

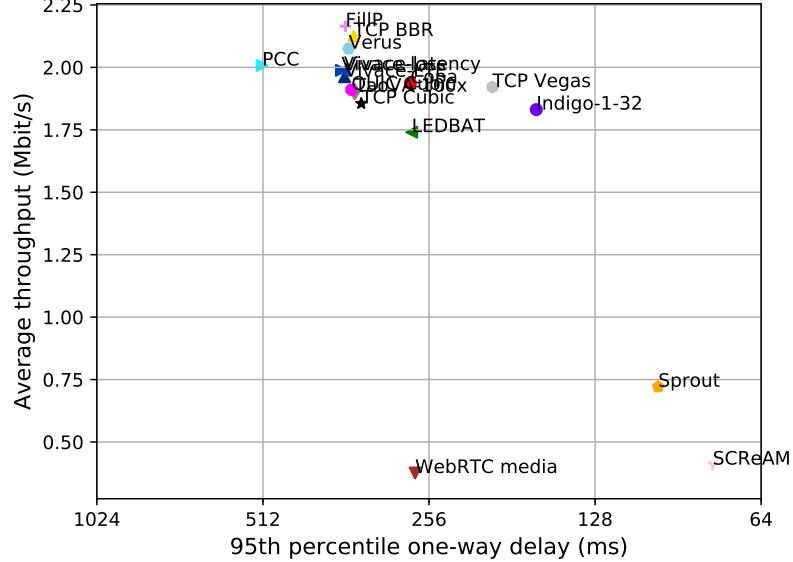
## Pantheon Report

Generated at 2018-04-03 04:00:07 (UTC).  
Data path: India ppp0 (*remote*) → AWS India 1 Ethernet (*local*).  
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.

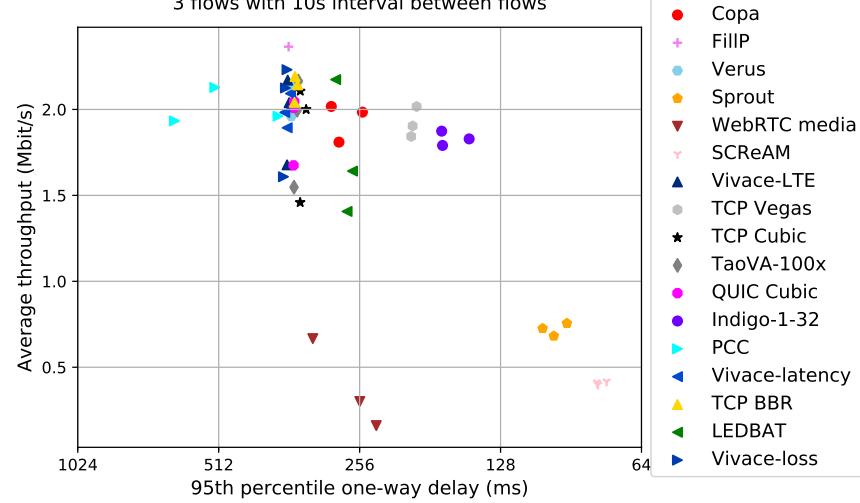
### Git summary:

```
branch: master @ 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 India ppp0 to AWS India 1 Ethernet, 3 runs of 30s each per scheme  
 3 flows with 10s interval between flows (mean of all runs by scheme)



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



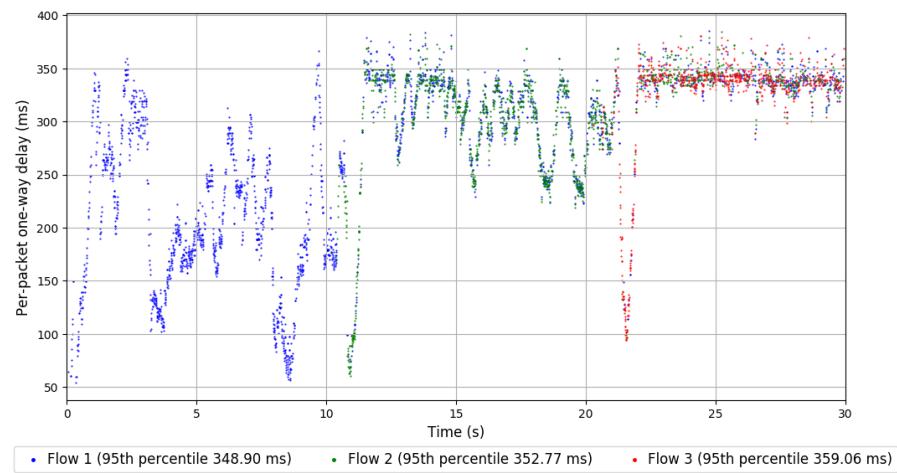
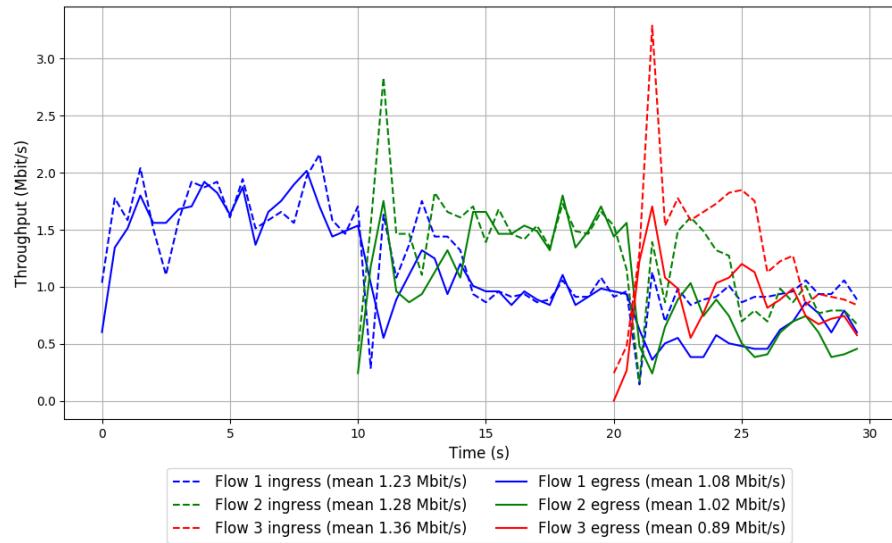
scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	3	1.26	0.95	0.76	348.17	350.86	359.43	7.29	12.86	22.64
TCP Cubic	3	1.24	0.65	0.56	337.84	341.14	343.10	2.20	3.89	6.24
LEDBAT	3	0.93	0.94	0.63	253.49	287.12	275.40	0.22	1.23	2.85
PCC	3	1.12	0.93	0.85	370.25	602.25	730.96	50.70	71.70	89.71
QUIC Cubic	3	1.23	0.73	0.62	351.30	356.89	359.69	5.47	9.82	15.39
SCReAM	3	0.20	0.21	0.22	65.56	82.49	75.37	0.23	0.20	0.48
WebRTC media	3	0.06	0.22	0.09	238.62	286.23	264.24	1.96	1.45	6.41
Sprout	3	0.37	0.35	0.36	99.51	95.68	100.20	0.34	0.60	0.90
TaoVA-100x	3	1.19	0.87	0.54	345.92	352.91	360.88	12.88	22.48	58.21
TCP Vegas	3	1.07	0.82	0.92	204.43	192.96	176.41	1.38	0.53	1.58
Verus	3	1.92	0.16	0.17	356.87	358.55	366.32	21.20	62.15	64.11
Copa	3	1.18	0.80	0.69	259.02	296.27	296.21	1.48	3.11	7.12
FillP	3	1.13	1.05	1.12	361.75	363.14	363.73	43.52	51.79	57.07
Indigo-1-32	3	0.89	0.95	0.95	157.69	162.89	172.30	0.96	1.38	2.17
Vivace-latency	3	1.06	1.00	0.82	359.81	367.19	369.59	23.62	29.68	41.39
Vivace-loss	3	1.23	0.82	0.71	367.90	369.55	371.89	32.40	39.10	49.88
Vivace-LTE	3	1.08	0.92	0.85	358.86	366.91	368.14	25.85	32.89	42.21

Run 1: Statistics of TCP BBR

```
Start at: 2018-04-03 02:04:06
End at: 2018-04-03 02:04:36
Local clock offset: 0.82 ms
Remote clock offset: -2.001 ms

# Below is generated by plot.py at 2018-04-03 03:59:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.04 Mbit/s
95th percentile per-packet one-way delay: 352.737 ms
Loss rate: 19.69%
-- Flow 1:
Average throughput: 1.08 Mbit/s
95th percentile per-packet one-way delay: 348.900 ms
Loss rate: 12.35%
-- Flow 2:
Average throughput: 1.02 Mbit/s
95th percentile per-packet one-way delay: 352.766 ms
Loss rate: 21.35%
-- Flow 3:
Average throughput: 0.89 Mbit/s
95th percentile per-packet one-way delay: 359.063 ms
Loss rate: 36.55%
```

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

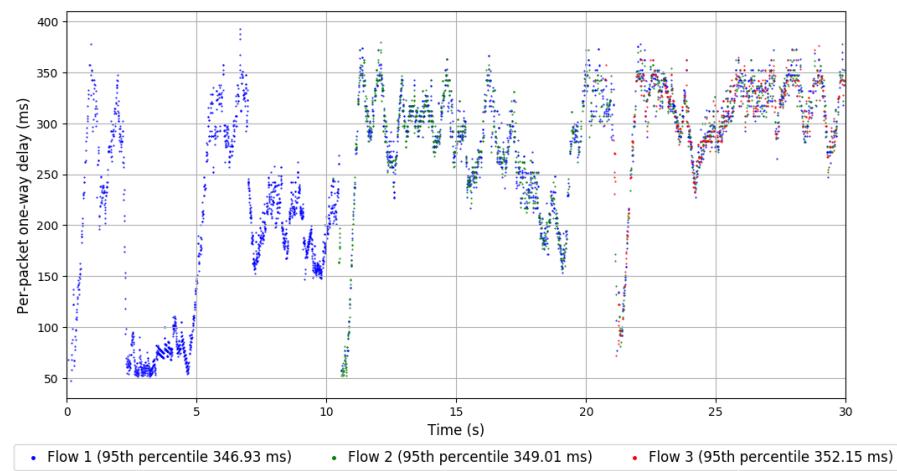
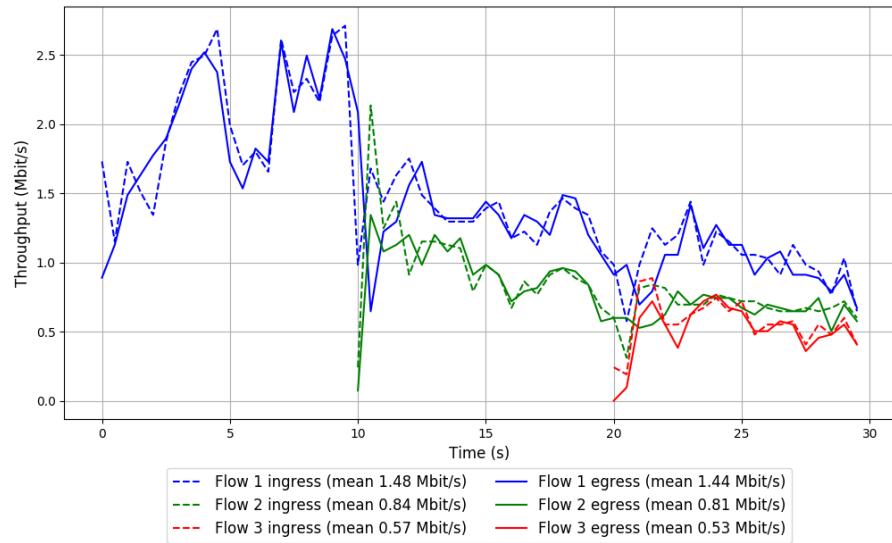


Run 2: Statistics of TCP BBR

```
Start at: 2018-04-03 02:23:52
End at: 2018-04-03 02:24:22
Local clock offset: 3.806 ms
Remote clock offset: -7.751 ms

# Below is generated by plot.py at 2018-04-03 03:59:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.14 Mbit/s
95th percentile per-packet one-way delay: 347.380 ms
Loss rate: 4.12%
-- Flow 1:
Average throughput: 1.44 Mbit/s
95th percentile per-packet one-way delay: 346.929 ms
Loss rate: 3.00%
-- Flow 2:
Average throughput: 0.81 Mbit/s
95th percentile per-packet one-way delay: 349.009 ms
Loss rate: 5.09%
-- Flow 3:
Average throughput: 0.53 Mbit/s
95th percentile per-packet one-way delay: 352.148 ms
Loss rate: 9.98%
```

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

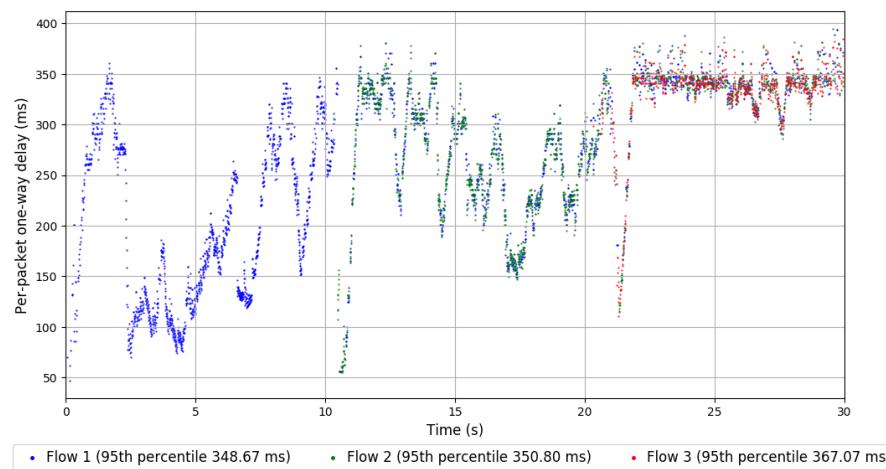
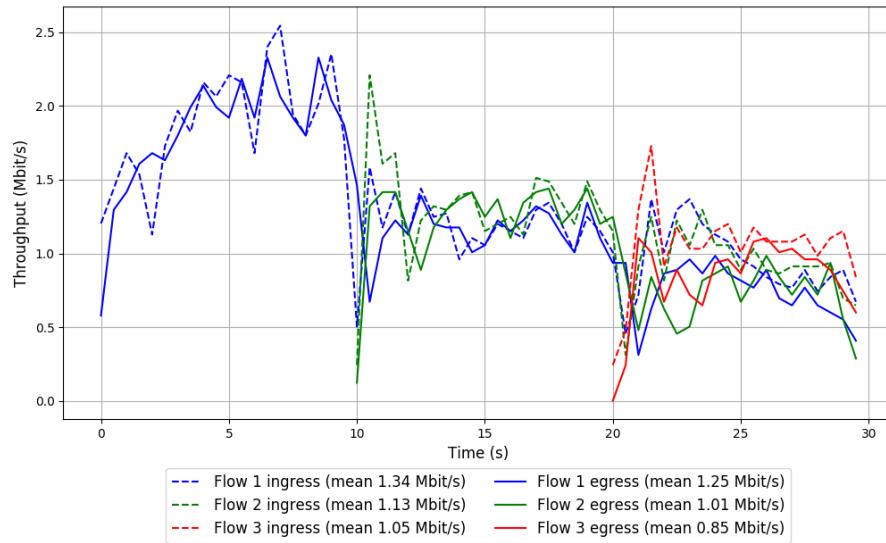


Run 3: Statistics of TCP BBR

```
Start at: 2018-04-03 02:43:43
End at: 2018-04-03 02:44:13
Local clock offset: 4.219 ms
Remote clock offset: 2.352 ms

# Below is generated by plot.py at 2018-04-03 03:59:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.19 Mbit/s
95th percentile per-packet one-way delay: 351.695 ms
Loss rate: 10.38%
-- Flow 1:
Average throughput: 1.25 Mbit/s
95th percentile per-packet one-way delay: 348.670 ms
Loss rate: 6.53%
-- Flow 2:
Average throughput: 1.01 Mbit/s
95th percentile per-packet one-way delay: 350.798 ms
Loss rate: 12.14%
-- Flow 3:
Average throughput: 0.85 Mbit/s
95th percentile per-packet one-way delay: 367.071 ms
Loss rate: 21.38%
```

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

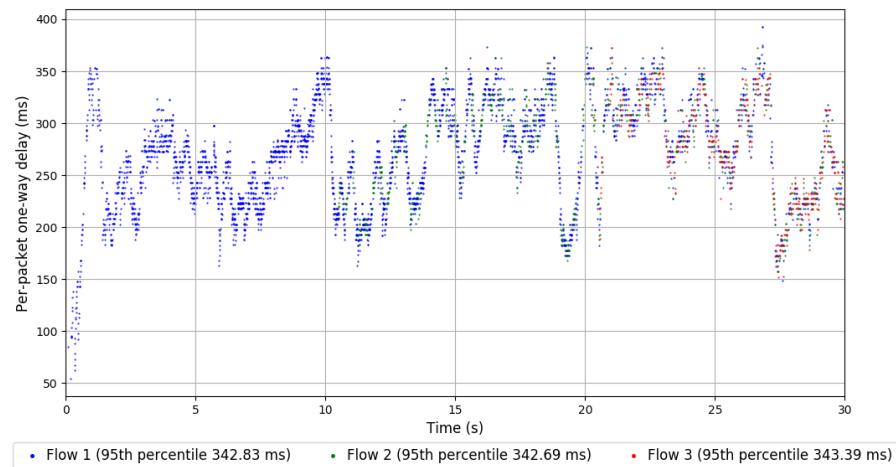
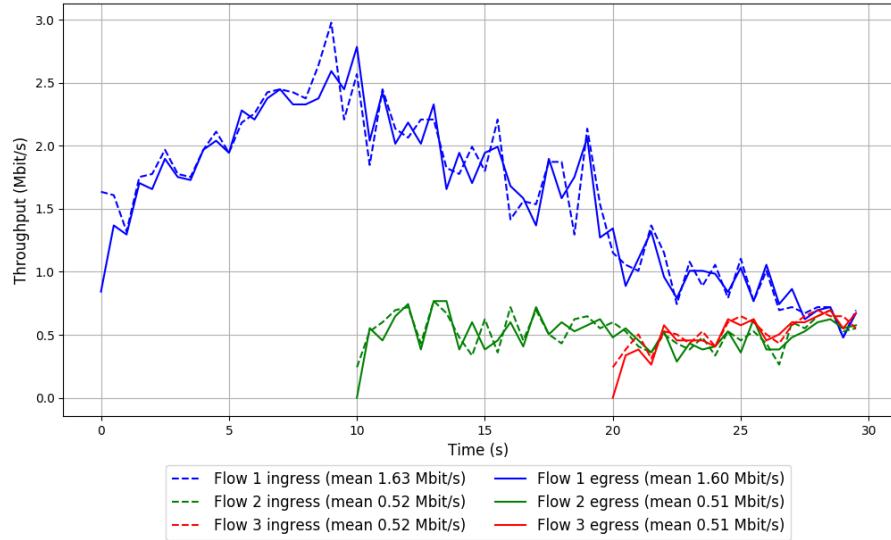


Run 1: Statistics of TCP Cubic

```
Start at: 2018-04-03 02:19:29
End at: 2018-04-03 02:19:59
Local clock offset: 3.41 ms
Remote clock offset: -6.706 ms

# Below is generated by plot.py at 2018-04-03 03:59:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.11 Mbit/s
95th percentile per-packet one-way delay: 342.849 ms
Loss rate: 2.47%
-- Flow 1:
Average throughput: 1.60 Mbit/s
95th percentile per-packet one-way delay: 342.827 ms
Loss rate: 2.06%
-- Flow 2:
Average throughput: 0.51 Mbit/s
95th percentile per-packet one-way delay: 342.695 ms
Loss rate: 3.21%
-- Flow 3:
Average throughput: 0.51 Mbit/s
95th percentile per-packet one-way delay: 343.390 ms
Loss rate: 4.85%
```

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

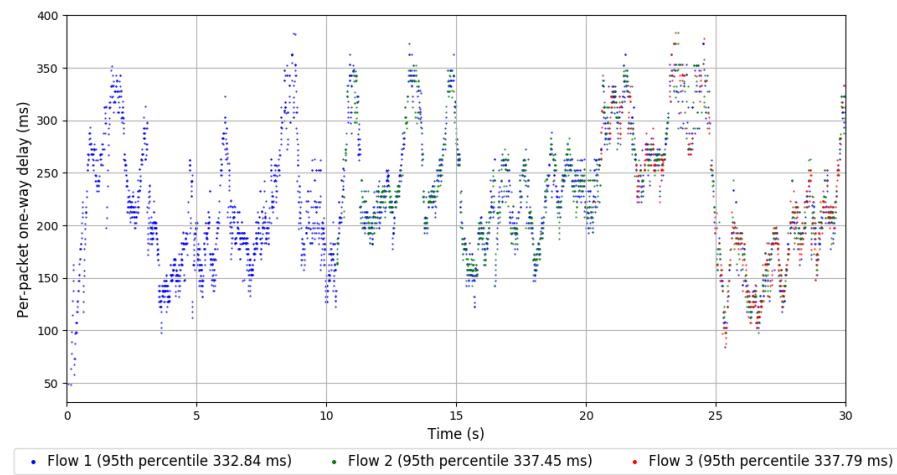
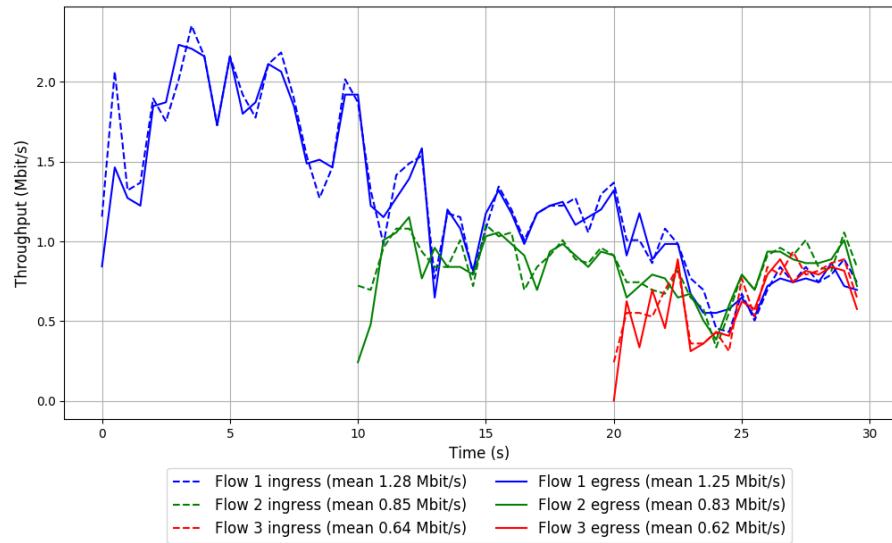


Run 2: Statistics of TCP Cubic

```
Start at: 2018-04-03 02:39:20
End at: 2018-04-03 02:39:50
Local clock offset: 1.489 ms
Remote clock offset: 2.612 ms

# Below is generated by plot.py at 2018-04-03 03:59:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.00 Mbit/s
95th percentile per-packet one-way delay: 333.036 ms
Loss rate: 2.90%
-- Flow 1:
Average throughput: 1.25 Mbit/s
95th percentile per-packet one-way delay: 332.837 ms
Loss rate: 2.22%
-- Flow 2:
Average throughput: 0.83 Mbit/s
95th percentile per-packet one-way delay: 337.455 ms
Loss rate: 3.27%
-- Flow 3:
Average throughput: 0.62 Mbit/s
95th percentile per-packet one-way delay: 337.791 ms
Loss rate: 6.02%
```

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

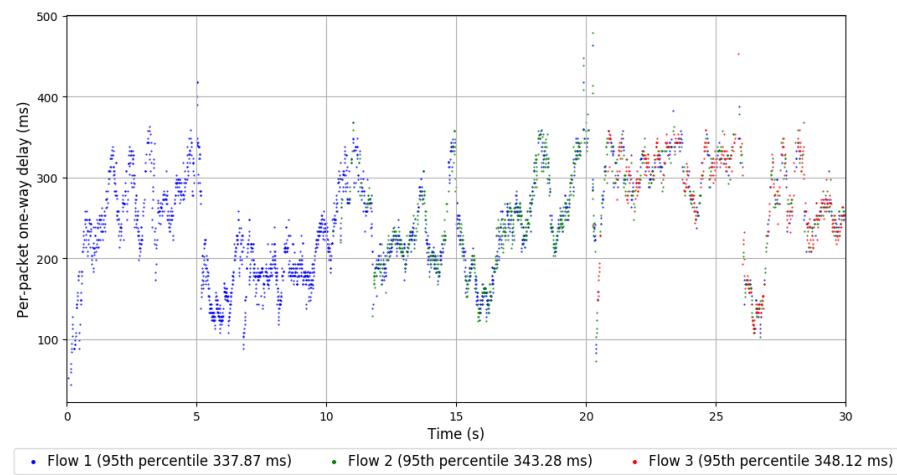
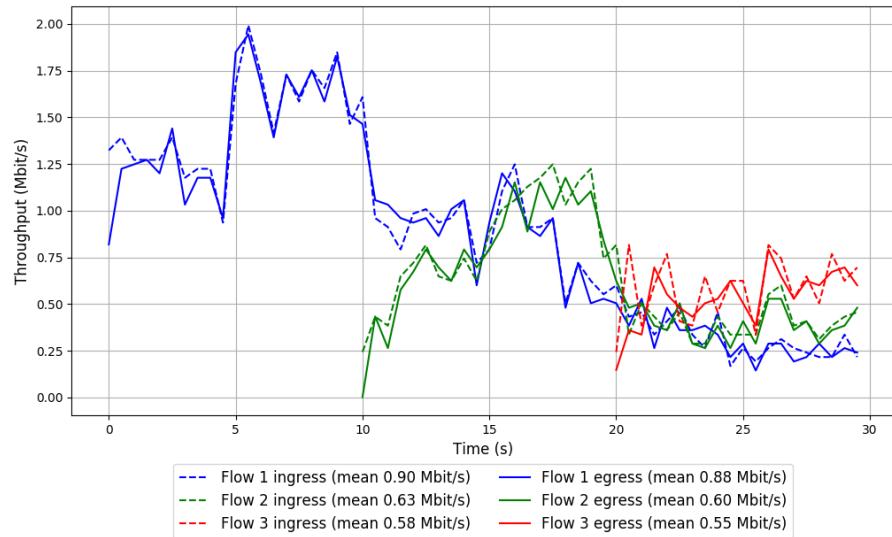


Run 3: Statistics of TCP Cubic

```
Start at: 2018-04-03 02:59:10
End at: 2018-04-03 02:59:40
Local clock offset: 2.414 ms
Remote clock offset: 6.246 ms

# Below is generated by plot.py at 2018-04-03 03:59:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.46 Mbit/s
95th percentile per-packet one-way delay: 342.989 ms
Loss rate: 3.81%
-- Flow 1:
Average throughput: 0.88 Mbit/s
95th percentile per-packet one-way delay: 337.869 ms
Loss rate: 2.31%
-- Flow 2:
Average throughput: 0.60 Mbit/s
95th percentile per-packet one-way delay: 343.282 ms
Loss rate: 5.19%
-- Flow 3:
Average throughput: 0.55 Mbit/s
95th percentile per-packet one-way delay: 348.118 ms
Loss rate: 7.85%
```

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

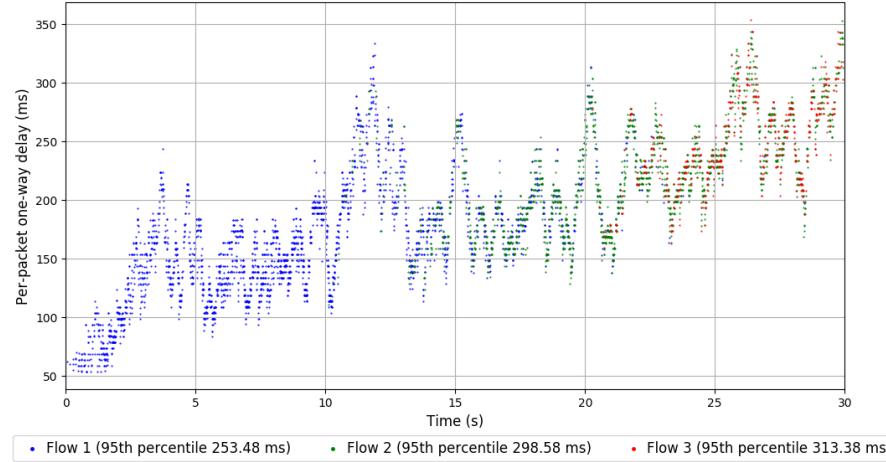
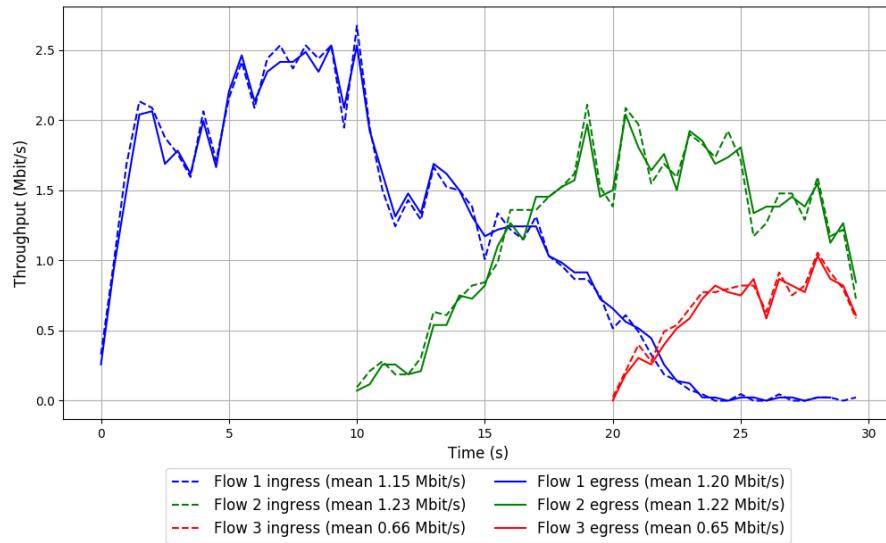


```
Run 1: Statistics of LEDBAT

Start at: 2018-04-03 02:17:17
End at: 2018-04-03 02:17:47
Local clock offset: 3.55 ms
Remote clock offset: -6.387 ms

# Below is generated by plot.py at 2018-04-03 03:59:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.17 Mbit/s
95th percentile per-packet one-way delay: 288.018 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 1.20 Mbit/s
95th percentile per-packet one-way delay: 253.479 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 1.22 Mbit/s
95th percentile per-packet one-way delay: 298.582 ms
Loss rate: 1.15%
-- Flow 3:
Average throughput: 0.65 Mbit/s
95th percentile per-packet one-way delay: 313.382 ms
Loss rate: 3.77%
```

Run 1: Report of LEDBAT — Data Link

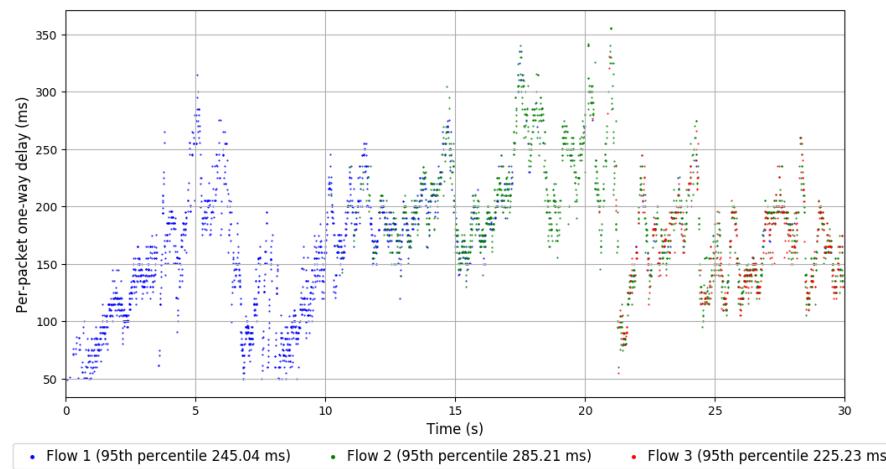
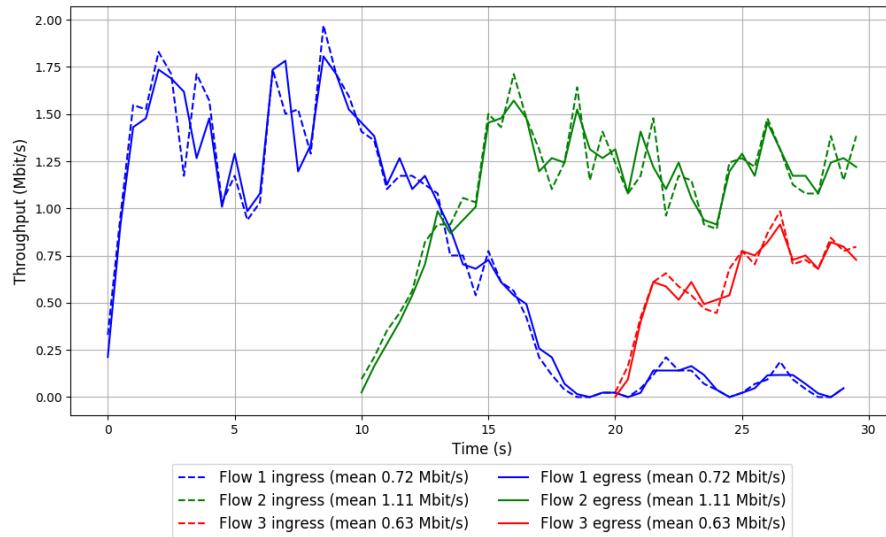


Run 2: Statistics of LEDBAT

```
Start at: 2018-04-03 02:37:08
End at: 2018-04-03 02:37:38
Local clock offset: 2.173 ms
Remote clock offset: 0.461 ms

# Below is generated by plot.py at 2018-04-03 03:59:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.64 Mbit/s
95th percentile per-packet one-way delay: 265.198 ms
Loss rate: 0.99%
-- Flow 1:
Average throughput: 0.72 Mbit/s
95th percentile per-packet one-way delay: 245.041 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 1.11 Mbit/s
95th percentile per-packet one-way delay: 285.208 ms
Loss rate: 1.38%
-- Flow 3:
Average throughput: 0.63 Mbit/s
95th percentile per-packet one-way delay: 225.233 ms
Loss rate: 2.64%
```

## Run 2: Report of LEDBAT — Data Link

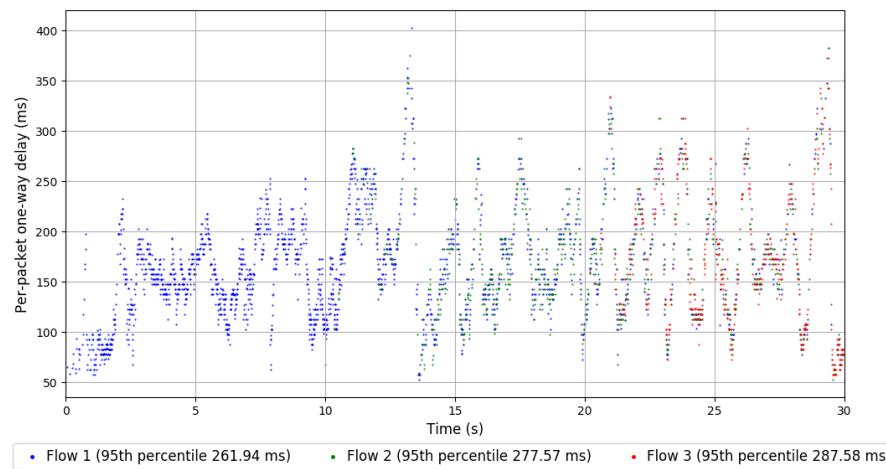
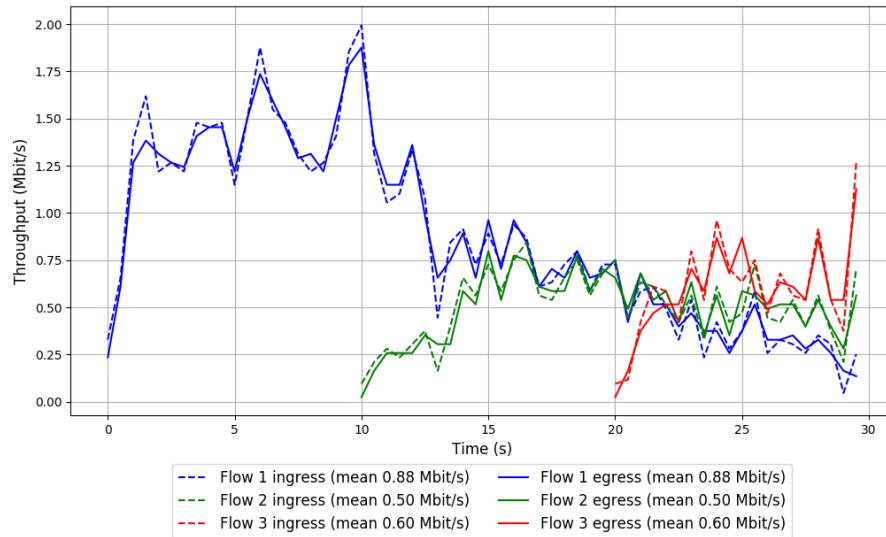


Run 3: Statistics of LEDBAT

```
Start at: 2018-04-03 02:56:58
End at: 2018-04-03 02:57:28
Local clock offset: 1.284 ms
Remote clock offset: 0.912 ms

# Below is generated by plot.py at 2018-04-03 03:59:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.41 Mbit/s
95th percentile per-packet one-way delay: 272.335 ms
Loss rate: 0.91%
-- Flow 1:
Average throughput: 0.88 Mbit/s
95th percentile per-packet one-way delay: 261.937 ms
Loss rate: 0.53%
-- Flow 2:
Average throughput: 0.50 Mbit/s
95th percentile per-packet one-way delay: 277.570 ms
Loss rate: 1.17%
-- Flow 3:
Average throughput: 0.60 Mbit/s
95th percentile per-packet one-way delay: 287.581 ms
Loss rate: 2.15%
```

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

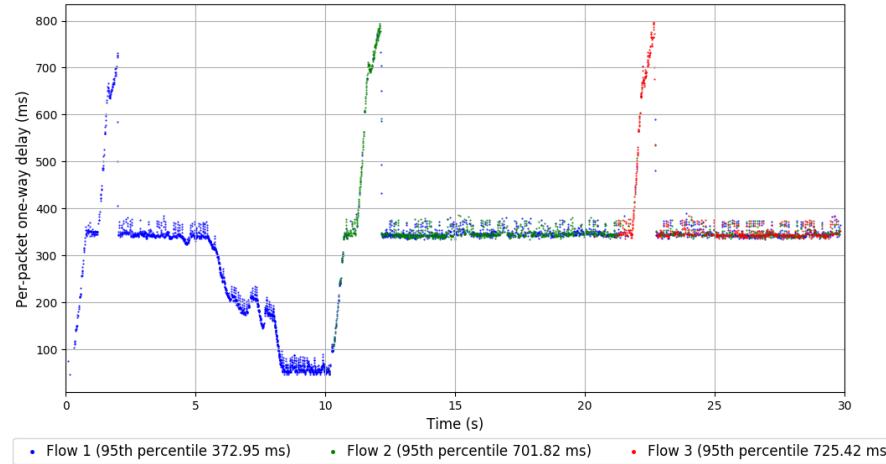
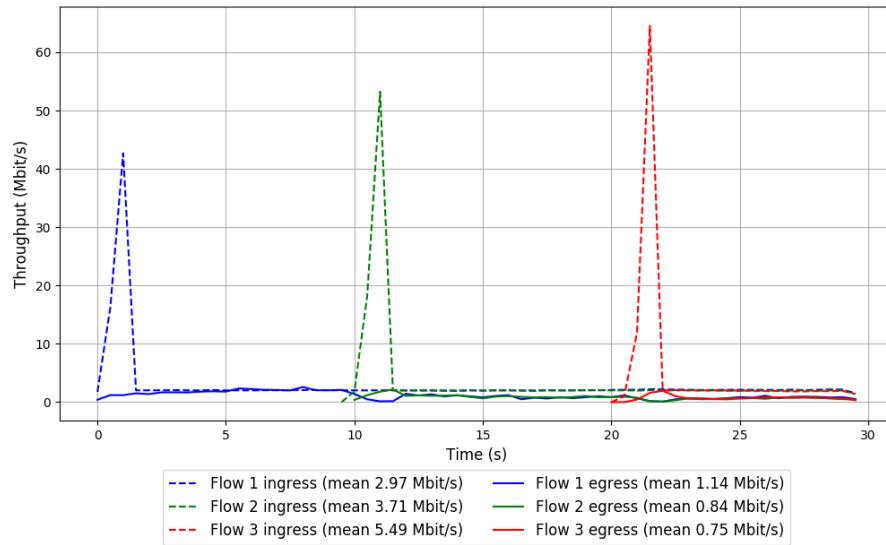


```
Run 1: Statistics of PCC

Start at: 2018-04-03 02:01:54
End at: 2018-04-03 02:02:24
Local clock offset: 2.271 ms
Remote clock offset: -0.077 ms

# Below is generated by plot.py at 2018-04-03 03:59:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.93 Mbit/s
95th percentile per-packet one-way delay: 636.455 ms
Loss rate: 73.42%
-- Flow 1:
Average throughput: 1.14 Mbit/s
95th percentile per-packet one-way delay: 372.949 ms
Loss rate: 61.80%
-- Flow 2:
Average throughput: 0.84 Mbit/s
95th percentile per-packet one-way delay: 701.818 ms
Loss rate: 77.53%
-- Flow 3:
Average throughput: 0.75 Mbit/s
95th percentile per-packet one-way delay: 725.422 ms
Loss rate: 86.89%
```

Run 1: Report of PCC — Data Link

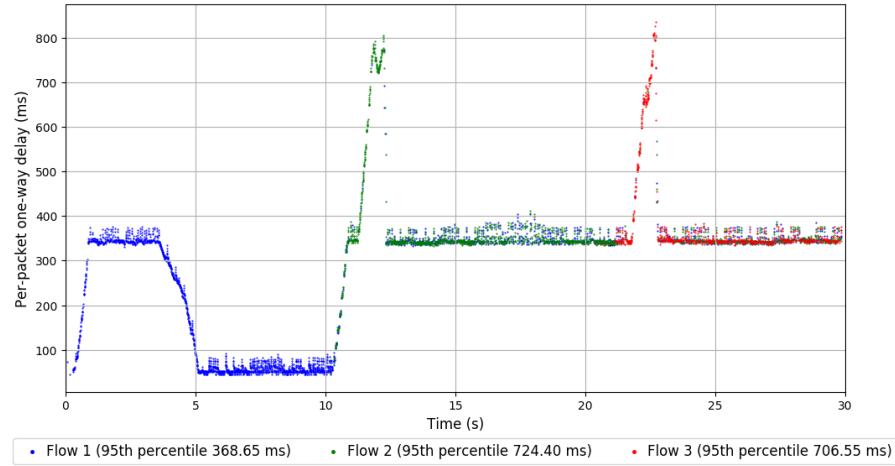
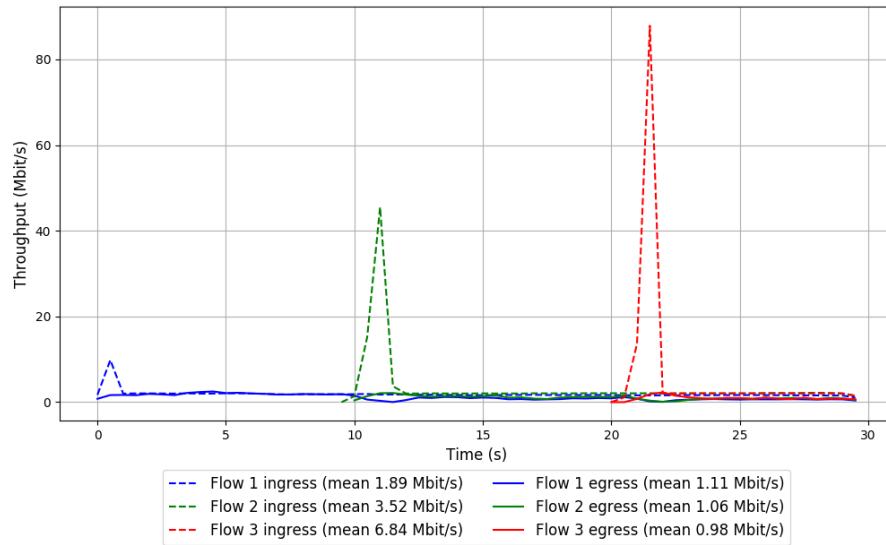


Run 2: Statistics of PCC

```
Start at: 2018-04-03 02:21:41
End at: 2018-04-03 02:22:11
Local clock offset: 1.706 ms
Remote clock offset: -6.516 ms

# Below is generated by plot.py at 2018-04-03 03:59:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.13 Mbit/s
95th percentile per-packet one-way delay: 521.970 ms
Loss rate: 67.27%
-- Flow 1:
Average throughput: 1.11 Mbit/s
95th percentile per-packet one-way delay: 368.649 ms
Loss rate: 41.27%
-- Flow 2:
Average throughput: 1.06 Mbit/s
95th percentile per-packet one-way delay: 724.396 ms
Loss rate: 69.99%
-- Flow 3:
Average throughput: 0.98 Mbit/s
95th percentile per-packet one-way delay: 706.549 ms
Loss rate: 86.23%
```

## Run 2: Report of PCC — Data Link

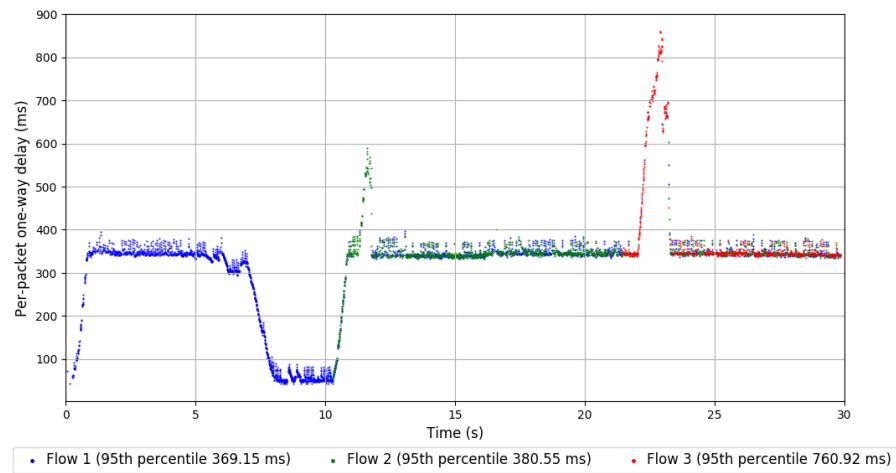
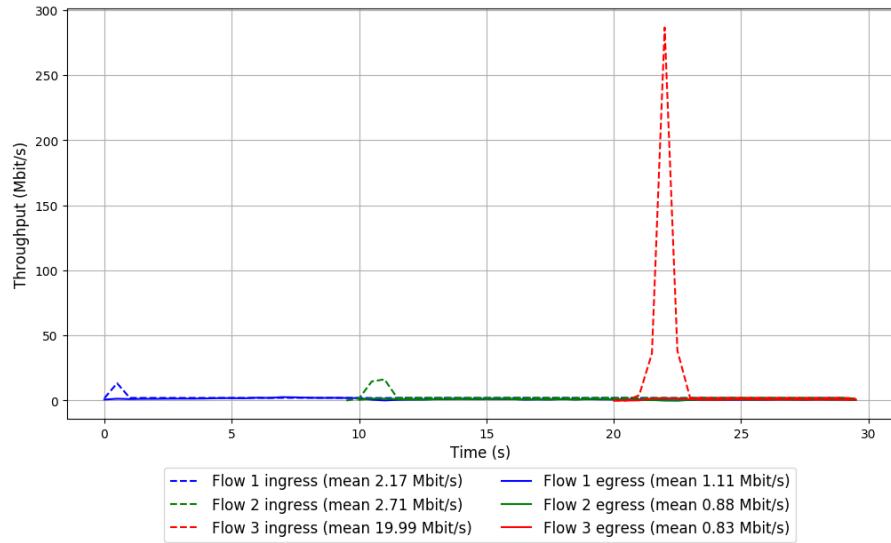


Run 3: Statistics of PCC

```
Start at: 2018-04-03 02:41:31
End at: 2018-04-03 02:42:01
Local clock offset: 1.412 ms
Remote clock offset: 2.559 ms

# Below is generated by plot.py at 2018-04-03 03:59:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.96 Mbit/s
95th percentile per-packet one-way delay: 382.394 ms
Loss rate: 81.48%
-- Flow 1:
Average throughput: 1.11 Mbit/s
95th percentile per-packet one-way delay: 369.146 ms
Loss rate: 49.02%
-- Flow 2:
Average throughput: 0.88 Mbit/s
95th percentile per-packet one-way delay: 380.545 ms
Loss rate: 67.58%
-- Flow 3:
Average throughput: 0.83 Mbit/s
95th percentile per-packet one-way delay: 760.919 ms
Loss rate: 96.00%
```

### Run 3: Report of PCC — Data Link

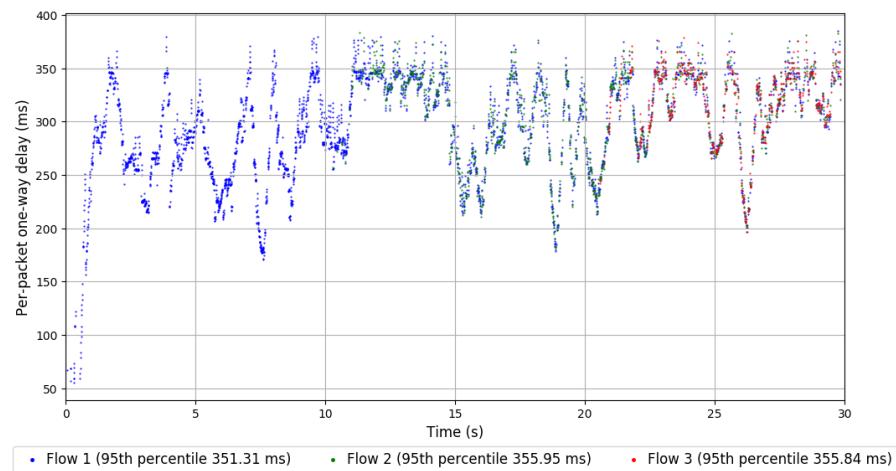
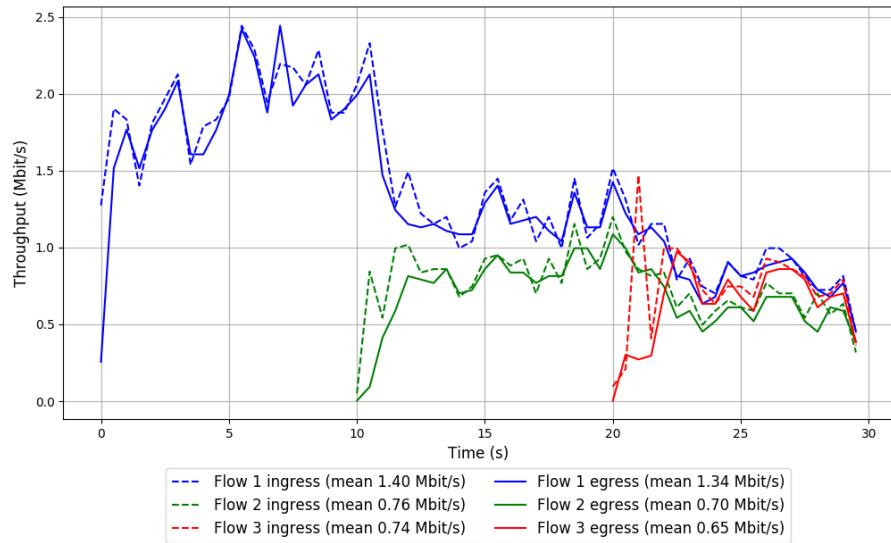


```
Run 1: Statistics of QUIC Cubic
```

```
Start at: 2018-04-03 02:11:47
End at: 2018-04-03 02:12:17
Local clock offset: 3.734 ms
Remote clock offset: -6.138 ms

# Below is generated by plot.py at 2018-04-03 03:59:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.01 Mbit/s
95th percentile per-packet one-way delay: 354.215 ms
Loss rate: 6.92%
-- Flow 1:
Average throughput: 1.34 Mbit/s
95th percentile per-packet one-way delay: 351.307 ms
Loss rate: 4.66%
-- Flow 2:
Average throughput: 0.70 Mbit/s
95th percentile per-packet one-way delay: 355.951 ms
Loss rate: 9.47%
-- Flow 3:
Average throughput: 0.65 Mbit/s
95th percentile per-packet one-way delay: 355.840 ms
Loss rate: 14.54%
```

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

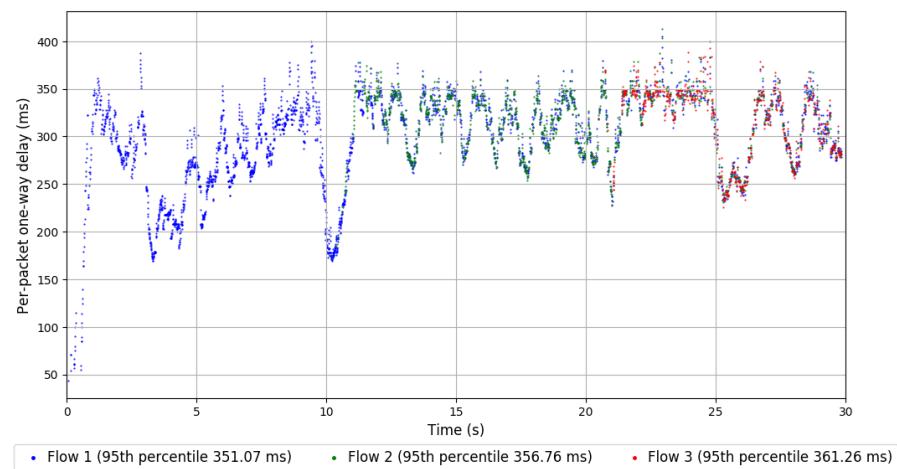
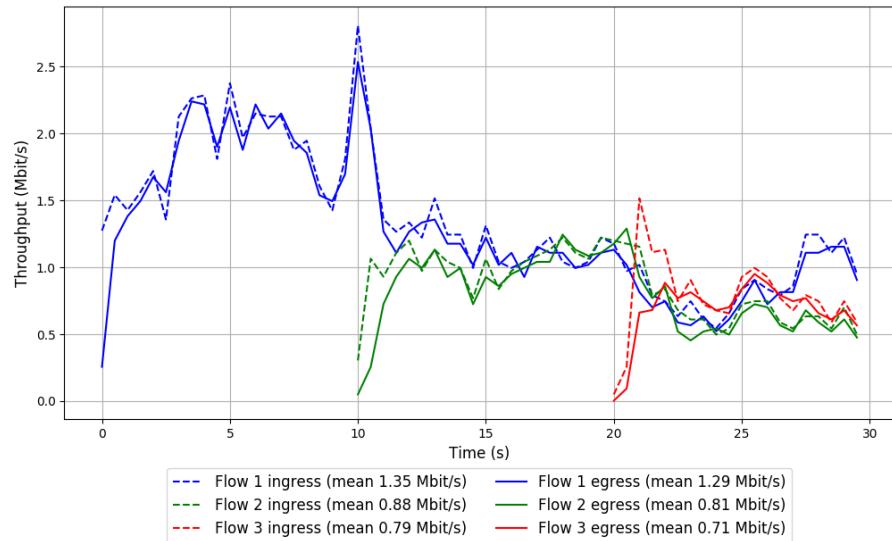


Run 2: Statistics of QUIC Cubic

```
Start at: 2018-04-03 02:31:34
End at: 2018-04-03 02:32:04
Local clock offset: 3.959 ms
Remote clock offset: -1.763 ms

# Below is generated by plot.py at 2018-04-03 03:59:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.05 Mbit/s
95th percentile per-packet one-way delay: 353.200 ms
Loss rate: 6.87%
-- Flow 1:
Average throughput: 1.29 Mbit/s
95th percentile per-packet one-way delay: 351.069 ms
Loss rate: 5.02%
-- Flow 2:
Average throughput: 0.81 Mbit/s
95th percentile per-packet one-way delay: 356.758 ms
Loss rate: 8.47%
-- Flow 3:
Average throughput: 0.71 Mbit/s
95th percentile per-packet one-way delay: 361.256 ms
Loss rate: 12.96%
```

Run 2: Report of QUIC Cubic — Data Link

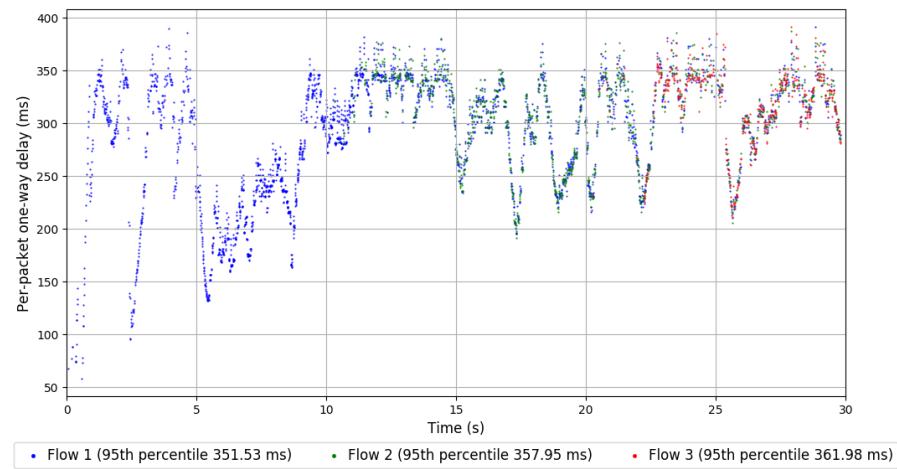
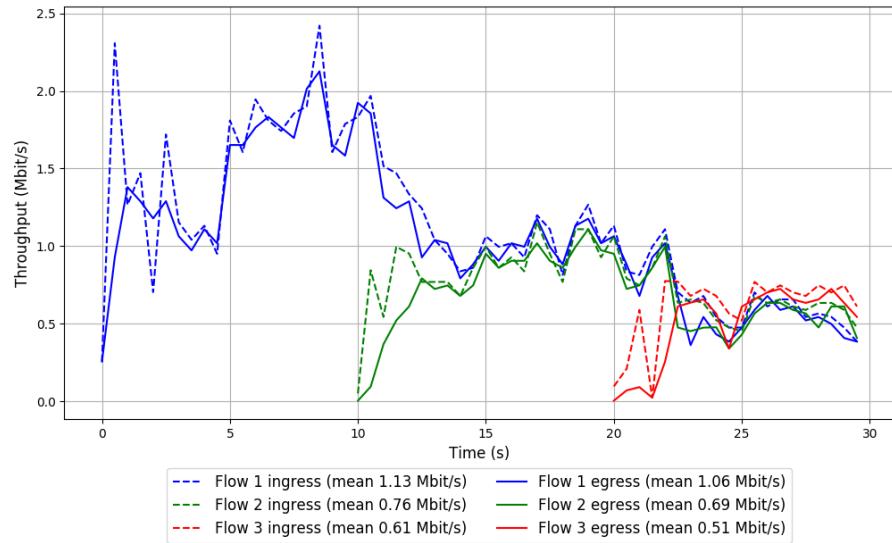


Run 3: Statistics of QUIC Cubic

```
Start at: 2018-04-03 02:51:24
End at: 2018-04-03 02:51:54
Local clock offset: 4.652 ms
Remote clock offset: 5.7 ms

# Below is generated by plot.py at 2018-04-03 03:59:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.67 Mbit/s
95th percentile per-packet one-way delay: 354.338 ms
Loss rate: 9.36%
-- Flow 1:
Average throughput: 1.06 Mbit/s
95th percentile per-packet one-way delay: 351.530 ms
Loss rate: 6.73%
-- Flow 2:
Average throughput: 0.69 Mbit/s
95th percentile per-packet one-way delay: 357.947 ms
Loss rate: 11.52%
-- Flow 3:
Average throughput: 0.51 Mbit/s
95th percentile per-packet one-way delay: 361.975 ms
Loss rate: 18.66%
```

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

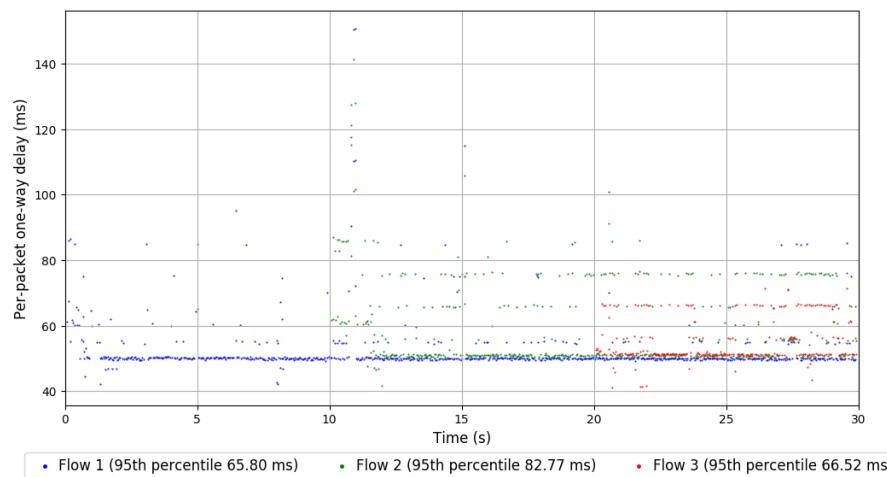
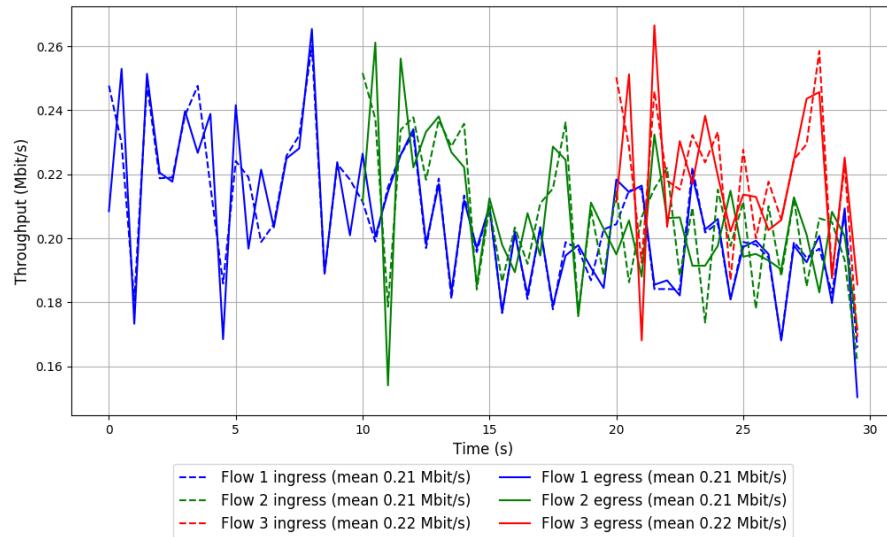


```
Run 1: Statistics of SCReAM
```

```
Start at: 2018-04-03 02:00:48
End at: 2018-04-03 02:01:18
Local clock offset: 2.323 ms
Remote clock offset: -0.628 ms

# Below is generated by plot.py at 2018-04-03 03:59:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.42 Mbit/s
95th percentile per-packet one-way delay: 75.981 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 65.804 ms
Loss rate: 0.24%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 82.768 ms
Loss rate: 0.20%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 66.521 ms
Loss rate: 0.36%
```

Run 1: Report of SCReAM — Data Link

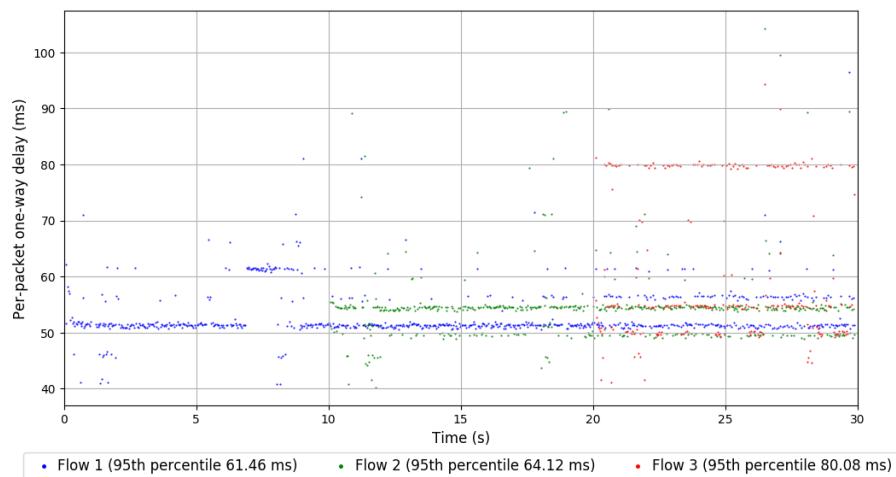
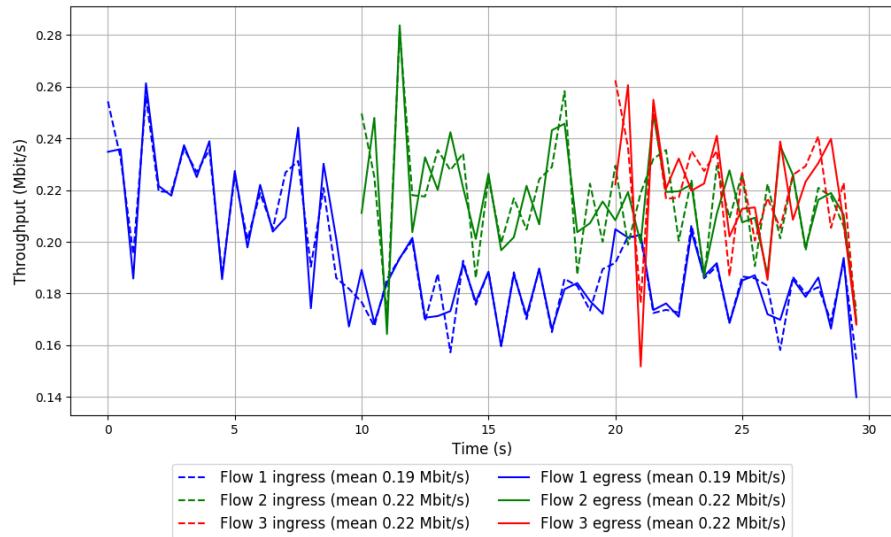


Run 2: Statistics of SCReAM

```
Start at: 2018-04-03 02:20:35
End at: 2018-04-03 02:21:05
Local clock offset: 2.741 ms
Remote clock offset: -6.395 ms

# Below is generated by plot.py at 2018-04-03 03:59:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.41 Mbit/s
95th percentile per-packet one-way delay: 79.711 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 61.462 ms
Loss rate: 0.24%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 64.125 ms
Loss rate: 0.21%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 80.080 ms
Loss rate: 0.74%
```

## Run 2: Report of SCReAM — Data Link

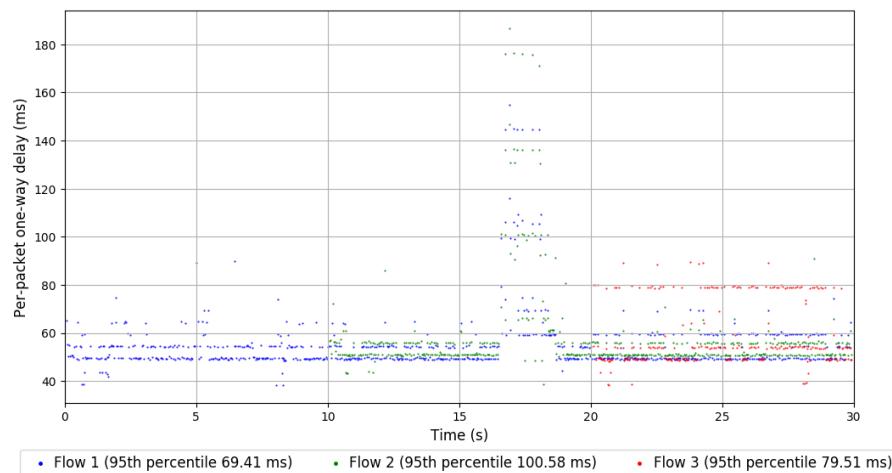
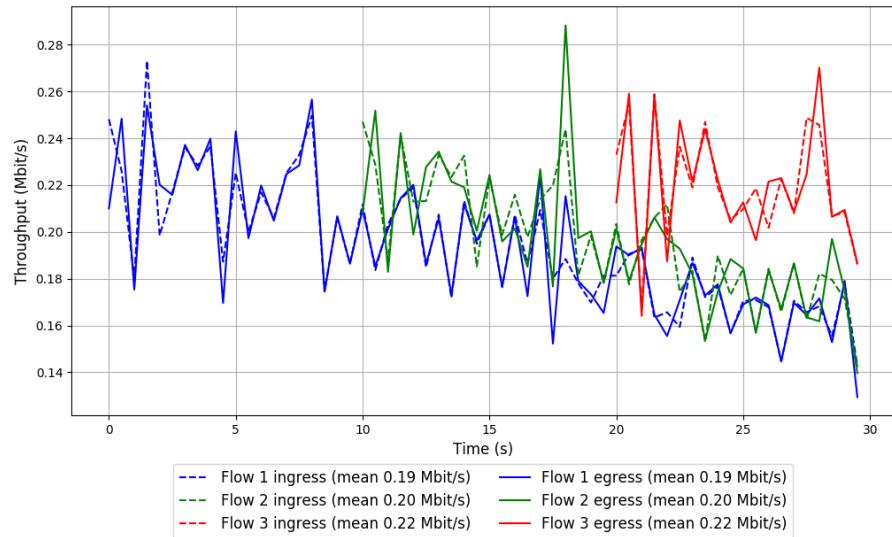


Run 3: Statistics of SCReAM

```
Start at: 2018-04-03 02:40:26
End at: 2018-04-03 02:40:56
Local clock offset: 1.506 ms
Remote clock offset: 1.583 ms

# Below is generated by plot.py at 2018-04-03 03:59:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 79.290 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 69.412 ms
Loss rate: 0.22%
-- Flow 2:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 100.575 ms
Loss rate: 0.18%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 79.507 ms
Loss rate: 0.35%
```

Run 3: Report of SCReAM — Data Link

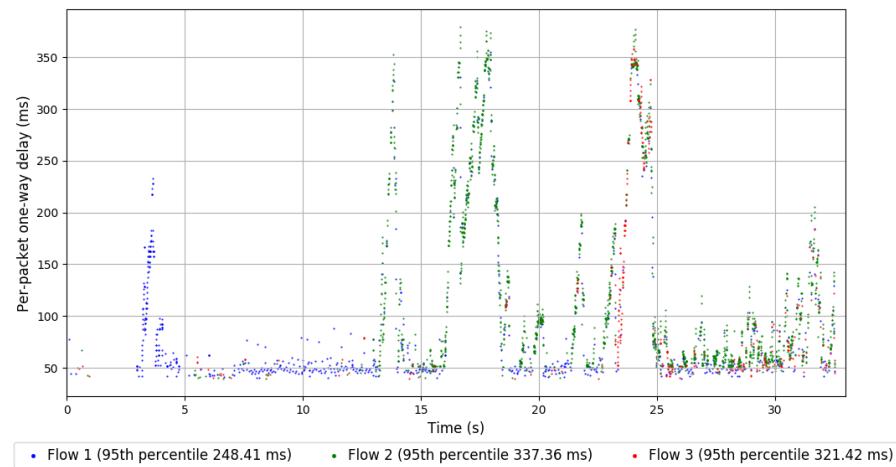
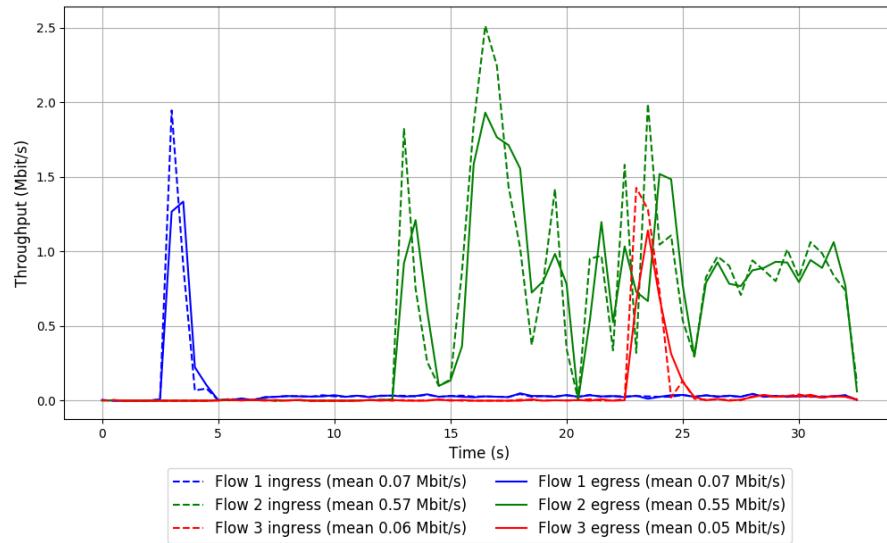


```
Run 1: Statistics of WebRTC media

Start at: 2018-04-03 02:03:00
End at: 2018-04-03 02:03:30
Local clock offset: 4.548 ms
Remote clock offset: -0.717 ms

# Below is generated by plot.py at 2018-04-03 03:59:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.67 Mbit/s
95th percentile per-packet one-way delay: 322.283 ms
Loss rate: 4.67%
-- Flow 1:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 248.405 ms
Loss rate: 1.96%
-- Flow 2:
Average throughput: 0.55 Mbit/s
95th percentile per-packet one-way delay: 337.356 ms
Loss rate: 3.68%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 321.418 ms
Loss rate: 16.76%
```

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

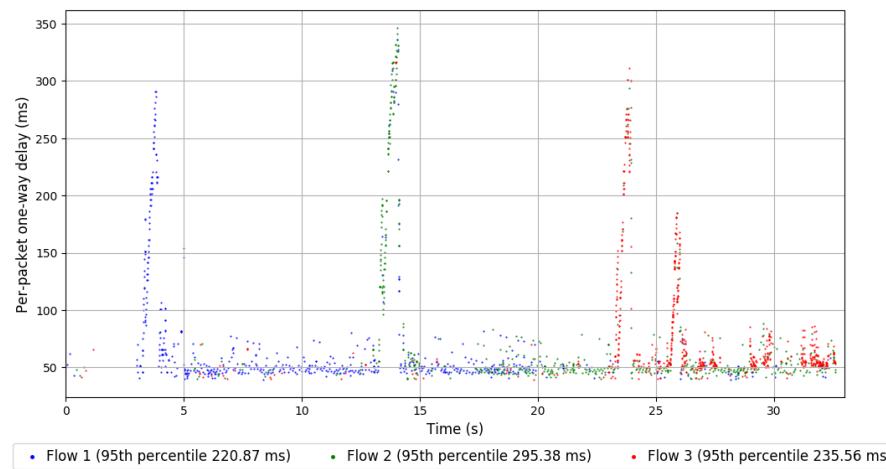
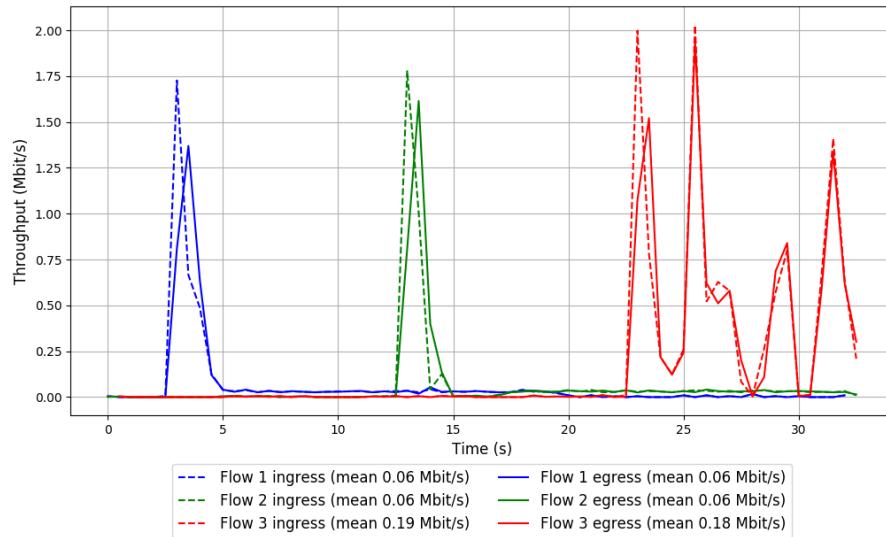


Run 2: Statistics of WebRTC media

```
Start at: 2018-04-03 02:22:47
End at: 2018-04-03 02:23:17
Local clock offset: 2.44 ms
Remote clock offset: -7.306 ms

# Below is generated by plot.py at 2018-04-03 03:59:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.30 Mbit/s
95th percentile per-packet one-way delay: 255.813 ms
Loss rate: 1.73%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 220.870 ms
Loss rate: 1.79%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 295.385 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 235.561 ms
Loss rate: 2.26%
```

Run 2: Report of WebRTC media — Data Link

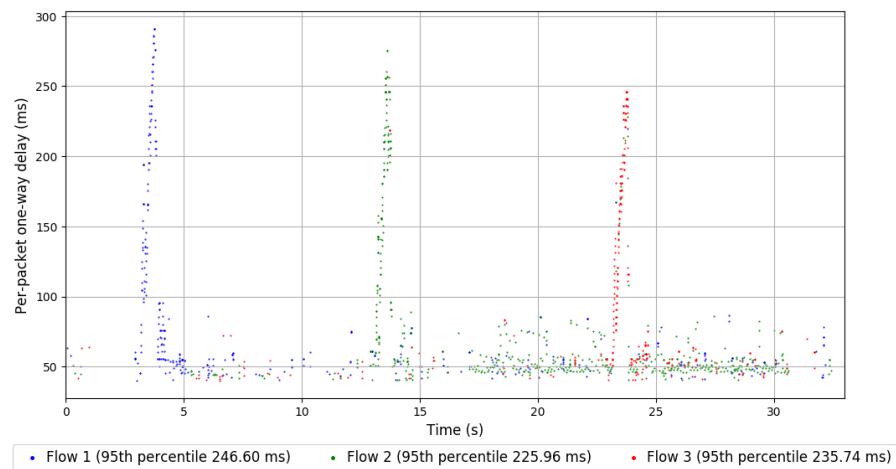
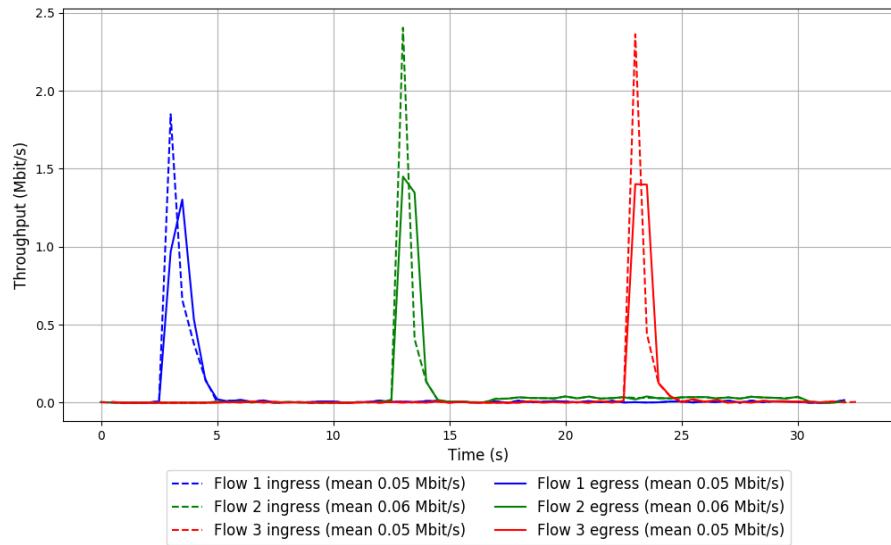


```
Run 3: Statistics of WebRTC media

Start at: 2018-04-03 02:42:37
End at: 2018-04-03 02:43:07
Local clock offset: 4.647 ms
Remote clock offset: 2.97 ms

# Below is generated by plot.py at 2018-04-03 03:59:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 235.853 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 246.600 ms
Loss rate: 2.13%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 225.960 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 235.740 ms
Loss rate: 0.21%
```

Run 3: Report of WebRTC media — Data Link

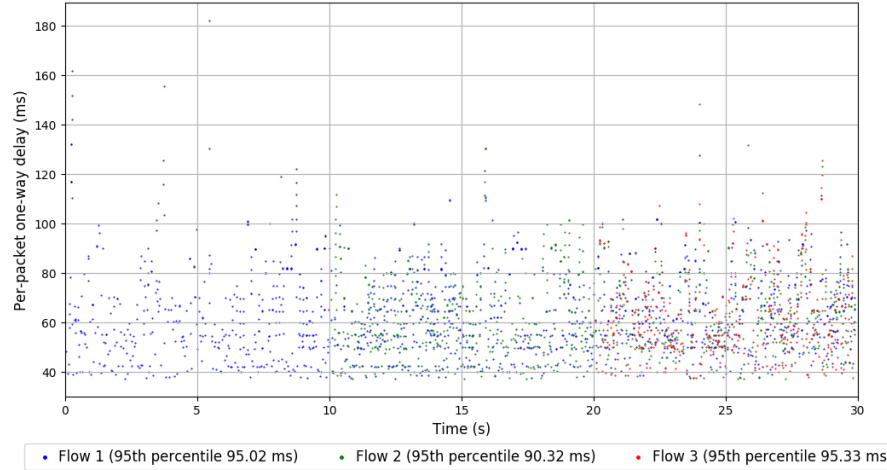
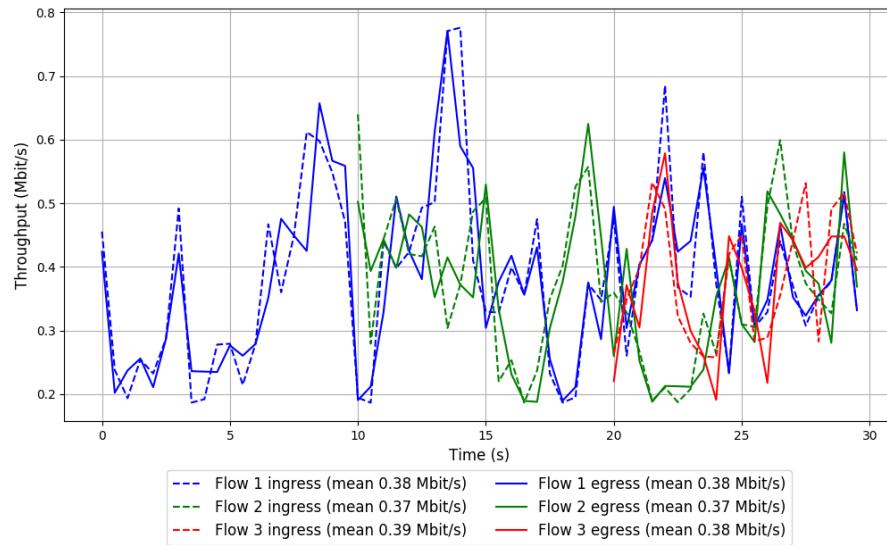


Run 1: Statistics of Sprout

```
Start at: 2018-04-03 02:12:53
End at: 2018-04-03 02:13:23
Local clock offset: 0.282 ms
Remote clock offset: -5.767 ms

# Below is generated by plot.py at 2018-04-03 03:59:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.76 Mbit/s
95th percentile per-packet one-way delay: 92.354 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 0.38 Mbit/s
95th percentile per-packet one-way delay: 95.021 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 0.37 Mbit/s
95th percentile per-packet one-way delay: 90.318 ms
Loss rate: 0.44%
-- Flow 3:
Average throughput: 0.38 Mbit/s
95th percentile per-packet one-way delay: 95.335 ms
Loss rate: 1.83%
```

## Run 1: Report of Sprout — Data Link

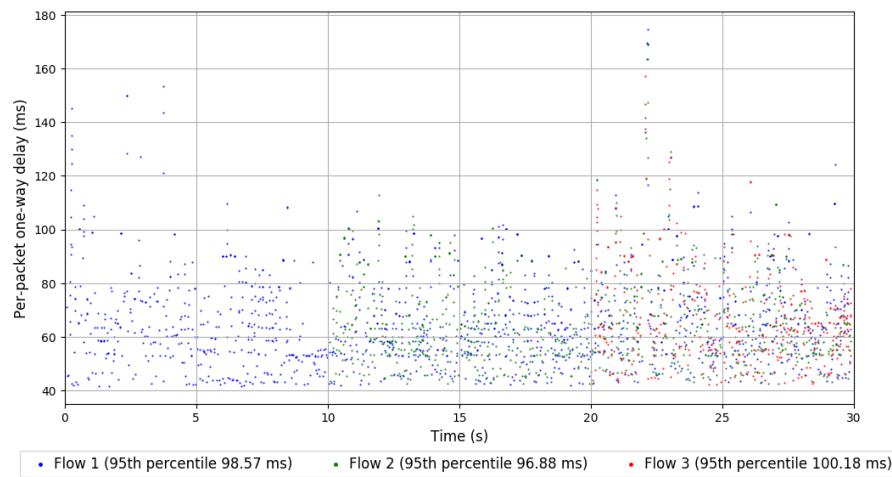
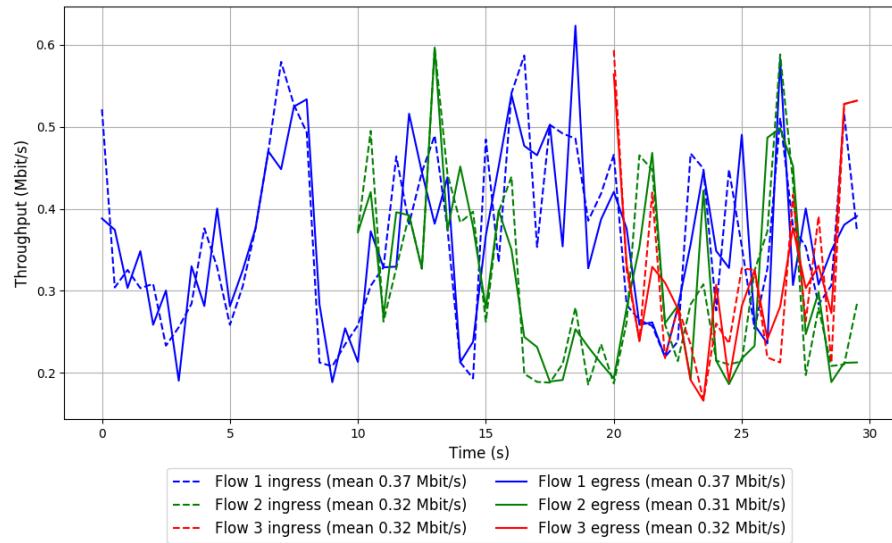


Run 2: Statistics of Sprout

```
Start at: 2018-04-03 02:32:40
End at: 2018-04-03 02:33:10
Local clock offset: 5.019 ms
Remote clock offset: -2.157 ms

# Below is generated by plot.py at 2018-04-03 03:59:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.68 Mbit/s
95th percentile per-packet one-way delay: 98.510 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 0.37 Mbit/s
95th percentile per-packet one-way delay: 98.574 ms
Loss rate: 0.63%
-- Flow 2:
Average throughput: 0.31 Mbit/s
95th percentile per-packet one-way delay: 96.879 ms
Loss rate: 0.72%
-- Flow 3:
Average throughput: 0.32 Mbit/s
95th percentile per-packet one-way delay: 100.179 ms
Loss rate: 0.35%
```

## Run 2: Report of Sprout — Data Link

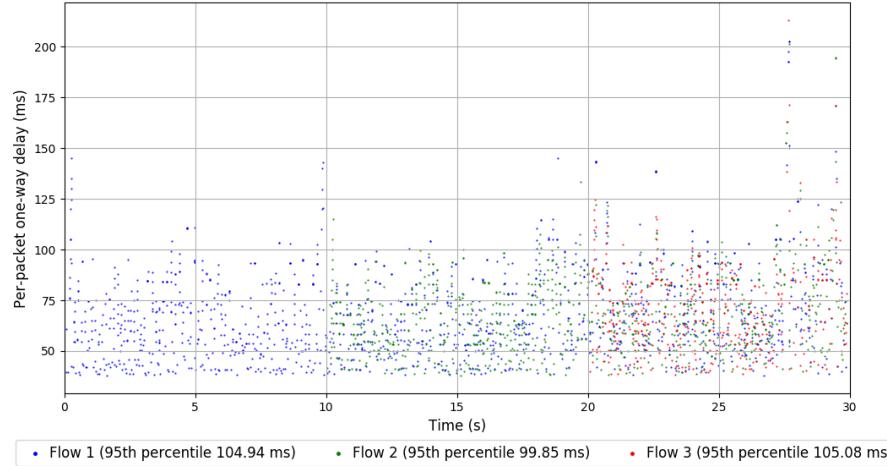
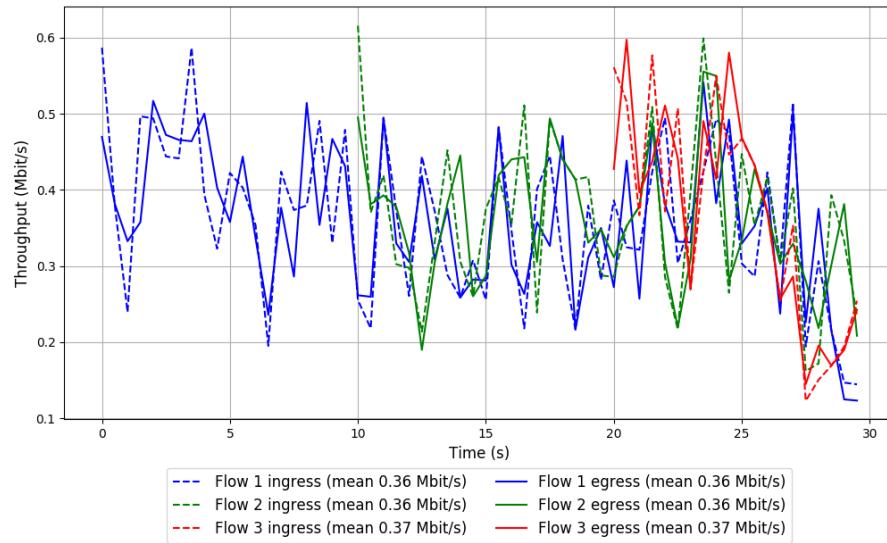


Run 3: Statistics of Sprout

```
Start at: 2018-04-03 02:52:30
End at: 2018-04-03 02:53:00
Local clock offset: 2.601 ms
Remote clock offset: 5.265 ms

# Below is generated by plot.py at 2018-04-03 03:59:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.73 Mbit/s
95th percentile per-packet one-way delay: 104.076 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 104.942 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 99.849 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 0.37 Mbit/s
95th percentile per-packet one-way delay: 105.075 ms
Loss rate: 0.52%
```

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

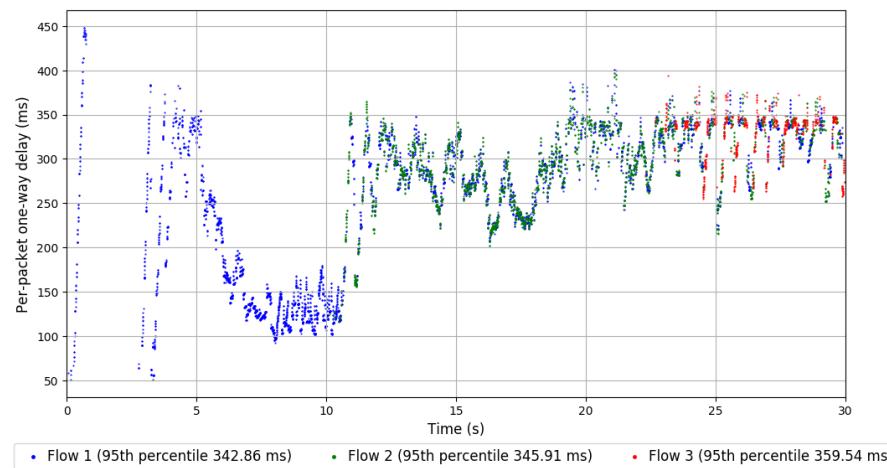
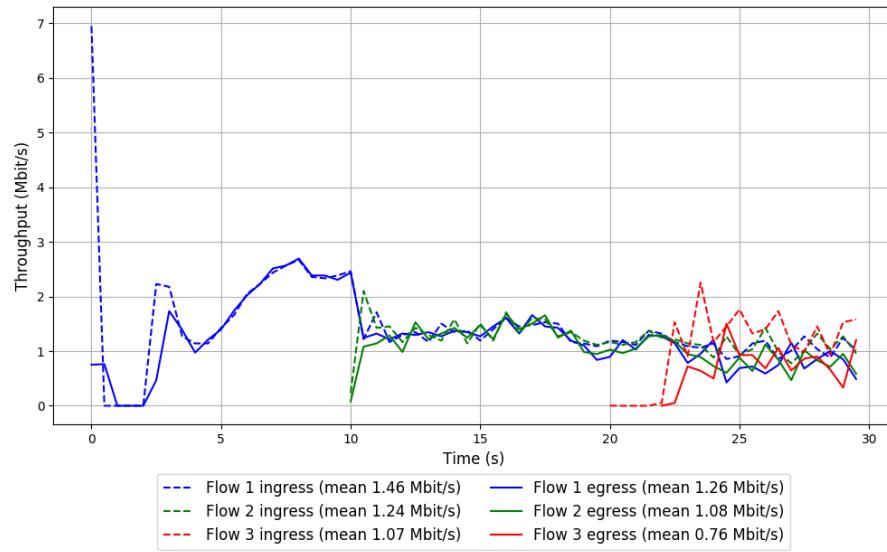


Run 1: Statistics of TaoVA-100x

```
Start at: 2018-04-03 02:18:23
End at: 2018-04-03 02:18:53
Local clock offset: 0.463 ms
Remote clock offset: -6.662 ms

# Below is generated by plot.py at 2018-04-03 03:59:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.16 Mbit/s
95th percentile per-packet one-way delay: 346.028 ms
Loss rate: 17.93%
-- Flow 1:
Average throughput: 1.26 Mbit/s
95th percentile per-packet one-way delay: 342.857 ms
Loss rate: 13.99%
-- Flow 2:
Average throughput: 1.08 Mbit/s
95th percentile per-packet one-way delay: 345.909 ms
Loss rate: 13.19%
-- Flow 3:
Average throughput: 0.76 Mbit/s
95th percentile per-packet one-way delay: 359.536 ms
Loss rate: 45.17%
```

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

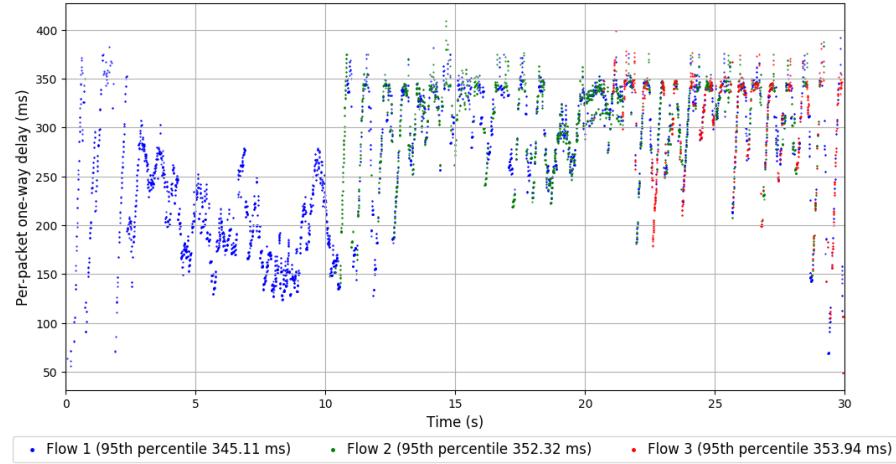
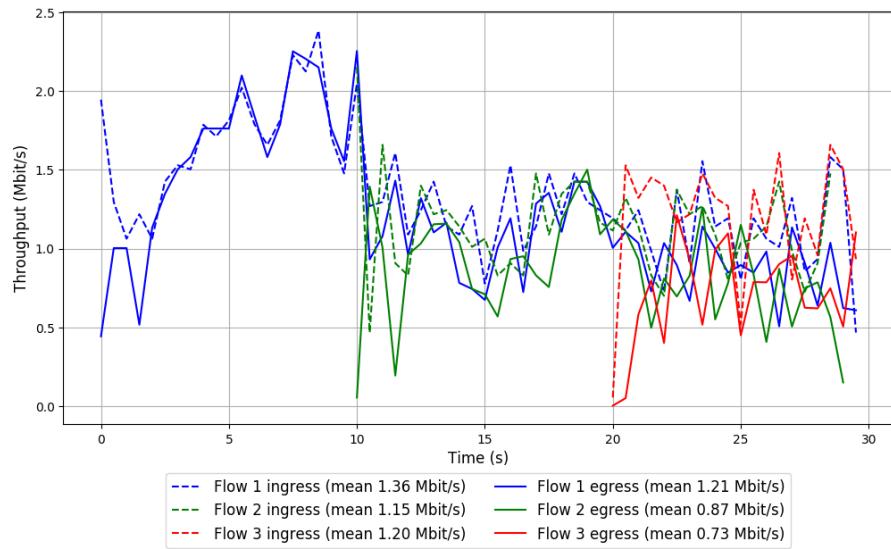


Run 2: Statistics of TaoVA-100x

```
Start at: 2018-04-03 02:38:14
End at: 2018-04-03 02:38:44
Local clock offset: 2.955 ms
Remote clock offset: 1.194 ms

# Below is generated by plot.py at 2018-04-03 03:59:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.00 Mbit/s
95th percentile per-packet one-way delay: 347.896 ms
Loss rate: 19.71%
-- Flow 1:
Average throughput: 1.21 Mbit/s
95th percentile per-packet one-way delay: 345.113 ms
Loss rate: 11.71%
-- Flow 2:
Average throughput: 0.87 Mbit/s
95th percentile per-packet one-way delay: 352.323 ms
Loss rate: 23.00%
-- Flow 3:
Average throughput: 0.73 Mbit/s
95th percentile per-packet one-way delay: 353.943 ms
Loss rate: 41.05%
```

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

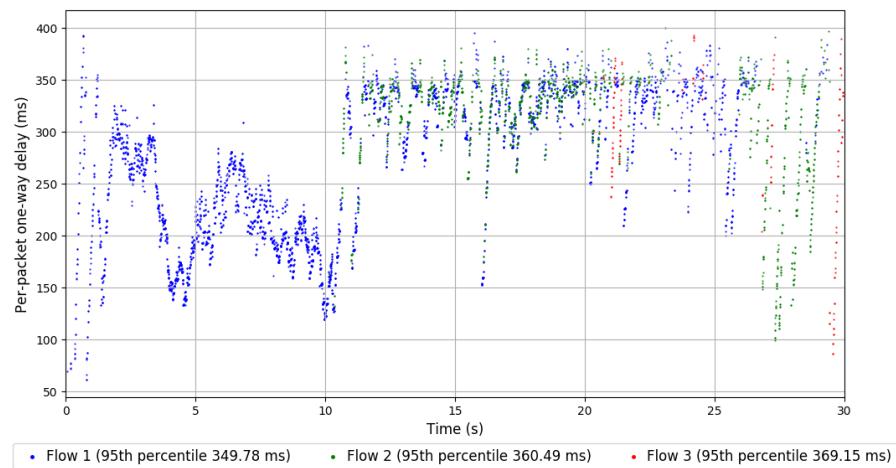
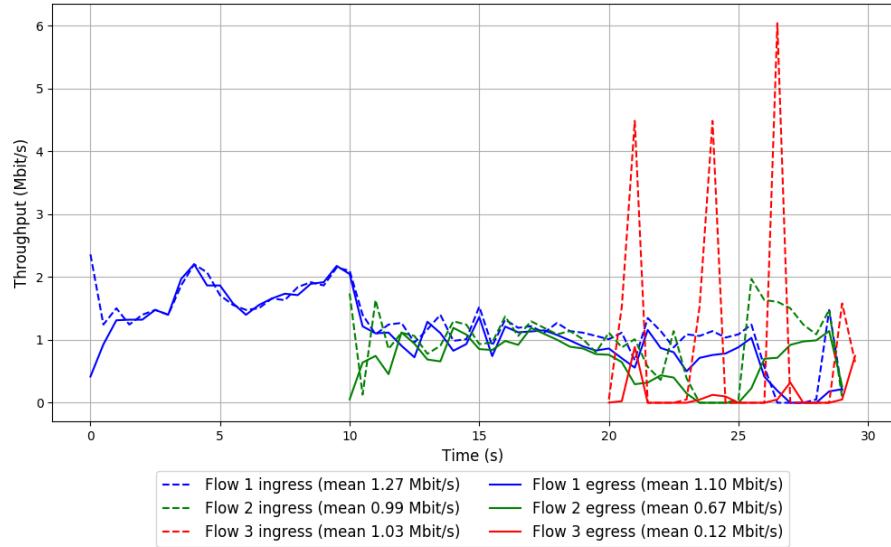


Run 3: Statistics of TaoVA-100x

```
Start at: 2018-04-03 02:58:04
End at: 2018-04-03 02:58:34
Local clock offset: 3.804 ms
Remote clock offset: 4.62 ms

# Below is generated by plot.py at 2018-04-03 03:59:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.55 Mbit/s
95th percentile per-packet one-way delay: 353.482 ms
Loss rate: 29.87%
-- Flow 1:
Average throughput: 1.10 Mbit/s
95th percentile per-packet one-way delay: 349.782 ms
Loss rate: 12.95%
-- Flow 2:
Average throughput: 0.67 Mbit/s
95th percentile per-packet one-way delay: 360.486 ms
Loss rate: 31.26%
-- Flow 3:
Average throughput: 0.12 Mbit/s
95th percentile per-packet one-way delay: 369.148 ms
Loss rate: 88.42%
```

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

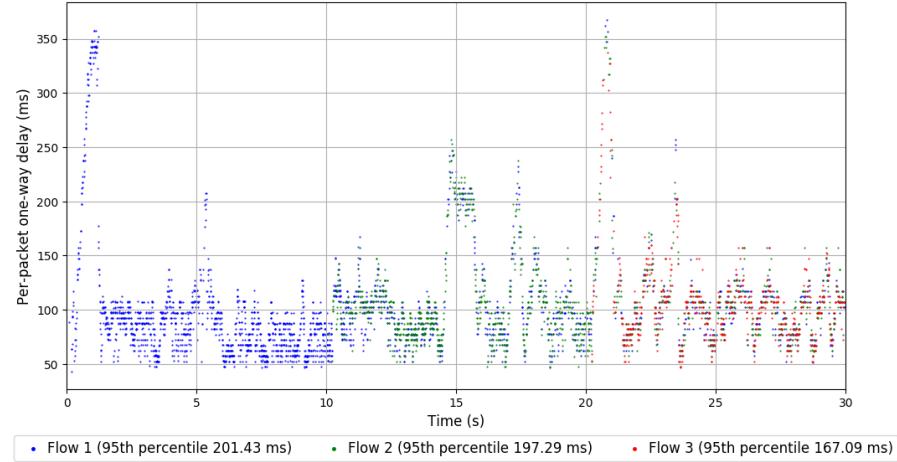
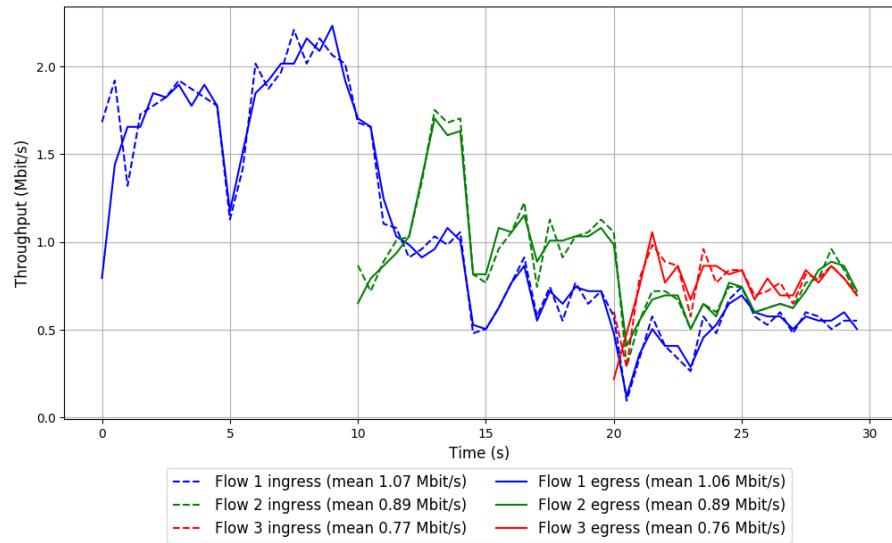


Run 1: Statistics of TCP Vegas

```
Start at: 2018-04-03 02:08:30
End at: 2018-04-03 02:09:00
Local clock offset: 0.864 ms
Remote clock offset: -3.261 ms

# Below is generated by plot.py at 2018-04-03 03:59:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.90 Mbit/s
95th percentile per-packet one-way delay: 197.247 ms
Loss rate: 1.23%
-- Flow 1:
Average throughput: 1.06 Mbit/s
95th percentile per-packet one-way delay: 201.432 ms
Loss rate: 1.46%
-- Flow 2:
Average throughput: 0.89 Mbit/s
95th percentile per-packet one-way delay: 197.295 ms
Loss rate: 0.81%
-- Flow 3:
Average throughput: 0.76 Mbit/s
95th percentile per-packet one-way delay: 167.085 ms
Loss rate: 1.26%
```

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

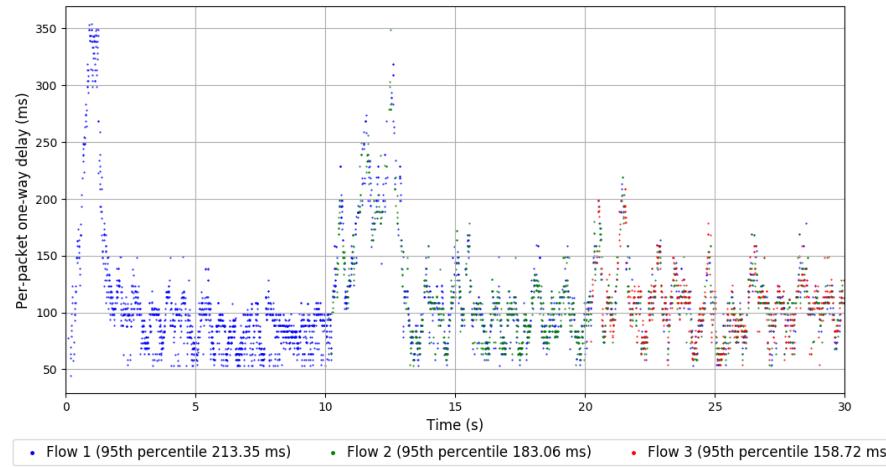
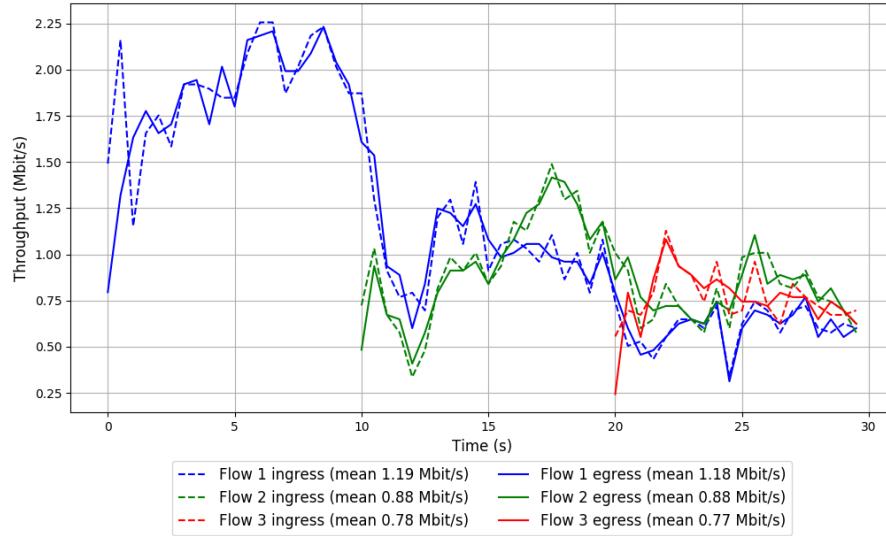


Run 2: Statistics of TCP Vegas

```
Start at: 2018-04-03 02:28:16
End at: 2018-04-03 02:28:46
Local clock offset: 2.067 ms
Remote clock offset: -5.321 ms

# Below is generated by plot.py at 2018-04-03 03:59:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.02 Mbit/s
95th percentile per-packet one-way delay: 193.420 ms
Loss rate: 1.01%
-- Flow 1:
Average throughput: 1.18 Mbit/s
95th percentile per-packet one-way delay: 213.355 ms
Loss rate: 1.14%
-- Flow 2:
Average throughput: 0.88 Mbit/s
95th percentile per-packet one-way delay: 183.058 ms
Loss rate: 0.27%
-- Flow 3:
Average throughput: 0.77 Mbit/s
95th percentile per-packet one-way delay: 158.717 ms
Loss rate: 2.02%
```

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

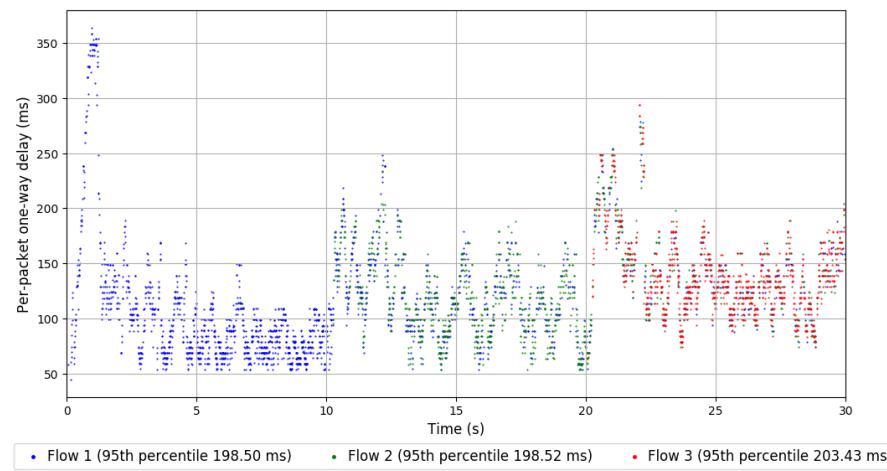
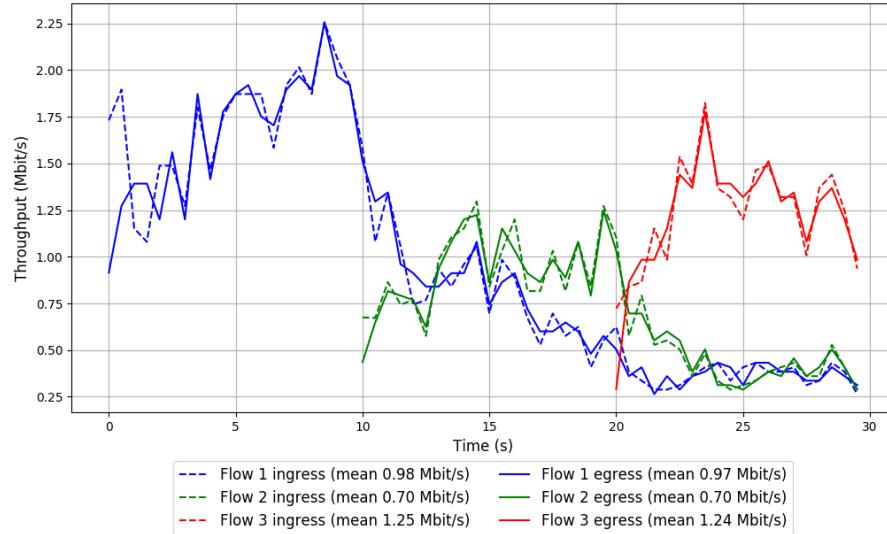


Run 3: Statistics of TCP Vegas

```
Start at: 2018-04-03 02:48:06
End at: 2018-04-03 02:48:36
Local clock offset: 3.385 ms
Remote clock offset: 3.021 ms

# Below is generated by plot.py at 2018-04-03 03:59:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.84 Mbit/s
95th percentile per-packet one-way delay: 198.671 ms
Loss rate: 1.27%
-- Flow 1:
Average throughput: 0.97 Mbit/s
95th percentile per-packet one-way delay: 198.499 ms
Loss rate: 1.55%
-- Flow 2:
Average throughput: 0.70 Mbit/s
95th percentile per-packet one-way delay: 198.524 ms
Loss rate: 0.52%
-- Flow 3:
Average throughput: 1.24 Mbit/s
95th percentile per-packet one-way delay: 203.426 ms
Loss rate: 1.45%
```

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

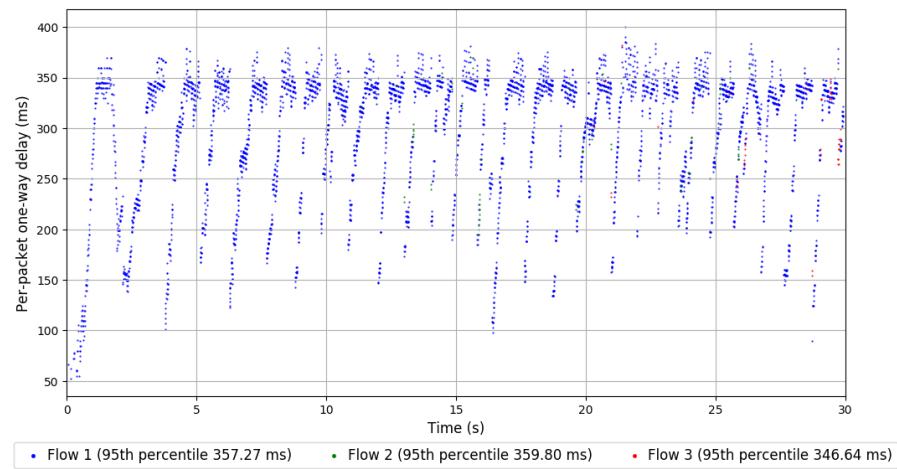
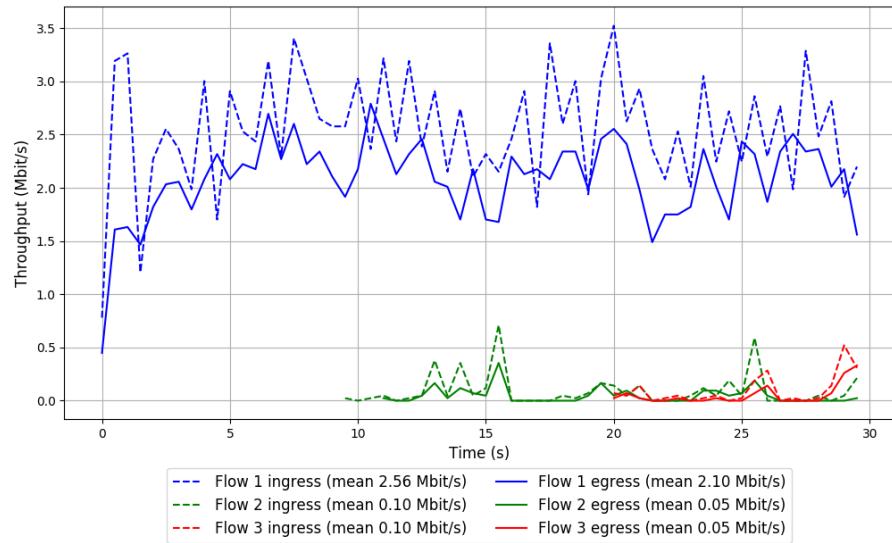


Run 1: Statistics of Verus

```
Start at: 2018-04-03 02:09:36
End at: 2018-04-03 02:10:06
Local clock offset: 1.9 ms
Remote clock offset: -4.882 ms

# Below is generated by plot.py at 2018-04-03 03:59:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.14 Mbit/s
95th percentile per-packet one-way delay: 357.297 ms
Loss rate: 19.37%
-- Flow 1:
Average throughput: 2.10 Mbit/s
95th percentile per-packet one-way delay: 357.272 ms
Loss rate: 18.21%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 359.796 ms
Loss rate: 52.80%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 346.639 ms
Loss rate: 45.68%
```

## Run 1: Report of Verus — Data Link

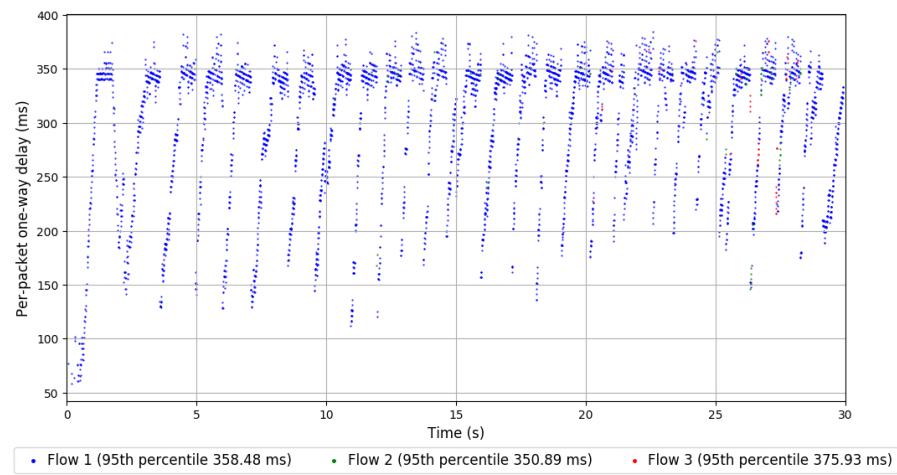
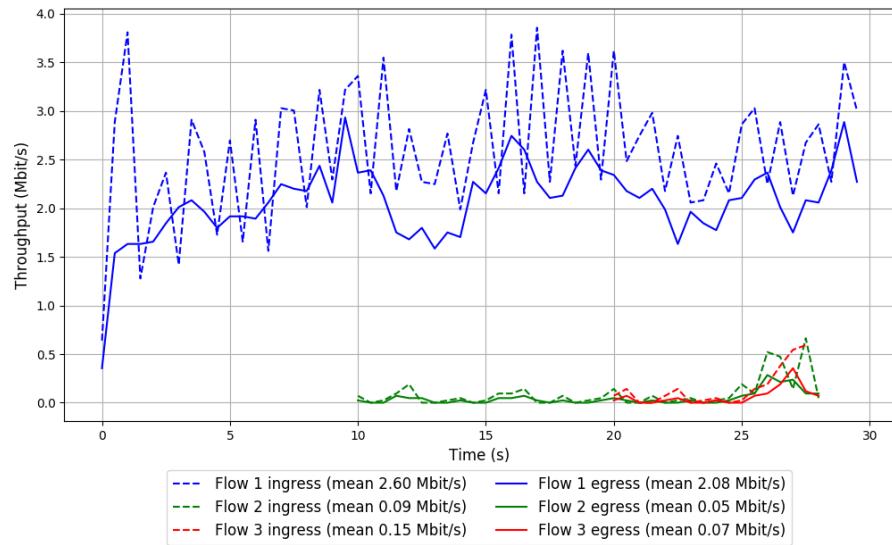


Run 2: Statistics of Verus

```
Start at: 2018-04-03 02:29:22
End at: 2018-04-03 02:29:52
Local clock offset: 3.231 ms
Remote clock offset: -5.454 ms

# Below is generated by plot.py at 2018-04-03 03:59:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.12 Mbit/s
95th percentile per-packet one-way delay: 358.586 ms
Loss rate: 21.49%
-- Flow 1:
Average throughput: 2.08 Mbit/s
95th percentile per-packet one-way delay: 358.478 ms
Loss rate: 20.35%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 350.894 ms
Loss rate: 51.03%
-- Flow 3:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 375.930 ms
Loss rate: 54.00%
```

## Run 2: Report of Verus — Data Link

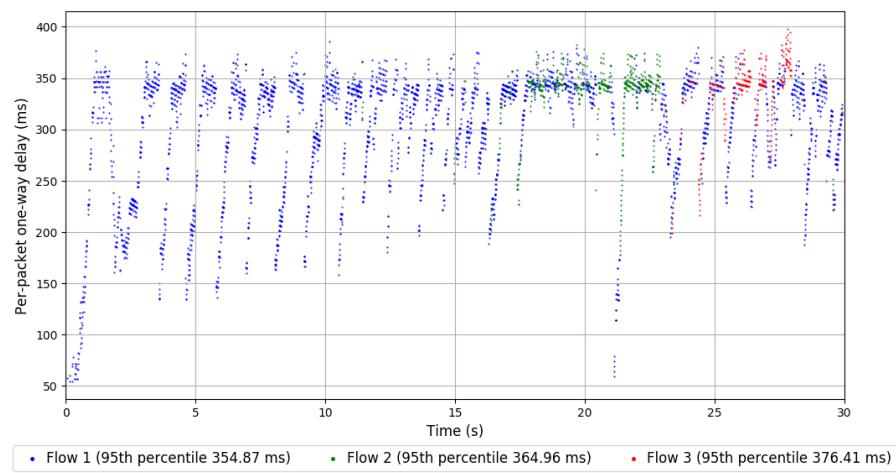
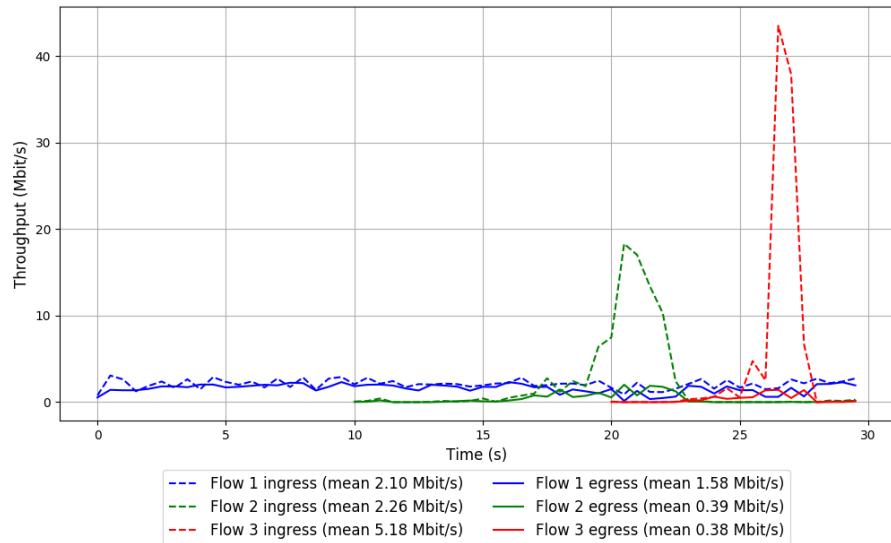


Run 3: Statistics of Verus

```
Start at: 2018-04-03 02:49:12
End at: 2018-04-03 02:49:42
Local clock offset: 1.87 ms
Remote clock offset: 4.017 ms

# Below is generated by plot.py at 2018-04-03 03:59:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.96 Mbit/s
95th percentile per-packet one-way delay: 358.104 ms
Loss rate: 62.68%
-- Flow 1:
Average throughput: 1.58 Mbit/s
95th percentile per-packet one-way delay: 354.871 ms
Loss rate: 25.03%
-- Flow 2:
Average throughput: 0.39 Mbit/s
95th percentile per-packet one-way delay: 364.960 ms
Loss rate: 82.62%
-- Flow 3:
Average throughput: 0.38 Mbit/s
95th percentile per-packet one-way delay: 376.406 ms
Loss rate: 92.64%
```

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

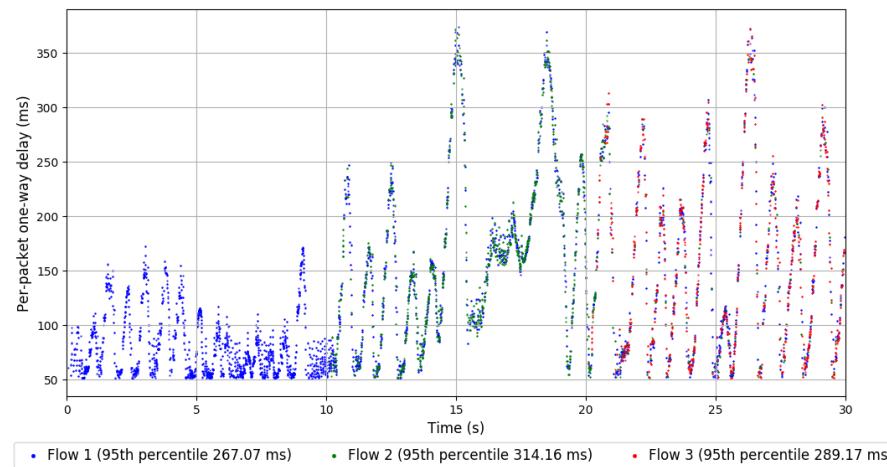
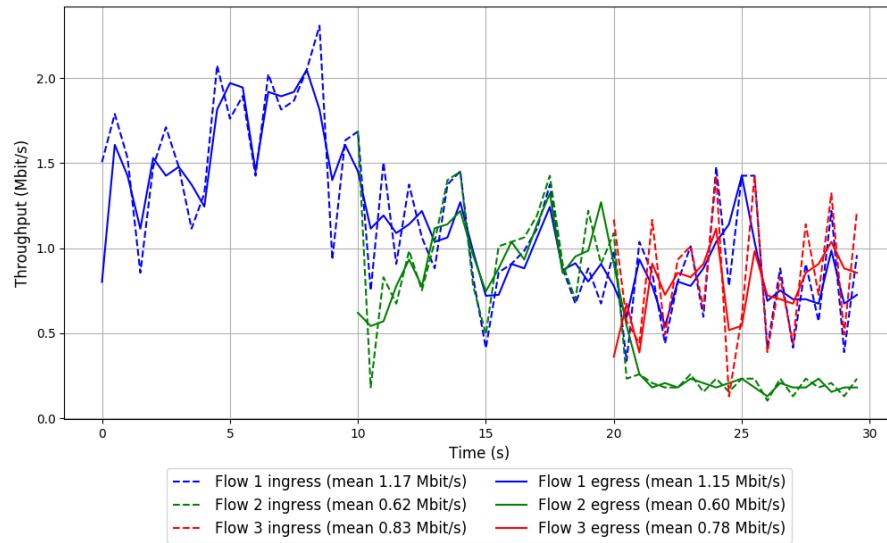


Run 1: Statistics of Copa

```
Start at: 2018-04-03 02:05:12
End at: 2018-04-03 02:05:42
Local clock offset: 4.224 ms
Remote clock offset: -3.064 ms

# Below is generated by plot.py at 2018-04-03 03:59:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.81 Mbit/s
95th percentile per-packet one-way delay: 283.396 ms
Loss rate: 2.73%
-- Flow 1:
Average throughput: 1.15 Mbit/s
95th percentile per-packet one-way delay: 267.071 ms
Loss rate: 1.52%
-- Flow 2:
Average throughput: 0.60 Mbit/s
95th percentile per-packet one-way delay: 314.157 ms
Loss rate: 3.46%
-- Flow 3:
Average throughput: 0.78 Mbit/s
95th percentile per-packet one-way delay: 289.166 ms
Loss rate: 6.78%
```

## Run 1: Report of Copa — Data Link

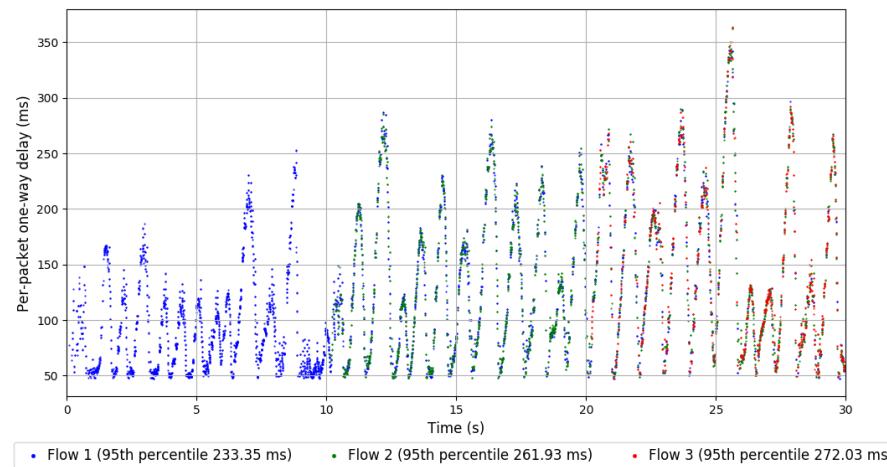
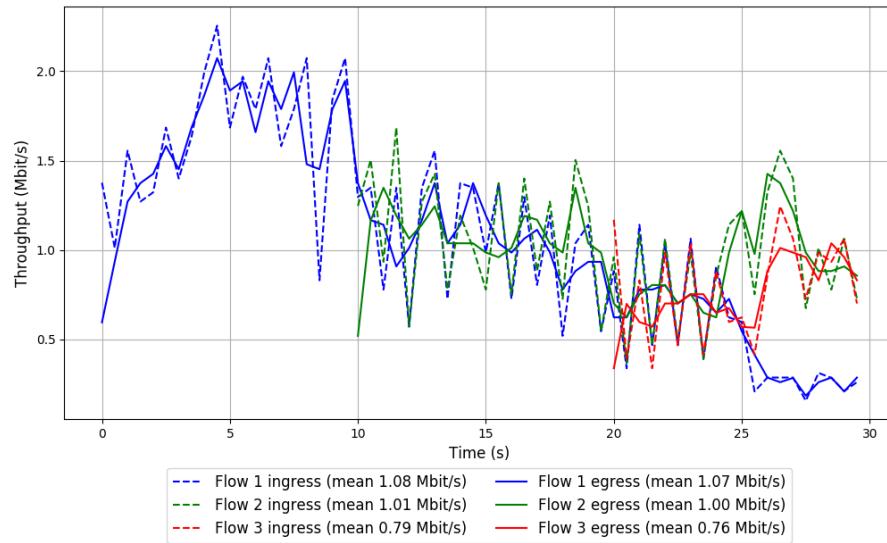


Run 2: Statistics of Copa

```
Start at: 2018-04-03 02:24:58
End at: 2018-04-03 02:25:28
Local clock offset: 0.307 ms
Remote clock offset: -7.089 ms

# Below is generated by plot.py at 2018-04-03 03:59:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.98 Mbit/s
95th percentile per-packet one-way delay: 252.529 ms
Loss rate: 1.87%
-- Flow 1:
Average throughput: 1.07 Mbit/s
95th percentile per-packet one-way delay: 233.354 ms
Loss rate: 1.25%
-- Flow 2:
Average throughput: 1.00 Mbit/s
95th percentile per-packet one-way delay: 261.926 ms
Loss rate: 1.95%
-- Flow 3:
Average throughput: 0.76 Mbit/s
95th percentile per-packet one-way delay: 272.034 ms
Loss rate: 4.20%
```

## Run 2: Report of Copa — Data Link

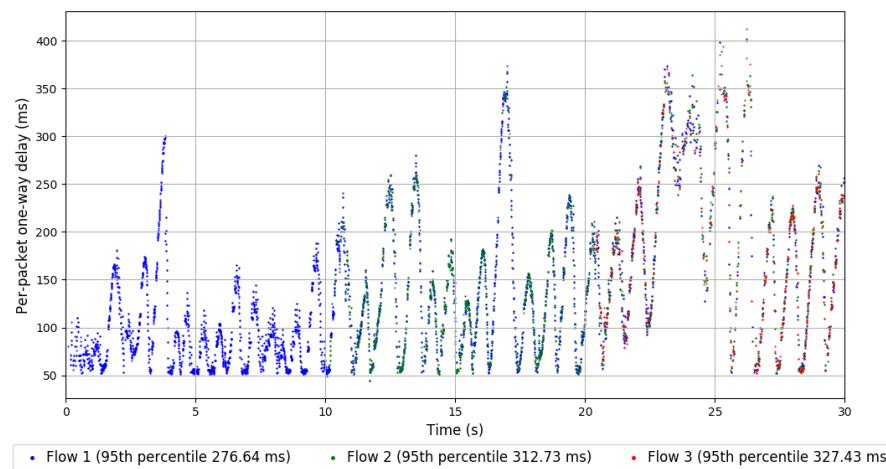
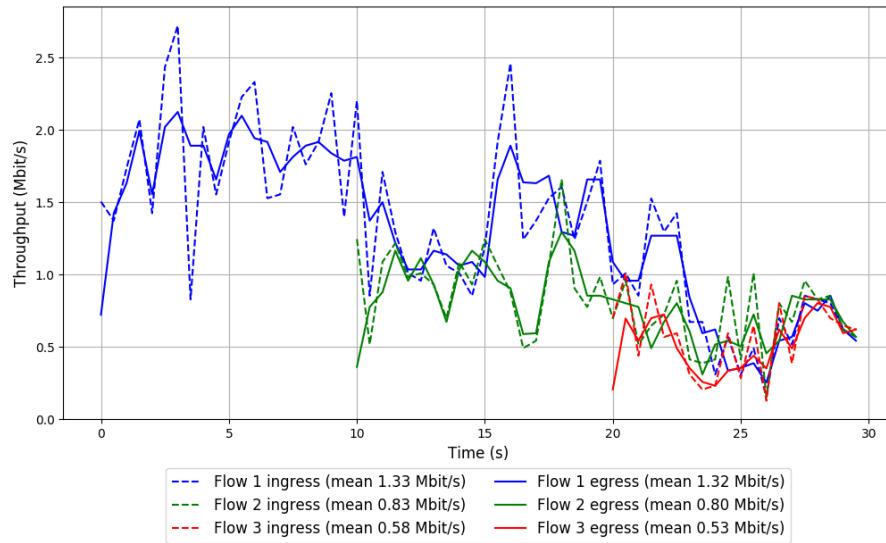


Run 3: Statistics of Copa

```
Start at: 2018-04-03 02:44:49
End at: 2018-04-03 02:45:19
Local clock offset: 4.707 ms
Remote clock offset: 3.36 ms

# Below is generated by plot.py at 2018-04-03 03:59:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.02 Mbit/s
95th percentile per-packet one-way delay: 294.272 ms
Loss rate: 3.08%
-- Flow 1:
Average throughput: 1.32 Mbit/s
95th percentile per-packet one-way delay: 276.645 ms
Loss rate: 1.68%
-- Flow 2:
Average throughput: 0.80 Mbit/s
95th percentile per-packet one-way delay: 312.728 ms
Loss rate: 3.92%
-- Flow 3:
Average throughput: 0.53 Mbit/s
95th percentile per-packet one-way delay: 327.428 ms
Loss rate: 10.37%
```

### Run 3: Report of Copa — Data Link

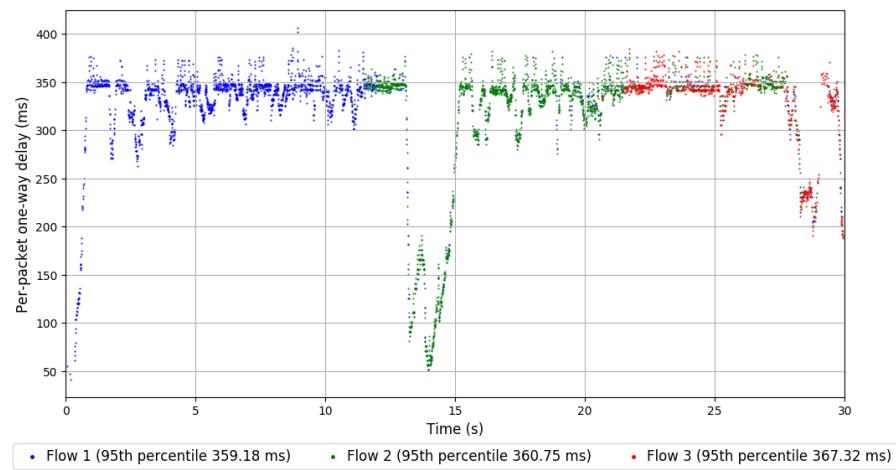
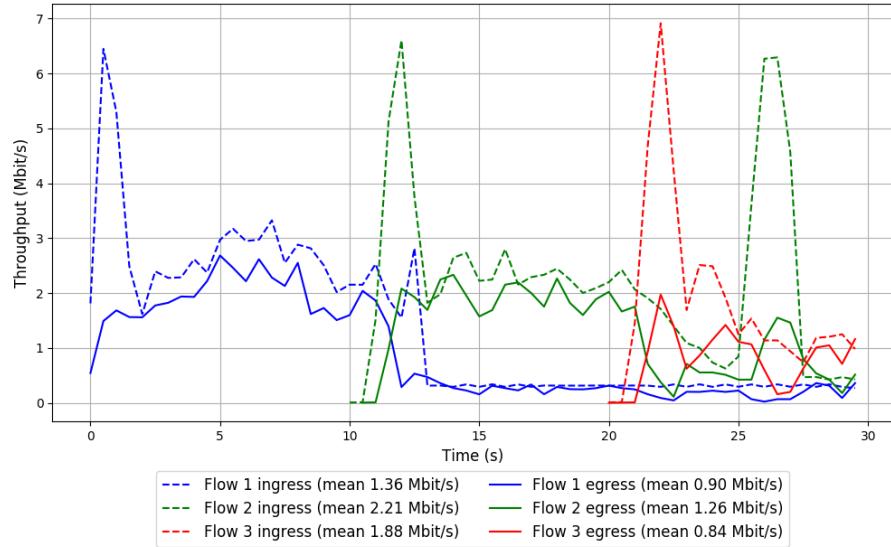


```
Run 1: Statistics of FillP

Start at: 2018-04-03 02:06:18
End at: 2018-04-03 02:06:48
Local clock offset: 3.651 ms
Remote clock offset: -2.997 ms

# Below is generated by plot.py at 2018-04-03 03:59:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.98 Mbit/s
95th percentile per-packet one-way delay: 361.798 ms
Loss rate: 42.83%
-- Flow 1:
Average throughput: 0.90 Mbit/s
95th percentile per-packet one-way delay: 359.184 ms
Loss rate: 34.25%
-- Flow 2:
Average throughput: 1.26 Mbit/s
95th percentile per-packet one-way delay: 360.751 ms
Loss rate: 44.80%
-- Flow 3:
Average throughput: 0.84 Mbit/s
95th percentile per-packet one-way delay: 367.323 ms
Loss rate: 56.92%
```

## Run 1: Report of FillP — Data Link

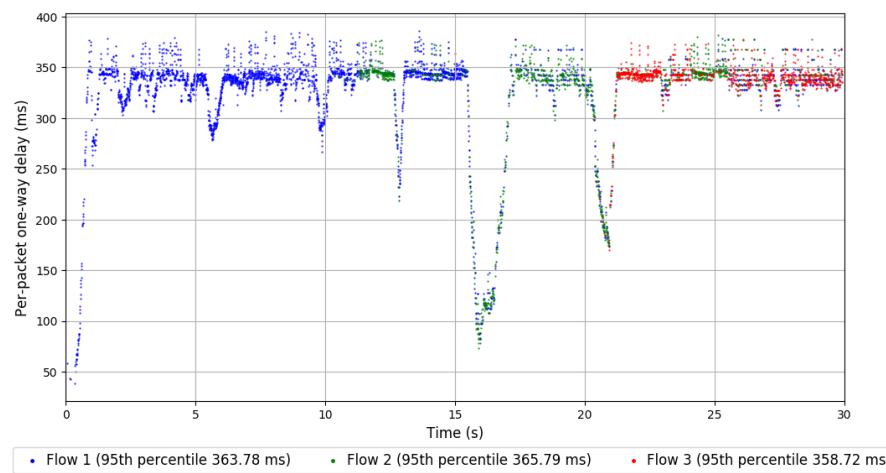
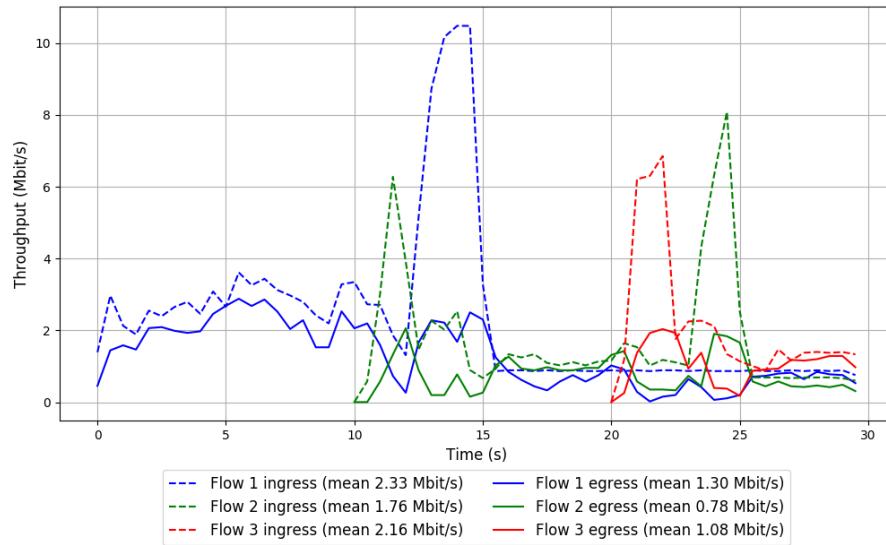


Run 2: Statistics of FillP

```
Start at: 2018-04-03 02:26:04
End at: 2018-04-03 02:26:34
Local clock offset: 1.137 ms
Remote clock offset: -7.004 ms

# Below is generated by plot.py at 2018-04-03 03:59:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.15 Mbit/s
95th percentile per-packet one-way delay: 363.363 ms
Loss rate: 49.18%
-- Flow 1:
Average throughput: 1.30 Mbit/s
95th percentile per-packet one-way delay: 363.778 ms
Loss rate: 44.64%
-- Flow 2:
Average throughput: 0.78 Mbit/s
95th percentile per-packet one-way delay: 365.787 ms
Loss rate: 56.59%
-- Flow 3:
Average throughput: 1.08 Mbit/s
95th percentile per-packet one-way delay: 358.719 ms
Loss rate: 51.89%
```

## Run 2: Report of FillP — Data Link

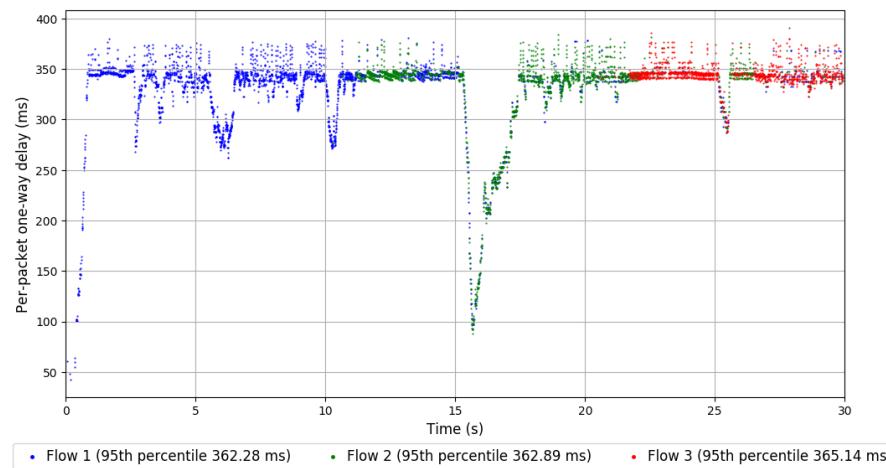
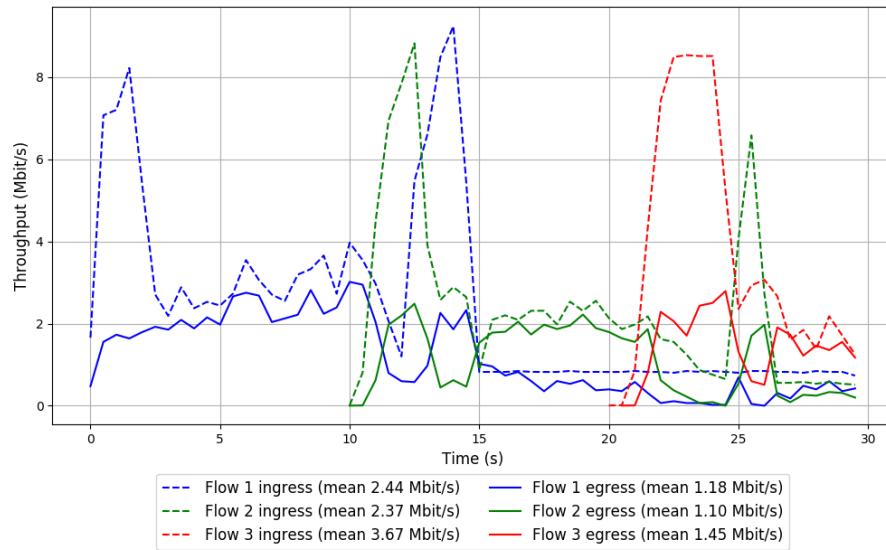


Run 3: Statistics of FillP

```
Start at: 2018-04-03 02:45:55
End at: 2018-04-03 02:46:25
Local clock offset: 3.078 ms
Remote clock offset: 3.909 ms

# Below is generated by plot.py at 2018-04-03 03:59:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.37 Mbit/s
95th percentile per-packet one-way delay: 363.012 ms
Loss rate: 54.86%
-- Flow 1:
Average throughput: 1.18 Mbit/s
95th percentile per-packet one-way delay: 362.279 ms
Loss rate: 51.67%
-- Flow 2:
Average throughput: 1.10 Mbit/s
95th percentile per-packet one-way delay: 362.890 ms
Loss rate: 53.97%
-- Flow 3:
Average throughput: 1.45 Mbit/s
95th percentile per-packet one-way delay: 365.139 ms
Loss rate: 62.40%
```

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

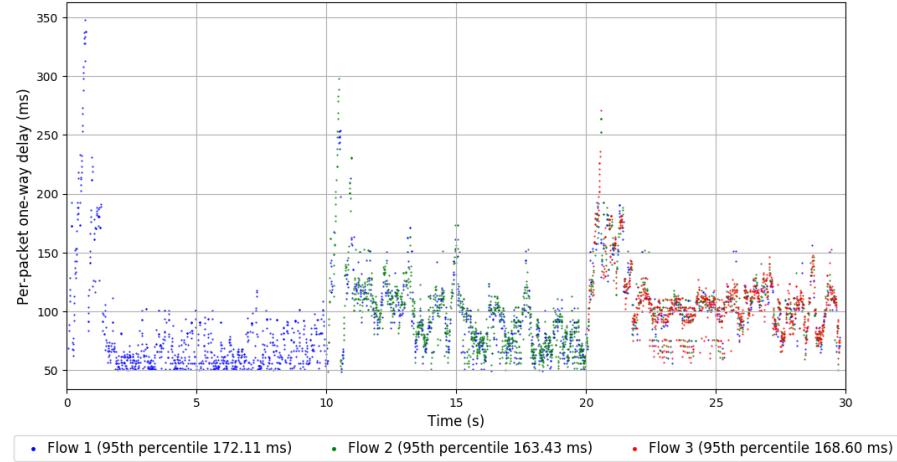
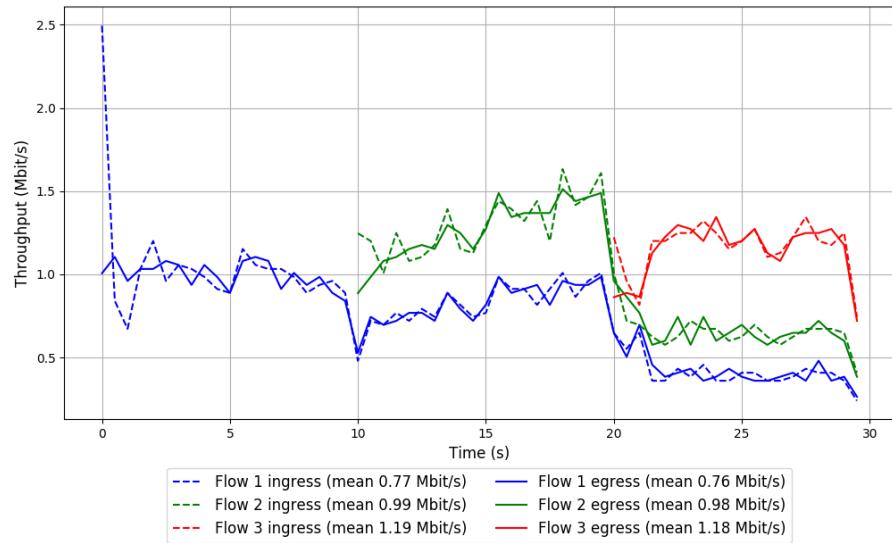


```
Run 1: Statistics of Indigo-1-32
```

```
Start at: 2018-04-03 02:10:42
End at: 2018-04-03 02:11:12
Local clock offset: 0.628 ms
Remote clock offset: -5.874 ms

# Below is generated by plot.py at 2018-04-03 03:59:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.79 Mbit/s
95th percentile per-packet one-way delay: 170.271 ms
Loss rate: 1.69%
-- Flow 1:
Average throughput: 0.76 Mbit/s
95th percentile per-packet one-way delay: 172.112 ms
Loss rate: 1.99%
-- Flow 2:
Average throughput: 0.98 Mbit/s
95th percentile per-packet one-way delay: 163.425 ms
Loss rate: 1.23%
-- Flow 3:
Average throughput: 1.18 Mbit/s
95th percentile per-packet one-way delay: 168.600 ms
Loss rate: 1.86%
```

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

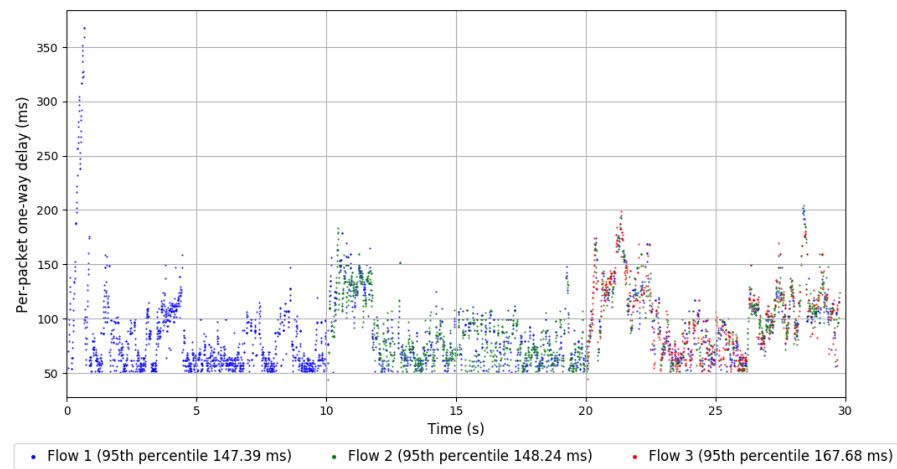
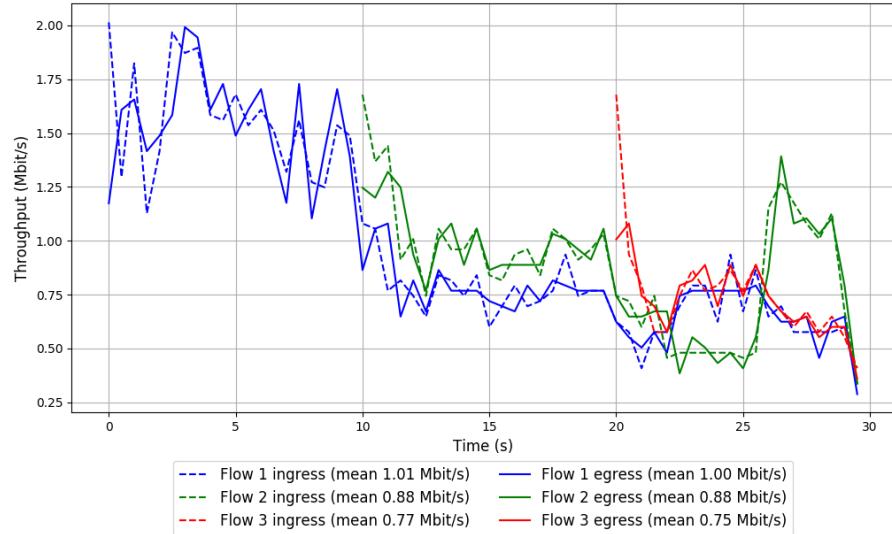


Run 2: Statistics of Indigo-1-32

```
Start at: 2018-04-03 02:30:28
End at: 2018-04-03 02:30:58
Local clock offset: 3.639 ms
Remote clock offset: -3.55 ms

# Below is generated by plot.py at 2018-04-03 03:59:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.83 Mbit/s
95th percentile per-packet one-way delay: 149.381 ms
Loss rate: 1.22%
-- Flow 1:
Average throughput: 1.00 Mbit/s
95th percentile per-packet one-way delay: 147.391 ms
Loss rate: 0.68%
-- Flow 2:
Average throughput: 0.88 Mbit/s
95th percentile per-packet one-way delay: 148.236 ms
Loss rate: 1.24%
-- Flow 3:
Average throughput: 0.75 Mbit/s
95th percentile per-packet one-way delay: 167.682 ms
Loss rate: 3.33%
```

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

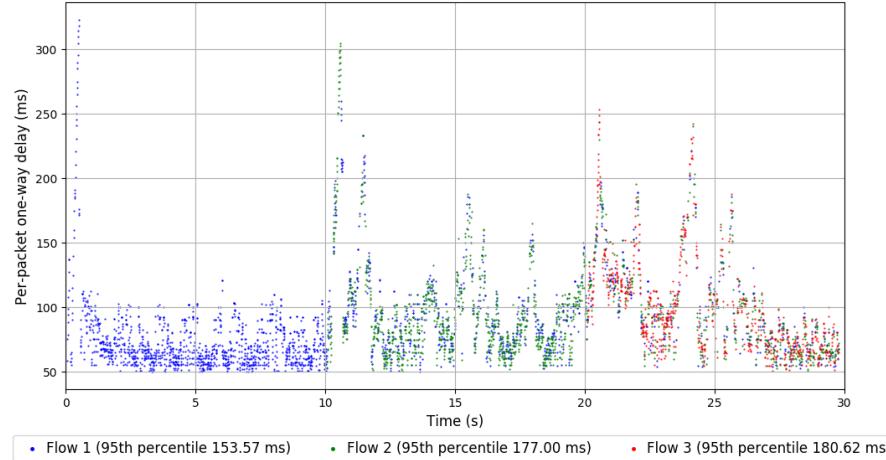
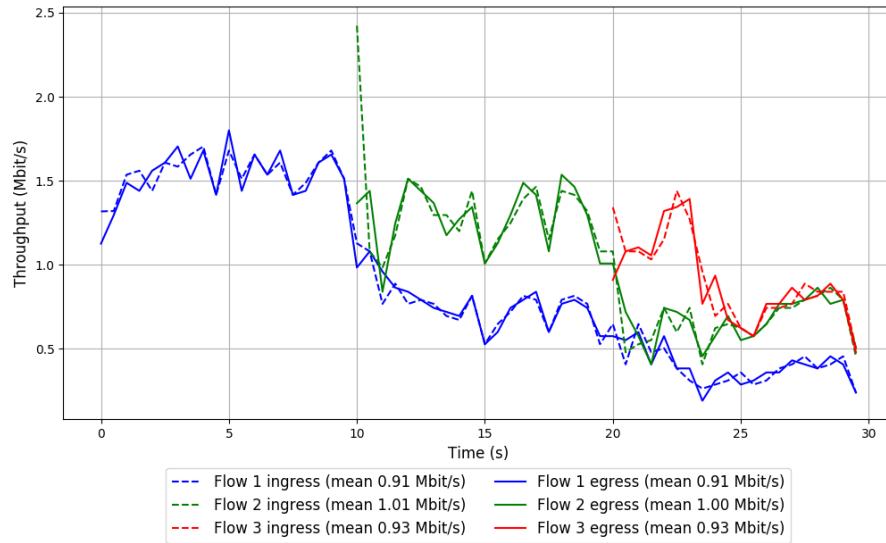


Run 3: Statistics of Indigo-1-32

```
Start at: 2018-04-03 02:50:18
End at: 2018-04-03 02:50:48
Local clock offset: 4.016 ms
Remote clock offset: 4.696 ms

# Below is generated by plot.py at 2018-04-03 03:59:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.87 Mbit/s
95th percentile per-packet one-way delay: 171.020 ms
Loss rate: 0.92%
-- Flow 1:
Average throughput: 0.91 Mbit/s
95th percentile per-packet one-way delay: 153.573 ms
Loss rate: 0.22%
-- Flow 2:
Average throughput: 1.00 Mbit/s
95th percentile per-packet one-way delay: 176.995 ms
Loss rate: 1.68%
-- Flow 3:
Average throughput: 0.93 Mbit/s
95th percentile per-packet one-way delay: 180.619 ms
Loss rate: 1.32%
```

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

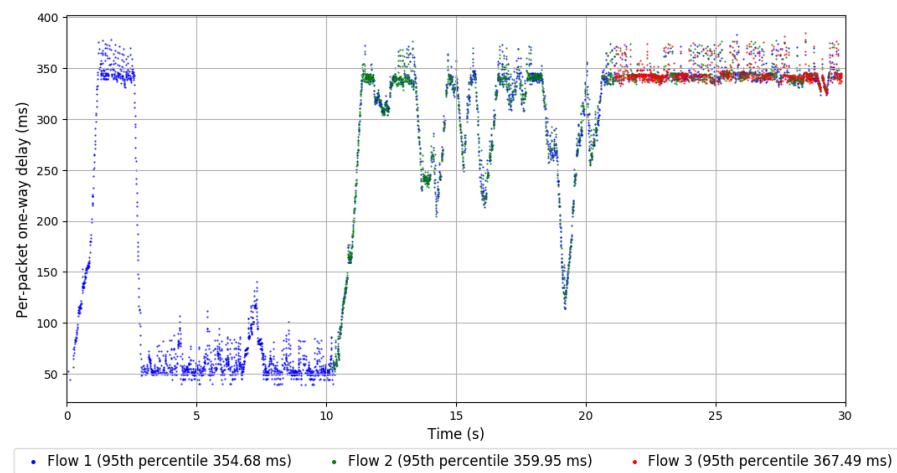
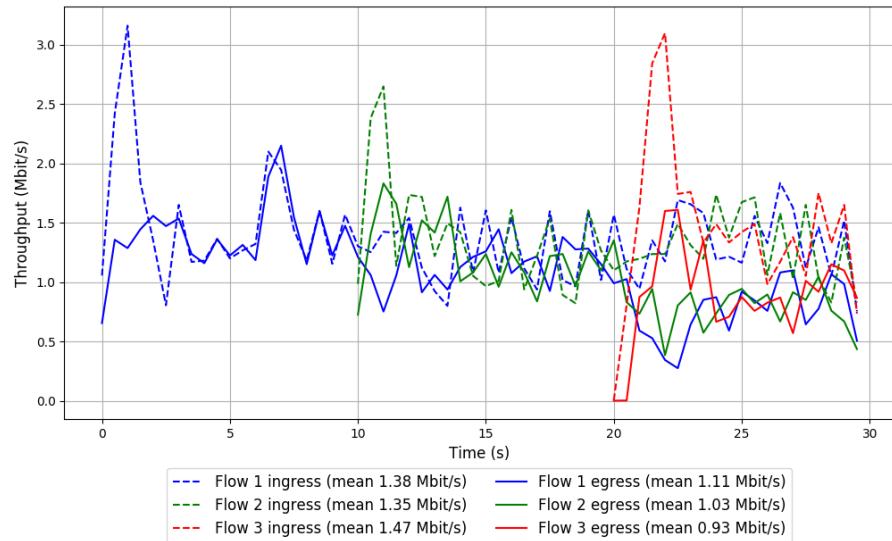


```
Run 1: Statistics of Vivace-latency
```

```
Start at: 2018-04-03 02:07:24
End at: 2018-04-03 02:07:54
Local clock offset: 1.923 ms
Remote clock offset: -3.31 ms

# Below is generated by plot.py at 2018-04-03 04:00:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.09 Mbit/s
95th percentile per-packet one-way delay: 359.748 ms
Loss rate: 24.48%
-- Flow 1:
Average throughput: 1.11 Mbit/s
95th percentile per-packet one-way delay: 354.675 ms
Loss rate: 19.87%
-- Flow 2:
Average throughput: 1.03 Mbit/s
95th percentile per-packet one-way delay: 359.954 ms
Loss rate: 23.68%
-- Flow 3:
Average throughput: 0.93 Mbit/s
95th percentile per-packet one-way delay: 367.493 ms
Loss rate: 39.10%
```

Run 1: Report of Vivace-latency — Data Link

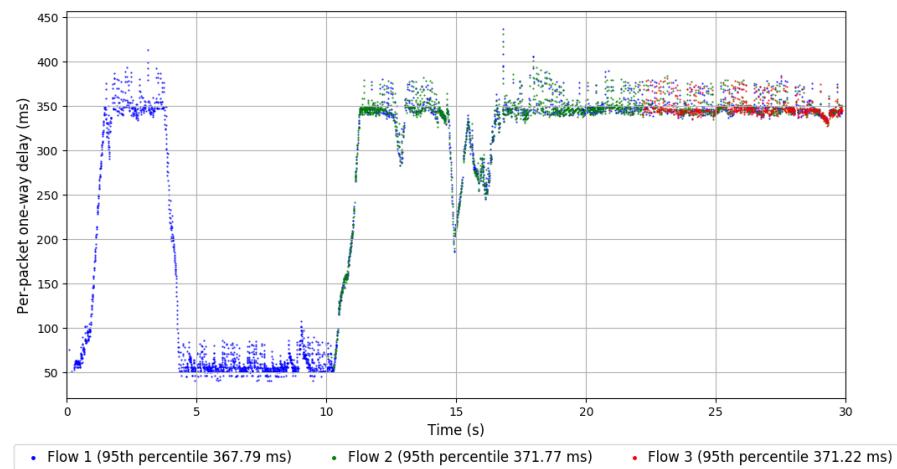
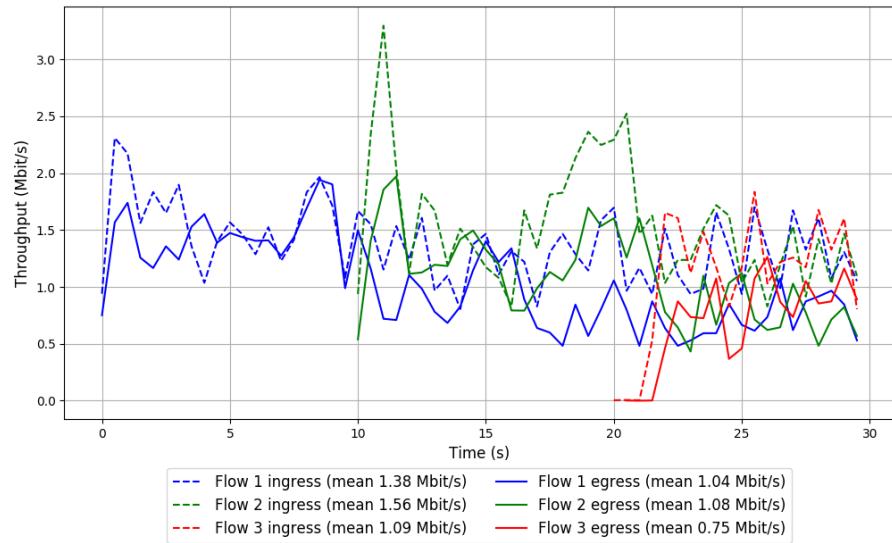


Run 2: Statistics of Vivace-latency

```
Start at: 2018-04-03 02:27:10
End at: 2018-04-03 02:27:40
Local clock offset: 2.863 ms
Remote clock offset: -6.991 ms

# Below is generated by plot.py at 2018-04-03 04:00:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.98 Mbit/s
95th percentile per-packet one-way delay: 369.925 ms
Loss rate: 28.68%
-- Flow 1:
Average throughput: 1.04 Mbit/s
95th percentile per-packet one-way delay: 367.788 ms
Loss rate: 24.94%
-- Flow 2:
Average throughput: 1.08 Mbit/s
95th percentile per-packet one-way delay: 371.773 ms
Loss rate: 30.63%
-- Flow 3:
Average throughput: 0.75 Mbit/s
95th percentile per-packet one-way delay: 371.221 ms
Loss rate: 37.36%
```

Run 2: Report of Vivace-latency — Data Link

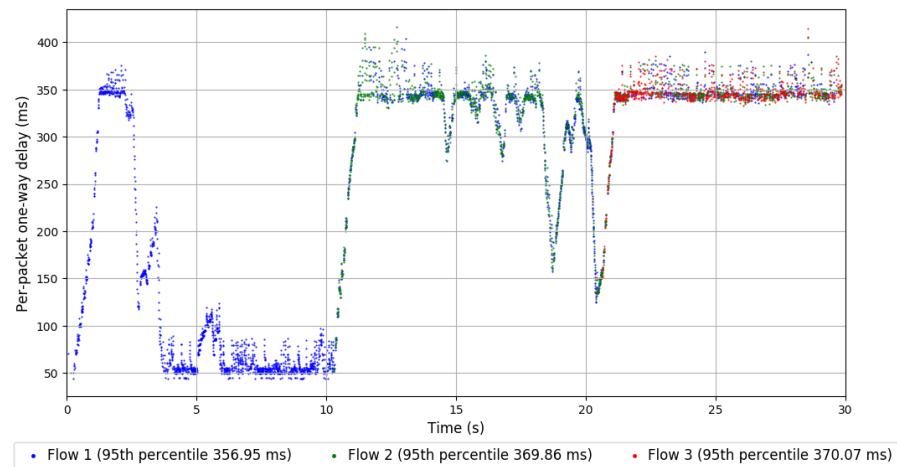
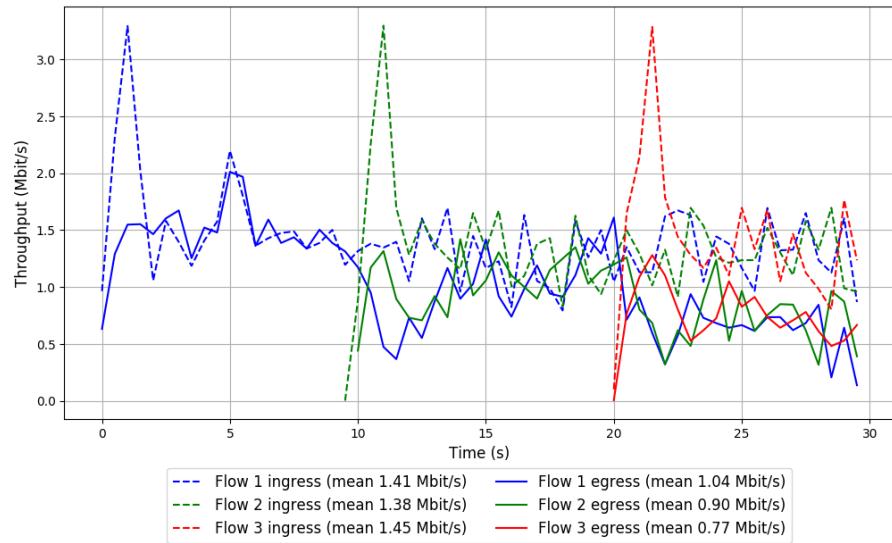


Run 3: Statistics of Vivace-latency

```
Start at: 2018-04-03 02:47:01
End at: 2018-04-03 02:47:31
Local clock offset: 3.722 ms
Remote clock offset: 3.316 ms

# Below is generated by plot.py at 2018-04-03 04:00:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.89 Mbit/s
95th percentile per-packet one-way delay: 365.631 ms
Loss rate: 32.58%
-- Flow 1:
Average throughput: 1.04 Mbit/s
95th percentile per-packet one-way delay: 356.955 ms
Loss rate: 26.05%
-- Flow 2:
Average throughput: 0.90 Mbit/s
95th percentile per-packet one-way delay: 369.855 ms
Loss rate: 34.72%
-- Flow 3:
Average throughput: 0.77 Mbit/s
95th percentile per-packet one-way delay: 370.066 ms
Loss rate: 47.71%
```

Run 3: Report of Vivace-latency — Data Link

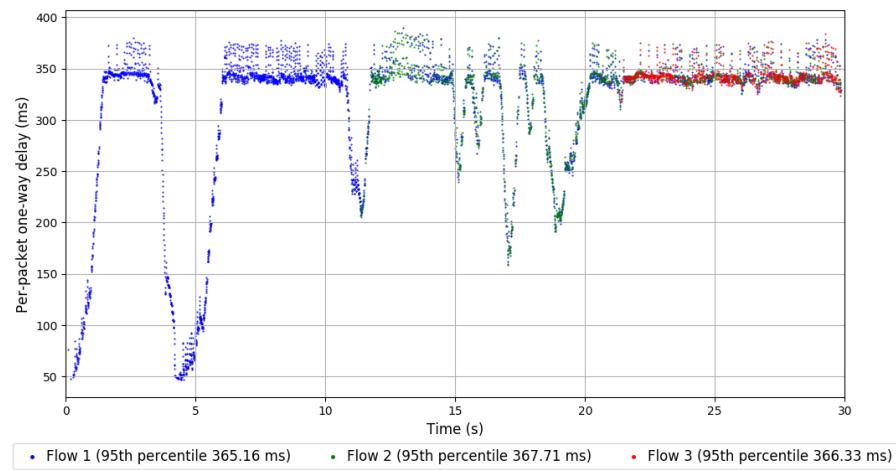
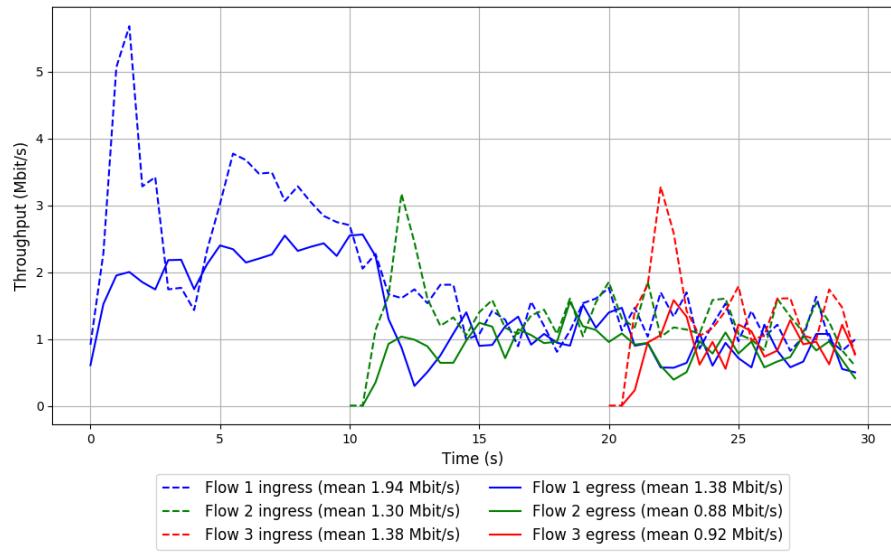


```
Run 1: Statistics of Vivace-loss
```

```
Start at: 2018-04-03 02:13:59
End at: 2018-04-03 02:14:29
Local clock offset: 1.565 ms
Remote clock offset: -4.511 ms

# Below is generated by plot.py at 2018-04-03 04:00:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.23 Mbit/s
95th percentile per-packet one-way delay: 365.841 ms
Loss rate: 31.74%
-- Flow 1:
Average throughput: 1.38 Mbit/s
95th percentile per-packet one-way delay: 365.161 ms
Loss rate: 28.71%
-- Flow 2:
Average throughput: 0.88 Mbit/s
95th percentile per-packet one-way delay: 367.712 ms
Loss rate: 35.37%
-- Flow 3:
Average throughput: 0.92 Mbit/s
95th percentile per-packet one-way delay: 366.326 ms
Loss rate: 37.68%
```

Run 1: Report of Vivace-loss — Data Link

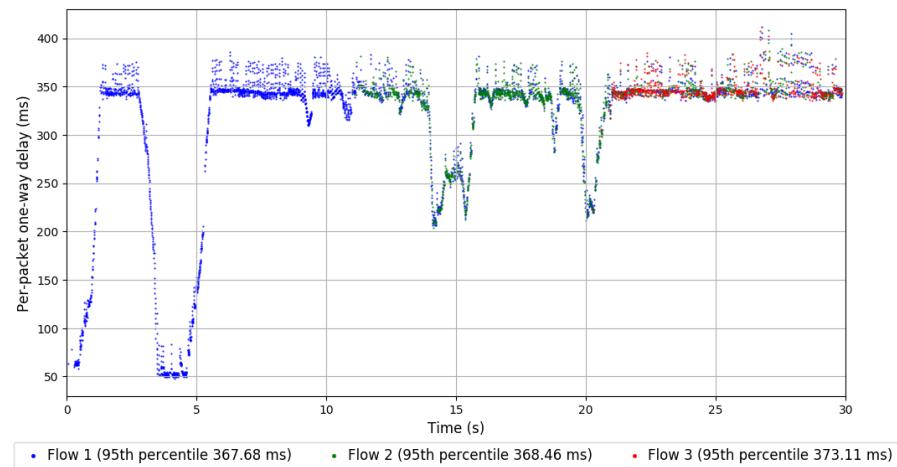
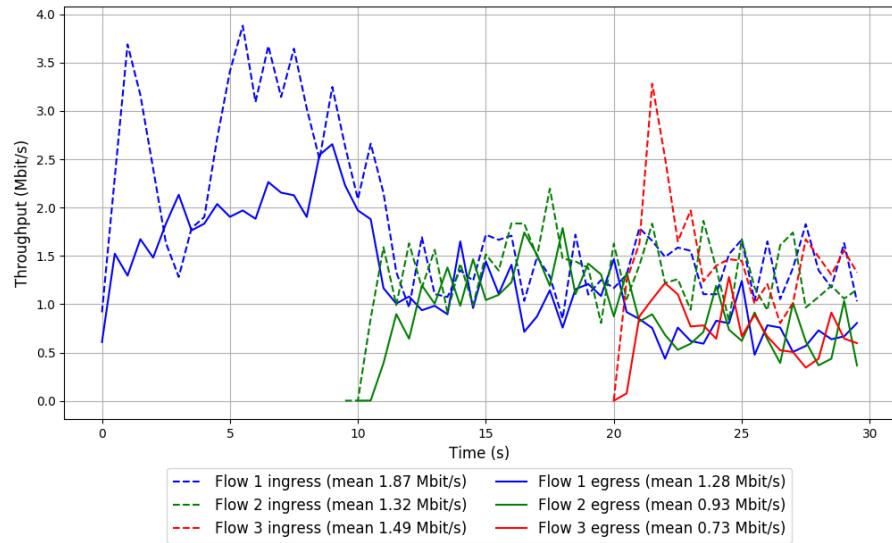


Run 2: Statistics of Vivace-loss

```
Start at: 2018-04-03 02:33:45
End at: 2018-04-03 02:34:15
Local clock offset: 2.568 ms
Remote clock offset: -1.297 ms

# Below is generated by plot.py at 2018-04-03 04:00:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.13 Mbit/s
95th percentile per-packet one-way delay: 368.726 ms
Loss rate: 34.50%
-- Flow 1:
Average throughput: 1.28 Mbit/s
95th percentile per-packet one-way delay: 367.675 ms
Loss rate: 31.50%
-- Flow 2:
Average throughput: 0.93 Mbit/s
95th percentile per-packet one-way delay: 368.458 ms
Loss rate: 31.03%
-- Flow 3:
Average throughput: 0.73 Mbit/s
95th percentile per-packet one-way delay: 373.108 ms
Loss rate: 52.14%
```

## Run 2: Report of Vivace-loss — Data Link

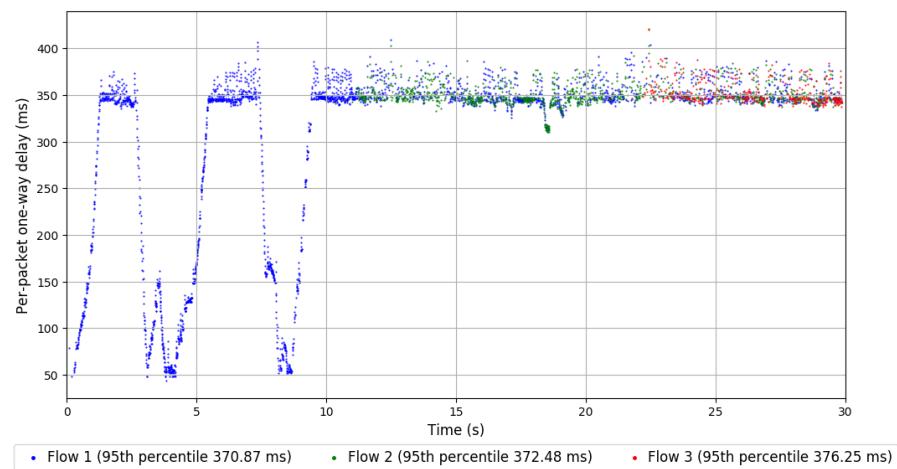
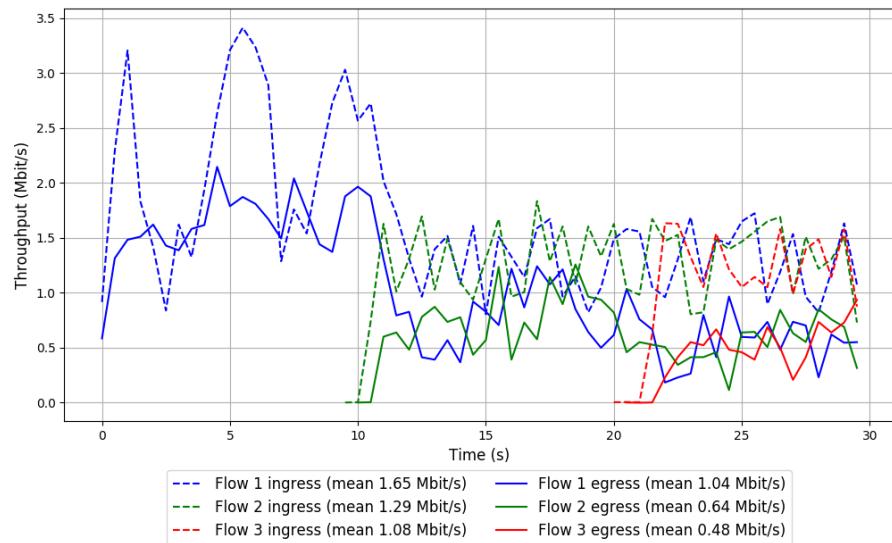


Run 3: Statistics of Vivace-loss

```
Start at: 2018-04-03 02:53:36
End at: 2018-04-03 02:54:06
Local clock offset: 4.881 ms
Remote clock offset: 4.692 ms

# Below is generated by plot.py at 2018-04-03 04:00:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.61 Mbit/s
95th percentile per-packet one-way delay: 372.320 ms
Loss rate: 44.00%
-- Flow 1:
Average throughput: 1.04 Mbit/s
95th percentile per-packet one-way delay: 370.874 ms
Loss rate: 37.00%
-- Flow 2:
Average throughput: 0.64 Mbit/s
95th percentile per-packet one-way delay: 372.479 ms
Loss rate: 50.91%
-- Flow 3:
Average throughput: 0.48 Mbit/s
95th percentile per-packet one-way delay: 376.246 ms
Loss rate: 59.81%
```

### Run 3: Report of Vivace-loss — Data Link

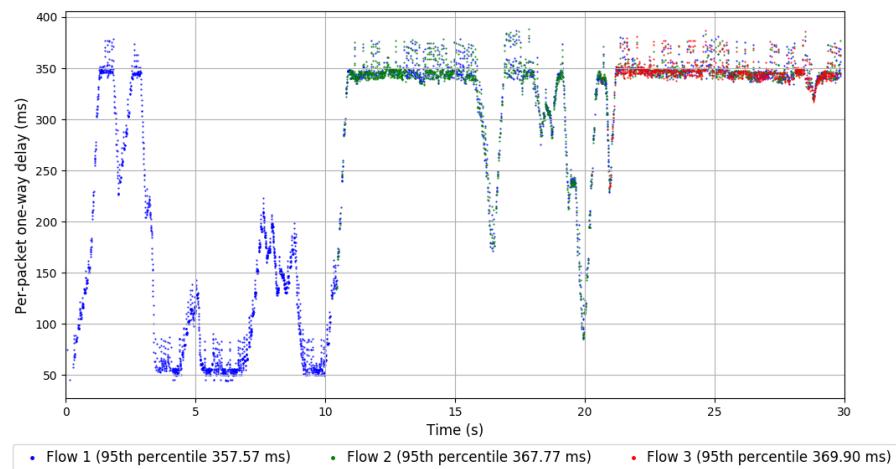
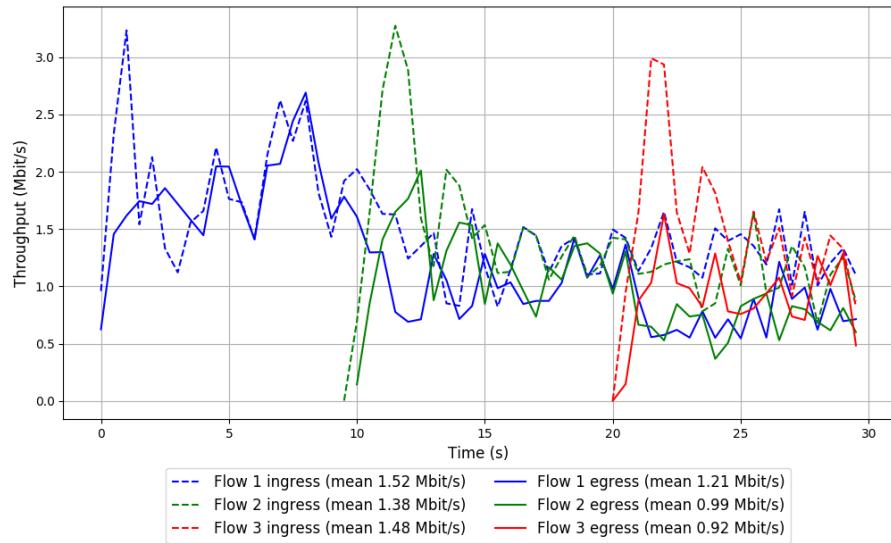


Run 1: Statistics of Vivace-LTE

```
Start at: 2018-04-03 02:16:11
End at: 2018-04-03 02:16:41
Local clock offset: 3.409 ms
Remote clock offset: -6.885 ms

# Below is generated by plot.py at 2018-04-03 04:00:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.17 Mbit/s
95th percentile per-packet one-way delay: 364.641 ms
Loss rate: 26.05%
-- Flow 1:
Average throughput: 1.21 Mbit/s
95th percentile per-packet one-way delay: 357.573 ms
Loss rate: 20.47%
-- Flow 2:
Average throughput: 0.99 Mbit/s
95th percentile per-packet one-way delay: 367.769 ms
Loss rate: 28.27%
-- Flow 3:
Average throughput: 0.92 Mbit/s
95th percentile per-packet one-way delay: 369.899 ms
Loss rate: 39.29%
```

Run 1: Report of Vivace-LTE — Data Link

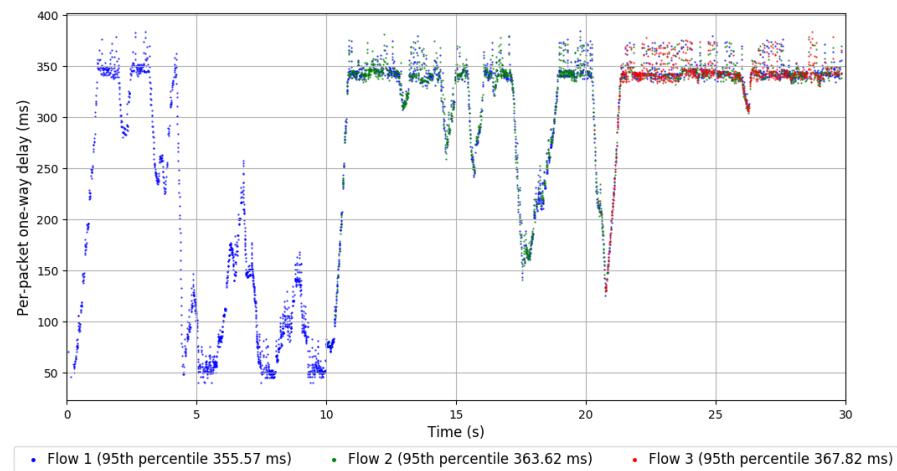
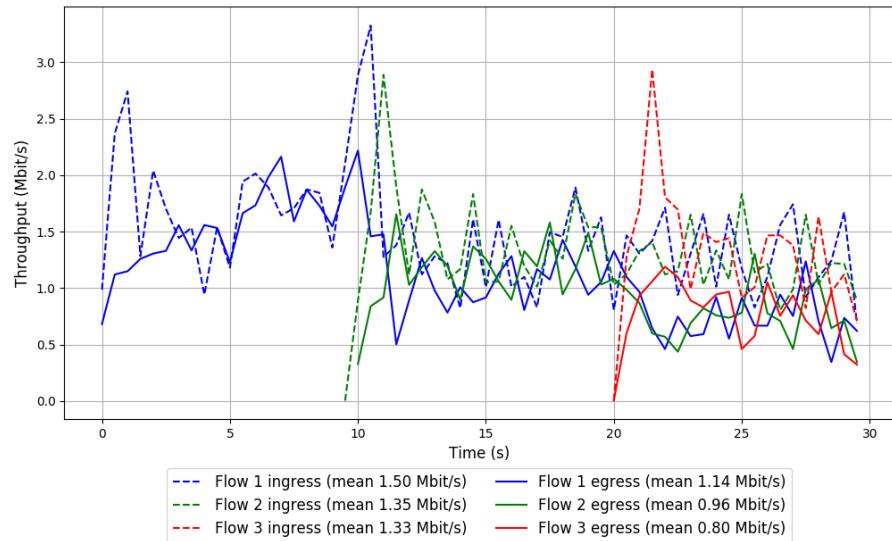


Run 2: Statistics of Vivace-LTE

```
Start at: 2018-04-03 02:36:02
End at: 2018-04-03 02:36:32
Local clock offset: 1.529 ms
Remote clock offset: 0.187 ms

# Below is generated by plot.py at 2018-04-03 04:00:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.04 Mbit/s
95th percentile per-packet one-way delay: 362.057 ms
Loss rate: 28.28%
-- Flow 1:
Average throughput: 1.14 Mbit/s
95th percentile per-packet one-way delay: 355.567 ms
Loss rate: 23.77%
-- Flow 2:
Average throughput: 0.96 Mbit/s
95th percentile per-packet one-way delay: 363.621 ms
Loss rate: 29.22%
-- Flow 3:
Average throughput: 0.80 Mbit/s
95th percentile per-packet one-way delay: 367.817 ms
Loss rate: 41.71%
```

Run 2: Report of Vivace-LTE — Data Link



Run 3: Statistics of Vivace-LTE

```
Start at: 2018-04-03 02:55:47
End at: 2018-04-03 02:56:17
Local clock offset: 3.269 ms
Remote clock offset: 5.093 ms

# Below is generated by plot.py at 2018-04-03 04:00:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.68 Mbit/s
95th percentile per-packet one-way delay: 365.782 ms
Loss rate: 38.07%
-- Flow 1:
Average throughput: 0.89 Mbit/s
95th percentile per-packet one-way delay: 363.446 ms
Loss rate: 33.30%
-- Flow 2:
Average throughput: 0.80 Mbit/s
95th percentile per-packet one-way delay: 369.345 ms
Loss rate: 41.17%
-- Flow 3:
Average throughput: 0.82 Mbit/s
95th percentile per-packet one-way delay: 366.700 ms
Loss rate: 45.64%
```

Run 3: Report of Vivace-LTE — Data Link

