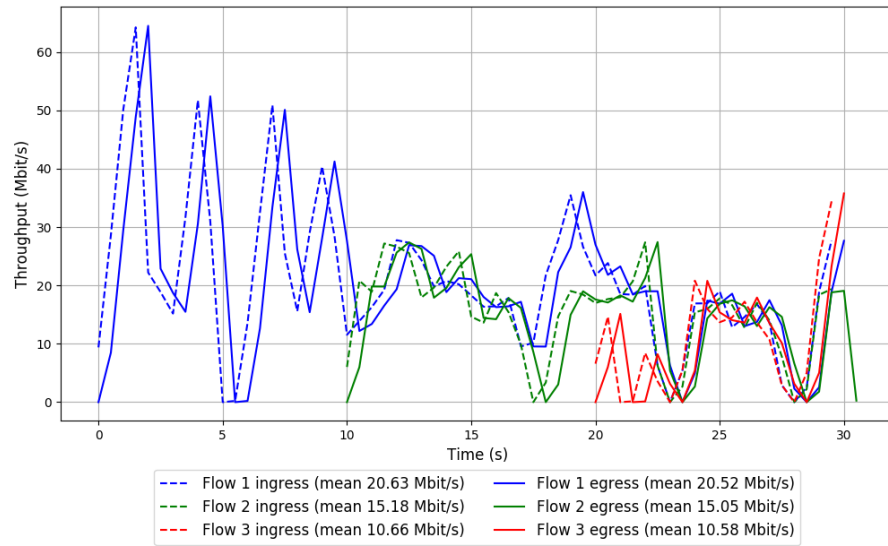


Run 3: Statistics of LEDBAT

Start at: 2018-09-07 15:10:40
End at: 2018-09-07 15:11:10
Local clock offset: -0.2 ms
Remote clock offset: -5.555 ms

Below is generated by plot.py at 2018-09-07 16:17:27
Datalink statistics
-- Total of 3 flows:
Average throughput: 34.07 Mbit/s
95th percentile per-packet one-way delay: 10.130 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 20.52 Mbit/s
95th percentile per-packet one-way delay: 10.077 ms
Loss rate: 0.52%
-- Flow 2:
Average throughput: 15.05 Mbit/s
95th percentile per-packet one-way delay: 10.207 ms
Loss rate: 0.81%
-- Flow 3:
Average throughput: 10.58 Mbit/s
95th percentile per-packet one-way delay: 10.384 ms
Loss rate: 0.80%

Run 3: Report of LEDBAT — Data Link

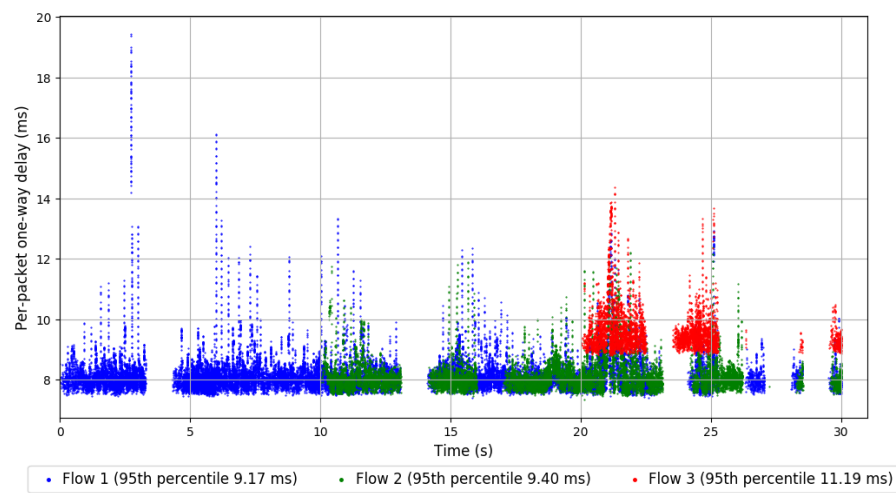
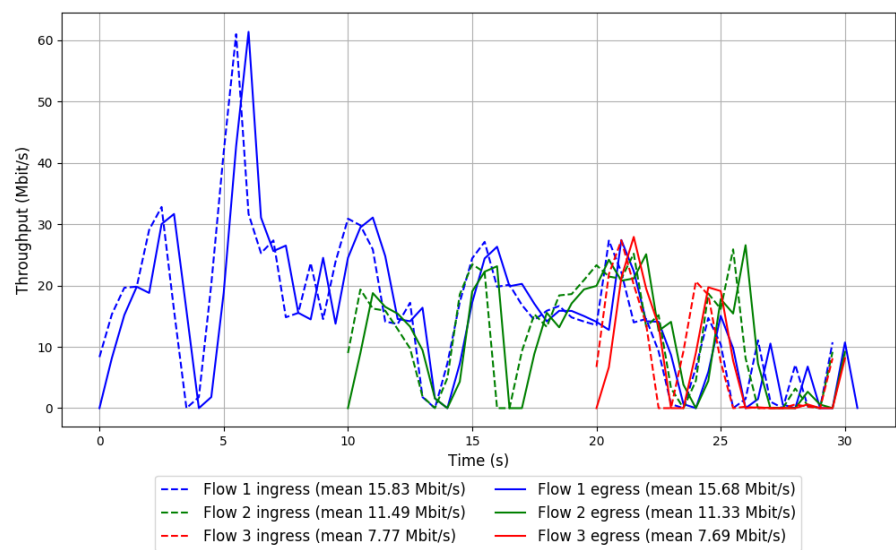


Run 4: Statistics of LEDBAT

Start at: 2018-09-07 15:31:35
End at: 2018-09-07 15:32:05
Local clock offset: 0.47 ms
Remote clock offset: -4.964 ms

Below is generated by plot.py at 2018-09-07 16:17:30
Datalink statistics
-- Total of 3 flows:
Average throughput: 25.78 Mbit/s
95th percentile per-packet one-way delay: 9.803 ms
Loss rate: 1.08%
-- Flow 1:
Average throughput: 15.68 Mbit/s
95th percentile per-packet one-way delay: 9.173 ms
Loss rate: 0.93%
-- Flow 2:
Average throughput: 11.33 Mbit/s
95th percentile per-packet one-way delay: 9.396 ms
Loss rate: 1.40%
-- Flow 3:
Average throughput: 7.69 Mbit/s
95th percentile per-packet one-way delay: 11.189 ms
Loss rate: 1.09%

Run 4: Report of LEDBAT — Data Link

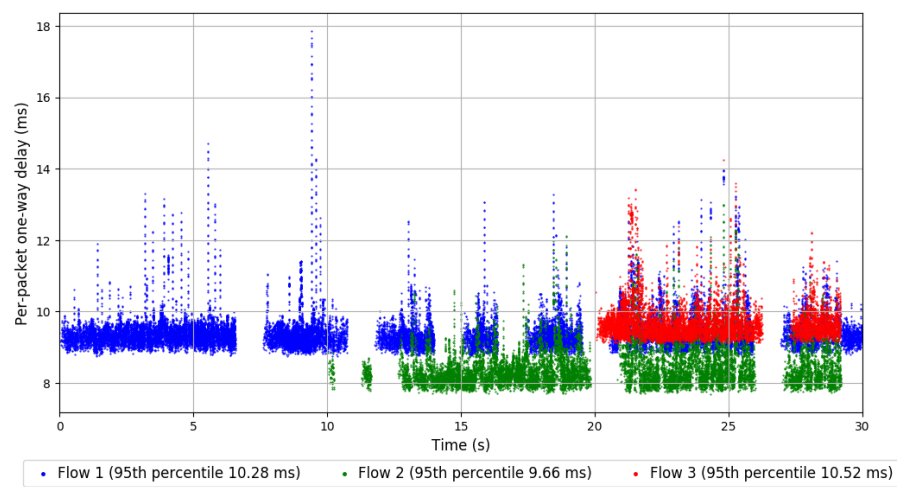
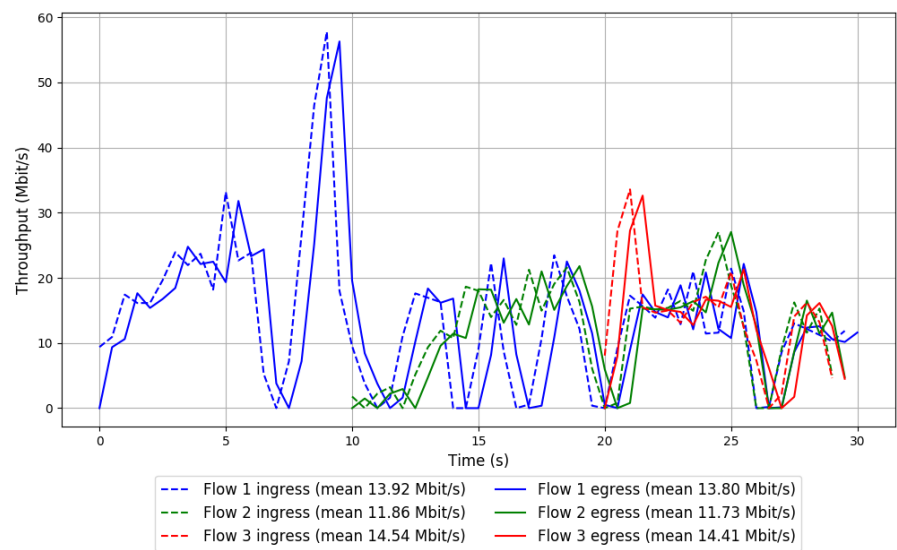


Run 5: Statistics of LEDBAT

Start at: 2018-09-07 15:52:28
End at: 2018-09-07 15:52:58
Local clock offset: 0.526 ms
Remote clock offset: -4.904 ms

Below is generated by plot.py at 2018-09-07 16:17:37
Datalink statistics
-- Total of 3 flows:
Average throughput: 25.71 Mbit/s
95th percentile per-packet one-way delay: 10.248 ms
Loss rate: 1.01%
-- Flow 1:
Average throughput: 13.80 Mbit/s
95th percentile per-packet one-way delay: 10.280 ms
Loss rate: 0.86%
-- Flow 2:
Average throughput: 11.73 Mbit/s
95th percentile per-packet one-way delay: 9.658 ms
Loss rate: 1.18%
-- Flow 3:
Average throughput: 14.41 Mbit/s
95th percentile per-packet one-way delay: 10.524 ms
Loss rate: 1.20%

Run 5: Report of LEDBAT — Data Link

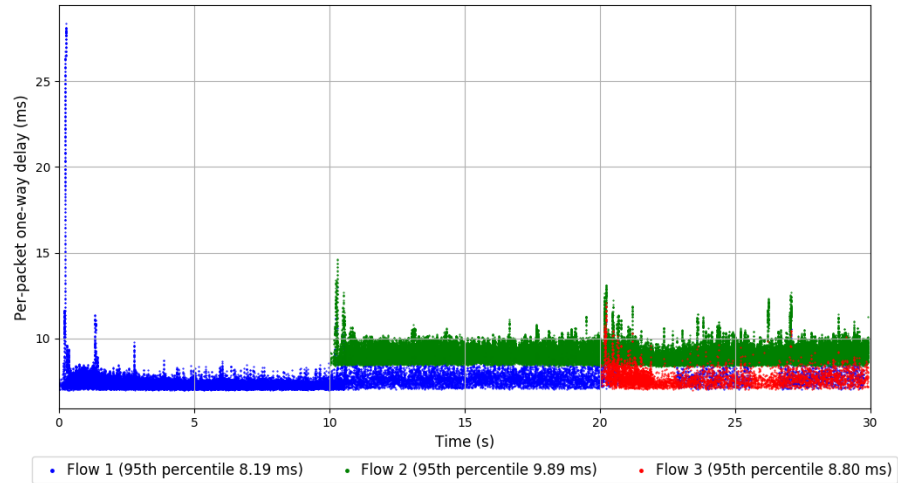
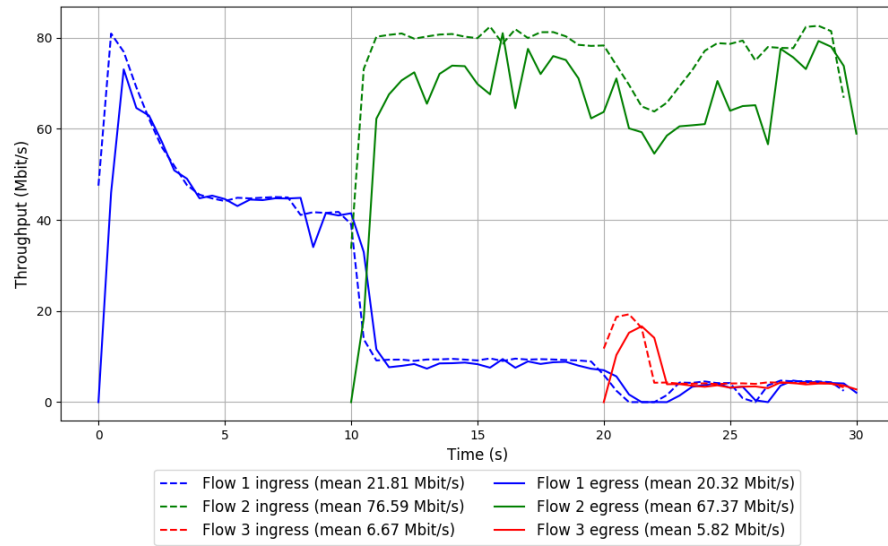


Run 1: Statistics of Indigo-Muses

Start at: 2018-09-07 14:34:41
End at: 2018-09-07 14:35:11
Local clock offset: 0.801 ms
Remote clock offset: -4.148 ms

Below is generated by plot.py at 2018-09-07 16:18:16
Datalink statistics
-- Total of 3 flows:
Average throughput: 66.95 Mbit/s
95th percentile per-packet one-way delay: 9.799 ms
Loss rate: 10.56%
-- Flow 1:
Average throughput: 20.32 Mbit/s
95th percentile per-packet one-way delay: 8.188 ms
Loss rate: 6.91%
-- Flow 2:
Average throughput: 67.37 Mbit/s
95th percentile per-packet one-way delay: 9.894 ms
Loss rate: 12.02%
-- Flow 3:
Average throughput: 5.82 Mbit/s
95th percentile per-packet one-way delay: 8.798 ms
Loss rate: 12.66%

Run 1: Report of Indigo-Muses — Data Link

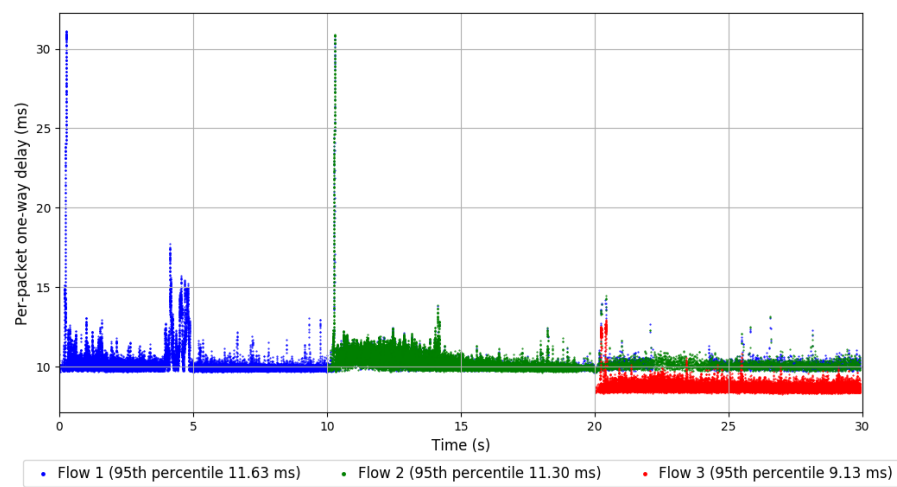
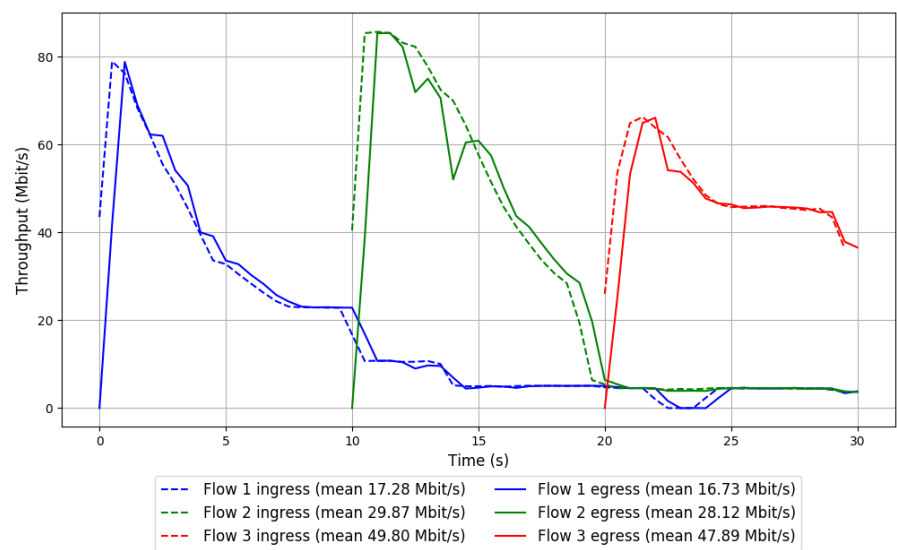


Run 2: Statistics of Indigo-Muses

Start at: 2018-09-07 14:55:31
End at: 2018-09-07 14:56:01
Local clock offset: -1.051 ms
Remote clock offset: -4.798 ms

Below is generated by plot.py at 2018-09-07 16:18:16
Datalink statistics
-- Total of 3 flows:
Average throughput: 51.25 Mbit/s
95th percentile per-packet one-way delay: 11.217 ms
Loss rate: 4.38%
-- Flow 1:
Average throughput: 16.73 Mbit/s
95th percentile per-packet one-way delay: 11.633 ms
Loss rate: 3.21%
-- Flow 2:
Average throughput: 28.12 Mbit/s
95th percentile per-packet one-way delay: 11.300 ms
Loss rate: 5.83%
-- Flow 3:
Average throughput: 47.89 Mbit/s
95th percentile per-packet one-way delay: 9.129 ms
Loss rate: 3.84%

Run 2: Report of Indigo-Muses — Data Link

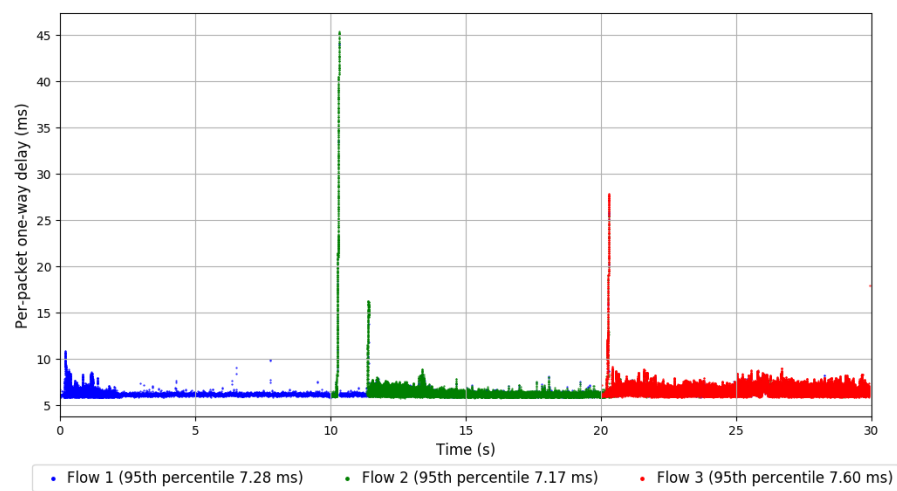
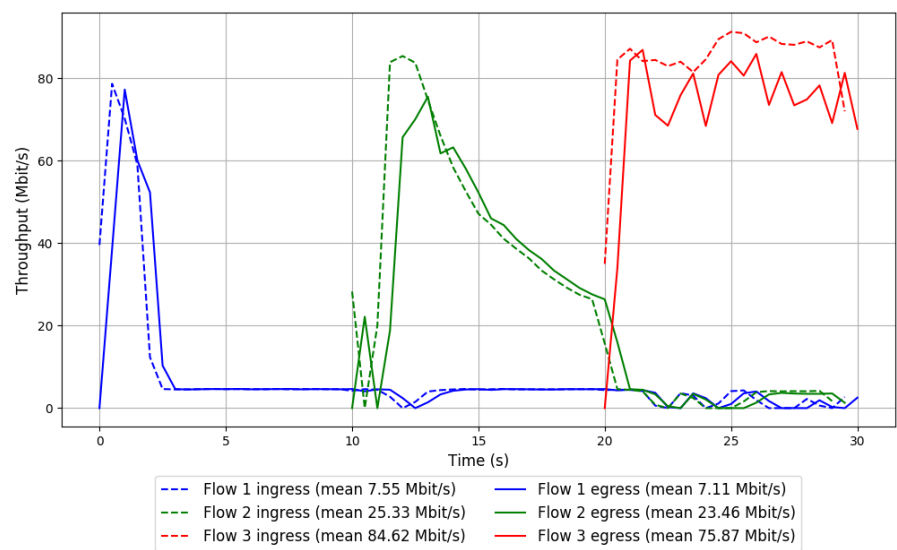


Run 3: Statistics of Indigo-Muses

Start at: 2018-09-07 15:16:32
End at: 2018-09-07 15:17:02
Local clock offset: 2.676 ms
Remote clock offset: -5.243 ms

Below is generated by plot.py at 2018-09-07 16:18:16
Datalink statistics
-- Total of 3 flows:
Average throughput: 47.25 Mbit/s
95th percentile per-packet one-way delay: 7.486 ms
Loss rate: 8.74%
-- Flow 1:
Average throughput: 7.11 Mbit/s
95th percentile per-packet one-way delay: 7.279 ms
Loss rate: 5.88%
-- Flow 2:
Average throughput: 23.46 Mbit/s
95th percentile per-packet one-way delay: 7.171 ms
Loss rate: 7.47%
-- Flow 3:
Average throughput: 75.87 Mbit/s
95th percentile per-packet one-way delay: 7.598 ms
Loss rate: 10.25%

Run 3: Report of Indigo-Muses — Data Link

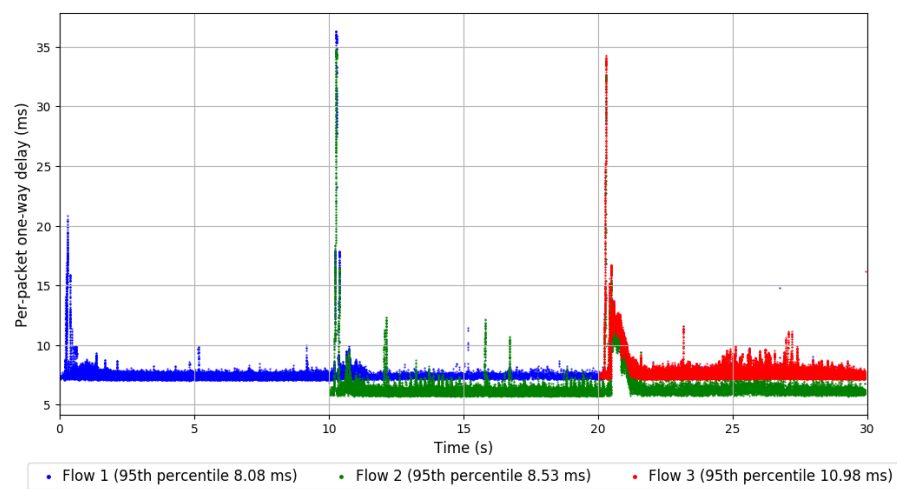
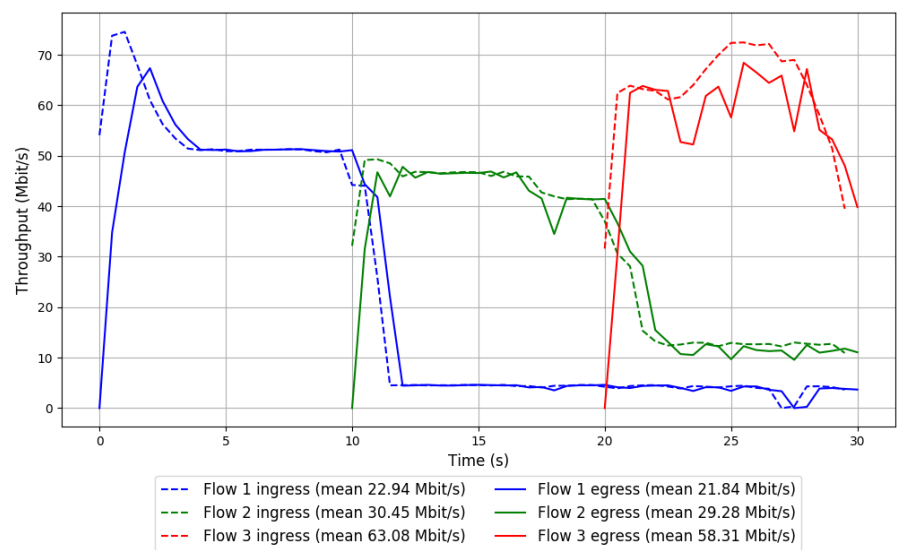


Run 4: Statistics of Indigo-Muses

Start at: 2018-09-07 15:37:19
End at: 2018-09-07 15:37:49
Local clock offset: 2.412 ms
Remote clock offset: -4.847 ms

Below is generated by plot.py at 2018-09-07 16:18:16
Datalink statistics
-- Total of 3 flows:
Average throughput: 60.59 Mbit/s
95th percentile per-packet one-way delay: 9.107 ms
Loss rate: 5.37%
-- Flow 1:
Average throughput: 21.84 Mbit/s
95th percentile per-packet one-way delay: 8.077 ms
Loss rate: 4.80%
-- Flow 2:
Average throughput: 29.28 Mbit/s
95th percentile per-packet one-way delay: 8.534 ms
Loss rate: 3.85%
-- Flow 3:
Average throughput: 58.31 Mbit/s
95th percentile per-packet one-way delay: 10.985 ms
Loss rate: 7.47%

Run 4: Report of Indigo-Muses — Data Link

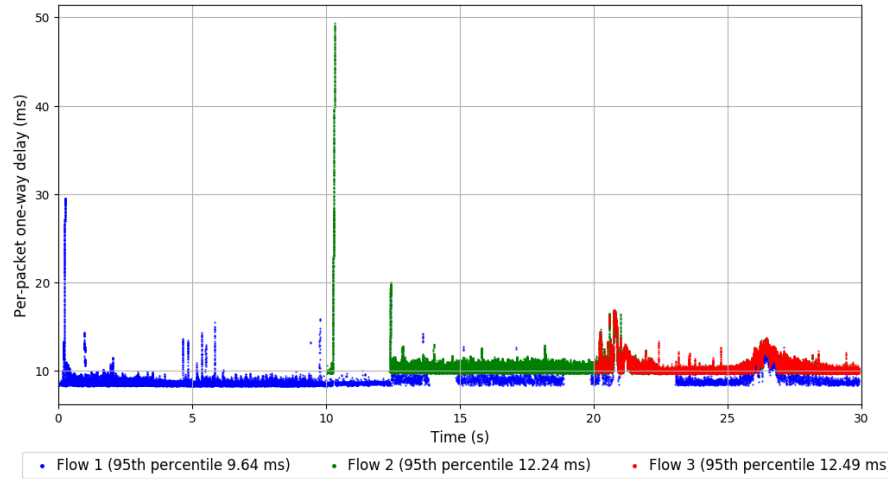
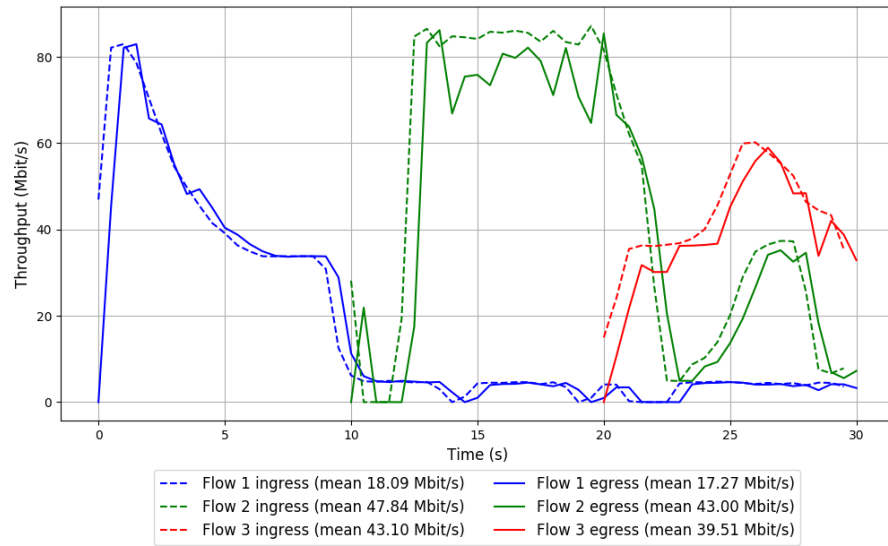


Run 5: Statistics of Indigo-Muses

Start at: 2018-09-07 15:58:12
End at: 2018-09-07 15:58:42
Local clock offset: -0.476 ms
Remote clock offset: -5.336 ms

Below is generated by plot.py at 2018-09-07 16:18:16
Datalink statistics
-- Total of 3 flows:
Average throughput: 58.92 Mbit/s
95th percentile per-packet one-way delay: 12.117 ms
Loss rate: 8.17%
-- Flow 1:
Average throughput: 17.27 Mbit/s
95th percentile per-packet one-way delay: 9.636 ms
Loss rate: 4.57%
-- Flow 2:
Average throughput: 43.00 Mbit/s
95th percentile per-packet one-way delay: 12.243 ms
Loss rate: 10.14%
-- Flow 3:
Average throughput: 39.51 Mbit/s
95th percentile per-packet one-way delay: 12.491 ms
Loss rate: 8.34%

Run 5: Report of Indigo-Muses — Data Link

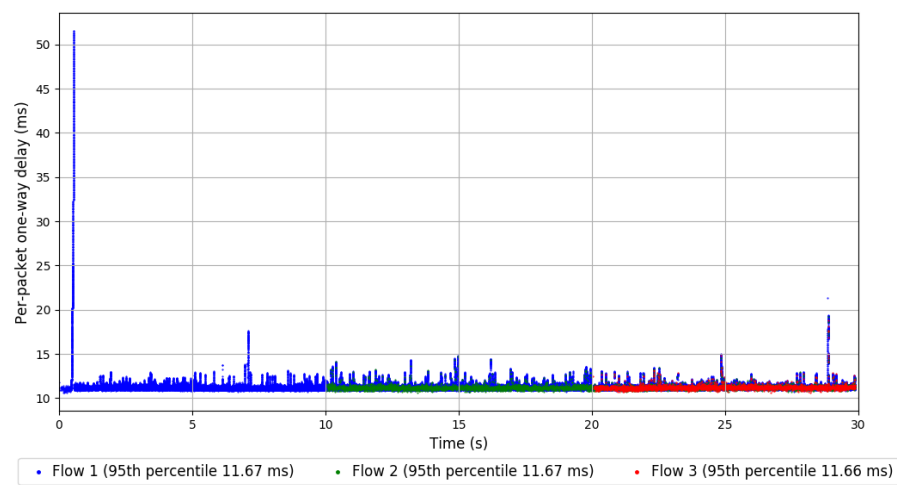
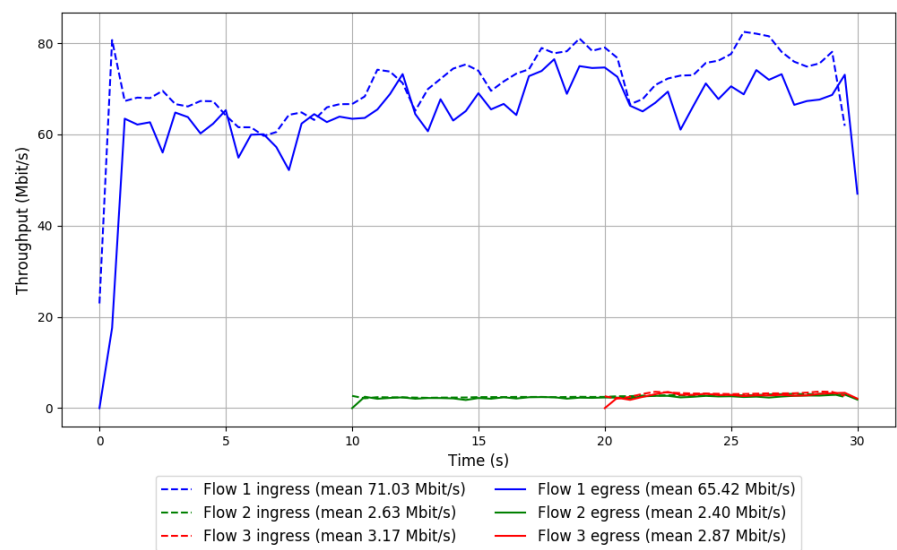



```
Run 1: Statistics of PCC-Allegro

Start at: 2018-09-07 14:29:59
End at: 2018-09-07 14:30:29
Local clock offset: -1.225 ms
Remote clock offset: -3.631 ms

# Below is generated by plot.py at 2018-09-07 16:18:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 67.96 Mbit/s
95th percentile per-packet one-way delay: 11.669 ms
Loss rate: 7.94%
-- Flow 1:
Average throughput: 65.42 Mbit/s
95th percentile per-packet one-way delay: 11.669 ms
Loss rate: 7.90%
-- Flow 2:
Average throughput: 2.40 Mbit/s
95th percentile per-packet one-way delay: 11.670 ms
Loss rate: 8.72%
-- Flow 3:
Average throughput: 2.87 Mbit/s
95th percentile per-packet one-way delay: 11.656 ms
Loss rate: 9.68%
```

Run 1: Report of PCC-Allegro — Data Link

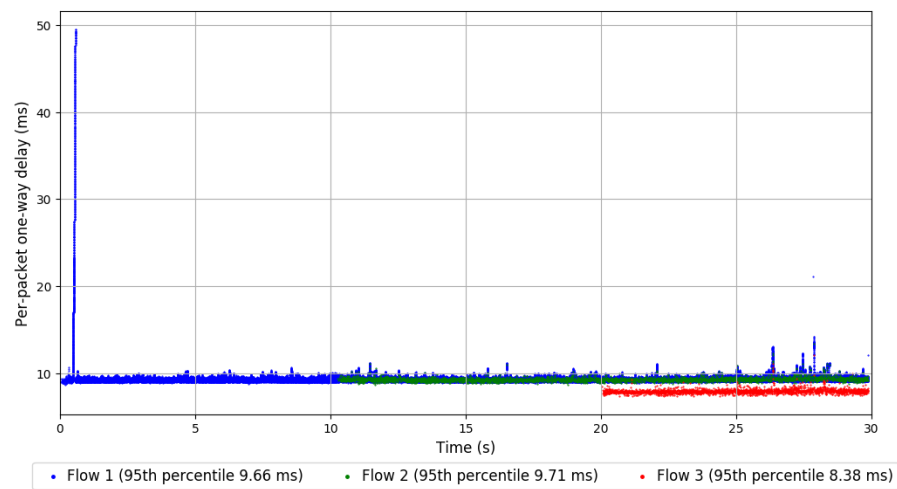
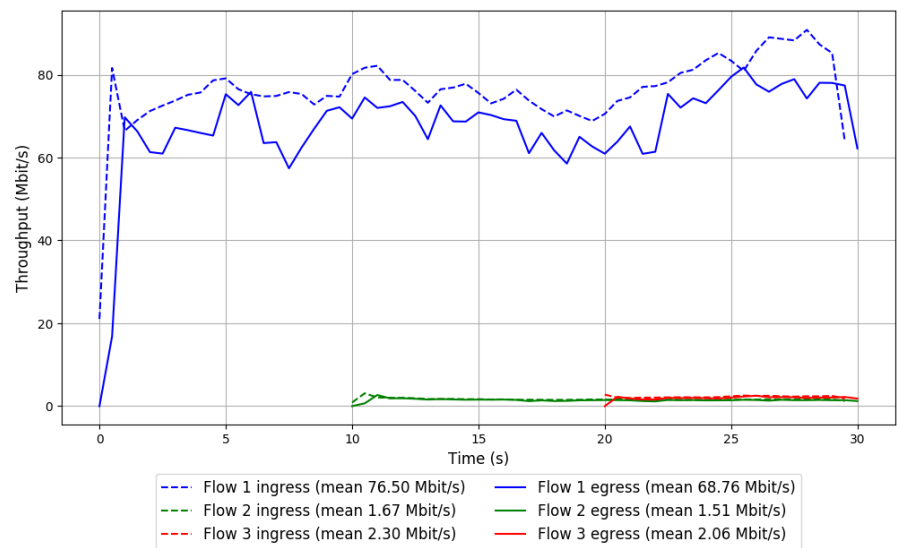


Run 2: Statistics of PCC-Allegro

Start at: 2018-09-07 14:50:57
End at: 2018-09-07 14:51:27
Local clock offset: 0.489 ms
Remote clock offset: -4.036 ms

Below is generated by plot.py at 2018-09-07 16:18:28
Datalink statistics
-- Total of 3 flows:
Average throughput: 70.44 Mbit/s
95th percentile per-packet one-way delay: 9.661 ms
Loss rate: 10.12%
-- Flow 1:
Average throughput: 68.76 Mbit/s
95th percentile per-packet one-way delay: 9.663 ms
Loss rate: 10.11%
-- Flow 2:
Average throughput: 1.51 Mbit/s
95th percentile per-packet one-way delay: 9.706 ms
Loss rate: 10.42%
-- Flow 3:
Average throughput: 2.06 Mbit/s
95th percentile per-packet one-way delay: 8.375 ms
Loss rate: 10.56%

Run 2: Report of PCC-Allegro — Data Link

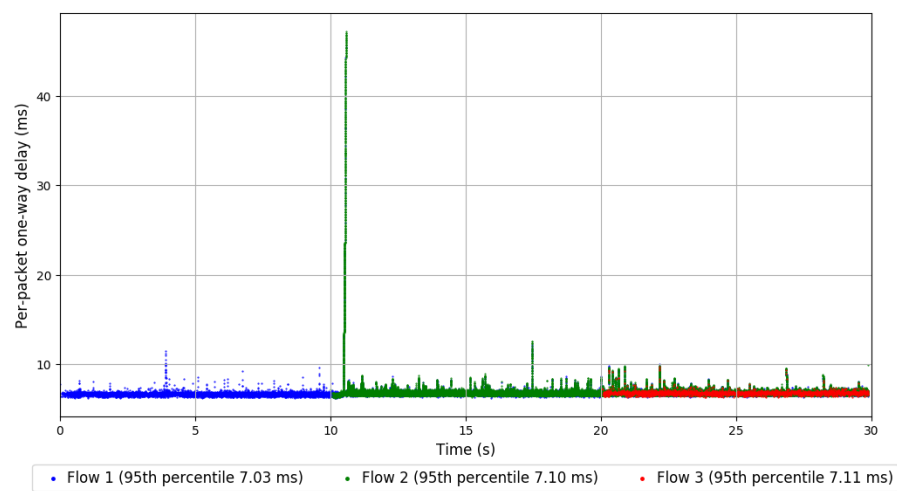
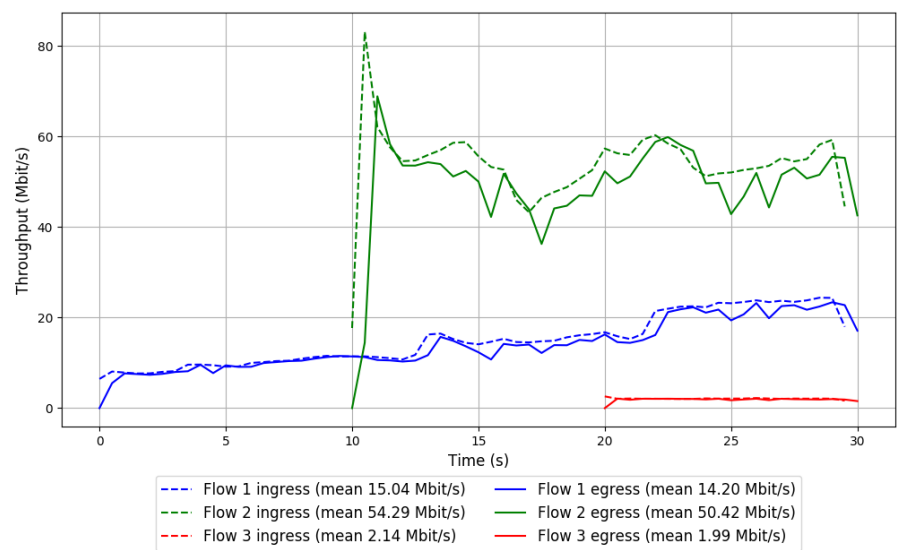


Run 3: Statistics of PCC-Allegro

Start at: 2018-09-07 15:11:54
End at: 2018-09-07 15:12:24
Local clock offset: 2.535 ms
Remote clock offset: -4.638 ms

Below is generated by plot.py at 2018-09-07 16:18:28
Datalink statistics
-- Total of 3 flows:
Average throughput: 48.38 Mbit/s
95th percentile per-packet one-way delay: 7.076 ms
Loss rate: 6.68%
-- Flow 1:
Average throughput: 14.20 Mbit/s
95th percentile per-packet one-way delay: 7.029 ms
Loss rate: 5.59%
-- Flow 2:
Average throughput: 50.42 Mbit/s
95th percentile per-packet one-way delay: 7.099 ms
Loss rate: 7.12%
-- Flow 3:
Average throughput: 1.99 Mbit/s
95th percentile per-packet one-way delay: 7.106 ms
Loss rate: 7.03%

Run 3: Report of PCC-Allegro — Data Link

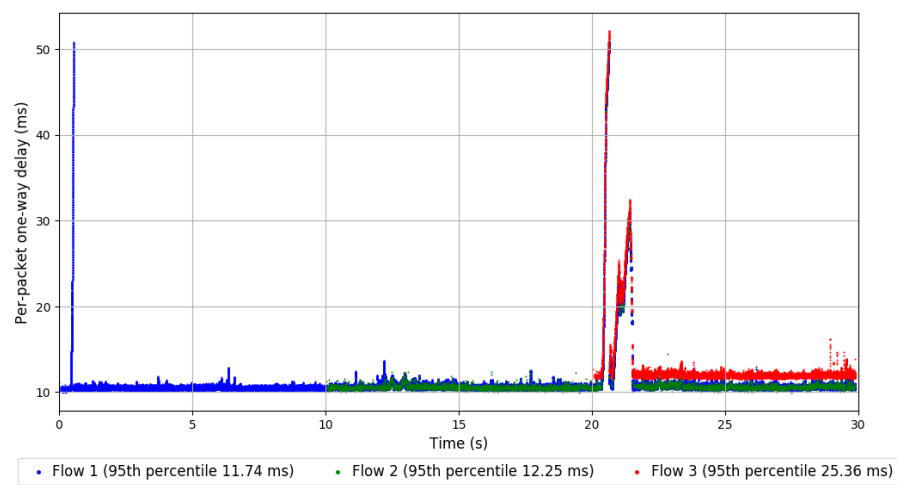
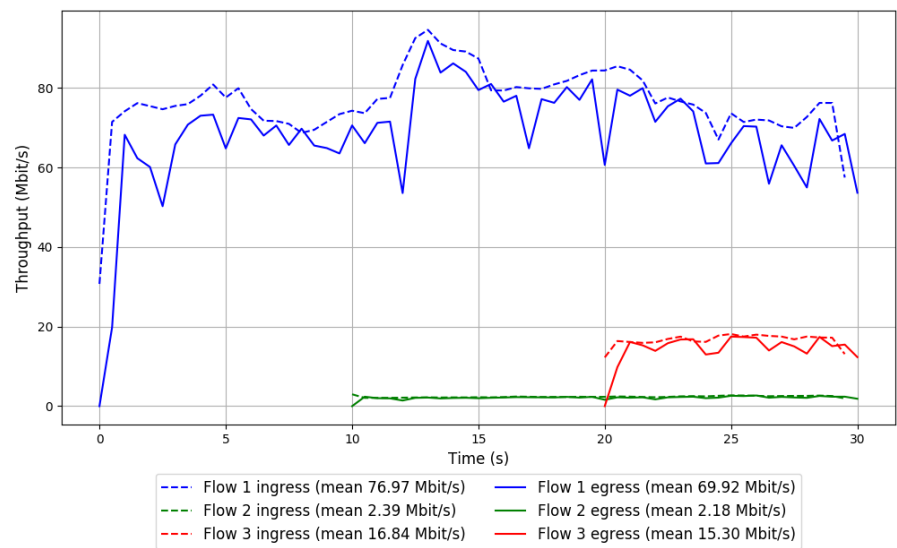


Run 4: Statistics of PCC-Allegro

Start at: 2018-09-07 15:32:43
End at: 2018-09-07 15:33:13
Local clock offset: -1.434 ms
Remote clock offset: -4.225 ms

Below is generated by plot.py at 2018-09-07 16:19:07
Datalink statistics
-- Total of 3 flows:
Average throughput: 76.41 Mbit/s
95th percentile per-packet one-way delay: 12.522 ms
Loss rate: 9.15%
-- Flow 1:
Average throughput: 69.92 Mbit/s
95th percentile per-packet one-way delay: 11.742 ms
Loss rate: 9.16%
-- Flow 2:
Average throughput: 2.18 Mbit/s
95th percentile per-packet one-way delay: 12.248 ms
Loss rate: 8.68%
-- Flow 3:
Average throughput: 15.30 Mbit/s
95th percentile per-packet one-way delay: 25.359 ms
Loss rate: 9.12%

Run 4: Report of PCC-Allegro — Data Link

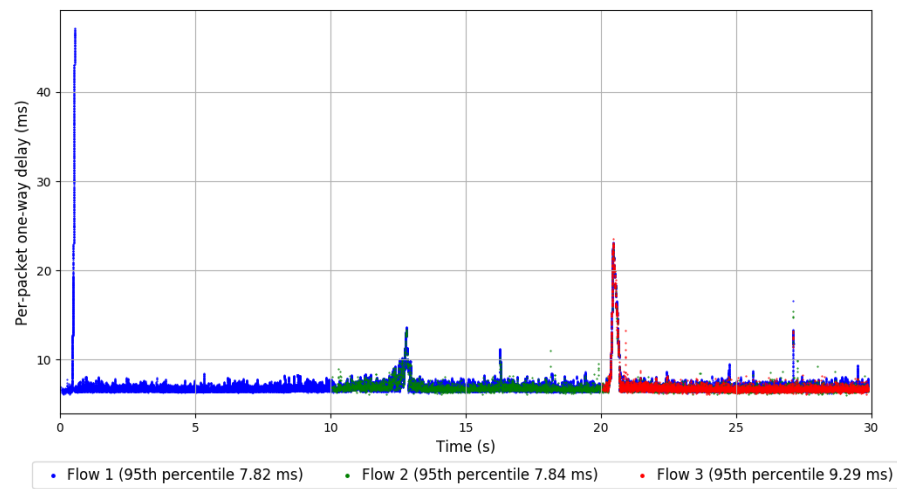
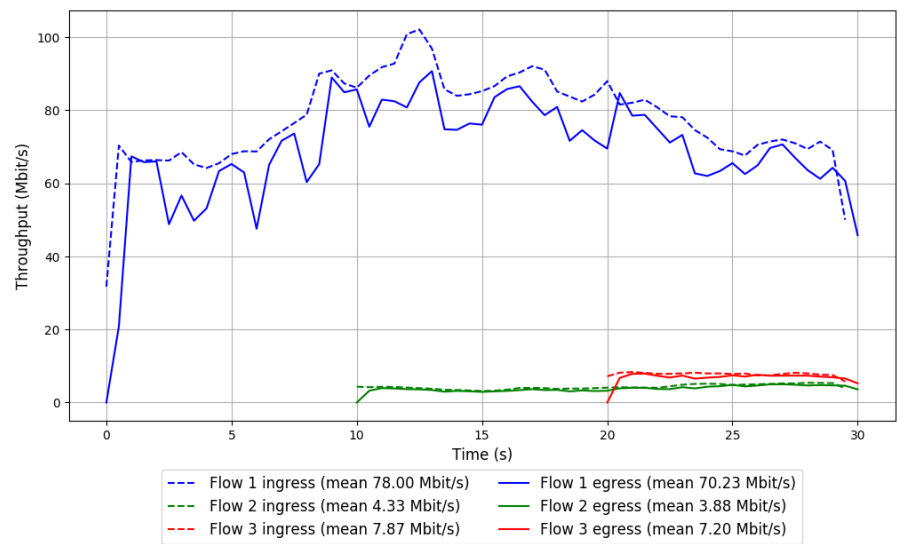


Run 5: Statistics of PCC-Allegro

Start at: 2018-09-07 15:53:36
End at: 2018-09-07 15:54:06
Local clock offset: 1.722 ms
Remote clock offset: -5.122 ms

Below is generated by plot.py at 2018-09-07 16:19:07
Datalink statistics
-- Total of 3 flows:
Average throughput: 75.19 Mbit/s
95th percentile per-packet one-way delay: 7.832 ms
Loss rate: 9.92%
-- Flow 1:
Average throughput: 70.23 Mbit/s
95th percentile per-packet one-way delay: 7.819 ms
Loss rate: 9.95%
-- Flow 2:
Average throughput: 3.88 Mbit/s
95th percentile per-packet one-way delay: 7.837 ms
Loss rate: 10.29%
-- Flow 3:
Average throughput: 7.20 Mbit/s
95th percentile per-packet one-way delay: 9.292 ms
Loss rate: 8.54%

Run 5: Report of PCC-Allegro — Data Link

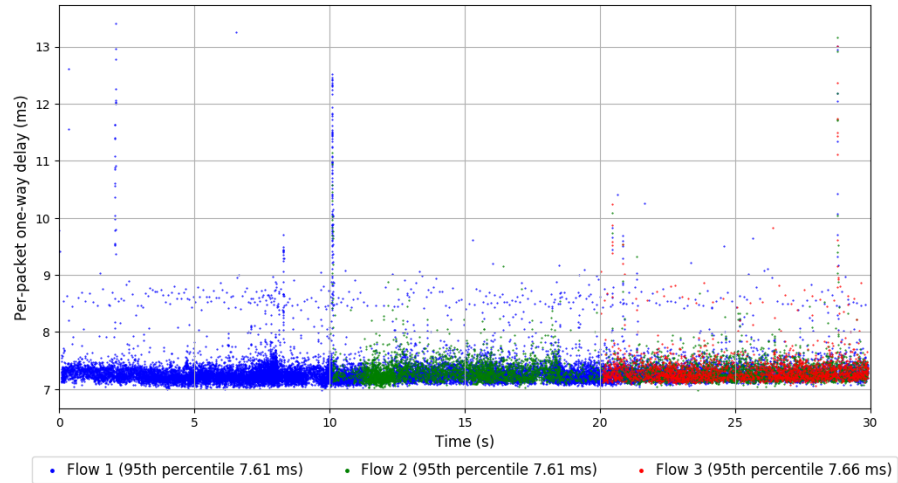
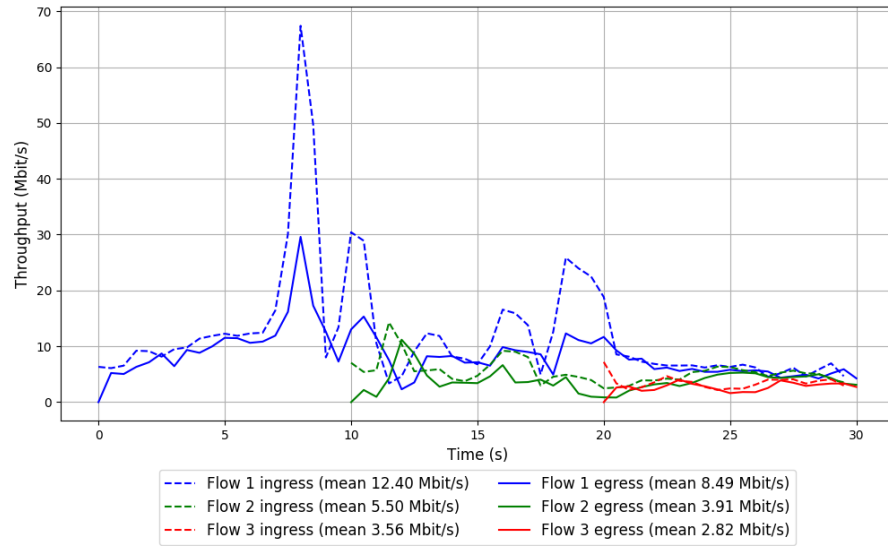


```
Run 1: Statistics of PCC-Expr

Start at: 2018-09-07 14:42:55
End at: 2018-09-07 14:43:25
Local clock offset: 0.284 ms
Remote clock offset: -4.858 ms

# Below is generated by plot.py at 2018-09-07 16:19:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.02 Mbit/s
95th percentile per-packet one-way delay: 7.618 ms
Loss rate: 30.25%
-- Flow 1:
Average throughput: 8.49 Mbit/s
95th percentile per-packet one-way delay: 7.610 ms
Loss rate: 31.54%
-- Flow 2:
Average throughput: 3.91 Mbit/s
95th percentile per-packet one-way delay: 7.613 ms
Loss rate: 28.92%
-- Flow 3:
Average throughput: 2.82 Mbit/s
95th percentile per-packet one-way delay: 7.660 ms
Loss rate: 20.80%
```

Run 1: Report of PCC-Expr — Data Link

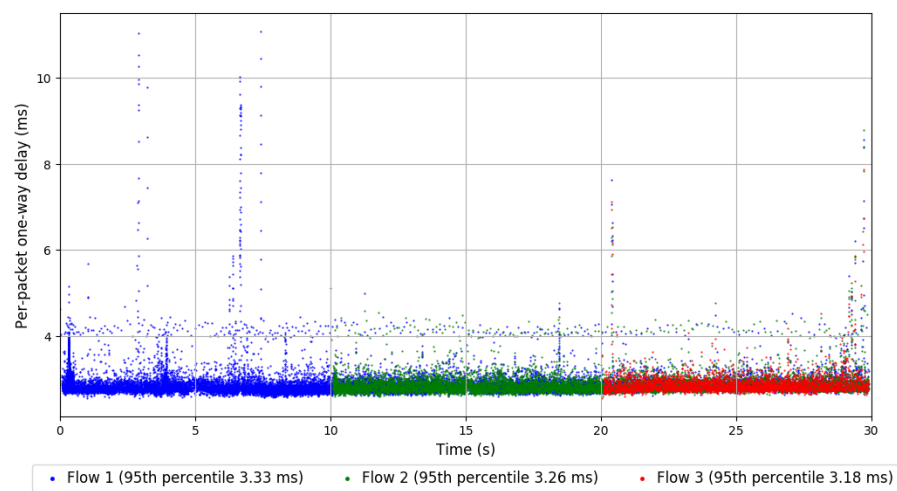
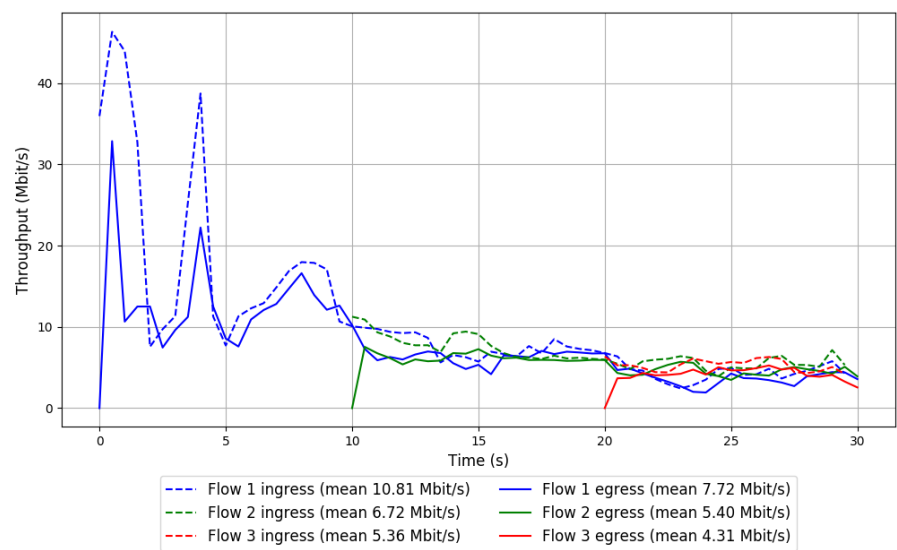


Run 2: Statistics of PCC-Expr

Start at: 2018-09-07 15:03:45
End at: 2018-09-07 15:04:15
Local clock offset: -2.733 ms
Remote clock offset: -12.303 ms

Below is generated by plot.py at 2018-09-07 16:19:07
Datalink statistics
-- Total of 3 flows:
Average throughput: 12.74 Mbit/s
95th percentile per-packet one-way delay: 3.281 ms
Loss rate: 25.30%
-- Flow 1:
Average throughput: 7.72 Mbit/s
95th percentile per-packet one-way delay: 3.330 ms
Loss rate: 28.57%
-- Flow 2:
Average throughput: 5.40 Mbit/s
95th percentile per-packet one-way delay: 3.259 ms
Loss rate: 19.61%
-- Flow 3:
Average throughput: 4.31 Mbit/s
95th percentile per-packet one-way delay: 3.181 ms
Loss rate: 19.64%

Run 2: Report of PCC-Expr — Data Link

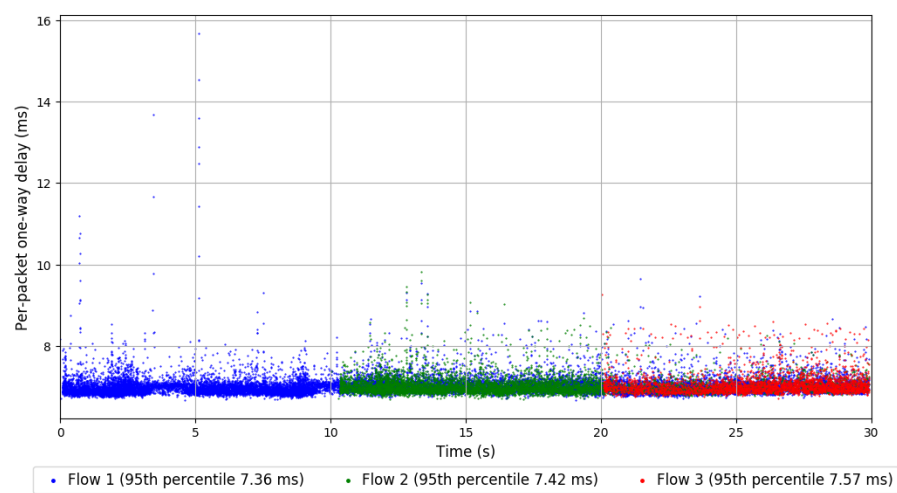
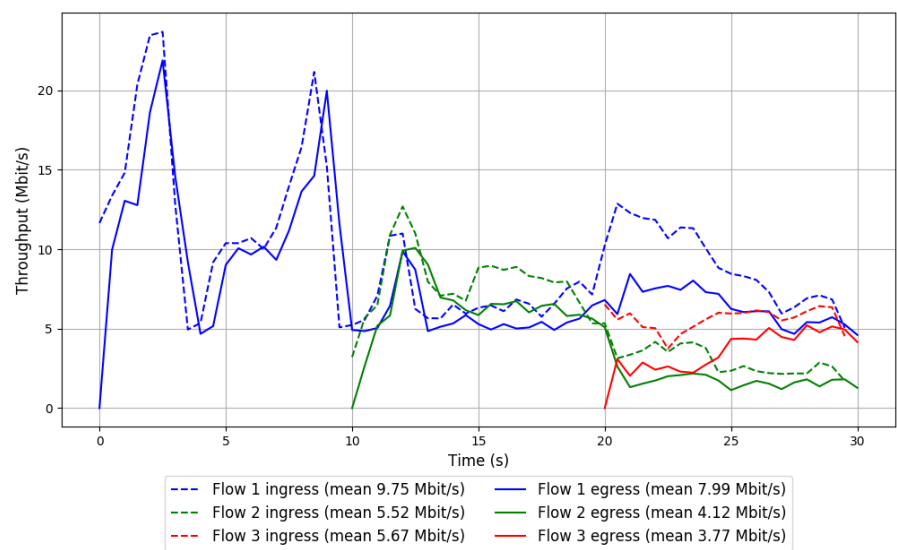


Run 3: Statistics of PCC-Expr

Start at: 2018-09-07 15:24:41
End at: 2018-09-07 15:25:11
Local clock offset: 1.023 ms
Remote clock offset: -4.993 ms

Below is generated by plot.py at 2018-09-07 16:19:07
Datalink statistics
-- Total of 3 flows:
Average throughput: 11.97 Mbit/s
95th percentile per-packet one-way delay: 7.388 ms
Loss rate: 21.70%
-- Flow 1:
Average throughput: 7.99 Mbit/s
95th percentile per-packet one-way delay: 7.357 ms
Loss rate: 18.07%
-- Flow 2:
Average throughput: 4.12 Mbit/s
95th percentile per-packet one-way delay: 7.417 ms
Loss rate: 25.36%
-- Flow 3:
Average throughput: 3.77 Mbit/s
95th percentile per-packet one-way delay: 7.567 ms
Loss rate: 33.46%

Run 3: Report of PCC-Expr — Data Link

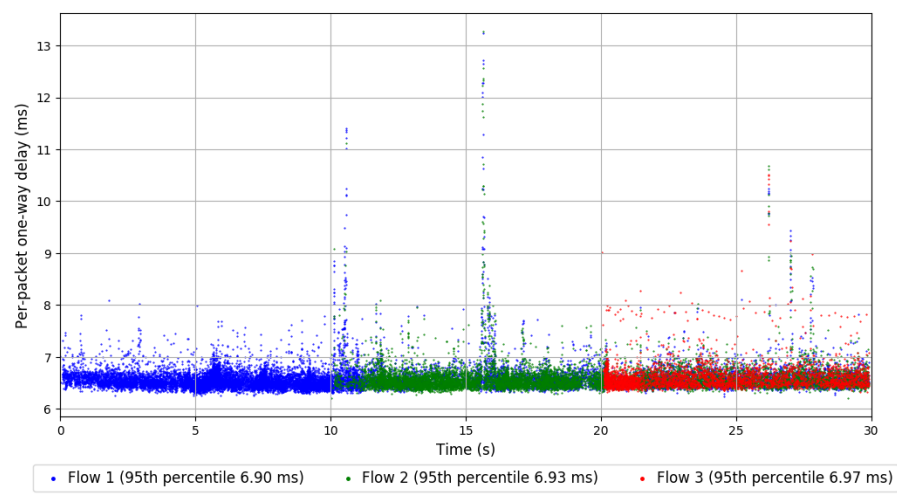
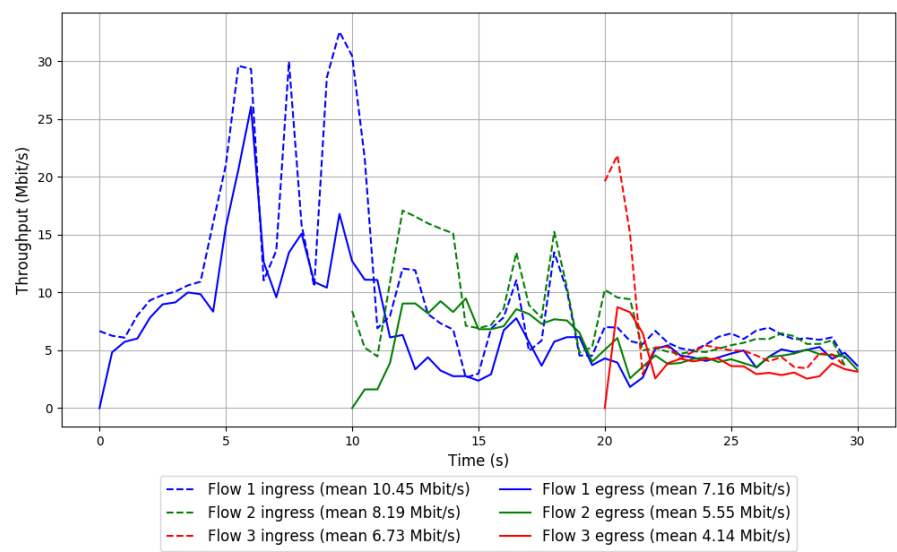


Run 4: Statistics of PCC-Expr

Start at: 2018-09-07 15:45:31
End at: 2018-09-07 15:46:01
Local clock offset: 2.325 ms
Remote clock offset: -4.452 ms

Below is generated by plot.py at 2018-09-07 16:19:07
Datalink statistics
-- Total of 3 flows:
Average throughput: 12.22 Mbit/s
95th percentile per-packet one-way delay: 6.920 ms
Loss rate: 32.52%
-- Flow 1:
Average throughput: 7.16 Mbit/s
95th percentile per-packet one-way delay: 6.900 ms
Loss rate: 31.42%
-- Flow 2:
Average throughput: 5.55 Mbit/s
95th percentile per-packet one-way delay: 6.930 ms
Loss rate: 32.19%
-- Flow 3:
Average throughput: 4.14 Mbit/s
95th percentile per-packet one-way delay: 6.975 ms
Loss rate: 38.48%

Run 4: Report of PCC-Expr — Data Link

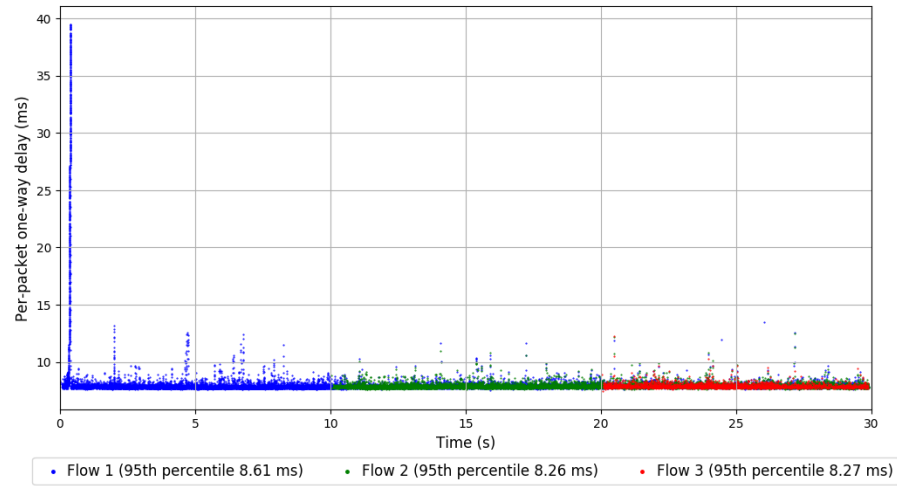
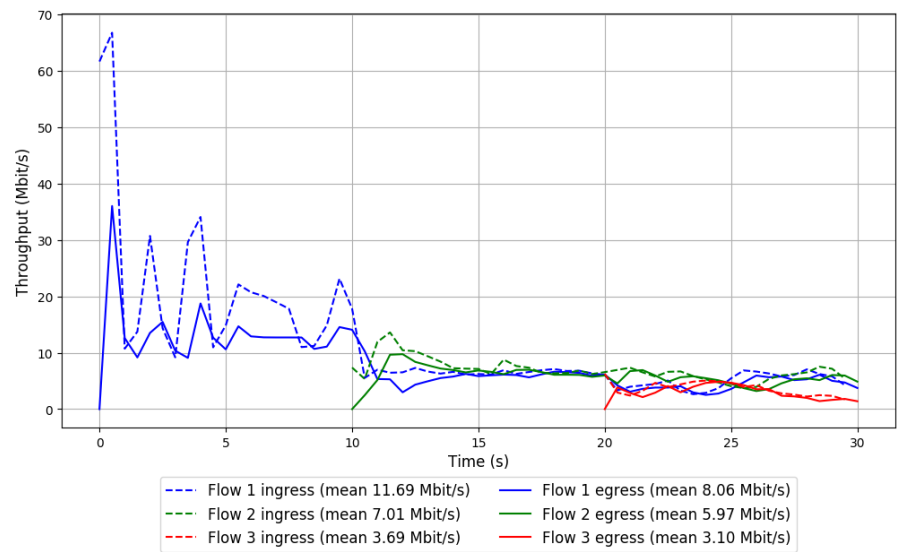


Run 5: Statistics of PCC-Expr

Start at: 2018-09-07 16:06:22
End at: 2018-09-07 16:06:52
Local clock offset: 0.717 ms
Remote clock offset: -4.875 ms

Below is generated by plot.py at 2018-09-07 16:19:07
Datalink statistics
-- Total of 3 flows:
Average throughput: 13.05 Mbit/s
95th percentile per-packet one-way delay: 8.438 ms
Loss rate: 25.72%
-- Flow 1:
Average throughput: 8.06 Mbit/s
95th percentile per-packet one-way delay: 8.614 ms
Loss rate: 31.07%
-- Flow 2:
Average throughput: 5.97 Mbit/s
95th percentile per-packet one-way delay: 8.258 ms
Loss rate: 14.85%
-- Flow 3:
Average throughput: 3.10 Mbit/s
95th percentile per-packet one-way delay: 8.270 ms
Loss rate: 16.00%

Run 5: Report of PCC-Expr — Data Link

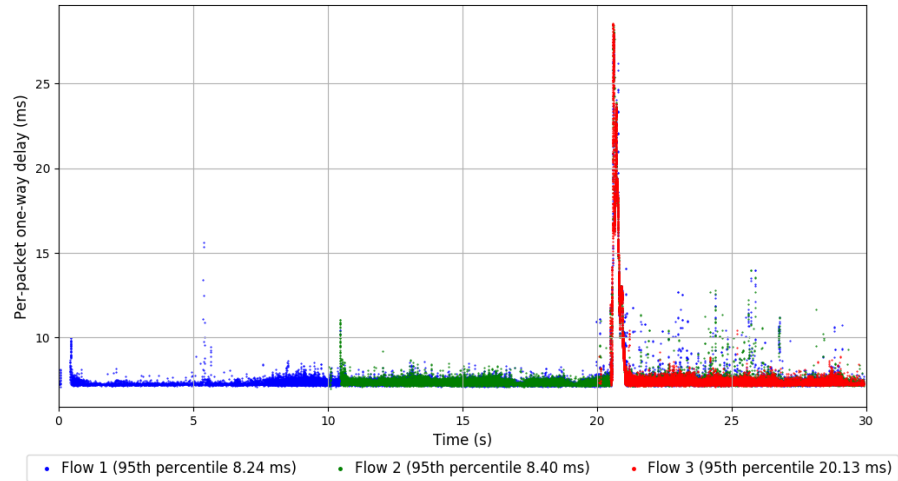
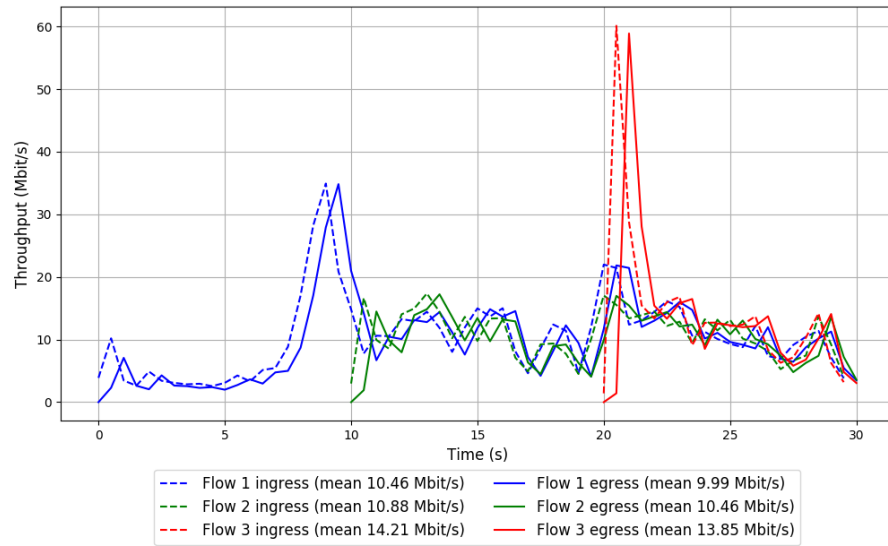


Run 1: Statistics of QUIC Cubic

Start at: 2018-09-07 14:41:46
End at: 2018-09-07 14:42:16
Local clock offset: 0.9 ms
Remote clock offset: -4.082 ms

Below is generated by plot.py at 2018-09-07 16:19:07
Datalink statistics
-- Total of 3 flows:
Average throughput: 21.51 Mbit/s
95th percentile per-packet one-way delay: 12.243 ms
Loss rate: 3.89%
-- Flow 1:
Average throughput: 9.99 Mbit/s
95th percentile per-packet one-way delay: 8.242 ms
Loss rate: 4.47%
-- Flow 2:
Average throughput: 10.46 Mbit/s
95th percentile per-packet one-way delay: 8.402 ms
Loss rate: 3.91%
-- Flow 3:
Average throughput: 13.85 Mbit/s
95th percentile per-packet one-way delay: 20.126 ms
Loss rate: 2.57%

Run 1: Report of QUIC Cubic — Data Link

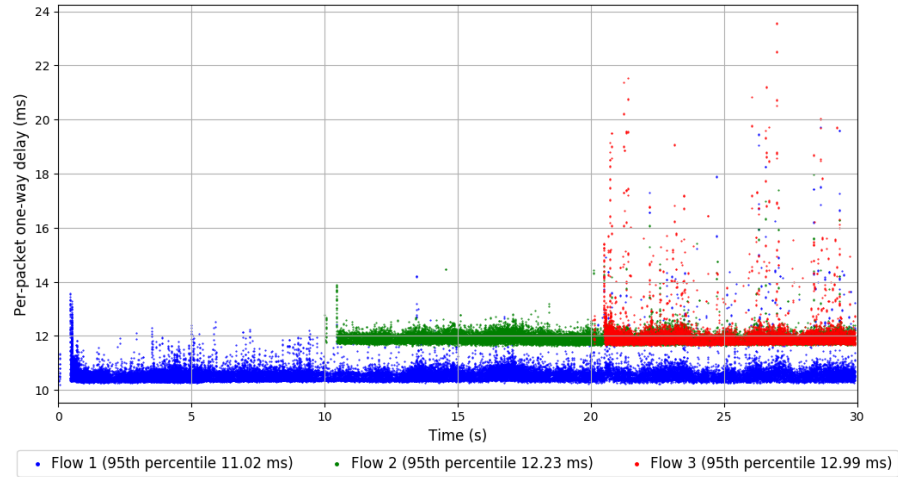
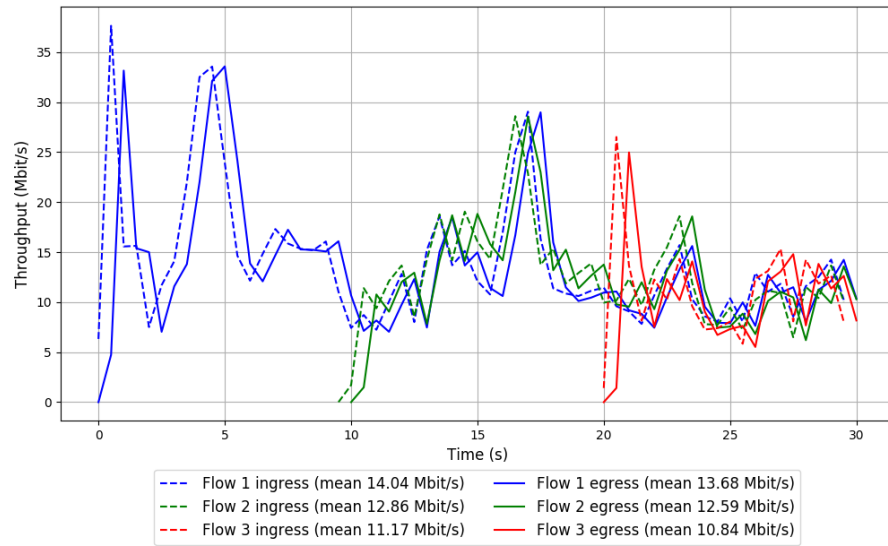


Run 2: Statistics of QUIC Cubic

Start at: 2018-09-07 15:02:31
End at: 2018-09-07 15:03:01
Local clock offset: -1.737 ms
Remote clock offset: -3.572 ms

Below is generated by plot.py at 2018-09-07 16:19:07
Datalink statistics
-- Total of 3 flows:
Average throughput: 25.64 Mbit/s
95th percentile per-packet one-way delay: 12.182 ms
Loss rate: 2.48%
-- Flow 1:
Average throughput: 13.68 Mbit/s
95th percentile per-packet one-way delay: 11.016 ms
Loss rate: 2.56%
-- Flow 2:
Average throughput: 12.59 Mbit/s
95th percentile per-packet one-way delay: 12.235 ms
Loss rate: 2.14%
-- Flow 3:
Average throughput: 10.84 Mbit/s
95th percentile per-packet one-way delay: 12.988 ms
Loss rate: 2.94%

Run 2: Report of QUIC Cubic — Data Link

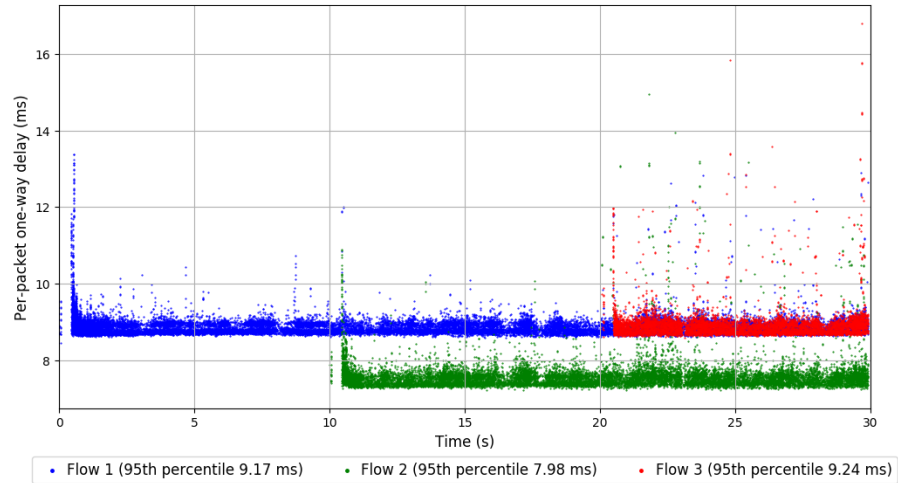
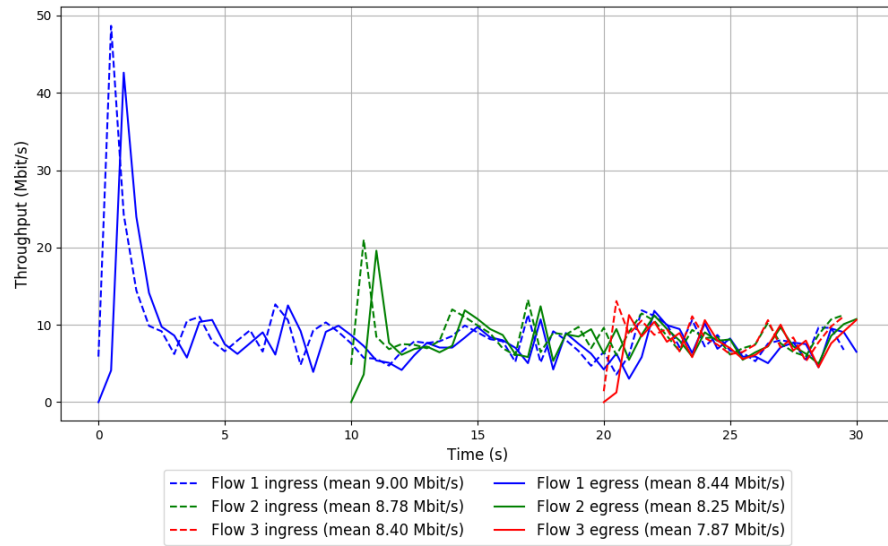


Run 3: Statistics of QUIC Cubic

Start at: 2018-09-07 15:23:33
End at: 2018-09-07 15:24:03
Local clock offset: 0.554 ms
Remote clock offset: -4.862 ms

Below is generated by plot.py at 2018-09-07 16:19:07
Datalink statistics
-- Total of 3 flows:
Average throughput: 16.52 Mbit/s
95th percentile per-packet one-way delay: 9.125 ms
Loss rate: 6.19%
-- Flow 1:
Average throughput: 8.44 Mbit/s
95th percentile per-packet one-way delay: 9.167 ms
Loss rate: 6.23%
-- Flow 2:
Average throughput: 8.25 Mbit/s
95th percentile per-packet one-way delay: 7.983 ms
Loss rate: 6.08%
-- Flow 3:
Average throughput: 7.87 Mbit/s
95th percentile per-packet one-way delay: 9.244 ms
Loss rate: 6.32%

Run 3: Report of QUIC Cubic — Data Link

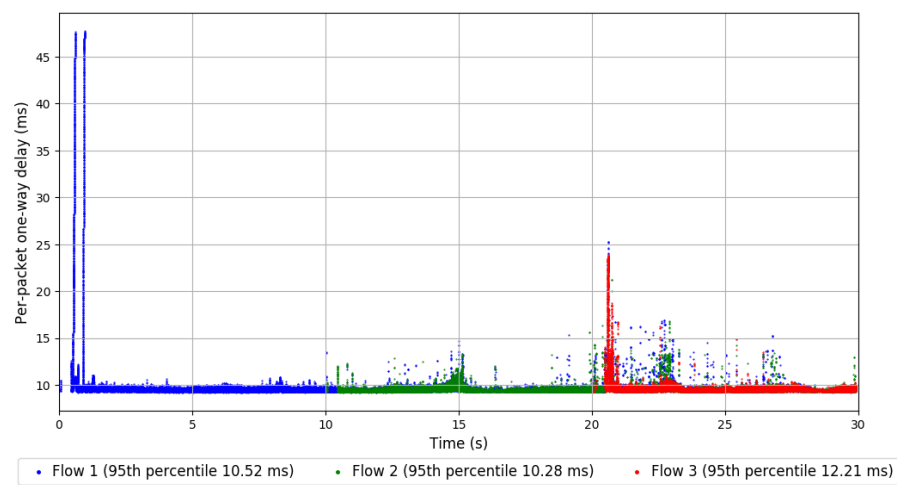
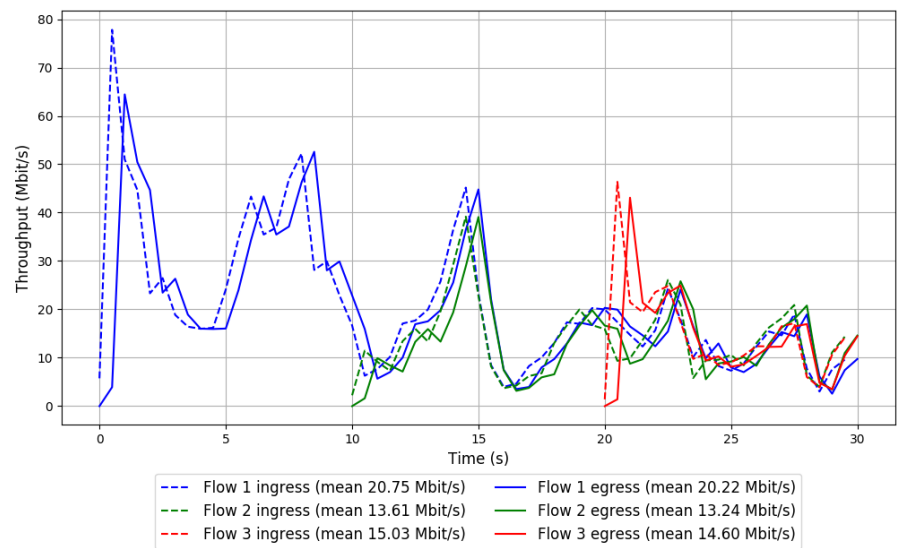


Run 4: Statistics of QUIC Cubic

Start at: 2018-09-07 15:44:22
End at: 2018-09-07 15:44:52
Local clock offset: 0.341 ms
Remote clock offset: -4.846 ms

Below is generated by plot.py at 2018-09-07 16:19:07
Datalink statistics
-- Total of 3 flows:
Average throughput: 33.85 Mbit/s
95th percentile per-packet one-way delay: 10.533 ms
Loss rate: 2.61%
-- Flow 1:
Average throughput: 20.22 Mbit/s
95th percentile per-packet one-way delay: 10.515 ms
Loss rate: 2.53%
-- Flow 2:
Average throughput: 13.24 Mbit/s
95th percentile per-packet one-way delay: 10.282 ms
Loss rate: 2.66%
-- Flow 3:
Average throughput: 14.60 Mbit/s
95th percentile per-packet one-way delay: 12.208 ms
Loss rate: 2.87%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2018-09-07 16:05:14

End at: 2018-09-07 16:05:44

Local clock offset: 1.291 ms

Remote clock offset: -5.11 ms

Below is generated by plot.py at 2018-09-07 16:19:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 31.18 Mbit/s

95th percentile per-packet one-way delay: 10.082 ms

Loss rate: 3.01%

-- Flow 1:

Average throughput: 16.14 Mbit/s

95th percentile per-packet one-way delay: 9.733 ms

Loss rate: 3.08%

-- Flow 2:

Average throughput: 13.48 Mbit/s

95th percentile per-packet one-way delay: 7.589 ms

Loss rate: 2.00%

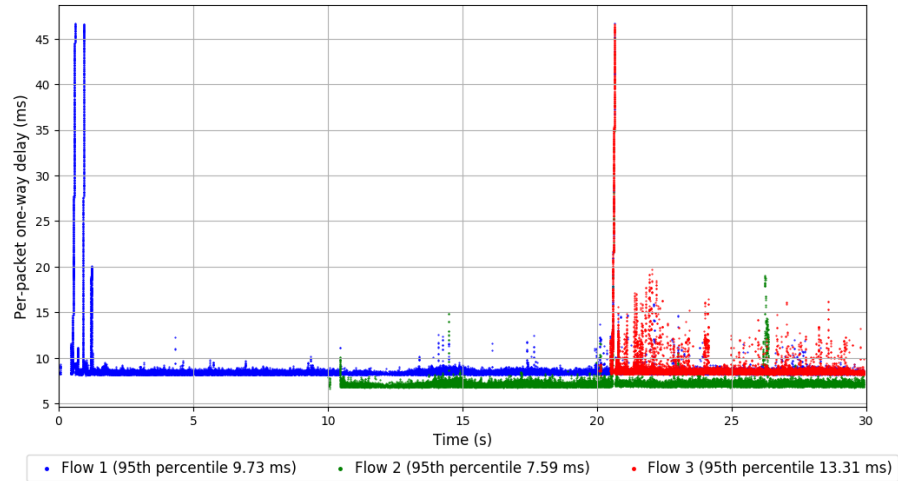
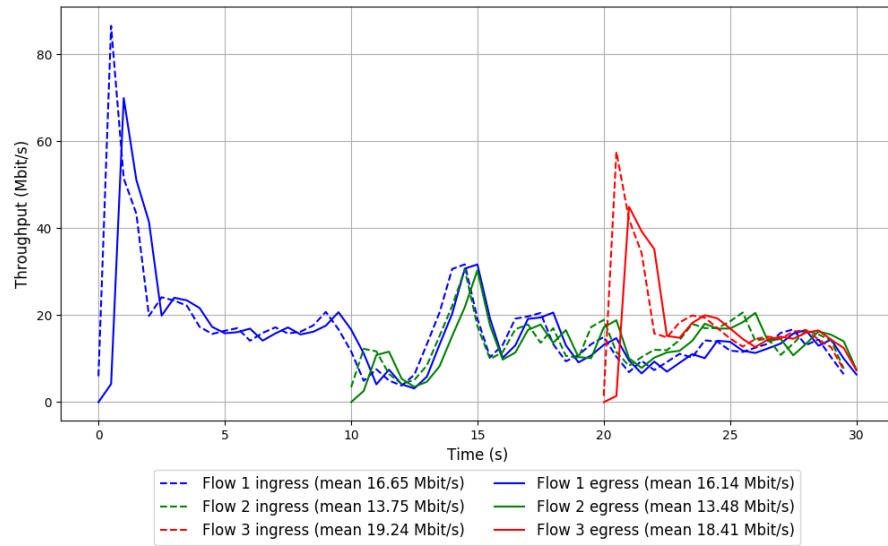
-- Flow 3:

Average throughput: 18.41 Mbit/s

95th percentile per-packet one-way delay: 13.315 ms

Loss rate: 4.31%

Run 5: Report of QUIC Cubic — Data Link

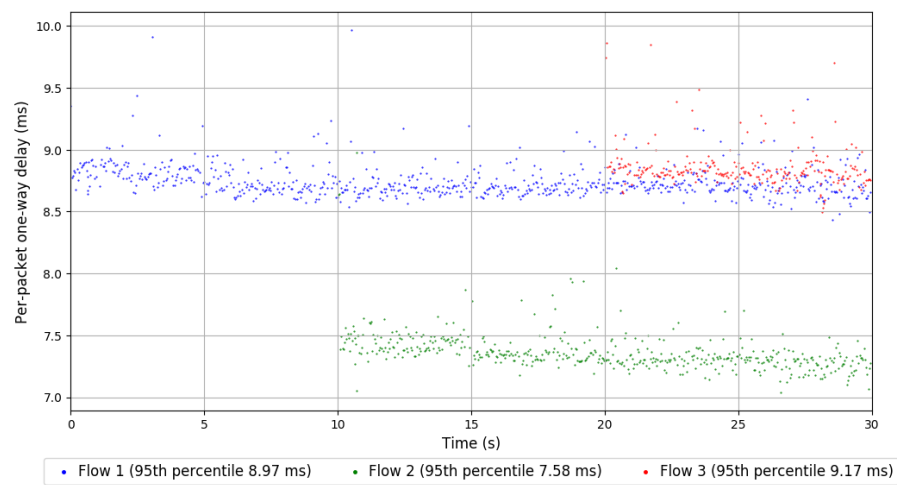
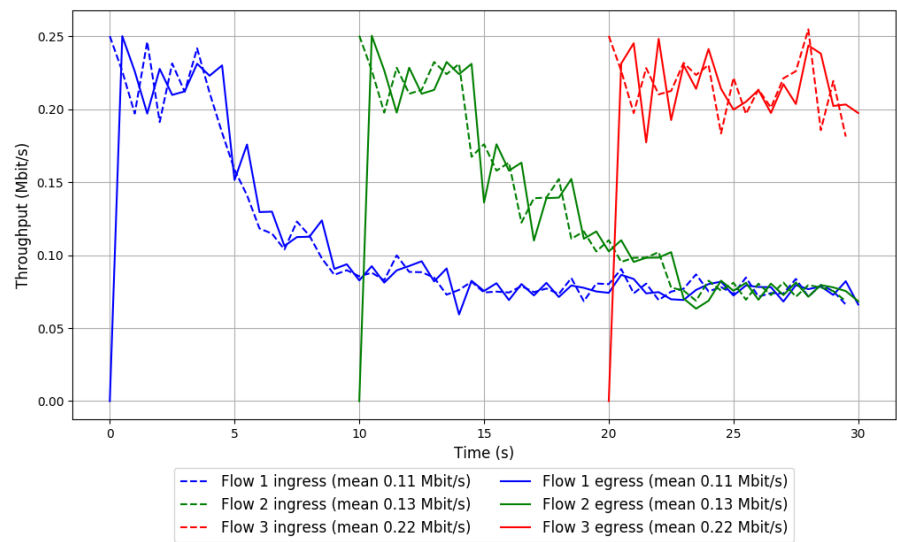


Run 1: Statistics of SReAM

Start at: 2018-09-07 14:39:24
End at: 2018-09-07 14:39:54
Local clock offset: 1.198 ms
Remote clock offset: -3.671 ms

Below is generated by plot.py at 2018-09-07 16:19:07
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.27 Mbit/s
95th percentile per-packet one-way delay: 8.951 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 0.11 Mbit/s
95th percentile per-packet one-way delay: 8.970 ms
Loss rate: 0.63%
-- Flow 2:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 7.576 ms
Loss rate: 1.22%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 9.173 ms
Loss rate: 0.00%

Run 1: Report of SReAM — Data Link

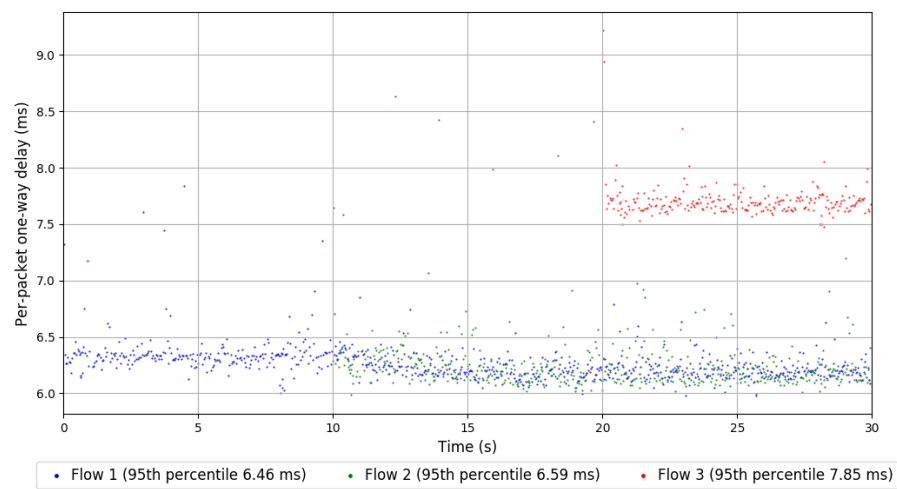
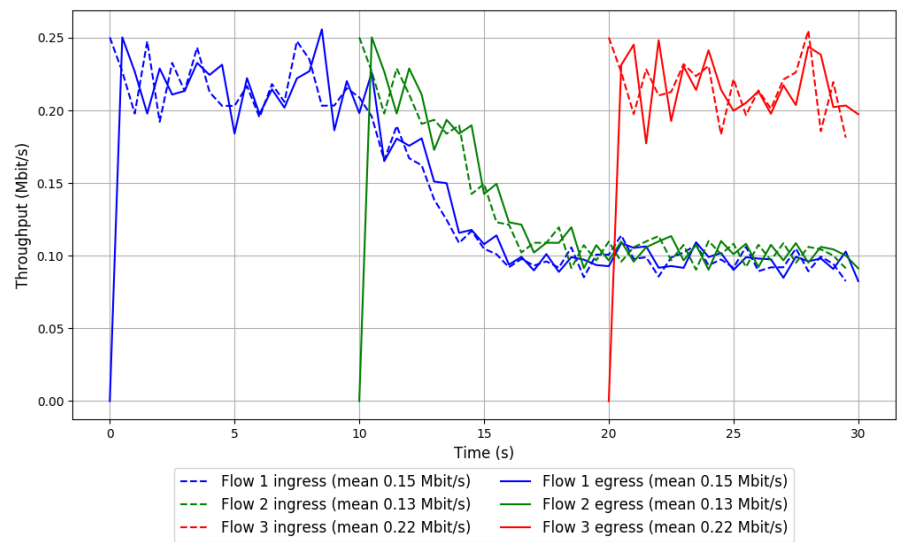


Run 2: Statistics of SCReAM

Start at: 2018-09-07 15:00:13
End at: 2018-09-07 15:00:43
Local clock offset: 1.238 ms
Remote clock offset: -4.807 ms

Below is generated by plot.py at 2018-09-07 16:19:07
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.31 Mbit/s
95th percentile per-packet one-way delay: 7.726 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 6.456 ms
Loss rate: 0.18%
-- Flow 2:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 6.591 ms
Loss rate: 0.34%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 7.851 ms
Loss rate: 0.00%

Run 2: Report of SReAM — Data Link

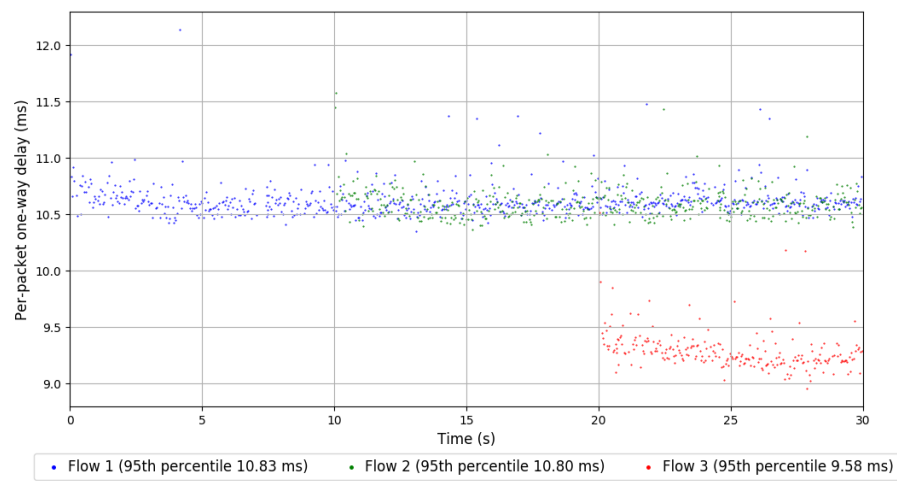
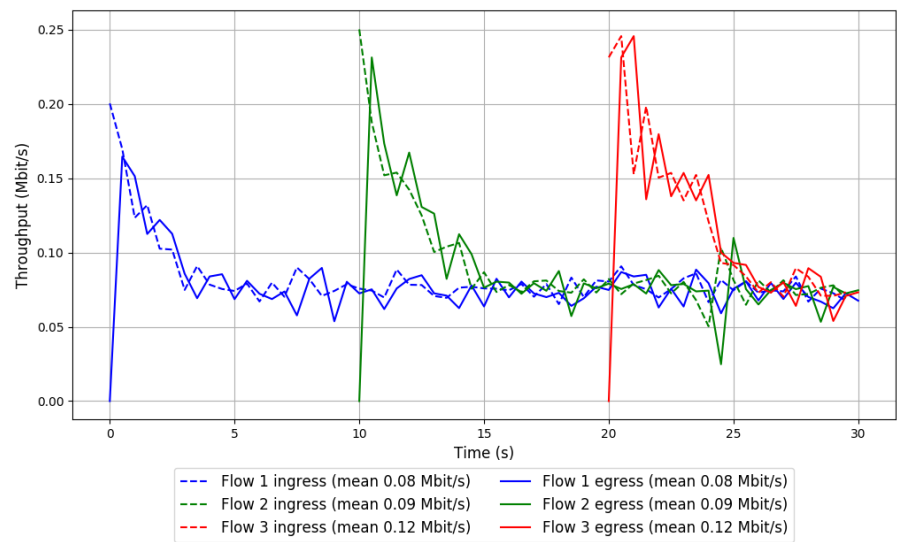


Run 3: Statistics of SCReAM

Start at: 2018-09-07 15:21:14
End at: 2018-09-07 15:21:44
Local clock offset: -1.232 ms
Remote clock offset: -4.755 ms

Below is generated by plot.py at 2018-09-07 16:19:07
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 10.796 ms
Loss rate: 4.03%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 10.830 ms
Loss rate: 4.69%
-- Flow 2:
Average throughput: 0.09 Mbit/s
95th percentile per-packet one-way delay: 10.798 ms
Loss rate: 3.09%
-- Flow 3:
Average throughput: 0.12 Mbit/s
95th percentile per-packet one-way delay: 9.576 ms
Loss rate: 4.10%

Run 3: Report of SReAM — Data Link

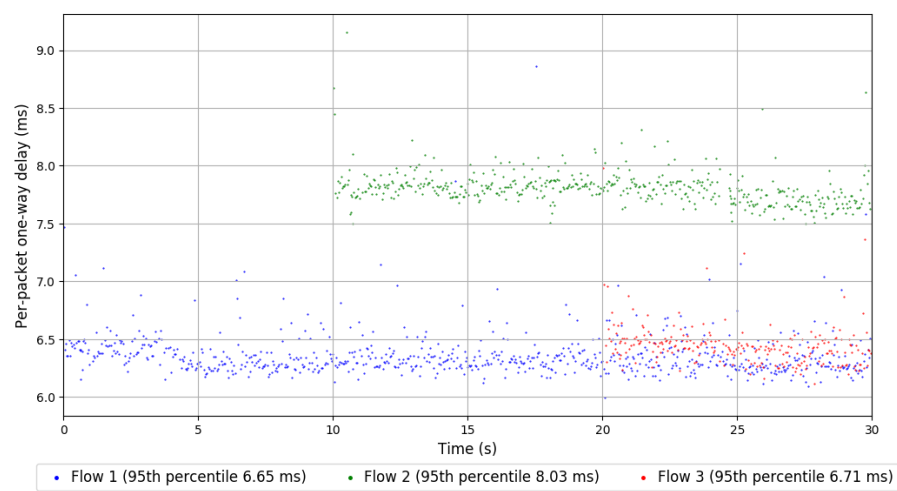
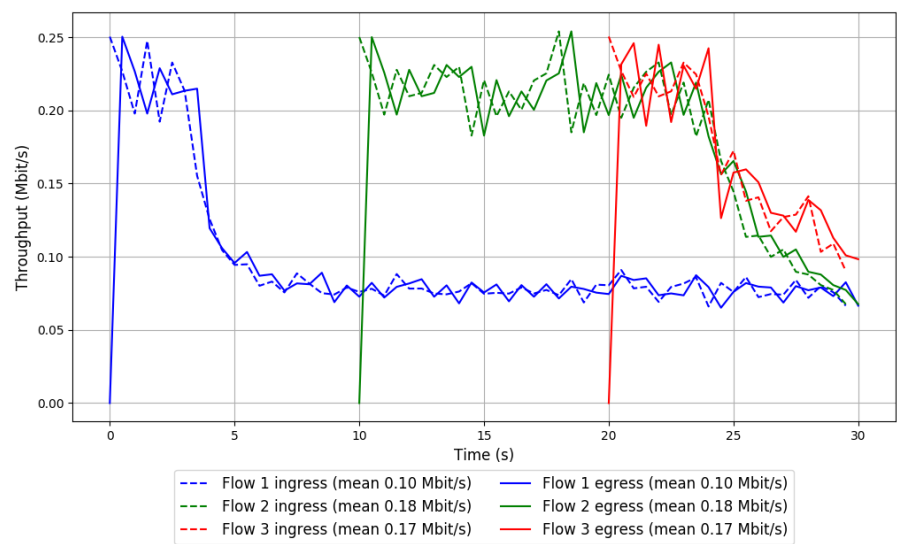


Run 4: Statistics of SCReAM

Start at: 2018-09-07 15:42:02
End at: 2018-09-07 15:42:32
Local clock offset: 1.552 ms
Remote clock offset: -5.301 ms

Below is generated by plot.py at 2018-09-07 16:19:07
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.27 Mbit/s
95th percentile per-packet one-way delay: 7.902 ms
Loss rate: 1.20%
-- Flow 1:
Average throughput: 0.10 Mbit/s
95th percentile per-packet one-way delay: 6.653 ms
Loss rate: 1.38%
-- Flow 2:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 8.027 ms
Loss rate: 0.69%
-- Flow 3:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 6.712 ms
Loss rate: 1.99%

Run 4: Report of SReAM — Data Link

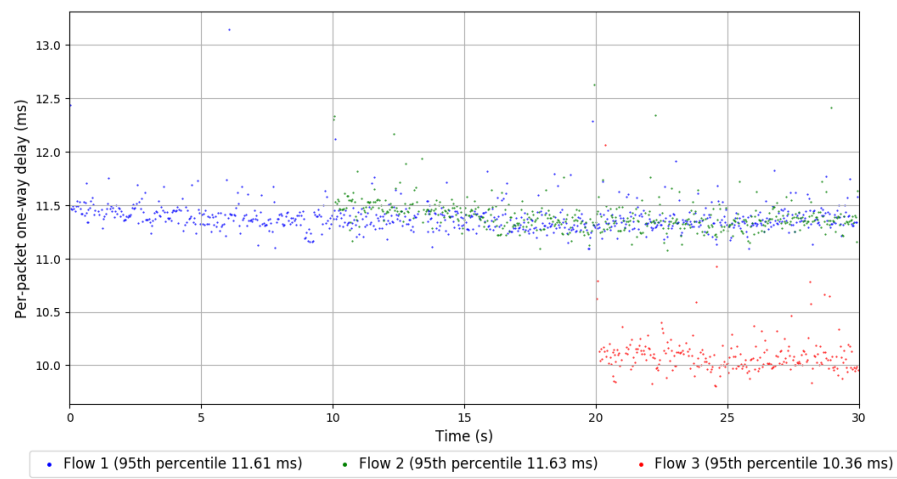
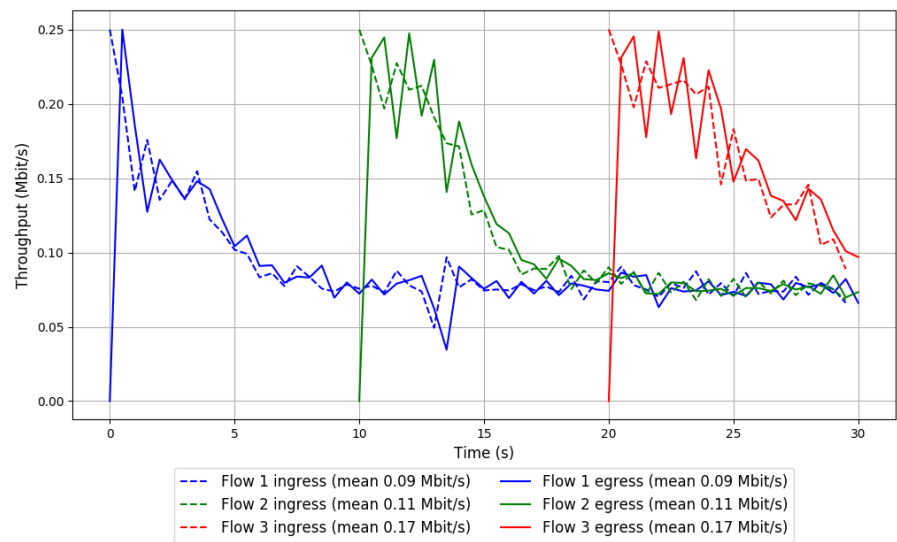


Run 5: Statistics of SCReAM

Start at: 2018-09-07 16:02:53
End at: 2018-09-07 16:03:23
Local clock offset: -1.034 ms
Remote clock offset: -4.377 ms

Below is generated by plot.py at 2018-09-07 16:19:07
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 11.587 ms
Loss rate: 1.51%
-- Flow 1:
Average throughput: 0.09 Mbit/s
95th percentile per-packet one-way delay: 11.609 ms
Loss rate: 1.76%
-- Flow 2:
Average throughput: 0.11 Mbit/s
95th percentile per-packet one-way delay: 11.627 ms
Loss rate: 1.25%
-- Flow 3:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 10.362 ms
Loss rate: 1.45%

Run 5: Report of SCSReAM — Data Link

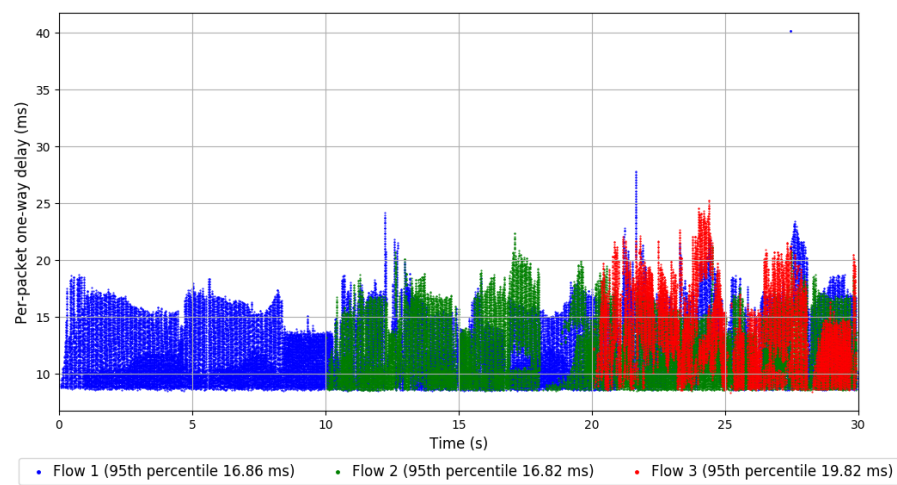
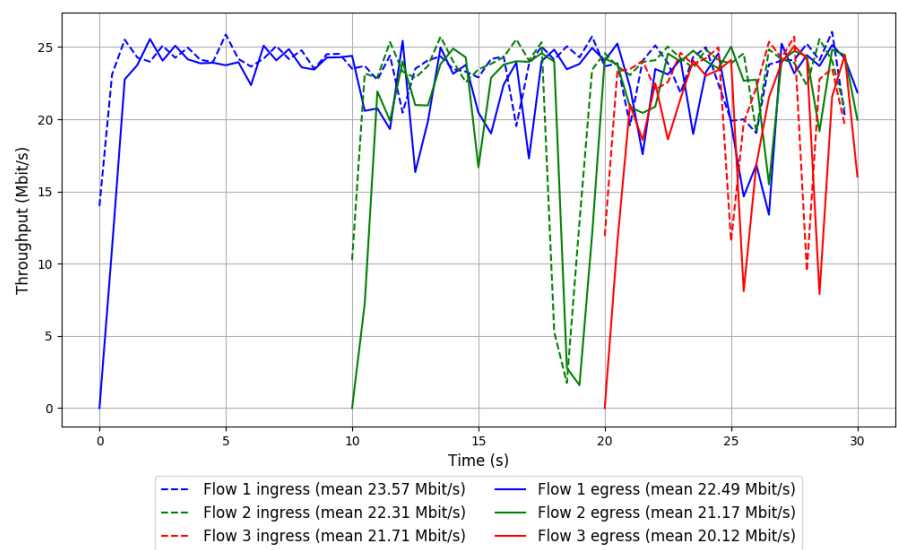


Run 1: Statistics of Sprout

Start at: 2018-09-07 14:33:28
End at: 2018-09-07 14:33:58
Local clock offset: 0.797 ms
Remote clock offset: -4.002 ms

Below is generated by plot.py at 2018-09-07 16:19:16
Datalink statistics
-- Total of 3 flows:
Average throughput: 43.22 Mbit/s
95th percentile per-packet one-way delay: 17.561 ms
Loss rate: 5.18%
-- Flow 1:
Average throughput: 22.49 Mbit/s
95th percentile per-packet one-way delay: 16.862 ms
Loss rate: 4.59%
-- Flow 2:
Average throughput: 21.17 Mbit/s
95th percentile per-packet one-way delay: 16.823 ms
Loss rate: 5.09%
-- Flow 3:
Average throughput: 20.12 Mbit/s
95th percentile per-packet one-way delay: 19.820 ms
Loss rate: 7.30%

Run 1: Report of Sprout — Data Link

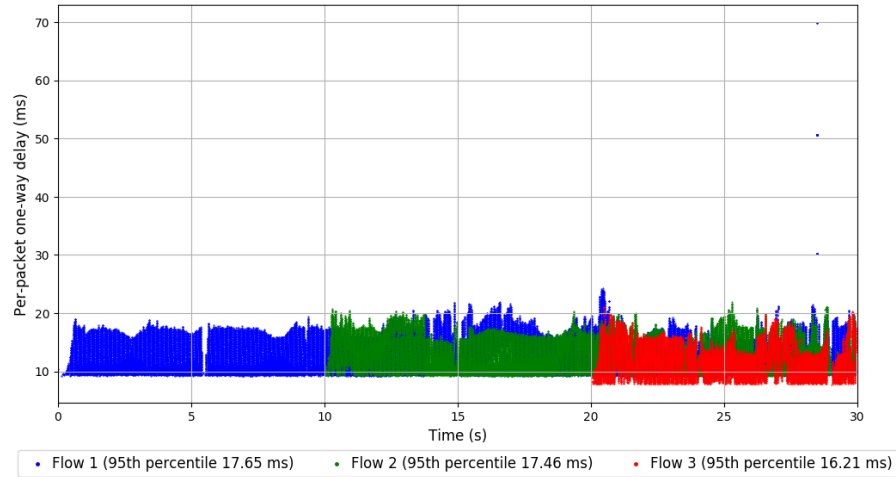
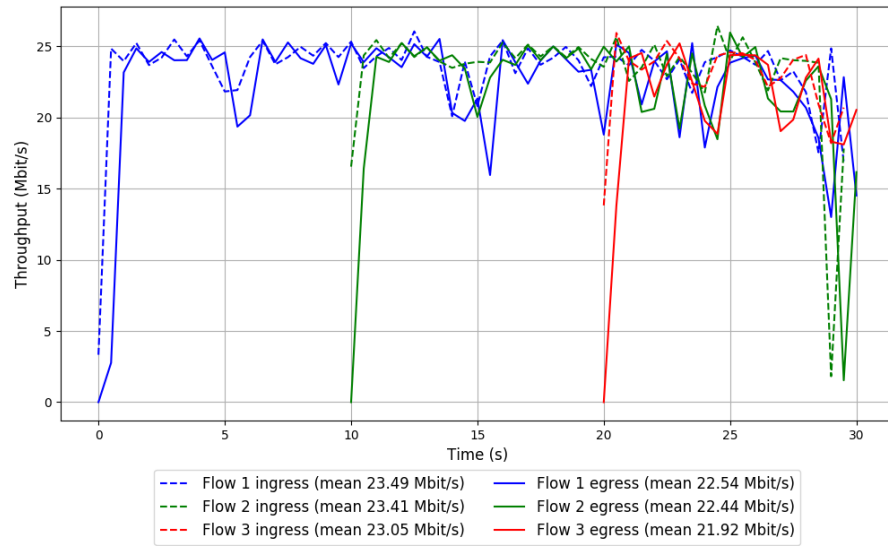


Run 2: Statistics of Sprout

Start at: 2018-09-07 14:54:23
End at: 2018-09-07 14:54:53
Local clock offset: 0.46 ms
Remote clock offset: -3.844 ms

Below is generated by plot.py at 2018-09-07 16:19:20
Datalink statistics
-- Total of 3 flows:
Average throughput: 44.70 Mbit/s
95th percentile per-packet one-way delay: 17.437 ms
Loss rate: 4.19%
-- Flow 1:
Average throughput: 22.54 Mbit/s
95th percentile per-packet one-way delay: 17.647 ms
Loss rate: 4.02%
-- Flow 2:
Average throughput: 22.44 Mbit/s
95th percentile per-packet one-way delay: 17.462 ms
Loss rate: 4.10%
-- Flow 3:
Average throughput: 21.92 Mbit/s
95th percentile per-packet one-way delay: 16.210 ms
Loss rate: 4.86%

Run 2: Report of Sprout — Data Link

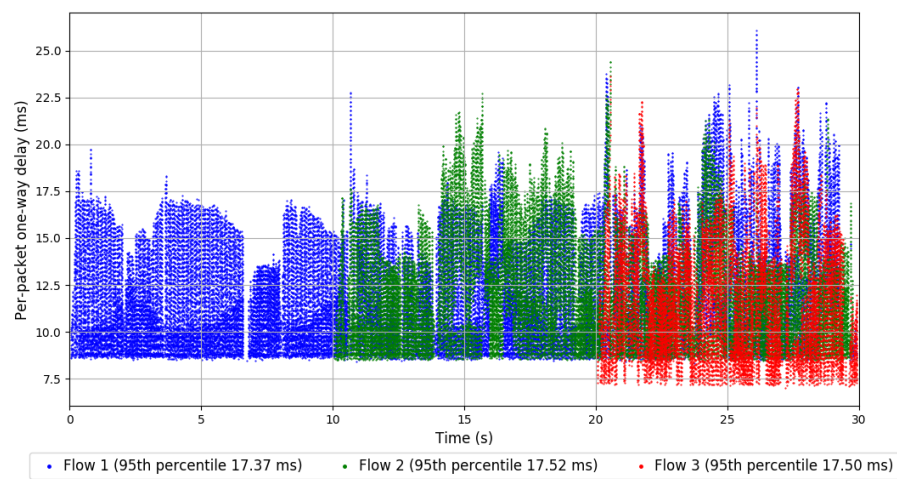
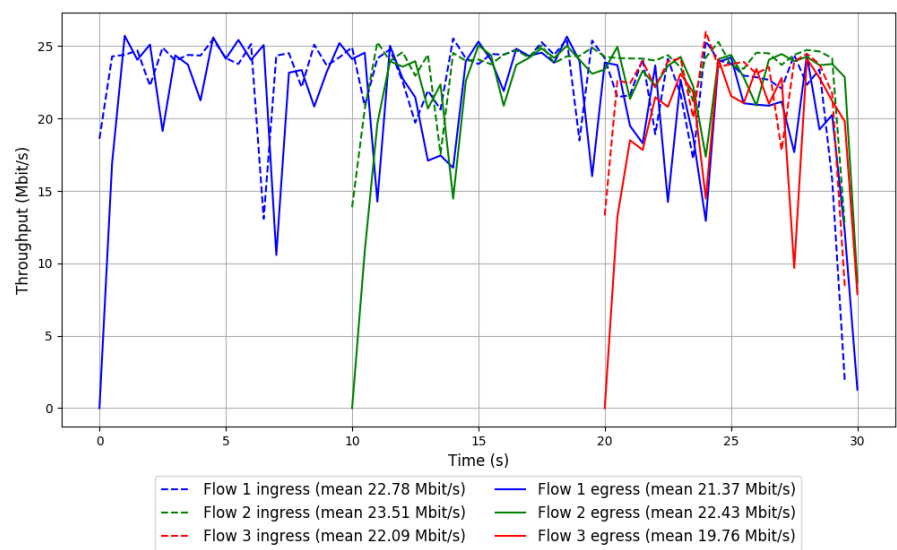


Run 3: Statistics of Sprout

Start at: 2018-09-07 15:15:23
End at: 2018-09-07 15:15:53
Local clock offset: 0.144 ms
Remote clock offset: -5.077 ms

```
# Below is generated by plot.py at 2018-09-07 16:19:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 42.80 Mbit/s
95th percentile per-packet one-way delay: 17.448 ms
Loss rate: 6.36%
-- Flow 1:
Average throughput: 21.37 Mbit/s
95th percentile per-packet one-way delay: 17.366 ms
Loss rate: 6.23%
-- Flow 2:
Average throughput: 22.43 Mbit/s
95th percentile per-packet one-way delay: 17.523 ms
Loss rate: 4.60%
-- Flow 3:
Average throughput: 19.76 Mbit/s
95th percentile per-packet one-way delay: 17.501 ms
Loss rate: 10.53%
```

Run 3: Report of Sprout — Data Link

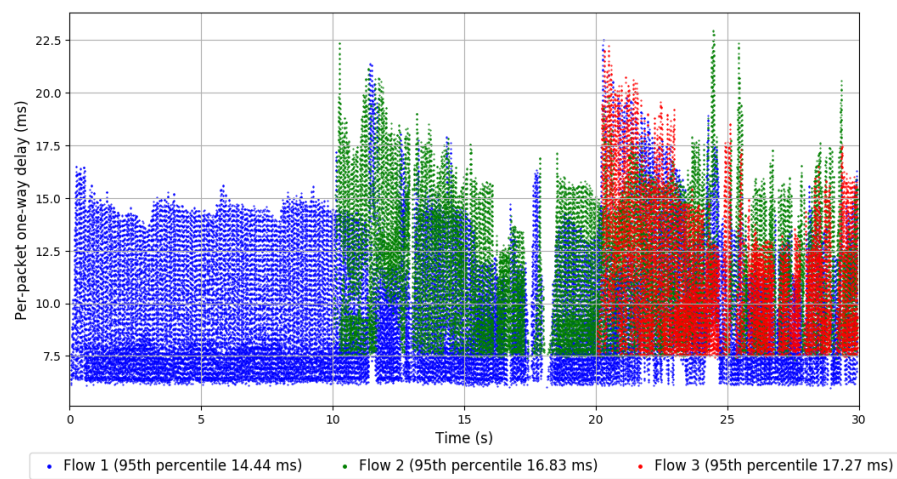
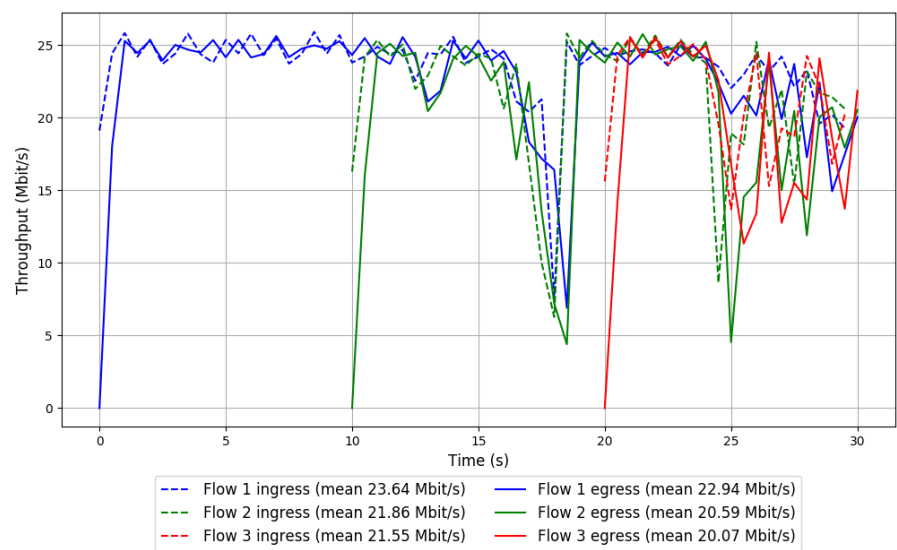


Run 4: Statistics of Sprout

Start at: 2018-09-07 15:36:11
End at: 2018-09-07 15:36:41
Local clock offset: 1.492 ms
Remote clock offset: -5.399 ms

```
# Below is generated by plot.py at 2018-09-07 16:19:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 43.27 Mbit/s
95th percentile per-packet one-way delay: 15.998 ms
Loss rate: 4.47%
-- Flow 1:
Average throughput: 22.94 Mbit/s
95th percentile per-packet one-way delay: 14.436 ms
Loss rate: 2.94%
-- Flow 2:
Average throughput: 20.59 Mbit/s
95th percentile per-packet one-way delay: 16.826 ms
Loss rate: 5.78%
-- Flow 3:
Average throughput: 20.07 Mbit/s
95th percentile per-packet one-way delay: 17.273 ms
Loss rate: 6.86%
```

Run 4: Report of Sprout — Data Link



Run 5: Statistics of Sprout

Start at: 2018-09-07 15:57:04

End at: 2018-09-07 15:57:34

Local clock offset: 2.097 ms

Remote clock offset: -4.53 ms

Below is generated by plot.py at 2018-09-07 16:19:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 41.64 Mbit/s

95th percentile per-packet one-way delay: 16.502 ms

Loss rate: 6.18%

-- Flow 1:

Average throughput: 22.53 Mbit/s

95th percentile per-packet one-way delay: 15.981 ms

Loss rate: 4.51%

-- Flow 2:

Average throughput: 18.31 Mbit/s

95th percentile per-packet one-way delay: 16.822 ms

Loss rate: 8.10%

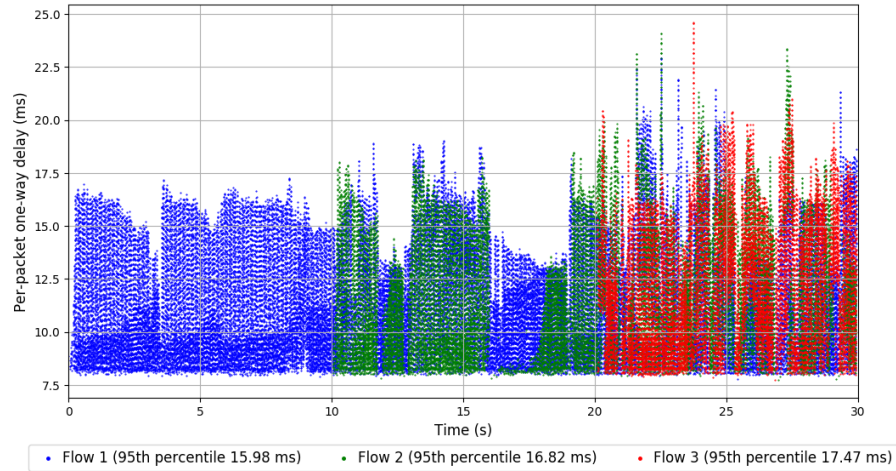
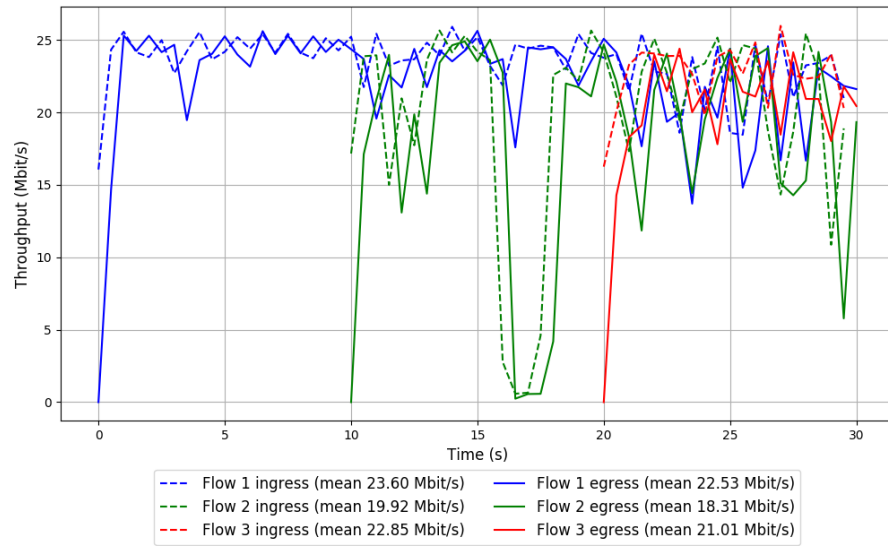
-- Flow 3:

Average throughput: 21.01 Mbit/s

95th percentile per-packet one-way delay: 17.468 ms

Loss rate: 8.05%

Run 5: Report of Sprout — Data Link

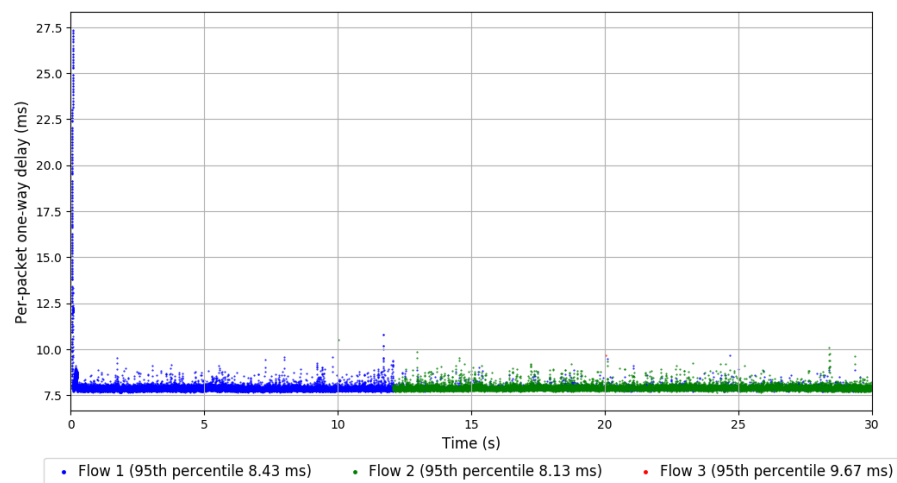
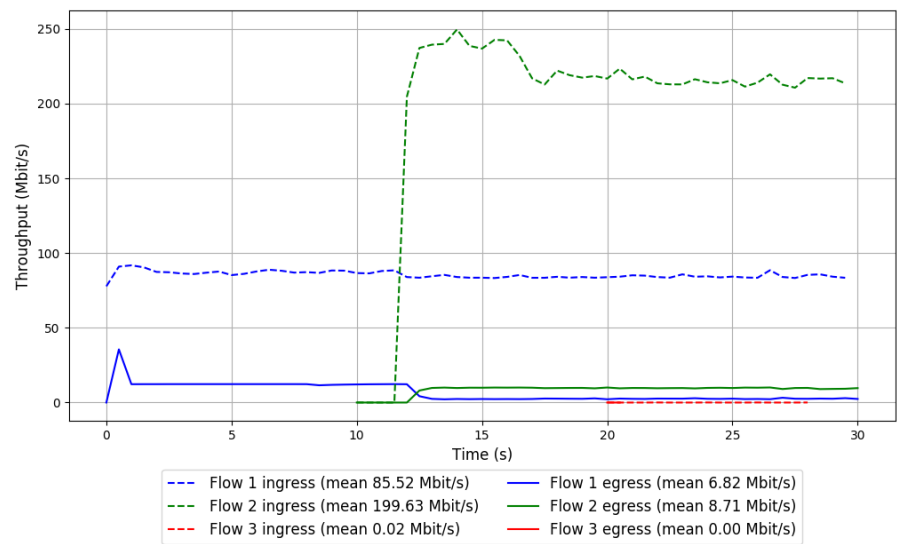


Run 1: Statistics of TaoVA-100x

Start at: 2018-09-07 14:44:02
End at: 2018-09-07 14:44:32
Local clock offset: 0.16 ms
Remote clock offset: -4.371 ms

Below is generated by plot.py at 2018-09-07 16:19:57
Datalink statistics
-- Total of 3 flows:
Average throughput: 12.62 Mbit/s
95th percentile per-packet one-way delay: 8.249 ms
Loss rate: 94.22%
-- Flow 1:
Average throughput: 6.82 Mbit/s
95th percentile per-packet one-way delay: 8.428 ms
Loss rate: 92.03%
-- Flow 2:
Average throughput: 8.71 Mbit/s
95th percentile per-packet one-way delay: 8.134 ms
Loss rate: 95.64%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 9.674 ms
Loss rate: 99.16%

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

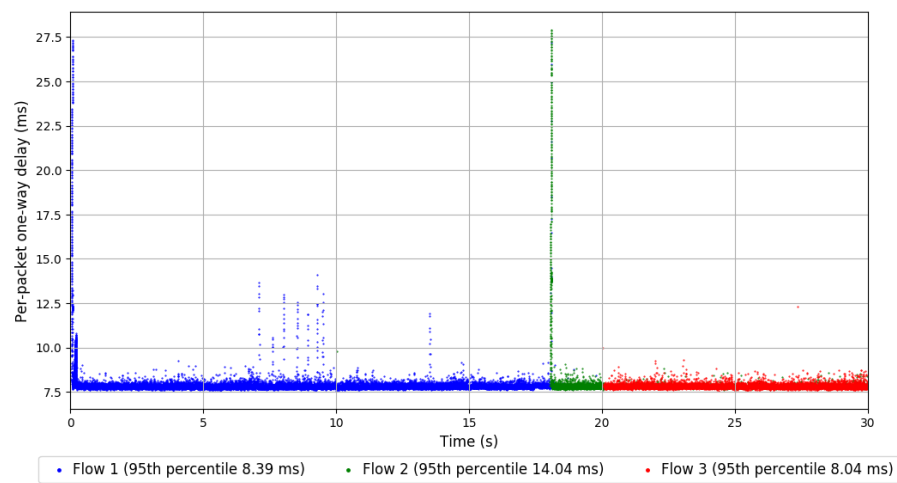
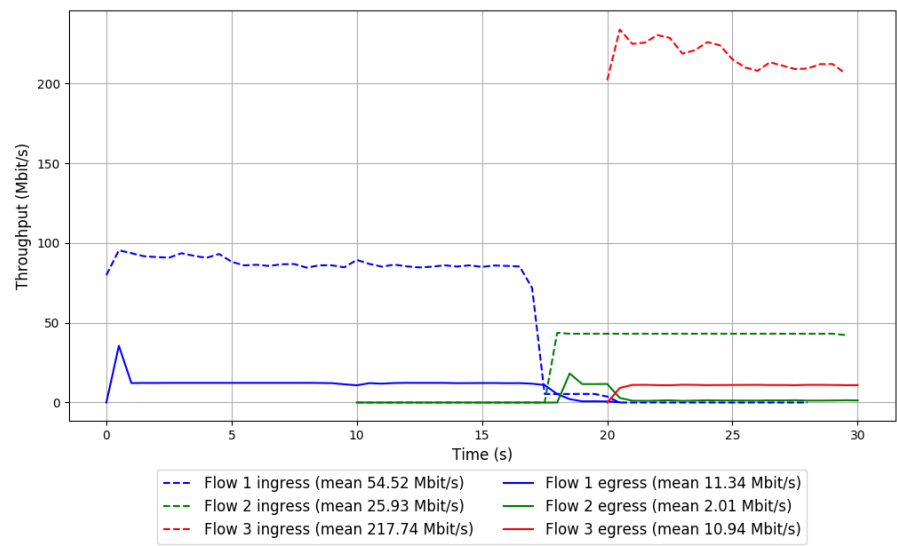


Run 2: Statistics of TaoVA-100x

Start at: 2018-09-07 15:04:52
End at: 2018-09-07 15:05:22
Local clock offset: 0.416 ms
Remote clock offset: -4.177 ms

Below is generated by plot.py at 2018-09-07 16:19:57
Datalink statistics
-- Total of 3 flows:
Average throughput: 12.61 Mbit/s
95th percentile per-packet one-way delay: 8.264 ms
Loss rate: 91.06%
-- Flow 1:
Average throughput: 11.34 Mbit/s
95th percentile per-packet one-way delay: 8.386 ms
Loss rate: 85.12%
-- Flow 2:
Average throughput: 2.01 Mbit/s
95th percentile per-packet one-way delay: 14.041 ms
Loss rate: 92.26%
-- Flow 3:
Average throughput: 10.94 Mbit/s
95th percentile per-packet one-way delay: 8.043 ms
Loss rate: 94.98%

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

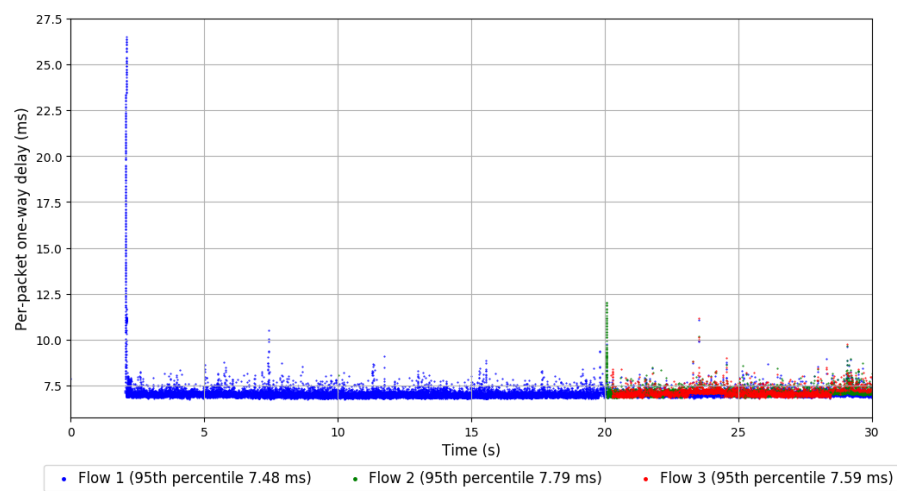
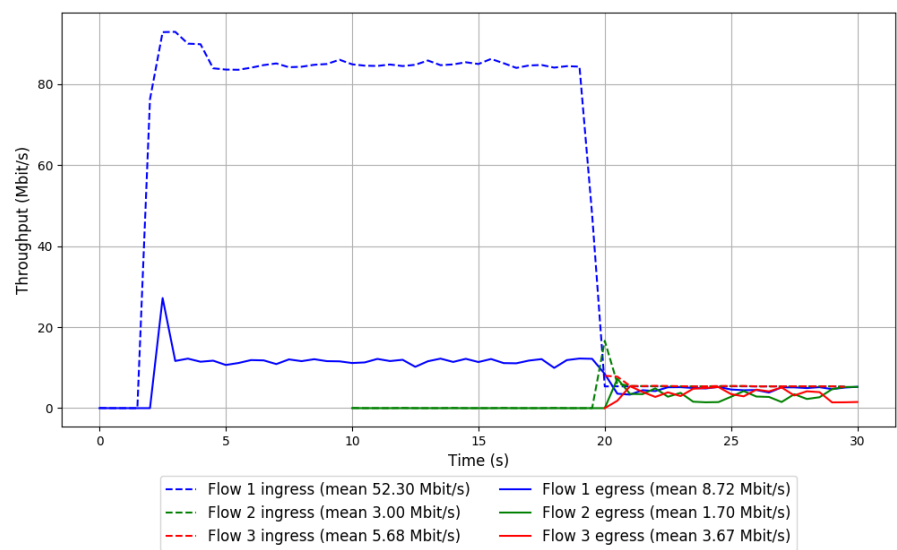


Run 3: Statistics of TaoVA-100x

Start at: 2018-09-07 15:25:50
End at: 2018-09-07 15:26:20
Local clock offset: 0.962 ms
Remote clock offset: -5.029 ms

Below is generated by plot.py at 2018-09-07 16:19:57
Datalink statistics
-- Total of 3 flows:
Average throughput: 11.05 Mbit/s
95th percentile per-packet one-way delay: 7.537 ms
Loss rate: 80.34%
-- Flow 1:
Average throughput: 8.72 Mbit/s
95th percentile per-packet one-way delay: 7.477 ms
Loss rate: 83.32%
-- Flow 2:
Average throughput: 1.70 Mbit/s
95th percentile per-packet one-way delay: 7.789 ms
Loss rate: 43.37%
-- Flow 3:
Average throughput: 3.67 Mbit/s
95th percentile per-packet one-way delay: 7.595 ms
Loss rate: 36.68%

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



Run 4: Statistics of TaoVA-100x

Start at: 2018-09-07 15:46:39

End at: 2018-09-07 15:47:09

Local clock offset: -1.02 ms

Remote clock offset: -5.32 ms

Below is generated by plot.py at 2018-09-07 16:19:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 12.11 Mbit/s

95th percentile per-packet one-way delay: 9.753 ms

Loss rate: 90.25%

-- Flow 1:

Average throughput: 5.13 Mbit/s

95th percentile per-packet one-way delay: 9.624 ms

Loss rate: 90.11%

-- Flow 2:

Average throughput: 8.52 Mbit/s

95th percentile per-packet one-way delay: 9.430 ms

Loss rate: 90.33%

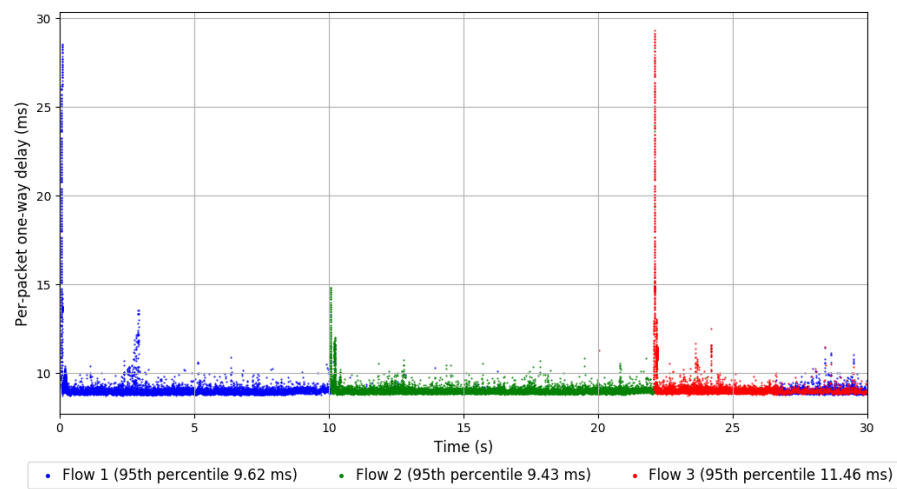
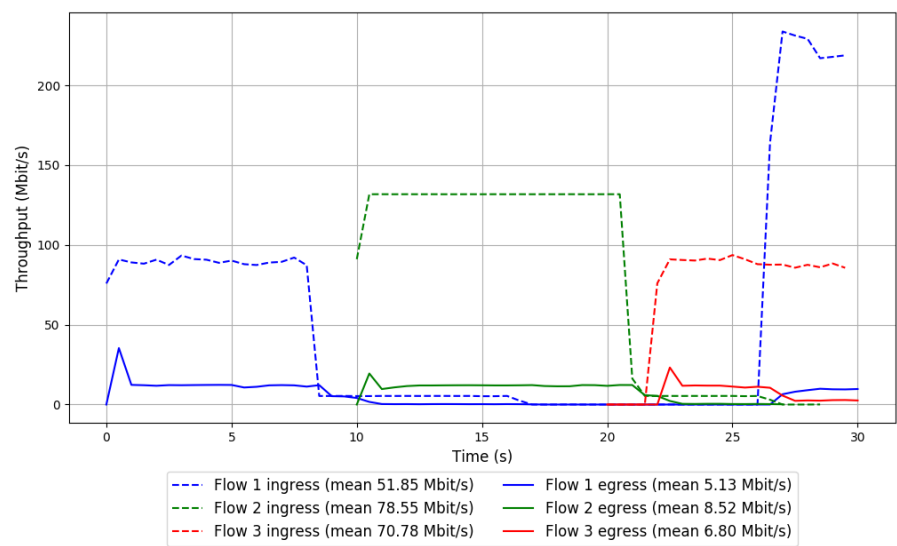
-- Flow 3:

Average throughput: 6.80 Mbit/s

95th percentile per-packet one-way delay: 11.463 ms

Loss rate: 90.41%

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

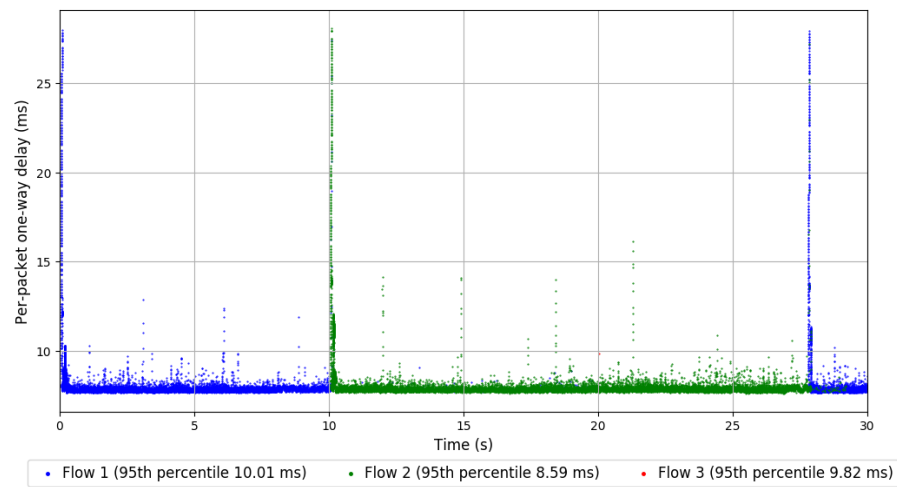
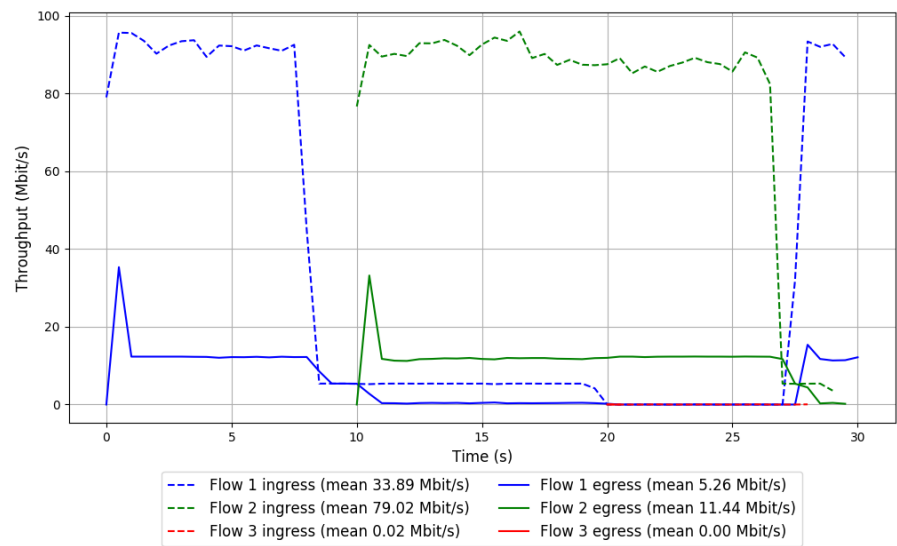


Run 5: Statistics of TaoVA-100x

Start at: 2018-09-07 16:07:30
End at: 2018-09-07 16:08:00
Local clock offset: 0.943 ms
Remote clock offset: -4.643 ms

Below is generated by plot.py at 2018-09-07 16:19:57
Datalink statistics
-- Total of 3 flows:
Average throughput: 12.58 Mbit/s
95th percentile per-packet one-way delay: 9.081 ms
Loss rate: 85.16%
-- Flow 1:
Average throughput: 5.26 Mbit/s
95th percentile per-packet one-way delay: 10.010 ms
Loss rate: 84.48%
-- Flow 2:
Average throughput: 11.44 Mbit/s
95th percentile per-packet one-way delay: 8.594 ms
Loss rate: 85.62%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 9.824 ms
Loss rate: 99.16%

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

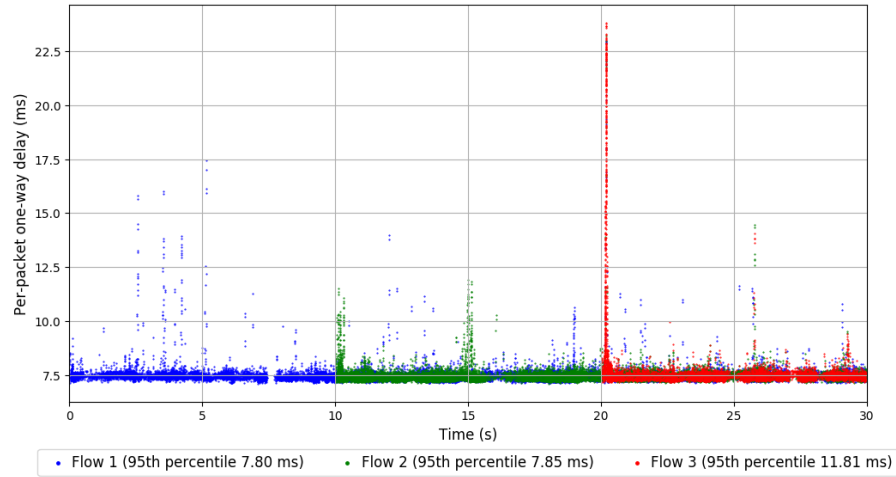
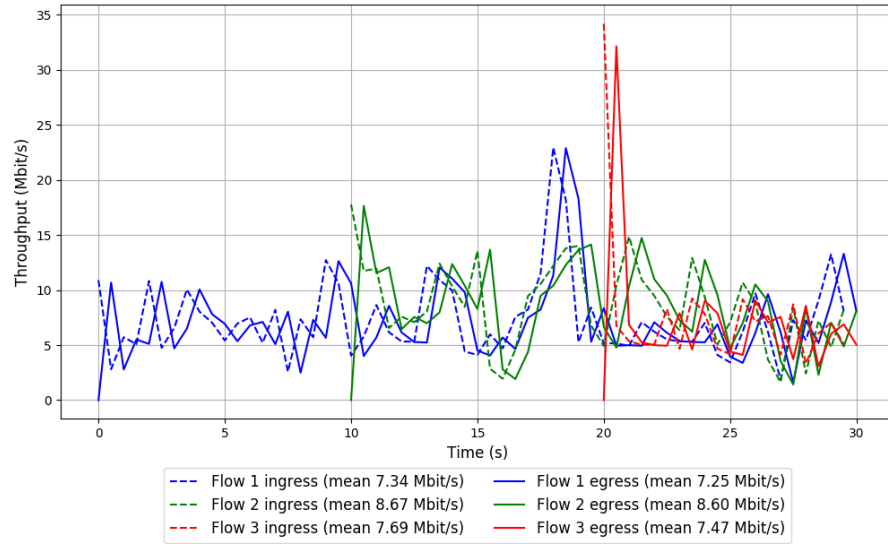


Run 1: Statistics of TCP Vegas

Start at: 2018-09-07 14:31:09
End at: 2018-09-07 14:31:39
Local clock offset: 1.031 ms
Remote clock offset: -3.715 ms

Below is generated by plot.py at 2018-09-07 16:19:57
Datalink statistics
-- Total of 3 flows:
Average throughput: 15.46 Mbit/s
95th percentile per-packet one-way delay: 7.933 ms
Loss rate: 1.33%
-- Flow 1:
Average throughput: 7.25 Mbit/s
95th percentile per-packet one-way delay: 7.804 ms
Loss rate: 1.16%
-- Flow 2:
Average throughput: 8.60 Mbit/s
95th percentile per-packet one-way delay: 7.851 ms
Loss rate: 0.87%
-- Flow 3:
Average throughput: 7.47 Mbit/s
95th percentile per-packet one-way delay: 11.813 ms
Loss rate: 2.86%

Run 1: Report of TCP Vegas — Data Link

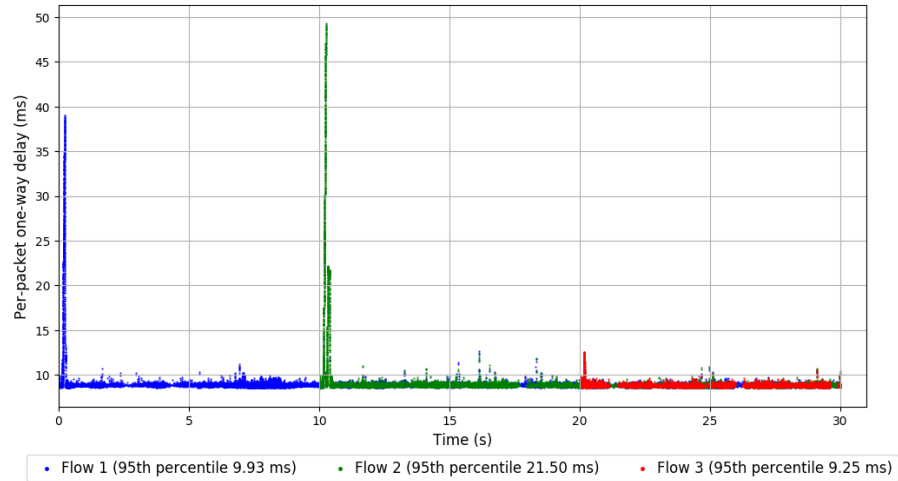
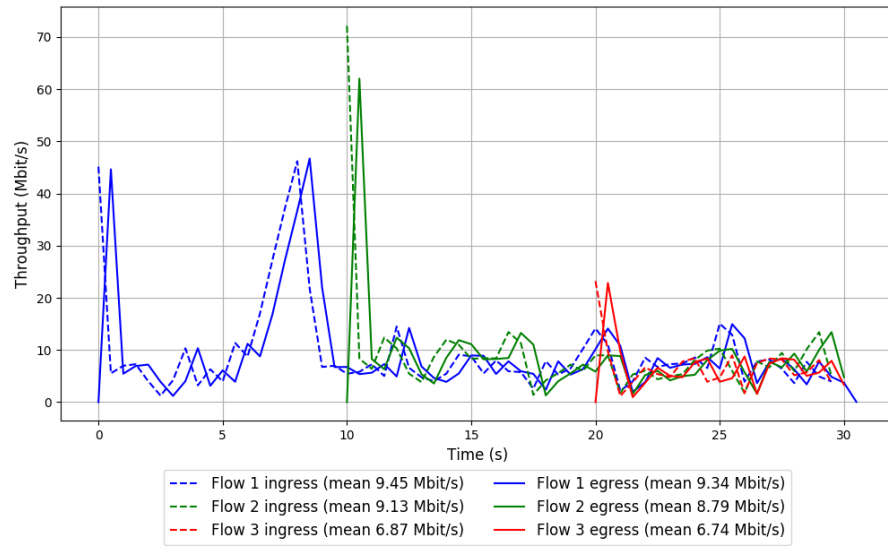


Run 2: Statistics of TCP Vegas

Start at: 2018-09-07 14:52:05
End at: 2018-09-07 14:52:35
Local clock offset: 0.614 ms
Remote clock offset: -4.307 ms

Below is generated by plot.py at 2018-09-07 16:19:57
Datalink statistics
-- Total of 3 flows:
Average throughput: 17.44 Mbit/s
95th percentile per-packet one-way delay: 13.033 ms
Loss rate: 2.12%
-- Flow 1:
Average throughput: 9.34 Mbit/s
95th percentile per-packet one-way delay: 9.927 ms
Loss rate: 1.10%
-- Flow 2:
Average throughput: 8.79 Mbit/s
95th percentile per-packet one-way delay: 21.500 ms
Loss rate: 3.77%
-- Flow 3:
Average throughput: 6.74 Mbit/s
95th percentile per-packet one-way delay: 9.252 ms
Loss rate: 1.93%

Run 2: Report of TCP Vegas — Data Link

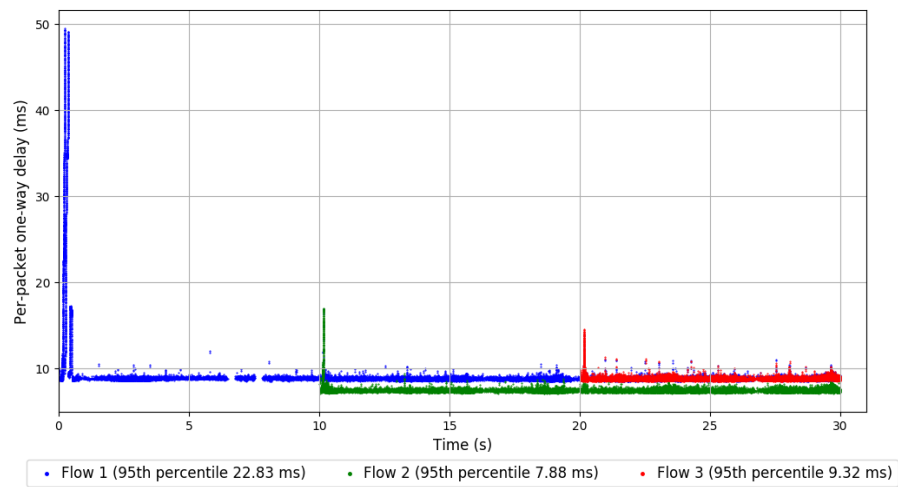
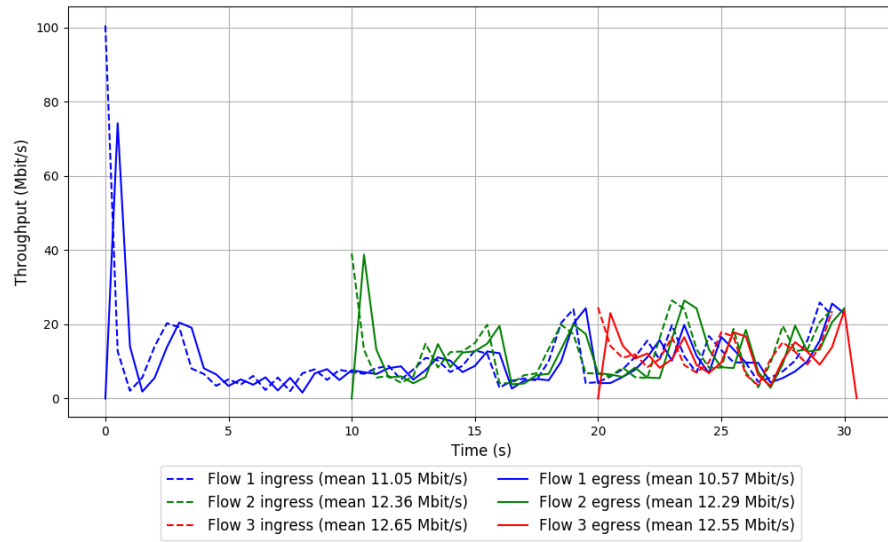


Run 3: Statistics of TCP Vegas

Start at: 2018-09-07 15:13:04
End at: 2018-09-07 15:13:34
Local clock offset: 0.885 ms
Remote clock offset: -4.204 ms

Below is generated by plot.py at 2018-09-07 16:19:57
Datalink statistics
-- Total of 3 flows:
Average throughput: 22.93 Mbit/s
95th percentile per-packet one-way delay: 10.486 ms
Loss rate: 2.40%
-- Flow 1:
Average throughput: 10.57 Mbit/s
95th percentile per-packet one-way delay: 22.831 ms
Loss rate: 4.36%
-- Flow 2:
Average throughput: 12.29 Mbit/s
95th percentile per-packet one-way delay: 7.875 ms
Loss rate: 0.57%
-- Flow 3:
Average throughput: 12.55 Mbit/s
95th percentile per-packet one-way delay: 9.325 ms
Loss rate: 0.85%

Run 3: Report of TCP Vegas — Data Link

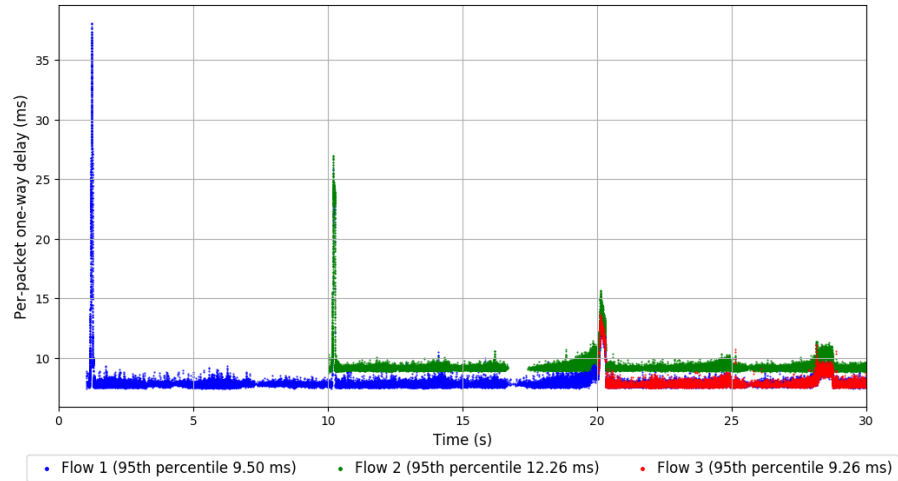
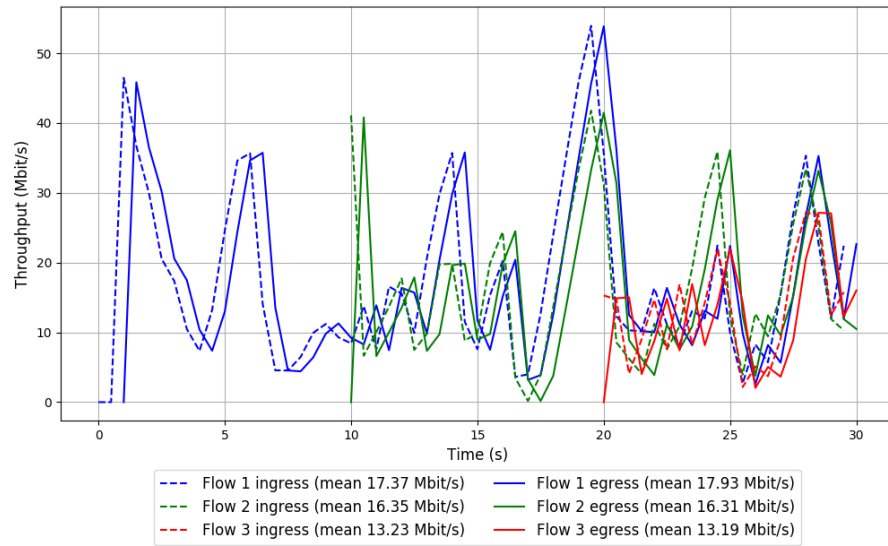


Run 4: Statistics of TCP Vegas

Start at: 2018-09-07 15:33:52
End at: 2018-09-07 15:34:22
Local clock offset: 0.502 ms
Remote clock offset: -4.955 ms

Below is generated by plot.py at 2018-09-07 16:19:57
Datalink statistics
-- Total of 3 flows:
Average throughput: 33.71 Mbit/s
95th percentile per-packet one-way delay: 10.605 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 17.93 Mbit/s
95th percentile per-packet one-way delay: 9.504 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 16.31 Mbit/s
95th percentile per-packet one-way delay: 12.262 ms
Loss rate: 0.26%
-- Flow 3:
Average throughput: 13.19 Mbit/s
95th percentile per-packet one-way delay: 9.258 ms
Loss rate: 0.29%

Run 4: Report of TCP Vegas — Data Link

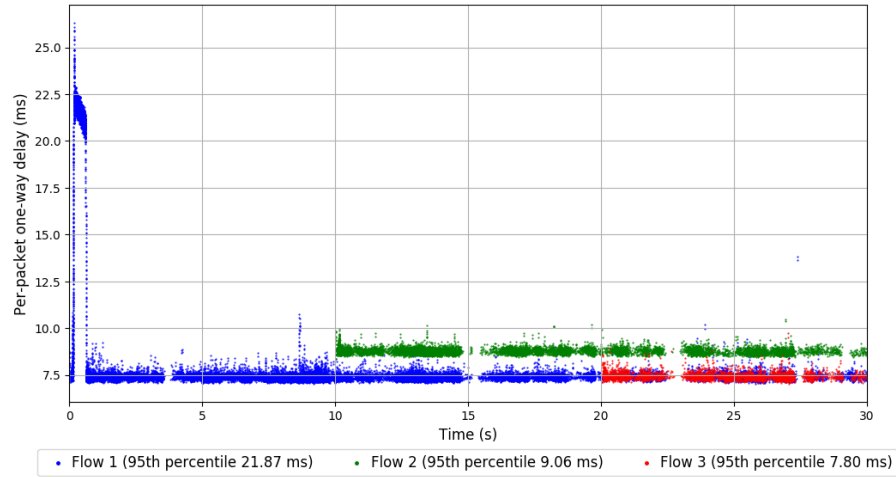
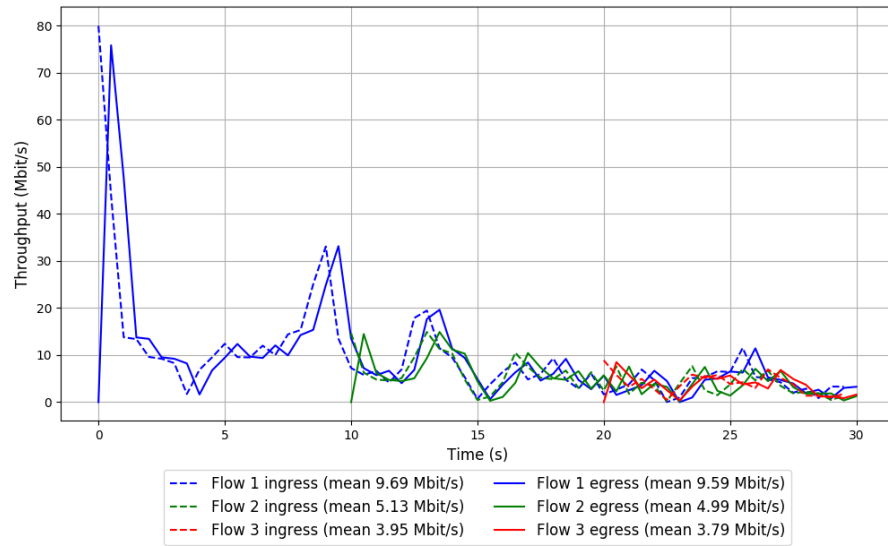


Run 5: Statistics of TCP Vegas

Start at: 2018-09-07 15:54:46
End at: 2018-09-07 15:55:16
Local clock offset: 0.777 ms
Remote clock offset: -5.324 ms

```
# Below is generated by plot.py at 2018-09-07 16:19:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.17 Mbit/s
95th percentile per-packet one-way delay: 21.634 ms
Loss rate: 1.71%
-- Flow 1:
Average throughput: 9.59 Mbit/s
95th percentile per-packet one-way delay: 21.873 ms
Loss rate: 1.04%
-- Flow 2:
Average throughput: 4.99 Mbit/s
95th percentile per-packet one-way delay: 9.061 ms
Loss rate: 2.73%
-- Flow 3:
Average throughput: 3.79 Mbit/s
95th percentile per-packet one-way delay: 7.802 ms
Loss rate: 4.02%
```

Run 5: Report of TCP Vegas — Data Link

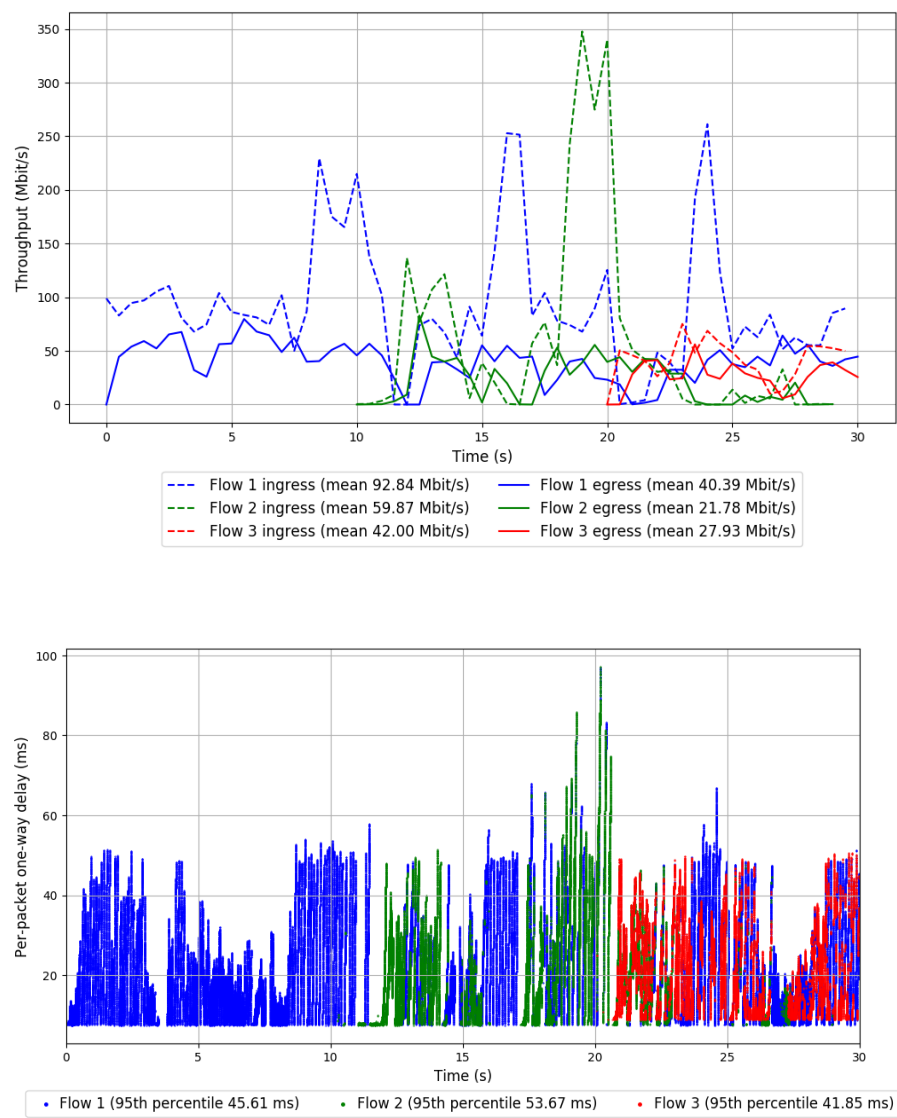


Run 1: Statistics of Verus

Start at: 2018-09-07 14:47:31
End at: 2018-09-07 14:48:01
Local clock offset: 0.257 ms
Remote clock offset: -4.402 ms

Below is generated by plot.py at 2018-09-07 16:20:39
Datalink statistics
-- Total of 3 flows:
Average throughput: 63.26 Mbit/s
95th percentile per-packet one-way delay: 46.086 ms
Loss rate: 56.18%
-- Flow 1:
Average throughput: 40.39 Mbit/s
95th percentile per-packet one-way delay: 45.607 ms
Loss rate: 56.44%
-- Flow 2:
Average throughput: 21.78 Mbit/s
95th percentile per-packet one-way delay: 53.672 ms
Loss rate: 63.95%
-- Flow 3:
Average throughput: 27.93 Mbit/s
95th percentile per-packet one-way delay: 41.851 ms
Loss rate: 33.26%

Run 1: Report of Verus — Data Link

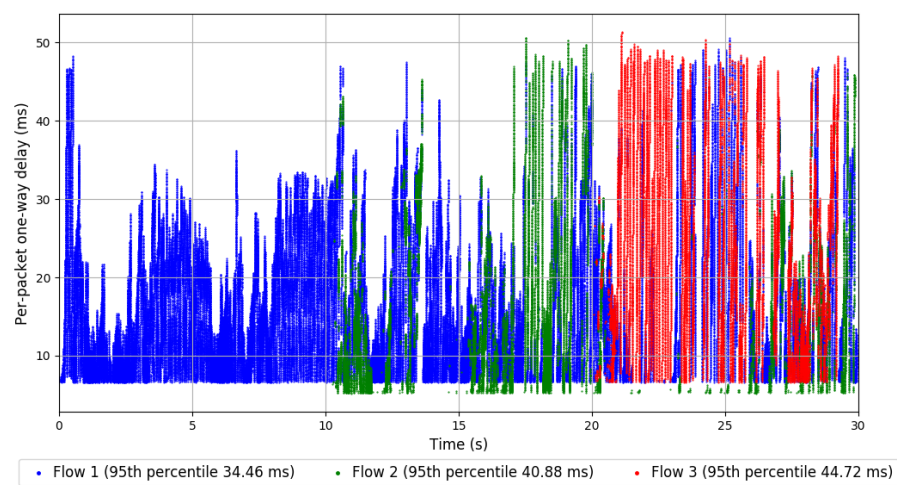
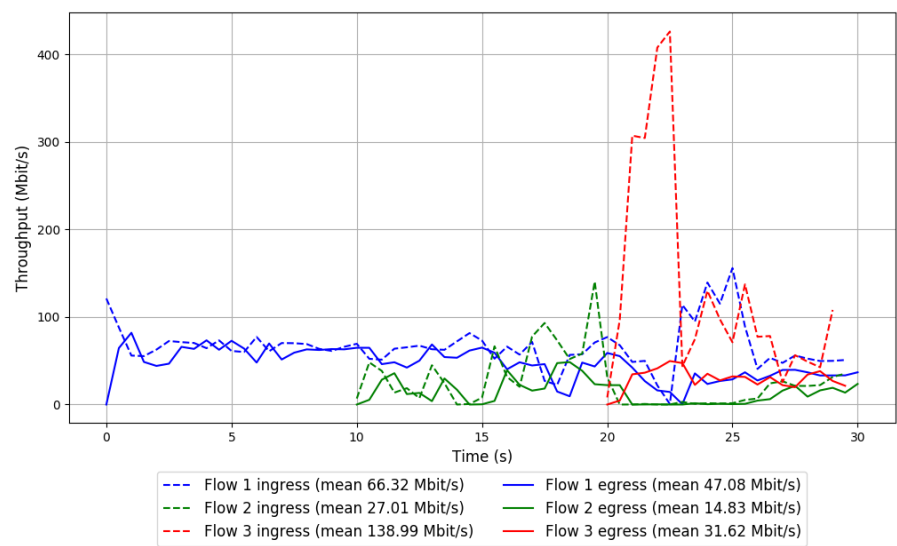


Run 2: Statistics of Verus

Start at: 2018-09-07 15:08:21
End at: 2018-09-07 15:08:51
Local clock offset: 2.187 ms
Remote clock offset: -4.854 ms

Below is generated by plot.py at 2018-09-07 16:20:46
Datalink statistics
-- Total of 3 flows:
Average throughput: 66.46 Mbit/s
95th percentile per-packet one-way delay: 39.274 ms
Loss rate: 47.42%
-- Flow 1:
Average throughput: 47.08 Mbit/s
95th percentile per-packet one-way delay: 34.462 ms
Loss rate: 29.00%
-- Flow 2:
Average throughput: 14.83 Mbit/s
95th percentile per-packet one-way delay: 40.883 ms
Loss rate: 45.05%
-- Flow 3:
Average throughput: 31.62 Mbit/s
95th percentile per-packet one-way delay: 44.716 ms
Loss rate: 77.20%

Run 2: Report of Verus — Data Link

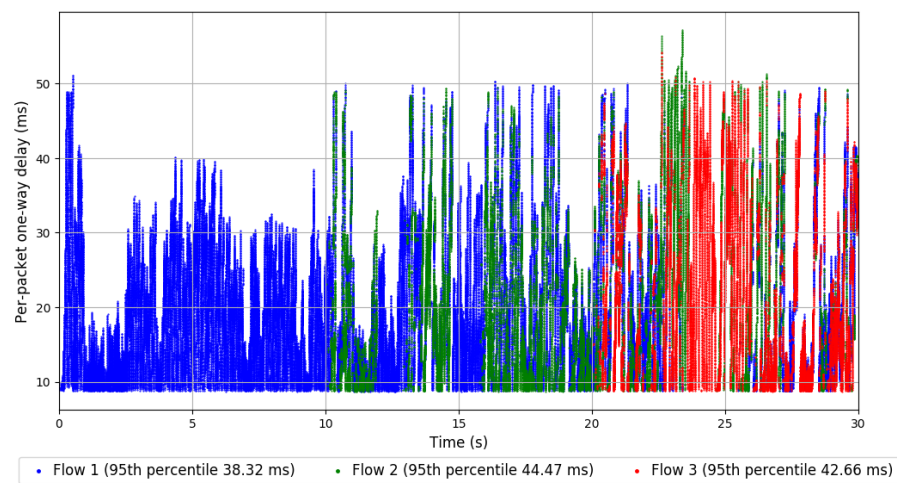
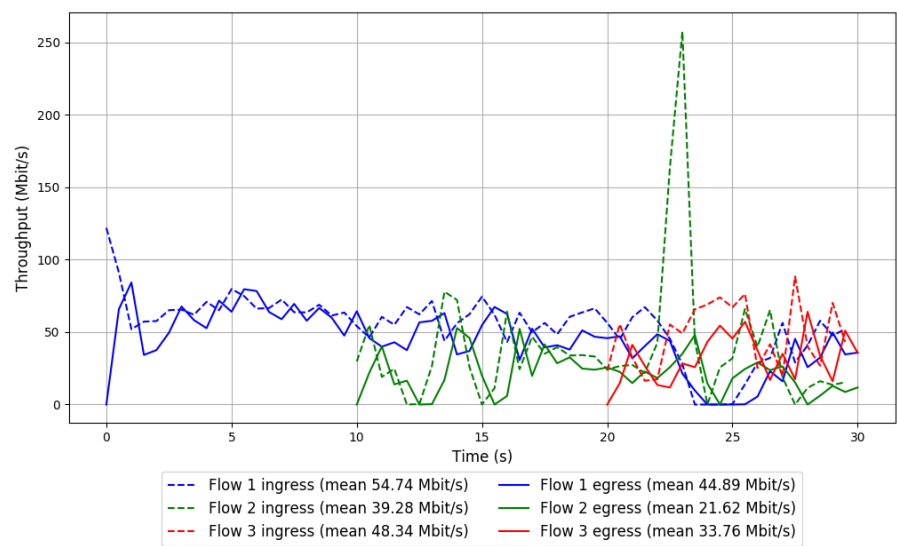


Run 3: Statistics of Verus

Start at: 2018-09-07 15:29:17
End at: 2018-09-07 15:29:47
Local clock offset: -0.908 ms
Remote clock offset: -5.037 ms

Below is generated by plot.py at 2018-09-07 16:20:46
Datalink statistics
-- Total of 3 flows:
Average throughput: 70.45 Mbit/s
95th percentile per-packet one-way delay: 41.064 ms
Loss rate: 27.20%
-- Flow 1:
Average throughput: 44.89 Mbit/s
95th percentile per-packet one-way delay: 38.317 ms
Loss rate: 17.92%
-- Flow 2:
Average throughput: 21.62 Mbit/s
95th percentile per-packet one-way delay: 44.467 ms
Loss rate: 44.93%
-- Flow 3:
Average throughput: 33.76 Mbit/s
95th percentile per-packet one-way delay: 42.657 ms
Loss rate: 30.00%

Run 3: Report of Verus — Data Link

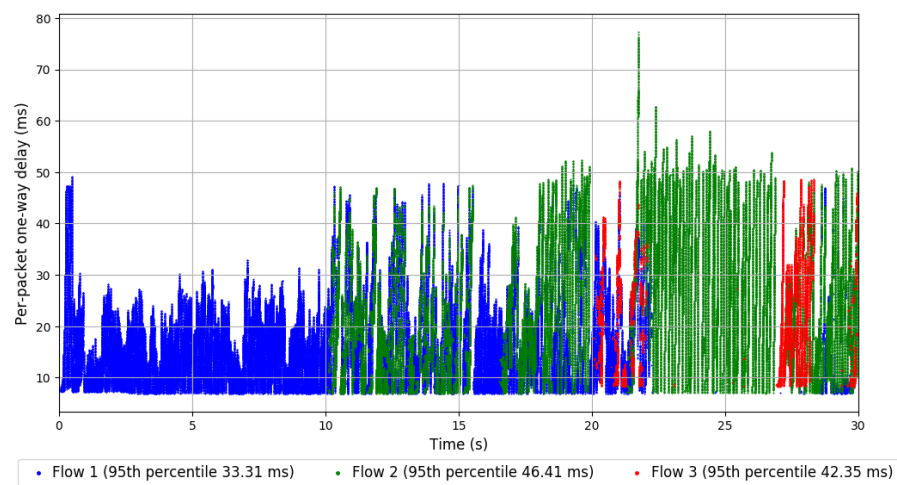
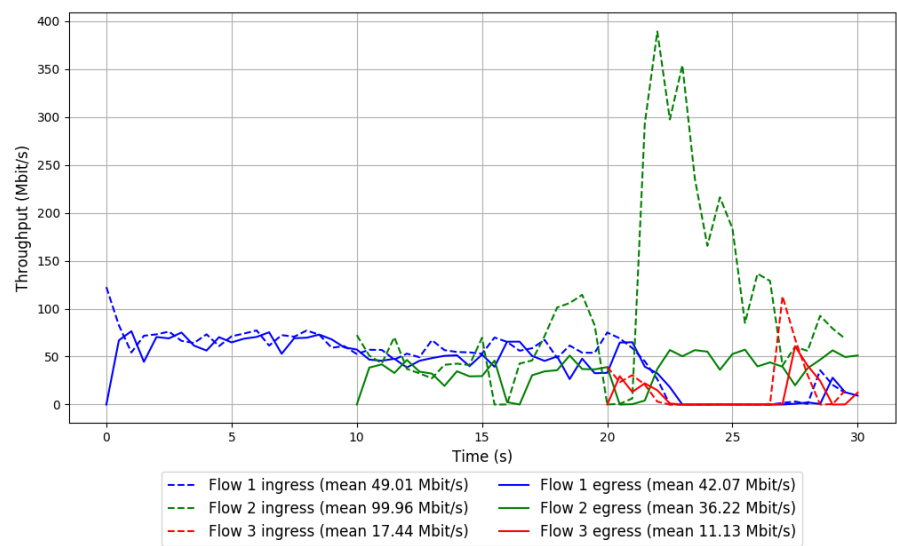


Run 4: Statistics of Verus

Start at: 2018-09-07 15:50:10
End at: 2018-09-07 15:50:40
Local clock offset: 0.946 ms
Remote clock offset: -4.987 ms

Below is generated by plot.py at 2018-09-07 16:20:50
Datalink statistics
-- Total of 3 flows:
Average throughput: 69.78 Mbit/s
95th percentile per-packet one-way delay: 42.042 ms
Loss rate: 42.36%
-- Flow 1:
Average throughput: 42.07 Mbit/s
95th percentile per-packet one-way delay: 33.313 ms
Loss rate: 14.06%
-- Flow 2:
Average throughput: 36.22 Mbit/s
95th percentile per-packet one-way delay: 46.410 ms
Loss rate: 63.71%
-- Flow 3:
Average throughput: 11.13 Mbit/s
95th percentile per-packet one-way delay: 42.353 ms
Loss rate: 36.18%

Run 4: Report of Verus — Data Link

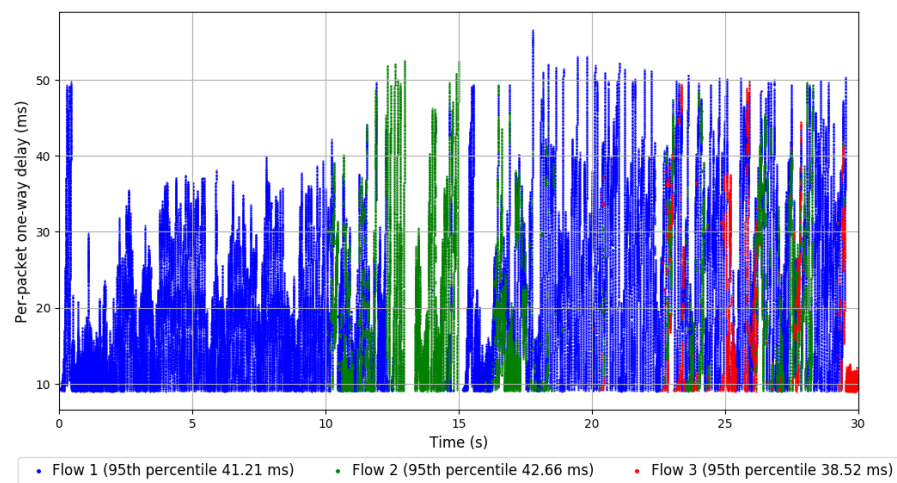
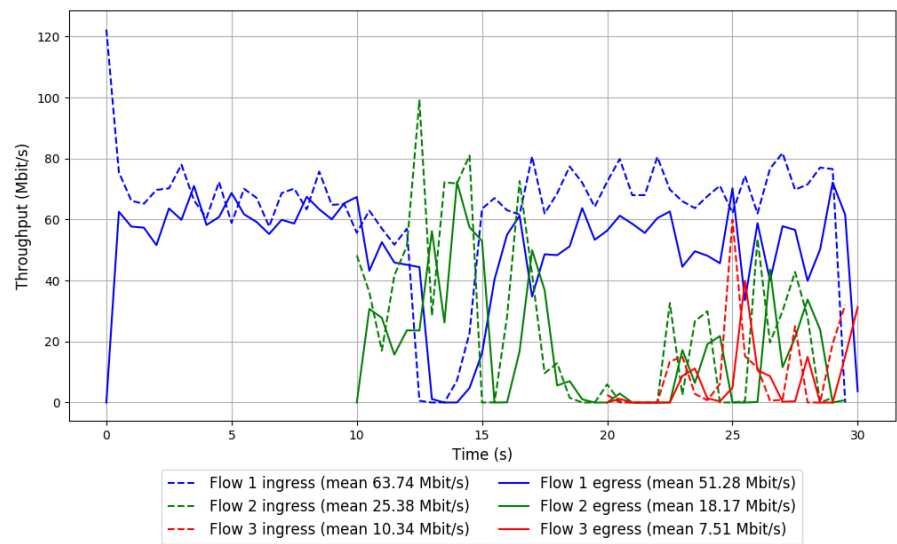


Run 5: Statistics of Verus

Start at: 2018-09-07 16:10:58
End at: 2018-09-07 16:11:28
Local clock offset: 0.081 ms
Remote clock offset: -5.549 ms

Below is generated by plot.py at 2018-09-07 16:20:50
Datalink statistics
-- Total of 3 flows:
Average throughput: 64.84 Mbit/s
95th percentile per-packet one-way delay: 41.486 ms
Loss rate: 21.64%
-- Flow 1:
Average throughput: 51.28 Mbit/s
95th percentile per-packet one-way delay: 41.209 ms
Loss rate: 19.53%
-- Flow 2:
Average throughput: 18.17 Mbit/s
95th percentile per-packet one-way delay: 42.660 ms
Loss rate: 28.50%
-- Flow 3:
Average throughput: 7.51 Mbit/s
95th percentile per-packet one-way delay: 38.524 ms
Loss rate: 27.41%

Run 5: Report of Verus — Data Link

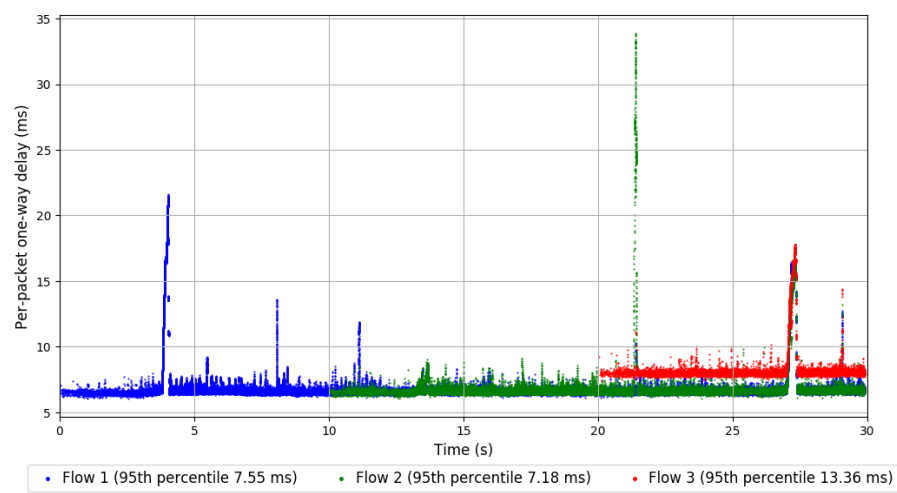
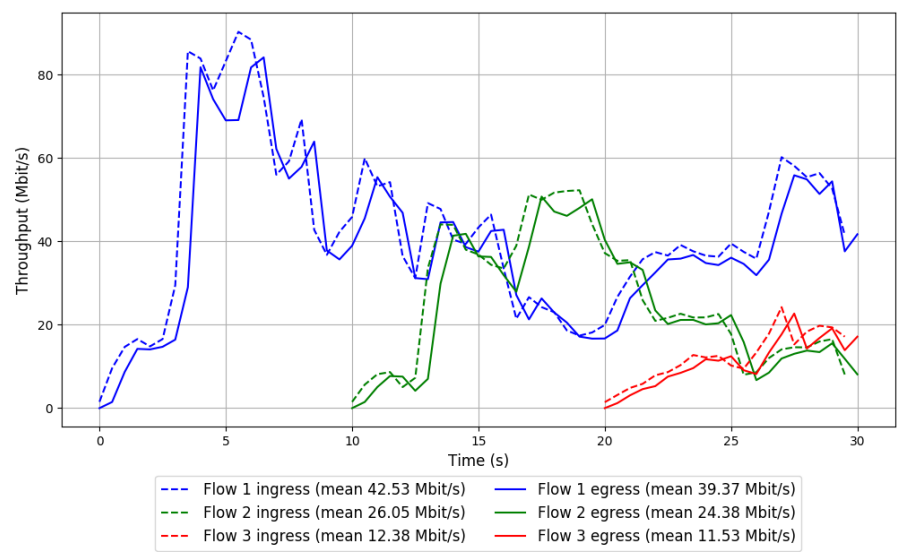


Run 1: Statistics of PCC-Vivace

Start at: 2018-09-07 14:37:06
End at: 2018-09-07 14:37:36
Local clock offset: 1.191 ms
Remote clock offset: -4.521 ms

Below is generated by plot.py at 2018-09-07 16:20:50
Datalink statistics
-- Total of 3 flows:
Average throughput: 59.39 Mbit/s
95th percentile per-packet one-way delay: 8.154 ms
Loss rate: 7.12%
-- Flow 1:
Average throughput: 39.37 Mbit/s
95th percentile per-packet one-way delay: 7.553 ms
Loss rate: 7.42%
-- Flow 2:
Average throughput: 24.38 Mbit/s
95th percentile per-packet one-way delay: 7.184 ms
Loss rate: 6.42%
-- Flow 3:
Average throughput: 11.53 Mbit/s
95th percentile per-packet one-way delay: 13.357 ms
Loss rate: 6.94%

Run 1: Report of PCC-Vivace — Data Link

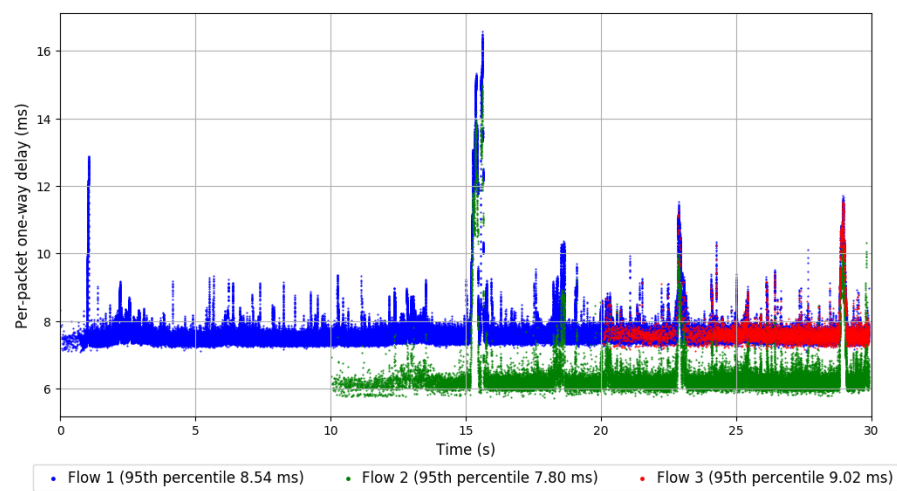
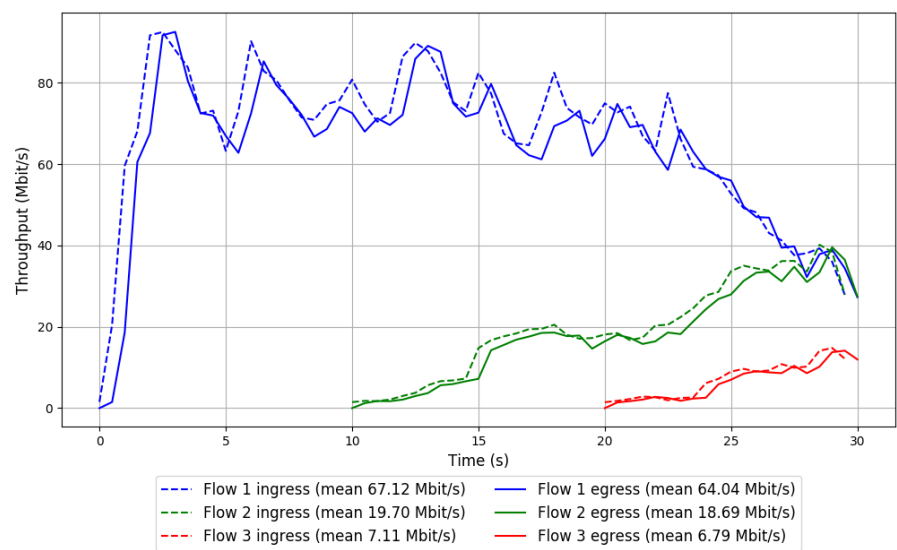


Run 2: Statistics of PCC-Vivace

Start at: 2018-09-07 14:57:54
End at: 2018-09-07 14:58:24
Local clock offset: 0.614 ms
Remote clock offset: -5.652 ms

Below is generated by plot.py at 2018-09-07 16:20:57
Datalink statistics
-- Total of 3 flows:
Average throughput: 78.71 Mbit/s
95th percentile per-packet one-way delay: 8.514 ms
Loss rate: 4.67%
-- Flow 1:
Average throughput: 64.04 Mbit/s
95th percentile per-packet one-way delay: 8.539 ms
Loss rate: 4.59%
-- Flow 2:
Average throughput: 18.69 Mbit/s
95th percentile per-packet one-way delay: 7.797 ms
Loss rate: 5.11%
-- Flow 3:
Average throughput: 6.79 Mbit/s
95th percentile per-packet one-way delay: 9.021 ms
Loss rate: 4.47%

Run 2: Report of PCC-Vivace — Data Link

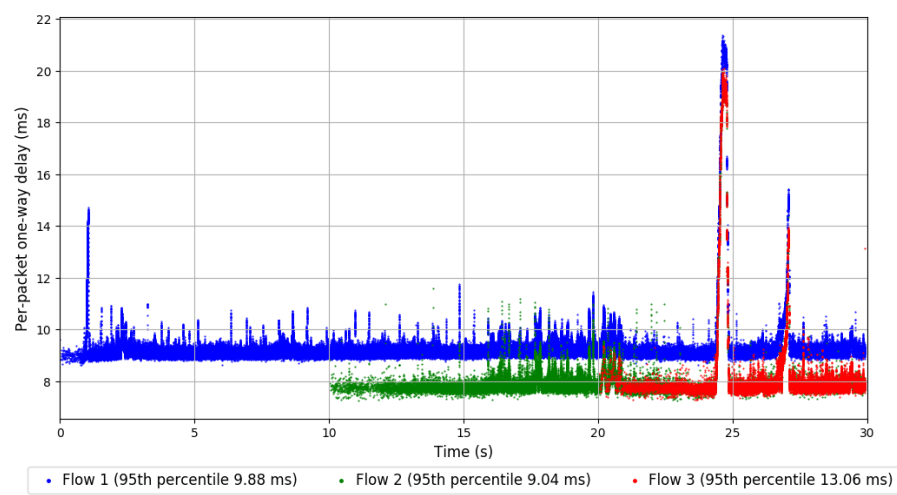
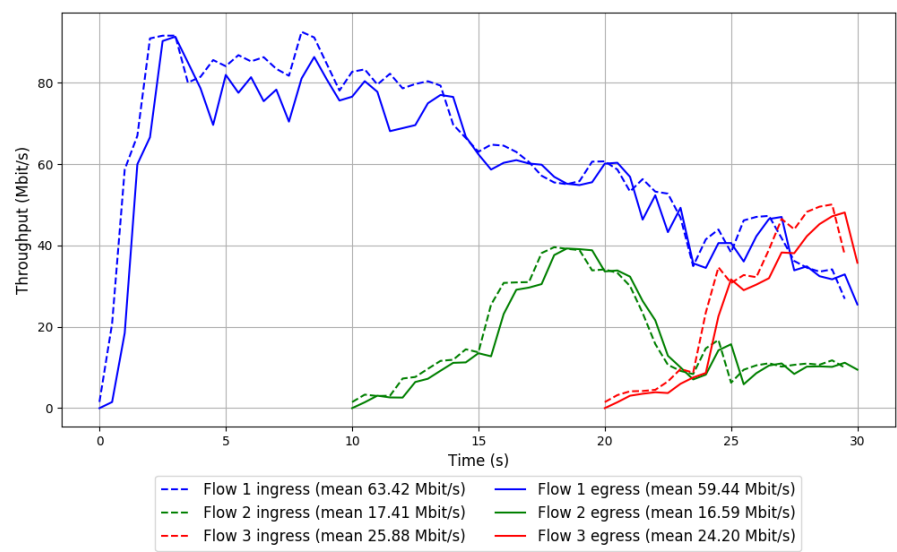


Run 3: Statistics of PCC-Vivace

Start at: 2018-09-07 15:18:53
End at: 2018-09-07 15:19:23
Local clock offset: 0.407 ms
Remote clock offset: -4.679 ms

Below is generated by plot.py at 2018-09-07 16:20:58
Datalink statistics
-- Total of 3 flows:
Average throughput: 78.45 Mbit/s
95th percentile per-packet one-way delay: 9.874 ms
Loss rate: 6.08%
-- Flow 1:
Average throughput: 59.44 Mbit/s
95th percentile per-packet one-way delay: 9.882 ms
Loss rate: 6.28%
-- Flow 2:
Average throughput: 16.59 Mbit/s
95th percentile per-packet one-way delay: 9.038 ms
Loss rate: 4.72%
-- Flow 3:
Average throughput: 24.20 Mbit/s
95th percentile per-packet one-way delay: 13.060 ms
Loss rate: 6.46%

Run 3: Report of PCC-Vivace — Data Link

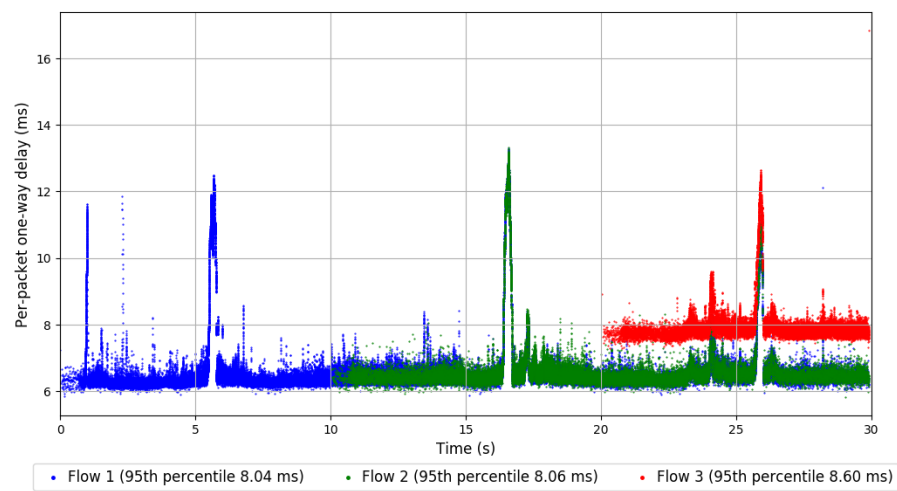
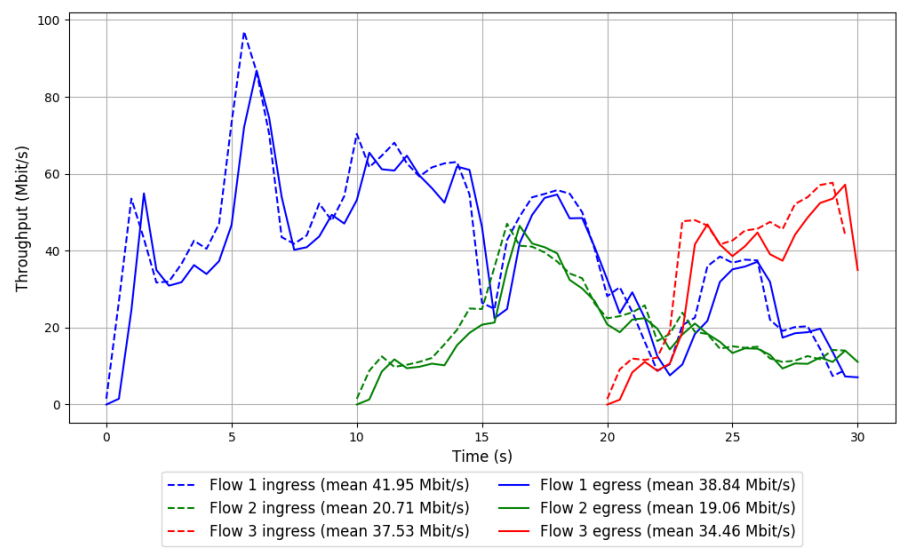


Run 4: Statistics of PCC-Vivace

Start at: 2018-09-07 15:39:42
End at: 2018-09-07 15:40:12
Local clock offset: 2.267 ms
Remote clock offset: -4.652 ms

Below is generated by plot.py at 2018-09-07 16:21:05
Datalink statistics
-- Total of 3 flows:
Average throughput: 62.88 Mbit/s
95th percentile per-packet one-way delay: 8.363 ms
Loss rate: 7.66%
-- Flow 1:
Average throughput: 38.84 Mbit/s
95th percentile per-packet one-way delay: 8.038 ms
Loss rate: 7.42%
-- Flow 2:
Average throughput: 19.06 Mbit/s
95th percentile per-packet one-way delay: 8.063 ms
Loss rate: 7.97%
-- Flow 3:
Average throughput: 34.46 Mbit/s
95th percentile per-packet one-way delay: 8.599 ms
Loss rate: 8.10%

Run 4: Report of PCC-Vivace — Data Link

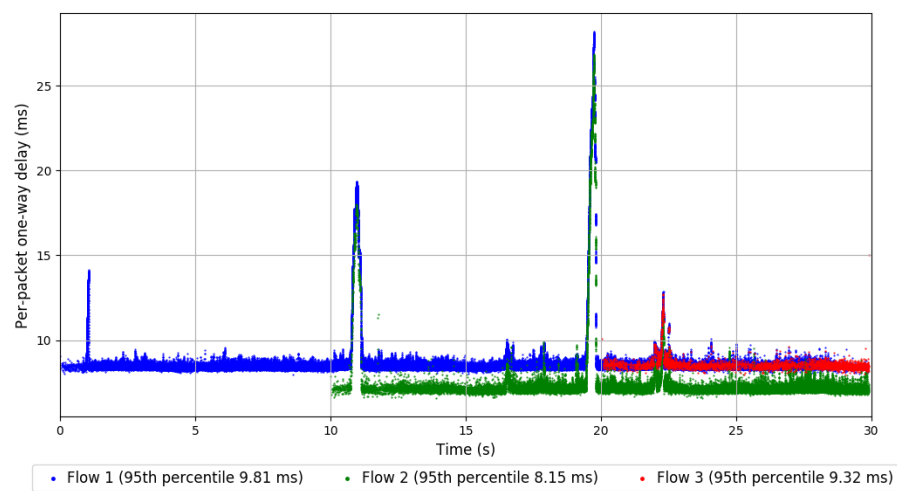
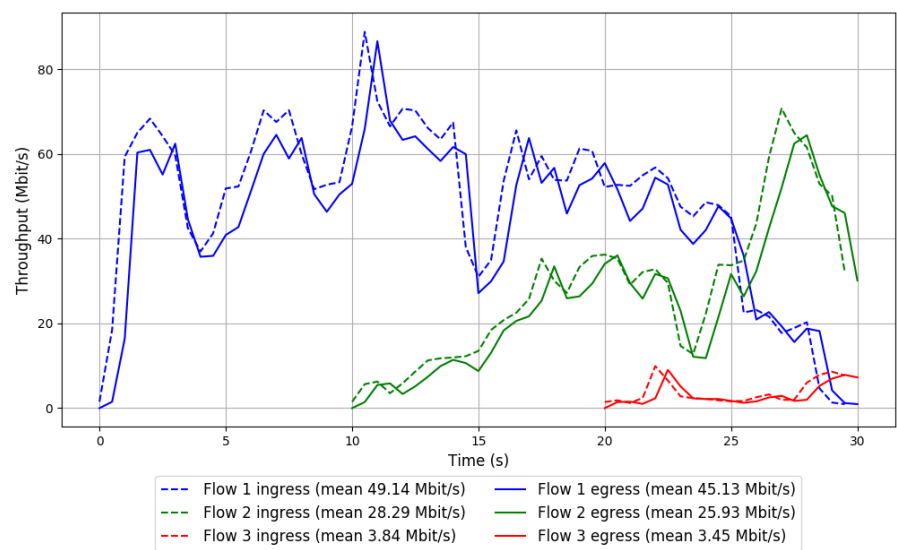


Run 5: Statistics of PCC-Vivace

Start at: 2018-09-07 16:00:34
End at: 2018-09-07 16:01:04
Local clock offset: 1.855 ms
Remote clock offset: -4.528 ms

Below is generated by plot.py at 2018-09-07 16:21:05
Datalink statistics
-- Total of 3 flows:
Average throughput: 63.50 Mbit/s
95th percentile per-packet one-way delay: 9.466 ms
Loss rate: 8.24%
-- Flow 1:
Average throughput: 45.13 Mbit/s
95th percentile per-packet one-way delay: 9.809 ms
Loss rate: 8.15%
-- Flow 2:
Average throughput: 25.93 Mbit/s
95th percentile per-packet one-way delay: 8.151 ms
Loss rate: 8.33%
-- Flow 3:
Average throughput: 3.45 Mbit/s
95th percentile per-packet one-way delay: 9.316 ms
Loss rate: 10.15%

Run 5: Report of PCC-Vivace — Data Link

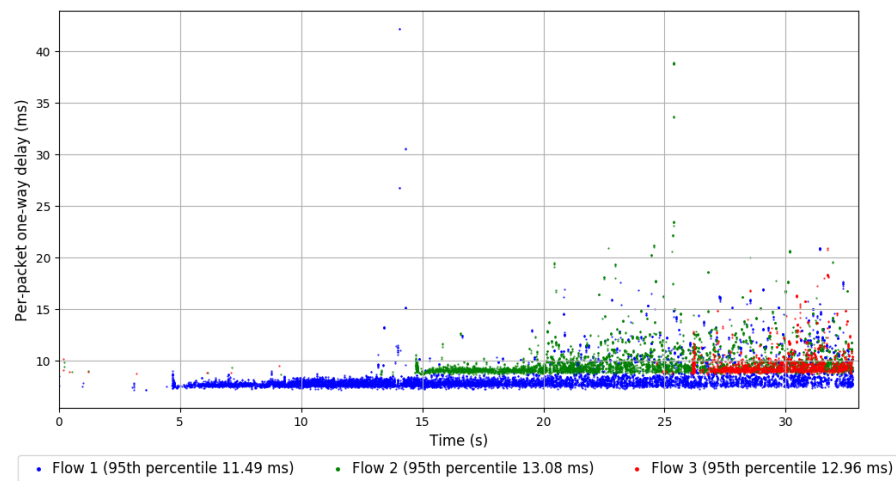
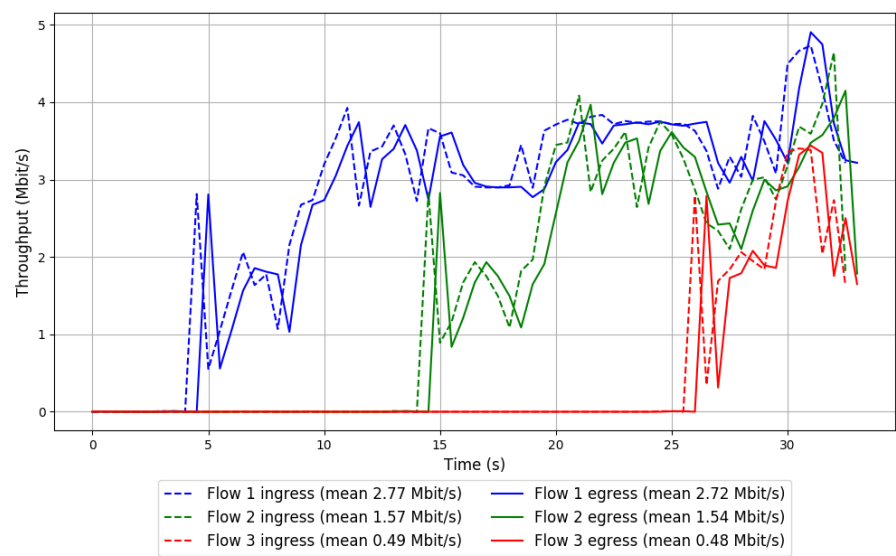


Run 1: Statistics of WebRTC media

Start at: 2018-09-07 14:48:42
End at: 2018-09-07 14:49:12
Local clock offset: 0.316 ms
Remote clock offset: -4.345 ms

Below is generated by plot.py at 2018-09-07 16:21:05
Datalink statistics
-- Total of 3 flows:
Average throughput: 4.72 Mbit/s
95th percentile per-packet one-way delay: 12.399 ms
Loss rate: 1.95%
-- Flow 1:
Average throughput: 2.72 Mbit/s
95th percentile per-packet one-way delay: 11.487 ms
Loss rate: 1.88%
-- Flow 2:
Average throughput: 1.54 Mbit/s
95th percentile per-packet one-way delay: 13.077 ms
Loss rate: 2.09%
-- Flow 3:
Average throughput: 0.48 Mbit/s
95th percentile per-packet one-way delay: 12.964 ms
Loss rate: 1.90%

Run 1: Report of WebRTC media — Data Link

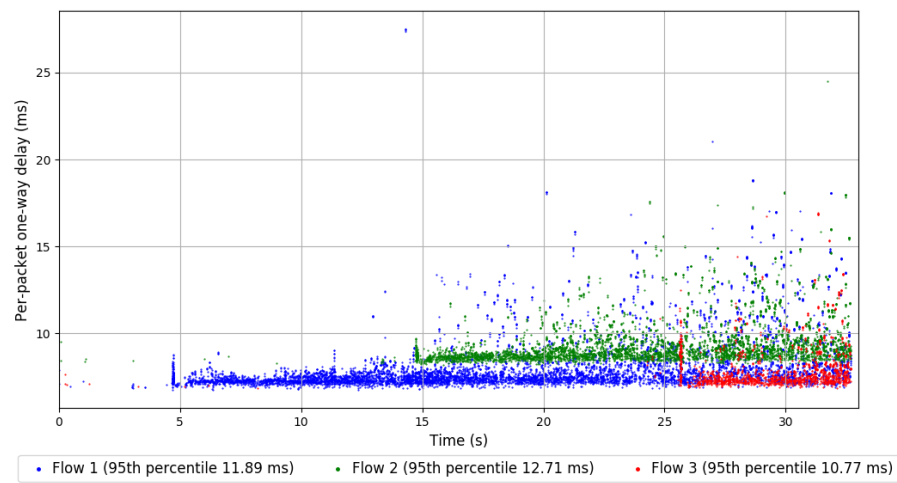
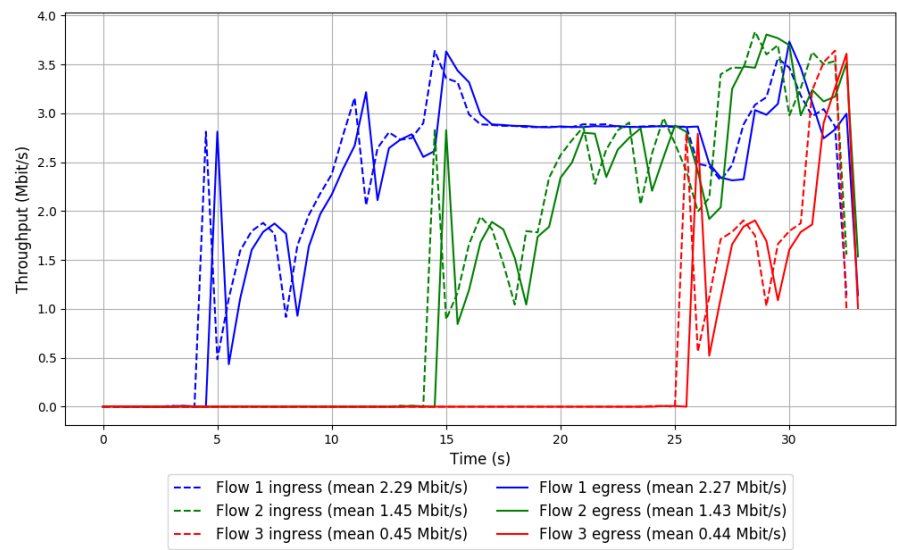


Run 2: Statistics of WebRTC media

Start at: 2018-09-07 15:09:33
End at: 2018-09-07 15:10:03
Local clock offset: -0.197 ms
Remote clock offset: -5.392 ms

Below is generated by plot.py at 2018-09-07 16:21:05
Datalink statistics
-- Total of 3 flows:
Average throughput: 4.14 Mbit/s
95th percentile per-packet one-way delay: 11.955 ms
Loss rate: 1.02%
-- Flow 1:
Average throughput: 2.27 Mbit/s
95th percentile per-packet one-way delay: 11.888 ms
Loss rate: 0.65%
-- Flow 2:
Average throughput: 1.43 Mbit/s
95th percentile per-packet one-way delay: 12.707 ms
Loss rate: 1.13%
-- Flow 3:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 10.772 ms
Loss rate: 2.52%

Run 2: Report of WebRTC media — Data Link

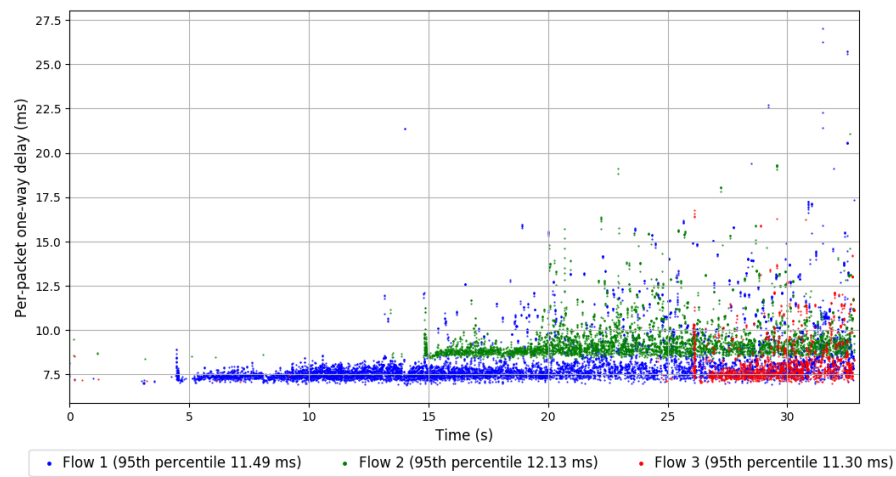
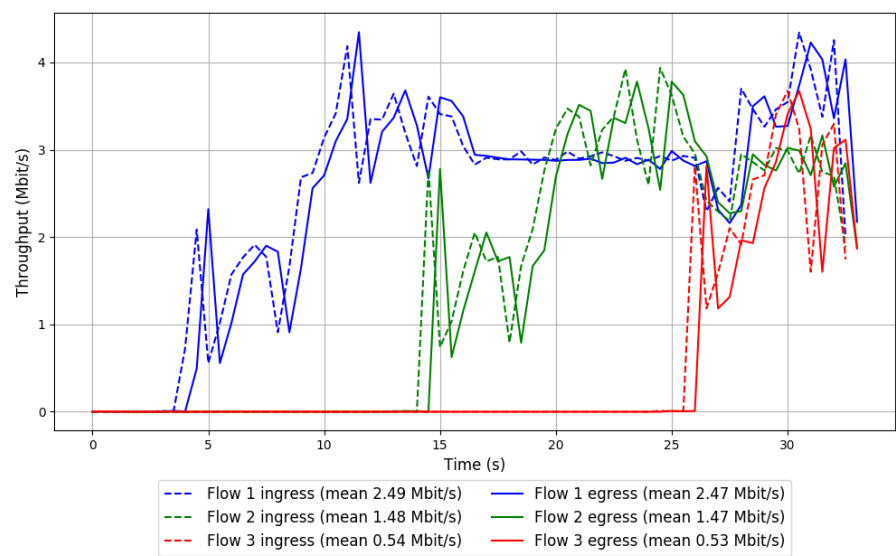


Run 3: Statistics of WebRTC media

Start at: 2018-09-07 15:30:28
End at: 2018-09-07 15:30:58
Local clock offset: 0.63 ms
Remote clock offset: -5.125 ms

Below is generated by plot.py at 2018-09-07 16:21:05
Datalink statistics
-- Total of 3 flows:
Average throughput: 4.46 Mbit/s
95th percentile per-packet one-way delay: 11.613 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 2.47 Mbit/s
95th percentile per-packet one-way delay: 11.487 ms
Loss rate: 0.79%
-- Flow 2:
Average throughput: 1.47 Mbit/s
95th percentile per-packet one-way delay: 12.128 ms
Loss rate: 0.71%
-- Flow 3:
Average throughput: 0.53 Mbit/s
95th percentile per-packet one-way delay: 11.301 ms
Loss rate: 1.26%

Run 3: Report of WebRTC media — Data Link

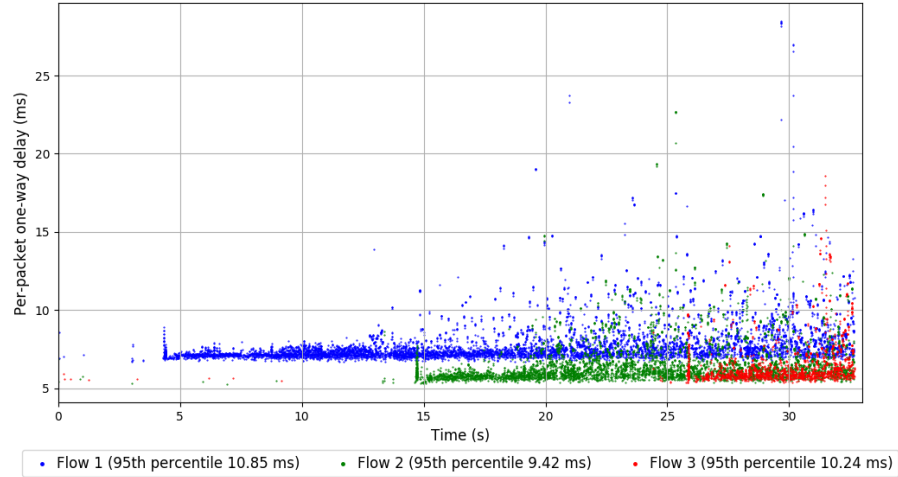
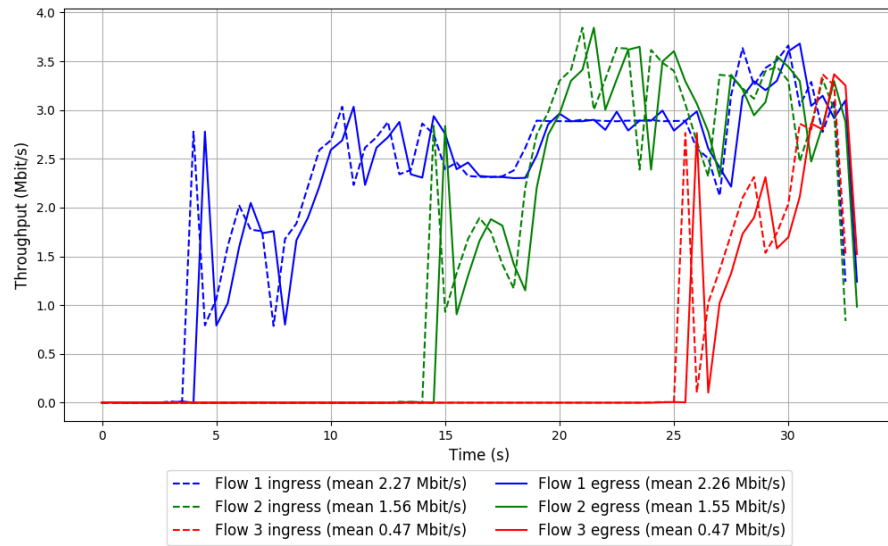


Run 4: Statistics of WebRTC media

Start at: 2018-09-07 15:51:21
End at: 2018-09-07 15:51:51
Local clock offset: 2.353 ms
Remote clock offset: -5.307 ms

Below is generated by plot.py at 2018-09-07 16:21:05
Datalink statistics
-- Total of 3 flows:
Average throughput: 4.28 Mbit/s
95th percentile per-packet one-way delay: 10.416 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 2.26 Mbit/s
95th percentile per-packet one-way delay: 10.849 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 1.55 Mbit/s
95th percentile per-packet one-way delay: 9.417 ms
Loss rate: 0.34%
-- Flow 3:
Average throughput: 0.47 Mbit/s
95th percentile per-packet one-way delay: 10.242 ms
Loss rate: 0.52%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-09-07 16:12:10
End at: 2018-09-07 16:12:40
Local clock offset: 1.281 ms
Remote clock offset: -5.581 ms

Below is generated by plot.py at 2018-09-07 16:21:05
Datalink statistics
-- Total of 3 flows:
Average throughput: 4.15 Mbit/s
95th percentile per-packet one-way delay: 10.534 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 2.31 Mbit/s
95th percentile per-packet one-way delay: 10.436 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 1.45 Mbit/s
95th percentile per-packet one-way delay: 9.614 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 11.987 ms
Loss rate: 0.00%

Run 5: Report of WebRTC media — Data Link

