

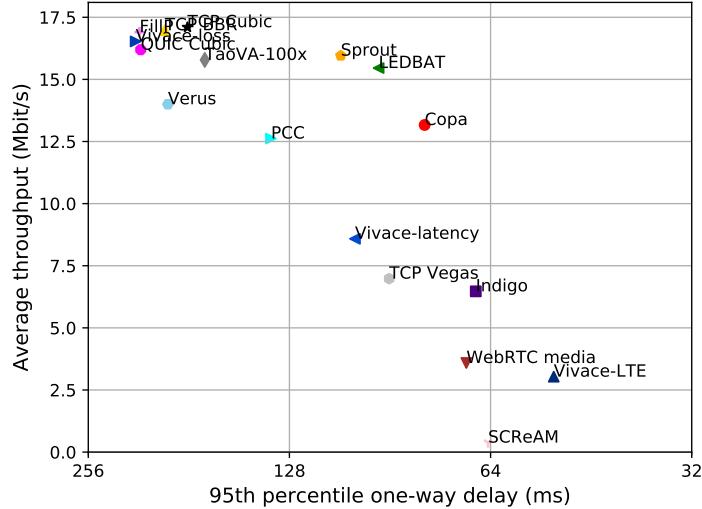
Pantheon Report

Generated at 2018-01-18 13:33:29 (UTC).
Data path: Stanford ppp0 (*remote*) → AWS California 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 `time.stanford.edu` and have been applied to correct the timestamps in logs.

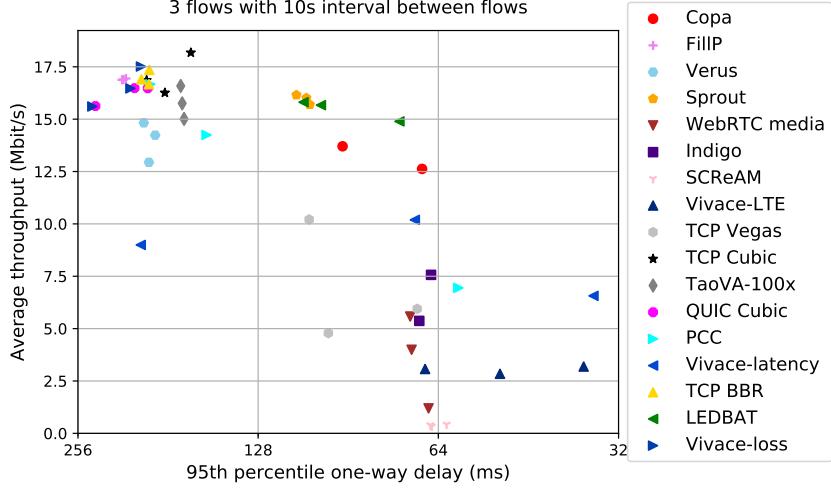
Git summary:

```
branch: master @ 54510ce29f849c716ac5c8199ca1604b6abdfbc3
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
  M datagrump/sender.cc
third_party/fillp @ ec9585325218d5048c4d4152fa42240af54c6e67
third_party/genericCC @ 80b516c448f795fd6e9675f7177b69c622f07da8
third_party/indigo @ b19f3730105f9aa95452552af924e3719b03cc55
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 @ 423cbca3e8ea1d599e7b5cf725835e8a2b6bfac6
third_party/webrtc @ a488197ddd041ace68a42849b2540ad834825f42
```

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



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



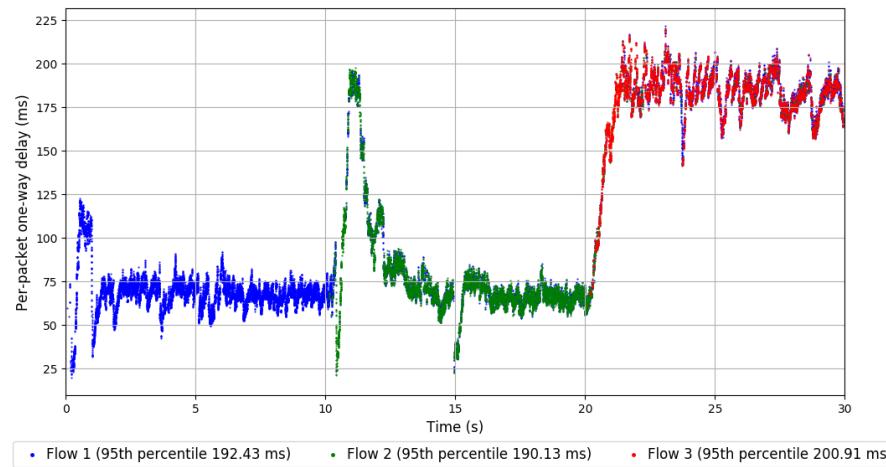
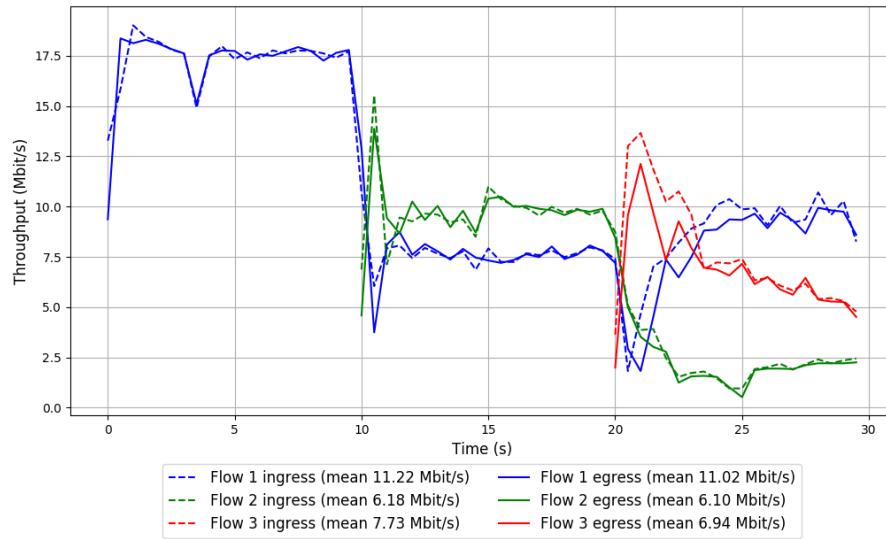
scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	3	10.43	6.41	6.96	191.00	194.78	206.66	2.01	3.07	11.52
TCP Cubic		12.40	5.53	3.19	181.37	180.70	177.93	0.26	0.65	1.31
LEDBAT		10.15	5.38	5.31	97.42	84.60	82.68	0.47	0.92	0.91
PCC		9.21	2.93	4.44	128.20	135.03	152.08	1.50	1.60	3.15
QUIC Cubic		12.30	4.21	3.35	214.34	211.09	210.23	1.27	2.10	3.48
SCReAM		0.17	0.22	0.22	64.73	56.86	56.27	0.13	0.27	0.48
WebRTC media		1.92	1.27	0.40	69.02	68.60	69.43	0.97	0.79	1.69
Sprout		9.67	6.84	5.35	102.22	108.35	116.55	2.21	2.84	3.95
TaoVA-100x		9.20	6.86	6.44	174.17	61.77	55.33	0.62	0.91	2.26
TCP Vegas		2.81	3.50	5.58	86.91	74.31	83.80	0.12	0.12	0.17
Verus		7.03	8.07	5.11	192.21	187.72	200.67	31.52	11.38	36.12
Copa		9.48	3.89	5.23	78.18	79.81	82.87	0.20	0.17	1.00
FillP		14.23	2.14	4.04	213.54	230.54	224.96	46.92	88.65	89.66
Indigo		3.30	2.50	4.52	69.73	67.81	56.62	0.11	0.25	0.28
Vivace-latency		5.33	1.91	6.06	101.83	102.40	93.80	1.78	3.04	6.74
Vivace-loss		12.76	4.07	3.32	219.12	211.82	216.18	18.71	15.93	16.30
Vivace-LTE		17.06	1.58	4.76	1456.24	51.57	84.90	0.01	0.63	0.71

Run 1: Statistics of TCP BBR

```
Start at: 2018-01-18 11:39:09
End at: 2018-01-18 11:39:39
Local clock offset: 2.181 ms
Remote clock offset: -2.599 ms

# Below is generated by plot.py at 2018-01-18 13:31:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 17.36 Mbit/s
95th percentile per-packet one-way delay: 194.560 ms
Loss rate: 3.25%
-- Flow 1:
Average throughput: 11.02 Mbit/s
95th percentile per-packet one-way delay: 192.431 ms
Loss rate: 2.05%
-- Flow 2:
Average throughput: 6.10 Mbit/s
95th percentile per-packet one-way delay: 190.132 ms
Loss rate: 1.74%
-- Flow 3:
Average throughput: 6.94 Mbit/s
95th percentile per-packet one-way delay: 200.912 ms
Loss rate: 10.90%
```

Run 1: Report of TCP BBR — Data Link

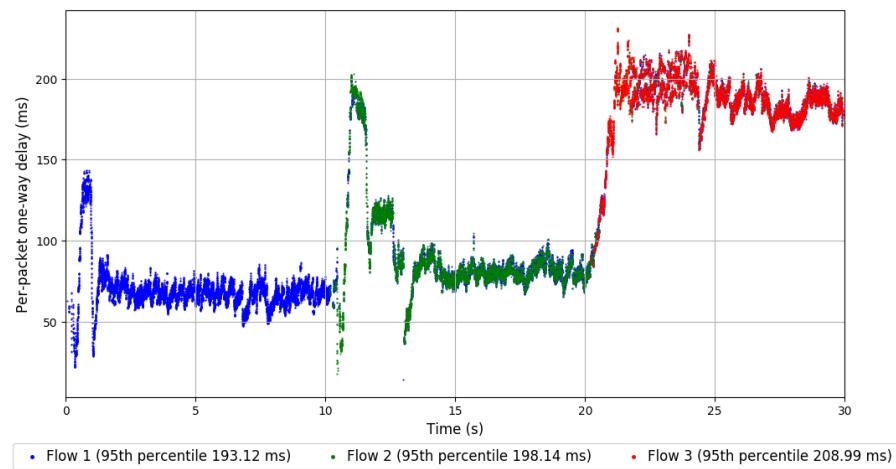
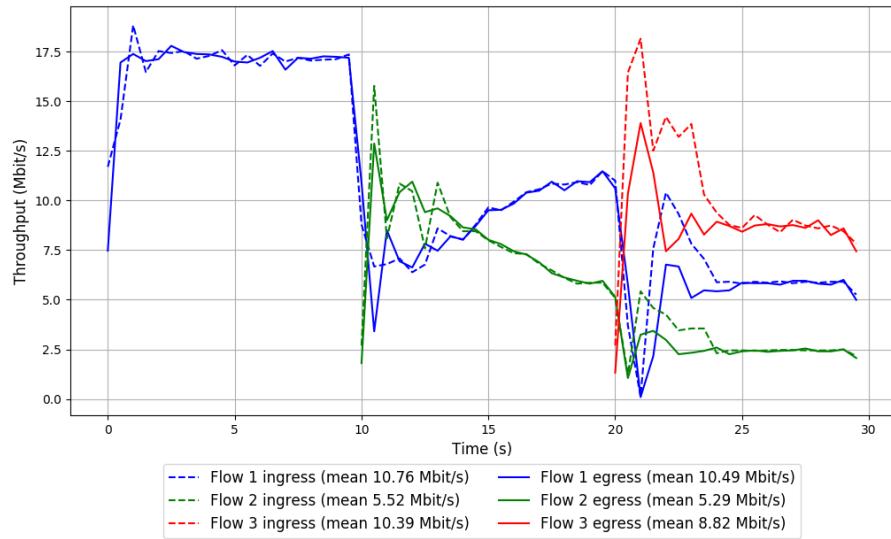


Run 2: Statistics of TCP BBR

```
Start at: 2018-01-18 12:00:41
End at: 2018-01-18 12:01:11
Local clock offset: 1.961 ms
Remote clock offset: -2.471 ms

# Below is generated by plot.py at 2018-01-18 13:31:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.90 Mbit/s
95th percentile per-packet one-way delay: 200.598 ms
Loss rate: 5.66%
-- Flow 1:
Average throughput: 10.49 Mbit/s
95th percentile per-packet one-way delay: 193.122 ms
Loss rate: 2.74%
-- Flow 2:
Average throughput: 5.29 Mbit/s
95th percentile per-packet one-way delay: 198.137 ms
Loss rate: 4.58%
-- Flow 3:
Average throughput: 8.82 Mbit/s
95th percentile per-packet one-way delay: 208.985 ms
Loss rate: 15.96%
```

Run 2: Report of TCP BBR — Data Link

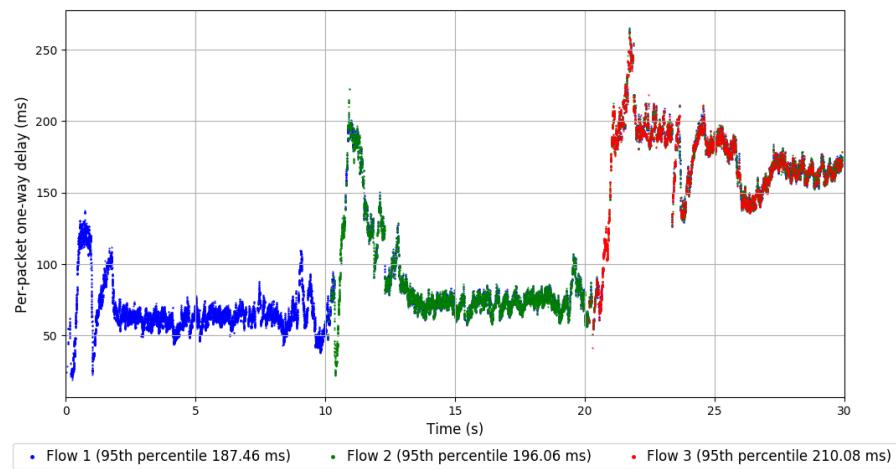
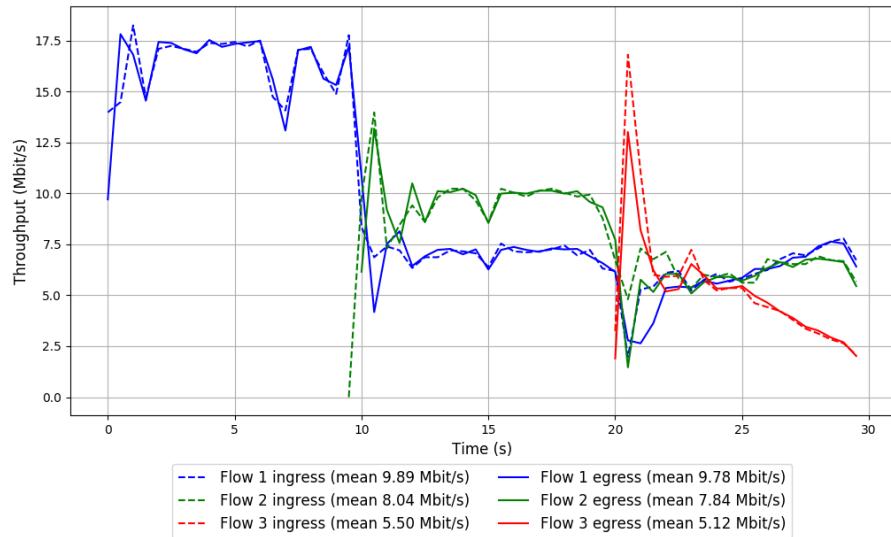


Run 3: Statistics of TCP BBR

```
Start at: 2018-01-18 12:22:10
End at: 2018-01-18 12:22:40
Local clock offset: 1.811 ms
Remote clock offset: -2.218 ms

# Below is generated by plot.py at 2018-01-18 13:31:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.67 Mbit/s
95th percentile per-packet one-way delay: 194.812 ms
Loss rate: 2.44%
-- Flow 1:
Average throughput: 9.78 Mbit/s
95th percentile per-packet one-way delay: 187.458 ms
Loss rate: 1.23%
-- Flow 2:
Average throughput: 7.84 Mbit/s
95th percentile per-packet one-way delay: 196.061 ms
Loss rate: 2.89%
-- Flow 3:
Average throughput: 5.12 Mbit/s
95th percentile per-packet one-way delay: 210.076 ms
Loss rate: 7.71%
```

Run 3: Report of TCP BBR — Data Link

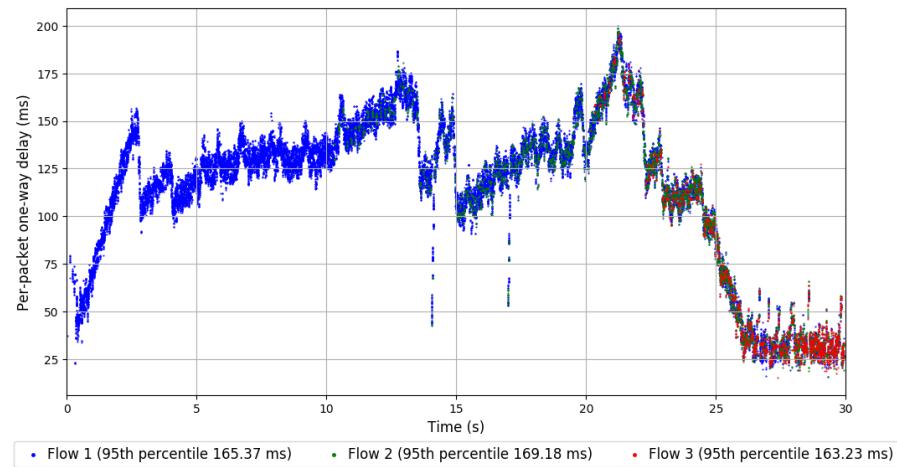
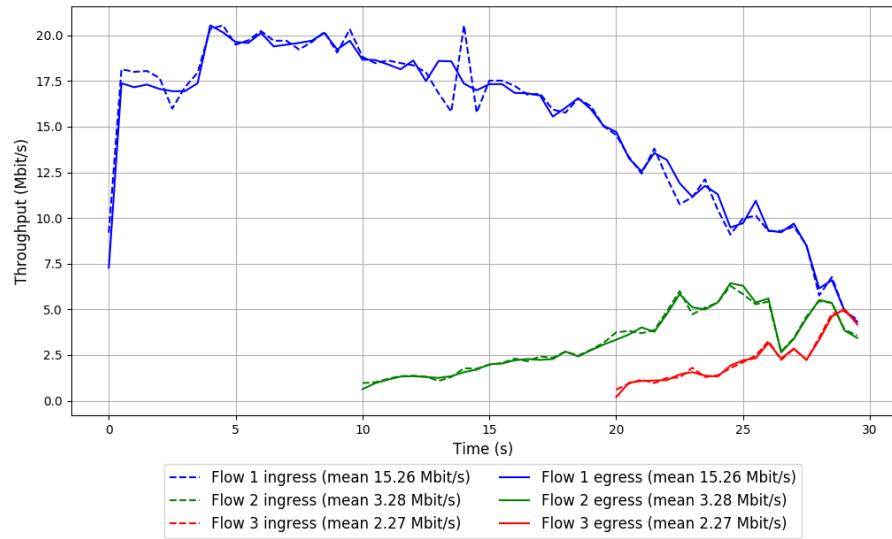


```
Run 1: Statistics of TCP Cubic
```

```
Start at: 2018-01-18 11:30:44
End at: 2018-01-18 11:31:14
Local clock offset: 2.277 ms
Remote clock offset: -2.673 ms

# Below is generated by plot.py at 2018-01-18 13:31:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.18 Mbit/s
95th percentile per-packet one-way delay: 165.830 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 15.26 Mbit/s
95th percentile per-packet one-way delay: 165.368 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 3.28 Mbit/s
95th percentile per-packet one-way delay: 169.182 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 2.27 Mbit/s
95th percentile per-packet one-way delay: 163.229 ms
Loss rate: 1.44%
```

Run 1: Report of TCP Cubic — Data Link

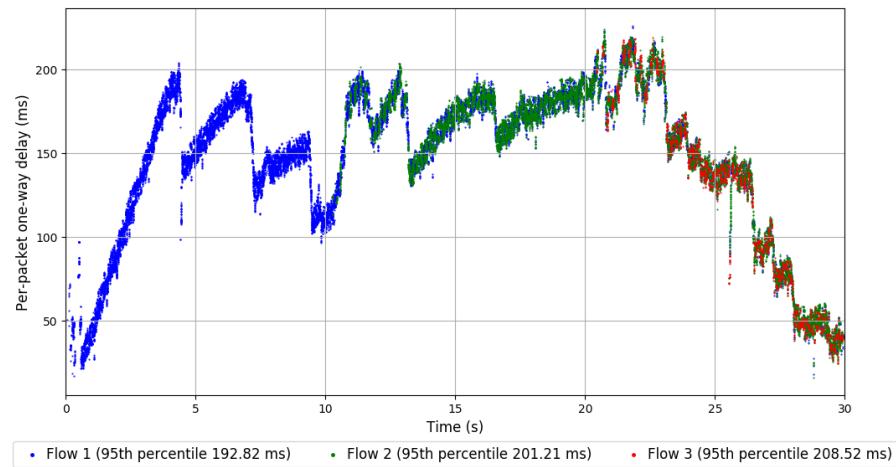
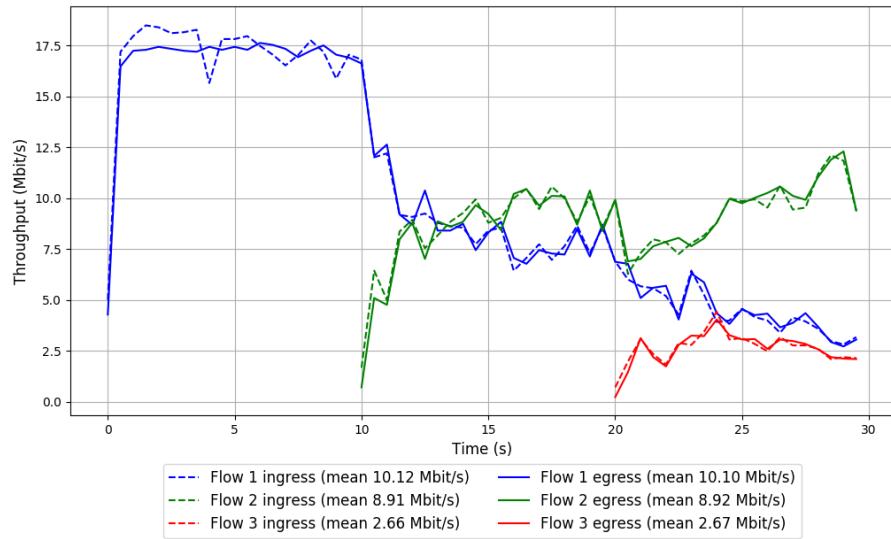


Run 2: Statistics of TCP Cubic

```
Start at: 2018-01-18 11:52:16
End at: 2018-01-18 11:52:46
Local clock offset: 2.047 ms
Remote clock offset: -2.435 ms

# Below is generated by plot.py at 2018-01-18 13:31:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.86 Mbit/s
95th percentile per-packet one-way delay: 196.590 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 10.10 Mbit/s
95th percentile per-packet one-way delay: 192.823 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 8.92 Mbit/s
95th percentile per-packet one-way delay: 201.214 ms
Loss rate: 0.49%
-- Flow 3:
Average throughput: 2.67 Mbit/s
95th percentile per-packet one-way delay: 208.522 ms
Loss rate: 1.55%
```

Run 2: Report of TCP Cubic — Data Link

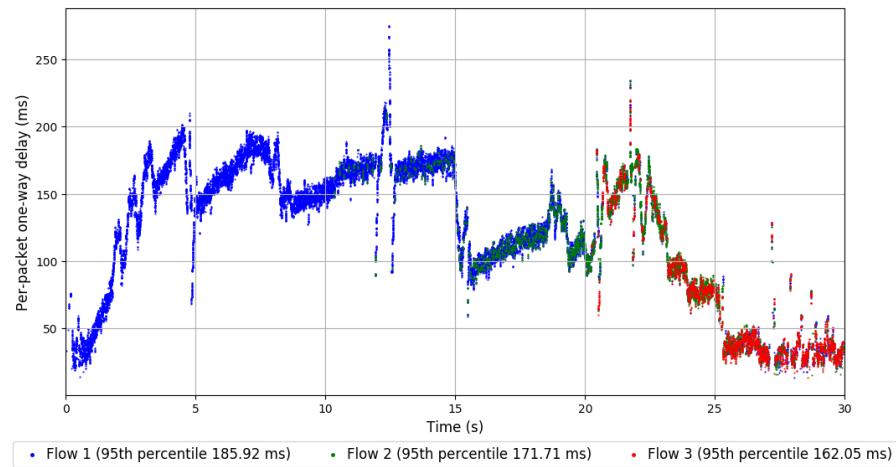
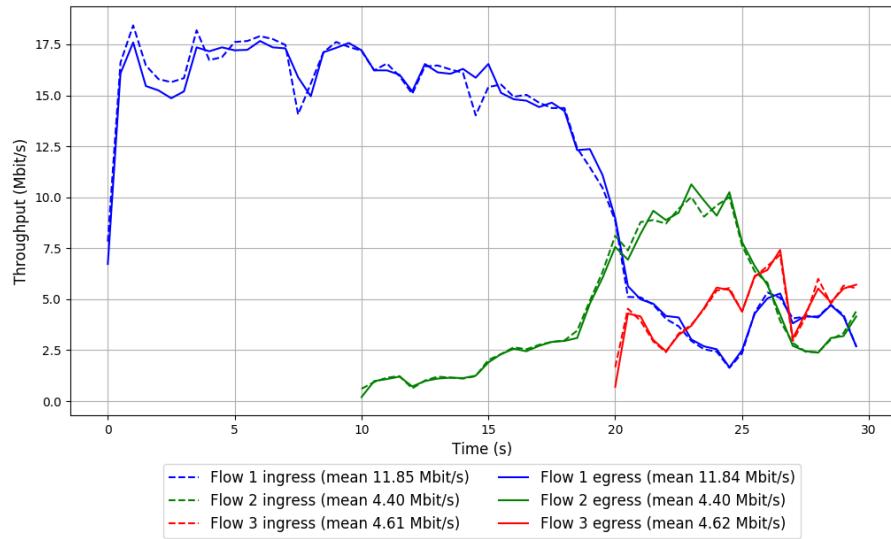


Run 3: Statistics of TCP Cubic

```
Start at: 2018-01-18 12:13:49
End at: 2018-01-18 12:14:19
Local clock offset: 1.968 ms
Remote clock offset: -2.585 ms

# Below is generated by plot.py at 2018-01-18 13:31:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.26 Mbit/s
95th percentile per-packet one-way delay: 183.249 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 11.84 Mbit/s
95th percentile per-packet one-way delay: 185.922 ms
Loss rate: 0.23%
-- Flow 2:
Average throughput: 4.40 Mbit/s
95th percentile per-packet one-way delay: 171.706 ms
Loss rate: 0.82%
-- Flow 3:
Average throughput: 4.62 Mbit/s
95th percentile per-packet one-way delay: 162.054 ms
Loss rate: 0.95%
```

Run 3: Report of TCP Cubic — Data Link

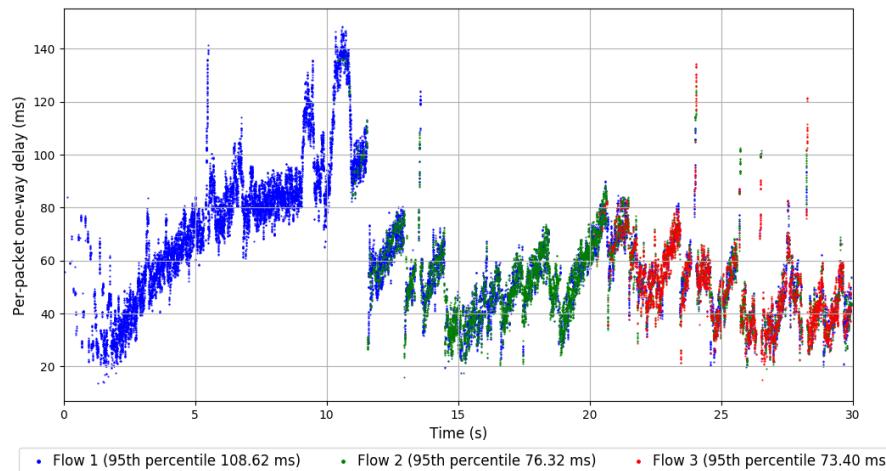
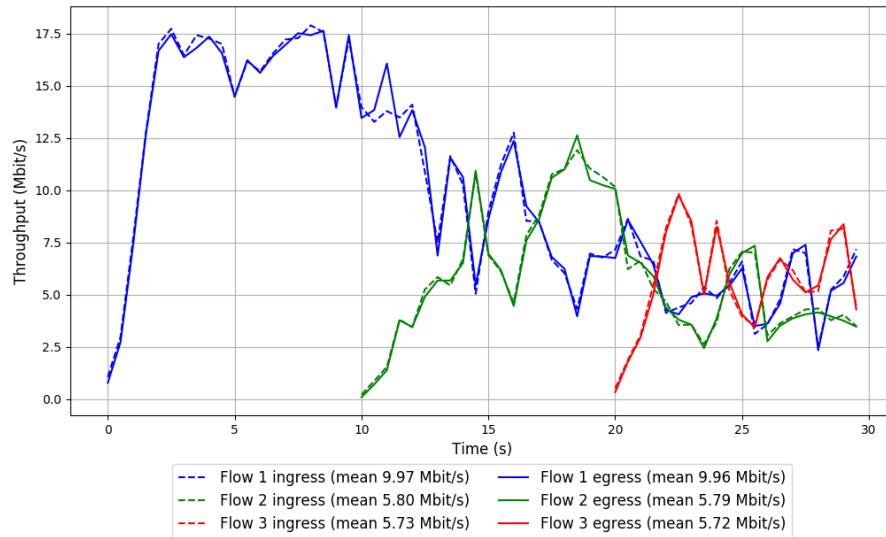


```
Run 1: Statistics of LEDBAT
```

```
Start at: 2018-01-18 11:42:45
End at: 2018-01-18 11:43:15
Local clock offset: 2.135 ms
Remote clock offset: -2.469 ms

# Below is generated by plot.py at 2018-01-18 13:31:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.67 Mbit/s
95th percentile per-packet one-way delay: 100.549 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 9.96 Mbit/s
95th percentile per-packet one-way delay: 108.624 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 5.79 Mbit/s
95th percentile per-packet one-way delay: 76.316 ms
Loss rate: 0.77%
-- Flow 3:
Average throughput: 5.72 Mbit/s
95th percentile per-packet one-way delay: 73.401 ms
Loss rate: 1.00%
```

Run 1: Report of LEDBAT — Data Link

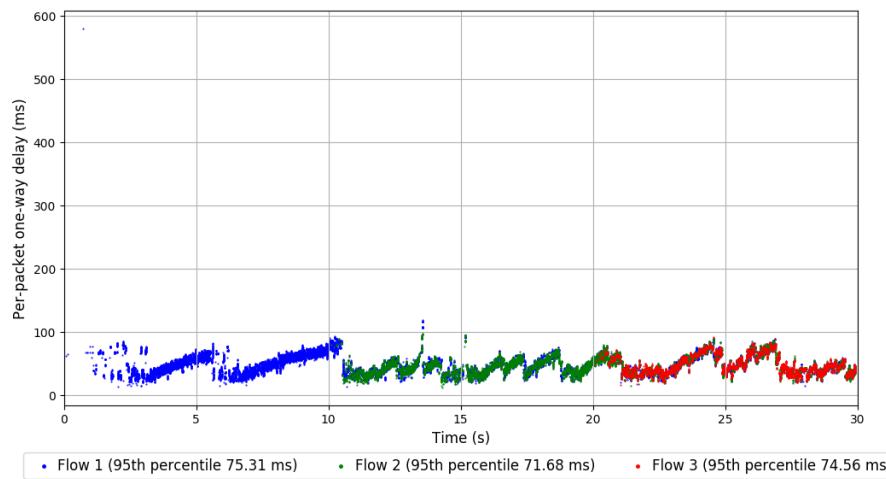
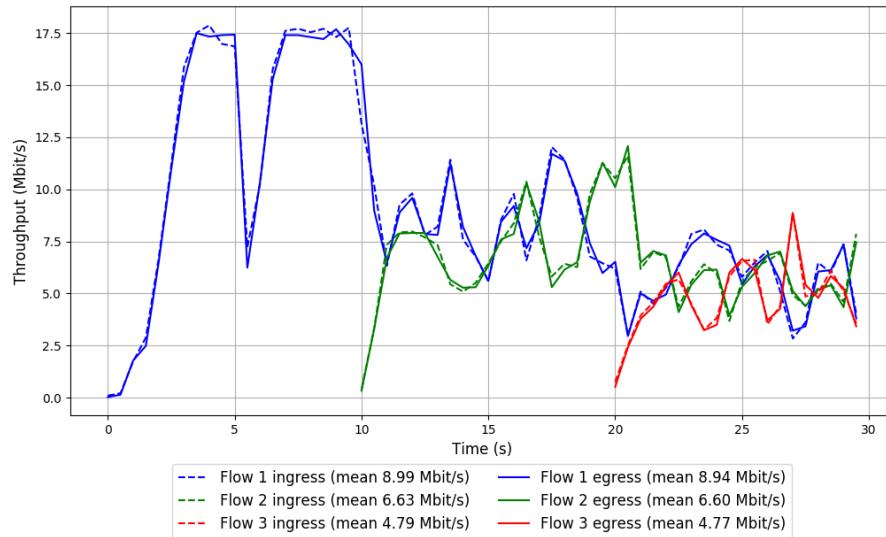


Run 2: Statistics of LEDBAT

```
Start at: 2018-01-18 12:04:17
End at: 2018-01-18 12:04:47
Local clock offset: 2.057 ms
Remote clock offset: -2.462 ms

# Below is generated by plot.py at 2018-01-18 13:31:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.89 Mbit/s
95th percentile per-packet one-way delay: 74.342 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 8.94 Mbit/s
95th percentile per-packet one-way delay: 75.310 ms
Loss rate: 0.74%
-- Flow 2:
Average throughput: 6.60 Mbit/s
95th percentile per-packet one-way delay: 71.679 ms
Loss rate: 0.92%
-- Flow 3:
Average throughput: 4.77 Mbit/s
95th percentile per-packet one-way delay: 74.562 ms
Loss rate: 1.04%
```

Run 2: Report of LEDBAT — Data Link

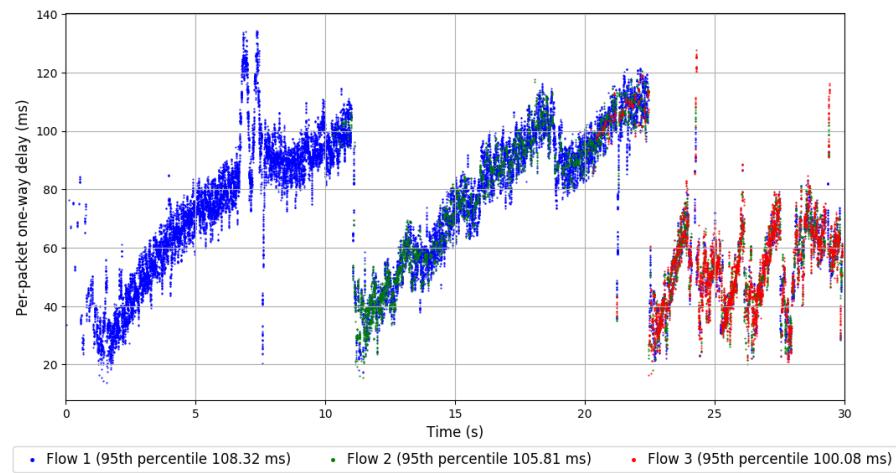
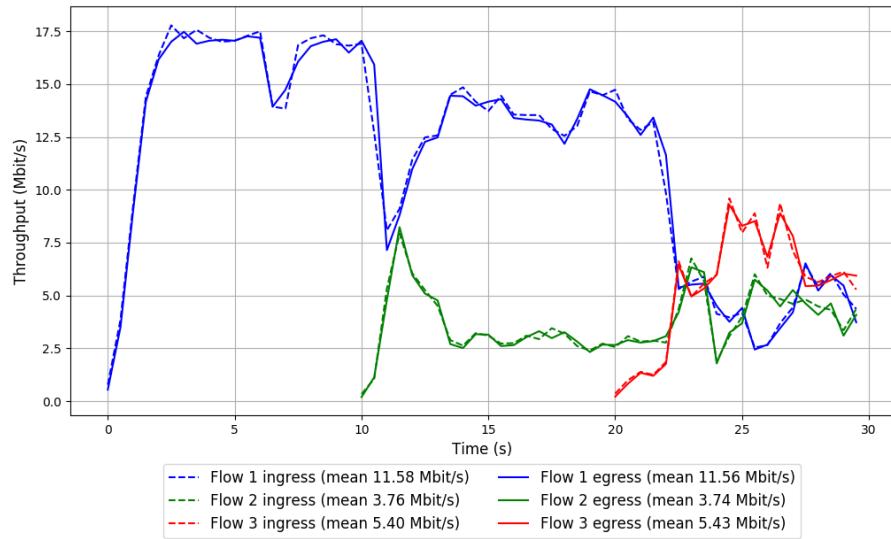


Run 3: Statistics of LEDBAT

```
Start at: 2018-01-18 12:25:45
End at: 2018-01-18 12:26:15
Local clock offset: 1.751 ms
Remote clock offset: -2.293 ms

# Below is generated by plot.py at 2018-01-18 13:32:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.81 Mbit/s
95th percentile per-packet one-way delay: 107.519 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 11.56 Mbit/s
95th percentile per-packet one-way delay: 108.321 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 3.74 Mbit/s
95th percentile per-packet one-way delay: 105.805 ms
Loss rate: 1.08%
-- Flow 3:
Average throughput: 5.43 Mbit/s
95th percentile per-packet one-way delay: 100.080 ms
Loss rate: 0.68%
```

Run 3: Report of LEDBAT — Data Link

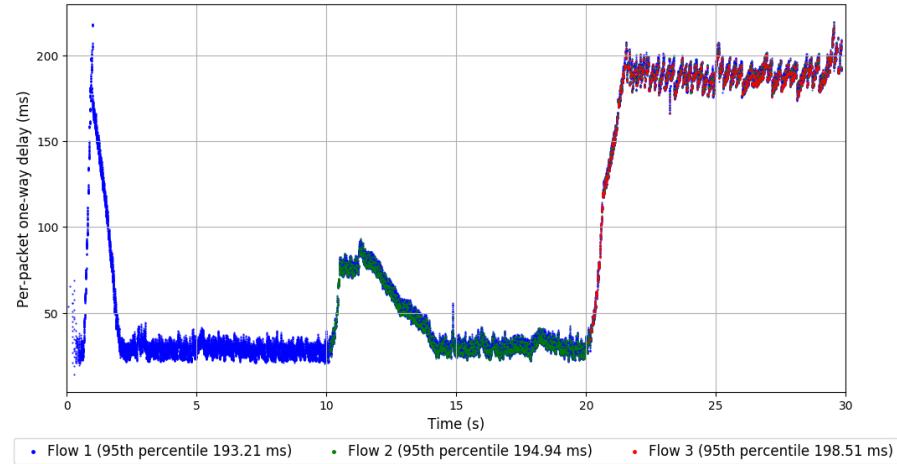
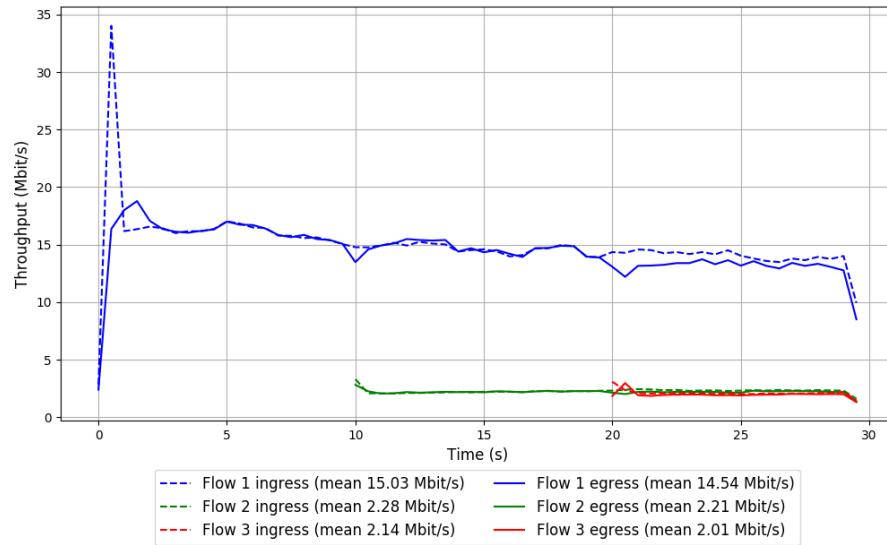


Run 1: Statistics of PCC

```
Start at: 2018-01-18 11:33:09
End at: 2018-01-18 11:38:39
Local clock offset: 2.154 ms
Remote clock offset: -2.675 ms

# Below is generated by plot.py at 2018-01-18 13:32:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.66 Mbit/s
95th percentile per-packet one-way delay: 193.798 ms
Loss rate: 3.63%
-- Flow 1:
Average throughput: 14.54 Mbit/s
95th percentile per-packet one-way delay: 193.206 ms
Loss rate: 3.51%
-- Flow 2:
Average throughput: 2.21 Mbit/s
95th percentile per-packet one-way delay: 194.942 ms
Loss rate: 3.36%
-- Flow 3:
Average throughput: 2.01 Mbit/s
95th percentile per-packet one-way delay: 198.515 ms
Loss rate: 6.65%
```

Run 1: Report of PCC — Data Link

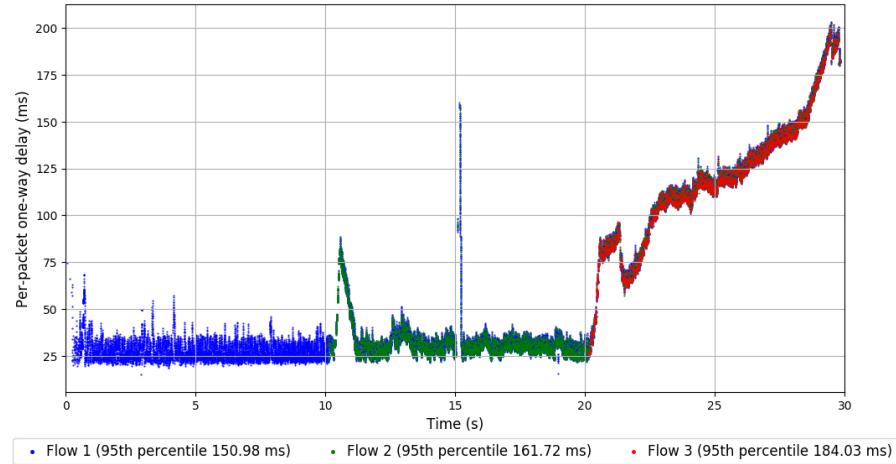
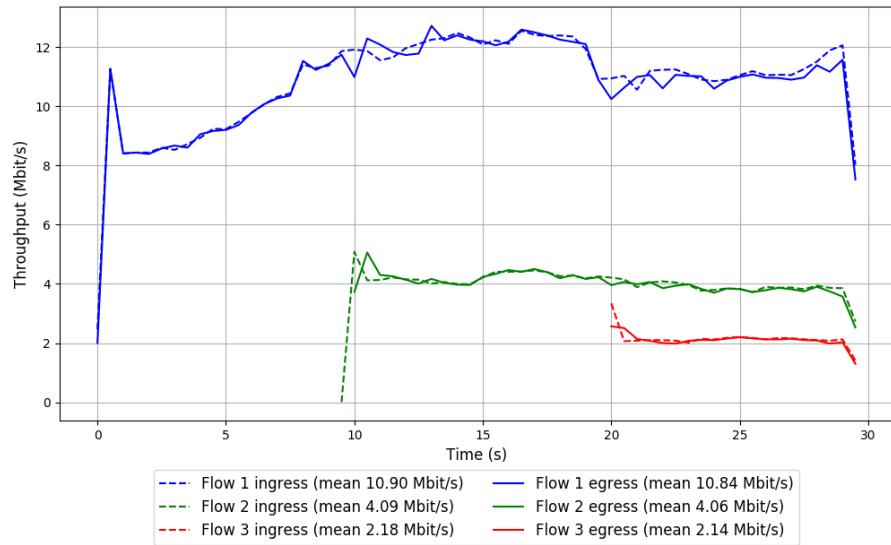


Run 2: Statistics of PCC

```
Start at: 2018-01-18 11:54:40
End at: 2018-01-18 11:55:10
Local clock offset: 2.076 ms
Remote clock offset: -2.509 ms

# Below is generated by plot.py at 2018-01-18 13:32:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.25 Mbit/s
95th percentile per-packet one-way delay: 156.114 ms
Loss rate: 0.94%
-- Flow 1:
Average throughput: 10.84 Mbit/s
95th percentile per-packet one-way delay: 150.981 ms
Loss rate: 0.82%
-- Flow 2:
Average throughput: 4.06 Mbit/s
95th percentile per-packet one-way delay: 161.722 ms
Loss rate: 1.11%
-- Flow 3:
Average throughput: 2.14 Mbit/s
95th percentile per-packet one-way delay: 184.028 ms
Loss rate: 2.22%
```

Run 2: Report of PCC — Data Link

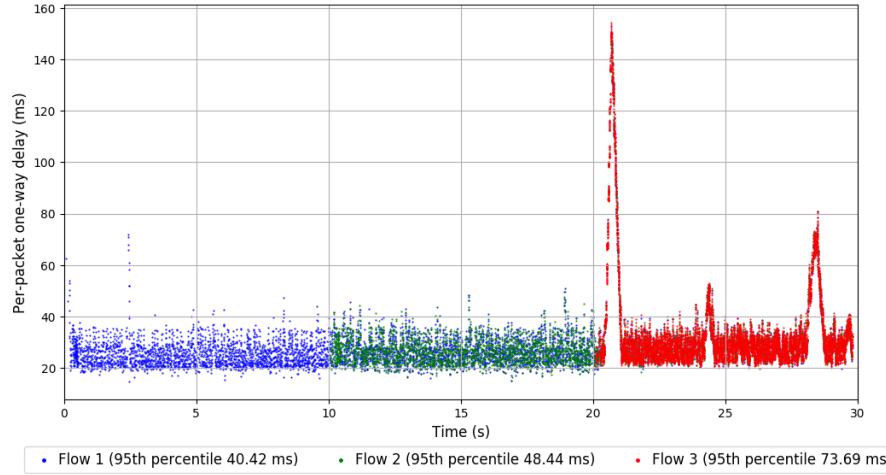
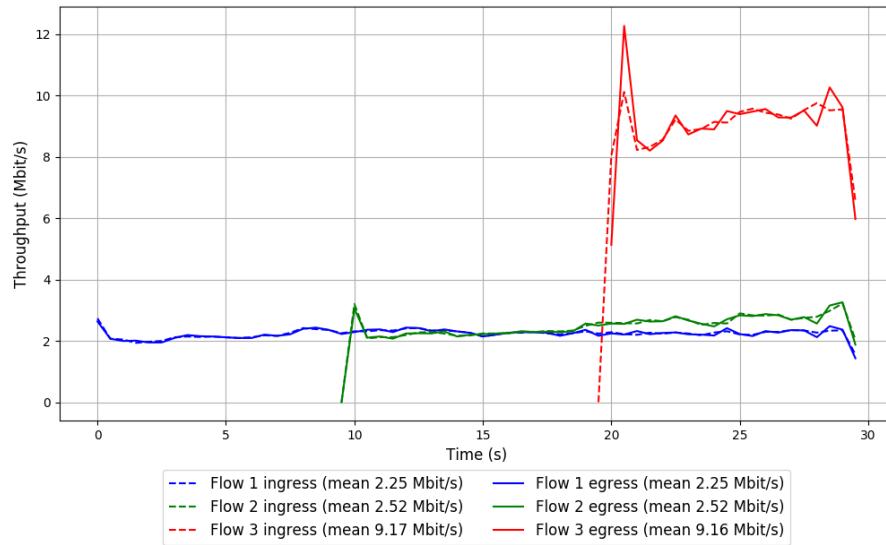


Run 3: Statistics of PCC

```
Start at: 2018-01-18 12:16:13
End at: 2018-01-18 12:16:43
Local clock offset: 1.848 ms
Remote clock offset: -2.364 ms

# Below is generated by plot.py at 2018-01-18 13:32:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 6.95 Mbit/s
95th percentile per-packet one-way delay: 59.259 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 2.25 Mbit/s
95th percentile per-packet one-way delay: 40.423 ms
Loss rate: 0.18%
-- Flow 2:
Average throughput: 2.52 Mbit/s
95th percentile per-packet one-way delay: 48.441 ms
Loss rate: 0.32%
-- Flow 3:
Average throughput: 9.16 Mbit/s
95th percentile per-packet one-way delay: 73.688 ms
Loss rate: 0.59%
```

Run 3: Report of PCC — Data Link

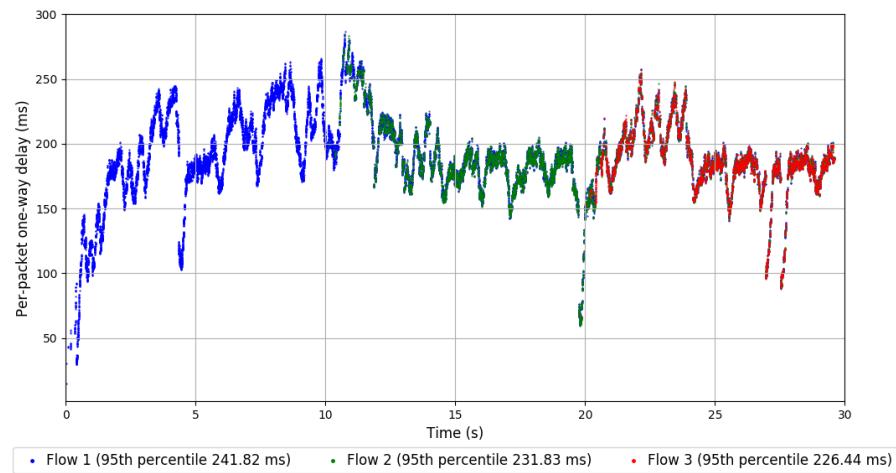
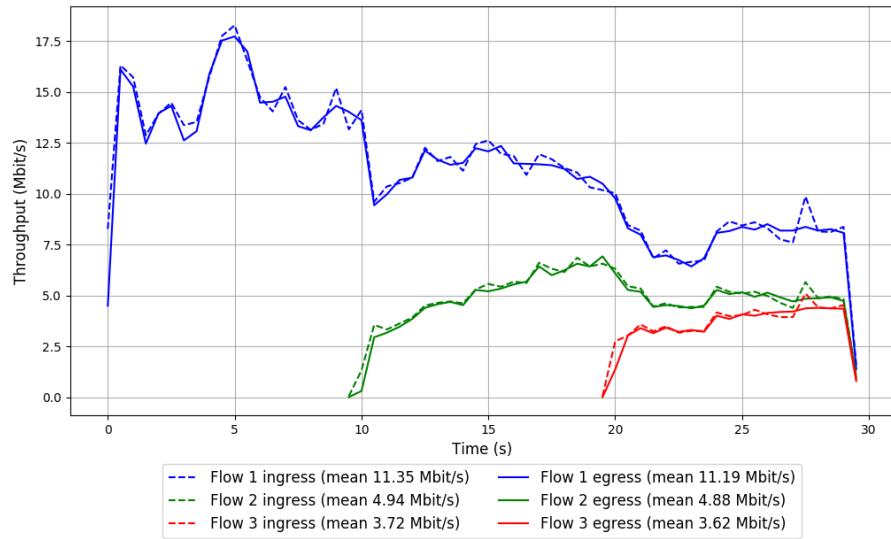


```
Run 1: Statistics of QUIC Cubic

Start at: 2018-01-18 11:37:57
End at: 2018-01-18 11:38:27
Local clock offset: 2.187 ms
Remote clock offset: -2.7 ms

# Below is generated by plot.py at 2018-01-18 13:32:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.63 Mbit/s
95th percentile per-packet one-way delay: 239.383 ms
Loss rate: 1.88%
-- Flow 1:
Average throughput: 11.19 Mbit/s
95th percentile per-packet one-way delay: 241.819 ms
Loss rate: 1.55%
-- Flow 2:
Average throughput: 4.88 Mbit/s
95th percentile per-packet one-way delay: 231.829 ms
Loss rate: 2.33%
-- Flow 3:
Average throughput: 3.62 Mbit/s
95th percentile per-packet one-way delay: 226.435 ms
Loss rate: 3.63%
```

Run 1: Report of QUIC Cubic — Data Link

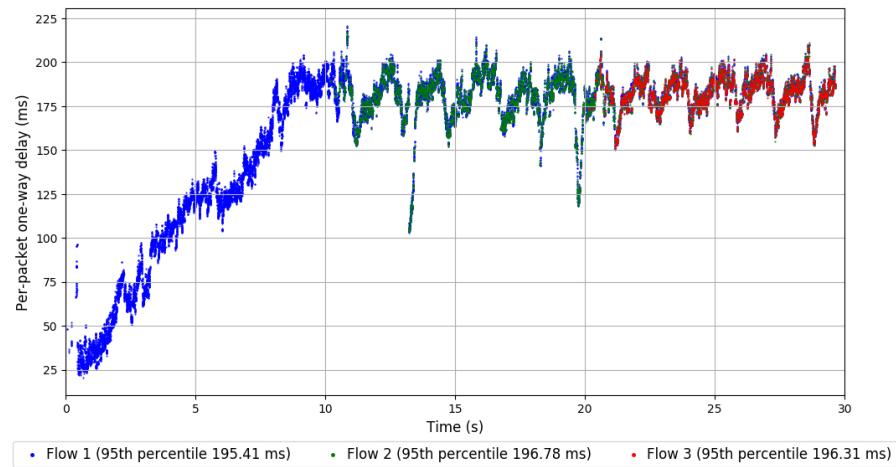
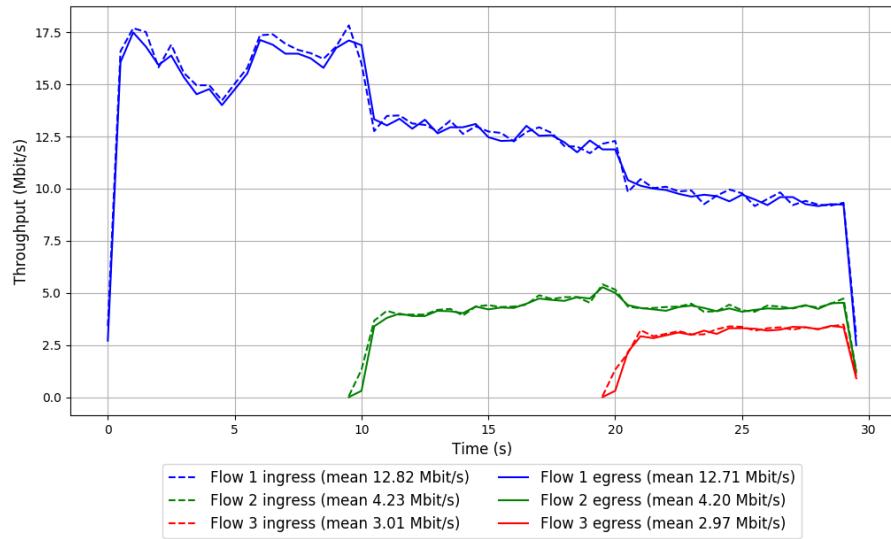


Run 2: Statistics of QUIC Cubic

```
Start at: 2018-01-18 11:59:29
End at: 2018-01-18 11:59:59
Local clock offset: 2.039 ms
Remote clock offset: -2.524 ms

# Below is generated by plot.py at 2018-01-18 13:32:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.48 Mbit/s
95th percentile per-packet one-way delay: 195.713 ms
Loss rate: 1.36%
-- Flow 1:
Average throughput: 12.71 Mbit/s
95th percentile per-packet one-way delay: 195.406 ms
Loss rate: 1.07%
-- Flow 2:
Average throughput: 4.20 Mbit/s
95th percentile per-packet one-way delay: 196.778 ms
Loss rate: 1.96%
-- Flow 3:
Average throughput: 2.97 Mbit/s
95th percentile per-packet one-way delay: 196.308 ms
Loss rate: 3.31%
```

Run 2: Report of QUIC Cubic — Data Link

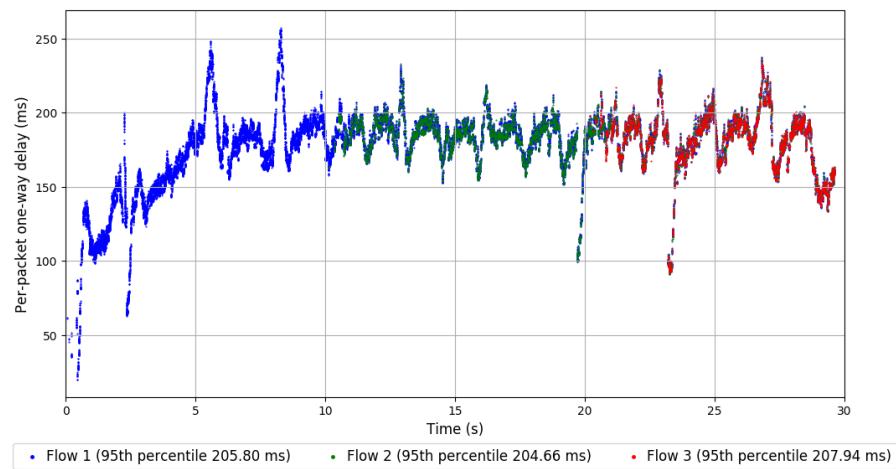
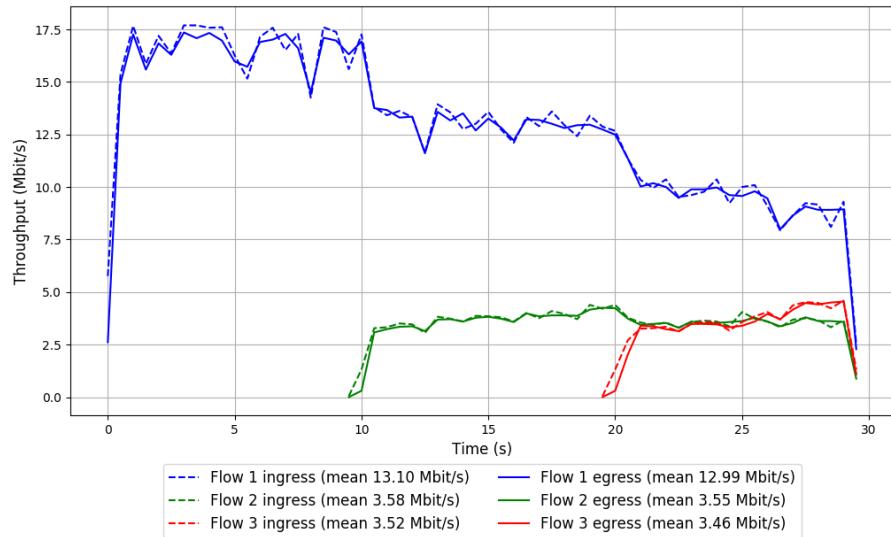


Run 3: Statistics of QUIC Cubic

```
Start at: 2018-01-18 12:20:58
End at: 2018-01-18 12:21:28
Local clock offset: 1.739 ms
Remote clock offset: -2.333 ms

# Below is generated by plot.py at 2018-01-18 13:32:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.48 Mbit/s
95th percentile per-packet one-way delay: 205.923 ms
Loss rate: 1.46%
-- Flow 1:
Average throughput: 12.99 Mbit/s
95th percentile per-packet one-way delay: 205.798 ms
Loss rate: 1.18%
-- Flow 2:
Average throughput: 3.55 Mbit/s
95th percentile per-packet one-way delay: 204.663 ms
Loss rate: 2.00%
-- Flow 3:
Average throughput: 3.46 Mbit/s
95th percentile per-packet one-way delay: 207.941 ms
Loss rate: 3.51%
```

Run 3: Report of QUIC Cubic — Data Link

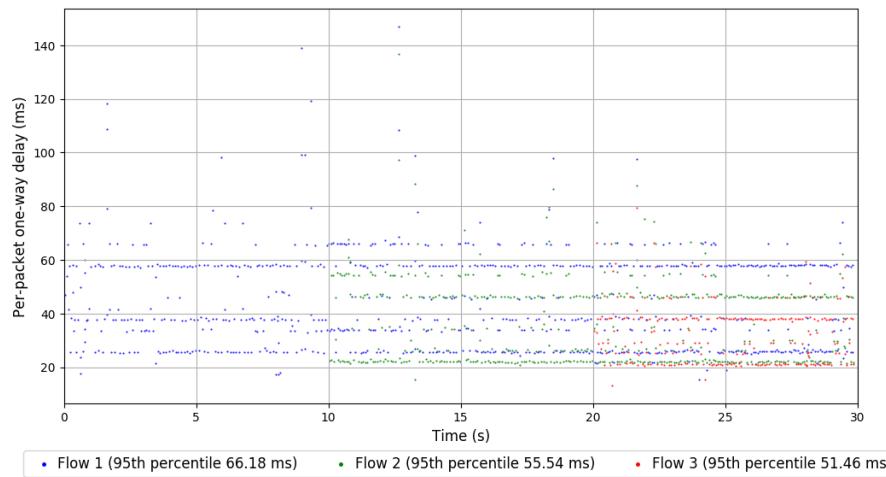
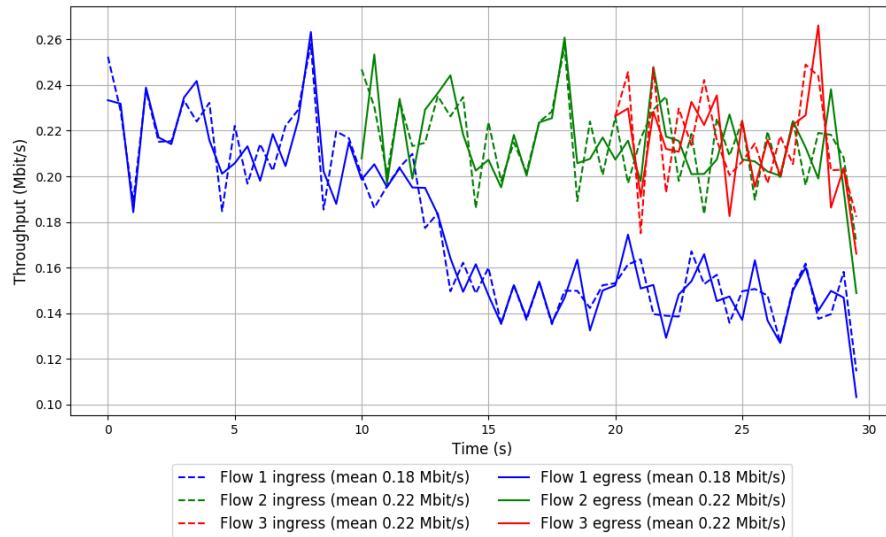


```
Run 1: Statistics of SCReAM

Start at: 2018-01-18 11:28:22
End at: 2018-01-18 11:28:52
Local clock offset: 2.292 ms
Remote clock offset: -2.645 ms

# Below is generated by plot.py at 2018-01-18 13:32:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.39 Mbit/s
95th percentile per-packet one-way delay: 66.023 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 66.182 ms
Loss rate: 0.21%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 55.541 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 51.458 ms
Loss rate: 0.74%
```

Run 1: Report of SCReAM — Data Link

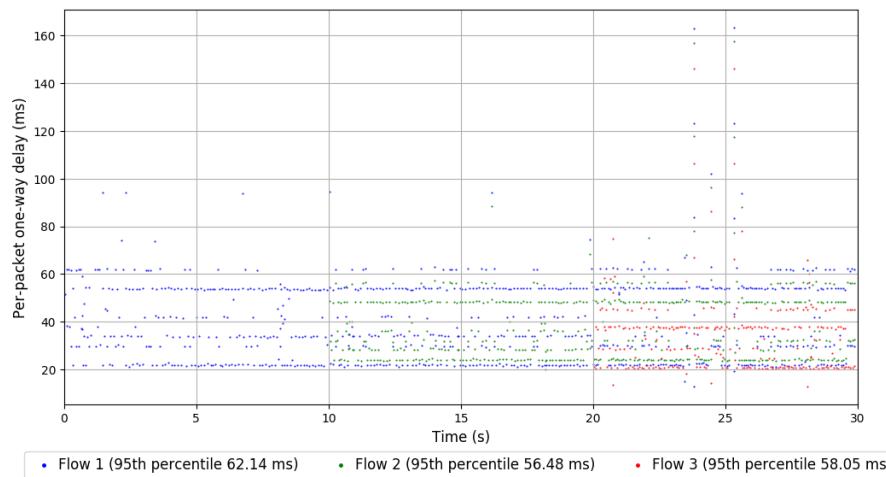
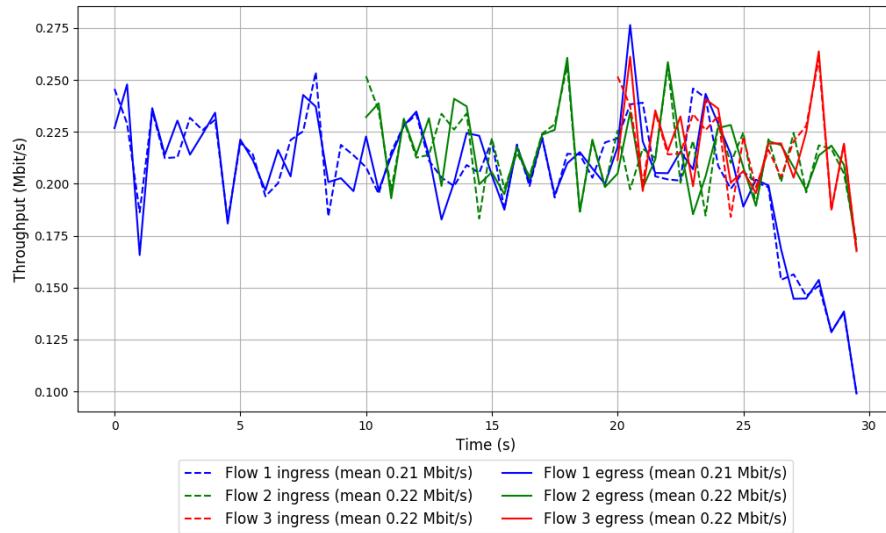


Run 2: Statistics of SCReAM

```
Start at: 2018-01-18 11:49:54
End at: 2018-01-18 11:50:24
Local clock offset: 2.002 ms
Remote clock offset: -2.458 ms

# Below is generated by plot.py at 2018-01-18 13:32:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.42 Mbit/s
95th percentile per-packet one-way delay: 61.995 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 62.143 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 56.478 ms
Loss rate: 0.20%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 58.052 ms
Loss rate: 0.35%
```

Run 2: Report of SCReAM — Data Link

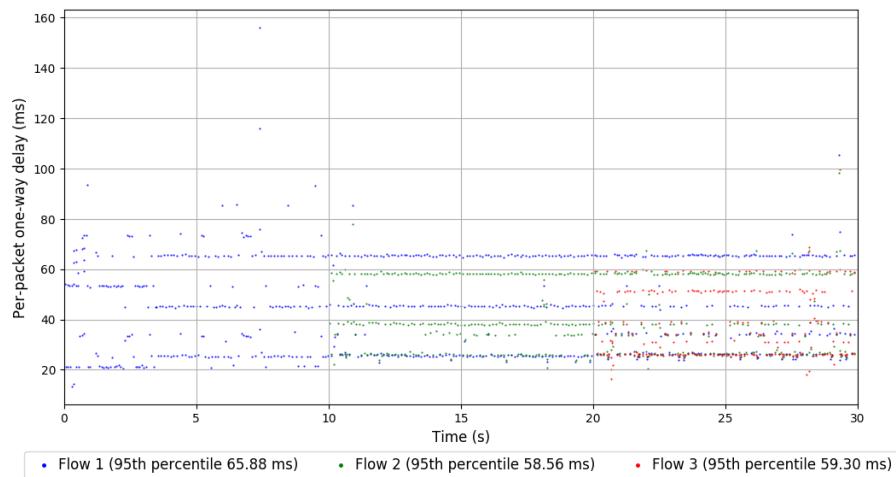
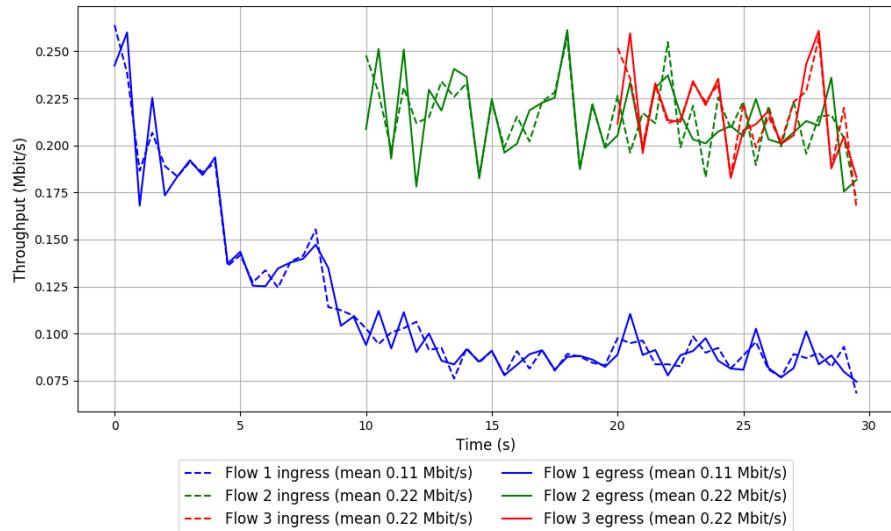


Run 3: Statistics of SCReAM

```
Start at: 2018-01-18 12:11:26
End at: 2018-01-18 12:11:56
Local clock offset: 1.996 ms
Remote clock offset: -2.588 ms

# Below is generated by plot.py at 2018-01-18 13:32:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.33 Mbit/s
95th percentile per-packet one-way delay: 65.634 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 0.11 Mbit/s
95th percentile per-packet one-way delay: 65.879 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 58.556 ms
Loss rate: 0.20%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 59.297 ms
Loss rate: 0.35%
```

Run 3: Report of SCReAM — Data Link

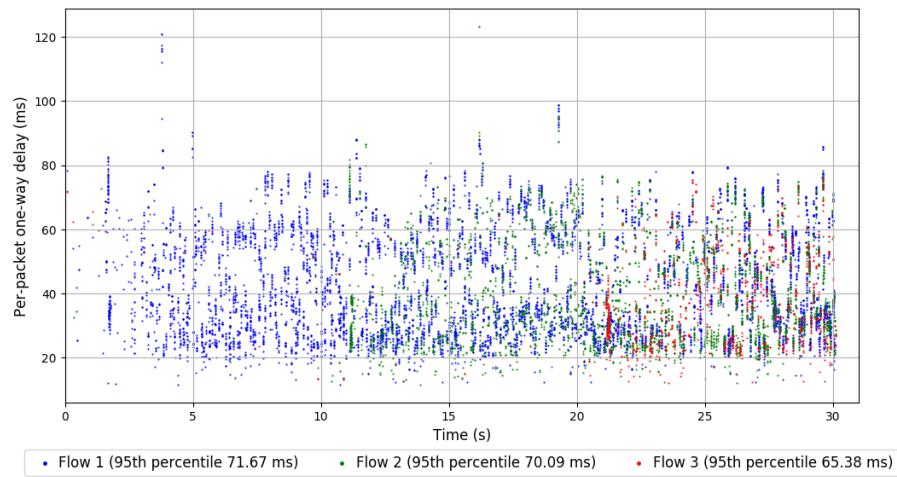
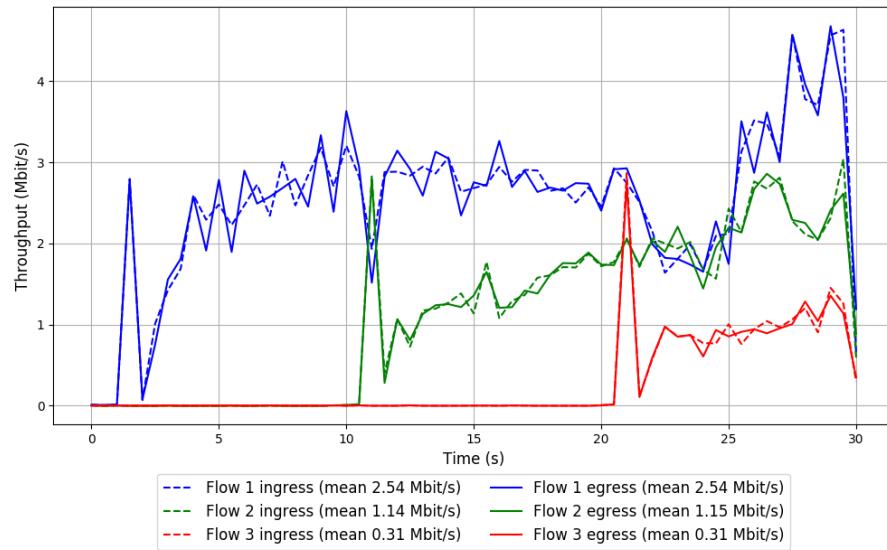


```
Run 1: Statistics of WebRTC media
```

```
Start at: 2018-01-18 11:36:46
End at: 2018-01-18 11:37:16
Local clock offset: 2.126 ms
Remote clock offset: -2.674 ms

# Below is generated by plot.py at 2018-01-18 13:32:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.99 Mbit/s
95th percentile per-packet one-way delay: 70.940 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 2.54 Mbit/s
95th percentile per-packet one-way delay: 71.672 ms
Loss rate: 0.55%
-- Flow 2:
Average throughput: 1.15 Mbit/s
95th percentile per-packet one-way delay: 70.090 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 0.31 Mbit/s
95th percentile per-packet one-way delay: 65.382 ms
Loss rate: 1.57%
```

Run 1: Report of WebRTC media — Data Link

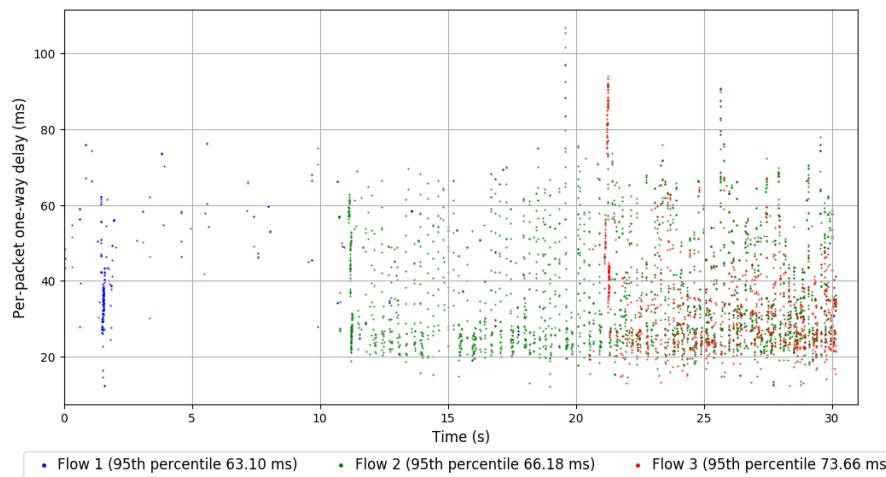
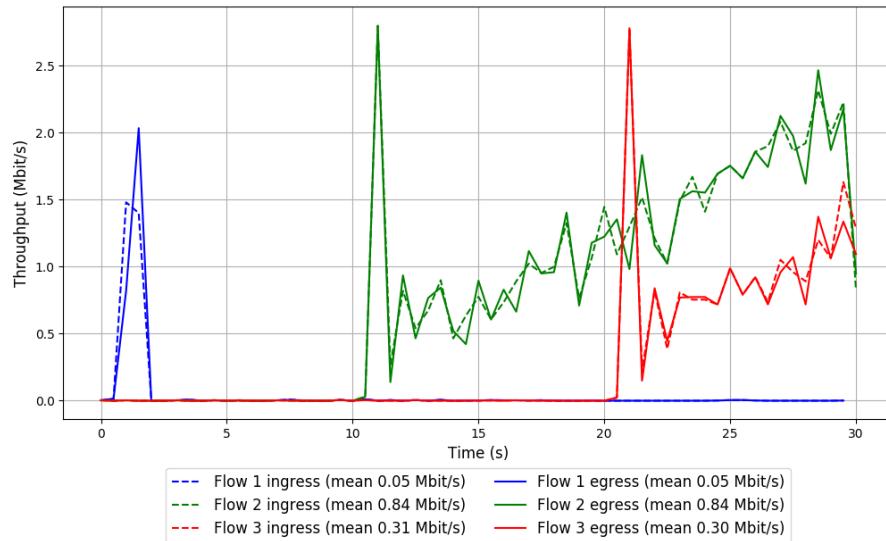


Run 2: Statistics of WebRTC media

```
Start at: 2018-01-18 11:58:18
End at: 2018-01-18 11:58:48
Local clock offset: 1.954 ms
Remote clock offset: -2.478 ms

# Below is generated by plot.py at 2018-01-18 13:32:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.19 Mbit/s
95th percentile per-packet one-way delay: 66.459 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 63.100 ms
Loss rate: 0.80%
-- Flow 2:
Average throughput: 0.84 Mbit/s
95th percentile per-packet one-way delay: 66.182 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 0.30 Mbit/s
95th percentile per-packet one-way delay: 73.663 ms
Loss rate: 2.59%
```

Run 2: Report of WebRTC media — Data Link

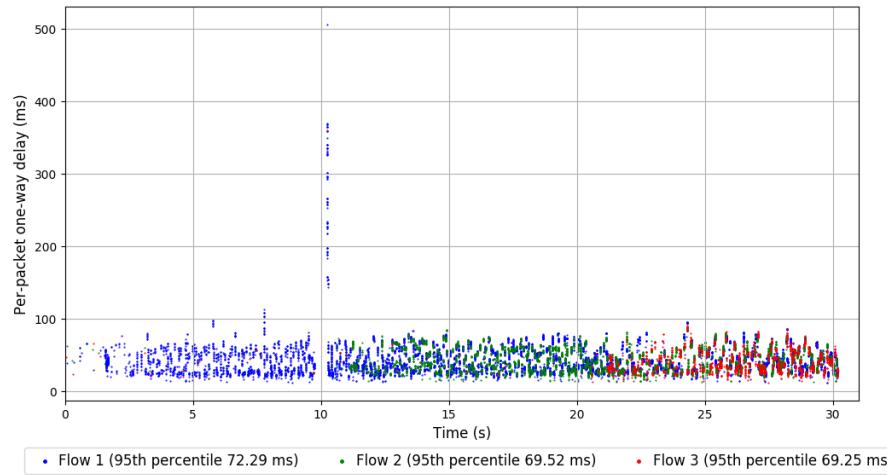
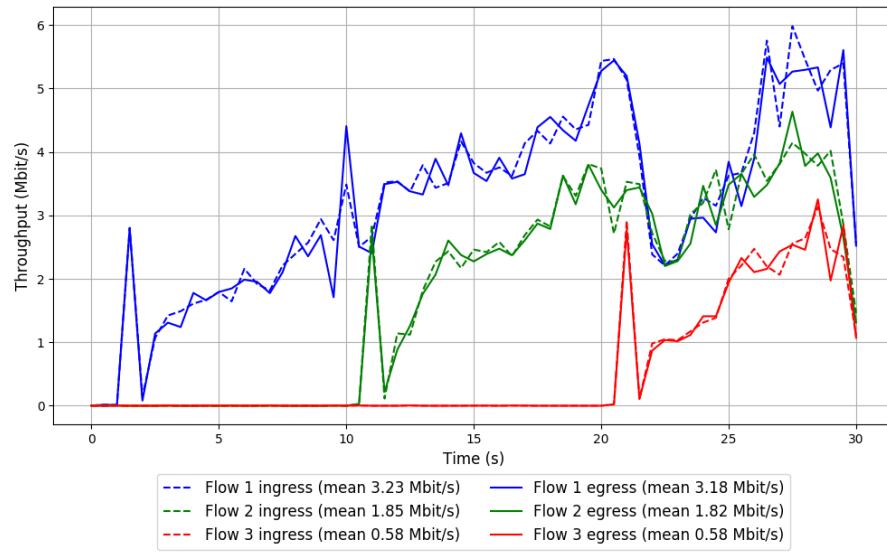


```
Run 3: Statistics of WebRTC media

Start at: 2018-01-18 12:19:47
End at: 2018-01-18 12:20:17
Local clock offset: 1.792 ms
Remote clock offset: -2.374 ms

# Below is generated by plot.py at 2018-01-18 13:32:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 5.58 Mbit/s
95th percentile per-packet one-way delay: 71.320 ms
Loss rate: 1.57%
-- Flow 1:
Average throughput: 3.18 Mbit/s
95th percentile per-packet one-way delay: 72.292 ms
Loss rate: 1.57%
-- Flow 2:
Average throughput: 1.82 Mbit/s
95th percentile per-packet one-way delay: 69.521 ms
Loss rate: 1.78%
-- Flow 3:
Average throughput: 0.58 Mbit/s
95th percentile per-packet one-way delay: 69.252 ms
Loss rate: 0.91%
```

Run 3: Report of WebRTC media — Data Link

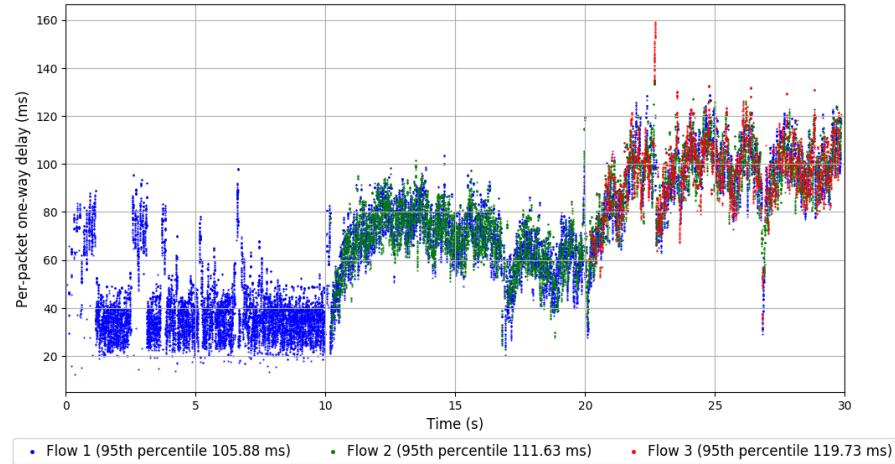
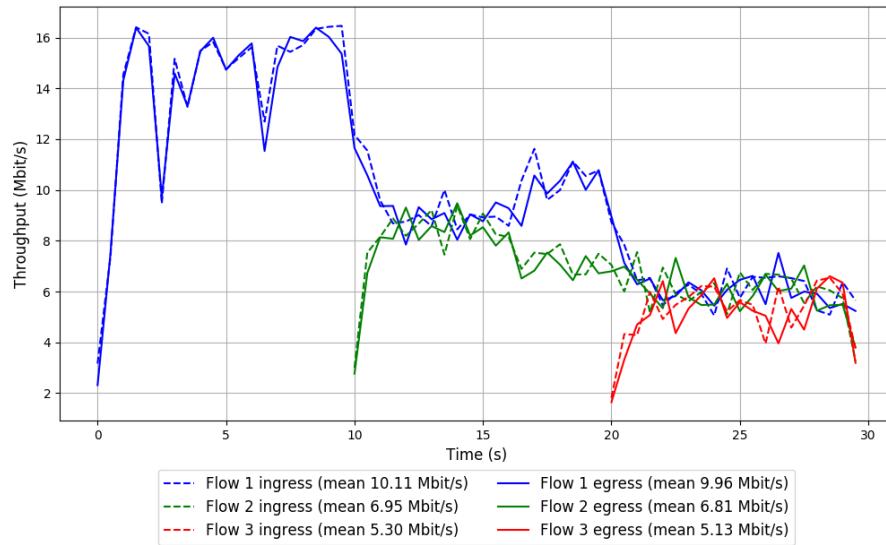


Run 1: Statistics of Sprout

```
Start at: 2018-01-18 11:23:35
End at: 2018-01-18 11:24:05
Local clock offset: 2.372 ms
Remote clock offset: -2.633 ms

# Below is generated by plot.py at 2018-01-18 13:32:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.15 Mbit/s
95th percentile per-packet one-way delay: 110.496 ms
Loss rate: 2.08%
-- Flow 1:
Average throughput: 9.96 Mbit/s
95th percentile per-packet one-way delay: 105.875 ms
Loss rate: 1.68%
-- Flow 2:
Average throughput: 6.81 Mbit/s
95th percentile per-packet one-way delay: 111.632 ms
Loss rate: 2.26%
-- Flow 3:
Average throughput: 5.13 Mbit/s
95th percentile per-packet one-way delay: 119.733 ms
Loss rate: 3.93%
```

Run 1: Report of Sprout — Data Link

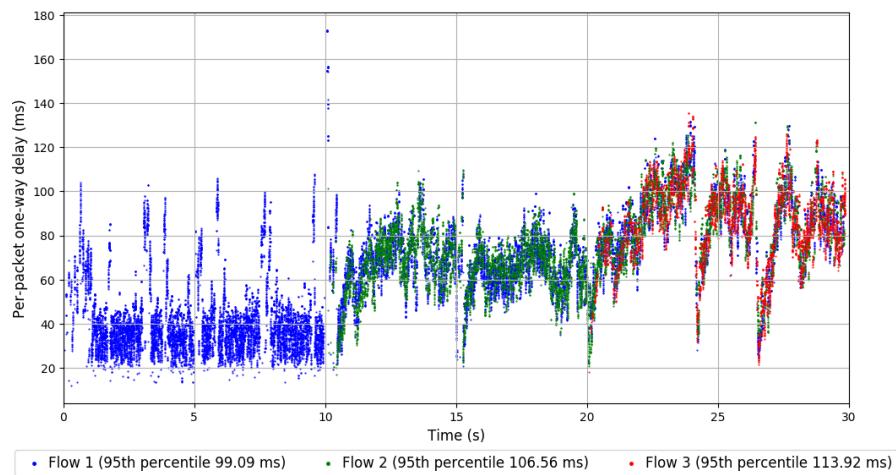
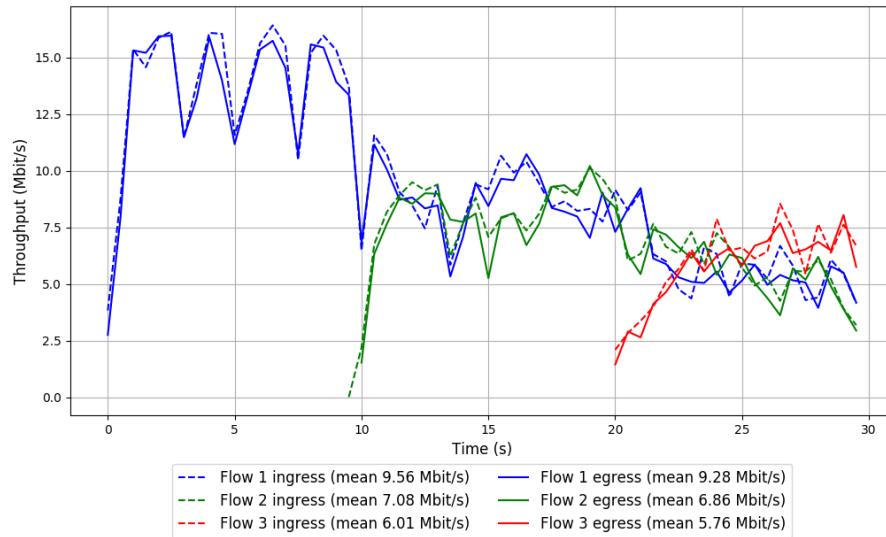


Run 2: Statistics of Sprout

```
Start at: 2018-01-18 11:45:08
End at: 2018-01-18 11:45:38
Local clock offset: 2.134 ms
Remote clock offset: -2.358 ms

# Below is generated by plot.py at 2018-01-18 13:32:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.70 Mbit/s
95th percentile per-packet one-way delay: 104.939 ms
Loss rate: 3.45%
-- Flow 1:
Average throughput: 9.28 Mbit/s
95th percentile per-packet one-way delay: 99.089 ms
Loss rate: 3.14%
-- Flow 2:
Average throughput: 6.86 Mbit/s
95th percentile per-packet one-way delay: 106.555 ms
Loss rate: 3.64%
-- Flow 3:
Average throughput: 5.76 Mbit/s
95th percentile per-packet one-way delay: 113.919 ms
Loss rate: 4.51%
```

Run 2: Report of Sprout — Data Link

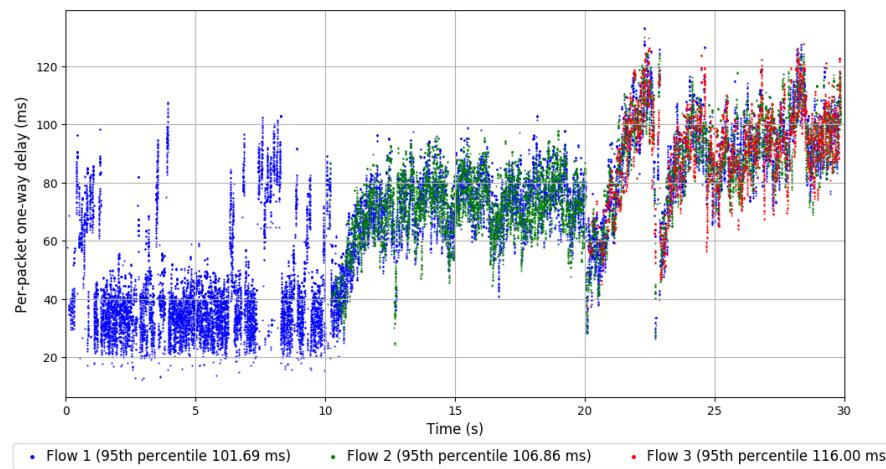
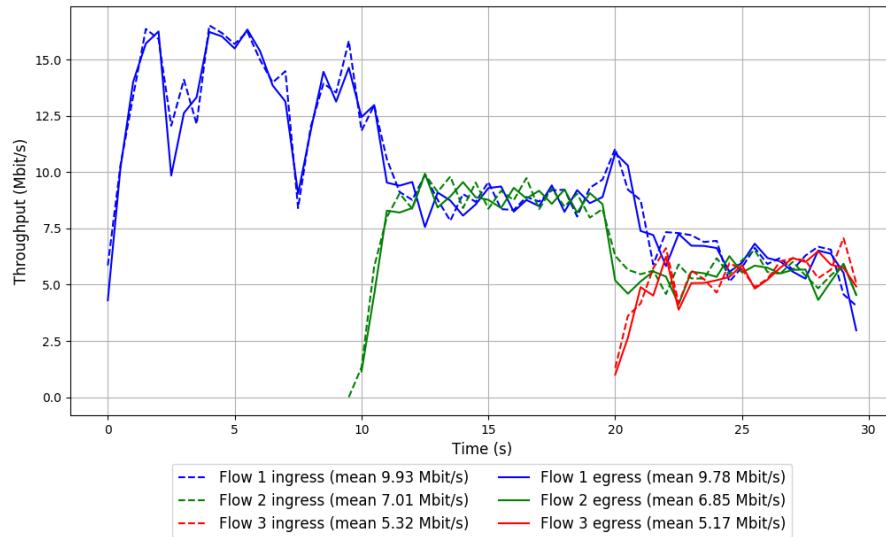


Run 3: Statistics of Sprout

```
Start at: 2018-01-18 12:06:40
End at: 2018-01-18 12:07:10
Local clock offset: 2.046 ms
Remote clock offset: -2.482 ms

# Below is generated by plot.py at 2018-01-18 13:32:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.01 Mbit/s
95th percentile per-packet one-way delay: 106.334 ms
Loss rate: 2.21%
-- Flow 1:
Average throughput: 9.78 Mbit/s
95th percentile per-packet one-way delay: 101.685 ms
Loss rate: 1.80%
-- Flow 2:
Average throughput: 6.85 Mbit/s
95th percentile per-packet one-way delay: 106.864 ms
Loss rate: 2.62%
-- Flow 3:
Average throughput: 5.17 Mbit/s
95th percentile per-packet one-way delay: 116.003 ms
Loss rate: 3.40%
```

Run 3: Report of Sprout — Data Link

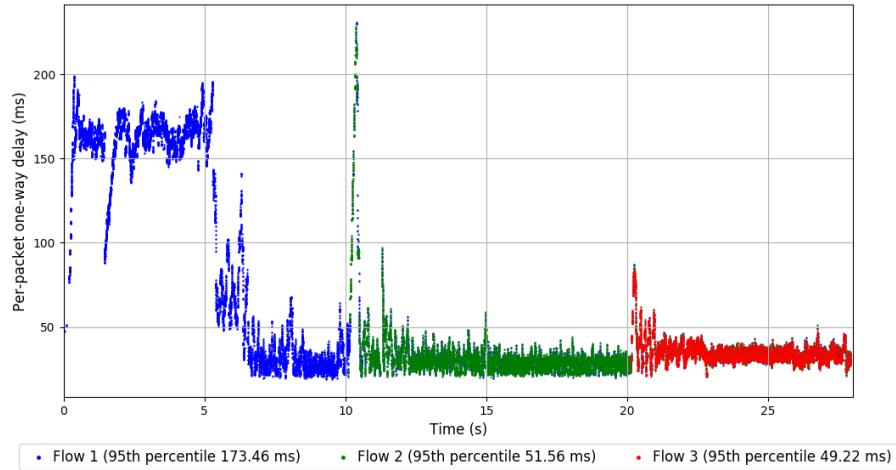
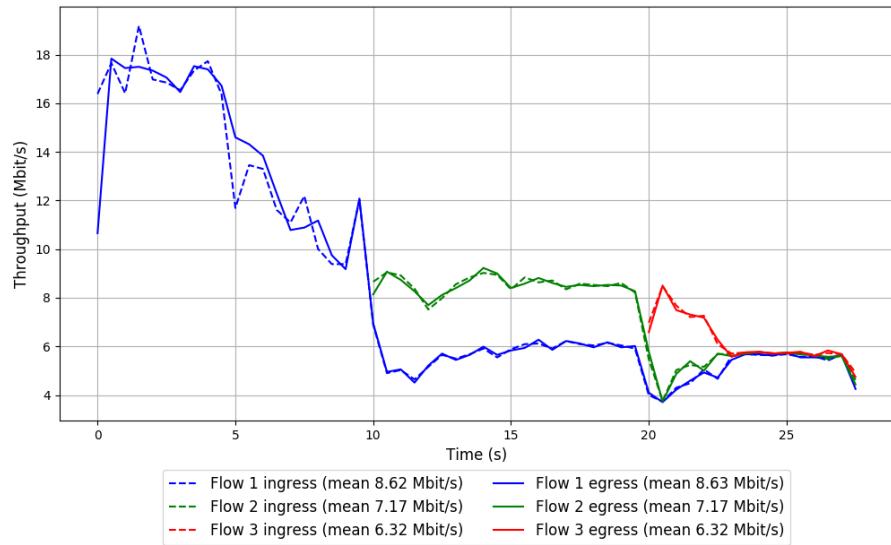


Run 1: Statistics of TaoVA-100x

```
Start at: 2018-01-18 11:41:33
End at: 2018-01-18 11:42:03
Local clock offset: 2.07 ms
Remote clock offset: -2.488 ms

# Below is generated by plot.py at 2018-01-18 13:32:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.01 Mbit/s
95th percentile per-packet one-way delay: 170.213 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 8.63 Mbit/s
95th percentile per-packet one-way delay: 173.460 ms
Loss rate: 0.18%
-- Flow 2:
Average throughput: 7.17 Mbit/s
95th percentile per-packet one-way delay: 51.556 ms
Loss rate: 0.26%
-- Flow 3:
Average throughput: 6.32 Mbit/s
95th percentile per-packet one-way delay: 49.222 ms
Loss rate: 0.55%
```

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

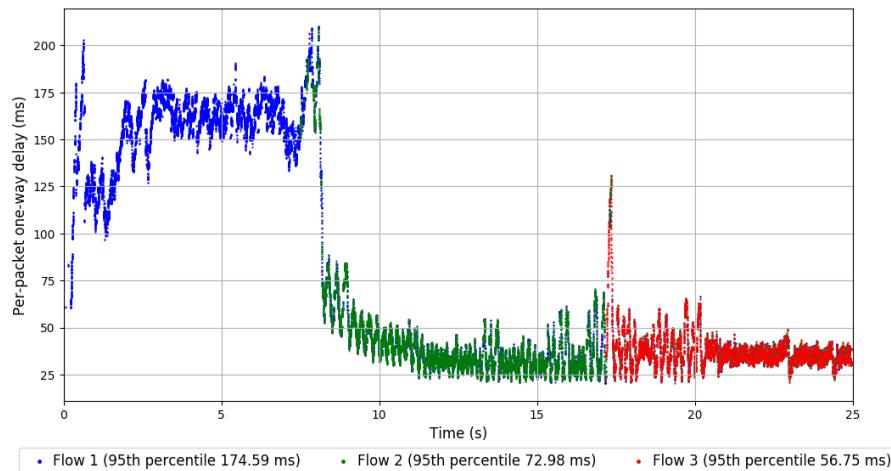
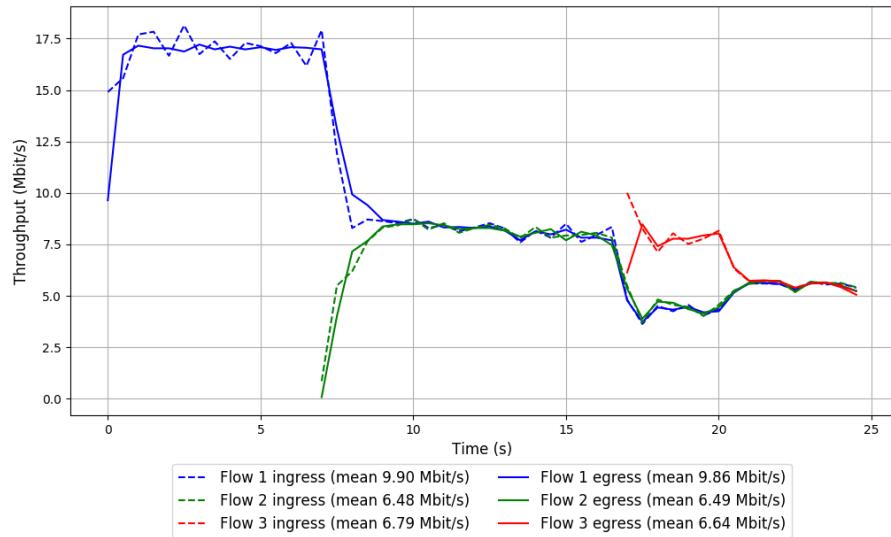


Run 2: Statistics of TaoVA-100x

```
Start at: 2018-01-18 12:03:05
End at: 2018-01-18 12:03:35
Local clock offset: 2.067 ms
Remote clock offset: -2.531 ms

# Below is generated by plot.py at 2018-01-18 13:32:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.59 Mbit/s
95th percentile per-packet one-way delay: 172.409 ms
Loss rate: 1.07%
-- Flow 1:
Average throughput: 9.86 Mbit/s
95th percentile per-packet one-way delay: 174.591 ms
Loss rate: 0.71%
-- Flow 2:
Average throughput: 6.49 Mbit/s
95th percentile per-packet one-way delay: 72.980 ms
Loss rate: 0.85%
-- Flow 3:
Average throughput: 6.64 Mbit/s
95th percentile per-packet one-way delay: 56.752 ms
Loss rate: 3.21%
```

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

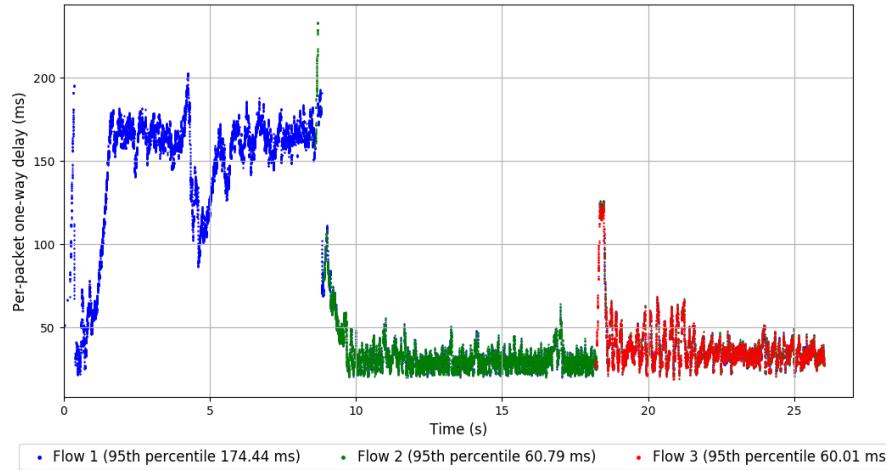
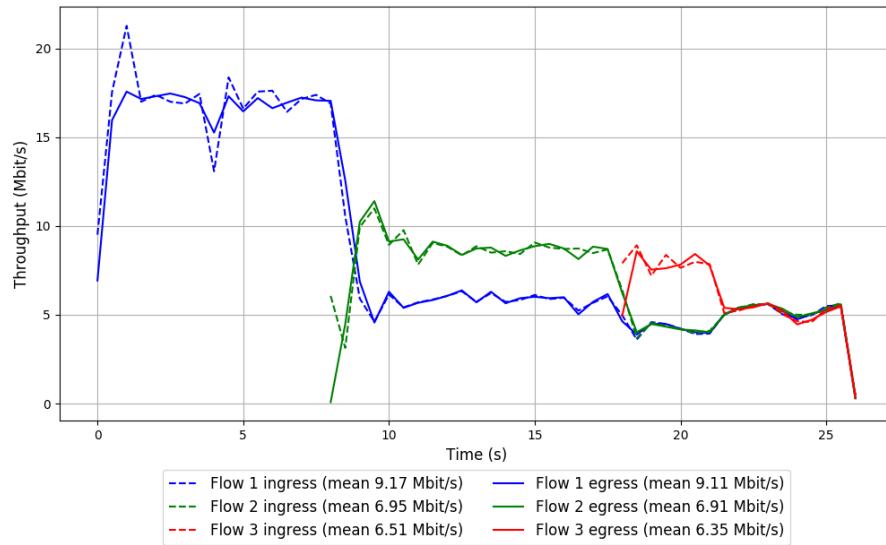


Run 3: Statistics of TaoVA-100x

```
Start at: 2018-01-18 12:24:33
End at: 2018-01-18 12:25:03
Local clock offset: 1.708 ms
Remote clock offset: -2.345 ms

# Below is generated by plot.py at 2018-01-18 13:32:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.76 Mbit/s
95th percentile per-packet one-way delay: 171.437 ms
Loss rate: 1.42%
-- Flow 1:
Average throughput: 9.11 Mbit/s
95th percentile per-packet one-way delay: 174.445 ms
Loss rate: 0.98%
-- Flow 2:
Average throughput: 6.91 Mbit/s
95th percentile per-packet one-way delay: 60.789 ms
Loss rate: 1.62%
-- Flow 3:
Average throughput: 6.35 Mbit/s
95th percentile per-packet one-way delay: 60.008 ms
Loss rate: 3.02%
```

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

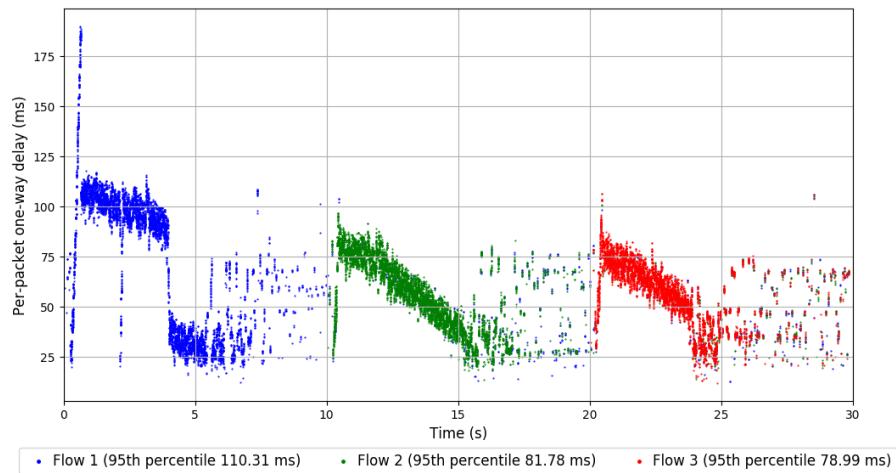
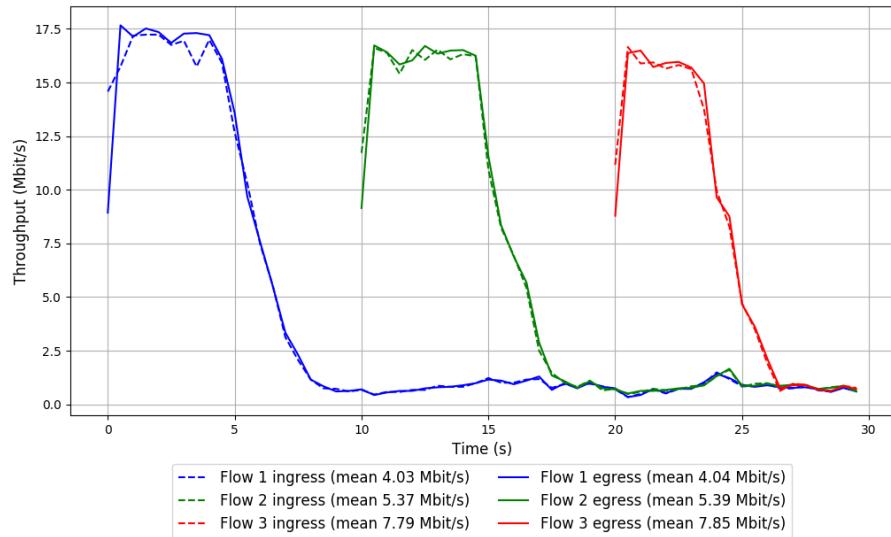


Run 1: Statistics of TCP Vegas

```
Start at: 2018-01-18 11:22:24
End at: 2018-01-18 11:22:54
Local clock offset: 2.275 ms
Remote clock offset: -2.758 ms

# Below is generated by plot.py at 2018-01-18 13:32:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 10.21 Mbit/s
95th percentile per-packet one-way delay: 105.204 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 4.04 Mbit/s
95th percentile per-packet one-way delay: 110.312 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 5.39 Mbit/s
95th percentile per-packet one-way delay: 81.784 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 7.85 Mbit/s
95th percentile per-packet one-way delay: 78.993 ms
Loss rate: 0.11%
```

Run 1: Report of TCP Vegas — Data Link

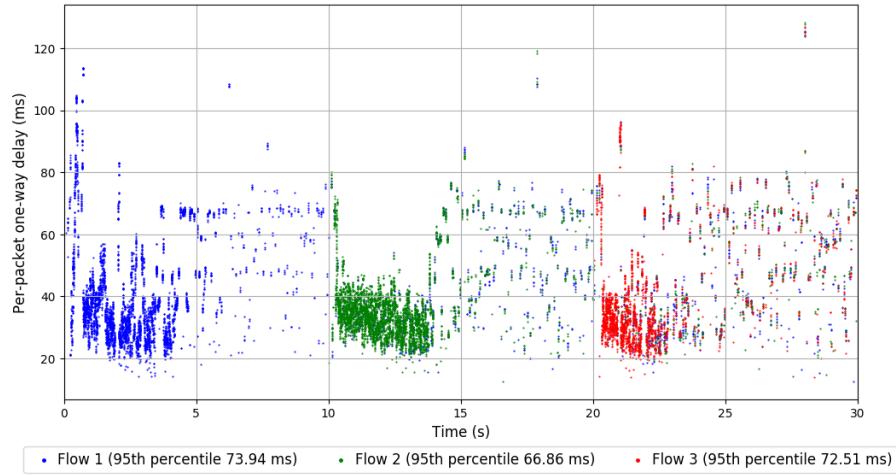
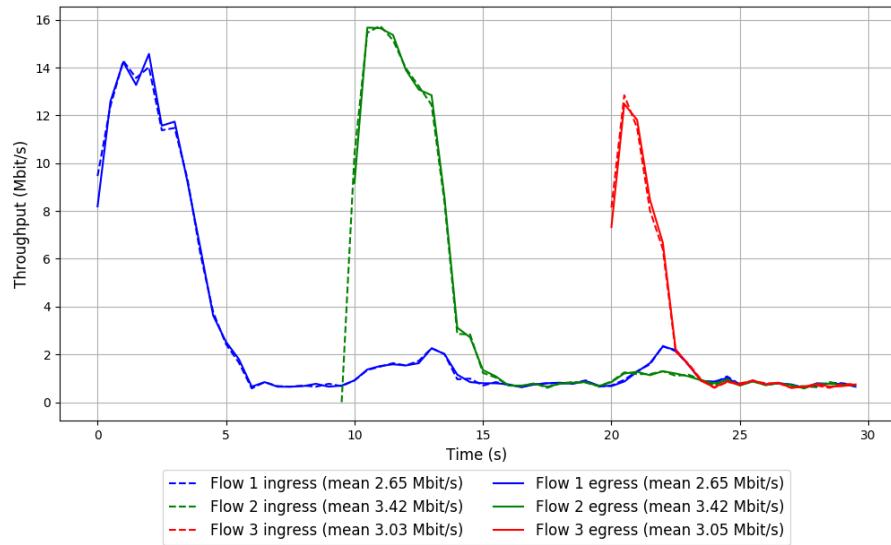


Run 2: Statistics of TCP Vegas

```
Start at: 2018-01-18 11:43:57
End at: 2018-01-18 11:44:27
Local clock offset: 2.061 ms
Remote clock offset: -2.37 ms

# Below is generated by plot.py at 2018-01-18 13:32:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 5.94 Mbit/s
95th percentile per-packet one-way delay: 69.428 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 2.65 Mbit/s
95th percentile per-packet one-way delay: 73.942 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 3.42 Mbit/s
95th percentile per-packet one-way delay: 66.855 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 3.05 Mbit/s
95th percentile per-packet one-way delay: 72.513 ms
Loss rate: 0.20%
```

Run 2: Report of TCP Vegas — Data Link

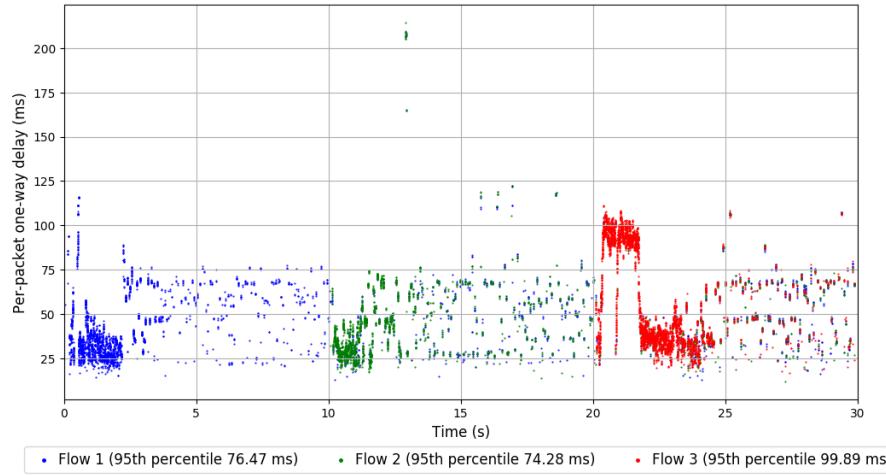
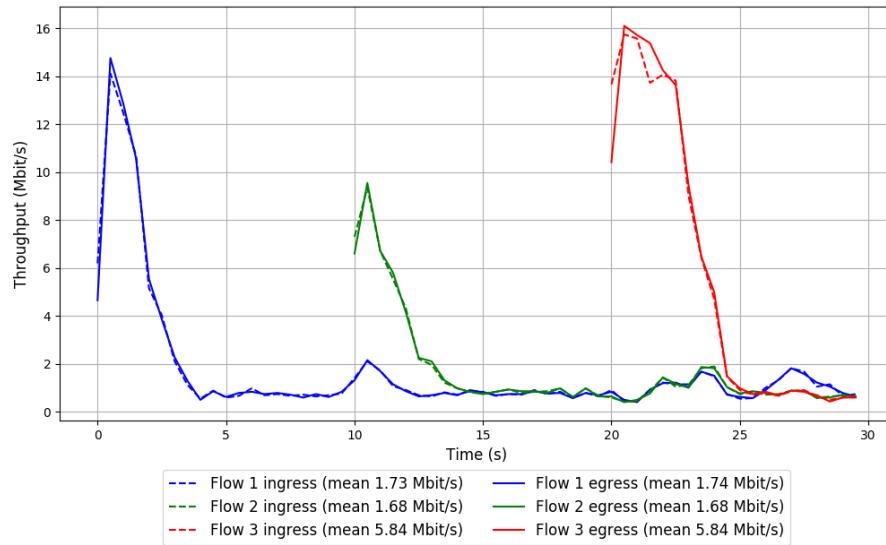


Run 3: Statistics of TCP Vegas

```
Start at: 2018-01-18 12:05:29
End at: 2018-01-18 12:05:59
Local clock offset: 2.036 ms
Remote clock offset: -2.53 ms

# Below is generated by plot.py at 2018-01-18 13:32:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.78 Mbit/s
95th percentile per-packet one-way delay: 97.700 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 1.74 Mbit/s
95th percentile per-packet one-way delay: 76.466 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 1.68 Mbit/s
95th percentile per-packet one-way delay: 74.285 ms
Loss rate: 0.18%
-- Flow 3:
Average throughput: 5.84 Mbit/s
95th percentile per-packet one-way delay: 99.889 ms
Loss rate: 0.21%
```

Run 3: Report of TCP Vegas — Data Link

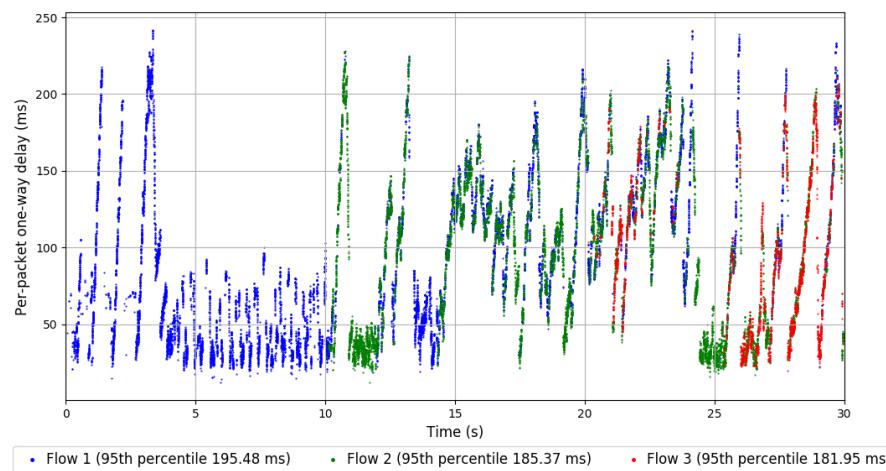
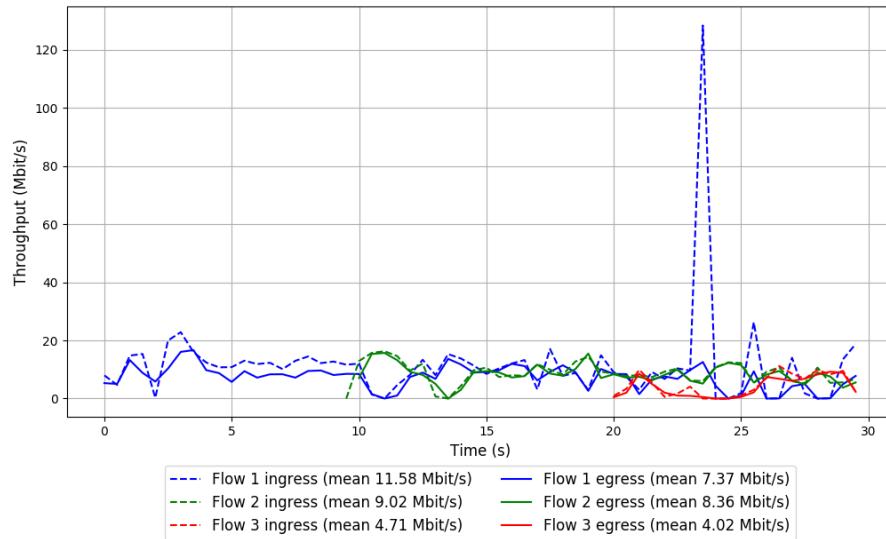


Run 1: Statistics of Verus

```
Start at: 2018-01-18 11:29:32
End at: 2018-01-18 11:30:02
Local clock offset: 2.284 ms
Remote clock offset: -2.603 ms

# Below is generated by plot.py at 2018-01-18 13:32:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.24 Mbit/s
95th percentile per-packet one-way delay: 190.198 ms
Loss rate: 25.82%
-- Flow 1:
Average throughput: 7.37 Mbit/s
95th percentile per-packet one-way delay: 195.481 ms
Loss rate: 36.69%
-- Flow 2:
Average throughput: 8.36 Mbit/s
95th percentile per-packet one-way delay: 185.372 ms
Loss rate: 7.50%
-- Flow 3:
Average throughput: 4.02 Mbit/s
95th percentile per-packet one-way delay: 181.946 ms
Loss rate: 15.81%
```

Run 1: Report of Verus — Data Link

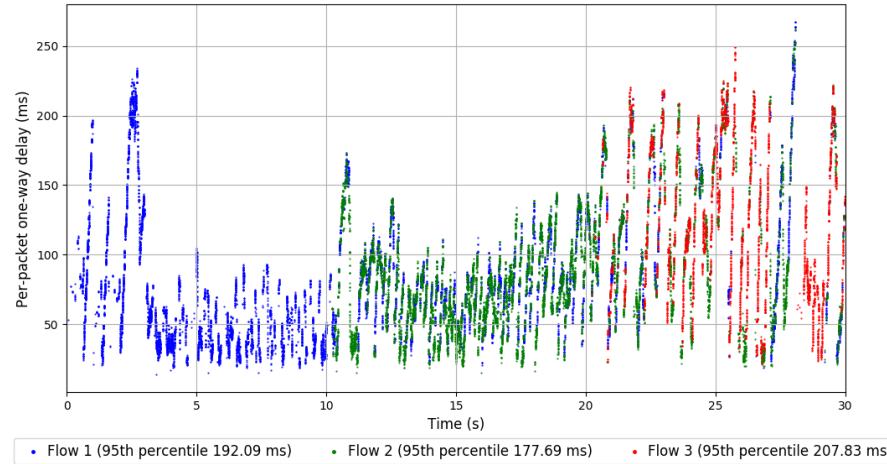
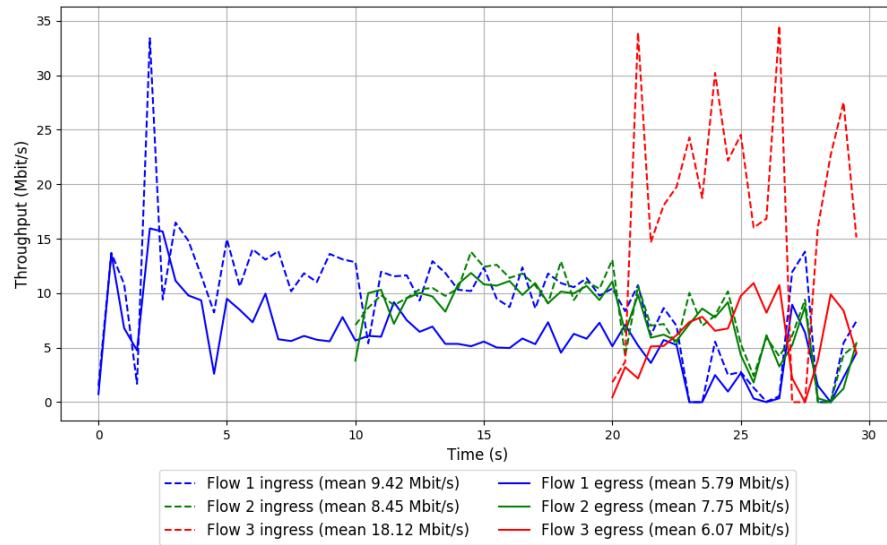


Run 2: Statistics of Verus

```
Start at: 2018-01-18 11:51:05
End at: 2018-01-18 11:51:35
Local clock offset: 2.094 ms
Remote clock offset: -2.481 ms

# Below is generated by plot.py at 2018-01-18 13:32:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.94 Mbit/s
95th percentile per-packet one-way delay: 194.848 ms
Loss rate: 38.63%
-- Flow 1:
Average throughput: 5.79 Mbit/s
95th percentile per-packet one-way delay: 192.090 ms
Loss rate: 38.67%
-- Flow 2:
Average throughput: 7.75 Mbit/s
95th percentile per-packet one-way delay: 177.690 ms
Loss rate: 8.20%
-- Flow 3:
Average throughput: 6.07 Mbit/s
95th percentile per-packet one-way delay: 207.828 ms
Loss rate: 66.93%
```

Run 2: Report of Verus — Data Link

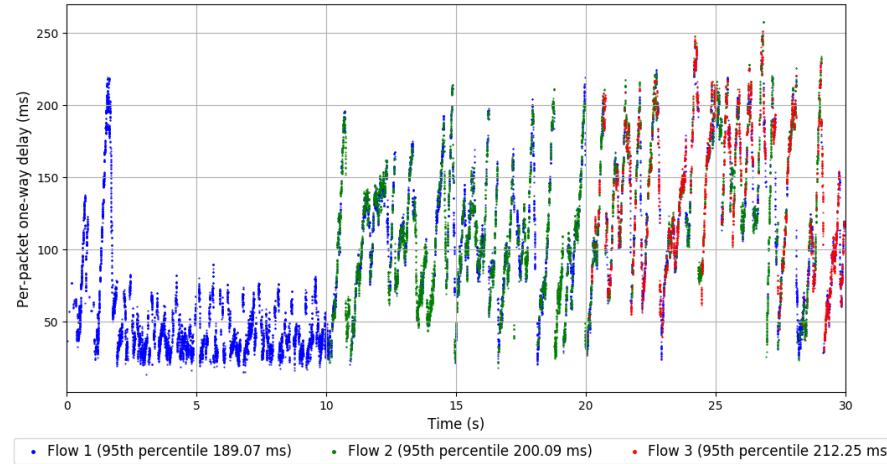
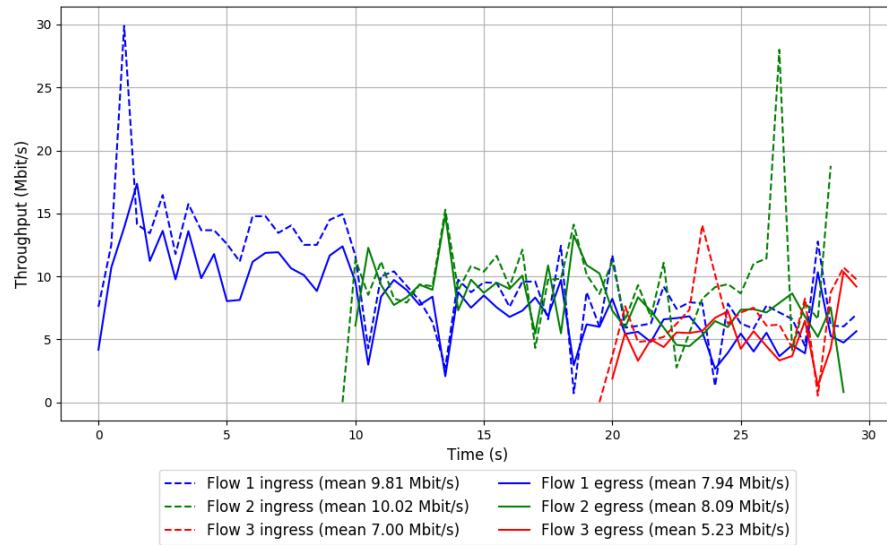


Run 3: Statistics of Verus

```
Start at: 2018-01-18 12:12:37
End at: 2018-01-18 12:13:07
Local clock offset: 1.986 ms
Remote clock offset: -2.583 ms

# Below is generated by plot.py at 2018-01-18 13:32:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.82 Mbit/s
95th percentile per-packet one-way delay: 198.721 ms
Loss rate: 19.75%
-- Flow 1:
Average throughput: 7.94 Mbit/s
95th percentile per-packet one-way delay: 189.068 ms
Loss rate: 19.20%
-- Flow 2:
Average throughput: 8.09 Mbit/s
95th percentile per-packet one-way delay: 200.094 ms
Loss rate: 18.43%
-- Flow 3:
Average throughput: 5.23 Mbit/s
95th percentile per-packet one-way delay: 212.251 ms
Loss rate: 25.61%
```

Run 3: Report of Verus — Data Link

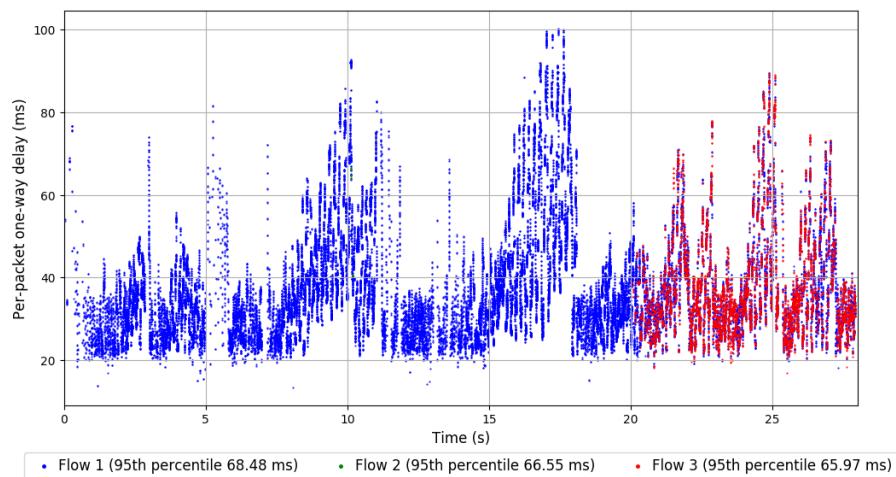
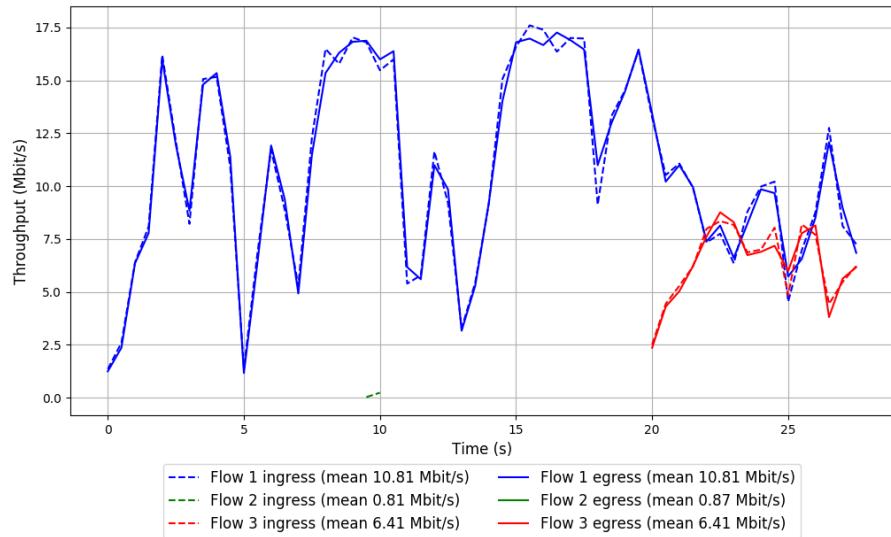


Run 1: Statistics of Copa

```
Start at: 2018-01-18 11:40:21
End at: 2018-01-18 11:40:51
Local clock offset: 2.176 ms
Remote clock offset: -2.509 ms

# Below is generated by plot.py at 2018-01-18 13:32:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.63 Mbit/s
95th percentile per-packet one-way delay: 68.136 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 10.81 Mbit/s
95th percentile per-packet one-way delay: 68.481 ms
Loss rate: 0.24%
-- Flow 2:
Average throughput: 0.87 Mbit/s
95th percentile per-packet one-way delay: 66.550 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 6.41 Mbit/s
95th percentile per-packet one-way delay: 65.970 ms
Loss rate: 0.76%
```

Run 1: Report of Copa — Data Link

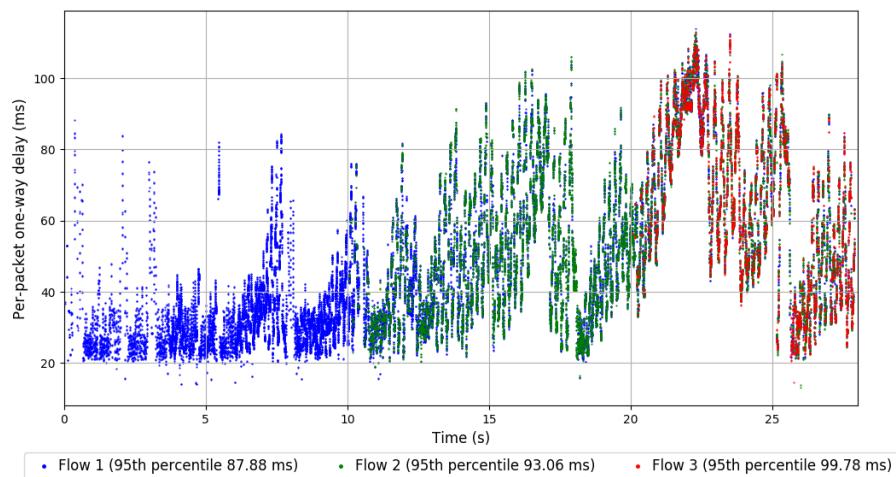
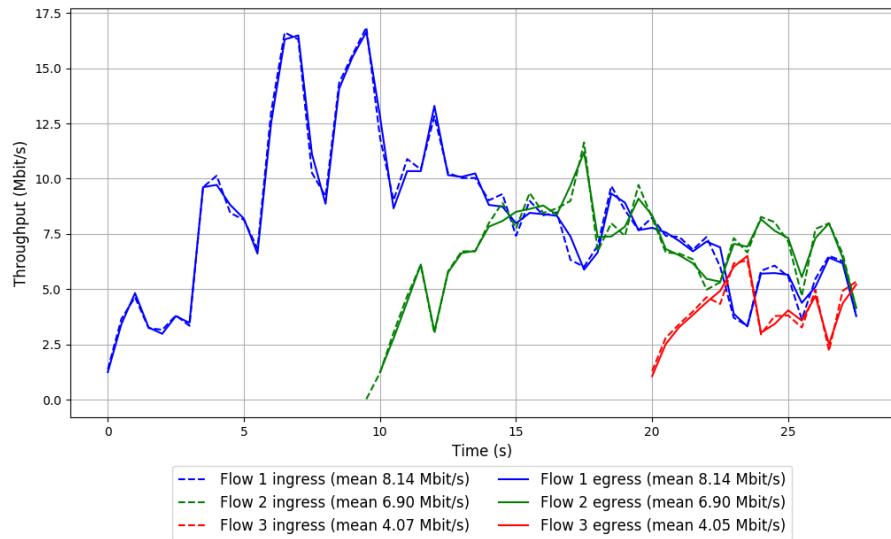


Run 2: Statistics of Copa

```
Start at: 2018-01-18 12:01:53
End at: 2018-01-18 12:02:23
Local clock offset: 2.061 ms
Remote clock offset: -2.432 ms

# Below is generated by plot.py at 2018-01-18 13:32:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.70 Mbit/s
95th percentile per-packet one-way delay: 92.509 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 8.14 Mbit/s
95th percentile per-packet one-way delay: 87.882 ms
Loss rate: 0.15%
-- Flow 2:
Average throughput: 6.90 Mbit/s
95th percentile per-packet one-way delay: 93.062 ms
Loss rate: 0.34%
-- Flow 3:
Average throughput: 4.05 Mbit/s
95th percentile per-packet one-way delay: 99.777 ms
Loss rate: 1.25%
```

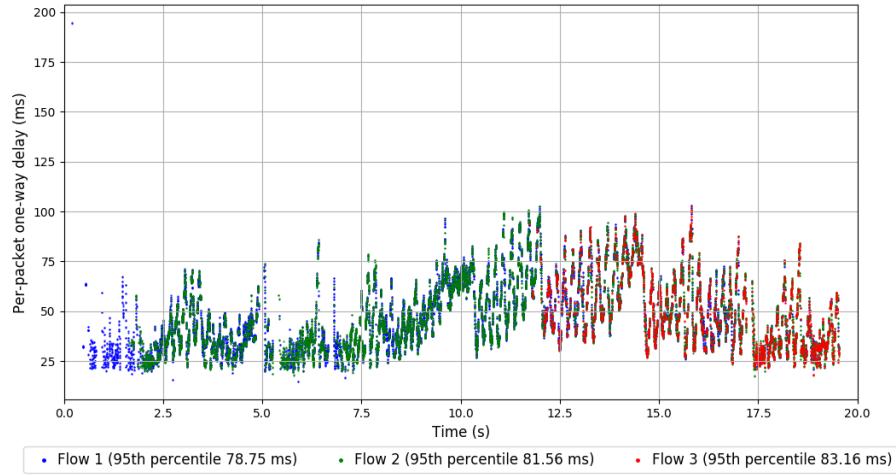
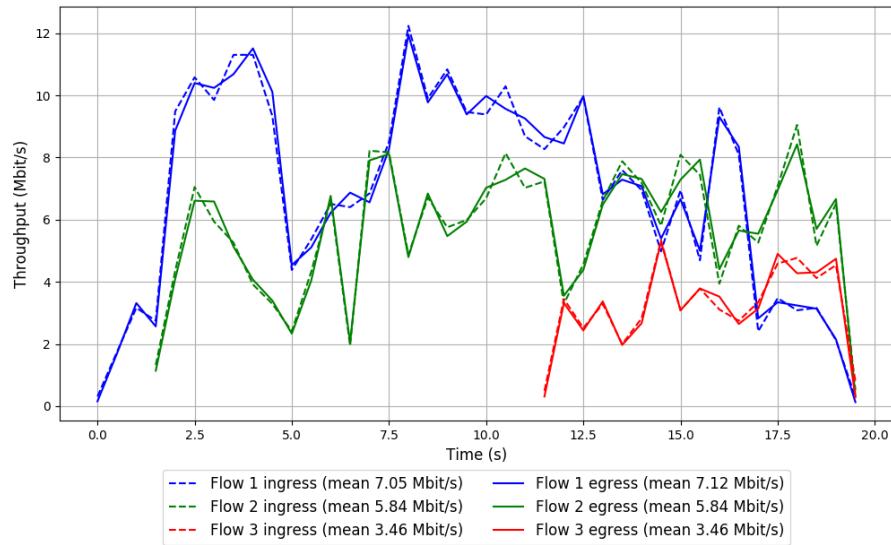
Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2018-01-18 12:23:21
End at: 2018-01-18 12:23:51
Local clock offset: 1.708 ms
Remote clock offset: -2.264 ms

Run 3: Report of Copa — Data Link

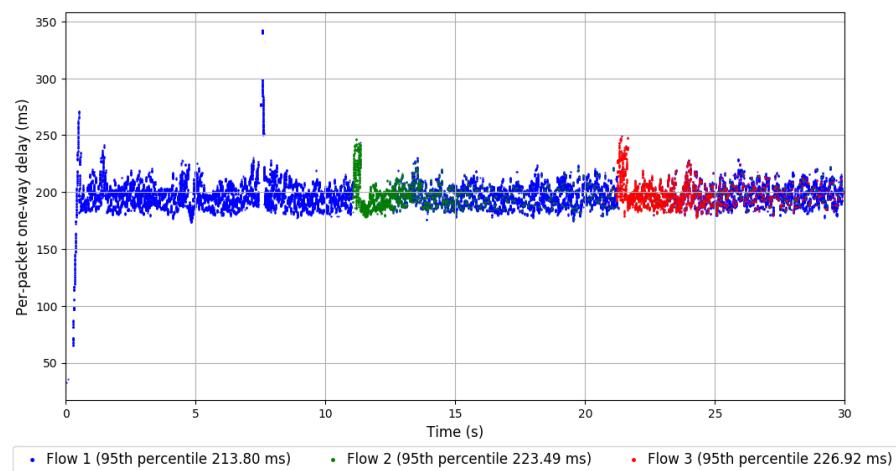
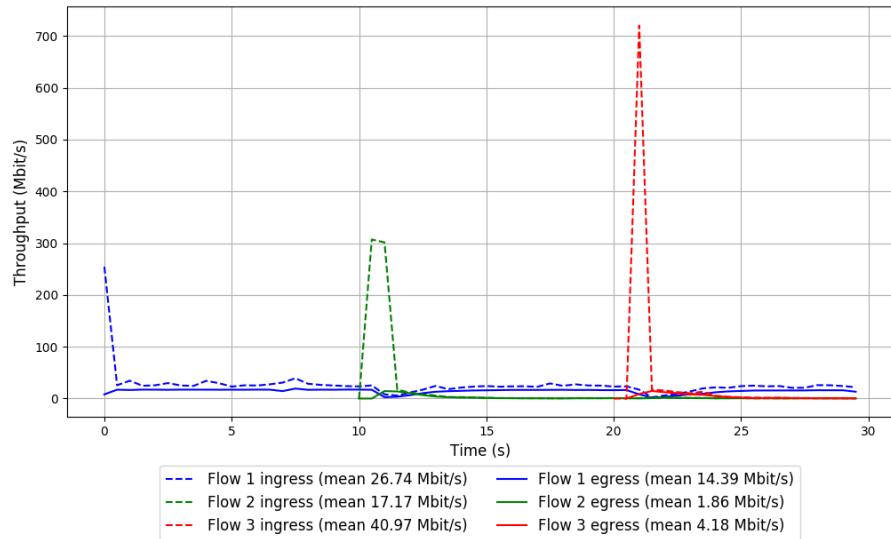


```
Run 1: Statistics of FillP

Start at: 2018-01-18 11:24:47
End at: 2018-01-18 11:25:17
Local clock offset: 2.327 ms
Remote clock offset: -2.613 ms

# Below is generated by plot.py at 2018-01-18 13:33:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.89 Mbit/s
95th percentile per-packet one-way delay: 214.816 ms
Loss rate: 67.39%
-- Flow 1:
Average throughput: 14.39 Mbit/s
95th percentile per-packet one-way delay: 213.801 ms
Loss rate: 46.31%
-- Flow 2:
Average throughput: 1.86 Mbit/s
95th percentile per-packet one-way delay: 223.486 ms
Loss rate: 89.39%
-- Flow 3:
Average throughput: 4.18 Mbit/s
95th percentile per-packet one-way delay: 226.919 ms
Loss rate: 90.49%
```

Run 1: Report of FillP — Data Link

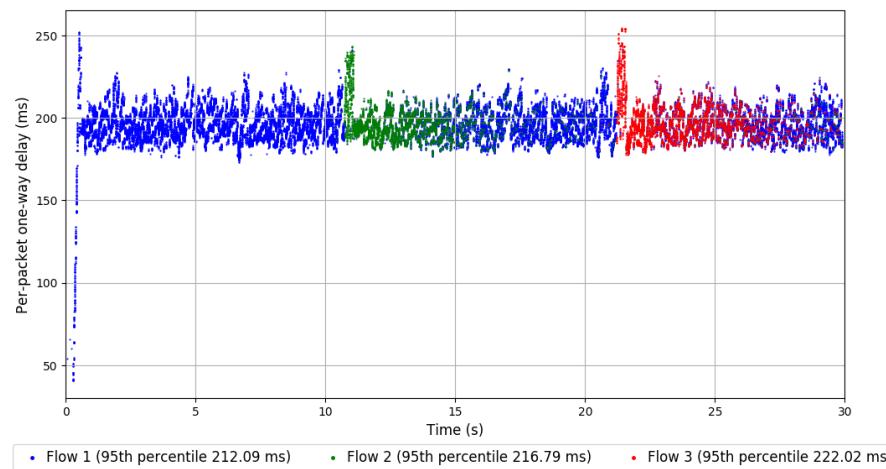
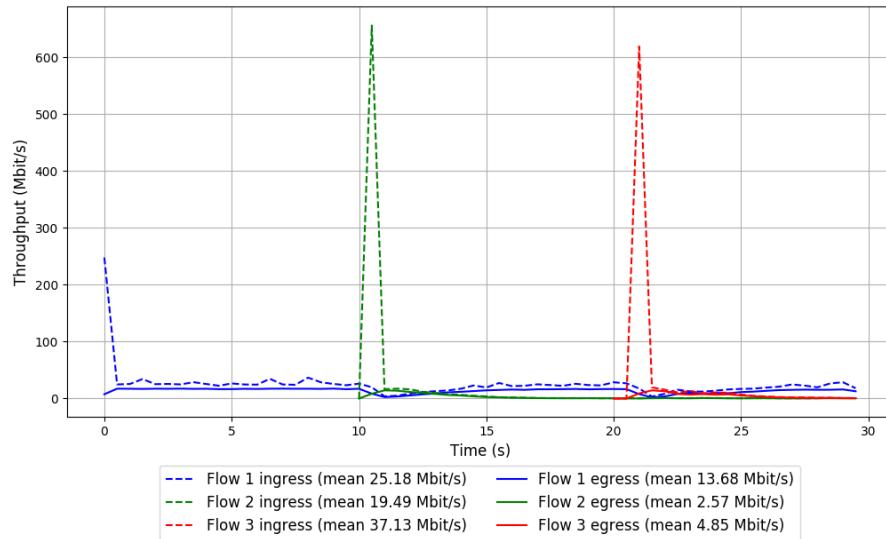


Run 2: Statistics of FillP

```
Start at: 2018-01-18 11:46:19
End at: 2018-01-18 11:46:49
Local clock offset: 2.133 ms
Remote clock offset: -2.395 ms

# Below is generated by plot.py at 2018-01-18 13:33:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.94 Mbit/s
95th percentile per-packet one-way delay: 212.864 ms
Loss rate: 66.48%
-- Flow 1:
Average throughput: 13.68 Mbit/s
95th percentile per-packet one-way delay: 212.089 ms
Loss rate: 45.81%
-- Flow 2:
Average throughput: 2.57 Mbit/s
95th percentile per-packet one-way delay: 216.795 ms
Loss rate: 86.95%
-- Flow 3:
Average throughput: 4.85 Mbit/s
95th percentile per-packet one-way delay: 222.017 ms
Loss rate: 87.29%
```

Run 2: Report of FillP — Data Link

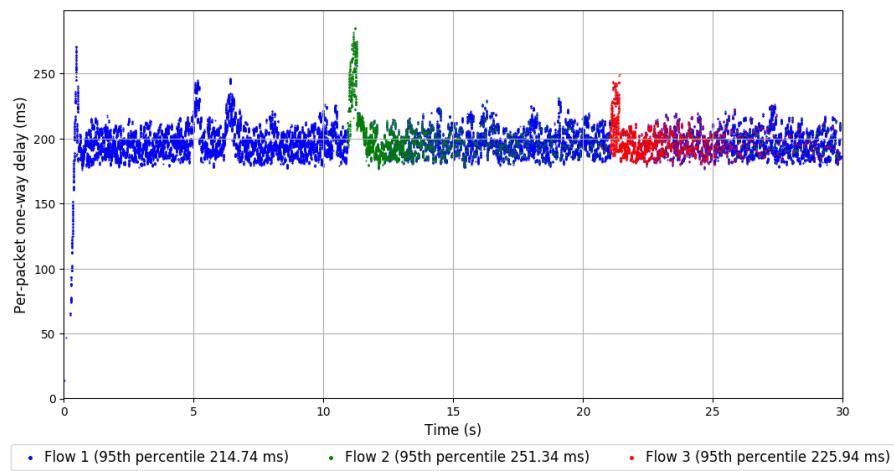
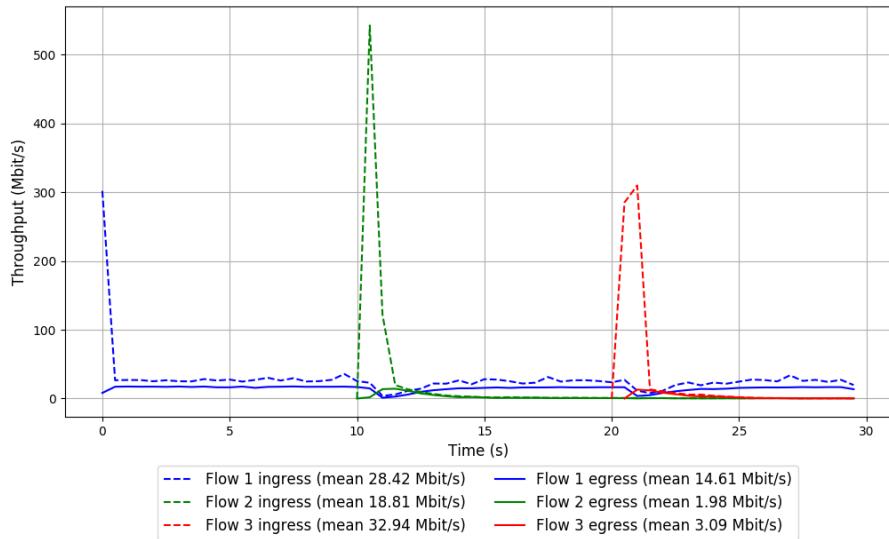


Run 3: Statistics of FillP

```
Start at: 2018-01-18 12:07:51
End at: 2018-01-18 12:08:21
Local clock offset: 2.026 ms
Remote clock offset: -2.537 ms

# Below is generated by plot.py at 2018-01-18 13:33:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.88 Mbit/s
95th percentile per-packet one-way delay: 216.090 ms
Loss rate: 67.47%
-- Flow 1:
Average throughput: 14.61 Mbit/s
95th percentile per-packet one-way delay: 214.740 ms
Loss rate: 48.63%
-- Flow 2:
Average throughput: 1.98 Mbit/s
95th percentile per-packet one-way delay: 251.335 ms
Loss rate: 89.61%
-- Flow 3:
Average throughput: 3.09 Mbit/s
95th percentile per-packet one-way delay: 225.944 ms
Loss rate: 91.19%
```

Run 3: Report of FillP — Data Link

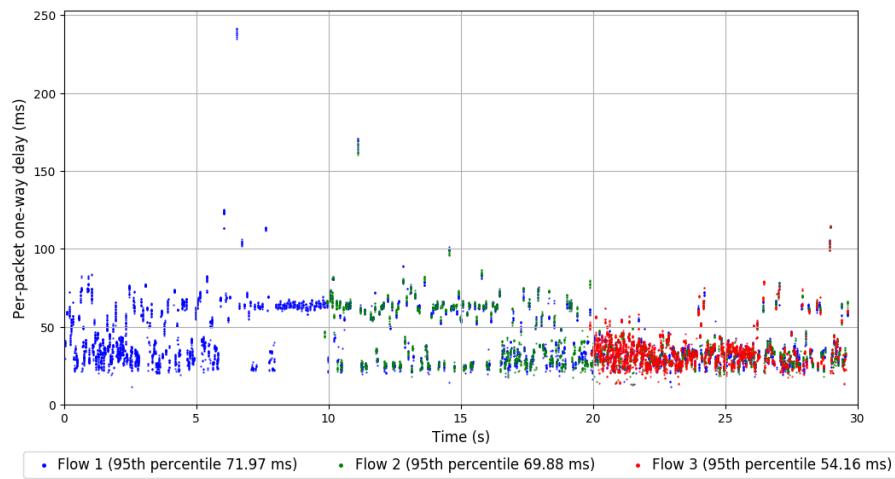
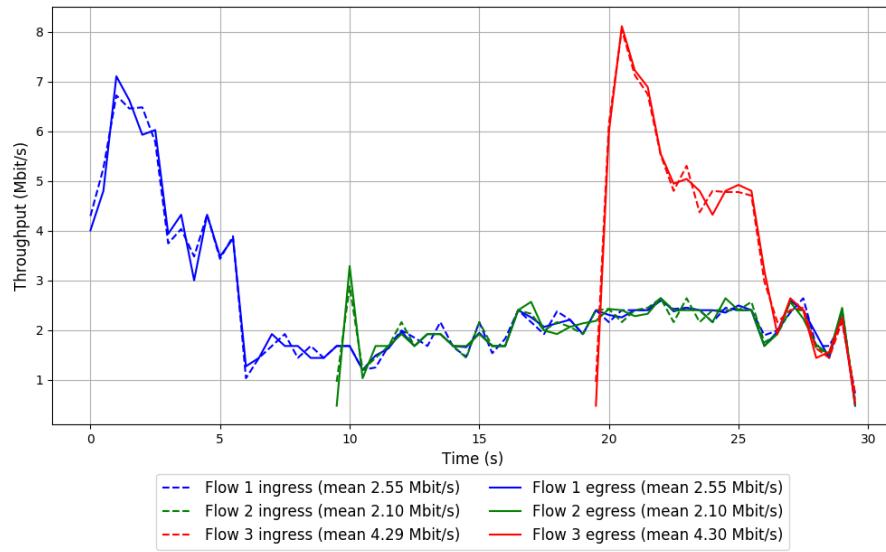


Run 1: Statistics of Indigo

```
Start at: 2018-01-18 11:34:20
End at: 2018-01-18 11:34:50
Local clock offset: 2.254 ms
Remote clock offset: -2.634 ms

# Below is generated by plot.py at 2018-01-18 13:33:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 5.37 Mbit/s
95th percentile per-packet one-way delay: 68.874 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 2.55 Mbit/s
95th percentile per-packet one-way delay: 71.972 ms
Loss rate: 0.17%
-- Flow 2:
Average throughput: 2.10 Mbit/s
95th percentile per-packet one-way delay: 69.881 ms
Loss rate: 0.29%
-- Flow 3:
Average throughput: 4.30 Mbit/s
95th percentile per-packet one-way delay: 54.158 ms
Loss rate: 0.29%
```

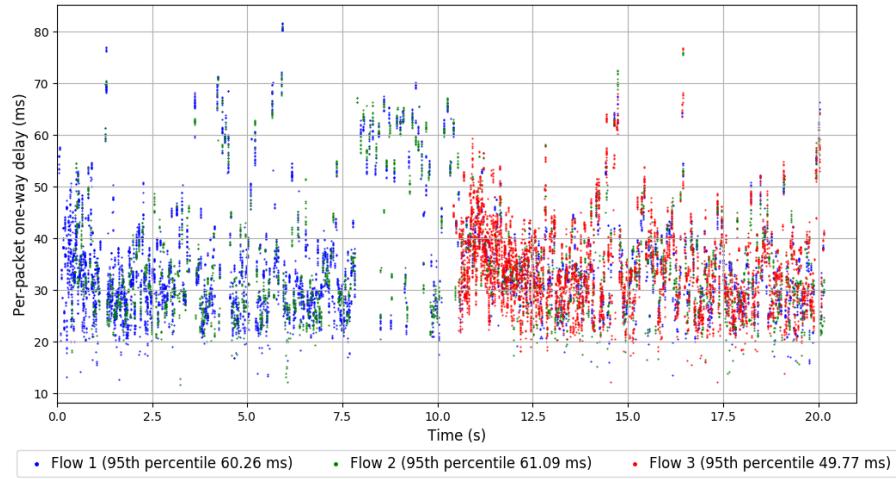
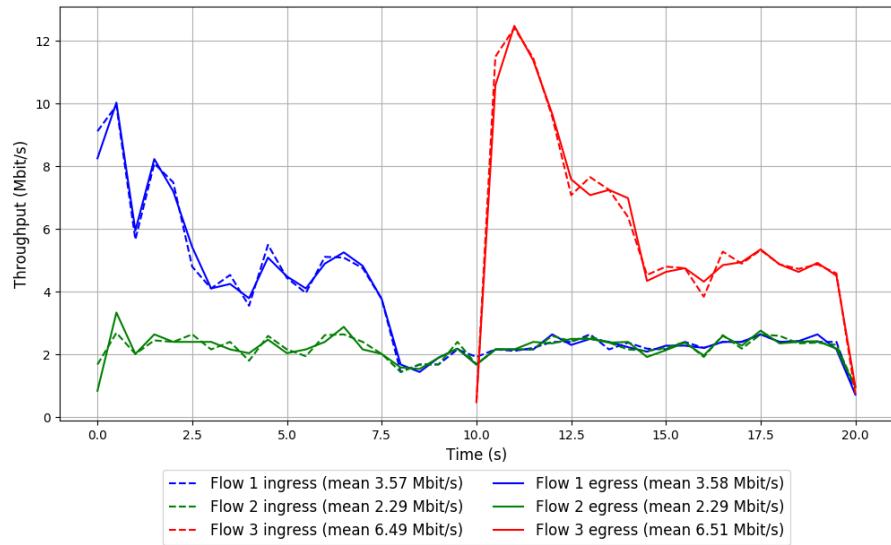
Run 1: Report of Indigo — Data Link



Run 2: Statistics of Indigo

Start at: 2018-01-18 11:55:51
End at: 2018-01-18 11:56:21
Local clock offset: 2.056 ms
Remote clock offset: -2.489 ms

Run 2: Report of Indigo — Data Link

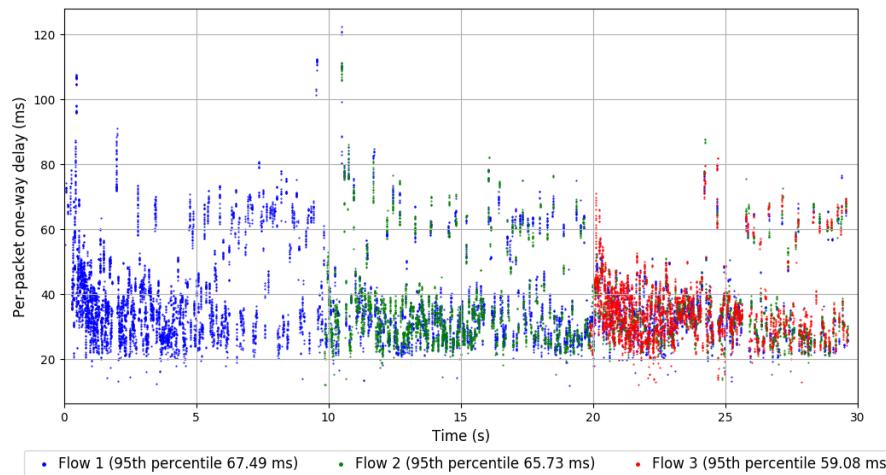
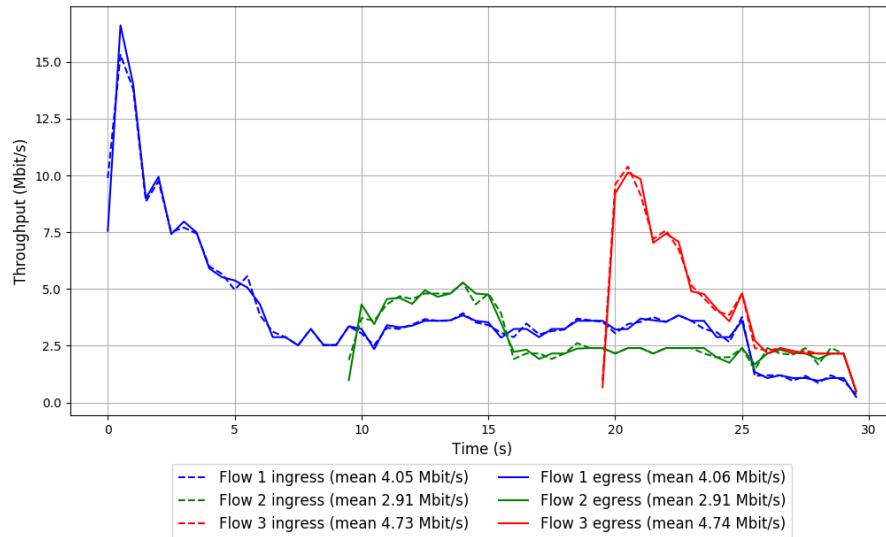


Run 3: Statistics of Indigo

```
Start at: 2018-01-18 12:17:24
End at: 2018-01-18 12:17:54
Local clock offset: 1.904 ms
Remote clock offset: -2.357 ms

# Below is generated by plot.py at 2018-01-18 13:33:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.57 Mbit/s
95th percentile per-packet one-way delay: 65.828 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 4.06 Mbit/s
95th percentile per-packet one-way delay: 67.494 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 2.91 Mbit/s
95th percentile per-packet one-way delay: 65.733 ms
Loss rate: 0.21%
-- Flow 3:
Average throughput: 4.74 Mbit/s
95th percentile per-packet one-way delay: 59.075 ms
Loss rate: 0.26%
```

Run 3: Report of Indigo — Data Link

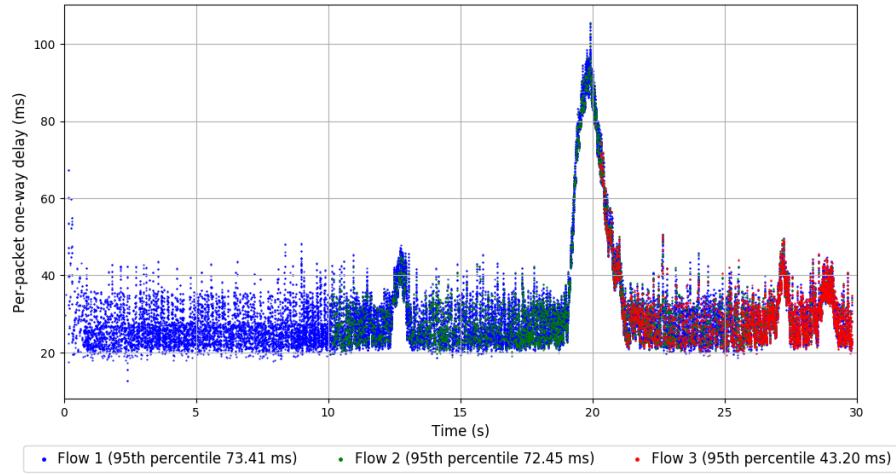
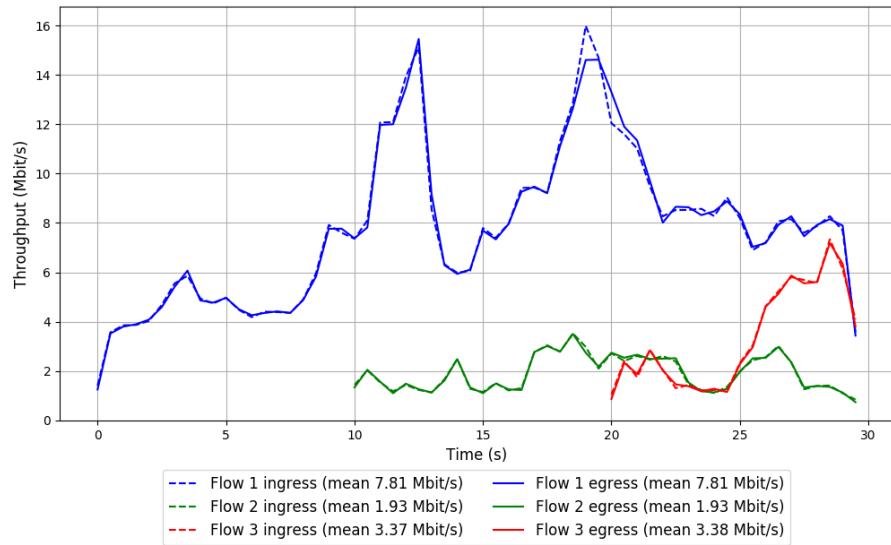


```
Run 1: Statistics of Vivace-latency
```

```
Start at: 2018-01-18 11:27:10
End at: 2018-01-18 11:27:40
Local clock offset: 2.205 ms
Remote clock offset: -2.665 ms

# Below is generated by plot.py at 2018-01-18 13:33:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 10.19 Mbit/s
95th percentile per-packet one-way delay: 70.066 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 7.81 Mbit/s
95th percentile per-packet one-way delay: 73.414 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 1.93 Mbit/s
95th percentile per-packet one-way delay: 72.451 ms
Loss rate: 0.24%
-- Flow 3:
Average throughput: 3.38 Mbit/s
95th percentile per-packet one-way delay: 43.195 ms
Loss rate: 0.89%
```

Run 1: Report of Vivace-latency — Data Link

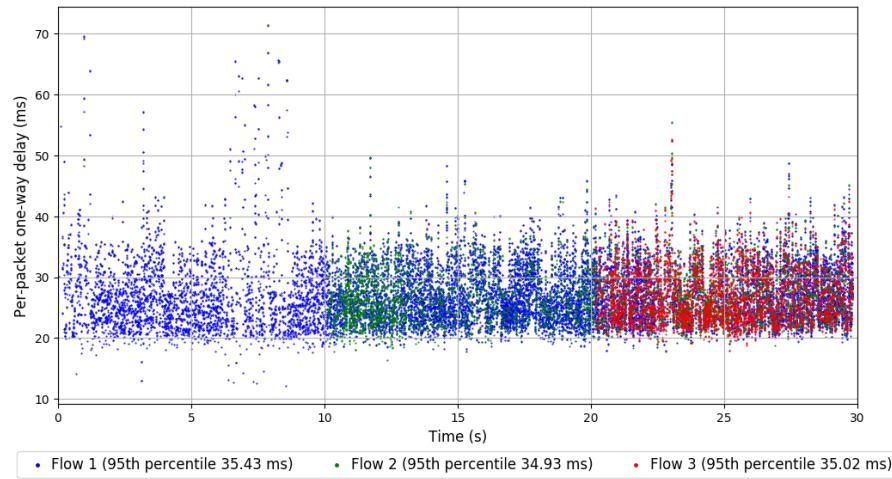
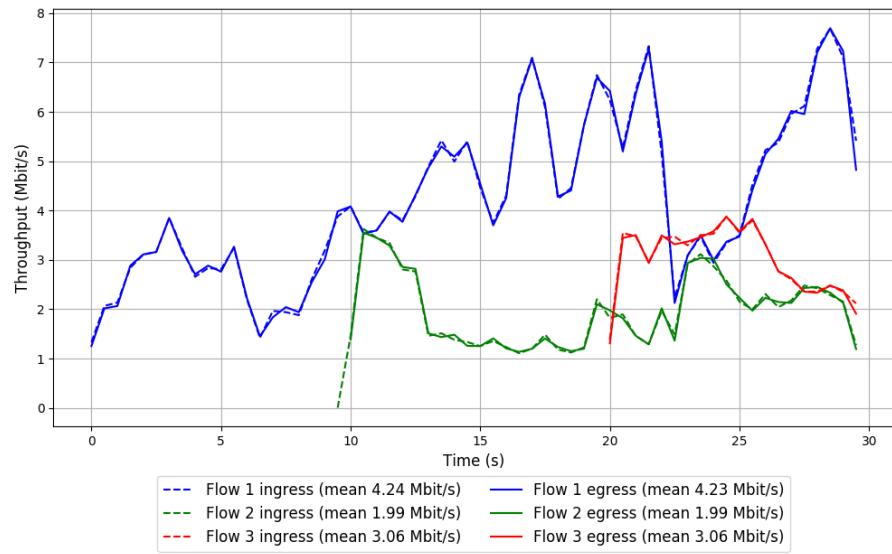


Run 2: Statistics of Vivace-latency

```
Start at: 2018-01-18 11:48:42
End at: 2018-01-18 11:49:12
Local clock offset: 2.077 ms
Remote clock offset: -2.441 ms

# Below is generated by plot.py at 2018-01-18 13:33:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 6.56 Mbit/s
95th percentile per-packet one-way delay: 35.244 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 4.23 Mbit/s
95th percentile per-packet one-way delay: 35.430 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 1.99 Mbit/s
95th percentile per-packet one-way delay: 34.934 ms
Loss rate: 0.26%
-- Flow 3:
Average throughput: 3.06 Mbit/s
95th percentile per-packet one-way delay: 35.015 ms
Loss rate: 0.56%
```

Run 2: Report of Vivace-latency — Data Link

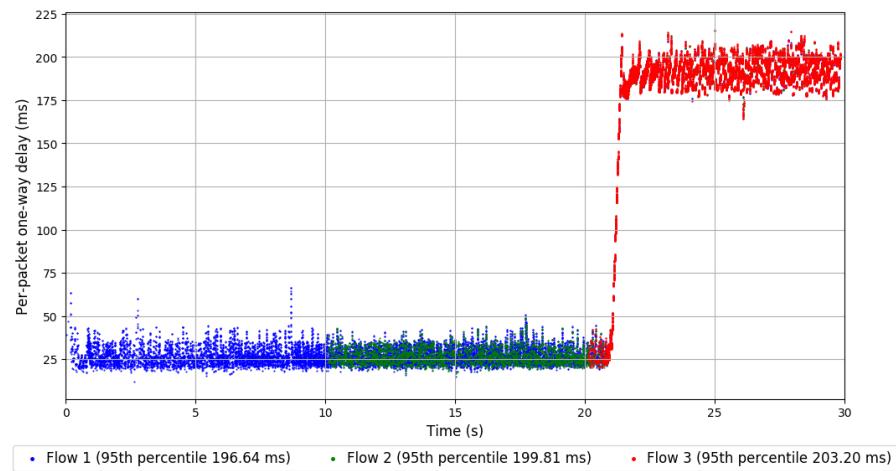
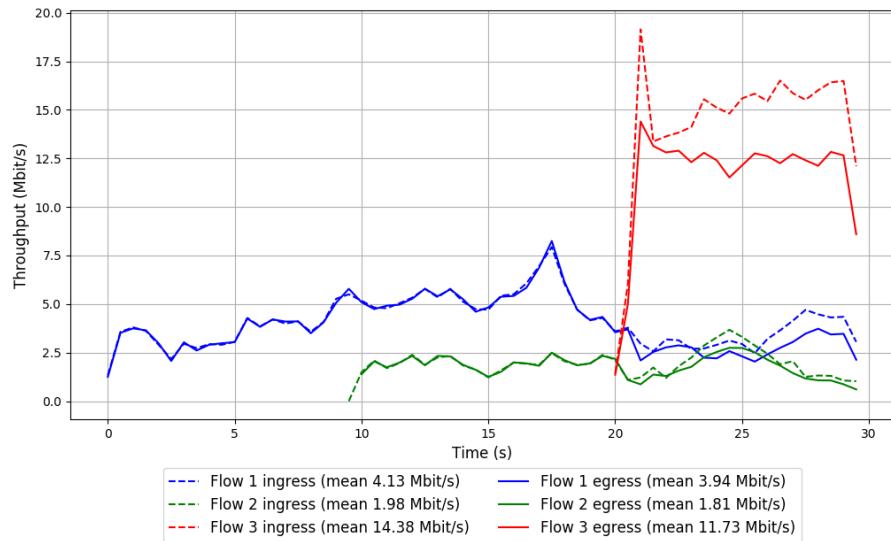


Run 3: Statistics of Vivace-latency

```
Start at: 2018-01-18 12:10:15
End at: 2018-01-18 12:10:45
Local clock offset: 2.013 ms
Remote clock offset: -2.481 ms

# Below is generated by plot.py at 2018-01-18 13:33:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 9.00 Mbit/s
95th percentile per-packet one-way delay: 201.093 ms
Loss rate: 11.82%
-- Flow 1:
Average throughput: 3.94 Mbit/s
95th percentile per-packet one-way delay: 196.636 ms
Loss rate: 4.86%
-- Flow 2:
Average throughput: 1.81 Mbit/s
95th percentile per-packet one-way delay: 199.812 ms
Loss rate: 8.62%
-- Flow 3:
Average throughput: 11.73 Mbit/s
95th percentile per-packet one-way delay: 203.197 ms
Loss rate: 18.77%
```

Run 3: Report of Vivace-latency — Data Link

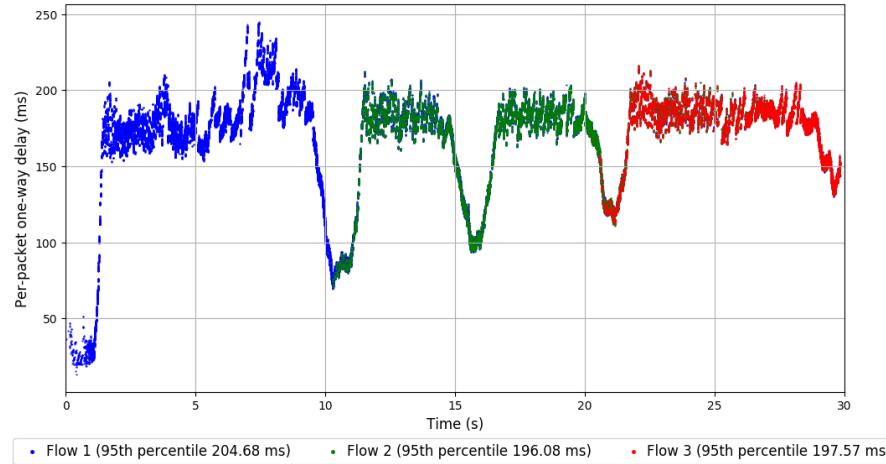
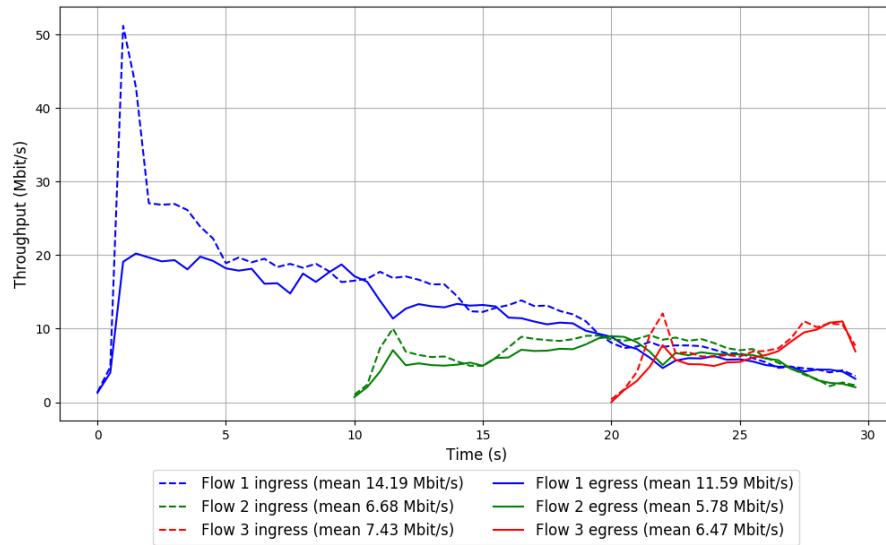


```
Run 1: Statistics of Vivace-loss
```

```
Start at: 2018-01-18 11:31:56
End at: 2018-01-18 11:32:26
Local clock offset: 2.26 ms
Remote clock offset: -2.583 ms

# Below is generated by plot.py at 2018-01-18 13:33:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 17.51 Mbit/s
95th percentile per-packet one-way delay: 200.882 ms
Loss rate: 17.05%
-- Flow 1:
Average throughput: 11.59 Mbit/s
95th percentile per-packet one-way delay: 204.675 ms
Loss rate: 18.44%
-- Flow 2:
Average throughput: 5.78 Mbit/s
95th percentile per-packet one-way delay: 196.084 ms
Loss rate: 13.96%
-- Flow 3:
Average throughput: 6.47 Mbit/s
95th percentile per-packet one-way delay: 197.569 ms
Loss rate: 14.60%
```

Run 1: Report of Vivace-loss — Data Link

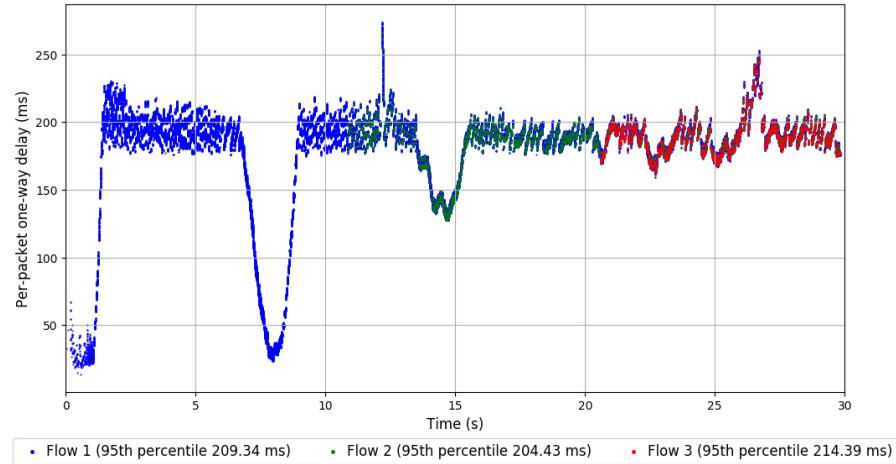
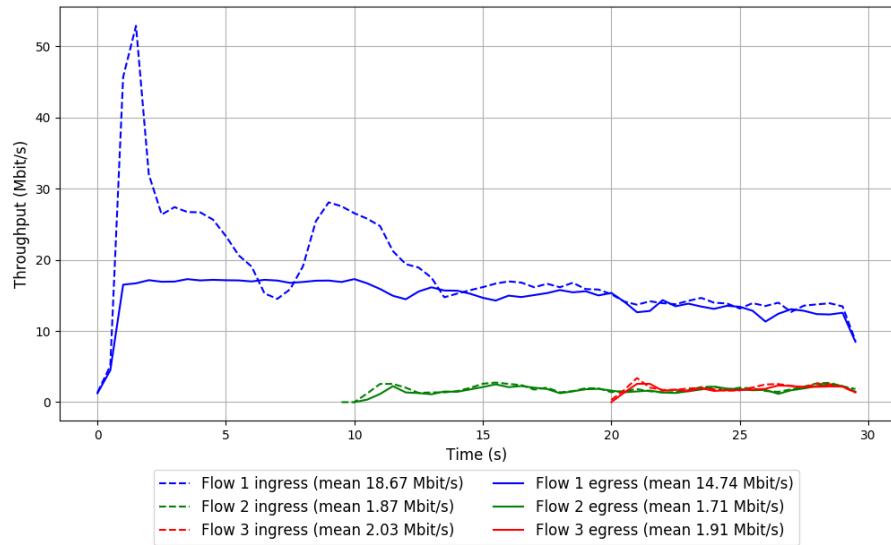


Run 2: Statistics of Vivace-loss

```
Start at: 2018-01-18 11:53:28
End at: 2018-01-18 11:53:58
Local clock offset: 2.057 ms
Remote clock offset: -2.428 ms

# Below is generated by plot.py at 2018-01-18 13:33:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.47 Mbit/s
95th percentile per-packet one-way delay: 209.199 ms
Loss rate: 20.13%
-- Flow 1:
Average throughput: 14.74 Mbit/s
95th percentile per-packet one-way delay: 209.345 ms
Loss rate: 21.19%
-- Flow 2:
Average throughput: 1.71 Mbit/s
95th percentile per-packet one-way delay: 204.425 ms
Loss rate: 10.58%
-- Flow 3:
Average throughput: 1.91 Mbit/s
95th percentile per-packet one-way delay: 214.388 ms
Loss rate: 8.25%
```

Run 2: Report of Vivace-loss — Data Link

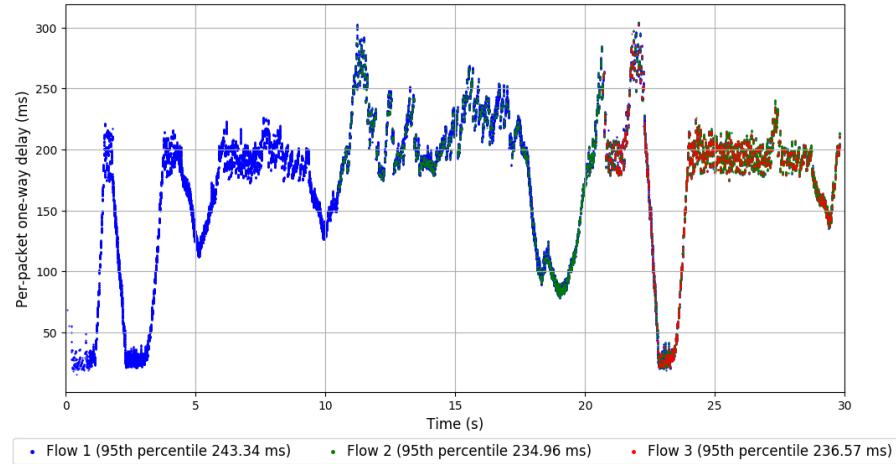
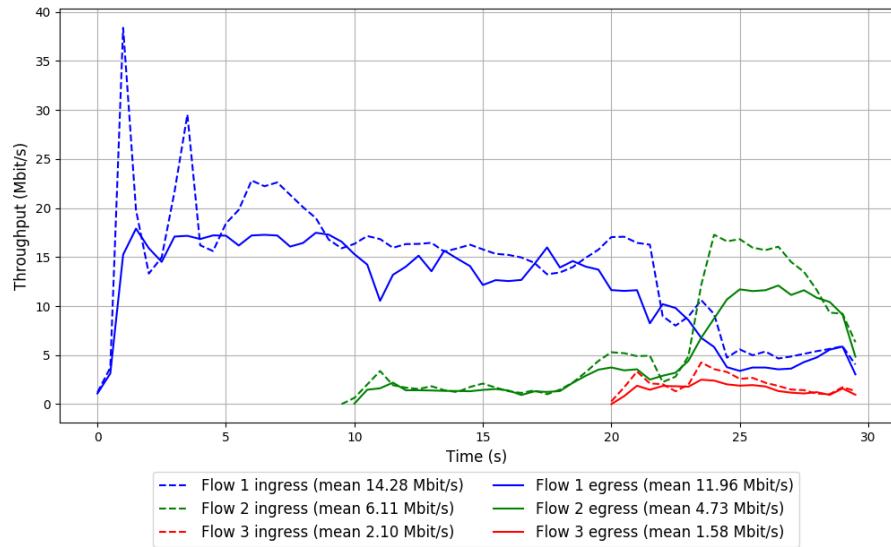


Run 3: Statistics of Vivace-loss

```
Start at: 2018-01-18 12:15:01
End at: 2018-01-18 12:15:31
Local clock offset: 1.941 ms
Remote clock offset: -2.467 ms

# Below is generated by plot.py at 2018-01-18 13:33:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.61 Mbit/s
95th percentile per-packet one-way delay: 242.196 ms
Loss rate: 18.30%
-- Flow 1:
Average throughput: 11.96 Mbit/s
95th percentile per-packet one-way delay: 243.337 ms
Loss rate: 16.51%
-- Flow 2:
Average throughput: 4.73 Mbit/s
95th percentile per-packet one-way delay: 234.959 ms
Loss rate: 23.26%
-- Flow 3:
Average throughput: 1.58 Mbit/s
95th percentile per-packet one-way delay: 236.571 ms
Loss rate: 26.06%
```

Run 3: Report of Vivace-loss — Data Link

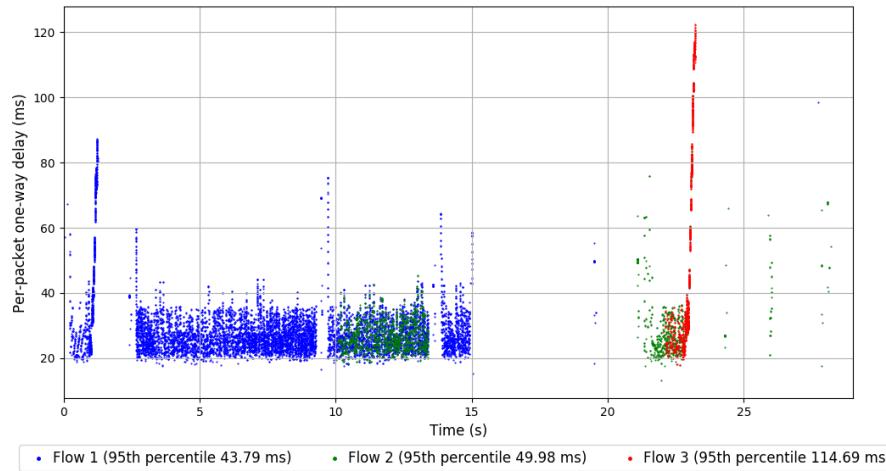
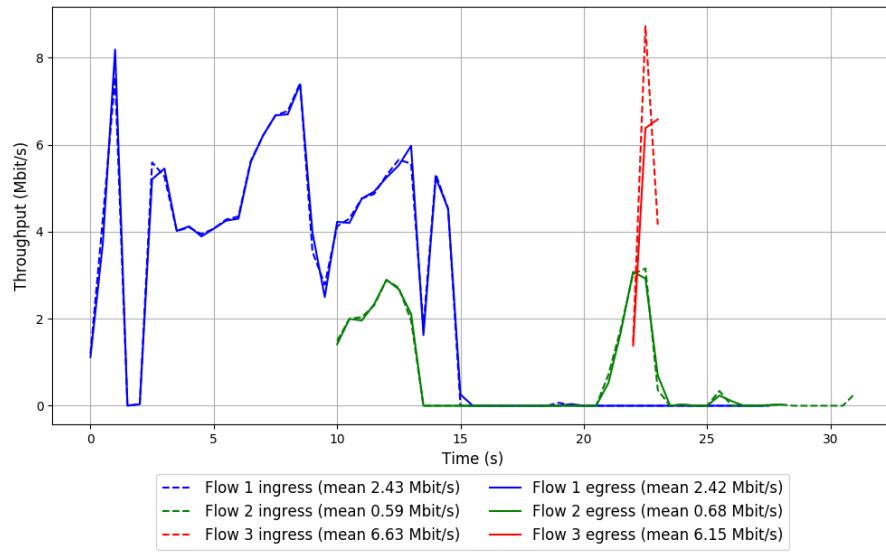


Run 1: Statistics of Vivace-LTE

```
Start at: 2018-01-18 11:35:31
End at: 2018-01-18 11:36:01
Local clock offset: 2.237 ms
Remote clock offset: -2.588 ms

# Below is generated by plot.py at 2018-01-18 13:33:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.07 Mbit/s
95th percentile per-packet one-way delay: 67.348 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 2.42 Mbit/s
95th percentile per-packet one-way delay: 43.791 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 0.68 Mbit/s
95th percentile per-packet one-way delay: 49.977 ms
Loss rate: 1.58%
-- Flow 3:
Average throughput: 6.15 Mbit/s
95th percentile per-packet one-way delay: 114.686 ms
Loss rate: 0.00%
```

Run 1: Report of Vivace-LTE — Data Link

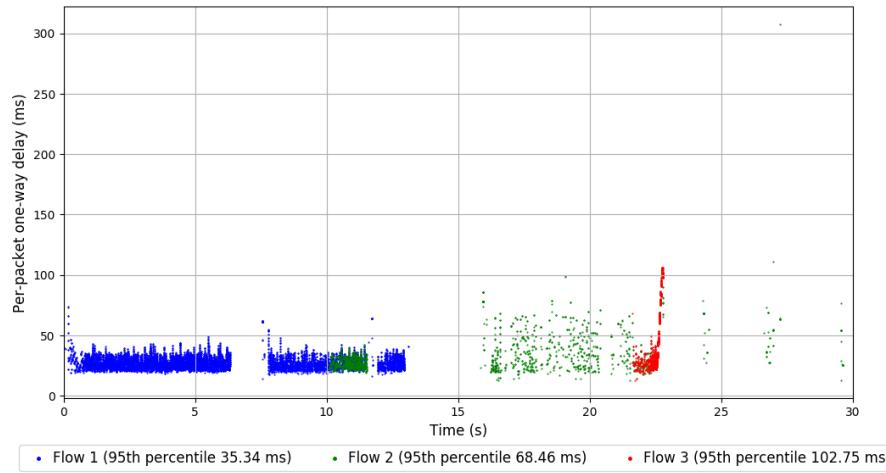
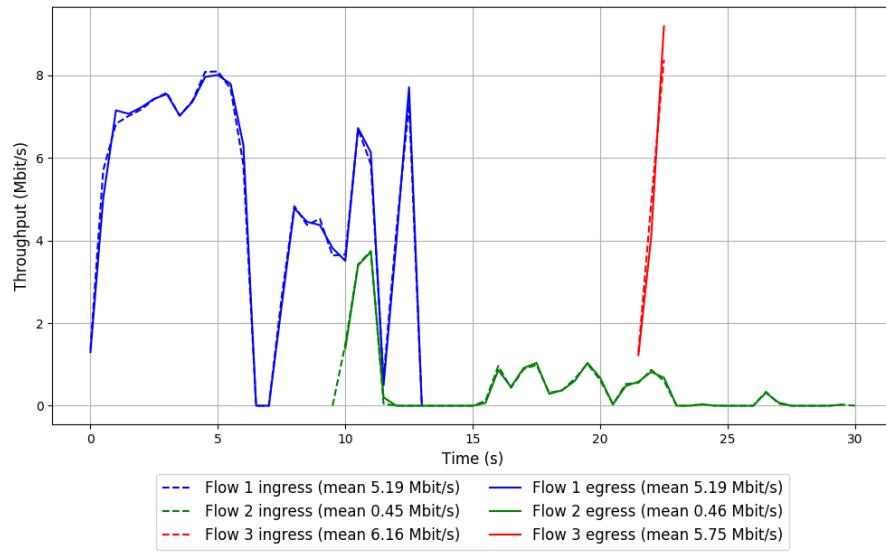


Run 2: Statistics of Vivace-LTE

```
Start at: 2018-01-18 11:57:03
End at: 2018-01-18 11:57:33
Local clock offset: 1.953 ms
Remote clock offset: -2.496 ms

# Below is generated by plot.py at 2018-01-18 13:33:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.84 Mbit/s
95th percentile per-packet one-way delay: 50.498 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 5.19 Mbit/s
95th percentile per-packet one-way delay: 35.340 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.46 Mbit/s
95th percentile per-packet one-way delay: 68.458 ms
Loss rate: 0.30%
-- Flow 3:
Average throughput: 5.75 Mbit/s
95th percentile per-packet one-way delay: 102.753 ms
Loss rate: 0.57%
```

Run 2: Report of Vivace-LTE — Data Link



Run 3: Statistics of Vivace-LTE

```
Start at: 2018-01-18 12:18:36
End at: 2018-01-18 12:19:06
Local clock offset: 1.878 ms
Remote clock offset: -2.373 ms

# Below is generated by plot.py at 2018-01-18 13:33:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.19 Mbit/s
95th percentile per-packet one-way delay: 36.599 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 43.57 Mbit/s
95th percentile per-packet one-way delay: 4289.588 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 3.61 Mbit/s
95th percentile per-packet one-way delay: 36.281 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 2.37 Mbit/s
95th percentile per-packet one-way delay: 37.253 ms
Loss rate: 1.55%
```

Run 3: Report of Vivace-LTE — Data Link

