

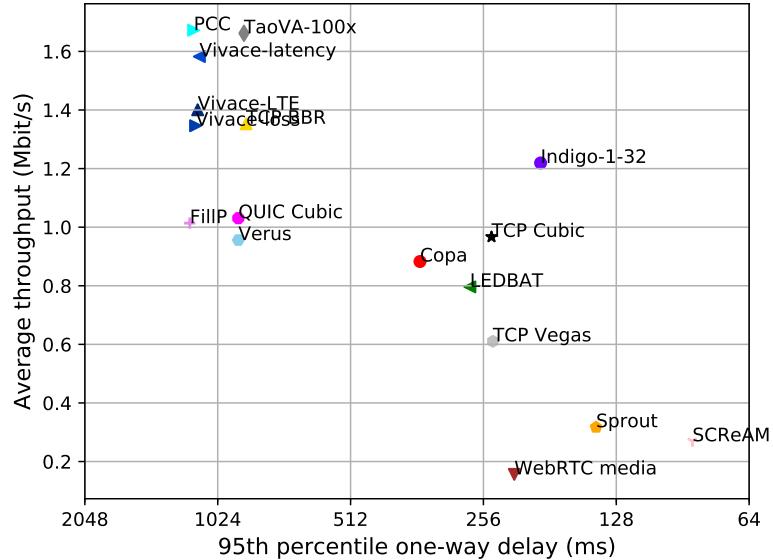
Pantheon Report

Generated at 2018-04-10 08:42:44 (UTC).
Data path: AWS India 1 Ethernet (*local*) → India 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).
Tested BBR with qdisc of Fair Queuing (**fq**), and other schemes with the default Linux qdisc (**pfifo_fast**).
NTP offsets were measured against nets.org.sg and have been applied to correct the timestamps in logs.

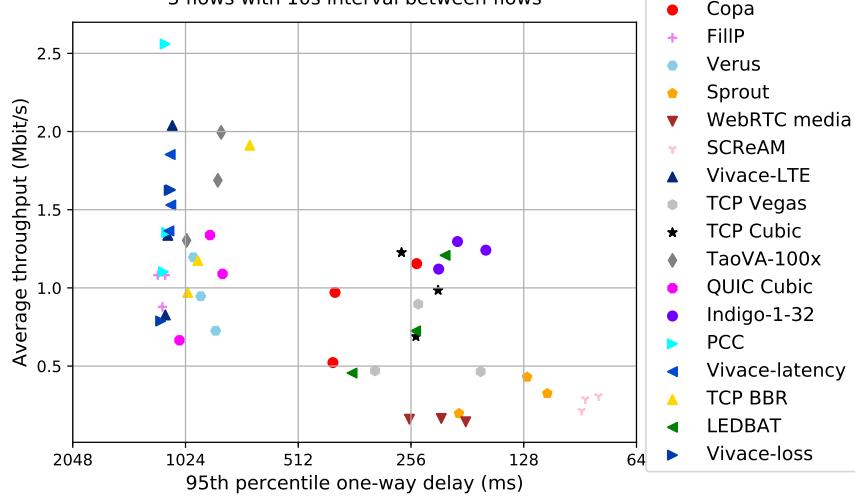
Git summary:

```
branch: master @ eb420b5be9bafcc22cf68b99ff5a2000462fc59
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
  M datagrump/sender.cc
third_party/fillp @ 11f8c46a2bf1dc797253db7e8ca04076272b2a44
third_party/genericCC @ 9249eea3238475c4d8cca1443d28df70bfff6c4a2
third_party/indigo @ a9b2060d39e4da2e8987e893e3eca2a6c7cd0ab9
third_party/indigo-1-layer-128-unit @ 3ae9e4ef4230db7484501f82ce8b377695f2f66d
third_party/indigo-1-layer-32-unit @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/indigo-1-layer-32-unit-no-calib @ 1f3a7f75b41135ed5b540c0fd3505939528e2a5f
third_party/indigo-no-calib @ 7224f2202e8a044d8306fa0b983ad84360c53d89
third_party/koho_cc @ f0f2e693303aee82ea808e6928eac4f1083a6681
  M datagrump/sender.cc
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ fb1053193c2861da659ba9013db26744ccfcf993
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/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream @ c3370fd7bd17265a79aeb34e4016ad23f5965885
third_party/sourdough @ f1a14bffe749737437f61b1eaeeb30b267cde681
third_party/sprout @ 6f2efe6e088d91066a9f023df375eee2665089ce
  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 @ 7a4ba531e75b4a6f66f5c4580192120401784ce3
third_party/webrtc @ f271183af822eee5d0031620f4bebf38aedc5581
```

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



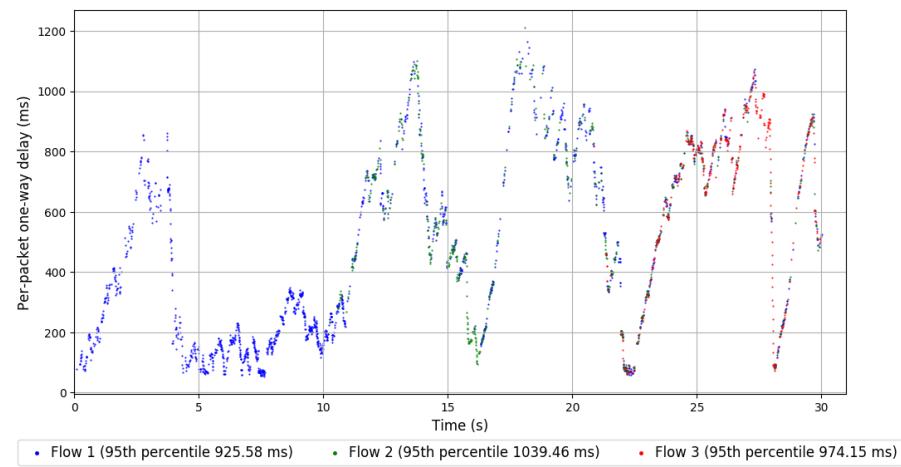
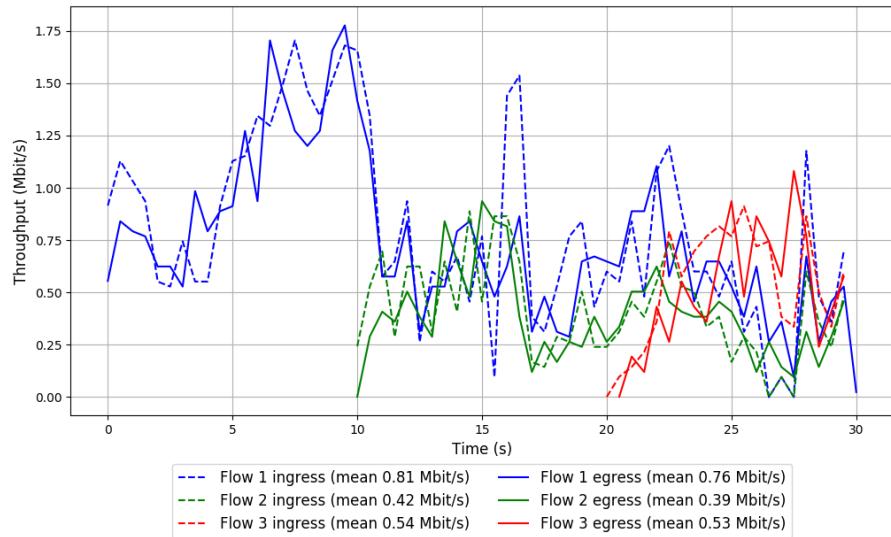
scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	3	0.89	0.48	0.49	827.20	967.81	917.02	11.12	11.03	19.56
TCP Cubic	3	0.44	0.55	0.48	223.47	266.85	237.26	8.04	4.98	4.78
LEDBAT	3	0.48	0.33	0.26	256.05	296.42	258.90	4.86	5.73	7.16
PCC	3	1.05	0.80	0.33	1140.56	1163.69	1153.59	62.44	91.43	82.26
QUIC Cubic	3	0.58	0.48	0.42	854.93	964.51	923.98	4.69	7.96	13.95
SCReAM	3	0.12	0.14	0.18	86.13	85.00	85.58	2.31	2.84	1.56
WebRTC media	3	0.05	0.06	0.05	200.94	224.75	158.35	8.00	9.45	15.33
Sprout	3	0.17	0.16	0.14	150.64	141.57	130.40	5.87	4.92	5.62
TaoVA-100x	3	1.04	0.75	0.39	779.47	941.80	1032.56	10.24	23.52	32.64
TCP Vegas	3	0.31	0.29	0.31	236.73	228.45	273.85	7.29	5.75	9.86
Verus	3	0.64	0.40	0.18	804.94	890.90	922.05	10.93	14.86	22.40
Copa	3	0.47	0.38	0.48	326.27	393.10	389.28	6.16	7.29	7.26
FillP	3	0.86	0.24	0.00	1184.20	1163.65	1152.60	86.16	89.73	92.34
Indigo-1-32	3	0.60	0.63	0.63	192.32	171.12	221.49	10.29	6.43	6.22
Vivace-latency	3	0.92	0.84	0.40	1125.56	1125.27	1125.10	33.26	39.27	53.64
Vivace-loss	3	0.93	0.56	0.23	1142.24	1177.23	1122.64	44.77	58.99	73.68
Vivace-LTE	3	0.92	0.63	0.23	1127.23	1144.12	1141.19	38.39	56.56	77.81

Run 1: Statistics of TCP BBR

```
Start at: 2018-04-10 07:59:25
End at: 2018-04-10 07:59:55
Local clock offset: -0.58 ms
Remote clock offset: -2.455 ms

# Below is generated by plot.py at 2018-04-10 08:42:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.18 Mbit/s
95th percentile per-packet one-way delay: 949.279 ms
Loss rate: 6.77%
-- Flow 1:
Average throughput: 0.76 Mbit/s
95th percentile per-packet one-way delay: 925.582 ms
Loss rate: 6.31%
-- Flow 2:
Average throughput: 0.39 Mbit/s
95th percentile per-packet one-way delay: 1039.462 ms
Loss rate: 6.80%
-- Flow 3:
Average throughput: 0.53 Mbit/s
95th percentile per-packet one-way delay: 974.150 ms
Loss rate: 8.80%
```

Run 1: Report of TCP BBR — Data Link

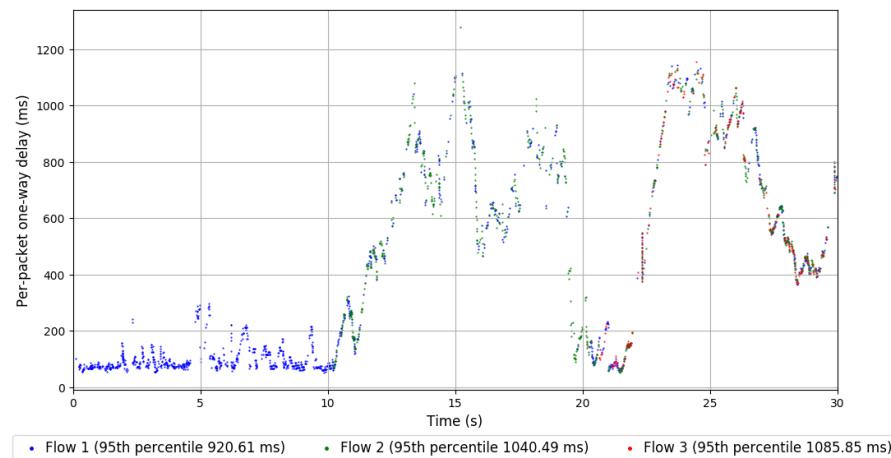
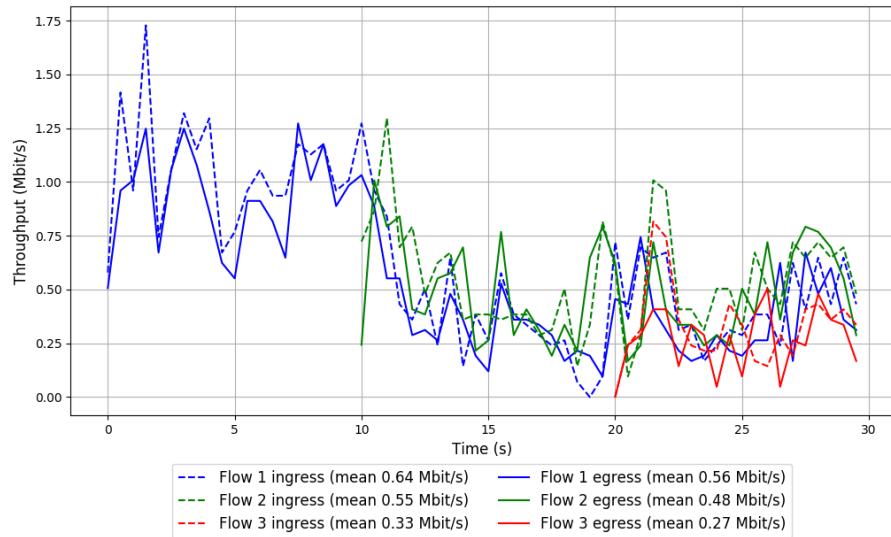


Run 2: Statistics of TCP BBR

```
Start at: 2018-04-10 08:19:27
End at: 2018-04-10 08:19:57
Local clock offset: -1.743 ms
Remote clock offset: -2.728 ms

# Below is generated by plot.py at 2018-04-10 08:42:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.97 Mbit/s
95th percentile per-packet one-way delay: 1010.409 ms
Loss rate: 13.00%
-- Flow 1:
Average throughput: 0.56 Mbit/s
95th percentile per-packet one-way delay: 920.605 ms
Loss rate: 12.79%
-- Flow 2:
Average throughput: 0.48 Mbit/s
95th percentile per-packet one-way delay: 1040.486 ms
Loss rate: 11.27%
-- Flow 3:
Average throughput: 0.27 Mbit/s
95th percentile per-packet one-way delay: 1085.848 ms
Loss rate: 19.85%
```

Run 2: Report of TCP BBR — Data Link

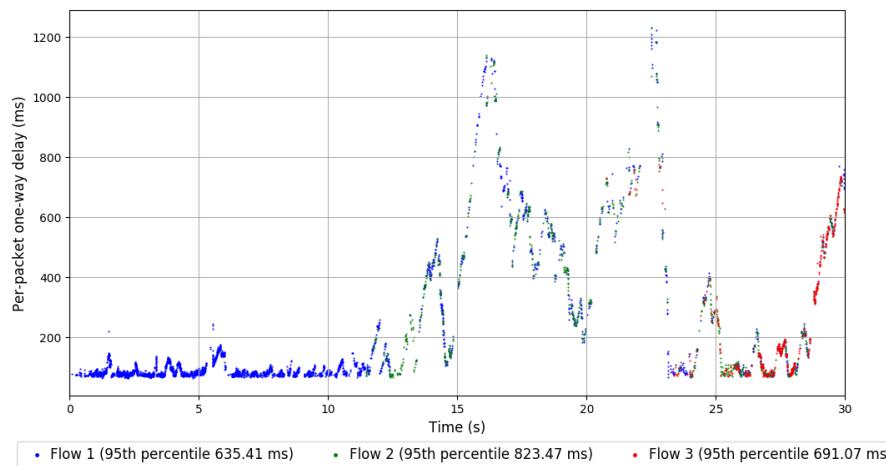
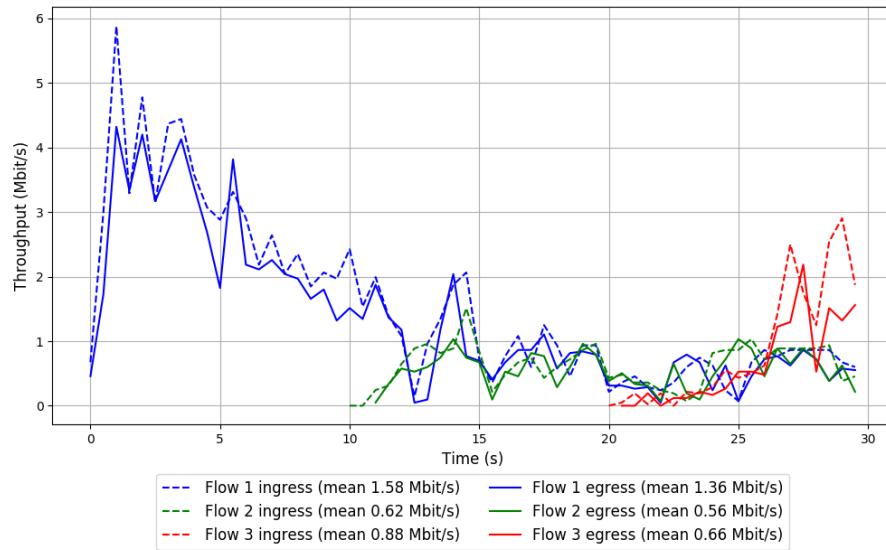


Run 3: Statistics of TCP BBR

```
Start at: 2018-04-10 08:39:18
End at: 2018-04-10 08:39:48
Local clock offset: -0.518 ms
Remote clock offset: -2.238 ms

# Below is generated by plot.py at 2018-04-10 08:42:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.91 Mbit/s
95th percentile per-packet one-way delay: 689.817 ms
Loss rate: 16.41%
-- Flow 1:
Average throughput: 1.36 Mbit/s
95th percentile per-packet one-way delay: 635.415 ms
Loss rate: 14.25%
-- Flow 2:
Average throughput: 0.56 Mbit/s
95th percentile per-packet one-way delay: 823.472 ms
Loss rate: 15.02%
-- Flow 3:
Average throughput: 0.66 Mbit/s
95th percentile per-packet one-way delay: 691.070 ms
Loss rate: 30.03%
```

Run 3: Report of TCP BBR — Data Link

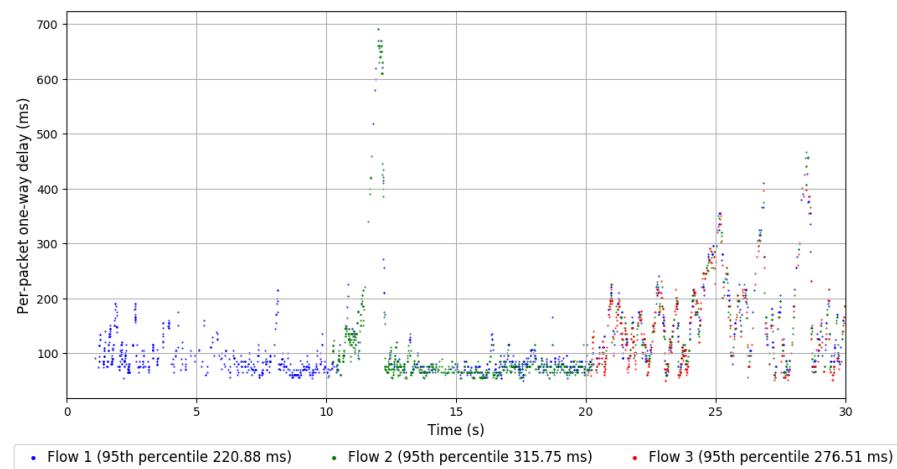
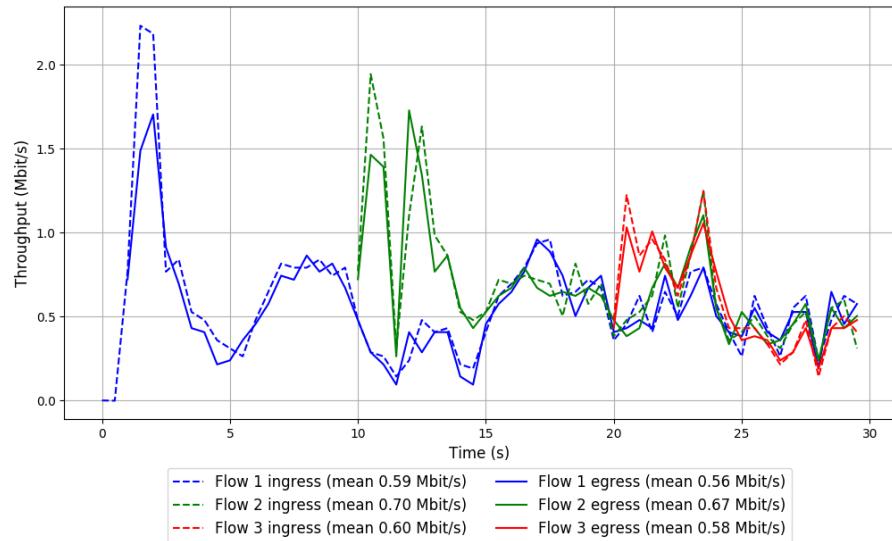


```
Run 1: Statistics of TCP Cubic
```

```
Start at: 2018-04-10 07:46:11
End at: 2018-04-10 07:46:41
Local clock offset: -0.721 ms
Remote clock offset: -2.008 ms

# Below is generated by plot.py at 2018-04-10 08:42:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.23 Mbit/s
95th percentile per-packet one-way delay: 271.331 ms
Loss rate: 5.24%
-- Flow 1:
Average throughput: 0.56 Mbit/s
95th percentile per-packet one-way delay: 220.876 ms
Loss rate: 7.32%
-- Flow 2:
Average throughput: 0.67 Mbit/s
95th percentile per-packet one-way delay: 315.746 ms
Loss rate: 3.46%
-- Flow 3:
Average throughput: 0.58 Mbit/s
95th percentile per-packet one-way delay: 276.512 ms
Loss rate: 3.23%
```

Run 1: Report of TCP Cubic — Data Link

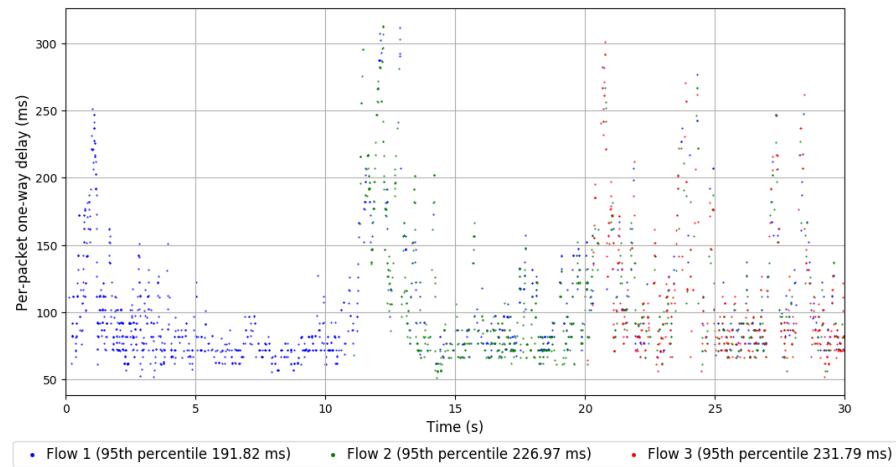
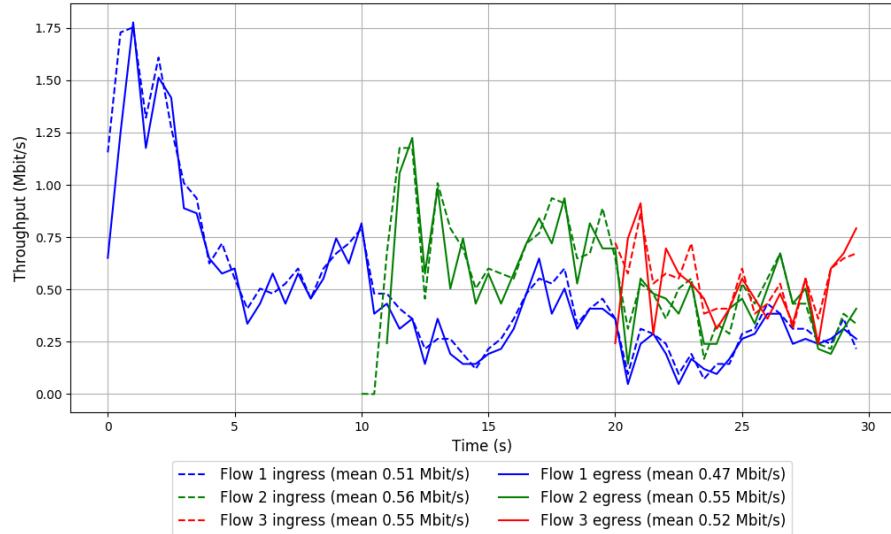


Run 2: Statistics of TCP Cubic

```
Start at: 2018-04-10 08:06:11
End at: 2018-04-10 08:06:41
Local clock offset: -1.179 ms
Remote clock offset: -2.277 ms

# Below is generated by plot.py at 2018-04-10 08:42:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.98 Mbit/s
95th percentile per-packet one-way delay: 216.686 ms
Loss rate: 7.30%
-- Flow 1:
Average throughput: 0.47 Mbit/s
95th percentile per-packet one-way delay: 191.821 ms
Loss rate: 8.58%
-- Flow 2:
Average throughput: 0.55 Mbit/s
95th percentile per-packet one-way delay: 226.975 ms
Loss rate: 6.29%
-- Flow 3:
Average throughput: 0.52 Mbit/s
95th percentile per-packet one-way delay: 231.788 ms
Loss rate: 5.76%
```

Run 2: Report of TCP Cubic — Data Link

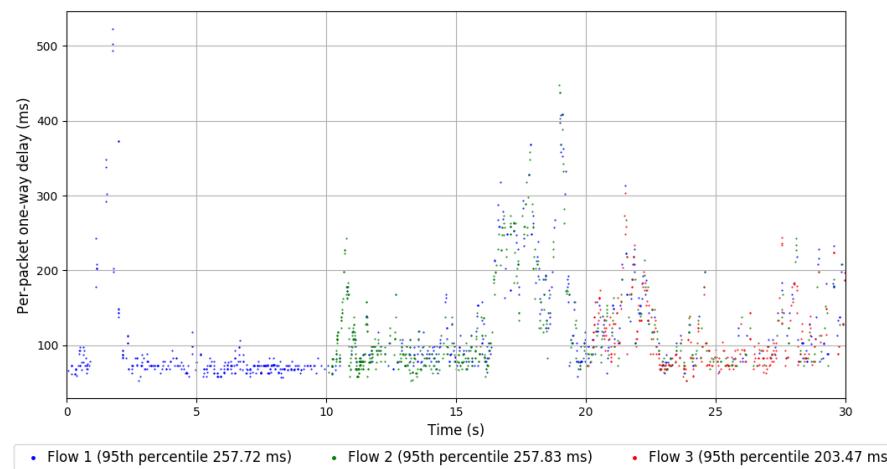
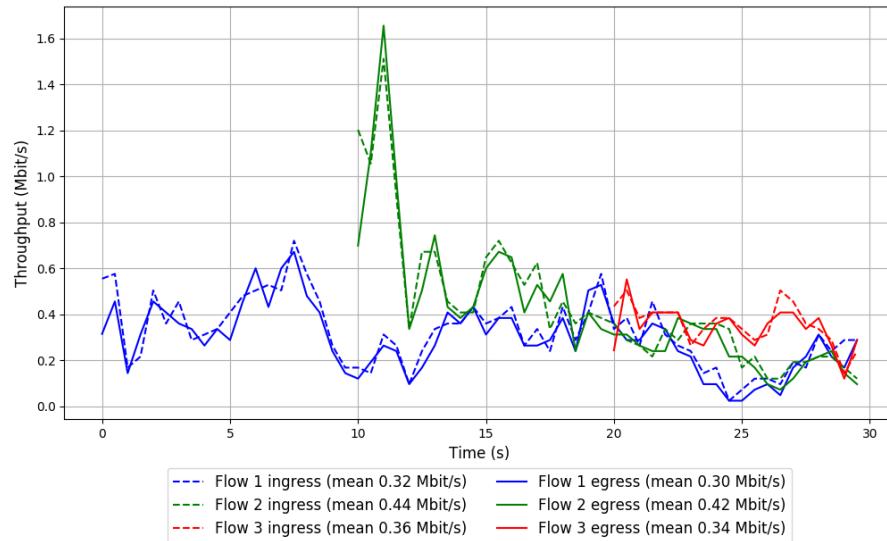


Run 3: Statistics of TCP Cubic

```
Start at: 2018-04-10 08:26:04
End at: 2018-04-10 08:26:34
Local clock offset: -1.665 ms
Remote clock offset: -2.776 ms

# Below is generated by plot.py at 2018-04-10 08:42:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.69 Mbit/s
95th percentile per-packet one-way delay: 248.323 ms
Loss rate: 6.53%
-- Flow 1:
Average throughput: 0.30 Mbit/s
95th percentile per-packet one-way delay: 257.721 ms
Loss rate: 8.21%
-- Flow 2:
Average throughput: 0.42 Mbit/s
95th percentile per-packet one-way delay: 257.832 ms
Loss rate: 5.18%
-- Flow 3:
Average throughput: 0.34 Mbit/s
95th percentile per-packet one-way delay: 203.468 ms
Loss rate: 5.35%
```

Run 3: Report of TCP Cubic — Data Link

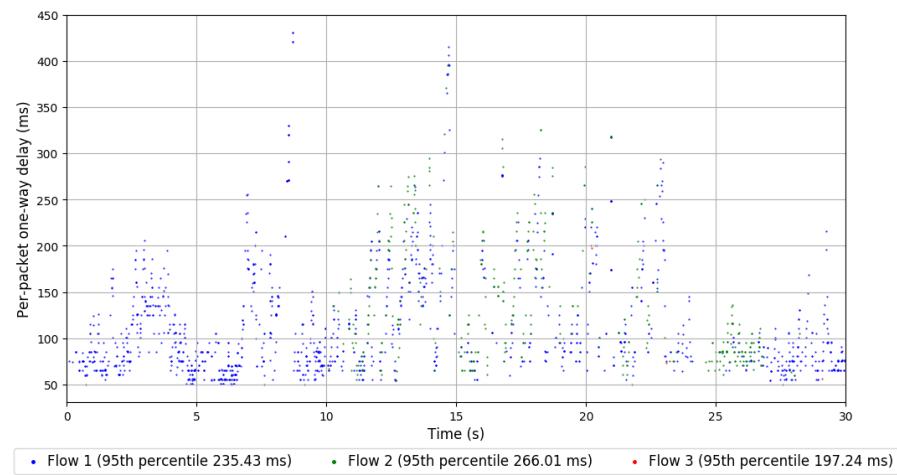
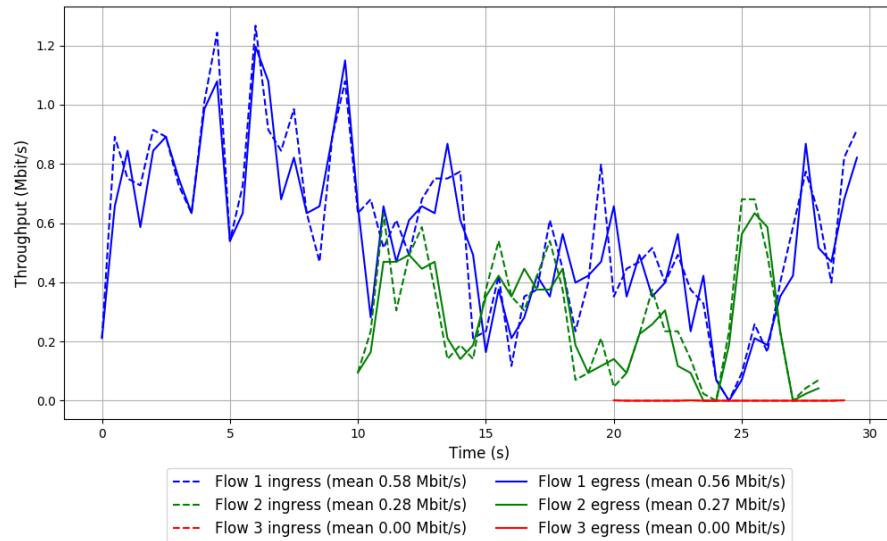


```
Run 1: Statistics of LEDBAT

Start at: 2018-04-10 07:49:29
End at: 2018-04-10 07:49:59
Local clock offset: -0.446 ms
Remote clock offset: -3.033 ms

# Below is generated by plot.py at 2018-04-10 08:42:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.72 Mbit/s
95th percentile per-packet one-way delay: 248.890 ms
Loss rate: 4.20%
-- Flow 1:
Average throughput: 0.56 Mbit/s
95th percentile per-packet one-way delay: 235.425 ms
Loss rate: 4.10%
-- Flow 2:
Average throughput: 0.27 Mbit/s
95th percentile per-packet one-way delay: 266.014 ms
Loss rate: 4.56%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 197.244 ms
Loss rate: 0.00%
```

Run 1: Report of LEDBAT — Data Link

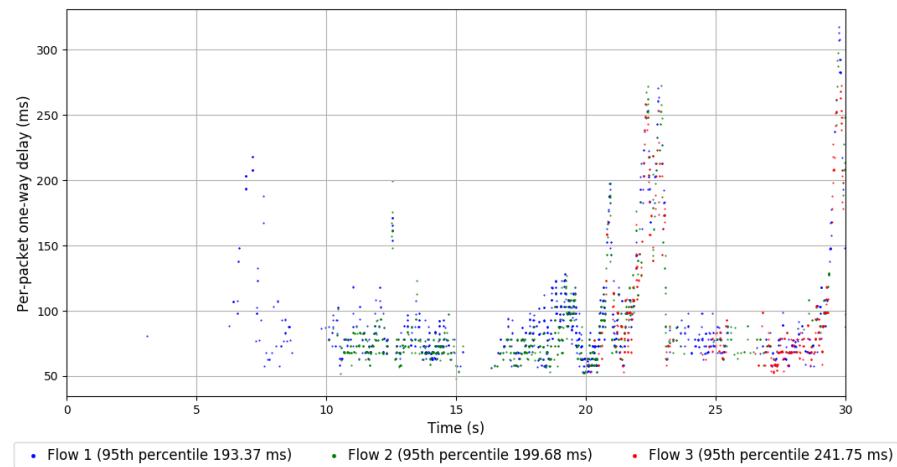
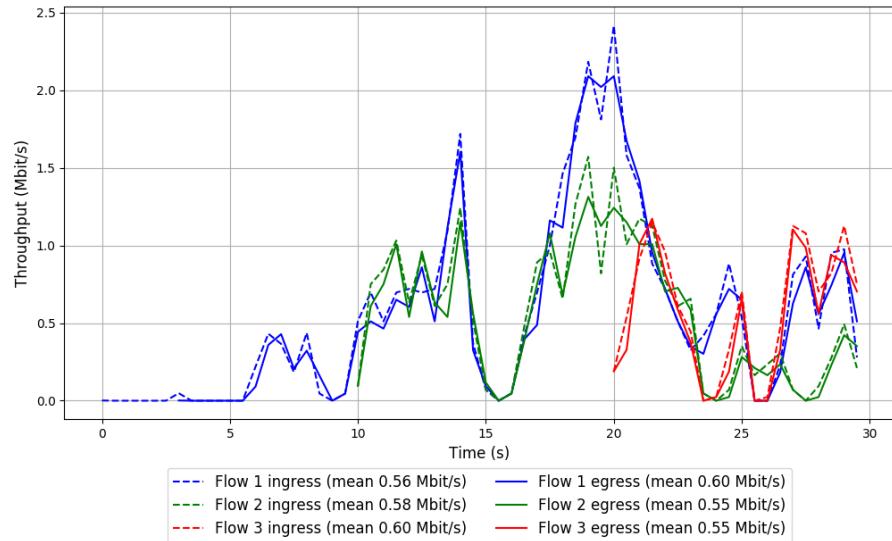


Run 2: Statistics of LEDBAT

```
Start at: 2018-04-10 08:09:33
End at: 2018-04-10 08:10:03
Local clock offset: -1.319 ms
Remote clock offset: -2.389 ms

# Below is generated by plot.py at 2018-04-10 08:42:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.21 Mbit/s
95th percentile per-packet one-way delay: 207.640 ms
Loss rate: 5.82%
-- Flow 1:
Average throughput: 0.60 Mbit/s
95th percentile per-packet one-way delay: 193.371 ms
Loss rate: 4.34%
-- Flow 2:
Average throughput: 0.55 Mbit/s
95th percentile per-packet one-way delay: 199.679 ms
Loss rate: 6.23%
-- Flow 3:
Average throughput: 0.55 Mbit/s
95th percentile per-packet one-way delay: 241.748 ms
Loss rate: 9.21%
```

Run 2: Report of LEDBAT — Data Link

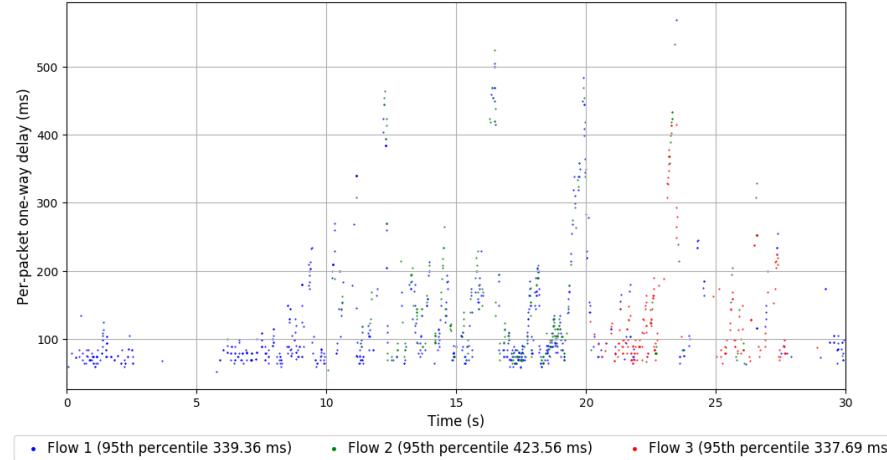
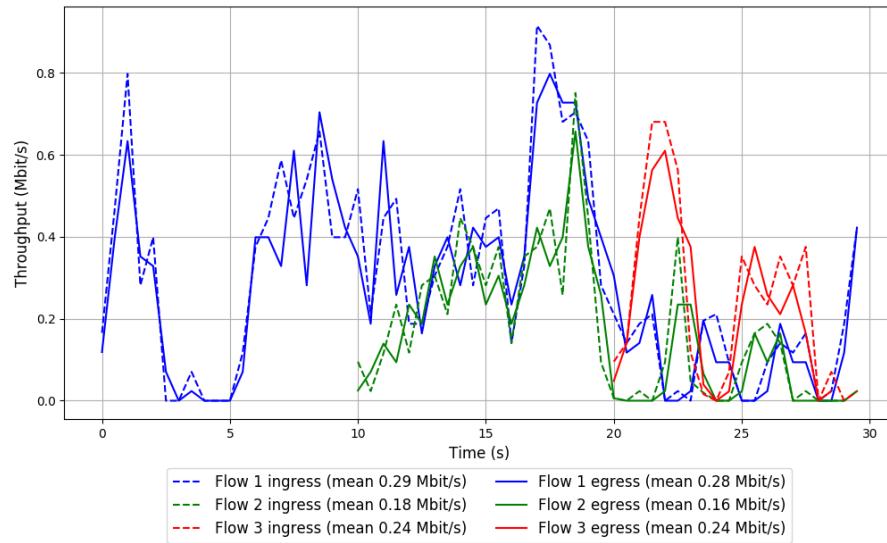


```
Run 3: Statistics of LEDBAT

Start at: 2018-04-10 08:29:23
End at: 2018-04-10 08:29:53
Local clock offset: -1.35 ms
Remote clock offset: -2.376 ms

# Below is generated by plot.py at 2018-04-10 08:42:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.46 Mbit/s
95th percentile per-packet one-way delay: 367.821 ms
Loss rate: 7.21%
-- Flow 1:
Average throughput: 0.28 Mbit/s
95th percentile per-packet one-way delay: 339.355 ms
Loss rate: 6.15%
-- Flow 2:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 423.555 ms
Loss rate: 6.40%
-- Flow 3:
Average throughput: 0.24 Mbit/s
95th percentile per-packet one-way delay: 337.695 ms
Loss rate: 12.27%
```

Run 3: Report of LEDBAT — Data Link

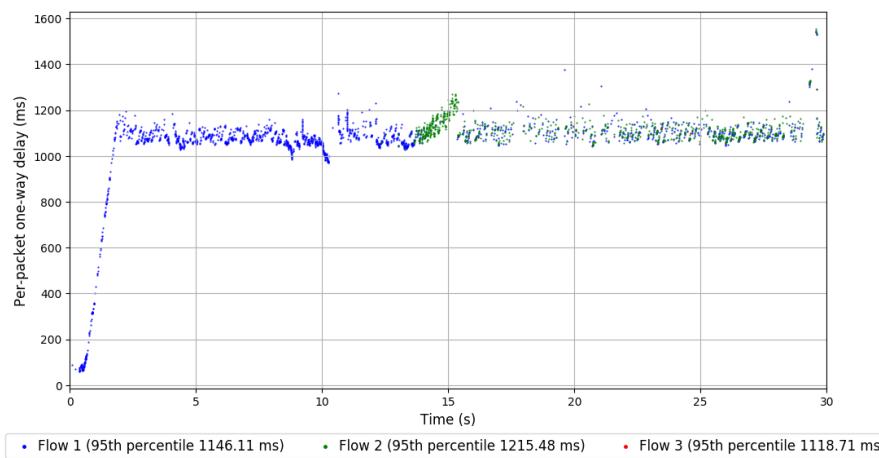
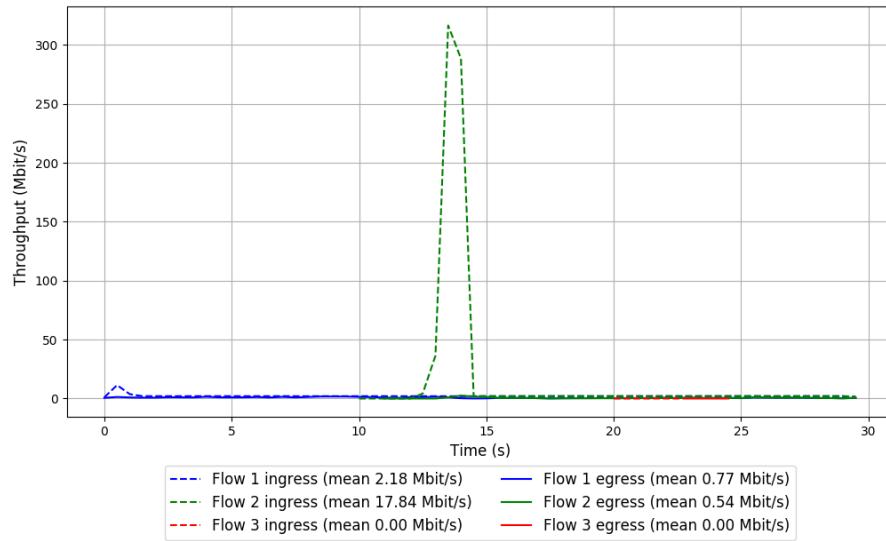


Run 1: Statistics of PCC

```
Start at: 2018-04-10 07:48:23
End at: 2018-04-10 07:48:53
Local clock offset: -0.677 ms
Remote clock offset: -2.28 ms

# Below is generated by plot.py at 2018-04-10 08:42:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.10 Mbit/s
95th percentile per-packet one-way delay: 1172.699 ms
Loss rate: 92.17%
-- Flow 1:
Average throughput: 0.77 Mbit/s
95th percentile per-packet one-way delay: 1146.111 ms
Loss rate: 64.83%
-- Flow 2:
Average throughput: 0.54 Mbit/s
95th percentile per-packet one-way delay: 1215.476 ms
Loss rate: 97.18%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 1118.707 ms
Loss rate: 83.22%
```

Run 1: Report of PCC — Data Link

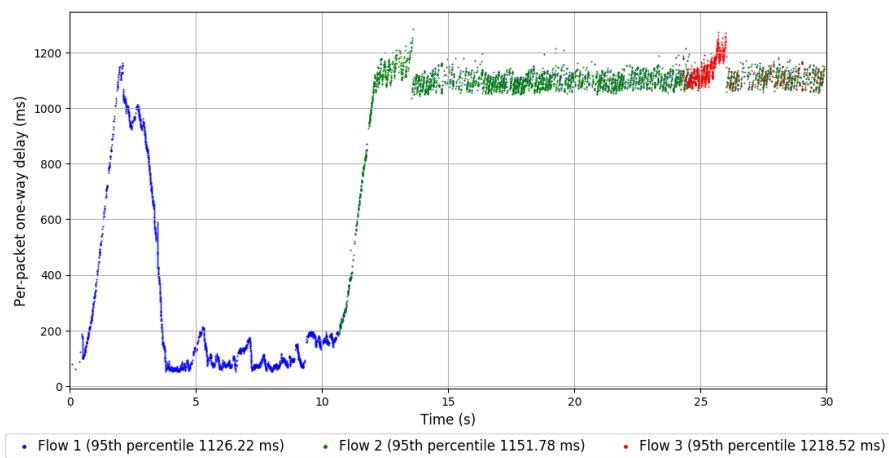
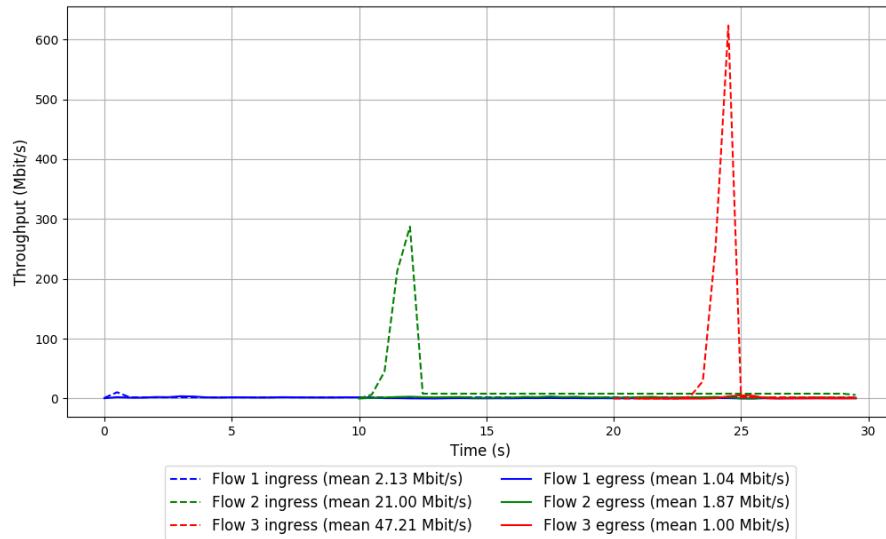


Run 2: Statistics of PCC

```
Start at: 2018-04-10 08:08:26
End at: 2018-04-10 08:08:56
Local clock offset: -0.867 ms
Remote clock offset: -2.291 ms

# Below is generated by plot.py at 2018-04-10 08:42:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.56 Mbit/s
95th percentile per-packet one-way delay: 1160.333 ms
Loss rate: 91.93%
-- Flow 1:
Average throughput: 1.04 Mbit/s
95th percentile per-packet one-way delay: 1126.224 ms
Loss rate: 51.31%
-- Flow 2:
Average throughput: 1.87 Mbit/s
95th percentile per-packet one-way delay: 1151.779 ms
Loss rate: 91.18%
-- Flow 3:
Average throughput: 1.00 Mbit/s
95th percentile per-packet one-way delay: 1218.516 ms
Loss rate: 98.16%
```

Run 2: Report of PCC — Data Link

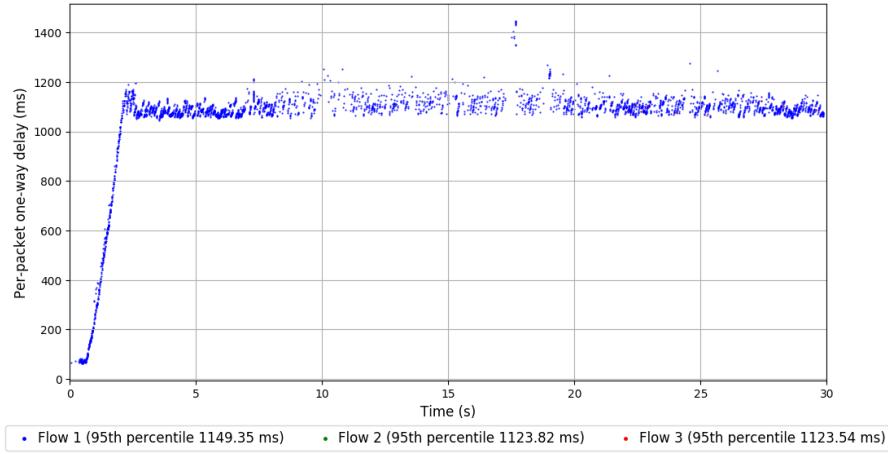
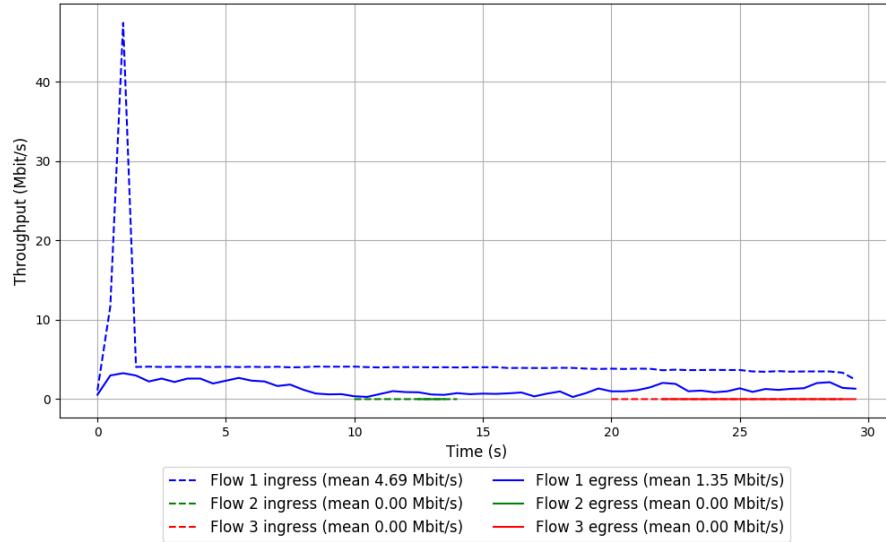


Run 3: Statistics of PCC

```
Start at: 2018-04-10 08:28:16
End at: 2018-04-10 08:28:46
Local clock offset: -1.783 ms
Remote clock offset: -2.989 ms

# Below is generated by plot.py at 2018-04-10 08:42:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.35 Mbit/s
95th percentile per-packet one-way delay: 1149.235 ms
Loss rate: 71.17%
-- Flow 1:
Average throughput: 1.35 Mbit/s
95th percentile per-packet one-way delay: 1149.348 ms
Loss rate: 71.17%
-- Flow 2:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 1123.819 ms
Loss rate: 85.93%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 1123.535 ms
Loss rate: 65.40%
```

Run 3: Report of PCC — Data Link

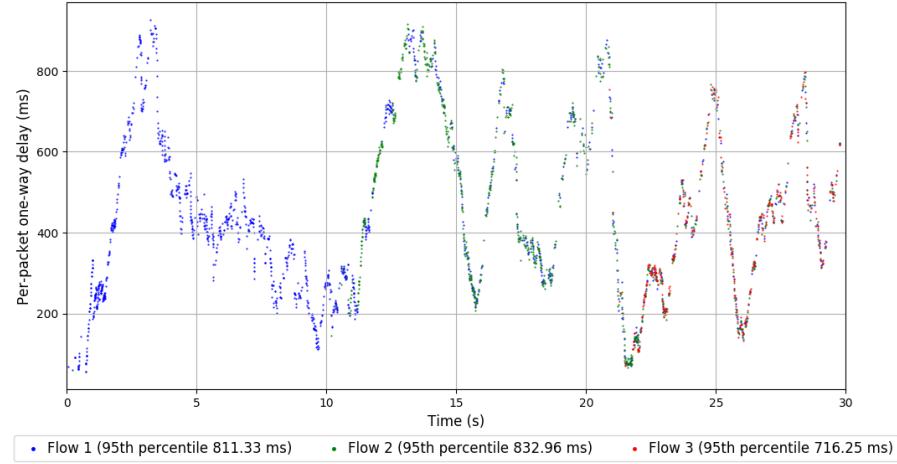
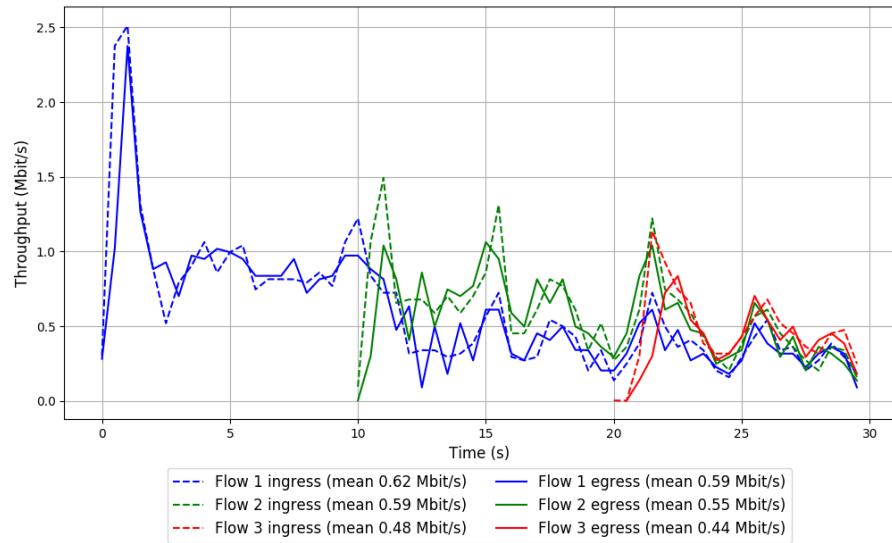


```
Run 1: Statistics of QUIC Cubic

Start at: 2018-04-10 08:00:32
End at: 2018-04-10 08:01:02
Local clock offset: -1.367 ms
Remote clock offset: -1.544 ms

# Below is generated by plot.py at 2018-04-10 08:42:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.09 Mbit/s
95th percentile per-packet one-way delay: 815.239 ms
Loss rate: 6.26%
-- Flow 1:
Average throughput: 0.59 Mbit/s
95th percentile per-packet one-way delay: 811.331 ms
Loss rate: 4.20%
-- Flow 2:
Average throughput: 0.55 Mbit/s
95th percentile per-packet one-way delay: 832.958 ms
Loss rate: 5.97%
-- Flow 3:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 716.245 ms
Loss rate: 15.15%
```

Run 1: Report of QUIC Cubic — Data Link

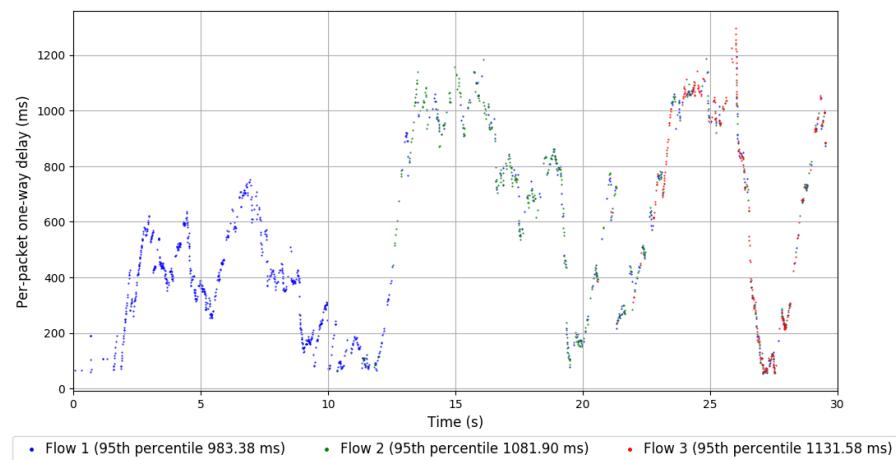
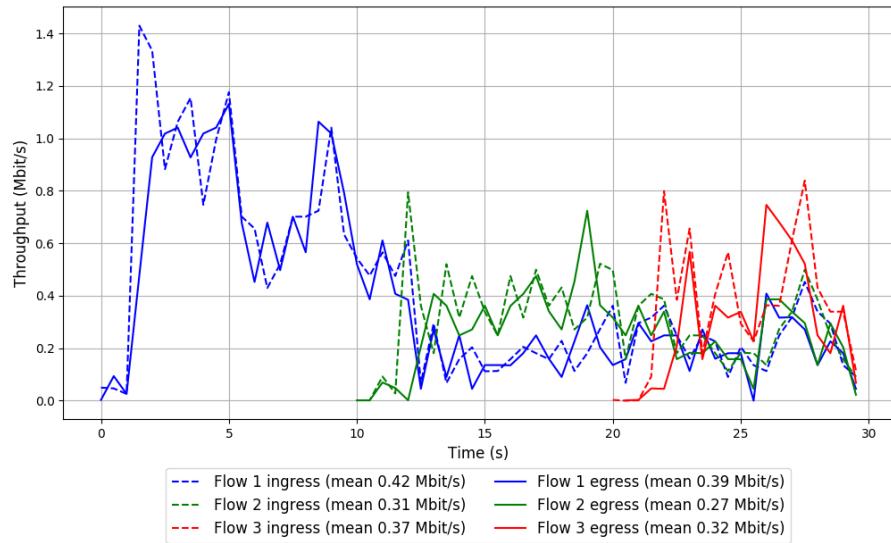


Run 2: Statistics of QUIC Cubic

```
Start at: 2018-04-10 08:20:33
End at: 2018-04-10 08:21:03
Local clock offset: -1.084 ms
Remote clock offset: -1.763 ms

# Below is generated by plot.py at 2018-04-10 08:42:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.66 Mbit/s
95th percentile per-packet one-way delay: 1062.788 ms
Loss rate: 10.45%
-- Flow 1:
Average throughput: 0.39 Mbit/s
95th percentile per-packet one-way delay: 983.383 ms
Loss rate: 7.00%
-- Flow 2:
Average throughput: 0.27 Mbit/s
95th percentile per-packet one-way delay: 1081.896 ms
Loss rate: 12.81%
-- Flow 3:
Average throughput: 0.32 Mbit/s
95th percentile per-packet one-way delay: 1131.579 ms
Loss rate: 18.75%
```

Run 2: Report of QUIC Cubic — Data Link

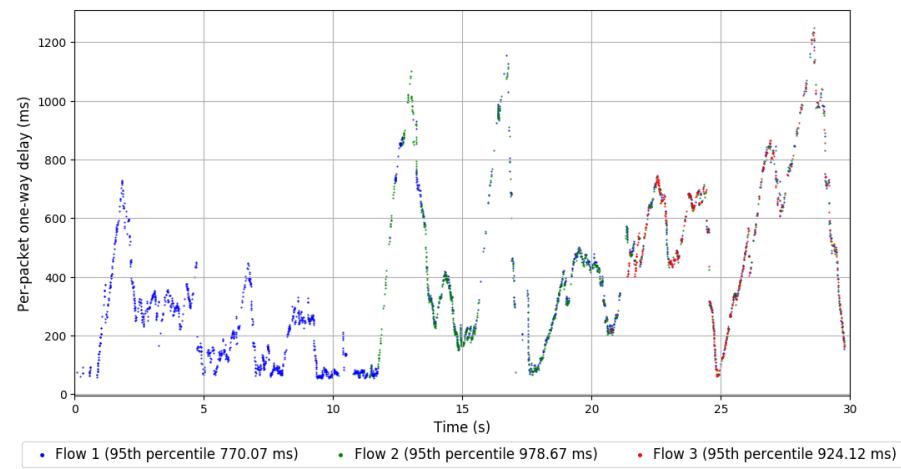
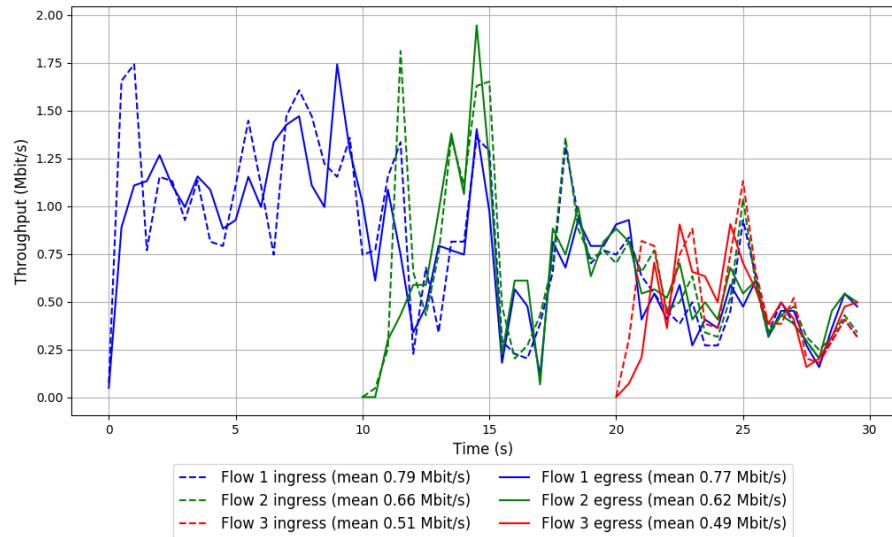


Run 3: Statistics of QUIC Cubic

```
Start at: 2018-04-10 08:40:23
End at: 2018-04-10 08:40:53
Local clock offset: -0.873 ms
Remote clock offset: -4.284 ms

# Below is generated by plot.py at 2018-04-10 08:42:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.34 Mbit/s
95th percentile per-packet one-way delay: 880.876 ms
Loss rate: 4.17%
-- Flow 1:
Average throughput: 0.77 Mbit/s
95th percentile per-packet one-way delay: 770.071 ms
Loss rate: 2.87%
-- Flow 2:
Average throughput: 0.62 Mbit/s
95th percentile per-packet one-way delay: 978.675 ms
Loss rate: 5.11%
-- Flow 3:
Average throughput: 0.49 Mbit/s
95th percentile per-packet one-way delay: 924.122 ms
Loss rate: 7.96%
```

Run 3: Report of QUIC Cubic — Data Link

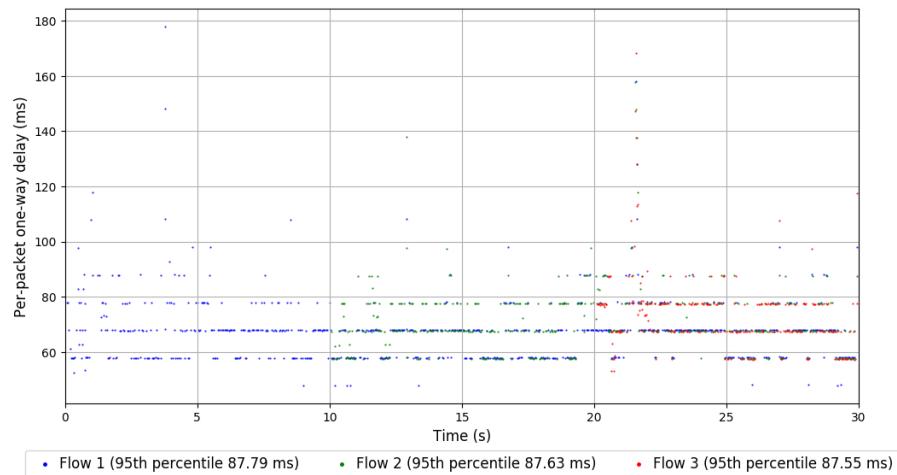
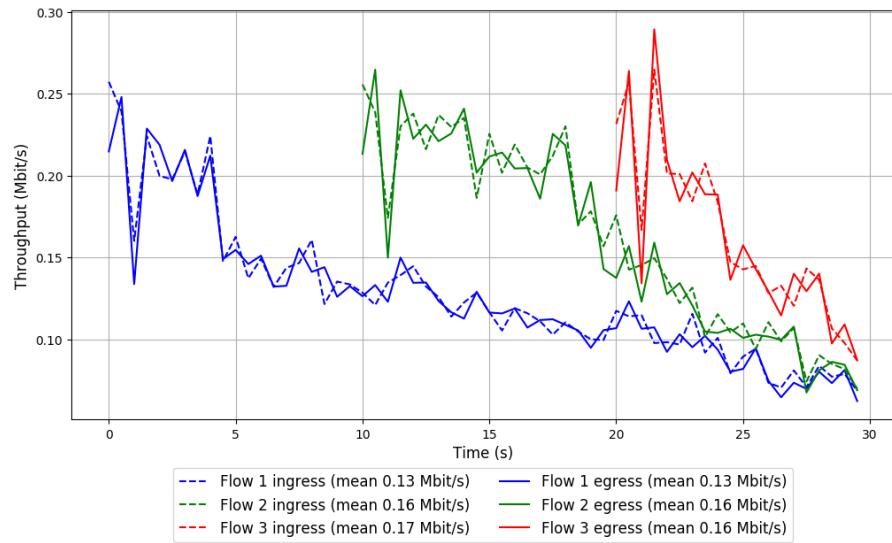


```
Run 1: Statistics of SCReAM

Start at: 2018-04-10 07:52:47
End at: 2018-04-10 07:53:17
Local clock offset: -1.173 ms
Remote clock offset: -2.359 ms

# Below is generated by plot.py at 2018-04-10 08:42:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.29 Mbit/s
95th percentile per-packet one-way delay: 87.672 ms
Loss rate: 1.51%
-- Flow 1:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 87.788 ms
Loss rate: 1.29%
-- Flow 2:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 87.631 ms
Loss rate: 1.78%
-- Flow 3:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 87.554 ms
Loss rate: 1.52%
```

Run 1: Report of SCReAM — Data Link

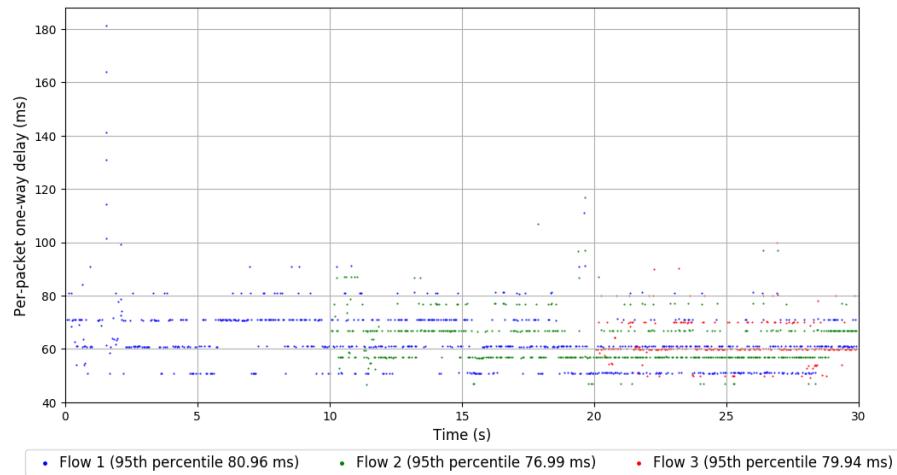
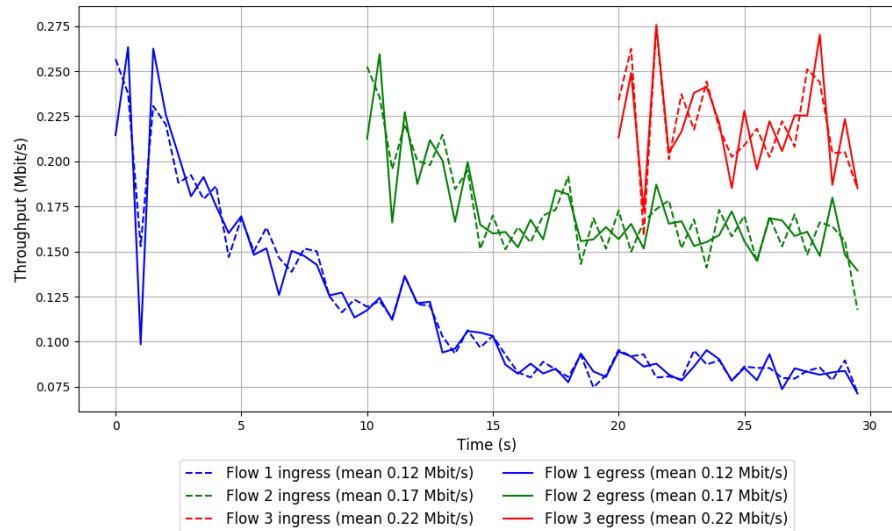


Run 2: Statistics of SCReAM

```
Start at: 2018-04-10 08:12:52
End at: 2018-04-10 08:13:22
Local clock offset: -1.654 ms
Remote clock offset: -2.668 ms

# Below is generated by plot.py at 2018-04-10 08:42:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.31 Mbit/s
95th percentile per-packet one-way delay: 80.839 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 0.12 Mbit/s
95th percentile per-packet one-way delay: 80.962 ms
Loss rate: 0.69%
-- Flow 2:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 76.989 ms
Loss rate: 0.55%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 79.937 ms
Loss rate: 0.35%
```

Run 2: Report of SCReAM — Data Link

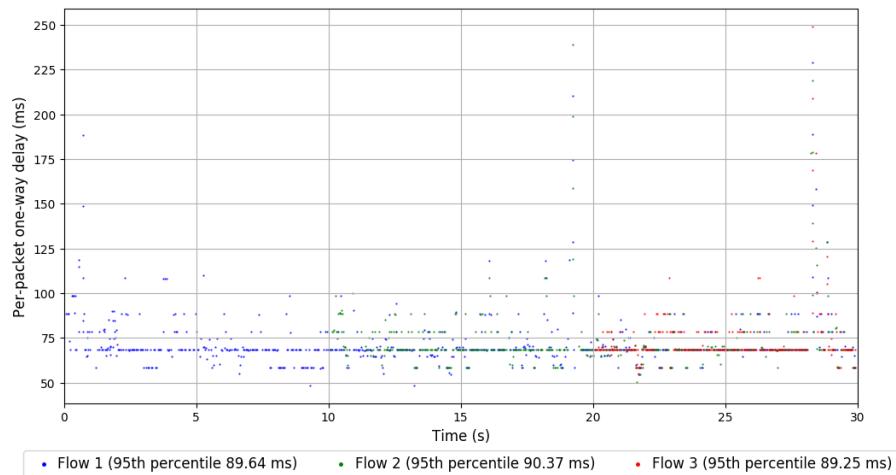
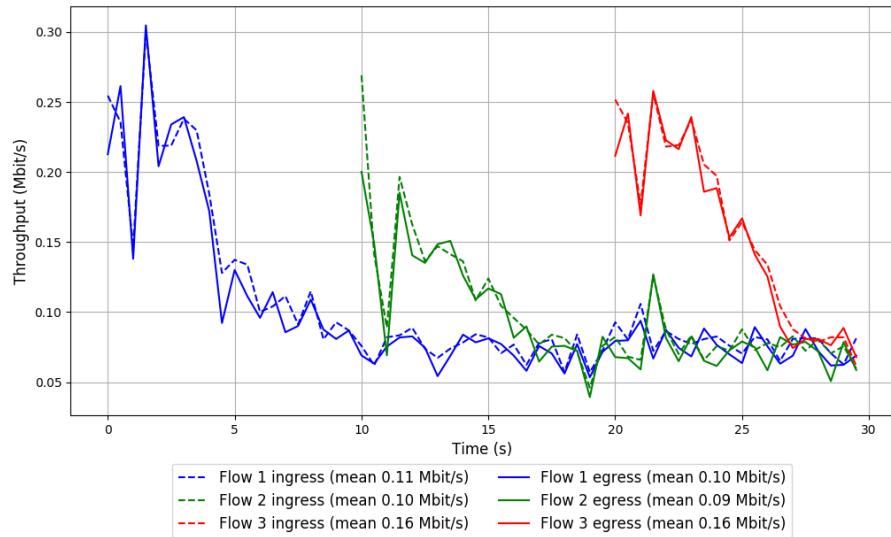


```
Run 3: Statistics of SCReAM

Start at: 2018-04-10 08:32:41
End at: 2018-04-10 08:33:11
Local clock offset: -1.569 ms
Remote clock offset: -3.16 ms

# Below is generated by plot.py at 2018-04-10 08:42:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 89.639 ms
Loss rate: 4.81%
-- Flow 1:
Average throughput: 0.10 Mbit/s
95th percentile per-packet one-way delay: 89.639 ms
Loss rate: 4.94%
-- Flow 2:
Average throughput: 0.09 Mbit/s
95th percentile per-packet one-way delay: 90.366 ms
Loss rate: 6.19%
-- Flow 3:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 89.248 ms
Loss rate: 2.82%
```

Run 3: Report of SCReAM — Data Link

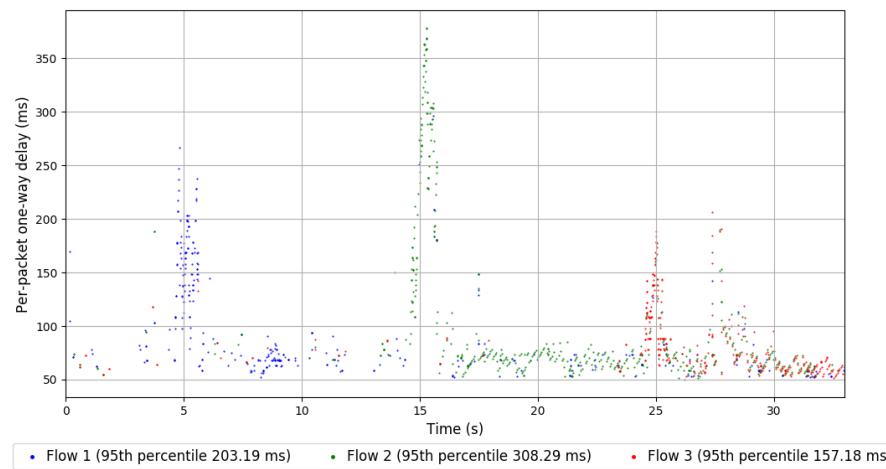
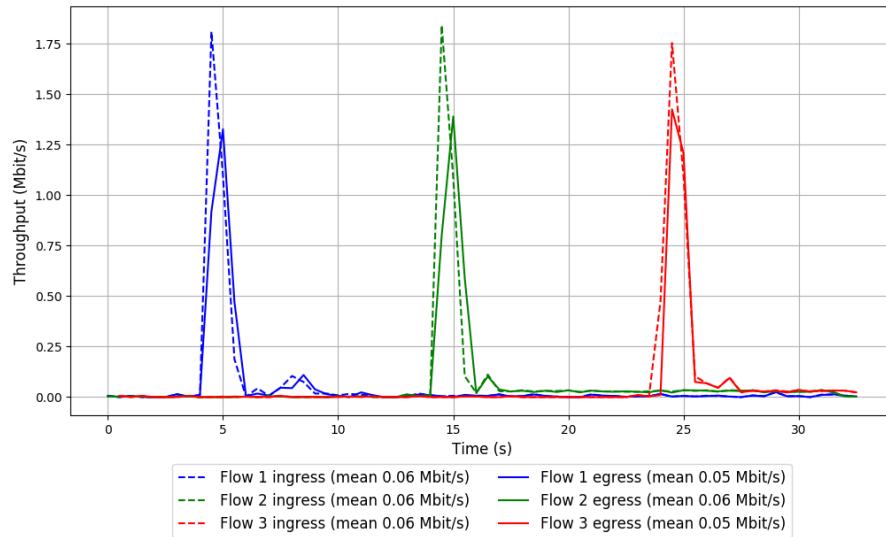


```
Run 1: Statistics of WebRTC media
```

```
Start at: 2018-04-10 07:51:41
End at: 2018-04-10 07:52:11
Local clock offset: -0.846 ms
Remote clock offset: -1.677 ms

# Below is generated by plot.py at 2018-04-10 08:42:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 258.454 ms
Loss rate: 11.88%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 203.193 ms
Loss rate: 11.06%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 308.293 ms
Loss rate: 6.79%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 157.179 ms
Loss rate: 17.86%
```

Run 1: Report of WebRTC media — Data Link

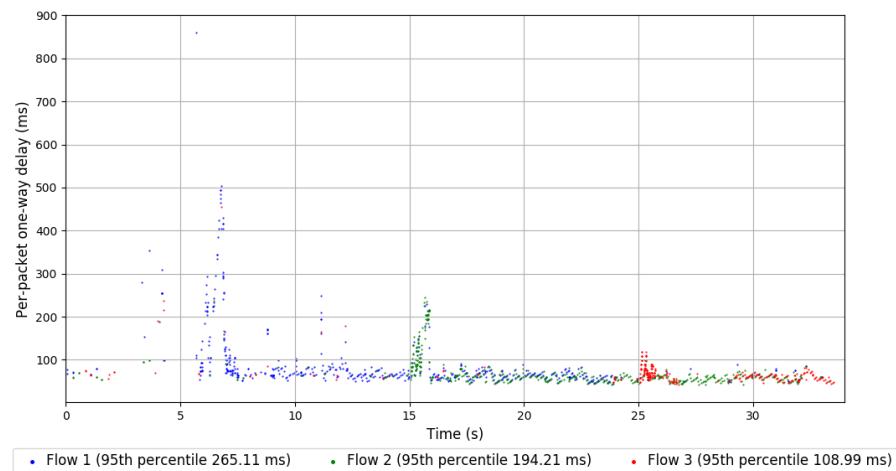
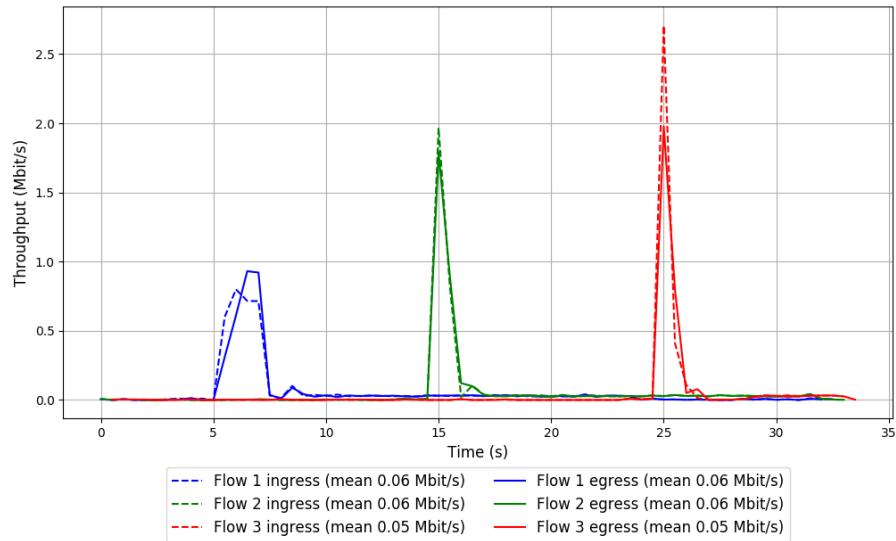


Run 2: Statistics of WebRTC media

```
Start at: 2018-04-10 08:11:46
End at: 2018-04-10 08:12:16
Local clock offset: -4.381 ms
Remote clock offset: -9.558 ms

# Below is generated by plot.py at 2018-04-10 08:42:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 212.493 ms
Loss rate: 4.20%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 265.108 ms
Loss rate: 2.65%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 194.212 ms
Loss rate: 0.77%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 108.991 ms
Loss rate: 9.64%
```

Run 2: Report of WebRTC media — Data Link

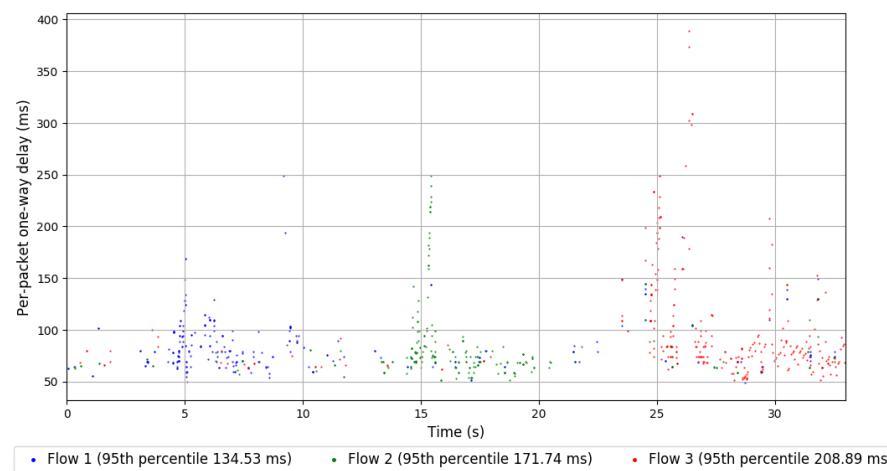
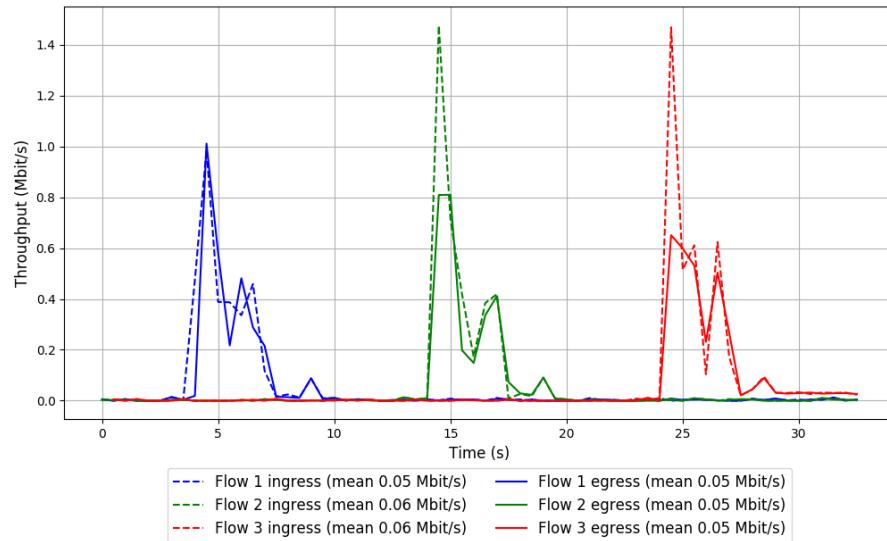


Run 3: Statistics of WebRTC media

```
Start at: 2018-04-10 08:31:35
End at: 2018-04-10 08:32:05
Local clock offset: -0.987 ms
Remote clock offset: -3.248 ms

# Below is generated by plot.py at 2018-04-10 08:42:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 182.812 ms
Loss rate: 16.76%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 134.527 ms
Loss rate: 10.30%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 171.744 ms
Loss rate: 20.79%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 208.894 ms
Loss rate: 18.50%
```

Run 3: Report of WebRTC media — Data Link

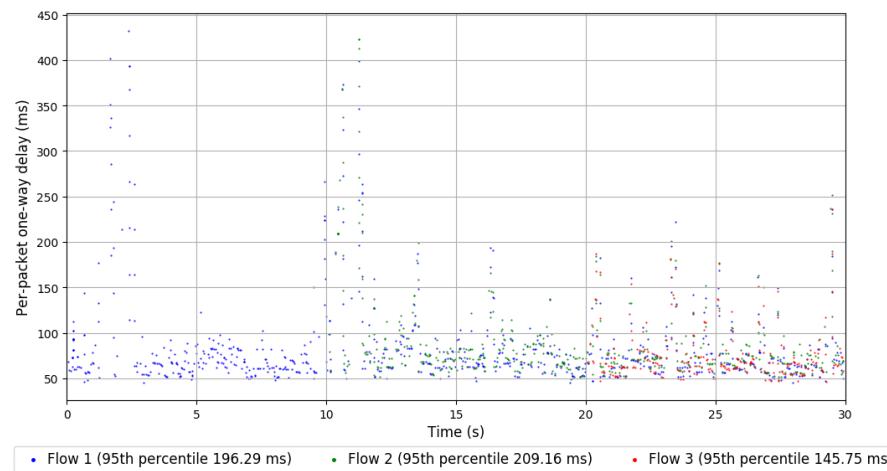
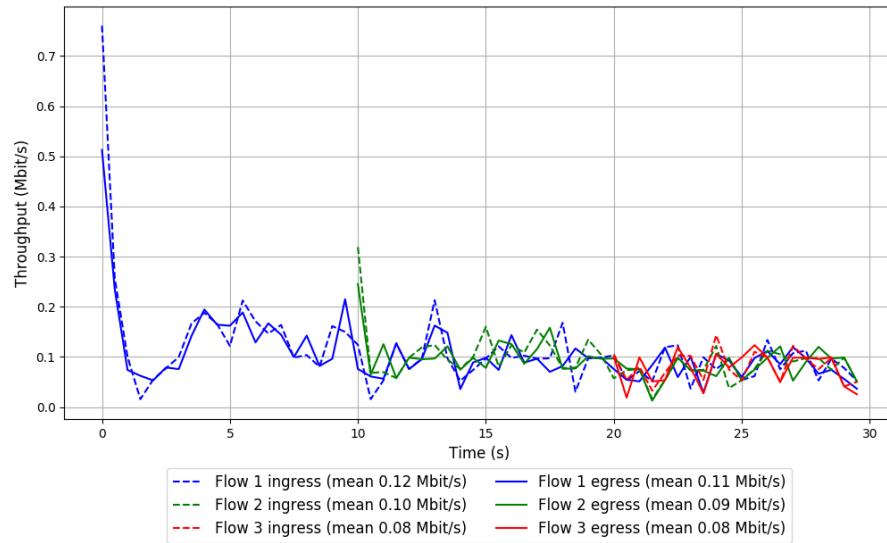


Run 1: Statistics of Sprout

```
Start at: 2018-04-10 07:44:00
End at: 2018-04-10 07:44:30
Local clock offset: -0.468 ms
Remote clock offset: -3.052 ms

# Below is generated by plot.py at 2018-04-10 08:42:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 190.566 ms
Loss rate: 4.53%
-- Flow 1:
Average throughput: 0.11 Mbit/s
95th percentile per-packet one-way delay: 196.287 ms
Loss rate: 5.77%
-- Flow 2:
Average throughput: 0.09 Mbit/s
95th percentile per-packet one-way delay: 209.161 ms
Loss rate: 2.89%
-- Flow 3:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 145.746 ms
Loss rate: 3.10%
```

Run 1: Report of Sprout — Data Link

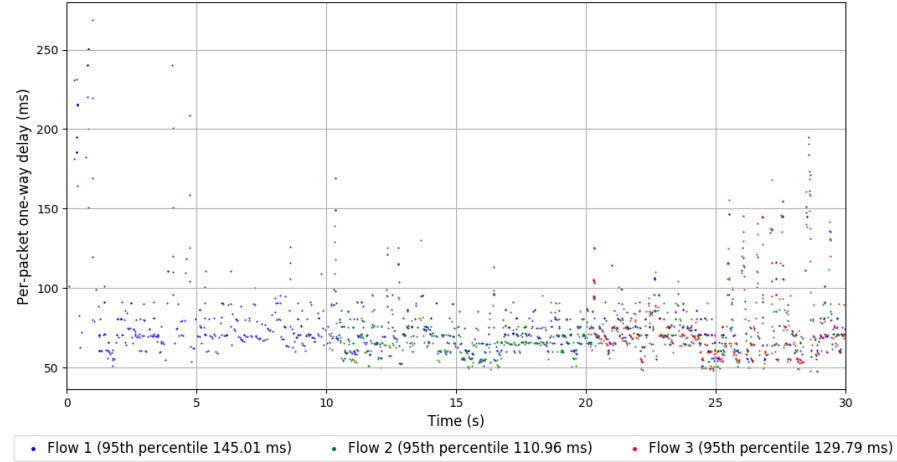
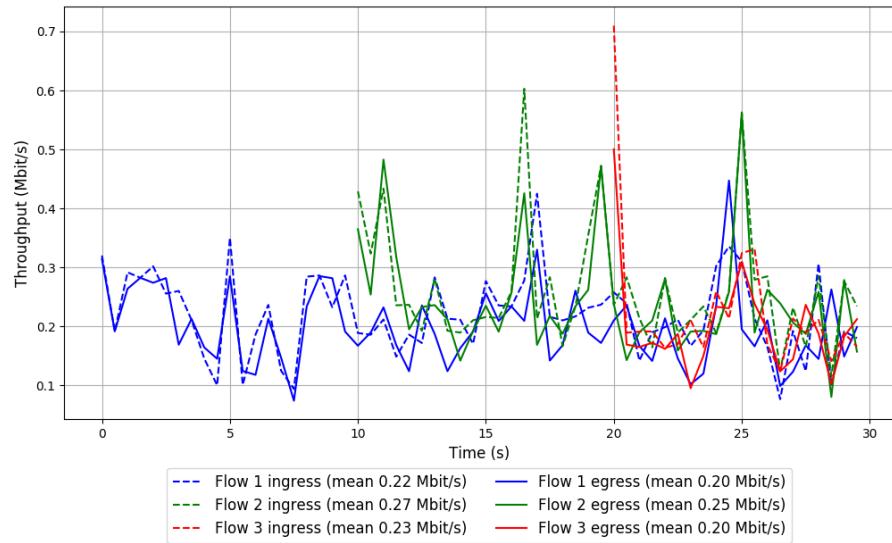


Run 2: Statistics of Sprout

```
Start at: 2018-04-10 08:03:55
End at: 2018-04-10 08:04:25
Local clock offset: -0.734 ms
Remote clock offset: -2.16 ms

# Below is generated by plot.py at 2018-04-10 08:42:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 125.442 ms
Loss rate: 9.10%
-- Flow 1:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 145.014 ms
Loss rate: 9.35%
-- Flow 2:
Average throughput: 0.25 Mbit/s
95th percentile per-packet one-way delay: 110.961 ms
Loss rate: 7.70%
-- Flow 3:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 129.795 ms
Loss rate: 11.62%
```

Run 2: Report of Sprout — Data Link

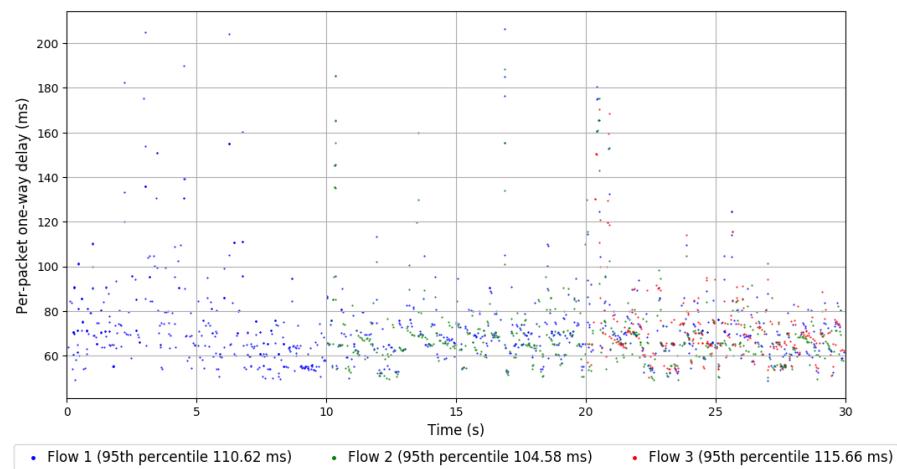
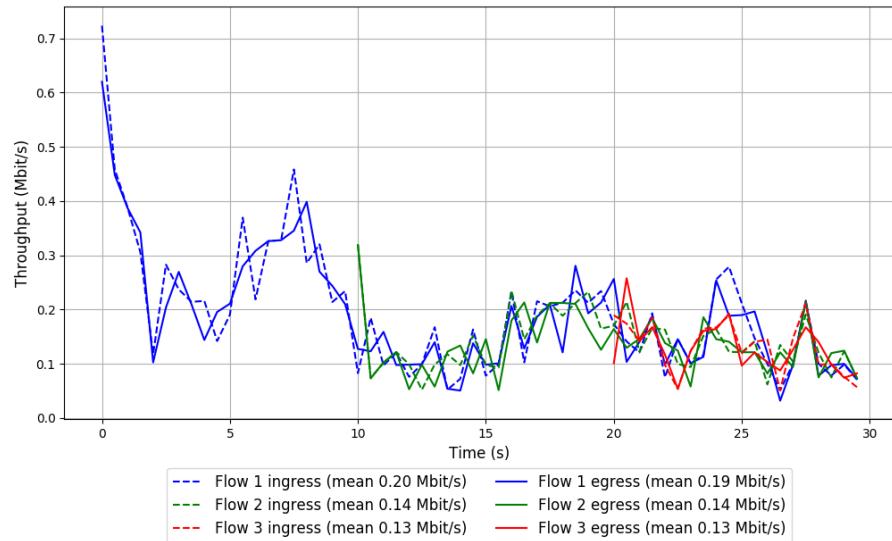


Run 3: Statistics of Sprout

```
Start at: 2018-04-10 08:23:51
End at: 2018-04-10 08:24:21
Local clock offset: -1.329 ms
Remote clock offset: -3.664 ms

# Below is generated by plot.py at 2018-04-10 08:42:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.32 Mbit/s
95th percentile per-packet one-way delay: 110.728 ms
Loss rate: 2.91%
-- Flow 1:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 110.616 ms
Loss rate: 2.48%
-- Flow 2:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 104.578 ms
Loss rate: 4.18%
-- Flow 3:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 115.657 ms
Loss rate: 2.13%
```

Run 3: Report of Sprout — Data Link

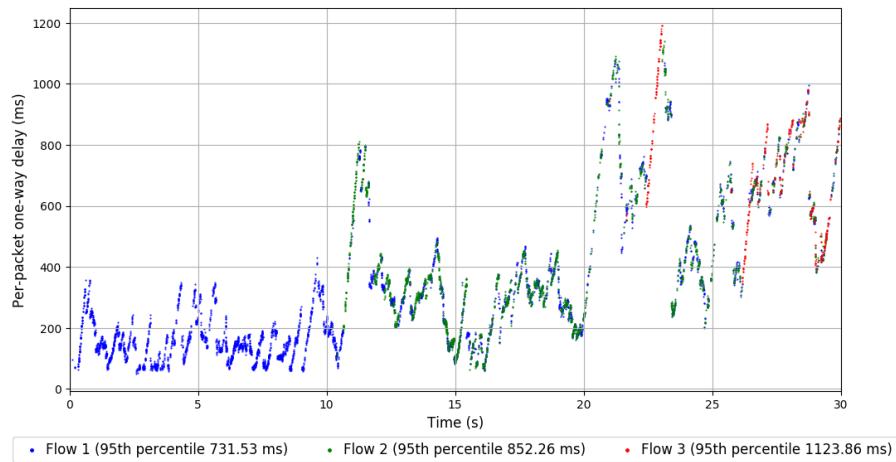
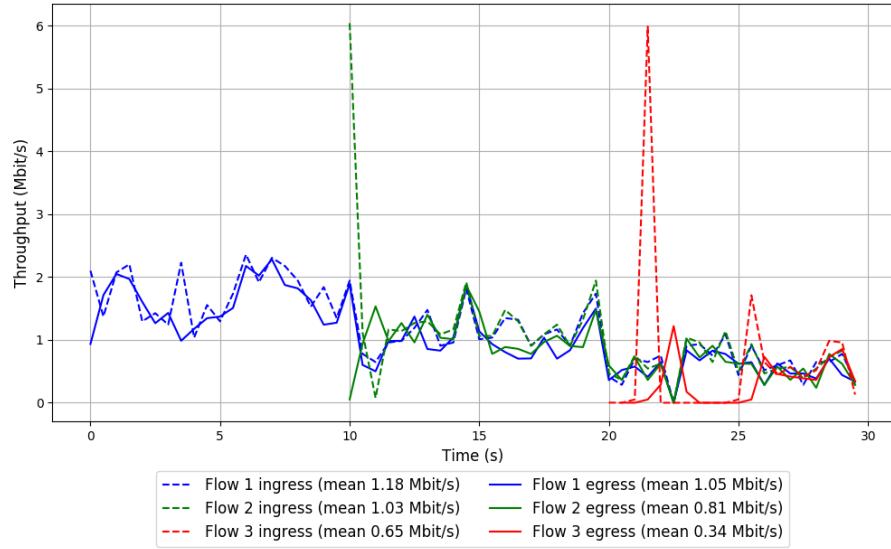


Run 1: Statistics of TaoVA-100x

```
Start at: 2018-04-10 07:45:06
End at: 2018-04-10 07:45:36
Local clock offset: -0.512 ms
Remote clock offset: -1.778 ms

# Below is generated by plot.py at 2018-04-10 08:42:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.69 Mbit/s
95th percentile per-packet one-way delay: 839.200 ms
Loss rate: 18.88%
-- Flow 1:
Average throughput: 1.05 Mbit/s
95th percentile per-packet one-way delay: 731.530 ms
Loss rate: 11.50%
-- Flow 2:
Average throughput: 0.81 Mbit/s
95th percentile per-packet one-way delay: 852.264 ms
Loss rate: 21.78%
-- Flow 3:
Average throughput: 0.34 Mbit/s
95th percentile per-packet one-way delay: 1123.861 ms
Loss rate: 51.34%
```

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

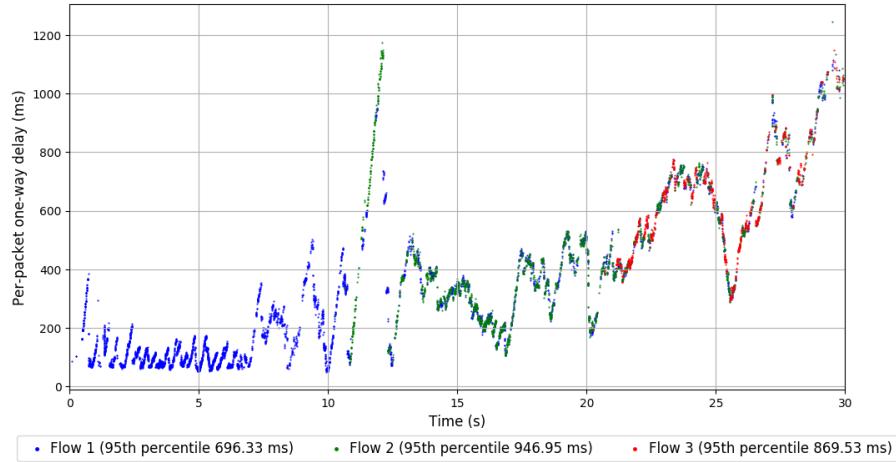
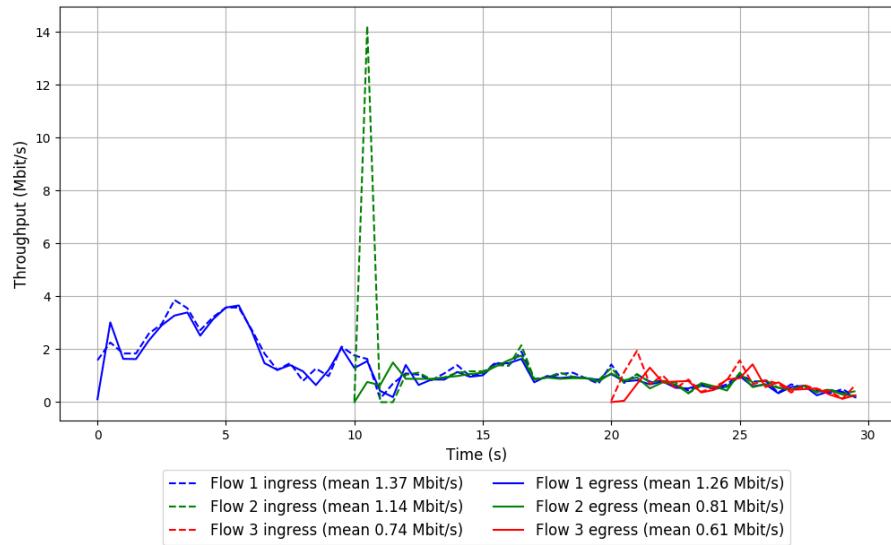


Run 2: Statistics of TaoVA-100x

```
Start at: 2018-04-10 08:05:03
End at: 2018-04-10 08:05:33
Local clock offset: -1.494 ms
Remote clock offset: -1.61 ms

# Below is generated by plot.py at 2018-04-10 08:42:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.99 Mbit/s
95th percentile per-packet one-way delay: 822.590 ms
Loss rate: 15.92%
-- Flow 1:
Average throughput: 1.26 Mbit/s
95th percentile per-packet one-way delay: 696.331 ms
Loss rate: 7.61%
-- Flow 2:
Average throughput: 0.81 Mbit/s
95th percentile per-packet one-way delay: 946.953 ms
Loss rate: 30.14%
-- Flow 3:
Average throughput: 0.61 Mbit/s
95th percentile per-packet one-way delay: 869.526 ms
Loss rate: 17.93%
```

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

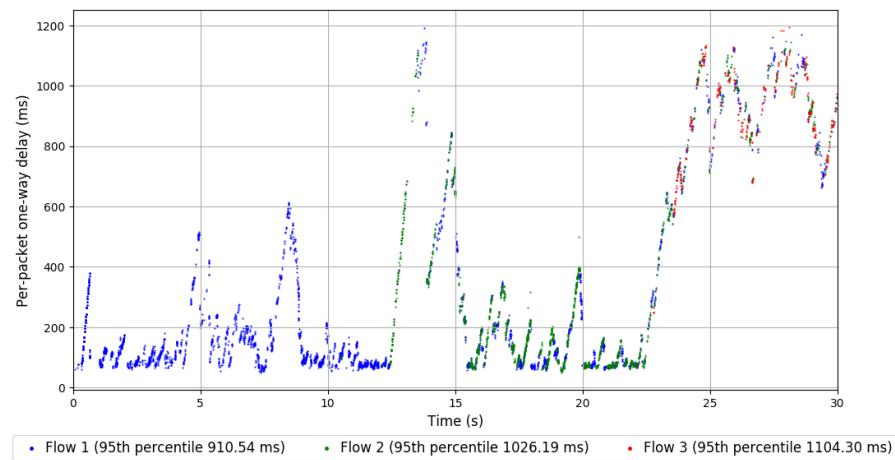
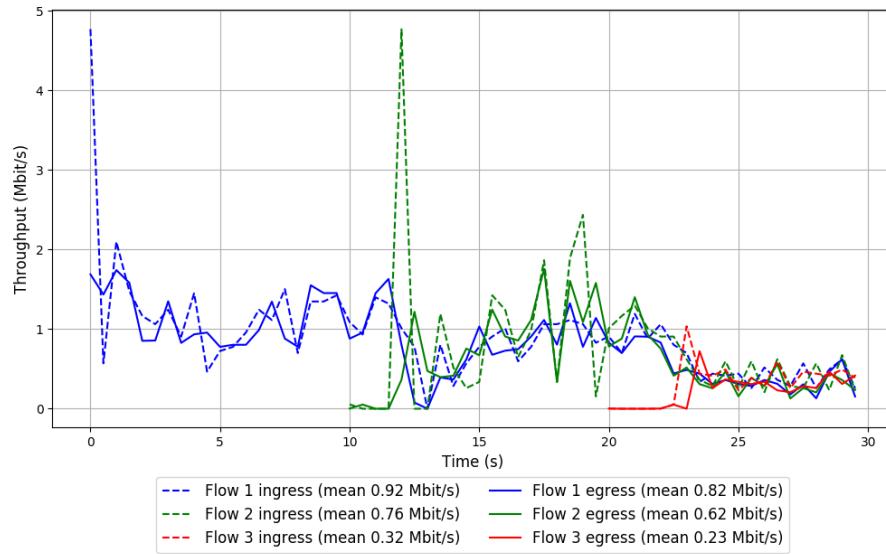


Run 3: Statistics of TaoVA-100x

```
Start at: 2018-04-10 08:24:57
End at: 2018-04-10 08:25:27
Local clock offset: -1.603 ms
Remote clock offset: -2.814 ms

# Below is generated by plot.py at 2018-04-10 08:42:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.30 Mbit/s
95th percentile per-packet one-way delay: 1017.092 ms
Loss rate: 15.11%
-- Flow 1:
Average throughput: 0.82 Mbit/s
95th percentile per-packet one-way delay: 910.539 ms
Loss rate: 11.60%
-- Flow 2:
Average throughput: 0.62 Mbit/s
95th percentile per-packet one-way delay: 1026.191 ms
Loss rate: 18.64%
-- Flow 3:
Average throughput: 0.23 Mbit/s
95th percentile per-packet one-way delay: 1104.295 ms
Loss rate: 28.66%
```

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

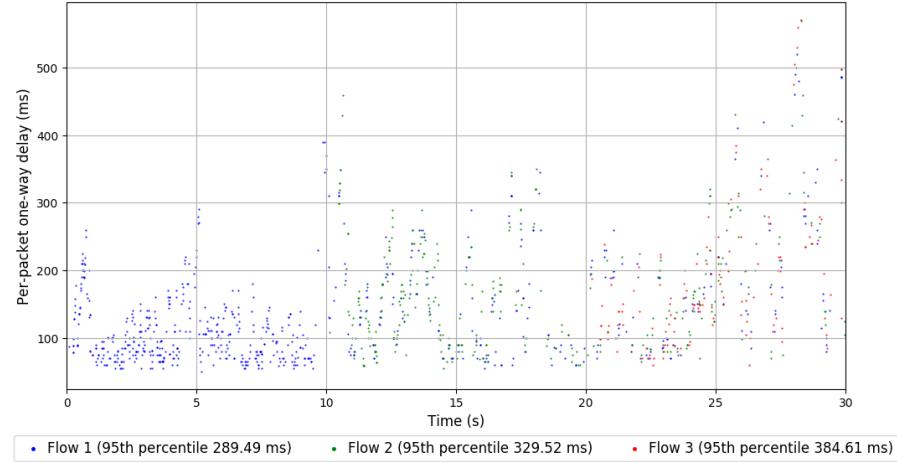
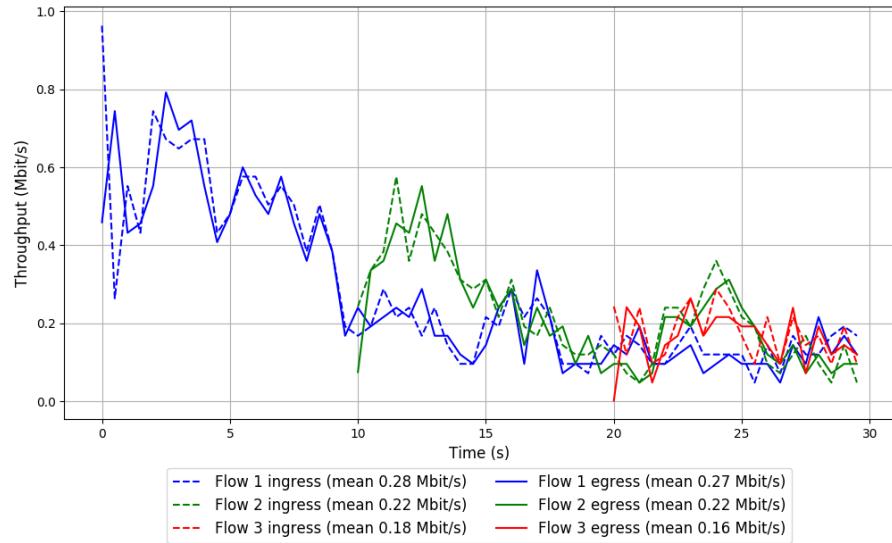


Run 1: Statistics of TCP Vegas

```
Start at: 2018-04-10 07:42:54
End at: 2018-04-10 07:43:24
Local clock offset: -0.143 ms
Remote clock offset: -1.183 ms

# Below is generated by plot.py at 2018-04-10 08:42:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.47 Mbit/s
95th percentile per-packet one-way delay: 319.384 ms
Loss rate: 4.57%
-- Flow 1:
Average throughput: 0.27 Mbit/s
95th percentile per-packet one-way delay: 289.486 ms
Loss rate: 3.95%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 329.516 ms
Loss rate: 4.04%
-- Flow 3:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 384.609 ms
Loss rate: 8.96%
```

Run 1: Report of TCP Vegas — Data Link

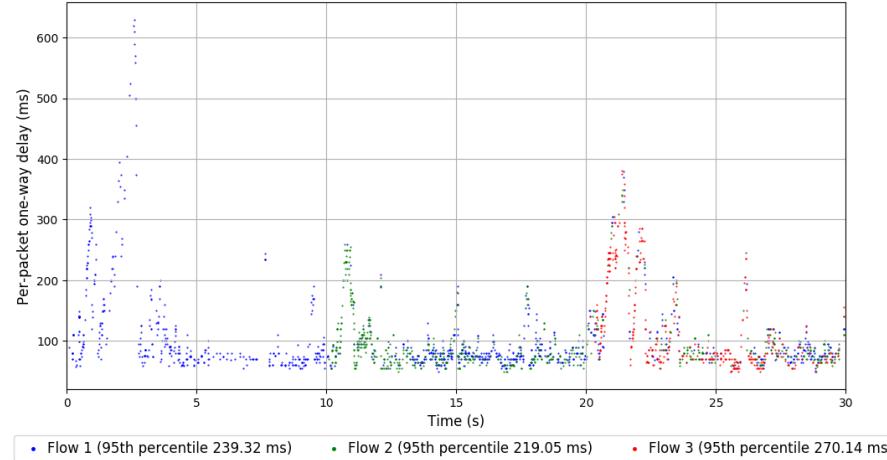
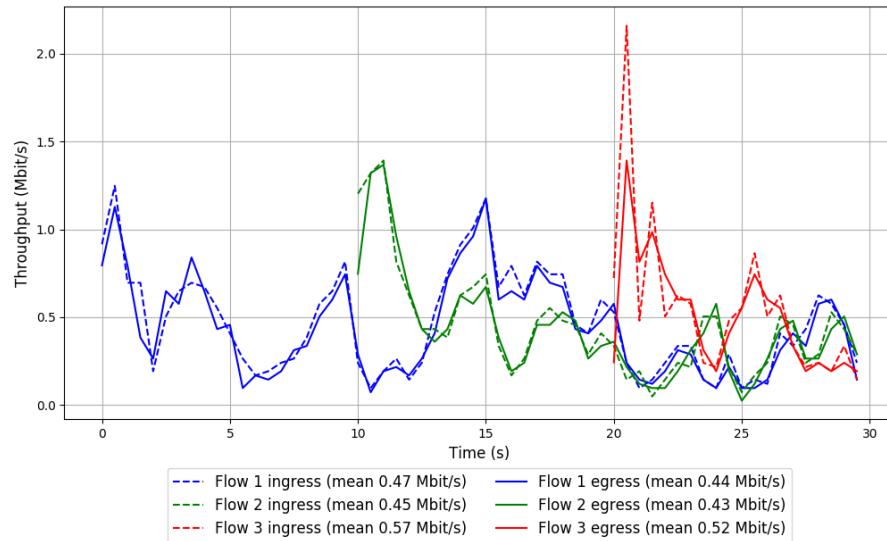


Run 2: Statistics of TCP Vegas

```
Start at: 2018-04-10 08:02:47
End at: 2018-04-10 08:03:17
Local clock offset: -1.205 ms
Remote clock offset: -3.678 ms

# Below is generated by plot.py at 2018-04-10 08:42:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.90 Mbit/s
95th percentile per-packet one-way delay: 244.898 ms
Loss rate: 6.31%
-- Flow 1:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 239.322 ms
Loss rate: 6.59%
-- Flow 2:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 219.052 ms
Loss rate: 4.04%
-- Flow 3:
Average throughput: 0.52 Mbit/s
95th percentile per-packet one-way delay: 270.139 ms
Loss rate: 9.24%
```

Run 2: Report of TCP Vegas — Data Link

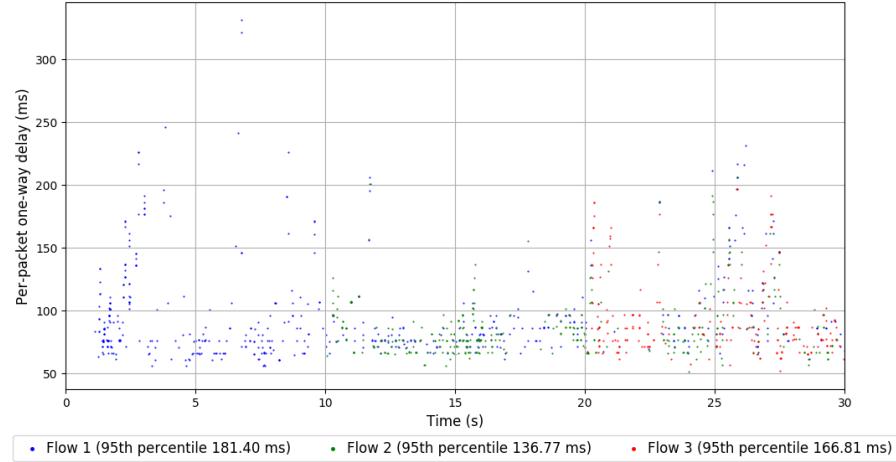
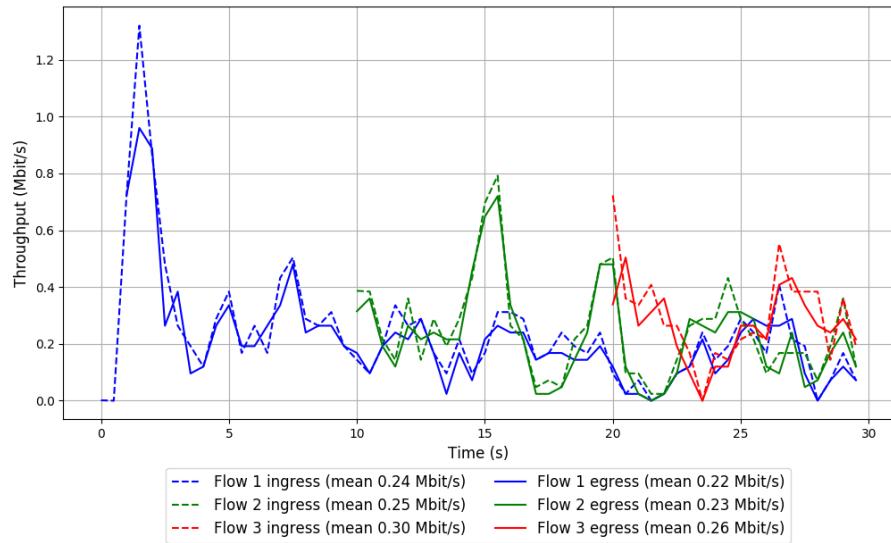


Run 3: Statistics of TCP Vegas

```
Start at: 2018-04-10 08:22:45
End at: 2018-04-10 08:23:15
Local clock offset: -1.054 ms
Remote clock offset: -2.721 ms

# Below is generated by plot.py at 2018-04-10 08:42:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.46 Mbit/s
95th percentile per-packet one-way delay: 166.783 ms
Loss rate: 10.63%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 181.395 ms
Loss rate: 11.34%
-- Flow 2:
Average throughput: 0.23 Mbit/s
95th percentile per-packet one-way delay: 136.768 ms
Loss rate: 9.18%
-- Flow 3:
Average throughput: 0.26 Mbit/s
95th percentile per-packet one-way delay: 166.808 ms
Loss rate: 11.38%
```

Run 3: Report of TCP Vegas — Data Link

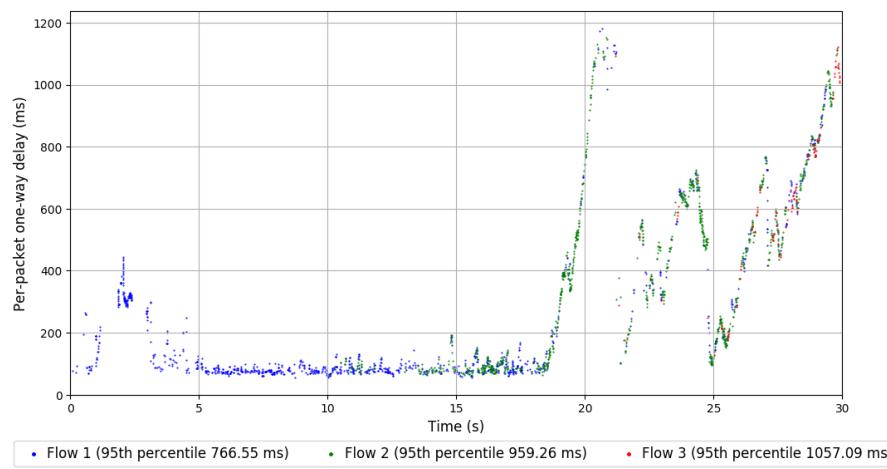
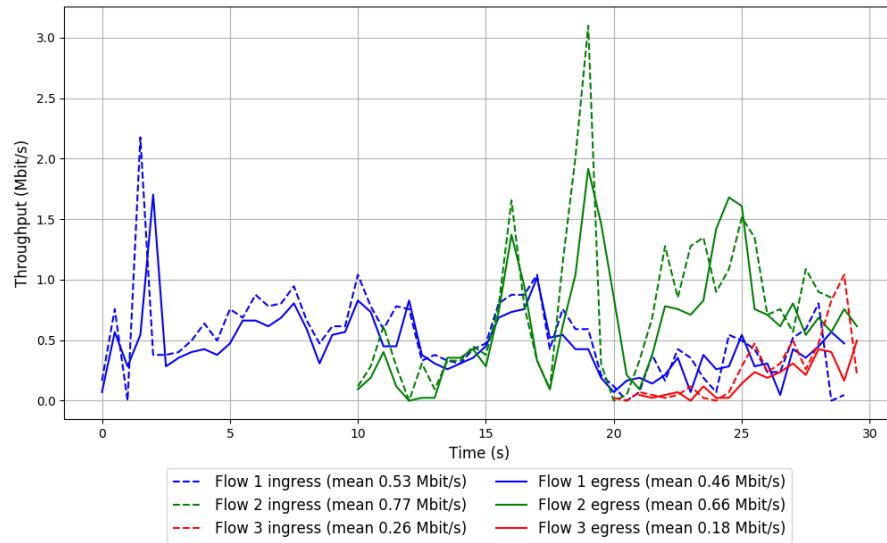


Run 1: Statistics of Verus

```
Start at: 2018-04-10 07:41:48
End at: 2018-04-10 07:42:18
Local clock offset: -0.407 ms
Remote clock offset: -2.103 ms

# Below is generated by plot.py at 2018-04-10 08:42:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.95 Mbit/s
95th percentile per-packet one-way delay: 932.544 ms
Loss rate: 13.26%
-- Flow 1:
Average throughput: 0.46 Mbit/s
95th percentile per-packet one-way delay: 766.548 ms
Loss rate: 12.83%
-- Flow 2:
Average throughput: 0.66 Mbit/s
95th percentile per-packet one-way delay: 959.262 ms
Loss rate: 9.57%
-- Flow 3:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 1057.090 ms
Loss rate: 37.09%
```

Run 1: Report of Verus — Data Link

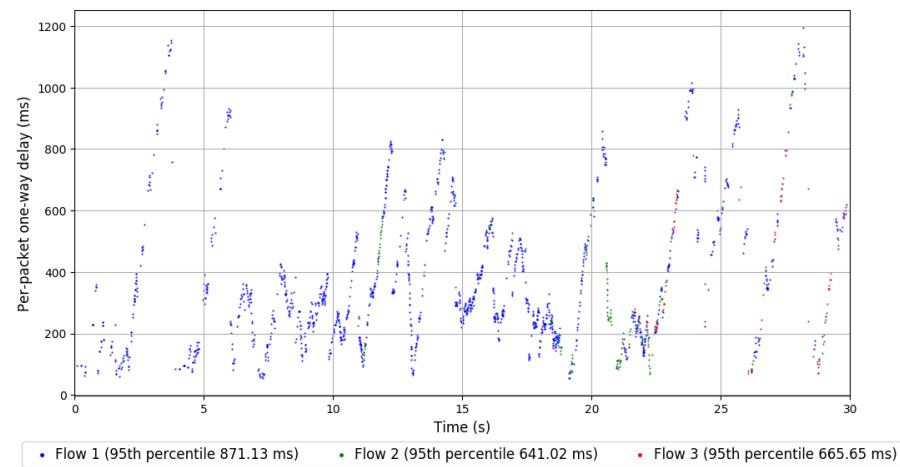
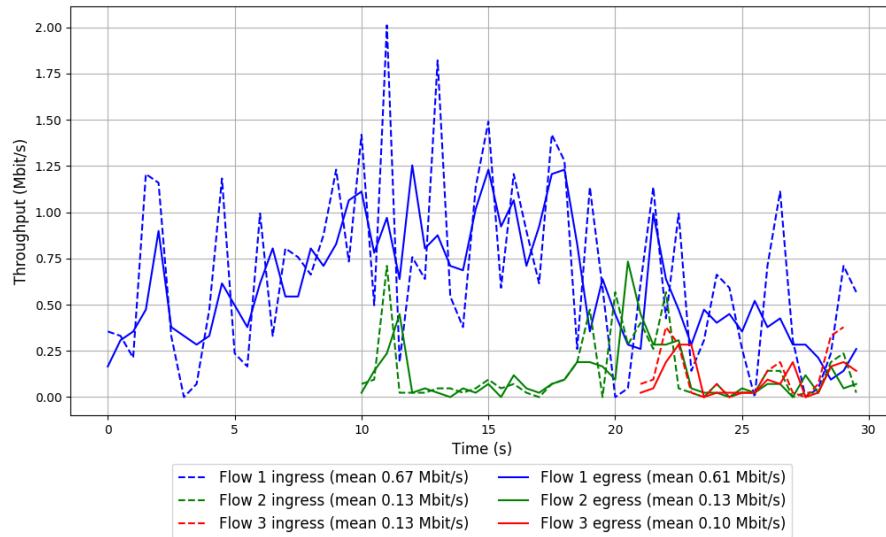


Run 2: Statistics of Verus

```
Start at: 2018-04-10 08:01:39
End at: 2018-04-10 08:02:09
Local clock offset: -1.44 ms
Remote clock offset: -2.15 ms

# Below is generated by plot.py at 2018-04-10 08:42:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.73 Mbit/s
95th percentile per-packet one-way delay: 850.588 ms
Loss rate: 8.42%
-- Flow 1:
Average throughput: 0.61 Mbit/s
95th percentile per-packet one-way delay: 871.130 ms
Loss rate: 8.31%
-- Flow 2:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 641.019 ms
Loss rate: 6.79%
-- Flow 3:
Average throughput: 0.10 Mbit/s
95th percentile per-packet one-way delay: 665.649 ms
Loss rate: 14.61%
```

Run 2: Report of Verus — Data Link

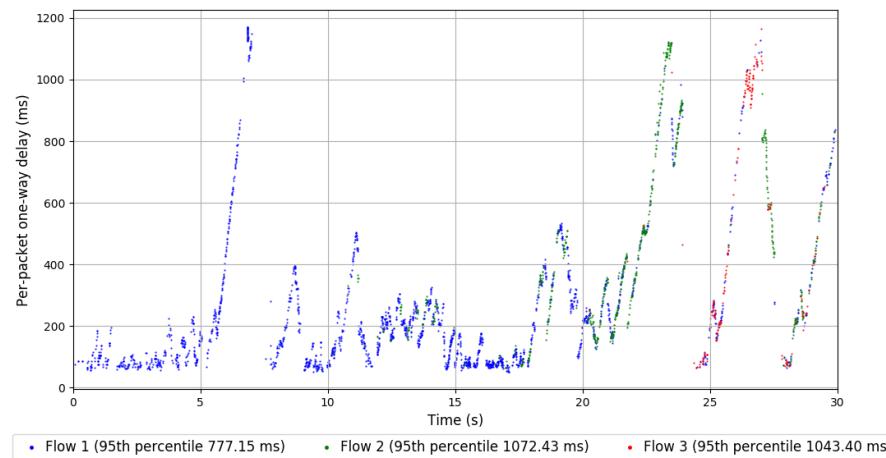
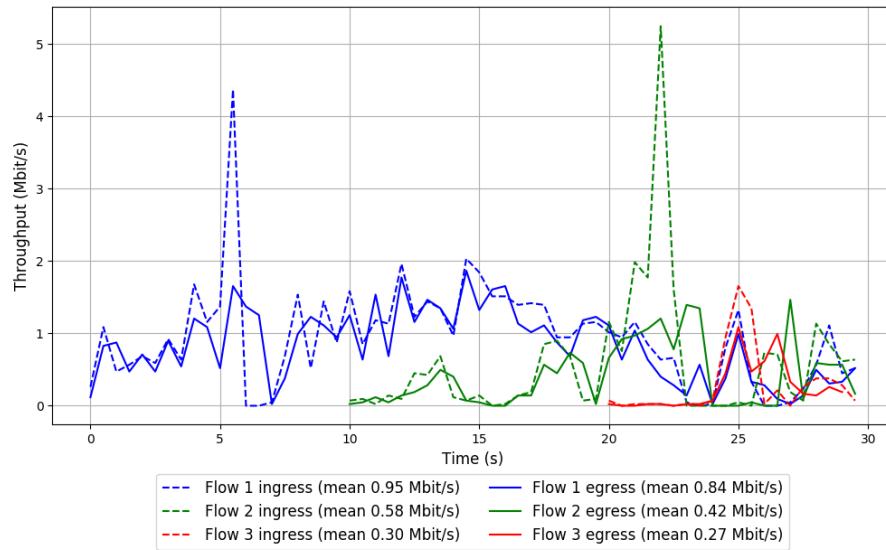


Run 3: Statistics of Verus

```
Start at: 2018-04-10 08:21:39
End at: 2018-04-10 08:22:09
Local clock offset: -1.224 ms
Remote clock offset: -3.446 ms

# Below is generated by plot.py at 2018-04-10 08:42:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.20 Mbit/s
95th percentile per-packet one-way delay: 975.607 ms
Loss rate: 16.34%
-- Flow 1:
Average throughput: 0.84 Mbit/s
95th percentile per-packet one-way delay: 777.155 ms
Loss rate: 11.64%
-- Flow 2:
Average throughput: 0.42 Mbit/s
95th percentile per-packet one-way delay: 1072.429 ms
Loss rate: 28.22%
-- Flow 3:
Average throughput: 0.27 Mbit/s
95th percentile per-packet one-way delay: 1043.403 ms
Loss rate: 15.51%
```

Run 3: Report of Verus — Data Link

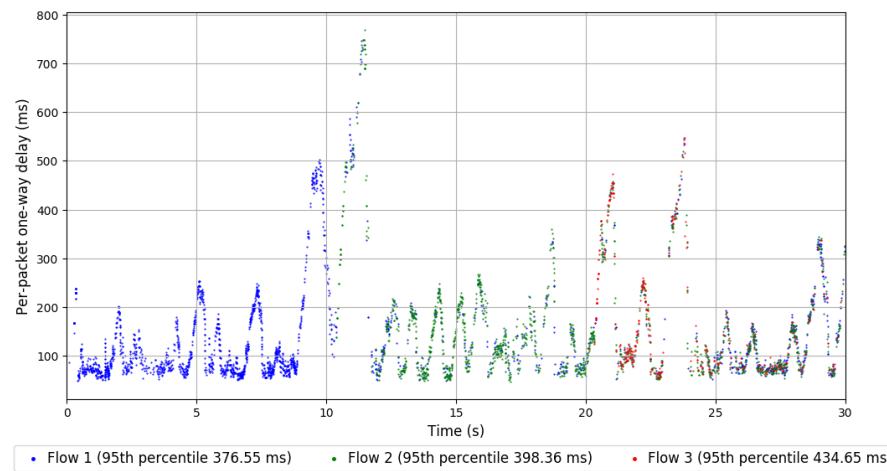
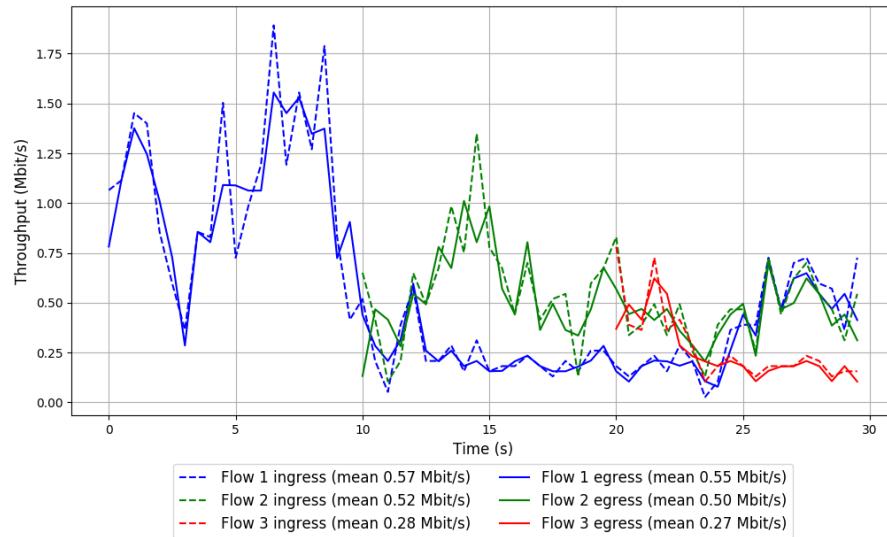


Run 1: Statistics of Copa

```
Start at: 2018-04-10 07:56:05
End at: 2018-04-10 07:56:35
Local clock offset: -0.728 ms
Remote clock offset: -2.156 ms

# Below is generated by plot.py at 2018-04-10 08:42:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.97 Mbit/s
95th percentile per-packet one-way delay: 408.392 ms
Loss rate: 4.47%
-- Flow 1:
Average throughput: 0.55 Mbit/s
95th percentile per-packet one-way delay: 376.545 ms
Loss rate: 3.24%
-- Flow 2:
Average throughput: 0.50 Mbit/s
95th percentile per-packet one-way delay: 398.355 ms
Loss rate: 5.56%
-- Flow 3:
Average throughput: 0.27 Mbit/s
95th percentile per-packet one-way delay: 434.649 ms
Loss rate: 7.87%
```

Run 1: Report of Copa — Data Link

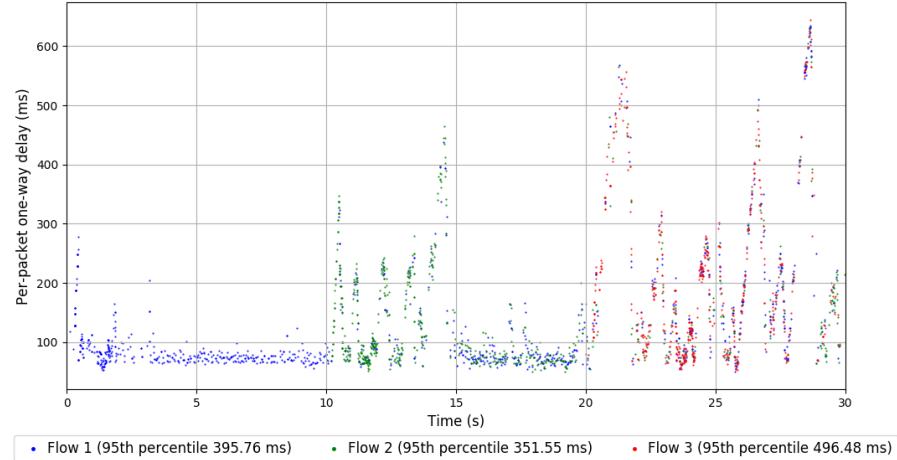
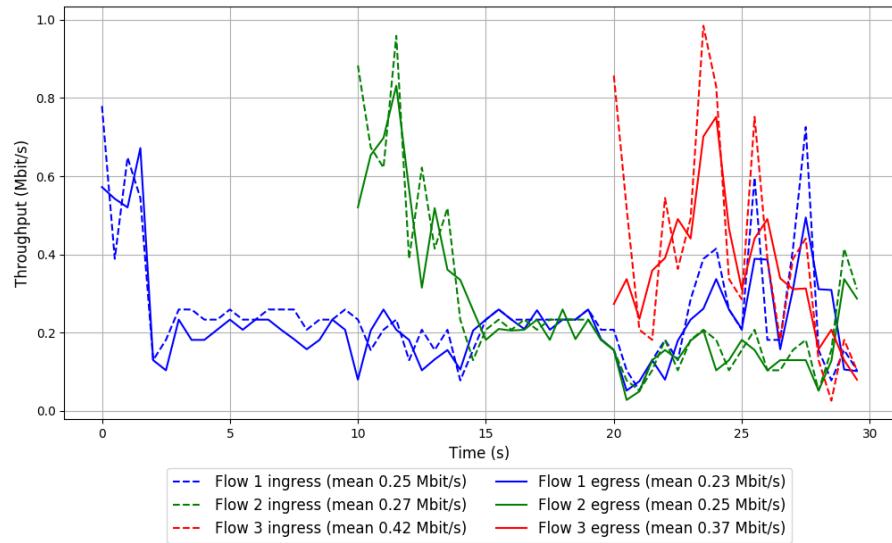


Run 2: Statistics of Copa

```
Start at: 2018-04-10 08:16:10
End at: 2018-04-10 08:16:40
Local clock offset: -1.045 ms
Remote clock offset: -2.847 ms

# Below is generated by plot.py at 2018-04-10 08:42:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.52 Mbit/s
95th percentile per-packet one-way delay: 413.732 ms
Loss rate: 8.87%
-- Flow 1:
Average throughput: 0.23 Mbit/s
95th percentile per-packet one-way delay: 395.757 ms
Loss rate: 8.32%
-- Flow 2:
Average throughput: 0.25 Mbit/s
95th percentile per-packet one-way delay: 351.554 ms
Loss rate: 7.41%
-- Flow 3:
Average throughput: 0.37 Mbit/s
95th percentile per-packet one-way delay: 496.475 ms
Loss rate: 11.80%
```

Run 2: Report of Copa — Data Link

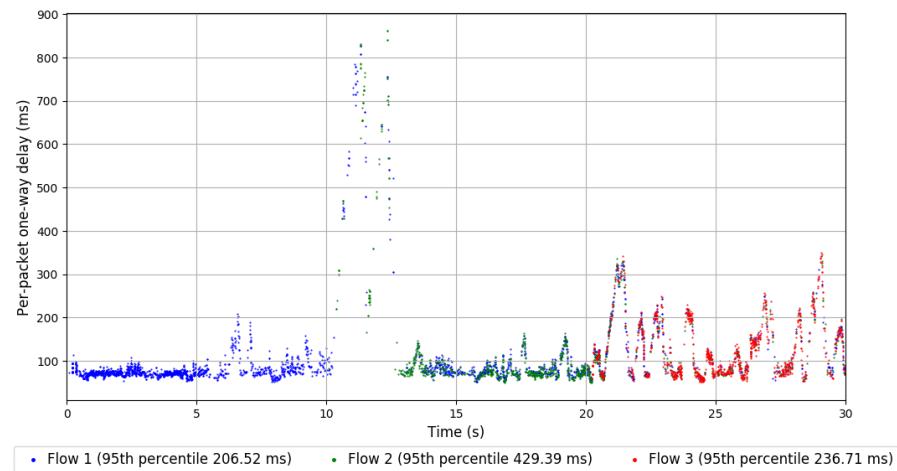
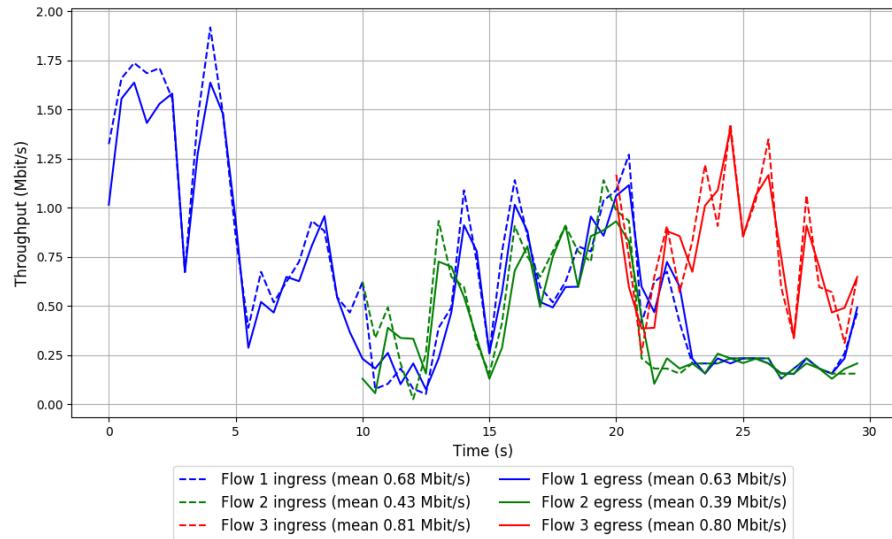


Run 3: Statistics of Copa

```
Start at: 2018-04-10 08:35:59
End at: 2018-04-10 08:36:29
Local clock offset: -0.512 ms
Remote clock offset: -3.348 ms

# Below is generated by plot.py at 2018-04-10 08:42:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.16 Mbit/s
95th percentile per-packet one-way delay: 247.195 ms
Loss rate: 6.33%
-- Flow 1:
Average throughput: 0.63 Mbit/s
95th percentile per-packet one-way delay: 206.518 ms
Loss rate: 6.92%
-- Flow 2:
Average throughput: 0.39 Mbit/s
95th percentile per-packet one-way delay: 429.388 ms
Loss rate: 8.91%
-- Flow 3:
Average throughput: 0.80 Mbit/s
95th percentile per-packet one-way delay: 236.710 ms
Loss rate: 2.11%
```

Run 3: Report of Copa — Data Link

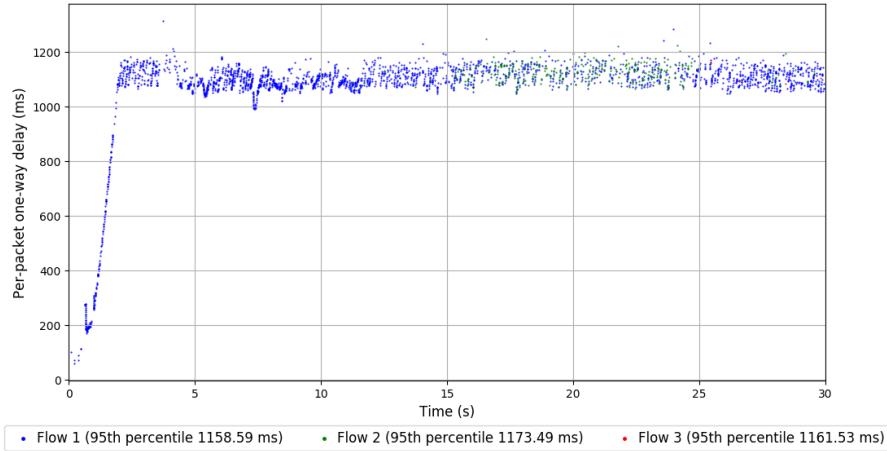
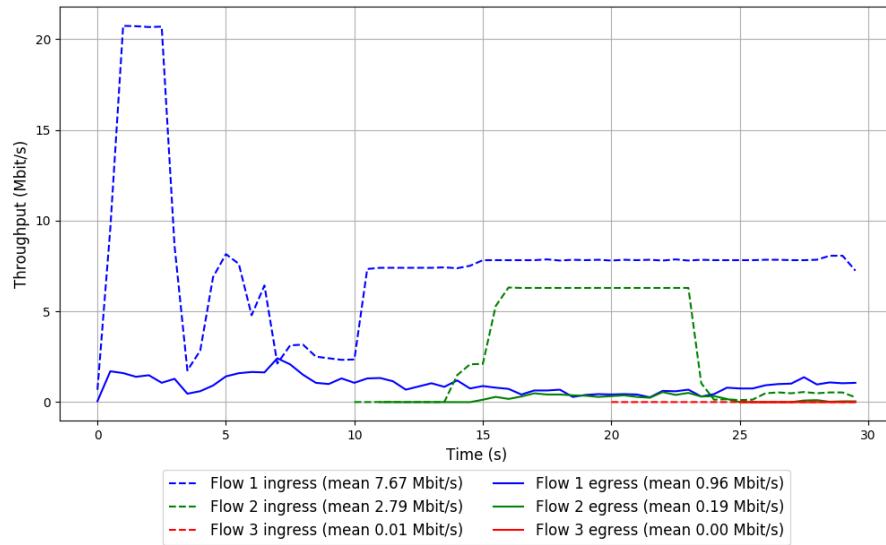


```
Run 1: Statistics of FillP

Start at: 2018-04-10 07:54:59
End at: 2018-04-10 07:55:29
Local clock offset: -0.664 ms
Remote clock offset: -2.918 ms

# Below is generated by plot.py at 2018-04-10 08:42:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.08 Mbit/s
95th percentile per-packet one-way delay: 1160.450 ms
Loss rate: 88.69%
-- Flow 1:
Average throughput: 0.96 Mbit/s
95th percentile per-packet one-way delay: 1158.592 ms
Loss rate: 87.50%
-- Flow 2:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 1173.494 ms
Loss rate: 93.60%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 1161.532 ms
Loss rate: 94.12%
```

Run 1: Report of FillP — Data Link

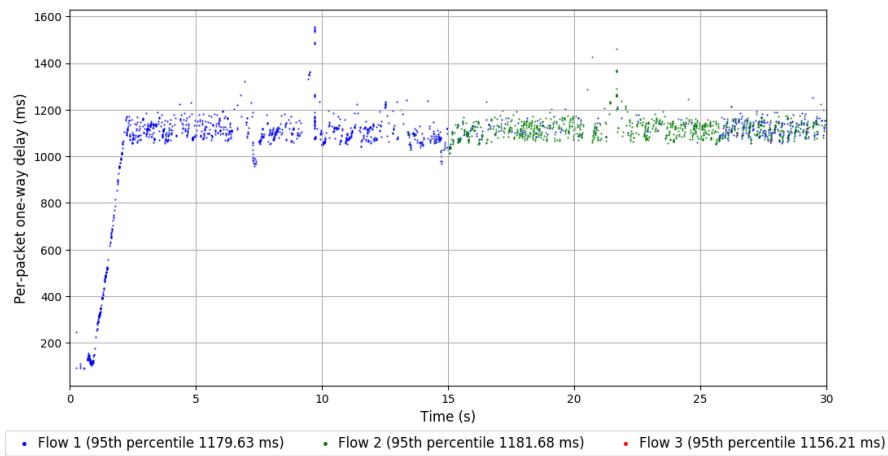
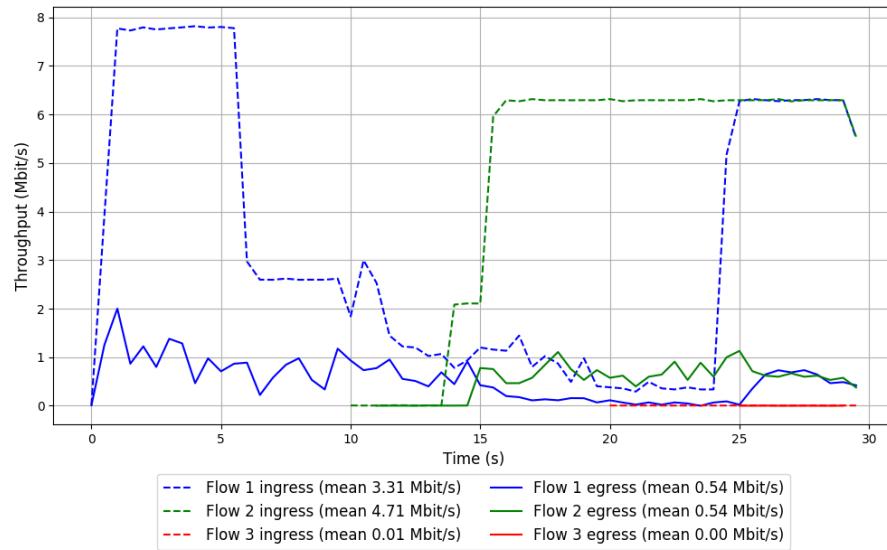


Run 2: Statistics of FillP

```
Start at: 2018-04-10 08:15:04
End at: 2018-04-10 08:15:34
Local clock offset: -1.673 ms
Remote clock offset: -2.37 ms

# Below is generated by plot.py at 2018-04-10 08:42:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.88 Mbit/s
95th percentile per-packet one-way delay: 1180.054 ms
Loss rate: 86.48%
-- Flow 1:
Average throughput: 0.54 Mbit/s
95th percentile per-packet one-way delay: 1179.629 ms
Loss rate: 83.87%
-- Flow 2:
Average throughput: 0.54 Mbit/s
95th percentile per-packet one-way delay: 1181.676 ms
Loss rate: 89.23%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 1156.207 ms
Loss rate: 92.87%
```

Run 2: Report of FillP — Data Link

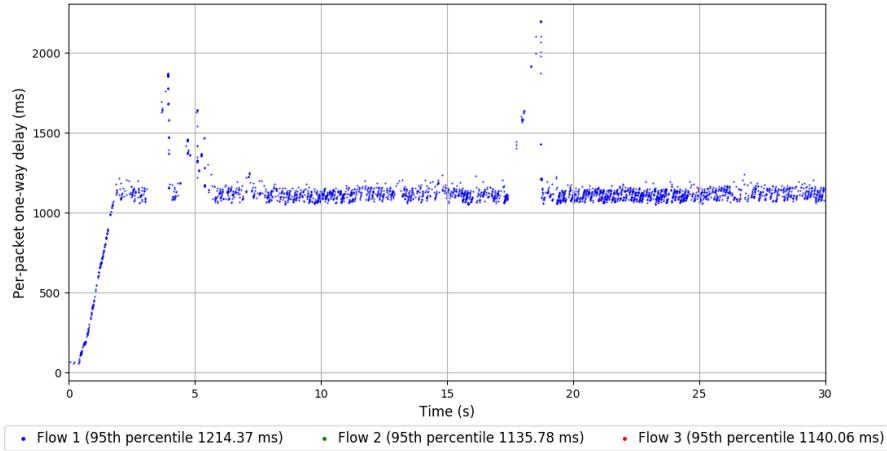
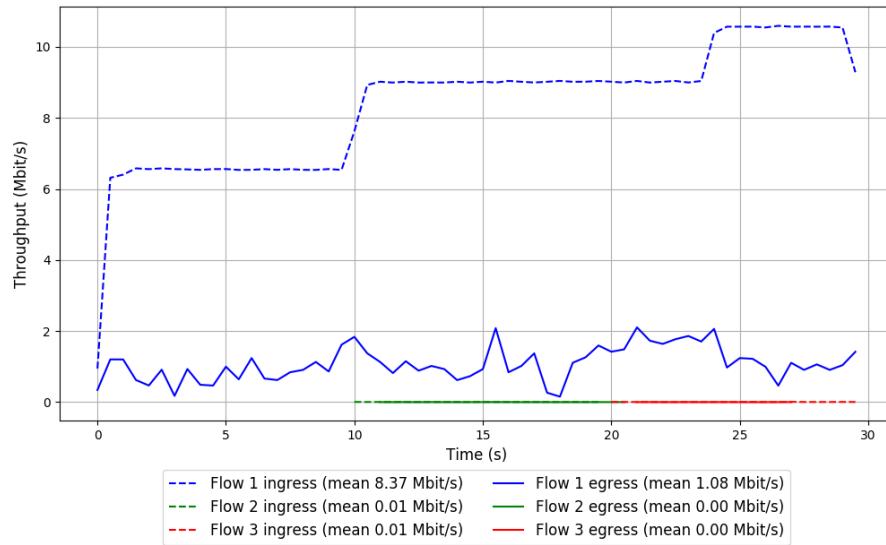


Run 3: Statistics of FillP

```
Start at: 2018-04-10 08:34:53
End at: 2018-04-10 08:35:23
Local clock offset: -1.514 ms
Remote clock offset: -2.462 ms

# Below is generated by plot.py at 2018-04-10 08:42:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.08 Mbit/s
95th percentile per-packet one-way delay: 1213.640 ms
Loss rate: 87.12%
-- Flow 1:
Average throughput: 1.08 Mbit/s
95th percentile per-packet one-way delay: 1214.369 ms
Loss rate: 87.11%
-- Flow 2:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 1135.783 ms
Loss rate: 86.36%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 1140.059 ms
Loss rate: 90.02%
```

Run 3: Report of FillP — Data Link

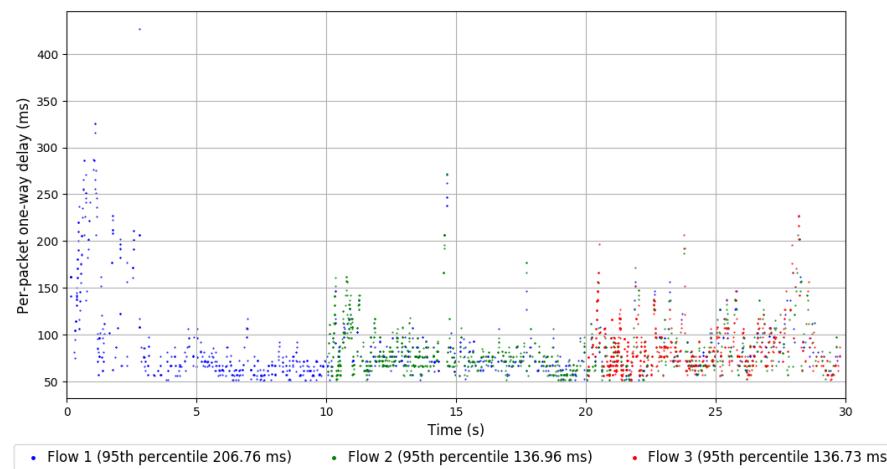
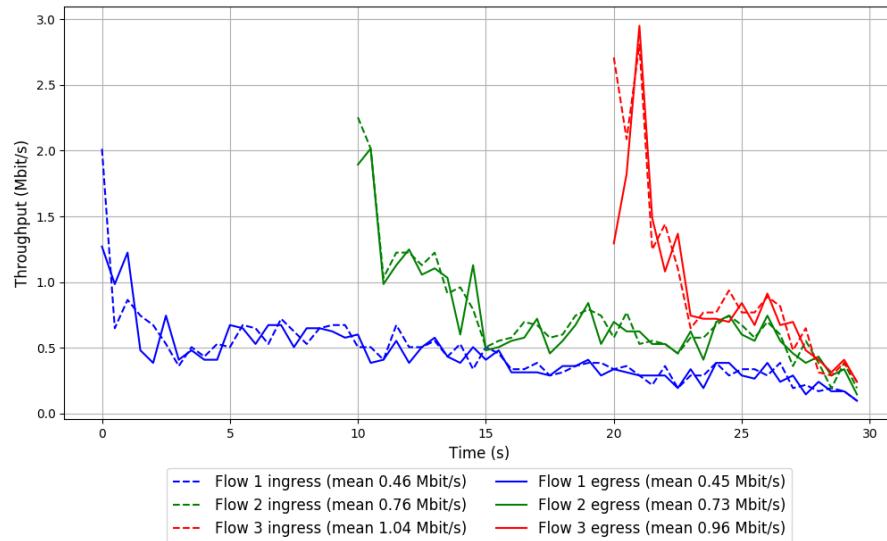


Run 1: Statistics of Indigo-1-32

```
Start at: 2018-04-10 07:50:36
End at: 2018-04-10 07:51:06
Local clock offset: -0.751 ms
Remote clock offset: -2.314 ms

# Below is generated by plot.py at 2018-04-10 08:42:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.24 Mbit/s
95th percentile per-packet one-way delay: 161.584 ms
Loss rate: 5.11%
-- Flow 1:
Average throughput: 0.45 Mbit/s
95th percentile per-packet one-way delay: 206.764 ms
Loss rate: 3.83%
-- Flow 2:
Average throughput: 0.73 Mbit/s
95th percentile per-packet one-way delay: 136.962 ms
Loss rate: 4.43%
-- Flow 3:
Average throughput: 0.96 Mbit/s
95th percentile per-packet one-way delay: 136.730 ms
Loss rate: 7.88%
```

Run 1: Report of Indigo-1-32 — Data Link

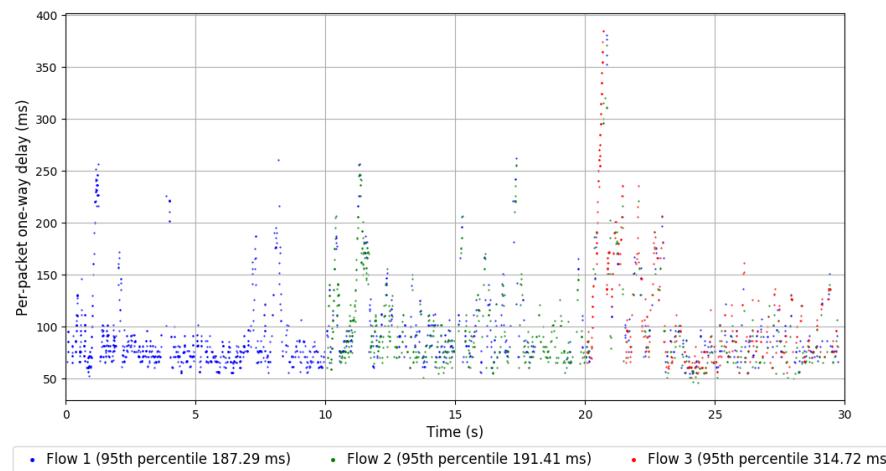
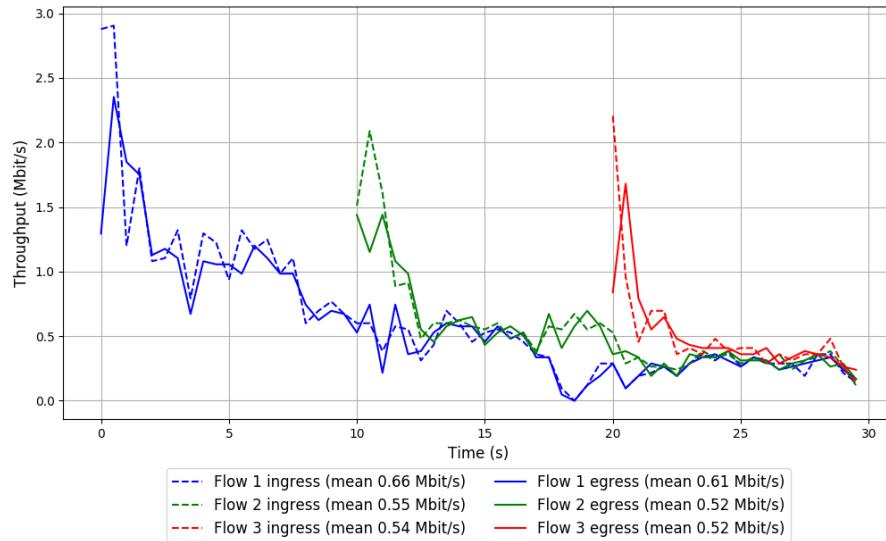


Run 2: Statistics of Indigo-1-32

```
Start at: 2018-04-10 08:10:40
End at: 2018-04-10 08:11:10
Local clock offset: -1.096 ms
Remote clock offset: -3.798 ms

# Below is generated by plot.py at 2018-04-10 08:42:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.12 Mbit/s
95th percentile per-packet one-way delay: 216.003 ms
Loss rate: 6.19%
-- Flow 1:
Average throughput: 0.61 Mbit/s
95th percentile per-packet one-way delay: 187.289 ms
Loss rate: 6.91%
-- Flow 2:
Average throughput: 0.52 Mbit/s
95th percentile per-packet one-way delay: 191.414 ms
Loss rate: 6.00%
-- Flow 3:
Average throughput: 0.52 Mbit/s
95th percentile per-packet one-way delay: 314.719 ms
Loss rate: 3.92%
```

Run 2: Report of Indigo-1-32 — Data Link

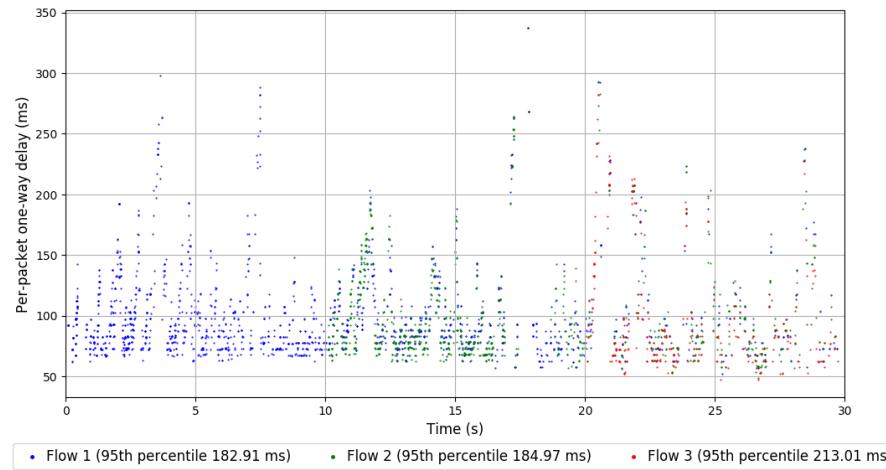
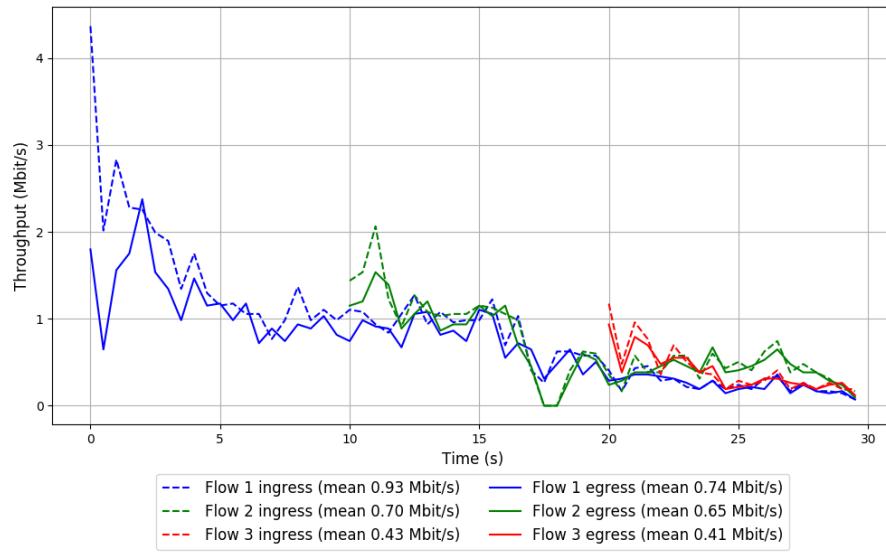


Run 3: Statistics of Indigo-1-32

```
Start at: 2018-04-10 08:30:29
End at: 2018-04-10 08:30:59
Local clock offset: -1.145 ms
Remote clock offset: -3.642 ms

# Below is generated by plot.py at 2018-04-10 08:42:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.30 Mbit/s
95th percentile per-packet one-way delay: 192.327 ms
Loss rate: 15.49%
-- Flow 1:
Average throughput: 0.74 Mbit/s
95th percentile per-packet one-way delay: 182.911 ms
Loss rate: 20.14%
-- Flow 2:
Average throughput: 0.65 Mbit/s
95th percentile per-packet one-way delay: 184.974 ms
Loss rate: 8.86%
-- Flow 3:
Average throughput: 0.41 Mbit/s
95th percentile per-packet one-way delay: 213.010 ms
Loss rate: 6.85%
```

Run 3: Report of Indigo-1-32 — Data Link

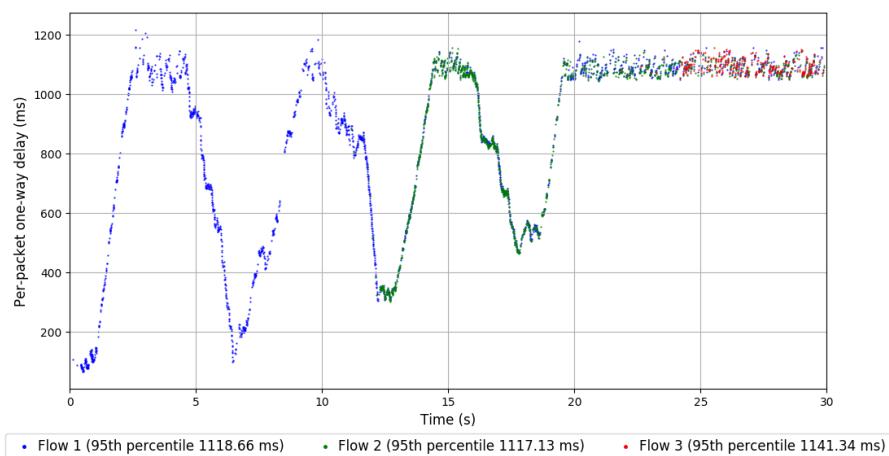
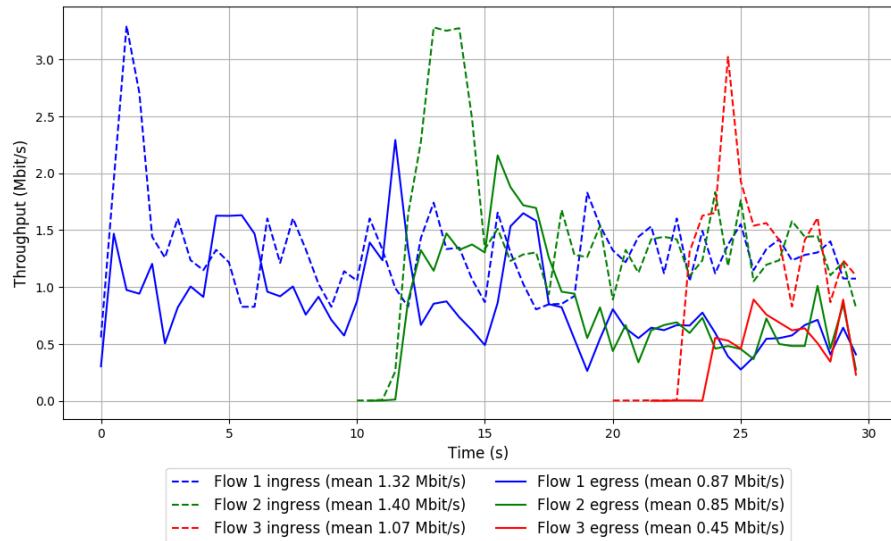


Run 1: Statistics of Vivace-latency

```
Start at: 2018-04-10 07:58:19
End at: 2018-04-10 07:58:49
Local clock offset: -0.983 ms
Remote clock offset: -2.454 ms

# Below is generated by plot.py at 2018-04-10 08:42:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.53 Mbit/s
95th percentile per-packet one-way delay: 1121.144 ms
Loss rate: 41.37%
-- Flow 1:
Average throughput: 0.87 Mbit/s
95th percentile per-packet one-way delay: 1118.661 ms
Loss rate: 34.01%
-- Flow 2:
Average throughput: 0.85 Mbit/s
95th percentile per-packet one-way delay: 1117.130 ms
Loss rate: 42.30%
-- Flow 3:
Average throughput: 0.45 Mbit/s
95th percentile per-packet one-way delay: 1141.336 ms
Loss rate: 66.29%
```

Run 1: Report of Vivace-latency — Data Link

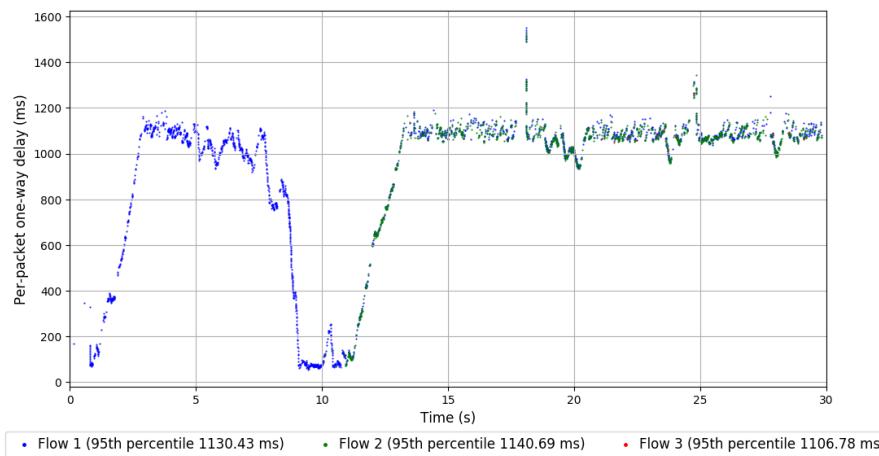
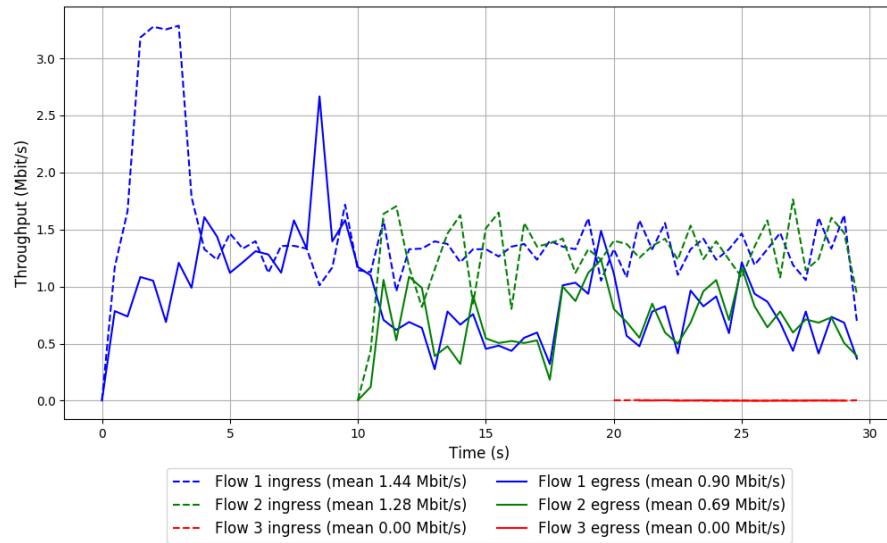


Run 2: Statistics of Vivace-latency

```
Start at: 2018-04-10 08:18:22
End at: 2018-04-10 08:18:52
Local clock offset: -1.518 ms
Remote clock offset: -2.455 ms

# Below is generated by plot.py at 2018-04-10 08:42:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.36 Mbit/s
95th percentile per-packet one-way delay: 1134.040 ms
Loss rate: 40.82%
-- Flow 1:
Average throughput: 0.90 Mbit/s
95th percentile per-packet one-way delay: 1130.434 ms
Loss rate: 37.58%
-- Flow 2:
Average throughput: 0.69 Mbit/s
95th percentile per-packet one-way delay: 1140.692 ms
Loss rate: 46.27%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 1106.781 ms
Loss rate: 47.99%
```

Run 2: Report of Vivace-latency — Data Link

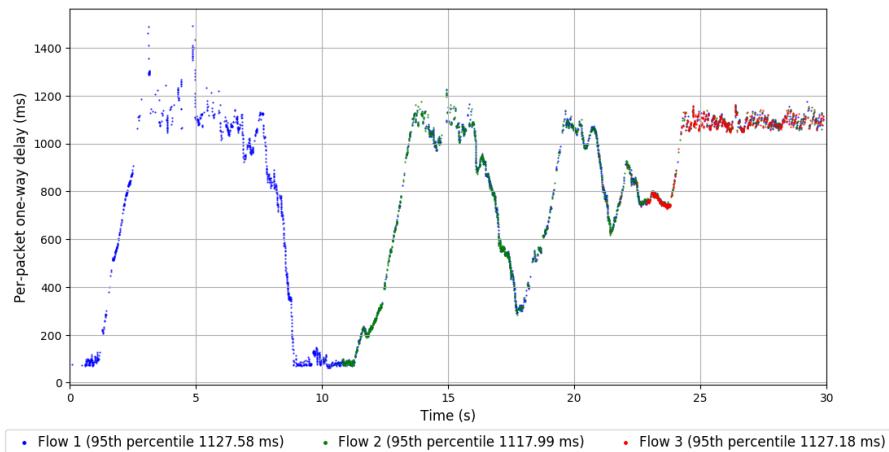
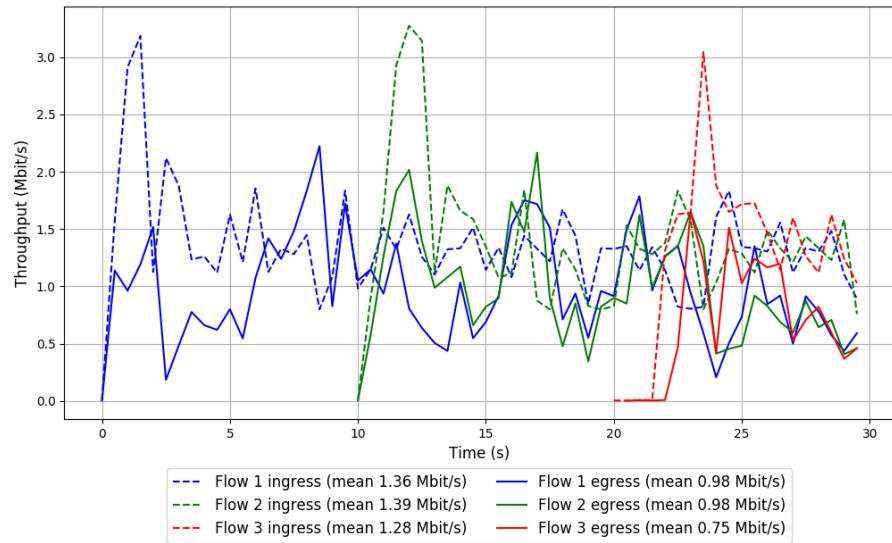


Run 3: Statistics of Vivace-latency

```
Start at: 2018-04-10 08:38:11
End at: 2018-04-10 08:38:41
Local clock offset: -1.086 ms
Remote clock offset: -2.568 ms

# Below is generated by plot.py at 2018-04-10 08:42:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.85 Mbit/s
95th percentile per-packet one-way delay: 1125.304 ms
Loss rate: 31.42%
-- Flow 1:
Average throughput: 0.98 Mbit/s
95th percentile per-packet one-way delay: 1127.579 ms
Loss rate: 28.18%
-- Flow 2:
Average throughput: 0.98 Mbit/s
95th percentile per-packet one-way delay: 1117.987 ms
Loss rate: 29.24%
-- Flow 3:
Average throughput: 0.75 Mbit/s
95th percentile per-packet one-way delay: 1127.179 ms
Loss rate: 46.65%
```

Run 3: Report of Vivace-latency — Data Link

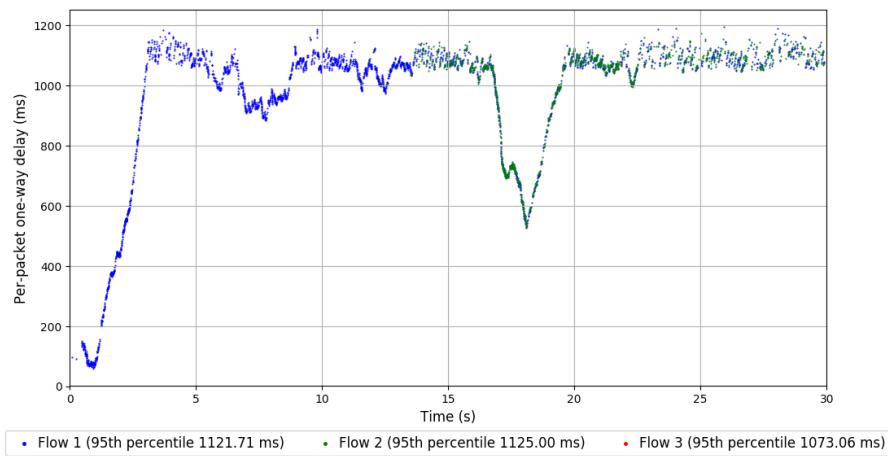
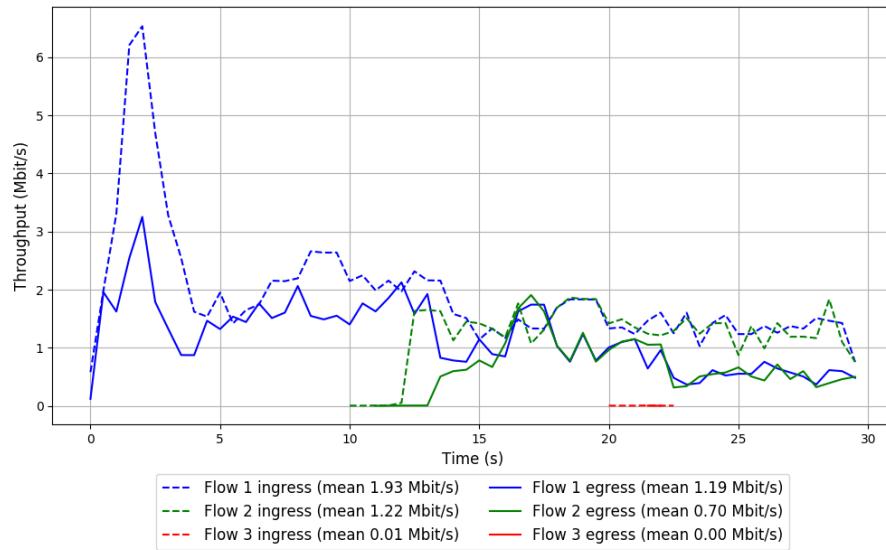


```
Run 1: Statistics of Vivace-loss
```

```
Start at: 2018-04-10 07:57:13
End at: 2018-04-10 07:57:43
Local clock offset: -0.941 ms
Remote clock offset: -3.261 ms

# Below is generated by plot.py at 2018-04-10 08:42:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.63 Mbit/s
95th percentile per-packet one-way delay: 1122.786 ms
Loss rate: 40.84%
-- Flow 1:
Average throughput: 1.19 Mbit/s
95th percentile per-packet one-way delay: 1121.715 ms
Loss rate: 38.55%
-- Flow 2:
Average throughput: 0.70 Mbit/s
95th percentile per-packet one-way delay: 1124.999 ms
Loss rate: 46.30%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 1073.061 ms
Loss rate: 78.57%
```

Run 1: Report of Vivace-loss — Data Link

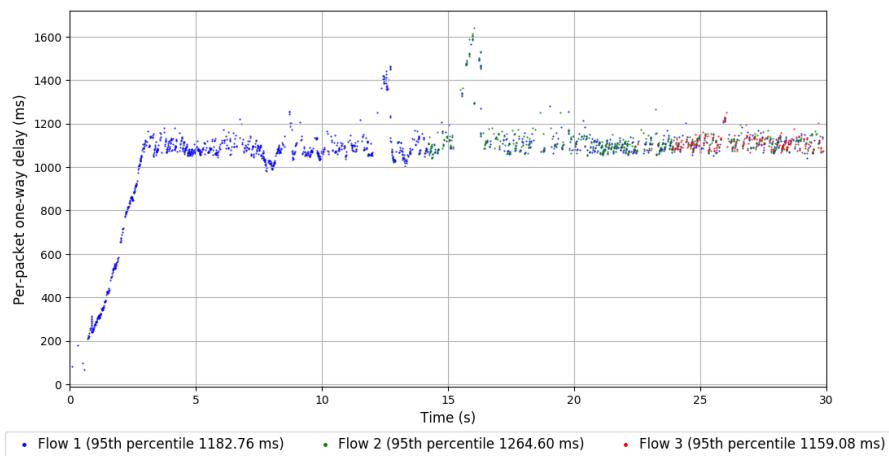
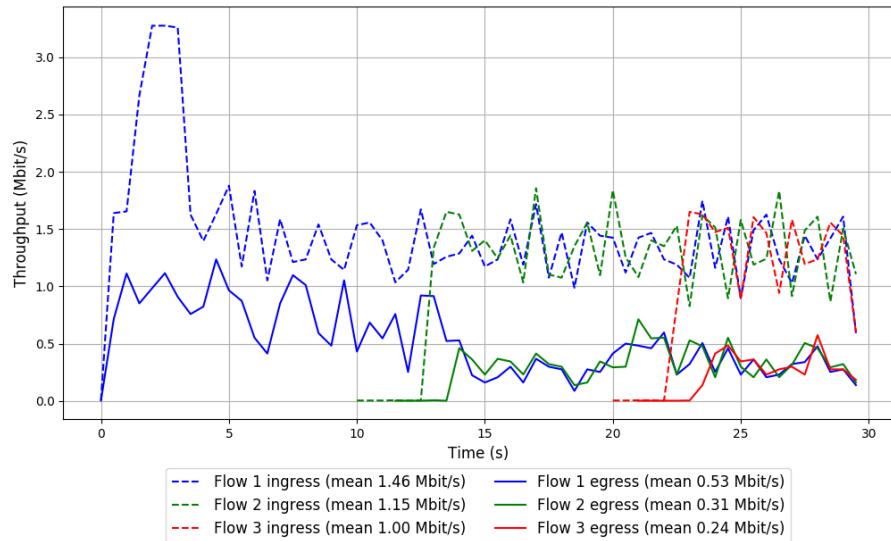


Run 2: Statistics of Vivace-loss

```
Start at: 2018-04-10 08:17:16
End at: 2018-04-10 08:17:46
Local clock offset: -1.628 ms
Remote clock offset: -2.714 ms

# Below is generated by plot.py at 2018-04-10 08:42:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.79 Mbit/s
95th percentile per-packet one-way delay: 1192.885 ms
Loss rate: 69.26%
-- Flow 1:
Average throughput: 0.53 Mbit/s
95th percentile per-packet one-way delay: 1182.755 ms
Loss rate: 63.78%
-- Flow 2:
Average throughput: 0.31 Mbit/s
95th percentile per-packet one-way delay: 1264.595 ms
Loss rate: 75.49%
-- Flow 3:
Average throughput: 0.24 Mbit/s
95th percentile per-packet one-way delay: 1159.076 ms
Loss rate: 79.12%
```

Run 2: Report of Vivace-loss — Data Link

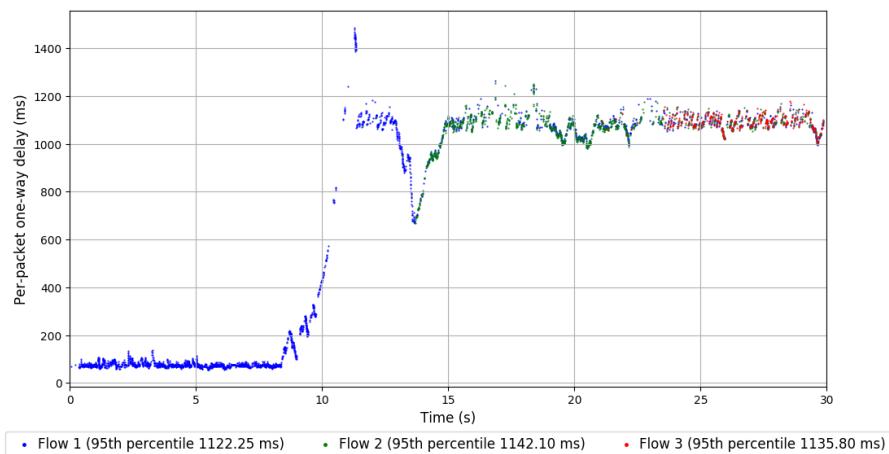
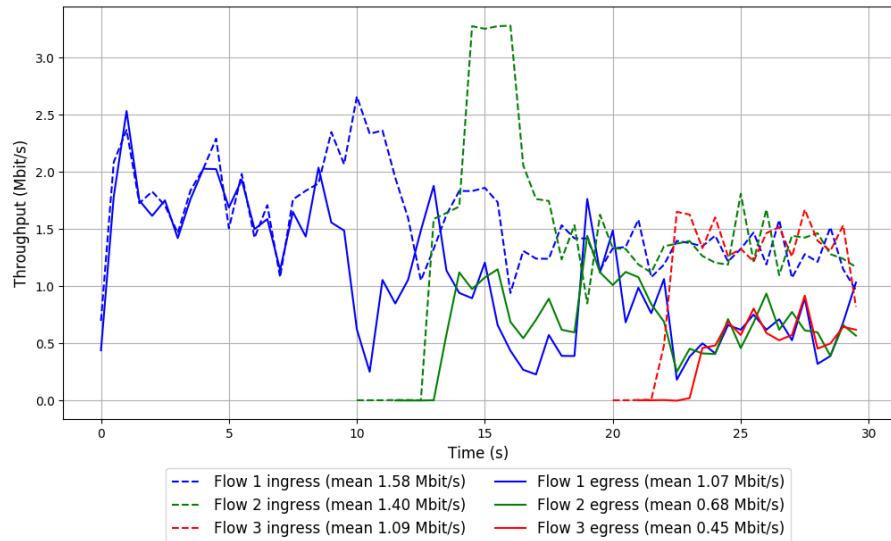


Run 3: Statistics of Vivace-loss

```
Start at: 2018-04-10 08:37:05
End at: 2018-04-10 08:37:35
Local clock offset: -0.613 ms
Remote clock offset: -2.525 ms

# Below is generated by plot.py at 2018-04-10 08:42:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.62 Mbit/s
95th percentile per-packet one-way delay: 1131.692 ms
Loss rate: 43.43%
-- Flow 1:
Average throughput: 1.07 Mbit/s
95th percentile per-packet one-way delay: 1122.246 ms
Loss rate: 31.97%
-- Flow 2:
Average throughput: 0.68 Mbit/s
95th percentile per-packet one-way delay: 1142.103 ms
Loss rate: 55.19%
-- Flow 3:
Average throughput: 0.45 Mbit/s
95th percentile per-packet one-way delay: 1135.795 ms
Loss rate: 63.34%
```

Run 3: Report of Vivace-loss — Data Link

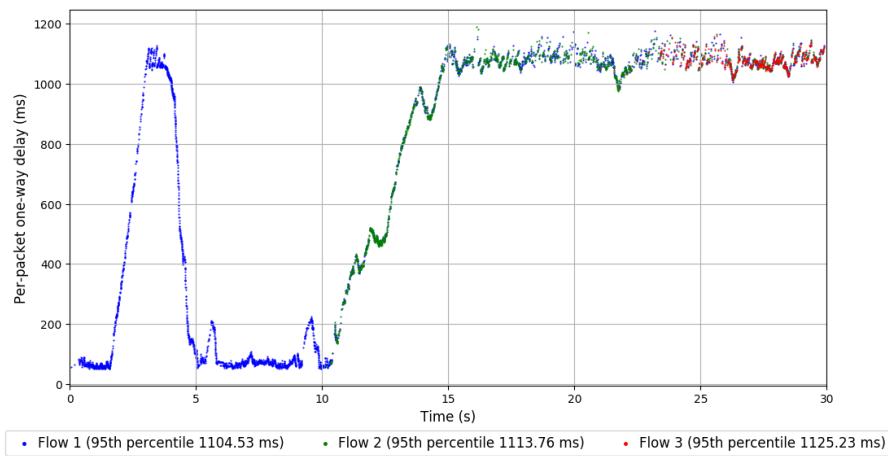
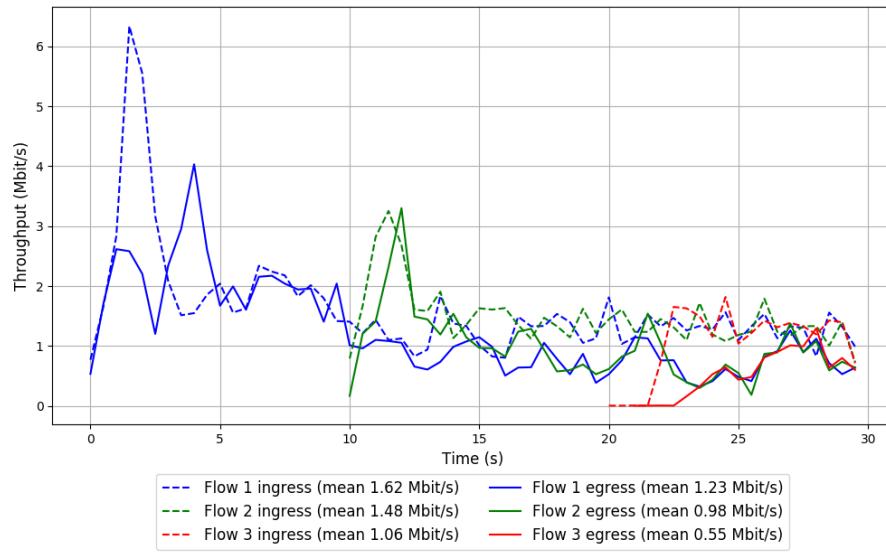


Run 1: Statistics of Vivace-LTE

```
Start at: 2018-04-10 07:53:53
End at: 2018-04-10 07:54:23
Local clock offset: -0.519 ms
Remote clock offset: -2.996 ms

# Below is generated by plot.py at 2018-04-10 08:42:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.04 Mbit/s
95th percentile per-packet one-way delay: 1110.319 ms
Loss rate: 31.10%
-- Flow 1:
Average throughput: 1.23 Mbit/s
95th percentile per-packet one-way delay: 1104.525 ms
Loss rate: 24.57%
-- Flow 2:
Average throughput: 0.98 Mbit/s
95th percentile per-packet one-way delay: 1113.757 ms
Loss rate: 33.73%
-- Flow 3:
Average throughput: 0.55 Mbit/s
95th percentile per-packet one-way delay: 1125.231 ms
Loss rate: 53.98%
```

Run 1: Report of Vivace-LTE — Data Link

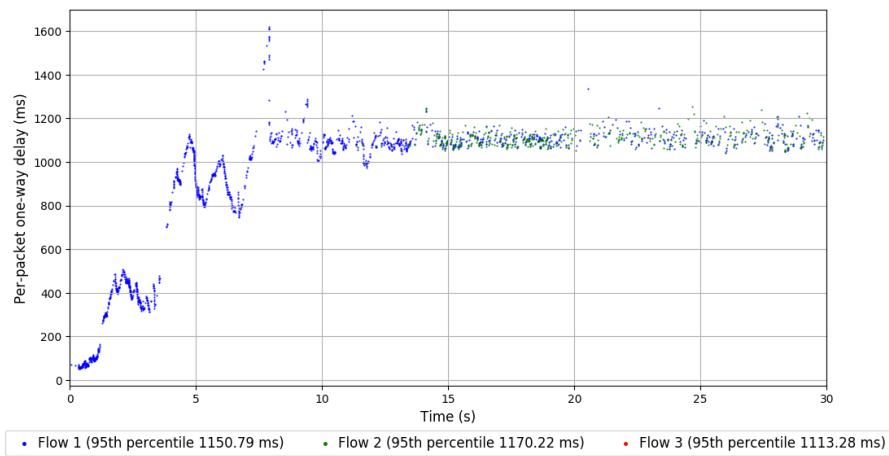
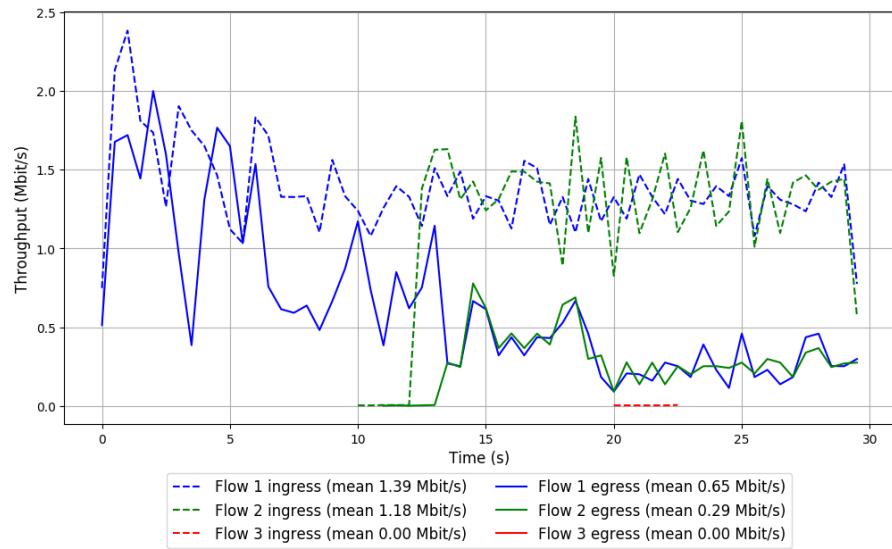


Run 2: Statistics of Vivace-LTE

```
Start at: 2018-04-10 08:13:58
End at: 2018-04-10 08:14:28
Local clock offset: -0.919 ms
Remote clock offset: -2.003 ms

# Below is generated by plot.py at 2018-04-10 08:42:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.83 Mbit/s
95th percentile per-packet one-way delay: 1159.218 ms
Loss rate: 62.03%
-- Flow 1:
Average throughput: 0.65 Mbit/s
95th percentile per-packet one-way delay: 1150.794 ms
Loss rate: 53.50%
-- Flow 2:
Average throughput: 0.29 Mbit/s
95th percentile per-packet one-way delay: 1170.225 ms
Loss rate: 77.02%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 1113.279 ms
Loss rate: 92.31%
```

Run 2: Report of Vivace-LTE — Data Link



Run 3: Statistics of Vivace-LTE

```
Start at: 2018-04-10 08:33:46
End at: 2018-04-10 08:34:16
Local clock offset: -1.407 ms
Remote clock offset: -1.65 ms

# Below is generated by plot.py at 2018-04-10 08:42:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.34 Mbit/s
95th percentile per-packet one-way delay: 1141.394 ms
Loss rate: 51.00%
-- Flow 1:
Average throughput: 0.89 Mbit/s
95th percentile per-packet one-way delay: 1126.379 ms
Loss rate: 37.11%
-- Flow 2:
Average throughput: 0.61 Mbit/s
95th percentile per-packet one-way delay: 1148.368 ms
Loss rate: 58.94%
-- Flow 3:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 1185.064 ms
Loss rate: 87.15%
```

Run 3: Report of Vivace-LTE — Data Link

