

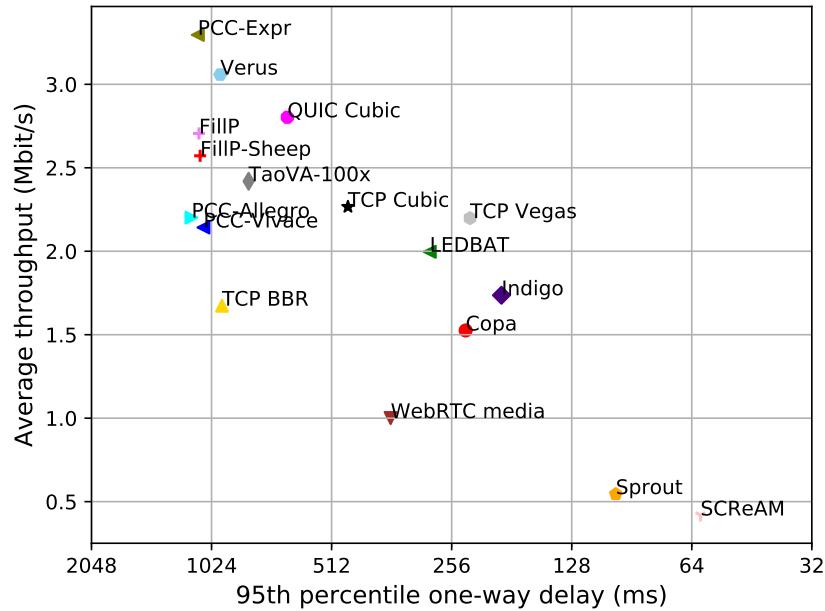
Pantheon Report

Generated at 2018-08-09 08:08:40 (UTC).
Data path: AWS India 1 Ethernet (*local*) → India ppp0 ppp0 (*remote*).
Repeated the test of 17 congestion control schemes 3 times.
Each test lasted for 30 seconds running 3 flows with 10-second interval between two flows.
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).
NTP offsets were measured against nets.org.sg and have been applied to correct the timestamps in logs.

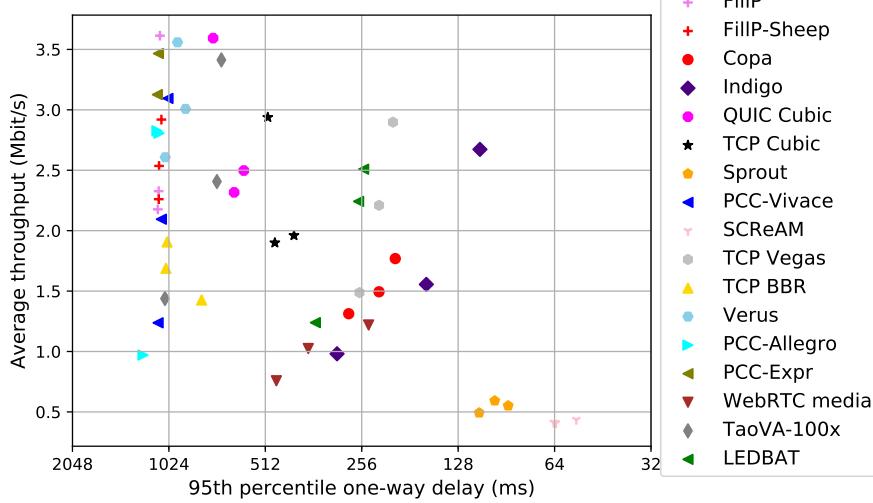
Git summary:

```
branch: master @ 7772df3413f4b07ba0096dfdd8e9d4c6dca623e3
third_party/fillp @ d47f4fa1b454a5e3c0537115c5a28436dbd4b834
third_party/fillp-sheep @ daed0c84f98531712514b2231f43ec6901114ffe
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179aab4a906ce6bb7cf3cf
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-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2
  M src/ScreamClient
  M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
  M src/verus.hpp
  M tools/plot.py
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851
```

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



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



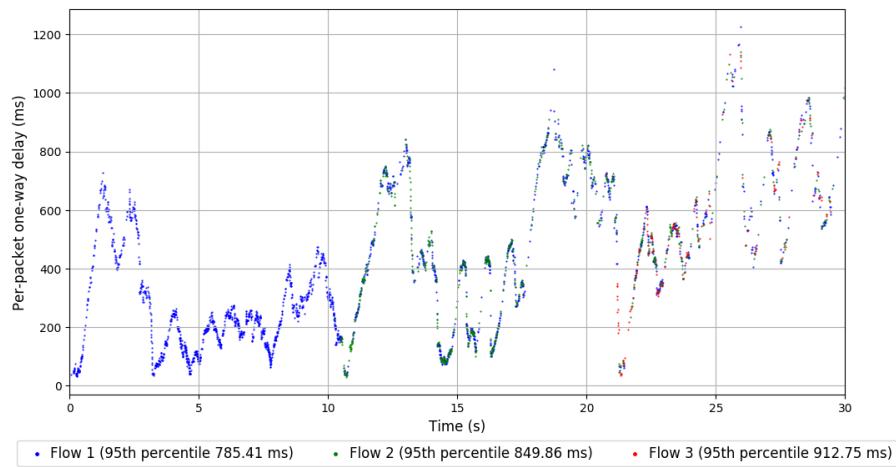
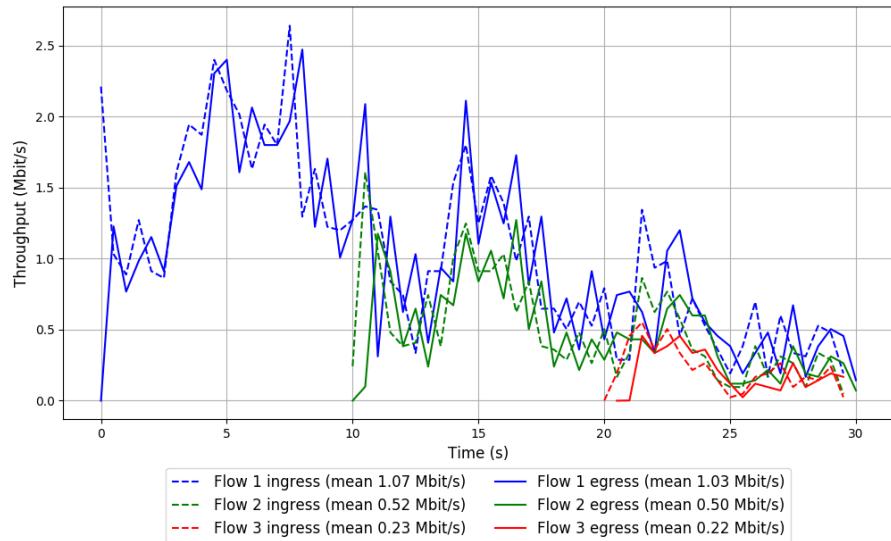
scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	3	1.10	0.69	0.38	935.84	986.44	1012.84	4.45	10.45	18.33
Copa		0.87	0.68	0.62	202.98	255.84	296.94	0.21	0.38	1.26
TCP Cubic		1.24	0.94	1.22	368.98	572.22	413.88	1.16	2.02	2.15
FillP		2.08	0.74	0.51	1100.74	1097.01	1108.13	70.97	51.73	73.77
FillP-Sheep		1.66	1.07	0.67	1078.29	1097.91	1120.79	29.48	52.72	78.12
Indigo		0.79	0.83	1.18	165.27	218.49	230.17	0.24	0.24	0.62
LEDBAT		1.39	0.69	0.53	280.71	287.71	337.29	0.50	1.00	2.24
PCC-Allegro		1.45	0.87	0.62	1117.64	1124.20	1192.60	52.99	61.55	91.70
PCC-Expr		2.30	1.23	0.76	1102.54	1116.61	1117.92	59.50	80.36	79.68
QUIC Cubic		1.82	1.08	0.83	606.57	691.64	784.11	1.49	2.67	7.69
SCReAM		0.21	0.21	0.20	58.18	59.43	70.97	0.03	0.17	0.29
Sprout		0.28	0.25	0.30	91.99	103.78	114.90	0.01	0.14	0.11
TaoVA-100x		1.55	0.97	0.72	736.93	846.36	939.86	2.75	12.36	20.17
TCP Vegas		1.23	0.99	0.93	175.62	278.71	318.61	0.18	0.53	1.44
Verus		2.04	1.43	0.32	919.98	1019.30	981.30	5.64	18.14	12.66
PCC-Vivace		1.21	0.99	0.89	1054.06	1074.05	1100.26	23.83	36.10	53.58
WebRTC media		0.48	0.37	0.16	340.88	336.26	435.20	0.49	0.30	1.12

Run 1: Statistics of TCP BBR

```
Start at: 2018-08-09 07:21:17
End at: 2018-08-09 07:21:47
Local clock offset: 2.984 ms
Remote clock offset: -8.898 ms

# Below is generated by plot.py at 2018-08-09 08:07:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.43 Mbit/s
95th percentile per-packet one-way delay: 809.471 ms
Loss rate: 3.47%
-- Flow 1:
Average throughput: 1.03 Mbit/s
95th percentile per-packet one-way delay: 785.415 ms
Loss rate: 2.75%
-- Flow 2:
Average throughput: 0.50 Mbit/s
95th percentile per-packet one-way delay: 849.861 ms
Loss rate: 3.76%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 912.747 ms
Loss rate: 12.56%
```

Run 1: Report of TCP BBR — Data Link

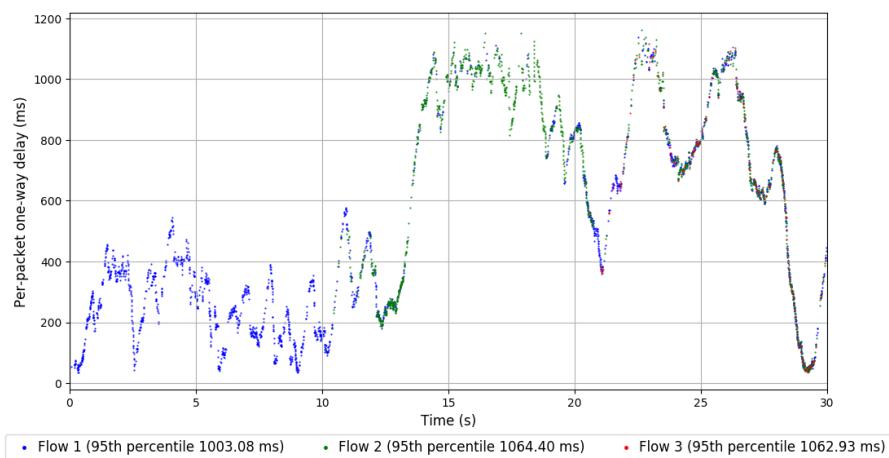
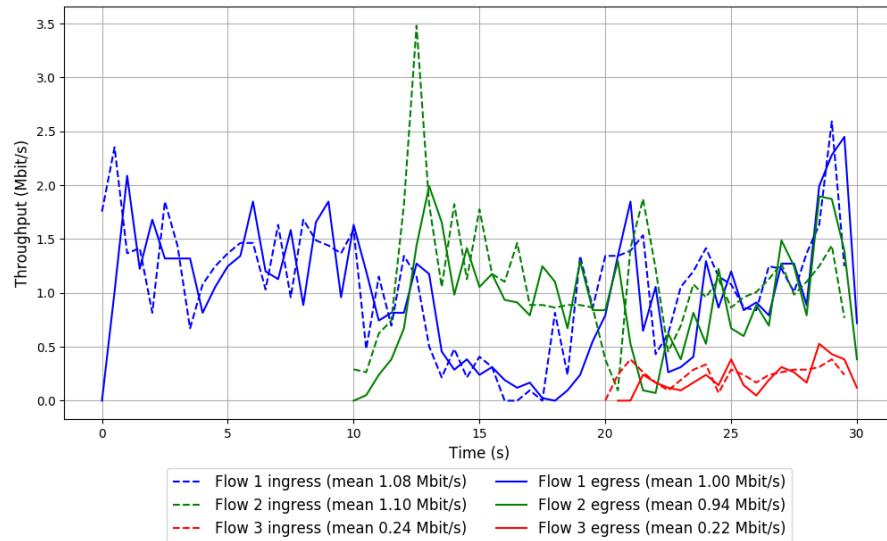


Run 2: Statistics of TCP BBR

```
Start at: 2018-08-09 07:39:52
End at: 2018-08-09 07:40:22
Local clock offset: -2.828 ms
Remote clock offset: -10.665 ms

# Below is generated by plot.py at 2018-08-09 08:07:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.69 Mbit/s
95th percentile per-packet one-way delay: 1045.419 ms
Loss rate: 10.63%
-- Flow 1:
Average throughput: 1.00 Mbit/s
95th percentile per-packet one-way delay: 1003.081 ms
Loss rate: 7.27%
-- Flow 2:
Average throughput: 0.94 Mbit/s
95th percentile per-packet one-way delay: 1064.399 ms
Loss rate: 15.35%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1062.933 ms
Loss rate: 12.62%
```

Run 2: Report of TCP BBR — Data Link

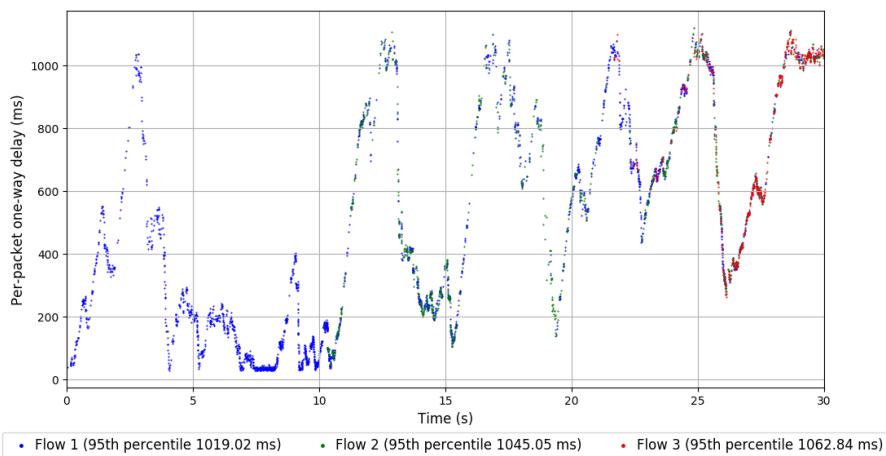
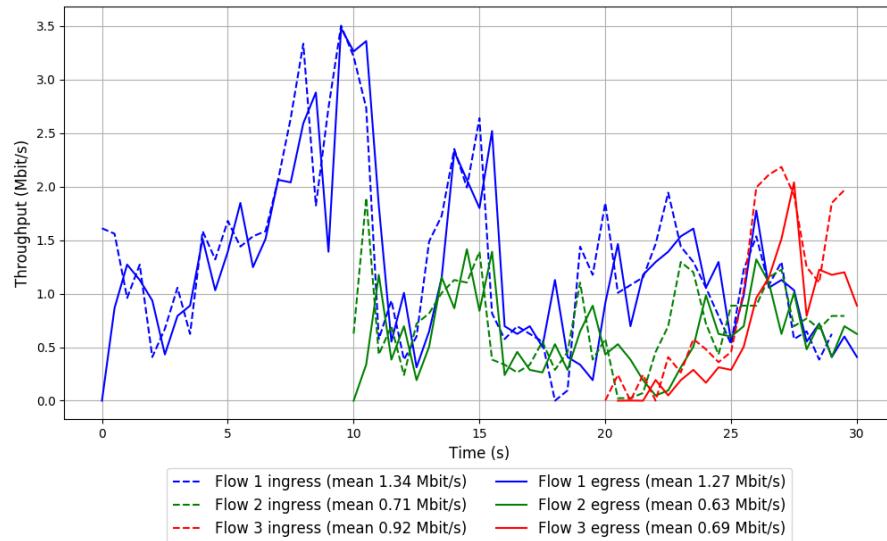


Run 3: Statistics of TCP BBR

```
Start at: 2018-08-09 07:58:30
End at: 2018-08-09 07:59:00
Local clock offset: 2.718 ms
Remote clock offset: -13.375 ms

# Below is generated by plot.py at 2018-08-09 08:07:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.91 Mbit/s
95th percentile per-packet one-way delay: 1036.708 ms
Loss rate: 9.23%
-- Flow 1:
Average throughput: 1.27 Mbit/s
95th percentile per-packet one-way delay: 1019.017 ms
Loss rate: 3.34%
-- Flow 2:
Average throughput: 0.63 Mbit/s
95th percentile per-packet one-way delay: 1045.049 ms
Loss rate: 12.25%
-- Flow 3:
Average throughput: 0.69 Mbit/s
95th percentile per-packet one-way delay: 1062.841 ms
Loss rate: 29.81%
```

Run 3: Report of TCP BBR — Data Link

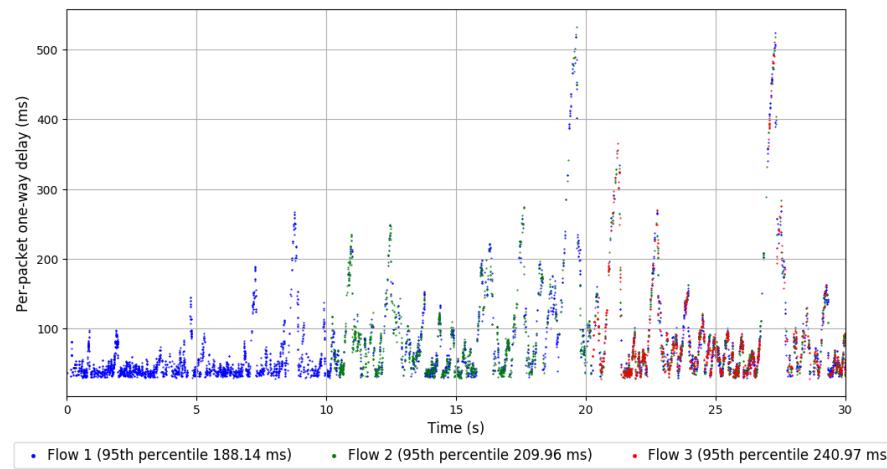
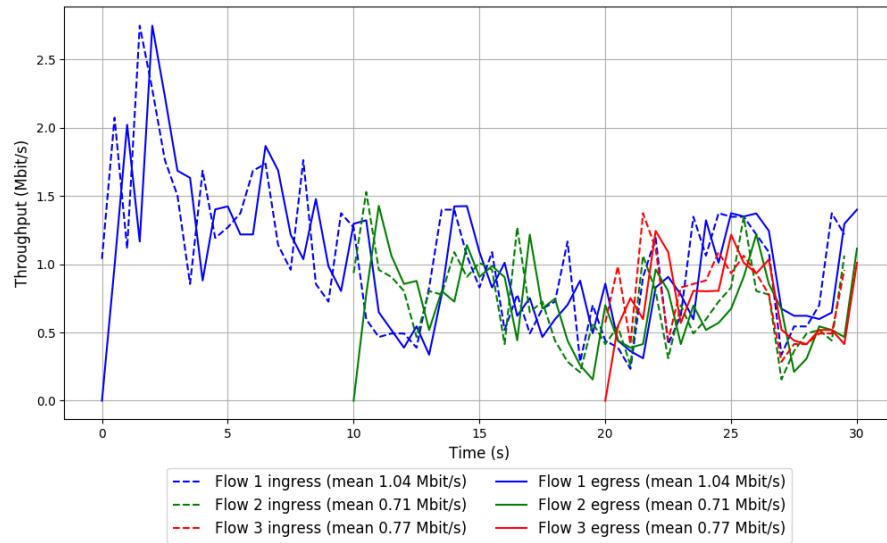


Run 1: Statistics of Copa

```
Start at: 2018-08-09 07:14:44
End at: 2018-08-09 07:15:14
Local clock offset: 1.509 ms
Remote clock offset: -10.38 ms

# Below is generated by plot.py at 2018-08-09 08:07:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.77 Mbit/s
95th percentile per-packet one-way delay: 201.158 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 1.04 Mbit/s
95th percentile per-packet one-way delay: 188.137 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 0.71 Mbit/s
95th percentile per-packet one-way delay: 209.961 ms
Loss rate: 0.29%
-- Flow 3:
Average throughput: 0.77 Mbit/s
95th percentile per-packet one-way delay: 240.971 ms
Loss rate: 0.49%
```

Run 1: Report of Copa — Data Link

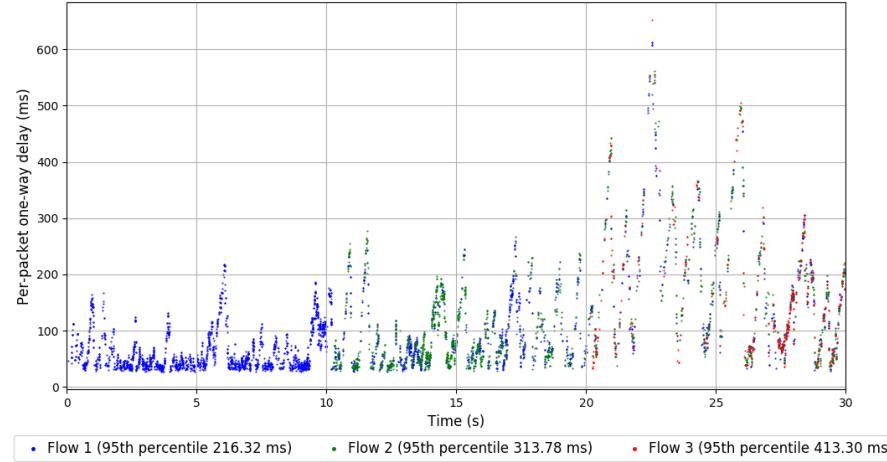
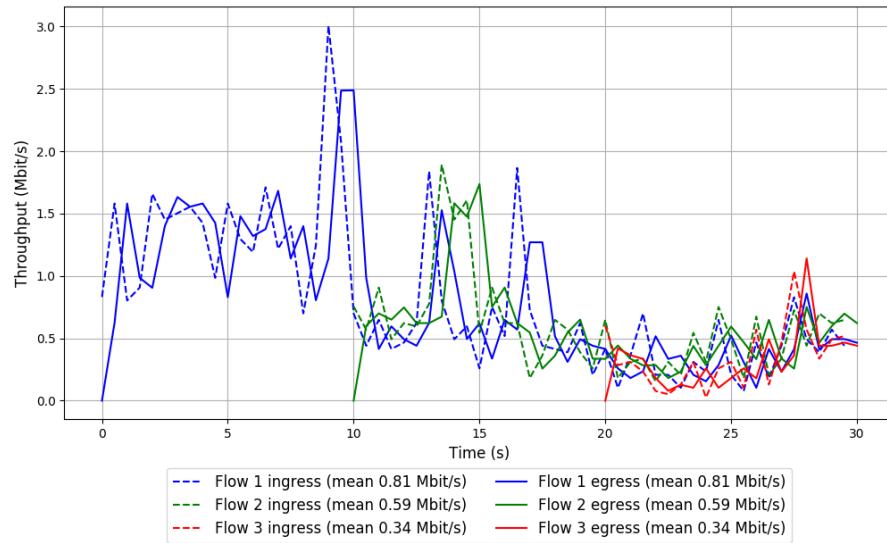


Run 2: Statistics of Copa

```
Start at: 2018-08-09 07:33:19
End at: 2018-08-09 07:33:49
Local clock offset: 3.161 ms
Remote clock offset: -8.724 ms

# Below is generated by plot.py at 2018-08-09 08:07:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.31 Mbit/s
95th percentile per-packet one-way delay: 281.103 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 0.81 Mbit/s
95th percentile per-packet one-way delay: 216.319 ms
Loss rate: 0.27%
-- Flow 2:
Average throughput: 0.59 Mbit/s
95th percentile per-packet one-way delay: 313.779 ms
Loss rate: 0.59%
-- Flow 3:
Average throughput: 0.34 Mbit/s
95th percentile per-packet one-way delay: 413.298 ms
Loss rate: 3.10%
```

Run 2: Report of Copa — Data Link

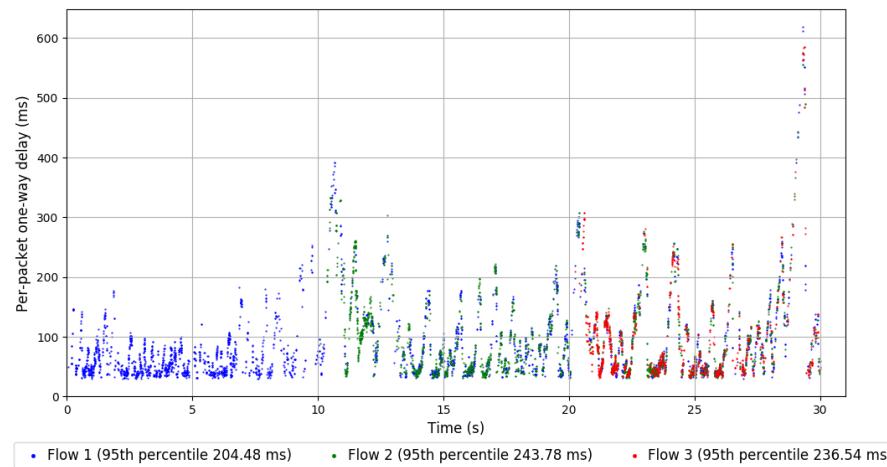
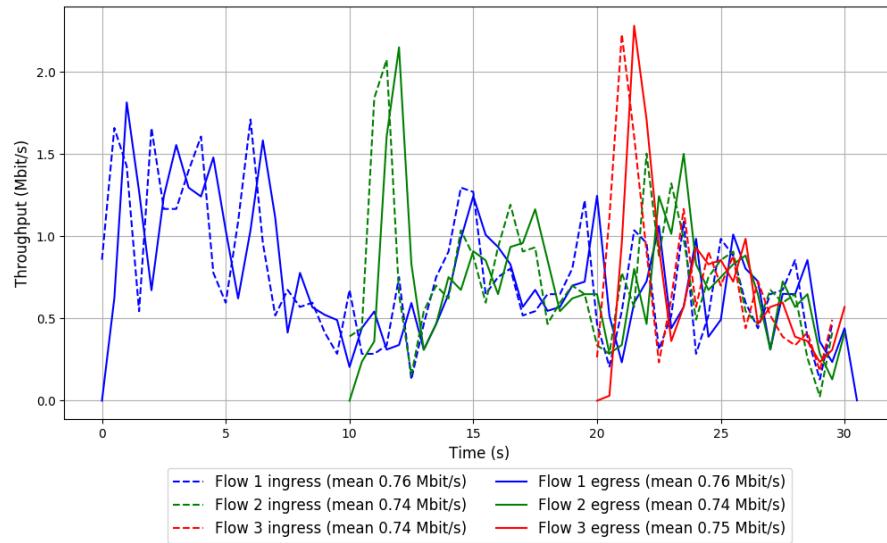


Run 3: Statistics of Copa

```
Start at: 2018-08-09 07:51:56
End at: 2018-08-09 07:52:26
Local clock offset: -0.614 ms
Remote clock offset: -13.534 ms

# Below is generated by plot.py at 2018-08-09 08:07:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.49 Mbit/s
95th percentile per-packet one-way delay: 226.089 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 0.76 Mbit/s
95th percentile per-packet one-way delay: 204.484 ms
Loss rate: 0.23%
-- Flow 2:
Average throughput: 0.74 Mbit/s
95th percentile per-packet one-way delay: 243.780 ms
Loss rate: 0.26%
-- Flow 3:
Average throughput: 0.75 Mbit/s
95th percentile per-packet one-way delay: 236.538 ms
Loss rate: 0.19%
```

Run 3: Report of Copa — Data Link

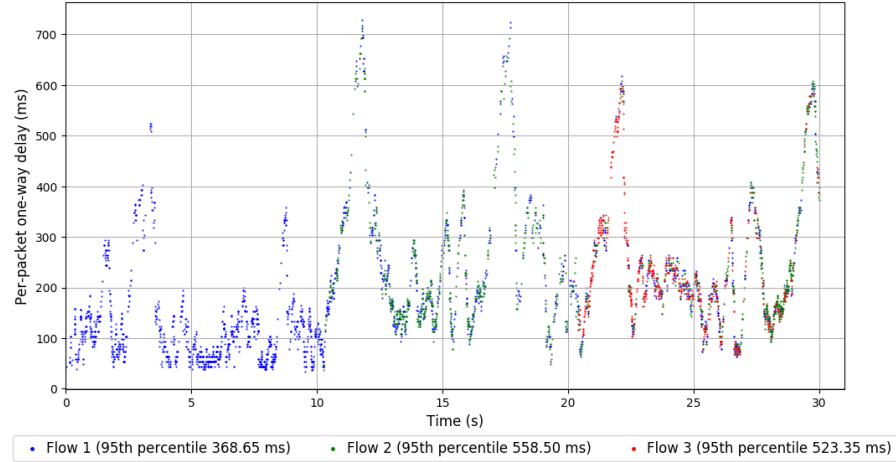
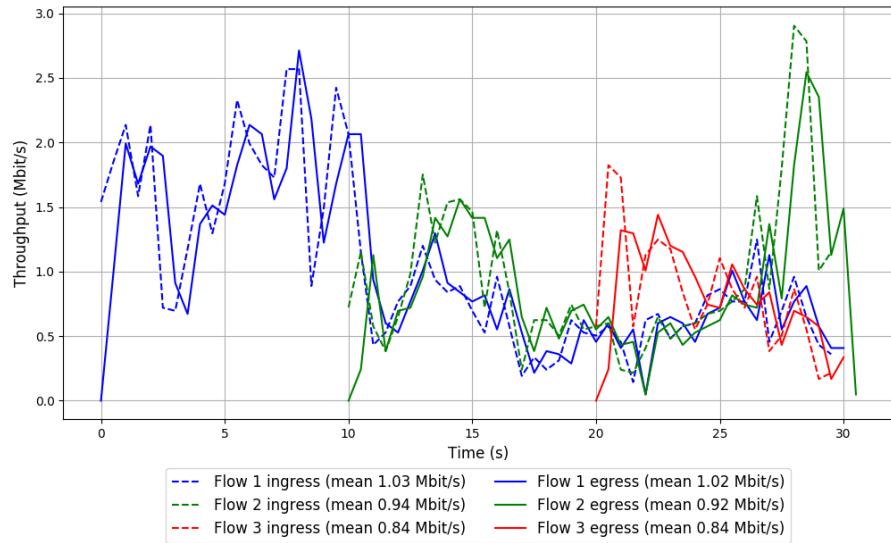


```
Run 1: Statistics of TCP Cubic
```

```
Start at: 2018-08-09 07:16:55
End at: 2018-08-09 07:17:25
Local clock offset: -0.378 ms
Remote clock offset: -8.121 ms

# Below is generated by plot.py at 2018-08-09 08:07:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.90 Mbit/s
95th percentile per-packet one-way delay: 478.094 ms
Loss rate: 1.84%
-- Flow 1:
Average throughput: 1.02 Mbit/s
95th percentile per-packet one-way delay: 368.652 ms
Loss rate: 1.17%
-- Flow 2:
Average throughput: 0.92 Mbit/s
95th percentile per-packet one-way delay: 558.505 ms
Loss rate: 3.00%
-- Flow 3:
Average throughput: 0.84 Mbit/s
95th percentile per-packet one-way delay: 523.346 ms
Loss rate: 1.72%
```

Run 1: Report of TCP Cubic — Data Link

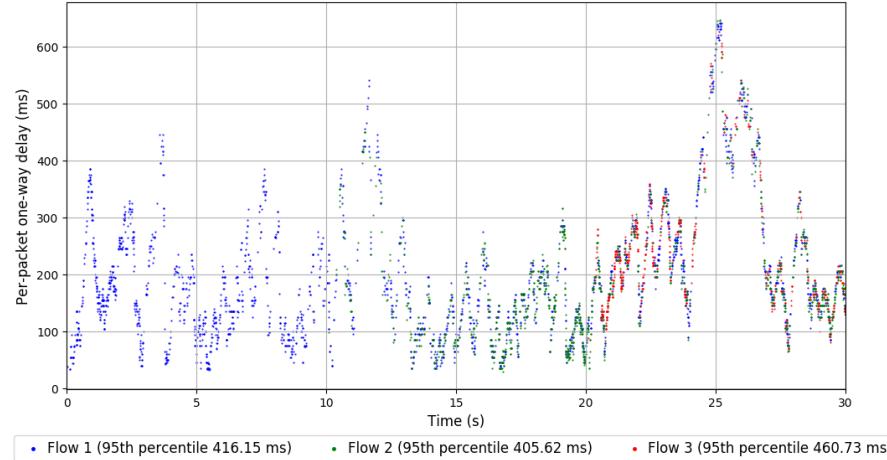
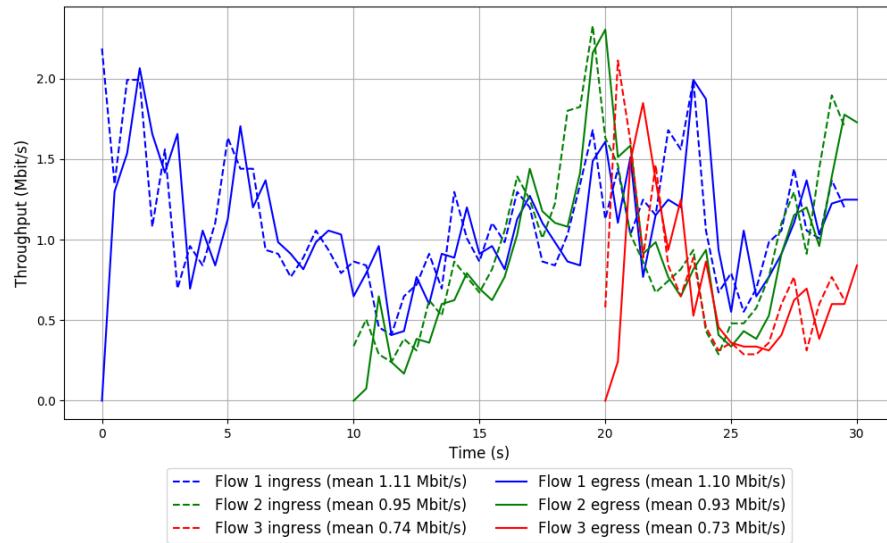


Run 2: Statistics of TCP Cubic

```
Start at: 2018-08-09 07:35:30
End at: 2018-08-09 07:36:00
Local clock offset: 2.142 ms
Remote clock offset: -8.749 ms

# Below is generated by plot.py at 2018-08-09 08:07:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.96 Mbit/s
95th percentile per-packet one-way delay: 416.701 ms
Loss rate: 1.49%
-- Flow 1:
Average throughput: 1.10 Mbit/s
95th percentile per-packet one-way delay: 416.155 ms
Loss rate: 1.19%
-- Flow 2:
Average throughput: 0.93 Mbit/s
95th percentile per-packet one-way delay: 405.625 ms
Loss rate: 1.84%
-- Flow 3:
Average throughput: 0.73 Mbit/s
95th percentile per-packet one-way delay: 460.732 ms
Loss rate: 1.95%
```

Run 2: Report of TCP Cubic — Data Link

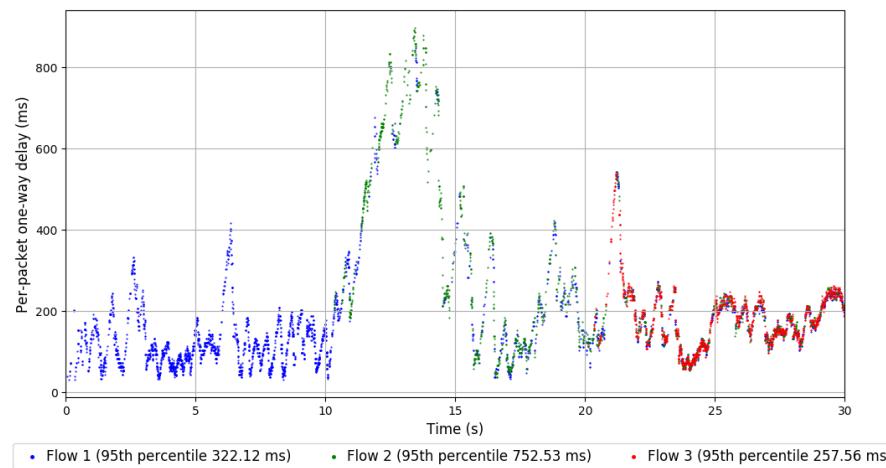
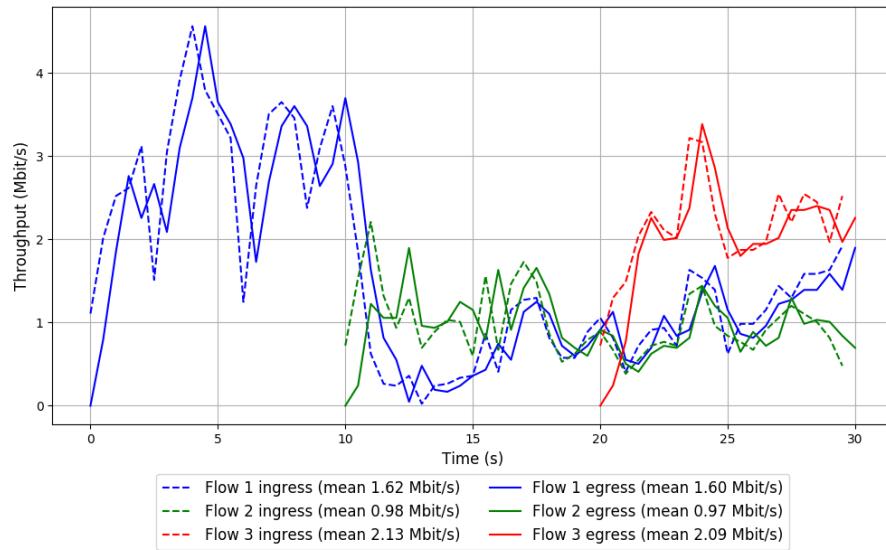


Run 3: Statistics of TCP Cubic

```
Start at: 2018-08-09 07:54:07
End at: 2018-08-09 07:54:37
Local clock offset: 0.83 ms
Remote clock offset: -13.744 ms

# Below is generated by plot.py at 2018-08-09 08:08:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.94 Mbit/s
95th percentile per-packet one-way delay: 502.975 ms
Loss rate: 1.53%
-- Flow 1:
Average throughput: 1.60 Mbit/s
95th percentile per-packet one-way delay: 322.121 ms
Loss rate: 1.11%
-- Flow 2:
Average throughput: 0.97 Mbit/s
95th percentile per-packet one-way delay: 752.535 ms
Loss rate: 1.22%
-- Flow 3:
Average throughput: 2.09 Mbit/s
95th percentile per-packet one-way delay: 257.558 ms
Loss rate: 2.77%
```

Run 3: Report of TCP Cubic — Data Link

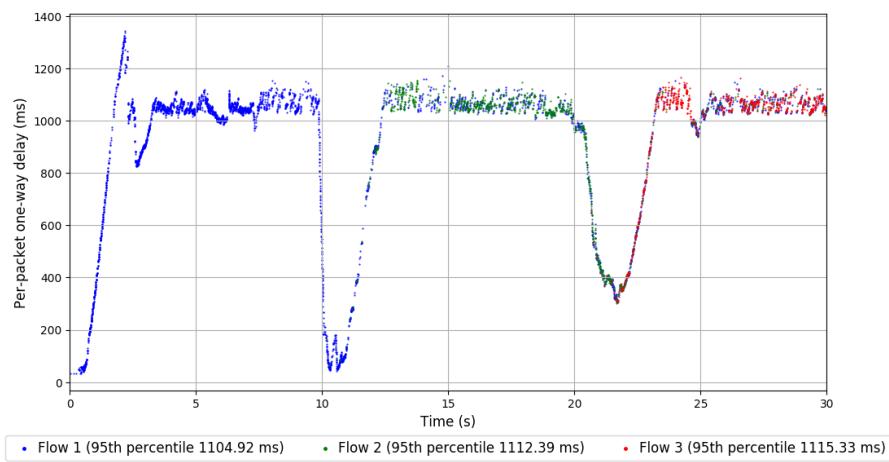
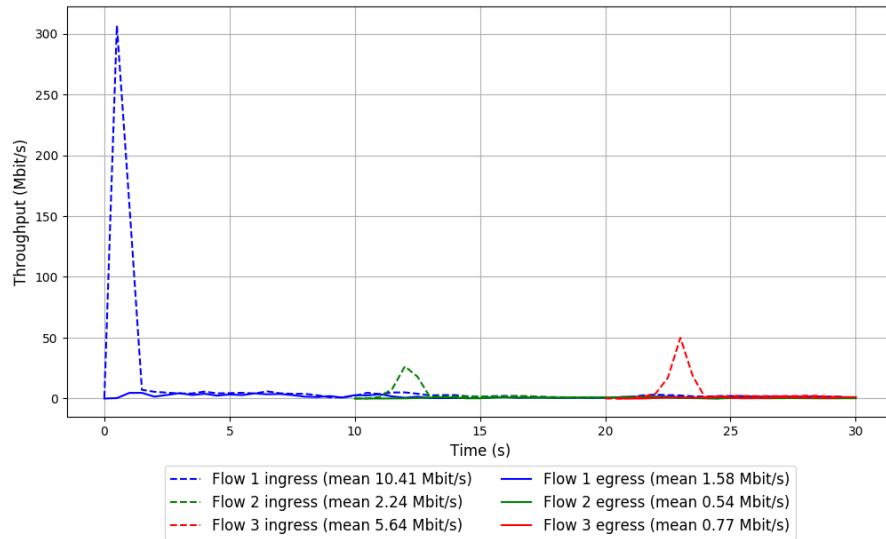


```
Run 1: Statistics of FillP

Start at: 2018-08-09 07:18:00
End at: 2018-08-09 07:18:30
Local clock offset: -0.435 ms
Remote clock offset: -9.276 ms

# Below is generated by plot.py at 2018-08-09 08:08:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.18 Mbit/s
95th percentile per-packet one-way delay: 1108.985 ms
Loss rate: 84.20%
-- Flow 1:
Average throughput: 1.58 Mbit/s
95th percentile per-packet one-way delay: 1104.921 ms
Loss rate: 84.83%
-- Flow 2:
Average throughput: 0.54 Mbit/s
95th percentile per-packet one-way delay: 1112.389 ms
Loss rate: 75.97%
-- Flow 3:
Average throughput: 0.77 Mbit/s
95th percentile per-packet one-way delay: 1115.331 ms
Loss rate: 87.28%
```

Run 1: Report of FillP — Data Link

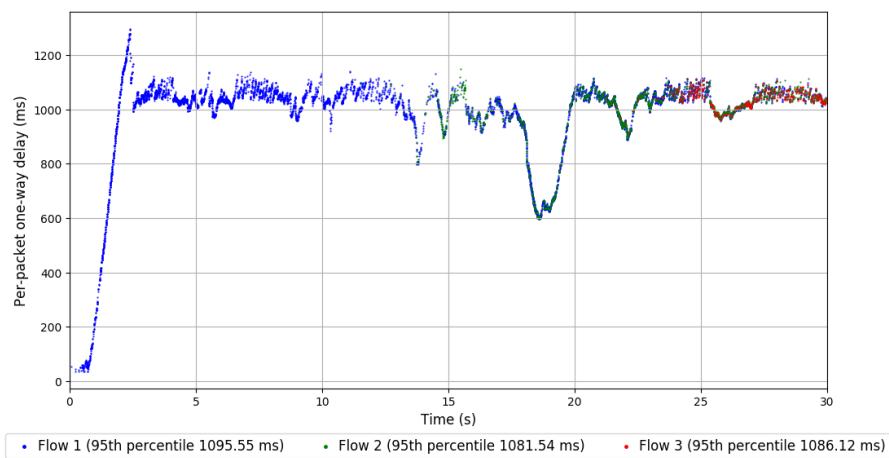
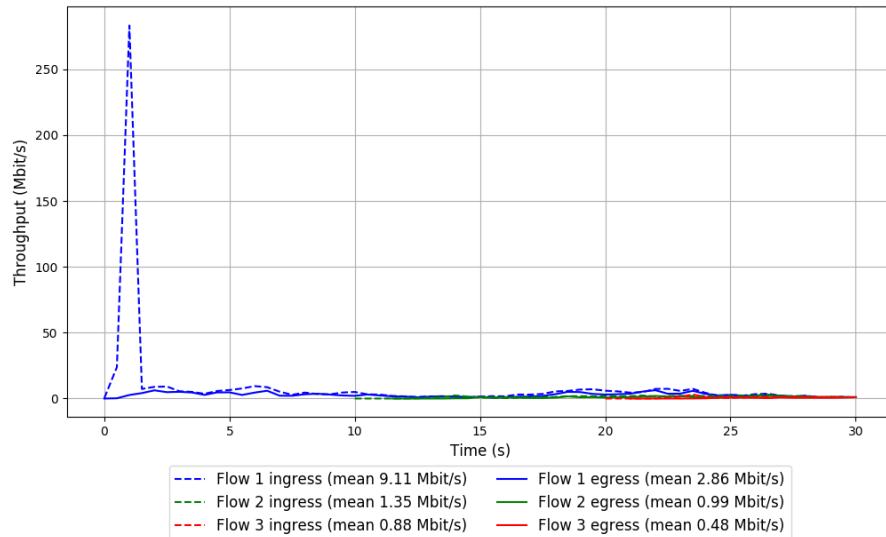


Run 2: Statistics of FillP

```
Start at: 2018-08-09 07:36:35
End at: 2018-08-09 07:37:05
Local clock offset: 0.534 ms
Remote clock offset: -9.319 ms

# Below is generated by plot.py at 2018-08-09 08:08:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.61 Mbit/s
95th percentile per-packet one-way delay: 1092.302 ms
Loss rate: 64.95%
-- Flow 1:
Average throughput: 2.86 Mbit/s
95th percentile per-packet one-way delay: 1095.551 ms
Loss rate: 68.61%
-- Flow 2:
Average throughput: 0.99 Mbit/s
95th percentile per-packet one-way delay: 1081.538 ms
Loss rate: 31.93%
-- Flow 3:
Average throughput: 0.48 Mbit/s
95th percentile per-packet one-way delay: 1086.119 ms
Loss rate: 52.26%
```

Run 2: Report of FillP — Data Link

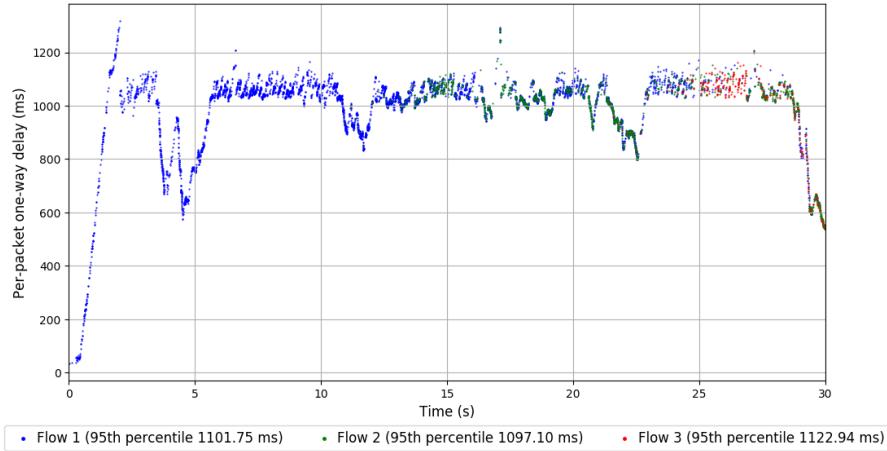
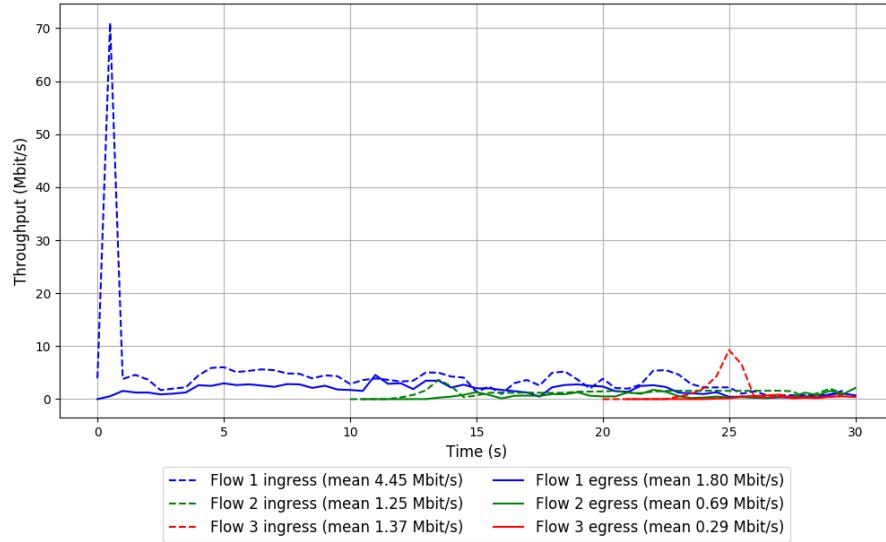


Run 3: Statistics of FillP

```
Start at: 2018-08-09 07:55:13
End at: 2018-08-09 07:55:43
Local clock offset: -0.924 ms
Remote clock offset: -13.435 ms

# Below is generated by plot.py at 2018-08-09 08:08:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.33 Mbit/s
95th percentile per-packet one-way delay: 1101.971 ms
Loss rate: 59.46%
-- Flow 1:
Average throughput: 1.80 Mbit/s
95th percentile per-packet one-way delay: 1101.748 ms
Loss rate: 59.47%
-- Flow 2:
Average throughput: 0.69 Mbit/s
95th percentile per-packet one-way delay: 1097.104 ms
Loss rate: 47.30%
-- Flow 3:
Average throughput: 0.29 Mbit/s
95th percentile per-packet one-way delay: 1122.943 ms
Loss rate: 81.76%
```

Run 3: Report of FillP — Data Link

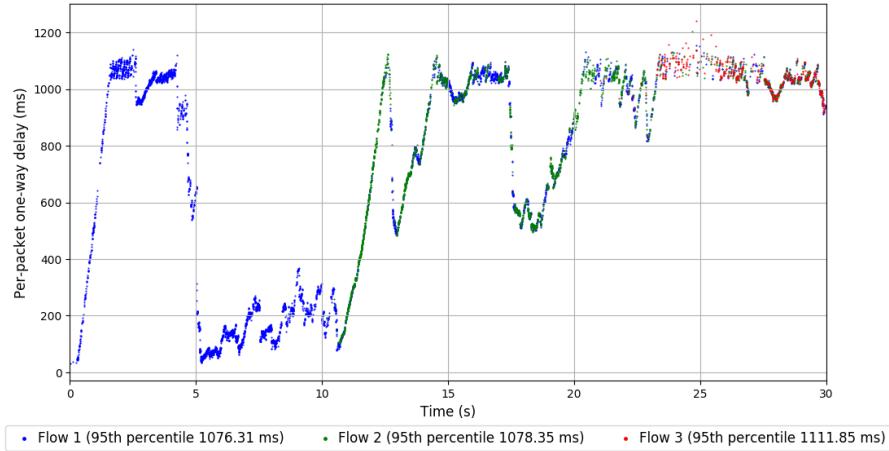
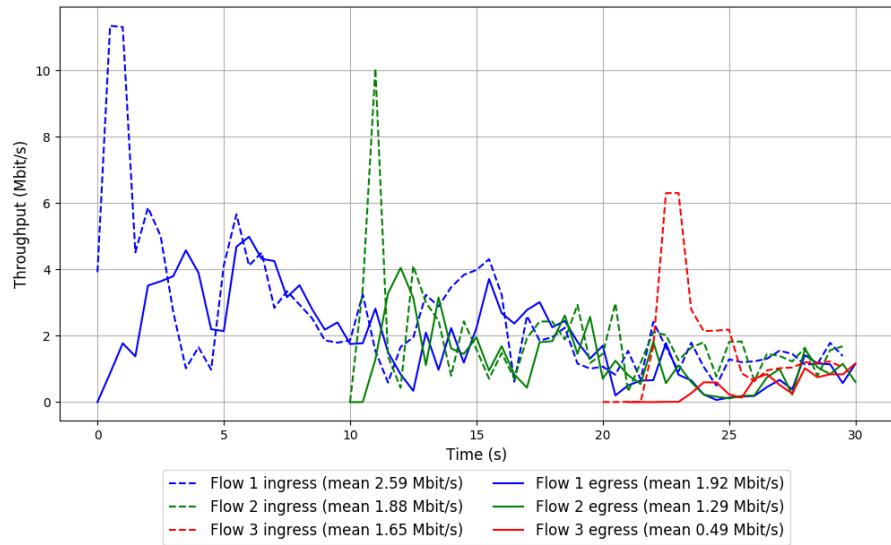


Run 1: Statistics of FillP-Sheep

```
Start at: 2018-08-09 07:26:44
End at: 2018-08-09 07:27:14
Local clock offset: 1.591 ms
Remote clock offset: -9.16 ms

# Below is generated by plot.py at 2018-08-09 08:08:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.92 Mbit/s
95th percentile per-packet one-way delay: 1080.658 ms
Loss rate: 33.63%
-- Flow 1:
Average throughput: 1.92 Mbit/s
95th percentile per-packet one-way delay: 1076.308 ms
Loss rate: 25.94%
-- Flow 2:
Average throughput: 1.29 Mbit/s
95th percentile per-packet one-way delay: 1078.350 ms
Loss rate: 32.25%
-- Flow 3:
Average throughput: 0.49 Mbit/s
95th percentile per-packet one-way delay: 1111.849 ms
Loss rate: 73.18%
```

Run 1: Report of FillP-Sheep — Data Link

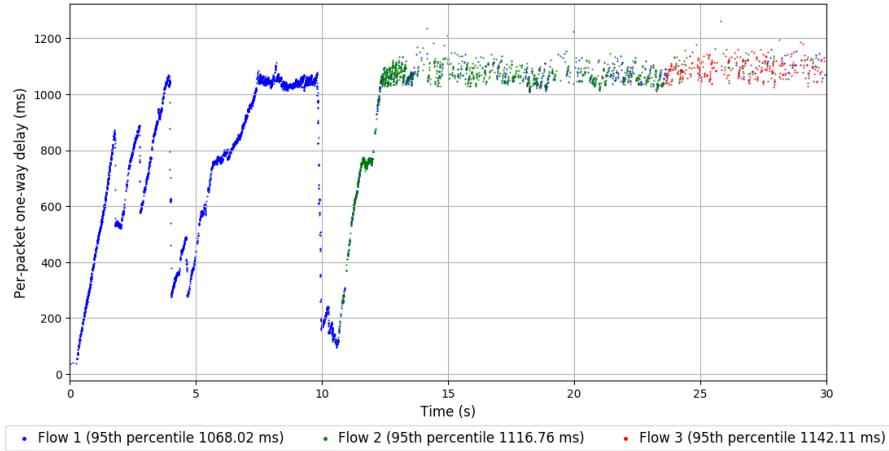
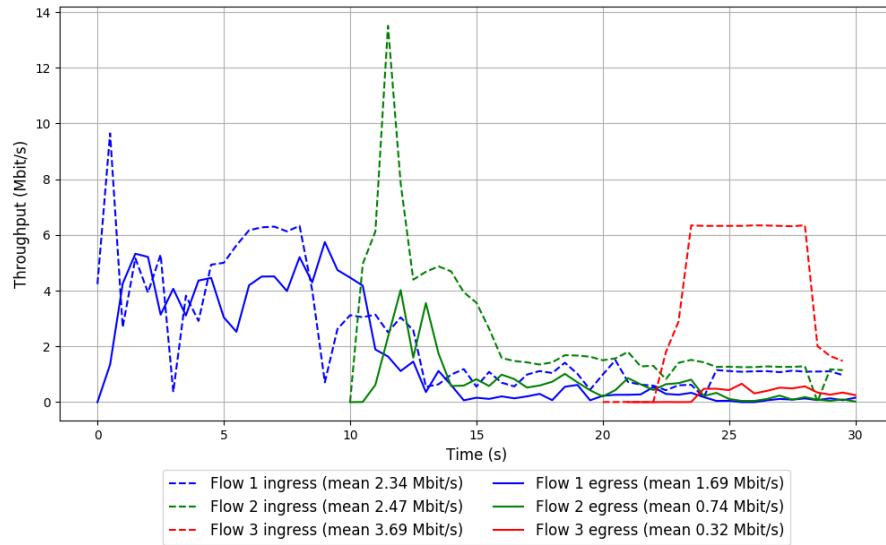


Run 2: Statistics of FillP-Sheep

```
Start at: 2018-08-09 07:45:22
End at: 2018-08-09 07:45:52
Local clock offset: -0.429 ms
Remote clock offset: -12.193 ms

# Below is generated by plot.py at 2018-08-09 08:08:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.26 Mbit/s
95th percentile per-packet one-way delay: 1101.346 ms
Loss rate: 56.69%
-- Flow 1:
Average throughput: 1.69 Mbit/s
95th percentile per-packet one-way delay: 1068.016 ms
Loss rate: 28.00%
-- Flow 2:
Average throughput: 0.74 Mbit/s
95th percentile per-packet one-way delay: 1116.759 ms
Loss rate: 71.00%
-- Flow 3:
Average throughput: 0.32 Mbit/s
95th percentile per-packet one-way delay: 1142.106 ms
Loss rate: 92.38%
```

Run 2: Report of FillP-Sheep — Data Link

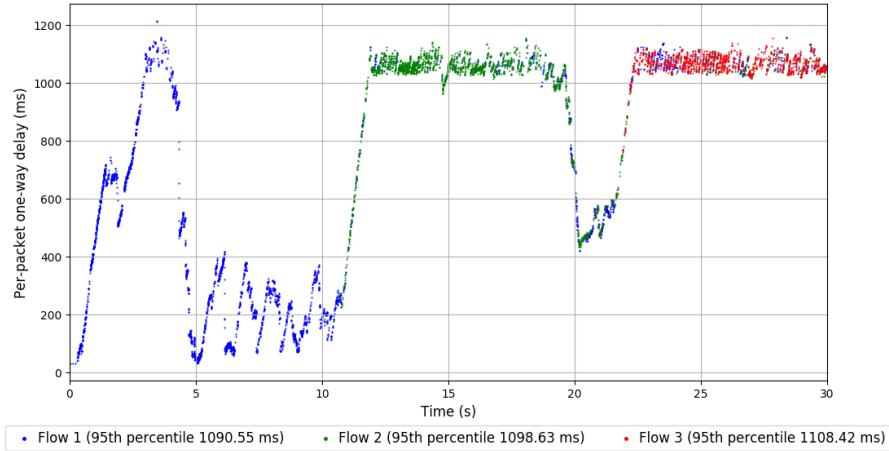
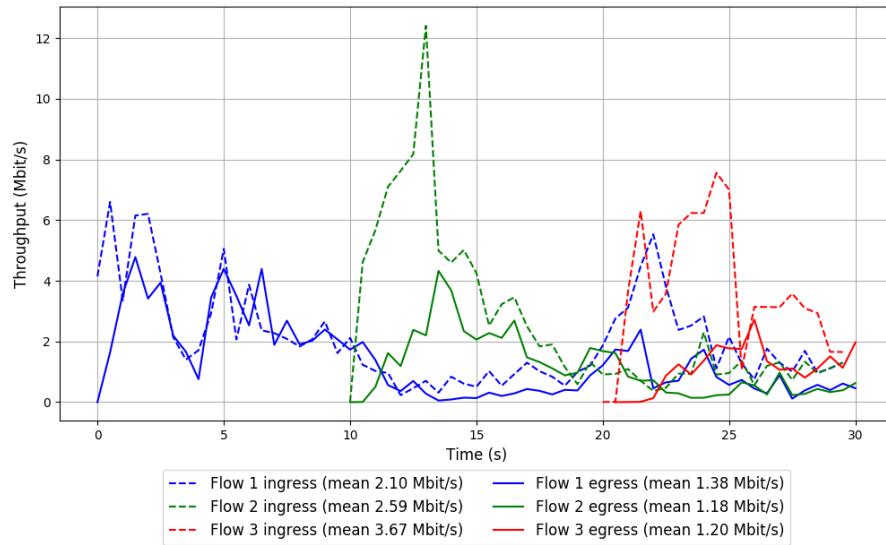


Run 3: Statistics of FillP-Sheep

```
Start at: 2018-08-09 08:03:59
End at: 2018-08-09 08:04:29
Local clock offset: 3.391 ms
Remote clock offset: -13.582 ms

# Below is generated by plot.py at 2018-08-09 08:08:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.54 Mbit/s
95th percentile per-packet one-way delay: 1099.070 ms
Loss rate: 49.74%
-- Flow 1:
Average throughput: 1.38 Mbit/s
95th percentile per-packet one-way delay: 1090.546 ms
Loss rate: 34.50%
-- Flow 2:
Average throughput: 1.18 Mbit/s
95th percentile per-packet one-way delay: 1098.630 ms
Loss rate: 54.90%
-- Flow 3:
Average throughput: 1.20 Mbit/s
95th percentile per-packet one-way delay: 1108.416 ms
Loss rate: 68.79%
```

Run 3: Report of FillP-Sheep — Data Link

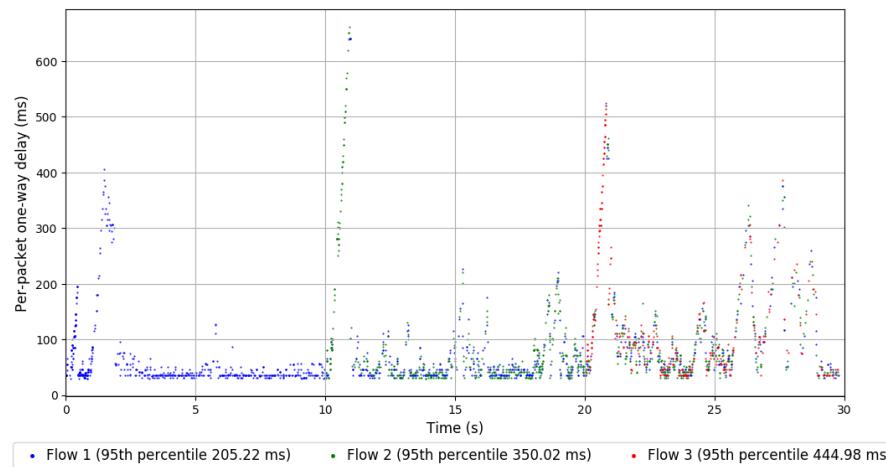
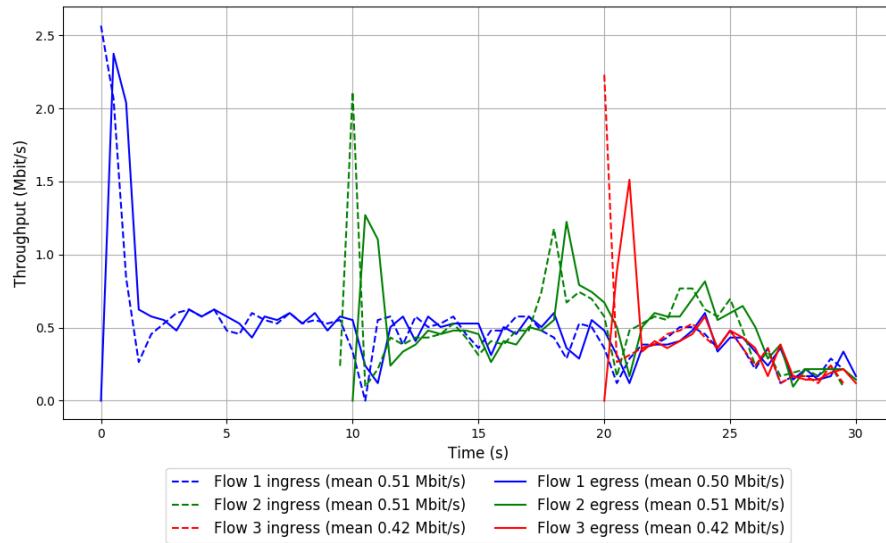


Run 1: Statistics of Indigo

```
Start at: 2018-08-09 07:30:02
End at: 2018-08-09 07:30:32
Local clock offset: 3.619 ms
Remote clock offset: -9.139 ms

# Below is generated by plot.py at 2018-08-09 08:08:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.98 Mbit/s
95th percentile per-packet one-way delay: 305.715 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 0.50 Mbit/s
95th percentile per-packet one-way delay: 205.217 ms
Loss rate: 0.24%
-- Flow 2:
Average throughput: 0.51 Mbit/s
95th percentile per-packet one-way delay: 350.020 ms
Loss rate: 0.35%
-- Flow 3:
Average throughput: 0.42 Mbit/s
95th percentile per-packet one-way delay: 444.983 ms
Loss rate: 0.88%
```

Run 1: Report of Indigo — Data Link

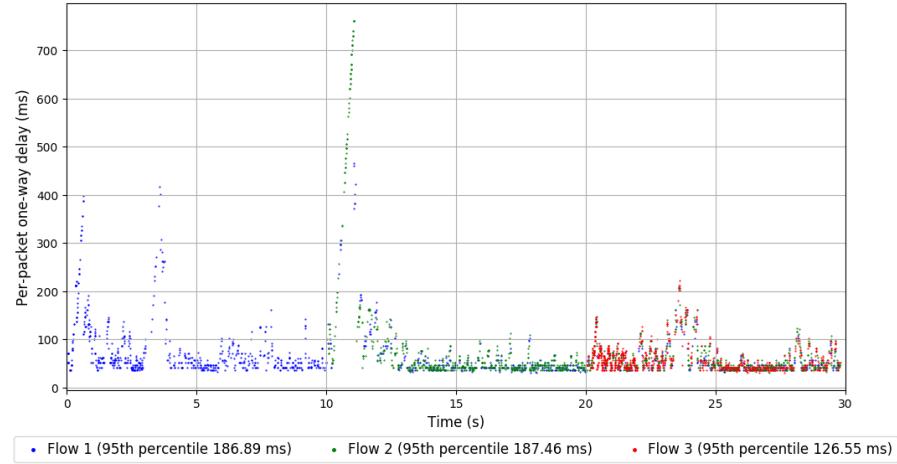
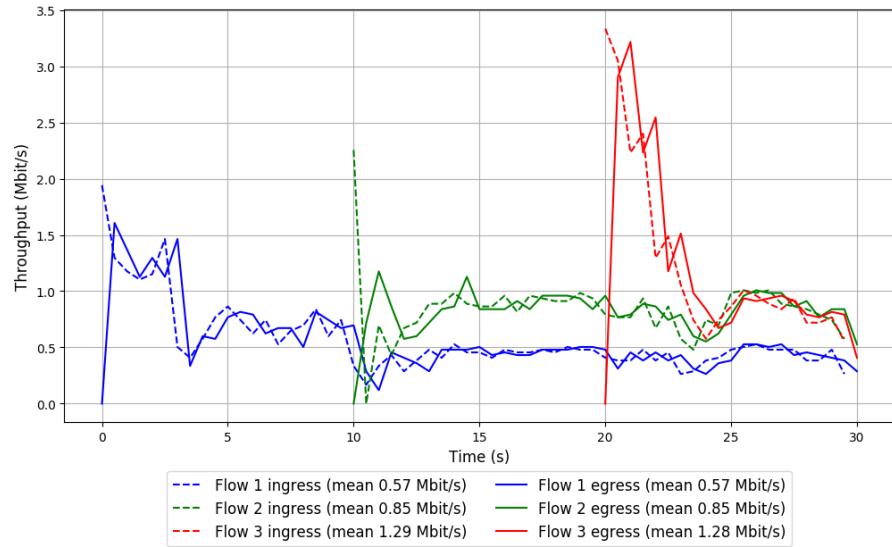


Run 2: Statistics of Indigo

```
Start at: 2018-08-09 07:48:39
End at: 2018-08-09 07:49:09
Local clock offset: -0.574 ms
Remote clock offset: -12.306 ms

# Below is generated by plot.py at 2018-08-09 08:08:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.56 Mbit/s
95th percentile per-packet one-way delay: 160.906 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 0.57 Mbit/s
95th percentile per-packet one-way delay: 186.891 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 0.85 Mbit/s
95th percentile per-packet one-way delay: 187.463 ms
Loss rate: 0.21%
-- Flow 3:
Average throughput: 1.28 Mbit/s
95th percentile per-packet one-way delay: 126.551 ms
Loss rate: 0.57%
```

Run 2: Report of Indigo — Data Link

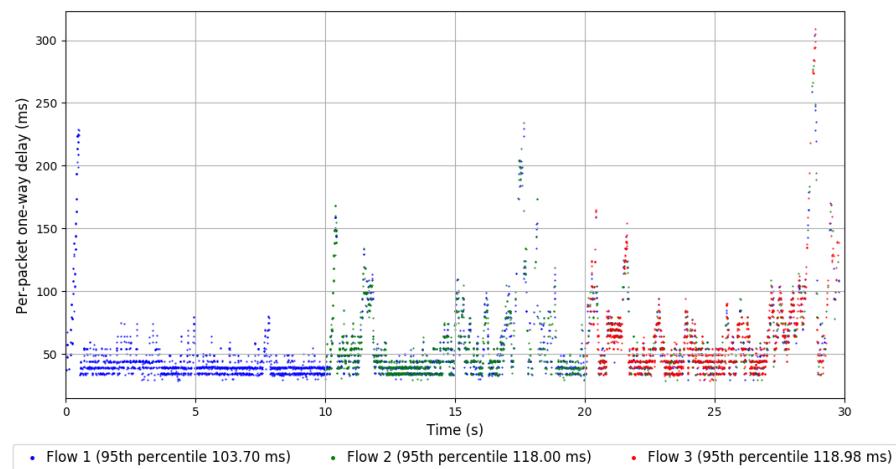
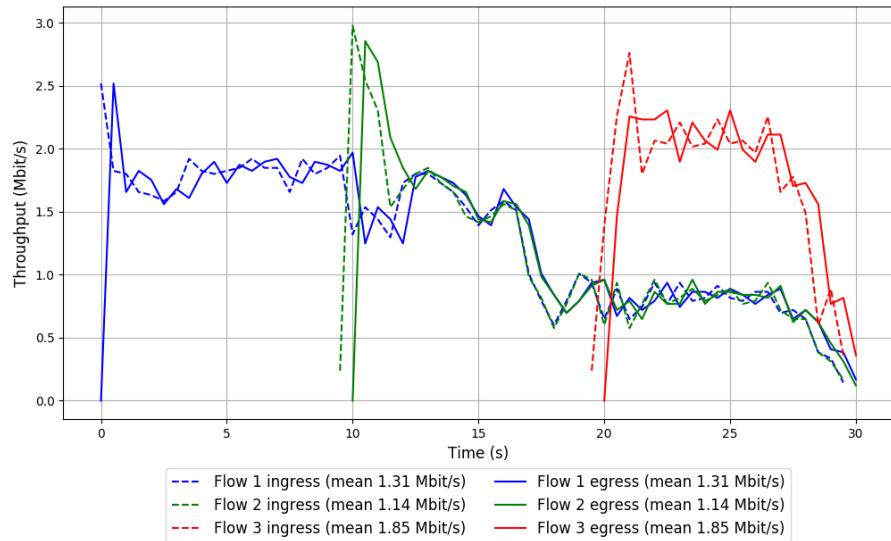


Run 3: Statistics of Indigo

```
Start at: 2018-08-09 08:07:15
End at: 2018-08-09 08:07:45
Local clock offset: 3.333 ms
Remote clock offset: -14.139 ms

# Below is generated by plot.py at 2018-08-09 08:08:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.67 Mbit/s
95th percentile per-packet one-way delay: 109.444 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 1.31 Mbit/s
95th percentile per-packet one-way delay: 103.704 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 1.14 Mbit/s
95th percentile per-packet one-way delay: 118.001 ms
Loss rate: 0.16%
-- Flow 3:
Average throughput: 1.85 Mbit/s
95th percentile per-packet one-way delay: 118.983 ms
Loss rate: 0.40%
```

Run 3: Report of Indigo — Data Link

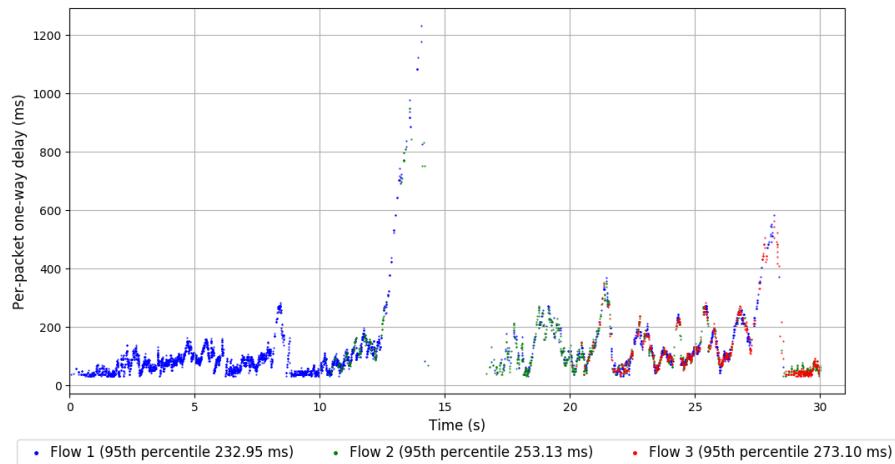
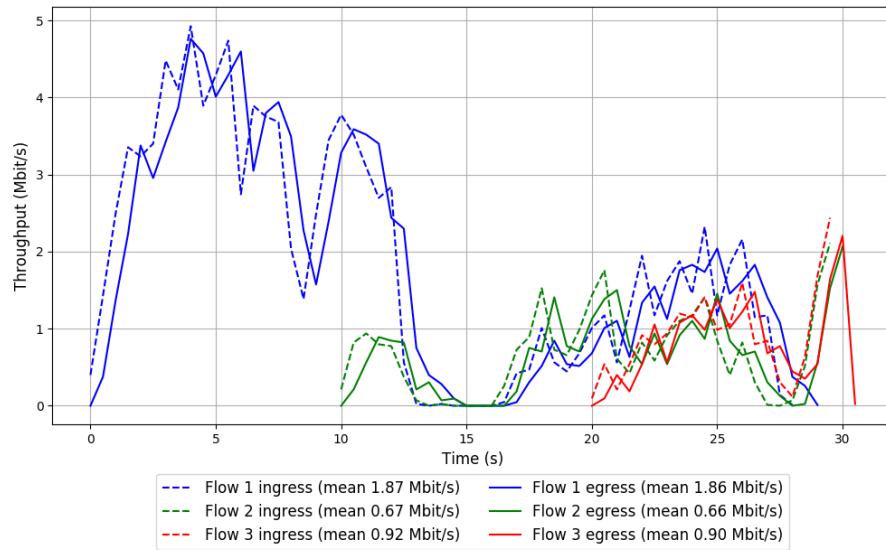


```
Run 1: Statistics of LEDBAT
```

```
Start at: 2018-08-09 07:27:50
End at: 2018-08-09 07:28:20
Local clock offset: 2.681 ms
Remote clock offset: -7.979 ms

# Below is generated by plot.py at 2018-08-09 08:08:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.51 Mbit/s
95th percentile per-packet one-way delay: 252.593 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 1.86 Mbit/s
95th percentile per-packet one-way delay: 232.949 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 0.66 Mbit/s
95th percentile per-packet one-way delay: 253.126 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 0.90 Mbit/s
95th percentile per-packet one-way delay: 273.102 ms
Loss rate: 2.31%
```

Run 1: Report of LEDBAT — Data Link

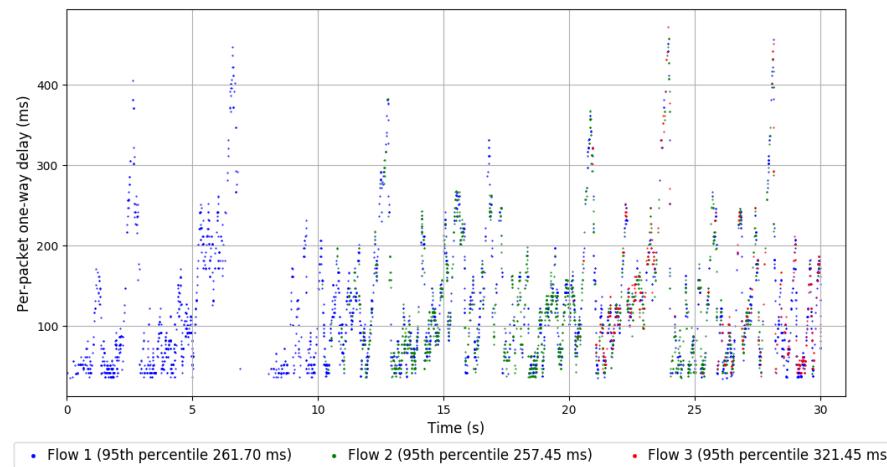
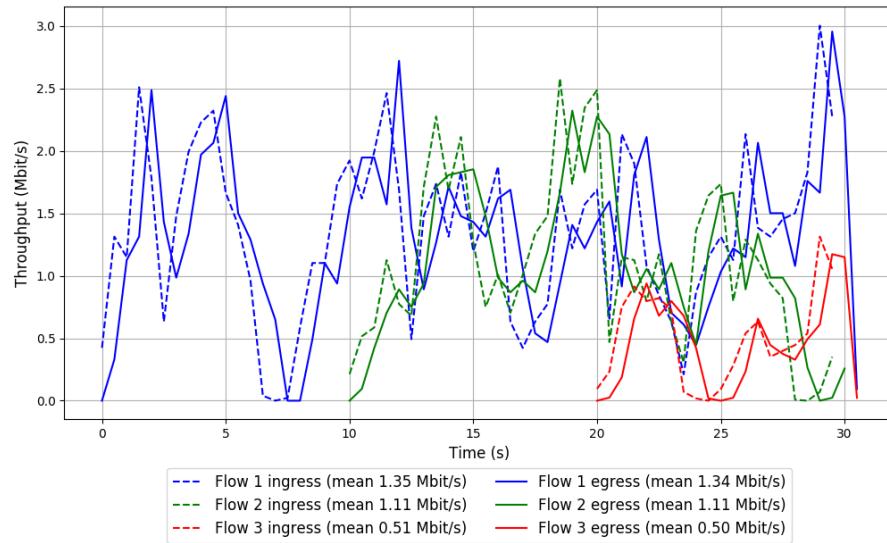


Run 2: Statistics of LEDBAT

```
Start at: 2018-08-09 07:46:27
End at: 2018-08-09 07:46:57
Local clock offset: -2.836 ms
Remote clock offset: -13.744 ms

# Below is generated by plot.py at 2018-08-09 08:08:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.24 Mbit/s
95th percentile per-packet one-way delay: 261.899 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 1.34 Mbit/s
95th percentile per-packet one-way delay: 261.704 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 1.11 Mbit/s
95th percentile per-packet one-way delay: 257.448 ms
Loss rate: 0.53%
-- Flow 3:
Average throughput: 0.50 Mbit/s
95th percentile per-packet one-way delay: 321.454 ms
Loss rate: 1.63%
```

Run 2: Report of LEDBAT — Data Link

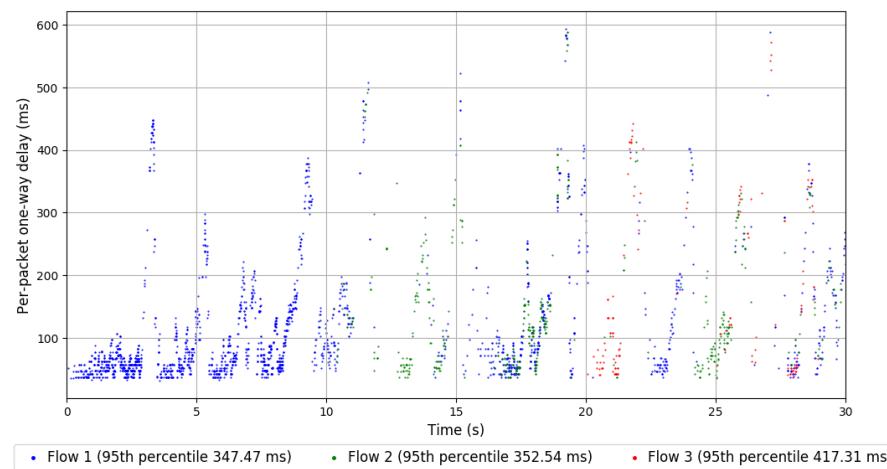
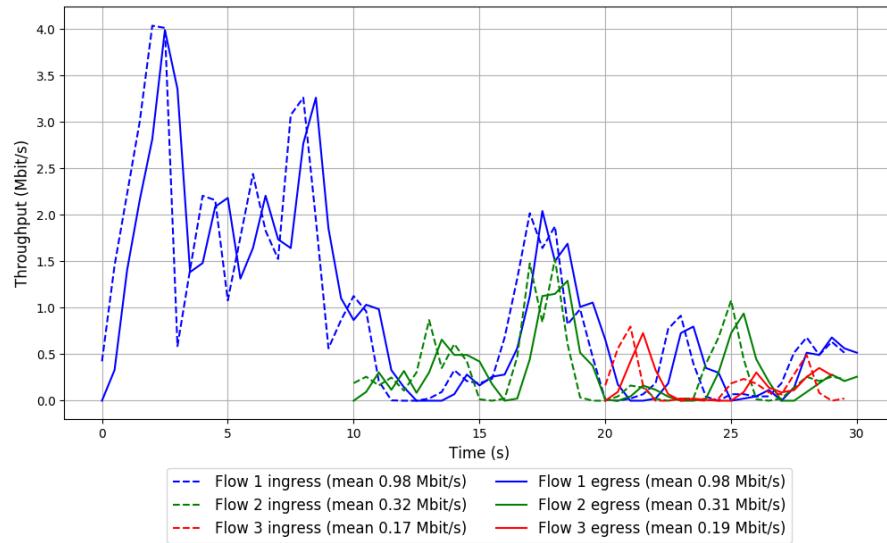


Run 3: Statistics of LEDBAT

```
Start at: 2018-08-09 08:05:04
End at: 2018-08-09 08:05:34
Local clock offset: -0.214 ms
Remote clock offset: -14.06 ms

# Below is generated by plot.py at 2018-08-09 08:08:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.24 Mbit/s
95th percentile per-packet one-way delay: 357.302 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 0.98 Mbit/s
95th percentile per-packet one-way delay: 347.466 ms
Loss rate: 0.52%
-- Flow 2:
Average throughput: 0.31 Mbit/s
95th percentile per-packet one-way delay: 352.544 ms
Loss rate: 1.85%
-- Flow 3:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 417.309 ms
Loss rate: 2.77%
```

Run 3: Report of LEDBAT — Data Link

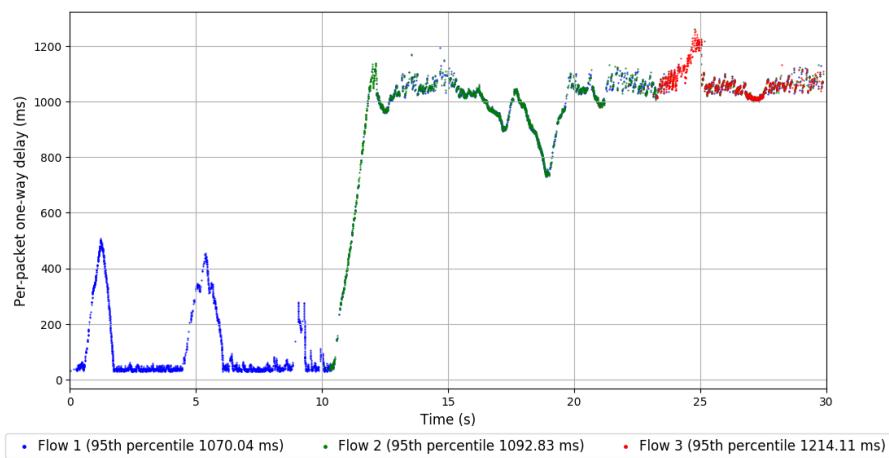
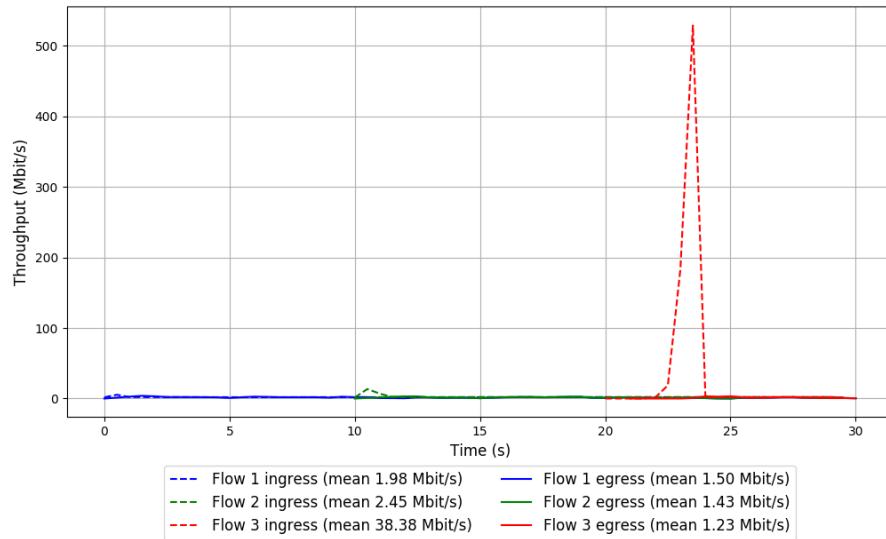


```
Run 1: Statistics of PCC-Allegro
```

```
Start at: 2018-08-09 07:28:56
End at: 2018-08-09 07:29:26
Local clock offset: 1.7 ms
Remote clock offset: -8.562 ms

# Below is generated by plot.py at 2018-08-09 08:08:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.81 Mbit/s
95th percentile per-packet one-way delay: 1099.677 ms
Loss rate: 82.76%
-- Flow 1:
Average throughput: 1.50 Mbit/s
95th percentile per-packet one-way delay: 1070.041 ms
Loss rate: 24.44%
-- Flow 2:
Average throughput: 1.43 Mbit/s
95th percentile per-packet one-way delay: 1092.833 ms
Loss rate: 42.07%
-- Flow 3:
Average throughput: 1.23 Mbit/s
95th percentile per-packet one-way delay: 1214.106 ms
Loss rate: 97.11%
```

Run 1: Report of PCC-Allegro — Data Link

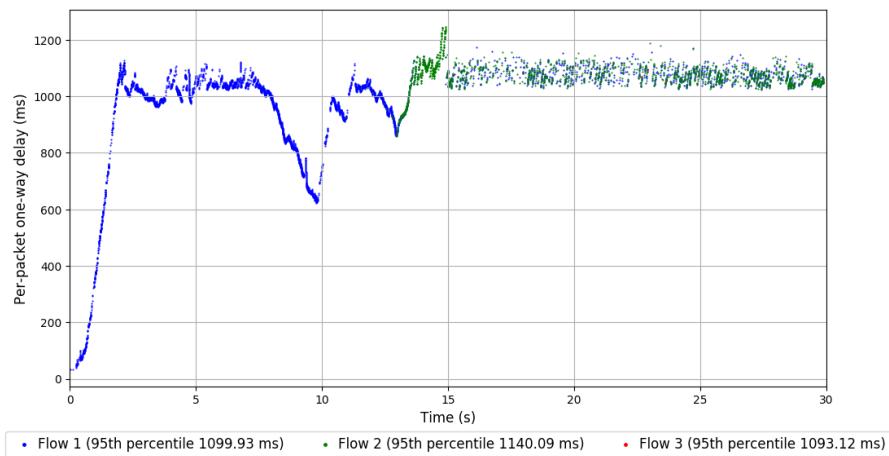
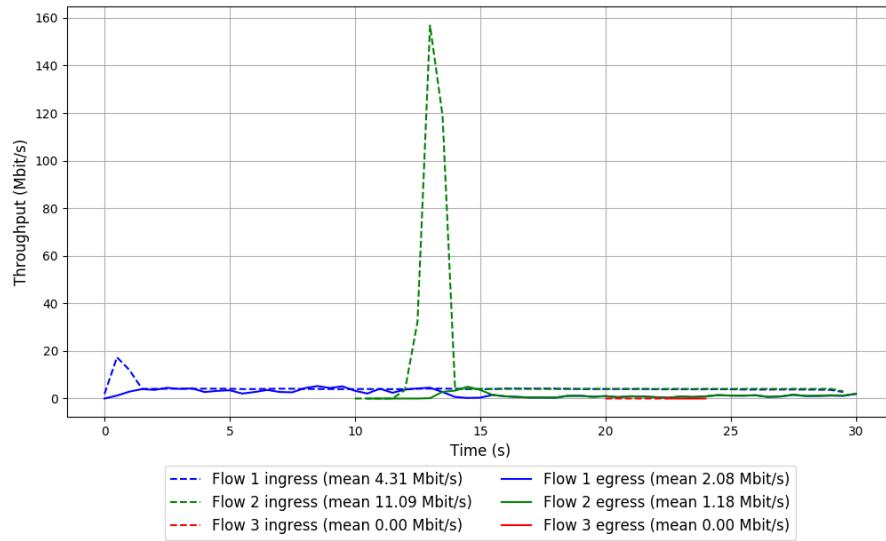


Run 2: Statistics of PCC-Allegro

```
Start at: 2018-08-09 07:47:33
End at: 2018-08-09 07:48:03
Local clock offset: 1.761 ms
Remote clock offset: -12.224 ms

# Below is generated by plot.py at 2018-08-09 08:08:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.83 Mbit/s
95th percentile per-packet one-way delay: 1115.487 ms
Loss rate: 75.83%
-- Flow 1:
Average throughput: 2.08 Mbit/s
95th percentile per-packet one-way delay: 1099.927 ms
Loss rate: 51.81%
-- Flow 2:
Average throughput: 1.18 Mbit/s
95th percentile per-packet one-way delay: 1140.091 ms
Loss rate: 89.88%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 1093.118 ms
Loss rate: 78.57%
```

Run 2: Report of PCC-Allegro — Data Link

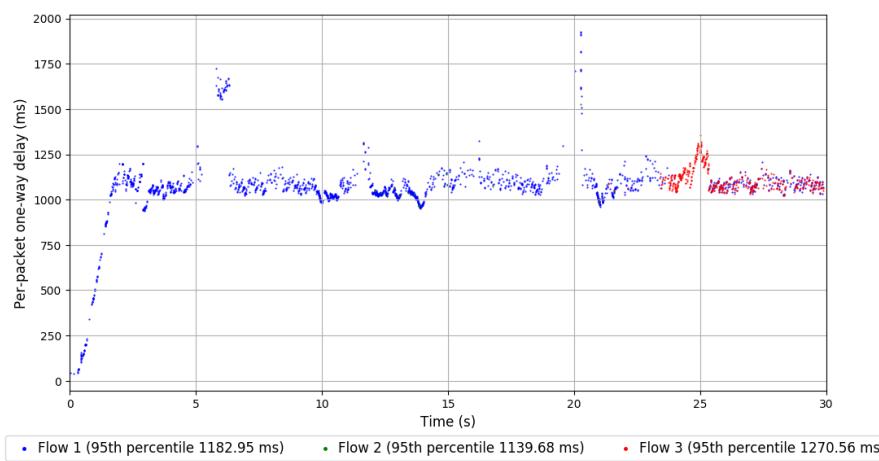
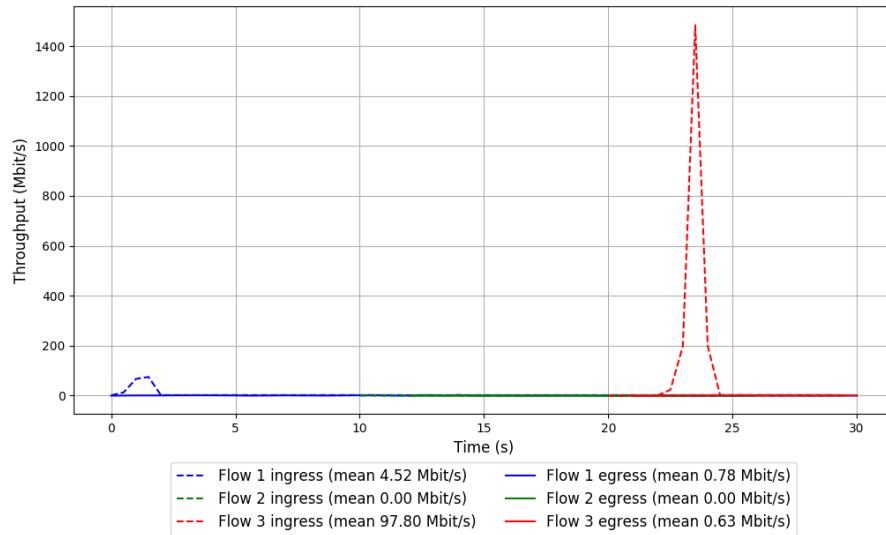


Run 3: Statistics of PCC-Allegro

```
Start at: 2018-08-09 08:06:09
End at: 2018-08-09 08:06:39
Local clock offset: 3.257 ms
Remote clock offset: -13.56 ms

# Below is generated by plot.py at 2018-08-09 08:08:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.97 Mbit/s
95th percentile per-packet one-way delay: 1233.217 ms
Loss rate: 97.36%
-- Flow 1:
Average throughput: 0.78 Mbit/s
95th percentile per-packet one-way delay: 1182.947 ms
Loss rate: 82.72%
-- Flow 2:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 1139.681 ms
Loss rate: 52.71%
-- Flow 3:
Average throughput: 0.63 Mbit/s
95th percentile per-packet one-way delay: 1270.563 ms
Loss rate: 99.42%
```

Run 3: Report of PCC-Allegro — Data Link



Run 1: Statistics of PCC-Expr

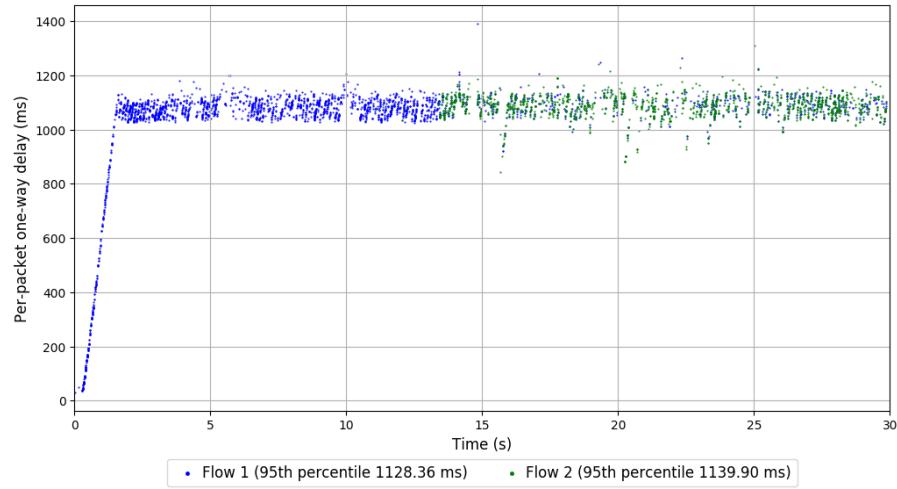
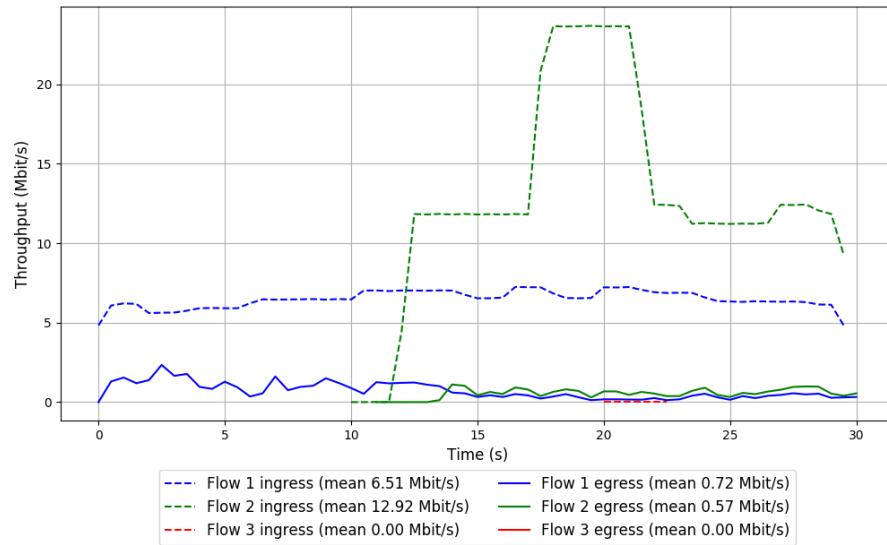
Start at: 2018-08-09 07:24:33

End at: 2018-08-09 07:25:03

Local clock offset: 3.085 ms

Remote clock offset: -7.335 ms

Run 1: Report of PCC-Expr — Data Link

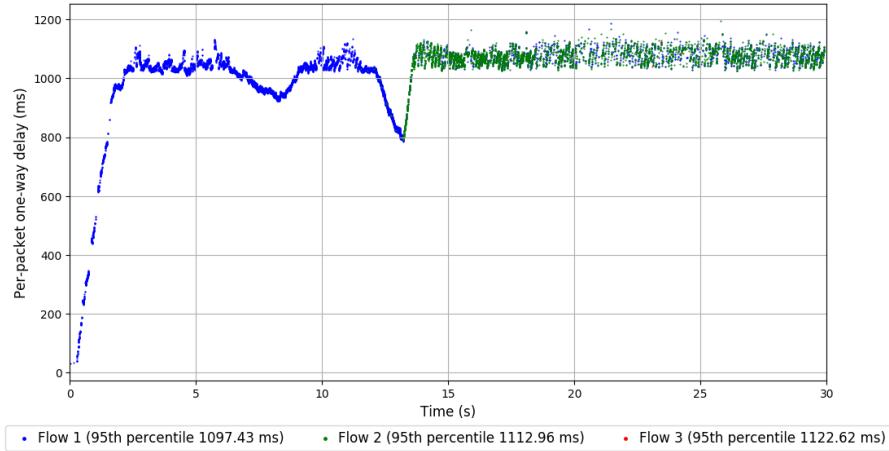
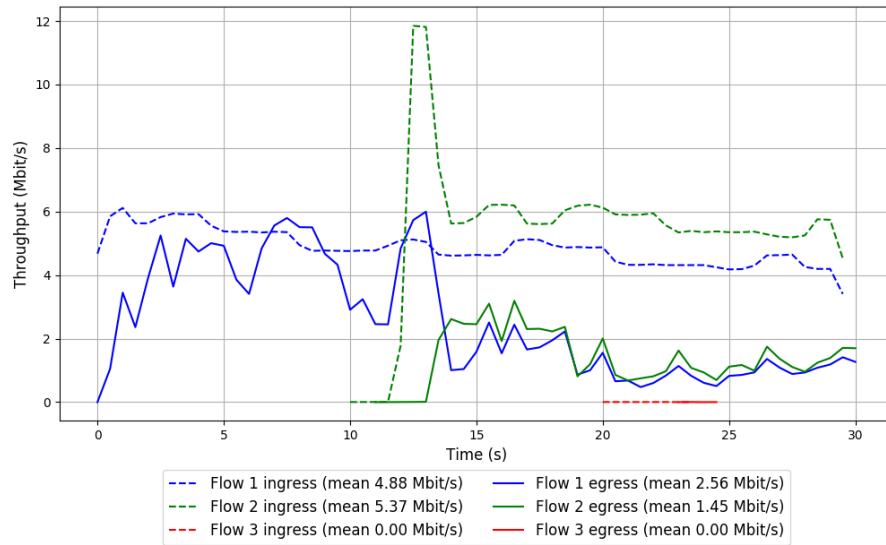


Run 2: Statistics of PCC-Expr

```
Start at: 2018-08-09 07:43:10
End at: 2018-08-09 07:43:40
Local clock offset: 0.04 ms
Remote clock offset: -12.346 ms

# Below is generated by plot.py at 2018-08-09 08:08:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.47 Mbit/s
95th percentile per-packet one-way delay: 1104.357 ms
Loss rate: 59.05%
-- Flow 1:
Average throughput: 2.56 Mbit/s
95th percentile per-packet one-way delay: 1097.432 ms
Loss rate: 47.52%
-- Flow 2:
Average throughput: 1.45 Mbit/s
95th percentile per-packet one-way delay: 1112.956 ms
Loss rate: 74.80%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 1122.623 ms
Loss rate: 77.71%
```

Run 2: Report of PCC-Expr — Data Link

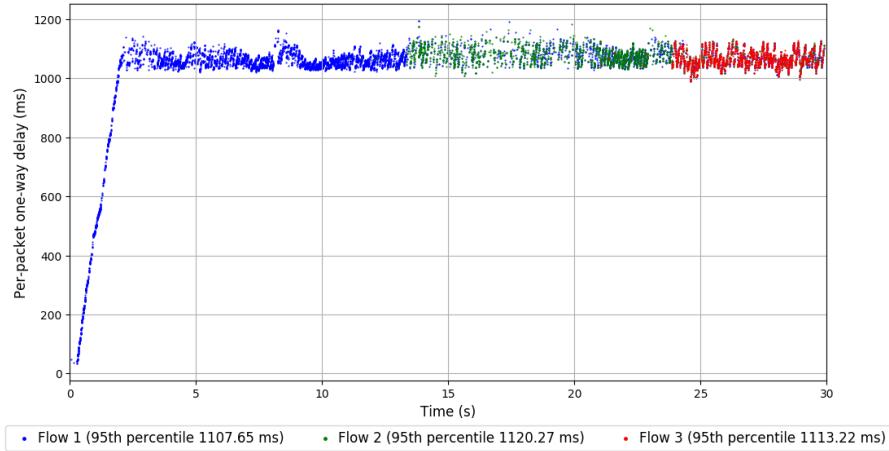
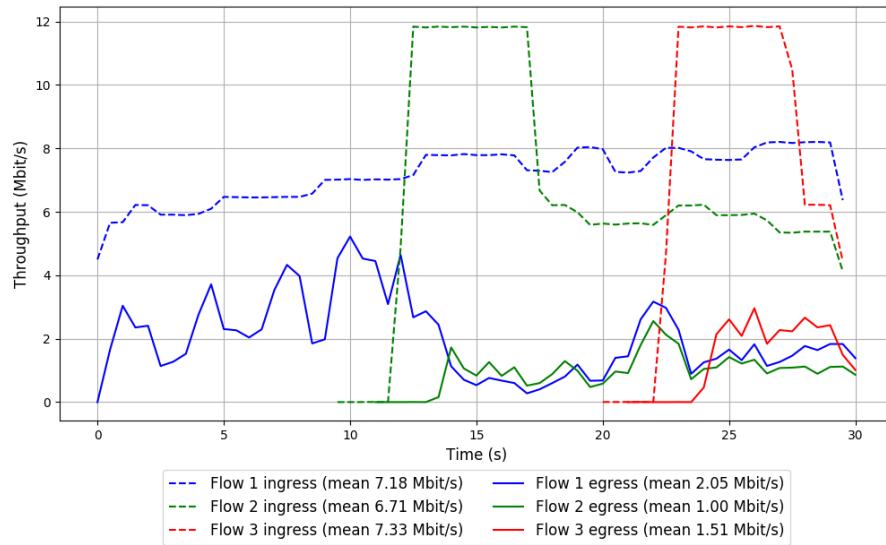


Run 3: Statistics of PCC-Expr

```
Start at: 2018-08-09 08:01:47
End at: 2018-08-09 08:02:17
Local clock offset: 2.353 ms
Remote clock offset: -14.623 ms

# Below is generated by plot.py at 2018-08-09 08:08:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.13 Mbit/s
95th percentile per-packet one-way delay: 1112.883 ms
Loss rate: 77.81%
-- Flow 1:
Average throughput: 2.05 Mbit/s
95th percentile per-packet one-way delay: 1107.647 ms
Loss rate: 71.49%
-- Flow 2:
Average throughput: 1.00 Mbit/s
95th percentile per-packet one-way delay: 1120.271 ms
Loss rate: 85.92%
-- Flow 3:
Average throughput: 1.51 Mbit/s
95th percentile per-packet one-way delay: 1113.220 ms
Loss rate: 81.65%
```

Run 3: Report of PCC-Expr — Data Link

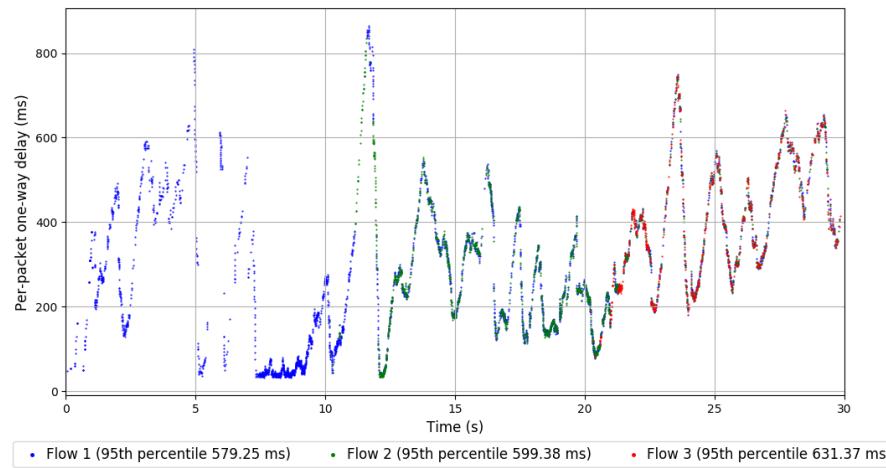
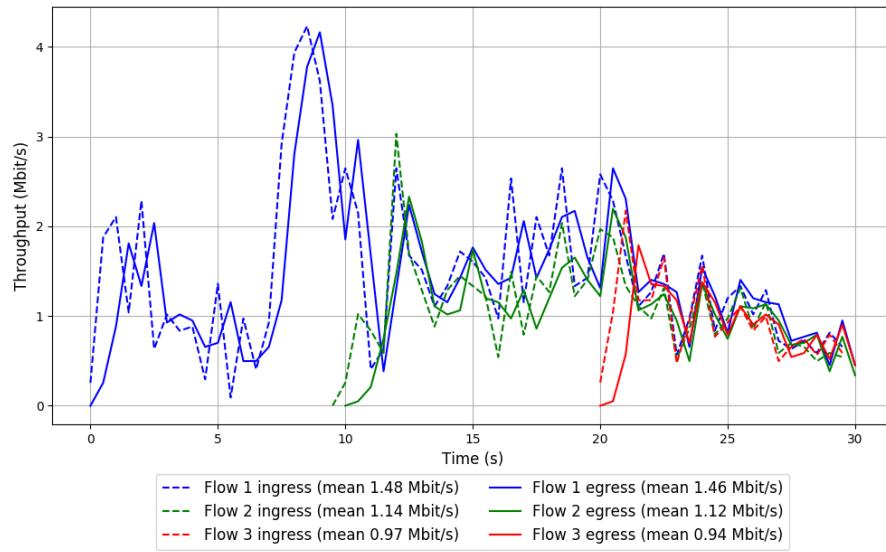


```
Run 1: Statistics of QUIC Cubic

Start at: 2018-08-09 07:25:39
End at: 2018-08-09 07:26:09
Local clock offset: 1.43 ms
Remote clock offset: -7.125 ms

# Below is generated by plot.py at 2018-08-09 08:08:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.50 Mbit/s
95th percentile per-packet one-way delay: 597.621 ms
Loss rate: 2.22%
-- Flow 1:
Average throughput: 1.46 Mbit/s
95th percentile per-packet one-way delay: 579.251 ms
Loss rate: 1.64%
-- Flow 2:
Average throughput: 1.12 Mbit/s
95th percentile per-packet one-way delay: 599.375 ms
Loss rate: 2.26%
-- Flow 3:
Average throughput: 0.94 Mbit/s
95th percentile per-packet one-way delay: 631.371 ms
Loss rate: 4.78%
```

Run 1: Report of QUIC Cubic — Data Link

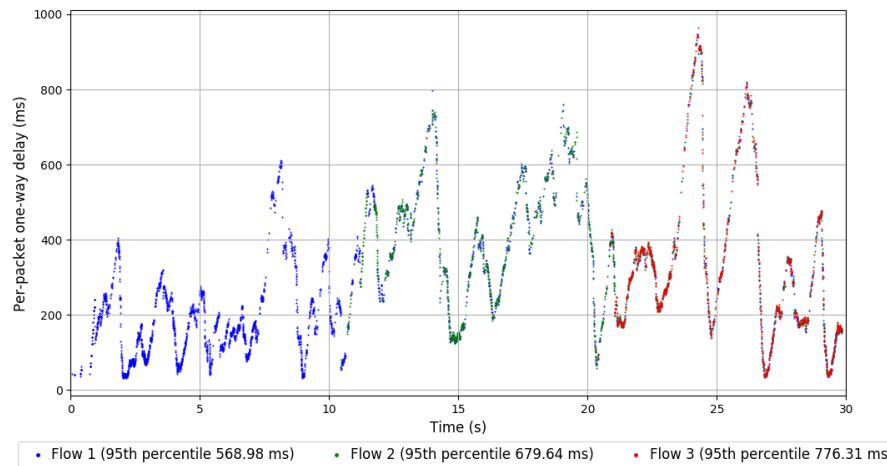
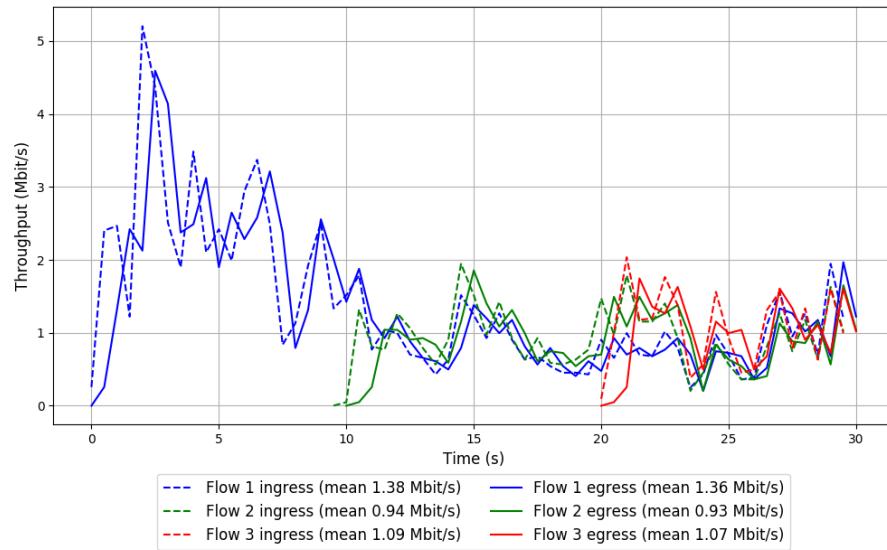


Run 2: Statistics of QUIC Cubic

```
Start at: 2018-08-09 07:44:16
End at: 2018-08-09 07:44:46
Local clock offset: -0.625 ms
Remote clock offset: -12.78 ms

# Below is generated by plot.py at 2018-08-09 08:08:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.32 Mbit/s
95th percentile per-packet one-way delay: 640.568 ms
Loss rate: 1.90%
-- Flow 1:
Average throughput: 1.36 Mbit/s
95th percentile per-packet one-way delay: 568.975 ms
Loss rate: 1.32%
-- Flow 2:
Average throughput: 0.93 Mbit/s
95th percentile per-packet one-way delay: 679.640 ms
Loss rate: 2.30%
-- Flow 3:
Average throughput: 1.07 Mbit/s
95th percentile per-packet one-way delay: 776.314 ms
Loss rate: 3.40%
```

Run 2: Report of QUIC Cubic — Data Link

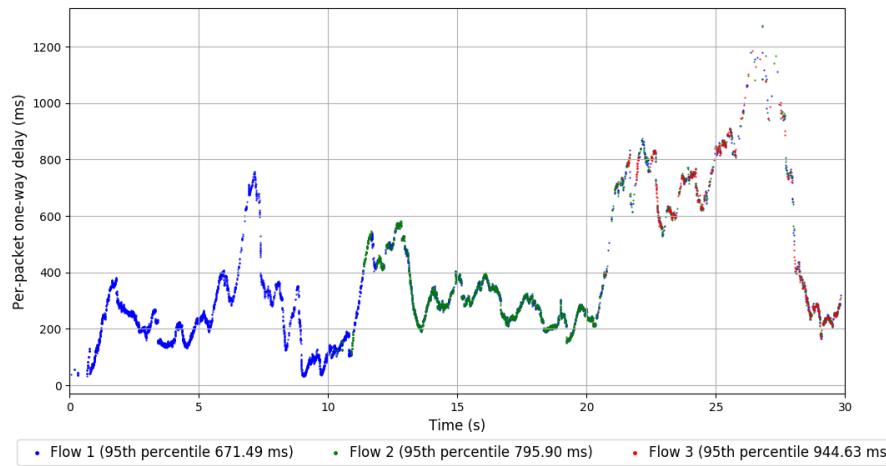
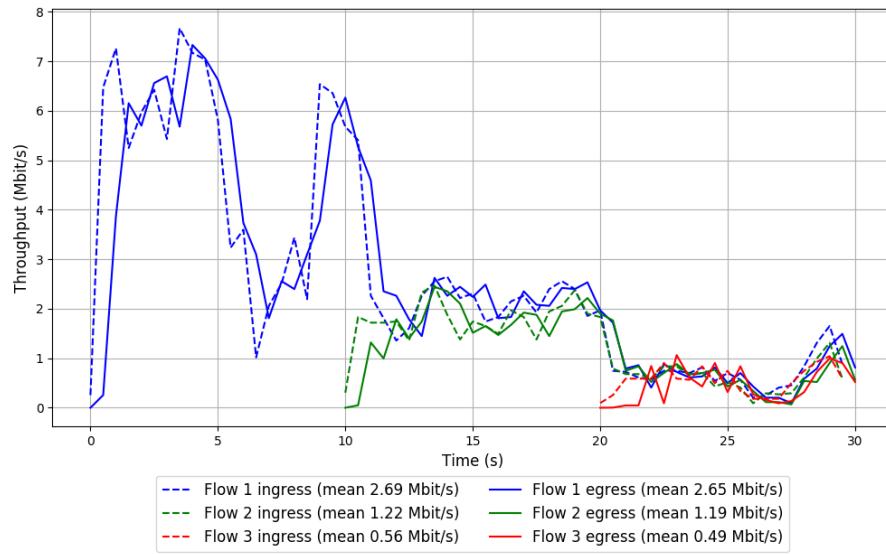


Run 3: Statistics of QUIC Cubic

```
Start at: 2018-08-09 08:02:53
End at: 2018-08-09 08:03:23
Local clock offset: -0.185 ms
Remote clock offset: -14.675 ms

# Below is generated by plot.py at 2018-08-09 08:08:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.59 Mbit/s
95th percentile per-packet one-way delay: 744.968 ms
Loss rate: 2.59%
-- Flow 1:
Average throughput: 2.65 Mbit/s
95th percentile per-packet one-way delay: 671.493 ms
Loss rate: 1.50%
-- Flow 2:
Average throughput: 1.19 Mbit/s
95th percentile per-packet one-way delay: 795.896 ms
Loss rate: 3.45%
-- Flow 3:
Average throughput: 0.49 Mbit/s
95th percentile per-packet one-way delay: 944.635 ms
Loss rate: 14.89%
```

Run 3: Report of QUIC Cubic — Data Link

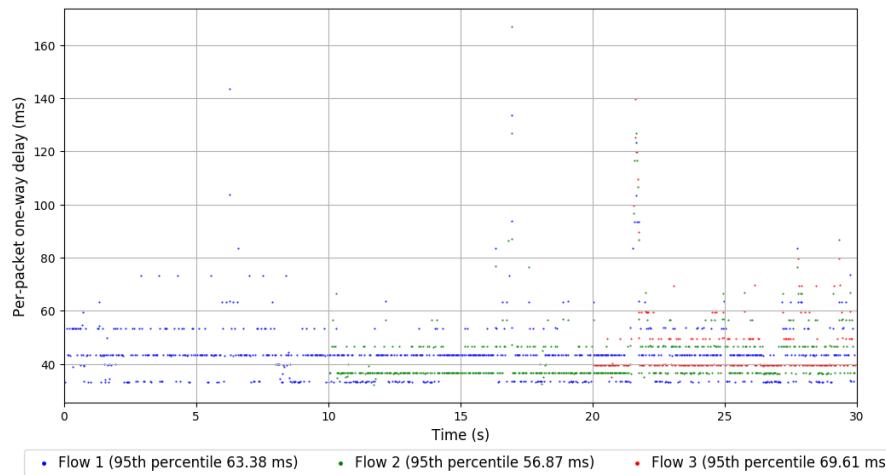
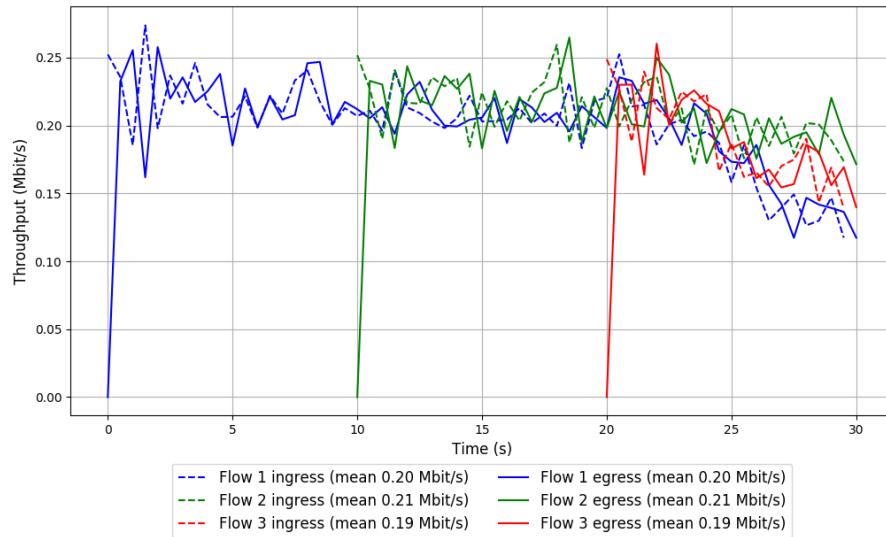


```
Run 1: Statistics of SCReAM

Start at: 2018-08-09 07:22:22
End at: 2018-08-09 07:22:52
Local clock offset: -0.964 ms
Remote clock offset: -8.115 ms

# Below is generated by plot.py at 2018-08-09 08:08:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.41 Mbit/s
95th percentile per-packet one-way delay: 63.402 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 63.383 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 56.870 ms
Loss rate: 0.18%
-- Flow 3:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 69.609 ms
Loss rate: 0.31%
```

Run 1: Report of SCReAM — Data Link

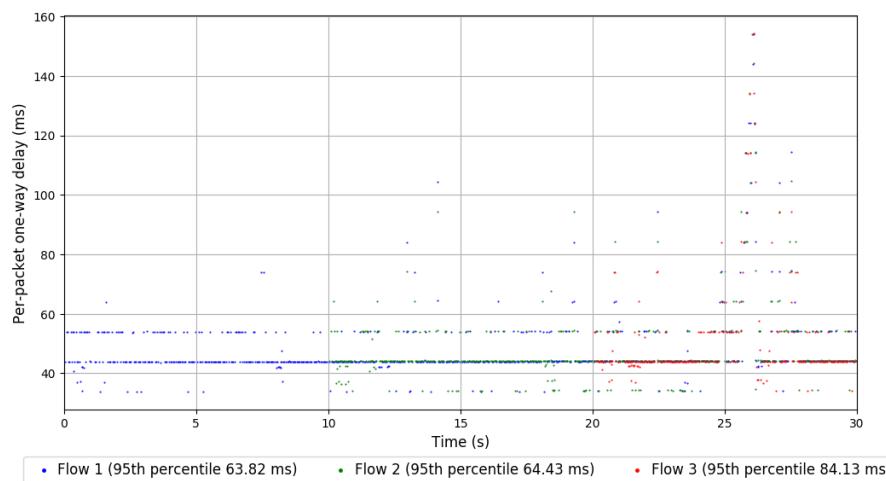
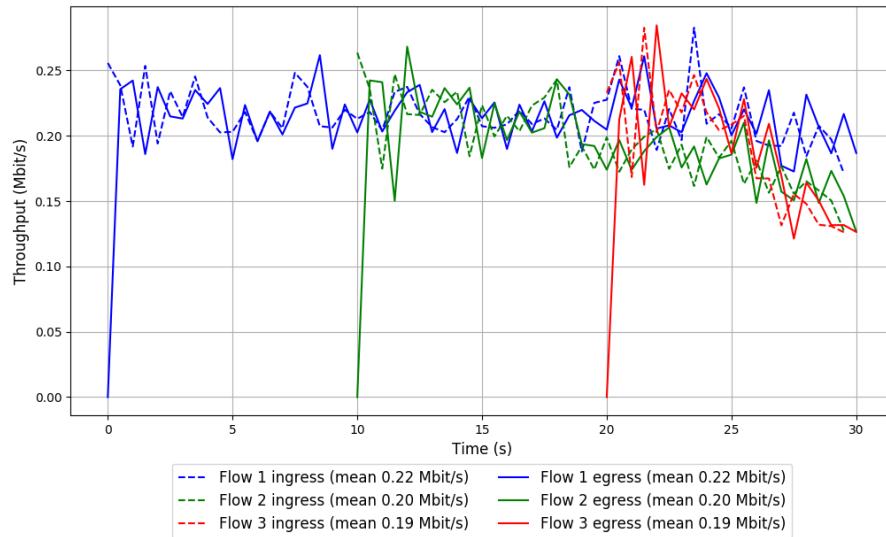


Run 2: Statistics of SCReAM

```
Start at: 2018-08-09 07:40:59
End at: 2018-08-09 07:41:29
Local clock offset: -3.35 ms
Remote clock offset: -10.892 ms

# Below is generated by plot.py at 2018-08-09 08:08:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.41 Mbit/s
95th percentile per-packet one-way delay: 64.430 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.819 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 64.429 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 84.131 ms
Loss rate: 0.26%
```

Run 2: Report of SCReAM — Data Link

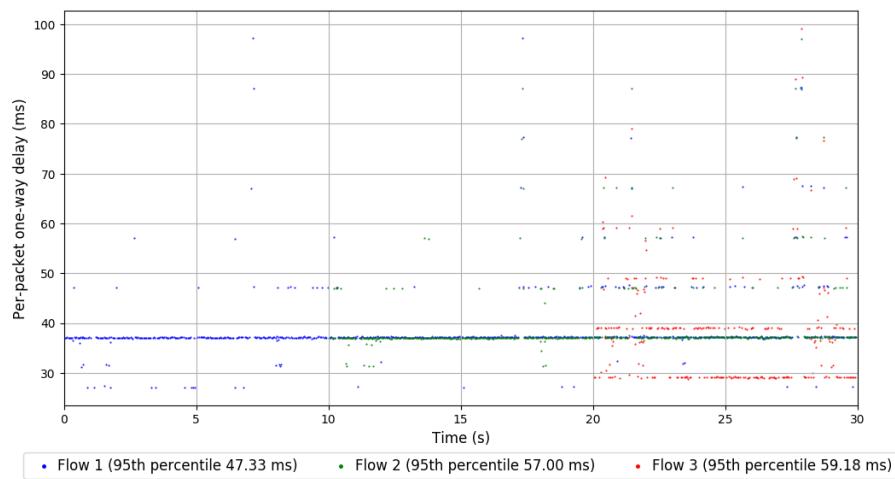
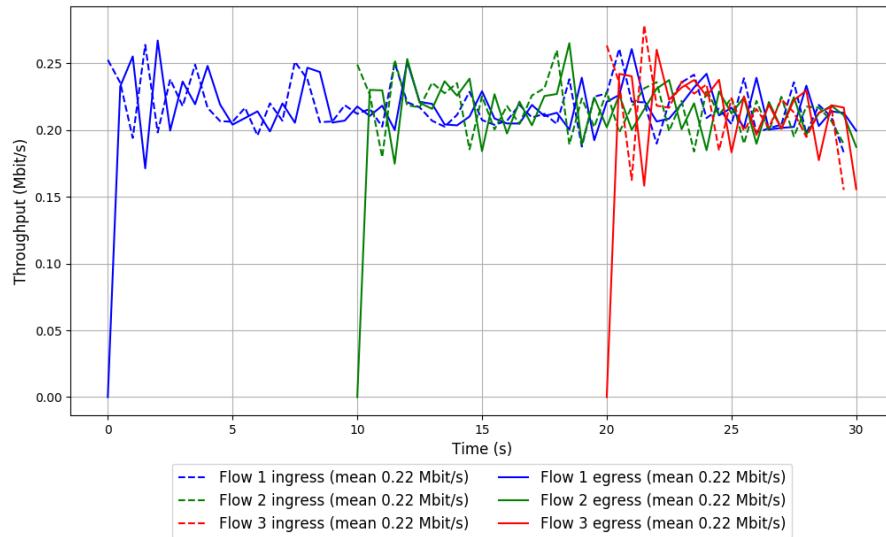


Run 3: Statistics of SCReAM

```
Start at: 2018-08-09 07:59:36
End at: 2018-08-09 08:00:06
Local clock offset: 3.202 ms
Remote clock offset: -14.044 ms

# Below is generated by plot.py at 2018-08-09 08:08:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 54.741 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 47.332 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 57.001 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 59.184 ms
Loss rate: 0.31%
```

Run 3: Report of SCReAM — Data Link

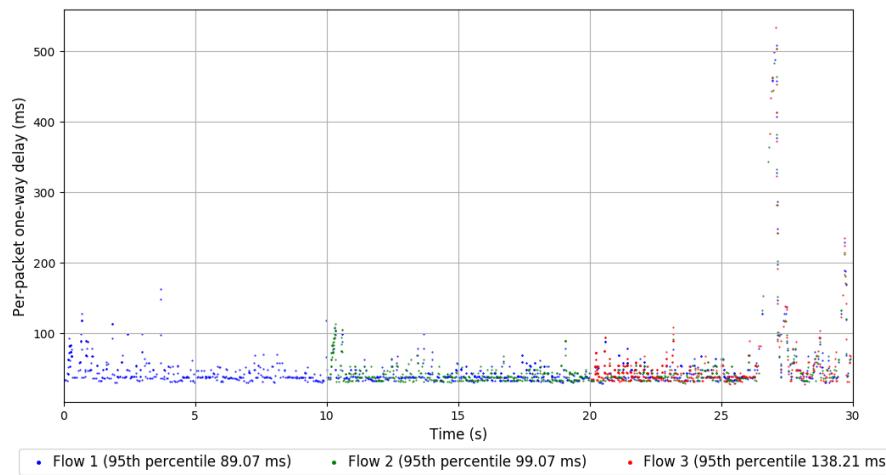
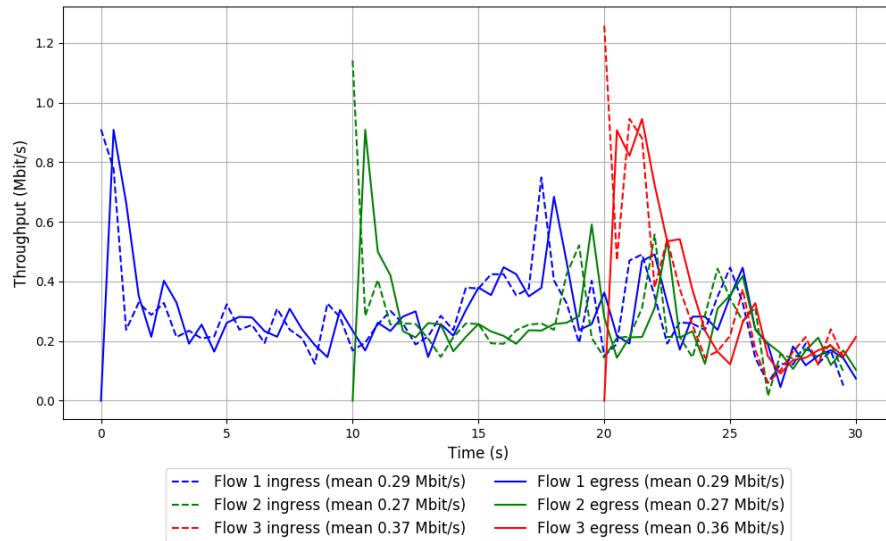


Run 1: Statistics of Sprout

```
Start at: 2018-08-09 07:15:50
End at: 2018-08-09 07:16:20
Local clock offset: 0.956 ms
Remote clock offset: -10.154 ms

# Below is generated by plot.py at 2018-08-09 08:08:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.59 Mbit/s
95th percentile per-packet one-way delay: 98.405 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 0.29 Mbit/s
95th percentile per-packet one-way delay: 89.071 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 0.27 Mbit/s
95th percentile per-packet one-way delay: 99.074 ms
Loss rate: 0.43%
-- Flow 3:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 138.211 ms
Loss rate: 0.33%
```

Run 1: Report of Sprout — Data Link

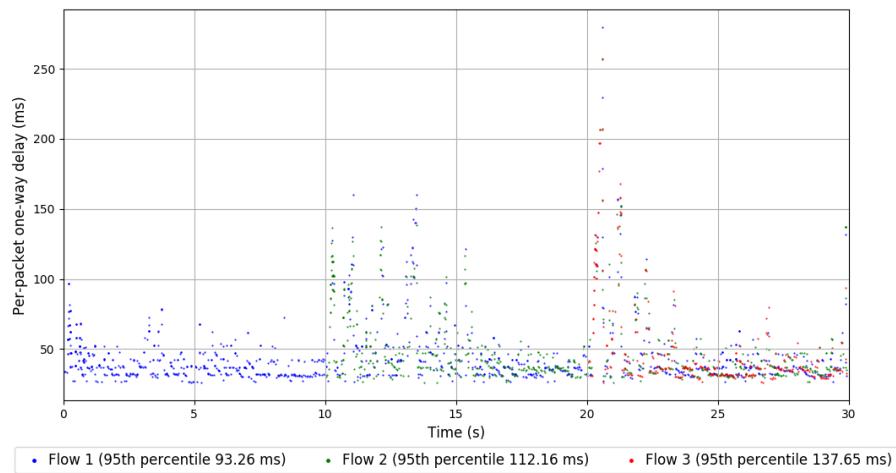
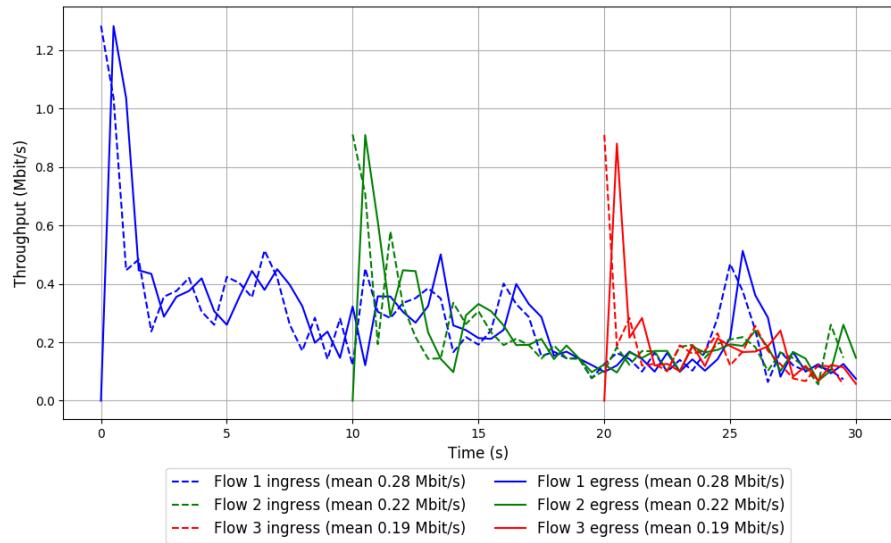


Run 2: Statistics of Sprout

```
Start at: 2018-08-09 07:34:24
End at: 2018-08-09 07:34:54
Local clock offset: 3.379 ms
Remote clock offset: -9.069 ms

# Below is generated by plot.py at 2018-08-09 08:08:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.49 Mbit/s
95th percentile per-packet one-way delay: 110.022 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.28 Mbit/s
95th percentile per-packet one-way delay: 93.257 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 112.156 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 137.652 ms
Loss rate: 0.00%
```

Run 2: Report of Sprout — Data Link

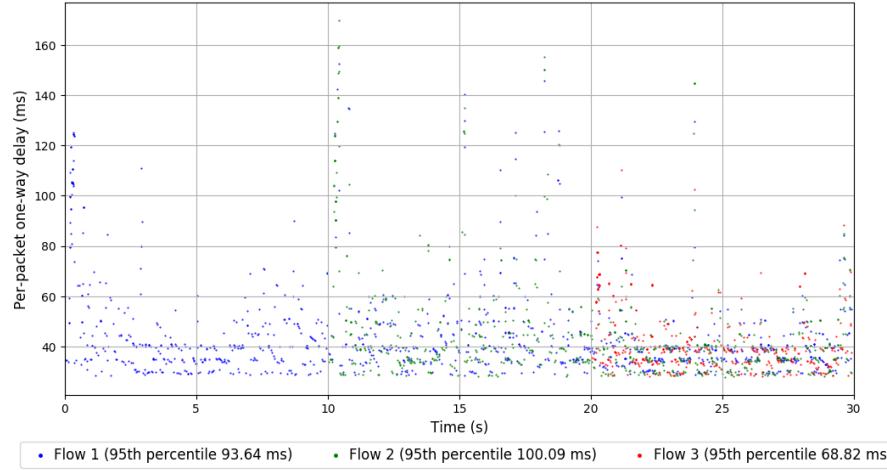
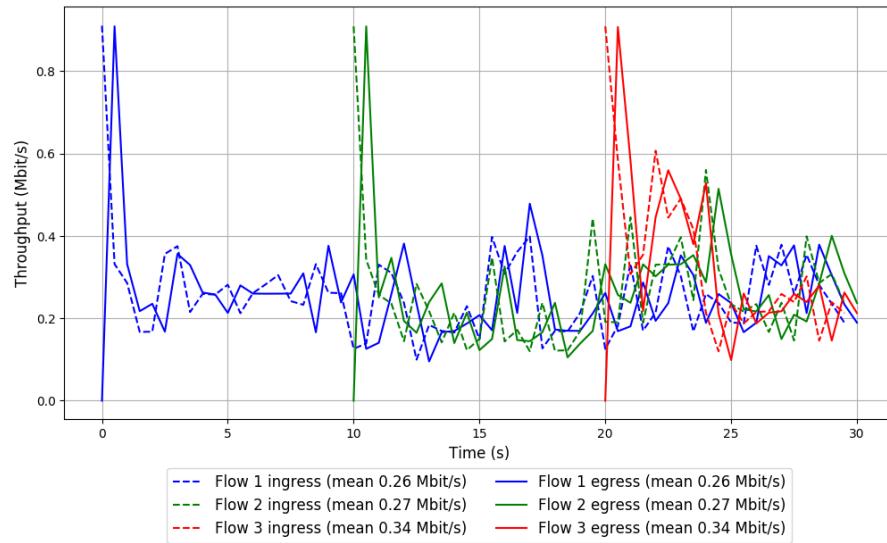


Run 3: Statistics of Sprout

```
Start at: 2018-08-09 07:53:02
End at: 2018-08-09 07:53:32
Local clock offset: 2.586 ms
Remote clock offset: -12.663 ms

# Below is generated by plot.py at 2018-08-09 08:08:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.55 Mbit/s
95th percentile per-packet one-way delay: 89.329 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.26 Mbit/s
95th percentile per-packet one-way delay: 93.644 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 0.27 Mbit/s
95th percentile per-packet one-way delay: 100.095 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.34 Mbit/s
95th percentile per-packet one-way delay: 68.823 ms
Loss rate: 0.00%
```

Run 3: Report of Sprout — Data Link

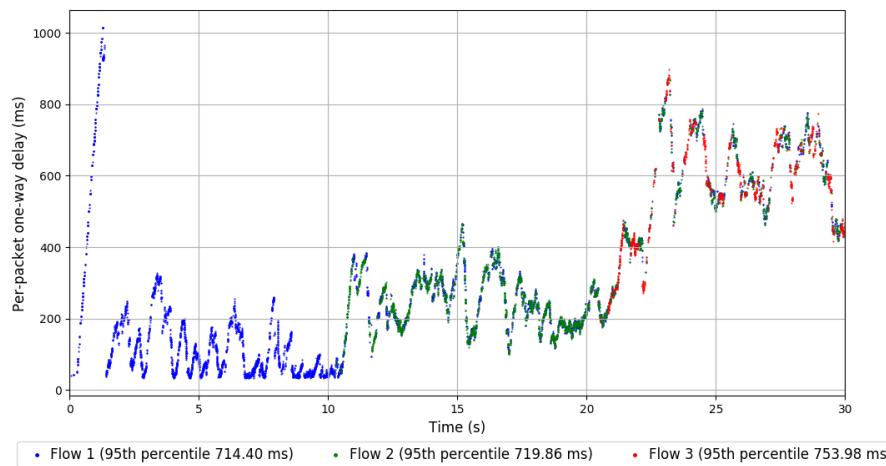
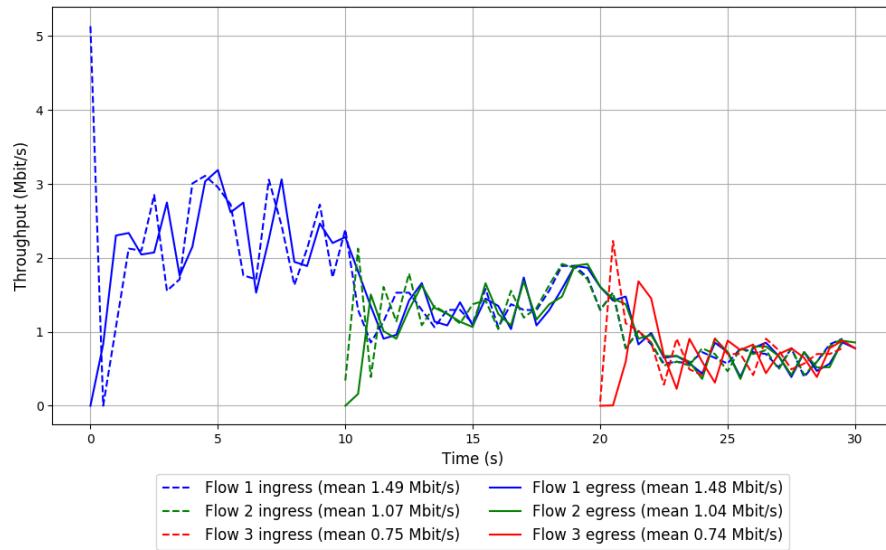


Run 1: Statistics of TaoVA-100x

```
Start at: 2018-08-09 07:12:33
End at: 2018-08-09 07:13:03
Local clock offset: -0.013 ms
Remote clock offset: -7.625 ms

# Below is generated by plot.py at 2018-08-09 08:08:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.41 Mbit/s
95th percentile per-packet one-way delay: 724.930 ms
Loss rate: 1.85%
-- Flow 1:
Average throughput: 1.48 Mbit/s
95th percentile per-packet one-way delay: 714.400 ms
Loss rate: 1.18%
-- Flow 2:
Average throughput: 1.04 Mbit/s
95th percentile per-packet one-way delay: 719.863 ms
Loss rate: 2.29%
-- Flow 3:
Average throughput: 0.74 Mbit/s
95th percentile per-packet one-way delay: 753.981 ms
Loss rate: 4.54%
```

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

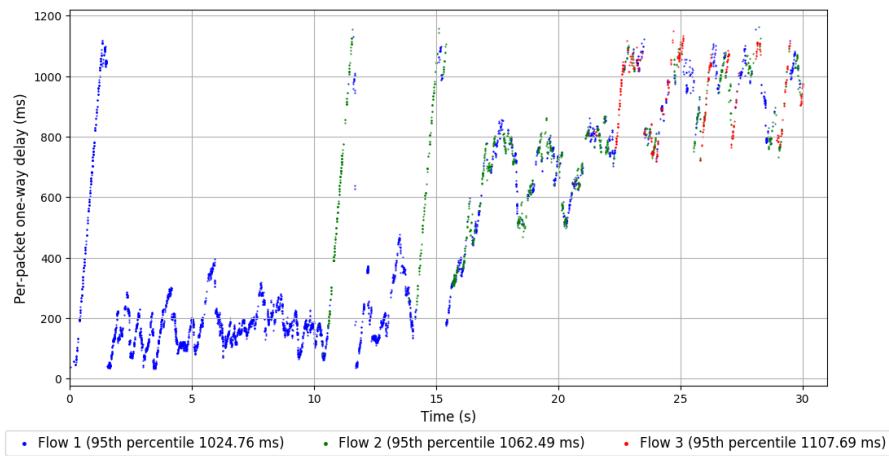
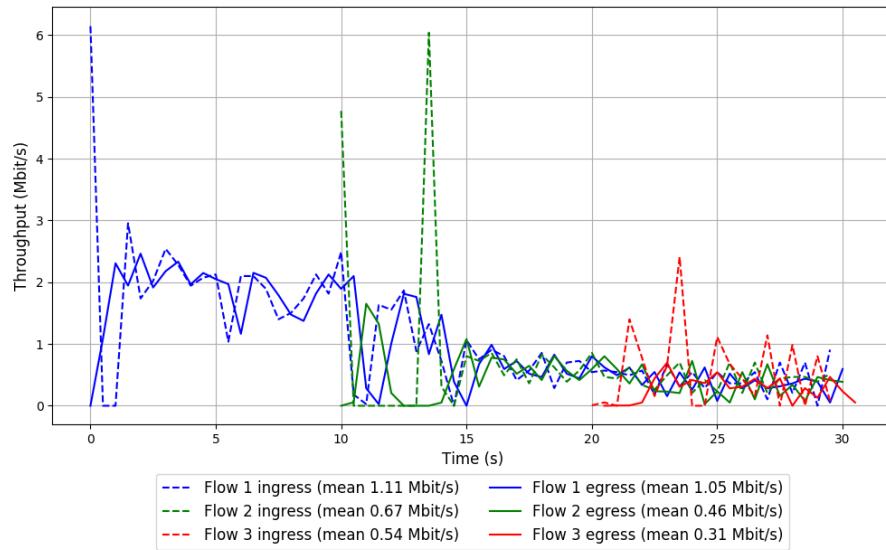


Run 2: Statistics of TaoVA-100x

```
Start at: 2018-08-09 07:31:07
End at: 2018-08-09 07:31:37
Local clock offset: -0.976 ms
Remote clock offset: -8.161 ms

# Below is generated by plot.py at 2018-08-09 08:08:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.44 Mbit/s
95th percentile per-packet one-way delay: 1053.208 ms
Loss rate: 17.06%
-- Flow 1:
Average throughput: 1.05 Mbit/s
95th percentile per-packet one-way delay: 1024.762 ms
Loss rate: 6.09%
-- Flow 2:
Average throughput: 0.46 Mbit/s
95th percentile per-packet one-way delay: 1062.492 ms
Loss rate: 32.25%
-- Flow 3:
Average throughput: 0.31 Mbit/s
95th percentile per-packet one-way delay: 1107.694 ms
Loss rate: 46.96%
```

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

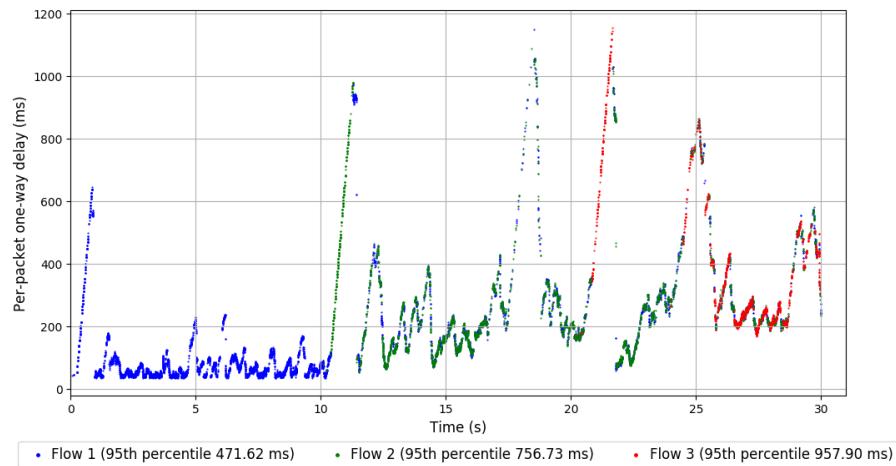
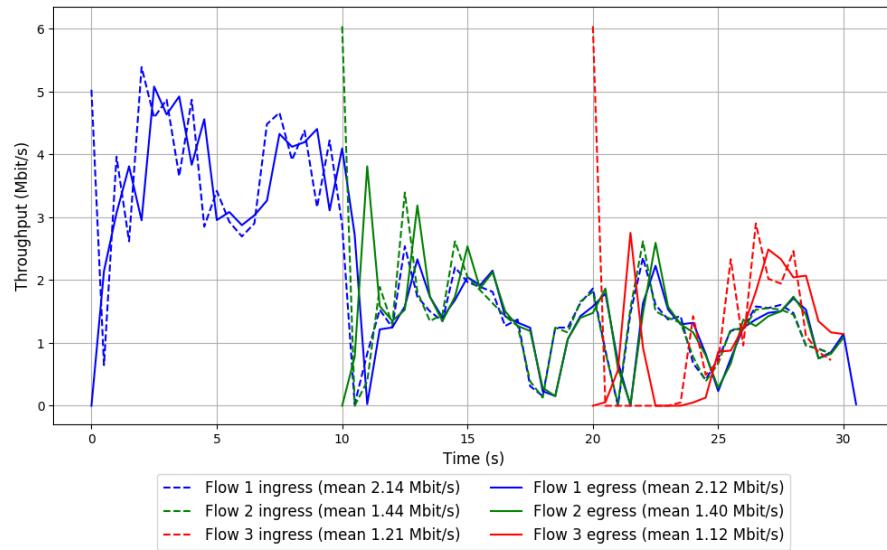


Run 3: Statistics of TaoVA-100x

```
Start at: 2018-08-09 07:49:44
End at: 2018-08-09 07:50:14
Local clock offset: -2.505 ms
Remote clock offset: -12.544 ms

# Below is generated by plot.py at 2018-08-09 08:08:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.41 Mbit/s
95th percentile per-packet one-way delay: 702.087 ms
Loss rate: 2.34%
-- Flow 1:
Average throughput: 2.12 Mbit/s
95th percentile per-packet one-way delay: 471.617 ms
Loss rate: 0.99%
-- Flow 2:
Average throughput: 1.40 Mbit/s
95th percentile per-packet one-way delay: 756.733 ms
Loss rate: 2.55%
-- Flow 3:
Average throughput: 1.12 Mbit/s
95th percentile per-packet one-way delay: 957.896 ms
Loss rate: 9.01%
```

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

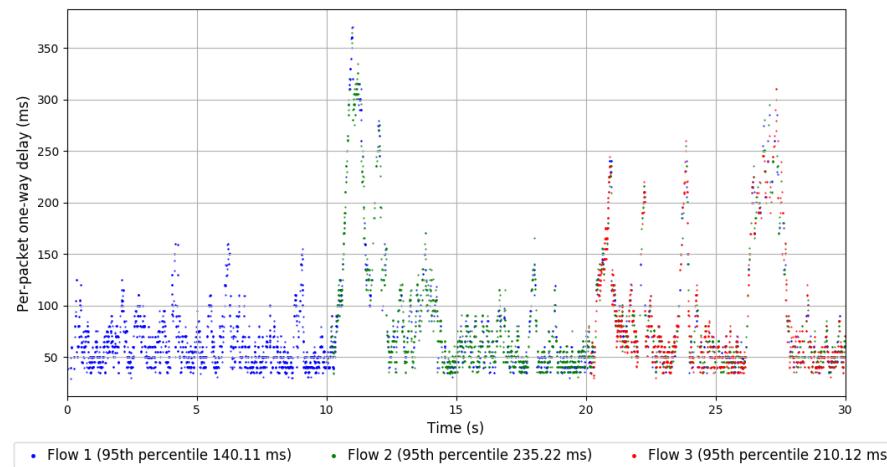
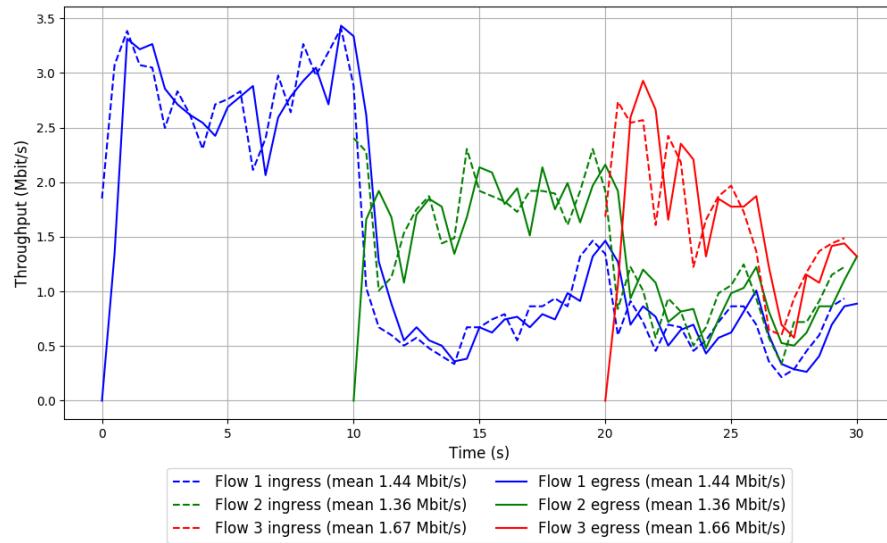


Run 1: Statistics of TCP Vegas

```
Start at: 2018-08-09 07:19:06
End at: 2018-08-09 07:19:36
Local clock offset: 3.711 ms
Remote clock offset: -7.866 ms

# Below is generated by plot.py at 2018-08-09 08:08:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.90 Mbit/s
95th percentile per-packet one-way delay: 204.519 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 1.44 Mbit/s
95th percentile per-packet one-way delay: 140.113 ms
Loss rate: 0.19%
-- Flow 2:
Average throughput: 1.36 Mbit/s
95th percentile per-packet one-way delay: 235.216 ms
Loss rate: 0.13%
-- Flow 3:
Average throughput: 1.66 Mbit/s
95th percentile per-packet one-way delay: 210.117 ms
Loss rate: 0.79%
```

Run 1: Report of TCP Vegas — Data Link

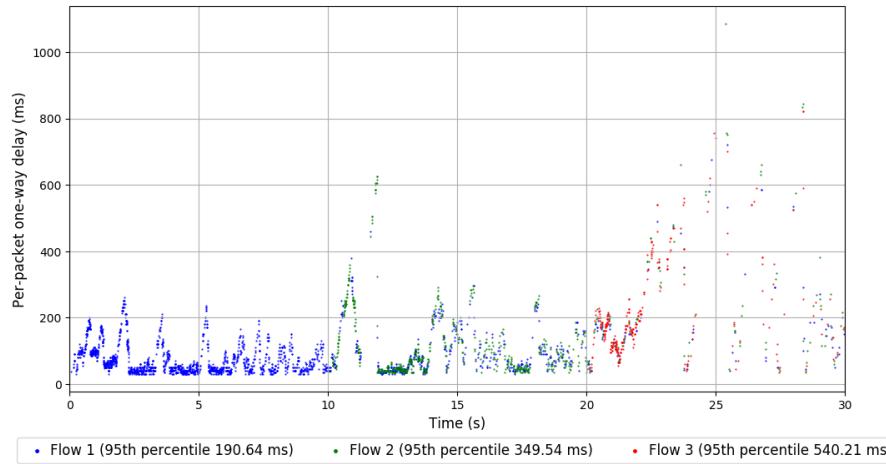
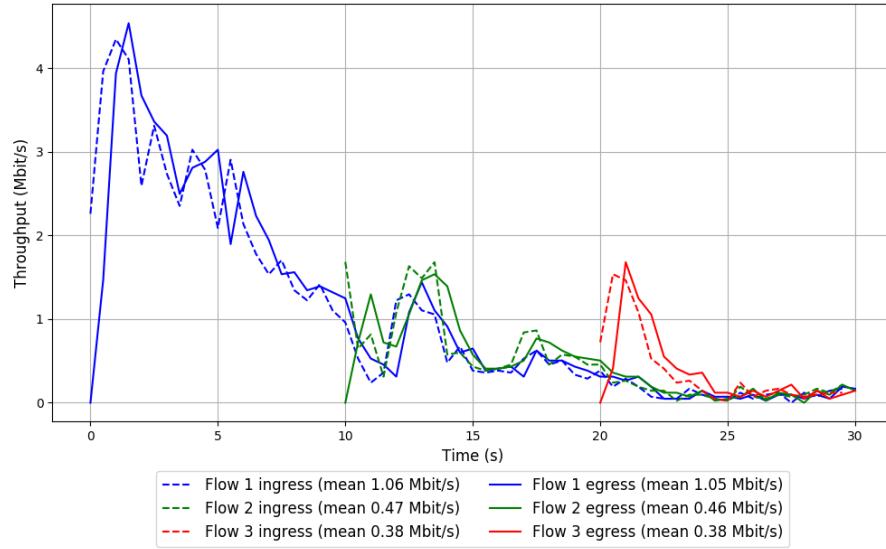


Run 2: Statistics of TCP Vegas

```
Start at: 2018-08-09 07:37:41
End at: 2018-08-09 07:38:11
Local clock offset: 2.966 ms
Remote clock offset: -9.786 ms

# Below is generated by plot.py at 2018-08-09 08:08:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.49 Mbit/s
95th percentile per-packet one-way delay: 260.180 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 1.05 Mbit/s
95th percentile per-packet one-way delay: 190.644 ms
Loss rate: 0.19%
-- Flow 2:
Average throughput: 0.46 Mbit/s
95th percentile per-packet one-way delay: 349.536 ms
Loss rate: 1.15%
-- Flow 3:
Average throughput: 0.38 Mbit/s
95th percentile per-packet one-way delay: 540.210 ms
Loss rate: 2.21%
```

Run 2: Report of TCP Vegas — Data Link

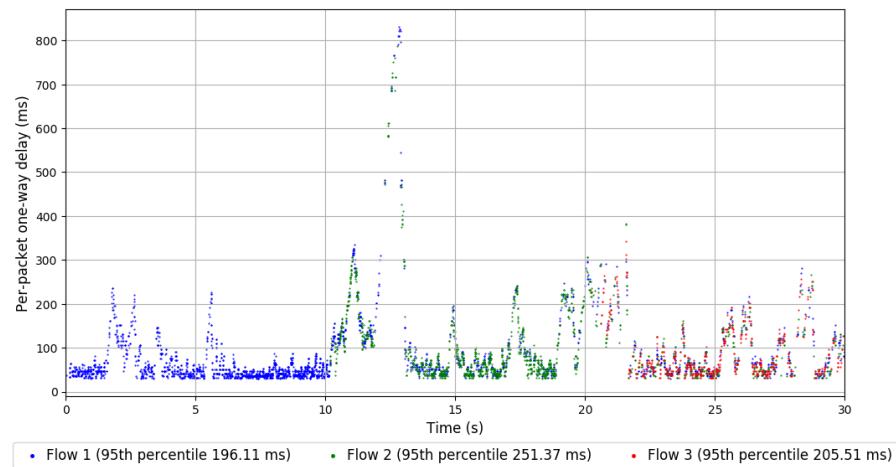
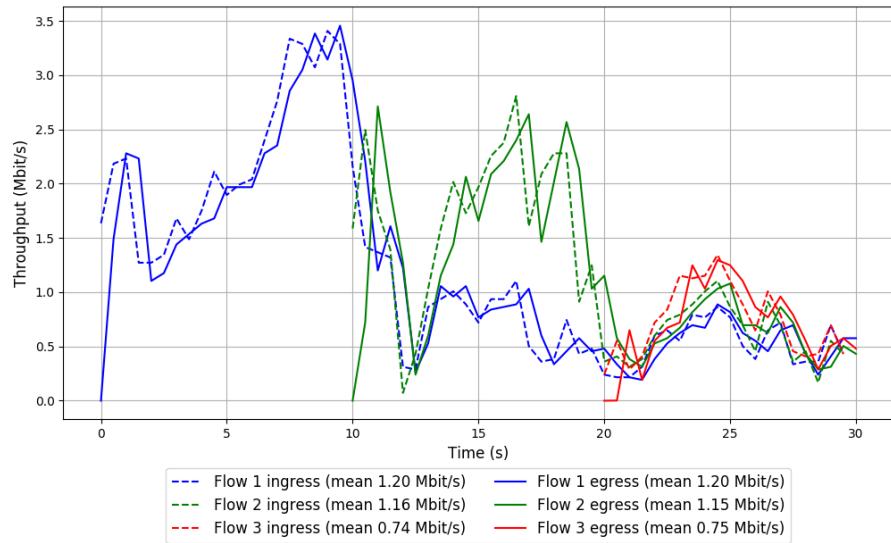


Run 3: Statistics of TCP Vegas

```
Start at: 2018-08-09 07:56:19
End at: 2018-08-09 07:56:49
Local clock offset: 3.2 ms
Remote clock offset: -13.095 ms

# Below is generated by plot.py at 2018-08-09 08:08:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.21 Mbit/s
95th percentile per-packet one-way delay: 226.035 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 1.20 Mbit/s
95th percentile per-packet one-way delay: 196.110 ms
Loss rate: 0.17%
-- Flow 2:
Average throughput: 1.15 Mbit/s
95th percentile per-packet one-way delay: 251.368 ms
Loss rate: 0.31%
-- Flow 3:
Average throughput: 0.75 Mbit/s
95th percentile per-packet one-way delay: 205.510 ms
Loss rate: 1.31%
```

Run 3: Report of TCP Vegas — Data Link

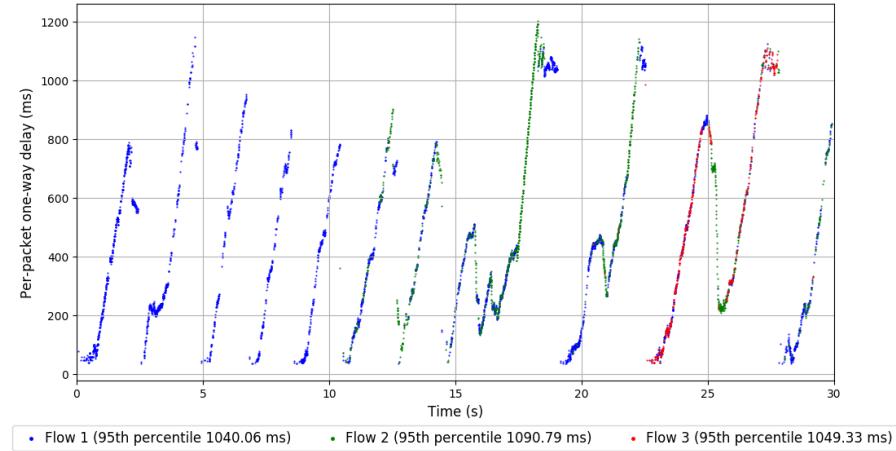
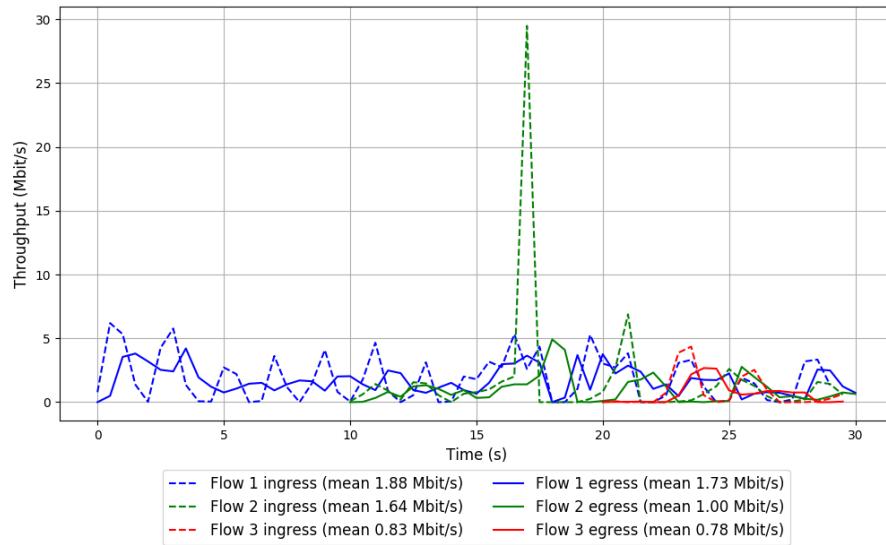


Run 1: Statistics of Verus

```
Start at: 2018-08-09 07:13:38
End at: 2018-08-09 07:14:08
Local clock offset: -2.545 ms
Remote clock offset: -8.989 ms

# Below is generated by plot.py at 2018-08-09 08:08:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.61 Mbit/s
95th percentile per-packet one-way delay: 1051.285 ms
Loss rate: 18.74%
-- Flow 1:
Average throughput: 1.73 Mbit/s
95th percentile per-packet one-way delay: 1040.056 ms
Loss rate: 6.59%
-- Flow 2:
Average throughput: 1.00 Mbit/s
95th percentile per-packet one-way delay: 1090.790 ms
Loss rate: 39.93%
-- Flow 3:
Average throughput: 0.78 Mbit/s
95th percentile per-packet one-way delay: 1049.326 ms
Loss rate: 16.45%
```

Run 1: Report of Verus — Data Link

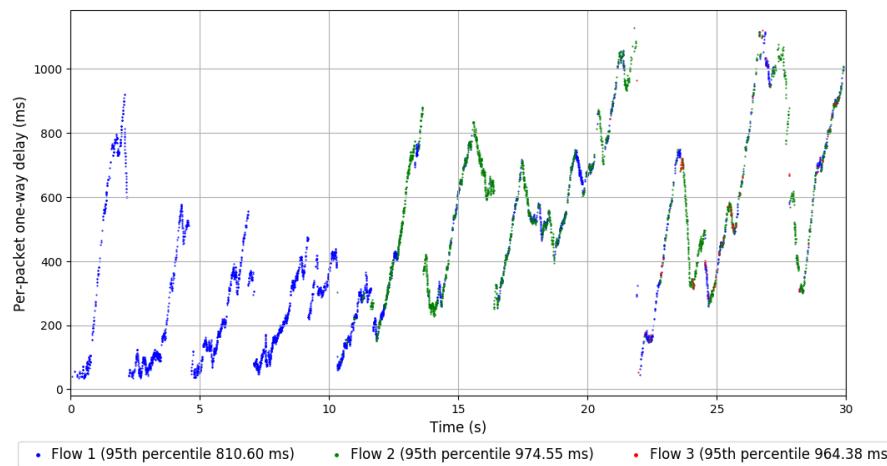
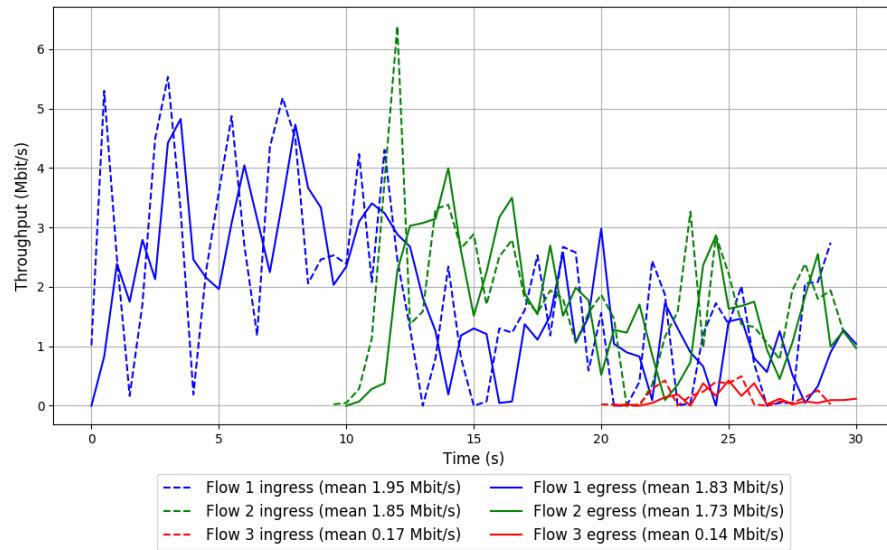


Run 2: Statistics of Verus

```
Start at: 2018-08-09 07:32:13
End at: 2018-08-09 07:32:43
Local clock offset: 0.333 ms
Remote clock offset: -9.028 ms

# Below is generated by plot.py at 2018-08-09 08:08:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.01 Mbit/s
95th percentile per-packet one-way delay: 908.153 ms
Loss rate: 5.87%
-- Flow 1:
Average throughput: 1.83 Mbit/s
95th percentile per-packet one-way delay: 810.601 ms
Loss rate: 4.64%
-- Flow 2:
Average throughput: 1.73 Mbit/s
95th percentile per-packet one-way delay: 974.549 ms
Loss rate: 7.34%
-- Flow 3:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 964.384 ms
Loss rate: 17.19%
```

Run 2: Report of Verus — Data Link

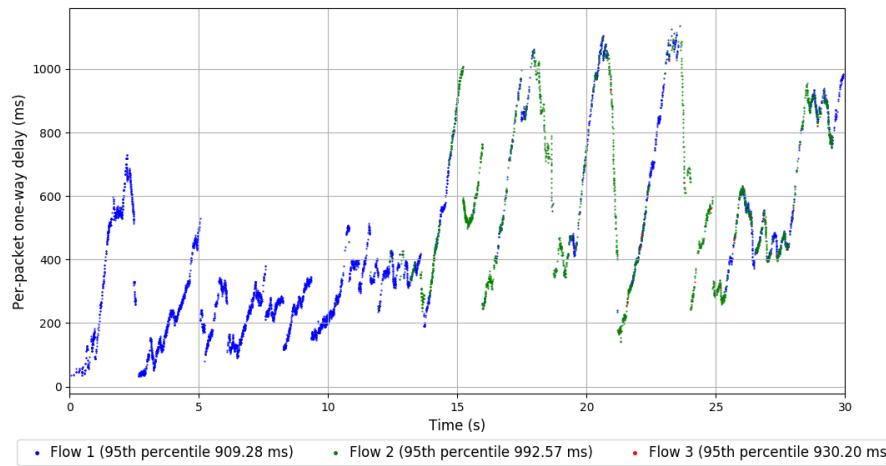
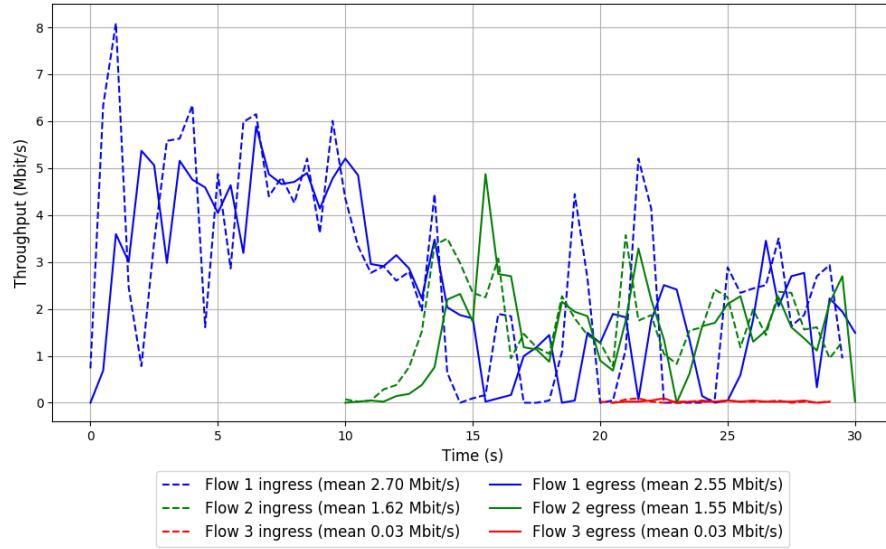


Run 3: Statistics of Verus

```
Start at: 2018-08-09 07:50:50
End at: 2018-08-09 07:51:20
Local clock offset: 0.874 ms
Remote clock offset: -11.898 ms

# Below is generated by plot.py at 2018-08-09 08:08:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.56 Mbit/s
95th percentile per-packet one-way delay: 962.302 ms
Loss rate: 6.10%
-- Flow 1:
Average throughput: 2.55 Mbit/s
95th percentile per-packet one-way delay: 909.280 ms
Loss rate: 5.68%
-- Flow 2:
Average throughput: 1.55 Mbit/s
95th percentile per-packet one-way delay: 992.568 ms
Loss rate: 7.16%
-- Flow 3:
Average throughput: 0.03 Mbit/s
95th percentile per-packet one-way delay: 930.200 ms
Loss rate: 4.35%
```

Run 3: Report of Verus — Data Link

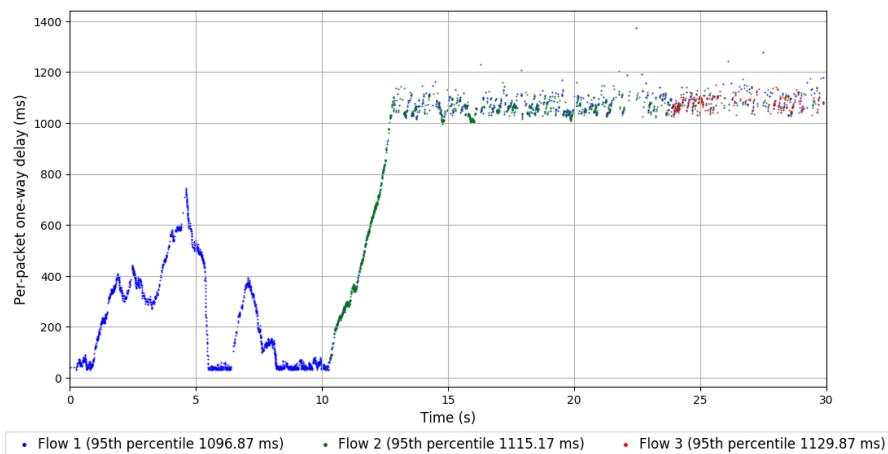
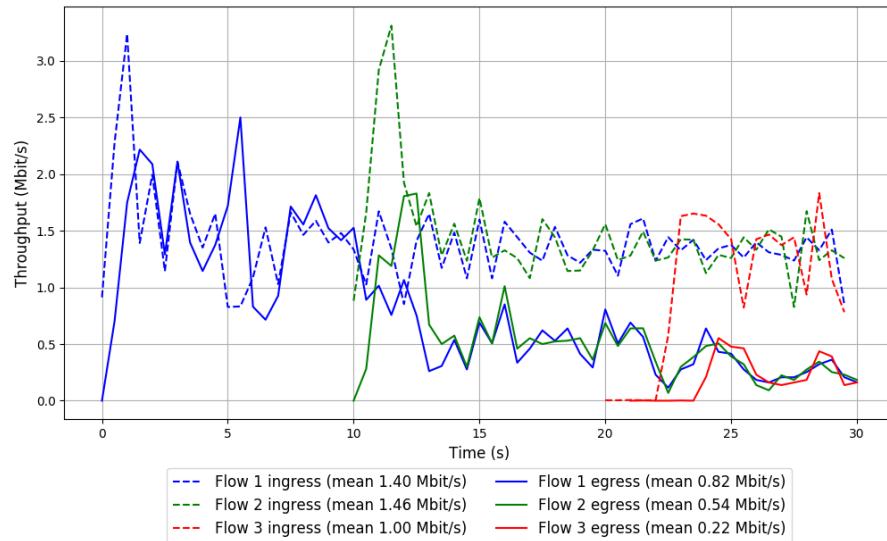


```
Run 1: Statistics of PCC-Vivace
```

```
Start at: 2018-08-09 07:23:27
End at: 2018-08-09 07:23:57
Local clock offset: -0.55 ms
Remote clock offset: -9.744 ms

# Below is generated by plot.py at 2018-08-09 08:08:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.24 Mbit/s
95th percentile per-packet one-way delay: 1106.848 ms
Loss rate: 54.32%
-- Flow 1:
Average throughput: 0.82 Mbit/s
95th percentile per-packet one-way delay: 1096.874 ms
Loss rate: 41.76%
-- Flow 2:
Average throughput: 0.54 Mbit/s
95th percentile per-packet one-way delay: 1115.174 ms
Loss rate: 63.34%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1129.868 ms
Loss rate: 81.15%
```

Run 1: Report of PCC-Vivace — Data Link

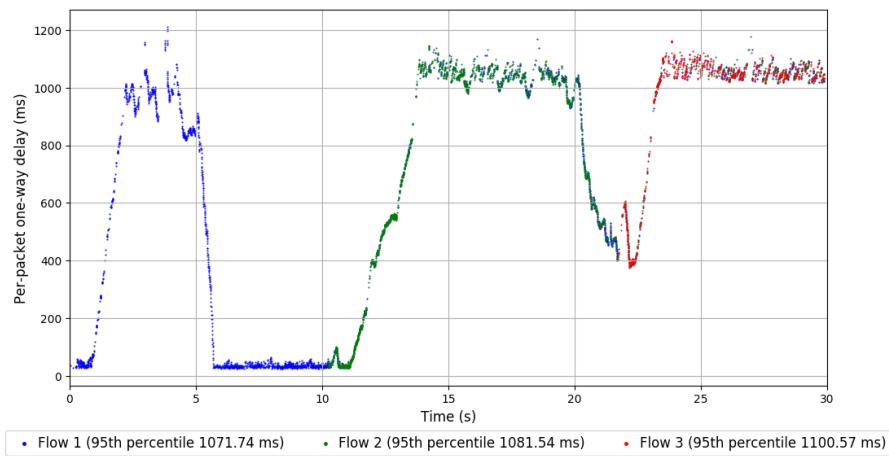
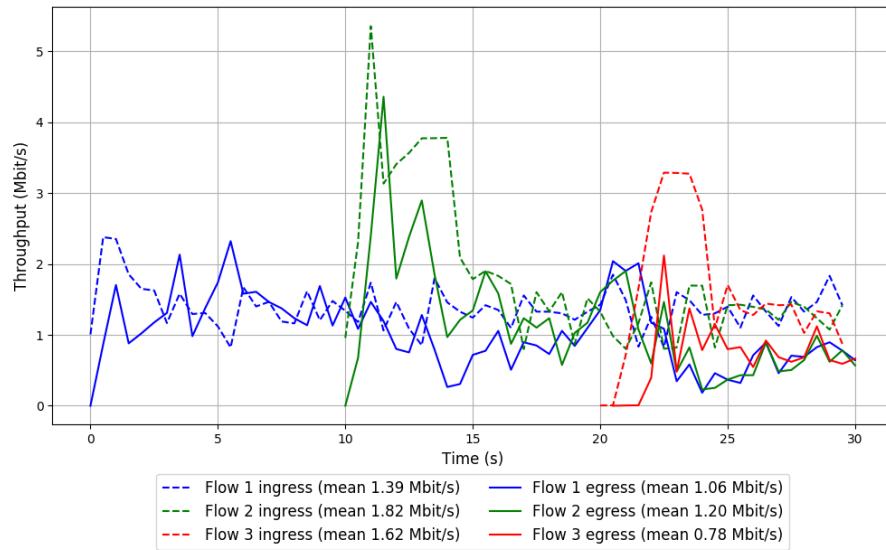


Run 2: Statistics of PCC-Vivace

```
Start at: 2018-08-09 07:42:04
End at: 2018-08-09 07:42:34
Local clock offset: 3.113 ms
Remote clock offset: -13.24 ms

# Below is generated by plot.py at 2018-08-09 08:08:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.09 Mbit/s
95th percentile per-packet one-way delay: 1080.927 ms
Loss rate: 33.34%
-- Flow 1:
Average throughput: 1.06 Mbit/s
95th percentile per-packet one-way delay: 1071.741 ms
Loss rate: 24.17%
-- Flow 2:
Average throughput: 1.20 Mbit/s
95th percentile per-packet one-way delay: 1081.537 ms
Loss rate: 34.36%
-- Flow 3:
Average throughput: 0.78 Mbit/s
95th percentile per-packet one-way delay: 1100.574 ms
Loss rate: 54.92%
```

Run 2: Report of PCC-Vivace — Data Link

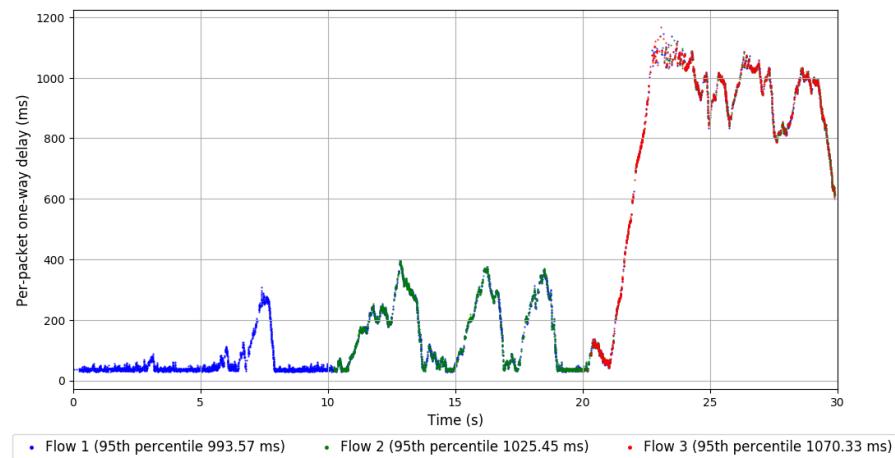
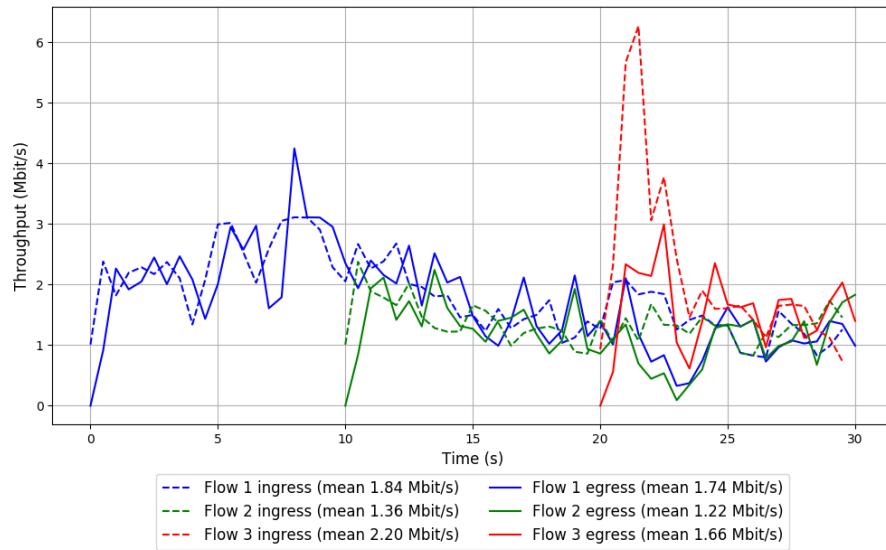


Run 3: Statistics of PCC-Vivace

```
Start at: 2018-08-09 08:00:41
End at: 2018-08-09 08:01:11
Local clock offset: 2.125 ms
Remote clock offset: -14.171 ms

# Below is generated by plot.py at 2018-08-09 08:08:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.09 Mbit/s
95th percentile per-packet one-way delay: 1030.966 ms
Loss rate: 10.86%
-- Flow 1:
Average throughput: 1.74 Mbit/s
95th percentile per-packet one-way delay: 993.569 ms
Loss rate: 5.55%
-- Flow 2:
Average throughput: 1.22 Mbit/s
95th percentile per-packet one-way delay: 1025.450 ms
Loss rate: 10.59%
-- Flow 3:
Average throughput: 1.66 Mbit/s
95th percentile per-packet one-way delay: 1070.326 ms
Loss rate: 24.68%
```

Run 3: Report of PCC-Vivace — Data Link

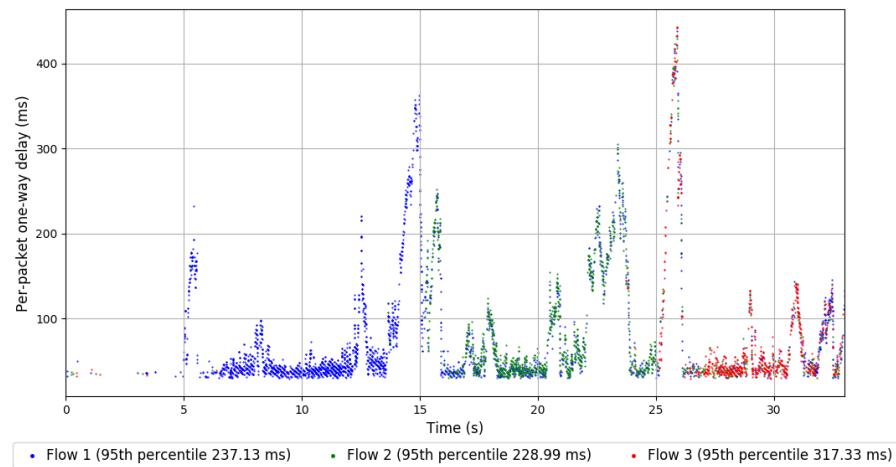
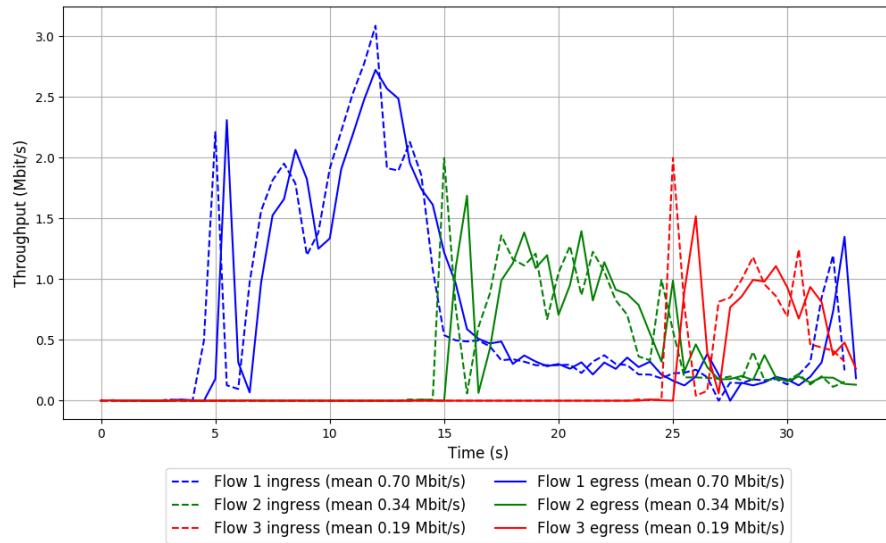


Run 1: Statistics of WebRTC media

```
Start at: 2018-08-09 07:20:11
End at: 2018-08-09 07:20:41
Local clock offset: 1.981 ms
Remote clock offset: -7.424 ms

# Below is generated by plot.py at 2018-08-09 08:08:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.22 Mbit/s
95th percentile per-packet one-way delay: 243.642 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 0.70 Mbit/s
95th percentile per-packet one-way delay: 237.132 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 0.34 Mbit/s
95th percentile per-packet one-way delay: 228.991 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 317.326 ms
Loss rate: 0.67%
```

Run 1: Report of WebRTC media — Data Link

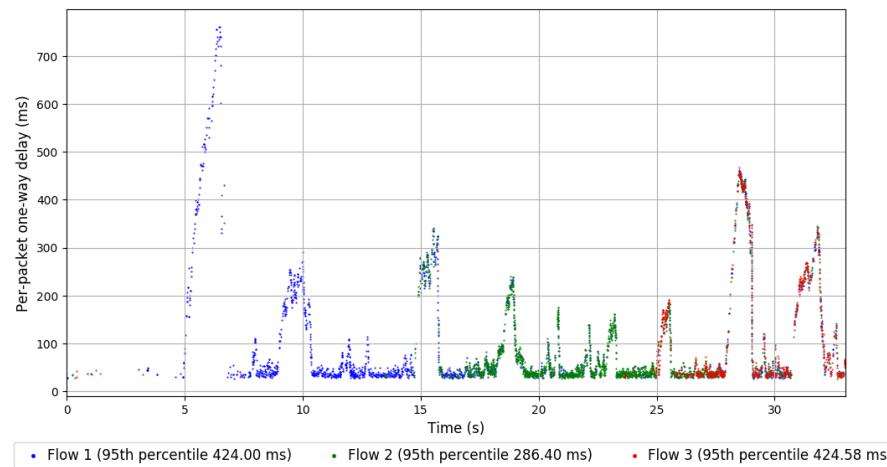
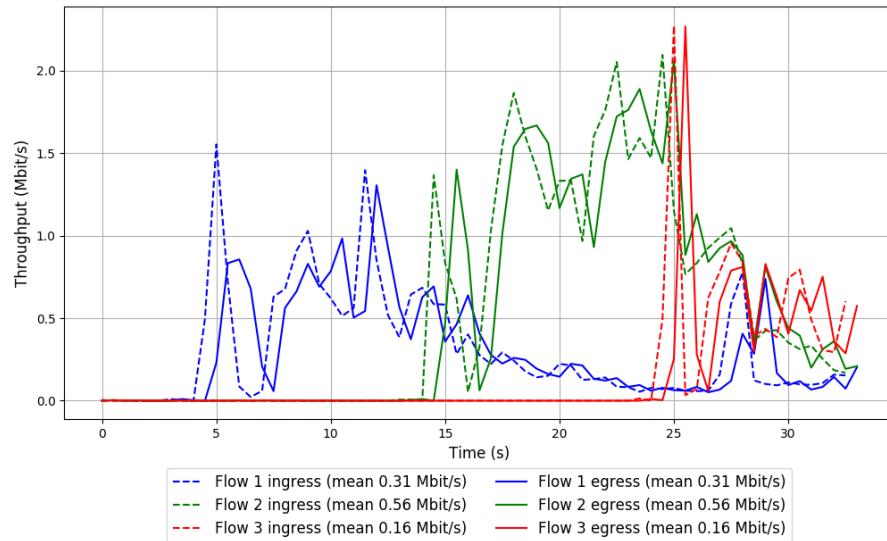


Run 2: Statistics of WebRTC media

```
Start at: 2018-08-09 07:38:47
End at: 2018-08-09 07:39:17
Local clock offset: 2.573 ms
Remote clock offset: -10.182 ms

# Below is generated by plot.py at 2018-08-09 08:08:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.02 Mbit/s
95th percentile per-packet one-way delay: 375.935 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 0.31 Mbit/s
95th percentile per-packet one-way delay: 424.005 ms
Loss rate: 0.89%
-- Flow 2:
Average throughput: 0.56 Mbit/s
95th percentile per-packet one-way delay: 286.403 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 424.585 ms
Loss rate: 0.99%
```

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

```
Start at: 2018-08-09 07:57:25
End at: 2018-08-09 07:57:55
Local clock offset: -3.355 ms
Remote clock offset: -14.24 ms

# Below is generated by plot.py at 2018-08-09 08:08:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.76 Mbit/s
95th percentile per-packet one-way delay: 472.847 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 361.498 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 493.395 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 0.12 Mbit/s
95th percentile per-packet one-way delay: 563.696 ms
Loss rate: 1.71%
```

Run 3: Report of WebRTC media — Data Link

