

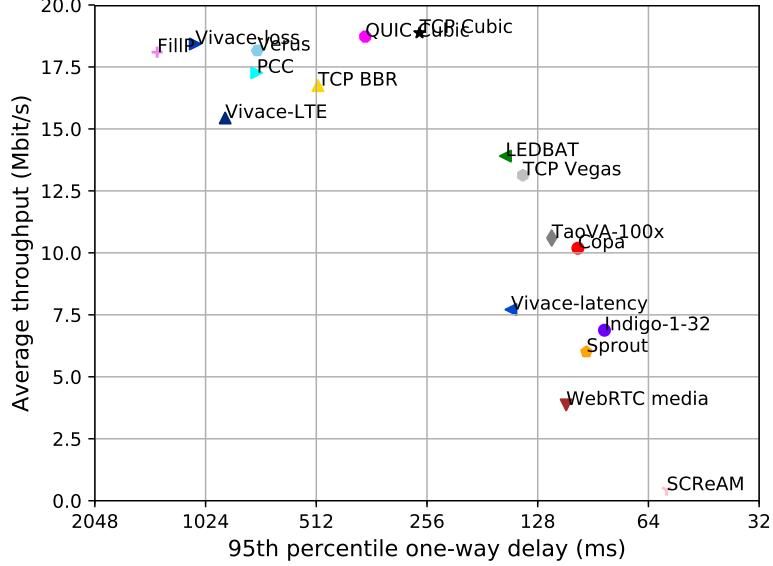
## Pantheon Report

Generated at 2018-03-05 22:07:51 (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](http://nets.org.sg) and have been applied to correct the timestamps in logs.

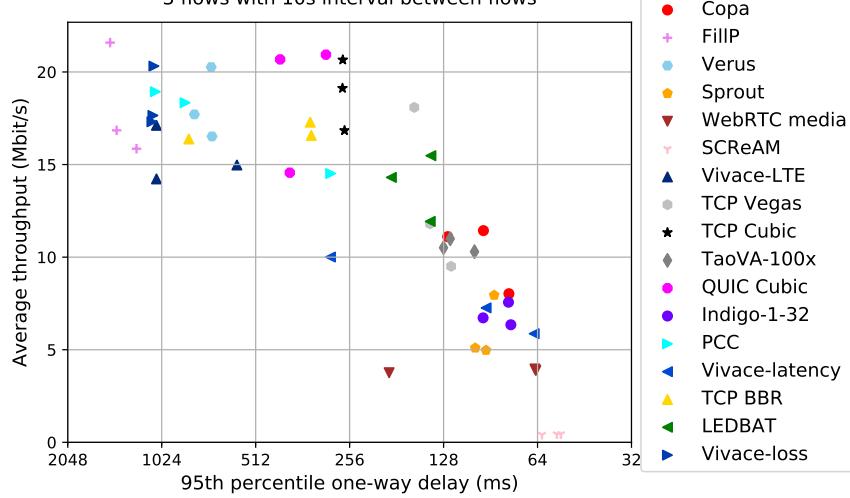
### Git summary:

```
branch: master @ f12c42a2c63fdd9a862eefa0468859bf379b6623
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
M datagrump/sender.cc
third_party/fillp @ 828bbf95fd4941149b5cec90f281d1c69ae1a5c6
third_party/genericCC @ 9249eea3238475c4d8cca1443d28df70bff6c4a2
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 @ a488197ddd041ace68a42849b2540ad834825f42
```

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



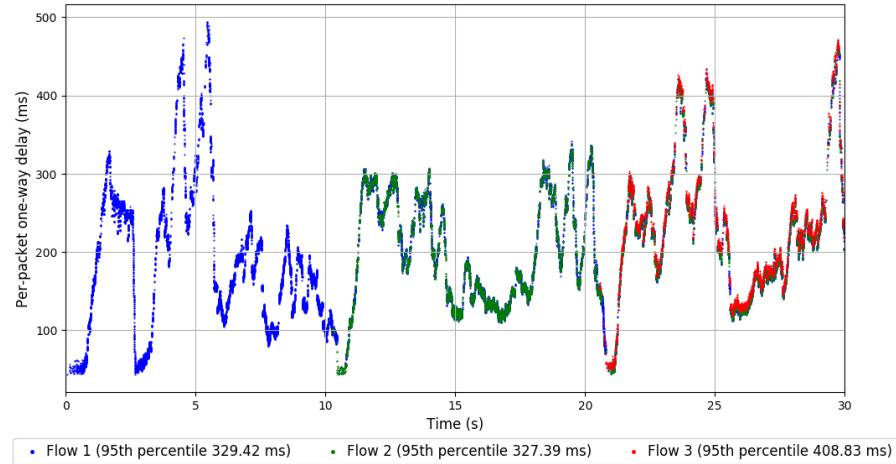
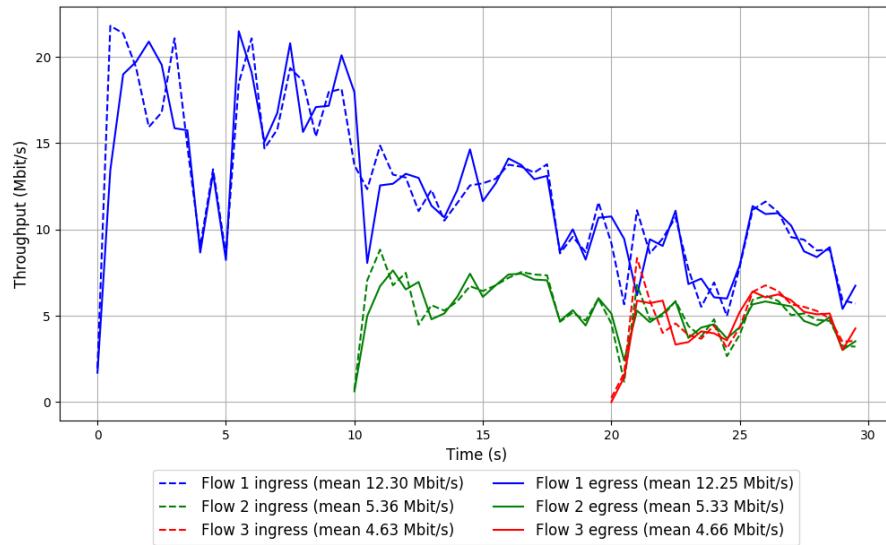
scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	3	12.23	4.97	3.99	441.33	534.86	592.88	0.80	1.92	4.55
TCP Cubic	3	12.76	7.30	3.91	258.11	293.43	426.26	0.57	1.13	3.20
LEDBAT	3	9.07	5.98	2.60	146.90	170.67	180.11	0.35	0.91	1.51
PCC	3	12.68	4.48	5.07	736.01	709.84	825.13	4.47	6.27	17.60
QUIC Cubic	3	13.77	6.23	2.66	356.87	421.31	405.78	0.62	1.63	3.77
SCReAM	3	0.21	0.22	0.22	57.12	57.13	53.66	0.17	0.27	0.46
WebRTC media	3	2.05	1.34	0.49	76.91	101.27	132.30	0.05	0.15	0.66
Sprout	3	3.03	3.17	2.65	96.98	88.67	99.76	0.03	0.43	1.04
TaoVA-100x	3	5.00	5.54	5.81	109.38	105.46	142.21	0.29	0.90	0.55
TCP Vegas	3	6.09	7.30	6.62	141.74	176.24	94.88	0.17	0.23	0.45
Verus	3	13.21	4.58	5.96	701.96	731.11	832.28	2.24	4.24	5.59
Copa	3	6.95	3.25	3.27	102.22	95.48	92.89	0.44	0.62	0.40
FillP	3	11.97	6.73	6.38	1459.71	1250.94	1205.75	77.04	91.72	96.04
Indigo-1-32	3	2.65	3.81	5.20	82.49	81.10	107.50	0.21	0.33	0.36
Vivace-latency	3	4.38	3.33	3.42	118.87	212.40	172.15	0.18	0.29	0.41
Vivace-loss	3	12.50	8.05	1.79	1093.58	1091.22	1080.77	40.13	34.14	40.18
Vivace-LTE	3	9.97	5.73	5.08	811.09	908.98	918.30	3.98	8.33	14.60

Run 1: Statistics of TCP BBR

```
Start at: 2018-03-05 21:12:18
End at: 2018-03-05 21:12:48
Local clock offset: 1.58 ms
Remote clock offset: 1.809 ms

# Below is generated by plot.py at 2018-03-05 22:06:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 17.29 Mbit/s
95th percentile per-packet one-way delay: 342.336 ms
Loss rate: 0.78%
-- Flow 1:
Average throughput: 12.25 Mbit/s
95th percentile per-packet one-way delay: 329.424 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 5.33 Mbit/s
95th percentile per-packet one-way delay: 327.394 ms
Loss rate: 1.04%
-- Flow 3:
Average throughput: 4.66 Mbit/s
95th percentile per-packet one-way delay: 408.829 ms
Loss rate: 2.29%
```

## Run 1: Report of TCP BBR — Data Link

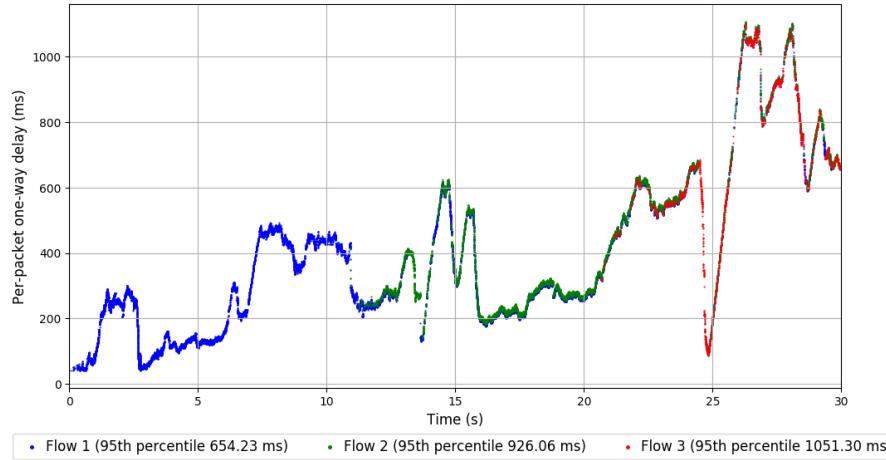
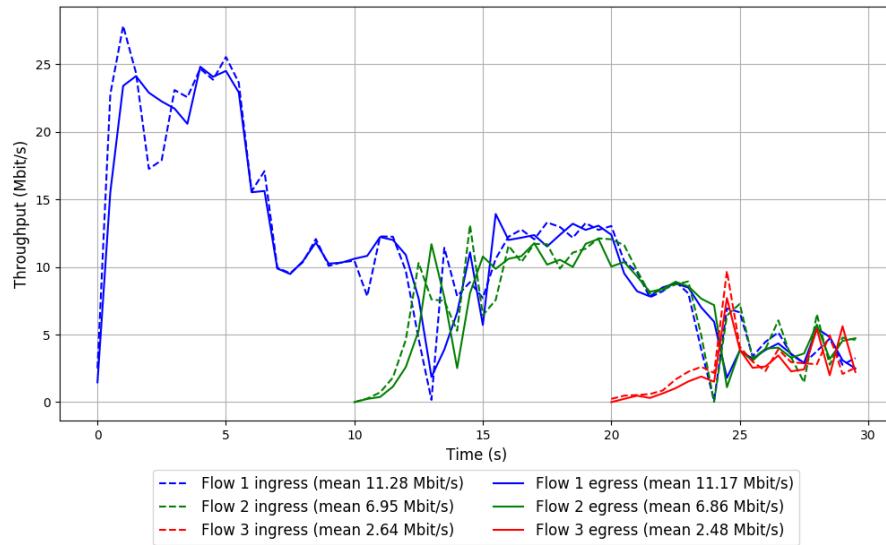


Run 2: Statistics of TCP BBR

```
Start at: 2018-03-05 21:32:28
End at: 2018-03-05 21:32:58
Local clock offset: 4.724 ms
Remote clock offset: 4.996 ms

# Below is generated by plot.py at 2018-03-05 22:06:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.38 Mbit/s
95th percentile per-packet one-way delay: 838.533 ms
Loss rate: 2.41%
-- Flow 1:
Average throughput: 11.17 Mbit/s
95th percentile per-packet one-way delay: 654.233 ms
Loss rate: 1.40%
-- Flow 2:
Average throughput: 6.86 Mbit/s
95th percentile per-packet one-way delay: 926.059 ms
Loss rate: 3.60%
-- Flow 3:
Average throughput: 2.48 Mbit/s
95th percentile per-packet one-way delay: 1051.301 ms
Loss rate: 9.12%
```

## Run 2: Report of TCP BBR — Data Link

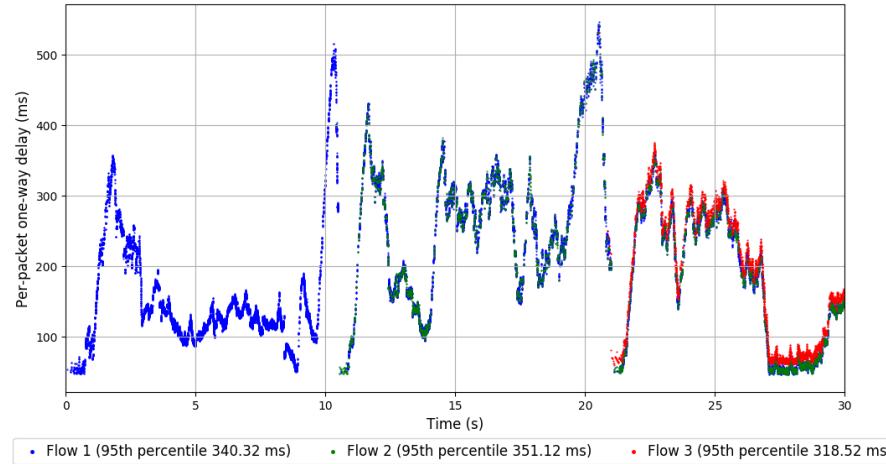
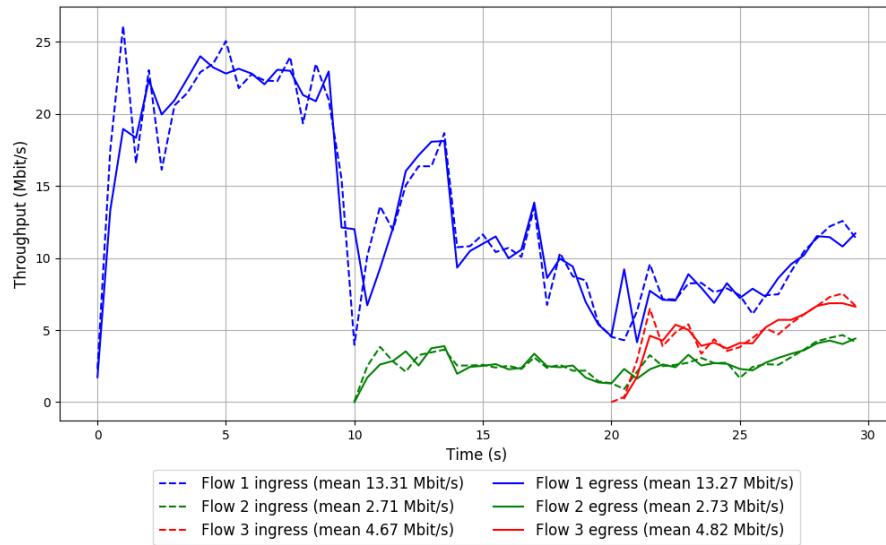


Run 3: Statistics of TCP BBR

```
Start at: 2018-03-05 21:52:34
End at: 2018-03-05 21:53:04
Local clock offset: 3.13 ms
Remote clock offset: 0.976 ms

# Below is generated by plot.py at 2018-03-05 22:06:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.57 Mbit/s
95th percentile per-packet one-way delay: 339.582 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 13.27 Mbit/s
95th percentile per-packet one-way delay: 340.325 ms
Loss rate: 0.48%
-- Flow 2:
Average throughput: 2.73 Mbit/s
95th percentile per-packet one-way delay: 351.119 ms
Loss rate: 1.13%
-- Flow 3:
Average throughput: 4.82 Mbit/s
95th percentile per-packet one-way delay: 318.517 ms
Loss rate: 2.24%
```

### Run 3: Report of TCP BBR — Data Link

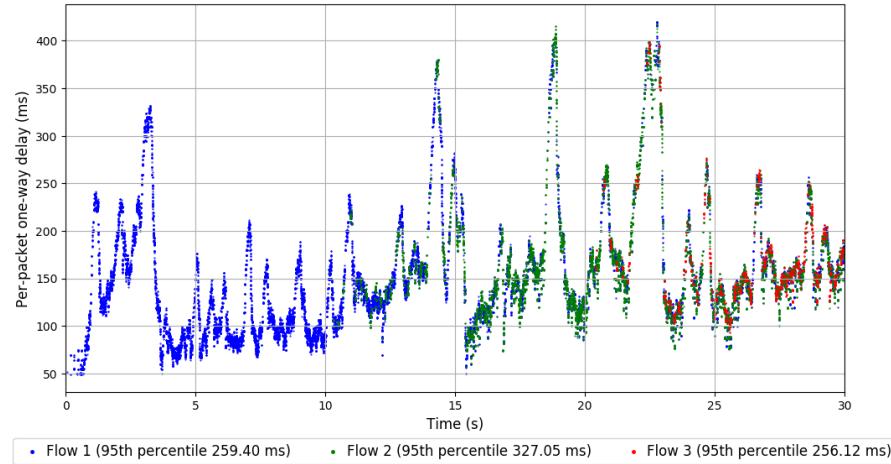
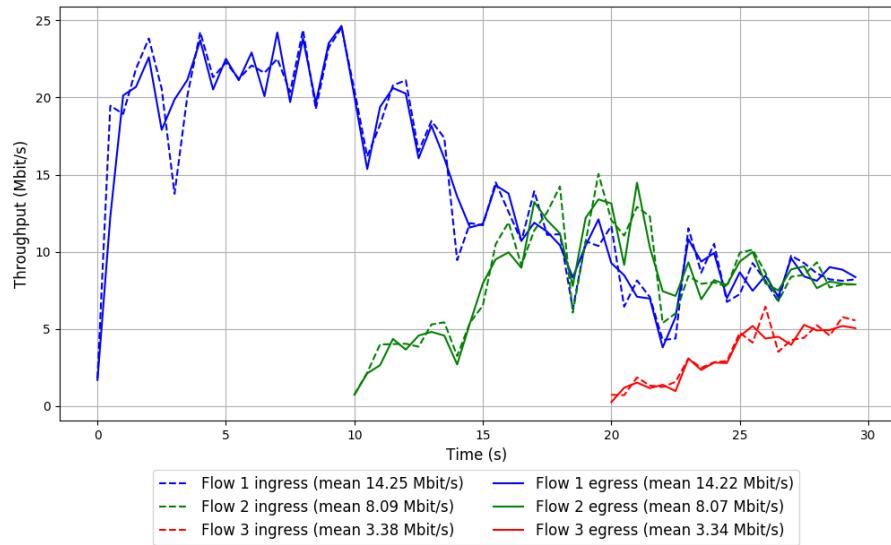


```
Run 1: Statistics of TCP Cubic
```

```
Start at: 2018-03-05 21:20:06
End at: 2018-03-05 21:20:36
Local clock offset: 2.97 ms
Remote clock offset: 3.45 ms

# Below is generated by plot.py at 2018-03-05 22:06:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 20.66 Mbit/s
95th percentile per-packet one-way delay: 269.296 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 14.22 Mbit/s
95th percentile per-packet one-way delay: 259.401 ms
Loss rate: 0.28%
-- Flow 2:
Average throughput: 8.07 Mbit/s
95th percentile per-packet one-way delay: 327.047 ms
Loss rate: 1.01%
-- Flow 3:
Average throughput: 3.34 Mbit/s
95th percentile per-packet one-way delay: 256.119 ms
Loss rate: 3.00%
```

## Run 1: Report of TCP Cubic — Data Link

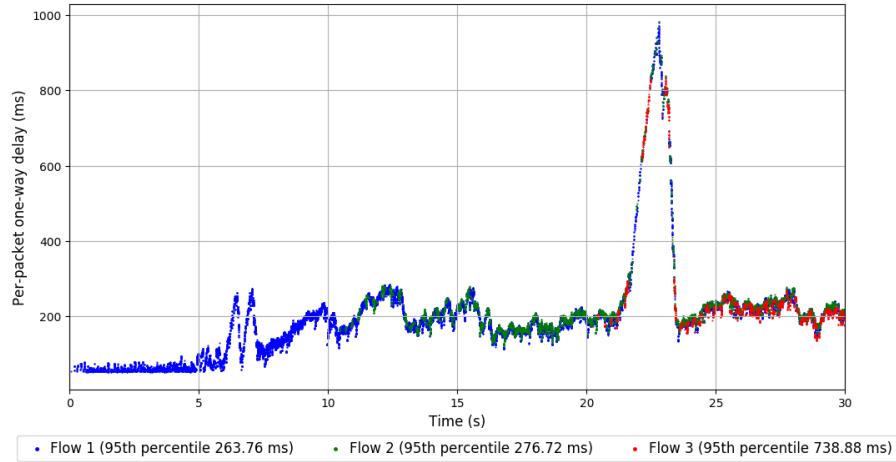
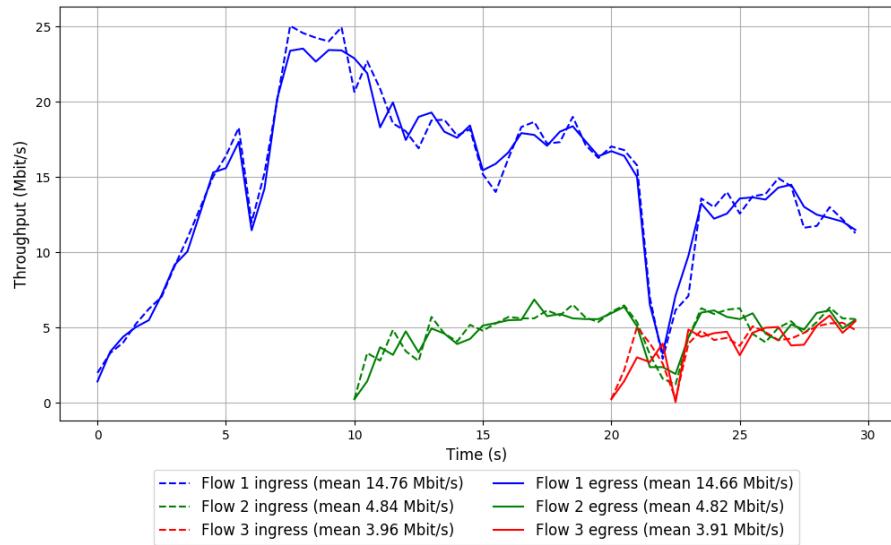


Run 2: Statistics of TCP Cubic

```
Start at: 2018-03-05 21:40:15
End at: 2018-03-05 21:40:45
Local clock offset: 0.994 ms
Remote clock offset: 2.804 ms

# Below is generated by plot.py at 2018-03-05 22:06:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.12 Mbit/s
95th percentile per-packet one-way delay: 269.823 ms
Loss rate: 1.04%
-- Flow 1:
Average throughput: 14.66 Mbit/s
95th percentile per-packet one-way delay: 263.759 ms
Loss rate: 0.81%
-- Flow 2:
Average throughput: 4.82 Mbit/s
95th percentile per-packet one-way delay: 276.722 ms
Loss rate: 1.38%
-- Flow 3:
Average throughput: 3.91 Mbit/s
95th percentile per-packet one-way delay: 738.885 ms
Loss rate: 2.71%
```

## Run 2: Report of TCP Cubic — Data Link

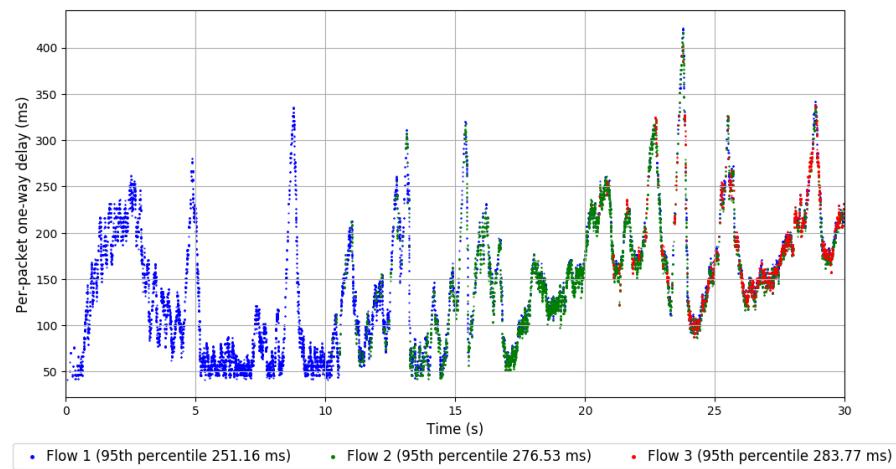
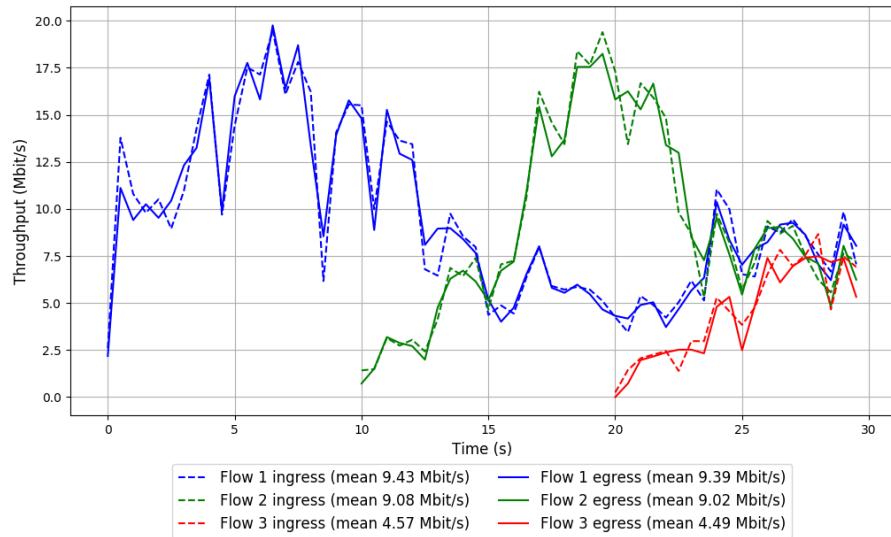


Run 3: Statistics of TCP Cubic

```
Start at: 2018-03-05 22:00:20
End at: 2018-03-05 22:00:50
Local clock offset: 6.248 ms
Remote clock offset: 1.304 ms

# Below is generated by plot.py at 2018-03-05 22:06:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.84 Mbit/s
95th percentile per-packet one-way delay: 265.798 ms
Loss rate: 1.04%
-- Flow 1:
Average throughput: 9.39 Mbit/s
95th percentile per-packet one-way delay: 251.164 ms
Loss rate: 0.61%
-- Flow 2:
Average throughput: 9.02 Mbit/s
95th percentile per-packet one-way delay: 276.526 ms
Loss rate: 0.99%
-- Flow 3:
Average throughput: 4.49 Mbit/s
95th percentile per-packet one-way delay: 283.772 ms
Loss rate: 3.89%
```

### Run 3: Report of TCP Cubic — Data Link

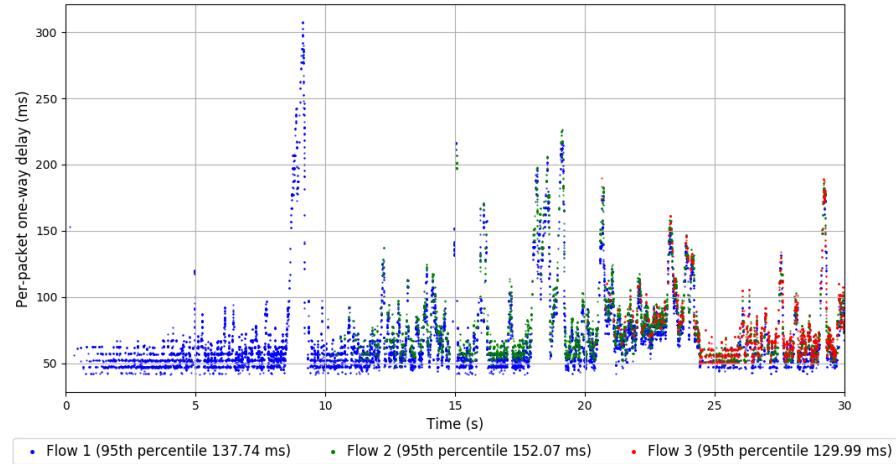
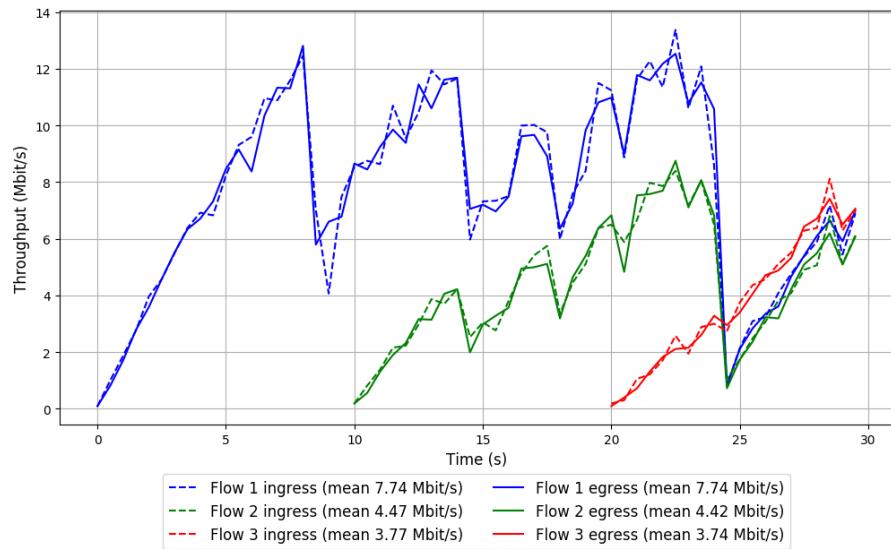


```
Run 1: Statistics of LEDBAT

Start at: 2018-03-05 21:10:04
End at: 2018-03-05 21:10:34
Local clock offset: 3.094 ms
Remote clock offset: 1.303 ms

# Below is generated by plot.py at 2018-03-05 22:06:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 11.93 Mbit/s
95th percentile per-packet one-way delay: 141.260 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 7.74 Mbit/s
95th percentile per-packet one-way delay: 137.740 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 4.42 Mbit/s
95th percentile per-packet one-way delay: 152.067 ms
Loss rate: 1.25%
-- Flow 3:
Average throughput: 3.74 Mbit/s
95th percentile per-packet one-way delay: 129.989 ms
Loss rate: 1.44%
```

Run 1: Report of LEDBAT — Data Link

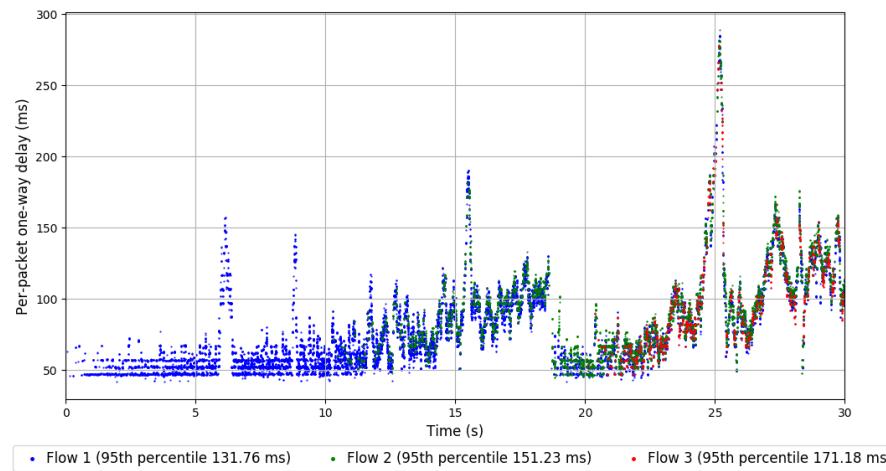
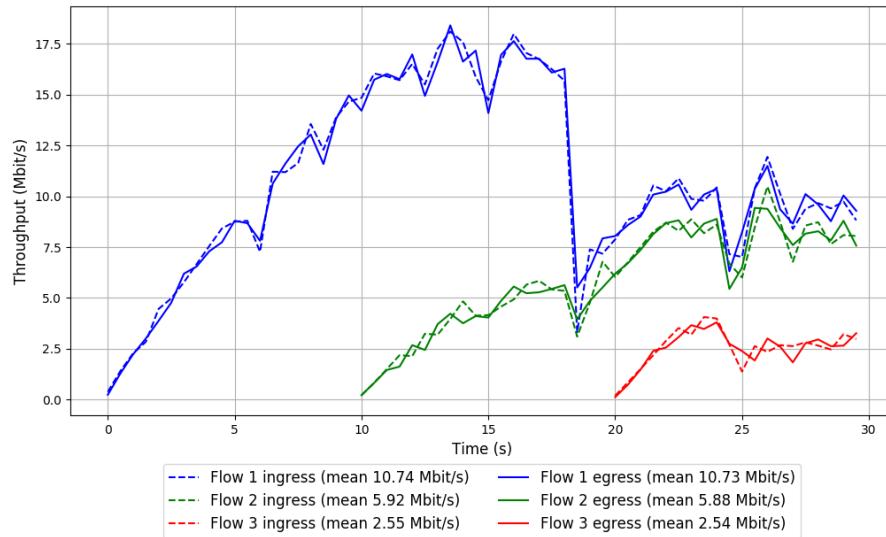


Run 2: Statistics of LEDBAT

```
Start at: 2018-03-05 21:30:11
End at: 2018-03-05 21:30:41
Local clock offset: 3.47 ms
Remote clock offset: 6.536 ms

# Below is generated by plot.py at 2018-03-05 22:06:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.48 Mbit/s
95th percentile per-packet one-way delay: 140.561 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 10.73 Mbit/s
95th percentile per-packet one-way delay: 131.757 ms
Loss rate: 0.28%
-- Flow 2:
Average throughput: 5.88 Mbit/s
95th percentile per-packet one-way delay: 151.233 ms
Loss rate: 0.84%
-- Flow 3:
Average throughput: 2.54 Mbit/s
95th percentile per-packet one-way delay: 171.184 ms
Loss rate: 1.57%
```

## Run 2: Report of LEDBAT — Data Link

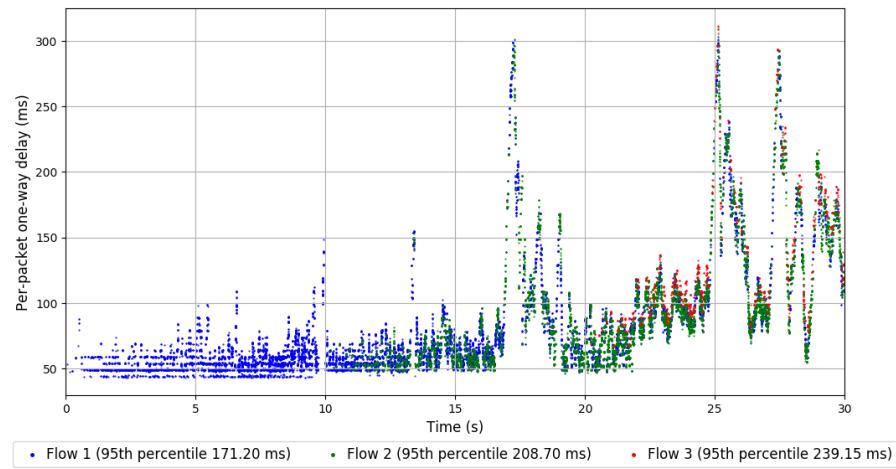
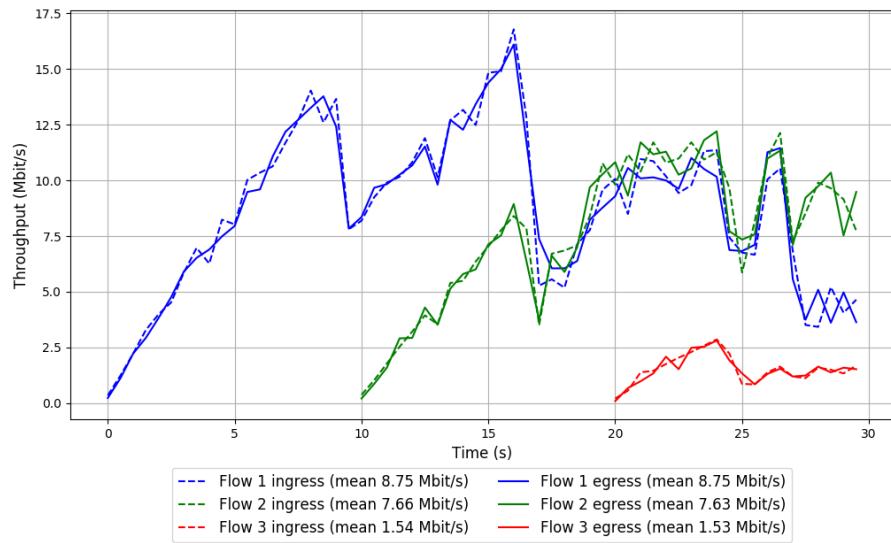


Run 3: Statistics of LEDBAT

```
Start at: 2018-03-05 21:50:21
End at: 2018-03-05 21:50:51
Local clock offset: 5.407 ms
Remote clock offset: 1.711 ms

# Below is generated by plot.py at 2018-03-05 22:06:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.31 Mbit/s
95th percentile per-packet one-way delay: 188.169 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 8.75 Mbit/s
95th percentile per-packet one-way delay: 171.204 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 7.63 Mbit/s
95th percentile per-packet one-way delay: 208.699 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 1.53 Mbit/s
95th percentile per-packet one-way delay: 239.149 ms
Loss rate: 1.53%
```

Run 3: Report of LEDBAT — Data Link

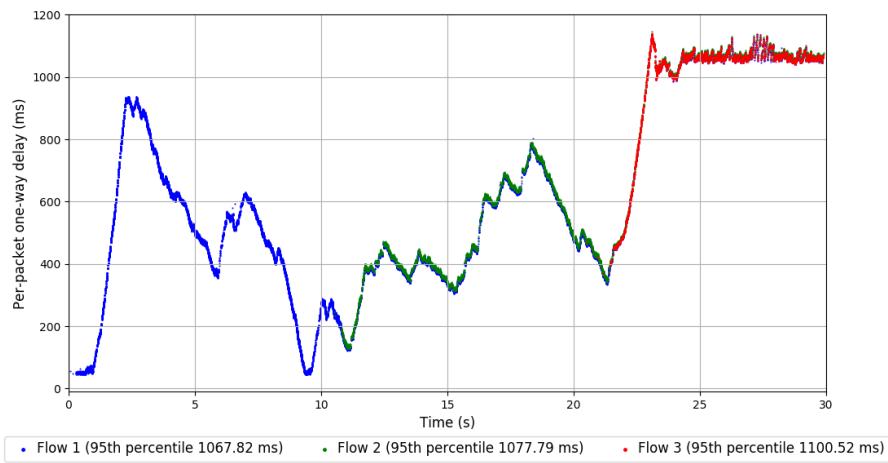
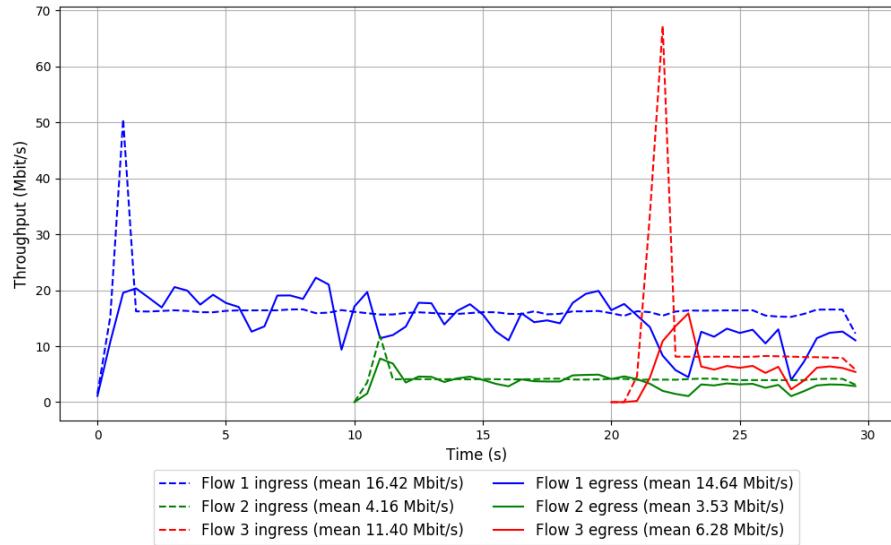


```
Run 1: Statistics of PCC

Start at: 2018-03-05 21:07:50
End at: 2018-03-05 21:08:20
Local clock offset: 0.764 ms
Remote clock offset: 0.228 ms

# Below is generated by plot.py at 2018-03-05 22:06:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.93 Mbit/s
95th percentile per-packet one-way delay: 1073.523 ms
Loss rate: 17.57%
-- Flow 1:
Average throughput: 14.64 Mbit/s
95th percentile per-packet one-way delay: 1067.816 ms
Loss rate: 10.98%
-- Flow 2:
Average throughput: 3.53 Mbit/s
95th percentile per-packet one-way delay: 1077.785 ms
Loss rate: 16.12%
-- Flow 3:
Average throughput: 6.28 Mbit/s
95th percentile per-packet one-way delay: 1100.522 ms
Loss rate: 47.45%
```

## Run 1: Report of PCC — Data Link

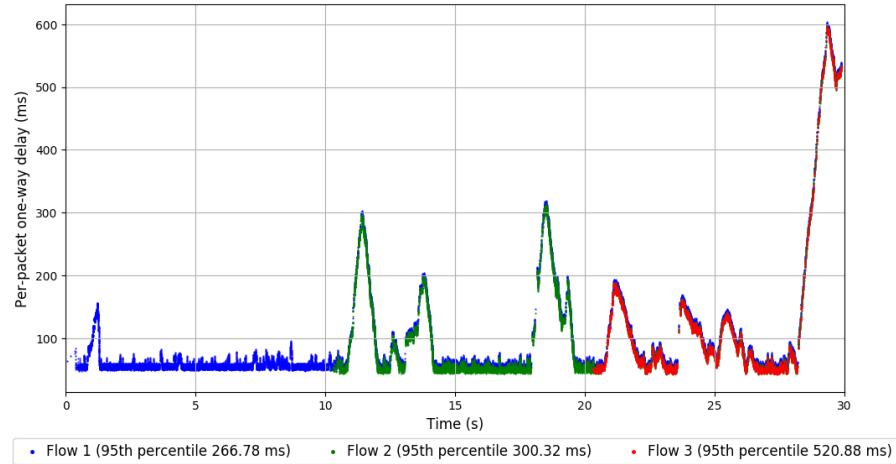
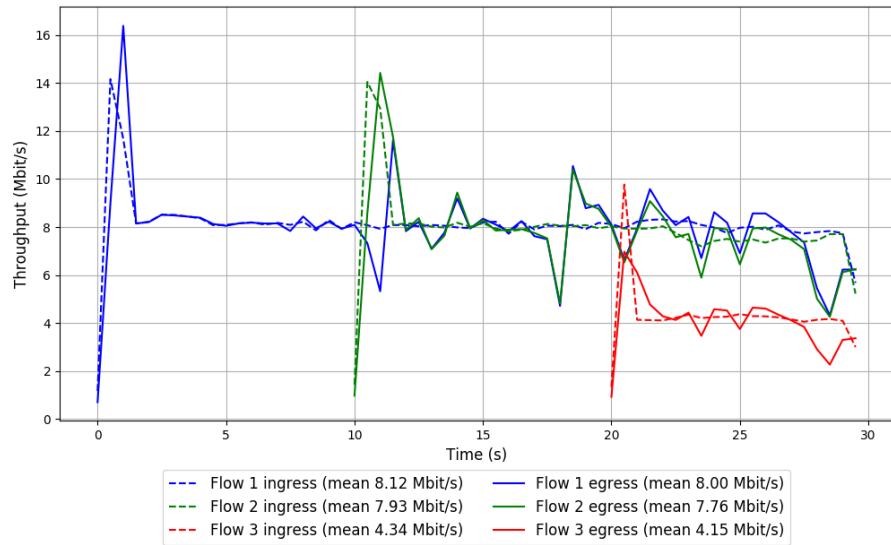


Run 2: Statistics of PCC

```
Start at: 2018-03-05 21:27:56
End at: 2018-03-05 21:28:26
Local clock offset: 2.191 ms
Remote clock offset: 5.59 ms

# Below is generated by plot.py at 2018-03-05 22:06:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.51 Mbit/s
95th percentile per-packet one-way delay: 294.358 ms
Loss rate: 2.25%
-- Flow 1:
Average throughput: 8.00 Mbit/s
95th percentile per-packet one-way delay: 266.778 ms
Loss rate: 1.68%
-- Flow 2:
Average throughput: 7.76 Mbit/s
95th percentile per-packet one-way delay: 300.324 ms
Loss rate: 2.40%
-- Flow 3:
Average throughput: 4.15 Mbit/s
95th percentile per-packet one-way delay: 520.885 ms
Loss rate: 4.92%
```

## Run 2: Report of PCC — Data Link

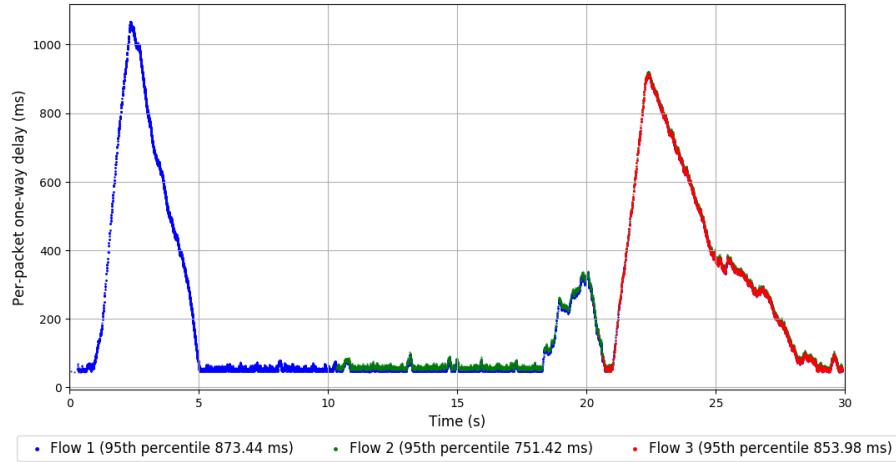
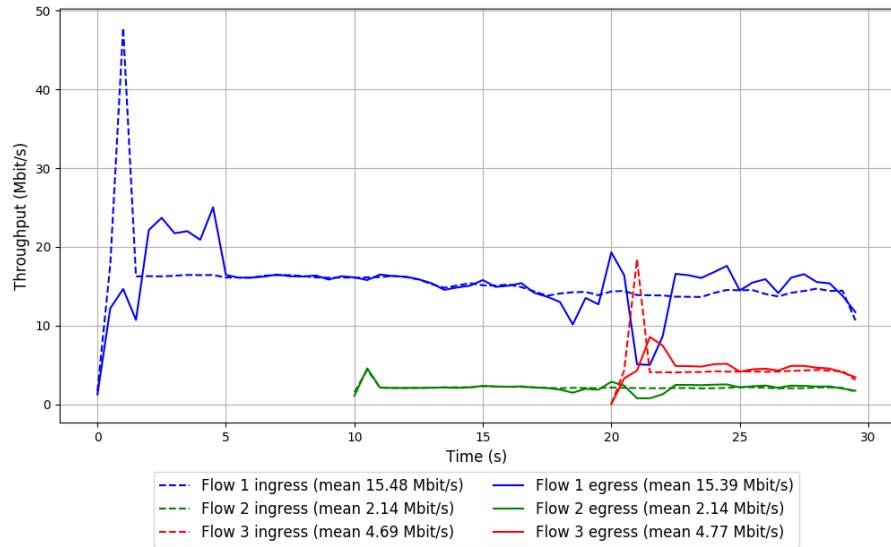


Run 3: Statistics of PCC

```
Start at: 2018-03-05 21:48:06
End at: 2018-03-05 21:48:36
Local clock offset: 1.771 ms
Remote clock offset: 1.633 ms

# Below is generated by plot.py at 2018-03-05 22:06:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.34 Mbit/s
95th percentile per-packet one-way delay: 862.058 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 15.39 Mbit/s
95th percentile per-packet one-way delay: 873.438 ms
Loss rate: 0.74%
-- Flow 2:
Average throughput: 2.14 Mbit/s
95th percentile per-packet one-way delay: 751.417 ms
Loss rate: 0.29%
-- Flow 3:
Average throughput: 4.77 Mbit/s
95th percentile per-packet one-way delay: 853.975 ms
Loss rate: 0.43%
```

### Run 3: Report of PCC — Data Link

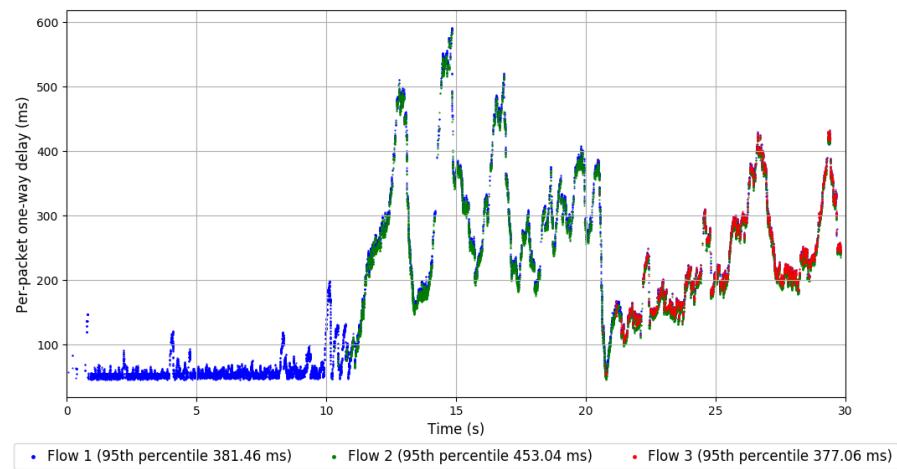
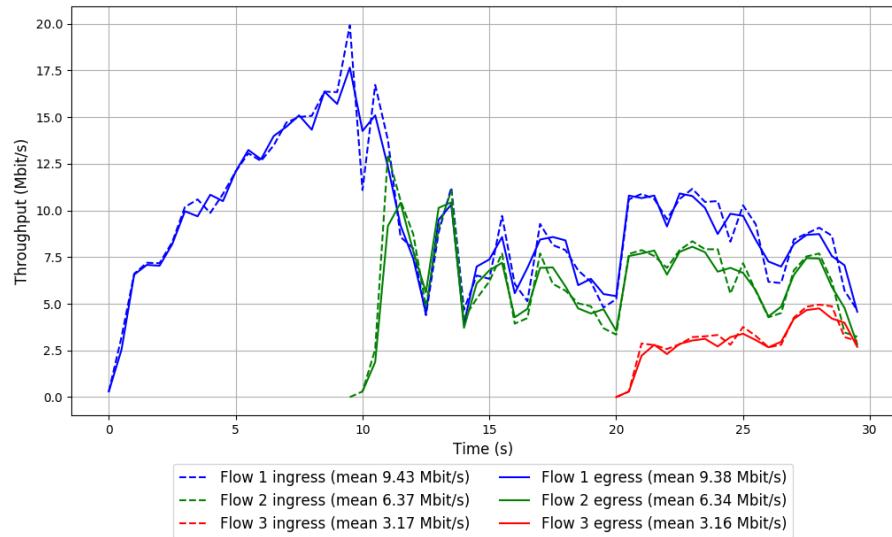


```
Run 1: Statistics of QUIC Cubic

Start at: 2018-03-05 21:11:11
End at: 2018-03-05 21:11:41
Local clock offset: 4.401 ms
Remote clock offset: 1.293 ms

# Below is generated by plot.py at 2018-03-05 22:06:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.56 Mbit/s
95th percentile per-packet one-way delay: 398.048 ms
Loss rate: 1.10%
-- Flow 1:
Average throughput: 9.38 Mbit/s
95th percentile per-packet one-way delay: 381.456 ms
Loss rate: 0.73%
-- Flow 2:
Average throughput: 6.34 Mbit/s
95th percentile per-packet one-way delay: 453.042 ms
Loss rate: 1.19%
-- Flow 3:
Average throughput: 3.16 Mbit/s
95th percentile per-packet one-way delay: 377.057 ms
Loss rate: 4.04%
```

Run 1: Report of QUIC Cubic — Data Link

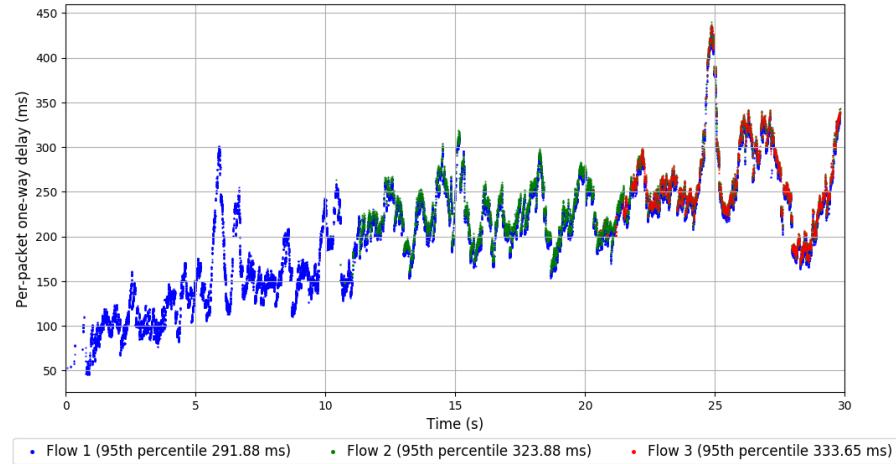
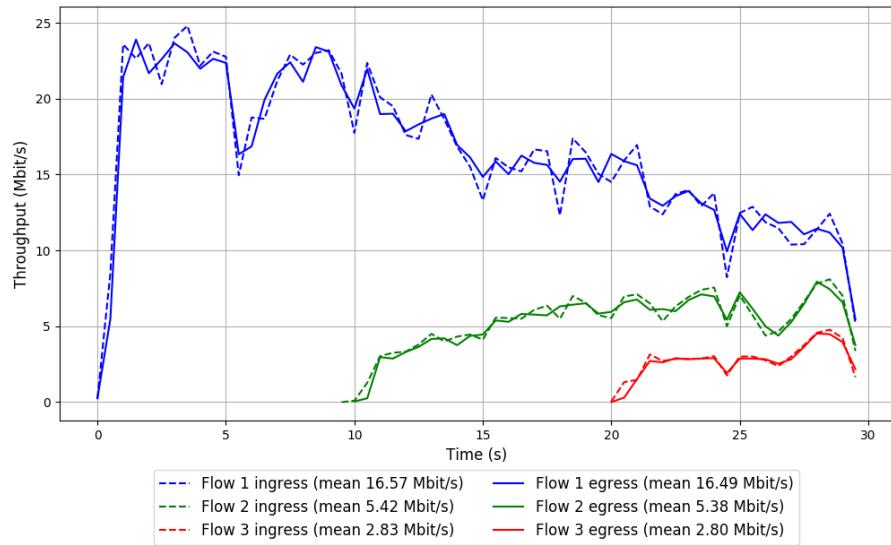


Run 2: Statistics of QUIC Cubic

```
Start at: 2018-03-05 21:31:19
End at: 2018-03-05 21:31:49
Local clock offset: 0.8 ms
Remote clock offset: 5.678 ms

# Below is generated by plot.py at 2018-03-05 22:06:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 20.93 Mbit/s
95th percentile per-packet one-way delay: 304.846 ms
Loss rate: 0.91%
-- Flow 1:
Average throughput: 16.49 Mbit/s
95th percentile per-packet one-way delay: 291.876 ms
Loss rate: 0.58%
-- Flow 2:
Average throughput: 5.38 Mbit/s
95th percentile per-packet one-way delay: 323.881 ms
Loss rate: 1.76%
-- Flow 3:
Average throughput: 2.80 Mbit/s
95th percentile per-packet one-way delay: 333.655 ms
Loss rate: 3.48%
```

## Run 2: Report of QUIC Cubic — Data Link

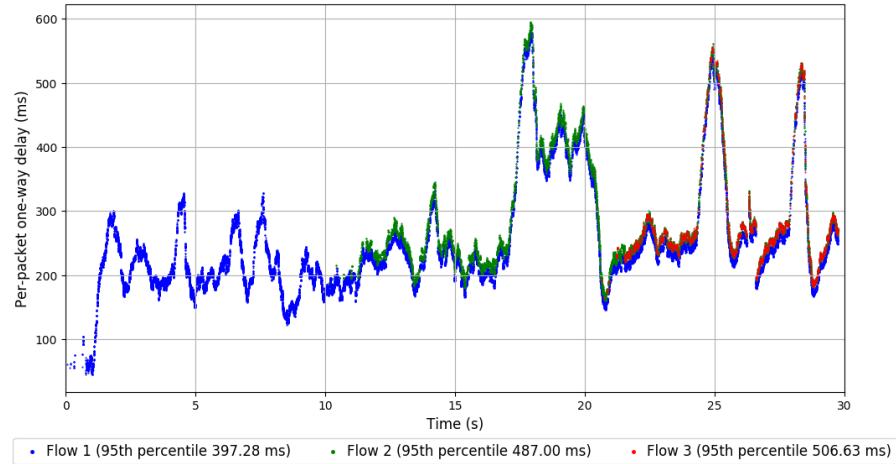
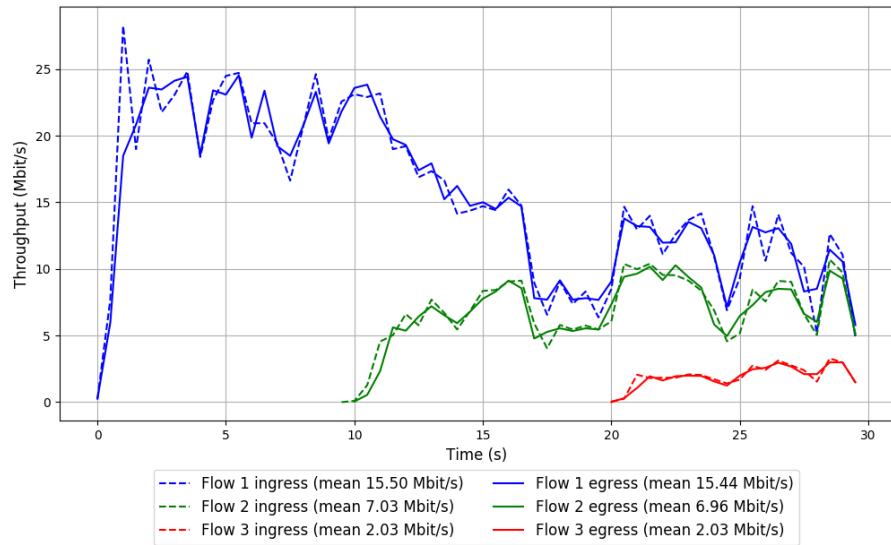


Run 3: Statistics of QUIC Cubic

```
Start at: 2018-03-05 21:51:27
End at: 2018-03-05 21:51:57
Local clock offset: 6.699 ms
Remote clock offset: 1.137 ms

# Below is generated by plot.py at 2018-03-05 22:06:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 20.68 Mbit/s
95th percentile per-packet one-way delay: 427.451 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 15.44 Mbit/s
95th percentile per-packet one-way delay: 397.278 ms
Loss rate: 0.56%
-- Flow 2:
Average throughput: 6.96 Mbit/s
95th percentile per-packet one-way delay: 487.001 ms
Loss rate: 1.95%
-- Flow 3:
Average throughput: 2.03 Mbit/s
95th percentile per-packet one-way delay: 506.629 ms
Loss rate: 3.78%
```

Run 3: Report of QUIC Cubic — Data Link

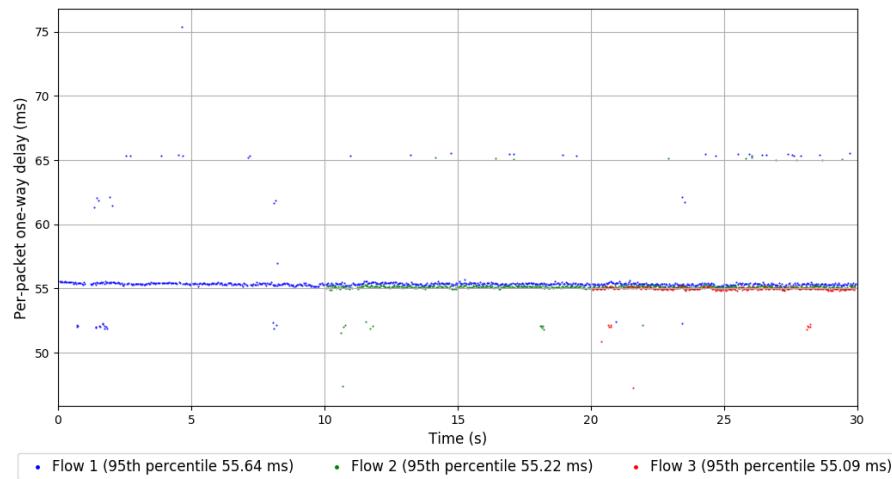
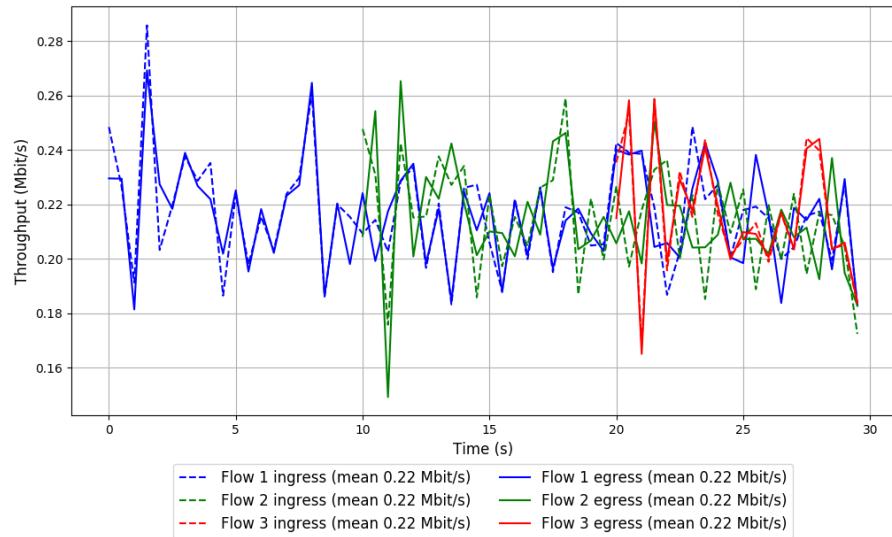


```
Run 1: Statistics of SCReAM

Start at: 2018-03-05 21:04:28
End at: 2018-03-05 21:04:58
Local clock offset: 0.645 ms
Remote clock offset: -0.21 ms

# Below is generated by plot.py at 2018-03-05 22:06:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 55.503 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 55.644 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 55.218 ms
Loss rate: 0.21%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 55.087 ms
Loss rate: 0.35%
```

Run 1: Report of SCReAM — Data Link

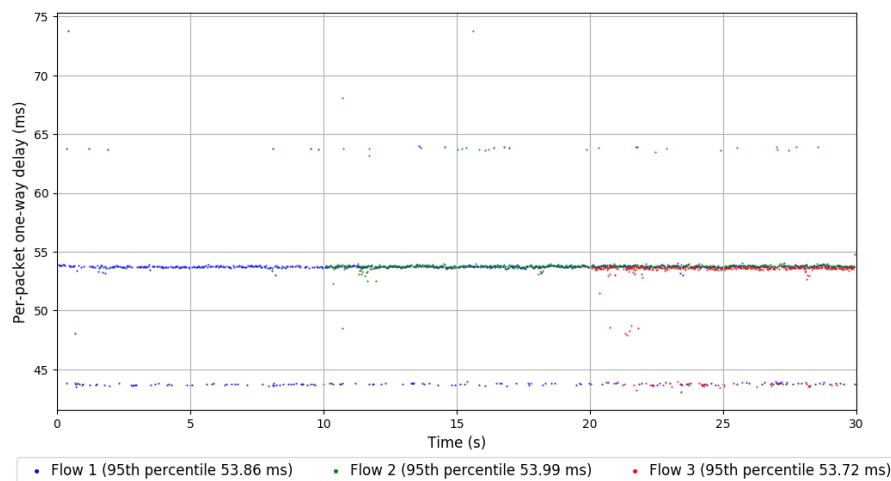
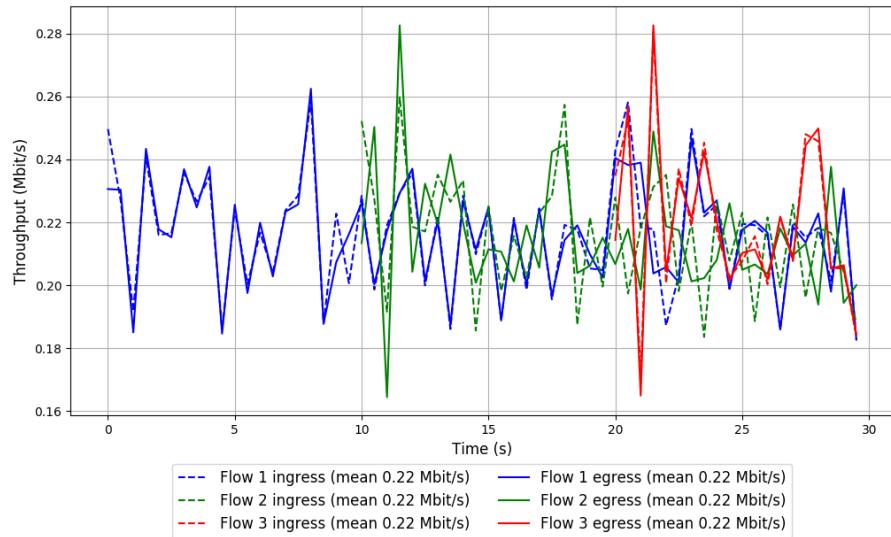


Run 2: Statistics of SCReAM

```
Start at: 2018-03-05 21:24:33
End at: 2018-03-05 21:25:03
Local clock offset: 1.393 ms
Remote clock offset: 5.155 ms

# Below is generated by plot.py at 2018-03-05 22:06:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 53.894 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 53.857 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 53.993 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 53.722 ms
Loss rate: 0.35%
```

## Run 2: Report of SCReAM — Data Link

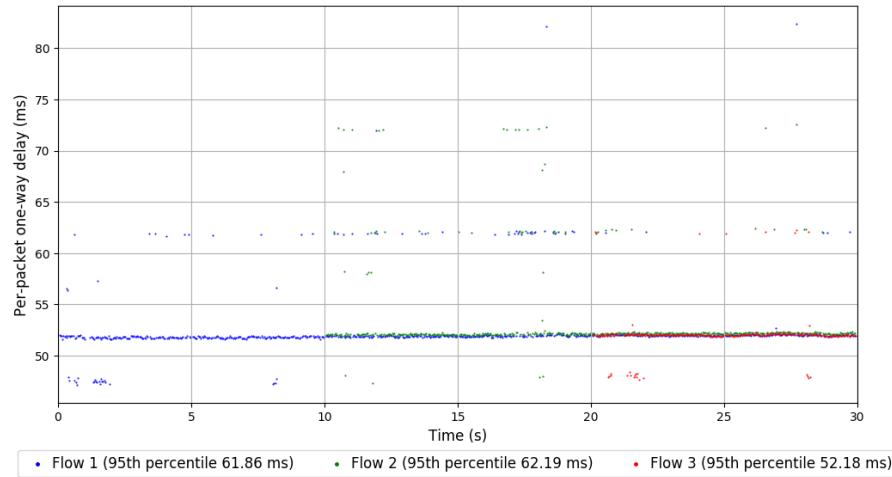
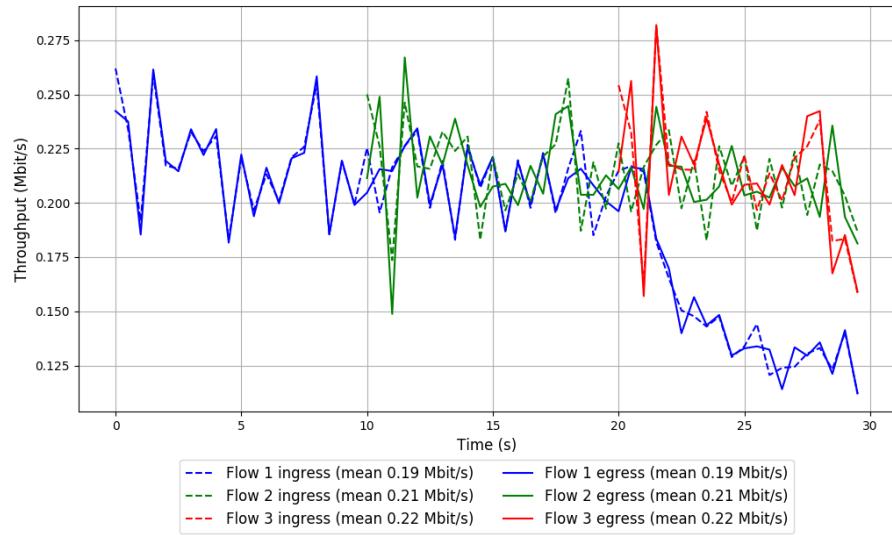


```
Run 3: Statistics of SCReAM
```

```
Start at: 2018-03-05 21:44:43
End at: 2018-03-05 21:45:13
Local clock offset: 3.031 ms
Remote clock offset: 1.107 ms

# Below is generated by plot.py at 2018-03-05 22:06:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.41 Mbit/s
95th percentile per-packet one-way delay: 61.942 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 61.856 ms
Loss rate: 0.24%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 62.187 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 52.177 ms
Loss rate: 0.67%
```

Run 3: Report of SCReAM — Data Link

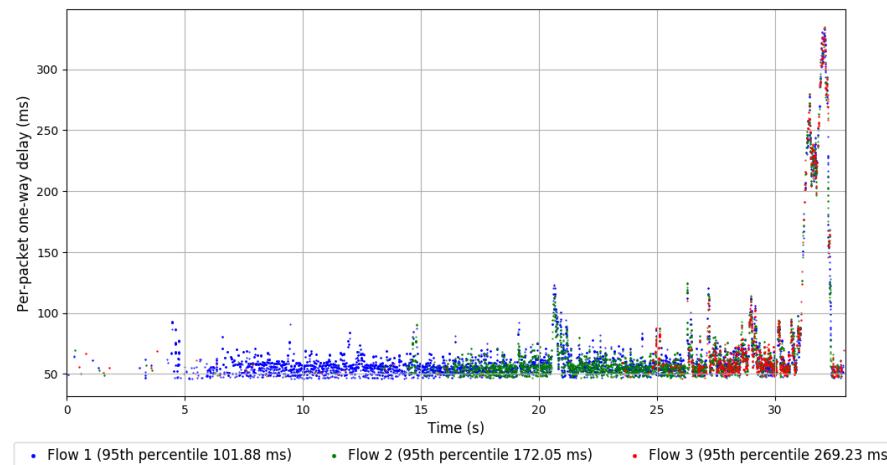
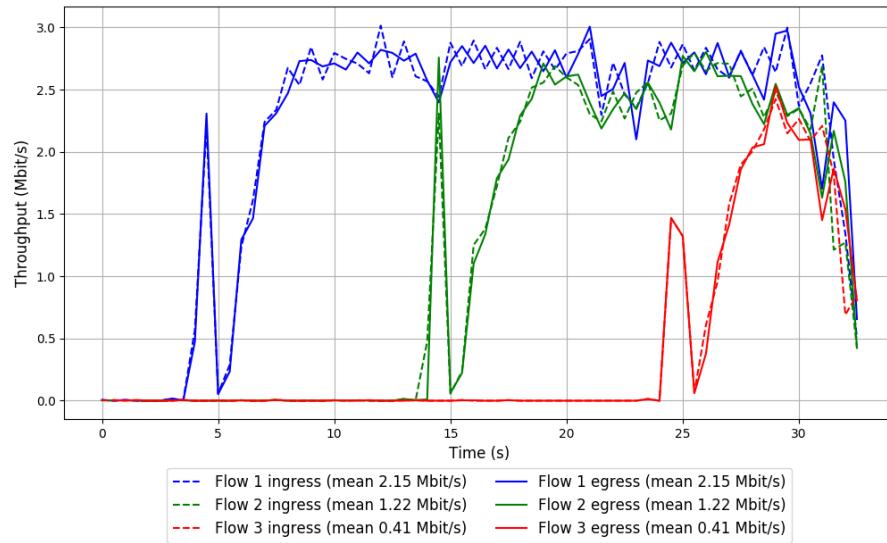


```
Run 1: Statistics of WebRTC media

Start at: 2018-03-05 21:13:25
End at: 2018-03-05 21:13:55
Local clock offset: 3.818 ms
Remote clock offset: 2.393 ms

# Below is generated by plot.py at 2018-03-05 22:06:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.76 Mbit/s
95th percentile per-packet one-way delay: 191.281 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 2.15 Mbit/s
95th percentile per-packet one-way delay: 101.882 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.22 Mbit/s
95th percentile per-packet one-way delay: 172.054 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.41 Mbit/s
95th percentile per-packet one-way delay: 269.234 ms
Loss rate: 0.92%
```

### Run 1: Report of WebRTC media — Data Link

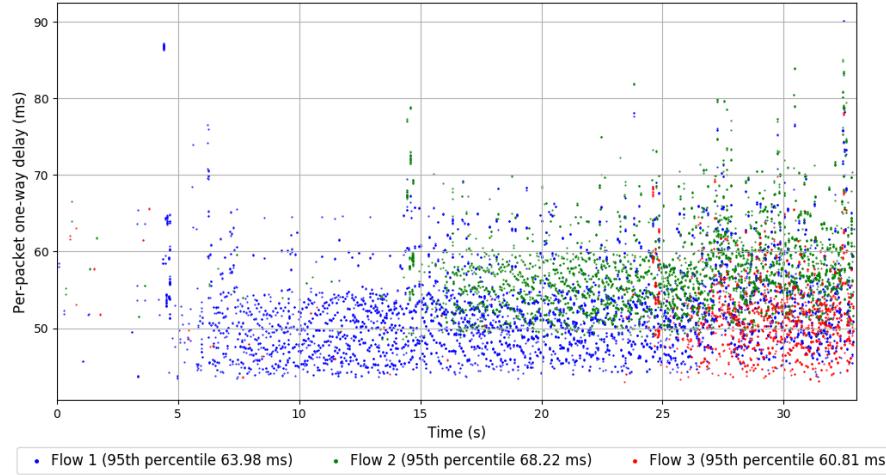
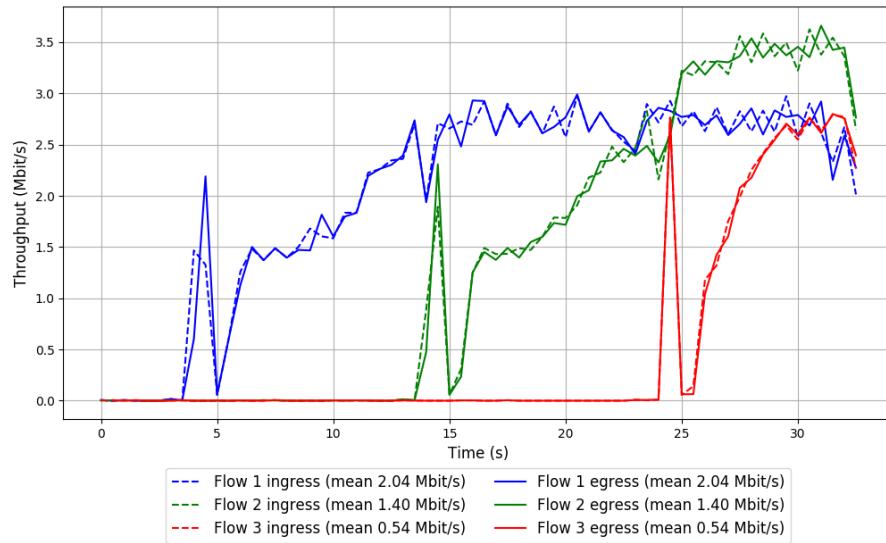


```
Run 2: Statistics of WebRTC media

Start at: 2018-03-05 21:33:36
End at: 2018-03-05 21:34:06
Local clock offset: 1.746 ms
Remote clock offset: 4.559 ms

# Below is generated by plot.py at 2018-03-05 22:06:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.96 Mbit/s
95th percentile per-packet one-way delay: 65.239 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 2.04 Mbit/s
95th percentile per-packet one-way delay: 63.981 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 1.40 Mbit/s
95th percentile per-packet one-way delay: 68.220 ms
Loss rate: 0.28%
-- Flow 3:
Average throughput: 0.54 Mbit/s
95th percentile per-packet one-way delay: 60.809 ms
Loss rate: 0.33%
```

Run 2: Report of WebRTC media — Data Link

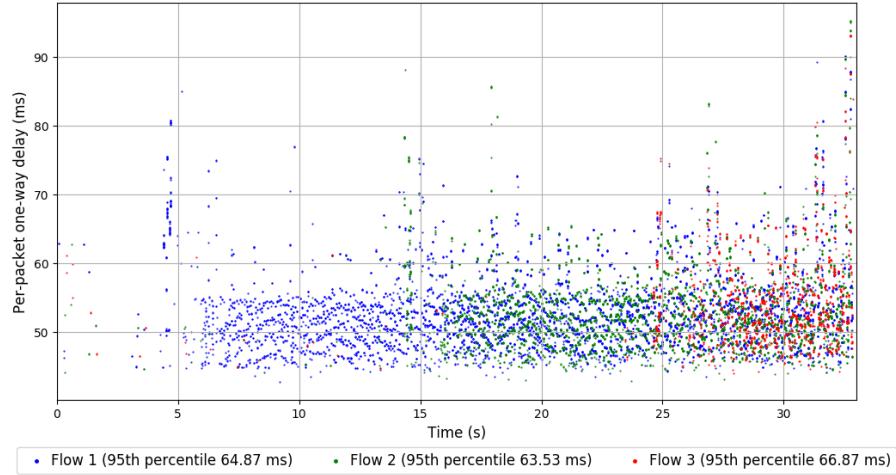
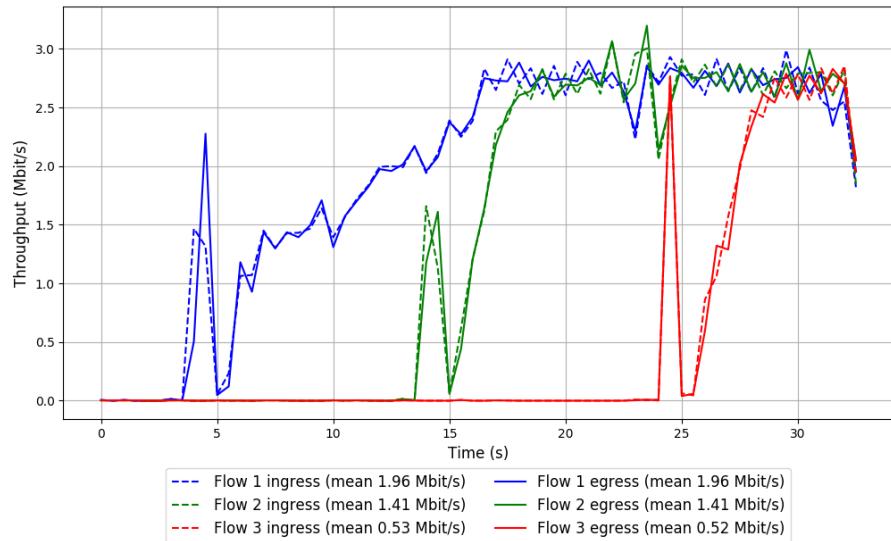


```
Run 3: Statistics of WebRTC media

Start at: 2018-03-05 21:53:41
End at: 2018-03-05 21:54:11
Local clock offset: 5.123 ms
Remote clock offset: 1.494 ms

# Below is generated by plot.py at 2018-03-05 22:06:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.88 Mbit/s
95th percentile per-packet one-way delay: 64.800 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 1.96 Mbit/s
95th percentile per-packet one-way delay: 64.866 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 1.41 Mbit/s
95th percentile per-packet one-way delay: 63.530 ms
Loss rate: 0.16%
-- Flow 3:
Average throughput: 0.52 Mbit/s
95th percentile per-packet one-way delay: 66.869 ms
Loss rate: 0.74%
```

Run 3: Report of WebRTC media — Data Link

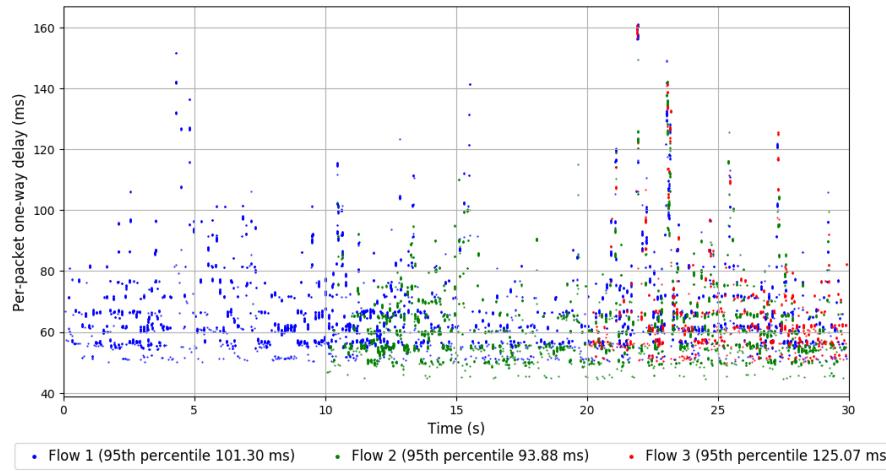
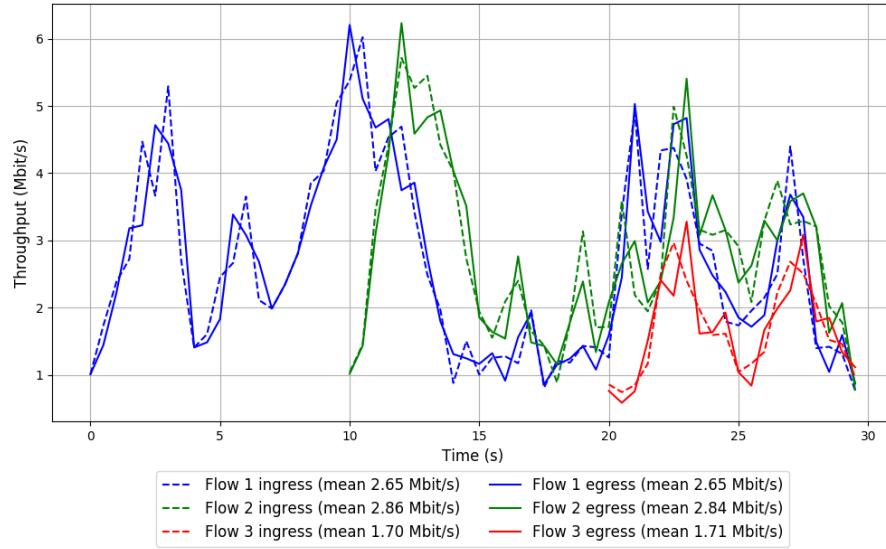


Run 1: Statistics of Sprout

```
Start at: 2018-03-05 21:17:51
End at: 2018-03-05 21:18:21
Local clock offset: 0.095 ms
Remote clock offset: 3.362 ms

# Below is generated by plot.py at 2018-03-05 22:06:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 5.10 Mbit/s
95th percentile per-packet one-way delay: 101.353 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 2.65 Mbit/s
95th percentile per-packet one-way delay: 101.304 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 2.84 Mbit/s
95th percentile per-packet one-way delay: 93.883 ms
Loss rate: 1.04%
-- Flow 3:
Average throughput: 1.71 Mbit/s
95th percentile per-packet one-way delay: 125.072 ms
Loss rate: 0.00%
```

## Run 1: Report of Sprout — Data Link

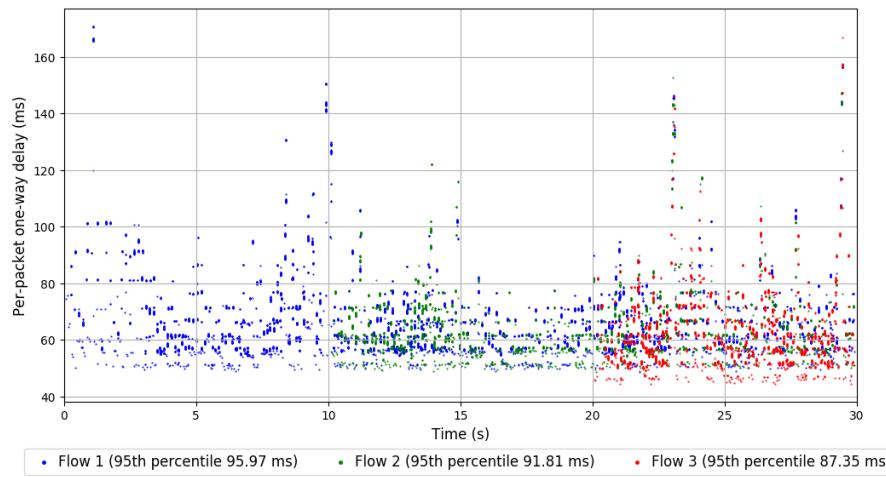
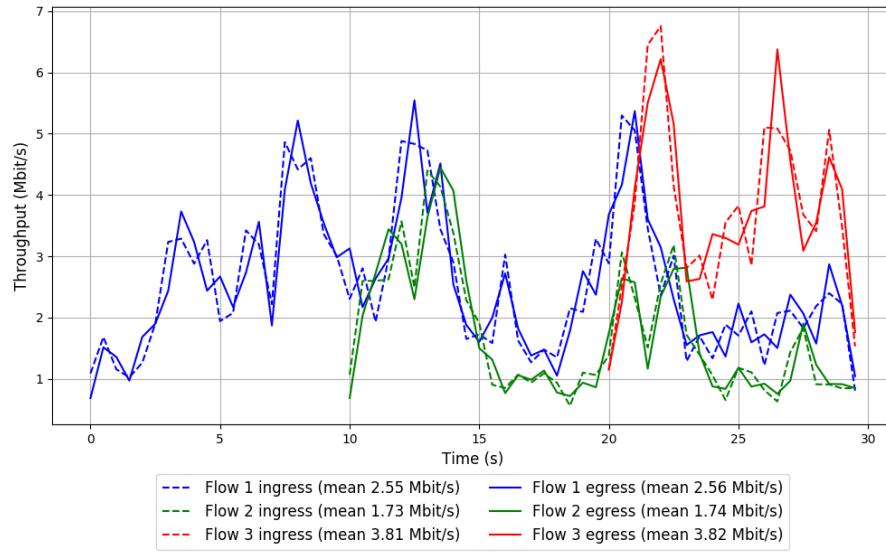


Run 2: Statistics of Sprout

```
Start at: 2018-03-05 21:38:02
End at: 2018-03-05 21:38:32
Local clock offset: 1.906 ms
Remote clock offset: 2.981 ms

# Below is generated by plot.py at 2018-03-05 22:06:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.97 Mbit/s
95th percentile per-packet one-way delay: 93.600 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 2.56 Mbit/s
95th percentile per-packet one-way delay: 95.975 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.74 Mbit/s
95th percentile per-packet one-way delay: 91.814 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 3.82 Mbit/s
95th percentile per-packet one-way delay: 87.353 ms
Loss rate: 0.27%
```

## Run 2: Report of Sprout — Data Link

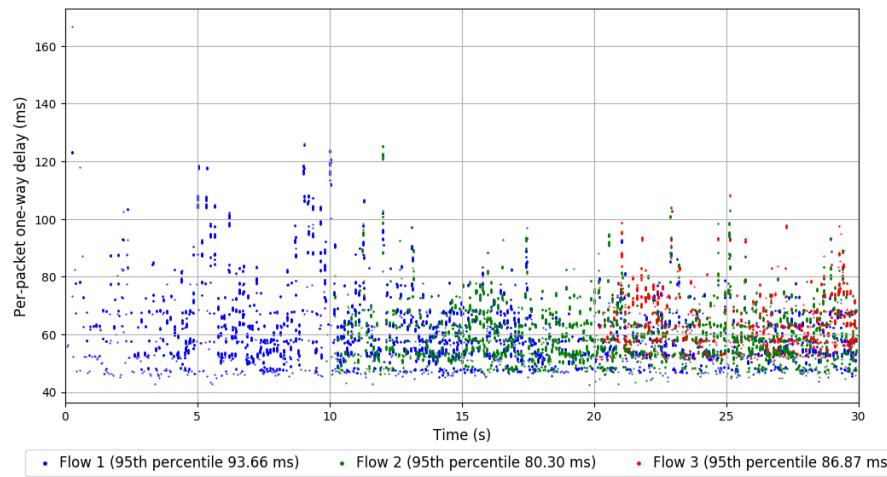
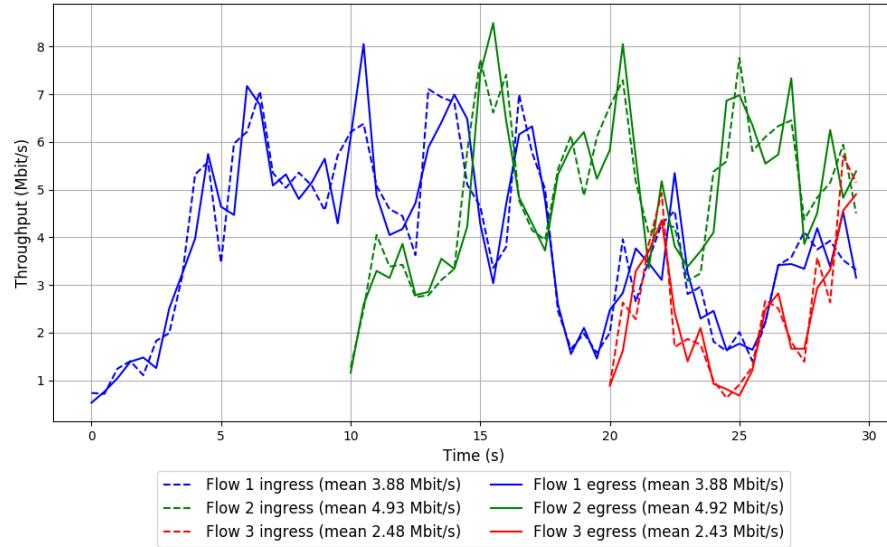


Run 3: Statistics of Sprout

```
Start at: 2018-03-05 21:58:06
End at: 2018-03-05 21:58:36
Local clock offset: 3.313 ms
Remote clock offset: 1.453 ms

# Below is generated by plot.py at 2018-03-05 22:06:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.95 Mbit/s
95th percentile per-packet one-way delay: 88.127 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 3.88 Mbit/s
95th percentile per-packet one-way delay: 93.657 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 4.92 Mbit/s
95th percentile per-packet one-way delay: 80.299 ms
Loss rate: 0.24%
-- Flow 3:
Average throughput: 2.43 Mbit/s
95th percentile per-packet one-way delay: 86.867 ms
Loss rate: 2.84%
```

### Run 3: Report of Sprout — Data Link

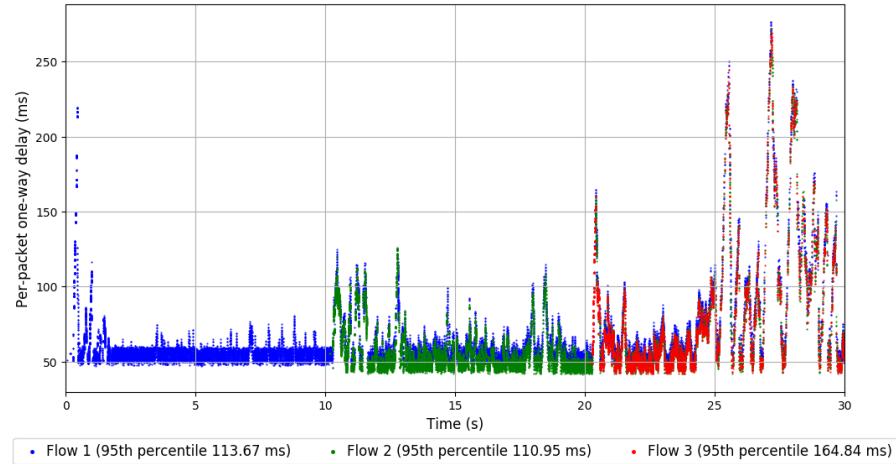
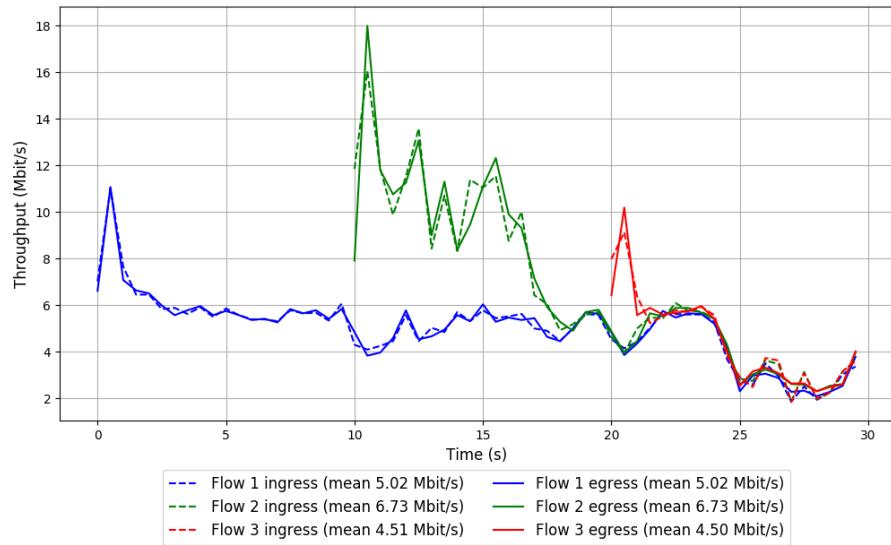


Run 1: Statistics of TaoVA-100x

```
Start at: 2018-03-05 21:05:34
End at: 2018-03-05 21:06:04
Local clock offset: 1.877 ms
Remote clock offset: -1.099 ms

# Below is generated by plot.py at 2018-03-05 22:06:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 10.99 Mbit/s
95th percentile per-packet one-way delay: 121.868 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 5.02 Mbit/s
95th percentile per-packet one-way delay: 113.666 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 6.73 Mbit/s
95th percentile per-packet one-way delay: 110.954 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 4.50 Mbit/s
95th percentile per-packet one-way delay: 164.845 ms
Loss rate: 0.52%
```

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

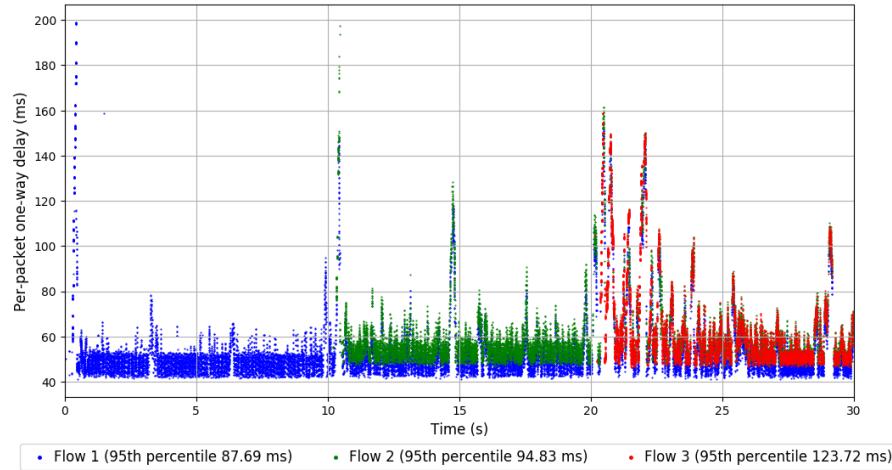
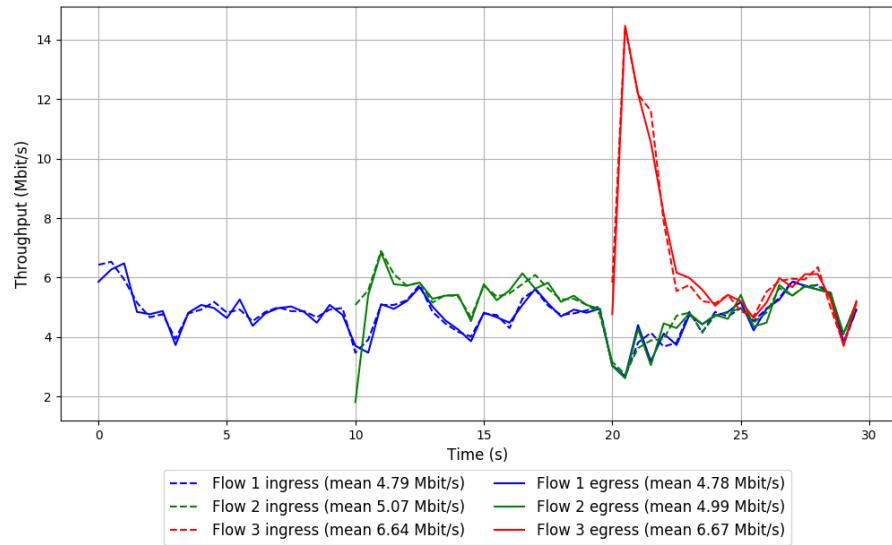


Run 2: Statistics of TaoVA-100x

```
Start at: 2018-03-05 21:25:39
End at: 2018-03-05 21:26:09
Local clock offset: 3.815 ms
Remote clock offset: 5.662 ms

# Below is generated by plot.py at 2018-03-05 22:06:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 10.29 Mbit/s
95th percentile per-packet one-way delay: 101.878 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 4.78 Mbit/s
95th percentile per-packet one-way delay: 87.685 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 4.99 Mbit/s
95th percentile per-packet one-way delay: 94.825 ms
Loss rate: 1.85%
-- Flow 3:
Average throughput: 6.67 Mbit/s
95th percentile per-packet one-way delay: 123.719 ms
Loss rate: 0.49%
```

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

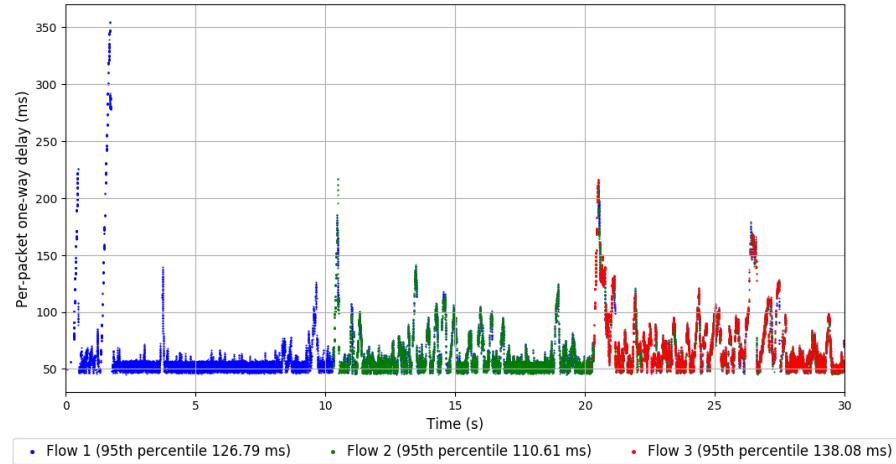
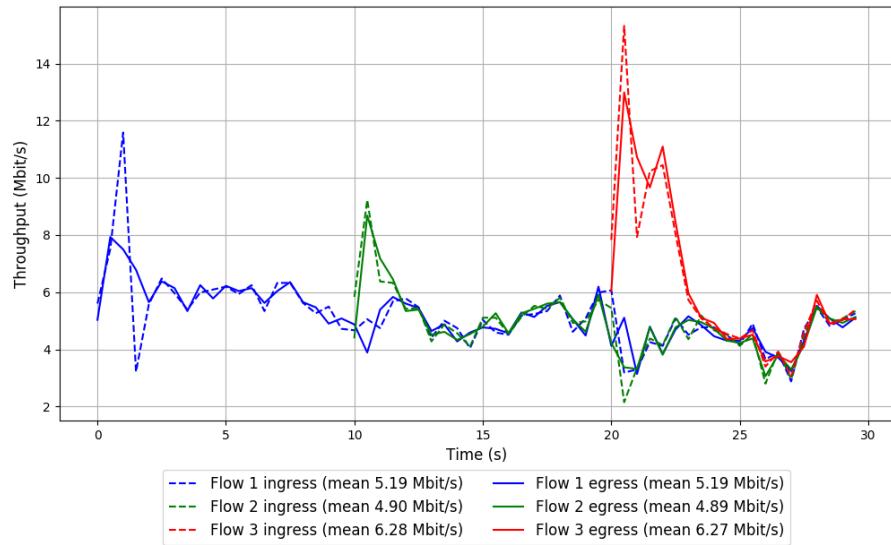


Run 3: Statistics of TaoVA-100x

```
Start at: 2018-03-05 21:45:49
End at: 2018-03-05 21:46:19
Local clock offset: 3.815 ms
Remote clock offset: 0.334 ms

# Below is generated by plot.py at 2018-03-05 22:06:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 10.51 Mbit/s
95th percentile per-packet one-way delay: 128.042 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 5.19 Mbit/s
95th percentile per-packet one-way delay: 126.789 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 4.89 Mbit/s
95th percentile per-packet one-way delay: 110.609 ms
Loss rate: 0.66%
-- Flow 3:
Average throughput: 6.27 Mbit/s
95th percentile per-packet one-way delay: 138.079 ms
Loss rate: 0.64%
```

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

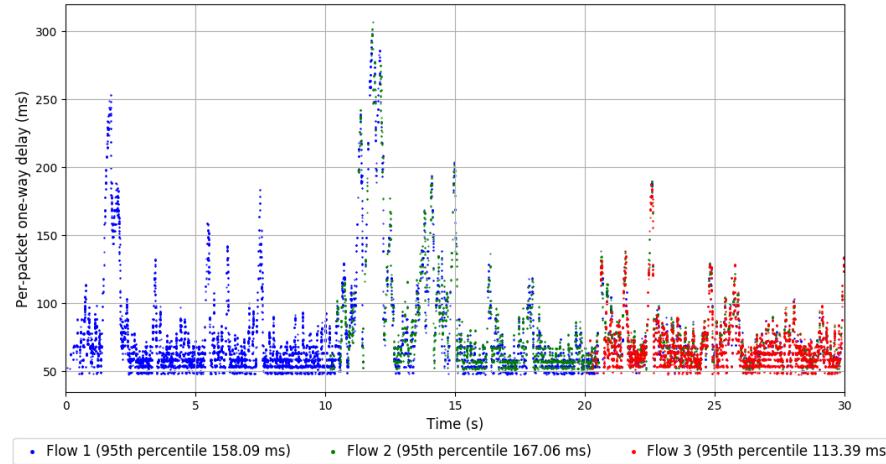
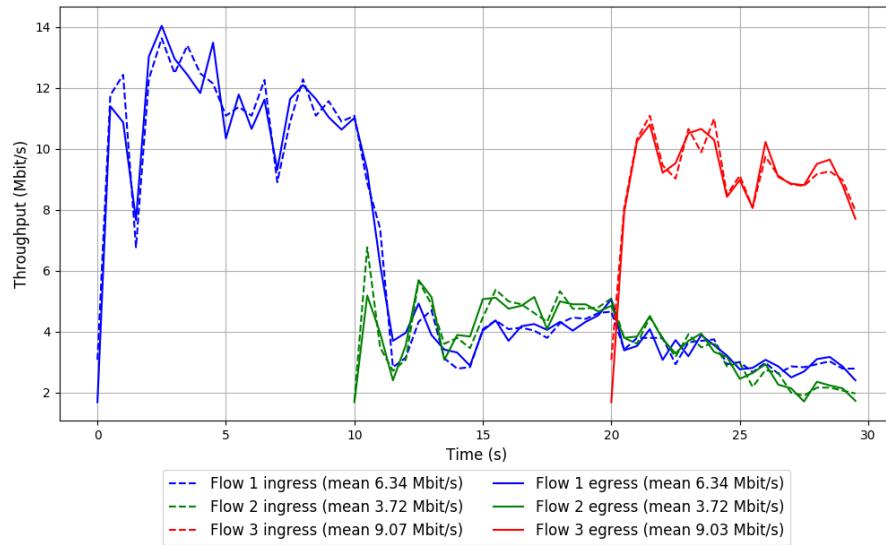


Run 1: Statistics of TCP Vegas

```
Start at: 2018-03-05 21:15:38
End at: 2018-03-05 21:16:08
Local clock offset: 3.296 ms
Remote clock offset: 3.081 ms

# Below is generated by plot.py at 2018-03-05 22:06:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 11.80 Mbit/s
95th percentile per-packet one-way delay: 141.401 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 6.34 Mbit/s
95th percentile per-packet one-way delay: 158.088 ms
Loss rate: 0.18%
-- Flow 2:
Average throughput: 3.72 Mbit/s
95th percentile per-packet one-way delay: 167.065 ms
Loss rate: 0.32%
-- Flow 3:
Average throughput: 9.03 Mbit/s
95th percentile per-packet one-way delay: 113.390 ms
Loss rate: 0.64%
```

## Run 1: Report of TCP Vegas — Data Link

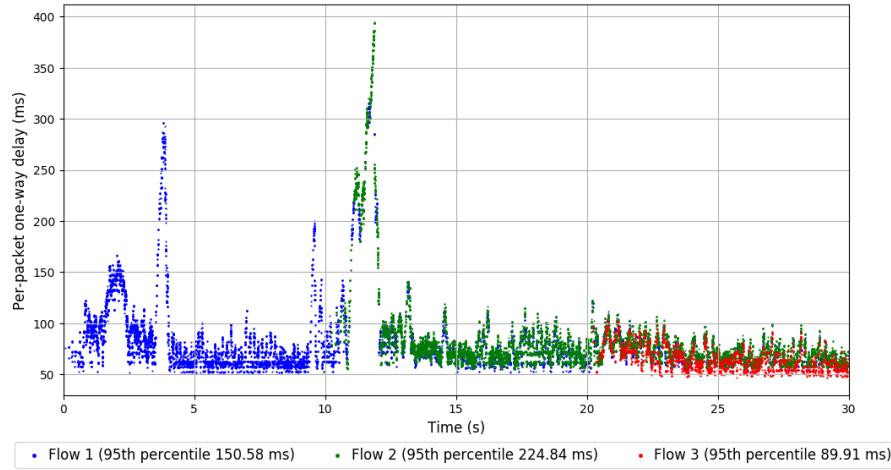
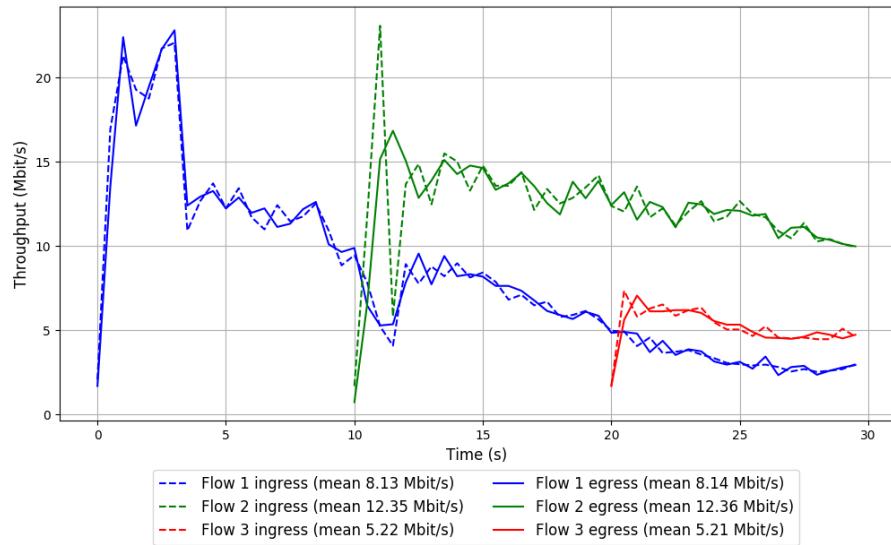


Run 2: Statistics of TCP Vegas

```
Start at: 2018-03-05 21:35:48
End at: 2018-03-05 21:36:18
Local clock offset: -0.155 ms
Remote clock offset: 4.191 ms

# Below is generated by plot.py at 2018-03-05 22:06:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.09 Mbit/s
95th percentile per-packet one-way delay: 158.917 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 8.14 Mbit/s
95th percentile per-packet one-way delay: 150.576 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 12.36 Mbit/s
95th percentile per-packet one-way delay: 224.835 ms
Loss rate: 0.27%
-- Flow 3:
Average throughput: 5.21 Mbit/s
95th percentile per-packet one-way delay: 89.914 ms
Loss rate: 0.58%
```

## Run 2: Report of TCP Vegas — Data Link

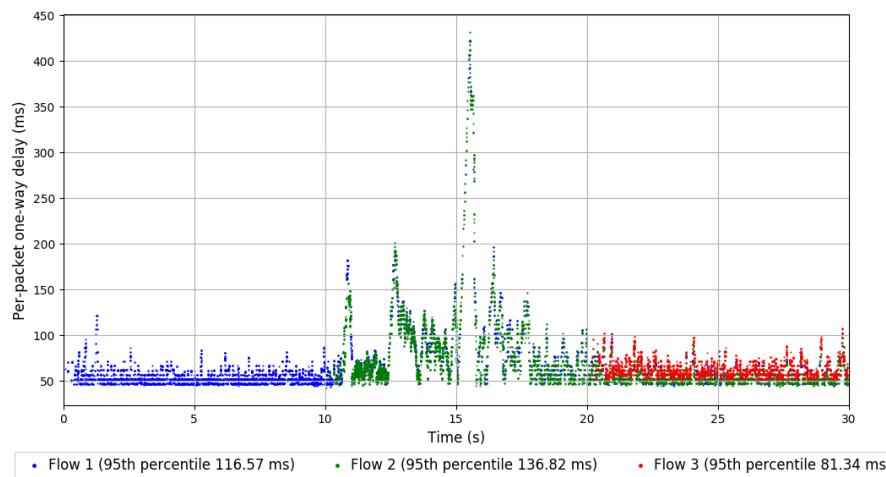
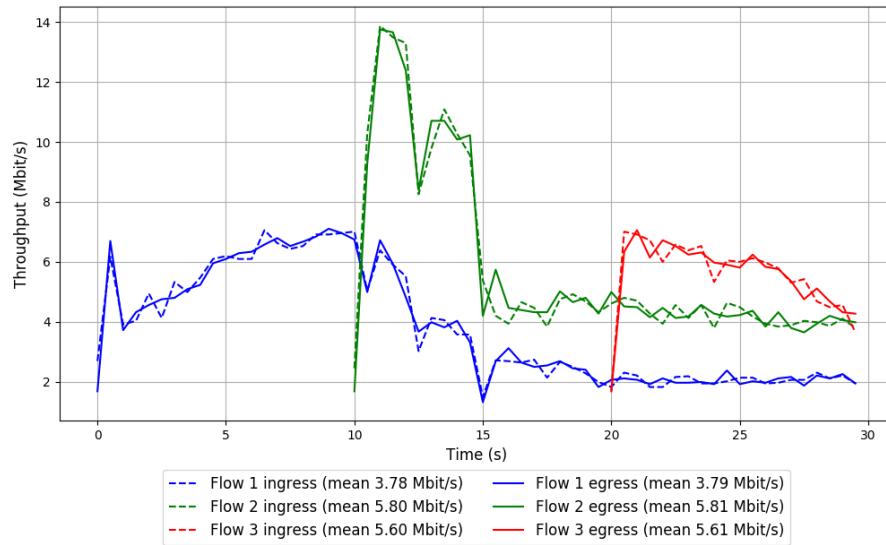


Run 3: Statistics of TCP Vegas

```
Start at: 2018-03-05 21:55:53
End at: 2018-03-05 21:56:23
Local clock offset: 3.763 ms
Remote clock offset: 0.662 ms

# Below is generated by plot.py at 2018-03-05 22:06:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 9.50 Mbit/s
95th percentile per-packet one-way delay: 121.083 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 3.79 Mbit/s
95th percentile per-packet one-way delay: 116.568 ms
Loss rate: 0.21%
-- Flow 2:
Average throughput: 5.81 Mbit/s
95th percentile per-packet one-way delay: 136.824 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 5.61 Mbit/s
95th percentile per-packet one-way delay: 81.337 ms
Loss rate: 0.13%
```

### Run 3: Report of TCP Vegas — Data Link

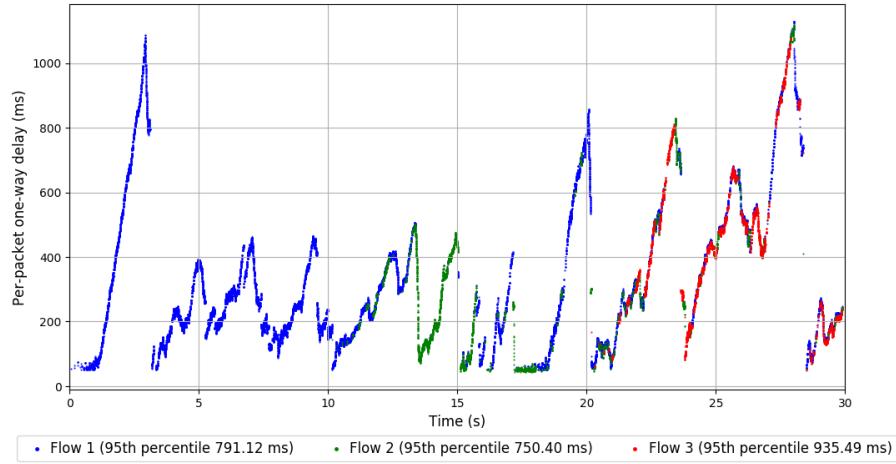
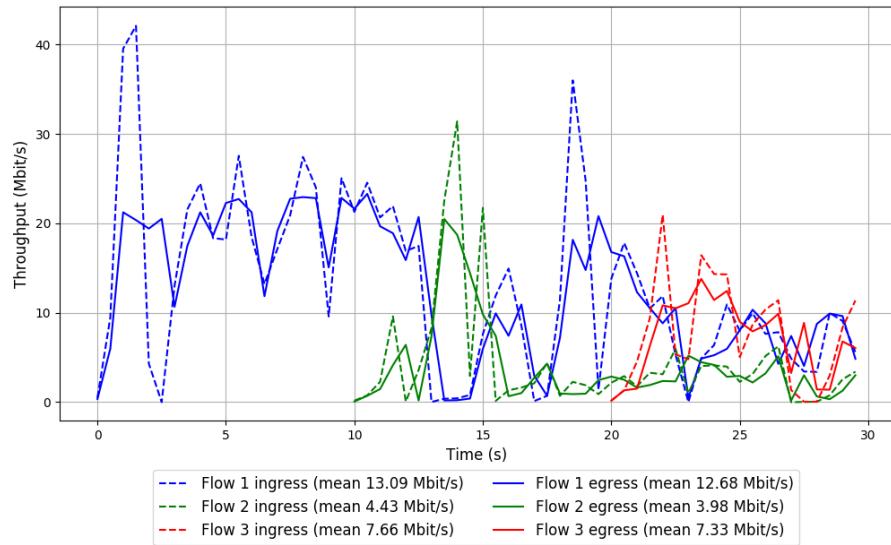


Run 1: Statistics of Verus

```
Start at: 2018-03-05 21:23:25
End at: 2018-03-05 21:23:55
Local clock offset: 0.783 ms
Remote clock offset: 4.107 ms

# Below is generated by plot.py at 2018-03-05 22:06:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 17.71 Mbit/s
95th percentile per-packet one-way delay: 804.622 ms
Loss rate: 4.63%
-- Flow 1:
Average throughput: 12.68 Mbit/s
95th percentile per-packet one-way delay: 791.125 ms
Loss rate: 3.25%
-- Flow 2:
Average throughput: 3.98 Mbit/s
95th percentile per-packet one-way delay: 750.401 ms
Loss rate: 9.90%
-- Flow 3:
Average throughput: 7.33 Mbit/s
95th percentile per-packet one-way delay: 935.494 ms
Loss rate: 5.74%
```

## Run 1: Report of Verus — Data Link

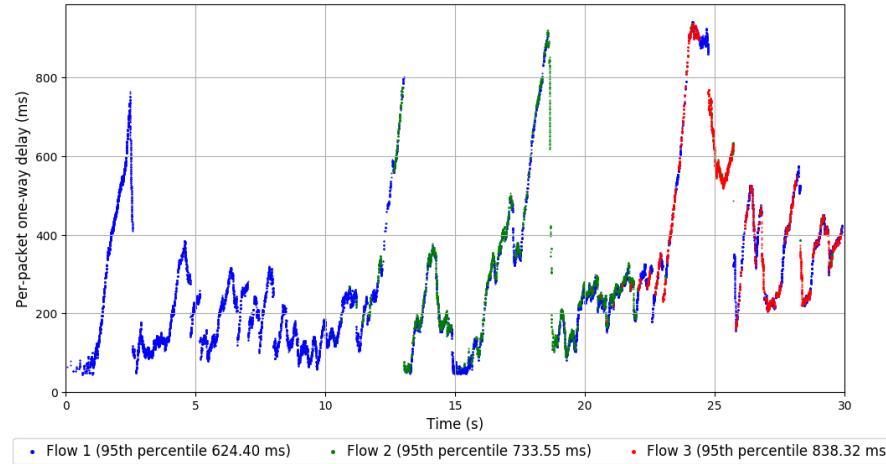
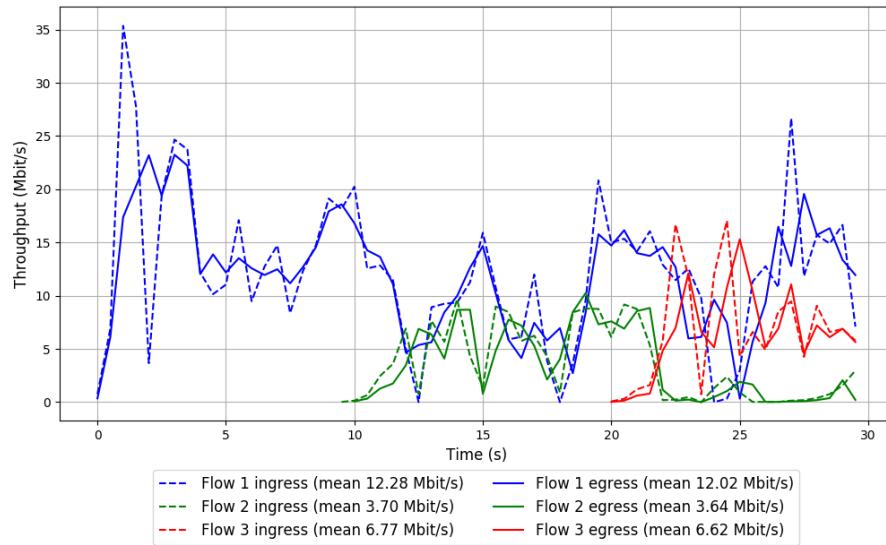


Run 2: Statistics of Verus

```
Start at: 2018-03-05 21:43:35
End at: 2018-03-05 21:44:05
Local clock offset: 0.83 ms
Remote clock offset: 1.933 ms

# Below is generated by plot.py at 2018-03-05 22:06:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.52 Mbit/s
95th percentile per-packet one-way delay: 706.406 ms
Loss rate: 2.33%
-- Flow 1:
Average throughput: 12.02 Mbit/s
95th percentile per-packet one-way delay: 624.404 ms
Loss rate: 1.85%
-- Flow 2:
Average throughput: 3.64 Mbit/s
95th percentile per-packet one-way delay: 733.549 ms
Loss rate: 2.59%
-- Flow 3:
Average throughput: 6.62 Mbit/s
95th percentile per-packet one-way delay: 838.320 ms
Loss rate: 4.66%
```

## Run 2: Report of Verus — Data Link

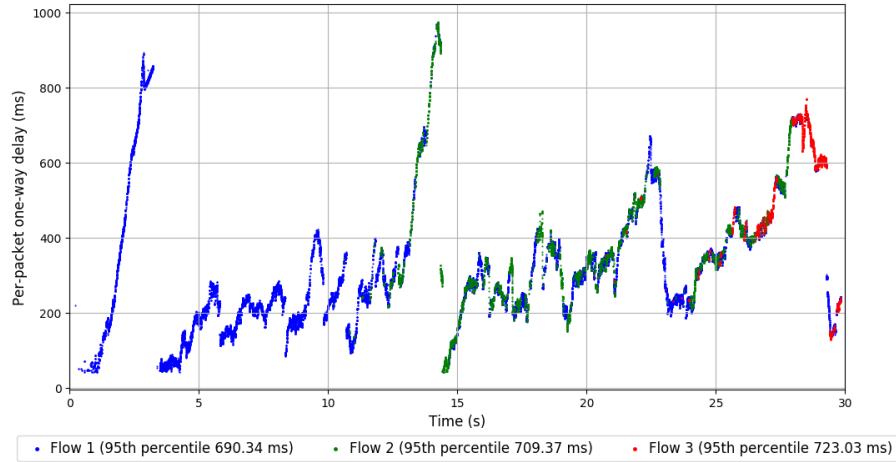
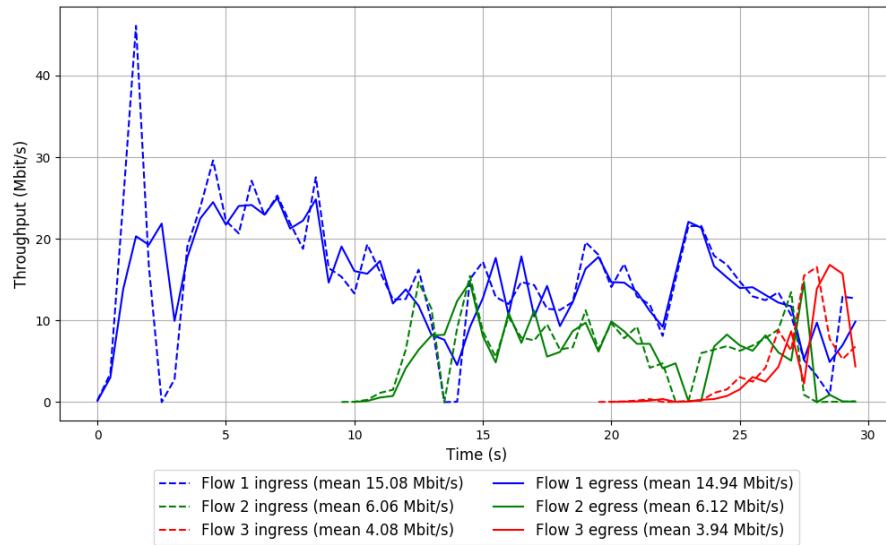


Run 3: Statistics of Verus

```
Start at: 2018-03-05 22:03:40
End at: 2018-03-05 22:04:10
Local clock offset: 5.275 ms
Remote clock offset: 1.665 ms

# Below is generated by plot.py at 2018-03-05 22:07:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 20.26 Mbit/s
95th percentile per-packet one-way delay: 710.796 ms
Loss rate: 1.65%
-- Flow 1:
Average throughput: 14.94 Mbit/s
95th percentile per-packet one-way delay: 690.341 ms
Loss rate: 1.61%
-- Flow 2:
Average throughput: 6.12 Mbit/s
95th percentile per-packet one-way delay: 709.370 ms
Loss rate: 0.22%
-- Flow 3:
Average throughput: 3.94 Mbit/s
95th percentile per-packet one-way delay: 723.031 ms
Loss rate: 6.37%
```

### Run 3: Report of Verus — Data Link

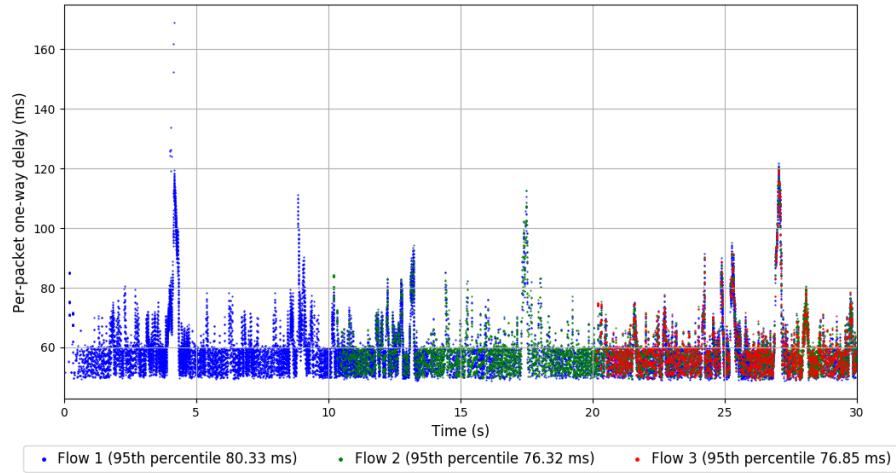
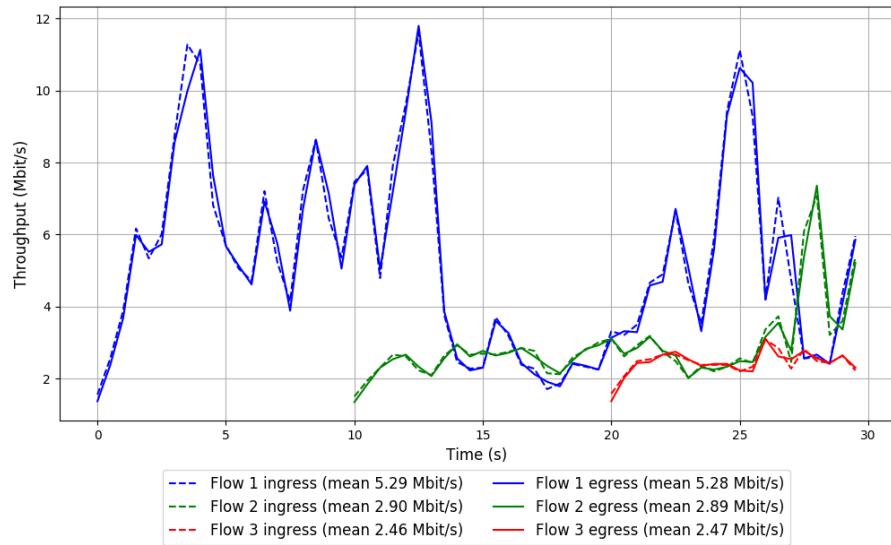


Run 1: Statistics of Copa

```
Start at: 2018-03-05 21:16:44
End at: 2018-03-05 21:17:14
Local clock offset: 0.635 ms
Remote clock offset: 3.262 ms

# Below is generated by plot.py at 2018-03-05 22:07:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.03 Mbit/s
95th percentile per-packet one-way delay: 79.047 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 5.28 Mbit/s
95th percentile per-packet one-way delay: 80.335 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 2.89 Mbit/s
95th percentile per-packet one-way delay: 76.322 ms
Loss rate: 0.58%
-- Flow 3:
Average throughput: 2.47 Mbit/s
95th percentile per-packet one-way delay: 76.854 ms
Loss rate: 0.42%
```

## Run 1: Report of Copa — Data Link

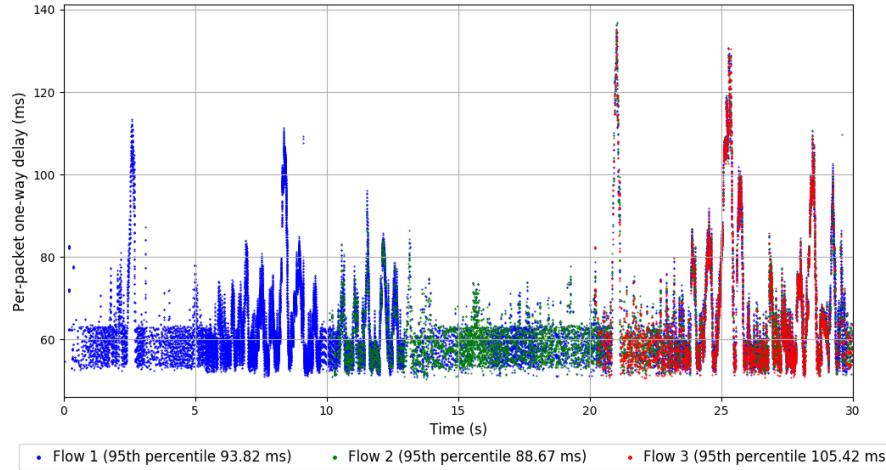
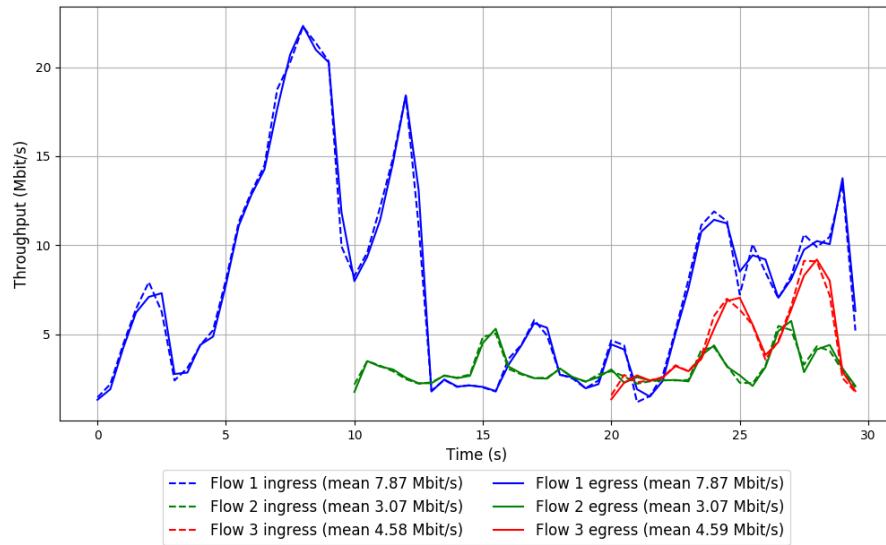


Run 2: Statistics of Copa

```
Start at: 2018-03-05 21:36:55
End at: 2018-03-05 21:37:25
Local clock offset: 0.475 ms
Remote clock offset: 4.483 ms

# Below is generated by plot.py at 2018-03-05 22:07:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 11.43 Mbit/s
95th percentile per-packet one-way delay: 95.400 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 7.87 Mbit/s
95th percentile per-packet one-way delay: 93.816 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 3.07 Mbit/s
95th percentile per-packet one-way delay: 88.670 ms
Loss rate: 0.21%
-- Flow 3:
Average throughput: 4.59 Mbit/s
95th percentile per-packet one-way delay: 105.422 ms
Loss rate: 0.20%
```

## Run 2: Report of Copa — Data Link

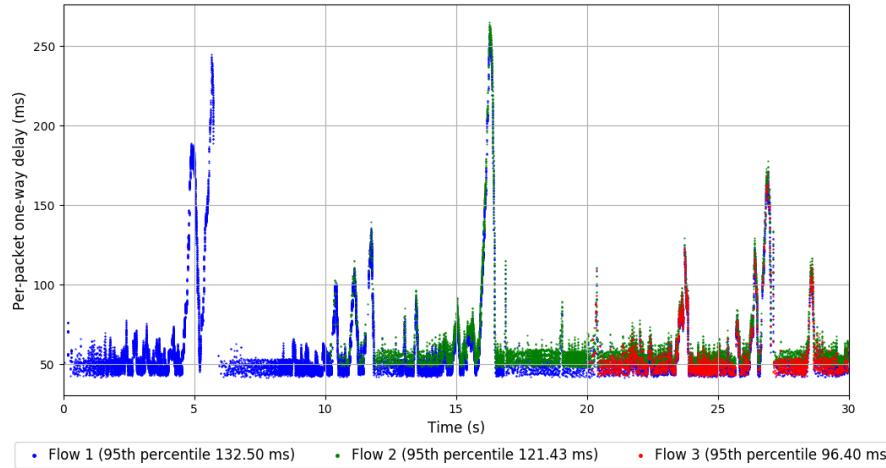
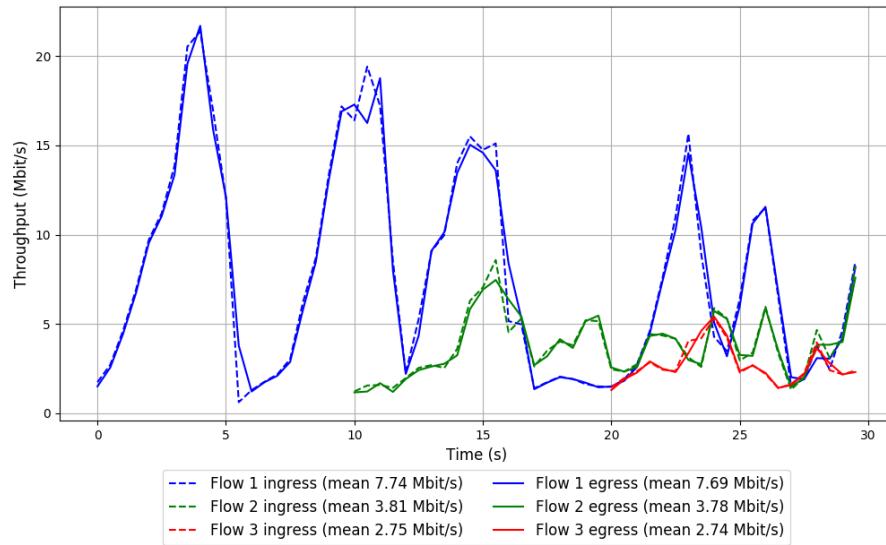


Run 3: Statistics of Copa

```
Start at: 2018-03-05 21:56:59
End at: 2018-03-05 21:57:29
Local clock offset: 3.94 ms
Remote clock offset: 1.374 ms

# Below is generated by plot.py at 2018-03-05 22:07:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 11.11 Mbit/s
95th percentile per-packet one-way delay: 124.180 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 7.69 Mbit/s
95th percentile per-packet one-way delay: 132.498 ms
Loss rate: 0.81%
-- Flow 2:
Average throughput: 3.78 Mbit/s
95th percentile per-packet one-way delay: 121.434 ms
Loss rate: 1.07%
-- Flow 3:
Average throughput: 2.74 Mbit/s
95th percentile per-packet one-way delay: 96.402 ms
Loss rate: 0.57%
```

### Run 3: Report of Copa — Data Link

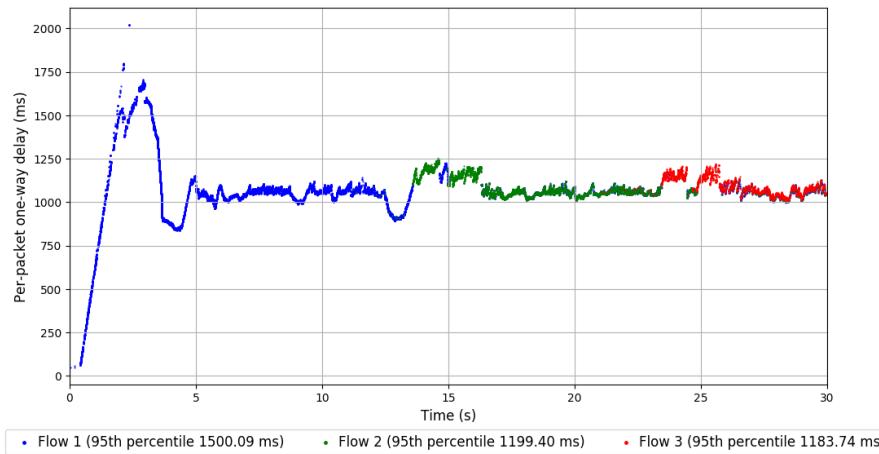
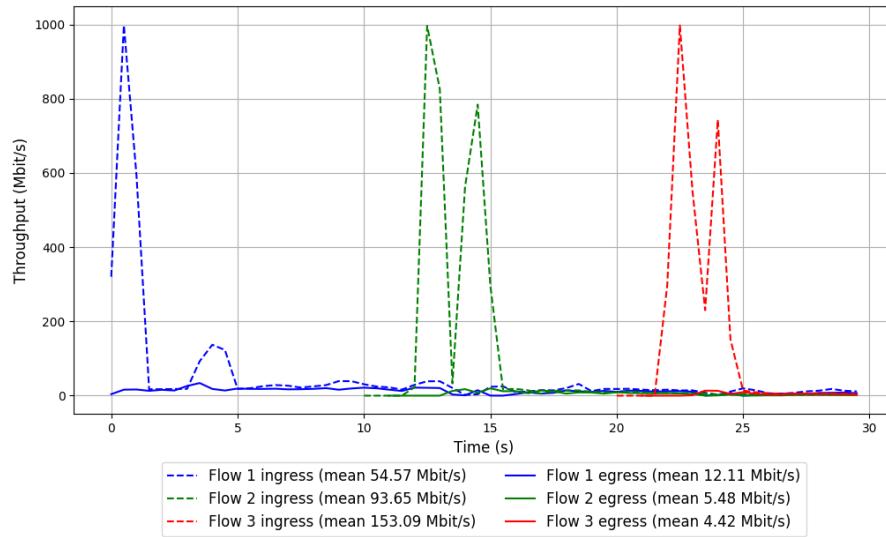


```
Run 1: Statistics of FillP

Start at: 2018-03-05 21:06:41
End at: 2018-03-05 21:07:11
Local clock offset: 2.946 ms
Remote clock offset: 0.105 ms

# Below is generated by plot.py at 2018-03-05 22:07:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.85 Mbit/s
95th percentile per-packet one-way delay: 1427.897 ms
Loss rate: 89.96%
-- Flow 1:
Average throughput: 12.11 Mbit/s
95th percentile per-packet one-way delay: 1500.092 ms
Loss rate: 77.85%
-- Flow 2:
Average throughput: 5.48 Mbit/s
95th percentile per-packet one-way delay: 1199.396 ms
Loss rate: 94.50%
-- Flow 3:
Average throughput: 4.42 Mbit/s
95th percentile per-packet one-way delay: 1183.737 ms
Loss rate: 97.42%
```

## Run 1: Report of FillP — Data Link

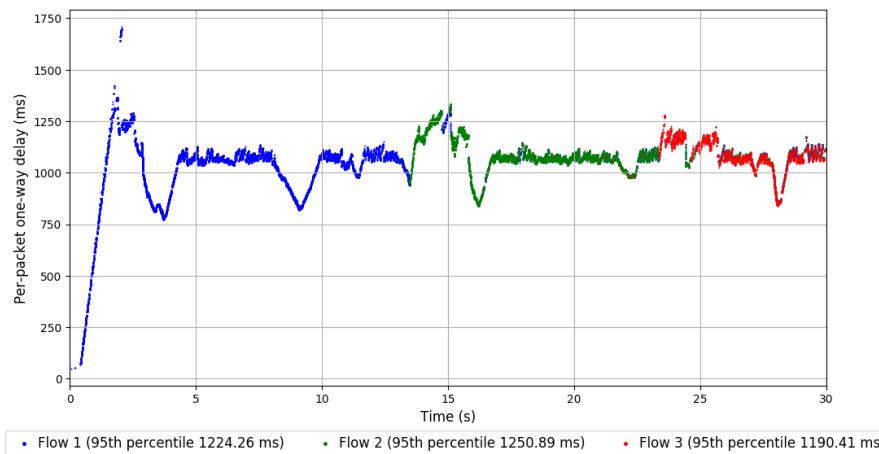
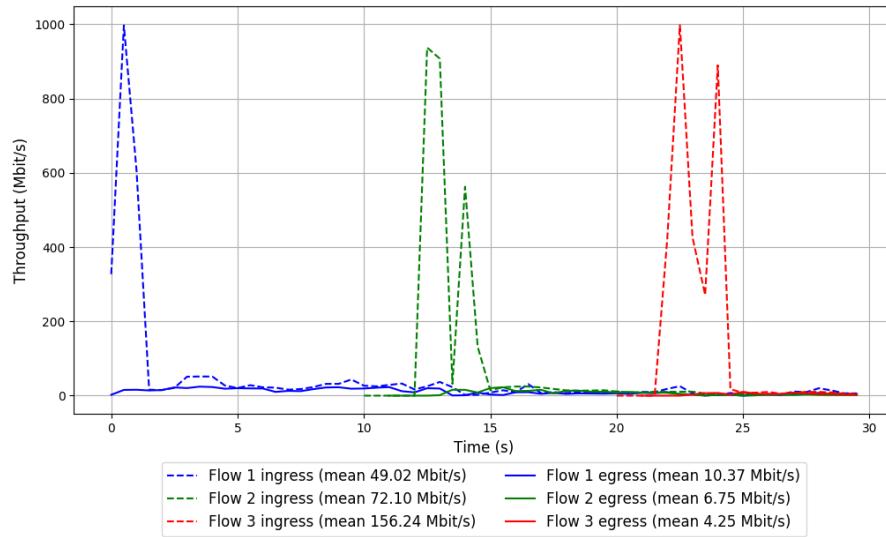


Run 2: Statistics of FillP

```
Start at: 2018-03-05 21:26:47
End at: 2018-03-05 21:27:17
Local clock offset: 2.904 ms
Remote clock offset: 5.498 ms

# Below is generated by plot.py at 2018-03-05 22:07:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.86 Mbit/s
95th percentile per-packet one-way delay: 1233.122 ms
Loss rate: 89.36%
-- Flow 1:
Average throughput: 10.37 Mbit/s
95th percentile per-packet one-way delay: 1224.263 ms
Loss rate: 78.88%
-- Flow 2:
Average throughput: 6.75 Mbit/s
95th percentile per-packet one-way delay: 1250.887 ms
Loss rate: 91.20%
-- Flow 3:
Average throughput: 4.25 Mbit/s
95th percentile per-packet one-way delay: 1190.409 ms
Loss rate: 97.57%
```

## Run 2: Report of FillP — Data Link

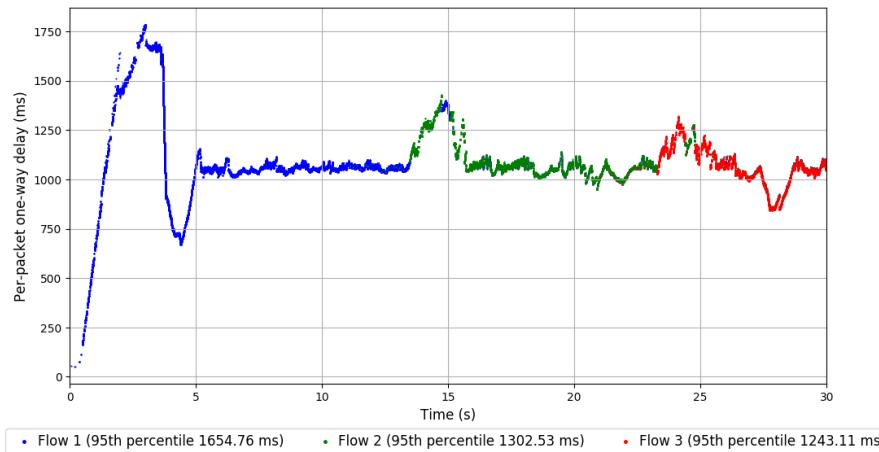
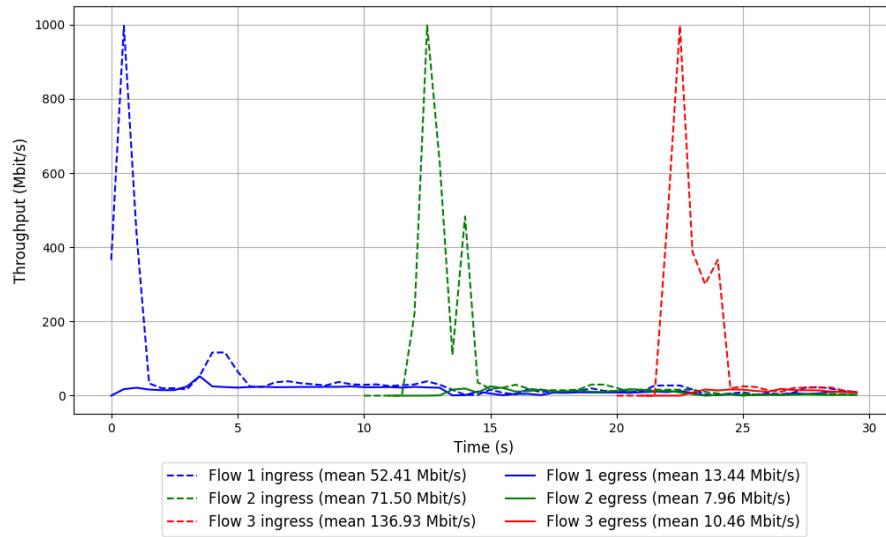


Run 3: Statistics of FillP

```
Start at: 2018-03-05 21:46:57
End at: 2018-03-05 21:47:27
Local clock offset: 4.87 ms
Remote clock offset: 1.288 ms

# Below is generated by plot.py at 2018-03-05 22:07:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 21.59 Mbit/s
95th percentile per-packet one-way delay: 1498.372 ms
Loss rate: 85.18%
-- Flow 1:
Average throughput: 13.44 Mbit/s
95th percentile per-packet one-way delay: 1654.763 ms
Loss rate: 74.40%
-- Flow 2:
Average throughput: 7.96 Mbit/s
95th percentile per-packet one-way delay: 1302.529 ms
Loss rate: 89.46%
-- Flow 3:
Average throughput: 10.46 Mbit/s
95th percentile per-packet one-way delay: 1243.109 ms
Loss rate: 93.13%
```

### Run 3: Report of FillP — Data Link

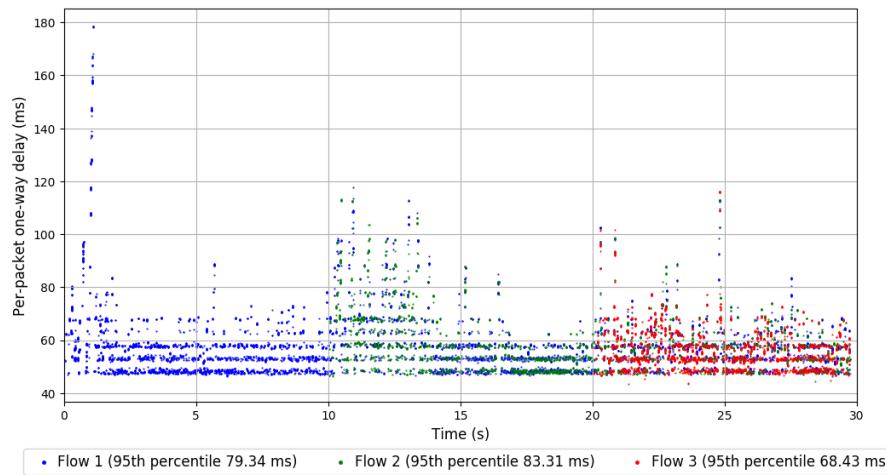
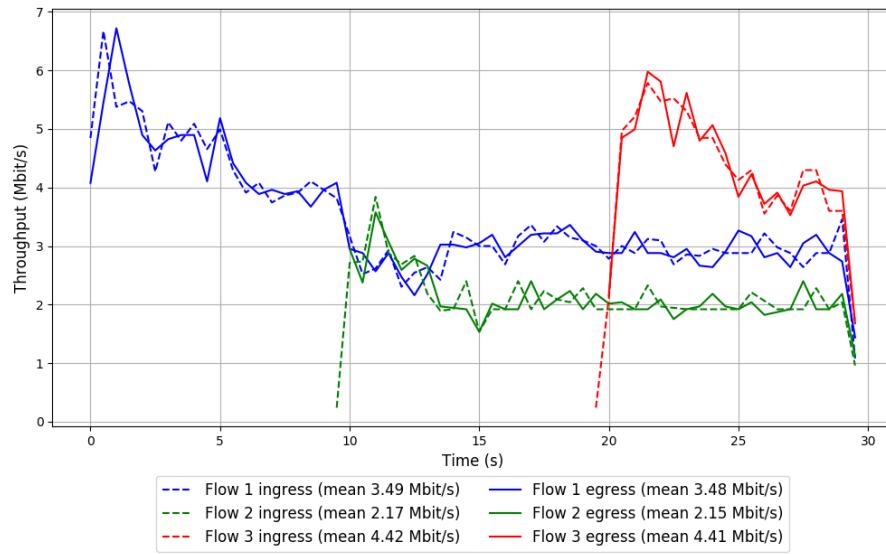


Run 1: Statistics of Indigo-1-32

```
Start at: 2018-03-05 21:14:31
End at: 2018-03-05 21:15:01
Local clock offset: 0.795 ms
Remote clock offset: 2.089 ms

# Below is generated by plot.py at 2018-03-05 22:07:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 6.35 Mbit/s
95th percentile per-packet one-way delay: 77.921 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 3.48 Mbit/s
95th percentile per-packet one-way delay: 79.336 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 2.15 Mbit/s
95th percentile per-packet one-way delay: 83.314 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 4.41 Mbit/s
95th percentile per-packet one-way delay: 68.427 ms
Loss rate: 0.14%
```

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

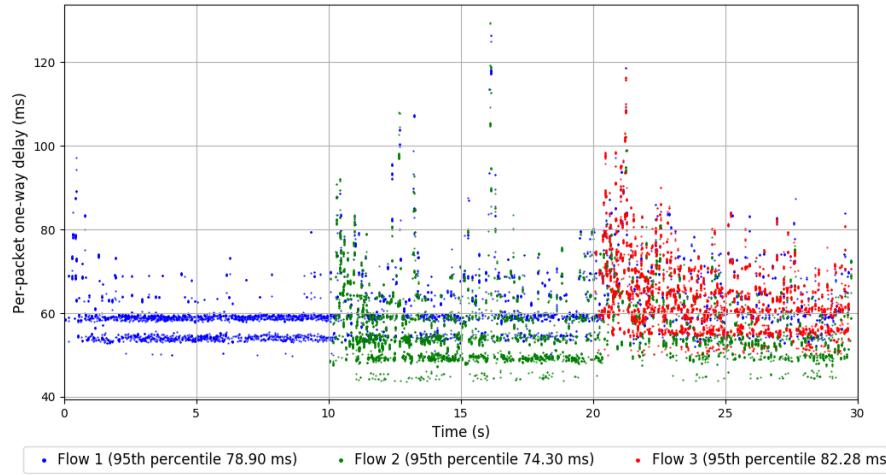
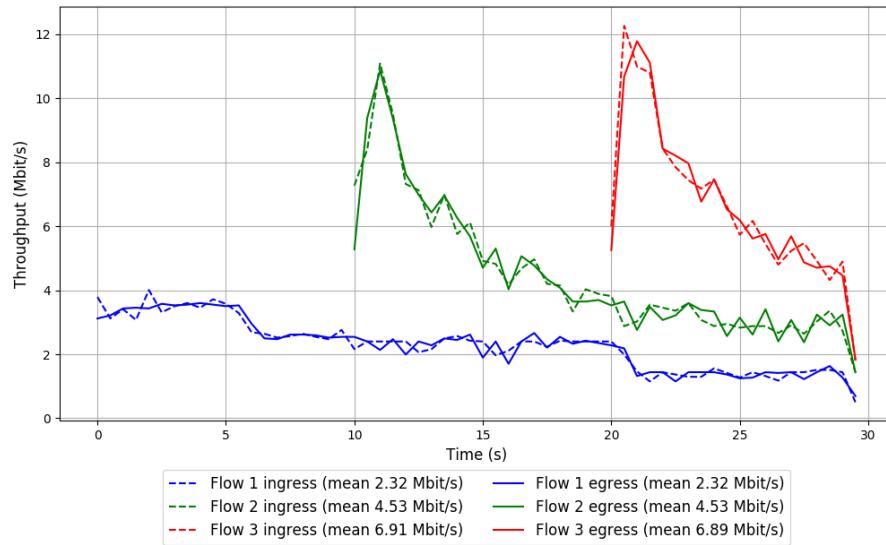


Run 2: Statistics of Indigo-1-32

```
Start at: 2018-03-05 21:34:42
End at: 2018-03-05 21:35:12
Local clock offset: 2.363 ms
Remote clock offset: 4.548 ms

# Below is generated by plot.py at 2018-03-05 22:07:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.56 Mbit/s
95th percentile per-packet one-way delay: 79.301 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 2.32 Mbit/s
95th percentile per-packet one-way delay: 78.898 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 4.53 Mbit/s
95th percentile per-packet one-way delay: 74.297 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 6.89 Mbit/s
95th percentile per-packet one-way delay: 82.285 ms
Loss rate: 0.57%
```

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

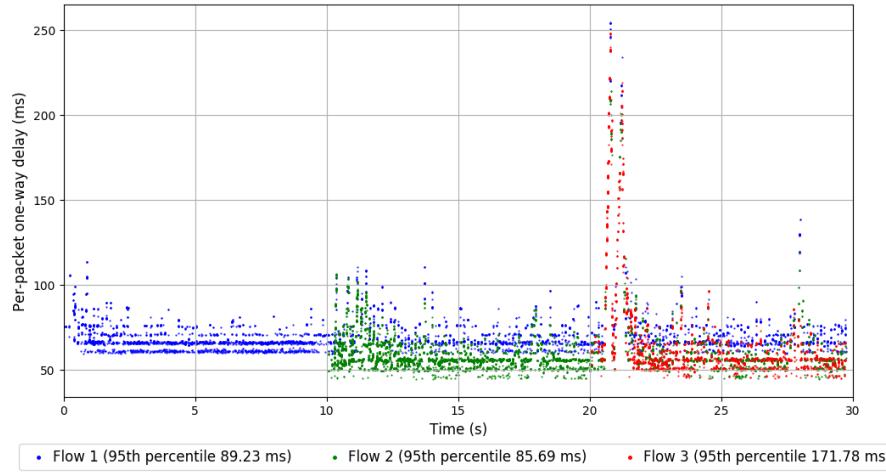
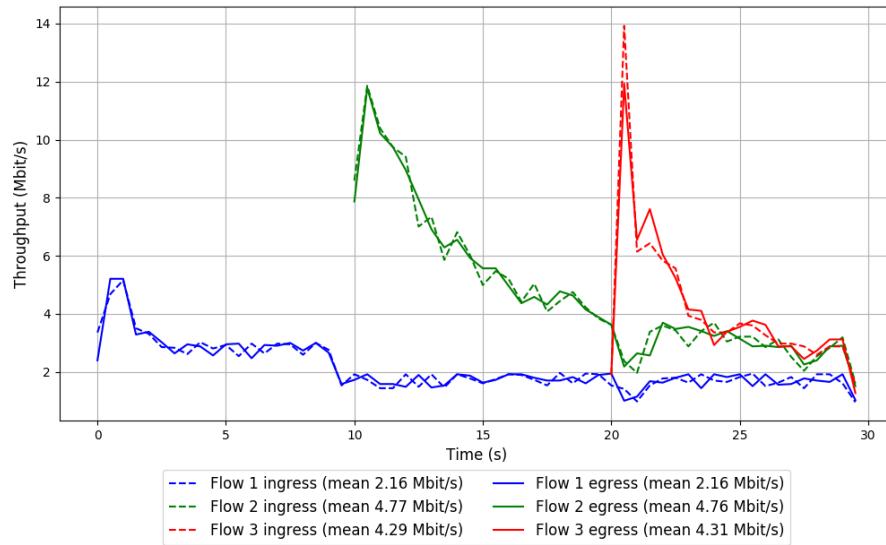


Run 3: Statistics of Indigo-1-32

```
Start at: 2018-03-05 21:54:47
End at: 2018-03-05 21:55:17
Local clock offset: 3.852 ms
Remote clock offset: 0.937 ms

# Below is generated by plot.py at 2018-03-05 22:07:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 6.72 Mbit/s
95th percentile per-packet one-way delay: 95.630 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 2.16 Mbit/s
95th percentile per-packet one-way delay: 89.231 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 4.76 Mbit/s
95th percentile per-packet one-way delay: 85.690 ms
Loss rate: 0.32%
-- Flow 3:
Average throughput: 4.31 Mbit/s
95th percentile per-packet one-way delay: 171.783 ms
Loss rate: 0.37%
```

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

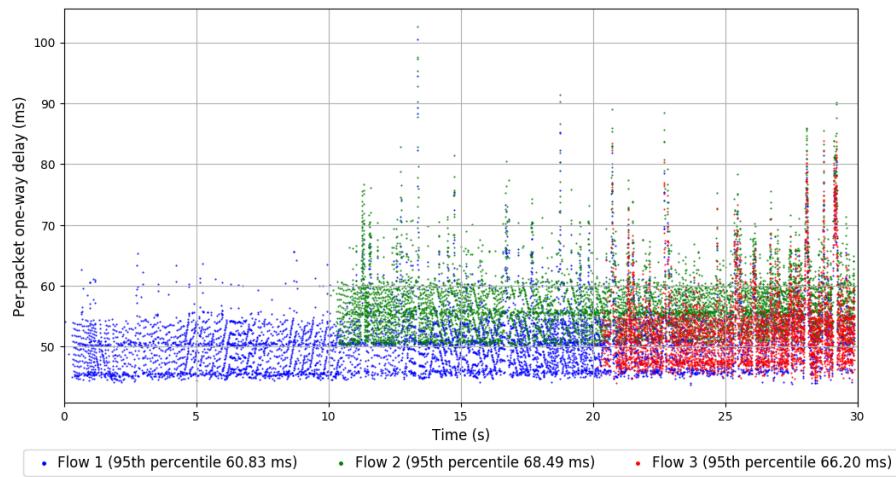
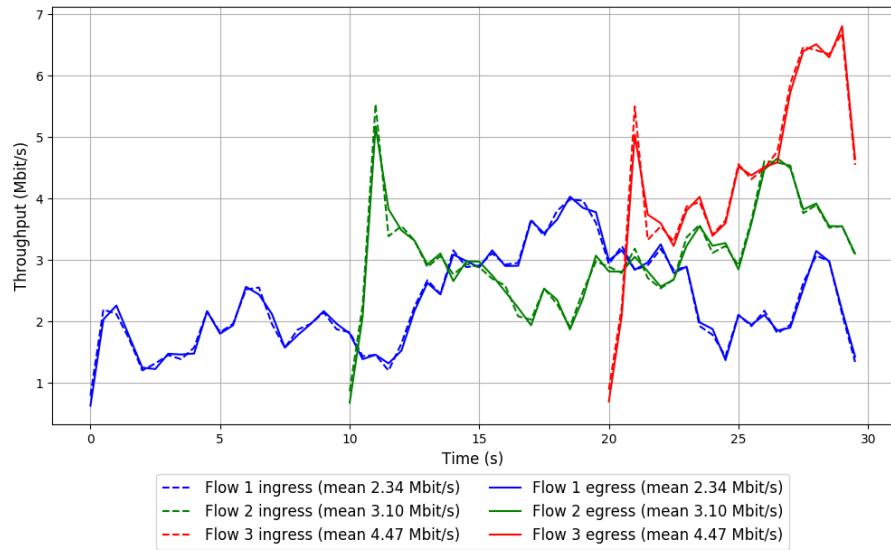


```
Run 1: Statistics of Vivace-latency
```

```
Start at: 2018-03-05 21:21:13
End at: 2018-03-05 21:21:43
Local clock offset: 1.826 ms
Remote clock offset: 4.507 ms

# Below is generated by plot.py at 2018-03-05 22:07:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 5.87 Mbit/s
95th percentile per-packet one-way delay: 65.612 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 2.34 Mbit/s
95th percentile per-packet one-way delay: 60.827 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 3.10 Mbit/s
95th percentile per-packet one-way delay: 68.490 ms
Loss rate: 0.32%
-- Flow 3:
Average throughput: 4.47 Mbit/s
95th percentile per-packet one-way delay: 66.203 ms
Loss rate: 0.60%
```

Run 1: Report of Vivace-latency — Data Link

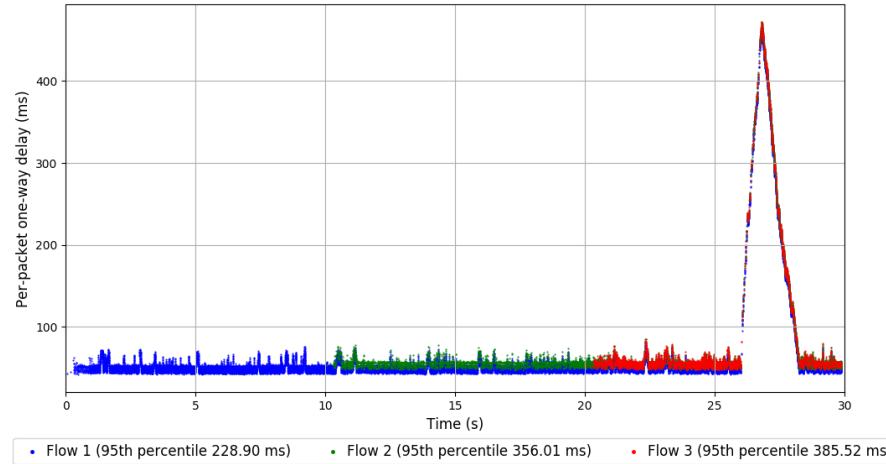
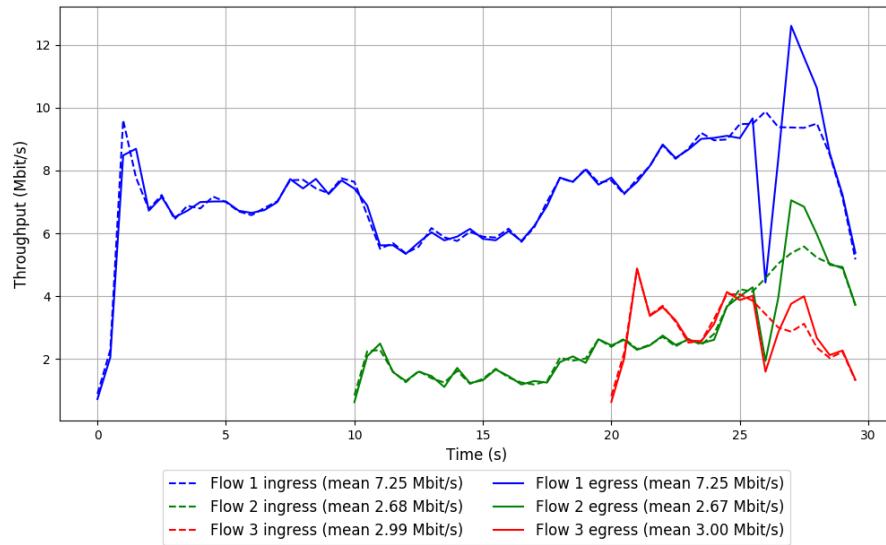


Run 2: Statistics of Vivace-latency

```
Start at: 2018-03-05 21:41:22
End at: 2018-03-05 21:41:52
Local clock offset: 3.99 ms
Remote clock offset: 2.633 ms

# Below is generated by plot.py at 2018-03-05 22:07:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 10.01 Mbit/s
95th percentile per-packet one-way delay: 294.896 ms
Loss rate: 0.21%
-- Flow 1:
Average throughput: 7.25 Mbit/s
95th percentile per-packet one-way delay: 228.896 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 2.67 Mbit/s
95th percentile per-packet one-way delay: 356.006 ms
Loss rate: 0.46%
-- Flow 3:
Average throughput: 3.00 Mbit/s
95th percentile per-packet one-way delay: 385.517 ms
Loss rate: 0.28%
```

Run 2: Report of Vivace-latency — Data Link

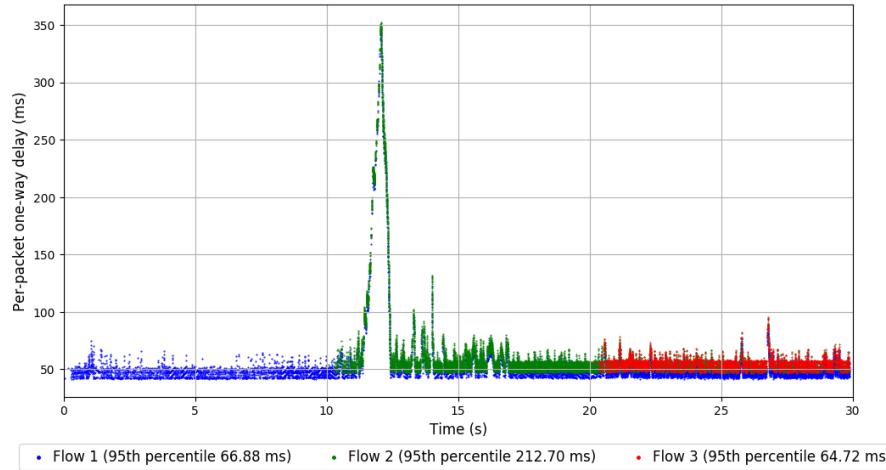
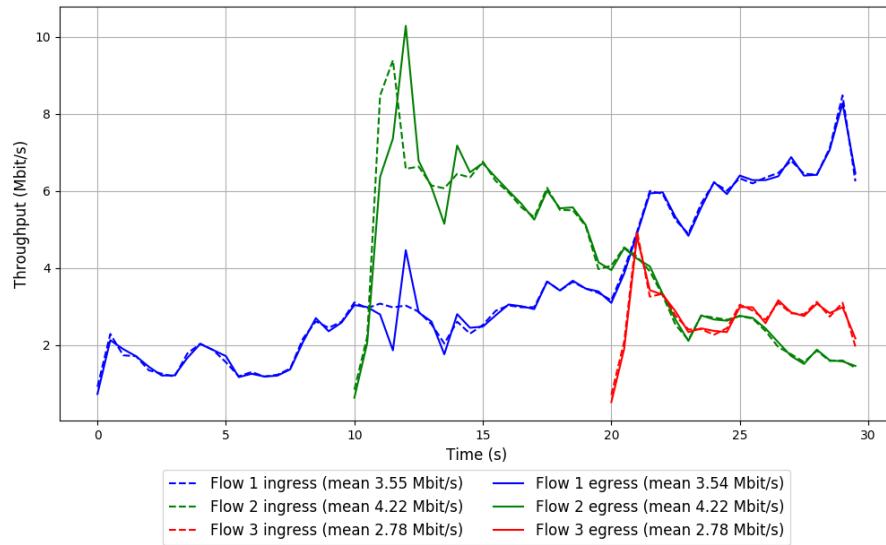


Run 3: Statistics of Vivace-latency

```
Start at: 2018-03-05 22:01:27
End at: 2018-03-05 22:01:57
Local clock offset: 5.619 ms
Remote clock offset: 1.717 ms

# Below is generated by plot.py at 2018-03-05 22:07:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.26 Mbit/s
95th percentile per-packet one-way delay: 93.534 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 3.54 Mbit/s
95th percentile per-packet one-way delay: 66.880 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 4.22 Mbit/s
95th percentile per-packet one-way delay: 212.703 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 2.78 Mbit/s
95th percentile per-packet one-way delay: 64.717 ms
Loss rate: 0.34%
```

Run 3: Report of Vivace-latency — Data Link

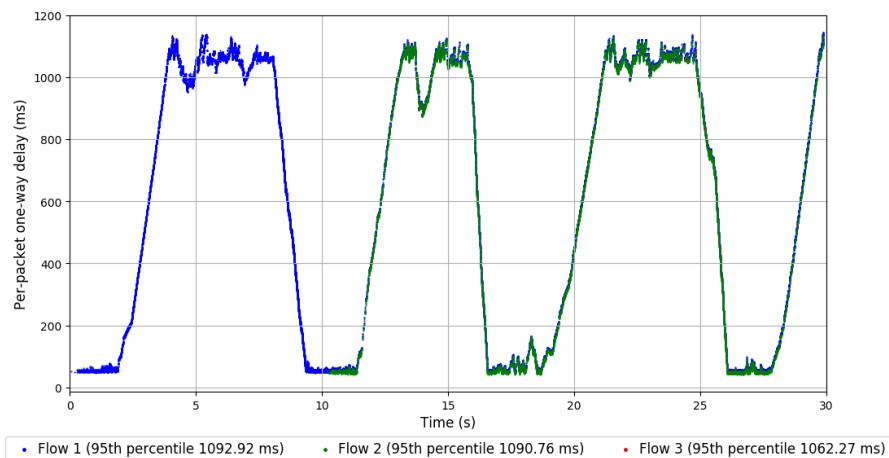
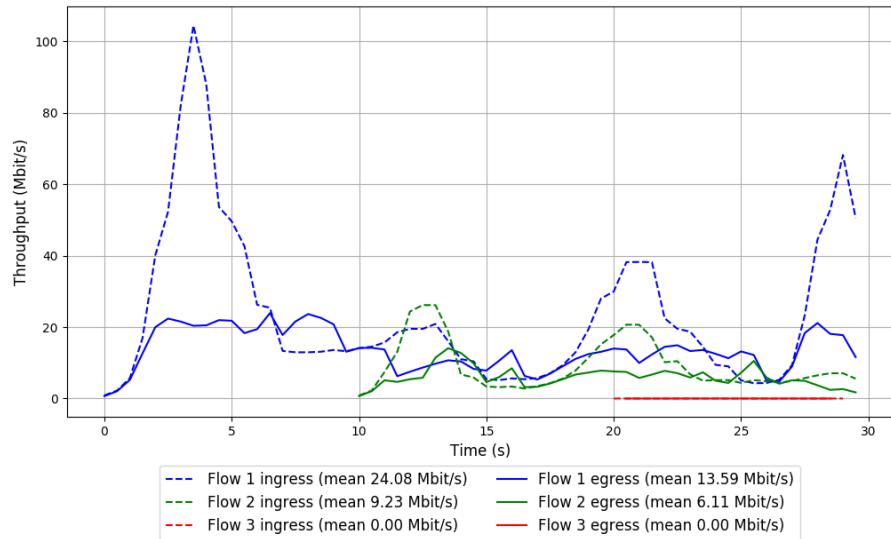


```
Run 1: Statistics of Vivace-loss
```

```
Start at: 2018-03-05 21:08:57
End at: 2018-03-05 21:09:27
Local clock offset: 3.126 ms
Remote clock offset: 1.19 ms

# Below is generated by plot.py at 2018-03-05 22:07:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 17.65 Mbit/s
95th percentile per-packet one-way delay: 1092.472 ms
Loss rate: 41.68%
-- Flow 1:
Average throughput: 13.59 Mbit/s
95th percentile per-packet one-way delay: 1092.916 ms
Loss rate: 43.64%
-- Flow 2:
Average throughput: 6.11 Mbit/s
95th percentile per-packet one-way delay: 1090.758 ms
Loss rate: 33.97%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 1062.271 ms
Loss rate: 40.54%
```

## Run 1: Report of Vivace-loss — Data Link

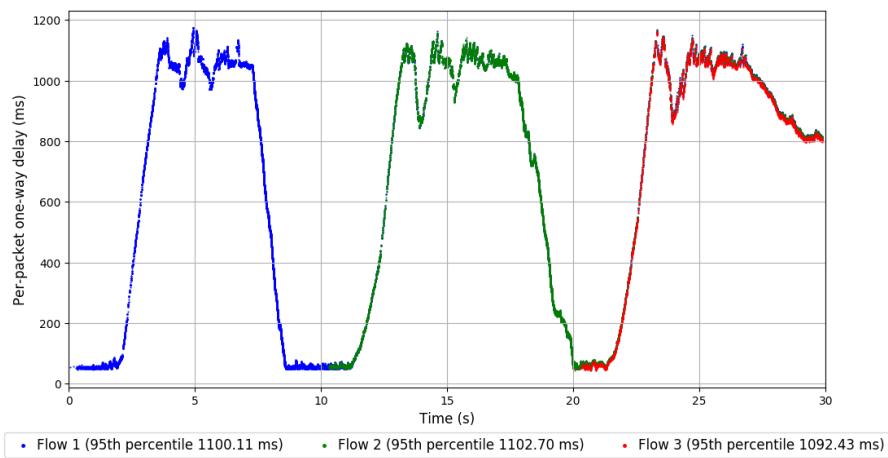
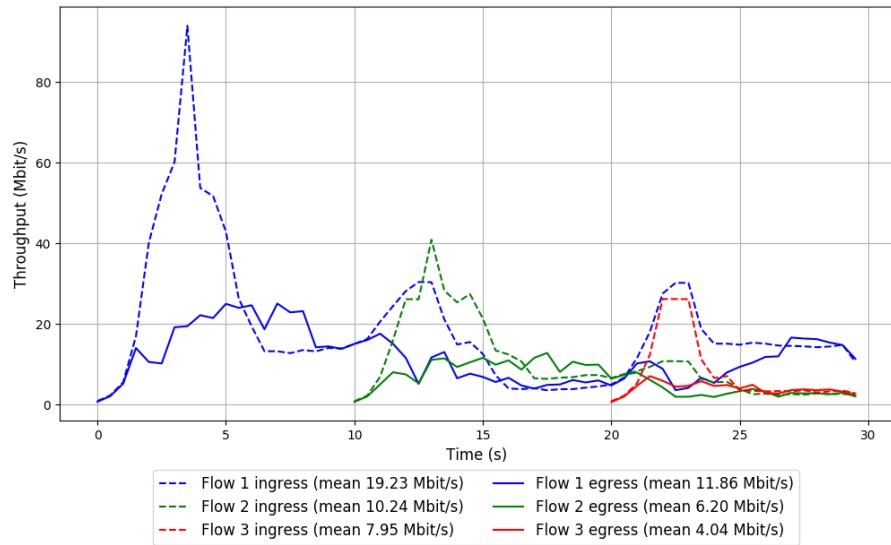


Run 2: Statistics of Vivace-loss

```
Start at: 2018-03-05 21:29:03
End at: 2018-03-05 21:29:33
Local clock offset: 2.306 ms
Remote clock offset: 6.09 ms

# Below is generated by plot.py at 2018-03-05 22:07:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 17.31 Mbit/s
95th percentile per-packet one-way delay: 1100.570 ms
Loss rate: 39.71%
-- Flow 1:
Average throughput: 11.86 Mbit/s
95th percentile per-packet one-way delay: 1100.110 ms
Loss rate: 38.41%
-- Flow 2:
Average throughput: 6.20 Mbit/s
95th percentile per-packet one-way delay: 1102.698 ms
Loss rate: 39.63%
-- Flow 3:
Average throughput: 4.04 Mbit/s
95th percentile per-packet one-way delay: 1092.428 ms
Loss rate: 49.40%
```

Run 2: Report of Vivace-loss — Data Link

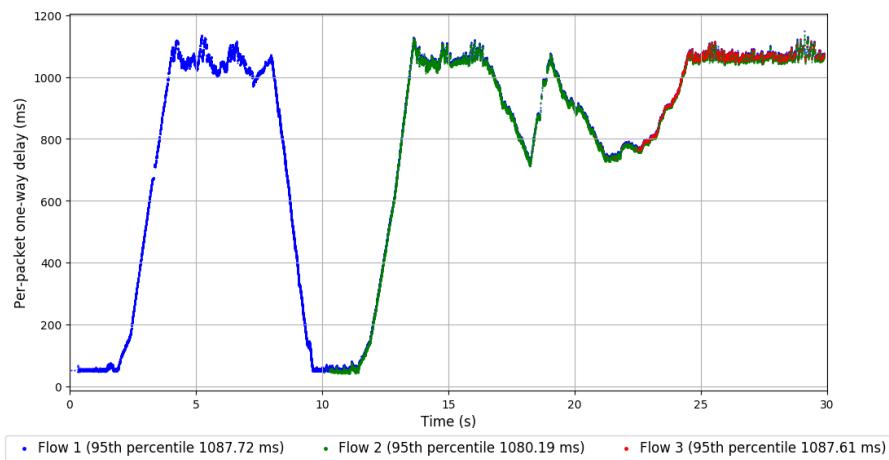
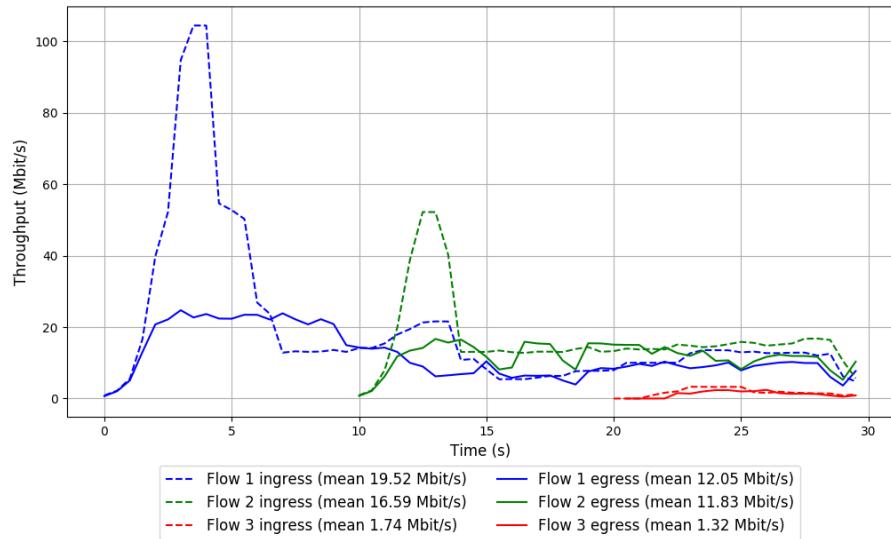


```
Run 3: Statistics of Vivace-loss
```

```
Start at: 2018-03-05 21:49:13
End at: 2018-03-05 21:49:43
Local clock offset: 4.583 ms
Remote clock offset: 1.425 ms

# Below is generated by plot.py at 2018-03-05 22:07:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 20.32 Mbit/s
95th percentile per-packet one-way delay: 1084.624 ms
Loss rate: 34.82%
-- Flow 1:
Average throughput: 12.05 Mbit/s
95th percentile per-packet one-way delay: 1087.724 ms
Loss rate: 38.34%
-- Flow 2:
Average throughput: 11.83 Mbit/s
95th percentile per-packet one-way delay: 1080.193 ms
Loss rate: 28.82%
-- Flow 3:
Average throughput: 1.32 Mbit/s
95th percentile per-packet one-way delay: 1087.609 ms
Loss rate: 30.61%
```

Run 3: Report of Vivace-loss — Data Link

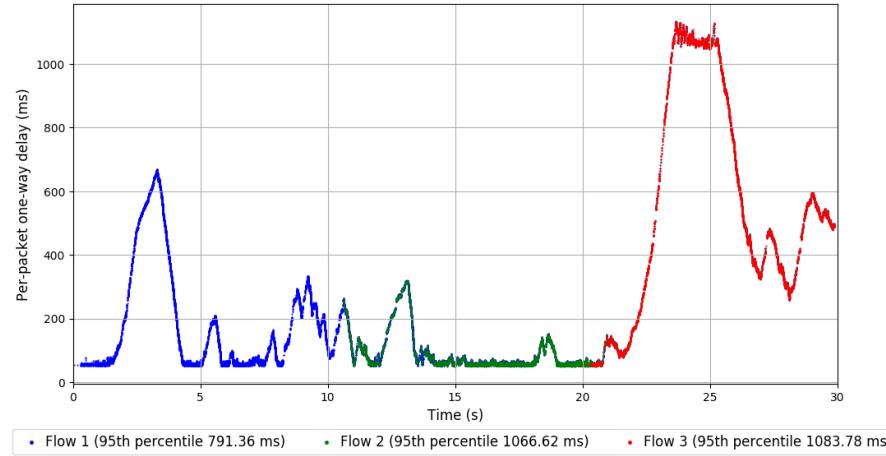
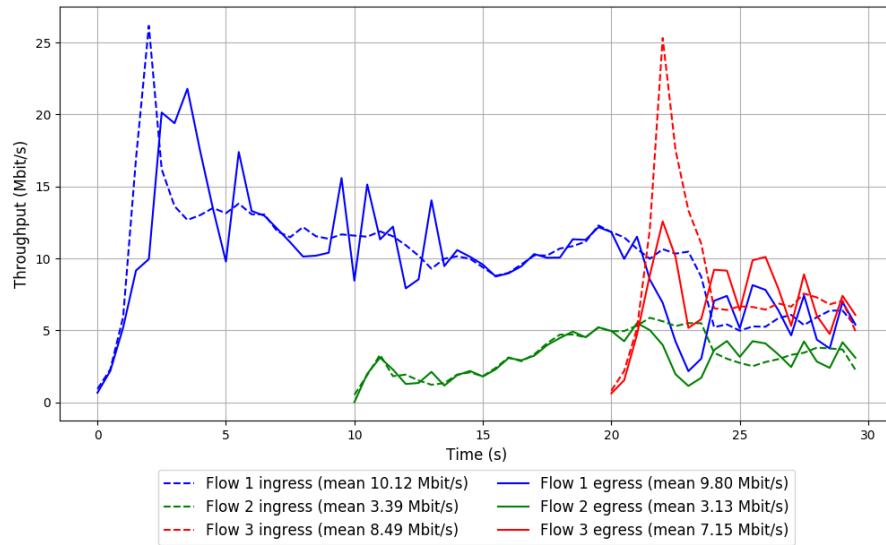


Run 1: Statistics of Vivace-LTE

```
Start at: 2018-03-05 21:18:58
End at: 2018-03-05 21:19:28
Local clock offset: 1.0 ms
Remote clock offset: 4.144 ms

# Below is generated by plot.py at 2018-03-05 22:07:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.22 Mbit/s
95th percentile per-packet one-way delay: 1064.357 ms
Loss rate: 6.42%
-- Flow 1:
Average throughput: 9.80 Mbit/s
95th percentile per-packet one-way delay: 791.355 ms
Loss rate: 3.38%
-- Flow 2:
Average throughput: 3.13 Mbit/s
95th percentile per-packet one-way delay: 1066.618 ms
Loss rate: 8.11%
-- Flow 3:
Average throughput: 7.15 Mbit/s
95th percentile per-packet one-way delay: 1083.777 ms
Loss rate: 16.07%
```

Run 1: Report of Vivace-LTE — Data Link

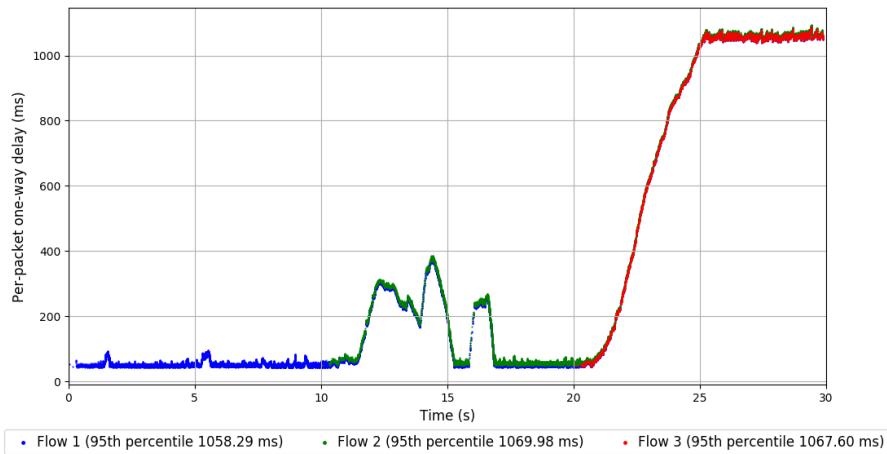
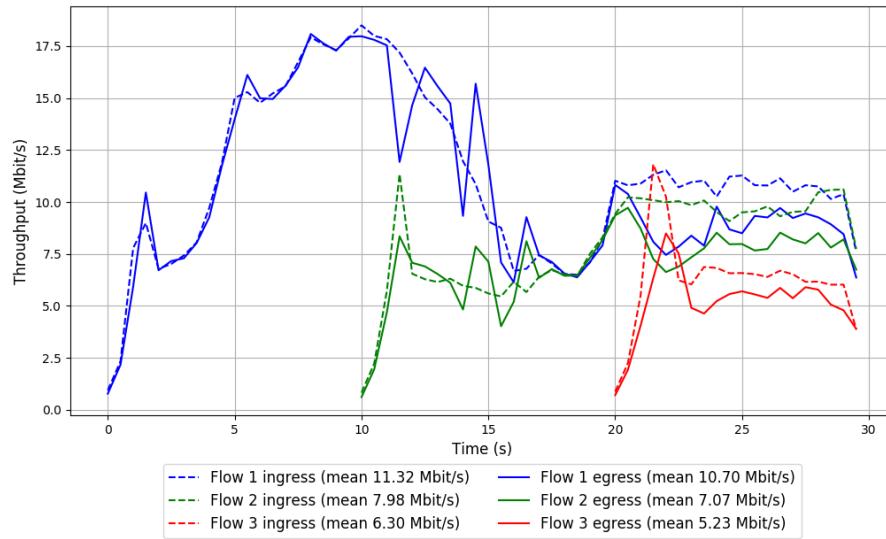


Run 2: Statistics of Vivace-LTE

```
Start at: 2018-03-05 21:39:08
End at: 2018-03-05 21:39:38
Local clock offset: 2.045 ms
Remote clock offset: 2.307 ms

# Below is generated by plot.py at 2018-03-05 22:07:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 17.12 Mbit/s
95th percentile per-packet one-way delay: 1064.576 ms
Loss rate: 8.60%
-- Flow 1:
Average throughput: 10.70 Mbit/s
95th percentile per-packet one-way delay: 1058.289 ms
Loss rate: 5.61%
-- Flow 2:
Average throughput: 7.07 Mbit/s
95th percentile per-packet one-way delay: 1069.976 ms
Loss rate: 11.57%
-- Flow 3:
Average throughput: 5.23 Mbit/s
95th percentile per-packet one-way delay: 1067.602 ms
Loss rate: 17.32%
```

Run 2: Report of Vivace-LTE — Data Link



Run 3: Statistics of Vivace-LTE

```
Start at: 2018-03-05 21:59:13
End at: 2018-03-05 21:59:43
Local clock offset: 3.868 ms
Remote clock offset: 1.864 ms

# Below is generated by plot.py at 2018-03-05 22:07:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.98 Mbit/s
95th percentile per-packet one-way delay: 588.030 ms
Loss rate: 4.20%
-- Flow 1:
Average throughput: 9.40 Mbit/s
95th percentile per-packet one-way delay: 583.617 ms
Loss rate: 2.96%
-- Flow 2:
Average throughput: 6.98 Mbit/s
95th percentile per-packet one-way delay: 590.352 ms
Loss rate: 5.32%
-- Flow 3:
Average throughput: 2.86 Mbit/s
95th percentile per-packet one-way delay: 603.511 ms
Loss rate: 10.40%
```

Run 3: Report of Vivace-LTE — Data Link

