

## Pantheon Report

Generated at 2017-08-21 05:13:03 (UTC).

Data path: GCE London Ethernet (*local*) → GCE Tokyo Ethernet (*remote*).

Repeated the test of 15 congestion control schemes 10 times.

Each test lasted for 30 seconds running 3 flows with 10-second interval between two flows.

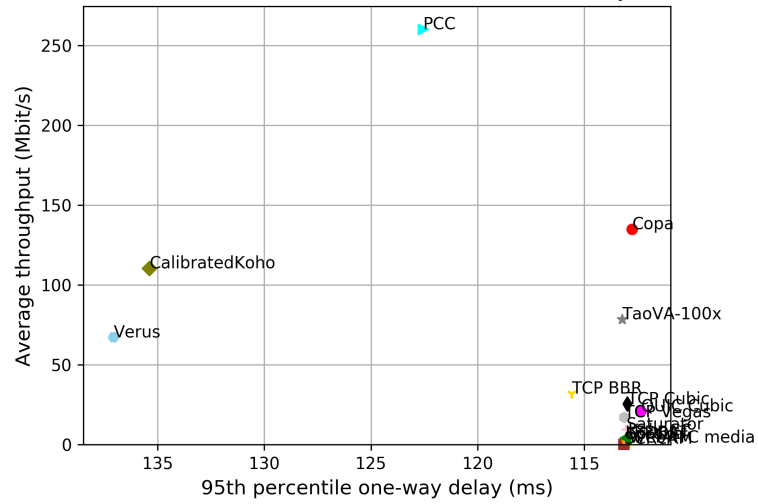
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

Tested BBR with qdisc of Fair Queuing (**fq**), and other schemes with the default Linux qdisc (**pfifo\_fast**).

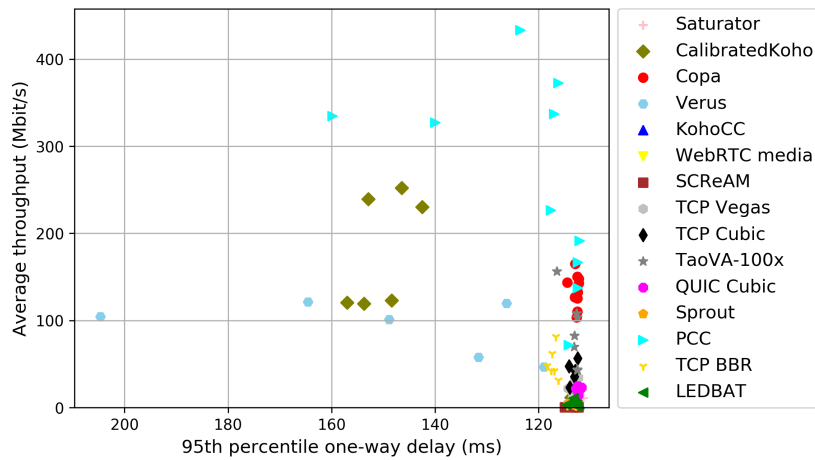
Git summary:

```
branch: master @ e43be7582298d552838afcf6382342bf187fbbd6
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
  M datagrump/sender.cc
third_party/genericCC @ dae96123232f1bcb37725348fa2378691ce26725
third_party/koho_cc @ f0f2e693303aee82ea808e6928eac4f1083a6681
  M datagrump/sender.cc
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-stimuli @ fc73a85ca16c34366d1888dc8a0d0d88d4ebf2a7
third_party/pantheon-tunnel @ baf443516dea3eeddeccaf9b916cc313273ca4f4
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 @ f1a14bffe749737437f61b1eaaeb30b267cde681
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/webrtc @ a488197ddd041ace68a42849b2540ad834825f42
```

test from GCE London Ethernet to GCE Tokyo Ethernet, 10 runs of 30s each per scheme  
3 flows with 10s interval between flows (mean of all runs by scheme)



test from GCE London Ethernet to GCE Tokyo Ethernet, 10 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	10	16.82	19.46	6.70	114.60	115.25	113.70	23.09	18.51	29.74
CalibratedKoho	10	66.27	64.64	3.48	123.69	127.95	112.82	47.62	39.51	64.43
Copa	10	88.38	69.88	21.11	112.58	112.42	112.94	4.08	1.42	27.02
TCP Cubic	10	6.85	17.77	19.18	112.70	112.82	112.93	3.56	3.60	5.97
KohoCC	10	2.76	2.84	3.05	144.46	112.56	112.76	37.60	42.69	35.09
LEDBAT	10	2.10	2.37	1.58	112.87	112.97	112.57	2.76	1.55	2.91
PCC	10	192.25	64.70	73.08	122.76	113.66	114.51	16.89	29.04	21.48
QUIC Cubic	10	0.05	18.93	26.63	111.89	111.70	111.45	0.00	0.00	0.00
Saturator	7	5.27	8.28	6.20	113.27	113.47	113.45	40.88	16.57	32.74
SCReAM	10	0.20	0.21	0.19	112.30	112.12	112.47	0.00	0.00	0.03
Sprout	10	1.80	1.91	1.42	112.93	112.93	112.53	2.36	1.91	3.48
TaoVA-100x	8	96.18	74.25	62.77	112.50	113.59	112.39	15.55	13.01	25.31
TCP Vegas	10	11.03	8.23	1.92	112.80	112.88	112.93	1.65	2.13	5.76
Verus	9	44.48	27.16	14.06	136.72	133.71	121.27	41.33	40.54	61.34
WebRTC media	10	0.24	1.29	0.21	113.04	112.27	113.70	0.00	0.00	0.00

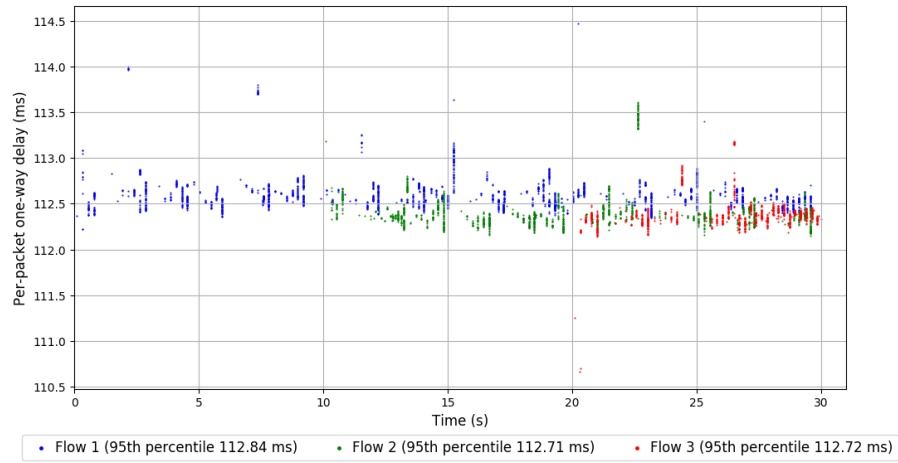
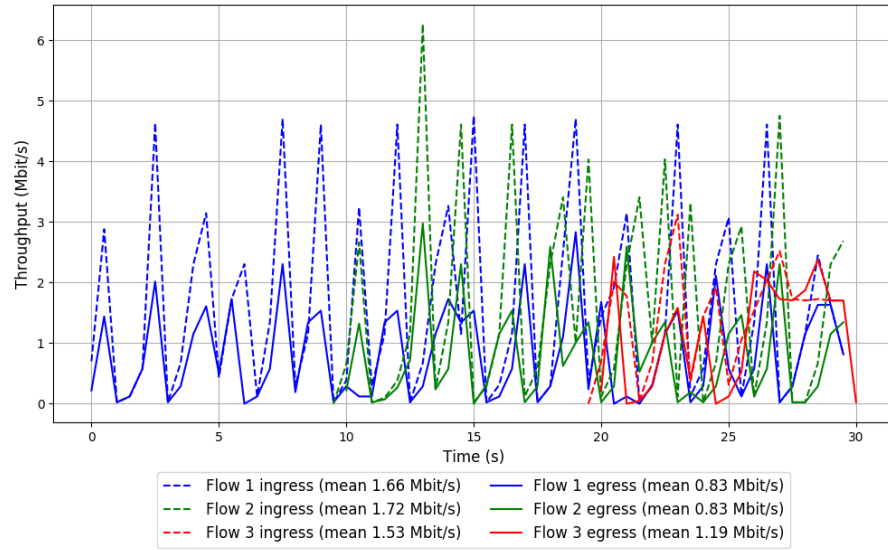
```
Run 1: Statistics of TCP BBR

Start at: 2017-08-21 02:01:58
End at: 2017-08-21 02:02:28

# Below is generated by plot.py at 2017-08-21 04:55:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.76 Mbit/s
95th percentile per-packet one-way delay: 112.809 ms
Loss rate: 46.61%
-- Flow 1:
Average throughput: 0.83 Mbit/s
95th percentile per-packet one-way delay: 112.845 ms
Loss rate: 50.20%
-- Flow 2:
Average throughput: 0.83 Mbit/s
95th percentile per-packet one-way delay: 112.706 ms
Loss rate: 52.19%
-- Flow 3:
Average throughput: 1.19 Mbit/s
95th percentile per-packet one-way delay: 112.725 ms
Loss rate: 22.51%
```



# Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2017-08-21 02:14:55

End at: 2017-08-21 02:15:25

# Below is generated by plot.py at 2017-08-21 04:56:10

# Datalink statistics

-- Total of 3 flows:

Average throughput: 81.42 Mbit/s

95th percentile per-packet one-way delay: 116.717 ms

Loss rate: 3.73%

-- Flow 1:

Average throughput: 48.47 Mbit/s

95th percentile per-packet one-way delay: 117.132 ms

Loss rate: 0.86%

-- Flow 2:

Average throughput: 35.53 Mbit/s

95th percentile per-packet one-way delay: 115.575 ms

Loss rate: 6.97%

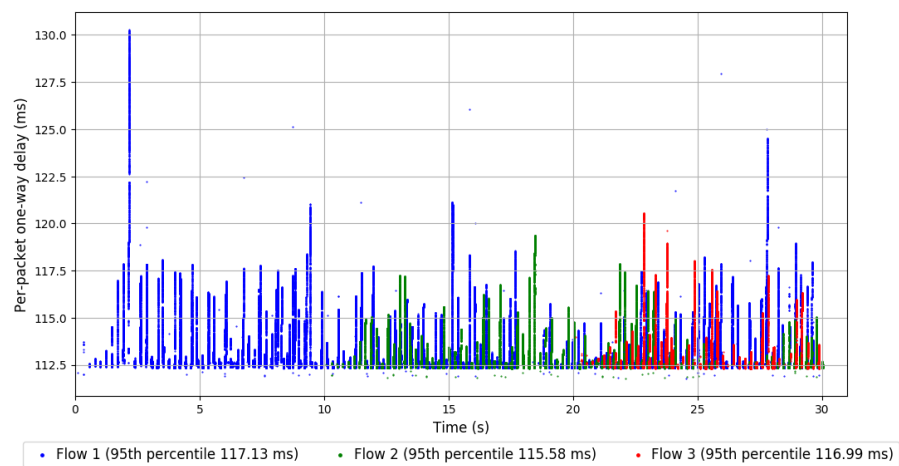
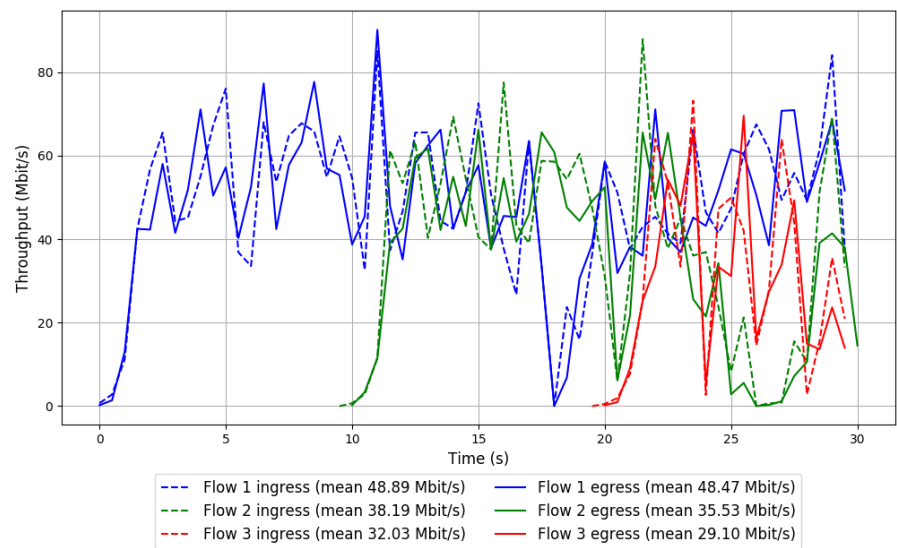
-- Flow 3:

Average throughput: 29.10 Mbit/s

95th percentile per-packet one-way delay: 116.989 ms

Loss rate: 9.16%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2017-08-21 02:27:40

End at: 2017-08-21 02:28:10

# Below is generated by plot.py at 2017-08-21 04:56:10

# Datalink statistics

-- Total of 3 flows:

Average throughput: 2.03 Mbit/s

95th percentile per-packet one-way delay: 114.447 ms

Loss rate: 38.97%

-- Flow 1:

Average throughput: 0.84 Mbit/s

95th percentile per-packet one-way delay: 112.774 ms

Loss rate: 49.91%

-- Flow 2:

Average throughput: 1.30 Mbit/s

95th percentile per-packet one-way delay: 114.515 ms

Loss rate: 23.97%

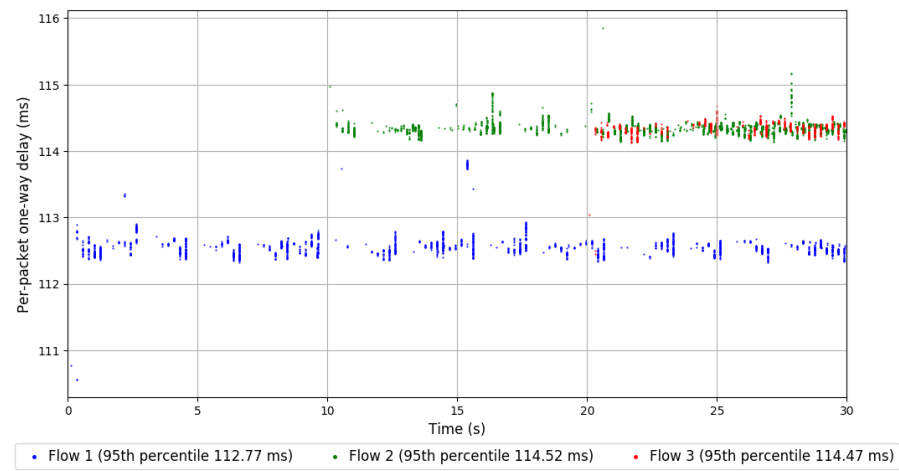
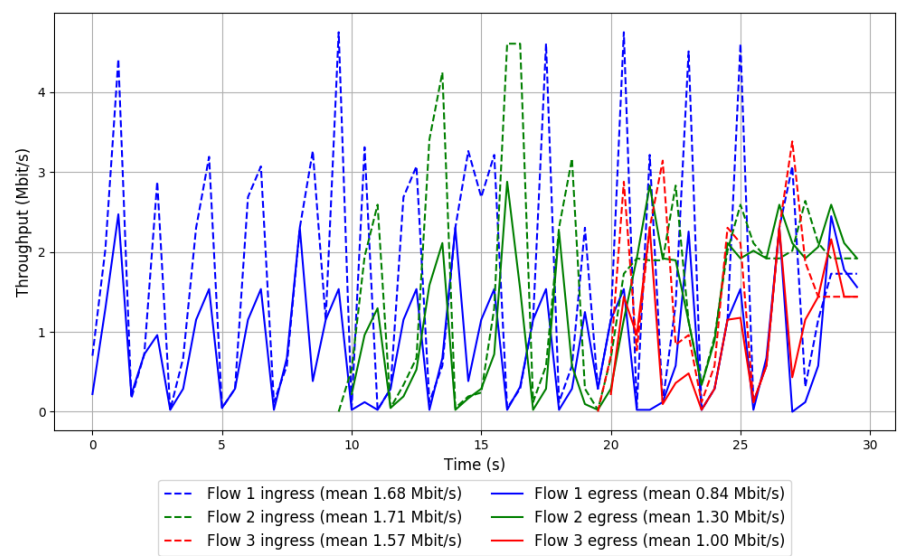
-- Flow 3:

Average throughput: 1.00 Mbit/s

95th percentile per-packet one-way delay: 114.472 ms

Loss rate: 36.32%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2017-08-21 02:40:26

End at: 2017-08-21 02:40:56

# Below is generated by plot.py at 2017-08-21 04:56:10

# Datalink statistics

-- Total of 3 flows:

Average throughput: 42.14 Mbit/s

95th percentile per-packet one-way delay: 116.949 ms

Loss rate: 4.89%

-- Flow 1:

Average throughput: 41.17 Mbit/s

95th percentile per-packet one-way delay: 116.990 ms

Loss rate: 4.12%

-- Flow 2:

Average throughput: 1.18 Mbit/s

95th percentile per-packet one-way delay: 112.755 ms

Loss rate: 25.91%

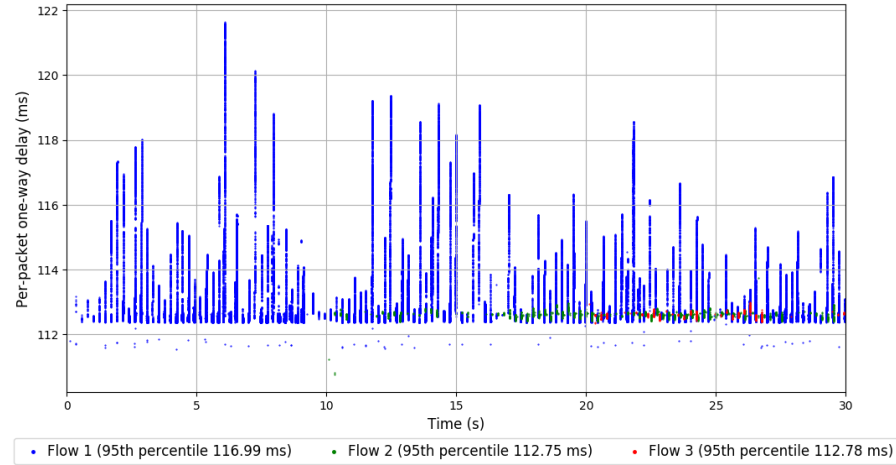
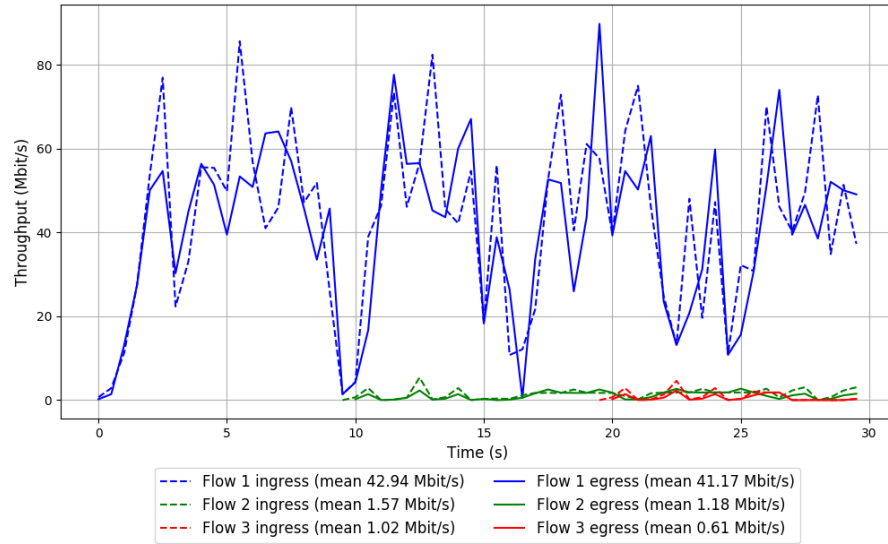
-- Flow 3:

Average throughput: 0.61 Mbit/s

95th percentile per-packet one-way delay: 112.777 ms

Loss rate: 39.70%

#### Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2017-08-21 02:53:22

End at: 2017-08-21 02:53:52

# Below is generated by plot.py at 2017-08-21 04:56:12

# Datalink statistics

-- Total of 3 flows:

Average throughput: 31.44 Mbit/s

95th percentile per-packet one-way delay: 116.182 ms

Loss rate: 3.36%

-- Flow 1:

Average throughput: 1.57 Mbit/s

95th percentile per-packet one-way delay: 112.838 ms

Loss rate: 16.08%

-- Flow 2:

Average throughput: 44.34 Mbit/s

95th percentile per-packet one-way delay: 116.247 ms

Loss rate: 2.20%

-- Flow 3:

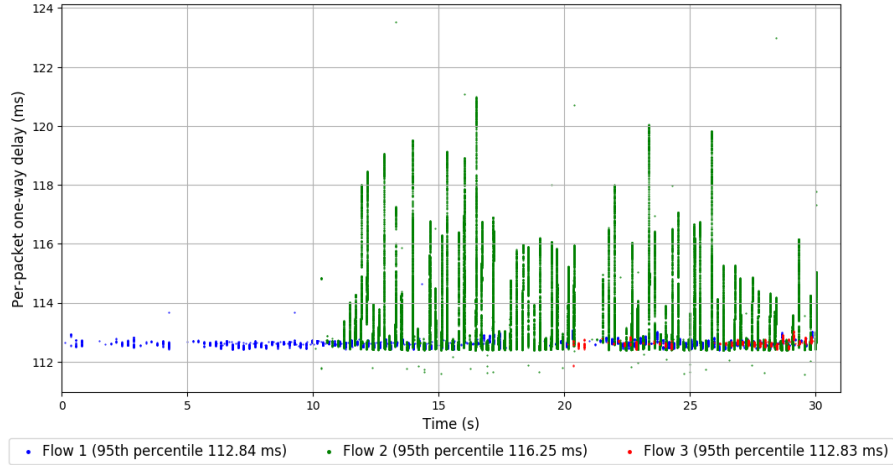
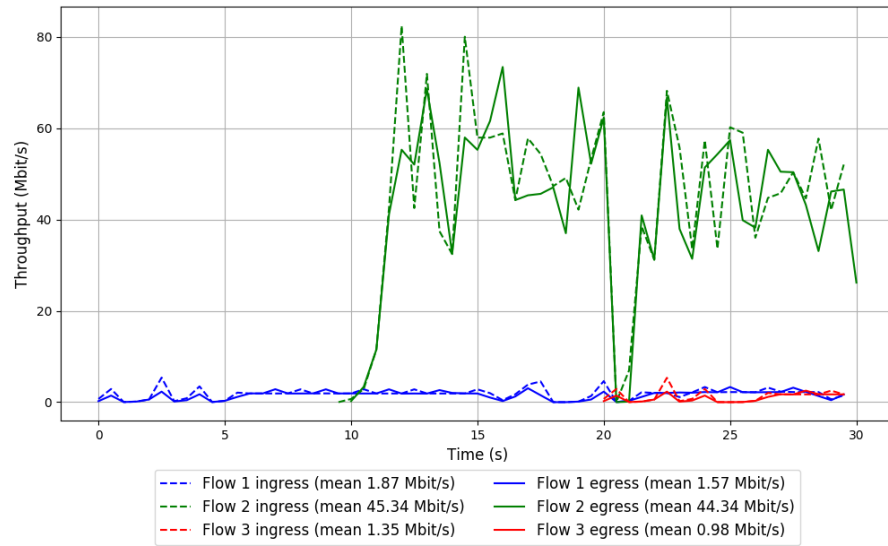
Average throughput: 0.98 Mbit/s

95th percentile per-packet one-way delay: 112.835 ms

Loss rate: 28.80%



## Run 5: Report of TCP BBR — Data Link



Run 6: Statistics of TCP BBR

Start at: 2017-08-21 03:05:57

End at: 2017-08-21 03:06:27

# Below is generated by plot.py at 2017-08-21 04:56:19

# Datalink statistics

-- Total of 3 flows:

Average throughput: 42.51 Mbit/s

95th percentile per-packet one-way delay: 117.622 ms

Loss rate: 5.57%

-- Flow 1:

Average throughput: 1.08 Mbit/s

95th percentile per-packet one-way delay: 113.063 ms

Loss rate: 33.06%

-- Flow 2:

Average throughput: 48.22 Mbit/s

95th percentile per-packet one-way delay: 117.898 ms

Loss rate: 2.07%

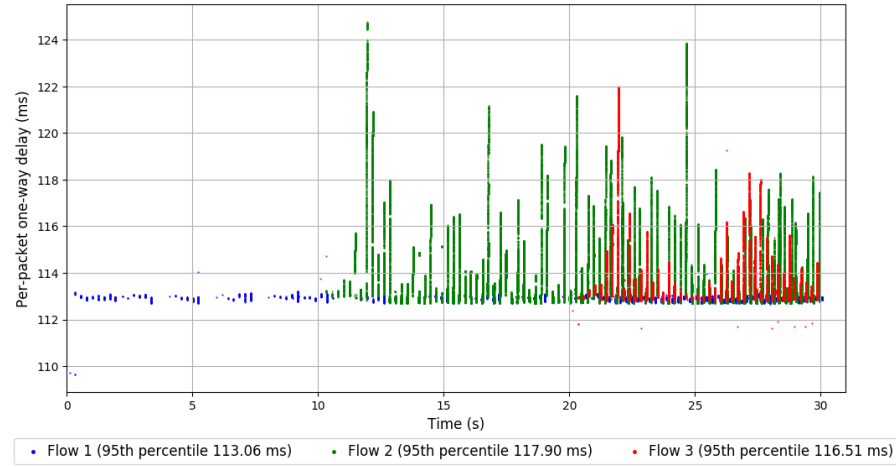
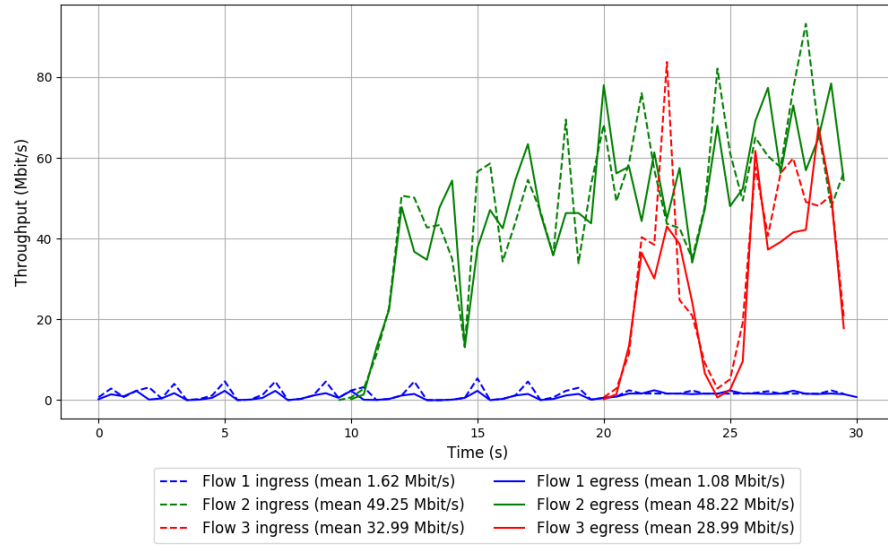
-- Flow 3:

Average throughput: 28.99 Mbit/s

95th percentile per-packet one-way delay: 116.509 ms

Loss rate: 12.08%

# Run 6: Report of TCP BBR — Data Link



Run 7: Statistics of TCP BBR

Start at: 2017-08-21 03:18:49

End at: 2017-08-21 03:19:19

# Below is generated by plot.py at 2017-08-21 04:56:19

# Datalink statistics

-- Total of 3 flows:

Average throughput: 3.34 Mbit/s

95th percentile per-packet one-way delay: 113.140 ms

Loss rate: 20.77%

-- Flow 1:

Average throughput: 1.22 Mbit/s

95th percentile per-packet one-way delay: 113.183 ms

Loss rate: 18.18%

-- Flow 2:

Average throughput: 2.55 Mbit/s

95th percentile per-packet one-way delay: 113.126 ms

Loss rate: 23.50%

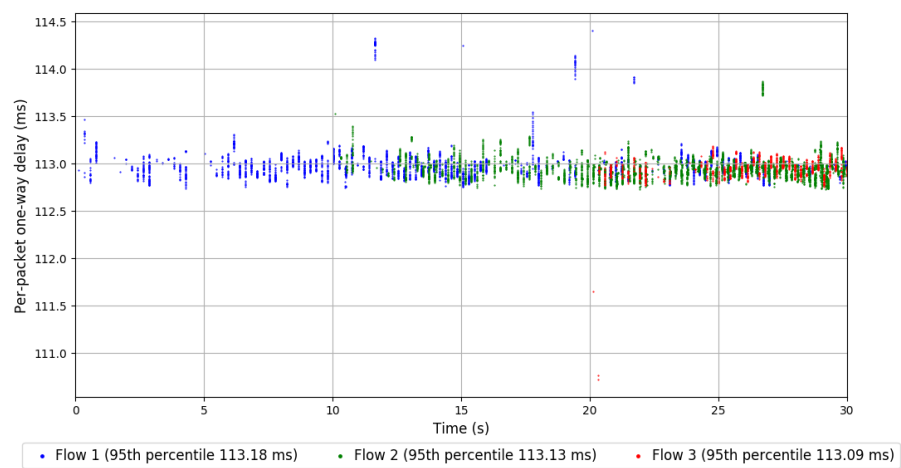
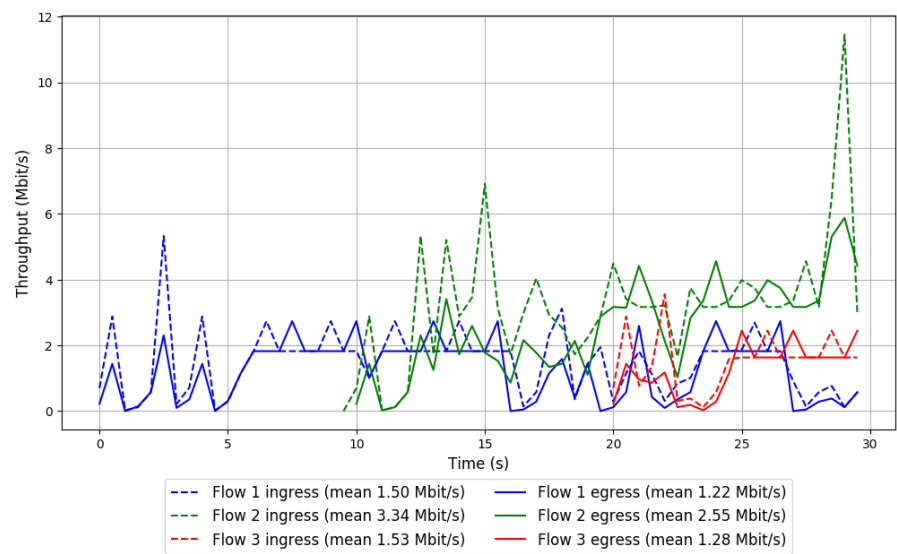
-- Flow 3:

Average throughput: 1.28 Mbit/s

95th percentile per-packet one-way delay: 113.086 ms

Loss rate: 16.47%

Run 7: Report of TCP BBR — Data Link



Run 8: Statistics of TCP BBR

Start at: 2017-08-21 03:31:43

End at: 2017-08-21 03:32:13

# Below is generated by plot.py at 2017-08-21 04:56:25

# Datalink statistics

-- Total of 3 flows:

Average throughput: 48.10 Mbit/s

95th percentile per-packet one-way delay: 118.375 ms

Loss rate: 12.21%

-- Flow 1:

Average throughput: 33.35 Mbit/s

95th percentile per-packet one-way delay: 118.059 ms

Loss rate: 12.61%

-- Flow 2:

Average throughput: 21.81 Mbit/s

95th percentile per-packet one-way delay: 119.147 ms

Loss rate: 10.45%

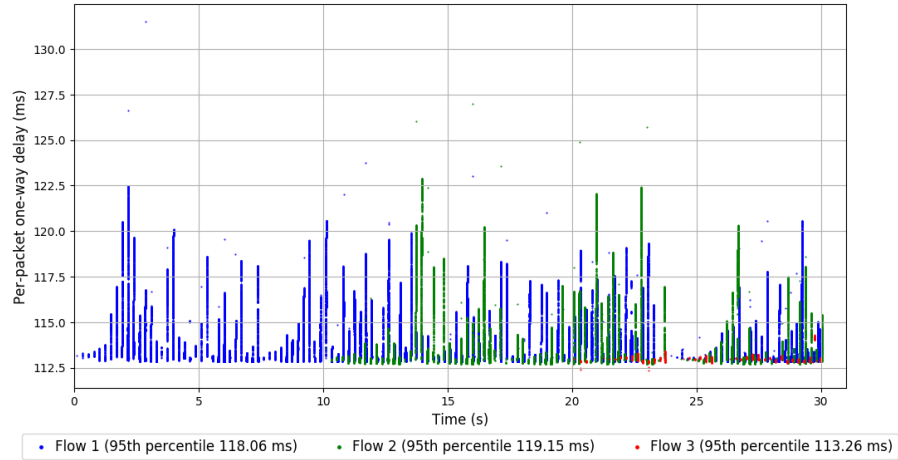
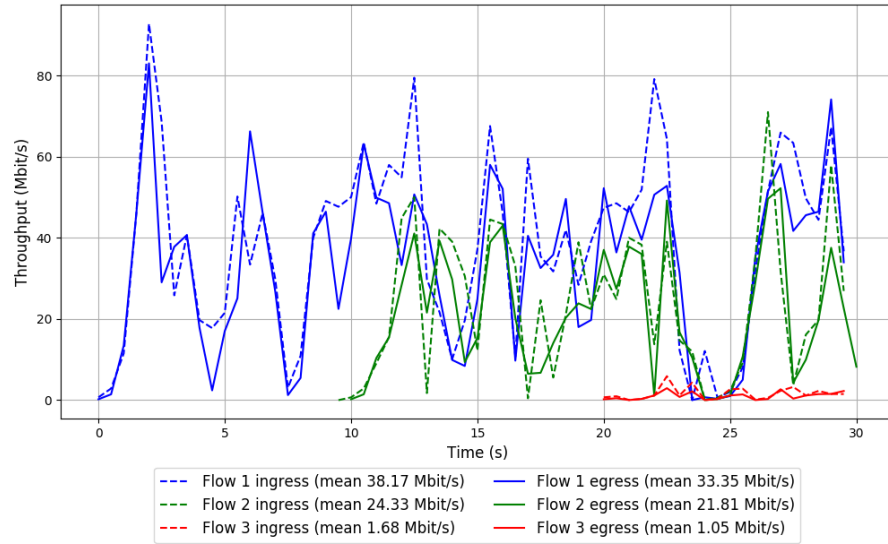
-- Flow 3:

Average throughput: 1.05 Mbit/s

95th percentile per-packet one-way delay: 113.263 ms

Loss rate: 37.19%

## Run 8: Report of TCP BBR — Data Link



Run 9: Statistics of TCP BBR

Start at: 2017-08-21 03:44:28

End at: 2017-08-21 03:44:58

# Below is generated by plot.py at 2017-08-21 04:56:33

# Datalink statistics

-- Total of 3 flows:

Average throughput: 61.86 Mbit/s

95th percentile per-packet one-way delay: 117.418 ms

Loss rate: 4.27%

-- Flow 1:

Average throughput: 38.41 Mbit/s

95th percentile per-packet one-way delay: 116.663 ms

Loss rate: 3.16%

-- Flow 2:

Average throughput: 34.23 Mbit/s

95th percentile per-packet one-way delay: 118.847 ms

Loss rate: 4.15%

-- Flow 3:

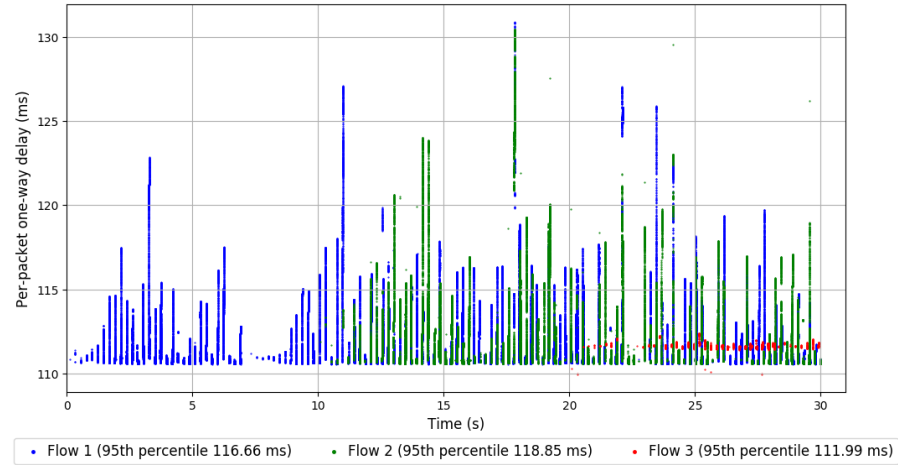
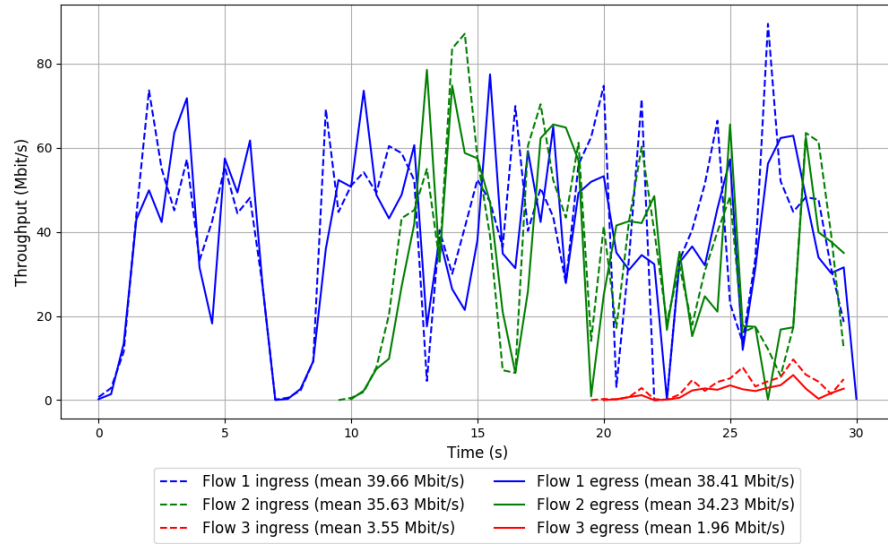
Average throughput: 1.96 Mbit/s

95th percentile per-packet one-way delay: 111.991 ms

Loss rate: 44.66%



# Run 9: Report of TCP BBR — Data Link



Run 10: Statistics of TCP BBR

Start at: 2017-08-21 03:57:02

End at: 2017-08-21 03:57:32

# Below is generated by plot.py at 2017-08-21 04:56:33

# Datalink statistics

-- Total of 3 flows:

Average throughput: 4.51 Mbit/s

95th percentile per-packet one-way delay: 112.358 ms

Loss rate: 37.57%

-- Flow 1:

Average throughput: 1.21 Mbit/s

95th percentile per-packet one-way delay: 112.440 ms

Loss rate: 42.75%

-- Flow 2:

Average throughput: 4.57 Mbit/s

95th percentile per-packet one-way delay: 111.712 ms

Loss rate: 33.71%

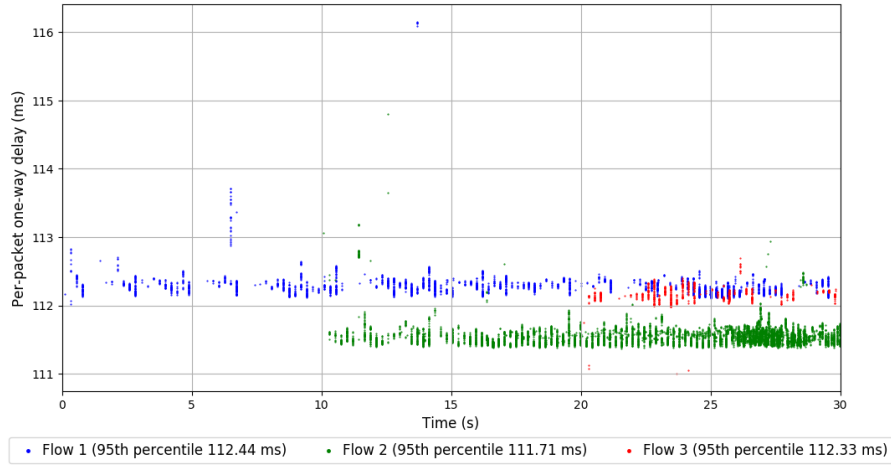
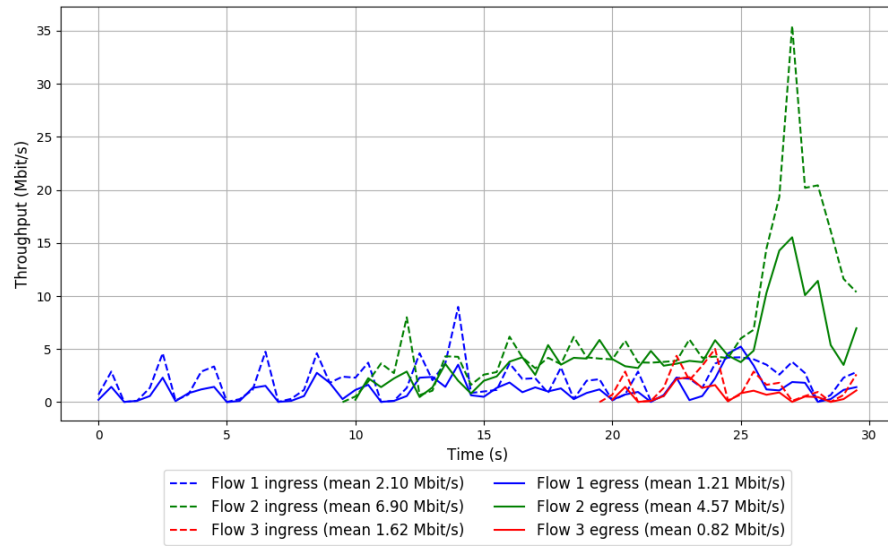
-- Flow 3:

Average throughput: 0.82 Mbit/s

95th percentile per-packet one-way delay: 112.329 ms

Loss rate: 50.48%

# Run 10: Report of TCP BBR — Data Link



Run 1: Statistics of CalibratedKoho

Start at: 2017-08-21 01:59:31

End at: 2017-08-21 02:00:01

# Below is generated by plot.py at 2017-08-21 04:56:33

# Datalink statistics

-- Total of 3 flows:

Average throughput: 2.19 Mbit/s

95th percentile per-packet one-way delay: 112.898 ms

Loss rate: 66.81%

-- Flow 1:

Average throughput: 1.05 Mbit/s

95th percentile per-packet one-way delay: 112.928 ms

Loss rate: 67.78%

-- Flow 2:

Average throughput: 1.09 Mbit/s

95th percentile per-packet one-way delay: 112.800 ms

Loss rate: 67.10%

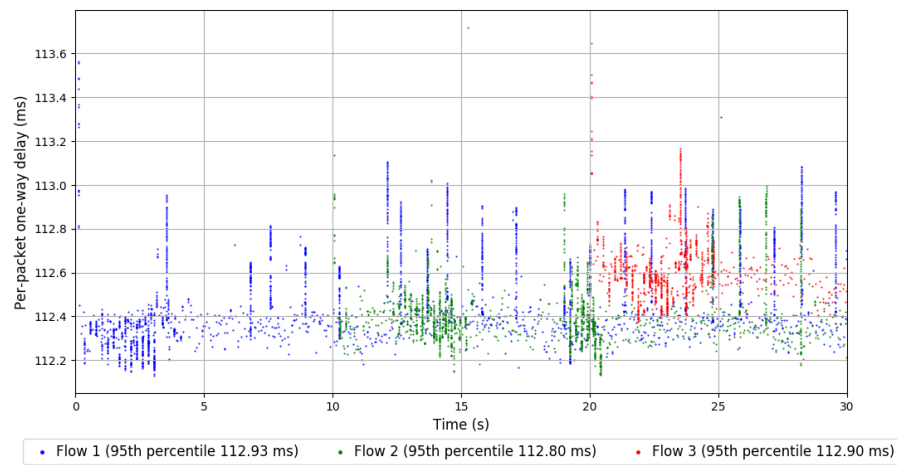
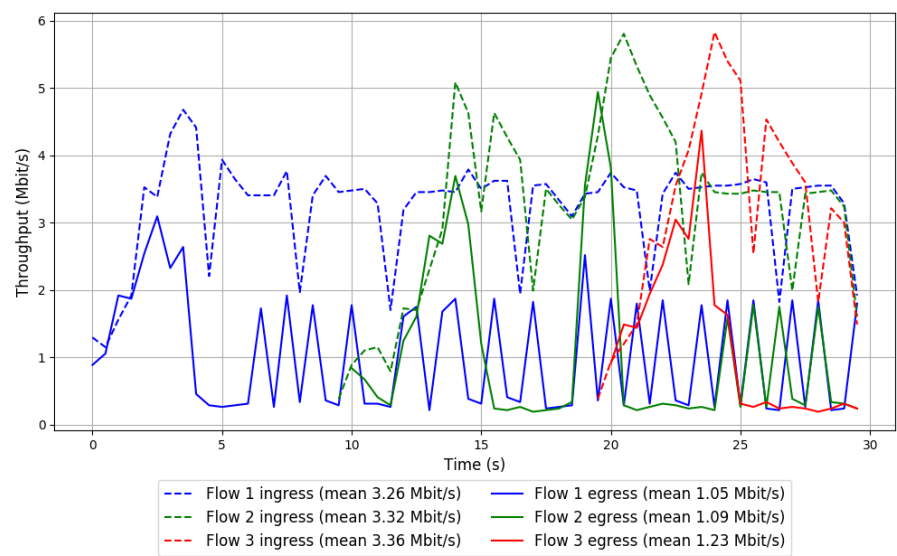
-- Flow 3:

Average throughput: 1.23 Mbit/s

95th percentile per-packet one-way delay: 112.901 ms

Loss rate: 63.39%

Run 1: Report of CalibratedKoho — Data Link



Run 2: Statistics of CalibratedKoho

Start at: 2017-08-21 02:11:54

End at: 2017-08-21 02:12:24

# Below is generated by plot.py at 2017-08-21 04:57:19

# Datalink statistics

-- Total of 3 flows:

Average throughput: 239.59 Mbit/s

95th percentile per-packet one-way delay: 152.889 ms

Loss rate: 0.13%

-- Flow 1:

Average throughput: 239.54 Mbit/s

95th percentile per-packet one-way delay: 152.893 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 0.09 Mbit/s

95th percentile per-packet one-way delay: 114.413 ms

Loss rate: 80.50%

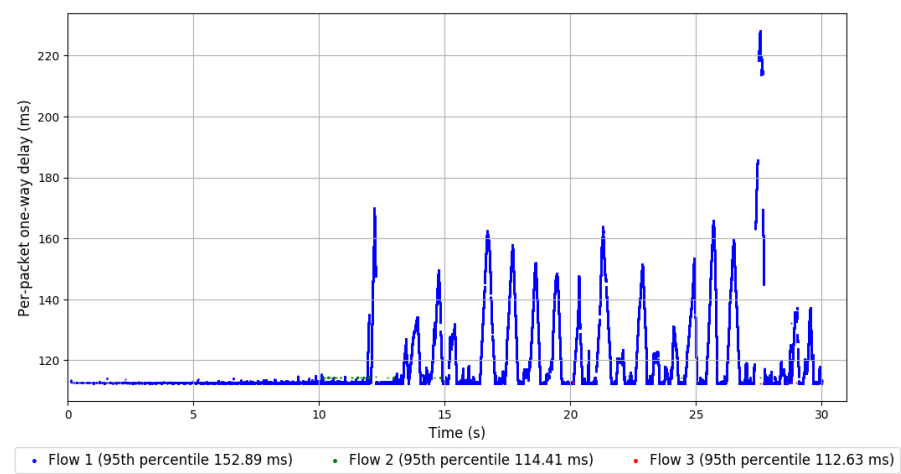
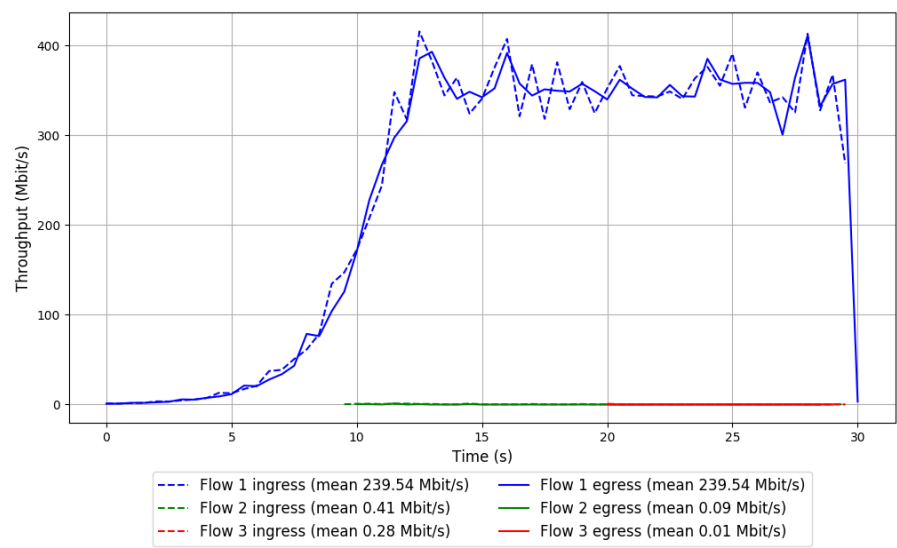
-- Flow 3:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 112.631 ms

Loss rate: 95.28%

Run 2: Report of CalibratedKoho — Data Link



Run 3: Statistics of CalibratedKoho

Start at: 2017-08-21 02:25:05

End at: 2017-08-21 02:25:35

# Below is generated by plot.py at 2017-08-21 04:57:19

# Datalink statistics

-- Total of 3 flows:

Average throughput: 120.58 Mbit/s

95th percentile per-packet one-way delay: 156.984 ms

Loss rate: 1.89%

-- Flow 1:

Average throughput: 0.99 Mbit/s

95th percentile per-packet one-way delay: 113.175 ms

Loss rate: 68.69%

-- Flow 2:

Average throughput: 179.43 Mbit/s

95th percentile per-packet one-way delay: 157.159 ms

Loss rate: 0.03%

-- Flow 3:

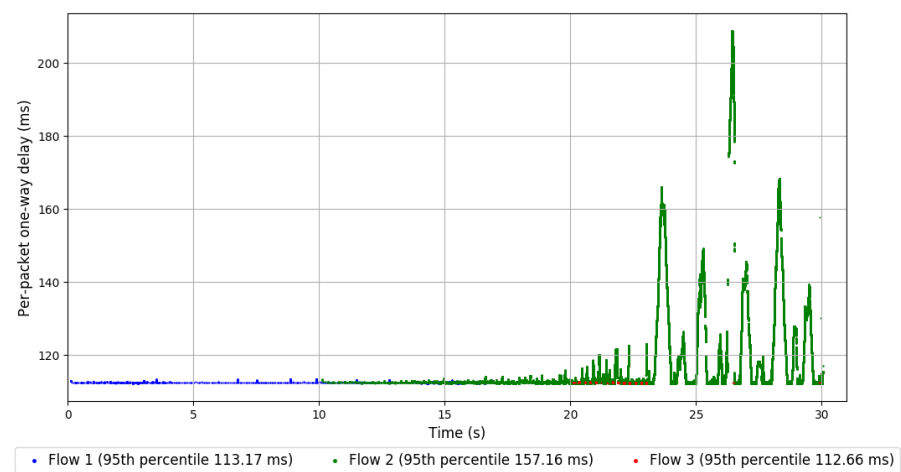
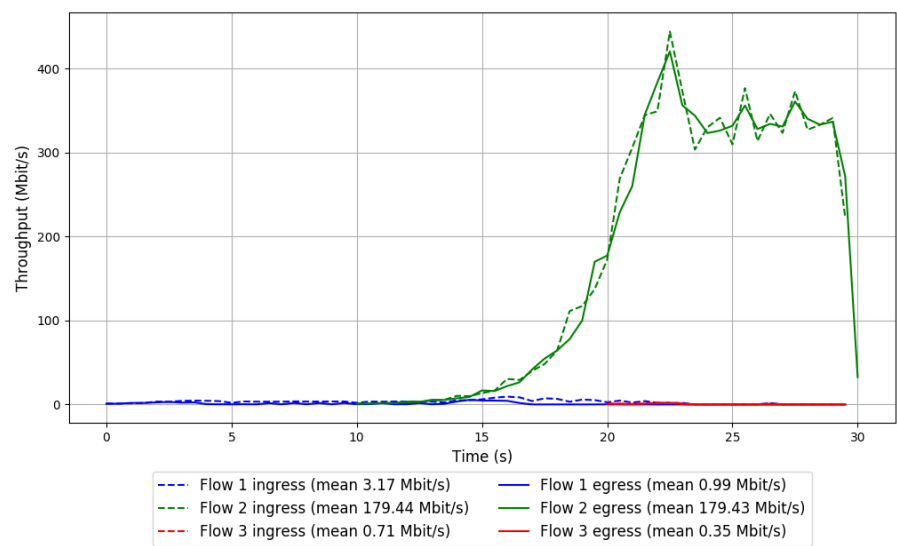
Average throughput: 0.35 Mbit/s

95th percentile per-packet one-way delay: 112.663 ms

Loss rate: 50.94%



Run 3: Report of CalibratedKoho — Data Link



Run 4: Statistics of CalibratedKoho

Start at: 2017-08-21 02:37:44

End at: 2017-08-21 02:38:14

# Below is generated by plot.py at 2017-08-21 04:57:19

# Datalink statistics

-- Total of 3 flows:

Average throughput: 119.49 Mbit/s

95th percentile per-packet one-way delay: 153.739 ms

Loss rate: 1.57%

-- Flow 1:

Average throughput: 0.86 Mbit/s

95th percentile per-packet one-way delay: 113.260 ms

Loss rate: 68.92%

-- Flow 2:

Average throughput: 177.99 Mbit/s

95th percentile per-packet one-way delay: 153.946 ms

Loss rate: 0.00%

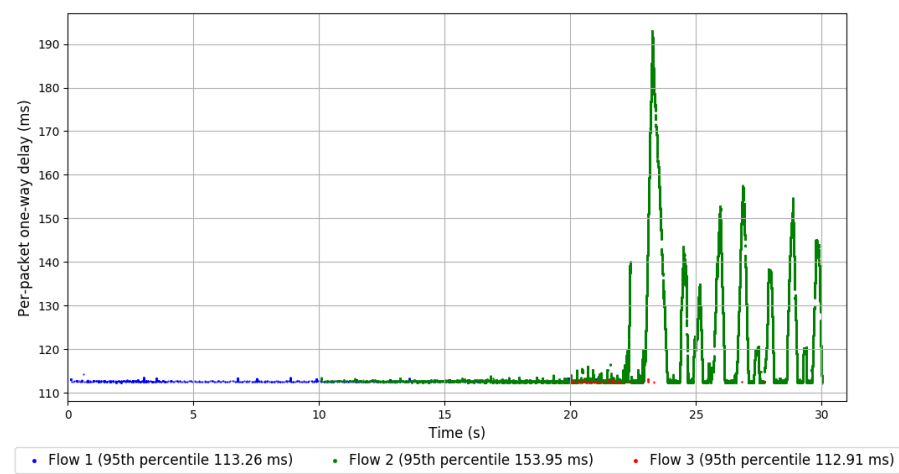
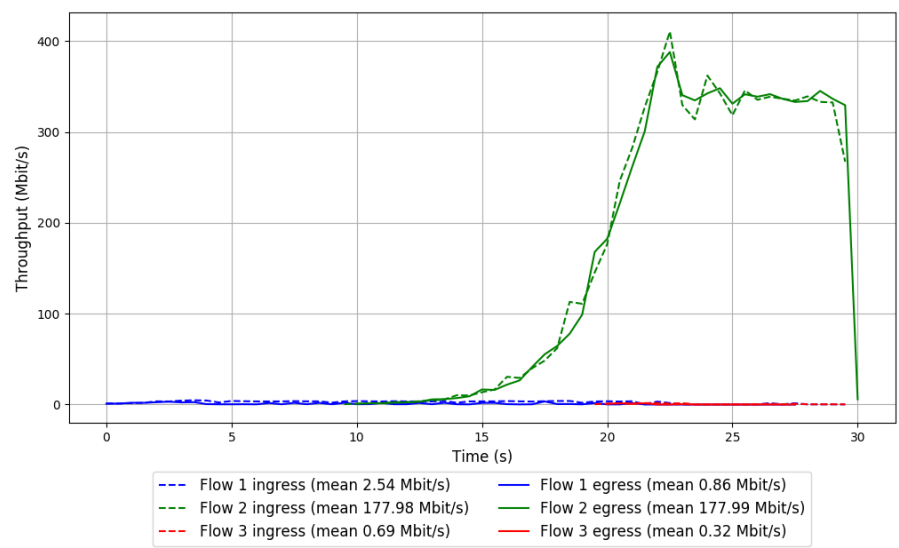
-- Flow 3:

Average throughput: 0.32 Mbit/s

95th percentile per-packet one-way delay: 112.909 ms

Loss rate: 64.34%

Run 4: Report of CalibratedKoho — Data Link



Run 5: Statistics of CalibratedKoho

Start at: 2017-08-21 02:50:25

End at: 2017-08-21 02:50:55

# Below is generated by plot.py at 2017-08-21 04:58:06

# Datalink statistics

-- Total of 3 flows:

Average throughput: 252.01 Mbit/s

95th percentile per-packet one-way delay: 146.457 ms

Loss rate: 0.26%

-- Flow 1:

Average throughput: 185.41 Mbit/s

95th percentile per-packet one-way delay: 149.444 ms

Loss rate: 0.31%

-- Flow 2:

Average throughput: 99.97 Mbit/s

95th percentile per-packet one-way delay: 140.186 ms

Loss rate: 0.01%

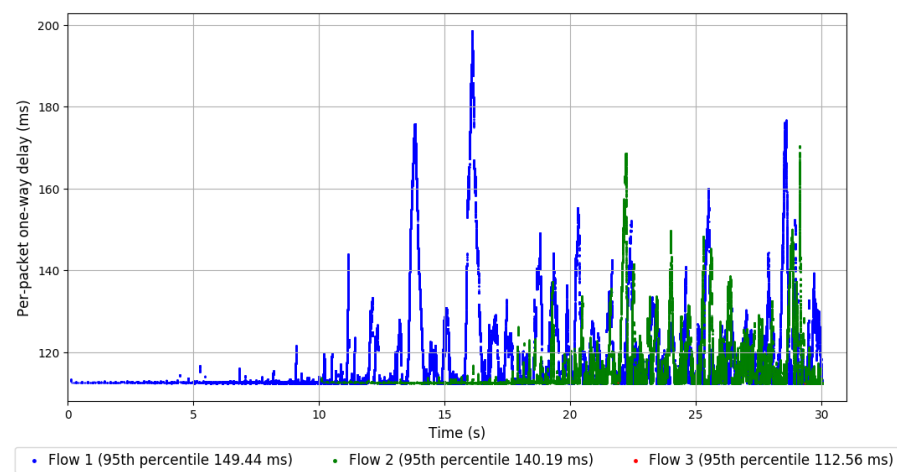
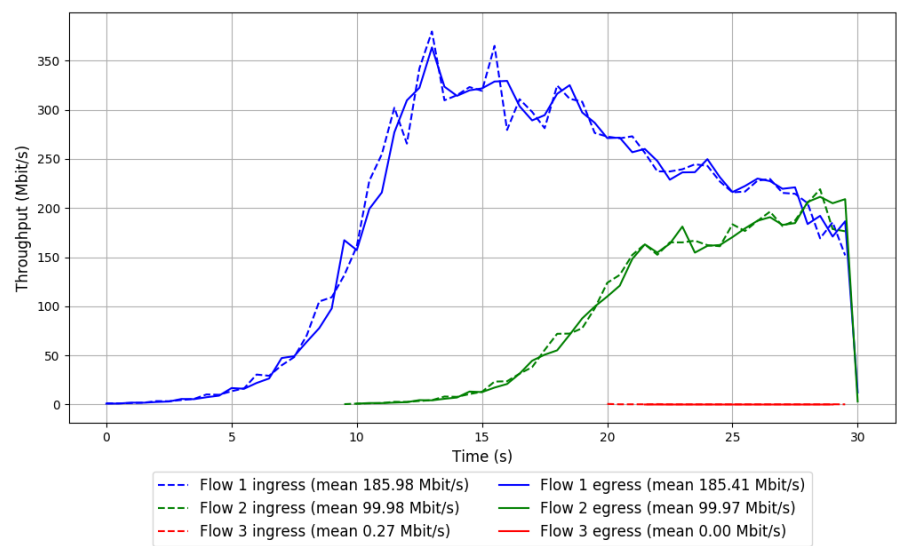
-- Flow 3:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 112.559 ms

Loss rate: 99.10%

Run 5: Report of CalibratedKoho — Data Link



Run 6: Statistics of CalibratedKoho

Start at: 2017-08-21 03:03:21

End at: 2017-08-21 03:03:51

# Below is generated by plot.py at 2017-08-21 04:58:06

# Datalink statistics

-- Total of 3 flows:

Average throughput: 2.65 Mbit/s

95th percentile per-packet one-way delay: 113.593 ms

Loss rate: 64.63%

-- Flow 1:

Average throughput: 1.04 Mbit/s

95th percentile per-packet one-way delay: 113.659 ms

Loss rate: 68.00%

-- Flow 2:

Average throughput: 1.50 Mbit/s

95th percentile per-packet one-way delay: 113.455 ms

Loss rate: 63.02%

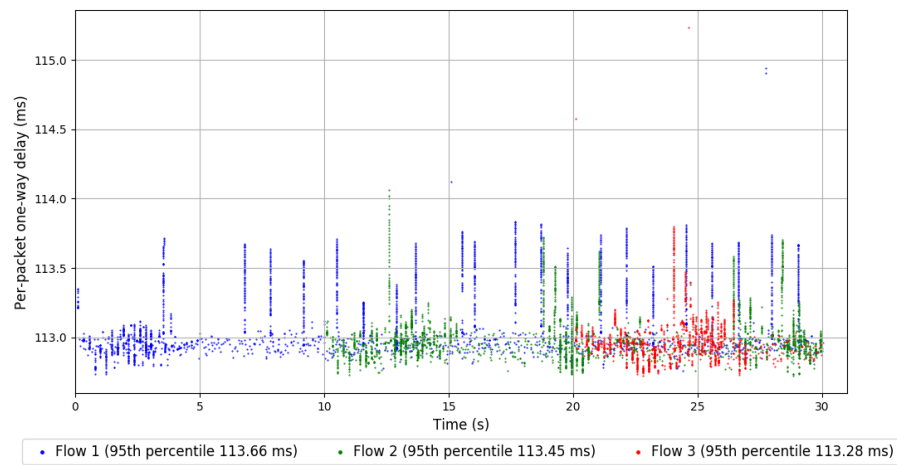
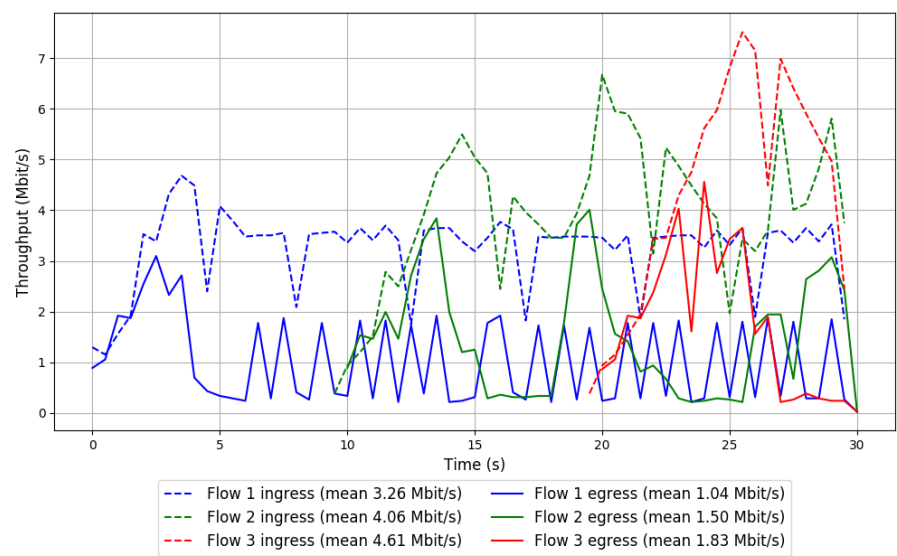
-- Flow 3:

Average throughput: 1.83 Mbit/s

95th percentile per-packet one-way delay: 113.283 ms

Loss rate: 60.30%

Run 6: Report of CalibratedKoho — Data Link



Run 7: Statistics of CalibratedKoho

Start at: 2017-08-21 03:15:53

End at: 2017-08-21 03:16:23

# Below is generated by plot.py at 2017-08-21 04:58:09

# Datalink statistics

-- Total of 3 flows:

Average throughput: 230.37 Mbit/s

95th percentile per-packet one-way delay: 142.514 ms

Loss rate: 0.31%

-- Flow 1:

Average throughput: 230.18 Mbit/s

95th percentile per-packet one-way delay: 142.522 ms

Loss rate: 0.17%

-- Flow 2:

Average throughput: 0.53 Mbit/s

95th percentile per-packet one-way delay: 113.151 ms

Loss rate: 55.48%

-- Flow 3:

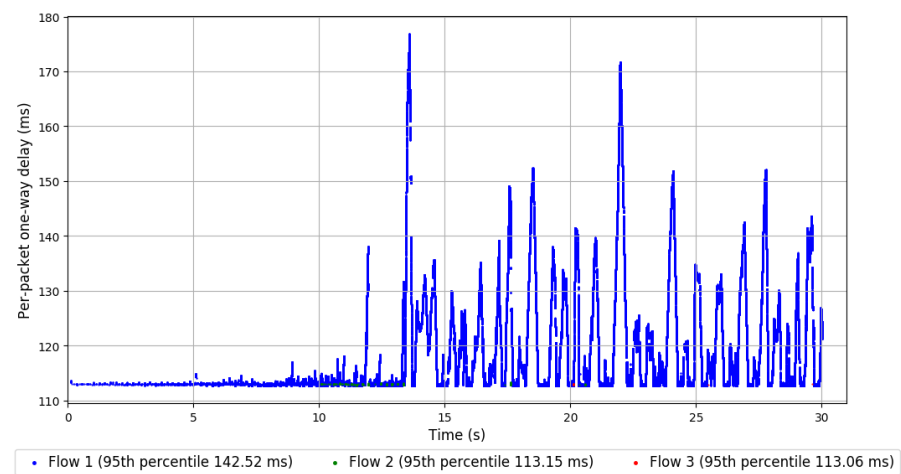
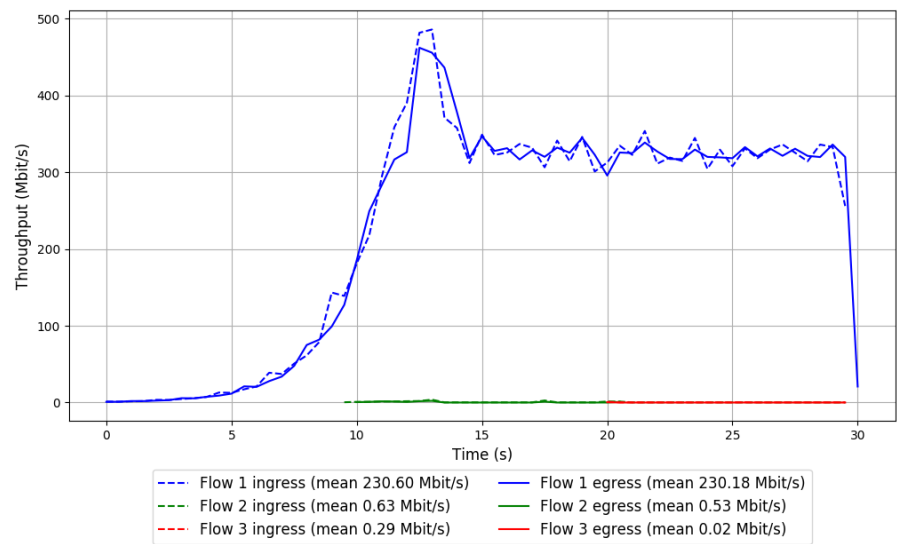
Average throughput: 0.02 Mbit/s

95th percentile per-packet one-way delay: 113.057 ms

Loss rate: 92.41%



Run 7: Report of CalibratedKoho — Data Link



Run 8: Statistics of CalibratedKoho

Start at: 2017-08-21 03:29:02

End at: 2017-08-21 03:29:32

# Below is generated by plot.py at 2017-08-21 04:58:10

# Datalink statistics

-- Total of 3 flows:

Average throughput: 11.82 Mbit/s

95th percentile per-packet one-way delay: 113.703 ms

Loss rate: 25.15%

-- Flow 1:

Average throughput: 1.29 Mbit/s

95th percentile per-packet one-way delay: 113.457 ms

Loss rate: 66.05%

-- Flow 2:

Average throughput: 1.38 Mbit/s

95th percentile per-packet one-way delay: 113.365 ms

Loss rate: 61.39%

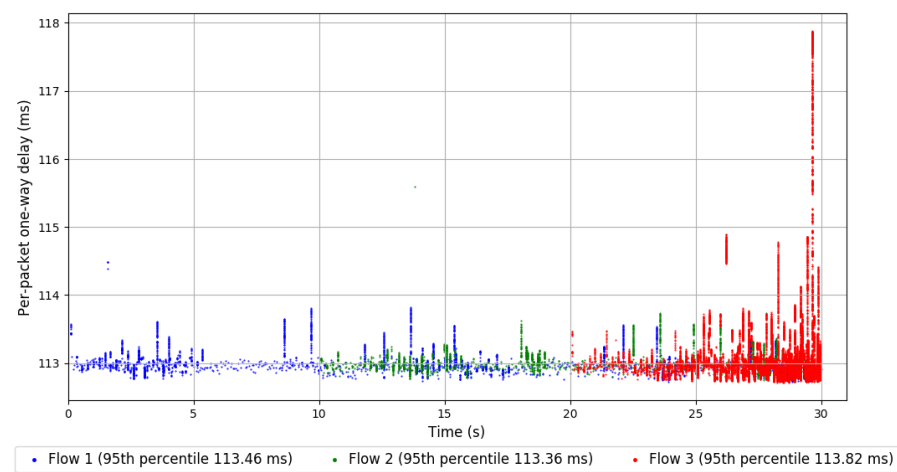
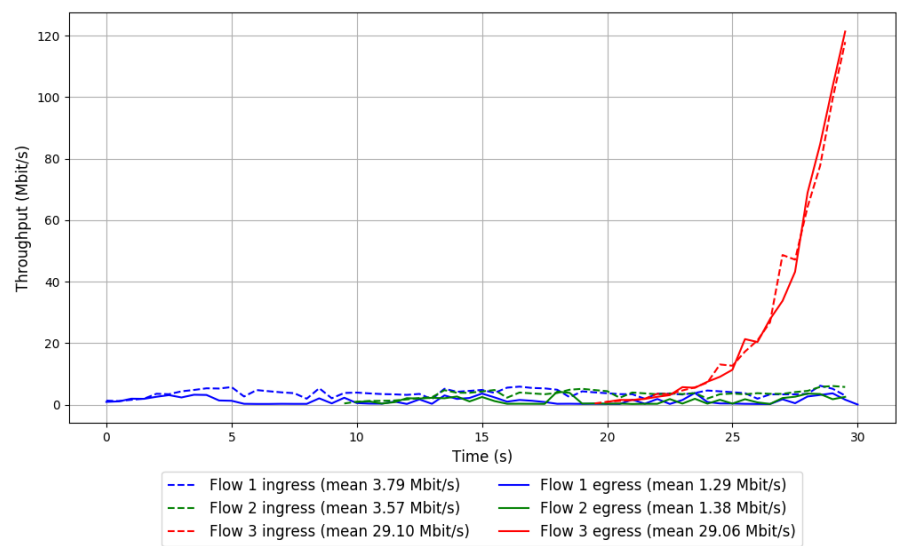
-- Flow 3:

Average throughput: 29.06 Mbit/s

95th percentile per-packet one-way delay: 113.818 ms

Loss rate: 0.15%

Run 8: Report of CalibratedKoho — Data Link



Run 9: Statistics of CalibratedKoho

Start at: 2017-08-21 03:41:50

End at: 2017-08-21 03:42:20

# Below is generated by plot.py at 2017-08-21 04:58:31

# Datalink statistics

-- Total of 3 flows:

Average throughput: 123.18 Mbit/s

95th percentile per-packet one-way delay: 148.399 ms

Loss rate: 1.81%

-- Flow 1:

Average throughput: 0.94 Mbit/s

95th percentile per-packet one-way delay: 112.851 ms

Loss rate: 67.98%

-- Flow 2:

Average throughput: 182.99 Mbit/s

95th percentile per-packet one-way delay: 148.563 ms

Loss rate: 0.02%

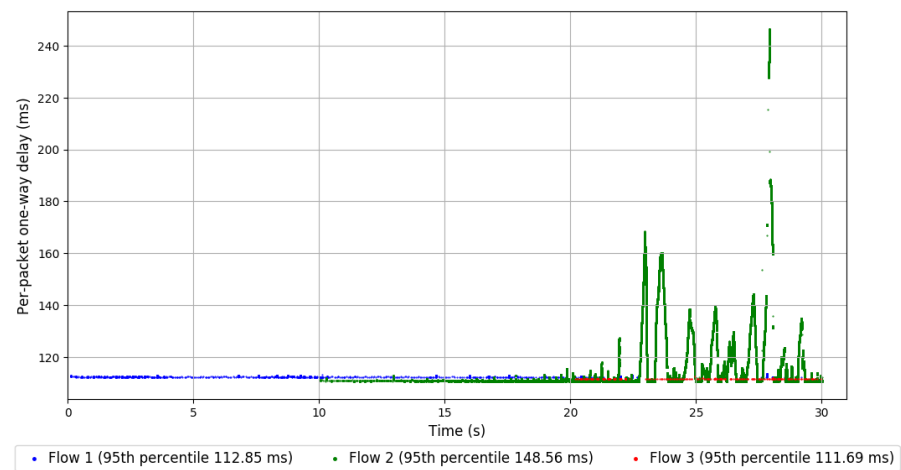
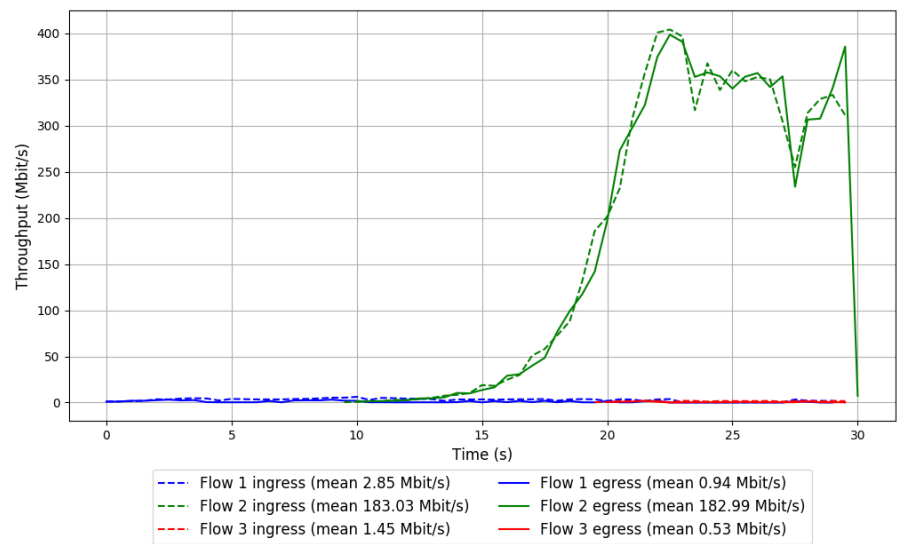
-- Flow 3:

Average throughput: 0.53 Mbit/s

95th percentile per-packet one-way delay: 111.685 ms

Loss rate: 63.48%

Run 9: Report of CalibratedKoho — Data Link



Run 10: Statistics of CalibratedKoho

Start at: 2017-08-21 03:54:32

End at: 2017-08-21 03:55:02

# Below is generated by plot.py at 2017-08-21 04:58:31

# Datalink statistics

-- Total of 3 flows:

Average throughput: 2.83 Mbit/s

95th percentile per-packet one-way delay: 112.636 ms

Loss rate: 66.28%

-- Flow 1:

Average throughput: 1.38 Mbit/s

95th percentile per-packet one-way delay: 112.683 ms

Loss rate: 68.33%

-- Flow 2:

Average throughput: 1.43 Mbit/s

95th percentile per-packet one-way delay: 112.485 ms

Loss rate: 67.52%

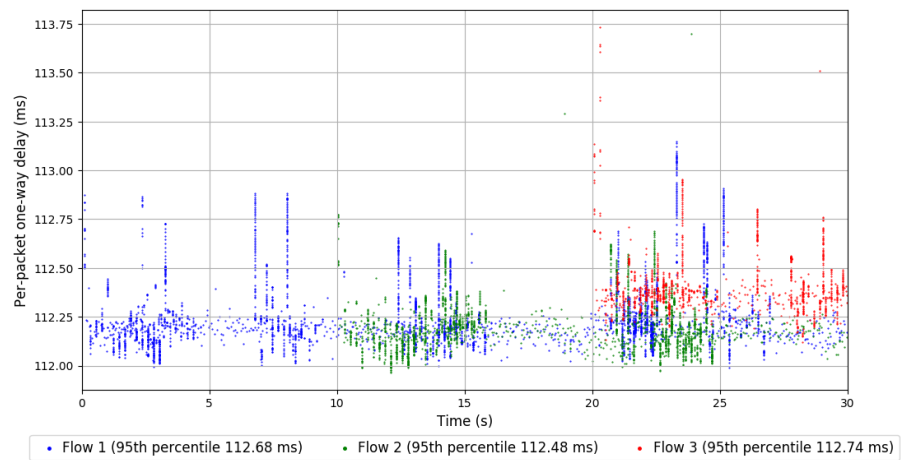
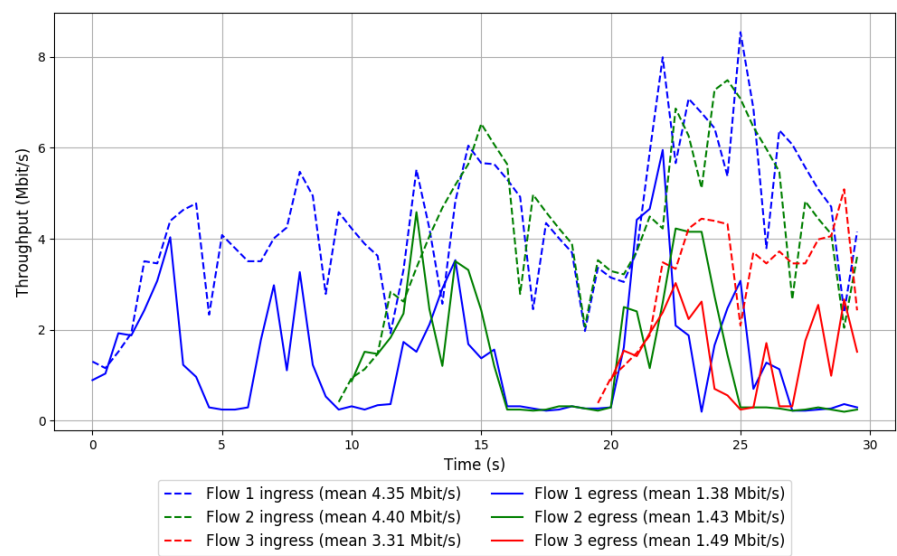
-- Flow 3:

Average throughput: 1.49 Mbit/s

95th percentile per-packet one-way delay: 112.743 ms

Loss rate: 54.86%

Run 10: Report of CalibratedKoho — Data Link



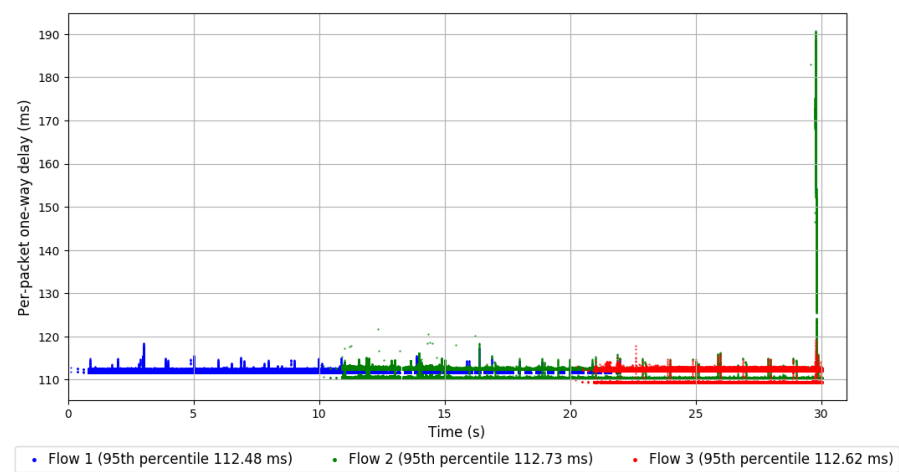
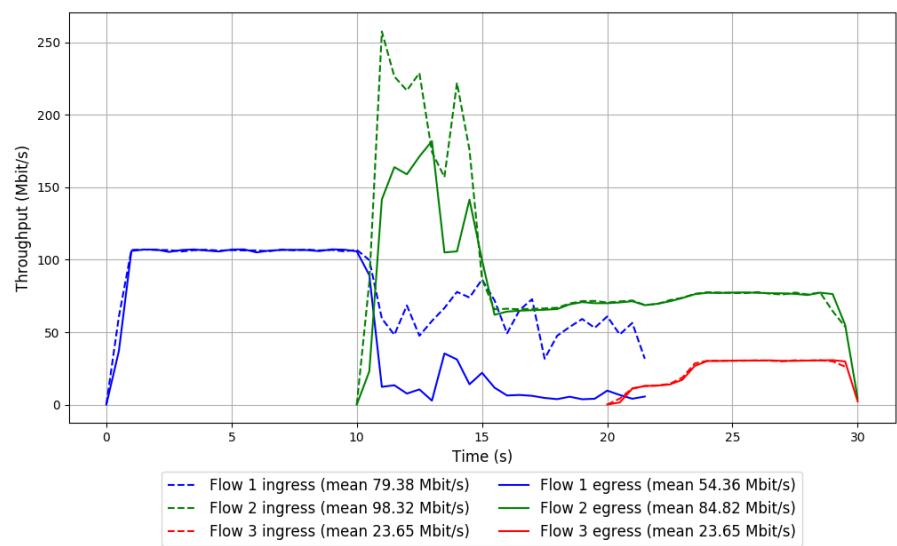
```
Run 1: Statistics of Copa

Start at: 2017-08-21 01:54:29
End at: 2017-08-21 01:54:59

# Below is generated by plot.py at 2017-08-21 04:58:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 103.76 Mbit/s
95th percentile per-packet one-way delay: 112.638 ms
Loss rate: 20.80%
-- Flow 1:
Average throughput: 54.36 Mbit/s
95th percentile per-packet one-way delay: 112.478 ms
Loss rate: 31.52%
-- Flow 2:
Average throughput: 84.82 Mbit/s
95th percentile per-packet one-way delay: 112.735 ms
Loss rate: 13.72%
-- Flow 3:
Average throughput: 23.65 Mbit/s
95th percentile per-packet one-way delay: 112.616 ms
Loss rate: 0.00%
```



Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2017-08-21 02:06:38

End at: 2017-08-21 02:07:08

# Below is generated by plot.py at 2017-08-21 04:59:18

# Datalink statistics

-- Total of 3 flows:

Average throughput: 132.47 Mbit/s

95th percentile per-packet one-way delay: 112.470 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 85.22 Mbit/s

95th percentile per-packet one-way delay: 112.469 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 71.20 Mbit/s

95th percentile per-packet one-way delay: 112.473 ms

Loss rate: 0.00%

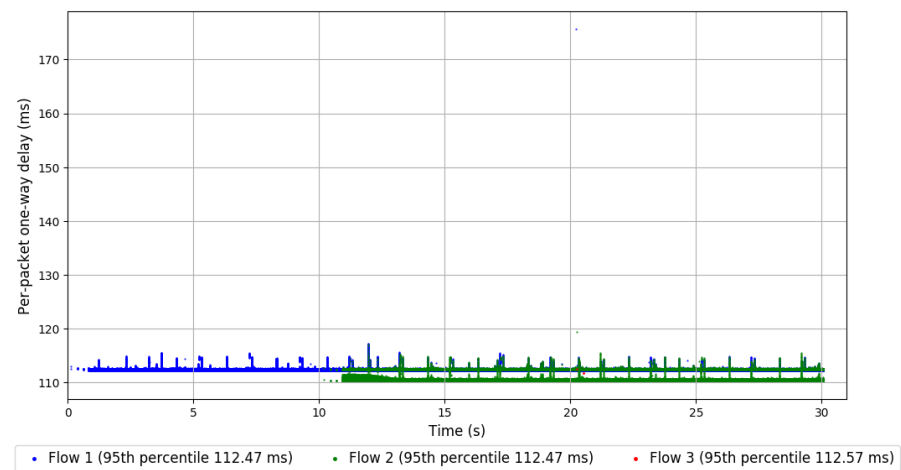
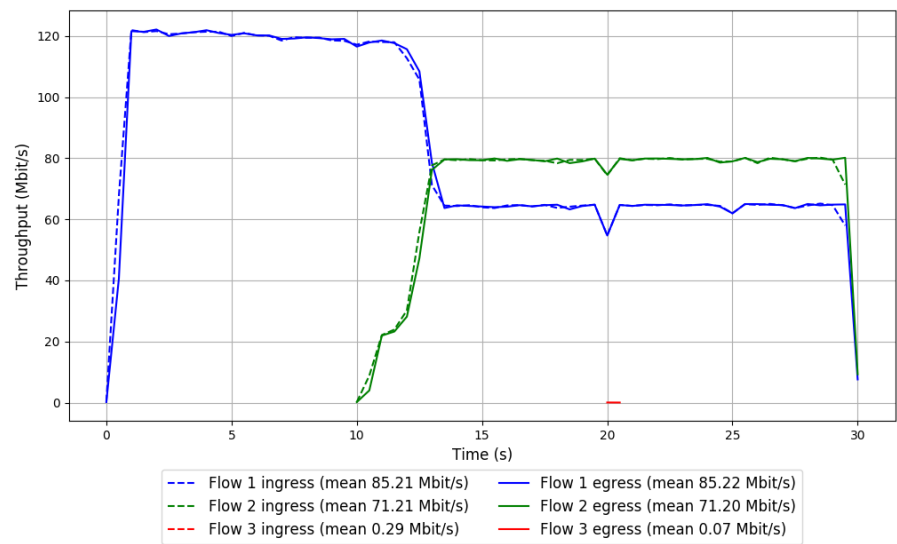
-- Flow 3:

Average throughput: 0.07 Mbit/s

95th percentile per-packet one-way delay: 112.570 ms

Loss rate: 76.95%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2017-08-21 02:19:54

End at: 2017-08-21 02:20:24

# Below is generated by plot.py at 2017-08-21 04:59:39

# Datalink statistics

-- Total of 3 flows:

Average throughput: 110.16 Mbit/s

95th percentile per-packet one-way delay: 112.506 ms

Loss rate: 4.84%

-- Flow 1:

Average throughput: 84.01 Mbit/s

95th percentile per-packet one-way delay: 112.440 ms

Loss rate: 2.49%

-- Flow 2:

Average throughput: 117.17 Mbit/s

95th percentile per-packet one-way delay: 112.466 ms

Loss rate: 0.01%

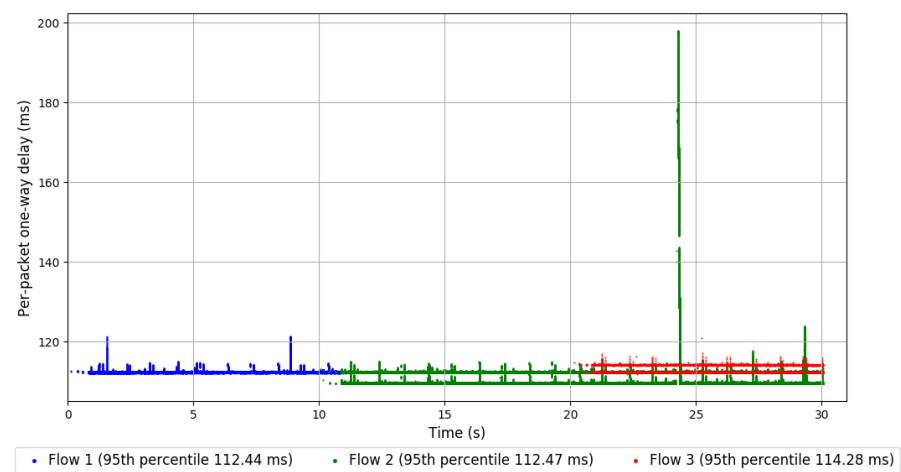
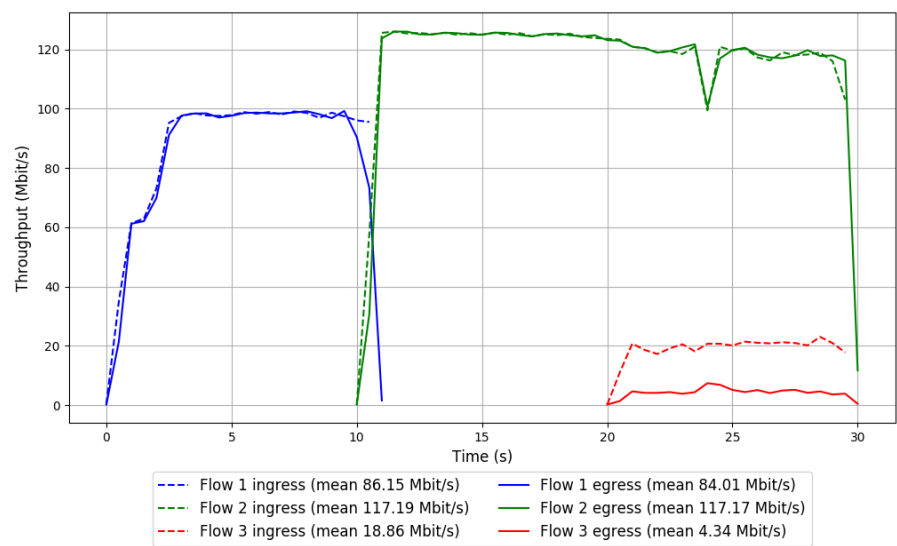
-- Flow 3:

Average throughput: 4.34 Mbit/s

95th percentile per-packet one-way delay: 114.278 ms

Loss rate: 77.01%

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

Start at: 2017-08-21 02:32:28

End at: 2017-08-21 02:32:58

# Below is generated by plot.py at 2017-08-21 05:00:17

# Datalink statistics

-- Total of 3 flows:

Average throughput: 143.88 Mbit/s

95th percentile per-packet one-way delay: 114.462 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 95.00 Mbit/s

95th percentile per-packet one-way delay: 114.473 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 65.31 Mbit/s

95th percentile per-packet one-way delay: 112.509 ms

Loss rate: 0.00%

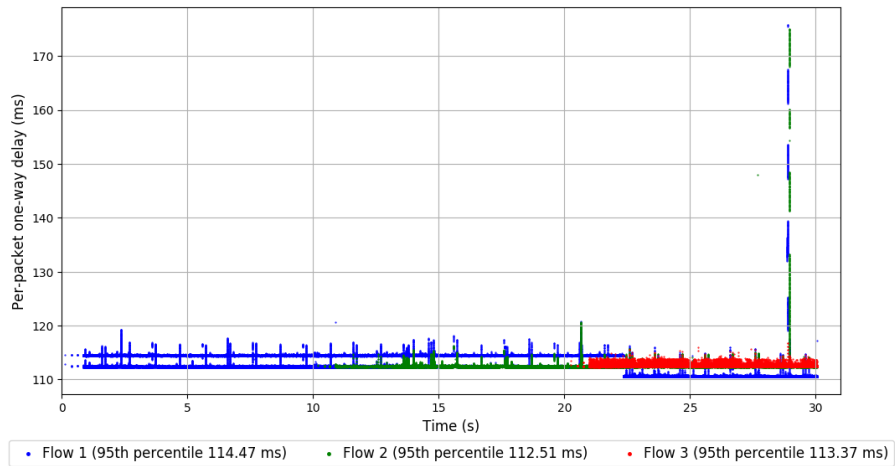
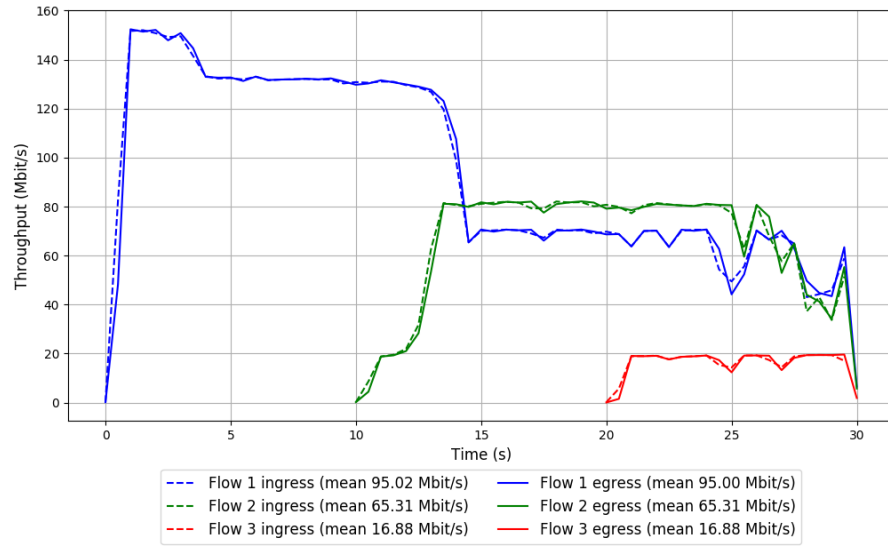
-- Flow 3:

Average throughput: 16.88 Mbit/s

95th percentile per-packet one-way delay: 113.371 ms

Loss rate: 0.00%

#### Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2017-08-21 02:45:18

End at: 2017-08-21 02:45:48

# Below is generated by plot.py at 2017-08-21 05:00:34

# Datalink statistics

-- Total of 3 flows:

Average throughput: 150.39 Mbit/s

95th percentile per-packet one-way delay: 112.519 ms

Loss rate: 4.10%

-- Flow 1:

Average throughput: 102.99 Mbit/s

95th percentile per-packet one-way delay: 112.500 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 49.03 Mbit/s

95th percentile per-packet one-way delay: 112.551 ms

Loss rate: 0.02%

-- Flow 3:

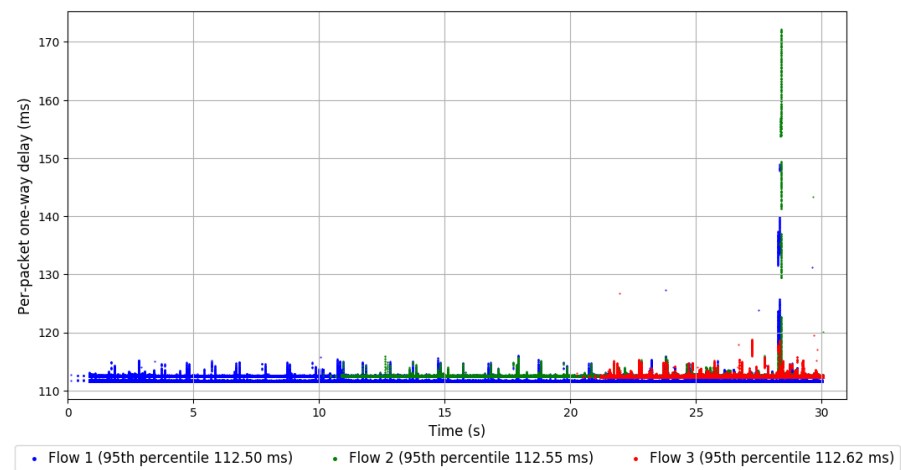
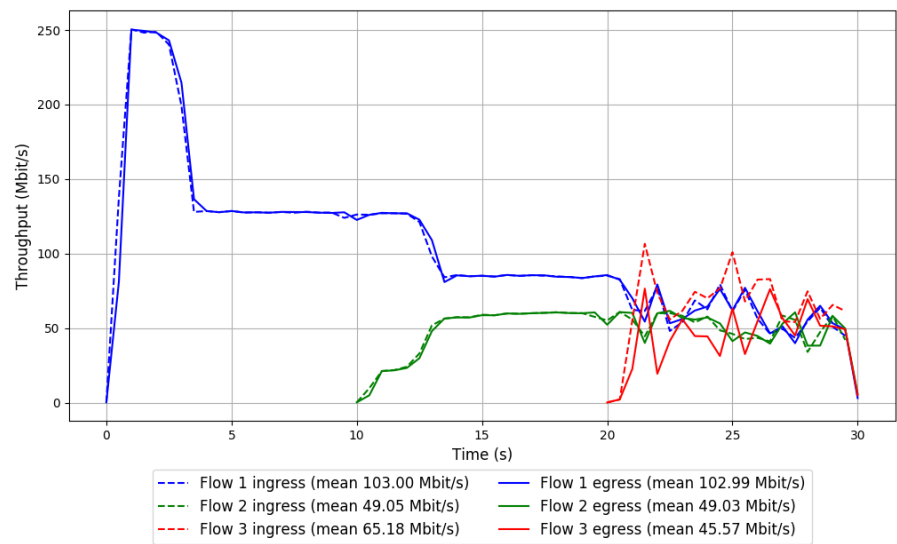
Average throughput: 45.57 Mbit/s

95th percentile per-packet one-way delay: 112.621 ms

Loss rate: 30.09%



Run 5: Report of Copa — Data Link



Run 6: Statistics of Copa

Start at: 2017-08-21 02:58:13

End at: 2017-08-21 02:58:43

# Below is generated by plot.py at 2017-08-21 05:00:56

# Datalink statistics

-- Total of 3 flows:

Average throughput: 125.68 Mbit/s

95th percentile per-packet one-way delay: 112.528 ms

Loss rate: 7.55%

-- Flow 1:

Average throughput: 72.61 Mbit/s

95th percentile per-packet one-way delay: 112.522 ms

Loss rate: 4.40%

-- Flow 2:

Average throughput: 67.09 Mbit/s

95th percentile per-packet one-way delay: 112.536 ms

Loss rate: 0.30%

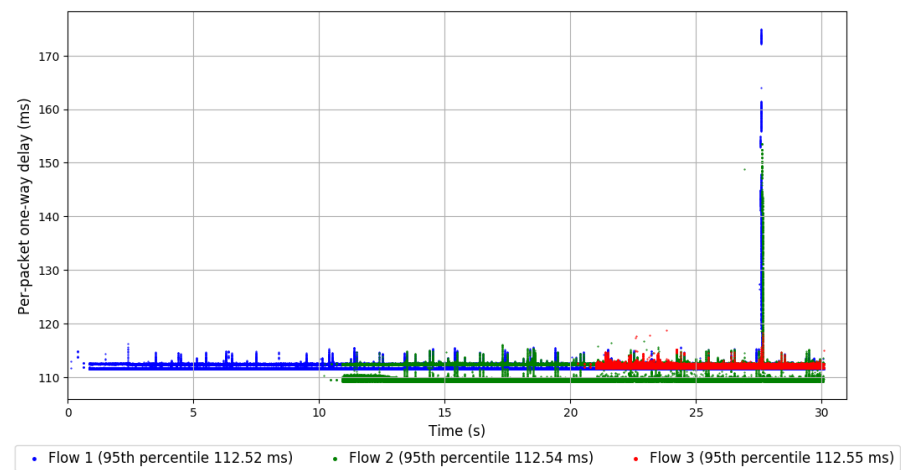
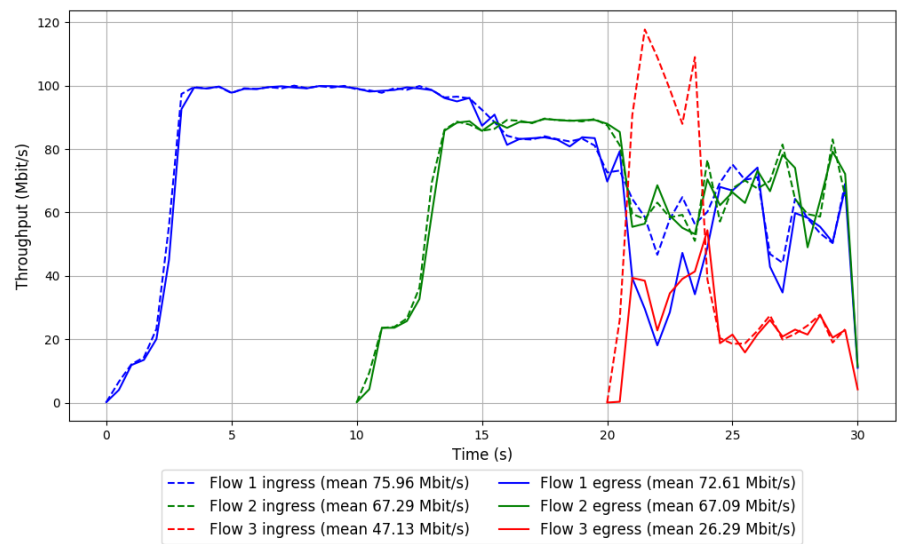
-- Flow 3:

Average throughput: 26.29 Mbit/s

95th percentile per-packet one-way delay: 112.547 ms

Loss rate: 44.20%

Run 6: Report of Copa — Data Link



Run 7: Statistics of Copa

Start at: 2017-08-21 03:10:45

End at: 2017-08-21 03:11:15

# Below is generated by plot.py at 2017-08-21 05:01:36

# Datalink statistics

-- Total of 3 flows:

Average throughput: 164.93 Mbit/s

95th percentile per-packet one-way delay: 112.975 ms

Loss rate: 0.86%

-- Flow 1:

Average throughput: 117.60 Mbit/s

95th percentile per-packet one-way delay: 112.994 ms

Loss rate: 0.11%

-- Flow 2:

Average throughput: 68.58 Mbit/s

95th percentile per-packet one-way delay: 112.824 ms

Loss rate: 0.00%

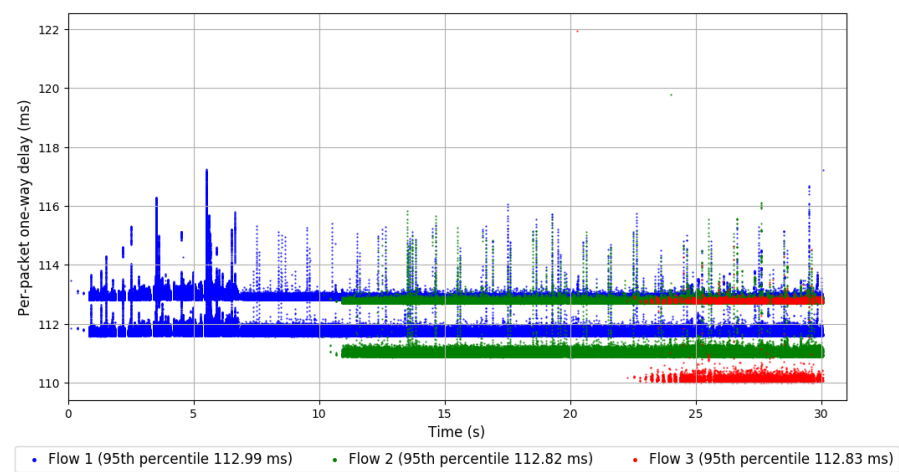
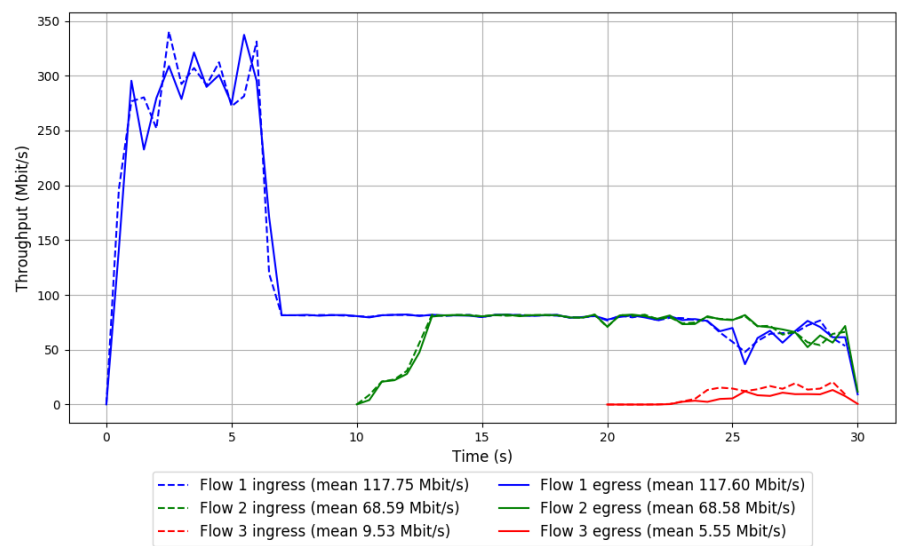
-- Flow 3:

Average throughput: 5.55 Mbit/s

95th percentile per-packet one-way delay: 112.827 ms

Loss rate: 41.81%

Run 7: Report of Copa — Data Link



Run 8: Statistics of Copa

Start at: 2017-08-21 03:23:51

End at: 2017-08-21 03:24:21

# Below is generated by plot.py at 2017-08-21 05:01:44

# Datalink statistics

-- Total of 3 flows:

Average throughput: 126.66 Mbit/s

95th percentile per-packet one-way delay: 112.982 ms

Loss rate: 0.04%

-- Flow 1:

Average throughput: 82.21 Mbit/s

95th percentile per-packet one-way delay: 112.924 ms

Loss rate: 0.07%

-- Flow 2:

Average throughput: 38.44 Mbit/s

95th percentile per-packet one-way delay: 113.105 ms

Loss rate: 0.00%

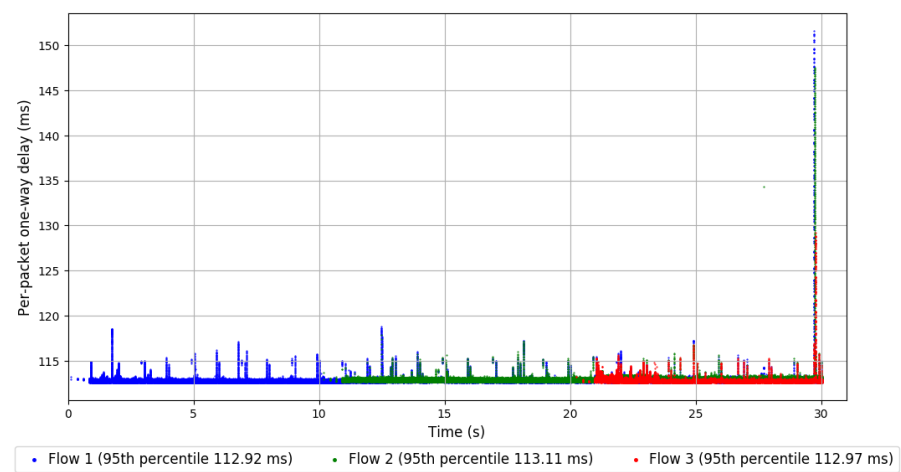
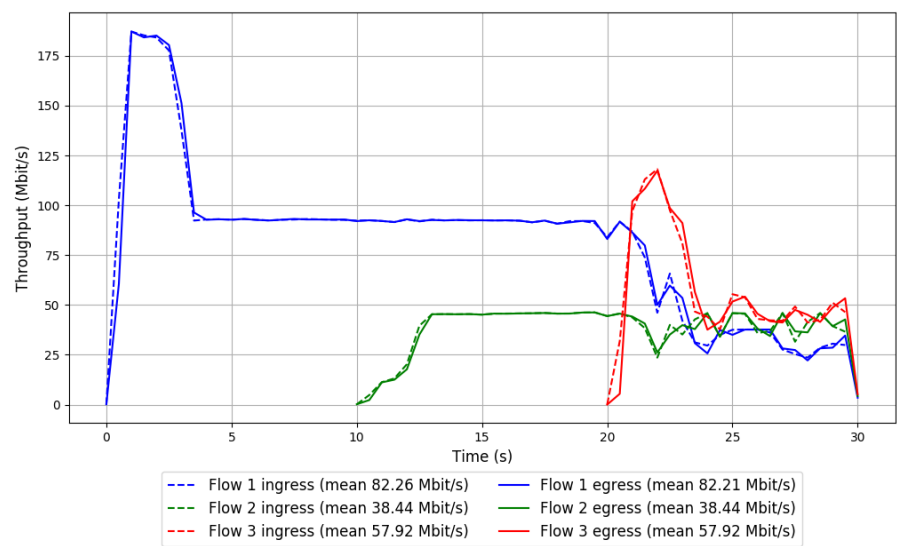
-- Flow 3:

Average throughput: 57.92 Mbit/s

95th percentile per-packet one-way delay: 112.967 ms

Loss rate: 0.00%

Run 8: Report of Copa — Data Link



Run 9: Statistics of Copa

Start at: 2017-08-21 03:36:41

End at: 2017-08-21 03:37:11

# Below is generated by plot.py at 2017-08-21 05:02:29

# Datalink statistics

-- Total of 3 flows:

Average throughput: 147.99 Mbit/s

95th percentile per-packet one-way delay: 112.278 ms

Loss rate: 1.37%

-- Flow 1:

Average throughput: 92.19 Mbit/s

95th percentile per-packet one-way delay: 112.271 ms

Loss rate: 2.18%

-- Flow 2:

Average throughput: 74.35 Mbit/s

95th percentile per-packet one-way delay: 110.770 ms

Loss rate: 0.00%

-- Flow 3:

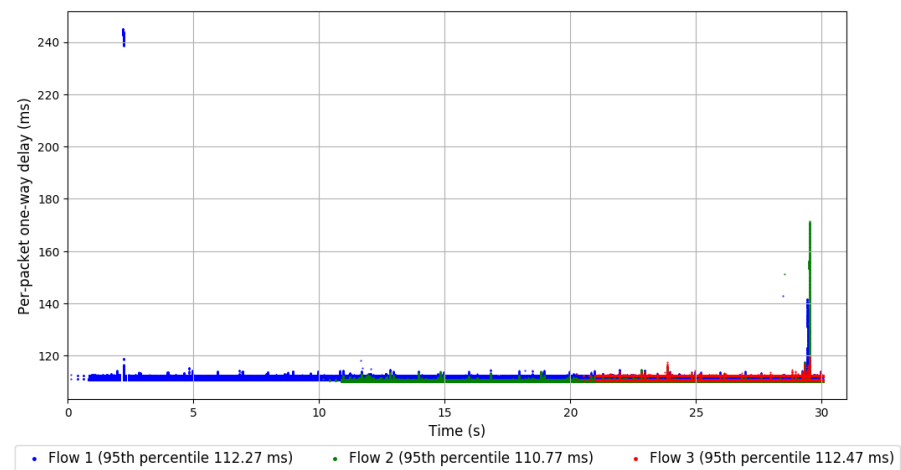
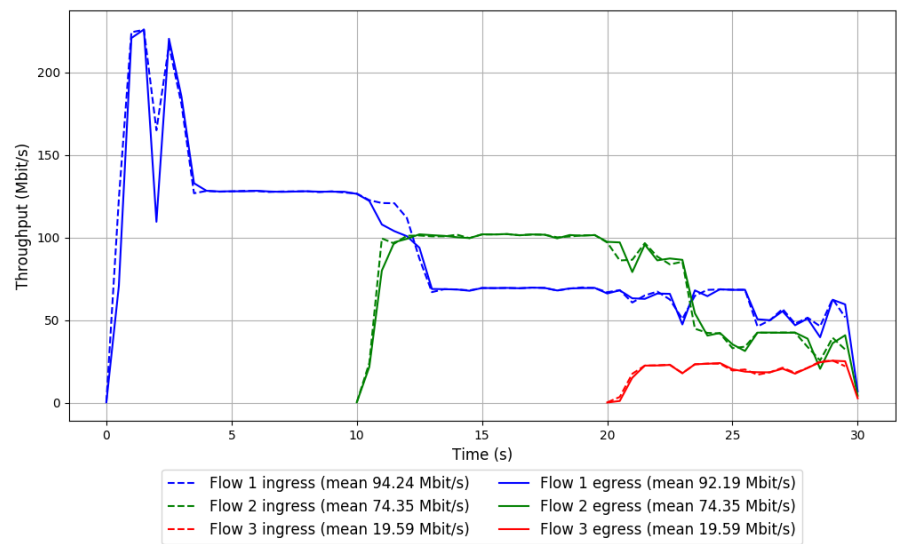
Average throughput: 19.59 Mbit/s

95th percentile per-packet one-way delay: 112.472 ms

Loss rate: 0.00%



Run 9: Report of Copa — Data Link



Run 10: Statistics of Copa

Start at: 2017-08-21 03:49:28

End at: 2017-08-21 03:49:58

# Below is generated by plot.py at 2017-08-21 05:02:43

# Datalink statistics

-- Total of 3 flows:

Average throughput: 142.84 Mbit/s

95th percentile per-packet one-way delay: 112.217 ms

Loss rate: 0.06%

-- Flow 1:

Average throughput: 97.64 Mbit/s

95th percentile per-packet one-way delay: 110.719 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 62.77 Mbit/s

95th percentile per-packet one-way delay: 112.252 ms

Loss rate: 0.19%

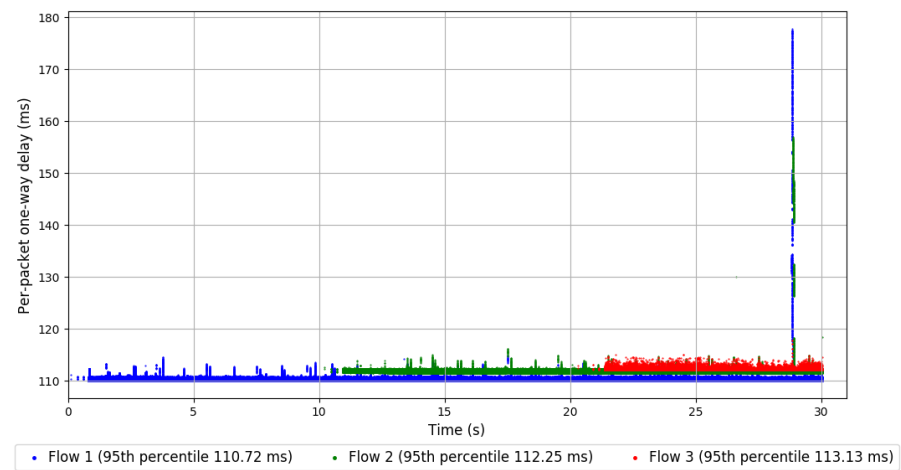
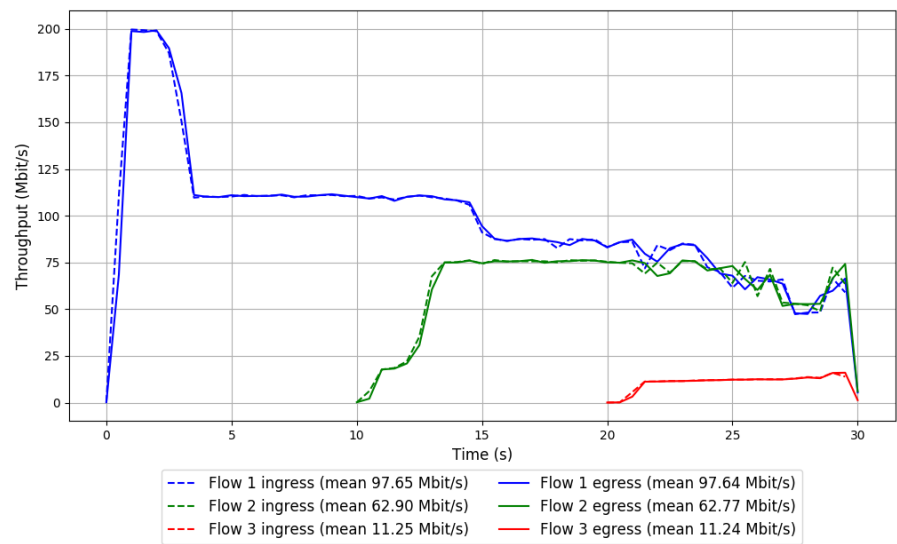
-- Flow 3:

Average throughput: 11.24 Mbit/s

95th percentile per-packet one-way delay: 113.131 ms

Loss rate: 0.14%

Run 10: Report of Copa — Data Link

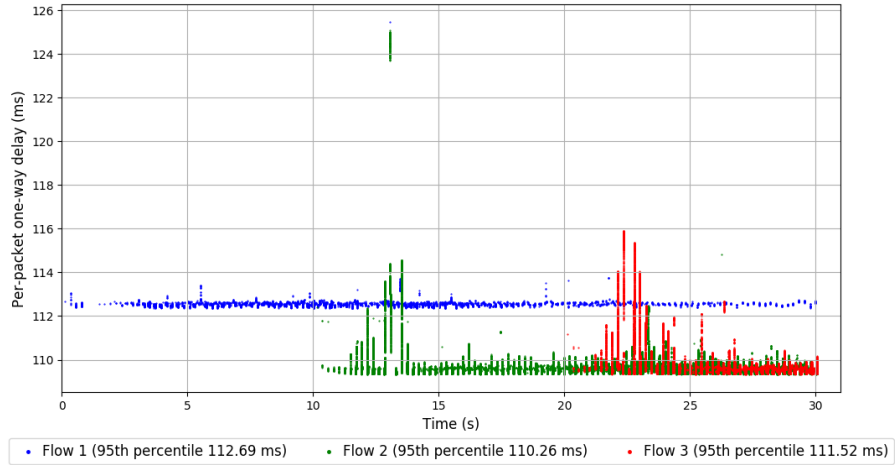
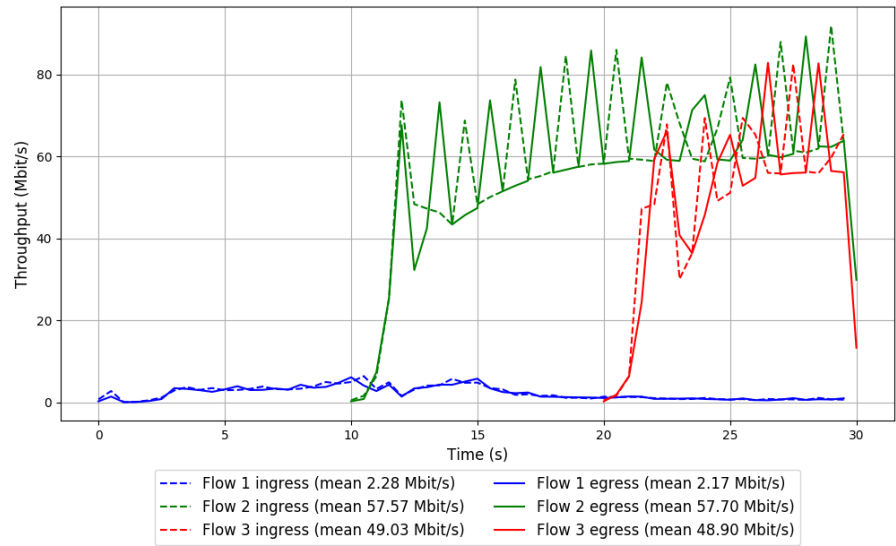


```
Run 1: Statistics of TCP Cubic

Start at: 2017-08-21 01:55:29
End at: 2017-08-21 01:55:59

# Below is generated by plot.py at 2017-08-21 05:02:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 56.73 Mbit/s
95th percentile per-packet one-way delay: 112.455 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 2.17 Mbit/s
95th percentile per-packet one-way delay: 112.692 ms
Loss rate: 4.67%
-- Flow 2:
Average throughput: 57.70 Mbit/s
95th percentile per-packet one-way delay: 110.264 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 48.90 Mbit/s
95th percentile per-packet one-way delay: 111.523 ms
Loss rate: 0.28%
```

# Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2017-08-21 02:07:43

End at: 2017-08-21 02:08:13

# Below is generated by plot.py at 2017-08-21 05:02:50

# Datalink statistics

-- Total of 3 flows:

Average throughput: 42.01 Mbit/s

95th percentile per-packet one-way delay: 112.948 ms

Loss rate: 0.35%

-- Flow 1:

Average throughput: 41.05 Mbit/s

95th percentile per-packet one-way delay: 112.787 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 0.89 Mbit/s

95th percentile per-packet one-way delay: 114.421 ms

Loss rate: 10.36%

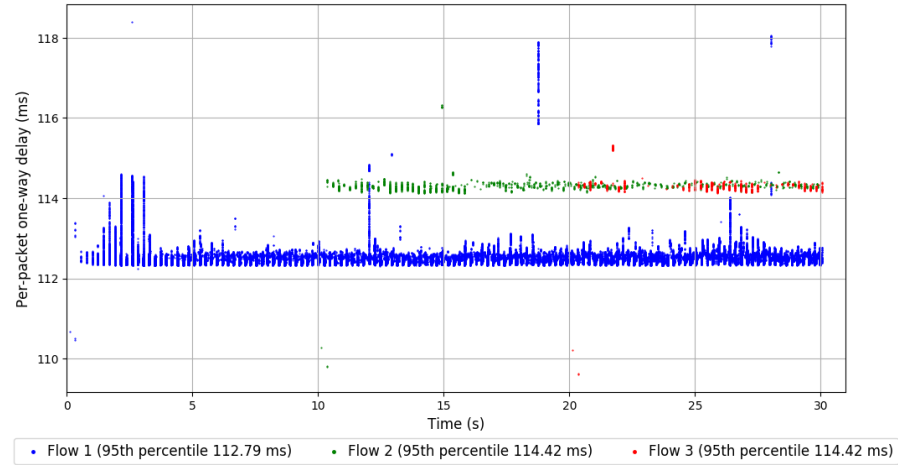
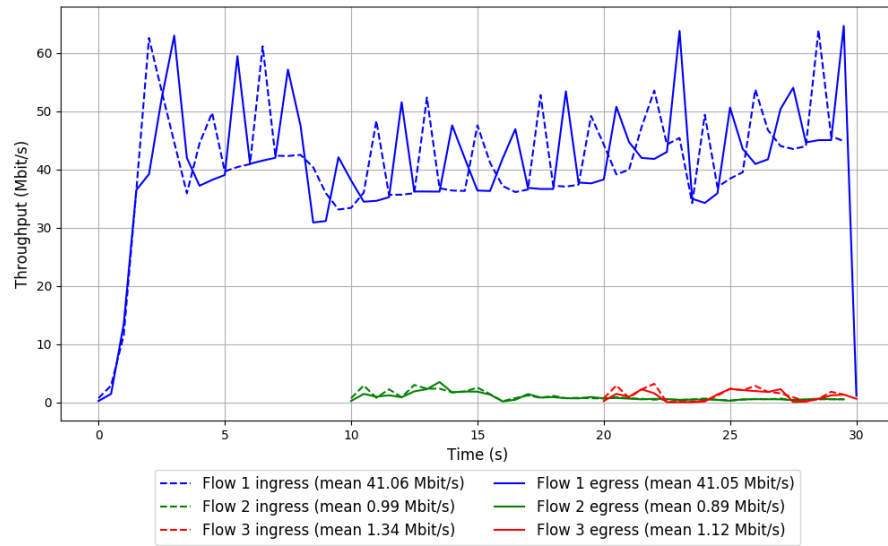
-- Flow 3:

Average throughput: 1.12 Mbit/s

95th percentile per-packet one-way delay: 114.423 ms

Loss rate: 16.77%

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



Run 3: Statistics of TCP Cubic

Start at: 2017-08-21 02:20:55

End at: 2017-08-21 02:21:25

# Below is generated by plot.py at 2017-08-21 05:02:51

# Datalink statistics

-- Total of 3 flows:

Average throughput: 35.63 Mbit/s

95th percentile per-packet one-way delay: 113.063 ms

Loss rate: 1.00%

-- Flow 1:

Average throughput: 2.32 Mbit/s

95th percentile per-packet one-way delay: 112.668 ms

Loss rate: 6.12%

-- Flow 2:

Average throughput: 49.19 Mbit/s

95th percentile per-packet one-way delay: 113.111 ms

Loss rate: 0.45%

-- Flow 3:

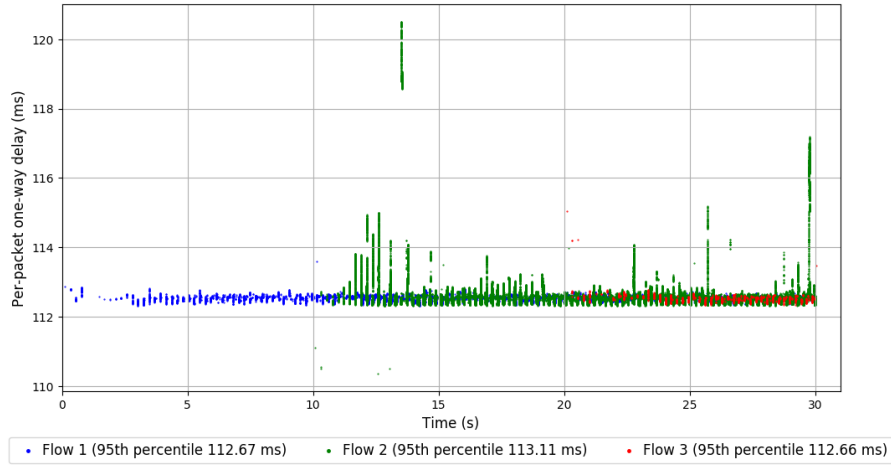
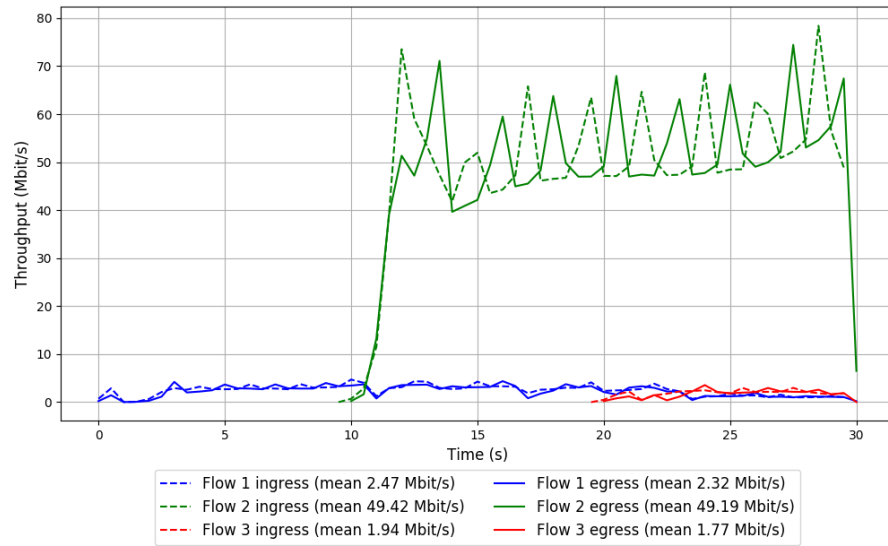
Average throughput: 1.77 Mbit/s

95th percentile per-packet one-way delay: 112.656 ms

Loss rate: 9.19%



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



Run 4: Statistics of TCP Cubic

Start at: 2017-08-21 02:33:33

End at: 2017-08-21 02:34:03

# Below is generated by plot.py at 2017-08-21 05:03:02

# Datalink statistics

-- Total of 3 flows:

Average throughput: 47.63 Mbit/s

95th percentile per-packet one-way delay: 114.118 ms

Loss rate: 0.53%

-- Flow 1:

Average throughput: 1.64 Mbit/s

95th percentile per-packet one-way delay: 112.723 ms

Loss rate: 5.90%

-- Flow 2:

Average throughput: 50.77 Mbit/s

95th percentile per-packet one-way delay: 114.341 ms

Loss rate: 0.13%

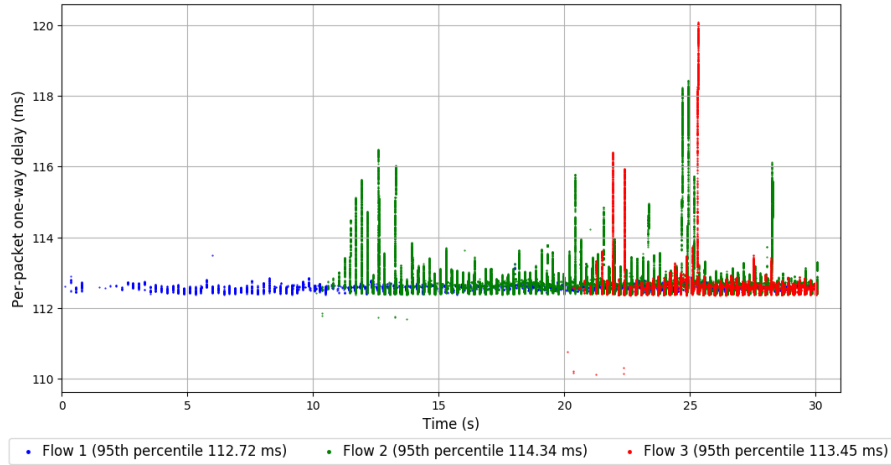
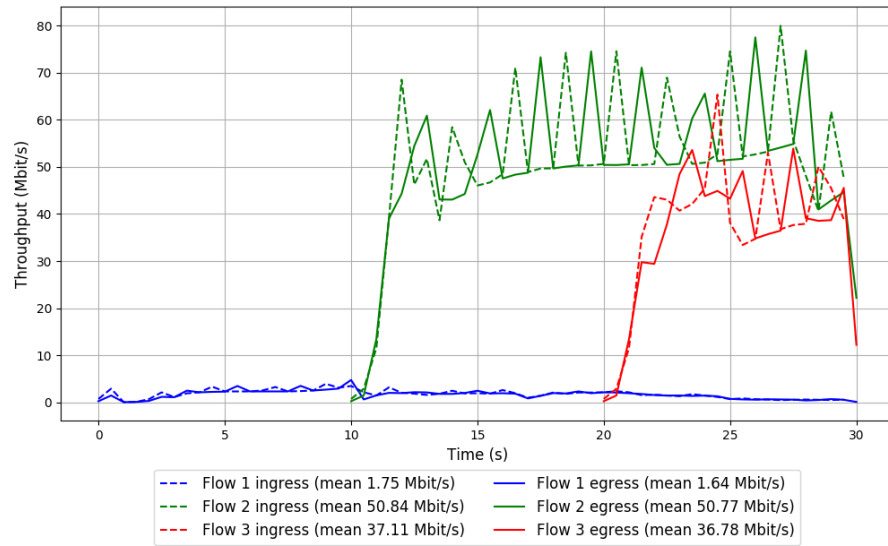
-- Flow 3:

Average throughput: 36.78 Mbit/s

95th percentile per-packet one-way delay: 113.448 ms

Loss rate: 0.87%

# Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2017-08-21 02:46:25

End at: 2017-08-21 02:46:55

# Below is generated by plot.py at 2017-08-21 05:03:02

# Datalink statistics

-- Total of 3 flows:

Average throughput: 8.50 Mbit/s

95th percentile per-packet one-way delay: 112.768 ms

Loss rate: 4.67%

-- Flow 1:

Average throughput: 4.81 Mbit/s

95th percentile per-packet one-way delay: 112.787 ms

Loss rate: 1.97%

-- Flow 2:

Average throughput: 3.44 Mbit/s

95th percentile per-packet one-way delay: 112.740 ms

Loss rate: 8.26%

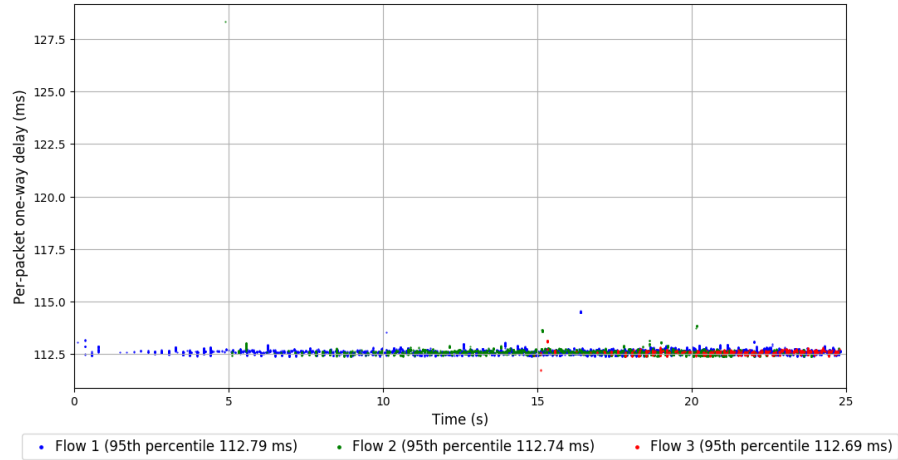
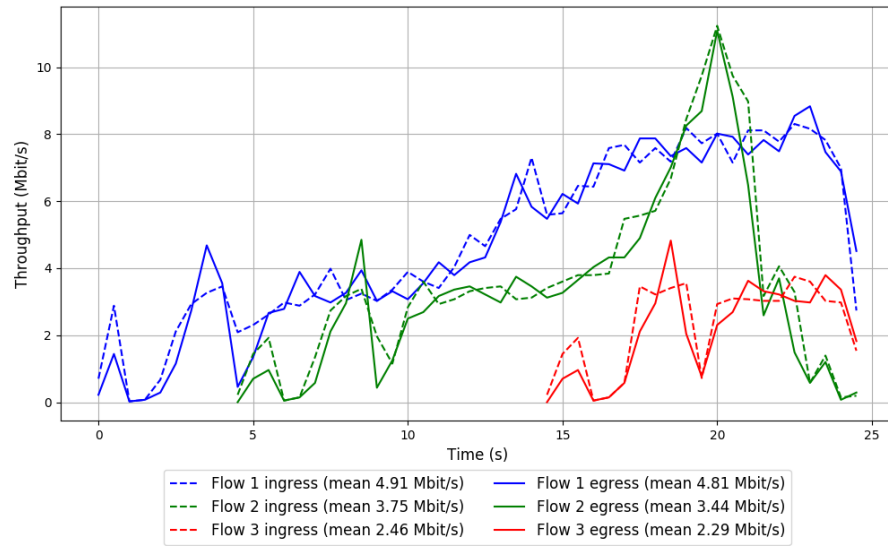
-- Flow 3:

Average throughput: 2.29 Mbit/s

95th percentile per-packet one-way delay: 112.690 ms

Loss rate: 7.14%

## Run 5: Report of TCP Cubic — Data Link



Run 6: Statistics of TCP Cubic

Start at: 2017-08-21 02:59:17

End at: 2017-08-21 02:59:47

# Below is generated by plot.py at 2017-08-21 05:03:02

# Datalink statistics

-- Total of 3 flows:

Average throughput: 6.77 Mbit/s

95th percentile per-packet one-way delay: 112.743 ms

Loss rate: 4.22%

-- Flow 1:

Average throughput: 2.89 Mbit/s

95th percentile per-packet one-way delay: 112.757 ms

Loss rate: 6.33%

-- Flow 2:

Average throughput: 4.79 Mbit/s

95th percentile per-packet one-way delay: 112.724 ms

Loss rate: 1.35%

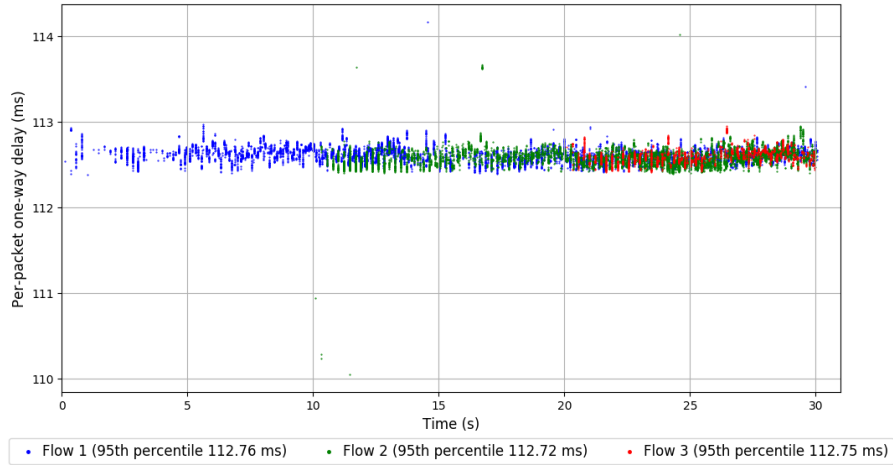
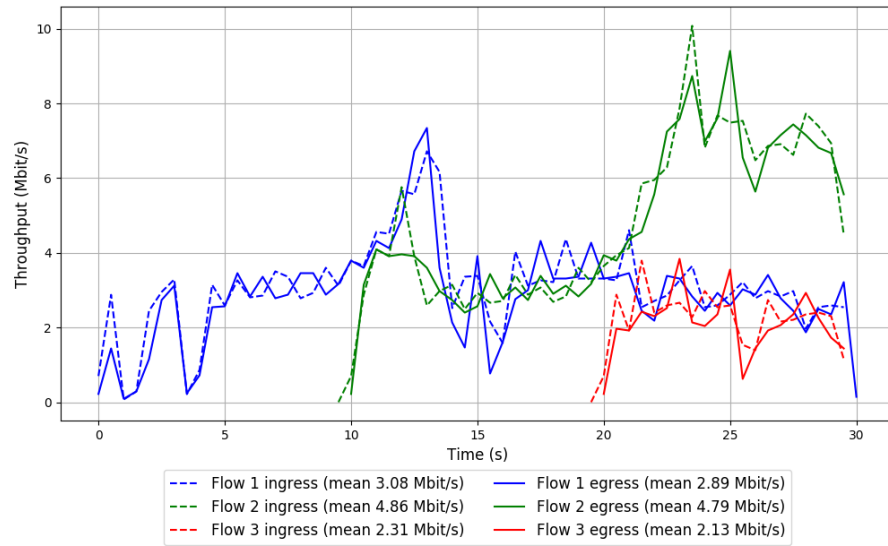
-- Flow 3:

Average throughput: 2.13 Mbit/s

95th percentile per-packet one-way delay: 112.747 ms

Loss rate: 7.79%

## Run 6: Report of TCP Cubic — Data Link



Run 7: Statistics of TCP Cubic

Start at: 2017-08-21 03:11:50

End at: 2017-08-21 03:12:20

# Below is generated by plot.py at 2017-08-21 05:03:02

# Datalink statistics

-- Total of 3 flows:

Average throughput: 23.23 Mbit/s

95th percentile per-packet one-way delay: 113.965 ms

Loss rate: 1.27%

-- Flow 1:

Average throughput: 2.58 Mbit/s

95th percentile per-packet one-way delay: 113.081 ms

Loss rate: 4.88%

-- Flow 2:

Average throughput: 2.52 Mbit/s

95th percentile per-packet one-way delay: 113.062 ms

Loss rate: 4.49%

-- Flow 3:

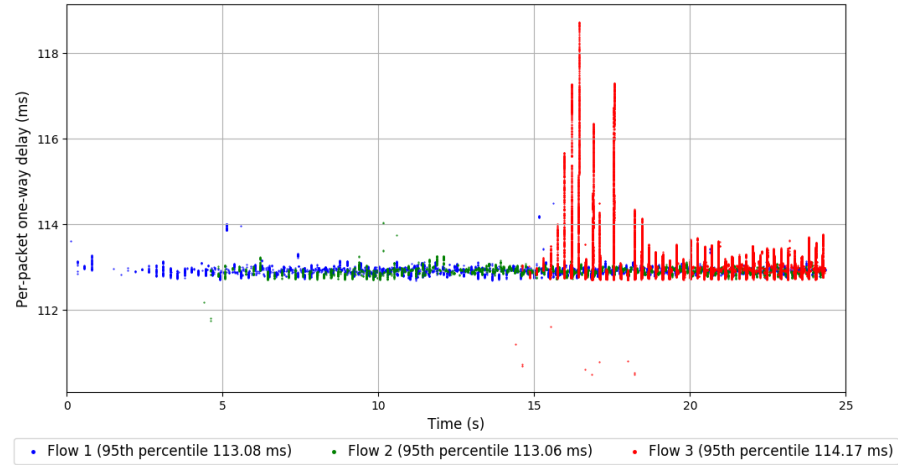
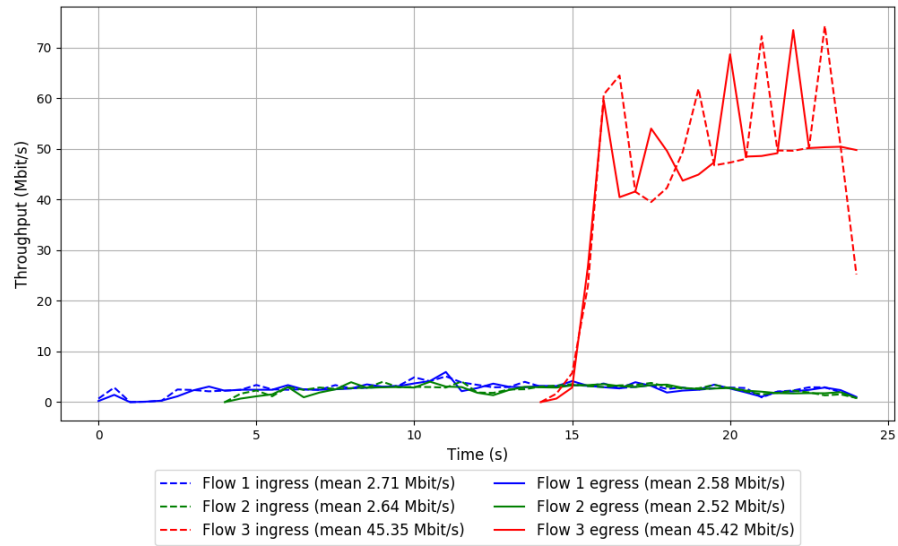
Average throughput: 45.42 Mbit/s

95th percentile per-packet one-way delay: 114.173 ms

Loss rate: 0.37%



## Run 7: Report of TCP Cubic — Data Link



Run 8: Statistics of TCP Cubic

Start at: 2017-08-21 03:24:53

End at: 2017-08-21 03:25:23

# Below is generated by plot.py at 2017-08-21 05:03:04

# Datalink statistics

-- Total of 3 flows:

Average throughput: 6.00 Mbit/s

95th percentile per-packet one-way delay: 113.057 ms

Loss rate: 3.02%

-- Flow 1:

Average throughput: 3.66 Mbit/s

95th percentile per-packet one-way delay: 113.054 ms

Loss rate: 1.37%

-- Flow 2:

Average throughput: 2.74 Mbit/s

95th percentile per-packet one-way delay: 113.056 ms

Loss rate: 3.18%

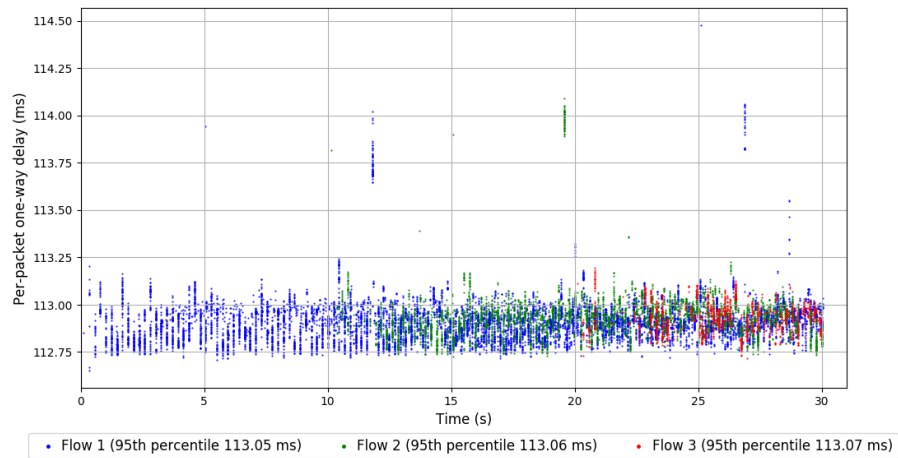
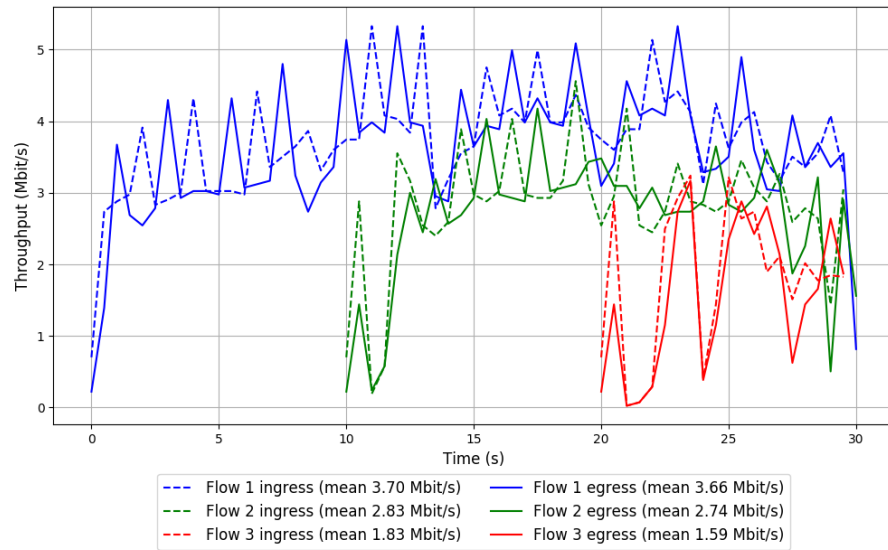
-- Flow 3:

Average throughput: 1.59 Mbit/s

95th percentile per-packet one-way delay: 113.068 ms

Loss rate: 12.71%

# Run 8: Report of TCP Cubic — Data Link



Run 9: Statistics of TCP Cubic

Start at: 2017-08-21 03:37:47

End at: 2017-08-21 03:38:17

# Below is generated by plot.py at 2017-08-21 05:03:09

# Datalink statistics

-- Total of 3 flows:

Average throughput: 21.50 Mbit/s

95th percentile per-packet one-way delay: 112.020 ms

Loss rate: 0.93%

-- Flow 1:

Average throughput: 3.57 Mbit/s

95th percentile per-packet one-way delay: 111.944 ms

Loss rate: 1.68%

-- Flow 2:

Average throughput: 2.45 Mbit/s

95th percentile per-packet one-way delay: 111.760 ms

Loss rate: 3.87%

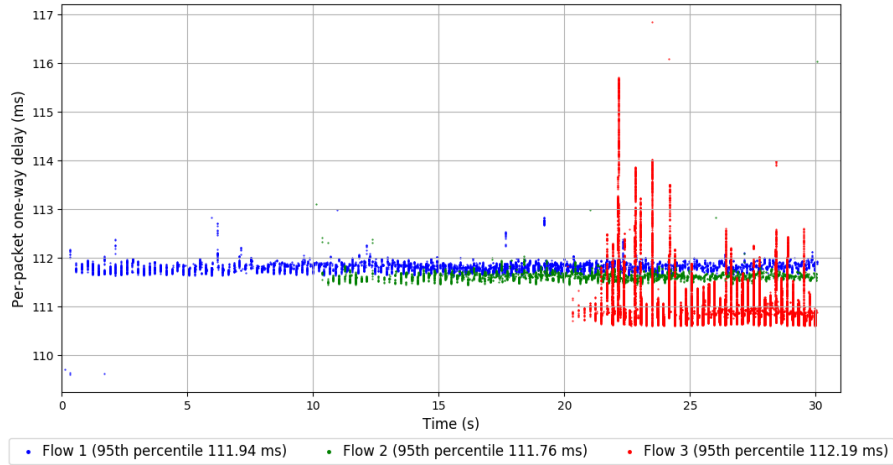
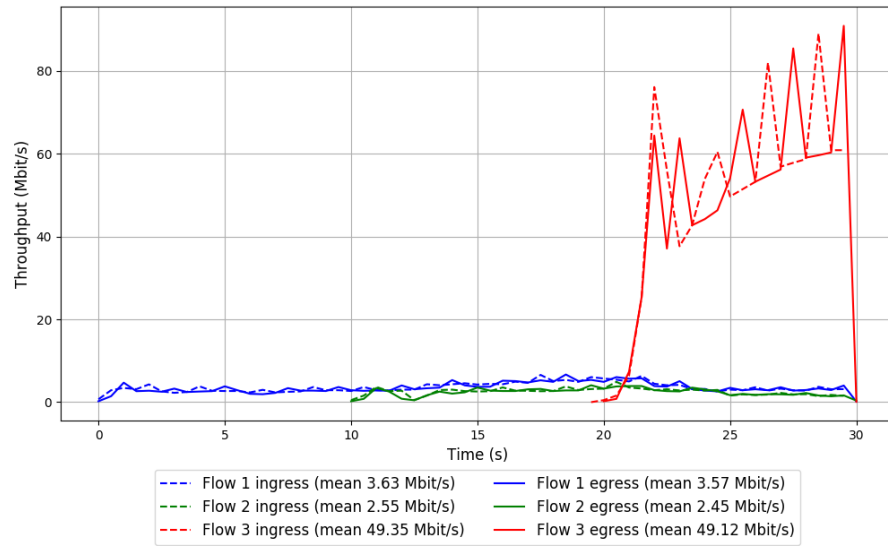
-- Flow 3:

Average throughput: 49.12 Mbit/s

95th percentile per-packet one-way delay: 112.193 ms

Loss rate: 0.46%

# Run 9: Report of TCP Cubic — Data Link



Run 10: Statistics of TCP Cubic

Start at: 2017-08-21 03:50:33

End at: 2017-08-21 03:51:03

# Below is generated by plot.py at 2017-08-21 05:03:09

# Datalink statistics

-- Total of 3 flows:

Average throughput: 6.84 Mbit/s

95th percentile per-packet one-way delay: 112.652 ms

Loss rate: 3.27%

-- Flow 1:

Average throughput: 3.78 Mbit/s

95th percentile per-packet one-way delay: 112.500 ms

Loss rate: 2.69%

-- Flow 2:

Average throughput: 3.24 Mbit/s

95th percentile per-packet one-way delay: 112.709 ms

Loss rate: 3.92%

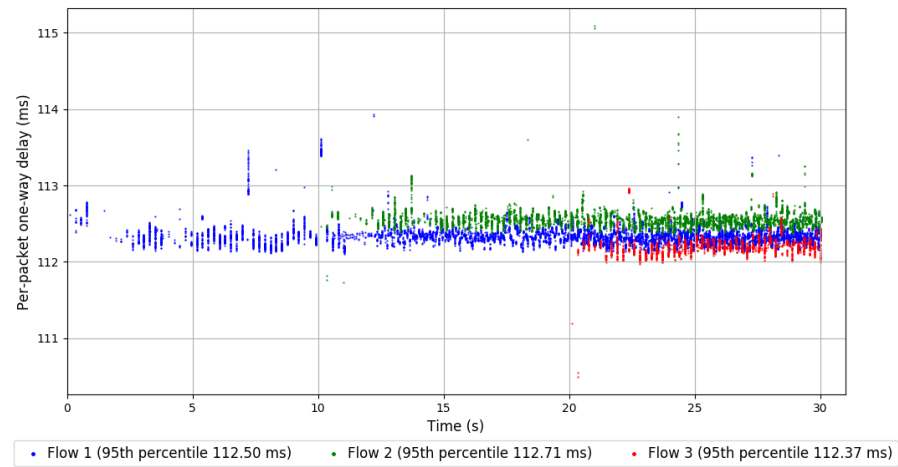
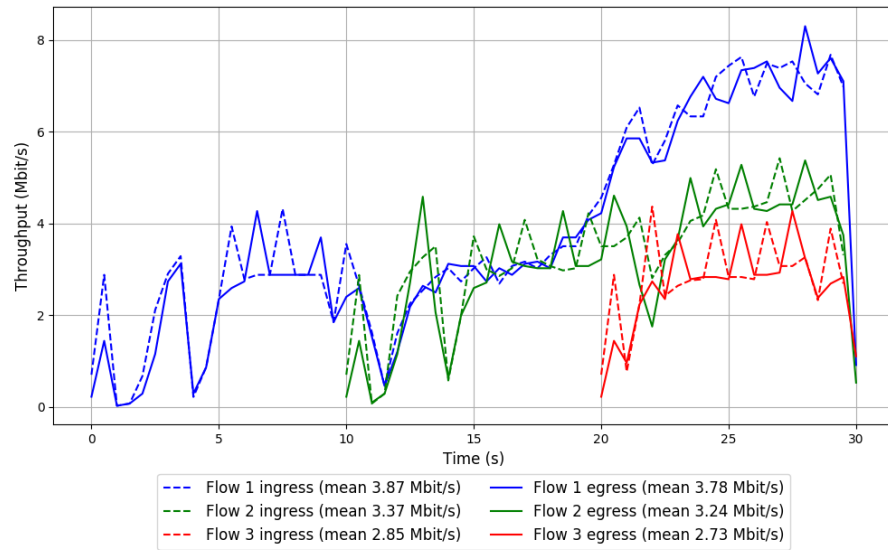
-- Flow 3:

Average throughput: 2.73 Mbit/s

95th percentile per-packet one-way delay: 112.373 ms

Loss rate: 4.08%

## Run 10: Report of TCP Cubic — Data Link



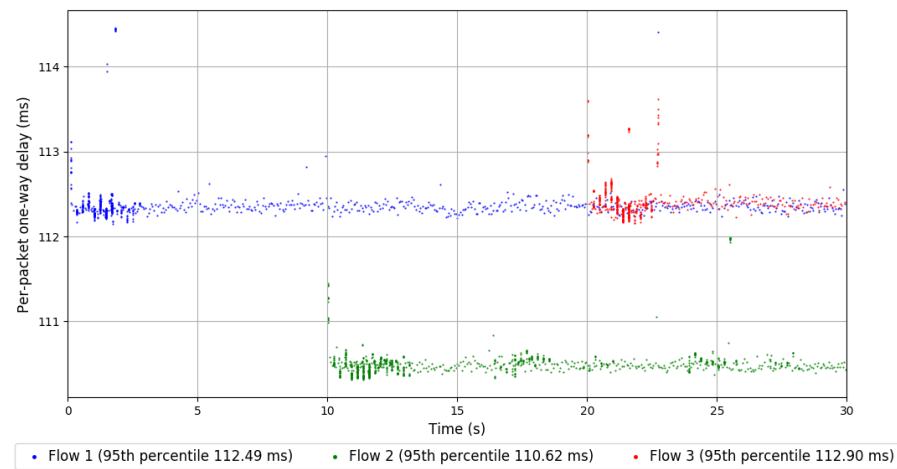
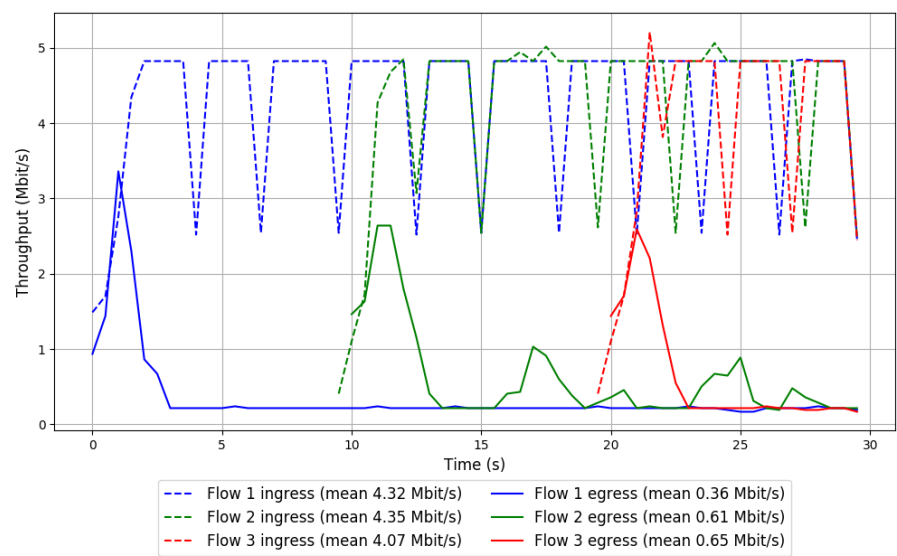
```
Run 1: Statistics of KohoCC

Start at: 2017-08-21 01:58:45
End at: 2017-08-21 01:59:15

# Below is generated by plot.py at 2017-08-21 05:03:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.98 Mbit/s
95th percentile per-packet one-way delay: 112.508 ms
Loss rate: 88.61%
-- Flow 1:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 112.494 ms
Loss rate: 91.75%
-- Flow 2:
Average throughput: 0.61 Mbit/s
95th percentile per-packet one-way delay: 110.624 ms
Loss rate: 86.03%
-- Flow 3:
Average throughput: 0.65 Mbit/s
95th percentile per-packet one-way delay: 112.902 ms
Loss rate: 84.13%
```



Run 1: Report of KohoCC — Data Link

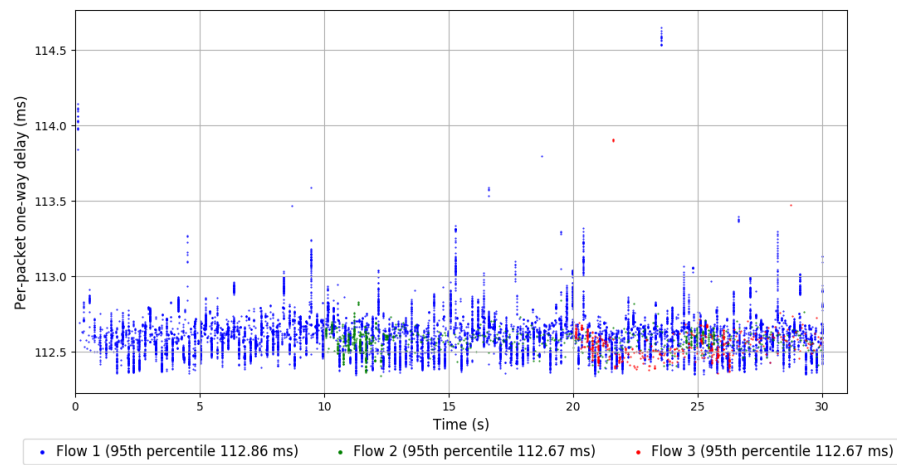
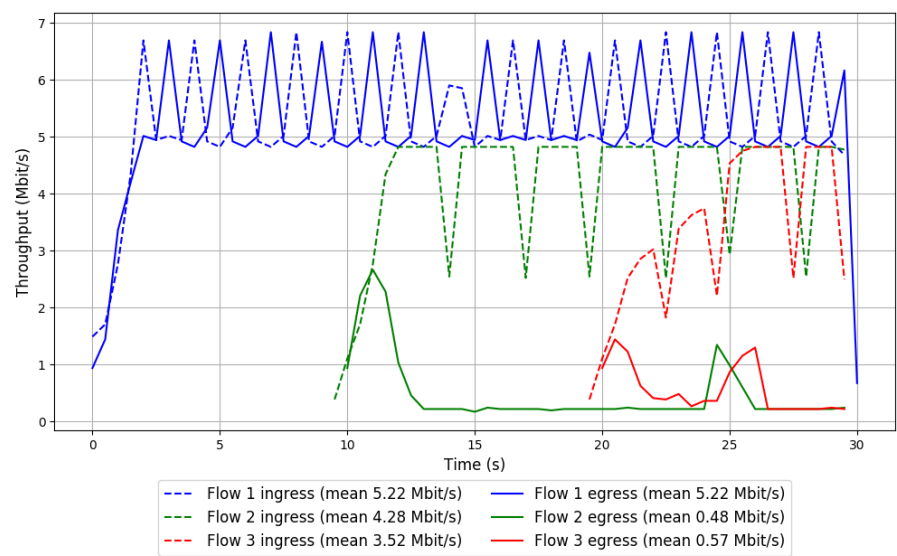


```
Run 2: Statistics of KohoCC

Start at: 2017-08-21 02:11:07
End at: 2017-08-21 02:11:37

# Below is generated by plot.py at 2017-08-21 05:03:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 5.73 Mbit/s
95th percentile per-packet one-way delay: 112.844 ms
Loss rate: 38.03%
-- Flow 1:
Average throughput: 5.22 Mbit/s
95th percentile per-packet one-way delay: 112.857 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 0.48 Mbit/s
95th percentile per-packet one-way delay: 112.672 ms
Loss rate: 88.74%
-- Flow 3:
Average throughput: 0.57 Mbit/s
95th percentile per-packet one-way delay: 112.671 ms
Loss rate: 83.73%
```

Run 2: Report of KohoCC — Data Link



Run 3: Statistics of KohoCC

Start at: 2017-08-21 02:24:18

End at: 2017-08-21 02:24:48

# Below is generated by plot.py at 2017-08-21 05:03:12

# Datalink statistics

-- Total of 3 flows:

Average throughput: 2.77 Mbit/s

95th percentile per-packet one-way delay: 114.382 ms

Loss rate: 68.33%

-- Flow 1:

Average throughput: 0.35 Mbit/s

95th percentile per-packet one-way delay: 114.551 ms

Loss rate: 91.71%

-- Flow 2:

Average throughput: 1.27 Mbit/s

95th percentile per-packet one-way delay: 112.900 ms

Loss rate: 70.94%

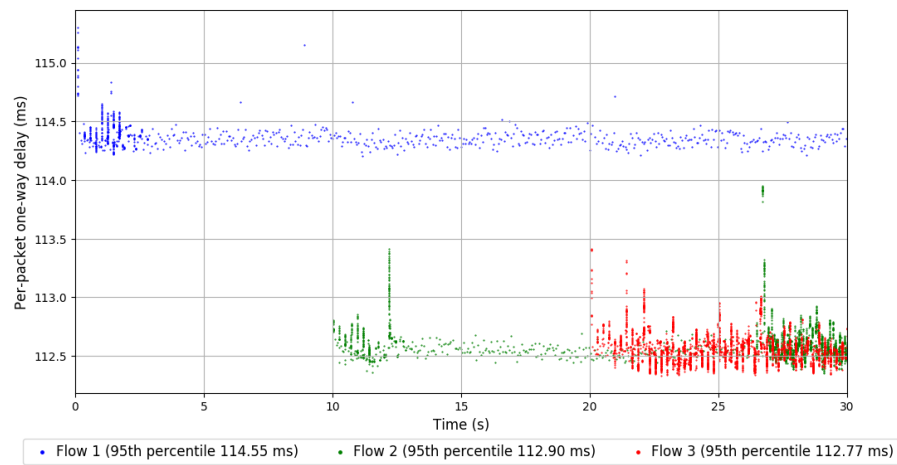
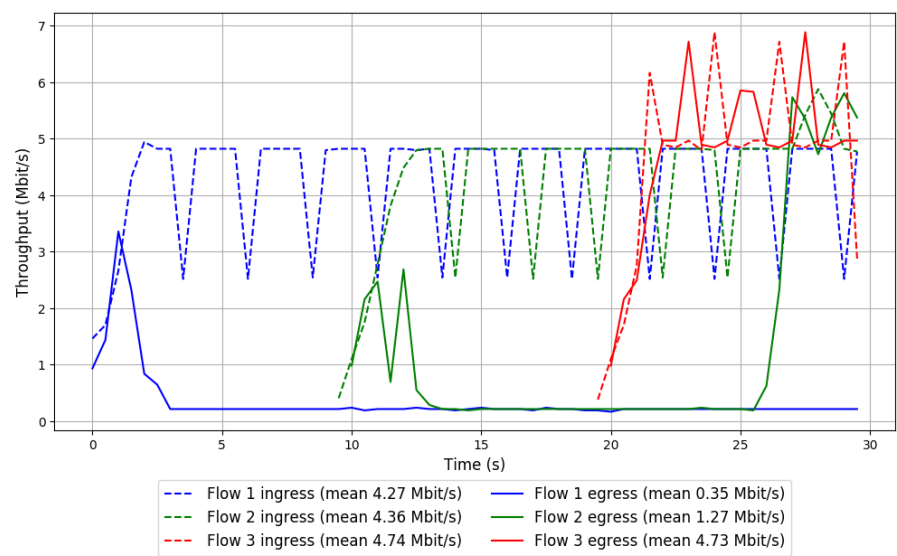
-- Flow 3:

Average throughput: 4.73 Mbit/s

95th percentile per-packet one-way delay: 112.773 ms

Loss rate: 0.23%

Run 3: Report of KohoCC — Data Link



Run 4: Statistics of KohoCC

Start at: 2017-08-21 02:36:56

End at: 2017-08-21 02:37:26

# Below is generated by plot.py at 2017-08-21 05:03:15

# Datalink statistics

-- Total of 3 flows:

Average throughput: 10.00 Mbit/s

95th percentile per-packet one-way delay: 112.700 ms

Loss rate: 1.54%

-- Flow 1:

Average throughput: 5.20 Mbit/s

95th percentile per-packet one-way delay: 112.683 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 4.78 Mbit/s

95th percentile per-packet one-way delay: 112.737 ms

Loss rate: 4.66%

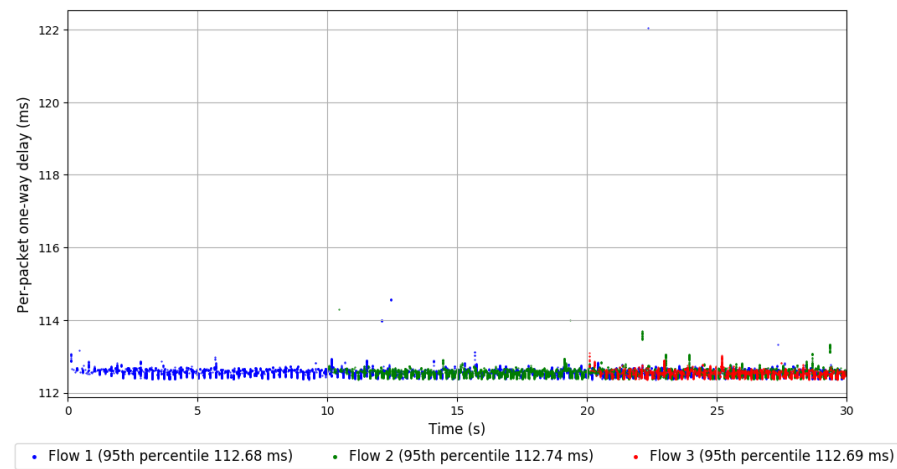
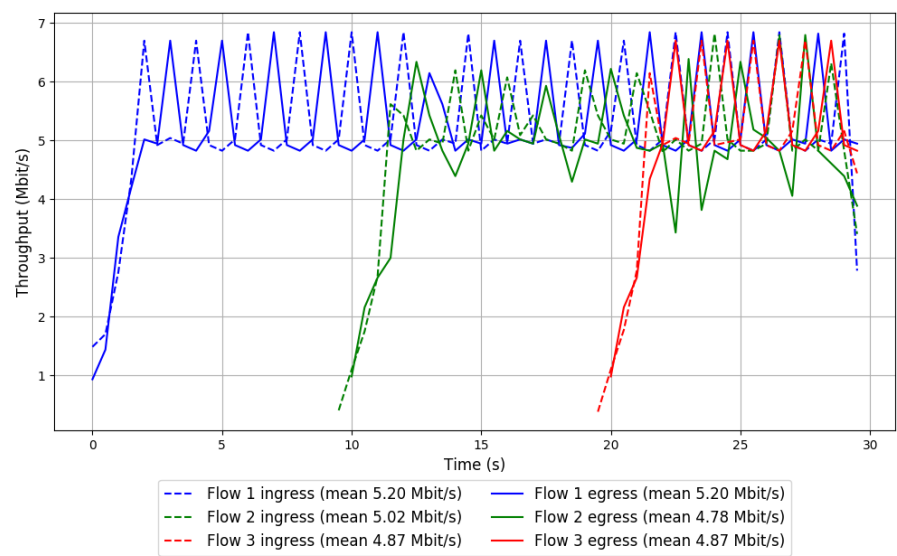
-- Flow 3:

Average throughput: 4.87 Mbit/s

95th percentile per-packet one-way delay: 112.691 ms

Loss rate: 0.00%

Run 4: Report of KohoCC — Data Link



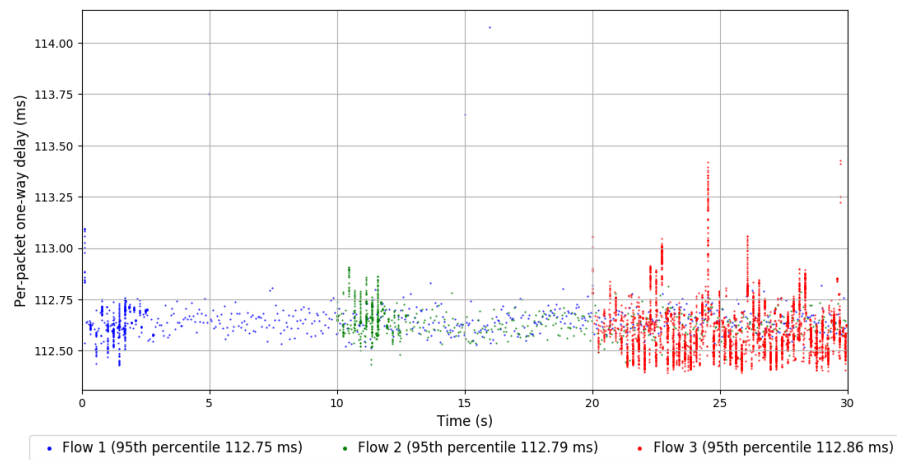
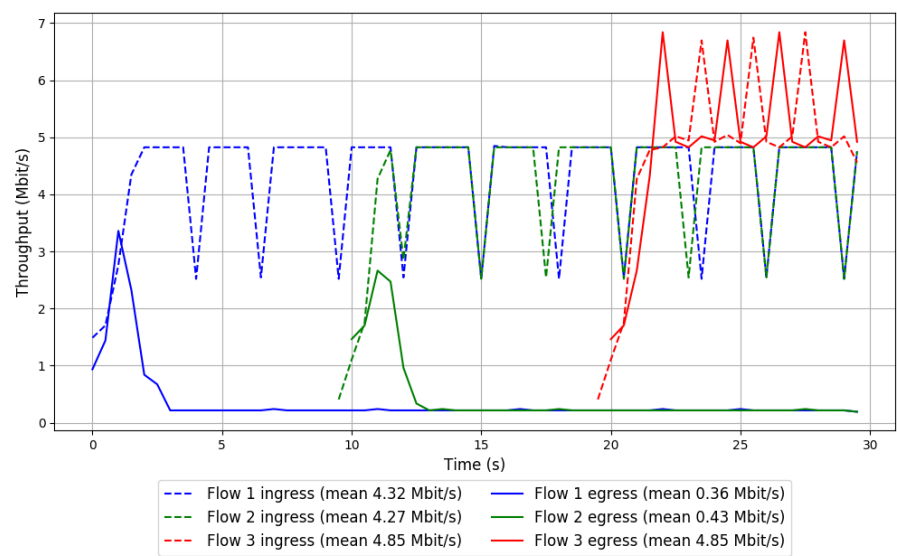
```
Run 5: Statistics of KohoCC

Start at: 2017-08-21 02:49:39
End at: 2017-08-21 02:50:09

# Below is generated by plot.py at 2017-08-21 05:03:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.26 Mbit/s
95th percentile per-packet one-way delay: 112.843 ms
Loss rate: 74.30%
-- Flow 1:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 112.750 ms
Loss rate: 91.71%
-- Flow 2:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 112.790 ms
Loss rate: 90.02%
-- Flow 3:
Average throughput: 4.85 Mbit/s
95th percentile per-packet one-way delay: 112.860 ms
Loss rate: 0.00%
```



Run 5: Report of KohoCC — Data Link



Run 6: Statistics of KohoCC

Start at: 2017-08-21 03:02:34

End at: 2017-08-21 03:03:04

# Below is generated by plot.py at 2017-08-21 05:03:18

# Datalink statistics

-- Total of 3 flows:

Average throughput: 10.00 Mbit/s

95th percentile per-packet one-way delay: 113.229 ms

Loss rate: 1.40%

-- Flow 1:

Average throughput: 5.19 Mbit/s

95th percentile per-packet one-way delay: 113.227 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 5.06 Mbit/s

95th percentile per-packet one-way delay: 113.232 ms

Loss rate: 0.10%

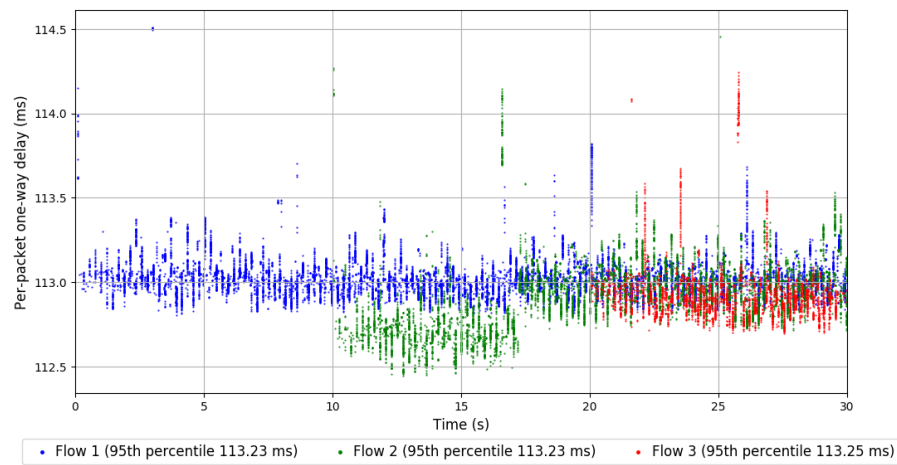
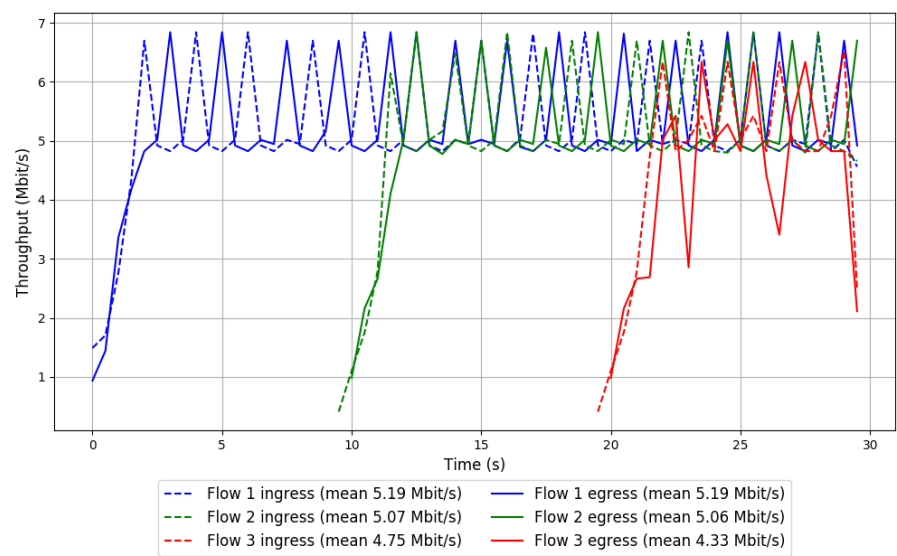
-- Flow 3:

Average throughput: 4.33 Mbit/s

95th percentile per-packet one-way delay: 113.255 ms

Loss rate: 8.79%

Run 6: Report of KohoCC — Data Link



Run 7: Statistics of KohoCC

Start at: 2017-08-21 03:15:06

End at: 2017-08-21 03:15:36

# Below is generated by plot.py at 2017-08-21 05:03:18

# Datalink statistics

-- Total of 3 flows:

Average throughput: 3.89 Mbit/s

95th percentile per-packet one-way delay: 113.399 ms

Loss rate: 56.77%

-- Flow 1:

Average throughput: 0.36 Mbit/s

95th percentile per-packet one-way delay: 113.173 ms

Loss rate: 91.75%

-- Flow 2:

Average throughput: 4.99 Mbit/s

95th percentile per-packet one-way delay: 113.417 ms

Loss rate: 0.56%

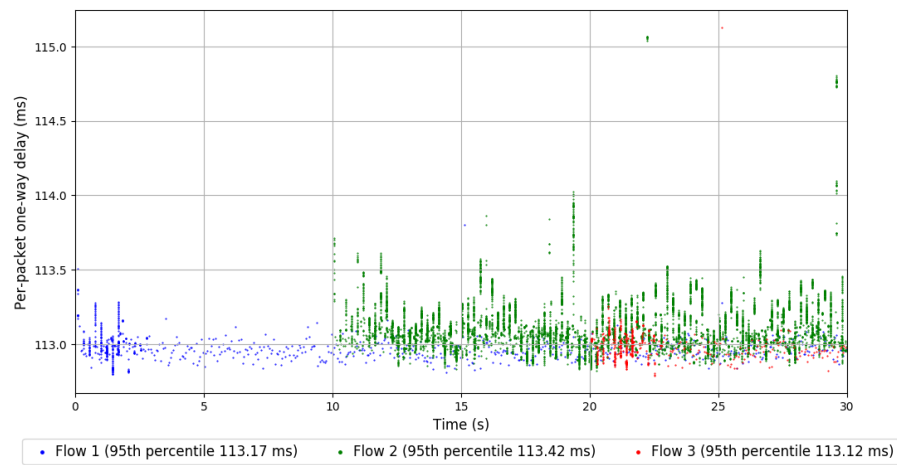
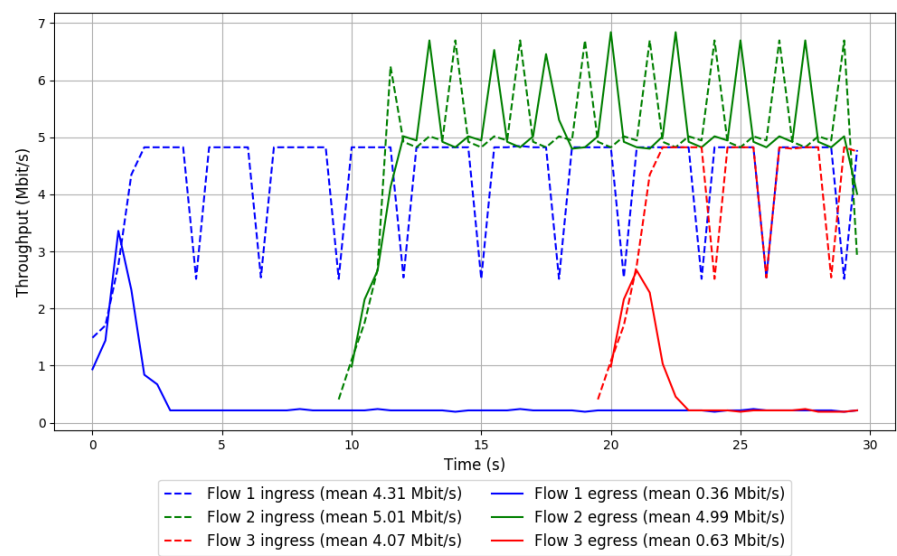
-- Flow 3:

Average throughput: 0.63 Mbit/s

95th percentile per-packet one-way delay: 113.121 ms

Loss rate: 84.44%

Run 7: Report of KohoCC — Data Link



Run 8: Statistics of KohoCC

Start at: 2017-08-21 03:28:14

End at: 2017-08-21 03:28:44

# Below is generated by plot.py at 2017-08-21 05:03:21

# Datalink statistics

-- Total of 3 flows:

Average throughput: 10.09 Mbit/s

95th percentile per-packet one-way delay: 113.176 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 5.14 Mbit/s

95th percentile per-packet one-way delay: 113.188 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 5.07 Mbit/s

95th percentile per-packet one-way delay: 113.170 ms

Loss rate: 0.00%

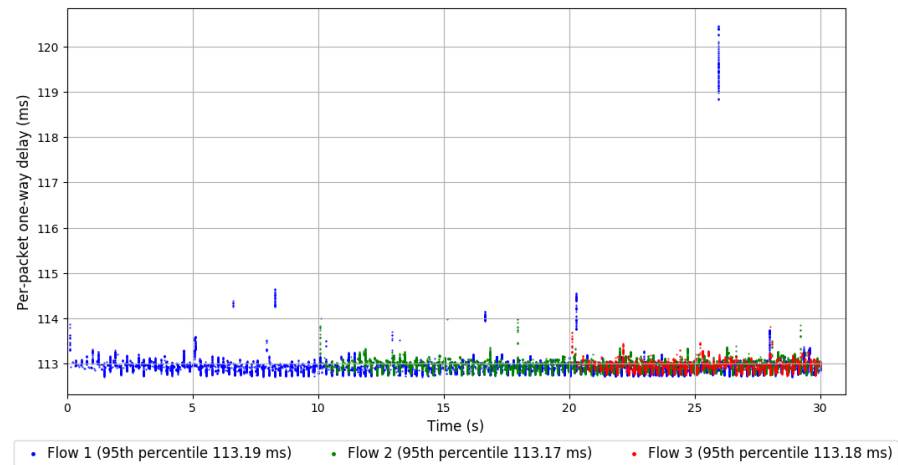
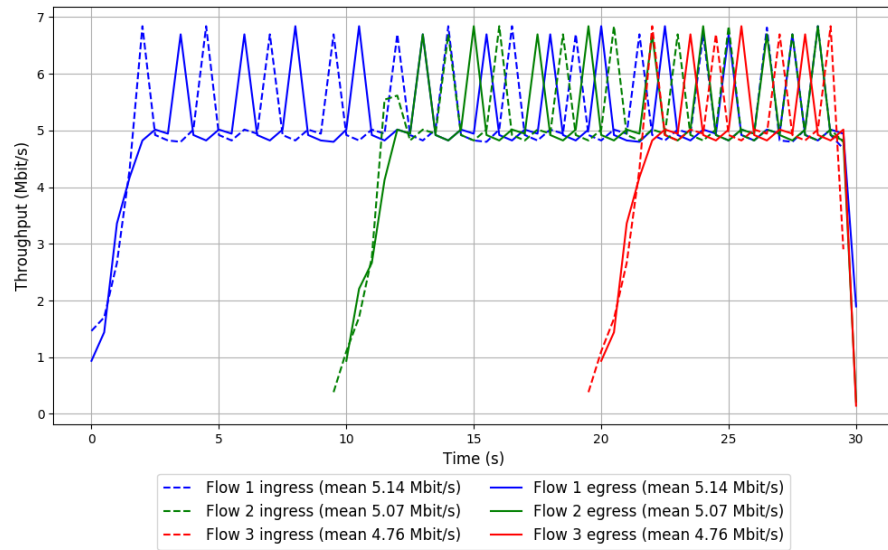
-- Flow 3:

Average throughput: 4.76 Mbit/s

95th percentile per-packet one-way delay: 113.176 ms

Loss rate: 0.00%

## Run 8: Report of KohoCC — Data Link



Run 9: Statistics of KohoCC

Start at: 2017-08-21 03:41:02

End at: 2017-08-21 03:41:32

# Below is generated by plot.py at 2017-08-21 05:03:22

# Datalink statistics

-- Total of 3 flows:

Average throughput: 6.48 Mbit/s

95th percentile per-packet one-way delay: 112.282 ms

Loss rate: 31.61%

-- Flow 1:

Average throughput: 4.65 Mbit/s

95th percentile per-packet one-way delay: 111.723 ms

Loss rate: 9.00%

-- Flow 2:

Average throughput: 0.60 Mbit/s

95th percentile per-packet one-way delay: 112.907 ms

Loss rate: 85.83%

-- Flow 3:

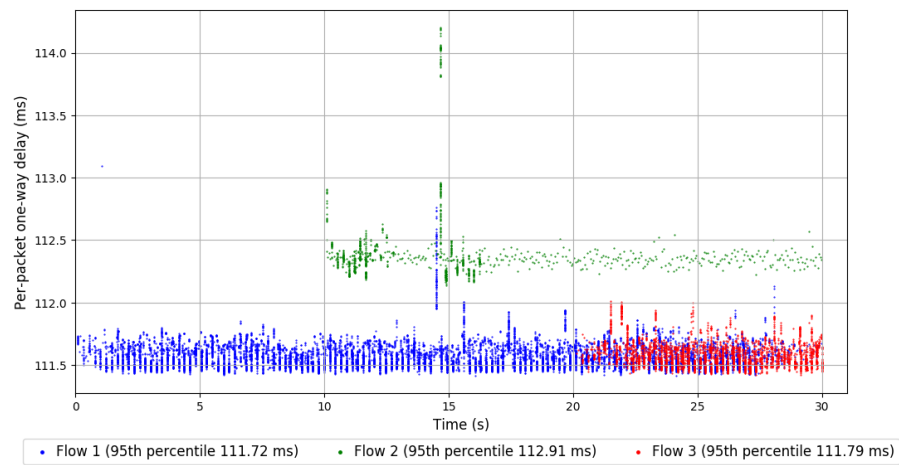
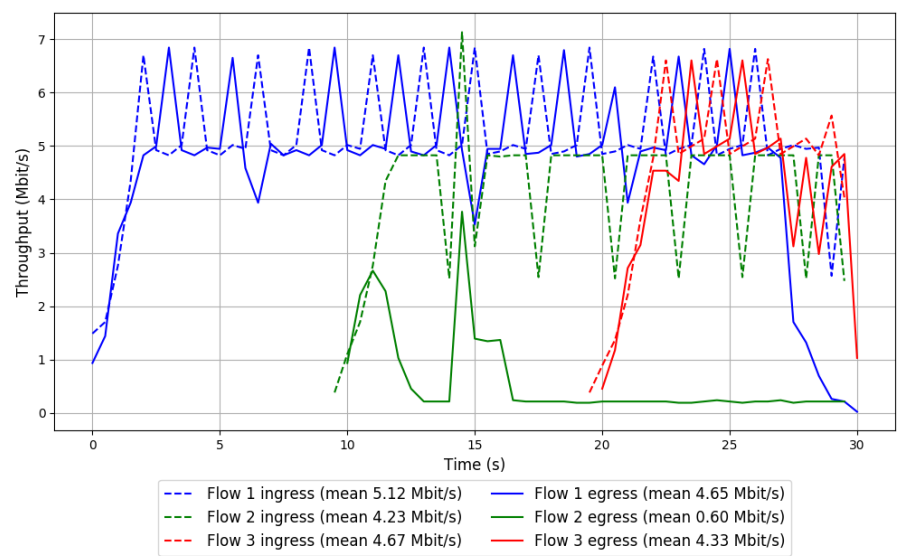
Average throughput: 4.33 Mbit/s

95th percentile per-packet one-way delay: 111.786 ms

Loss rate: 7.63%



Run 9: Report of KohoCC — Data Link

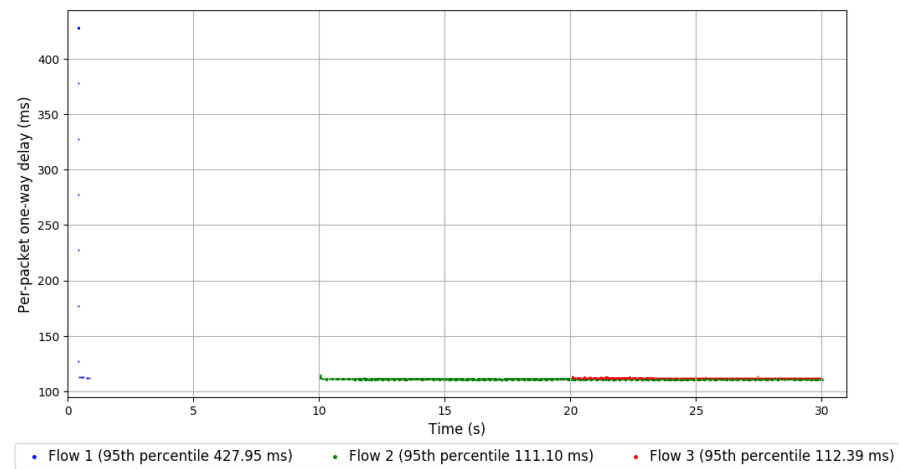
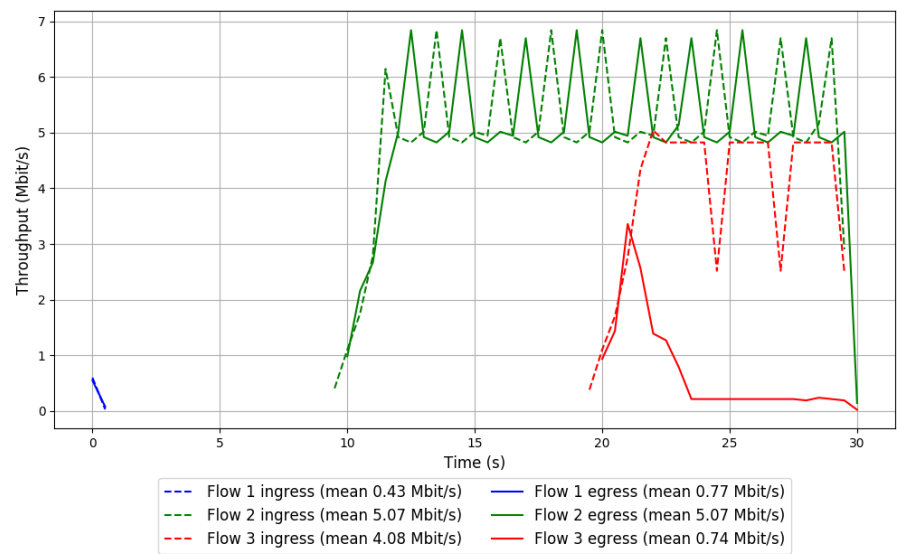


```
Run 10: Statistics of KohoCC

Start at: 2017-08-21 03:53:46
End at: 2017-08-21 03:54:16

# Below is generated by plot.py at 2017-08-21 05:03:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.68 Mbit/s
95th percentile per-packet one-way delay: 112.168 ms
Loss rate: 23.34%
-- Flow 1:
Average throughput: 0.77 Mbit/s
95th percentile per-packet one-way delay: 427.952 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 5.07 Mbit/s
95th percentile per-packet one-way delay: 111.104 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 0.74 Mbit/s
95th percentile per-packet one-way delay: 112.389 ms
Loss rate: 81.96%
```

Run 10: Report of KohoCC — Data Link

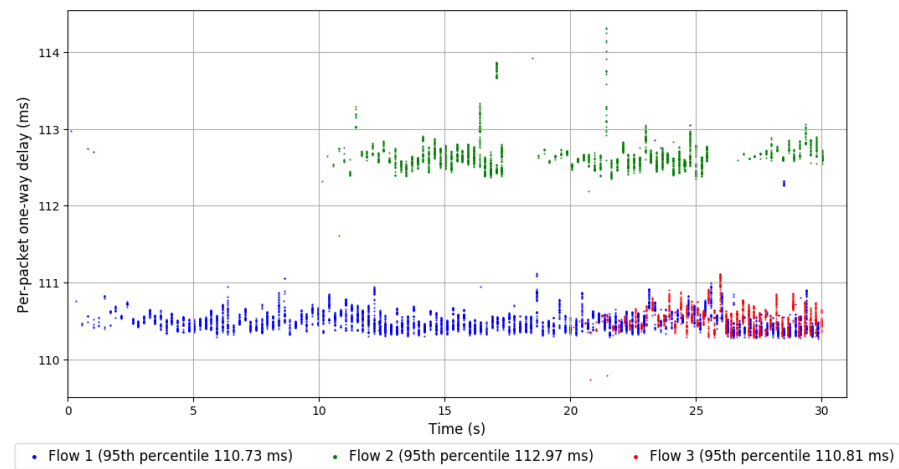
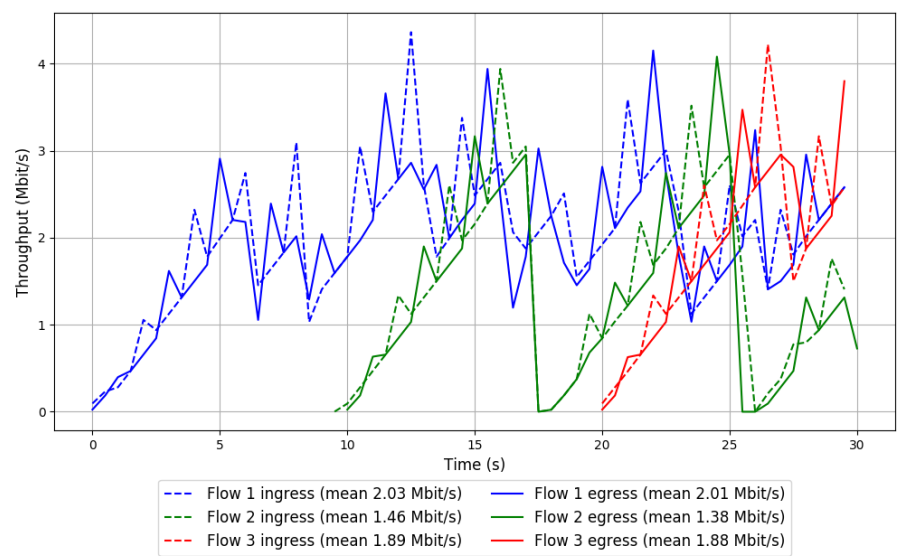


```
Run 1: Statistics of LEDBAT

Start at: 2017-08-21 01:51:16
End at: 2017-08-21 01:51:46

# Below is generated by plot.py at 2017-08-21 05:03:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.53 Mbit/s
95th percentile per-packet one-way delay: 112.733 ms
Loss rate: 2.30%
-- Flow 1:
Average throughput: 2.01 Mbit/s
95th percentile per-packet one-way delay: 110.731 ms
Loss rate: 1.34%
-- Flow 2:
Average throughput: 1.38 Mbit/s
95th percentile per-packet one-way delay: 112.971 ms
Loss rate: 5.37%
-- Flow 3:
Average throughput: 1.88 Mbit/s
95th percentile per-packet one-way delay: 110.806 ms
Loss rate: 0.63%
```

Run 1: Report of LEDBAT — Data Link

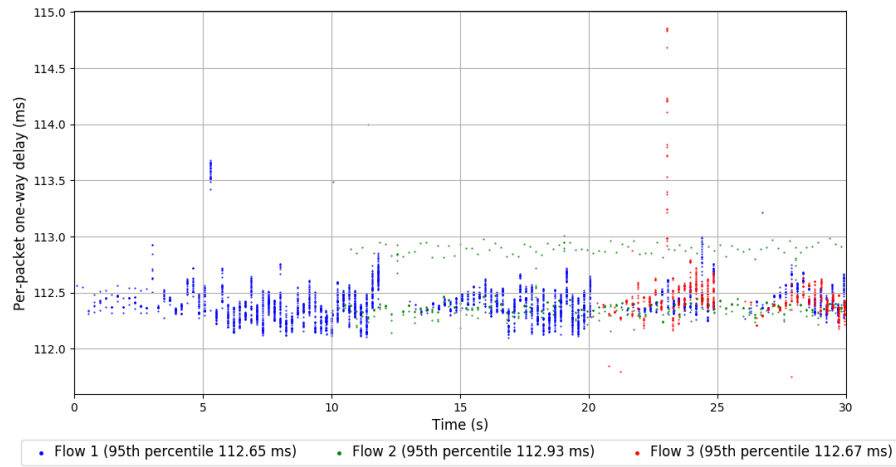
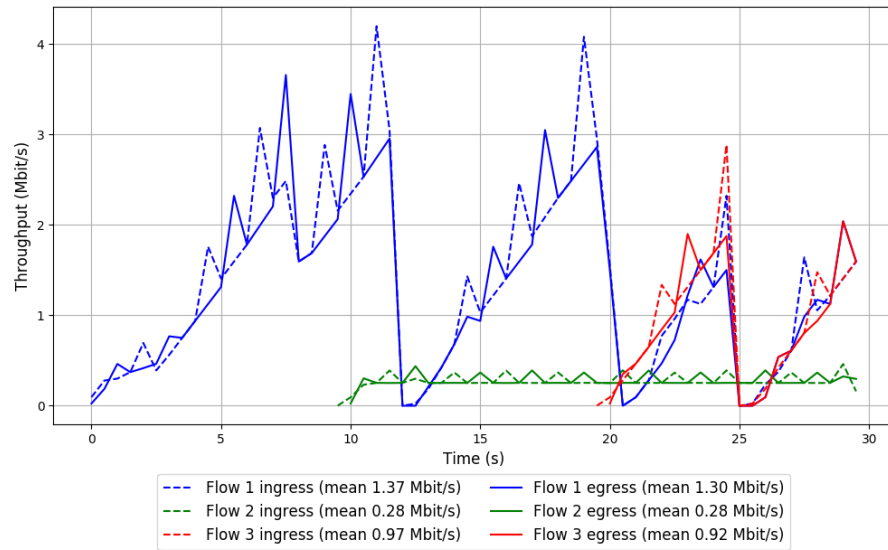


```
Run 2: Statistics of LEDBAT

Start at: 2017-08-21 02:03:32
End at: 2017-08-21 02:04:02

# Below is generated by plot.py at 2017-08-21 05:03:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.79 Mbit/s
95th percentile per-packet one-way delay: 112.699 ms
Loss rate: 4.40%
-- Flow 1:
Average throughput: 1.30 Mbit/s
95th percentile per-packet one-way delay: 112.653 ms
Loss rate: 4.80%
-- Flow 2:
Average throughput: 0.28 Mbit/s
95th percentile per-packet one-way delay: 112.931 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.92 Mbit/s
95th percentile per-packet one-way delay: 112.675 ms
Loss rate: 5.28%
```

## Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2017-08-21 02:16:36

End at: 2017-08-21 02:17:06

# Below is generated by plot.py at 2017-08-21 05:03:27

# Datalink statistics

-- Total of 3 flows:

Average throughput: 3.26 Mbit/s

95th percentile per-packet one-way delay: 114.707 ms

Loss rate: 2.76%

-- Flow 1:

Average throughput: 1.62 Mbit/s

95th percentile per-packet one-way delay: 115.012 ms

Loss rate: 4.21%

-- Flow 2:

Average throughput: 1.36 Mbit/s

95th percentile per-packet one-way delay: 114.617 ms

Loss rate: 2.32%

-- Flow 3:

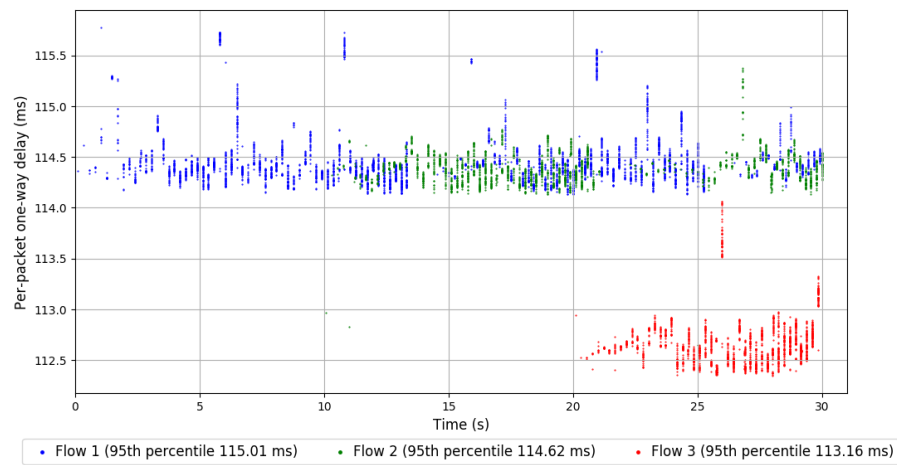
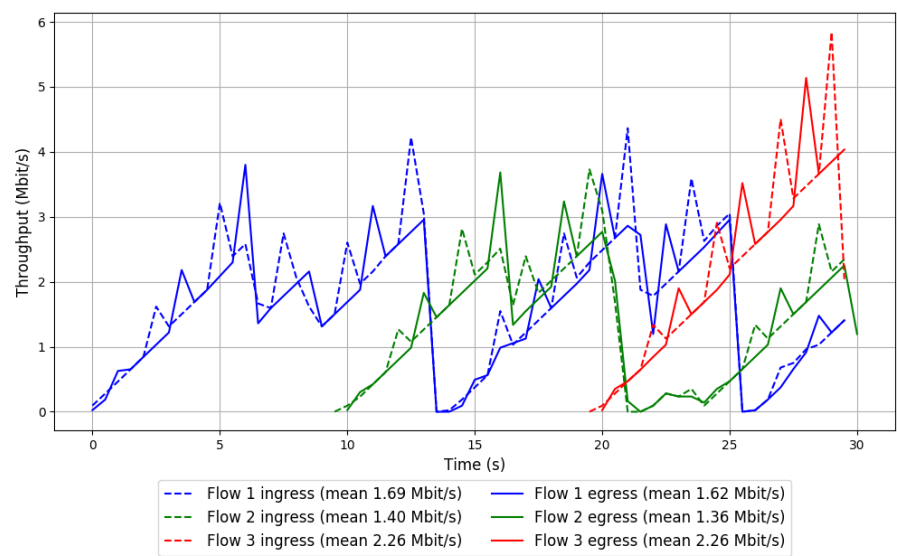
Average throughput: 2.26 Mbit/s

95th percentile per-packet one-way delay: 113.156 ms

Loss rate: 0.00%



Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2017-08-21 02:29:14

End at: 2017-08-21 02:29:44

# Below is generated by plot.py at 2017-08-21 05:03:29

# Datalink statistics

-- Total of 3 flows:

Average throughput: 4.95 Mbit/s

95th percentile per-packet one-way delay: 113.030 ms

Loss rate: 1.95%

-- Flow 1:

Average throughput: 1.41 Mbit/s

95th percentile per-packet one-way delay: 112.876 ms

Loss rate: 5.17%

-- Flow 2:

Average throughput: 4.79 Mbit/s

95th percentile per-packet one-way delay: 113.094 ms

Loss rate: 0.00%

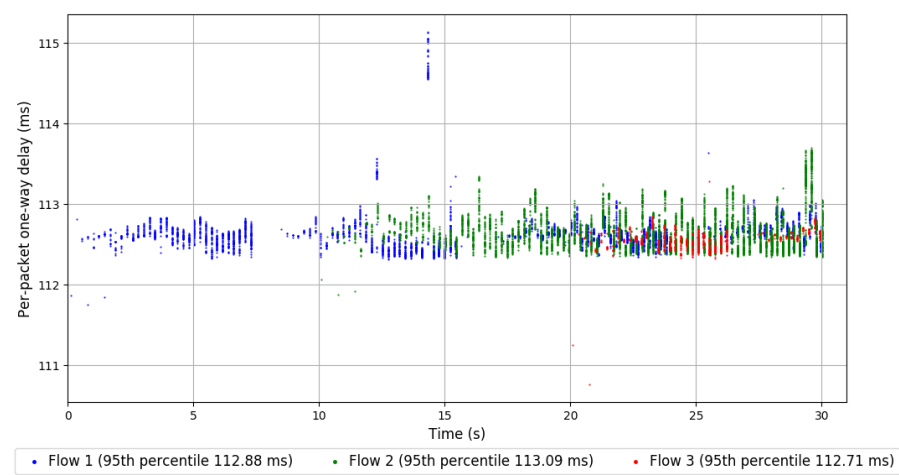
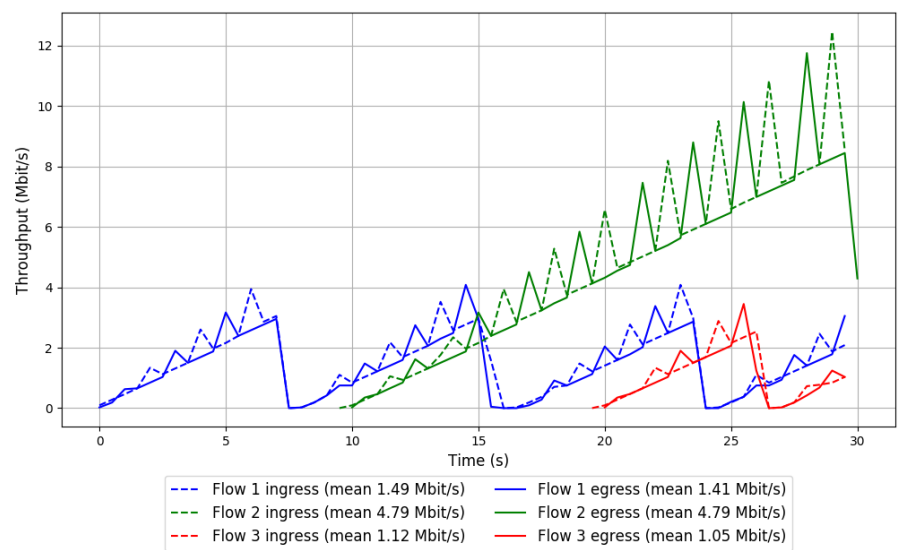
-- Flow 3:

Average throughput: 1.05 Mbit/s

95th percentile per-packet one-way delay: 112.714 ms

Loss rate: 5.87%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2017-08-21 02:42:04

End at: 2017-08-21 02:42:34

# Below is generated by plot.py at 2017-08-21 05:03:29

# Datalink statistics

-- Total of 3 flows:

Average throughput: 3.36 Mbit/s

95th percentile per-packet one-way delay: 112.982 ms

Loss rate: 3.06%

-- Flow 1:

Average throughput: 1.32 Mbit/s

95th percentile per-packet one-way delay: 112.903 ms

Loss rate: 5.24%

-- Flow 2:

Average throughput: 2.43 Mbit/s

95th percentile per-packet one-way delay: 113.049 ms

Loss rate: 0.44%

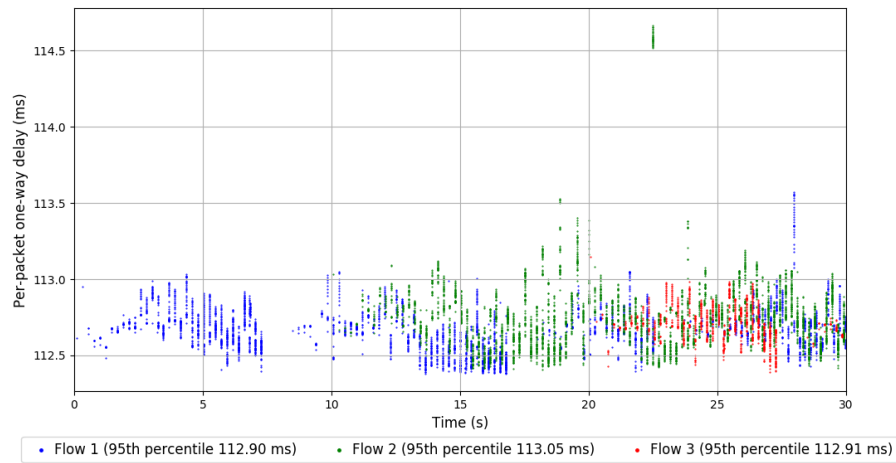
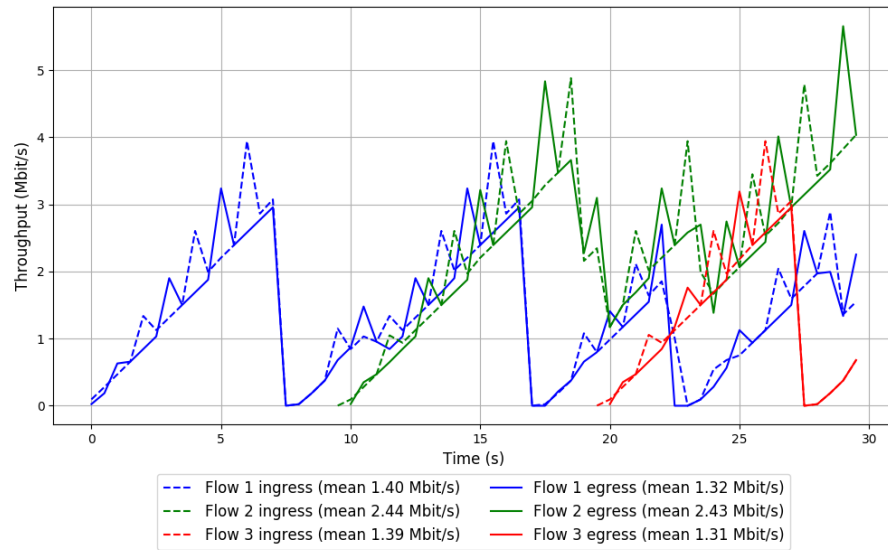
-- Flow 3:

Average throughput: 1.31 Mbit/s

95th percentile per-packet one-way delay: 112.908 ms

Loss rate: 5.72%

## Run 5: Report of LEDBAT — Data Link



Run 6: Statistics of LEDBAT

Start at: 2017-08-21 02:54:59

End at: 2017-08-21 02:55:29

# Below is generated by plot.py at 2017-08-21 05:03:31

# Datalink statistics

-- Total of 3 flows:

Average throughput: 3.01 Mbit/s

95th percentile per-packet one-way delay: 112.862 ms

Loss rate: 4.00%

-- Flow 1:

Average throughput: 1.68 Mbit/s

95th percentile per-packet one-way delay: 112.857 ms

Loss rate: 2.75%

-- Flow 2:

Average throughput: 1.35 Mbit/s

95th percentile per-packet one-way delay: 112.830 ms

Loss rate: 5.43%

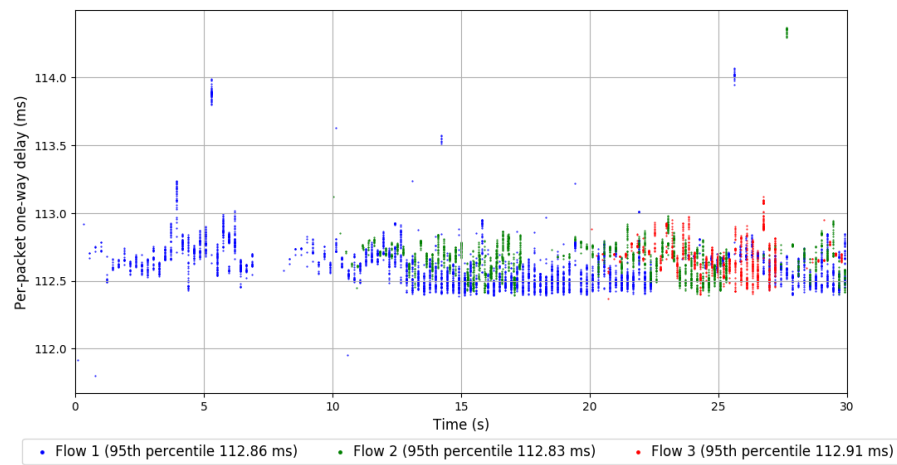
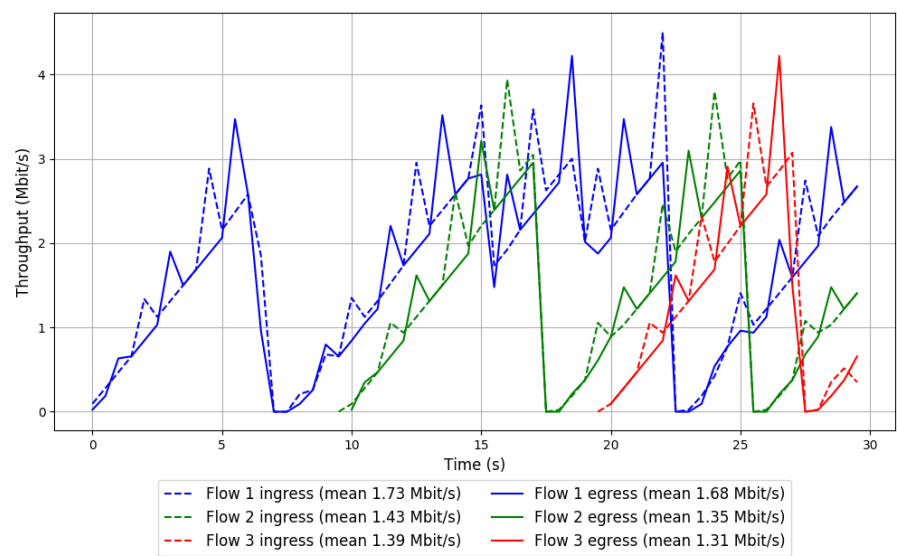
-- Flow 3:

Average throughput: 1.31 Mbit/s

95th percentile per-packet one-way delay: 112.910 ms

Loss rate: 5.80%

Run 6: Report of LEDBAT — Data Link



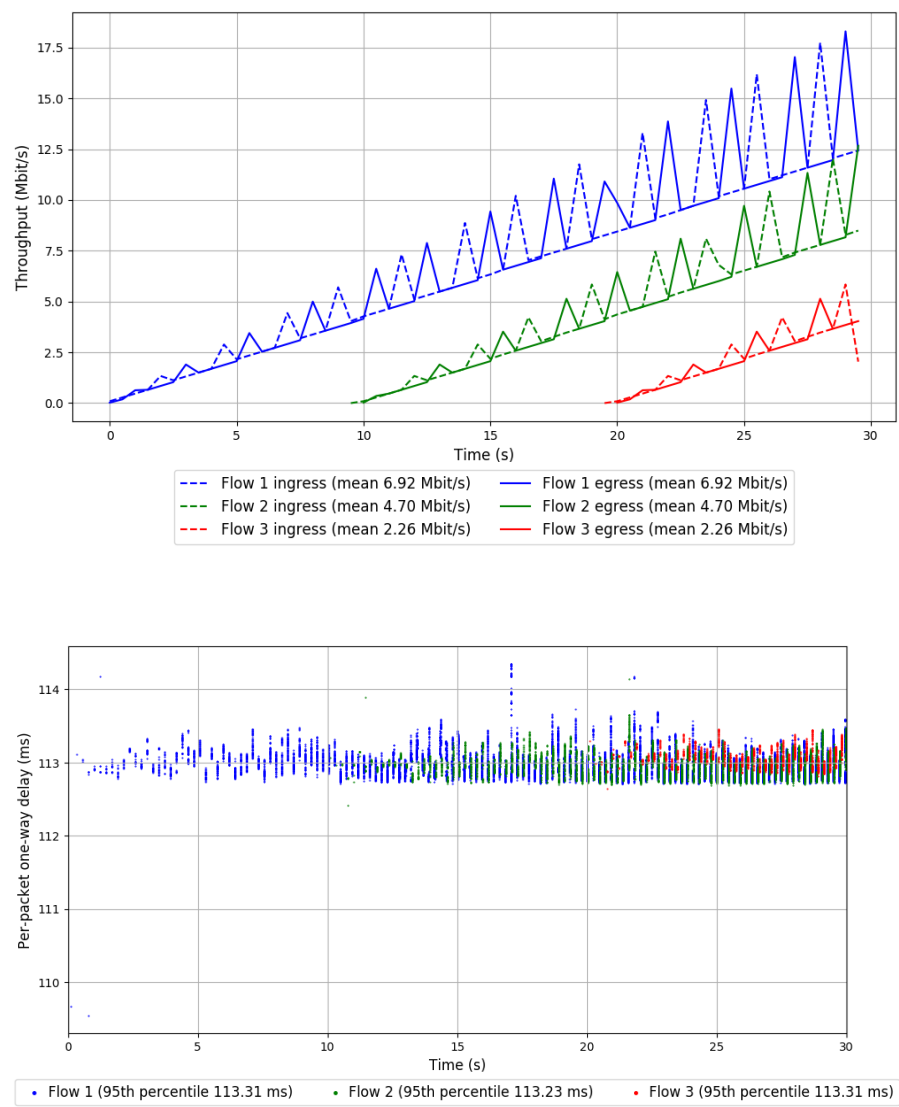
```
Run 7: Statistics of LEDBAT

Start at: 2017-08-21 03:07:34
End at: 2017-08-21 03:08:04

# Below is generated by plot.py at 2017-08-21 05:03:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 10.78 Mbit/s
95th percentile per-packet one-way delay: 113.291 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 6.92 Mbit/s
95th percentile per-packet one-way delay: 113.312 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 4.70 Mbit/s
95th percentile per-packet one-way delay: 113.235 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 2.26 Mbit/s
95th percentile per-packet one-way delay: 113.307 ms
Loss rate: 0.00%
```



Run 7: Report of LEDBAT — Data Link



Run 8: Statistics of LEDBAT

Start at: 2017-08-21 03:20:23

End at: 2017-08-21 03:20:53

# Below is generated by plot.py at 2017-08-21 05:03:35

# Datalink statistics

-- Total of 3 flows:

Average throughput: 6.36 Mbit/s

95th percentile per-packet one-way delay: 113.294 ms

Loss rate: 0.26%

-- Flow 1:

Average throughput: 2.92 Mbit/s

95th percentile per-packet one-way delay: 113.341 ms

Loss rate: 0.43%

-- Flow 2:

Average throughput: 4.08 Mbit/s

95th percentile per-packet one-way delay: 113.241 ms

Loss rate: 0.15%

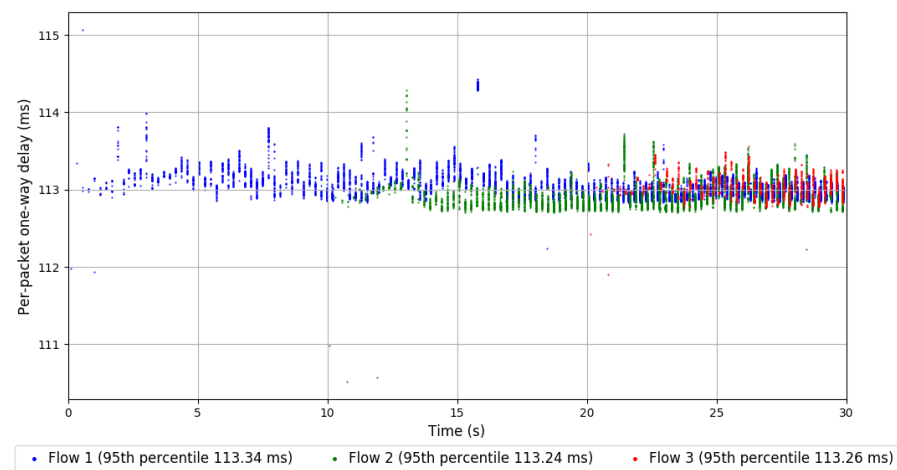
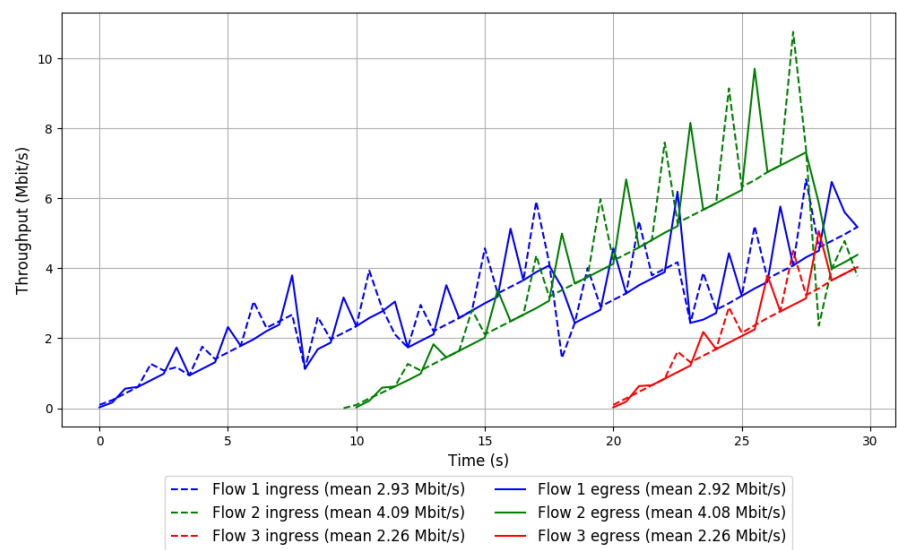
-- Flow 3:

Average throughput: 2.26 Mbit/s

95th percentile per-packet one-way delay: 113.262 ms

Loss rate: 0.00%

Run 8: Report of LEDBAT — Data Link



Run 9: Statistics of LEDBAT

Start at: 2017-08-21 03:33:20

End at: 2017-08-21 03:33:50

# Below is generated by plot.py at 2017-08-21 05:03:35

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.59 Mbit/s

95th percentile per-packet one-way delay: 112.543 ms

Loss rate: 0.95%

-- Flow 1:

Average throughput: 0.34 Mbit/s

95th percentile per-packet one-way delay: 112.494 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.29 Mbit/s

95th percentile per-packet one-way delay: 112.599 ms

Loss rate: 1.76%

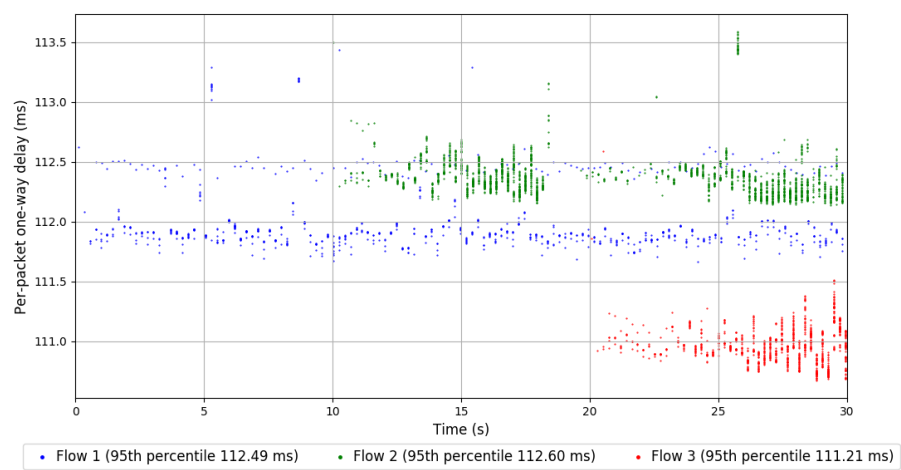
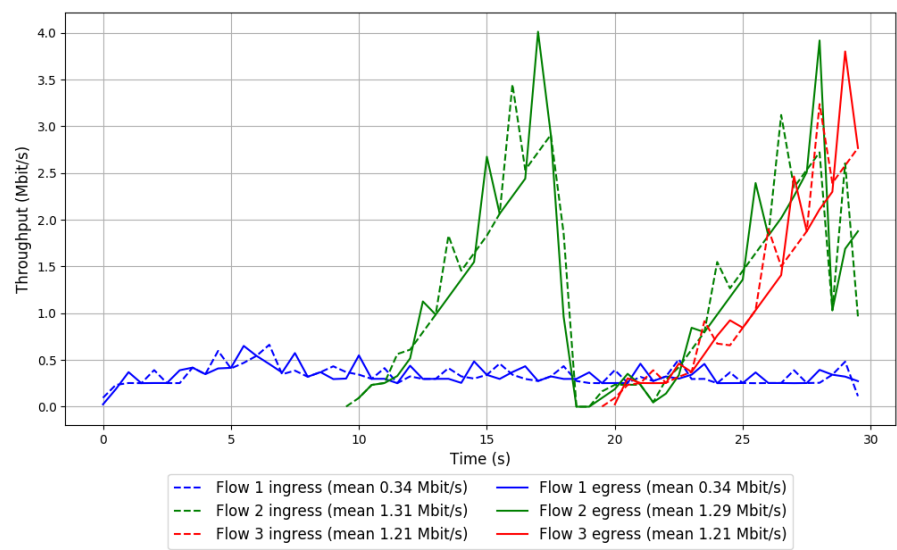
-- Flow 3:

Average throughput: 1.21 Mbit/s

95th percentile per-packet one-way delay: 111.210 ms

Loss rate: 0.00%

Run 9: Report of LEDBAT — Data Link



Run 10: Statistics of LEDBAT

Start at: 2017-08-21 03:46:06

End at: 2017-08-21 03:46:36

# Below is generated by plot.py at 2017-08-21 05:03:36

# Datalink statistics

-- Total of 3 flows:

Average throughput: 3.27 Mbit/s

95th percentile per-packet one-way delay: 112.625 ms

Loss rate: 2.42%

-- Flow 1:

Average throughput: 1.46 Mbit/s

95th percentile per-packet one-way delay: 112.567 ms

Loss rate: 3.62%

-- Flow 2:

Average throughput: 2.08 Mbit/s

95th percentile per-packet one-way delay: 111.096 ms

Loss rate: 0.00%

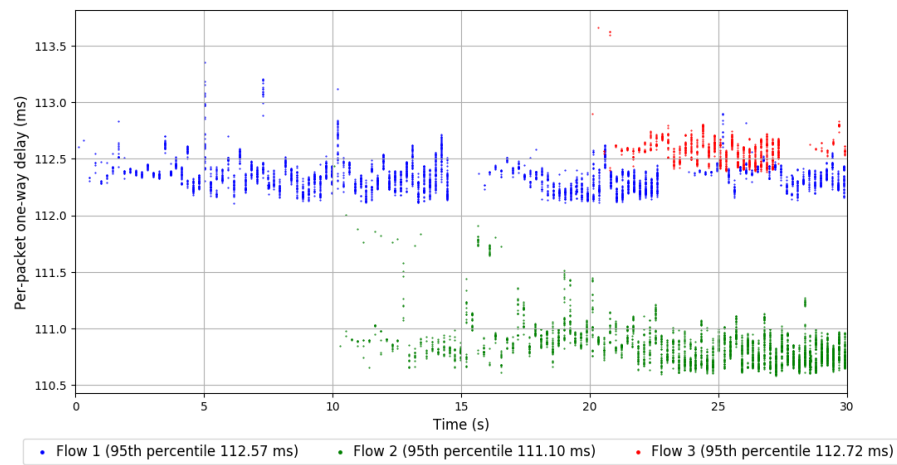
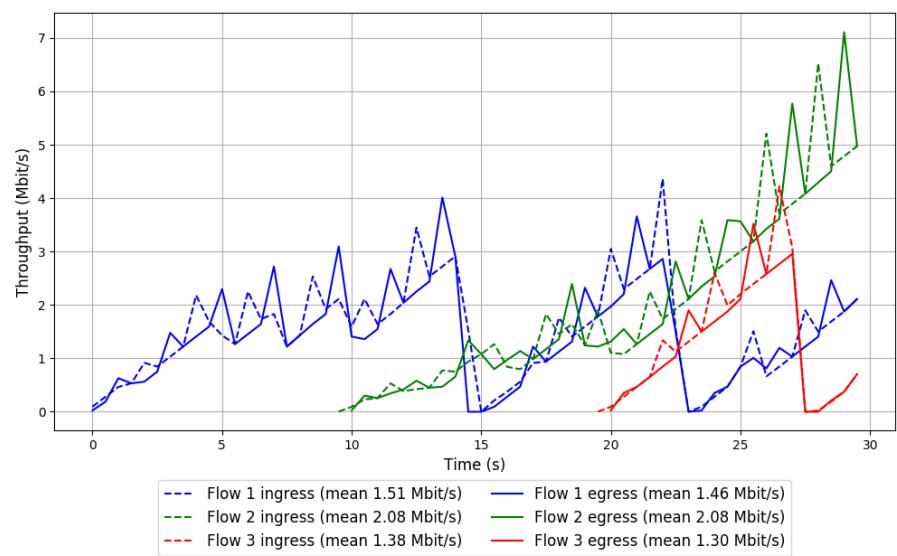
-- Flow 3:

Average throughput: 1.30 Mbit/s

95th percentile per-packet one-way delay: 112.722 ms

Loss rate: 5.79%

Run 10: Report of LEDBAT — Data Link



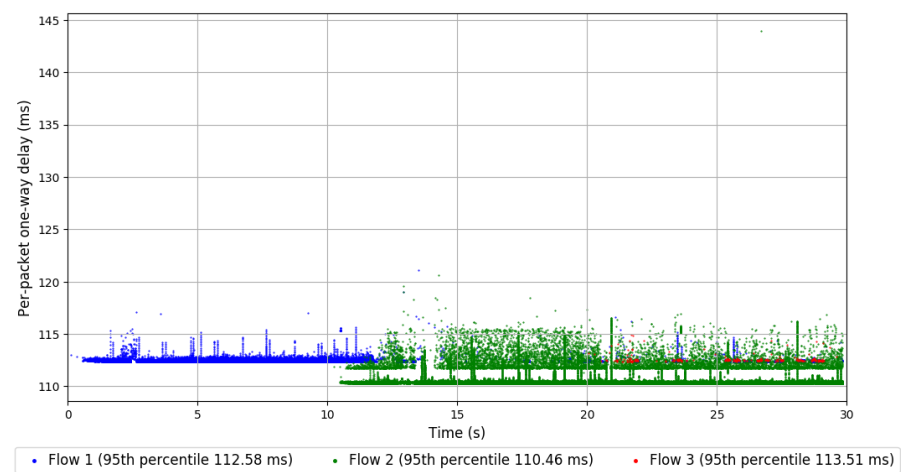
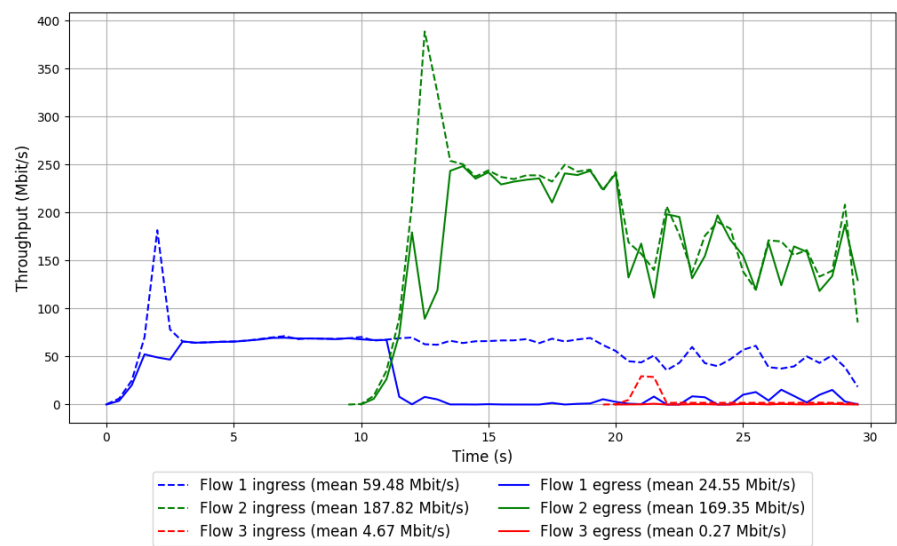
```
Run 1: Statistics of PCC

Start at: 2017-08-21 02:01:04
End at: 2017-08-21 02:01:34

# Below is generated by plot.py at 2017-08-21 05:03:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 137.53 Mbit/s
95th percentile per-packet one-way delay: 112.433 ms
Loss rate: 26.16%
-- Flow 1:
Average throughput: 24.55 Mbit/s
95th percentile per-packet one-way delay: 112.575 ms
Loss rate: 58.74%
-- Flow 2:
Average throughput: 169.35 Mbit/s
95th percentile per-packet one-way delay: 110.462 ms
Loss rate: 9.84%
-- Flow 3:
Average throughput: 0.27 Mbit/s
95th percentile per-packet one-way delay: 113.507 ms
Loss rate: 94.29%
```



Run 1: Report of PCC — Data Link

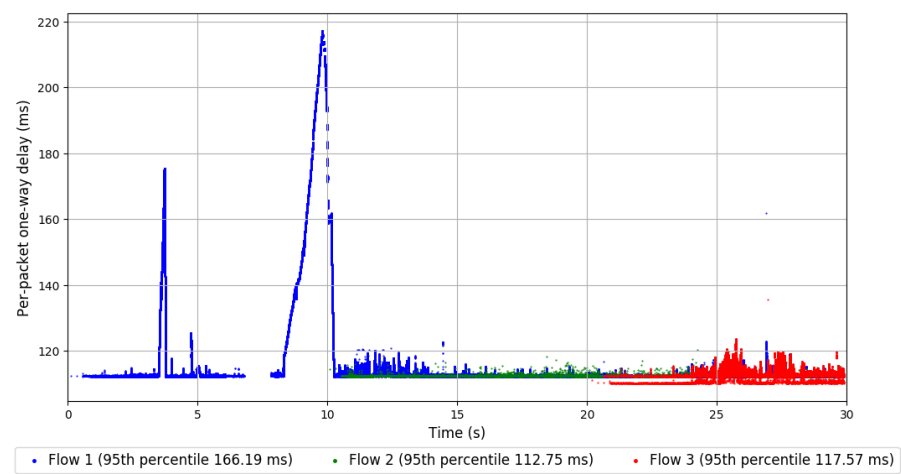
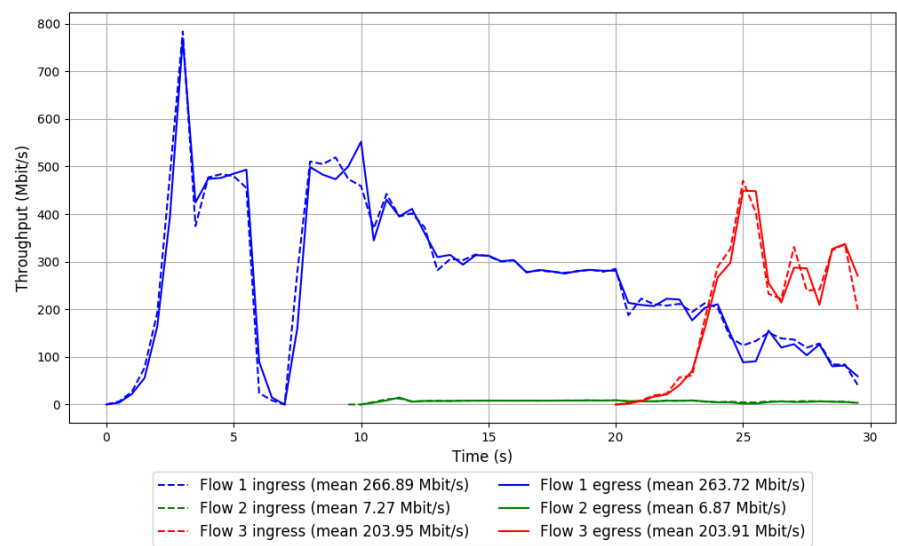


```
Run 2: Statistics of PCC

Start at: 2017-08-21 02:13:50
End at: 2017-08-21 02:14:20

# Below is generated by plot.py at 2017-08-21 05:04:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 334.80 Mbit/s
95th percentile per-packet one-way delay: 159.853 ms
Loss rate: 1.02%
-- Flow 1:
Average throughput: 263.72 Mbit/s
95th percentile per-packet one-way delay: 166.190 ms
Loss rate: 1.19%
-- Flow 2:
Average throughput: 6.87 Mbit/s
95th percentile per-packet one-way delay: 112.754 ms
Loss rate: 5.49%
-- Flow 3:
Average throughput: 203.91 Mbit/s
95th percentile per-packet one-way delay: 117.571 ms
Loss rate: 0.00%
```

Run 2: Report of PCC — Data Link



Run 3: Statistics of PCC

Start at: 2017-08-21 02:26:48

End at: 2017-08-21 02:27:18

# Below is generated by plot.py at 2017-08-21 05:04:45

# Datalink statistics

-- Total of 3 flows:

Average throughput: 71.94 Mbit/s

95th percentile per-packet one-way delay: 114.194 ms

Loss rate: 30.27%

-- Flow 1:

Average throughput: 48.57 Mbit/s

95th percentile per-packet one-way delay: 112.458 ms

Loss rate: 34.37%

-- Flow 2:

Average throughput: 13.38 Mbit/s

95th percentile per-packet one-way delay: 112.452 ms

Loss rate: 35.77%

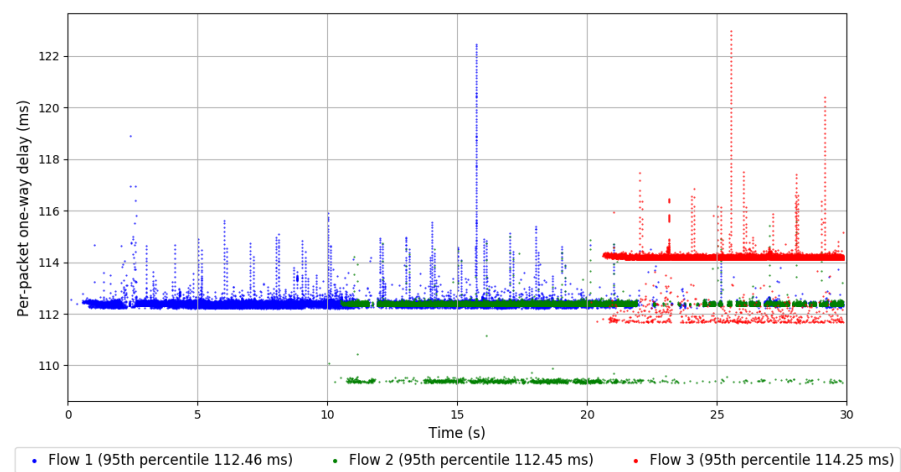
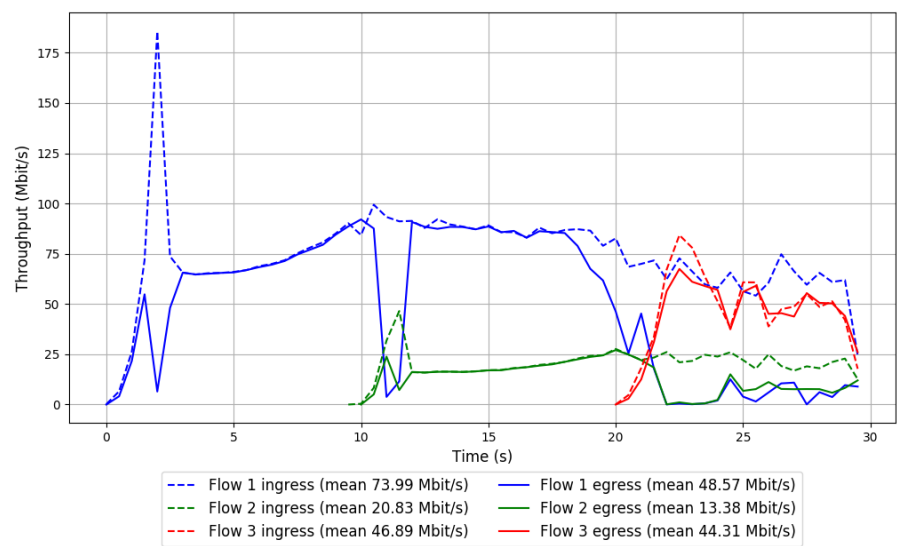
-- Flow 3:

Average throughput: 44.31 Mbit/s

95th percentile per-packet one-way delay: 114.252 ms

Loss rate: 5.48%

Run 3: Report of PCC — Data Link



Run 4: Statistics of PCC

Start at: 2017-08-21 02:39:27

End at: 2017-08-21 02:39:57

# Below is generated by plot.py at 2017-08-21 05:04:59

# Datalink statistics

-- Total of 3 flows:

Average throughput: 226.68 Mbit/s

95th percentile per-packet one-way delay: 117.639 ms

Loss rate: 19.55%

-- Flow 1:

Average throughput: 54.81 Mbit/s

95th percentile per-packet one-way delay: 112.500 ms

Loss rate: 48.86%

-- Flow 2:

Average throughput: 257.79 Mbit/s

95th percentile per-packet one-way delay: 119.066 ms

Loss rate: 1.08%

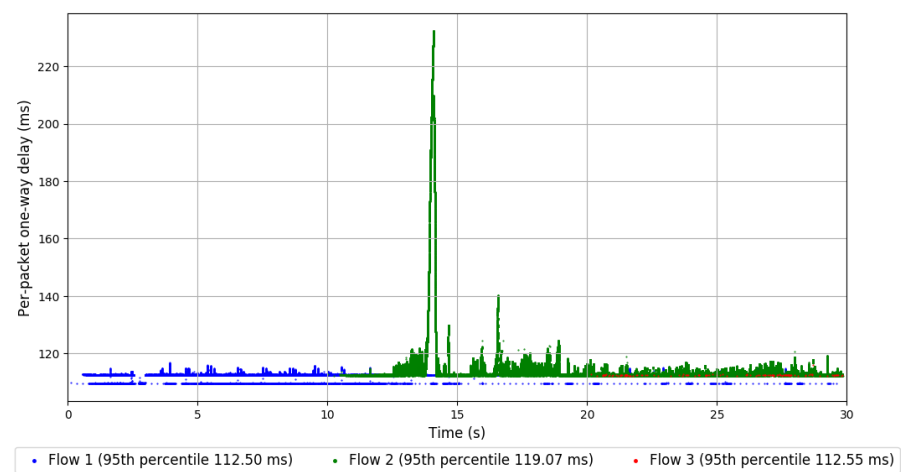
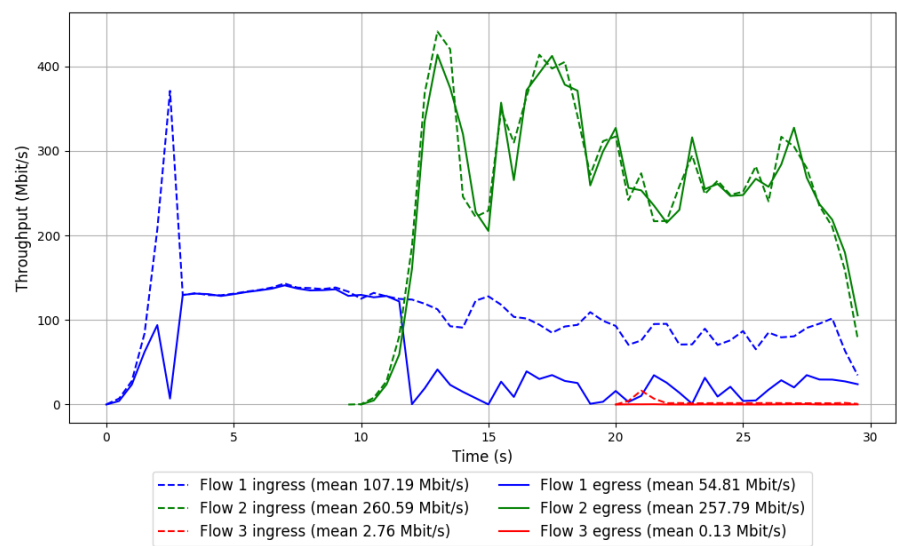
-- Flow 3:

Average throughput: 0.13 Mbit/s

95th percentile per-packet one-way delay: 112.546 ms

Loss rate: 95.30%

Run 4: Report of PCC — Data Link



Run 5: Statistics of PCC

Start at: 2017-08-21 02:52:20

End at: 2017-08-21 02:52:50

# Below is generated by plot.py at 2017-08-21 05:05:58

# Datalink statistics

-- Total of 3 flows:

Average throughput: 337.07 Mbit/s

95th percentile per-packet one-way delay: 117.031 ms

Loss rate: 1.00%

-- Flow 1:

Average throughput: 335.31 Mbit/s

95th percentile per-packet one-way delay: 117.045 ms

Loss rate: 0.95%

-- Flow 2:

Average throughput: 1.70 Mbit/s

95th percentile per-packet one-way delay: 112.625 ms

Loss rate: 13.74%

-- Flow 3:

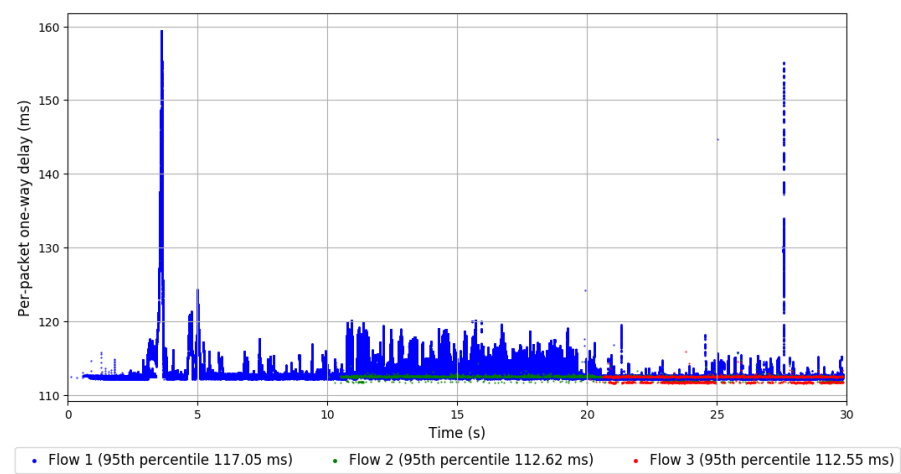
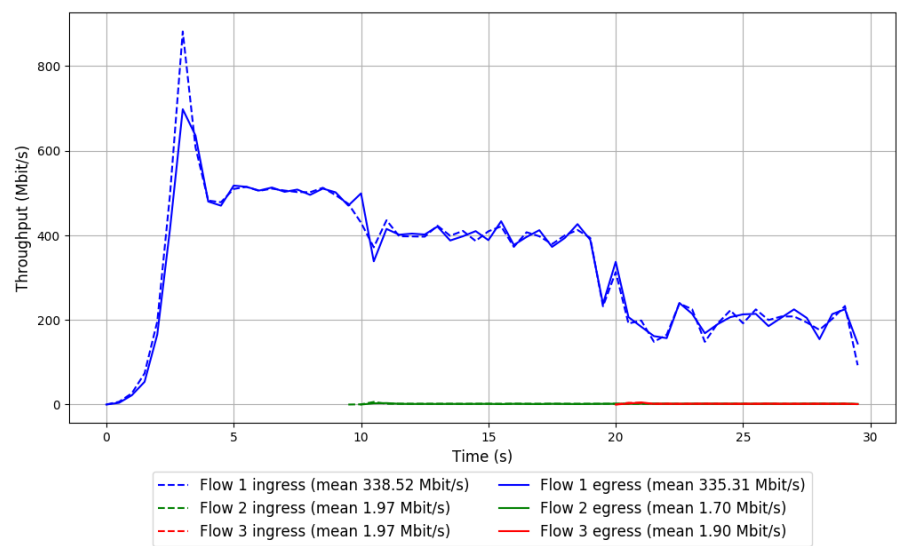
Average throughput: 1.90 Mbit/s

95th percentile per-packet one-way delay: 112.546 ms

Loss rate: 3.38%



Run 5: Report of PCC — Data Link



Run 6: Statistics of PCC

Start at: 2017-08-21 03:04:54

End at: 2017-08-21 03:05:24

# Below is generated by plot.py at 2017-08-21 05:06:03

# Datalink statistics

-- Total of 3 flows:

Average throughput: 327.37 Mbit/s

95th percentile per-packet one-way delay: 140.028 ms

Loss rate: 1.07%

-- Flow 1:

Average throughput: 326.55 Mbit/s

95th percentile per-packet one-way delay: 140.153 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 112.931 ms

Loss rate: 76.97%

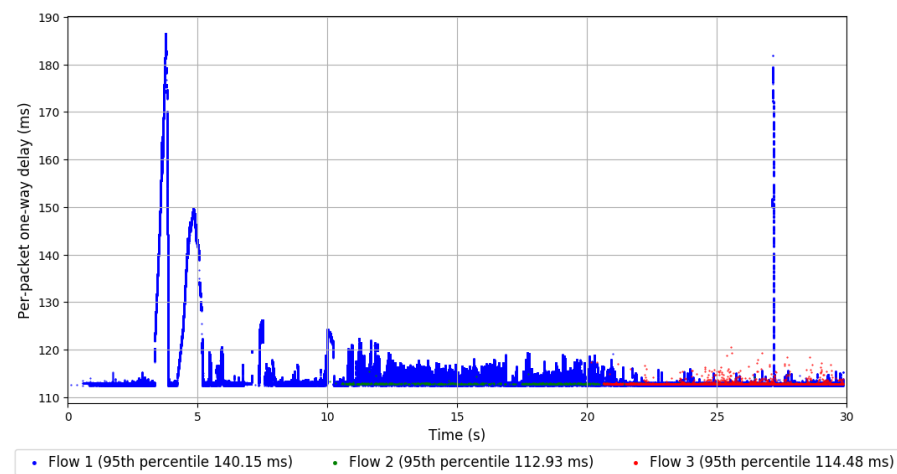
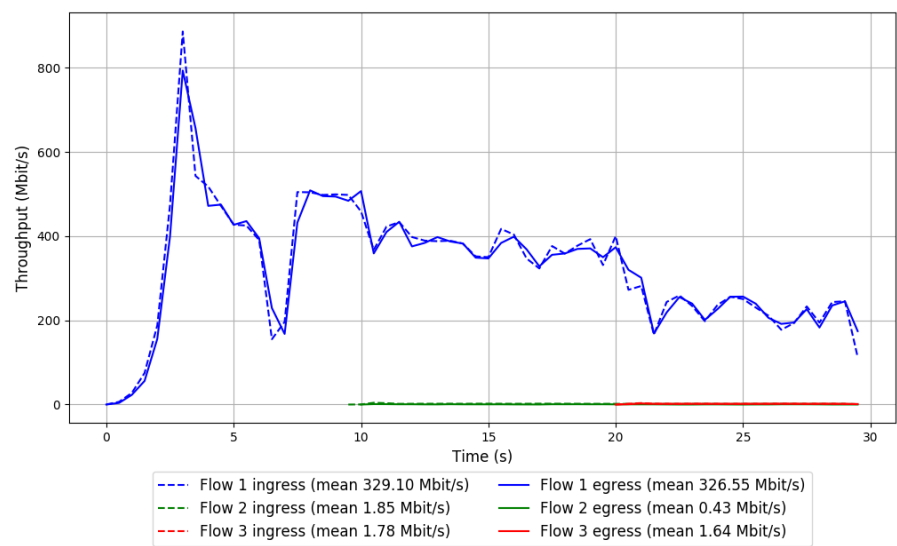
-- Flow 3:

Average throughput: 1.64 Mbit/s

95th percentile per-packet one-way delay: 114.482 ms

Loss rate: 7.72%

Run 6: Report of PCC — Data Link



Run 7: Statistics of PCC

Start at: 2017-08-21 03:17:44

End at: 2017-08-21 03:18:14

# Below is generated by plot.py at 2017-08-21 05:07:08

# Datalink statistics

-- Total of 3 flows:

Average throughput: 372.90 Mbit/s

95th percentile per-packet one-way delay: 116.240 ms

Loss rate: 0.72%

-- Flow 1:

Average throughput: 329.62 Mbit/s

95th percentile per-packet one-way delay: 116.225 ms

Loss rate: 0.45%

-- Flow 2:

Average throughput: 0.91 Mbit/s

95th percentile per-packet one-way delay: 112.908 ms

Loss rate: 48.03%

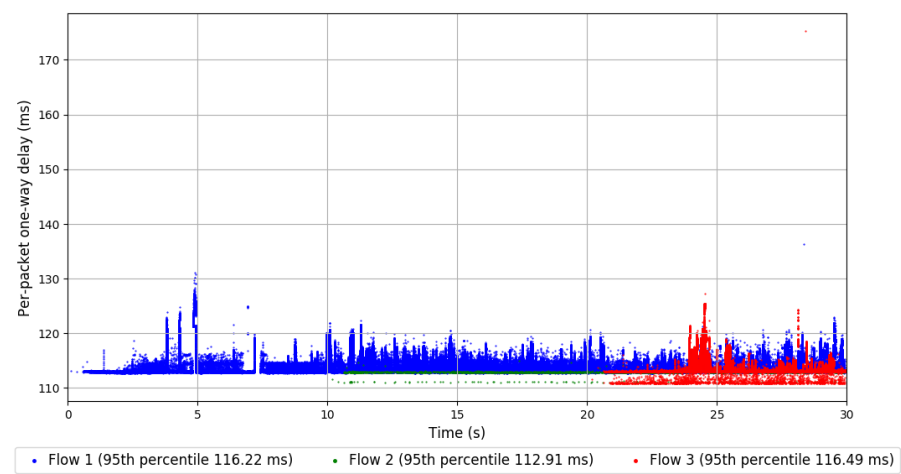
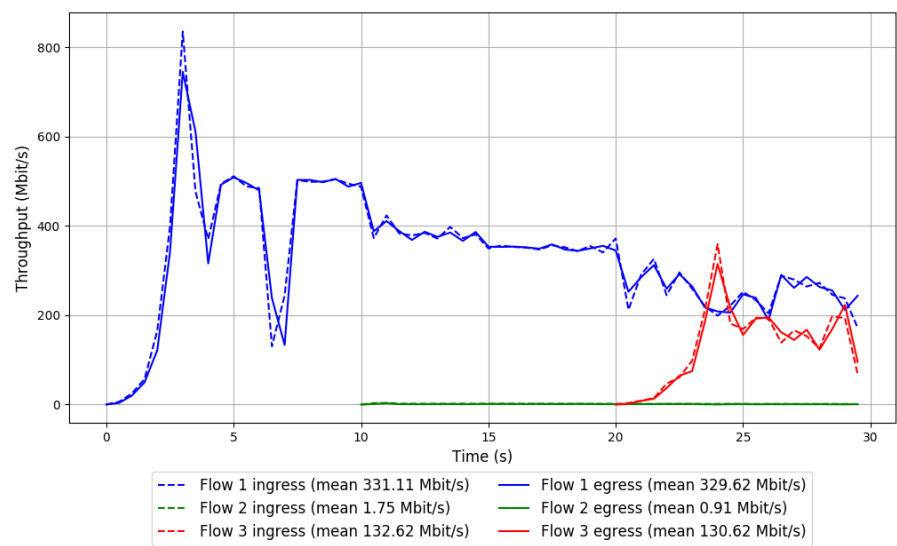
-- Flow 3:

Average throughput: 130.62 Mbit/s

95th percentile per-packet one-way delay: 116.486 ms

Loss rate: 1.50%

Run 7: Report of PCC — Data Link



Run 8: Statistics of PCC

Start at: 2017-08-21 03:30:36

End at: 2017-08-21 03:31:06

# Below is generated by plot.py at 2017-08-21 05:07:24

# Datalink statistics

-- Total of 3 flows:

Average throughput: 433.38 Mbit/s

95th percentile per-packet one-way delay: 123.529 ms

Loss rate: 1.19%

-- Flow 1:

Average throughput: 271.49 Mbit/s

95th percentile per-packet one-way delay: 126.425 ms

Loss rate: 1.58%

-- Flow 2:

Average throughput: 156.82 Mbit/s

95th percentile per-packet one-way delay: 118.425 ms

Loss rate: 0.54%

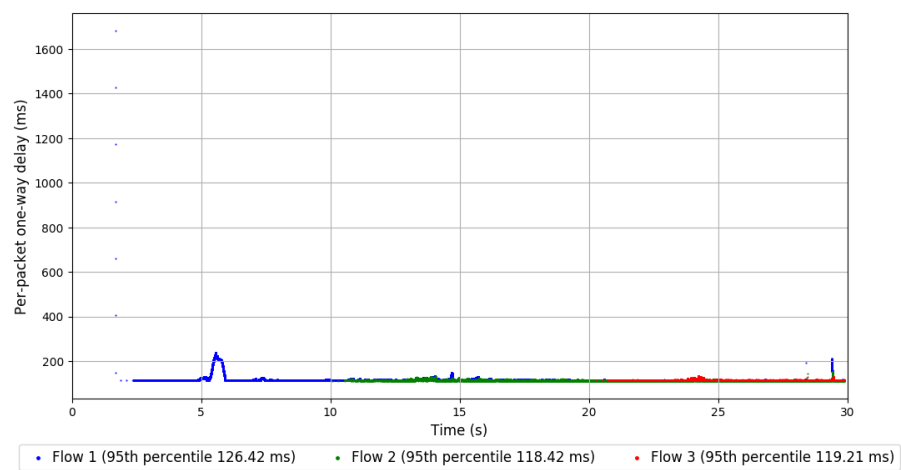
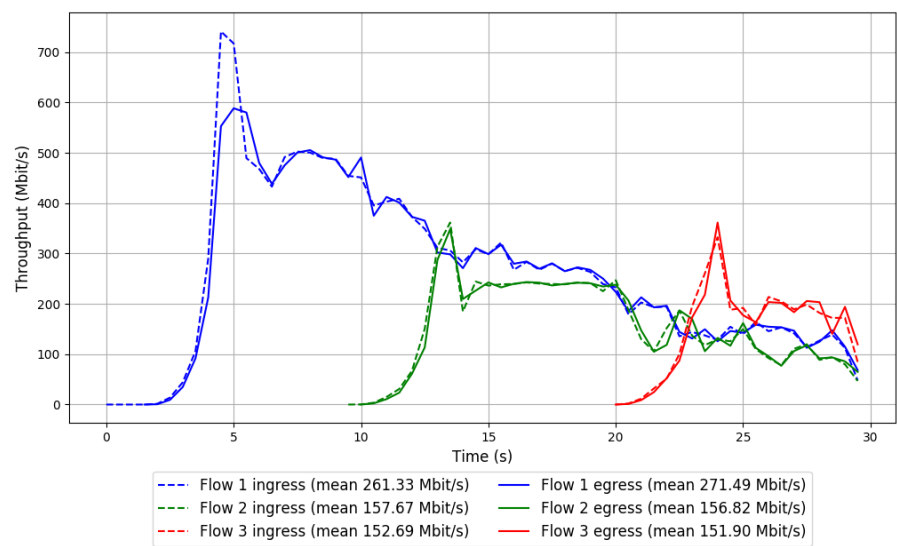
-- Flow 3:

Average throughput: 151.90 Mbit/s

95th percentile per-packet one-way delay: 119.207 ms

Loss rate: 0.50%

Run 8: Report of PCC — Data Link



Run 9: Statistics of PCC

Start at: 2017-08-21 03:43:32

End at: 2017-08-21 03:44:02

# Below is generated by plot.py at 2017-08-21 05:07:52

# Datalink statistics

-- Total of 3 flows:

Average throughput: 166.81 Mbit/s

95th percentile per-packet one-way delay: 112.466 ms

Loss rate: 11.73%

-- Flow 1:

Average throughput: 80.86 Mbit/s

95th percentile per-packet one-way delay: 111.958 ms

Loss rate: 8.49%

-- Flow 2:

Average throughput: 38.86 Mbit/s

95th percentile per-packet one-way delay: 112.516 ms

Loss rate: 36.15%

-- Flow 3:

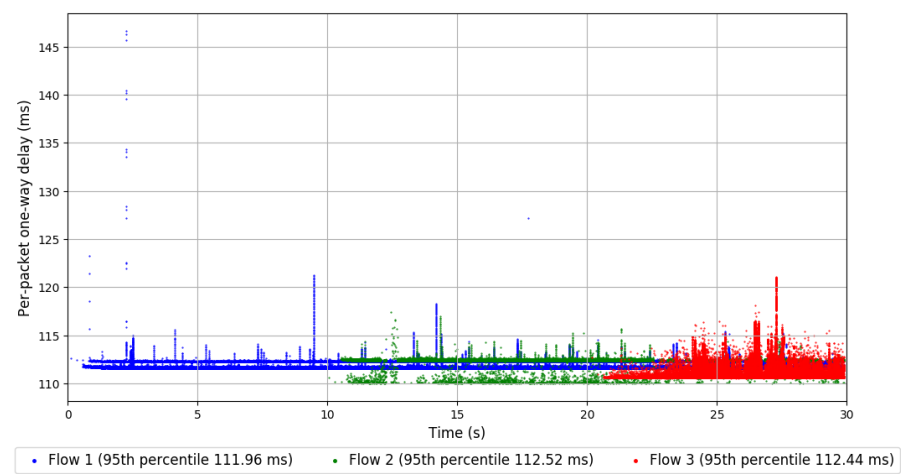
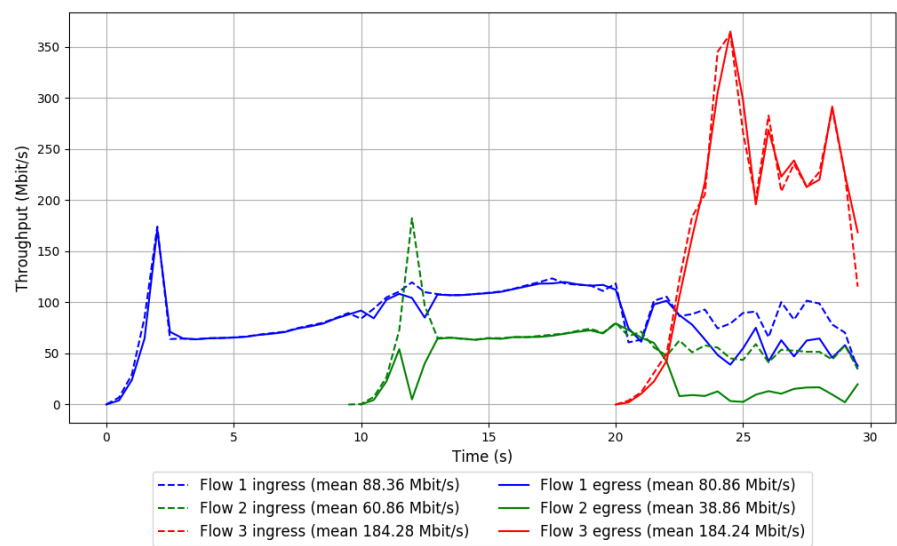
Average throughput: 184.24 Mbit/s

95th percentile per-packet one-way delay: 112.437 ms

Loss rate: 0.04%



Run 9: Report of PCC — Data Link

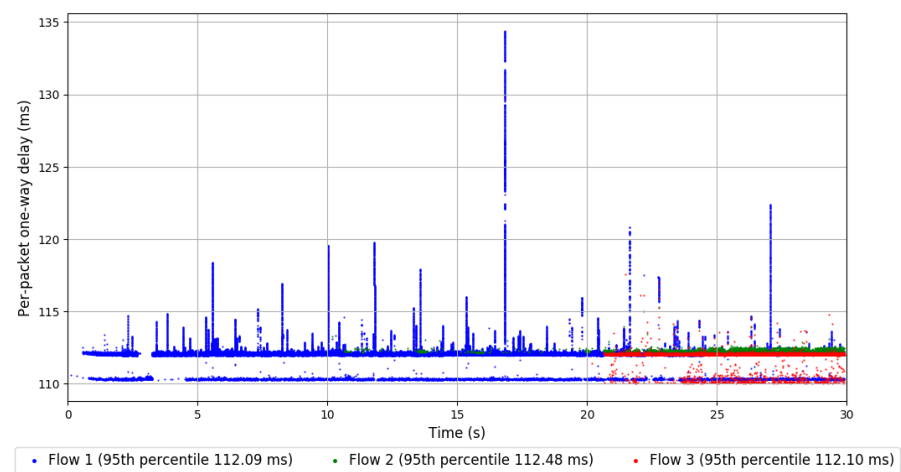
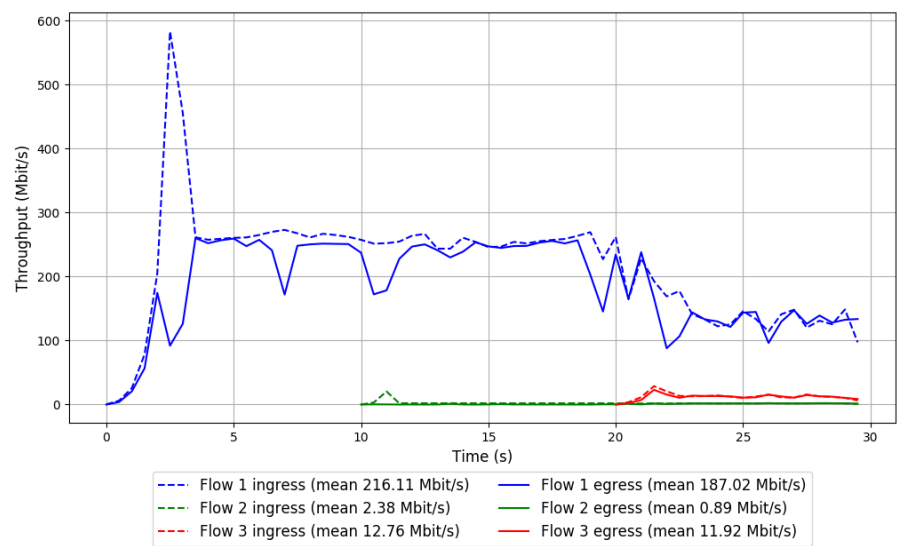


```
Run 10: Statistics of PCC

Start at: 2017-08-21 03:56:05
End at: 2017-08-21 03:56:35

# Below is generated by plot.py at 2017-08-21 05:08:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 191.49 Mbit/s
95th percentile per-packet one-way delay: 112.096 ms
Loss rate: 13.68%
-- Flow 1:
Average throughput: 187.02 Mbit/s
95th percentile per-packet one-way delay: 112.092 ms
Loss rate: 13.46%
-- Flow 2:
Average throughput: 0.89 Mbit/s
95th percentile per-packet one-way delay: 112.476 ms
Loss rate: 62.81%
-- Flow 3:
Average throughput: 11.92 Mbit/s
95th percentile per-packet one-way delay: 112.101 ms
Loss rate: 6.57%
```

Run 10: Report of PCC — Data Link

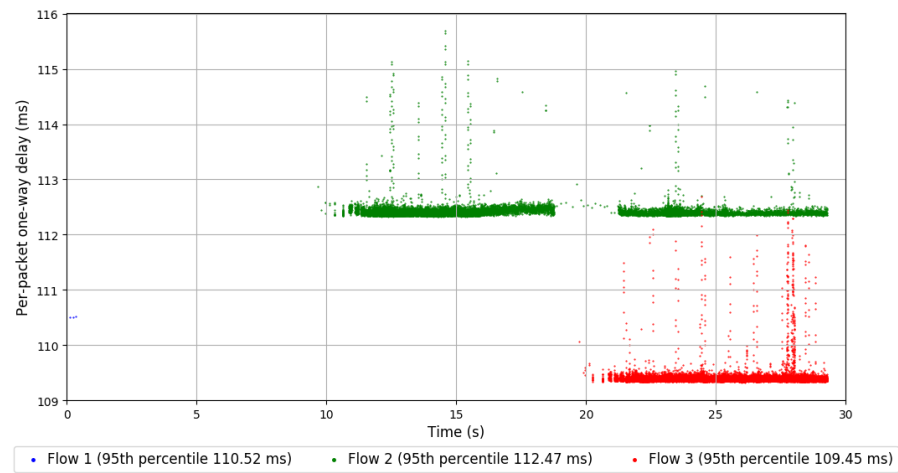
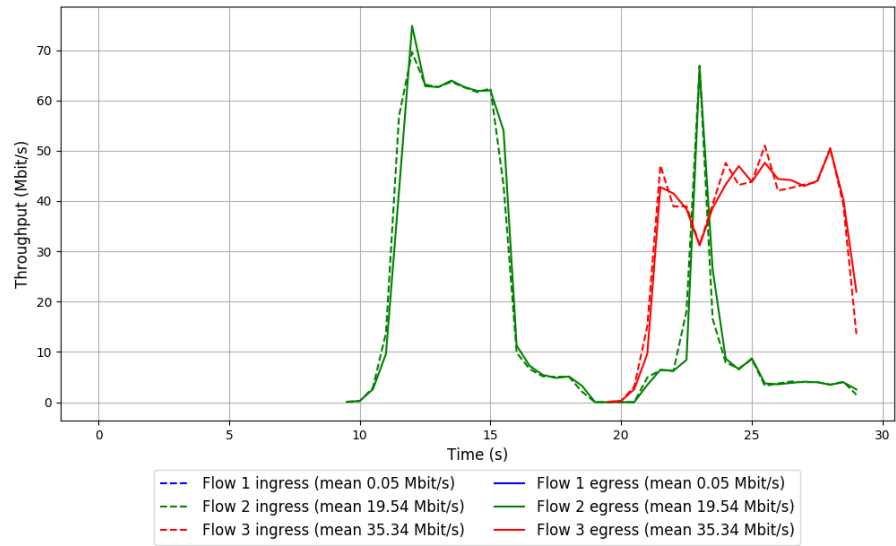


```
Run 1: Statistics of QUIC Cubic

Start at: 2017-08-21 01:56:20
End at: 2017-08-21 01:56:50

# Below is generated by plot.py at 2017-08-21 05:08:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 24.70 Mbit/s
95th percentile per-packet one-way delay: 112.447 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 110.521 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 19.54 Mbit/s
95th percentile per-packet one-way delay: 112.473 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 35.34 Mbit/s
95th percentile per-packet one-way delay: 109.449 ms
Loss rate: 0.00%
```

# Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2017-08-21 02:08:32

End at: 2017-08-21 02:09:02

# Below is generated by plot.py at 2017-08-21 05:08:04

# Datalink statistics

-- Total of 3 flows:

Average throughput: 14.23 Mbit/s

95th percentile per-packet one-way delay: 112.302 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 112.238 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 16.90 Mbit/s

95th percentile per-packet one-way delay: 111.746 ms

Loss rate: 0.00%

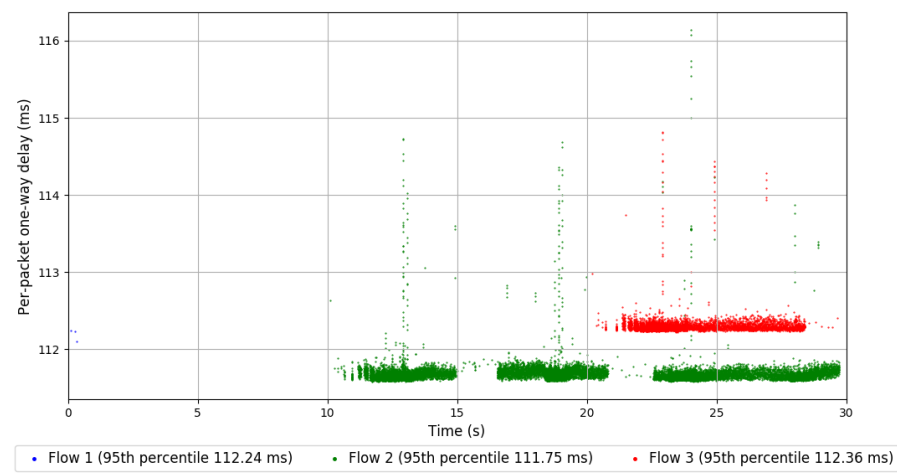
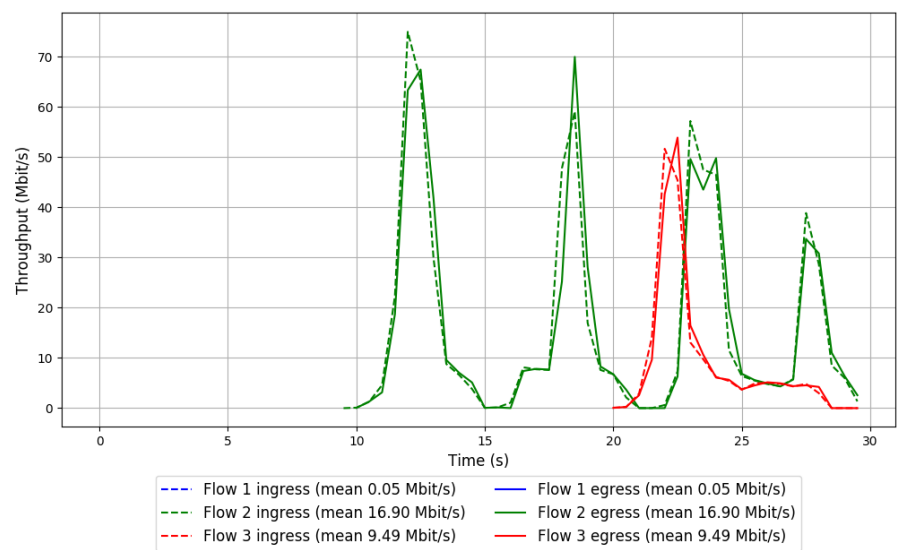
-- Flow 3:

Average throughput: 9.49 Mbit/s

95th percentile per-packet one-way delay: 112.360 ms

Loss rate: 0.00%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2017-08-21 02:21:44

End at: 2017-08-21 02:22:14

# Below is generated by plot.py at 2017-08-21 05:08:04

# Datalink statistics

-- Total of 3 flows:

Average throughput: 21.89 Mbit/s

95th percentile per-packet one-way delay: 112.654 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 110.674 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 19.92 Mbit/s

95th percentile per-packet one-way delay: 112.677 ms

Loss rate: 0.00%

-- Flow 3:

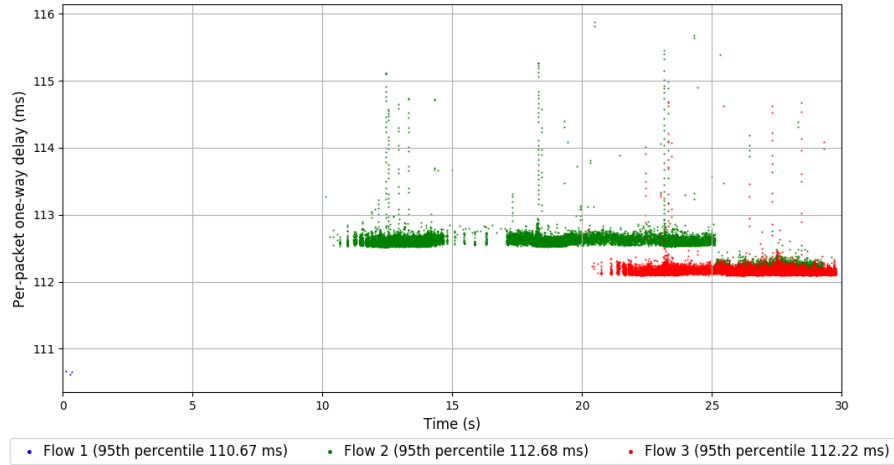
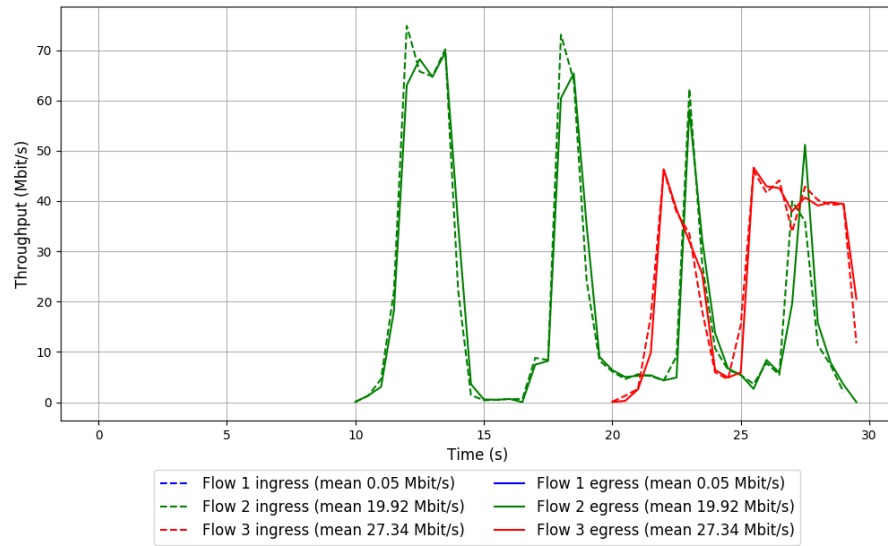
Average throughput: 27.34 Mbit/s

95th percentile per-packet one-way delay: 112.215 ms

Loss rate: 0.00%



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



Run 4: Statistics of QUIC Cubic

Start at: 2017-08-21 02:34:23

End at: 2017-08-21 02:34:53

# Below is generated by plot.py at 2017-08-21 05:08:09

# Datalink statistics

-- Total of 3 flows:

Average throughput: 23.52 Mbit/s

95th percentile per-packet one-way delay: 112.506 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 109.729 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 23.49 Mbit/s

95th percentile per-packet one-way delay: 112.524 ms

Loss rate: 0.00%

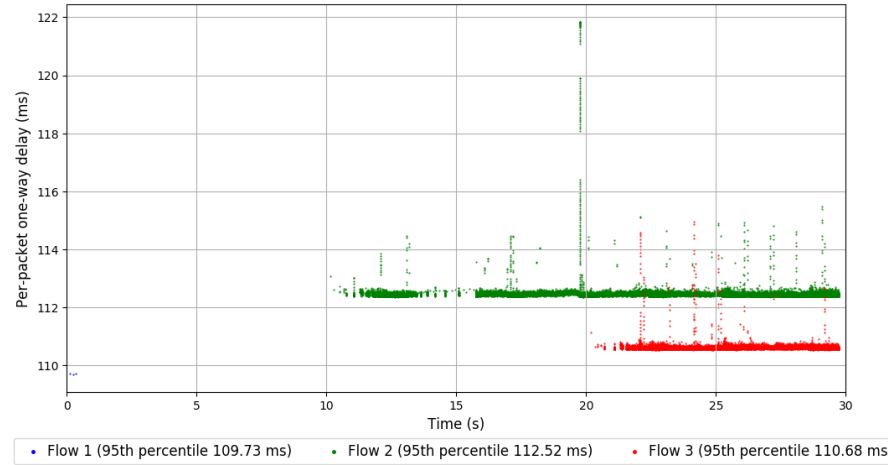
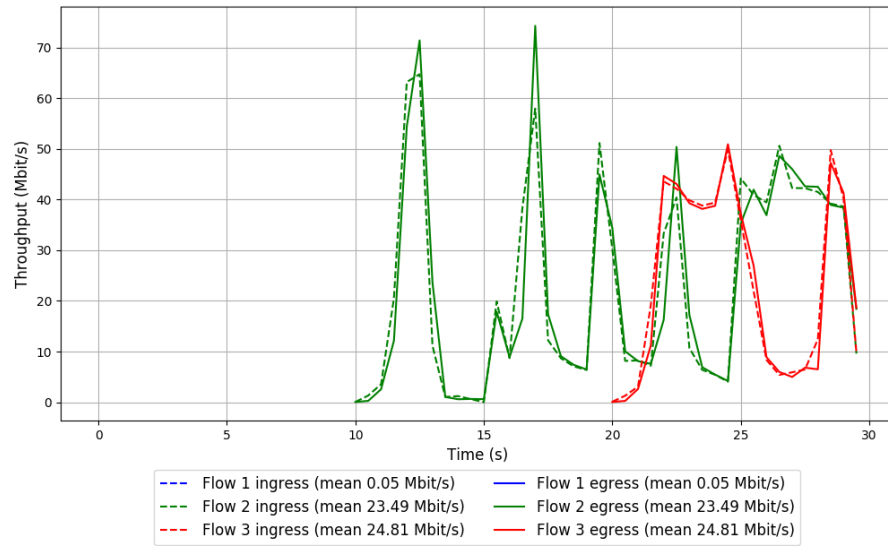
-- Flow 3:

Average throughput: 24.81 Mbit/s

95th percentile per-packet one-way delay: 110.678 ms

Loss rate: 0.00%

# Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2017-08-21 02:47:12

End at: 2017-08-21 02:47:42

# Below is generated by plot.py at 2017-08-21 05:08:11

# Datalink statistics

-- Total of 3 flows:

Average throughput: 21.55 Mbit/s

95th percentile per-packet one-way delay: 111.878 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 112.468 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 15.53 Mbit/s

95th percentile per-packet one-way delay: 110.630 ms

Loss rate: 0.00%

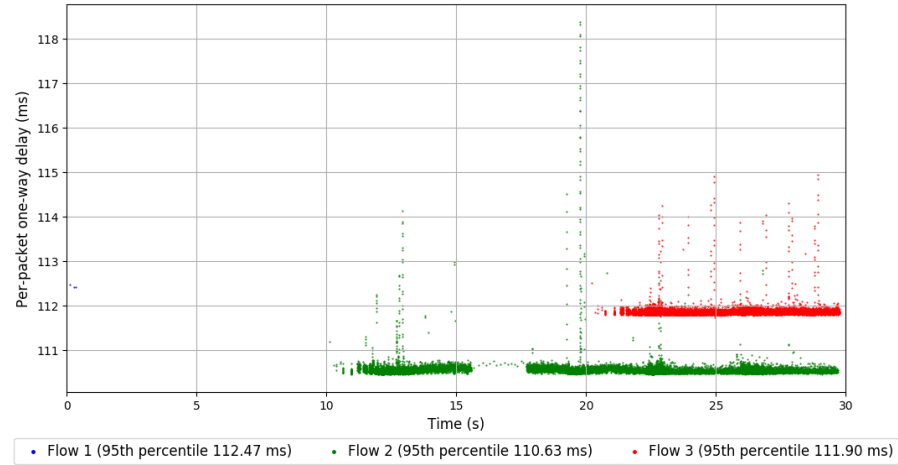
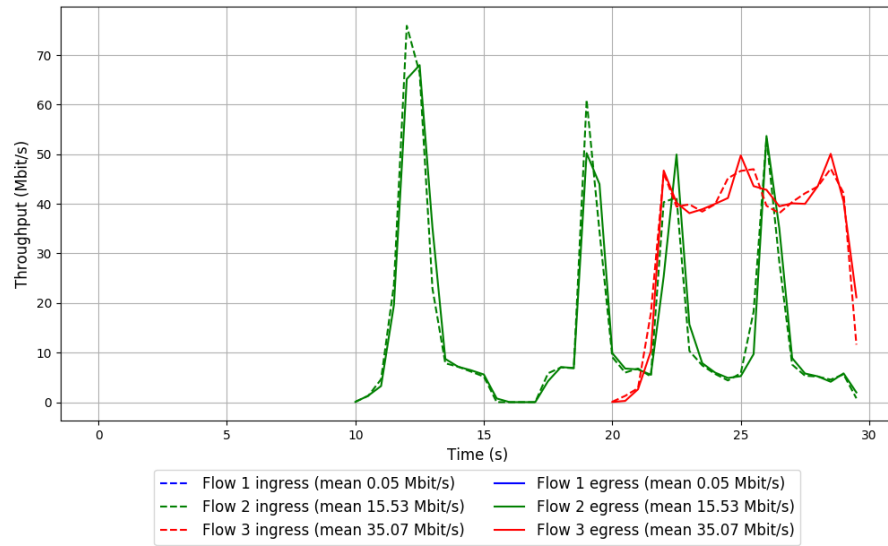
-- Flow 3:

Average throughput: 35.07 Mbit/s

95th percentile per-packet one-way delay: 111.899 ms

Loss rate: 0.00%

## Run 5: Report of QUIC Cubic — Data Link



Run 6: Statistics of QUIC Cubic

Start at: 2017-08-21 03:00:04

End at: 2017-08-21 03:00:34

# Below is generated by plot.py at 2017-08-21 05:08:16

# Datalink statistics

-- Total of 3 flows:

Average throughput: 23.48 Mbit/s

95th percentile per-packet one-way delay: 112.460 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 112.404 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 21.85 Mbit/s

95th percentile per-packet one-way delay: 111.759 ms

Loss rate: 0.00%

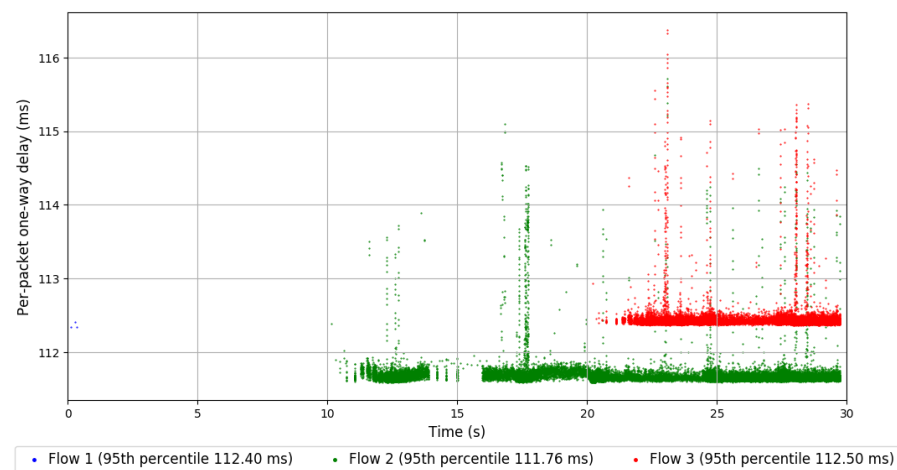
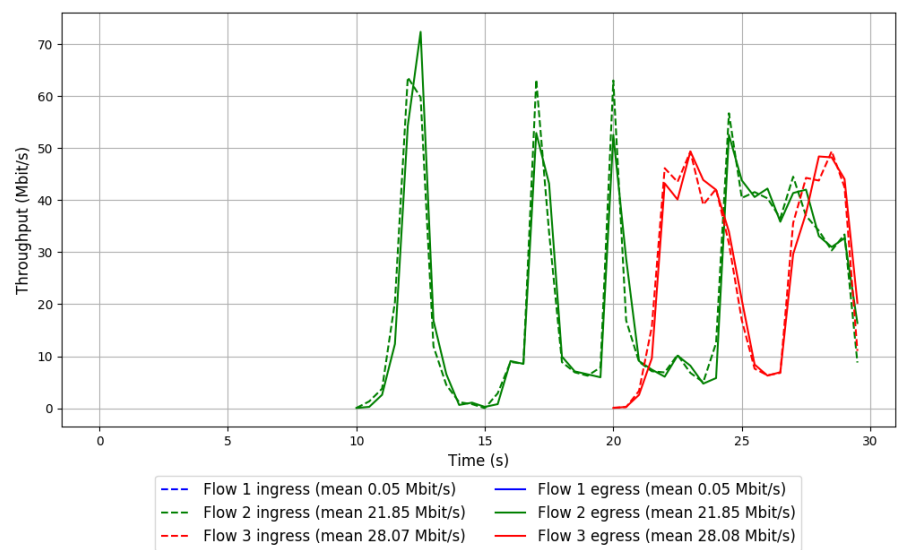
-- Flow 3:

Average throughput: 28.08 Mbit/s

95th percentile per-packet one-way delay: 112.497 ms

Loss rate: 0.00%

Run 6: Report of QUIC Cubic — Data Link



Run 7: Statistics of QUIC Cubic

Start at: 2017-08-21 03:12:38

End at: 2017-08-21 03:13:08

# Below is generated by plot.py at 2017-08-21 05:08:17

# Datalink statistics

-- Total of 3 flows:

Average throughput: 21.81 Mbit/s

95th percentile per-packet one-way delay: 112.793 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 114.753 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 18.90 Mbit/s

95th percentile per-packet one-way delay: 112.818 ms

Loss rate: 0.00%

-- Flow 3:

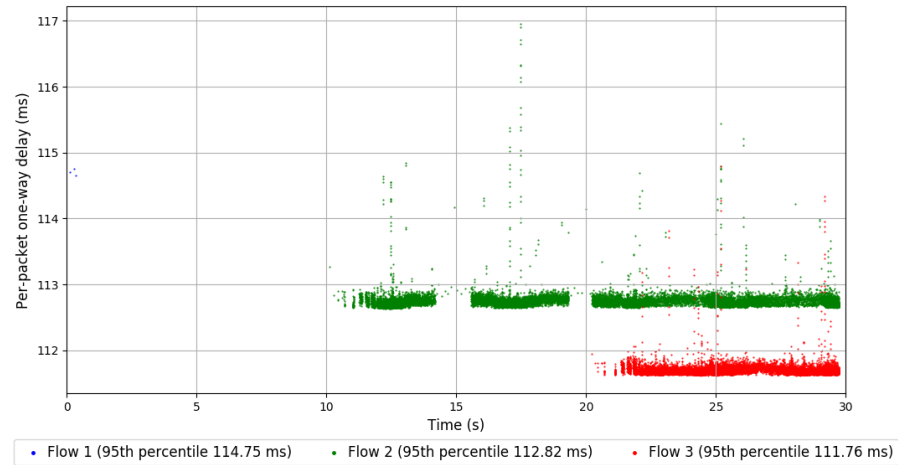
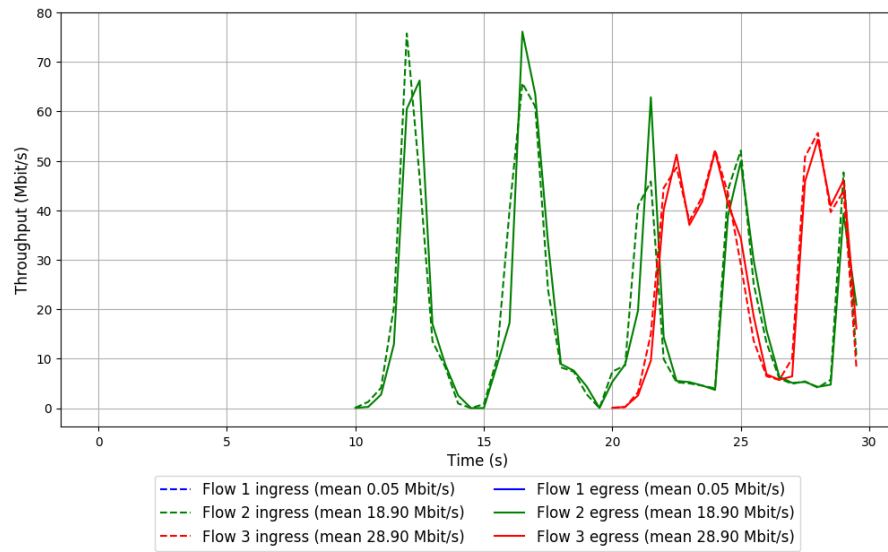
Average throughput: 28.90 Mbit/s

95th percentile per-packet one-way delay: 111.757 ms

Loss rate: 0.00%



## Run 7: Report of QUIC Cubic — Data Link



Run 8: Statistics of QUIC Cubic

Start at: 2017-08-21 03:25:41

End at: 2017-08-21 03:26:11

# Below is generated by plot.py at 2017-08-21 05:08:22

# Datalink statistics

-- Total of 3 flows:

Average throughput: 22.98 Mbit/s

95th percentile per-packet one-way delay: 111.666 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 111.183 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 21.19 Mbit/s

95th percentile per-packet one-way delay: 111.067 ms

Loss rate: 0.00%

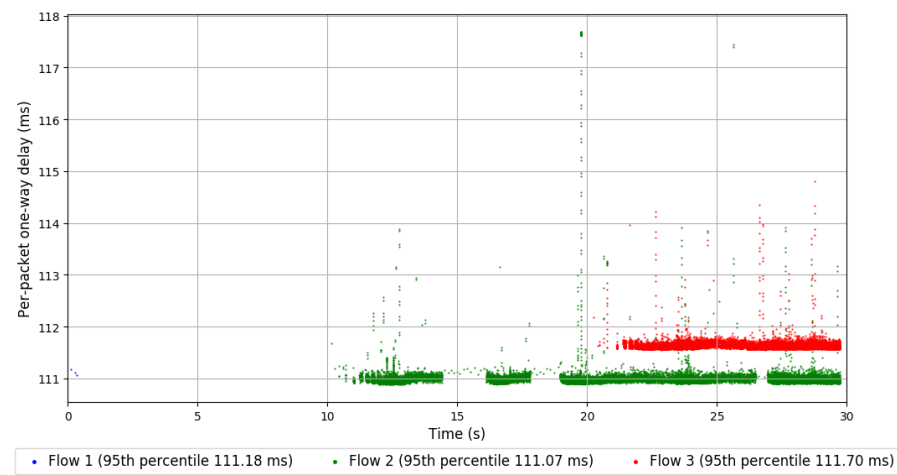
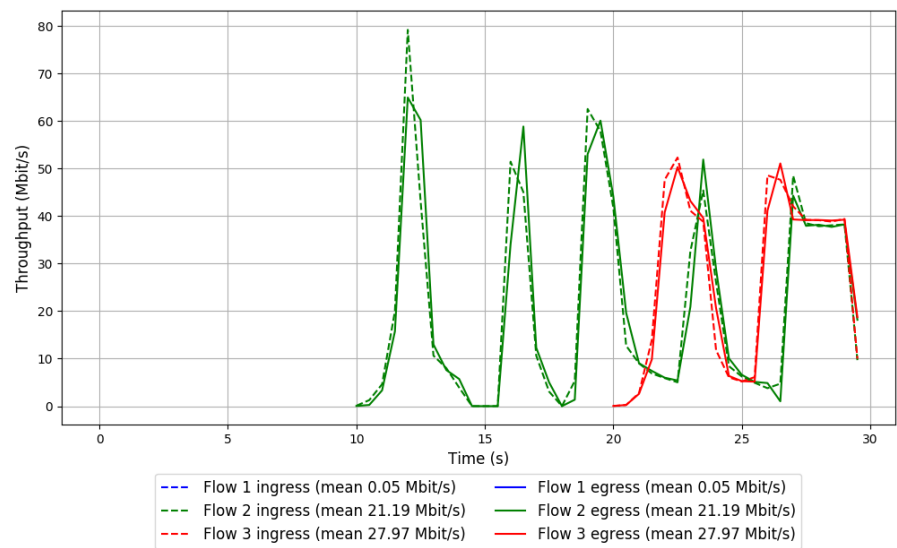
-- Flow 3:

Average throughput: 27.97 Mbit/s

95th percentile per-packet one-way delay: 111.705 ms

Loss rate: 0.00%

Run 8: Report of QUIC Cubic — Data Link



Run 9: Statistics of QUIC Cubic

Start at: 2017-08-21 03:38:36

End at: 2017-08-21 03:39:06

# Below is generated by plot.py at 2017-08-21 05:08:23

# Datalink statistics

-- Total of 3 flows:

Average throughput: 18.40 Mbit/s

95th percentile per-packet one-way delay: 112.375 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 112.511 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 15.31 Mbit/s

95th percentile per-packet one-way delay: 108.837 ms

Loss rate: 0.00%

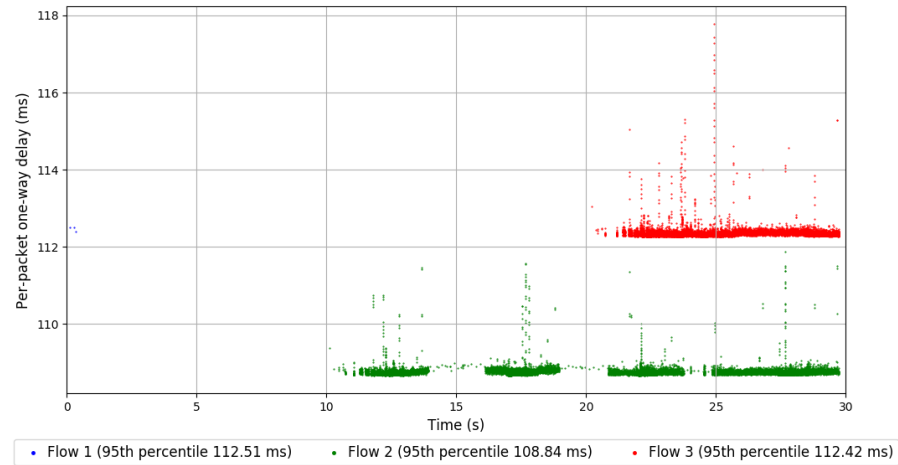
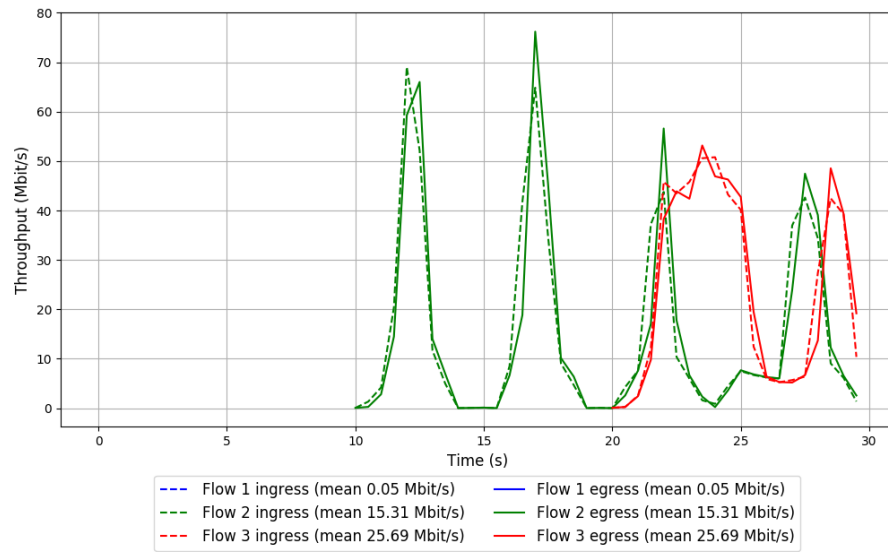
-- Flow 3:

Average throughput: 25.69 Mbit/s

95th percentile per-packet one-way delay: 112.417 ms

Loss rate: 0.00%

## Run 9: Report of QUIC Cubic — Data Link



Run 10: Statistics of QUIC Cubic

Start at: 2017-08-21 03:51:19

End at: 2017-08-21 03:51:49

# Below is generated by plot.py at 2017-08-21 05:08:29

# Datalink statistics

-- Total of 3 flows:

Average throughput: 18.67 Mbit/s

95th percentile per-packet one-way delay: 112.405 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 112.396 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 16.71 Mbit/s

95th percentile per-packet one-way delay: 112.427 ms

Loss rate: 0.00%

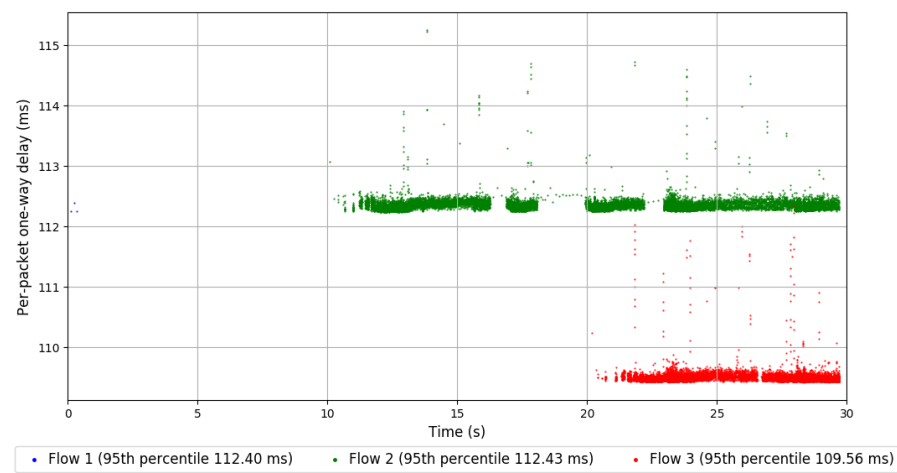
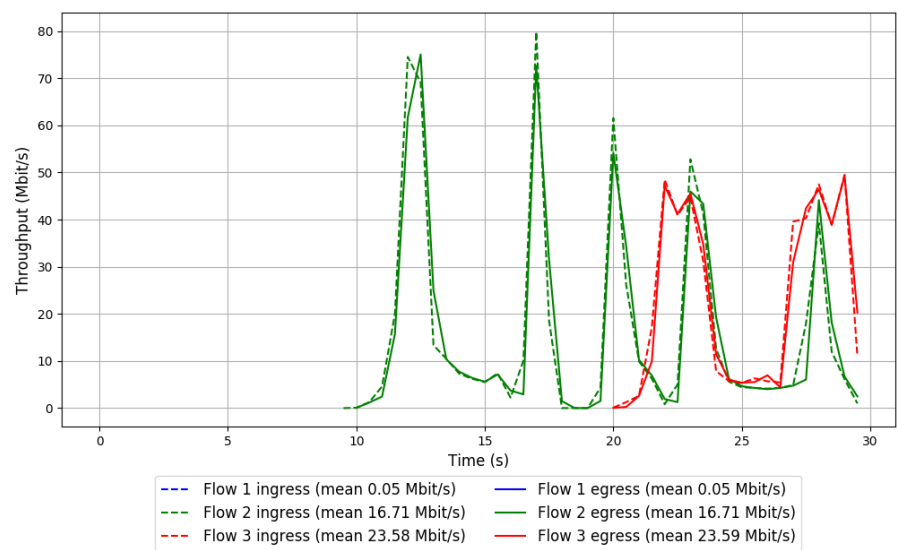
-- Flow 3:

Average throughput: 23.59 Mbit/s

95th percentile per-packet one-way delay: 109.560 ms

Loss rate: 0.01%

Run 10: Report of QUIC Cubic — Data Link



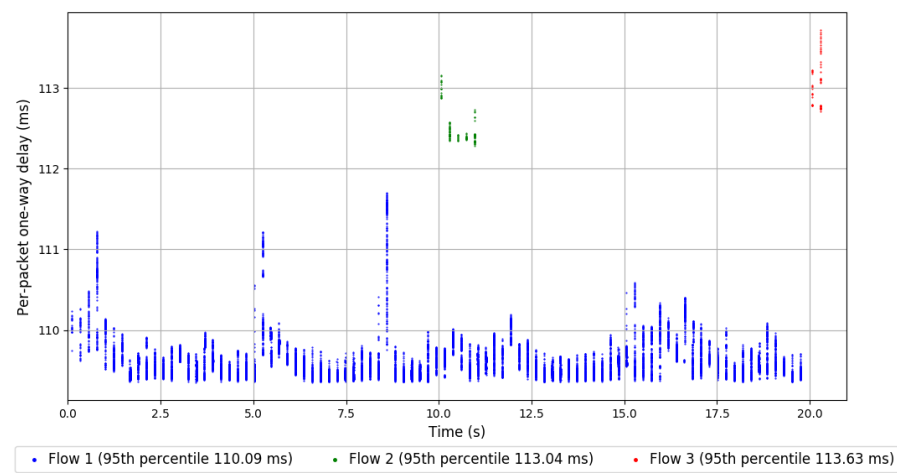
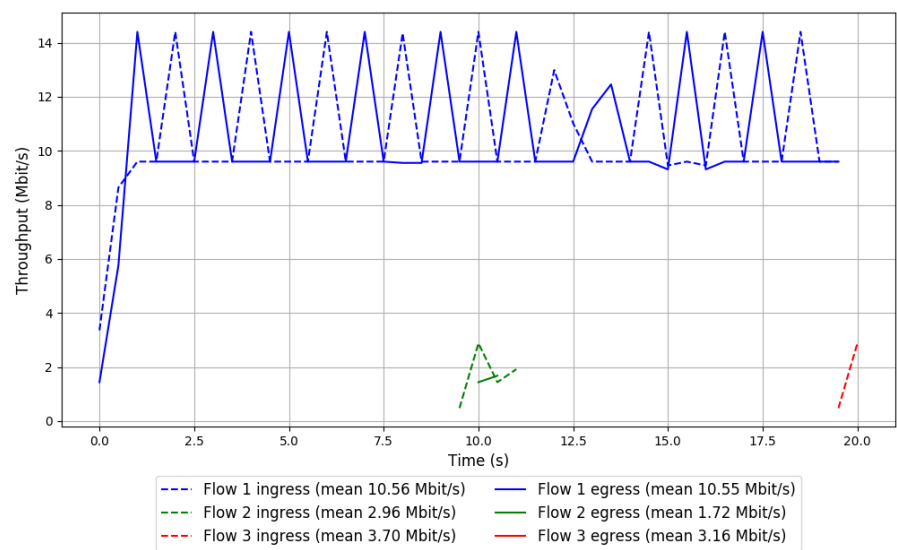
Run 1: Statistics of Saturator

Start at: 2017-08-21 02:02:45

End at: 2017-08-21 02:03:15



Run 1: Report of Saturator — Data Link



Run 2: Statistics of Saturator

Start at: 2017-08-21 02:15:49

End at: 2017-08-21 02:16:19

# Below is generated by plot.py at 2017-08-21 05:08:29

# Datalink statistics

-- Total of 3 flows:

Average throughput: 6.98 Mbit/s

95th percentile per-packet one-way delay: 113.199 ms

Loss rate: 1.07%

-- Flow 1:

Average throughput: 3.17 Mbit/s

95th percentile per-packet one-way delay: 113.317 ms

Loss rate: 57.14%

-- Flow 2:

Average throughput: 10.41 Mbit/s

95th percentile per-packet one-way delay: 113.121 ms

Loss rate: 0.16%

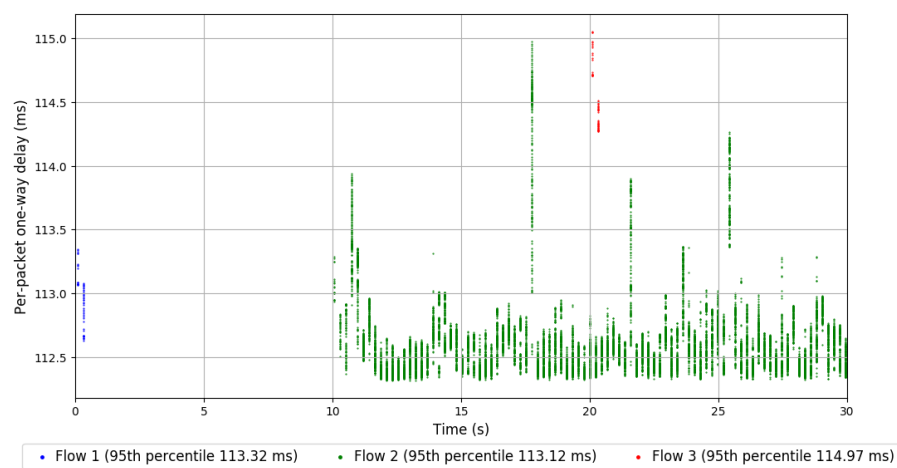
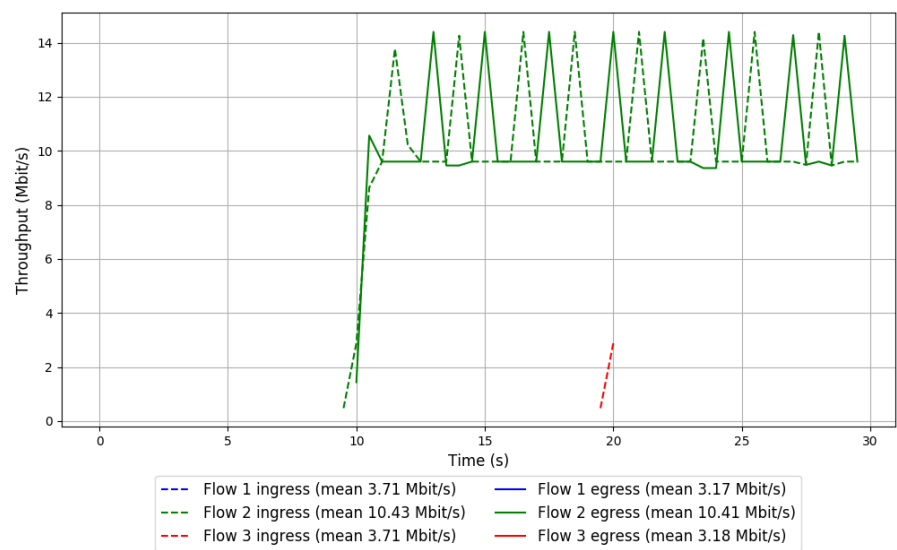
-- Flow 3:

Average throughput: 3.18 Mbit/s

95th percentile per-packet one-way delay: 114.974 ms

Loss rate: 57.14%

Run 2: Report of Saturator — Data Link



Run 3: Statistics of Saturator

Start at: 2017-08-21 02:28:27

End at: 2017-08-21 02:28:57

# Below is generated by plot.py at 2017-08-21 05:08:32

# Datalink statistics

-- Total of 3 flows:

Average throughput: 10.53 Mbit/s

95th percentile per-packet one-way delay: 113.163 ms

Loss rate: 0.68%

-- Flow 1:

Average throughput: 10.49 Mbit/s

95th percentile per-packet one-way delay: 113.143 ms

Loss rate: 0.07%

-- Flow 2:

Average throughput: 3.15 Mbit/s

95th percentile per-packet one-way delay: 114.767 ms

Loss rate: 57.14%

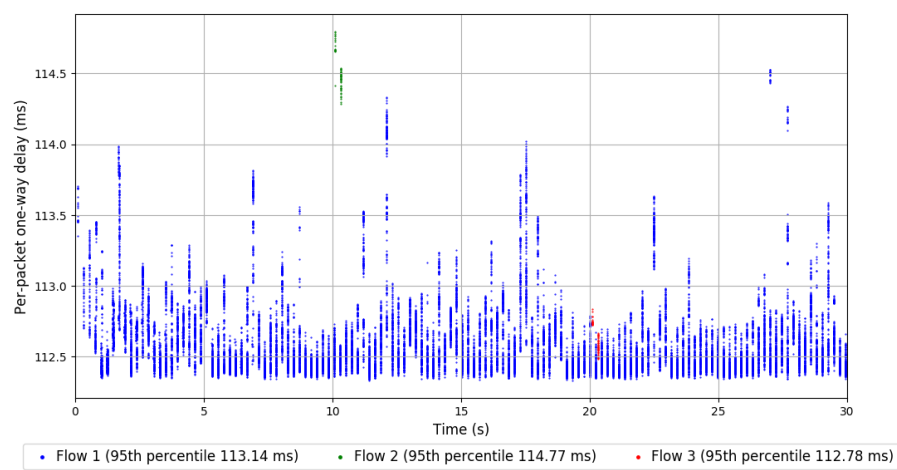
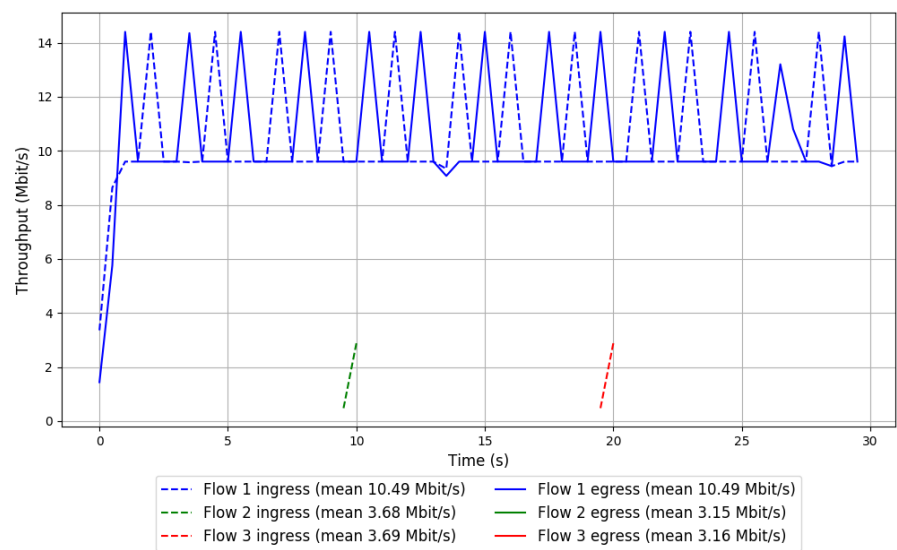
-- Flow 3:

Average throughput: 3.16 Mbit/s

95th percentile per-packet one-way delay: 112.783 ms

Loss rate: 57.14%

Run 3: Report of Saturator — Data Link



Run 4: Statistics of Saturator

Start at: 2017-08-21 02:41:17

End at: 2017-08-21 02:41:47

# Below is generated by plot.py at 2017-08-21 05:08:32

# Datalink statistics

-- Total of 3 flows:

Average throughput: 6.97 Mbit/s

95th percentile per-packet one-way delay: 113.278 ms

Loss rate: 1.14%

-- Flow 1:

Average throughput: 3.18 Mbit/s

95th percentile per-packet one-way delay: 113.065 ms

Loss rate: 57.14%

-- Flow 2:

Average throughput: 10.39 Mbit/s

95th percentile per-packet one-way delay: 113.279 ms

Loss rate: 0.23%

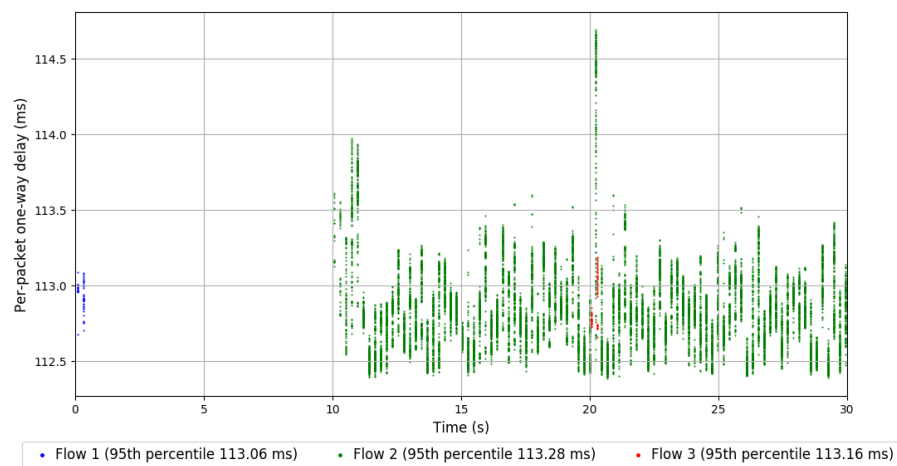
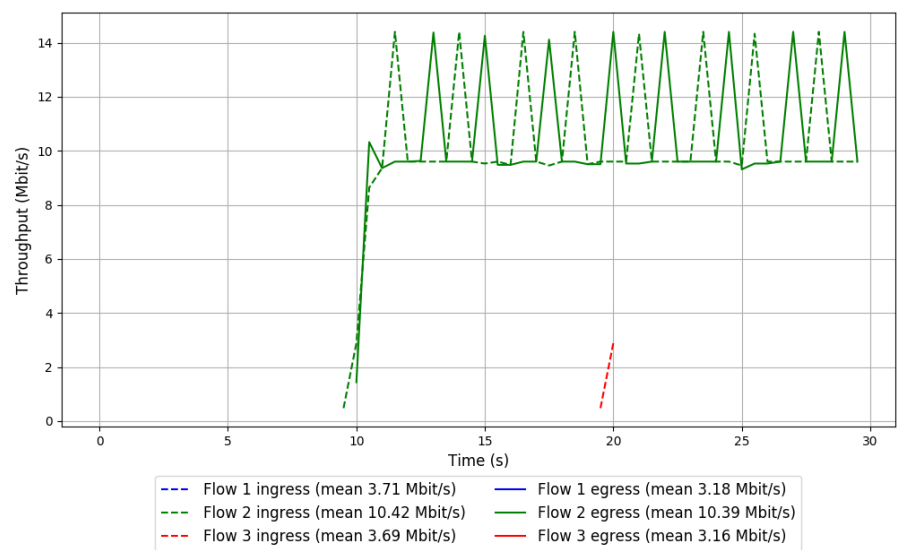
-- Flow 3:

Average throughput: 3.16 Mbit/s

95th percentile per-packet one-way delay: 113.161 ms

Loss rate: 57.14%

Run 4: Report of Saturator — Data Link



Run 5: Statistics of Saturator

Start at: 2017-08-21 02:54:11

End at: 2017-08-21 02:54:41

# Below is generated by plot.py at 2017-08-21 05:08:35

# Datalink statistics

-- Total of 3 flows:

Average throughput: 10.27 Mbit/s

95th percentile per-packet one-way delay: 113.153 ms

Loss rate: 0.48%

-- Flow 1:

Average throughput: 3.15 Mbit/s

95th percentile per-packet one-way delay: 115.290 ms

Loss rate: 57.14%

-- Flow 2:

Average throughput: 10.26 Mbit/s

95th percentile per-packet one-way delay: 113.180 ms

Loss rate: 0.23%

-- Flow 3:

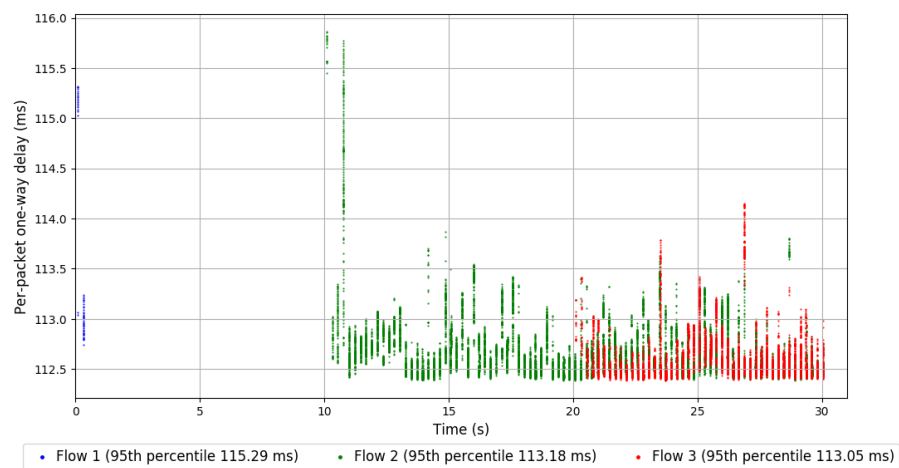
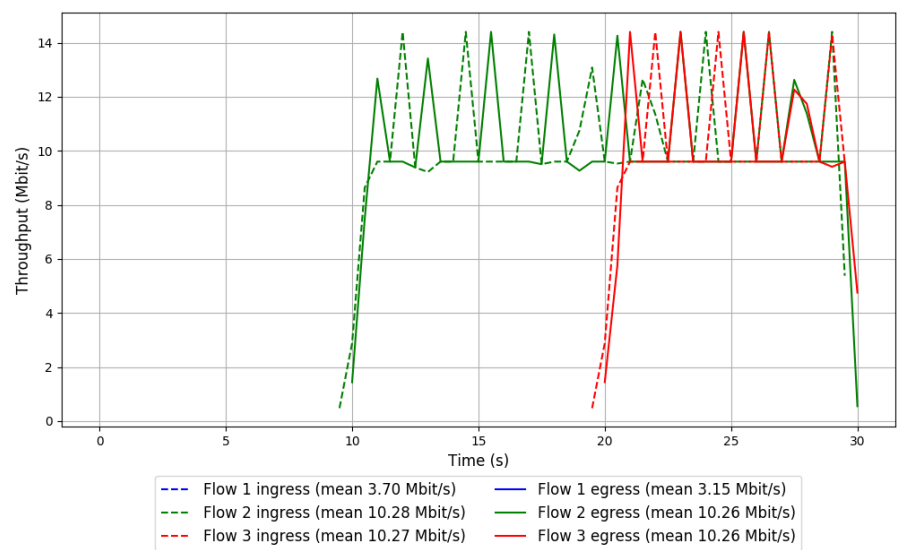
Average throughput: 10.26 Mbit/s

95th percentile per-packet one-way delay: 113.051 ms

Loss rate: 0.05%



Run 5: Report of Saturator — Data Link



Run 6: Statistics of Saturator

Start at: 2017-08-21 03:06:47

End at: 2017-08-21 03:07:17

# Below is generated by plot.py at 2017-08-21 05:08:36

# Datalink statistics

-- Total of 3 flows:

Average throughput: 10.17 Mbit/s

95th percentile per-packet one-way delay: 113.520 ms

Loss rate: 0.79%

-- Flow 1:

Average throughput: 3.01 Mbit/s

95th percentile per-packet one-way delay: 113.332 ms

Loss rate: 57.46%

-- Flow 2:

Average throughput: 10.28 Mbit/s

95th percentile per-packet one-way delay: 113.249 ms

Loss rate: 0.55%

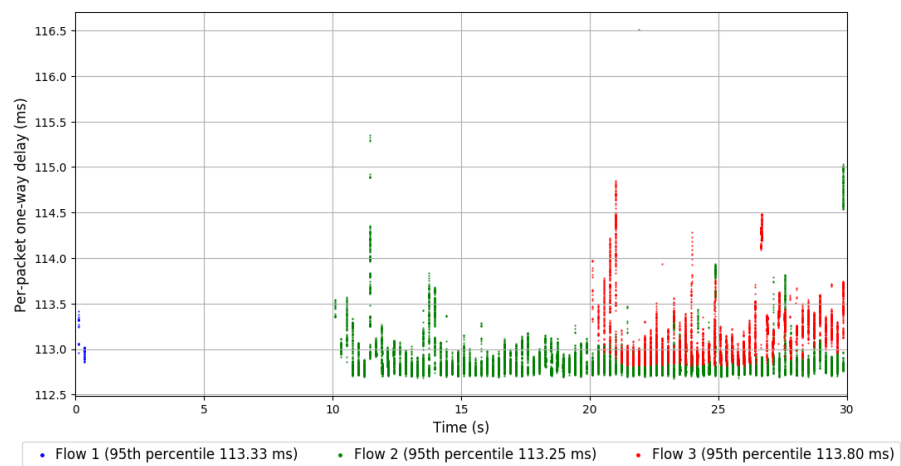
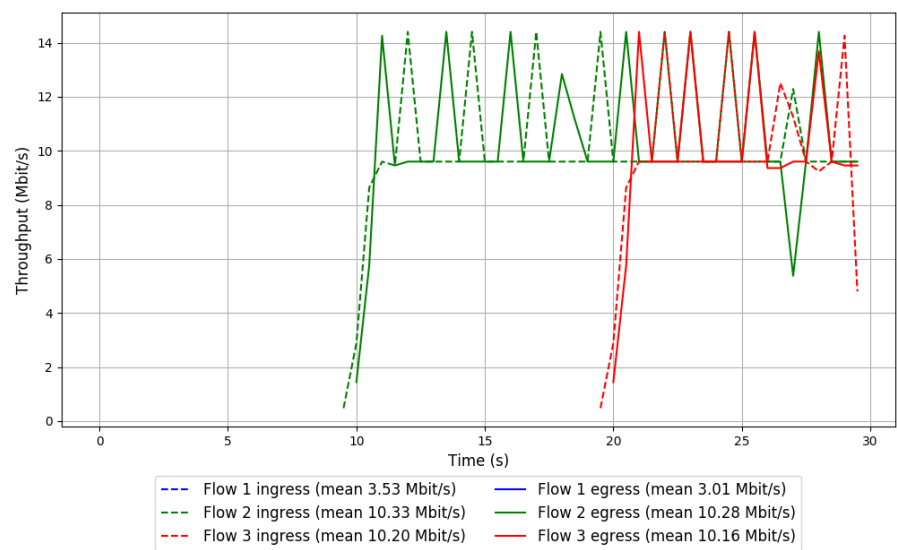
-- Flow 3:

Average throughput: 10.16 Mbit/s

95th percentile per-packet one-way delay: 113.804 ms

Loss rate: 0.37%

Run 6: Report of Saturator — Data Link



Run 7: Statistics of Saturator

Start at: 2017-08-21 03:19:36

End at: 2017-08-21 03:20:06

# Below is generated by plot.py at 2017-08-21 05:08:40

# Datalink statistics

-- Total of 3 flows:

Average throughput: 10.29 Mbit/s

95th percentile per-packet one-way delay: 113.562 ms

Loss rate: 0.72%

-- Flow 1:

Average throughput: 3.17 Mbit/s

95th percentile per-packet one-way delay: 113.429 ms

Loss rate: 57.14%

-- Flow 2:

Average throughput: 10.32 Mbit/s

95th percentile per-packet one-way delay: 113.584 ms

Loss rate: 0.52%

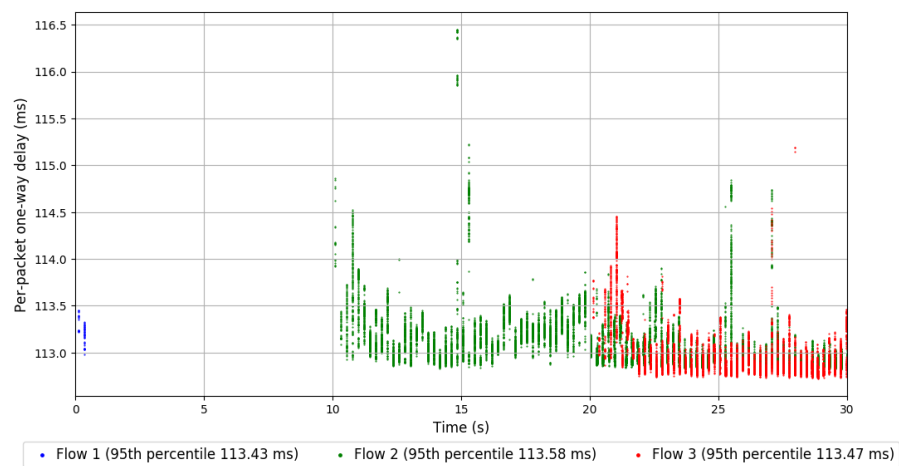
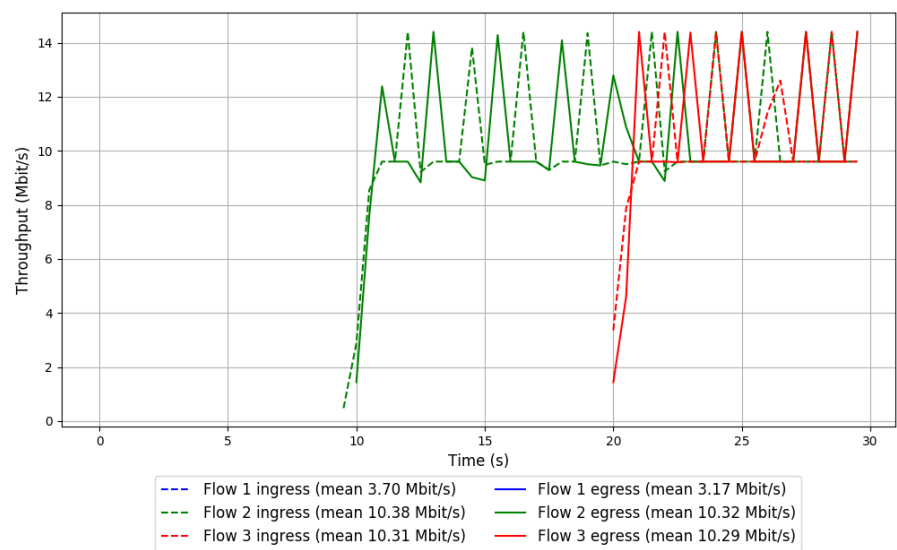
-- Flow 3:

Average throughput: 10.29 Mbit/s

95th percentile per-packet one-way delay: 113.465 ms

Loss rate: 0.20%

Run 7: Report of Saturator — Data Link

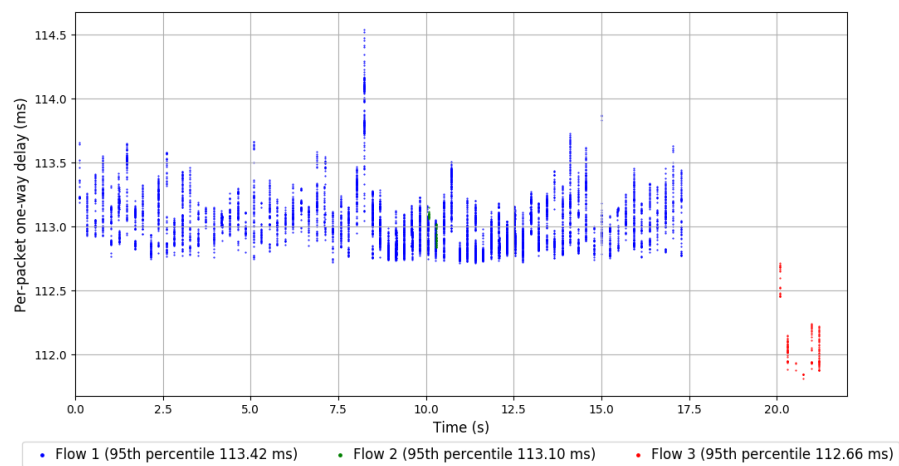
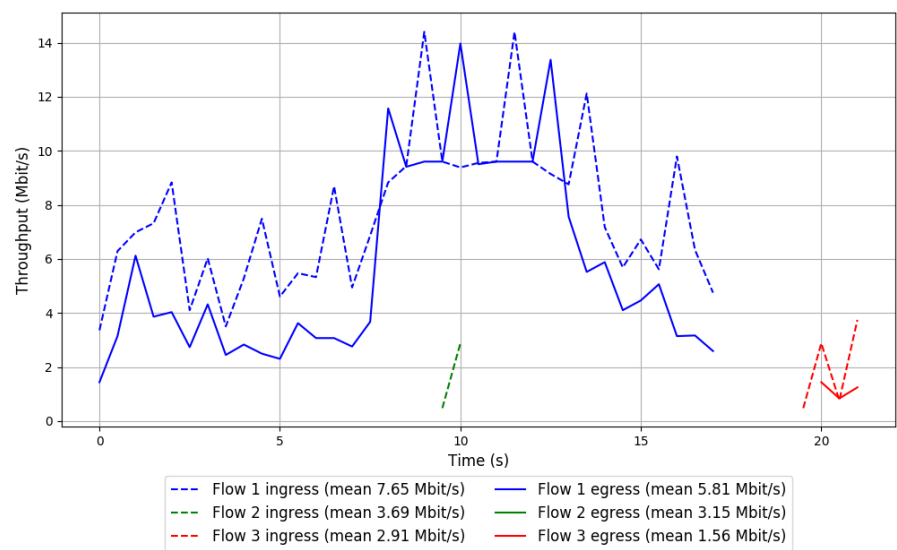


Run 8: Statistics of Saturator

Start at: 2017-08-21 03:32:33

End at: 2017-08-21 03:33:03

Run 8: Report of Saturator — Data Link



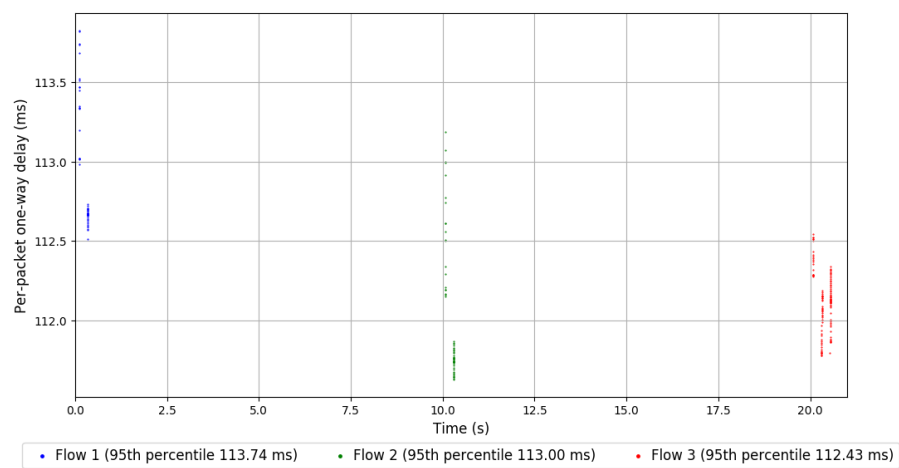
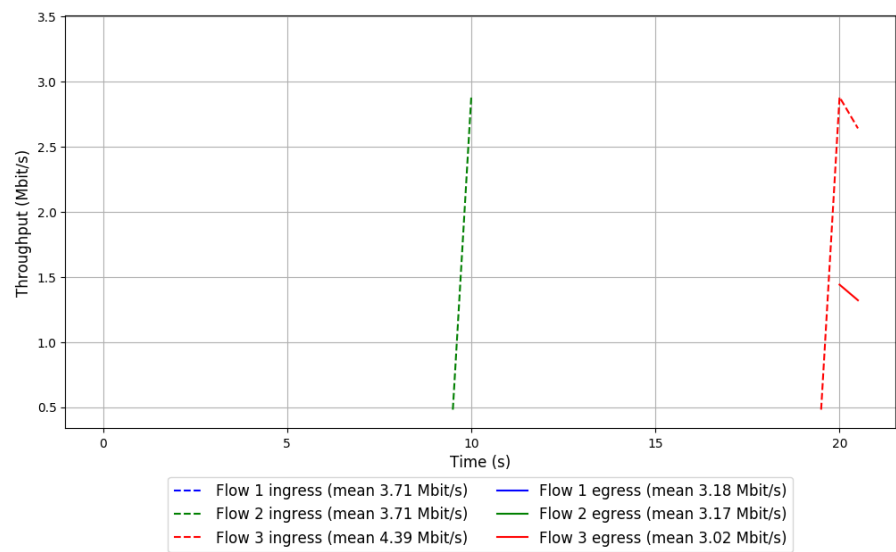
Run 9: Statistics of Saturator

Start at: 2017-08-21 03:45:20

End at: 2017-08-21 03:45:50



Run 9: Report of Saturator — Data Link



Run 10: Statistics of Saturator

Start at: 2017-08-21 03:57:48

End at: 2017-08-21 03:58:18

# Below is generated by plot.py at 2017-08-21 05:08:45

# Datalink statistics

-- Total of 3 flows:

Average throughput: 10.77 Mbit/s

95th percentile per-packet one-way delay: 111.330 ms

Loss rate: 0.68%

-- Flow 1:

Average throughput: 10.72 Mbit/s

95th percentile per-packet one-way delay: 111.305 ms

Loss rate: 0.09%

-- Flow 2:

Average throughput: 3.18 Mbit/s

95th percentile per-packet one-way delay: 113.123 ms

Loss rate: 57.14%

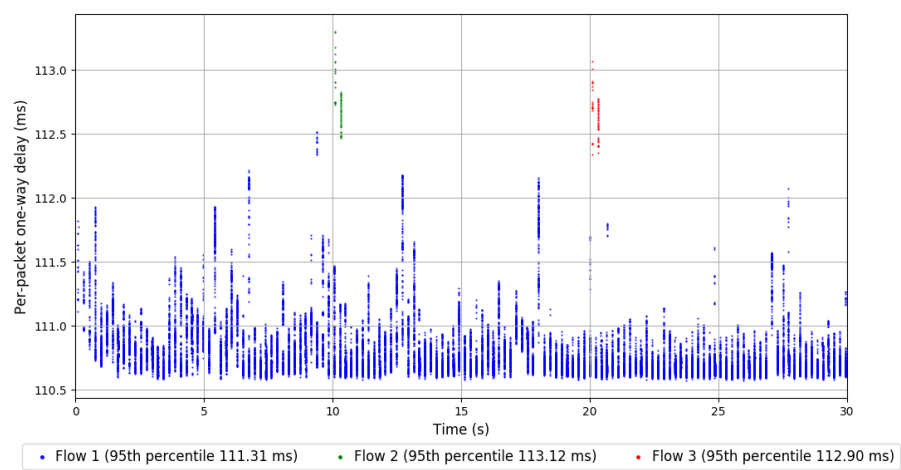
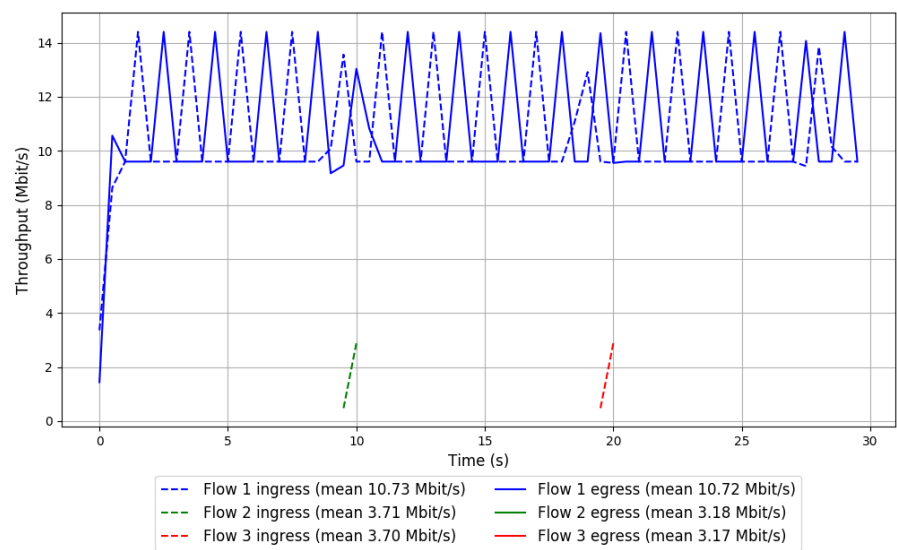
-- Flow 3:

Average throughput: 3.17 Mbit/s

95th percentile per-packet one-way delay: 112.901 ms

Loss rate: 57.14%

Run 10: Report of Saturator — Data Link

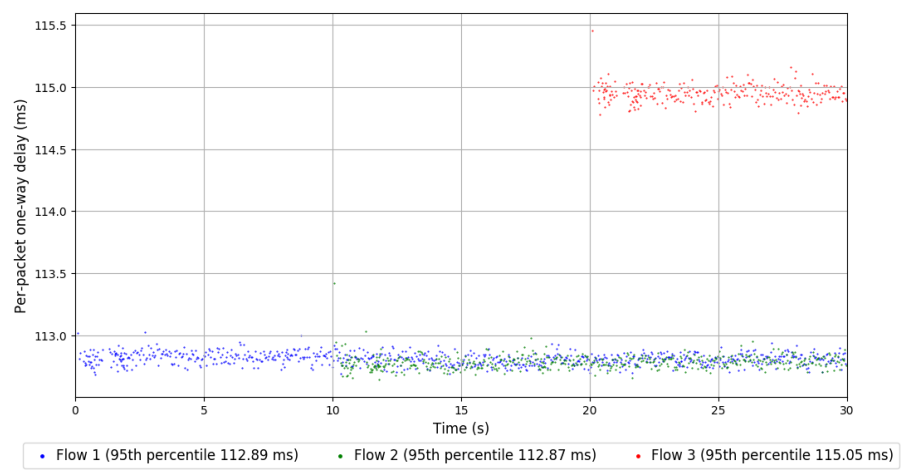
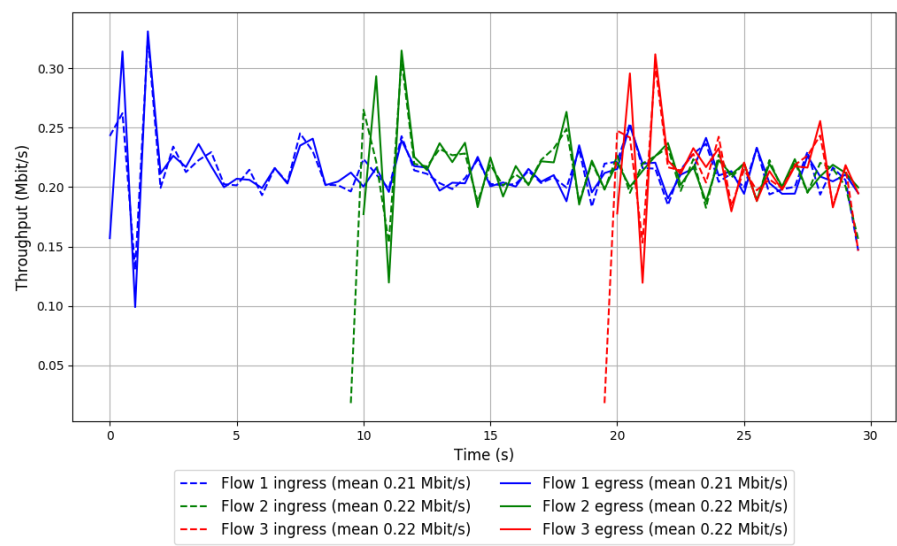


```
Run 1: Statistics of SCReAM

Start at: 2017-08-21 02:00:18
End at: 2017-08-21 02:00:48

# Below is generated by plot.py at 2017-08-21 05:08:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 114.979 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 112.893 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 112.866 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 115.049 ms
Loss rate: 0.00%
```

Run 1: Report of SReAM — Data Link

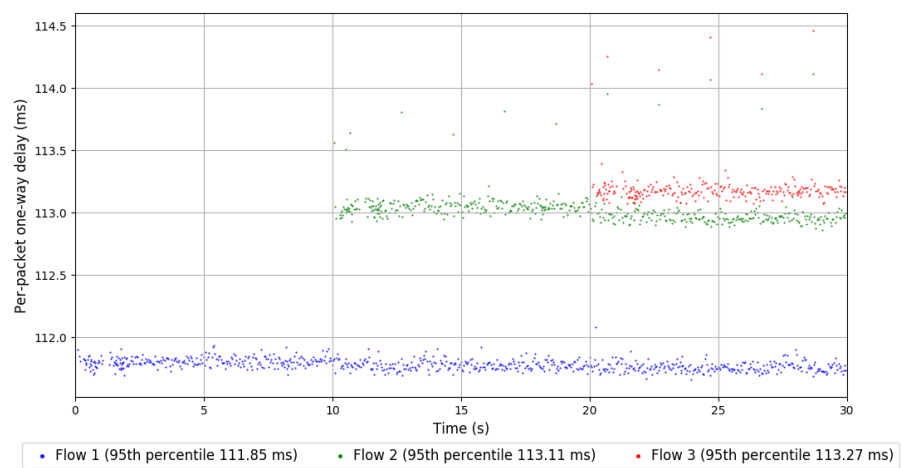
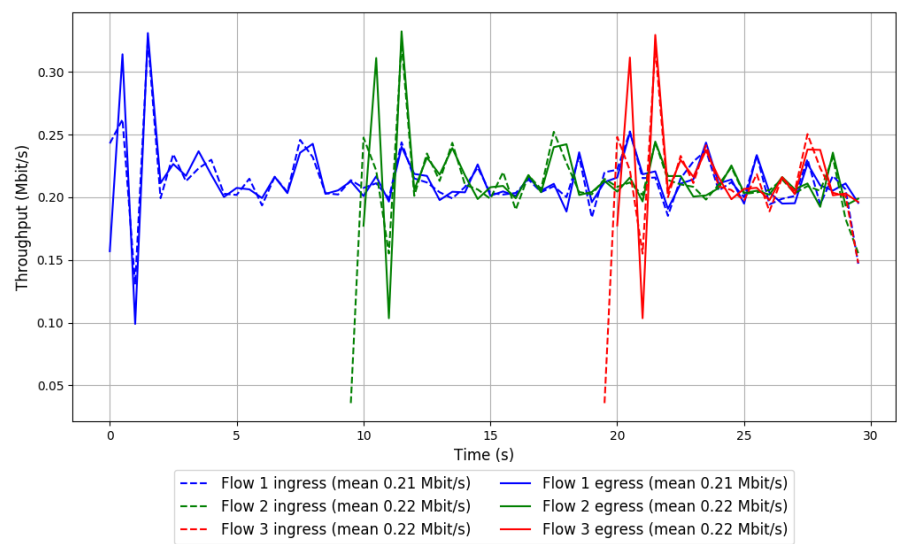


```
Run 2: Statistics of SCReAM

Start at: 2017-08-21 02:13:04
End at: 2017-08-21 02:13:34

# Below is generated by plot.py at 2017-08-21 05:08:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 113.204 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 111.853 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 113.115 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 113.268 ms
Loss rate: 0.00%
```

Run 2: Report of SCRaM — Data Link



Run 3: Statistics of SCReAM

Start at: 2017-08-21 02:26:02

End at: 2017-08-21 02:26:32

# Below is generated by plot.py at 2017-08-21 05:08:45

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.40 Mbit/s

95th percentile per-packet one-way delay: 112.498 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 112.516 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 110.970 ms

Loss rate: 0.00%

-- Flow 3:

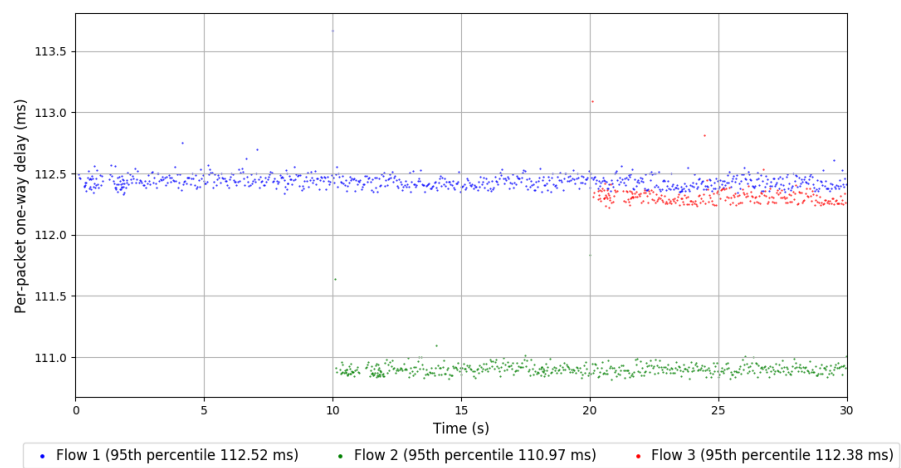
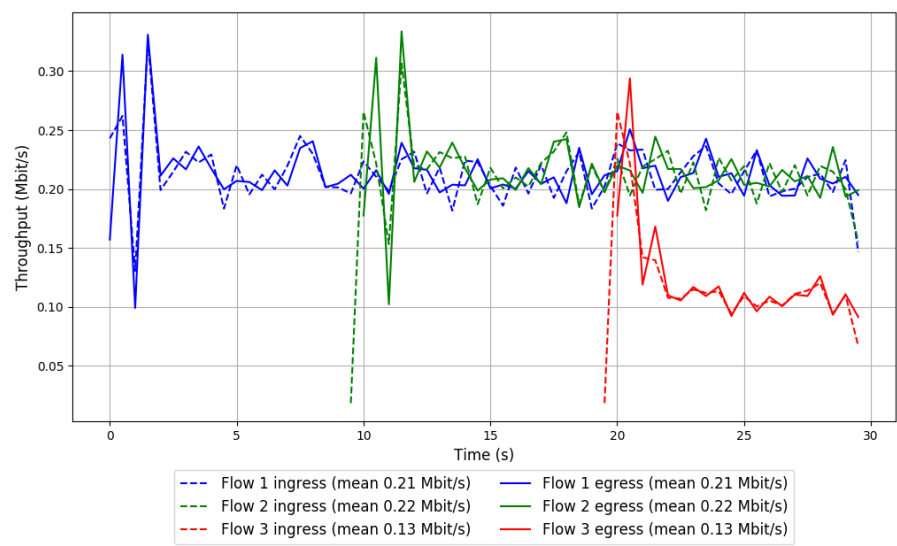
Average throughput: 0.13 Mbit/s

95th percentile per-packet one-way delay: 112.378 ms

Loss rate: 0.00%



Run 3: Report of SCRaM — Data Link

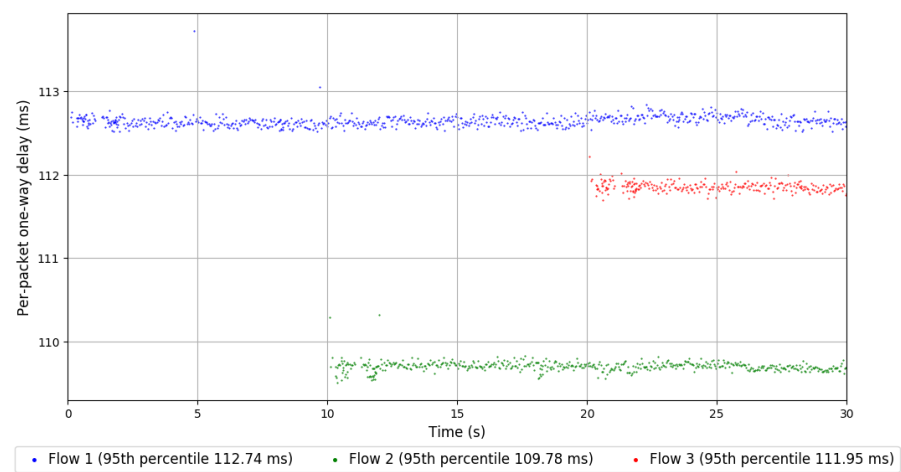
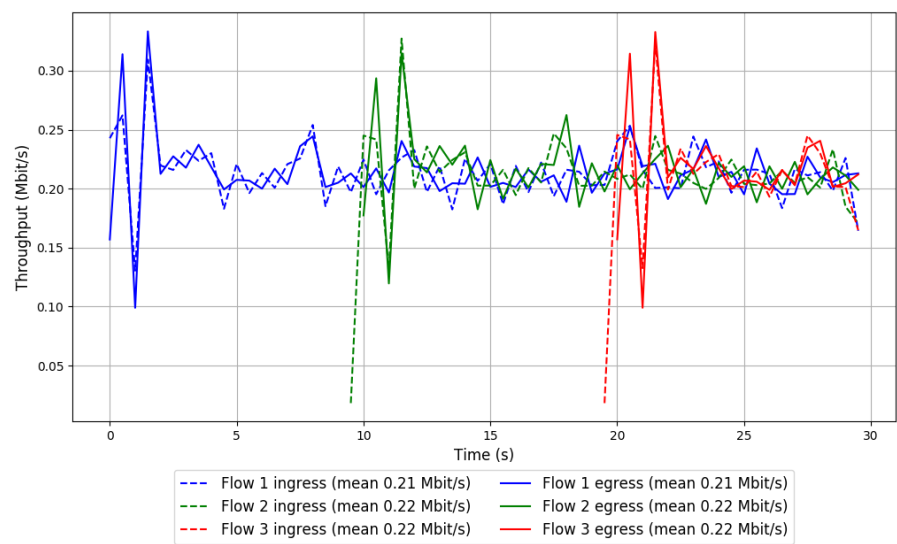


```
Run 4: Statistics of SCReAM

Start at: 2017-08-21 02:38:41
End at: 2017-08-21 02:39:11

# Below is generated by plot.py at 2017-08-21 05:08:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 112.716 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 112.738 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 109.783 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 111.946 ms
Loss rate: 0.00%
```

Run 4: Report of SCSReAM — Data Link



Run 5: Statistics of SCReAM

Start at: 2017-08-21 02:51:33

End at: 2017-08-21 02:52:03

# Below is generated by plot.py at 2017-08-21 05:08:47

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 112.312 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 110.631 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 109.669 ms

Loss rate: 0.00%

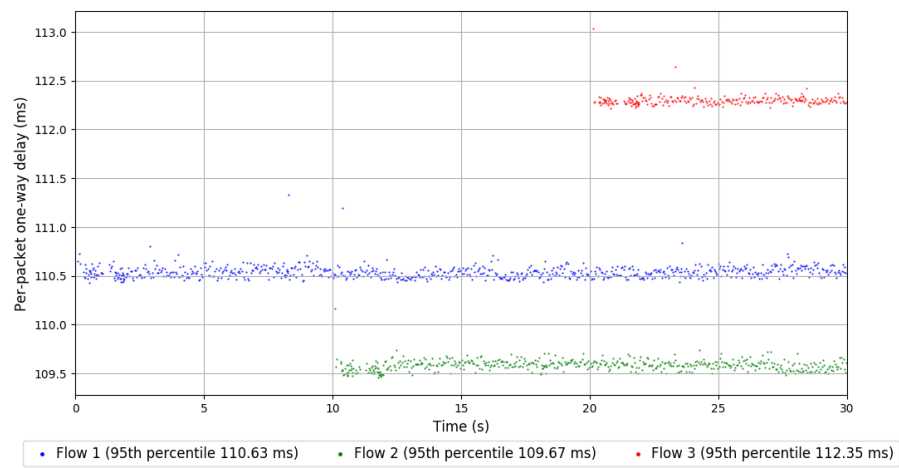
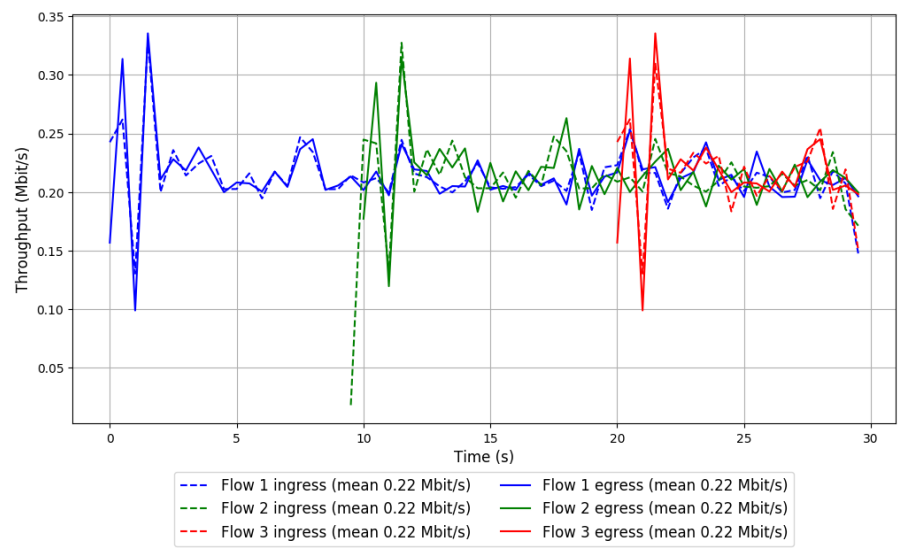
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 112.348 ms

Loss rate: 0.00%

Run 5: Report of SReAM — Data Link



Run 6: Statistics of SReAM

Start at: 2017-08-21 03:04:07

End at: 2017-08-21 03:04:37

# Below is generated by plot.py at 2017-08-21 05:08:47

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 112.970 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 112.784 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 113.001 ms

Loss rate: 0.00%

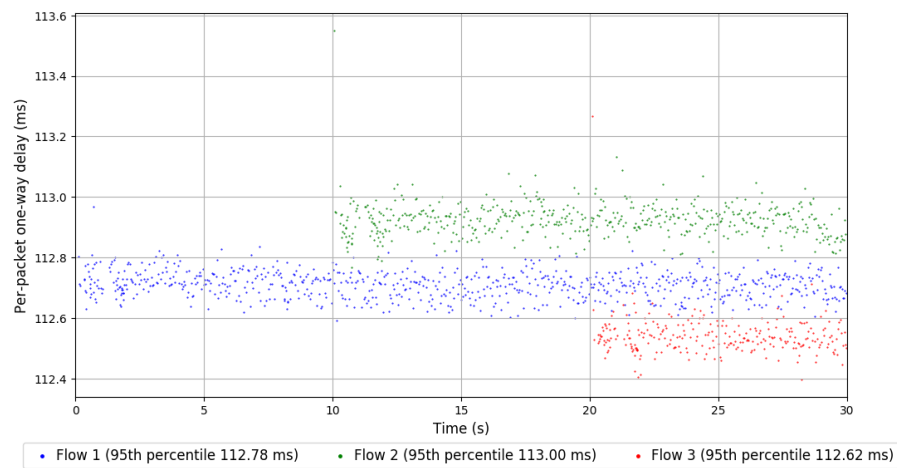
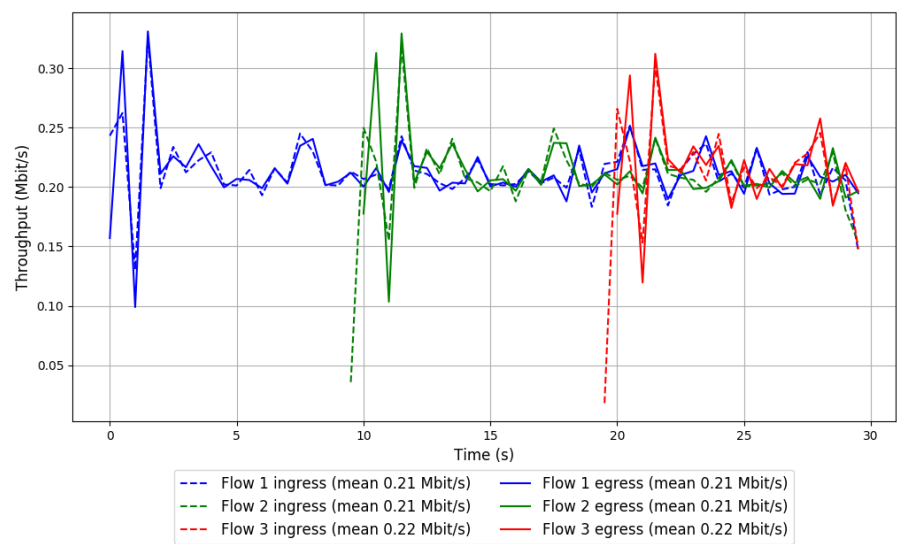
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 112.619 ms

Loss rate: 0.00%

Run 6: Report of SReAM — Data Link



Run 7: Statistics of SReAM

Start at: 2017-08-21 03:16:58

End at: 2017-08-21 03:17:28

# Below is generated by plot.py at 2017-08-21 05:08:49

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.33 Mbit/s

95th percentile per-packet one-way delay: 113.124 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.11 Mbit/s

95th percentile per-packet one-way delay: 113.140 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 113.117 ms

Loss rate: 0.00%

-- Flow 3:

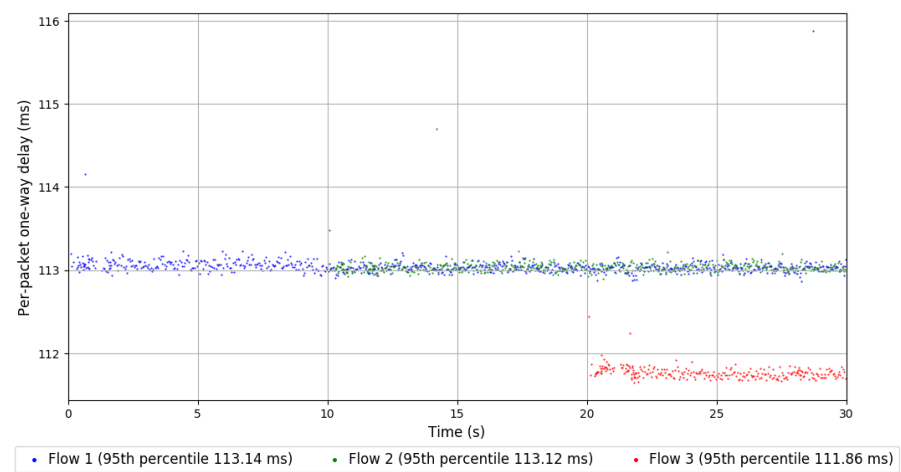
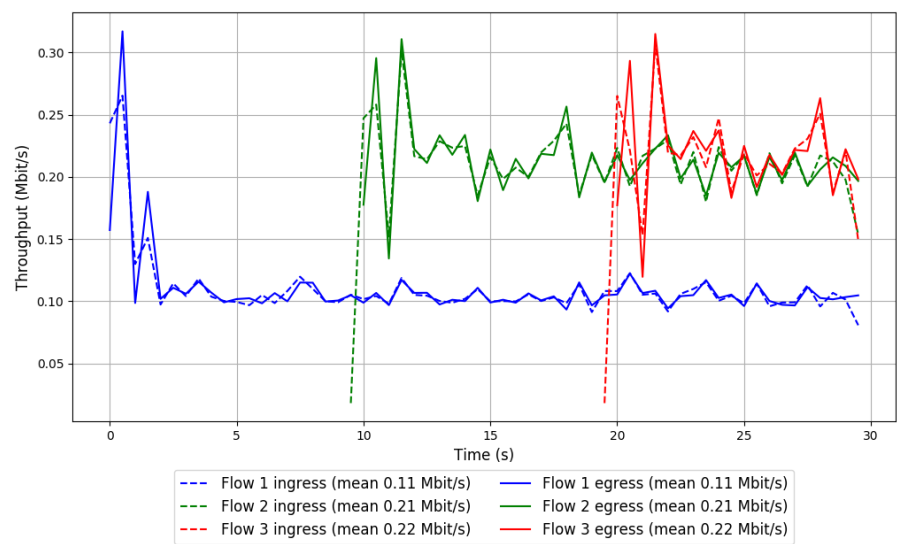
Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 111.859 ms

Loss rate: 0.00%



Run 7: Report of SReAM — Data Link



Run 8: Statistics of SCReAM

Start at: 2017-08-21 03:29:49

End at: 2017-08-21 03:30:20

# Below is generated by plot.py at 2017-08-21 05:08:49

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 114.750 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 112.491 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 114.793 ms

Loss rate: 0.00%

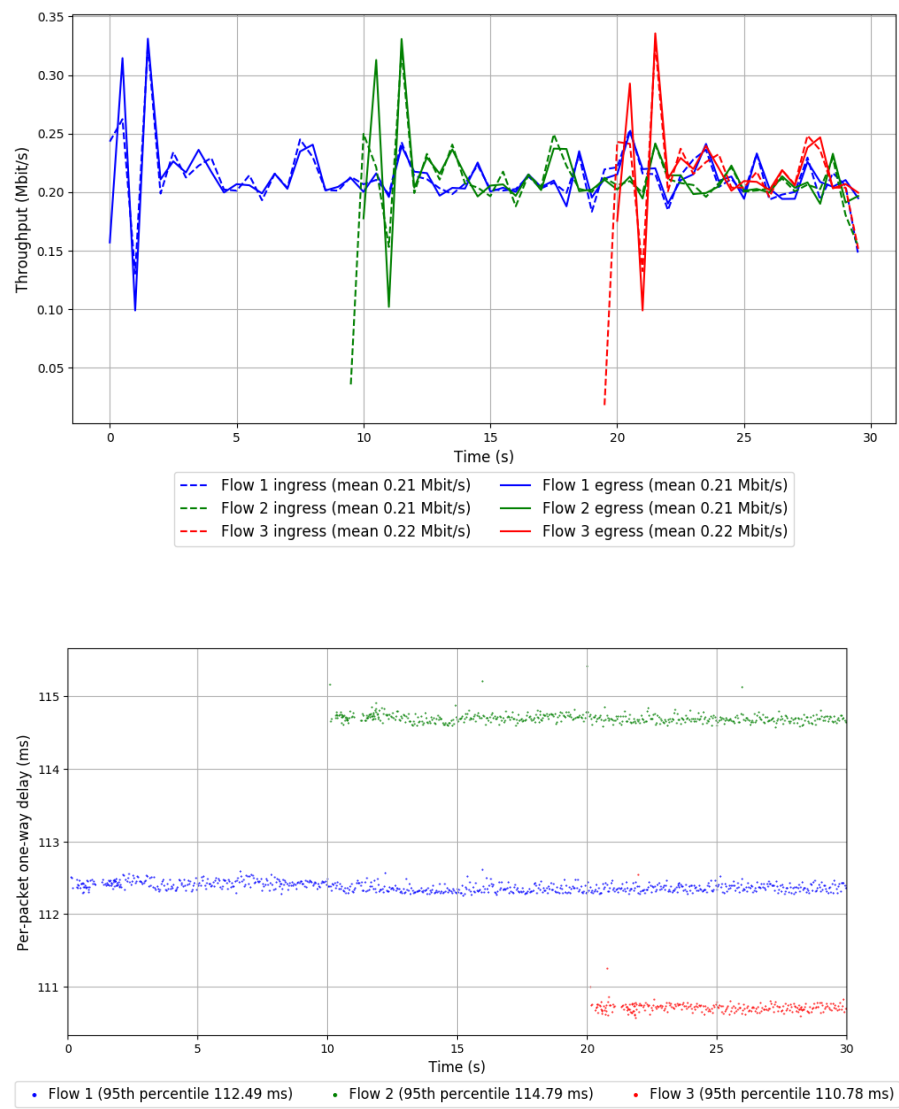
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 110.783 ms

Loss rate: 0.00%

Run 8: Report of SReAM — Data Link



Run 9: Statistics of SCReAM

Start at: 2017-08-21 03:42:46

End at: 2017-08-21 03:43:16

# Below is generated by plot.py at 2017-08-21 05:08:50

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.40 Mbit/s

95th percentile per-packet one-way delay: 112.332 ms

Loss rate: 0.03%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 111.238 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 111.203 ms

Loss rate: 0.00%

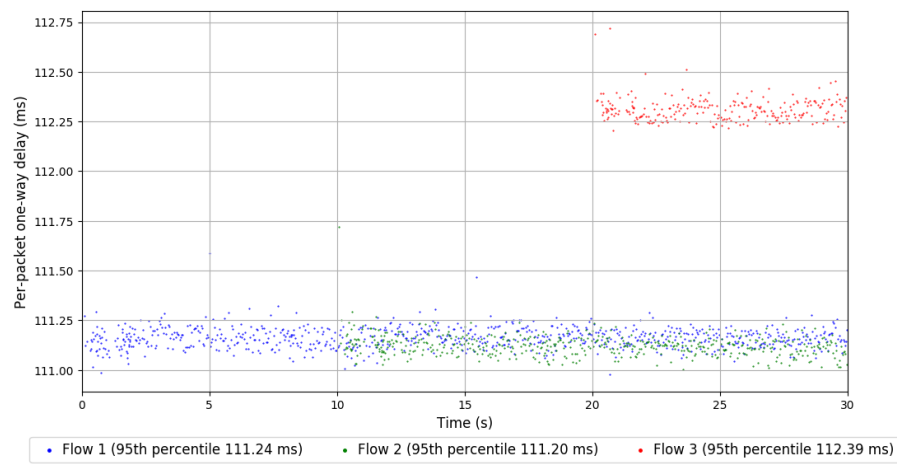
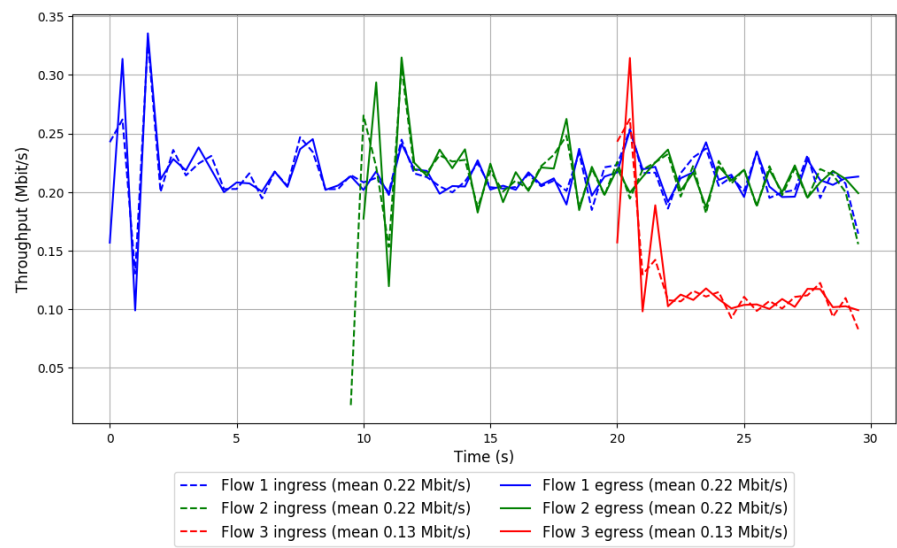
-- Flow 3:

Average throughput: 0.13 Mbit/s

95th percentile per-packet one-way delay: 112.392 ms

Loss rate: 0.31%

Run 9: Report of SReAM — Data Link

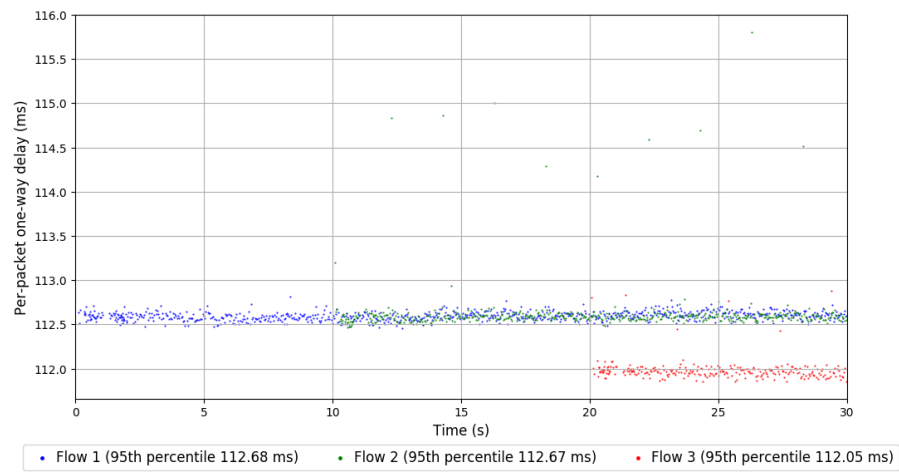
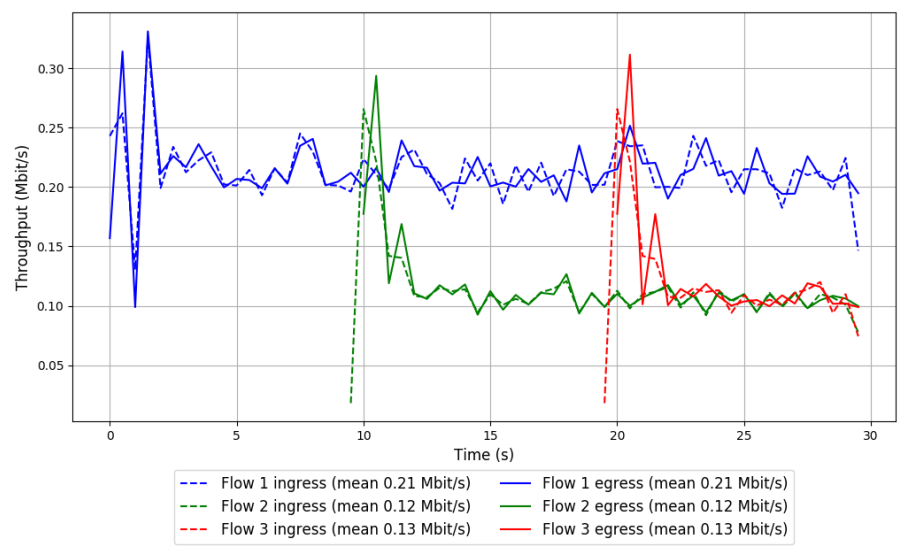


```
Run 10: Statistics of SReAM

Start at: 2017-08-21 03:55:19
End at: 2017-08-21 03:55:49

# Below is generated by plot.py at 2017-08-21 05:08:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.33 Mbit/s
95th percentile per-packet one-way delay: 112.674 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 112.681 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.12 Mbit/s
95th percentile per-packet one-way delay: 112.673 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 112.054 ms
Loss rate: 0.00%
```

Run 10: Report of SReAM — Data Link



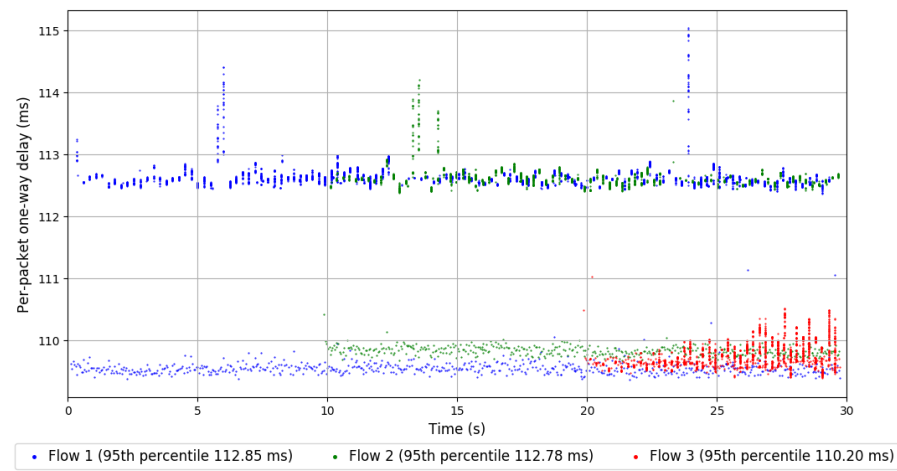
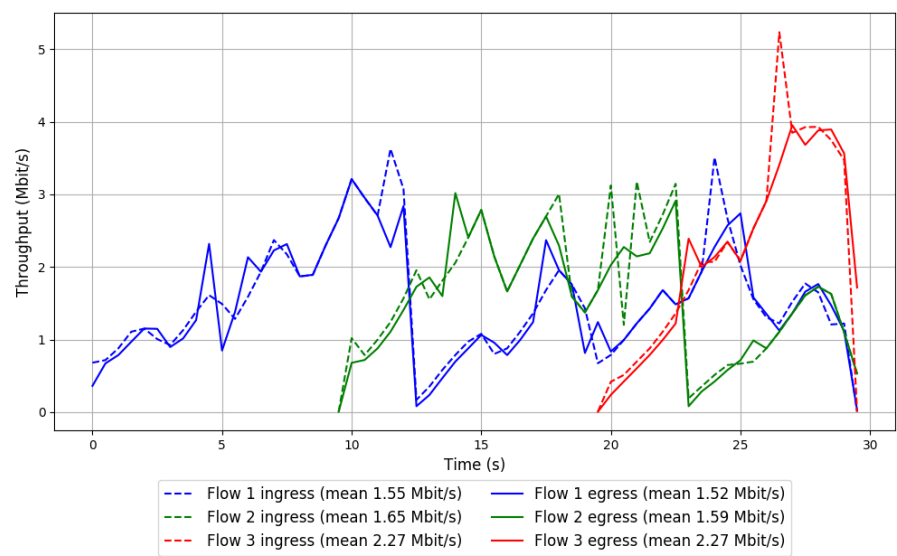
```
Run 1: Statistics of Sprout

Start at: 2017-08-21 01:57:10
End at: 2017-08-21 01:57:40

# Below is generated by plot.py at 2017-08-21 05:08:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.34 Mbit/s
95th percentile per-packet one-way delay: 112.781 ms
Loss rate: 2.29%
-- Flow 1:
Average throughput: 1.52 Mbit/s
95th percentile per-packet one-way delay: 112.846 ms
Loss rate: 2.40%
-- Flow 2:
Average throughput: 1.59 Mbit/s
95th percentile per-packet one-way delay: 112.775 ms
Loss rate: 3.59%
-- Flow 3:
Average throughput: 2.27 Mbit/s
95th percentile per-packet one-way delay: 110.202 ms
Loss rate: 0.16%
```



Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2017-08-21 02:09:21

End at: 2017-08-21 02:09:51

# Below is generated by plot.py at 2017-08-21 05:08:54

# Datalink statistics

-- Total of 3 flows:

Average throughput: 4.44 Mbit/s

95th percentile per-packet one-way delay: 114.357 ms

Loss rate: 0.71%

-- Flow 1:

Average throughput: 2.35 Mbit/s

95th percentile per-packet one-way delay: 114.441 ms

Loss rate: 0.81%

-- Flow 2:

Average throughput: 3.04 Mbit/s

95th percentile per-packet one-way delay: 113.073 ms

Loss rate: 0.00%

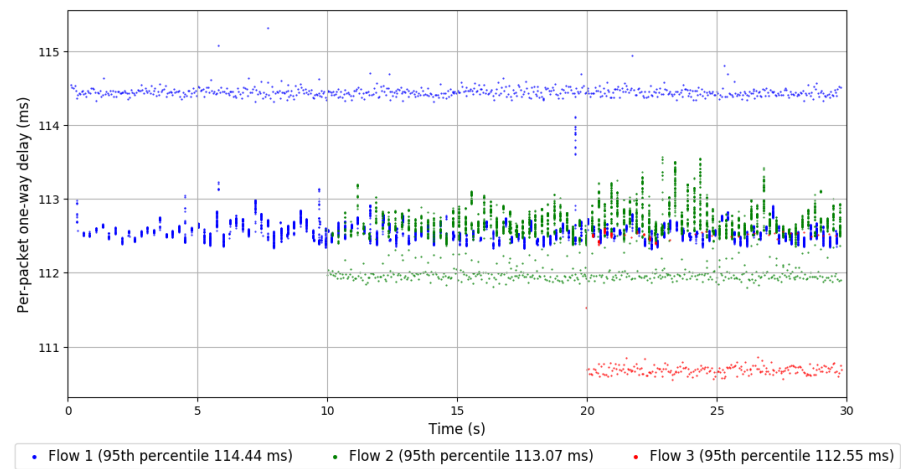
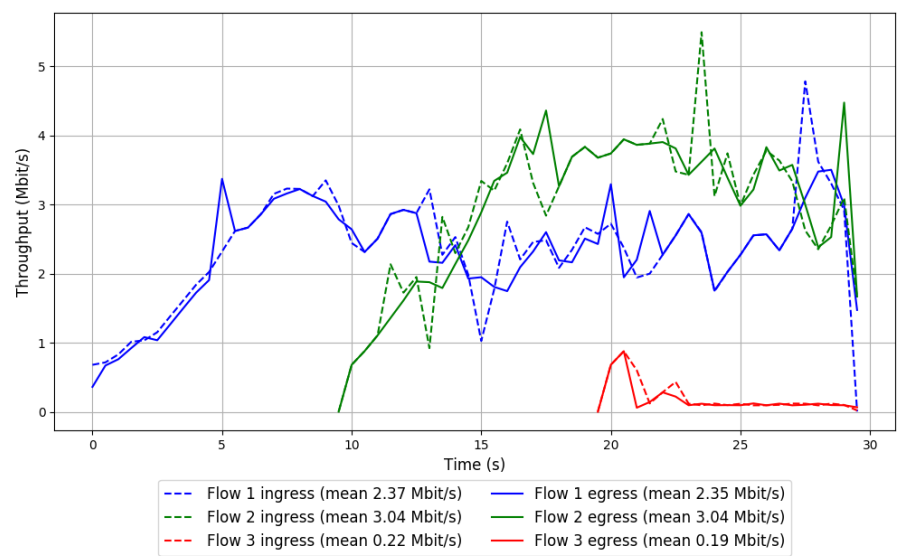
-- Flow 3:

Average throughput: 0.19 Mbit/s

95th percentile per-packet one-way delay: 112.552 ms

Loss rate: 16.64%

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2017-08-21 02:22:34

End at: 2017-08-21 02:23:04

# Below is generated by plot.py at 2017-08-21 05:08:55

# Datalink statistics

-- Total of 3 flows:

Average throughput: 3.19 Mbit/s

95th percentile per-packet one-way delay: 112.765 ms

Loss rate: 2.71%

-- Flow 1:

Average throughput: 1.23 Mbit/s

95th percentile per-packet one-way delay: 112.762 ms

Loss rate: 4.72%

-- Flow 2:

Average throughput: 2.02 Mbit/s

95th percentile per-packet one-way delay: 112.824 ms

Loss rate: 0.73%

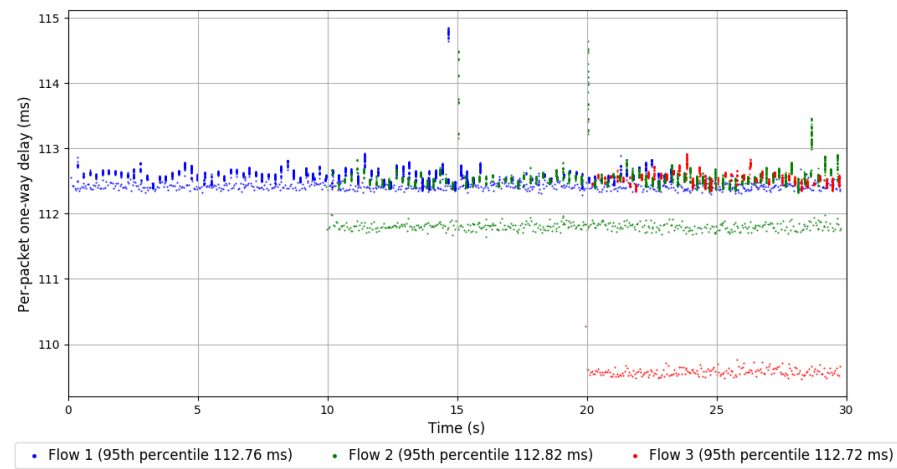
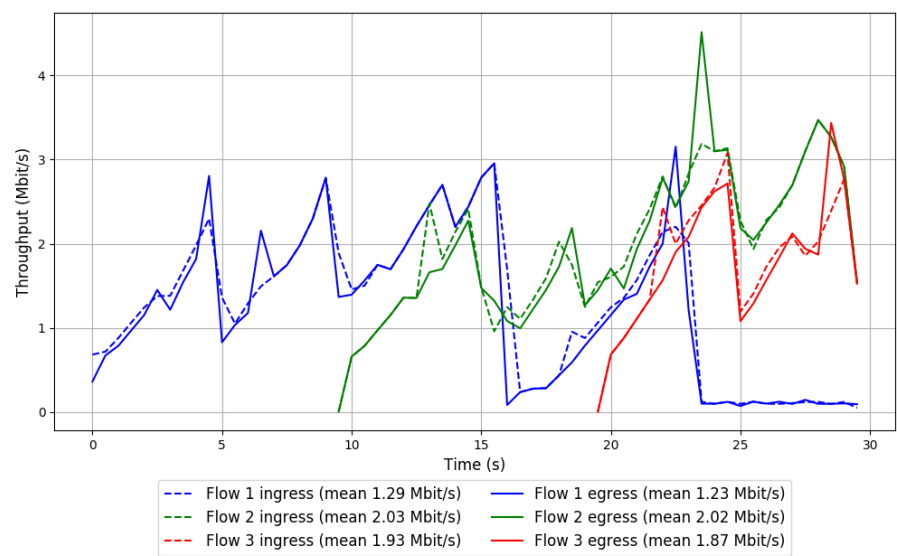
-- Flow 3:

Average throughput: 1.87 Mbit/s

95th percentile per-packet one-way delay: 112.718 ms

Loss rate: 2.88%

Run 3: Report of Sprout — Data Link



Run 4: Statistics of Sprout

Start at: 2017-08-21 02:35:14

End at: 2017-08-21 02:35:44

# Below is generated by plot.py at 2017-08-21 05:08:56

# Datalink statistics

-- Total of 3 flows:

Average throughput: 3.07 Mbit/s

95th percentile per-packet one-way delay: 112.720 ms

Loss rate: 3.59%

-- Flow 1:

Average throughput: 1.38 Mbit/s

95th percentile per-packet one-way delay: 112.703 ms

Loss rate: 5.57%

-- Flow 2:

Average throughput: 1.54 Mbit/s

95th percentile per-packet one-way delay: 112.745 ms

Loss rate: 2.50%

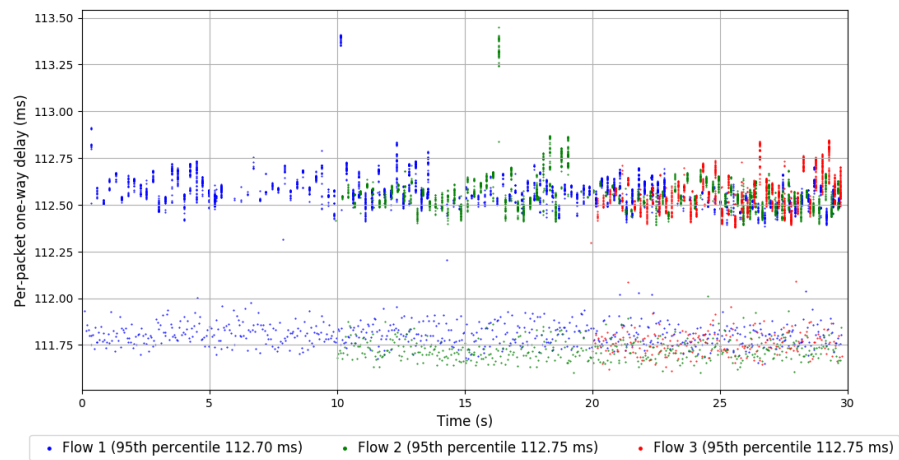
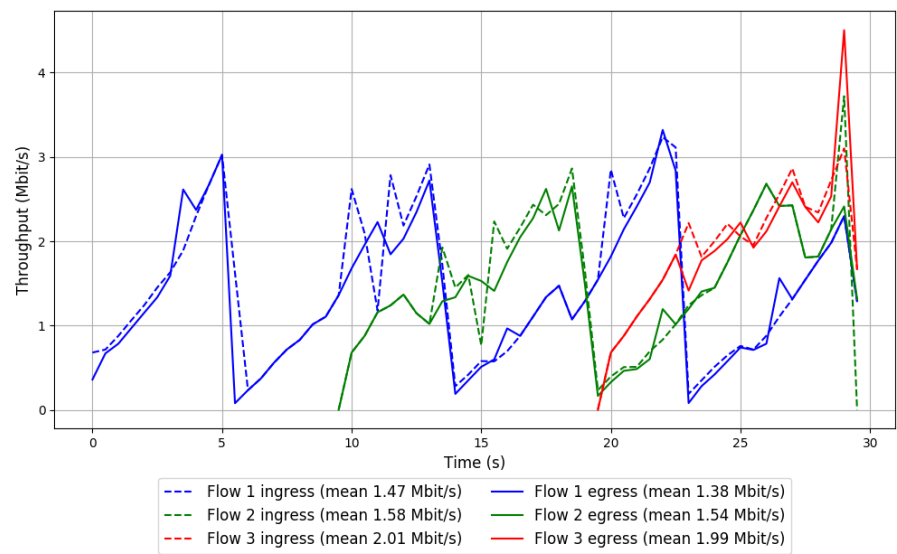
-- Flow 3:

Average throughput: 1.99 Mbit/s

95th percentile per-packet one-way delay: 112.752 ms

Loss rate: 0.96%

Run 4: Report of Sprout — Data Link



Run 5: Statistics of Sprout

Start at: 2017-08-21 02:48:02

End at: 2017-08-21 02:48:32

# Below is generated by plot.py at 2017-08-21 05:08:58

# Datalink statistics

-- Total of 3 flows:

Average throughput: 4.97 Mbit/s

95th percentile per-packet one-way delay: 113.228 ms

Loss rate: 0.33%

-- Flow 1:

Average throughput: 2.85 Mbit/s

95th percentile per-packet one-way delay: 113.181 ms

Loss rate: 0.03%

-- Flow 2:

Average throughput: 2.87 Mbit/s

95th percentile per-packet one-way delay: 113.312 ms

Loss rate: 0.02%

-- Flow 3:

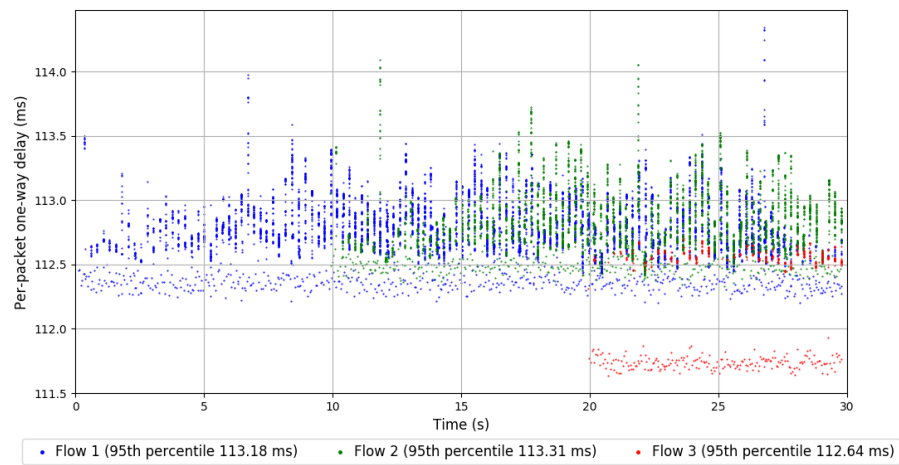
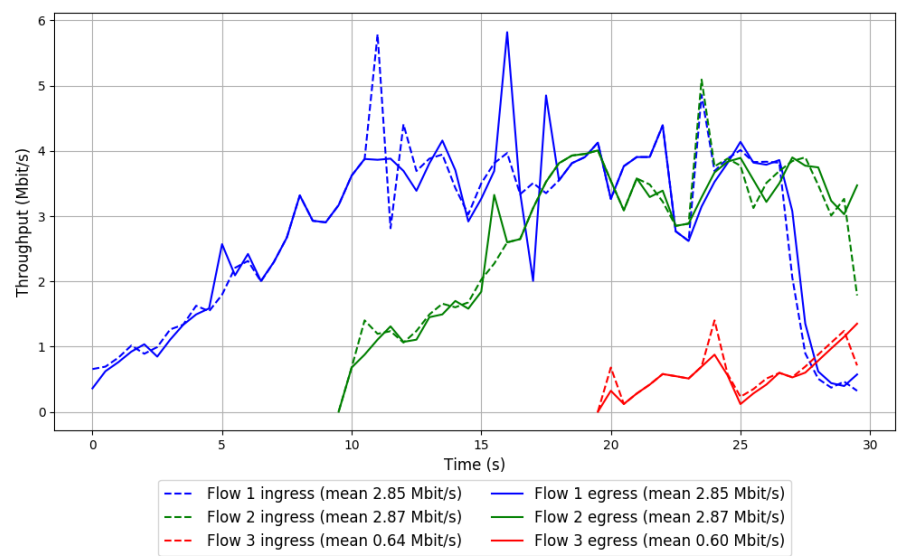
Average throughput: 0.60 Mbit/s

95th percentile per-packet one-way delay: 112.643 ms

Loss rate: 7.13%



Run 5: Report of Sprout — Data Link



Run 6: Statistics of Sprout

Start at: 2017-08-21 03:00:54

End at: 2017-08-21 03:01:24

# Below is generated by plot.py at 2017-08-21 05:08:58

# Datalink statistics

-- Total of 3 flows:

Average throughput: 3.38 Mbit/s

95th percentile per-packet one-way delay: 112.991 ms

Loss rate: 1.93%

-- Flow 1:

Average throughput: 1.61 Mbit/s

95th percentile per-packet one-way delay: 112.868 ms

Loss rate: 3.98%

-- Flow 2:

Average throughput: 2.03 Mbit/s

95th percentile per-packet one-way delay: 113.100 ms

Loss rate: 0.00%

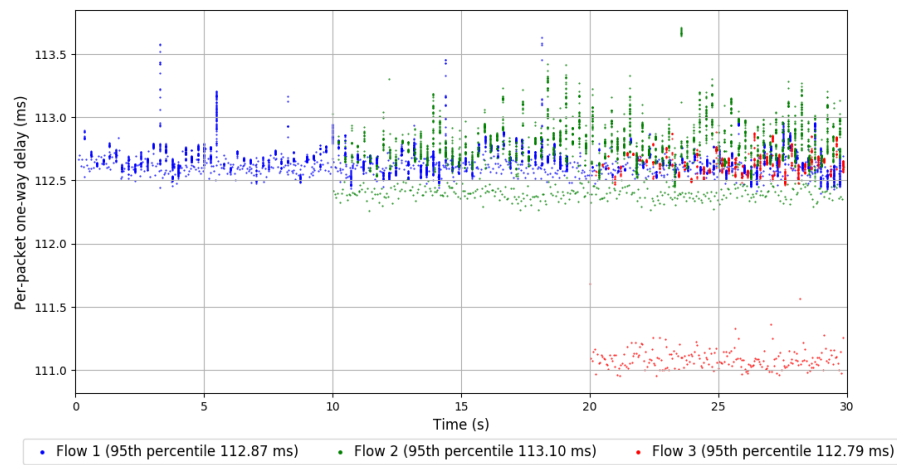
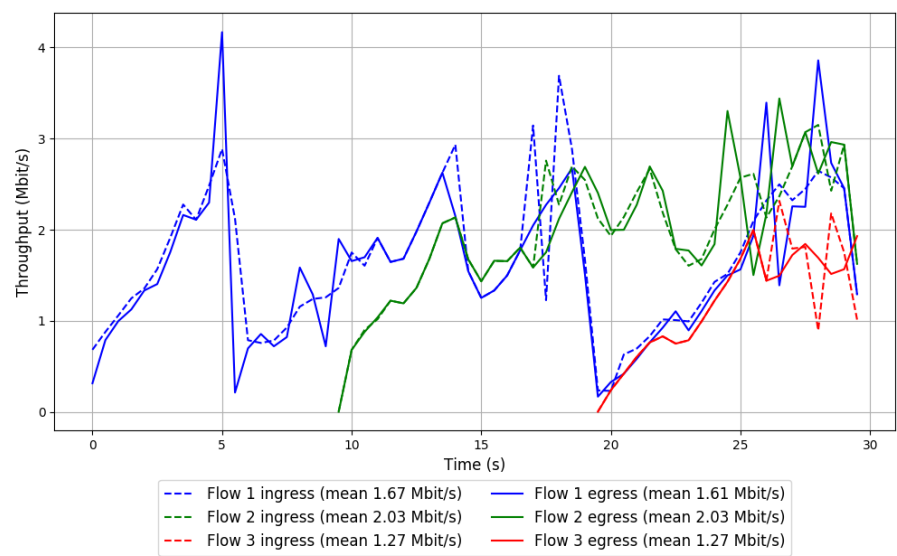
-- Flow 3:

Average throughput: 1.27 Mbit/s

95th percentile per-packet one-way delay: 112.790 ms

Loss rate: 0.00%

Run 6: Report of Sprout — Data Link



Run 7: Statistics of Sprout

Start at: 2017-08-21 03:13:28

End at: 2017-08-21 03:13:58

# Below is generated by plot.py at 2017-08-21 05:09:01

# Datalink statistics

-- Total of 3 flows:

Average throughput: 3.15 Mbit/s

95th percentile per-packet one-way delay: 113.101 ms

Loss rate: 1.99%

-- Flow 1:

Average throughput: 1.66 Mbit/s

95th percentile per-packet one-way delay: 113.089 ms

Loss rate: 1.52%

-- Flow 2:

Average throughput: 1.55 Mbit/s

95th percentile per-packet one-way delay: 113.125 ms

Loss rate: 3.21%

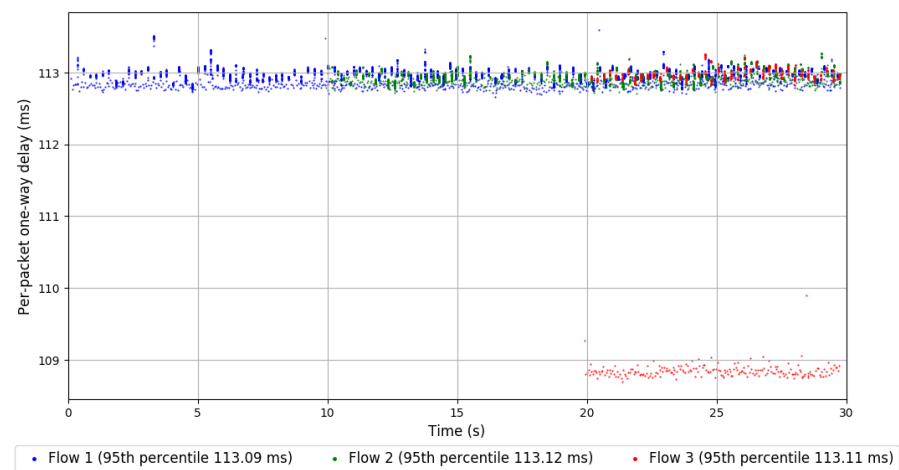
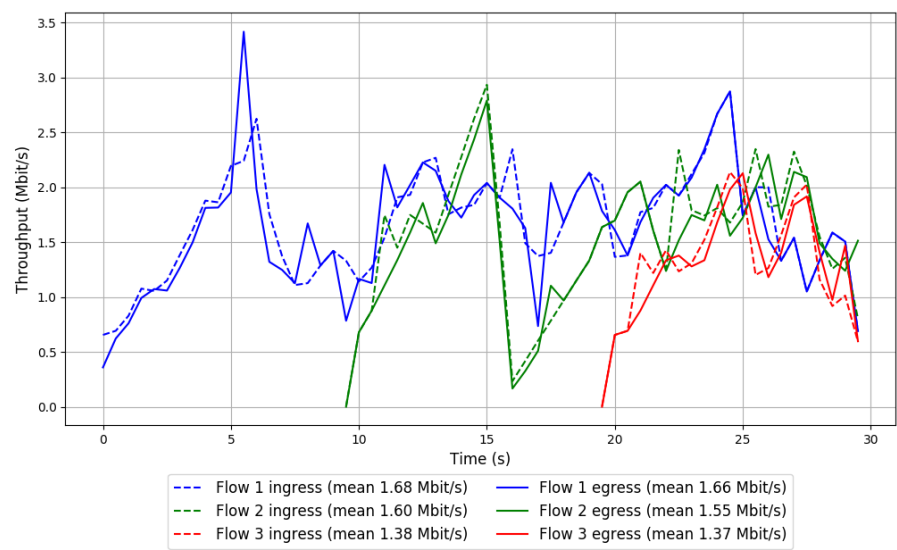
-- Flow 3:

Average throughput: 1.37 Mbit/s

95th percentile per-packet one-way delay: 113.115 ms

Loss rate: 0.88%

Run 7: Report of Sprout — Data Link



Run 8: Statistics of Sprout

Start at: 2017-08-21 03:26:30

End at: 2017-08-21 03:27:01

# Below is generated by plot.py at 2017-08-21 05:09:01

# Datalink statistics

-- Total of 3 flows:

Average throughput: 3.22 Mbit/s

95th percentile per-packet one-way delay: 113.140 ms

Loss rate: 2.02%

-- Flow 1:

Average throughput: 1.42 Mbit/s

95th percentile per-packet one-way delay: 113.095 ms

Loss rate: 3.61%

-- Flow 2:

Average throughput: 1.89 Mbit/s

95th percentile per-packet one-way delay: 113.183 ms

Loss rate: 1.03%

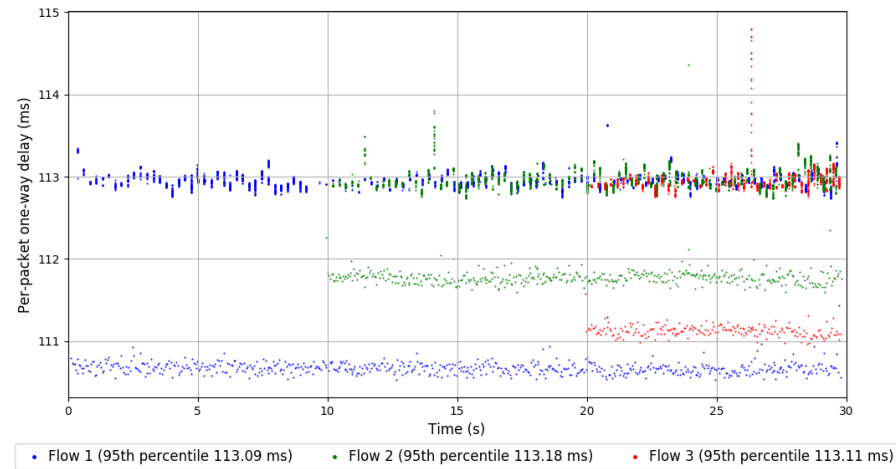
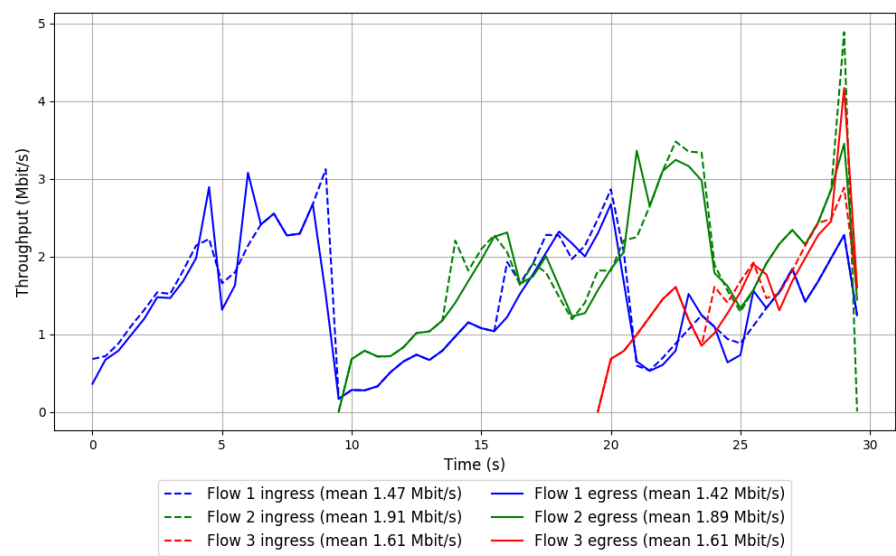
-- Flow 3:

Average throughput: 1.61 Mbit/s

95th percentile per-packet one-way delay: 113.111 ms

Loss rate: 0.00%

Run 8: Report of Sprout — Data Link



Run 9: Statistics of Sprout

Start at: 2017-08-21 03:39:25

End at: 2017-08-21 03:39:55

# Below is generated by plot.py at 2017-08-21 05:09:02

# Datalink statistics

-- Total of 3 flows:

Average throughput: 2.37 Mbit/s

95th percentile per-packet one-way delay: 112.727 ms

Loss rate: 3.23%

-- Flow 1:

Average throughput: 1.10 Mbit/s

95th percentile per-packet one-way delay: 112.808 ms

Loss rate: 0.80%

-- Flow 2:

Average throughput: 1.28 Mbit/s

95th percentile per-packet one-way delay: 112.394 ms

Loss rate: 4.79%

-- Flow 3:

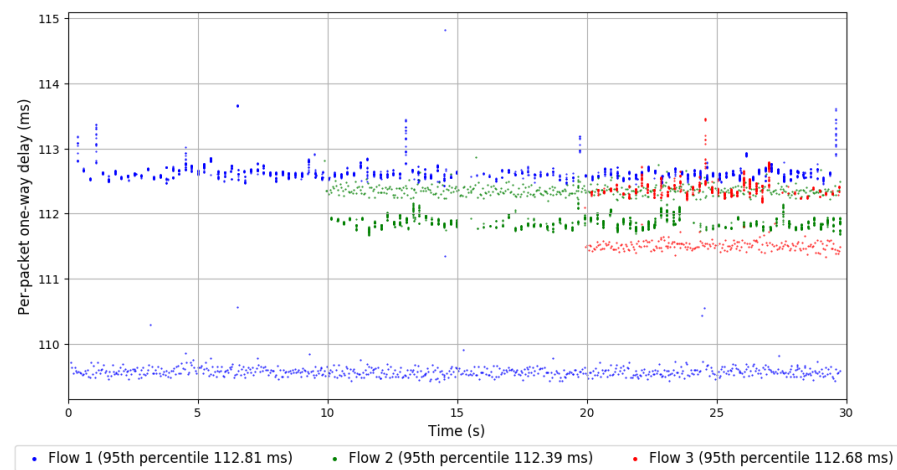
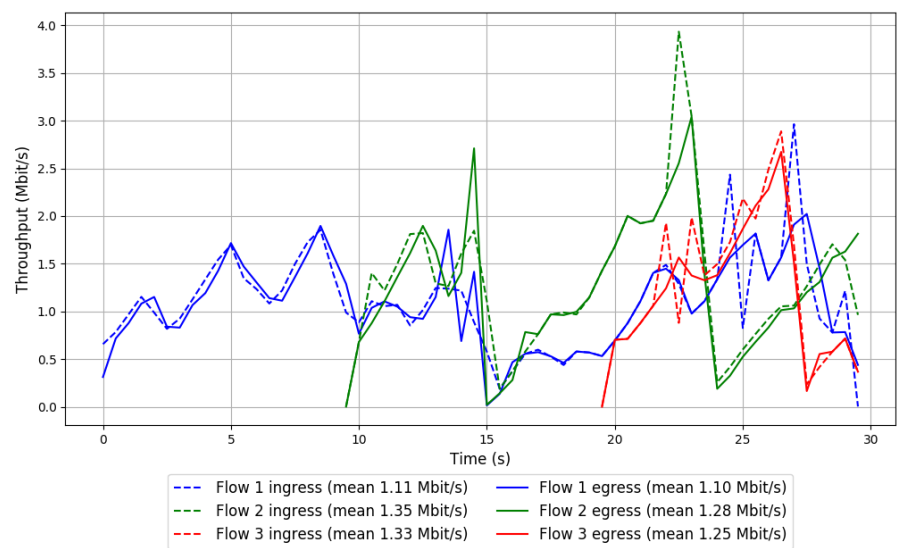
Average throughput: 1.25 Mbit/s

95th percentile per-packet one-way delay: 112.684 ms

Loss rate: 6.13%



Run 9: Report of Sprout — Data Link



Run 10: Statistics of Sprout

Start at: 2017-08-21 03:52:09

End at: 2017-08-21 03:52:39

# Below is generated by plot.py at 2017-08-21 05:09:04

# Datalink statistics

-- Total of 3 flows:

Average throughput: 4.32 Mbit/s

95th percentile per-packet one-way delay: 112.712 ms

Loss rate: 0.74%

-- Flow 1:

Average throughput: 2.90 Mbit/s

95th percentile per-packet one-way delay: 111.555 ms

Loss rate: 0.17%

-- Flow 2:

Average throughput: 1.24 Mbit/s

95th percentile per-packet one-way delay: 112.786 ms

Loss rate: 3.19%

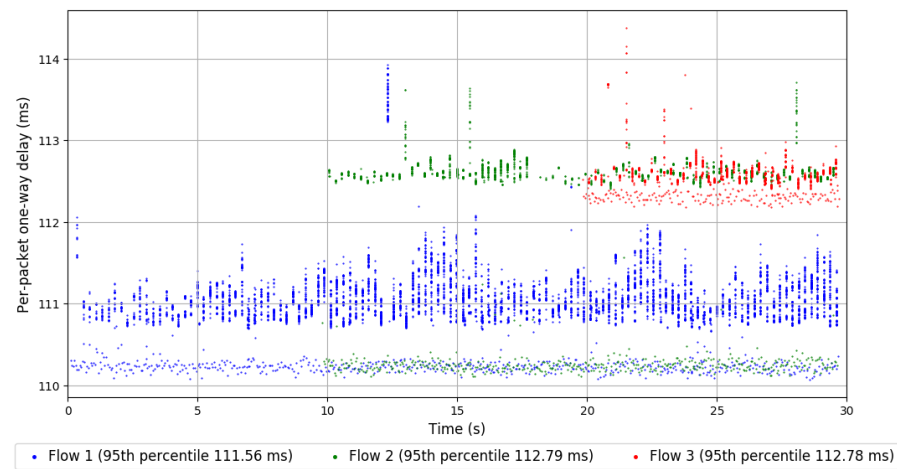
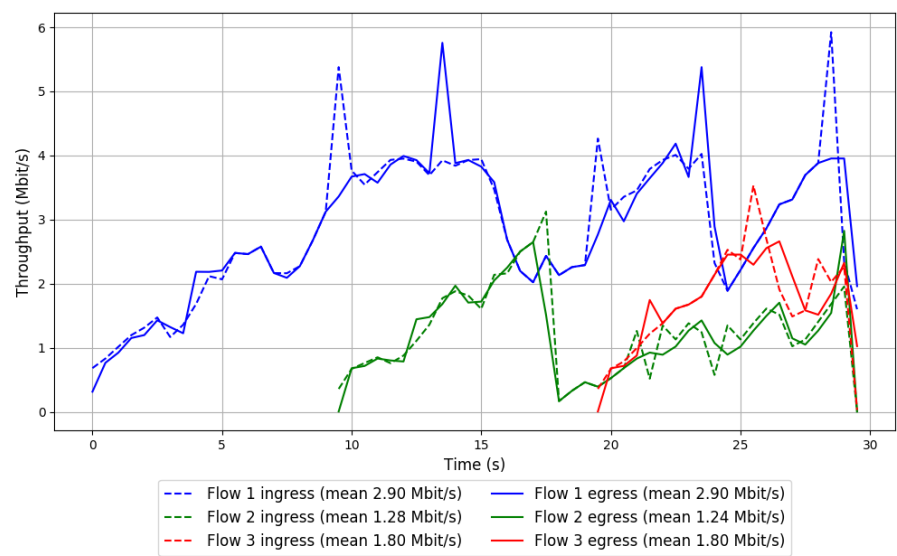
-- Flow 3:

Average throughput: 1.80 Mbit/s

95th percentile per-packet one-way delay: 112.780 ms

Loss rate: 0.00%

Run 10: Report of Sprout — Data Link

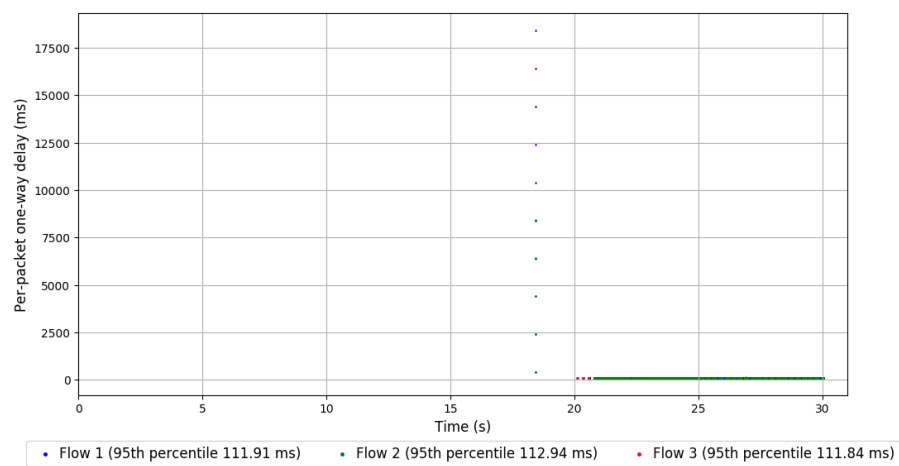
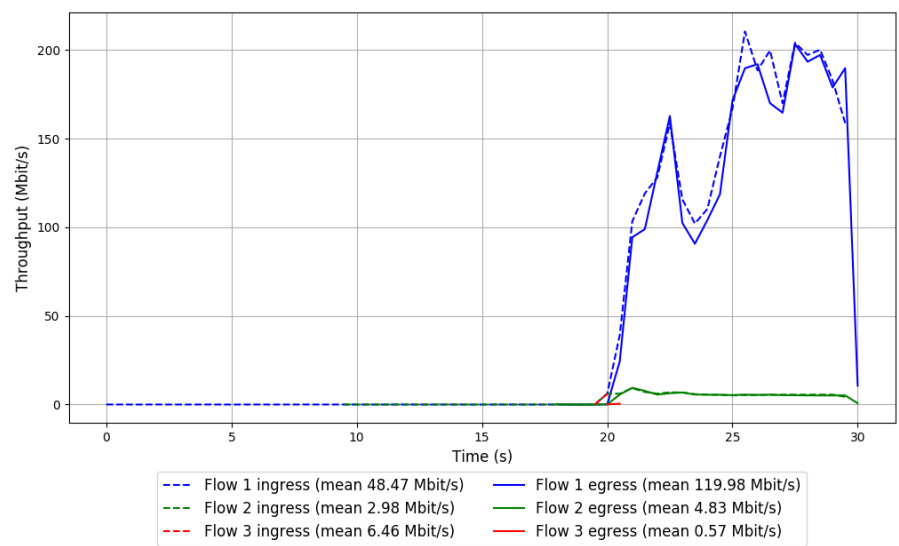


Run 1: Statistics of TaoVA-100x

Start at: 2017-08-21 01:52:03

End at: 2017-08-21 01:52:33

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

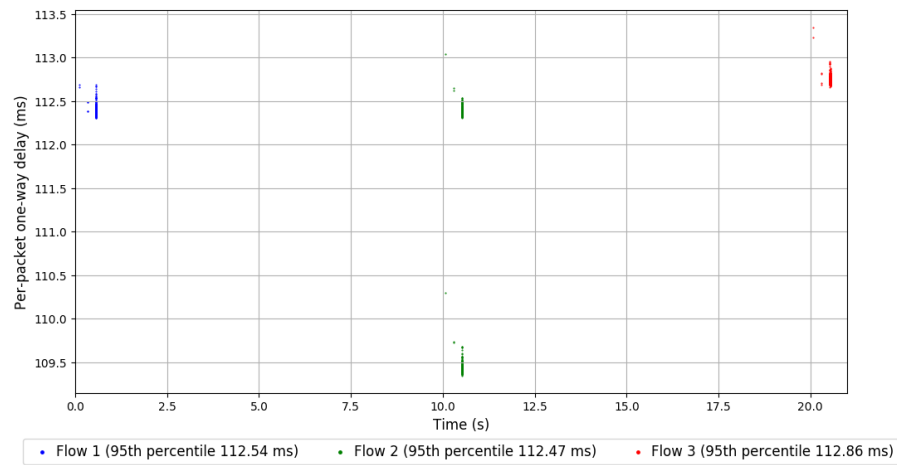
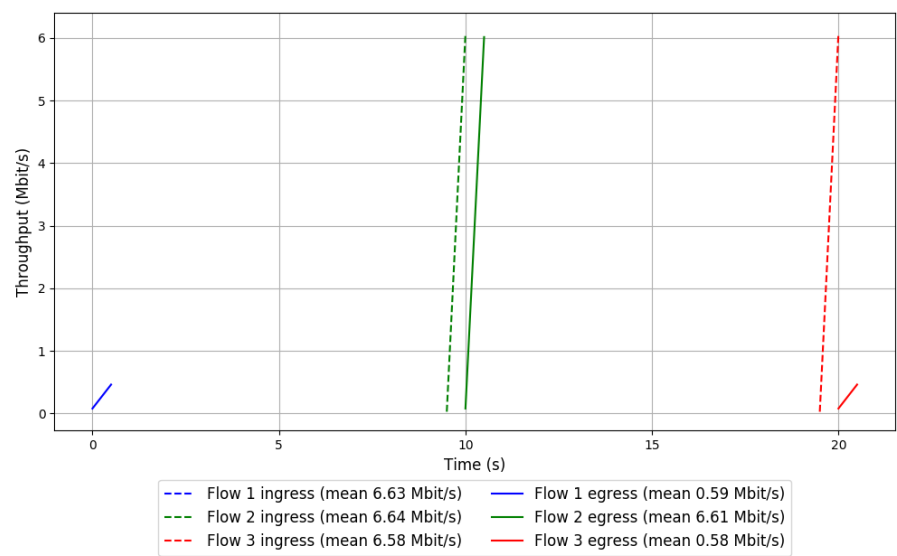


Run 2: Statistics of TaoVA-100x

Start at: 2017-08-21 02:04:19

End at: 2017-08-21 02:04:49

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



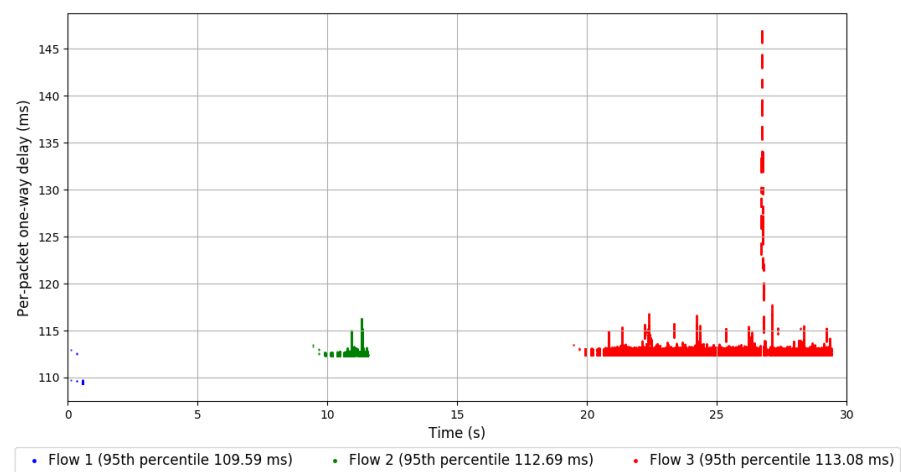
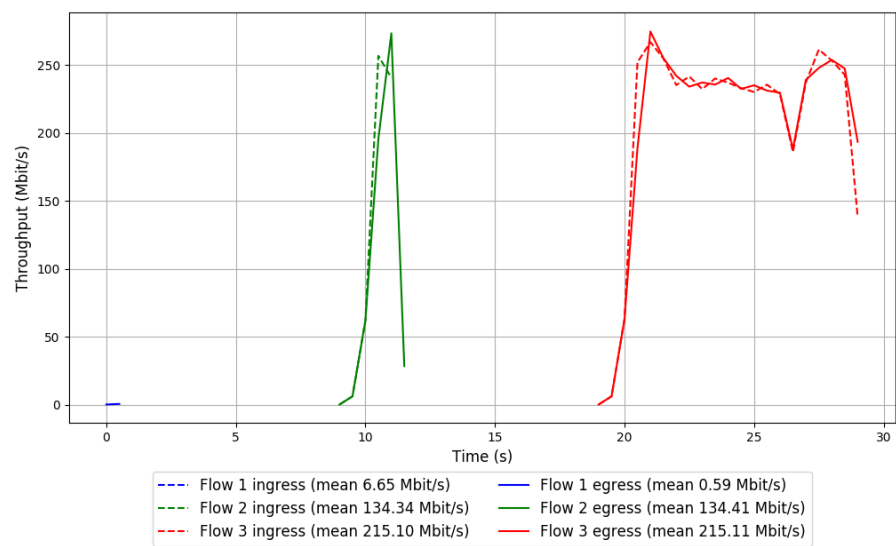
```
Run 3: Statistics of TaoVA-100x

Start at: 2017-08-21 02:17:23
End at: 2017-08-21 02:17:53

# Below is generated by plot.py at 2017-08-21 05:09:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 82.66 Mbit/s
95th percentile per-packet one-way delay: 113.054 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 0.59 Mbit/s
95th percentile per-packet one-way delay: 109.588 ms
Loss rate: 91.17%
-- Flow 2:
Average throughput: 134.41 Mbit/s
95th percentile per-packet one-way delay: 112.689 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 215.11 Mbit/s
95th percentile per-packet one-way delay: 113.081 ms
Loss rate: 0.00%
```



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

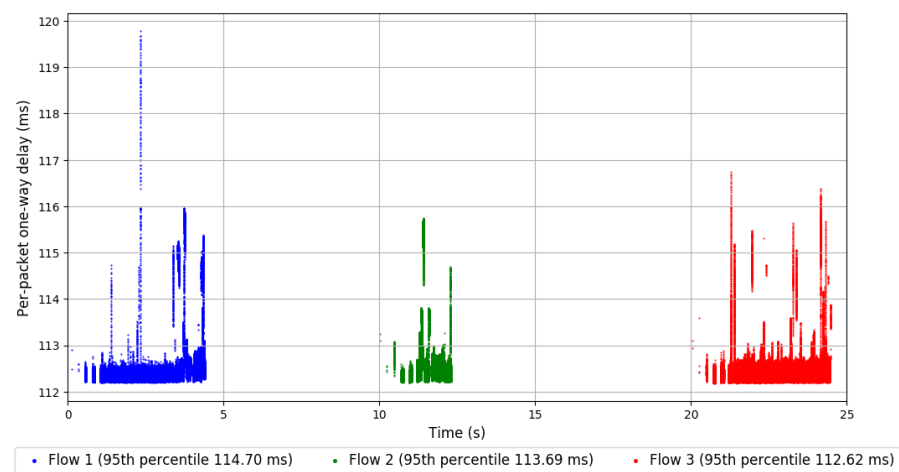
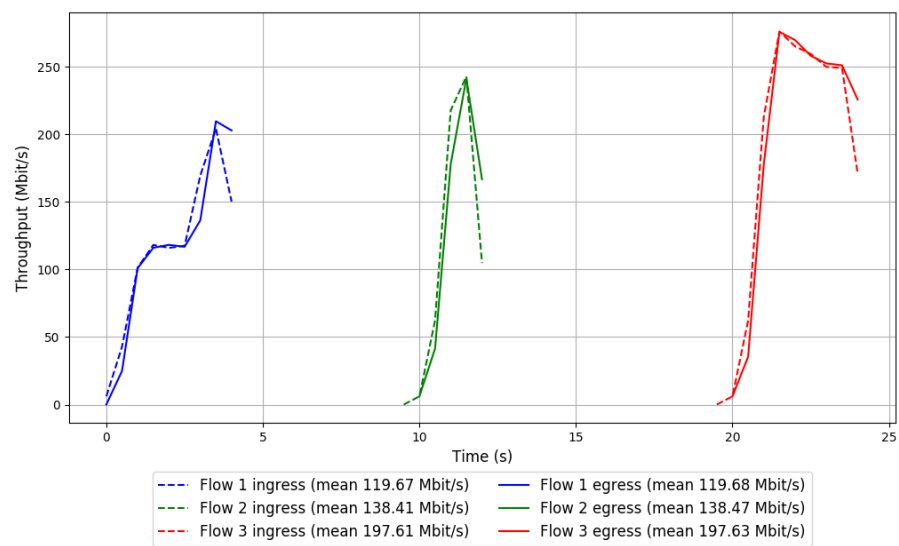


```
Run 4: Statistics of TaoVA-100x

Start at: 2017-08-21 02:30:01
End at: 2017-08-21 02:30:31

# Below is generated by plot.py at 2017-08-21 05:09:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 70.01 Mbit/s
95th percentile per-packet one-way delay: 113.135 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 119.68 Mbit/s
95th percentile per-packet one-way delay: 114.696 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 138.47 Mbit/s
95th percentile per-packet one-way delay: 113.688 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 197.63 Mbit/s
95th percentile per-packet one-way delay: 112.621 ms
Loss rate: 0.00%
```

Run 4: Report of TaoVA-100x — Data Link



Run 5: Statistics of TaoVA-100x

Start at: 2017-08-21 02:42:51

End at: 2017-08-21 02:43:21

# Below is generated by plot.py at 2017-08-21 05:09:51

# Datalink statistics

-- Total of 3 flows:

Average throughput: 43.82 Mbit/s

95th percentile per-packet one-way delay: 112.561 ms

Loss rate: 0.40%

-- Flow 1:

Average throughput: 195.73 Mbit/s

95th percentile per-packet one-way delay: 112.557 ms

Loss rate: 0.21%

-- Flow 2:

Average throughput: 0.59 Mbit/s

95th percentile per-packet one-way delay: 112.638 ms

Loss rate: 91.17%

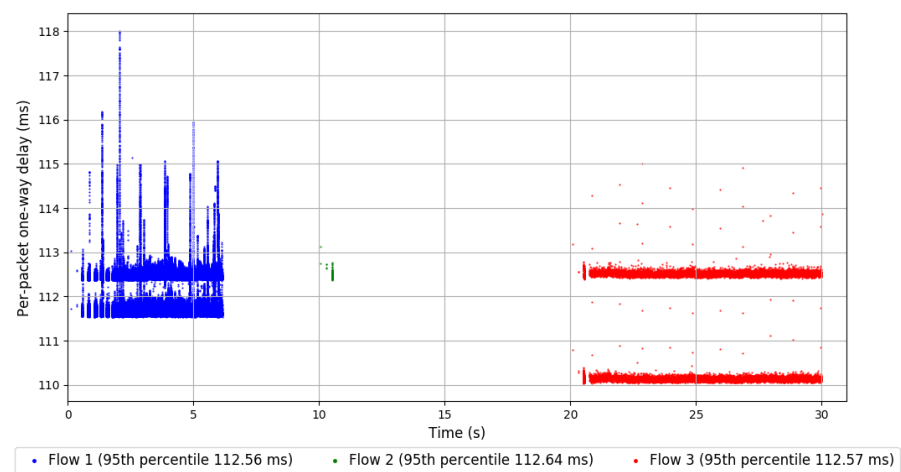
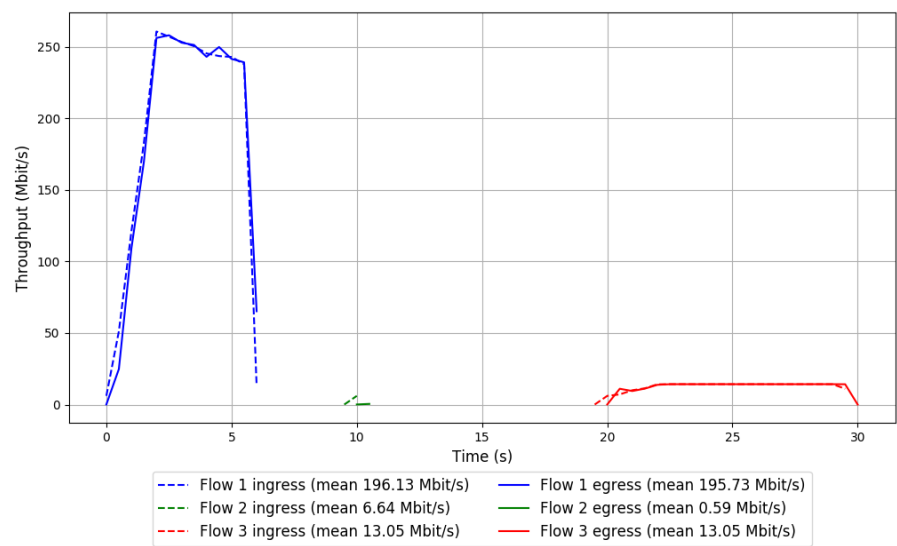
-- Flow 3:

Average throughput: 13.05 Mbit/s

95th percentile per-packet one-way delay: 112.573 ms

Loss rate: 0.00%

Run 5: Report of TaoVA-100x — Data Link



Run 6: Statistics of TaoVA-100x

Start at: 2017-08-21 02:55:46

End at: 2017-08-21 02:56:16

# Below is generated by plot.py at 2017-08-21 05:10:00

# Datalink statistics

-- Total of 3 flows:

Average throughput: 43.02 Mbit/s

95th percentile per-packet one-way delay: 112.560 ms

Loss rate: 0.22%

-- Flow 1:

Average throughput: 29.84 Mbit/s

95th percentile per-packet one-way delay: 112.551 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 19.77 Mbit/s

95th percentile per-packet one-way delay: 112.581 ms

Loss rate: 0.00%

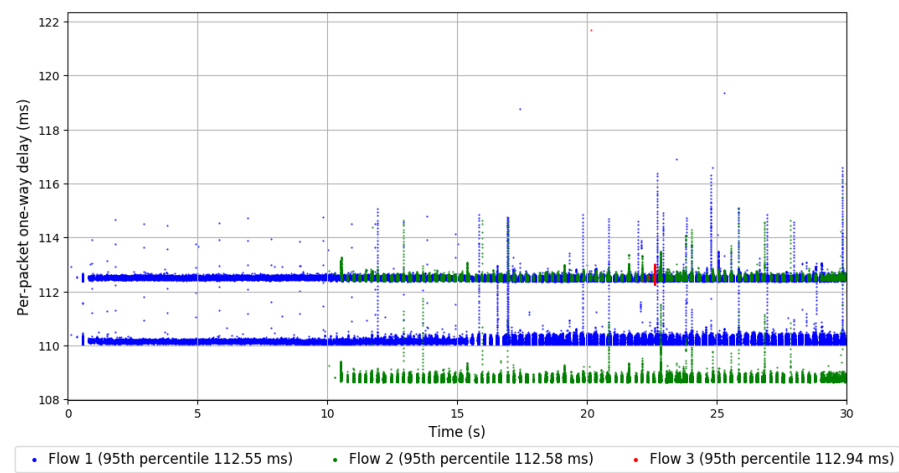
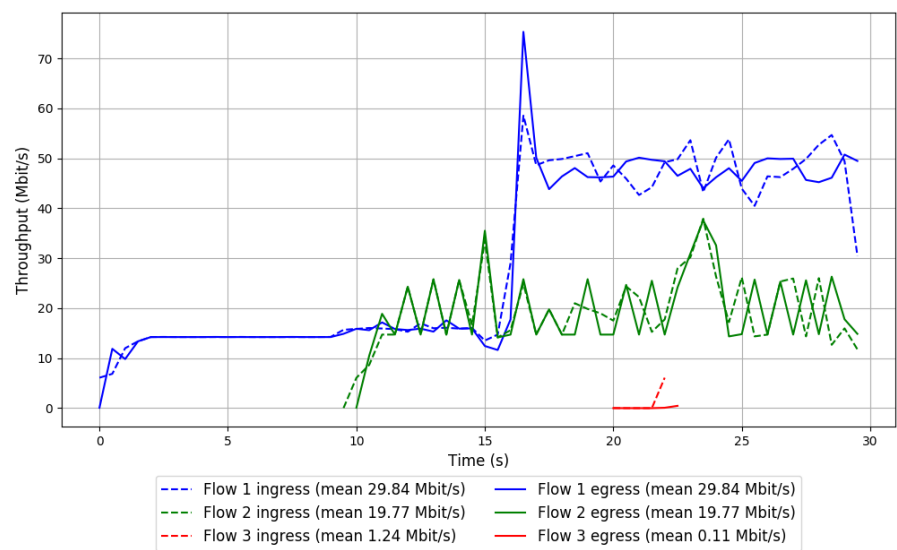
-- Flow 3:

Average throughput: 0.11 Mbit/s

95th percentile per-packet one-way delay: 112.943 ms

Loss rate: 91.17%

Run 6: Report of TaoVA-100x — Data Link



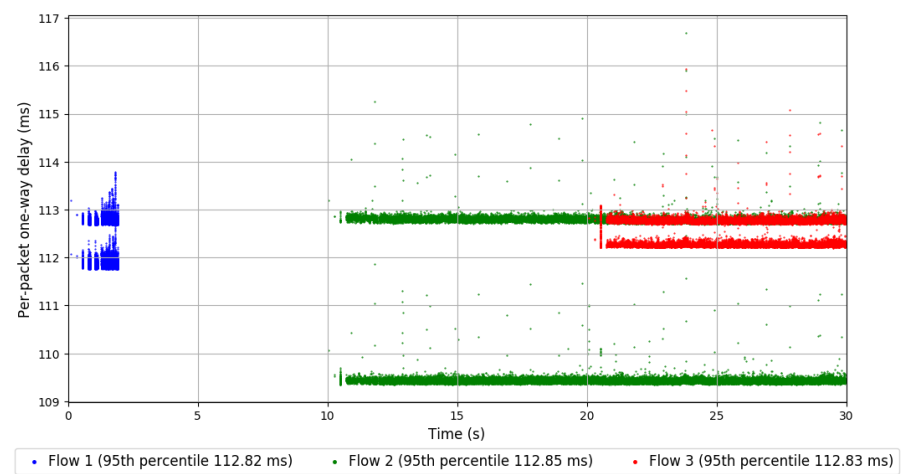
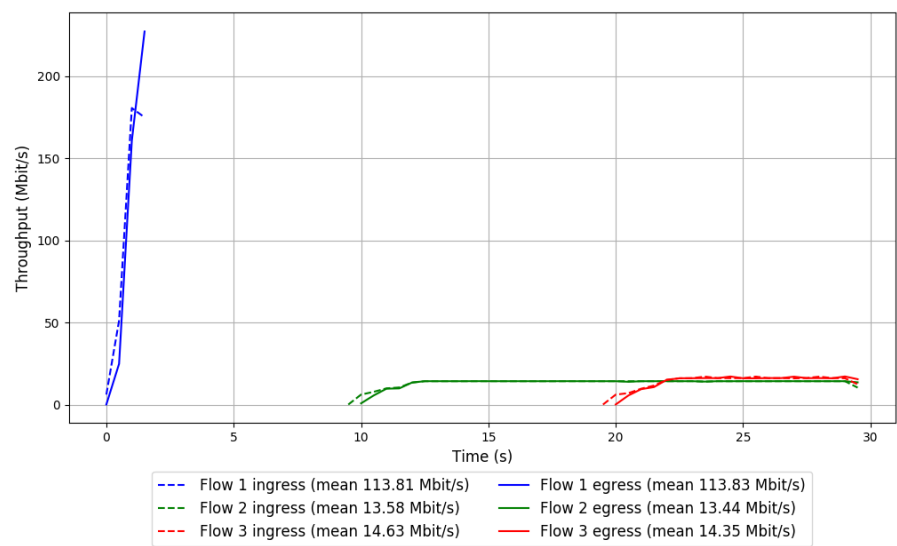
```
Run 7: Statistics of TaoVA-100x

Start at: 2017-08-21 03:08:22
End at: 2017-08-21 03:08:52

# Below is generated by plot.py at 2017-08-21 05:10:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 20.64 Mbit/s
95th percentile per-packet one-way delay: 112.842 ms
Loss rate: 0.87%
-- Flow 1:
Average throughput: 113.83 Mbit/s
95th percentile per-packet one-way delay: 112.821 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 13.44 Mbit/s
95th percentile per-packet one-way delay: 112.852 ms
Loss rate: 1.01%
-- Flow 3:
Average throughput: 14.35 Mbit/s
95th percentile per-packet one-way delay: 112.833 ms
Loss rate: 1.86%
```



Run 7: Report of TaoVA-100x — Data Link



Run 8: Statistics of TaoVA-100x

Start at: 2017-08-21 03:21:10

End at: 2017-08-21 03:21:40

# Below is generated by plot.py at 2017-08-21 05:10:59

# Datalink statistics

-- Total of 3 flows:

Average throughput: 156.45 Mbit/s

95th percentile per-packet one-way delay: 116.462 ms

Loss rate: 3.74%

-- Flow 1:

Average throughput: 192.75 Mbit/s

95th percentile per-packet one-way delay: 112.874 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 148.38 Mbit/s

95th percentile per-packet one-way delay: 118.067 ms

Loss rate: 3.37%

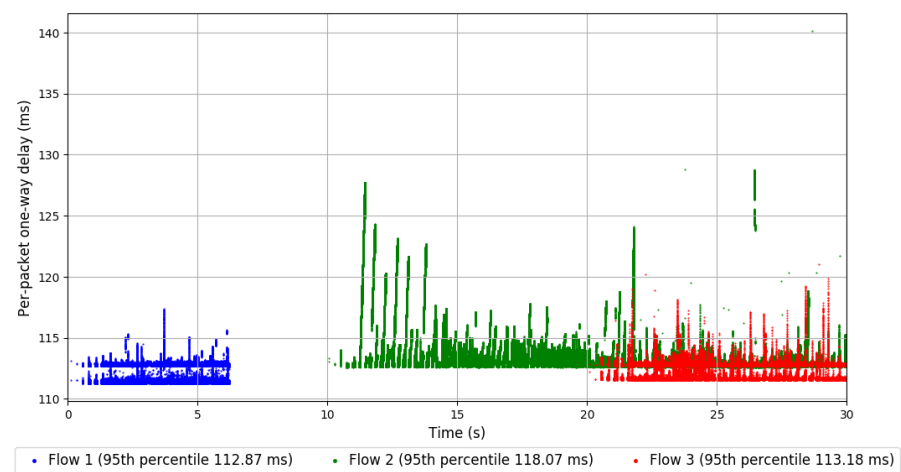
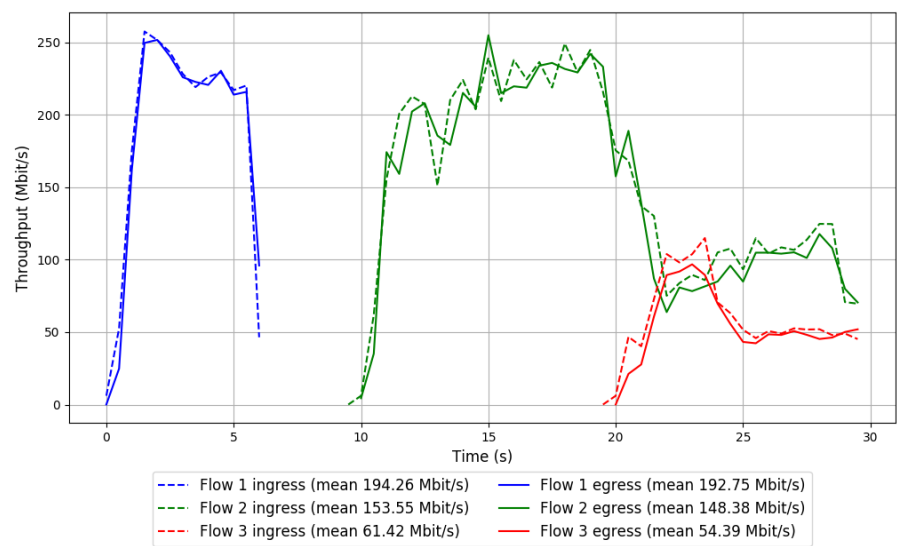
-- Flow 3:

Average throughput: 54.39 Mbit/s

95th percentile per-packet one-way delay: 113.178 ms

Loss rate: 11.43%

Run 8: Report of TaoVA-100x — Data Link



Run 9: Statistics of TaoVA-100x

Start at: 2017-08-21 03:34:06

End at: 2017-08-21 03:34:36

# Below is generated by plot.py at 2017-08-21 05:10:59

# Datalink statistics

-- Total of 3 flows:

Average throughput: 103.61 Mbit/s

95th percentile per-packet one-way delay: 112.545 ms

Loss rate: 9.28%

-- Flow 1:

Average throughput: 59.83 Mbit/s

95th percentile per-packet one-way delay: 112.459 ms

Loss rate: 14.96%

-- Flow 2:

Average throughput: 65.97 Mbit/s

95th percentile per-packet one-way delay: 113.155 ms

Loss rate: 0.00%

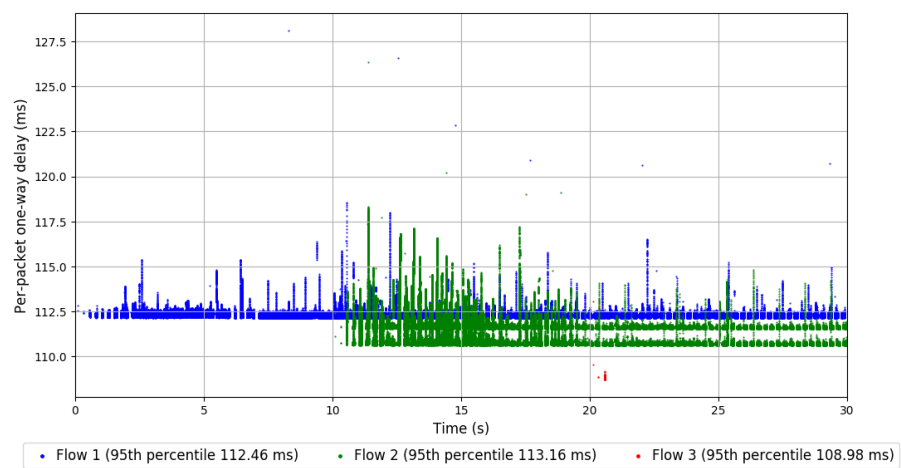
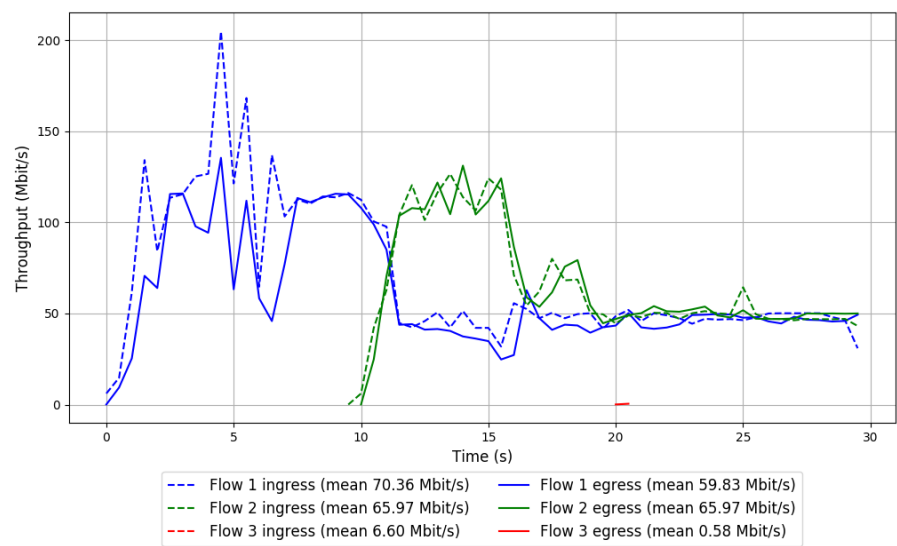
-- Flow 3:

Average throughput: 0.58 Mbit/s

95th percentile per-packet one-way delay: 108.979 ms

Loss rate: 91.17%

Run 9: Report of TaoVA-100x — Data Link

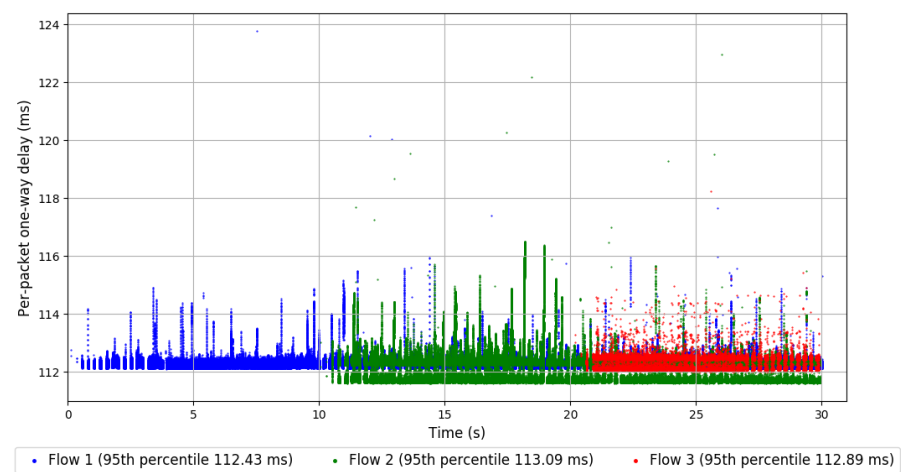
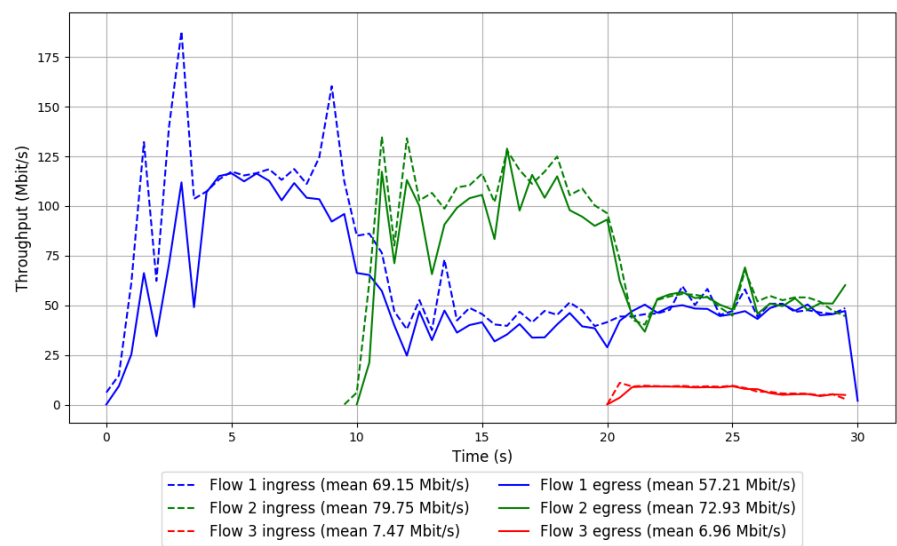


```
Run 10: Statistics of TaoVA-100x

Start at: 2017-08-21 03:46:52
End at: 2017-08-21 03:47:22

# Below is generated by plot.py at 2017-08-21 05:11:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 107.99 Mbit/s
95th percentile per-packet one-way delay: 112.653 ms
Loss rate: 13.36%
-- Flow 1:
Average throughput: 57.21 Mbit/s
95th percentile per-packet one-way delay: 112.434 ms
Loss rate: 17.27%
-- Flow 2:
Average throughput: 72.93 Mbit/s
95th percentile per-packet one-way delay: 113.088 ms
Loss rate: 8.56%
-- Flow 3:
Average throughput: 6.96 Mbit/s
95th percentile per-packet one-way delay: 112.892 ms
Loss rate: 6.85%
```

Run 10: Report of TaoVA-100x — Data Link



Run 1: Statistics of TCP Vegas

Start at: 2017-08-21 01:52:55

End at: 2017-08-21 01:53:25

# Below is generated by plot.py at 2017-08-21 05:11:27

# Datalink statistics

-- Total of 3 flows:

Average throughput: 4.85 Mbit/s

95th percentile per-packet one-way delay: 112.648 ms

Loss rate: 3.00%

-- Flow 1:

Average throughput: 2.92 Mbit/s

95th percentile per-packet one-way delay: 112.503 ms

Loss rate: 1.58%

-- Flow 2:

Average throughput: 1.83 Mbit/s

95th percentile per-packet one-way delay: 112.708 ms

Loss rate: 3.78%

-- Flow 3:

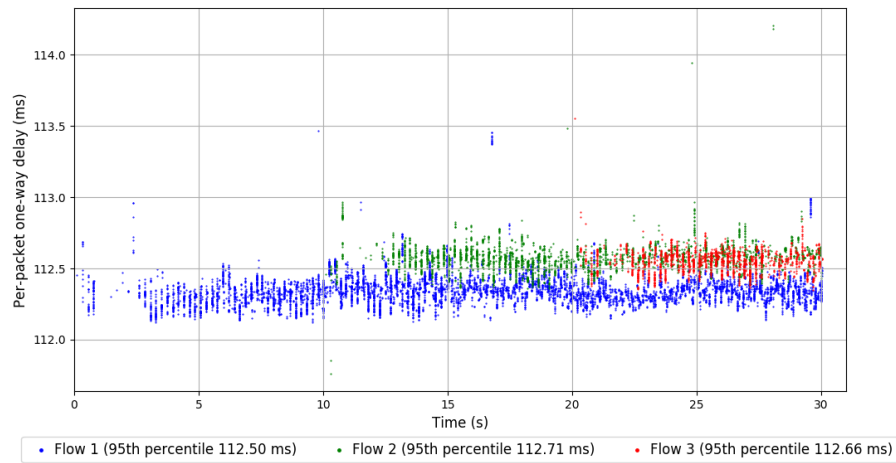
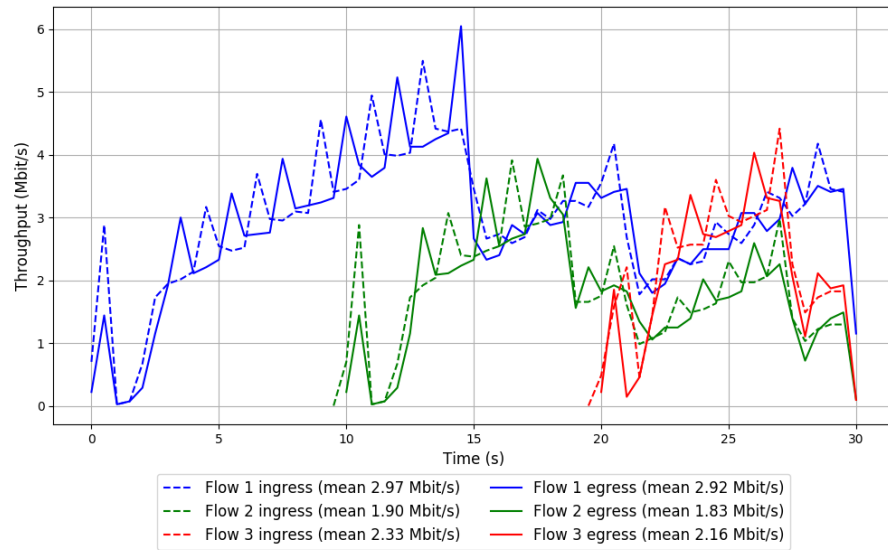
Average throughput: 2.16 Mbit/s

95th percentile per-packet one-way delay: 112.656 ms

Loss rate: 7.16%



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



Run 2: Statistics of TCP Vegas

Start at: 2017-08-21 02:05:05

End at: 2017-08-21 02:05:35

# Below is generated by plot.py at 2017-08-21 05:11:27

# Datalink statistics

-- Total of 3 flows:

Average throughput: 5.90 Mbit/s

95th percentile per-packet one-way delay: 112.667 ms

Loss rate: 3.35%

-- Flow 1:

Average throughput: 3.12 Mbit/s

95th percentile per-packet one-way delay: 112.701 ms

Loss rate: 2.50%

-- Flow 2:

Average throughput: 2.83 Mbit/s

95th percentile per-packet one-way delay: 112.497 ms

Loss rate: 3.54%

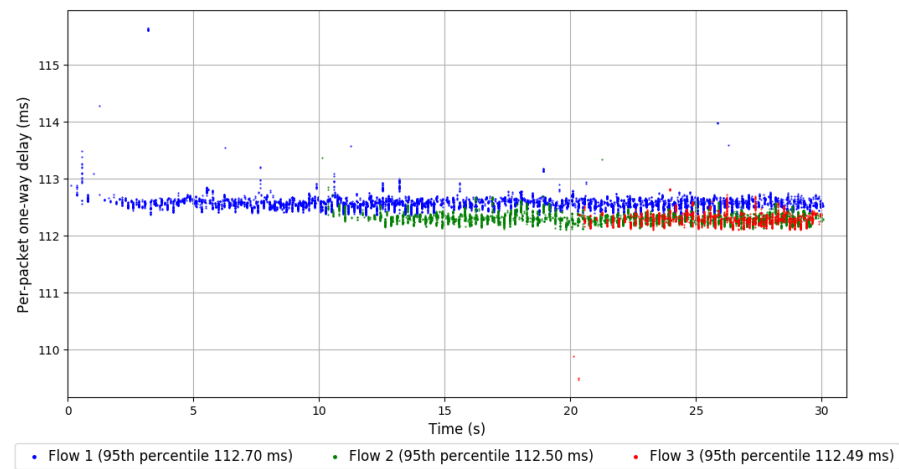
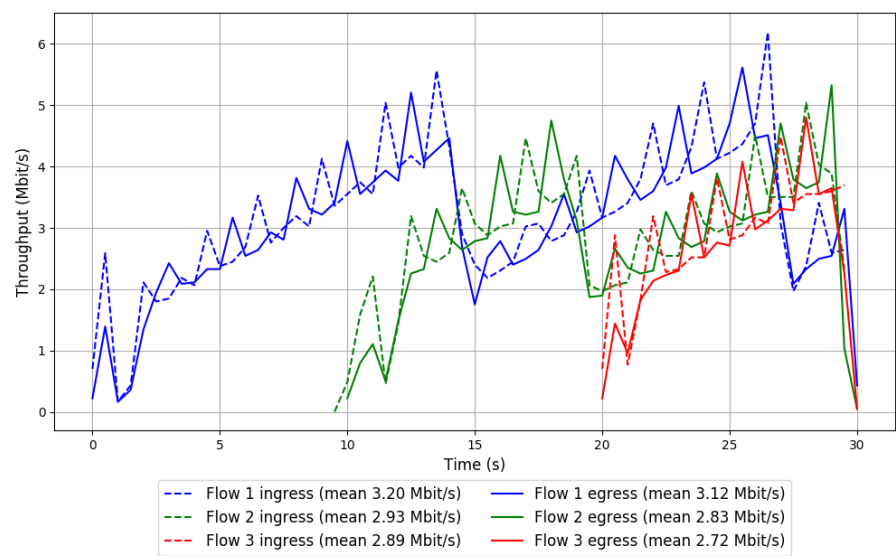
-- Flow 3:

Average throughput: 2.72 Mbit/s

95th percentile per-packet one-way delay: 112.492 ms

Loss rate: 5.81%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2017-08-21 02:18:19

End at: 2017-08-21 02:18:49

# Below is generated by plot.py at 2017-08-21 05:11:27

# Datalink statistics

-- Total of 3 flows:

Average throughput: 22.04 Mbit/s

95th percentile per-packet one-way delay: 114.300 ms

Loss rate: 0.79%

-- Flow 1:

Average throughput: 1.53 Mbit/s

95th percentile per-packet one-way delay: 114.464 ms

Loss rate: 4.35%

-- Flow 2:

Average throughput: 30.20 Mbit/s

95th percentile per-packet one-way delay: 112.715 ms

Loss rate: 0.35%

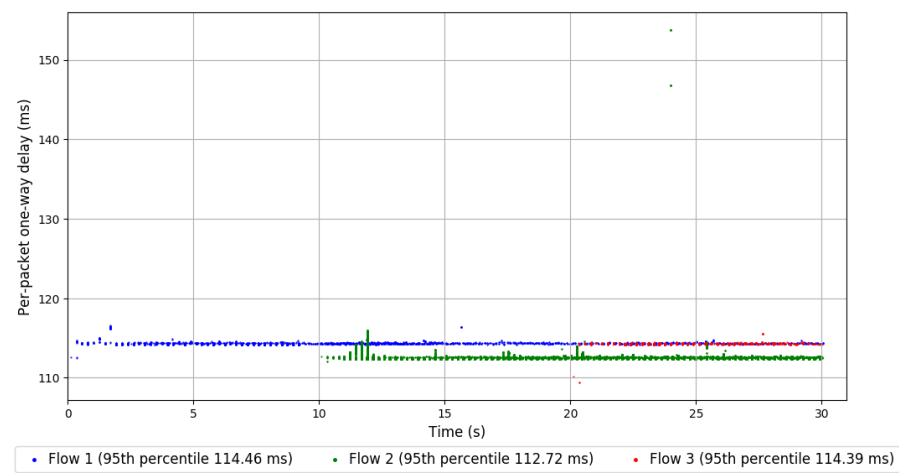
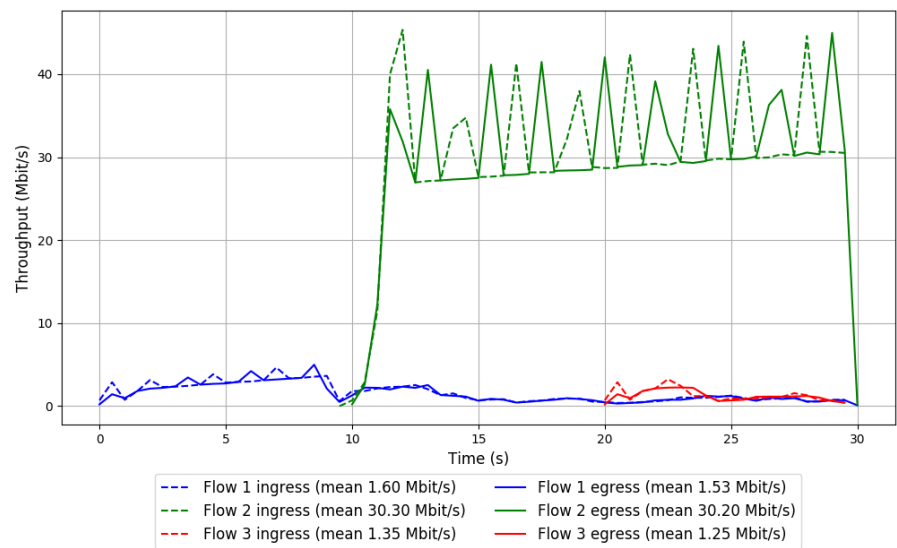
-- Flow 3:

Average throughput: 1.25 Mbit/s

95th percentile per-packet one-way delay: 114.389 ms

Loss rate: 7.84%

Run 3: Report of TCP Vegas — Data Link



Run 4: Statistics of TCP Vegas

Start at: 2017-08-21 02:30:55

End at: 2017-08-21 02:31:25

# Below is generated by plot.py at 2017-08-21 05:11:27

# Datalink statistics

-- Total of 3 flows:

Average throughput: 4.80 Mbit/s

95th percentile per-packet one-way delay: 114.411 ms

Loss rate: 3.54%

-- Flow 1:

Average throughput: 2.46 Mbit/s

95th percentile per-packet one-way delay: 112.708 ms

Loss rate: 3.30%

-- Flow 2:

Average throughput: 2.83 Mbit/s

95th percentile per-packet one-way delay: 114.467 ms

Loss rate: 2.99%

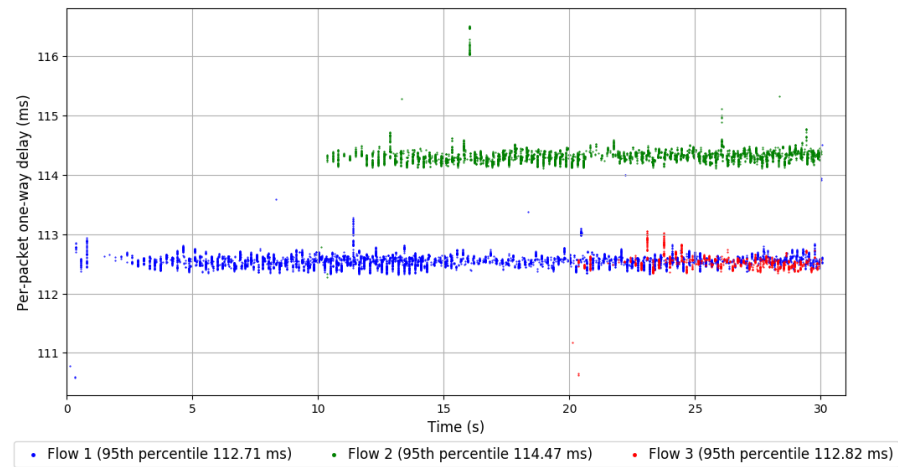
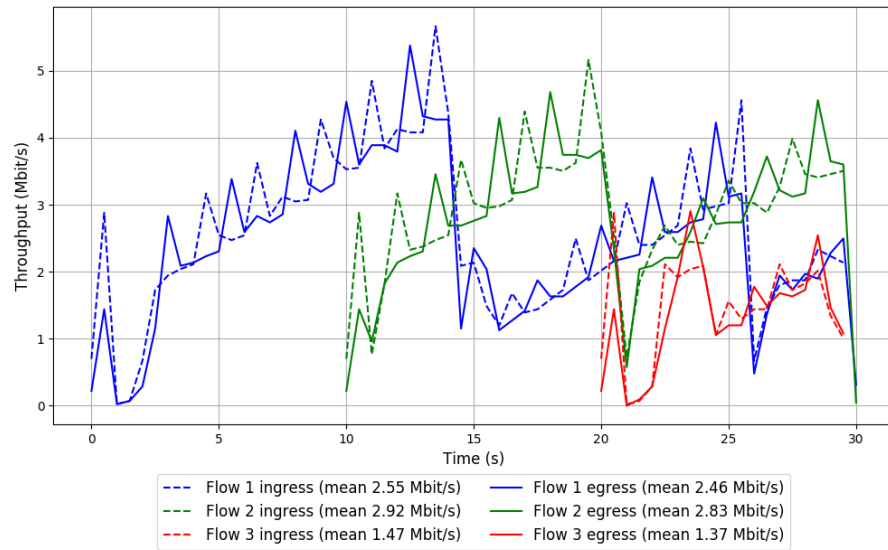
-- Flow 3:

Average throughput: 1.37 Mbit/s

95th percentile per-packet one-way delay: 112.817 ms

Loss rate: 6.96%

# Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2017-08-21 02:43:43

End at: 2017-08-21 02:44:13

# Below is generated by plot.py at 2017-08-21 05:11:27

# Datalink statistics

-- Total of 3 flows:

Average throughput: 14.08 Mbit/s

95th percentile per-packet one-way delay: 112.718 ms

Loss rate: 0.66%

-- Flow 1:

Average throughput: 2.63 Mbit/s

95th percentile per-packet one-way delay: 112.737 ms

Loss rate: 2.30%

-- Flow 2:

Average throughput: 16.23 Mbit/s

95th percentile per-packet one-way delay: 112.695 ms

Loss rate: 0.00%

-- Flow 3:

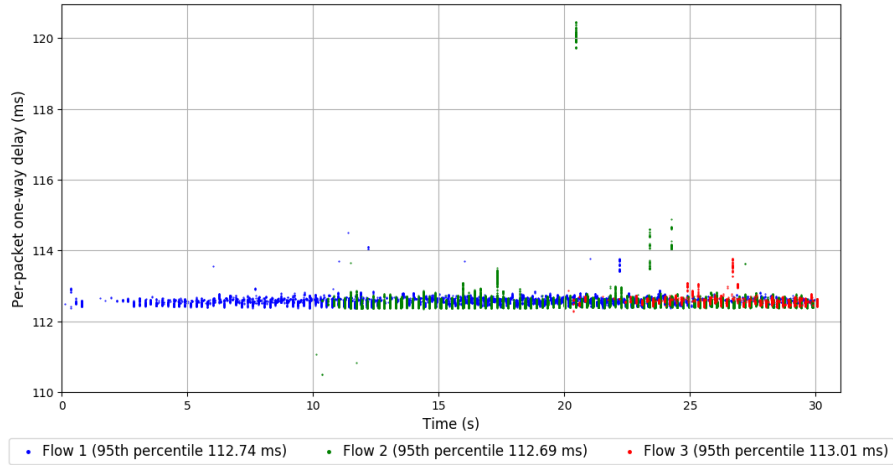
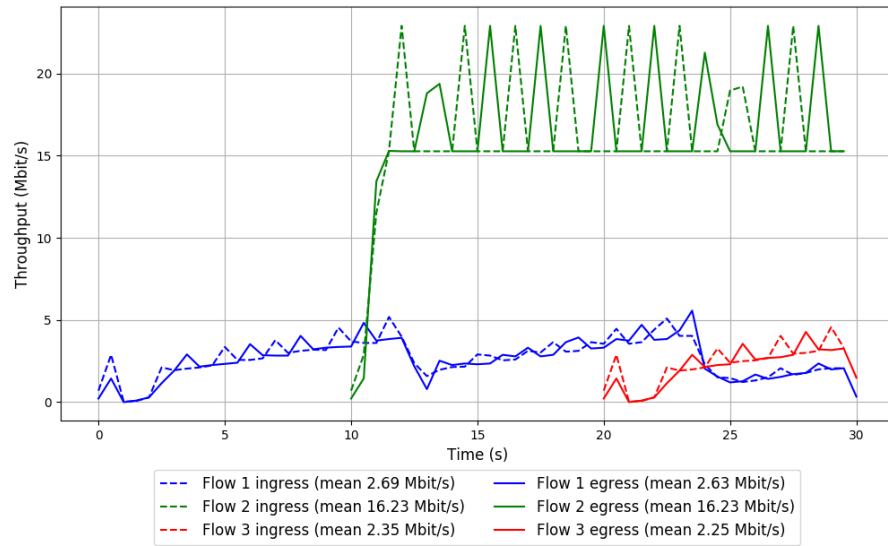
Average throughput: 2.25 Mbit/s

95th percentile per-packet one-way delay: 113.007 ms

Loss rate: 4.13%



## Run 5: Report of TCP Vegas — Data Link



Run 6: Statistics of TCP Vegas

Start at: 2017-08-21 02:56:38

End at: 2017-08-21 02:57:08

# Below is generated by plot.py at 2017-08-21 05:11:27

# Datalink statistics

-- Total of 3 flows:

Average throughput: 31.40 Mbit/s

95th percentile per-packet one-way delay: 113.023 ms

Loss rate: 0.06%

-- Flow 1:

Average throughput: 25.28 Mbit/s

95th percentile per-packet one-way delay: 113.074 ms

Loss rate: 0.02%

-- Flow 2:

Average throughput: 7.71 Mbit/s

95th percentile per-packet one-way delay: 112.939 ms

Loss rate: 0.07%

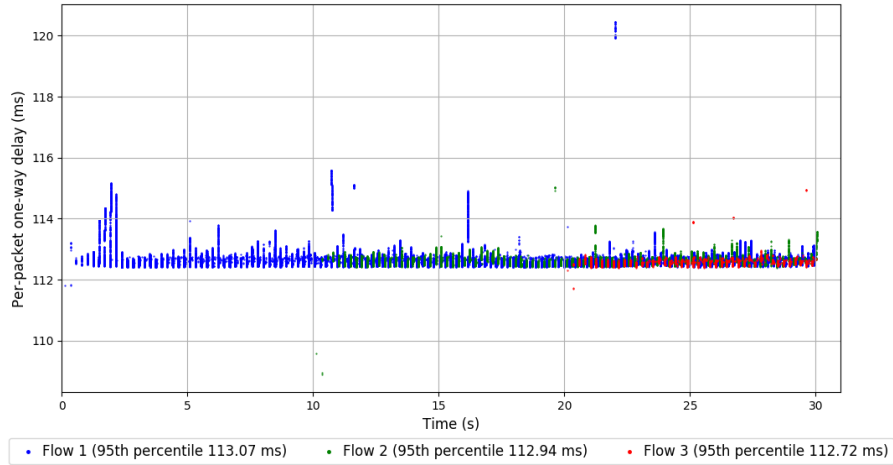
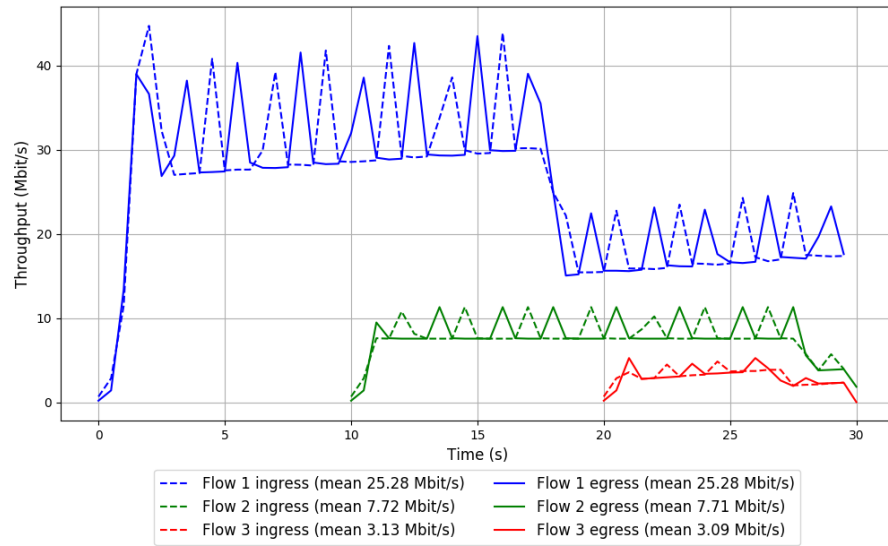
-- Flow 3:

Average throughput: 3.09 Mbit/s

95th percentile per-packet one-way delay: 112.719 ms

Loss rate: 1.12%

# Run 6: Report of TCP Vegas — Data Link



Run 7: Statistics of TCP Vegas

Start at: 2017-08-21 03:09:11

End at: 2017-08-21 03:09:41

# Below is generated by plot.py at 2017-08-21 05:11:27

# Datalink statistics

-- Total of 3 flows:

Average throughput: 14.01 Mbit/s

95th percentile per-packet one-way delay: 113.234 ms

Loss rate: 1.15%

-- Flow 1:

Average throughput: 2.97 Mbit/s

95th percentile per-packet one-way delay: 113.028 ms

Loss rate: 2.06%

-- Flow 2:

Average throughput: 16.06 Mbit/s

95th percentile per-packet one-way delay: 113.308 ms

Loss rate: 0.65%

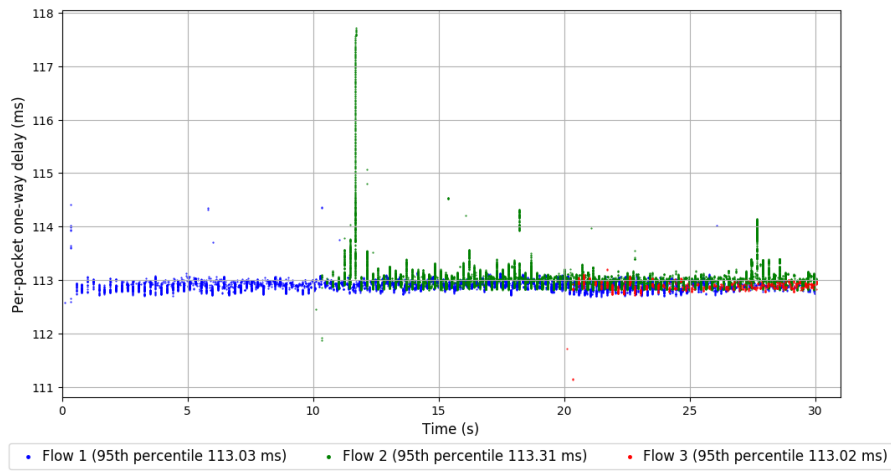
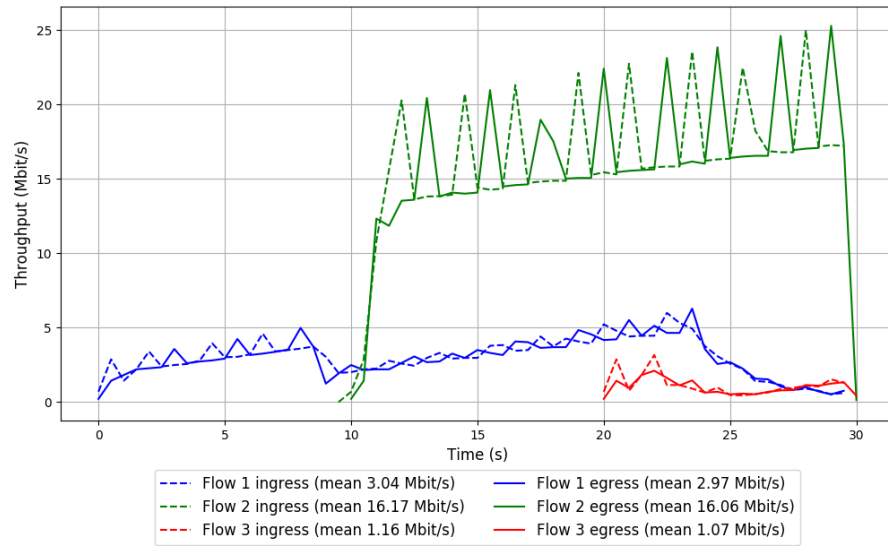
-- Flow 3:

Average throughput: 1.07 Mbit/s

95th percentile per-packet one-way delay: 113.015 ms

Loss rate: 7.87%

# Run 7: Report of TCP Vegas — Data Link



Run 8: Statistics of TCP Vegas

Start at: 2017-08-21 03:22:16

End at: 2017-08-21 03:22:46

# Below is generated by plot.py at 2017-08-21 05:11:30

# Datalink statistics

-- Total of 3 flows:

Average throughput: 13.31 Mbit/s

95th percentile per-packet one-way delay: 113.407 ms

Loss rate: 0.50%

-- Flow 1:

Average throughput: 11.62 Mbit/s

95th percentile per-packet one-way delay: 113.432 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 1.63 Mbit/s

95th percentile per-packet one-way delay: 113.073 ms

Loss rate: 3.08%

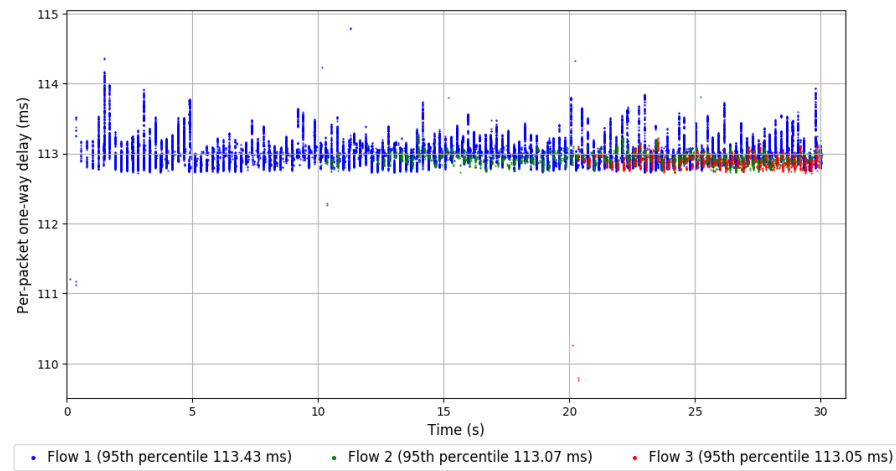
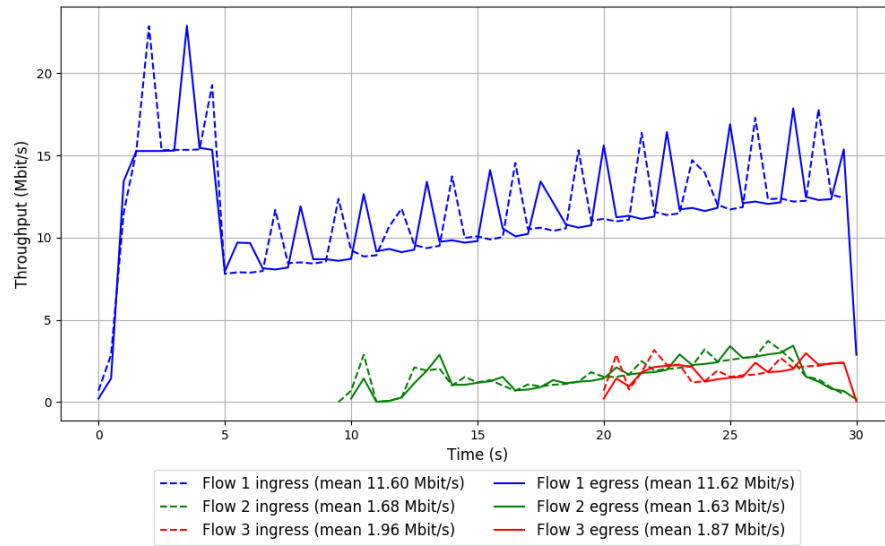
-- Flow 3:

Average throughput: 1.87 Mbit/s

95th percentile per-packet one-way delay: 113.052 ms

Loss rate: 4.70%

# Run 8: Report of TCP Vegas — Data Link



Run 9: Statistics of TCP Vegas

Start at: 2017-08-21 03:35:06

End at: 2017-08-21 03:35:36

# Below is generated by plot.py at 2017-08-21 05:11:34

# Datalink statistics

-- Total of 3 flows:

Average throughput: 34.51 Mbit/s

95th percentile per-packet one-way delay: 112.333 ms

Loss rate: 0.24%

-- Flow 1:

Average throughput: 33.07 Mbit/s

95th percentile per-packet one-way delay: 111.302 ms

Loss rate: 0.03%

-- Flow 2:

Average throughput: 1.59 Mbit/s

95th percentile per-packet one-way delay: 112.712 ms

Loss rate: 3.45%

-- Flow 3:

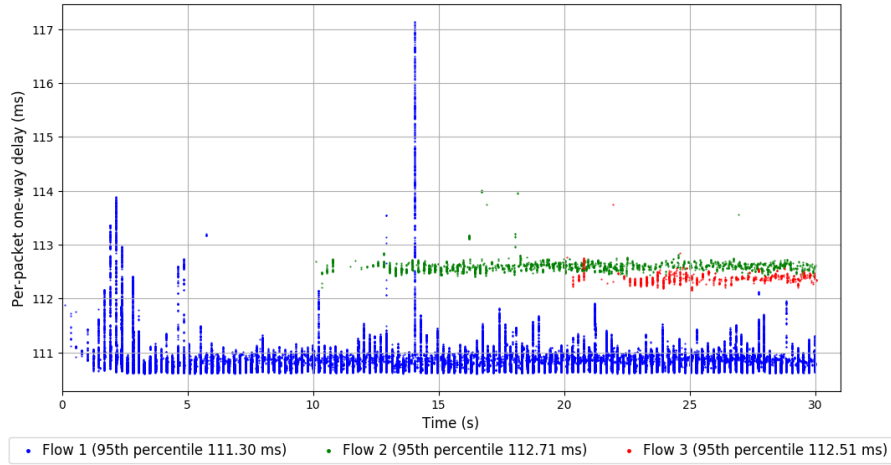
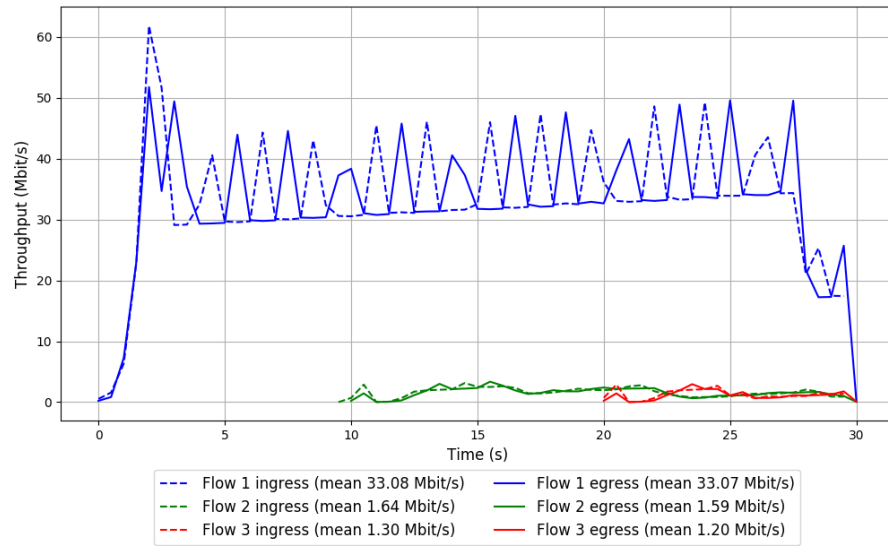
Average throughput: 1.20 Mbit/s

95th percentile per-packet one-way delay: 112.511 ms

Loss rate: 7.79%



# Run 9: Report of TCP Vegas — Data Link



Run 10: Statistics of TCP Vegas

Start at: 2017-08-21 03:47:53

End at: 2017-08-21 03:48:23

# Below is generated by plot.py at 2017-08-21 05:11:39

# Datalink statistics

-- Total of 3 flows:

Average throughput: 26.28 Mbit/s

95th percentile per-packet one-way delay: 112.524 ms

Loss rate: 0.60%

-- Flow 1:

Average throughput: 24.67 Mbit/s

95th percentile per-packet one-way delay: 112.035 ms

Loss rate: 0.39%

-- Flow 2:

Average throughput: 1.35 Mbit/s

95th percentile per-packet one-way delay: 111.708 ms

Loss rate: 3.40%

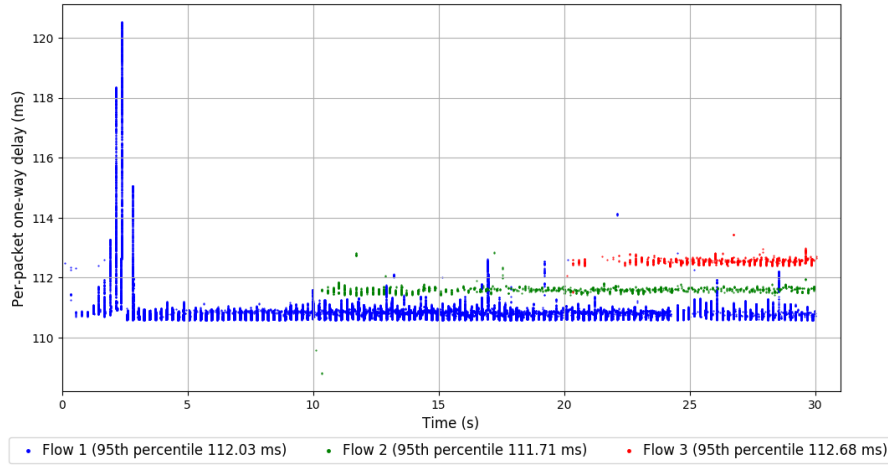
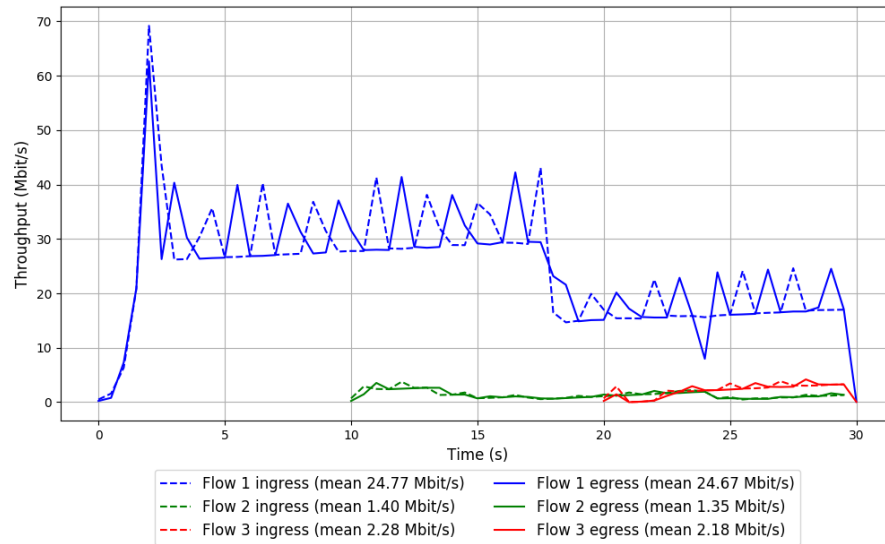
-- Flow 3:

Average throughput: 2.18 Mbit/s

95th percentile per-packet one-way delay: 112.684 ms

Loss rate: 4.26%

# Run 10: Report of TCP Vegas — Data Link

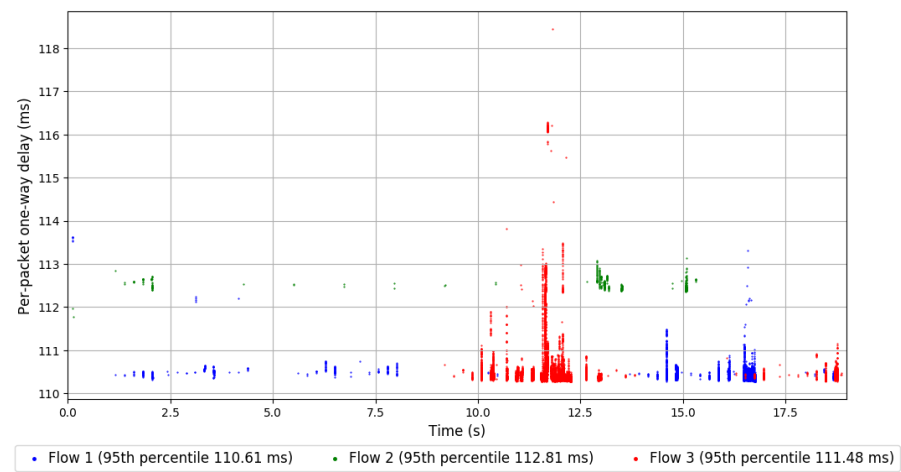
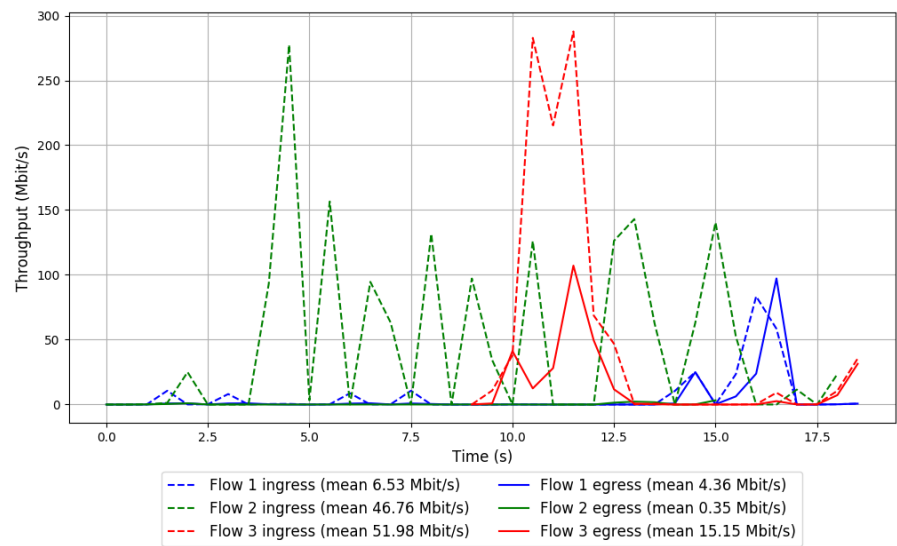


Run 1: Statistics of Verus

Start at: 2017-08-21 01:57:57

End at: 2017-08-21 01:58:27

Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2017-08-21 02:10:08

End at: 2017-08-21 02:10:38

# Below is generated by plot.py at 2017-08-21 05:12:03

# Datalink statistics

-- Total of 3 flows:

Average throughput: 121.42 Mbit/s

95th percentile per-packet one-way delay: 164.540 ms

Loss rate: 6.62%

-- Flow 1:

Average throughput: 85.93 Mbit/s

95th percentile per-packet one-way delay: 144.483 ms

Loss rate: 8.64%

-- Flow 2:

Average throughput: 32.62 Mbit/s

95th percentile per-packet one-way delay: 193.758 ms

Loss rate: 0.48%

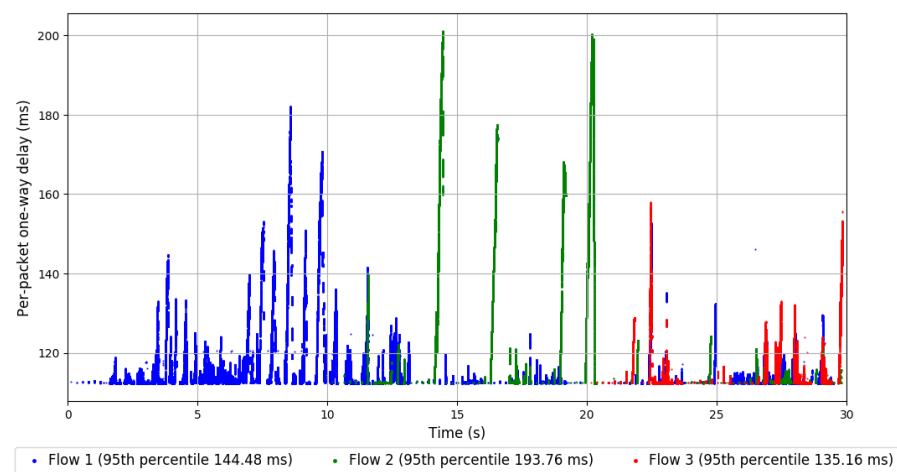
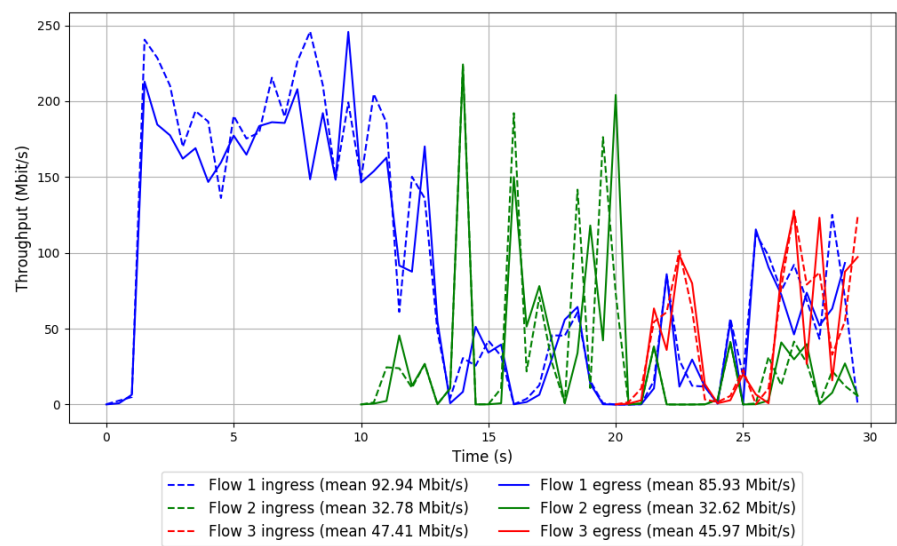
-- Flow 3:

Average throughput: 45.97 Mbit/s

95th percentile per-packet one-way delay: 135.157 ms

Loss rate: 3.11%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2017-08-21 02:23:20

End at: 2017-08-21 02:23:50

# Below is generated by plot.py at 2017-08-21 05:12:03

# Datalink statistics

-- Total of 3 flows:

Average throughput: 119.67 Mbit/s

95th percentile per-packet one-way delay: 126.227 ms

Loss rate: 23.10%

-- Flow 1:

Average throughput: 68.27 Mbit/s

95th percentile per-packet one-way delay: 125.568 ms

Loss rate: 1.91%

-- Flow 2:

Average throughput: 66.21 Mbit/s

95th percentile per-packet one-way delay: 127.356 ms

Loss rate: 2.84%

-- Flow 3:

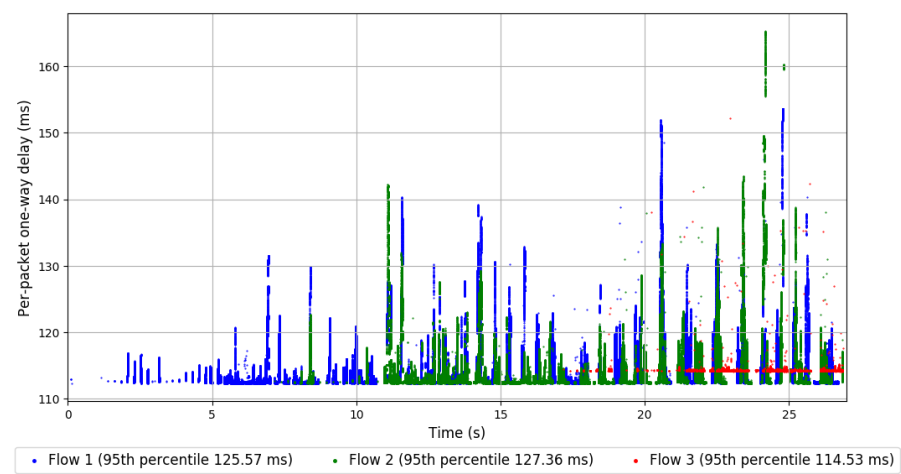
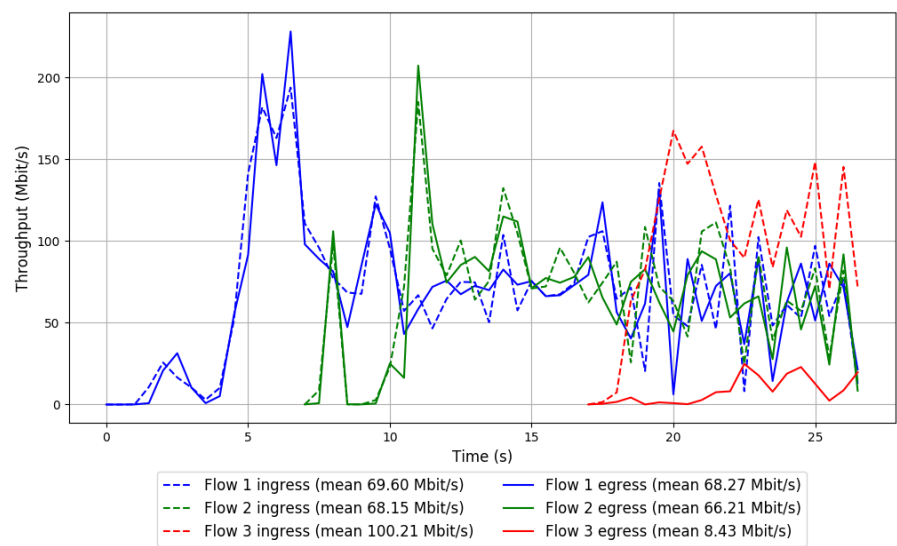
Average throughput: 8.43 Mbit/s

95th percentile per-packet one-way delay: 114.532 ms

Loss rate: 91.58%



Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

Start at: 2017-08-21 02:36:01

End at: 2017-08-21 02:36:31

# Below is generated by plot.py at 2017-08-21 05:12:24

# Datalink statistics

-- Total of 3 flows:

Average throughput: 101.26 Mbit/s

95th percentile per-packet one-way delay: 148.861 ms

Loss rate: 2.60%

-- Flow 1:

Average throughput: 49.17 Mbit/s

95th percentile per-packet one-way delay: 188.674 ms

Loss rate: 4.98%

-- Flow 2:

Average throughput: 76.89 Mbit/s

95th percentile per-packet one-way delay: 125.503 ms

Loss rate: 0.23%

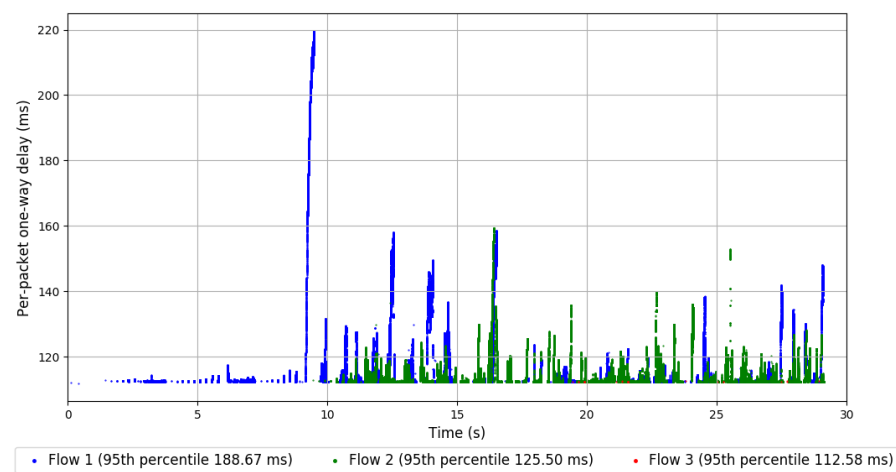
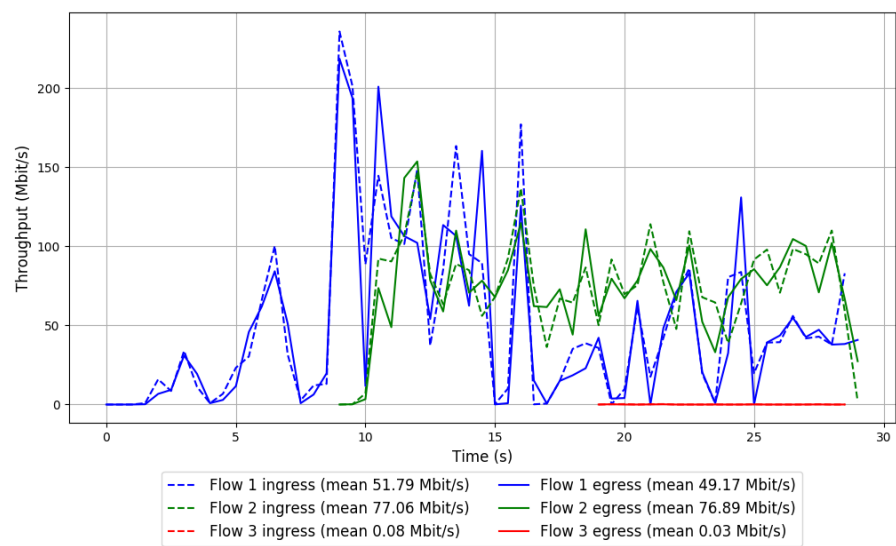
-- Flow 3:

Average throughput: 0.03 Mbit/s

95th percentile per-packet one-way delay: 112.577 ms

Loss rate: 60.00%

Run 4: Report of Verus — Data Link



Run 5: Statistics of Verus

Start at: 2017-08-21 02:48:49

End at: 2017-08-21 02:49:19

# Below is generated by plot.py at 2017-08-21 05:12:24

# Datalink statistics

-- Total of 3 flows:

Average throughput: 13.29 Mbit/s

95th percentile per-packet one-way delay: 113.191 ms

Loss rate: 83.18%

-- Flow 1:

Average throughput: 13.43 Mbit/s

95th percentile per-packet one-way delay: 113.190 ms

Loss rate: 69.86%

-- Flow 2:

Average throughput: 0.74 Mbit/s

95th percentile per-packet one-way delay: 113.328 ms

Loss rate: 98.32%

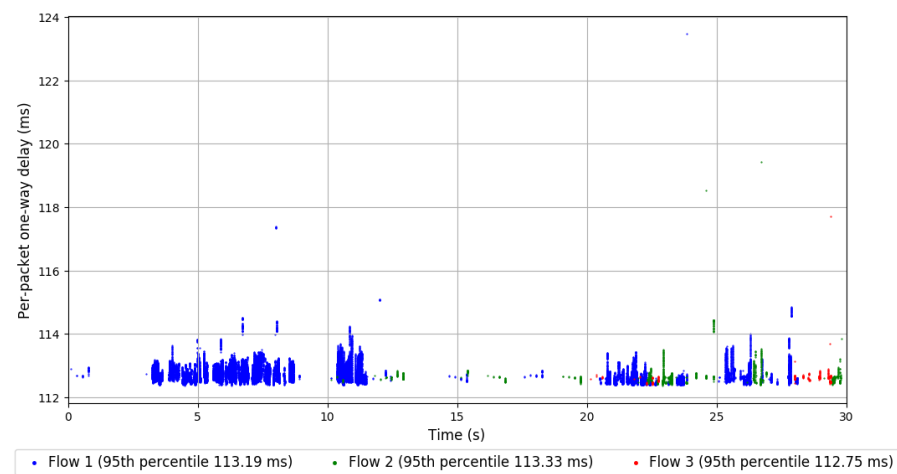
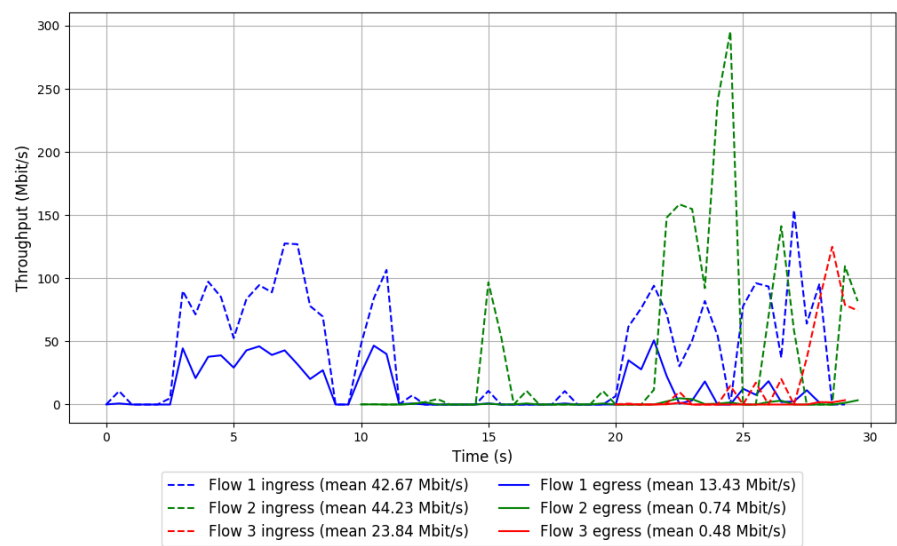
-- Flow 3:

Average throughput: 0.48 Mbit/s

95th percentile per-packet one-way delay: 112.747 ms

Loss rate: 98.06%

Run 5: Report of Verus — Data Link



Run 6: Statistics of Verus

Start at: 2017-08-21 03:01:40

End at: 2017-08-21 03:02:10

# Below is generated by plot.py at 2017-08-21 05:12:24

# Datalink statistics

-- Total of 3 flows:

Average throughput: 57.84 Mbit/s

95th percentile per-packet one-way delay: 131.581 ms

Loss rate: 47.50%

-- Flow 1:

Average throughput: 28.57 Mbit/s

95th percentile per-packet one-way delay: 113.304 ms

Loss rate: 64.68%

-- Flow 2:

Average throughput: 29.73 Mbit/s

95th percentile per-packet one-way delay: 134.390 ms

Loss rate: 0.11%

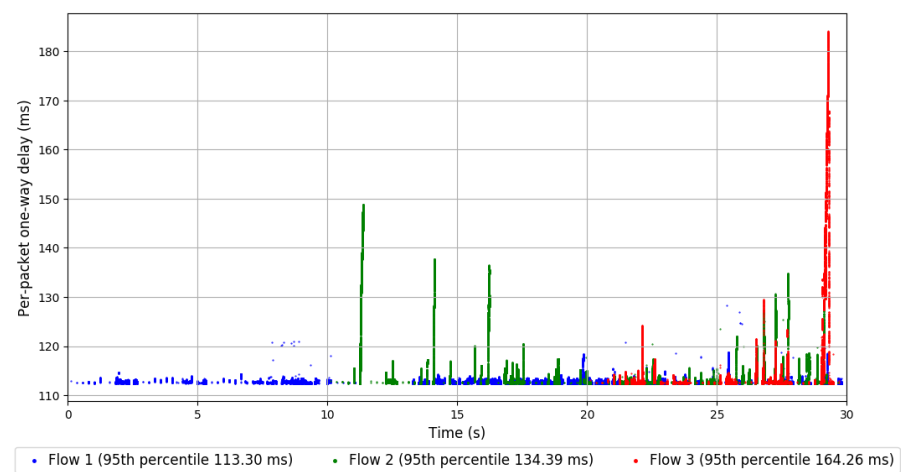
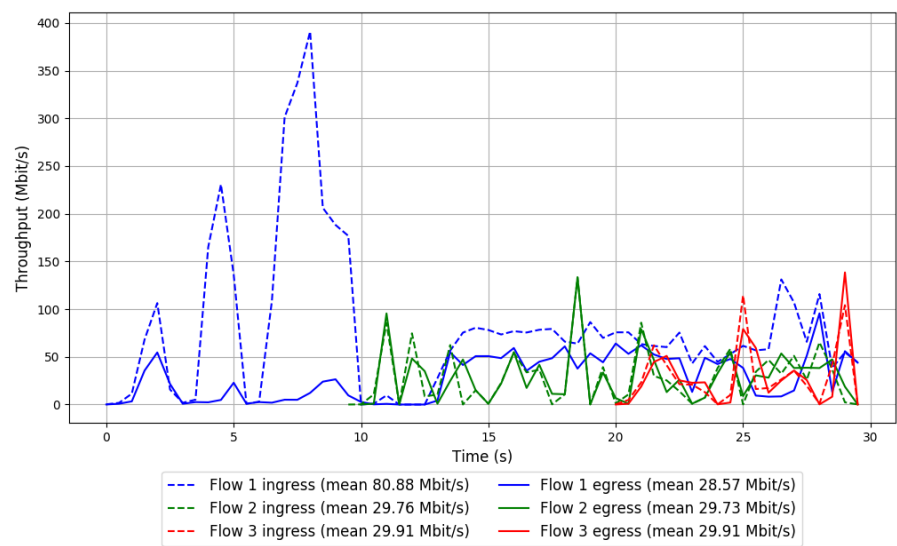
-- Flow 3:

Average throughput: 29.91 Mbit/s

95th percentile per-packet one-way delay: 164.259 ms

Loss rate: 0.00%

Run 6: Report of Verus — Data Link



Run 7: Statistics of Verus

Start at: 2017-08-21 03:14:14

End at: 2017-08-21 03:14:44

# Below is generated by plot.py at 2017-08-21 05:12:34

# Datalink statistics

-- Total of 3 flows:

Average throughput: 46.52 Mbit/s

95th percentile per-packet one-way delay: 118.977 ms

Loss rate: 48.27%

-- Flow 1:

Average throughput: 31.04 Mbit/s

95th percentile per-packet one-way delay: 112.986 ms

Loss rate: 58.12%

-- Flow 2:

Average throughput: 23.42 Mbit/s

95th percentile per-packet one-way delay: 162.906 ms

Loss rate: 1.56%

-- Flow 3:

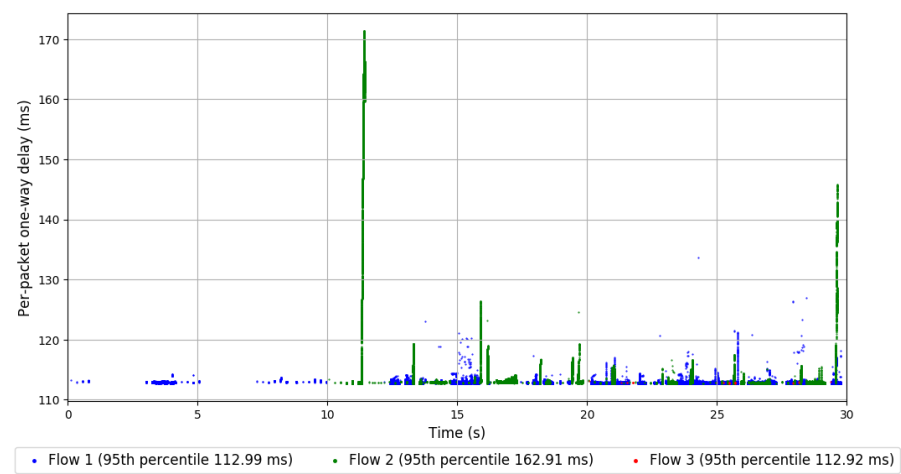
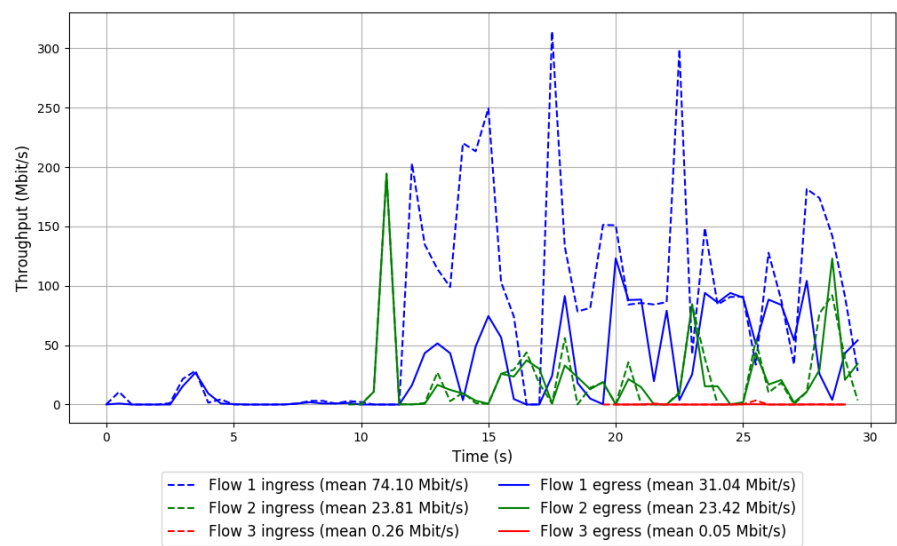
Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 112.920 ms

Loss rate: 82.86%



Run 7: Report of Verus — Data Link



Run 8: Statistics of Verus

Start at: 2017-08-21 03:27:17

End at: 2017-08-21 03:27:47

# Below is generated by plot.py at 2017-08-21 05:12:47

# Datalink statistics

-- Total of 3 flows:

Average throughput: 104.63 Mbit/s

95th percentile per-packet one-way delay: 204.651 ms

Loss rate: 13.28%

-- Flow 1:

Average throughput: 96.49 Mbit/s

95th percentile per-packet one-way delay: 206.650 ms

Loss rate: 2.20%

-- Flow 2:

Average throughput: 1.61 Mbit/s

95th percentile per-packet one-way delay: 120.999 ms

Loss rate: 80.99%

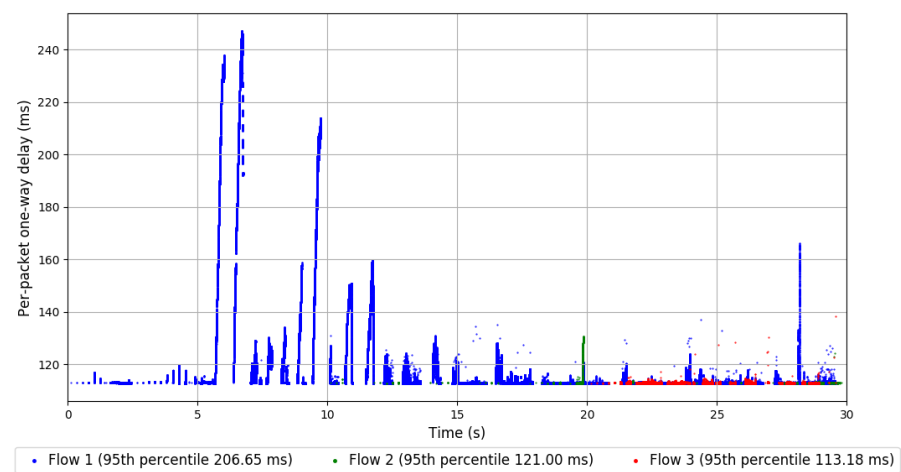
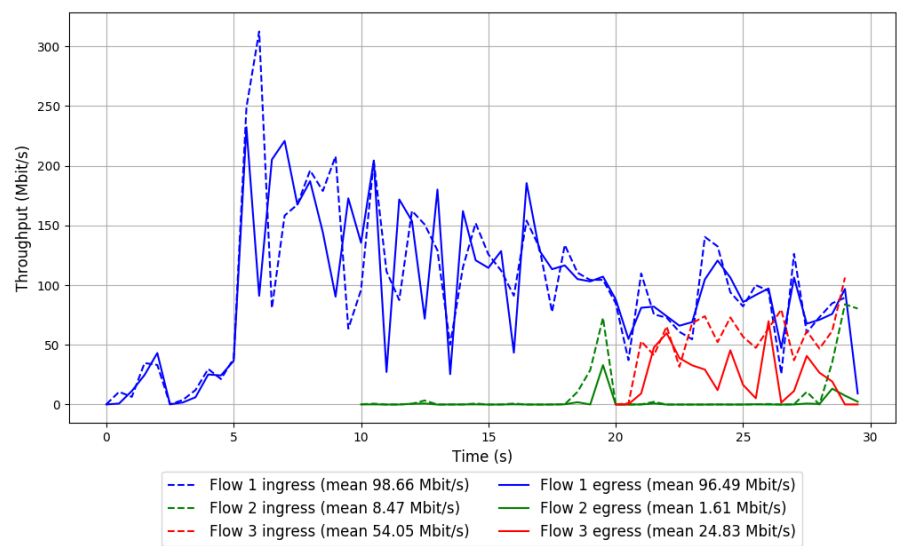
-- Flow 3:

Average throughput: 24.83 Mbit/s

95th percentile per-packet one-way delay: 113.182 ms

Loss rate: 54.25%

Run 8: Report of Verus — Data Link



Run 9: Statistics of Verus

Start at: 2017-08-21 03:40:11

End at: 2017-08-21 03:40:41

# Below is generated by plot.py at 2017-08-21 05:12:47

# Datalink statistics

-- Total of 3 flows:

Average throughput: 26.09 Mbit/s

95th percentile per-packet one-way delay: 113.255 ms

Loss rate: 75.16%

-- Flow 1:

Average throughput: 19.95 Mbit/s

95th percentile per-packet one-way delay: 113.346 ms

Loss rate: 74.55%

-- Flow 2:

Average throughput: 1.36 Mbit/s

95th percentile per-packet one-way delay: 112.777 ms

Loss rate: 92.47%

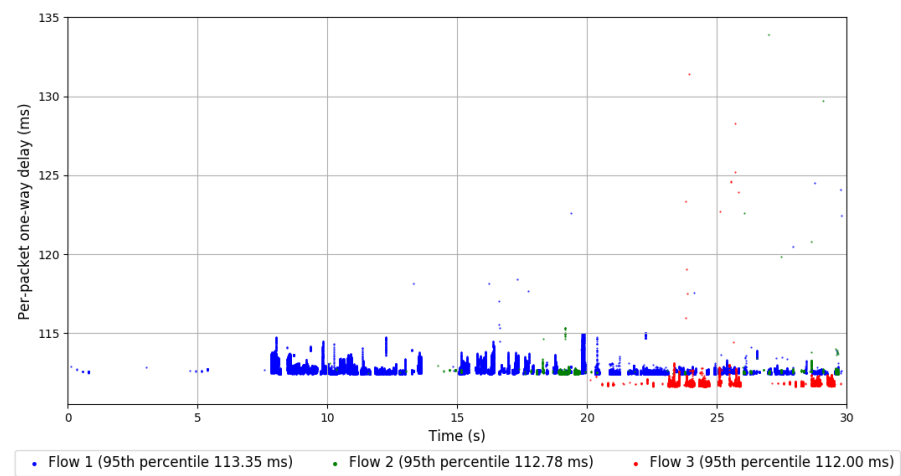
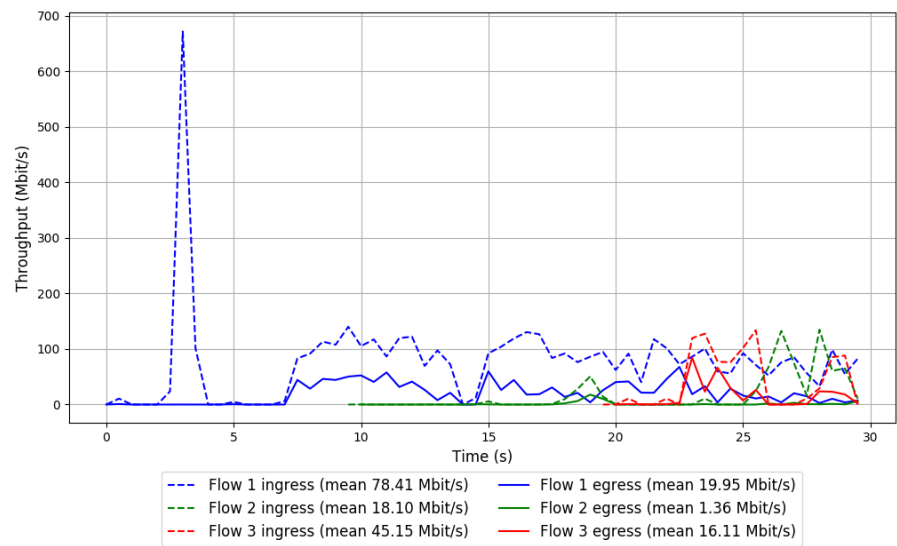
-- Flow 3:

Average throughput: 16.11 Mbit/s

95th percentile per-packet one-way delay: 112.001 ms

Loss rate: 64.31%

Run 9: Report of Verus — Data Link



Run 10: Statistics of Verus

Start at: 2017-08-21 03:52:55

End at: 2017-08-21 03:53:25

# Below is generated by plot.py at 2017-08-21 05:13:00

# Datalink statistics

-- Total of 3 flows:

Average throughput: 15.56 Mbit/s

95th percentile per-packet one-way delay: 112.337 ms

Loss rate: 88.36%

-- Flow 1:

Average throughput: 7.50 Mbit/s

95th percentile per-packet one-way delay: 112.254 ms

Loss rate: 87.03%

-- Flow 2:

Average throughput: 11.89 Mbit/s

95th percentile per-packet one-way delay: 112.385 ms

Loss rate: 87.89%

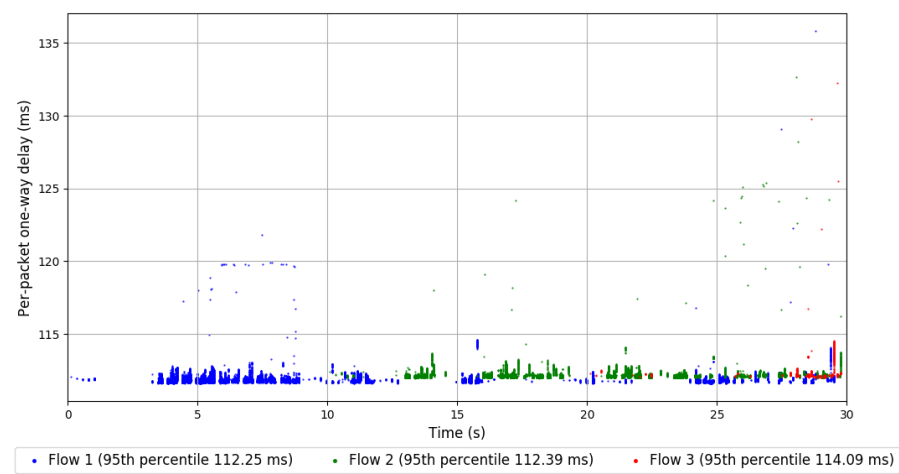
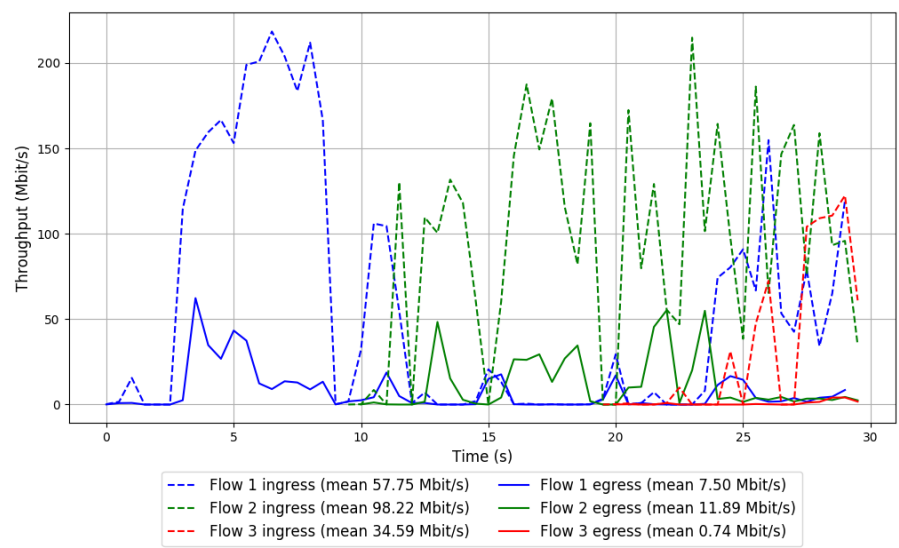
-- Flow 3:

Average throughput: 0.74 Mbit/s

95th percentile per-packet one-way delay: 114.093 ms

Loss rate: 97.88%

Run 10: Report of Verus — Data Link



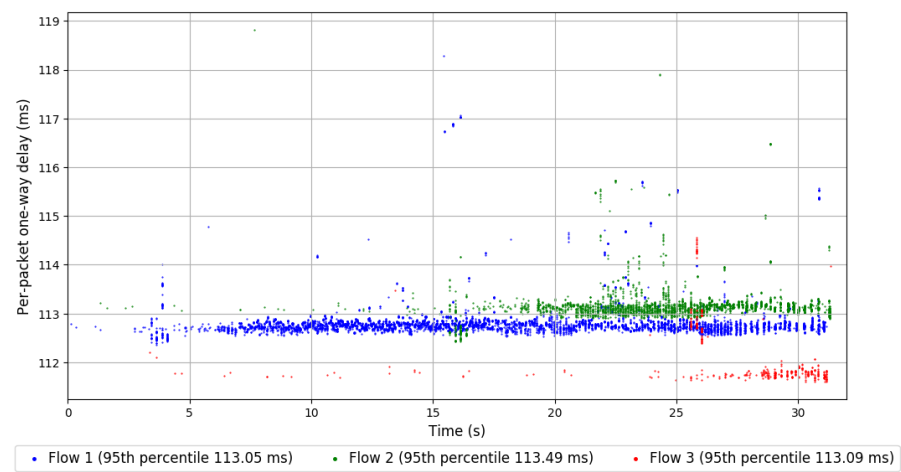
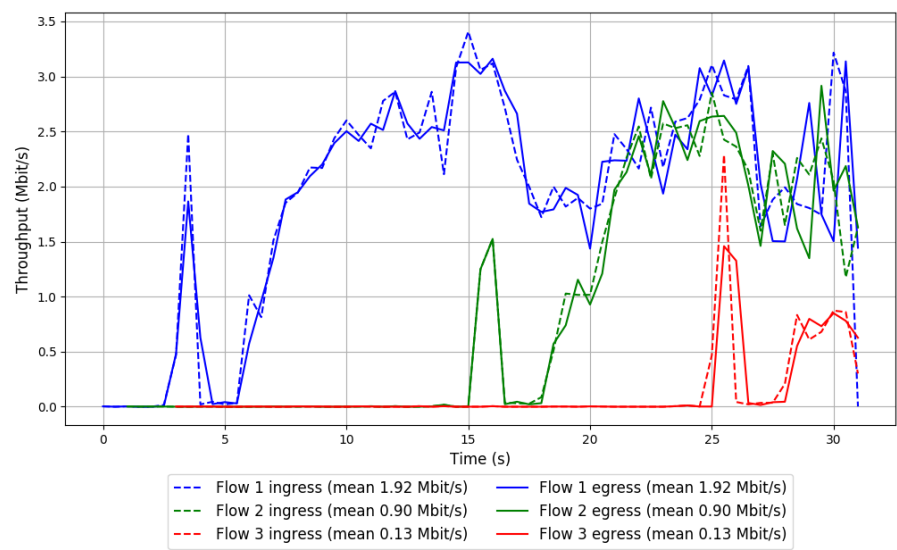
```
Run 1: Statistics of WebRTC media

Start at: 2017-08-21 01:53:42
End at: 2017-08-21 01:54:12

# Below is generated by plot.py at 2017-08-21 05:13:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.89 Mbit/s
95th percentile per-packet one-way delay: 113.295 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.92 Mbit/s
95th percentile per-packet one-way delay: 113.049 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.90 Mbit/s
95th percentile per-packet one-way delay: 113.490 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 113.088 ms
Loss rate: 0.00%
```



Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2017-08-21 02:05:52

End at: 2017-08-21 02:06:22

# Below is generated by plot.py at 2017-08-21 05:13:00

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.37 Mbit/s

95th percentile per-packet one-way delay: 113.047 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 114.234 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.30 Mbit/s

95th percentile per-packet one-way delay: 112.087 ms

Loss rate: 0.00%

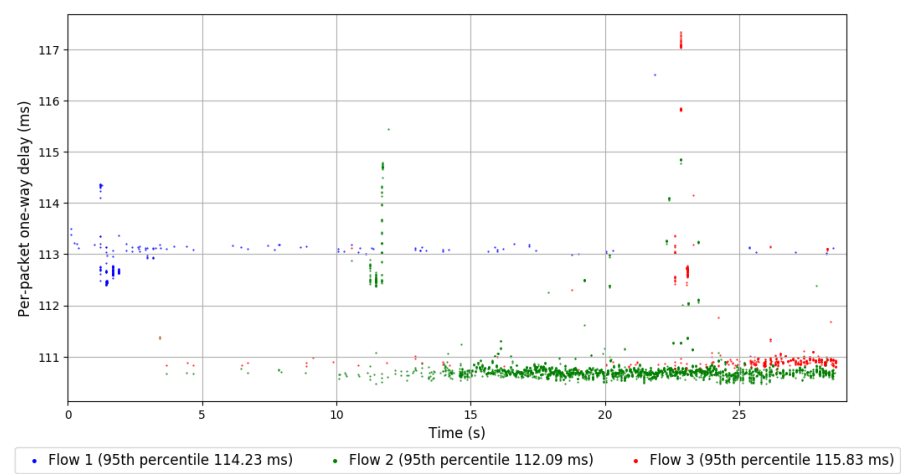
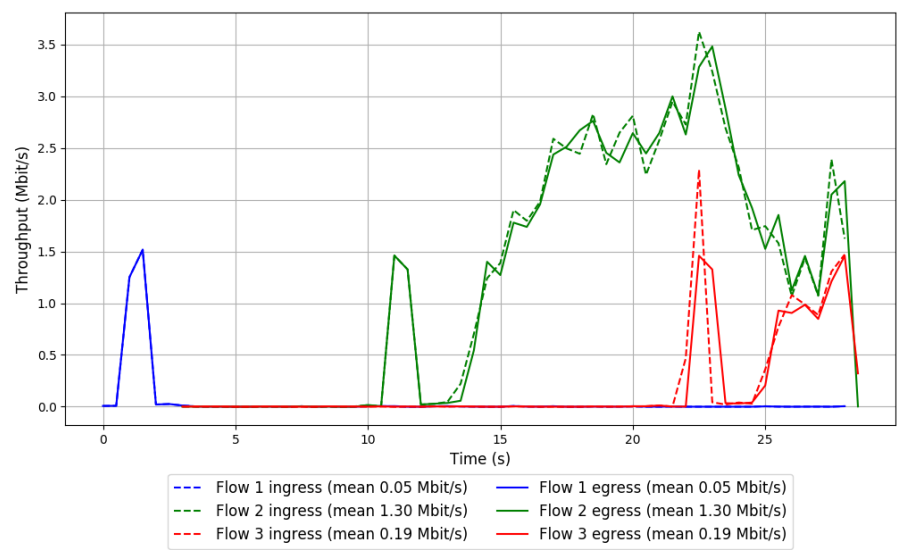
-- Flow 3:

Average throughput: 0.19 Mbit/s

95th percentile per-packet one-way delay: 115.826 ms

Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2017-08-21 02:19:08

End at: 2017-08-21 02:19:38

# Below is generated by plot.py at 2017-08-21 05:13:00

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.45 Mbit/s

95th percentile per-packet one-way delay: 112.656 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 112.767 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.38 Mbit/s

95th percentile per-packet one-way delay: 112.284 ms

Loss rate: 0.00%

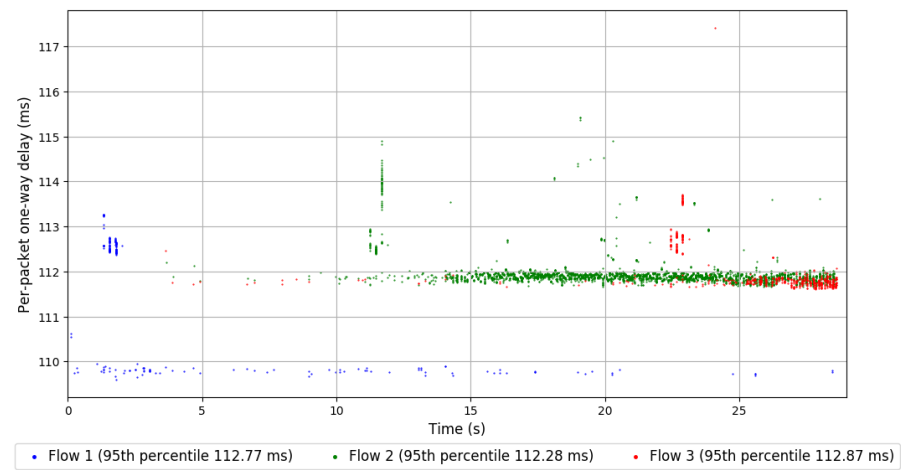
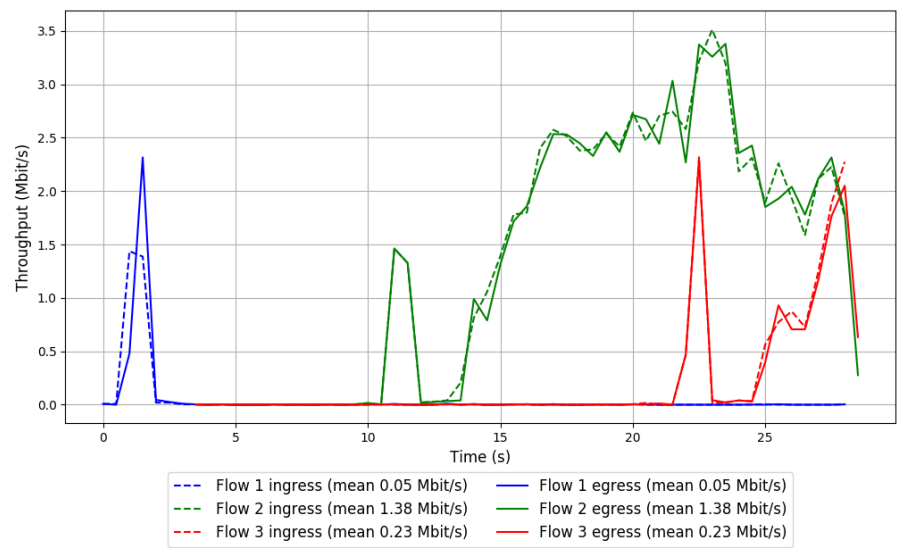
-- Flow 3:

Average throughput: 0.23 Mbit/s

95th percentile per-packet one-way delay: 112.867 ms

Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2017-08-21 02:31:42

End at: 2017-08-21 02:32:12

# Below is generated by plot.py at 2017-08-21 05:13:00

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.33 Mbit/s

95th percentile per-packet one-way delay: 113.148 ms

Loss rate: 0.03%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 113.025 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.22 Mbit/s

95th percentile per-packet one-way delay: 112.594 ms

Loss rate: 0.04%

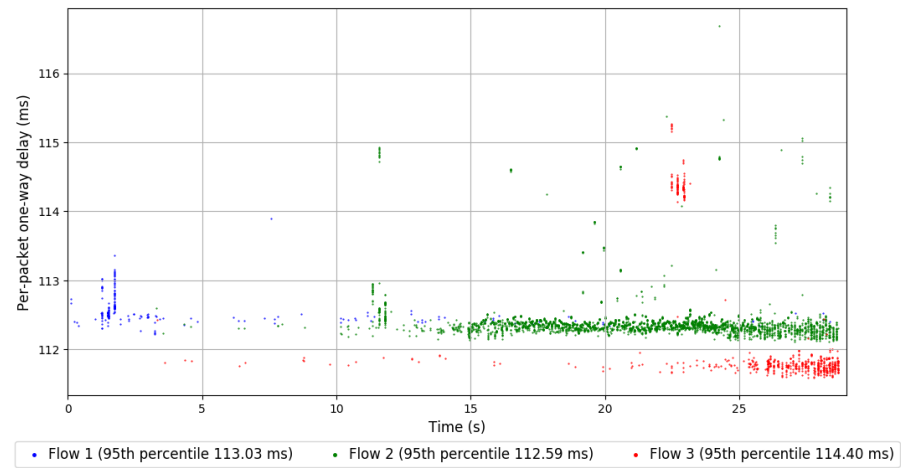
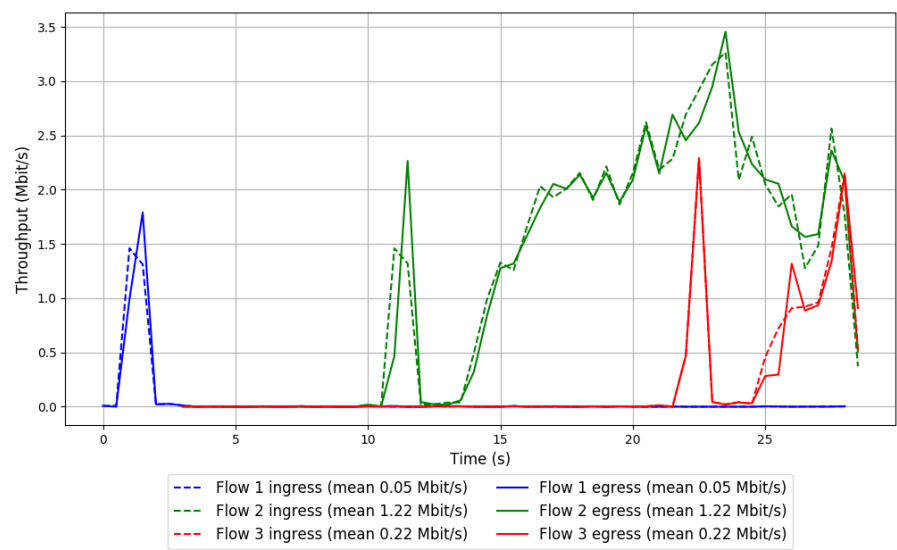
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 114.396 ms

Loss rate: 0.00%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2017-08-21 02:44:31

End at: 2017-08-21 02:45:01

# Below is generated by plot.py at 2017-08-21 05:13:00

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.46 Mbit/s

95th percentile per-packet one-way delay: 112.701 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 112.752 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.41 Mbit/s

95th percentile per-packet one-way delay: 112.474 ms

Loss rate: 0.00%

-- Flow 3:

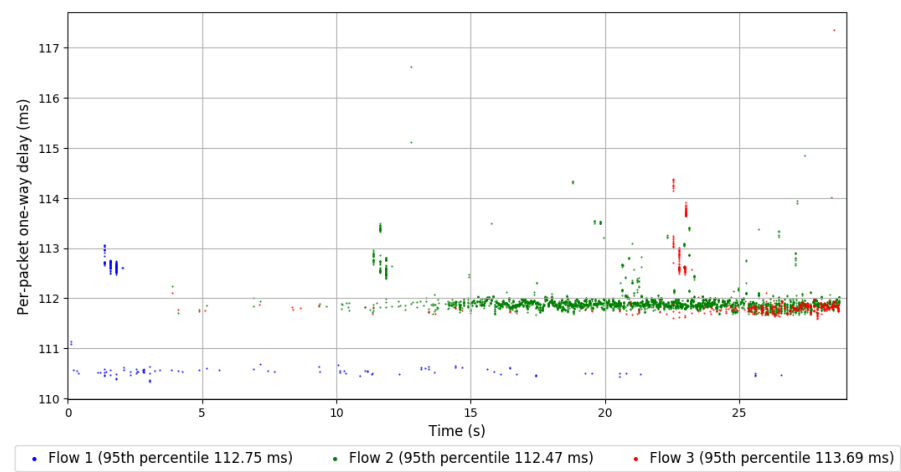
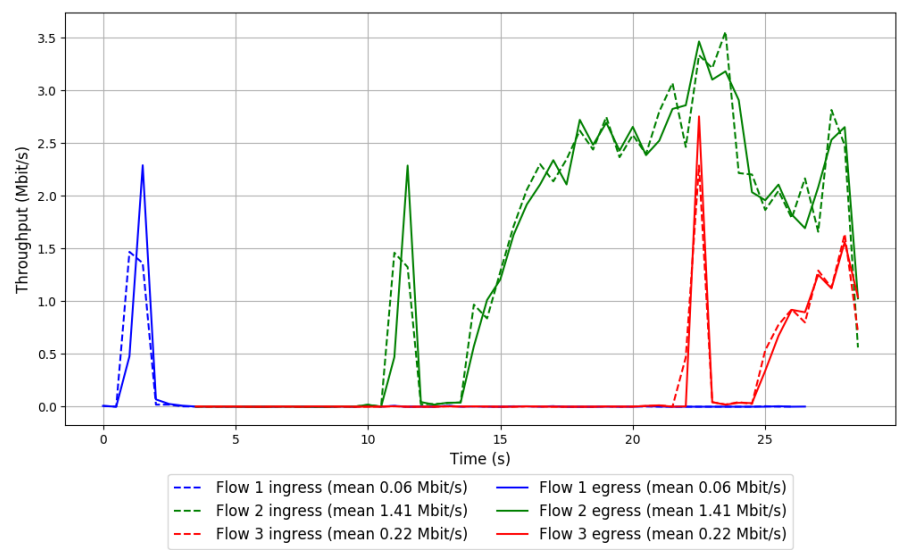
Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 113.689 ms

Loss rate: 0.00%



Run 5: Report of WebRTC media — Data Link



Run 6: Statistics of WebRTC media

Start at: 2017-08-21 02:57:27

End at: 2017-08-21 02:57:57

# Below is generated by plot.py at 2017-08-21 05:13:00

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.43 Mbit/s

95th percentile per-packet one-way delay: 112.677 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 113.521 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.35 Mbit/s

95th percentile per-packet one-way delay: 110.077 ms

Loss rate: 0.00%

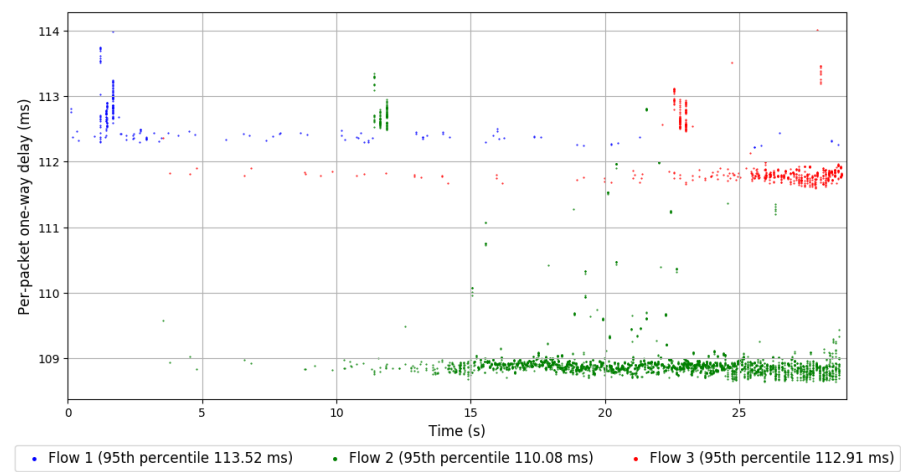
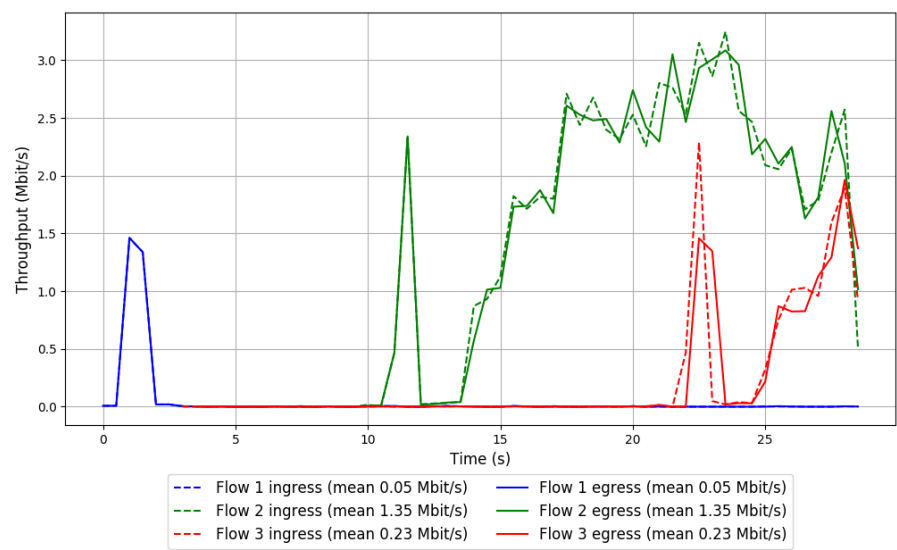
-- Flow 3:

Average throughput: 0.23 Mbit/s

95th percentile per-packet one-way delay: 112.908 ms

Loss rate: 0.00%

Run 6: Report of WebRTC media — Data Link



Run 7: Statistics of WebRTC media

Start at: 2017-08-21 03:09:59

End at: 2017-08-21 03:10:29

# Below is generated by plot.py at 2017-08-21 05:13:00

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.40 Mbit/s

95th percentile per-packet one-way delay: 112.969 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 113.237 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.27 Mbit/s

95th percentile per-packet one-way delay: 112.853 ms

Loss rate: 0.00%

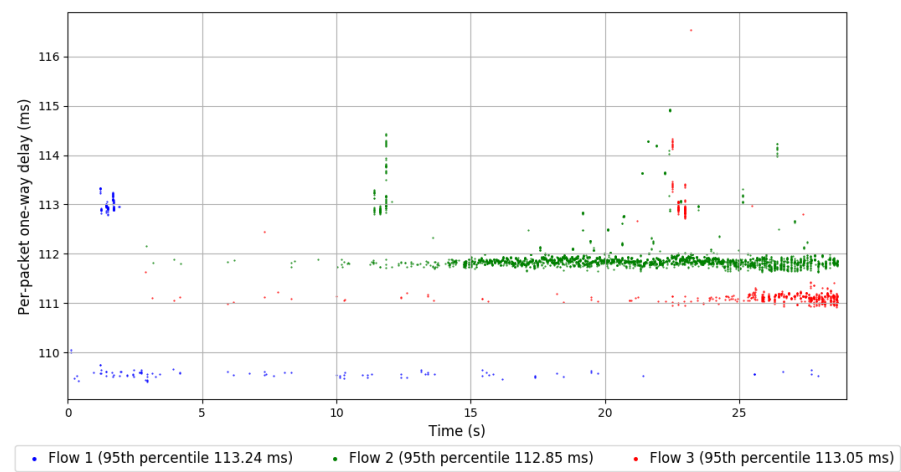
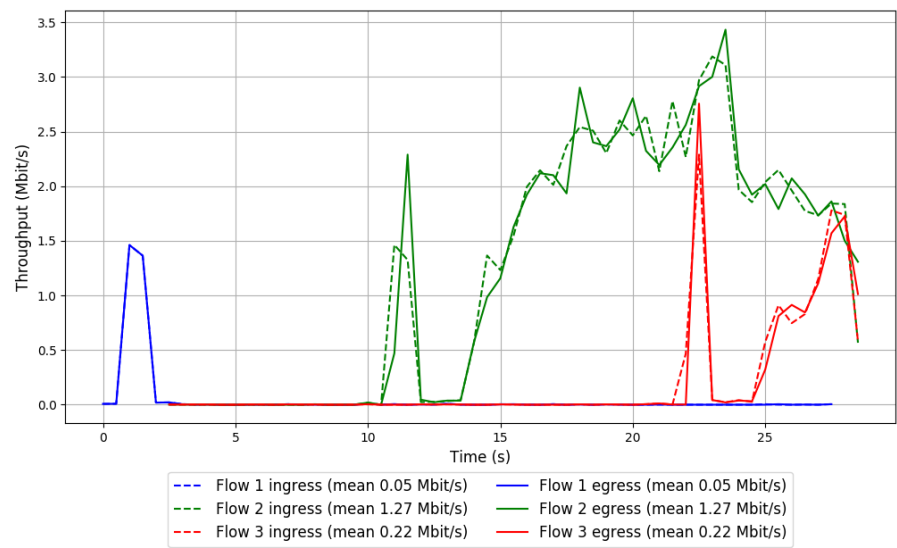
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 113.052 ms

Loss rate: 0.00%

Run 7: Report of WebRTC media — Data Link



Run 8: Statistics of WebRTC media

Start at: 2017-08-21 03:23:04

End at: 2017-08-21 03:23:34

# Below is generated by plot.py at 2017-08-21 05:13:00

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.40 Mbit/s

95th percentile per-packet one-way delay: 113.016 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 113.222 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.35 Mbit/s

95th percentile per-packet one-way delay: 112.272 ms

Loss rate: 0.00%

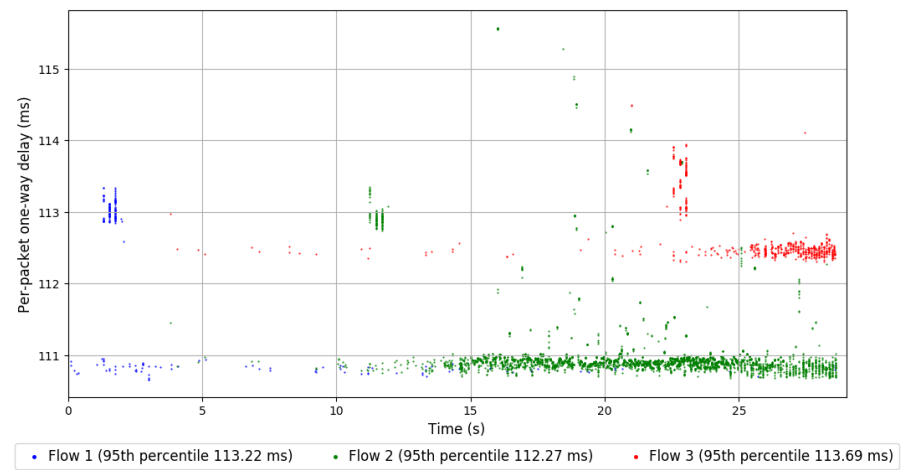
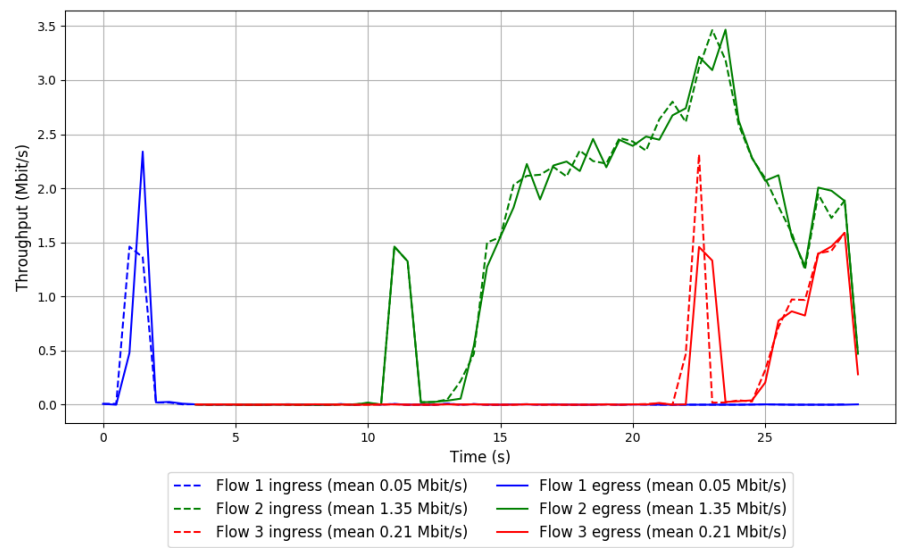
-- Flow 3:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 113.691 ms

Loss rate: 0.00%

Run 8: Report of WebRTC media — Data Link



Run 9: Statistics of WebRTC media

Start at: 2017-08-21 03:35:55

End at: 2017-08-21 03:36:25

# Below is generated by plot.py at 2017-08-21 05:13:00

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.44 Mbit/s

95th percentile per-packet one-way delay: 112.610 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 112.646 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.41 Mbit/s

95th percentile per-packet one-way delay: 111.769 ms

Loss rate: 0.00%

-- Flow 3:

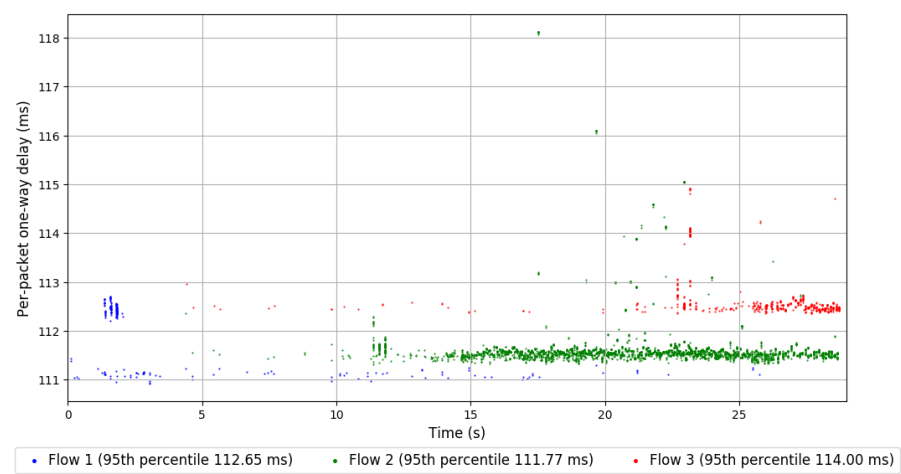
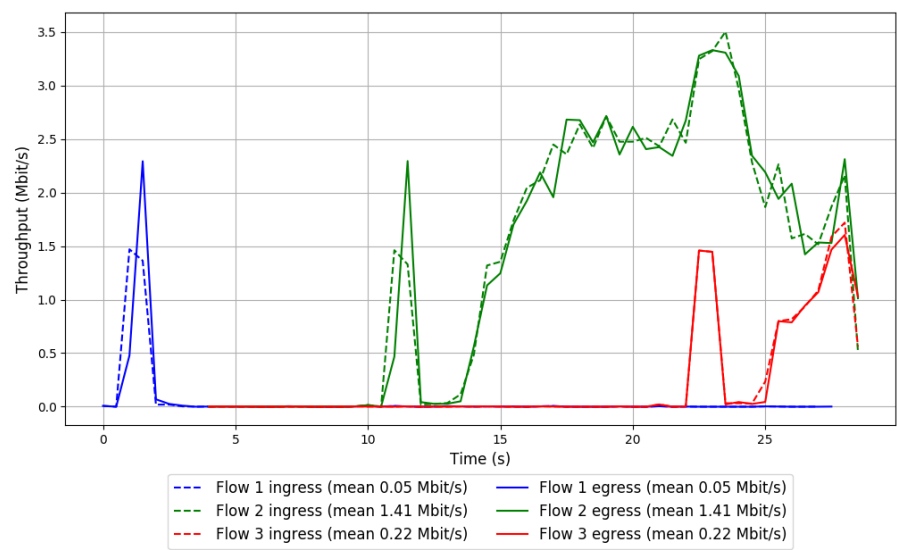
Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 113.995 ms

Loss rate: 0.00%



Run 9: Report of WebRTC media — Data Link



Run 10: Statistics of WebRTC media

Start at: 2017-08-21 03:48:42

End at: 2017-08-21 03:49:12

# Below is generated by plot.py at 2017-08-21 05:13:01

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.41 Mbit/s

95th percentile per-packet one-way delay: 112.776 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 111.976 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.31 Mbit/s

95th percentile per-packet one-way delay: 112.766 ms

Loss rate: 0.00%

-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 113.494 ms

Loss rate: 0.00%

Run 10: Report of WebRTC media — Data Link

