

Pantheon Report

Generated at 2018-05-30 15:17:59 (UTC).

Data path: AWS India 1 Ethernet (*local*) → India ppp0 ppp0 (*remote*).

Repeated the test of 16 congestion control schemes 3 times.

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

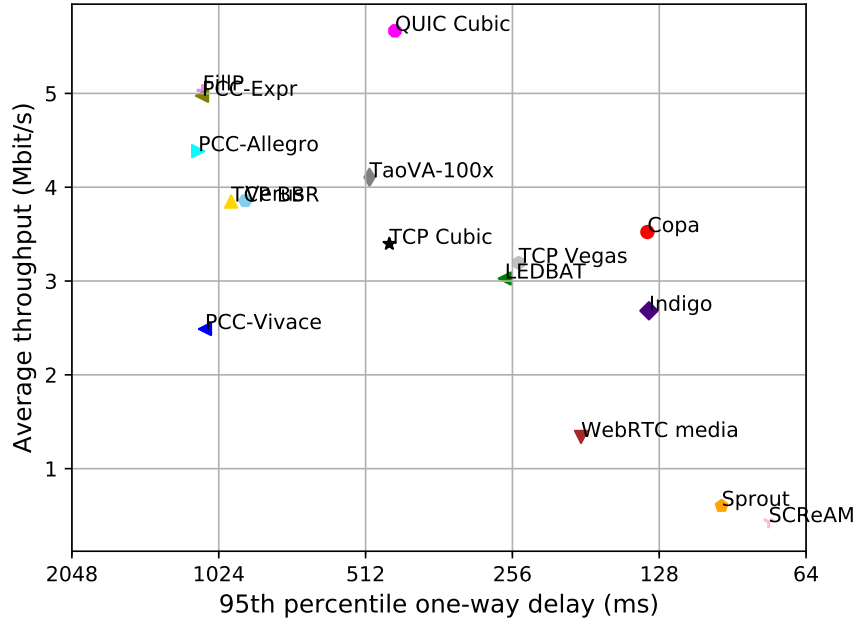
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

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

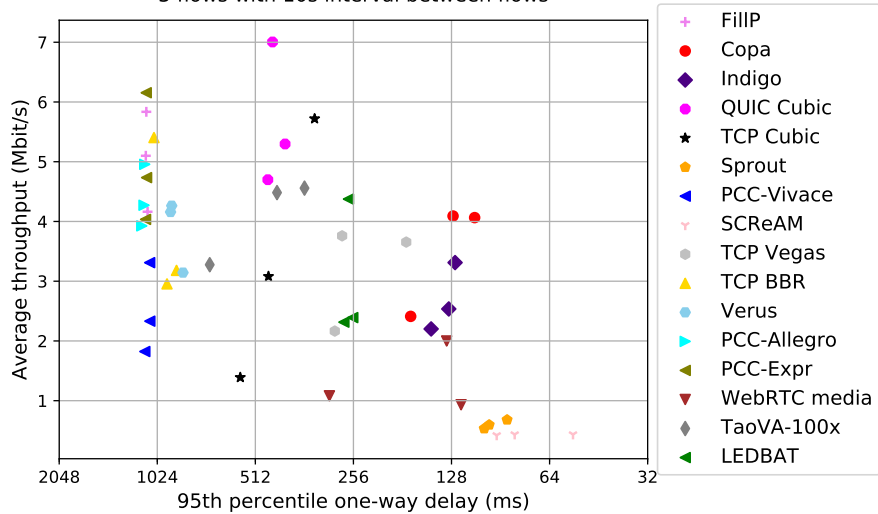
Git summary:

```
branch: master @ 227fdf9a3757f17b88537cceed5743a33037a3d2
third_party/fillp @ d47f4fa1b454a5e3c0537115c5a28436dbd4b834
third_party/genericCC @ c7966e494a929986eaa5a9c169a7f381fe1bbbe5
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ 6f038ed31259d366f9840f65b82cbe8f464b1b39
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quick @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2
M src/ScreamClient
M src/ScreamServer
third_party/sprout @ c838669682f0c19f6baf92afc9a596a406d48c1f
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 ppp0, 3 runs of 30s each per scheme
 3 flows with 10s interval between flows (mean of all runs by scheme)



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



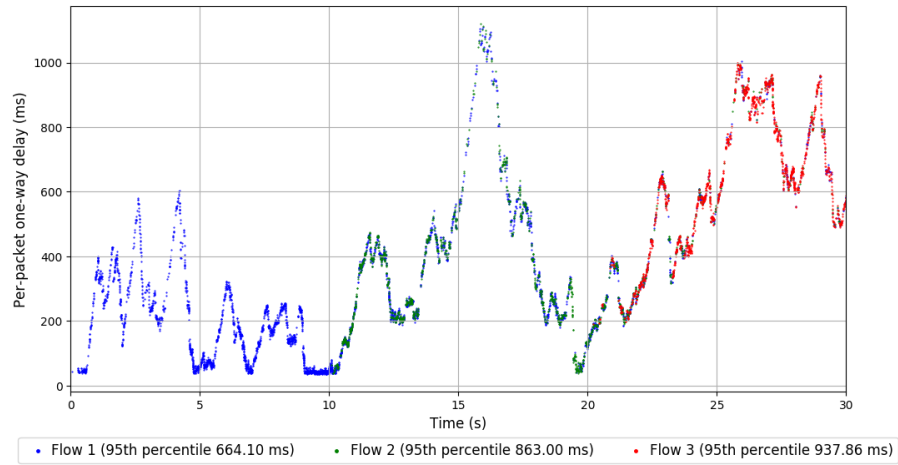
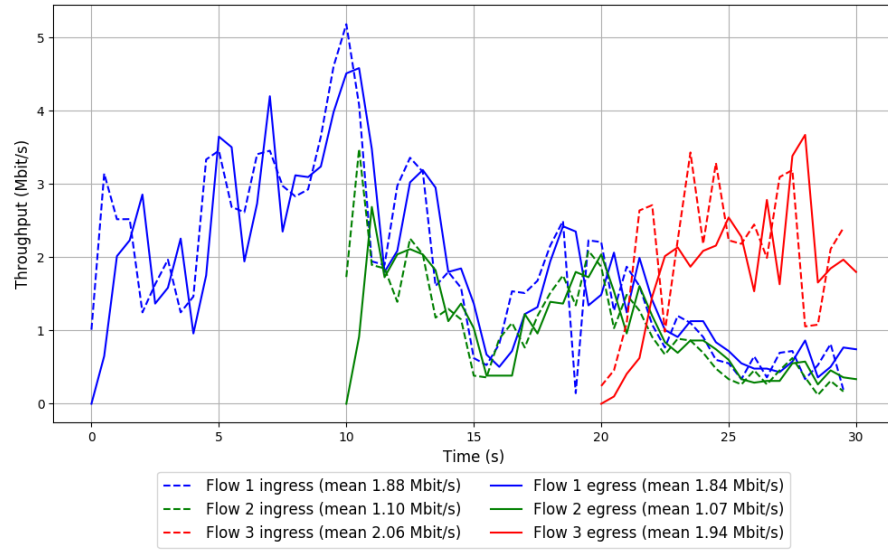
scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	3	2.51	1.39	1.29	857.95	964.23	1020.31	2.72	6.96	7.62
Copa	3	1.95	1.63	1.47	130.03	136.19	139.96	0.10	0.16	0.63
TCP Cubic	3	2.31	1.13	1.06	436.80	469.82	472.19	0.64	1.05	3.12
FillP	3	3.59	1.70	1.25	1102.62	1099.71	1110.82	51.25	34.51	53.91
Indigo	3	1.23	1.24	1.94	138.04	142.67	129.76	0.02	0.14	0.31
LEDBAT	3	1.92	1.18	0.99	254.24	311.16	283.97	0.54	0.77	1.37
PCC-Allegro	3	2.82	1.72	1.47	1097.01	1145.70	1275.44	33.57	73.46	96.70
PCC-Expr	3	2.70	2.50	2.13	1099.92	1106.43	1120.38	38.95	51.69	74.77
QUIC Cubic	3	4.06	1.85	1.21	428.83	506.50	479.85	0.78	2.06	4.01
SCReAM	3	0.22	0.22	0.21	72.98	78.53	75.09	0.04	0.00	0.12
Sprout	3	0.31	0.28	0.32	82.78	108.94	106.10	0.00	0.05	0.70
TaoVA-100x	3	2.45	1.69	1.64	399.18	548.02	598.96	0.75	1.45	4.45
TCP Vegas	3	1.62	1.61	1.52	215.19	329.09	291.67	0.19	0.72	0.87
Verus	3	2.97	0.80	1.21	829.37	894.62	1024.16	4.47	5.99	10.92
PCC-Vivace	3	1.48	1.09	0.96	1086.30	1096.98	1103.17	20.15	29.59	39.01
WebRTC media	3	0.71	0.40	0.22	133.37	179.21	241.06	0.07	0.04	0.63

Run 1: Statistics of TCP BBR

Start at: 2018-05-30 14:38:03
End at: 2018-05-30 14:38:33
Local clock offset: 0.307 ms
Remote clock offset: -7.304 ms

Below is generated by plot.py at 2018-05-30 15:17:11
Datalink statistics
-- Total of 3 flows:
Average throughput: 3.18 Mbit/s
95th percentile per-packet one-way delay: 893.795 ms
Loss rate: 2.83%
-- Flow 1:
Average throughput: 1.84 Mbit/s
95th percentile per-packet one-way delay: 664.098 ms
Loss rate: 1.33%
-- Flow 2:
Average throughput: 1.07 Mbit/s
95th percentile per-packet one-way delay: 862.995 ms
Loss rate: 2.22%
-- Flow 3:
Average throughput: 1.94 Mbit/s
95th percentile per-packet one-way delay: 937.860 ms
Loss rate: 7.54%

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2018-05-30 14:55:44

End at: 2018-05-30 14:56:14

Local clock offset: 1.178 ms

Remote clock offset: 2.453 ms

Below is generated by plot.py at 2018-05-30 15:17:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.40 Mbit/s

95th percentile per-packet one-way delay: 1048.139 ms

Loss rate: 7.69%

-- Flow 1:

Average throughput: 3.72 Mbit/s

95th percentile per-packet one-way delay: 1029.072 ms

Loss rate: 5.06%

-- Flow 2:

Average throughput: 2.34 Mbit/s

95th percentile per-packet one-way delay: 1071.580 ms

Loss rate: 13.41%

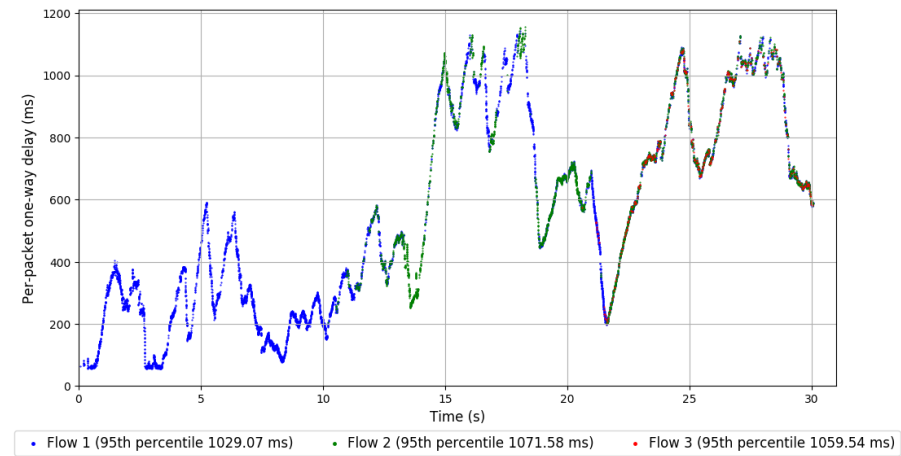
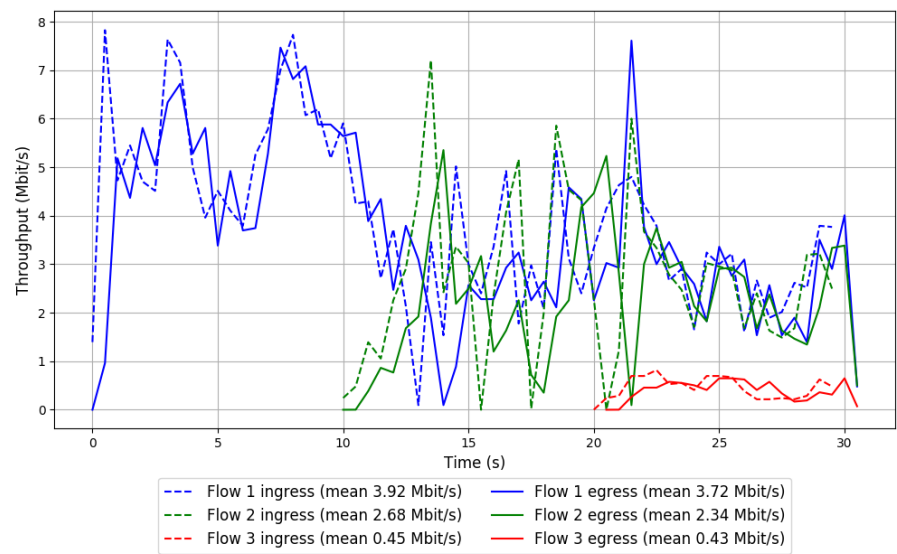
-- Flow 3:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 1059.538 ms

Loss rate: 8.31%

Run 2: Report of TCP BBR — Data Link

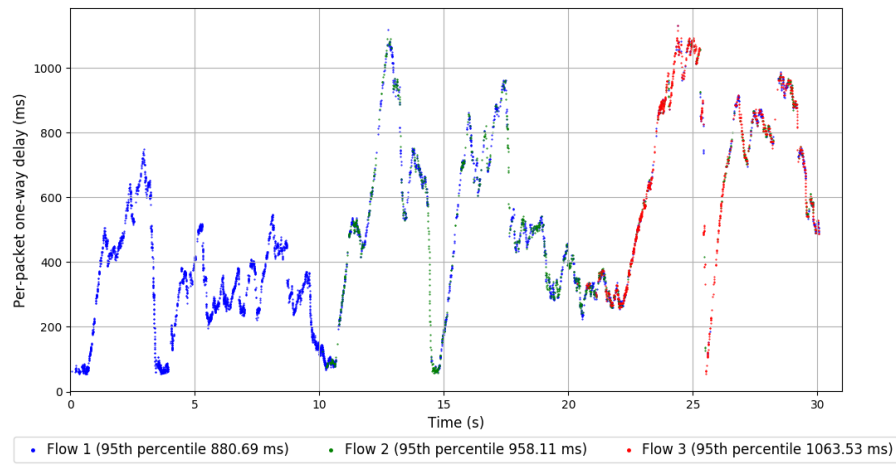
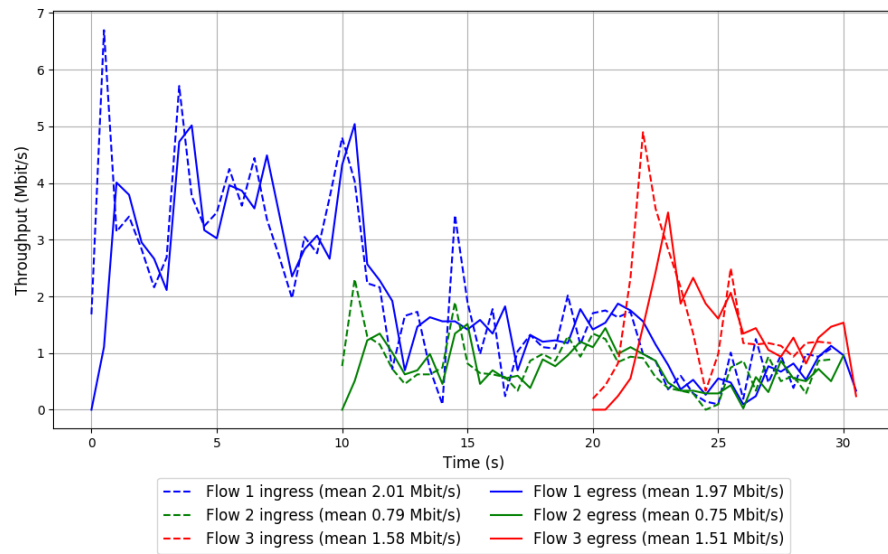


Run 3: Statistics of TCP BBR

Start at: 2018-05-30 15:14:04
End at: 2018-05-30 15:14:34
Local clock offset: 1.094 ms
Remote clock offset: 10.211 ms

Below is generated by plot.py at 2018-05-30 15:17:14
Datalink statistics
-- Total of 3 flows:
Average throughput: 2.96 Mbit/s
95th percentile per-packet one-way delay: 955.944 ms
Loss rate: 3.27%
-- Flow 1:
Average throughput: 1.97 Mbit/s
95th percentile per-packet one-way delay: 880.686 ms
Loss rate: 1.78%
-- Flow 2:
Average throughput: 0.75 Mbit/s
95th percentile per-packet one-way delay: 958.105 ms
Loss rate: 5.25%
-- Flow 3:
Average throughput: 1.51 Mbit/s
95th percentile per-packet one-way delay: 1063.526 ms
Loss rate: 7.01%

Run 3: Report of TCP BBR — Data Link



Run 1: Statistics of Copa

Start at: 2018-05-30 14:23:50

End at: 2018-05-30 14:24:20

Local clock offset: -0.34 ms

Remote clock offset: 11.95 ms

Below is generated by plot.py at 2018-05-30 15:17:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 2.41 Mbit/s

95th percentile per-packet one-way delay: 170.816 ms

Loss rate: 0.24%

-- Flow 1:

Average throughput: 1.31 Mbit/s

95th percentile per-packet one-way delay: 168.646 ms

Loss rate: 0.14%

-- Flow 2:

Average throughput: 1.14 Mbit/s

95th percentile per-packet one-way delay: 176.578 ms

Loss rate: 0.17%

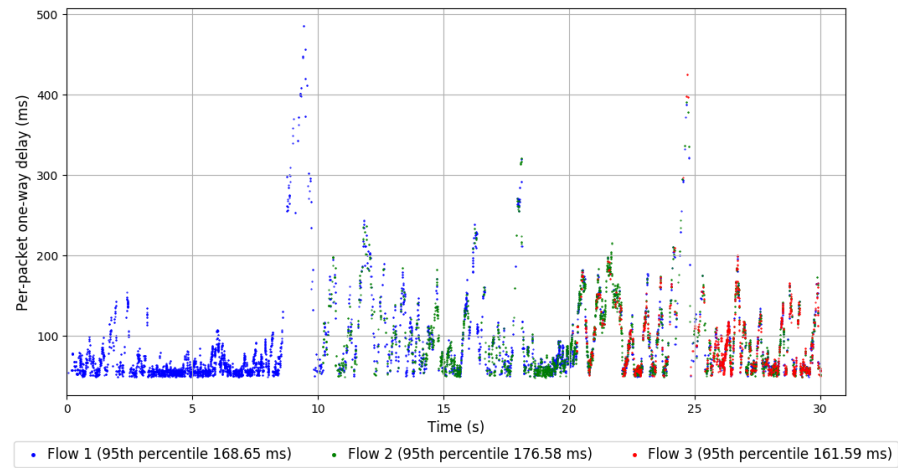
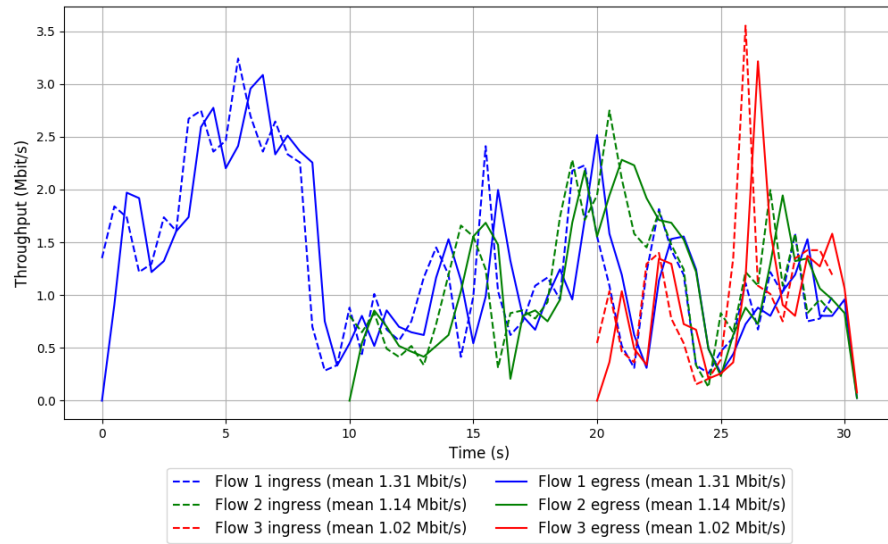
-- Flow 3:

Average throughput: 1.02 Mbit/s

95th percentile per-packet one-way delay: 161.593 ms

Loss rate: 0.77%

Run 1: Report of Copa — Data Link

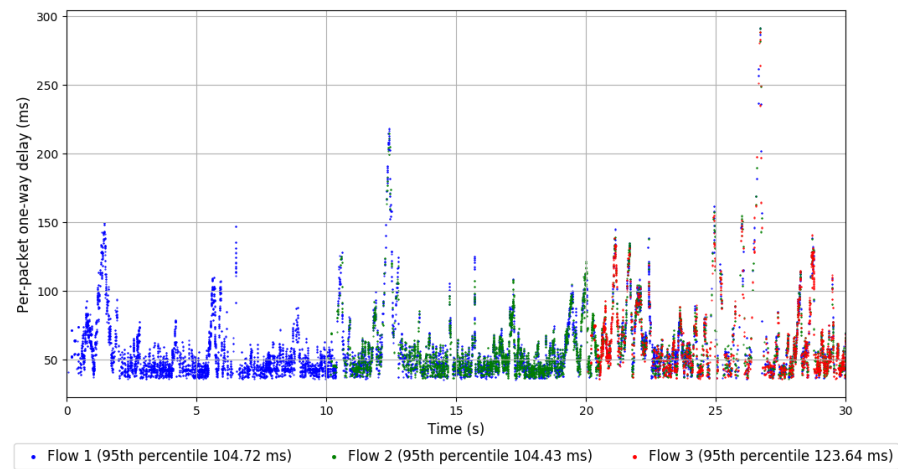
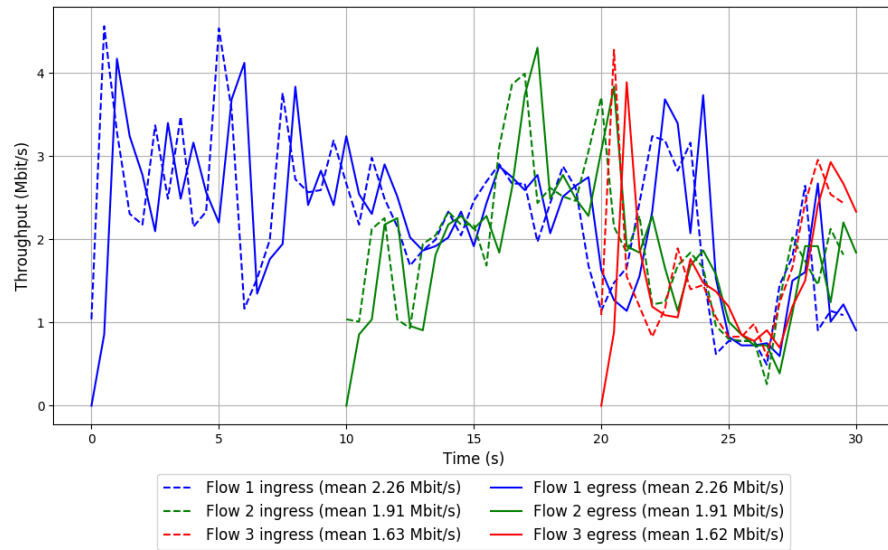


Run 2: Statistics of Copa

Start at: 2018-05-30 14:41:20
End at: 2018-05-30 14:41:50
Local clock offset: -1.002 ms
Remote clock offset: -9.145 ms

Below is generated by plot.py at 2018-05-30 15:17:17
Datalink statistics
-- Total of 3 flows:
Average throughput: 4.06 Mbit/s
95th percentile per-packet one-way delay: 108.691 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 2.26 Mbit/s
95th percentile per-packet one-way delay: 104.716 ms
Loss rate: 0.15%
-- Flow 2:
Average throughput: 1.91 Mbit/s
95th percentile per-packet one-way delay: 104.426 ms
Loss rate: 0.31%
-- Flow 3:
Average throughput: 1.62 Mbit/s
95th percentile per-packet one-way delay: 123.637 ms
Loss rate: 1.05%

Run 2: Report of Copa — Data Link

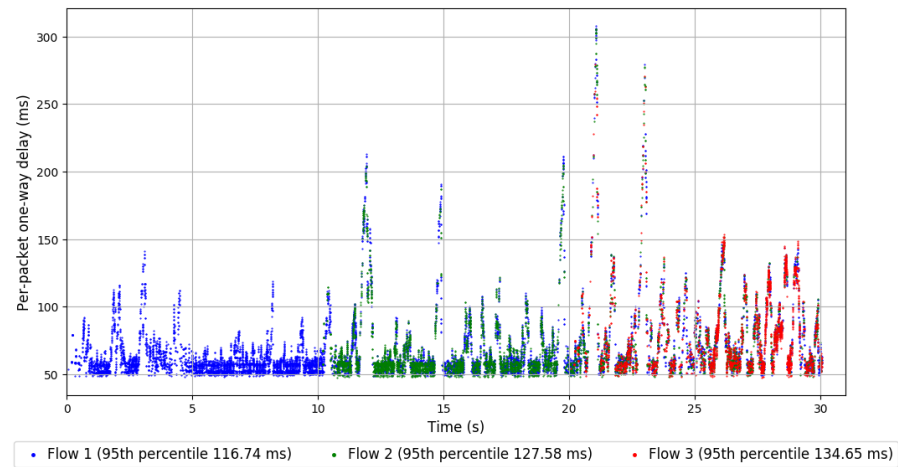
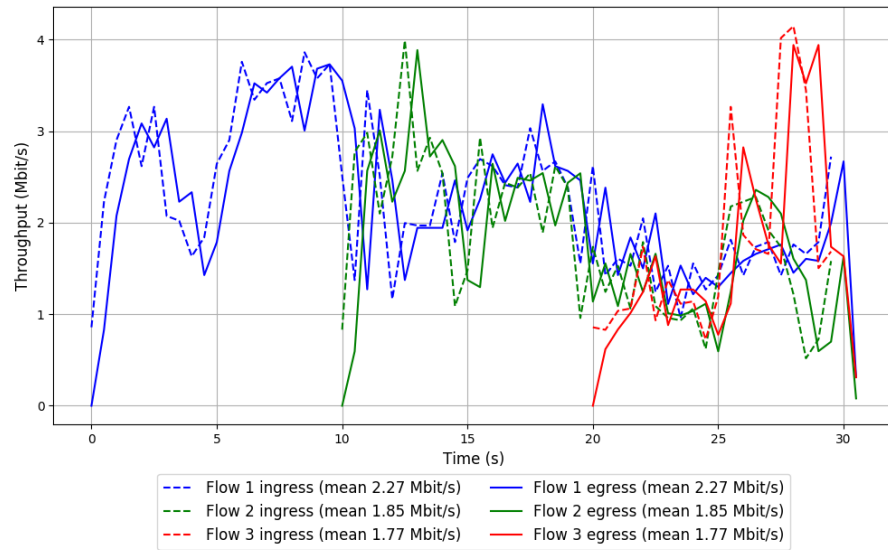


Run 3: Statistics of Copa

Start at: 2018-05-30 14:59:12
End at: 2018-05-30 14:59:42
Local clock offset: 3.428 ms
Remote clock offset: -4.568 ms

Below is generated by plot.py at 2018-05-30 15:17:17
Datalink statistics
-- Total of 3 flows:
Average throughput: 4.09 Mbit/s
95th percentile per-packet one-way delay: 126.620 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 2.27 Mbit/s
95th percentile per-packet one-way delay: 116.739 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.85 Mbit/s
95th percentile per-packet one-way delay: 127.577 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 1.77 Mbit/s
95th percentile per-packet one-way delay: 134.647 ms
Loss rate: 0.07%

Run 3: Report of Copa — Data Link

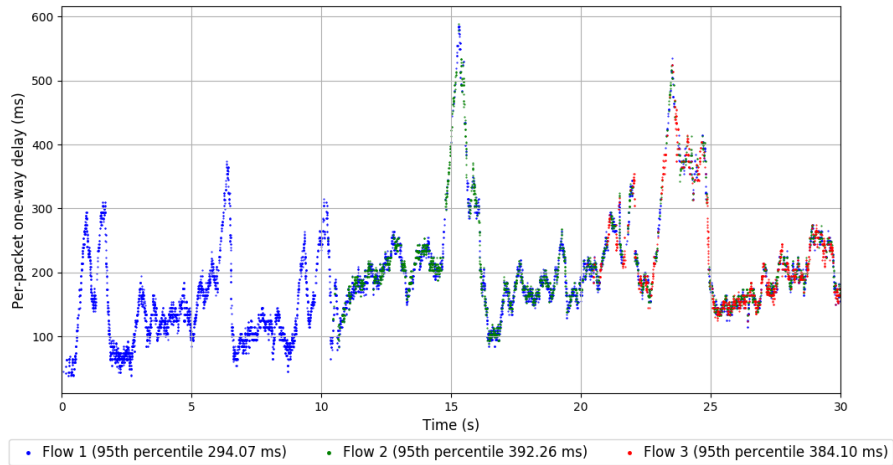
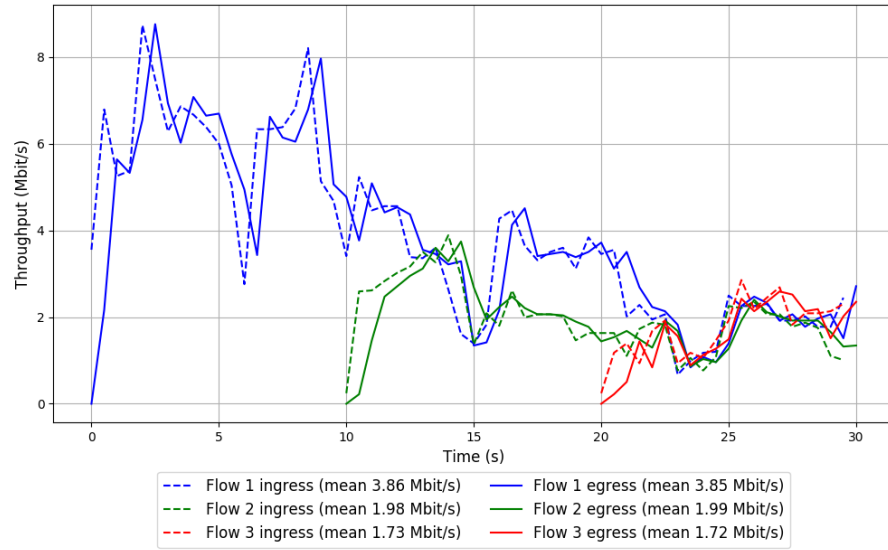


Run 1: Statistics of TCP Cubic

Start at: 2018-05-30 14:39:09
End at: 2018-05-30 14:39:39
Local clock offset: -0.03 ms
Remote clock offset: -8.405 ms

Below is generated by plot.py at 2018-05-30 15:17:17
Datalink statistics
-- Total of 3 flows:
Average throughput: 5.72 Mbit/s
95th percentile per-packet one-way delay: 336.825 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 3.85 Mbit/s
95th percentile per-packet one-way delay: 294.074 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 1.99 Mbit/s
95th percentile per-packet one-way delay: 392.258 ms
Loss rate: 0.58%
-- Flow 3:
Average throughput: 1.72 Mbit/s
95th percentile per-packet one-way delay: 384.103 ms
Loss rate: 3.20%

Run 1: Report of TCP Cubic — Data Link

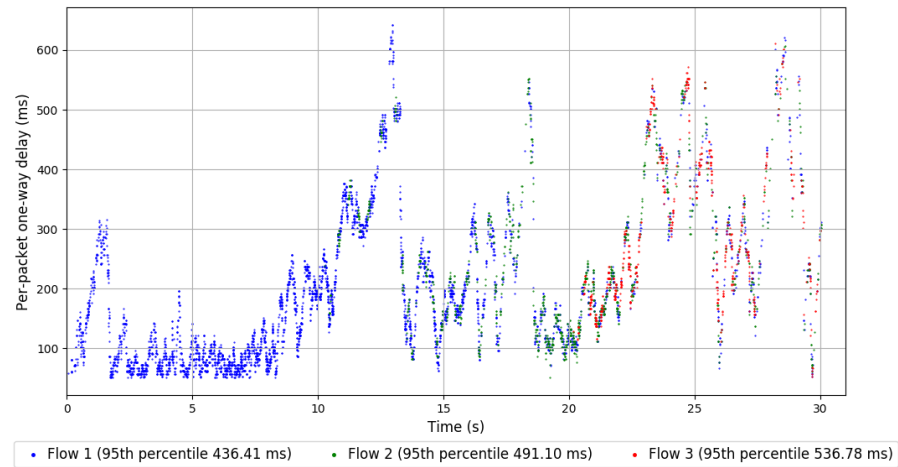
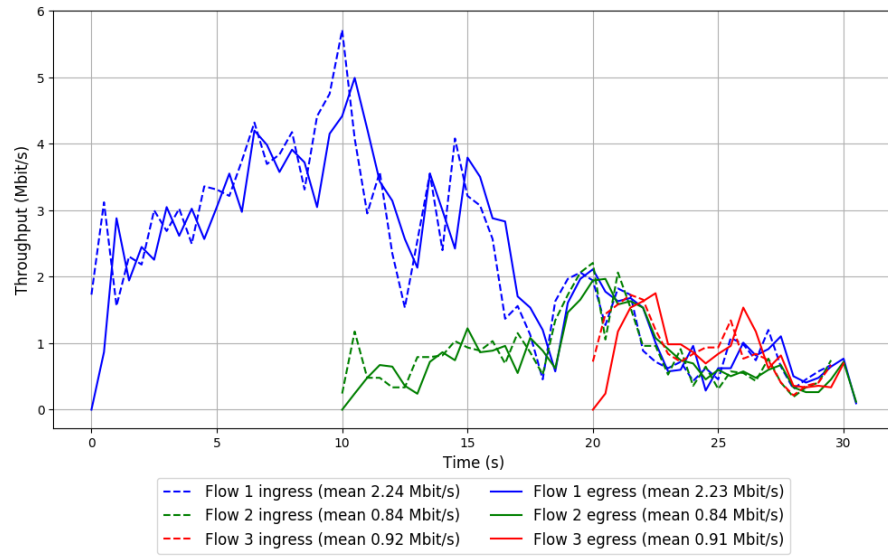


Run 2: Statistics of TCP Cubic

Start at: 2018-05-30 14:56:57
End at: 2018-05-30 14:57:27
Local clock offset: 2.41 ms
Remote clock offset: -3.234 ms

Below is generated by plot.py at 2018-05-30 15:17:17
Datalink statistics
-- Total of 3 flows:
Average throughput: 3.08 Mbit/s
95th percentile per-packet one-way delay: 466.639 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 2.23 Mbit/s
95th percentile per-packet one-way delay: 436.409 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.84 Mbit/s
95th percentile per-packet one-way delay: 491.102 ms
Loss rate: 1.07%
-- Flow 3:
Average throughput: 0.91 Mbit/s
95th percentile per-packet one-way delay: 536.779 ms
Loss rate: 2.48%

Run 2: Report of TCP Cubic — Data Link

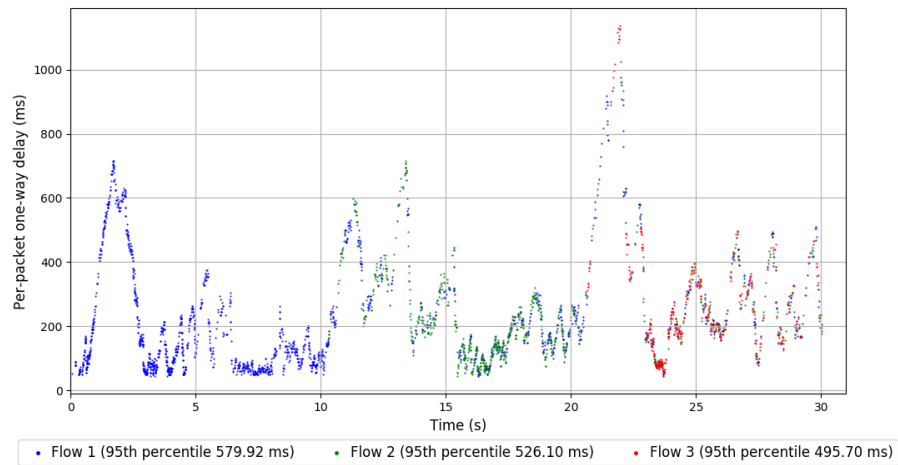
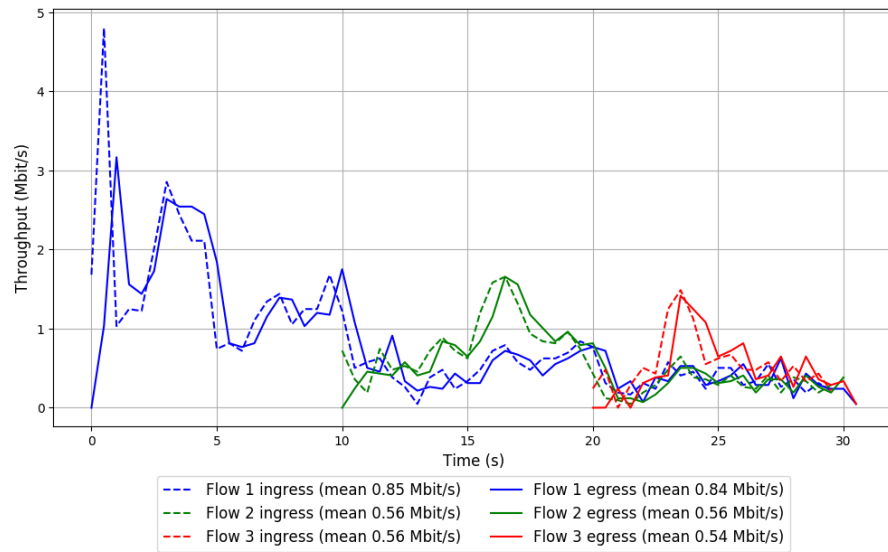


Run 3: Statistics of TCP Cubic

Start at: 2018-05-30 15:15:12
End at: 2018-05-30 15:15:42
Local clock offset: 0.008 ms
Remote clock offset: -2.155 ms

Below is generated by plot.py at 2018-05-30 15:17:17
Datalink statistics
-- Total of 3 flows:
Average throughput: 1.39 Mbit/s
95th percentile per-packet one-way delay: 569.485 ms
Loss rate: 1.56%
-- Flow 1:
Average throughput: 0.84 Mbit/s
95th percentile per-packet one-way delay: 579.925 ms
Loss rate: 1.13%
-- Flow 2:
Average throughput: 0.56 Mbit/s
95th percentile per-packet one-way delay: 526.097 ms
Loss rate: 1.49%
-- Flow 3:
Average throughput: 0.54 Mbit/s
95th percentile per-packet one-way delay: 495.701 ms
Loss rate: 3.69%

Run 3: Report of TCP Cubic — Data Link

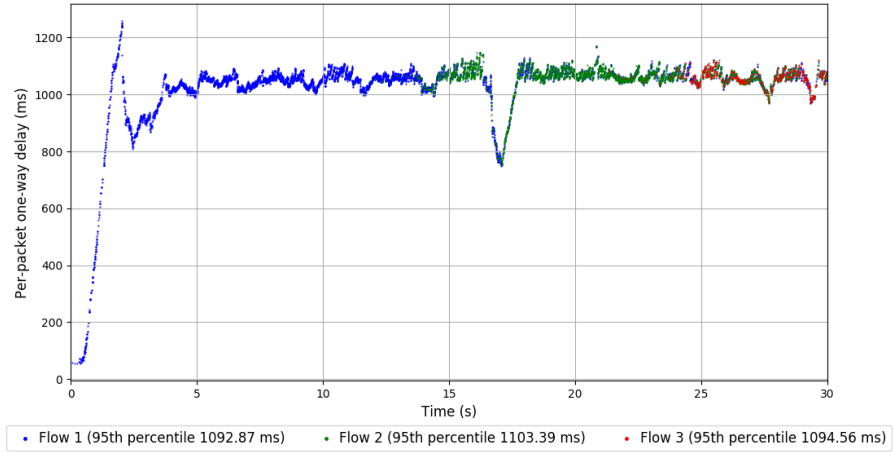
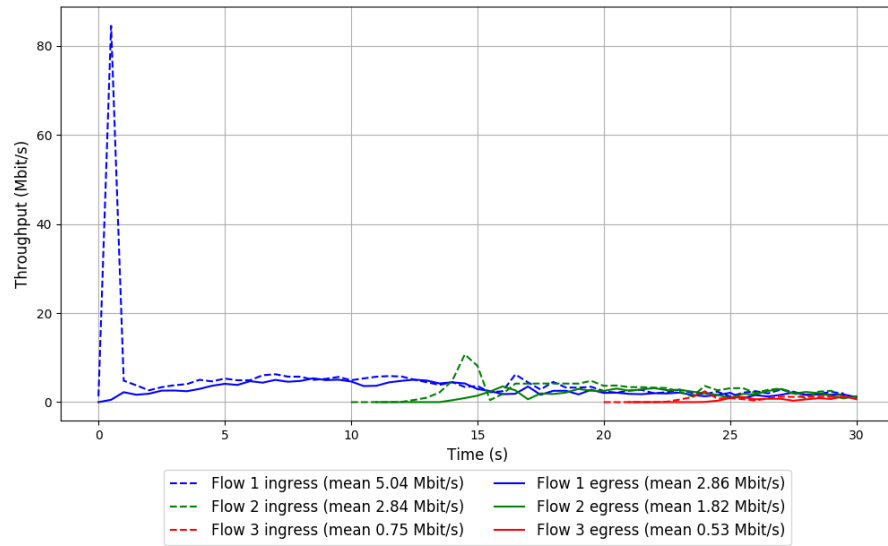


Run 1: Statistics of FillP

Start at: 2018-05-30 14:26:03
End at: 2018-05-30 14:26:33
Local clock offset: 1.848 ms
Remote clock offset: 13.855 ms

Below is generated by plot.py at 2018-05-30 15:17:21
Datalink statistics
-- Total of 3 flows:
Average throughput: 4.16 Mbit/s
95th percentile per-packet one-way delay: 1096.574 ms
Loss rate: 42.07%
-- Flow 1:
Average throughput: 2.86 Mbit/s
95th percentile per-packet one-way delay: 1092.866 ms
Loss rate: 43.30%
-- Flow 2:
Average throughput: 1.82 Mbit/s
95th percentile per-packet one-way delay: 1103.393 ms
Loss rate: 39.16%
-- Flow 3:
Average throughput: 0.53 Mbit/s
95th percentile per-packet one-way delay: 1094.561 ms
Loss rate: 39.15%

Run 1: Report of FillP — Data Link

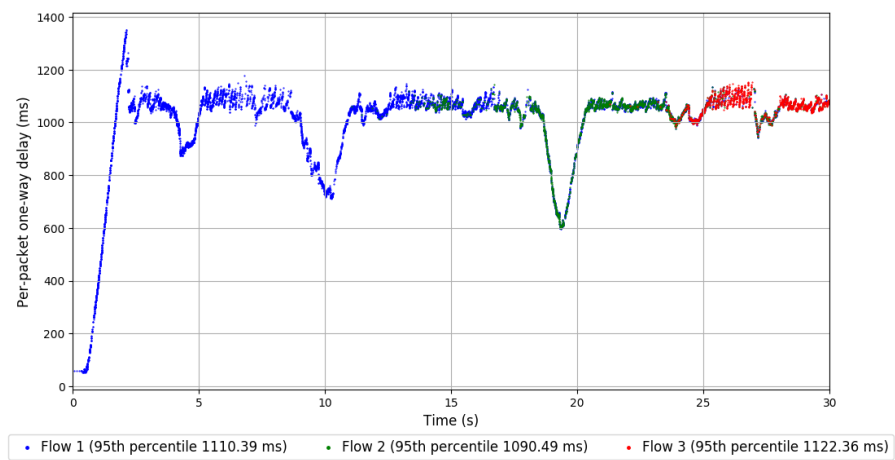
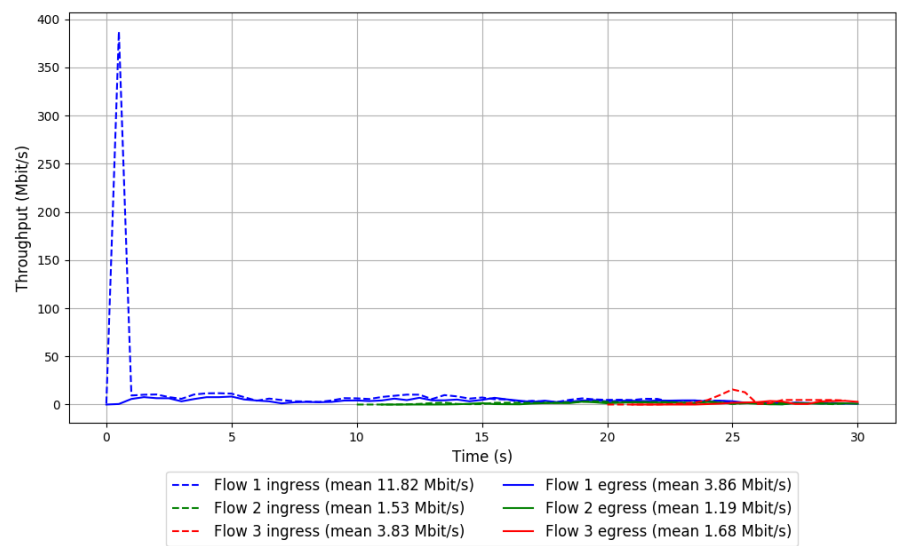


Run 2: Statistics of FillP

Start at: 2018-05-30 14:43:32
End at: 2018-05-30 14:44:02
Local clock offset: -0.706 ms
Remote clock offset: 4.699 ms

Below is generated by plot.py at 2018-05-30 15:17:26
Datalink statistics
-- Total of 3 flows:
Average throughput: 5.10 Mbit/s
95th percentile per-packet one-way delay: 1110.358 ms
Loss rate: 63.89%
-- Flow 1:
Average throughput: 3.86 Mbit/s
95th percentile per-packet one-way delay: 1110.387 ms
Loss rate: 67.37%
-- Flow 2:
Average throughput: 1.19 Mbit/s
95th percentile per-packet one-way delay: 1090.495 ms
Loss rate: 26.31%
-- Flow 3:
Average throughput: 1.68 Mbit/s
95th percentile per-packet one-way delay: 1122.364 ms
Loss rate: 61.70%

Run 2: Report of FillP — Data Link

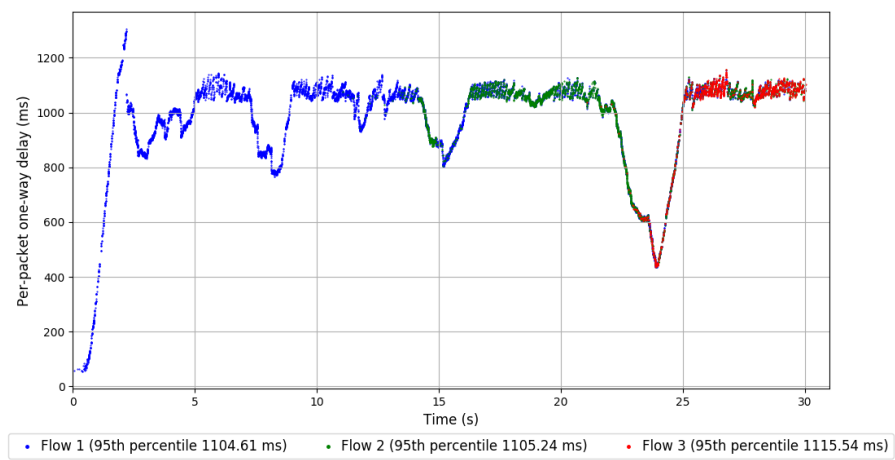
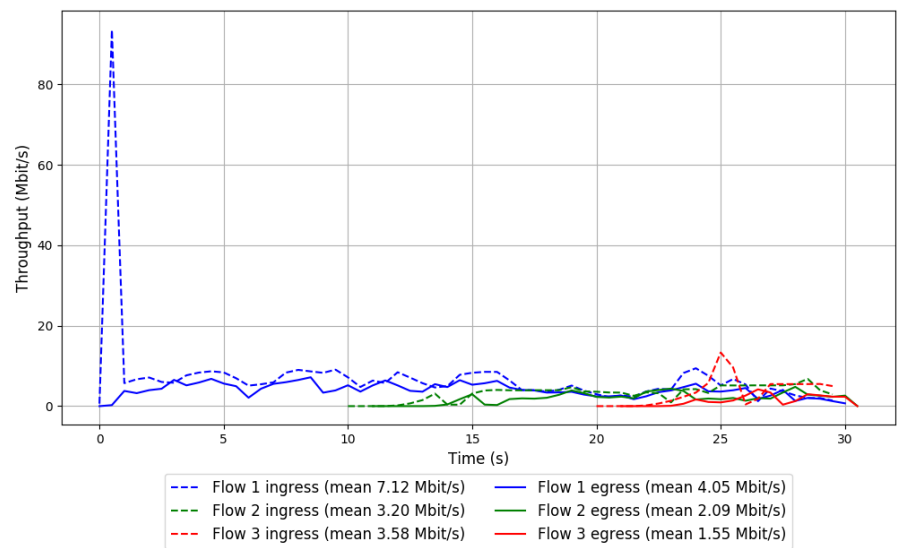


Run 3: Statistics of FillP

Start at: 2018-05-30 15:01:29
End at: 2018-05-30 15:01:59
Local clock offset: -1.928 ms
Remote clock offset: -8.964 ms

Below is generated by plot.py at 2018-05-30 15:17:26
Datalink statistics
-- Total of 3 flows:
Average throughput: 5.84 Mbit/s
95th percentile per-packet one-way delay: 1106.365 ms
Loss rate: 44.10%
-- Flow 1:
Average throughput: 4.05 Mbit/s
95th percentile per-packet one-way delay: 1104.612 ms
Loss rate: 43.09%
-- Flow 2:
Average throughput: 2.09 Mbit/s
95th percentile per-packet one-way delay: 1105.239 ms
Loss rate: 38.07%
-- Flow 3:
Average throughput: 1.55 Mbit/s
95th percentile per-packet one-way delay: 1115.541 ms
Loss rate: 60.88%

Run 3: Report of FillP — Data Link

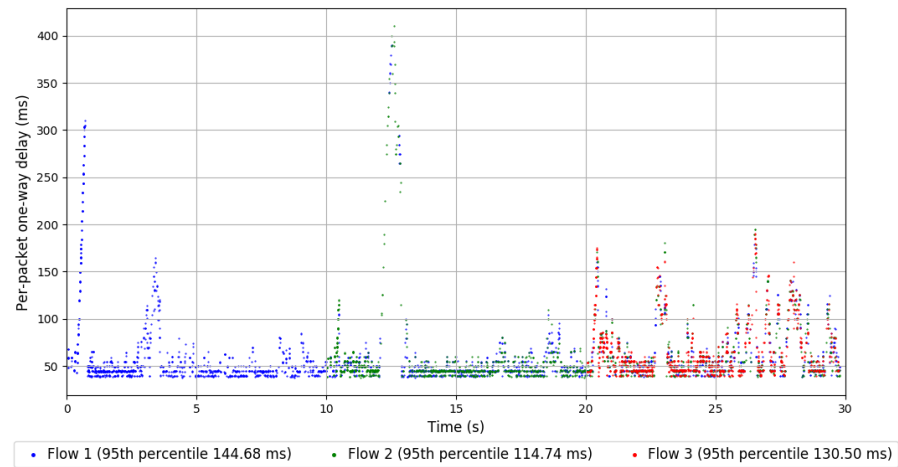
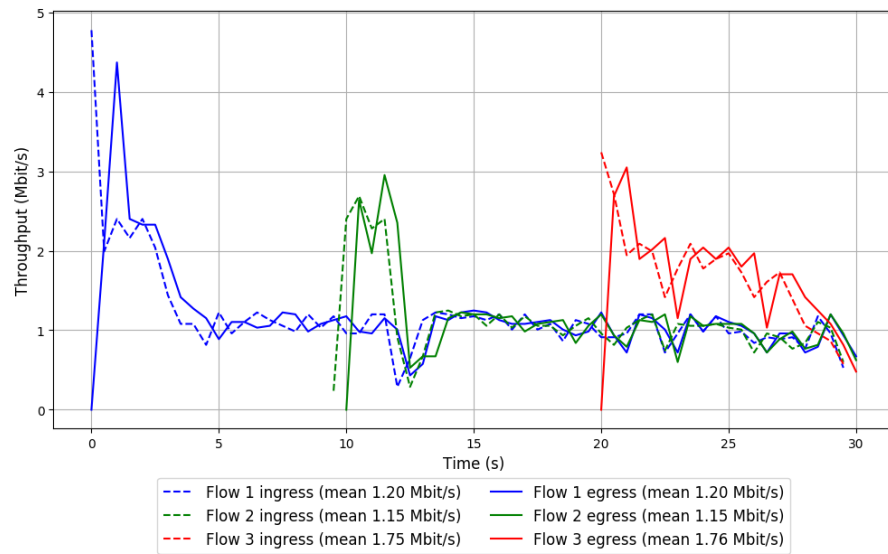


Run 1: Statistics of Indigo

Start at: 2018-05-30 14:30:25
End at: 2018-05-30 14:30:55
Local clock offset: -0.414 ms
Remote clock offset: -5.135 ms

Below is generated by plot.py at 2018-05-30 15:17:26
Datalink statistics
-- Total of 3 flows:
Average throughput: 2.54 Mbit/s
95th percentile per-packet one-way delay: 130.496 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 1.20 Mbit/s
95th percentile per-packet one-way delay: 144.679 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 1.15 Mbit/s
95th percentile per-packet one-way delay: 114.740 ms
Loss rate: 0.32%
-- Flow 3:
Average throughput: 1.76 Mbit/s
95th percentile per-packet one-way delay: 130.496 ms
Loss rate: 0.42%

Run 1: Report of Indigo — Data Link

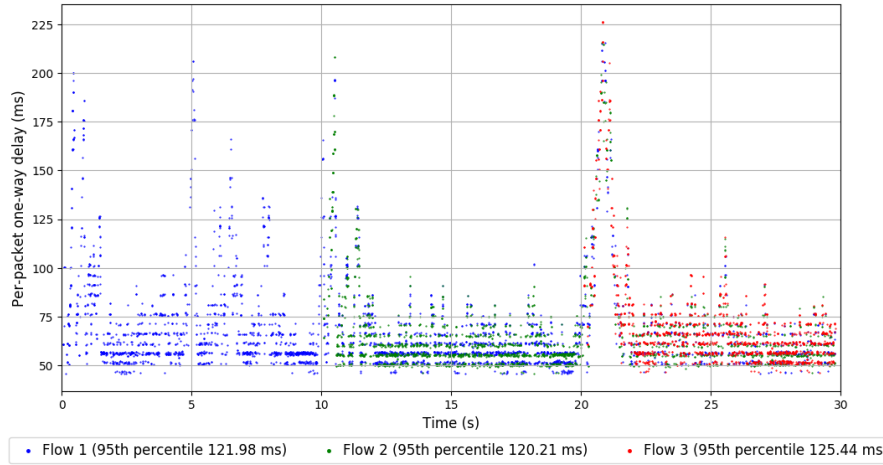
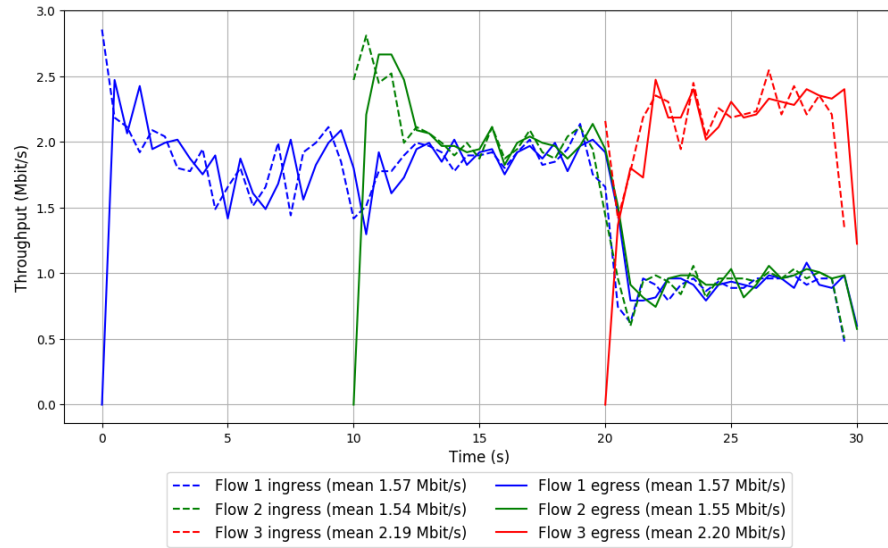


Run 2: Statistics of Indigo

Start at: 2018-05-30 14:47:54
End at: 2018-05-30 14:48:24
Local clock offset: -2.058 ms
Remote clock offset: -9.359 ms

Below is generated by plot.py at 2018-05-30 15:17:26
Datalink statistics
-- Total of 3 flows:
Average throughput: 3.31 Mbit/s
95th percentile per-packet one-way delay: 124.804 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 1.57 Mbit/s
95th percentile per-packet one-way delay: 121.980 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.55 Mbit/s
95th percentile per-packet one-way delay: 120.206 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 2.20 Mbit/s
95th percentile per-packet one-way delay: 125.440 ms
Loss rate: 0.50%

Run 2: Report of Indigo — Data Link



Run 3: Statistics of Indigo

Start at: 2018-05-30 15:06:04

End at: 2018-05-30 15:06:34

Local clock offset: -2.115 ms

Remote clock offset: 3.187 ms

Below is generated by plot.py at 2018-05-30 15:17:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 2.20 Mbit/s

95th percentile per-packet one-way delay: 147.815 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 0.92 Mbit/s

95th percentile per-packet one-way delay: 147.462 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.01 Mbit/s

95th percentile per-packet one-way delay: 193.067 ms

Loss rate: 0.06%

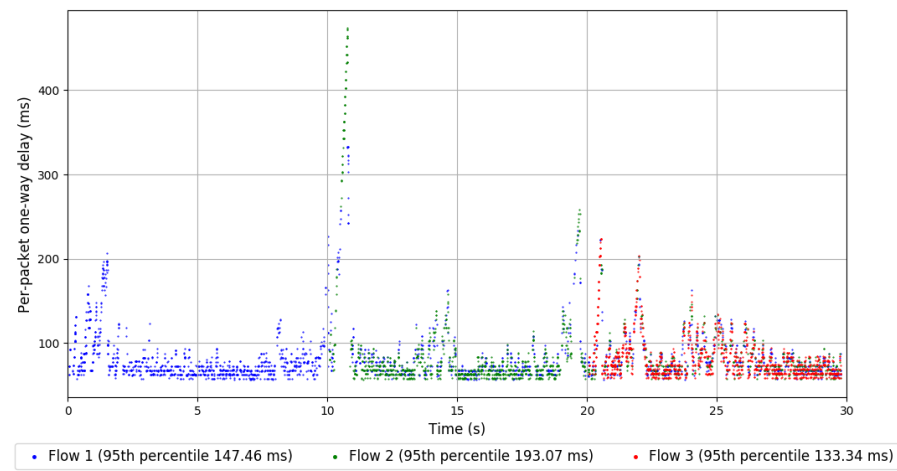
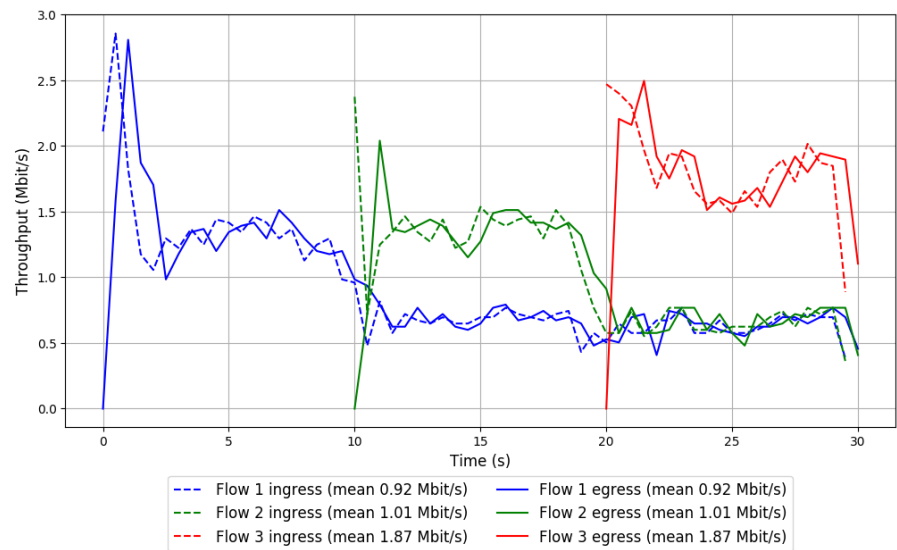
-- Flow 3:

Average throughput: 1.87 Mbit/s

95th percentile per-packet one-way delay: 133.339 ms

Loss rate: 0.00%

Run 3: Report of Indigo — Data Link

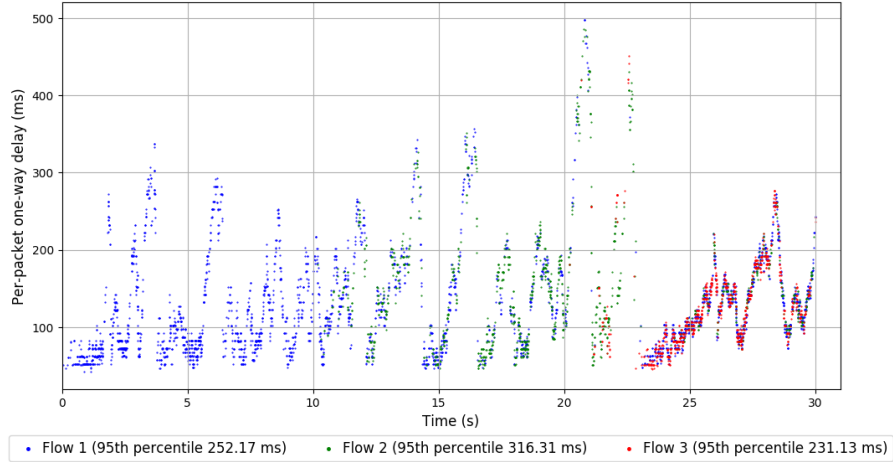
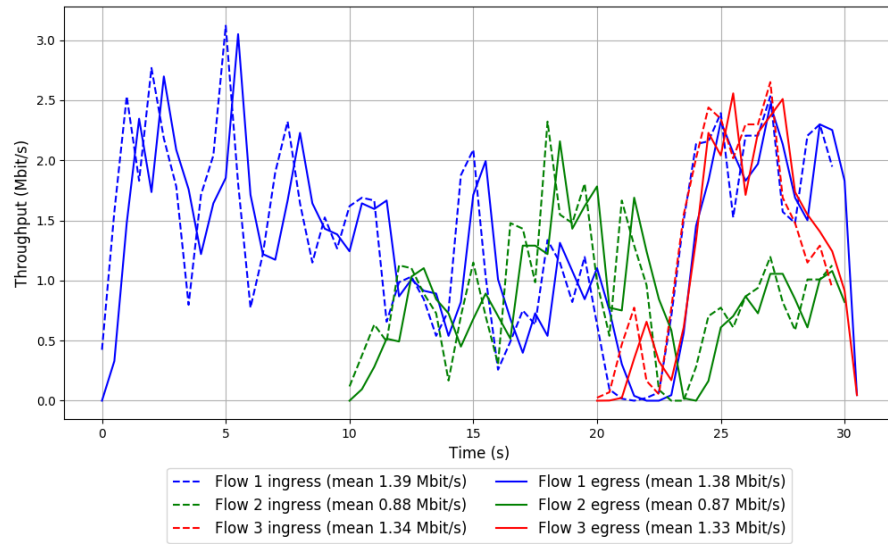


```
Run 1: Statistics of LEDBAT

Start at: 2018-05-30 14:27:08
End at: 2018-05-30 14:27:38
Local clock offset: -1.72 ms
Remote clock offset: 2.729 ms

# Below is generated by plot.py at 2018-05-30 15:17:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.39 Mbit/s
95th percentile per-packet one-way delay: 257.208 ms
Loss rate: 1.20%
-- Flow 1:
Average throughput: 1.38 Mbit/s
95th percentile per-packet one-way delay: 252.167 ms
Loss rate: 1.01%
-- Flow 2:
Average throughput: 0.87 Mbit/s
95th percentile per-packet one-way delay: 316.311 ms
Loss rate: 1.21%
-- Flow 3:
Average throughput: 1.33 Mbit/s
95th percentile per-packet one-way delay: 231.134 ms
Loss rate: 1.77%
```

Run 1: Report of LEDBAT — Data Link



Run 2: Statistics of LEDBAT

Start at: 2018-05-30 14:44:37

End at: 2018-05-30 14:45:07

Local clock offset: -1.578 ms

Remote clock offset: 11.32 ms

Below is generated by plot.py at 2018-05-30 15:17:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.37 Mbit/s

95th percentile per-packet one-way delay: 265.184 ms

Loss rate: 0.45%

-- Flow 1:

Average throughput: 2.80 Mbit/s

95th percentile per-packet one-way delay: 256.747 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 1.94 Mbit/s

95th percentile per-packet one-way delay: 326.811 ms

Loss rate: 0.61%

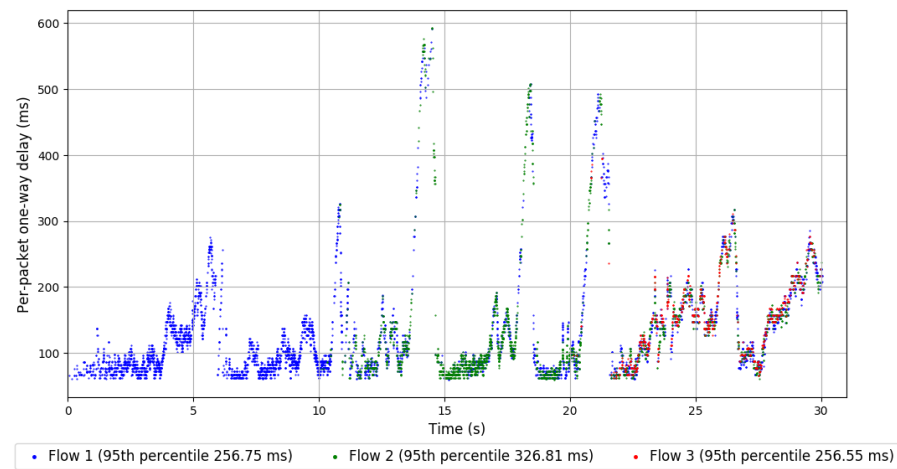
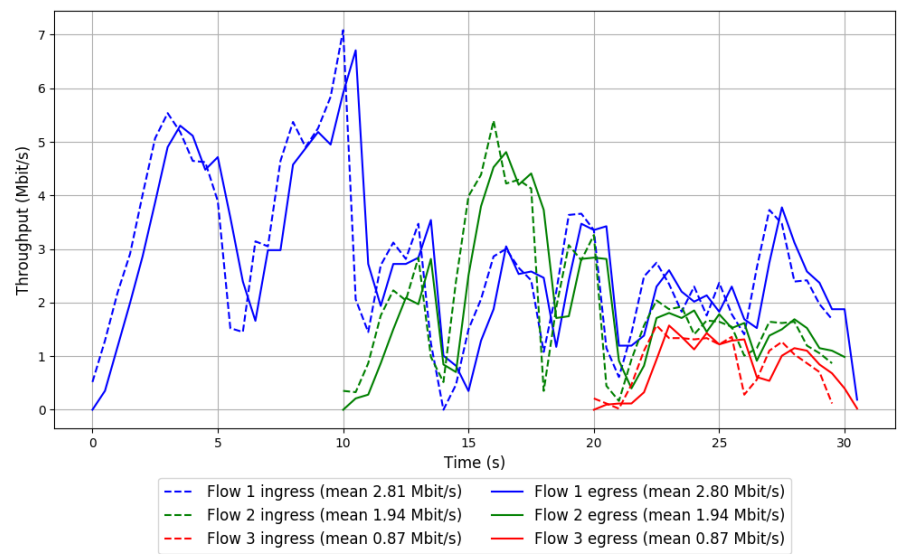
-- Flow 3:

Average throughput: 0.87 Mbit/s

95th percentile per-packet one-way delay: 256.552 ms

Loss rate: 0.41%

Run 2: Report of LEDBAT — Data Link

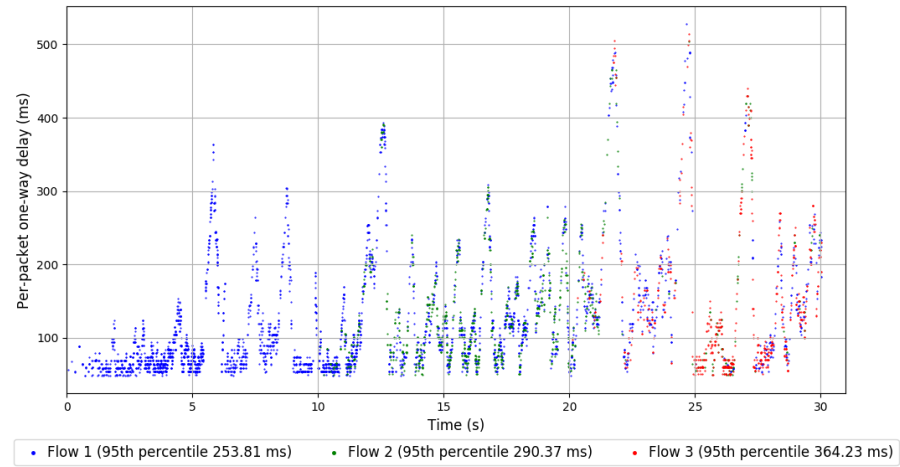
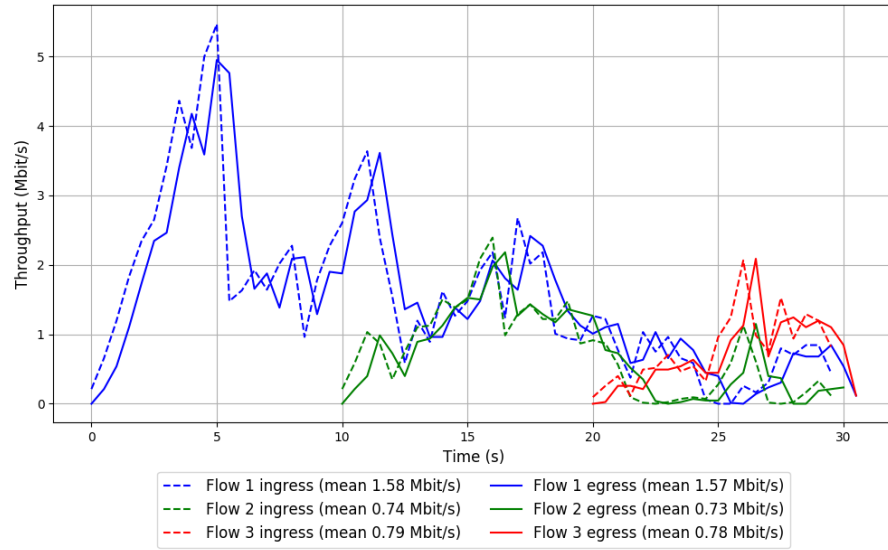


Run 3: Statistics of LEDBAT

Start at: 2018-05-30 15:02:38
End at: 2018-05-30 15:03:08
Local clock offset: -1.724 ms
Remote clock offset: -7.293 ms

Below is generated by plot.py at 2018-05-30 15:17:26
Datalink statistics
-- Total of 3 flows:
Average throughput: 2.31 Mbit/s
95th percentile per-packet one-way delay: 273.930 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 1.57 Mbit/s
95th percentile per-packet one-way delay: 253.807 ms
Loss rate: 0.22%
-- Flow 2:
Average throughput: 0.73 Mbit/s
95th percentile per-packet one-way delay: 290.367 ms
Loss rate: 0.48%
-- Flow 3:
Average throughput: 0.78 Mbit/s
95th percentile per-packet one-way delay: 364.232 ms
Loss rate: 1.94%

Run 3: Report of LEDBAT — Data Link

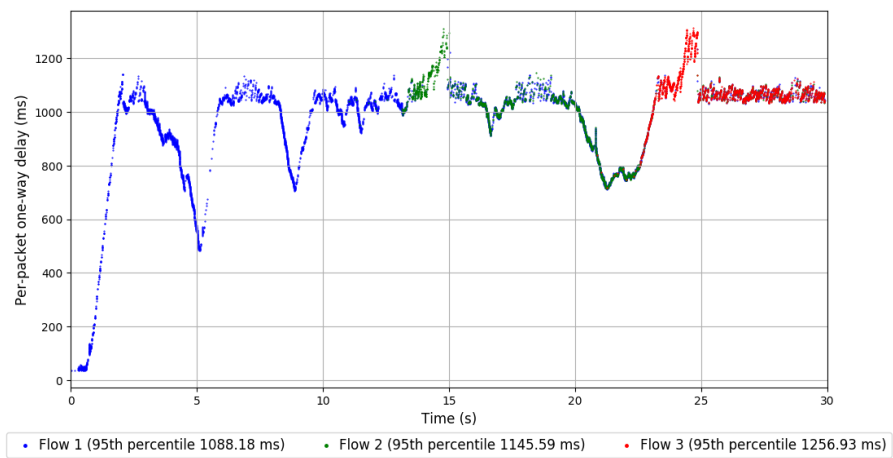
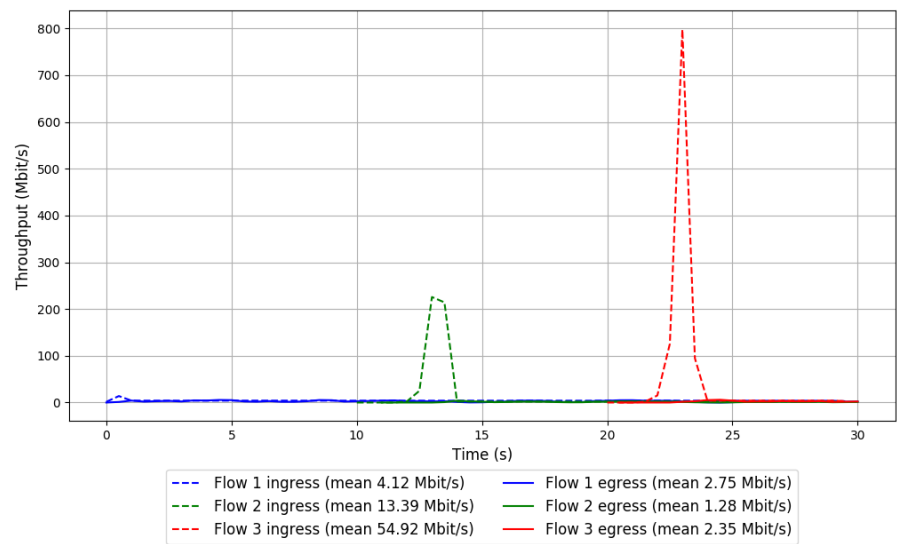


Run 1: Statistics of PCC-Allegro

Start at: 2018-05-30 14:33:42
End at: 2018-05-30 14:34:12
Local clock offset: -1.451 ms
Remote clock offset: -6.627 ms

Below is generated by plot.py at 2018-05-30 15:17:37
Datalink statistics
-- Total of 3 flows:
Average throughput: 4.27 Mbit/s
95th percentile per-packet one-way delay: 1124.391 ms
Loss rate: 86.29%
-- Flow 1:
Average throughput: 2.75 Mbit/s
95th percentile per-packet one-way delay: 1088.183 ms
Loss rate: 33.18%
-- Flow 2:
Average throughput: 1.28 Mbit/s
95th percentile per-packet one-way delay: 1145.591 ms
Loss rate: 90.95%
-- Flow 3:
Average throughput: 2.35 Mbit/s
95th percentile per-packet one-way delay: 1256.934 ms
Loss rate: 96.08%

Run 1: Report of PCC-Allegro — Data Link

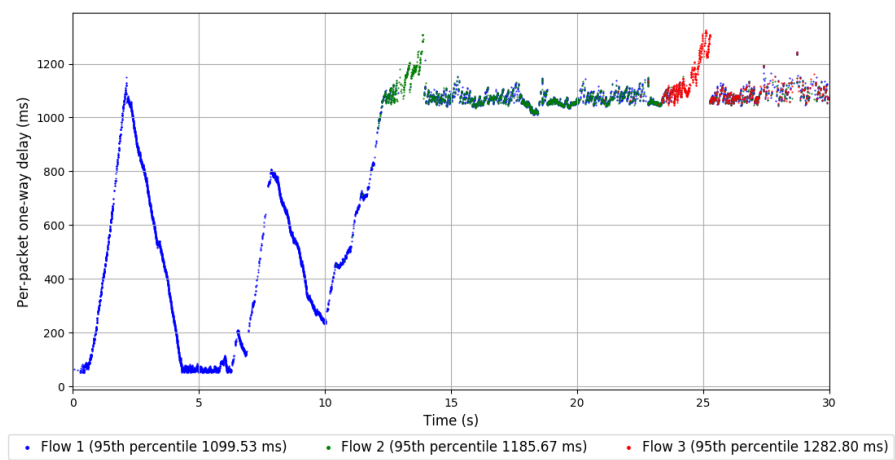
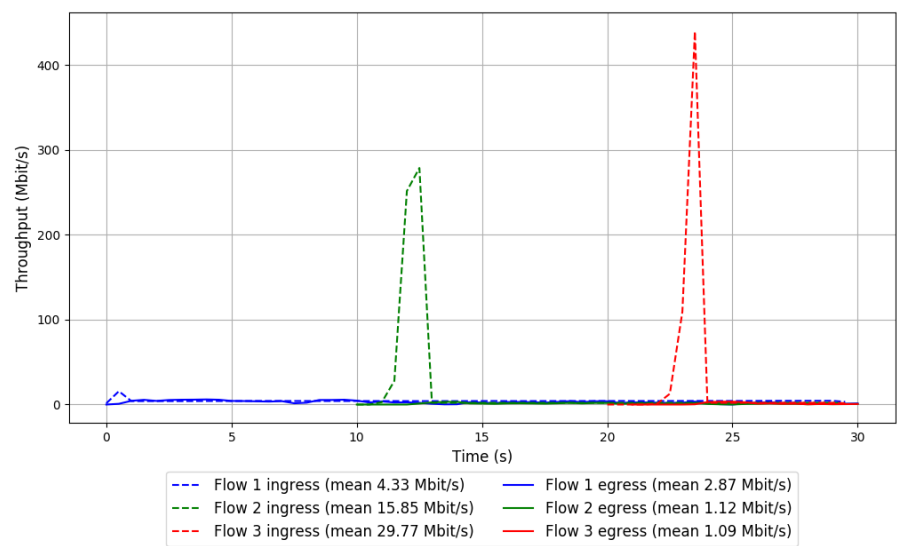


Run 2: Statistics of PCC-Allegro

Start at: 2018-05-30 14:51:14
End at: 2018-05-30 14:51:44
Local clock offset: -2.688 ms
Remote clock offset: -6.602 ms

Below is generated by plot.py at 2018-05-30 15:17:37
Datalink statistics
-- Total of 3 flows:
Average throughput: 3.93 Mbit/s
95th percentile per-packet one-way delay: 1142.228 ms
Loss rate: 84.10%
-- Flow 1:
Average throughput: 2.87 Mbit/s
95th percentile per-packet one-way delay: 1099.529 ms
Loss rate: 33.68%
-- Flow 2:
Average throughput: 1.12 Mbit/s
95th percentile per-packet one-way delay: 1185.674 ms
Loss rate: 93.05%
-- Flow 3:
Average throughput: 1.09 Mbit/s
95th percentile per-packet one-way delay: 1282.799 ms
Loss rate: 96.71%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2018-05-30 15:09:27

End at: 2018-05-30 15:09:57

Local clock offset: 0.176 ms

Remote clock offset: 5.337 ms

Below is generated by plot.py at 2018-05-30 15:17:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.96 Mbit/s

95th percentile per-packet one-way delay: 1118.695 ms

Loss rate: 72.25%

-- Flow 1:

Average throughput: 2.84 Mbit/s

95th percentile per-packet one-way delay: 1103.331 ms

Loss rate: 33.85%

-- Flow 2:

Average throughput: 2.75 Mbit/s

95th percentile per-packet one-way delay: 1105.836 ms

Loss rate: 36.37%

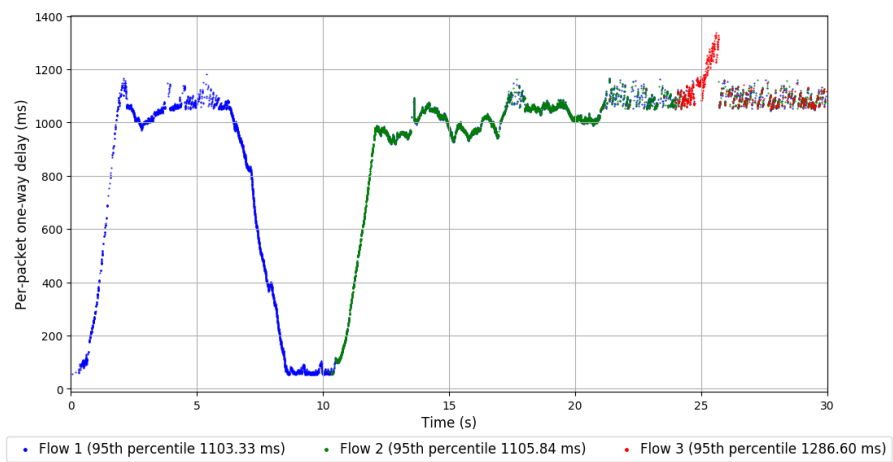
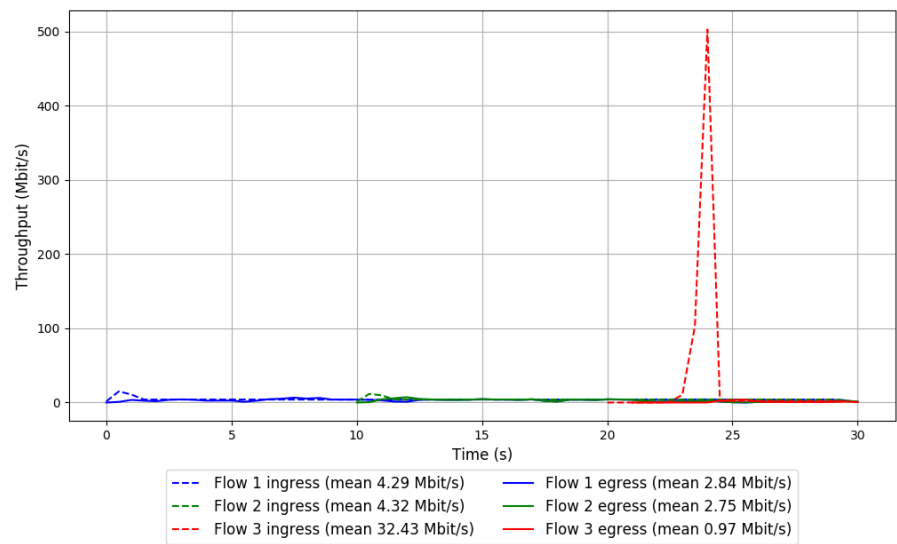
-- Flow 3:

Average throughput: 0.97 Mbit/s

95th percentile per-packet one-way delay: 1286.600 ms

Loss rate: 97.31%

Run 3: Report of PCC-Allegro — Data Link

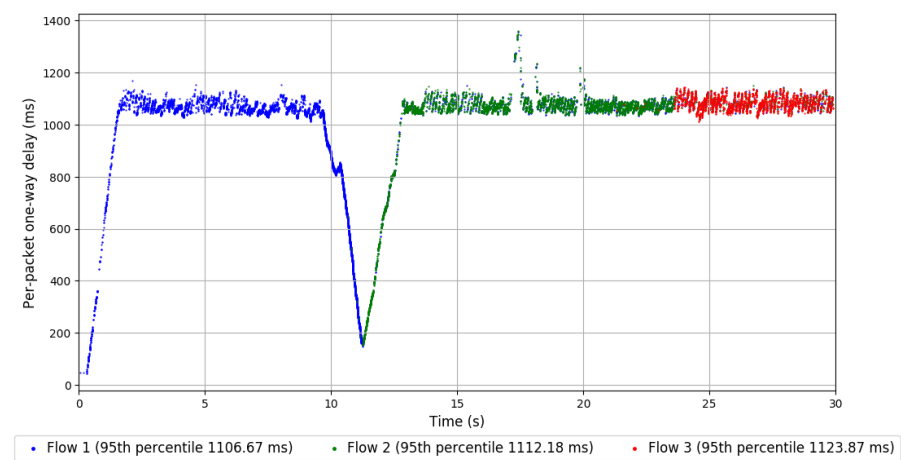
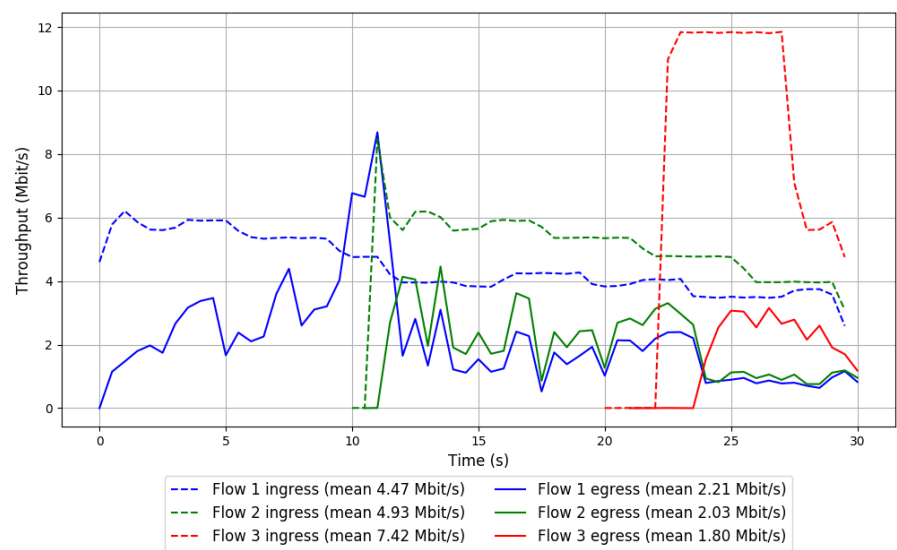


```
Run 1: Statistics of PCC-Expr

Start at: 2018-05-30 14:24:57
End at: 2018-05-30 14:25:27
Local clock offset: 2.135 ms
Remote clock offset: 5.324 ms

# Below is generated by plot.py at 2018-05-30 15:17:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.03 Mbit/s
95th percentile per-packet one-way delay: 1112.530 ms
Loss rate: 60.50%
-- Flow 1:
Average throughput: 2.21 Mbit/s
95th percentile per-packet one-way delay: 1106.669 ms
Loss rate: 50.70%
-- Flow 2:
Average throughput: 2.03 Mbit/s
95th percentile per-packet one-way delay: 1112.184 ms
Loss rate: 60.13%
-- Flow 3:
Average throughput: 1.80 Mbit/s
95th percentile per-packet one-way delay: 1123.867 ms
Loss rate: 78.90%
```

Run 1: Report of PCC-Expr — Data Link

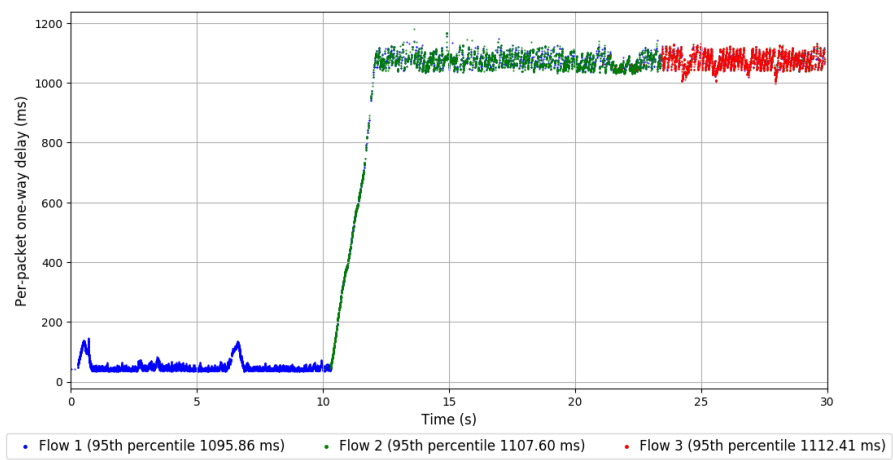
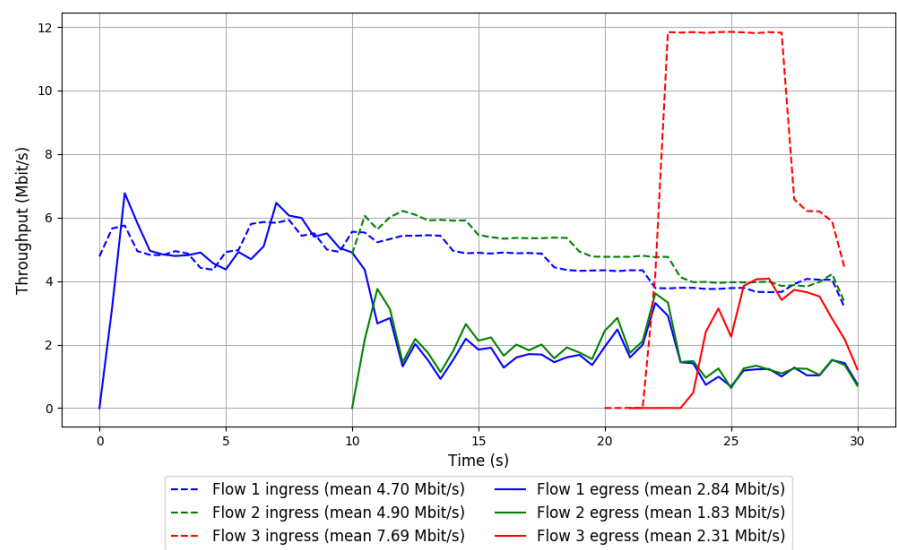


Run 2: Statistics of PCC-Expr

Start at: 2018-05-30 14:42:26
End at: 2018-05-30 14:42:56
Local clock offset: 0.34 ms
Remote clock offset: -9.197 ms

Below is generated by plot.py at 2018-05-30 15:17:41
Datalink statistics
-- Total of 3 flows:
Average throughput: 4.73 Mbit/s
95th percentile per-packet one-way delay: 1104.507 ms
Loss rate: 54.94%
-- Flow 1:
Average throughput: 2.84 Mbit/s
95th percentile per-packet one-way delay: 1095.857 ms
Loss rate: 39.67%
-- Flow 2:
Average throughput: 1.83 Mbit/s
95th percentile per-packet one-way delay: 1107.599 ms
Loss rate: 62.80%
-- Flow 3:
Average throughput: 2.31 Mbit/s
95th percentile per-packet one-way delay: 1112.406 ms
Loss rate: 73.13%

Run 2: Report of PCC-Expr — Data Link

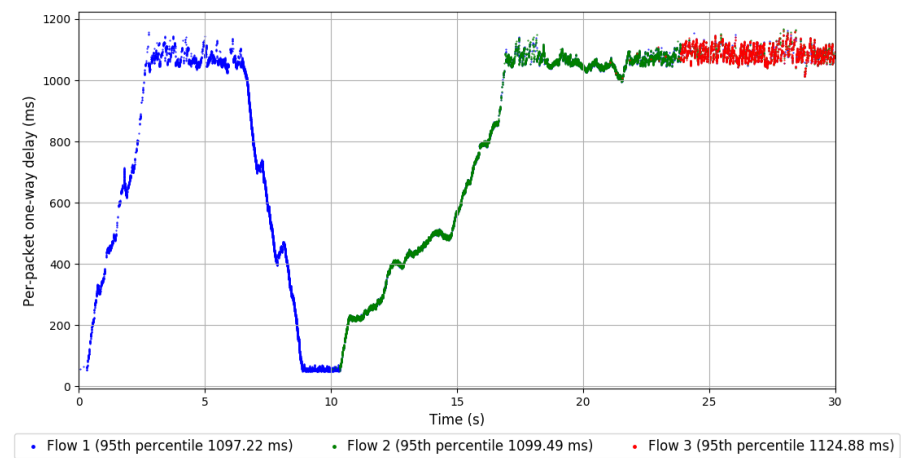
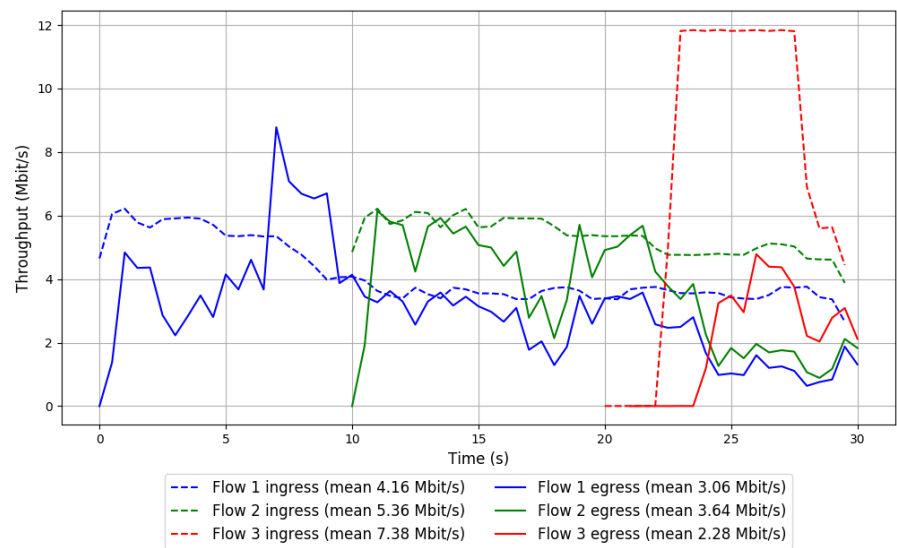


Run 3: Statistics of PCC-Expr

Start at: 2018-05-30 15:00:20
End at: 2018-05-30 15:00:50
Local clock offset: -1.626 ms
Remote clock offset: -8.811 ms

Below is generated by plot.py at 2018-05-30 15:17:45
Datalink statistics
-- Total of 3 flows:
Average throughput: 6.15 Mbit/s
95th percentile per-packet one-way delay: 1107.355 ms
Loss rate: 39.45%
-- Flow 1:
Average throughput: 3.06 Mbit/s
95th percentile per-packet one-way delay: 1097.221 ms
Loss rate: 26.48%
-- Flow 2:
Average throughput: 3.64 Mbit/s
95th percentile per-packet one-way delay: 1099.494 ms
Loss rate: 32.14%
-- Flow 3:
Average throughput: 2.28 Mbit/s
95th percentile per-packet one-way delay: 1124.880 ms
Loss rate: 72.27%

Run 3: Report of PCC-Expr — Data Link

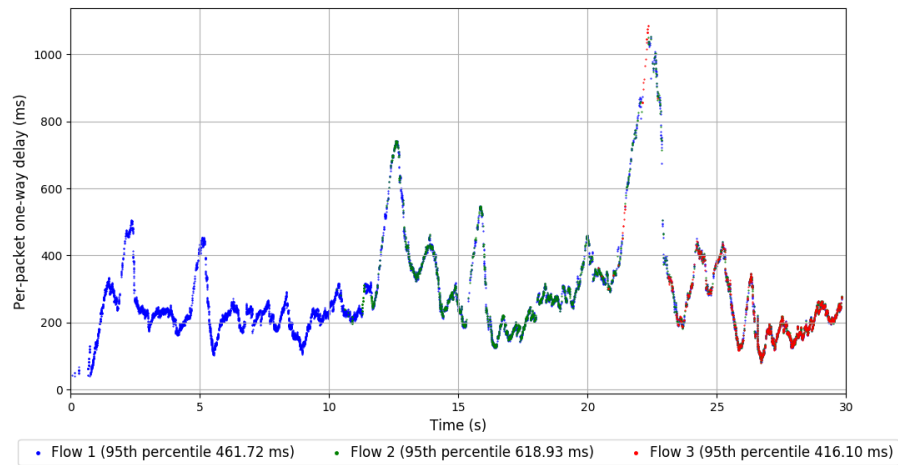
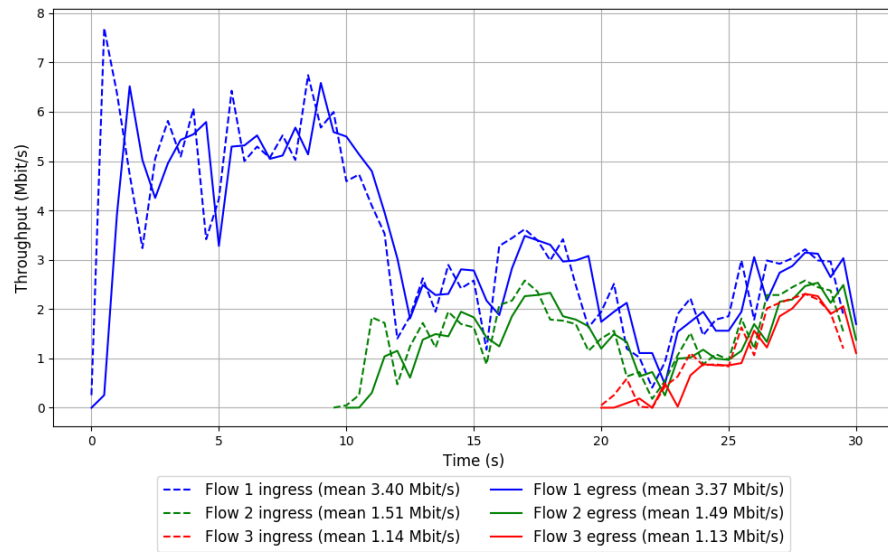


Run 1: Statistics of QUIC Cubic

Start at: 2018-05-30 14:34:47
End at: 2018-05-30 14:35:17
Local clock offset: -0.154 ms
Remote clock offset: -3.979 ms

Below is generated by plot.py at 2018-05-30 15:17:45
Datalink statistics
-- Total of 3 flows:
Average throughput: 4.70 Mbit/s
95th percentile per-packet one-way delay: 468.748 ms
Loss rate: 1.73%
-- Flow 1:
Average throughput: 3.37 Mbit/s
95th percentile per-packet one-way delay: 461.719 ms
Loss rate: 1.13%
-- Flow 2:
Average throughput: 1.49 Mbit/s
95th percentile per-packet one-way delay: 618.928 ms
Loss rate: 2.61%
-- Flow 3:
Average throughput: 1.13 Mbit/s
95th percentile per-packet one-way delay: 416.101 ms
Loss rate: 4.86%

Run 1: Report of QUIC Cubic — Data Link

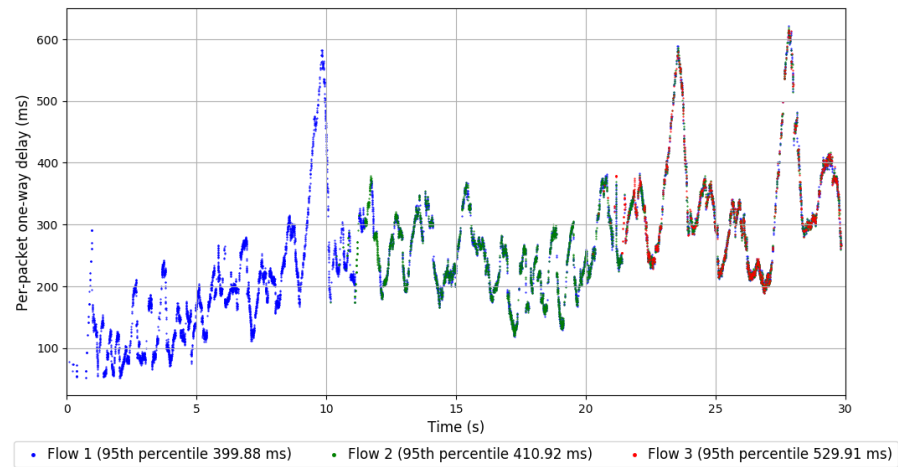
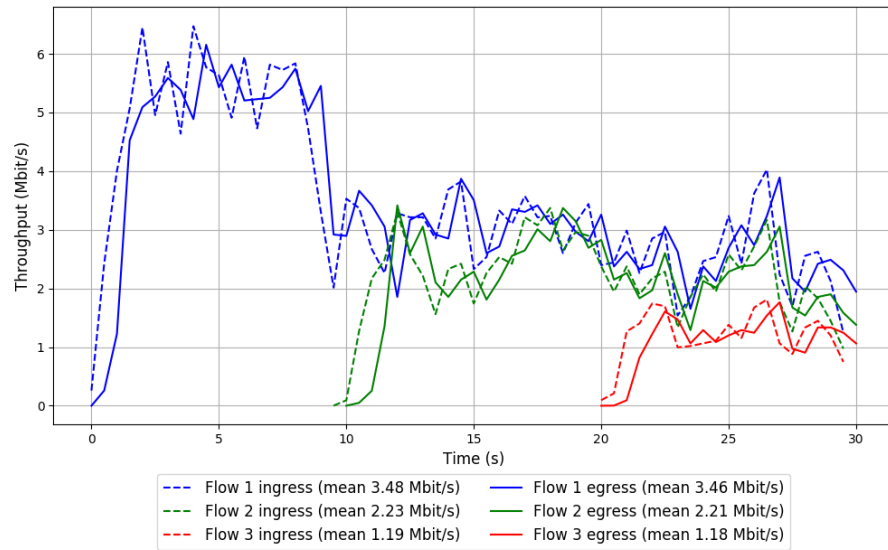


Run 2: Statistics of QUIC Cubic

Start at: 2018-05-30 14:52:21
End at: 2018-05-30 14:52:51
Local clock offset: -1.613 ms
Remote clock offset: -7.868 ms

Below is generated by plot.py at 2018-05-30 15:17:45
Datalink statistics
-- Total of 3 flows:
Average throughput: 5.30 Mbit/s
95th percentile per-packet one-way delay: 414.953 ms
Loss rate: 1.03%
-- Flow 1:
Average throughput: 3.46 Mbit/s
95th percentile per-packet one-way delay: 399.879 ms
Loss rate: 0.68%
-- Flow 2:
Average throughput: 2.21 Mbit/s
95th percentile per-packet one-way delay: 410.917 ms
Loss rate: 1.28%
-- Flow 3:
Average throughput: 1.18 Mbit/s
95th percentile per-packet one-way delay: 529.914 ms
Loss rate: 3.21%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-05-30 15:10:35

End at: 2018-05-30 15:11:05

Local clock offset: 3.564 ms

Remote clock offset: 11.47 ms

Below is generated by plot.py at 2018-05-30 15:17:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 7.00 Mbit/s

95th percentile per-packet one-way delay: 453.478 ms

Loss rate: 1.05%

-- Flow 1:

Average throughput: 5.36 Mbit/s

95th percentile per-packet one-way delay: 424.891 ms

Loss rate: 0.53%

-- Flow 2:

Average throughput: 1.86 Mbit/s

95th percentile per-packet one-way delay: 489.659 ms

Loss rate: 2.30%

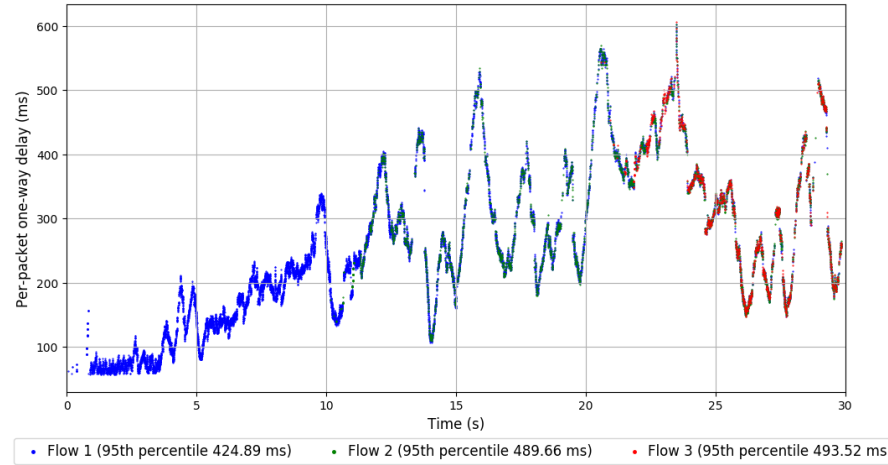
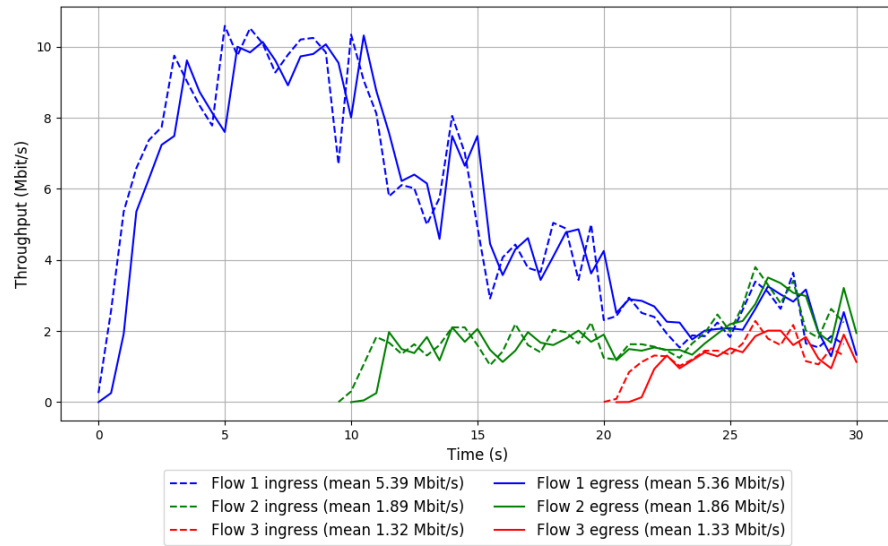
-- Flow 3:

Average throughput: 1.33 Mbit/s

95th percentile per-packet one-way delay: 493.522 ms

Loss rate: 3.97%

Run 3: Report of QUIC Cubic — Data Link

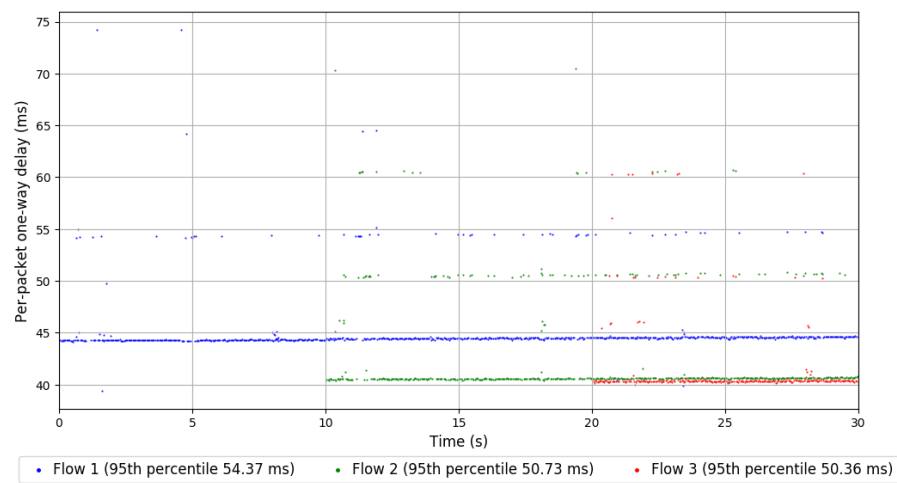
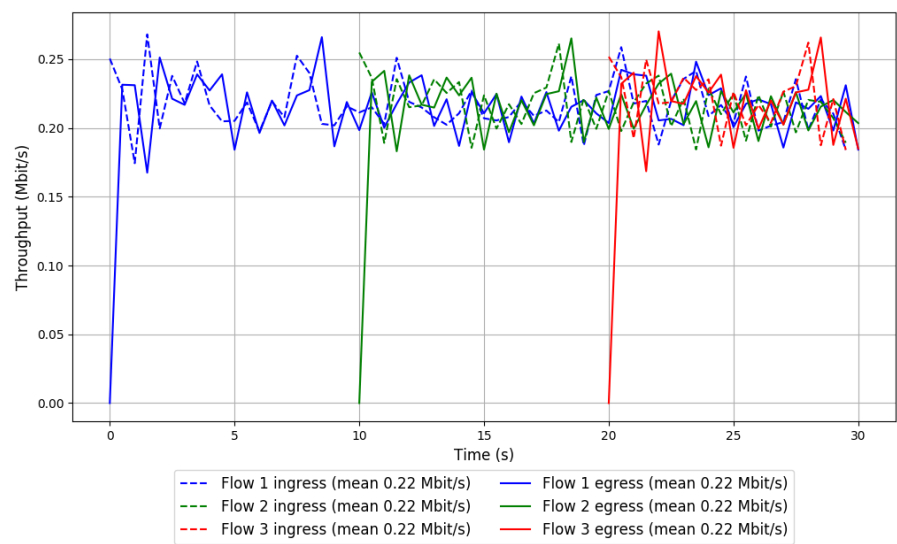


Run 1: Statistics of SReAM

Start at: 2018-05-30 14:40:15
End at: 2018-05-30 14:40:45
Local clock offset: -1.985 ms
Remote clock offset: -8.545 ms

Below is generated by plot.py at 2018-05-30 15:17:46
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 54.236 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 54.369 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.726 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.356 ms
Loss rate: 0.35%

Run 1: Report of SReAM — Data Link

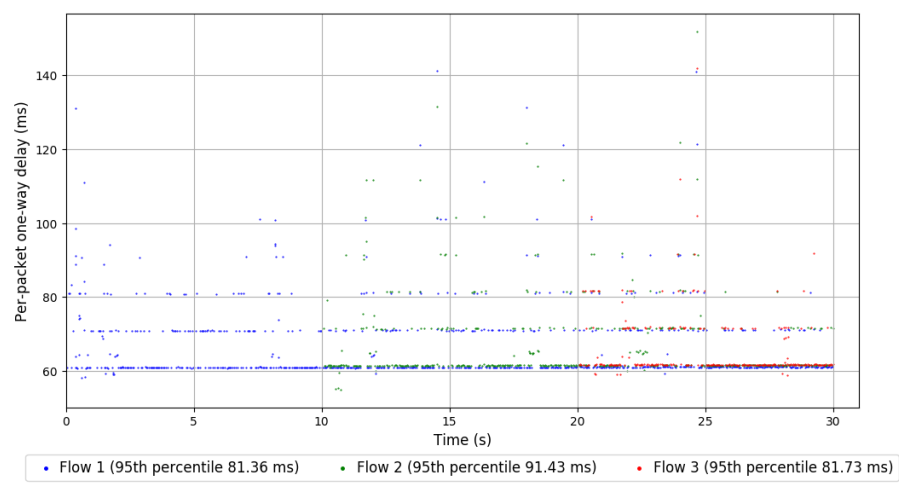
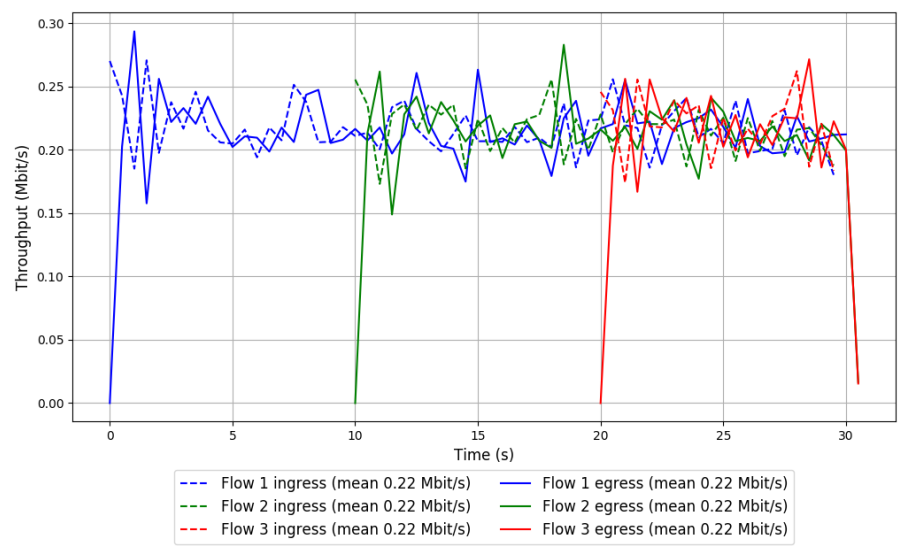


Run 2: Statistics of SReAM

Start at: 2018-05-30 14:58:05
End at: 2018-05-30 14:58:35
Local clock offset: 1.273 ms
Remote clock offset: -0.687 ms

Below is generated by plot.py at 2018-05-30 15:17:46
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 81.894 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 81.363 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 91.427 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 81.735 ms
Loss rate: 0.00%

Run 2: Report of SReAM — Data Link

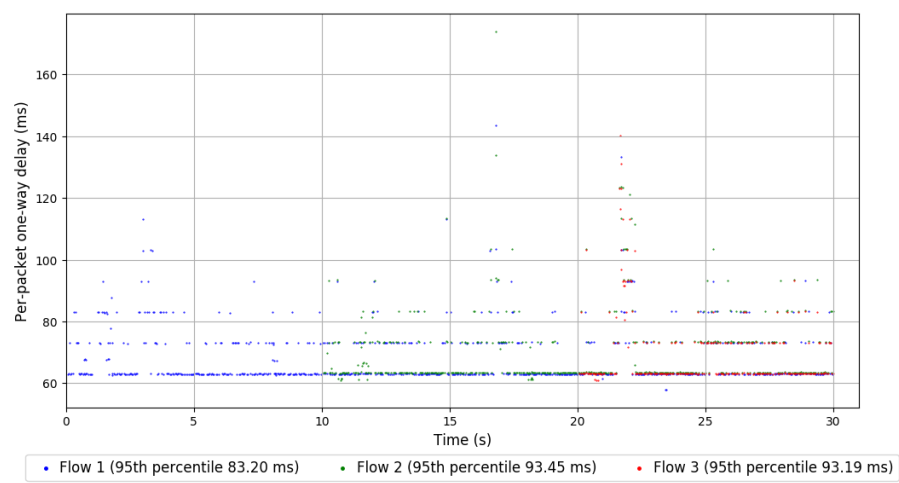
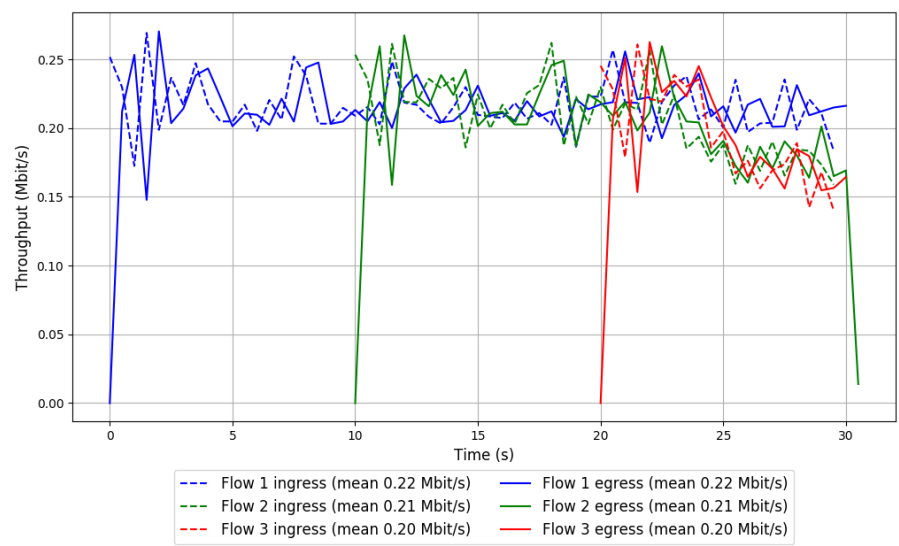


Run 3: Statistics of SReAM

Start at: 2018-05-30 15:16:19
End at: 2018-05-30 15:16:49
Local clock offset: -2.393 ms
Remote clock offset: 7.531 ms

Below is generated by plot.py at 2018-05-30 15:17:46
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.42 Mbit/s
95th percentile per-packet one-way delay: 92.998 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 83.205 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 93.446 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 93.191 ms
Loss rate: 0.00%

Run 3: Report of SReAM — Data Link

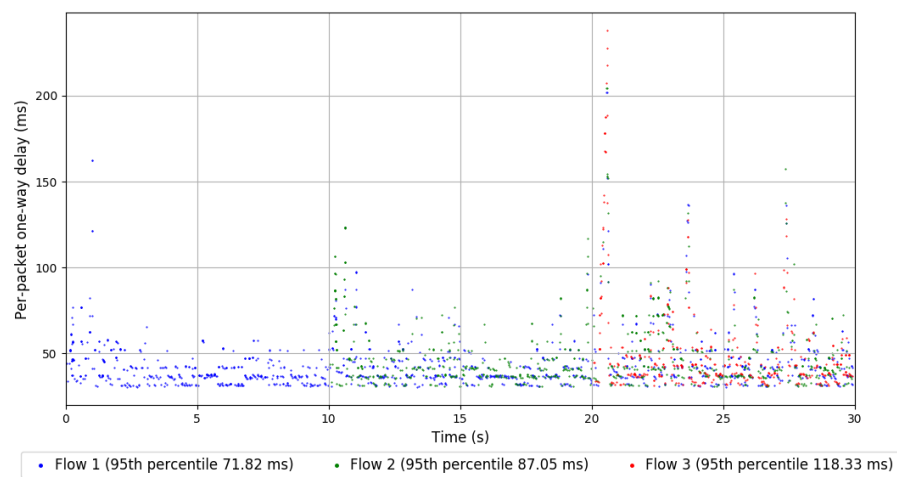
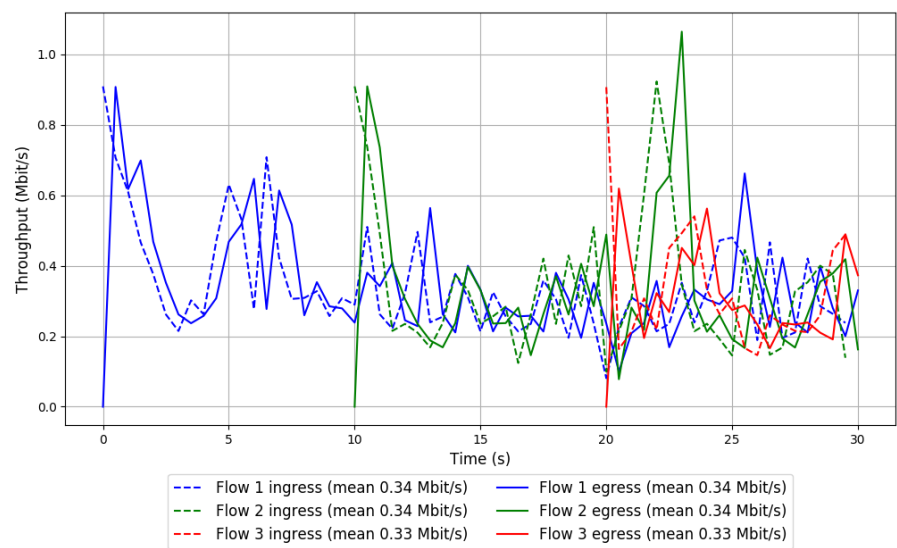


Run 1: Statistics of Sprout

Start at: 2018-05-30 14:36:58
End at: 2018-05-30 14:37:28
Local clock offset: -2.965 ms
Remote clock offset: -15.128 ms

Below is generated by plot.py at 2018-05-30 15:17:46
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.68 Mbit/s
95th percentile per-packet one-way delay: 86.415 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 0.34 Mbit/s
95th percentile per-packet one-way delay: 71.820 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.34 Mbit/s
95th percentile per-packet one-way delay: 87.054 ms
Loss rate: 0.15%
-- Flow 3:
Average throughput: 0.33 Mbit/s
95th percentile per-packet one-way delay: 118.325 ms
Loss rate: 2.11%

Run 1: Report of Sprout — Data Link

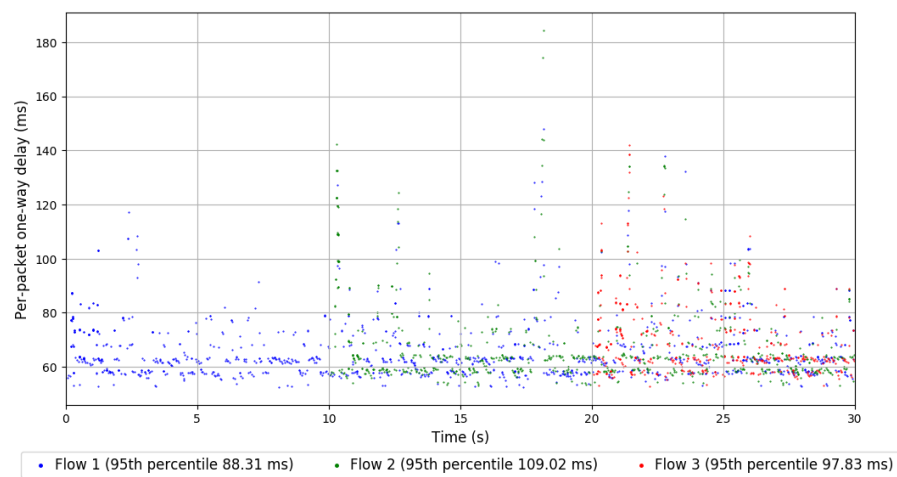
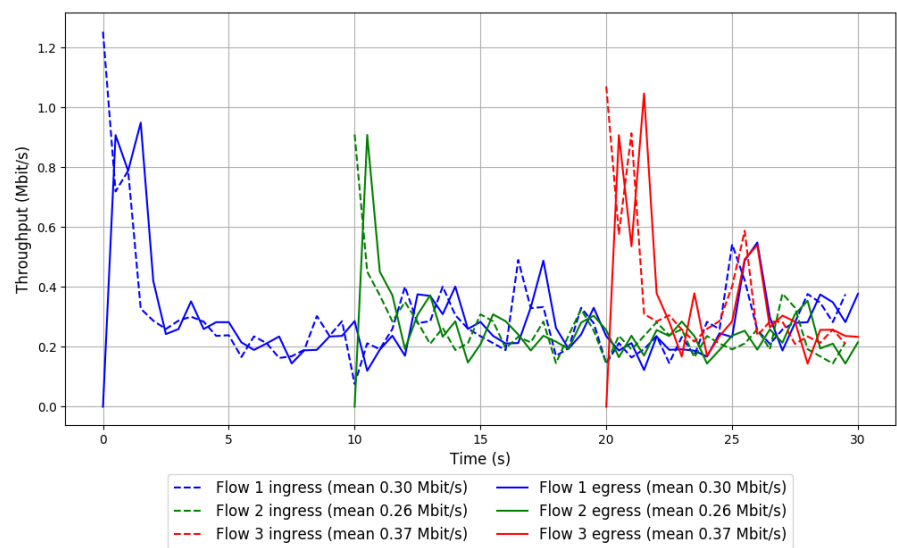


Run 2: Statistics of Sprout

Start at: 2018-05-30 14:54:36
End at: 2018-05-30 14:55:06
Local clock offset: -0.732 ms
Remote clock offset: -2.65 ms

Below is generated by plot.py at 2018-05-30 15:17:46
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.60 Mbit/s
95th percentile per-packet one-way delay: 98.067 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.30 Mbit/s
95th percentile per-packet one-way delay: 88.308 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.26 Mbit/s
95th percentile per-packet one-way delay: 109.015 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.37 Mbit/s
95th percentile per-packet one-way delay: 97.825 ms
Loss rate: 0.00%

Run 2: Report of Sprout — Data Link

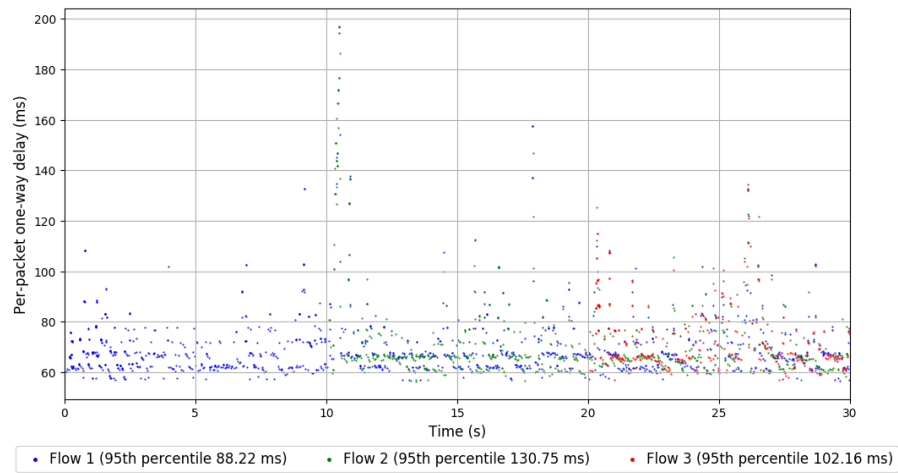
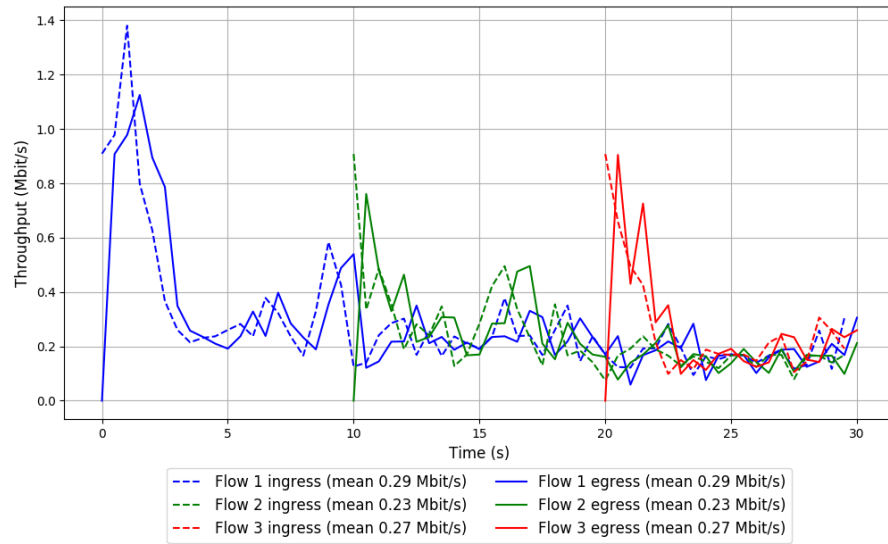


Run 3: Statistics of Sprout

Start at: 2018-05-30 15:12:51
End at: 2018-05-30 15:13:21
Local clock offset: -1.908 ms
Remote clock offset: 8.328 ms

```
# Below is generated by plot.py at 2018-05-30 15:17:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.53 Mbit/s
95th percentile per-packet one-way delay: 101.579 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.29 Mbit/s
95th percentile per-packet one-way delay: 88.223 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.23 Mbit/s
95th percentile per-packet one-way delay: 130.754 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.27 Mbit/s
95th percentile per-packet one-way delay: 102.160 ms
Loss rate: 0.00%
```

Run 3: Report of Sprout — Data Link



Run 1: Statistics of TaoVA-100x

Start at: 2018-05-30 14:29:19

End at: 2018-05-30 14:29:49

Local clock offset: -1.842 ms

Remote clock offset: 2.018 ms

Below is generated by plot.py at 2018-05-30 15:17:52

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.56 Mbit/s

95th percentile per-packet one-way delay: 361.746 ms

Loss rate: 0.80%

-- Flow 1:

Average throughput: 2.87 Mbit/s

95th percentile per-packet one-way delay: 331.899 ms

Loss rate: 0.44%

-- Flow 2:

Average throughput: 1.71 Mbit/s

95th percentile per-packet one-way delay: 365.543 ms

Loss rate: 1.03%

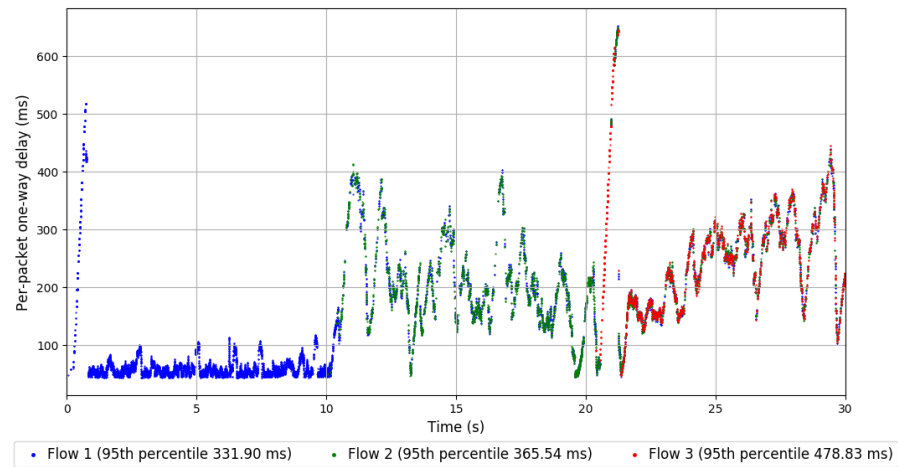
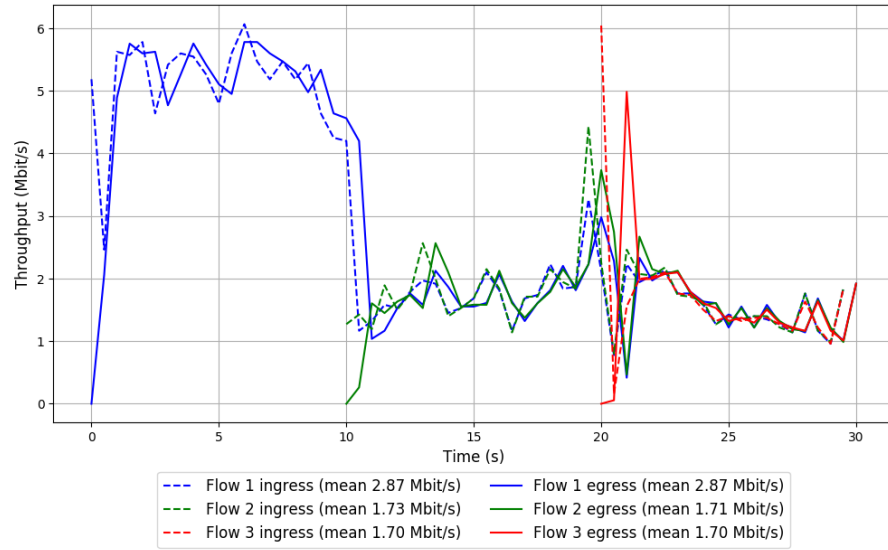
-- Flow 3:

Average throughput: 1.70 Mbit/s

95th percentile per-packet one-way delay: 478.831 ms

Loss rate: 2.15%

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



Run 2: Statistics of TaoVA-100x

Start at: 2018-05-30 14:46:48

End at: 2018-05-30 14:47:18

Local clock offset: -2.108 ms

Remote clock offset: 2.475 ms

Below is generated by plot.py at 2018-05-30 15:17:52

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.28 Mbit/s

95th percentile per-packet one-way delay: 706.772 ms

Loss rate: 3.06%

-- Flow 1:

Average throughput: 1.89 Mbit/s

95th percentile per-packet one-way delay: 513.339 ms

Loss rate: 1.47%

-- Flow 2:

Average throughput: 1.43 Mbit/s

95th percentile per-packet one-way delay: 772.966 ms

Loss rate: 2.60%

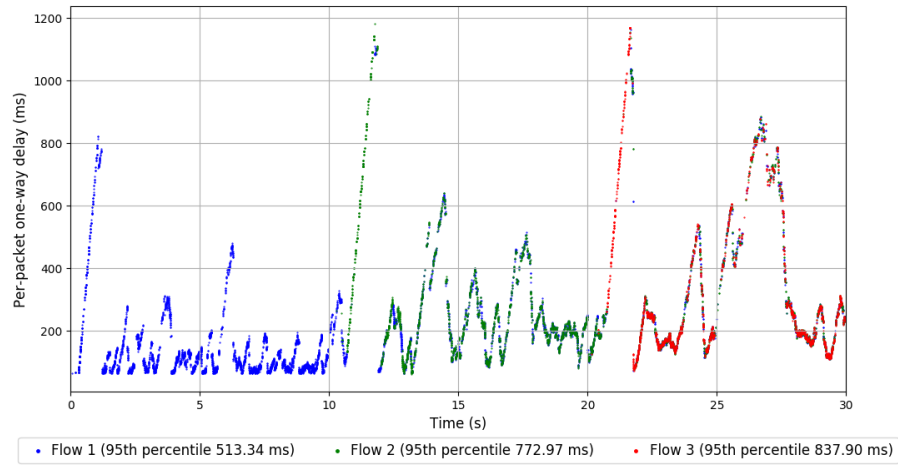
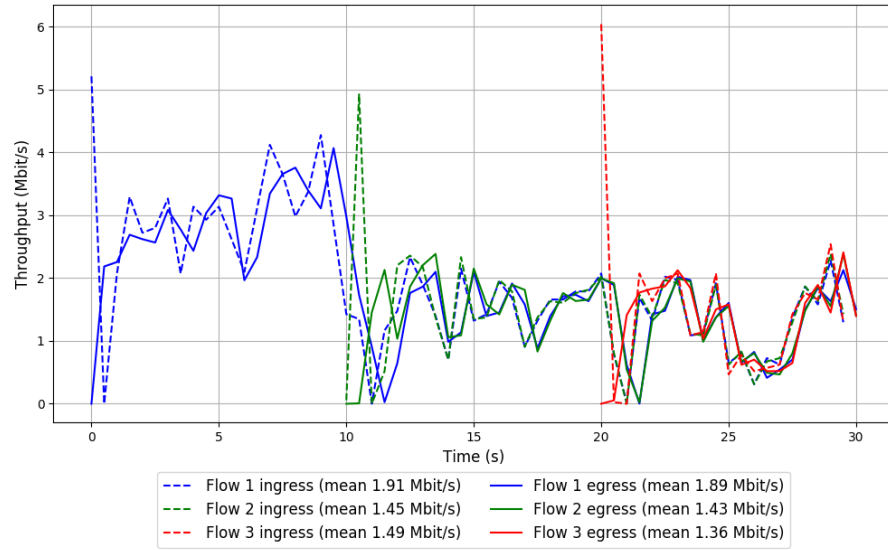
-- Flow 3:

Average throughput: 1.36 Mbit/s

95th percentile per-packet one-way delay: 837.899 ms

Loss rate: 10.07%

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



Run 3: Statistics of TaoVA-100x

Start at: 2018-05-30 15:04:55

End at: 2018-05-30 15:05:25

Local clock offset: 3.16 ms

Remote clock offset: 1.949 ms

Below is generated by plot.py at 2018-05-30 15:17:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.48 Mbit/s

95th percentile per-packet one-way delay: 439.322 ms

Loss rate: 0.56%

-- Flow 1:

Average throughput: 2.59 Mbit/s

95th percentile per-packet one-way delay: 352.305 ms

Loss rate: 0.34%

-- Flow 2:

Average throughput: 1.93 Mbit/s

95th percentile per-packet one-way delay: 505.555 ms

Loss rate: 0.73%

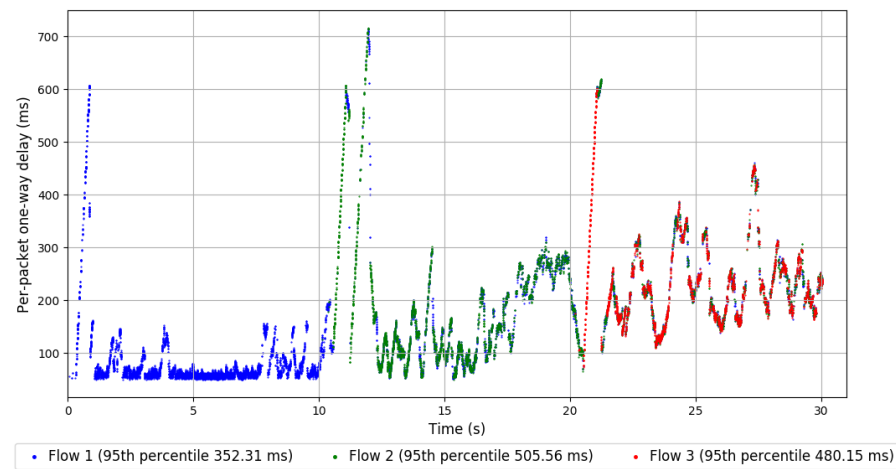
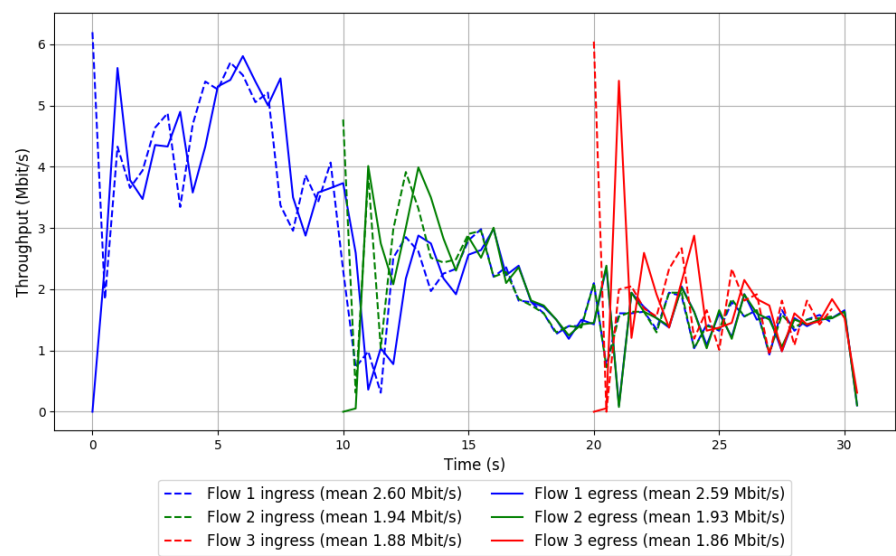
-- Flow 3:

Average throughput: 1.86 Mbit/s

95th percentile per-packet one-way delay: 480.149 ms

Loss rate: 1.13%

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



Run 1: Statistics of TCP Vegas

Start at: 2018-05-30 14:31:31

End at: 2018-05-30 14:32:01

Local clock offset: -0.106 ms

Remote clock offset: 4.417 ms

Below is generated by plot.py at 2018-05-30 15:17:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 2.17 Mbit/s

95th percentile per-packet one-way delay: 292.049 ms

Loss rate: 0.53%

-- Flow 1:

Average throughput: 1.41 Mbit/s

95th percentile per-packet one-way delay: 260.110 ms

Loss rate: 0.28%

-- Flow 2:

Average throughput: 0.87 Mbit/s

95th percentile per-packet one-way delay: 316.847 ms

Loss rate: 0.82%

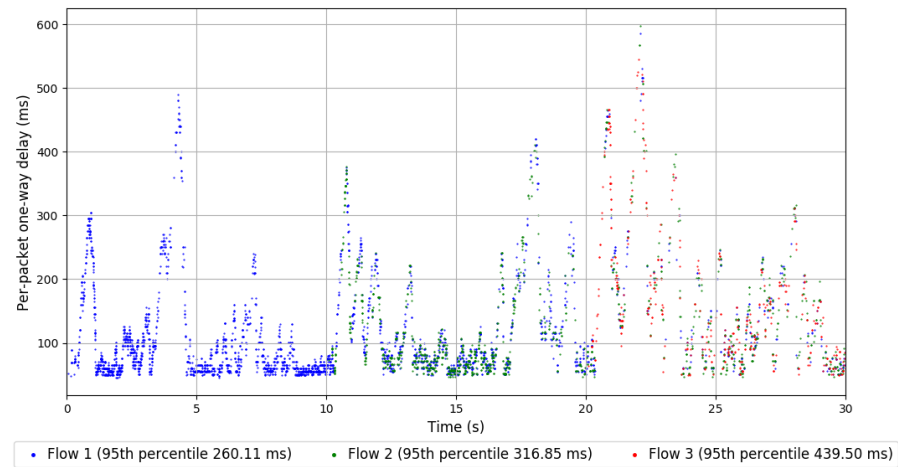
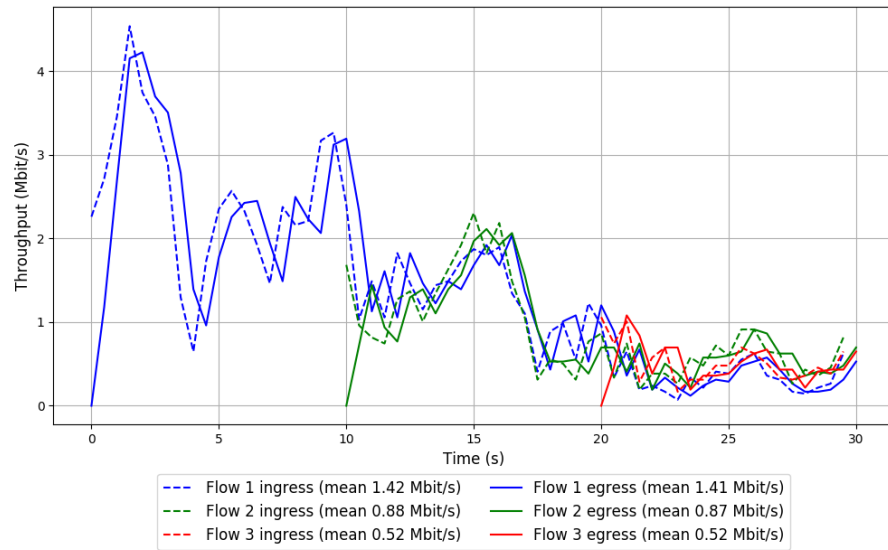
-- Flow 3:

Average throughput: 0.52 Mbit/s

95th percentile per-packet one-way delay: 439.497 ms

Loss rate: 1.61%

Run 1: Report of TCP Vegas — Data Link

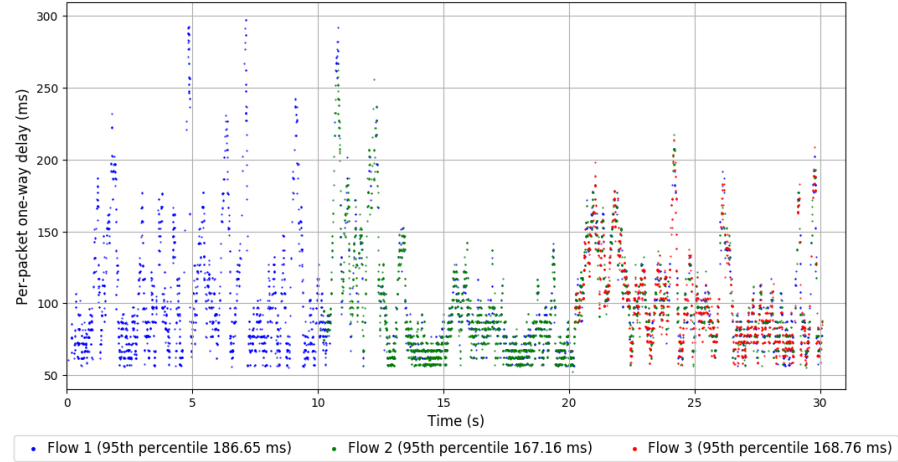
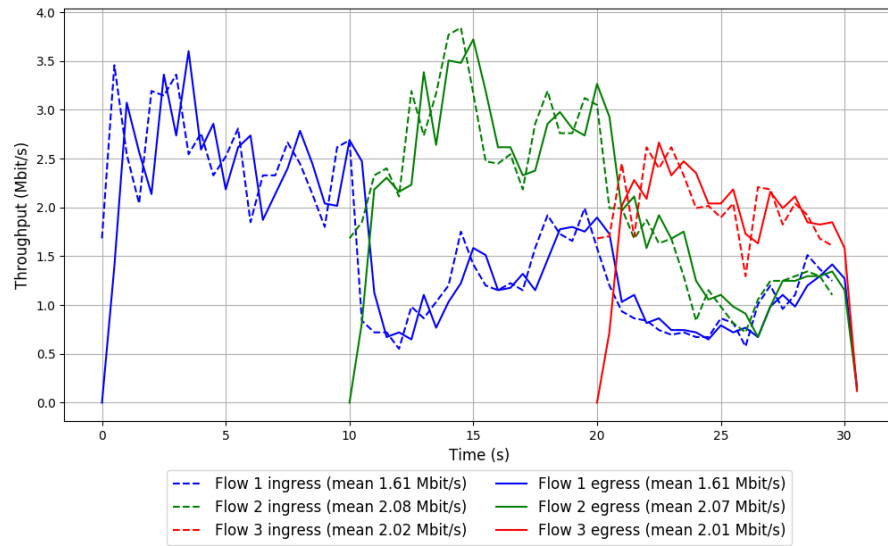


Run 2: Statistics of TCP Vegas

Start at: 2018-05-30 14:48:59
End at: 2018-05-30 14:49:29
Local clock offset: -1.85 ms
Remote clock offset: -3.239 ms

Below is generated by plot.py at 2018-05-30 15:17:53
Datalink statistics
-- Total of 3 flows:
Average throughput: 3.65 Mbit/s
95th percentile per-packet one-way delay: 176.258 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 1.61 Mbit/s
95th percentile per-packet one-way delay: 186.646 ms
Loss rate: 0.15%
-- Flow 2:
Average throughput: 2.07 Mbit/s
95th percentile per-packet one-way delay: 167.163 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 2.01 Mbit/s
95th percentile per-packet one-way delay: 168.762 ms
Loss rate: 0.42%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2018-05-30 15:07:12

End at: 2018-05-30 15:07:42

Local clock offset: -0.798 ms

Remote clock offset: 8.788 ms

Below is generated by plot.py at 2018-05-30 15:17:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.76 Mbit/s

95th percentile per-packet one-way delay: 277.305 ms

Loss rate: 0.60%

-- Flow 1:

Average throughput: 1.83 Mbit/s

95th percentile per-packet one-way delay: 198.815 ms

Loss rate: 0.13%

-- Flow 2:

Average throughput: 1.90 Mbit/s

95th percentile per-packet one-way delay: 503.273 ms

Loss rate: 1.29%

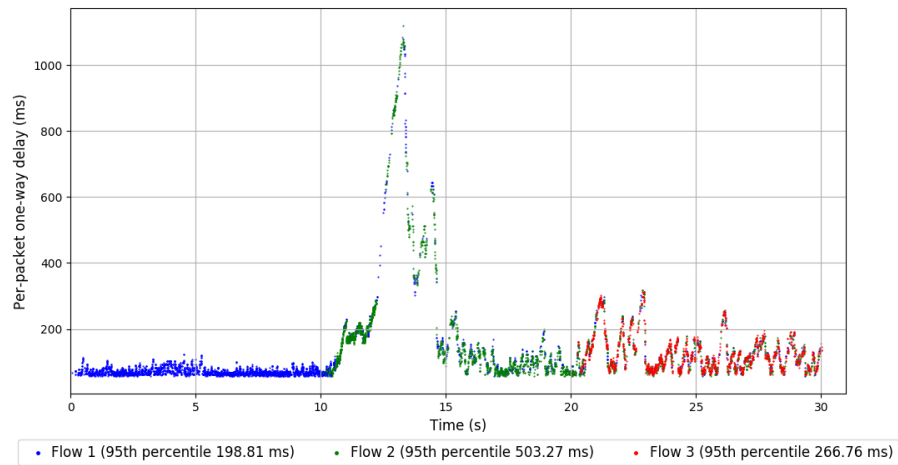
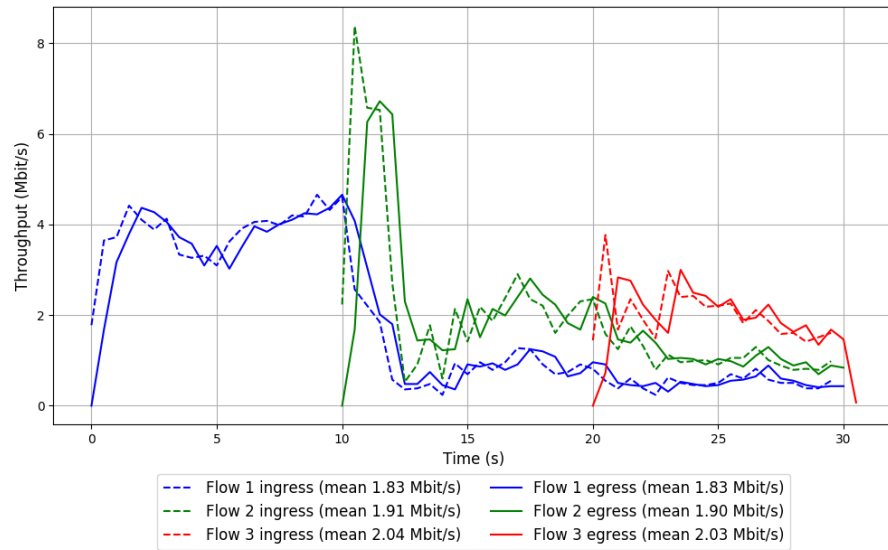
-- Flow 3:

Average throughput: 2.03 Mbit/s

95th percentile per-packet one-way delay: 266.756 ms

Loss rate: 0.59%

Run 3: Report of TCP Vegas — Data Link



Run 1: Statistics of Verus

Start at: 2018-05-30 14:32:36

End at: 2018-05-30 14:33:06

Local clock offset: 0.083 ms

Remote clock offset: 1.982 ms

Below is generated by plot.py at 2018-05-30 15:17:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.26 Mbit/s

95th percentile per-packet one-way delay: 924.617 ms

Loss rate: 7.62%

-- Flow 1:

Average throughput: 2.92 Mbit/s

95th percentile per-packet one-way delay: 764.935 ms

Loss rate: 6.77%

-- Flow 2:

Average throughput: 1.03 Mbit/s

95th percentile per-packet one-way delay: 690.945 ms

Loss rate: 1.56%

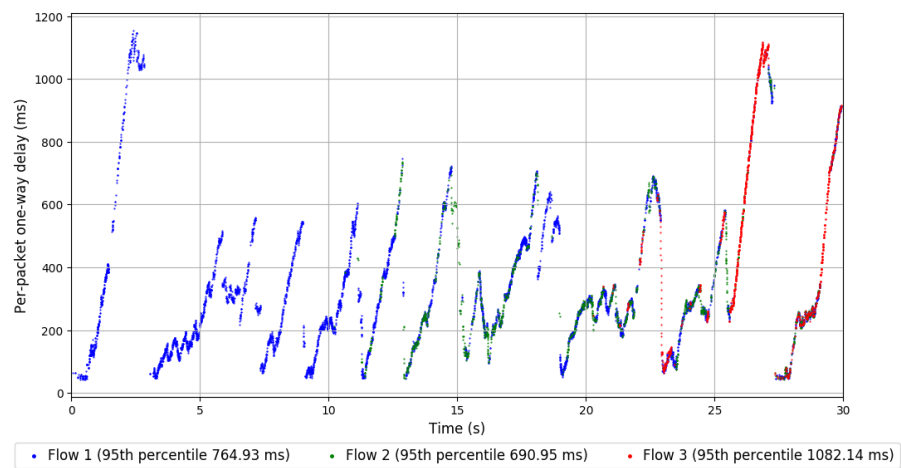
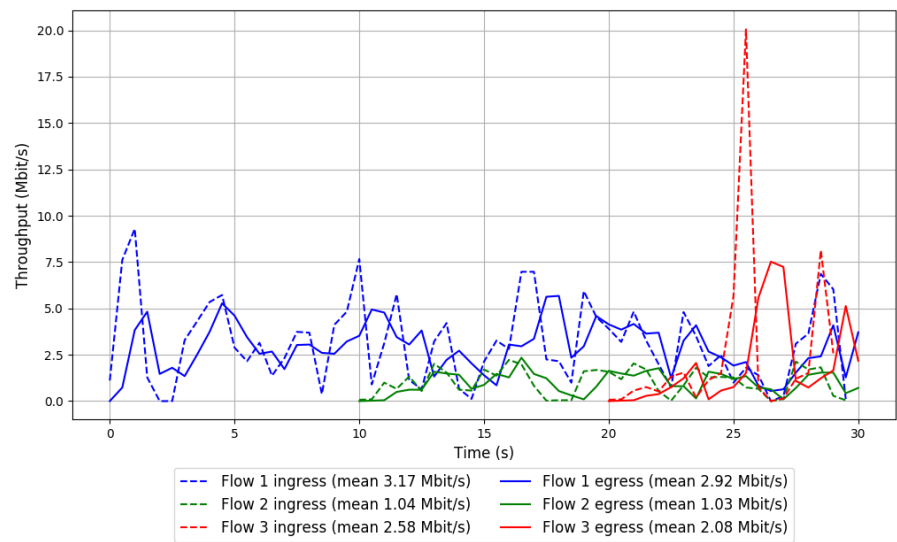
-- Flow 3:

Average throughput: 2.08 Mbit/s

95th percentile per-packet one-way delay: 1082.137 ms

Loss rate: 16.14%

Run 1: Report of Verus — Data Link

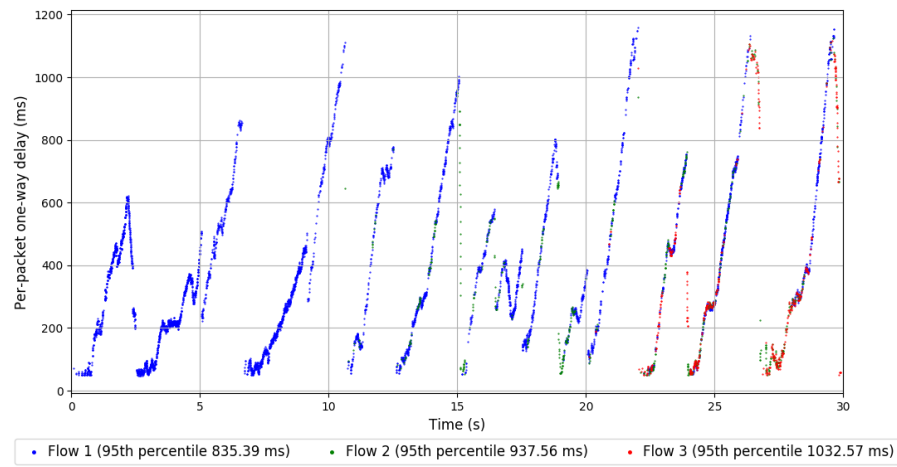
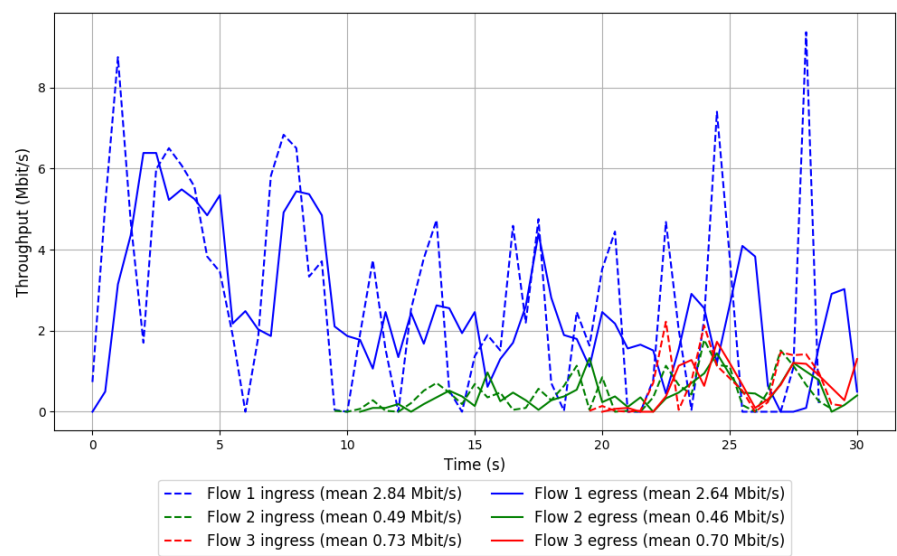


Run 2: Statistics of Verus

Start at: 2018-05-30 14:50:06
End at: 2018-05-30 14:50:36
Local clock offset: -0.118 ms
Remote clock offset: -8.386 ms

Below is generated by plot.py at 2018-05-30 15:17:53
Datalink statistics
-- Total of 3 flows:
Average throughput: 3.14 Mbit/s
95th percentile per-packet one-way delay: 853.712 ms
Loss rate: 3.83%
-- Flow 1:
Average throughput: 2.64 Mbit/s
95th percentile per-packet one-way delay: 835.394 ms
Loss rate: 3.72%
-- Flow 2:
Average throughput: 0.46 Mbit/s
95th percentile per-packet one-way delay: 937.561 ms
Loss rate: 4.19%
-- Flow 3:
Average throughput: 0.70 Mbit/s
95th percentile per-packet one-way delay: 1032.565 ms
Loss rate: 4.61%

Run 2: Report of Verus — Data Link

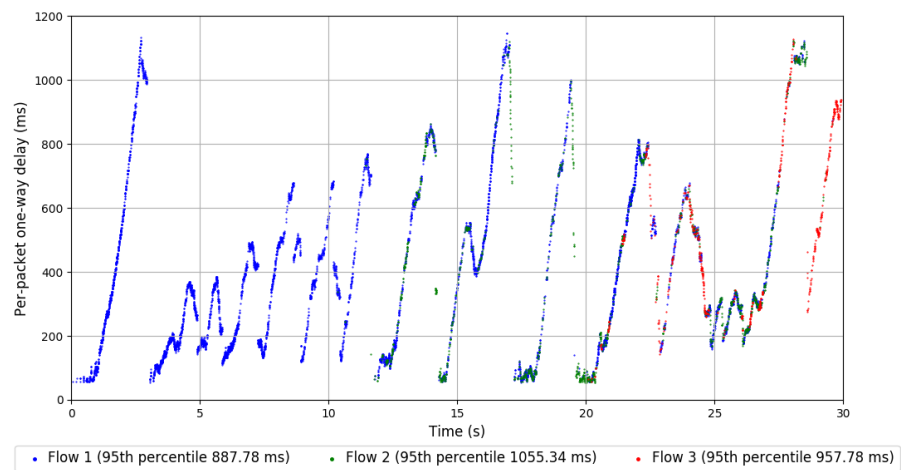
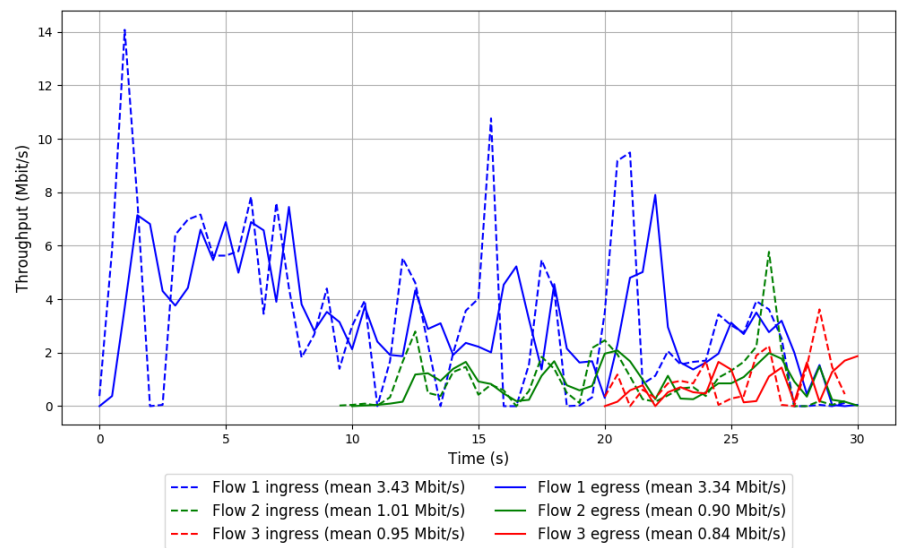


Run 3: Statistics of Verus

Start at: 2018-05-30 15:08:19
End at: 2018-05-30 15:08:49
Local clock offset: -0.981 ms
Remote clock offset: 5.025 ms

Below is generated by plot.py at 2018-05-30 15:17:55
Datalink statistics
-- Total of 3 flows:
Average throughput: 4.16 Mbit/s
95th percentile per-packet one-way delay: 932.195 ms
Loss rate: 4.98%
-- Flow 1:
Average throughput: 3.34 Mbit/s
95th percentile per-packet one-way delay: 887.783 ms
Loss rate: 2.91%
-- Flow 2:
Average throughput: 0.90 Mbit/s
95th percentile per-packet one-way delay: 1055.339 ms
Loss rate: 12.23%
-- Flow 3:
Average throughput: 0.84 Mbit/s
95th percentile per-packet one-way delay: 957.783 ms
Loss rate: 12.01%

Run 3: Report of Verus — Data Link



Run 1: Statistics of PCC-Vivace

Start at: 2018-05-30 14:28:14

End at: 2018-05-30 14:28:44

Local clock offset: -1.756 ms

Remote clock offset: -0.22 ms

Below is generated by plot.py at 2018-05-30 15:17:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 2.33 Mbit/s

95th percentile per-packet one-way delay: 1079.547 ms

Loss rate: 23.84%

-- Flow 1:

Average throughput: 1.22 Mbit/s

95th percentile per-packet one-way delay: 1067.846 ms

Loss rate: 14.33%

-- Flow 2:

Average throughput: 1.16 Mbit/s

95th percentile per-packet one-way delay: 1089.565 ms

Loss rate: 31.63%

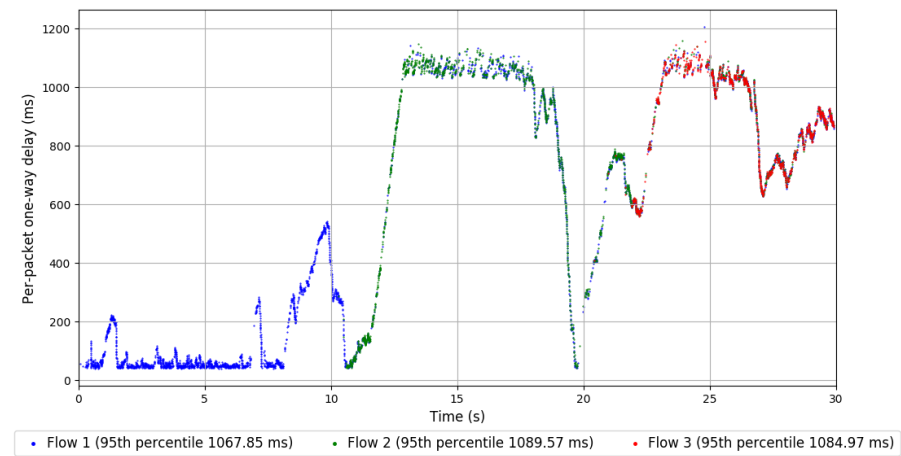
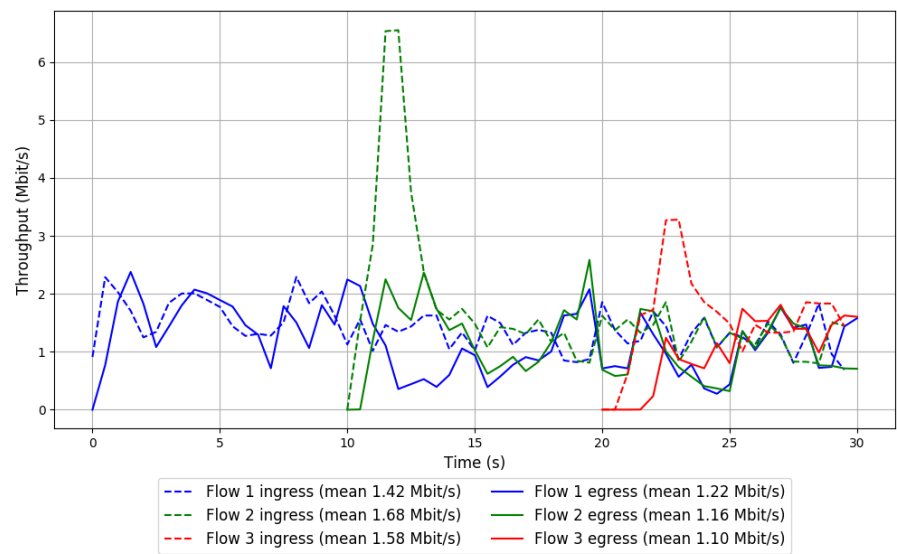
-- Flow 3:

Average throughput: 1.10 Mbit/s

95th percentile per-packet one-way delay: 1084.969 ms

Loss rate: 32.98%

Run 1: Report of PCC-Vivace — Data Link



Run 2: Statistics of PCC-Vivace

Start at: 2018-05-30 14:45:43

End at: 2018-05-30 14:46:13

Local clock offset: -1.461 ms

Remote clock offset: 1.091 ms

Below is generated by plot.py at 2018-05-30 15:17:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.31 Mbit/s

95th percentile per-packet one-way delay: 1080.662 ms

Loss rate: 15.80%

-- Flow 1:

Average throughput: 2.18 Mbit/s

95th percentile per-packet one-way delay: 1073.790 ms

Loss rate: 11.30%

-- Flow 2:

Average throughput: 1.19 Mbit/s

95th percentile per-packet one-way delay: 1084.469 ms

Loss rate: 18.80%

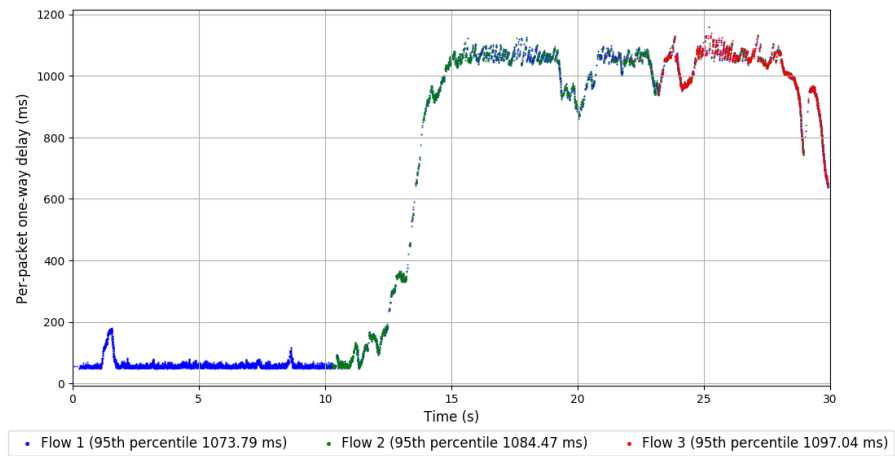
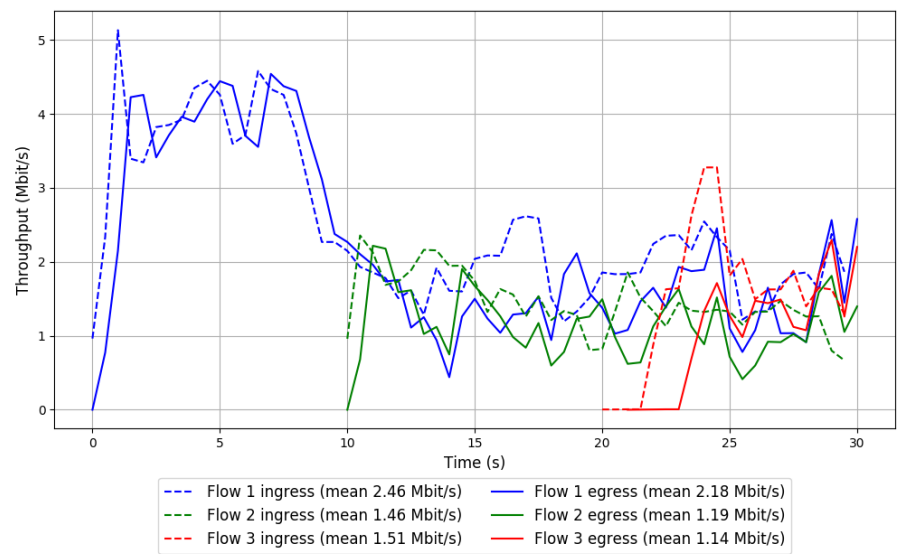
-- Flow 3:

Average throughput: 1.14 Mbit/s

95th percentile per-packet one-way delay: 1097.035 ms

Loss rate: 32.18%

Run 2: Report of PCC-Vivace — Data Link



Run 3: Statistics of PCC-Vivace

Start at: 2018-05-30 15:03:47

End at: 2018-05-30 15:04:17

Local clock offset: -1.879 ms

Remote clock offset: 2.435 ms

Below is generated by plot.py at 2018-05-30 15:17:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.82 Mbit/s

95th percentile per-packet one-way delay: 1118.452 ms

Loss rate: 38.21%

-- Flow 1:

Average throughput: 1.05 Mbit/s

95th percentile per-packet one-way delay: 1117.256 ms

Loss rate: 34.81%

-- Flow 2:

Average throughput: 0.92 Mbit/s

95th percentile per-packet one-way delay: 1116.916 ms

Loss rate: 38.35%

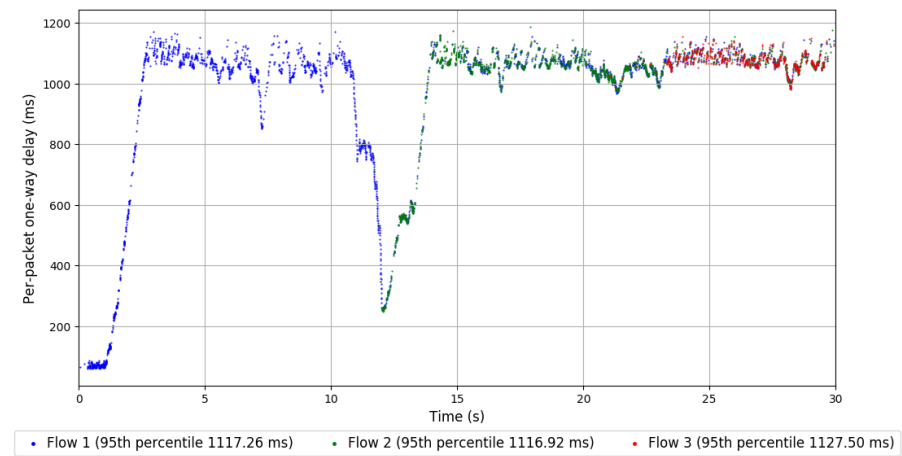
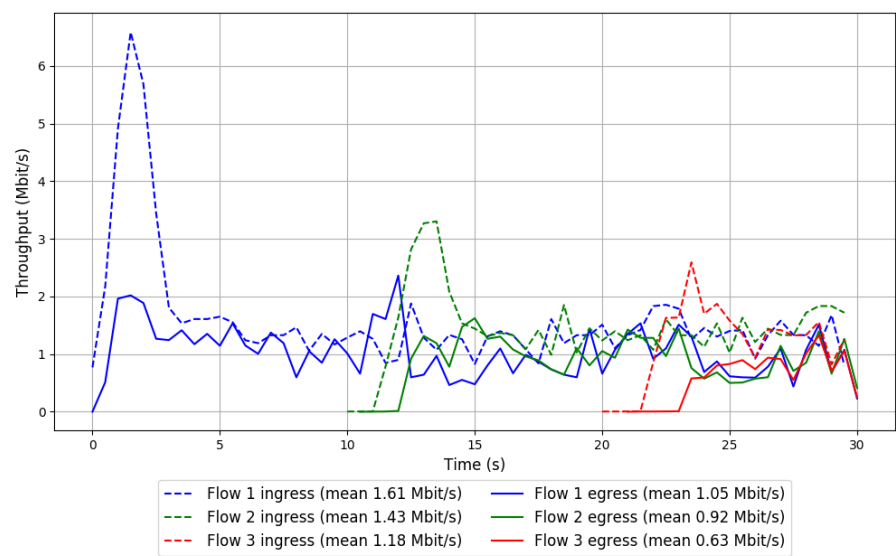
-- Flow 3:

Average throughput: 0.63 Mbit/s

95th percentile per-packet one-way delay: 1127.503 ms

Loss rate: 51.86%

Run 3: Report of PCC-Vivace — Data Link

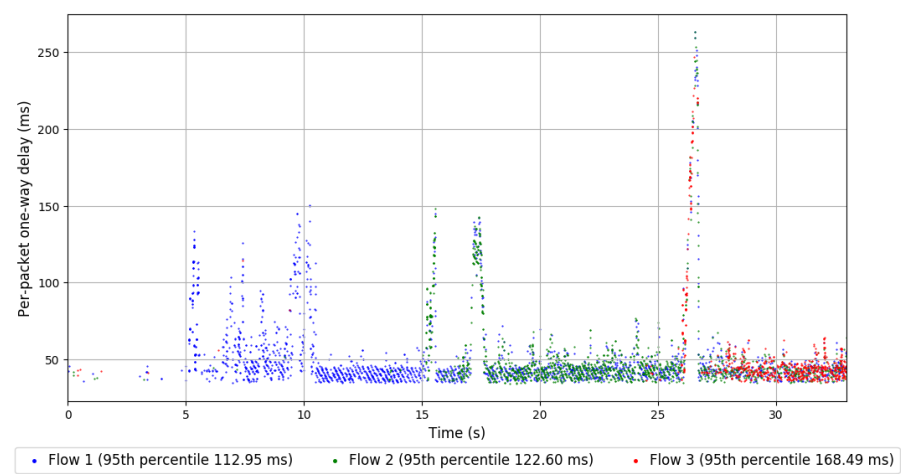
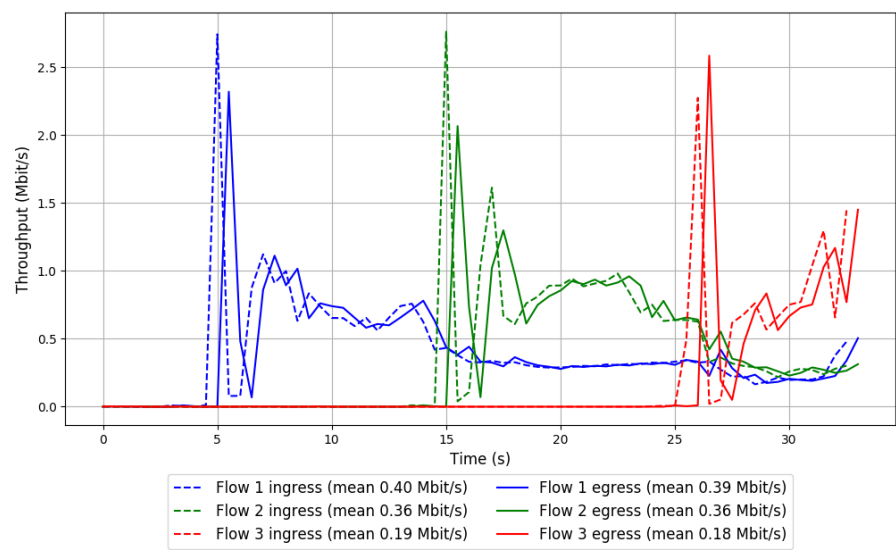


```
Run 1: Statistics of WebRTC media

Start at: 2018-05-30 14:35:53
End at: 2018-05-30 14:36:23
Local clock offset: -0.258 ms
Remote clock offset: -7.325 ms

# Below is generated by plot.py at 2018-05-30 15:17:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.93 Mbit/s
95th percentile per-packet one-way delay: 119.605 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 0.39 Mbit/s
95th percentile per-packet one-way delay: 112.950 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 122.600 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 168.485 ms
Loss rate: 0.96%
```

Run 1: Report of WebRTC media — Data Link

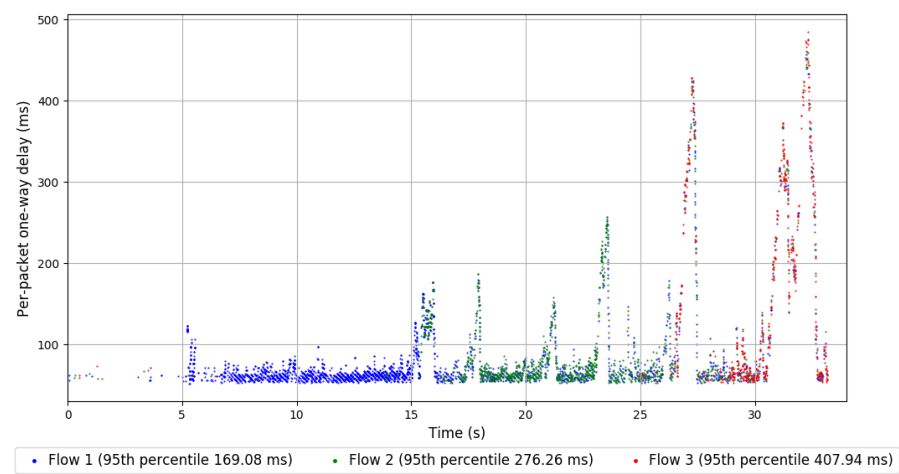
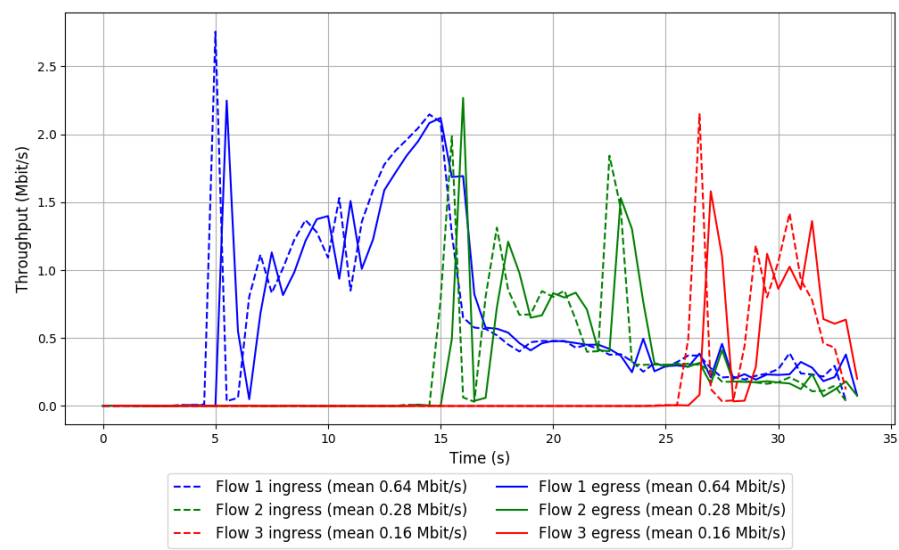


Run 2: Statistics of WebRTC media

Start at: 2018-05-30 14:53:29
End at: 2018-05-30 14:53:59
Local clock offset: -2.124 ms
Remote clock offset: -5.863 ms

Below is generated by plot.py at 2018-05-30 15:17:56
Datalink statistics
-- Total of 3 flows:
Average throughput: 1.08 Mbit/s
95th percentile per-packet one-way delay: 303.366 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 0.64 Mbit/s
95th percentile per-packet one-way delay: 169.079 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 0.28 Mbit/s
95th percentile per-packet one-way delay: 276.256 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 407.939 ms
Loss rate: 0.30%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2018-05-30 15:11:43
End at: 2018-05-30 15:12:13
Local clock offset: -0.271 ms
Remote clock offset: 14.911 ms

Below is generated by plot.py at 2018-05-30 15:17:57
Datalink statistics
-- Total of 3 flows:
Average throughput: 2.00 Mbit/s
95th percentile per-packet one-way delay: 132.453 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 1.11 Mbit/s
95th percentile per-packet one-way delay: 118.066 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.57 Mbit/s
95th percentile per-packet one-way delay: 138.775 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.33 Mbit/s
95th percentile per-packet one-way delay: 146.747 ms
Loss rate: 0.62%

Run 3: Report of WebRTC media — Data Link

