

Pantheon Report

Generated at 2018-03-01 15:46:50 (UTC).

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

Repeated the test of 17 congestion control schemes 10 times.

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

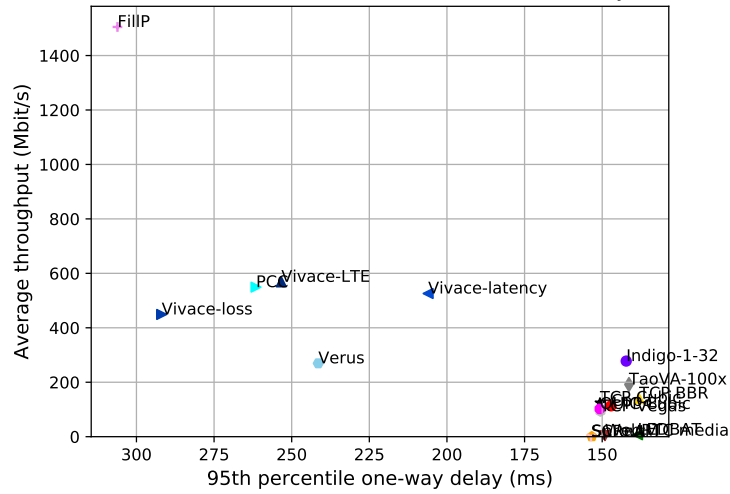
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

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

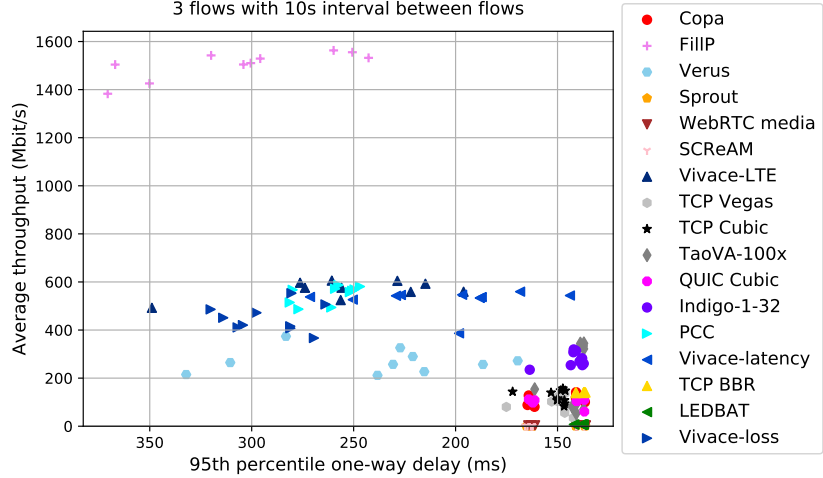
Git summary:

```
branch: master @ f12c42a2c63fdd9a862eefa0468859bf379b6623
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
  M datagrump/sender.cc
third_party/fillp @ 828bbf95fd4941149b5cec90f281d1c69ae1a5c6
third_party/genericCC @ 9249eea3238475c4d8cca1443d28df70bff6c4a2
third_party/indigo @ a9b2060d39e4da2e8987e893e3eca2a6c7cd0ab9
third_party/indigo-1-layer-128-unit @ 3ae9e4ef4230db7484501f82ce8b377695f2f66d
third_party/indigo-1-layer-32-unit @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/indigo-1-layer-32-unit-no-calib @ 1f3a7f75b41135ed5b540c0fd3505939528e2a5f
third_party/indigo-no-calib @ 7224f2202e8a044d8306fa0b983ad84360c53d89
third_party/koho_cc @ f0f2e693303aee82ea808e6928eac4f1083a6681
  M datagrump/sender.cc
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ fb1053193c2861da659ba9013db26744ccfcf993
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
  M receiver/src/buffer.h
  M receiver/src/core.cpp
  M sender/src/buffer.h
  M sender/src/core.cpp
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream @ c3370fd7bd17265a79aeb34e4016ad23f5965885
third_party/sourdough @ f1a14bffe749737437f61b1eaeeb30b267cde681
third_party/sprout @ 6f2efe6e088d91066a9f023df375eee2665089ce
  M src/examples/cellsim.cc
  M src/examples/sproutbt2.cc
  M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
  M src/verus.hpp
  M tools/plot.py
third_party/vivace @ 7a4ba531e75b4a6f66f5c4580192120401784ce3
third_party/webrtc @ a488197ddd041ace68a42849b2540ad834825f42
```

test from GCE London Ethernet to GCE Sydney 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 Sydney 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	72.85	70.50	63.63	138.13	137.64	137.49	0.98	1.55	3.42
TCP Cubic	10	69.60	63.49	40.54	149.74	152.32	149.84	0.92	1.44	5.28
LEDBAT	10	4.68	2.98	1.37	138.71	138.42	137.81	1.85	2.83	5.83
PCC	10	473.68	96.05	37.34	263.07	258.21	255.69	4.31	4.46	6.56
QUIC Cubic	10	51.63	53.06	47.05	145.51	140.89	149.26	1.09	1.62	2.23
SCReAM	10	0.21	0.21	0.21	142.47	150.40	147.64	0.86	1.34	2.64
WebRTC media	10	2.04	1.26	0.44	142.64	140.58	142.31	1.10	1.88	5.44
Sprout	10	0.38	0.39	0.45	143.09	148.21	145.71	1.07	1.19	2.46
TaoVA-100x	10	98.76	86.18	119.68	145.64	145.95	140.75	0.75	0.50	3.22
TCP Vegas	10	54.62	40.57	36.85	150.03	149.46	154.27	0.70	1.50	3.24
Verus	10	162.14	136.80	52.78	211.41	246.91	243.84	1.77	5.11	7.25
Copa	10	65.00	49.38	49.92	139.68	156.42	146.20	0.97	2.71	3.76
FillP	10	794.31	770.79	616.17	277.44	300.72	315.97	6.96	7.70	17.09
Indigo-1-32	10	144.39	139.56	128.59	141.46	142.62	144.46	0.92	1.47	3.55
Vivace-latency	10	318.59	257.35	115.47	193.01	207.75	192.94	1.49	2.10	5.41
Vivace-loss	10	215.76	280.60	150.52	272.68	297.93	280.21	4.88	4.20	7.06
Vivace-LTE	10	335.07	287.56	134.45	253.37	225.17	206.24	2.31	2.35	5.71

Run 1: Statistics of TCP BBR

Start at: 2018-03-01 06:55:40

End at: 2018-03-01 06:56:10

Below is generated by plot.py at 2018-03-01 13:53:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 141.18 Mbit/s

95th percentile per-packet one-way delay: 140.975 ms

Loss rate: 1.55%

-- Flow 1:

Average throughput: 72.70 Mbit/s

95th percentile per-packet one-way delay: 141.035 ms

Loss rate: 1.04%

-- Flow 2:

Average throughput: 71.77 Mbit/s

95th percentile per-packet one-way delay: 136.755 ms

Loss rate: 1.49%

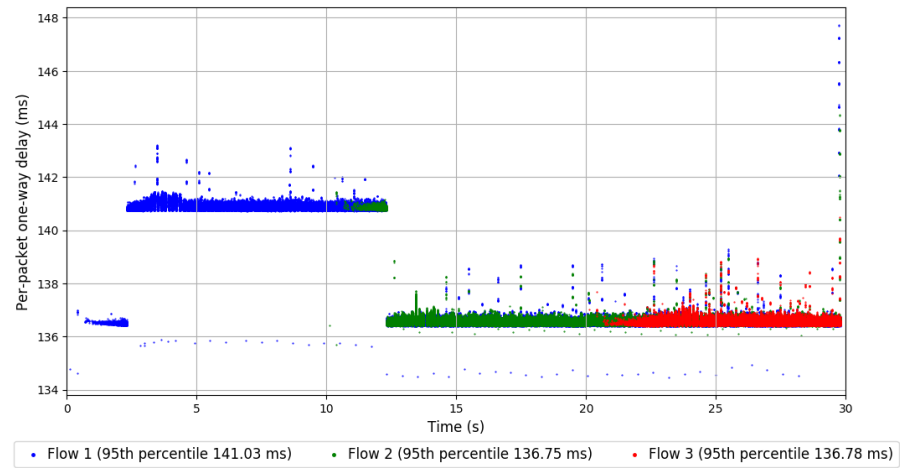
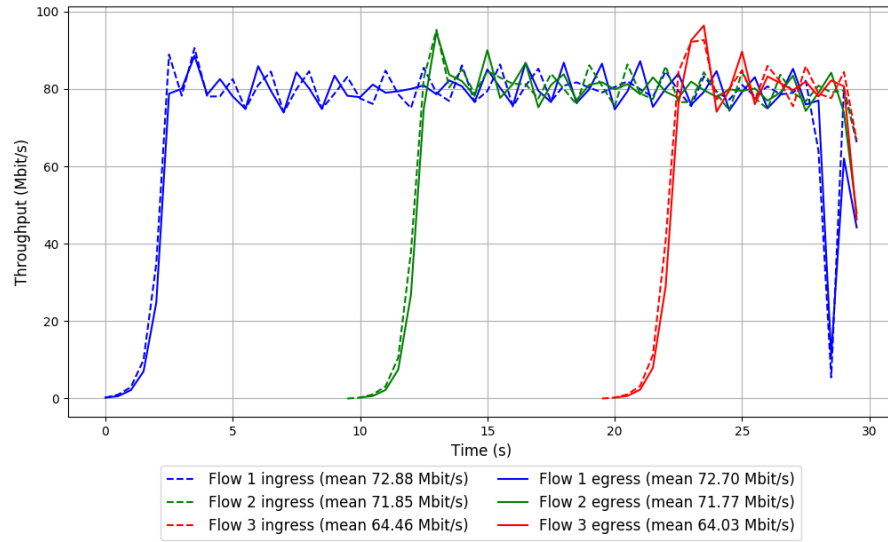
-- Flow 3:

Average throughput: 64.03 Mbit/s

95th percentile per-packet one-way delay: 136.780 ms

Loss rate: 3.41%

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2018-03-01 07:15:59

End at: 2018-03-01 07:16:29

Below is generated by plot.py at 2018-03-01 13:53:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 137.56 Mbit/s

95th percentile per-packet one-way delay: 141.025 ms

Loss rate: 1.56%

-- Flow 1:

Average throughput: 71.59 Mbit/s

95th percentile per-packet one-way delay: 141.052 ms

Loss rate: 1.00%

-- Flow 2:

Average throughput: 68.54 Mbit/s

95th percentile per-packet one-way delay: 140.969 ms

Loss rate: 1.53%

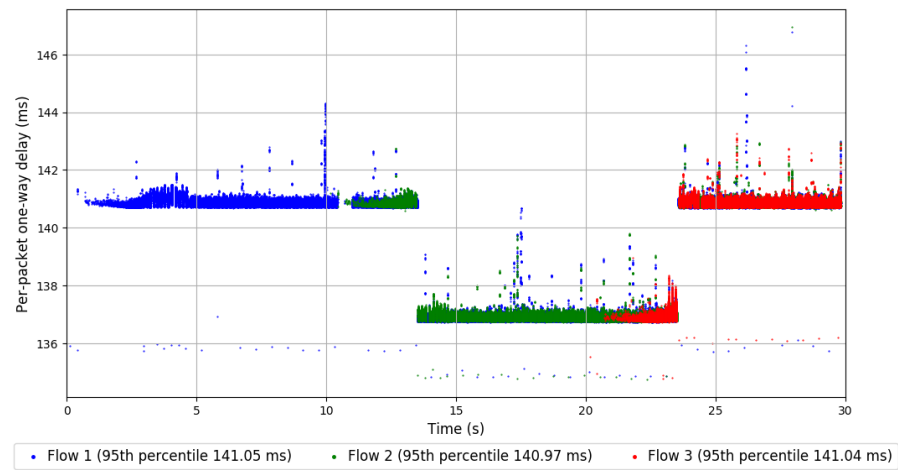
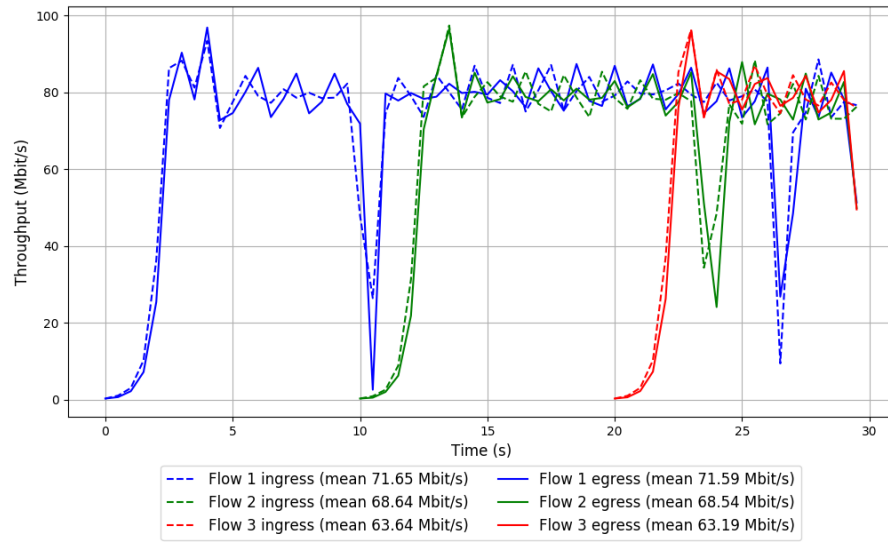
-- Flow 3:

Average throughput: 63.19 Mbit/s

95th percentile per-packet one-way delay: 141.042 ms

Loss rate: 3.53%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2018-03-01 07:36:34

End at: 2018-03-01 07:37:04

Below is generated by plot.py at 2018-03-01 13:53:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 140.12 Mbit/s

95th percentile per-packet one-way delay: 141.037 ms

Loss rate: 1.64%

-- Flow 1:

Average throughput: 72.44 Mbit/s

95th percentile per-packet one-way delay: 141.037 ms

Loss rate: 1.05%

-- Flow 2:

Average throughput: 71.33 Mbit/s

95th percentile per-packet one-way delay: 141.026 ms

Loss rate: 1.68%

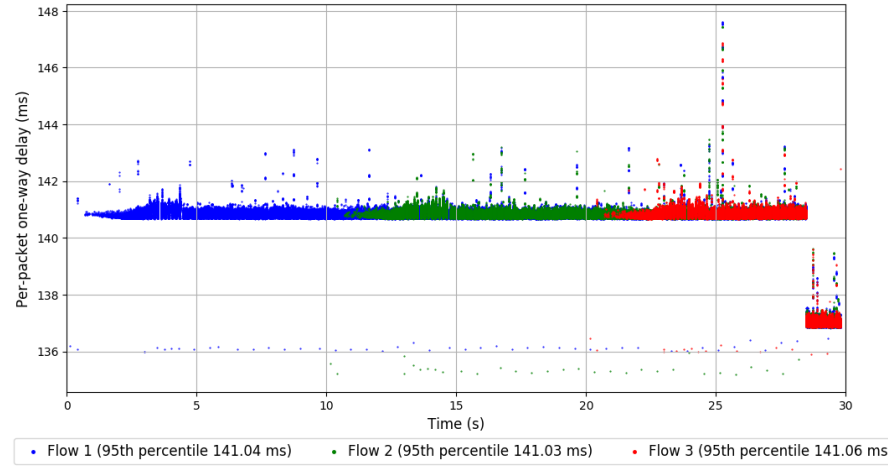
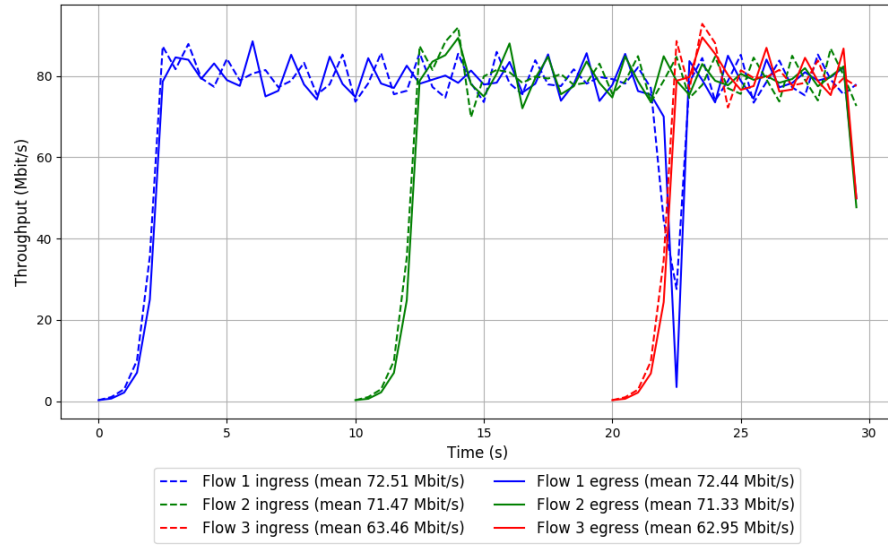
-- Flow 3:

Average throughput: 62.95 Mbit/s

95th percentile per-packet one-way delay: 141.059 ms

Loss rate: 3.59%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2018-03-01 07:57:09

End at: 2018-03-01 07:57:39

Below is generated by plot.py at 2018-03-01 13:53:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 138.08 Mbit/s

95th percentile per-packet one-way delay: 137.153 ms

Loss rate: 1.51%

-- Flow 1:

Average throughput: 71.97 Mbit/s

95th percentile per-packet one-way delay: 137.195 ms

Loss rate: 0.99%

-- Flow 2:

Average throughput: 68.92 Mbit/s

95th percentile per-packet one-way delay: 137.032 ms

Loss rate: 1.52%

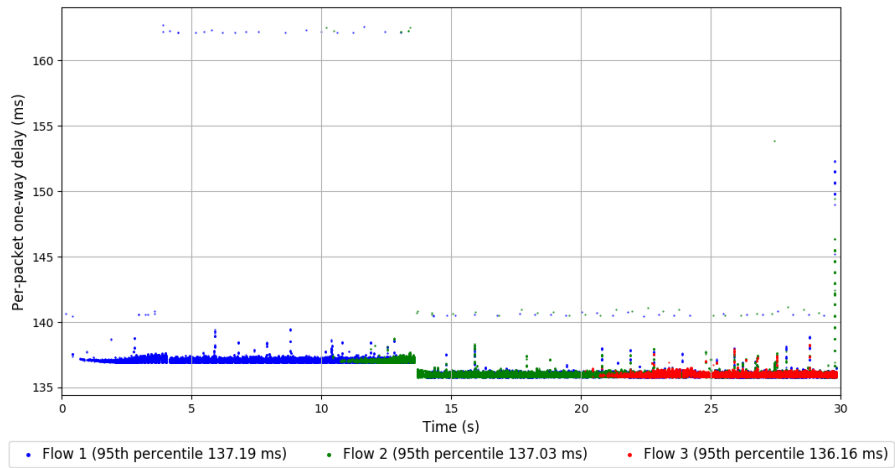
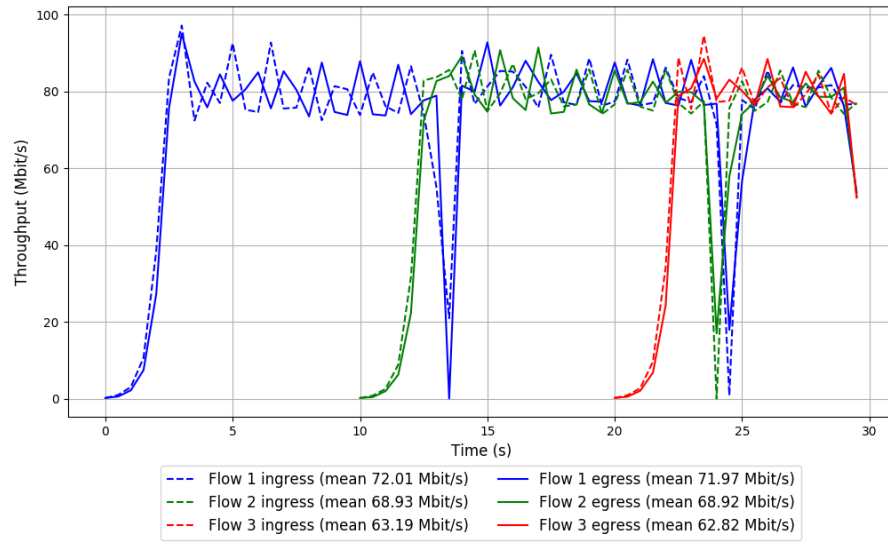
-- Flow 3:

Average throughput: 62.82 Mbit/s

95th percentile per-packet one-way delay: 136.163 ms

Loss rate: 3.32%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2018-03-01 08:18:17

End at: 2018-03-01 08:18:47

Below is generated by plot.py at 2018-03-01 13:53:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 142.03 Mbit/s

95th percentile per-packet one-way delay: 137.101 ms

Loss rate: 1.55%

-- Flow 1:

Average throughput: 73.81 Mbit/s

95th percentile per-packet one-way delay: 137.135 ms

Loss rate: 0.96%

-- Flow 2:

Average throughput: 71.72 Mbit/s

95th percentile per-packet one-way delay: 137.060 ms

Loss rate: 1.67%

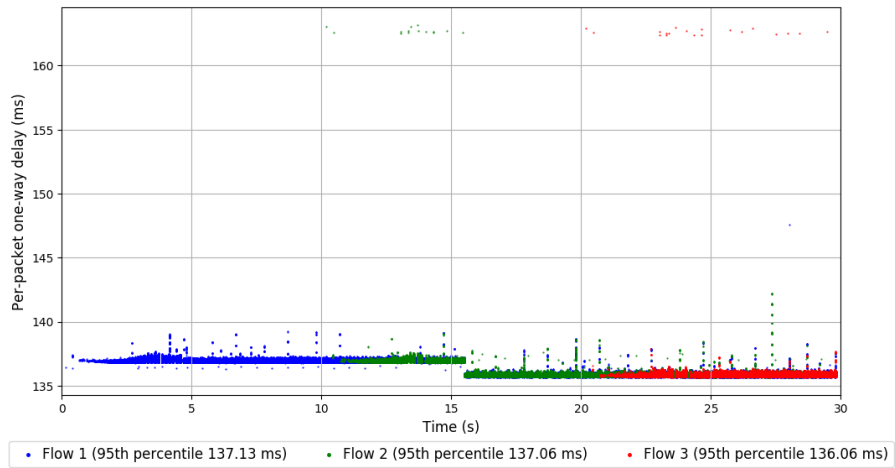
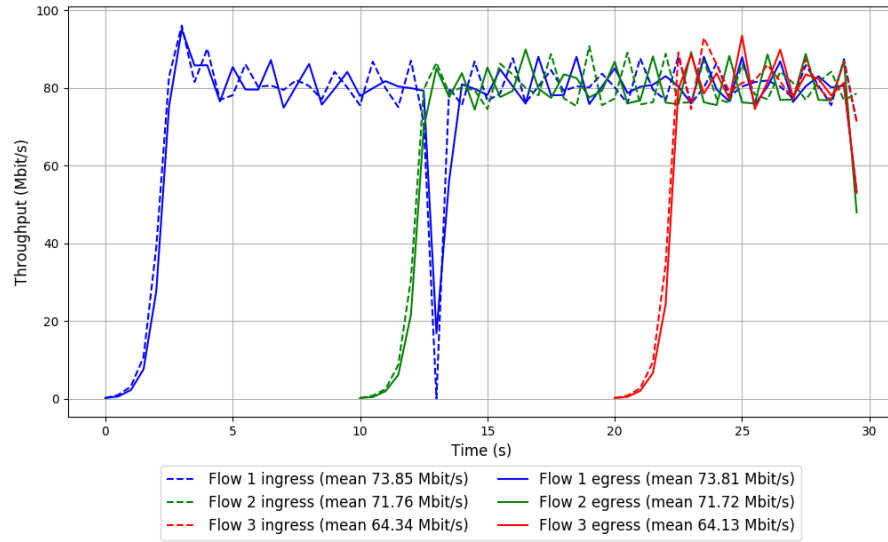
-- Flow 3:

Average throughput: 64.13 Mbit/s

95th percentile per-packet one-way delay: 136.060 ms

Loss rate: 3.33%

Run 5: Report of TCP BBR — Data Link



Run 6: Statistics of TCP BBR

Start at: 2018-03-01 08:38:57

End at: 2018-03-01 08:39:28

Below is generated by plot.py at 2018-03-01 13:53:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 139.43 Mbit/s

95th percentile per-packet one-way delay: 137.123 ms

Loss rate: 1.51%

-- Flow 1:

Average throughput: 72.46 Mbit/s

95th percentile per-packet one-way delay: 137.135 ms

Loss rate: 0.98%

-- Flow 2:

Average throughput: 70.20 Mbit/s

95th percentile per-packet one-way delay: 137.097 ms

Loss rate: 1.53%

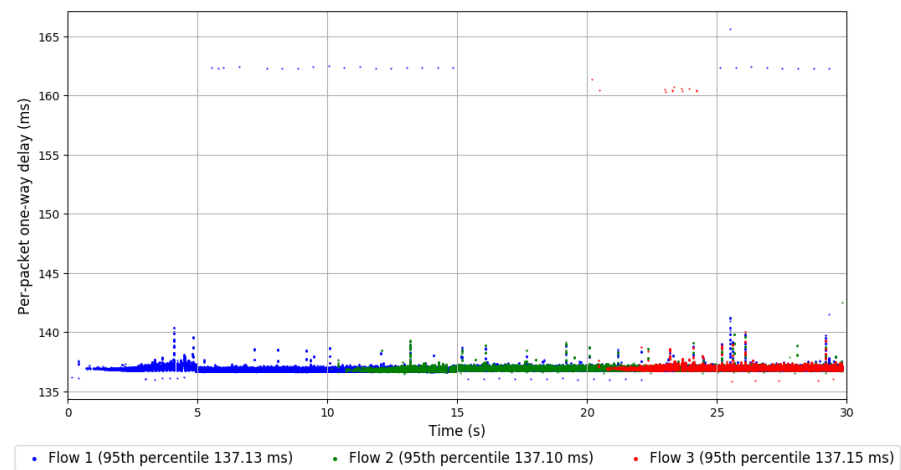
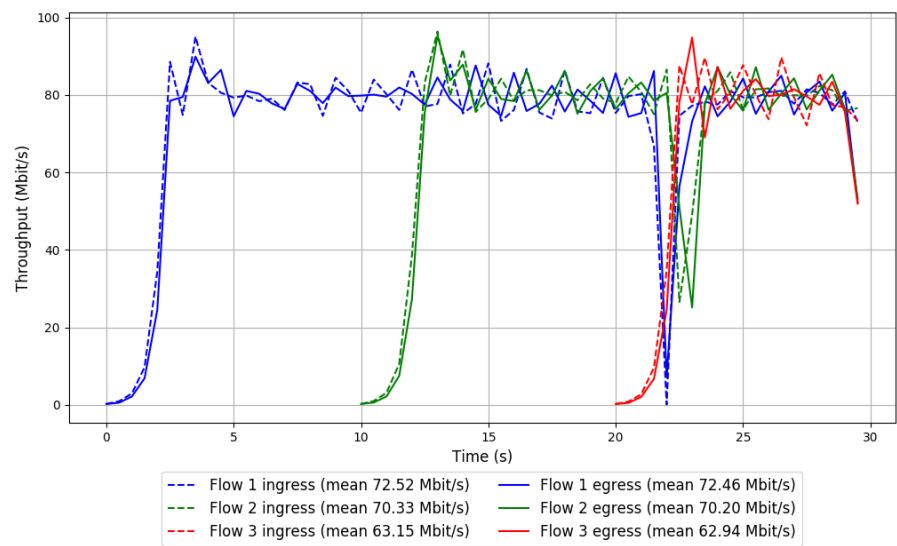
-- Flow 3:

Average throughput: 62.94 Mbit/s

95th percentile per-packet one-way delay: 137.147 ms

Loss rate: 3.32%

Run 6: Report of TCP BBR — Data Link



Run 7: Statistics of TCP BBR

Start at: 2018-03-01 09:00:23

End at: 2018-03-01 09:00:53

Below is generated by plot.py at 2018-03-01 13:53:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 142.22 Mbit/s

95th percentile per-packet one-way delay: 136.611 ms

Loss rate: 1.40%

-- Flow 1:

Average throughput: 75.01 Mbit/s

95th percentile per-packet one-way delay: 136.597 ms

Loss rate: 0.78%

-- Flow 2:

Average throughput: 70.21 Mbit/s

95th percentile per-packet one-way delay: 136.593 ms

Loss rate: 1.49%

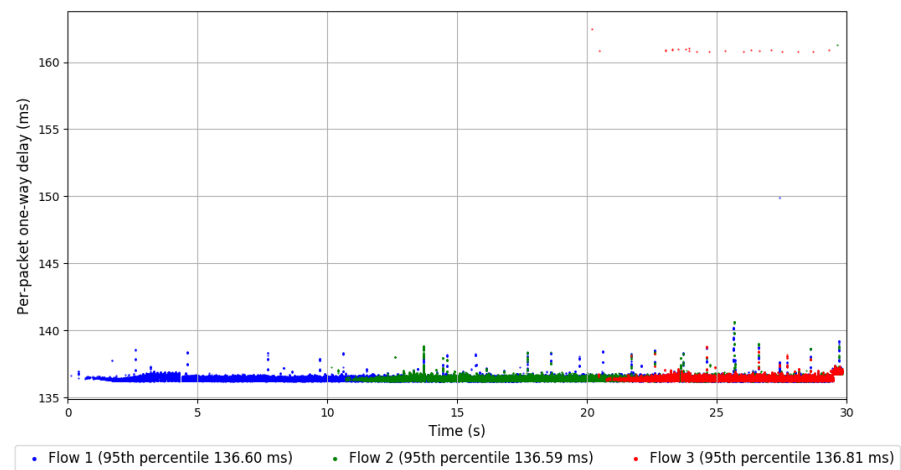
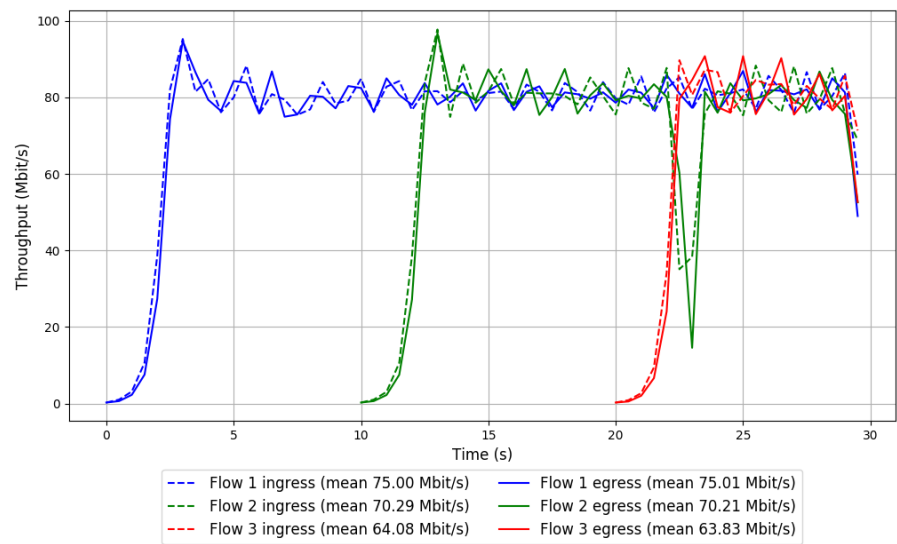
-- Flow 3:

Average throughput: 63.83 Mbit/s

95th percentile per-packet one-way delay: 136.812 ms

Loss rate: 3.39%

Run 7: Report of TCP BBR — Data Link



Run 8: Statistics of TCP BBR

Start at: 2018-03-01 09:21:33

End at: 2018-03-01 09:22:03

Below is generated by plot.py at 2018-03-01 13:53:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 140.56 Mbit/s

95th percentile per-packet one-way delay: 137.123 ms

Loss rate: 1.51%

-- Flow 1:

Average throughput: 72.02 Mbit/s

95th percentile per-packet one-way delay: 137.095 ms

Loss rate: 0.97%

-- Flow 2:

Average throughput: 72.18 Mbit/s

95th percentile per-packet one-way delay: 137.119 ms

Loss rate: 1.49%

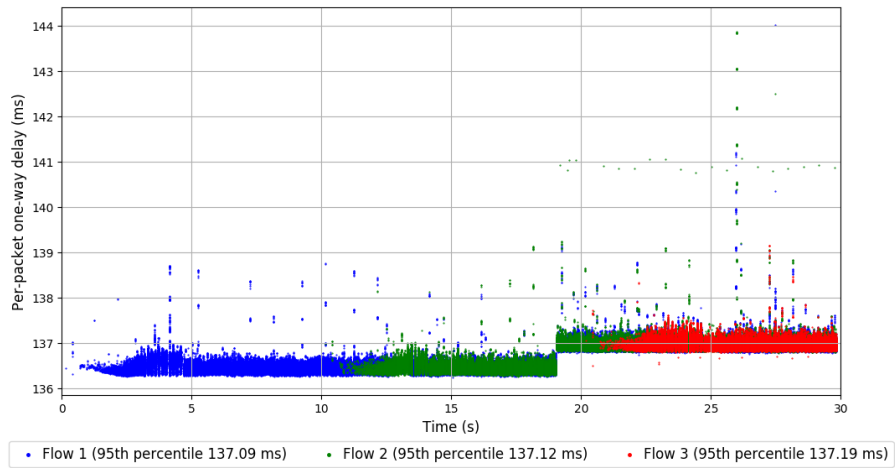
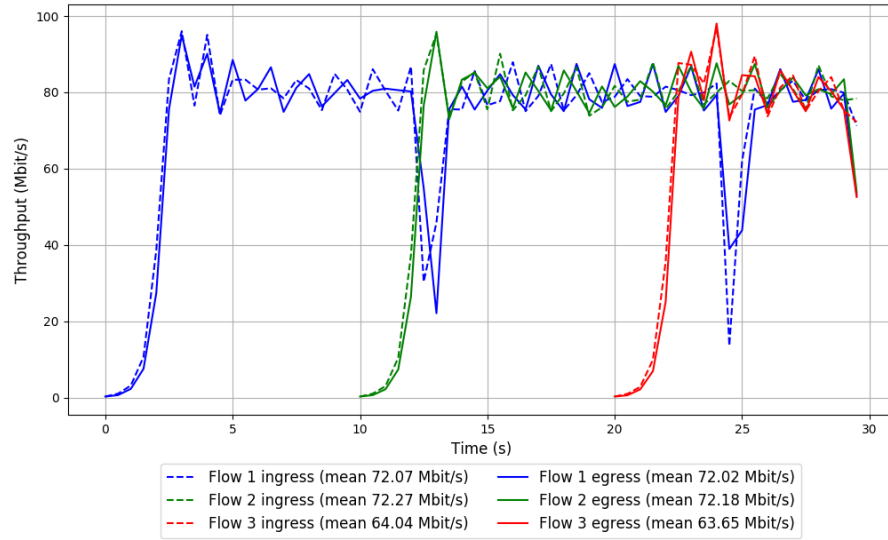
-- Flow 3:

Average throughput: 63.65 Mbit/s

95th percentile per-packet one-way delay: 137.185 ms

Loss rate: 3.36%

Run 8: Report of TCP BBR — Data Link



Run 9: Statistics of TCP BBR

Start at: 2018-03-01 09:42:44

End at: 2018-03-01 09:43:14

Below is generated by plot.py at 2018-03-01 13:56:04

Datalink statistics

-- Total of 3 flows:

Average throughput: 141.10 Mbit/s

95th percentile per-packet one-way delay: 136.707 ms

Loss rate: 1.52%

-- Flow 1:

Average throughput: 73.94 Mbit/s

95th percentile per-packet one-way delay: 136.778 ms

Loss rate: 0.97%

-- Flow 2:

Average throughput: 69.85 Mbit/s

95th percentile per-packet one-way delay: 136.453 ms

Loss rate: 1.54%

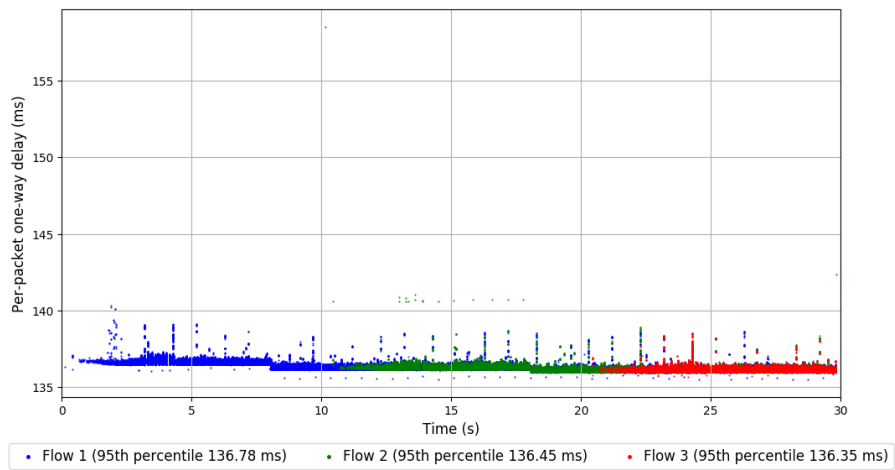
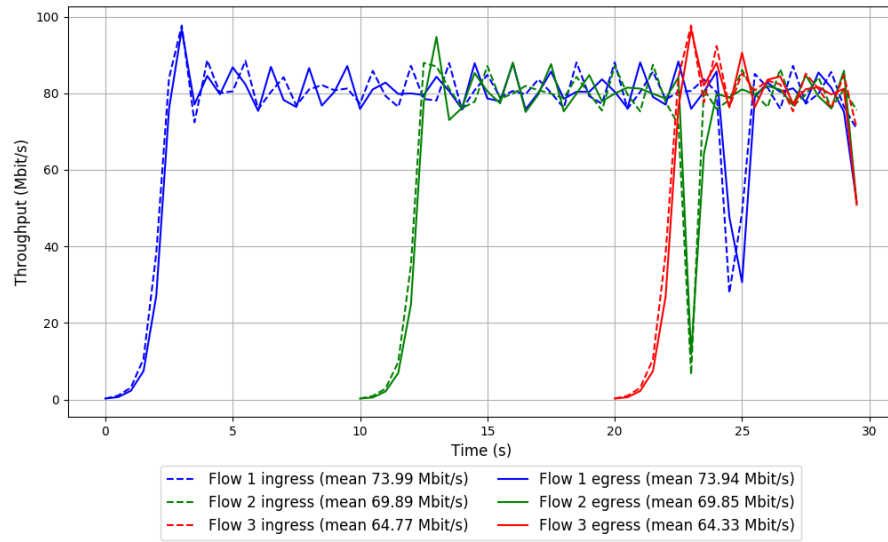
-- Flow 3:

Average throughput: 64.33 Mbit/s

95th percentile per-packet one-way delay: 136.349 ms

Loss rate: 3.35%

Run 9: Report of TCP BBR — Data Link



Run 10: Statistics of TCP BBR

Start at: 2018-03-01 10:03:52

End at: 2018-03-01 10:04:23

Below is generated by plot.py at 2018-03-01 13:56:04

Datalink statistics

-- Total of 3 flows:

Average throughput: 140.12 Mbit/s

95th percentile per-packet one-way delay: 136.262 ms

Loss rate: 1.64%

-- Flow 1:

Average throughput: 72.54 Mbit/s

95th percentile per-packet one-way delay: 136.258 ms

Loss rate: 1.08%

-- Flow 2:

Average throughput: 70.29 Mbit/s

95th percentile per-packet one-way delay: 136.256 ms

Loss rate: 1.60%

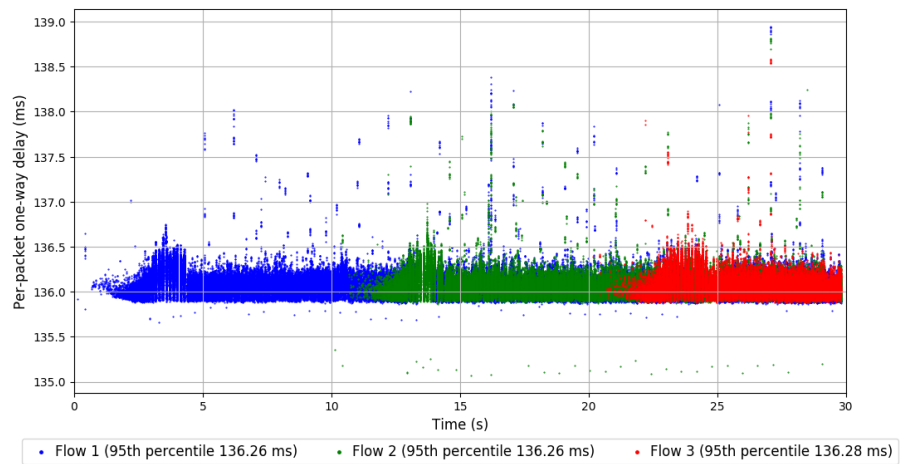
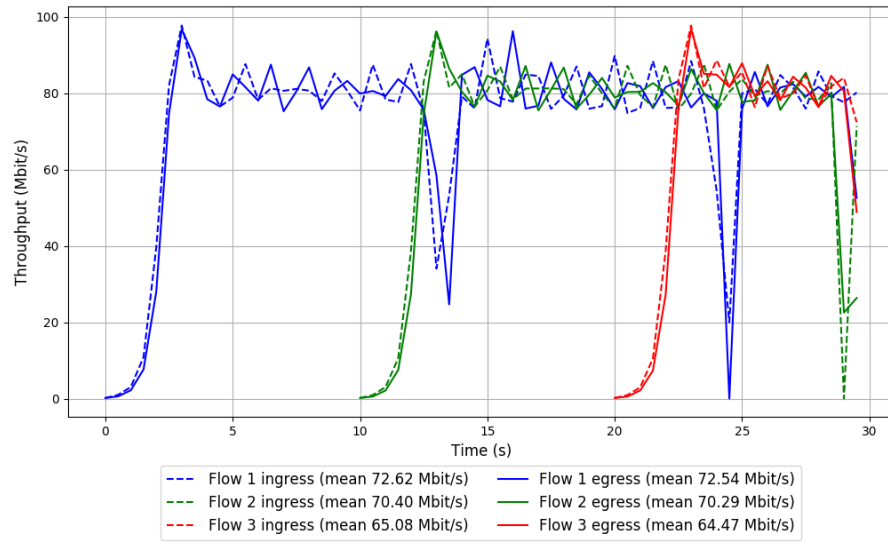
-- Flow 3:

Average throughput: 64.47 Mbit/s

95th percentile per-packet one-way delay: 136.283 ms

Loss rate: 3.63%

Run 10: Report of TCP BBR — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2018-03-01 07:08:46

End at: 2018-03-01 07:09:16

Below is generated by plot.py at 2018-03-01 13:56:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 156.83 Mbit/s

95th percentile per-packet one-way delay: 147.397 ms

Loss rate: 1.21%

-- Flow 1:

Average throughput: 82.71 Mbit/s

95th percentile per-packet one-way delay: 146.930 ms

Loss rate: 0.32%

-- Flow 2:

Average throughput: 81.24 Mbit/s

95th percentile per-packet one-way delay: 146.186 ms

Loss rate: 1.55%

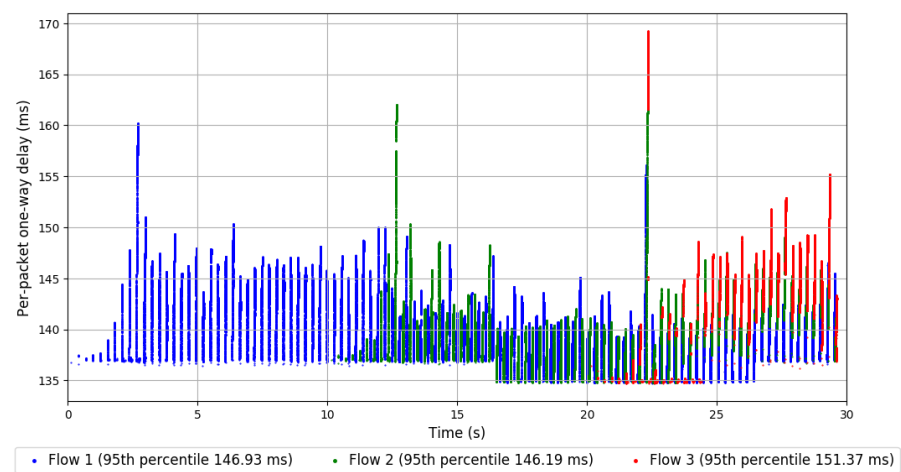
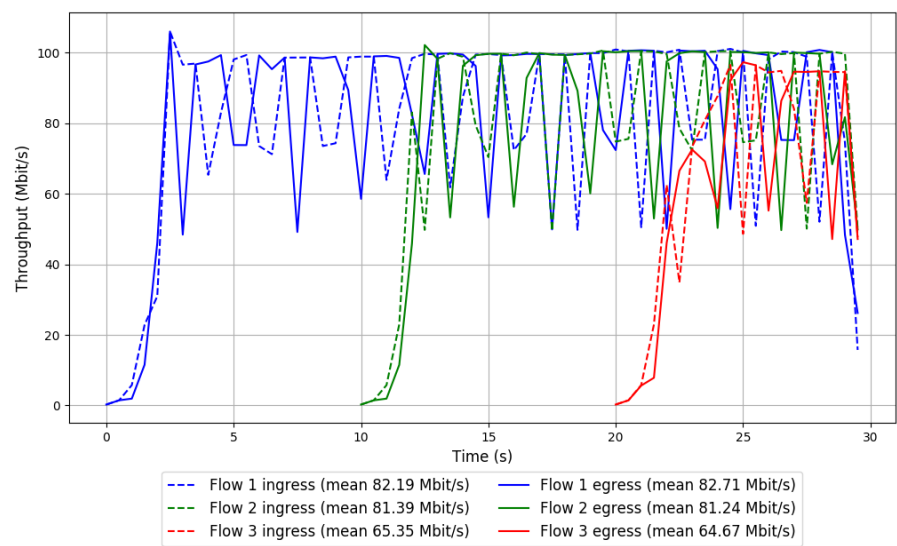
-- Flow 3:

Average throughput: 64.67 Mbit/s

95th percentile per-packet one-way delay: 151.370 ms

Loss rate: 3.75%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2018-03-01 07:29:06

End at: 2018-03-01 07:29:36

Below is generated by plot.py at 2018-03-01 13:56:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 139.70 Mbit/s

95th percentile per-packet one-way delay: 153.179 ms

Loss rate: 1.32%

-- Flow 1:

Average throughput: 81.62 Mbit/s

95th percentile per-packet one-way delay: 151.204 ms

Loss rate: 1.02%

-- Flow 2:

Average throughput: 67.24 Mbit/s

95th percentile per-packet one-way delay: 162.429 ms

Loss rate: 1.14%

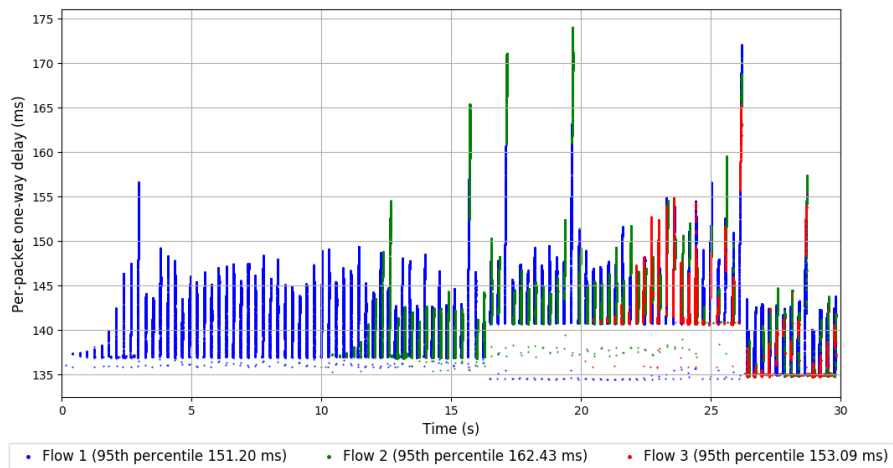
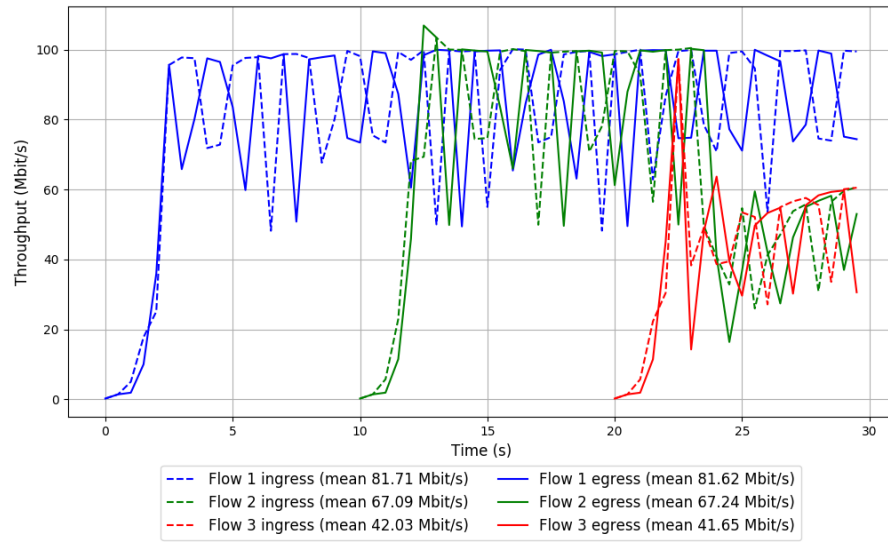
-- Flow 3:

Average throughput: 41.65 Mbit/s

95th percentile per-packet one-way delay: 153.088 ms

Loss rate: 3.65%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2018-03-01 07:49:46

End at: 2018-03-01 07:50:16

Below is generated by plot.py at 2018-03-01 13:56:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 143.63 Mbit/s

95th percentile per-packet one-way delay: 172.036 ms

Loss rate: 1.52%

-- Flow 1:

Average throughput: 80.67 Mbit/s

95th percentile per-packet one-way delay: 168.131 ms

Loss rate: 1.04%

-- Flow 2:

Average throughput: 76.51 Mbit/s

95th percentile per-packet one-way delay: 173.353 ms

Loss rate: 1.64%

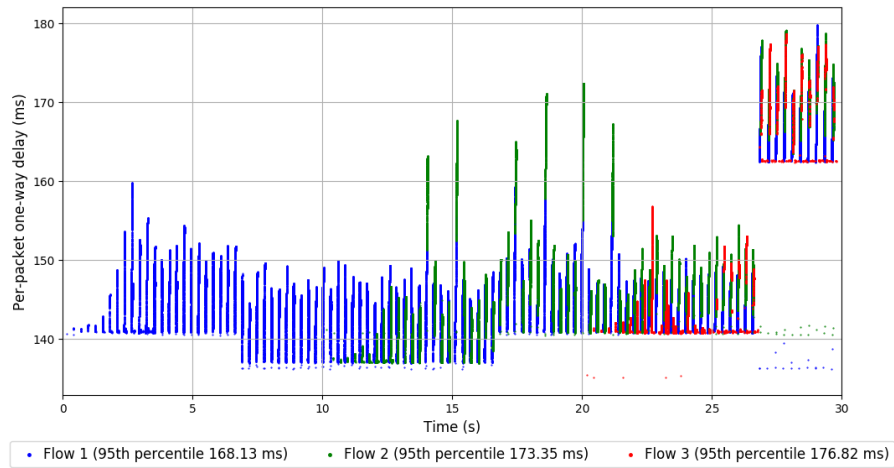
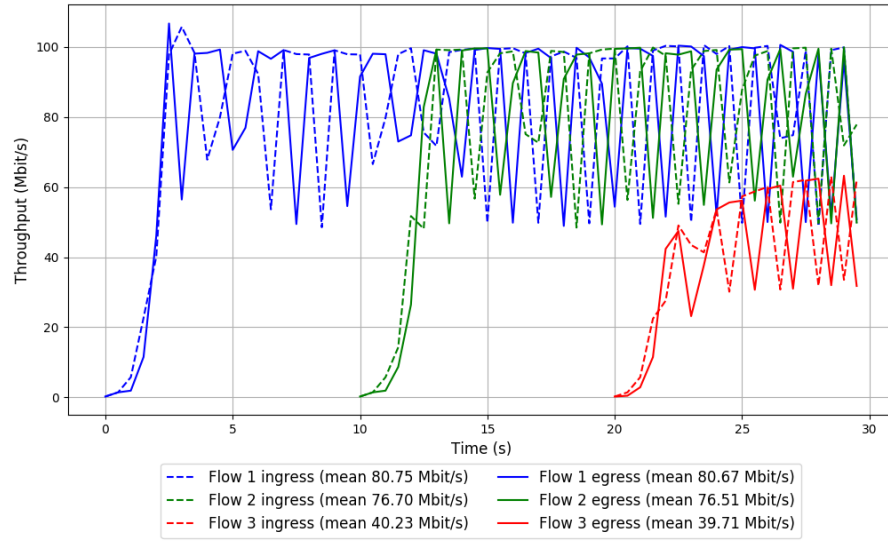
-- Flow 3:

Average throughput: 39.71 Mbit/s

95th percentile per-packet one-way delay: 176.823 ms

Loss rate: 4.01%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2018-03-01 08:10:45

End at: 2018-03-01 08:11:15

Below is generated by plot.py at 2018-03-01 13:56:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 107.89 Mbit/s

95th percentile per-packet one-way delay: 146.619 ms

Loss rate: 1.54%

-- Flow 1:

Average throughput: 69.53 Mbit/s

95th percentile per-packet one-way delay: 146.578 ms

Loss rate: 1.06%

-- Flow 2:

Average throughput: 37.97 Mbit/s

95th percentile per-packet one-way delay: 148.891 ms

Loss rate: 1.61%

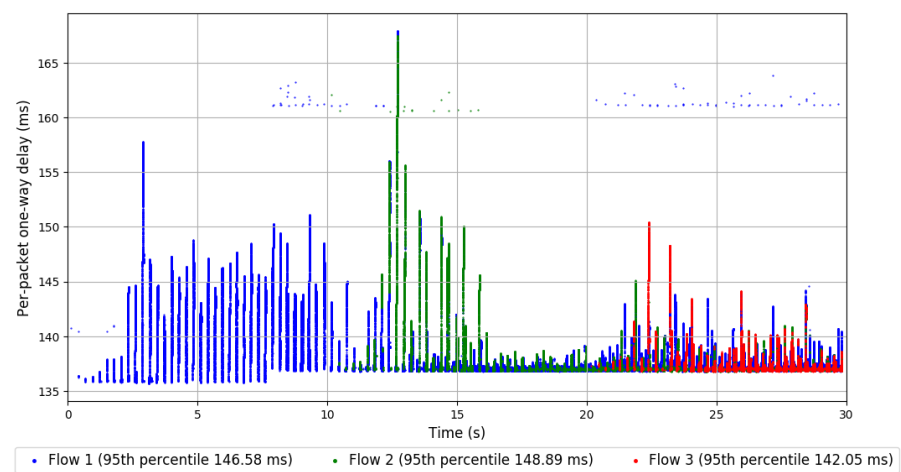
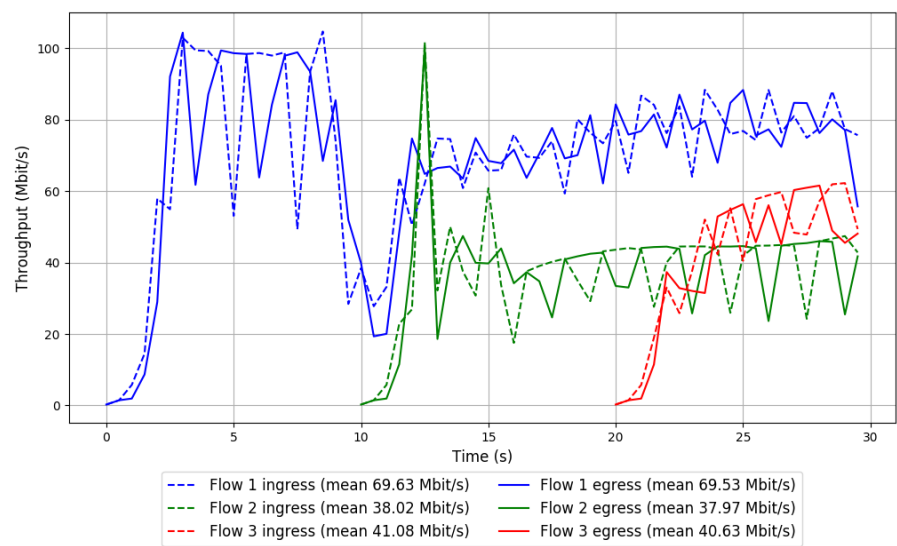
-- Flow 3:

Average throughput: 40.63 Mbit/s

95th percentile per-packet one-way delay: 142.047 ms

Loss rate: 3.83%

Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2018-03-01 08:31:31

End at: 2018-03-01 08:32:01

Below is generated by plot.py at 2018-03-01 13:56:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 82.79 Mbit/s

95th percentile per-packet one-way delay: 146.763 ms

Loss rate: 2.05%

-- Flow 1:

Average throughput: 32.41 Mbit/s

95th percentile per-packet one-way delay: 144.053 ms

Loss rate: 1.46%

-- Flow 2:

Average throughput: 41.97 Mbit/s

95th percentile per-packet one-way delay: 148.092 ms

Loss rate: 1.46%

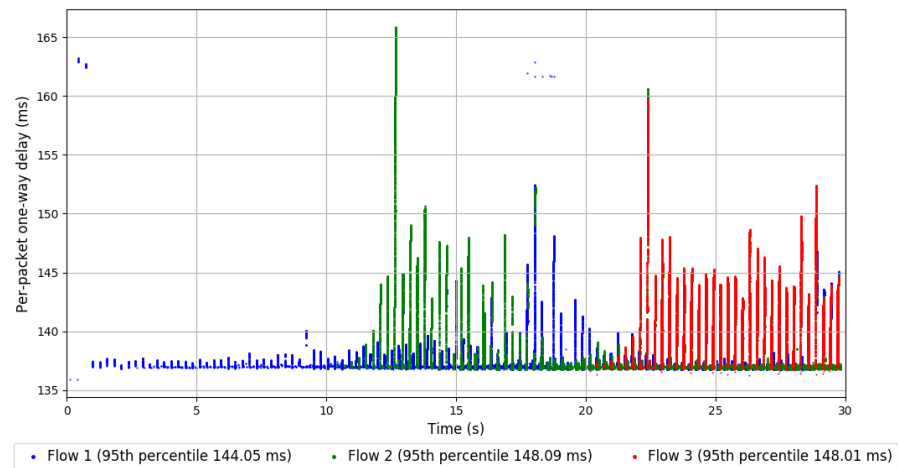
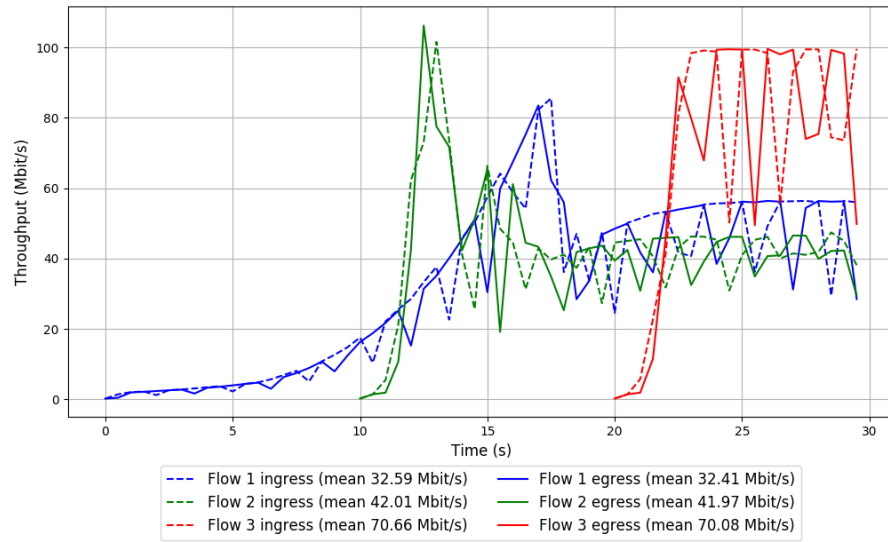
-- Flow 3:

Average throughput: 70.08 Mbit/s

95th percentile per-packet one-way delay: 148.008 ms

Loss rate: 3.58%

Run 5: Report of TCP Cubic — Data Link



Run 6: Statistics of TCP Cubic

Start at: 2018-03-01 08:52:53

End at: 2018-03-01 08:53:23

Below is generated by plot.py at 2018-03-01 13:56:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 148.66 Mbit/s

95th percentile per-packet one-way delay: 148.506 ms

Loss rate: 1.68%

-- Flow 1:

Average throughput: 71.98 Mbit/s

95th percentile per-packet one-way delay: 151.043 ms

Loss rate: 1.14%

-- Flow 2:

Average throughput: 80.71 Mbit/s

95th percentile per-packet one-way delay: 147.891 ms

Loss rate: 1.56%

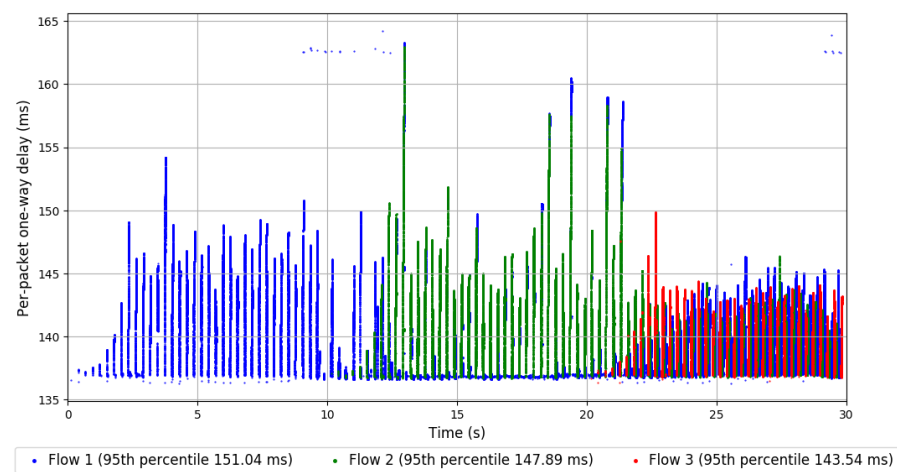
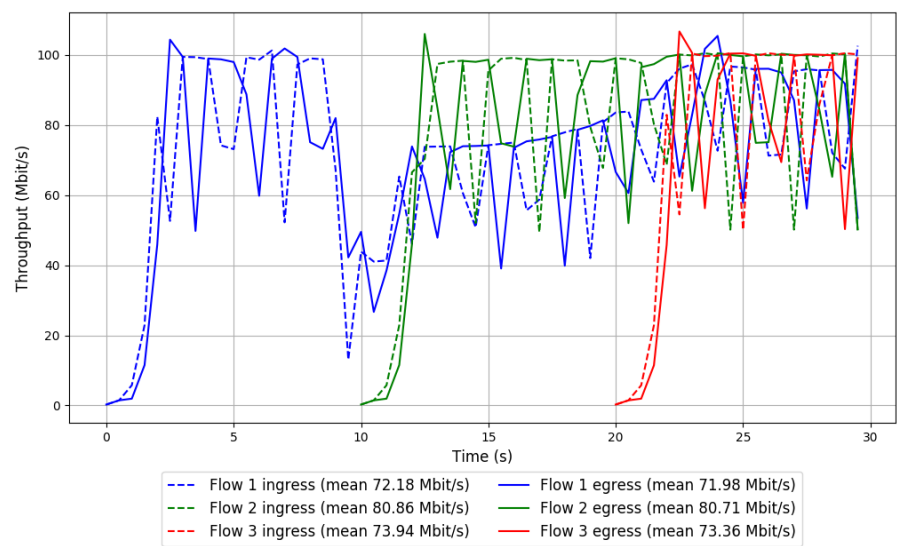
-- Flow 3:

Average throughput: 73.36 Mbit/s

95th percentile per-packet one-way delay: 143.543 ms

Loss rate: 3.49%

Run 6: Report of TCP Cubic — Data Link



Run 7: Statistics of TCP Cubic

Start at: 2018-03-01 09:14:01

End at: 2018-03-01 09:14:31

Below is generated by plot.py at 2018-03-01 13:57:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 94.03 Mbit/s

95th percentile per-packet one-way delay: 146.458 ms

Loss rate: 1.07%

-- Flow 1:

Average throughput: 52.25 Mbit/s

95th percentile per-packet one-way delay: 145.566 ms

Loss rate: 0.93%

-- Flow 2:

Average throughput: 62.49 Mbit/s

95th percentile per-packet one-way delay: 147.167 ms

Loss rate: 1.13%

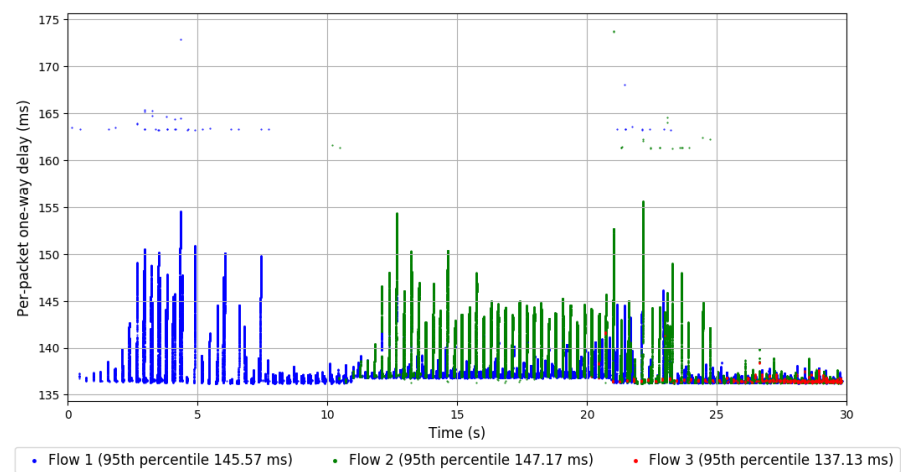
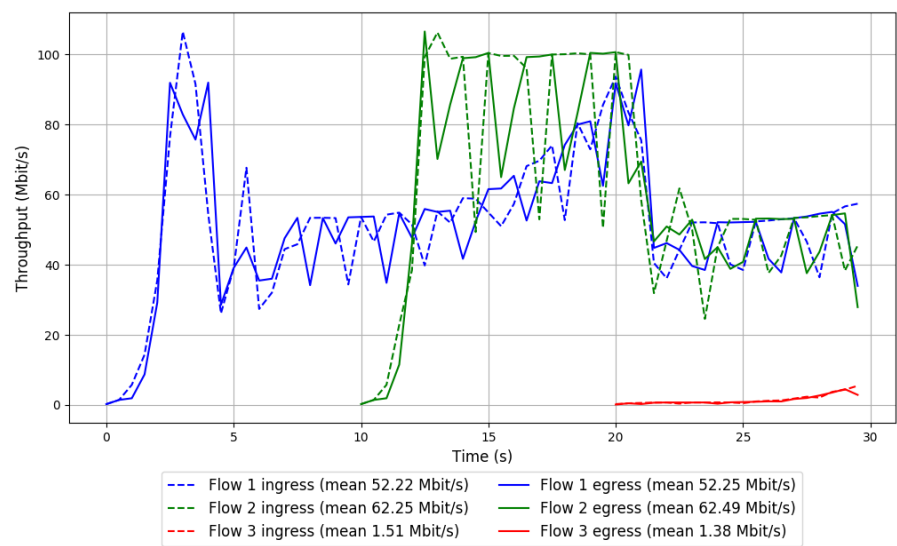
-- Flow 3:

Average throughput: 1.38 Mbit/s

95th percentile per-packet one-way delay: 137.130 ms

Loss rate: 10.70%

Run 7: Report of TCP Cubic — Data Link



Run 8: Statistics of TCP Cubic

Start at: 2018-03-01 09:35:10

End at: 2018-03-01 09:35:40

Below is generated by plot.py at 2018-03-01 13:57:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 115.33 Mbit/s

95th percentile per-packet one-way delay: 149.853 ms

Loss rate: 1.21%

-- Flow 1:

Average throughput: 60.27 Mbit/s

95th percentile per-packet one-way delay: 147.920 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 64.25 Mbit/s

95th percentile per-packet one-way delay: 152.391 ms

Loss rate: 1.04%

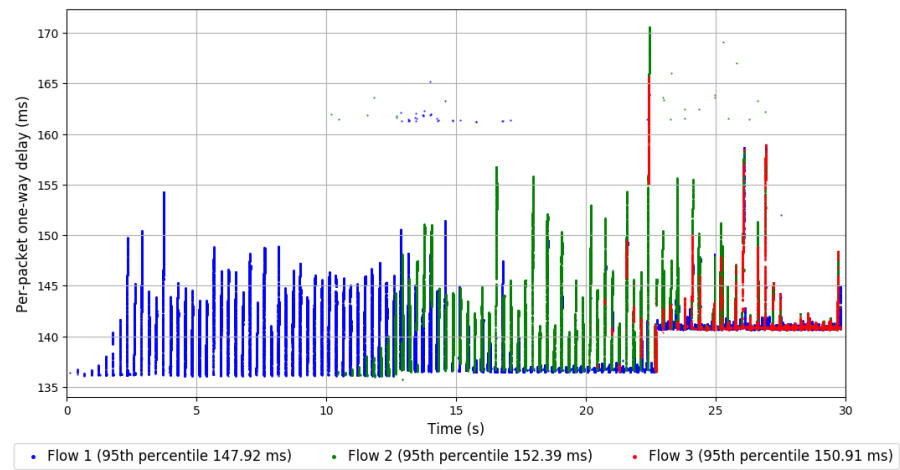
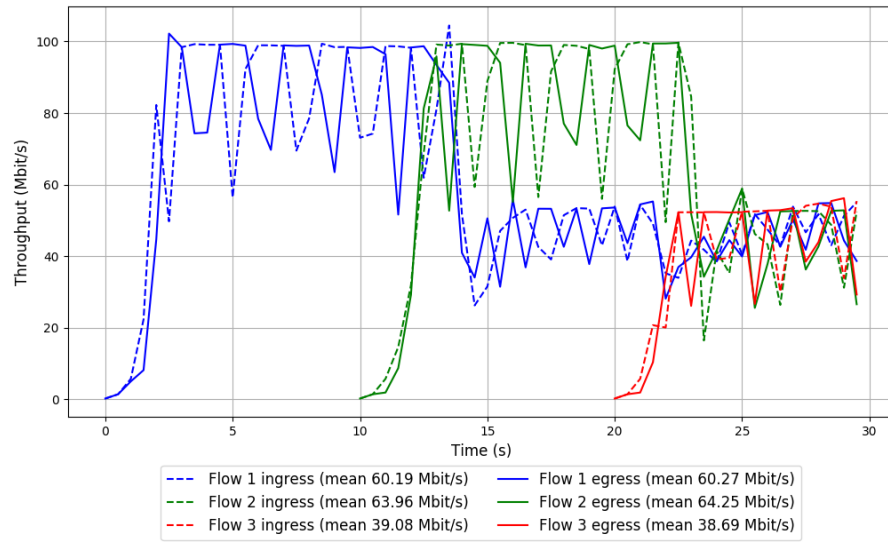
-- Flow 3:

Average throughput: 38.69 Mbit/s

95th percentile per-packet one-way delay: 150.914 ms

Loss rate: 3.77%

Run 8: Report of TCP Cubic — Data Link



Run 9: Statistics of TCP Cubic

Start at: 2018-03-01 09:56:17

End at: 2018-03-01 09:56:48

Below is generated by plot.py at 2018-03-01 13:57:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 108.16 Mbit/s

95th percentile per-packet one-way delay: 150.236 ms

Loss rate: 0.81%

-- Flow 1:

Average throughput: 81.00 Mbit/s

95th percentile per-packet one-way delay: 149.563 ms

Loss rate: 0.46%

-- Flow 2:

Average throughput: 41.47 Mbit/s

95th percentile per-packet one-way delay: 151.802 ms

Loss rate: 1.71%

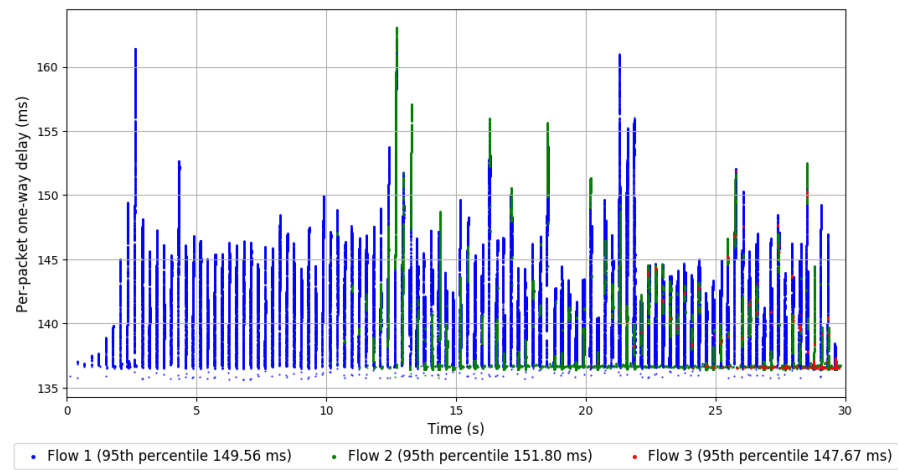
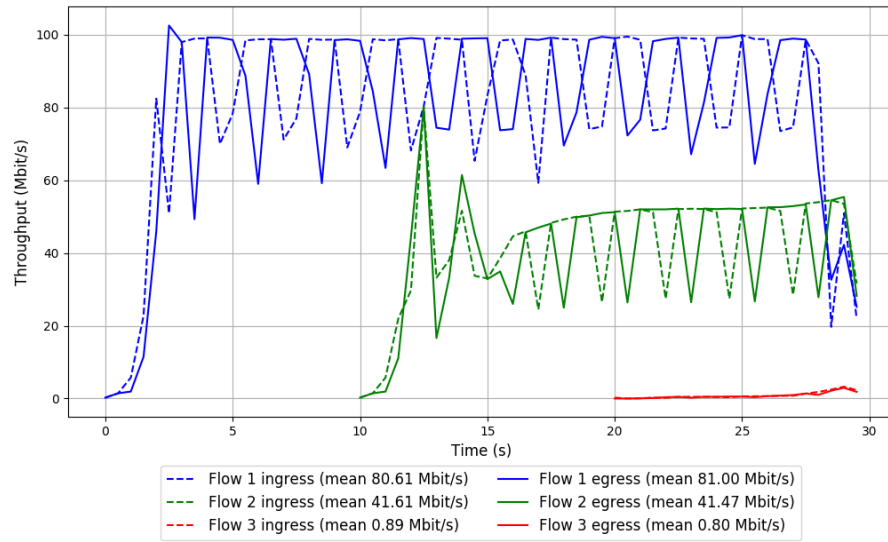
-- Flow 3:

Average throughput: 0.80 Mbit/s

95th percentile per-packet one-way delay: 147.668 ms

Loss rate: 12.79%

Run 9: Report of TCP Cubic — Data Link



Run 10: Statistics of TCP Cubic

Start at: 2018-03-01 10:17:30

End at: 2018-03-01 10:18:00

Below is generated by plot.py at 2018-03-01 13:58:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 147.89 Mbit/s

95th percentile per-packet one-way delay: 146.224 ms

Loss rate: 1.37%

-- Flow 1:

Average throughput: 83.53 Mbit/s

95th percentile per-packet one-way delay: 146.441 ms

Loss rate: 1.00%

-- Flow 2:

Average throughput: 81.05 Mbit/s

95th percentile per-packet one-way delay: 144.996 ms

Loss rate: 1.55%

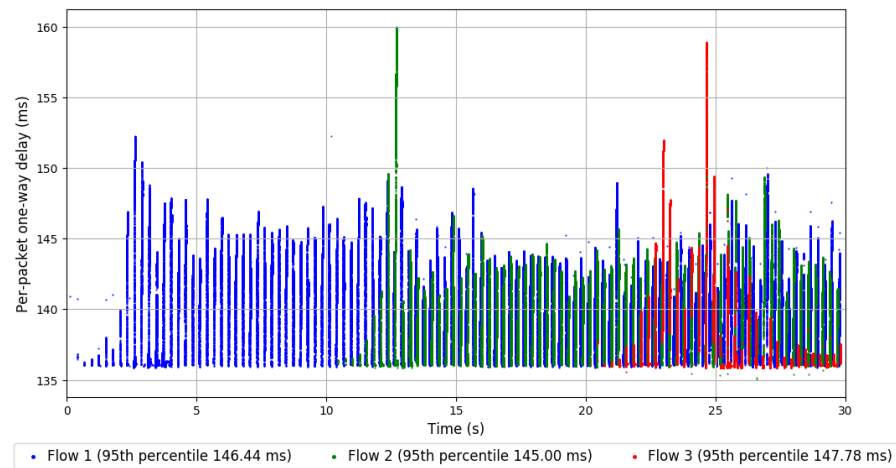
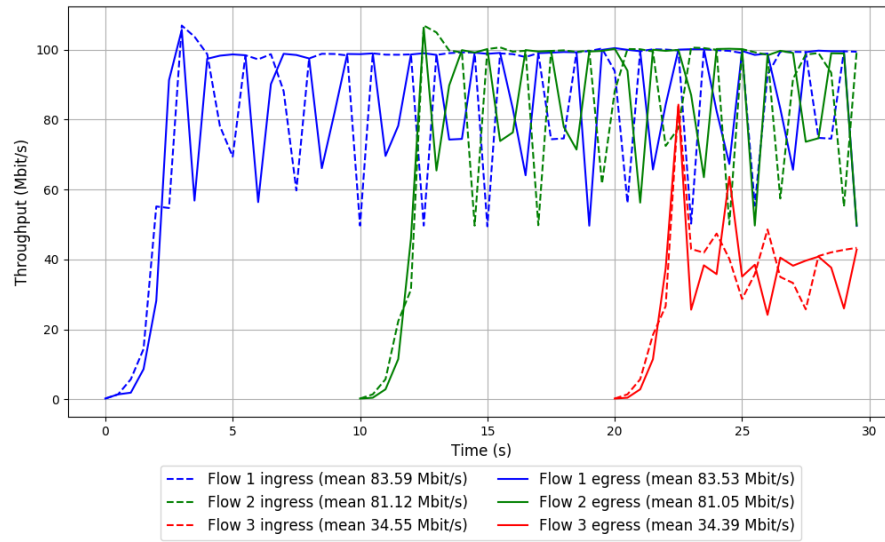
-- Flow 3:

Average throughput: 34.39 Mbit/s

95th percentile per-packet one-way delay: 147.775 ms

Loss rate: 3.19%

Run 10: Report of TCP Cubic — Data Link

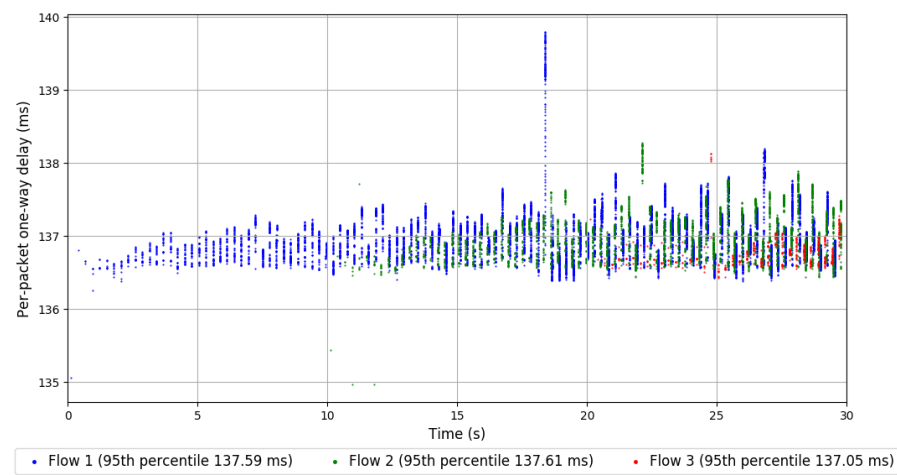
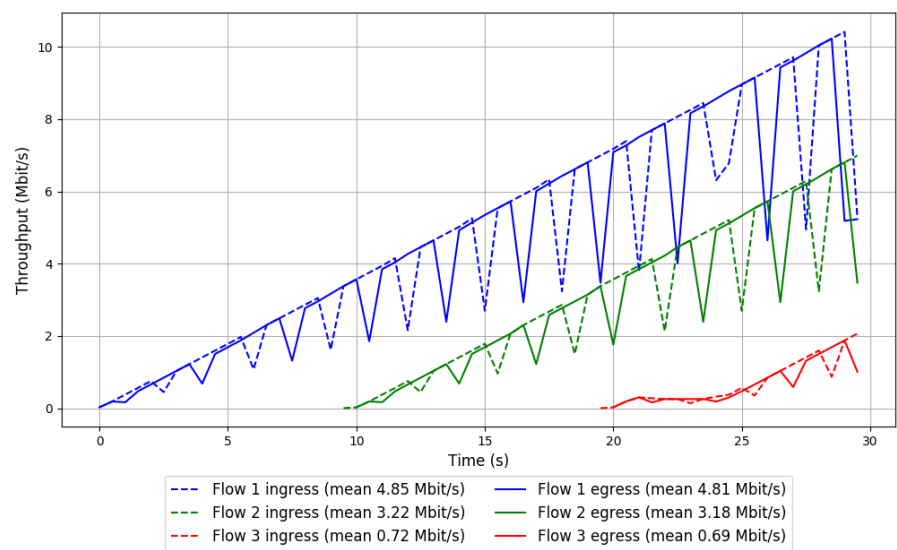


```
Run 1: Statistics of LEDBAT

Start at: 2018-03-01 06:58:41
End at: 2018-03-01 06:59:11

# Below is generated by plot.py at 2018-03-01 13:58:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.10 Mbit/s
95th percentile per-packet one-way delay: 137.588 ms
Loss rate: 2.29%
-- Flow 1:
Average throughput: 4.81 Mbit/s
95th percentile per-packet one-way delay: 137.587 ms
Loss rate: 1.83%
-- Flow 2:
Average throughput: 3.18 Mbit/s
95th percentile per-packet one-way delay: 137.606 ms
Loss rate: 2.74%
-- Flow 3:
Average throughput: 0.69 Mbit/s
95th percentile per-packet one-way delay: 137.048 ms
Loss rate: 7.43%
```


Run 1: Report of LEDBAT — Data Link

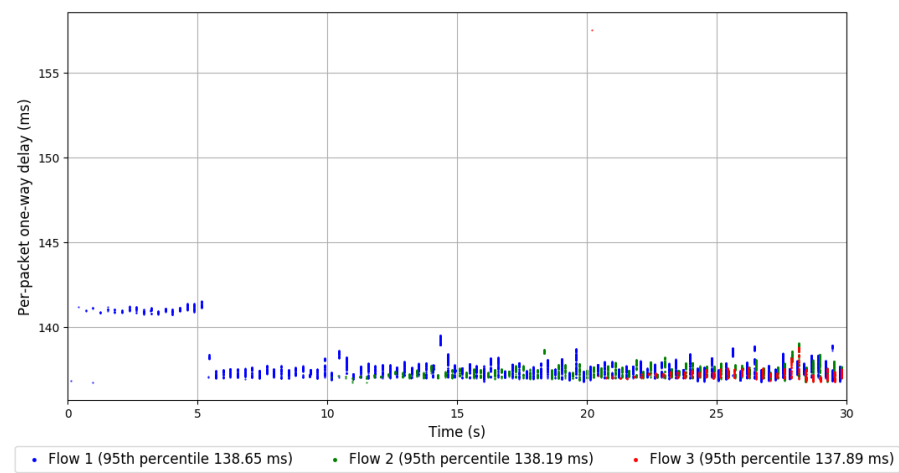
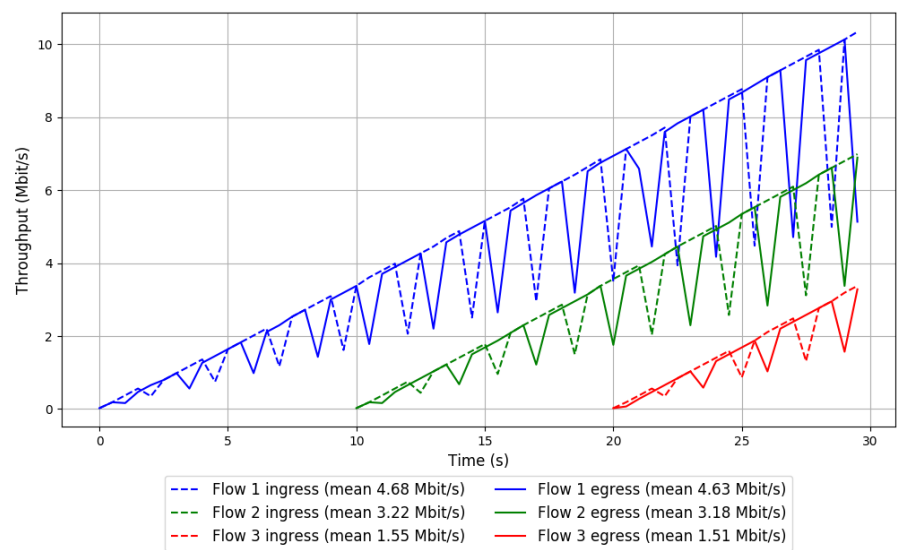


```
Run 2: Statistics of LEDBAT

Start at: 2018-03-01 07:18:57
End at: 2018-03-01 07:19:27

# Below is generated by plot.py at 2018-03-01 13:58:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.22 Mbit/s
95th percentile per-packet one-way delay: 138.484 ms
Loss rate: 2.38%
-- Flow 1:
Average throughput: 4.63 Mbit/s
95th percentile per-packet one-way delay: 138.652 ms
Loss rate: 1.86%
-- Flow 2:
Average throughput: 3.18 Mbit/s
95th percentile per-packet one-way delay: 138.190 ms
Loss rate: 2.74%
-- Flow 3:
Average throughput: 1.51 Mbit/s
95th percentile per-packet one-way delay: 137.894 ms
Loss rate: 5.55%
```

Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2018-03-01 07:39:31

End at: 2018-03-01 07:40:01

Below is generated by plot.py at 2018-03-01 13:58:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 7.13 Mbit/s

95th percentile per-packet one-way delay: 142.030 ms

Loss rate: 2.35%

-- Flow 1:

Average throughput: 4.68 Mbit/s

95th percentile per-packet one-way delay: 142.120 ms

Loss rate: 1.84%

-- Flow 2:

Average throughput: 3.05 Mbit/s

95th percentile per-packet one-way delay: 141.746 ms

Loss rate: 2.75%

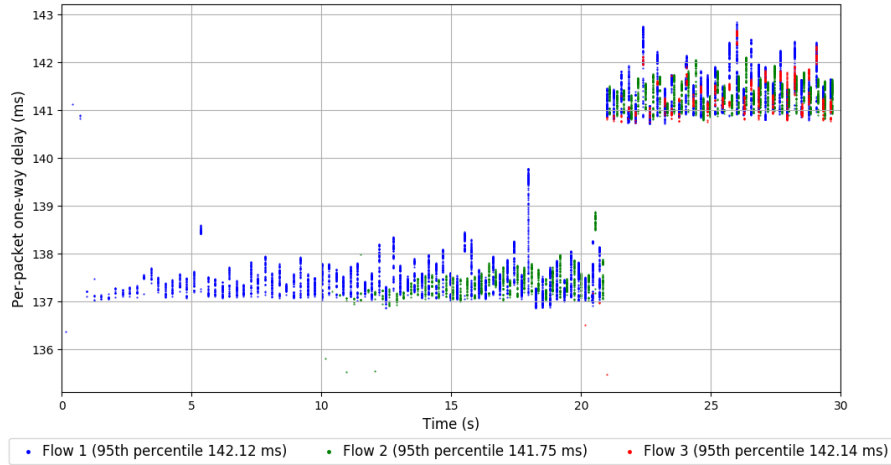
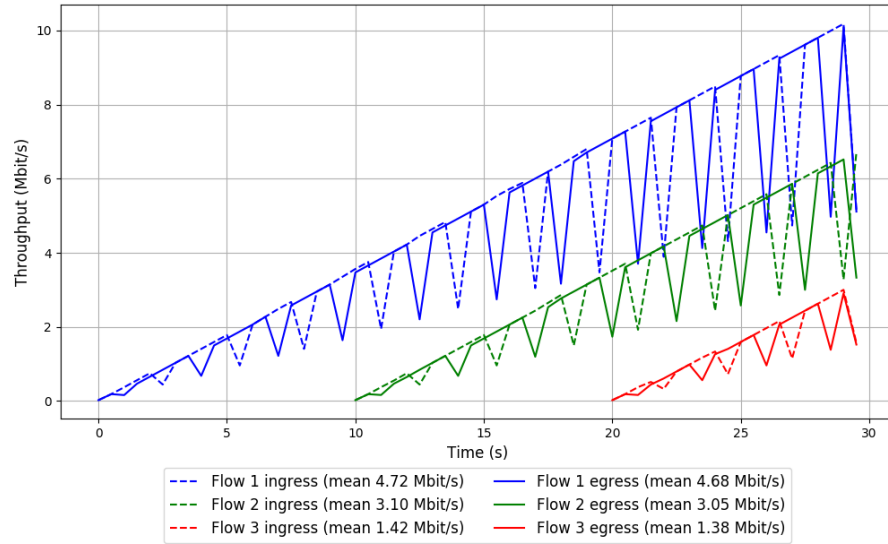
-- Flow 3:

Average throughput: 1.38 Mbit/s

95th percentile per-packet one-way delay: 142.141 ms

Loss rate: 5.70%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2018-03-01 08:00:10

End at: 2018-03-01 08:00:40

Below is generated by plot.py at 2018-03-01 13:58:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 7.04 Mbit/s

95th percentile per-packet one-way delay: 138.041 ms

Loss rate: 2.38%

-- Flow 1:

Average throughput: 4.78 Mbit/s

95th percentile per-packet one-way delay: 138.175 ms

Loss rate: 1.83%

-- Flow 2:

Average throughput: 2.81 Mbit/s

95th percentile per-packet one-way delay: 137.902 ms

Loss rate: 2.90%

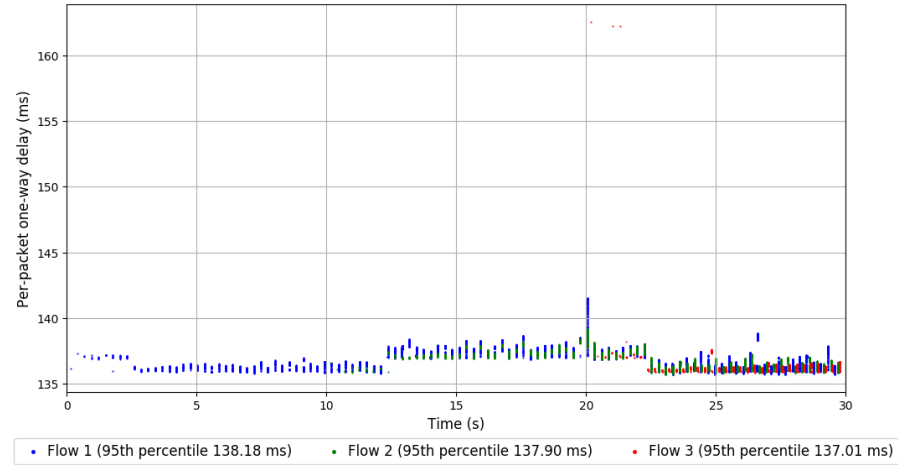
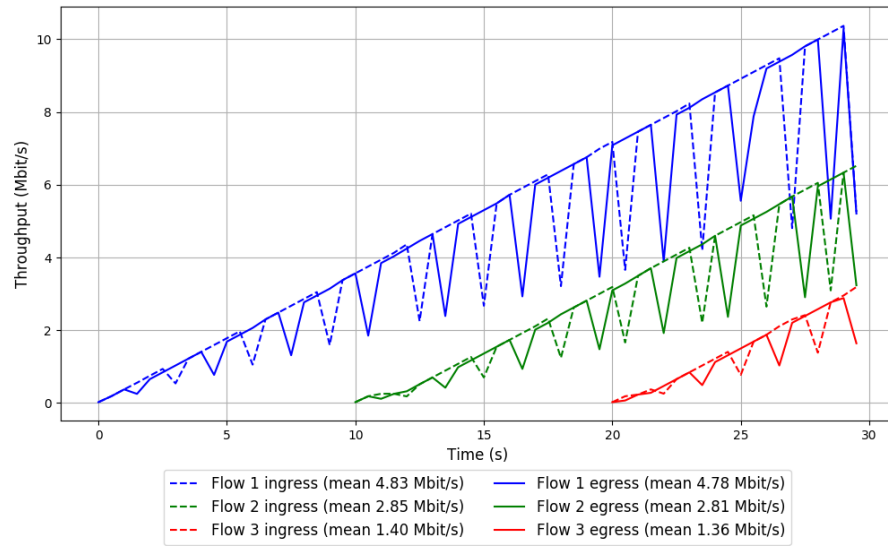
-- Flow 3:

Average throughput: 1.36 Mbit/s

95th percentile per-packet one-way delay: 137.014 ms

Loss rate: 5.84%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2018-03-01 08:21:25

End at: 2018-03-01 08:21:55

Below is generated by plot.py at 2018-03-01 13:58:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 6.97 Mbit/s

95th percentile per-packet one-way delay: 137.779 ms

Loss rate: 2.39%

-- Flow 1:

Average throughput: 4.63 Mbit/s

95th percentile per-packet one-way delay: 137.855 ms

Loss rate: 1.86%

-- Flow 2:

Average throughput: 2.95 Mbit/s

95th percentile per-packet one-way delay: 137.614 ms

Loss rate: 2.84%

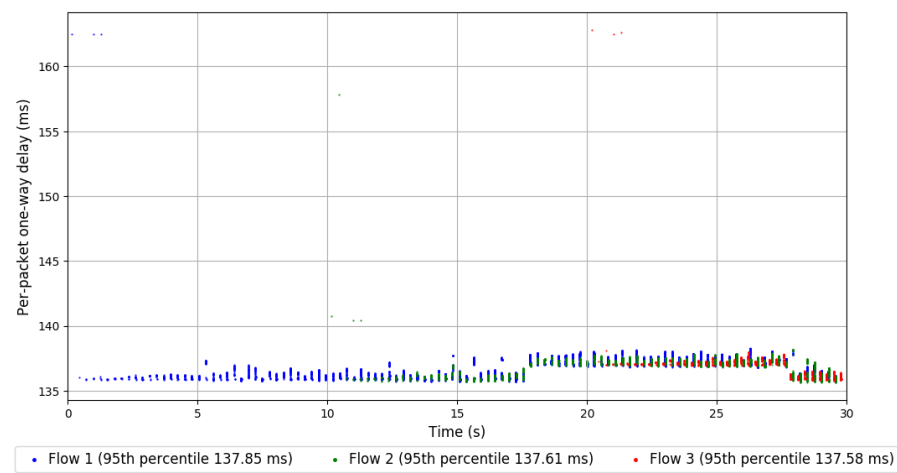
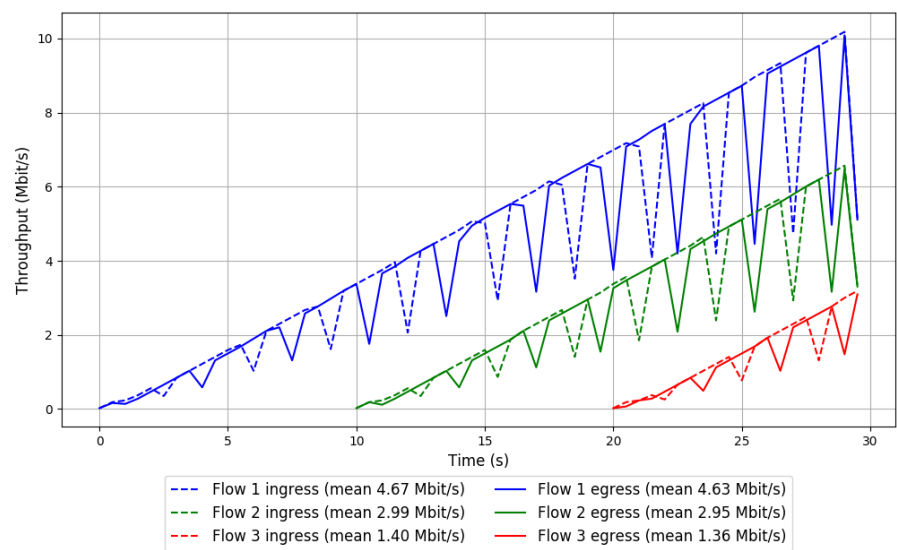
-- Flow 3:

Average throughput: 1.36 Mbit/s

95th percentile per-packet one-way delay: 137.576 ms

Loss rate: 5.82%

Run 5: Report of LEDBAT — Data Link



Run 6: Statistics of LEDBAT

Start at: 2018-03-01 08:42:04

End at: 2018-03-01 08:42:34

Below is generated by plot.py at 2018-03-01 13:58:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 7.03 Mbit/s

95th percentile per-packet one-way delay: 137.961 ms

Loss rate: 2.40%

-- Flow 1:

Average throughput: 4.62 Mbit/s

95th percentile per-packet one-way delay: 138.086 ms

Loss rate: 1.87%

-- Flow 2:

Average throughput: 2.96 Mbit/s

95th percentile per-packet one-way delay: 137.815 ms

Loss rate: 2.85%

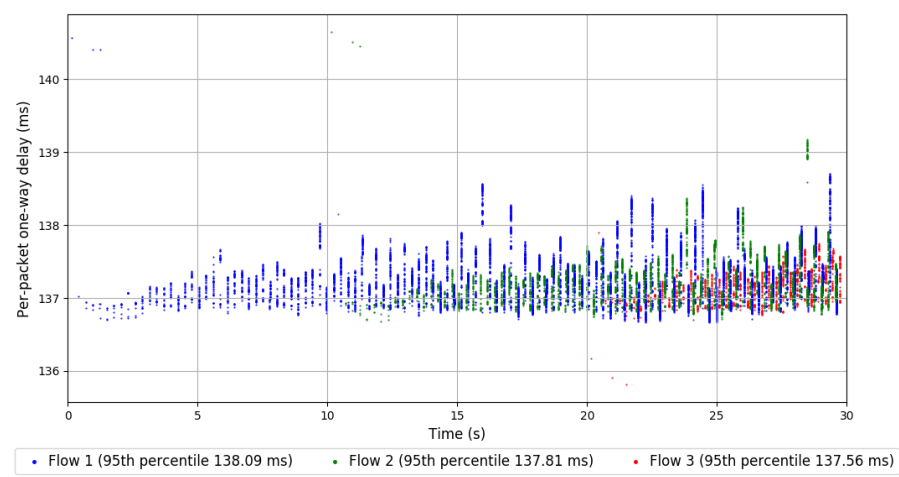
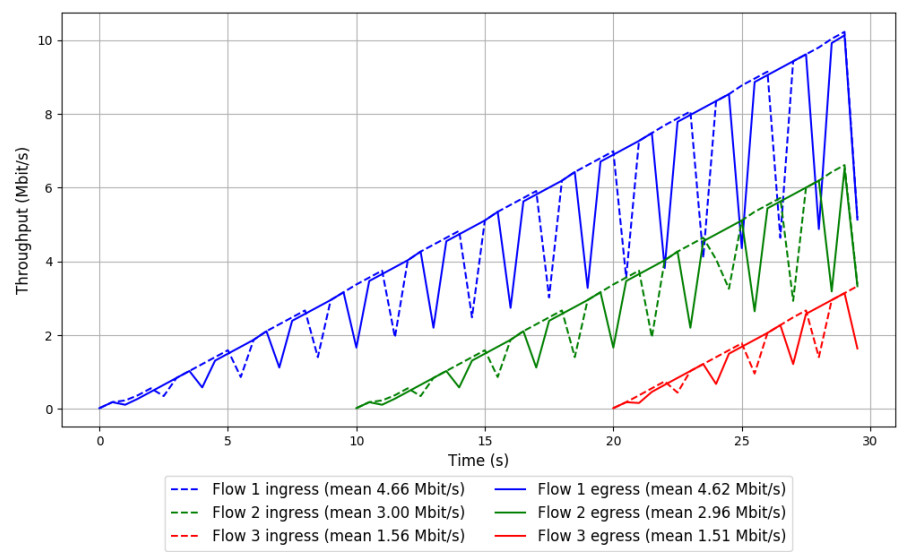
-- Flow 3:

Average throughput: 1.51 Mbit/s

95th percentile per-packet one-way delay: 137.559 ms

Loss rate: 5.51%

Run 6: Report of LEDBAT — Data Link



Run 7: Statistics of LEDBAT

Start at: 2018-03-01 09:03:30

End at: 2018-03-01 09:04:00

Below is generated by plot.py at 2018-03-01 13:58:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 7.13 Mbit/s

95th percentile per-packet one-way delay: 138.098 ms

Loss rate: 2.39%

-- Flow 1:

Average throughput: 4.60 Mbit/s

95th percentile per-packet one-way delay: 138.180 ms

Loss rate: 1.87%

-- Flow 2:

Average throughput: 3.11 Mbit/s

95th percentile per-packet one-way delay: 137.961 ms

Loss rate: 2.78%

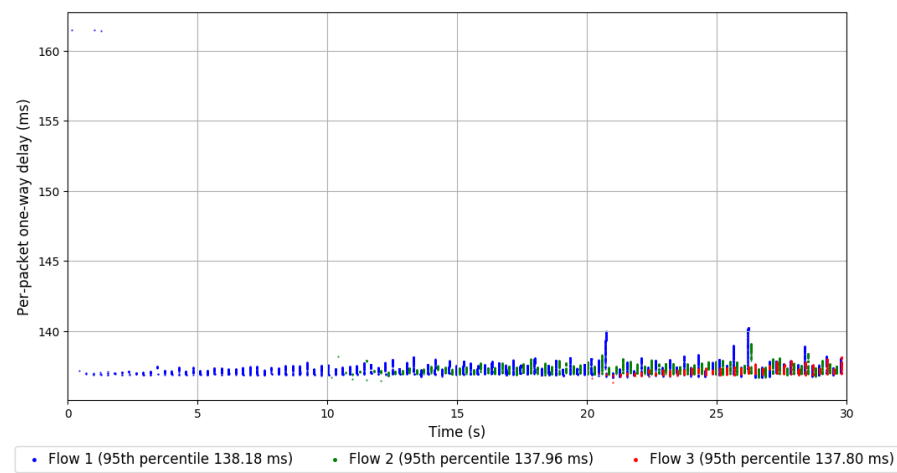
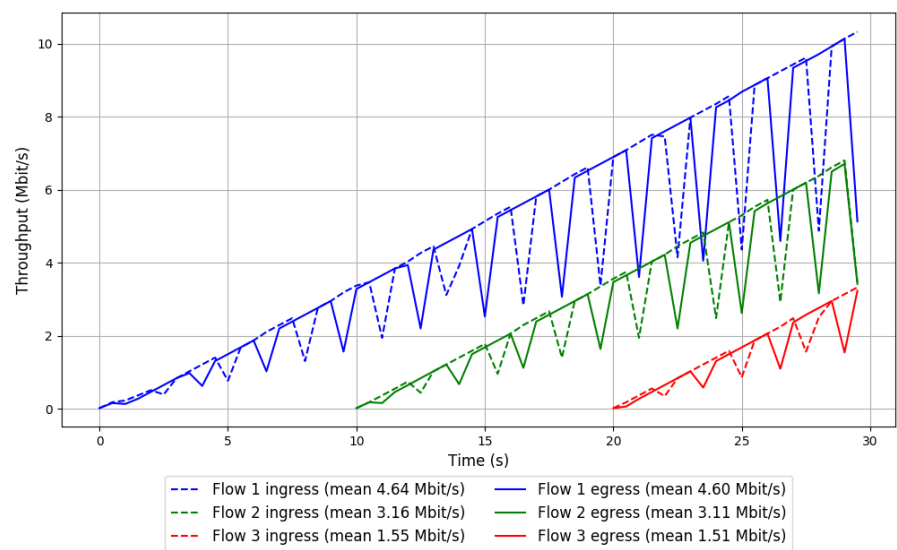
-- Flow 3:

Average throughput: 1.51 Mbit/s

95th percentile per-packet one-way delay: 137.804 ms

Loss rate: 5.51%

Run 7: Report of LEDBAT — Data Link



Run 8: Statistics of LEDBAT

Start at: 2018-03-01 09:24:41

End at: 2018-03-01 09:25:11

Below is generated by plot.py at 2018-03-01 13:58:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 6.93 Mbit/s

95th percentile per-packet one-way delay: 141.695 ms

Loss rate: 2.41%

-- Flow 1:

Average throughput: 4.53 Mbit/s

95th percentile per-packet one-way delay: 141.805 ms

Loss rate: 1.87%

-- Flow 2:

Average throughput: 2.89 Mbit/s

95th percentile per-packet one-way delay: 141.197 ms

Loss rate: 2.86%

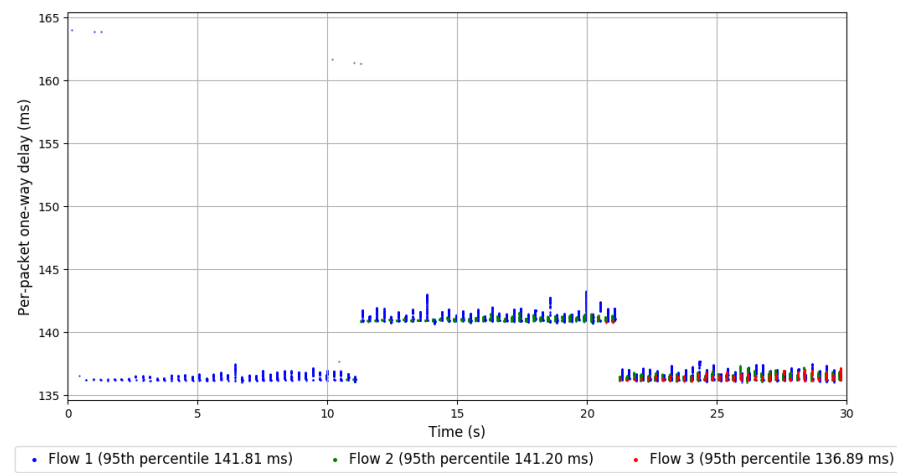
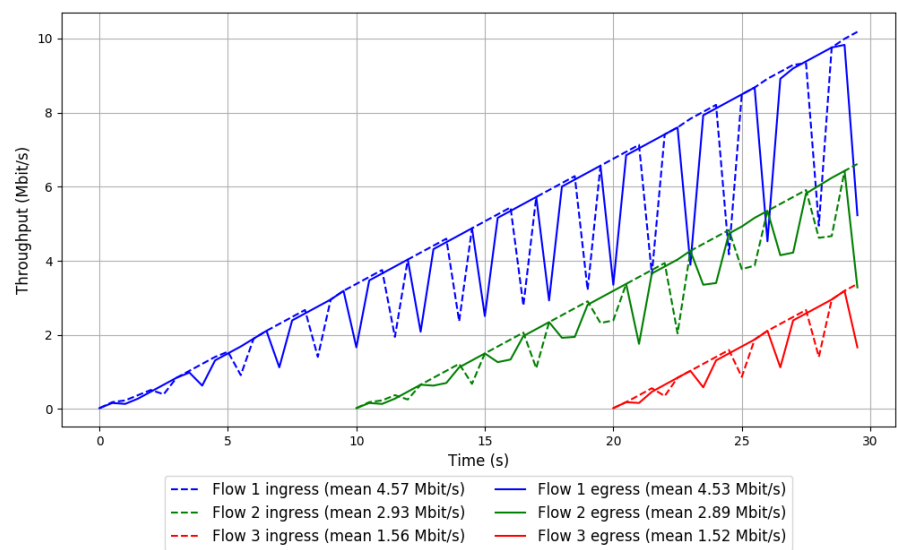
-- Flow 3:

Average throughput: 1.52 Mbit/s

95th percentile per-packet one-way delay: 136.891 ms

Loss rate: 5.55%

Run 8: Report of LEDBAT — Data Link



Run 9: Statistics of LEDBAT

Start at: 2018-03-01 09:45:43

End at: 2018-03-01 09:46:13

Below is generated by plot.py at 2018-03-01 13:58:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 7.05 Mbit/s

95th percentile per-packet one-way delay: 137.424 ms

Loss rate: 2.39%

-- Flow 1:

Average throughput: 4.76 Mbit/s

95th percentile per-packet one-way delay: 137.541 ms

Loss rate: 1.84%

-- Flow 2:

Average throughput: 2.74 Mbit/s

95th percentile per-packet one-way delay: 137.154 ms

Loss rate: 2.94%

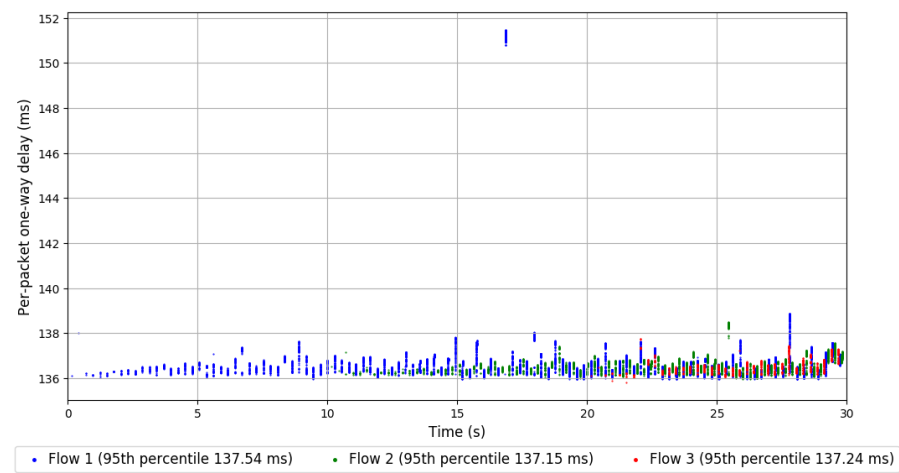
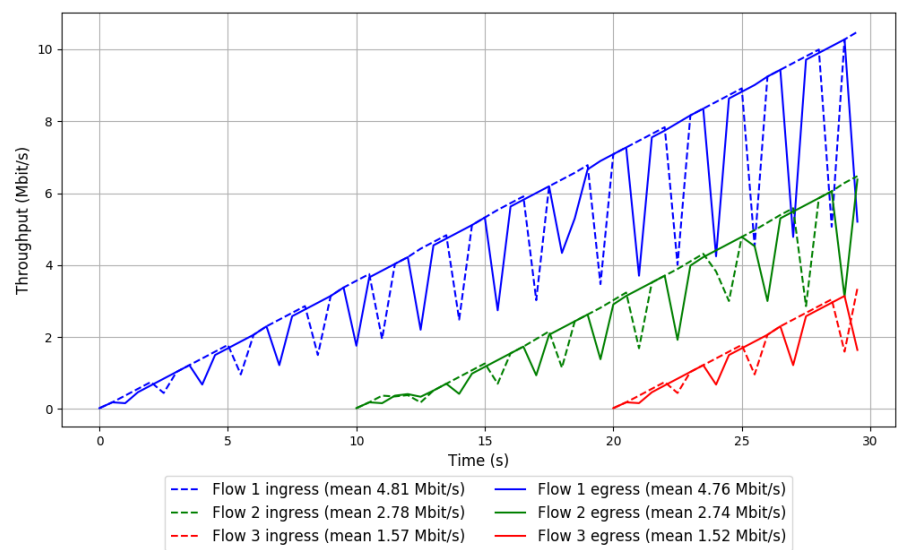
-- Flow 3:

Average throughput: 1.52 Mbit/s

95th percentile per-packet one-way delay: 137.244 ms

Loss rate: 5.57%

Run 9: Report of LEDBAT — Data Link



Run 10: Statistics of LEDBAT

Start at: 2018-03-01 10:06:53

End at: 2018-03-01 10:07:23

Below is generated by plot.py at 2018-03-01 13:58:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 7.13 Mbit/s

95th percentile per-packet one-way delay: 137.061 ms

Loss rate: 2.37%

-- Flow 1:

Average throughput: 4.77 Mbit/s

95th percentile per-packet one-way delay: 137.068 ms

Loss rate: 1.83%

-- Flow 2:

Average throughput: 2.96 Mbit/s

95th percentile per-packet one-way delay: 137.061 ms

Loss rate: 2.85%

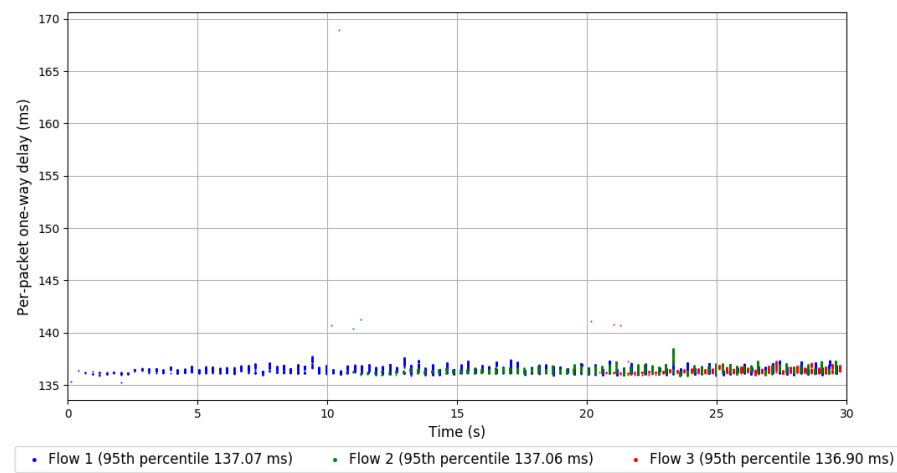
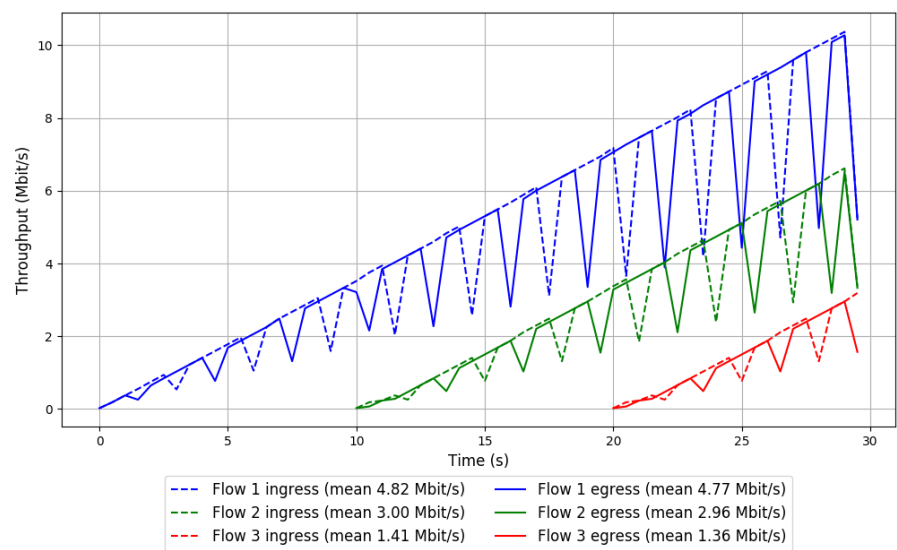
-- Flow 3:

Average throughput: 1.36 Mbit/s

95th percentile per-packet one-way delay: 136.897 ms

Loss rate: 5.84%

Run 10: Report of LEDBAT — Data Link

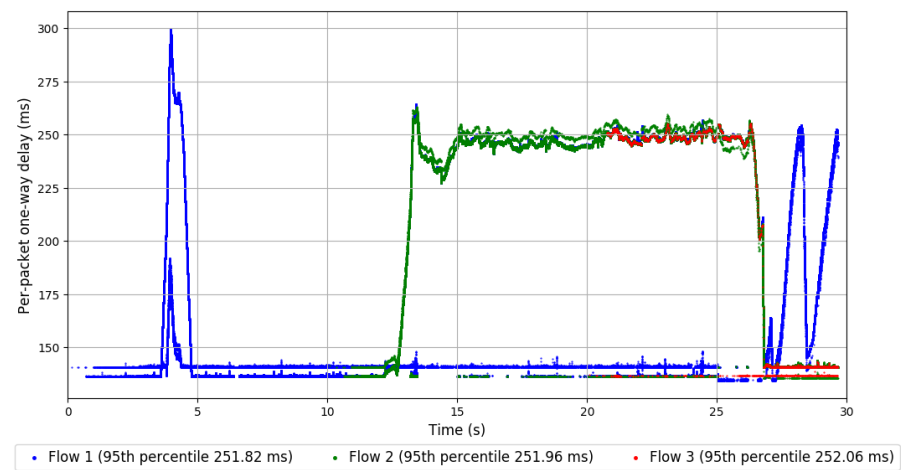
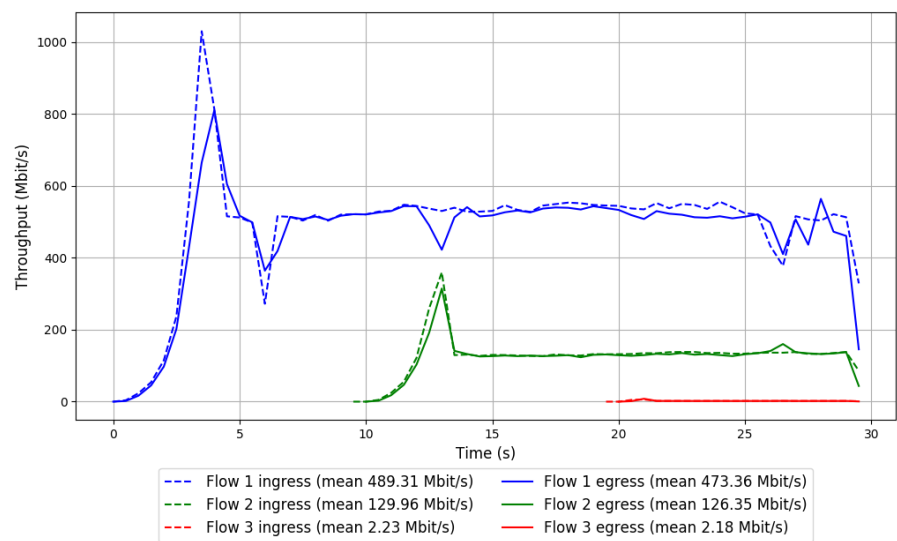


```
Run 1: Statistics of PCC

Start at: 2018-03-01 06:57:27
End at: 2018-03-01 06:57:57

# Below is generated by plot.py at 2018-03-01 14:05:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 557.85 Mbit/s
95th percentile per-packet one-way delay: 251.848 ms
Loss rate: 4.22%
-- Flow 1:
Average throughput: 473.36 Mbit/s
95th percentile per-packet one-way delay: 251.822 ms
Loss rate: 4.22%
-- Flow 2:
Average throughput: 126.35 Mbit/s
95th percentile per-packet one-way delay: 251.960 ms
Loss rate: 4.22%
-- Flow 3:
Average throughput: 2.18 Mbit/s
95th percentile per-packet one-way delay: 252.065 ms
Loss rate: 5.06%
```

Run 1: Report of PCC — Data Link



Run 2: Statistics of PCC

Start at: 2018-03-01 07:17:45

End at: 2018-03-01 07:18:15

Below is generated by plot.py at 2018-03-01 14:05:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 514.67 Mbit/s

95th percentile per-packet one-way delay: 281.343 ms

Loss rate: 4.92%

-- Flow 1:

Average throughput: 469.46 Mbit/s

95th percentile per-packet one-way delay: 281.168 ms

Loss rate: 4.91%

-- Flow 2:

Average throughput: 66.26 Mbit/s

95th percentile per-packet one-way delay: 282.781 ms

Loss rate: 4.87%

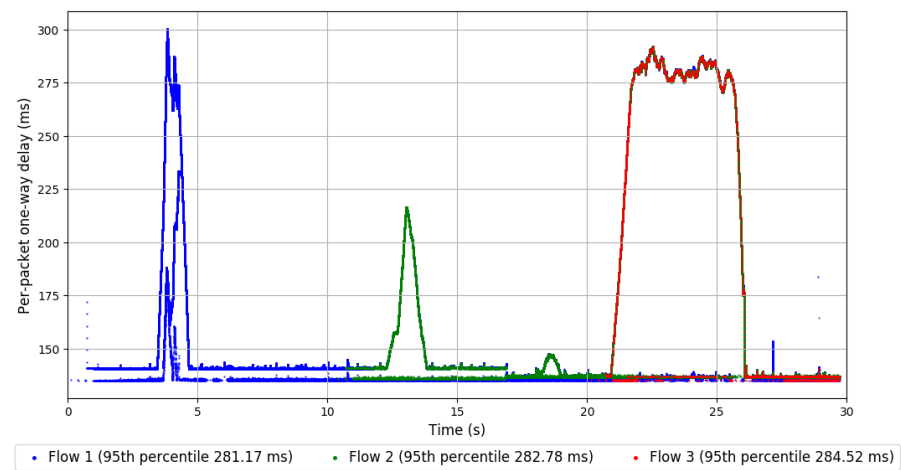
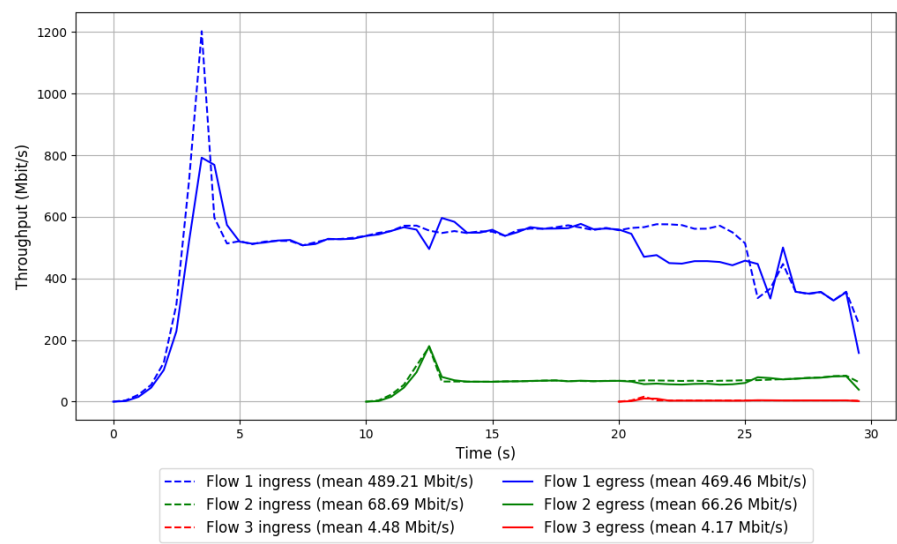
-- Flow 3:

Average throughput: 4.17 Mbit/s

95th percentile per-packet one-way delay: 284.525 ms

Loss rate: 9.53%

Run 2: Report of PCC — Data Link



Run 3: Statistics of PCC

Start at: 2018-03-01 07:38:21

End at: 2018-03-01 07:38:51

Below is generated by plot.py at 2018-03-01 14:05:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 494.06 Mbit/s

95th percentile per-packet one-way delay: 260.947 ms

Loss rate: 2.77%

-- Flow 1:

Average throughput: 482.28 Mbit/s

95th percentile per-packet one-way delay: 260.846 ms

Loss rate: 2.79%

-- Flow 2:

Average throughput: 16.63 Mbit/s

95th percentile per-packet one-way delay: 257.532 ms

Loss rate: 2.24%

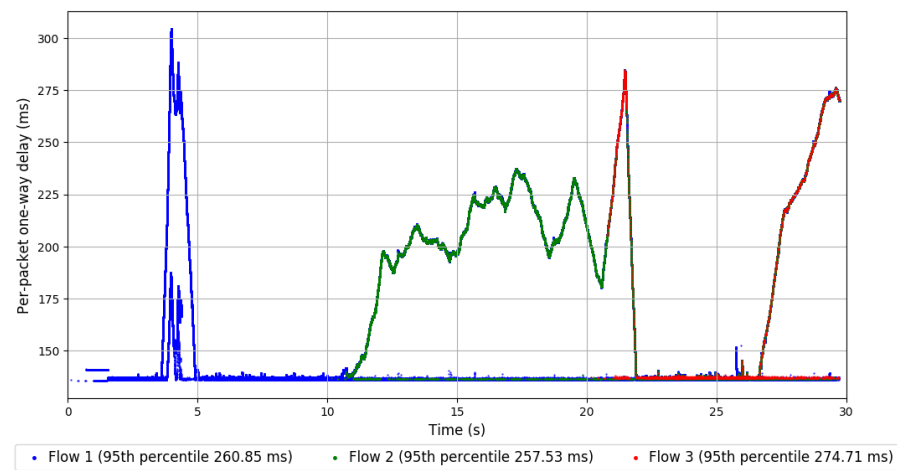
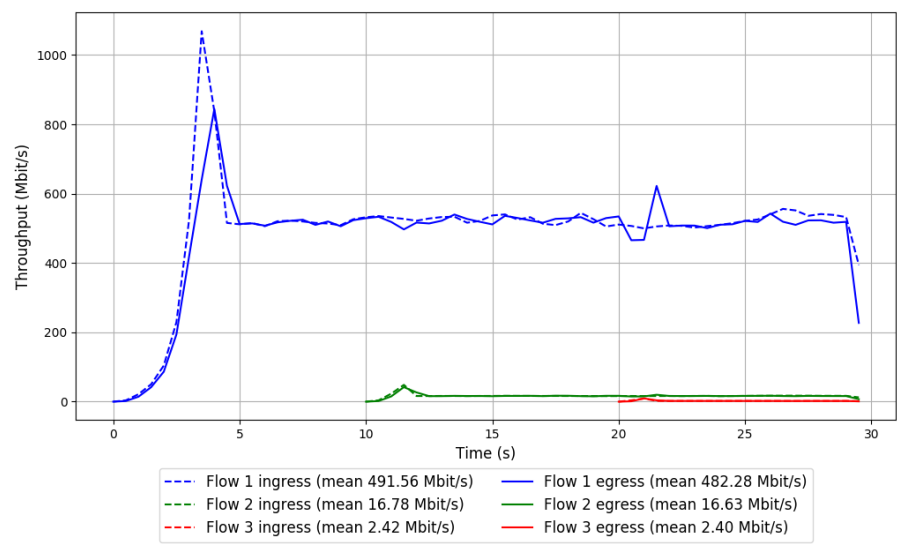
-- Flow 3:

Average throughput: 2.40 Mbit/s

95th percentile per-packet one-way delay: 274.707 ms

Loss rate: 3.58%

Run 3: Report of PCC — Data Link



Run 4: Statistics of PCC

Start at: 2018-03-01 07:58:56

End at: 2018-03-01 07:59:26

Below is generated by plot.py at 2018-03-01 14:06:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 580.95 Mbit/s

95th percentile per-packet one-way delay: 246.883 ms

Loss rate: 2.86%

-- Flow 1:

Average throughput: 538.48 Mbit/s

95th percentile per-packet one-way delay: 246.853 ms

Loss rate: 2.84%

-- Flow 2:

Average throughput: 63.03 Mbit/s

95th percentile per-packet one-way delay: 247.711 ms

Loss rate: 3.10%

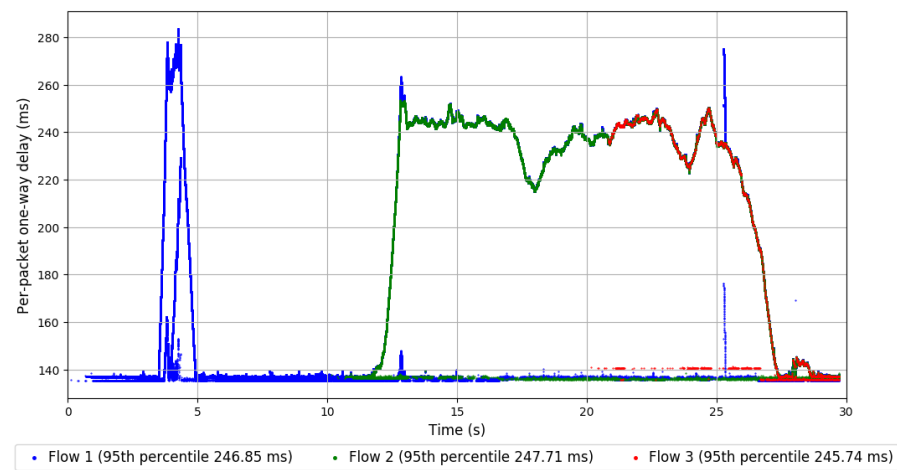
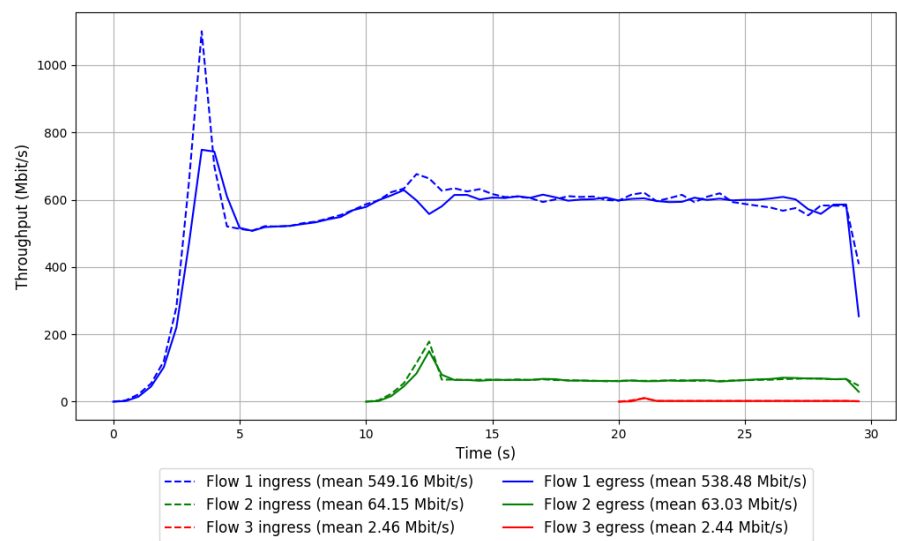
-- Flow 3:

Average throughput: 2.44 Mbit/s

95th percentile per-packet one-way delay: 245.738 ms

Loss rate: 3.30%

Run 4: Report of PCC — Data Link



Run 5: Statistics of PCC

Start at: 2018-03-01 08:20:07

End at: 2018-03-01 08:20:37

Below is generated by plot.py at 2018-03-01 14:06:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 571.79 Mbit/s

95th percentile per-packet one-way delay: 259.090 ms

Loss rate: 5.19%

-- Flow 1:

Average throughput: 472.68 Mbit/s

95th percentile per-packet one-way delay: 261.619 ms

Loss rate: 5.18%

-- Flow 2:

Average throughput: 120.61 Mbit/s

95th percentile per-packet one-way delay: 246.793 ms

Loss rate: 3.96%

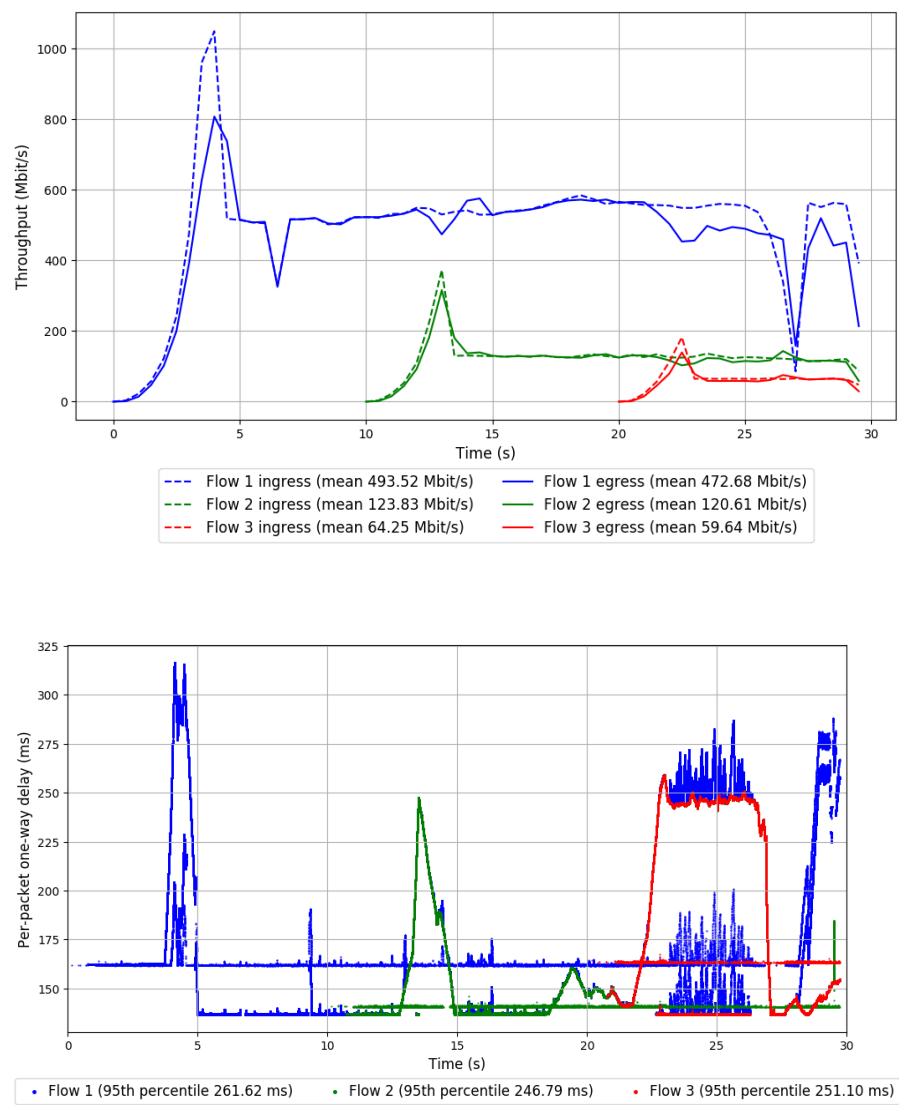
-- Flow 3:

Average throughput: 59.64 Mbit/s

95th percentile per-packet one-way delay: 251.096 ms

Loss rate: 10.01%

Run 5: Report of PCC — Data Link



Run 6: Statistics of PCC

Start at: 2018-03-01 08:40:48

End at: 2018-03-01 08:41:18

Below is generated by plot.py at 2018-03-01 14:07:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 567.26 Mbit/s

95th percentile per-packet one-way delay: 279.889 ms

Loss rate: 3.95%

-- Flow 1:

Average throughput: 472.21 Mbit/s

95th percentile per-packet one-way delay: 285.464 ms

Loss rate: 3.81%

-- Flow 2:

Average throughput: 128.05 Mbit/s

95th percentile per-packet one-way delay: 252.814 ms

Loss rate: 4.40%

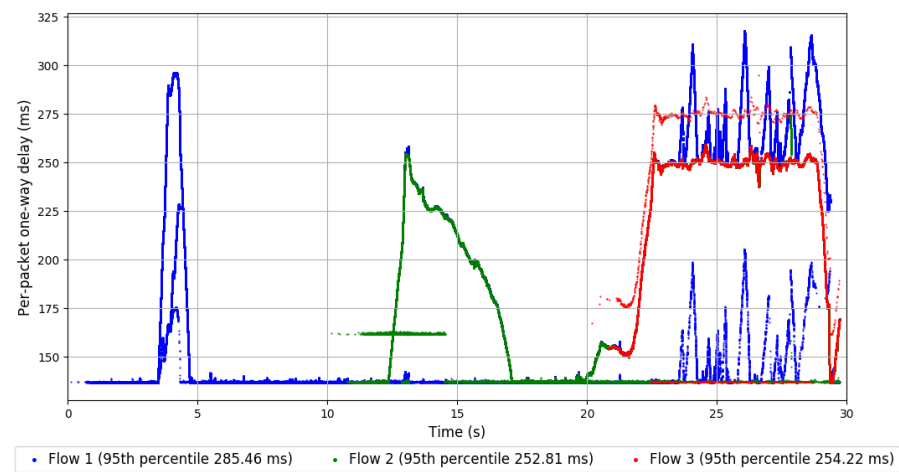
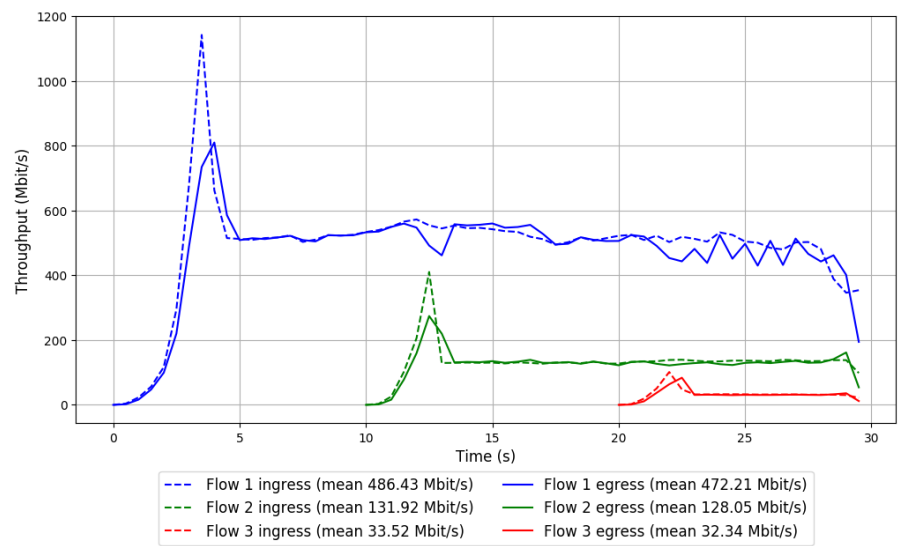
-- Flow 3:

Average throughput: 32.34 Mbit/s

95th percentile per-packet one-way delay: 254.222 ms

Loss rate: 6.51%

Run 6: Report of PCC — Data Link



Run 7: Statistics of PCC

Start at: 2018-03-01 09:02:13

End at: 2018-03-01 09:02:43

Below is generated by plot.py at 2018-03-01 14:07:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 586.95 Mbit/s

95th percentile per-packet one-way delay: 257.486 ms

Loss rate: 4.22%

-- Flow 1:

Average throughput: 526.83 Mbit/s

95th percentile per-packet one-way delay: 259.833 ms

Loss rate: 4.08%

-- Flow 2:

Average throughput: 61.35 Mbit/s

95th percentile per-packet one-way delay: 248.923 ms

Loss rate: 4.24%

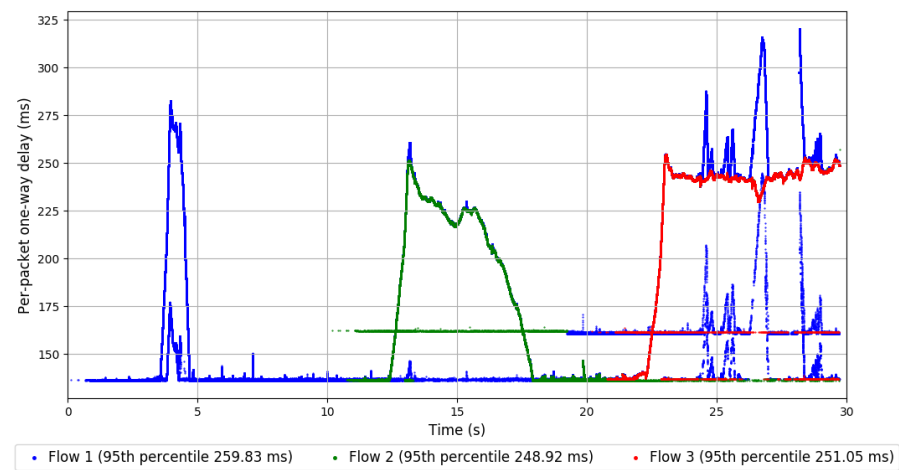
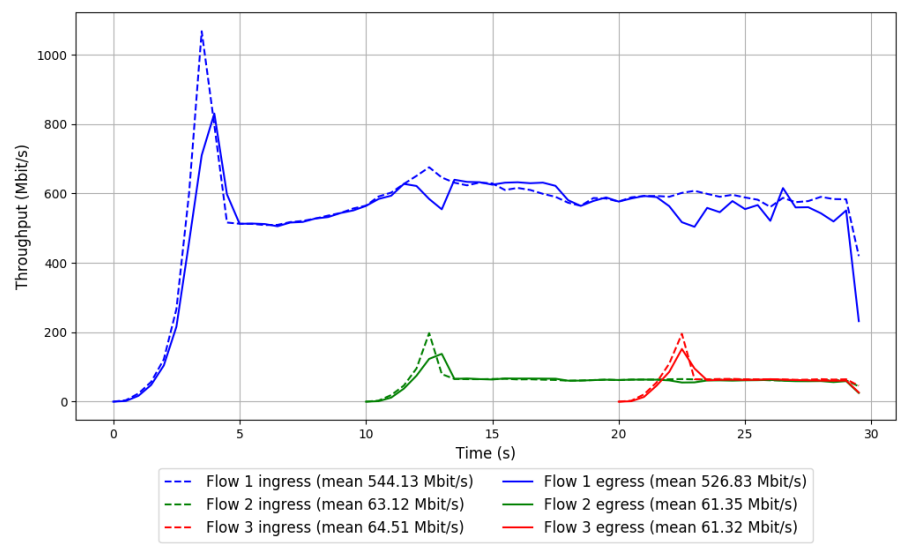
-- Flow 3:

Average throughput: 61.32 Mbit/s

95th percentile per-packet one-way delay: 251.046 ms

Loss rate: 7.87%

Run 7: Report of PCC — Data Link



Run 8: Statistics of PCC

Start at: 2018-03-01 09:23:23

End at: 2018-03-01 09:23:53

Below is generated by plot.py at 2018-03-01 14:08:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 563.42 Mbit/s

95th percentile per-packet one-way delay: 250.719 ms

Loss rate: 6.77%

-- Flow 1:

Average throughput: 378.53 Mbit/s

95th percentile per-packet one-way delay: 256.671 ms

Loss rate: 5.94%

-- Flow 2:

Average throughput: 224.89 Mbit/s

95th percentile per-packet one-way delay: 246.833 ms

Loss rate: 7.74%

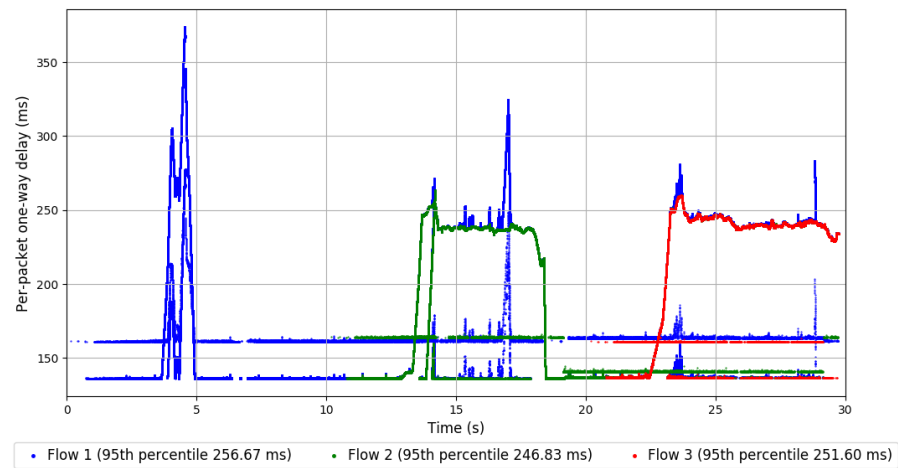
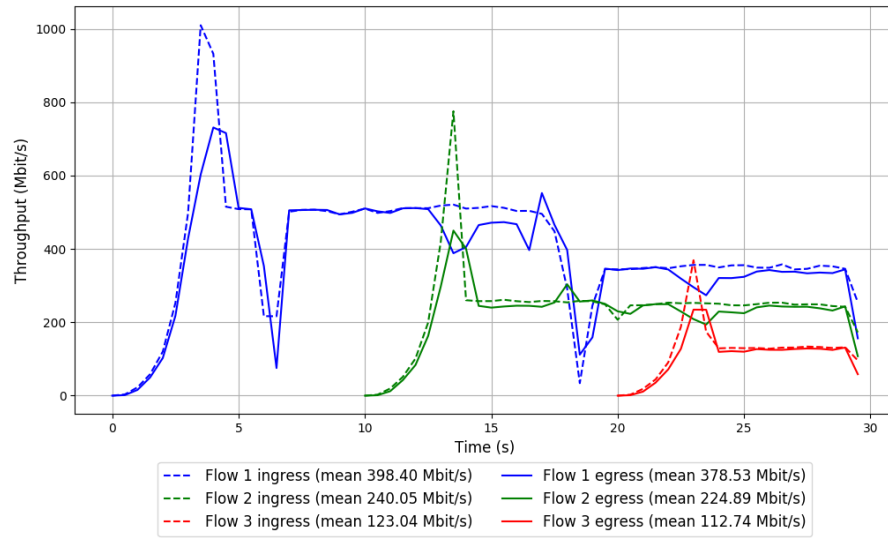
-- Flow 3:

Average throughput: 112.74 Mbit/s

95th percentile per-packet one-way delay: 251.605 ms

Loss rate: 11.15%

Run 8: Report of PCC — Data Link



Run 9: Statistics of PCC

Start at: 2018-03-01 09:44:32

End at: 2018-03-01 09:45:02

Below is generated by plot.py at 2018-03-01 14:14:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 486.75 Mbit/s

95th percentile per-packet one-way delay: 277.061 ms

Loss rate: 6.27%

-- Flow 1:

Average throughput: 386.76 Mbit/s

95th percentile per-packet one-way delay: 277.124 ms

Loss rate: 6.30%

-- Flow 2:

Average throughput: 120.30 Mbit/s

95th percentile per-packet one-way delay: 277.278 ms

Loss rate: 6.58%

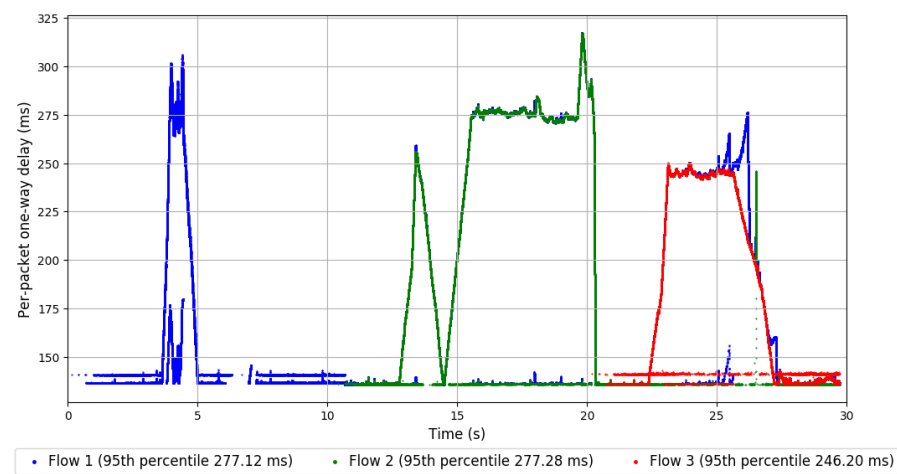
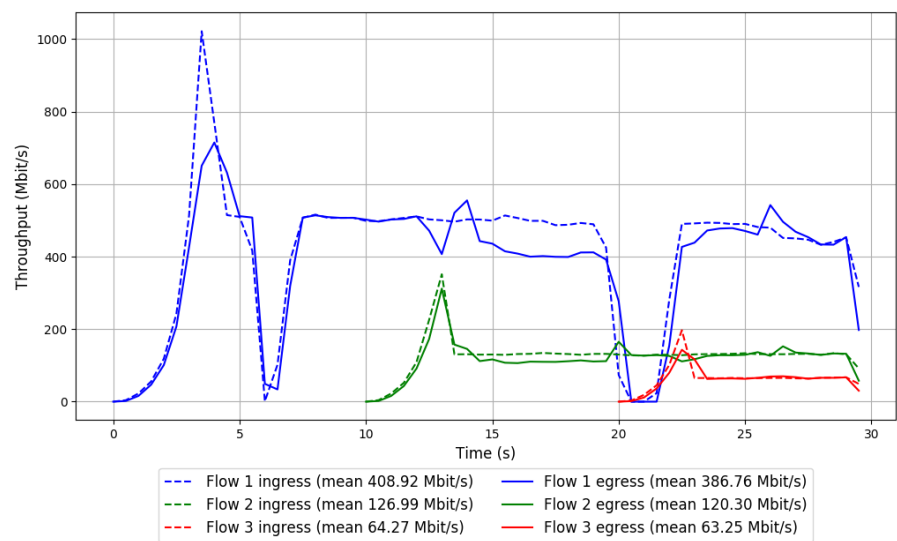
-- Flow 3:

Average throughput: 63.25 Mbit/s

95th percentile per-packet one-way delay: 246.196 ms

Loss rate: 4.40%

Run 9: Report of PCC — Data Link



Run 10: Statistics of PCC

Start at: 2018-03-01 10:05:39

End at: 2018-03-01 10:06:09

Below is generated by plot.py at 2018-03-01 14:15:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 568.62 Mbit/s

95th percentile per-packet one-way delay: 249.555 ms

Loss rate: 3.04%

-- Flow 1:

Average throughput: 536.17 Mbit/s

95th percentile per-packet one-way delay: 249.293 ms

Loss rate: 3.00%

-- Flow 2:

Average throughput: 33.05 Mbit/s

95th percentile per-packet one-way delay: 269.445 ms

Loss rate: 3.25%

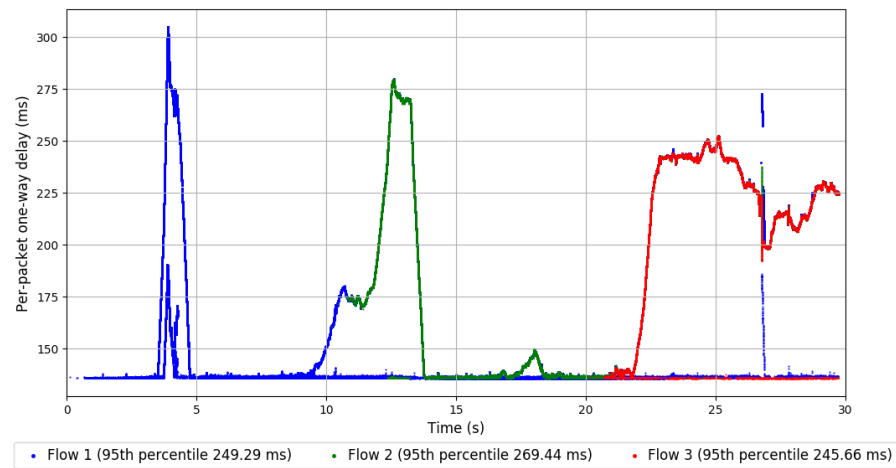
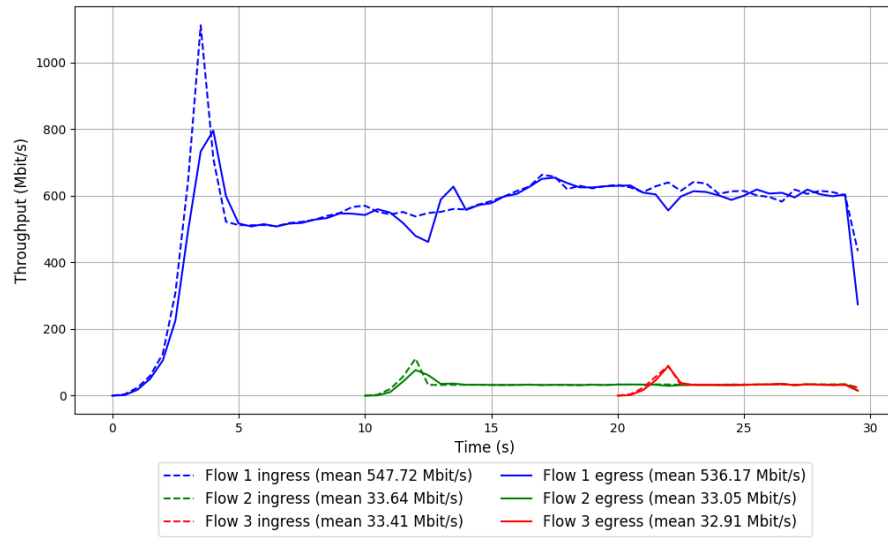
-- Flow 3:

Average throughput: 32.91 Mbit/s

95th percentile per-packet one-way delay: 245.663 ms

Loss rate: 4.21%

Run 10: Report of PCC — Data Link

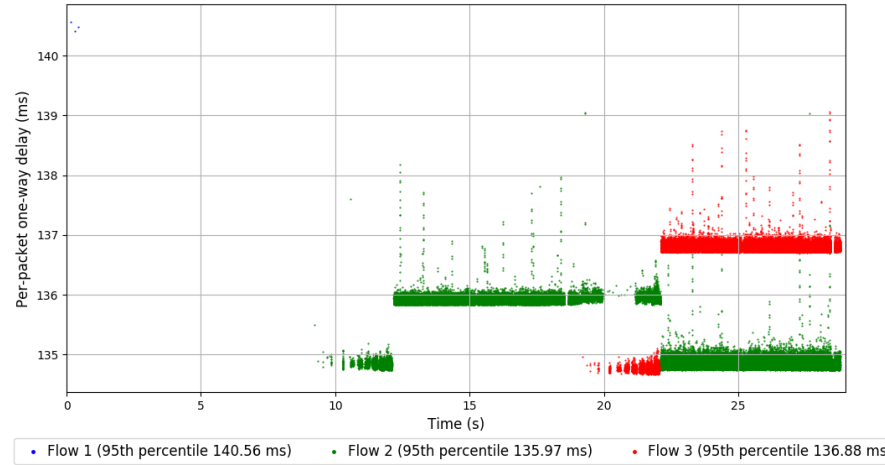
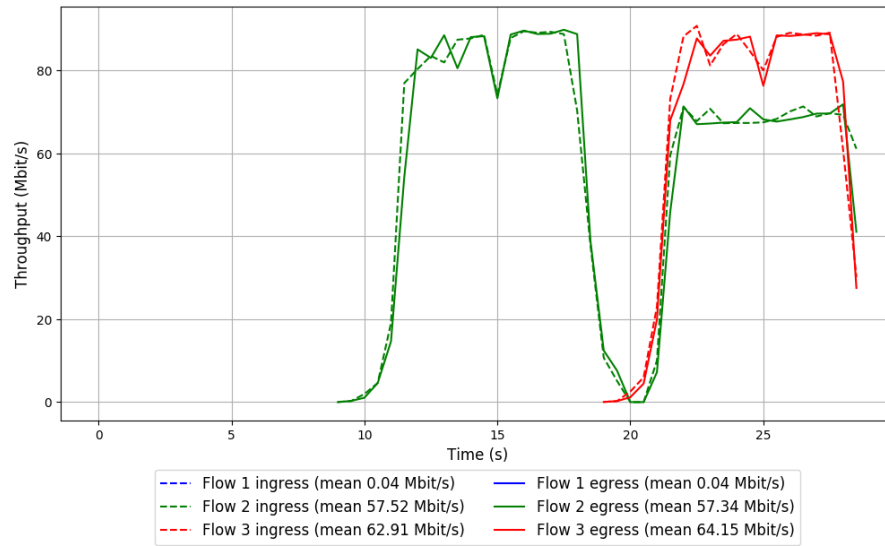


```
Run 1: Statistics of QUIC Cubic

Start at: 2018-03-01 07:04:09
End at: 2018-03-01 07:04:39

# Below is generated by plot.py at 2018-03-01 14:15:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 60.63 Mbit/s
95th percentile per-packet one-way delay: 136.837 ms
Loss rate: 1.38%
-- Flow 1:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 140.565 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 57.34 Mbit/s
95th percentile per-packet one-way delay: 135.968 ms
Loss rate: 1.66%
-- Flow 3:
Average throughput: 64.15 Mbit/s
95th percentile per-packet one-way delay: 136.883 ms
Loss rate: 0.85%
```


Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2018-03-01 07:24:26

End at: 2018-03-01 07:24:56

Below is generated by plot.py at 2018-03-01 14:15:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 117.80 Mbit/s

95th percentile per-packet one-way delay: 140.444 ms

Loss rate: 1.59%

-- Flow 1:

Average throughput: 60.45 Mbit/s

95th percentile per-packet one-way delay: 140.373 ms

Loss rate: 1.14%

-- Flow 2:

Average throughput: 56.89 Mbit/s

95th percentile per-packet one-way delay: 140.499 ms

Loss rate: 1.49%

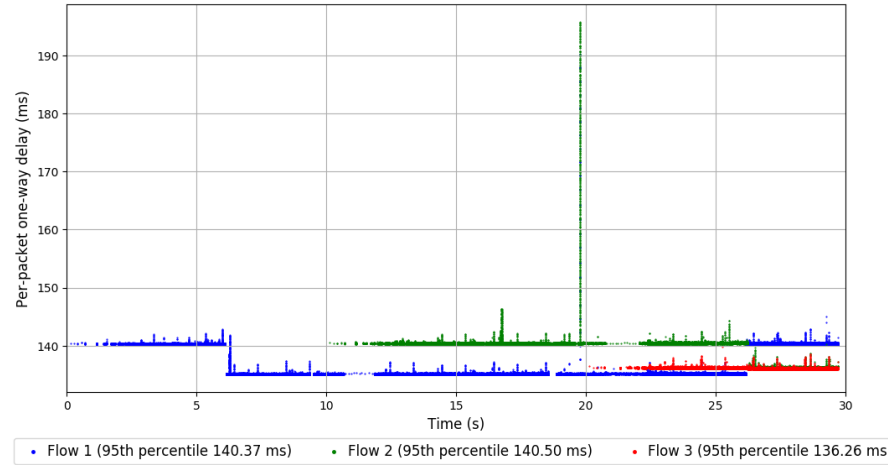
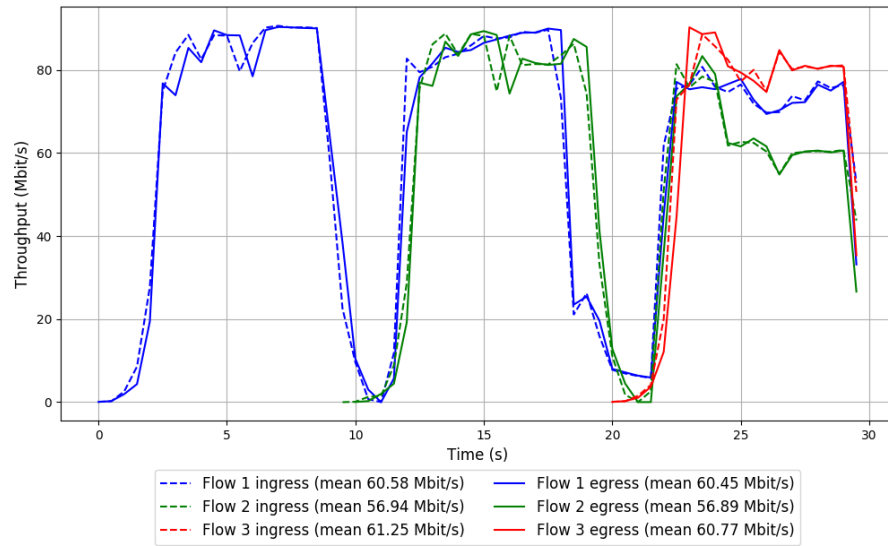
-- Flow 3:

Average throughput: 60.77 Mbit/s

95th percentile per-packet one-way delay: 136.263 ms

Loss rate: 3.12%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-03-01 07:44:59

End at: 2018-03-01 07:45:29

Below is generated by plot.py at 2018-03-01 14:15:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 105.71 Mbit/s

95th percentile per-packet one-way delay: 162.472 ms

Loss rate: 1.24%

-- Flow 1:

Average throughput: 55.55 Mbit/s

95th percentile per-packet one-way delay: 162.511 ms

Loss rate: 1.15%

-- Flow 2:

Average throughput: 58.60 Mbit/s

95th percentile per-packet one-way delay: 140.655 ms

Loss rate: 1.58%

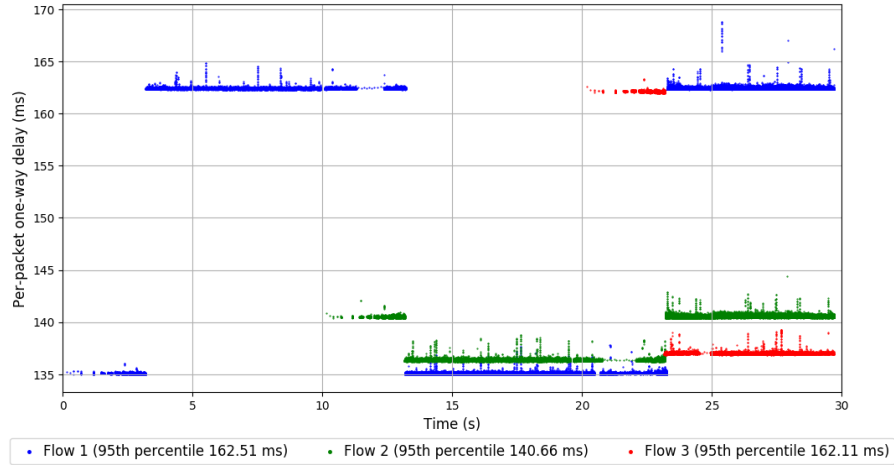
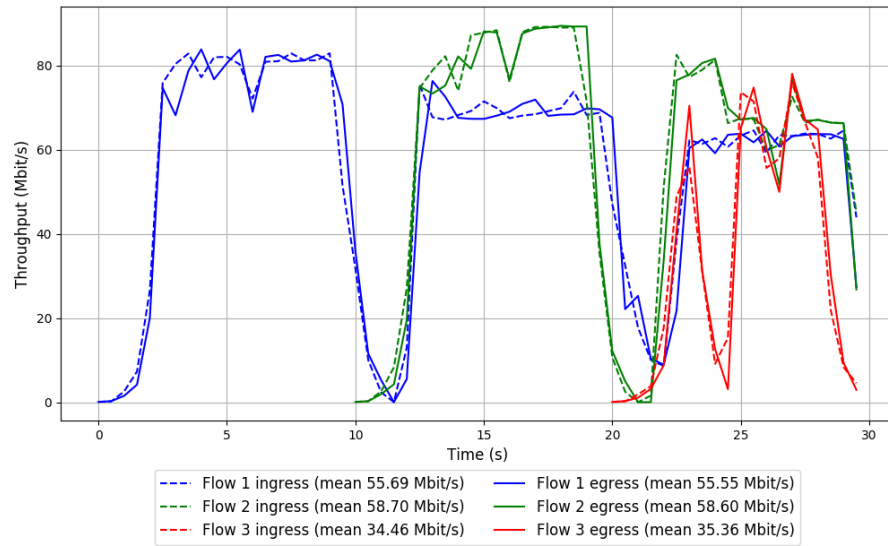
-- Flow 3:

Average throughput: 35.36 Mbit/s

95th percentile per-packet one-way delay: 162.106 ms

Loss rate: 0.53%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2018-03-01 08:05:36

End at: 2018-03-01 08:06:06

Below is generated by plot.py at 2018-03-01 14:15:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 97.73 Mbit/s

95th percentile per-packet one-way delay: 162.038 ms

Loss rate: 1.84%

-- Flow 1:

Average throughput: 58.77 Mbit/s

95th percentile per-packet one-way delay: 140.498 ms

Loss rate: 1.19%

-- Flow 2:

Average throughput: 43.51 Mbit/s

95th percentile per-packet one-way delay: 140.509 ms

Loss rate: 2.24%

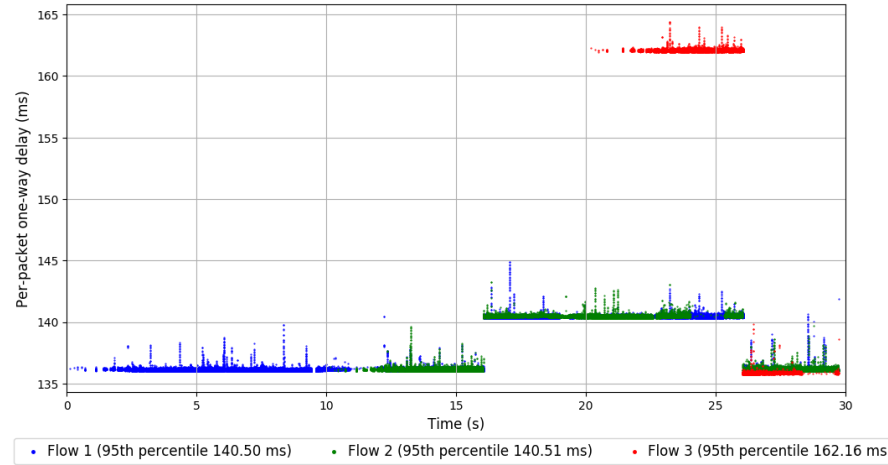
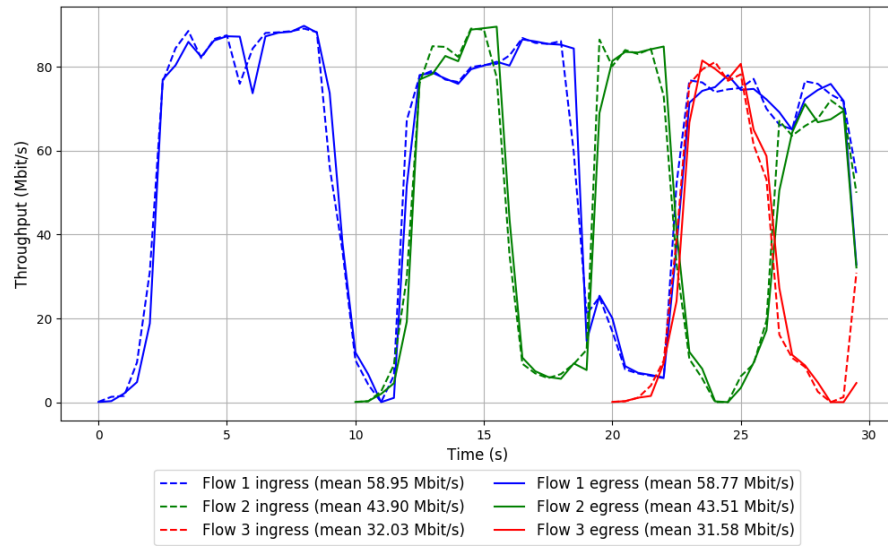
-- Flow 3:

Average throughput: 31.58 Mbit/s

95th percentile per-packet one-way delay: 162.165 ms

Loss rate: 4.37%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2018-03-01 08:26:59

End at: 2018-03-01 08:27:29

Below is generated by plot.py at 2018-03-01 14:15:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 109.31 Mbit/s

95th percentile per-packet one-way delay: 136.851 ms

Loss rate: 1.85%

-- Flow 1:

Average throughput: 60.78 Mbit/s

95th percentile per-packet one-way delay: 136.887 ms

Loss rate: 1.21%

-- Flow 2:

Average throughput: 43.78 Mbit/s

95th percentile per-packet one-way delay: 136.461 ms

Loss rate: 1.92%

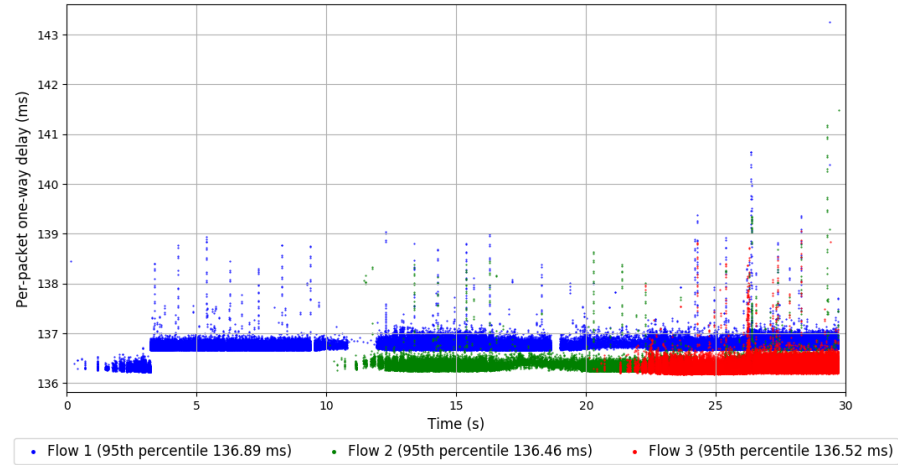
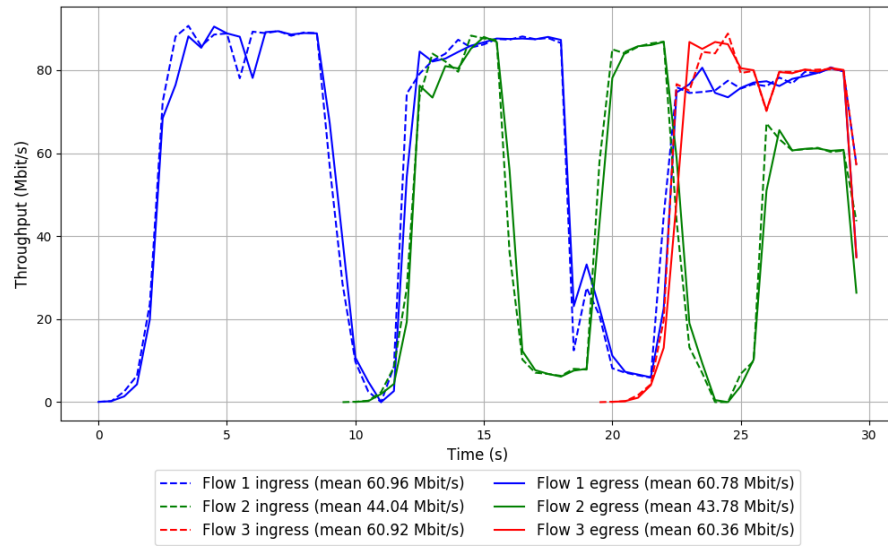
-- Flow 3:

Average throughput: 60.36 Mbit/s

95th percentile per-packet one-way delay: 136.518 ms

Loss rate: 3.66%

Run 5: Report of QUIC Cubic — Data Link



Run 6: Statistics of QUIC Cubic

Start at: 2018-03-01 08:47:35

End at: 2018-03-01 08:48:05

Below is generated by plot.py at 2018-03-01 14:15:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 108.18 Mbit/s

95th percentile per-packet one-way delay: 161.231 ms

Loss rate: 1.38%

-- Flow 1:

Average throughput: 58.35 Mbit/s

95th percentile per-packet one-way delay: 136.406 ms

Loss rate: 1.23%

-- Flow 2:

Average throughput: 58.68 Mbit/s

95th percentile per-packet one-way delay: 136.534 ms

Loss rate: 1.98%

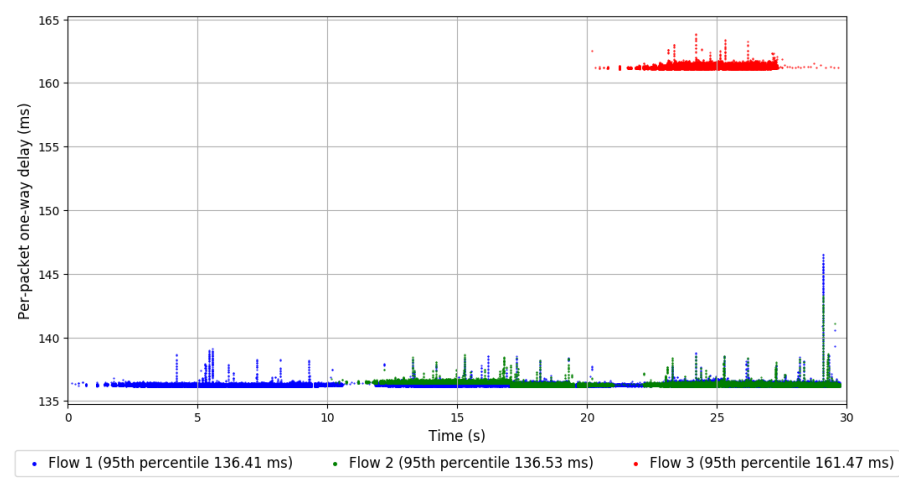
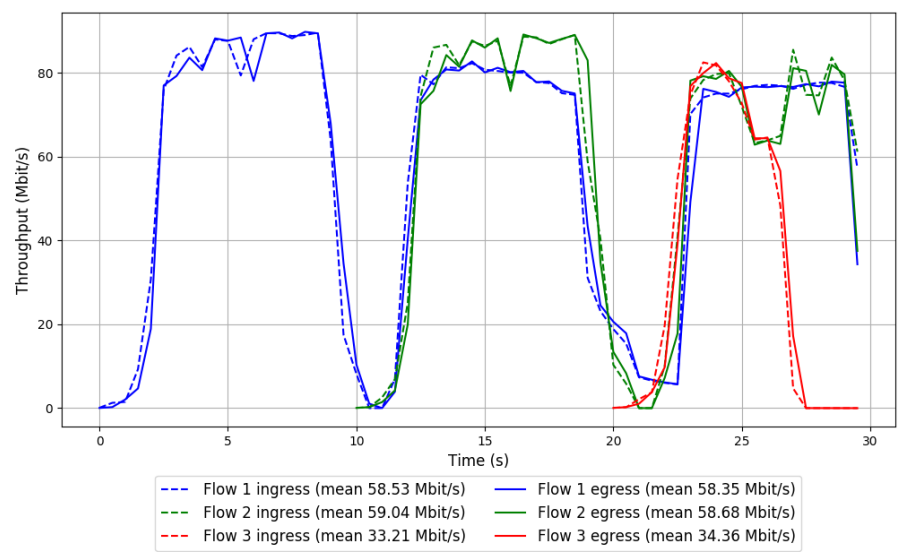
-- Flow 3:

Average throughput: 34.36 Mbit/s

95th percentile per-packet one-way delay: 161.472 ms

Loss rate: 0.00%

Run 6: Report of QUIC Cubic — Data Link



Run 7: Statistics of QUIC Cubic

Start at: 2018-03-01 09:09:08

End at: 2018-03-01 09:09:38

Below is generated by plot.py at 2018-03-01 14:15:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 101.26 Mbit/s

95th percentile per-packet one-way delay: 162.525 ms

Loss rate: 1.40%

-- Flow 1:

Average throughput: 55.71 Mbit/s

95th percentile per-packet one-way delay: 160.729 ms

Loss rate: 1.12%

-- Flow 2:

Average throughput: 52.08 Mbit/s

95th percentile per-packet one-way delay: 136.060 ms

Loss rate: 1.96%

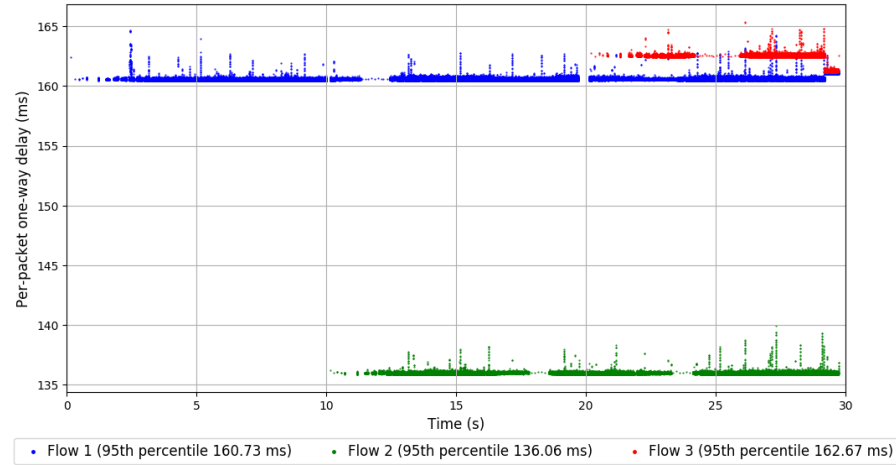
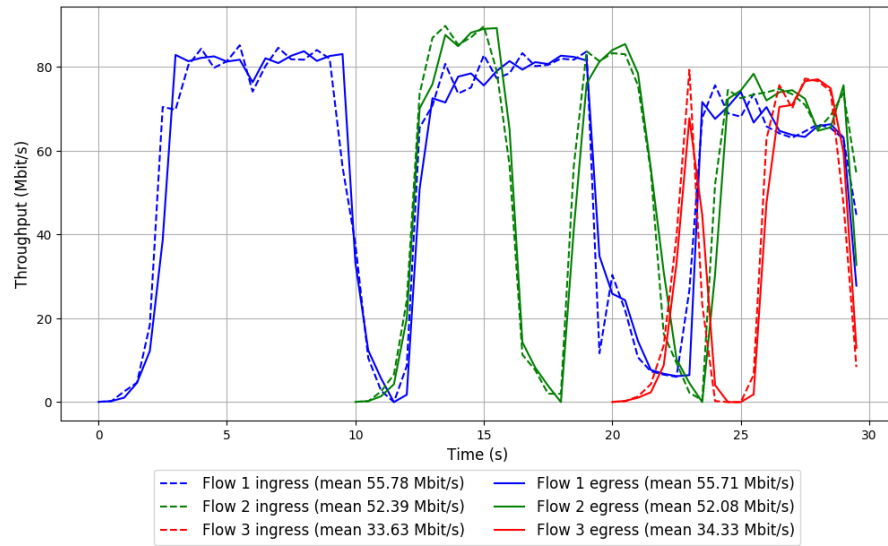
-- Flow 3:

Average throughput: 34.33 Mbit/s

95th percentile per-packet one-way delay: 162.669 ms

Loss rate: 1.04%

Run 7: Report of QUIC Cubic — Data Link



Run 8: Statistics of QUIC Cubic

Start at: 2018-03-01 09:30:16

End at: 2018-03-01 09:30:46

Below is generated by plot.py at 2018-03-01 14:15:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 112.04 Mbit/s

95th percentile per-packet one-way delay: 164.125 ms

Loss rate: 1.74%

-- Flow 1:

Average throughput: 56.60 Mbit/s

95th percentile per-packet one-way delay: 164.195 ms

Loss rate: 1.23%

-- Flow 2:

Average throughput: 57.02 Mbit/s

95th percentile per-packet one-way delay: 161.022 ms

Loss rate: 1.55%

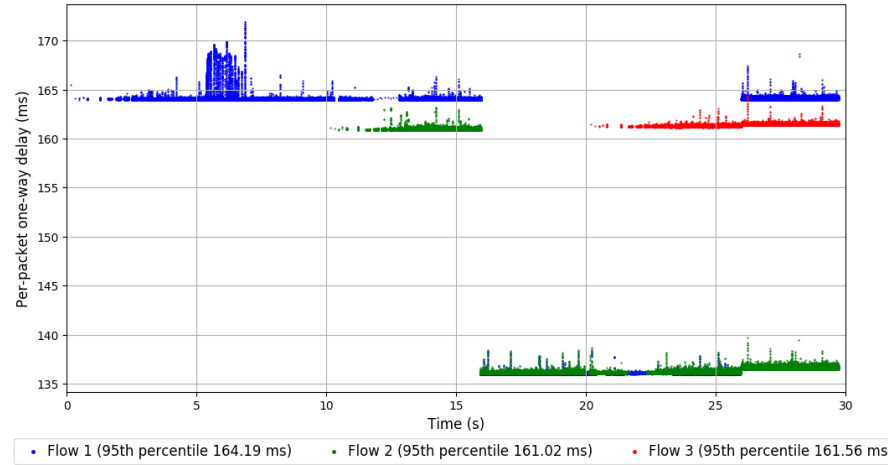
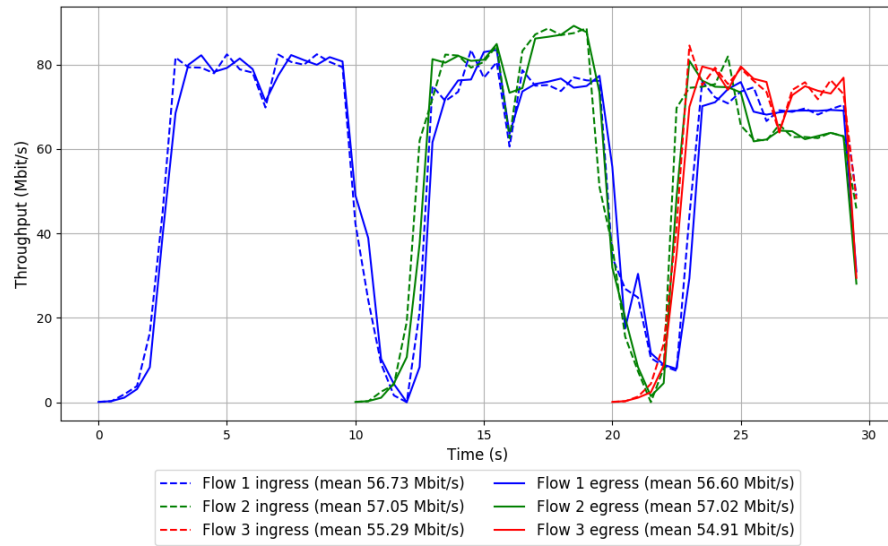
-- Flow 3:

Average throughput: 54.91 Mbit/s

95th percentile per-packet one-way delay: 161.559 ms

Loss rate: 3.70%

Run 8: Report of QUIC Cubic — Data Link



Run 9: Statistics of QUIC Cubic

Start at: 2018-03-01 09:51:10

End at: 2018-03-01 09:51:40

Below is generated by plot.py at 2018-03-01 14:15:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 104.00 Mbit/s

95th percentile per-packet one-way delay: 140.698 ms

Loss rate: 0.72%

-- Flow 1:

Average throughput: 52.42 Mbit/s

95th percentile per-packet one-way delay: 136.038 ms

Loss rate: 1.42%

-- Flow 2:

Average throughput: 50.31 Mbit/s

95th percentile per-packet one-way delay: 140.792 ms

Loss rate: 0.00%

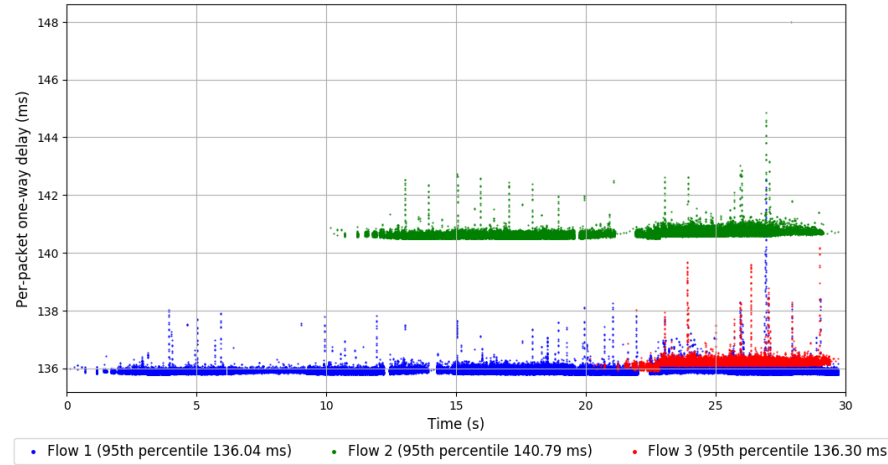
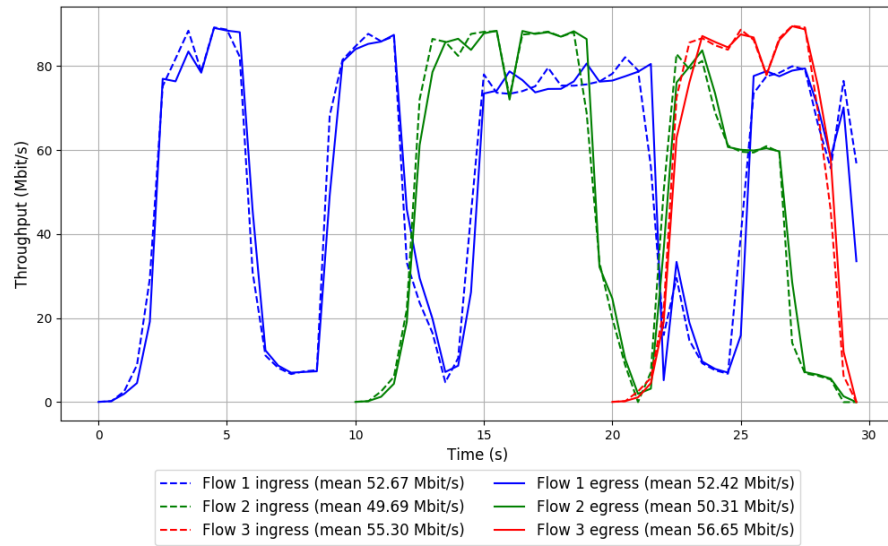
-- Flow 3:

Average throughput: 56.65 Mbit/s

95th percentile per-packet one-way delay: 136.303 ms

Loss rate: 0.00%

Run 9: Report of QUIC Cubic — Data Link

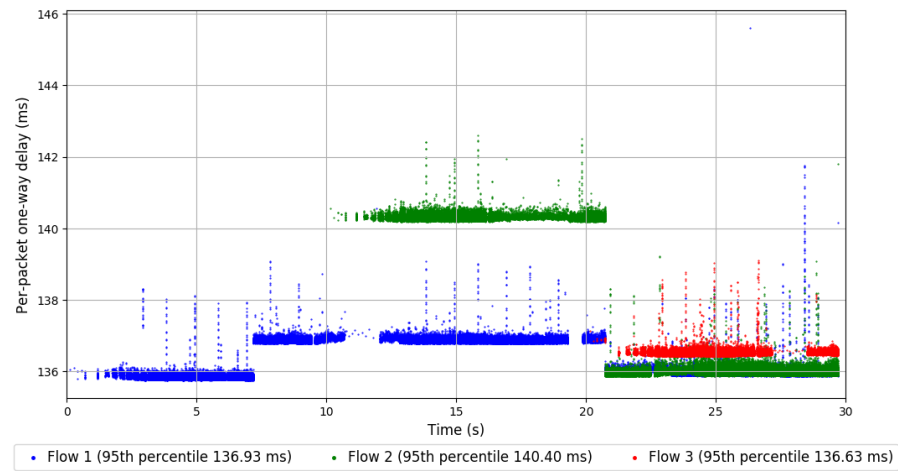
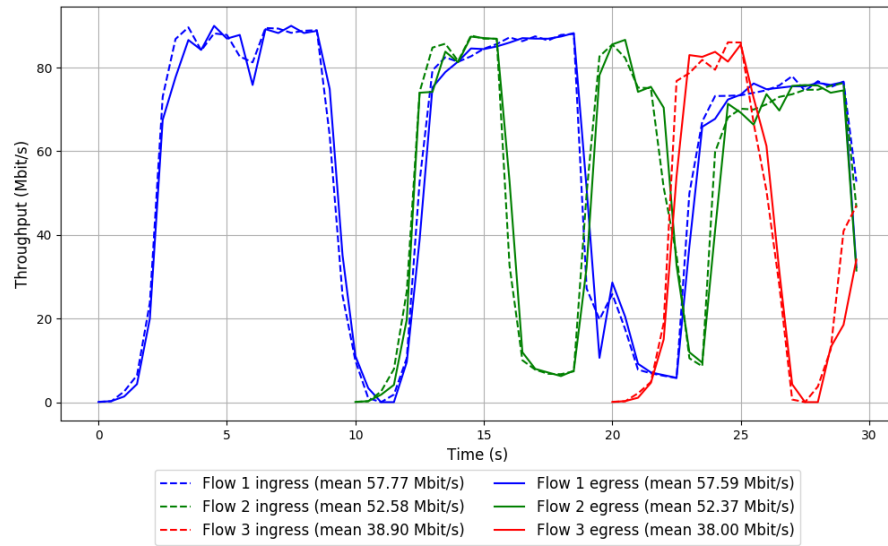


```
Run 10: Statistics of QUIC Cubic

Start at: 2018-03-01 10:12:22
End at: 2018-03-01 10:12:52

# Below is generated by plot.py at 2018-03-01 14:15:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 104.52 Mbit/s
95th percentile per-packet one-way delay: 140.323 ms
Loss rate: 1.86%
-- Flow 1:
Average throughput: 57.59 Mbit/s
95th percentile per-packet one-way delay: 136.934 ms
Loss rate: 1.21%
-- Flow 2:
Average throughput: 52.37 Mbit/s
95th percentile per-packet one-way delay: 140.396 ms
Loss rate: 1.77%
-- Flow 3:
Average throughput: 38.00 Mbit/s
95th percentile per-packet one-way delay: 136.626 ms
Loss rate: 5.03%
```

Run 10: Report of QUIC Cubic — Data Link

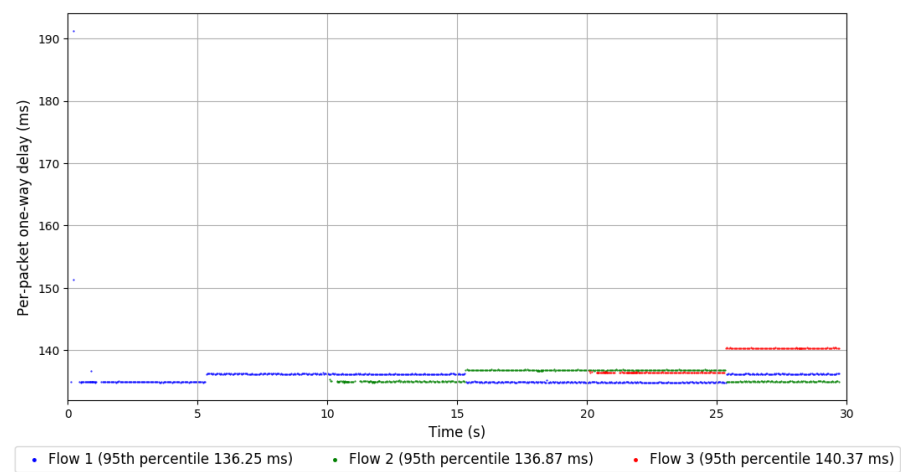
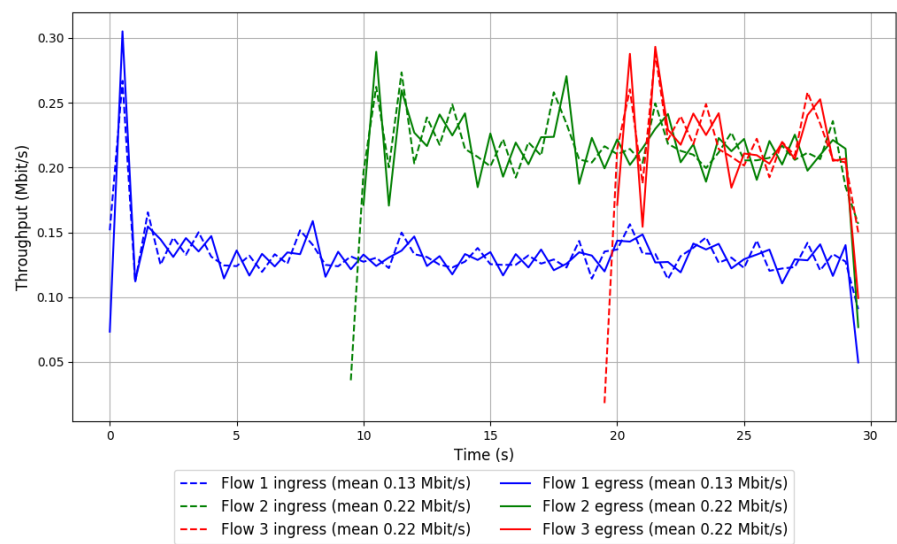


```
Run 1: Statistics of SCReAM

Start at: 2018-03-01 07:02:17
End at: 2018-03-01 07:02:47

# Below is generated by plot.py at 2018-03-01 14:15:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.35 Mbit/s
95th percentile per-packet one-way delay: 140.332 ms
Loss rate: 1.48%
-- Flow 1:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 136.250 ms
Loss rate: 0.89%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.870 ms
Loss rate: 1.43%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 140.371 ms
Loss rate: 2.63%
```

Run 1: Report of SCRaM — Data Link

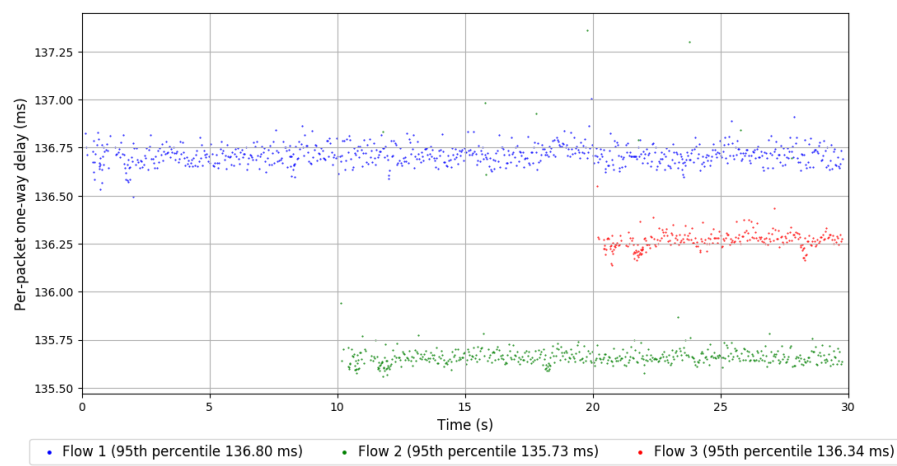
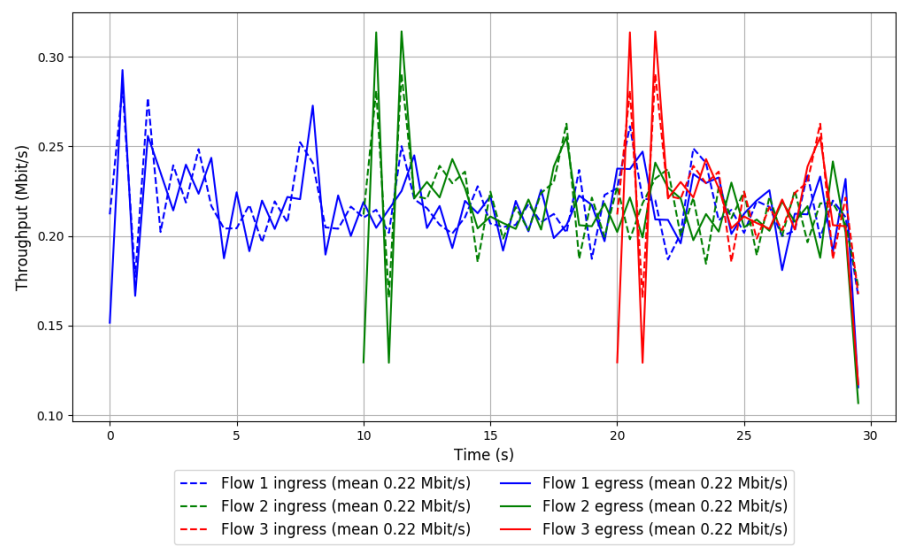


```
Run 2: Statistics of SCReAM

Start at: 2018-03-01 07:22:35
End at: 2018-03-01 07:23:05

# Below is generated by plot.py at 2018-03-01 14:15:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 136.780 ms
Loss rate: 1.30%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.796 ms
Loss rate: 0.77%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 135.728 ms
Loss rate: 1.42%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.335 ms
Loss rate: 2.63%
```

Run 2: Report of SReAM — Data Link



Run 3: Statistics of SCReAM

Start at: 2018-03-01 07:43:08

End at: 2018-03-01 07:43:38

Below is generated by plot.py at 2018-03-01 14:15:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 162.266 ms

Loss rate: 1.26%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 137.204 ms

Loss rate: 0.89%

-- Flow 2:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 162.316 ms

Loss rate: 1.10%

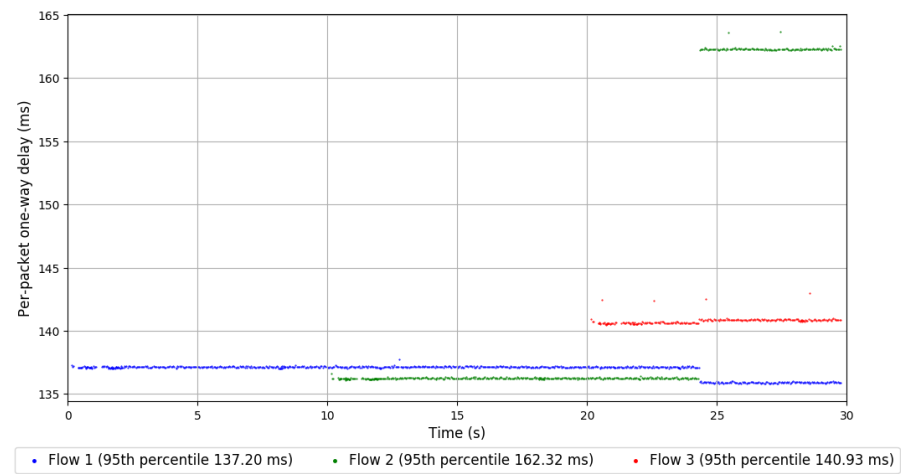
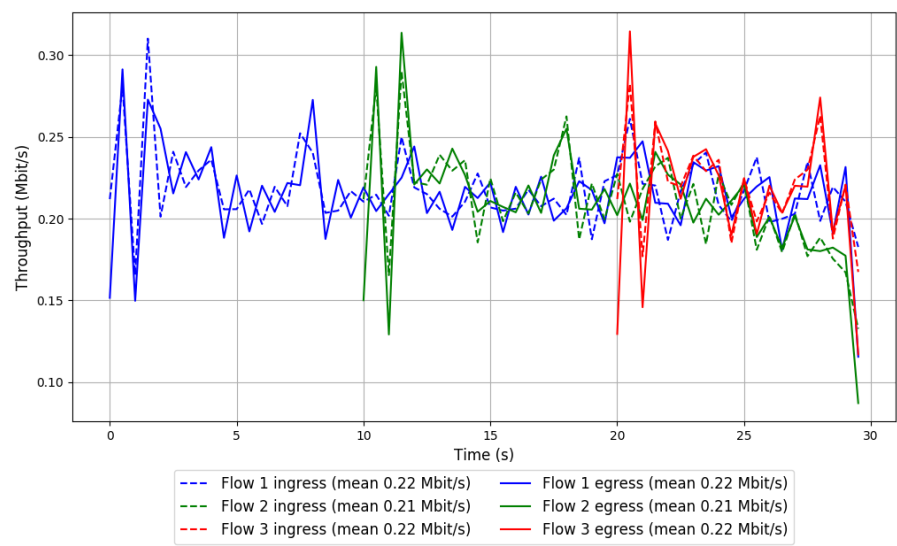
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 140.929 ms

Loss rate: 2.64%

Run 3: Report of SCRaM — Data Link



Run 4: Statistics of SReAM

Start at: 2018-03-01 08:03:46

End at: 2018-03-01 08:04:16

Below is generated by plot.py at 2018-03-01 14:15:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.42 Mbit/s

95th percentile per-packet one-way delay: 162.307 ms

Loss rate: 1.21%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 136.764 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 162.244 ms

Loss rate: 1.24%

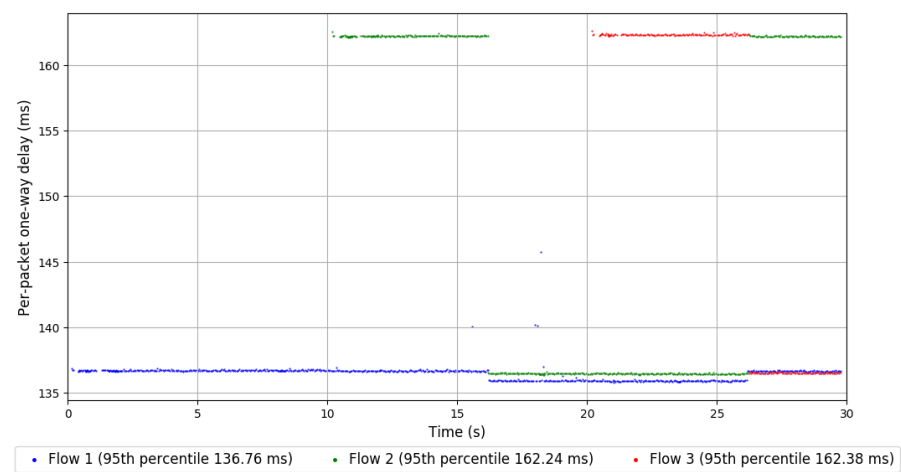
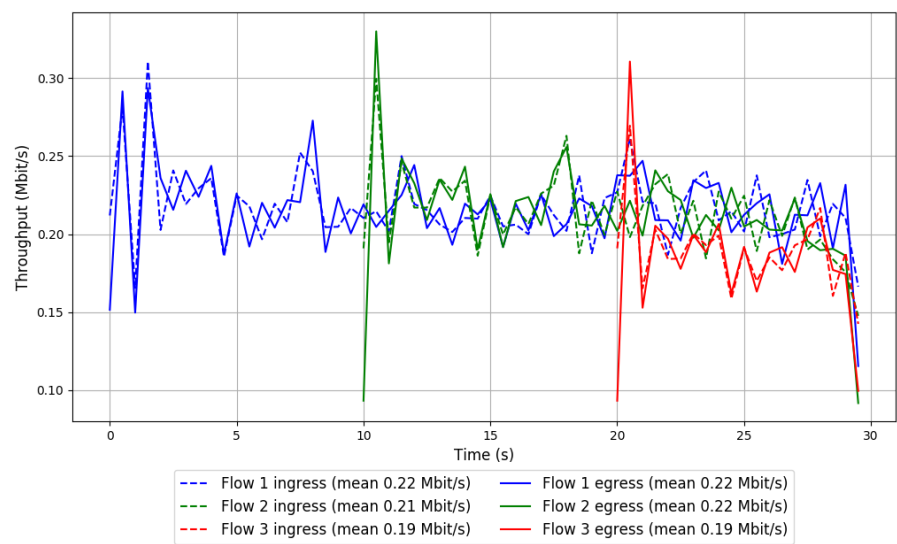
-- Flow 3:

Average throughput: 0.19 Mbit/s

95th percentile per-packet one-way delay: 162.375 ms

Loss rate: 2.63%

Run 4: Report of SReAM — Data Link



Run 5: Statistics of SReAM

Start at: 2018-03-01 08:25:08

End at: 2018-03-01 08:25:38

Below is generated by plot.py at 2018-03-01 14:15:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 162.724 ms

Loss rate: 1.31%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 140.572 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 162.763 ms

Loss rate: 1.44%

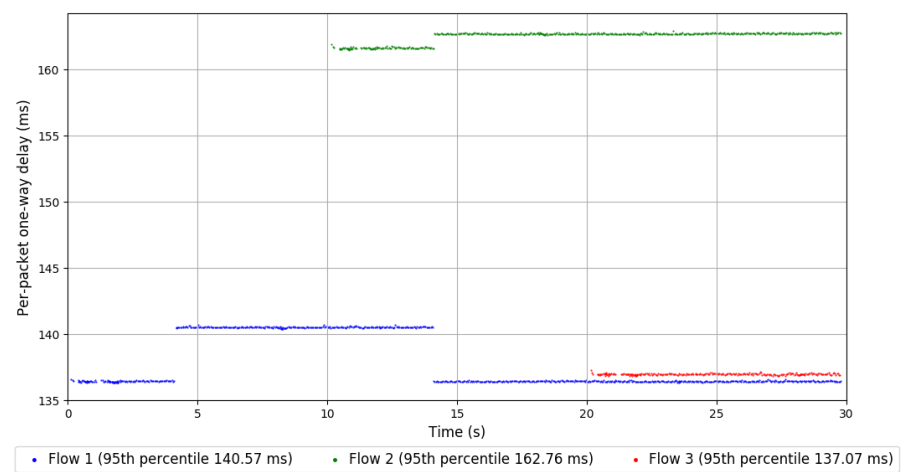
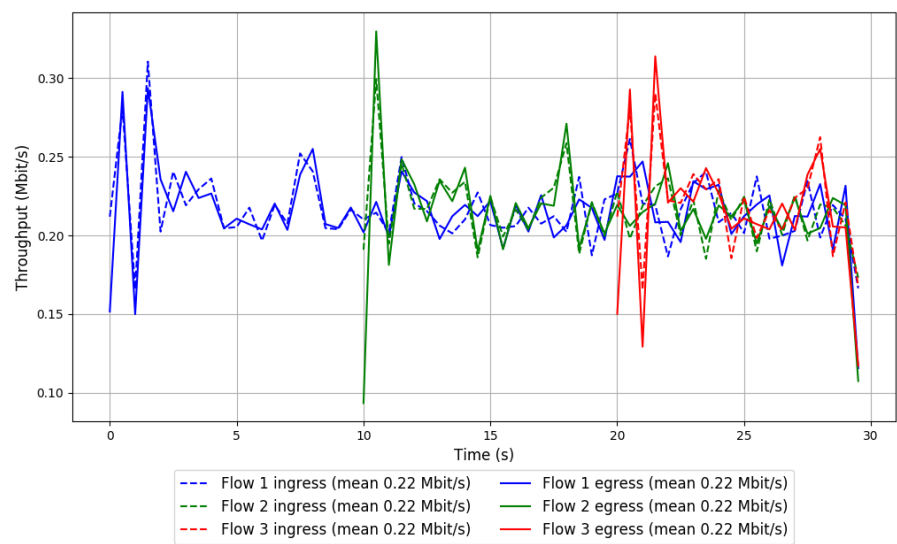
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 137.074 ms

Loss rate: 2.63%

Run 5: Report of SCRaM — Data Link



Run 6: Statistics of SReAM

Start at: 2018-03-01 08:45:45

End at: 2018-03-01 08:46:15

Below is generated by plot.py at 2018-03-01 14:15:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 137.071 ms

Loss rate: 1.37%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 137.100 ms

Loss rate: 0.90%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 136.720 ms

Loss rate: 1.42%

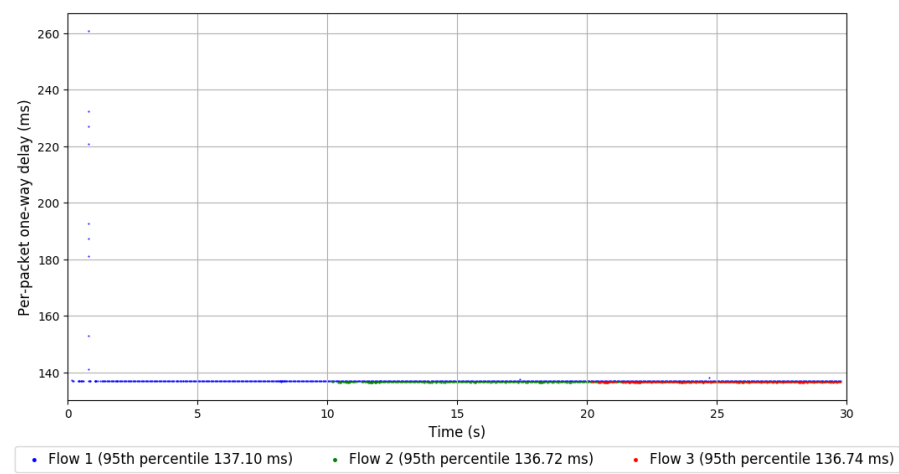
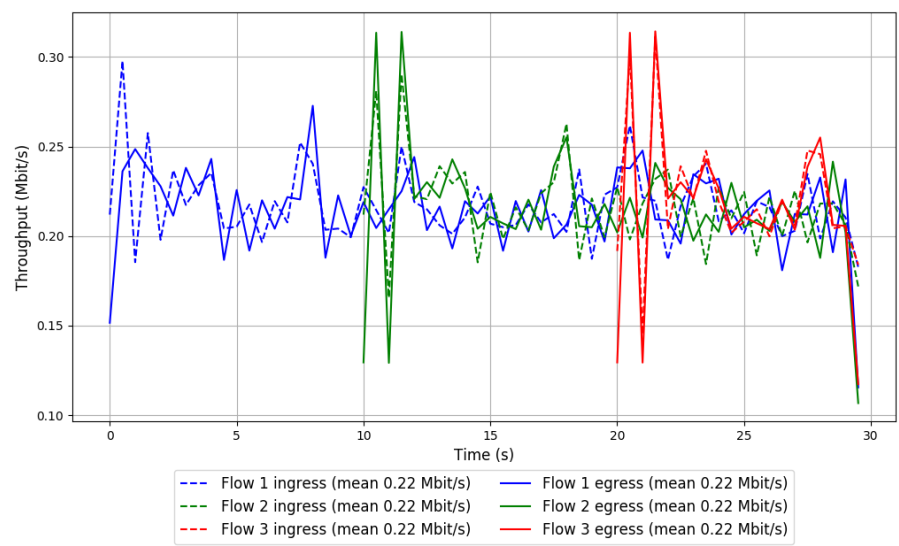
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 136.735 ms

Loss rate: 2.63%

Run 6: Report of SReAM — Data Link

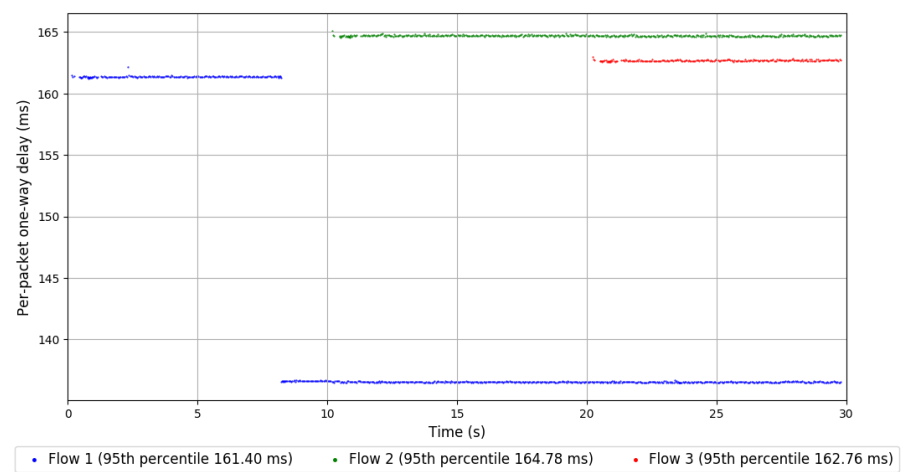
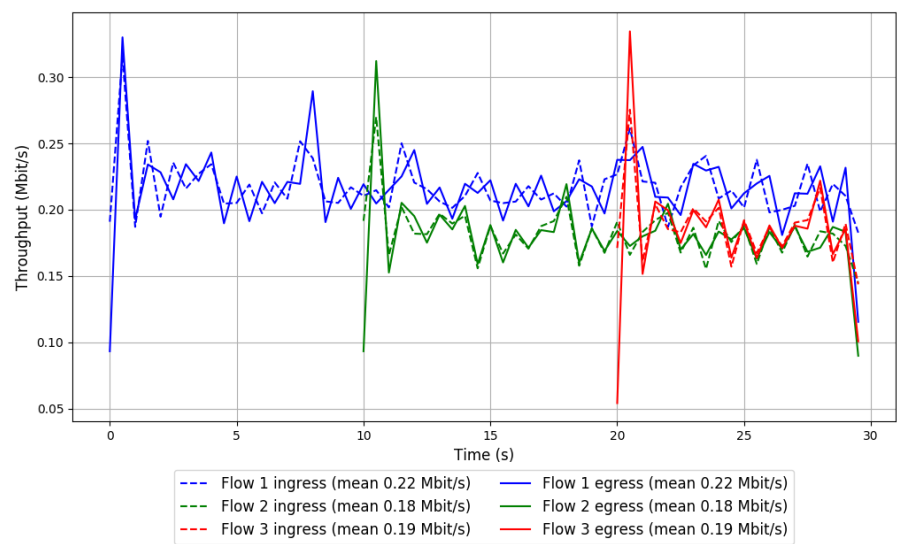


```
Run 7: Statistics of SCReAM

Start at: 2018-03-01 09:07:14
End at: 2018-03-01 09:07:44

# Below is generated by plot.py at 2018-03-01 14:15:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 164.742 ms
Loss rate: 1.34%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 161.395 ms
Loss rate: 0.90%
-- Flow 2:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 164.783 ms
Loss rate: 1.43%
-- Flow 3:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 162.764 ms
Loss rate: 2.69%
```


Run 7: Report of SReAM — Data Link



Run 8: Statistics of SReAM

Start at: 2018-03-01 09:28:24

End at: 2018-03-01 09:28:54

Below is generated by plot.py at 2018-03-01 14:15:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.42 Mbit/s

95th percentile per-packet one-way delay: 165.915 ms

Loss rate: 1.27%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 161.462 ms

Loss rate: 0.91%

-- Flow 2:

Average throughput: 0.19 Mbit/s

95th percentile per-packet one-way delay: 165.945 ms

Loss rate: 1.08%

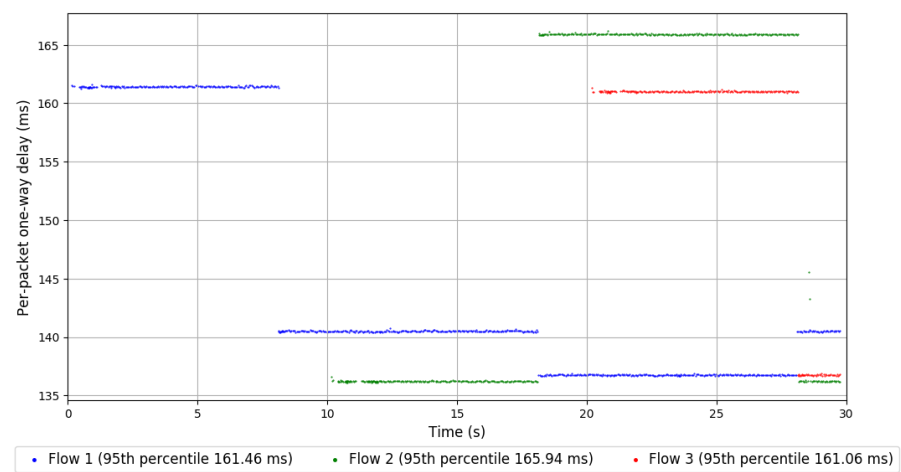
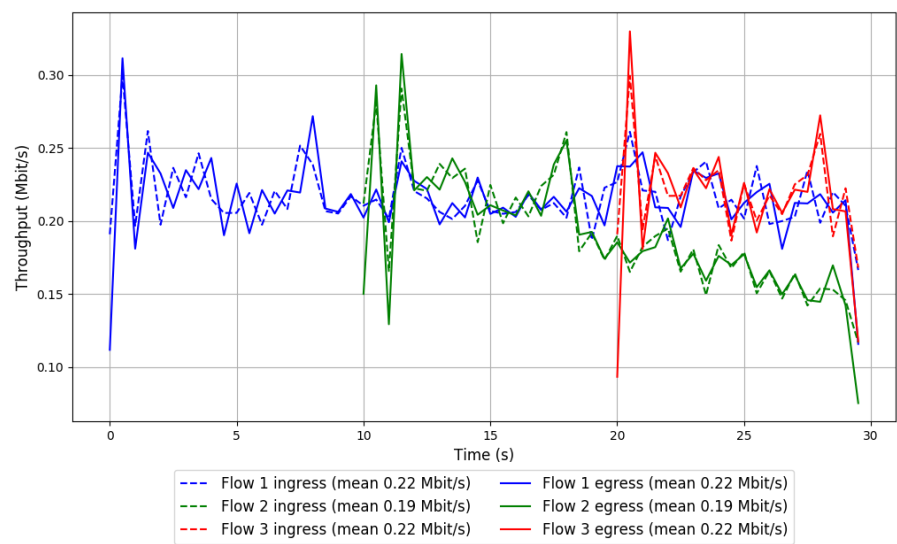
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 161.064 ms

Loss rate: 2.65%

Run 8: Report of SCRaM — Data Link



Run 9: Statistics of SReAM

Start at: 2018-03-01 09:49:20

End at: 2018-03-01 09:49:50

Below is generated by plot.py at 2018-03-01 14:15:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 140.929 ms

Loss rate: 1.37%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 140.955 ms

Loss rate: 0.90%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 140.813 ms

Loss rate: 1.42%

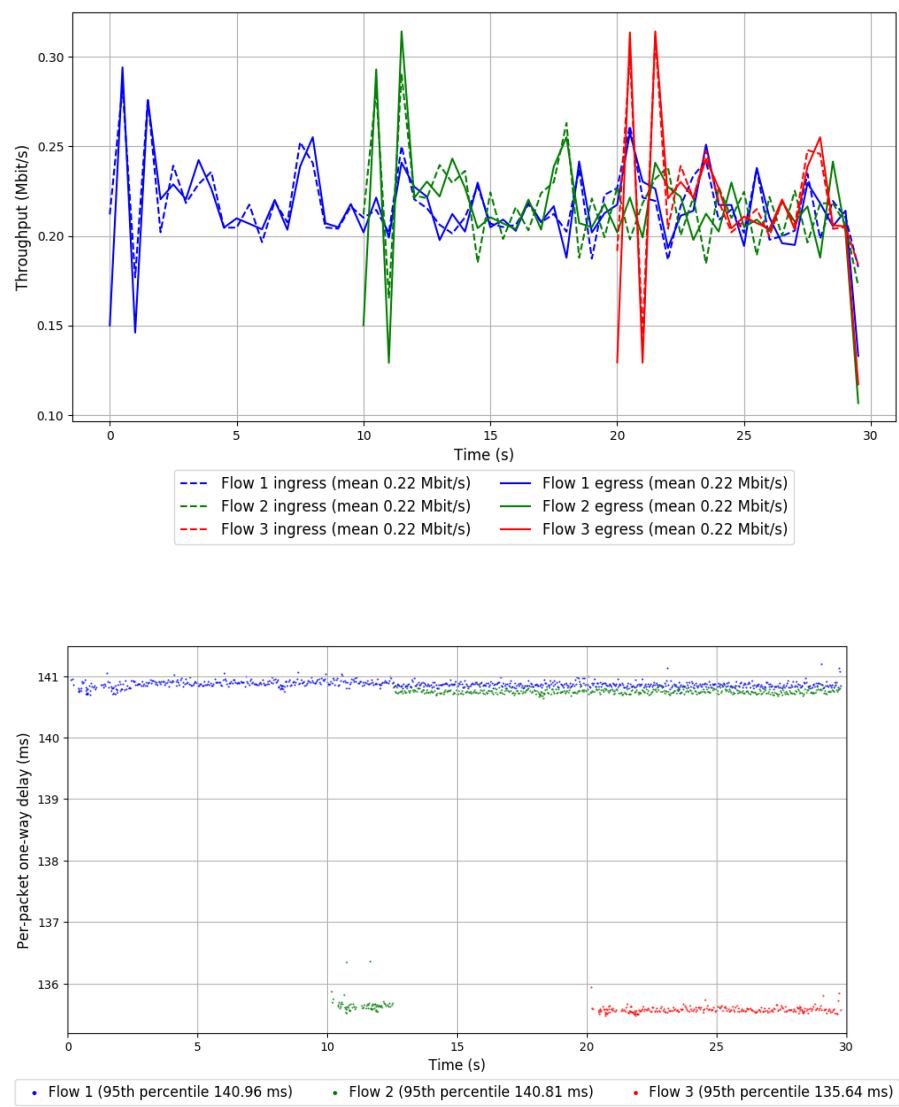
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 135.639 ms

Loss rate: 2.63%

Run 9: Report of SReAM — Data Link

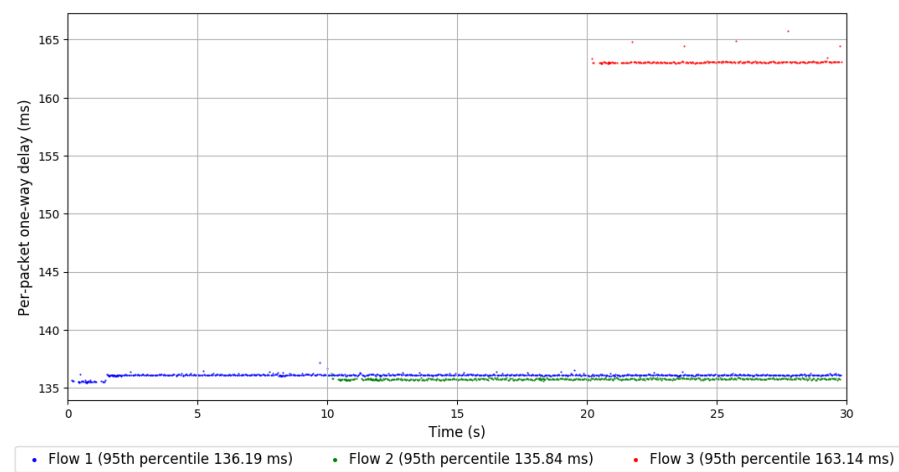
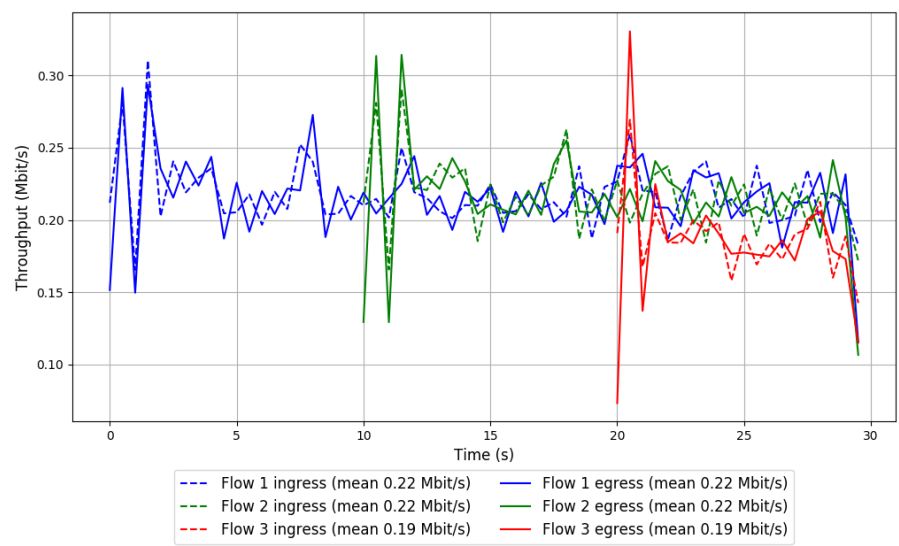


```
Run 10: Statistics of SReAM

Start at: 2018-03-01 10:10:31
End at: 2018-03-01 10:11:01

# Below is generated by plot.py at 2018-03-01 14:15:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.42 Mbit/s
95th percentile per-packet one-way delay: 163.063 ms
Loss rate: 1.33%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.194 ms
Loss rate: 0.89%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 135.838 ms
Loss rate: 1.42%
-- Flow 3:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 163.138 ms
Loss rate: 2.64%
```

Run 10: Report of SReAM — Data Link

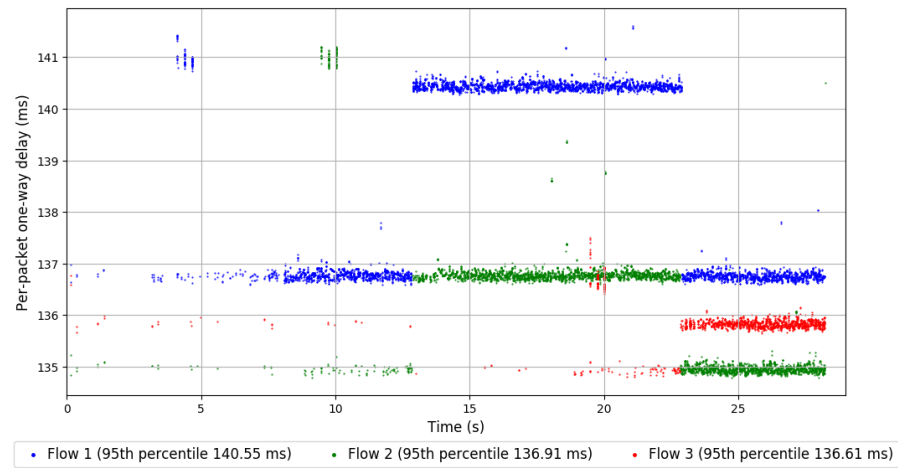
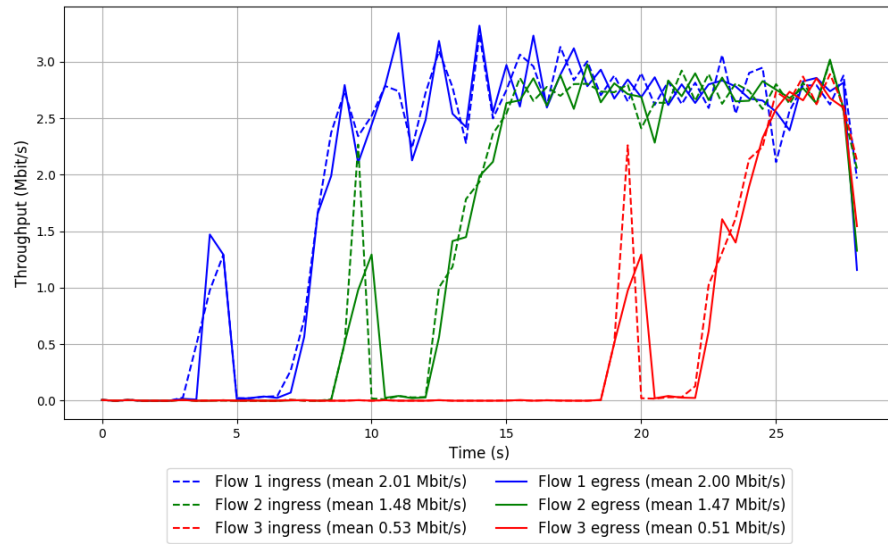


```
Run 1: Statistics of WebRTC media

Start at: 2018-03-01 06:56:38
End at: 2018-03-01 06:57:08

# Below is generated by plot.py at 2018-03-01 14:15:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.98 Mbit/s
95th percentile per-packet one-way delay: 140.516 ms
Loss rate: 1.92%
-- Flow 1:
Average throughput: 2.00 Mbit/s
95th percentile per-packet one-way delay: 140.553 ms
Loss rate: 1.35%
-- Flow 2:
Average throughput: 1.47 Mbit/s
95th percentile per-packet one-way delay: 136.911 ms
Loss rate: 1.65%
-- Flow 3:
Average throughput: 0.51 Mbit/s
95th percentile per-packet one-way delay: 136.608 ms
Loss rate: 4.89%
```


Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2018-03-01 07:16:56

End at: 2018-03-01 07:17:26

Below is generated by plot.py at 2018-03-01 14:15:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.71 Mbit/s

95th percentile per-packet one-way delay: 140.871 ms

Loss rate: 1.78%

-- Flow 1:

Average throughput: 2.05 Mbit/s

95th percentile per-packet one-way delay: 135.856 ms

Loss rate: 1.05%

-- Flow 2:

Average throughput: 1.26 Mbit/s

95th percentile per-packet one-way delay: 140.921 ms

Loss rate: 1.93%

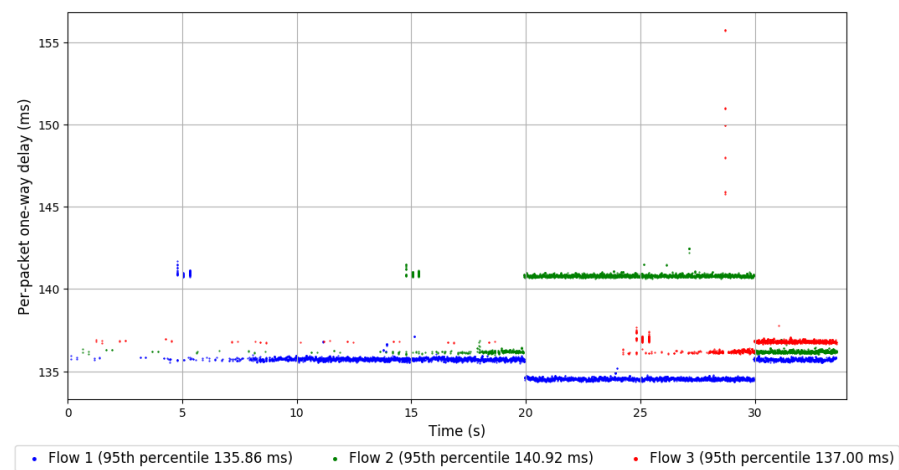
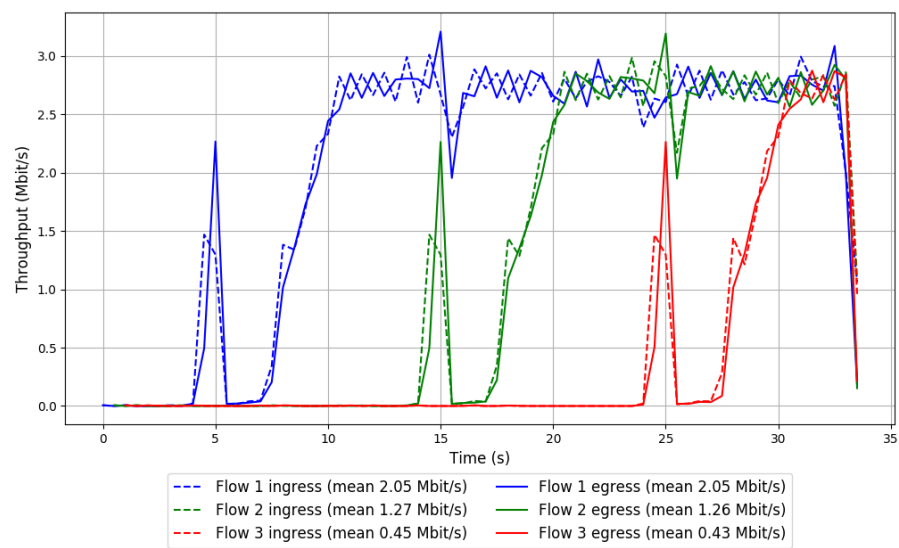
-- Flow 3:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 137.000 ms

Loss rate: 4.81%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2018-03-01 07:37:31

End at: 2018-03-01 07:38:01

Below is generated by plot.py at 2018-03-01 14:15:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.71 Mbit/s

95th percentile per-packet one-way delay: 140.895 ms

Loss rate: 1.89%

-- Flow 1:

Average throughput: 2.05 Mbit/s

95th percentile per-packet one-way delay: 135.494 ms

Loss rate: 1.06%

-- Flow 2:

Average throughput: 1.26 Mbit/s

95th percentile per-packet one-way delay: 140.936 ms

Loss rate: 1.93%

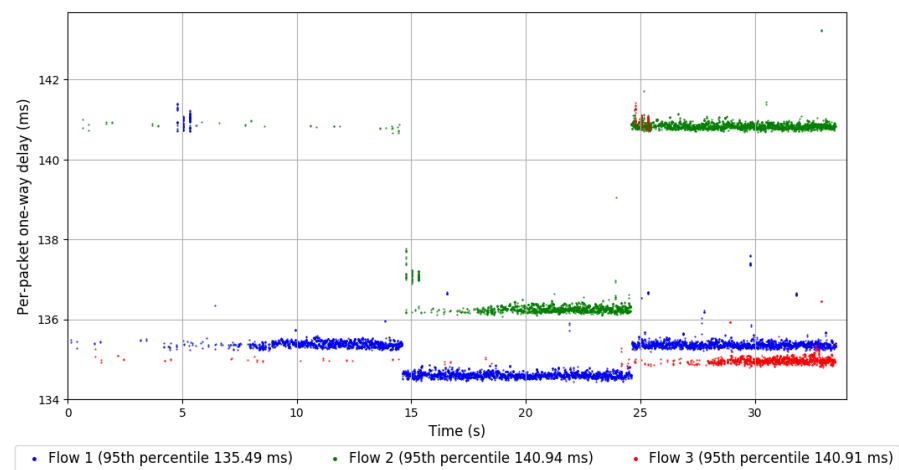
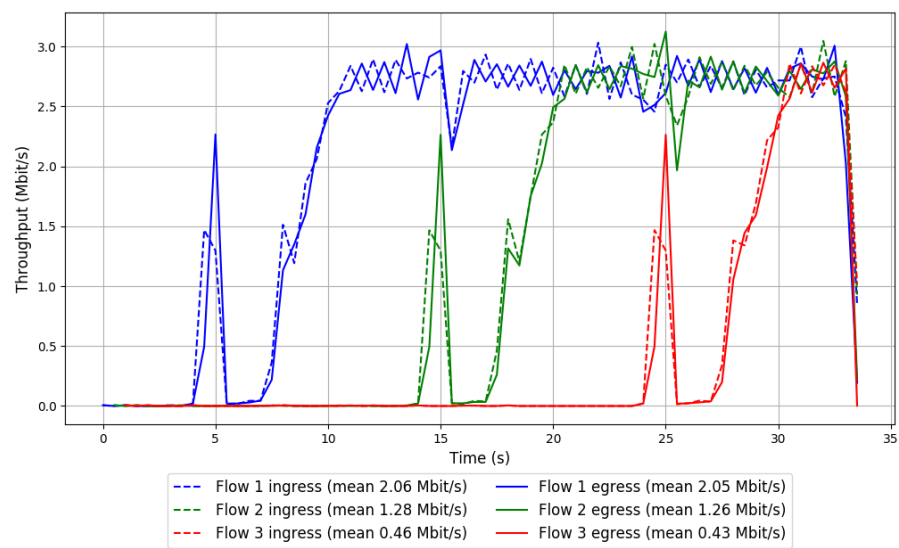
-- Flow 3:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 140.908 ms

Loss rate: 5.68%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2018-03-01 07:58:06

End at: 2018-03-01 07:58:36

Below is generated by plot.py at 2018-03-01 14:15:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.71 Mbit/s

95th percentile per-packet one-way delay: 136.079 ms

Loss rate: 1.79%

-- Flow 1:

Average throughput: 2.05 Mbit/s

95th percentile per-packet one-way delay: 135.348 ms

Loss rate: 1.06%

-- Flow 2:

Average throughput: 1.26 Mbit/s

95th percentile per-packet one-way delay: 140.477 ms

Loss rate: 1.67%

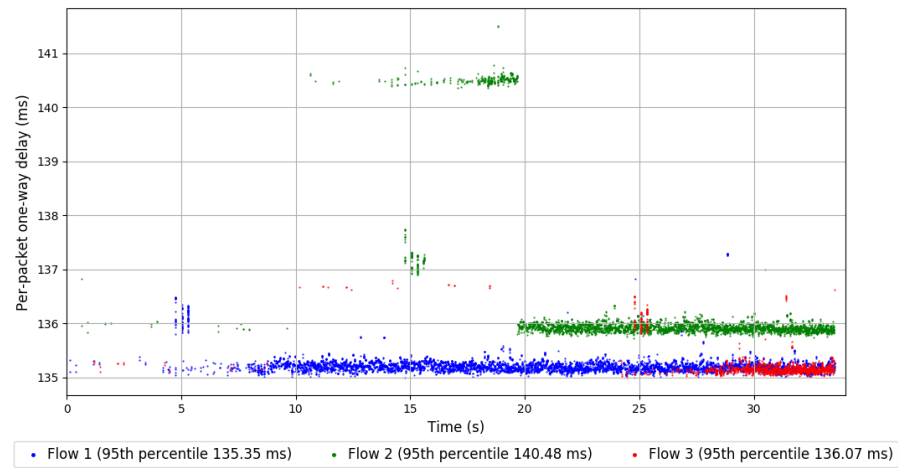
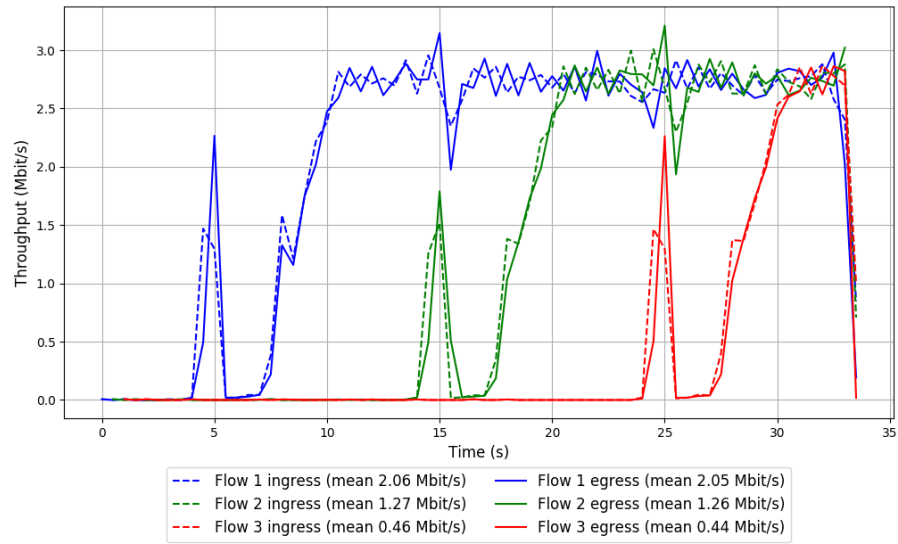
-- Flow 3:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 136.073 ms

Loss rate: 5.58%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-03-01 08:19:17

End at: 2018-03-01 08:19:47

Below is generated by plot.py at 2018-03-01 14:15:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.51 Mbit/s

95th percentile per-packet one-way delay: 164.373 ms

Loss rate: 1.95%

-- Flow 1:

Average throughput: 2.04 Mbit/s

95th percentile per-packet one-way delay: 137.027 ms

Loss rate: 1.03%

-- Flow 2:

Average throughput: 1.07 Mbit/s

95th percentile per-packet one-way delay: 164.440 ms

Loss rate: 2.24%

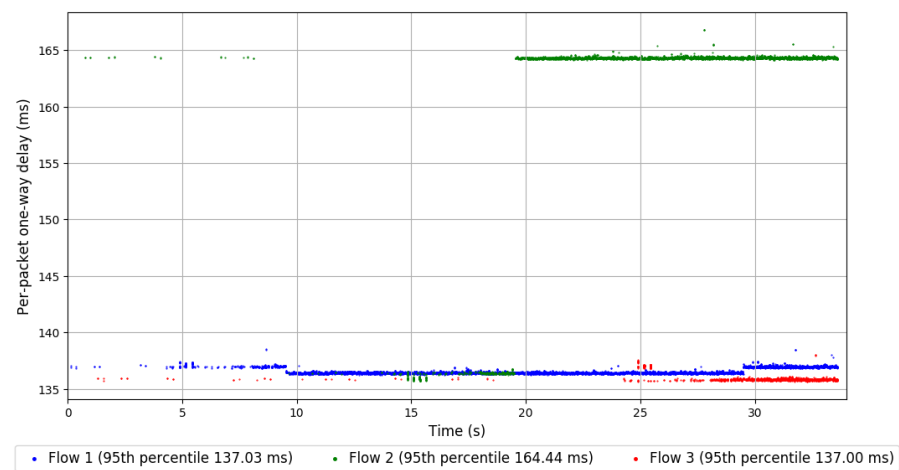
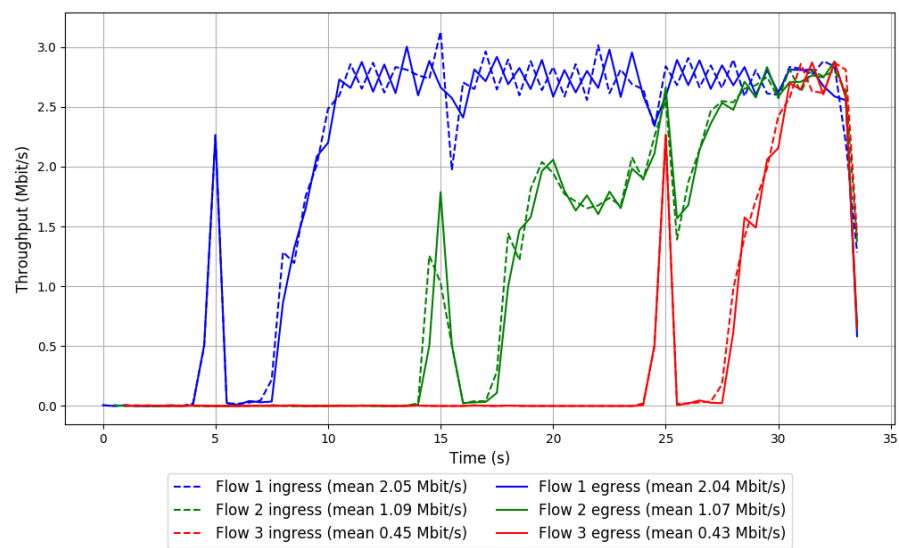
-- Flow 3:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 137.002 ms

Loss rate: 5.57%

Run 5: Report of WebRTC media — Data Link



Run 6: Statistics of WebRTC media

Start at: 2018-03-01 08:39:57

End at: 2018-03-01 08:40:27

Below is generated by plot.py at 2018-03-01 14:15:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.60 Mbit/s

95th percentile per-packet one-way delay: 162.768 ms

Loss rate: 2.02%

-- Flow 1:

Average throughput: 1.98 Mbit/s

95th percentile per-packet one-way delay: 162.800 ms

Loss rate: 1.26%

-- Flow 2:

Average throughput: 1.25 Mbit/s

95th percentile per-packet one-way delay: 137.091 ms

Loss rate: 1.89%

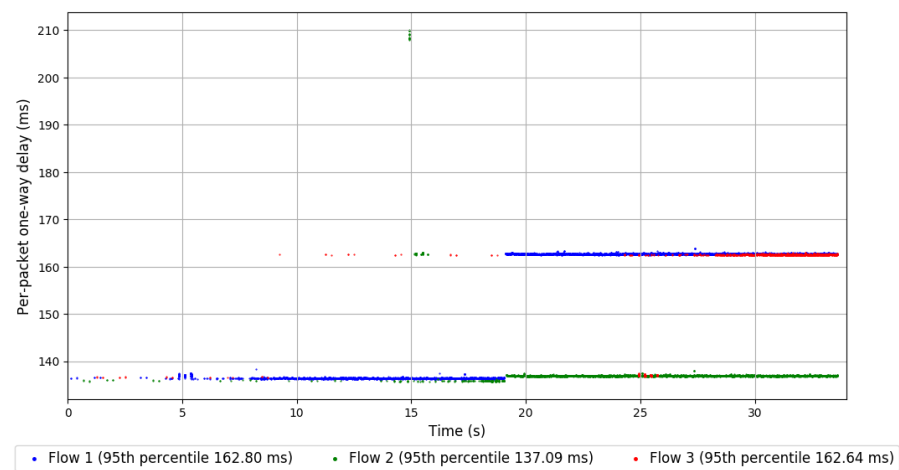
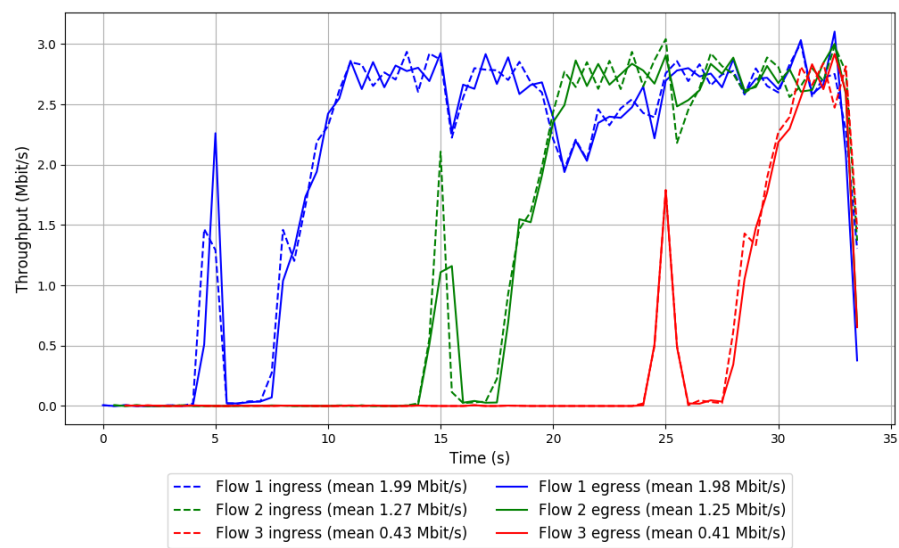
-- Flow 3:

Average throughput: 0.41 Mbit/s

95th percentile per-packet one-way delay: 162.642 ms

Loss rate: 6.05%

Run 6: Report of WebRTC media — Data Link



Run 7: Statistics of WebRTC media

Start at: 2018-03-01 09:01:22

End at: 2018-03-01 09:01:52

Below is generated by plot.py at 2018-03-01 14:15:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.68 Mbit/s

95th percentile per-packet one-way delay: 161.005 ms

Loss rate: 1.78%

-- Flow 1:

Average throughput: 2.03 Mbit/s

95th percentile per-packet one-way delay: 161.052 ms

Loss rate: 0.97%

-- Flow 2:

Average throughput: 1.26 Mbit/s

95th percentile per-packet one-way delay: 137.068 ms

Loss rate: 1.72%

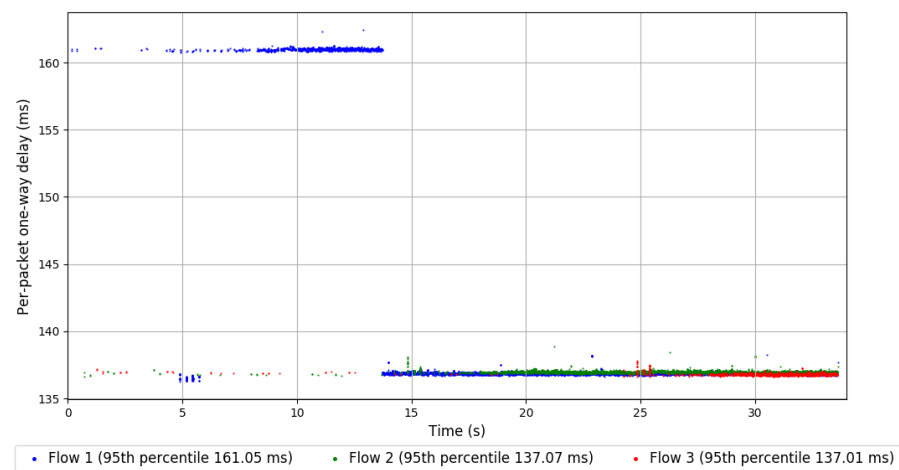
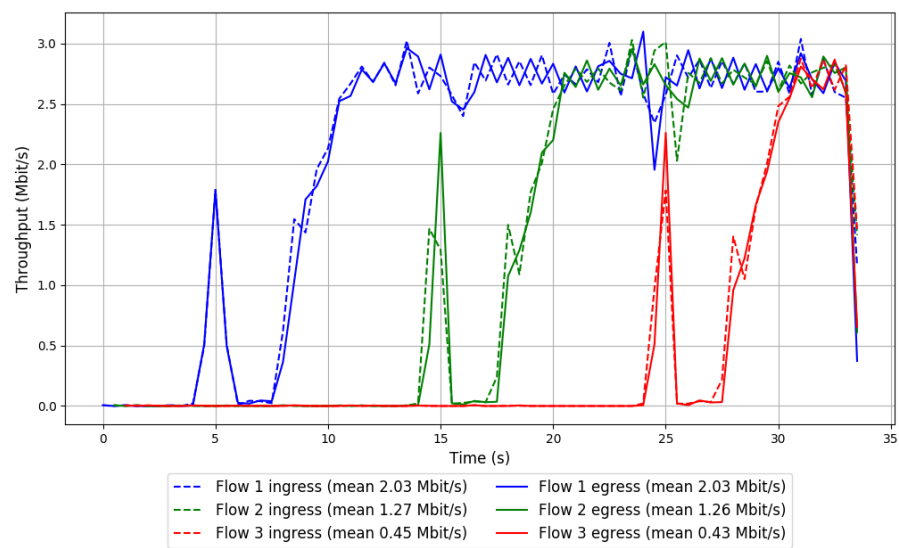
-- Flow 3:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 137.015 ms

Loss rate: 5.66%

Run 7: Report of WebRTC media — Data Link



Run 8: Statistics of WebRTC media

Start at: 2018-03-01 09:22:33

End at: 2018-03-01 09:23:03

Below is generated by plot.py at 2018-03-01 14:15:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.68 Mbit/s

95th percentile per-packet one-way delay: 163.235 ms

Loss rate: 1.88%

-- Flow 1:

Average throughput: 2.05 Mbit/s

95th percentile per-packet one-way delay: 136.902 ms

Loss rate: 1.05%

-- Flow 2:

Average throughput: 1.26 Mbit/s

95th percentile per-packet one-way delay: 136.068 ms

Loss rate: 2.01%

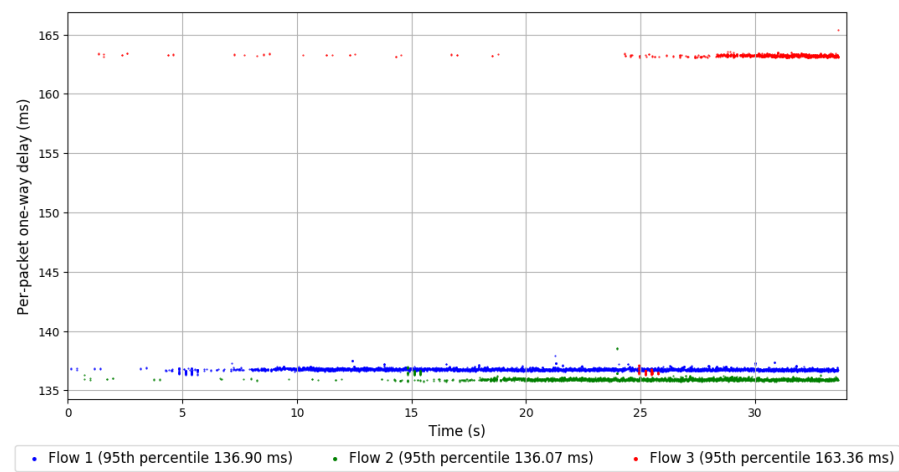
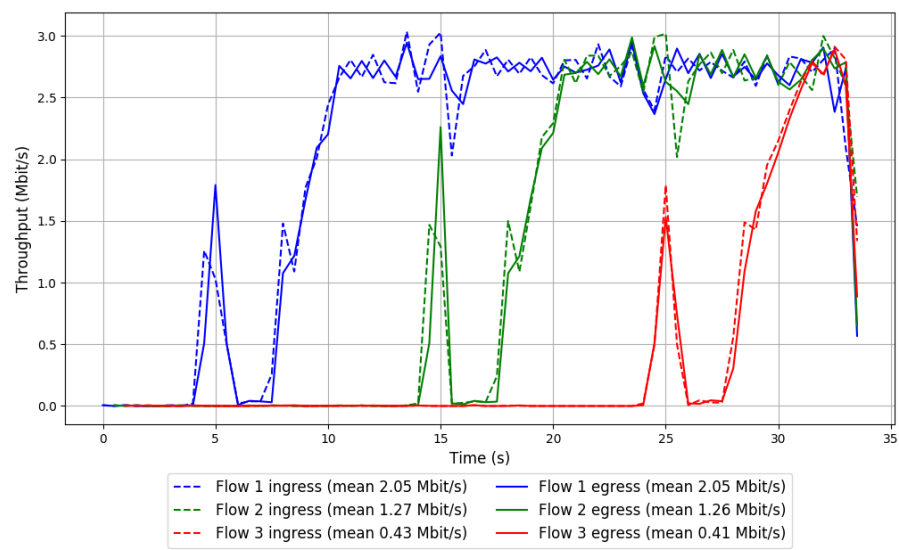
-- Flow 3:

Average throughput: 0.41 Mbit/s

95th percentile per-packet one-way delay: 163.363 ms

Loss rate: 5.56%

Run 8: Report of WebRTC media — Data Link



Run 9: Statistics of WebRTC media

Start at: 2018-03-01 09:43:42

End at: 2018-03-01 09:44:12

Below is generated by plot.py at 2018-03-01 14:15:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.72 Mbit/s

95th percentile per-packet one-way delay: 140.500 ms

Loss rate: 1.91%

-- Flow 1:

Average throughput: 2.05 Mbit/s

95th percentile per-packet one-way delay: 140.530 ms

Loss rate: 1.16%

-- Flow 2:

Average throughput: 1.27 Mbit/s

95th percentile per-packet one-way delay: 135.752 ms

Loss rate: 1.86%

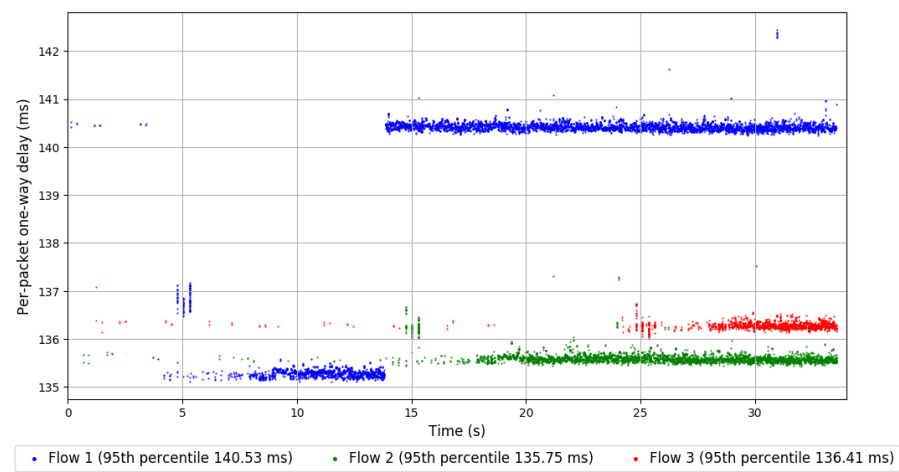
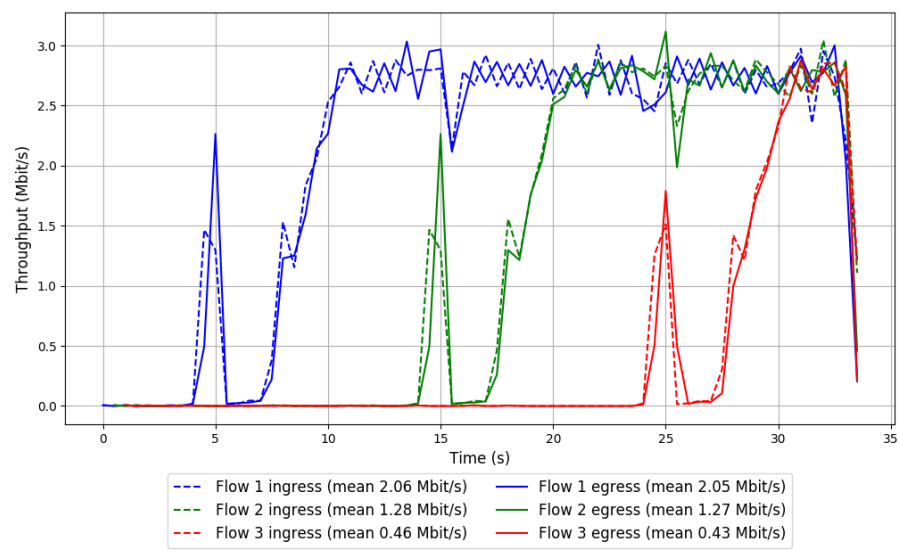
-- Flow 3:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 136.412 ms

Loss rate: 5.60%

Run 9: Report of WebRTC media — Data Link



Run 10: Statistics of WebRTC media

Start at: 2018-03-01 10:04:50

End at: 2018-03-01 10:05:20

Below is generated by plot.py at 2018-03-01 14:15:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.71 Mbit/s

95th percentile per-packet one-way delay: 140.849 ms

Loss rate: 1.78%

-- Flow 1:

Average throughput: 2.05 Mbit/s

95th percentile per-packet one-way delay: 140.881 ms

Loss rate: 1.02%

-- Flow 2:

Average throughput: 1.26 Mbit/s

95th percentile per-packet one-way delay: 136.116 ms

Loss rate: 1.90%

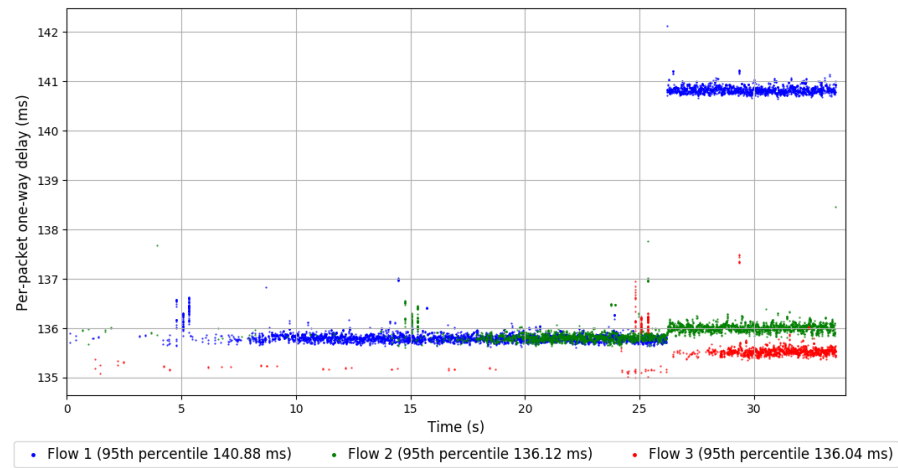
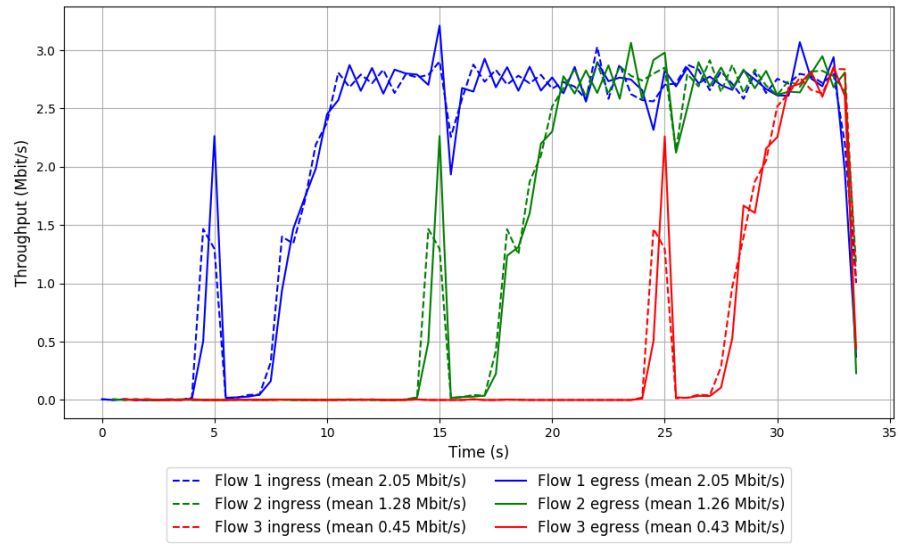
-- Flow 3:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 136.036 ms

Loss rate: 4.96%

Run 10: Report of WebRTC media — Data Link

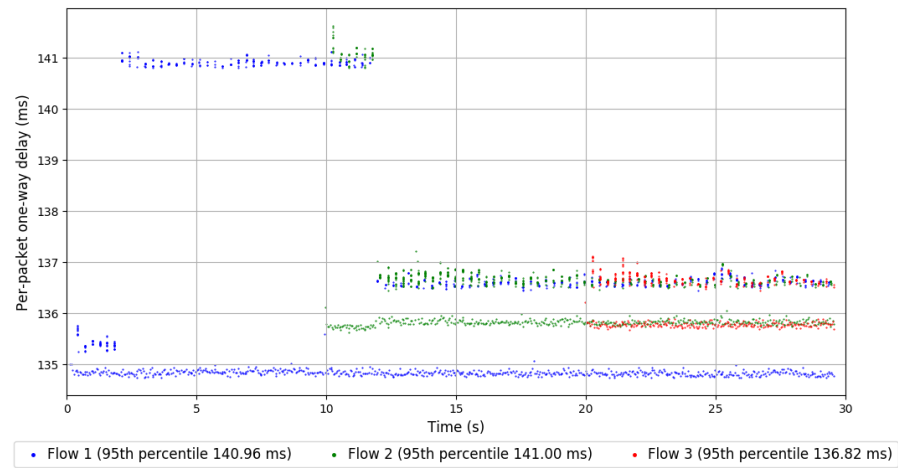
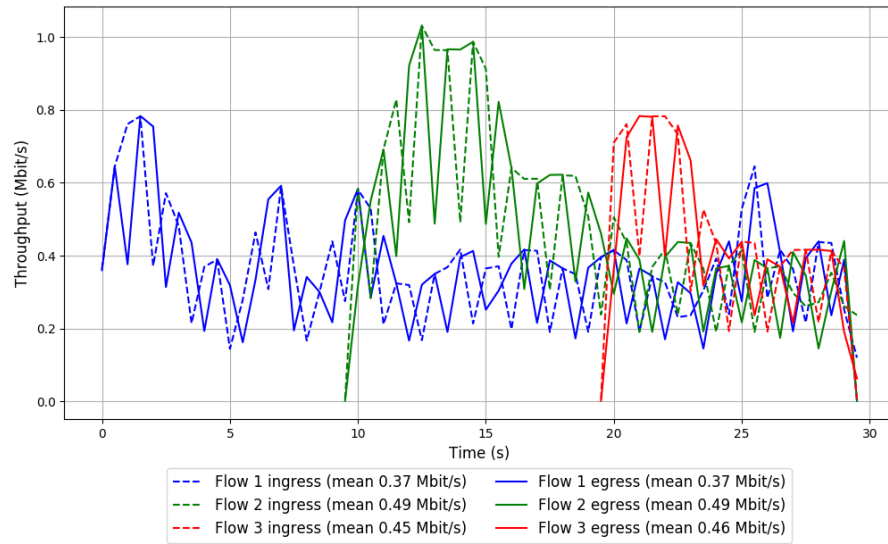


```
Run 1: Statistics of Sprout

Start at: 2018-03-01 06:59:30
End at: 2018-03-01 07:00:00

# Below is generated by plot.py at 2018-03-01 14:15:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.84 Mbit/s
95th percentile per-packet one-way delay: 140.946 ms
Loss rate: 1.09%
-- Flow 1:
Average throughput: 0.37 Mbit/s
95th percentile per-packet one-way delay: 140.957 ms
Loss rate: 0.84%
-- Flow 2:
Average throughput: 0.49 Mbit/s
95th percentile per-packet one-way delay: 141.001 ms
Loss rate: 1.23%
-- Flow 3:
Average throughput: 0.46 Mbit/s
95th percentile per-packet one-way delay: 136.823 ms
Loss rate: 1.38%
```

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2018-03-01 07:19:47

End at: 2018-03-01 07:20:17

Below is generated by plot.py at 2018-03-01 14:15:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.19 Mbit/s

95th percentile per-packet one-way delay: 141.113 ms

Loss rate: 2.56%

-- Flow 1:

Average throughput: 0.49 Mbit/s

95th percentile per-packet one-way delay: 141.074 ms

Loss rate: 2.41%

-- Flow 2:

Average throughput: 0.65 Mbit/s

95th percentile per-packet one-way delay: 141.165 ms

Loss rate: 1.33%

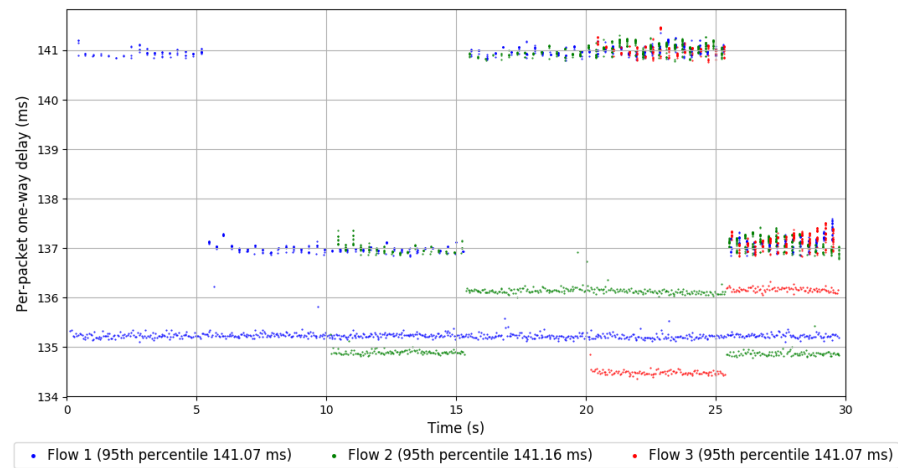
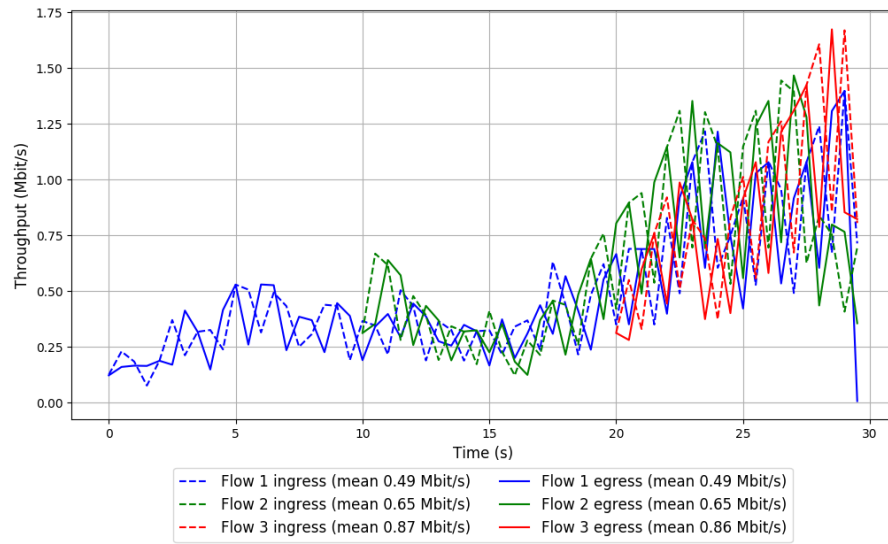
-- Flow 3:

Average throughput: 0.86 Mbit/s

95th percentile per-packet one-way delay: 141.070 ms

Loss rate: 4.67%

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2018-03-01 07:40:21

End at: 2018-03-01 07:40:51

Below is generated by plot.py at 2018-03-01 14:15:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.71 Mbit/s

95th percentile per-packet one-way delay: 162.613 ms

Loss rate: 0.58%

-- Flow 1:

Average throughput: 0.37 Mbit/s

95th percentile per-packet one-way delay: 137.206 ms

Loss rate: 0.96%

-- Flow 2:

Average throughput: 0.39 Mbit/s

95th percentile per-packet one-way delay: 137.212 ms

Loss rate: 0.05%

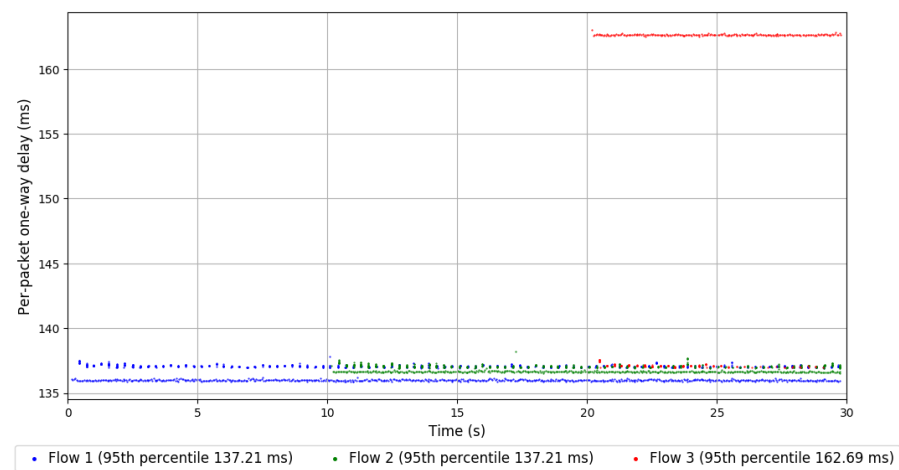
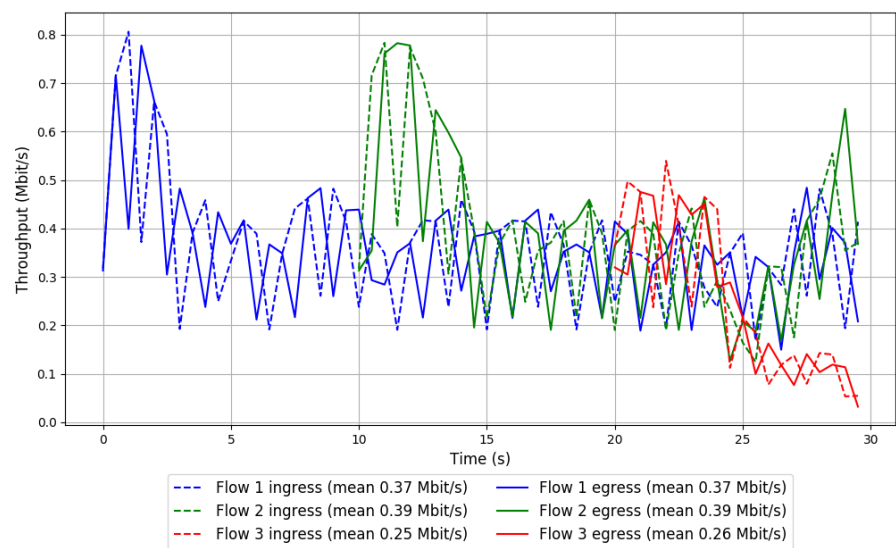
-- Flow 3:

Average throughput: 0.26 Mbit/s

95th percentile per-packet one-way delay: 162.686 ms

Loss rate: 0.55%

Run 3: Report of Sprout — Data Link



Run 4: Statistics of Sprout

Start at: 2018-03-01 08:01:00

End at: 2018-03-01 08:01:30

Below is generated by plot.py at 2018-03-01 14:15:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.65 Mbit/s

95th percentile per-packet one-way delay: 162.166 ms

Loss rate: 1.59%

-- Flow 1:

Average throughput: 0.36 Mbit/s

95th percentile per-packet one-way delay: 137.142 ms

Loss rate: 0.97%

-- Flow 2:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 162.222 ms

Loss rate: 2.48%

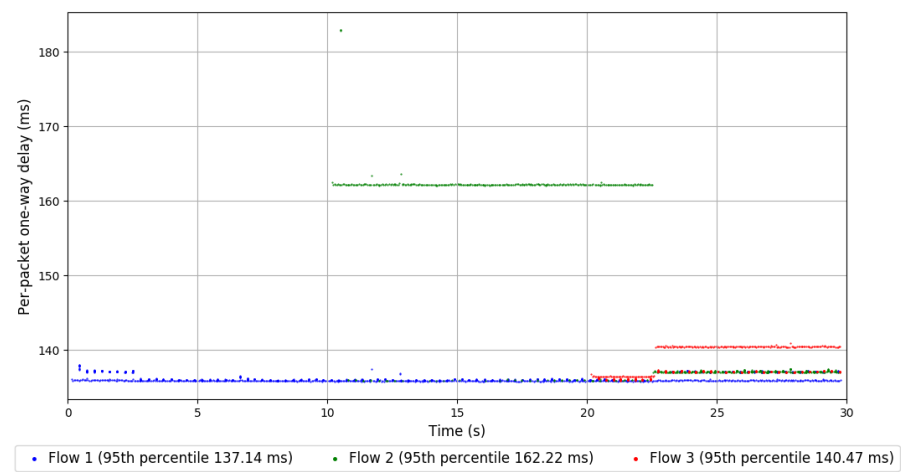
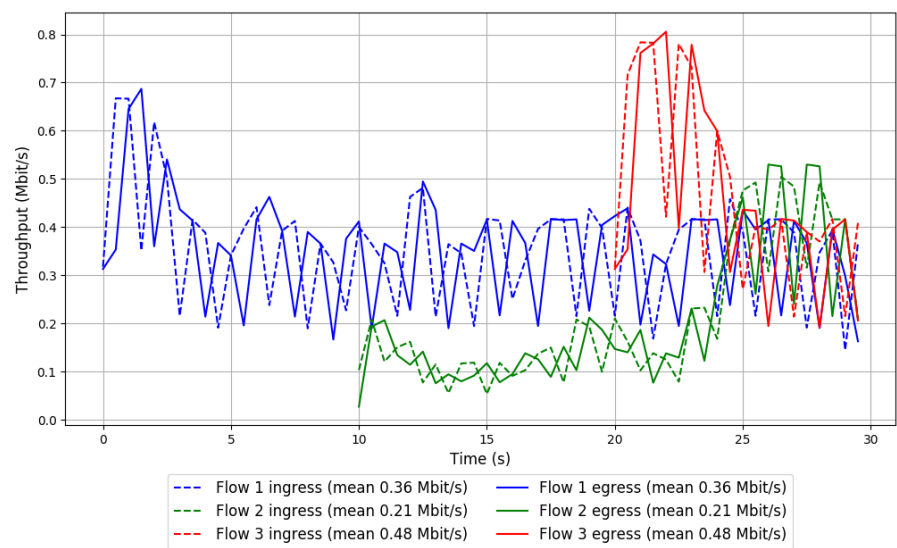
-- Flow 3:

Average throughput: 0.48 Mbit/s

95th percentile per-packet one-way delay: 140.474 ms

Loss rate: 2.19%

Run 4: Report of Sprout — Data Link



Run 5: Statistics of Sprout

Start at: 2018-03-01 08:22:16

End at: 2018-03-01 08:22:46

Below is generated by plot.py at 2018-03-01 14:15:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.61 Mbit/s

95th percentile per-packet one-way delay: 162.739 ms

Loss rate: 1.71%

-- Flow 1:

Average throughput: 0.23 Mbit/s

95th percentile per-packet one-way delay: 162.784 ms

Loss rate: 1.32%

-- Flow 2:

Average throughput: 0.38 Mbit/s

95th percentile per-packet one-way delay: 162.257 ms

Loss rate: 1.43%

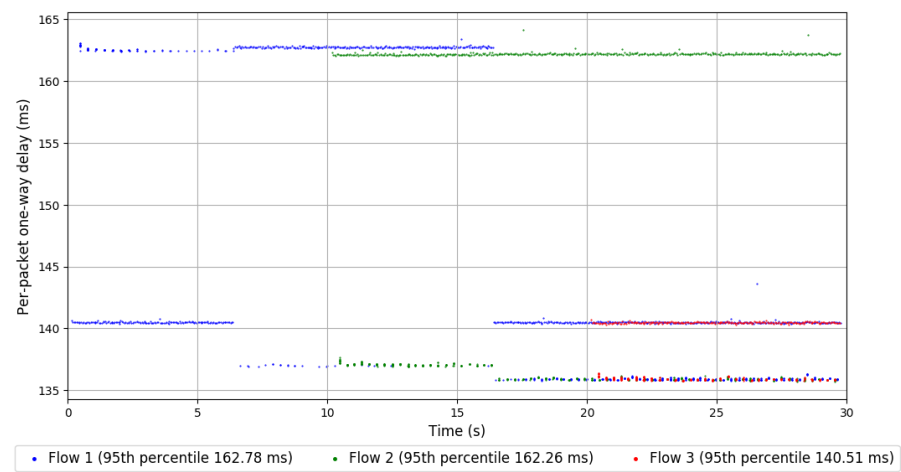
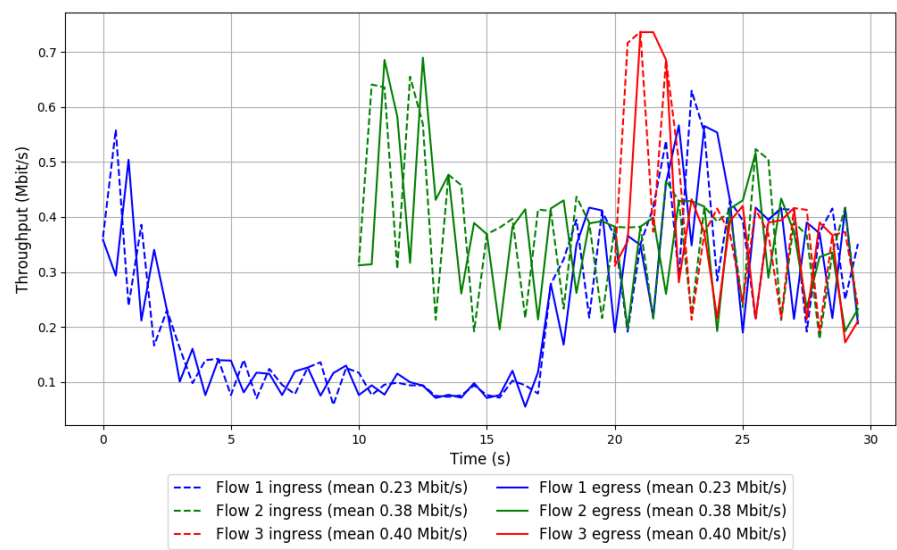
-- Flow 3:

Average throughput: 0.40 Mbit/s

95th percentile per-packet one-way delay: 140.515 ms

Loss rate: 2.93%

Run 5: Report of Sprout — Data Link



Run 6: Statistics of Sprout

Start at: 2018-03-01 08:42:55

End at: 2018-03-01 08:43:25

Below is generated by plot.py at 2018-03-01 14:15:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.78 Mbit/s

95th percentile per-packet one-way delay: 162.891 ms

Loss rate: 0.80%

-- Flow 1:

Average throughput: 0.49 Mbit/s

95th percentile per-packet one-way delay: 160.659 ms

Loss rate: 0.33%

-- Flow 2:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 162.970 ms

Loss rate: 0.58%

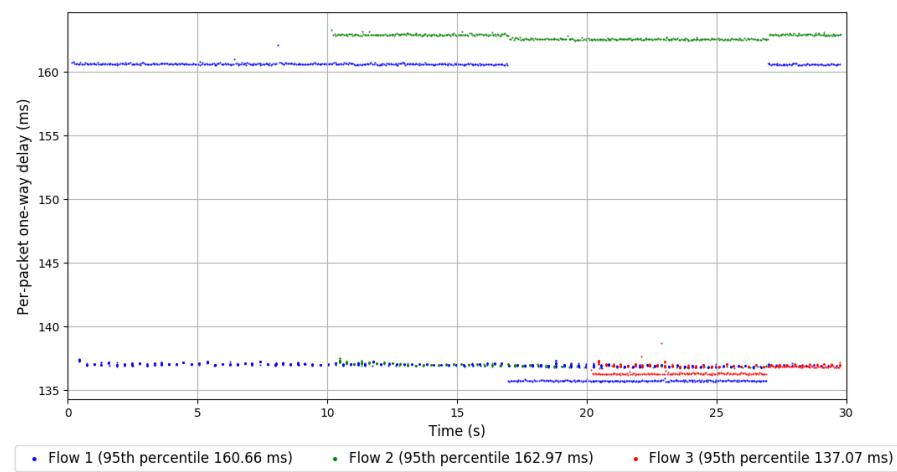
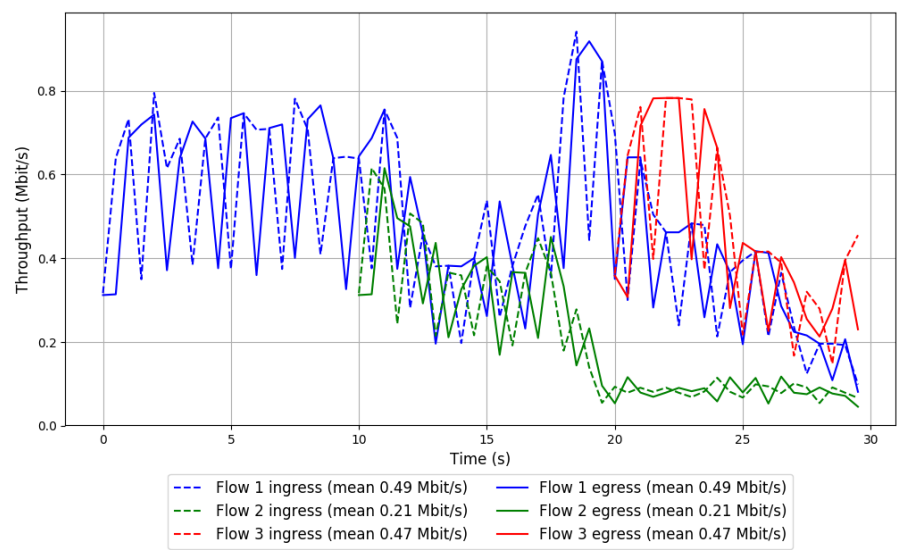
-- Flow 3:

Average throughput: 0.47 Mbit/s

95th percentile per-packet one-way delay: 137.072 ms

Loss rate: 2.48%

Run 6: Report of Sprout — Data Link



Run 7: Statistics of Sprout

Start at: 2018-03-01 09:04:21

End at: 2018-03-01 09:04:51

Below is generated by plot.py at 2018-03-01 14:15:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.78 Mbit/s

95th percentile per-packet one-way delay: 162.512 ms

Loss rate: 1.33%

-- Flow 1:

Average throughput: 0.36 Mbit/s

95th percentile per-packet one-way delay: 136.863 ms

Loss rate: 1.07%

-- Flow 2:

Average throughput: 0.45 Mbit/s

95th percentile per-packet one-way delay: 136.754 ms

Loss rate: 1.05%

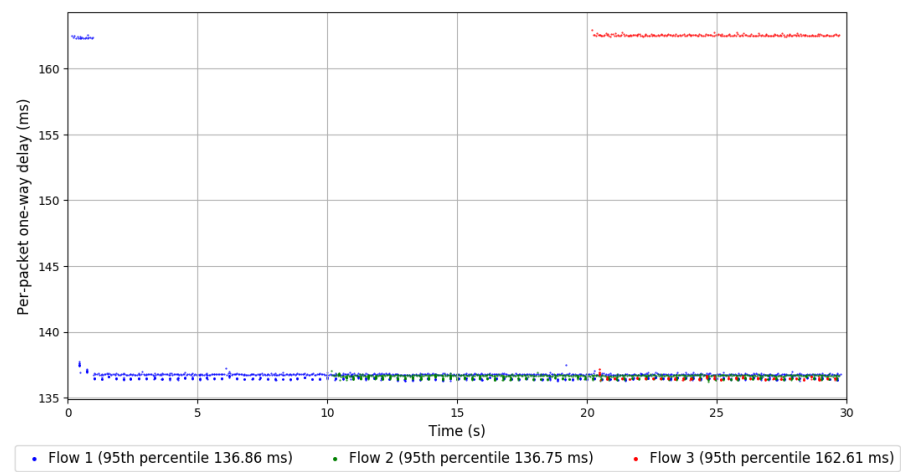
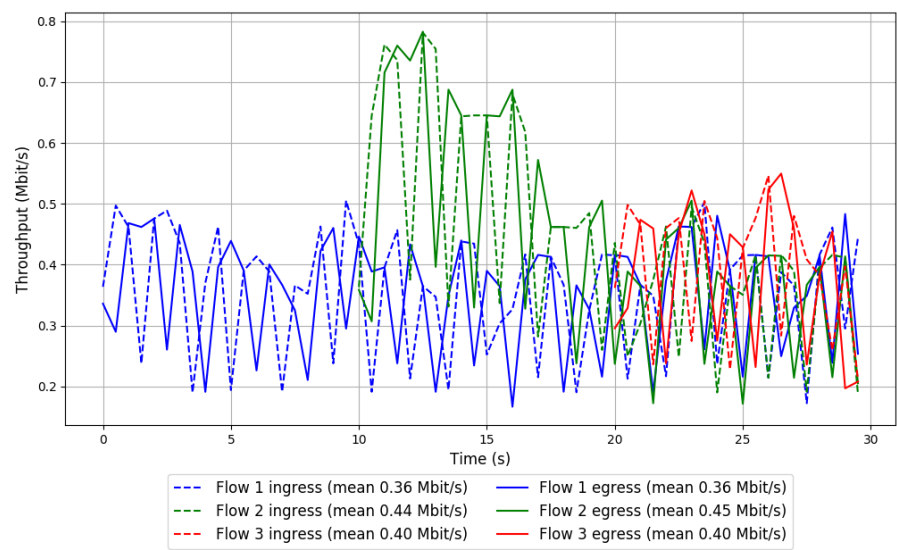
-- Flow 3:

Average throughput: 0.40 Mbit/s

95th percentile per-packet one-way delay: 162.614 ms

Loss rate: 2.66%

Run 7: Report of Sprout — Data Link



Run 8: Statistics of Sprout

Start at: 2018-03-01 09:25:32

End at: 2018-03-01 09:26:02

Below is generated by plot.py at 2018-03-01 14:15:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.65 Mbit/s

95th percentile per-packet one-way delay: 165.341 ms

Loss rate: 1.14%

-- Flow 1:

Average throughput: 0.39 Mbit/s

95th percentile per-packet one-way delay: 140.968 ms

Loss rate: 0.90%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 165.397 ms

Loss rate: 0.55%

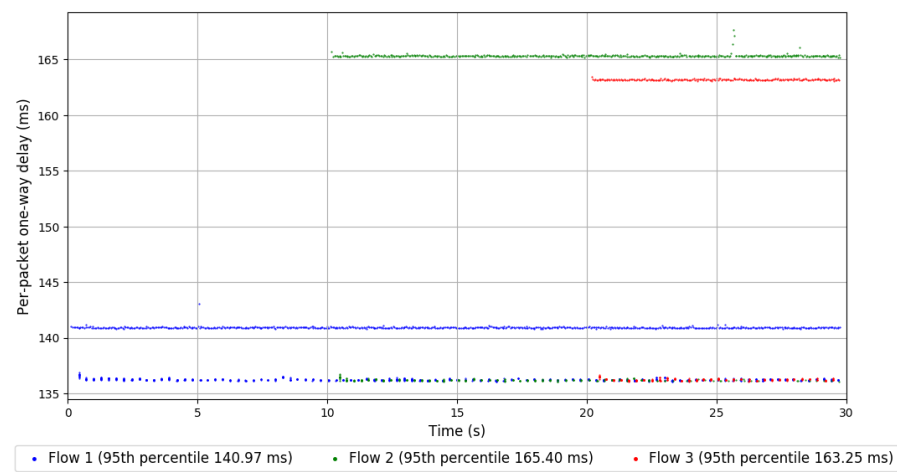
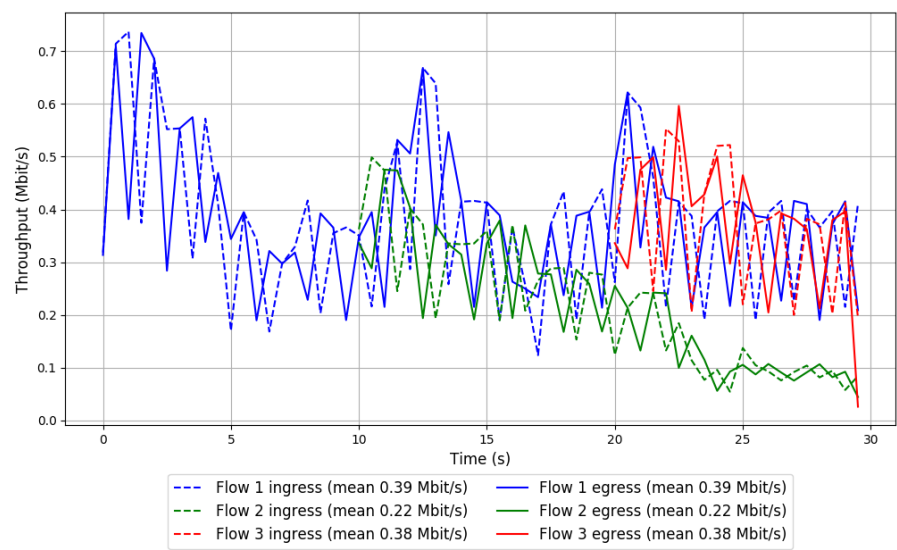
-- Flow 3:

Average throughput: 0.38 Mbit/s

95th percentile per-packet one-way delay: 163.253 ms

Loss rate: 2.55%

Run 8: Report of Sprout — Data Link



Run 9: Statistics of Sprout

Start at: 2018-03-01 09:46:33

End at: 2018-03-01 09:47:03

Below is generated by plot.py at 2018-03-01 14:15:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.78 Mbit/s

95th percentile per-packet one-way delay: 136.796 ms

Loss rate: 1.37%

-- Flow 1:

Average throughput: 0.41 Mbit/s

95th percentile per-packet one-way delay: 136.809 ms

Loss rate: 0.94%

-- Flow 2:

Average throughput: 0.39 Mbit/s

95th percentile per-packet one-way delay: 136.832 ms

Loss rate: 1.33%

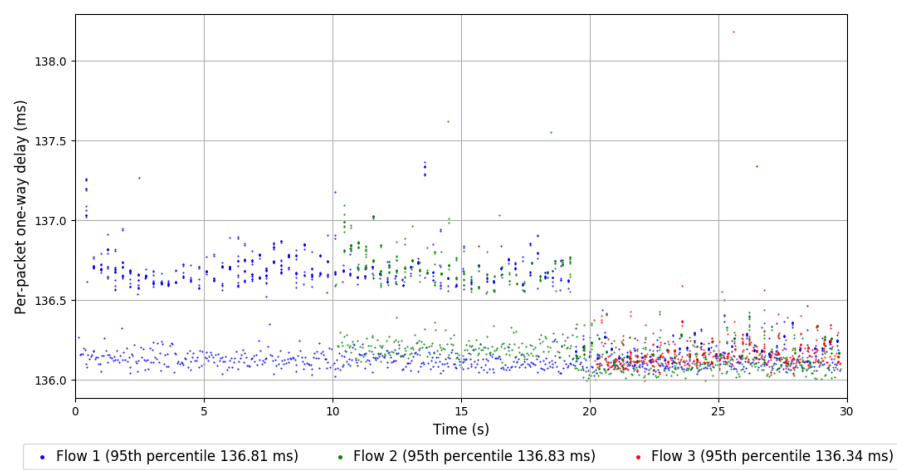
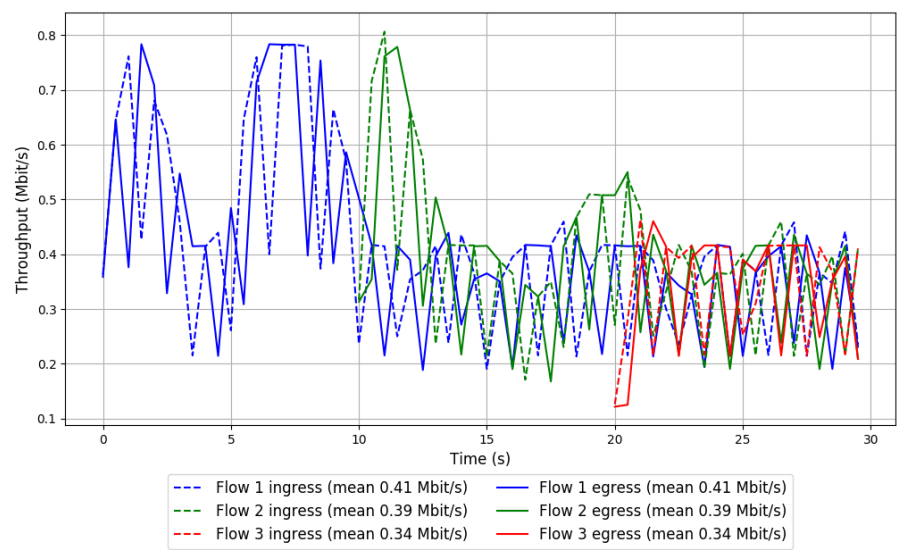
-- Flow 3:

Average throughput: 0.34 Mbit/s

95th percentile per-packet one-way delay: 136.340 ms

Loss rate: 3.04%

Run 9: Report of Sprout — Data Link



Run 10: Statistics of Sprout

Start at: 2018-03-01 10:07:42

End at: 2018-03-01 10:08:12

Below is generated by plot.py at 2018-03-01 14:15:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.85 Mbit/s

95th percentile per-packet one-way delay: 136.349 ms

Loss rate: 1.52%

-- Flow 1:

Average throughput: 0.38 Mbit/s

95th percentile per-packet one-way delay: 136.392 ms

Loss rate: 1.00%

-- Flow 2:

Average throughput: 0.47 Mbit/s

95th percentile per-packet one-way delay: 136.306 ms

Loss rate: 1.83%

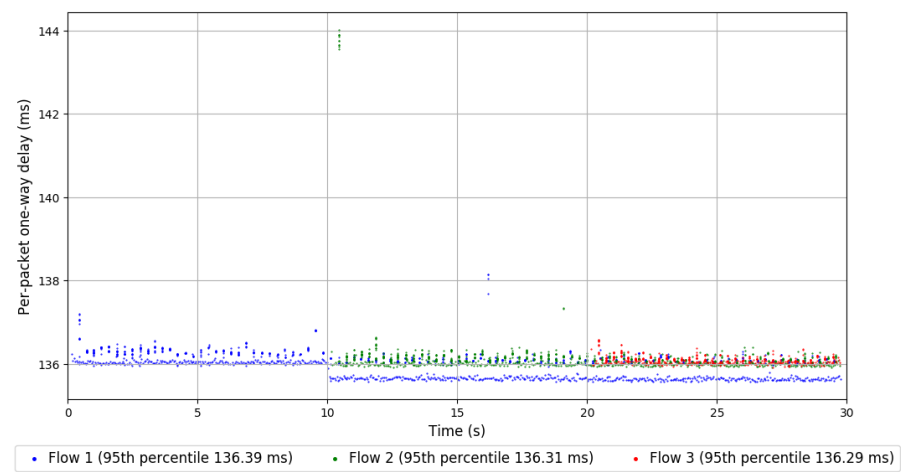
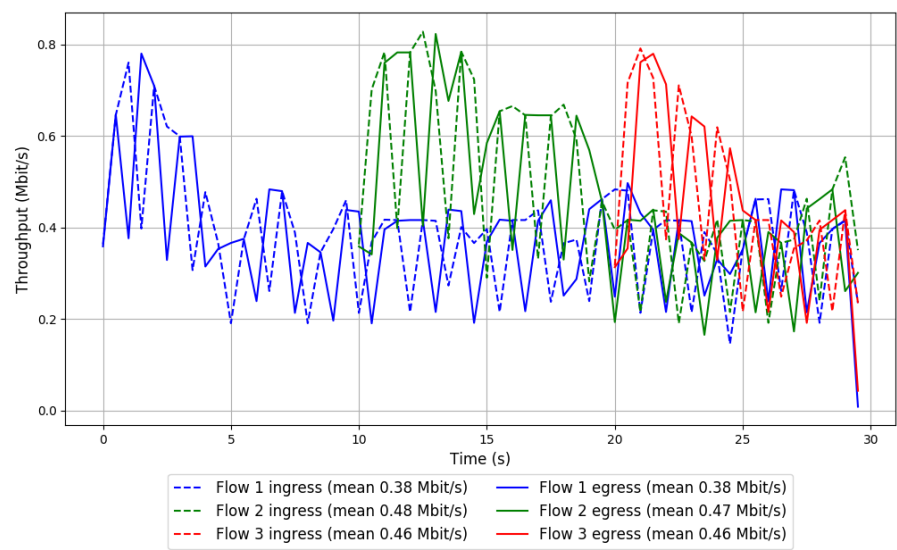
-- Flow 3:

Average throughput: 0.46 Mbit/s

95th percentile per-packet one-way delay: 136.286 ms

Loss rate: 2.18%

Run 10: Report of Sprout — Data Link

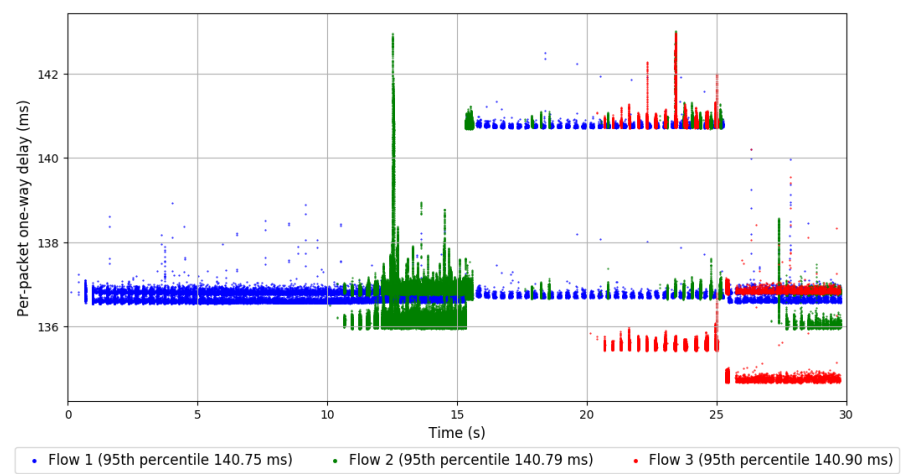
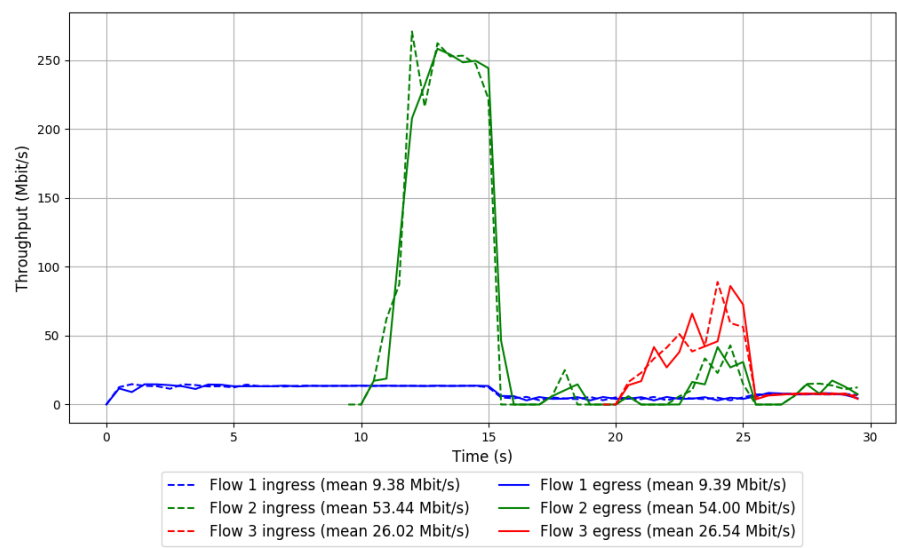


```
Run 1: Statistics of TaoVA-100x

Start at: 2018-03-01 07:06:17
End at: 2018-03-01 07:06:47

# Below is generated by plot.py at 2018-03-01 14:15:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 53.85 Mbit/s
95th percentile per-packet one-way delay: 140.828 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 9.39 Mbit/s
95th percentile per-packet one-way delay: 140.752 ms
Loss rate: 0.76%
-- Flow 2:
Average throughput: 54.00 Mbit/s
95th percentile per-packet one-way delay: 140.787 ms
Loss rate: 0.34%
-- Flow 3:
Average throughput: 26.54 Mbit/s
95th percentile per-packet one-way delay: 140.903 ms
Loss rate: 0.79%
```


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

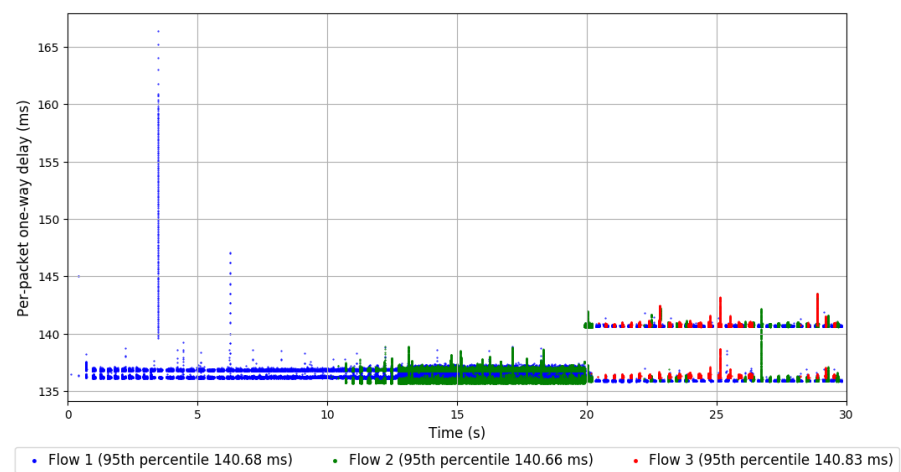
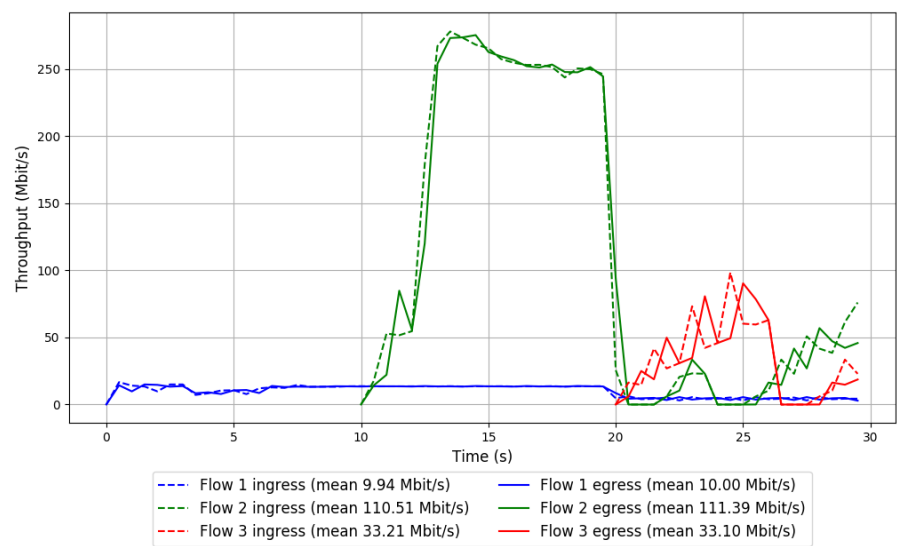


```
Run 2: Statistics of TaoVA-100x

Start at: 2018-03-01 07:26:32
End at: 2018-03-01 07:27:02

# Below is generated by plot.py at 2018-03-01 14:15:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.92 Mbit/s
95th percentile per-packet one-way delay: 140.724 ms
Loss rate: 1.32%
-- Flow 1:
Average throughput: 10.00 Mbit/s
95th percentile per-packet one-way delay: 140.675 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 111.39 Mbit/s
95th percentile per-packet one-way delay: 140.657 ms
Loss rate: 1.12%
-- Flow 3:
Average throughput: 33.10 Mbit/s
95th percentile per-packet one-way delay: 140.829 ms
Loss rate: 3.55%
```

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



Run 3: Statistics of TaoVA-100x

Start at: 2018-03-01 07:47:09

End at: 2018-03-01 07:47:39

Below is generated by plot.py at 2018-03-01 14:15:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 119.81 Mbit/s

95th percentile per-packet one-way delay: 140.800 ms

Loss rate: 3.03%

-- Flow 1:

Average throughput: 18.98 Mbit/s

95th percentile per-packet one-way delay: 141.374 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 126.84 Mbit/s

95th percentile per-packet one-way delay: 137.064 ms

Loss rate: 2.64%

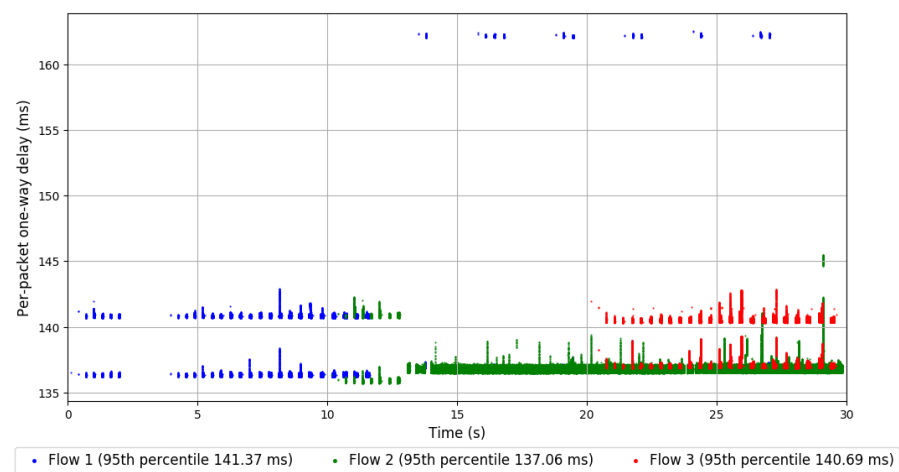
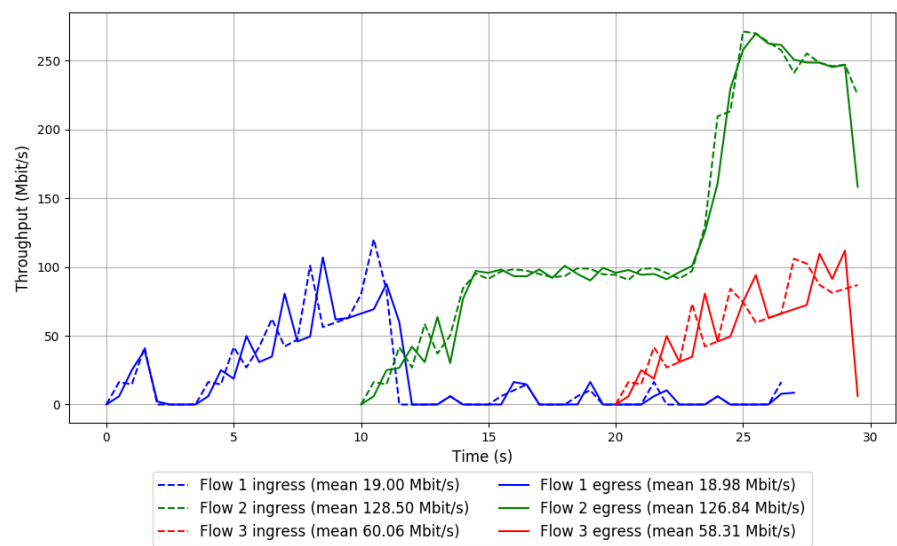
-- Flow 3:

Average throughput: 58.31 Mbit/s

95th percentile per-packet one-way delay: 140.693 ms

Loss rate: 7.32%

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



Run 4: Statistics of TaoVA-100x

Start at: 2018-03-01 08:07:43

End at: 2018-03-01 08:08:13

Below is generated by plot.py at 2018-03-01 14:21:04

Datalink statistics

-- Total of 3 flows:

Average throughput: 321.89 Mbit/s

95th percentile per-packet one-way delay: 137.115 ms

Loss rate: 1.32%

-- Flow 1:

Average throughput: 208.56 Mbit/s

95th percentile per-packet one-way delay: 137.078 ms

Loss rate: 1.01%

-- Flow 2:

Average throughput: 99.25 Mbit/s

95th percentile per-packet one-way delay: 137.902 ms

Loss rate: 0.00%

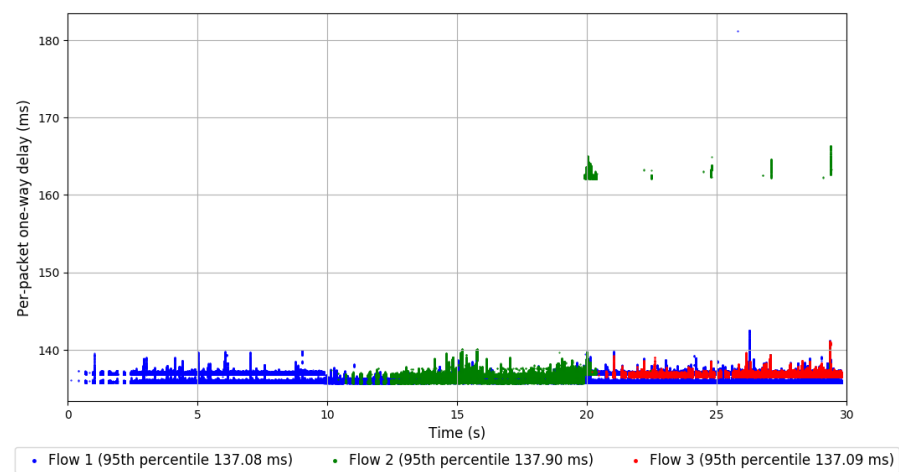
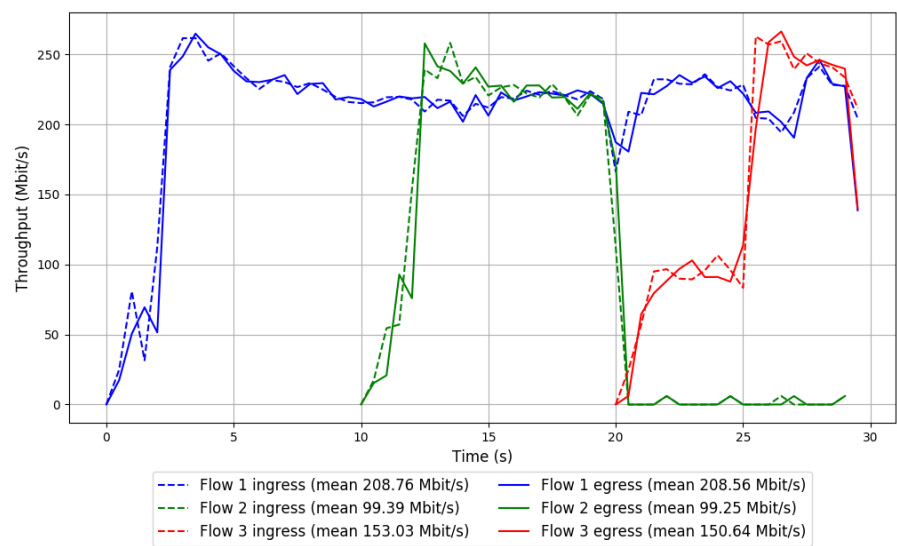
-- Flow 3:

Average throughput: 150.64 Mbit/s

95th percentile per-packet one-way delay: 137.087 ms

Loss rate: 4.29%

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



Run 5: Statistics of TaoVA-100x

Start at: 2018-03-01 08:29:10

End at: 2018-03-01 08:29:40

Below is generated by plot.py at 2018-03-01 14:21:04

Datalink statistics

-- Total of 3 flows:

Average throughput: 70.17 Mbit/s

95th percentile per-packet one-way delay: 137.201 ms

Loss rate: 2.98%

-- Flow 1:

Average throughput: 19.09 Mbit/s

95th percentile per-packet one-way delay: 162.073 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 5.55 Mbit/s

95th percentile per-packet one-way delay: 162.671 ms

Loss rate: 0.70%

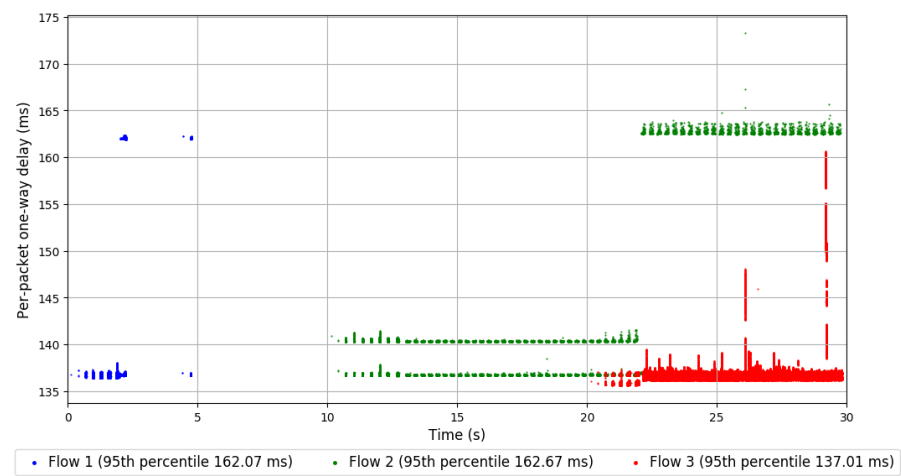
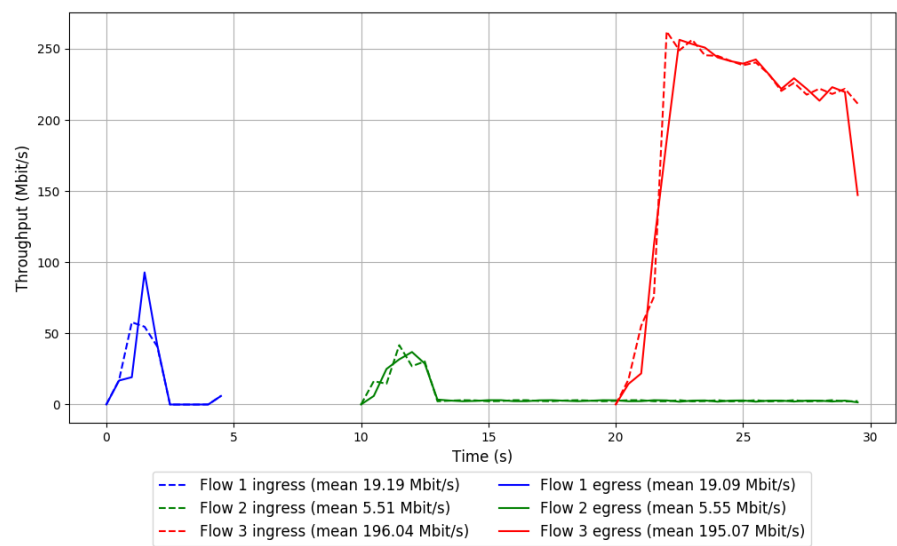
-- Flow 3:

Average throughput: 195.07 Mbit/s

95th percentile per-packet one-way delay: 137.007 ms

Loss rate: 3.24%

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



Run 6: Statistics of TaoVA-100x

Start at: 2018-03-01 08:49:43

End at: 2018-03-01 08:50:13

Below is generated by plot.py at 2018-03-01 14:21:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 333.73 Mbit/s

95th percentile per-packet one-way delay: 137.267 ms

Loss rate: 1.14%

-- Flow 1:

Average throughput: 206.68 Mbit/s

95th percentile per-packet one-way delay: 137.134 ms

Loss rate: 1.04%

-- Flow 2:

Average throughput: 108.61 Mbit/s

95th percentile per-packet one-way delay: 161.276 ms

Loss rate: 0.00%

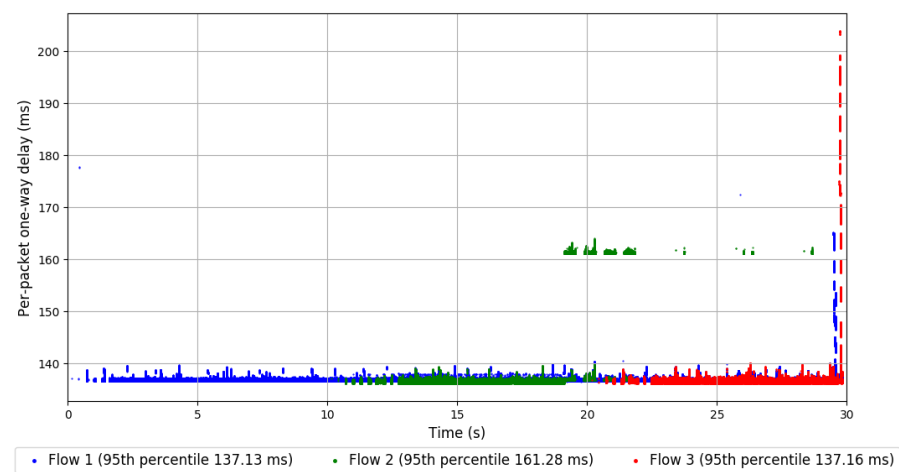
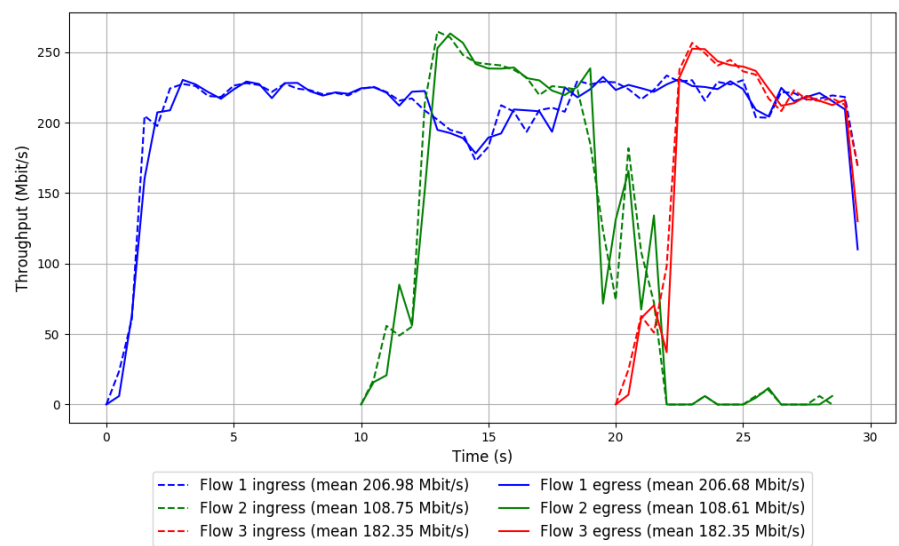
-- Flow 3:

Average throughput: 182.35 Mbit/s

95th percentile per-packet one-way delay: 137.160 ms

Loss rate: 2.74%

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

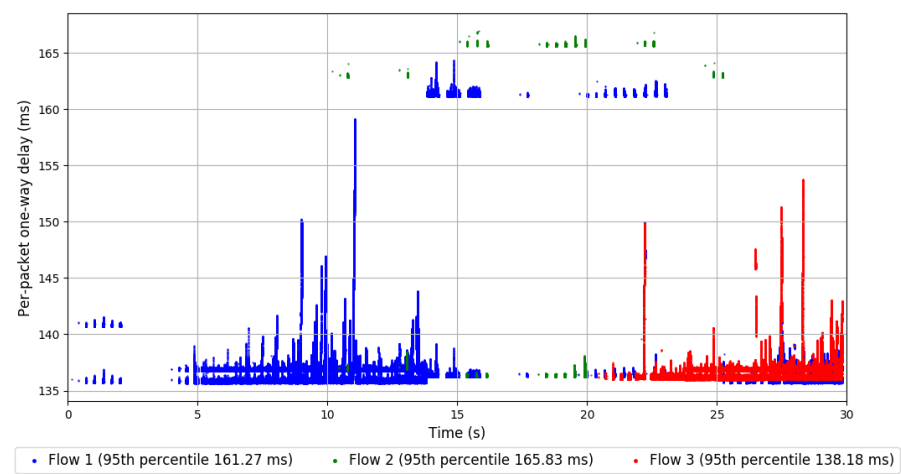
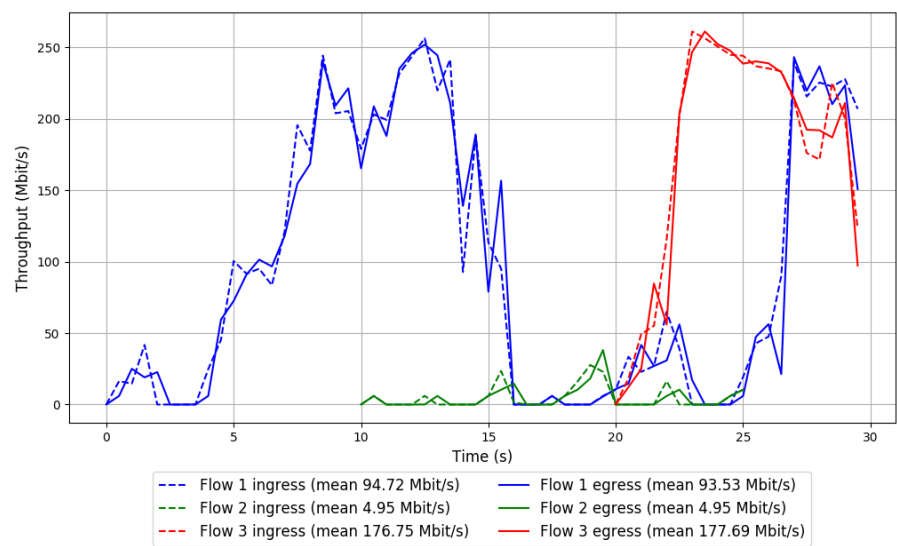


```
Run 7: Statistics of TaoVA-100x

Start at: 2018-03-01 09:11:19
End at: 2018-03-01 09:11:49

# Below is generated by plot.py at 2018-03-01 14:21:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 153.89 Mbit/s
95th percentile per-packet one-way delay: 161.205 ms
Loss rate: 2.15%
-- Flow 1:
Average throughput: 93.53 Mbit/s
95th percentile per-packet one-way delay: 161.274 ms
Loss rate: 2.16%
-- Flow 2:
Average throughput: 4.95 Mbit/s
95th percentile per-packet one-way delay: 165.827 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 177.69 Mbit/s
95th percentile per-packet one-way delay: 138.184 ms
Loss rate: 2.24%
```

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



Run 8: Statistics of TaoVA-100x

Start at: 2018-03-01 09:32:32

End at: 2018-03-01 09:33:02

Below is generated by plot.py at 2018-03-01 14:21:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 81.86 Mbit/s

95th percentile per-packet one-way delay: 142.824 ms

Loss rate: 0.09%

-- Flow 1:

Average throughput: 5.21 Mbit/s

95th percentile per-packet one-way delay: 161.918 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 104.97 Mbit/s

95th percentile per-packet one-way delay: 136.672 ms

Loss rate: 0.00%

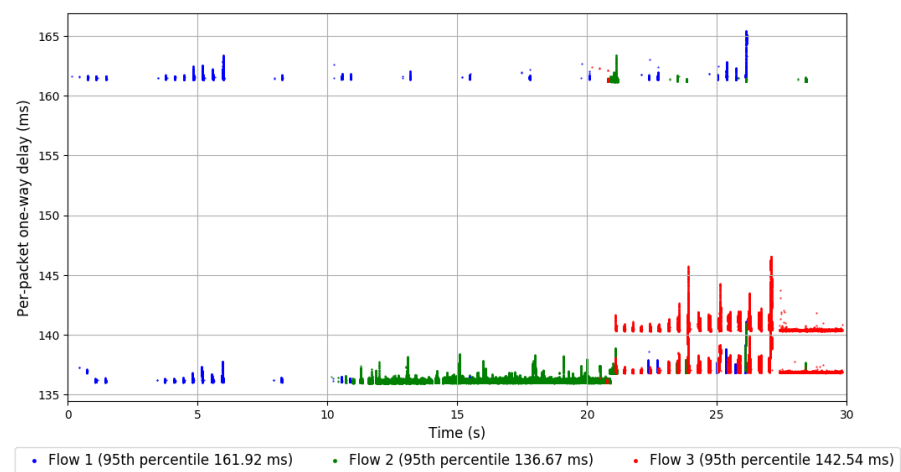
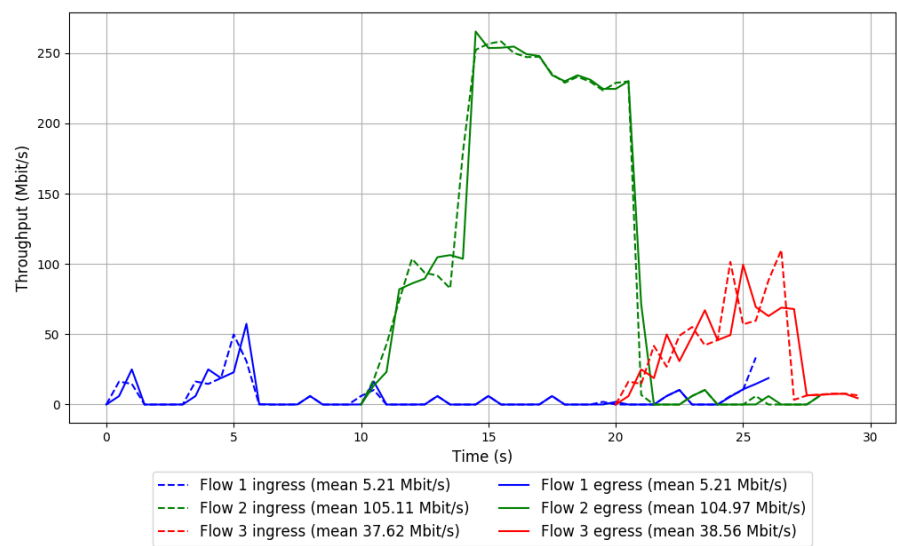
-- Flow 3:

Average throughput: 38.56 Mbit/s

95th percentile per-packet one-way delay: 142.539 ms

Loss rate: 0.57%

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



Run 9: Statistics of TaoVA-100x

Start at: 2018-03-01 09:53:18

End at: 2018-03-01 09:53:48

Below is generated by plot.py at 2018-03-01 14:24:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 343.53 Mbit/s

95th percentile per-packet one-way delay: 138.803 ms

Loss rate: 1.25%

-- Flow 1:

Average throughput: 203.33 Mbit/s

95th percentile per-packet one-way delay: 137.056 ms

Loss rate: 1.09%

-- Flow 2:

Average throughput: 133.73 Mbit/s

95th percentile per-packet one-way delay: 139.700 ms

Loss rate: 0.14%

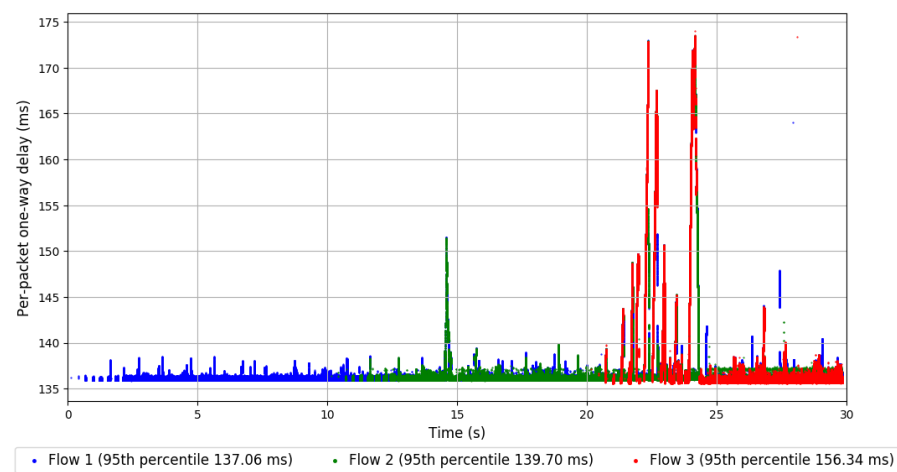
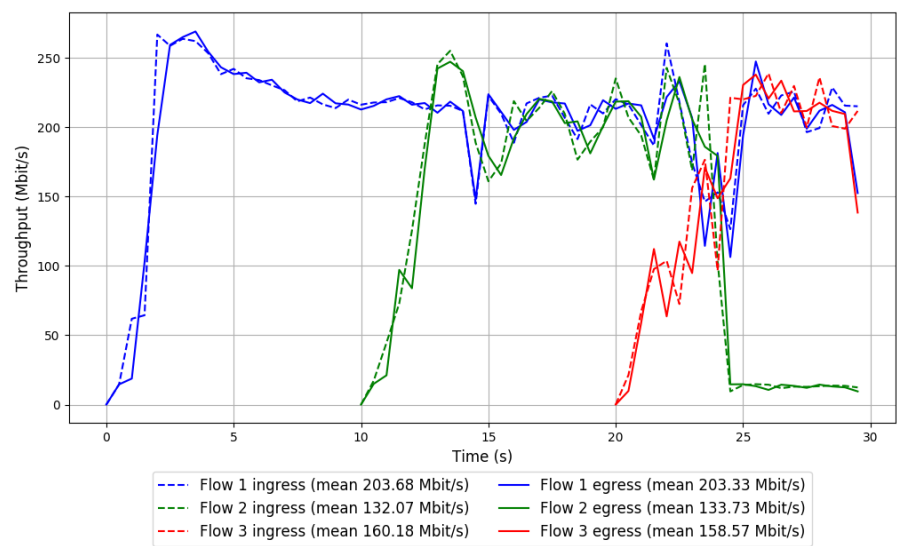
-- Flow 3:

Average throughput: 158.57 Mbit/s

95th percentile per-packet one-way delay: 156.345 ms

Loss rate: 3.73%

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

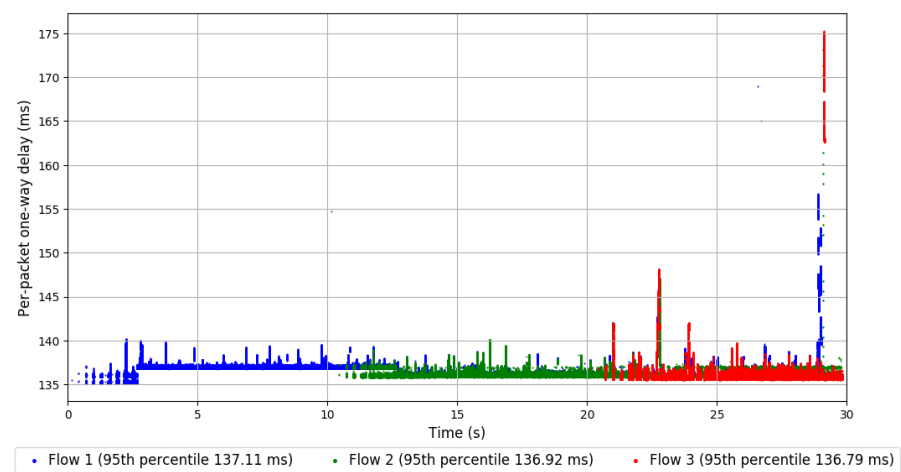
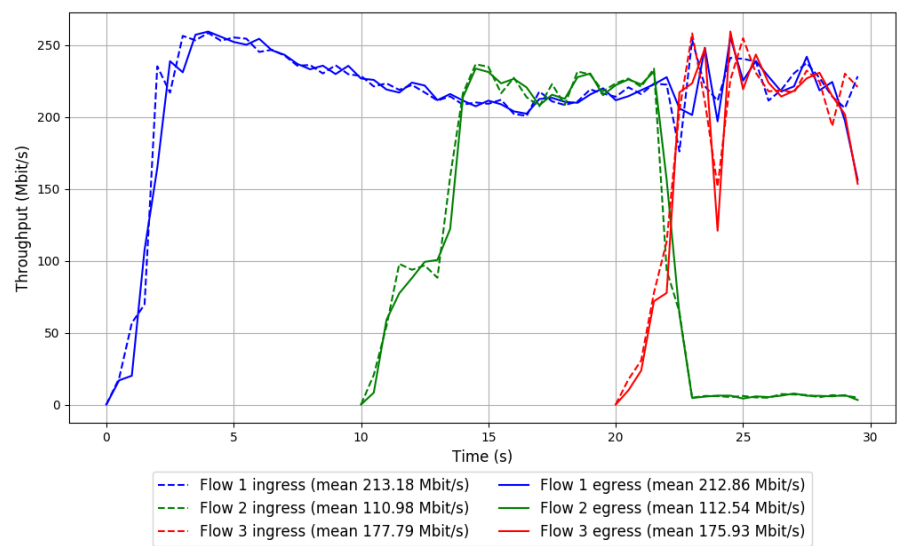


```
Run 10: Statistics of TaoVA-100x

Start at: 2018-03-01 10:14:30
End at: 2018-03-01 10:15:00

# Below is generated by plot.py at 2018-03-01 14:25:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 344.52 Mbit/s
95th percentile per-packet one-way delay: 137.075 ms
Loss rate: 1.31%
-- Flow 1:
Average throughput: 212.86 Mbit/s
95th percentile per-packet one-way delay: 137.111 ms
Loss rate: 1.06%
-- Flow 2:
Average throughput: 112.54 Mbit/s
95th percentile per-packet one-way delay: 136.919 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 175.93 Mbit/s
95th percentile per-packet one-way delay: 136.792 ms
Loss rate: 3.75%
```

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



Run 1: Statistics of TCP Vegas

Start at: 2018-03-01 07:09:45

End at: 2018-03-01 07:10:15

Below is generated by plot.py at 2018-03-01 14:25:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 34.76 Mbit/s

95th percentile per-packet one-way delay: 142.222 ms

Loss rate: 1.48%

-- Flow 1:

Average throughput: 22.88 Mbit/s

95th percentile per-packet one-way delay: 142.124 ms

Loss rate: 0.94%

-- Flow 2:

Average throughput: 8.13 Mbit/s

95th percentile per-packet one-way delay: 141.823 ms

Loss rate: 1.54%

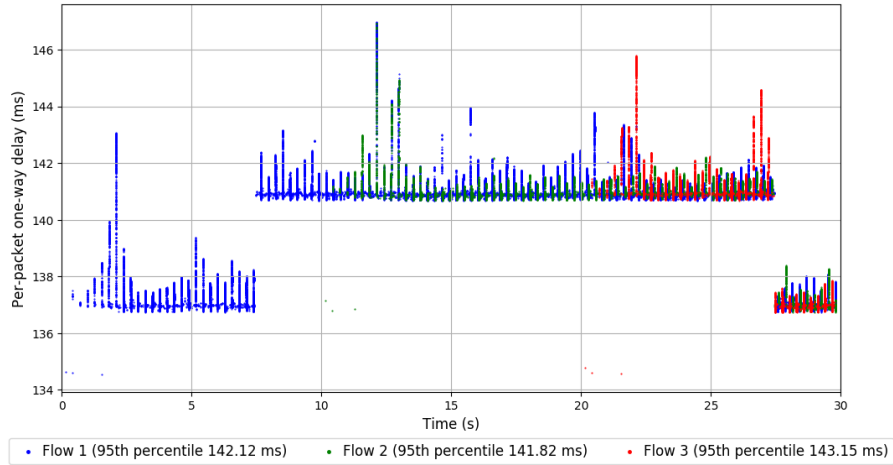
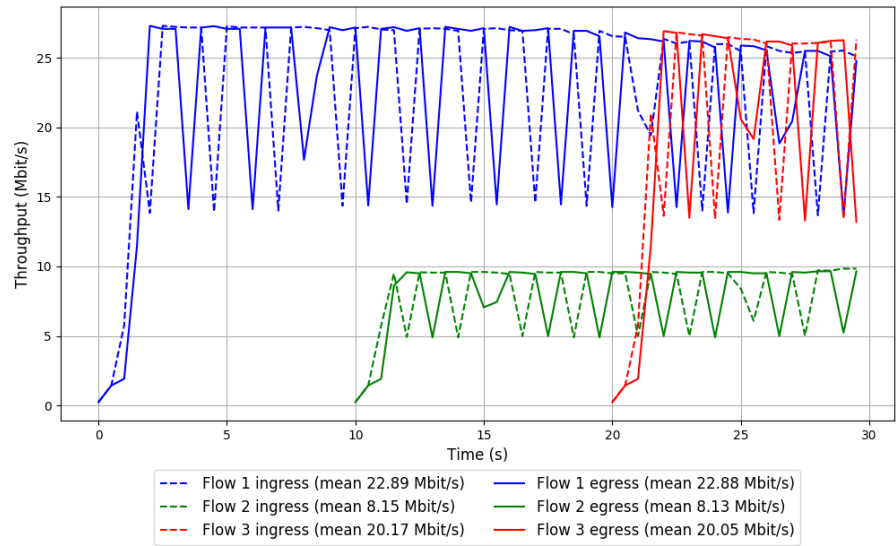
-- Flow 3:

Average throughput: 20.05 Mbit/s

95th percentile per-packet one-way delay: 143.147 ms

Loss rate: 3.32%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2018-03-01 07:30:04

End at: 2018-03-01 07:30:34

Below is generated by plot.py at 2018-03-01 14:25:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 104.56 Mbit/s

95th percentile per-packet one-way delay: 150.152 ms

Loss rate: 1.82%

-- Flow 1:

Average throughput: 29.23 Mbit/s

95th percentile per-packet one-way delay: 147.630 ms

Loss rate: 0.96%

-- Flow 2:

Average throughput: 80.02 Mbit/s

95th percentile per-packet one-way delay: 150.087 ms

Loss rate: 1.56%

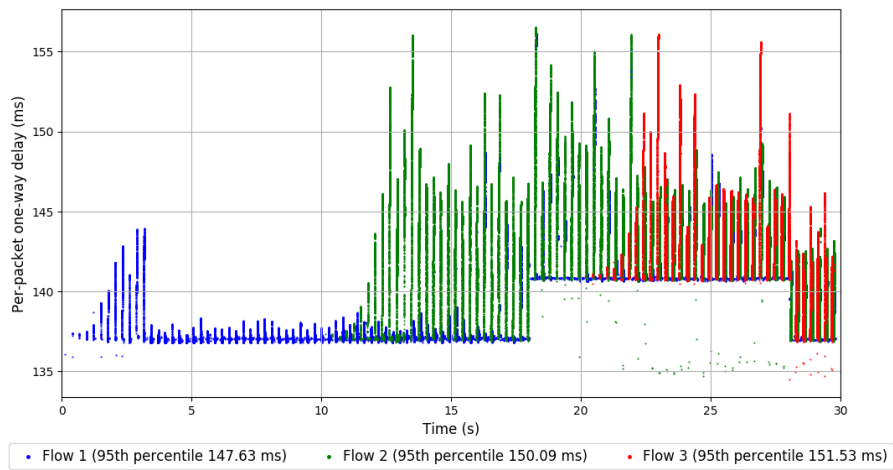
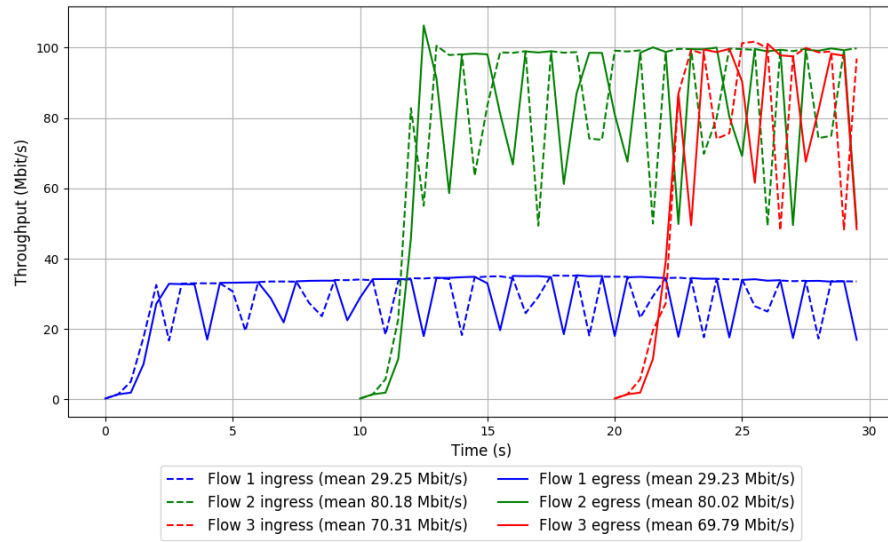
-- Flow 3:

Average throughput: 69.79 Mbit/s

95th percentile per-packet one-way delay: 151.531 ms

Loss rate: 3.52%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2018-03-01 07:50:44

End at: 2018-03-01 07:51:14

Below is generated by plot.py at 2018-03-01 14:25:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 102.52 Mbit/s

95th percentile per-packet one-way delay: 152.886 ms

Loss rate: 0.77%

-- Flow 1:

Average throughput: 73.15 Mbit/s

95th percentile per-packet one-way delay: 152.315 ms

Loss rate: 0.31%

-- Flow 2:

Average throughput: 29.44 Mbit/s

95th percentile per-packet one-way delay: 154.738 ms

Loss rate: 1.41%

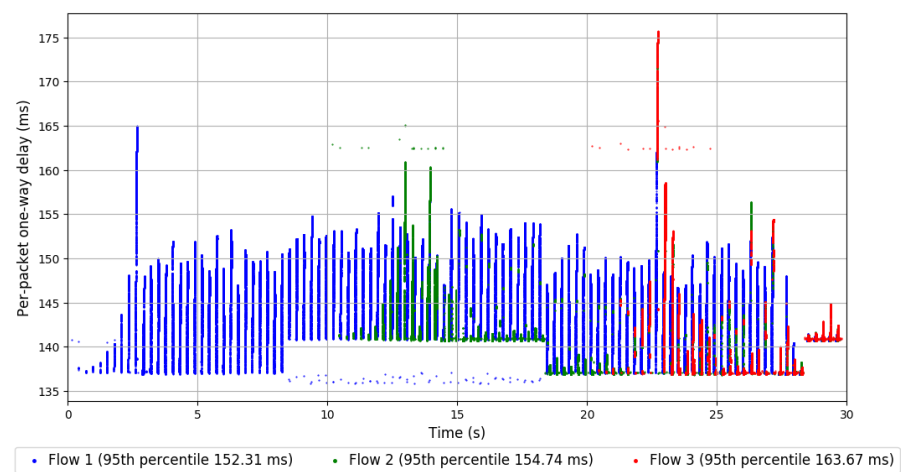
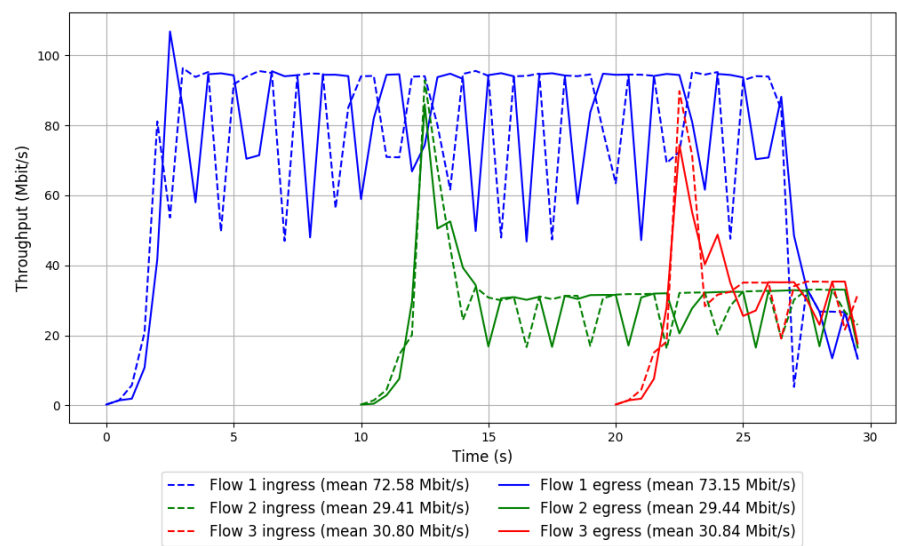
-- Flow 3:

Average throughput: 30.84 Mbit/s

95th percentile per-packet one-way delay: 163.673 ms

Loss rate: 2.89%

Run 3: Report of TCP Vegas — Data Link



Run 4: Statistics of TCP Vegas

Start at: 2018-03-01 08:11:43

End at: 2018-03-01 08:12:13

Below is generated by plot.py at 2018-03-01 14:25:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 120.42 Mbit/s

95th percentile per-packet one-way delay: 150.222 ms

Loss rate: 1.28%

-- Flow 1:

Average throughput: 79.35 Mbit/s

95th percentile per-packet one-way delay: 150.615 ms

Loss rate: 1.00%

-- Flow 2:

Average throughput: 55.50 Mbit/s

95th percentile per-packet one-way delay: 145.205 ms

Loss rate: 1.59%

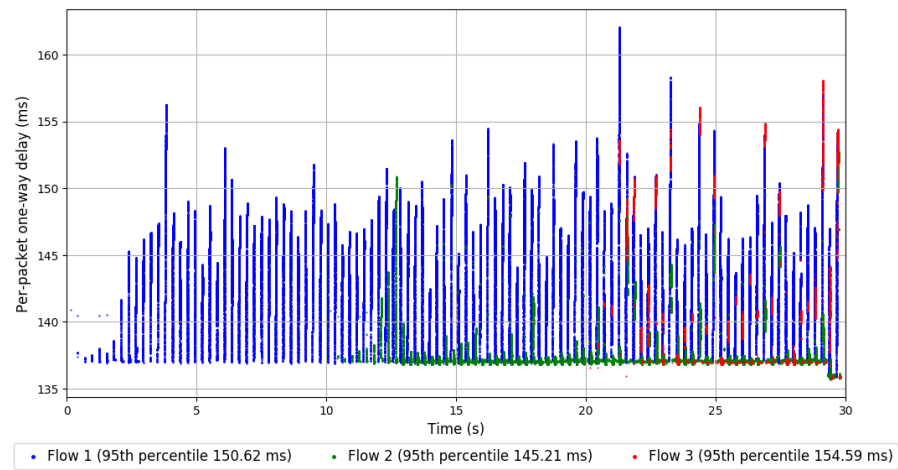
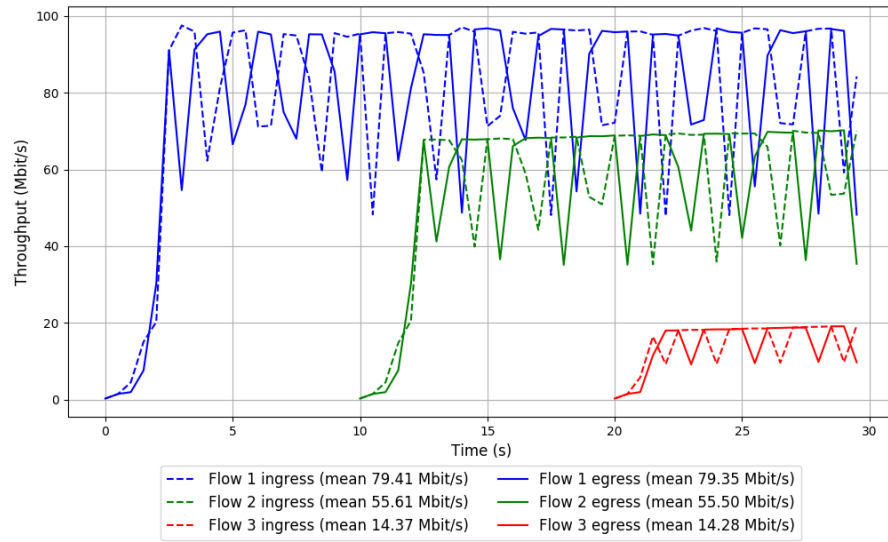
-- Flow 3:

Average throughput: 14.28 Mbit/s

95th percentile per-packet one-way delay: 154.586 ms

Loss rate: 3.39%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2018-03-01 08:32:27

End at: 2018-03-01 08:32:57

Below is generated by plot.py at 2018-03-01 14:25:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 117.04 Mbit/s

95th percentile per-packet one-way delay: 148.953 ms

Loss rate: 1.23%

-- Flow 1:

Average throughput: 58.02 Mbit/s

95th percentile per-packet one-way delay: 149.261 ms

Loss rate: 0.62%

-- Flow 2:

Average throughput: 77.77 Mbit/s

95th percentile per-packet one-way delay: 148.430 ms

Loss rate: 1.57%

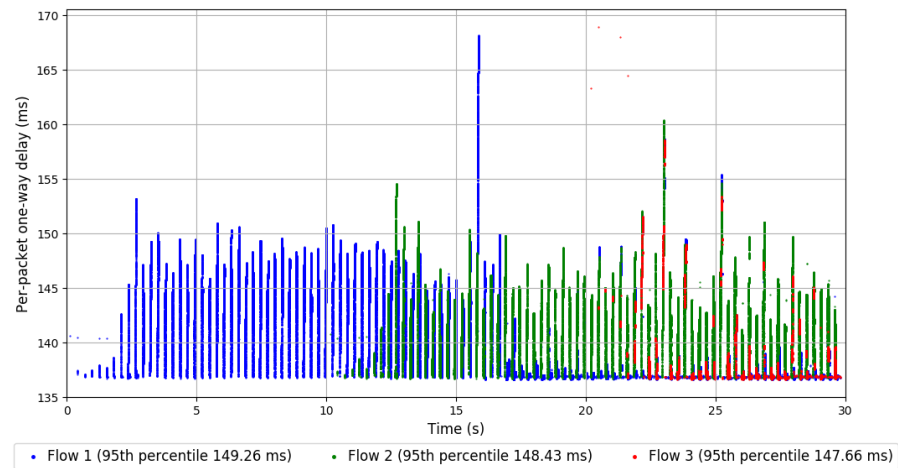
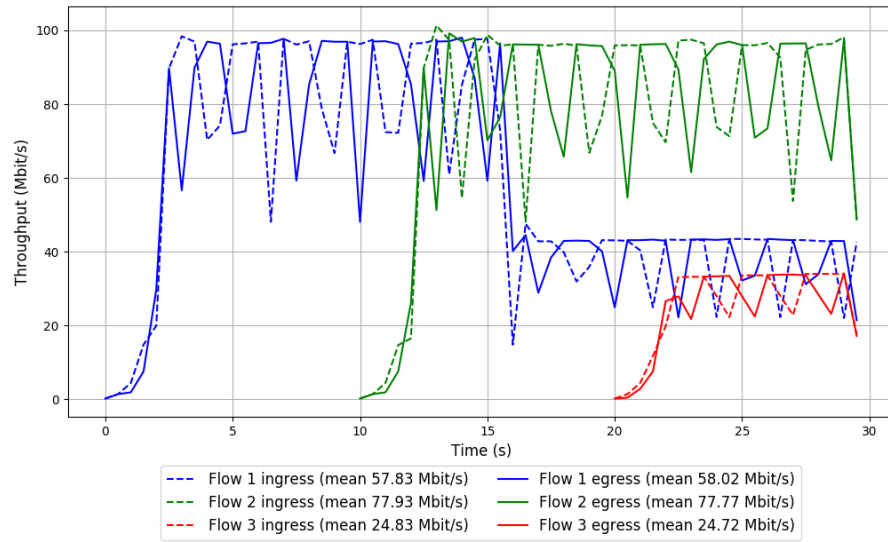
-- Flow 3:

Average throughput: 24.72 Mbit/s

95th percentile per-packet one-way delay: 147.658 ms

Loss rate: 3.48%

Run 5: Report of TCP Vegas — Data Link



Run 6: Statistics of TCP Vegas

Start at: 2018-03-01 08:53:54

End at: 2018-03-01 08:54:24

Below is generated by plot.py at 2018-03-01 14:25:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 80.22 Mbit/s

95th percentile per-packet one-way delay: 175.107 ms

Loss rate: 0.54%

-- Flow 1:

Average throughput: 72.25 Mbit/s

95th percentile per-packet one-way delay: 174.821 ms

Loss rate: 0.31%

-- Flow 2:

Average throughput: 5.80 Mbit/s

95th percentile per-packet one-way delay: 175.555 ms

Loss rate: 1.40%

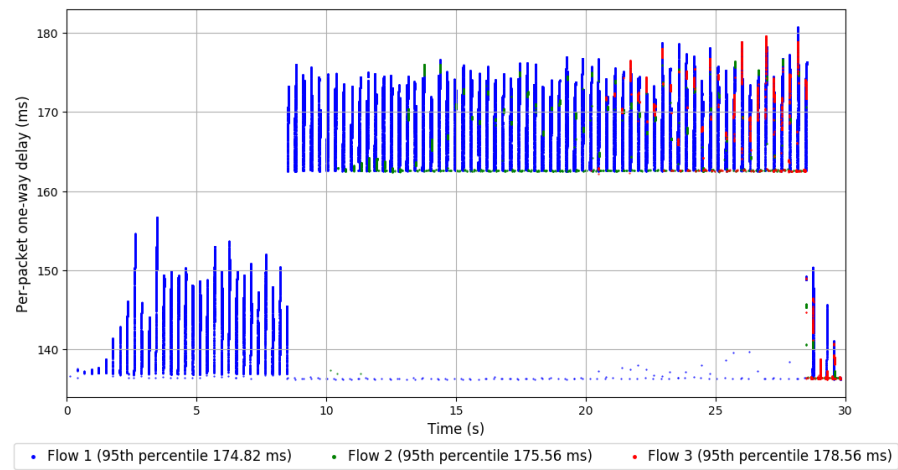
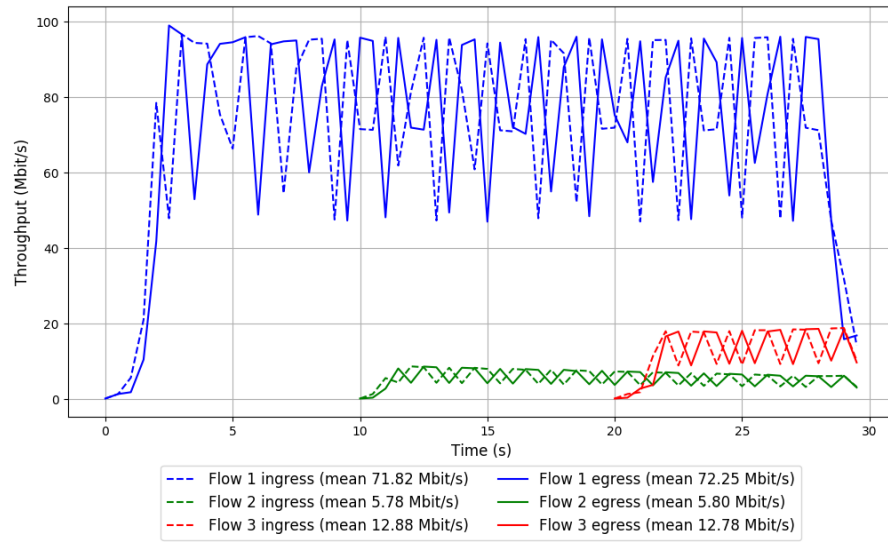
-- Flow 3:

Average throughput: 12.78 Mbit/s

95th percentile per-packet one-way delay: 178.562 ms

Loss rate: 3.72%

Run 6: Report of TCP Vegas — Data Link



Run 7: Statistics of TCP Vegas

Start at: 2018-03-01 09:14:58

End at: 2018-03-01 09:15:28

Below is generated by plot.py at 2018-03-01 14:25:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 82.47 Mbit/s

95th percentile per-packet one-way delay: 146.509 ms

Loss rate: 0.84%

-- Flow 1:

Average throughput: 53.78 Mbit/s

95th percentile per-packet one-way delay: 146.234 ms

Loss rate: 0.48%

-- Flow 2:

Average throughput: 28.07 Mbit/s

95th percentile per-packet one-way delay: 145.781 ms

Loss rate: 1.31%

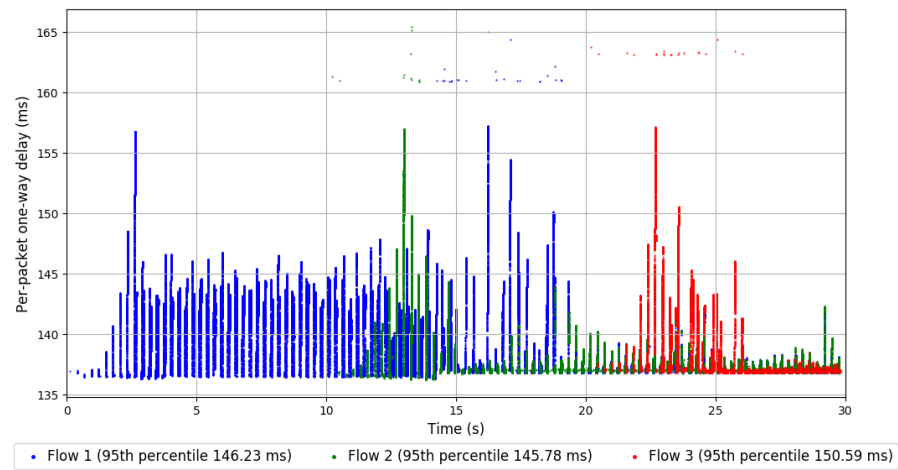
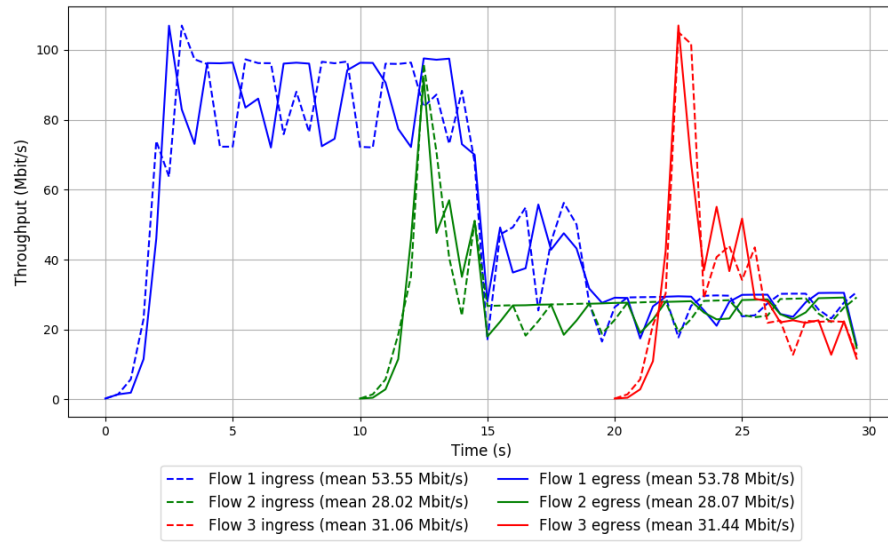
-- Flow 3:

Average throughput: 31.44 Mbit/s

95th percentile per-packet one-way delay: 150.595 ms

Loss rate: 1.84%

Run 7: Report of TCP Vegas — Data Link



Run 8: Statistics of TCP Vegas

Start at: 2018-03-01 09:36:08

End at: 2018-03-01 09:36:38

Below is generated by plot.py at 2018-03-01 14:25:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 55.78 Mbit/s

95th percentile per-packet one-way delay: 146.463 ms

Loss rate: 2.05%

-- Flow 1:

Average throughput: 26.55 Mbit/s

95th percentile per-packet one-way delay: 146.210 ms

Loss rate: 0.94%

-- Flow 2:

Average throughput: 9.10 Mbit/s

95th percentile per-packet one-way delay: 141.461 ms

Loss rate: 1.68%

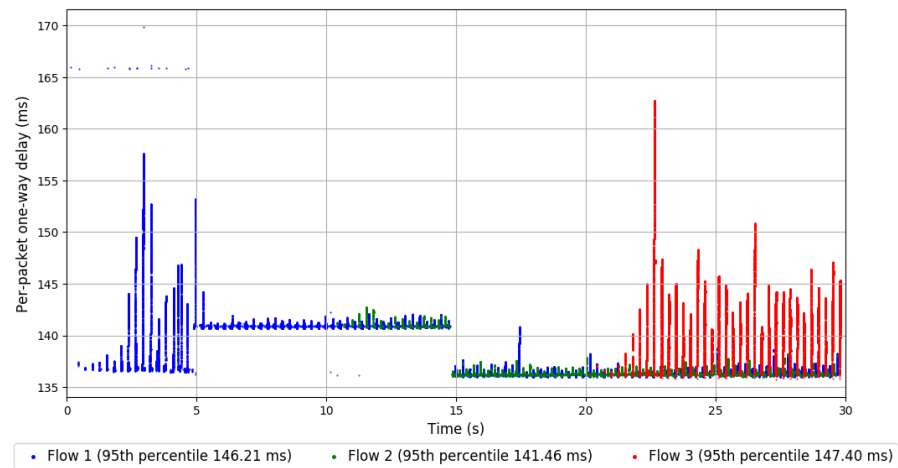
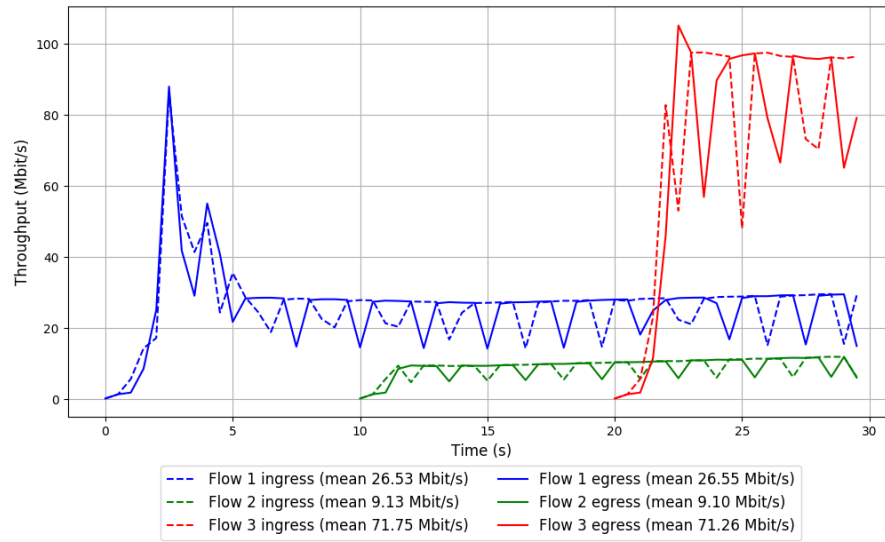
-- Flow 3:

Average throughput: 71.26 Mbit/s

95th percentile per-packet one-way delay: 147.403 ms

Loss rate: 3.37%

Run 8: Report of TCP Vegas — Data Link



Run 9: Statistics of TCP Vegas

Start at: 2018-03-01 09:57:14

End at: 2018-03-01 09:57:44

Below is generated by plot.py at 2018-03-01 14:25:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 136.73 Mbit/s

95th percentile per-packet one-way delay: 146.375 ms

Loss rate: 1.34%

-- Flow 1:

Average throughput: 76.69 Mbit/s

95th percentile per-packet one-way delay: 144.469 ms

Loss rate: 1.01%

-- Flow 2:

Average throughput: 79.99 Mbit/s

95th percentile per-packet one-way delay: 146.691 ms

Loss rate: 1.56%

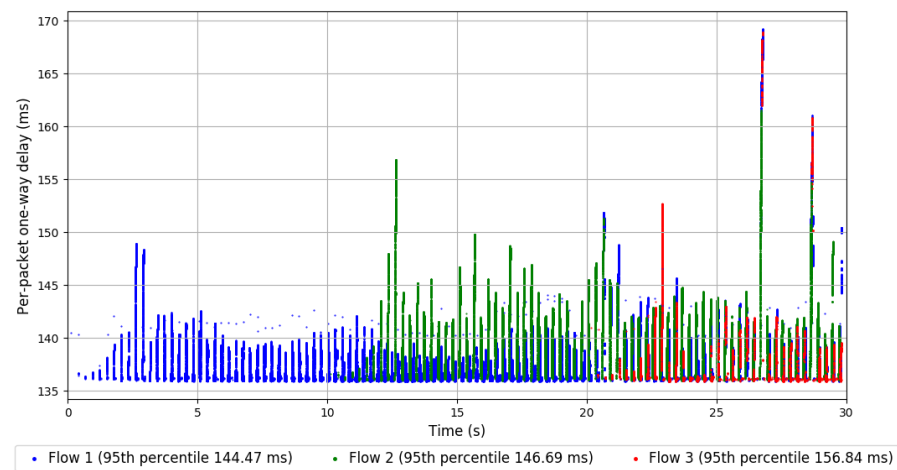
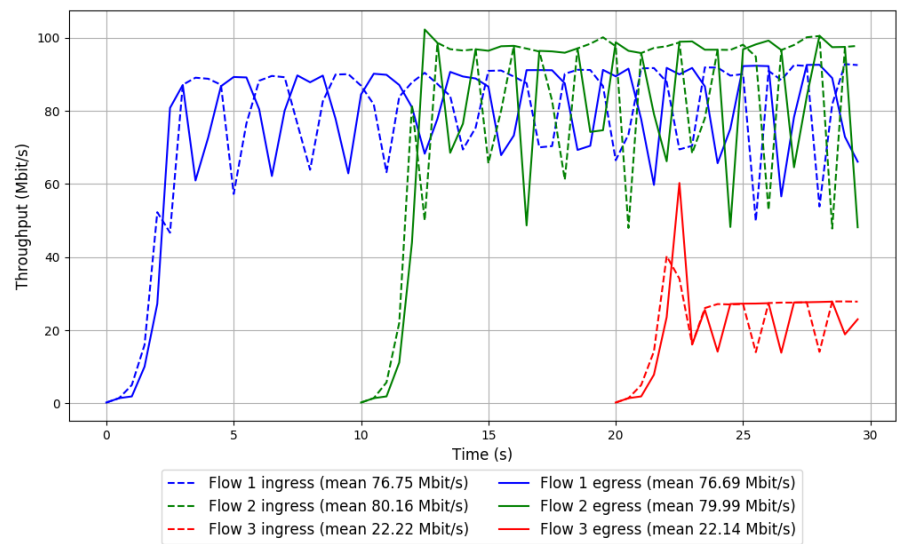
-- Flow 3:

Average throughput: 22.14 Mbit/s

95th percentile per-packet one-way delay: 156.835 ms

Loss rate: 3.17%

Run 9: Report of TCP Vegas — Data Link



Run 10: Statistics of TCP Vegas

Start at: 2018-03-01 10:18:28

End at: 2018-03-01 10:18:59

Below is generated by plot.py at 2018-03-01 14:25:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 98.56 Mbit/s

95th percentile per-packet one-way delay: 146.816 ms

Loss rate: 1.44%

-- Flow 1:

Average throughput: 54.29 Mbit/s

95th percentile per-packet one-way delay: 146.652 ms

Loss rate: 0.46%

-- Flow 2:

Average throughput: 31.92 Mbit/s

95th percentile per-packet one-way delay: 144.878 ms

Loss rate: 1.38%

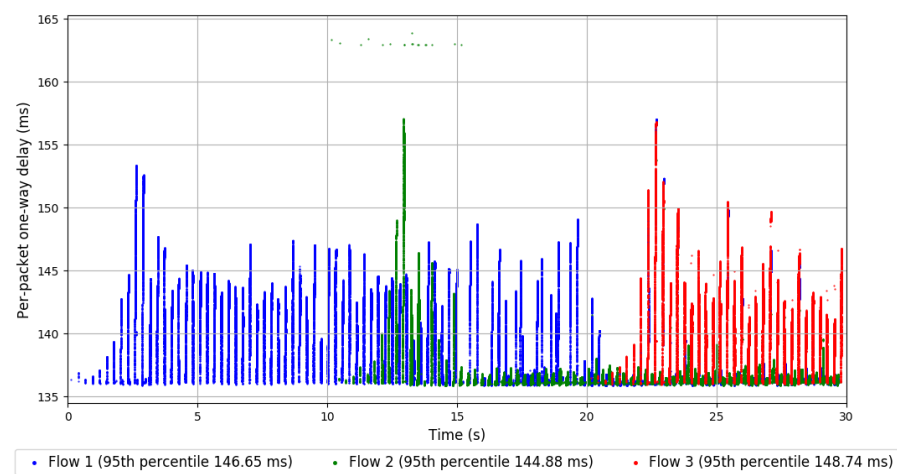
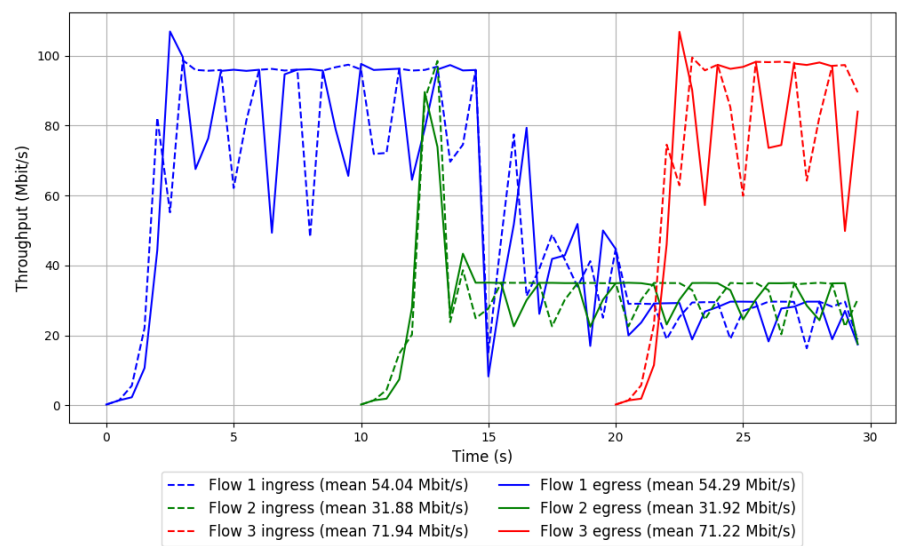
-- Flow 3:

Average throughput: 71.22 Mbit/s

95th percentile per-packet one-way delay: 148.738 ms

Loss rate: 3.71%

Run 10: Report of TCP Vegas — Data Link

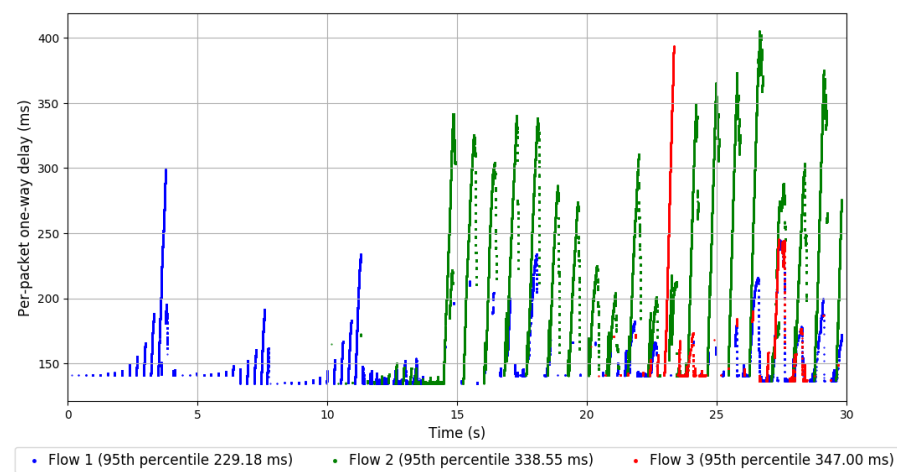
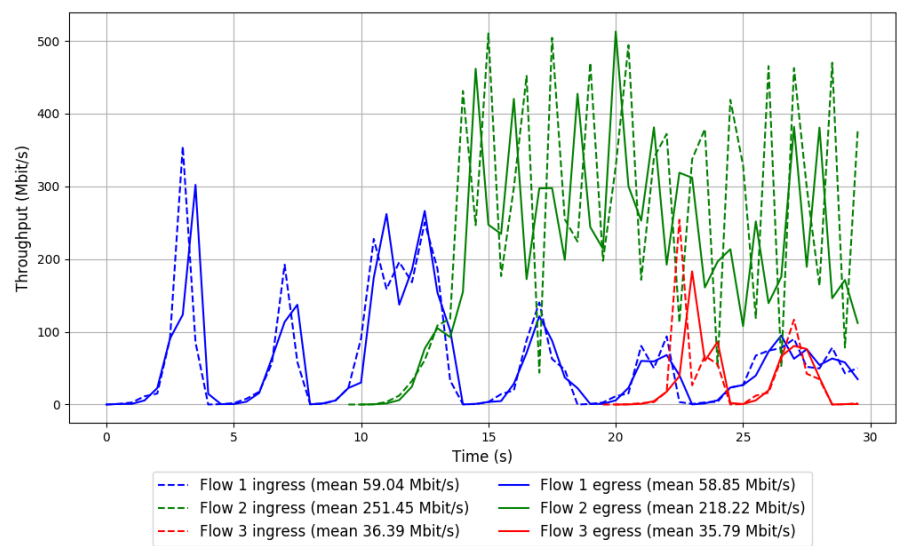


```
Run 1: Statistics of Verus

Start at: 2018-03-01 07:10:36
End at: 2018-03-01 07:11:06

# Below is generated by plot.py at 2018-03-01 14:25:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 214.93 Mbit/s
95th percentile per-packet one-way delay: 332.140 ms
Loss rate: 10.22%
-- Flow 1:
Average throughput: 58.85 Mbit/s
95th percentile per-packet one-way delay: 229.181 ms
Loss rate: 0.73%
-- Flow 2:
Average throughput: 218.22 Mbit/s
95th percentile per-packet one-way delay: 338.550 ms
Loss rate: 13.96%
-- Flow 3:
Average throughput: 35.79 Mbit/s
95th percentile per-packet one-way delay: 347.004 ms
Loss rate: 4.68%
```


Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2018-03-01 07:31:00

End at: 2018-03-01 07:31:30

Below is generated by plot.py at 2018-03-01 14:25:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 289.87 Mbit/s

95th percentile per-packet one-way delay: 220.986 ms

Loss rate: 1.67%

-- Flow 1:

Average throughput: 161.79 Mbit/s

95th percentile per-packet one-way delay: 182.185 ms

Loss rate: 0.74%

-- Flow 2:

Average throughput: 129.32 Mbit/s

95th percentile per-packet one-way delay: 226.515 ms

Loss rate: 1.23%

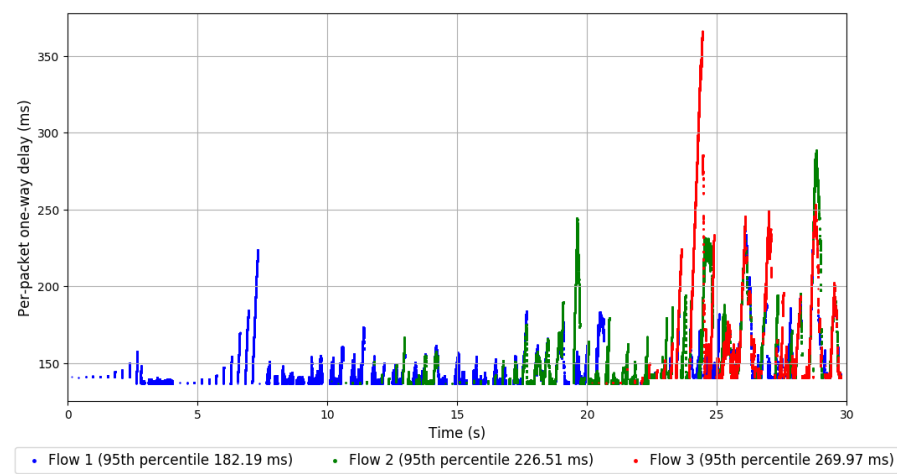
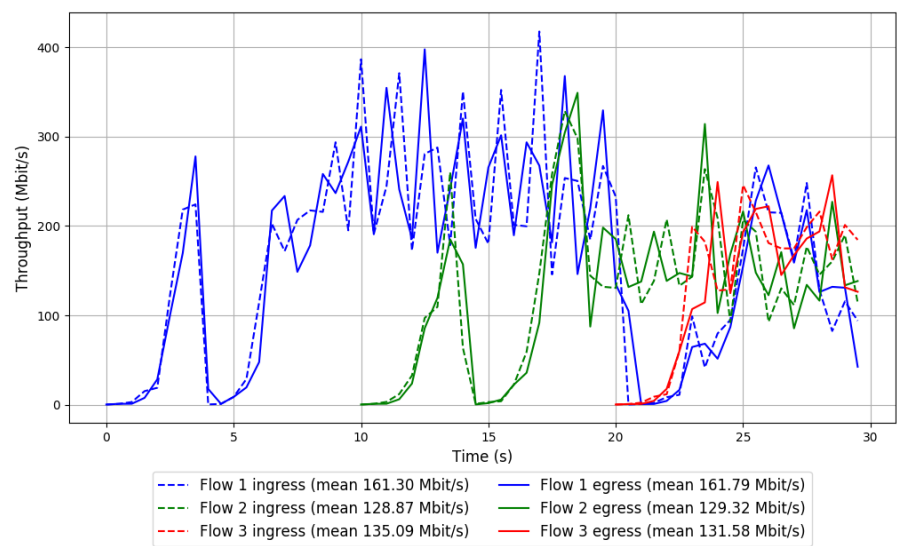
-- Flow 3:

Average throughput: 131.58 Mbit/s

95th percentile per-packet one-way delay: 269.973 ms

Loss rate: 5.86%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2018-03-01 07:51:40

End at: 2018-03-01 07:52:10

Below is generated by plot.py at 2018-03-01 14:25:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 264.75 Mbit/s

95th percentile per-packet one-way delay: 310.519 ms

Loss rate: 6.46%

-- Flow 1:

Average throughput: 176.05 Mbit/s

95th percentile per-packet one-way delay: 217.030 ms

Loss rate: 1.79%

-- Flow 2:

Average throughput: 118.62 Mbit/s

95th percentile per-packet one-way delay: 366.897 ms

Loss rate: 15.69%

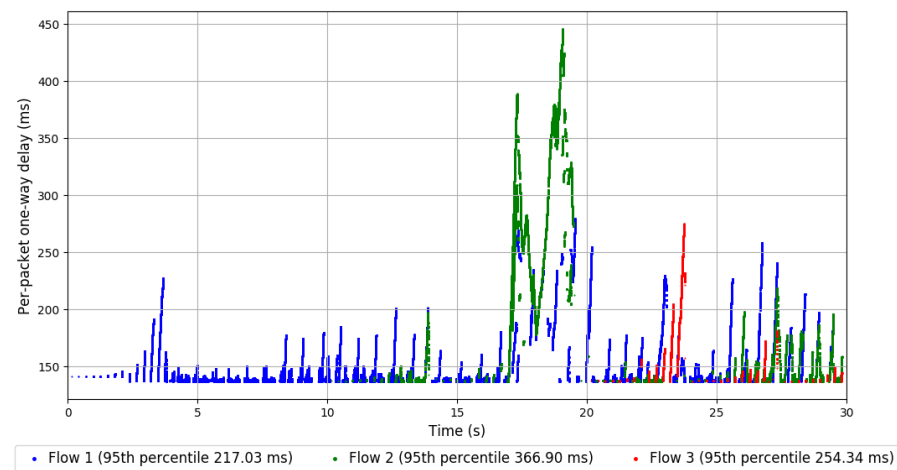
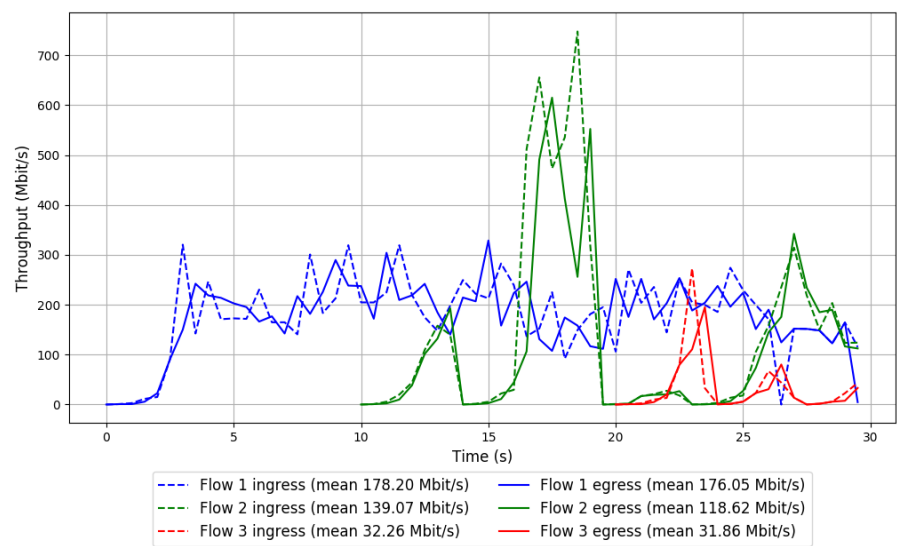
-- Flow 3:

Average throughput: 31.86 Mbit/s

95th percentile per-packet one-way delay: 254.344 ms

Loss rate: 3.96%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

Start at: 2018-03-01 08:12:42

End at: 2018-03-01 08:13:12

Below is generated by plot.py at 2018-03-01 14:25:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 257.30 Mbit/s

95th percentile per-packet one-way delay: 230.676 ms

Loss rate: 3.43%

-- Flow 1:

Average throughput: 131.53 Mbit/s

95th percentile per-packet one-way delay: 212.640 ms

Loss rate: 2.25%

-- Flow 2:

Average throughput: 164.10 Mbit/s

95th percentile per-packet one-way delay: 176.966 ms

Loss rate: 1.53%

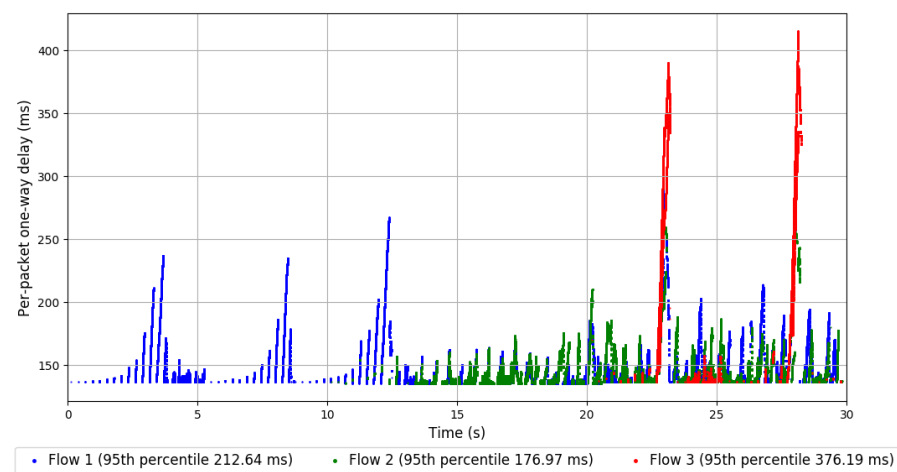
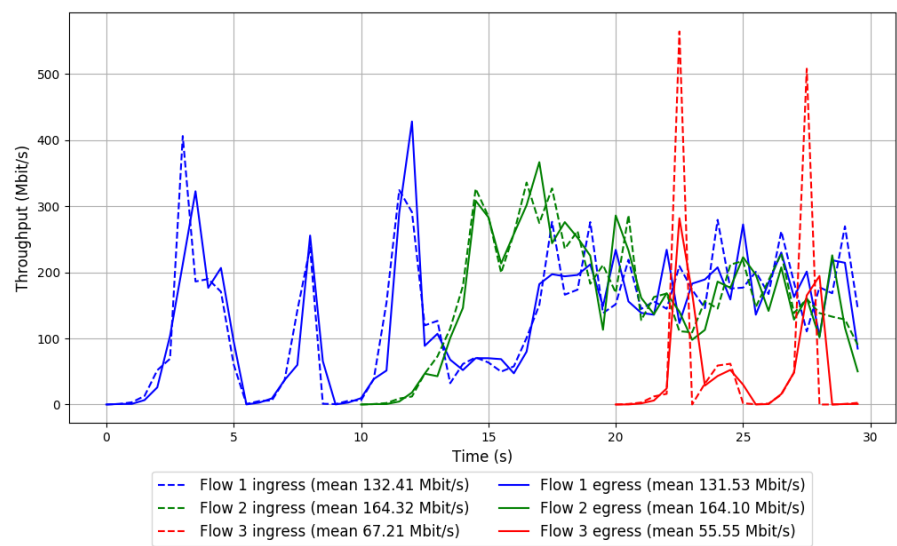
-- Flow 3:

Average throughput: 55.55 Mbit/s

95th percentile per-packet one-way delay: 376.191 ms

Loss rate: 19.91%

Run 4: Report of Verus — Data Link



Run 5: Statistics of Verus

Start at: 2018-03-01 08:33:25

End at: 2018-03-01 08:33:55

Below is generated by plot.py at 2018-03-01 14:25:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 226.96 Mbit/s

95th percentile per-packet one-way delay: 215.354 ms

Loss rate: 2.11%

-- Flow 1:

Average throughput: 162.87 Mbit/s

95th percentile per-packet one-way delay: 218.431 ms

Loss rate: 1.45%

-- Flow 2:

Average throughput: 77.79 Mbit/s

95th percentile per-packet one-way delay: 217.790 ms

Loss rate: 4.49%

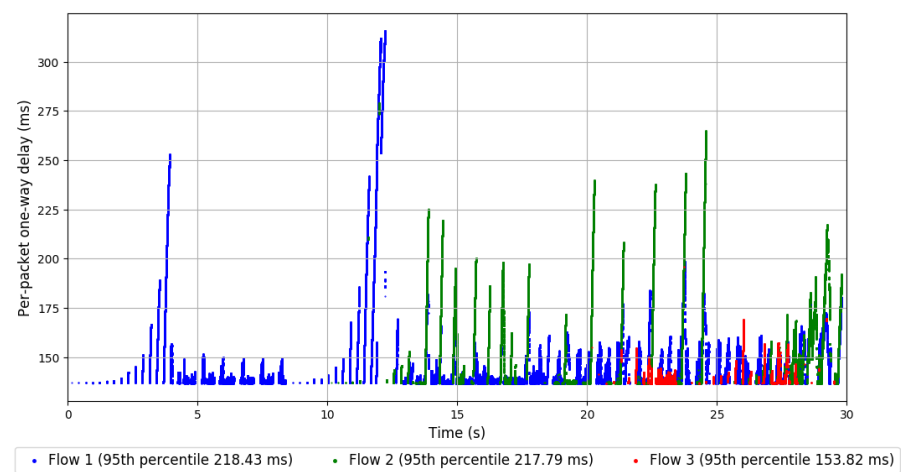
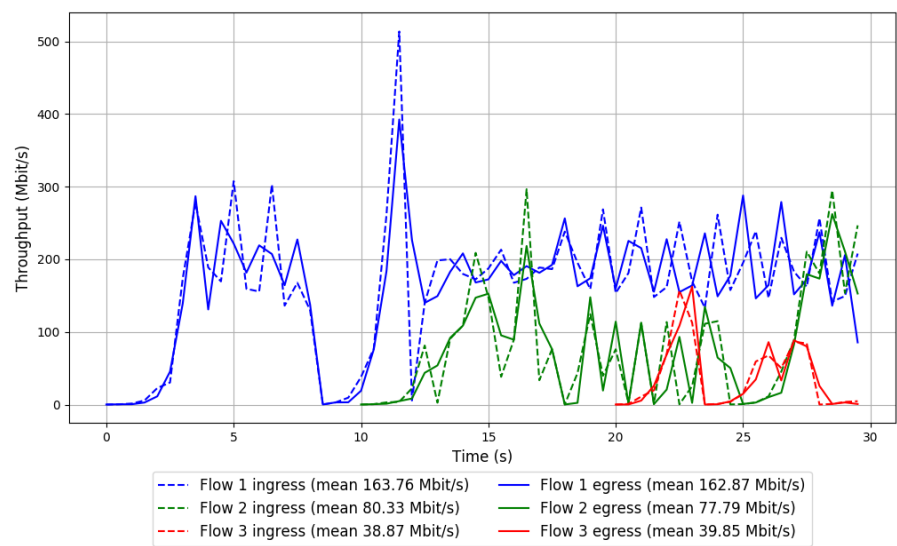
-- Flow 3:

Average throughput: 39.85 Mbit/s

95th percentile per-packet one-way delay: 153.817 ms

Loss rate: 0.62%

Run 5: Report of Verus — Data Link



Run 6: Statistics of Verus

Start at: 2018-03-01 08:54:50

End at: 2018-03-01 08:55:20

Below is generated by plot.py at 2018-03-01 14:26:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 256.92 Mbit/s

95th percentile per-packet one-way delay: 186.572 ms

Loss rate: 1.08%

-- Flow 1:

Average throughput: 202.42 Mbit/s

95th percentile per-packet one-way delay: 184.866 ms

Loss rate: 0.65%

-- Flow 2:

Average throughput: 54.41 Mbit/s

95th percentile per-packet one-way delay: 214.382 ms

Loss rate: 0.06%

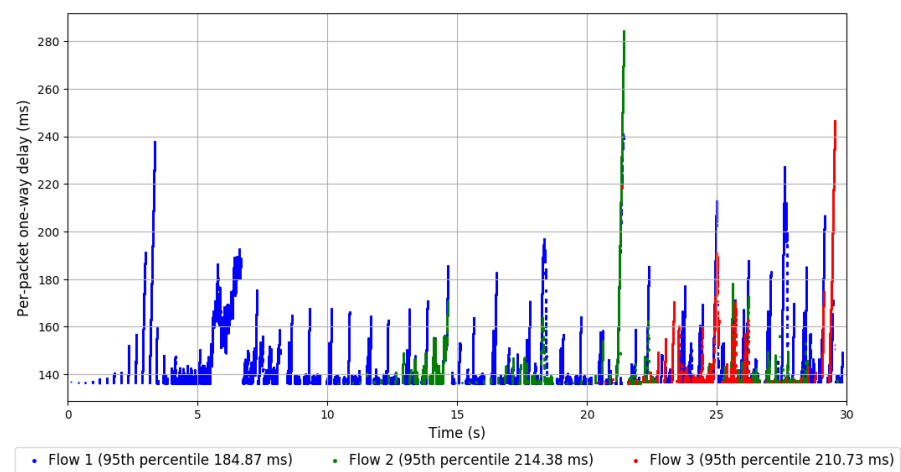
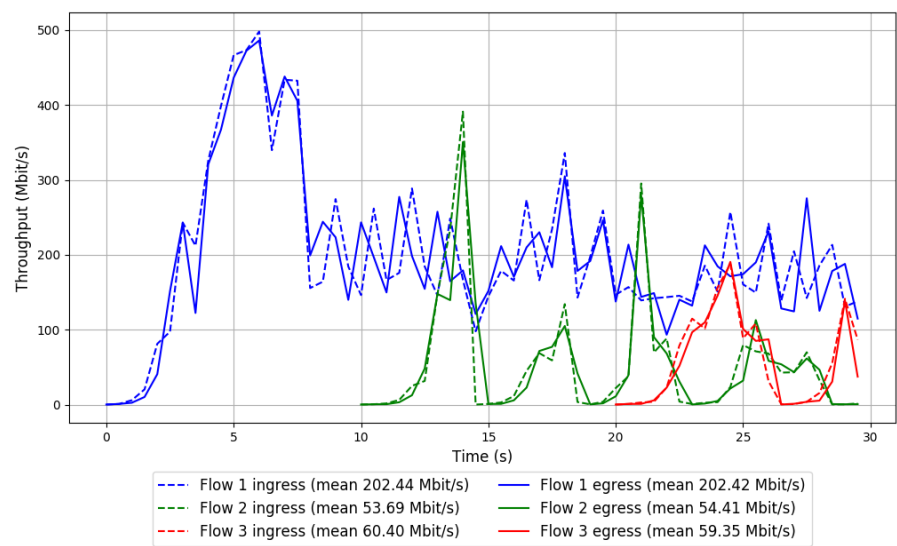
-- Flow 3:

Average throughput: 59.35 Mbit/s

95th percentile per-packet one-way delay: 210.729 ms

Loss rate: 7.22%

Run 6: Report of Verus — Data Link



Run 7: Statistics of Verus

Start at: 2018-03-01 09:15:54

End at: 2018-03-01 09:16:24

Below is generated by plot.py at 2018-03-01 14:28:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 326.22 Mbit/s

95th percentile per-packet one-way delay: 227.161 ms

Loss rate: 2.73%

-- Flow 1:

Average throughput: 242.80 Mbit/s

95th percentile per-packet one-way delay: 223.288 ms

Loss rate: 2.06%

-- Flow 2:

Average throughput: 95.39 Mbit/s

95th percentile per-packet one-way delay: 217.756 ms

Loss rate: 4.27%

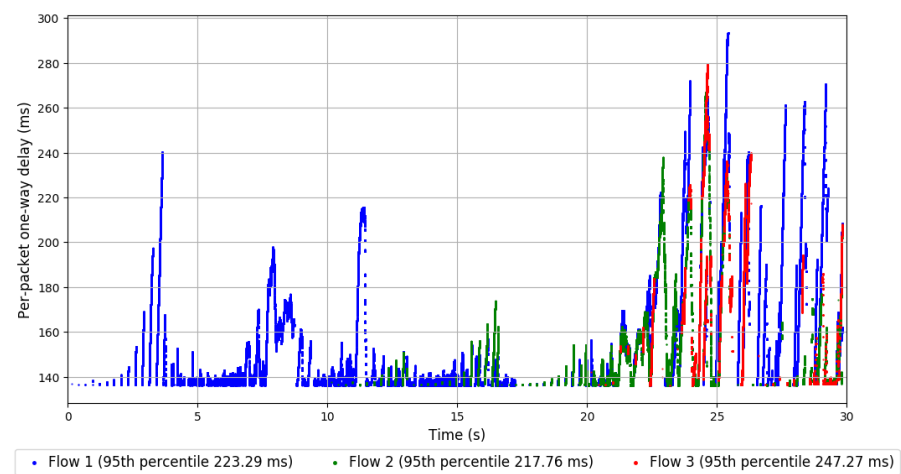
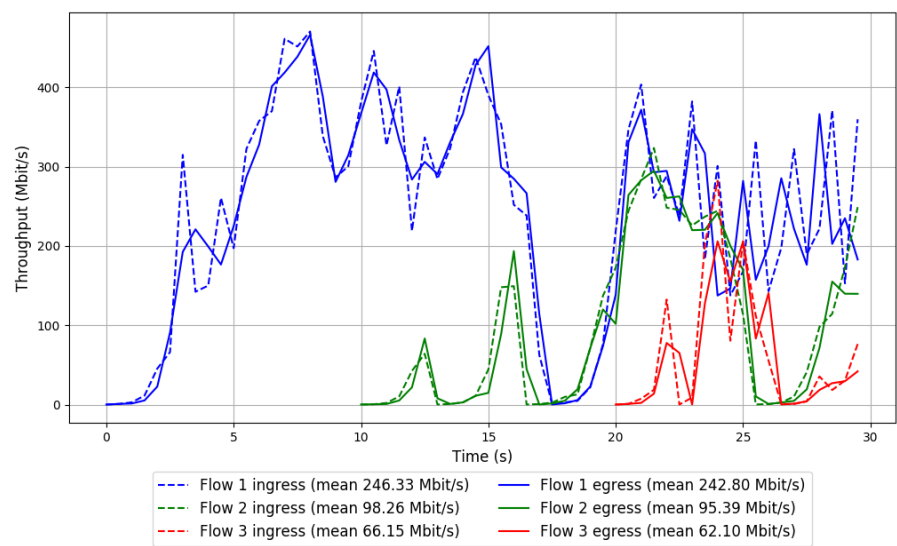
-- Flow 3:

Average throughput: 62.10 Mbit/s

95th percentile per-packet one-way delay: 247.268 ms

Loss rate: 5.71%

Run 7: Report of Verus — Data Link



Run 8: Statistics of Verus

Start at: 2018-03-01 09:37:02

End at: 2018-03-01 09:37:32

Below is generated by plot.py at 2018-03-01 14:28:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 272.11 Mbit/s

95th percentile per-packet one-way delay: 169.521 ms

Loss rate: 0.99%

-- Flow 1:

Average throughput: 181.22 Mbit/s

95th percentile per-packet one-way delay: 168.253 ms

Loss rate: 0.46%

-- Flow 2:

Average throughput: 128.38 Mbit/s

95th percentile per-packet one-way delay: 171.370 ms

Loss rate: 1.00%

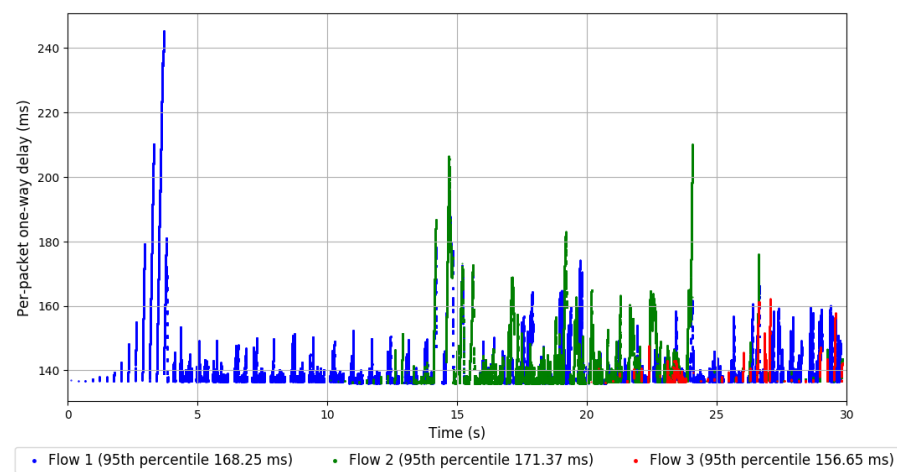
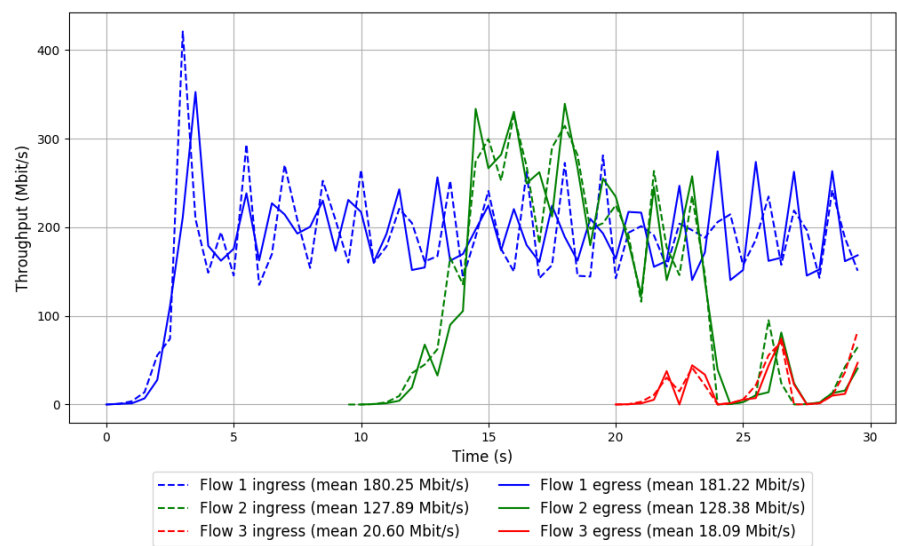
-- Flow 3:

Average throughput: 18.09 Mbit/s

95th percentile per-packet one-way delay: 156.650 ms

Loss rate: 14.61%

Run 8: Report of Verus — Data Link



Run 9: Statistics of Verus

Start at: 2018-03-01 09:58:12

End at: 2018-03-01 09:58:42

Below is generated by plot.py at 2018-03-01 14:31:11

Datalink statistics

-- Total of 3 flows:

Average throughput: 373.84 Mbit/s

95th percentile per-packet one-way delay: 283.190 ms

Loss rate: 6.34%

-- Flow 1:

Average throughput: 207.06 Mbit/s

95th percentile per-packet one-way delay: 251.623 ms

Loss rate: 5.87%

-- Flow 2:

Average throughput: 229.63 Mbit/s

95th percentile per-packet one-way delay: 293.180 ms

Loss rate: 6.62%

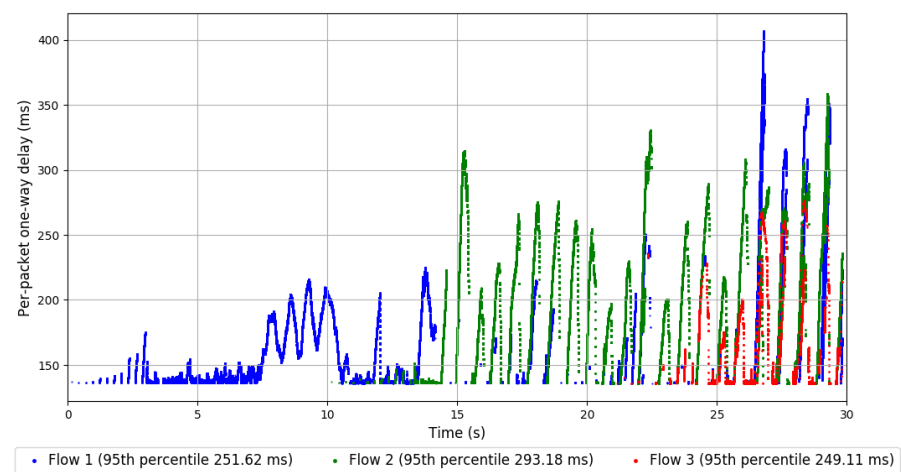
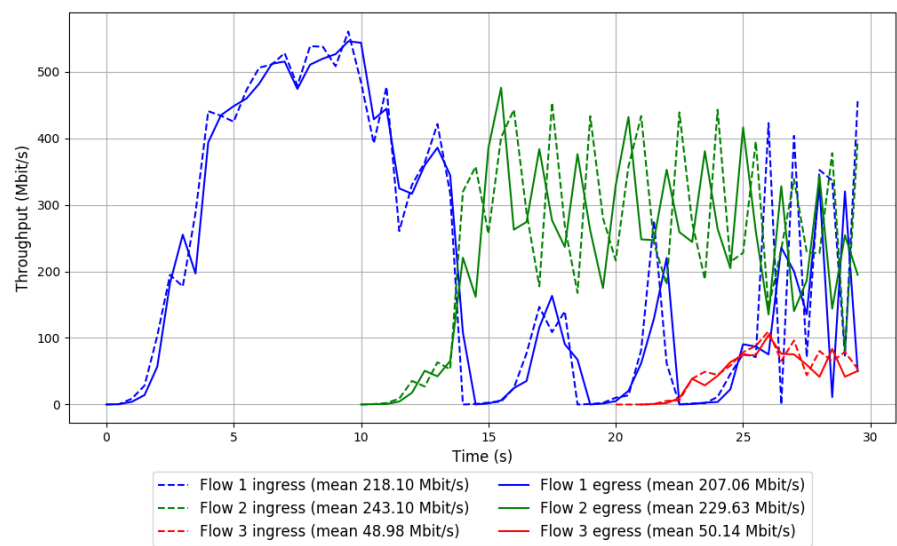
-- Flow 3:

Average throughput: 50.14 Mbit/s

95th percentile per-packet one-way delay: 249.113 ms

Loss rate: 9.92%

Run 9: Report of Verus — Data Link



Run 10: Statistics of Verus

Start at: 2018-03-01 10:19:24

End at: 2018-03-01 10:19:54

Below is generated by plot.py at 2018-03-01 14:31:11

Datalink statistics

-- Total of 3 flows:

Average throughput: 211.70 Mbit/s

95th percentile per-packet one-way delay: 238.296 ms

Loss rate: 1.87%

-- Flow 1:

Average throughput: 96.85 Mbit/s

95th percentile per-packet one-way delay: 226.571 ms

Loss rate: 1.73%

-- Flow 2:

Average throughput: 152.18 Mbit/s

95th percentile per-packet one-way delay: 245.666 ms

Loss rate: 2.27%

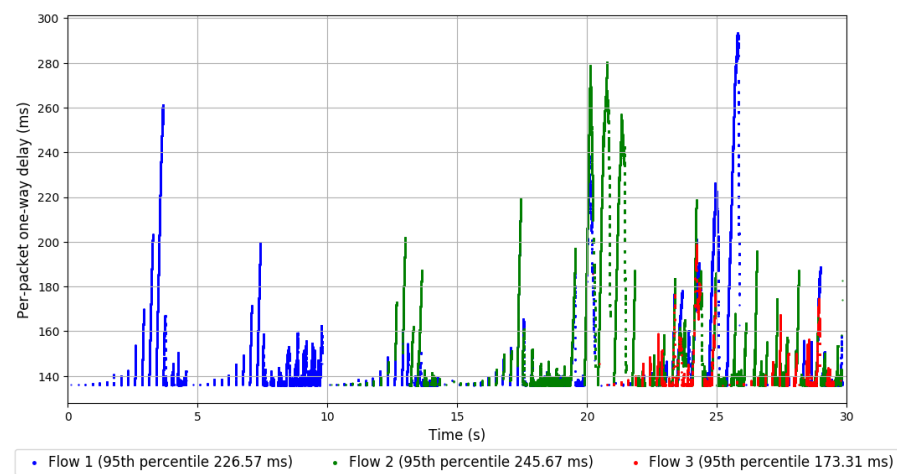
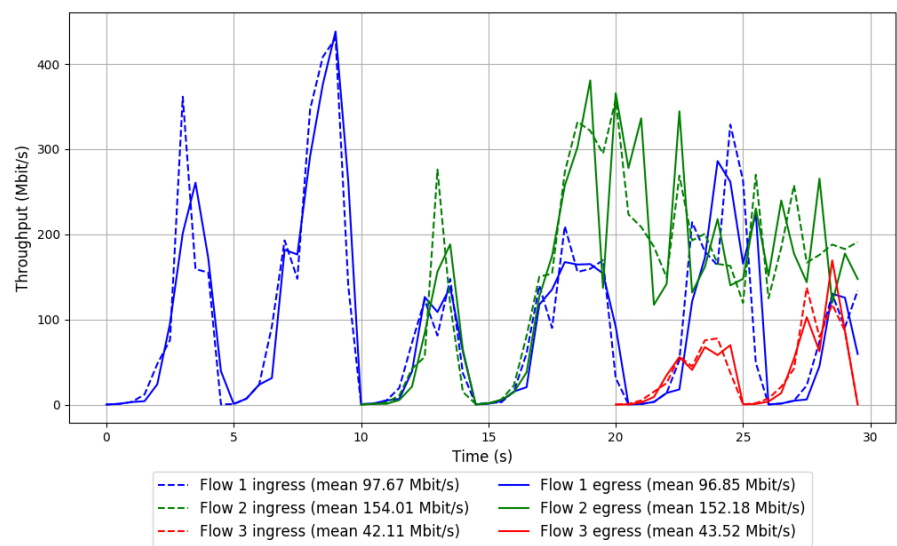
-- Flow 3:

Average throughput: 43.52 Mbit/s

95th percentile per-packet one-way delay: 173.310 ms

Loss rate: 0.02%

Run 10: Report of Verus — Data Link

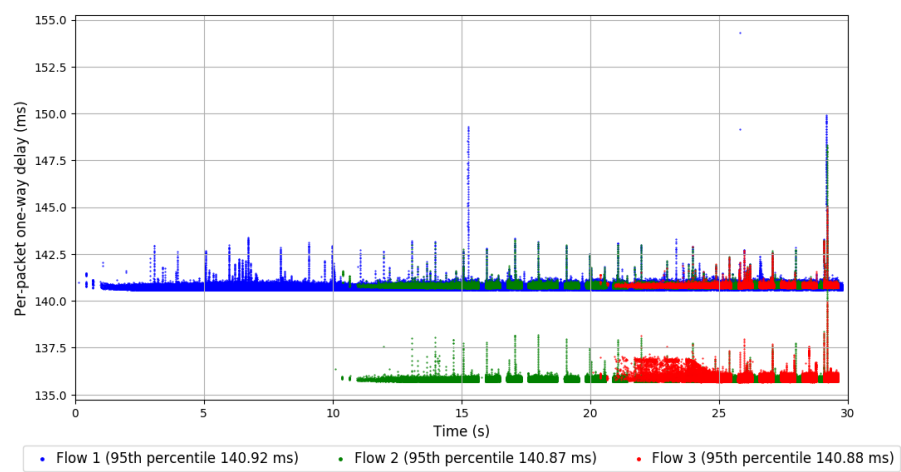
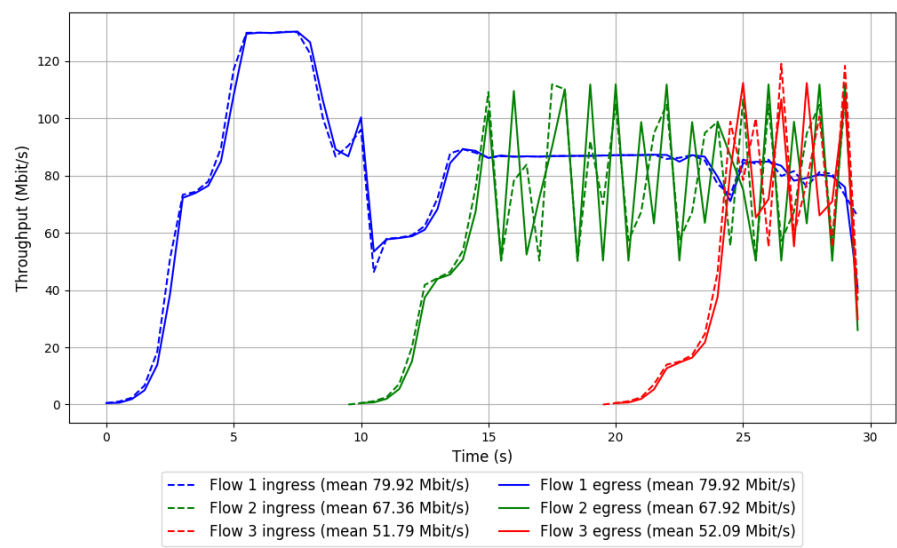


```
Run 1: Statistics of Copa

Start at: 2018-03-01 07:03:06
End at: 2018-03-01 07:03:36

# Below is generated by plot.py at 2018-03-01 14:31:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 141.36 Mbit/s
95th percentile per-packet one-way delay: 140.899 ms
Loss rate: 1.41%
-- Flow 1:
Average throughput: 79.92 Mbit/s
95th percentile per-packet one-way delay: 140.919 ms
Loss rate: 0.94%
-- Flow 2:
Average throughput: 67.92 Mbit/s
95th percentile per-packet one-way delay: 140.872 ms
Loss rate: 1.35%
-- Flow 3:
Average throughput: 52.09 Mbit/s
95th percentile per-packet one-way delay: 140.880 ms
Loss rate: 3.76%
```

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2018-03-01 07:23:23

End at: 2018-03-01 07:23:53

Below is generated by plot.py at 2018-03-01 14:31:11

Datalink statistics

-- Total of 3 flows:

Average throughput: 127.79 Mbit/s

95th percentile per-packet one-way delay: 164.113 ms

Loss rate: 7.97%

-- Flow 1:

Average throughput: 57.87 Mbit/s

95th percentile per-packet one-way delay: 140.800 ms

Loss rate: 0.93%

-- Flow 2:

Average throughput: 78.19 Mbit/s

95th percentile per-packet one-way delay: 192.589 ms

Loss rate: 16.43%

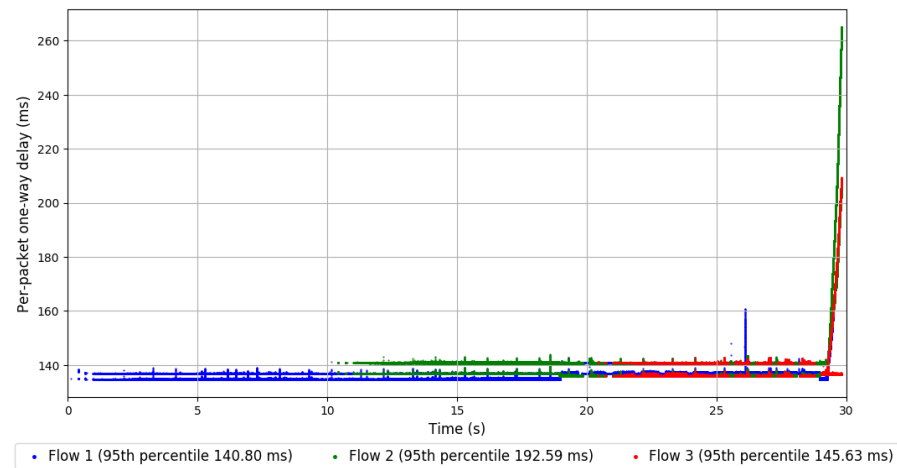
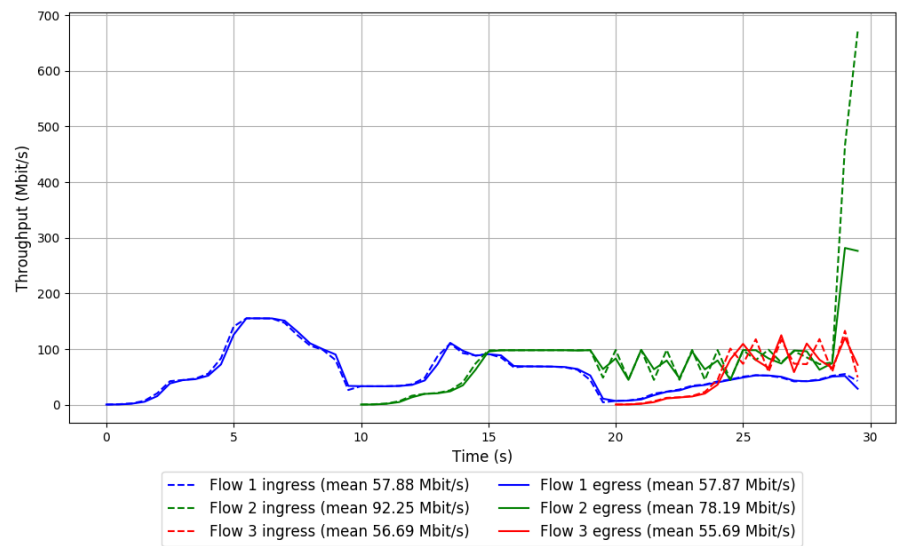
-- Flow 3:

Average throughput: 55.69 Mbit/s

95th percentile per-packet one-way delay: 145.626 ms

Loss rate: 1.87%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2018-03-01 07:43:57

End at: 2018-03-01 07:44:27

Below is generated by plot.py at 2018-03-01 14:31:11

Datalink statistics

-- Total of 3 flows:

Average throughput: 137.14 Mbit/s

95th percentile per-packet one-way delay: 140.870 ms

Loss rate: 2.13%

-- Flow 1:

Average throughput: 72.64 Mbit/s

95th percentile per-packet one-way delay: 140.878 ms

Loss rate: 1.65%

-- Flow 2:

Average throughput: 70.46 Mbit/s

95th percentile per-packet one-way delay: 140.857 ms

Loss rate: 1.52%

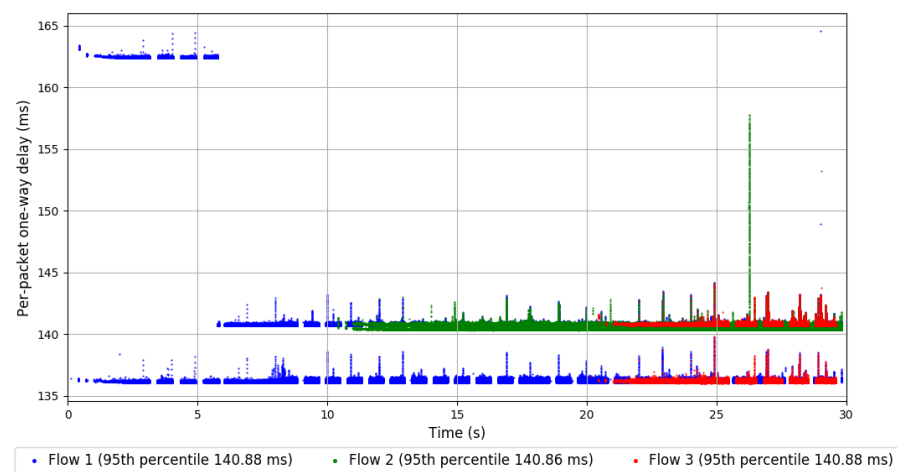
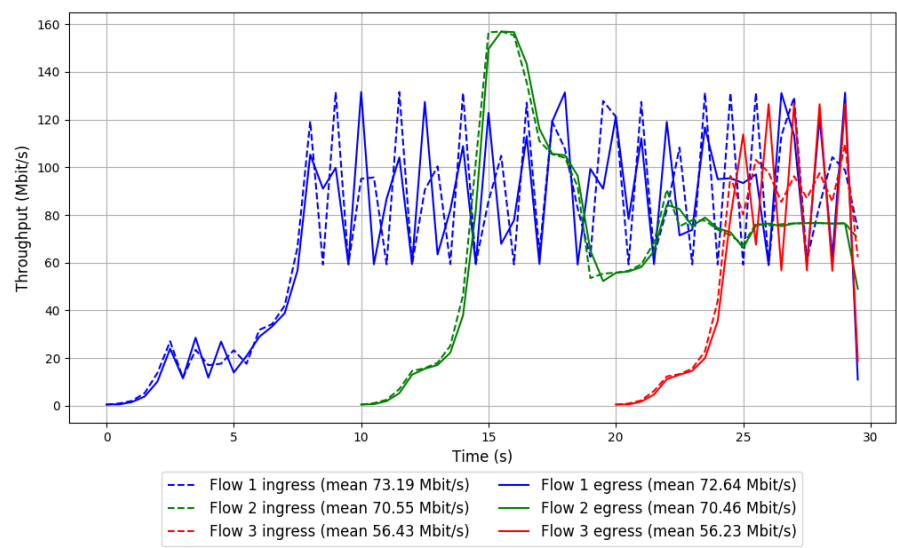
-- Flow 3:

Average throughput: 56.23 Mbit/s

95th percentile per-packet one-way delay: 140.876 ms

Loss rate: 5.56%

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

Start at: 2018-03-01 08:04:35

End at: 2018-03-01 08:05:05

Below is generated by plot.py at 2018-03-01 14:31:11

Datalink statistics

-- Total of 3 flows:

Average throughput: 110.12 Mbit/s

95th percentile per-packet one-way delay: 140.722 ms

Loss rate: 0.51%

-- Flow 1:

Average throughput: 71.84 Mbit/s

95th percentile per-packet one-way delay: 136.972 ms

Loss rate: 0.75%

-- Flow 2:

Average throughput: 34.55 Mbit/s

95th percentile per-packet one-way delay: 162.202 ms

Loss rate: 0.04%

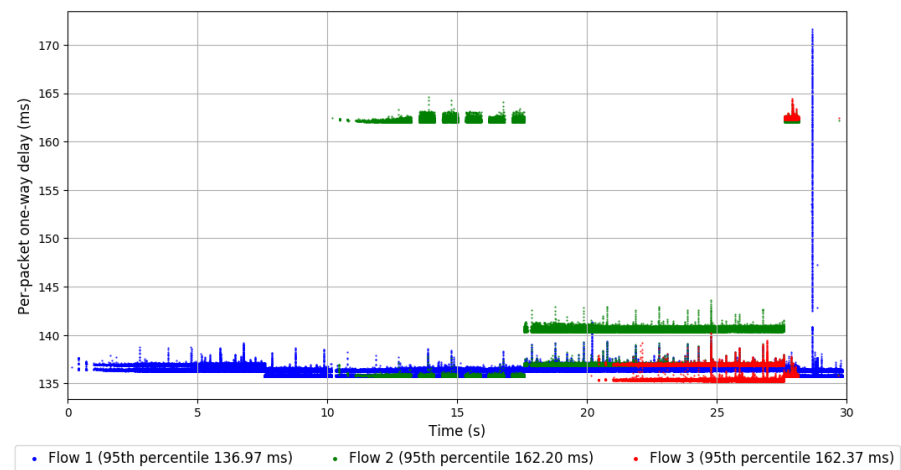
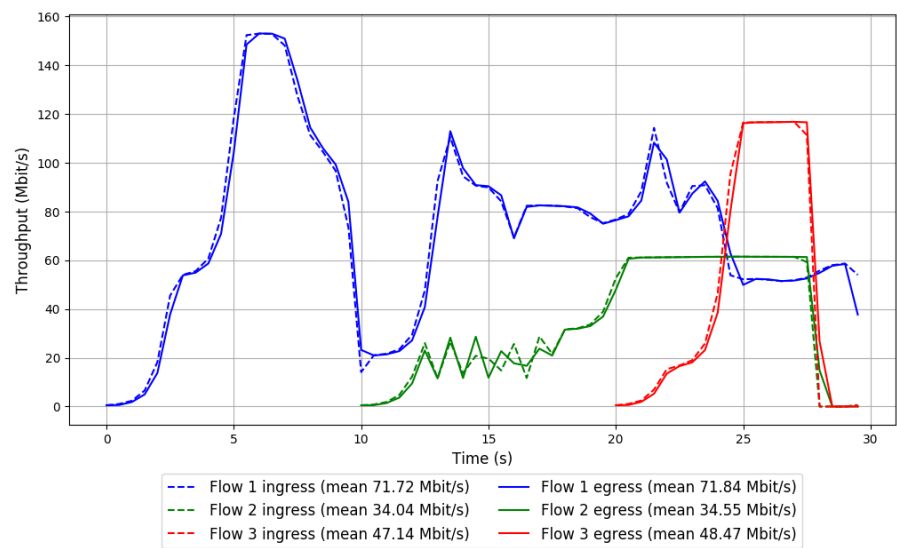
-- Flow 3:

Average throughput: 48.47 Mbit/s

95th percentile per-packet one-way delay: 162.369 ms

Loss rate: 0.06%

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2018-03-01 08:25:58

End at: 2018-03-01 08:26:28

Below is generated by plot.py at 2018-03-01 14:31:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 88.37 Mbit/s

95th percentile per-packet one-way delay: 164.695 ms

Loss rate: 1.31%

-- Flow 1:

Average throughput: 64.94 Mbit/s

95th percentile per-packet one-way delay: 136.933 ms

Loss rate: 0.08%

-- Flow 2:

Average throughput: 17.59 Mbit/s

95th percentile per-packet one-way delay: 161.793 ms

Loss rate: 0.00%

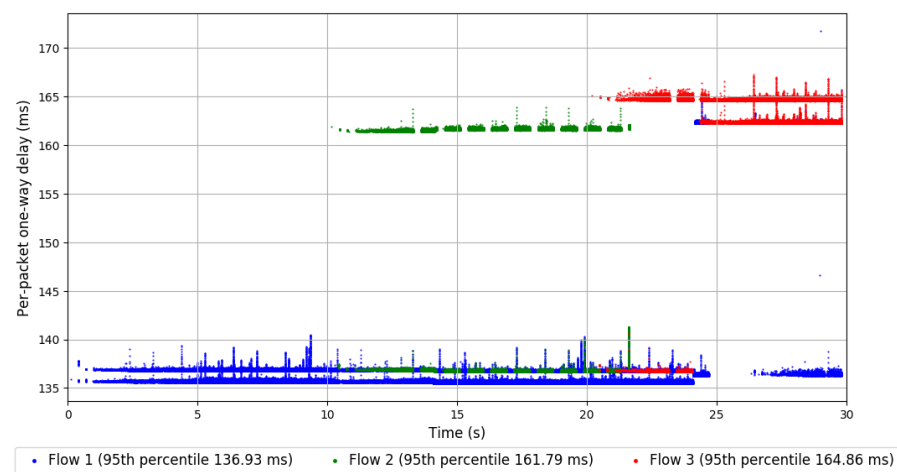
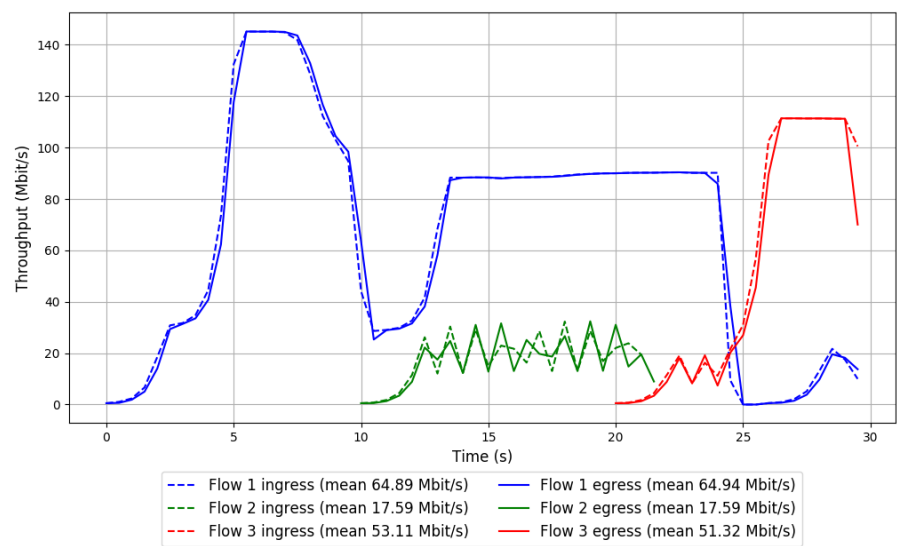
-- Flow 3:

Average throughput: 51.32 Mbit/s

95th percentile per-packet one-way delay: 164.859 ms

Loss rate: 6.32%

Run 5: Report of Copa — Data Link



Run 6: Statistics of Copa

Start at: 2018-03-01 08:46:35

End at: 2018-03-01 08:47:05

Below is generated by plot.py at 2018-03-01 14:31:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 80.82 Mbit/s

95th percentile per-packet one-way delay: 161.294 ms

Loss rate: 2.25%

-- Flow 1:

Average throughput: 49.63 Mbit/s

95th percentile per-packet one-way delay: 137.245 ms

Loss rate: 1.20%

-- Flow 2:

Average throughput: 13.98 Mbit/s

95th percentile per-packet one-way delay: 161.537 ms

Loss rate: 2.31%

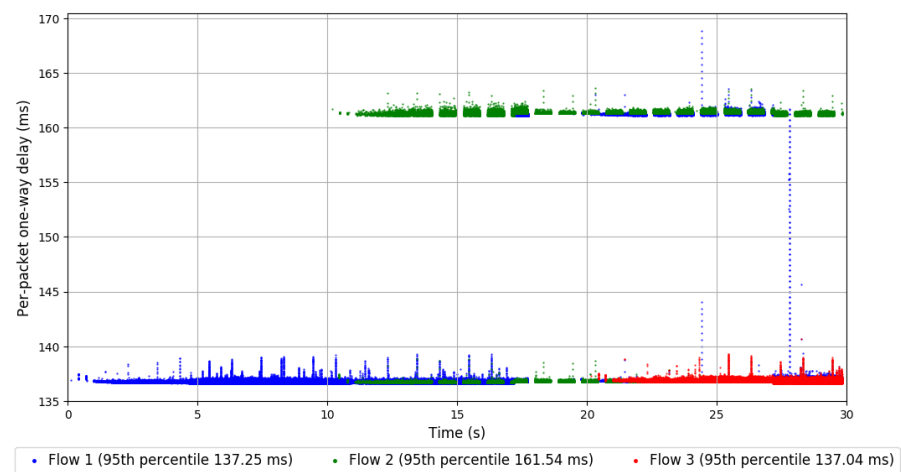
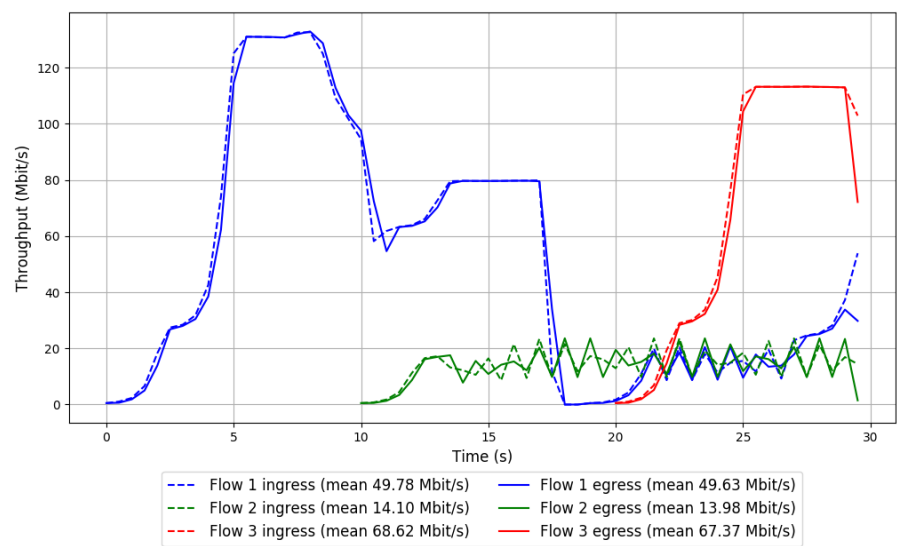
-- Flow 3:

Average throughput: 67.37 Mbit/s

95th percentile per-packet one-way delay: 137.039 ms

Loss rate: 4.52%

Run 6: Report of Copa — Data Link



Run 7: Statistics of Copa

Start at: 2018-03-01 09:08:04

End at: 2018-03-01 09:08:34

Below is generated by plot.py at 2018-03-01 14:32:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 113.52 Mbit/s

95th percentile per-packet one-way delay: 140.908 ms

Loss rate: 1.20%

-- Flow 1:

Average throughput: 61.32 Mbit/s

95th percentile per-packet one-way delay: 140.946 ms

Loss rate: 1.06%

-- Flow 2:

Average throughput: 72.90 Mbit/s

95th percentile per-packet one-way delay: 136.913 ms

Loss rate: 1.39%

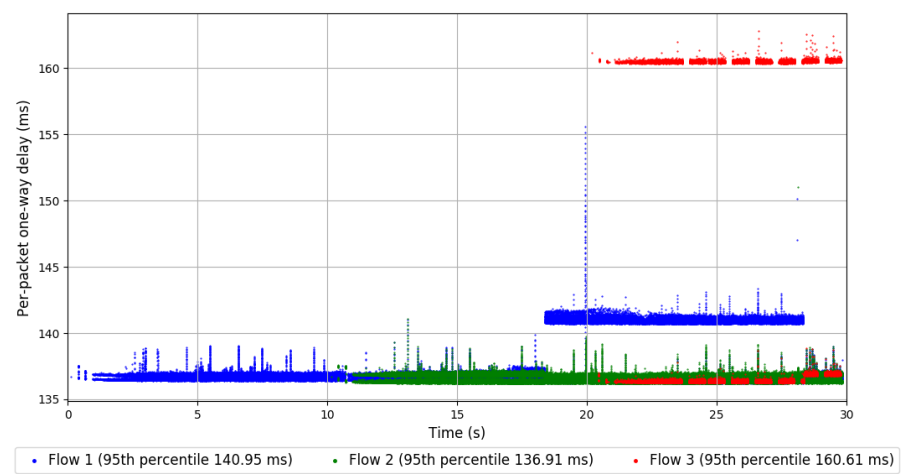
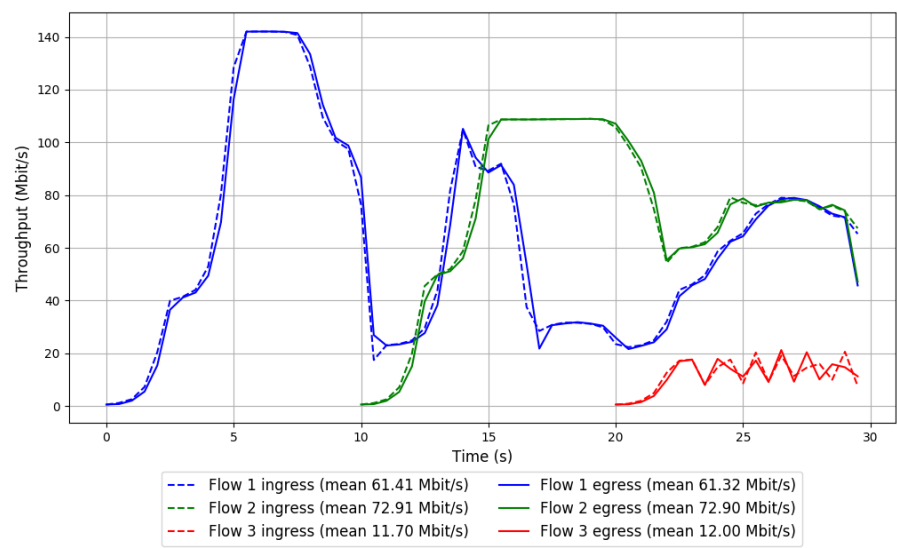
-- Flow 3:

Average throughput: 12.00 Mbit/s

95th percentile per-packet one-way delay: 160.609 ms

Loss rate: 0.91%

Run 7: Report of Copa — Data Link



Run 8: Statistics of Copa

Start at: 2018-03-01 09:29:14

End at: 2018-03-01 09:29:44

Below is generated by plot.py at 2018-03-01 14:33:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 121.01 Mbit/s

95th percentile per-packet one-way delay: 140.964 ms

Loss rate: 1.58%

-- Flow 1:

Average throughput: 88.05 Mbit/s

95th percentile per-packet one-way delay: 140.888 ms

Loss rate: 1.39%

-- Flow 2:

Average throughput: 14.35 Mbit/s

95th percentile per-packet one-way delay: 165.890 ms

Loss rate: 2.54%

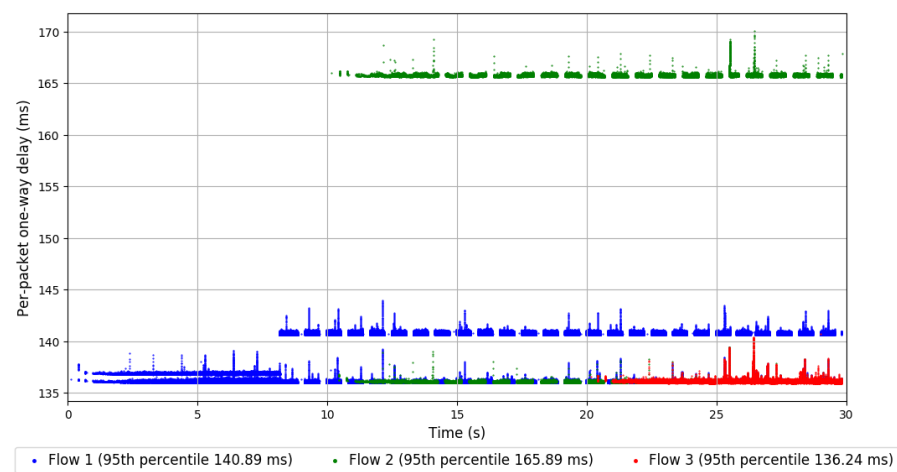
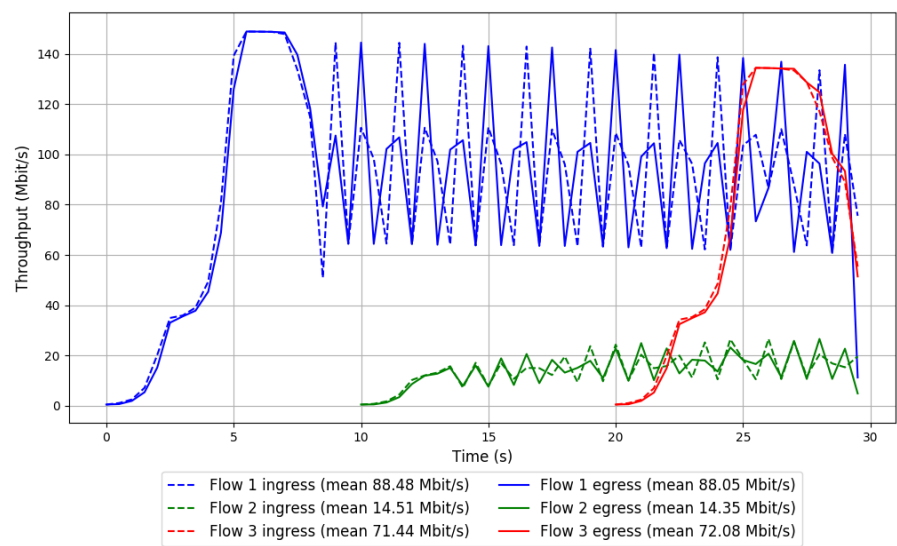
-- Flow 3:

Average throughput: 72.08 Mbit/s

95th percentile per-packet one-way delay: 136.238 ms

Loss rate: 1.87%

Run 8: Report of Copa — Data Link



Run 9: Statistics of Copa

Start at: 2018-03-01 09:50:09

End at: 2018-03-01 09:50:39

Below is generated by plot.py at 2018-03-01 14:33:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 100.36 Mbit/s

95th percentile per-packet one-way delay: 136.589 ms

Loss rate: 2.31%

-- Flow 1:

Average throughput: 37.12 Mbit/s

95th percentile per-packet one-way delay: 140.932 ms

Loss rate: 0.93%

-- Flow 2:

Average throughput: 72.87 Mbit/s

95th percentile per-packet one-way delay: 136.568 ms

Loss rate: 1.53%

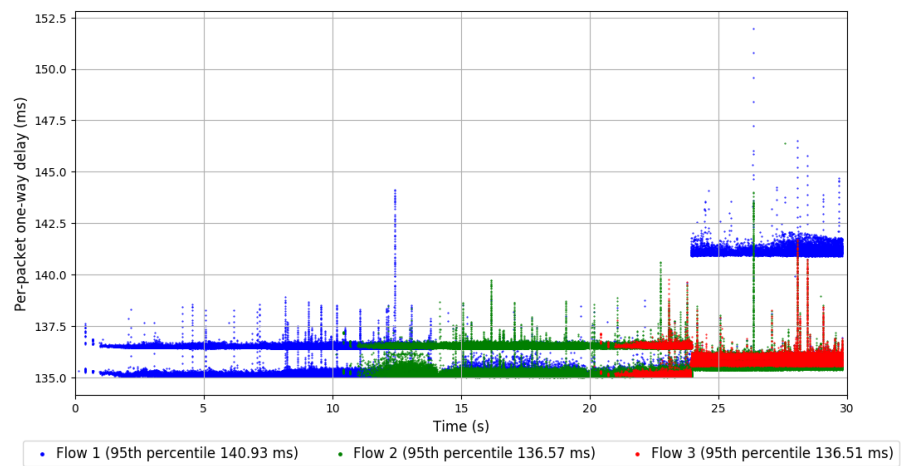
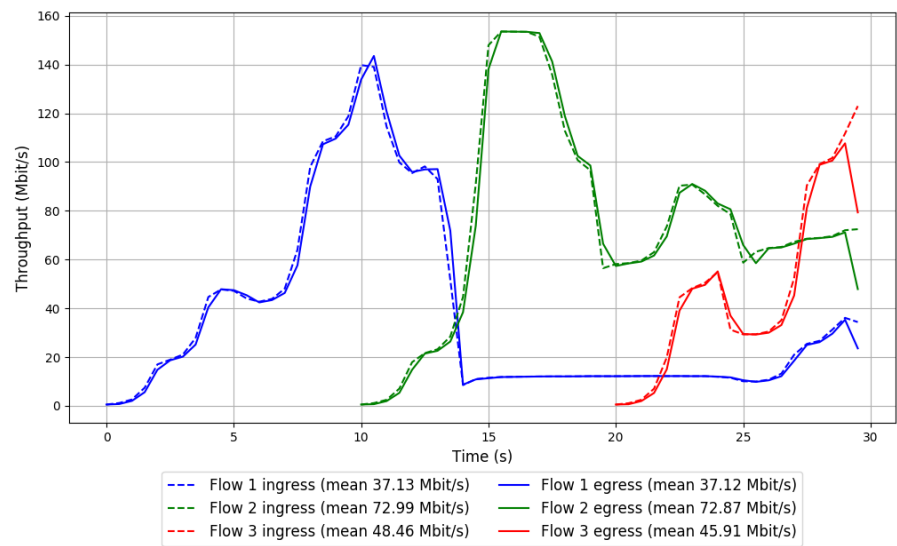
-- Flow 3:

Average throughput: 45.91 Mbit/s

95th percentile per-packet one-way delay: 136.507 ms

Loss rate: 7.88%

Run 9: Report of Copa — Data Link



Run 10: Statistics of Copa

Start at: 2018-03-01 10:11:19

End at: 2018-03-01 10:11:49

Below is generated by plot.py at 2018-03-01 14:33:22

Datalink statistics

-- Total of 3 flows:

Average throughput: 111.75 Mbit/s

95th percentile per-packet one-way delay: 140.462 ms

Loss rate: 1.02%

-- Flow 1:

Average throughput: 66.71 Mbit/s

95th percentile per-packet one-way delay: 140.293 ms

Loss rate: 0.78%

-- Flow 2:

Average throughput: 51.01 Mbit/s

95th percentile per-packet one-way delay: 165.020 ms

Loss rate: 0.00%

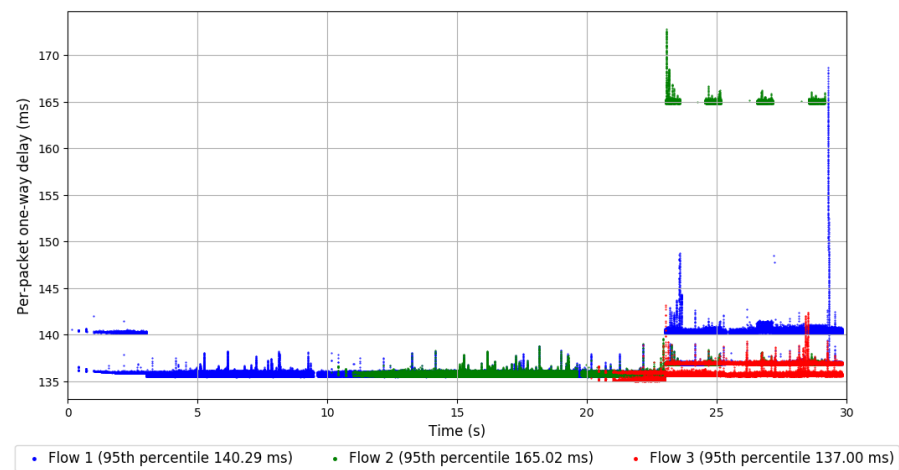
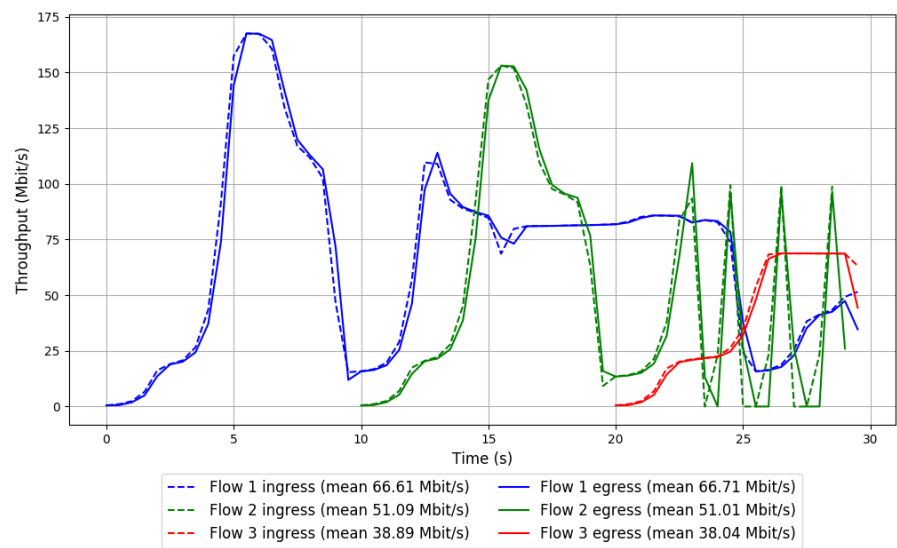
-- Flow 3:

Average throughput: 38.04 Mbit/s

95th percentile per-packet one-way delay: 137.004 ms

Loss rate: 4.86%

Run 10: Report of Copa — Data Link

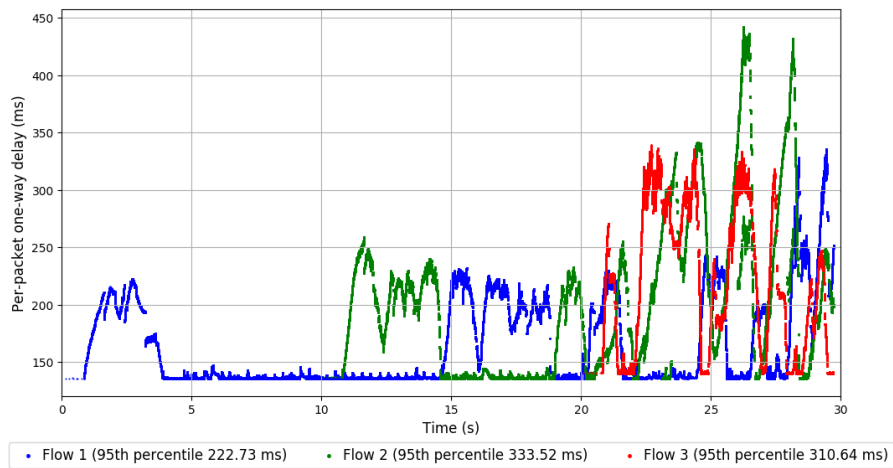
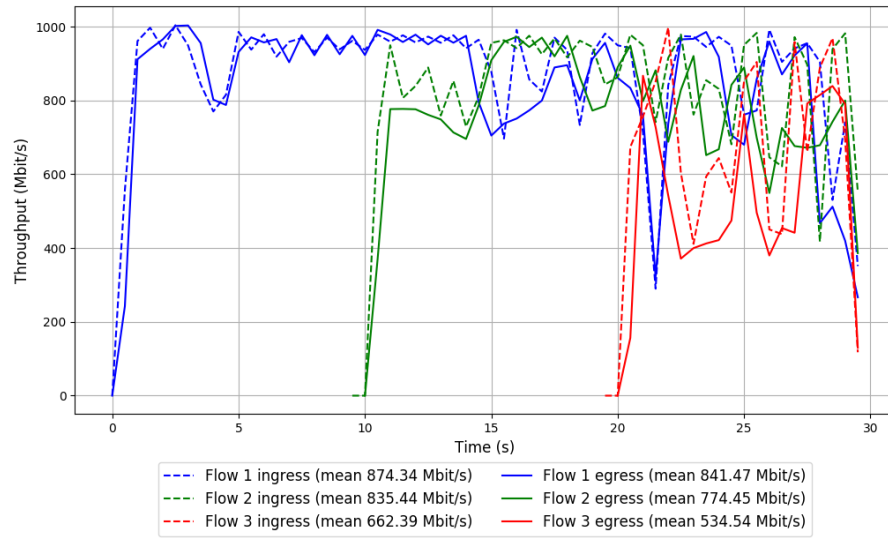


```
Run 1: Statistics of FillP

Start at: 2018-03-01 07:00:19
End at: 2018-03-01 07:00:49

# Below is generated by plot.py at 2018-03-01 14:58:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1529.09 Mbit/s
95th percentile per-packet one-way delay: 295.816 ms
Loss rate: 8.14%
-- Flow 1:
Average throughput: 841.47 Mbit/s
95th percentile per-packet one-way delay: 222.731 ms
Loss rate: 4.64%
-- Flow 2:
Average throughput: 774.45 Mbit/s
95th percentile per-packet one-way delay: 333.522 ms
Loss rate: 8.58%
-- Flow 3:
Average throughput: 534.54 Mbit/s
95th percentile per-packet one-way delay: 310.636 ms
Loss rate: 21.08%
```


Run 1: Report of FillP — Data Link



Run 2: Statistics of FillP

Start at: 2018-03-01 07:20:36

End at: 2018-03-01 07:21:06

Below is generated by plot.py at 2018-03-01 14:58:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 1425.77 Mbit/s

95th percentile per-packet one-way delay: 350.149 ms

Loss rate: 8.63%

-- Flow 1:

Average throughput: 730.46 Mbit/s

95th percentile per-packet one-way delay: 356.102 ms

Loss rate: 7.30%

-- Flow 2:

Average throughput: 690.49 Mbit/s

95th percentile per-packet one-way delay: 357.666 ms

Loss rate: 9.15%

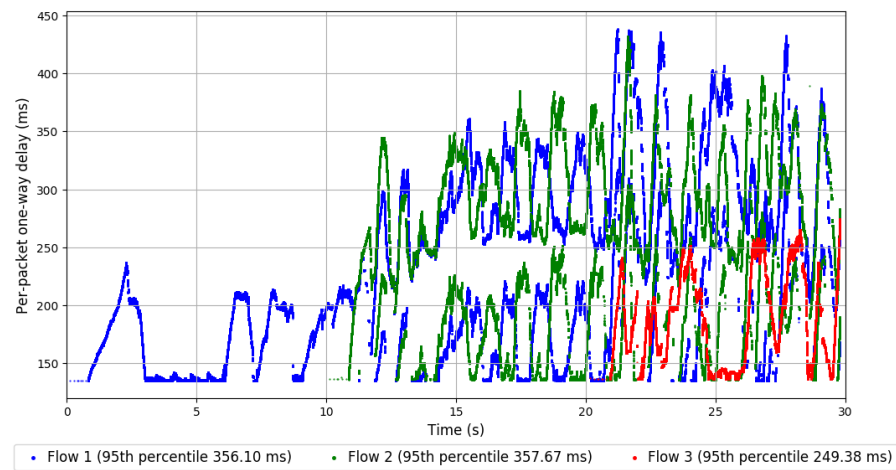
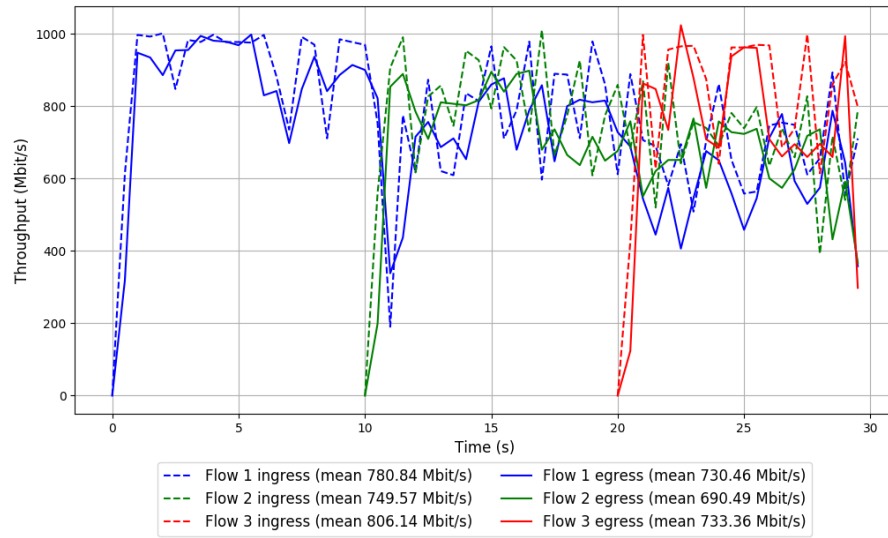
-- Flow 3:

Average throughput: 733.36 Mbit/s

95th percentile per-packet one-way delay: 249.379 ms

Loss rate: 11.55%

Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2018-03-01 07:41:10

End at: 2018-03-01 07:41:40

Below is generated by plot.py at 2018-03-01 14:59:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 1510.17 Mbit/s

95th percentile per-packet one-way delay: 300.493 ms

Loss rate: 10.37%

-- Flow 1:

Average throughput: 776.68 Mbit/s

95th percentile per-packet one-way delay: 247.258 ms

Loss rate: 9.67%

-- Flow 2:

Average throughput: 792.67 Mbit/s

95th percentile per-packet one-way delay: 276.096 ms

Loss rate: 8.75%

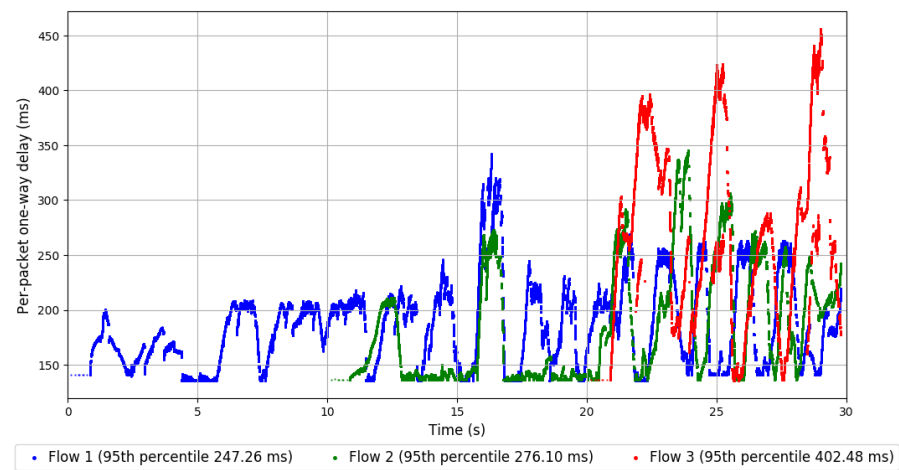
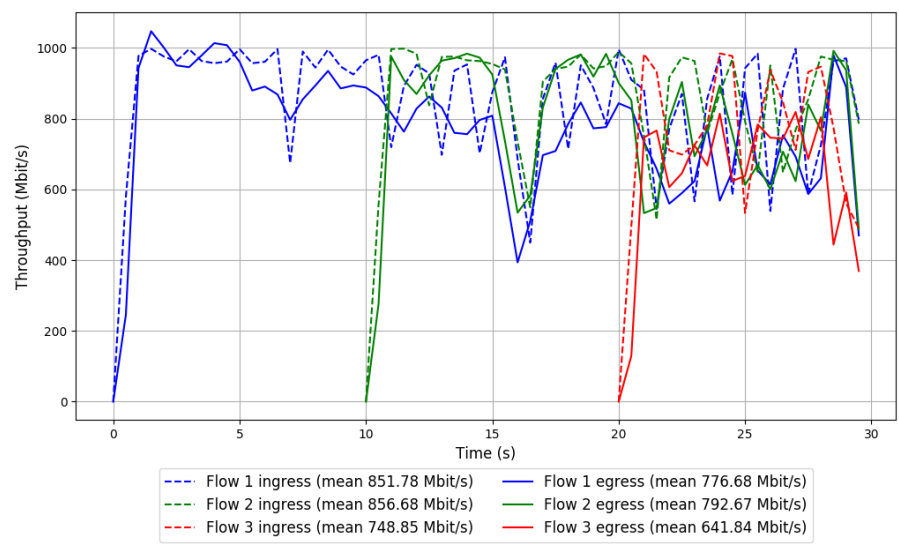
-- Flow 3:

Average throughput: 641.84 Mbit/s

95th percentile per-packet one-way delay: 402.479 ms

Loss rate: 16.49%

Run 3: Report of FillP — Data Link



Run 4: Statistics of FillP

Start at: 2018-03-01 08:01:48

End at: 2018-03-01 08:02:18

Below is generated by plot.py at 2018-03-01 14:59:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 1382.83 Mbit/s

95th percentile per-packet one-way delay: 370.621 ms

Loss rate: 9.63%

-- Flow 1:

Average throughput: 722.12 Mbit/s

95th percentile per-packet one-way delay: 378.946 ms

Loss rate: 9.58%

-- Flow 2:

Average throughput: 684.07 Mbit/s

95th percentile per-packet one-way delay: 371.689 ms

Loss rate: 6.78%

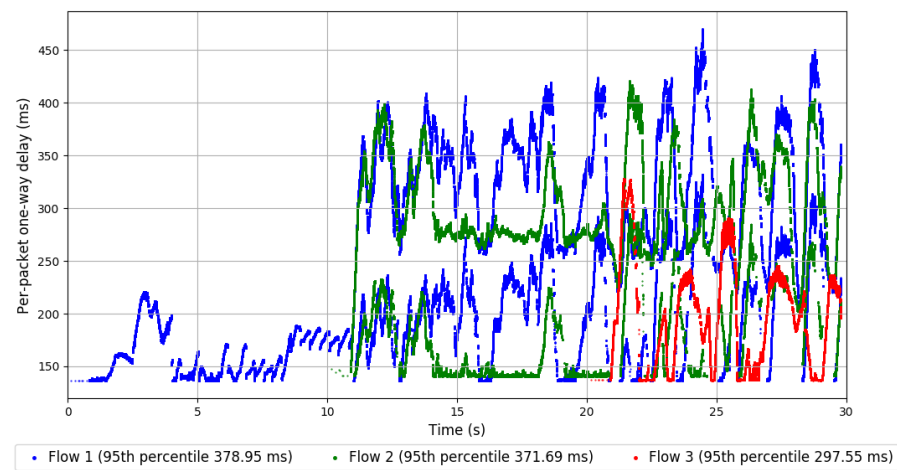
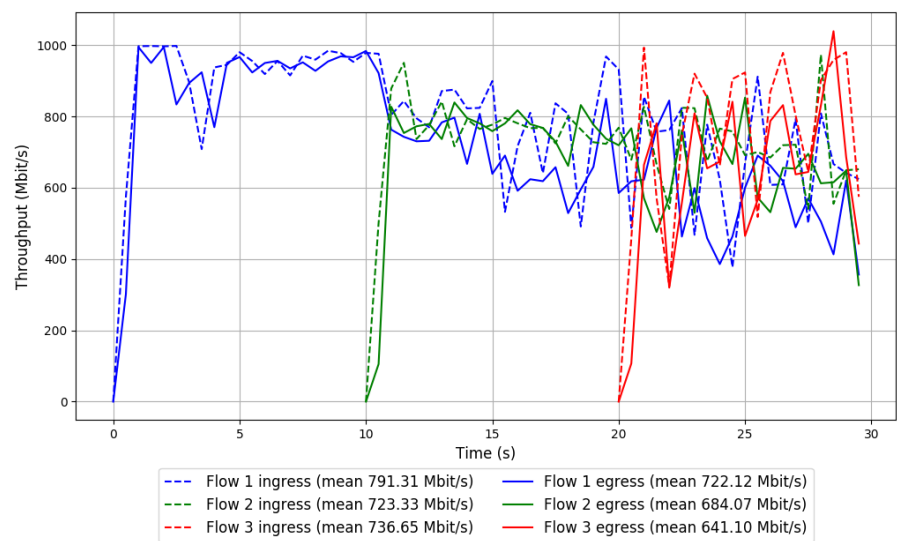
-- Flow 3:

Average throughput: 641.10 Mbit/s

95th percentile per-packet one-way delay: 297.548 ms

Loss rate: 15.39%

Run 4: Report of FillP — Data Link



Run 5: Statistics of FillP

Start at: 2018-03-01 08:23:06

End at: 2018-03-01 08:23:36

Below is generated by plot.py at 2018-03-01 15:00:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 1504.14 Mbit/s

95th percentile per-packet one-way delay: 366.974 ms

Loss rate: 7.37%

-- Flow 1:

Average throughput: 780.71 Mbit/s

95th percentile per-packet one-way delay: 361.439 ms

Loss rate: 5.33%

-- Flow 2:

Average throughput: 838.59 Mbit/s

95th percentile per-packet one-way delay: 256.589 ms

Loss rate: 5.33%

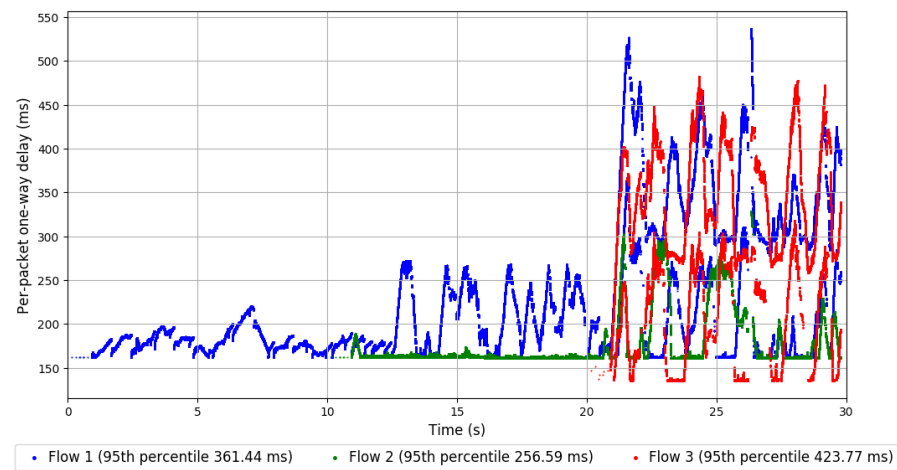
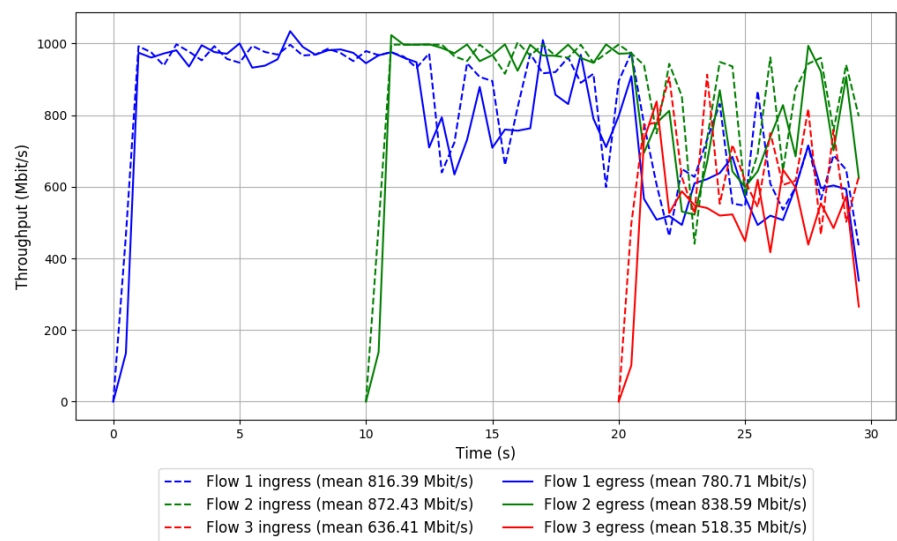
-- Flow 3:

Average throughput: 518.35 Mbit/s

95th percentile per-packet one-way delay: 423.773 ms

Loss rate: 20.90%

Run 5: Report of FillP — Data Link



Run 6: Statistics of FillP

Start at: 2018-03-01 08:43:45

End at: 2018-03-01 08:44:15

Below is generated by plot.py at 2018-03-01 15:00:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 1504.50 Mbit/s

95th percentile per-packet one-way delay: 304.047 ms

Loss rate: 8.61%

-- Flow 1:

Average throughput: 820.01 Mbit/s

95th percentile per-packet one-way delay: 235.840 ms

Loss rate: 5.95%

-- Flow 2:

Average throughput: 751.51 Mbit/s

95th percentile per-packet one-way delay: 365.900 ms

Loss rate: 6.71%

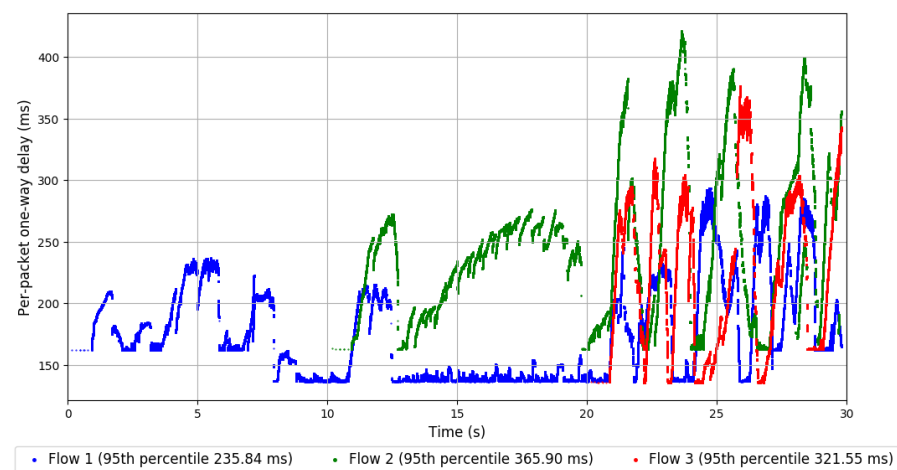
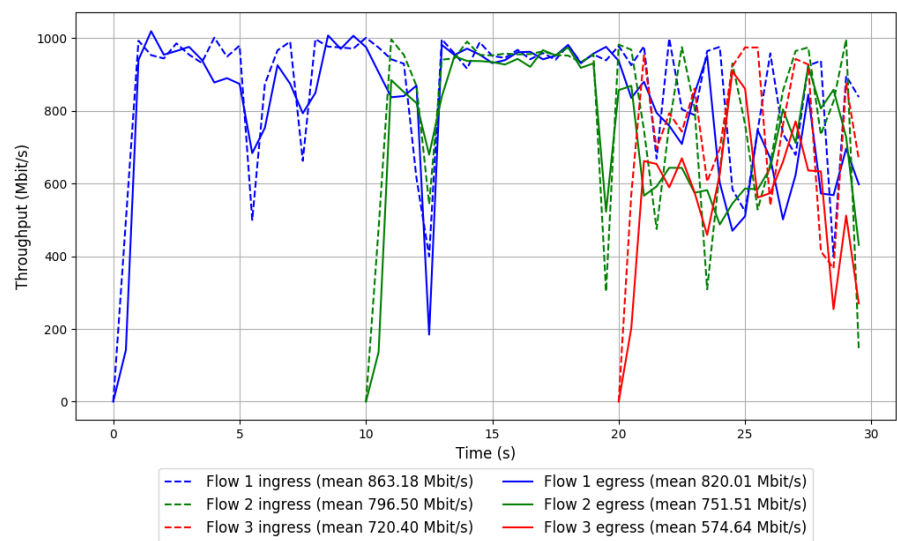
-- Flow 3:

Average throughput: 574.64 Mbit/s

95th percentile per-packet one-way delay: 321.548 ms

Loss rate: 22.43%

Run 6: Report of FillP — Data Link



Run 7: Statistics of FillP

Start at: 2018-03-01 09:05:11

End at: 2018-03-01 09:05:41

Below is generated by plot.py at 2018-03-01 15:01:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 1555.50 Mbit/s

95th percentile per-packet one-way delay: 250.624 ms

Loss rate: 8.41%

-- Flow 1:

Average throughput: 810.58 Mbit/s

95th percentile per-packet one-way delay: 261.795 ms

Loss rate: 6.33%

-- Flow 2:

Average throughput: 785.04 Mbit/s

95th percentile per-packet one-way delay: 233.643 ms

Loss rate: 8.67%

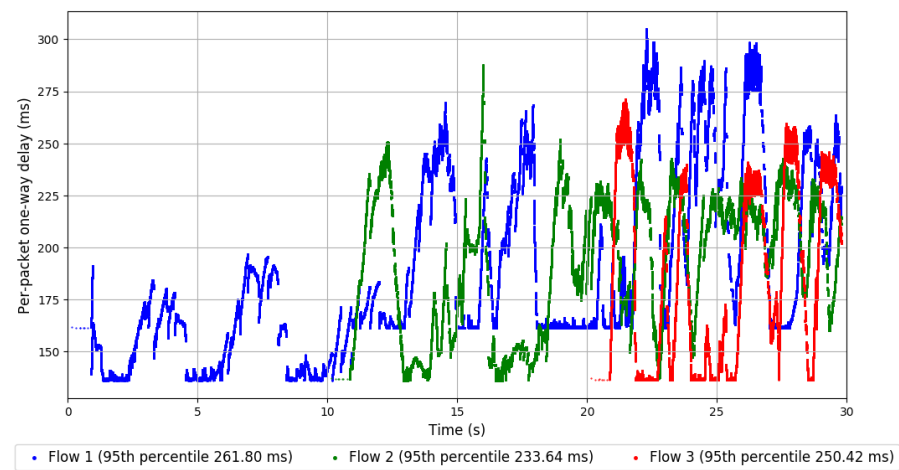
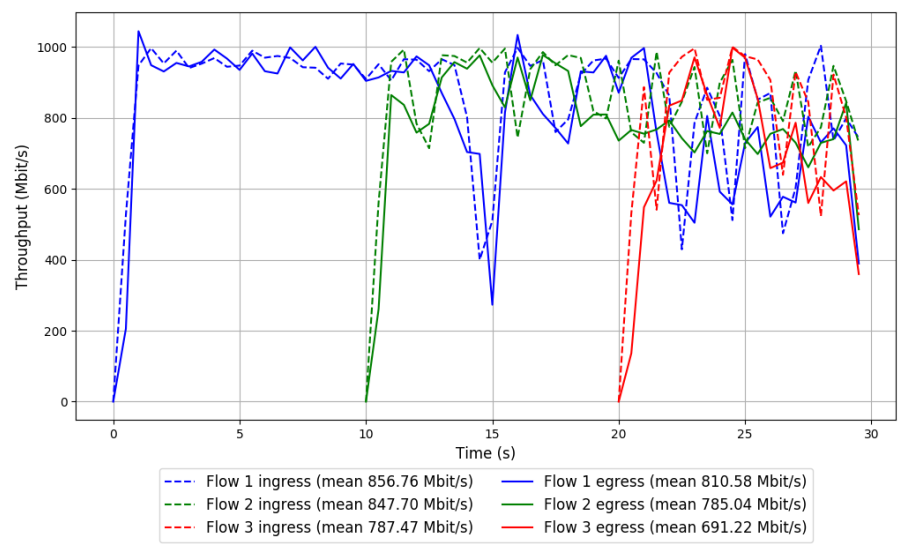
-- Flow 3:

Average throughput: 691.22 Mbit/s

95th percentile per-packet one-way delay: 250.418 ms

Loss rate: 14.66%

Run 7: Report of FillP — Data Link



Run 8: Statistics of FillP

Start at: 2018-03-01 09:26:22

End at: 2018-03-01 09:26:52

Below is generated by plot.py at 2018-03-01 15:02:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 1563.13 Mbit/s

95th percentile per-packet one-way delay: 259.822 ms

Loss rate: 8.51%

-- Flow 1:

Average throughput: 811.41 Mbit/s

95th percentile per-packet one-way delay: 249.940 ms

Loss rate: 7.46%

-- Flow 2:

Average throughput: 844.45 Mbit/s

95th percentile per-packet one-way delay: 226.273 ms

Loss rate: 5.70%

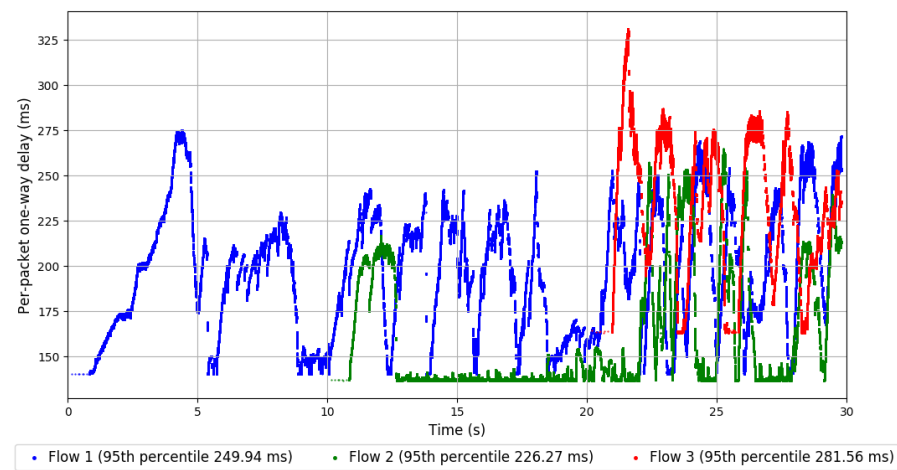
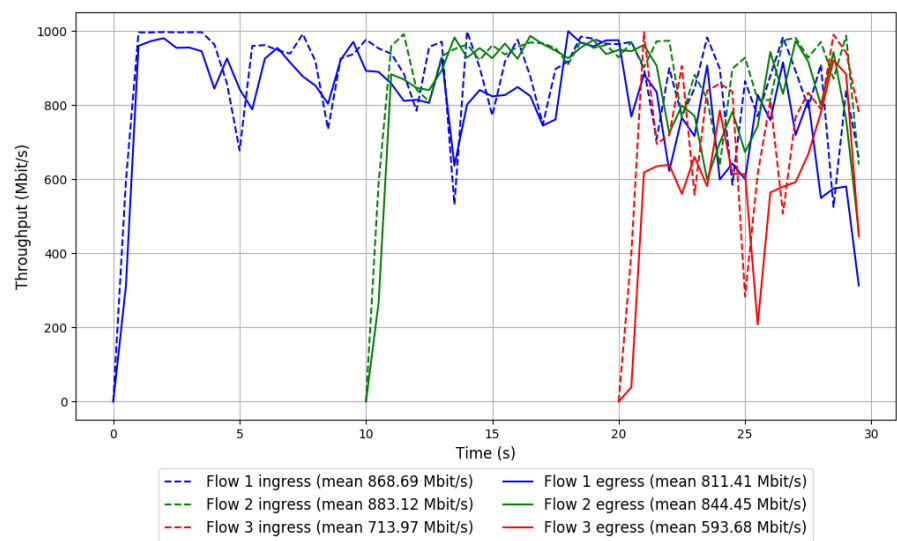
-- Flow 3:

Average throughput: 593.68 Mbit/s

95th percentile per-packet one-way delay: 281.562 ms

Loss rate: 19.38%

Run 8: Report of FillP — Data Link



Run 9: Statistics of FillP

Start at: 2018-03-01 09:47:22

End at: 2018-03-01 09:47:52

Below is generated by plot.py at 2018-03-01 15:26:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 1532.11 Mbit/s

95th percentile per-packet one-way delay: 242.678 ms

Loss rate: 9.37%

-- Flow 1:

Average throughput: 835.17 Mbit/s

95th percentile per-packet one-way delay: 233.845 ms

Loss rate: 6.88%

-- Flow 2:

Average throughput: 763.08 Mbit/s

95th percentile per-packet one-way delay: 246.487 ms

Loss rate: 10.29%

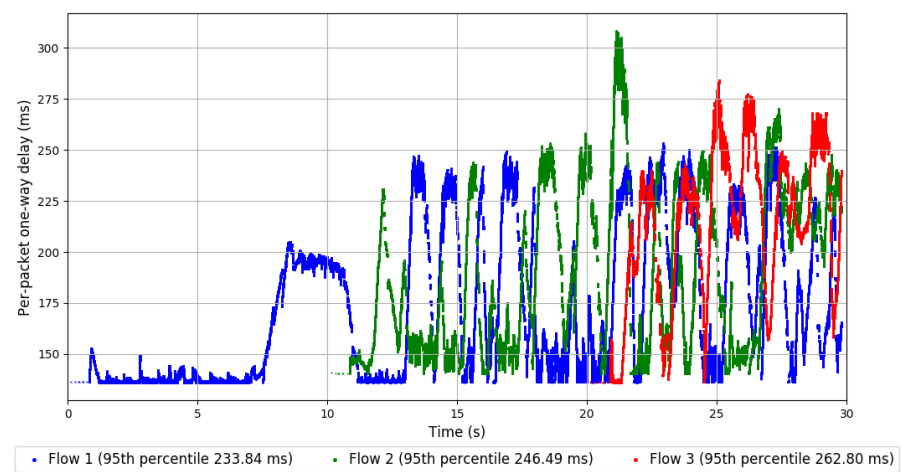
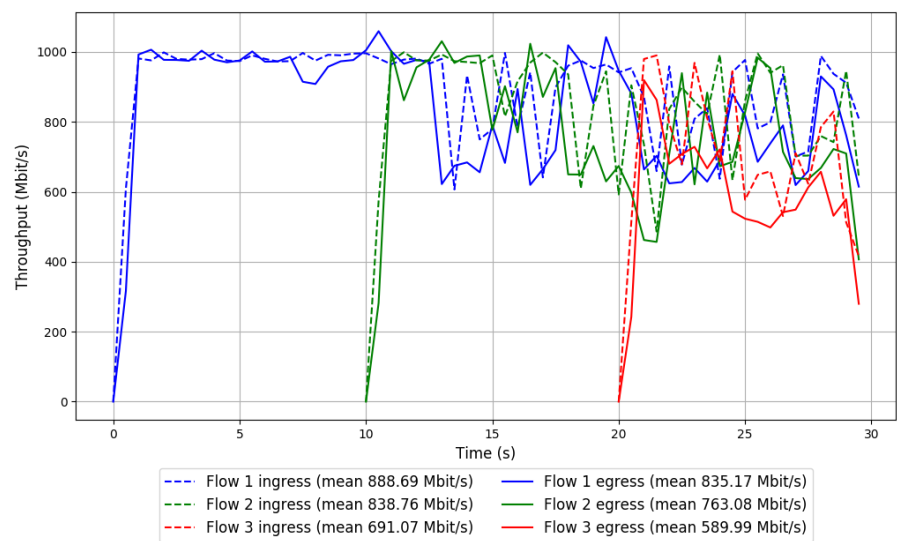
-- Flow 3:

Average throughput: 589.99 Mbit/s

95th percentile per-packet one-way delay: 262.795 ms

Loss rate: 16.85%

Run 9: Report of FillP — Data Link



Run 10: Statistics of FillP

Start at: 2018-03-01 10:08:31

End at: 2018-03-01 10:09:01

Below is generated by plot.py at 2018-03-01 15:26:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 1542.32 Mbit/s

95th percentile per-packet one-way delay: 319.907 ms

Loss rate: 7.46%

-- Flow 1:

Average throughput: 814.51 Mbit/s

95th percentile per-packet one-way delay: 226.479 ms

Loss rate: 6.47%

-- Flow 2:

Average throughput: 783.56 Mbit/s

95th percentile per-packet one-way delay: 339.360 ms

Loss rate: 7.01%

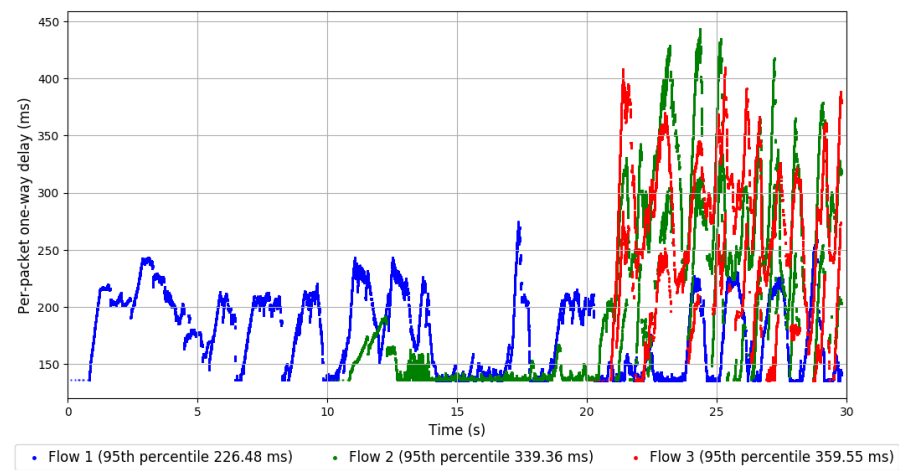
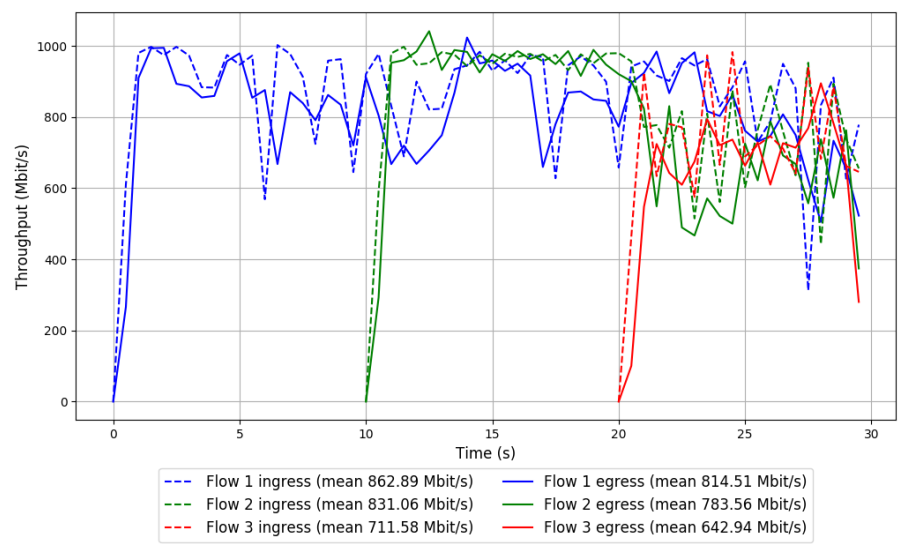
-- Flow 3:

Average throughput: 642.94 Mbit/s

95th percentile per-packet one-way delay: 359.552 ms

Loss rate: 12.14%

Run 10: Report of FillP — Data Link

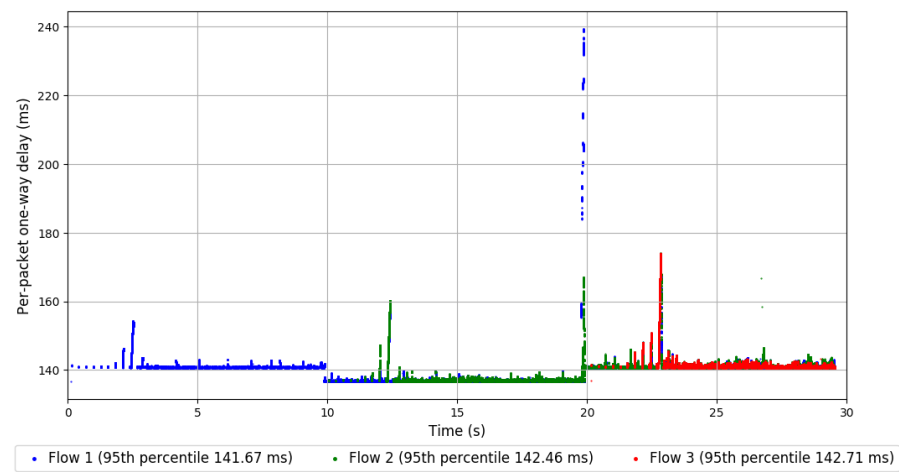
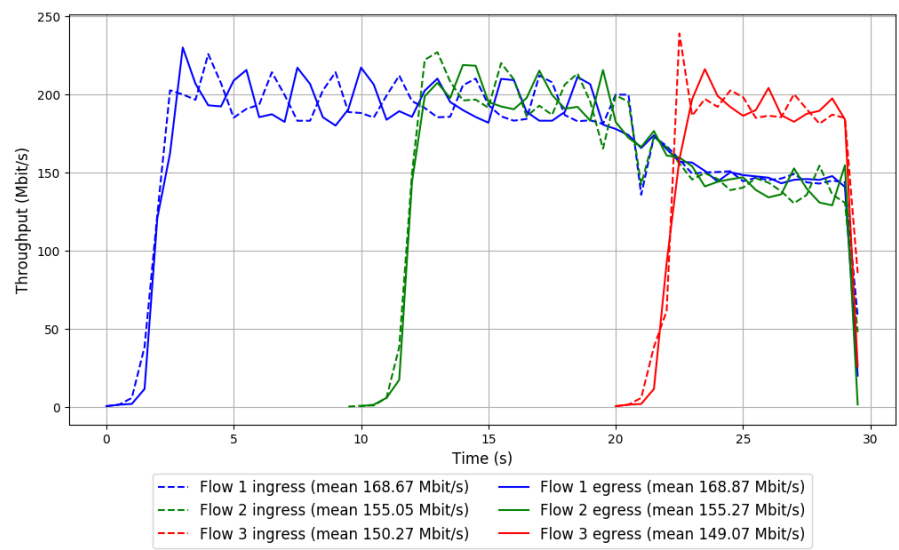


```
Run 1: Statistics of Indigo-1-32

Start at: 2018-03-01 07:05:02
End at: 2018-03-01 07:05:32

# Below is generated by plot.py at 2018-03-01 15:26:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 319.38 Mbit/s
95th percentile per-packet one-way delay: 142.065 ms
Loss rate: 1.38%
-- Flow 1:
Average throughput: 168.87 Mbit/s
95th percentile per-packet one-way delay: 141.674 ms
Loss rate: 0.80%
-- Flow 2:
Average throughput: 155.27 Mbit/s
95th percentile per-packet one-way delay: 142.461 ms
Loss rate: 1.27%
-- Flow 3:
Average throughput: 149.07 Mbit/s
95th percentile per-packet one-way delay: 142.709 ms
Loss rate: 3.61%
```

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



Run 2: Statistics of Indigo-1-32

Start at: 2018-03-01 07:25:23

End at: 2018-03-01 07:25:53

Below is generated by plot.py at 2018-03-01 15:26:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 253.92 Mbit/s

95th percentile per-packet one-way delay: 143.516 ms

Loss rate: 1.67%

-- Flow 1:

Average throughput: 121.70 Mbit/s

95th percentile per-packet one-way delay: 142.607 ms

Loss rate: 0.97%

-- Flow 2:

Average throughput: 126.45 Mbit/s

95th percentile per-packet one-way delay: 143.570 ms

Loss rate: 1.58%

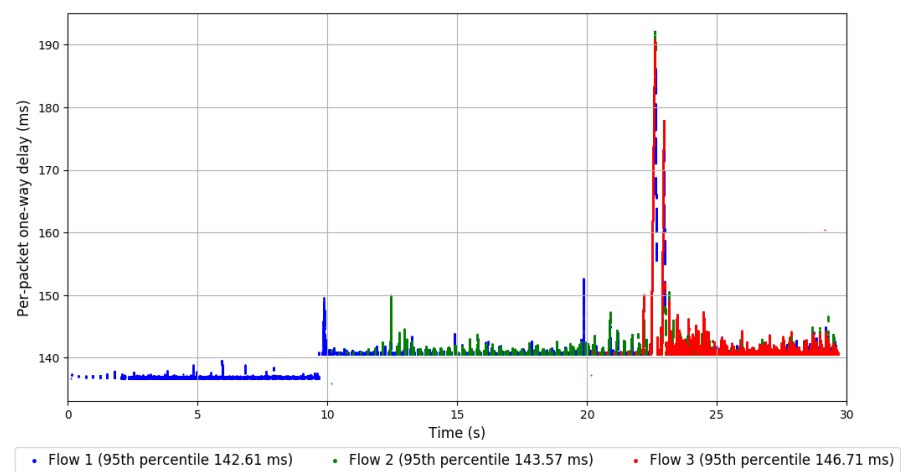
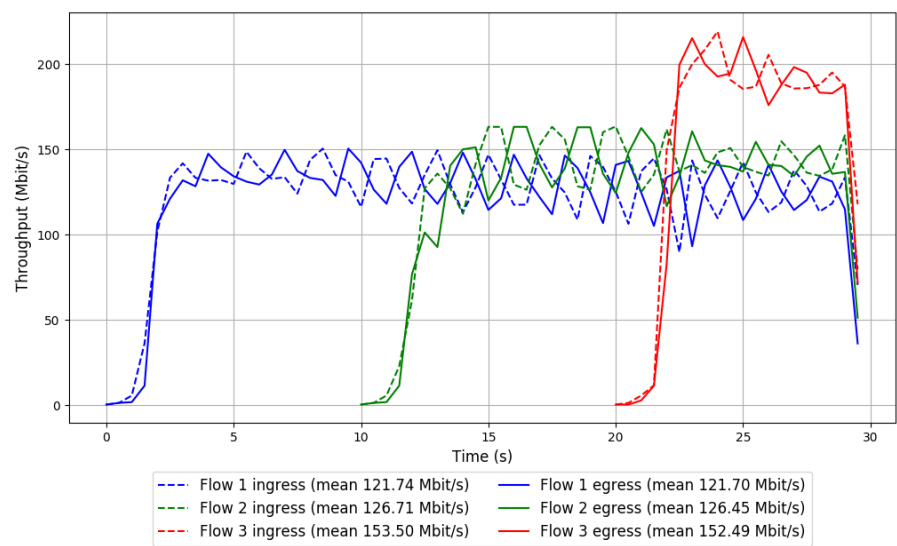
-- Flow 3:

Average throughput: 152.49 Mbit/s

95th percentile per-packet one-way delay: 146.705 ms

Loss rate: 3.47%

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



Run 3: Statistics of Indigo-1-32

Start at: 2018-03-01 07:45:55

End at: 2018-03-01 07:46:25

Below is generated by plot.py at 2018-03-01 15:26:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 307.67 Mbit/s

95th percentile per-packet one-way delay: 142.229 ms

Loss rate: 1.42%

-- Flow 1:

Average throughput: 175.98 Mbit/s

95th percentile per-packet one-way delay: 140.022 ms

Loss rate: 0.80%

-- Flow 2:

Average throughput: 125.93 Mbit/s

95th percentile per-packet one-way delay: 143.129 ms

Loss rate: 1.53%

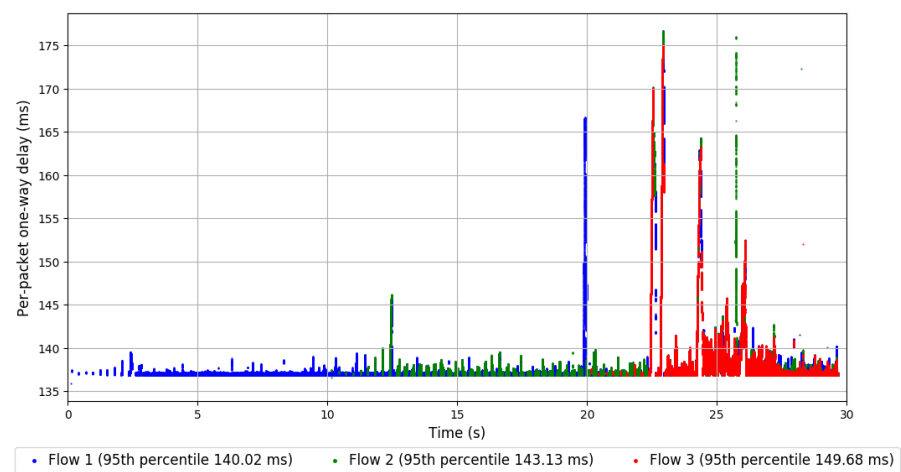
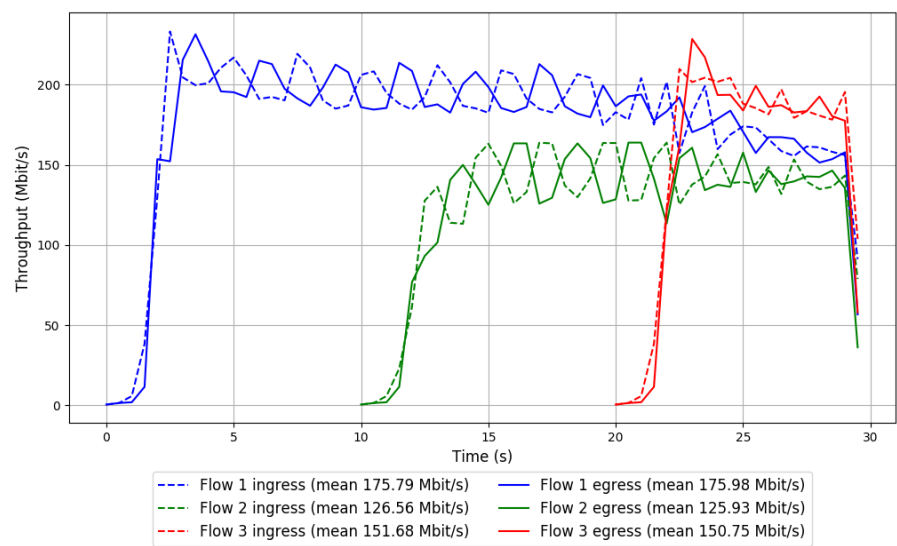
-- Flow 3:

Average throughput: 150.75 Mbit/s

95th percentile per-packet one-way delay: 149.684 ms

Loss rate: 3.42%

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



Run 4: Statistics of Indigo-1-32

Start at: 2018-03-01 08:06:32

End at: 2018-03-01 08:07:02

Below is generated by plot.py at 2018-03-01 15:26:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 254.07 Mbit/s

95th percentile per-packet one-way delay: 137.842 ms

Loss rate: 1.50%

-- Flow 1:

Average throughput: 134.11 Mbit/s

95th percentile per-packet one-way delay: 137.600 ms

Loss rate: 0.98%

-- Flow 2:

Average throughput: 120.88 Mbit/s

95th percentile per-packet one-way delay: 137.997 ms

Loss rate: 1.58%

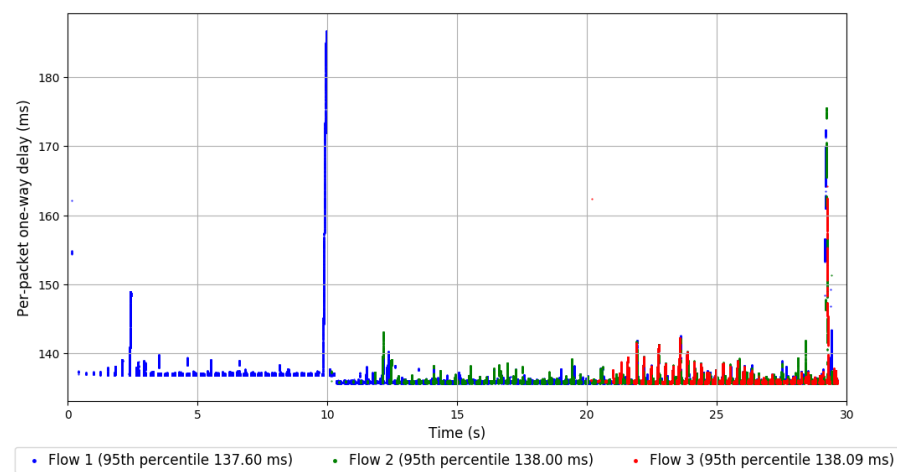
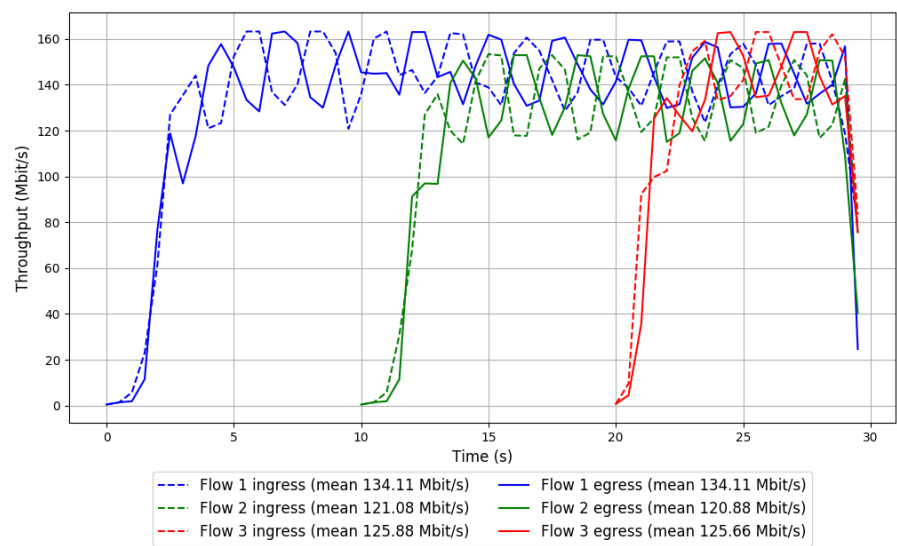
-- Flow 3:

Average throughput: 125.66 Mbit/s

95th percentile per-packet one-way delay: 138.090 ms

Loss rate: 3.03%

Run 4: Report of Indigo-1-32 — Data Link



Run 5: Statistics of Indigo-1-32

Start at: 2018-03-01 08:27:57

End at: 2018-03-01 08:28:27

Below is generated by plot.py at 2018-03-01 15:26:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 269.28 Mbit/s

95th percentile per-packet one-way delay: 139.213 ms

Loss rate: 1.46%

-- Flow 1:

Average throughput: 139.46 Mbit/s

95th percentile per-packet one-way delay: 138.120 ms

Loss rate: 0.95%

-- Flow 2:

Average throughput: 136.22 Mbit/s

95th percentile per-packet one-way delay: 139.606 ms

Loss rate: 1.47%

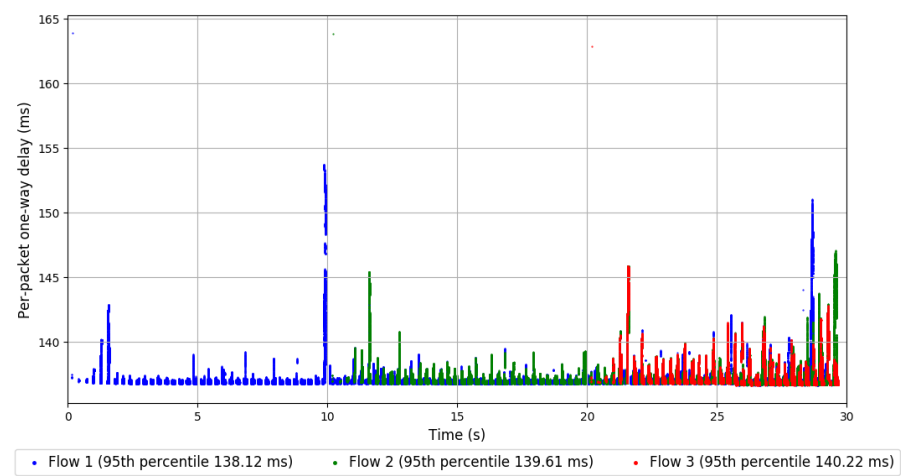
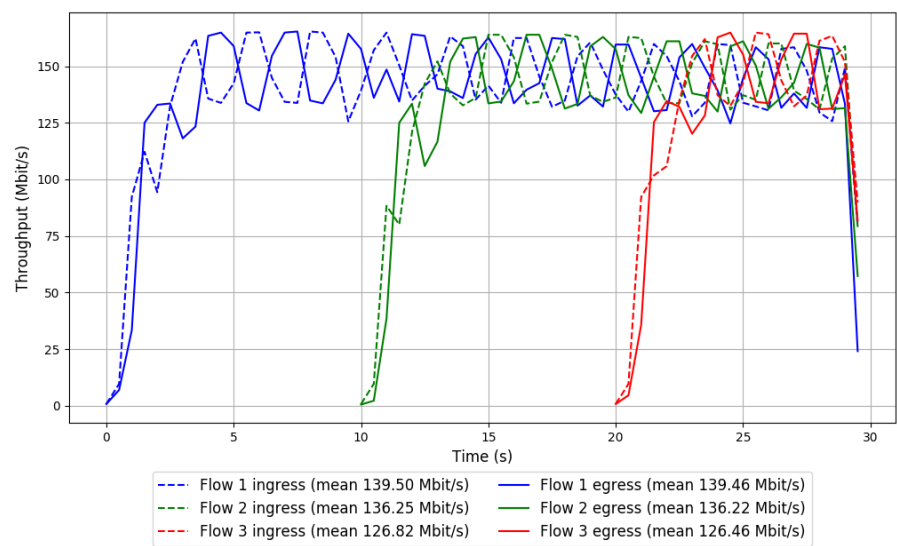
-- Flow 3:

Average throughput: 126.46 Mbit/s

95th percentile per-packet one-way delay: 140.215 ms

Loss rate: 3.15%

Run 5: Report of Indigo-1-32 — Data Link



Run 6: Statistics of Indigo-1-32

Start at: 2018-03-01 08:48:33

End at: 2018-03-01 08:49:03

Below is generated by plot.py at 2018-03-01 15:26:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 234.90 Mbit/s

95th percentile per-packet one-way delay: 163.635 ms

Loss rate: 1.56%

-- Flow 1:

Average throughput: 125.56 Mbit/s

95th percentile per-packet one-way delay: 163.249 ms

Loss rate: 0.89%

-- Flow 2:

Average throughput: 124.36 Mbit/s

95th percentile per-packet one-way delay: 163.704 ms

Loss rate: 1.43%

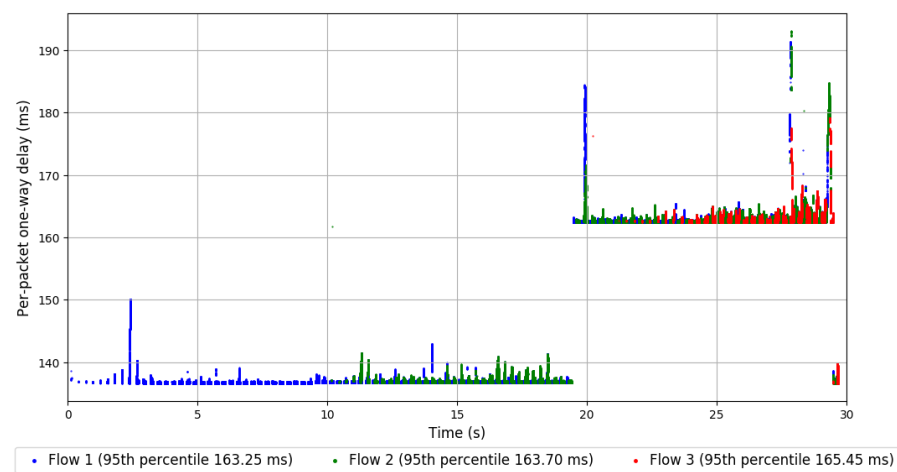
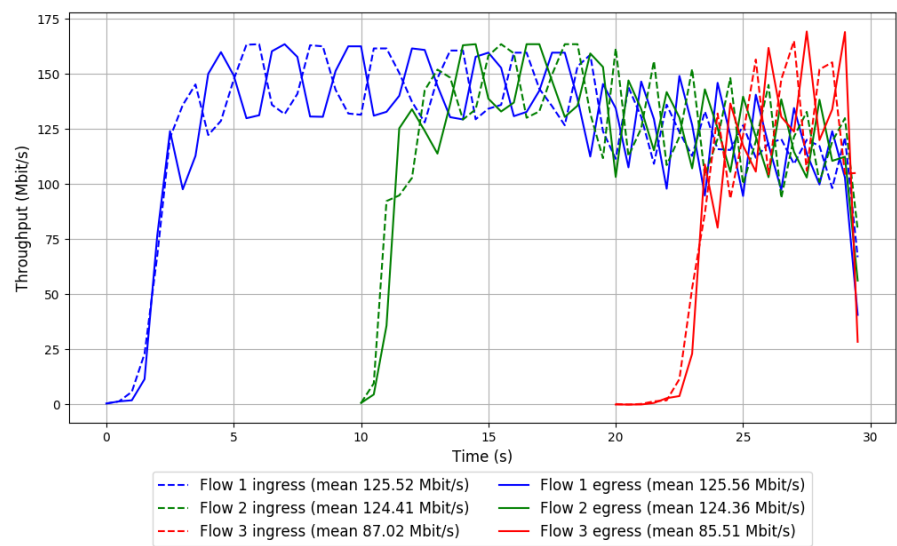
-- Flow 3:

Average throughput: 85.51 Mbit/s

95th percentile per-packet one-way delay: 165.453 ms

Loss rate: 4.90%

Run 6: Report of Indigo-1-32 — Data Link



Run 7: Statistics of Indigo-1-32

Start at: 2018-03-01 09:10:06

End at: 2018-03-01 09:10:36

Below is generated by plot.py at 2018-03-01 15:26:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 260.31 Mbit/s

95th percentile per-packet one-way delay: 137.147 ms

Loss rate: 1.52%

-- Flow 1:

Average throughput: 133.68 Mbit/s

95th percentile per-packet one-way delay: 137.063 ms

Loss rate: 0.98%

-- Flow 2:

Average throughput: 131.04 Mbit/s

95th percentile per-packet one-way delay: 137.378 ms

Loss rate: 1.52%

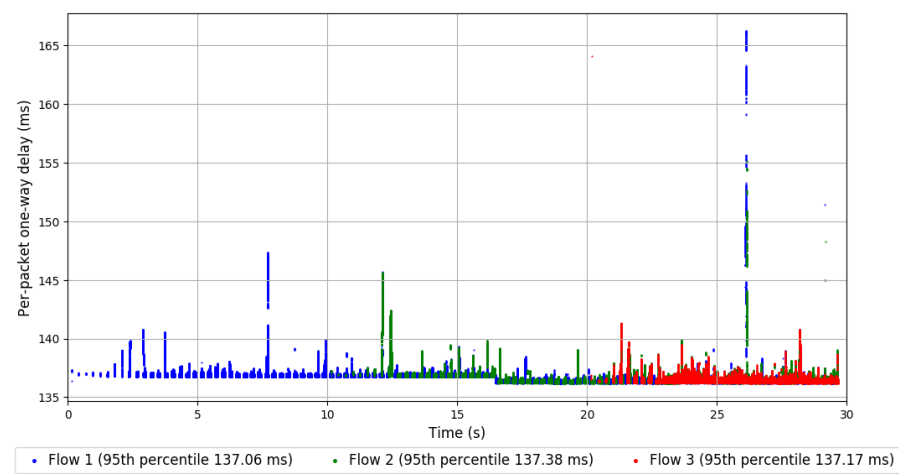
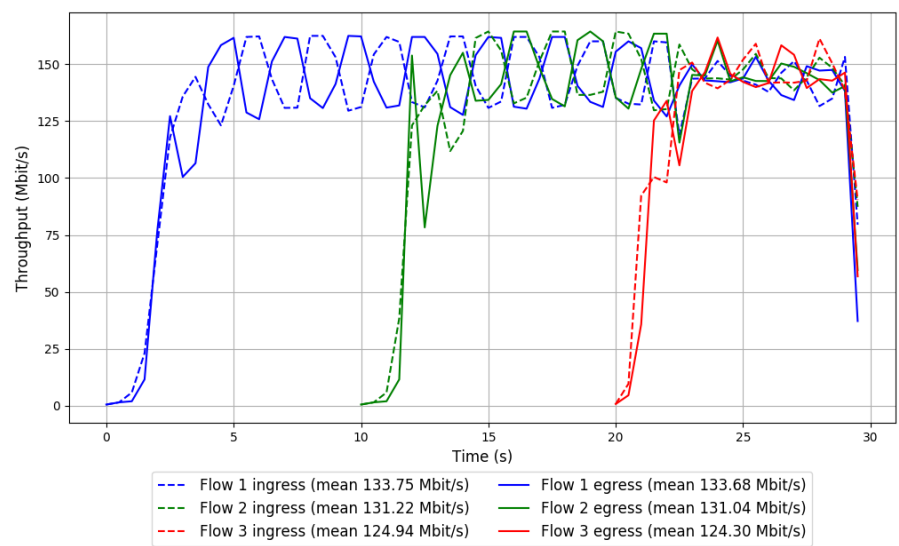
-- Flow 3:

Average throughput: 124.30 Mbit/s

95th percentile per-packet one-way delay: 137.171 ms

Loss rate: 3.29%

Run 7: Report of Indigo-1-32 — Data Link



Run 8: Statistics of Indigo-1-32

Start at: 2018-03-01 09:31:14

End at: 2018-03-01 09:31:44

Below is generated by plot.py at 2018-03-01 15:26:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 313.92 Mbit/s

95th percentile per-packet one-way delay: 140.927 ms

Loss rate: 1.43%

-- Flow 1:

Average throughput: 176.53 Mbit/s

95th percentile per-packet one-way delay: 139.210 ms

Loss rate: 0.86%

-- Flow 2:

Average throughput: 135.29 Mbit/s

95th percentile per-packet one-way delay: 141.810 ms

Loss rate: 1.45%

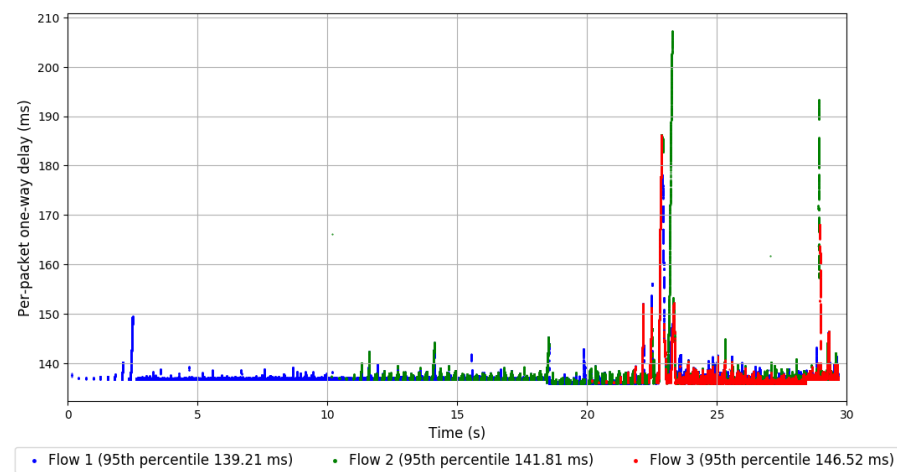
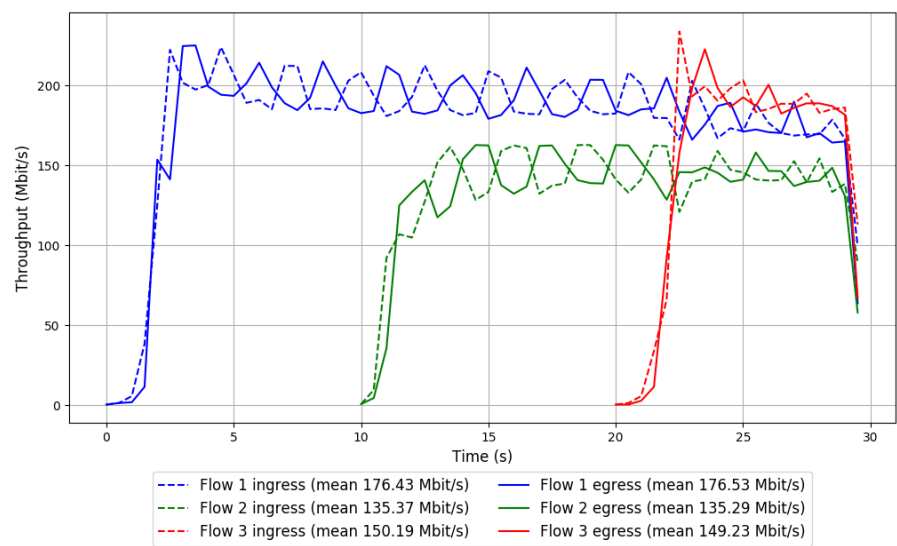
-- Flow 3:

Average throughput: 149.23 Mbit/s

95th percentile per-packet one-way delay: 146.524 ms

Loss rate: 3.42%

Run 8: Report of Indigo-1-32 — Data Link



Run 9: Statistics of Indigo-1-32

Start at: 2018-03-01 09:52:06

End at: 2018-03-01 09:52:36

Below is generated by plot.py at 2018-03-01 15:26:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 281.83 Mbit/s

95th percentile per-packet one-way delay: 138.177 ms

Loss rate: 1.49%

-- Flow 1:

Average throughput: 133.55 Mbit/s

95th percentile per-packet one-way delay: 137.521 ms

Loss rate: 0.98%

-- Flow 2:

Average throughput: 170.79 Mbit/s

95th percentile per-packet one-way delay: 138.526 ms

Loss rate: 1.45%

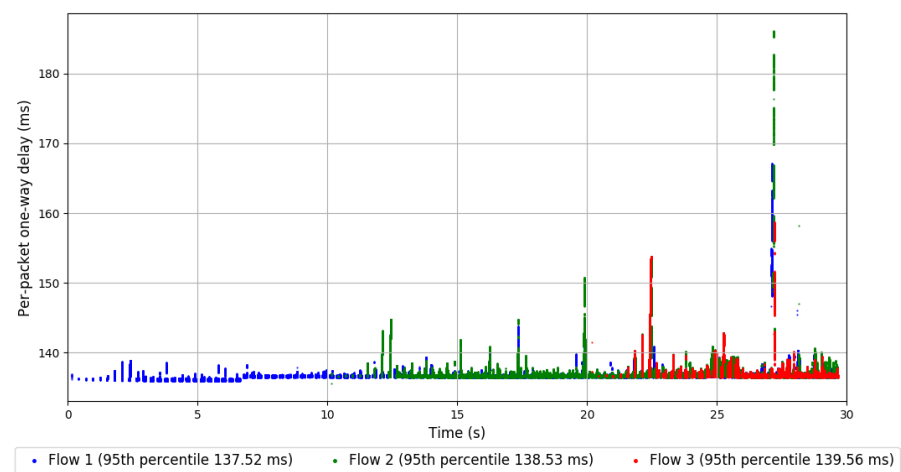
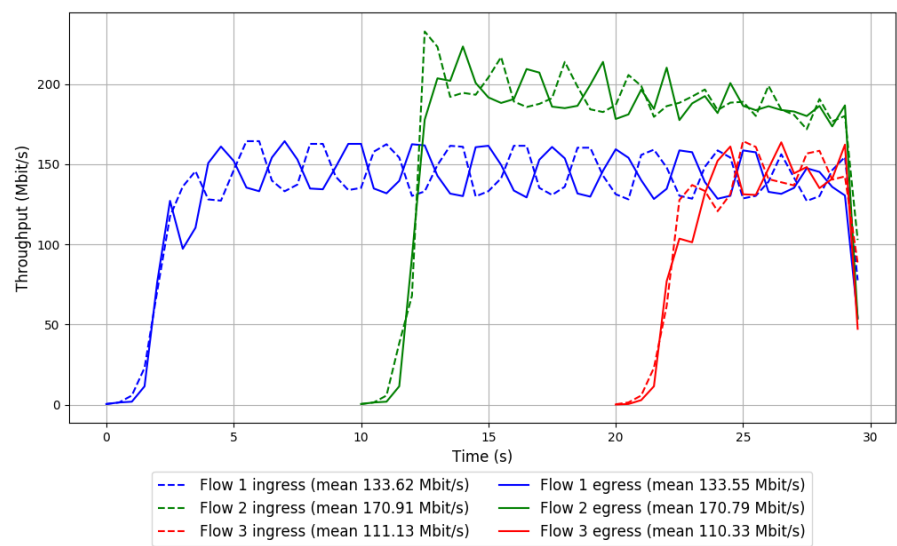
-- Flow 3:

Average throughput: 110.33 Mbit/s

95th percentile per-packet one-way delay: 139.564 ms

Loss rate: 3.52%

Run 9: Report of Indigo-1-32 — Data Link



Run 10: Statistics of Indigo-1-32

Start at: 2018-03-01 10:13:17

End at: 2018-03-01 10:13:47

Below is generated by plot.py at 2018-03-01 15:26:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 282.08 Mbit/s

95th percentile per-packet one-way delay: 137.920 ms

Loss rate: 1.51%

-- Flow 1:

Average throughput: 134.48 Mbit/s

95th percentile per-packet one-way delay: 137.529 ms

Loss rate: 0.99%

-- Flow 2:

Average throughput: 169.37 Mbit/s

95th percentile per-packet one-way delay: 138.066 ms

Loss rate: 1.42%

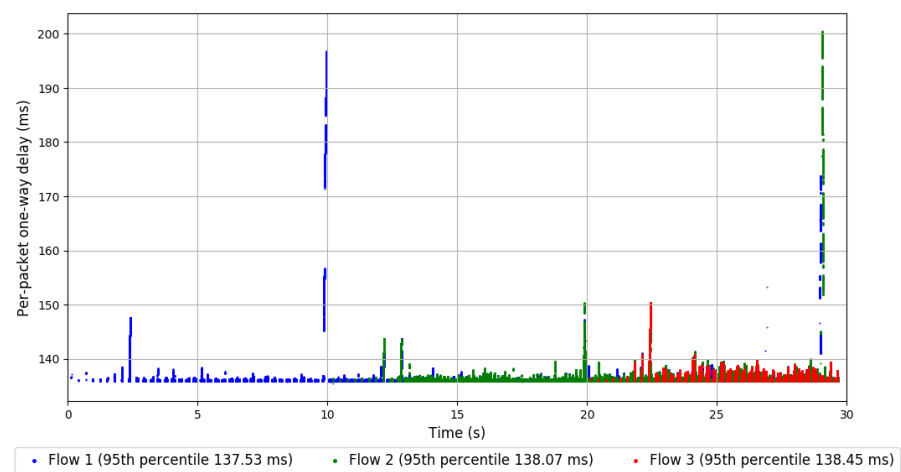
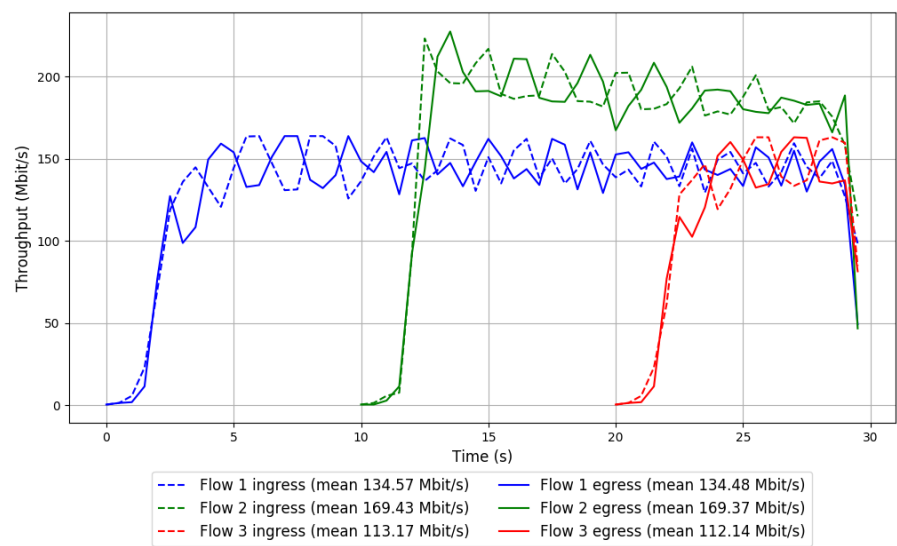
-- Flow 3:

Average throughput: 112.14 Mbit/s

95th percentile per-packet one-way delay: 138.454 ms

Loss rate: 3.69%

Run 10: Report of Indigo-1-32 — Data Link



Run 1: Statistics of Vivace-latency

Start at: 2018-03-01 07:07:12

End at: 2018-03-01 07:07:42

Below is generated by plot.py at 2018-03-01 15:26:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 543.55 Mbit/s

95th percentile per-packet one-way delay: 143.934 ms

Loss rate: 1.60%

-- Flow 1:

Average throughput: 315.92 Mbit/s

95th percentile per-packet one-way delay: 143.152 ms

Loss rate: 1.36%

-- Flow 2:

Average throughput: 285.05 Mbit/s

95th percentile per-packet one-way delay: 142.814 ms

Loss rate: 1.26%

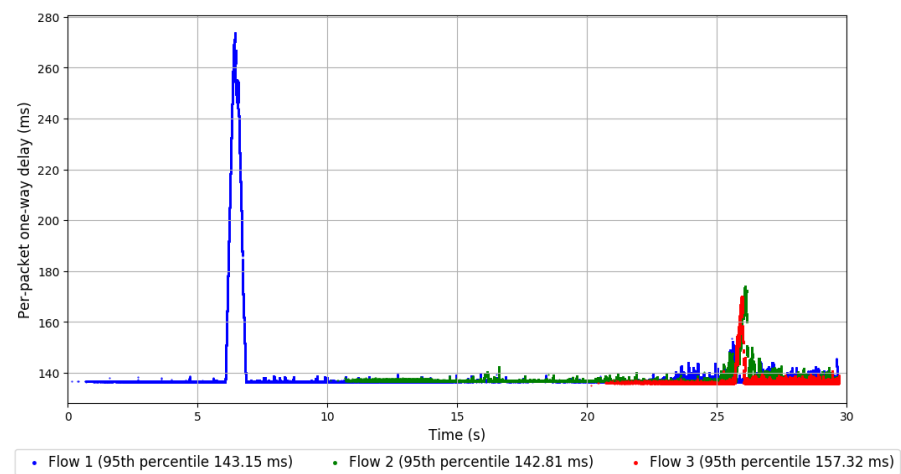
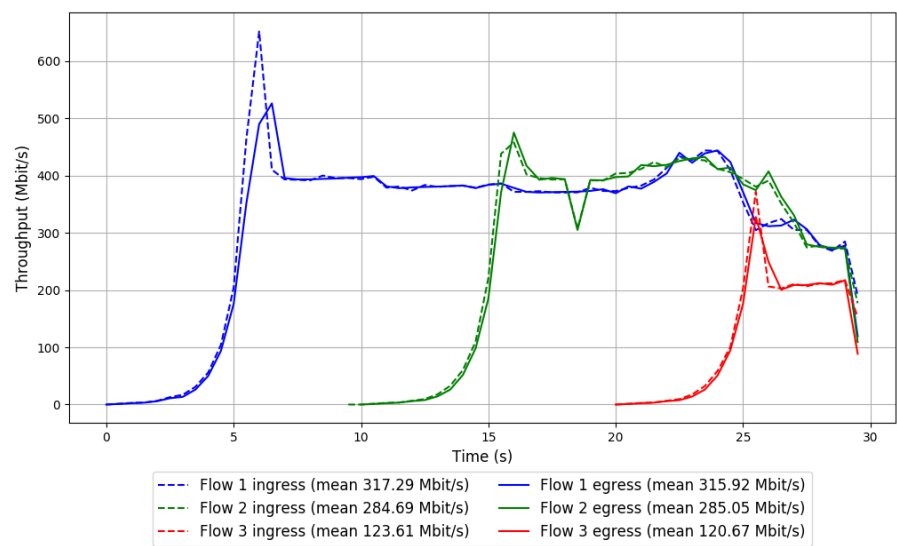
-- Flow 3:

Average throughput: 120.67 Mbit/s

95th percentile per-packet one-way delay: 157.316 ms

Loss rate: 5.09%

Run 1: Report of Vivace-latency — Data Link



Run 2: Statistics of Vivace-latency

Start at: 2018-03-01 07:27:32

End at: 2018-03-01 07:28:02

Below is generated by plot.py at 2018-03-01 15:26:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 546.59 Mbit/s

95th percentile per-packet one-way delay: 196.801 ms

Loss rate: 1.44%

-- Flow 1:

Average throughput: 312.30 Mbit/s

95th percentile per-packet one-way delay: 154.765 ms

Loss rate: 0.95%

-- Flow 2:

Average throughput: 294.60 Mbit/s

95th percentile per-packet one-way delay: 232.105 ms

Loss rate: 1.57%

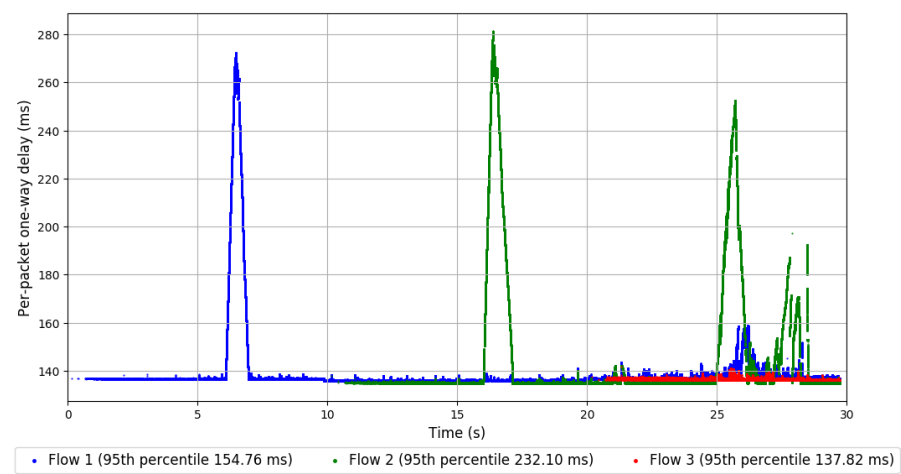
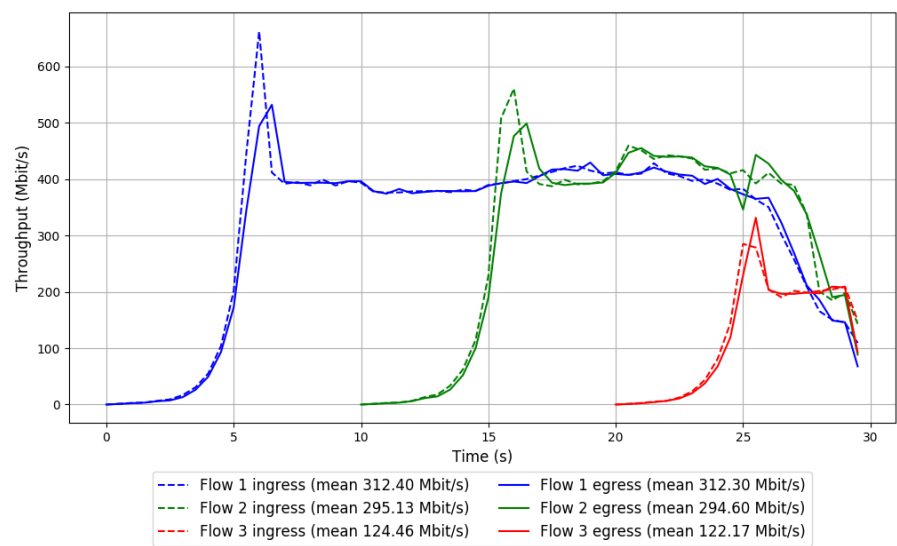
-- Flow 3:

Average throughput: 122.17 Mbit/s

95th percentile per-packet one-way delay: 137.816 ms

Loss rate: 4.59%

Run 2: Report of Vivace-latency — Data Link



Run 3: Statistics of Vivace-latency

Start at: 2018-03-01 07:48:12

End at: 2018-03-01 07:48:42

Below is generated by plot.py at 2018-03-01 15:26:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 545.84 Mbit/s

95th percentile per-packet one-way delay: 226.834 ms

Loss rate: 1.27%

-- Flow 1:

Average throughput: 332.82 Mbit/s

95th percentile per-packet one-way delay: 231.699 ms

Loss rate: 1.14%

-- Flow 2:

Average throughput: 291.22 Mbit/s

95th percentile per-packet one-way delay: 215.563 ms

Loss rate: 1.13%

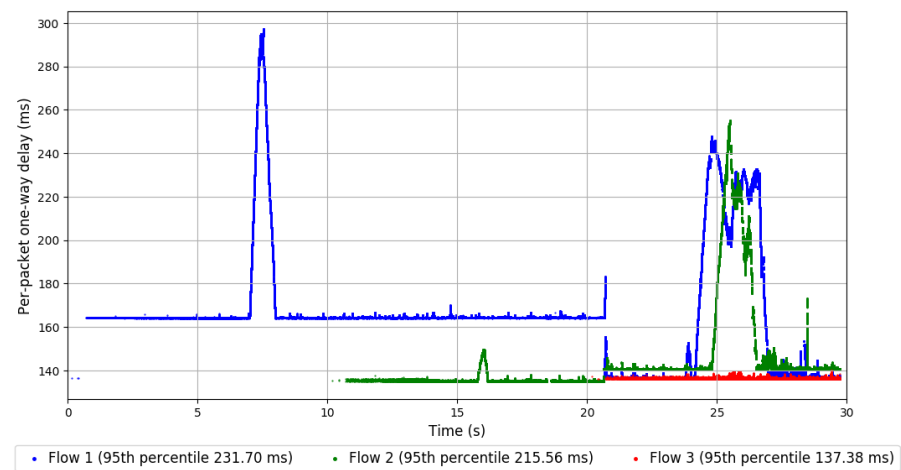
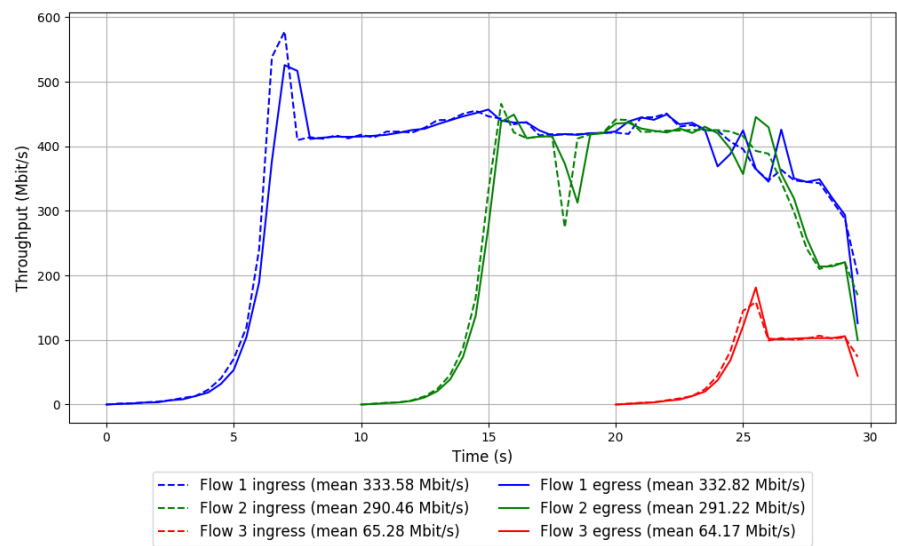
-- Flow 3:

Average throughput: 64.17 Mbit/s

95th percentile per-packet one-way delay: 137.375 ms

Loss rate: 4.42%

Run 3: Report of Vivace-latency — Data Link



Run 4: Statistics of Vivace-latency

Start at: 2018-03-01 08:09:07

End at: 2018-03-01 08:09:37

Below is generated by plot.py at 2018-03-01 15:26:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 542.35 Mbit/s

95th percentile per-packet one-way delay: 229.245 ms

Loss rate: 1.84%

-- Flow 1:

Average throughput: 324.84 Mbit/s

95th percentile per-packet one-way delay: 154.454 ms

Loss rate: 1.32%

-- Flow 2:

Average throughput: 278.44 Mbit/s

95th percentile per-packet one-way delay: 303.655 ms

Loss rate: 1.88%

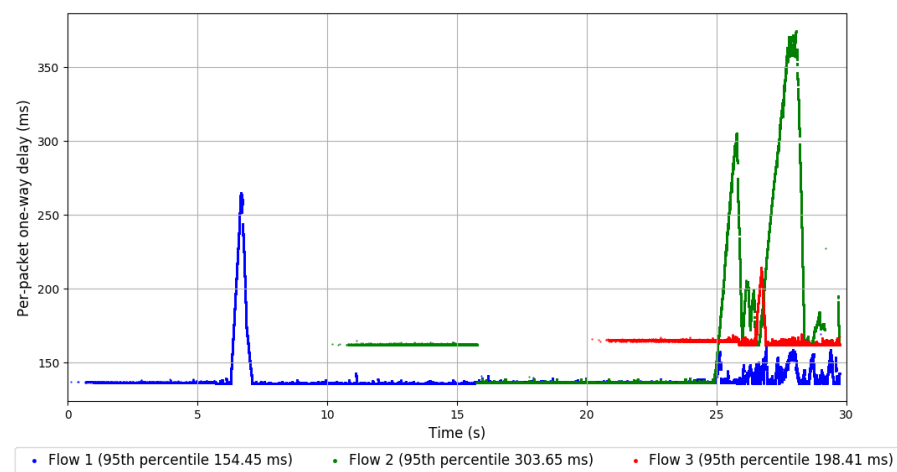
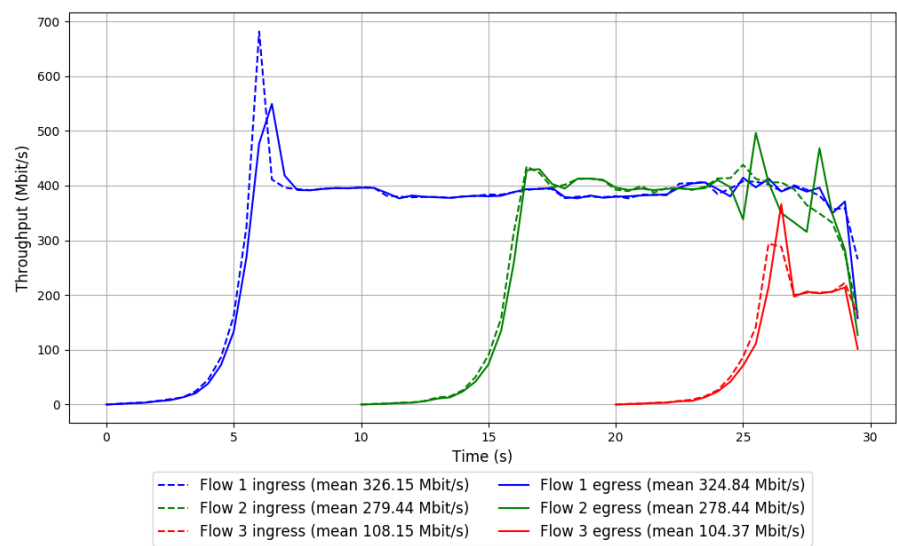
-- Flow 3:

Average throughput: 104.37 Mbit/s

95th percentile per-packet one-way delay: 198.412 ms

Loss rate: 6.42%

Run 4: Report of Vivace-latency — Data Link



Run 5: Statistics of Vivace-latency

Start at: 2018-03-01 08:30:08

End at: 2018-03-01 08:30:38

Below is generated by plot.py at 2018-03-01 15:26:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 386.33 Mbit/s

95th percentile per-packet one-way delay: 198.316 ms

Loss rate: 2.70%

-- Flow 1:

Average throughput: 298.04 Mbit/s

95th percentile per-packet one-way delay: 197.942 ms

Loss rate: 1.96%

-- Flow 2:

Average throughput: 43.83 Mbit/s

95th percentile per-packet one-way delay: 141.480 ms

Loss rate: 4.45%

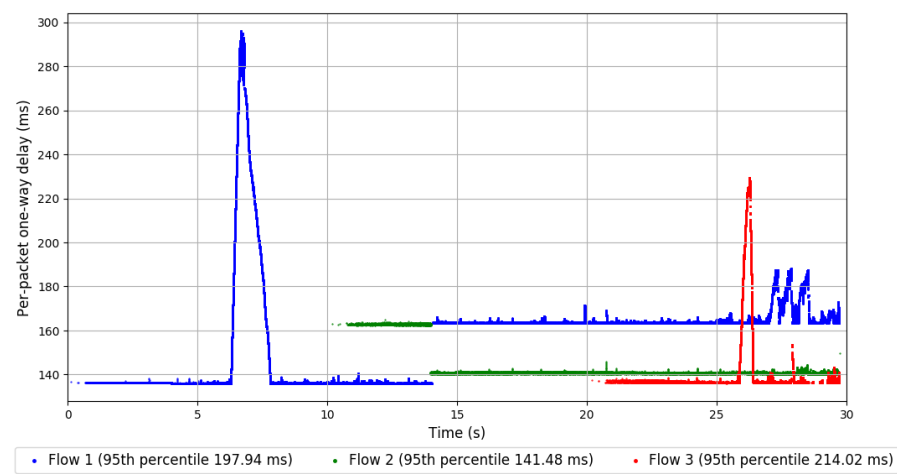
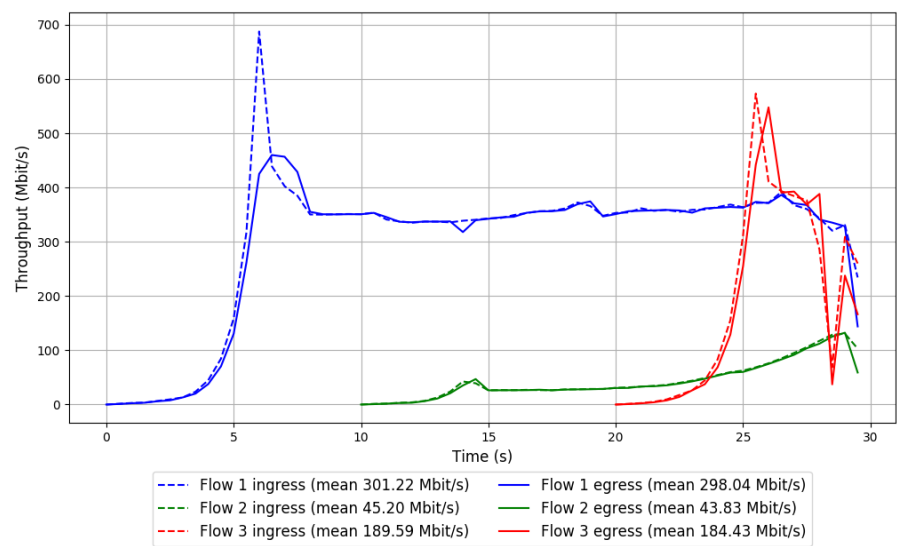
-- Flow 3:

Average throughput: 184.43 Mbit/s

95th percentile per-packet one-way delay: 214.021 ms

Loss rate: 5.45%

Run 5: Report of Vivace-latency — Data Link



Run 6: Statistics of Vivace-latency

Start at: 2018-03-01 08:51:14

End at: 2018-03-01 08:51:44

Below is generated by plot.py at 2018-03-01 15:26:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 537.74 Mbit/s

95th percentile per-packet one-way delay: 271.415 ms

Loss rate: 2.59%

-- Flow 1:

Average throughput: 306.62 Mbit/s

95th percentile per-packet one-way delay: 338.481 ms

Loss rate: 2.42%

-- Flow 2:

Average throughput: 293.59 Mbit/s

95th percentile per-packet one-way delay: 209.535 ms

Loss rate: 2.27%

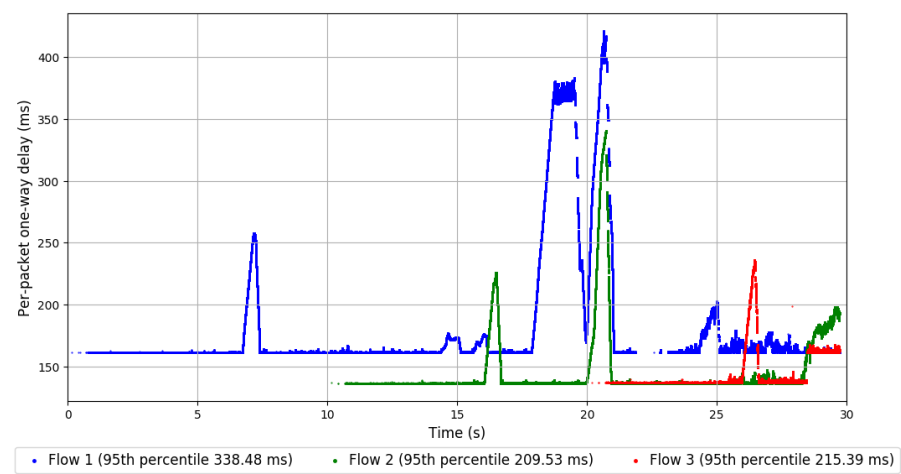
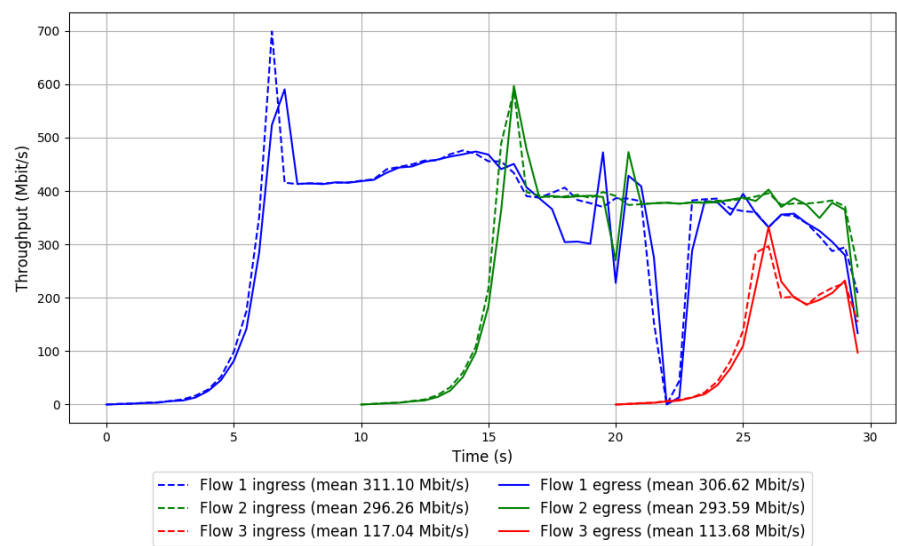
-- Flow 3:

Average throughput: 113.68 Mbit/s

95th percentile per-packet one-way delay: 215.390 ms

Loss rate: 5.54%

Run 6: Report of Vivace-latency — Data Link



Run 7: Statistics of Vivace-latency

Start at: 2018-03-01 09:12:26

End at: 2018-03-01 09:12:56

Below is generated by plot.py at 2018-03-01 15:26:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 526.48 Mbit/s

95th percentile per-packet one-way delay: 250.431 ms

Loss rate: 2.81%

-- Flow 1:

Average throughput: 314.57 Mbit/s

95th percentile per-packet one-way delay: 177.705 ms

Loss rate: 1.32%

-- Flow 2:

Average throughput: 276.93 Mbit/s

95th percentile per-packet one-way delay: 309.568 ms

Loss rate: 3.72%

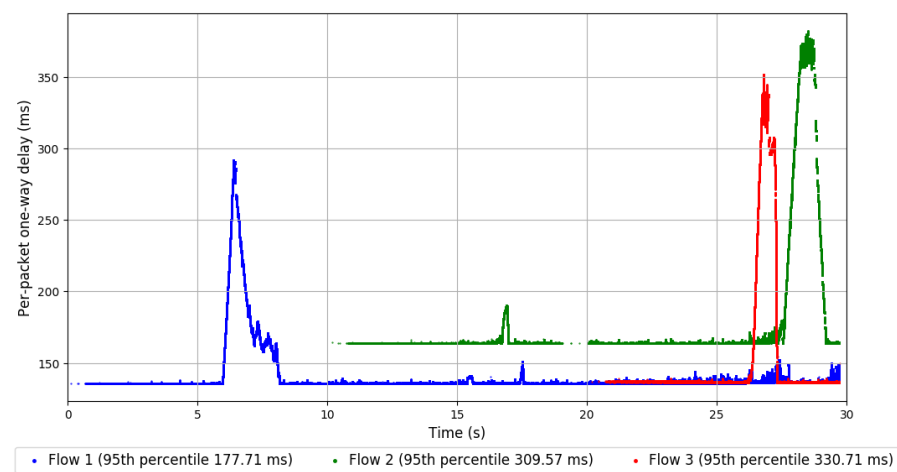
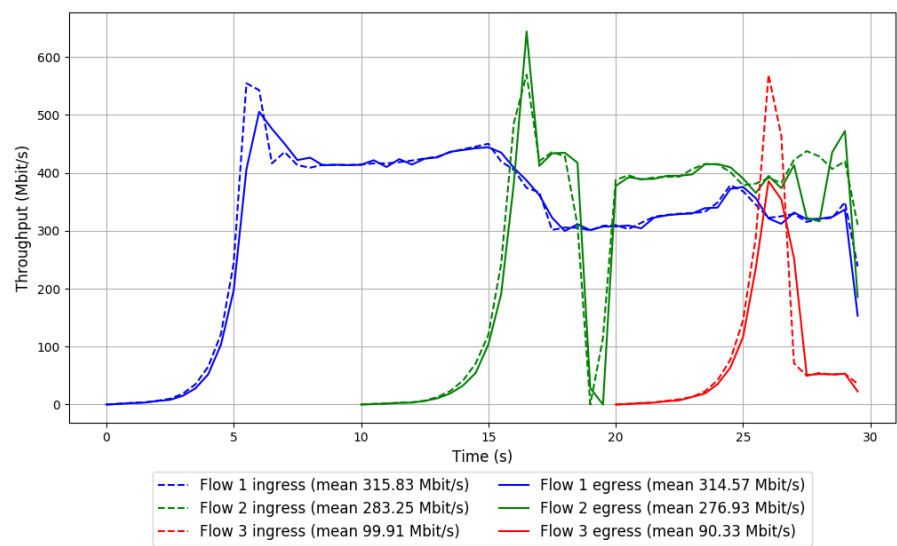
-- Flow 3:

Average throughput: 90.33 Mbit/s

95th percentile per-packet one-way delay: 330.715 ms

Loss rate: 12.00%

Run 7: Report of Vivace-latency — Data Link



Run 8: Statistics of Vivace-latency

Start at: 2018-03-01 09:33:32

End at: 2018-03-01 09:34:02

Below is generated by plot.py at 2018-03-01 15:26:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 559.63 Mbit/s

95th percentile per-packet one-way delay: 168.367 ms

Loss rate: 1.45%

-- Flow 1:

Average throughput: 345.60 Mbit/s

95th percentile per-packet one-way delay: 170.564 ms

Loss rate: 1.37%

-- Flow 2:

Average throughput: 292.23 Mbit/s

95th percentile per-packet one-way delay: 146.554 ms

Loss rate: 1.27%

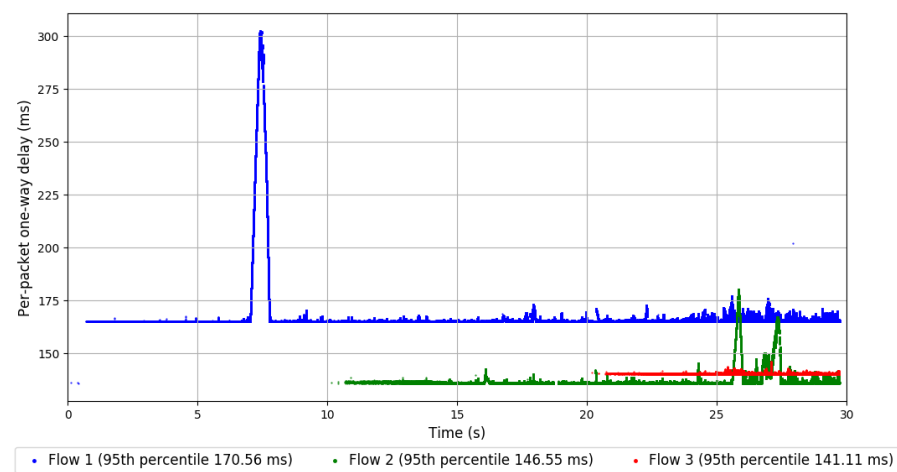
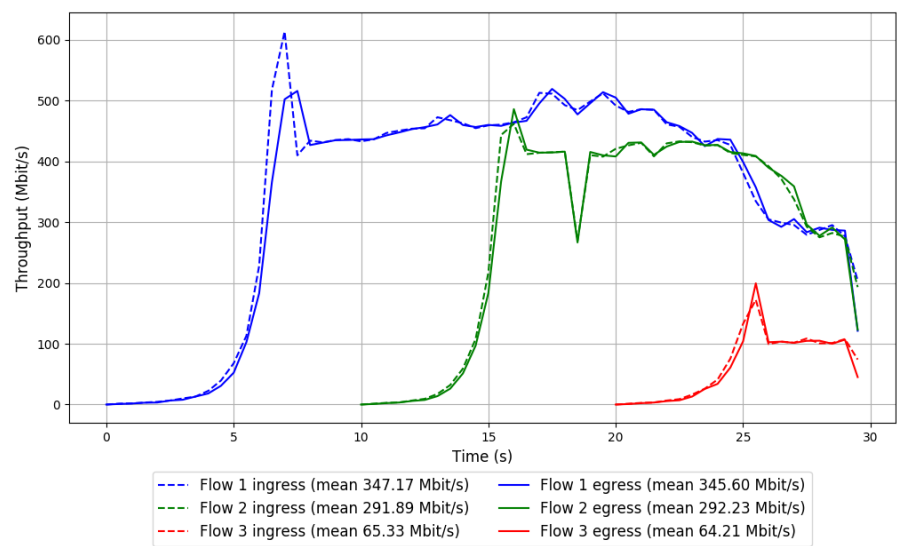
-- Flow 3:

Average throughput: 64.21 Mbit/s

95th percentile per-packet one-way delay: 141.106 ms

Loss rate: 4.56%

Run 8: Report of Vivace-latency — Data Link



Run 9: Statistics of Vivace-latency

Start at: 2018-03-01 09:54:44

End at: 2018-03-01 09:55:14

Below is generated by plot.py at 2018-03-01 15:26:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 533.36 Mbit/s

95th percentile per-packet one-way delay: 188.146 ms

Loss rate: 1.42%

-- Flow 1:

Average throughput: 324.26 Mbit/s

95th percentile per-packet one-way delay: 171.181 ms

Loss rate: 1.63%

-- Flow 2:

Average throughput: 235.29 Mbit/s

95th percentile per-packet one-way delay: 187.178 ms

Loss rate: 1.47%

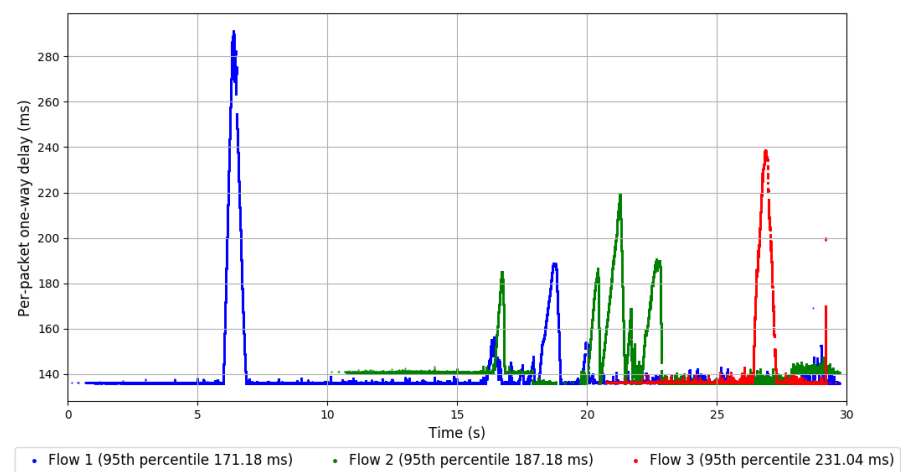
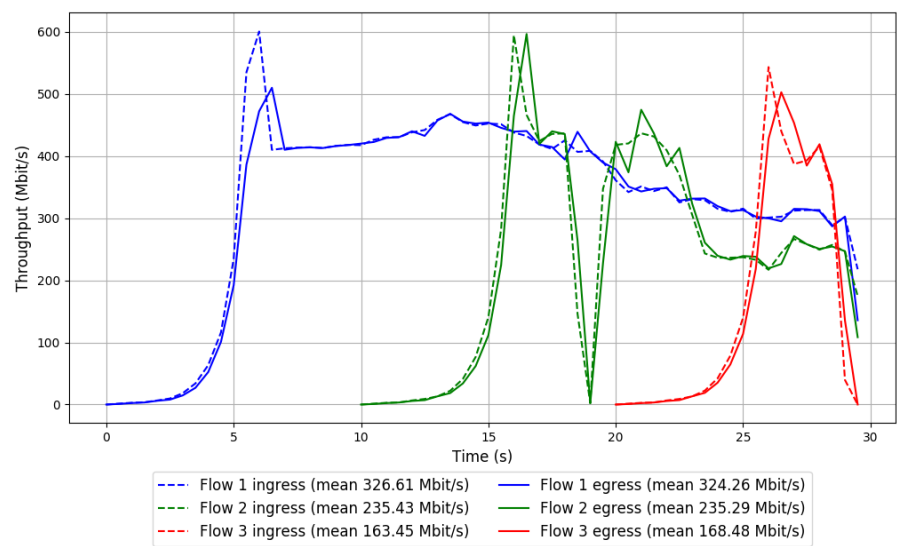
-- Flow 3:

Average throughput: 168.48 Mbit/s

95th percentile per-packet one-way delay: 231.044 ms

Loss rate: 0.00%

Run 9: Report of Vivace-latency — Data Link



Run 10: Statistics of Vivace-latency

Start at: 2018-03-01 10:15:56

End at: 2018-03-01 10:16:26

Below is generated by plot.py at 2018-03-01 15:27:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 537.17 Mbit/s

95th percentile per-packet one-way delay: 187.197 ms

Loss rate: 1.95%

-- Flow 1:

Average throughput: 310.91 Mbit/s

95th percentile per-packet one-way delay: 190.165 ms

Loss rate: 1.40%

-- Flow 2:

Average throughput: 282.34 Mbit/s

95th percentile per-packet one-way delay: 189.021 ms

Loss rate: 1.96%

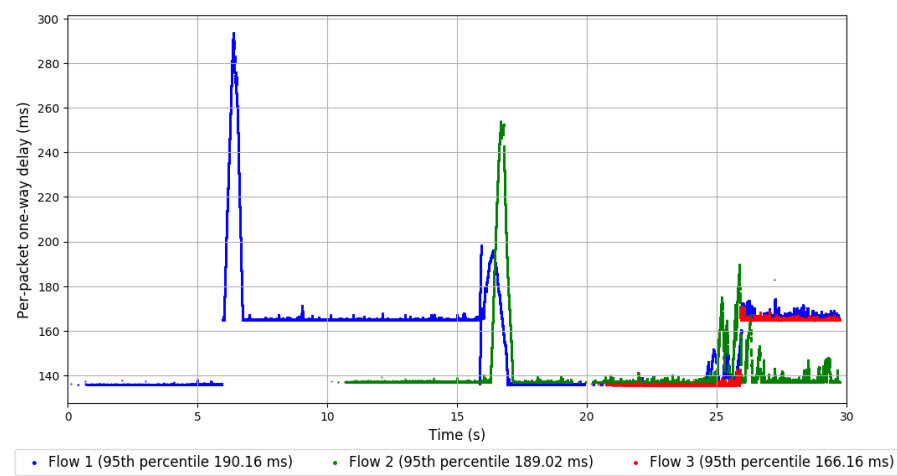
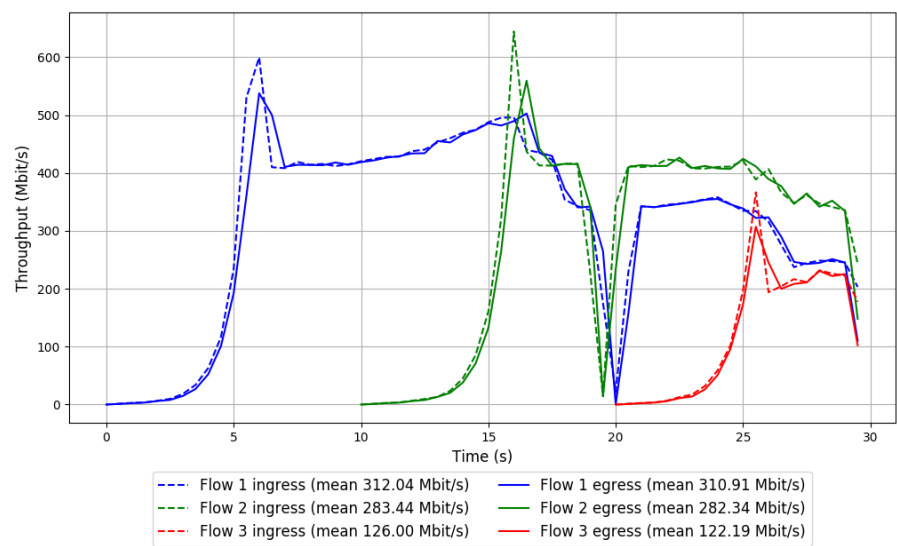
-- Flow 3:

Average throughput: 122.19 Mbit/s

95th percentile per-packet one-way delay: 166.161 ms

Loss rate: 6.07%

Run 10: Report of Vivace-latency — Data Link

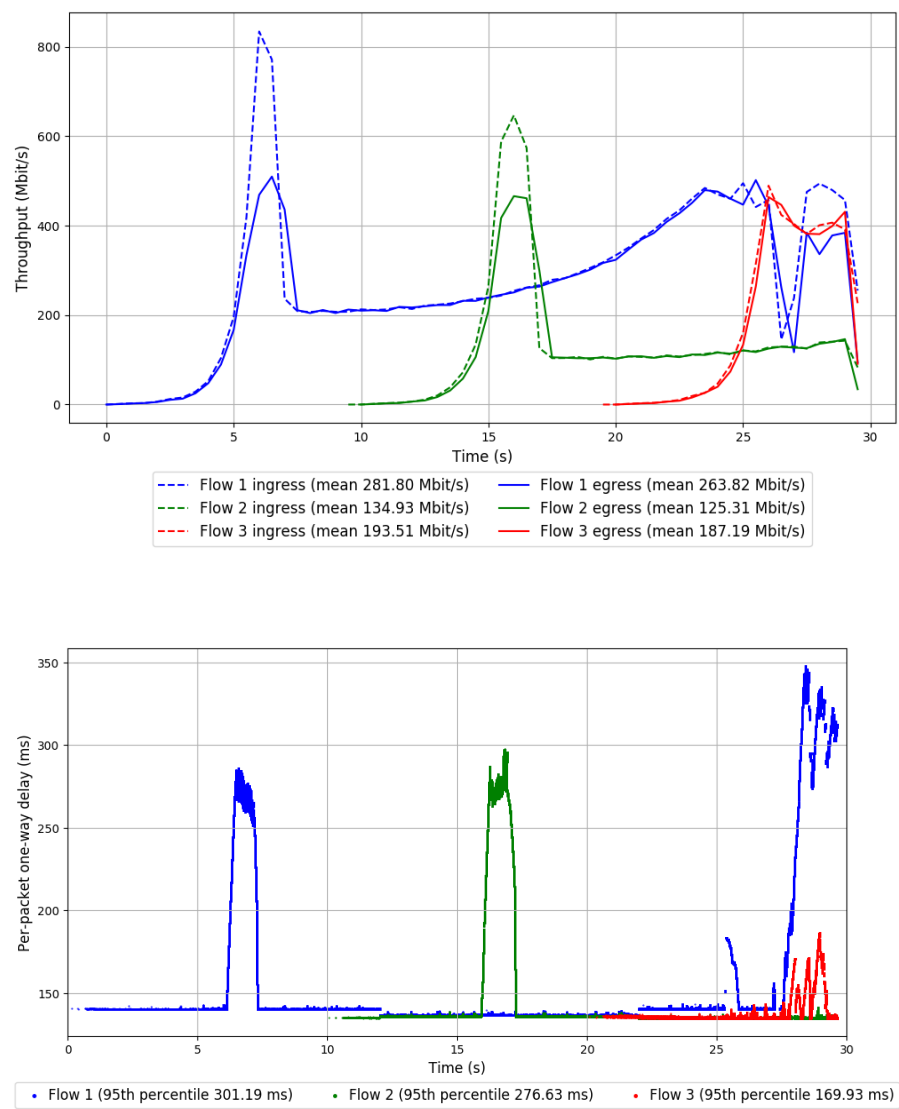


```
Run 1: Statistics of Vivace-loss

Start at: 2018-03-01 06:51:30
End at: 2018-03-01 06:52:00

# Below is generated by plot.py at 2018-03-01 15:27:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 407.55 Mbit/s
95th percentile per-packet one-way delay: 281.020 ms
Loss rate: 7.42%
-- Flow 1:
Average throughput: 263.82 Mbit/s
95th percentile per-packet one-way delay: 301.187 ms
Loss rate: 7.33%
-- Flow 2:
Average throughput: 125.31 Mbit/s
95th percentile per-packet one-way delay: 276.633 ms
Loss rate: 8.53%
-- Flow 3:
Average throughput: 187.19 Mbit/s
95th percentile per-packet one-way delay: 169.930 ms
Loss rate: 6.21%
```

Run 1: Report of Vivace-loss — Data Link



Run 2: Statistics of Vivace-loss

Start at: 2018-03-01 07:11:44

End at: 2018-03-01 07:12:14

Below is generated by plot.py at 2018-03-01 15:28:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 415.69 Mbit/s

95th percentile per-packet one-way delay: 281.068 ms

Loss rate: 3.92%

-- Flow 1:

Average throughput: 156.90 Mbit/s

95th percentile per-packet one-way delay: 257.022 ms

Loss rate: 4.98%

-- Flow 2:

Average throughput: 314.42 Mbit/s

95th percentile per-packet one-way delay: 300.341 ms

Loss rate: 3.87%

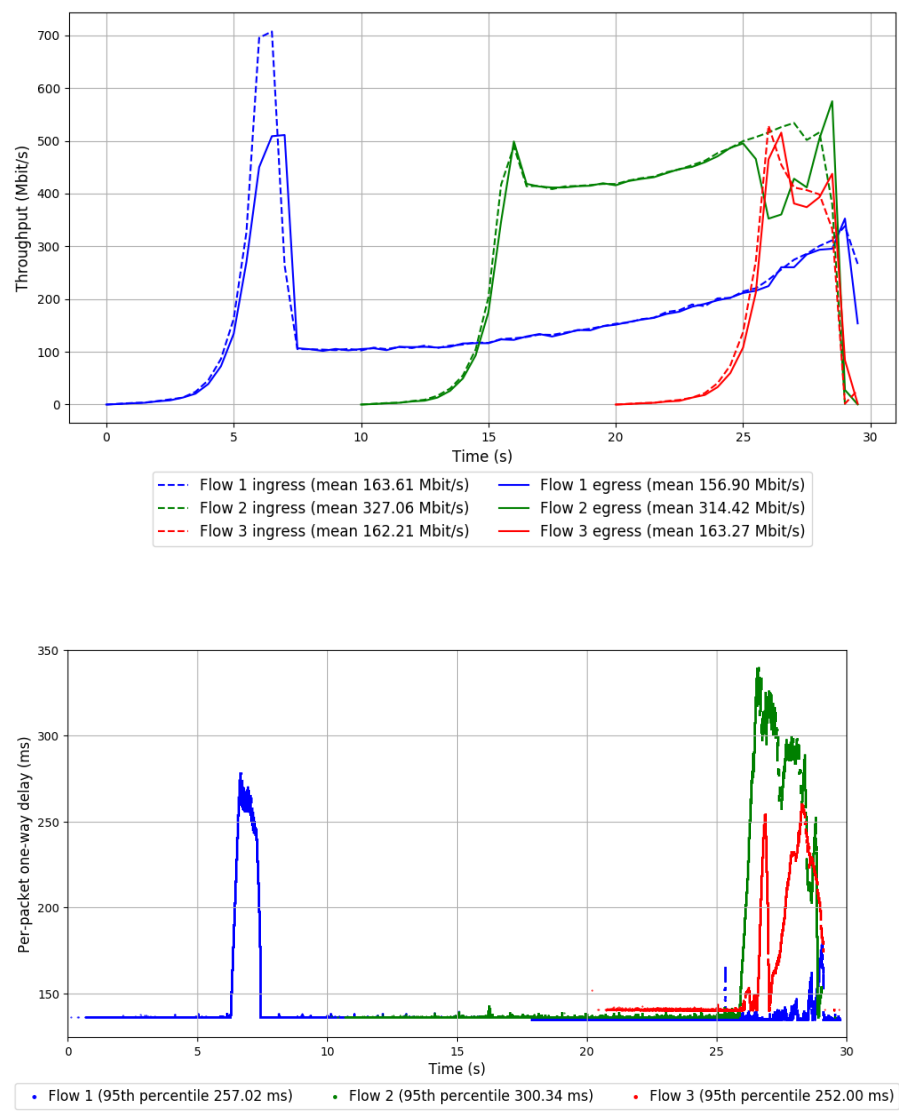
-- Flow 3:

Average throughput: 163.27 Mbit/s

95th percentile per-packet one-way delay: 252.000 ms

Loss rate: 0.87%

Run 2: Report of Vivace-loss — Data Link



Run 3: Statistics of Vivace-loss

Start at: 2018-03-01 07:32:15

End at: 2018-03-01 07:32:45

Below is generated by plot.py at 2018-03-01 15:33:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 472.04 Mbit/s

95th percentile per-packet one-way delay: 297.648 ms

Loss rate: 5.87%

-- Flow 1:

Average throughput: 254.95 Mbit/s

95th percentile per-packet one-way delay: 276.630 ms

Loss rate: 5.80%

-- Flow 2:

Average throughput: 276.44 Mbit/s

95th percentile per-packet one-way delay: 304.787 ms

Loss rate: 5.46%

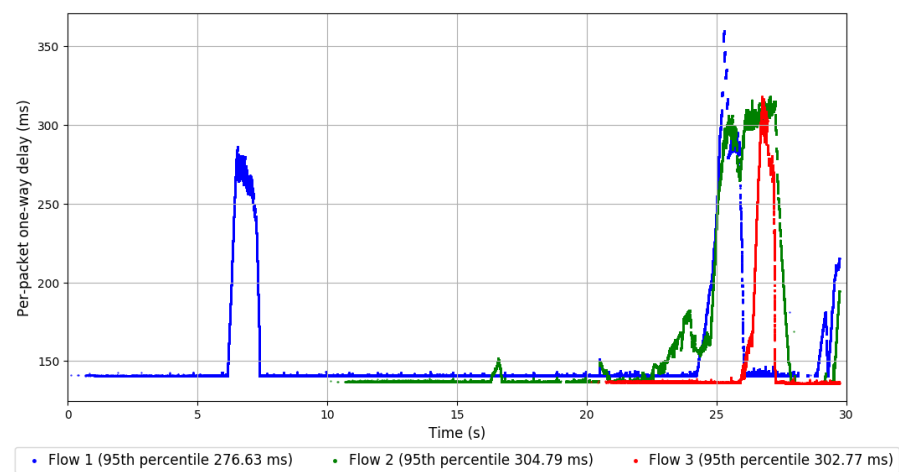
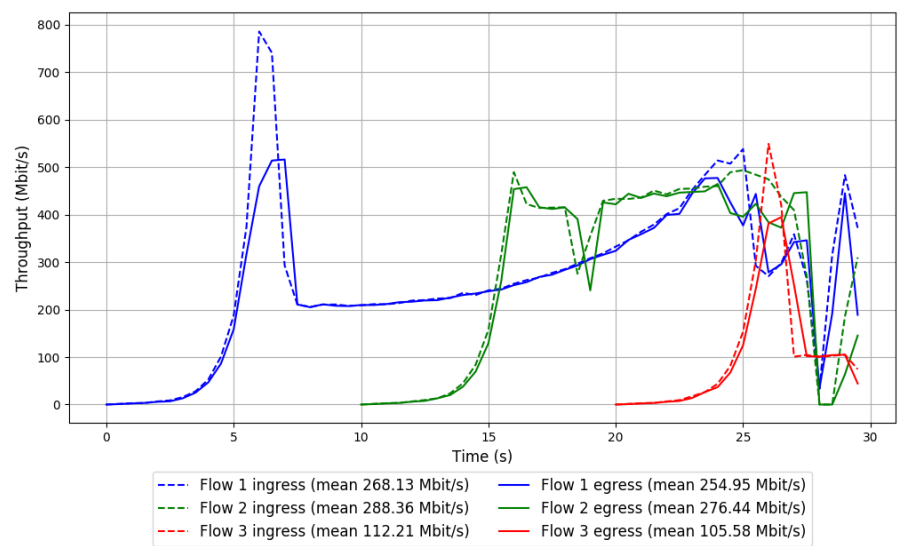
-- Flow 3:

Average throughput: 105.58 Mbit/s

95th percentile per-packet one-way delay: 302.769 ms

Loss rate: 8.54%

Run 3: Report of Vivace-loss — Data Link



Run 4: Statistics of Vivace-loss

Start at: 2018-03-01 07:52:53

End at: 2018-03-01 07:53:23

Below is generated by plot.py at 2018-03-01 15:33:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 420.54 Mbit/s

95th percentile per-packet one-way delay: 304.293 ms

Loss rate: 6.34%

-- Flow 1:

Average throughput: 157.78 Mbit/s

95th percentile per-packet one-way delay: 265.640 ms

Loss rate: 8.21%

-- Flow 2:

Average throughput: 305.54 Mbit/s

95th percentile per-packet one-way delay: 315.985 ms

Loss rate: 3.71%

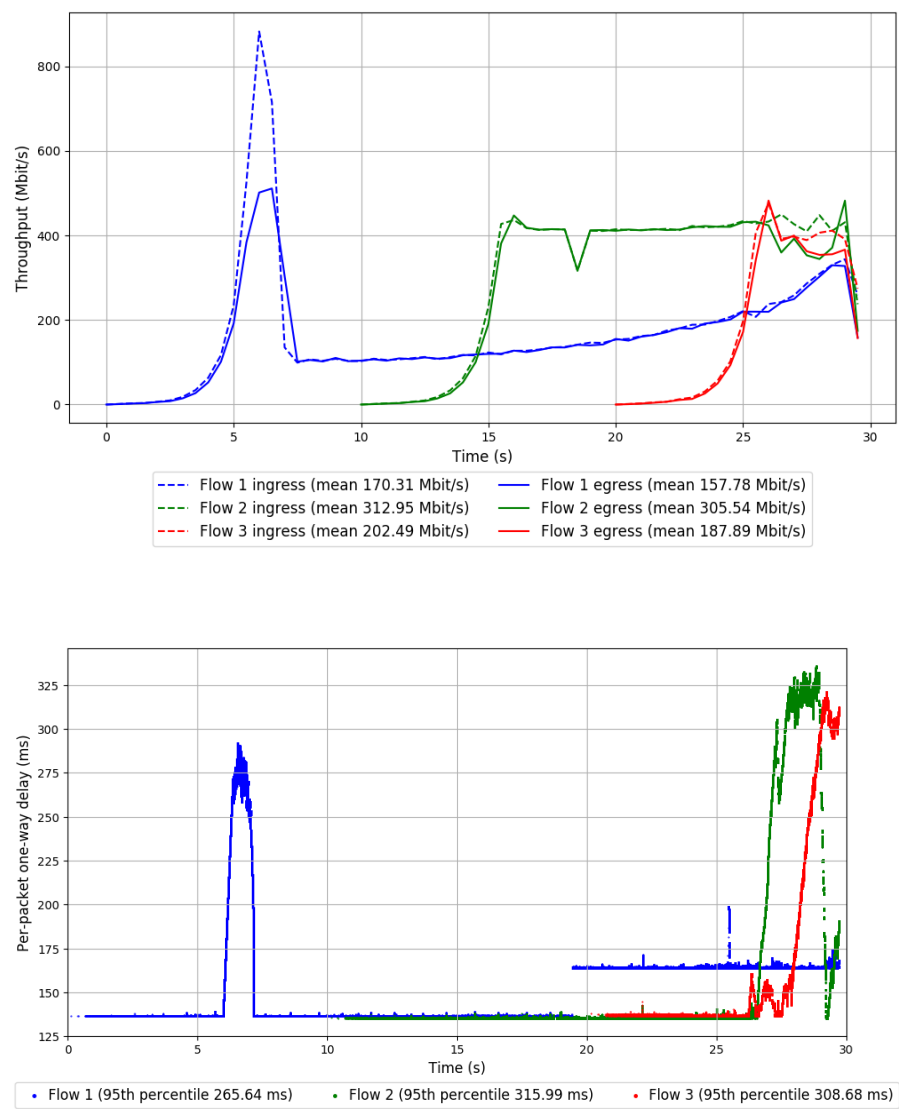
-- Flow 3:

Average throughput: 187.89 Mbit/s

95th percentile per-packet one-way delay: 308.676 ms

Loss rate: 9.81%

Run 4: Report of Vivace-loss — Data Link



Run 5: Statistics of Vivace-loss

Start at: 2018-03-01 08:13:56

End at: 2018-03-01 08:14:26

Below is generated by plot.py at 2018-03-01 15:33:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 451.10 Mbit/s

95th percentile per-packet one-way delay: 313.954 ms

Loss rate: 2.67%

-- Flow 1:

Average throughput: 238.44 Mbit/s

95th percentile per-packet one-way delay: 287.363 ms

Loss rate: 2.17%

-- Flow 2:

Average throughput: 269.76 Mbit/s

95th percentile per-packet one-way delay: 395.766 ms

Loss rate: 2.73%

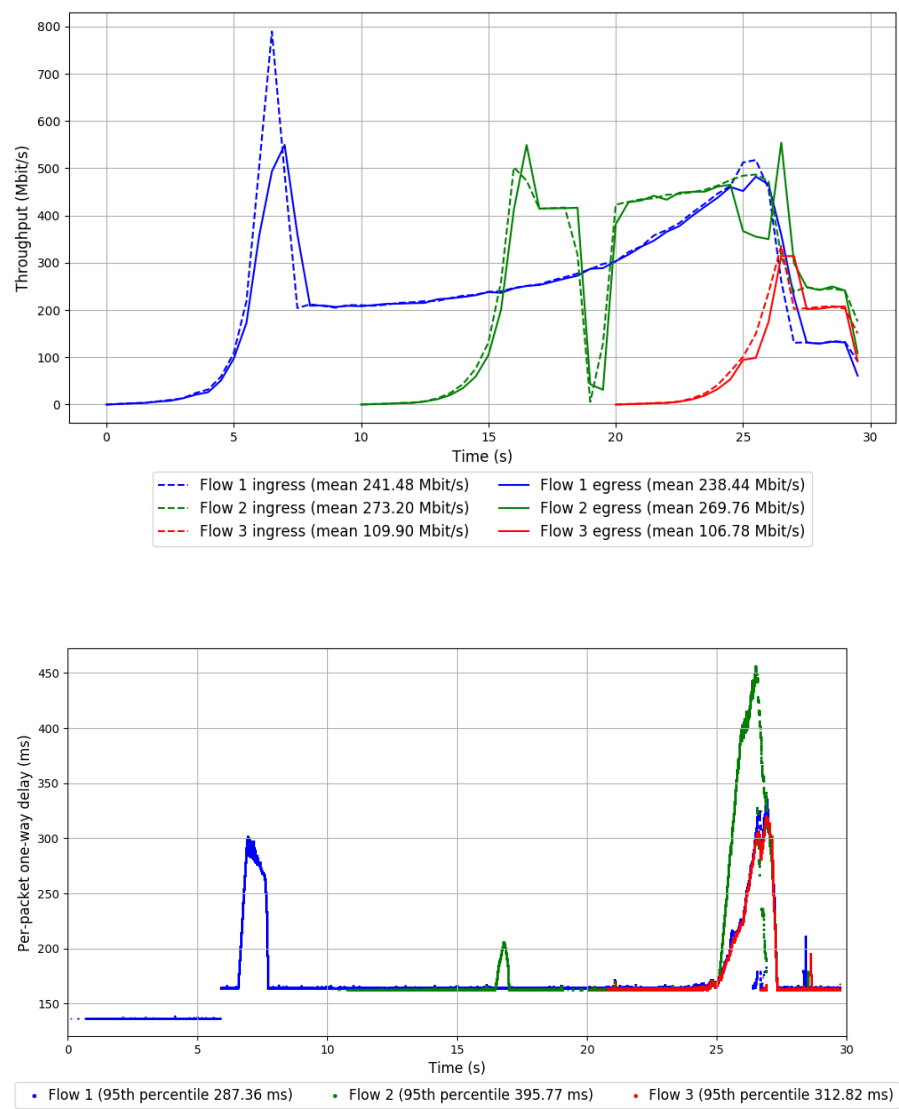
-- Flow 3:

Average throughput: 106.78 Mbit/s

95th percentile per-packet one-way delay: 312.821 ms

Loss rate: 5.76%

Run 5: Report of Vivace-loss — Data Link



Run 6: Statistics of Vivace-loss

Start at: 2018-03-01 08:34:36

End at: 2018-03-01 08:35:06

Below is generated by plot.py at 2018-03-01 15:33:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 411.01 Mbit/s

95th percentile per-packet one-way delay: 306.900 ms

Loss rate: 5.86%

-- Flow 1:

Average throughput: 157.68 Mbit/s

95th percentile per-packet one-way delay: 260.387 ms

Loss rate: 6.11%

-- Flow 2:

Average throughput: 311.47 Mbit/s

95th percentile per-packet one-way delay: 337.000 ms

Loss rate: 5.42%

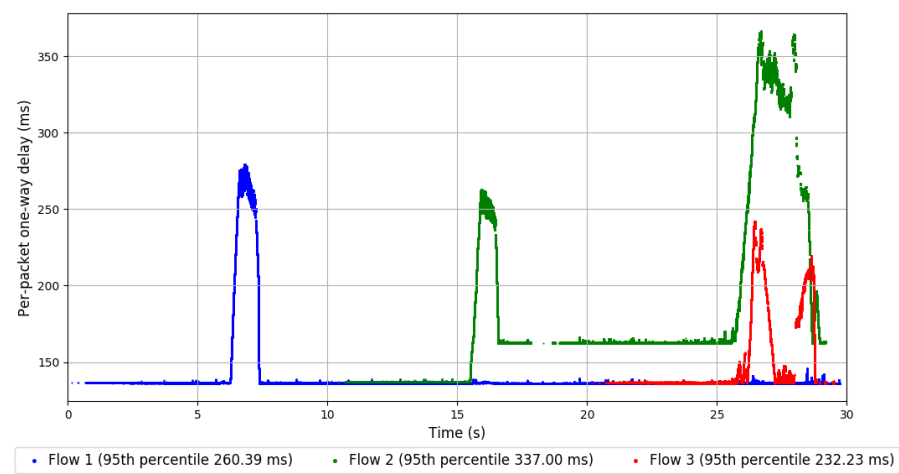
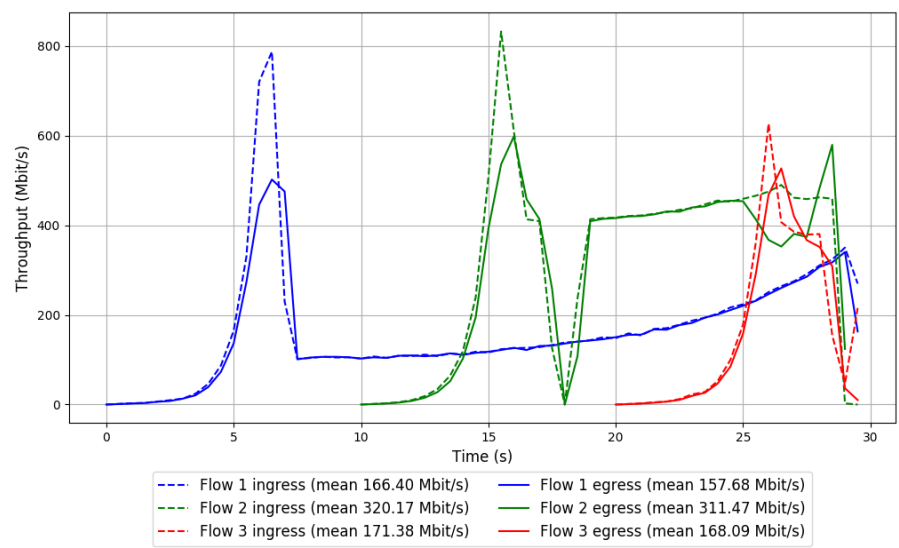
-- Flow 3:

Average throughput: 168.09 Mbit/s

95th percentile per-packet one-way delay: 232.229 ms

Loss rate: 6.72%

Run 6: Report of Vivace-loss — Data Link



Run 7: Statistics of Vivace-loss

Start at: 2018-03-01 08:56:03

End at: 2018-03-01 08:56:33

Below is generated by plot.py at 2018-03-01 15:34:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 485.96 Mbit/s

95th percentile per-packet one-way delay: 320.134 ms

Loss rate: 3.55%

-- Flow 1:

Average throughput: 238.40 Mbit/s

95th percentile per-packet one-way delay: 276.909 ms

Loss rate: 4.41%

-- Flow 2:

Average throughput: 294.84 Mbit/s

95th percentile per-packet one-way delay: 327.822 ms

Loss rate: 3.10%

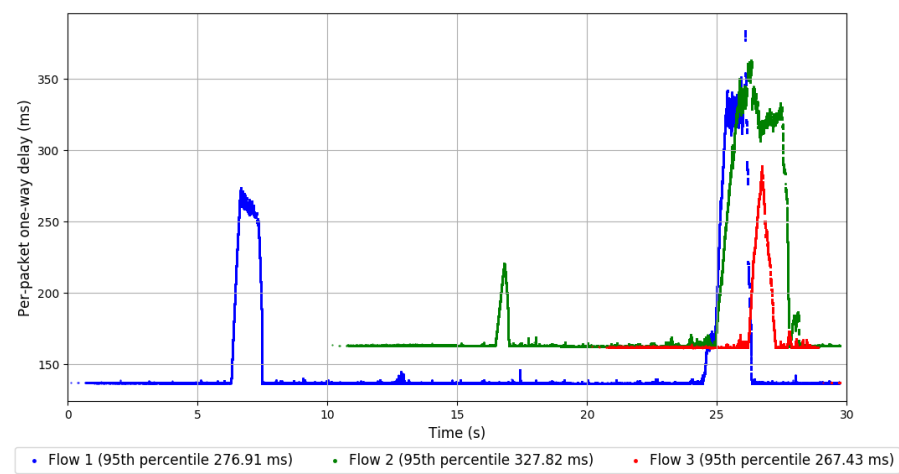
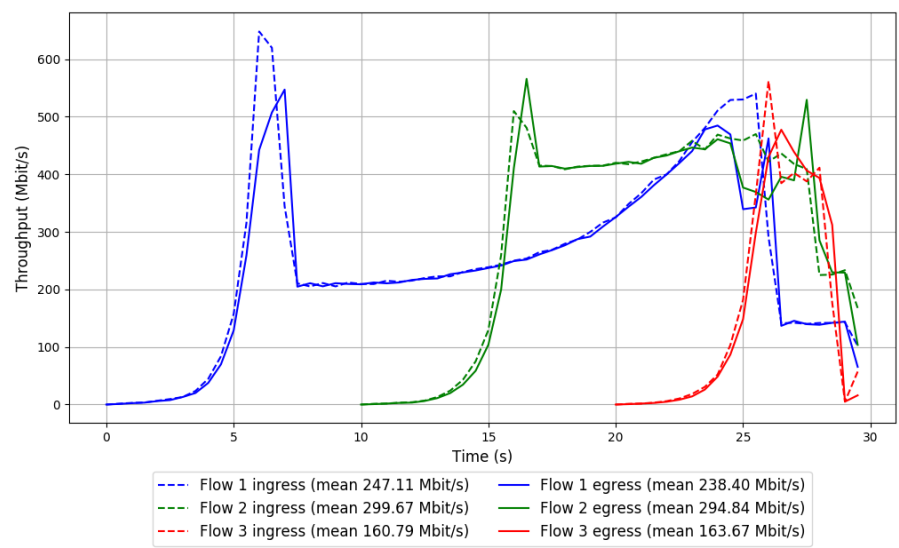
-- Flow 3:

Average throughput: 163.67 Mbit/s

95th percentile per-packet one-way delay: 267.425 ms

Loss rate: 1.30%

Run 7: Report of Vivace-loss — Data Link



Run 8: Statistics of Vivace-loss

Start at: 2018-03-01 09:17:13

End at: 2018-03-01 09:17:43

Below is generated by plot.py at 2018-03-01 15:34:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 366.81 Mbit/s

95th percentile per-packet one-way delay: 269.474 ms

Loss rate: 3.56%

-- Flow 1:

Average throughput: 123.42 Mbit/s

95th percentile per-packet one-way delay: 278.817 ms

Loss rate: 4.63%

-- Flow 2:

Average throughput: 315.31 Mbit/s

95th percentile per-packet one-way delay: 144.828 ms

Loss rate: 1.95%

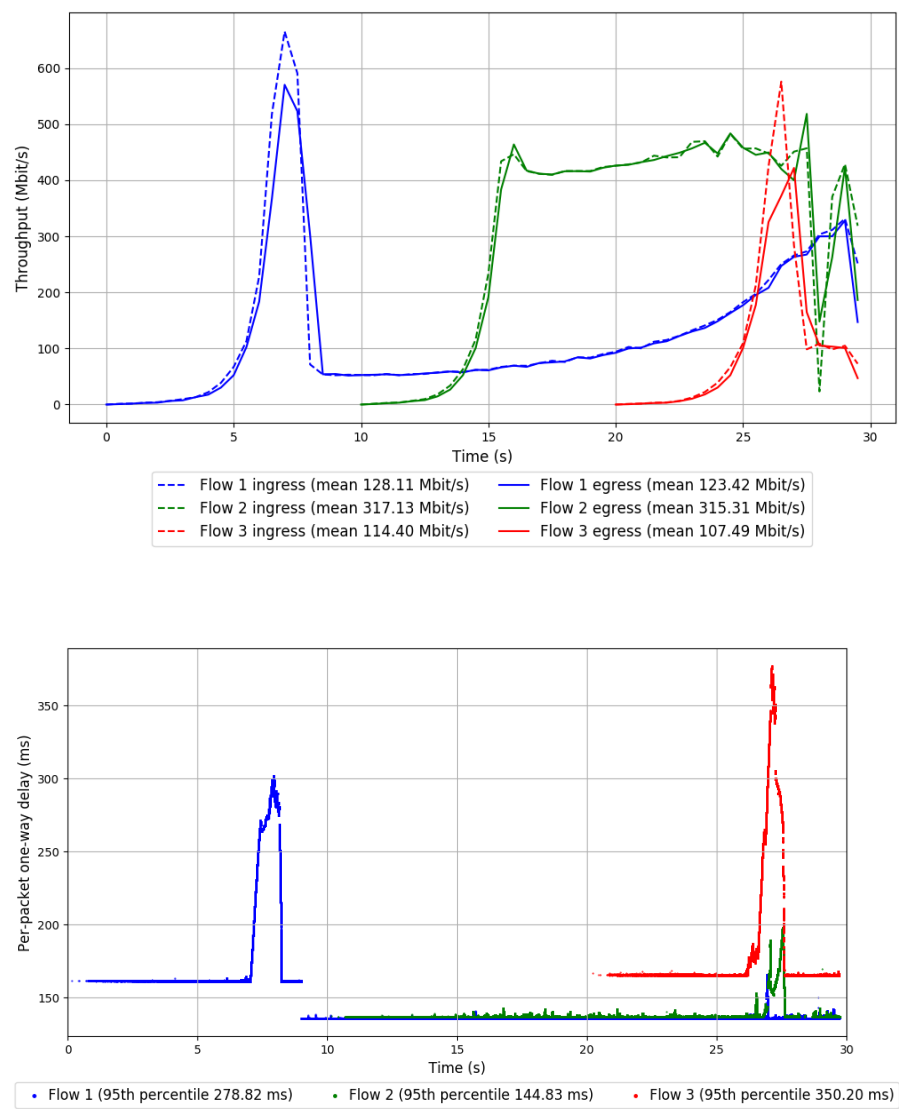
-- Flow 3:

Average throughput: 107.49 Mbit/s

95th percentile per-packet one-way delay: 350.196 ms

Loss rate: 8.98%

Run 8: Report of Vivace-loss — Data Link



Run 9: Statistics of Vivace-loss

Start at: 2018-03-01 09:38:17

End at: 2018-03-01 09:38:47

Below is generated by plot.py at 2018-03-01 15:37:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 553.12 Mbit/s

95th percentile per-packet one-way delay: 280.489 ms

Loss rate: 3.37%

-- Flow 1:

Average throughput: 305.01 Mbit/s

95th percentile per-packet one-way delay: 265.809 ms

Loss rate: 1.84%

-- Flow 2:

Average throughput: 287.60 Mbit/s

95th percentile per-packet one-way delay: 351.978 ms

Loss rate: 4.18%

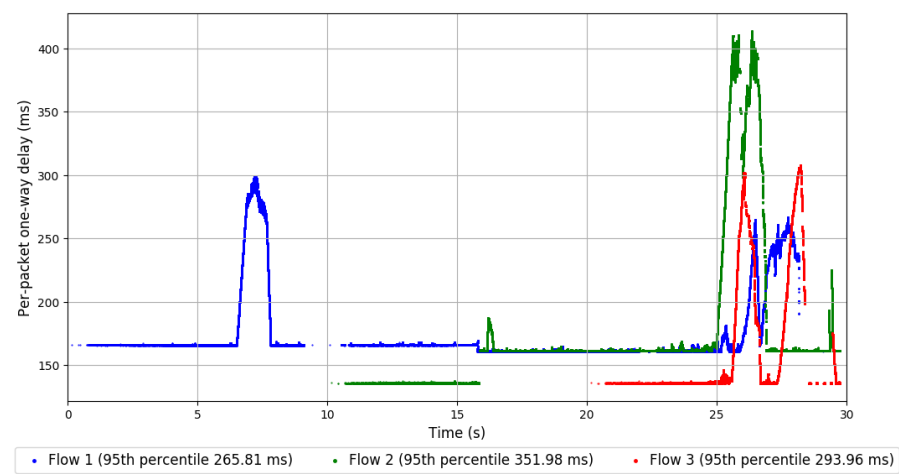
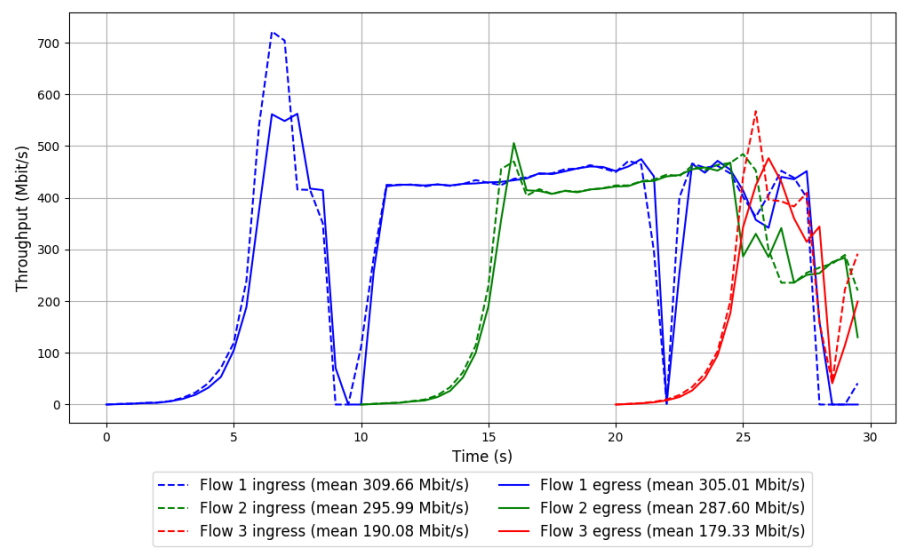
-- Flow 3:

Average throughput: 179.33 Mbit/s

95th percentile per-packet one-way delay: 293.964 ms

Loss rate: 8.29%

Run 9: Report of Vivace-loss — Data Link



Run 10: Statistics of Vivace-loss

Start at: 2018-03-01 09:59:34

End at: 2018-03-01 10:00:04

Below is generated by plot.py at 2018-03-01 15:37:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 506.64 Mbit/s

95th percentile per-packet one-way delay: 263.804 ms

Loss rate: 4.22%

-- Flow 1:

Average throughput: 261.22 Mbit/s

95th percentile per-packet one-way delay: 257.085 ms

Loss rate: 3.27%

-- Flow 2:

Average throughput: 305.32 Mbit/s

95th percentile per-packet one-way delay: 224.133 ms

Loss rate: 3.02%

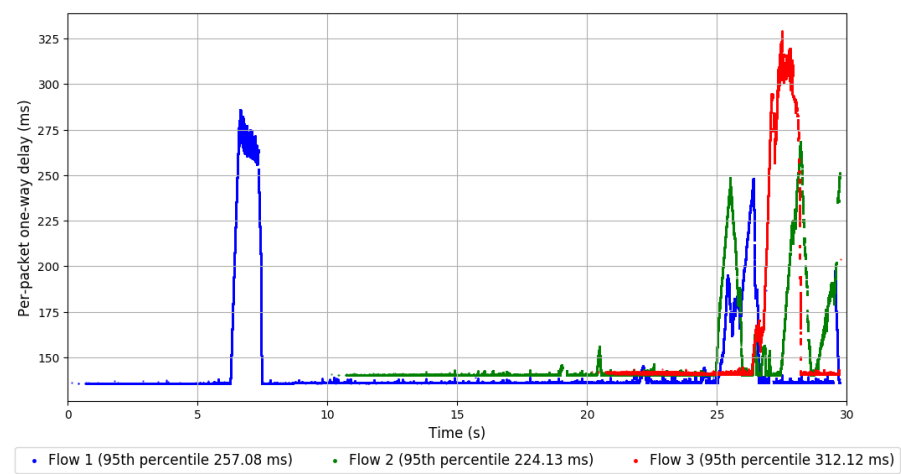
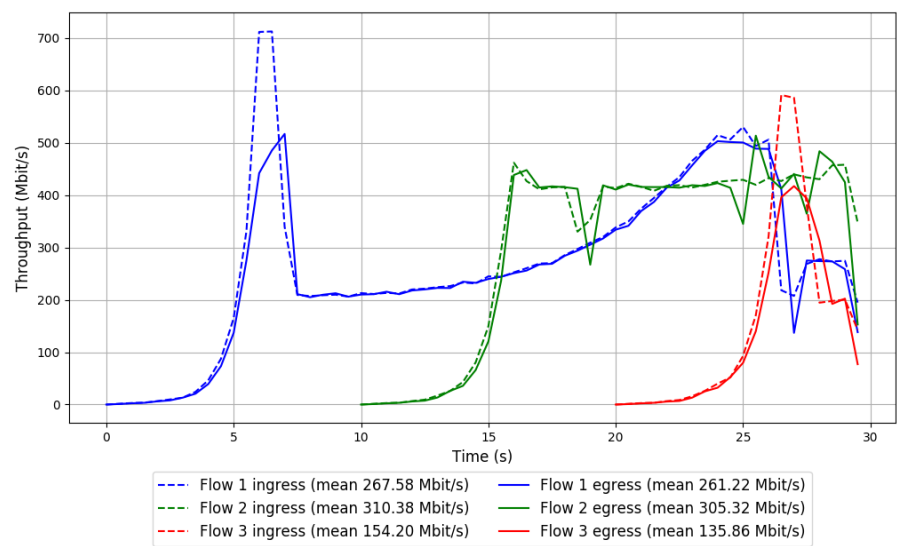
-- Flow 3:

Average throughput: 135.86 Mbit/s

95th percentile per-packet one-way delay: 312.118 ms

Loss rate: 14.11%

Run 10: Report of Vivace-loss — Data Link

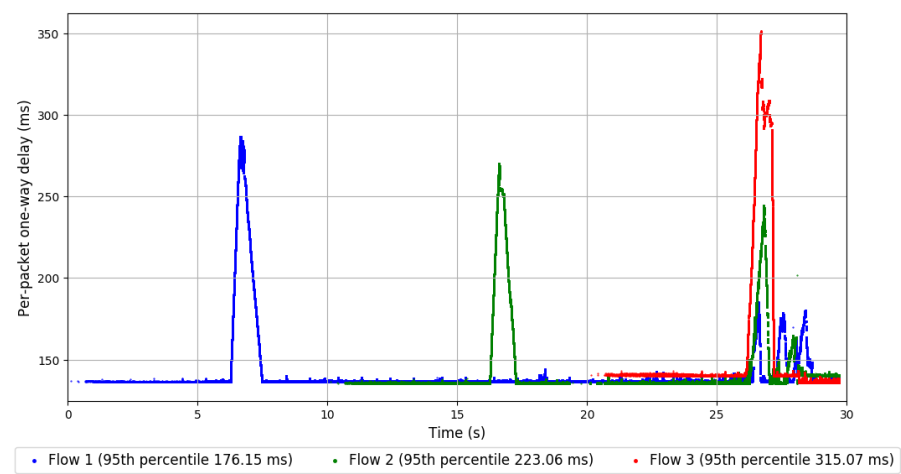
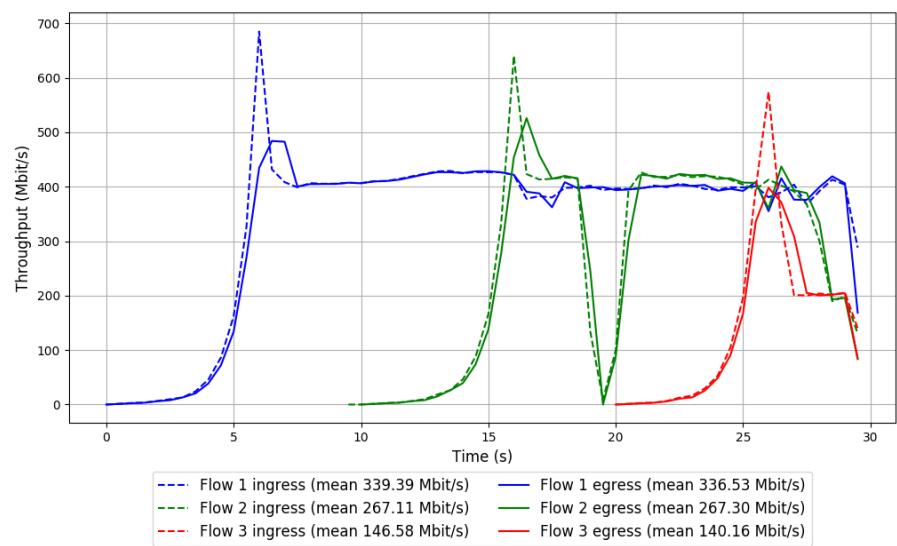


```
Run 1: Statistics of Vivace-LTE

Start at: 2018-03-01 06:54:04
End at: 2018-03-01 06:54:34

# Below is generated by plot.py at 2018-03-01 15:43:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 558.82 Mbit/s
95th percentile per-packet one-way delay: 222.000 ms
Loss rate: 2.07%
-- Flow 1:
Average throughput: 336.53 Mbit/s
95th percentile per-packet one-way delay: 176.150 ms
Loss rate: 1.76%
-- Flow 2:
Average throughput: 267.30 Mbit/s
95th percentile per-packet one-way delay: 223.064 ms
Loss rate: 1.31%
-- Flow 3:
Average throughput: 140.16 Mbit/s
95th percentile per-packet one-way delay: 315.072 ms
Loss rate: 7.08%
```


Run 1: Report of Vivace-LTE — Data Link



Run 2: Statistics of Vivace-LTE

Start at: 2018-03-01 07:14:21

End at: 2018-03-01 07:14:51

Below is generated by plot.py at 2018-03-01 15:43:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 592.65 Mbit/s

95th percentile per-packet one-way delay: 214.794 ms

Loss rate: 2.08%

-- Flow 1:

Average throughput: 355.67 Mbit/s

95th percentile per-packet one-way delay: 244.453 ms

Loss rate: 1.64%

-- Flow 2:

Average throughput: 301.31 Mbit/s

95th percentile per-packet one-way delay: 176.580 ms

Loss rate: 2.35%

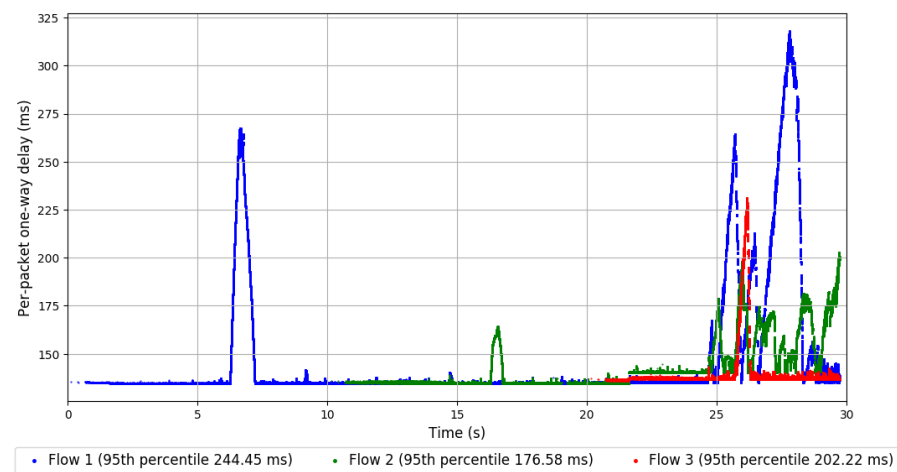
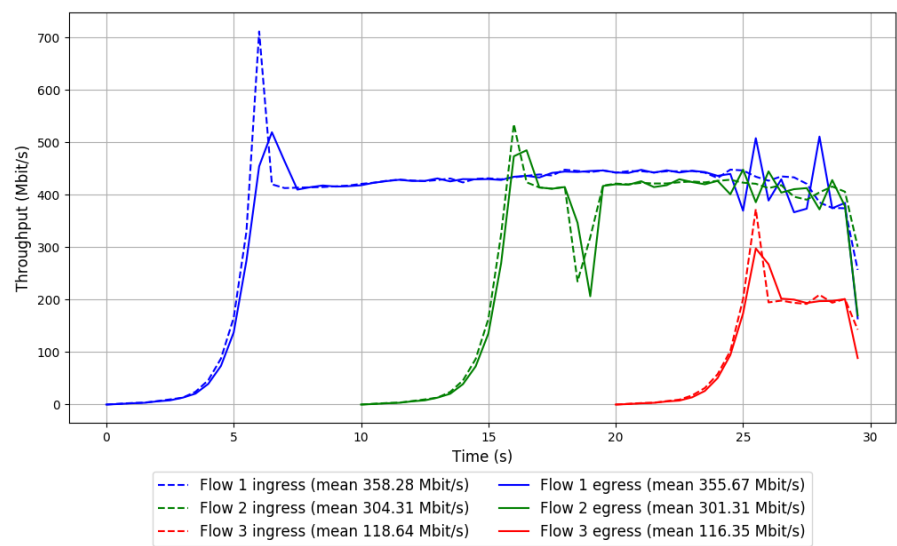
-- Flow 3:

Average throughput: 116.35 Mbit/s

95th percentile per-packet one-way delay: 202.217 ms

Loss rate: 4.68%

Run 2: Report of Vivace-LTE — Data Link



Run 3: Statistics of Vivace-LTE

Start at: 2018-03-01 07:34:55

End at: 2018-03-01 07:35:25

Below is generated by plot.py at 2018-03-01 15:43:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 605.69 Mbit/s

95th percentile per-packet one-way delay: 260.711 ms

Loss rate: 2.61%

-- Flow 1:

Average throughput: 359.59 Mbit/s

95th percentile per-packet one-way delay: 274.717 ms

Loss rate: 2.56%

-- Flow 2:

Average throughput: 317.21 Mbit/s

95th percentile per-packet one-way delay: 217.365 ms

Loss rate: 2.28%

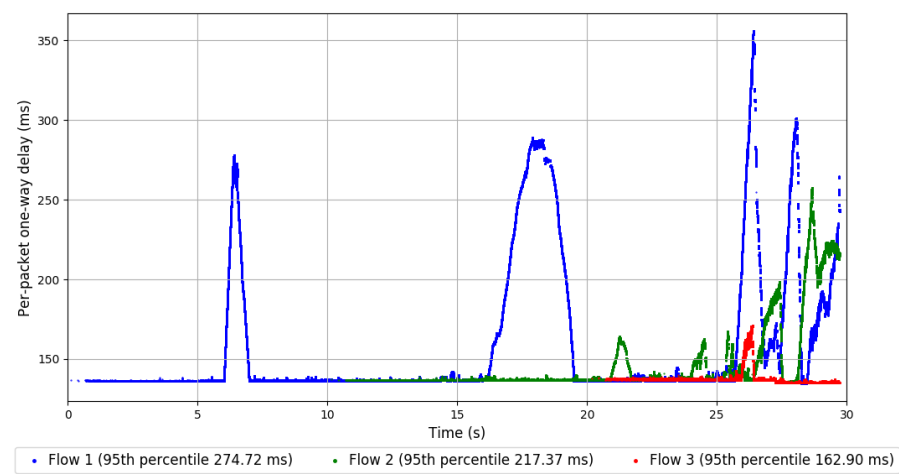
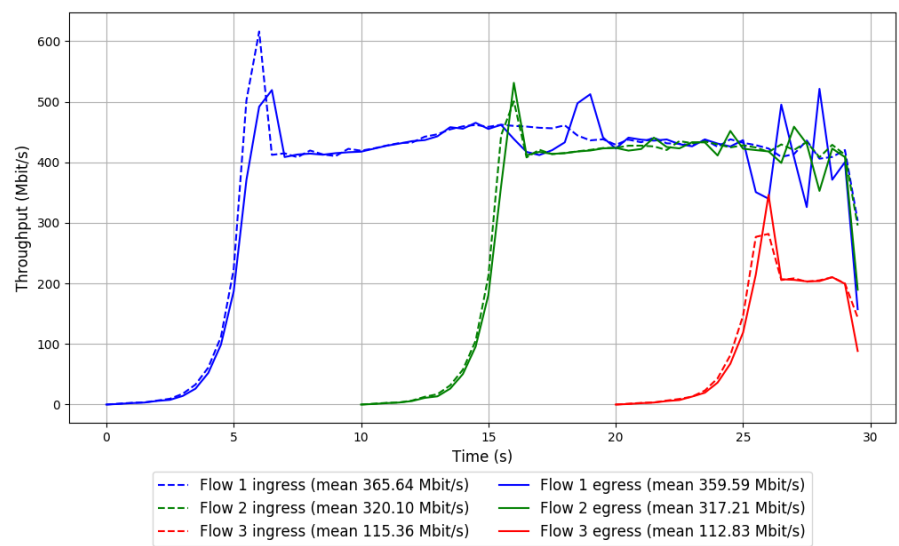
-- Flow 3:

Average throughput: 112.83 Mbit/s

95th percentile per-packet one-way delay: 162.900 ms

Loss rate: 4.94%

Run 3: Report of Vivace-LTE — Data Link



Run 4: Statistics of Vivace-LTE

Start at: 2018-03-01 07:55:30

End at: 2018-03-01 07:56:00

Below is generated by plot.py at 2018-03-01 15:43:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 604.72 Mbit/s

95th percentile per-packet one-way delay: 228.547 ms

Loss rate: 1.74%

-- Flow 1:

Average throughput: 356.74 Mbit/s

95th percentile per-packet one-way delay: 257.716 ms

Loss rate: 1.25%

-- Flow 2:

Average throughput: 316.17 Mbit/s

95th percentile per-packet one-way delay: 168.390 ms

Loss rate: 1.96%

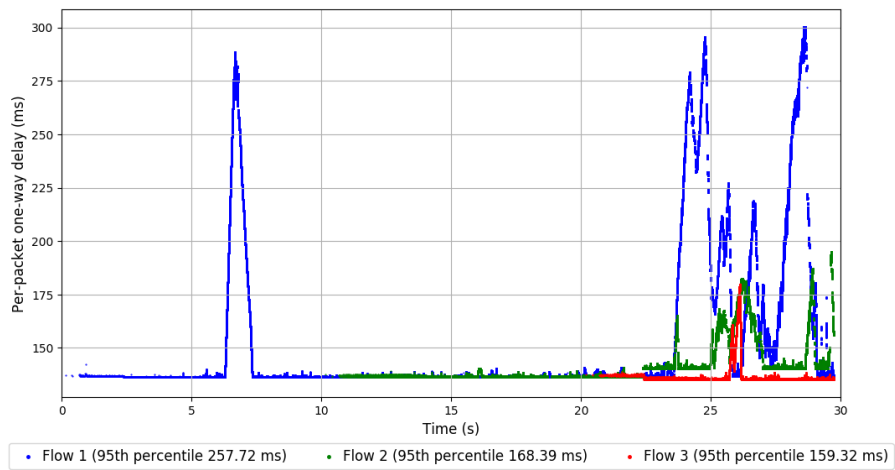
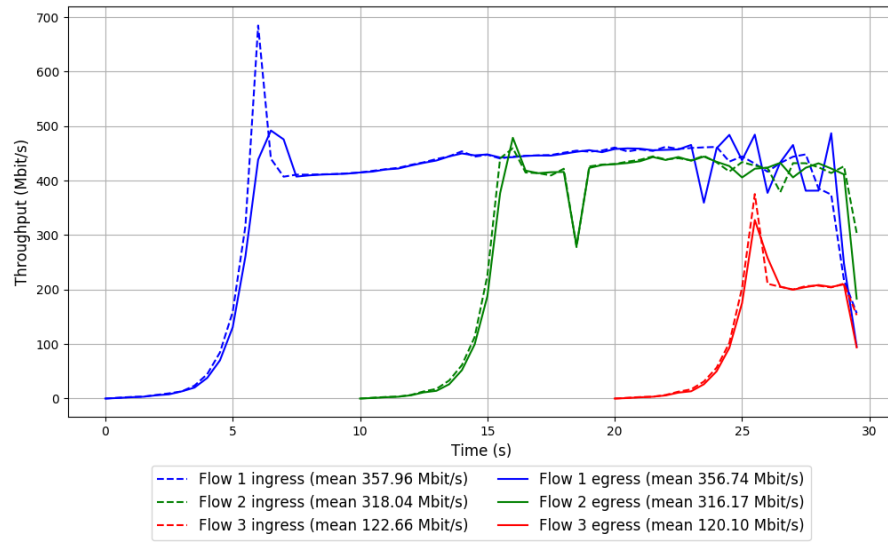
-- Flow 3:

Average throughput: 120.10 Mbit/s

95th percentile per-packet one-way delay: 159.316 ms

Loss rate: 4.83%

Run 4: Report of Vivace-LTE — Data Link



Run 5: Statistics of Vivace-LTE

Start at: 2018-03-01 08:16:41

End at: 2018-03-01 08:17:11

Below is generated by plot.py at 2018-03-01 15:43:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 524.68 Mbit/s

95th percentile per-packet one-way delay: 256.348 ms

Loss rate: 3.69%

-- Flow 1:

Average throughput: 337.04 Mbit/s

95th percentile per-packet one-way delay: 265.177 ms

Loss rate: 3.10%

-- Flow 2:

Average throughput: 197.02 Mbit/s

95th percentile per-packet one-way delay: 257.493 ms

Loss rate: 3.31%

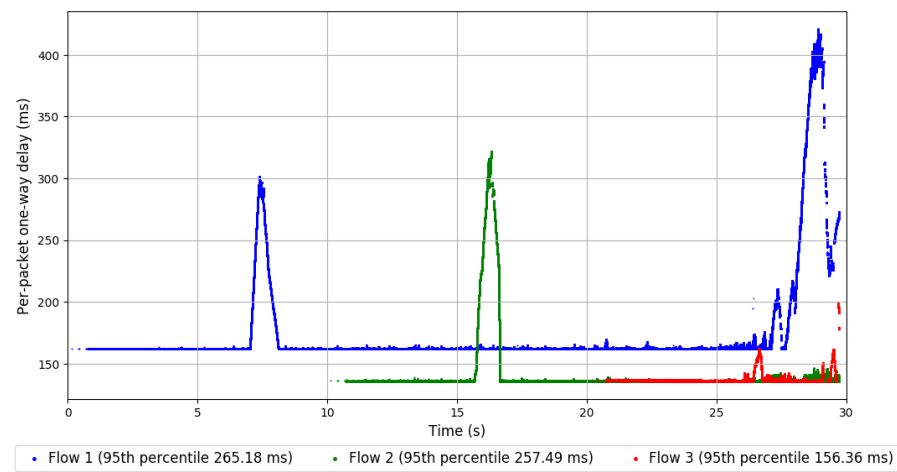
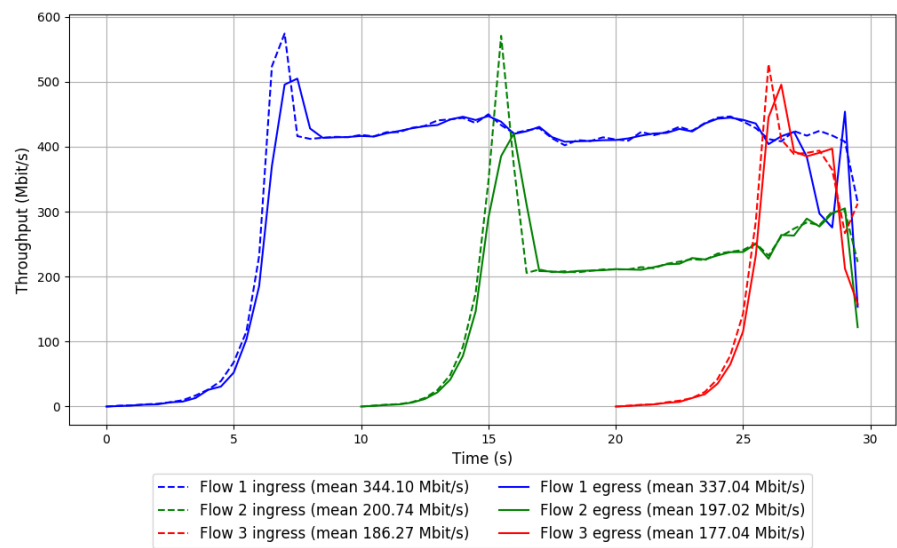
-- Flow 3:

Average throughput: 177.04 Mbit/s

95th percentile per-packet one-way delay: 156.359 ms

Loss rate: 7.81%

Run 5: Report of Vivace-LTE — Data Link



Run 6: Statistics of Vivace-LTE

Start at: 2018-03-01 08:37:17

End at: 2018-03-01 08:37:47

Below is generated by plot.py at 2018-03-01 15:44:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 575.84 Mbit/s

95th percentile per-packet one-way delay: 273.876 ms

Loss rate: 1.80%

-- Flow 1:

Average throughput: 339.51 Mbit/s

95th percentile per-packet one-way delay: 293.129 ms

Loss rate: 1.34%

-- Flow 2:

Average throughput: 298.96 Mbit/s

95th percentile per-packet one-way delay: 191.914 ms

Loss rate: 2.01%

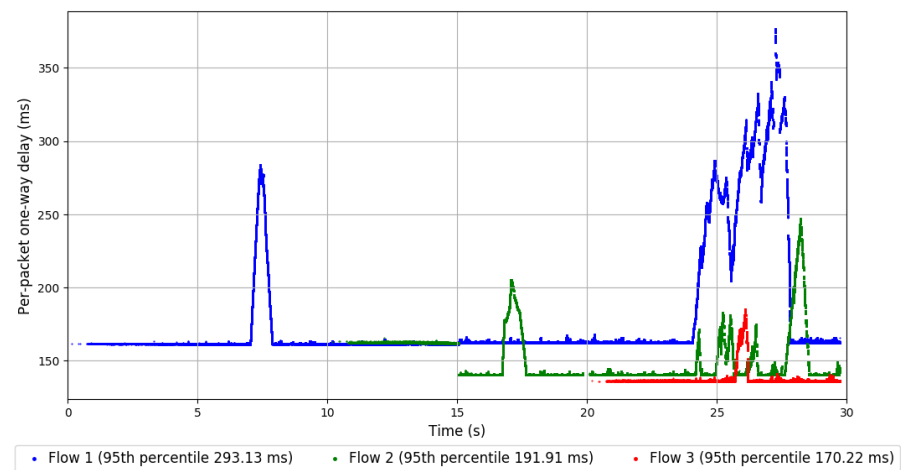
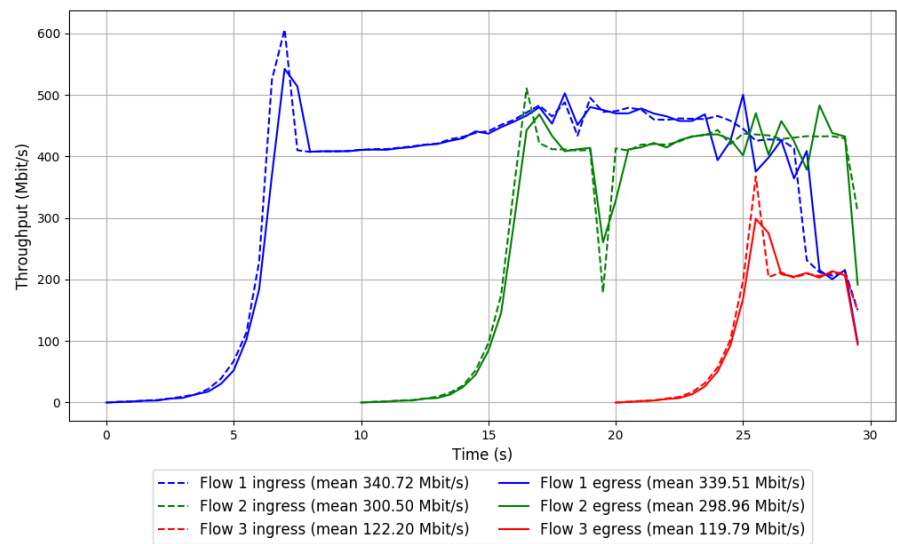
-- Flow 3:

Average throughput: 119.79 Mbit/s

95th percentile per-packet one-way delay: 170.219 ms

Loss rate: 4.71%

Run 6: Report of Vivace-LTE — Data Link



Run 7: Statistics of Vivace-LTE

Start at: 2018-03-01 08:58:50

End at: 2018-03-01 08:59:20

Below is generated by plot.py at 2018-03-01 15:45:22

Datalink statistics

-- Total of 3 flows:

Average throughput: 492.51 Mbit/s

95th percentile per-packet one-way delay: 348.952 ms

Loss rate: 4.84%

-- Flow 1:

Average throughput: 254.14 Mbit/s

95th percentile per-packet one-way delay: 372.854 ms

Loss rate: 5.93%

-- Flow 2:

Average throughput: 281.23 Mbit/s

95th percentile per-packet one-way delay: 329.978 ms

Loss rate: 3.94%

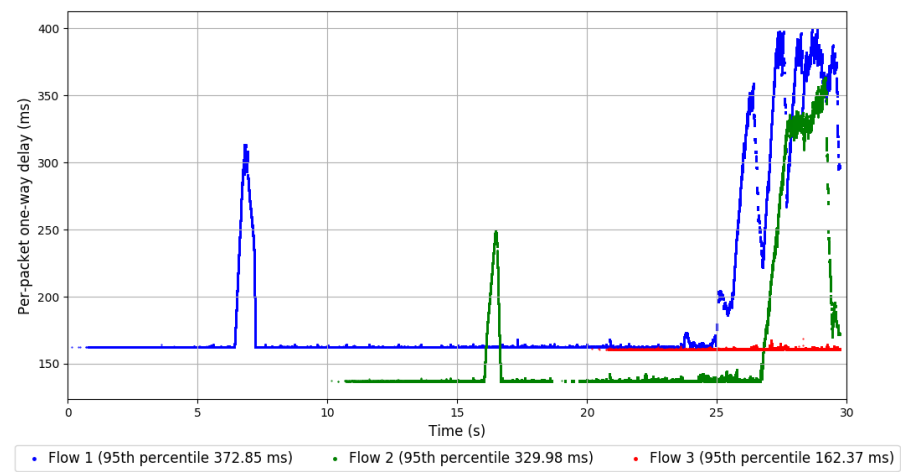
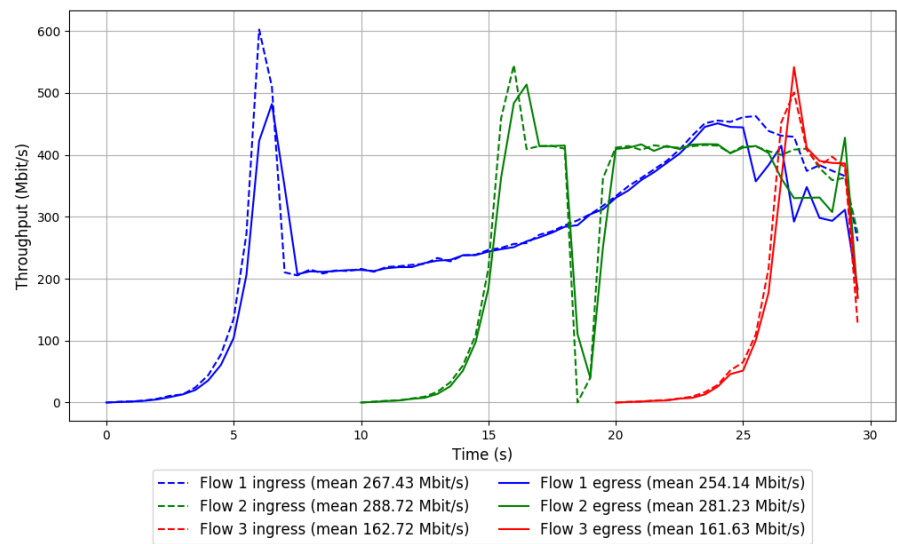
-- Flow 3:

Average throughput: 161.63 Mbit/s

95th percentile per-packet one-way delay: 162.374 ms

Loss rate: 2.56%

Run 7: Report of Vivace-LTE — Data Link



Run 8: Statistics of Vivace-LTE

Start at: 2018-03-01 09:19:52

End at: 2018-03-01 09:20:22

Below is generated by plot.py at 2018-03-01 15:45:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 596.86 Mbit/s

95th percentile per-packet one-way delay: 276.263 ms

Loss rate: 2.75%

-- Flow 1:

Average throughput: 360.16 Mbit/s

95th percentile per-packet one-way delay: 193.730 ms

Loss rate: 1.88%

-- Flow 2:

Average throughput: 294.00 Mbit/s

95th percentile per-packet one-way delay: 308.452 ms

Loss rate: 2.69%

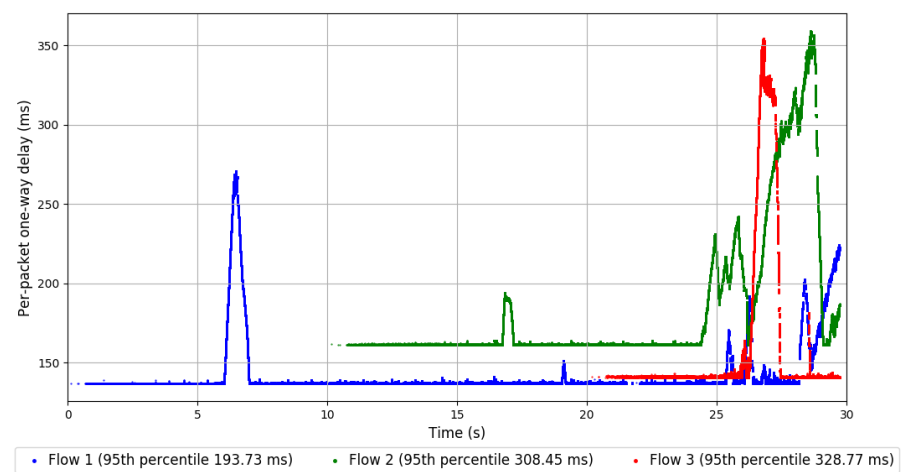
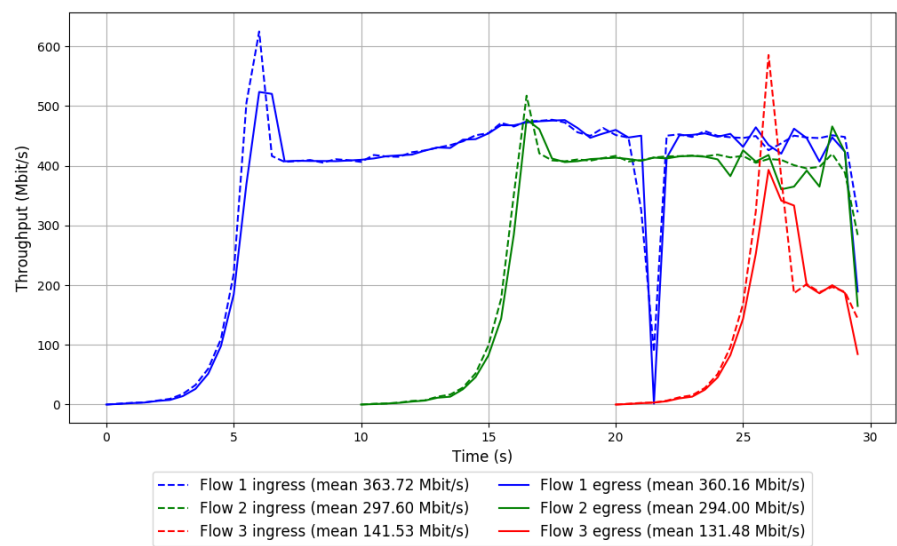
-- Flow 3:

Average throughput: 131.48 Mbit/s

95th percentile per-packet one-way delay: 328.773 ms

Loss rate: 9.72%

Run 8: Report of Vivace-LTE — Data Link



Run 9: Statistics of Vivace-LTE

Start at: 2018-03-01 09:41:06

End at: 2018-03-01 09:41:36

Below is generated by plot.py at 2018-03-01 15:46:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 576.02 Mbit/s

95th percentile per-packet one-way delay: 255.955 ms

Loss rate: 2.26%

-- Flow 1:

Average throughput: 331.76 Mbit/s

95th percentile per-packet one-way delay: 273.776 ms

Loss rate: 2.26%

-- Flow 2:

Average throughput: 309.22 Mbit/s

95th percentile per-packet one-way delay: 184.113 ms

Loss rate: 1.81%

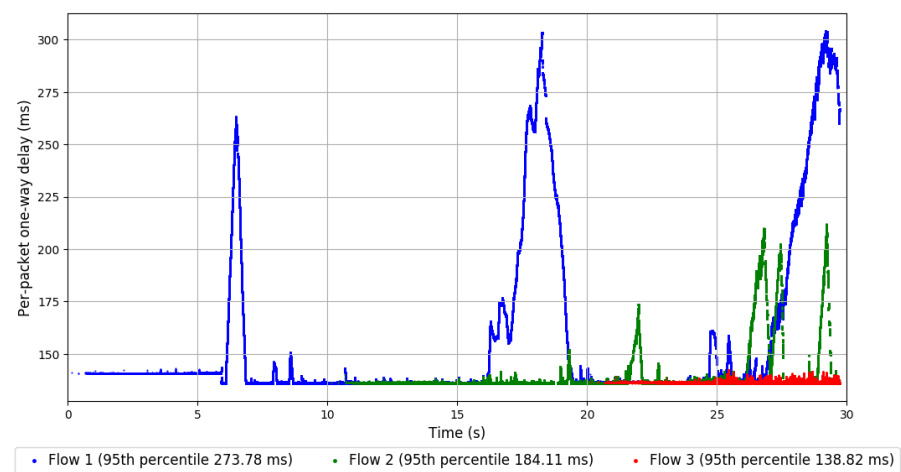
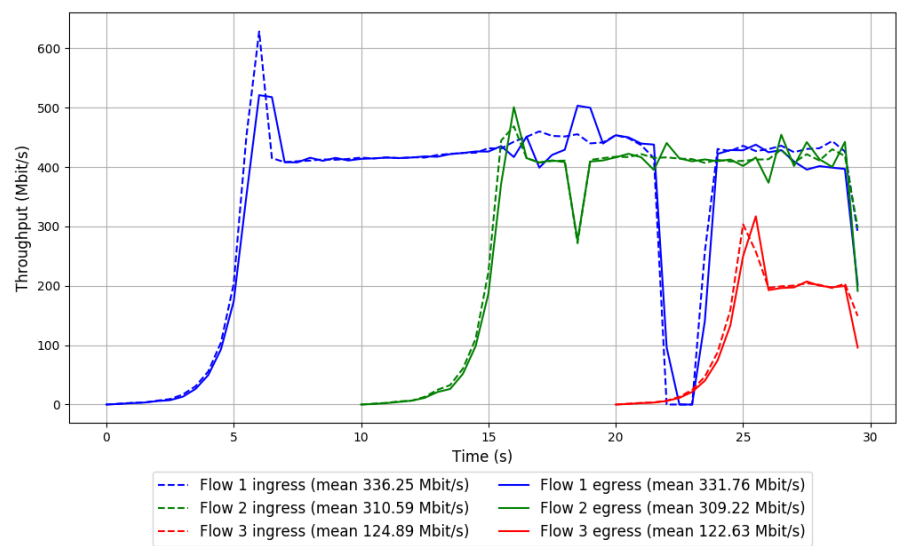
-- Flow 3:

Average throughput: 122.63 Mbit/s

95th percentile per-packet one-way delay: 138.821 ms

Loss rate: 4.56%

Run 9: Report of Vivace-LTE — Data Link



```
Run 10: Statistics of Vivace-LTE

Start at: 2018-03-01 10:02:17
End at: 2018-03-01 10:02:47

# Below is generated by plot.py at 2018-03-01 15:46:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 559.49 Mbit/s
95th percentile per-packet one-way delay: 196.082 ms
Loss rate: 1.96%
-- Flow 1:
Average throughput: 319.55 Mbit/s
95th percentile per-packet one-way delay: 181.980 ms
Loss rate: 1.38%
-- Flow 2:
Average throughput: 293.15 Mbit/s
95th percentile per-packet one-way delay: 194.364 ms
Loss rate: 1.85%
-- Flow 3:
Average throughput: 142.46 Mbit/s
95th percentile per-packet one-way delay: 266.331 ms
Loss rate: 6.25%
```

Run 10: Report of Vivace-LTE — Data Link

