

Pantheon Report

Generated at 2018-02-21 23:28:08 (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.

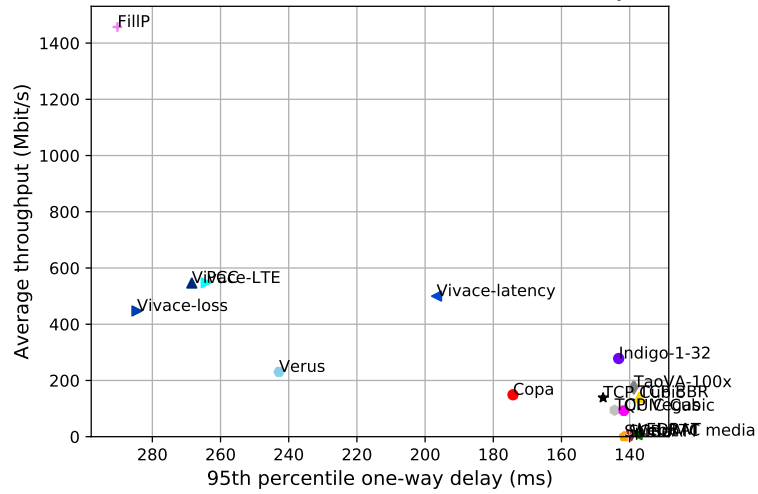
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

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

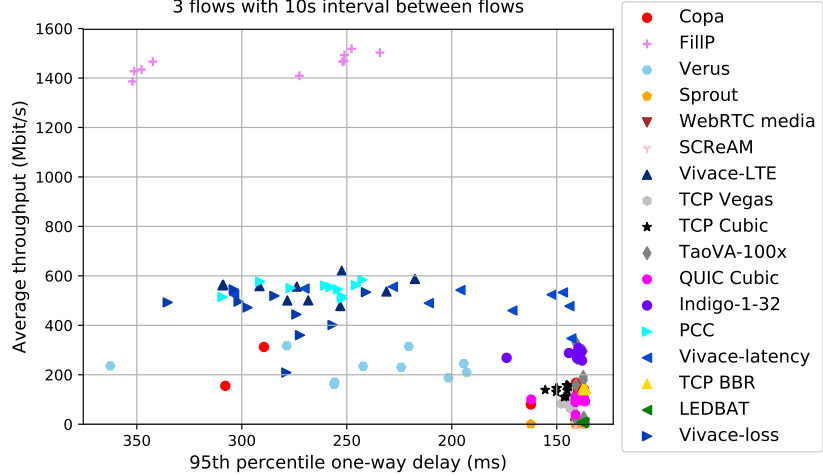
Git summary:

```
branch: master @ f12c42a2c63fdd9a862eefa0468859bf379b6623
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
  M datagrump/sender.cc
third_party/fillp @ 828bbf95fd4941149b5ce90f281d1c69ae1a5c6
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	72.82	70.96	63.39	137.22	137.25	137.27	0.98	1.58	3.35
TCP Cubic	10	77.23	68.79	50.06	147.43	147.63	148.30	0.82	1.62	4.07
LEDBAT	10	4.73	3.00	1.27	137.87	137.77	137.44	1.84	2.82	5.76
PCC	10	456.68	104.43	67.13	267.57	246.59	249.15	4.30	3.84	6.69
QUIC Cubic	10	48.36	50.45	33.10	141.33	137.29	137.61	1.11	1.81	2.08
SCReAM	10	0.22	0.22	0.22	139.53	137.29	137.03	0.82	1.42	2.63
WebRTC media	10	1.99	1.26	0.43	138.62	137.35	137.80	1.08	1.89	5.55
Sprout	10	0.37	0.47	0.44	138.63	138.31	139.94	0.90	1.39	2.05
TaoVA-100x	10	100.54	84.60	69.14	138.13	141.07	139.47	0.98	2.08	2.22
TCP Vegas	10	48.49	47.35	44.55	143.82	143.10	143.01	0.91	1.68	4.09
Verus	10	153.08	90.32	55.81	230.39	221.68	239.88	2.72	3.87	8.24
Copa	10	93.16	75.49	50.99	173.57	154.13	155.76	7.67	3.94	4.20
FillP	10	766.61	718.20	661.43	253.89	297.58	294.40	8.37	10.24	13.27
Indigo-1-32	10	137.55	148.52	132.02	141.61	143.69	144.89	0.95	1.38	3.48
Vivace-latency	10	292.21	271.24	87.56	189.94	196.36	150.31	1.71	2.10	4.61
Vivace-loss	10	233.63	259.78	129.61	280.58	267.35	313.32	5.45	5.16	14.83
Vivace-LTE	10	336.17	255.93	127.10	264.99	261.64	231.73	2.48	2.78	6.28

Run 1: Statistics of TCP BBR

Start at: 2018-02-21 14:30:48

End at: 2018-02-21 14:31:18

Below is generated by plot.py at 2018-02-21 21:34:11

Datalink statistics

-- Total of 3 flows:

Average throughput: 140.52 Mbit/s

95th percentile per-packet one-way delay: 137.445 ms

Loss rate: 1.50%

-- Flow 1:

Average throughput: 73.49 Mbit/s

95th percentile per-packet one-way delay: 137.429 ms

Loss rate: 0.96%

-- Flow 2:

Average throughput: 70.32 Mbit/s

95th percentile per-packet one-way delay: 137.490 ms

Loss rate: 1.52%

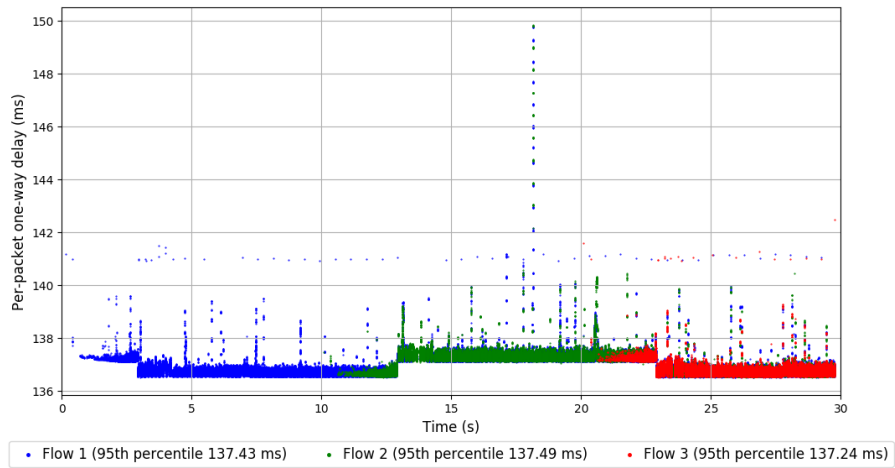
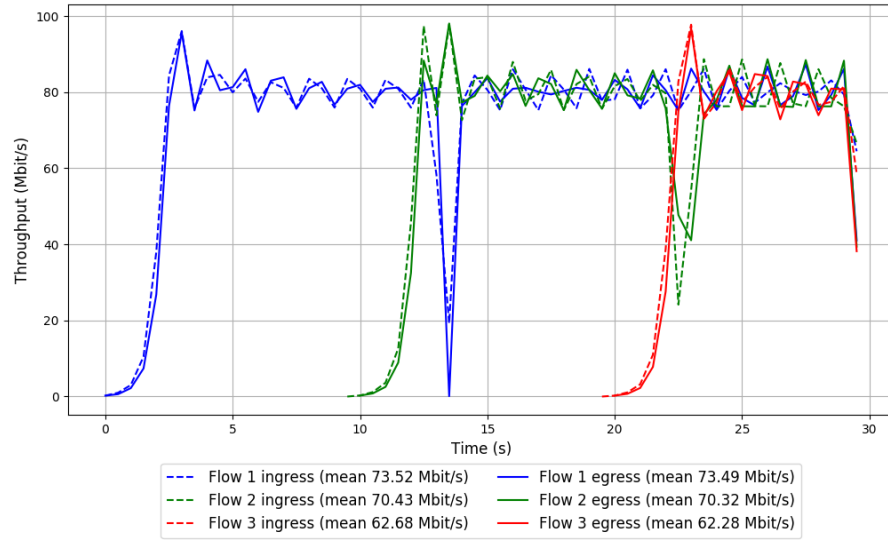
-- Flow 3:

Average throughput: 62.28 Mbit/s

95th percentile per-packet one-way delay: 137.239 ms

Loss rate: 3.35%

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2018-02-21 14:51:17

End at: 2018-02-21 14:51:47

Below is generated by plot.py at 2018-02-21 21:34:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 142.68 Mbit/s

95th percentile per-packet one-way delay: 137.492 ms

Loss rate: 1.55%

-- Flow 1:

Average throughput: 73.84 Mbit/s

95th percentile per-packet one-way delay: 137.469 ms

Loss rate: 1.08%

-- Flow 2:

Average throughput: 72.43 Mbit/s

95th percentile per-packet one-way delay: 137.492 ms

Loss rate: 1.47%

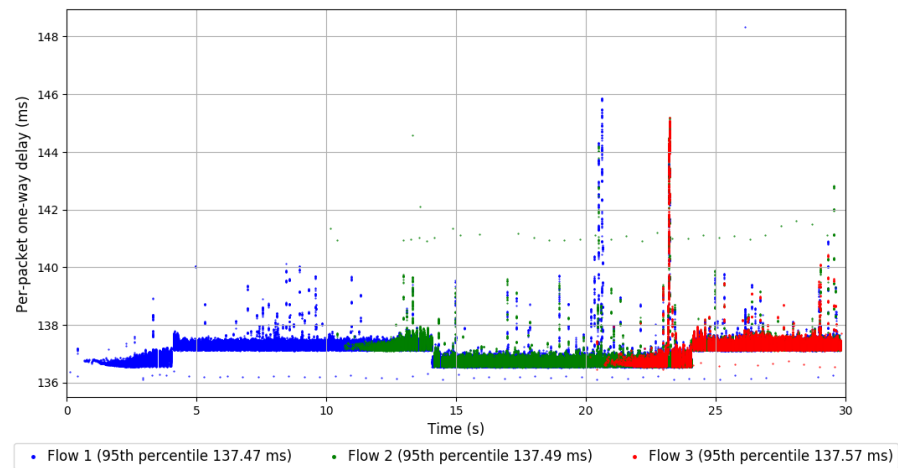
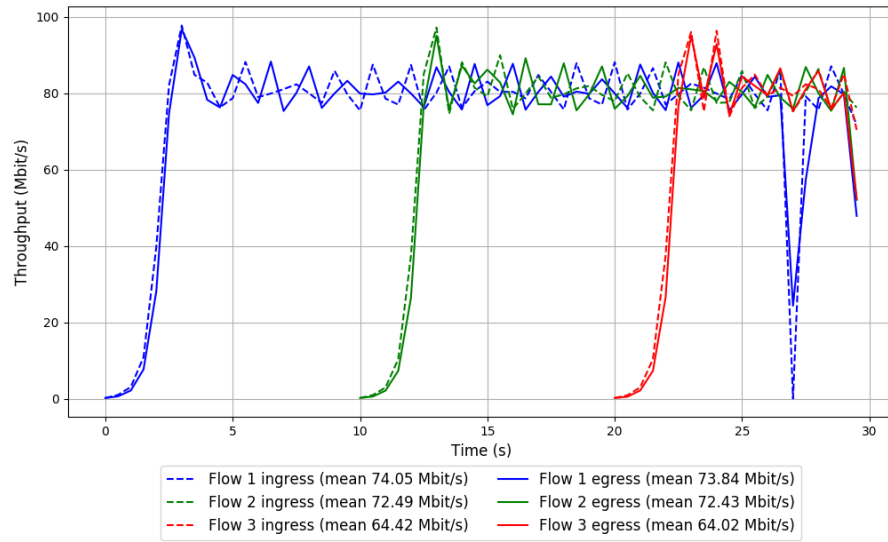
-- Flow 3:

Average throughput: 64.02 Mbit/s

95th percentile per-packet one-way delay: 137.569 ms

Loss rate: 3.34%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2018-02-21 15:12:11

End at: 2018-02-21 15:12:41

Below is generated by plot.py at 2018-02-21 21:34:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 141.24 Mbit/s

95th percentile per-packet one-way delay: 136.115 ms

Loss rate: 1.51%

-- Flow 1:

Average throughput: 72.57 Mbit/s

95th percentile per-packet one-way delay: 136.092 ms

Loss rate: 0.96%

-- Flow 2:

Average throughput: 72.13 Mbit/s

95th percentile per-packet one-way delay: 136.126 ms

Loss rate: 1.50%

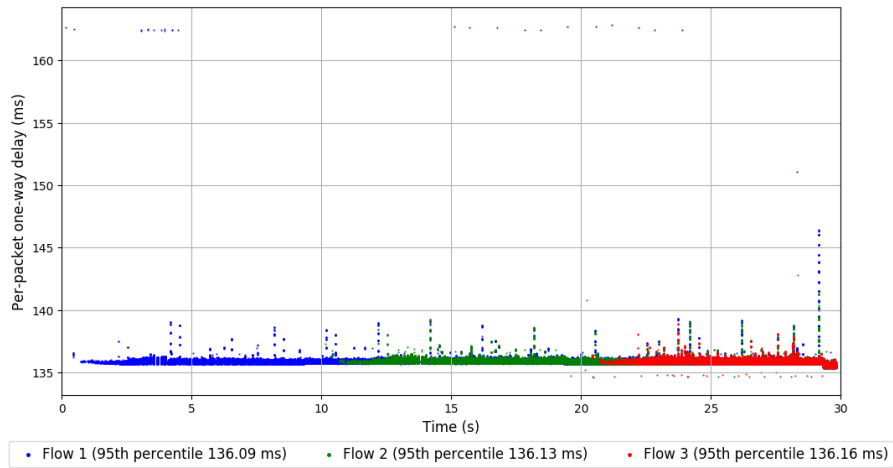
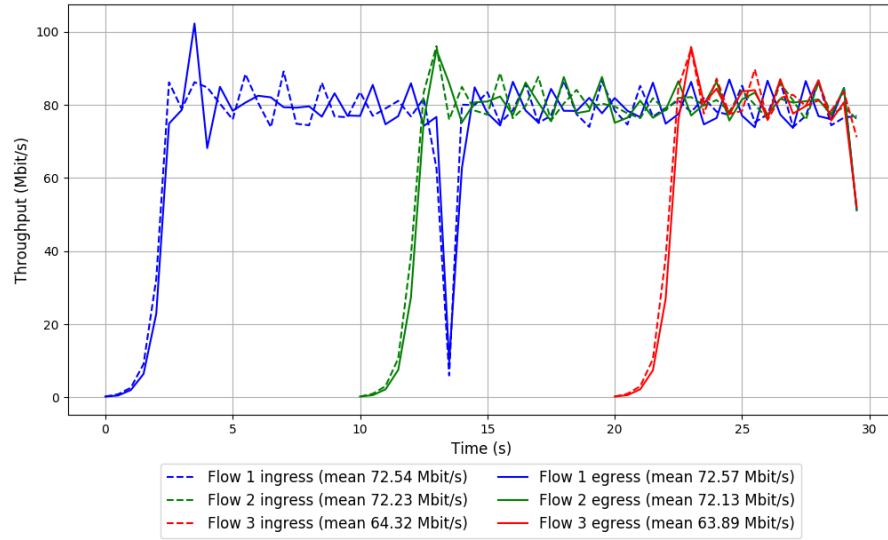
-- Flow 3:

Average throughput: 63.89 Mbit/s

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

Loss rate: 3.38%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2018-02-21 15:32:26

End at: 2018-02-21 15:32:56

Below is generated by plot.py at 2018-02-21 21:34:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 140.24 Mbit/s

95th percentile per-packet one-way delay: 137.368 ms

Loss rate: 1.57%

-- Flow 1:

Average throughput: 73.12 Mbit/s

95th percentile per-packet one-way delay: 137.337 ms

Loss rate: 0.97%

-- Flow 2:

Average throughput: 70.08 Mbit/s

95th percentile per-packet one-way delay: 137.368 ms

Loss rate: 1.72%

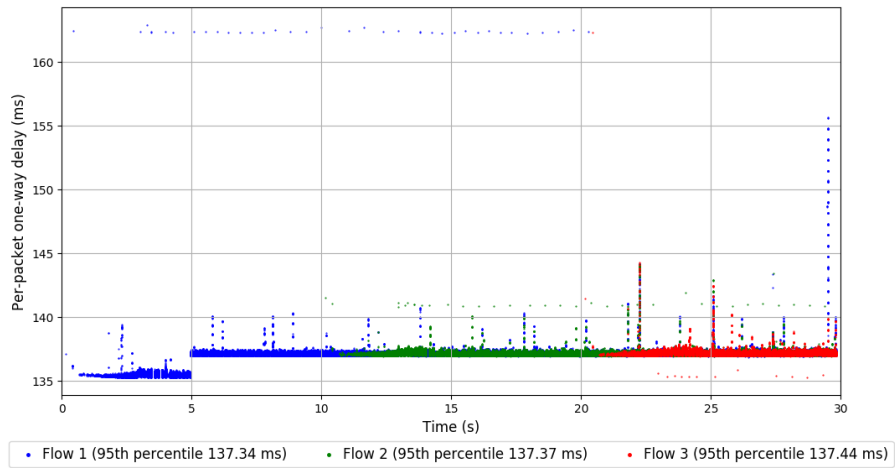
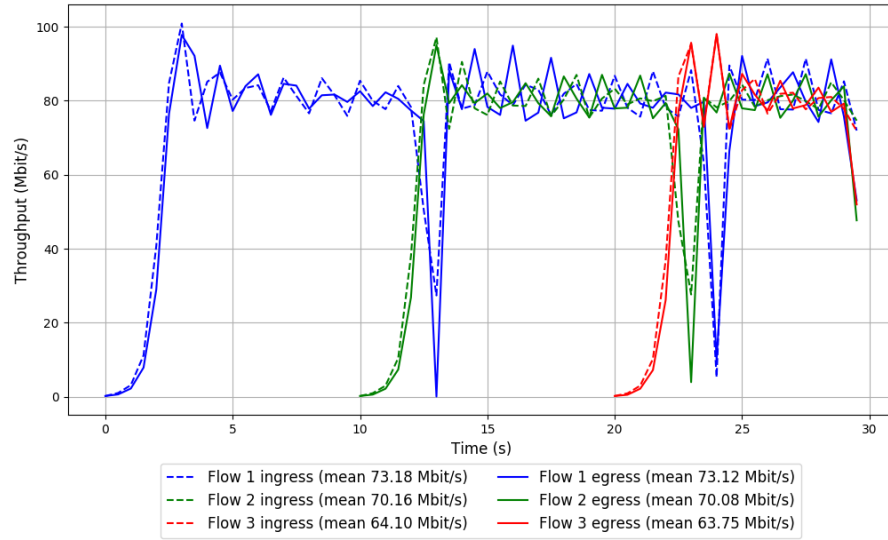
-- Flow 3:

Average throughput: 63.75 Mbit/s

95th percentile per-packet one-way delay: 137.442 ms

Loss rate: 3.32%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2018-02-21 15:52:51

End at: 2018-02-21 15:53:21

Below is generated by plot.py at 2018-02-21 21:34:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 139.24 Mbit/s

95th percentile per-packet one-way delay: 137.315 ms

Loss rate: 1.56%

-- Flow 1:

Average throughput: 72.02 Mbit/s

95th percentile per-packet one-way delay: 137.306 ms

Loss rate: 0.95%

-- Flow 2:

Average throughput: 70.16 Mbit/s

95th percentile per-packet one-way delay: 137.314 ms

Loss rate: 1.71%

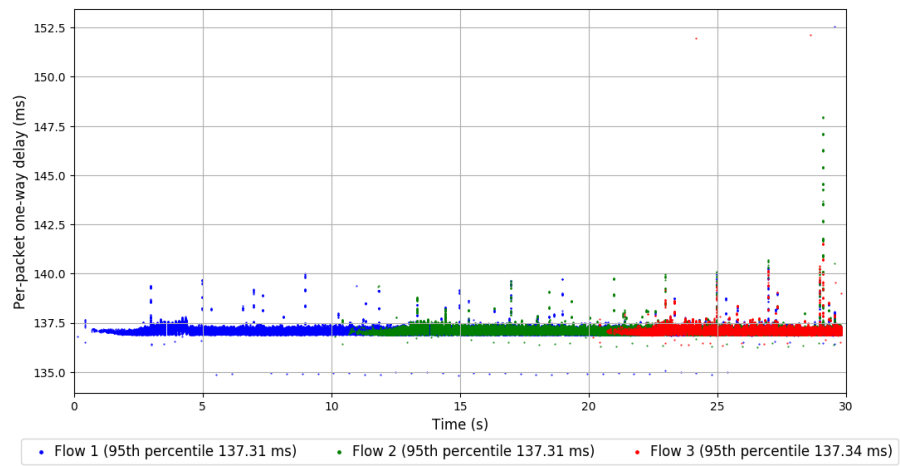
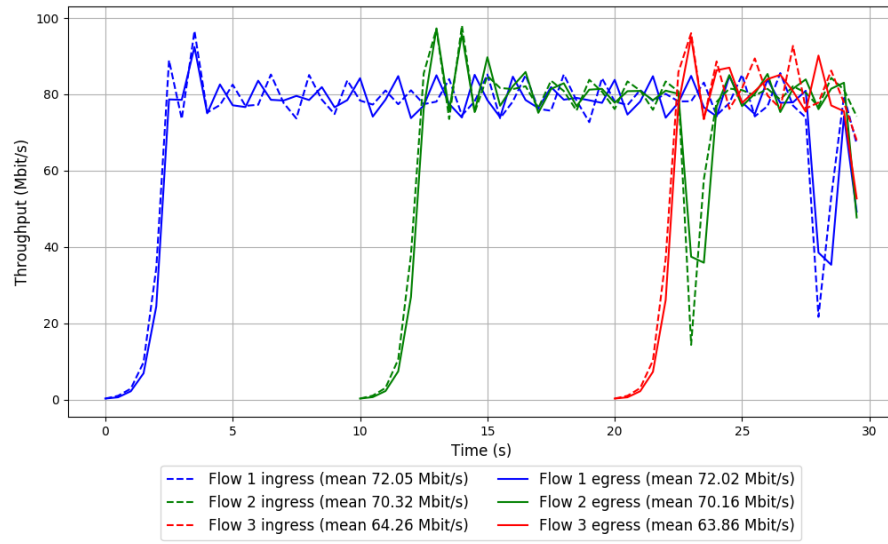
-- Flow 3:

Average throughput: 63.86 Mbit/s

95th percentile per-packet one-way delay: 137.345 ms

Loss rate: 3.31%

Run 5: Report of TCP BBR — Data Link



Run 6: Statistics of TCP BBR

Start at: 2018-02-21 16:13:03

End at: 2018-02-21 16:13:33

Below is generated by plot.py at 2018-02-21 21:34:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 140.56 Mbit/s

95th percentile per-packet one-way delay: 137.413 ms

Loss rate: 1.53%

-- Flow 1:

Average throughput: 73.34 Mbit/s

95th percentile per-packet one-way delay: 137.395 ms

Loss rate: 0.97%

-- Flow 2:

Average throughput: 70.21 Mbit/s

95th percentile per-packet one-way delay: 137.417 ms

Loss rate: 1.56%

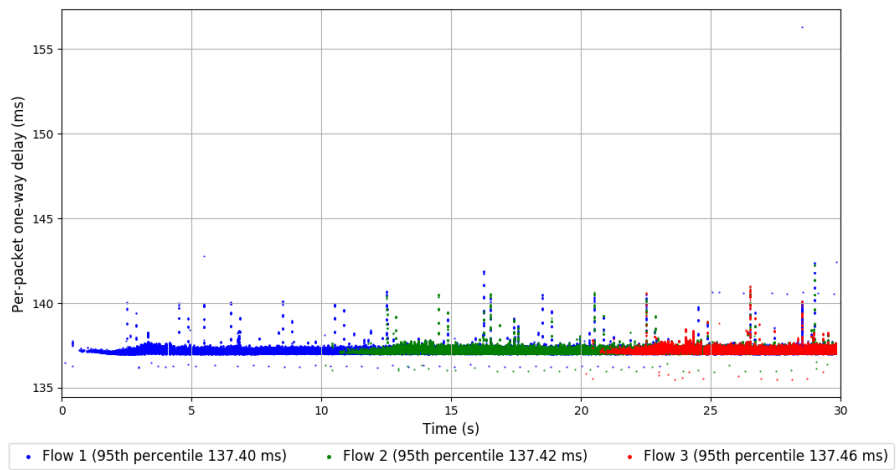
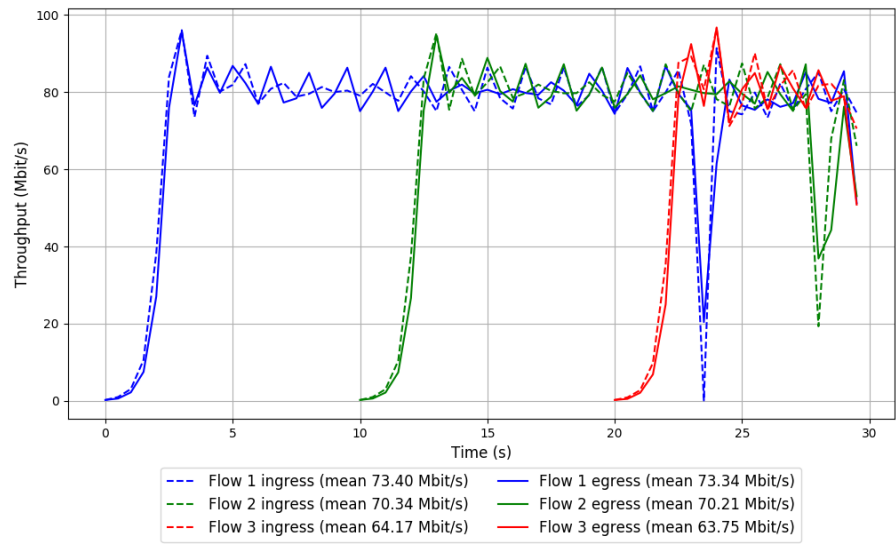
-- Flow 3:

Average throughput: 63.75 Mbit/s

95th percentile per-packet one-way delay: 137.456 ms

Loss rate: 3.39%

Run 6: Report of TCP BBR — Data Link



Run 7: Statistics of TCP BBR

Start at: 2018-02-21 16:33:59

End at: 2018-02-21 16:34:29

Below is generated by plot.py at 2018-02-21 21:34:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 137.31 Mbit/s

95th percentile per-packet one-way delay: 137.362 ms

Loss rate: 1.53%

-- Flow 1:

Average throughput: 71.85 Mbit/s

95th percentile per-packet one-way delay: 137.325 ms

Loss rate: 1.01%

-- Flow 2:

Average throughput: 68.94 Mbit/s

95th percentile per-packet one-way delay: 137.375 ms

Loss rate: 1.51%

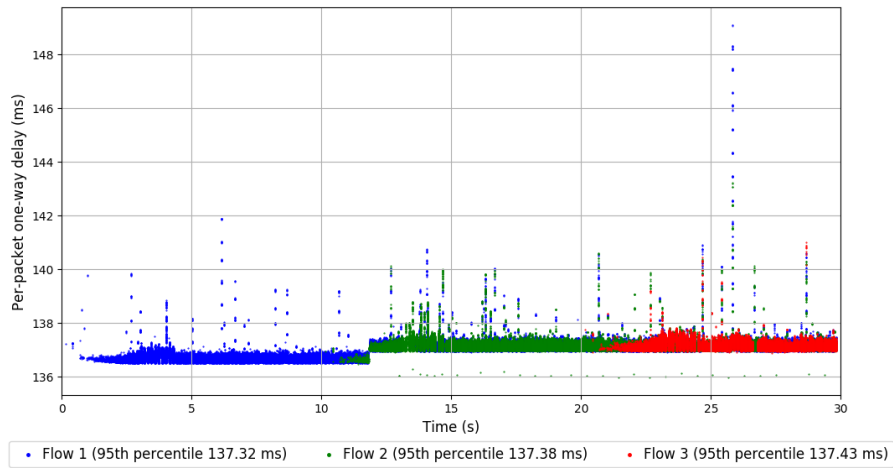
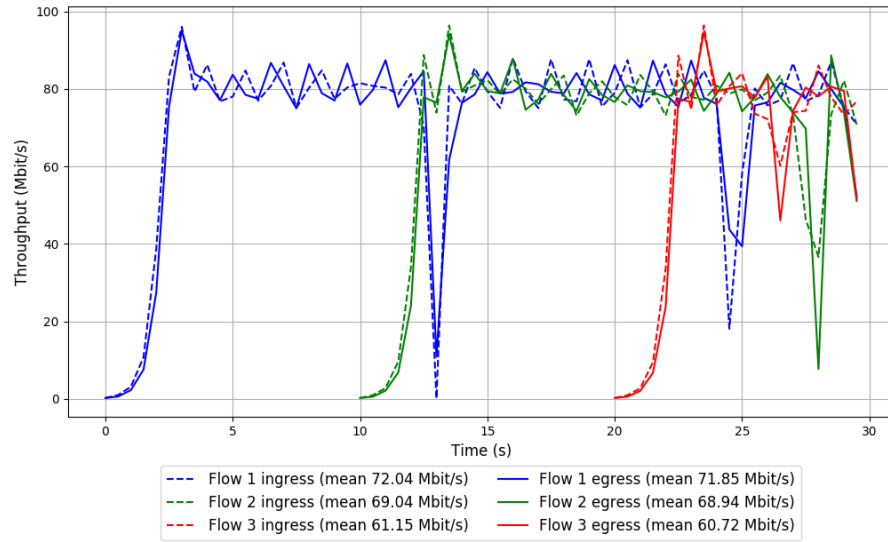
-- Flow 3:

Average throughput: 60.72 Mbit/s

95th percentile per-packet one-way delay: 137.426 ms

Loss rate: 3.43%

Run 7: Report of TCP BBR — Data Link



Run 8: Statistics of TCP BBR

Start at: 2018-02-21 16:54:30

End at: 2018-02-21 16:55:00

Below is generated by plot.py at 2018-02-21 21:34:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 141.17 Mbit/s

95th percentile per-packet one-way delay: 137.544 ms

Loss rate: 1.57%

-- Flow 1:

Average throughput: 72.21 Mbit/s

95th percentile per-packet one-way delay: 137.520 ms

Loss rate: 0.98%

-- Flow 2:

Average throughput: 72.71 Mbit/s

95th percentile per-packet one-way delay: 137.554 ms

Loss rate: 1.66%

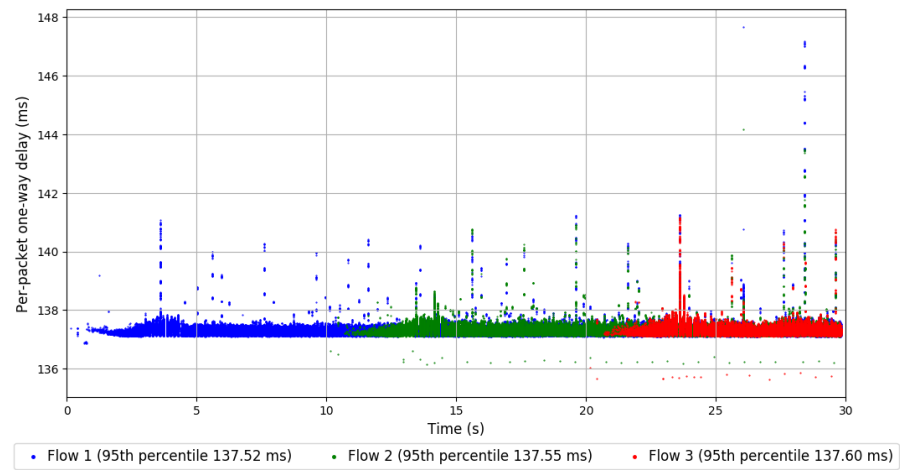
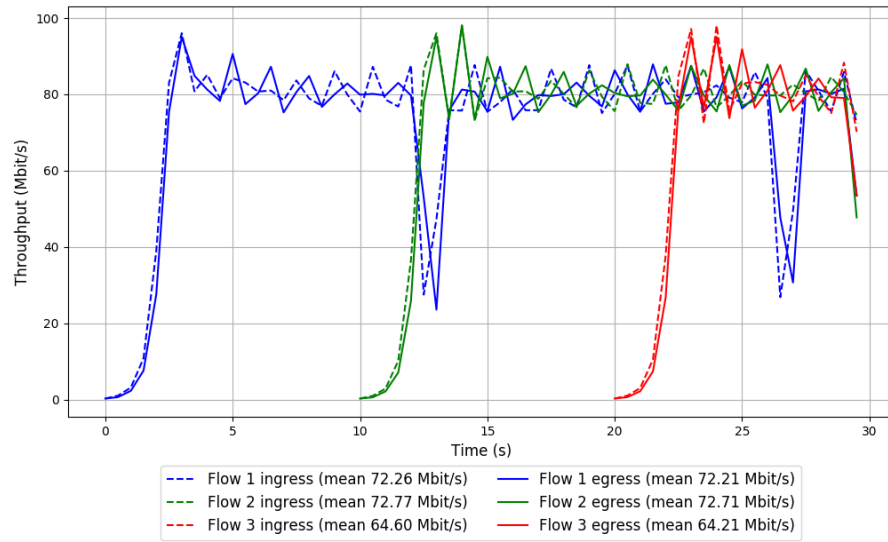
-- Flow 3:

Average throughput: 64.21 Mbit/s

95th percentile per-packet one-way delay: 137.597 ms

Loss rate: 3.32%

Run 8: Report of TCP BBR — Data Link



Run 9: Statistics of TCP BBR

Start at: 2018-02-21 17:14:50

End at: 2018-02-21 17:15:20

Below is generated by plot.py at 2018-02-21 21:36:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 140.86 Mbit/s

95th percentile per-packet one-way delay: 137.636 ms

Loss rate: 1.54%

-- Flow 1:

Average throughput: 72.12 Mbit/s

95th percentile per-packet one-way delay: 137.607 ms

Loss rate: 1.00%

-- Flow 2:

Average throughput: 72.43 Mbit/s

95th percentile per-packet one-way delay: 137.639 ms

Loss rate: 1.55%

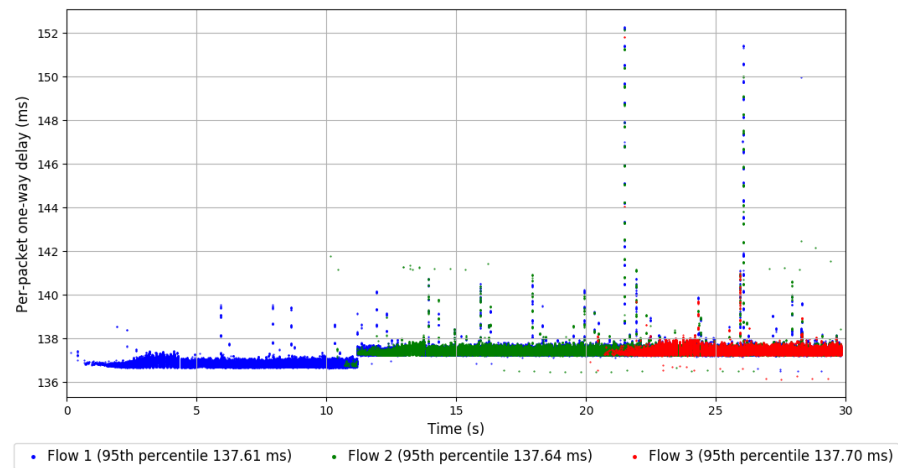
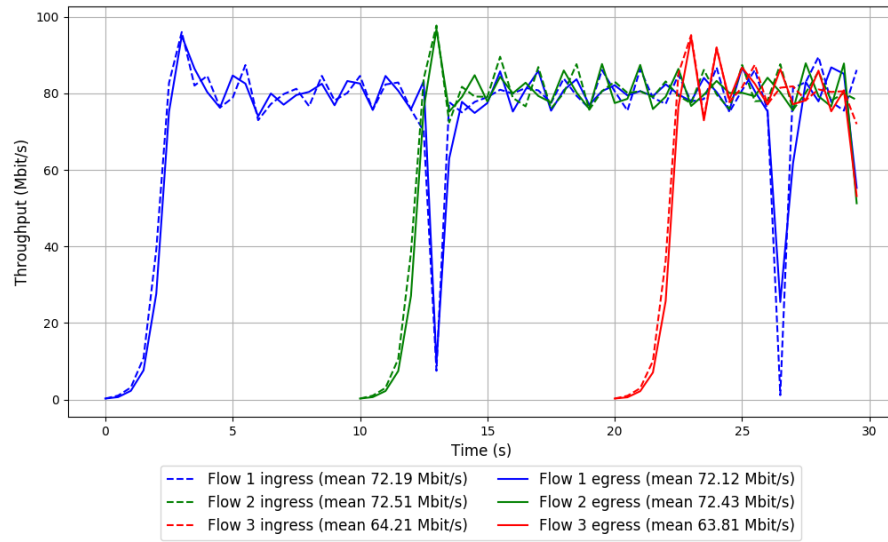
-- Flow 3:

Average throughput: 63.81 Mbit/s

95th percentile per-packet one-way delay: 137.701 ms

Loss rate: 3.34%

Run 9: Report of TCP BBR — Data Link



Run 10: Statistics of TCP BBR

Start at: 2018-02-21 17:35:14

End at: 2018-02-21 17:35:44

Below is generated by plot.py at 2018-02-21 21:36:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 140.84 Mbit/s

95th percentile per-packet one-way delay: 136.726 ms

Loss rate: 1.52%

-- Flow 1:

Average throughput: 73.60 Mbit/s

95th percentile per-packet one-way delay: 136.713 ms

Loss rate: 0.97%

-- Flow 2:

Average throughput: 70.15 Mbit/s

95th percentile per-packet one-way delay: 136.713 ms

Loss rate: 1.56%

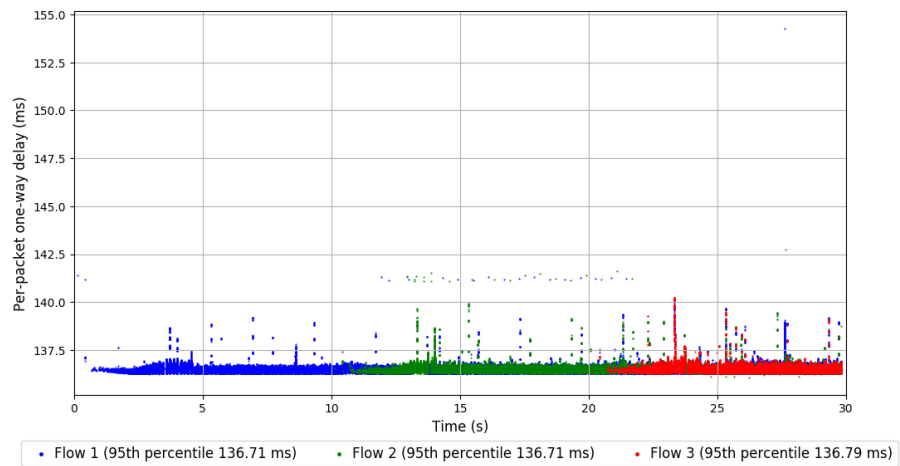
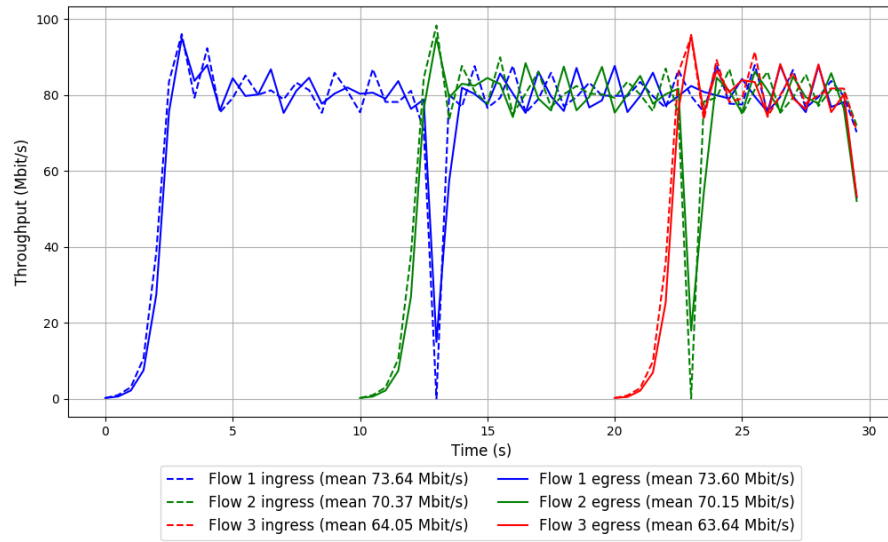
-- Flow 3:

Average throughput: 63.64 Mbit/s

95th percentile per-packet one-way delay: 136.792 ms

Loss rate: 3.34%

Run 10: Report of TCP BBR — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2018-02-21 14:47:13

End at: 2018-02-21 14:47:43

Below is generated by plot.py at 2018-02-21 21:36:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 138.74 Mbit/s

95th percentile per-packet one-way delay: 155.479 ms

Loss rate: 1.10%

-- Flow 1:

Average throughput: 75.35 Mbit/s

95th percentile per-packet one-way delay: 155.191 ms

Loss rate: 0.55%

-- Flow 2:

Average throughput: 79.48 Mbit/s

95th percentile per-packet one-way delay: 156.341 ms

Loss rate: 1.57%

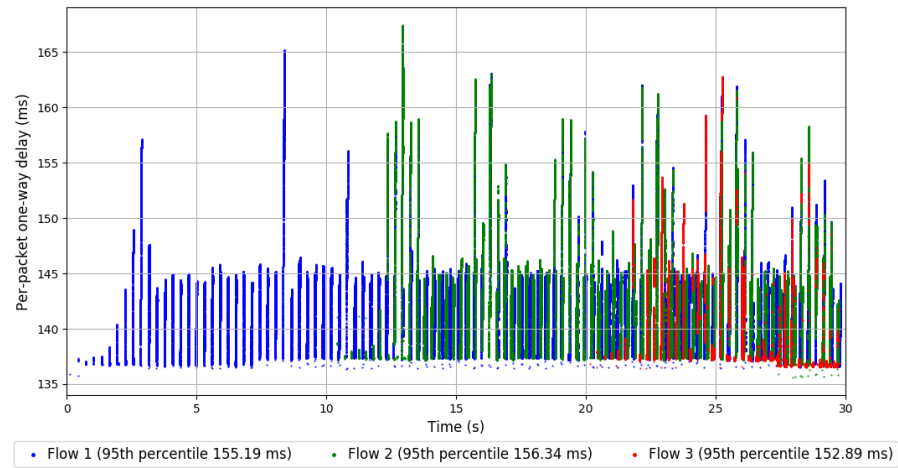
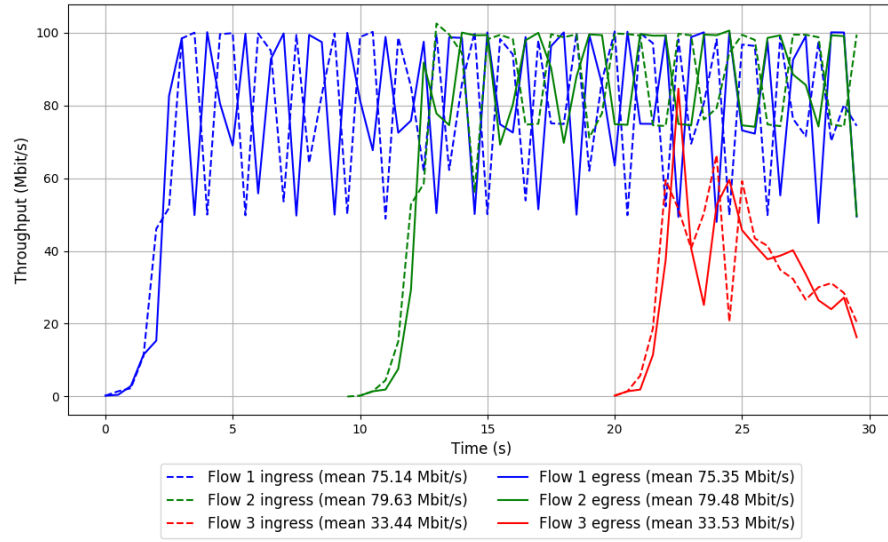
-- Flow 3:

Average throughput: 33.53 Mbit/s

95th percentile per-packet one-way delay: 152.891 ms

Loss rate: 2.48%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2018-02-21 15:08:26

End at: 2018-02-21 15:08:56

Below is generated by plot.py at 2018-02-21 21:36:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 109.30 Mbit/s

95th percentile per-packet one-way delay: 146.540 ms

Loss rate: 1.51%

-- Flow 1:

Average throughput: 60.46 Mbit/s

95th percentile per-packet one-way delay: 145.570 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 39.81 Mbit/s

95th percentile per-packet one-way delay: 148.278 ms

Loss rate: 1.69%

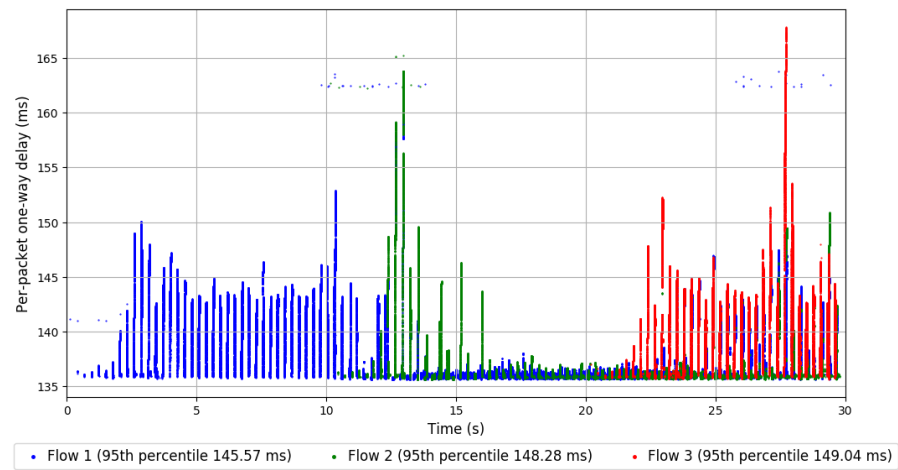
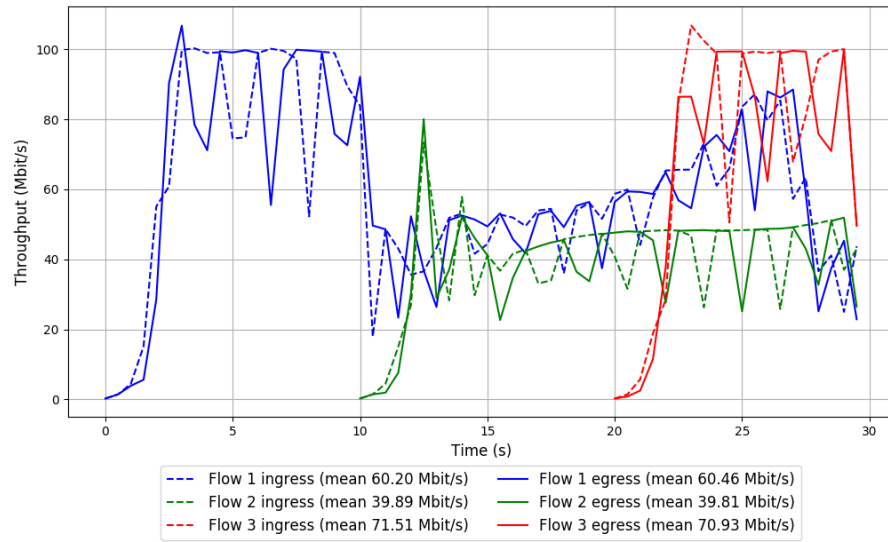
-- Flow 3:

Average throughput: 70.93 Mbit/s

95th percentile per-packet one-way delay: 149.040 ms

Loss rate: 3.56%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2018-02-21 15:28:55

End at: 2018-02-21 15:29:25

Below is generated by plot.py at 2018-02-21 21:37:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 157.73 Mbit/s

95th percentile per-packet one-way delay: 145.399 ms

Loss rate: 1.50%

-- Flow 1:

Average throughput: 81.47 Mbit/s

95th percentile per-packet one-way delay: 145.196 ms

Loss rate: 0.91%

-- Flow 2:

Average throughput: 80.69 Mbit/s

95th percentile per-packet one-way delay: 145.214 ms

Loss rate: 1.52%

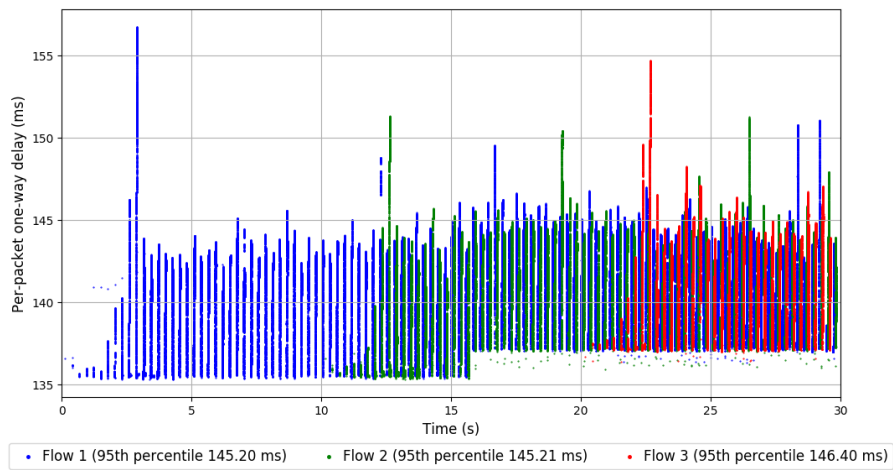
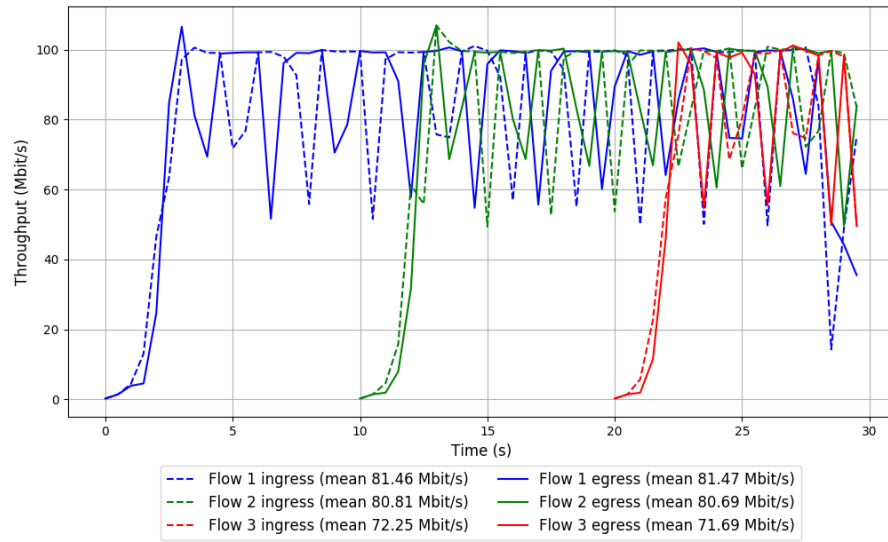
-- Flow 3:

Average throughput: 71.69 Mbit/s

95th percentile per-packet one-way delay: 146.396 ms

Loss rate: 3.54%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2018-02-21 15:49:21

End at: 2018-02-21 15:49:51

Below is generated by plot.py at 2018-02-21 21:37:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 145.44 Mbit/s

95th percentile per-packet one-way delay: 150.290 ms

Loss rate: 1.40%

-- Flow 1:

Average throughput: 83.08 Mbit/s

95th percentile per-packet one-way delay: 151.105 ms

Loss rate: 1.00%

-- Flow 2:

Average throughput: 78.79 Mbit/s

95th percentile per-packet one-way delay: 145.911 ms

Loss rate: 1.60%

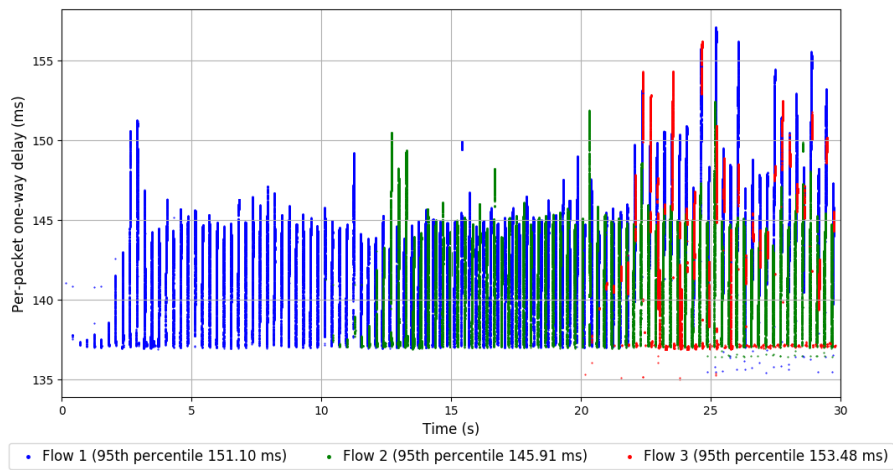
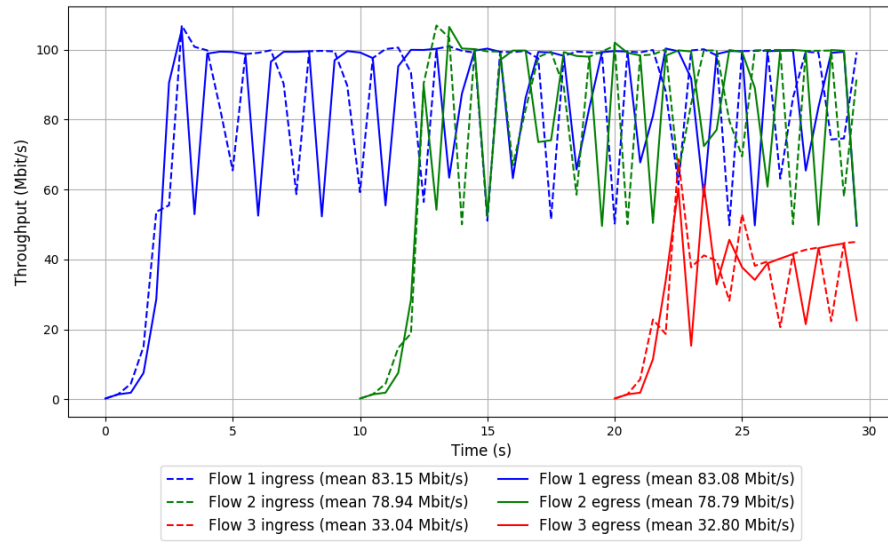
-- Flow 3:

Average throughput: 32.80 Mbit/s

95th percentile per-packet one-way delay: 153.483 ms

Loss rate: 3.45%

Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2018-02-21 16:09:35

End at: 2018-02-21 16:10:05

Below is generated by plot.py at 2018-02-21 21:37:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 112.25 Mbit/s

95th percentile per-packet one-way delay: 145.588 ms

Loss rate: 1.48%

-- Flow 1:

Average throughput: 59.11 Mbit/s

95th percentile per-packet one-way delay: 145.725 ms

Loss rate: 1.34%

-- Flow 2:

Average throughput: 80.98 Mbit/s

95th percentile per-packet one-way delay: 145.495 ms

Loss rate: 1.55%

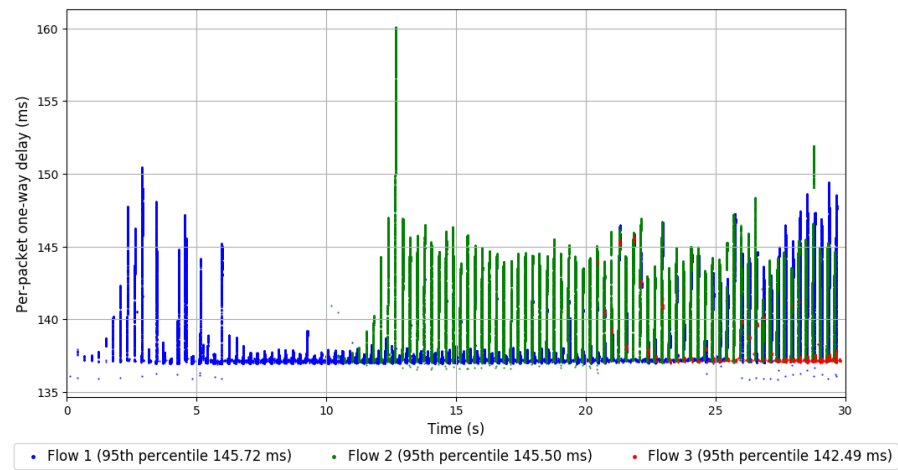
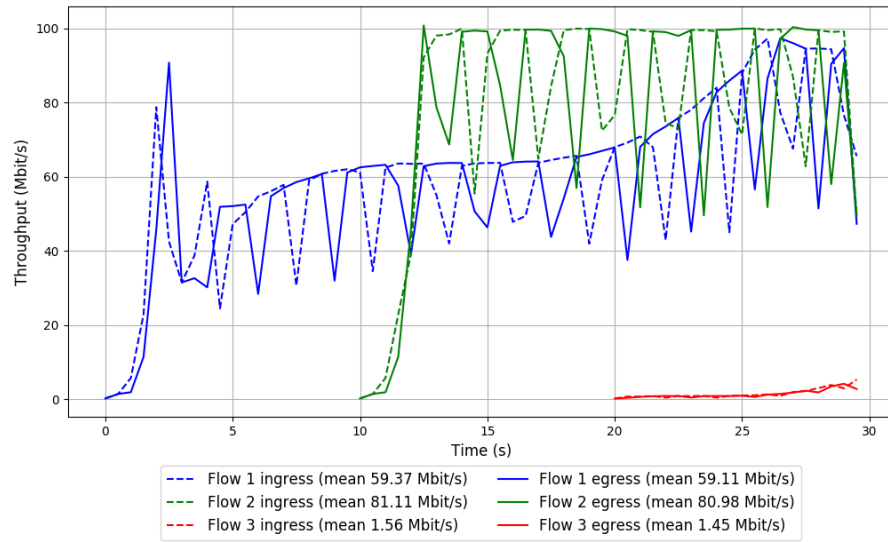
-- Flow 3:

Average throughput: 1.45 Mbit/s

95th percentile per-packet one-way delay: 142.490 ms

Loss rate: 9.75%

Run 5: Report of TCP Cubic — Data Link



Run 6: Statistics of TCP Cubic

Start at: 2018-02-21 16:29:59

End at: 2018-02-21 16:30:29

Below is generated by plot.py at 2018-02-21 21:37:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 146.44 Mbit/s

95th percentile per-packet one-way delay: 149.905 ms

Loss rate: 1.42%

-- Flow 1:

Average throughput: 83.36 Mbit/s

95th percentile per-packet one-way delay: 150.926 ms

Loss rate: 1.02%

-- Flow 2:

Average throughput: 79.06 Mbit/s

95th percentile per-packet one-way delay: 145.819 ms

Loss rate: 1.58%

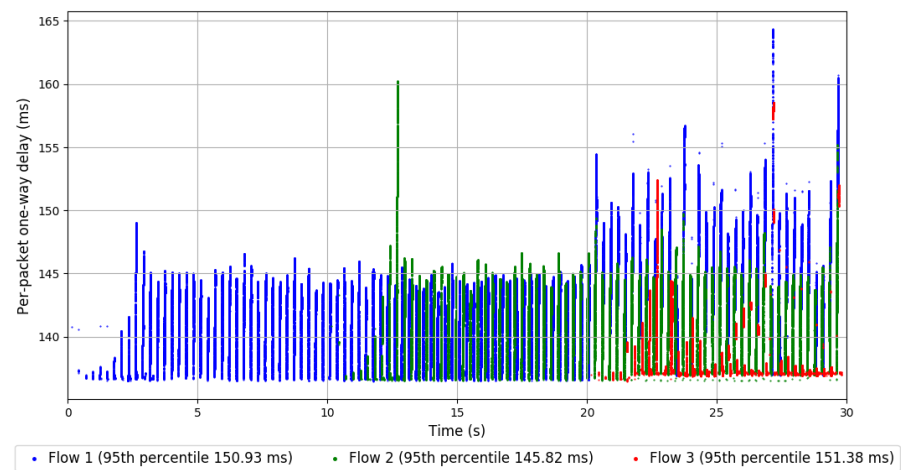
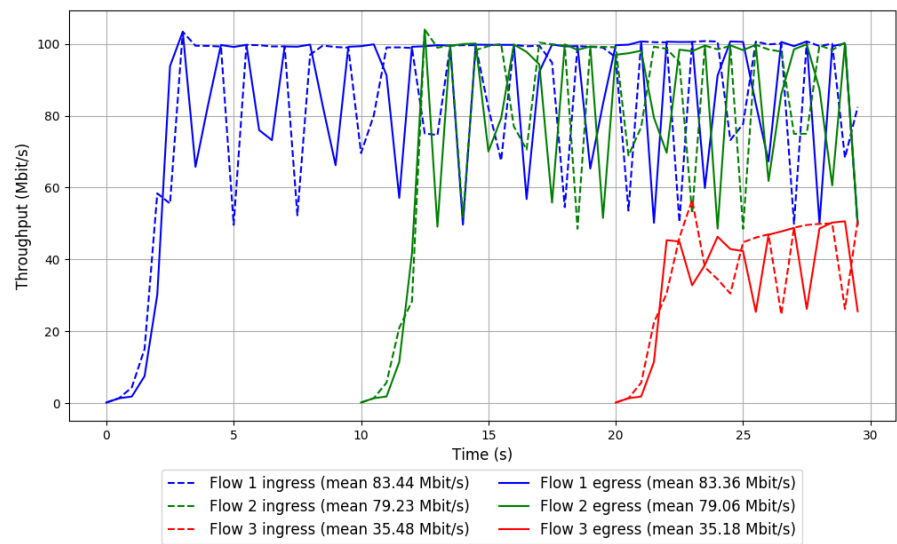
-- Flow 3:

Average throughput: 35.18 Mbit/s

95th percentile per-packet one-way delay: 151.385 ms

Loss rate: 3.62%

Run 6: Report of TCP Cubic — Data Link



Run 7: Statistics of TCP Cubic

Start at: 2018-02-21 16:50:45

End at: 2018-02-21 16:51:15

Below is generated by plot.py at 2018-02-21 21:38:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 136.39 Mbit/s

95th percentile per-packet one-way delay: 145.049 ms

Loss rate: 1.61%

-- Flow 1:

Average throughput: 83.59 Mbit/s

95th percentile per-packet one-way delay: 144.900 ms

Loss rate: 0.99%

-- Flow 2:

Average throughput: 45.06 Mbit/s

95th percentile per-packet one-way delay: 145.036 ms

Loss rate: 1.85%

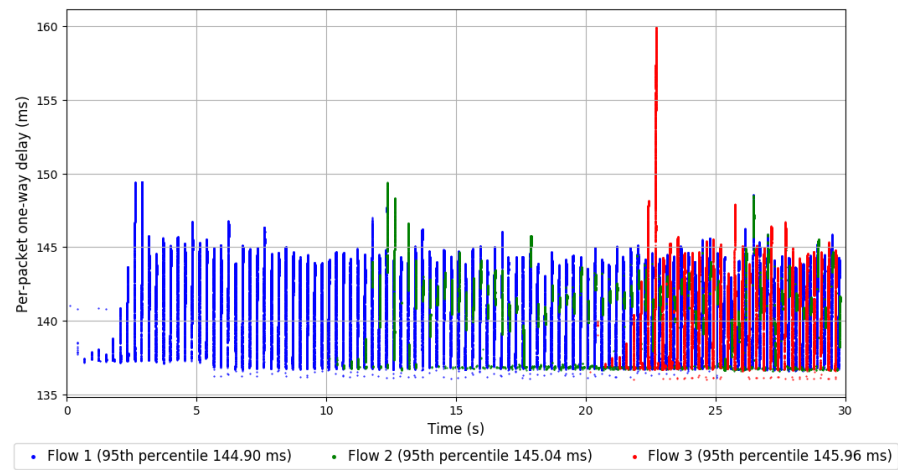
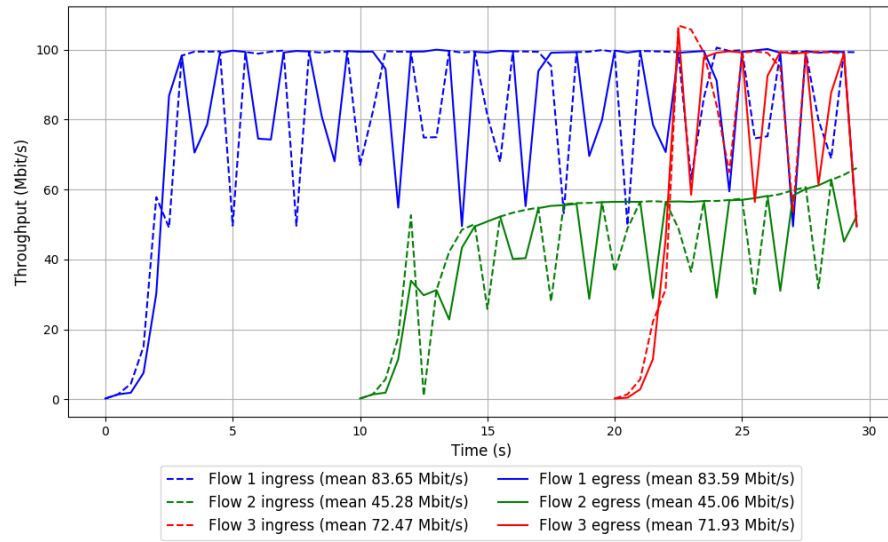
-- Flow 3:

Average throughput: 71.93 Mbit/s

95th percentile per-packet one-way delay: 145.958 ms

Loss rate: 3.49%

Run 7: Report of TCP Cubic — Data Link



Run 8: Statistics of TCP Cubic

Start at: 2018-02-21 17:10:54

End at: 2018-02-21 17:11:24

Below is generated by plot.py at 2018-02-21 21:38:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 130.50 Mbit/s

95th percentile per-packet one-way delay: 150.329 ms

Loss rate: 1.22%

-- Flow 1:

Average throughput: 80.53 Mbit/s

95th percentile per-packet one-way delay: 146.827 ms

Loss rate: 0.33%

-- Flow 2:

Average throughput: 42.21 Mbit/s

95th percentile per-packet one-way delay: 154.239 ms

Loss rate: 1.78%

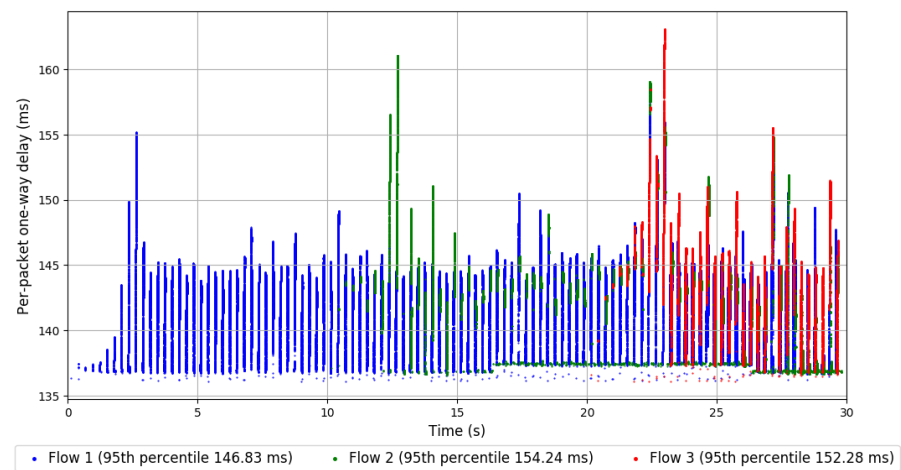
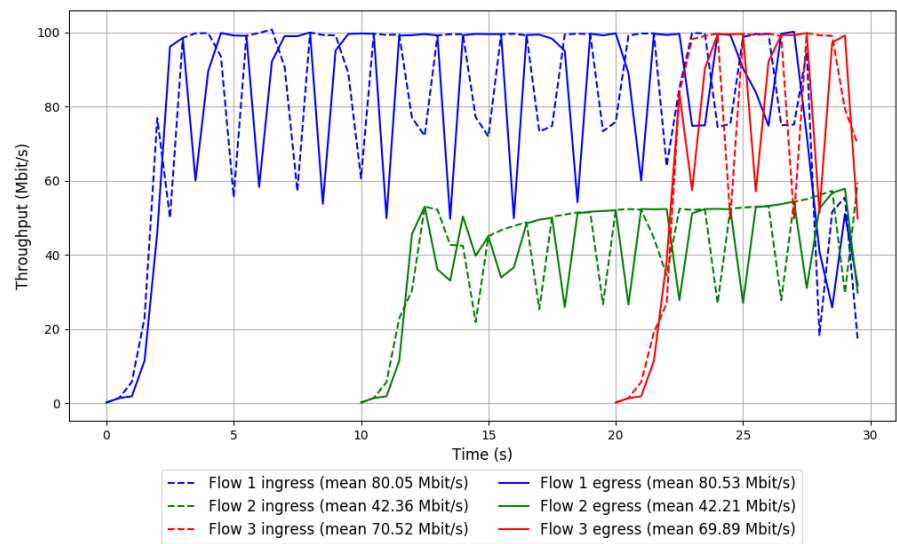
-- Flow 3:

Average throughput: 69.89 Mbit/s

95th percentile per-packet one-way delay: 152.276 ms

Loss rate: 3.61%

Run 8: Report of TCP Cubic — Data Link



Run 9: Statistics of TCP Cubic

Start at: 2018-02-21 17:31:26

End at: 2018-02-21 17:31:56

Below is generated by plot.py at 2018-02-21 21:38:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 151.74 Mbit/s

95th percentile per-packet one-way delay: 144.341 ms

Loss rate: 1.46%

-- Flow 1:

Average throughput: 83.95 Mbit/s

95th percentile per-packet one-way delay: 144.275 ms

Loss rate: 0.99%

-- Flow 2:

Average throughput: 81.41 Mbit/s

95th percentile per-packet one-way delay: 144.419 ms

Loss rate: 1.53%

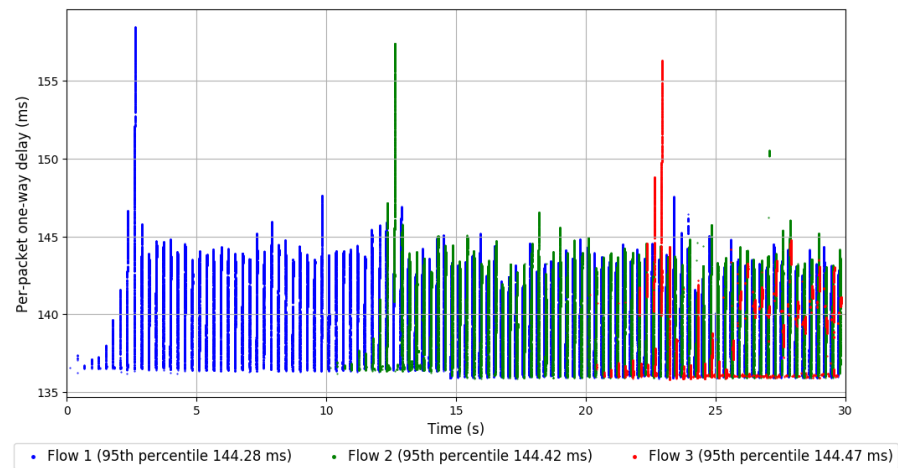
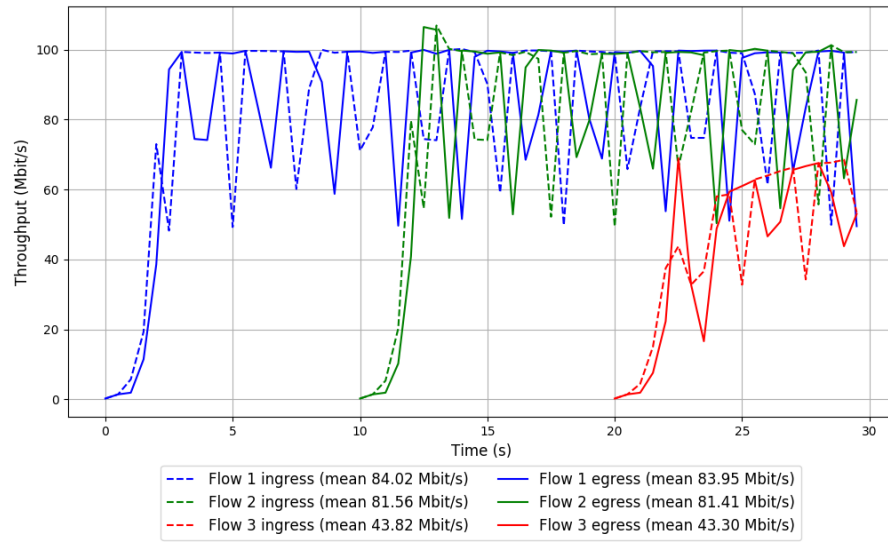
-- Flow 3:

Average throughput: 43.30 Mbit/s

95th percentile per-packet one-way delay: 144.470 ms

Loss rate: 3.92%

Run 9: Report of TCP Cubic — Data Link



Run 10: Statistics of TCP Cubic

Start at: 2018-02-21 17:52:06

End at: 2018-02-21 17:52:36

Below is generated by plot.py at 2018-02-21 21:39:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 157.08 Mbit/s

95th percentile per-packet one-way delay: 144.948 ms

Loss rate: 1.26%

-- Flow 1:

Average throughput: 81.44 Mbit/s

95th percentile per-packet one-way delay: 144.622 ms

Loss rate: 0.47%

-- Flow 2:

Average throughput: 80.39 Mbit/s

95th percentile per-packet one-way delay: 145.534 ms

Loss rate: 1.55%

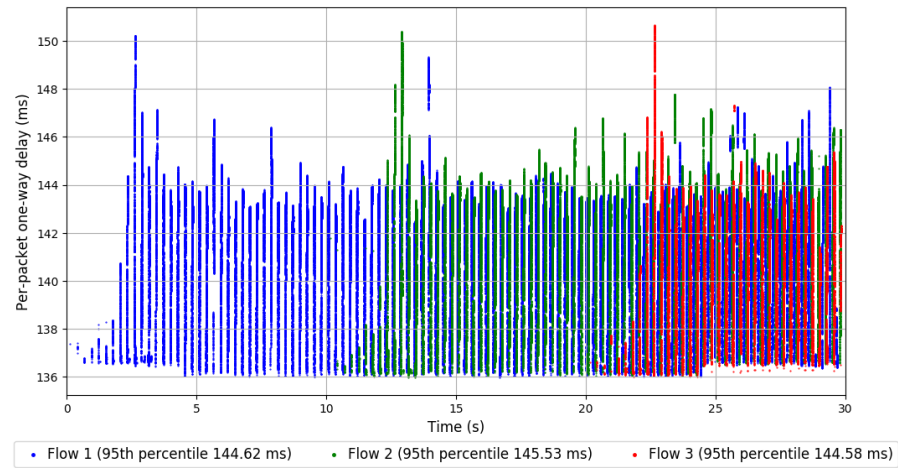
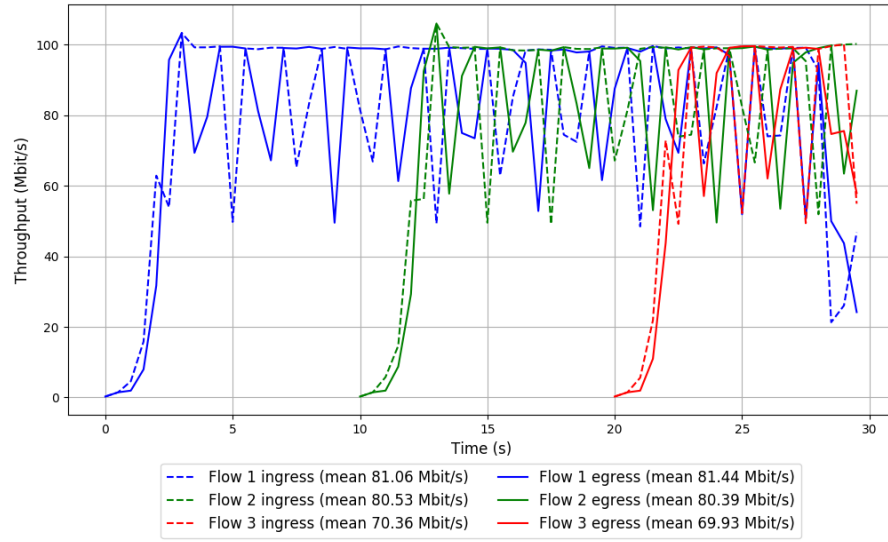
-- Flow 3:

Average throughput: 69.93 Mbit/s

95th percentile per-packet one-way delay: 144.579 ms

Loss rate: 3.32%

Run 10: Report of TCP Cubic — Data Link

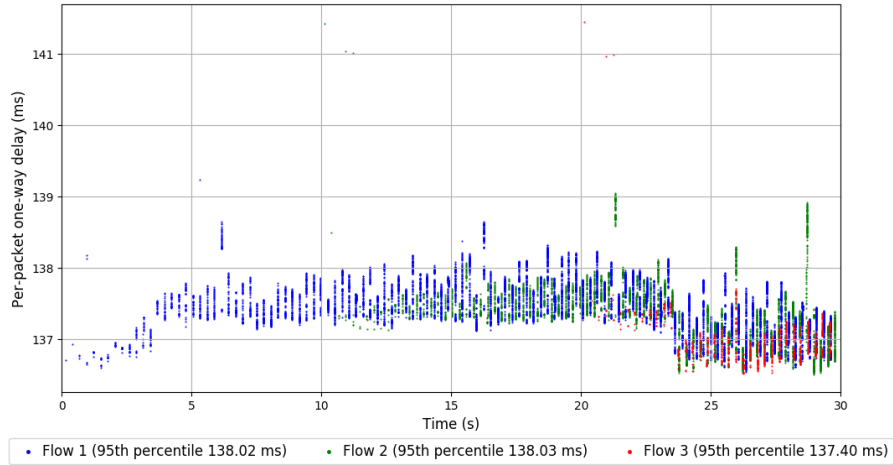
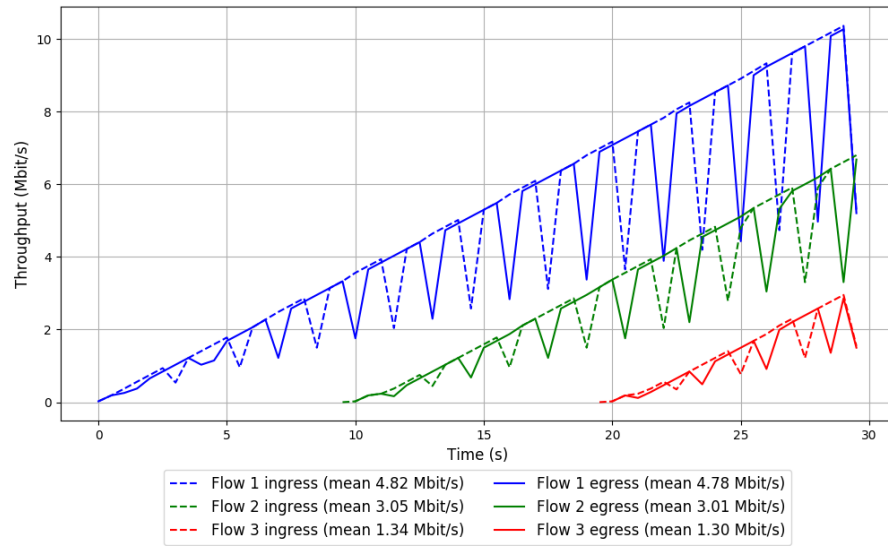


```
Run 1: Statistics of LEDBAT

Start at: 2018-02-21 14:29:57
End at: 2018-02-21 14:30:27

# Below is generated by plot.py at 2018-02-21 21:39:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.16 Mbit/s
95th percentile per-packet one-way delay: 138.003 ms
Loss rate: 2.36%
-- Flow 1:
Average throughput: 4.78 Mbit/s
95th percentile per-packet one-way delay: 138.018 ms
Loss rate: 1.84%
-- Flow 2:
Average throughput: 3.01 Mbit/s
95th percentile per-packet one-way delay: 138.033 ms
Loss rate: 2.81%
-- Flow 3:
Average throughput: 1.30 Mbit/s
95th percentile per-packet one-way delay: 137.401 ms
Loss rate: 5.94%
```


Run 1: Report of LEDBAT — Data Link

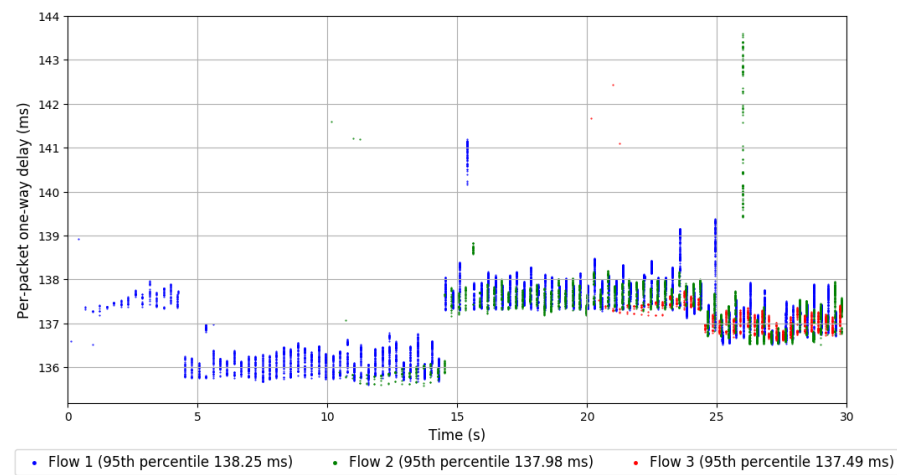
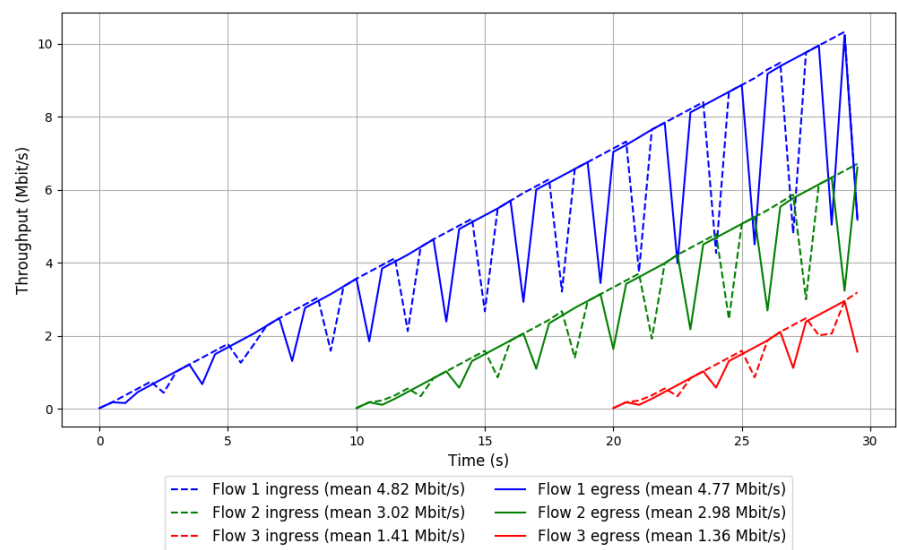


```
Run 2: Statistics of LEDBAT

Start at: 2018-02-21 14:50:26
End at: 2018-02-21 14:50:56

# Below is generated by plot.py at 2018-02-21 21:39:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.15 Mbit/s
95th percentile per-packet one-way delay: 138.158 ms
Loss rate: 2.35%
-- Flow 1:
Average throughput: 4.77 Mbit/s
95th percentile per-packet one-way delay: 138.249 ms
Loss rate: 1.83%
-- Flow 2:
Average throughput: 2.98 Mbit/s
95th percentile per-packet one-way delay: 137.976 ms
Loss rate: 2.80%
-- Flow 3:
Average throughput: 1.36 Mbit/s
95th percentile per-packet one-way delay: 137.489 ms
Loss rate: 5.84%
```

Run 2: Report of LEDBAT — Data Link

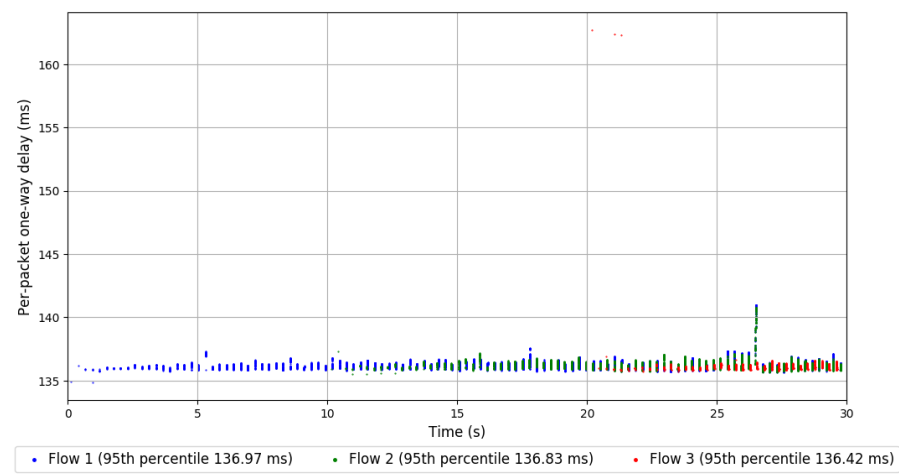
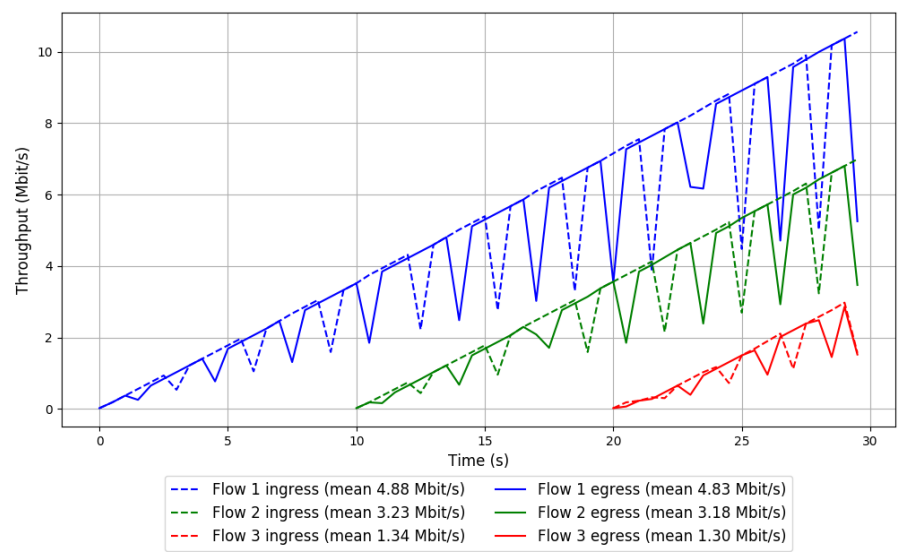


```
Run 3: Statistics of LEDBAT

Start at: 2018-02-21 15:11:21
End at: 2018-02-21 15:11:51

# Below is generated by plot.py at 2018-02-21 21:39:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.36 Mbit/s
95th percentile per-packet one-way delay: 136.901 ms
Loss rate: 2.33%
-- Flow 1:
Average throughput: 4.83 Mbit/s
95th percentile per-packet one-way delay: 136.969 ms
Loss rate: 1.82%
-- Flow 2:
Average throughput: 3.18 Mbit/s
95th percentile per-packet one-way delay: 136.826 ms
Loss rate: 2.74%
-- Flow 3:
Average throughput: 1.30 Mbit/s
95th percentile per-packet one-way delay: 136.420 ms
Loss rate: 6.01%
```

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2018-02-21 15:31:35

End at: 2018-02-21 15:32:05

Below is generated by plot.py at 2018-02-21 21:39:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 7.20 Mbit/s

95th percentile per-packet one-way delay: 137.839 ms

Loss rate: 2.35%

-- Flow 1:

Average throughput: 4.71 Mbit/s

95th percentile per-packet one-way delay: 137.837 ms

Loss rate: 1.84%

-- Flow 2:

Average throughput: 3.17 Mbit/s

95th percentile per-packet one-way delay: 137.886 ms

Loss rate: 2.74%

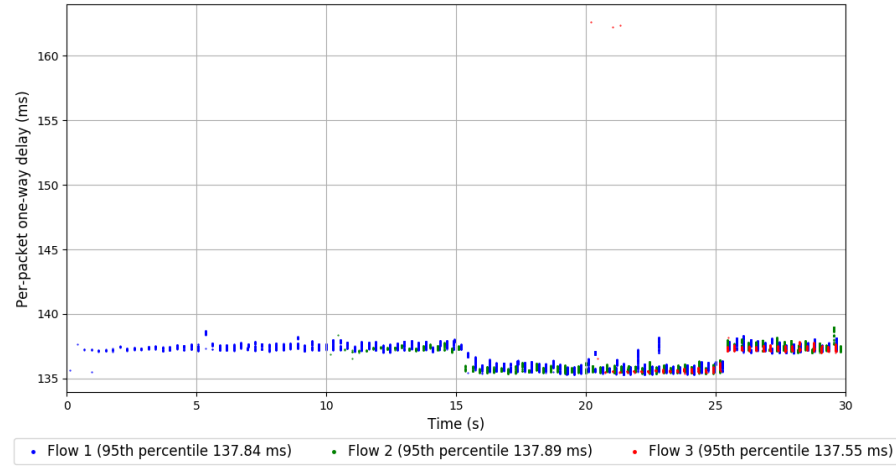
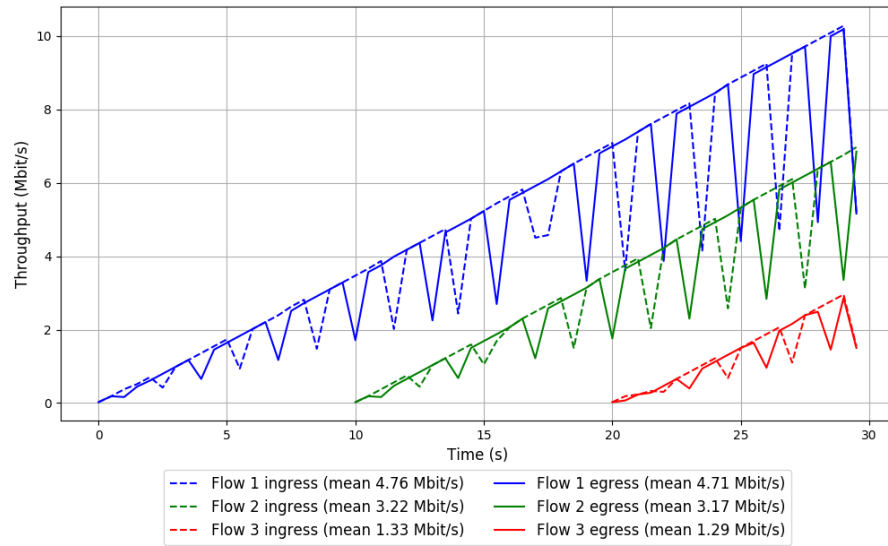
-- Flow 3:

Average throughput: 1.29 Mbit/s

95th percentile per-packet one-way delay: 137.553 ms

Loss rate: 5.96%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2018-02-21 15:52:00

End at: 2018-02-21 15:52:30

Below is generated by plot.py at 2018-02-21 21:39:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 7.04 Mbit/s

95th percentile per-packet one-way delay: 138.113 ms

Loss rate: 2.40%

-- Flow 1:

Average throughput: 4.60 Mbit/s

95th percentile per-packet one-way delay: 138.196 ms

Loss rate: 1.87%

-- Flow 2:

Average throughput: 2.99 Mbit/s

95th percentile per-packet one-way delay: 137.990 ms

Loss rate: 2.82%

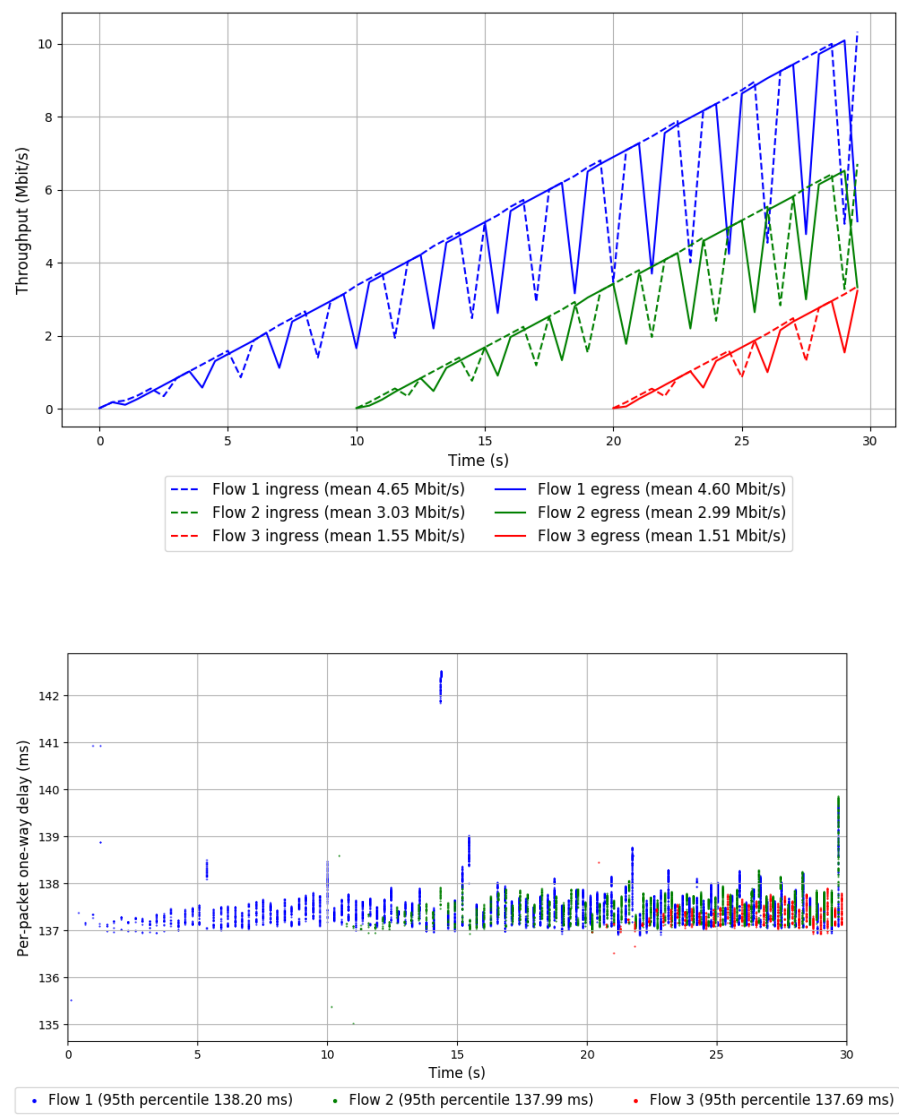
-- Flow 3:

Average throughput: 1.51 Mbit/s

95th percentile per-packet one-way delay: 137.692 ms

Loss rate: 5.58%

Run 5: Report of LEDBAT — Data Link



Run 6: Statistics of LEDBAT

Start at: 2018-02-21 16:12:13

End at: 2018-02-21 16:12:43

Below is generated by plot.py at 2018-02-21 21:39:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 6.61 Mbit/s

95th percentile per-packet one-way delay: 137.721 ms

Loss rate: 2.21%

-- Flow 1:

Average throughput: 4.56 Mbit/s

95th percentile per-packet one-way delay: 137.764 ms

Loss rate: 1.88%

-- Flow 2:

Average throughput: 3.01 Mbit/s

95th percentile per-packet one-way delay: 137.446 ms

Loss rate: 2.81%

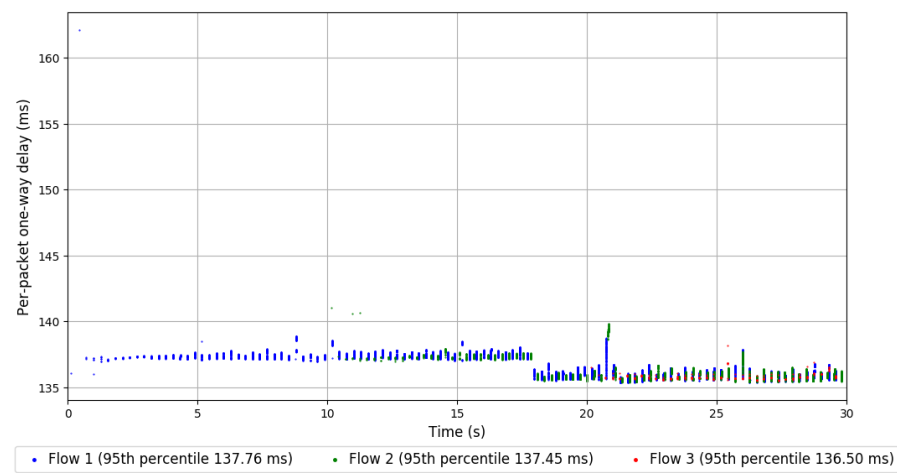
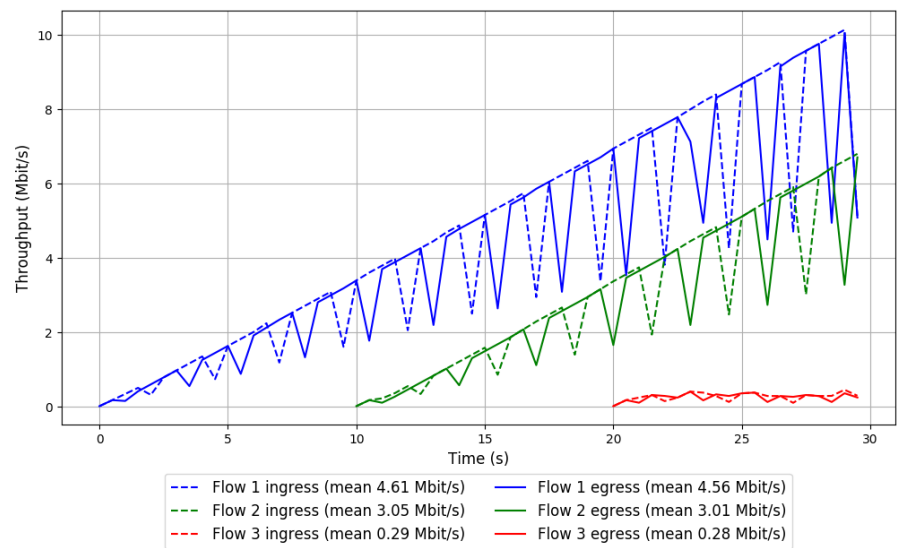
-- Flow 3:

Average throughput: 0.28 Mbit/s

95th percentile per-packet one-way delay: 136.505 ms

Loss rate: 5.44%

Run 6: Report of LEDBAT — Data Link

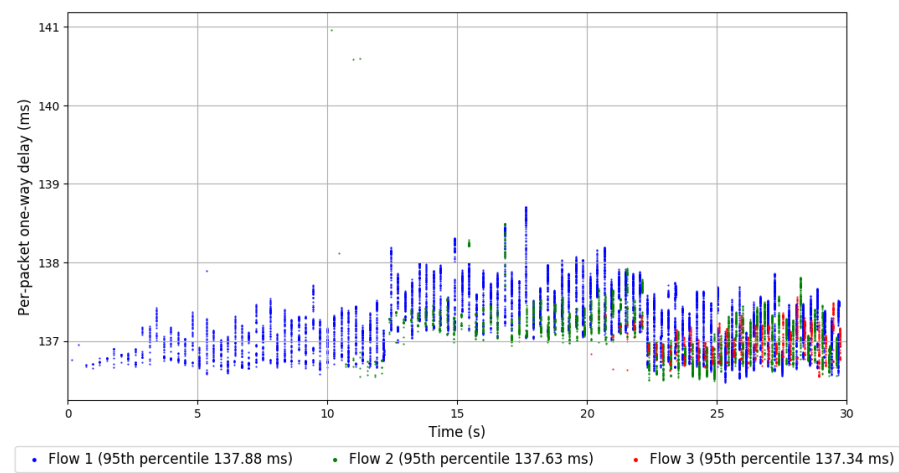
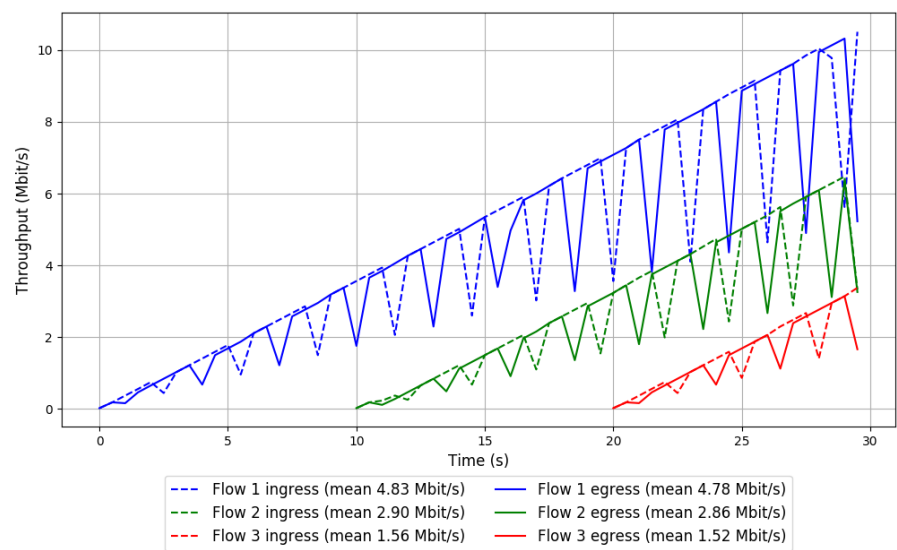


```
Run 7: Statistics of LEDBAT

Start at: 2018-02-21 16:33:09
End at: 2018-02-21 16:33:39

# Below is generated by plot.py at 2018-02-21 21:39:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.14 Mbit/s
95th percentile per-packet one-way delay: 137.834 ms
Loss rate: 2.38%
-- Flow 1:
Average throughput: 4.78 Mbit/s
95th percentile per-packet one-way delay: 137.879 ms
Loss rate: 1.83%
-- Flow 2:
Average throughput: 2.86 Mbit/s
95th percentile per-packet one-way delay: 137.635 ms
Loss rate: 2.91%
-- Flow 3:
Average throughput: 1.52 Mbit/s
95th percentile per-packet one-way delay: 137.338 ms
Loss rate: 5.57%
```

Run 7: Report of LEDBAT — Data Link



Run 8: Statistics of LEDBAT

Start at: 2018-02-21 16:53:40

End at: 2018-02-21 16:54:10

Below is generated by plot.py at 2018-02-21 21:39:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 6.96 Mbit/s

95th percentile per-packet one-way delay: 138.262 ms

Loss rate: 2.39%

-- Flow 1:

Average throughput: 4.78 Mbit/s

95th percentile per-packet one-way delay: 138.181 ms

Loss rate: 1.84%

-- Flow 2:

Average throughput: 2.63 Mbit/s

95th percentile per-packet one-way delay: 138.632 ms

Loss rate: 3.00%

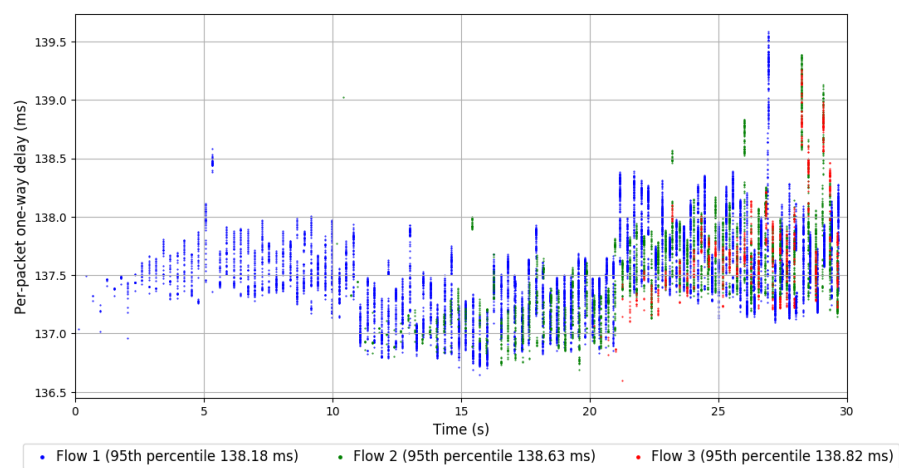
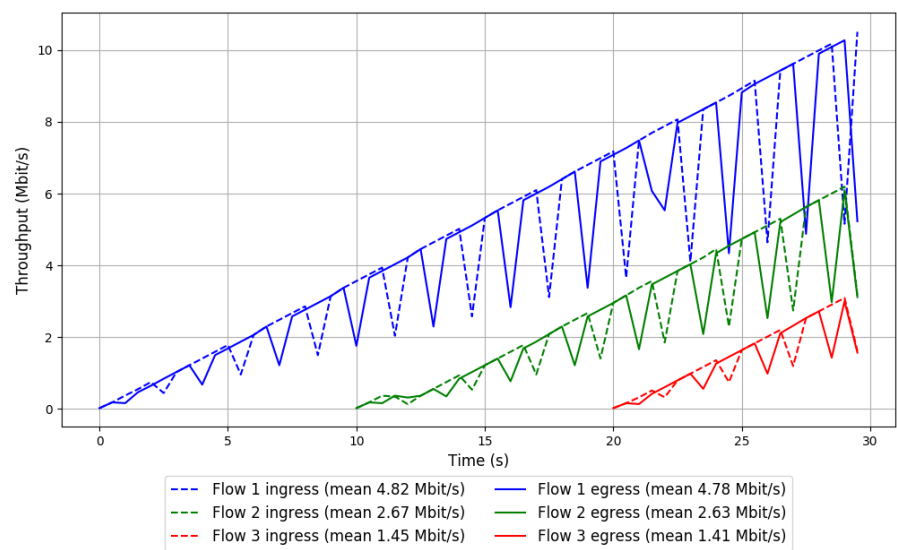
-- Flow 3:

Average throughput: 1.41 Mbit/s

95th percentile per-packet one-way delay: 138.820 ms

Loss rate: 5.74%

Run 8: Report of LEDBAT — Data Link



Run 9: Statistics of LEDBAT

Start at: 2018-02-21 17:13:59

End at: 2018-02-21 17:14:29

Below is generated by plot.py at 2018-02-21 21:39:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 7.23 Mbit/s

95th percentile per-packet one-way delay: 138.153 ms

Loss rate: 2.35%

-- Flow 1:

Average throughput: 4.74 Mbit/s

95th percentile per-packet one-way delay: 138.213 ms

Loss rate: 1.84%

-- Flow 2:

Average throughput: 3.12 Mbit/s

95th percentile per-packet one-way delay: 137.971 ms

Loss rate: 2.75%

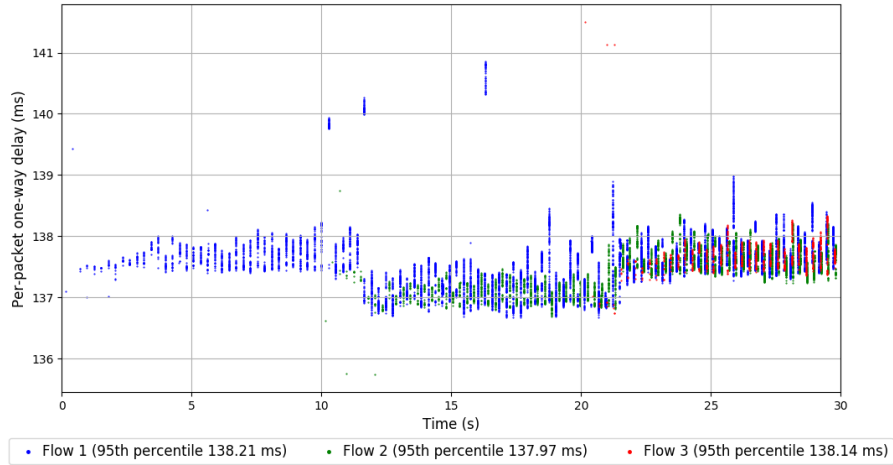
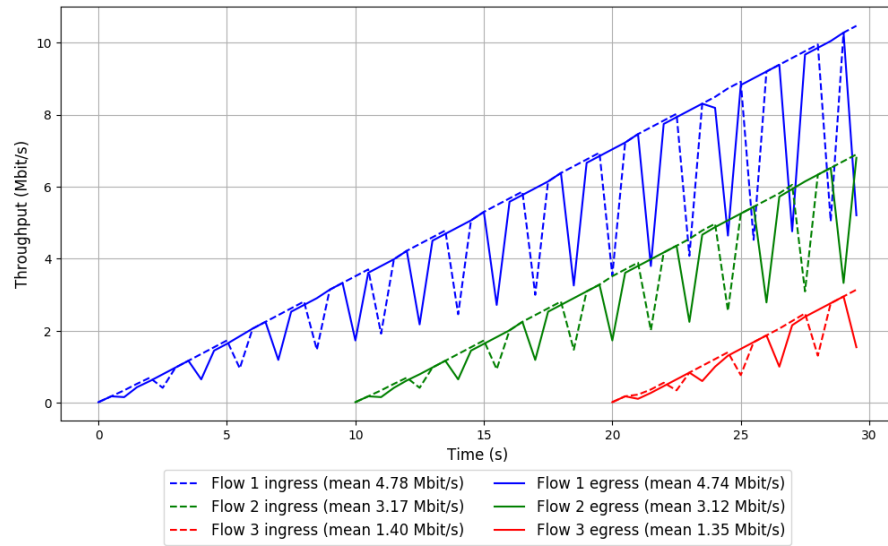
-- Flow 3:

Average throughput: 1.35 Mbit/s

95th percentile per-packet one-way delay: 138.139 ms

Loss rate: 5.78%

Run 9: Report of LEDBAT — Data Link

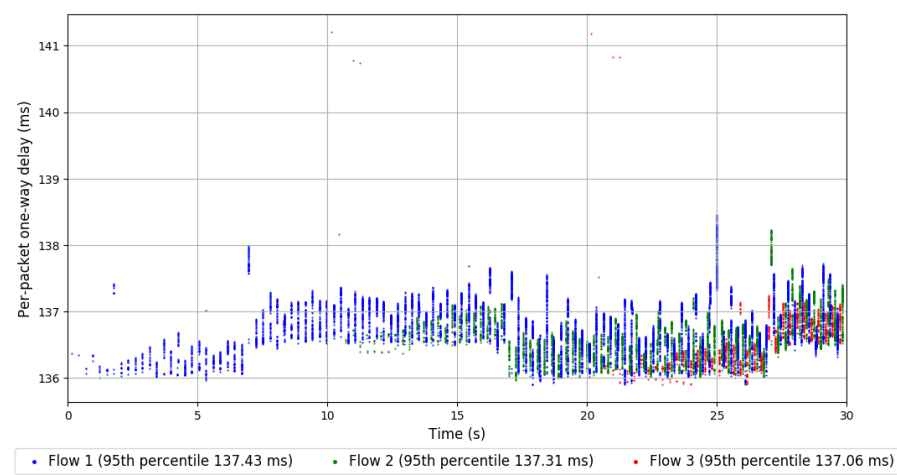
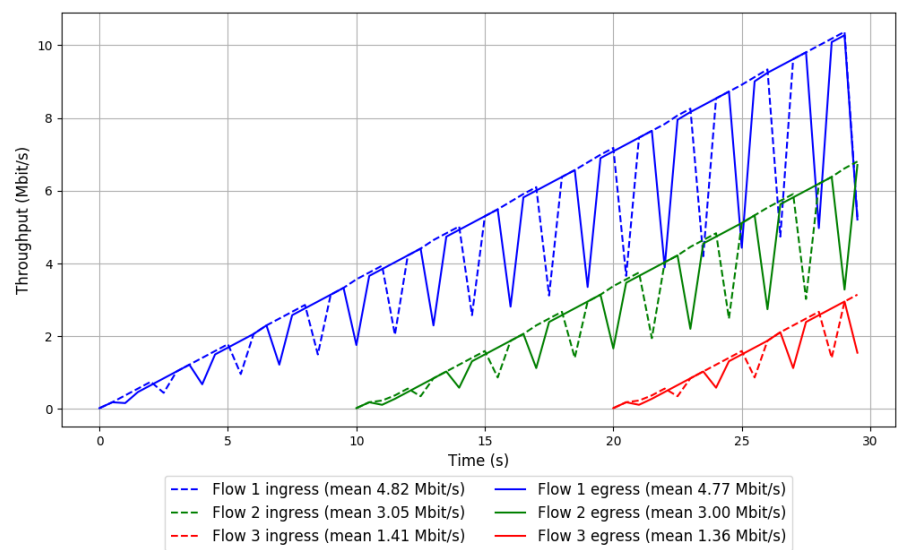


```
Run 10: Statistics of LEDBAT

Start at: 2018-02-21 17:34:24
End at: 2018-02-21 17:34:54

# Below is generated by plot.py at 2018-02-21 21:39:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.17 Mbit/s
95th percentile per-packet one-way delay: 137.383 ms
Loss rate: 2.36%
-- Flow 1:
Average throughput: 4.77 Mbit/s
95th percentile per-packet one-way delay: 137.427 ms
Loss rate: 1.84%
-- Flow 2:
Average throughput: 3.00 Mbit/s
95th percentile per-packet one-way delay: 137.311 ms
Loss rate: 2.82%
-- Flow 3:
Average throughput: 1.36 Mbit/s
95th percentile per-packet one-way delay: 137.061 ms
Loss rate: 5.77%
```

Run 10: Report of LEDBAT — Data Link

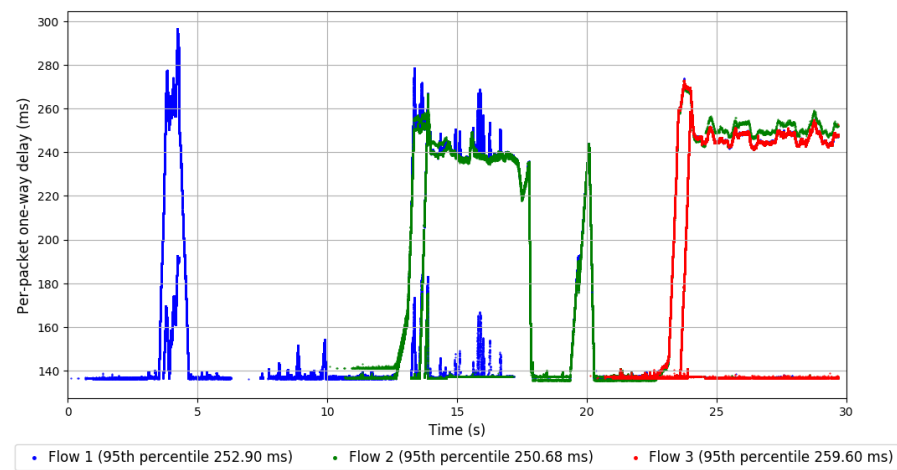
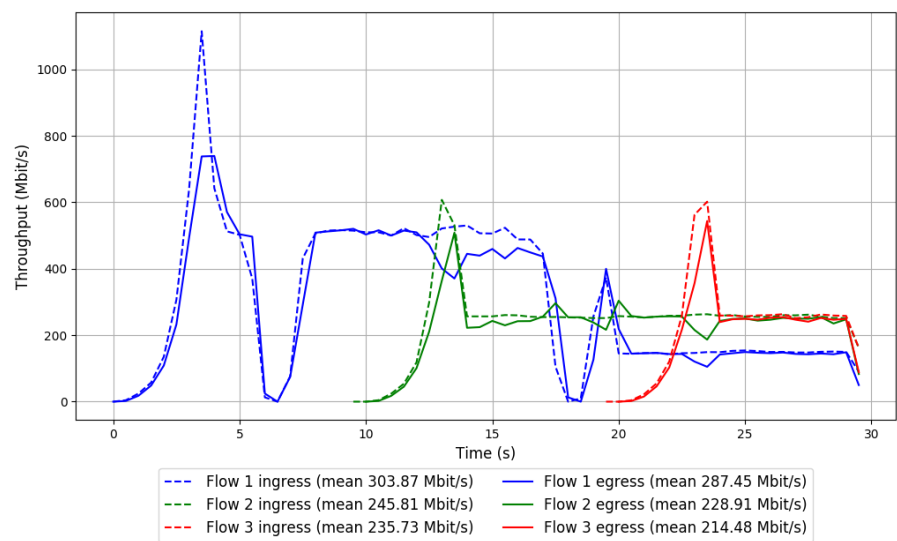


```
Run 1: Statistics of PCC

Start at: 2018-02-21 14:45:06
End at: 2018-02-21 14:45:36

# Below is generated by plot.py at 2018-02-21 21:46:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 508.39 Mbit/s
95th percentile per-packet one-way delay: 252.019 ms
Loss rate: 7.59%
-- Flow 1:
Average throughput: 287.45 Mbit/s
95th percentile per-packet one-way delay: 252.903 ms
Loss rate: 6.27%
-- Flow 2:
Average throughput: 228.91 Mbit/s
95th percentile per-packet one-way delay: 250.679 ms
Loss rate: 8.18%
-- Flow 3:
Average throughput: 214.48 Mbit/s
95th percentile per-packet one-way delay: 259.604 ms
Loss rate: 11.53%
```

Run 1: Report of PCC — Data Link



Run 2: Statistics of PCC

Start at: 2018-02-21 15:06:16

End at: 2018-02-21 15:06:46

Below is generated by plot.py at 2018-02-21 21:46:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 560.82 Mbit/s

95th percentile per-packet one-way delay: 260.285 ms

Loss rate: 6.36%

-- Flow 1:

Average throughput: 444.05 Mbit/s

95th percentile per-packet one-way delay: 265.407 ms

Loss rate: 5.98%

-- Flow 2:

Average throughput: 122.22 Mbit/s

95th percentile per-packet one-way delay: 248.800 ms

Loss rate: 5.92%

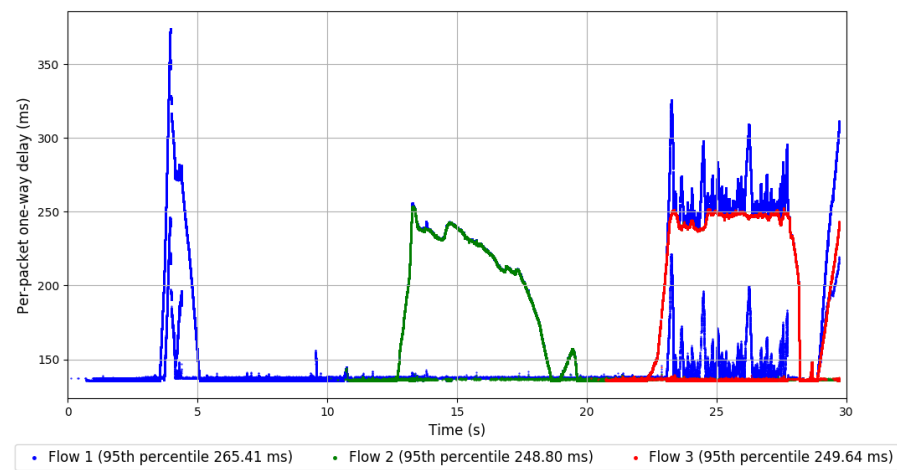
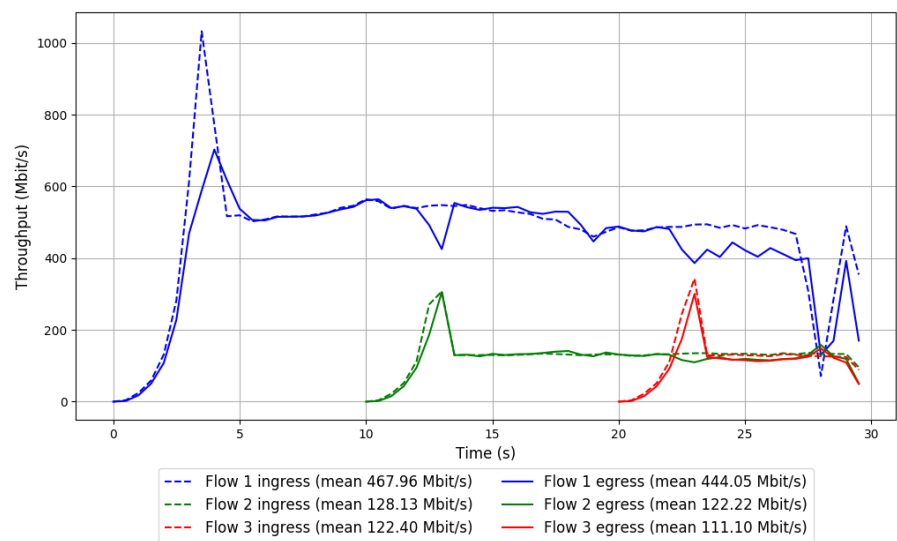
-- Flow 3:

Average throughput: 111.10 Mbit/s

95th percentile per-packet one-way delay: 249.643 ms

Loss rate: 11.75%

Run 2: Report of PCC — Data Link



Run 3: Statistics of PCC

Start at: 2018-02-21 15:26:45

End at: 2018-02-21 15:27:15

Below is generated by plot.py at 2018-02-21 21:47:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 576.73 Mbit/s

95th percentile per-packet one-way delay: 291.247 ms

Loss rate: 3.81%

-- Flow 1:

Average throughput: 513.69 Mbit/s

95th percentile per-packet one-way delay: 293.769 ms

Loss rate: 3.79%

-- Flow 2:

Average throughput: 65.57 Mbit/s

95th percentile per-packet one-way delay: 243.802 ms

Loss rate: 2.83%

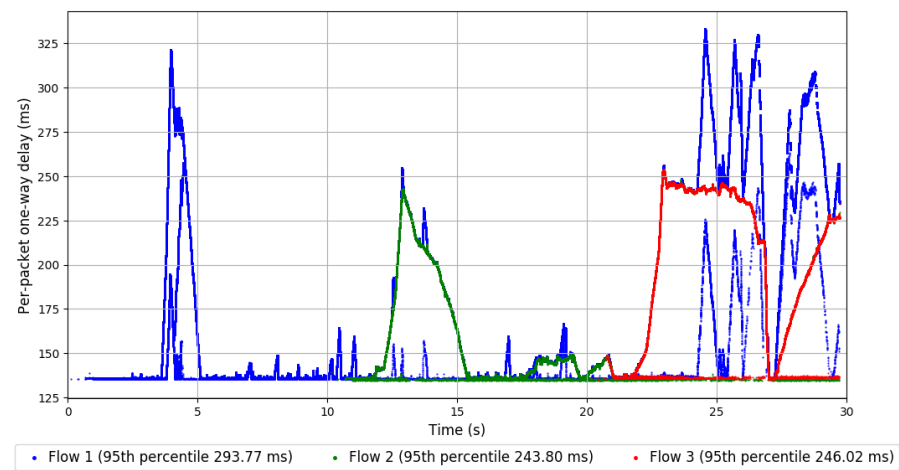
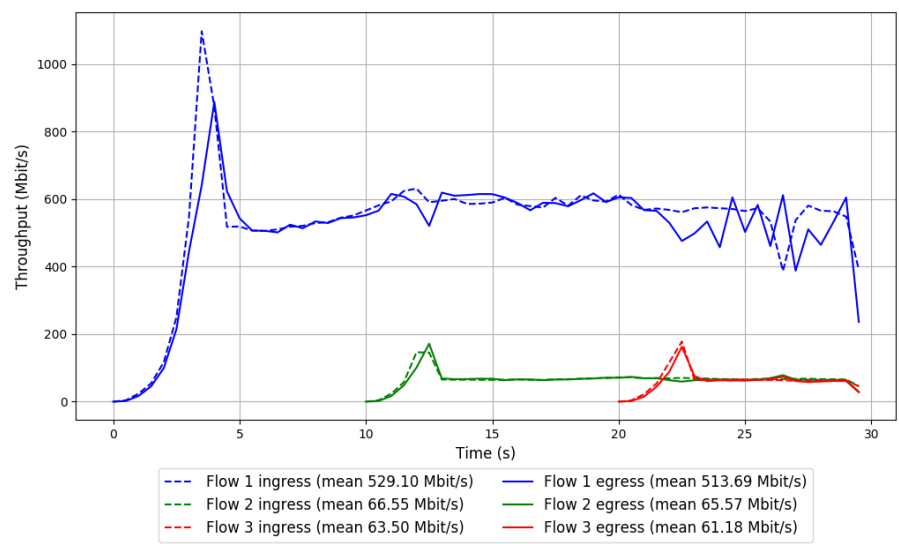
-- Flow 3:

Average throughput: 61.18 Mbit/s

95th percentile per-packet one-way delay: 246.022 ms

Loss rate: 6.22%

Run 3: Report of PCC — Data Link



Run 4: Statistics of PCC

Start at: 2018-02-21 15:47:09

End at: 2018-02-21 15:47:39

Below is generated by plot.py at 2018-02-21 21:47:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 584.21 Mbit/s

95th percentile per-packet one-way delay: 242.482 ms

Loss rate: 4.06%

-- Flow 1:

Average throughput: 532.57 Mbit/s

95th percentile per-packet one-way delay: 242.625 ms

Loss rate: 4.17%

-- Flow 2:

Average throughput: 62.54 Mbit/s

95th percentile per-packet one-way delay: 241.821 ms

Loss rate: 2.41%

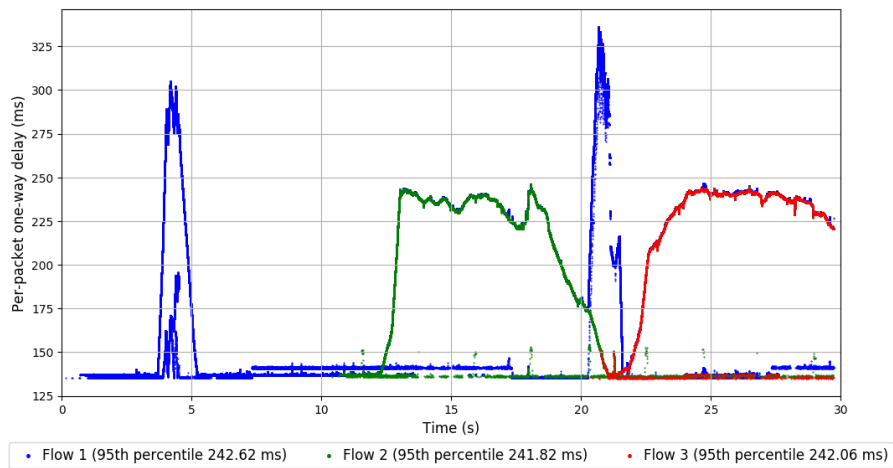
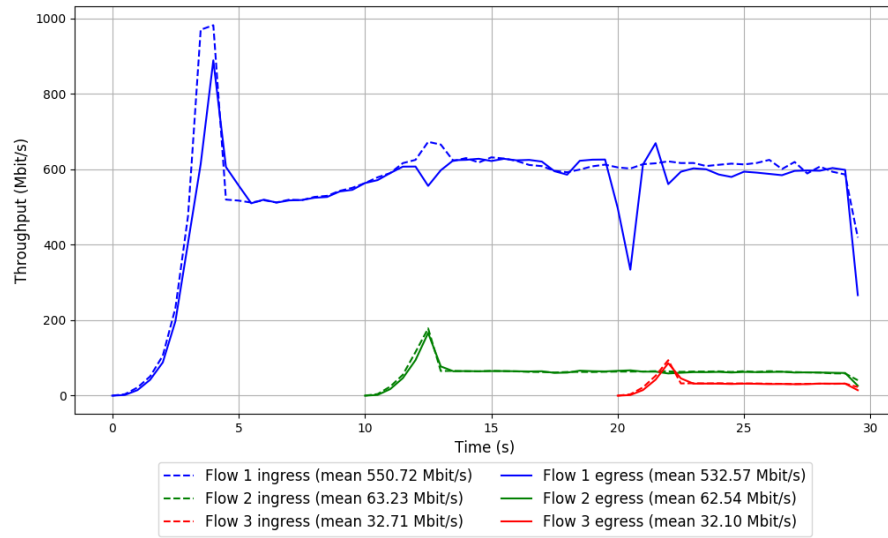
-- Flow 3:

Average throughput: 32.10 Mbit/s

95th percentile per-packet one-way delay: 242.063 ms

Loss rate: 4.53%

Run 4: Report of PCC — Data Link



Run 5: Statistics of PCC

Start at: 2018-02-21 16:07:26

End at: 2018-02-21 16:07:56

Below is generated by plot.py at 2018-02-21 21:47:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 550.41 Mbit/s

95th percentile per-packet one-way delay: 276.733 ms

Loss rate: 4.49%

-- Flow 1:

Average throughput: 470.86 Mbit/s

95th percentile per-packet one-way delay: 283.624 ms

Loss rate: 4.24%

-- Flow 2:

Average throughput: 64.10 Mbit/s

95th percentile per-packet one-way delay: 248.192 ms

Loss rate: 3.22%

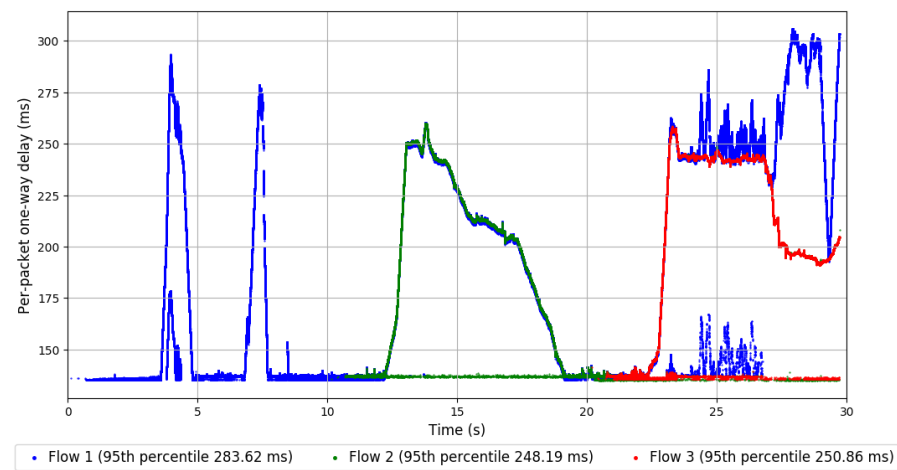
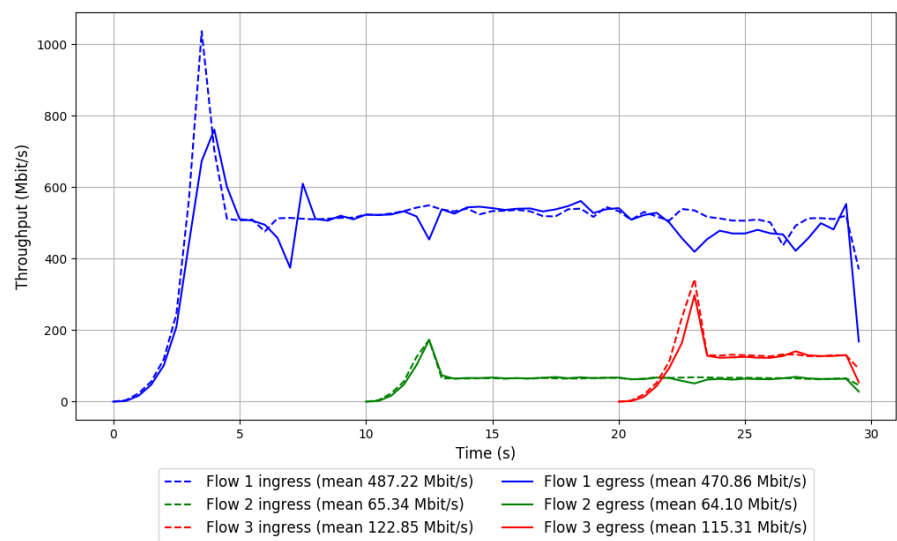
-- Flow 3:

Average throughput: 115.31 Mbit/s

95th percentile per-packet one-way delay: 250.858 ms

Loss rate: 8.79%

Run 5: Report of PCC — Data Link



Run 6: Statistics of PCC

Start at: 2018-02-21 16:27:51

End at: 2018-02-21 16:28:21

Below is generated by plot.py at 2018-02-21 21:47:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 545.64 Mbit/s

95th percentile per-packet one-way delay: 254.270 ms

Loss rate: 3.47%

-- Flow 1:

Average throughput: 483.60 Mbit/s

95th percentile per-packet one-way delay: 253.451 ms

Loss rate: 3.45%

-- Flow 2:

Average throughput: 64.23 Mbit/s

95th percentile per-packet one-way delay: 249.009 ms

Loss rate: 2.88%

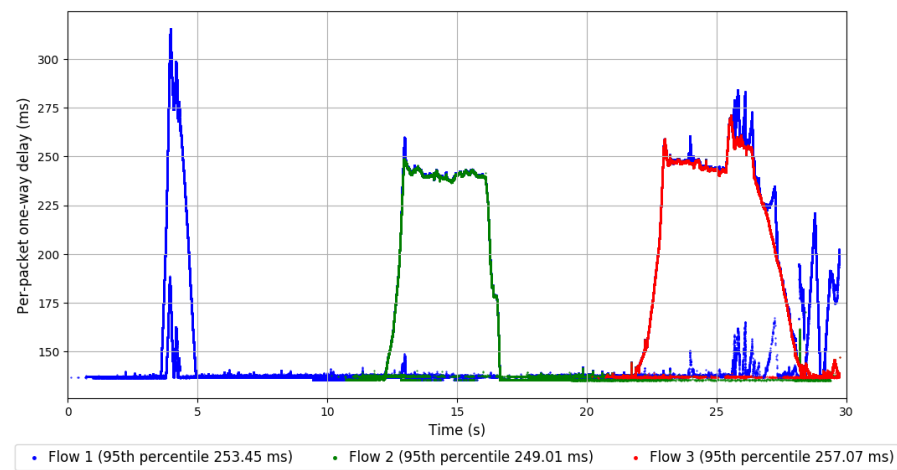
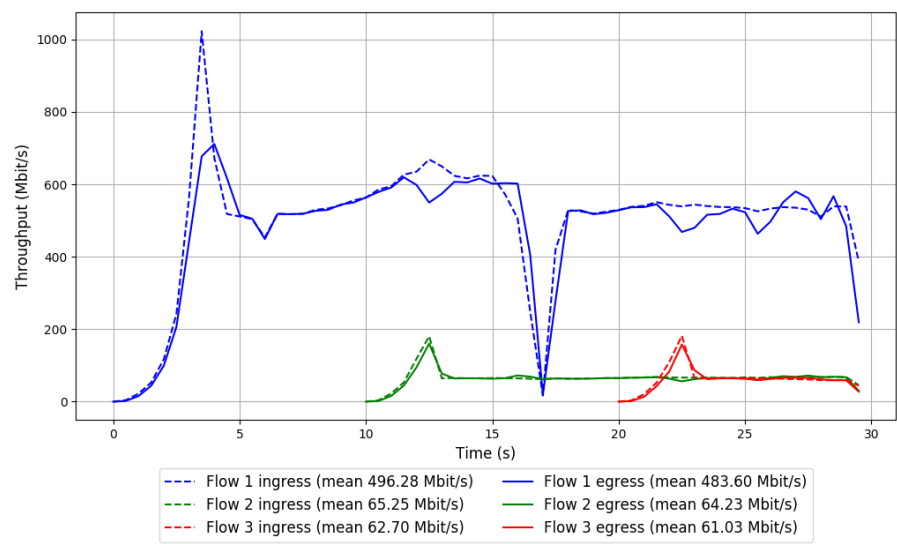
-- Flow 3:

Average throughput: 61.03 Mbit/s

95th percentile per-packet one-way delay: 257.073 ms

Loss rate: 5.27%

Run 6: Report of PCC — Data Link



Run 7: Statistics of PCC

Start at: 2018-02-21 16:48:37

End at: 2018-02-21 16:49:07

Below is generated by plot.py at 2018-02-21 21:47:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 517.62 Mbit/s

95th percentile per-packet one-way delay: 252.341 ms

Loss rate: 3.84%

-- Flow 1:

Average throughput: 455.76 Mbit/s

95th percentile per-packet one-way delay: 254.975 ms

Loss rate: 3.74%

-- Flow 2:

Average throughput: 63.66 Mbit/s

95th percentile per-packet one-way delay: 246.250 ms

Loss rate: 3.03%

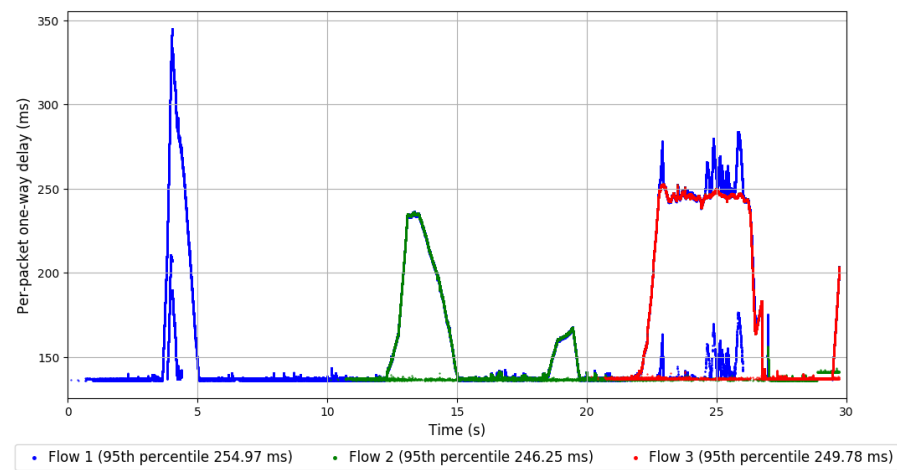
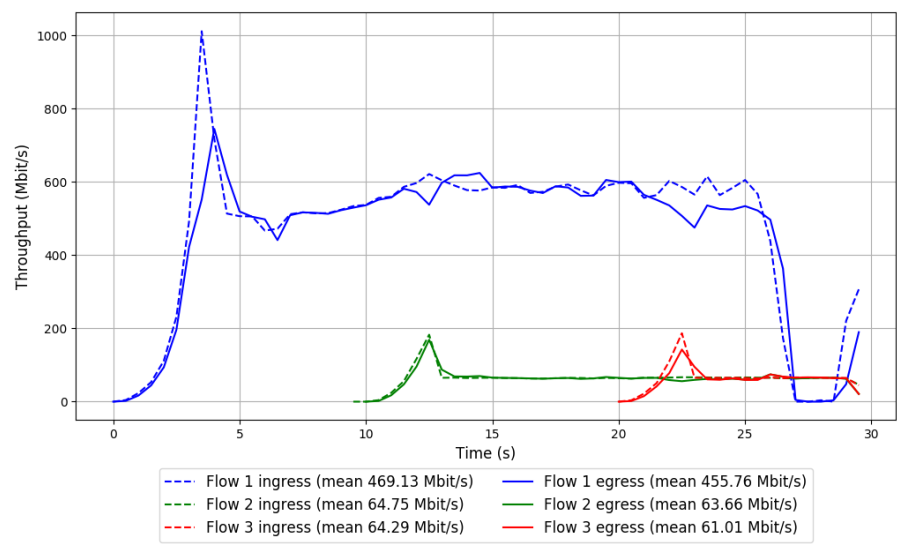
-- Flow 3:

Average throughput: 61.01 Mbit/s

95th percentile per-packet one-way delay: 249.779 ms

Loss rate: 7.74%

Run 7: Report of PCC — Data Link



Run 8: Statistics of PCC

Start at: 2018-02-21 17:08:49

End at: 2018-02-21 17:09:19

Below is generated by plot.py at 2018-02-21 21:48:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 514.25 Mbit/s

95th percentile per-packet one-way delay: 309.191 ms

Loss rate: 4.58%

-- Flow 1:

Average throughput: 432.71 Mbit/s

95th percentile per-packet one-way delay: 320.201 ms

Loss rate: 4.75%

-- Flow 2:

Average throughput: 122.02 Mbit/s

95th percentile per-packet one-way delay: 246.152 ms

Loss rate: 3.63%

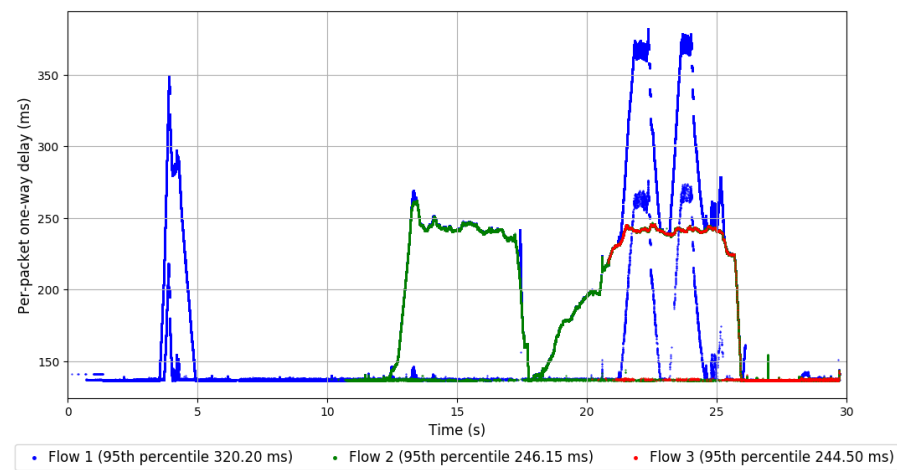
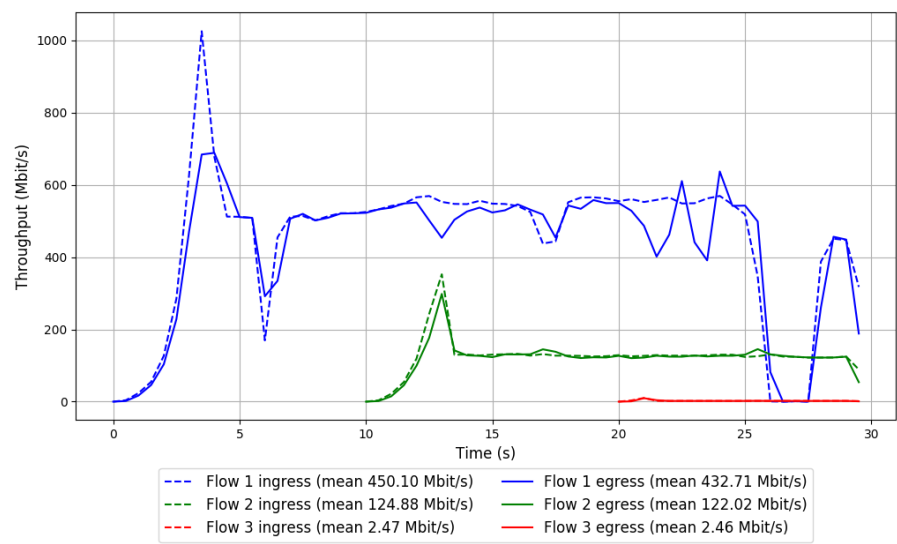
-- Flow 3:

Average throughput: 2.46 Mbit/s

95th percentile per-packet one-way delay: 244.500 ms

Loss rate: 3.15%

Run 8: Report of PCC — Data Link



Run 9: Statistics of PCC

Start at: 2018-02-21 17:29:20

End at: 2018-02-21 17:29:50

Below is generated by plot.py at 2018-02-21 21:56:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 554.18 Mbit/s

95th percentile per-packet one-way delay: 257.717 ms

Loss rate: 3.73%

-- Flow 1:

Average throughput: 469.68 Mbit/s

95th percentile per-packet one-way delay: 263.037 ms

Loss rate: 3.86%

-- Flow 2:

Average throughput: 125.66 Mbit/s

95th percentile per-packet one-way delay: 245.746 ms

Loss rate: 2.98%

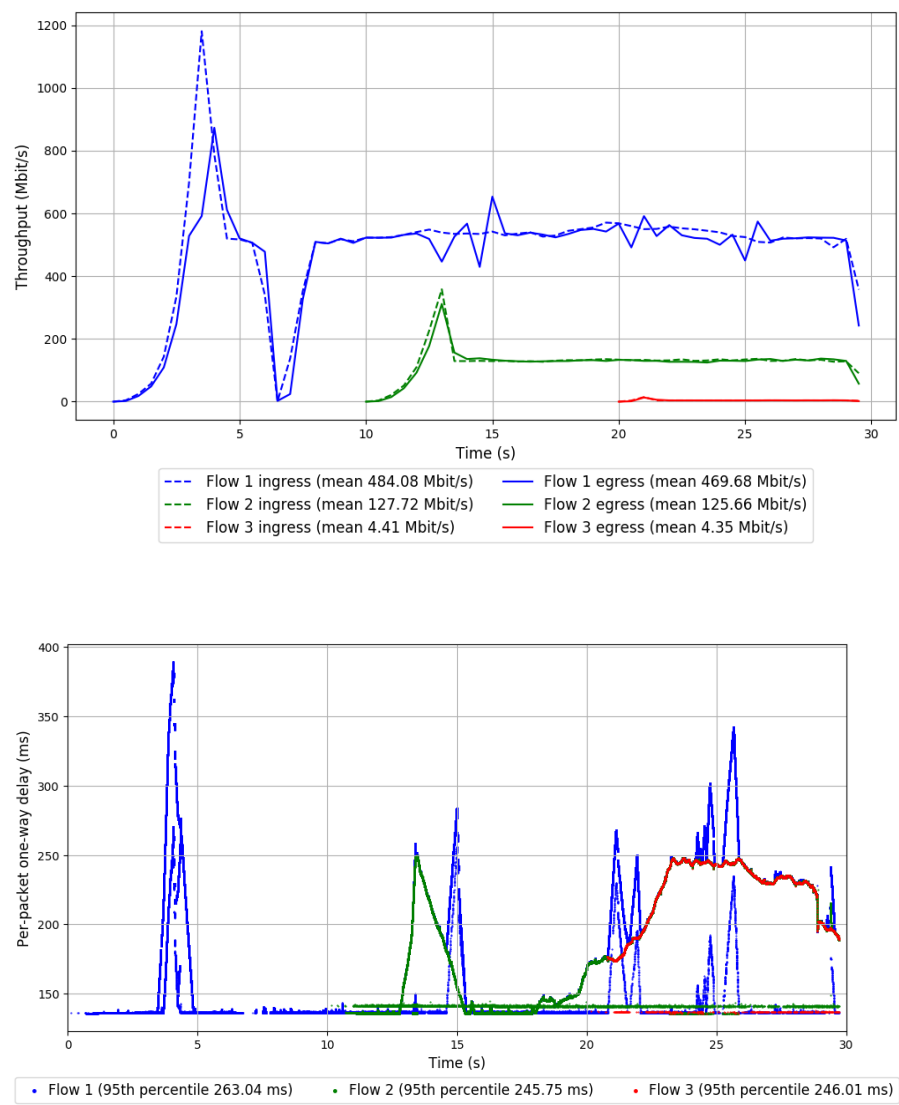
-- Flow 3:

Average throughput: 4.35 Mbit/s

95th percentile per-packet one-way delay: 246.011 ms

Loss rate: 3.98%

Run 9: Report of PCC — Data Link

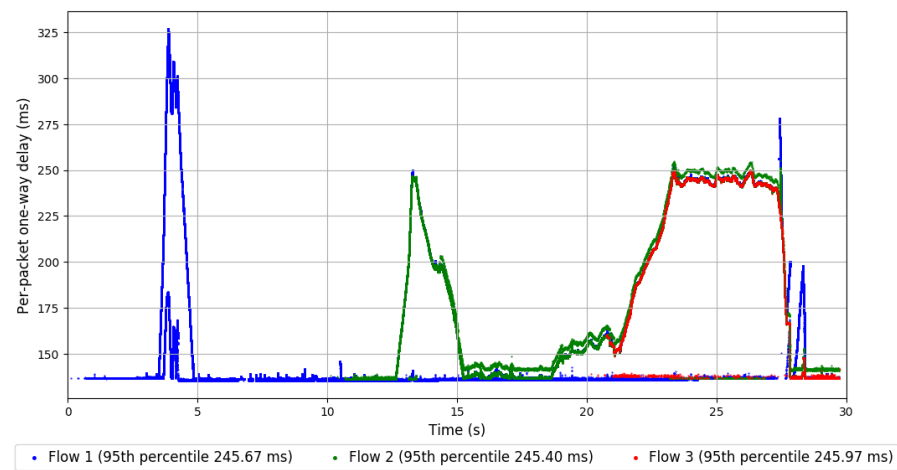
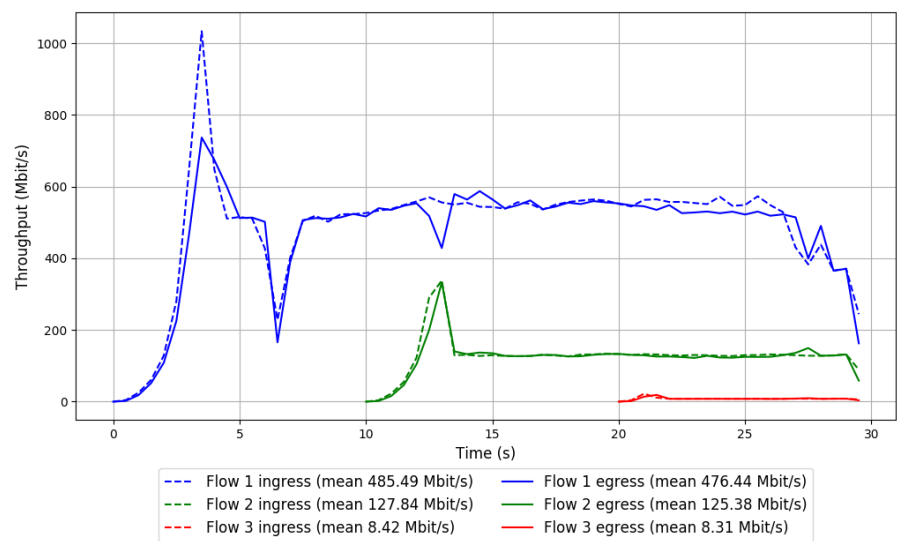


```
Run 10: Statistics of PCC

Start at: 2018-02-21 17:49:56
End at: 2018-02-21 17:50:26

# Below is generated by plot.py at 2018-02-21 21:56:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 562.01 Mbit/s
95th percentile per-packet one-way delay: 245.616 ms
Loss rate: 2.84%
-- Flow 1:
Average throughput: 476.44 Mbit/s
95th percentile per-packet one-way delay: 245.667 ms
Loss rate: 2.76%
-- Flow 2:
Average throughput: 125.38 Mbit/s
95th percentile per-packet one-way delay: 245.402 ms
Loss rate: 3.28%
-- Flow 3:
Average throughput: 8.31 Mbit/s
95th percentile per-packet one-way delay: 245.968 ms
Loss rate: 3.96%
```

Run 10: Report of PCC — Data Link

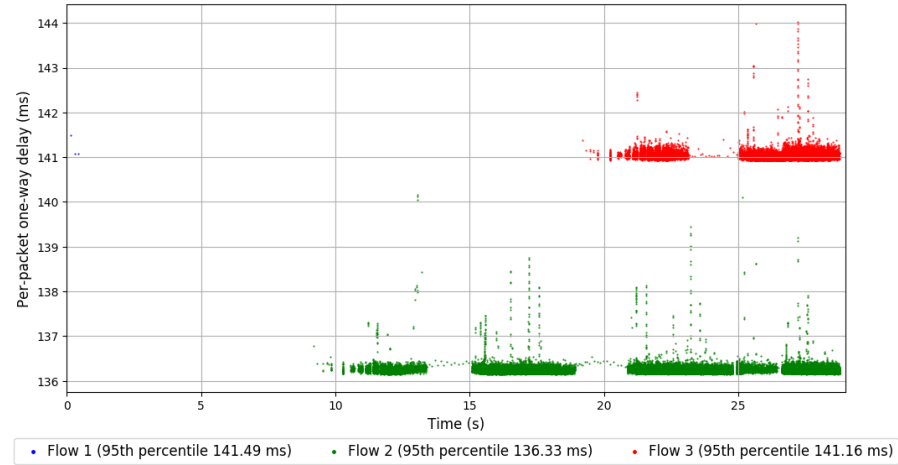
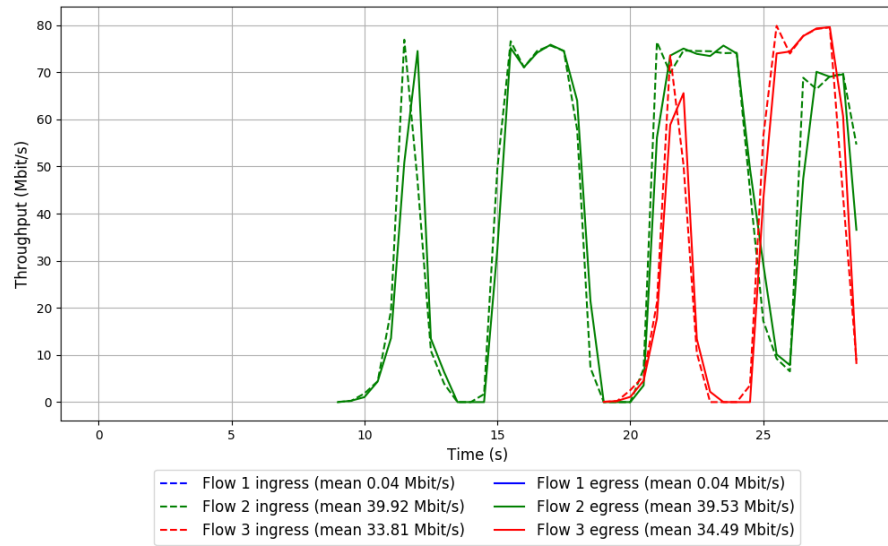


```
Run 1: Statistics of QUIC Cubic

Start at: 2018-02-21 14:42:13
End at: 2018-02-21 14:42:43

# Below is generated by plot.py at 2018-02-21 21:56:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 38.58 Mbit/s
95th percentile per-packet one-way delay: 141.086 ms
Loss rate: 1.90%
-- Flow 1:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 141.486 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 39.53 Mbit/s
95th percentile per-packet one-way delay: 136.332 ms
Loss rate: 2.34%
-- Flow 3:
Average throughput: 34.49 Mbit/s
95th percentile per-packet one-way delay: 141.159 ms
Loss rate: 0.86%
```


Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2018-02-21 15:03:21

End at: 2018-02-21 15:03:51

Below is generated by plot.py at 2018-02-21 21:56:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 109.83 Mbit/s

95th percentile per-packet one-way delay: 141.006 ms

Loss rate: 1.23%

-- Flow 1:

Average throughput: 61.19 Mbit/s

95th percentile per-packet one-way delay: 141.017 ms

Loss rate: 1.18%

-- Flow 2:

Average throughput: 56.66 Mbit/s

95th percentile per-packet one-way delay: 141.001 ms

Loss rate: 1.61%

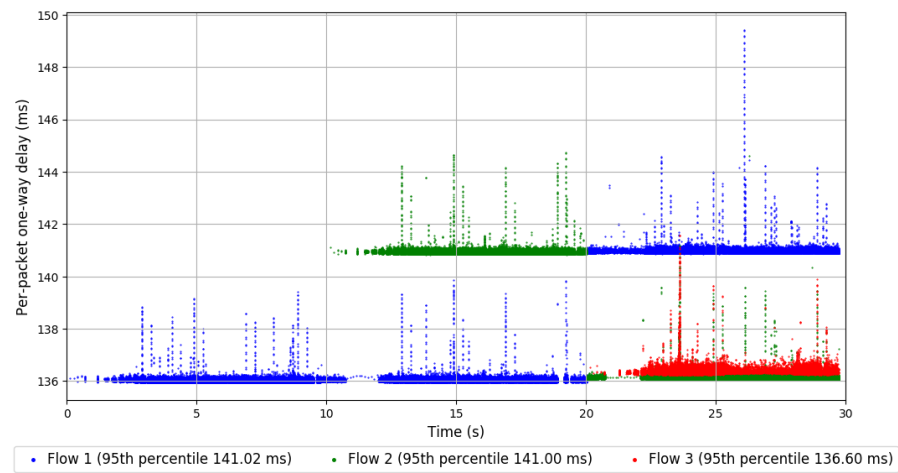
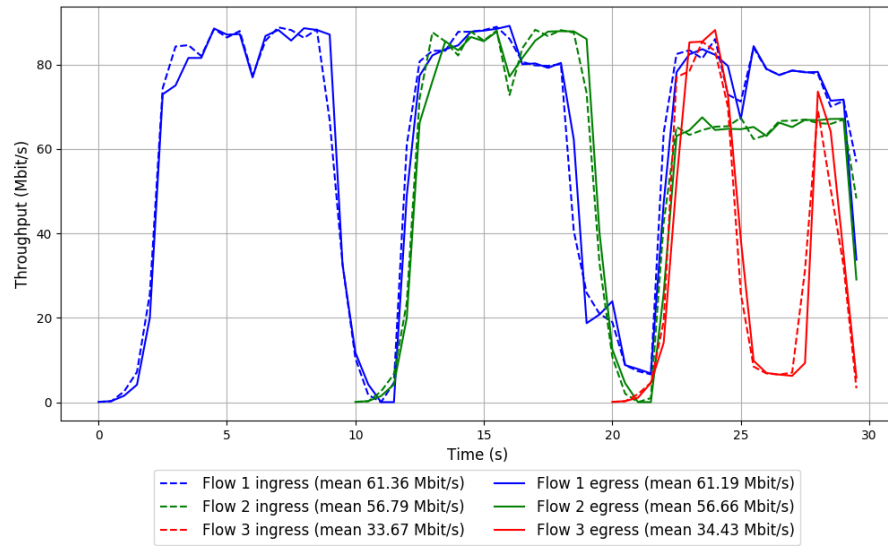
-- Flow 3:

Average throughput: 34.43 Mbit/s

95th percentile per-packet one-way delay: 136.601 ms

Loss rate: 0.20%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-02-21 15:23:47

End at: 2018-02-21 15:24:17

Below is generated by plot.py at 2018-02-21 21:56:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 100.40 Mbit/s

95th percentile per-packet one-way delay: 162.213 ms

Loss rate: 1.21%

-- Flow 1:

Average throughput: 50.23 Mbit/s

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

Loss rate: 1.34%

-- Flow 2:

Average throughput: 59.24 Mbit/s

95th percentile per-packet one-way delay: 141.253 ms

Loss rate: 1.38%

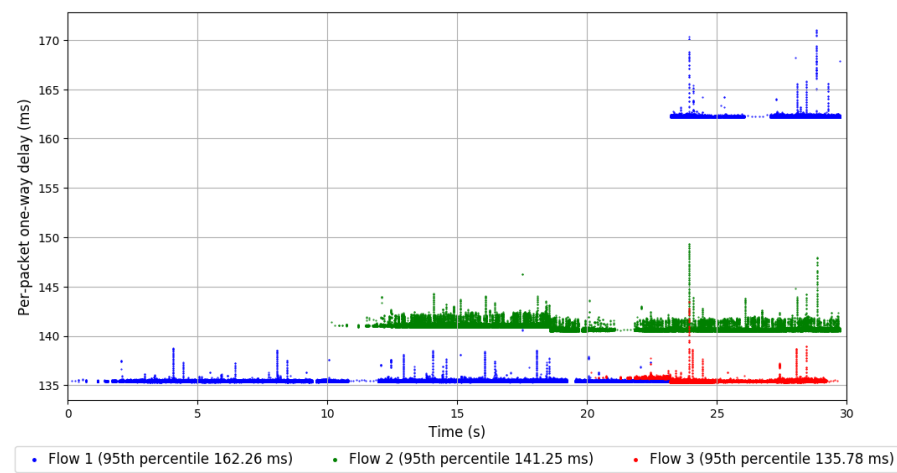
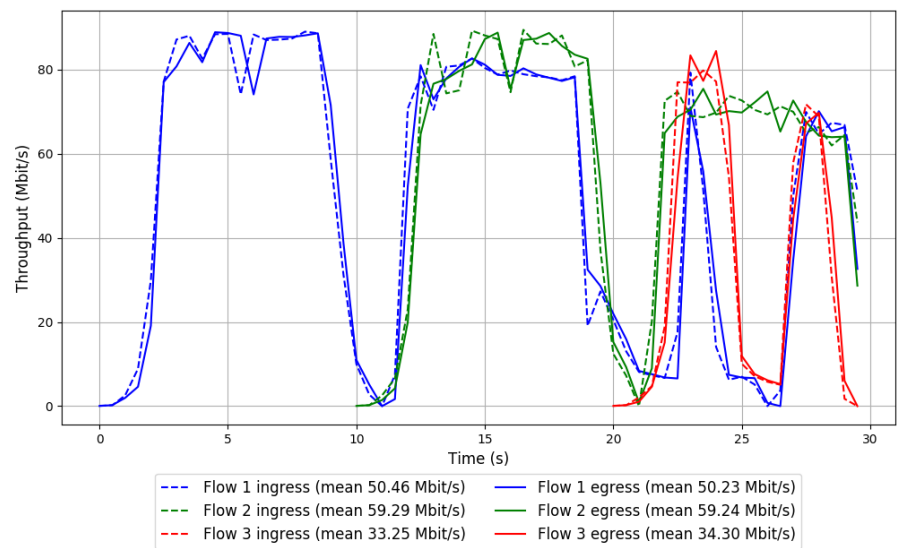
-- Flow 3:

Average throughput: 34.30 Mbit/s

95th percentile per-packet one-way delay: 135.777 ms

Loss rate: 0.01%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2018-02-21 15:44:14

End at: 2018-02-21 15:44:44

Below is generated by plot.py at 2018-02-21 21:56:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 105.23 Mbit/s

95th percentile per-packet one-way delay: 136.967 ms

Loss rate: 1.70%

-- Flow 1:

Average throughput: 59.27 Mbit/s

95th percentile per-packet one-way delay: 136.998 ms

Loss rate: 1.19%

-- Flow 2:

Average throughput: 51.95 Mbit/s

95th percentile per-packet one-way delay: 135.383 ms

Loss rate: 1.98%

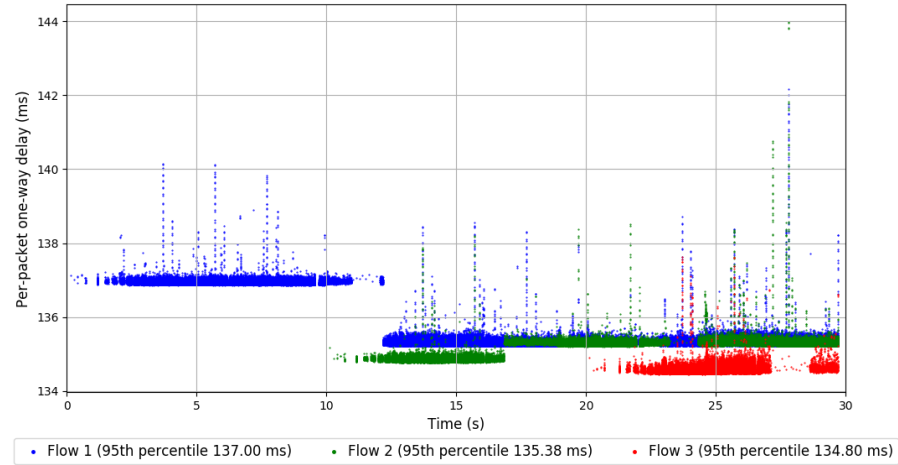
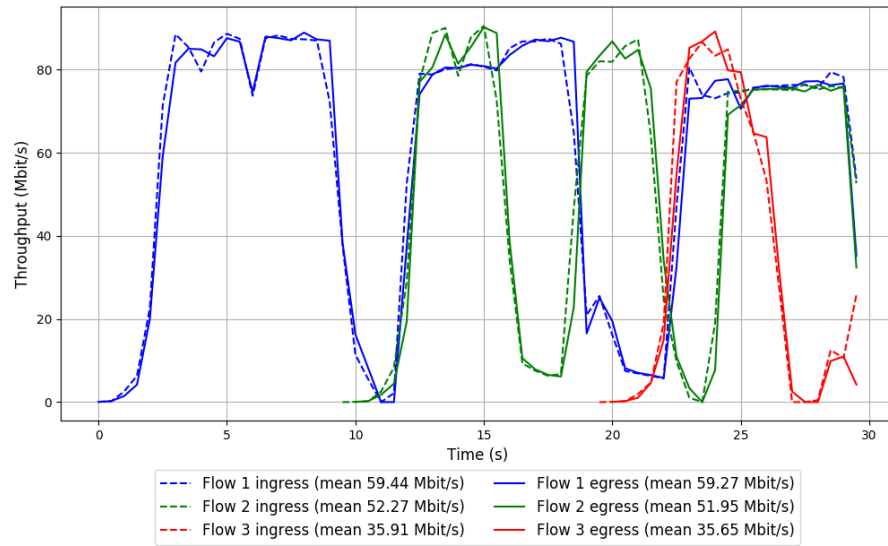
-- Flow 3:

Average throughput: 35.65 Mbit/s

95th percentile per-packet one-way delay: 134.797 ms

Loss rate: 3.43%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2018-02-21 16:04:28

End at: 2018-02-21 16:04:58

Below is generated by plot.py at 2018-02-21 21:56:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 91.68 Mbit/s

95th percentile per-packet one-way delay: 136.467 ms

Loss rate: 1.44%

-- Flow 1:

Average throughput: 52.33 Mbit/s

95th percentile per-packet one-way delay: 134.696 ms

Loss rate: 1.34%

-- Flow 2:

Average throughput: 47.49 Mbit/s

95th percentile per-packet one-way delay: 136.442 ms

Loss rate: 1.81%

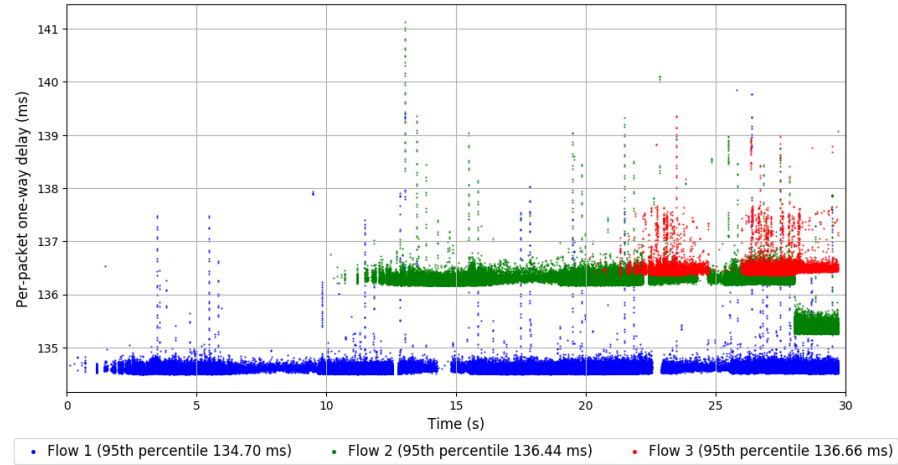
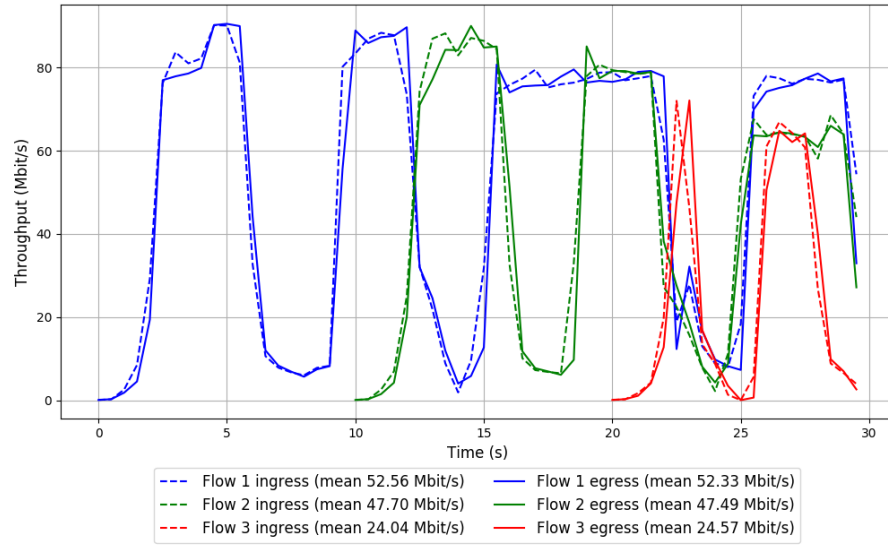
-- Flow 3:

Average throughput: 24.57 Mbit/s

95th percentile per-packet one-way delay: 136.659 ms

Loss rate: 0.64%

Run 5: Report of QUIC Cubic — Data Link



Run 6: Statistics of QUIC Cubic

Start at: 2018-02-21 16:24:57

End at: 2018-02-21 16:25:27

Below is generated by plot.py at 2018-02-21 21:56:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 94.04 Mbit/s

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

Loss rate: 1.38%

-- Flow 1:

Average throughput: 53.77 Mbit/s

95th percentile per-packet one-way delay: 137.286 ms

Loss rate: 1.15%

-- Flow 2:

Average throughput: 49.75 Mbit/s

95th percentile per-packet one-way delay: 135.996 ms

Loss rate: 2.07%

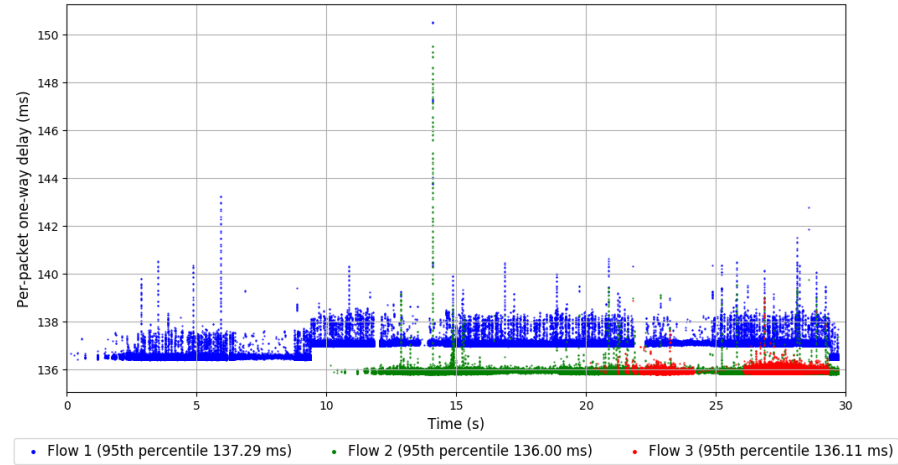
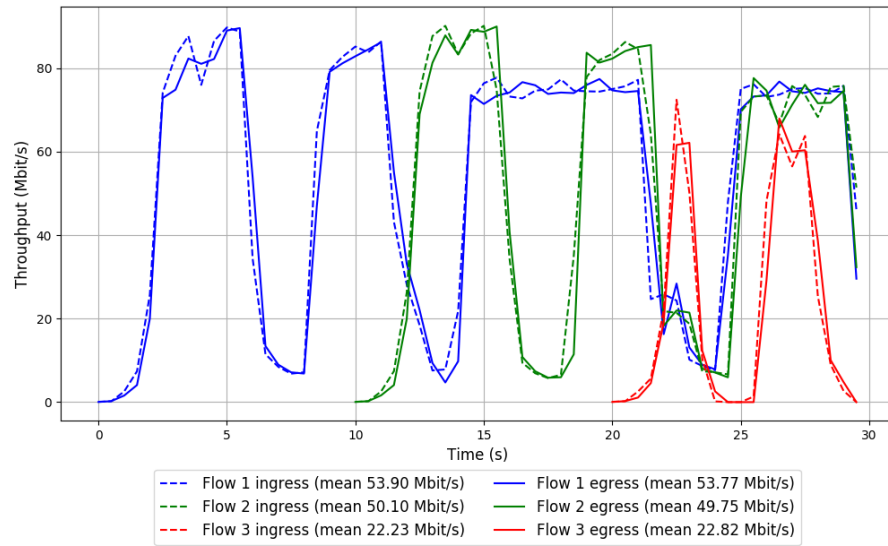
-- Flow 3:

Average throughput: 22.82 Mbit/s

95th percentile per-packet one-way delay: 136.111 ms

Loss rate: 0.00%

Run 6: Report of QUIC Cubic — Data Link



Run 7: Statistics of QUIC Cubic

Start at: 2018-02-21 16:45:41

End at: 2018-02-21 16:46:11

Below is generated by plot.py at 2018-02-21 21:56:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 99.95 Mbit/s

95th percentile per-packet one-way delay: 140.687 ms

Loss rate: 1.58%

-- Flow 1:

Average throughput: 48.21 Mbit/s

95th percentile per-packet one-way delay: 140.731 ms

Loss rate: 1.44%

-- Flow 2:

Average throughput: 61.34 Mbit/s

95th percentile per-packet one-way delay: 137.182 ms

Loss rate: 0.47%

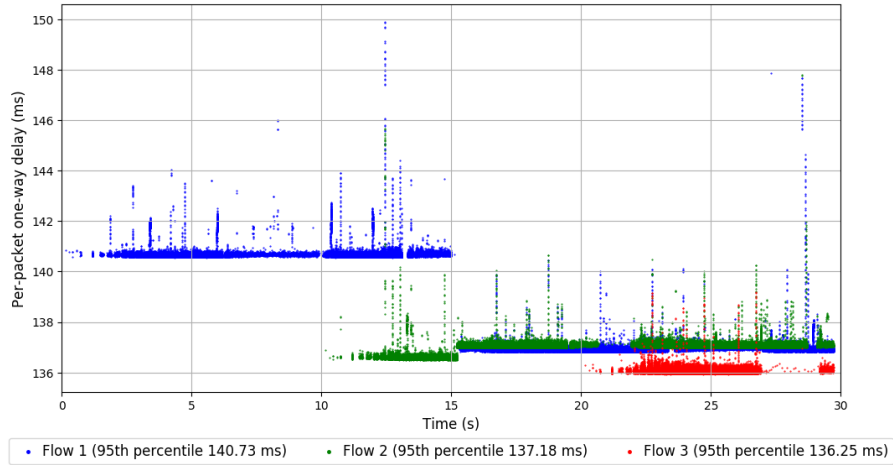
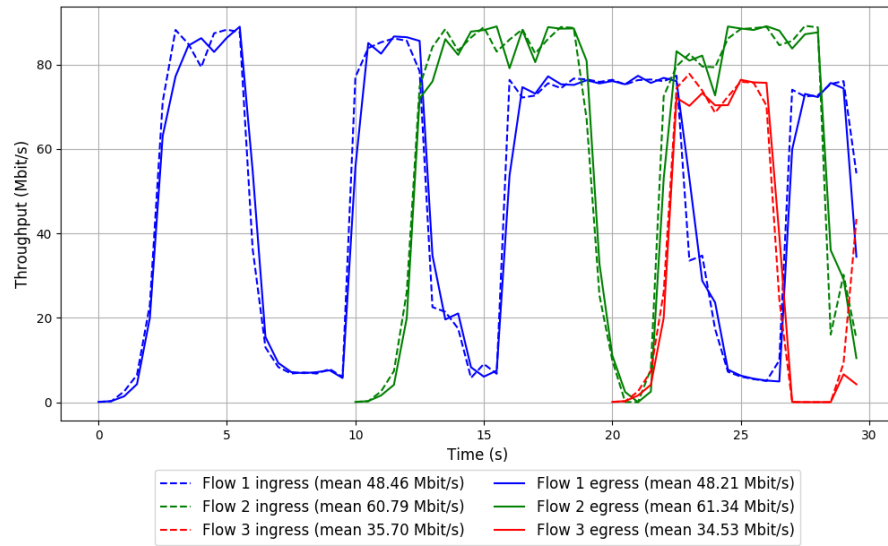
-- Flow 3:

Average throughput: 34.53 Mbit/s

95th percentile per-packet one-way delay: 136.249 ms

Loss rate: 5.95%

Run 7: Report of QUIC Cubic — Data Link



Run 8: Statistics of QUIC Cubic

Start at: 2018-02-21 17:05:51

End at: 2018-02-21 17:06:21

Below is generated by plot.py at 2018-02-21 21:56:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 100.02 Mbit/s

95th percentile per-packet one-way delay: 141.119 ms

Loss rate: 1.74%

-- Flow 1:

Average throughput: 56.91 Mbit/s

95th percentile per-packet one-way delay: 140.900 ms

Loss rate: 1.04%

-- Flow 2:

Average throughput: 46.92 Mbit/s

95th percentile per-packet one-way delay: 137.094 ms

Loss rate: 1.88%

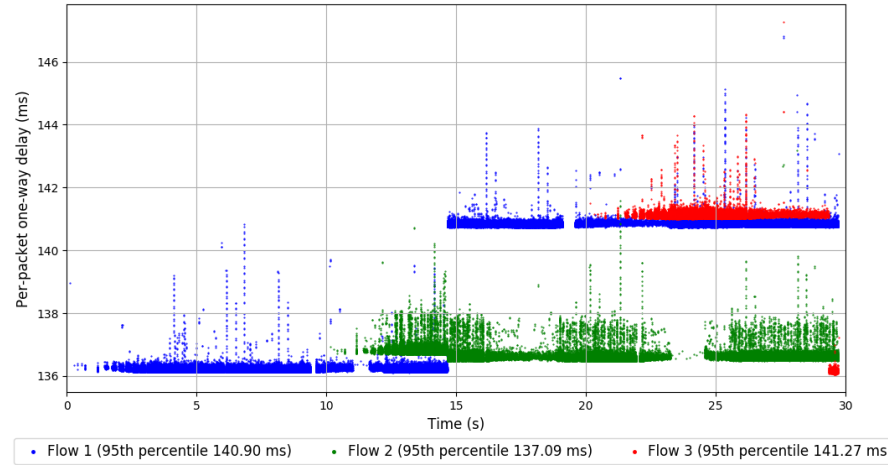
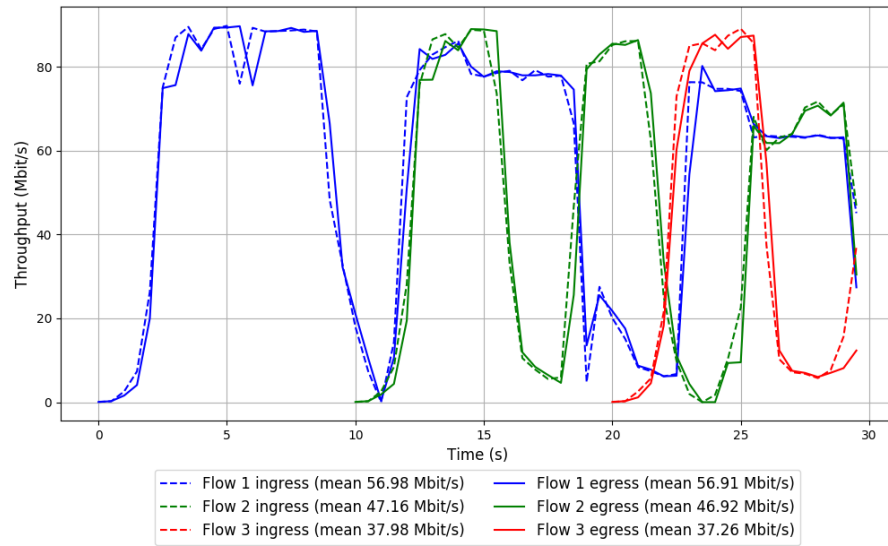
-- Flow 3:

Average throughput: 37.26 Mbit/s

95th percentile per-packet one-way delay: 141.266 ms

Loss rate: 4.62%

Run 8: Report of QUIC Cubic — Data Link



Run 9: Statistics of QUIC Cubic

Start at: 2018-02-21 17:26:24

End at: 2018-02-21 17:26:54

Below is generated by plot.py at 2018-02-21 21:56:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 89.01 Mbit/s

95th percentile per-packet one-way delay: 141.128 ms

Loss rate: 2.10%

-- Flow 1:

Average throughput: 50.53 Mbit/s

95th percentile per-packet one-way delay: 141.170 ms

Loss rate: 1.29%

-- Flow 2:

Average throughput: 40.13 Mbit/s

95th percentile per-packet one-way delay: 136.231 ms

Loss rate: 2.54%

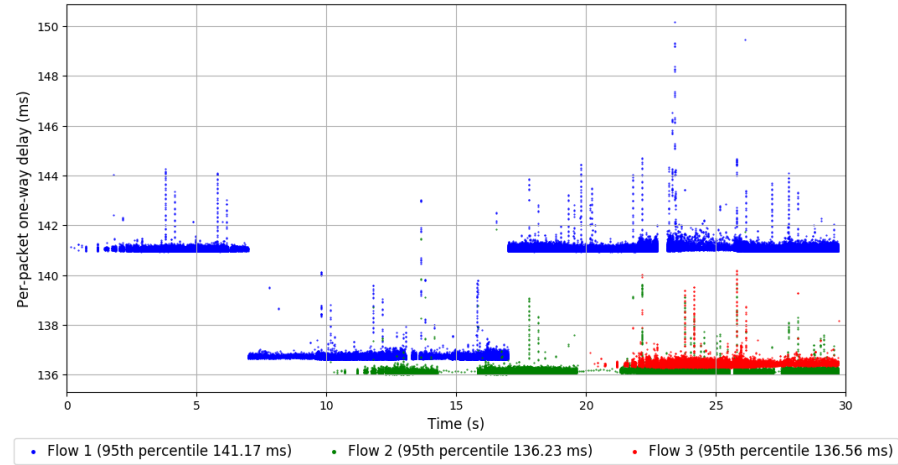
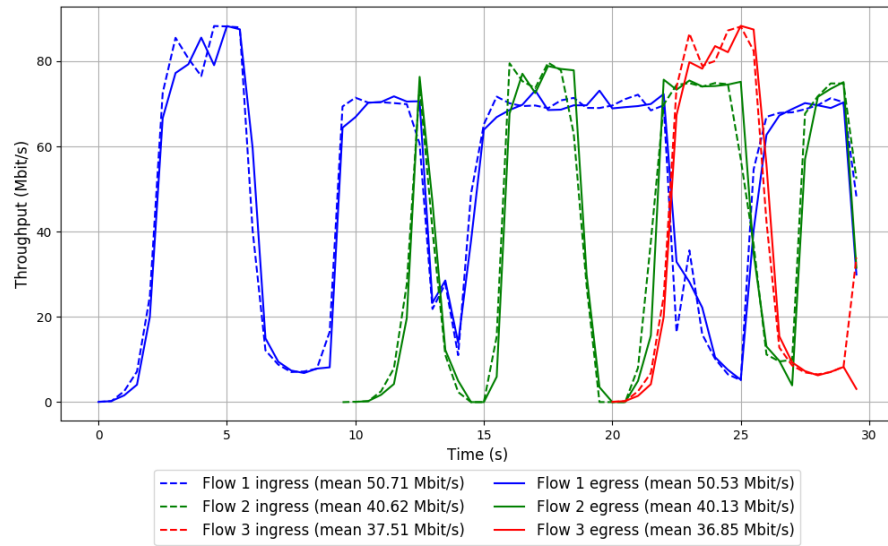
-- Flow 3:

Average throughput: 36.85 Mbit/s

95th percentile per-packet one-way delay: 136.562 ms

Loss rate: 4.45%

Run 9: Report of QUIC Cubic — Data Link



Run 10: Statistics of QUIC Cubic

Start at: 2018-02-21 17:47:01

End at: 2018-02-21 17:47:31

Below is generated by plot.py at 2018-02-21 21:56:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 96.90 Mbit/s

95th percentile per-packet one-way delay: 139.383 ms

Loss rate: 1.37%

-- Flow 1:

Average throughput: 51.10 Mbit/s

95th percentile per-packet one-way delay: 136.781 ms

Loss rate: 1.09%

-- Flow 2:

Average throughput: 51.52 Mbit/s

95th percentile per-packet one-way delay: 135.961 ms

Loss rate: 2.04%

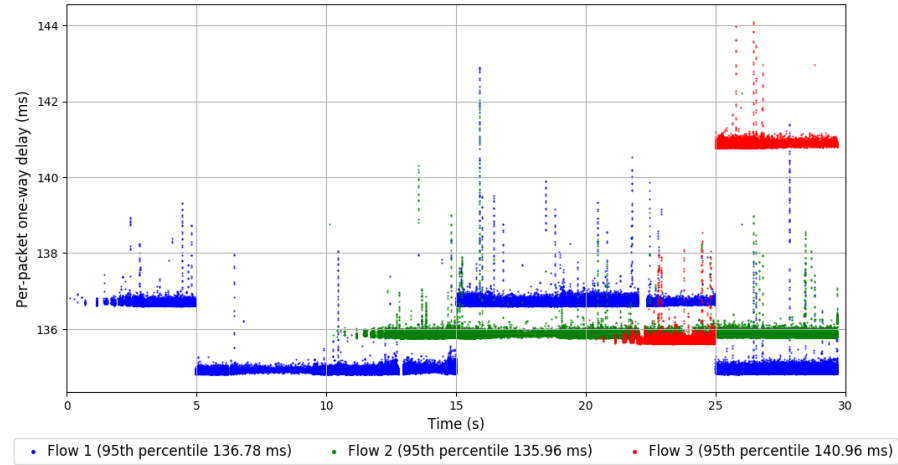
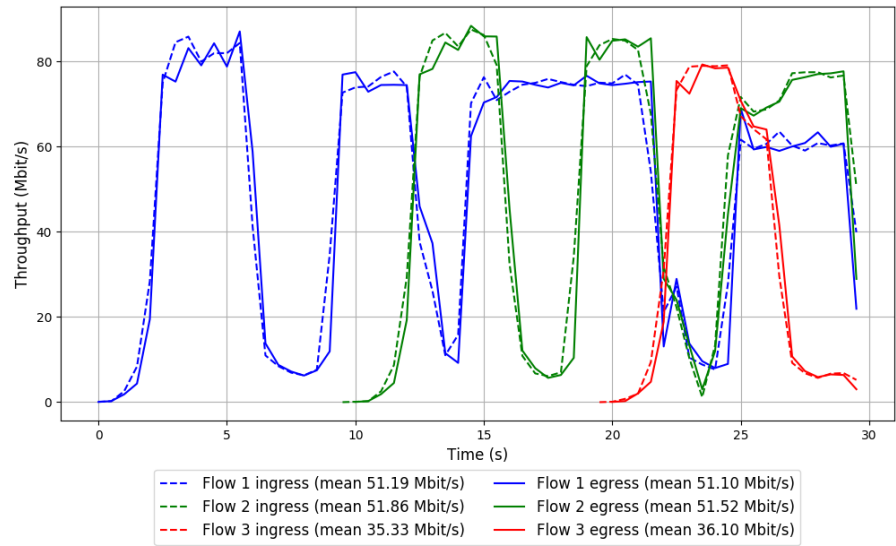
-- Flow 3:

Average throughput: 36.10 Mbit/s

95th percentile per-packet one-way delay: 140.959 ms

Loss rate: 0.63%

Run 10: Report of QUIC Cubic — Data Link

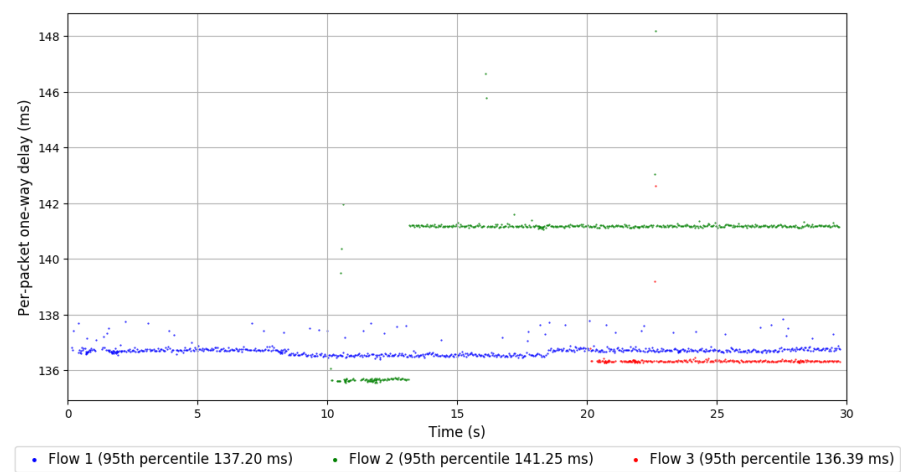
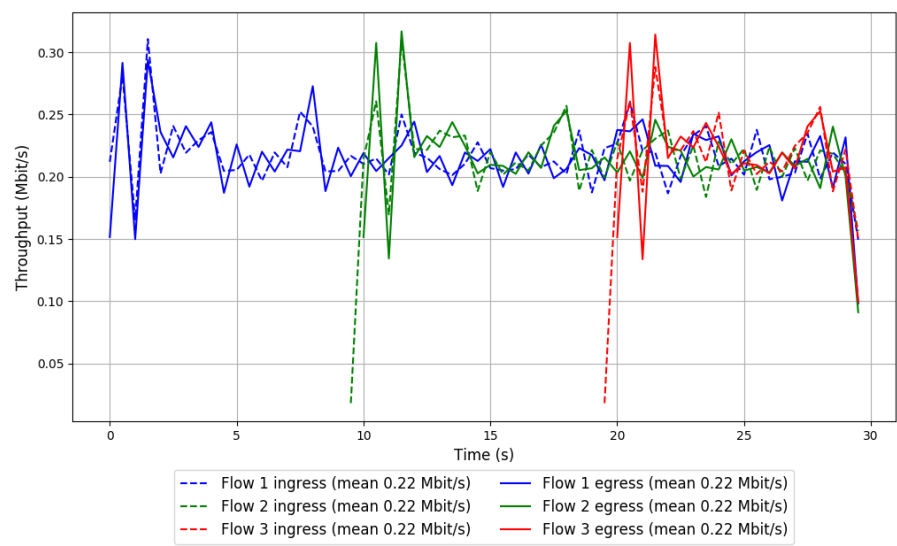


```
Run 1: Statistics of SCReAM

Start at: 2018-02-21 14:44:17
End at: 2018-02-21 14:44:48

# Below is generated by plot.py at 2018-02-21 21:56:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 141.212 ms
Loss rate: 1.30%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 137.203 ms
Loss rate: 0.77%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 141.247 ms
Loss rate: 1.42%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.387 ms
Loss rate: 2.63%
```

Run 1: Report of SReAM — Data Link

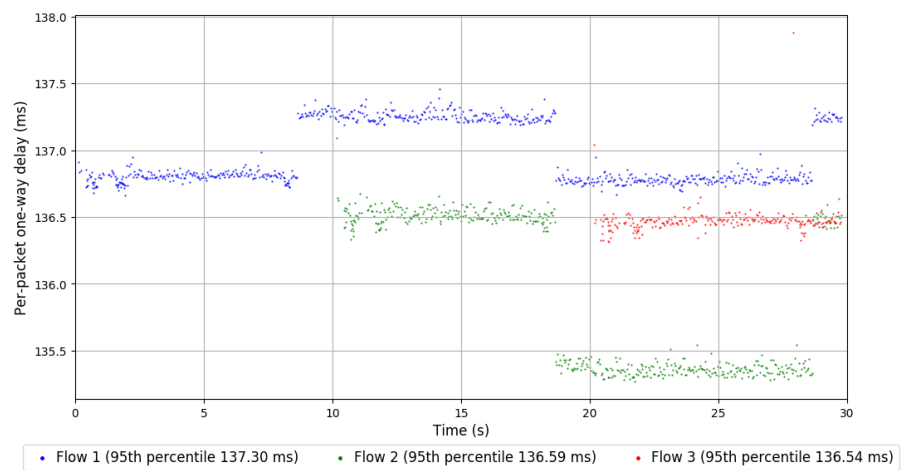
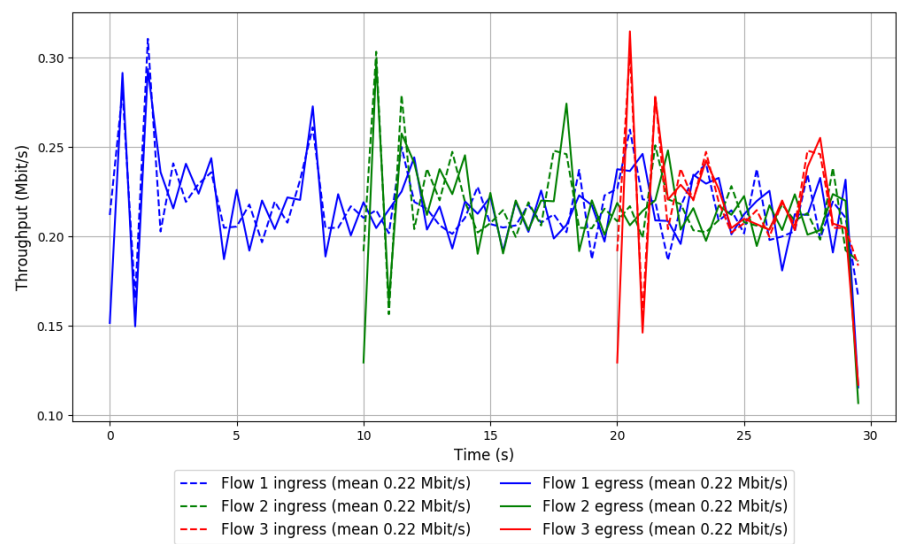


```
Run 2: Statistics of SCReAM

Start at: 2018-02-21 15:05:27
End at: 2018-02-21 15:05:57

# Below is generated by plot.py at 2018-02-21 21:56:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 137.276 ms
Loss rate: 1.30%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 137.300 ms
Loss rate: 0.77%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.587 ms
Loss rate: 1.43%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.536 ms
Loss rate: 2.64%
```

Run 2: Report of SReAM — Data Link

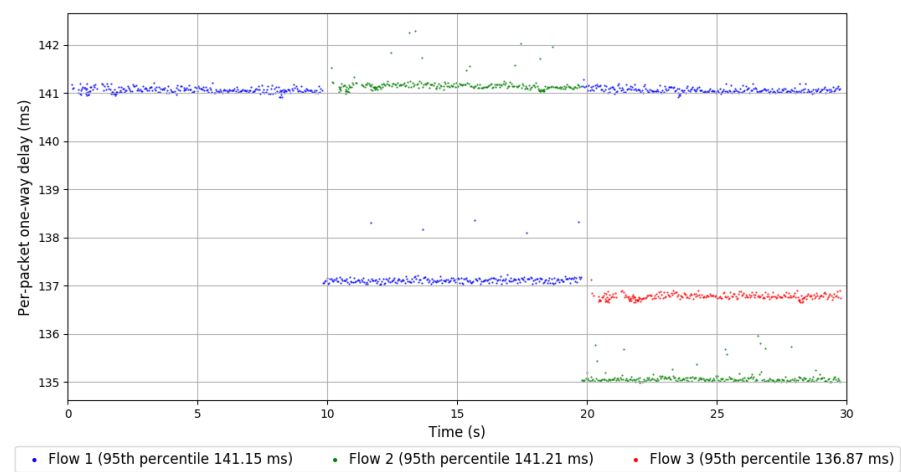
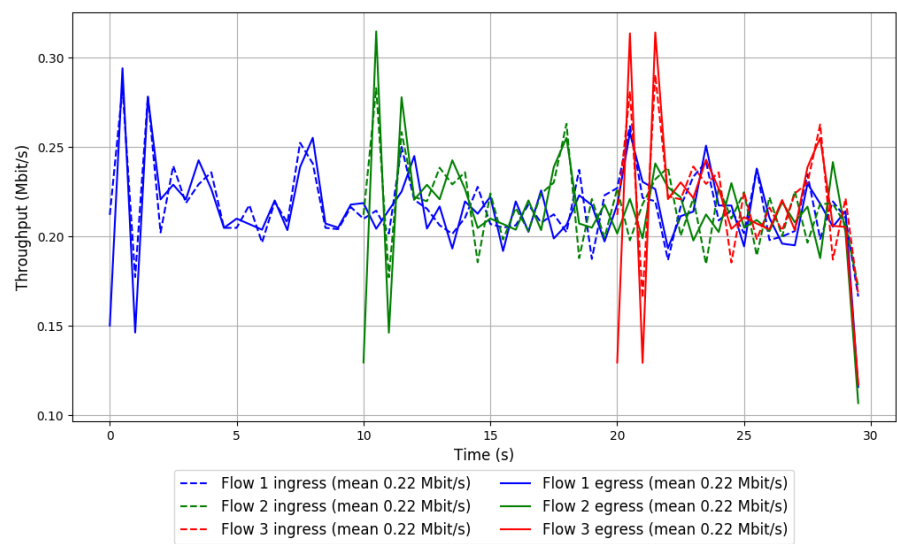


```
Run 3: Statistics of SCReAM

Start at: 2018-02-21 15:25:56
End at: 2018-02-21 15:26:26

# Below is generated by plot.py at 2018-02-21 21:56:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 141.180 ms
Loss rate: 1.37%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 141.148 ms
Loss rate: 0.90%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 141.214 ms
Loss rate: 1.43%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.870 ms
Loss rate: 2.63%
```


Run 3: Report of SReAM — Data Link

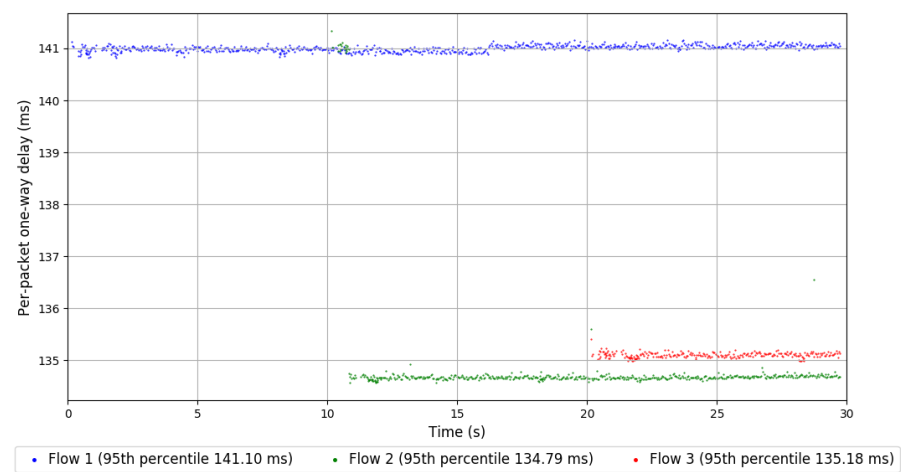
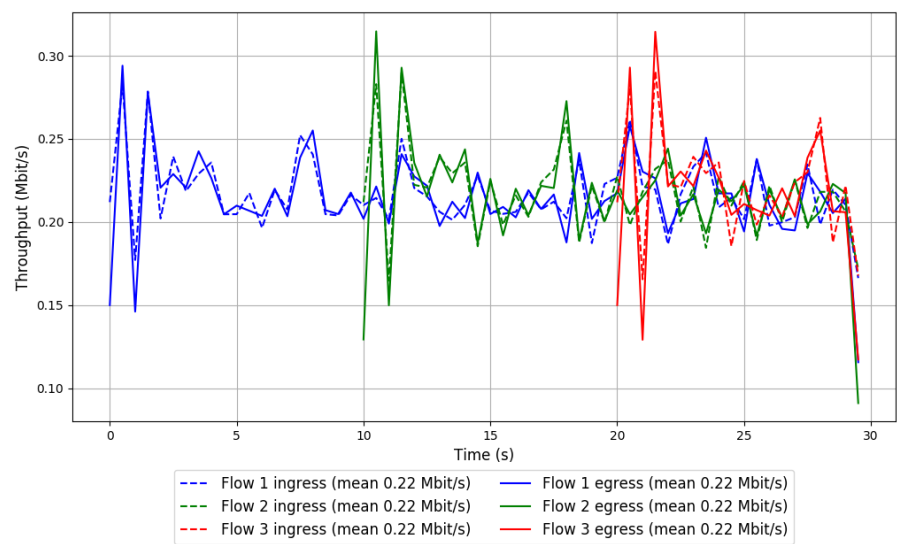


```
Run 4: Statistics of SReAM

Start at: 2018-02-21 15:46:20
End at: 2018-02-21 15:46:50

# Below is generated by plot.py at 2018-02-21 21:56:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 141.080 ms
Loss rate: 1.37%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 141.098 ms
Loss rate: 0.90%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 134.794 ms
Loss rate: 1.42%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 135.176 ms
Loss rate: 2.63%
```

Run 4: Report of SReAM — Data Link



Run 5: Statistics of SCReAM

Start at: 2018-02-21 16:06:37

End at: 2018-02-21 16:07:07

Below is generated by plot.py at 2018-02-21 21:56:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 140.708 ms

Loss rate: 1.37%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 140.728 ms

Loss rate: 0.90%

-- Flow 2:

Average throughput: 0.22 Mbit/s

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

Loss rate: 1.42%

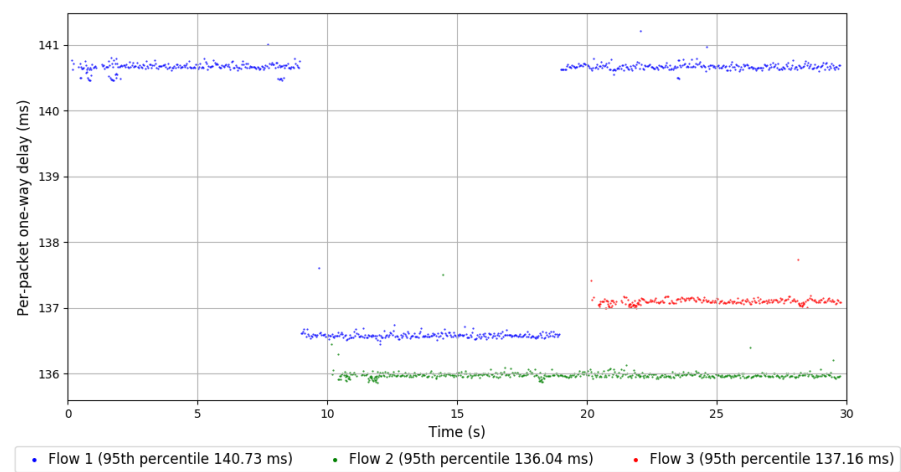
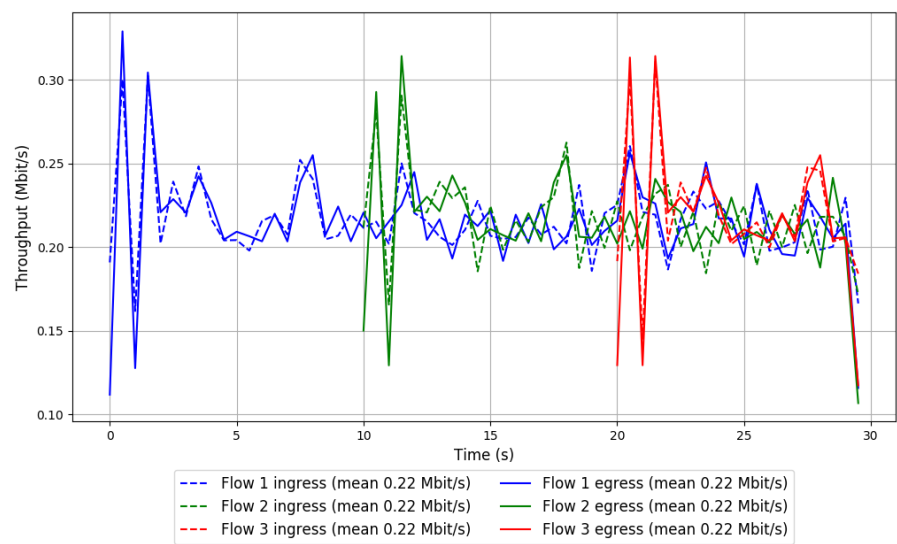
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 137.158 ms

Loss rate: 2.64%

Run 5: Report of SCRaM — Data Link



Run 6: Statistics of SReAM

Start at: 2018-02-21 16:27:03

End at: 2018-02-21 16:27:33

Below is generated by plot.py at 2018-02-21 21:56:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 140.621 ms

Loss rate: 1.30%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 136.982 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 136.141 ms

Loss rate: 1.42%

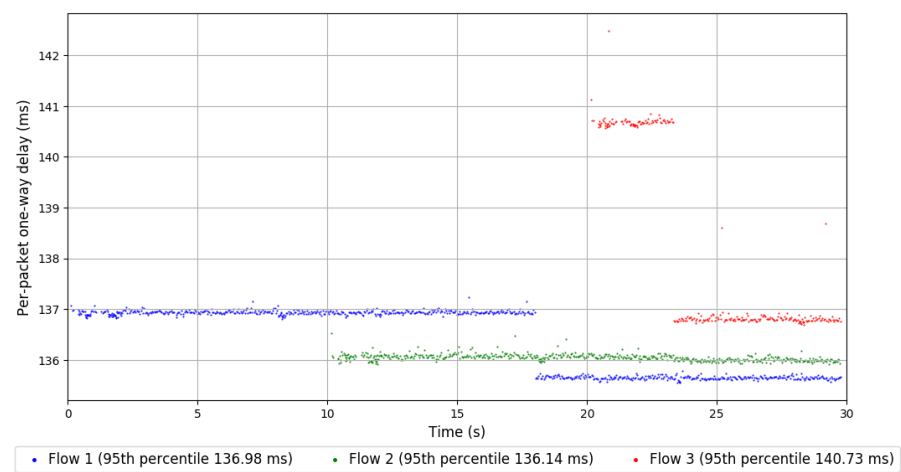
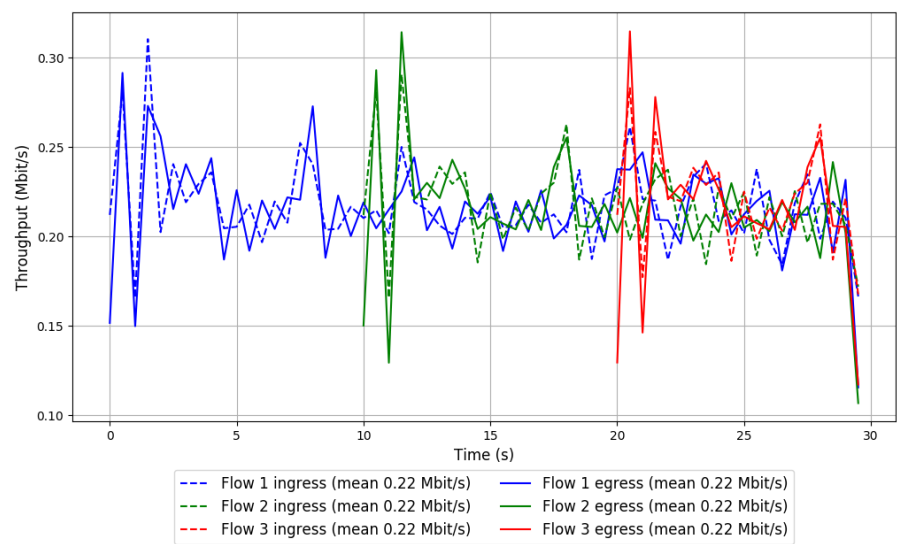
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 140.726 ms

Loss rate: 2.65%

Run 6: Report of SReAM — Data Link



Run 7: Statistics of SReAM

Start at: 2018-02-21 16:47:48

End at: 2018-02-21 16:48:19

Below is generated by plot.py at 2018-02-21 21:56:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 140.882 ms

Loss rate: 1.30%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 140.902 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 136.278 ms

Loss rate: 1.42%

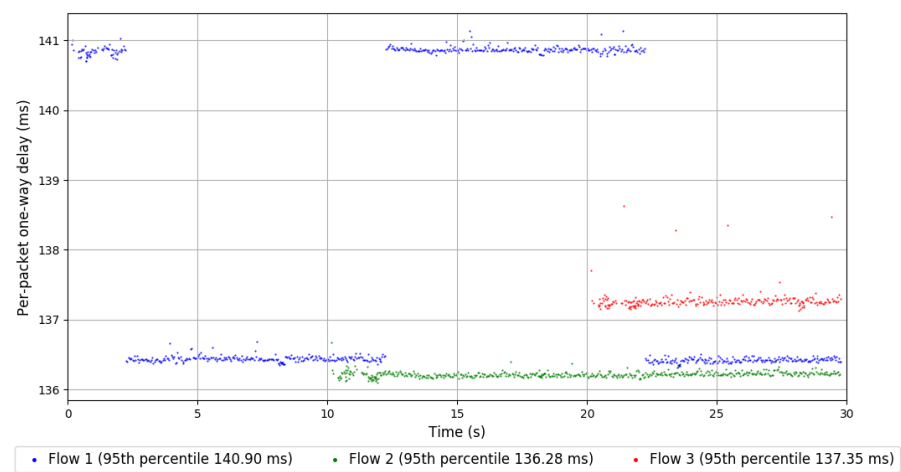
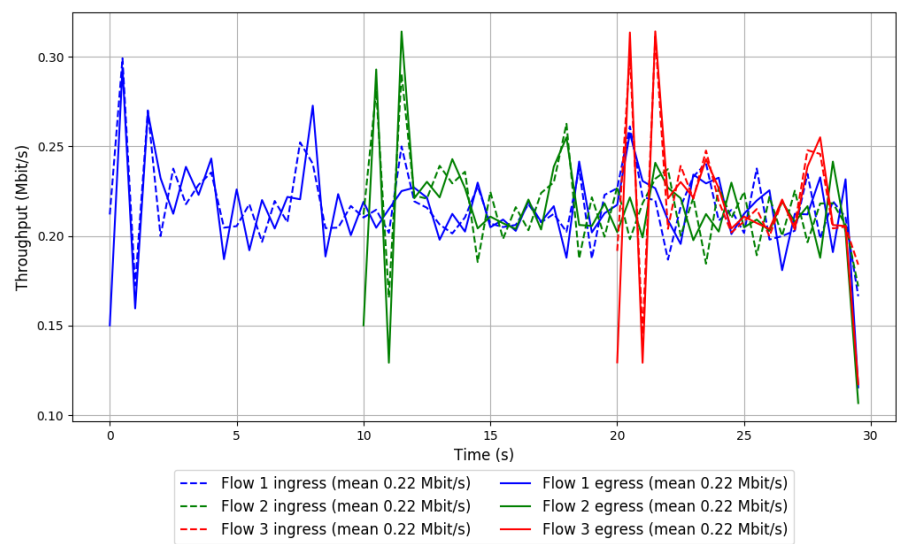
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 137.353 ms

Loss rate: 2.63%

Run 7: Report of SReAM — Data Link



Run 8: Statistics of SCReAM

Start at: 2018-02-21 17:08:01

End at: 2018-02-21 17:08:31

Below is generated by plot.py at 2018-02-21 21:56:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 141.456 ms

Loss rate: 1.37%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 141.766 ms

Loss rate: 0.90%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 136.860 ms

Loss rate: 1.42%

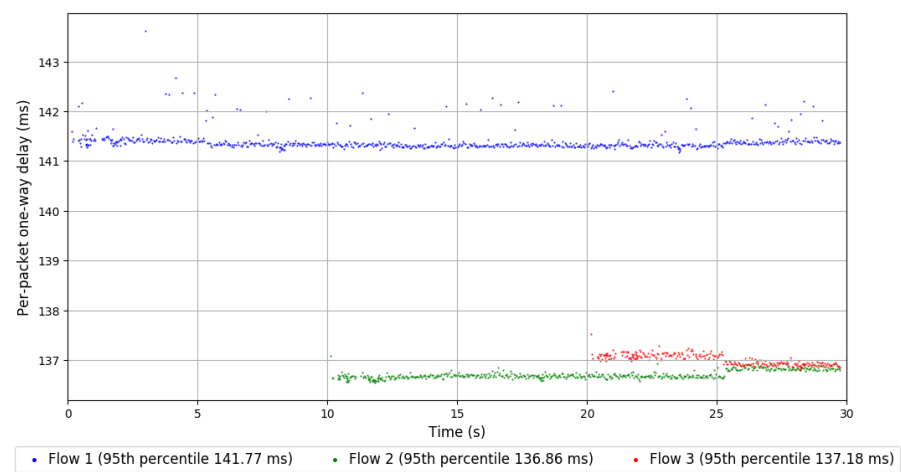
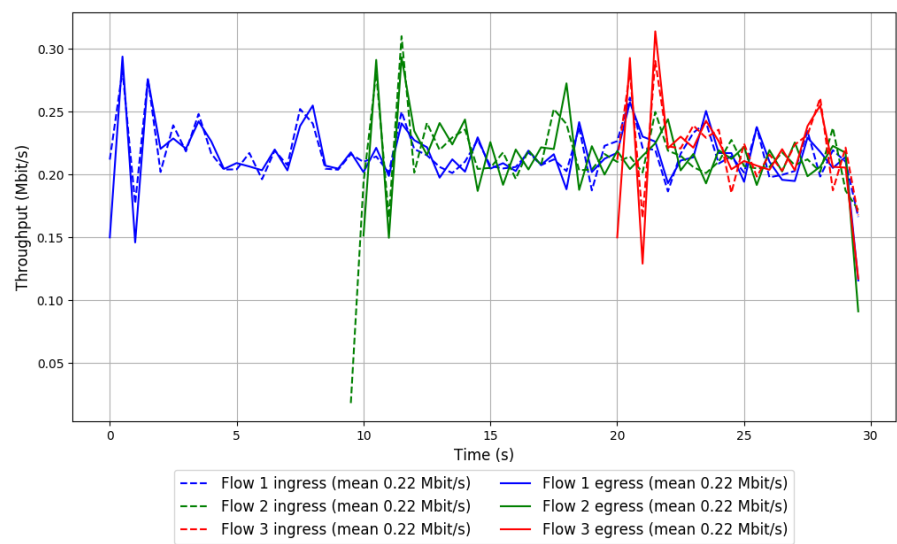
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 137.175 ms

Loss rate: 2.63%

Run 8: Report of SReAM — Data Link



Run 9: Statistics of SReAM

Start at: 2018-02-21 17:28:31

End at: 2018-02-21 17:29:01

Below is generated by plot.py at 2018-02-21 21:56:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 136.741 ms

Loss rate: 1.28%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 136.756 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 136.331 ms

Loss rate: 1.42%

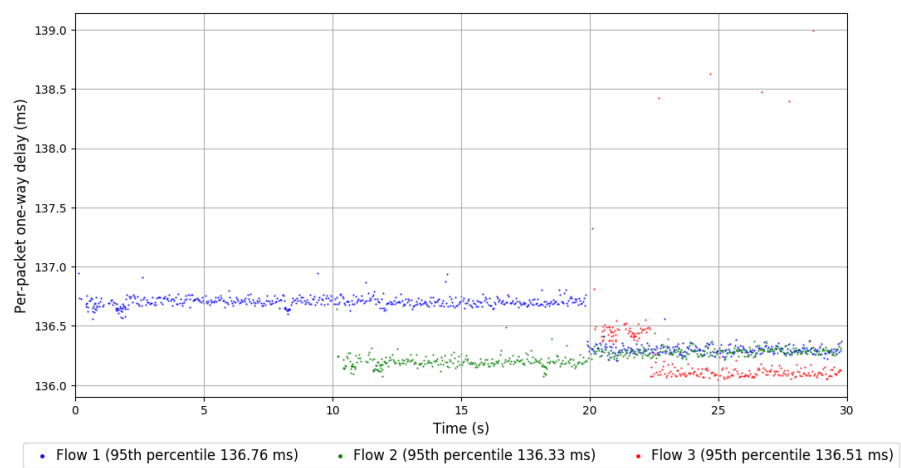
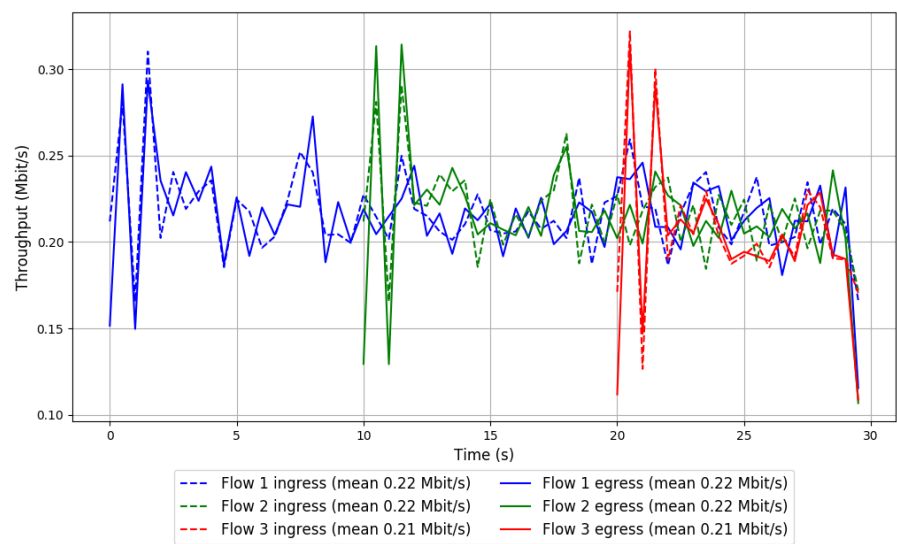
-- Flow 3:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 136.508 ms

Loss rate: 2.61%

Run 9: Report of SReAM — Data Link

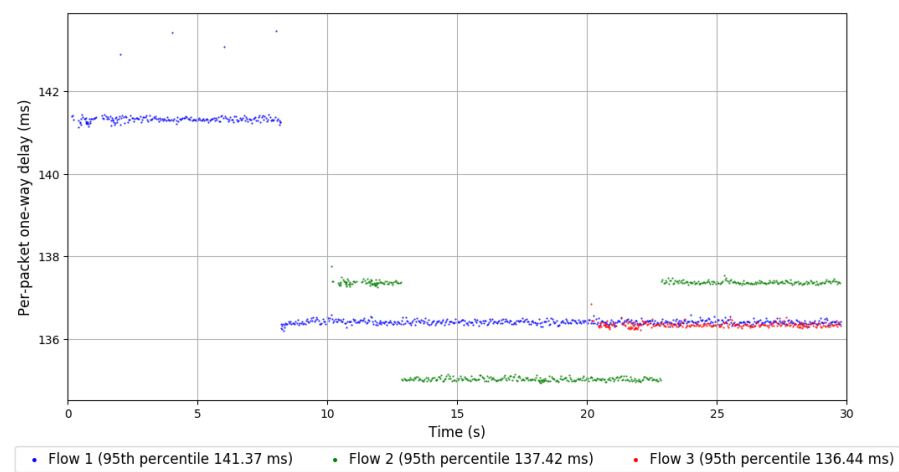
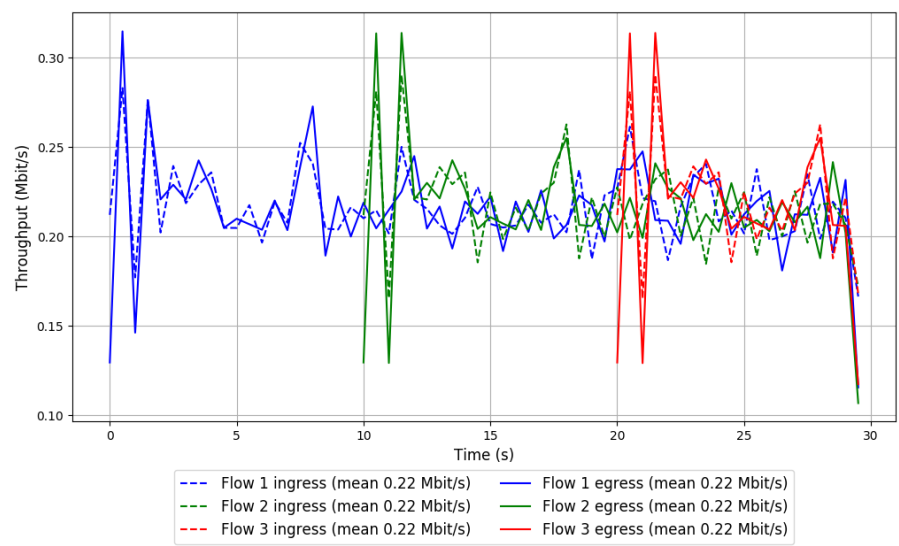


```
Run 10: Statistics of SReAM

Start at: 2018-02-21 17:49:08
End at: 2018-02-21 17:49:38

# Below is generated by plot.py at 2018-02-21 21:56:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 141.346 ms
Loss rate: 1.30%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 141.374 ms
Loss rate: 0.77%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 137.421 ms
Loss rate: 1.42%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.439 ms
Loss rate: 2.63%
```

Run 10: Report of SReAM — Data Link

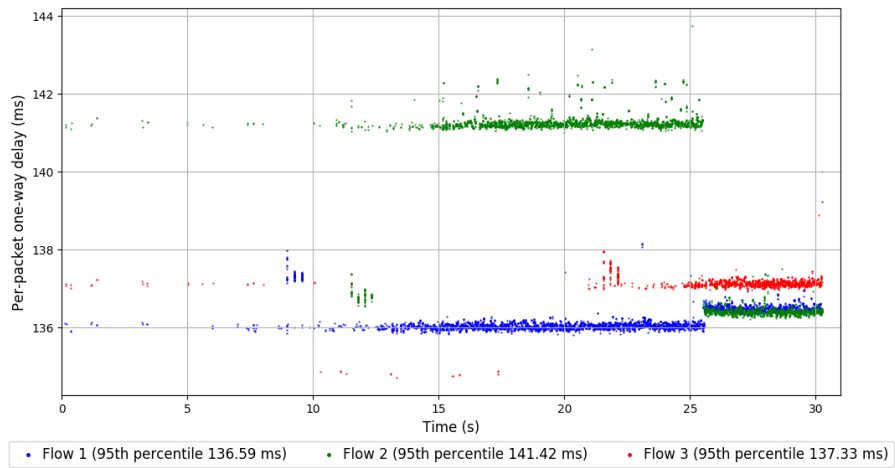
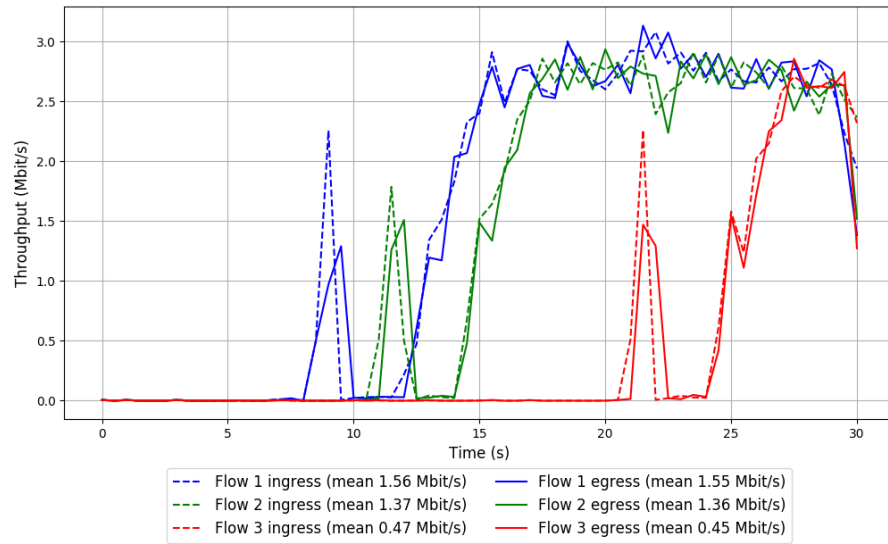


```
Run 1: Statistics of WebRTC media

Start at: 2018-02-21 14:32:51
End at: 2018-02-21 14:33:21

# Below is generated by plot.py at 2018-02-21 21:56:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.36 Mbit/s
95th percentile per-packet one-way delay: 141.304 ms
Loss rate: 2.18%
-- Flow 1:
Average throughput: 1.55 Mbit/s
95th percentile per-packet one-way delay: 136.595 ms
Loss rate: 1.43%
-- Flow 2:
Average throughput: 1.36 Mbit/s
95th percentile per-packet one-way delay: 141.421 ms
Loss rate: 1.78%
-- Flow 3:
Average throughput: 0.45 Mbit/s
95th percentile per-packet one-way delay: 137.332 ms
Loss rate: 5.76%
```


Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2018-02-21 14:53:36

End at: 2018-02-21 14:54:06

Below is generated by plot.py at 2018-02-21 21:56:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.66 Mbit/s

95th percentile per-packet one-way delay: 137.253 ms

Loss rate: 1.76%

-- Flow 1:

Average throughput: 2.02 Mbit/s

95th percentile per-packet one-way delay: 137.295 ms

Loss rate: 0.95%

-- Flow 2:

Average throughput: 1.25 Mbit/s

95th percentile per-packet one-way delay: 136.610 ms

Loss rate: 1.96%

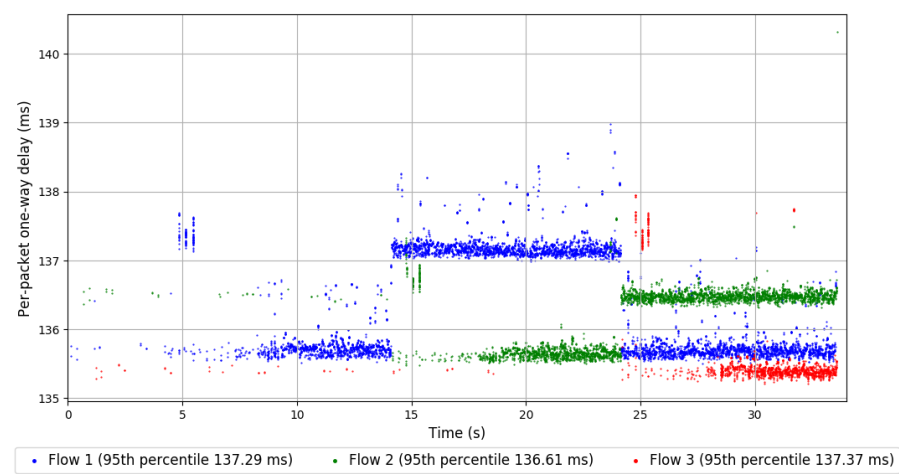
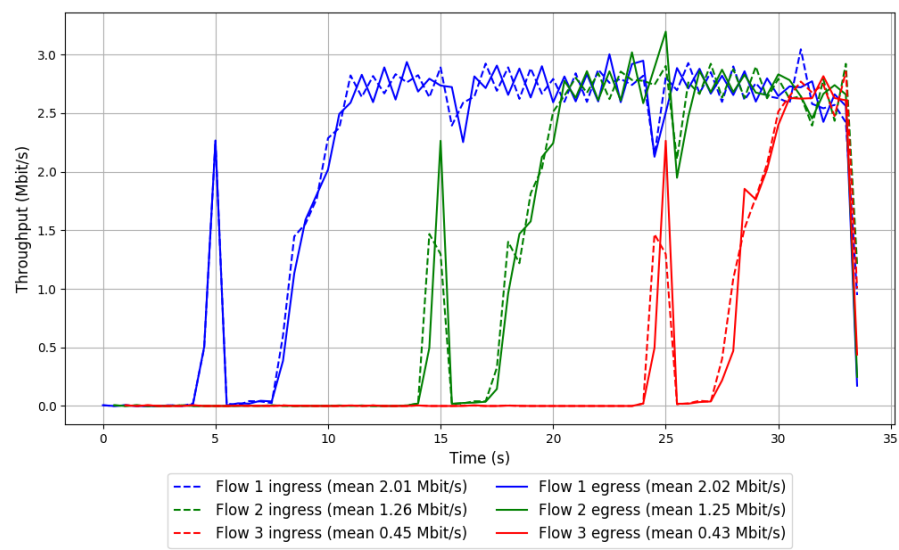
-- Flow 3:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 137.370 ms

Loss rate: 4.90%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2018-02-21 15:14:06

End at: 2018-02-21 15:14:36

Below is generated by plot.py at 2018-02-21 21:56:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.67 Mbit/s

95th percentile per-packet one-way delay: 140.682 ms

Loss rate: 1.80%

-- Flow 1:

Average throughput: 2.04 Mbit/s

95th percentile per-packet one-way delay: 136.906 ms

Loss rate: 0.96%

-- Flow 2:

Average throughput: 1.25 Mbit/s

95th percentile per-packet one-way delay: 135.367 ms

Loss rate: 1.92%

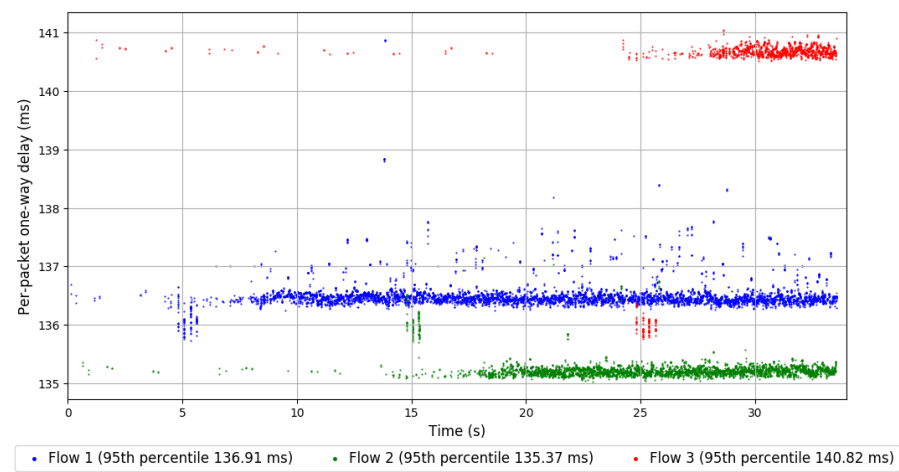
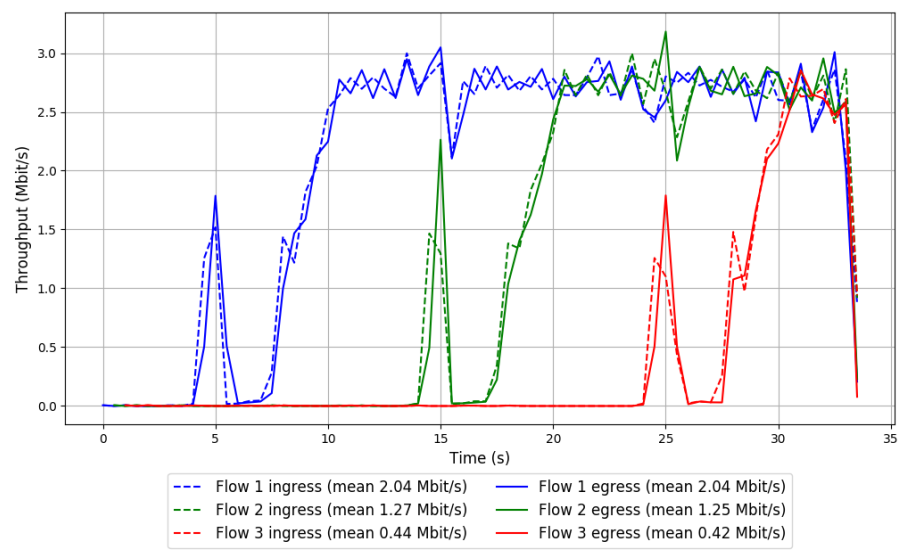
-- Flow 3:

Average throughput: 0.42 Mbit/s

95th percentile per-packet one-way delay: 140.823 ms

Loss rate: 5.51%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2018-02-21 15:34:25

End at: 2018-02-21 15:34:55

Below is generated by plot.py at 2018-02-21 21:56:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.68 Mbit/s

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

Loss rate: 1.92%

-- Flow 1:

Average throughput: 2.04 Mbit/s

95th percentile per-packet one-way delay: 141.076 ms

Loss rate: 0.94%

-- Flow 2:

Average throughput: 1.25 Mbit/s

95th percentile per-packet one-way delay: 141.046 ms

Loss rate: 2.00%

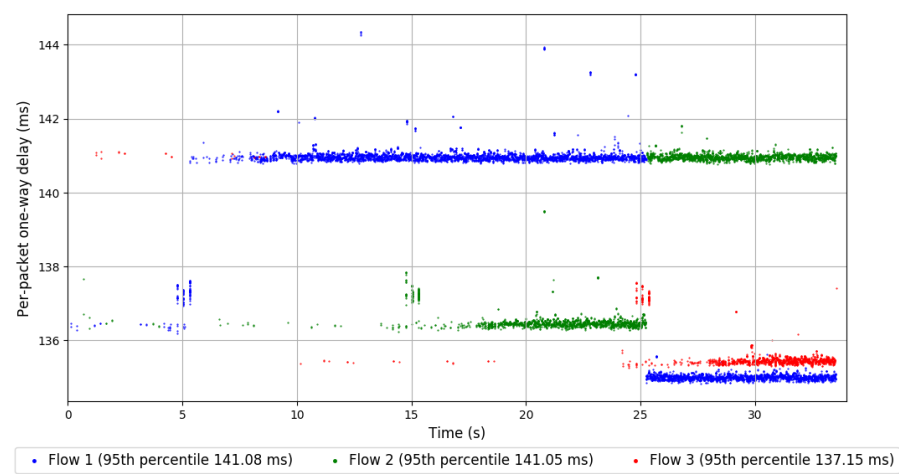
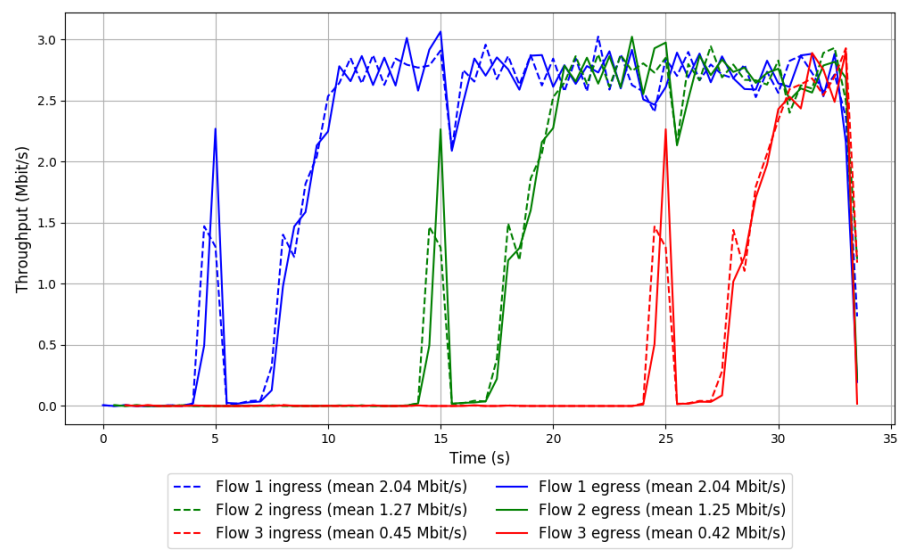
-- Flow 3:

Average throughput: 0.42 Mbit/s

95th percentile per-packet one-way delay: 137.146 ms

Loss rate: 6.30%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-02-21 15:54:53

End at: 2018-02-21 15:55:23

Below is generated by plot.py at 2018-02-21 21:56:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.68 Mbit/s

95th percentile per-packet one-way delay: 136.833 ms

Loss rate: 1.80%

-- Flow 1:

Average throughput: 2.04 Mbit/s

95th percentile per-packet one-way delay: 136.839 ms

Loss rate: 1.07%

-- Flow 2:

Average throughput: 1.24 Mbit/s

95th percentile per-packet one-way delay: 136.022 ms

Loss rate: 1.96%

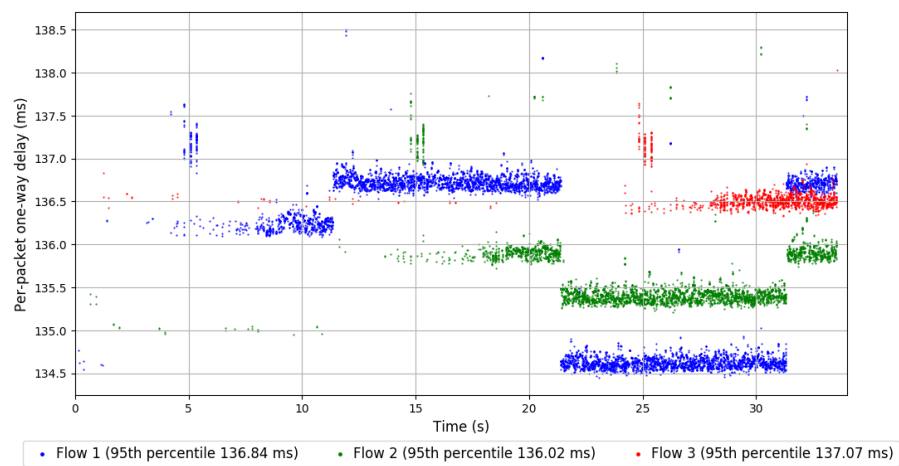
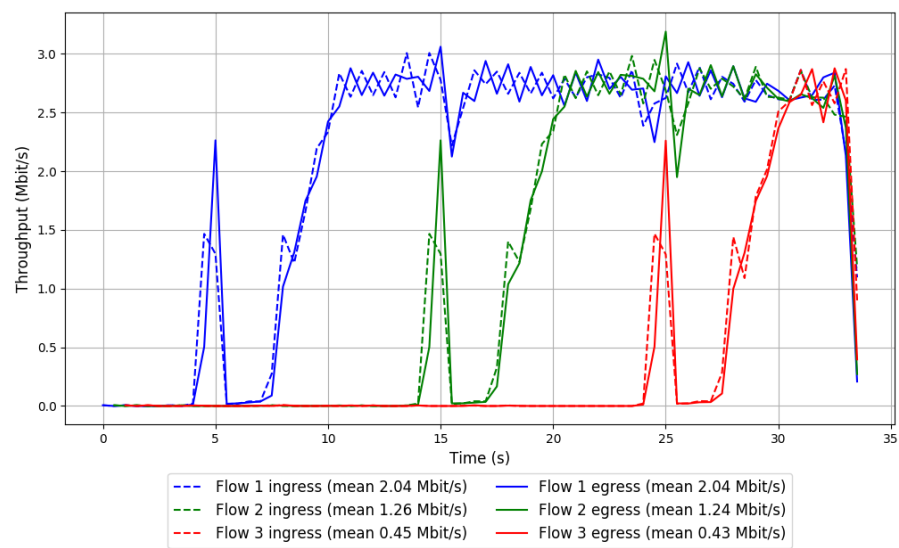
-- Flow 3:

Average throughput: 0.43 Mbit/s

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

Loss rate: 4.79%

Run 5: Report of WebRTC media — Data Link



Run 6: Statistics of WebRTC media

Start at: 2018-02-21 16:15:08

End at: 2018-02-21 16:15:38

Below is generated by plot.py at 2018-02-21 21:56:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.66 Mbit/s

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

Loss rate: 1.85%

-- Flow 1:

Average throughput: 2.03 Mbit/s

95th percentile per-packet one-way delay: 137.084 ms

Loss rate: 1.11%

-- Flow 2:

Average throughput: 1.25 Mbit/s

95th percentile per-packet one-way delay: 136.744 ms

Loss rate: 1.67%

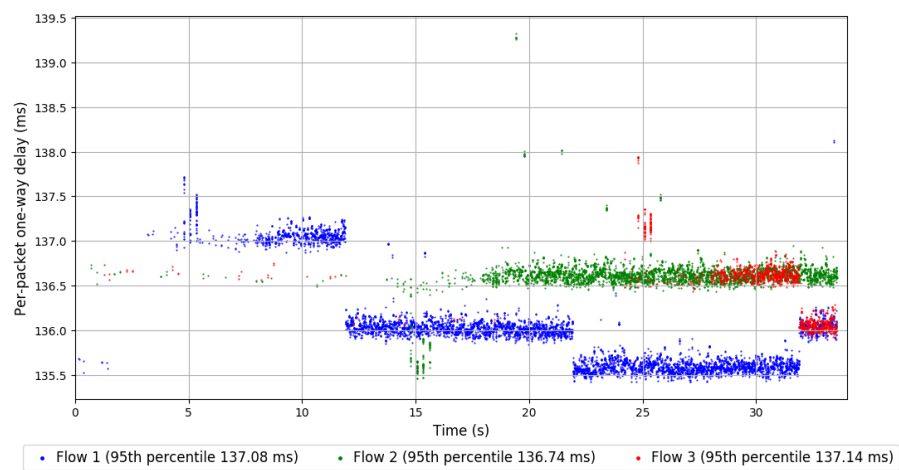
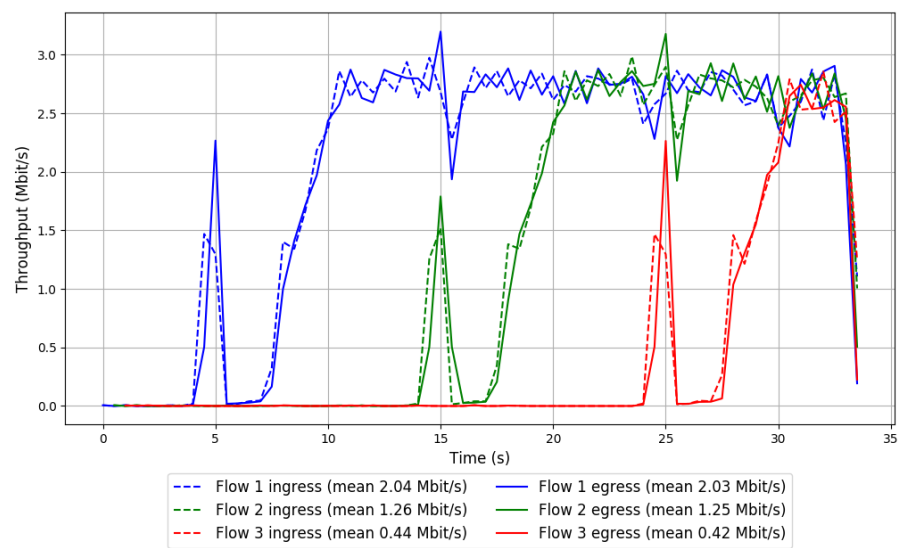
-- Flow 3:

Average throughput: 0.42 Mbit/s

95th percentile per-packet one-way delay: 137.141 ms

Loss rate: 5.93%

Run 6: Report of WebRTC media — Data Link



Run 7: Statistics of WebRTC media

Start at: 2018-02-21 16:35:59

End at: 2018-02-21 16:36:29

Below is generated by plot.py at 2018-02-21 21:56:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.69 Mbit/s

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

Loss rate: 1.81%

-- Flow 1:

Average throughput: 2.04 Mbit/s

95th percentile per-packet one-way delay: 136.818 ms

Loss rate: 1.01%

-- Flow 2:

Average throughput: 1.25 Mbit/s

95th percentile per-packet one-way delay: 135.986 ms

Loss rate: 1.72%

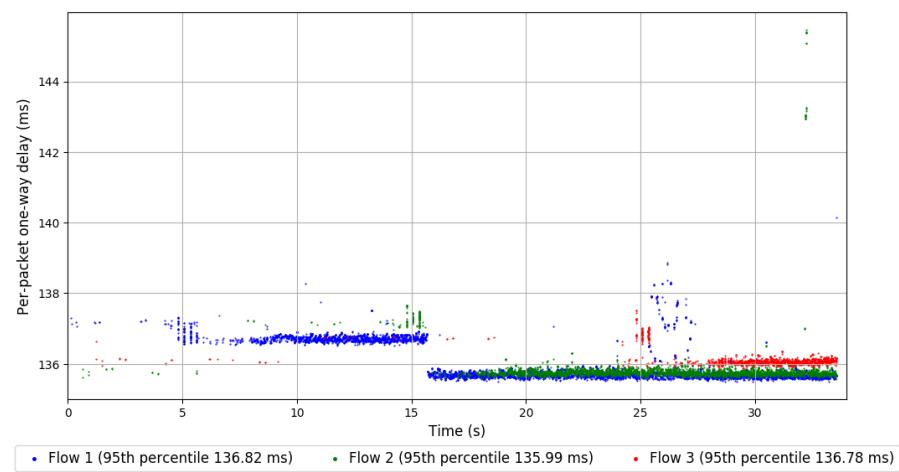
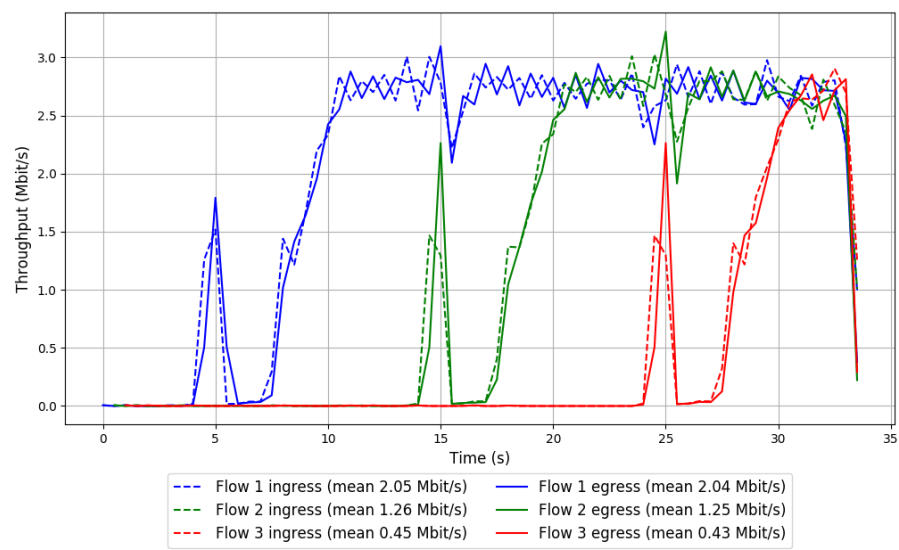
-- Flow 3:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 136.785 ms

Loss rate: 5.84%

Run 7: Report of WebRTC media — Data Link



Run 8: Statistics of WebRTC media

Start at: 2018-02-21 16:56:34

End at: 2018-02-21 16:57:04

Below is generated by plot.py at 2018-02-21 21:56:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.68 Mbit/s

95th percentile per-packet one-way delay: 141.277 ms

Loss rate: 1.95%

-- Flow 1:

Average throughput: 2.04 Mbit/s

95th percentile per-packet one-way delay: 141.303 ms

Loss rate: 1.06%

-- Flow 2:

Average throughput: 1.25 Mbit/s

95th percentile per-packet one-way delay: 136.702 ms

Loss rate: 2.09%

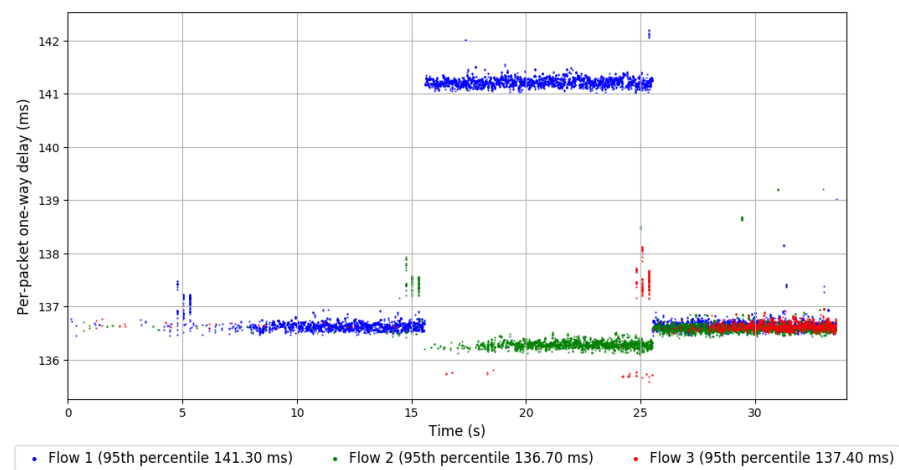
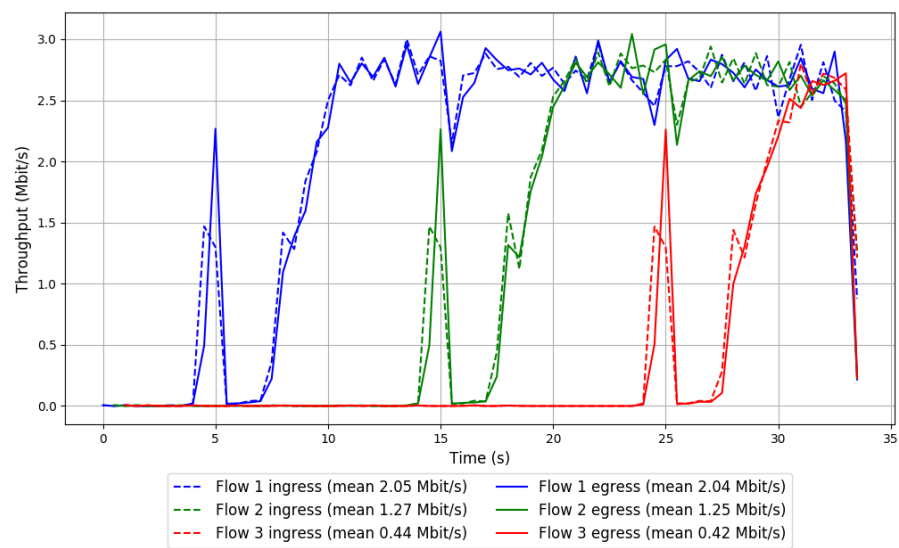
-- Flow 3:

Average throughput: 0.42 Mbit/s

95th percentile per-packet one-way delay: 137.401 ms

Loss rate: 5.81%

Run 8: Report of WebRTC media — Data Link



Run 9: Statistics of WebRTC media

Start at: 2018-02-21 17:16:50

End at: 2018-02-21 17:17:20

Below is generated by plot.py at 2018-02-21 21:56:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.67 Mbit/s

95th percentile per-packet one-way delay: 141.302 ms

Loss rate: 1.83%

-- Flow 1:

Average throughput: 2.03 Mbit/s

95th percentile per-packet one-way delay: 141.335 ms

Loss rate: 1.06%

-- Flow 2:

Average throughput: 1.25 Mbit/s

95th percentile per-packet one-way delay: 137.353 ms

Loss rate: 1.72%

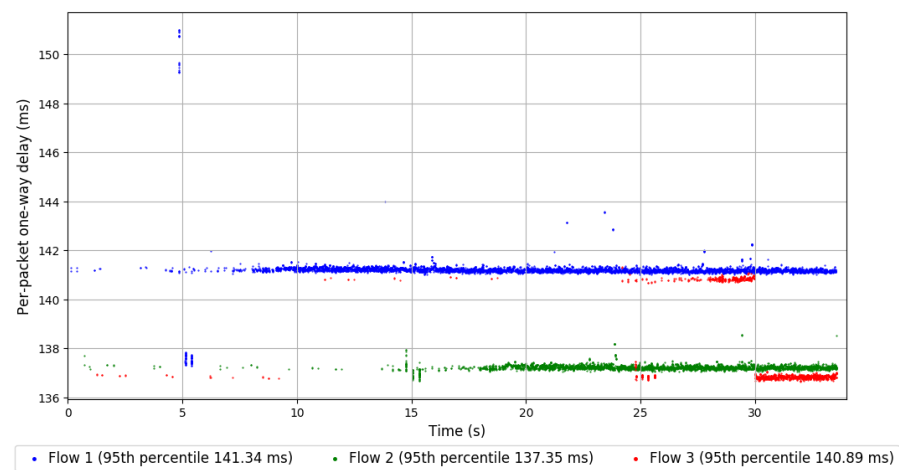
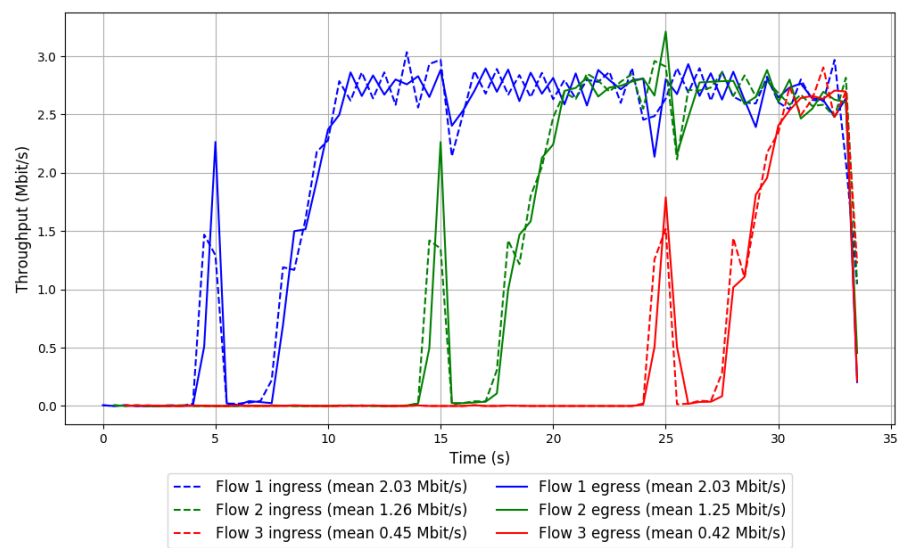
-- Flow 3:

Average throughput: 0.42 Mbit/s

95th percentile per-packet one-way delay: 140.889 ms

Loss rate: 5.76%

Run 9: Report of WebRTC media — Data Link



Run 10: Statistics of WebRTC media

Start at: 2018-02-21 17:37:18

End at: 2018-02-21 17:37:48

Below is generated by plot.py at 2018-02-21 21:56:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.69 Mbit/s

95th percentile per-packet one-way delay: 140.922 ms

Loss rate: 1.95%

-- Flow 1:

Average throughput: 2.04 Mbit/s

95th percentile per-packet one-way delay: 140.953 ms

Loss rate: 1.26%

-- Flow 2:

Average throughput: 1.25 Mbit/s

95th percentile per-packet one-way delay: 136.292 ms

Loss rate: 2.06%

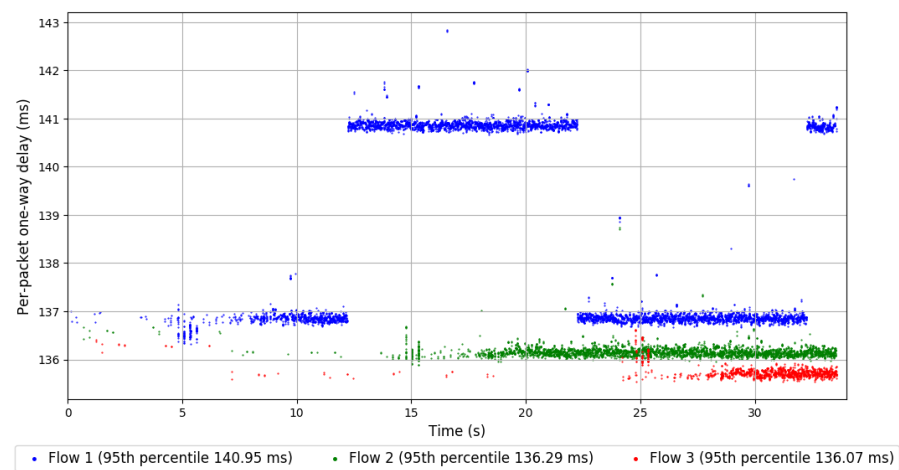
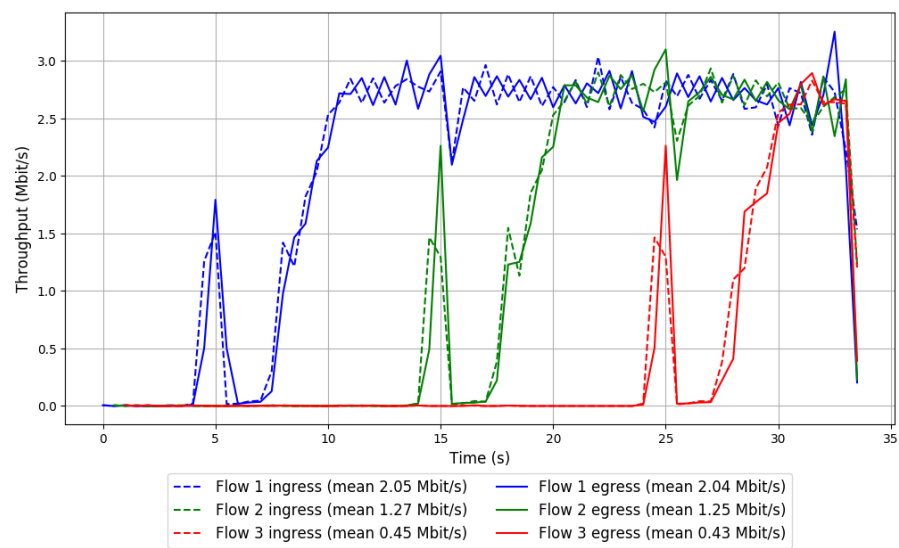
-- Flow 3:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 136.066 ms

Loss rate: 4.88%

Run 10: Report of WebRTC media — Data Link

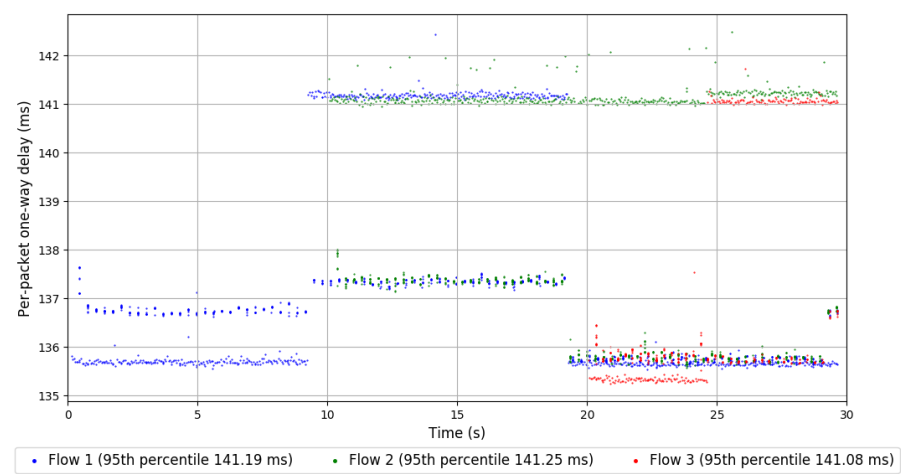
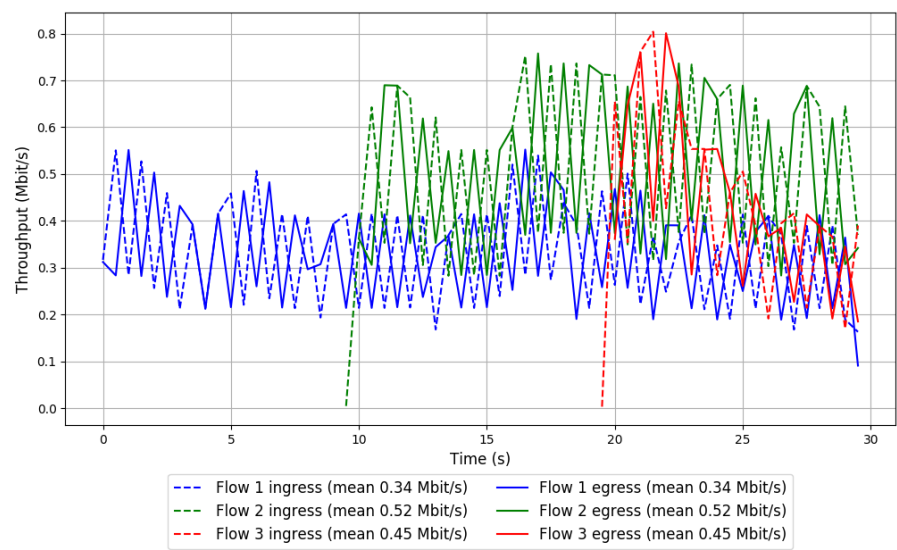


```
Run 1: Statistics of Sprout

Start at: 2018-02-21 14:48:11
End at: 2018-02-21 14:48:41

# Below is generated by plot.py at 2018-02-21 21:56:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.83 Mbit/s
95th percentile per-packet one-way delay: 141.203 ms
Loss rate: 1.33%
-- Flow 1:
Average throughput: 0.34 Mbit/s
95th percentile per-packet one-way delay: 141.192 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.52 Mbit/s
95th percentile per-packet one-way delay: 141.247 ms
Loss rate: 1.79%
-- Flow 3:
Average throughput: 0.45 Mbit/s
95th percentile per-packet one-way delay: 141.080 ms
Loss rate: 2.35%
```

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2018-02-21 15:09:22

End at: 2018-02-21 15:09:52

Below is generated by plot.py at 2018-02-21 21:56:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.75 Mbit/s

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

Loss rate: 1.29%

-- Flow 1:

Average throughput: 0.37 Mbit/s

95th percentile per-packet one-way delay: 136.110 ms

Loss rate: 0.95%

-- Flow 2:

Average throughput: 0.37 Mbit/s

95th percentile per-packet one-way delay: 137.240 ms

Loss rate: 1.42%

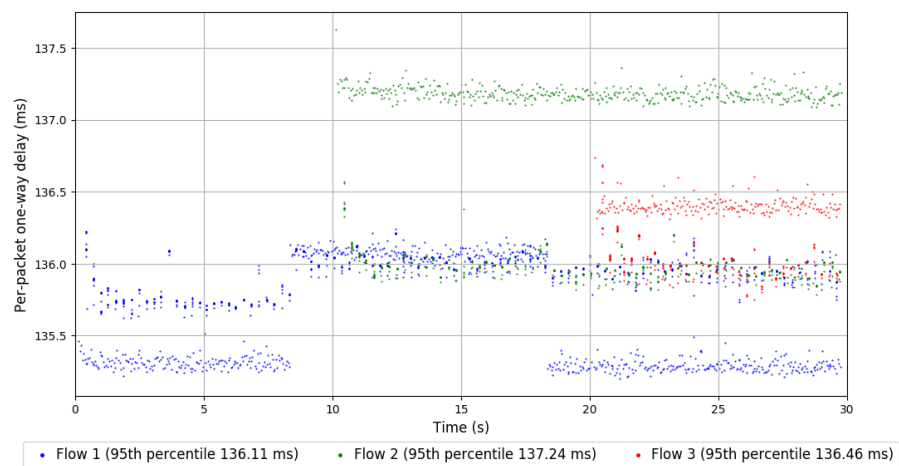
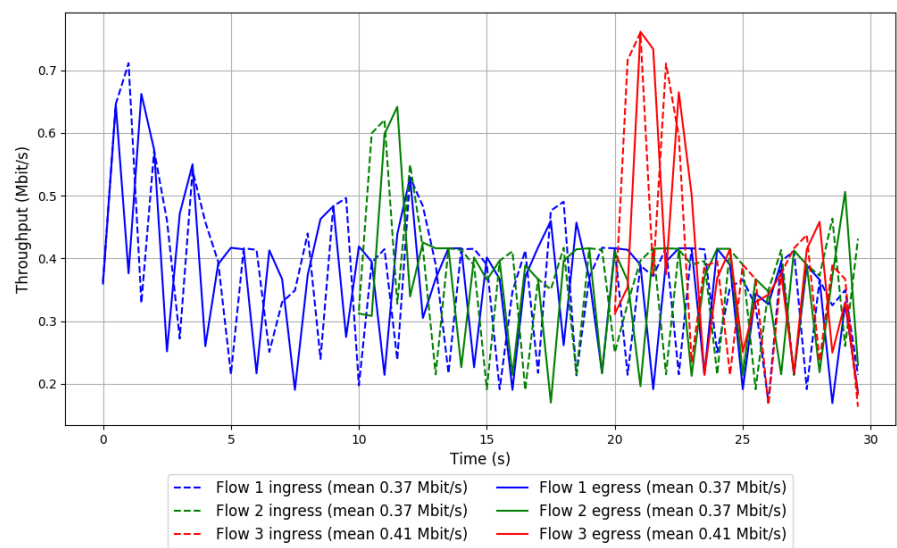
-- Flow 3:

Average throughput: 0.41 Mbit/s

95th percentile per-packet one-way delay: 136.458 ms

Loss rate: 2.00%

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2018-02-21 15:29:54

End at: 2018-02-21 15:30:24

Below is generated by plot.py at 2018-02-21 21:56:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.70 Mbit/s

95th percentile per-packet one-way delay: 162.370 ms

Loss rate: 0.95%

-- Flow 1:

Average throughput: 0.34 Mbit/s

95th percentile per-packet one-way delay: 137.216 ms

Loss rate: 0.81%

-- Flow 2:

Average throughput: 0.35 Mbit/s

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

Loss rate: 0.20%

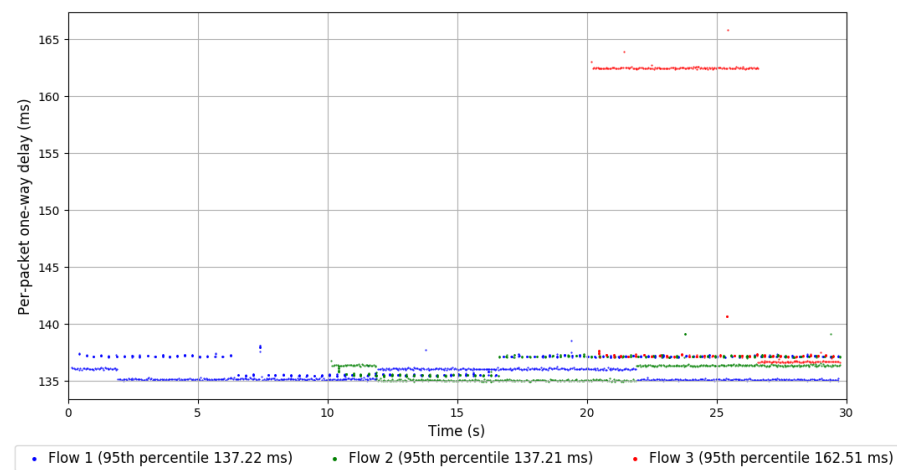
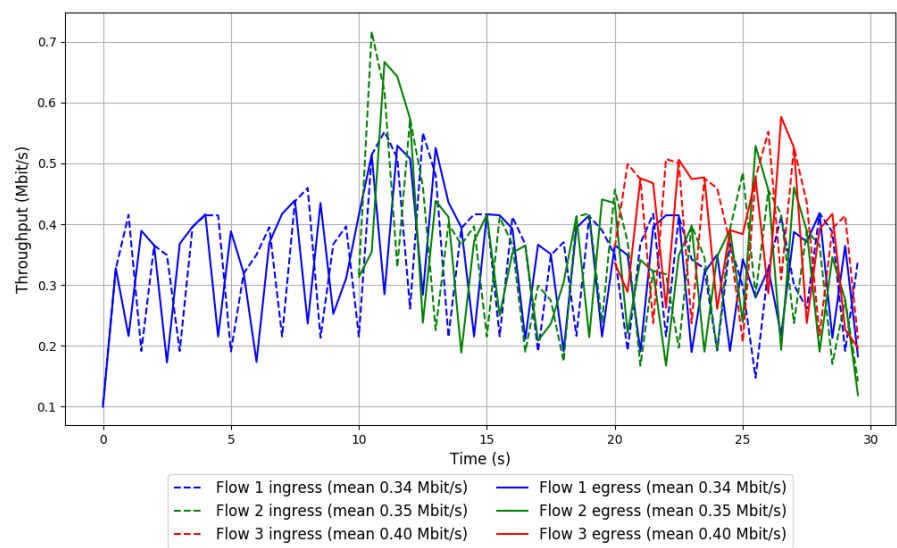
-- Flow 3:

Average throughput: 0.40 Mbit/s

95th percentile per-packet one-way delay: 162.507 ms

Loss rate: 2.63%

Run 3: Report of Sprout — Data Link



Run 4: Statistics of Sprout

Start at: 2018-02-21 15:50:19

End at: 2018-02-21 15:50:49

Below is generated by plot.py at 2018-02-21 21:56:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.79 Mbit/s

95th percentile per-packet one-way delay: 137.241 ms

Loss rate: 1.63%

-- Flow 1:

Average throughput: 0.39 Mbit/s

95th percentile per-packet one-way delay: 137.294 ms

Loss rate: 1.32%

-- Flow 2:

Average throughput: 0.40 Mbit/s

95th percentile per-packet one-way delay: 137.171 ms

Loss rate: 1.59%

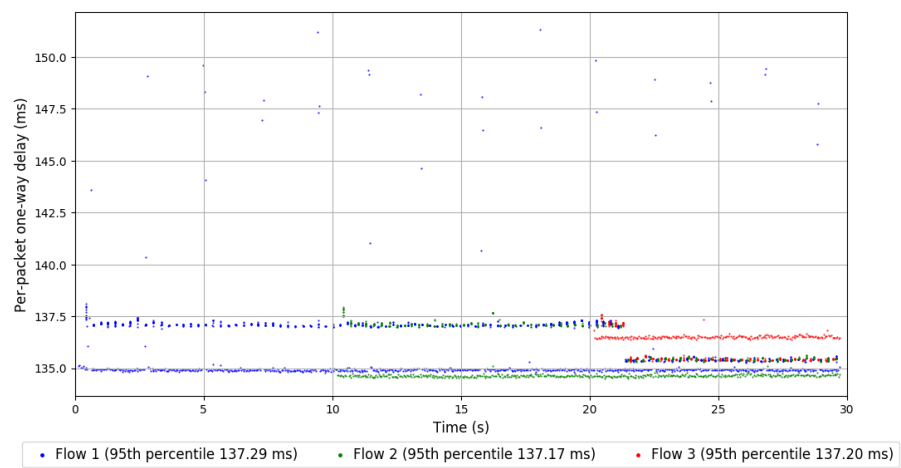
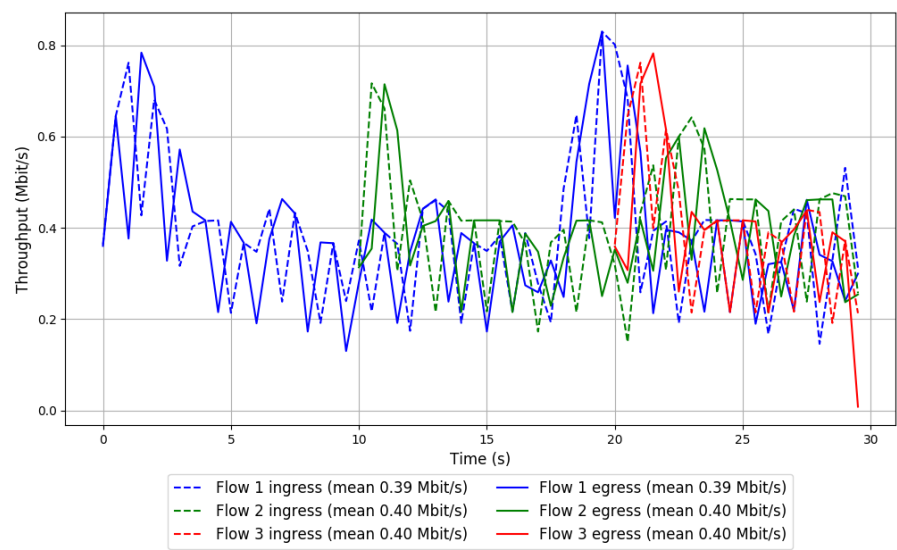
-- Flow 3:

Average throughput: 0.40 Mbit/s

95th percentile per-packet one-way delay: 137.198 ms

Loss rate: 2.63%

Run 4: Report of Sprout — Data Link



Run 5: Statistics of Sprout

Start at: 2018-02-21 16:10:31

End at: 2018-02-21 16:11:01

Below is generated by plot.py at 2018-02-21 21:56:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.26 Mbit/s

95th percentile per-packet one-way delay: 140.598 ms

Loss rate: 1.35%

-- Flow 1:

Average throughput: 0.39 Mbit/s

95th percentile per-packet one-way delay: 137.309 ms

Loss rate: 0.79%

-- Flow 2:

Average throughput: 1.11 Mbit/s

95th percentile per-packet one-way delay: 140.636 ms

Loss rate: 1.88%

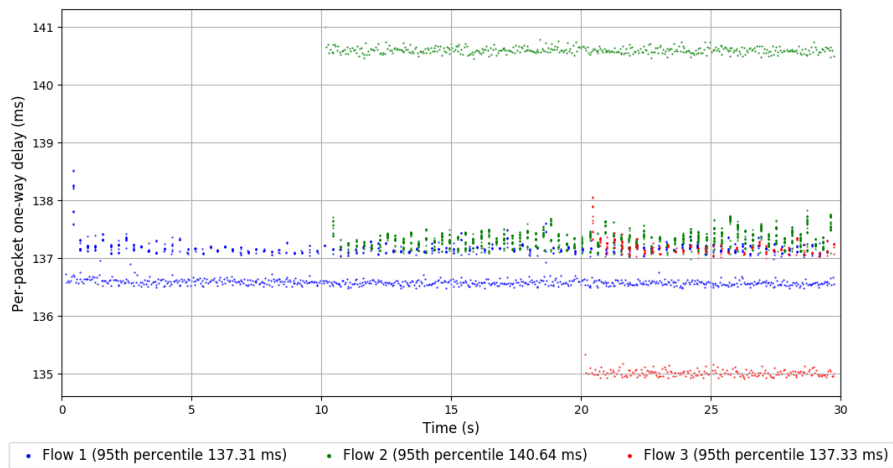
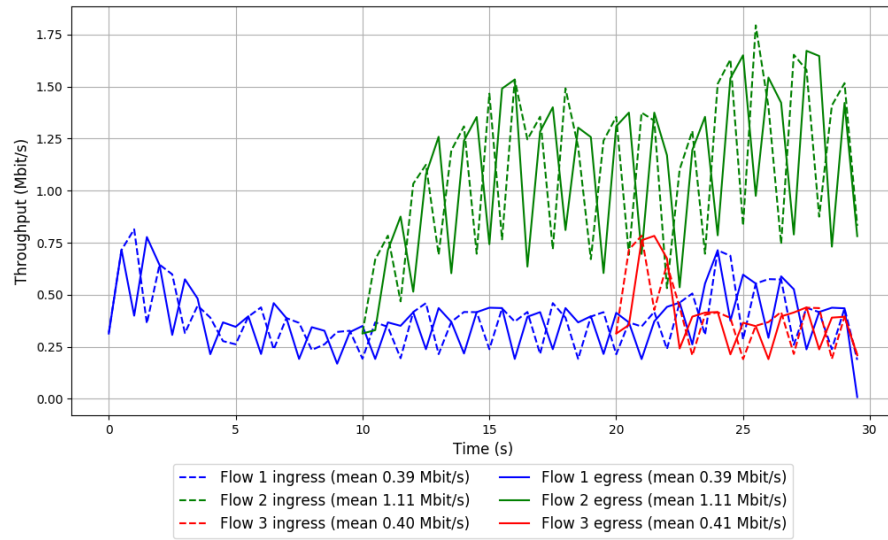
-- Flow 3:

Average throughput: 0.41 Mbit/s

95th percentile per-packet one-way delay: 137.331 ms

Loss rate: 0.10%

Run 5: Report of Sprout — Data Link



Run 6: Statistics of Sprout

Start at: 2018-02-21 16:30:58

End at: 2018-02-21 16:31:28

Below is generated by plot.py at 2018-02-21 21:56:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.80 Mbit/s

95th percentile per-packet one-way delay: 136.808 ms

Loss rate: 1.36%

-- Flow 1:

Average throughput: 0.40 Mbit/s

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

Loss rate: 0.87%

-- Flow 2:

Average throughput: 0.39 Mbit/s

95th percentile per-packet one-way delay: 136.793 ms

Loss rate: 1.50%

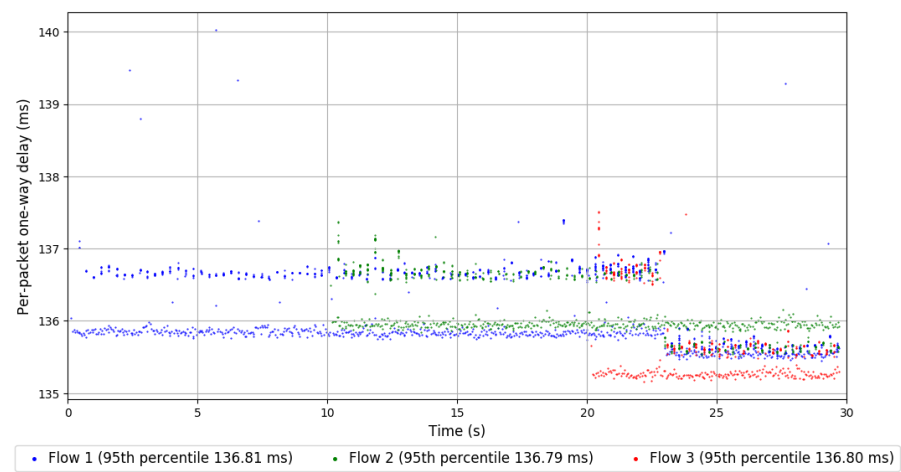
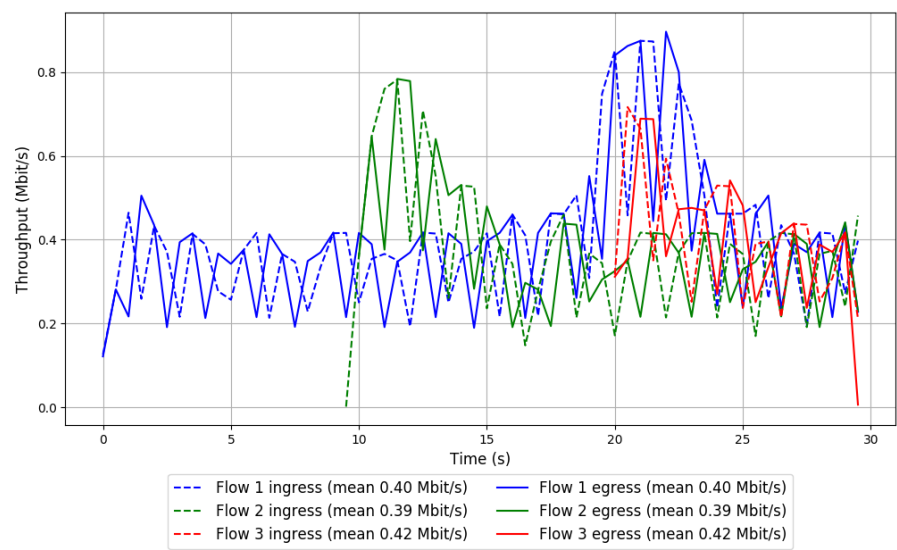
-- Flow 3:

Average throughput: 0.42 Mbit/s

95th percentile per-packet one-way delay: 136.800 ms

Loss rate: 2.55%

Run 6: Report of Sprout — Data Link



Run 7: Statistics of Sprout

Start at: 2018-02-21 16:51:43

End at: 2018-02-21 16:52:13

Below is generated by plot.py at 2018-02-21 21:56:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.75 Mbit/s

95th percentile per-packet one-way delay: 140.884 ms

Loss rate: 1.44%

-- Flow 1:

Average throughput: 0.37 Mbit/s

95th percentile per-packet one-way delay: 140.907 ms

Loss rate: 1.16%

-- Flow 2:

Average throughput: 0.39 Mbit/s

95th percentile per-packet one-way delay: 137.454 ms

Loss rate: 1.21%

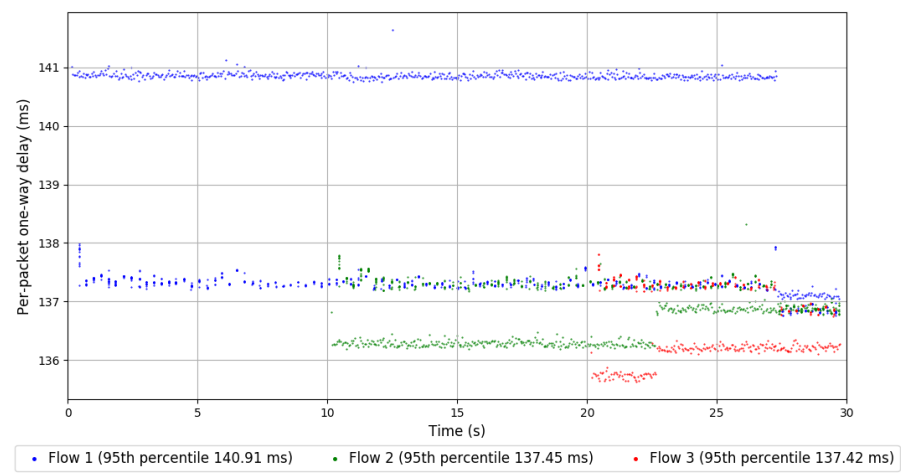
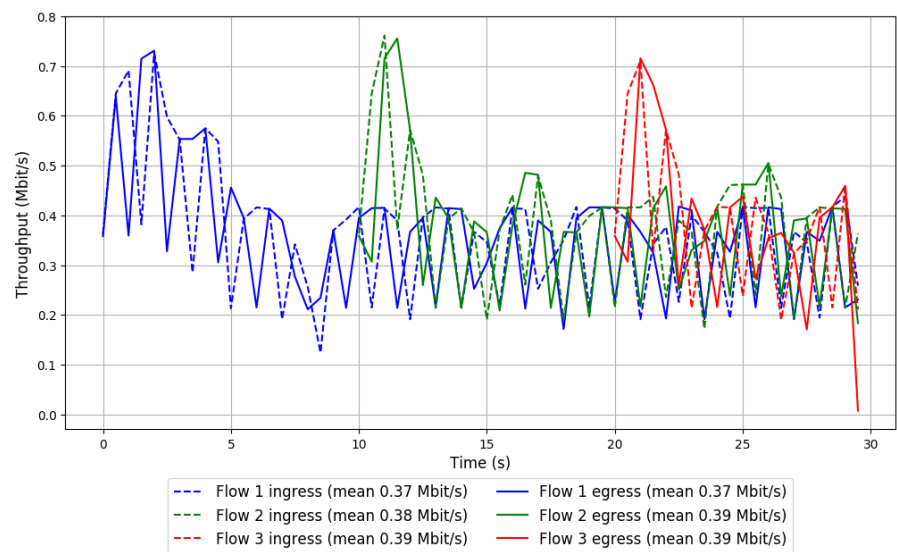
-- Flow 3:

Average throughput: 0.39 Mbit/s

95th percentile per-packet one-way delay: 137.423 ms

Loss rate: 2.67%

Run 7: Report of Sprout — Data Link



Run 8: Statistics of Sprout

Start at: 2018-02-21 17:11:52

End at: 2018-02-21 17:12:22

Below is generated by plot.py at 2018-02-21 21:56:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.74 Mbit/s

95th percentile per-packet one-way delay: 141.220 ms

Loss rate: 1.23%

-- Flow 1:

Average throughput: 0.36 Mbit/s

95th percentile per-packet one-way delay: 141.248 ms

Loss rate: 0.97%

-- Flow 2:

Average throughput: 0.36 Mbit/s

95th percentile per-packet one-way delay: 137.464 ms

Loss rate: 1.30%

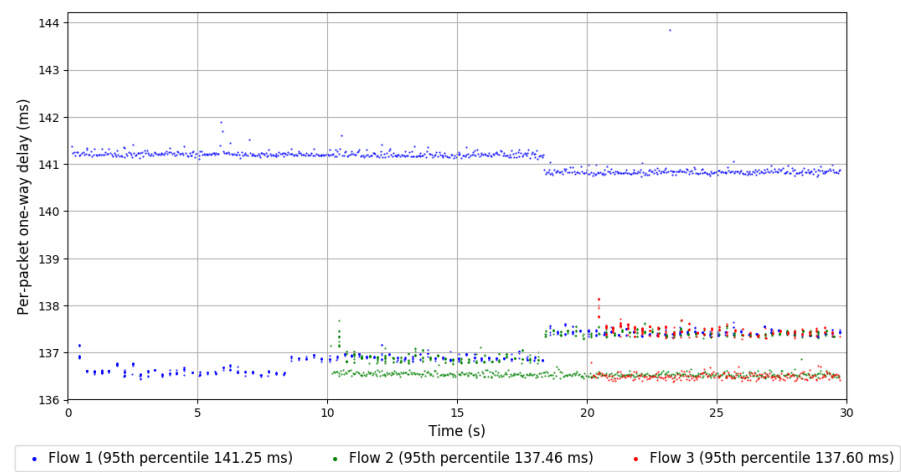
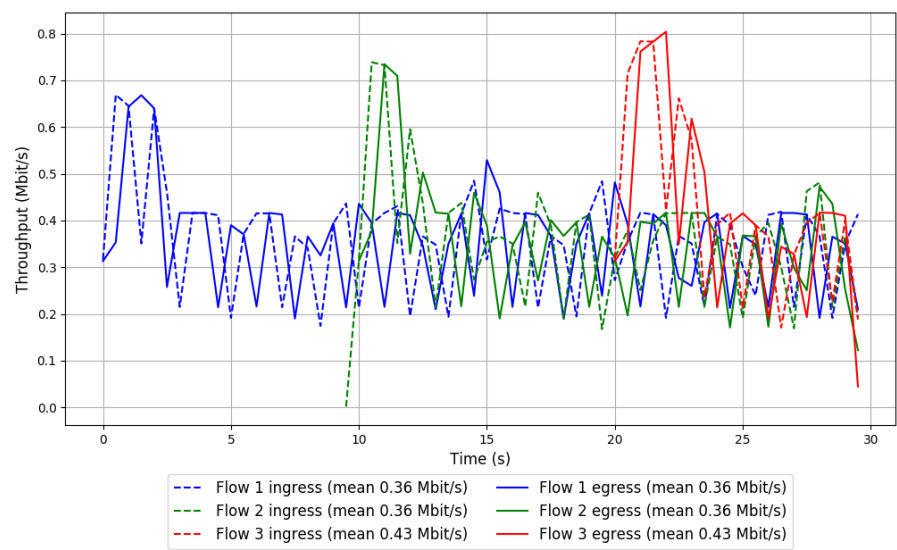
-- Flow 3:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 137.597 ms

Loss rate: 1.77%

Run 8: Report of Sprout — Data Link



Run 9: Statistics of Sprout

Start at: 2018-02-21 17:32:24

End at: 2018-02-21 17:32:54

Below is generated by plot.py at 2018-02-21 21:56:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.78 Mbit/s

95th percentile per-packet one-way delay: 141.189 ms

Loss rate: 1.19%

-- Flow 1:

Average throughput: 0.36 Mbit/s

95th percentile per-packet one-way delay: 140.925 ms

Loss rate: 0.76%

-- Flow 2:

Average throughput: 0.38 Mbit/s

95th percentile per-packet one-way delay: 141.246 ms

Loss rate: 1.37%

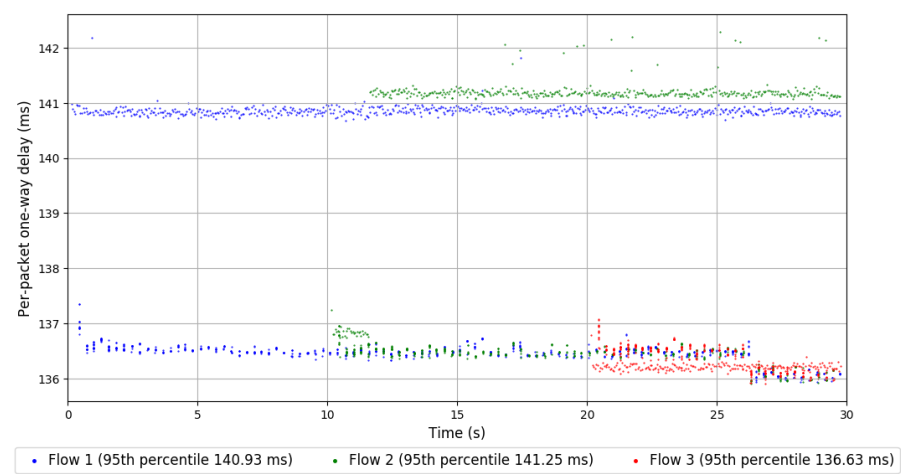
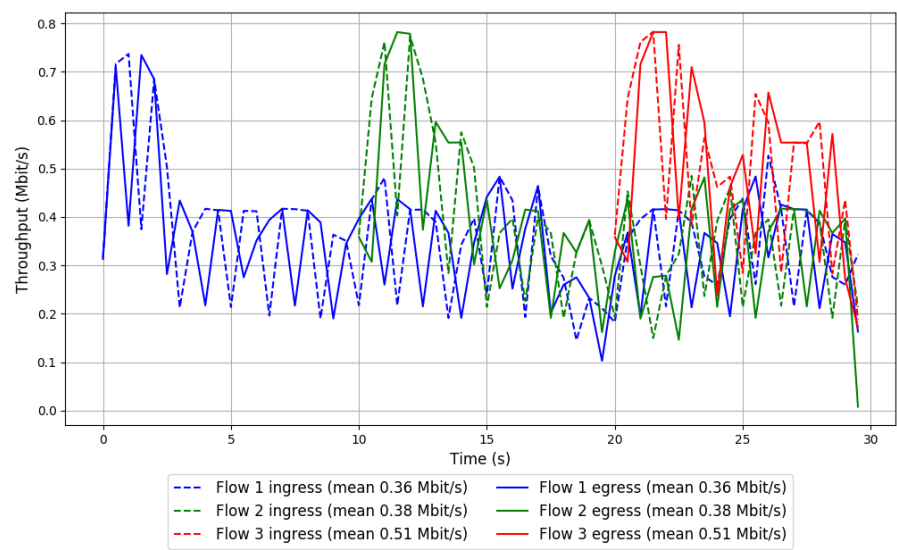
-- Flow 3:

Average throughput: 0.51 Mbit/s

95th percentile per-packet one-way delay: 136.631 ms

Loss rate: 1.83%

Run 9: Report of Sprout — Data Link



Run 10: Statistics of Sprout

Start at: 2018-02-21 17:53:05

End at: 2018-02-21 17:53:35

Below is generated by plot.py at 2018-02-21 21:56:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.77 Mbit/s

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

Loss rate: 1.42%

-- Flow 1:

Average throughput: 0.34 Mbit/s

95th percentile per-packet one-way delay: 137.269 ms

Loss rate: 1.02%

-- Flow 2:

Average throughput: 0.38 Mbit/s

95th percentile per-packet one-way delay: 136.688 ms

Loss rate: 1.61%

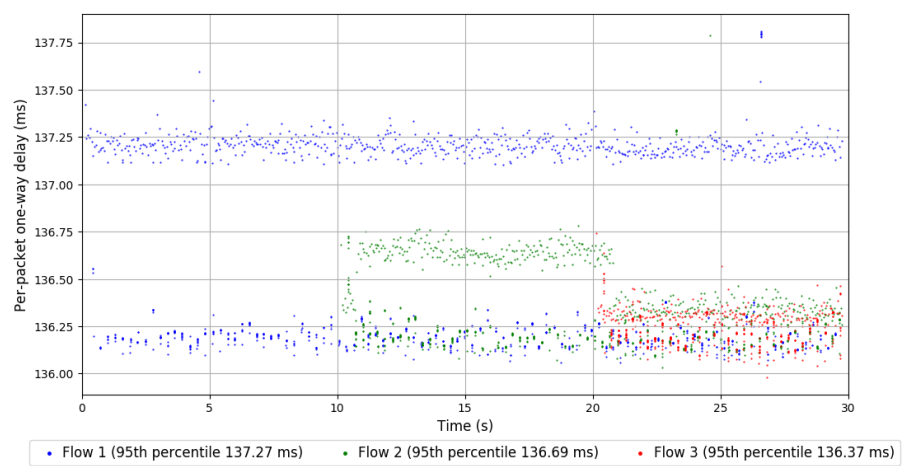
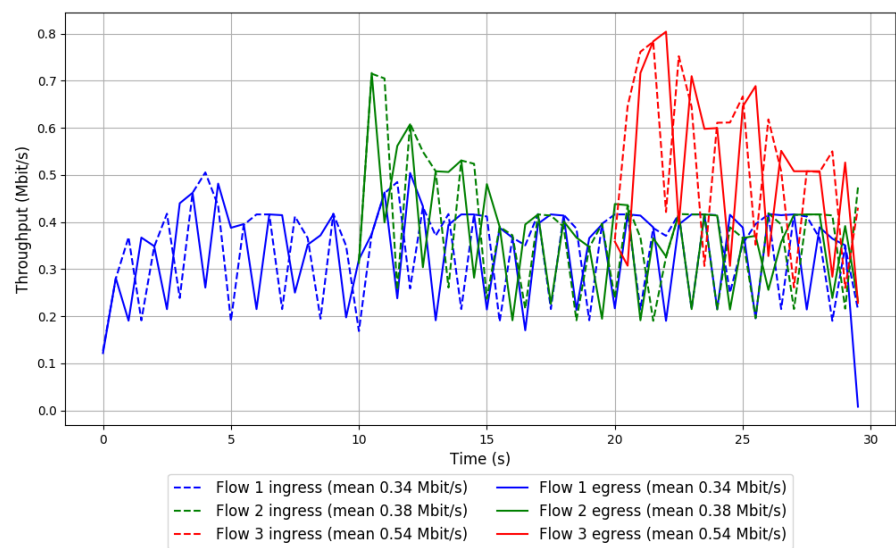
-- Flow 3:

Average throughput: 0.54 Mbit/s

95th percentile per-packet one-way delay: 136.370 ms

Loss rate: 1.94%

Run 10: Report of Sprout — Data Link

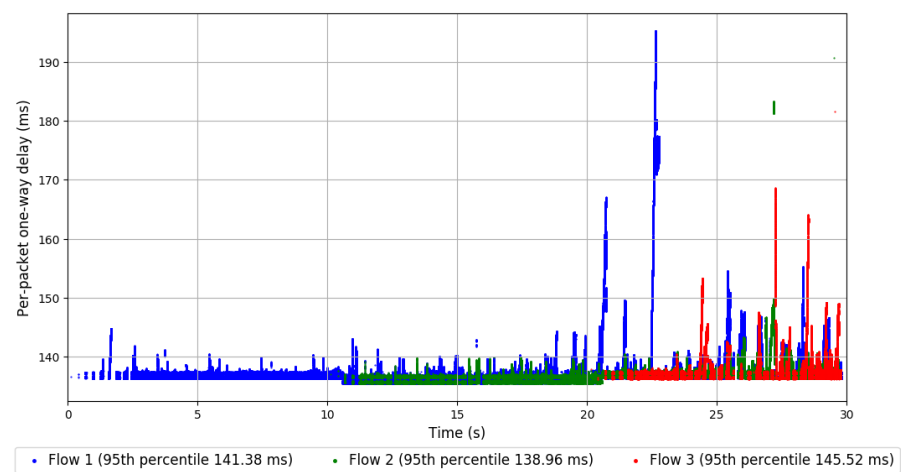
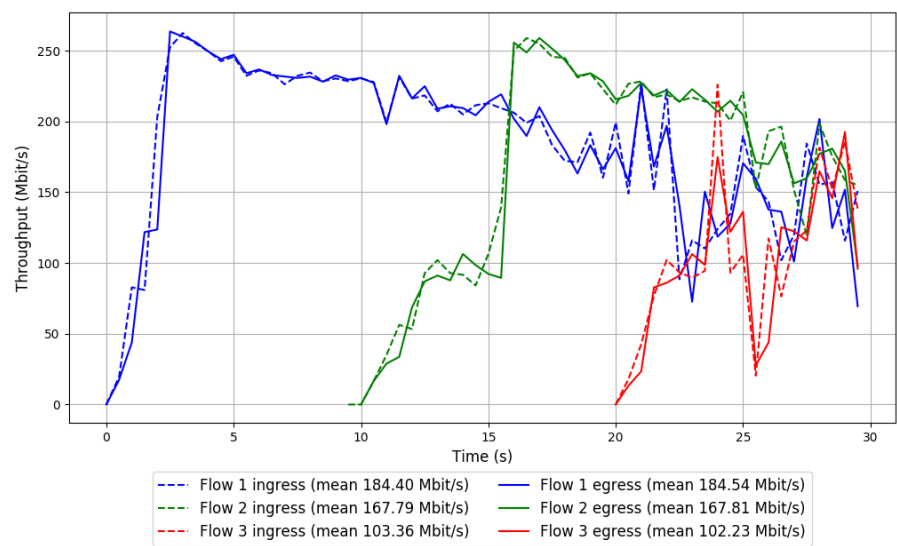


```
Run 1: Statistics of TaoVA-100x

Start at: 2018-02-21 14:49:00
End at: 2018-02-21 14:49:30

# Below is generated by plot.py at 2018-02-21 22:01:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 328.88 Mbit/s
95th percentile per-packet one-way delay: 140.848 ms
Loss rate: 1.39%
-- Flow 1:
Average throughput: 184.54 Mbit/s
95th percentile per-packet one-way delay: 141.377 ms
Loss rate: 0.84%
-- Flow 2:
Average throughput: 167.81 Mbit/s
95th percentile per-packet one-way delay: 138.962 ms
Loss rate: 1.48%
-- Flow 3:
Average throughput: 102.23 Mbit/s
95th percentile per-packet one-way delay: 145.518 ms
Loss rate: 4.07%
```


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

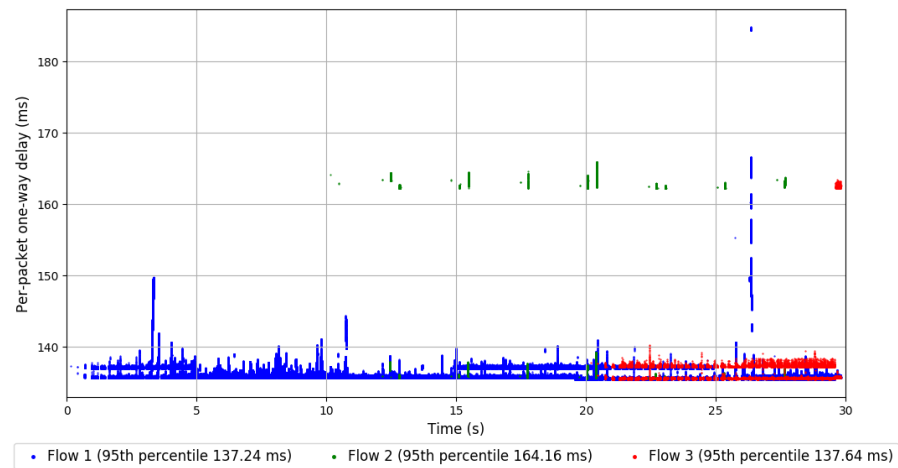
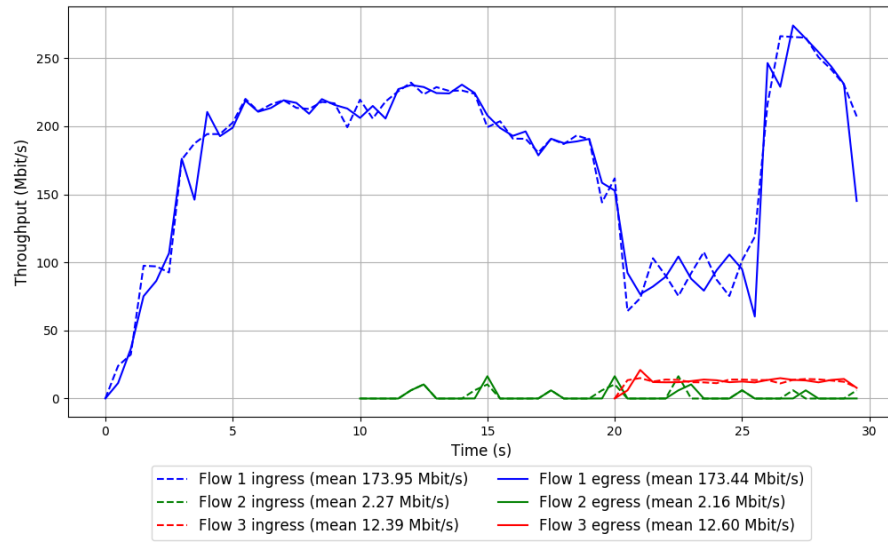


```
Run 2: Statistics of TaoVA-100x

Start at: 2018-02-21 15:10:11
End at: 2018-02-21 15:10:41

# Below is generated by plot.py at 2018-02-21 22:01:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 178.94 Mbit/s
95th percentile per-packet one-way delay: 137.270 ms
Loss rate: 1.25%
-- Flow 1:
Average throughput: 173.44 Mbit/s
95th percentile per-packet one-way delay: 137.236 ms
Loss rate: 1.20%
-- Flow 2:
Average throughput: 2.16 Mbit/s
95th percentile per-packet one-way delay: 164.164 ms
Loss rate: 6.73%
-- Flow 3:
Average throughput: 12.60 Mbit/s
95th percentile per-packet one-way delay: 137.639 ms
Loss rate: 1.12%
```

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

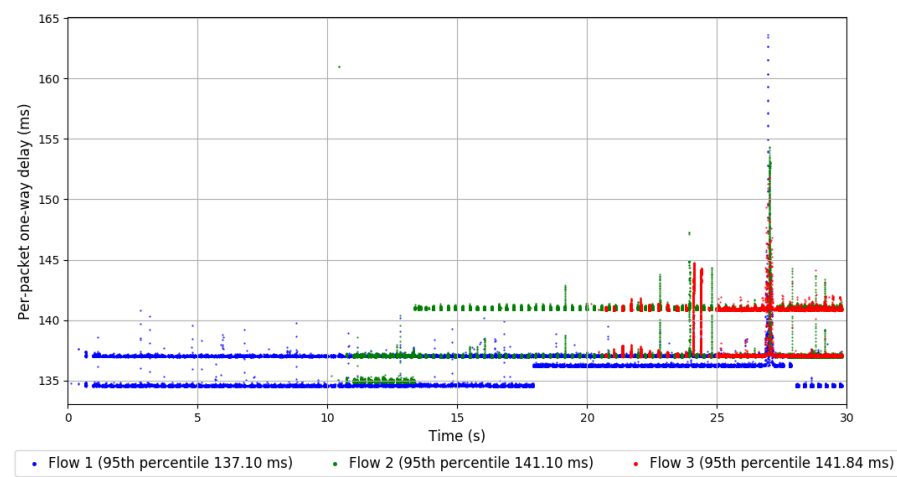
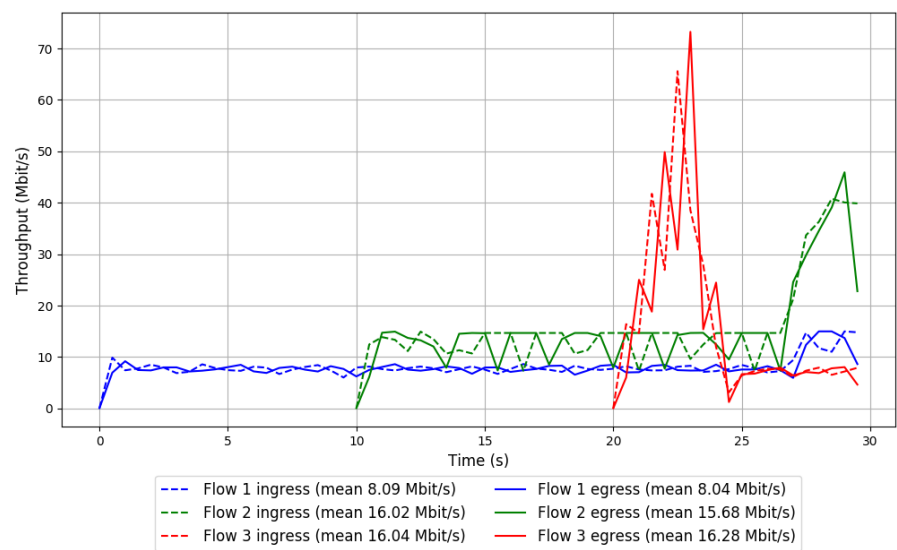


```
Run 3: Statistics of TaoVA-100x

Start at: 2018-02-21 15:30:43
End at: 2018-02-21 15:31:13

# Below is generated by plot.py at 2018-02-21 22:01:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.73 Mbit/s
95th percentile per-packet one-way delay: 141.078 ms
Loss rate: 2.38%
-- Flow 1:
Average throughput: 8.04 Mbit/s
95th percentile per-packet one-way delay: 137.104 ms
Loss rate: 1.54%
-- Flow 2:
Average throughput: 15.68 Mbit/s
95th percentile per-packet one-way delay: 141.097 ms
Loss rate: 3.53%
-- Flow 3:
Average throughput: 16.28 Mbit/s
95th percentile per-packet one-way delay: 141.844 ms
Loss rate: 1.34%
```

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



Run 4: Statistics of TaoVA-100x

Start at: 2018-02-21 15:51:08

End at: 2018-02-21 15:51:38

Below is generated by plot.py at 2018-02-21 22:01:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 20.64 Mbit/s

95th percentile per-packet one-way delay: 137.042 ms

Loss rate: 1.29%

-- Flow 1:

Average throughput: 13.36 Mbit/s

95th percentile per-packet one-way delay: 137.038 ms

Loss rate: 0.91%

-- Flow 2:

Average throughput: 7.40 Mbit/s

95th percentile per-packet one-way delay: 137.044 ms

Loss rate: 1.52%

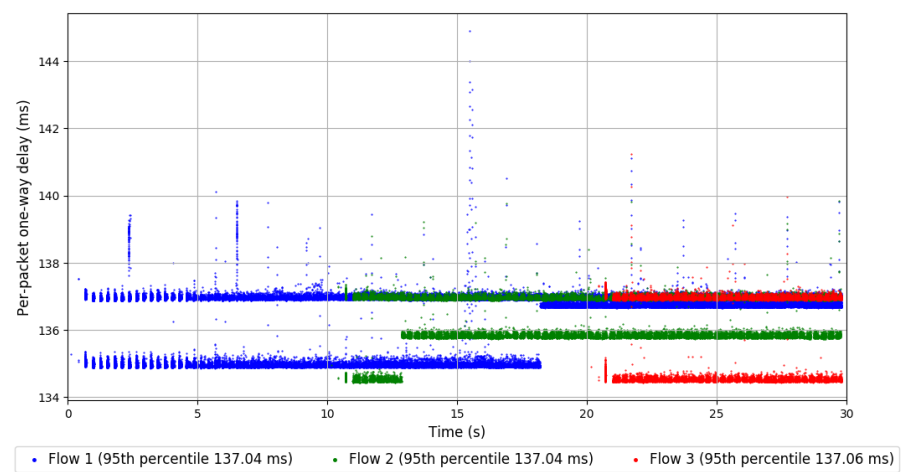
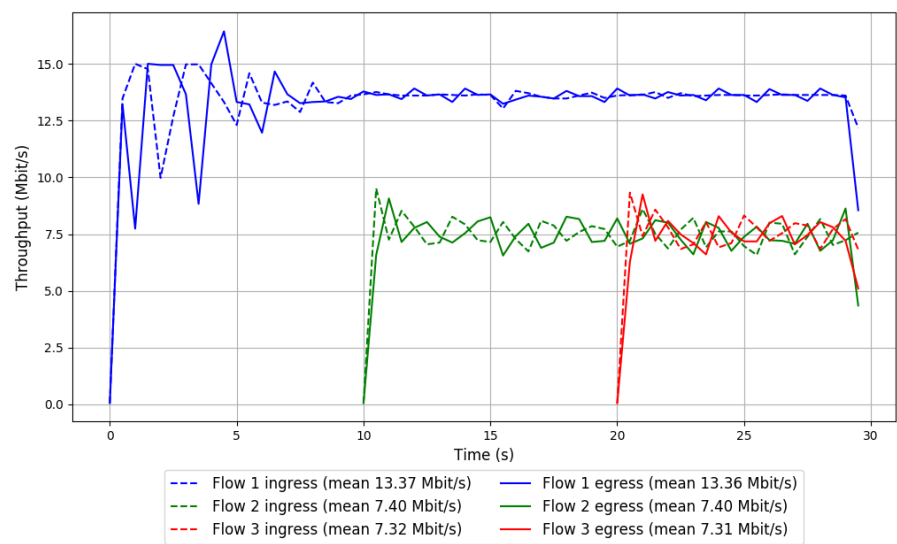
-- Flow 3:

Average throughput: 7.31 Mbit/s

95th percentile per-packet one-way delay: 137.058 ms

Loss rate: 2.87%

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



Run 5: Statistics of TaoVA-100x

Start at: 2018-02-21 16:11:20

End at: 2018-02-21 16:11:50

Below is generated by plot.py at 2018-02-21 22:01:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 25.94 Mbit/s

95th percentile per-packet one-way delay: 137.141 ms

Loss rate: 1.42%

-- Flow 1:

Average throughput: 13.07 Mbit/s

95th percentile per-packet one-way delay: 137.125 ms

Loss rate: 0.94%

-- Flow 2:

Average throughput: 13.15 Mbit/s

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

Loss rate: 1.39%

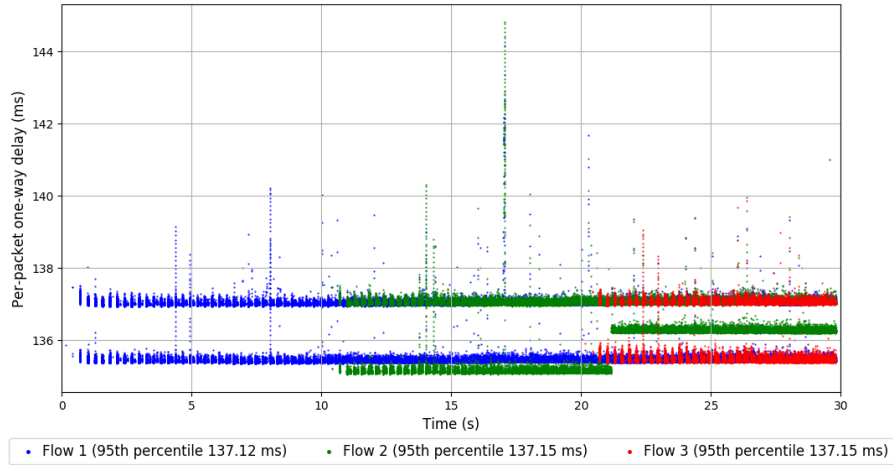
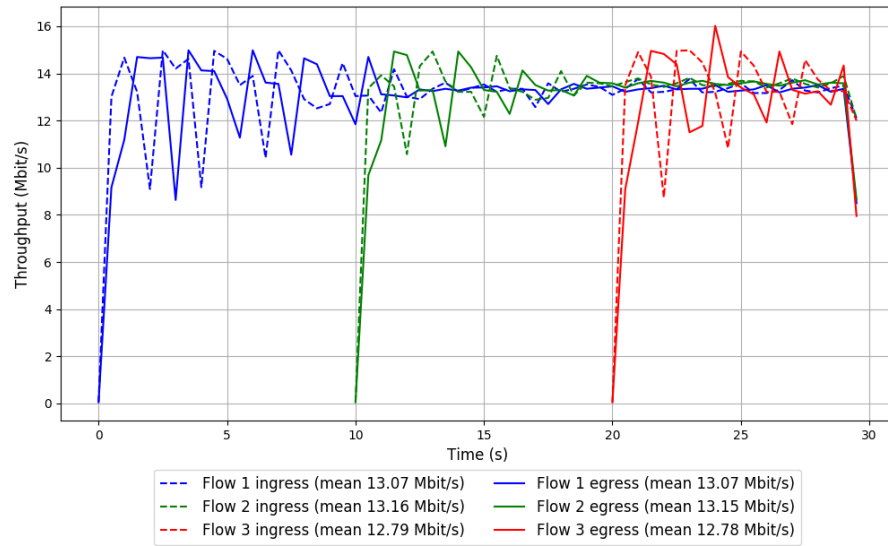
-- Flow 3:

Average throughput: 12.78 Mbit/s

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

Loss rate: 2.94%

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



Run 6: Statistics of TaoVA-100x

Start at: 2018-02-21 16:31:46

End at: 2018-02-21 16:32:16

Below is generated by plot.py at 2018-02-21 22:01:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 295.77 Mbit/s

95th percentile per-packet one-way delay: 137.327 ms

Loss rate: 0.85%

-- Flow 1:

Average throughput: 186.33 Mbit/s

95th percentile per-packet one-way delay: 136.992 ms

Loss rate: 0.48%

-- Flow 2:

Average throughput: 159.62 Mbit/s

95th percentile per-packet one-way delay: 138.328 ms

Loss rate: 1.42%

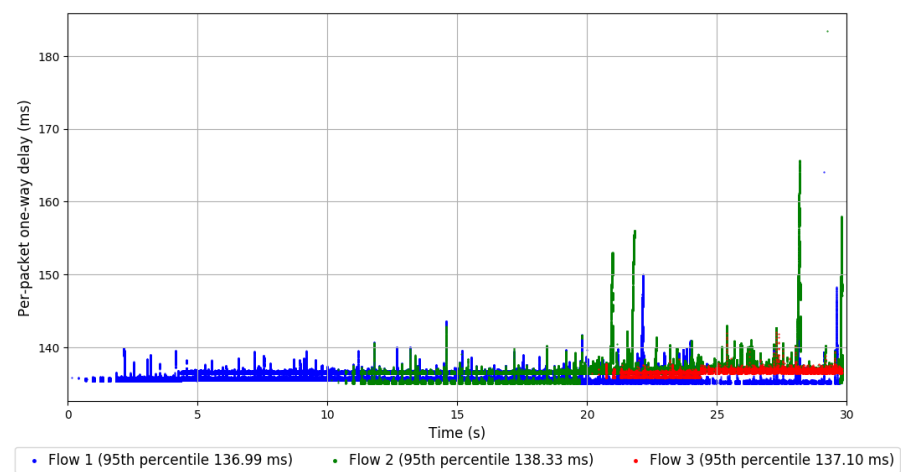
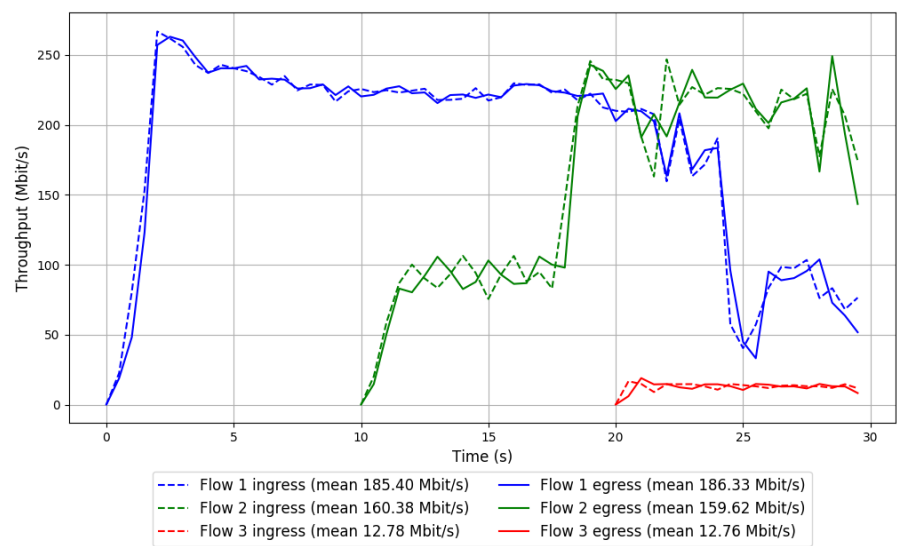
-- Flow 3:

Average throughput: 12.76 Mbit/s

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

Loss rate: 2.89%

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

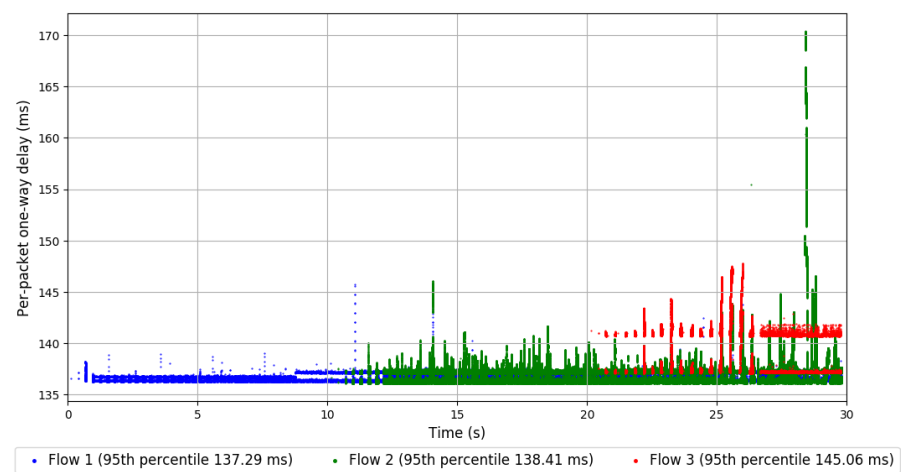
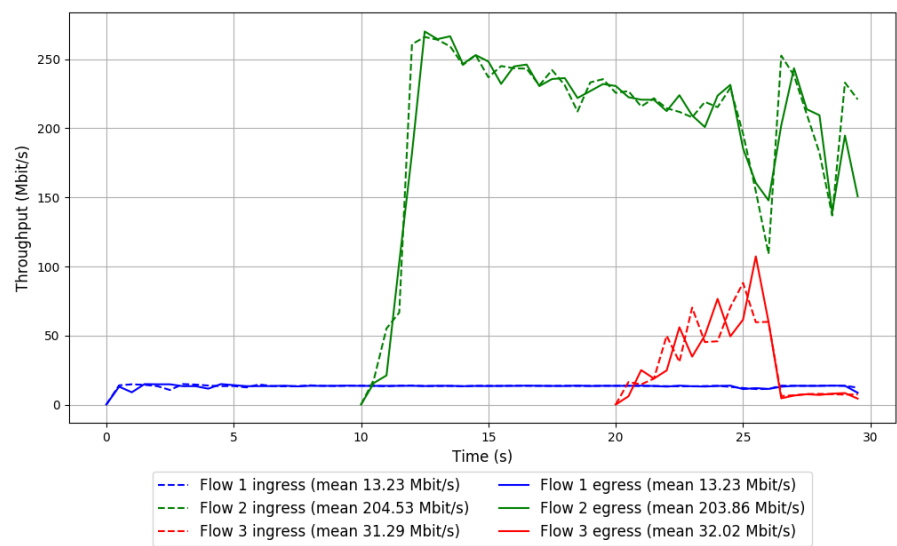


```
Run 7: Statistics of TaoVA-100x

Start at: 2018-02-21 16:52:32
End at: 2018-02-21 16:53:02

# Below is generated by plot.py at 2018-02-21 22:01:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 158.74 Mbit/s
95th percentile per-packet one-way delay: 140.833 ms
Loss rate: 1.63%
-- Flow 1:
Average throughput: 13.23 Mbit/s
95th percentile per-packet one-way delay: 137.290 ms
Loss rate: 0.94%
-- Flow 2:
Average throughput: 203.86 Mbit/s
95th percentile per-packet one-way delay: 138.406 ms
Loss rate: 1.76%
-- Flow 3:
Average throughput: 32.02 Mbit/s
95th percentile per-packet one-way delay: 145.055 ms
Loss rate: 0.70%
```

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



Run 8: Statistics of TaoVA-100x

Start at: 2018-02-21 17:12:41

End at: 2018-02-21 17:13:11

Below is generated by plot.py at 2018-02-21 22:01:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 267.65 Mbit/s

95th percentile per-packet one-way delay: 140.395 ms

Loss rate: 1.58%

-- Flow 1:

Average throughput: 199.47 Mbit/s

95th percentile per-packet one-way delay: 137.466 ms

Loss rate: 1.10%

-- Flow 2:

Average throughput: 63.16 Mbit/s

95th percentile per-packet one-way delay: 141.710 ms

Loss rate: 0.00%

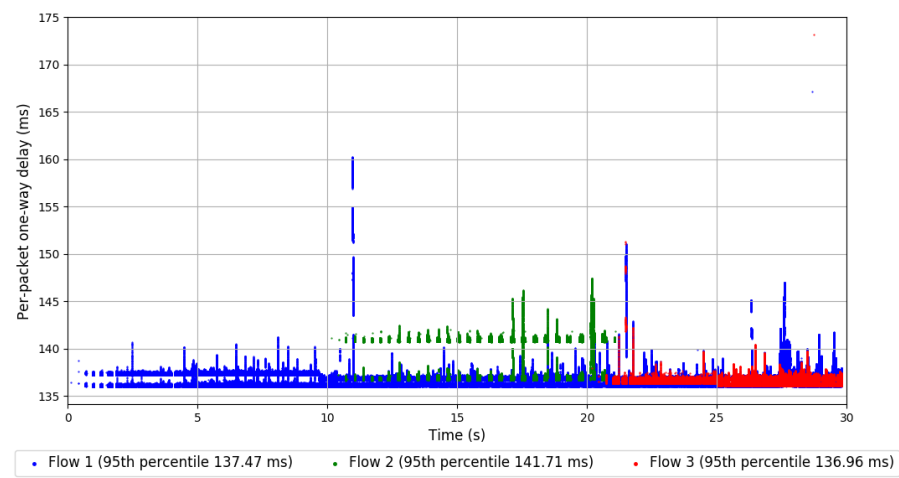
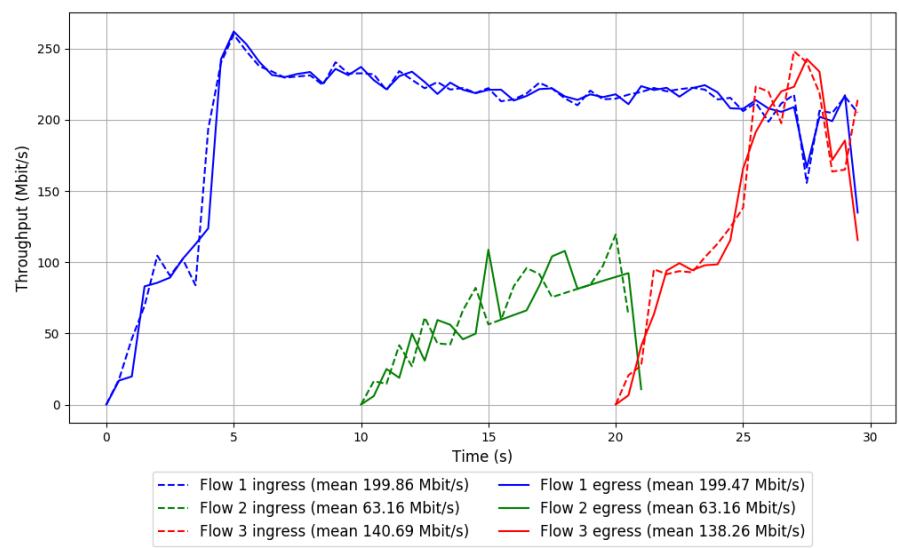
-- Flow 3:

Average throughput: 138.26 Mbit/s

95th percentile per-packet one-way delay: 136.957 ms

Loss rate: 4.43%

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

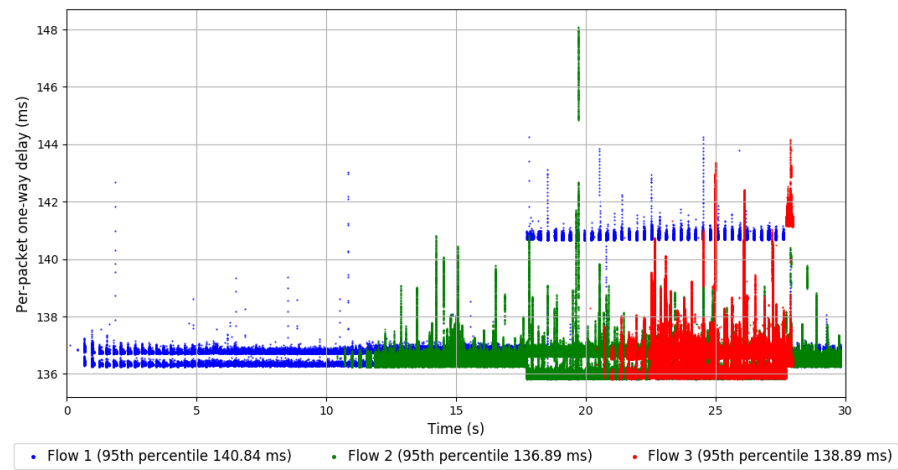
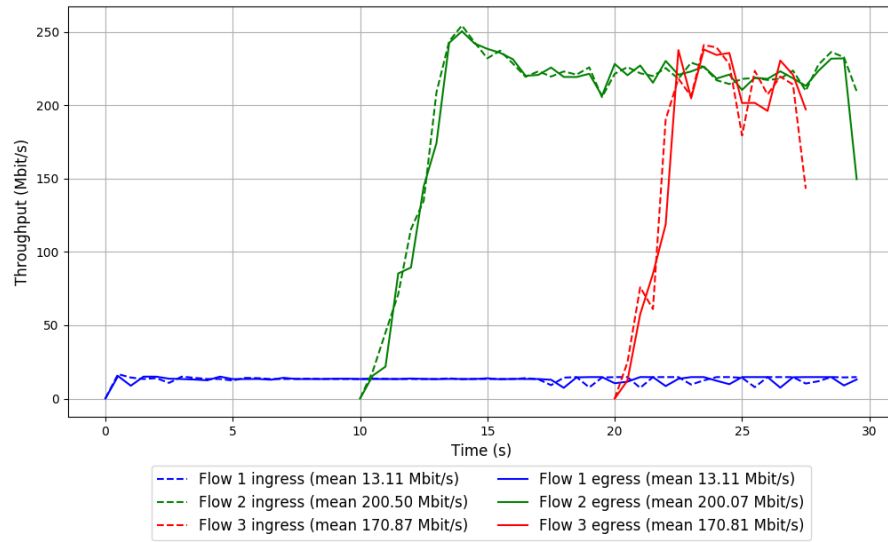


```
Run 9: Statistics of TaoVA-100x

Start at: 2018-02-21 17:33:13
End at: 2018-02-21 17:33:43

# Below is generated by plot.py at 2018-02-21 22:01:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 190.69 Mbit/s
95th percentile per-packet one-way delay: 137.369 ms
Loss rate: 1.17%
-- Flow 1:
Average throughput: 13.11 Mbit/s
95th percentile per-packet one-way delay: 140.838 ms
Loss rate: 0.93%
-- Flow 2:
Average throughput: 200.07 Mbit/s
95th percentile per-packet one-way delay: 136.886 ms
Loss rate: 1.59%
-- Flow 3:
Average throughput: 170.81 Mbit/s
95th percentile per-packet one-way delay: 138.889 ms
Loss rate: 0.00%
```


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

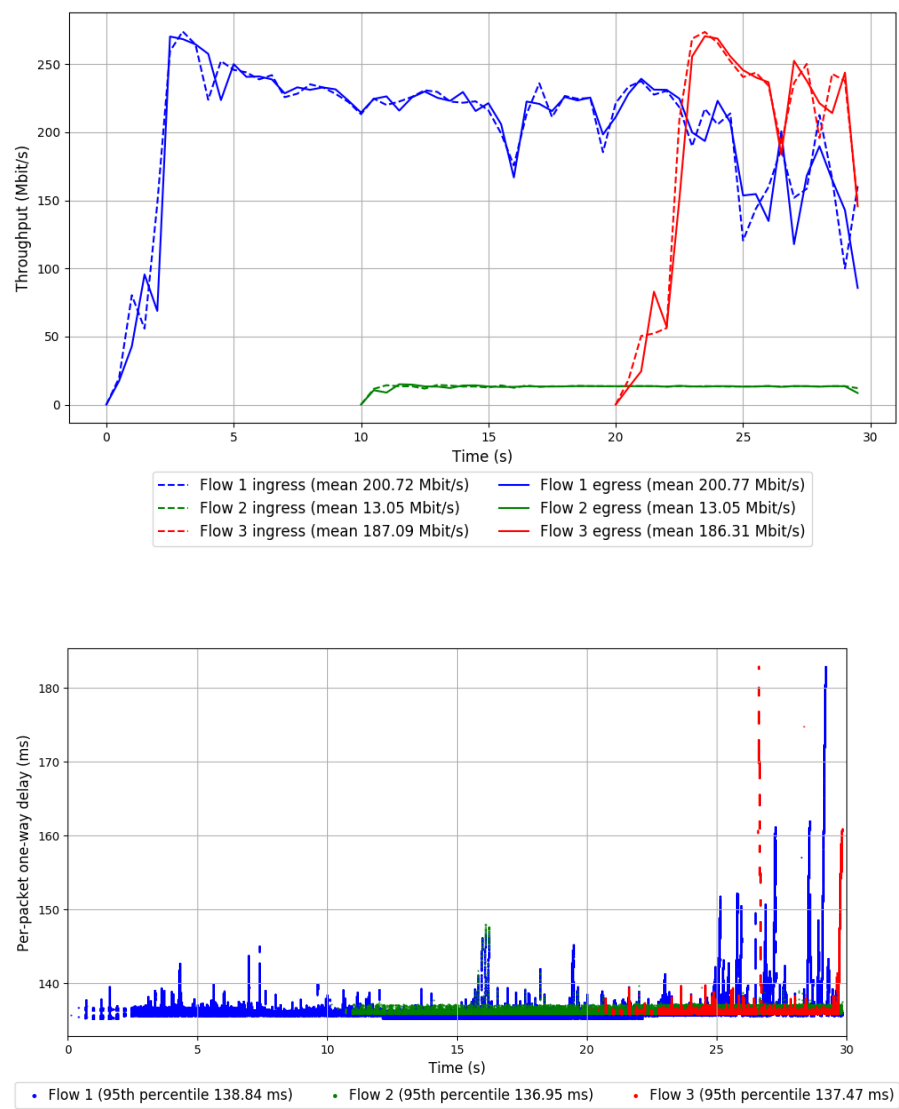


```
Run 10: Statistics of TaoVA-100x

Start at: 2018-02-21 17:53:54
End at: 2018-02-21 17:54:24

# Below is generated by plot.py at 2018-02-21 22:05:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 270.05 Mbit/s
95th percentile per-packet one-way delay: 138.525 ms
Loss rate: 1.11%
-- Flow 1:
Average throughput: 200.77 Mbit/s
95th percentile per-packet one-way delay: 138.845 ms
Loss rate: 0.88%
-- Flow 2:
Average throughput: 13.05 Mbit/s
95th percentile per-packet one-way delay: 136.950 ms
Loss rate: 1.42%
-- Flow 3:
Average throughput: 186.31 Mbit/s
95th percentile per-packet one-way delay: 137.474 ms
Loss rate: 1.82%
```

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



Run 1: Statistics of TCP Vegas

Start at: 2018-02-21 14:46:19

End at: 2018-02-21 14:46:49

Below is generated by plot.py at 2018-02-21 22:05:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 82.89 Mbit/s

95th percentile per-packet one-way delay: 147.937 ms

Loss rate: 1.78%

-- Flow 1:

Average throughput: 18.67 Mbit/s

95th percentile per-packet one-way delay: 147.123 ms

Loss rate: 1.07%

-- Flow 2:

Average throughput: 78.67 Mbit/s

95th percentile per-packet one-way delay: 146.762 ms

Loss rate: 1.54%

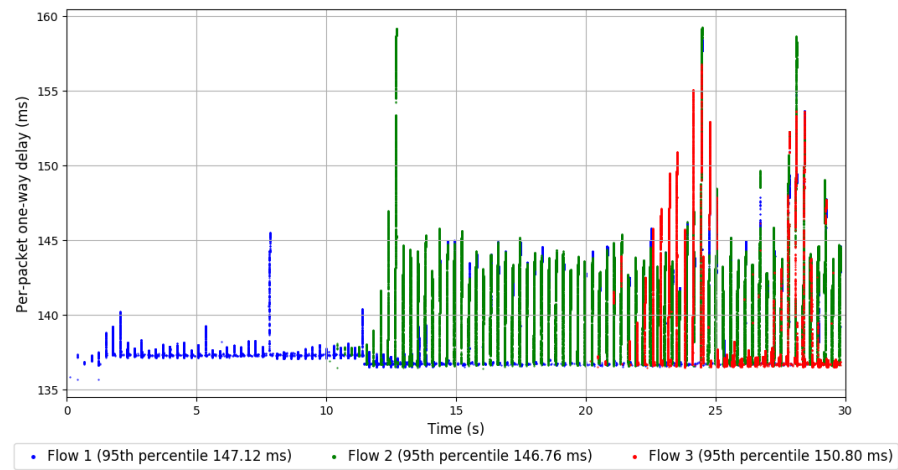
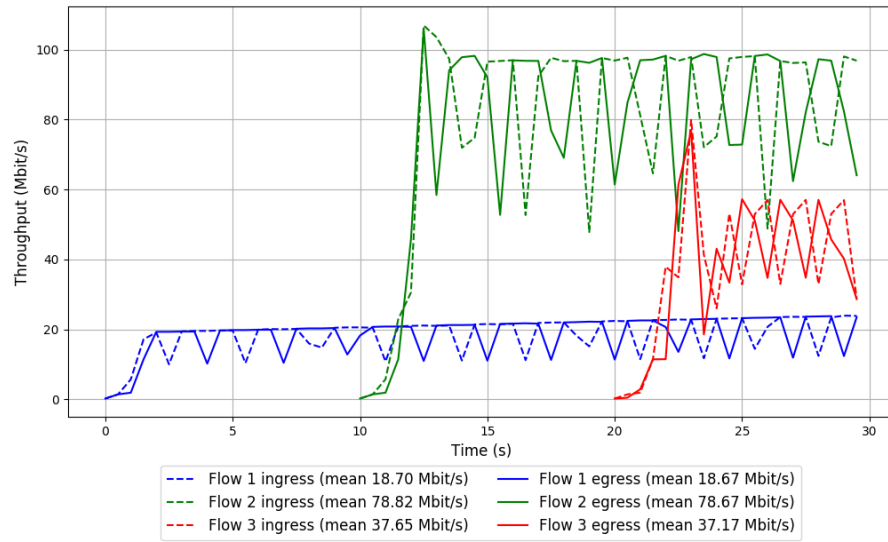
-- Flow 3:

Average throughput: 37.17 Mbit/s

95th percentile per-packet one-way delay: 150.799 ms

Loss rate: 3.82%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2018-02-21 15:07:32

End at: 2018-02-21 15:08:02

Below is generated by plot.py at 2018-02-21 22:05:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 94.42 Mbit/s

95th percentile per-packet one-way delay: 141.645 ms

Loss rate: 1.25%

-- Flow 1:

Average throughput: 51.34 Mbit/s

95th percentile per-packet one-way delay: 142.096 ms

Loss rate: 0.98%

-- Flow 2:

Average throughput: 64.51 Mbit/s

95th percentile per-packet one-way delay: 140.623 ms

Loss rate: 1.53%

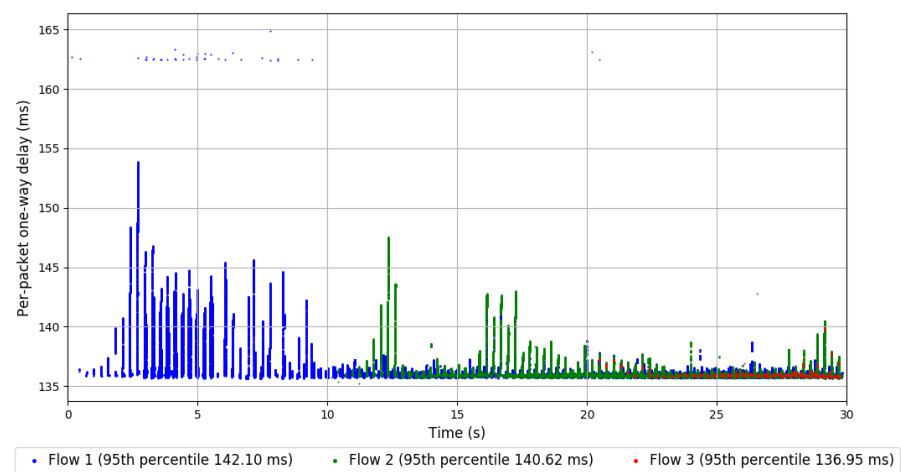
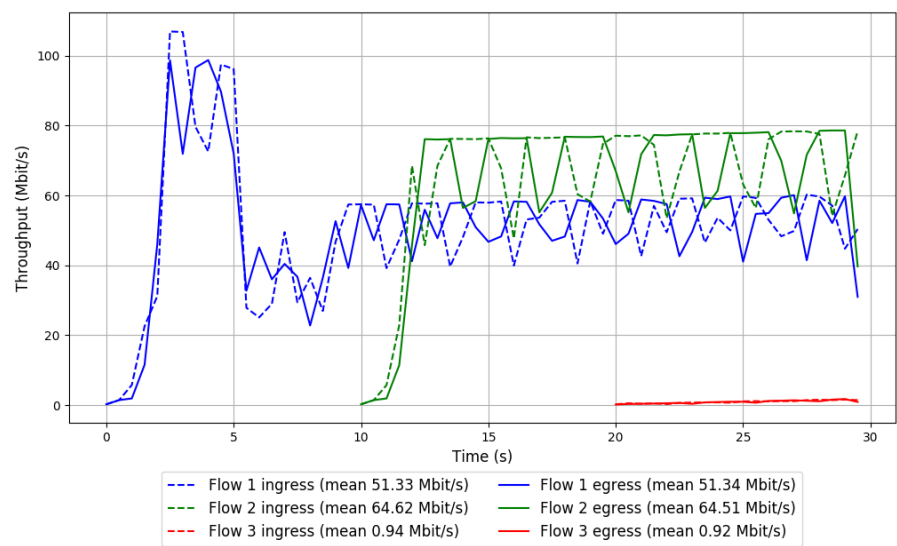
-- Flow 3:

Average throughput: 0.92 Mbit/s

95th percentile per-packet one-way delay: 136.952 ms

Loss rate: 5.39%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2018-02-21 15:28:00

End at: 2018-02-21 15:28:30

Below is generated by plot.py at 2018-02-21 22:05:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 94.44 Mbit/s

95th percentile per-packet one-way delay: 144.340 ms

Loss rate: 1.66%

-- Flow 1:

Average throughput: 55.56 Mbit/s

95th percentile per-packet one-way delay: 142.355 ms

Loss rate: 1.01%

-- Flow 2:

Average throughput: 24.74 Mbit/s

95th percentile per-packet one-way delay: 145.396 ms

Loss rate: 1.51%

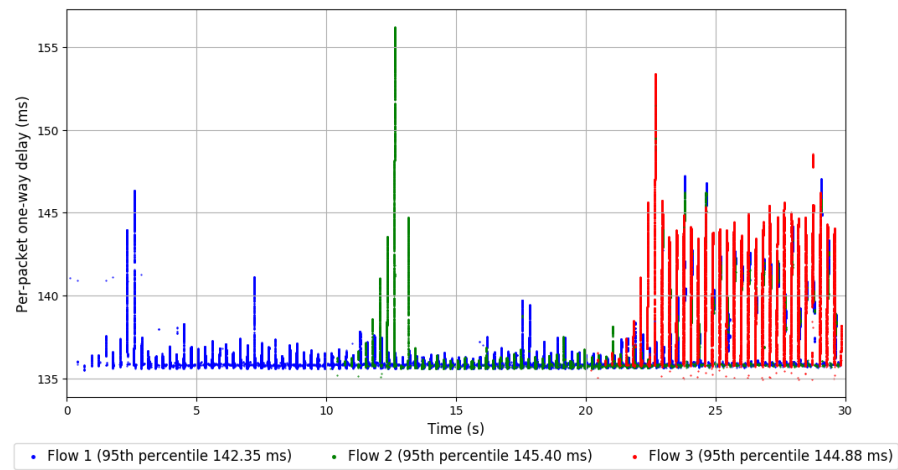
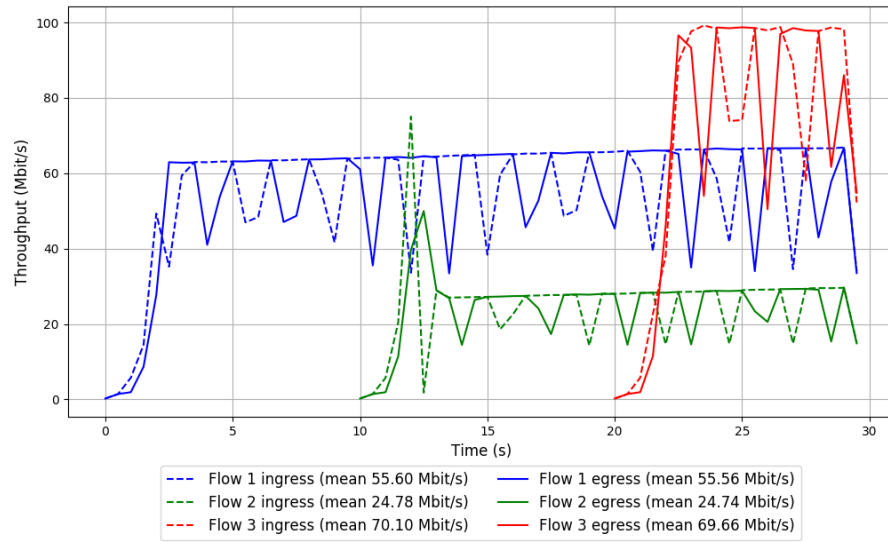
-- Flow 3:

Average throughput: 69.66 Mbit/s

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

Loss rate: 3.35%

Run 3: Report of TCP Vegas — Data Link



Run 4: Statistics of TCP Vegas

Start at: 2018-02-21 15:48:24

End at: 2018-02-21 15:48:54

Below is generated by plot.py at 2018-02-21 22:05:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 140.01 Mbit/s

95th percentile per-packet one-way delay: 144.412 ms

Loss rate: 1.26%

-- Flow 1:

Average throughput: 82.81 Mbit/s

95th percentile per-packet one-way delay: 144.163 ms

Loss rate: 1.00%

-- Flow 2:

Average throughput: 79.95 Mbit/s

95th percentile per-packet one-way delay: 144.819 ms

Loss rate: 1.51%

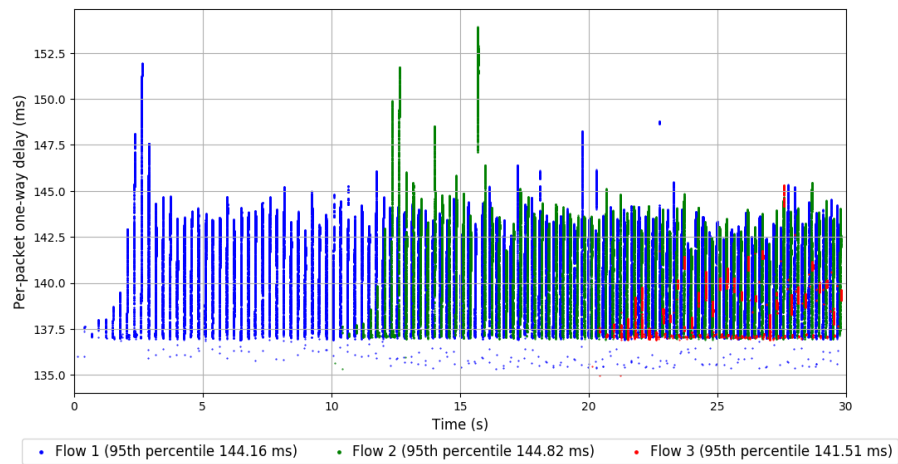
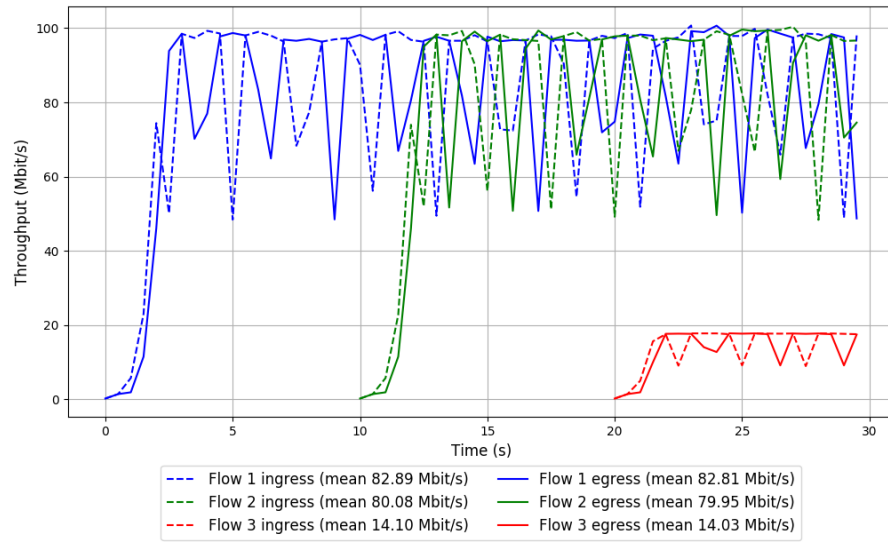
-- Flow 3:

Average throughput: 14.03 Mbit/s

95th percentile per-packet one-way delay: 141.511 ms

Loss rate: 3.17%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2018-02-21 16:08:39

End at: 2018-02-21 16:09:09

Below is generated by plot.py at 2018-02-21 22:05:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 111.82 Mbit/s

95th percentile per-packet one-way delay: 144.988 ms

Loss rate: 1.83%

-- Flow 1:

Average throughput: 36.35 Mbit/s

95th percentile per-packet one-way delay: 144.582 ms

Loss rate: 0.97%

-- Flow 2:

Average throughput: 79.45 Mbit/s

95th percentile per-packet one-way delay: 144.155 ms

Loss rate: 1.65%

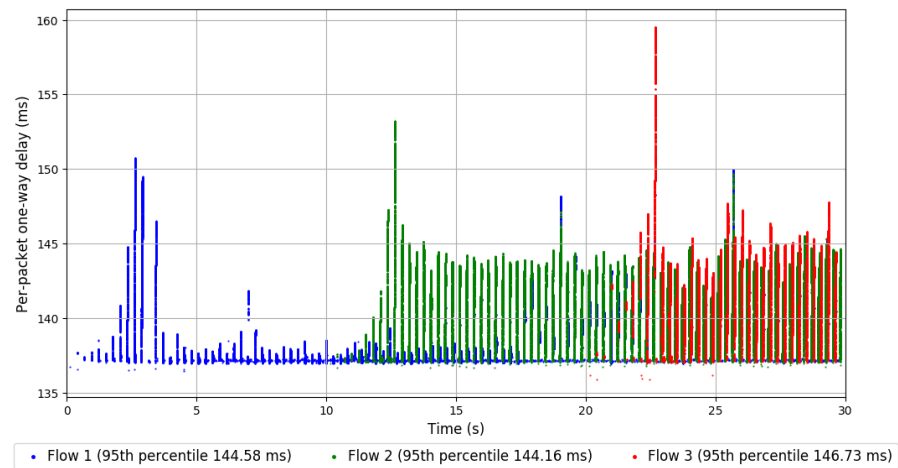
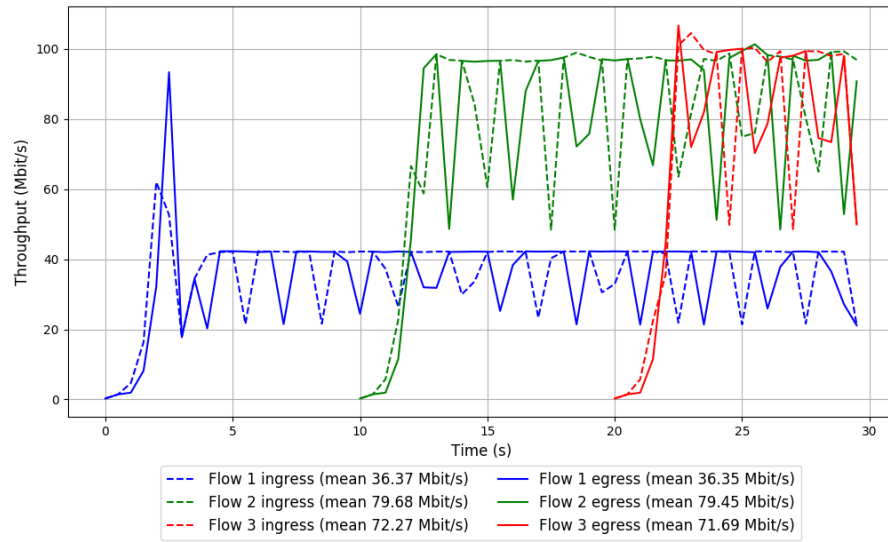
-- Flow 3:

Average throughput: 71.69 Mbit/s

95th percentile per-packet one-way delay: 146.726 ms

Loss rate: 3.55%

Run 5: Report of TCP Vegas — Data Link



Run 6: Statistics of TCP Vegas

Start at: 2018-02-21 16:29:05

End at: 2018-02-21 16:29:35

Below is generated by plot.py at 2018-02-21 22:05:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 84.06 Mbit/s

95th percentile per-packet one-way delay: 146.093 ms

Loss rate: 1.04%

-- Flow 1:

Average throughput: 83.19 Mbit/s

95th percentile per-packet one-way delay: 146.105 ms

Loss rate: 1.00%

-- Flow 2:

Average throughput: 1.56 Mbit/s

95th percentile per-packet one-way delay: 142.927 ms

Loss rate: 3.01%

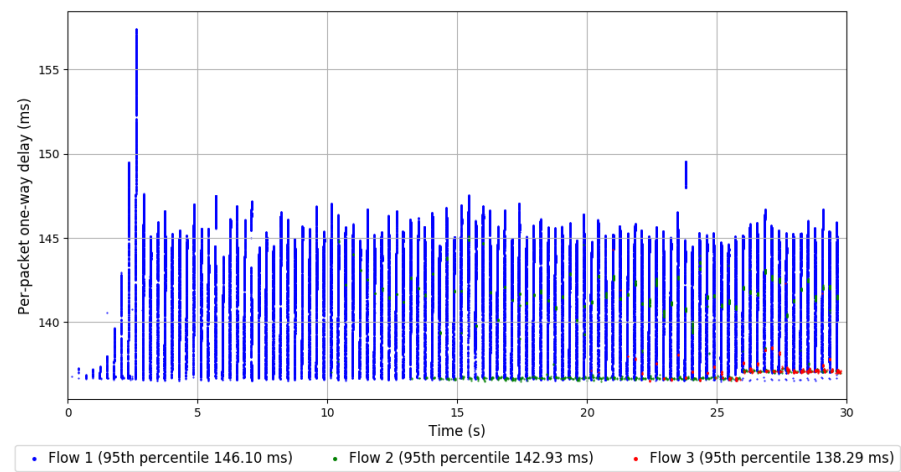
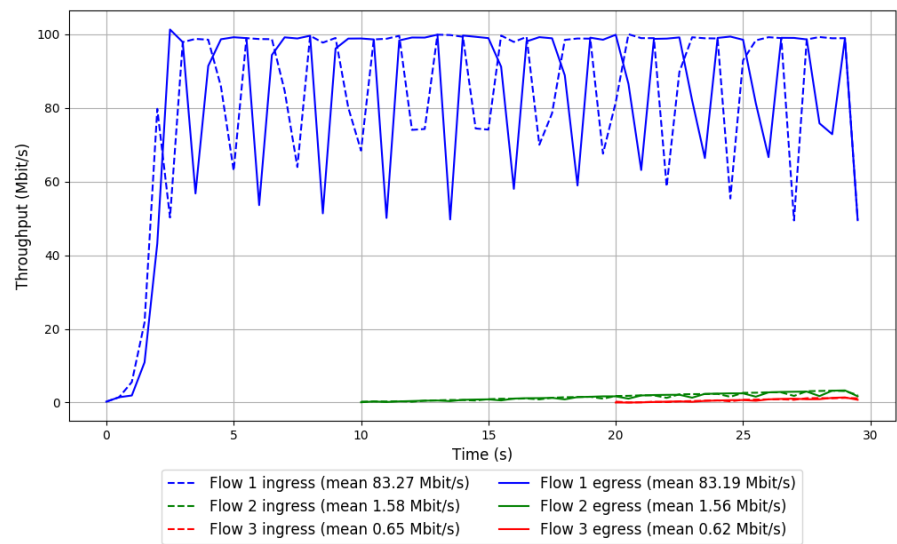
-- Flow 3:

Average throughput: 0.62 Mbit/s

95th percentile per-packet one-way delay: 138.293 ms

Loss rate: 7.83%

Run 6: Report of TCP Vegas — Data Link



Run 7: Statistics of TCP Vegas

Start at: 2018-02-21 16:49:50

End at: 2018-02-21 16:50:20

Below is generated by plot.py at 2018-02-21 22:05:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 98.87 Mbit/s

95th percentile per-packet one-way delay: 145.444 ms

Loss rate: 1.83%

-- Flow 1:

Average throughput: 34.71 Mbit/s

95th percentile per-packet one-way delay: 141.265 ms

Loss rate: 1.04%

-- Flow 2:

Average throughput: 63.32 Mbit/s

95th percentile per-packet one-way delay: 140.627 ms

Loss rate: 1.56%

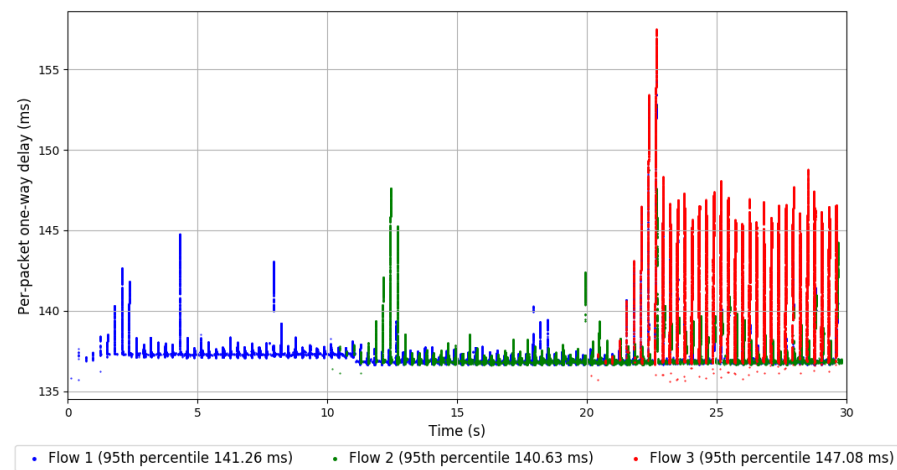
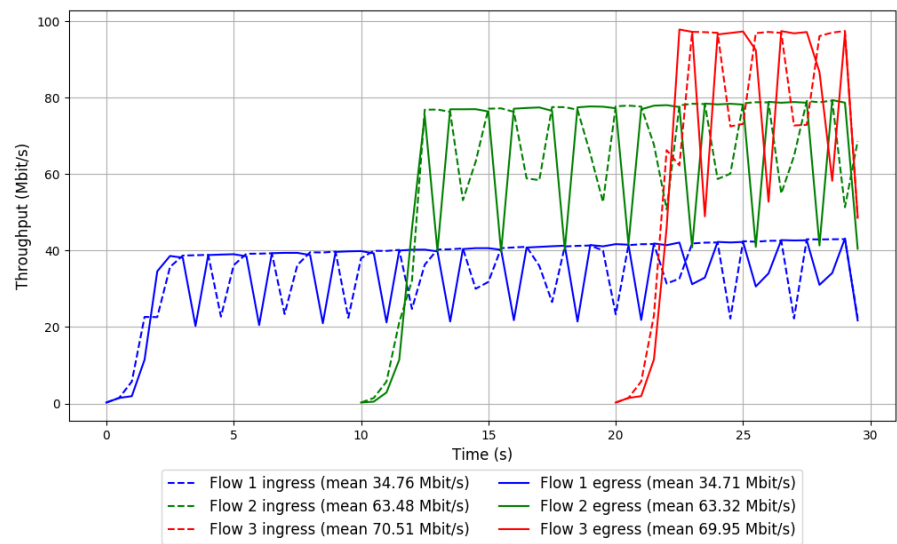
-- Flow 3:

Average throughput: 69.95 Mbit/s

95th percentile per-packet one-way delay: 147.083 ms

Loss rate: 3.52%

Run 7: Report of TCP Vegas — Data Link



Run 8: Statistics of TCP Vegas

Start at: 2018-02-21 17:10:01

End at: 2018-02-21 17:10:31

Below is generated by plot.py at 2018-02-21 22:05:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 64.36 Mbit/s

95th percentile per-packet one-way delay: 141.998 ms

Loss rate: 1.80%

-- Flow 1:

Average throughput: 28.38 Mbit/s

95th percentile per-packet one-way delay: 144.178 ms

Loss rate: 0.96%

-- Flow 2:

Average throughput: 26.94 Mbit/s

95th percentile per-packet one-way delay: 140.732 ms

Loss rate: 1.48%

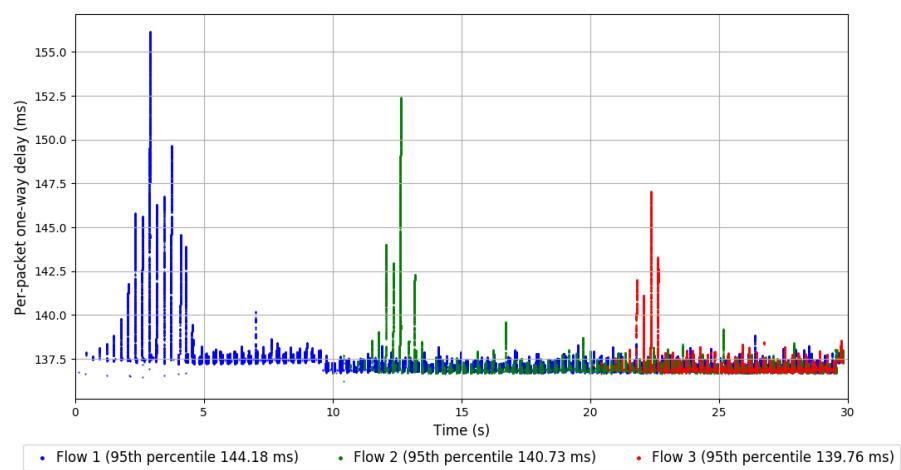
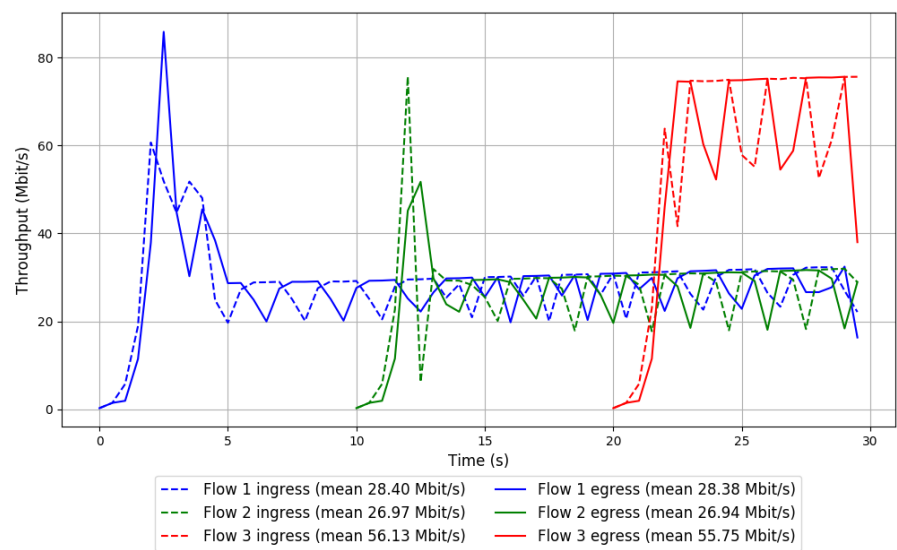
-- Flow 3:

Average throughput: 55.75 Mbit/s

95th percentile per-packet one-way delay: 139.761 ms

Loss rate: 3.40%

Run 8: Report of TCP Vegas — Data Link



Run 9: Statistics of TCP Vegas

Start at: 2018-02-21 17:30:33

End at: 2018-02-21 17:31:03

Below is generated by plot.py at 2018-02-21 22:05:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 63.92 Mbit/s

95th percentile per-packet one-way delay: 143.463 ms

Loss rate: 1.91%

-- Flow 1:

Average throughput: 26.12 Mbit/s

95th percentile per-packet one-way delay: 142.567 ms

Loss rate: 0.70%

-- Flow 2:

Average throughput: 22.30 Mbit/s

95th percentile per-packet one-way delay: 140.784 ms

Loss rate: 1.50%

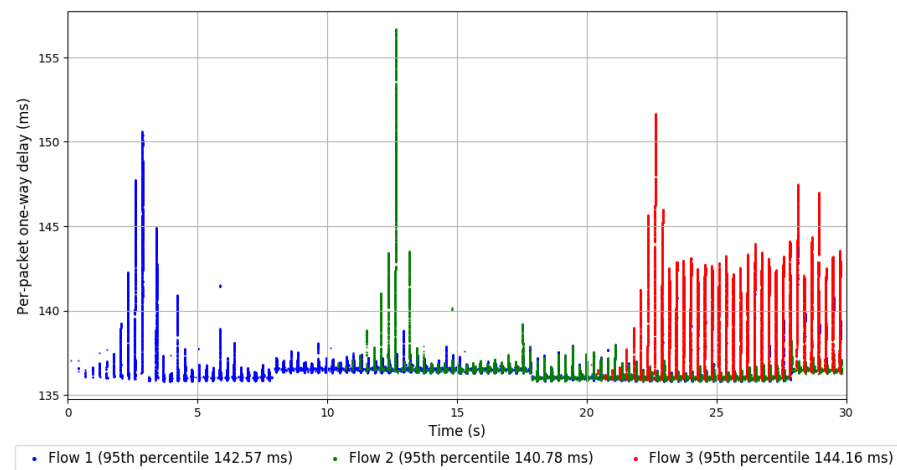
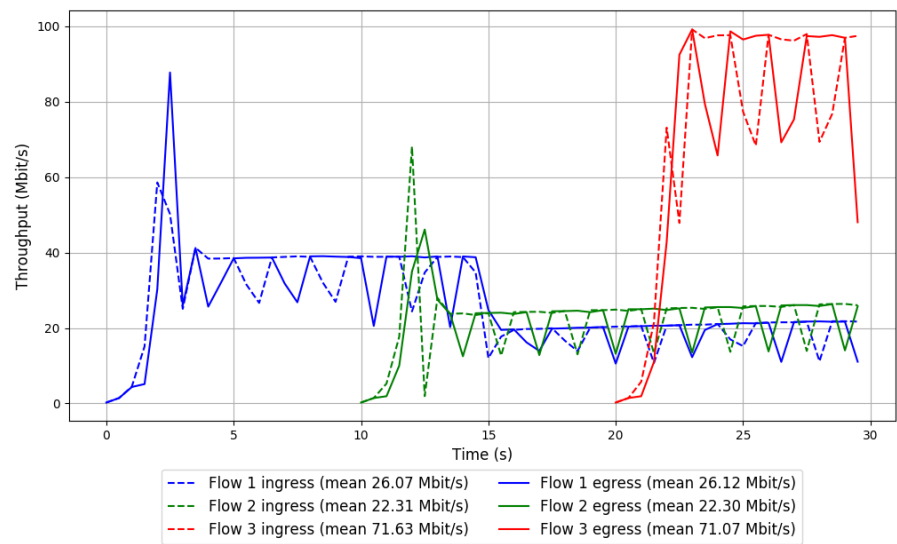
-- Flow 3:

Average throughput: 71.07 Mbit/s

95th percentile per-packet one-way delay: 144.156 ms

Loss rate: 3.49%

Run 9: Report of TCP Vegas — Data Link



Run 10: Statistics of TCP Vegas

Start at: 2018-02-21 17:51:10

End at: 2018-02-21 17:51:40

Below is generated by plot.py at 2018-02-21 22:05:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 106.69 Mbit/s

95th percentile per-packet one-way delay: 143.626 ms

Loss rate: 1.09%

-- Flow 1:

Average throughput: 67.76 Mbit/s

95th percentile per-packet one-way delay: 143.750 ms

Loss rate: 0.34%

-- Flow 2:

Average throughput: 32.04 Mbit/s

95th percentile per-packet one-way delay: 144.126 ms

Loss rate: 1.48%

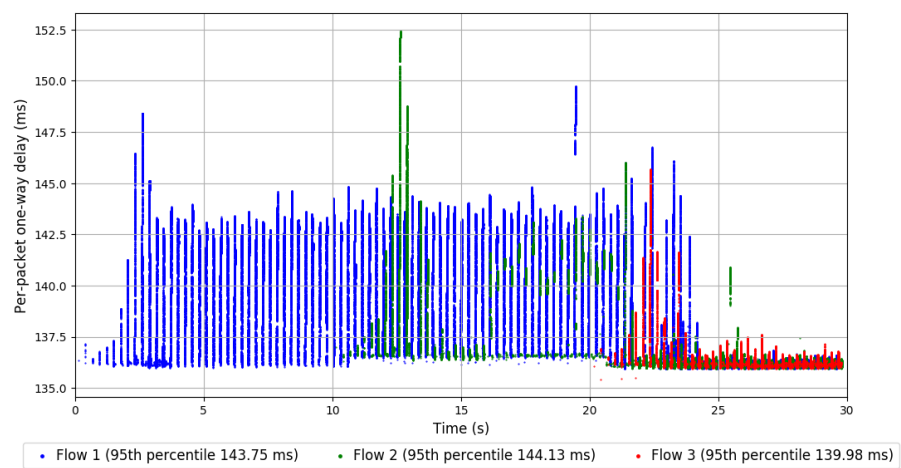
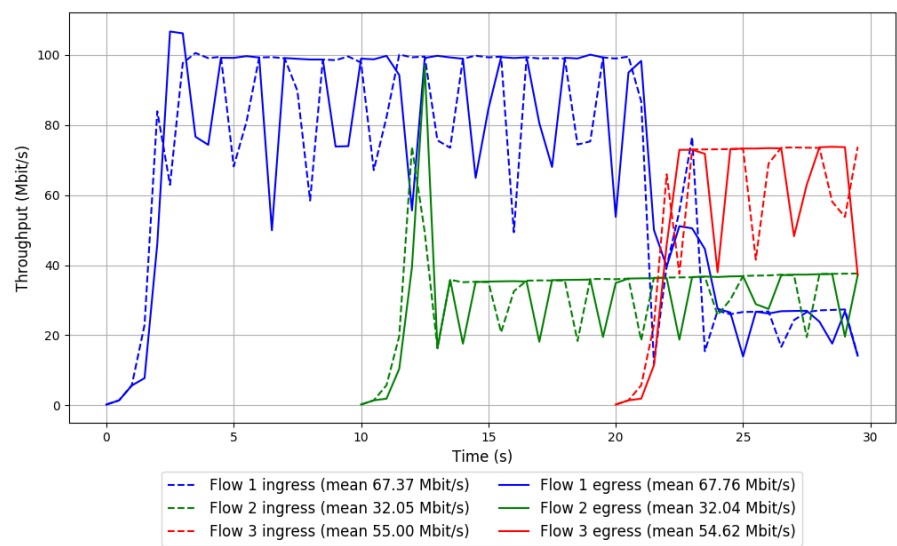
-- Flow 3:

Average throughput: 54.62 Mbit/s

95th percentile per-packet one-way delay: 139.984 ms

Loss rate: 3.40%

Run 10: Report of TCP Vegas — Data Link



Run 1: Statistics of Verus

Start at: 2018-02-21 14:39:54

End at: 2018-02-21 14:40:24

Below is generated by plot.py at 2018-02-21 22:05:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 245.04 Mbit/s

95th percentile per-packet one-way delay: 194.286 ms

Loss rate: 3.12%

-- Flow 1:

Average throughput: 134.89 Mbit/s

95th percentile per-packet one-way delay: 232.461 ms

Loss rate: 3.62%

-- Flow 2:

Average throughput: 153.67 Mbit/s

95th percentile per-packet one-way delay: 186.613 ms

Loss rate: 2.08%

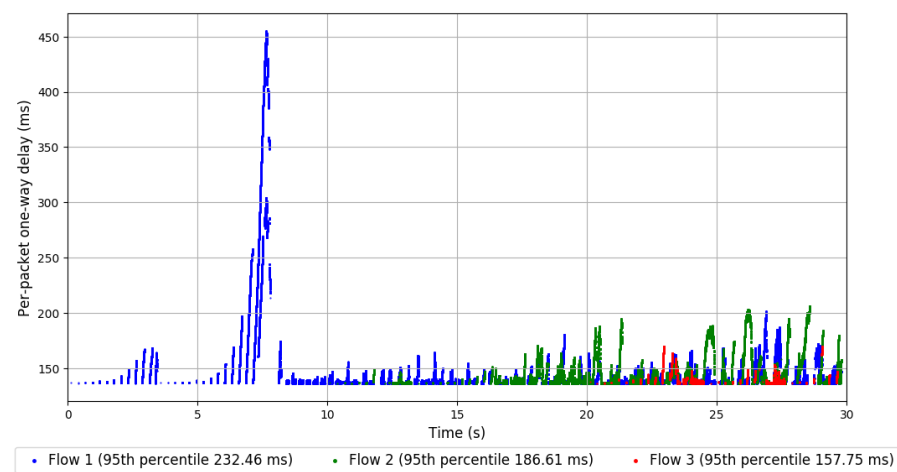
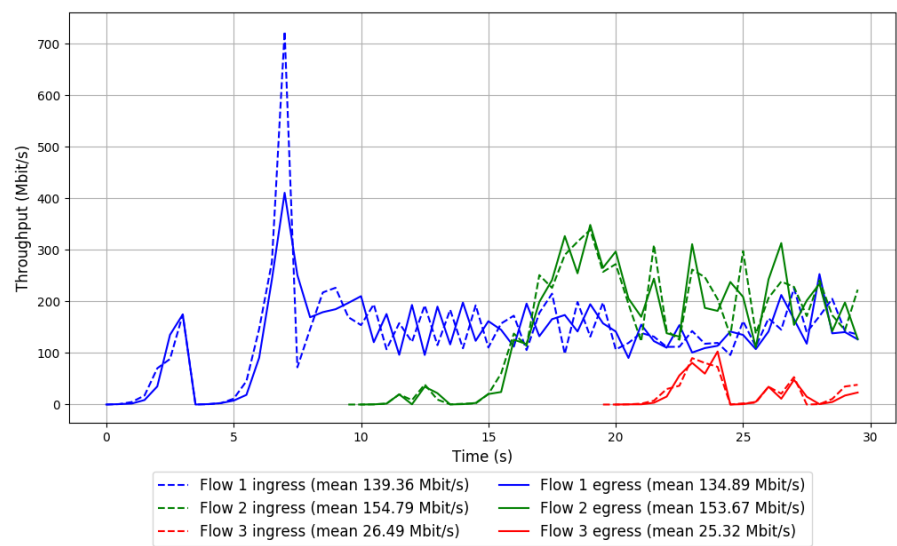
-- Flow 3:

Average throughput: 25.32 Mbit/s

95th percentile per-packet one-way delay: 157.753 ms

Loss rate: 7.38%

Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2018-02-21 15:00:53

End at: 2018-02-21 15:01:23

Below is generated by plot.py at 2018-02-21 22:06:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 314.39 Mbit/s

95th percentile per-packet one-way delay: 220.503 ms

Loss rate: 0.31%

-- Flow 1:

Average throughput: 189.70 Mbit/s

95th percentile per-packet one-way delay: 220.222 ms

Loss rate: 0.20%

-- Flow 2:

Average throughput: 150.03 Mbit/s

95th percentile per-packet one-way delay: 231.877 ms

Loss rate: 0.12%

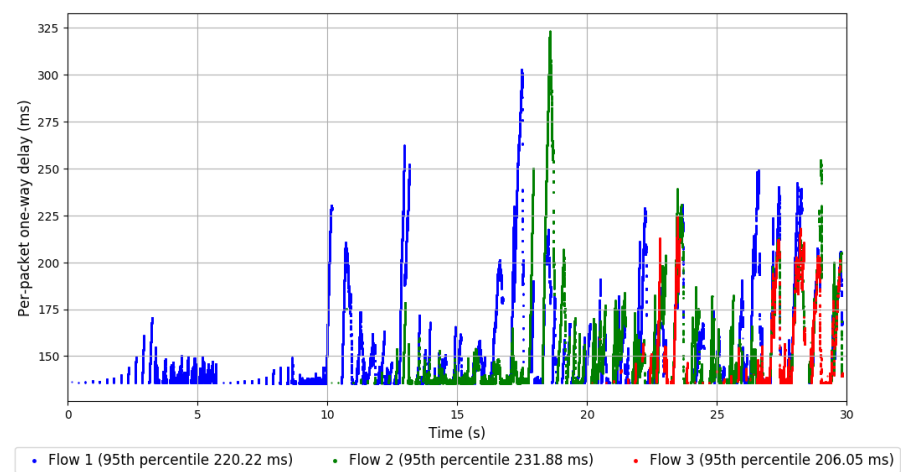
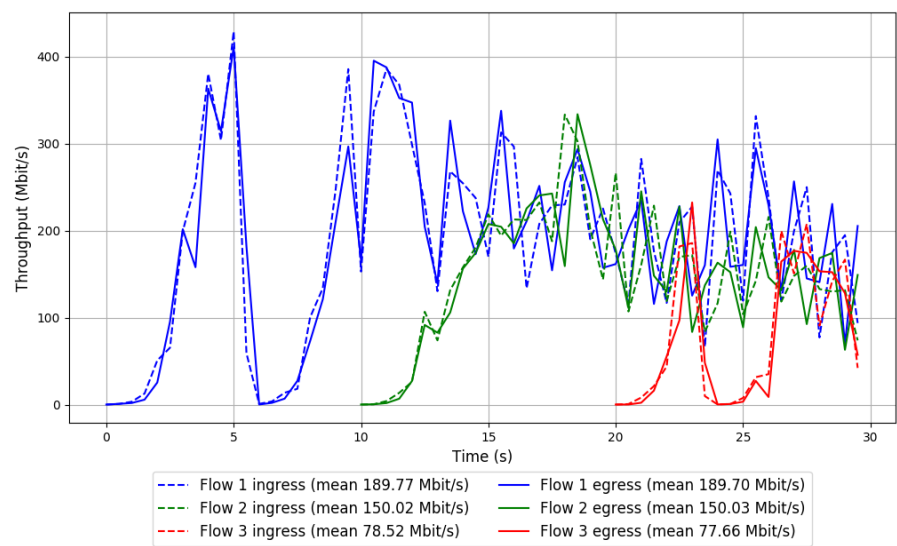
-- Flow 3:

Average throughput: 77.66 Mbit/s

95th percentile per-packet one-way delay: 206.049 ms

Loss rate: 1.83%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2018-02-21 15:21:19

End at: 2018-02-21 15:21:49

Below is generated by plot.py at 2018-02-21 22:06:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 317.41 Mbit/s

95th percentile per-packet one-way delay: 278.583 ms

Loss rate: 4.80%

-- Flow 1:

Average throughput: 207.53 Mbit/s

95th percentile per-packet one-way delay: 258.874 ms

Loss rate: 3.17%

-- Flow 2:

Average throughput: 154.81 Mbit/s

95th percentile per-packet one-way delay: 338.594 ms

Loss rate: 8.26%

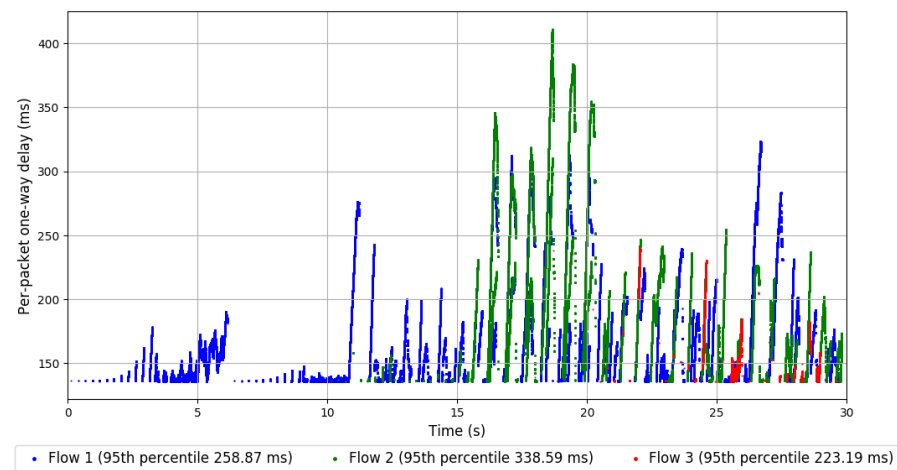
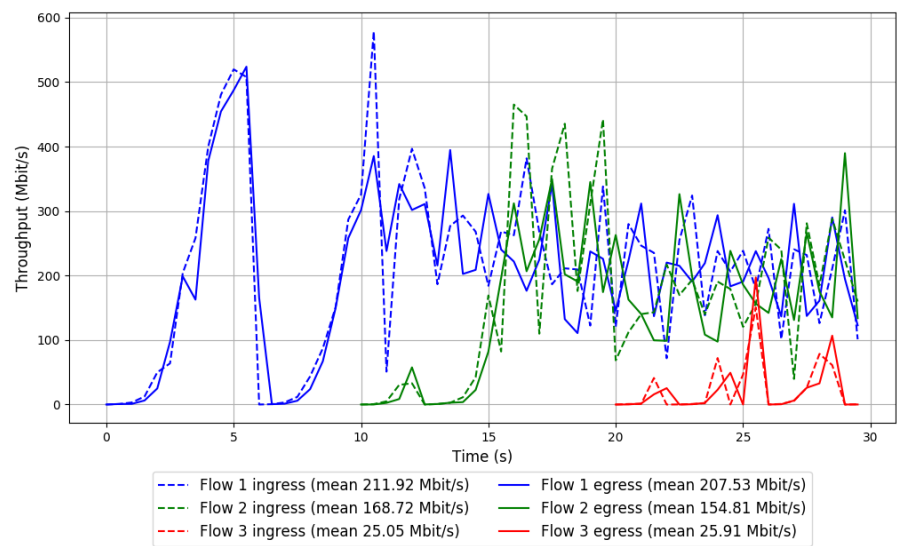
-- Flow 3:

Average throughput: 25.91 Mbit/s

95th percentile per-packet one-way delay: 223.195 ms

Loss rate: 0.07%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

Start at: 2018-02-21 15:41:53

End at: 2018-02-21 15:42:23

Below is generated by plot.py at 2018-02-21 22:06:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 234.31 Mbit/s

95th percentile per-packet one-way delay: 242.221 ms

Loss rate: 5.64%

-- Flow 1:

Average throughput: 180.30 Mbit/s

95th percentile per-packet one-way delay: 242.146 ms

Loss rate: 3.85%

-- Flow 2:

Average throughput: 52.34 Mbit/s

95th percentile per-packet one-way delay: 162.393 ms

Loss rate: 1.94%

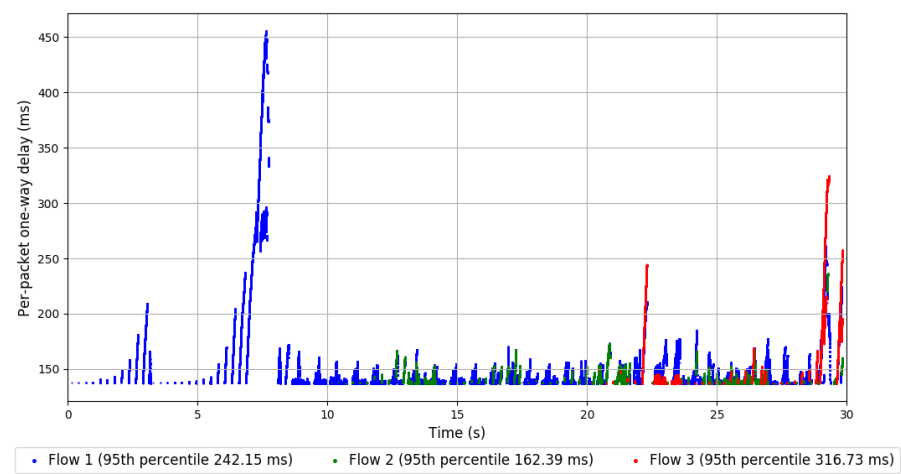
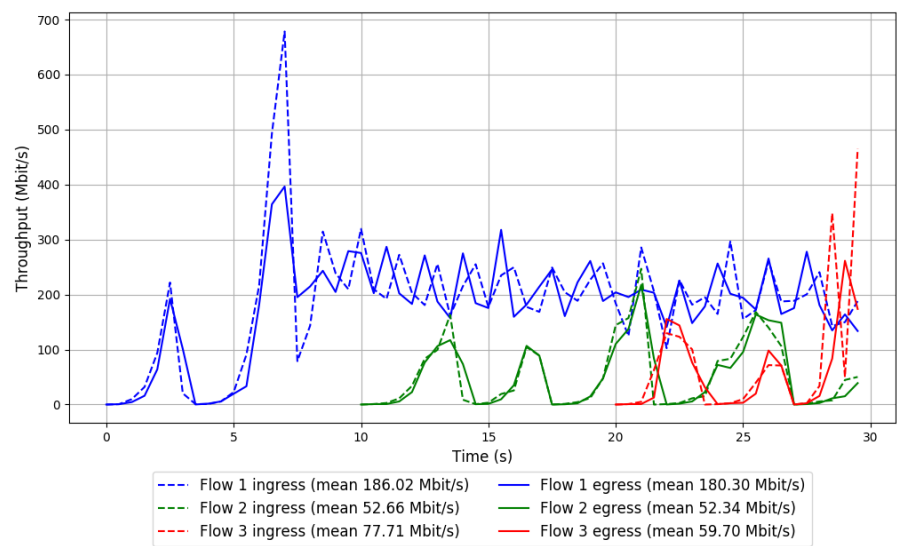
-- Flow 3:

Average throughput: 59.70 Mbit/s

95th percentile per-packet one-way delay: 316.732 ms

Loss rate: 23.88%

Run 4: Report of Verus — Data Link



Run 5: Statistics of Verus

Start at: 2018-02-21 16:02:12

End at: 2018-02-21 16:02:42

Below is generated by plot.py at 2018-02-21 22:06:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 187.82 Mbit/s

95th percentile per-packet one-way delay: 201.617 ms

Loss rate: 2.73%

-- Flow 1:

Average throughput: 146.07 Mbit/s

95th percentile per-packet one-way delay: 227.940 ms

Loss rate: 3.14%

-- Flow 2:

Average throughput: 30.51 Mbit/s

95th percentile per-packet one-way delay: 154.935 ms

Loss rate: 2.52%

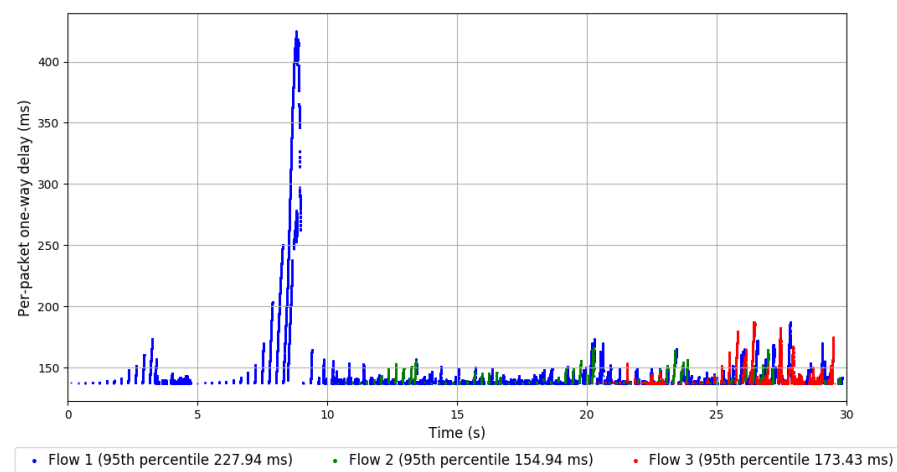
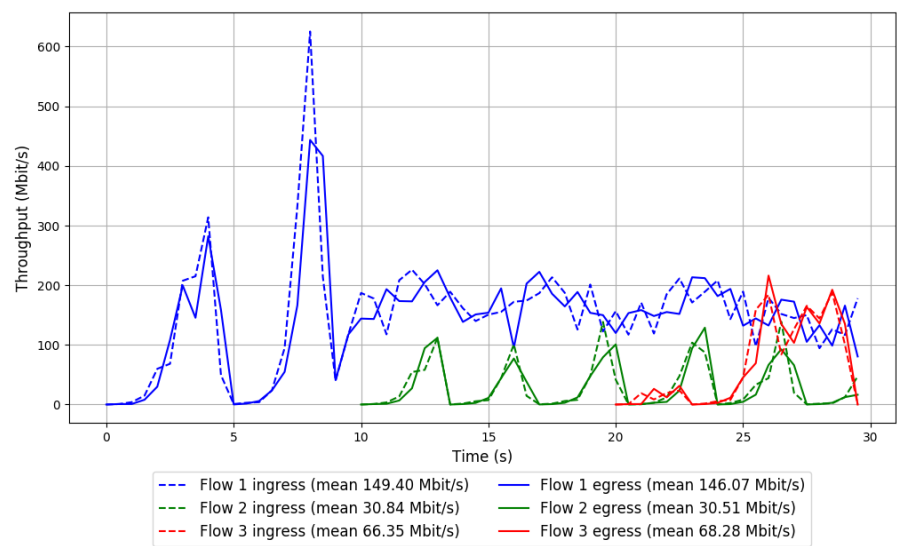
-- Flow 3:

Average throughput: 68.28 Mbit/s

95th percentile per-packet one-way delay: 173.428 ms

Loss rate: 0.00%

Run 5: Report of Verus — Data Link



Run 6: Statistics of Verus

Start at: 2018-02-21 16:22:35

End at: 2018-02-21 16:23:05

Below is generated by plot.py at 2018-02-21 22:06:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 236.00 Mbit/s

95th percentile per-packet one-way delay: 362.606 ms

Loss rate: 12.06%

-- Flow 1:

Average throughput: 108.08 Mbit/s

95th percentile per-packet one-way delay: 195.592 ms

Loss rate: 1.64%

-- Flow 2:

Average throughput: 144.04 Mbit/s

95th percentile per-packet one-way delay: 371.519 ms

Loss rate: 20.79%

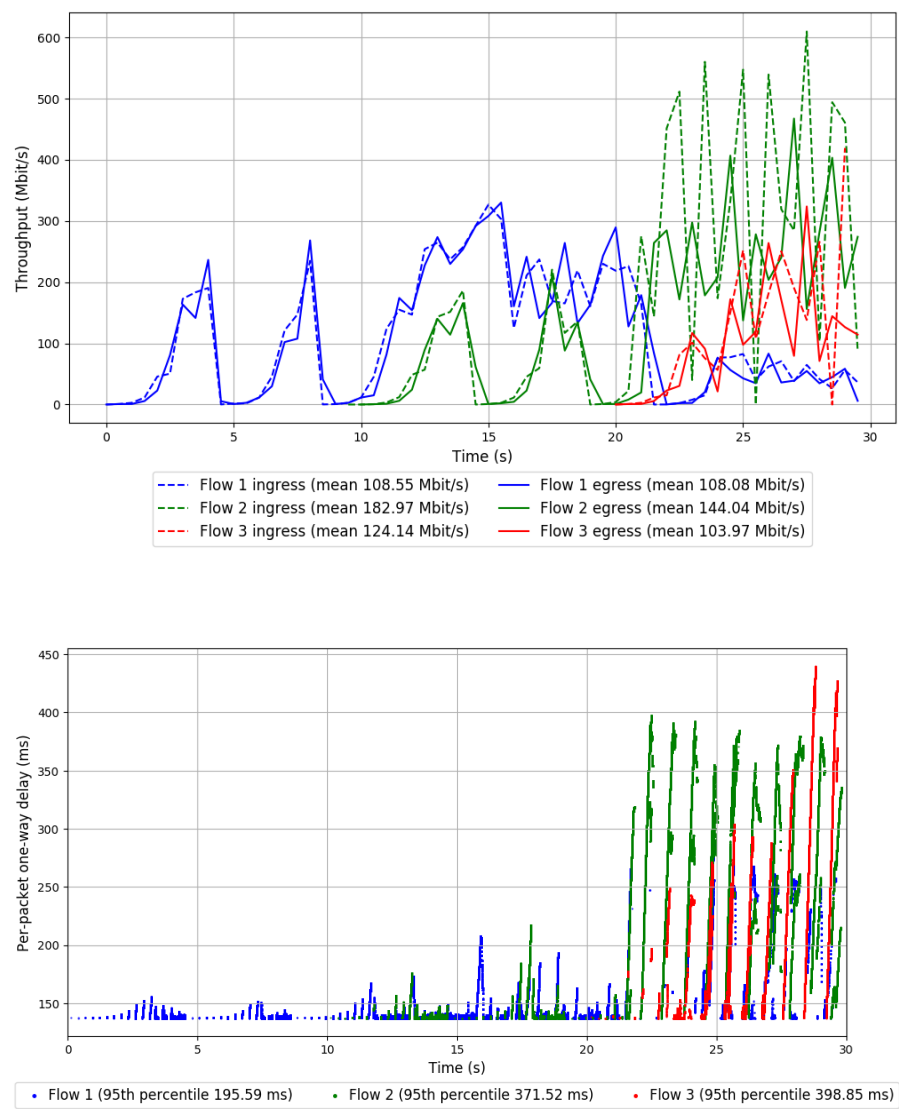
-- Flow 3:

Average throughput: 103.97 Mbit/s

95th percentile per-packet one-way delay: 398.851 ms

Loss rate: 14.23%

Run 6: Report of Verus — Data Link



Run 7: Statistics of Verus

Start at: 2018-02-21 16:43:25

End at: 2018-02-21 16:43:55

Below is generated by plot.py at 2018-02-21 22:06:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 170.01 Mbit/s

95th percentile per-packet one-way delay: 255.803 ms

Loss rate: 2.78%

-- Flow 1:

Average throughput: 127.32 Mbit/s

95th percentile per-packet one-way delay: 288.620 ms

Loss rate: 3.46%

-- Flow 2:

Average throughput: 49.87 Mbit/s

95th percentile per-packet one-way delay: 166.630 ms

Loss rate: 0.18%

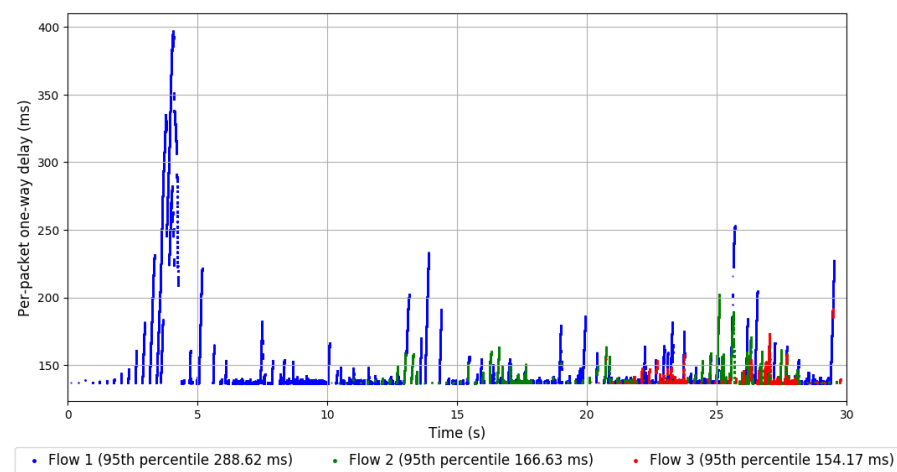
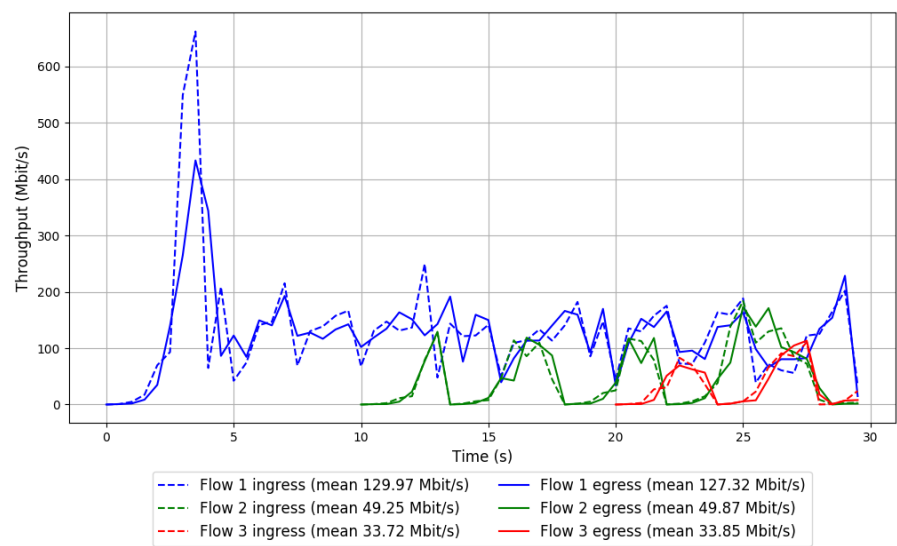
-- Flow 3:

Average throughput: 33.85 Mbit/s

95th percentile per-packet one-way delay: 154.169 ms

Loss rate: 2.41%

Run 7: Report of Verus — Data Link



Run 8: Statistics of Verus

Start at: 2018-02-21 17:03:36

End at: 2018-02-21 17:04:06

Below is generated by plot.py at 2018-02-21 22:07:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 160.77 Mbit/s

95th percentile per-packet one-way delay: 255.977 ms

Loss rate: 5.57%

-- Flow 1:

Average throughput: 110.62 Mbit/s

95th percentile per-packet one-way delay: 210.544 ms

Loss rate: 2.58%

-- Flow 2:

Average throughput: 44.85 Mbit/s

95th percentile per-packet one-way delay: 155.271 ms

Loss rate: 0.01%

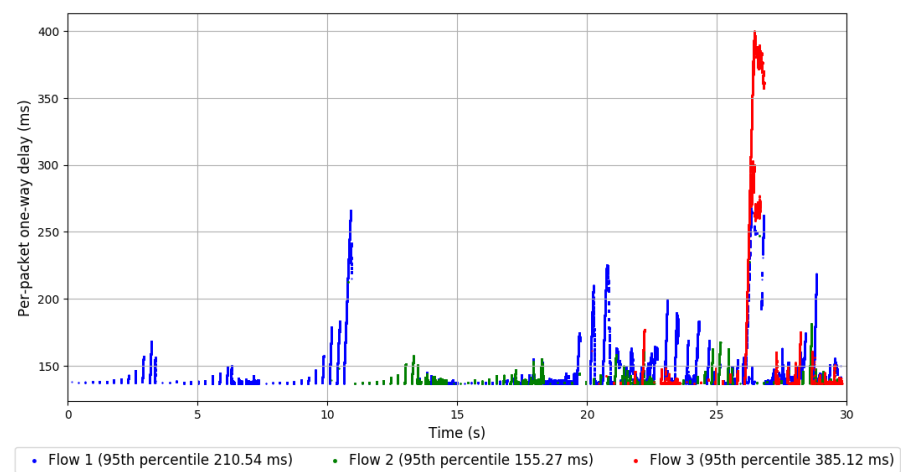
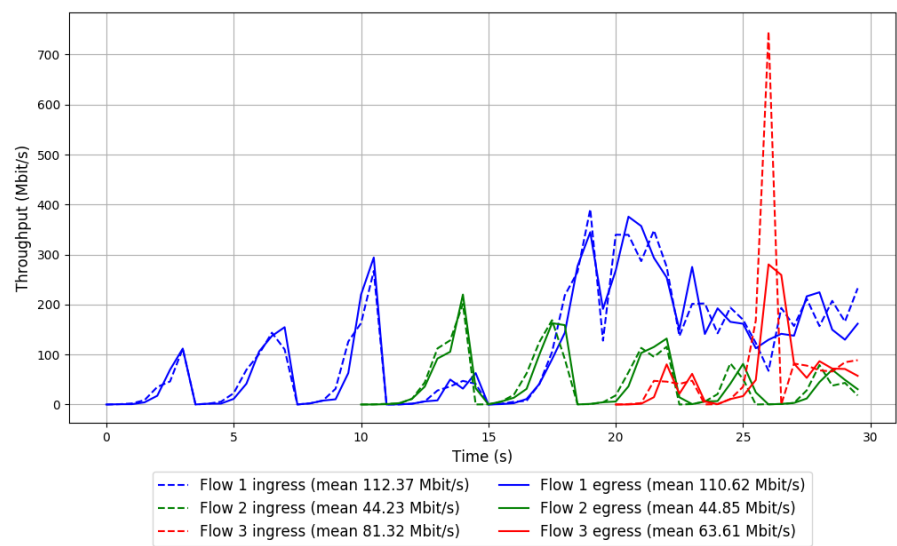
-- Flow 3:

Average throughput: 63.61 Mbit/s

95th percentile per-packet one-way delay: 385.123 ms

Loss rate: 24.11%

Run 8: Report of Verus — Data Link



Run 9: Statistics of Verus

Start at: 2018-02-21 17:24:05

End at: 2018-02-21 17:24:35

Below is generated by plot.py at 2018-02-21 22:08:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 209.68 Mbit/s

95th percentile per-packet one-way delay: 192.937 ms

Loss rate: 2.85%

-- Flow 1:

Average throughput: 162.82 Mbit/s

95th percentile per-packet one-way delay: 200.129 ms

Loss rate: 2.80%

-- Flow 2:

Average throughput: 54.14 Mbit/s

95th percentile per-packet one-way delay: 163.922 ms

Loss rate: 2.68%

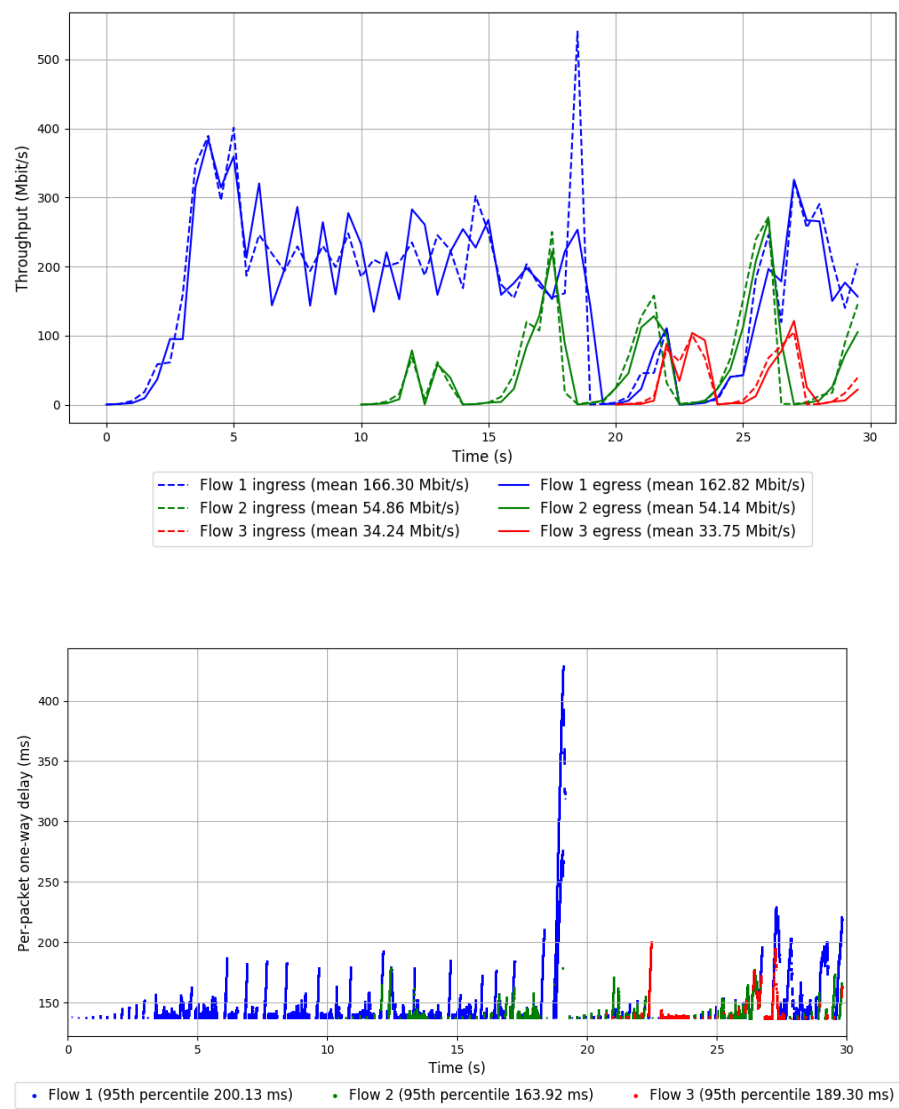
-- Flow 3:

Average throughput: 33.75 Mbit/s

95th percentile per-packet one-way delay: 189.297 ms

Loss rate: 4.14%

Run 9: Report of Verus — Data Link



Run 10: Statistics of Verus

Start at: 2018-02-21 17:44:40

End at: 2018-02-21 17:45:10

Below is generated by plot.py at 2018-02-21 22:09:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 230.29 Mbit/s

95th percentile per-packet one-way delay: 224.111 ms

Loss rate: 2.37%

-- Flow 1:

Average throughput: 163.47 Mbit/s

95th percentile per-packet one-way delay: 227.398 ms

Loss rate: 2.70%

-- Flow 2:

Average throughput: 68.95 Mbit/s

95th percentile per-packet one-way delay: 285.044 ms

Loss rate: 0.16%

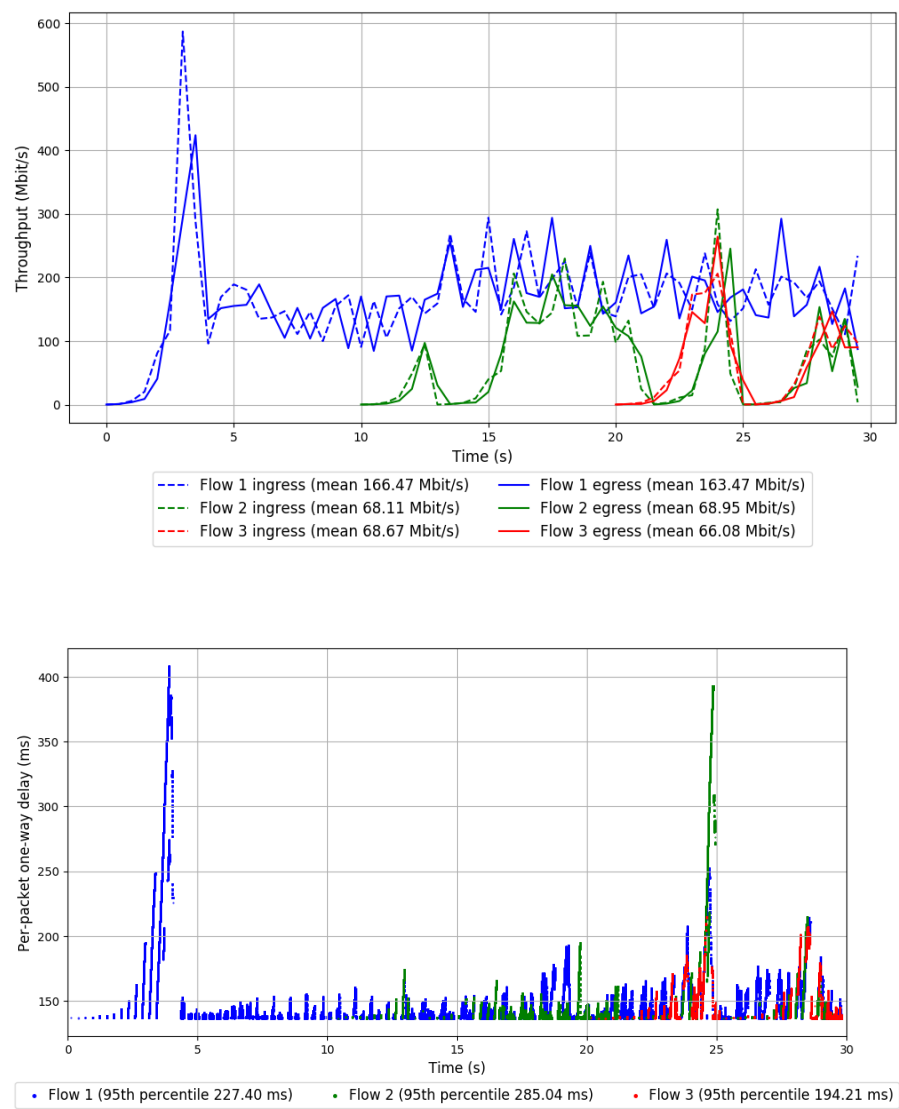
-- Flow 3:

Average throughput: 66.08 Mbit/s

95th percentile per-packet one-way delay: 194.205 ms

Loss rate: 4.35%

Run 10: Report of Verus — Data Link



Run 1: Statistics of Copa

Start at: 2018-02-21 14:31:45

End at: 2018-02-21 14:32:15

Below is generated by plot.py at 2018-02-21 22:10:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 147.42 Mbit/s

95th percentile per-packet one-way delay: 140.958 ms

Loss rate: 1.47%

-- Flow 1:

Average throughput: 77.40 Mbit/s

95th percentile per-packet one-way delay: 141.014 ms

Loss rate: 0.71%

-- Flow 2:

Average throughput: 76.36 Mbit/s

95th percentile per-packet one-way delay: 137.187 ms

Loss rate: 1.48%

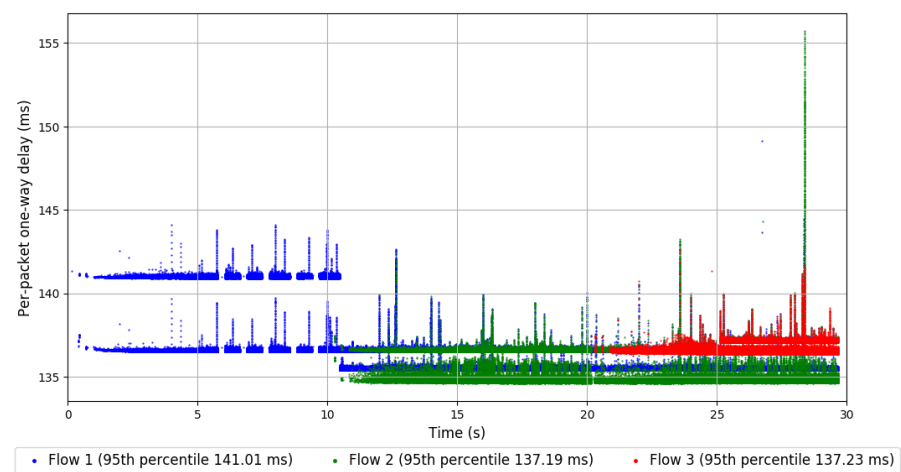
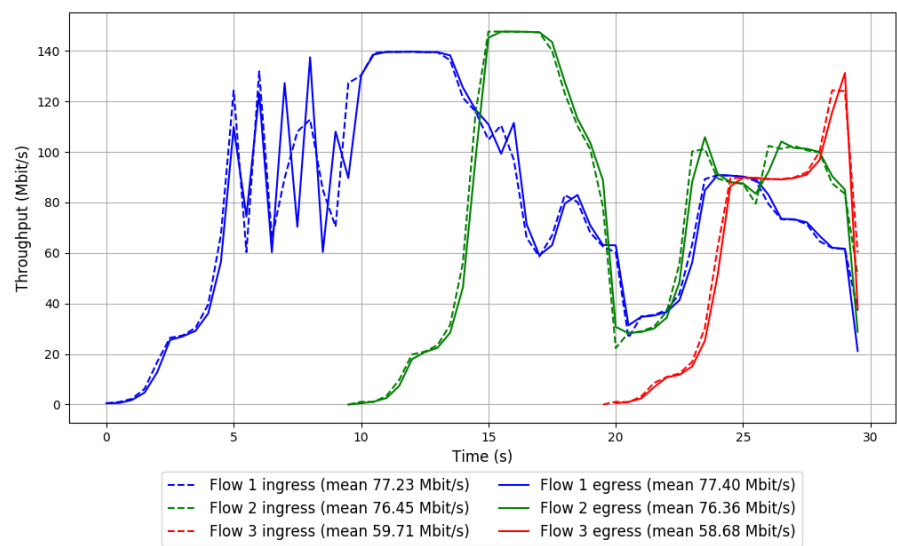
-- Flow 3:

Average throughput: 58.68 Mbit/s

95th percentile per-packet one-way delay: 137.232 ms

Loss rate: 4.42%

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2018-02-21 14:52:15

End at: 2018-02-21 14:52:45

Below is generated by plot.py at 2018-02-21 22:16:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 312.39 Mbit/s

95th percentile per-packet one-way delay: 289.451 ms

Loss rate: 25.75%

-- Flow 1:

Average throughput: 186.09 Mbit/s

95th percentile per-packet one-way delay: 306.461 ms

Loss rate: 25.71%

-- Flow 2:

Average throughput: 187.46 Mbit/s

95th percentile per-packet one-way delay: 274.105 ms

Loss rate: 26.02%

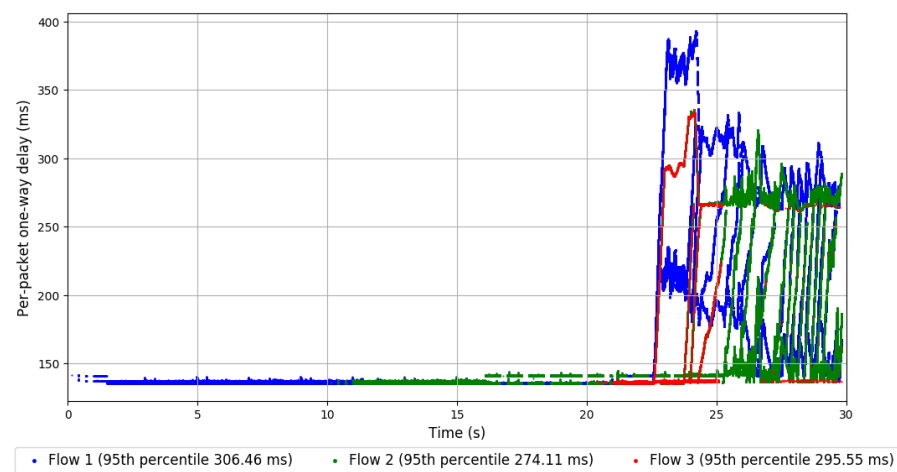
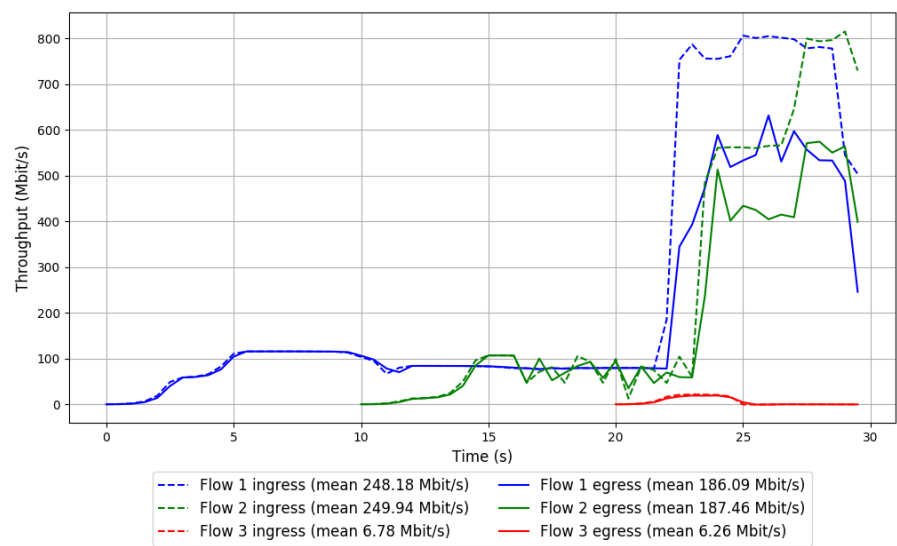
-- Flow 3:

Average throughput: 6.26 Mbit/s

95th percentile per-packet one-way delay: 295.552 ms

Loss rate: 10.18%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2018-02-21 15:13:09

End at: 2018-02-21 15:13:39

Below is generated by plot.py at 2018-02-21 22:16:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 79.82 Mbit/s

95th percentile per-packet one-way delay: 162.326 ms

Loss rate: 0.06%

-- Flow 1:

Average throughput: 63.37 Mbit/s

95th percentile per-packet one-way delay: 141.122 ms

Loss rate: 0.03%

-- Flow 2:

Average throughput: 7.33 Mbit/s

95th percentile per-packet one-way delay: 162.389 ms

Loss rate: 0.63%

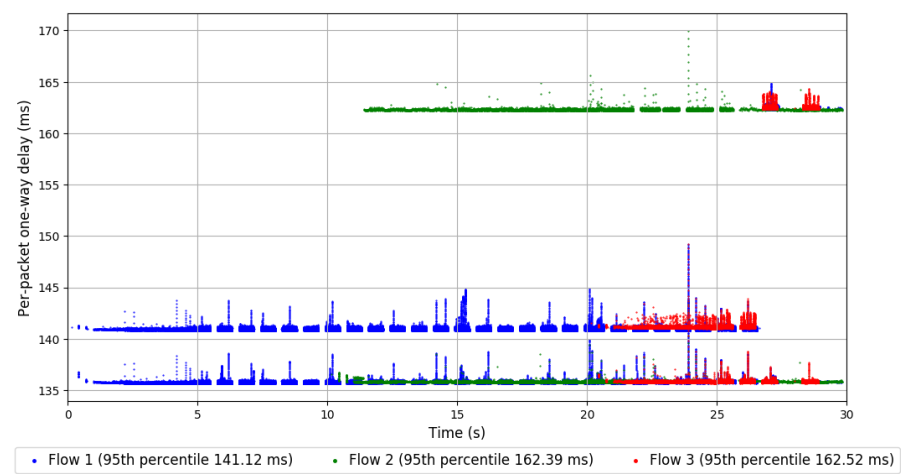
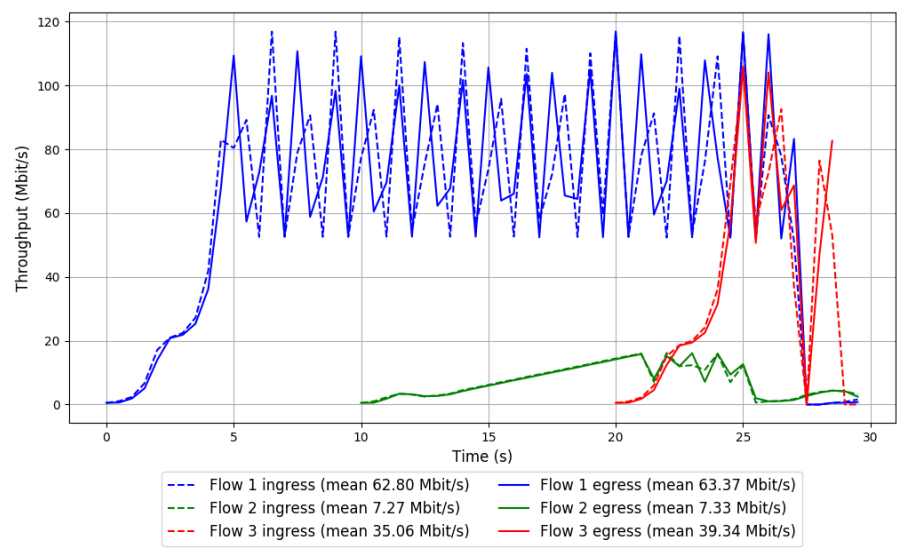
-- Flow 3:

Average throughput: 39.34 Mbit/s

95th percentile per-packet one-way delay: 162.520 ms

Loss rate: 0.00%

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

Start at: 2018-02-21 15:33:24

End at: 2018-02-21 15:33:54

Below is generated by plot.py at 2018-02-21 22:16:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 104.61 Mbit/s

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

Loss rate: 1.69%

-- Flow 1:

Average throughput: 38.62 Mbit/s

95th percentile per-packet one-way delay: 141.019 ms

Loss rate: 2.92%

-- Flow 2:

Average throughput: 67.19 Mbit/s

95th percentile per-packet one-way delay: 137.086 ms

Loss rate: 1.13%

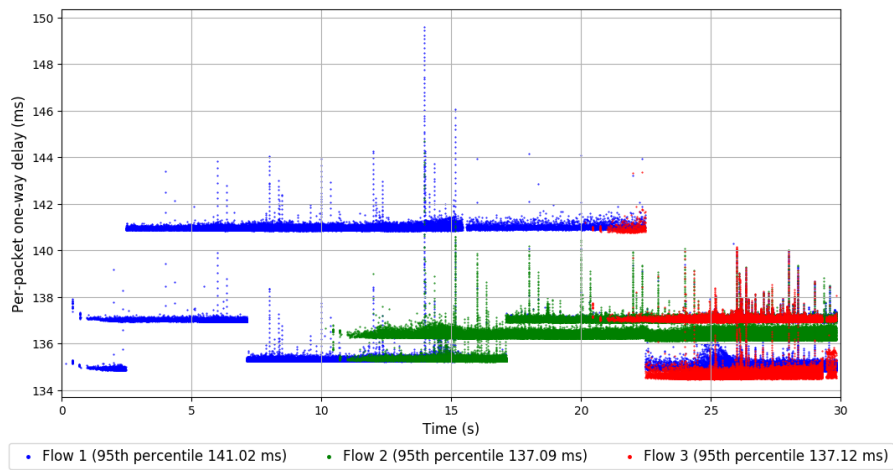
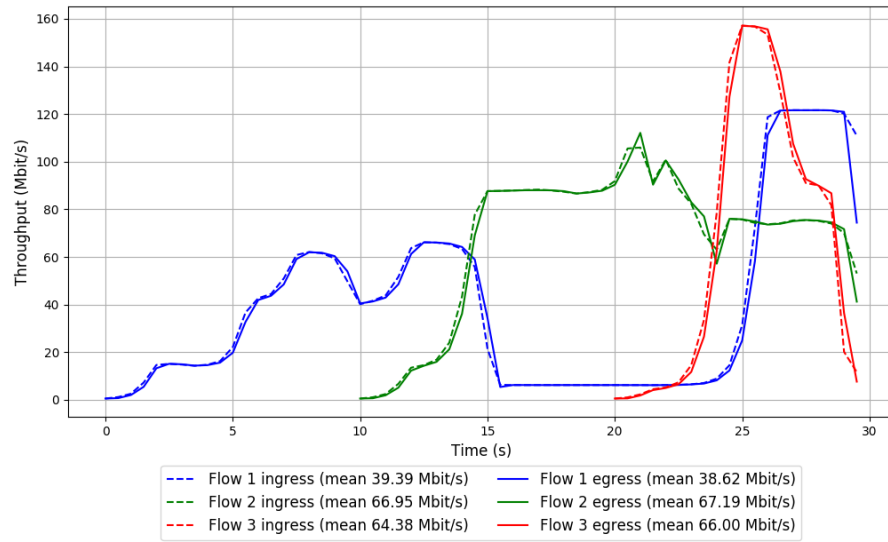
-- Flow 3:

Average throughput: 66.00 Mbit/s

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

Loss rate: 0.57%

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2018-02-21 15:53:48

End at: 2018-02-21 15:54:18

Below is generated by plot.py at 2018-02-21 22:16:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 142.22 Mbit/s

95th percentile per-packet one-way delay: 137.063 ms

Loss rate: 1.46%

-- Flow 1:

Average throughput: 73.77 Mbit/s

95th percentile per-packet one-way delay: 137.054 ms

Loss rate: 0.80%

-- Flow 2:

Average throughput: 66.50 Mbit/s

95th percentile per-packet one-way delay: 137.069 ms

Loss rate: 1.41%

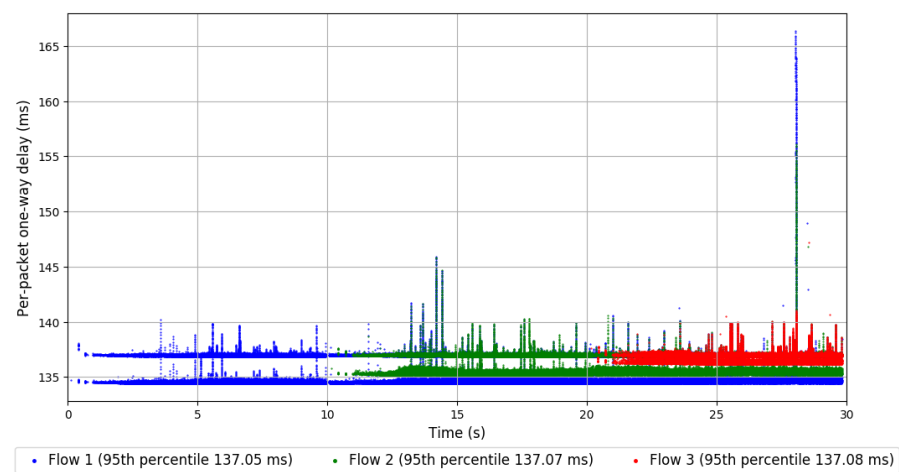
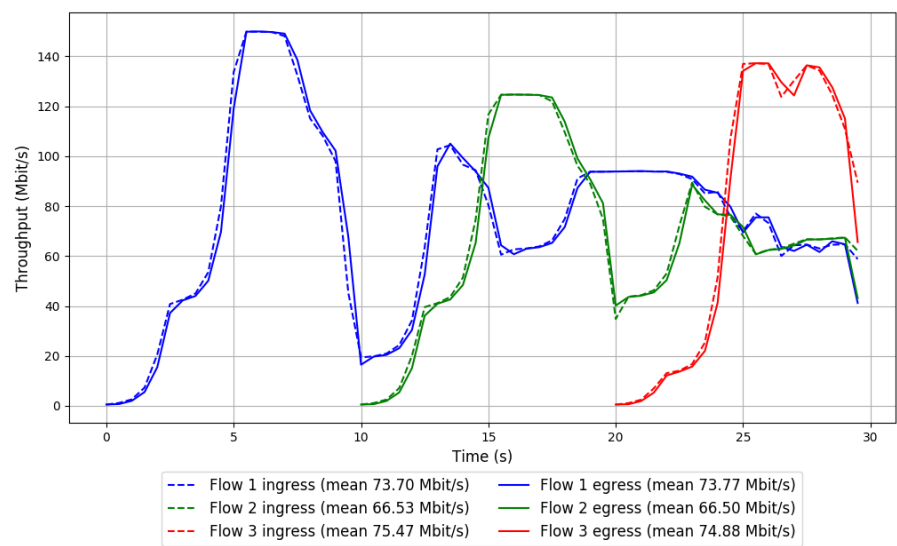
-- Flow 3:

Average throughput: 74.88 Mbit/s

95th percentile per-packet one-way delay: 137.079 ms

Loss rate: 3.51%

Run 5: Report of Copa — Data Link



Run 6: Statistics of Copa

Start at: 2018-02-21 16:14:01

End at: 2018-02-21 16:14:31

Below is generated by plot.py at 2018-02-21 22:16:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 155.13 Mbit/s

95th percentile per-packet one-way delay: 307.843 ms

Loss rate: 31.87%

-- Flow 1:

Average throughput: 198.89 Mbit/s

95th percentile per-packet one-way delay: 309.959 ms

Loss rate: 43.08%

-- Flow 2:

Average throughput: 58.06 Mbit/s

95th percentile per-packet one-way delay: 137.131 ms

Loss rate: 1.96%

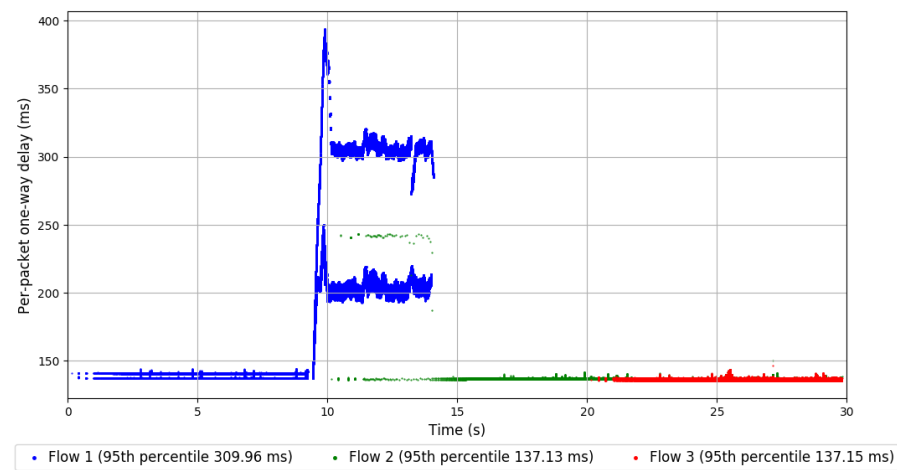
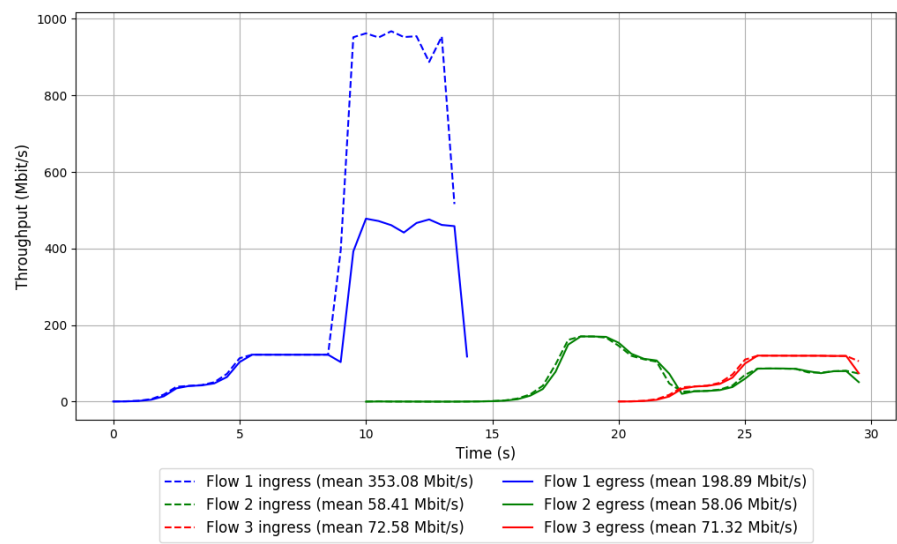
-- Flow 3:

Average throughput: 71.32 Mbit/s

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

Loss rate: 4.44%

Run 6: Report of Copa — Data Link



Run 7: Statistics of Copa

Start at: 2018-02-21 16:34:56

End at: 2018-02-21 16:35:26

Below is generated by plot.py at 2018-02-21 22:16:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 114.10 Mbit/s

95th percentile per-packet one-way delay: 140.620 ms

Loss rate: 1.51%

-- Flow 1:

Average throughput: 63.00 Mbit/s

95th percentile per-packet one-way delay: 140.661 ms

Loss rate: 1.15%

-- Flow 2:

Average throughput: 62.56 Mbit/s

95th percentile per-packet one-way delay: 136.683 ms

Loss rate: 1.43%

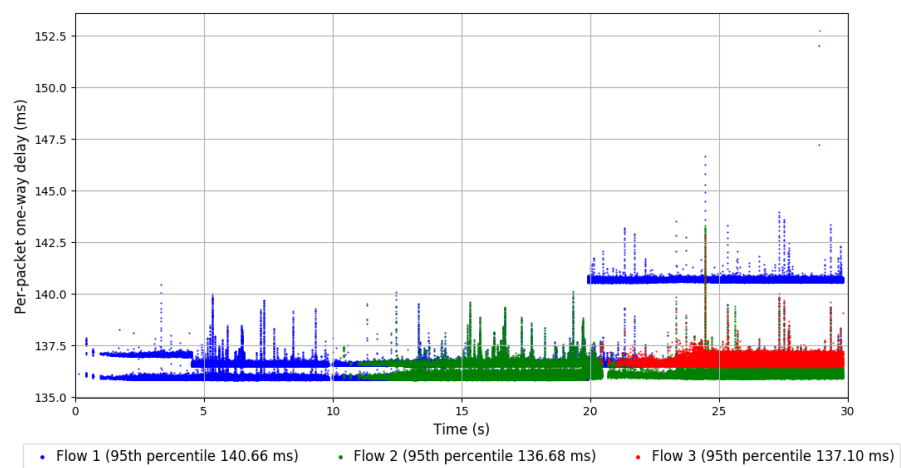
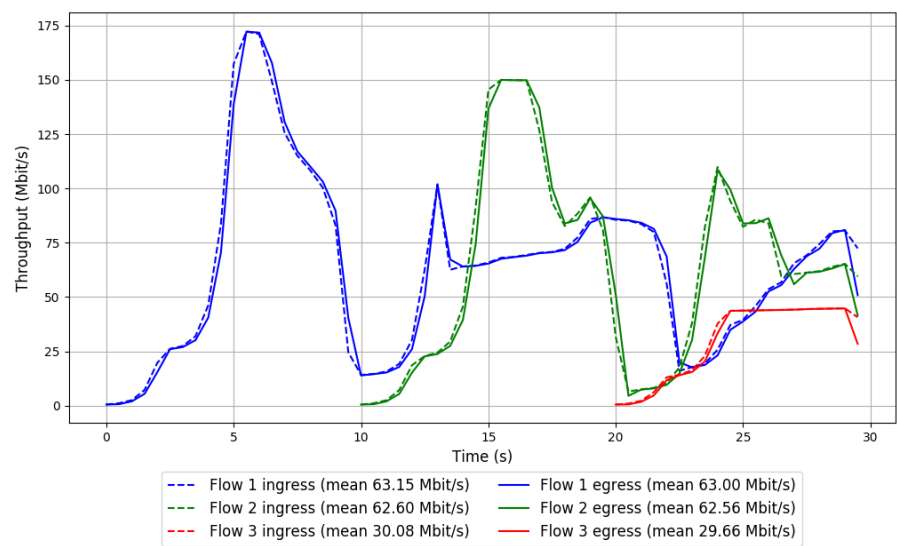
-- Flow 3:

Average throughput: 29.66 Mbit/s

95th percentile per-packet one-way delay: 137.098 ms

Loss rate: 4.10%

Run 7: Report of Copa — Data Link



Run 8: Statistics of Copa

Start at: 2018-02-21 16:55:28

End at: 2018-02-21 16:55:58

Below is generated by plot.py at 2018-02-21 22:16:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 167.67 Mbit/s

95th percentile per-packet one-way delay: 140.839 ms

Loss rate: 1.24%

-- Flow 1:

Average throughput: 96.11 Mbit/s

95th percentile per-packet one-way delay: 140.865 ms

Loss rate: 0.44%

-- Flow 2:

Average throughput: 75.77 Mbit/s

95th percentile per-packet one-way delay: 137.255 ms

Loss rate: 1.42%

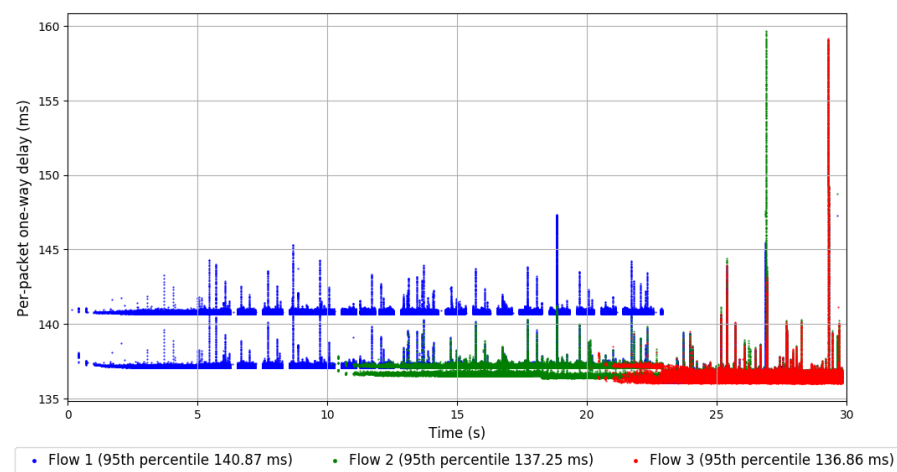
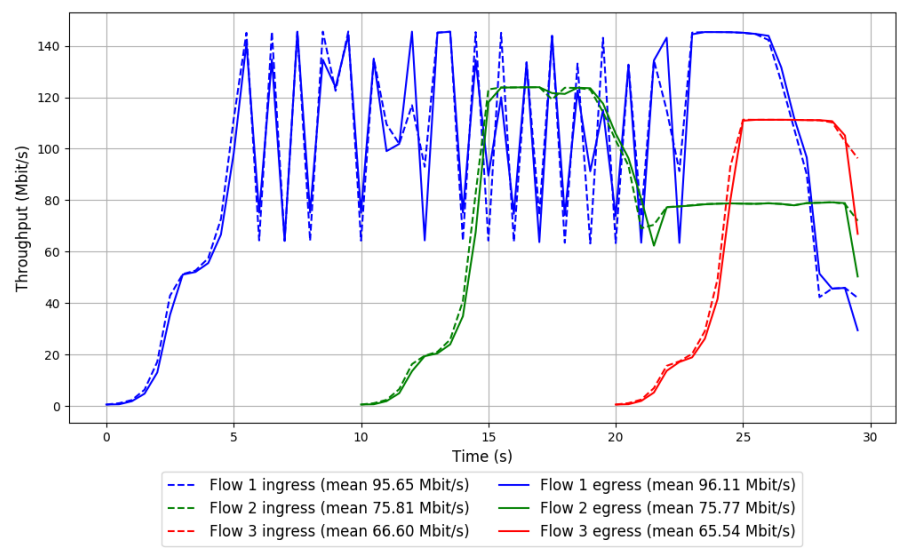
-- Flow 3:

Average throughput: 65.54 Mbit/s

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

Loss rate: 4.30%

Run 8: Report of Copa — Data Link



Run 9: Statistics of Copa

Start at: 2018-02-21 17:15:48

End at: 2018-02-21 17:16:18

Below is generated by plot.py at 2018-02-21 22:16:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 122.96 Mbit/s

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

Loss rate: 1.95%

-- Flow 1:

Average throughput: 59.03 Mbit/s

95th percentile per-packet one-way delay: 141.094 ms

Loss rate: 1.16%

-- Flow 2:

Average throughput: 79.90 Mbit/s

95th percentile per-packet one-way delay: 141.259 ms

Loss rate: 1.83%

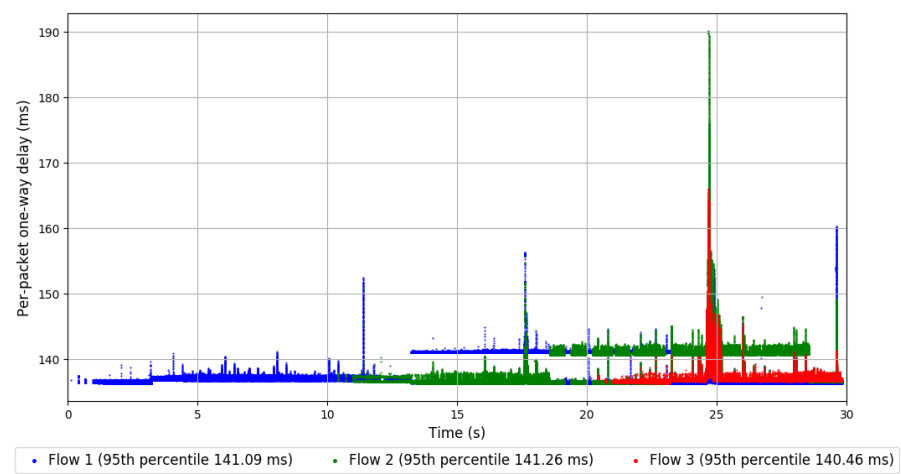
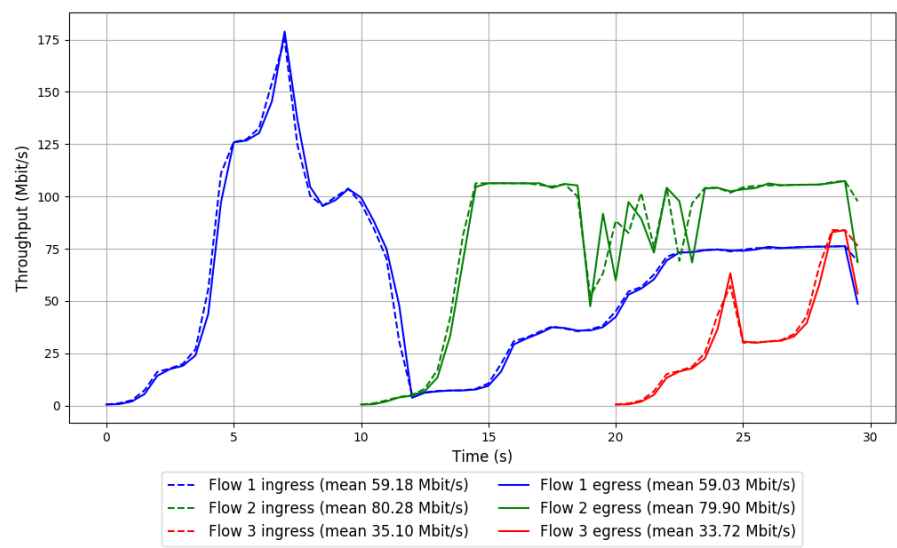
-- Flow 3:

Average throughput: 33.72 Mbit/s

95th percentile per-packet one-way delay: 140.460 ms

Loss rate: 6.56%

Run 9: Report of Copa — Data Link



Run 10: Statistics of Copa

Start at: 2018-02-21 17:36:12

End at: 2018-02-21 17:36:42

Below is generated by plot.py at 2018-02-21 22:16:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 145.20 Mbit/s

95th percentile per-packet one-way delay: 141.061 ms

Loss rate: 1.67%

-- Flow 1:

Average throughput: 75.32 Mbit/s

95th percentile per-packet one-way delay: 136.416 ms

Loss rate: 0.74%

-- Flow 2:

Average throughput: 73.75 Mbit/s

95th percentile per-packet one-way delay: 141.146 ms

Loss rate: 2.11%

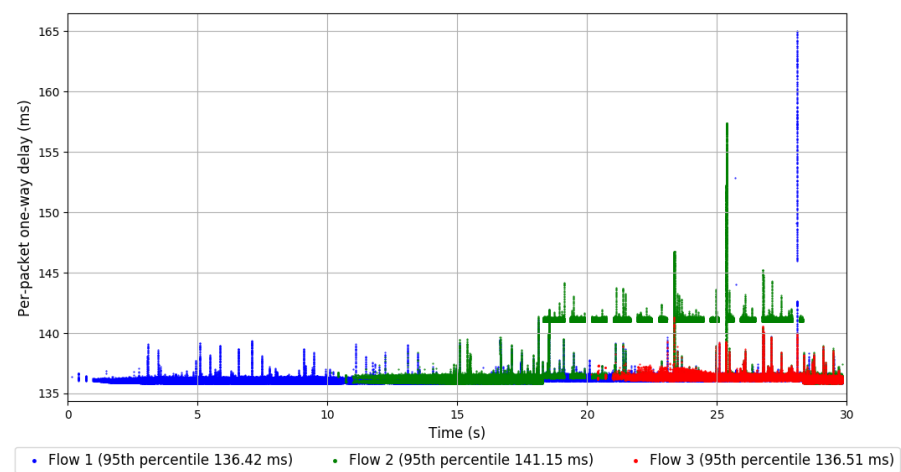
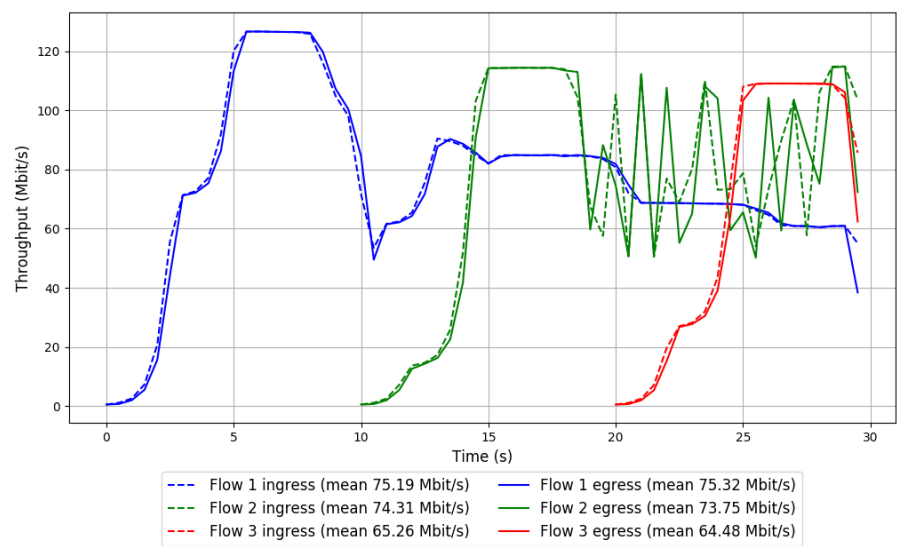
-- Flow 3:

Average throughput: 64.48 Mbit/s

95th percentile per-packet one-way delay: 136.508 ms

Loss rate: 3.90%

Run 10: Report of Copa — Data Link

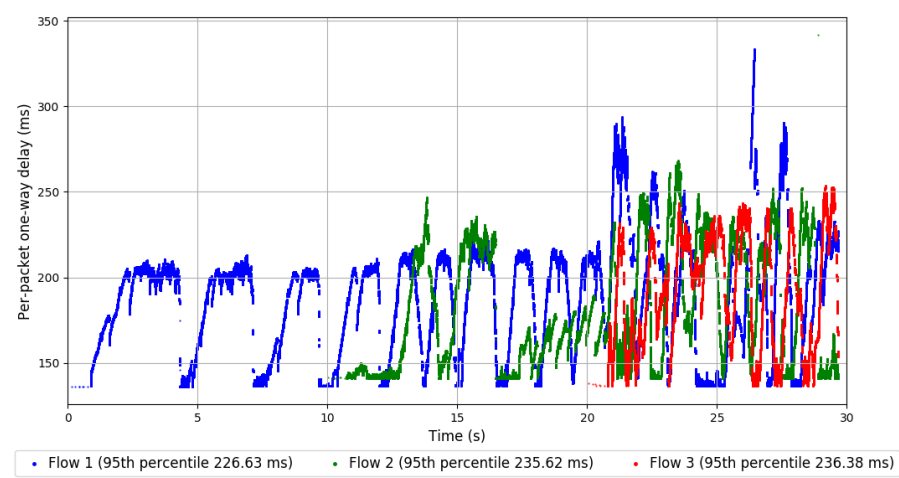
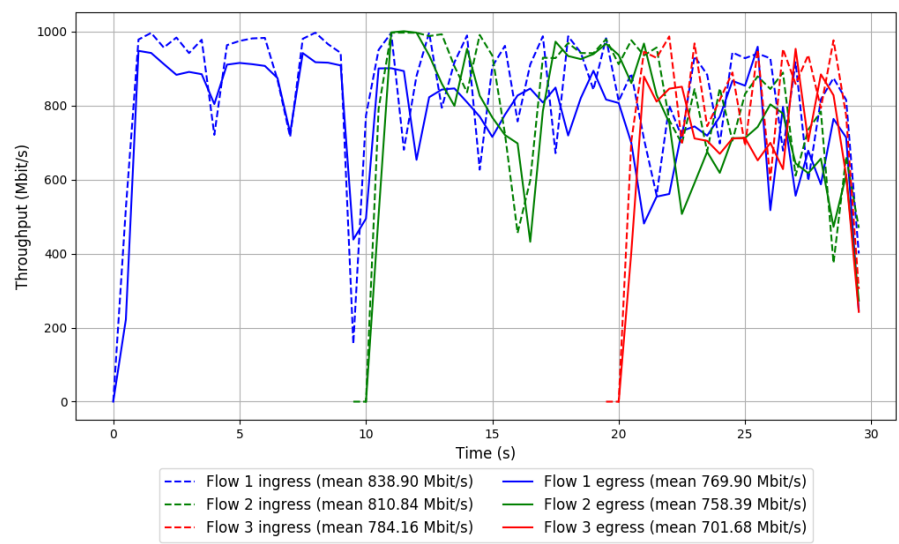


```
Run 1: Statistics of FillP

Start at: 2018-02-21 14:35:14
End at: 2018-02-21 14:35:44

# Below is generated by plot.py at 2018-02-21 22:37:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1502.81 Mbit/s
95th percentile per-packet one-way delay: 234.215 ms
Loss rate: 9.26%
-- Flow 1:
Average throughput: 769.90 Mbit/s
95th percentile per-packet one-way delay: 226.633 ms
Loss rate: 9.06%
-- Flow 2:
Average throughput: 758.39 Mbit/s
95th percentile per-packet one-way delay: 235.616 ms
Loss rate: 7.77%
-- Flow 3:
Average throughput: 701.68 Mbit/s
95th percentile per-packet one-way delay: 236.377 ms
Loss rate: 13.00%
```


Run 1: Report of FillP — Data Link



Run 2: Statistics of FillP

Start at: 2018-02-21 14:55:57

End at: 2018-02-21 14:56:27

Below is generated by plot.py at 2018-02-21 22:39:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 1466.20 Mbit/s

95th percentile per-packet one-way delay: 342.368 ms

Loss rate: 9.22%

-- Flow 1:

Average throughput: 788.44 Mbit/s

95th percentile per-packet one-way delay: 231.887 ms

Loss rate: 7.99%

-- Flow 2:

Average throughput: 706.95 Mbit/s

95th percentile per-packet one-way delay: 383.836 ms

Loss rate: 11.03%

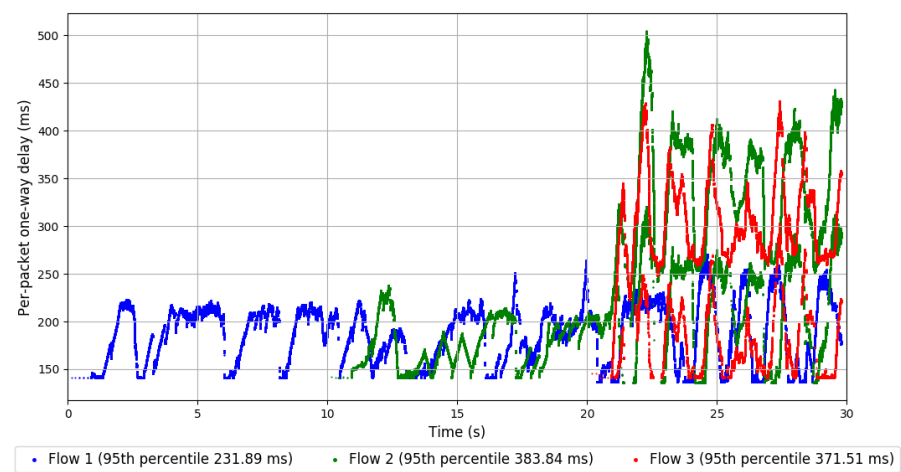
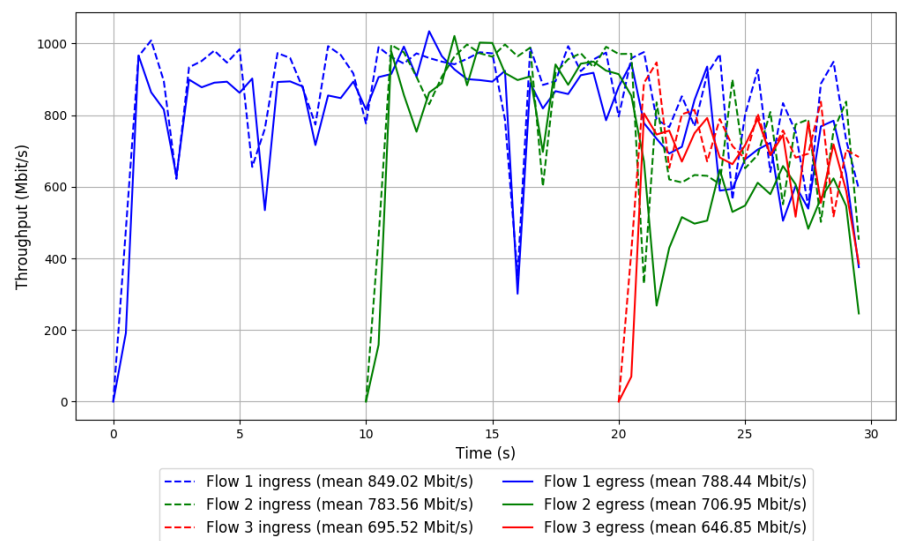
-- Flow 3:

Average throughput: 646.85 Mbit/s

95th percentile per-packet one-way delay: 371.509 ms

Loss rate: 9.64%

Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2018-02-21 15:16:30

End at: 2018-02-21 15:17:00

Below is generated by plot.py at 2018-02-21 22:39:06

Datalink statistics

-- Total of 3 flows:

Average throughput: 1409.22 Mbit/s

95th percentile per-packet one-way delay: 272.549 ms

Loss rate: 10.46%

-- Flow 1:

Average throughput: 738.31 Mbit/s

95th percentile per-packet one-way delay: 274.738 ms

Loss rate: 8.61%

-- Flow 2:

Average throughput: 709.68 Mbit/s

95th percentile per-packet one-way delay: 265.724 ms

Loss rate: 10.49%

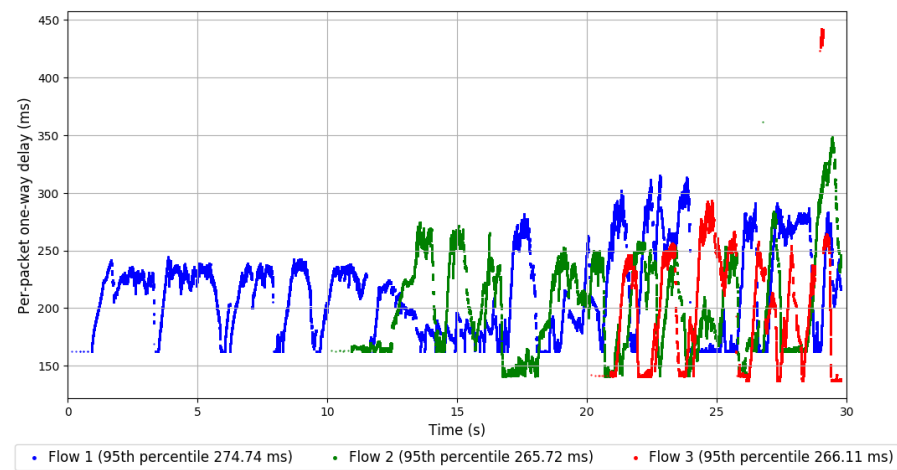
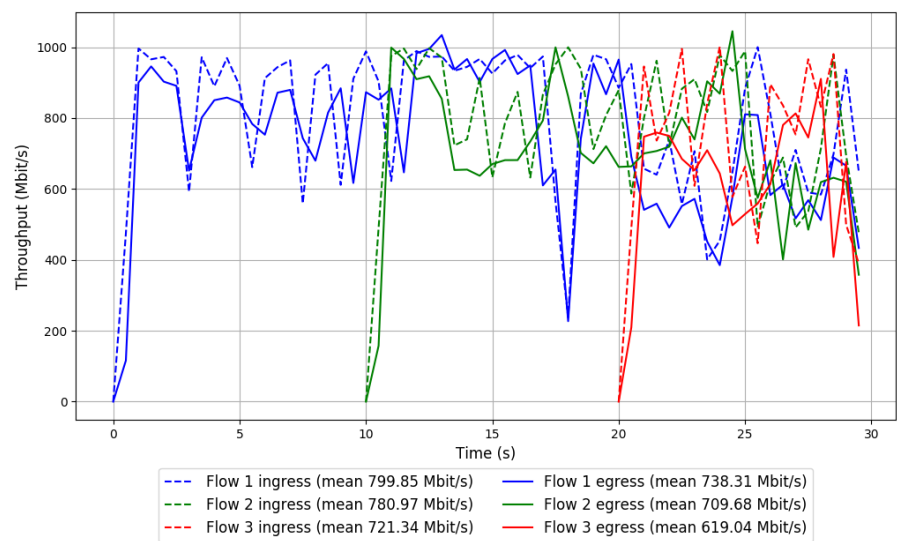
-- Flow 3:

Average throughput: 619.04 Mbit/s

95th percentile per-packet one-way delay: 266.109 ms

Loss rate: 16.59%

Run 3: Report of FillP — Data Link



Run 4: Statistics of FillP

Start at: 2018-02-21 15:36:46

End at: 2018-02-21 15:37:16

Below is generated by plot.py at 2018-02-21 22:41:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 1493.18 Mbit/s

95th percentile per-packet one-way delay: 251.091 ms

Loss rate: 9.34%

-- Flow 1:

Average throughput: 731.90 Mbit/s

95th percentile per-packet one-way delay: 256.634 ms

Loss rate: 10.53%

-- Flow 2:

Average throughput: 759.91 Mbit/s

95th percentile per-packet one-way delay: 244.773 ms

Loss rate: 8.87%

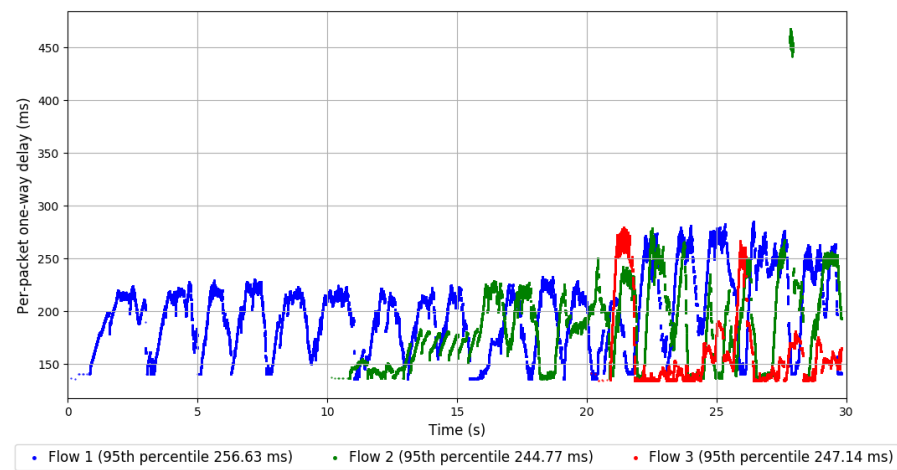
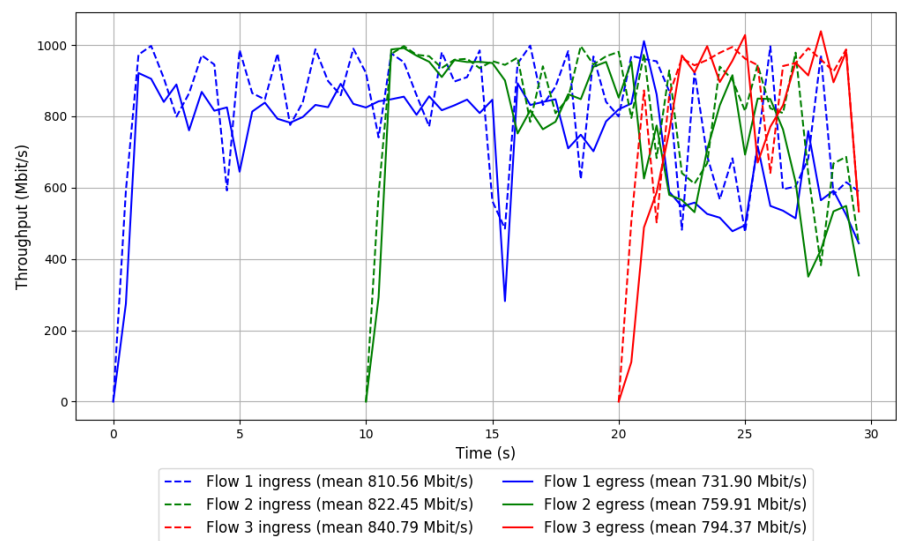
-- Flow 3:

Average throughput: 794.37 Mbit/s

95th percentile per-packet one-way delay: 247.143 ms

Loss rate: 6.76%

Run 4: Report of FillP — Data Link



Run 5: Statistics of FillP

Start at: 2018-02-21 15:57:09

End at: 2018-02-21 15:57:39

Below is generated by plot.py at 2018-02-21 22:41:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 1466.06 Mbit/s

95th percentile per-packet one-way delay: 252.028 ms

Loss rate: 9.86%

-- Flow 1:

Average throughput: 778.28 Mbit/s

95th percentile per-packet one-way delay: 248.667 ms

Loss rate: 7.73%

-- Flow 2:

Average throughput: 739.57 Mbit/s

95th percentile per-packet one-way delay: 245.438 ms

Loss rate: 10.41%

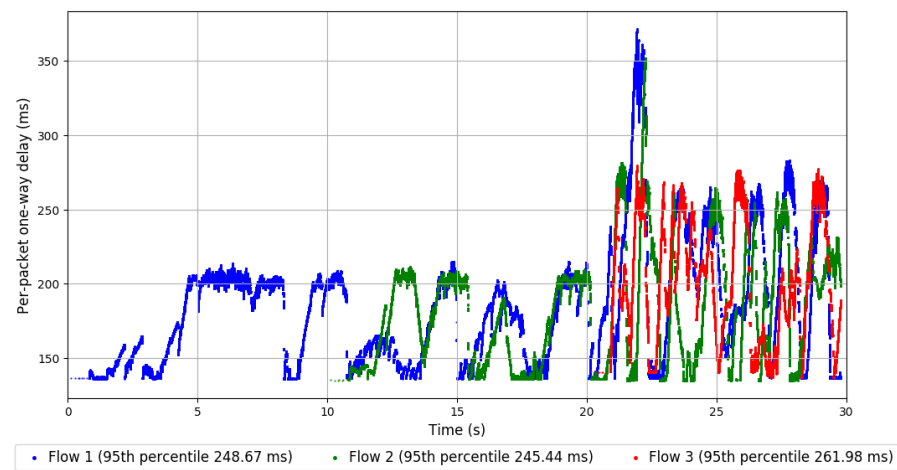
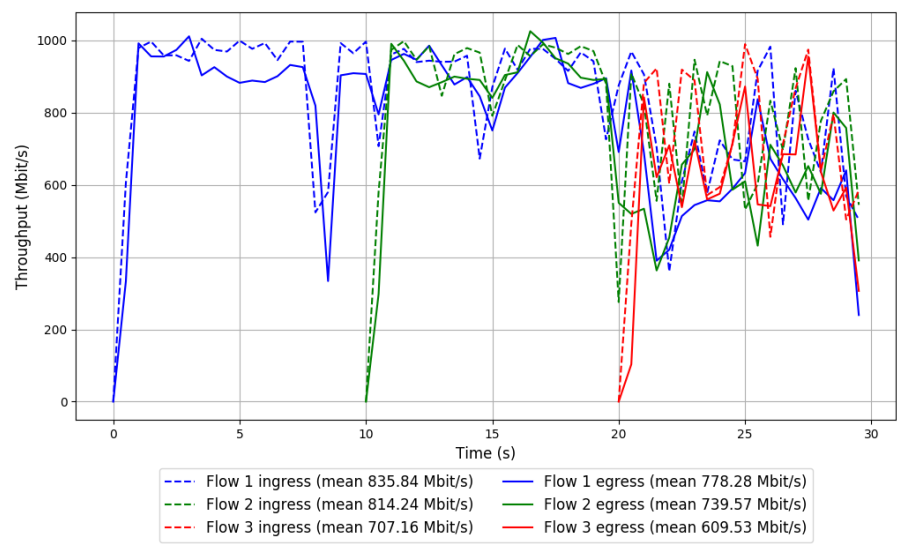
-- Flow 3:

Average throughput: 609.53 Mbit/s

95th percentile per-packet one-way delay: 261.979 ms

Loss rate: 16.22%

Run 5: Report of FillP — Data Link



Run 6: Statistics of FillP

Start at: 2018-02-21 16:17:27

End at: 2018-02-21 16:17:57

Below is generated by plot.py at 2018-02-21 22:41:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 1469.23 Mbit/s

95th percentile per-packet one-way delay: 251.220 ms

Loss rate: 10.16%

-- Flow 1:

Average throughput: 749.62 Mbit/s

95th percentile per-packet one-way delay: 250.353 ms

Loss rate: 10.22%

-- Flow 2:

Average throughput: 752.19 Mbit/s

95th percentile per-packet one-way delay: 241.423 ms

Loss rate: 8.22%

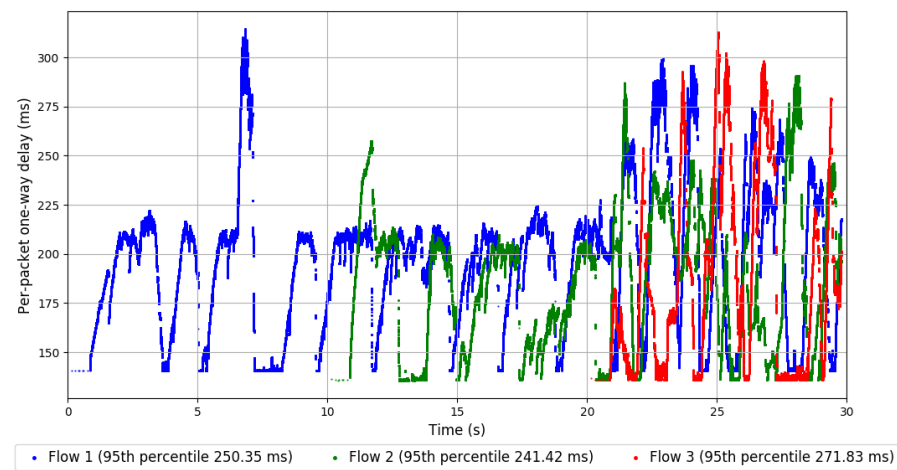
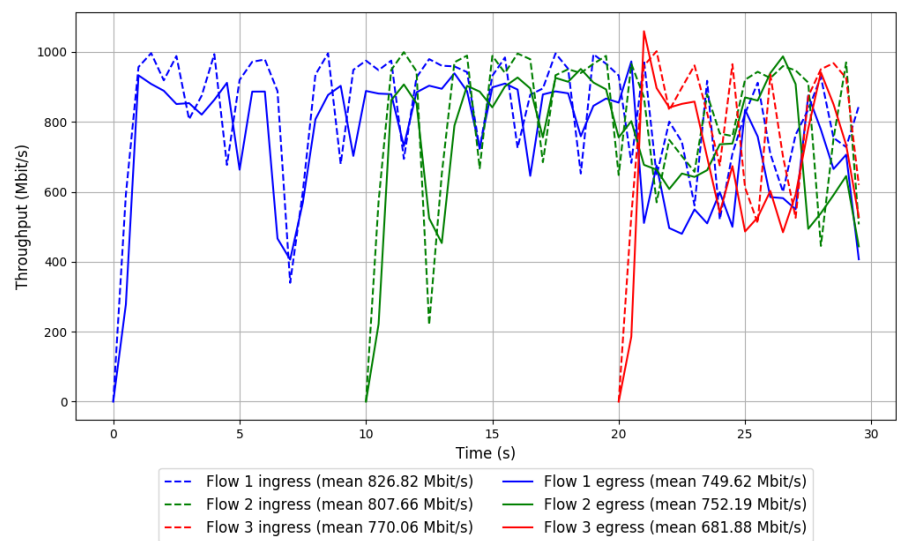
-- Flow 3:

Average throughput: 681.88 Mbit/s

95th percentile per-packet one-way delay: 271.834 ms

Loss rate: 14.03%

Run 6: Report of FillP — Data Link



Run 7: Statistics of FillP

Start at: 2018-02-21 16:38:23

End at: 2018-02-21 16:38:53

Below is generated by plot.py at 2018-02-21 22:41:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 1386.39 Mbit/s

95th percentile per-packet one-way delay: 352.062 ms

Loss rate: 8.59%

-- Flow 1:

Average throughput: 719.50 Mbit/s

95th percentile per-packet one-way delay: 347.463 ms

Loss rate: 6.73%

-- Flow 2:

Average throughput: 657.41 Mbit/s

95th percentile per-packet one-way delay: 365.296 ms

Loss rate: 9.69%

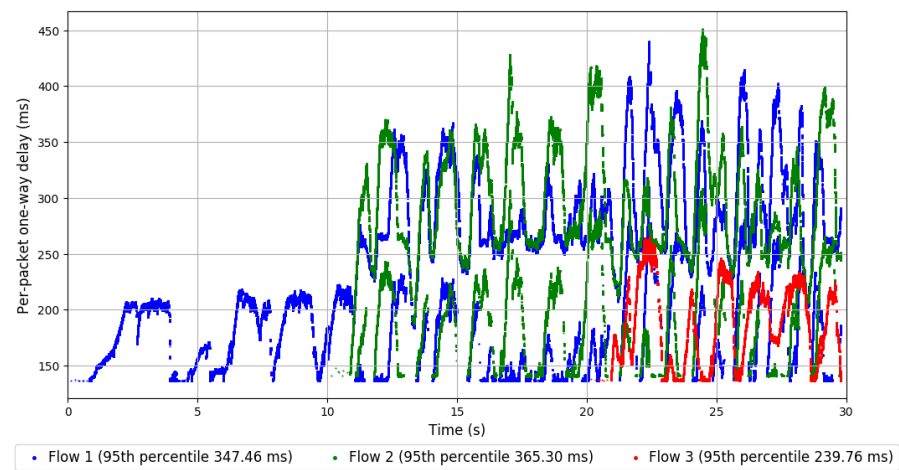
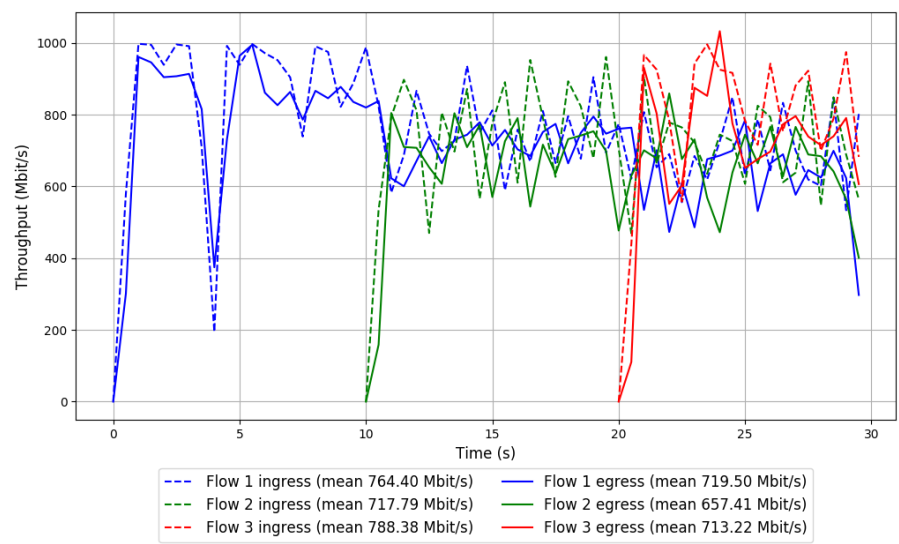
-- Flow 3:

Average throughput: 713.22 Mbit/s

95th percentile per-packet one-way delay: 239.760 ms

Loss rate: 12.04%

Run 7: Report of FillP — Data Link



Run 8: Statistics of FillP

Start at: 2018-02-21 16:58:42

End at: 2018-02-21 16:59:12

Below is generated by plot.py at 2018-02-21 22:46:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 1427.21 Mbit/s

95th percentile per-packet one-way delay: 351.249 ms

Loss rate: 9.95%

-- Flow 1:

Average throughput: 754.45 Mbit/s

95th percentile per-packet one-way delay: 243.509 ms

Loss rate: 9.62%

-- Flow 2:

Average throughput: 726.99 Mbit/s

95th percentile per-packet one-way delay: 366.939 ms

Loss rate: 8.93%

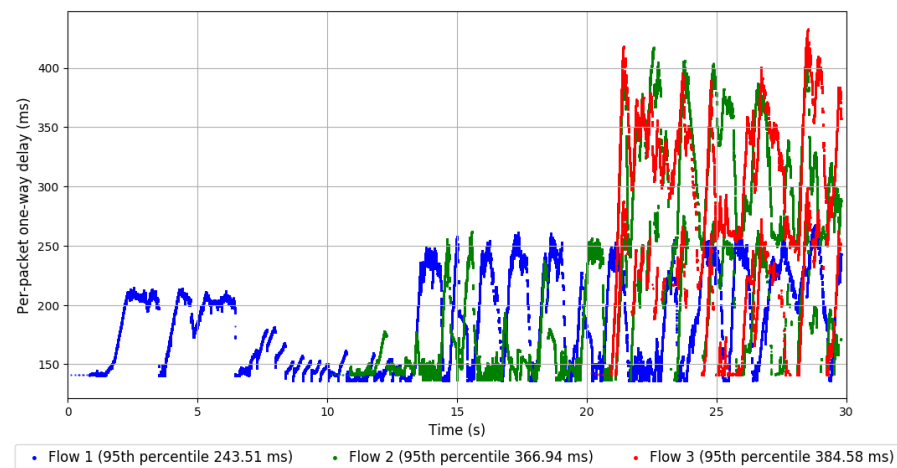
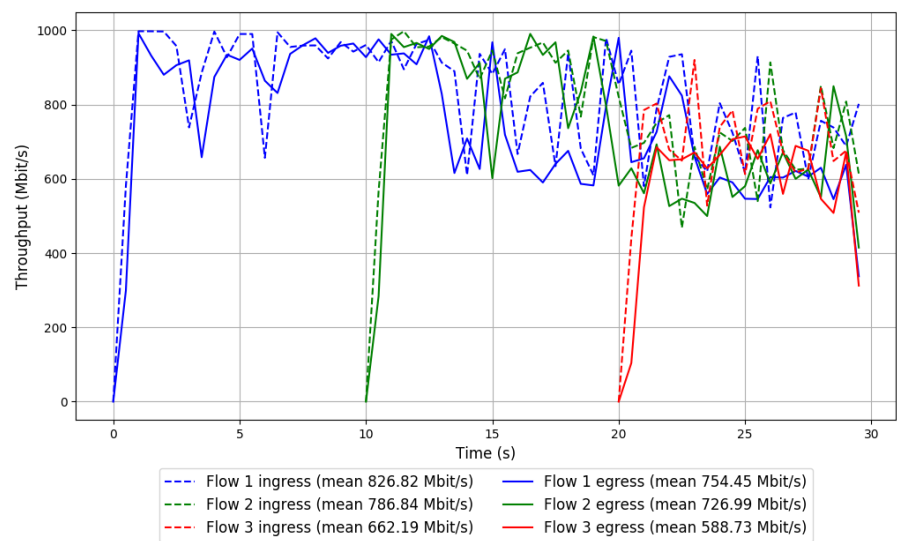
-- Flow 3:

Average throughput: 588.73 Mbit/s

95th percentile per-packet one-way delay: 384.585 ms

Loss rate: 13.66%

Run 8: Report of FillP — Data Link



Run 9: Statistics of FillP

Start at: 2018-02-21 17:19:07

End at: 2018-02-21 17:19:37

Below is generated by plot.py at 2018-02-21 23:05:53

Datalink statistics

-- Total of 3 flows:

Average throughput: 1434.28 Mbit/s

95th percentile per-packet one-way delay: 347.796 ms

Loss rate: 10.34%

-- Flow 1:

Average throughput: 823.67 Mbit/s

95th percentile per-packet one-way delay: 233.375 ms

Loss rate: 6.79%

-- Flow 2:

Average throughput: 637.34 Mbit/s

95th percentile per-packet one-way delay: 376.118 ms

Loss rate: 14.44%

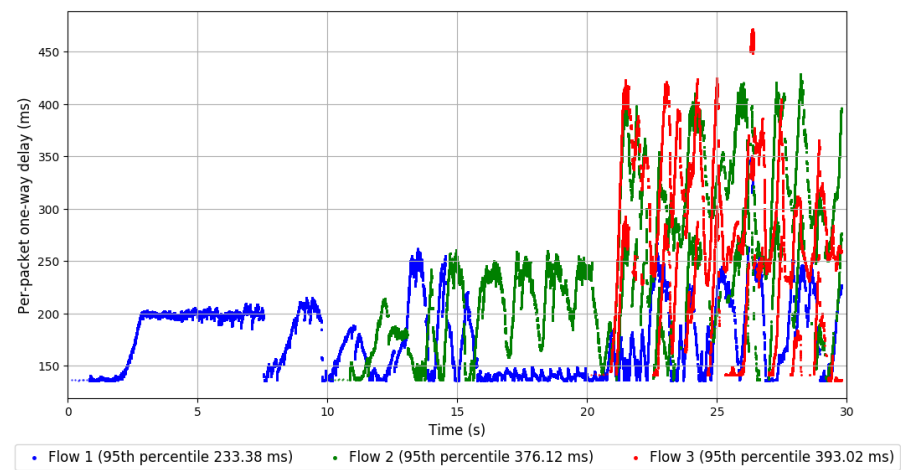
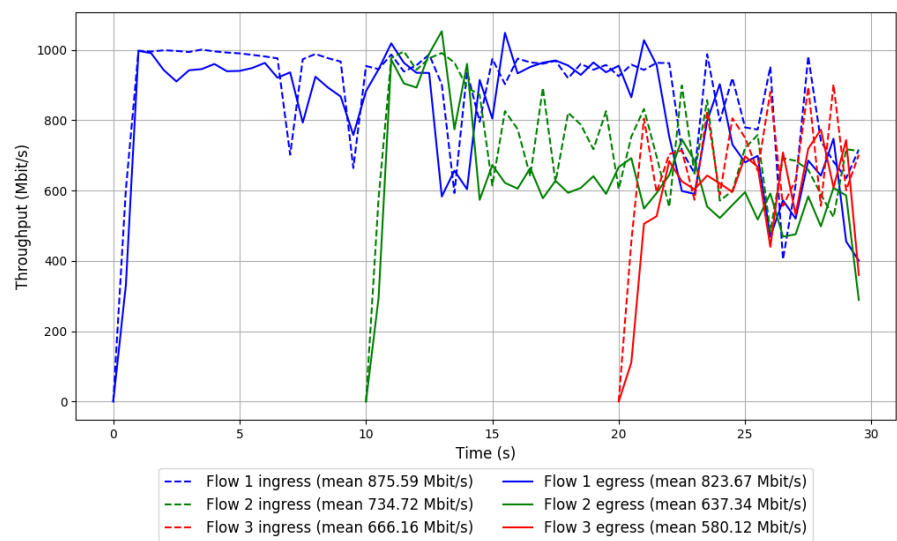
-- Flow 3:

Average throughput: 580.12 Mbit/s

95th percentile per-packet one-way delay: 393.023 ms

Loss rate: 15.36%

Run 9: Report of FillP — Data Link



Run 10: Statistics of FillP

Start at: 2018-02-21 17:39:41

End at: 2018-02-21 17:40:11

Below is generated by plot.py at 2018-02-21 23:08:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 1518.26 Mbit/s

95th percentile per-packet one-way delay: 247.729 ms

Loss rate: 9.85%

-- Flow 1:

Average throughput: 812.04 Mbit/s

95th percentile per-packet one-way delay: 225.683 ms

Loss rate: 6.41%

-- Flow 2:

Average throughput: 733.59 Mbit/s

95th percentile per-packet one-way delay: 250.677 ms

Loss rate: 12.59%

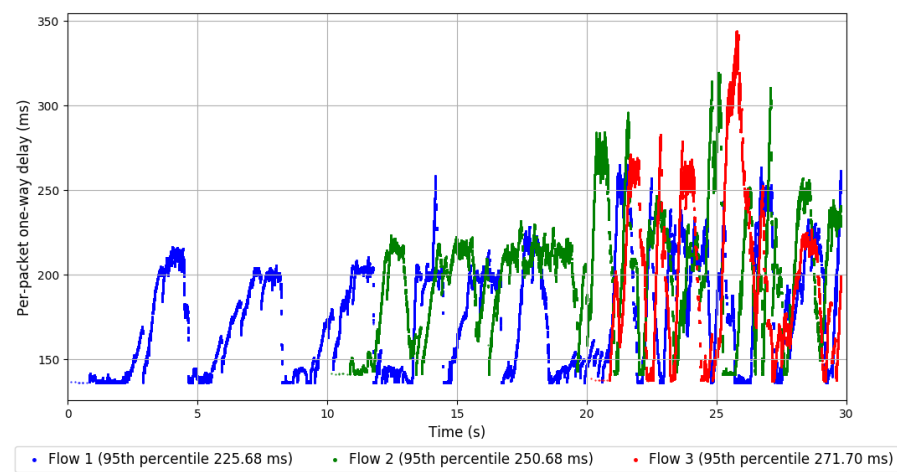
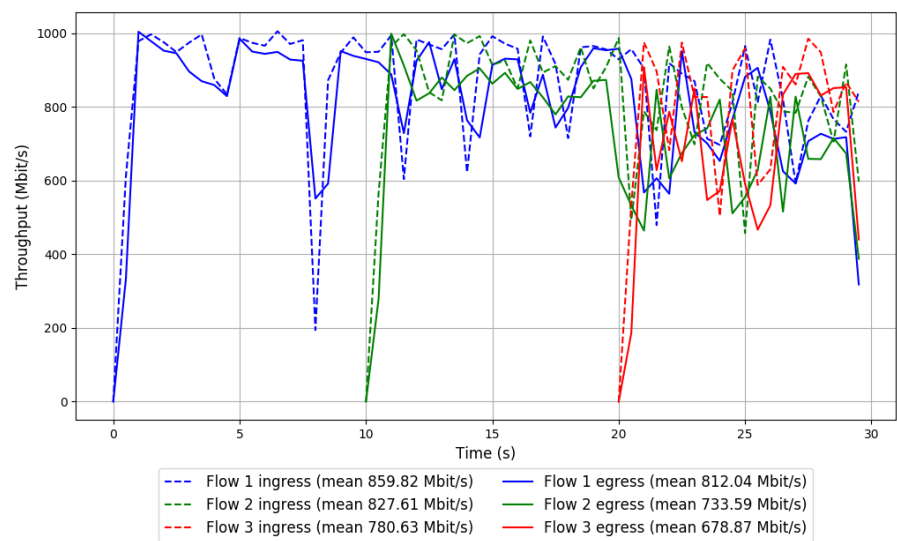
-- Flow 3:

Average throughput: 678.87 Mbit/s

95th percentile per-packet one-way delay: 271.700 ms

Loss rate: 15.44%

Run 10: Report of FillP — Data Link

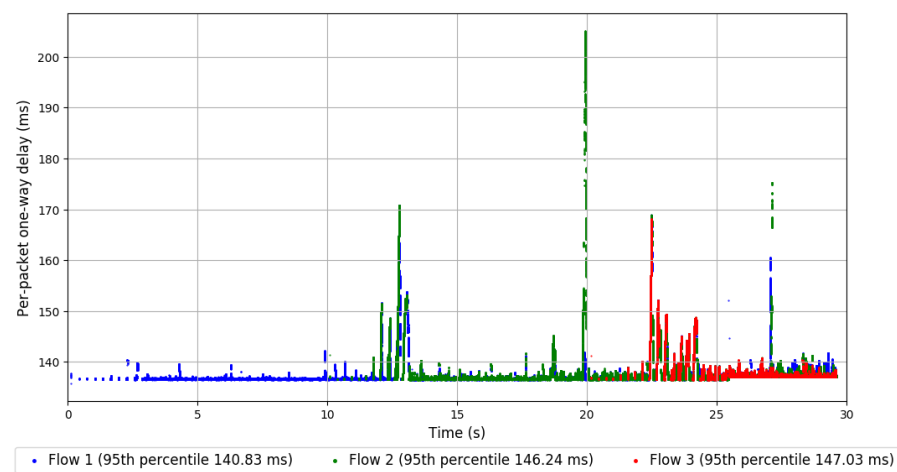
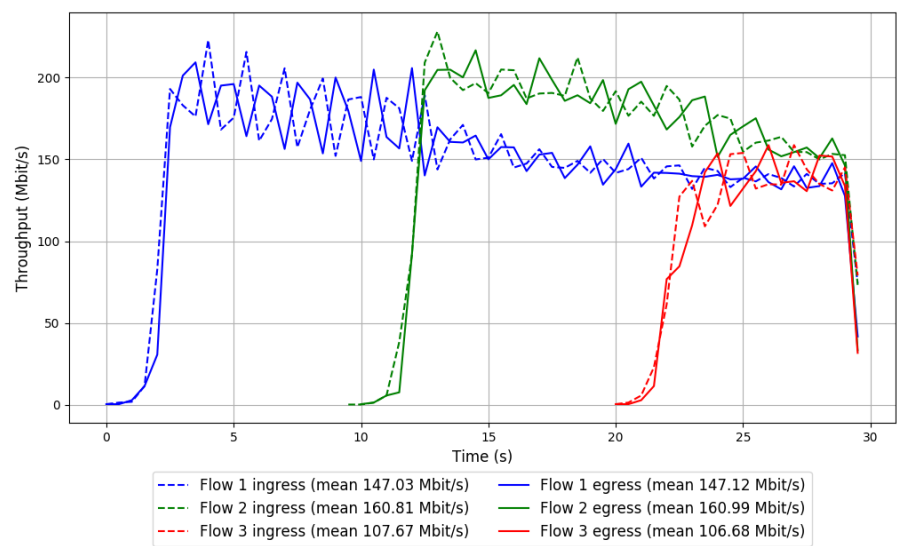


```
Run 1: Statistics of Indigo-1-32

Start at: 2018-02-21 14:43:05
End at: 2018-02-21 14:43:35

# Below is generated by plot.py at 2018-02-21 23:08:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 287.76 Mbit/s
95th percentile per-packet one-way delay: 144.204 ms
Loss rate: 1.38%
-- Flow 1:
Average throughput: 147.12 Mbit/s
95th percentile per-packet one-way delay: 140.833 ms
Loss rate: 0.88%
-- Flow 2:
Average throughput: 160.99 Mbit/s
95th percentile per-packet one-way delay: 146.243 ms
Loss rate: 1.28%
-- Flow 3:
Average throughput: 106.68 Mbit/s
95th percentile per-packet one-way delay: 147.031 ms
Loss rate: 3.79%
```

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

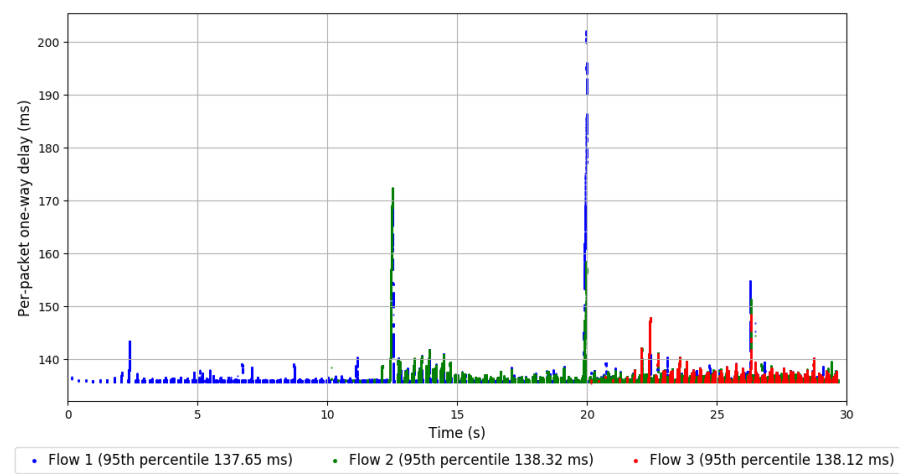
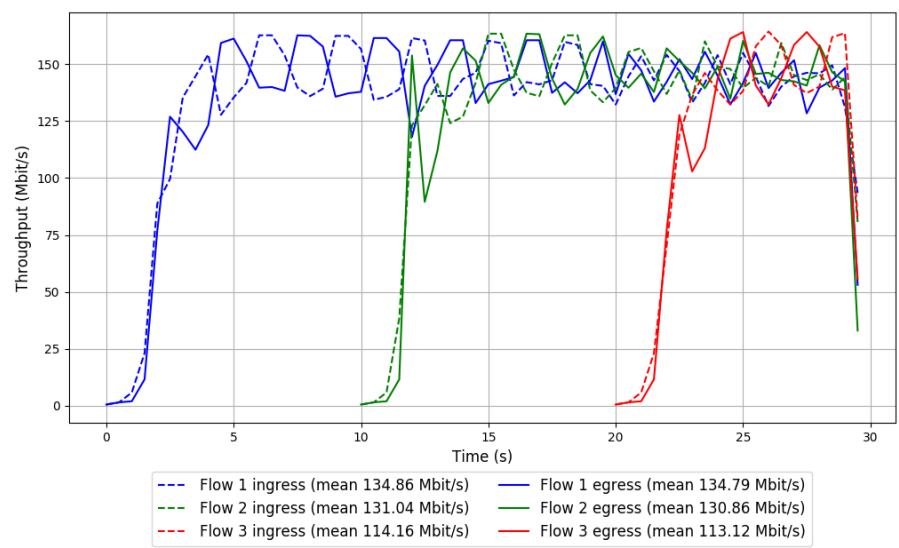


```
Run 2: Statistics of Indigo-1-32

Start at: 2018-02-21 15:04:17
End at: 2018-02-21 15:04:47

# Below is generated by plot.py at 2018-02-21 23:08:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 257.49 Mbit/s
95th percentile per-packet one-way delay: 137.946 ms
Loss rate: 1.54%
-- Flow 1:
Average throughput: 134.79 Mbit/s
95th percentile per-packet one-way delay: 137.654 ms
Loss rate: 0.96%
-- Flow 2:
Average throughput: 130.86 Mbit/s
95th percentile per-packet one-way delay: 138.324 ms
Loss rate: 1.51%
-- Flow 3:
Average throughput: 113.12 Mbit/s
95th percentile per-packet one-way delay: 138.123 ms
Loss rate: 3.69%
```

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



Run 3: Statistics of Indigo-1-32

Start at: 2018-02-21 15:24:43

End at: 2018-02-21 15:25:13

Below is generated by plot.py at 2018-02-21 23:08:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 294.43 Mbit/s

95th percentile per-packet one-way delay: 138.287 ms

Loss rate: 1.45%

-- Flow 1:

Average throughput: 138.40 Mbit/s

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

Loss rate: 0.95%

-- Flow 2:

Average throughput: 162.20 Mbit/s

95th percentile per-packet one-way delay: 138.701 ms

Loss rate: 1.23%

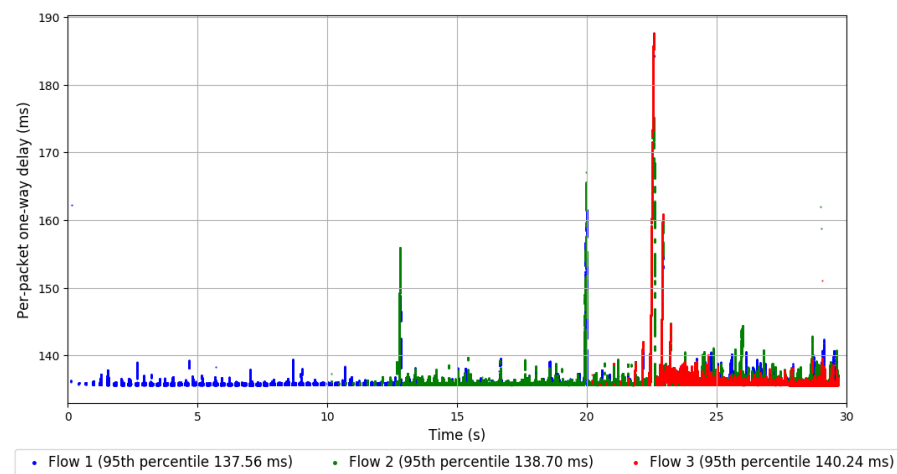
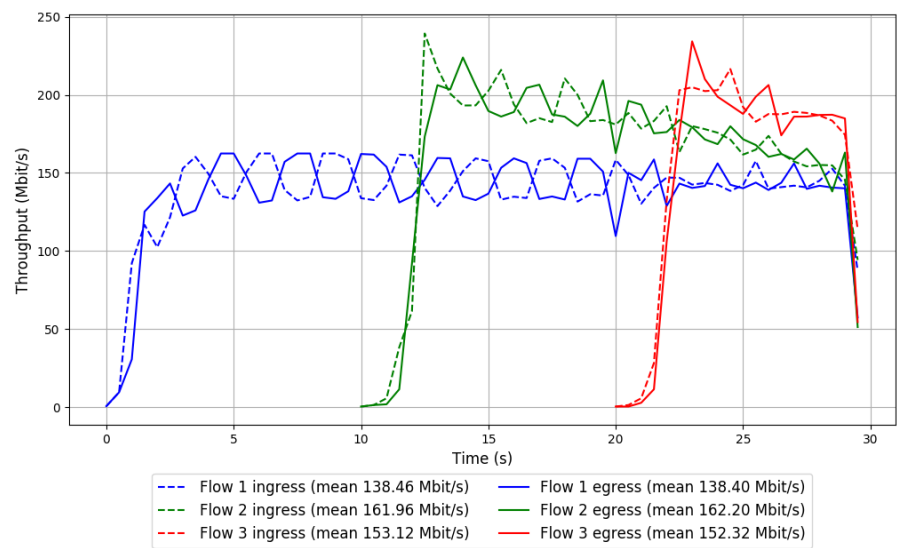
-- Flow 3:

Average throughput: 152.32 Mbit/s

95th percentile per-packet one-way delay: 140.237 ms

Loss rate: 3.30%

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



Run 4: Statistics of Indigo-1-32

Start at: 2018-02-21 15:45:09

End at: 2018-02-21 15:45:39

Below is generated by plot.py at 2018-02-21 23:08:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 263.52 Mbit/s

95th percentile per-packet one-way delay: 139.017 ms

Loss rate: 1.59%

-- Flow 1:

Average throughput: 130.97 Mbit/s

95th percentile per-packet one-way delay: 138.539 ms

Loss rate: 0.98%

-- Flow 2:

Average throughput: 126.47 Mbit/s

95th percentile per-packet one-way delay: 139.038 ms

Loss rate: 1.49%

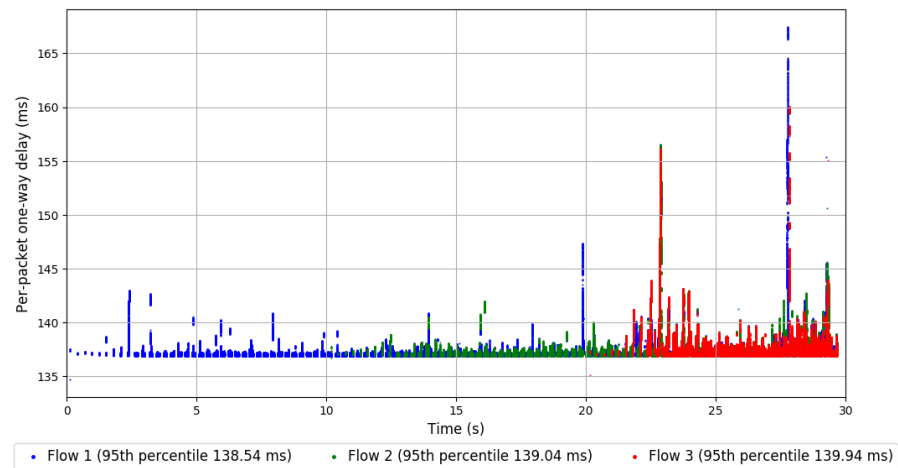
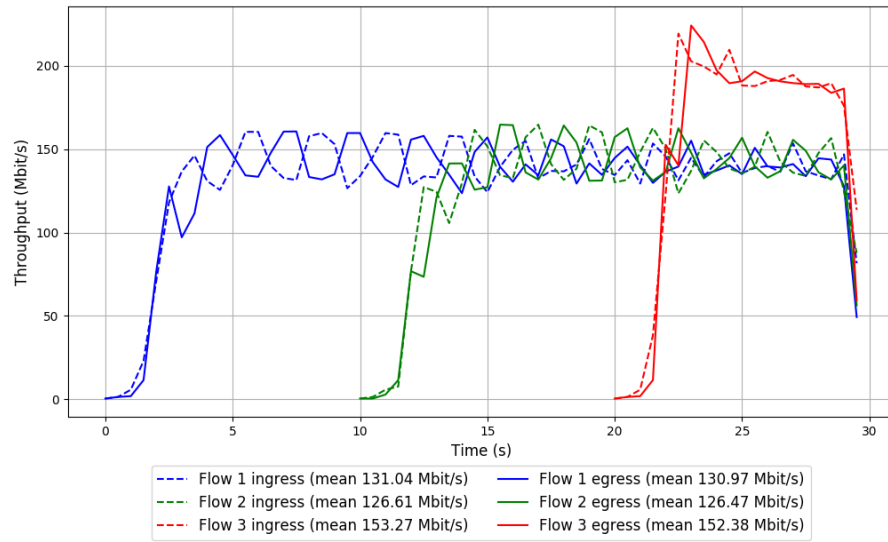
-- Flow 3:

Average throughput: 152.38 Mbit/s

95th percentile per-packet one-way delay: 139.941 ms

Loss rate: 3.34%

Run 4: Report of Indigo-1-32 — Data Link



Run 5: Statistics of Indigo-1-32

Start at: 2018-02-21 16:05:23

End at: 2018-02-21 16:05:53

Below is generated by plot.py at 2018-02-21 23:08:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 308.43 Mbit/s

95th percentile per-packet one-way delay: 139.668 ms

Loss rate: 1.33%

-- Flow 1:

Average throughput: 164.95 Mbit/s

95th percentile per-packet one-way delay: 138.945 ms

Loss rate: 0.82%

-- Flow 2:

Average throughput: 163.72 Mbit/s

95th percentile per-packet one-way delay: 140.322 ms

Loss rate: 1.31%

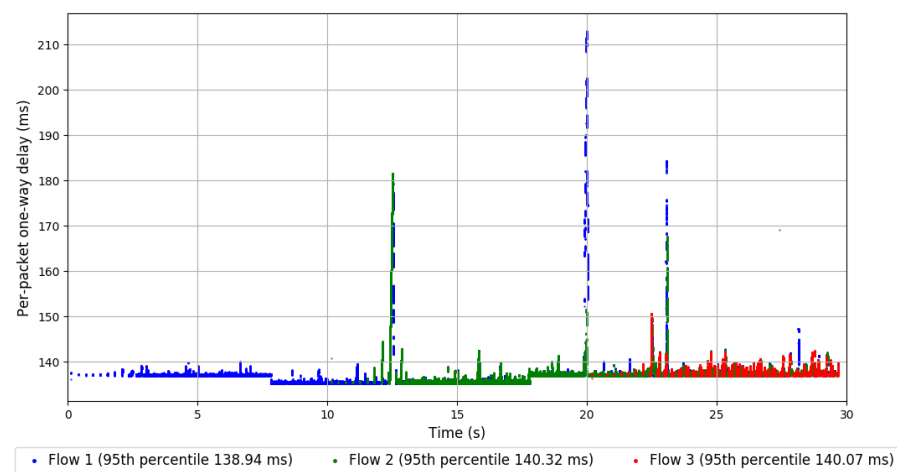
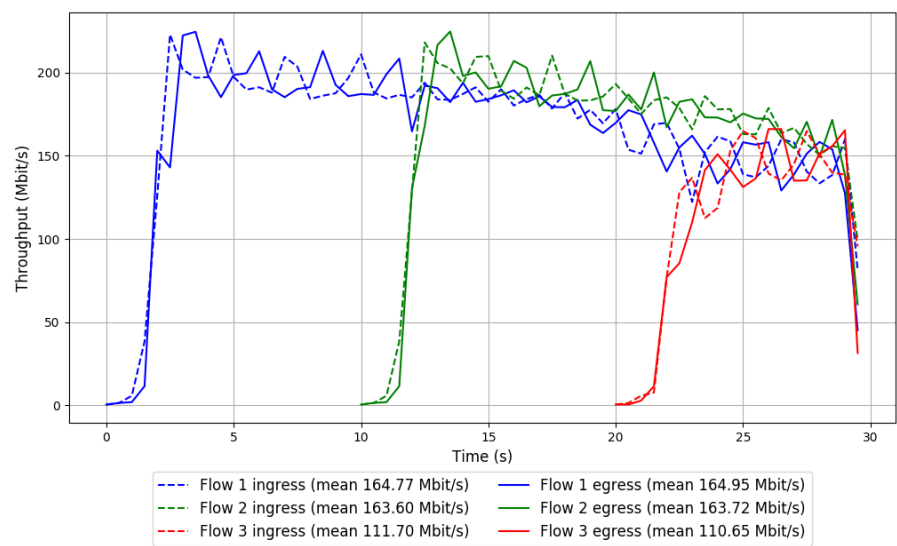
-- Flow 3:

Average throughput: 110.65 Mbit/s

95th percentile per-packet one-way delay: 140.075 ms

Loss rate: 3.71%

Run 5: Report of Indigo-1-32 — Data Link



Run 6: Statistics of Indigo-1-32

Start at: 2018-02-21 16:25:51

End at: 2018-02-21 16:26:21

Below is generated by plot.py at 2018-02-21 23:08:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 266.82 Mbit/s

95th percentile per-packet one-way delay: 139.073 ms

Loss rate: 1.64%

-- Flow 1:

Average throughput: 131.34 Mbit/s

95th percentile per-packet one-way delay: 138.690 ms

Loss rate: 1.00%

-- Flow 2:

Average throughput: 130.18 Mbit/s

95th percentile per-packet one-way delay: 139.148 ms

Loss rate: 1.53%

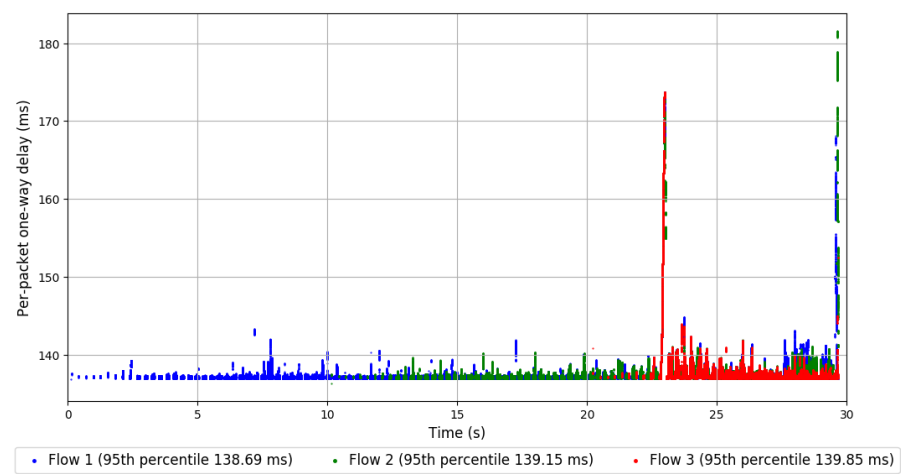
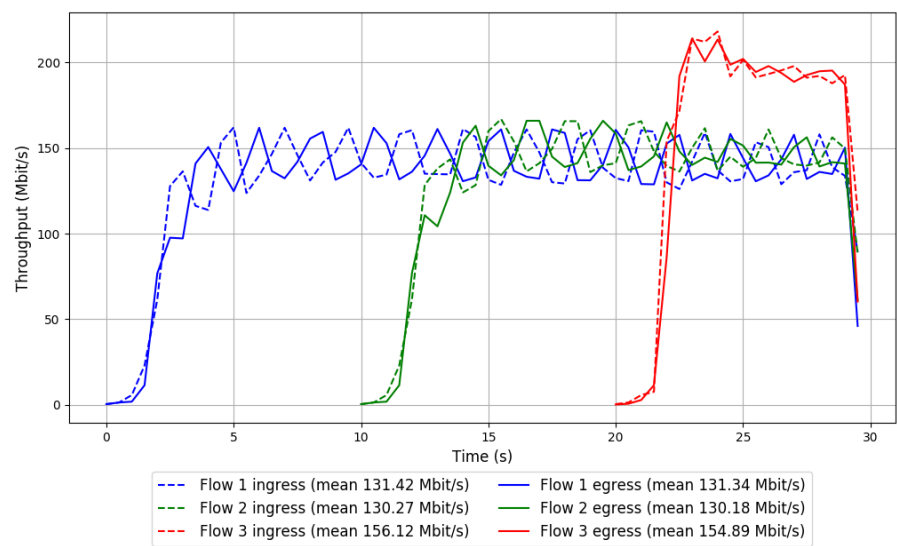
-- Flow 3:

Average throughput: 154.89 Mbit/s

95th percentile per-packet one-way delay: 139.853 ms

Loss rate: 3.46%

Run 6: Report of Indigo-1-32 — Data Link



Run 7: Statistics of Indigo-1-32

Start at: 2018-02-21 16:46:36

End at: 2018-02-21 16:47:06

Below is generated by plot.py at 2018-02-21 23:08:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 268.40 Mbit/s

95th percentile per-packet one-way delay: 173.870 ms

Loss rate: 1.43%

-- Flow 1:

Average throughput: 128.80 Mbit/s

95th percentile per-packet one-way delay: 165.226 ms

Loss rate: 0.97%

-- Flow 2:

Average throughput: 151.83 Mbit/s

95th percentile per-packet one-way delay: 172.745 ms

Loss rate: 1.30%

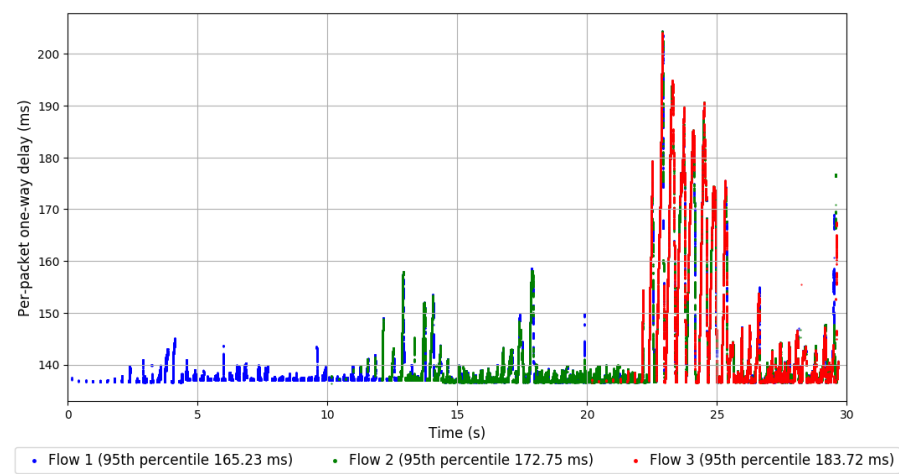
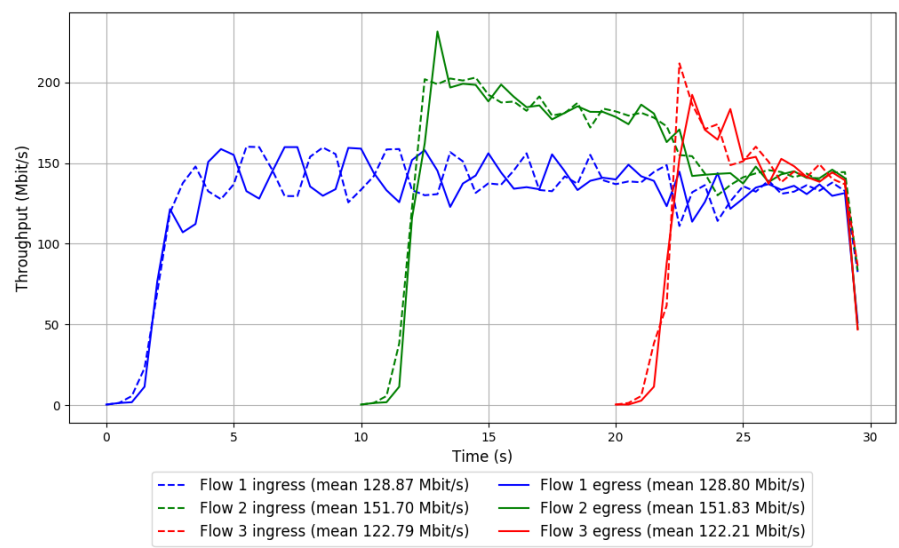
-- Flow 3:

Average throughput: 122.21 Mbit/s

95th percentile per-packet one-way delay: 183.725 ms

Loss rate: 3.25%

Run 7: Report of Indigo-1-32 — Data Link



Run 8: Statistics of Indigo-1-32

Start at: 2018-02-21 17:06:47

End at: 2018-02-21 17:07:17

Below is generated by plot.py at 2018-02-21 23:08:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 287.82 Mbit/s

95th percentile per-packet one-way delay: 140.708 ms

Loss rate: 1.48%

-- Flow 1:

Average throughput: 130.84 Mbit/s

95th percentile per-packet one-way delay: 139.820 ms

Loss rate: 0.97%

-- Flow 2:

Average throughput: 165.49 Mbit/s

95th percentile per-packet one-way delay: 141.563 ms

Loss rate: 1.28%

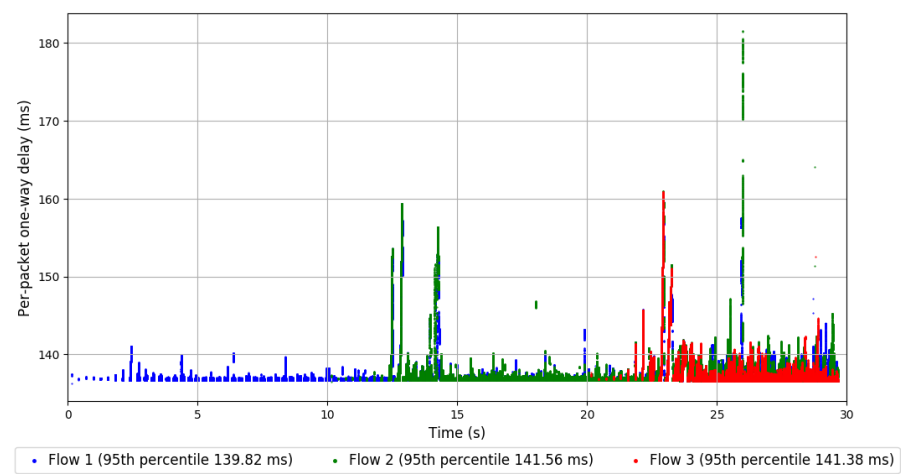
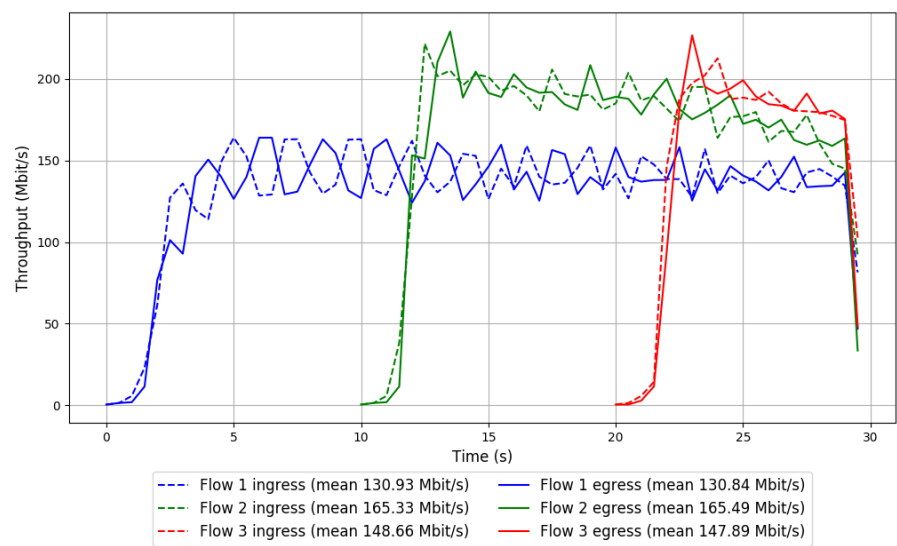
-- Flow 3:

Average throughput: 147.89 Mbit/s

95th percentile per-packet one-way delay: 141.379 ms

Loss rate: 3.30%

Run 8: Report of Indigo-1-32 — Data Link



Run 9: Statistics of Indigo-1-32

Start at: 2018-02-21 17:27:19

End at: 2018-02-21 17:27:49

Below is generated by plot.py at 2018-02-21 23:08:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 278.65 Mbit/s

95th percentile per-packet one-way delay: 139.166 ms

Loss rate: 1.46%

-- Flow 1:

Average throughput: 133.90 Mbit/s

95th percentile per-packet one-way delay: 138.589 ms

Loss rate: 0.98%

-- Flow 2:

Average throughput: 166.02 Mbit/s

95th percentile per-packet one-way delay: 139.828 ms

Loss rate: 1.33%

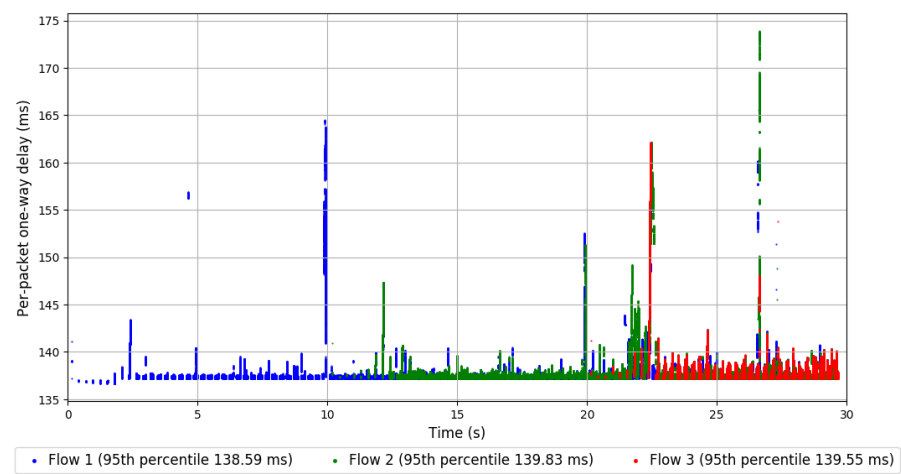
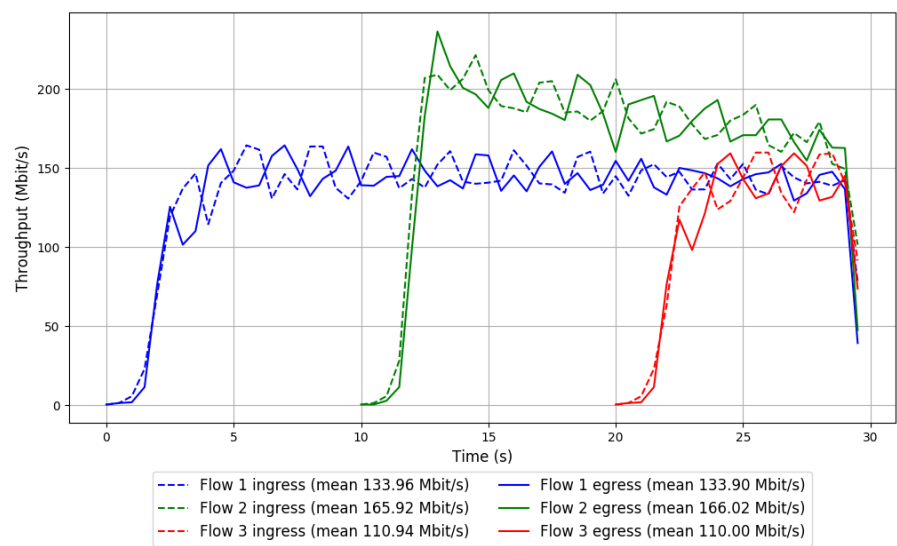
-- Flow 3:

Average throughput: 110.00 Mbit/s

95th percentile per-packet one-way delay: 139.547 ms

Loss rate: 3.63%

Run 9: Report of Indigo-1-32 — Data Link



Run 10: Statistics of Indigo-1-32

Start at: 2018-02-21 17:47:57

End at: 2018-02-21 17:48:27

Below is generated by plot.py at 2018-02-21 23:08:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 266.86 Mbit/s

95th percentile per-packet one-way delay: 140.303 ms

Loss rate: 1.58%

-- Flow 1:

Average throughput: 134.34 Mbit/s

95th percentile per-packet one-way delay: 140.205 ms

Loss rate: 0.96%

-- Flow 2:

Average throughput: 127.46 Mbit/s

95th percentile per-packet one-way delay: 141.011 ms

Loss rate: 1.52%

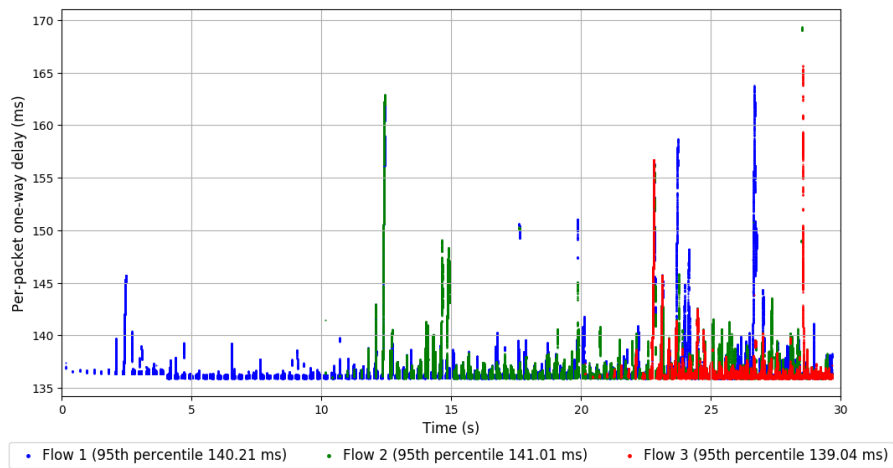
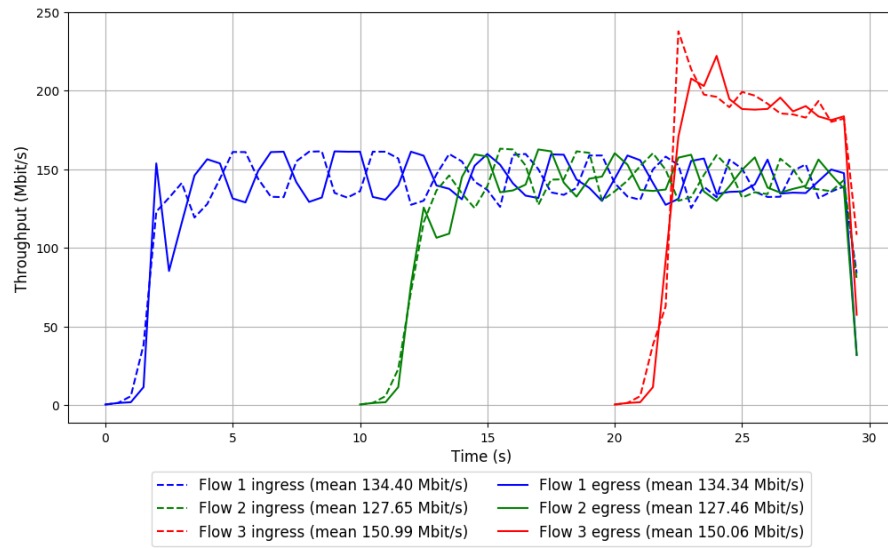
-- Flow 3:

Average throughput: 150.06 Mbit/s

95th percentile per-packet one-way delay: 139.037 ms

Loss rate: 3.37%

Run 10: Report of Indigo-1-32 — Data Link

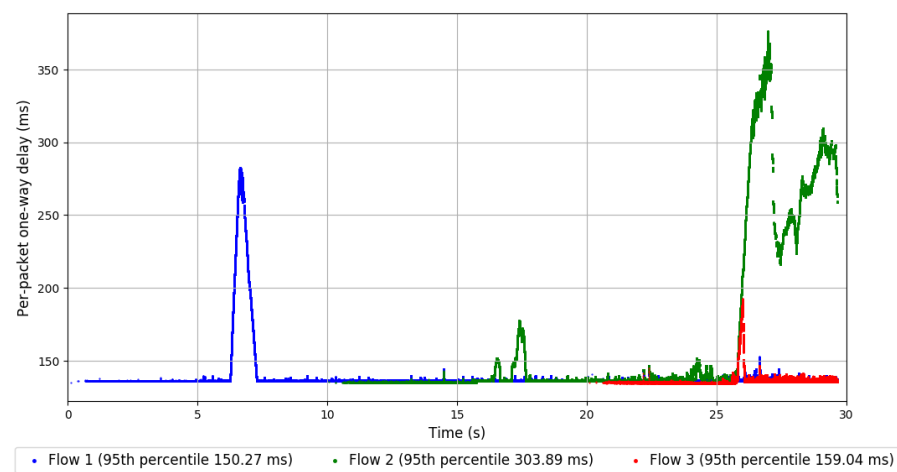
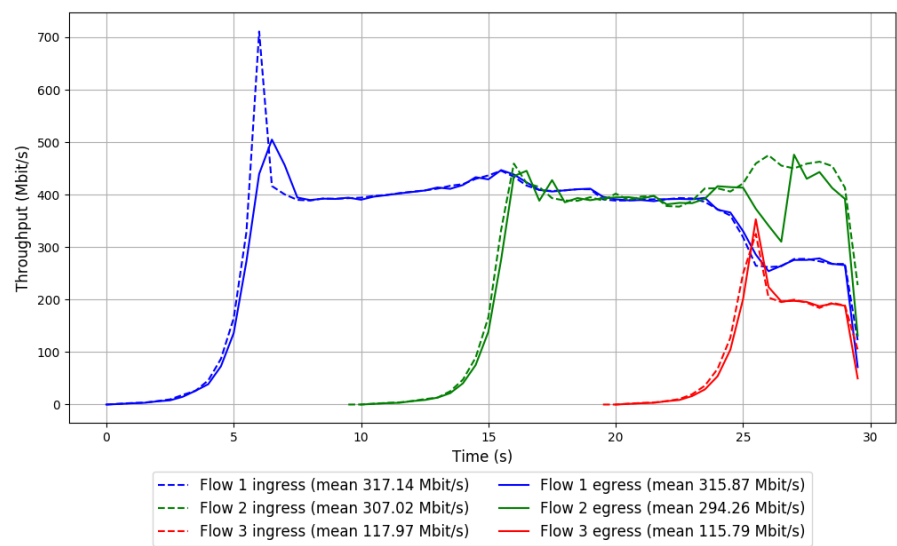


```
Run 1: Statistics of Vivace-latency

Start at: 2018-02-21 14:33:40
End at: 2018-02-21 14:34:10

# Below is generated by plot.py at 2018-02-21 23:08:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 548.63 Mbit/s
95th percentile per-packet one-way delay: 270.132 ms
Loss rate: 3.06%
-- Flow 1:
Average throughput: 315.87 Mbit/s
95th percentile per-packet one-way delay: 150.273 ms
Loss rate: 1.33%
-- Flow 2:
Average throughput: 294.26 Mbit/s
95th percentile per-packet one-way delay: 303.889 ms
Loss rate: 5.47%
-- Flow 3:
Average throughput: 115.79 Mbit/s
95th percentile per-packet one-way delay: 159.037 ms
Loss rate: 4.56%
```


Run 1: Report of Vivace-latency — Data Link



Run 2: Statistics of Vivace-latency

Start at: 2018-02-21 14:54:25

End at: 2018-02-21 14:54:55

Below is generated by plot.py at 2018-02-21 23:08:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 523.80 Mbit/s

95th percentile per-packet one-way delay: 152.463 ms

Loss rate: 1.72%

-- Flow 1:

Average throughput: 328.00 Mbit/s

95th percentile per-packet one-way delay: 165.774 ms

Loss rate: 1.73%

-- Flow 2:

Average throughput: 268.05 Mbit/s

95th percentile per-packet one-way delay: 146.381 ms

Loss rate: 1.38%

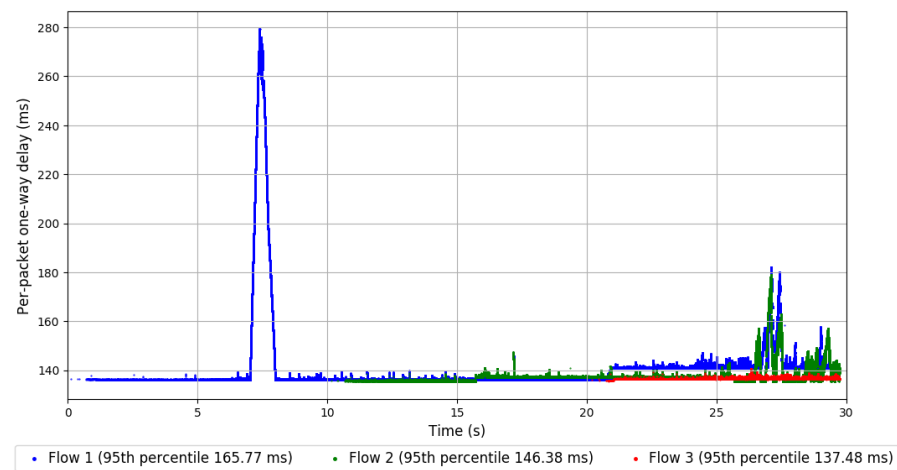
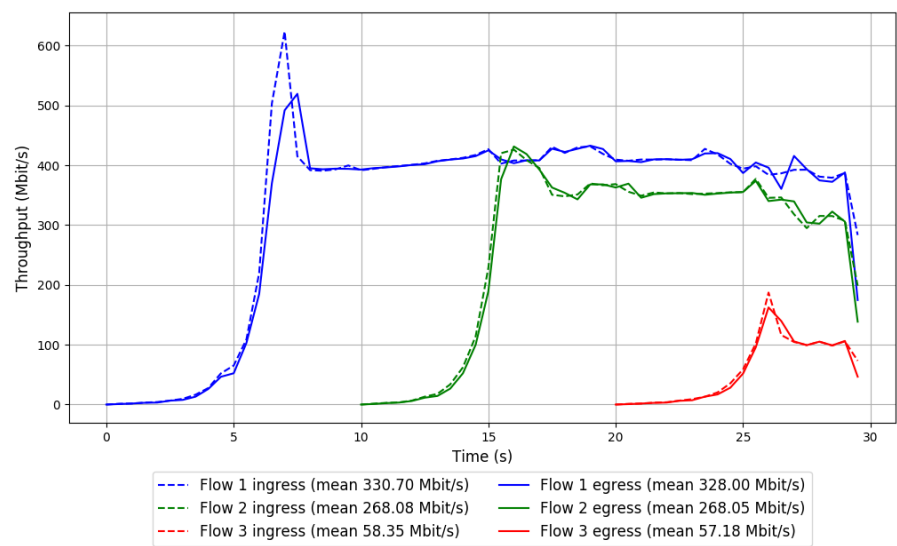
-- Flow 3:

Average throughput: 57.18 Mbit/s

95th percentile per-packet one-way delay: 137.480 ms

Loss rate: 4.71%

Run 2: Report of Vivace-latency — Data Link



Run 3: Statistics of Vivace-latency

Start at: 2018-02-21 15:14:55

End at: 2018-02-21 15:15:25

Below is generated by plot.py at 2018-02-21 23:08:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 542.39 Mbit/s

95th percentile per-packet one-way delay: 195.877 ms

Loss rate: 1.55%

-- Flow 1:

Average throughput: 323.96 Mbit/s

95th percentile per-packet one-way delay: 251.791 ms

Loss rate: 1.54%

-- Flow 2:

Average throughput: 275.07 Mbit/s

95th percentile per-packet one-way delay: 172.878 ms

Loss rate: 0.86%

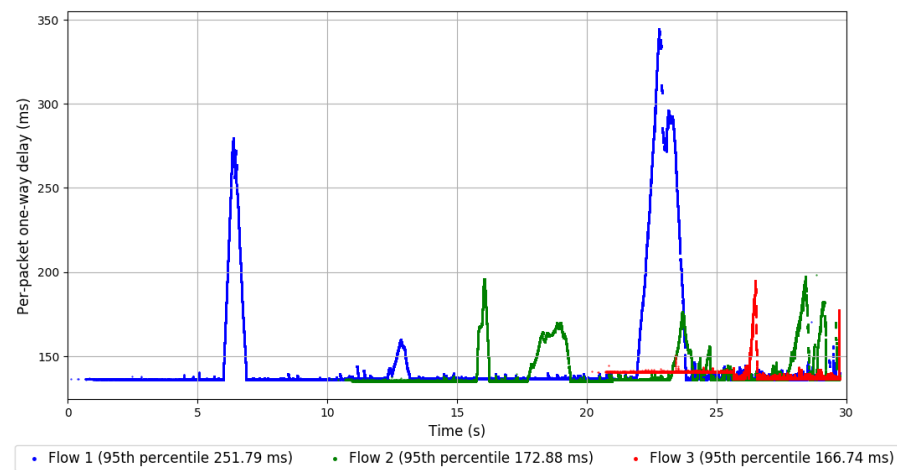
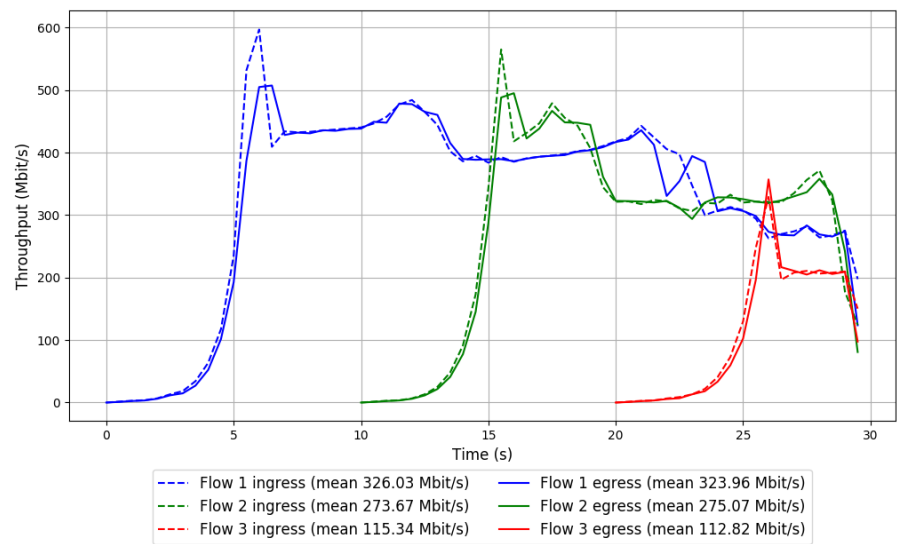
-- Flow 3:

Average throughput: 112.82 Mbit/s

95th percentile per-packet one-way delay: 166.735 ms

Loss rate: 4.94%

Run 3: Report of Vivace-latency — Data Link



Run 4: Statistics of Vivace-latency

Start at: 2018-02-21 15:35:14

End at: 2018-02-21 15:35:44

Below is generated by plot.py at 2018-02-21 23:08:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 523.26 Mbit/s

95th percentile per-packet one-way delay: 303.658 ms

Loss rate: 3.78%

-- Flow 1:

Average throughput: 310.61 Mbit/s

95th percentile per-packet one-way delay: 296.518 ms

Loss rate: 4.03%

-- Flow 2:

Average throughput: 289.26 Mbit/s

95th percentile per-packet one-way delay: 330.024 ms

Loss rate: 3.28%

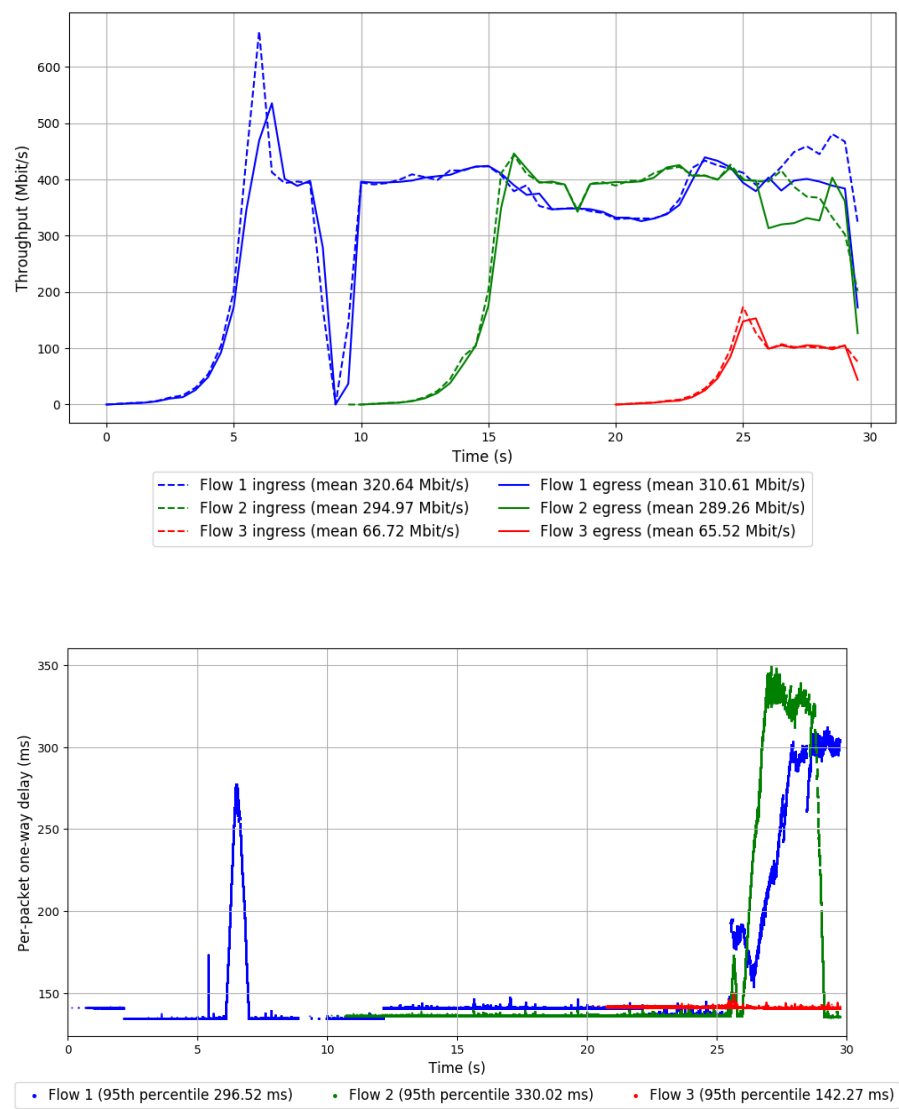
-- Flow 3:

Average throughput: 65.52 Mbit/s

95th percentile per-packet one-way delay: 142.271 ms

Loss rate: 4.58%

Run 4: Report of Vivace-latency — Data Link



Run 5: Statistics of Vivace-latency

Start at: 2018-02-21 15:55:42

End at: 2018-02-21 15:56:12

Below is generated by plot.py at 2018-02-21 23:08:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 459.57 Mbit/s

95th percentile per-packet one-way delay: 171.142 ms

Loss rate: 1.34%

-- Flow 1:

Average throughput: 294.51 Mbit/s

95th percentile per-packet one-way delay: 188.147 ms

Loss rate: 1.21%

-- Flow 2:

Average throughput: 229.82 Mbit/s

95th percentile per-packet one-way delay: 163.929 ms

Loss rate: 1.36%

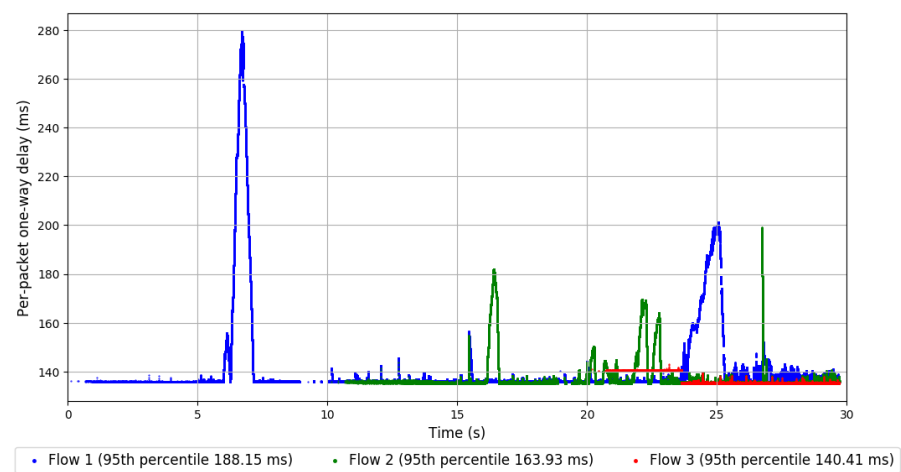
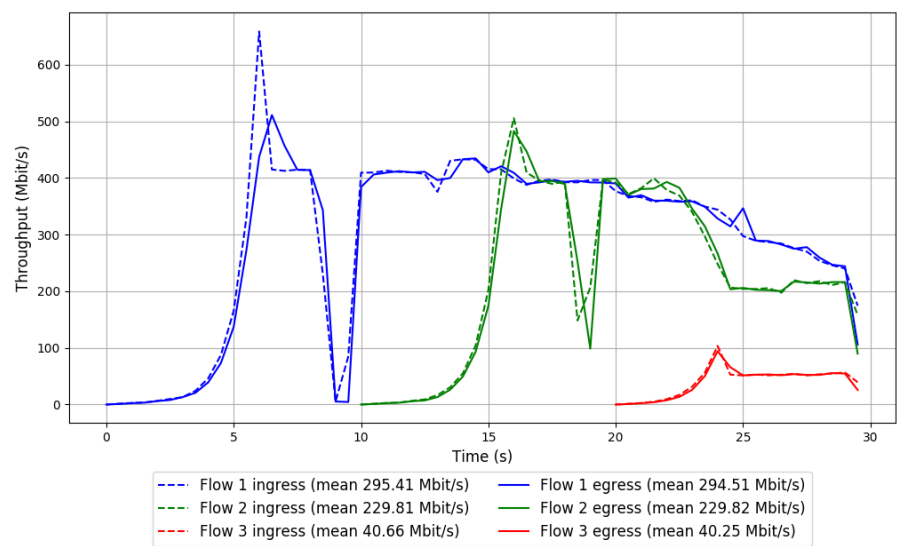
-- Flow 3:

Average throughput: 40.25 Mbit/s

95th percentile per-packet one-way delay: 140.410 ms

Loss rate: 3.78%

Run 5: Report of Vivace-latency — Data Link



Run 6: Statistics of Vivace-latency

Start at: 2018-02-21 16:15:57

End at: 2018-02-21 16:16:27

Below is generated by plot.py at 2018-02-21 23:08:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 489.48 Mbit/s

95th percentile per-packet one-way delay: 210.947 ms

Loss rate: 1.83%

-- Flow 1:

Average throughput: 303.77 Mbit/s

95th percentile per-packet one-way delay: 147.850 ms

Loss rate: 1.23%

-- Flow 2:

Average throughput: 221.57 Mbit/s

95th percentile per-packet one-way delay: 252.077 ms

Loss rate: 2.29%

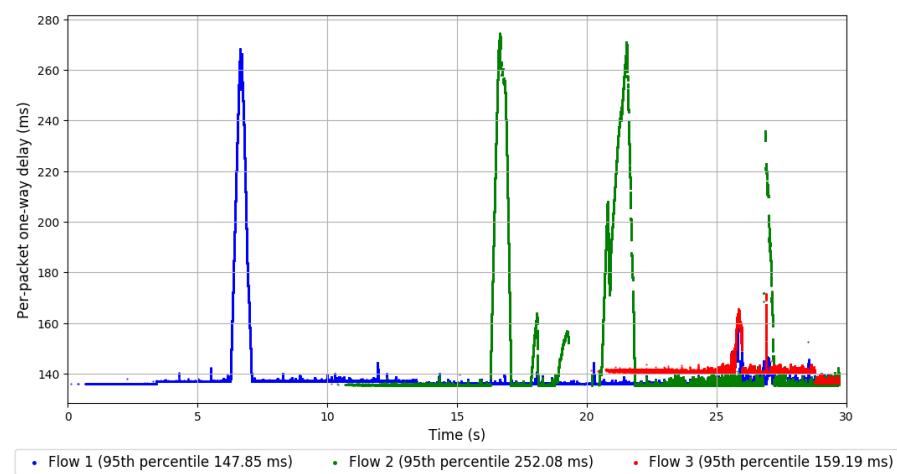
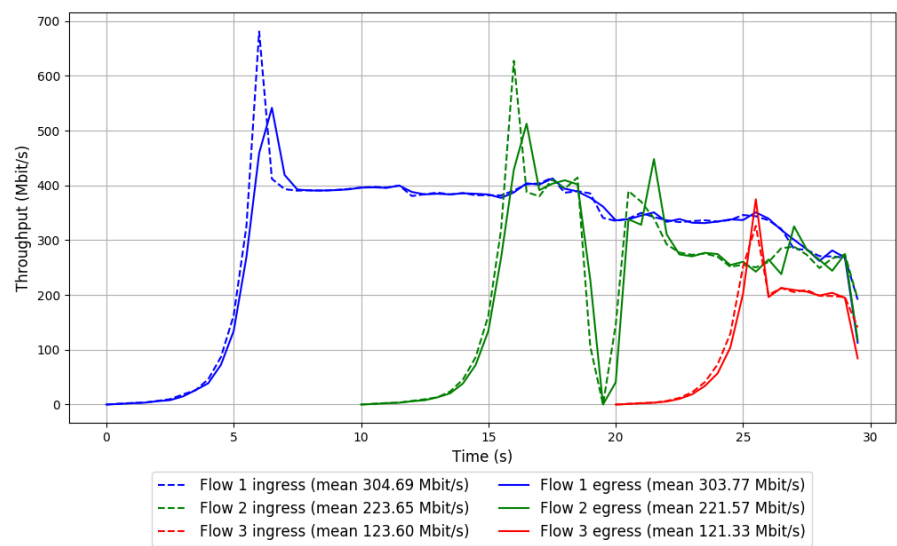
-- Flow 3:

Average throughput: 121.33 Mbit/s

95th percentile per-packet one-way delay: 159.190 ms

Loss rate: 4.59%

Run 6: Report of Vivace-latency — Data Link



Run 7: Statistics of Vivace-latency

Start at: 2018-02-21 16:36:48

End at: 2018-02-21 16:37:18

Below is generated by plot.py at 2018-02-21 23:08:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 555.76 Mbit/s

95th percentile per-packet one-way delay: 228.066 ms

Loss rate: 1.95%

-- Flow 1:

Average throughput: 322.54 Mbit/s

95th percentile per-packet one-way delay: 260.533 ms

Loss rate: 1.96%

-- Flow 2:

Average throughput: 298.88 Mbit/s

95th percentile per-packet one-way delay: 158.509 ms

Loss rate: 1.54%

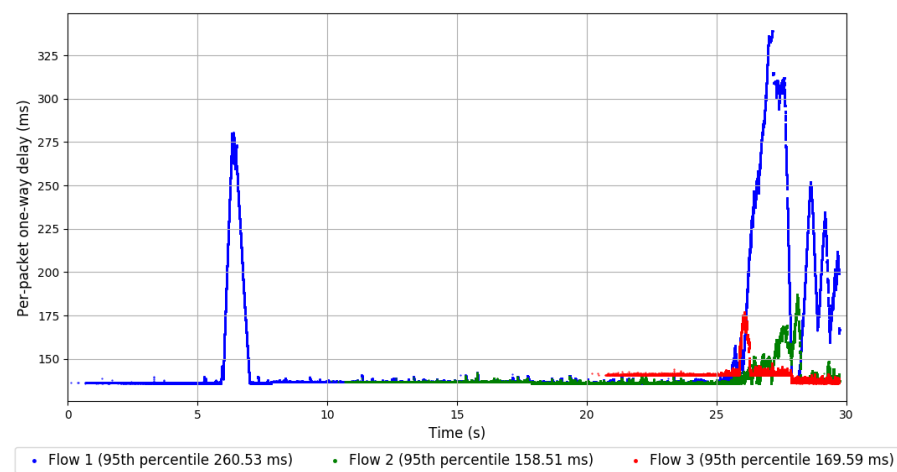
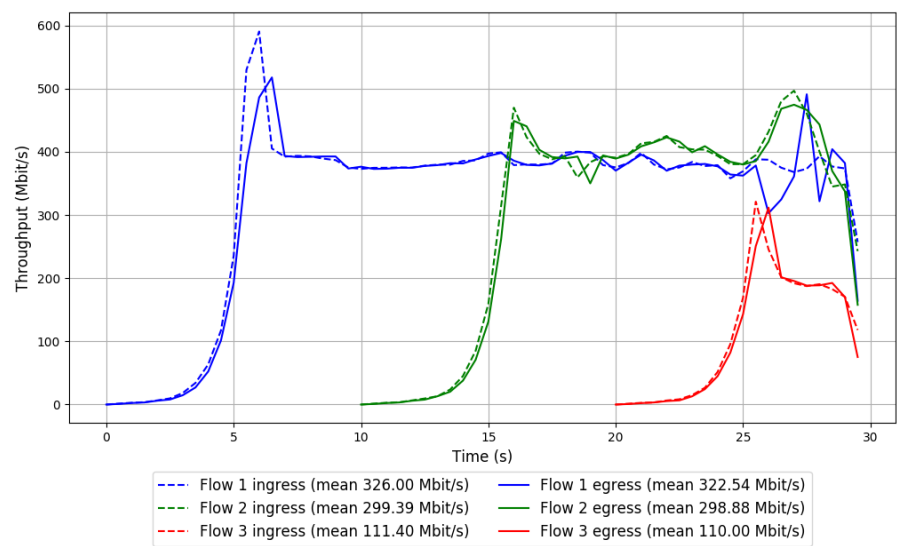
-- Flow 3:

Average throughput: 110.00 Mbit/s

95th percentile per-packet one-way delay: 169.588 ms

Loss rate: 4.07%

Run 7: Report of Vivace-latency — Data Link



Run 8: Statistics of Vivace-latency

Start at: 2018-02-21 16:57:24

End at: 2018-02-21 16:57:54

Below is generated by plot.py at 2018-02-21 23:08:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 346.85 Mbit/s

95th percentile per-packet one-way delay: 143.056 ms

Loss rate: 1.61%

-- Flow 1:

Average throughput: 149.47 Mbit/s

95th percentile per-packet one-way delay: 143.871 ms

Loss rate: 1.77%

-- Flow 2:

Average throughput: 265.81 Mbit/s

95th percentile per-packet one-way delay: 140.948 ms

Loss rate: 1.15%

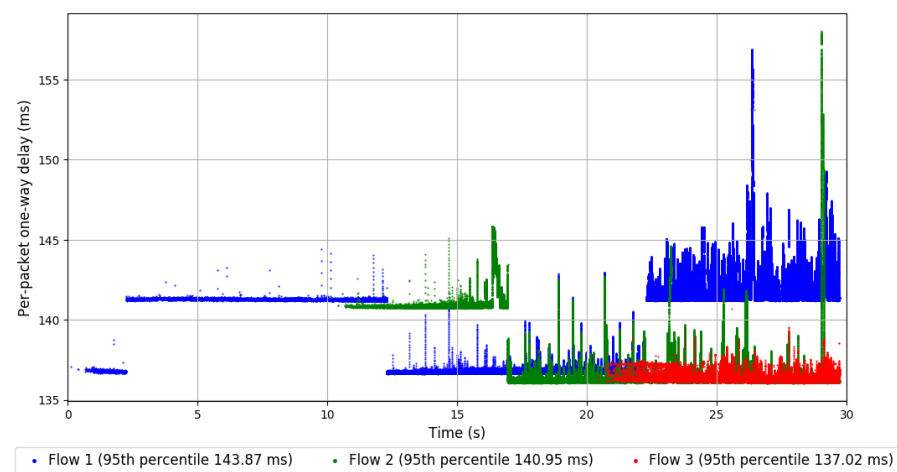
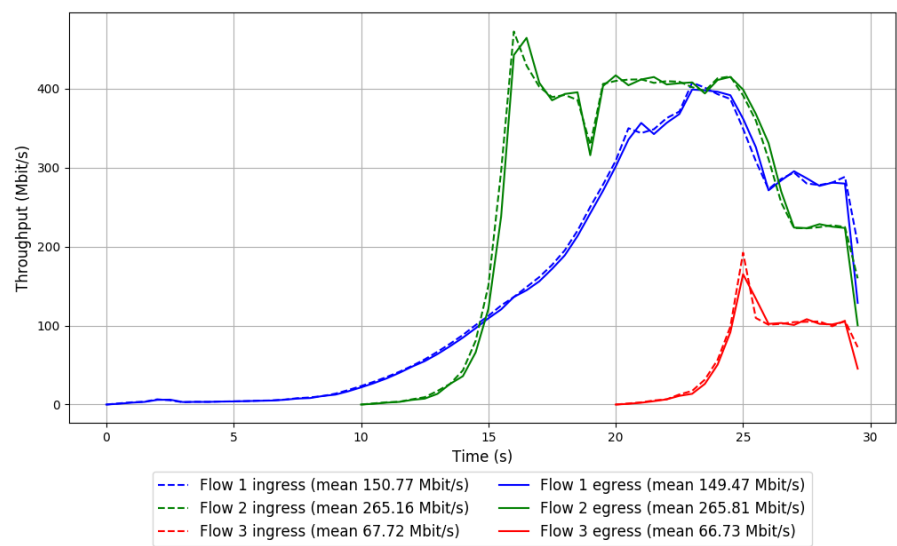
-- Flow 3:

Average throughput: 66.73 Mbit/s

95th percentile per-packet one-way delay: 137.022 ms

Loss rate: 4.21%

Run 8: Report of Vivace-latency — Data Link



Run 9: Statistics of Vivace-latency

Start at: 2018-02-21 17:17:39

End at: 2018-02-21 17:18:09

Below is generated by plot.py at 2018-02-21 23:08:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 477.42 Mbit/s

95th percentile per-packet one-way delay: 143.994 ms

Loss rate: 1.80%

-- Flow 1:

Average throughput: 259.96 Mbit/s

95th percentile per-packet one-way delay: 139.677 ms

Loss rate: 1.16%

-- Flow 2:

Average throughput: 295.75 Mbit/s

95th percentile per-packet one-way delay: 155.573 ms

Loss rate: 2.34%

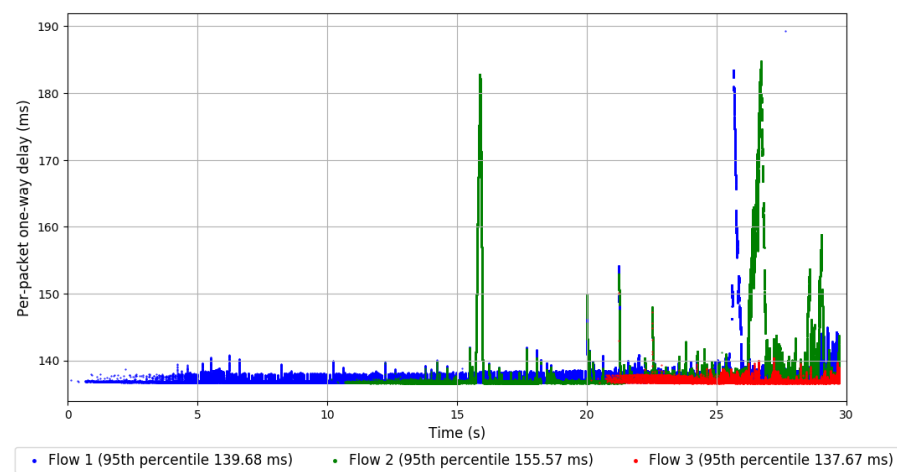
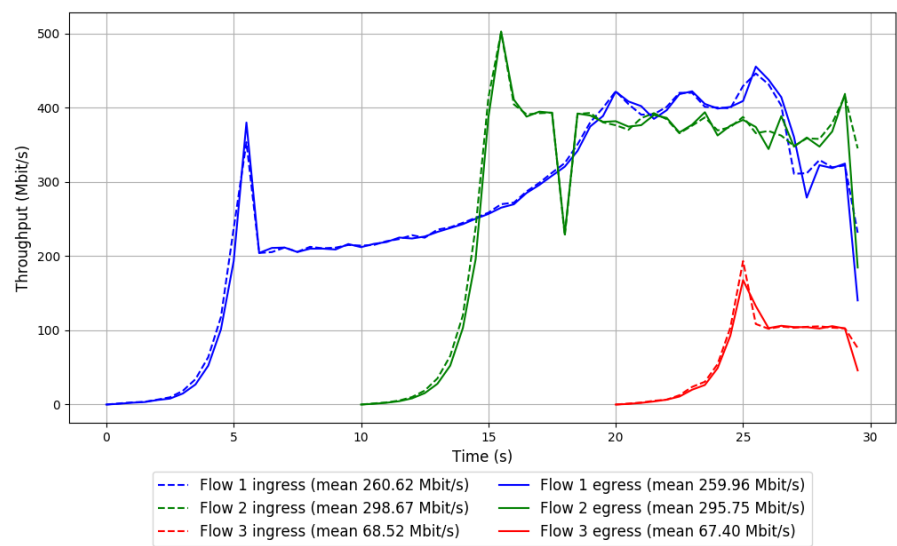
-- Flow 3:

Average throughput: 67.40 Mbit/s

95th percentile per-packet one-way delay: 137.673 ms

Loss rate: 4.36%

Run 9: Report of Vivace-latency — Data Link



Run 10: Statistics of Vivace-latency

Start at: 2018-02-21 17:38:07

End at: 2018-02-21 17:38:37

Below is generated by plot.py at 2018-02-21 23:08:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 532.91 Mbit/s

95th percentile per-packet one-way delay: 147.084 ms

Loss rate: 1.57%

-- Flow 1:

Average throughput: 313.44 Mbit/s

95th percentile per-packet one-way delay: 154.988 ms

Loss rate: 1.11%

-- Flow 2:

Average throughput: 273.96 Mbit/s

95th percentile per-packet one-way delay: 139.440 ms

Loss rate: 1.31%

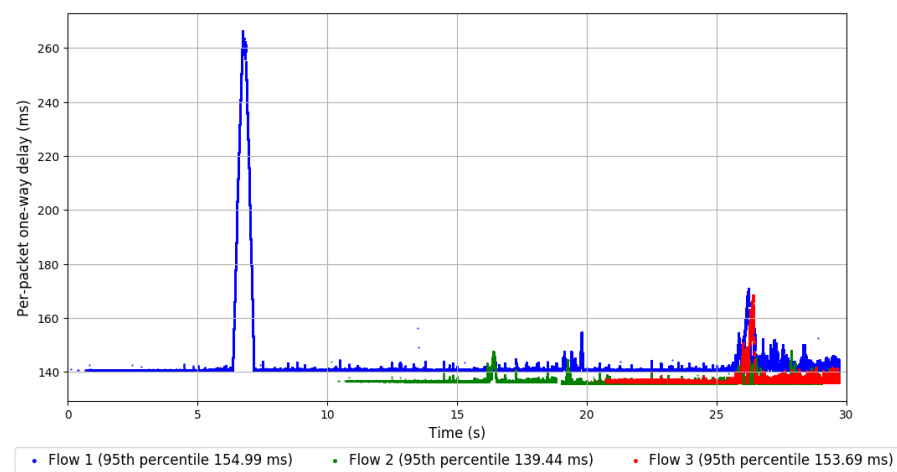
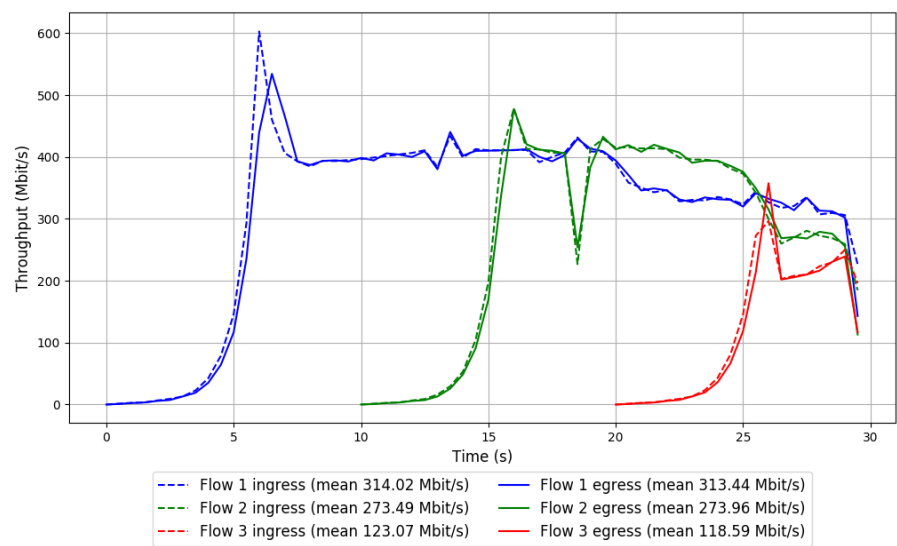
-- Flow 3:

Average throughput: 118.59 Mbit/s

95th percentile per-packet one-way delay: 153.693 ms

Loss rate: 6.31%

Run 10: Report of Vivace-latency — Data Link

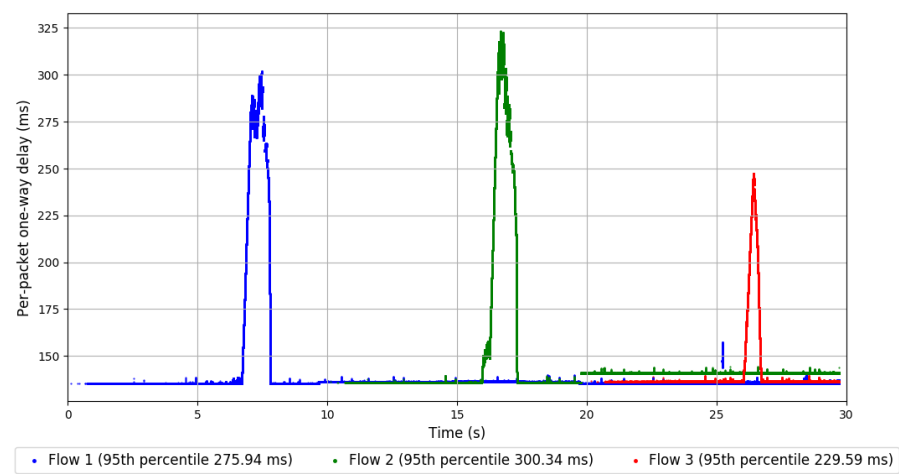
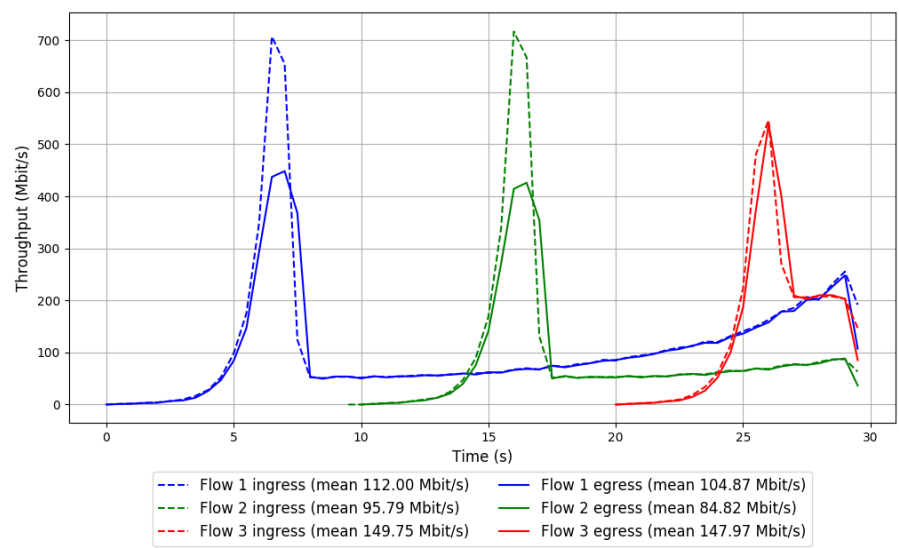


```
Run 1: Statistics of Vivace-loss

Start at: 2018-02-21 14:37:11
End at: 2018-02-21 14:37:41

# Below is generated by plot.py at 2018-02-21 23:08:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 208.88 Mbit/s
95th percentile per-packet one-way delay: 278.766 ms
Loss rate: 8.03%
-- Flow 1:
Average throughput: 104.87 Mbit/s
95th percentile per-packet one-way delay: 275.935 ms
Loss rate: 7.22%
-- Flow 2:
Average throughput: 84.82 Mbit/s
95th percentile per-packet one-way delay: 300.340 ms
Loss rate: 12.65%
-- Flow 3:
Average throughput: 147.97 Mbit/s
95th percentile per-packet one-way delay: 229.593 ms
Loss rate: 3.93%
```

Run 1: Report of Vivace-loss — Data Link



Run 2: Statistics of Vivace-loss

Start at: 2018-02-21 14:57:56

End at: 2018-02-21 14:58:26

Below is generated by plot.py at 2018-02-21 23:09:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 471.80 Mbit/s

95th percentile per-packet one-way delay: 297.284 ms

Loss rate: 5.96%

-- Flow 1:

Average throughput: 260.60 Mbit/s

95th percentile per-packet one-way delay: 268.374 ms

Loss rate: 4.18%

-- Flow 2:

Average throughput: 265.58 Mbit/s

95th percentile per-packet one-way delay: 302.703 ms

Loss rate: 4.96%

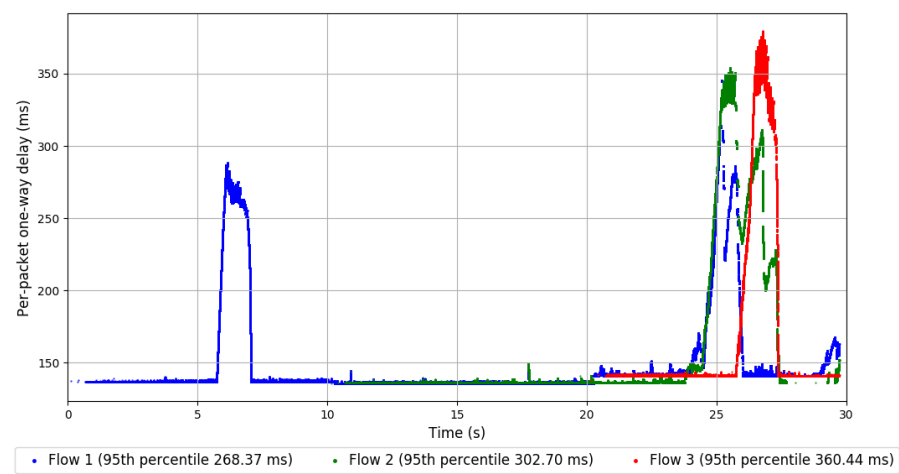
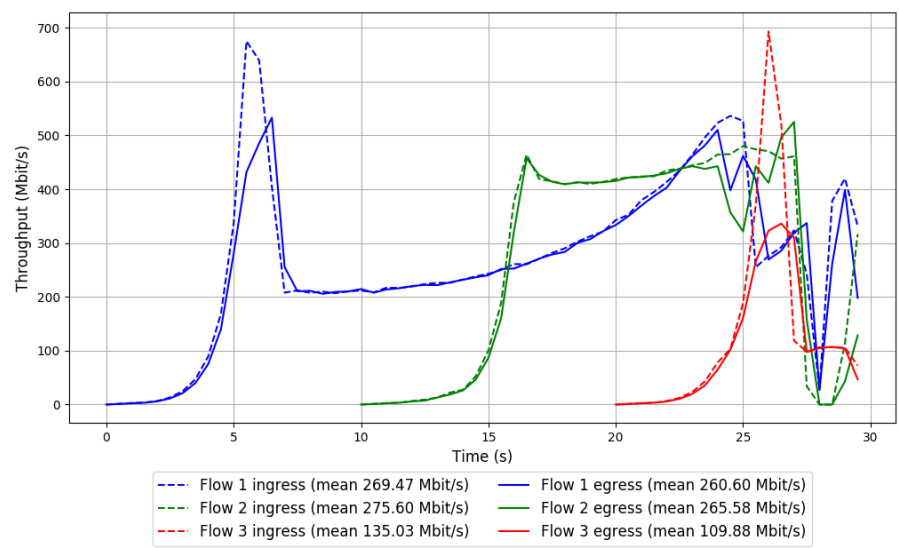
-- Flow 3:

Average throughput: 109.88 Mbit/s

95th percentile per-packet one-way delay: 360.441 ms

Loss rate: 20.89%

Run 2: Report of Vivace-loss — Data Link



Run 3: Statistics of Vivace-loss

Start at: 2018-02-21 15:18:24

End at: 2018-02-21 15:18:54

Below is generated by plot.py at 2018-02-21 23:10:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 359.98 Mbit/s

95th percentile per-packet one-way delay: 272.294 ms

Loss rate: 7.49%

-- Flow 1:

Average throughput: 130.67 Mbit/s

95th percentile per-packet one-way delay: 256.374 ms

Loss rate: 6.67%

-- Flow 2:

Average throughput: 291.41 Mbit/s

95th percentile per-packet one-way delay: 259.517 ms

Loss rate: 5.96%

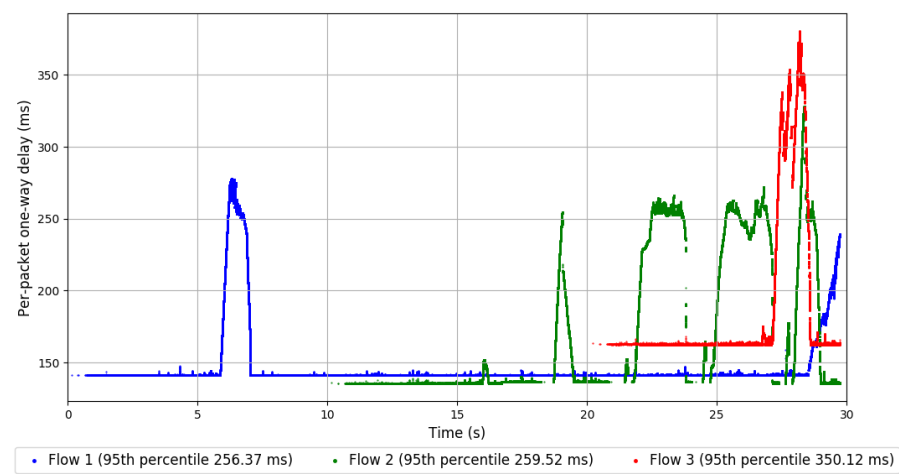
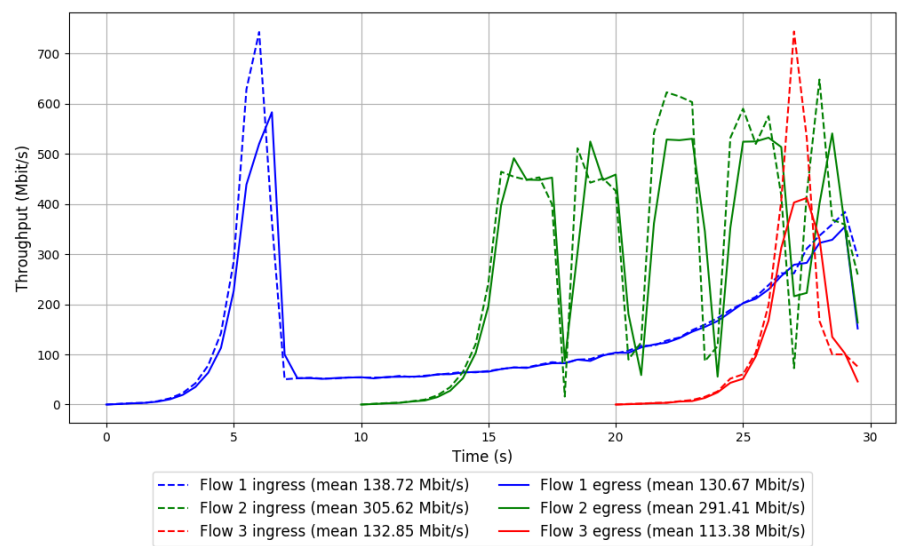
-- Flow 3:

Average throughput: 113.38 Mbit/s

95th percentile per-packet one-way delay: 350.117 ms

Loss rate: 17.23%

Run 3: Report of Vivace-loss — Data Link



Run 4: Statistics of Vivace-loss

Start at: 2018-02-21 15:38:43

End at: 2018-02-21 15:39:13

Below is generated by plot.py at 2018-02-21 23:14:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 533.87 Mbit/s

95th percentile per-packet one-way delay: 240.879 ms

Loss rate: 3.75%

-- Flow 1:

Average throughput: 351.75 Mbit/s

95th percentile per-packet one-way delay: 252.824 ms

Loss rate: 2.74%

-- Flow 2:

Average throughput: 193.43 Mbit/s

95th percentile per-packet one-way delay: 140.721 ms

Loss rate: 2.56%

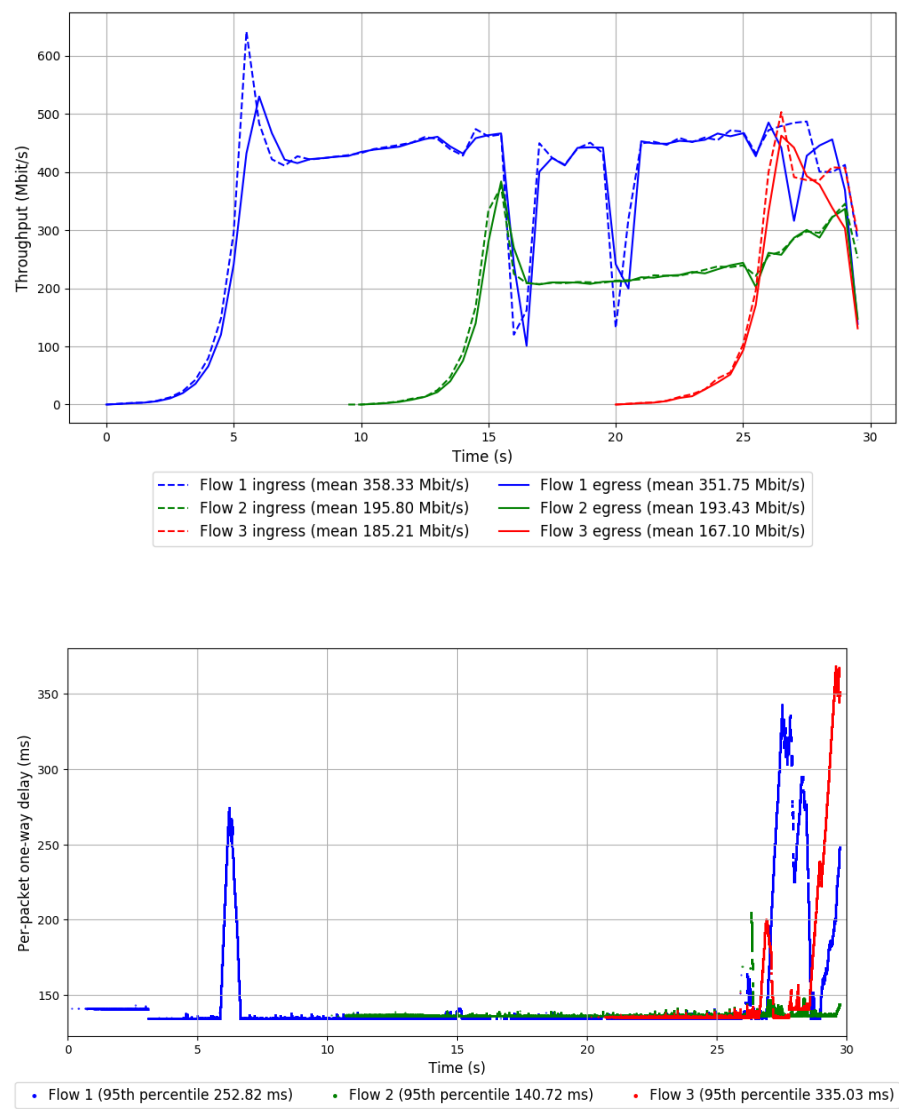
-- Flow 3:

Average throughput: 167.10 Mbit/s

95th percentile per-packet one-way delay: 335.031 ms

Loss rate: 12.25%

Run 4: Report of Vivace-loss — Data Link



Run 5: Statistics of Vivace-loss

Start at: 2018-02-21 15:59:05

End at: 2018-02-21 15:59:35

Below is generated by plot.py at 2018-02-21 23:14:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 492.46 Mbit/s

95th percentile per-packet one-way delay: 335.280 ms

Loss rate: 7.68%

-- Flow 1:

Average throughput: 253.86 Mbit/s

95th percentile per-packet one-way delay: 351.366 ms

Loss rate: 9.92%

-- Flow 2:

Average throughput: 281.28 Mbit/s

95th percentile per-packet one-way delay: 327.565 ms

Loss rate: 5.19%

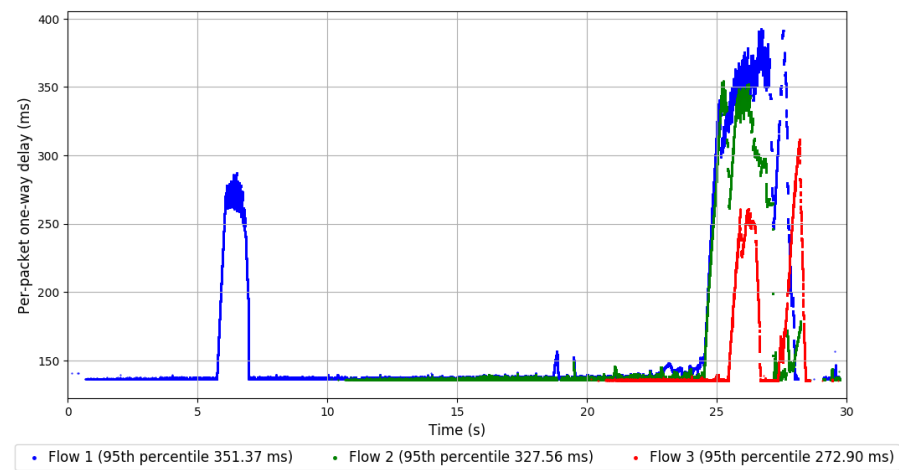
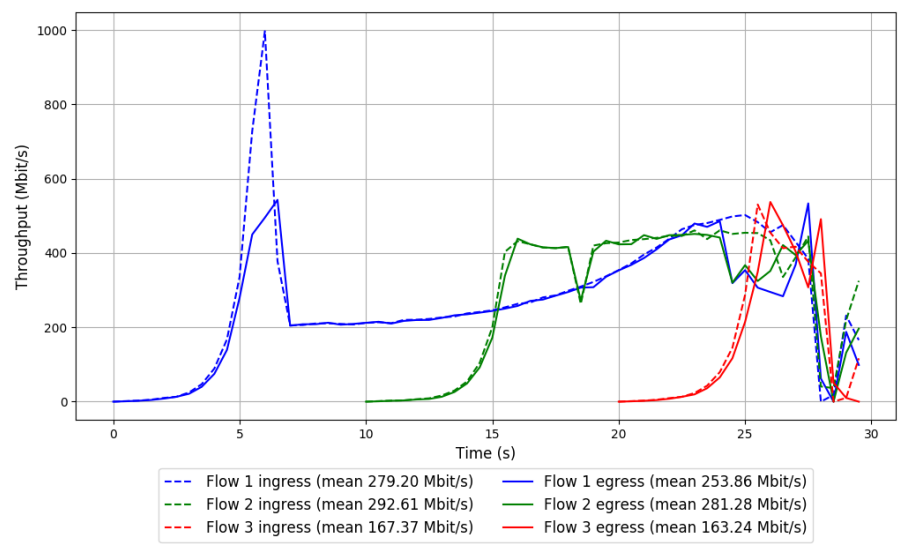
-- Flow 3:

Average throughput: 163.24 Mbit/s

95th percentile per-packet one-way delay: 272.897 ms

Loss rate: 5.12%

Run 5: Report of Vivace-loss — Data Link



Run 6: Statistics of Vivace-loss

Start at: 2018-02-21 16:19:23

End at: 2018-02-21 16:19:53

Below is generated by plot.py at 2018-02-21 23:17:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 519.08 Mbit/s

95th percentile per-packet one-way delay: 284.458 ms

Loss rate: 5.47%

-- Flow 1:

Average throughput: 258.71 Mbit/s

95th percentile per-packet one-way delay: 310.456 ms

Loss rate: 6.34%

-- Flow 2:

Average throughput: 291.16 Mbit/s

95th percentile per-packet one-way delay: 271.270 ms

Loss rate: 4.27%

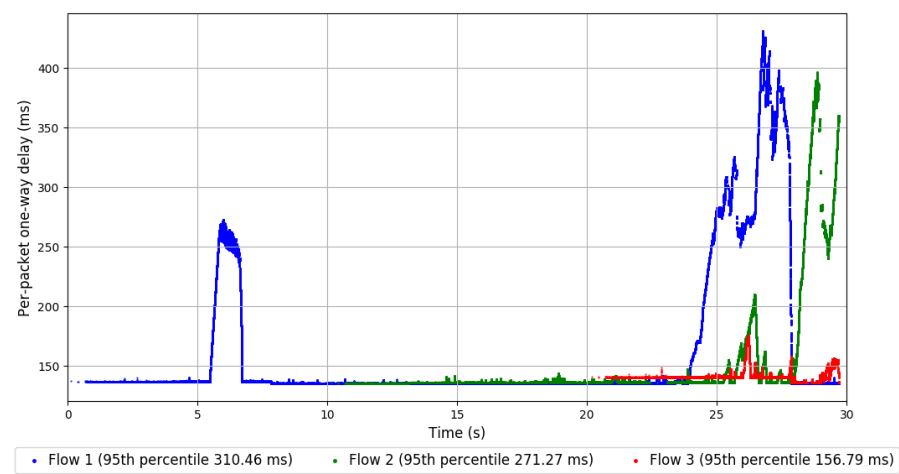
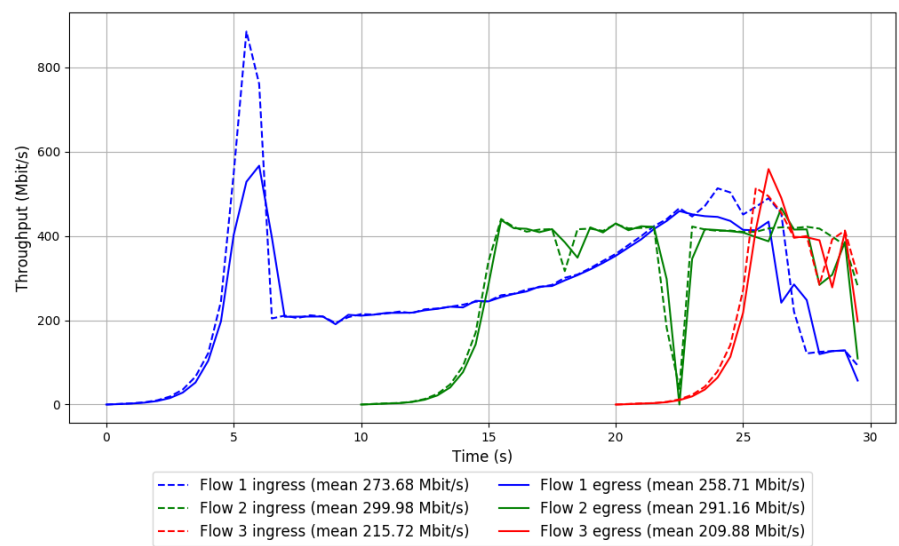
-- Flow 3:

Average throughput: 209.88 Mbit/s

95th percentile per-packet one-way delay: 156.791 ms

Loss rate: 5.46%

Run 6: Report of Vivace-loss — Data Link



Run 7: Statistics of Vivace-loss

Start at: 2018-02-21 16:40:19

End at: 2018-02-21 16:40:49

Below is generated by plot.py at 2018-02-21 23:17:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 544.95 Mbit/s

95th percentile per-packet one-way delay: 303.818 ms

Loss rate: 5.07%

-- Flow 1:

Average throughput: 302.82 Mbit/s

95th percentile per-packet one-way delay: 296.546 ms

Loss rate: 4.55%

-- Flow 2:

Average throughput: 311.97 Mbit/s

95th percentile per-packet one-way delay: 314.233 ms

Loss rate: 5.47%

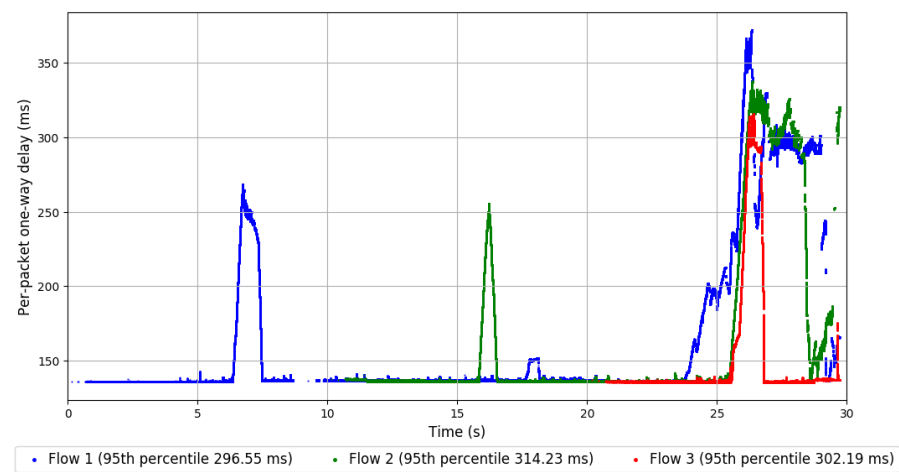
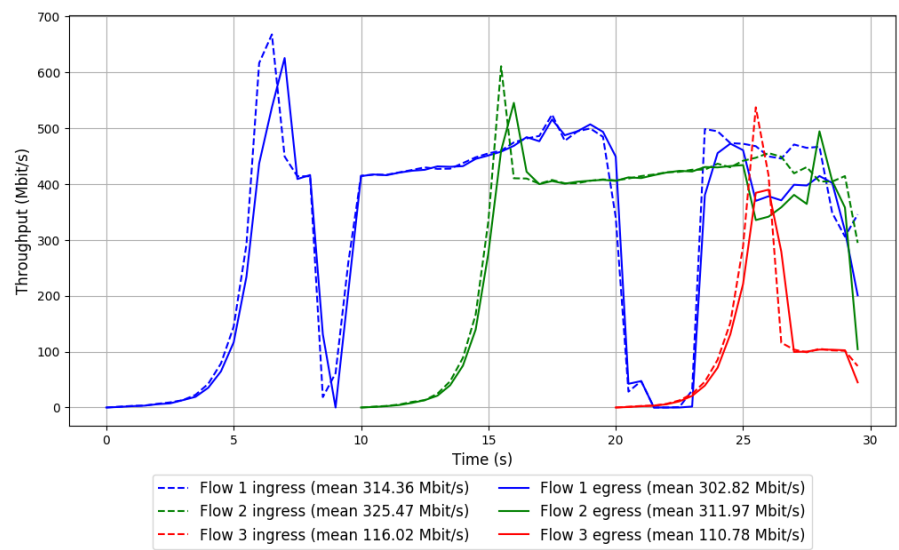
-- Flow 3:

Average throughput: 110.78 Mbit/s

95th percentile per-packet one-way delay: 302.191 ms

Loss rate: 7.17%

Run 7: Report of Vivace-loss — Data Link



Run 8: Statistics of Vivace-loss

Start at: 2018-02-21 17:00:38

End at: 2018-02-21 17:01:08

Below is generated by plot.py at 2018-02-21 23:17:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 401.50 Mbit/s

95th percentile per-packet one-way delay: 256.762 ms

Loss rate: 6.11%

-- Flow 1:

Average throughput: 161.60 Mbit/s

95th percentile per-packet one-way delay: 253.101 ms

Loss rate: 5.11%

-- Flow 2:

Average throughput: 307.16 Mbit/s

95th percentile per-packet one-way delay: 175.070 ms

Loss rate: 2.69%

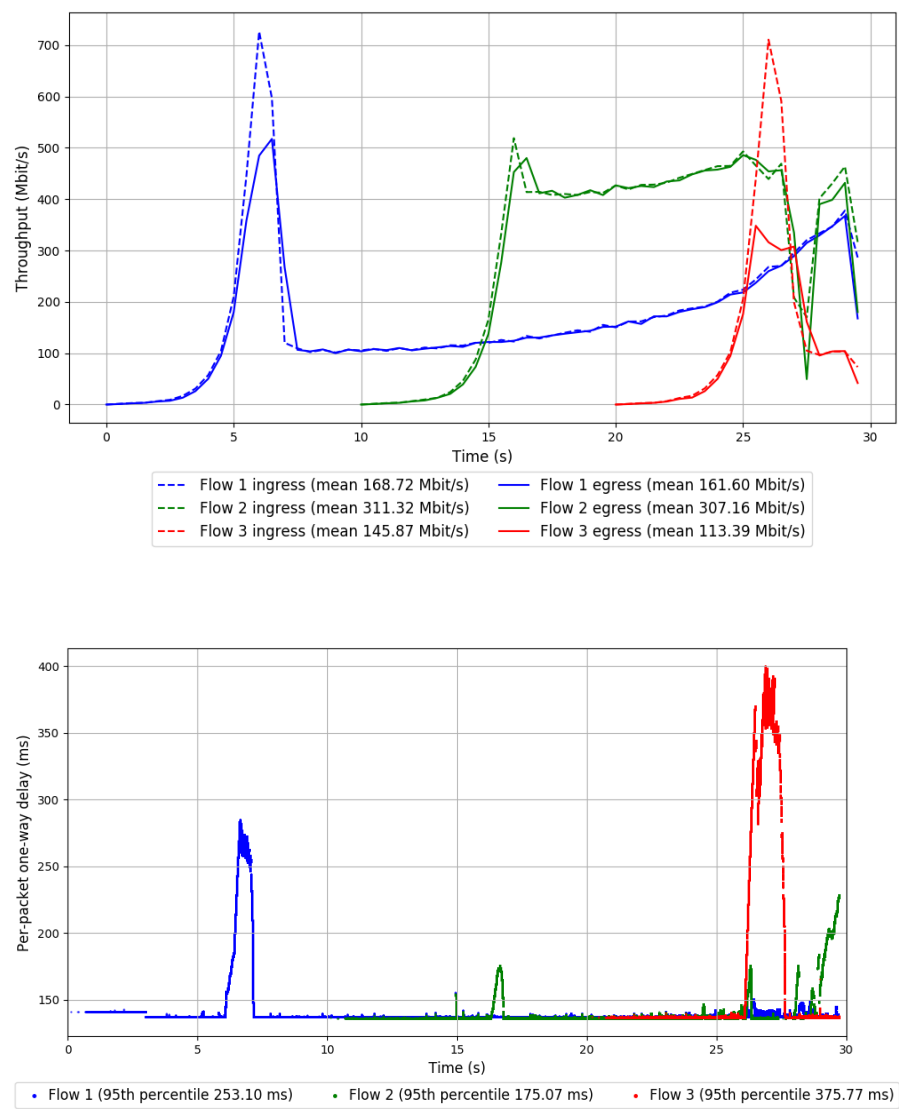
-- Flow 3:

Average throughput: 113.39 Mbit/s

95th percentile per-packet one-way delay: 375.771 ms

Loss rate: 24.43%

Run 8: Report of Vivace-loss — Data Link



Run 9: Statistics of Vivace-loss

Start at: 2018-02-21 17:21:03

End at: 2018-02-21 17:21:33

Below is generated by plot.py at 2018-02-21 23:17:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 443.87 Mbit/s

95th percentile per-packet one-way delay: 274.000 ms

Loss rate: 5.13%

-- Flow 1:

Average throughput: 243.94 Mbit/s

95th percentile per-packet one-way delay: 257.667 ms

Loss rate: 3.04%

-- Flow 2:

Average throughput: 261.53 Mbit/s

95th percentile per-packet one-way delay: 281.804 ms

Loss rate: 2.84%

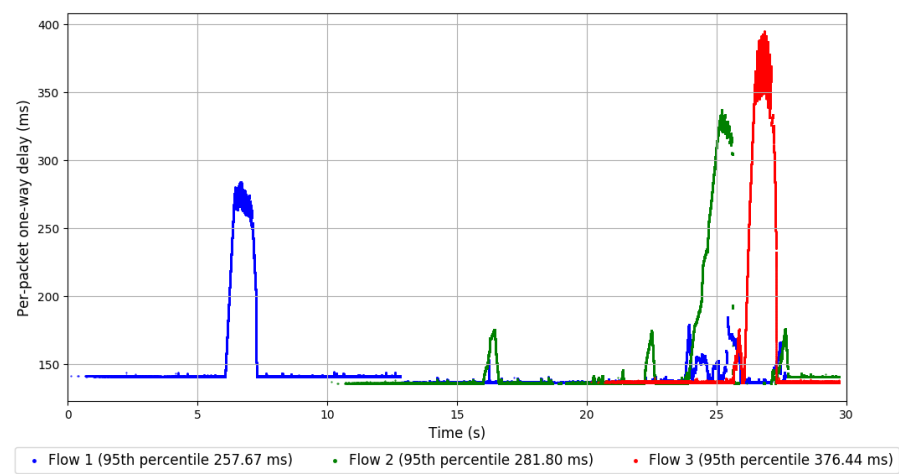
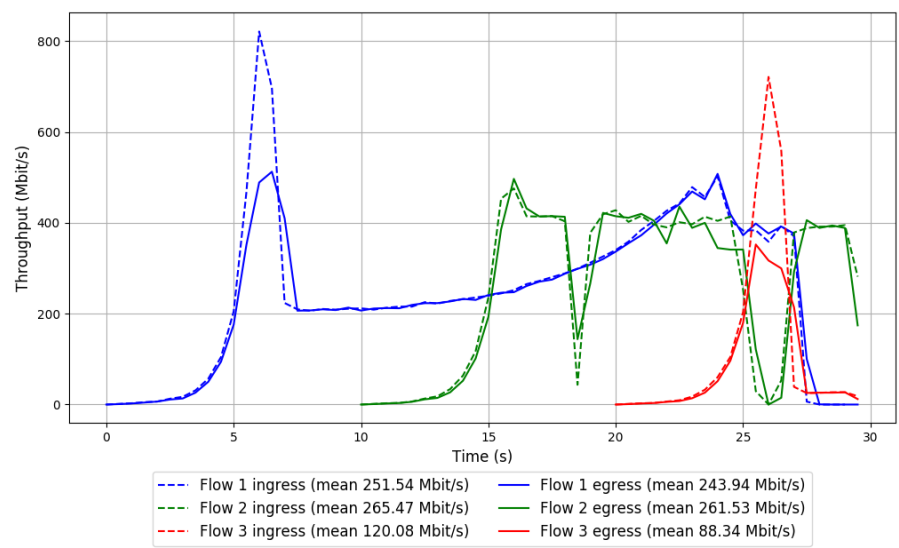
-- Flow 3:

Average throughput: 88.34 Mbit/s

95th percentile per-packet one-way delay: 376.435 ms

Loss rate: 28.46%

Run 9: Report of Vivace-loss — Data Link



Run 10: Statistics of Vivace-loss

Start at: 2018-02-21 17:41:38

End at: 2018-02-21 17:42:08

Below is generated by plot.py at 2018-02-21 23:18:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 495.73 Mbit/s

95th percentile per-packet one-way delay: 301.530 ms

Loss rate: 5.93%

-- Flow 1:

Average throughput: 267.52 Mbit/s

95th percentile per-packet one-way delay: 283.148 ms

Loss rate: 4.77%

-- Flow 2:

Average throughput: 309.49 Mbit/s

95th percentile per-packet one-way delay: 300.278 ms

Loss rate: 4.98%

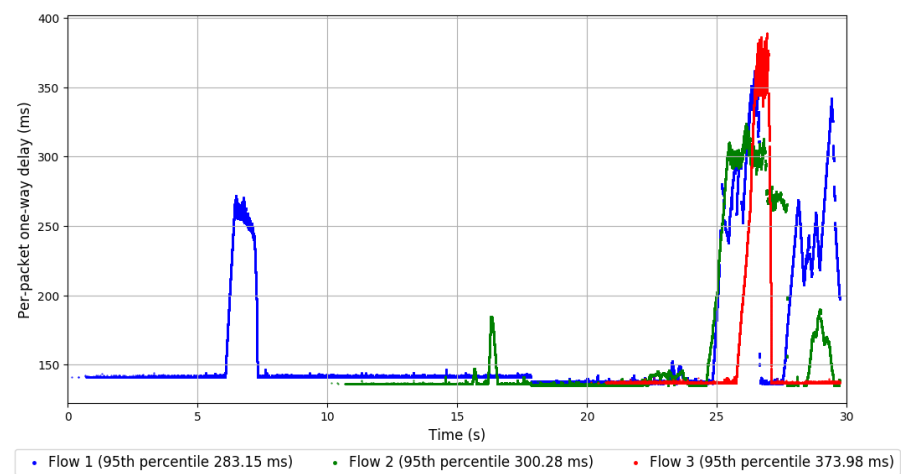
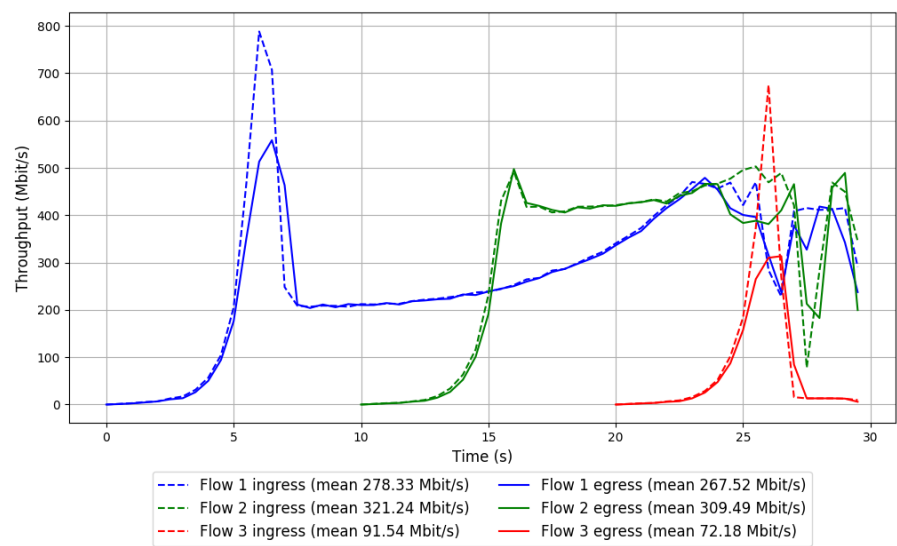
-- Flow 3:

Average throughput: 72.18 Mbit/s

95th percentile per-packet one-way delay: 373.976 ms

Loss rate: 23.33%

Run 10: Report of Vivace-loss — Data Link

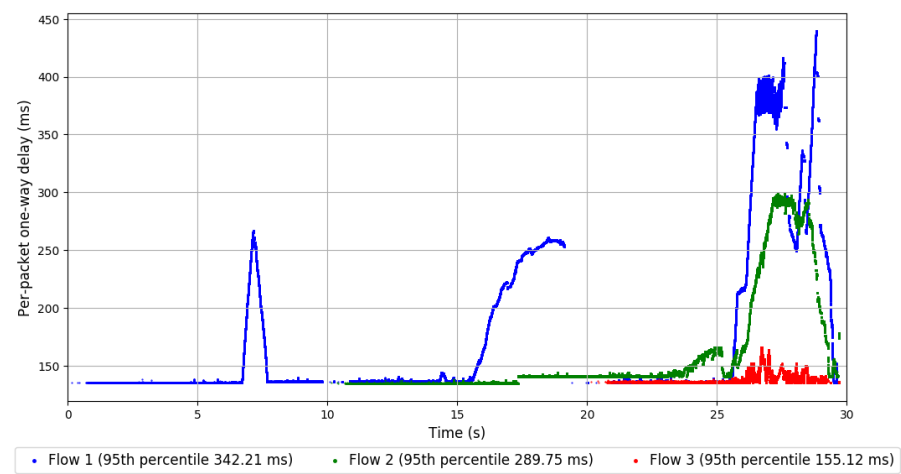
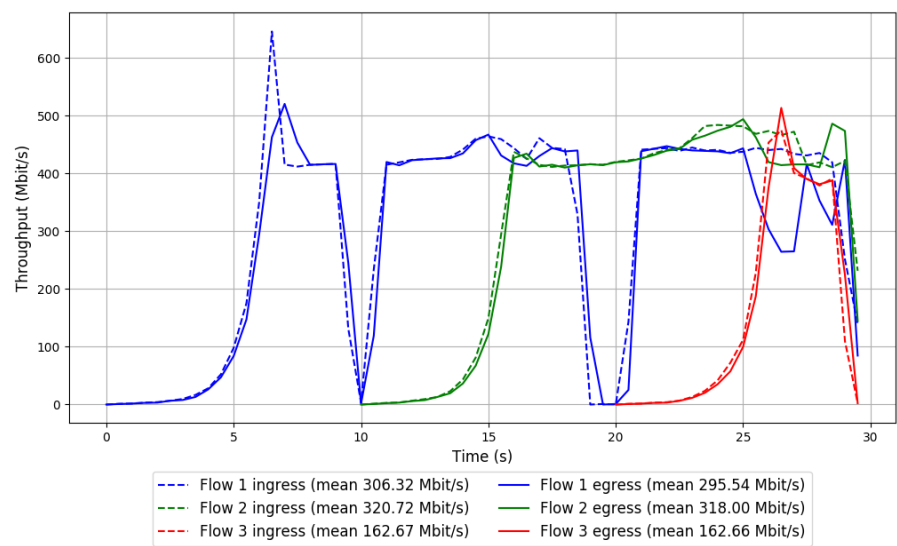


```
Run 1: Statistics of Vivace-LTE

Start at: 2018-02-21 14:38:19
End at: 2018-02-21 14:38:49

# Below is generated by plot.py at 2018-02-21 23:21:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 558.61 Mbit/s
95th percentile per-packet one-way delay: 291.573 ms
Loss rate: 3.18%
-- Flow 1:
Average throughput: 295.54 Mbit/s
95th percentile per-packet one-way delay: 342.215 ms
Loss rate: 4.39%
-- Flow 2:
Average throughput: 318.00 Mbit/s
95th percentile per-packet one-way delay: 289.751 ms
Loss rate: 2.20%
-- Flow 3:
Average throughput: 162.66 Mbit/s
95th percentile per-packet one-way delay: 155.125 ms
Loss rate: 0.00%
```


Run 1: Report of Vivace-LTE — Data Link



Run 2: Statistics of Vivace-LTE

Start at: 2018-02-21 14:59:25

End at: 2018-02-21 14:59:55

Below is generated by plot.py at 2018-02-21 23:23:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 478.10 Mbit/s

95th percentile per-packet one-way delay: 253.088 ms

Loss rate: 2.62%

-- Flow 1:

Average throughput: 364.71 Mbit/s

95th percentile per-packet one-way delay: 242.294 ms

Loss rate: 2.07%

-- Flow 2:

Average throughput: 115.76 Mbit/s

95th percentile per-packet one-way delay: 304.170 ms

Loss rate: 4.07%

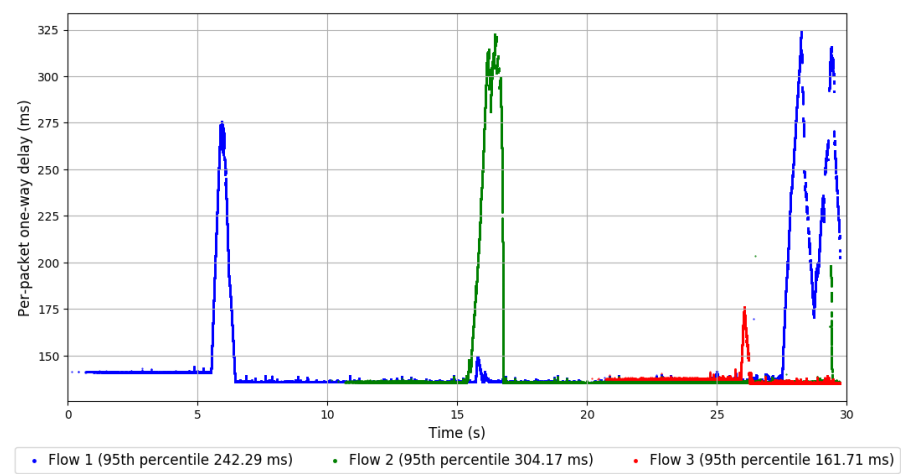
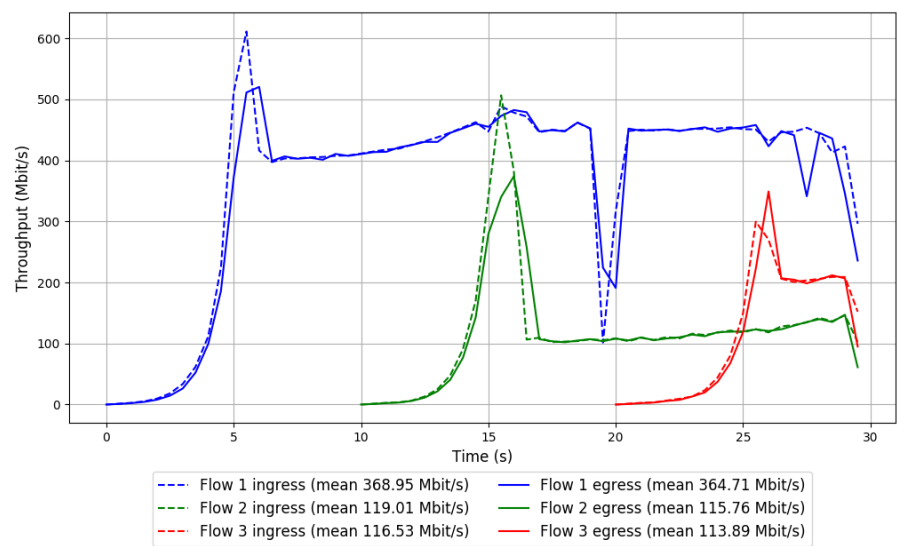
-- Flow 3:

Average throughput: 113.89 Mbit/s

95th percentile per-packet one-way delay: 161.710 ms

Loss rate: 4.98%

Run 2: Report of Vivace-LTE — Data Link



Run 3: Statistics of Vivace-LTE

Start at: 2018-02-21 15:19:44

End at: 2018-02-21 15:20:14

Below is generated by plot.py at 2018-02-21 23:25:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 556.72 Mbit/s

95th percentile per-packet one-way delay: 273.802 ms

Loss rate: 2.48%

-- Flow 1:

Average throughput: 326.68 Mbit/s

95th percentile per-packet one-way delay: 261.096 ms

Loss rate: 1.89%

-- Flow 2:

Average throughput: 286.04 Mbit/s

95th percentile per-packet one-way delay: 280.400 ms

Loss rate: 2.57%

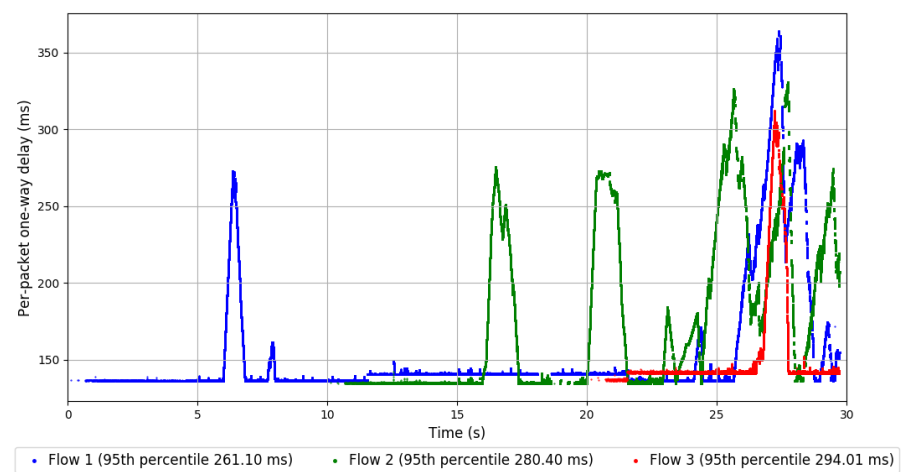
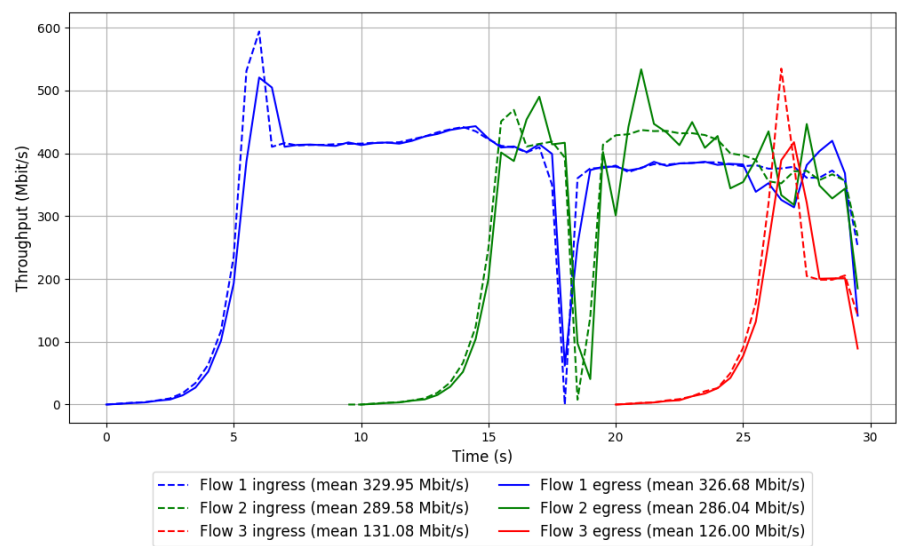
-- Flow 3:

Average throughput: 126.00 Mbit/s

95th percentile per-packet one-way delay: 294.013 ms

Loss rate: 6.64%

Run 3: Report of Vivace-LTE — Data Link



Run 4: Statistics of Vivace-LTE

Start at: 2018-02-21 15:40:16

End at: 2018-02-21 15:40:46

Below is generated by plot.py at 2018-02-21 23:25:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 587.57 Mbit/s

95th percentile per-packet one-way delay: 217.567 ms

Loss rate: 2.28%

-- Flow 1:

Average throughput: 351.19 Mbit/s

95th percentile per-packet one-way delay: 205.406 ms

Loss rate: 1.38%

-- Flow 2:

Average throughput: 304.56 Mbit/s

95th percentile per-packet one-way delay: 216.964 ms

Loss rate: 2.27%

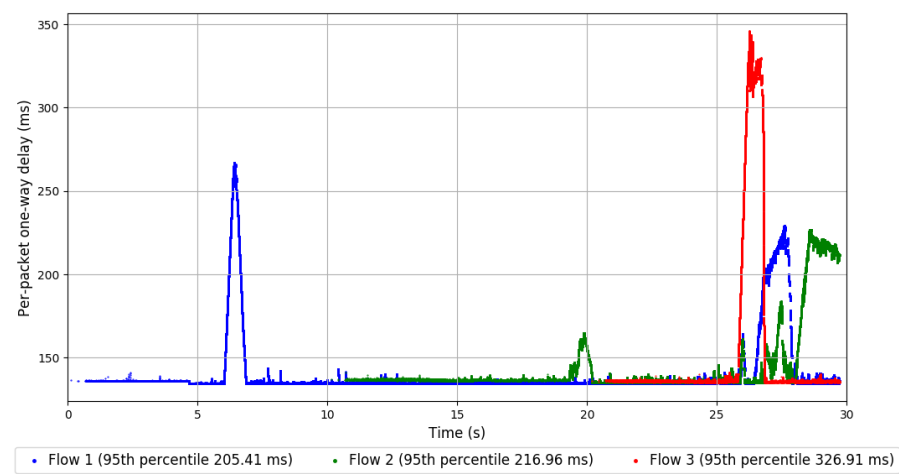
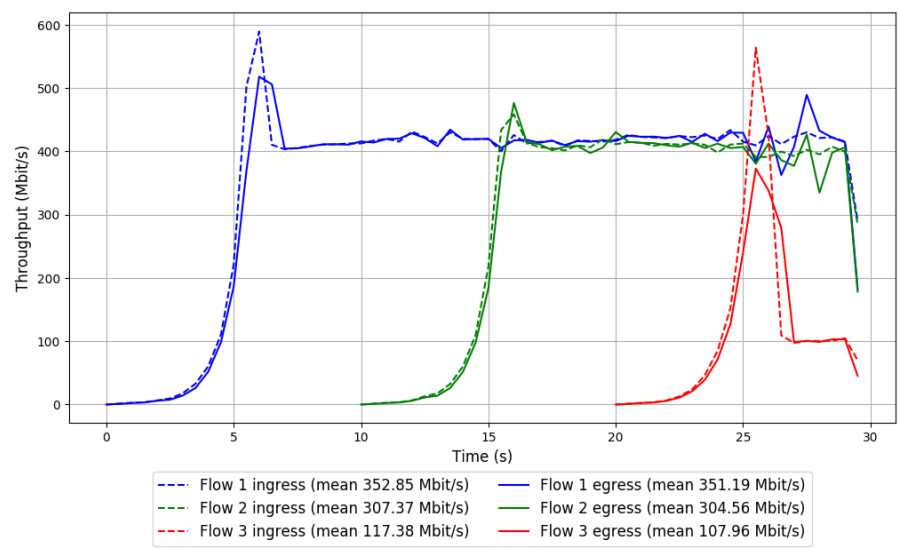
-- Flow 3:

Average throughput: 107.96 Mbit/s

95th percentile per-packet one-way delay: 326.913 ms

Loss rate: 10.56%

Run 4: Report of Vivace-LTE — Data Link



Run 5: Statistics of Vivace-LTE

Start at: 2018-02-21 16:00:36

End at: 2018-02-21 16:01:06

Below is generated by plot.py at 2018-02-21 23:26:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 564.54 Mbit/s

95th percentile per-packet one-way delay: 308.860 ms

Loss rate: 3.67%

-- Flow 1:

Average throughput: 333.31 Mbit/s

95th percentile per-packet one-way delay: 335.300 ms

Loss rate: 4.05%

-- Flow 2:

Average throughput: 297.69 Mbit/s

95th percentile per-packet one-way delay: 243.310 ms

Loss rate: 2.77%

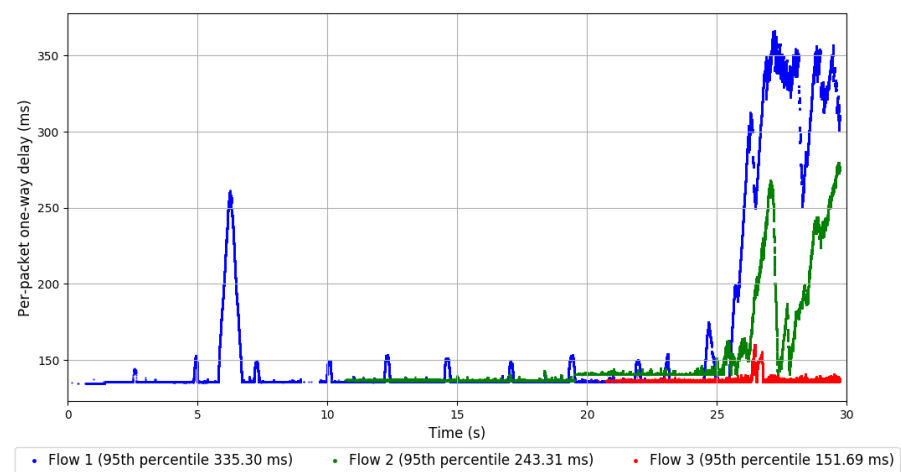
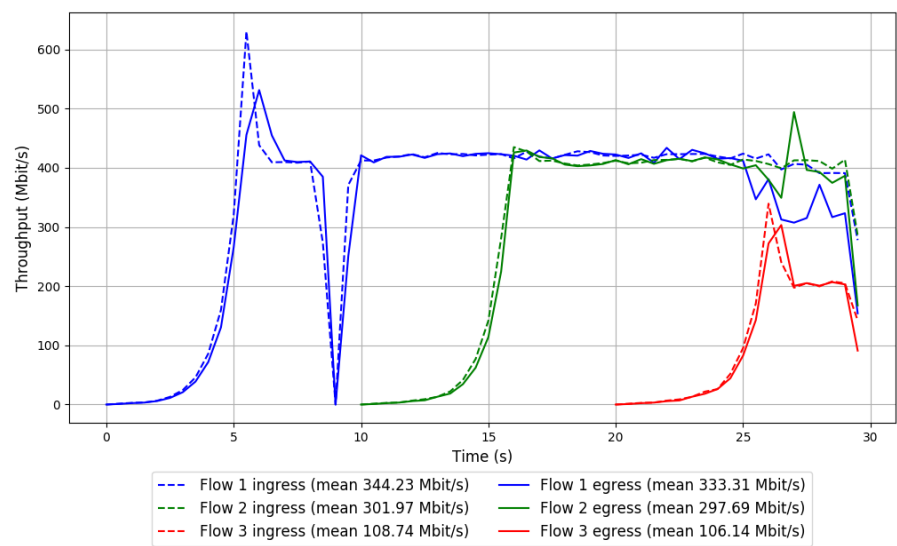
-- Flow 3:

Average throughput: 106.14 Mbit/s

95th percentile per-packet one-way delay: 151.693 ms

Loss rate: 5.12%

Run 5: Report of Vivace-LTE — Data Link



Run 6: Statistics of Vivace-LTE

Start at: 2018-02-21 16:20:55

End at: 2018-02-21 16:21:25

Below is generated by plot.py at 2018-02-21 23:27:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 620.26 Mbit/s

95th percentile per-packet one-way delay: 252.418 ms

Loss rate: 3.27%

-- Flow 1:

Average throughput: 349.84 Mbit/s

95th percentile per-packet one-way delay: 238.773 ms

Loss rate: 2.26%

-- Flow 2:

Average throughput: 314.67 Mbit/s

95th percentile per-packet one-way delay: 270.142 ms

Loss rate: 4.16%

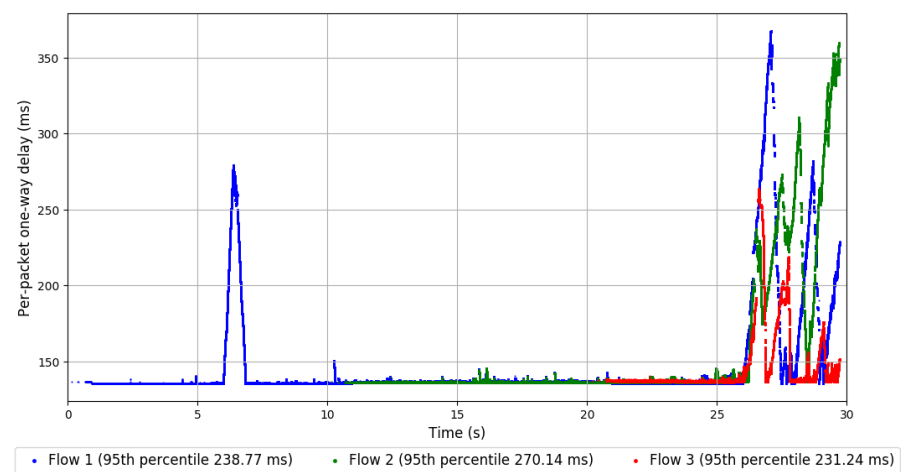
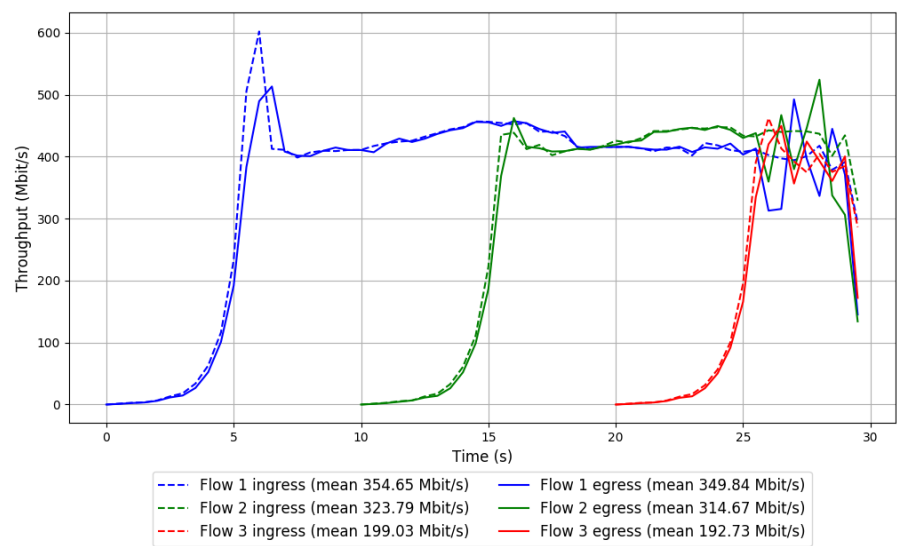
-- Flow 3:

Average throughput: 192.73 Mbit/s

95th percentile per-packet one-way delay: 231.243 ms

Loss rate: 5.87%

Run 6: Report of Vivace-LTE — Data Link



Run 7: Statistics of Vivace-LTE

Start at: 2018-02-21 16:41:54

End at: 2018-02-21 16:42:24

Below is generated by plot.py at 2018-02-21 23:27:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 501.04 Mbit/s

95th percentile per-packet one-way delay: 268.365 ms

Loss rate: 2.38%

-- Flow 1:

Average throughput: 342.96 Mbit/s

95th percentile per-packet one-way delay: 282.225 ms

Loss rate: 2.56%

-- Flow 2:

Average throughput: 188.09 Mbit/s

95th percentile per-packet one-way delay: 199.144 ms

Loss rate: 1.10%

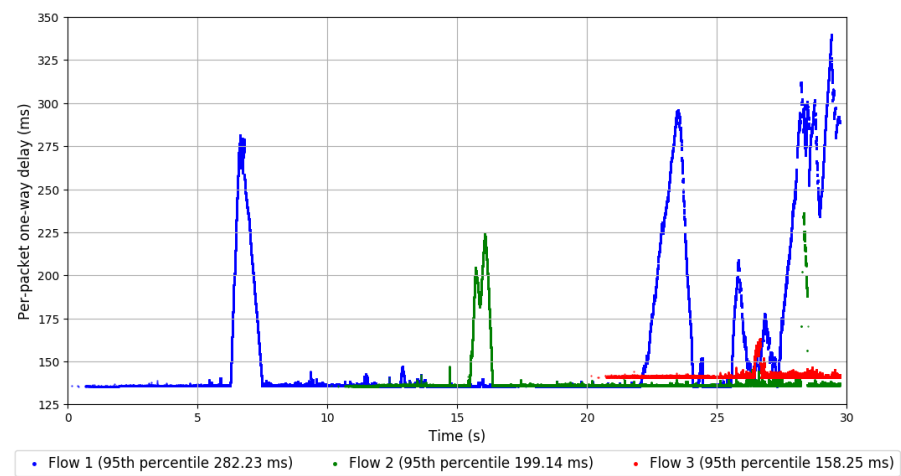
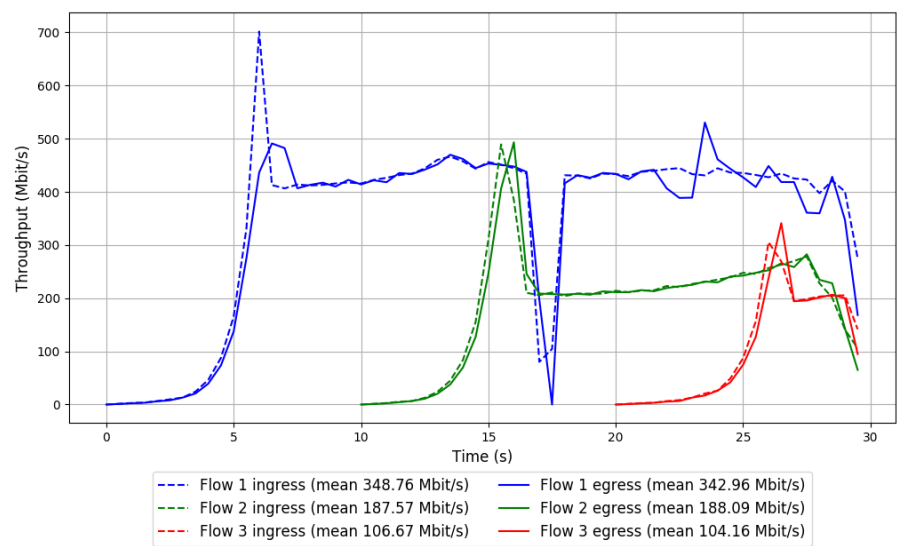
-- Flow 3:

Average throughput: 104.16 Mbit/s

95th percentile per-packet one-way delay: 158.247 ms

Loss rate: 5.11%

Run 7: Report of Vivace-LTE — Data Link



Run 8: Statistics of Vivace-LTE

Start at: 2018-02-21 17:02:02

End at: 2018-02-21 17:02:32

Below is generated by plot.py at 2018-02-21 23:27:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 536.86 Mbit/s

95th percentile per-packet one-way delay: 231.098 ms

Loss rate: 1.88%

-- Flow 1:

Average throughput: 324.56 Mbit/s

95th percentile per-packet one-way delay: 226.717 ms

Loss rate: 1.21%

-- Flow 2:

Average throughput: 255.01 Mbit/s

95th percentile per-packet one-way delay: 215.589 ms

Loss rate: 1.16%

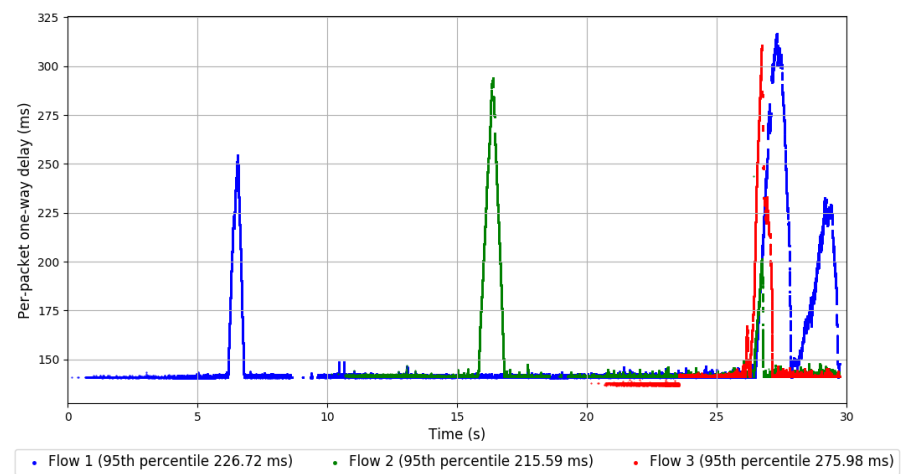
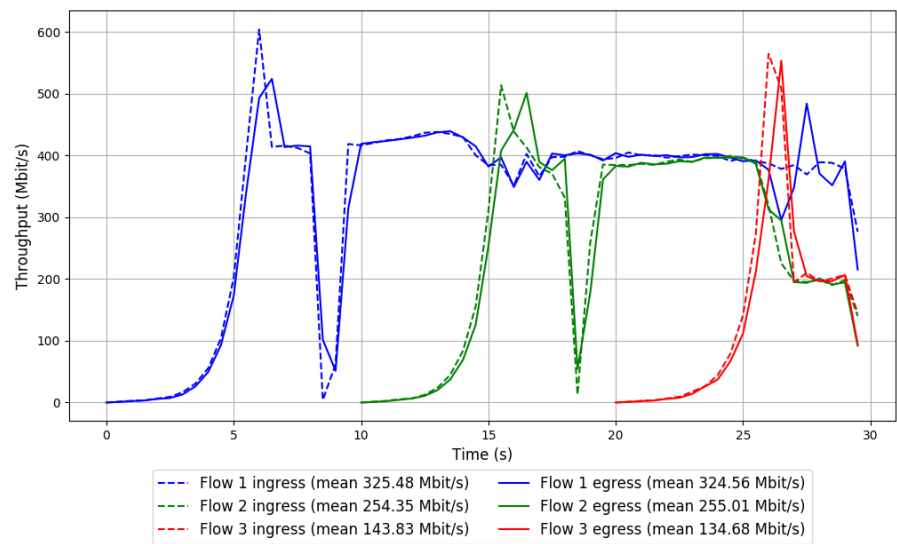
-- Flow 3:

Average throughput: 134.68 Mbit/s

95th percentile per-packet one-way delay: 275.977 ms

Loss rate: 8.98%

Run 8: Report of Vivace-LTE — Data Link



Run 9: Statistics of Vivace-LTE

Start at: 2018-02-21 17:22:29

End at: 2018-02-21 17:22:59

Below is generated by plot.py at 2018-02-21 23:28:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 561.54 Mbit/s

95th percentile per-packet one-way delay: 309.223 ms

Loss rate: 2.84%

-- Flow 1:

Average throughput: 330.77 Mbit/s

95th percentile per-packet one-way delay: 239.279 ms

Loss rate: 2.18%

-- Flow 2:

Average throughput: 290.42 Mbit/s

95th percentile per-packet one-way delay: 318.903 ms

Loss rate: 3.58%

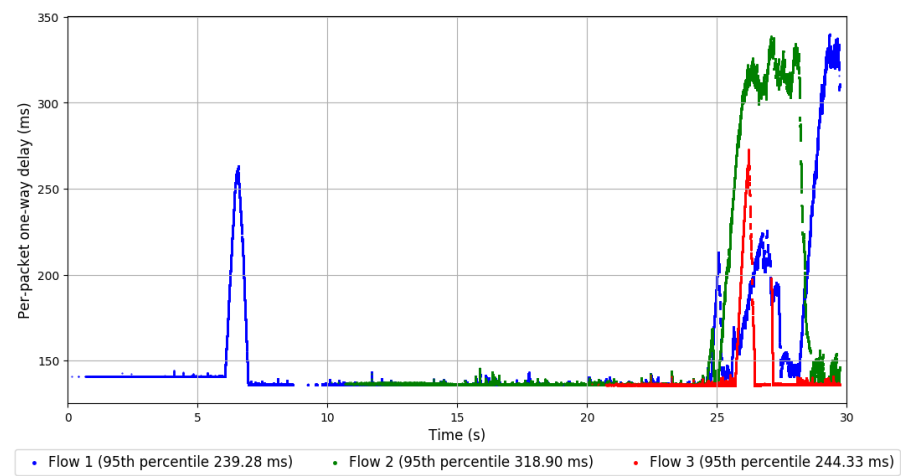
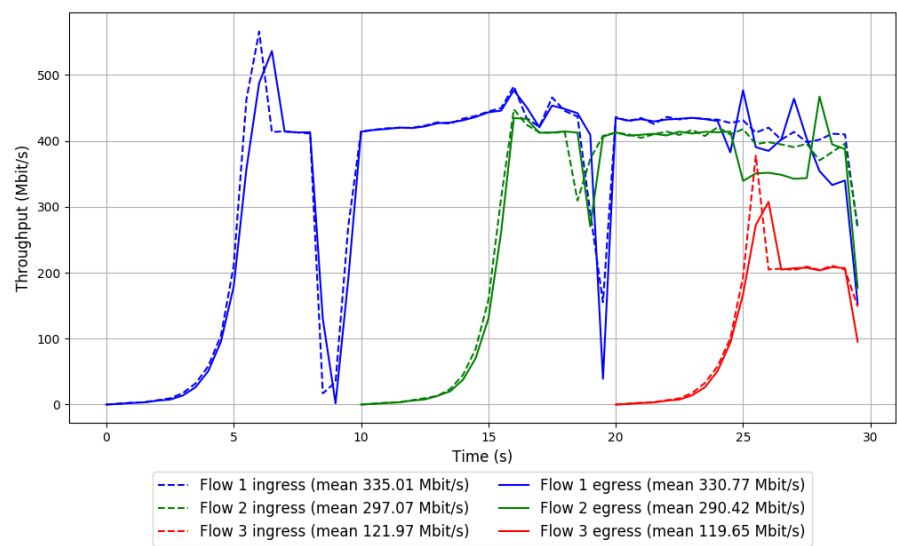
-- Flow 3:

Average throughput: 119.65 Mbit/s

95th percentile per-packet one-way delay: 244.330 ms

Loss rate: 4.62%

Run 9: Report of Vivace-LTE — Data Link



Run 10: Statistics of Vivace-LTE

Start at: 2018-02-21 17:43:09

End at: 2018-02-21 17:43:39

Below is generated by plot.py at 2018-02-21 23:28:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 500.58 Mbit/s

95th percentile per-packet one-way delay: 278.316 ms

Loss rate: 3.67%

-- Flow 1:

Average throughput: 342.17 Mbit/s

95th percentile per-packet one-way delay: 276.563 ms

Loss rate: 2.82%

-- Flow 2:

Average throughput: 189.05 Mbit/s

95th percentile per-packet one-way delay: 278.008 ms

Loss rate: 3.91%

-- Flow 3:

Average throughput: 103.10 Mbit/s

95th percentile per-packet one-way delay: 318.036 ms

Loss rate: 10.89%

Run 10: Report of Vivace-LTE — Data Link

