

Pantheon Report

Generated at 2017-12-21 11:15:00 (UTC).

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

Repeated the test of 14 congestion control schemes 10 times.

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

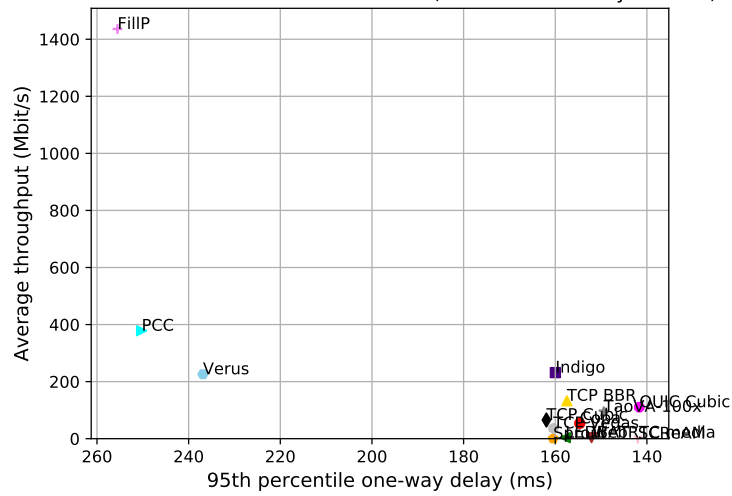
Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

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

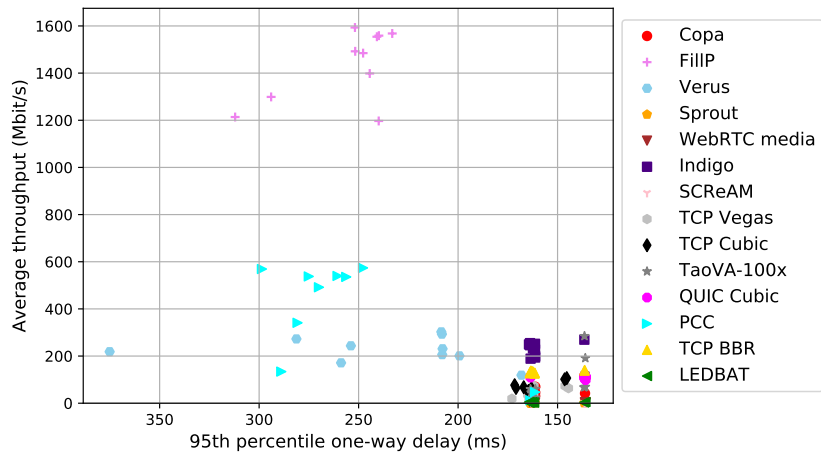
Git summary:

```
branch: master @ 904a5750834816b1e46a2c86405d707788d27c16
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
  M datagrump/sender.cc
third_party/fillp @ dcaef6b00654e660f73f7ed679d2eab61ce08639
third_party/genericCC @ 80b516c448f795fd6e9675f7177b69c622f07da8
third_party/indigo @ b19f3730105f9aa95452552af924e3719b03cc55
third_party/indigo-no-calib @ 7224f2202e8a044d8306fa0b983ad84360c53d89
third_party/koho_cc @ f0f2e693303aee82ea808e6928eac4f1083a6681
  M datagrump/sender.cc
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ fb1053193c2861da659ba9013db26744ccfcf993
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
  M receiver/src/buffer.h
  M receiver/src/core.cpp
  M sender/src/buffer.h
  M sender/src/core.cpp
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream @ c3370fd7bd17265a79aeb34e4016ad23f5965885
third_party/sourdough @ f1a14bffe749737437f61b1eaaeb30b267cde681
third_party/sprout @ 6f2efe6e088d91066a9f023df375eee2665089ce
  M src/examples/cellsim.cc
  M src/examples/sproutbt2.cc
  M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
  M src/verus.hpp
  M tools/plot.py
third_party/webrtc @ a488197ddd041ace68a42849b2540ad834825f42
```

test from GCE London Ethernet to GCE 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	69.11	66.60	60.51	157.44	157.48	149.42	1.16	1.73	3.62
TCP Cubic	10	37.58	31.68	21.89	161.70	161.07	159.08	2.17	2.62	5.67
LEDBAT	10	2.03	1.70	1.09	157.86	152.52	149.52	2.11	2.59	5.75
PCC	10	280.48	98.20	101.87	240.26	236.02	245.71	3.68	3.57	6.25
QUIC Cubic	10	60.23	55.06	40.99	138.73	141.55	136.00	1.10	1.11	2.62
SCReAM	9	0.27	0.22	0.21	655.14	136.08	141.62	0.70	1.42	2.72
WebRTC media	10	1.99	1.21	0.40	141.27	149.33	149.46	1.08	1.86	5.51
Sprout	10	0.30	0.28	0.35	157.62	160.15	157.43	0.90	0.80	2.13
TaoVA-100x	10	31.49	76.81	63.40	154.55	149.84	152.12	0.80	1.29	3.73
TCP Vegas	10	13.11	23.04	24.65	158.45	159.26	158.21	1.87	1.56	3.14
Verus	10	141.88	92.89	71.05	233.55	225.94	266.40	1.47	3.60	6.58
Copa	10	26.68	35.43	17.41	152.00	144.09	154.84	0.48	0.96	6.12
FillP	10	758.38	757.28	544.07	226.31	254.48	281.69	3.77	7.64	15.07
Indigo	10	124.55	118.02	90.72	159.87	160.04	160.48	0.89	1.31	3.74

Run 1: Statistics of TCP BBR

Start at: 2017-12-21 04:53:51

End at: 2017-12-21 04:54:21

Below is generated by plot.py at 2017-12-21 10:14:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 138.04 Mbit/s

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

Loss rate: 1.73%

-- Flow 1:

Average throughput: 71.10 Mbit/s

95th percentile per-packet one-way delay: 136.423 ms

Loss rate: 1.29%

-- Flow 2:

Average throughput: 70.00 Mbit/s

95th percentile per-packet one-way delay: 136.454 ms

Loss rate: 1.65%

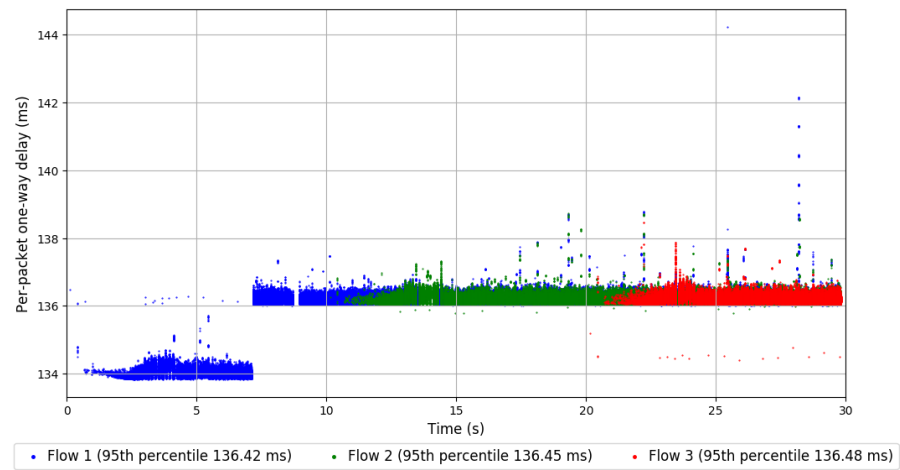
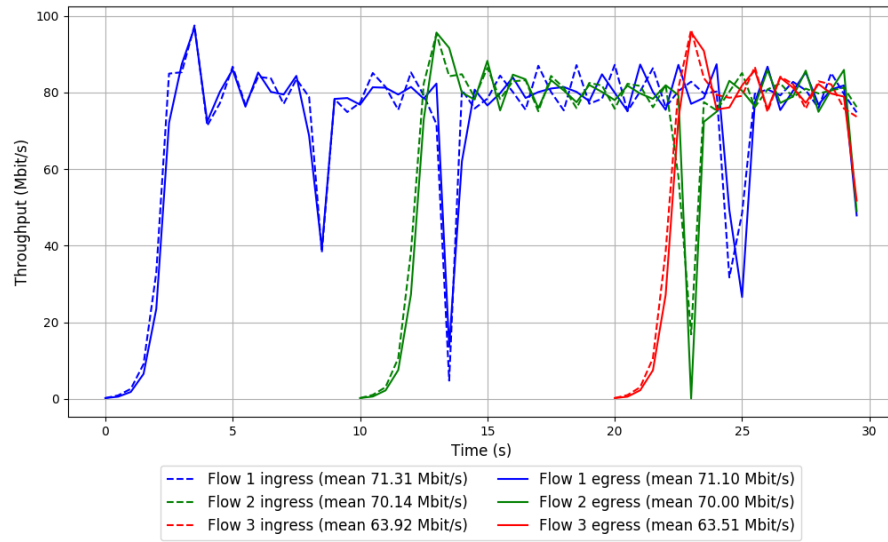
-- Flow 3:

Average throughput: 63.51 Mbit/s

95th percentile per-packet one-way delay: 136.478 ms

Loss rate: 3.37%

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2017-12-21 05:09:30

End at: 2017-12-21 05:10:00

Below is generated by plot.py at 2017-12-21 10:14:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 129.57 Mbit/s

95th percentile per-packet one-way delay: 161.495 ms

Loss rate: 1.81%

-- Flow 1:

Average throughput: 66.39 Mbit/s

95th percentile per-packet one-way delay: 161.491 ms

Loss rate: 1.29%

-- Flow 2:

Average throughput: 67.46 Mbit/s

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

Loss rate: 1.77%

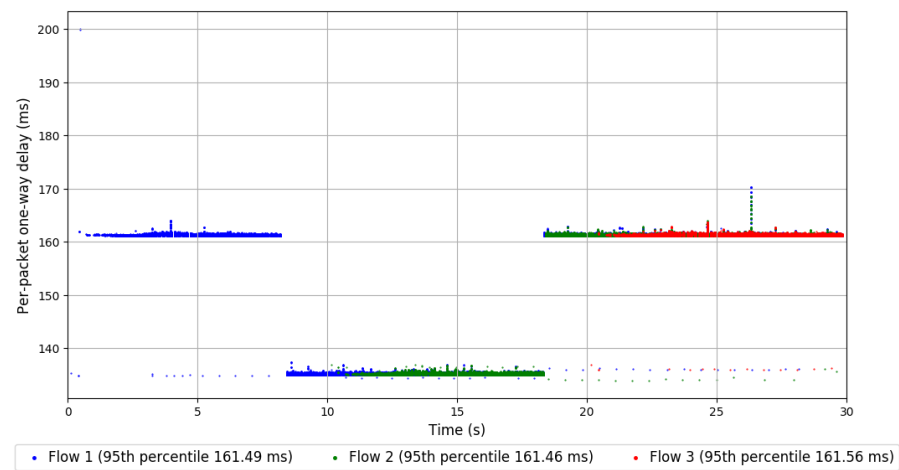
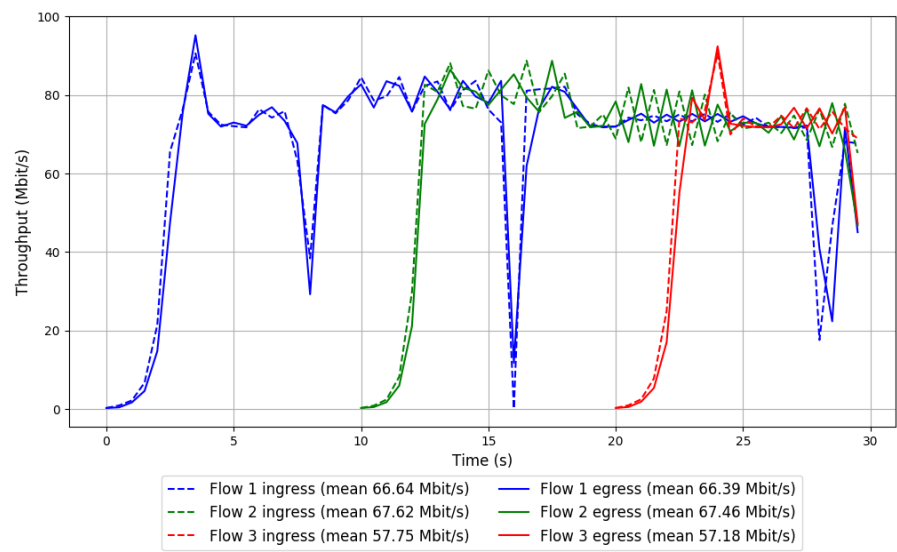
-- Flow 3:

Average throughput: 57.18 Mbit/s

95th percentile per-packet one-way delay: 161.558 ms

Loss rate: 3.72%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2017-12-21 05:24:59

End at: 2017-12-21 05:25:29

Below is generated by plot.py at 2017-12-21 10:14:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 127.80 Mbit/s

95th percentile per-packet one-way delay: 161.554 ms

Loss rate: 1.94%

-- Flow 1:

Average throughput: 67.70 Mbit/s

95th percentile per-packet one-way delay: 161.522 ms

Loss rate: 1.23%

-- Flow 2:

Average throughput: 62.63 Mbit/s

95th percentile per-packet one-way delay: 161.586 ms

Loss rate: 2.29%

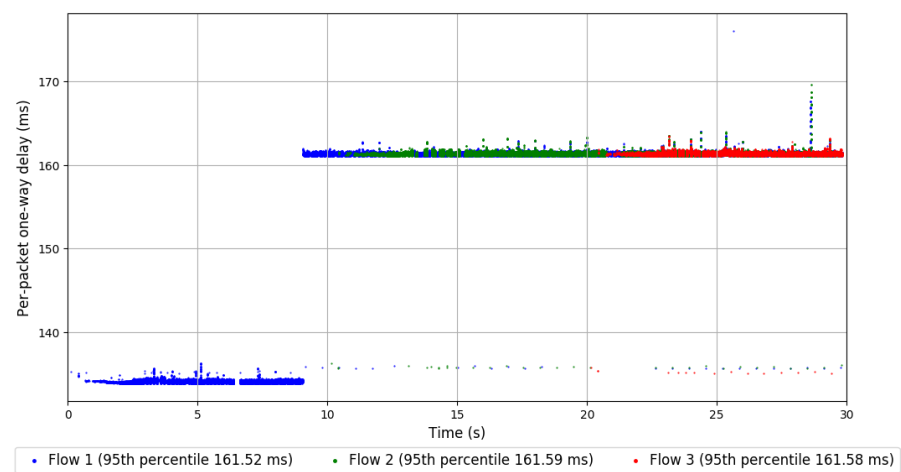
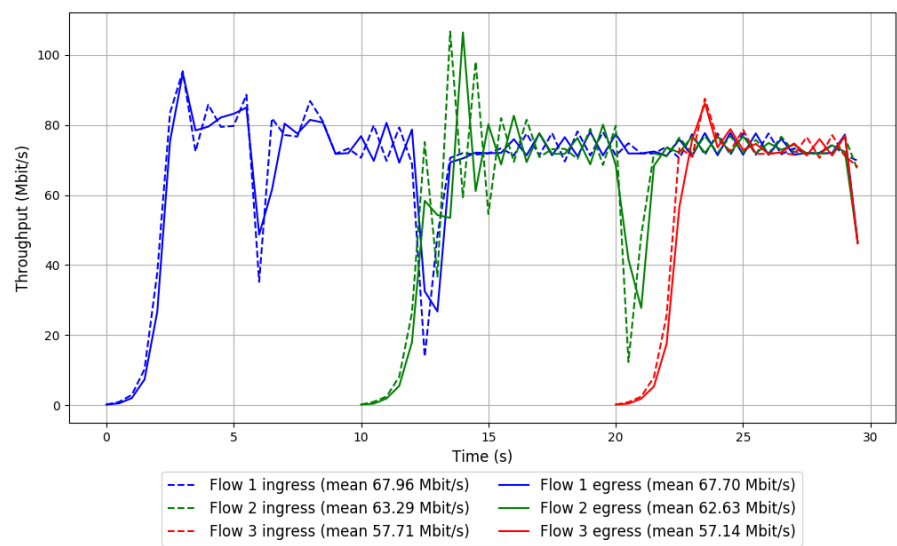
-- Flow 3:

Average throughput: 57.14 Mbit/s

95th percentile per-packet one-way delay: 161.577 ms

Loss rate: 3.71%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2017-12-21 05:40:23

End at: 2017-12-21 05:40:53

Below is generated by plot.py at 2017-12-21 10:14:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 125.72 Mbit/s

95th percentile per-packet one-way delay: 161.591 ms

Loss rate: 1.96%

-- Flow 1:

Average throughput: 65.25 Mbit/s

95th percentile per-packet one-way delay: 161.560 ms

Loss rate: 1.49%

-- Flow 2:

Average throughput: 63.24 Mbit/s

95th percentile per-packet one-way delay: 161.617 ms

Loss rate: 1.89%

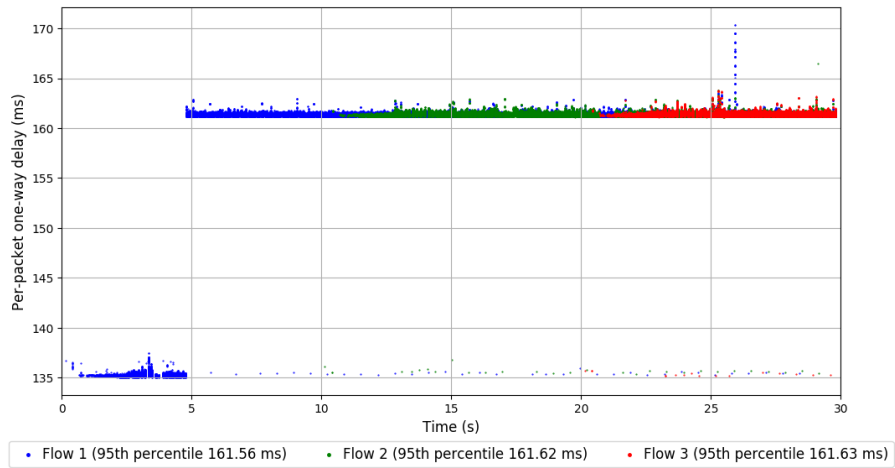
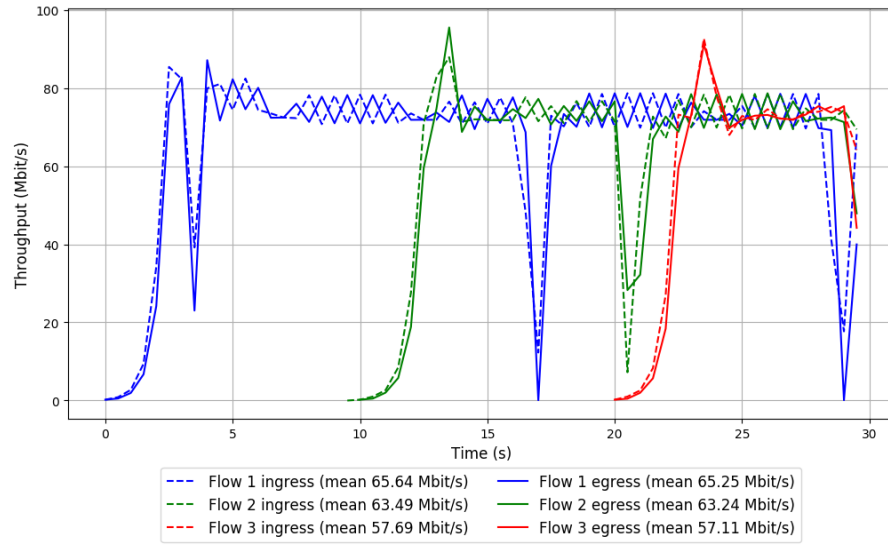
-- Flow 3:

Average throughput: 57.11 Mbit/s

95th percentile per-packet one-way delay: 161.627 ms

Loss rate: 3.73%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2017-12-21 05:55:49

End at: 2017-12-21 05:56:19

Below is generated by plot.py at 2017-12-21 10:14:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 138.05 Mbit/s

95th percentile per-packet one-way delay: 163.401 ms

Loss rate: 1.55%

-- Flow 1:

Average throughput: 71.61 Mbit/s

95th percentile per-packet one-way delay: 163.380 ms

Loss rate: 1.01%

-- Flow 2:

Average throughput: 69.09 Mbit/s

95th percentile per-packet one-way delay: 163.472 ms

Loss rate: 1.56%

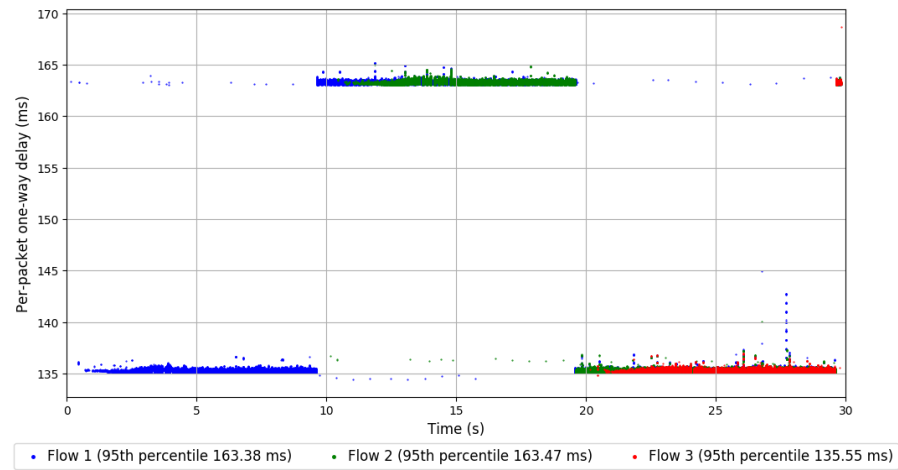
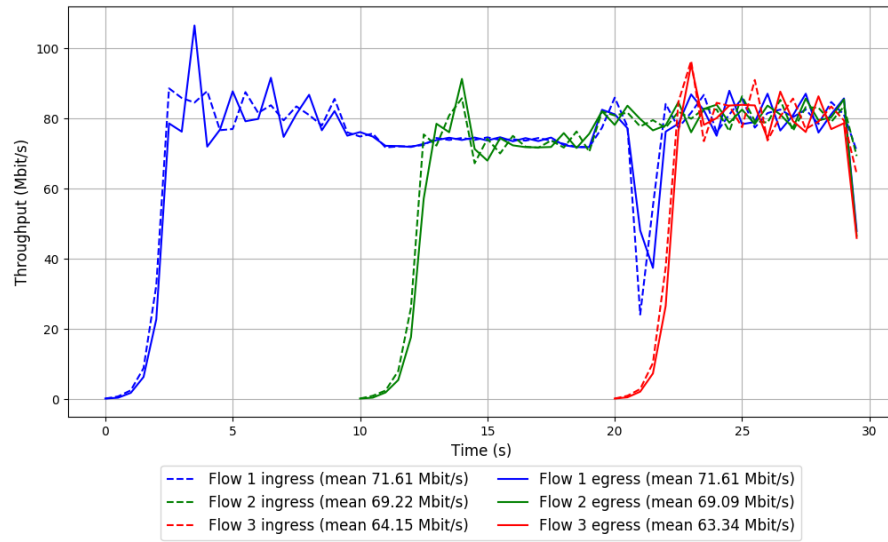
-- Flow 3:

Average throughput: 63.34 Mbit/s

95th percentile per-packet one-way delay: 135.551 ms

Loss rate: 3.40%

Run 5: Report of TCP BBR — Data Link



Run 6: Statistics of TCP BBR

Start at: 2017-12-21 06:11:12

End at: 2017-12-21 06:11:42

Below is generated by plot.py at 2017-12-21 10:14:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 136.42 Mbit/s

95th percentile per-packet one-way delay: 163.438 ms

Loss rate: 1.59%

-- Flow 1:

Average throughput: 70.36 Mbit/s

95th percentile per-packet one-way delay: 163.437 ms

Loss rate: 1.00%

-- Flow 2:

Average throughput: 68.76 Mbit/s

95th percentile per-packet one-way delay: 163.497 ms

Loss rate: 1.56%

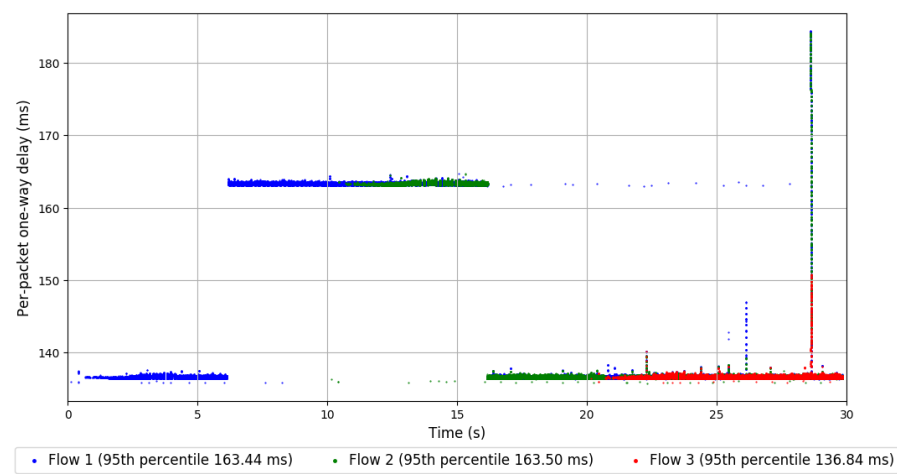
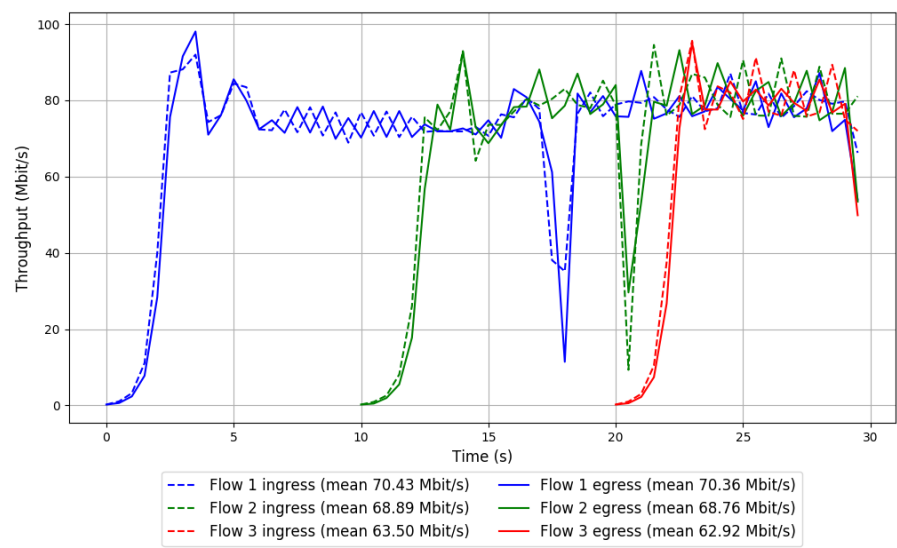
-- Flow 3:

Average throughput: 62.92 Mbit/s

95th percentile per-packet one-way delay: 136.843 ms

Loss rate: 3.64%

Run 6: Report of TCP BBR — Data Link



Run 7: Statistics of TCP BBR

Start at: 2017-12-21 06:26:38

End at: 2017-12-21 06:27:08

Below is generated by plot.py at 2017-12-21 10:14:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 126.77 Mbit/s

95th percentile per-packet one-way delay: 163.854 ms

Loss rate: 1.74%

-- Flow 1:

Average throughput: 66.69 Mbit/s

95th percentile per-packet one-way delay: 163.829 ms

Loss rate: 1.20%

-- Flow 2:

Average throughput: 62.63 Mbit/s

95th percentile per-packet one-way delay: 163.876 ms

Loss rate: 1.70%

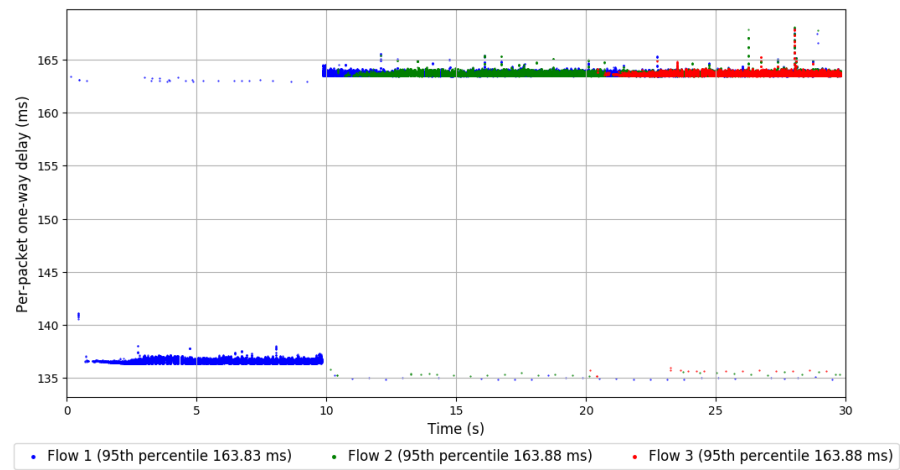
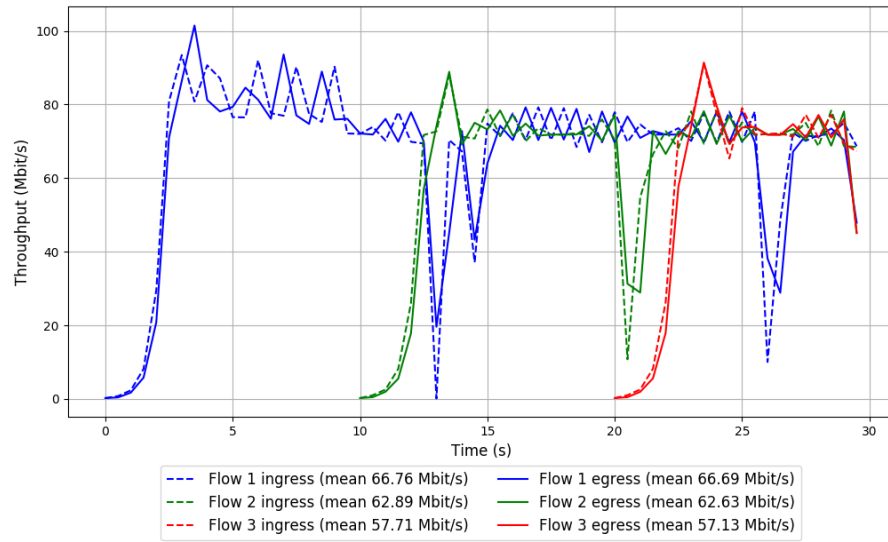
-- Flow 3:

Average throughput: 57.13 Mbit/s

95th percentile per-packet one-way delay: 163.878 ms

Loss rate: 3.72%

Run 7: Report of TCP BBR — Data Link



Run 8: Statistics of TCP BBR

Start at: 2017-12-21 06:42:11

End at: 2017-12-21 06:42:41

Below is generated by plot.py at 2017-12-21 10:14:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 130.38 Mbit/s

95th percentile per-packet one-way delay: 163.886 ms

Loss rate: 1.73%

-- Flow 1:

Average throughput: 68.46 Mbit/s

95th percentile per-packet one-way delay: 163.860 ms

Loss rate: 1.04%

-- Flow 2:

Average throughput: 64.71 Mbit/s

95th percentile per-packet one-way delay: 163.928 ms

Loss rate: 1.74%

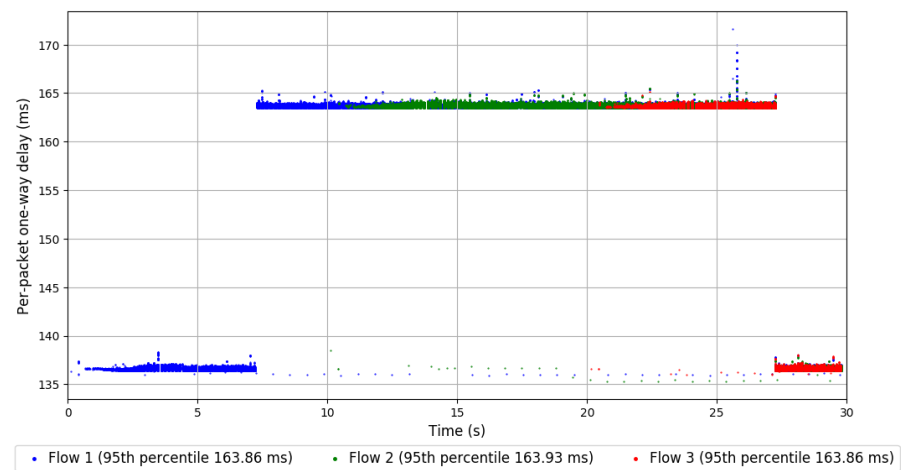
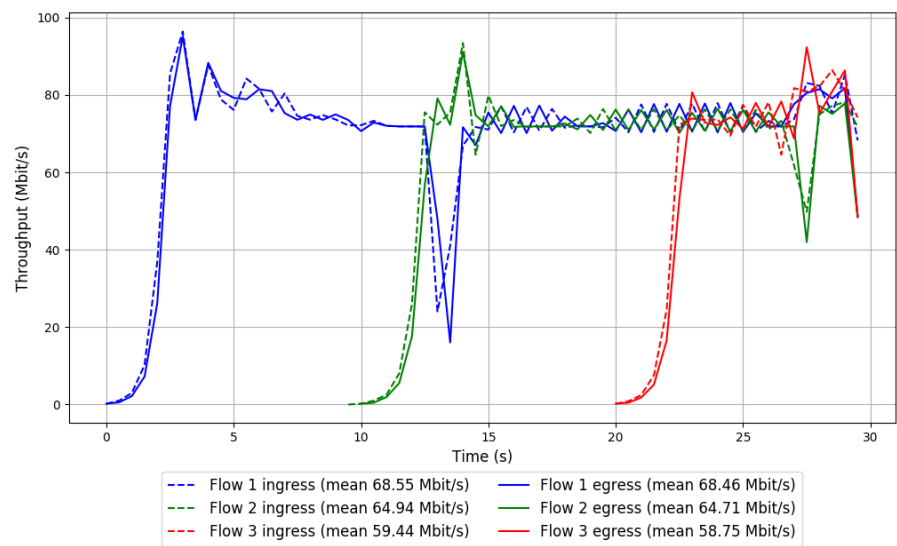
-- Flow 3:

Average throughput: 58.75 Mbit/s

95th percentile per-packet one-way delay: 163.863 ms

Loss rate: 4.10%

Run 8: Report of TCP BBR — Data Link



Run 9: Statistics of TCP BBR

Start at: 2017-12-21 06:57:17

End at: 2017-12-21 06:57:47

Below is generated by plot.py at 2017-12-21 10:17:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 140.72 Mbit/s

95th percentile per-packet one-way delay: 136.382 ms

Loss rate: 1.52%

-- Flow 1:

Average throughput: 73.65 Mbit/s

95th percentile per-packet one-way delay: 136.379 ms

Loss rate: 0.97%

-- Flow 2:

Average throughput: 69.55 Mbit/s

95th percentile per-packet one-way delay: 136.376 ms

Loss rate: 1.51%

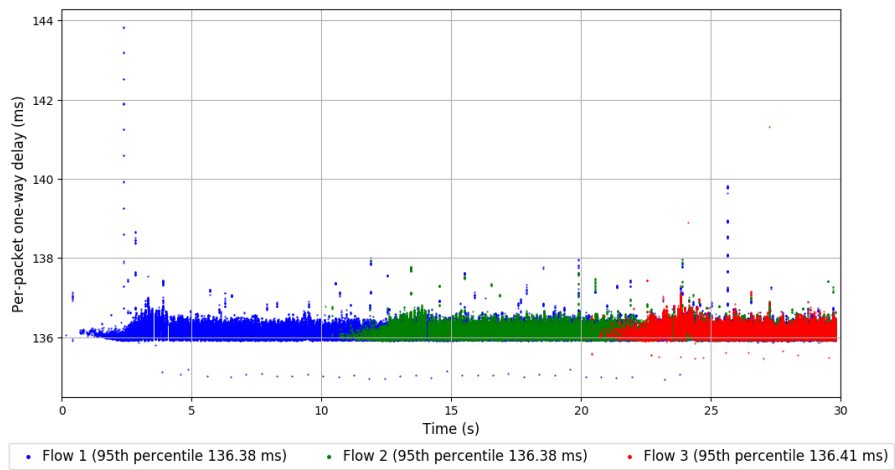
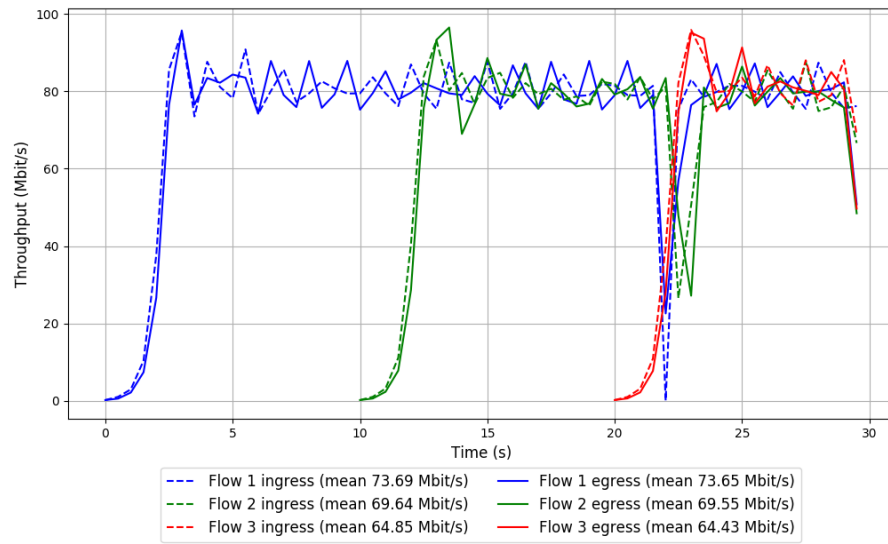
-- Flow 3:

Average throughput: 64.43 Mbit/s

95th percentile per-packet one-way delay: 136.407 ms

Loss rate: 3.44%

Run 9: Report of TCP BBR — Data Link



Run 10: Statistics of TCP BBR

Start at: 2017-12-21 07:13:33

End at: 2017-12-21 07:14:03

Below is generated by plot.py at 2017-12-21 10:17:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 135.74 Mbit/s

95th percentile per-packet one-way delay: 162.505 ms

Loss rate: 1.61%

-- Flow 1:

Average throughput: 69.93 Mbit/s

95th percentile per-packet one-way delay: 162.524 ms

Loss rate: 1.09%

-- Flow 2:

Average throughput: 67.96 Mbit/s

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

Loss rate: 1.58%

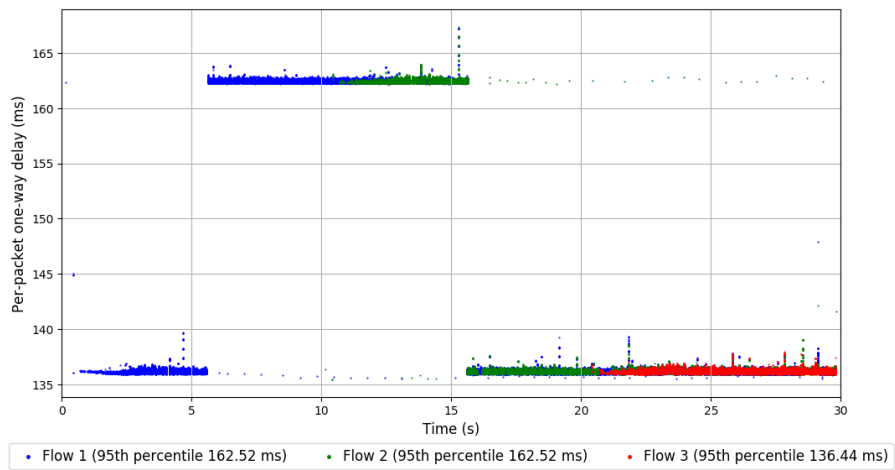
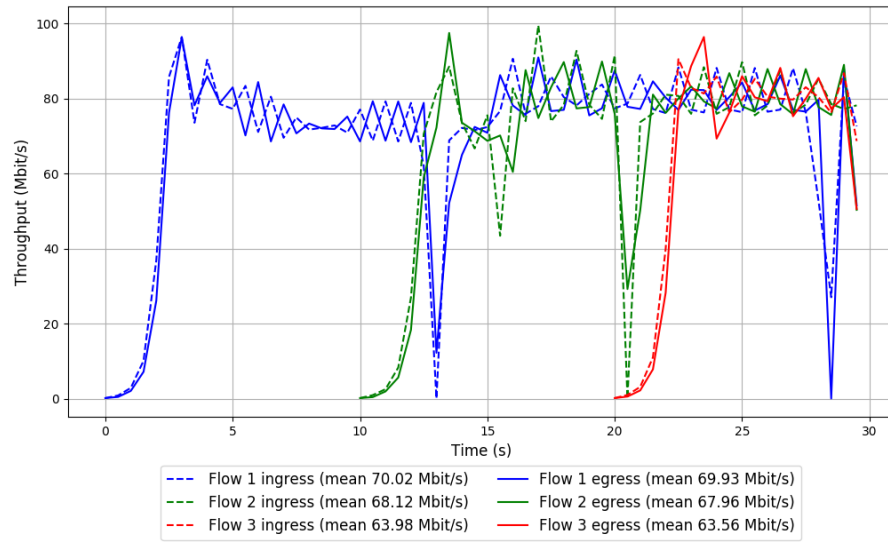
-- Flow 3:

Average throughput: 63.56 Mbit/s

95th percentile per-packet one-way delay: 136.444 ms

Loss rate: 3.38%

Run 10: Report of TCP BBR — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2017-12-21 04:54:49

End at: 2017-12-21 04:55:19

Below is generated by plot.py at 2017-12-21 10:17:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 101.52 Mbit/s

95th percentile per-packet one-way delay: 146.445 ms

Loss rate: 1.82%

-- Flow 1:

Average throughput: 70.42 Mbit/s

95th percentile per-packet one-way delay: 145.750 ms

Loss rate: 0.89%

-- Flow 2:

Average throughput: 16.05 Mbit/s

95th percentile per-packet one-way delay: 142.069 ms

Loss rate: 5.22%

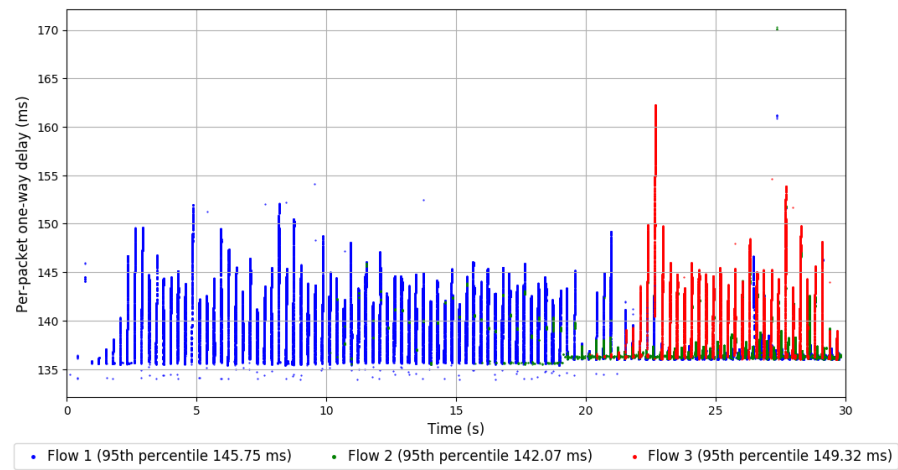
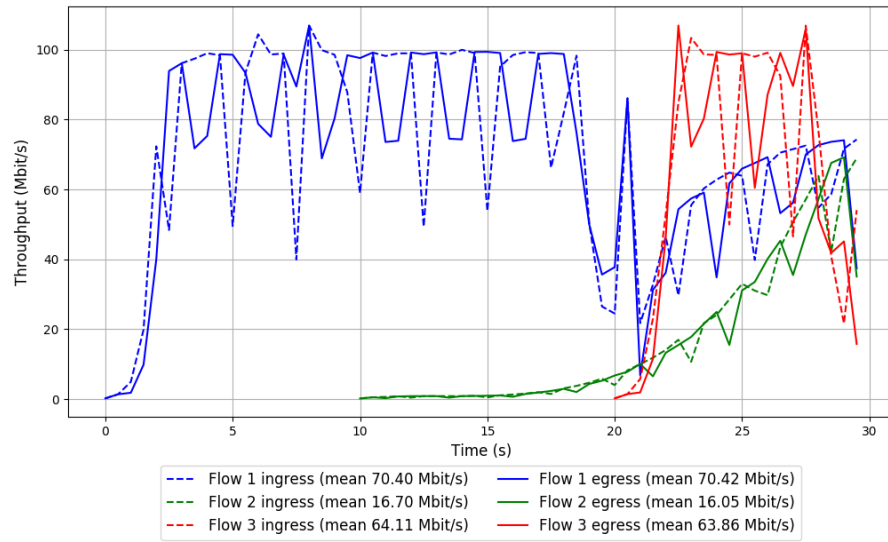
-- Flow 3:

Average throughput: 63.86 Mbit/s

95th percentile per-packet one-way delay: 149.321 ms

Loss rate: 3.17%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2017-12-21 05:10:28

End at: 2017-12-21 05:10:58

Below is generated by plot.py at 2017-12-21 10:17:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 67.82 Mbit/s

95th percentile per-packet one-way delay: 167.002 ms

Loss rate: 1.50%

-- Flow 1:

Average throughput: 38.50 Mbit/s

95th percentile per-packet one-way delay: 167.282 ms

Loss rate: 1.65%

-- Flow 2:

Average throughput: 43.11 Mbit/s

95th percentile per-packet one-way delay: 166.166 ms

Loss rate: 1.11%

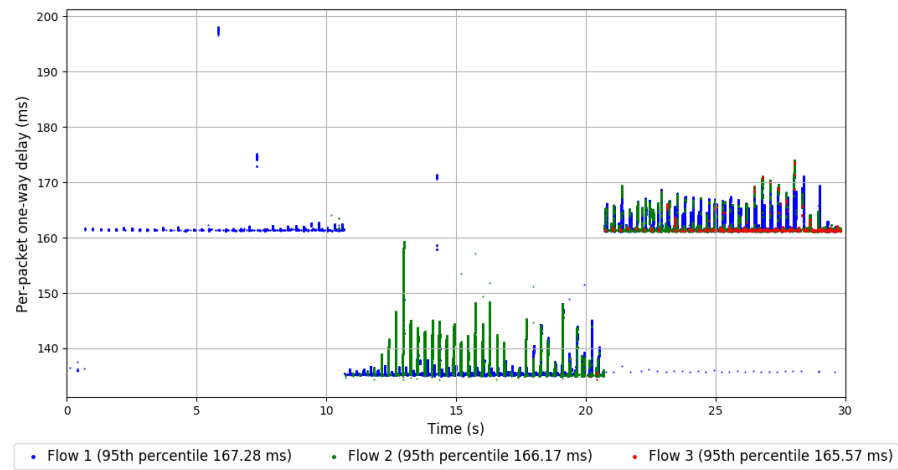
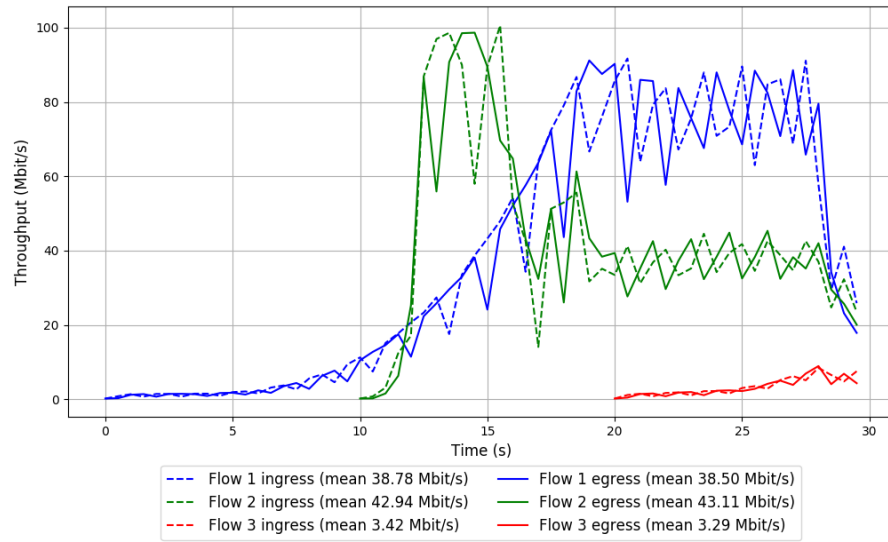
-- Flow 3:

Average throughput: 3.29 Mbit/s

95th percentile per-packet one-way delay: 165.572 ms

Loss rate: 6.29%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2017-12-21 05:25:57

End at: 2017-12-21 05:26:27

Below is generated by plot.py at 2017-12-21 10:17:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 25.91 Mbit/s

95th percentile per-packet one-way delay: 162.696 ms

Loss rate: 4.29%

-- Flow 1:

Average throughput: 9.98 Mbit/s

95th percentile per-packet one-way delay: 162.485 ms

Loss rate: 4.91%

-- Flow 2:

Average throughput: 21.84 Mbit/s

95th percentile per-packet one-way delay: 163.001 ms

Loss rate: 3.46%

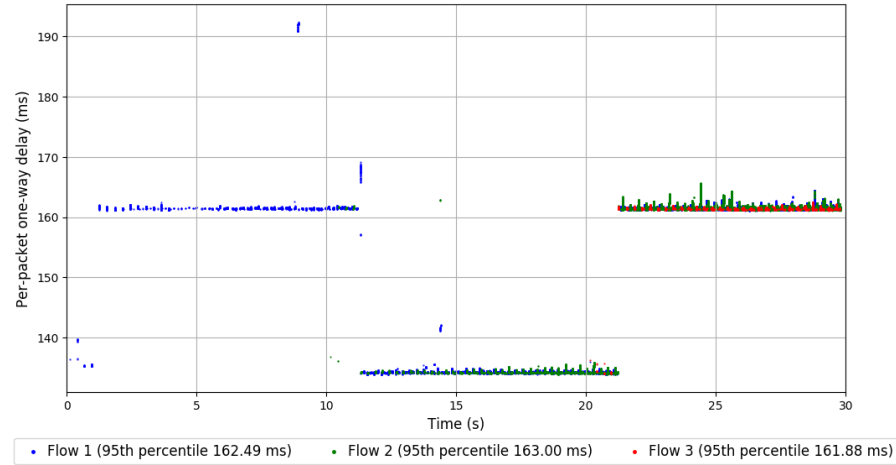
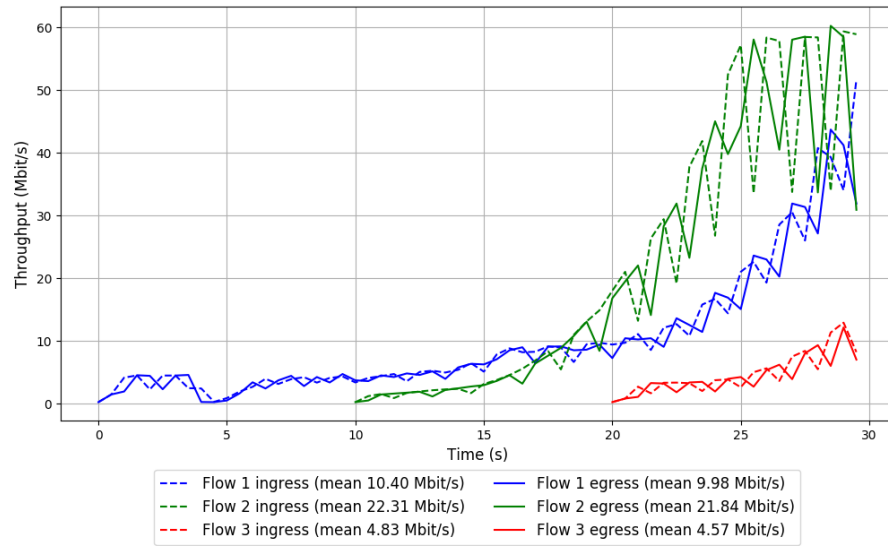
-- Flow 3:

Average throughput: 4.57 Mbit/s

95th percentile per-packet one-way delay: 161.885 ms

Loss rate: 7.95%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2017-12-21 05:41:21

End at: 2017-12-21 05:41:51

Below is generated by plot.py at 2017-12-21 10:17:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 49.46 Mbit/s

95th percentile per-packet one-way delay: 162.916 ms

Loss rate: 2.67%

-- Flow 1:

Average throughput: 29.94 Mbit/s

95th percentile per-packet one-way delay: 162.840 ms

Loss rate: 2.42%

-- Flow 2:

Average throughput: 6.52 Mbit/s

95th percentile per-packet one-way delay: 164.056 ms

Loss rate: 3.34%

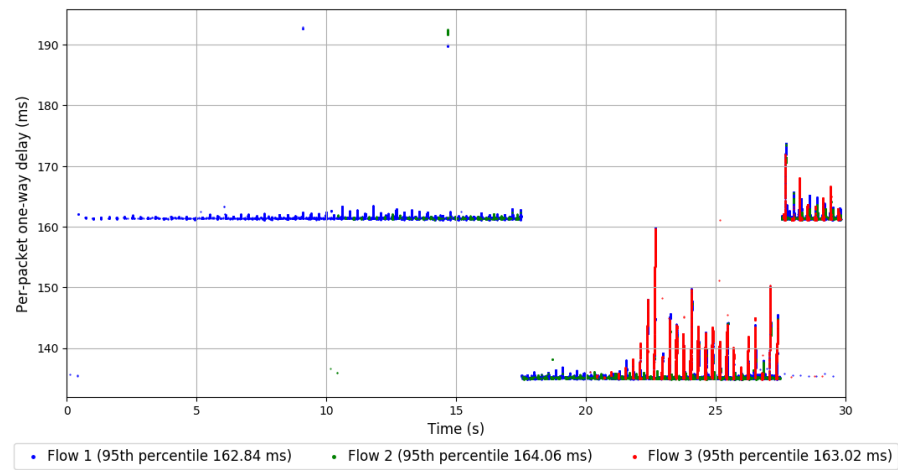
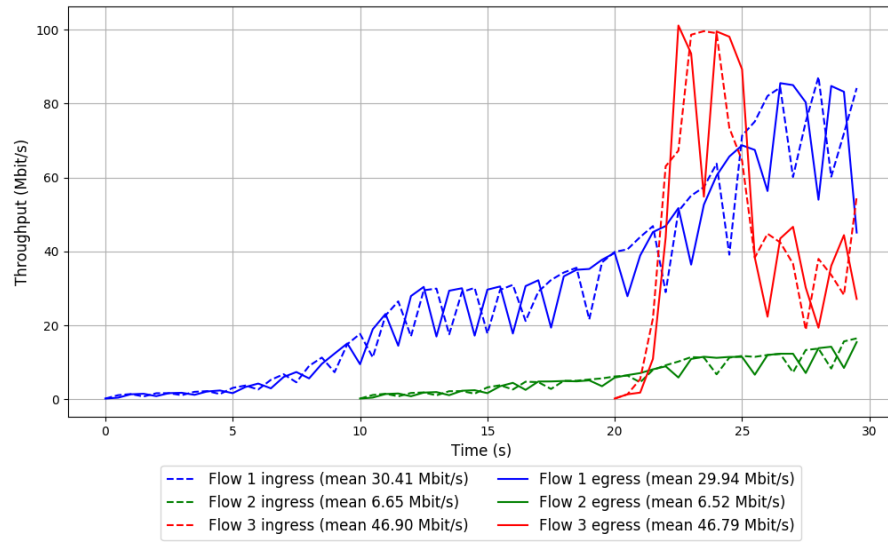
-- Flow 3:

Average throughput: 46.79 Mbit/s

95th percentile per-packet one-way delay: 163.018 ms

Loss rate: 2.97%

Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2017-12-21 05:56:47

End at: 2017-12-21 05:57:17

Below is generated by plot.py at 2017-12-21 10:17:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 52.17 Mbit/s

95th percentile per-packet one-way delay: 164.600 ms

Loss rate: 1.71%

-- Flow 1:

Average throughput: 44.91 Mbit/s

95th percentile per-packet one-way delay: 164.602 ms

Loss rate: 1.50%

-- Flow 2:

Average throughput: 9.38 Mbit/s

95th percentile per-packet one-way delay: 164.684 ms

Loss rate: 2.49%

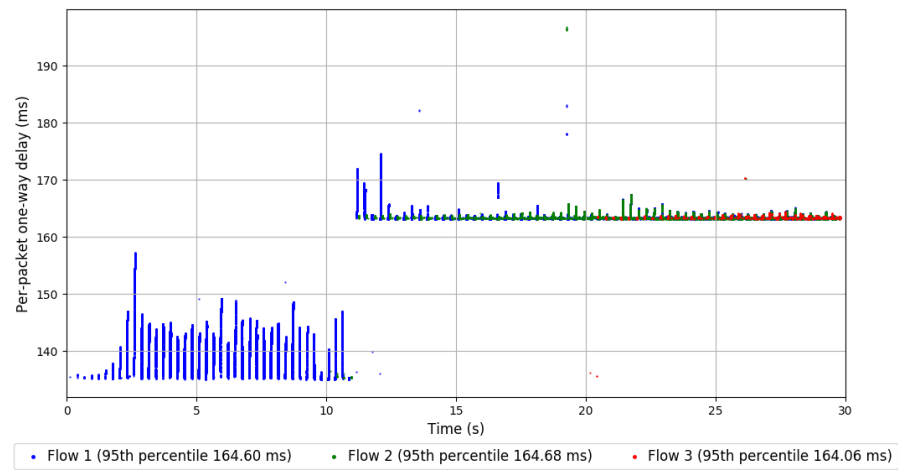
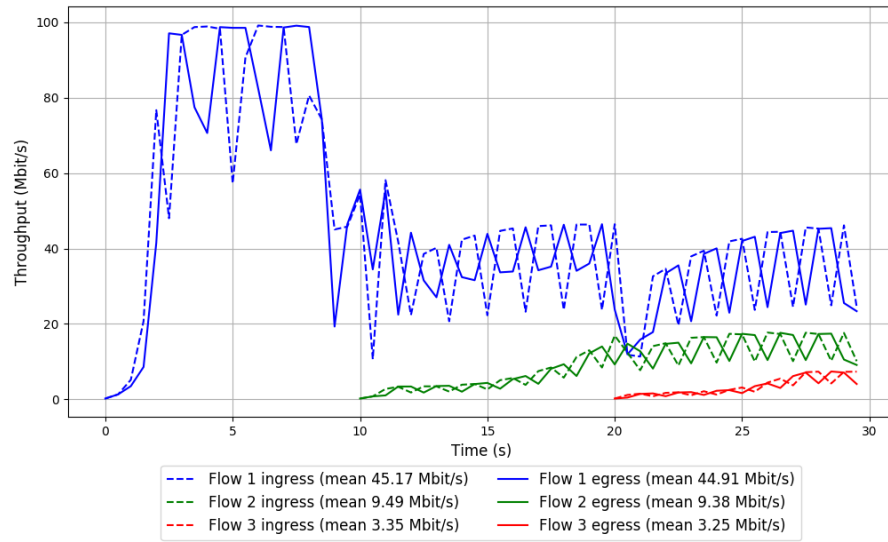
-- Flow 3:

Average throughput: 3.25 Mbit/s

95th percentile per-packet one-way delay: 164.065 ms

Loss rate: 5.77%

Run 5: Report of TCP Cubic — Data Link



Run 6: Statistics of TCP Cubic

Start at: 2017-12-21 06:12:12

End at: 2017-12-21 06:12:42

Below is generated by plot.py at 2017-12-21 10:17:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 76.56 Mbit/s

95th percentile per-packet one-way delay: 171.575 ms

Loss rate: 2.16%

-- Flow 1:

Average throughput: 26.89 Mbit/s

95th percentile per-packet one-way delay: 169.557 ms

Loss rate: 2.92%

-- Flow 2:

Average throughput: 74.60 Mbit/s

95th percentile per-packet one-way delay: 171.831 ms

Loss rate: 1.65%

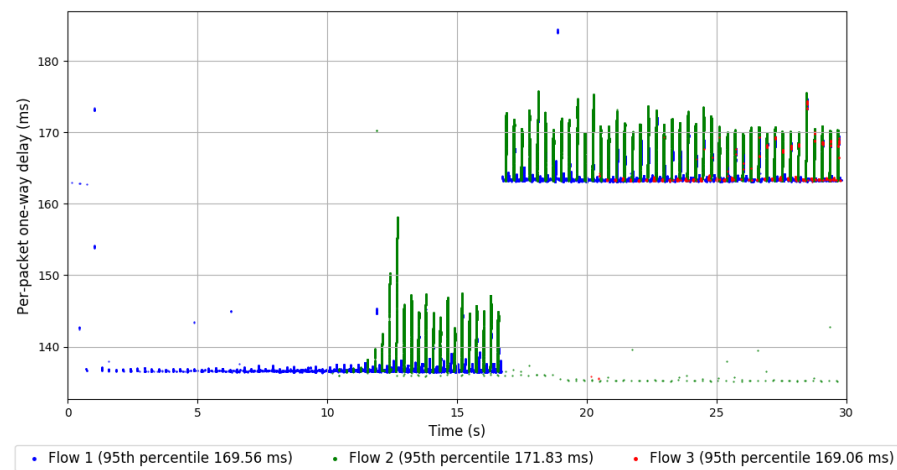
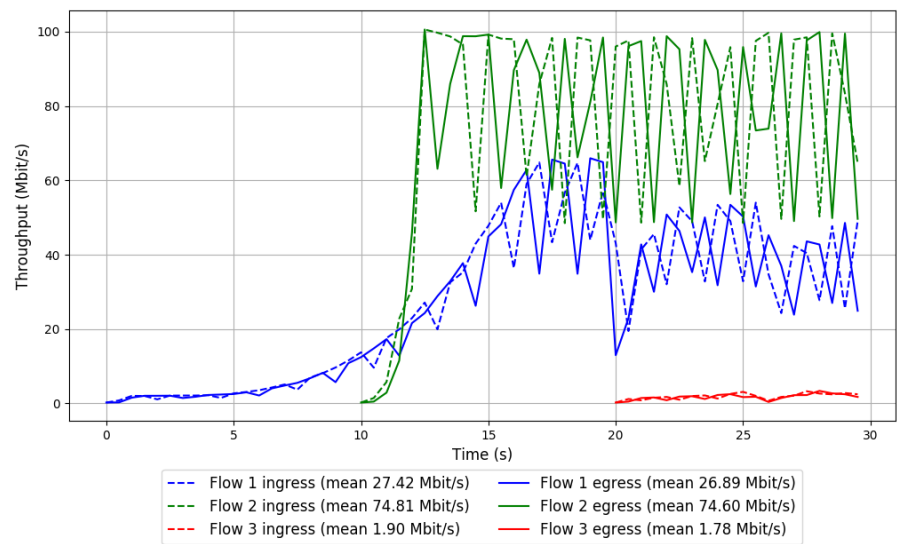
-- Flow 3:

Average throughput: 1.78 Mbit/s

95th percentile per-packet one-way delay: 169.060 ms

Loss rate: 9.07%

Run 6: Report of TCP Cubic — Data Link



Run 7: Statistics of TCP Cubic

Start at: 2017-12-21 06:27:36

End at: 2017-12-21 06:28:06

Below is generated by plot.py at 2017-12-21 10:17:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 47.66 Mbit/s

95th percentile per-packet one-way delay: 164.658 ms

Loss rate: 1.95%

-- Flow 1:

Average throughput: 18.09 Mbit/s

95th percentile per-packet one-way delay: 164.248 ms

Loss rate: 2.66%

-- Flow 2:

Average throughput: 43.12 Mbit/s

95th percentile per-packet one-way delay: 165.181 ms

Loss rate: 1.28%

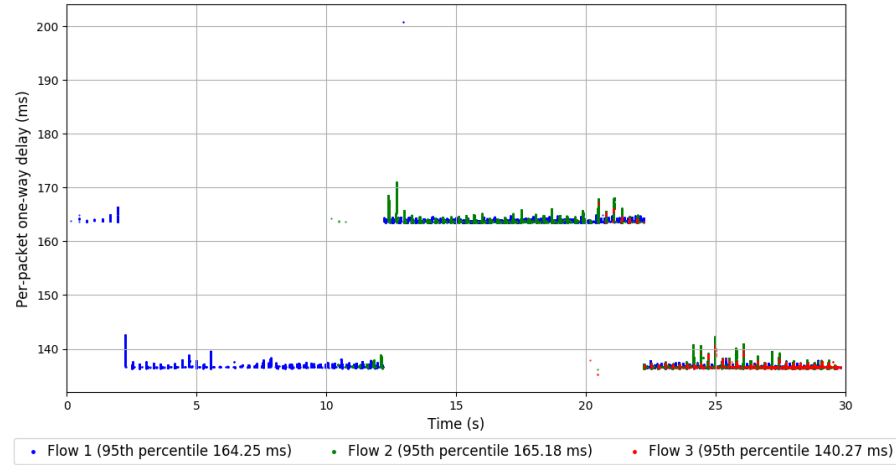
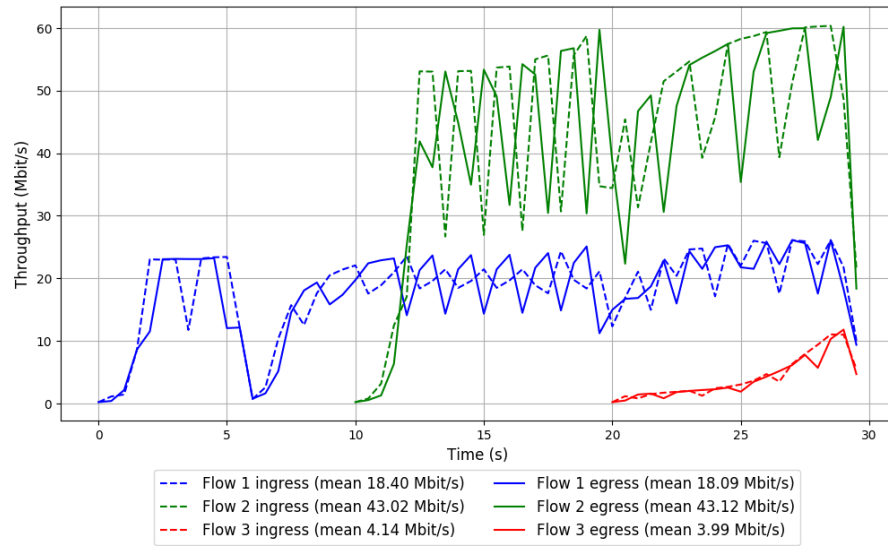
-- Flow 3:

Average throughput: 3.99 Mbit/s

95th percentile per-packet one-way delay: 140.267 ms

Loss rate: 6.30%

Run 7: Report of TCP Cubic — Data Link



Run 8: Statistics of TCP Cubic

Start at: 2017-12-21 06:43:09

End at: 2017-12-21 06:43:39

Below is generated by plot.py at 2017-12-21 10:17:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 64.58 Mbit/s

95th percentile per-packet one-way delay: 170.895 ms

Loss rate: 2.10%

-- Flow 1:

Average throughput: 38.08 Mbit/s

95th percentile per-packet one-way delay: 171.916 ms

Loss rate: 2.11%

-- Flow 2:

Average throughput: 38.07 Mbit/s

95th percentile per-packet one-way delay: 164.591 ms

Loss rate: 1.68%

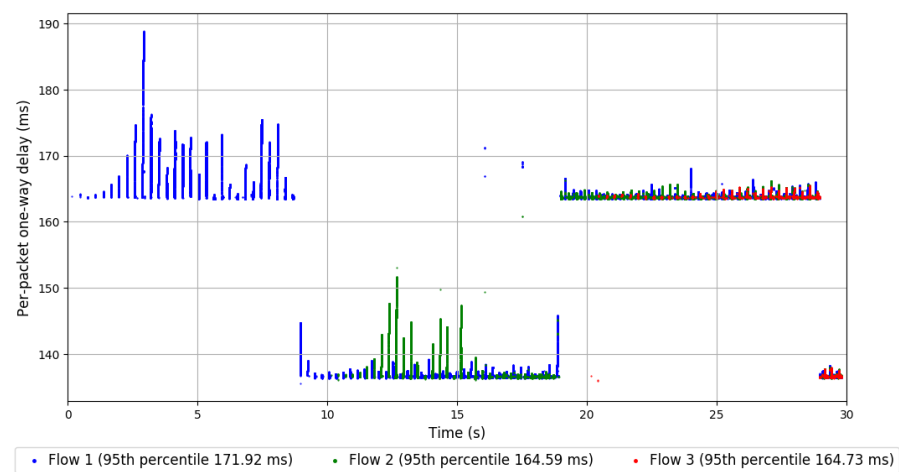
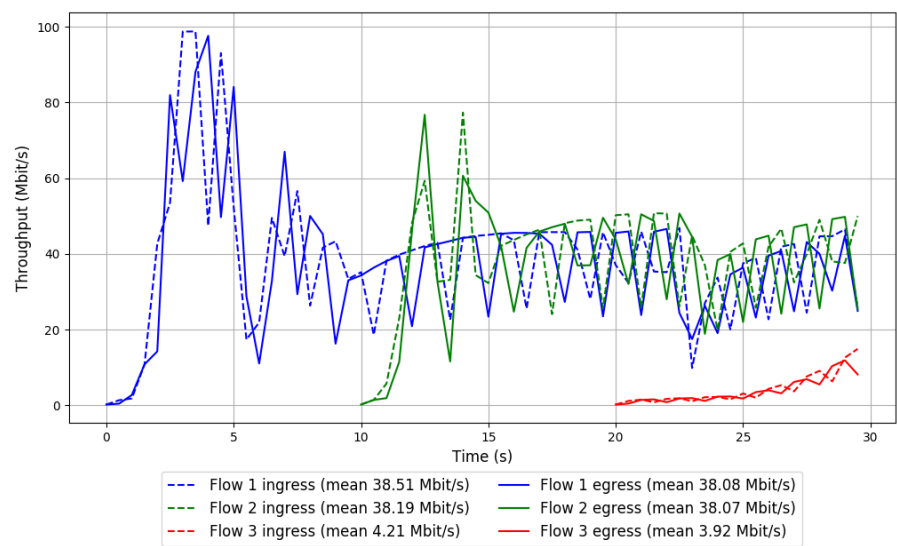
-- Flow 3:

Average throughput: 3.92 Mbit/s

95th percentile per-packet one-way delay: 164.730 ms

Loss rate: 9.48%

Run 8: Report of TCP Cubic — Data Link



Run 9: Statistics of TCP Cubic

Start at: 2017-12-21 06:58:16

End at: 2017-12-21 06:58:46

Below is generated by plot.py at 2017-12-21 10:17:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 106.54 Mbit/s

95th percentile per-packet one-way delay: 145.379 ms

Loss rate: 1.75%

-- Flow 1:

Average throughput: 55.75 Mbit/s

95th percentile per-packet one-way delay: 145.413 ms

Loss rate: 1.40%

-- Flow 2:

Average throughput: 57.84 Mbit/s

95th percentile per-packet one-way delay: 145.088 ms

Loss rate: 1.73%

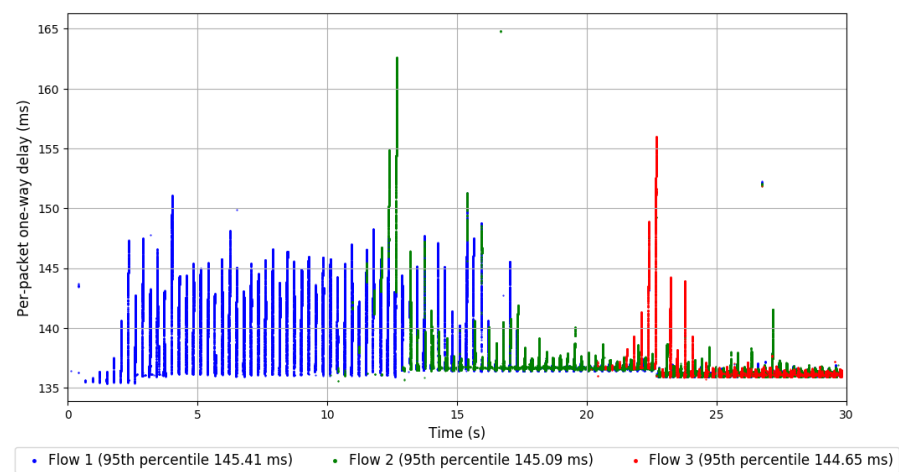
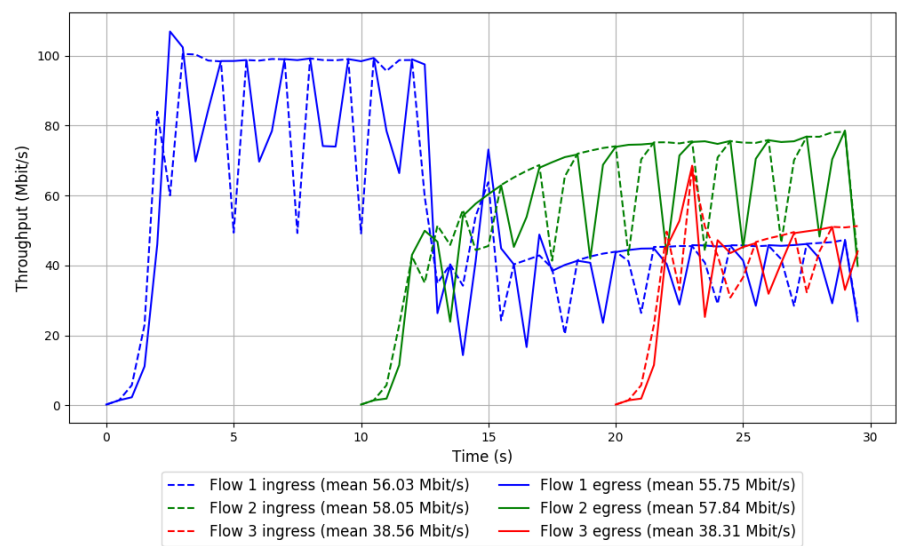
-- Flow 3:

Average throughput: 38.31 Mbit/s

95th percentile per-packet one-way delay: 144.645 ms

Loss rate: 3.38%

Run 9: Report of TCP Cubic — Data Link



Run 10: Statistics of TCP Cubic

Start at: 2017-12-21 07:14:31

End at: 2017-12-21 07:15:01

Below is generated by plot.py at 2017-12-21 10:17:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 62.91 Mbit/s

95th percentile per-packet one-way delay: 163.164 ms

Loss rate: 1.68%

-- Flow 1:

Average throughput: 43.19 Mbit/s

95th percentile per-packet one-way delay: 162.914 ms

Loss rate: 1.19%

-- Flow 2:

Average throughput: 6.25 Mbit/s

95th percentile per-packet one-way delay: 163.995 ms

Loss rate: 4.23%

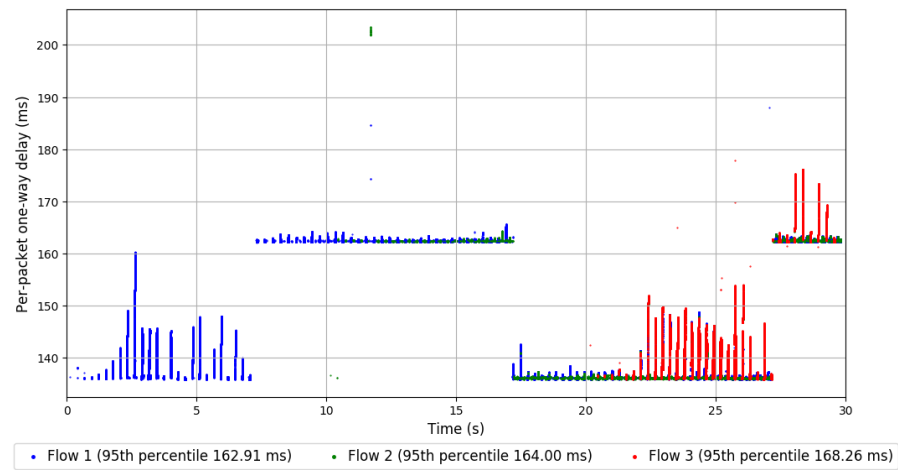
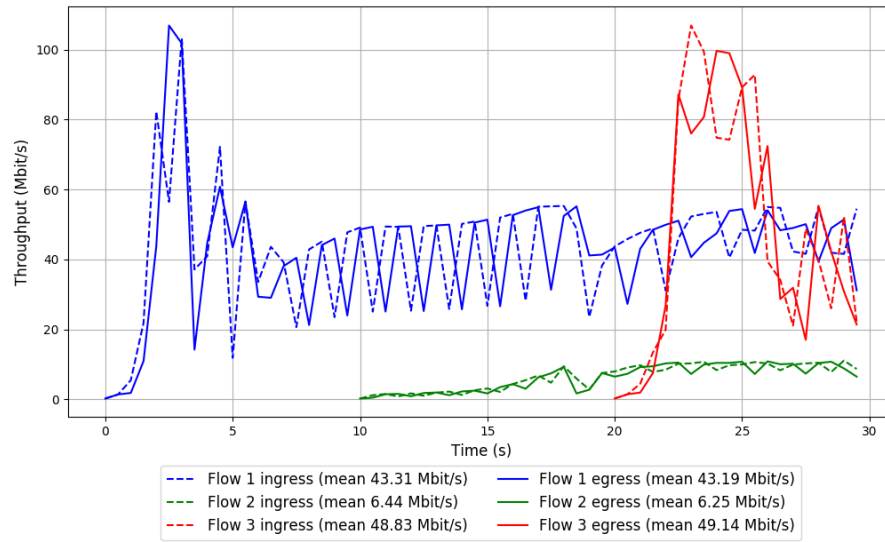
-- Flow 3:

Average throughput: 49.14 Mbit/s

95th percentile per-packet one-way delay: 168.262 ms

Loss rate: 2.34%

Run 10: Report of TCP Cubic — Data Link

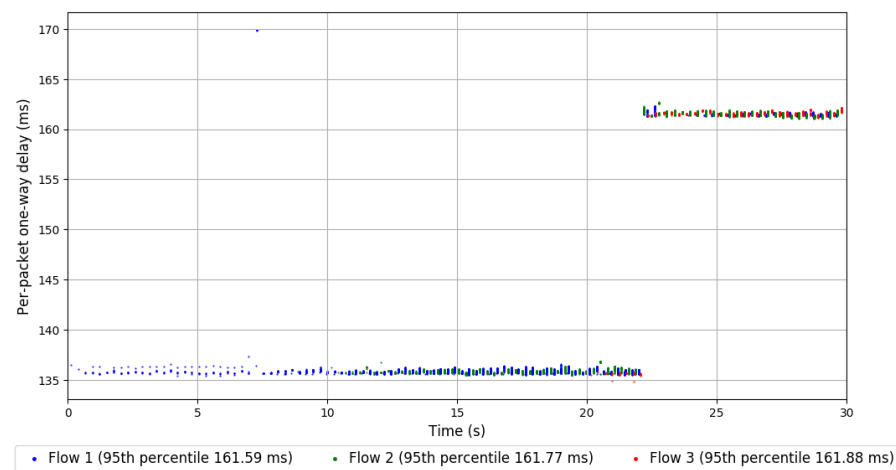
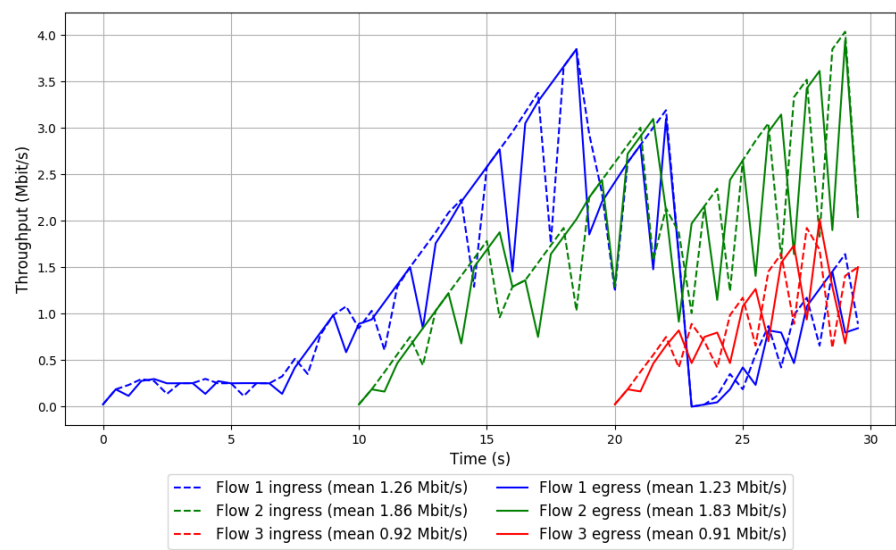


```
Run 1: Statistics of LEDBAT

Start at: 2017-12-21 05:03:26
End at: 2017-12-21 05:03:56

# Below is generated by plot.py at 2017-12-21 10:17:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.72 Mbit/s
95th percentile per-packet one-way delay: 161.756 ms
Loss rate: 3.22%
-- Flow 1:
Average throughput: 1.23 Mbit/s
95th percentile per-packet one-way delay: 161.592 ms
Loss rate: 3.39%
-- Flow 2:
Average throughput: 1.83 Mbit/s
95th percentile per-packet one-way delay: 161.766 ms
Loss rate: 2.87%
-- Flow 3:
Average throughput: 0.91 Mbit/s
95th percentile per-packet one-way delay: 161.884 ms
Loss rate: 3.98%
```


Run 1: Report of LEDBAT — Data Link

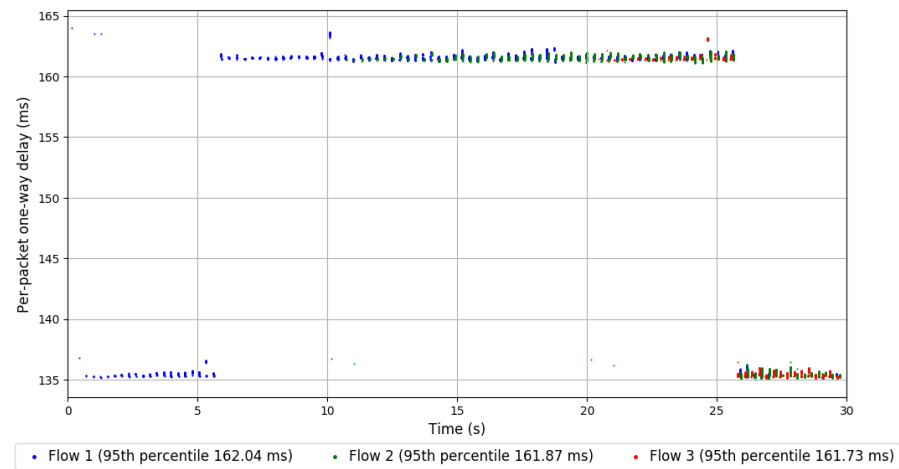
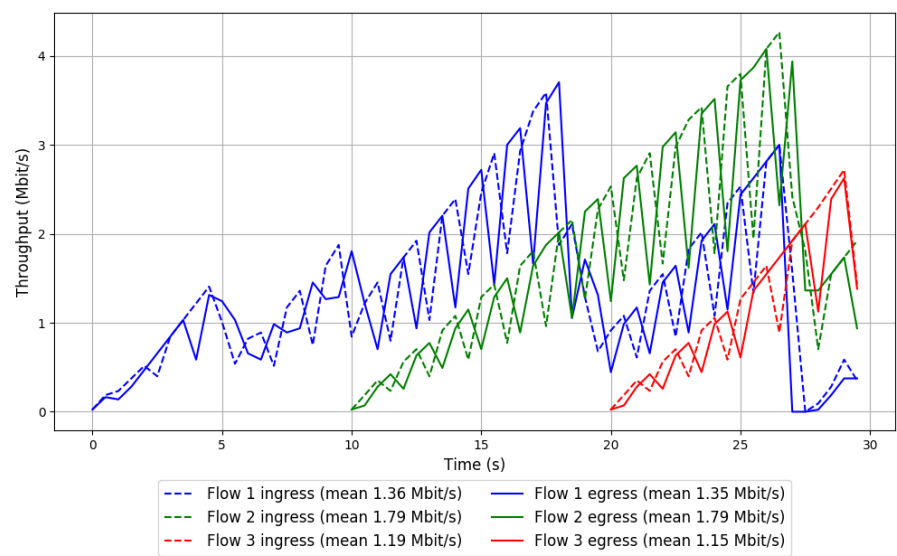


```
Run 2: Statistics of LEDBAT

Start at: 2017-12-21 05:18:53
End at: 2017-12-21 05:19:23

# Below is generated by plot.py at 2017-12-21 10:17:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.89 Mbit/s
95th percentile per-packet one-way delay: 161.962 ms
Loss rate: 2.59%
-- Flow 1:
Average throughput: 1.35 Mbit/s
95th percentile per-packet one-way delay: 162.039 ms
Loss rate: 2.37%
-- Flow 2:
Average throughput: 1.79 Mbit/s
95th percentile per-packet one-way delay: 161.871 ms
Loss rate: 1.68%
-- Flow 3:
Average throughput: 1.15 Mbit/s
95th percentile per-packet one-way delay: 161.732 ms
Loss rate: 6.15%
```

Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2017-12-21 05:34:48

End at: 2017-12-21 05:35:18

Below is generated by plot.py at 2017-12-21 10:17:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 5.26 Mbit/s

95th percentile per-packet one-way delay: 135.984 ms

Loss rate: 1.31%

-- Flow 1:

Average throughput: 3.61 Mbit/s

95th percentile per-packet one-way delay: 136.078 ms

Loss rate: 0.55%

-- Flow 2:

Average throughput: 2.05 Mbit/s

95th percentile per-packet one-way delay: 135.666 ms

Loss rate: 2.39%

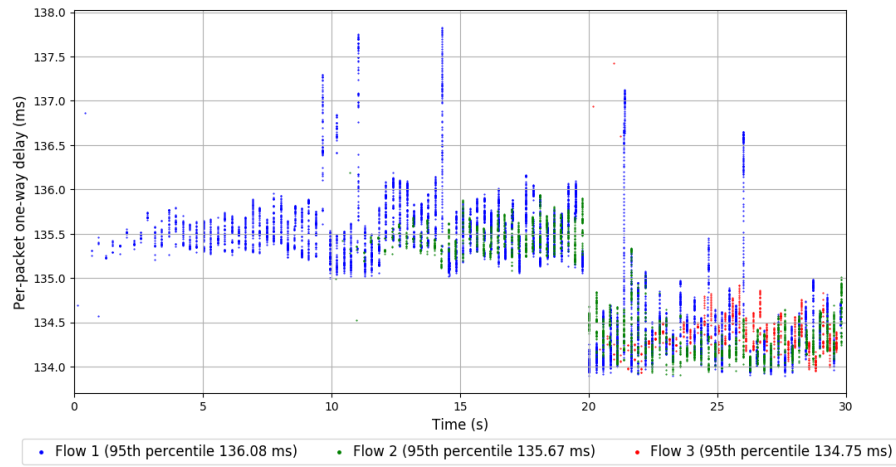
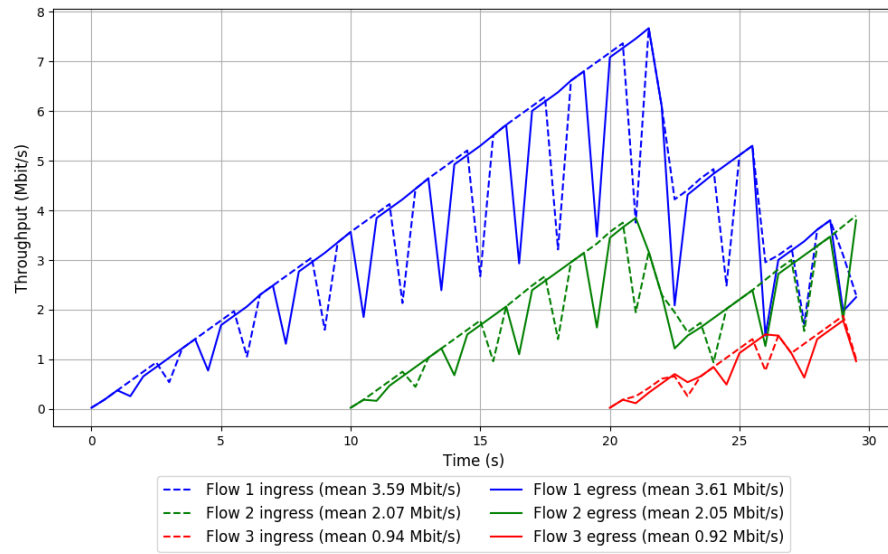
-- Flow 3:

Average throughput: 0.92 Mbit/s

95th percentile per-packet one-way delay: 134.745 ms

Loss rate: 5.50%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2017-12-21 05:49:50

End at: 2017-12-21 05:50:20

Below is generated by plot.py at 2017-12-21 10:17:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 2.69 Mbit/s

95th percentile per-packet one-way delay: 136.666 ms

Loss rate: 2.59%

-- Flow 1:

Average throughput: 2.33 Mbit/s

95th percentile per-packet one-way delay: 136.686 ms

Loss rate: 2.27%

-- Flow 2:

Average throughput: 0.24 Mbit/s

95th percentile per-packet one-way delay: 136.588 ms

Loss rate: 1.46%

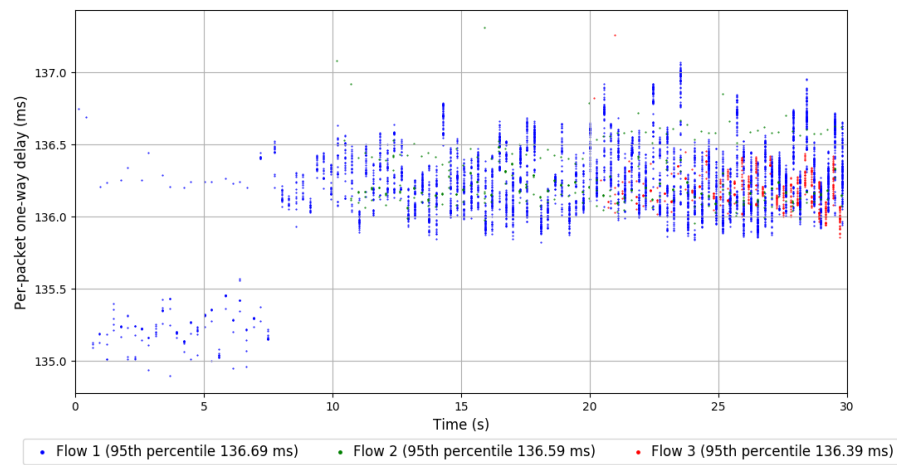
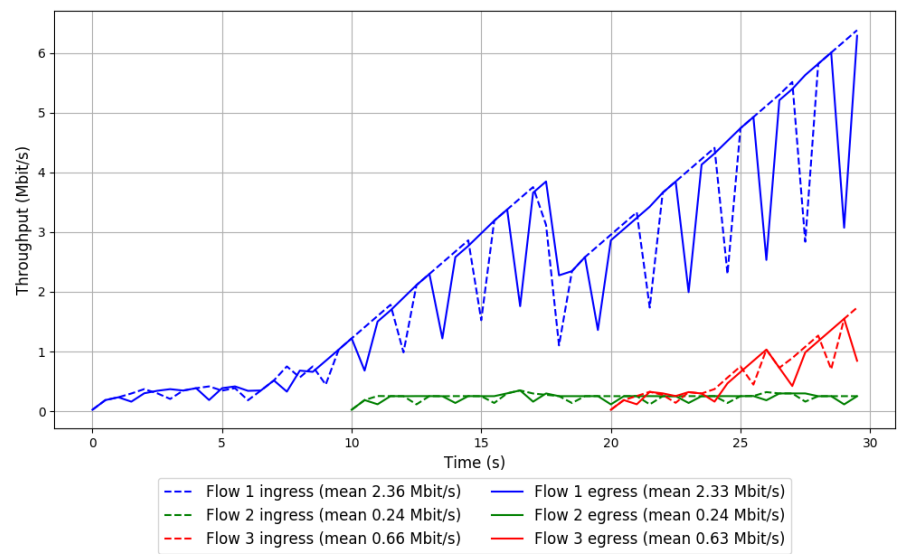
-- Flow 3:

Average throughput: 0.63 Mbit/s

95th percentile per-packet one-way delay: 136.388 ms

Loss rate: 6.89%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2017-12-21 06:05:21

End at: 2017-12-21 06:05:51

Below is generated by plot.py at 2017-12-21 10:17:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 2.35 Mbit/s

95th percentile per-packet one-way delay: 163.943 ms

Loss rate: 2.45%

-- Flow 1:

Average throughput: 1.38 Mbit/s

95th percentile per-packet one-way delay: 164.087 ms

Loss rate: 0.83%

-- Flow 2:

Average throughput: 0.99 Mbit/s

95th percentile per-packet one-way delay: 163.855 ms

Loss rate: 4.04%

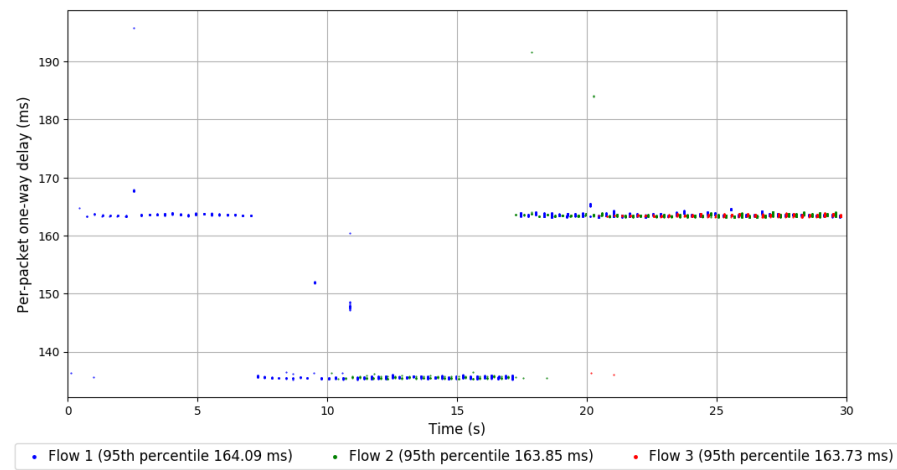
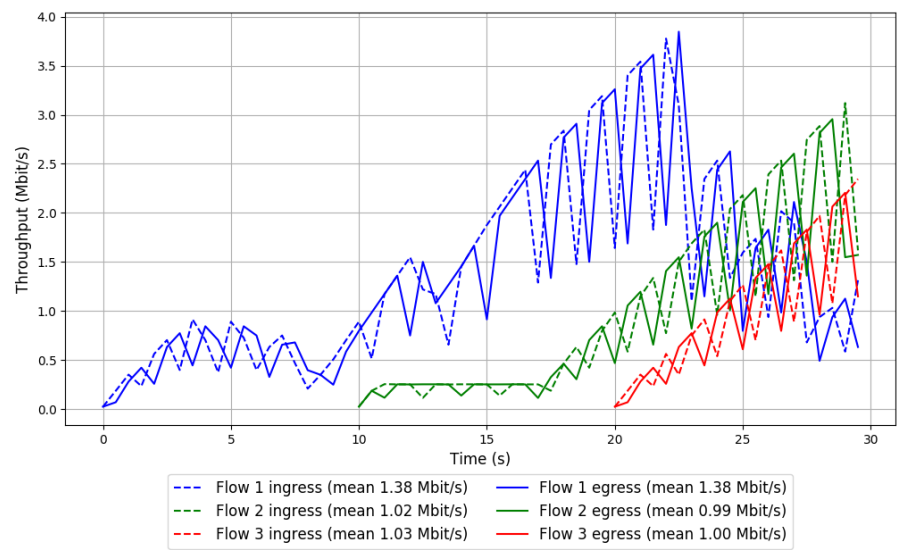
-- Flow 3:

Average throughput: 1.00 Mbit/s

95th percentile per-packet one-way delay: 163.734 ms

Loss rate: 5.88%

Run 5: Report of LEDBAT — Data Link



Run 6: Statistics of LEDBAT

Start at: 2017-12-21 06:20:34

End at: 2017-12-21 06:21:04

Below is generated by plot.py at 2017-12-21 10:17:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.80 Mbit/s

95th percentile per-packet one-way delay: 163.558 ms

Loss rate: 2.90%

-- Flow 1:

Average throughput: 1.59 Mbit/s

95th percentile per-packet one-way delay: 163.700 ms

Loss rate: 2.01%

-- Flow 2:

Average throughput: 2.79 Mbit/s

95th percentile per-packet one-way delay: 137.290 ms

Loss rate: 2.92%

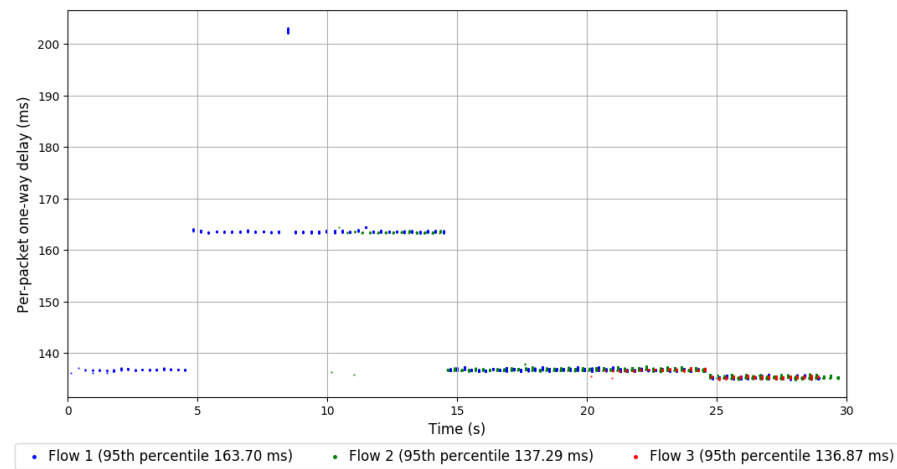
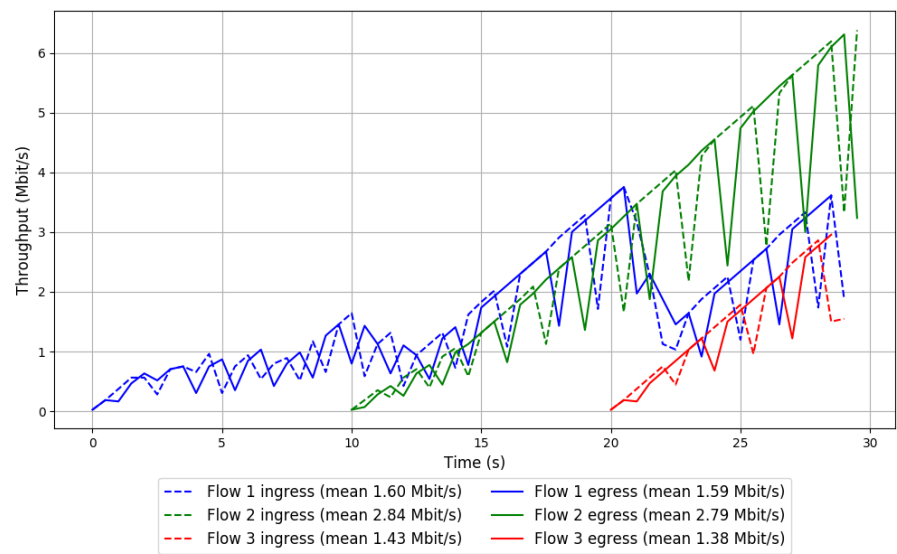
-- Flow 3:

Average throughput: 1.38 Mbit/s

95th percentile per-packet one-way delay: 136.871 ms

Loss rate: 6.02%

Run 6: Report of LEDBAT — Data Link



Run 7: Statistics of LEDBAT

Start at: 2017-12-21 06:36:05

End at: 2017-12-21 06:36:35

Below is generated by plot.py at 2017-12-21 10:17:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.03 Mbit/s

95th percentile per-packet one-way delay: 164.470 ms

Loss rate: 2.34%

-- Flow 1:

Average throughput: 1.86 Mbit/s

95th percentile per-packet one-way delay: 164.548 ms

Loss rate: 2.37%

-- Flow 2:

Average throughput: 1.30 Mbit/s

95th percentile per-packet one-way delay: 164.266 ms

Loss rate: 0.87%

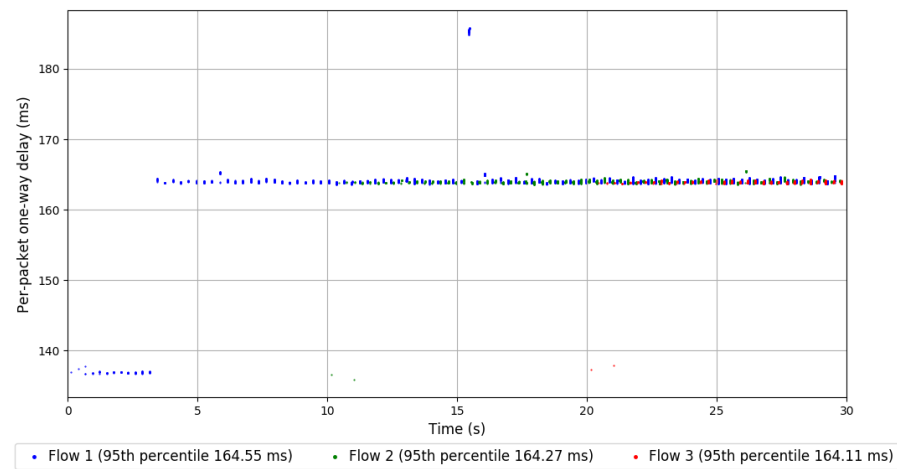
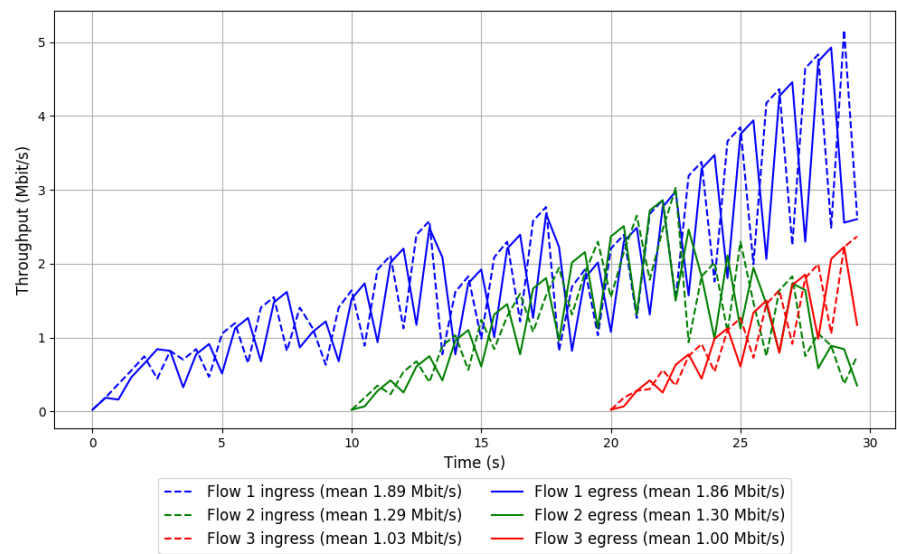
-- Flow 3:

Average throughput: 1.00 Mbit/s

95th percentile per-packet one-way delay: 164.109 ms

Loss rate: 5.84%

Run 7: Report of LEDBAT — Data Link



Run 8: Statistics of LEDBAT

Start at: 2017-12-21 06:51:37

End at: 2017-12-21 06:52:07

Below is generated by plot.py at 2017-12-21 10:17:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.42 Mbit/s

95th percentile per-packet one-way delay: 164.213 ms

Loss rate: 2.40%

-- Flow 1:

Average throughput: 2.40 Mbit/s

95th percentile per-packet one-way delay: 164.295 ms

Loss rate: 1.27%

-- Flow 2:

Average throughput: 2.32 Mbit/s

95th percentile per-packet one-way delay: 164.035 ms

Loss rate: 3.08%

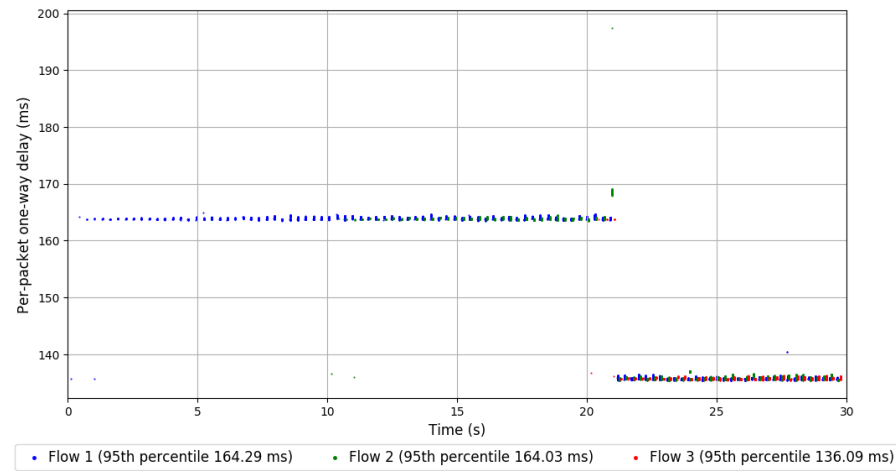
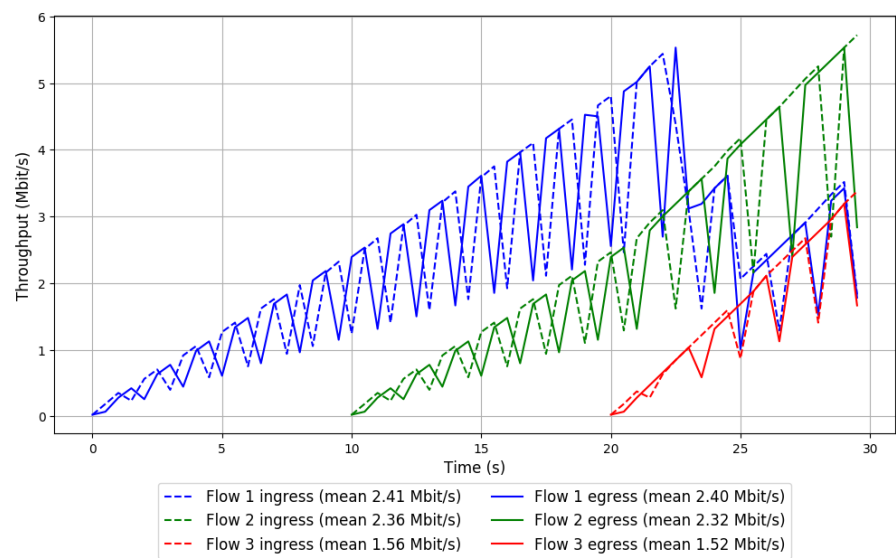
-- Flow 3:

Average throughput: 1.52 Mbit/s

95th percentile per-packet one-way delay: 136.089 ms

Loss rate: 5.55%

Run 8: Report of LEDBAT — Data Link



Run 9: Statistics of LEDBAT

Start at: 2017-12-21 07:07:35

End at: 2017-12-21 07:08:05

Below is generated by plot.py at 2017-12-21 10:17:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 4.80 Mbit/s

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

Loss rate: 2.86%

-- Flow 1:

Average throughput: 3.18 Mbit/s

95th percentile per-packet one-way delay: 162.707 ms

Loss rate: 2.23%

-- Flow 2:

Average throughput: 1.95 Mbit/s

95th percentile per-packet one-way delay: 136.910 ms

Loss rate: 3.33%

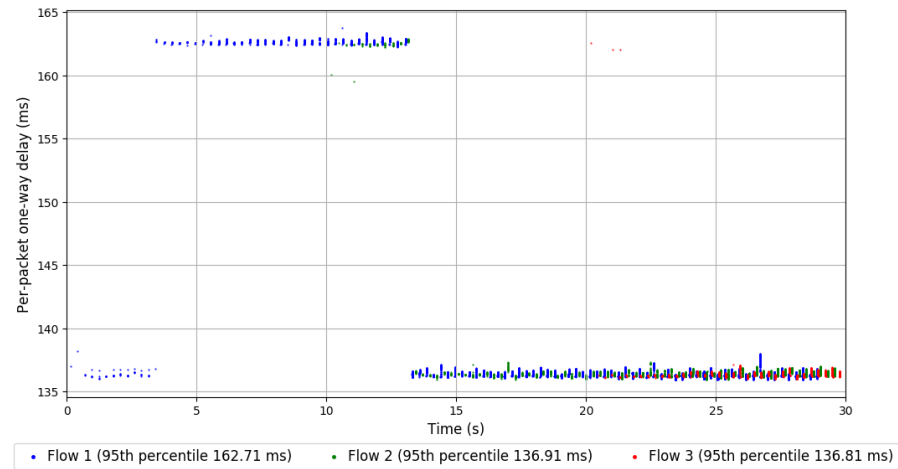
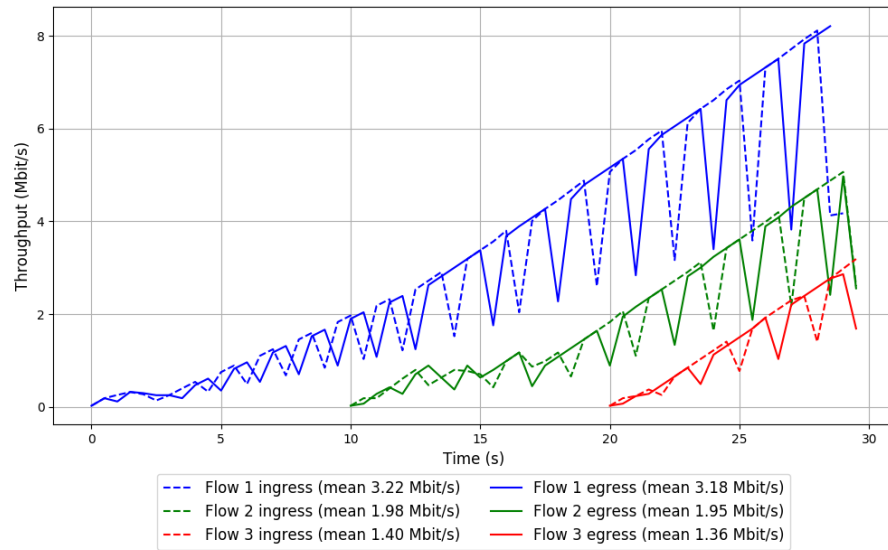
-- Flow 3:

Average throughput: 1.36 Mbit/s

95th percentile per-packet one-way delay: 136.814 ms

Loss rate: 5.83%

Run 9: Report of LEDBAT — Data Link



Run 10: Statistics of LEDBAT

Start at: 2017-12-21 07:23:09

End at: 2017-12-21 07:23:39

Below is generated by plot.py at 2017-12-21 10:17:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 2.89 Mbit/s

95th percentile per-packet one-way delay: 162.936 ms

Loss rate: 3.86%

-- Flow 1:

Average throughput: 1.39 Mbit/s

95th percentile per-packet one-way delay: 162.867 ms

Loss rate: 3.85%

-- Flow 2:

Average throughput: 1.77 Mbit/s

95th percentile per-packet one-way delay: 162.982 ms

Loss rate: 3.28%

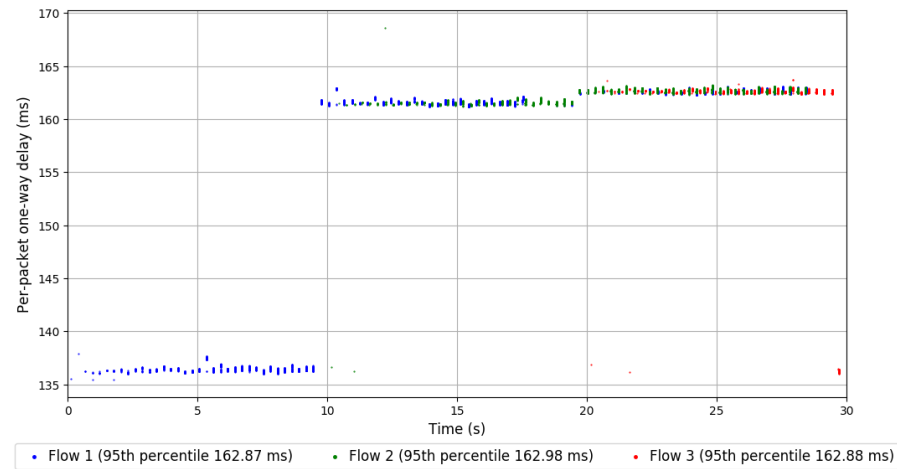
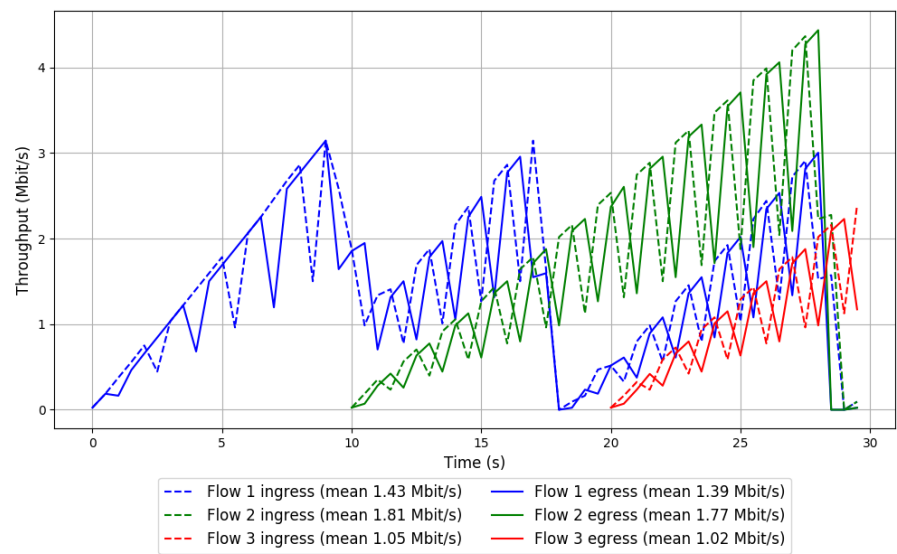
-- Flow 3:

Average throughput: 1.02 Mbit/s

95th percentile per-packet one-way delay: 162.877 ms

Loss rate: 5.90%

Run 10: Report of LEDBAT — Data Link

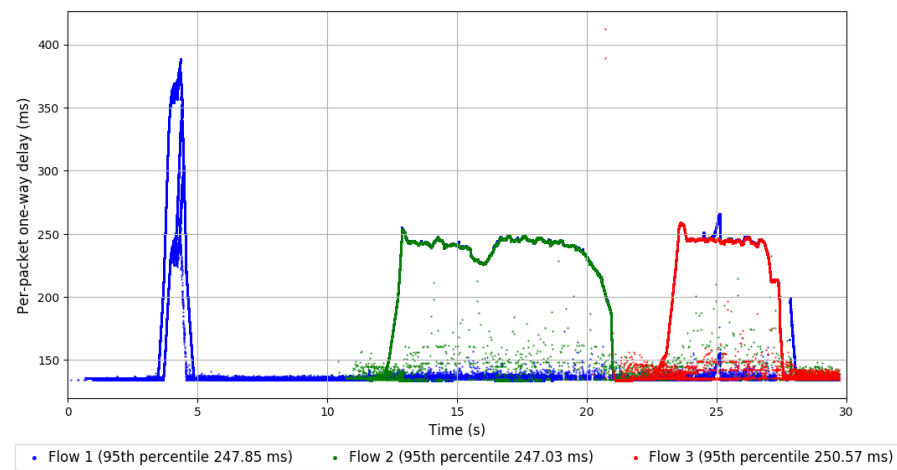
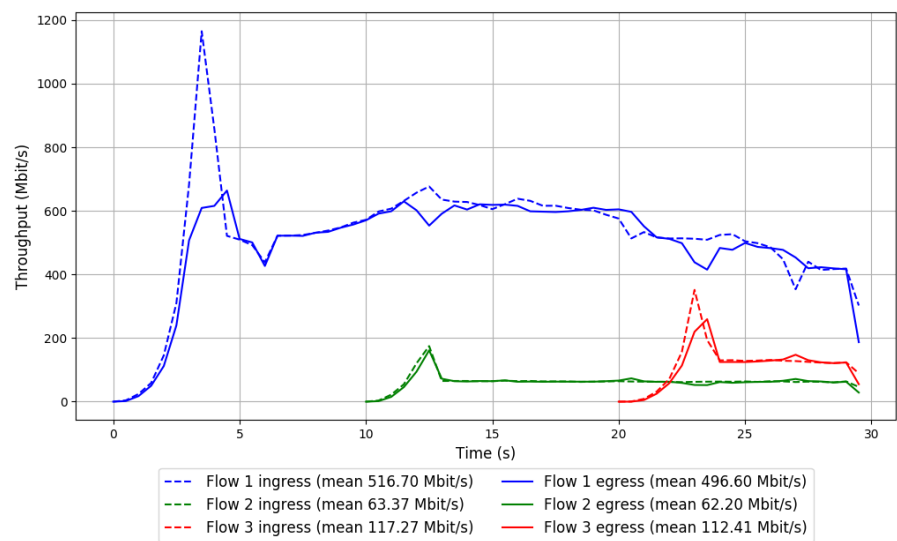


```
Run 1: Statistics of PCC

Start at: 2017-12-21 05:05:26
End at: 2017-12-21 05:05:56

# Below is generated by plot.py at 2017-12-21 10:26:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 573.86 Mbit/s
95th percentile per-packet one-way delay: 247.785 ms
Loss rate: 4.79%
-- Flow 1:
Average throughput: 496.60 Mbit/s
95th percentile per-packet one-way delay: 247.846 ms
Loss rate: 4.77%
-- Flow 2:
Average throughput: 62.20 Mbit/s
95th percentile per-packet one-way delay: 247.033 ms
Loss rate: 3.18%
-- Flow 3:
Average throughput: 112.41 Mbit/s
95th percentile per-packet one-way delay: 250.570 ms
Loss rate: 6.84%
```

Run 1: Report of PCC — Data Link

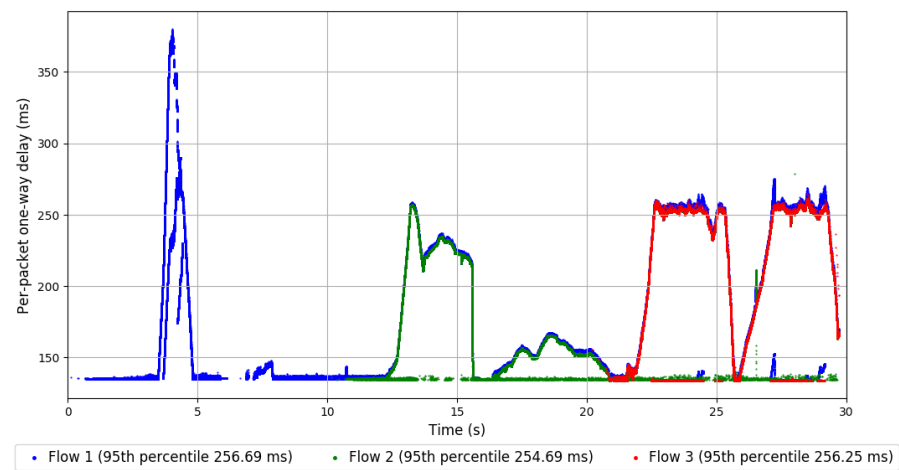
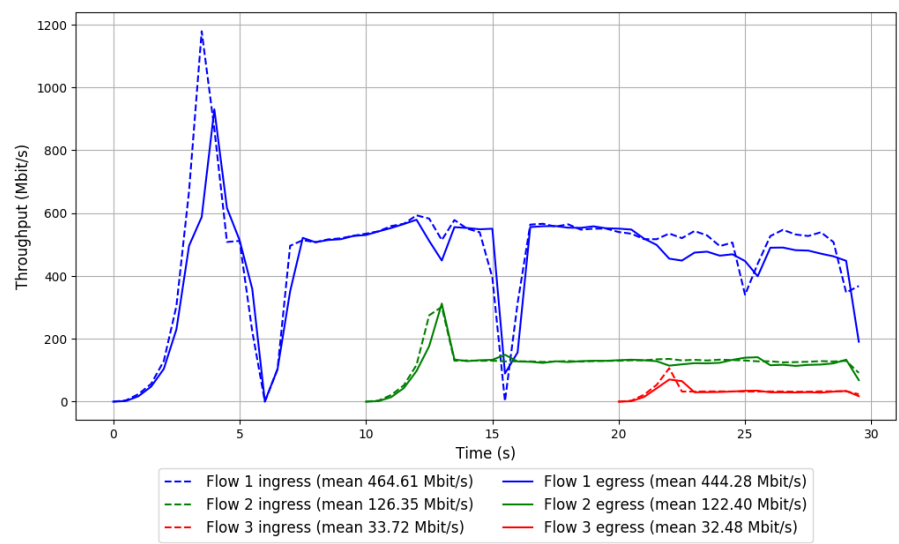


```
Run 2: Statistics of PCC

Start at: 2017-12-21 05:20:49
End at: 2017-12-21 05:21:19

# Below is generated by plot.py at 2017-12-21 10:26:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 535.70 Mbit/s
95th percentile per-packet one-way delay: 256.202 ms
Loss rate: 5.16%
-- Flow 1:
Average throughput: 444.28 Mbit/s
95th percentile per-packet one-way delay: 256.687 ms
Loss rate: 5.25%
-- Flow 2:
Average throughput: 122.40 Mbit/s
95th percentile per-packet one-way delay: 254.689 ms
Loss rate: 4.46%
-- Flow 3:
Average throughput: 32.48 Mbit/s
95th percentile per-packet one-way delay: 256.246 ms
Loss rate: 6.56%
```

Run 2: Report of PCC — Data Link



Run 3: Statistics of PCC

Start at: 2017-12-21 05:36:48

End at: 2017-12-21 05:37:18

Below is generated by plot.py at 2017-12-21 10:26:01

Datalink statistics

-- Total of 3 flows:

Average throughput: 47.11 Mbit/s

95th percentile per-packet one-way delay: 161.316 ms

Loss rate: 2.11%

-- Flow 1:

Average throughput: 4.71 Mbit/s

95th percentile per-packet one-way delay: 161.323 ms

Loss rate: 1.29%

-- Flow 2:

Average throughput: 33.20 Mbit/s

95th percentile per-packet one-way delay: 161.305 ms

Loss rate: 1.43%

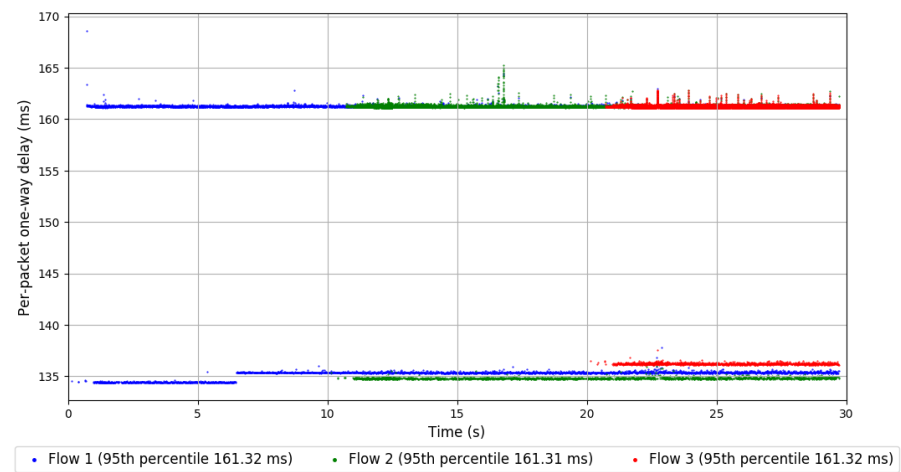
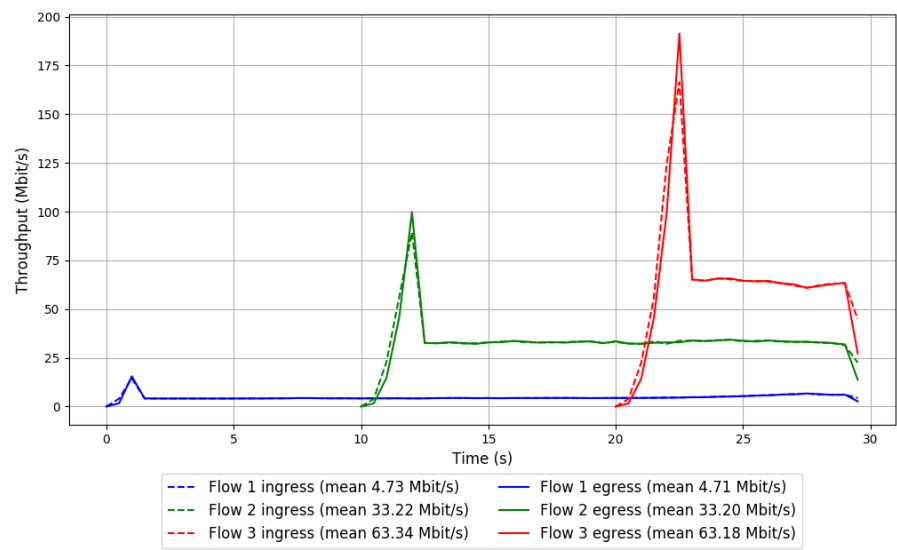
-- Flow 3:

Average throughput: 63.18 Mbit/s

95th percentile per-packet one-way delay: 161.323 ms

Loss rate: 3.01%

Run 3: Report of PCC — Data Link



Run 4: Statistics of PCC

Start at: 2017-12-21 05:51:53

End at: 2017-12-21 05:52:23

Below is generated by plot.py at 2017-12-21 10:26:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 569.16 Mbit/s

95th percentile per-packet one-way delay: 298.587 ms

Loss rate: 4.57%

-- Flow 1:

Average throughput: 506.90 Mbit/s

95th percentile per-packet one-way delay: 302.083 ms

Loss rate: 4.57%

-- Flow 2:

Average throughput: 64.42 Mbit/s

95th percentile per-packet one-way delay: 253.504 ms

Loss rate: 3.14%

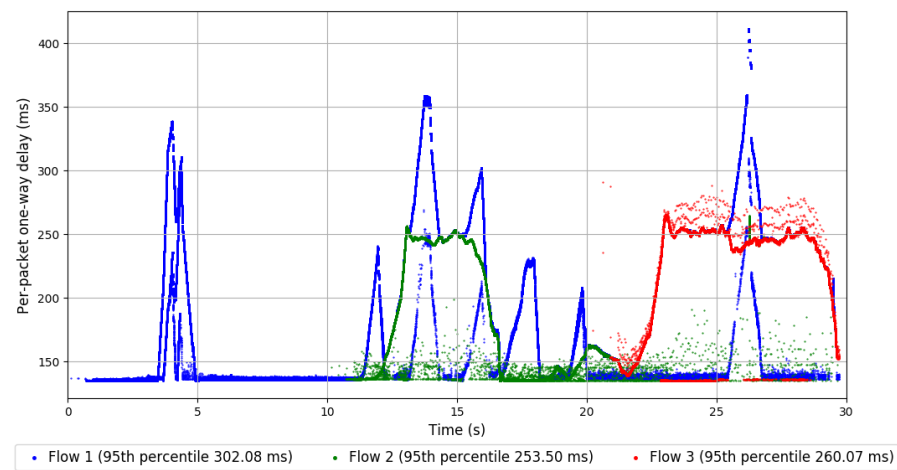
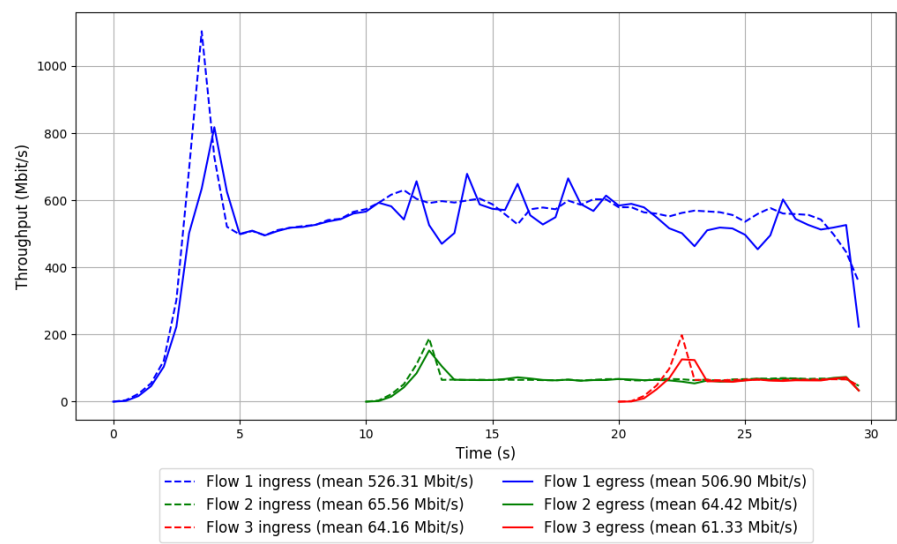
-- Flow 3:

Average throughput: 61.33 Mbit/s

95th percentile per-packet one-way delay: 260.067 ms

Loss rate: 7.44%

Run 4: Report of PCC — Data Link



Run 5: Statistics of PCC

Start at: 2017-12-21 06:07:24

End at: 2017-12-21 06:07:54

Below is generated by plot.py at 2017-12-21 10:26:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 134.07 Mbit/s

95th percentile per-packet one-way delay: 288.849 ms

Loss rate: 7.66%

-- Flow 1:

Average throughput: 5.51 Mbit/s

95th percentile per-packet one-way delay: 187.273 ms

Loss rate: 2.00%

-- Flow 2:

Average throughput: 4.89 Mbit/s

95th percentile per-packet one-way delay: 198.900 ms

Loss rate: 2.92%

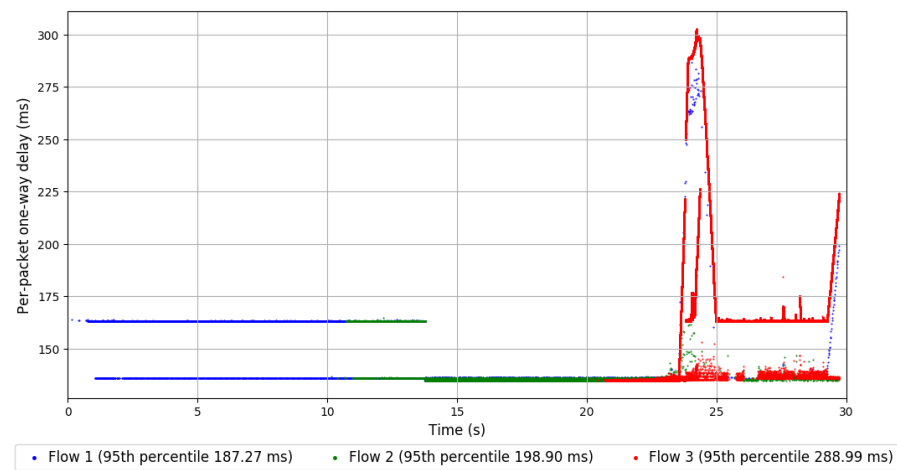
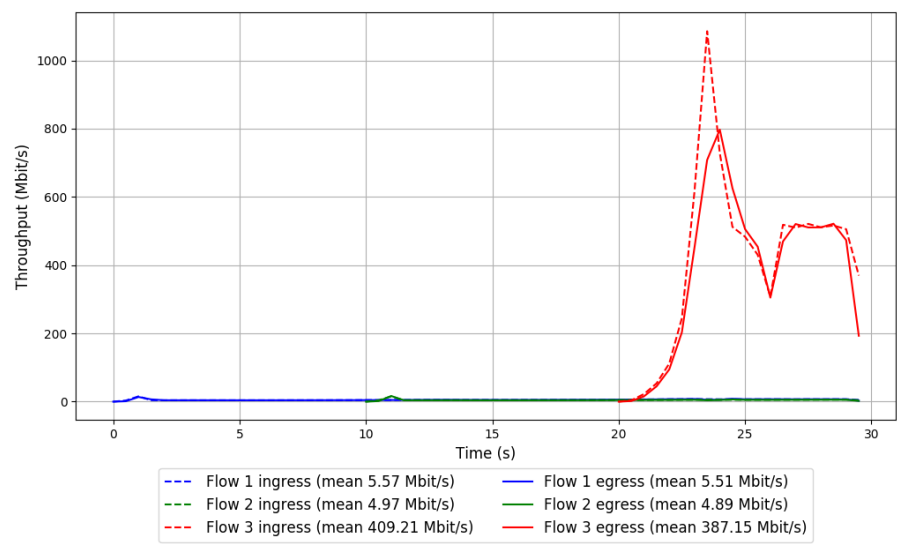
-- Flow 3:

Average throughput: 387.15 Mbit/s

95th percentile per-packet one-way delay: 288.988 ms

Loss rate: 8.01%

Run 5: Report of PCC — Data Link



Run 6: Statistics of PCC

Start at: 2017-12-21 06:22:29

End at: 2017-12-21 06:22:59

Below is generated by plot.py at 2017-12-21 10:26:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 491.77 Mbit/s

95th percentile per-packet one-way delay: 269.926 ms

Loss rate: 3.17%

-- Flow 1:

Average throughput: 450.12 Mbit/s

95th percentile per-packet one-way delay: 267.927 ms

Loss rate: 2.84%

-- Flow 2:

Average throughput: 4.53 Mbit/s

95th percentile per-packet one-way delay: 265.028 ms

Loss rate: 2.54%

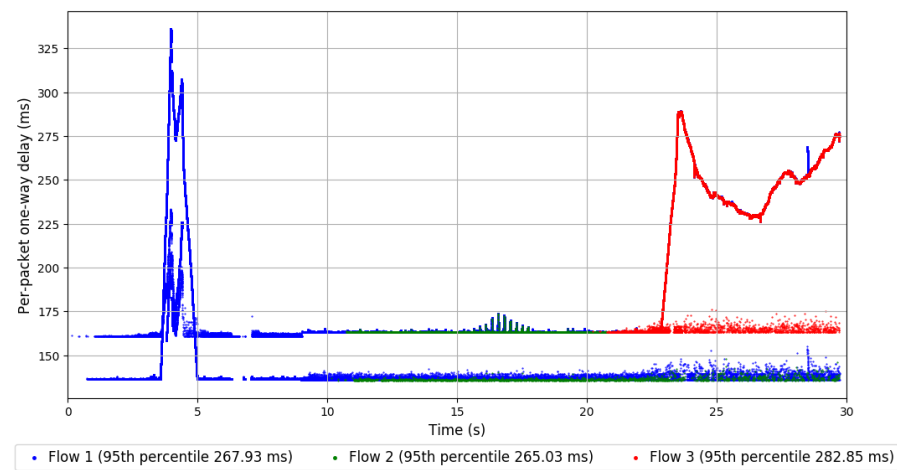
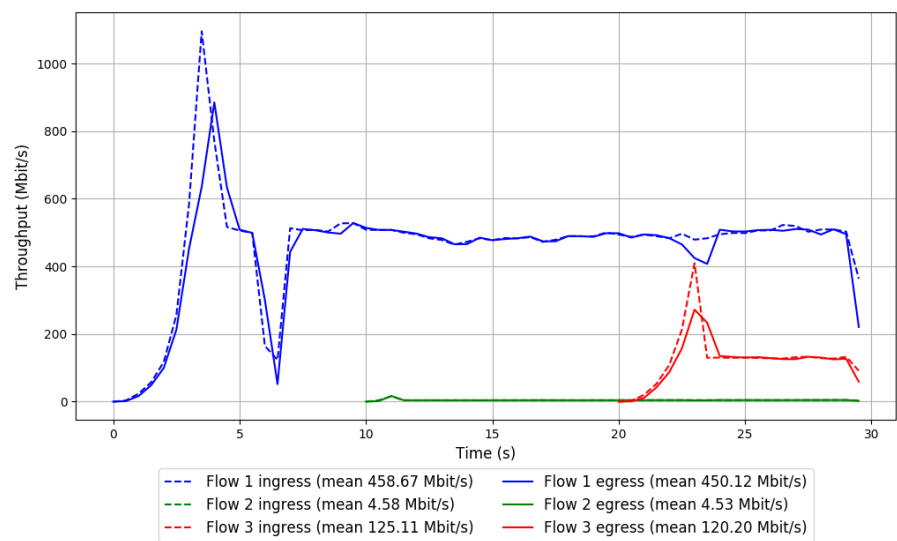
-- Flow 3:

Average throughput: 120.20 Mbit/s

95th percentile per-packet one-way delay: 282.853 ms

Loss rate: 6.86%

Run 6: Report of PCC — Data Link



Run 7: Statistics of PCC

Start at: 2017-12-21 06:38:06

End at: 2017-12-21 06:38:36

Below is generated by plot.py at 2017-12-21 10:26:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 537.69 Mbit/s

95th percentile per-packet one-way delay: 275.035 ms

Loss rate: 5.43%

-- Flow 1:

Average throughput: 419.86 Mbit/s

95th percentile per-packet one-way delay: 275.290 ms

Loss rate: 5.36%

-- Flow 2:

Average throughput: 119.86 Mbit/s

95th percentile per-packet one-way delay: 275.005 ms

Loss rate: 5.43%

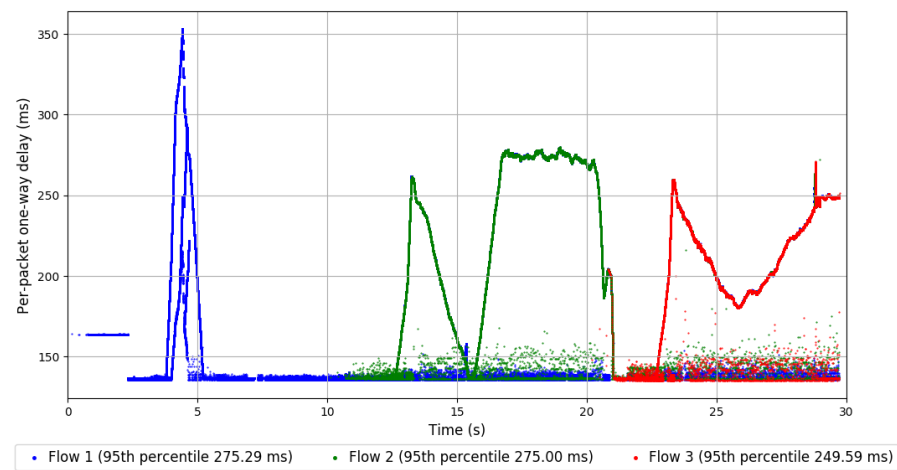
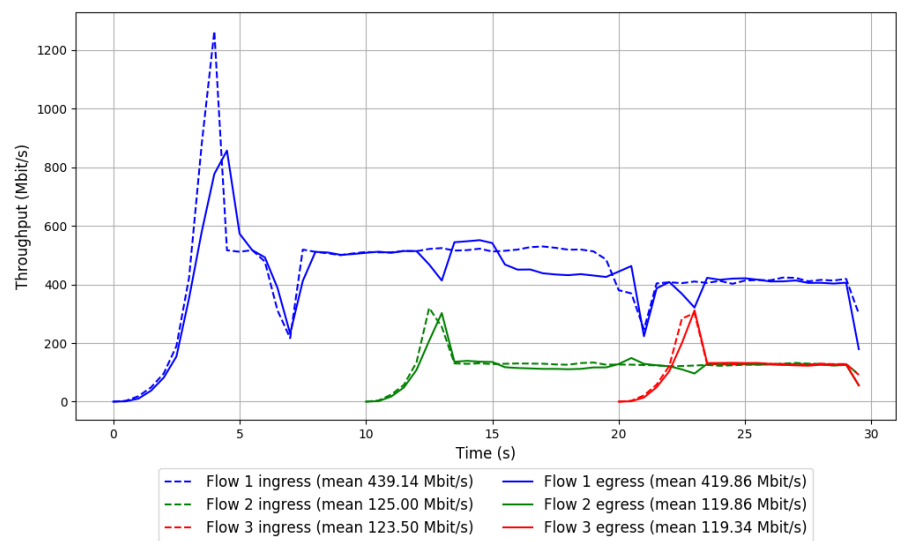
-- Flow 3:

Average throughput: 119.34 Mbit/s

95th percentile per-packet one-way delay: 249.585 ms

Loss rate: 6.16%

Run 7: Report of PCC — Data Link



Run 8: Statistics of PCC

Start at: 2017-12-21 06:53:40

End at: 2017-12-21 06:54:10

Below is generated by plot.py at 2017-12-21 10:26:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 12.29 Mbit/s

95th percentile per-packet one-way delay: 163.654 ms

Loss rate: 1.63%

-- Flow 1:

Average throughput: 4.89 Mbit/s

95th percentile per-packet one-way delay: 163.659 ms

Loss rate: 1.40%

-- Flow 2:

Average throughput: 8.91 Mbit/s

95th percentile per-packet one-way delay: 163.646 ms

Loss rate: 1.47%

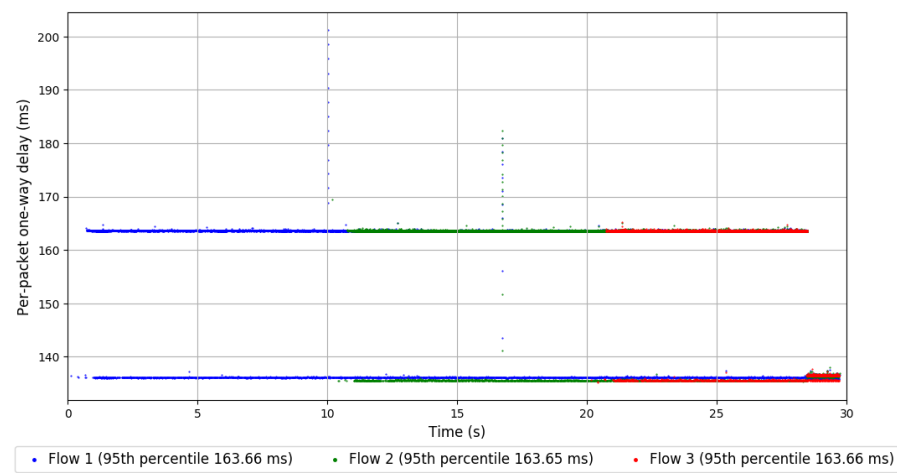
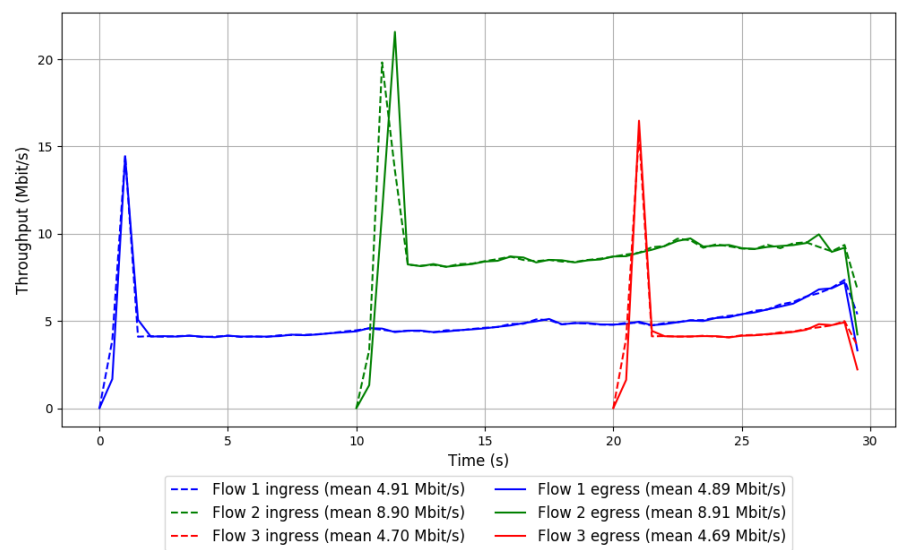
-- Flow 3:

Average throughput: 4.69 Mbit/s

95th percentile per-packet one-way delay: 163.657 ms

Loss rate: 2.97%

Run 8: Report of PCC — Data Link



Run 9: Statistics of PCC

Start at: 2017-12-21 07:09:35

End at: 2017-12-21 07:10:05

Below is generated by plot.py at 2017-12-21 10:26:19

Datalink statistics

-- Total of 3 flows:

Average throughput: 341.07 Mbit/s

95th percentile per-packet one-way delay: 280.678 ms

Loss rate: 5.59%

-- Flow 1:

Average throughput: 13.81 Mbit/s

95th percentile per-packet one-way delay: 279.978 ms

Loss rate: 3.60%

-- Flow 2:

Average throughput: 439.24 Mbit/s

95th percentile per-packet one-way delay: 280.449 ms

Loss rate: 5.32%

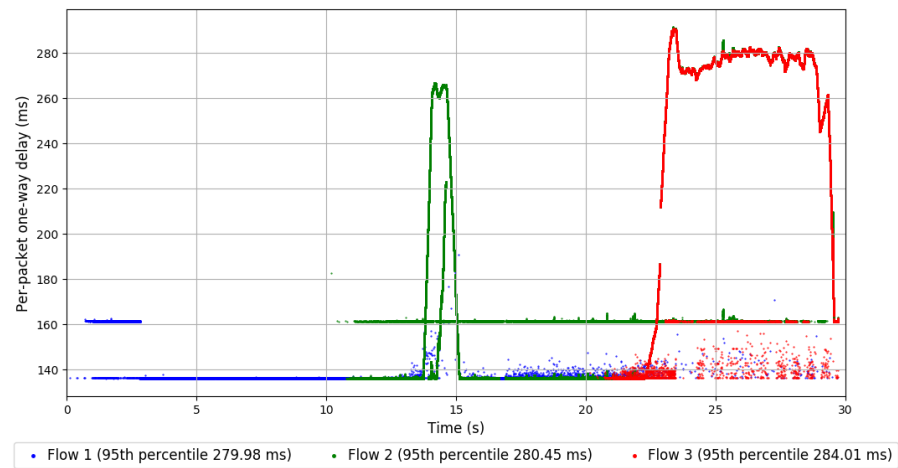
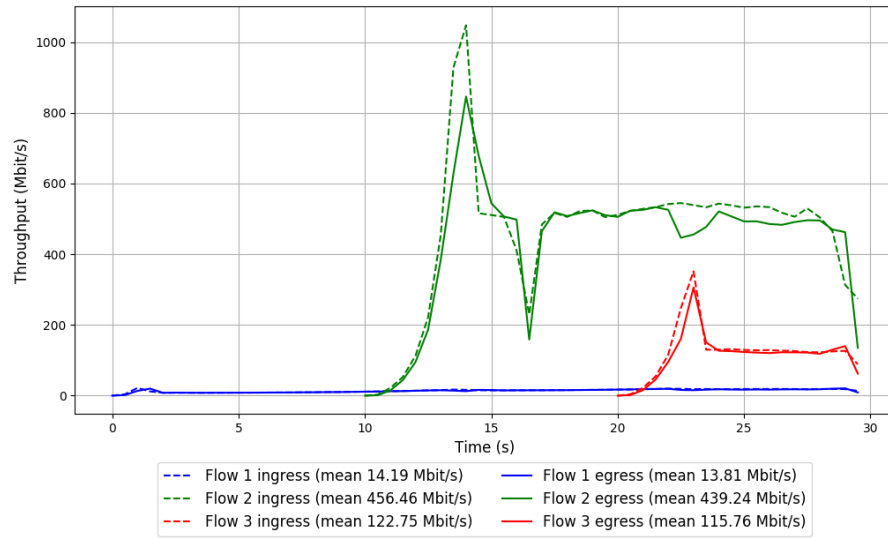
-- Flow 3:

Average throughput: 115.76 Mbit/s

95th percentile per-packet one-way delay: 284.010 ms

Loss rate: 8.34%

Run 9: Report of PCC — Data Link

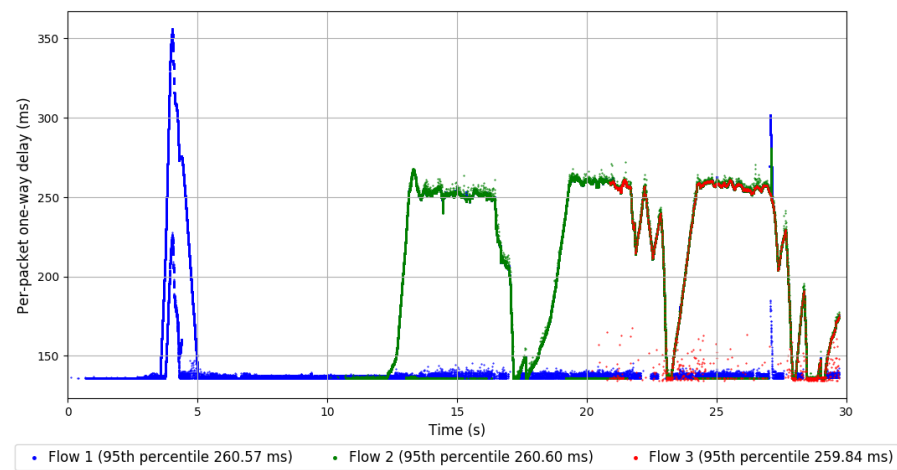
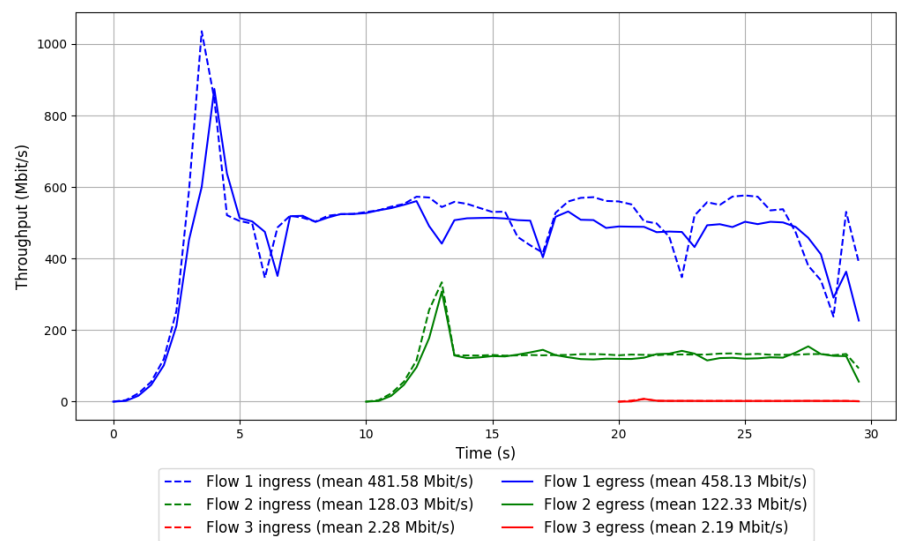


```
Run 10: Statistics of PCC

Start at: 2017-12-21 07:25:04
End at: 2017-12-21 07:25:34

# Below is generated by plot.py at 2017-12-21 10:26:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 539.74 Mbit/s
95th percentile per-packet one-way delay: 260.577 ms
Loss rate: 5.75%
-- Flow 1:
Average throughput: 458.13 Mbit/s
95th percentile per-packet one-way delay: 260.575 ms
Loss rate: 5.74%
-- Flow 2:
Average throughput: 122.33 Mbit/s
95th percentile per-packet one-way delay: 260.596 ms
Loss rate: 5.77%
-- Flow 3:
Average throughput: 2.19 Mbit/s
95th percentile per-packet one-way delay: 259.837 ms
Loss rate: 6.35%
```

Run 10: Report of PCC — Data Link

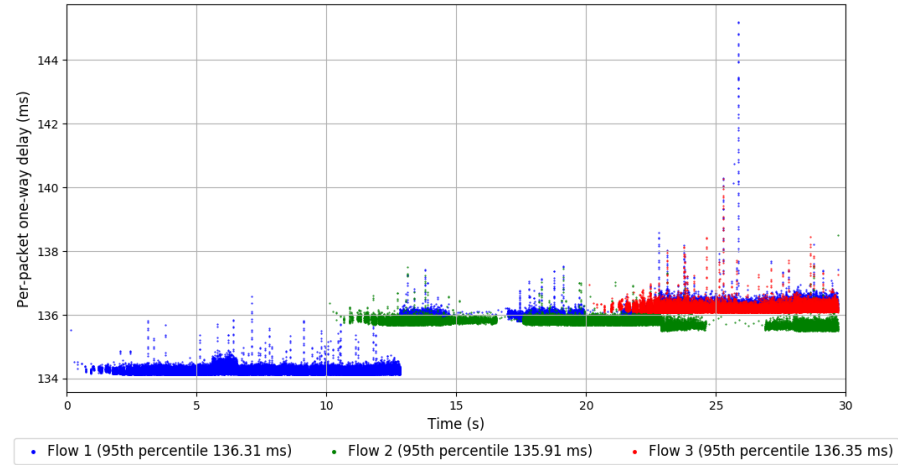
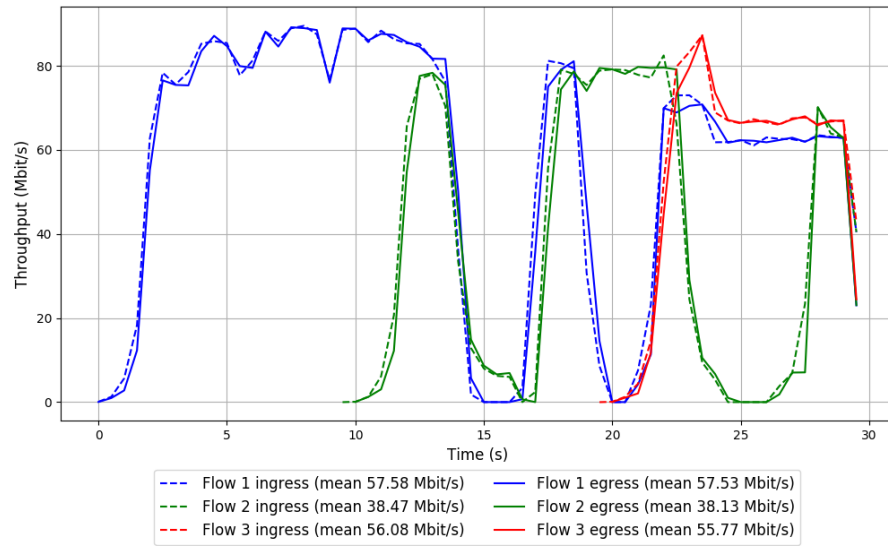


```
Run 1: Statistics of QUIC Cubic

Start at: 2017-12-21 04:59:55
End at: 2017-12-21 05:00:25

# Below is generated by plot.py at 2017-12-21 10:26:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 100.84 Mbit/s
95th percentile per-packet one-way delay: 136.294 ms
Loss rate: 1.74%
-- Flow 1:
Average throughput: 57.53 Mbit/s
95th percentile per-packet one-way delay: 136.309 ms
Loss rate: 1.01%
-- Flow 2:
Average throughput: 38.13 Mbit/s
95th percentile per-packet one-way delay: 135.906 ms
Loss rate: 2.25%
-- Flow 3:
Average throughput: 55.77 Mbit/s
95th percentile per-packet one-way delay: 136.350 ms
Loss rate: 3.32%
```


Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2017-12-21 05:15:08

End at: 2017-12-21 05:15:38

Below is generated by plot.py at 2017-12-21 10:26:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 98.17 Mbit/s

95th percentile per-packet one-way delay: 135.846 ms

Loss rate: 1.90%

-- Flow 1:

Average throughput: 54.20 Mbit/s

95th percentile per-packet one-way delay: 135.550 ms

Loss rate: 1.05%

-- Flow 2:

Average throughput: 49.52 Mbit/s

95th percentile per-packet one-way delay: 135.823 ms

Loss rate: 2.10%

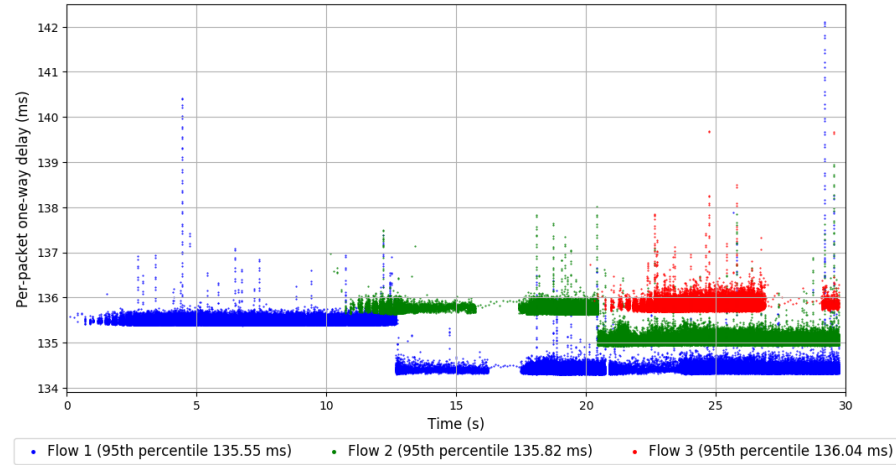
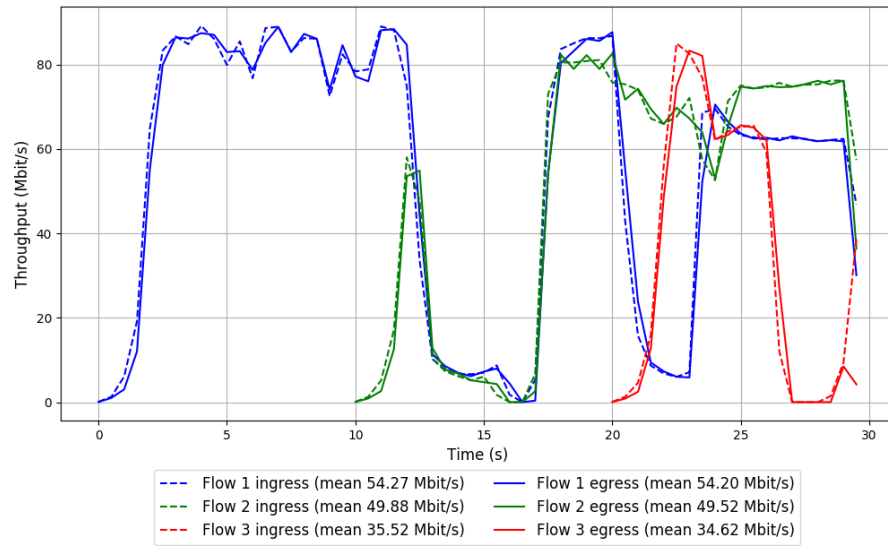
-- Flow 3:

Average throughput: 34.62 Mbit/s

95th percentile per-packet one-way delay: 136.043 ms

Loss rate: 5.27%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2017-12-21 05:31:02

End at: 2017-12-21 05:31:32

Below is generated by plot.py at 2017-12-21 10:26:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 117.30 Mbit/s

95th percentile per-packet one-way delay: 136.496 ms

Loss rate: 0.65%

-- Flow 1:

Average throughput: 68.99 Mbit/s

95th percentile per-packet one-way delay: 135.908 ms

Loss rate: 1.01%

-- Flow 2:

Average throughput: 61.95 Mbit/s

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

Loss rate: 0.16%

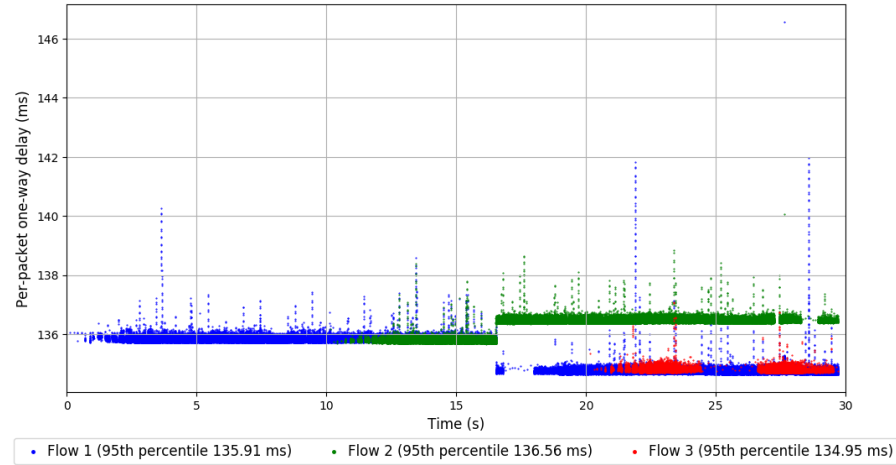
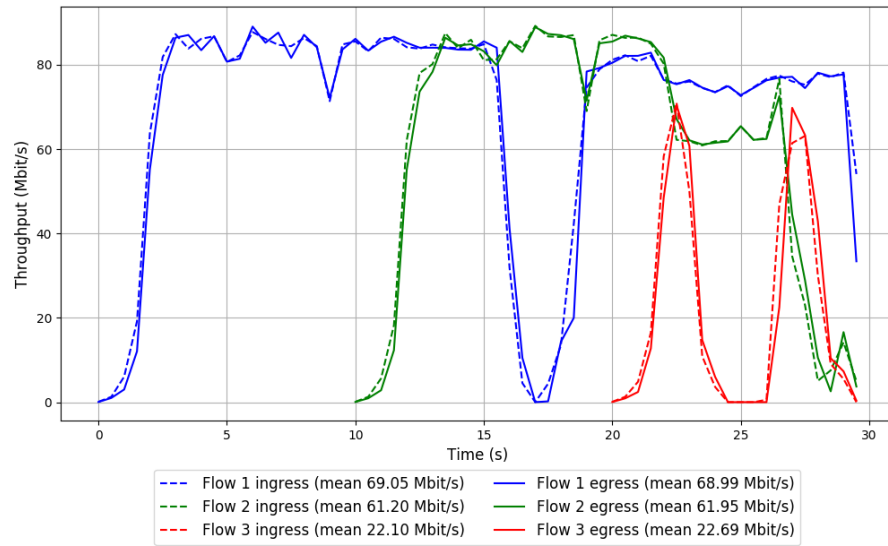
-- Flow 3:

Average throughput: 22.69 Mbit/s

95th percentile per-packet one-way delay: 134.954 ms

Loss rate: 0.00%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2017-12-21 05:46:01

End at: 2017-12-21 05:46:31

Below is generated by plot.py at 2017-12-21 10:26:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 116.78 Mbit/s

95th percentile per-packet one-way delay: 163.465 ms

Loss rate: 1.18%

-- Flow 1:

Average throughput: 57.96 Mbit/s

95th percentile per-packet one-way delay: 135.375 ms

Loss rate: 1.32%

-- Flow 2:

Average throughput: 61.29 Mbit/s

95th percentile per-packet one-way delay: 163.542 ms

Loss rate: 0.00%

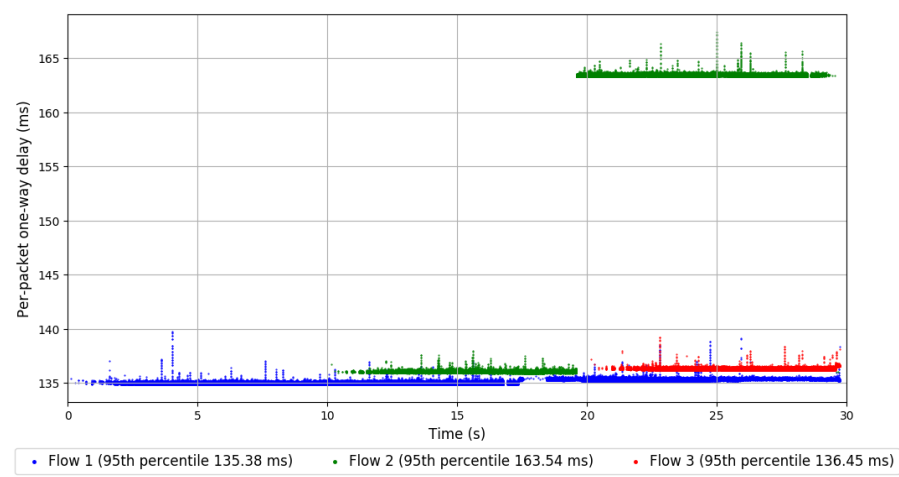
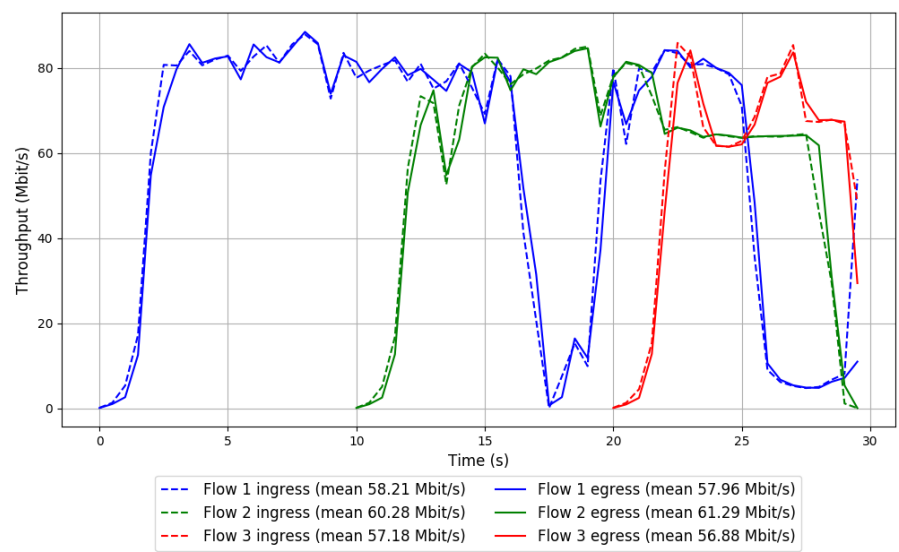
-- Flow 3:

Average throughput: 56.88 Mbit/s

95th percentile per-packet one-way delay: 136.451 ms

Loss rate: 3.28%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2017-12-21 06:01:48

End at: 2017-12-21 06:02:18

Below is generated by plot.py at 2017-12-21 10:27:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 119.85 Mbit/s

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

Loss rate: 0.77%

-- Flow 1:

Average throughput: 67.72 Mbit/s

95th percentile per-packet one-way delay: 136.302 ms

Loss rate: 1.15%

-- Flow 2:

Average throughput: 61.74 Mbit/s

95th percentile per-packet one-way delay: 135.940 ms

Loss rate: 0.16%

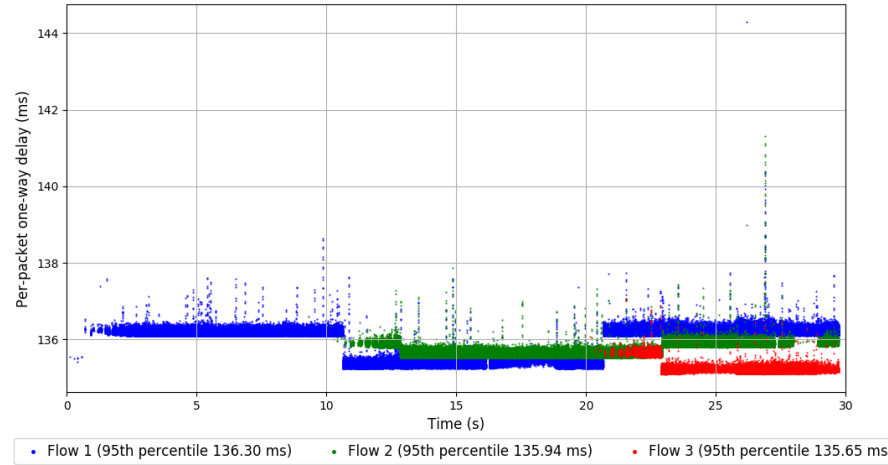
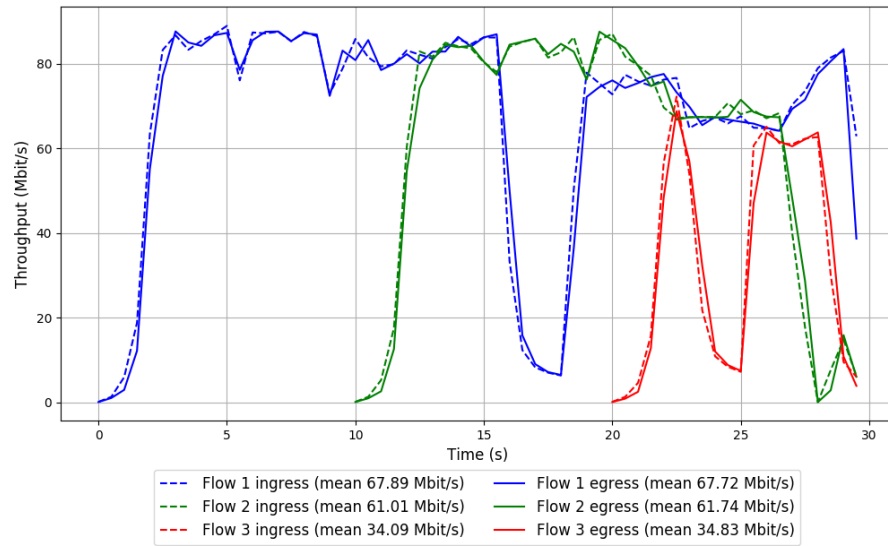
-- Flow 3:

Average throughput: 34.83 Mbit/s

95th percentile per-packet one-way delay: 135.652 ms

Loss rate: 0.65%

Run 5: Report of QUIC Cubic — Data Link



Run 6: Statistics of QUIC Cubic

Start at: 2017-12-21 06:17:00

End at: 2017-12-21 06:17:30

Below is generated by plot.py at 2017-12-21 10:27:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 108.35 Mbit/s

95th percentile per-packet one-way delay: 136.064 ms

Loss rate: 1.30%

-- Flow 1:

Average throughput: 56.19 Mbit/s

95th percentile per-packet one-way delay: 136.083 ms

Loss rate: 1.19%

-- Flow 2:

Average throughput: 62.04 Mbit/s

95th percentile per-packet one-way delay: 135.810 ms

Loss rate: 1.58%

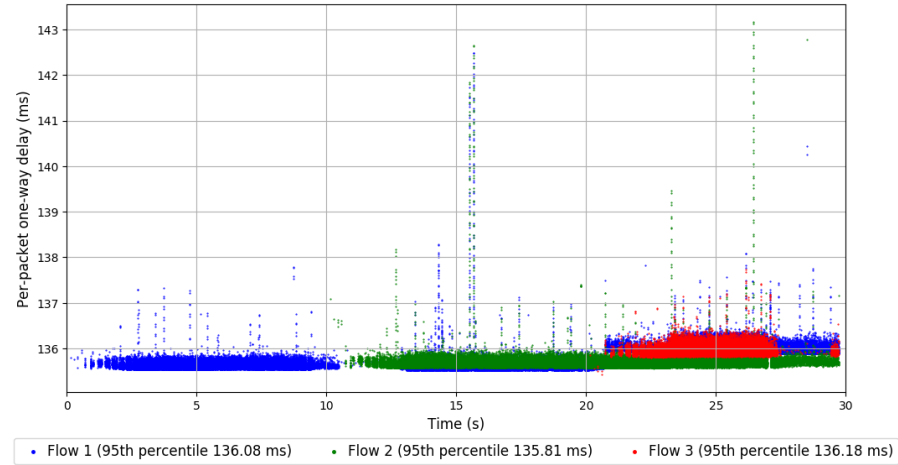
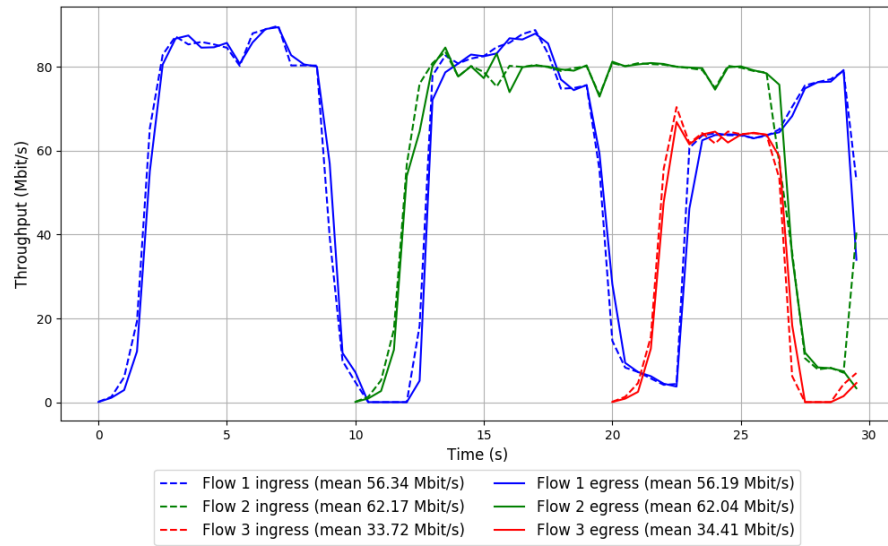
-- Flow 3:

Average throughput: 34.41 Mbit/s

95th percentile per-packet one-way delay: 136.184 ms

Loss rate: 0.79%

Run 6: Report of QUIC Cubic — Data Link



Run 7: Statistics of QUIC Cubic

Start at: 2017-12-21 06:32:34

End at: 2017-12-21 06:33:04

Below is generated by plot.py at 2017-12-21 10:27:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 108.68 Mbit/s

95th percentile per-packet one-way delay: 163.642 ms

Loss rate: 1.22%

-- Flow 1:

Average throughput: 58.72 Mbit/s

95th percentile per-packet one-way delay: 163.522 ms

Loss rate: 1.20%

-- Flow 2:

Average throughput: 61.50 Mbit/s

95th percentile per-packet one-way delay: 163.706 ms

Loss rate: 0.11%

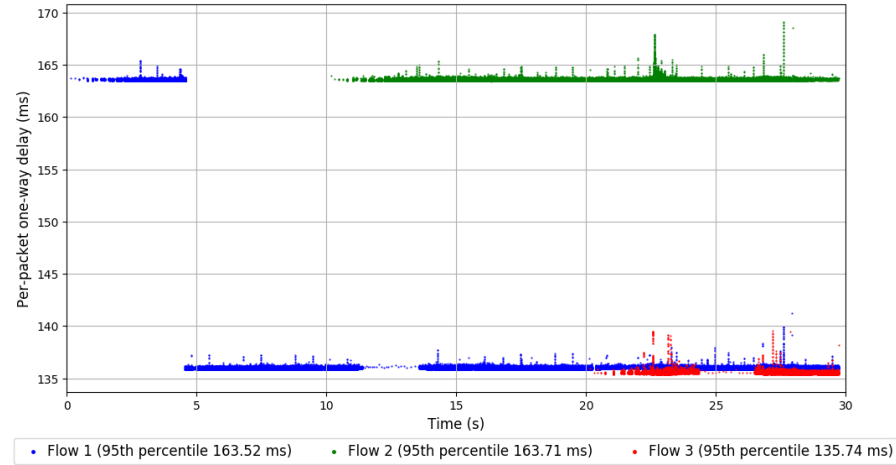
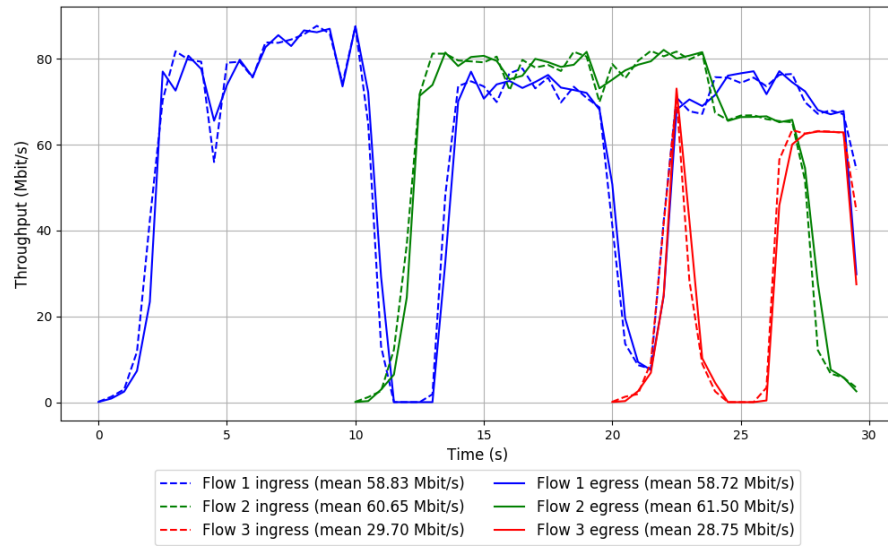
-- Flow 3:

Average throughput: 28.75 Mbit/s

95th percentile per-packet one-way delay: 135.741 ms

Loss rate: 5.86%

Run 7: Report of QUIC Cubic — Data Link



Run 8: Statistics of QUIC Cubic

Start at: 2017-12-21 06:48:02

End at: 2017-12-21 06:48:32

Below is generated by plot.py at 2017-12-21 10:28:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 111.01 Mbit/s

95th percentile per-packet one-way delay: 135.632 ms

Loss rate: 1.54%

-- Flow 1:

Average throughput: 58.47 Mbit/s

95th percentile per-packet one-way delay: 135.566 ms

Loss rate: 1.01%

-- Flow 2:

Average throughput: 53.37 Mbit/s

95th percentile per-packet one-way delay: 135.598 ms

Loss rate: 1.56%

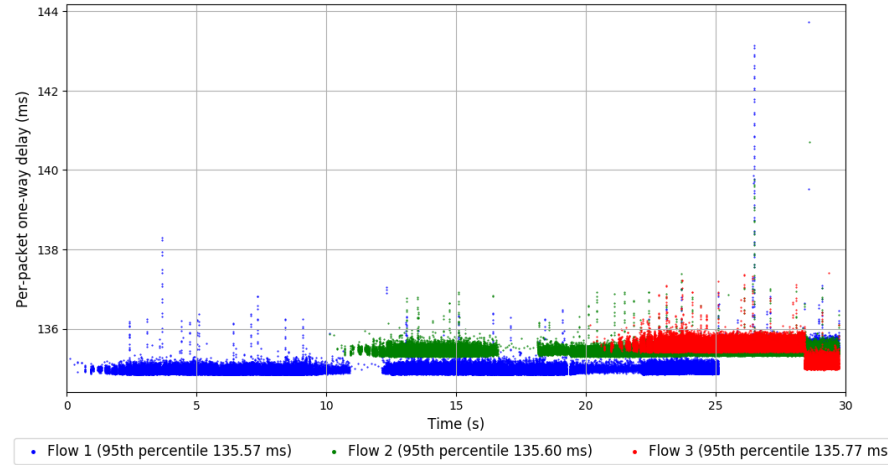
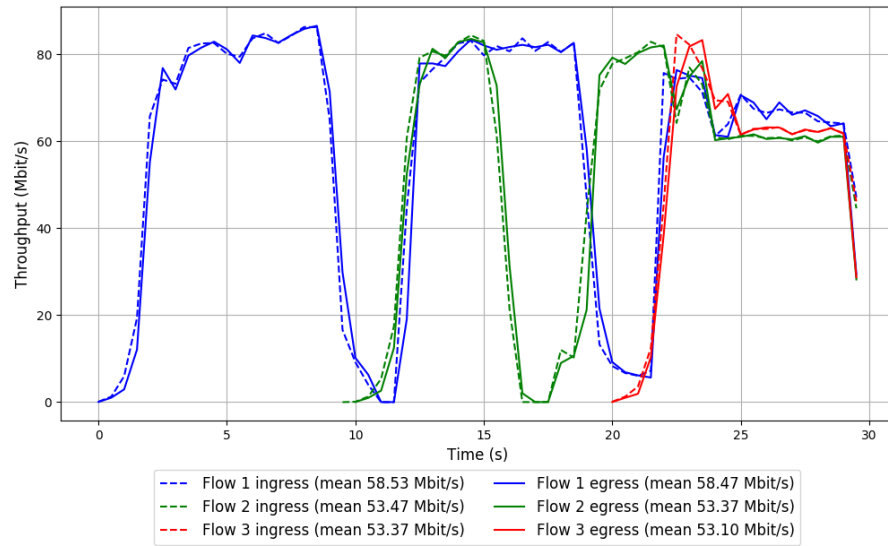
-- Flow 3:

Average throughput: 53.10 Mbit/s

95th percentile per-packet one-way delay: 135.769 ms

Loss rate: 3.27%

Run 8: Report of QUIC Cubic — Data Link



Run 9: Statistics of QUIC Cubic

Start at: 2017-12-21 07:03:26

End at: 2017-12-21 07:03:56

Below is generated by plot.py at 2017-12-21 10:28:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 108.29 Mbit/s

95th percentile per-packet one-way delay: 136.737 ms

Loss rate: 1.12%

-- Flow 1:

Average throughput: 63.45 Mbit/s

95th percentile per-packet one-way delay: 136.747 ms

Loss rate: 1.00%

-- Flow 2:

Average throughput: 42.59 Mbit/s

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

Loss rate: 1.61%

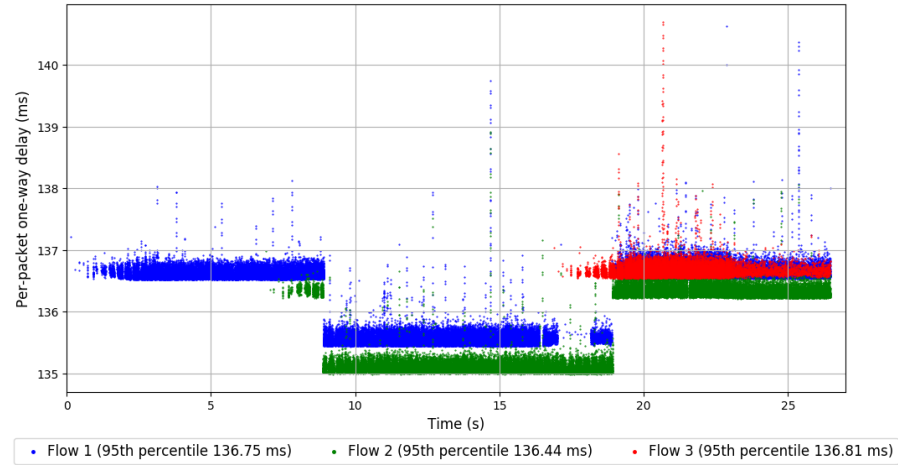
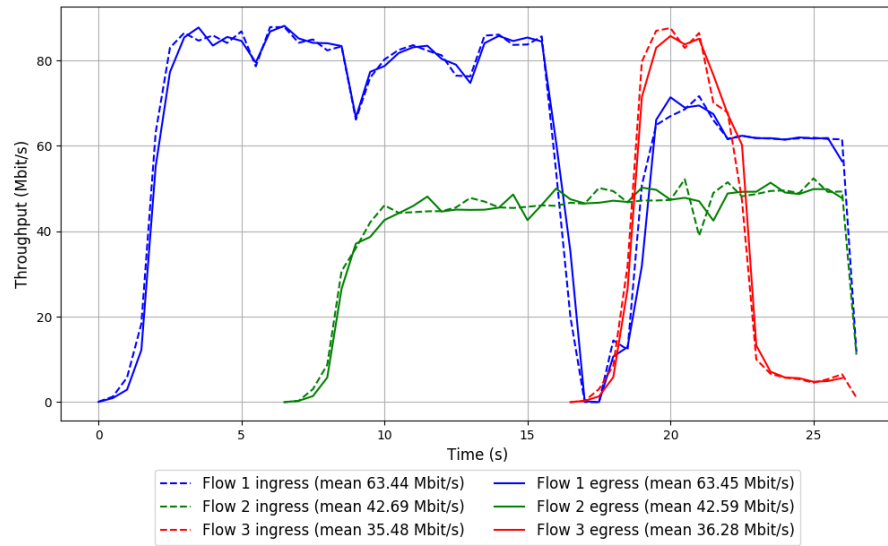
-- Flow 3:

Average throughput: 36.28 Mbit/s

95th percentile per-packet one-way delay: 136.805 ms

Loss rate: 0.52%

Run 9: Report of QUIC Cubic — Data Link



Run 10: Statistics of QUIC Cubic

Start at: 2017-12-21 07:19:31

End at: 2017-12-21 07:20:01

Below is generated by plot.py at 2017-12-21 10:28:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 114.69 Mbit/s

95th percentile per-packet one-way delay: 136.149 ms

Loss rate: 1.57%

-- Flow 1:

Average throughput: 59.03 Mbit/s

95th percentile per-packet one-way delay: 135.949 ms

Loss rate: 1.05%

-- Flow 2:

Average throughput: 58.48 Mbit/s

95th percentile per-packet one-way delay: 136.216 ms

Loss rate: 1.58%

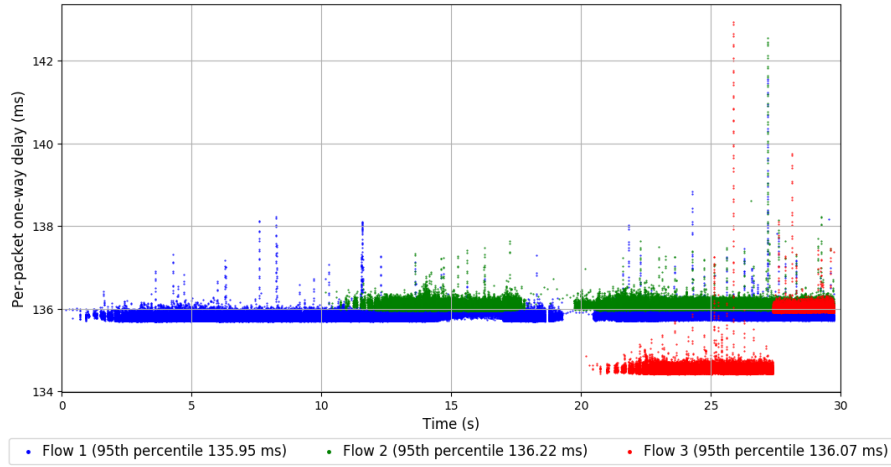
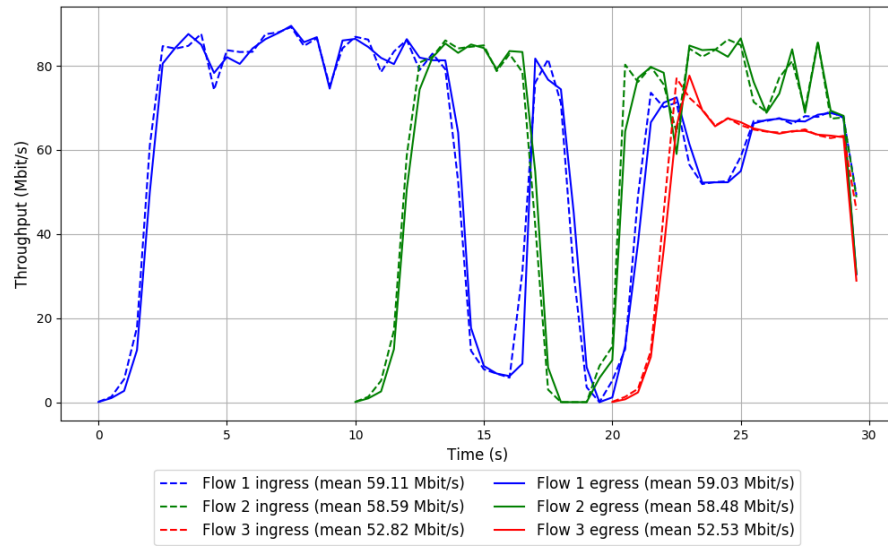
-- Flow 3:

Average throughput: 52.53 Mbit/s

95th percentile per-packet one-way delay: 136.069 ms

Loss rate: 3.29%

Run 10: Report of QUIC Cubic — Data Link

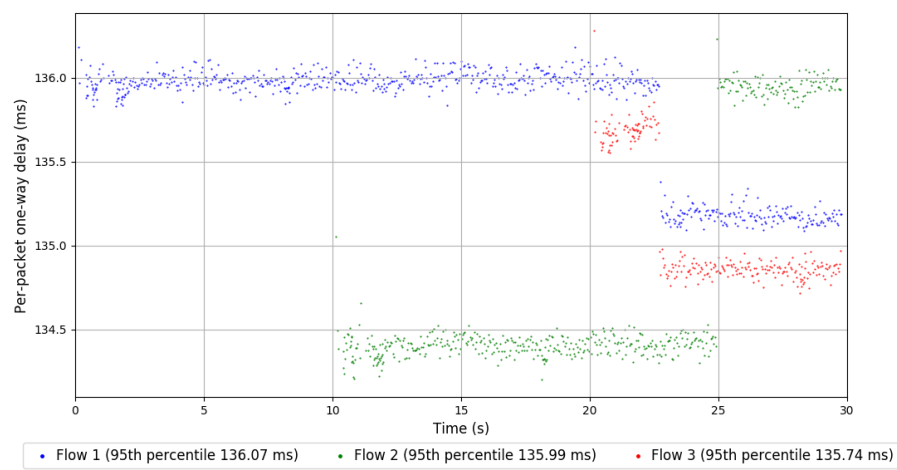
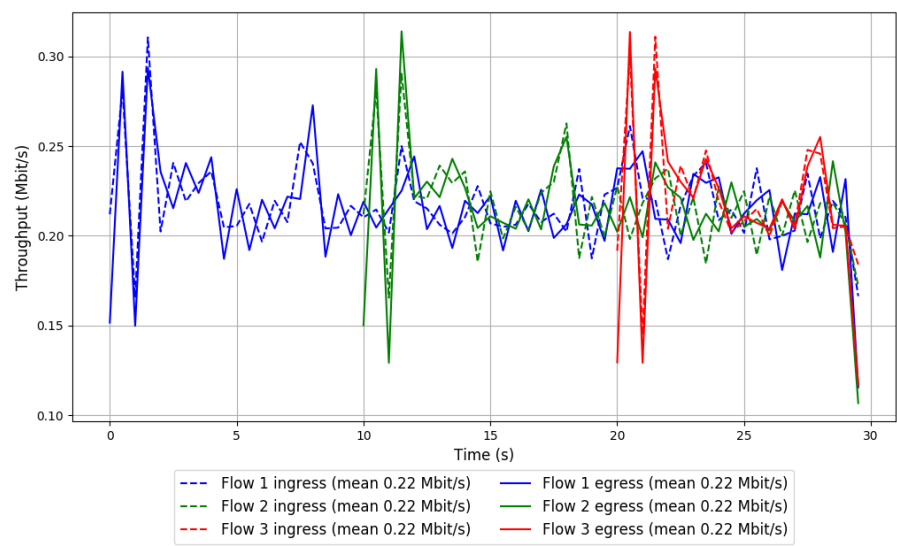


```
Run 1: Statistics of SCReAM

Start at: 2017-12-21 05:01:45
End at: 2017-12-21 05:02:15

# Below is generated by plot.py at 2017-12-21 10:28:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 136.047 ms
Loss rate: 1.30%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.074 ms
Loss rate: 0.77%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 135.986 ms
Loss rate: 1.42%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 135.740 ms
Loss rate: 2.63%
```

Run 1: Report of SReAM — Data Link

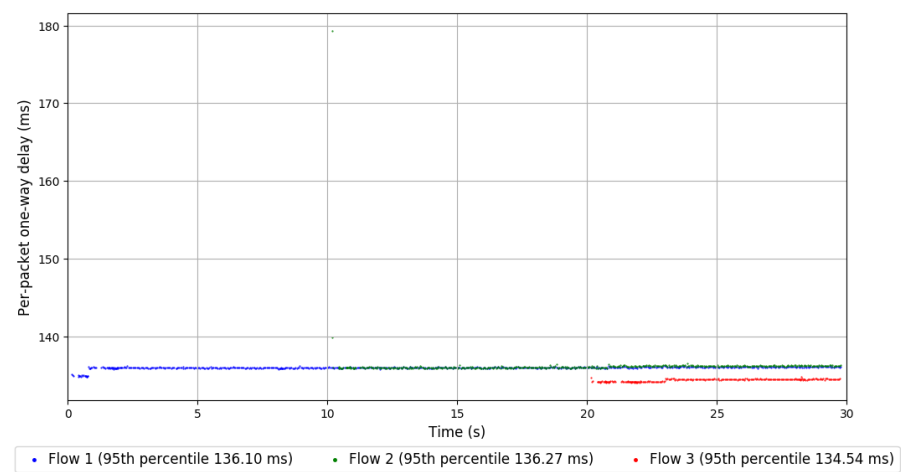
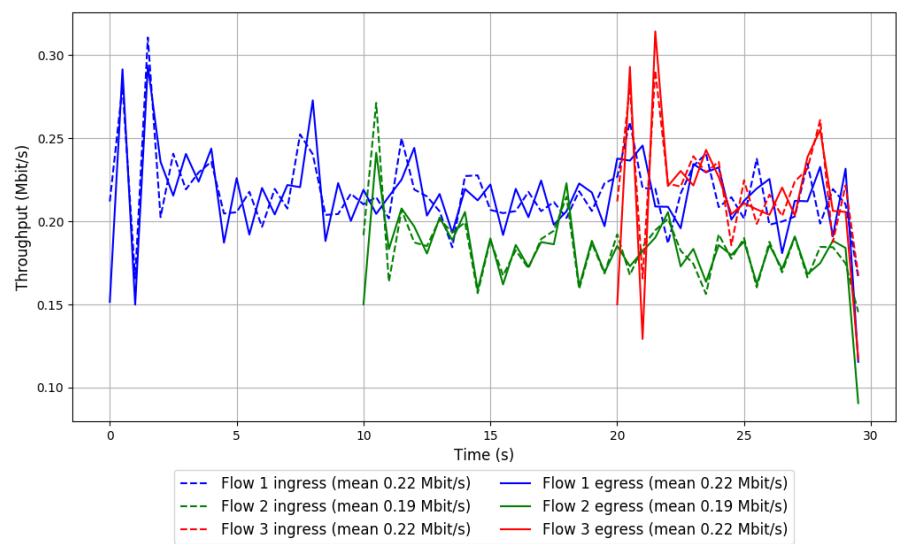


```
Run 2: Statistics of SCReAM

Start at: 2017-12-21 05:17:07
End at: 2017-12-21 05:17:37

# Below is generated by plot.py at 2017-12-21 10:28:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.41 Mbit/s
95th percentile per-packet one-way delay: 136.210 ms
Loss rate: 1.24%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.096 ms
Loss rate: 0.77%
-- Flow 2:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 136.270 ms
Loss rate: 1.24%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 134.543 ms
Loss rate: 2.63%
```

Run 2: Report of SCRaM — Data Link

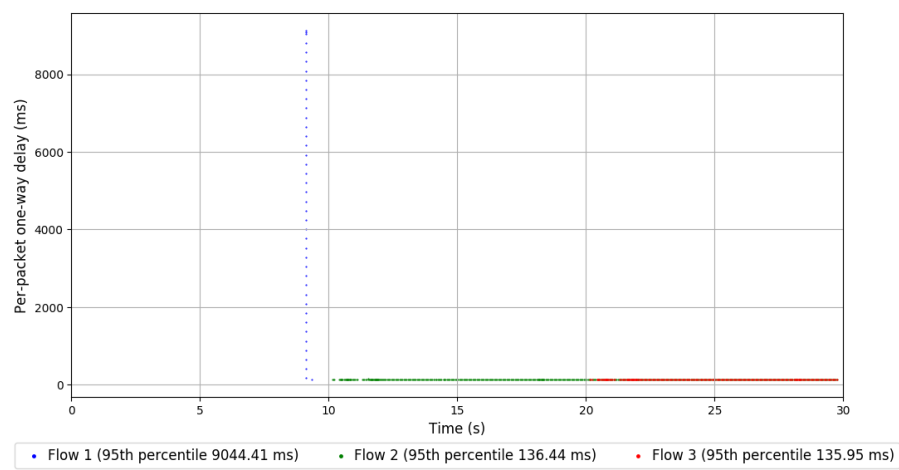
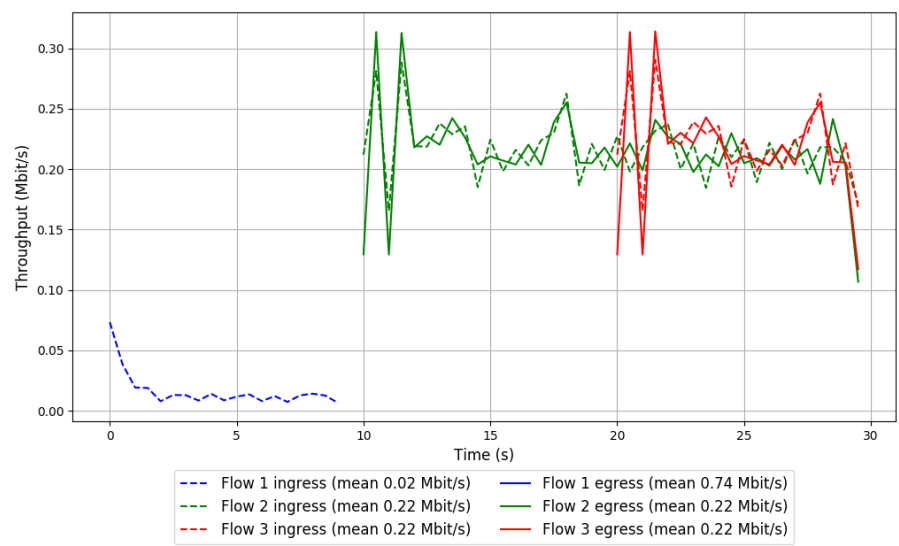


Run 3: Statistics of SReAM

Start at: 2017-12-21 05:32:57

End at: 2017-12-21 05:33:27

Run 3: Report of SReAM — Data Link



Run 4: Statistics of SCReAM

Start at: 2017-12-21 05:47:51

End at: 2017-12-21 05:48:21

Below is generated by plot.py at 2017-12-21 10:28:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 136.273 ms

Loss rate: 1.30%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 136.239 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 136.192 ms

Loss rate: 1.42%

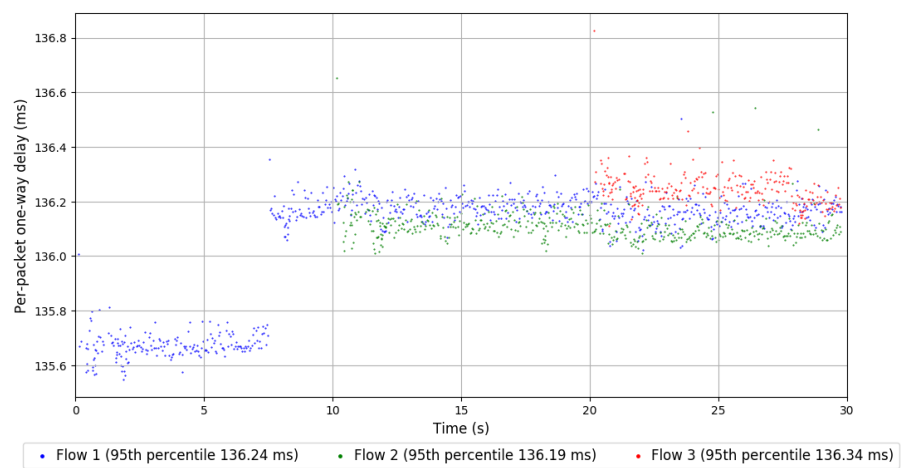
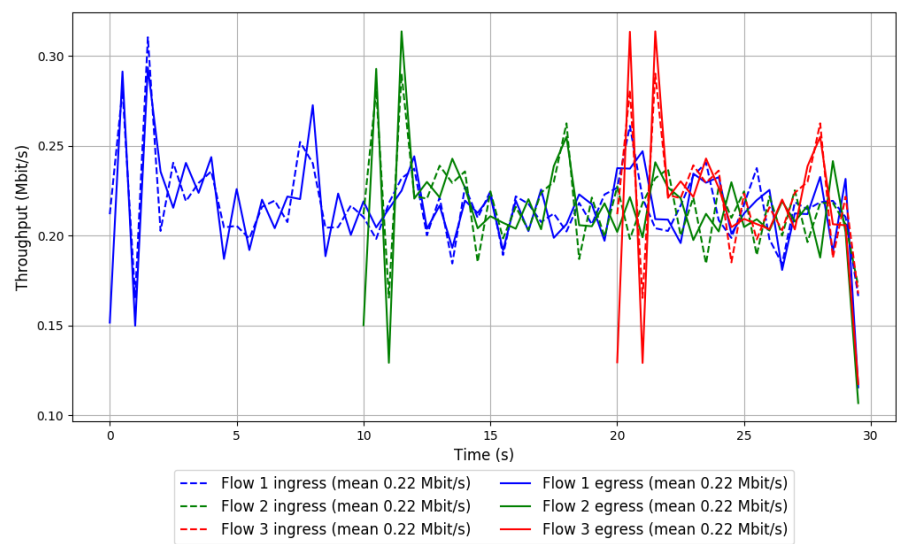
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 136.338 ms

Loss rate: 2.64%

Run 4: Report of SReAM — Data Link

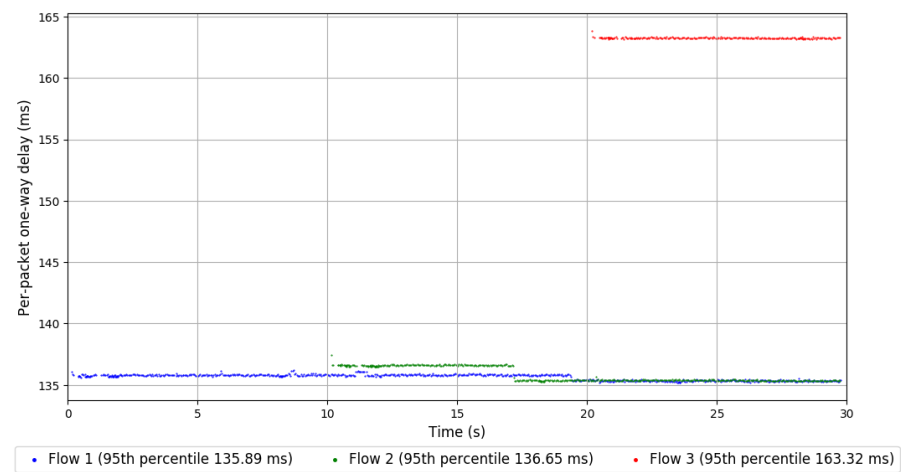
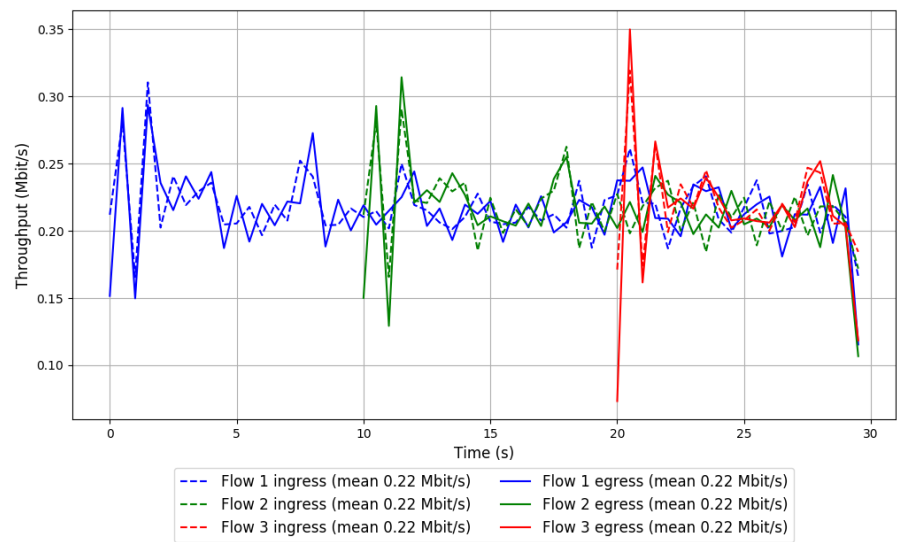


```
Run 5: Statistics of SCReAM

Start at: 2017-12-21 06:03:41
End at: 2017-12-21 06:04:11

# Below is generated by plot.py at 2017-12-21 10:28:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 163.271 ms
Loss rate: 1.37%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 135.887 ms
Loss rate: 0.77%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.649 ms
Loss rate: 1.42%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 163.325 ms
Loss rate: 3.06%
```

Run 5: Report of SReAM — Data Link



Run 6: Statistics of SCReAM

Start at: 2017-12-21 06:18:51

End at: 2017-12-21 06:19:21

Below is generated by plot.py at 2017-12-21 10:28:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 136.031 ms

Loss rate: 1.48%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 136.058 ms

Loss rate: 0.89%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 135.648 ms

Loss rate: 1.61%

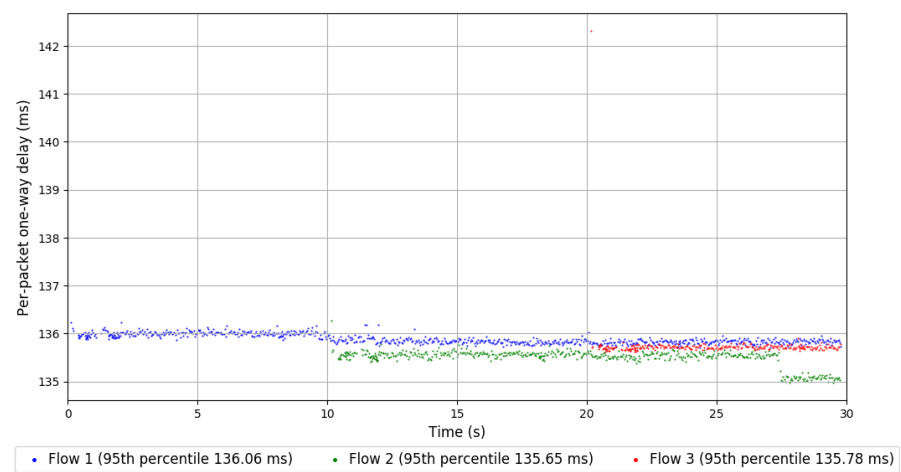
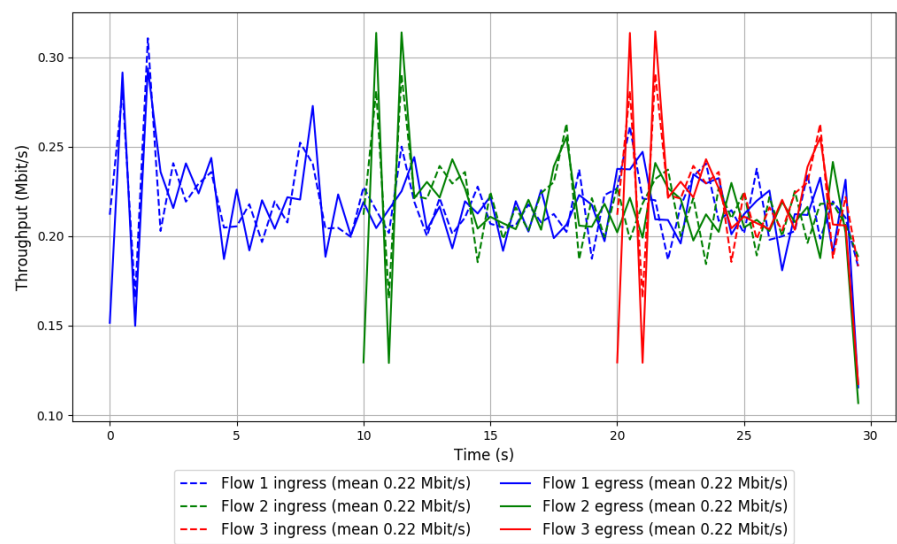
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 135.783 ms

Loss rate: 2.97%

Run 6: Report of SCRaM — Data Link



Run 7: Statistics of SCReAM

Start at: 2017-12-21 06:34:21

End at: 2017-12-21 06:34:51

Below is generated by plot.py at 2017-12-21 10:28:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 136.277 ms

Loss rate: 1.30%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 136.305 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 136.192 ms

Loss rate: 1.42%

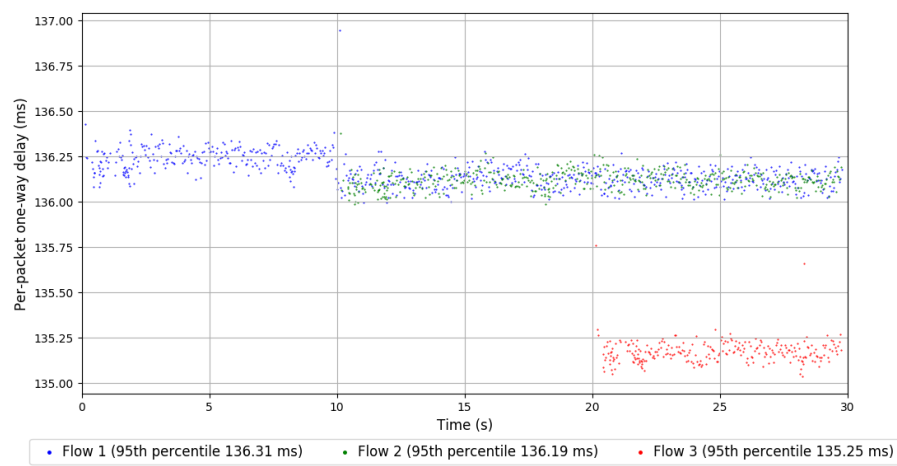
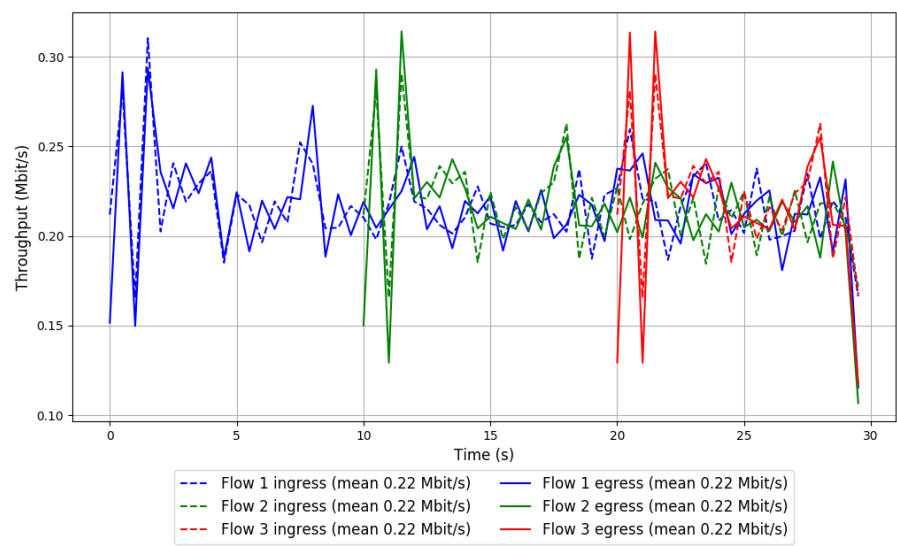
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 135.247 ms

Loss rate: 2.63%

Run 7: Report of SReAM — Data Link



Run 8: Statistics of SReAM

Start at: 2017-12-21 06:49:50

End at: 2017-12-21 06:50:20

Below is generated by plot.py at 2017-12-21 10:28:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 136.245 ms

Loss rate: 1.30%

-- Flow 1:

Average throughput: 0.22 Mbit/s

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

Loss rate: 0.77%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 136.226 ms

Loss rate: 1.42%

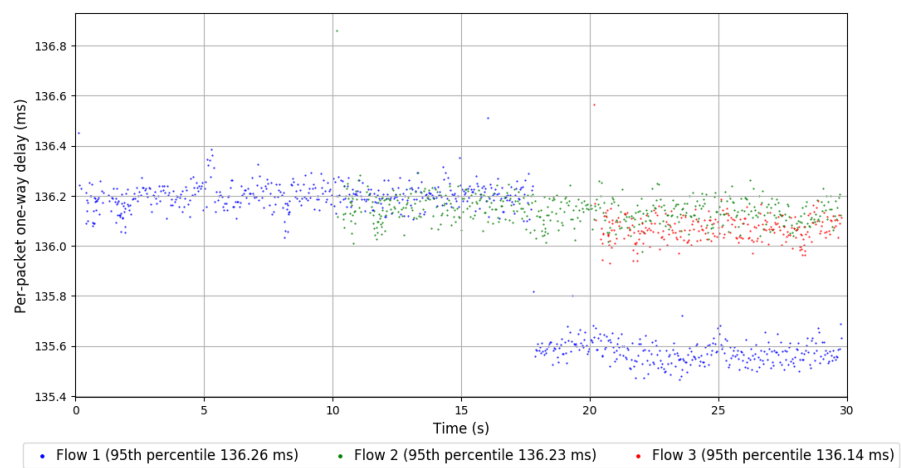
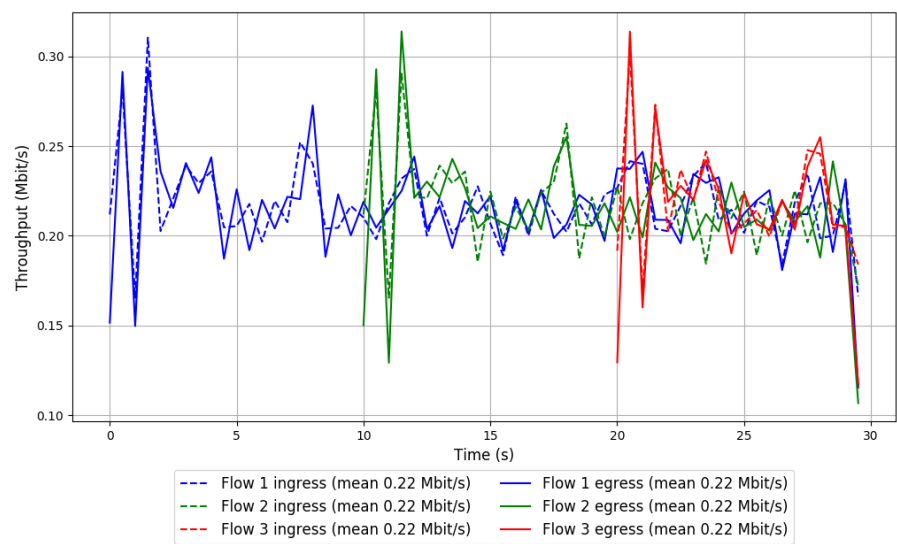
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 136.144 ms

Loss rate: 2.65%

Run 8: Report of SReAM — Data Link



Run 9: Statistics of SCReAM

Start at: 2017-12-21 07:05:25

End at: 2017-12-21 07:05:55

Below is generated by plot.py at 2017-12-21 10:28:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.25 Mbit/s

95th percentile per-packet one-way delay: 135.983 ms

Loss rate: 1.75%

-- Flow 1:

Average throughput: 0.64 Mbit/s

95th percentile per-packet one-way delay: 4808.459 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 135.353 ms

Loss rate: 1.42%

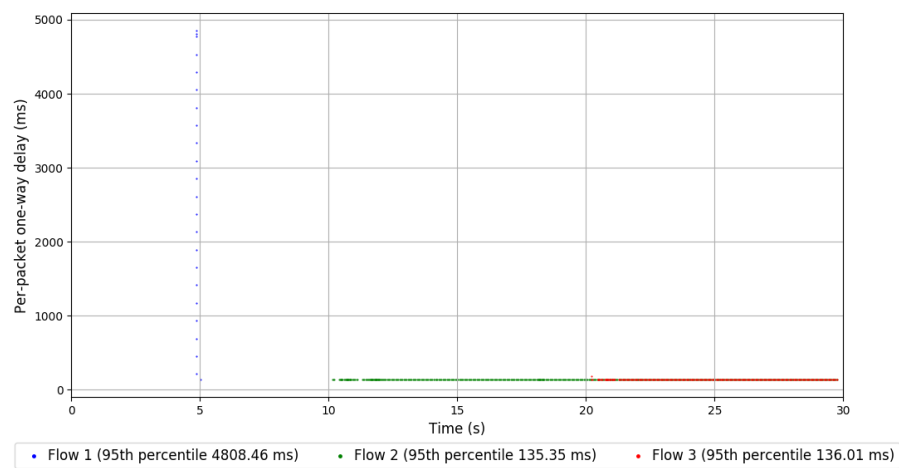
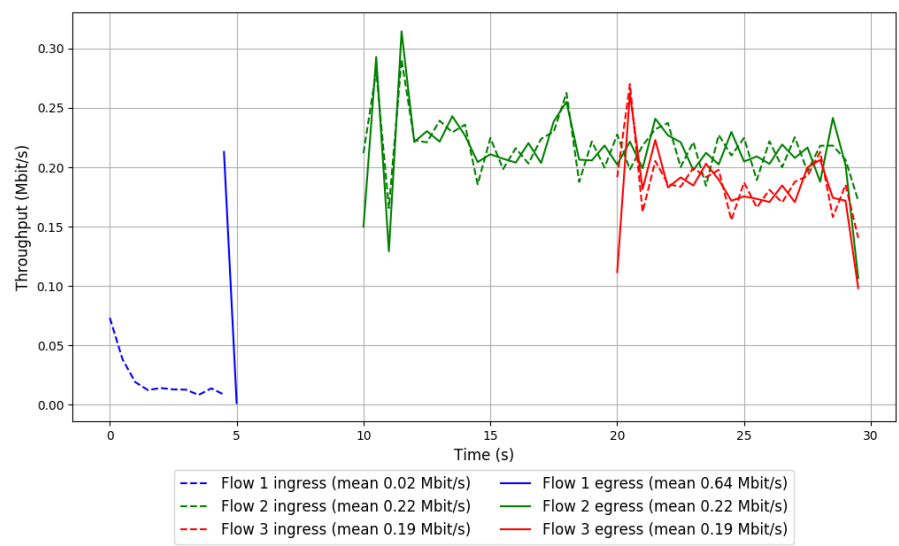
-- Flow 3:

Average throughput: 0.19 Mbit/s

95th percentile per-packet one-way delay: 136.014 ms

Loss rate: 2.62%

Run 9: Report of SCRaM — Data Link



Run 10: Statistics of SReAM

Start at: 2017-12-21 07:21:23

End at: 2017-12-21 07:21:53

Below is generated by plot.py at 2017-12-21 10:28:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.42 Mbit/s

95th percentile per-packet one-way delay: 161.342 ms

Loss rate: 1.26%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 134.900 ms

Loss rate: 0.77%

-- Flow 2:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 136.216 ms

Loss rate: 1.42%

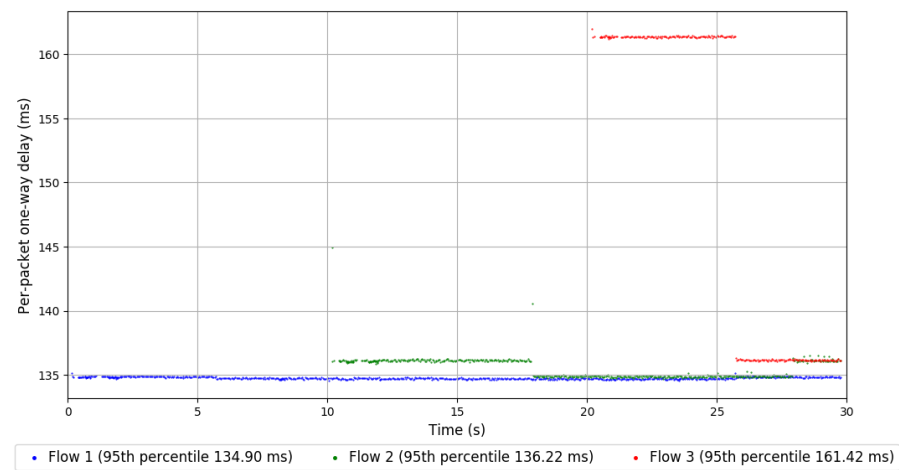
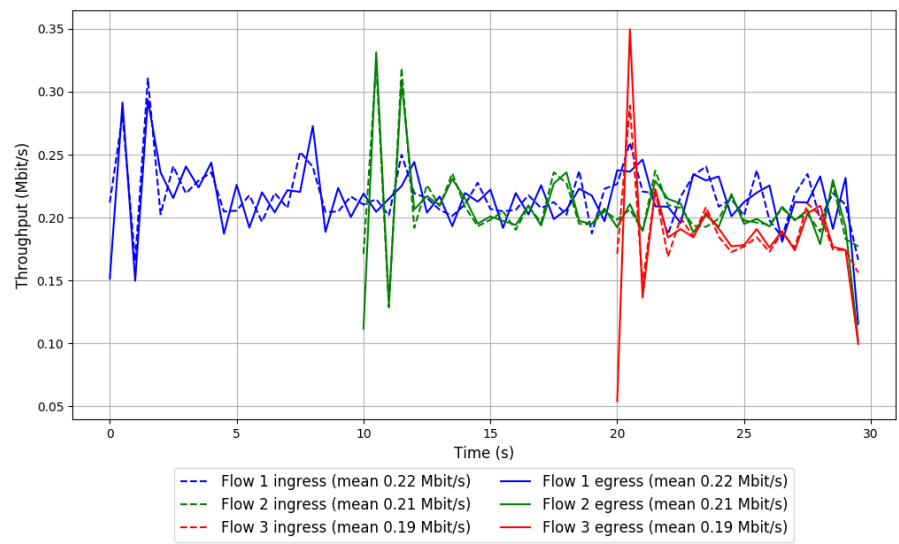
-- Flow 3:

Average throughput: 0.19 Mbit/s

95th percentile per-packet one-way delay: 161.416 ms

Loss rate: 2.62%

Run 10: Report of SCRaM — Data Link

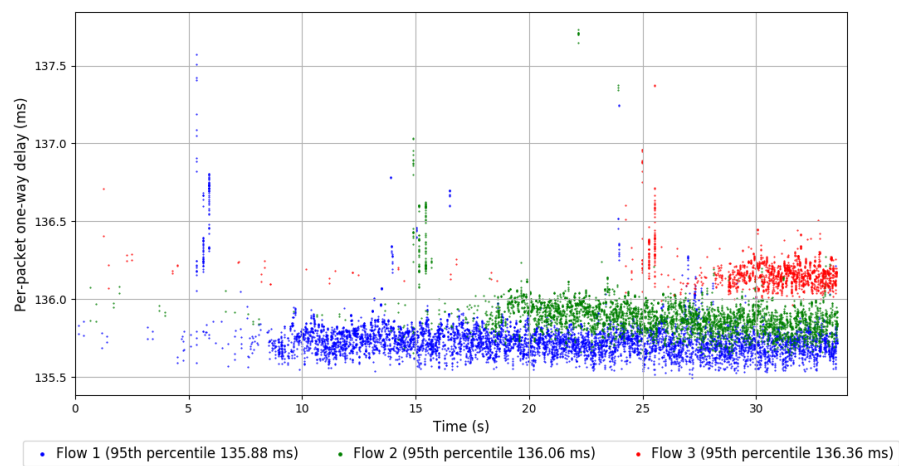
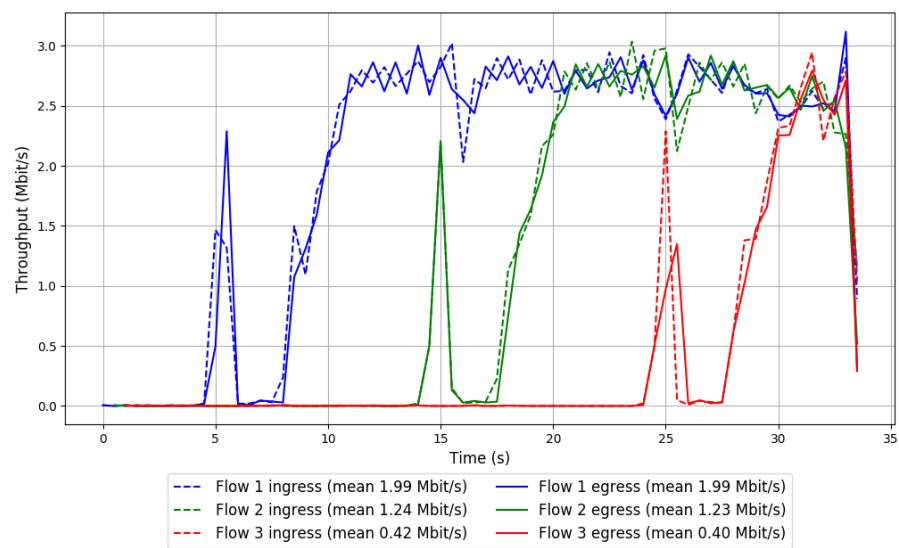


```
Run 1: Statistics of WebRTC media

Start at: 2017-12-21 04:51:47
End at: 2017-12-21 04:52:17

# Below is generated by plot.py at 2017-12-21 10:28:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.58 Mbit/s
95th percentile per-packet one-way delay: 136.209 ms
Loss rate: 1.65%
-- Flow 1:
Average throughput: 1.99 Mbit/s
95th percentile per-packet one-way delay: 135.883 ms
Loss rate: 0.87%
-- Flow 2:
Average throughput: 1.23 Mbit/s
95th percentile per-packet one-way delay: 136.055 ms
Loss rate: 1.65%
-- Flow 3:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 136.360 ms
Loss rate: 5.53%
```


Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2017-12-21 05:07:32

End at: 2017-12-21 05:08:02

Below is generated by plot.py at 2017-12-21 10:28:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.57 Mbit/s

95th percentile per-packet one-way delay: 161.281 ms

Loss rate: 1.92%

-- Flow 1:

Average throughput: 2.01 Mbit/s

95th percentile per-packet one-way delay: 136.205 ms

Loss rate: 0.99%

-- Flow 2:

Average throughput: 1.22 Mbit/s

95th percentile per-packet one-way delay: 136.032 ms

Loss rate: 2.02%

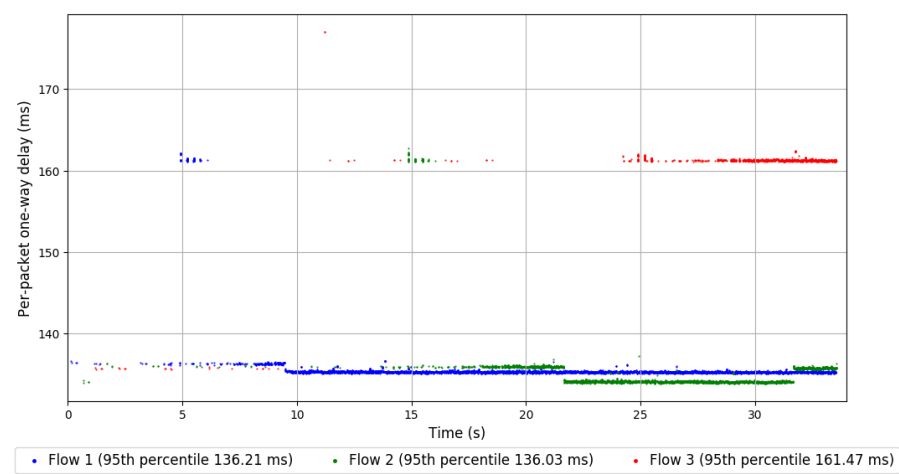
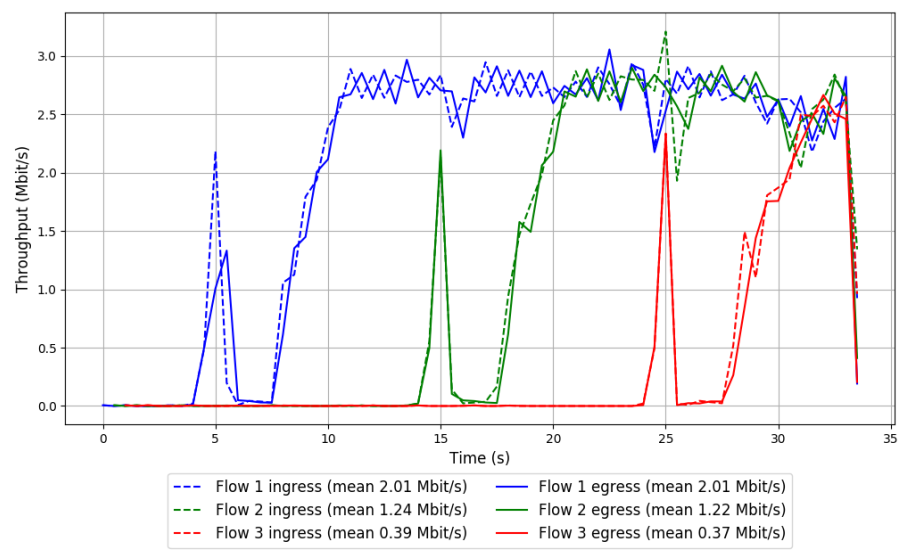
-- Flow 3:

Average throughput: 0.37 Mbit/s

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

Loss rate: 6.58%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2017-12-21 05:22:54

End at: 2017-12-21 05:23:24

Below is generated by plot.py at 2017-12-21 10:28:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.57 Mbit/s

95th percentile per-packet one-way delay: 163.693 ms

Loss rate: 1.85%

-- Flow 1:

Average throughput: 2.00 Mbit/s

95th percentile per-packet one-way delay: 136.385 ms

Loss rate: 1.00%

-- Flow 2:

Average throughput: 1.21 Mbit/s

95th percentile per-packet one-way delay: 163.659 ms

Loss rate: 1.78%

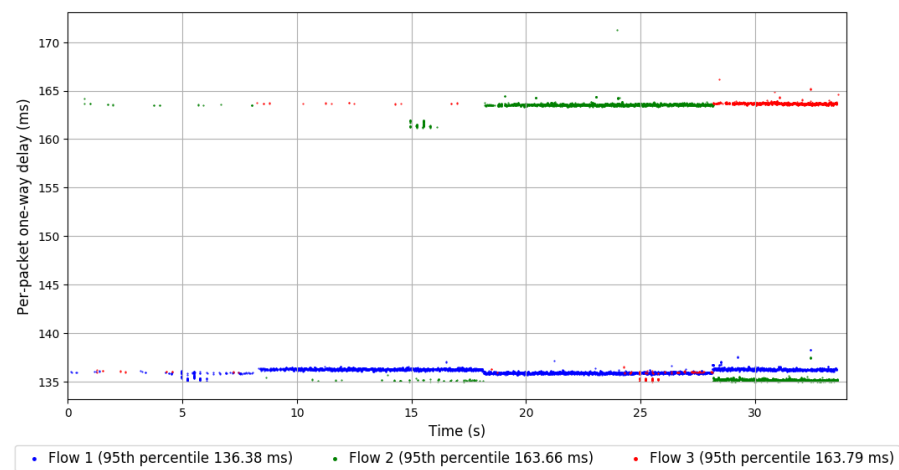
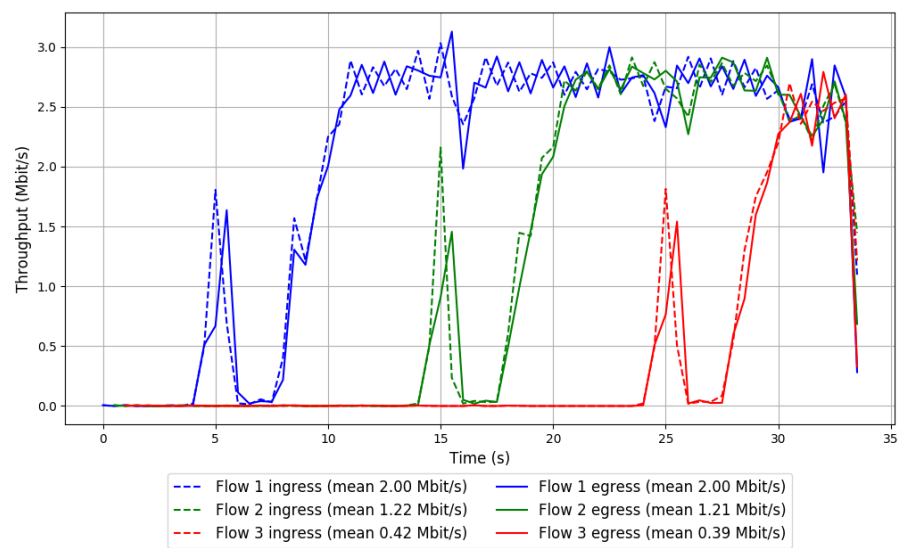
-- Flow 3:

Average throughput: 0.39 Mbit/s

95th percentile per-packet one-way delay: 163.788 ms

Loss rate: 6.23%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2017-12-21 05:38:29

End at: 2017-12-21 05:38:59

Below is generated by plot.py at 2017-12-21 10:28:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.59 Mbit/s

95th percentile per-packet one-way delay: 163.544 ms

Loss rate: 1.90%

-- Flow 1:

Average throughput: 2.02 Mbit/s

95th percentile per-packet one-way delay: 135.699 ms

Loss rate: 1.25%

-- Flow 2:

Average throughput: 1.21 Mbit/s

95th percentile per-packet one-way delay: 163.617 ms

Loss rate: 1.88%

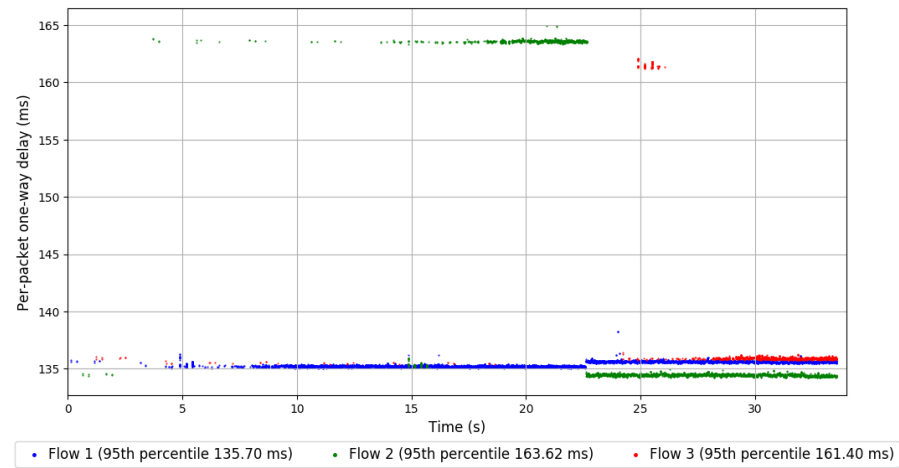
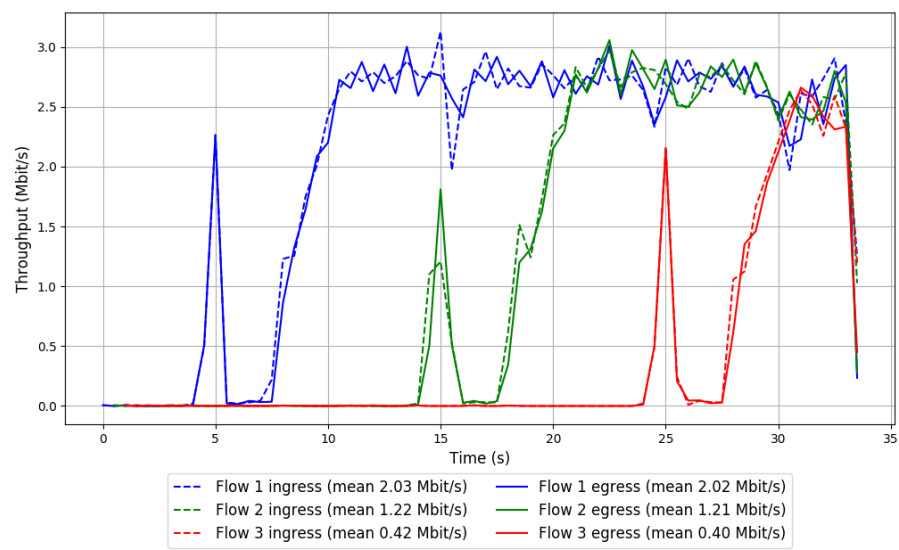
-- Flow 3:

Average throughput: 0.40 Mbit/s

95th percentile per-packet one-way delay: 161.403 ms

Loss rate: 5.29%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2017-12-21 05:53:59

End at: 2017-12-21 05:54:29

Below is generated by plot.py at 2017-12-21 10:28:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.61 Mbit/s

95th percentile per-packet one-way delay: 136.004 ms

Loss rate: 1.76%

-- Flow 1:

Average throughput: 2.01 Mbit/s

95th percentile per-packet one-way delay: 135.903 ms

Loss rate: 1.07%

-- Flow 2:

Average throughput: 1.22 Mbit/s

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

Loss rate: 1.79%

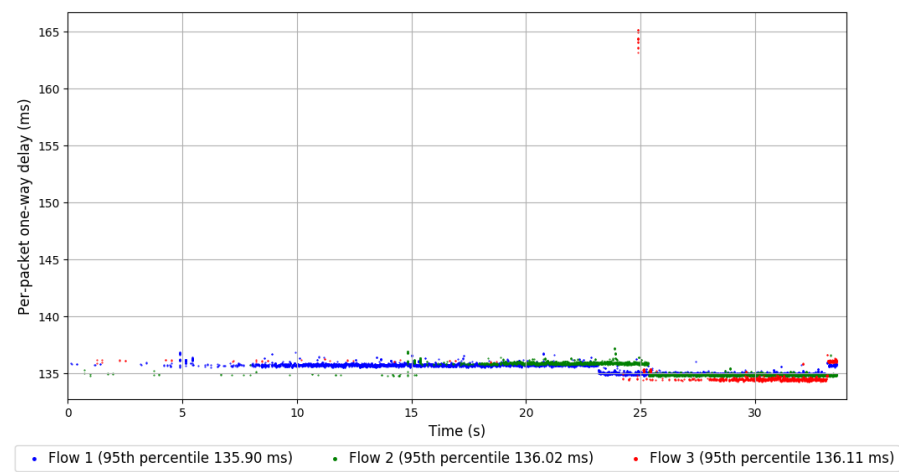
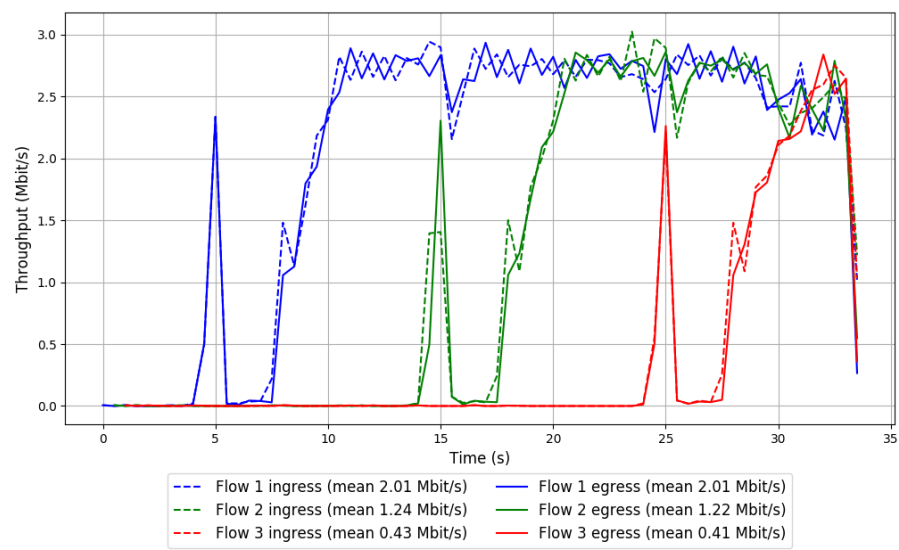
-- Flow 3:

Average throughput: 0.41 Mbit/s

95th percentile per-packet one-way delay: 136.114 ms

Loss rate: 5.02%

Run 5: Report of WebRTC media — Data Link



Run 6: Statistics of WebRTC media

Start at: 2017-12-21 06:09:11

End at: 2017-12-21 06:09:41

Below is generated by plot.py at 2017-12-21 10:28:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.58 Mbit/s

95th percentile per-packet one-way delay: 163.305 ms

Loss rate: 1.68%

-- Flow 1:

Average throughput: 2.00 Mbit/s

95th percentile per-packet one-way delay: 163.330 ms

Loss rate: 0.88%

-- Flow 2:

Average throughput: 1.21 Mbit/s

95th percentile per-packet one-way delay: 161.076 ms

Loss rate: 1.72%

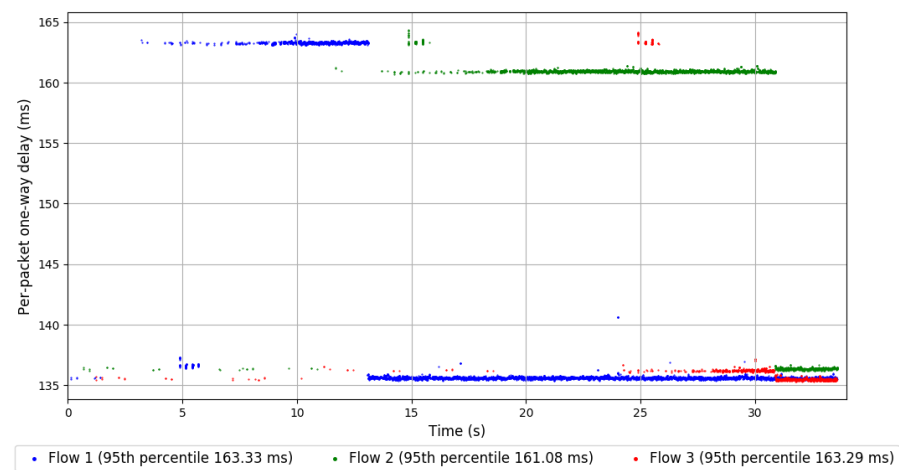
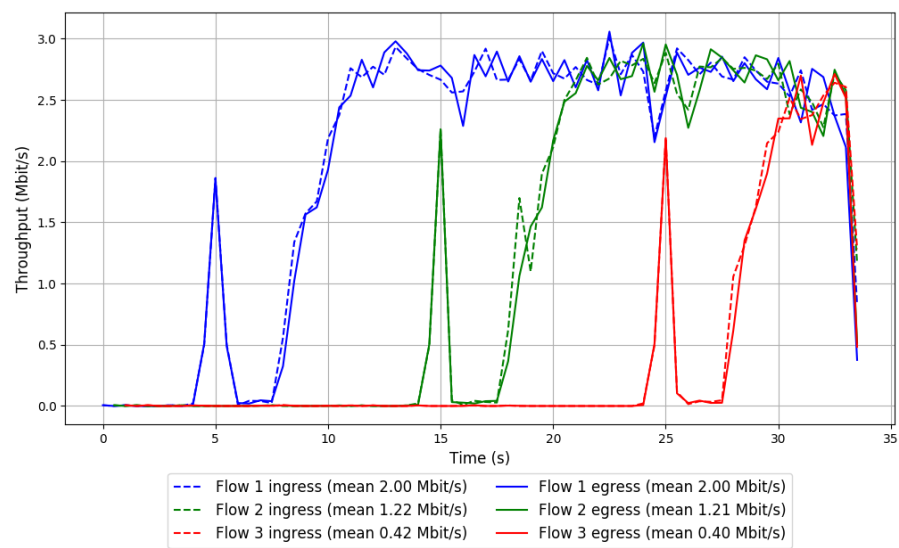
-- Flow 3:

Average throughput: 0.40 Mbit/s

95th percentile per-packet one-way delay: 163.286 ms

Loss rate: 5.46%

Run 6: Report of WebRTC media — Data Link



Run 7: Statistics of WebRTC media

Start at: 2017-12-21 06:24:31

End at: 2017-12-21 06:25:01

Below is generated by plot.py at 2017-12-21 10:28:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.55 Mbit/s

95th percentile per-packet one-way delay: 163.295 ms

Loss rate: 1.88%

-- Flow 1:

Average throughput: 2.01 Mbit/s

95th percentile per-packet one-way delay: 135.867 ms

Loss rate: 1.17%

-- Flow 2:

Average throughput: 1.21 Mbit/s

95th percentile per-packet one-way delay: 163.293 ms

Loss rate: 1.87%

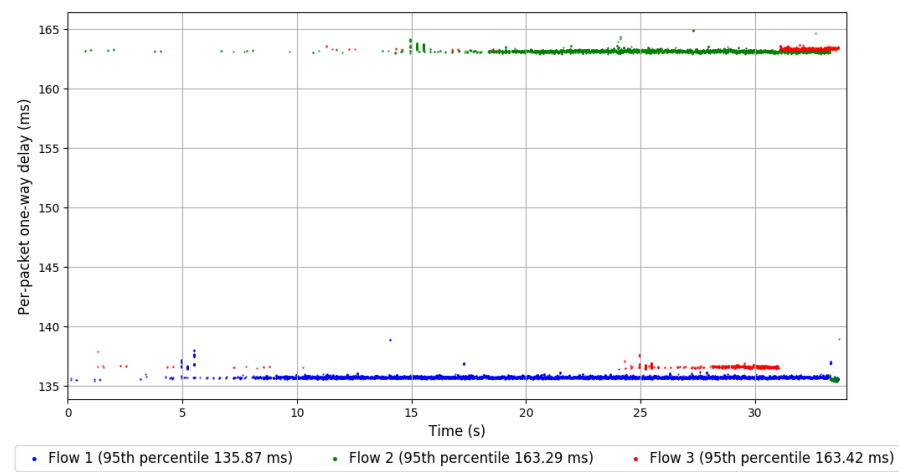
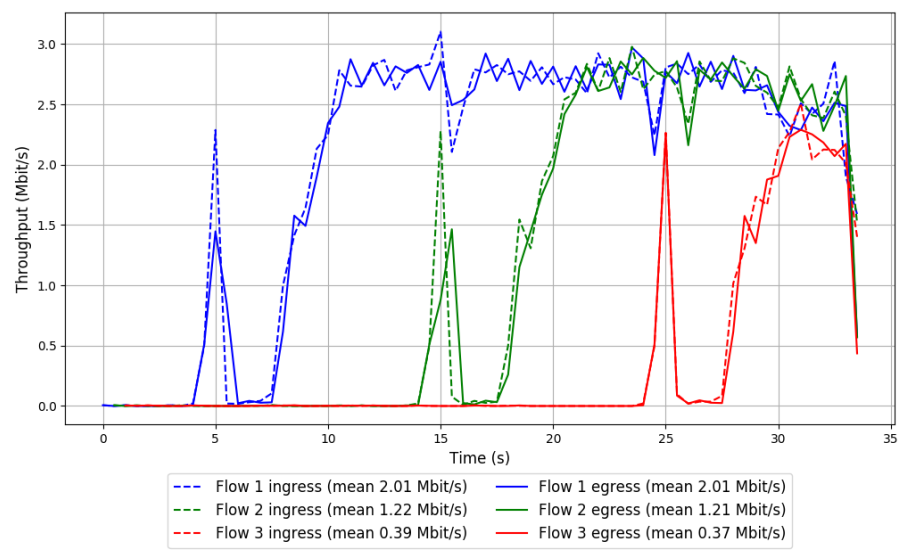
-- Flow 3:

Average throughput: 0.37 Mbit/s

95th percentile per-packet one-way delay: 163.420 ms

Loss rate: 5.73%

Run 7: Report of WebRTC media — Data Link



Run 8: Statistics of WebRTC media

Start at: 2017-12-21 06:40:10

End at: 2017-12-21 06:40:40

Below is generated by plot.py at 2017-12-21 10:28:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.45 Mbit/s

95th percentile per-packet one-way delay: 136.244 ms

Loss rate: 1.86%

-- Flow 1:

Average throughput: 1.84 Mbit/s

95th percentile per-packet one-way delay: 136.155 ms

Loss rate: 1.27%

-- Flow 2:

Average throughput: 1.23 Mbit/s

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

Loss rate: 1.88%

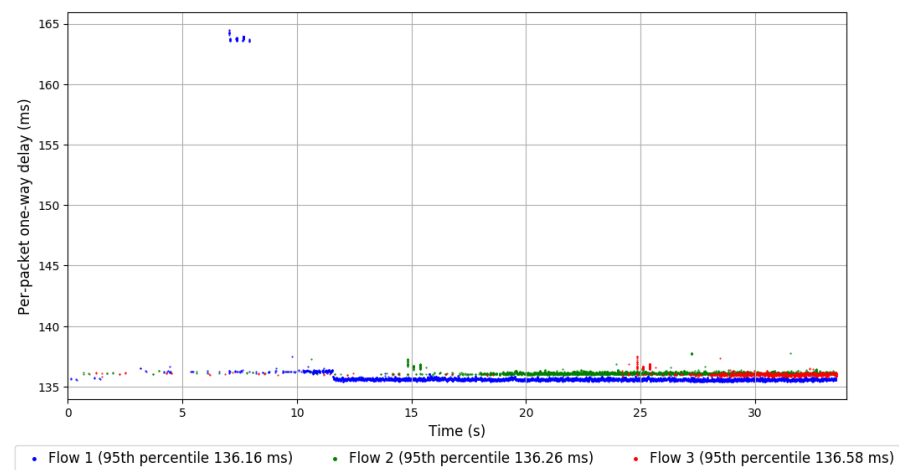
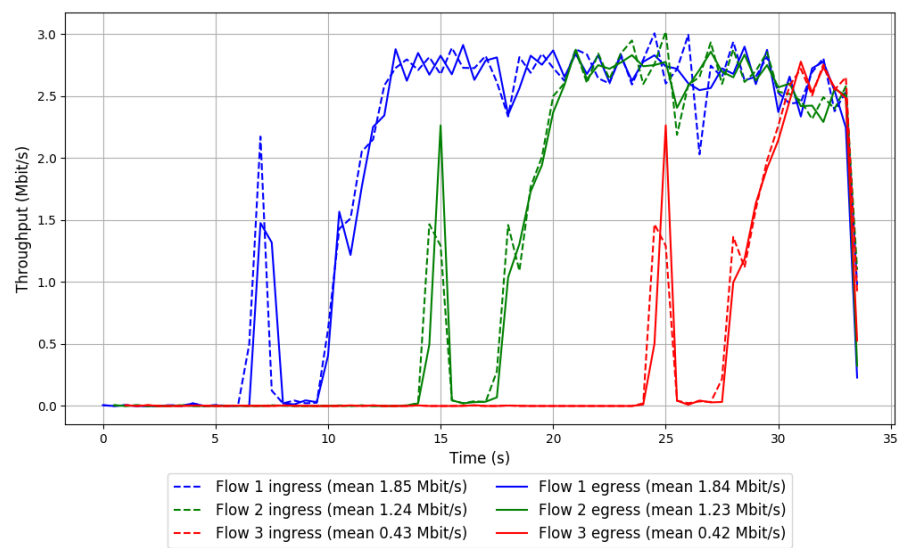
-- Flow 3:

Average throughput: 0.42 Mbit/s

95th percentile per-packet one-way delay: 136.583 ms

Loss rate: 4.39%

Run 8: Report of WebRTC media — Data Link



Run 9: Statistics of WebRTC media

Start at: 2017-12-21 06:55:20

End at: 2017-12-21 06:55:50

Below is generated by plot.py at 2017-12-21 10:28:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.60 Mbit/s

95th percentile per-packet one-way delay: 135.808 ms

Loss rate: 1.94%

-- Flow 1:

Average throughput: 2.01 Mbit/s

95th percentile per-packet one-way delay: 135.813 ms

Loss rate: 1.17%

-- Flow 2:

Average throughput: 1.22 Mbit/s

95th percentile per-packet one-way delay: 135.609 ms

Loss rate: 1.85%

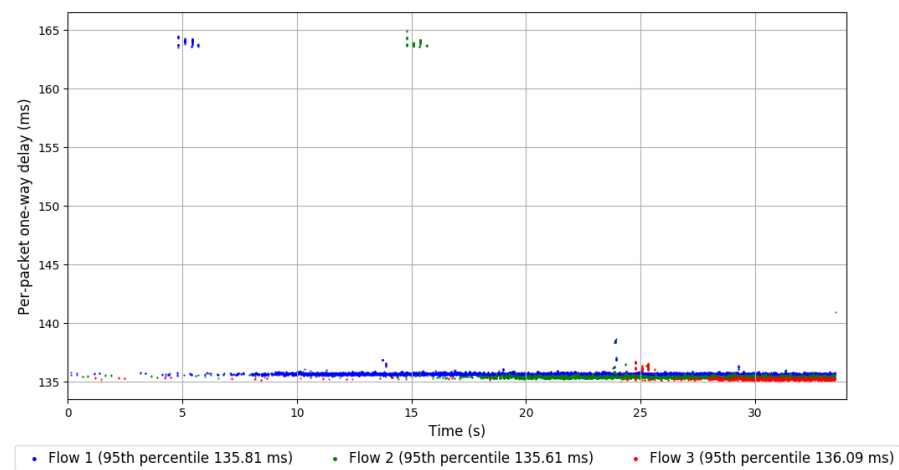
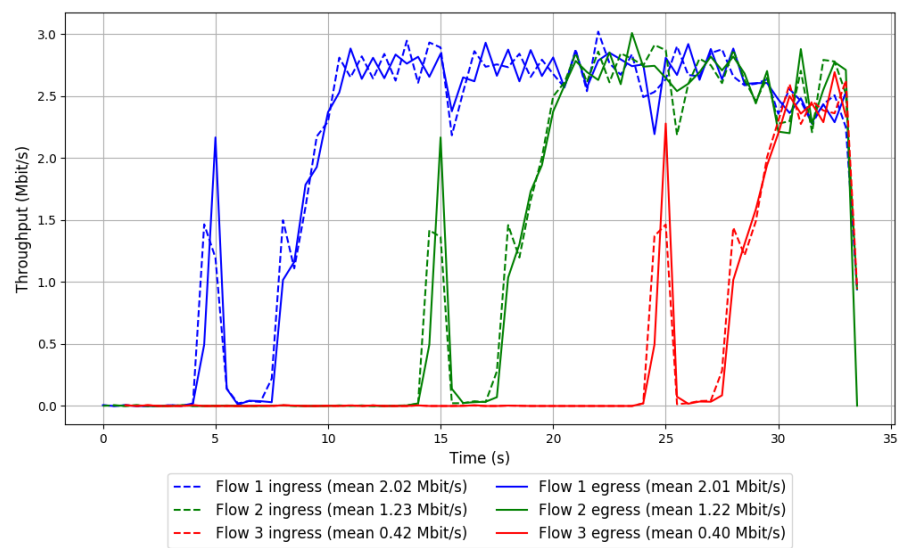
-- Flow 3:

Average throughput: 0.40 Mbit/s

95th percentile per-packet one-way delay: 136.091 ms

Loss rate: 6.01%

Run 9: Report of WebRTC media — Data Link



Run 10: Statistics of WebRTC media

Start at: 2017-12-21 07:11:32

End at: 2017-12-21 07:12:02

Below is generated by plot.py at 2017-12-21 10:28:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.55 Mbit/s

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

Loss rate: 1.87%

-- Flow 1:

Average throughput: 1.99 Mbit/s

95th percentile per-packet one-way delay: 161.425 ms

Loss rate: 1.12%

-- Flow 2:

Average throughput: 1.19 Mbit/s

95th percentile per-packet one-way delay: 161.663 ms

Loss rate: 2.13%

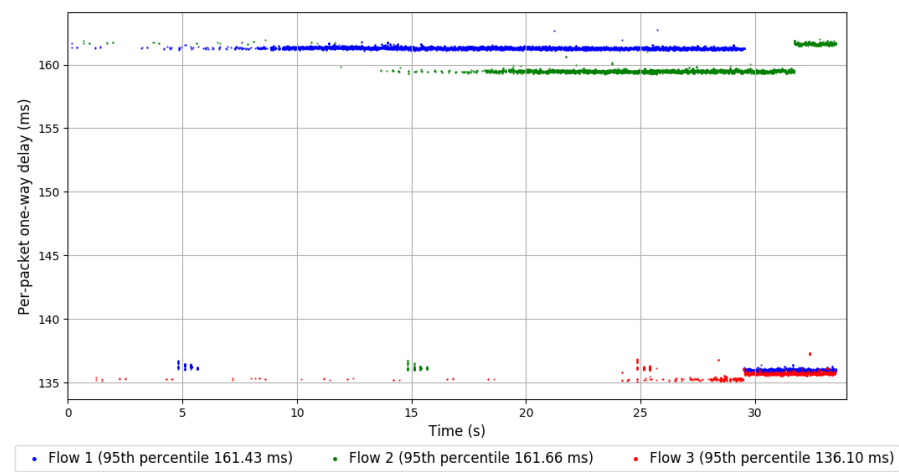
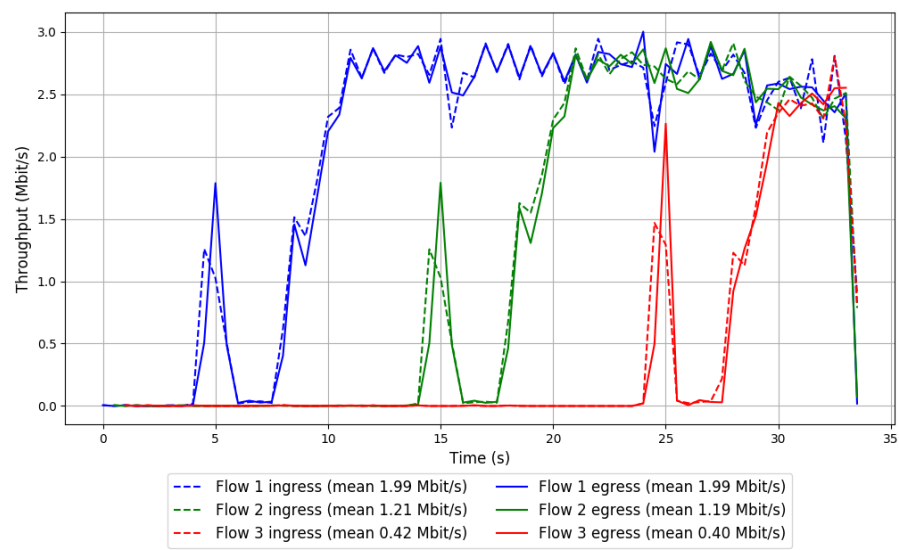
-- Flow 3:

Average throughput: 0.40 Mbit/s

95th percentile per-packet one-way delay: 136.100 ms

Loss rate: 4.83%

Run 10: Report of WebRTC media — Data Link



Run 1: Statistics of Sprout

Start at: 2017-12-21 05:06:43

End at: 2017-12-21 05:07:13

Below is generated by plot.py at 2017-12-21 10:28:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.56 Mbit/s

95th percentile per-packet one-way delay: 161.323 ms

Loss rate: 0.86%

-- Flow 1:

Average throughput: 0.29 Mbit/s

95th percentile per-packet one-way delay: 135.799 ms

Loss rate: 0.29%

-- Flow 2:

Average throughput: 0.24 Mbit/s

95th percentile per-packet one-way delay: 161.341 ms

Loss rate: 0.53%

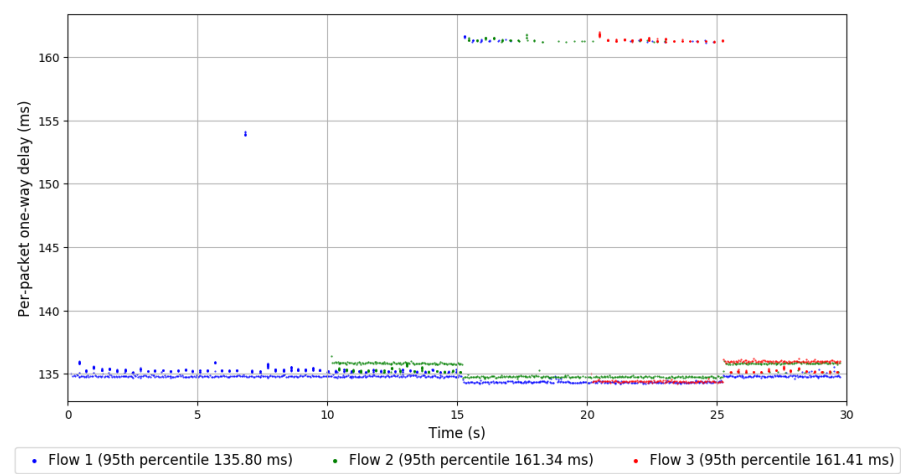
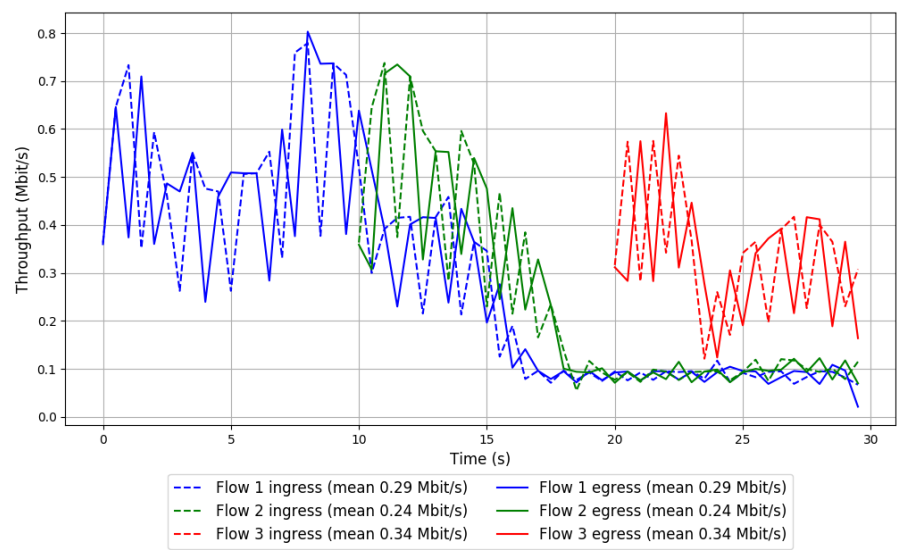
-- Flow 3:

Average throughput: 0.34 Mbit/s

95th percentile per-packet one-way delay: 161.406 ms

Loss rate: 2.77%

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2017-12-21 05:22:04

End at: 2017-12-21 05:22:34

Below is generated by plot.py at 2017-12-21 10:28:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.60 Mbit/s

95th percentile per-packet one-way delay: 163.462 ms

Loss rate: 0.85%

-- Flow 1:

Average throughput: 0.40 Mbit/s

95th percentile per-packet one-way delay: 163.488 ms

Loss rate: 0.88%

-- Flow 2:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 161.439 ms

Loss rate: 0.56%

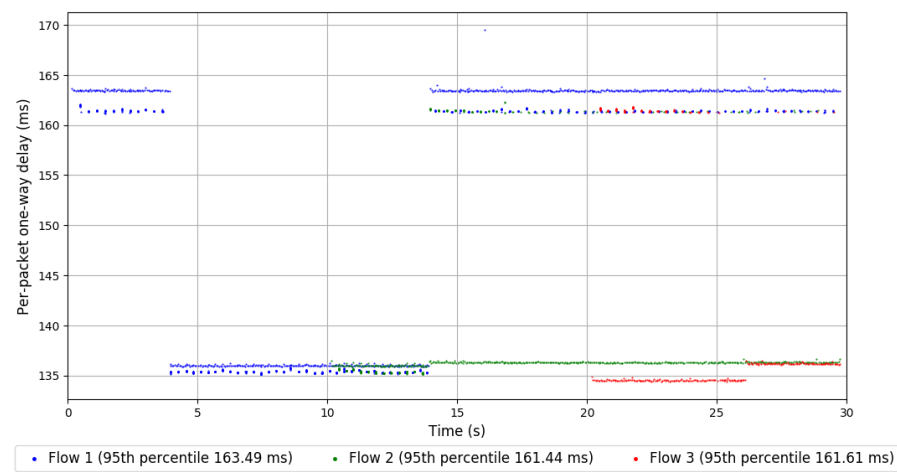
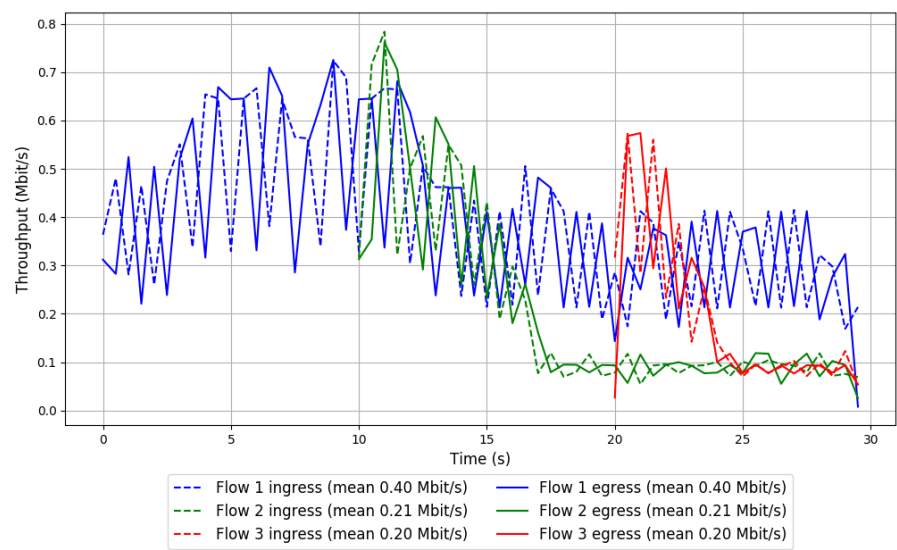
-- Flow 3:

Average throughput: 0.20 Mbit/s

95th percentile per-packet one-way delay: 161.612 ms

Loss rate: 1.25%

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2017-12-21 05:37:40

End at: 2017-12-21 05:38:10

Below is generated by plot.py at 2017-12-21 10:28:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.68 Mbit/s

95th percentile per-packet one-way delay: 163.555 ms

Loss rate: 1.15%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 161.409 ms

Loss rate: 1.38%

-- Flow 2:

Average throughput: 0.42 Mbit/s

95th percentile per-packet one-way delay: 163.603 ms

Loss rate: 0.43%

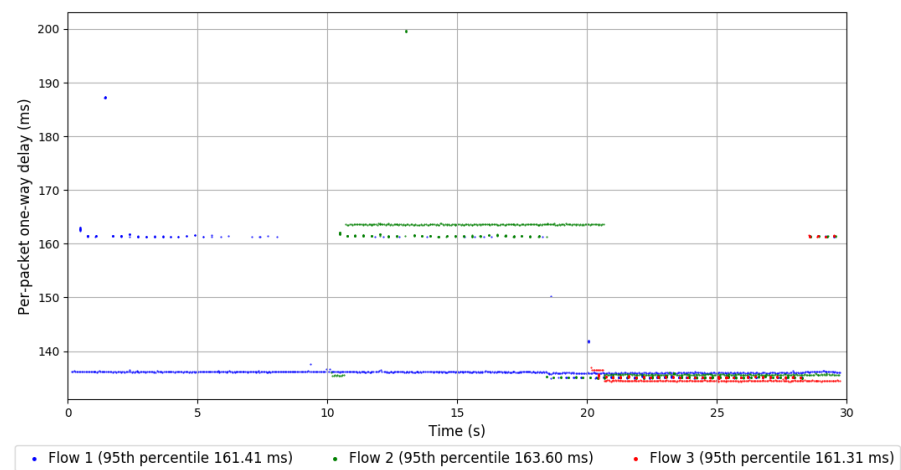
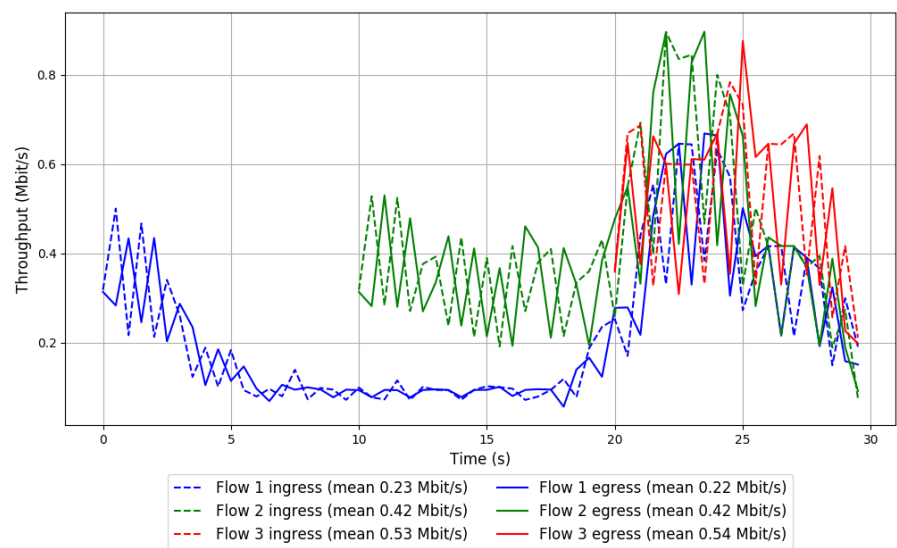
-- Flow 3:

Average throughput: 0.54 Mbit/s

95th percentile per-packet one-way delay: 161.315 ms

Loss rate: 1.98%

Run 3: Report of Sprout — Data Link



Run 4: Statistics of Sprout

Start at: 2017-12-21 05:53:09

End at: 2017-12-21 05:53:39

Below is generated by plot.py at 2017-12-21 10:28:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.73 Mbit/s

95th percentile per-packet one-way delay: 136.627 ms

Loss rate: 1.43%

-- Flow 1:

Average throughput: 0.37 Mbit/s

95th percentile per-packet one-way delay: 136.149 ms

Loss rate: 1.05%

-- Flow 2:

Average throughput: 0.33 Mbit/s

95th percentile per-packet one-way delay: 136.694 ms

Loss rate: 1.42%

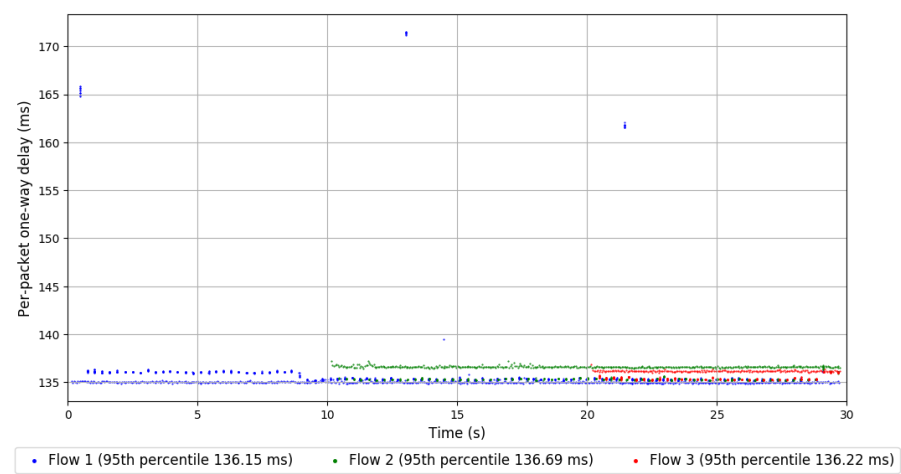
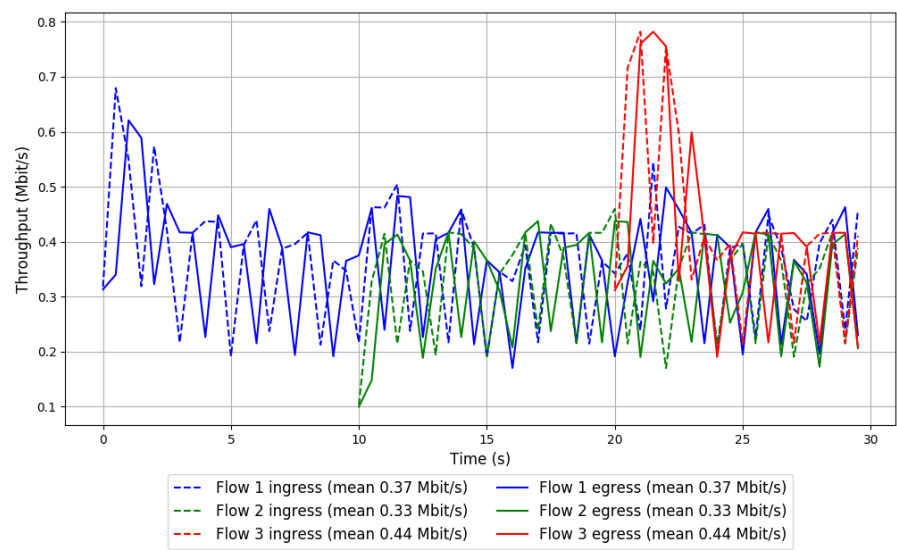
-- Flow 3:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 136.216 ms

Loss rate: 2.42%

Run 4: Report of Sprout — Data Link



Run 5: Statistics of Sprout

Start at: 2017-12-21 06:08:21

End at: 2017-12-21 06:08:51

Below is generated by plot.py at 2017-12-21 10:28:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.69 Mbit/s

95th percentile per-packet one-way delay: 163.498 ms

Loss rate: 1.32%

-- Flow 1:

Average throughput: 0.38 Mbit/s

95th percentile per-packet one-way delay: 163.556 ms

Loss rate: 1.35%

-- Flow 2:

Average throughput: 0.31 Mbit/s

95th percentile per-packet one-way delay: 163.418 ms

Loss rate: 0.58%

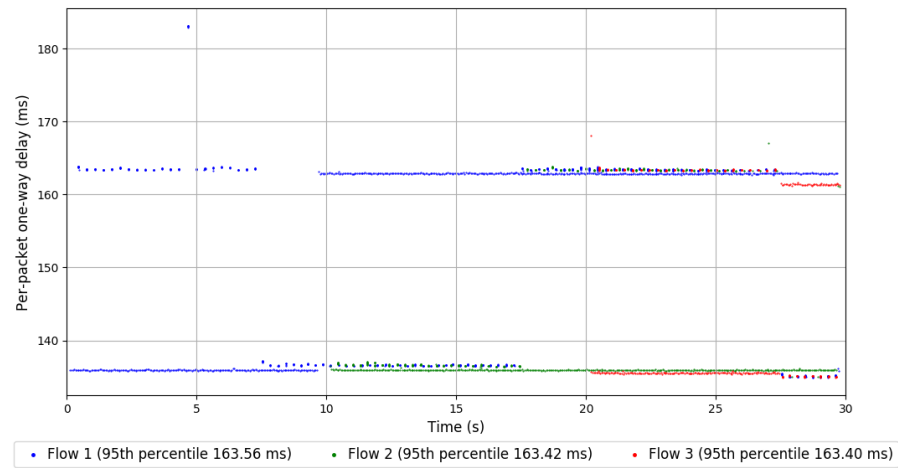
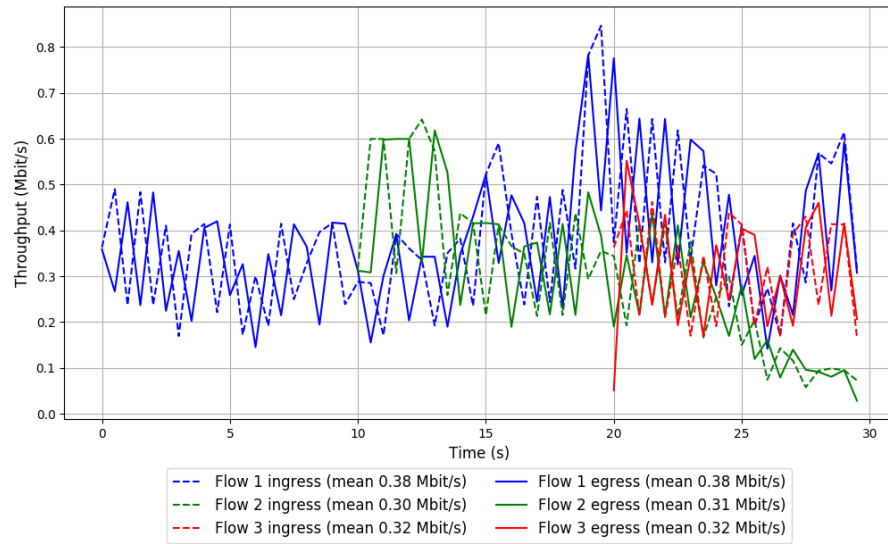
-- Flow 3:

Average throughput: 0.32 Mbit/s

95th percentile per-packet one-way delay: 163.399 ms

Loss rate: 2.58%

Run 5: Report of Sprout — Data Link



Run 6: Statistics of Sprout

Start at: 2017-12-21 06:23:41

End at: 2017-12-21 06:24:11

Below is generated by plot.py at 2017-12-21 10:28:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.35 Mbit/s

95th percentile per-packet one-way delay: 163.469 ms

Loss rate: 0.62%

-- Flow 1:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 163.279 ms

Loss rate: 0.42%

-- Flow 2:

Average throughput: 0.18 Mbit/s

95th percentile per-packet one-way delay: 163.495 ms

Loss rate: 0.67%

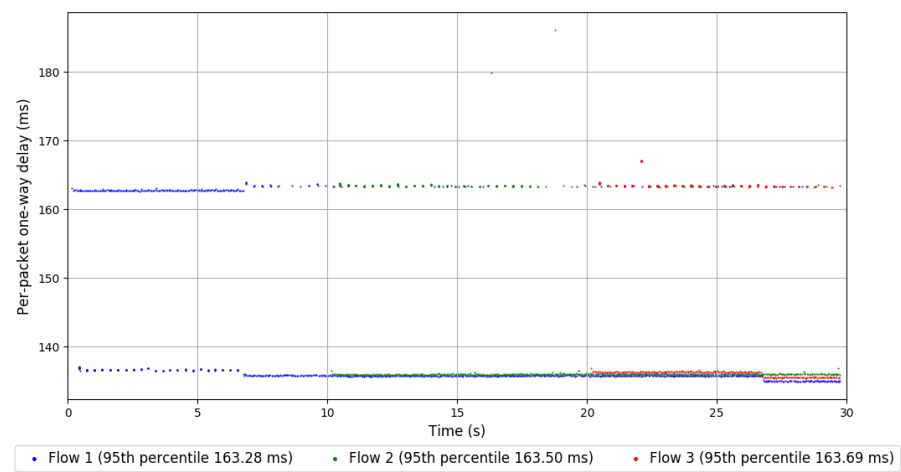
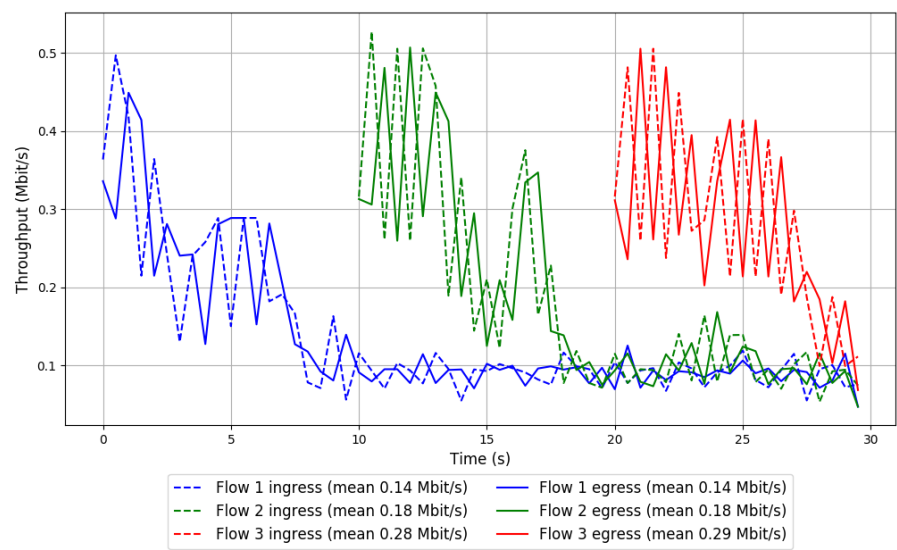
-- Flow 3:

Average throughput: 0.29 Mbit/s

95th percentile per-packet one-way delay: 163.691 ms

Loss rate: 0.85%

Run 6: Report of Sprout — Data Link



Run 7: Statistics of Sprout

Start at: 2017-12-21 06:39:21

End at: 2017-12-21 06:39:51

Below is generated by plot.py at 2017-12-21 10:28:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.64 Mbit/s

95th percentile per-packet one-way delay: 163.780 ms

Loss rate: 0.86%

-- Flow 1:

Average throughput: 0.36 Mbit/s

95th percentile per-packet one-way delay: 163.672 ms

Loss rate: 0.22%

-- Flow 2:

Average throughput: 0.28 Mbit/s

95th percentile per-packet one-way delay: 163.712 ms

Loss rate: 0.65%

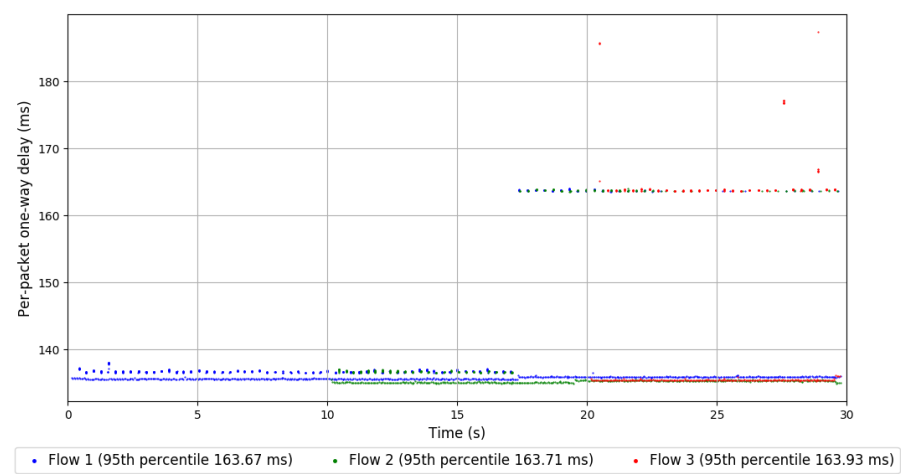
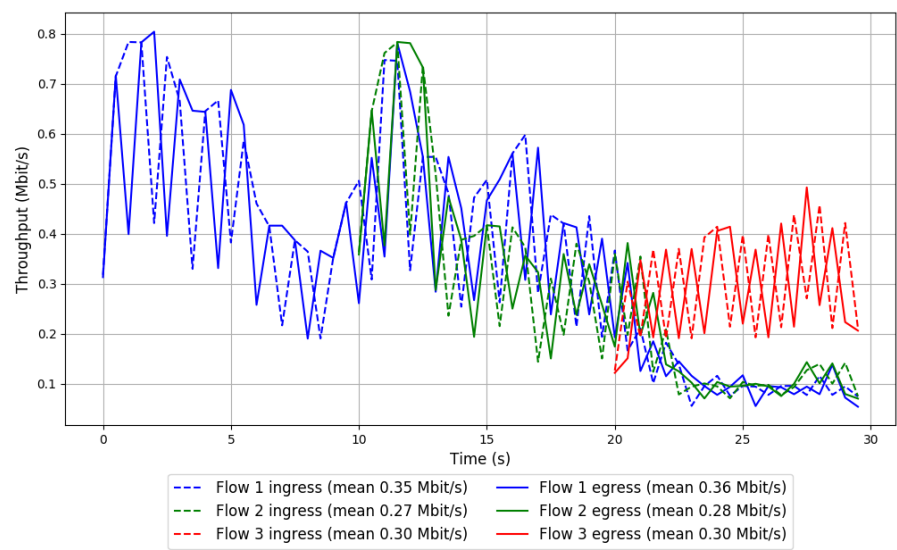
-- Flow 3:

Average throughput: 0.30 Mbit/s

95th percentile per-packet one-way delay: 163.931 ms

Loss rate: 3.47%

Run 7: Report of Sprout — Data Link



Run 8: Statistics of Sprout

Start at: 2017-12-21 06:54:30

End at: 2017-12-21 06:55:00

Below is generated by plot.py at 2017-12-21 10:28:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.72 Mbit/s

95th percentile per-packet one-way delay: 163.804 ms

Loss rate: 1.20%

-- Flow 1:

Average throughput: 0.33 Mbit/s

95th percentile per-packet one-way delay: 163.858 ms

Loss rate: 1.03%

-- Flow 2:

Average throughput: 0.38 Mbit/s

95th percentile per-packet one-way delay: 163.732 ms

Loss rate: 1.39%

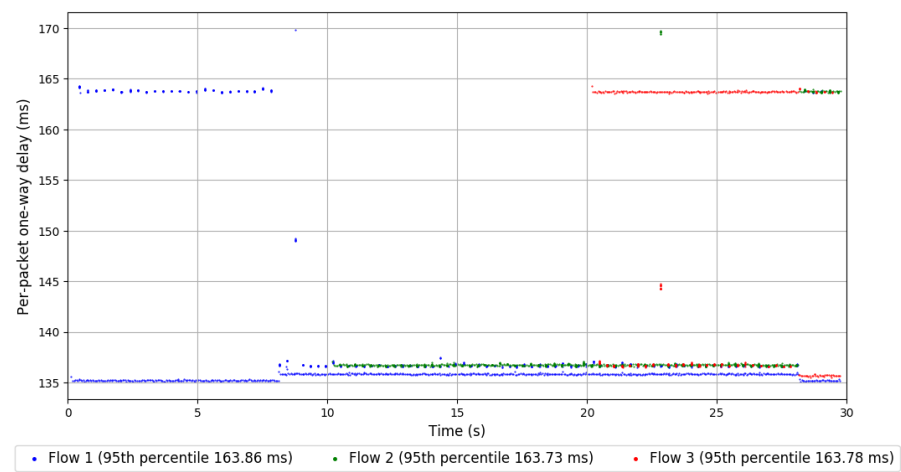
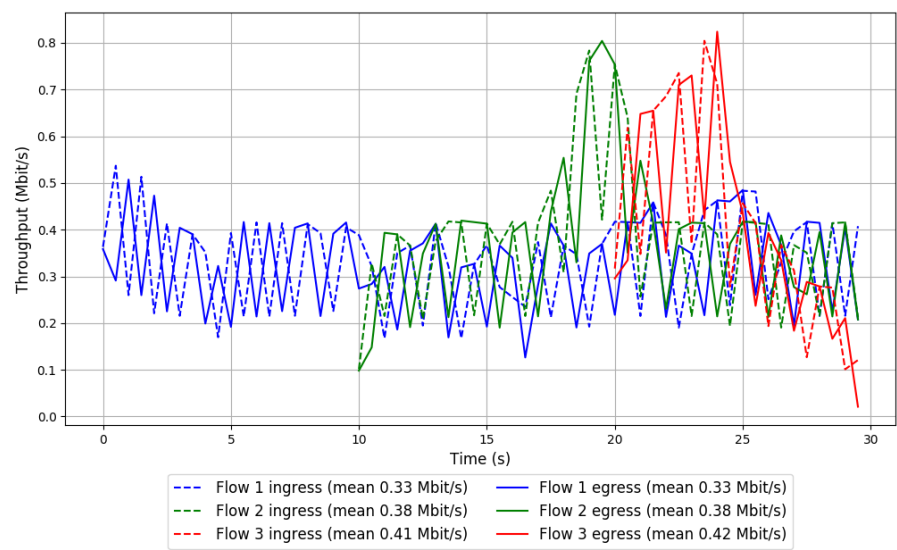
-- Flow 3:

Average throughput: 0.42 Mbit/s

95th percentile per-packet one-way delay: 163.782 ms

Loss rate: 1.28%

Run 8: Report of Sprout — Data Link



Run 9: Statistics of Sprout

Start at: 2017-12-21 07:10:43

End at: 2017-12-21 07:11:13

Below is generated by plot.py at 2017-12-21 10:28:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.57 Mbit/s

95th percentile per-packet one-way delay: 162.474 ms

Loss rate: 1.02%

-- Flow 1:

Average throughput: 0.28 Mbit/s

95th percentile per-packet one-way delay: 162.524 ms

Loss rate: 1.25%

-- Flow 2:

Average throughput: 0.35 Mbit/s

95th percentile per-packet one-way delay: 161.522 ms

Loss rate: 0.34%

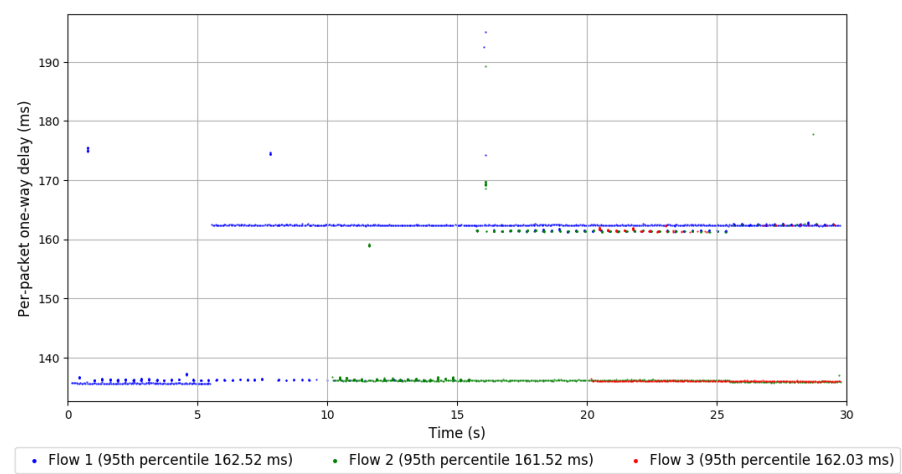
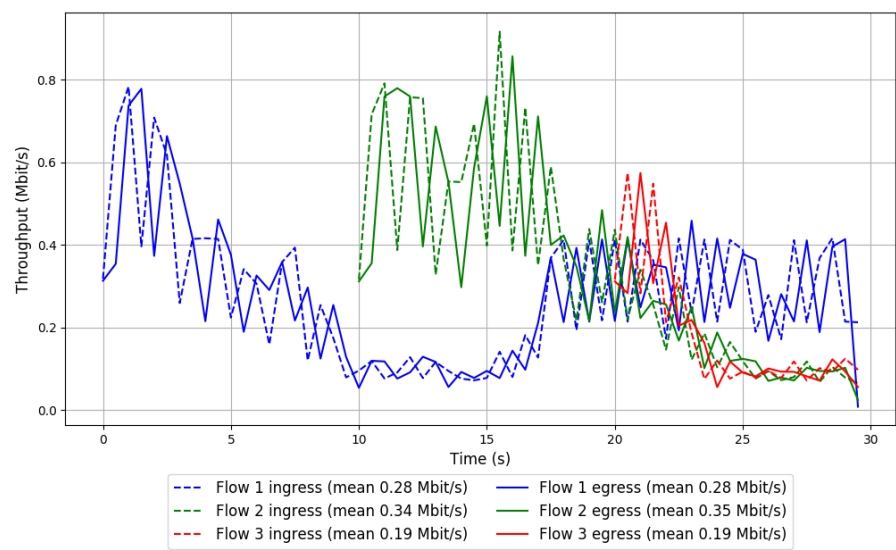
-- Flow 3:

Average throughput: 0.19 Mbit/s

95th percentile per-packet one-way delay: 162.028 ms

Loss rate: 2.53%

Run 9: Report of Sprout — Data Link



Run 10: Statistics of Sprout

Start at: 2017-12-21 07:26:19

End at: 2017-12-21 07:26:49

Below is generated by plot.py at 2017-12-21 10:28:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.51 Mbit/s

95th percentile per-packet one-way delay: 162.476 ms

Loss rate: 1.49%

-- Flow 1:

Average throughput: 0.27 Mbit/s

95th percentile per-packet one-way delay: 162.500 ms

Loss rate: 1.12%

-- Flow 2:

Average throughput: 0.12 Mbit/s

95th percentile per-packet one-way delay: 162.537 ms

Loss rate: 1.41%

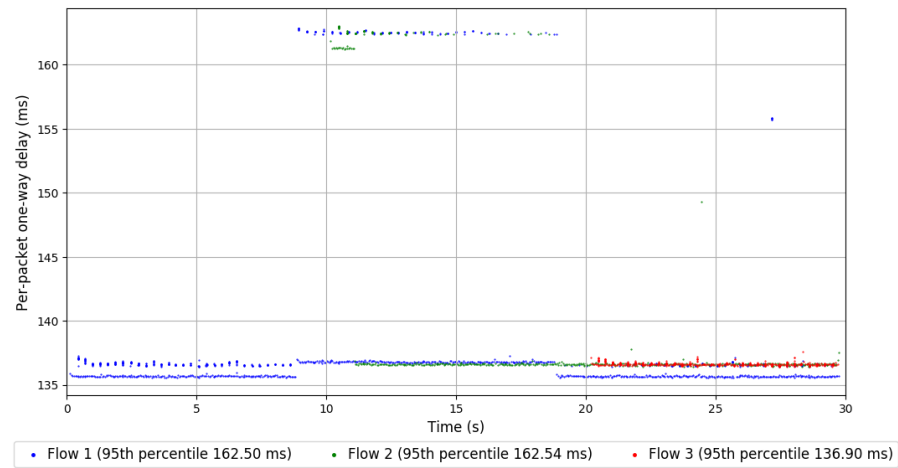
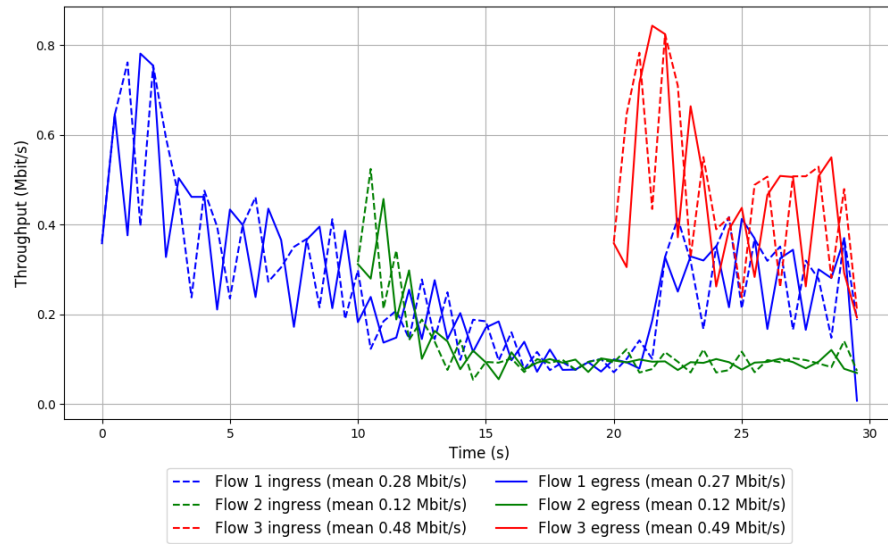
-- Flow 3:

Average throughput: 0.49 Mbit/s

95th percentile per-packet one-way delay: 136.899 ms

Loss rate: 2.19%

Run 10: Report of Sprout — Data Link

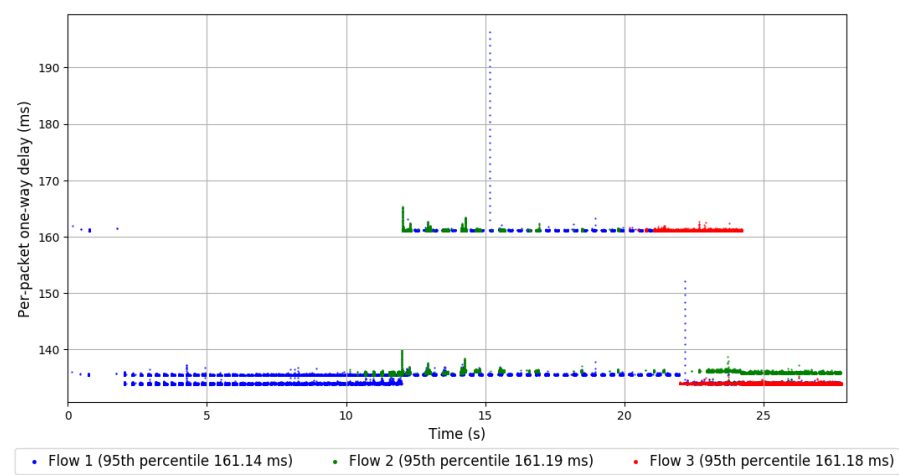
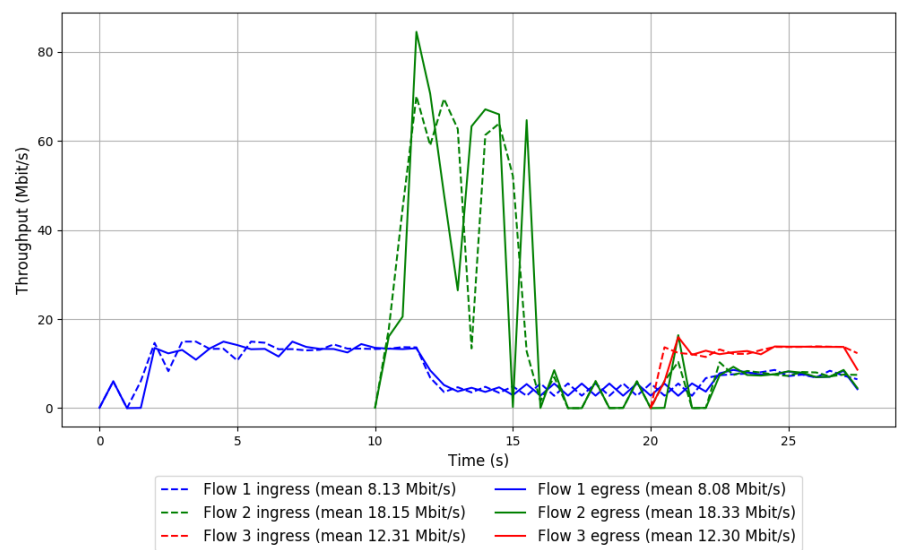


```
Run 1: Statistics of TaoVA-100x

Start at: 2017-12-21 05:02:34
End at: 2017-12-21 05:03:04

# Below is generated by plot.py at 2017-12-21 10:28:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.14 Mbit/s
95th percentile per-packet one-way delay: 161.177 ms
Loss rate: 1.50%
-- Flow 1:
Average throughput: 8.08 Mbit/s
95th percentile per-packet one-way delay: 161.138 ms
Loss rate: 1.62%
-- Flow 2:
Average throughput: 18.33 Mbit/s
95th percentile per-packet one-way delay: 161.194 ms
Loss rate: 0.72%
-- Flow 3:
Average throughput: 12.30 Mbit/s
95th percentile per-packet one-way delay: 161.180 ms
Loss rate: 3.82%
```


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

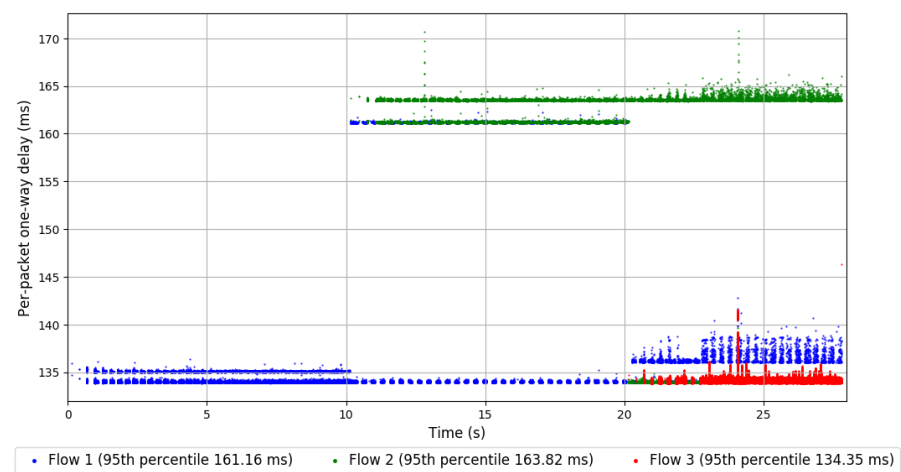
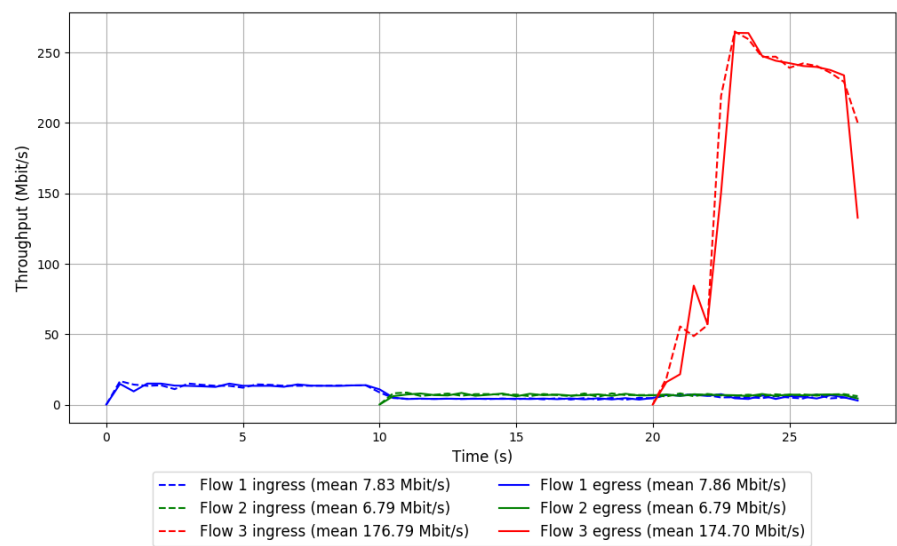


```
Run 2: Statistics of TaoVA-100x

Start at: 2017-12-21 05:17:56
End at: 2017-12-21 05:18:26

# Below is generated by plot.py at 2017-12-21 10:29:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 60.55 Mbit/s
95th percentile per-packet one-way delay: 161.183 ms
Loss rate: 3.86%
-- Flow 1:
Average throughput: 7.86 Mbit/s
95th percentile per-packet one-way delay: 161.161 ms
Loss rate: 0.65%
-- Flow 2:
Average throughput: 6.79 Mbit/s
95th percentile per-packet one-way delay: 163.821 ms
Loss rate: 1.62%
-- Flow 3:
Average throughput: 174.70 Mbit/s
95th percentile per-packet one-way delay: 134.350 ms
Loss rate: 4.55%
```

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



Run 3: Statistics of TaoVA-100x

Start at: 2017-12-21 05:33:45

End at: 2017-12-21 05:34:15

Below is generated by plot.py at 2017-12-21 10:31:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 125.56 Mbit/s

95th percentile per-packet one-way delay: 136.237 ms

Loss rate: 1.75%

-- Flow 1:

Average throughput: 5.87 Mbit/s

95th percentile per-packet one-way delay: 161.287 ms

Loss rate: 1.37%

-- Flow 2:

Average throughput: 186.59 Mbit/s

95th percentile per-packet one-way delay: 136.198 ms

Loss rate: 1.78%

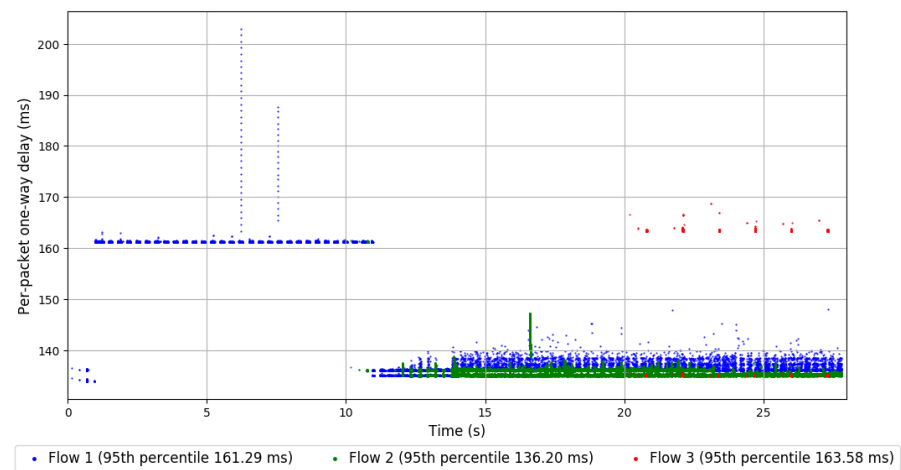
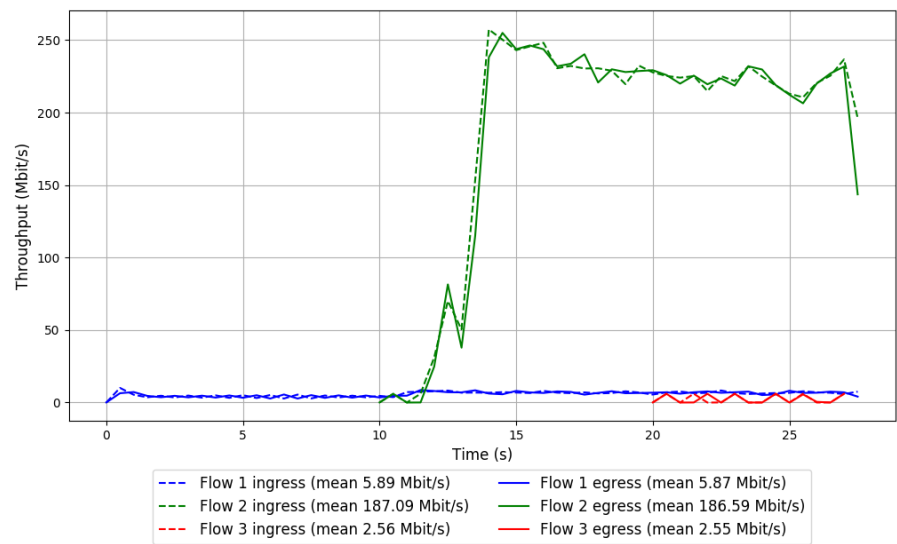
-- Flow 3:

Average throughput: 2.55 Mbit/s

95th percentile per-packet one-way delay: 163.578 ms

Loss rate: 0.00%

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



Run 4: Statistics of TaoVA-100x

Start at: 2017-12-21 05:48:39

End at: 2017-12-21 05:49:09

Below is generated by plot.py at 2017-12-21 10:33:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 191.42 Mbit/s

95th percentile per-packet one-way delay: 136.046 ms

Loss rate: 2.42%

-- Flow 1:

Average throughput: 13.06 Mbit/s

95th percentile per-packet one-way delay: 135.966 ms

Loss rate: 1.60%

-- Flow 2:

Average throughput: 196.83 Mbit/s

95th percentile per-packet one-way delay: 136.037 ms

Loss rate: 1.69%

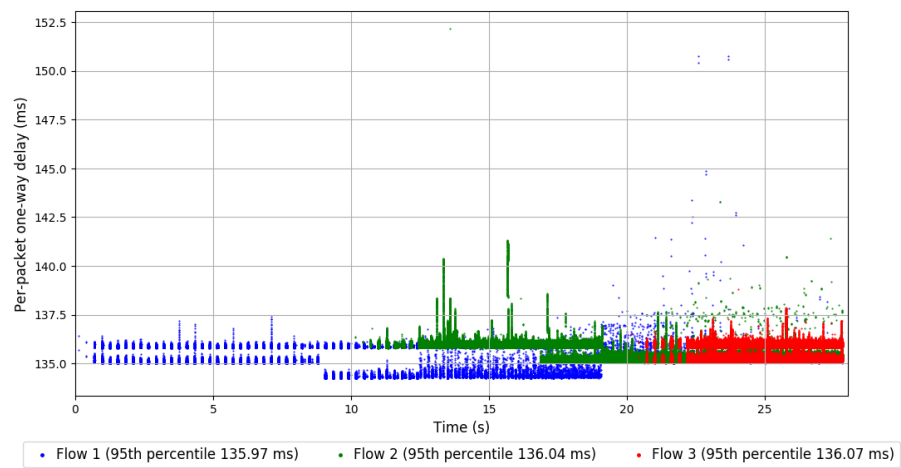
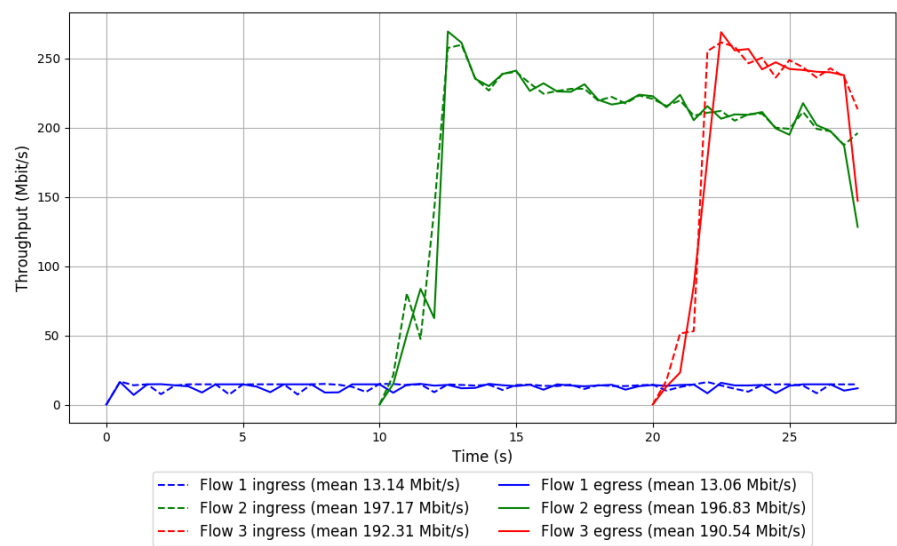
-- Flow 3:

Average throughput: 190.54 Mbit/s

95th percentile per-packet one-way delay: 136.069 ms

Loss rate: 4.32%

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



Run 5: Statistics of TaoVA-100x

Start at: 2017-12-21 06:04:30

End at: 2017-12-21 06:05:00

Below is generated by plot.py at 2017-12-21 10:33:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 14.25 Mbit/s

95th percentile per-packet one-way delay: 163.610 ms

Loss rate: 1.65%

-- Flow 1:

Average throughput: 14.24 Mbit/s

95th percentile per-packet one-way delay: 163.277 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 11.74 Mbit/s

95th percentile per-packet one-way delay: 163.275 ms

Loss rate: 1.44%

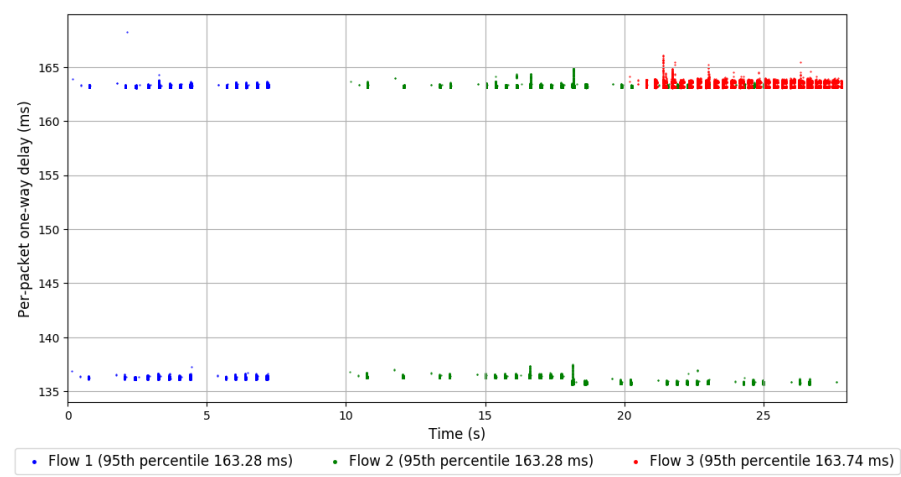
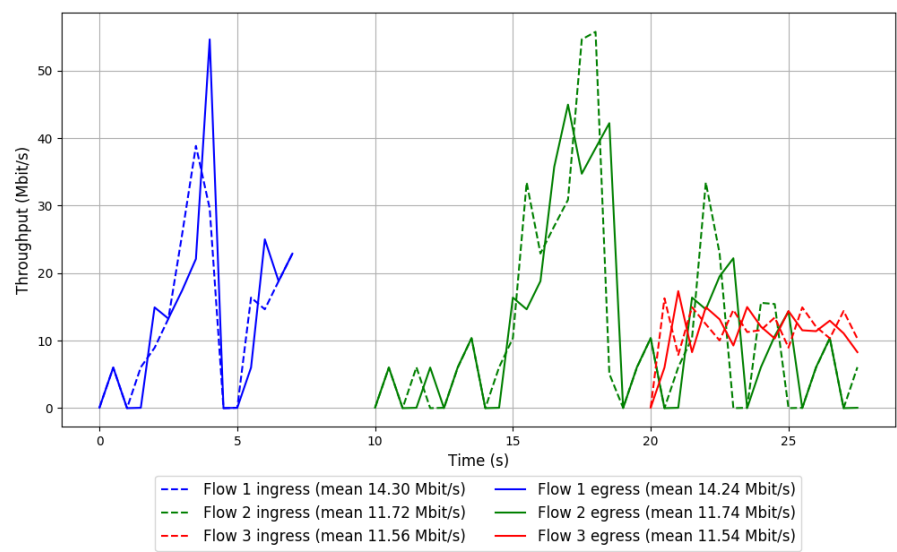
-- Flow 3:

Average throughput: 11.54 Mbit/s

95th percentile per-packet one-way delay: 163.741 ms

Loss rate: 3.96%

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



Run 6: Statistics of TaoVA-100x

Start at: 2017-12-21 06:19:40

End at: 2017-12-21 06:20:10

Below is generated by plot.py at 2017-12-21 10:33:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 45.46 Mbit/s

95th percentile per-packet one-way delay: 163.211 ms

Loss rate: 0.10%

-- Flow 1:

Average throughput: 59.74 Mbit/s

95th percentile per-packet one-way delay: 163.197 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 7.38 Mbit/s

95th percentile per-packet one-way delay: 163.236 ms

Loss rate: 0.95%

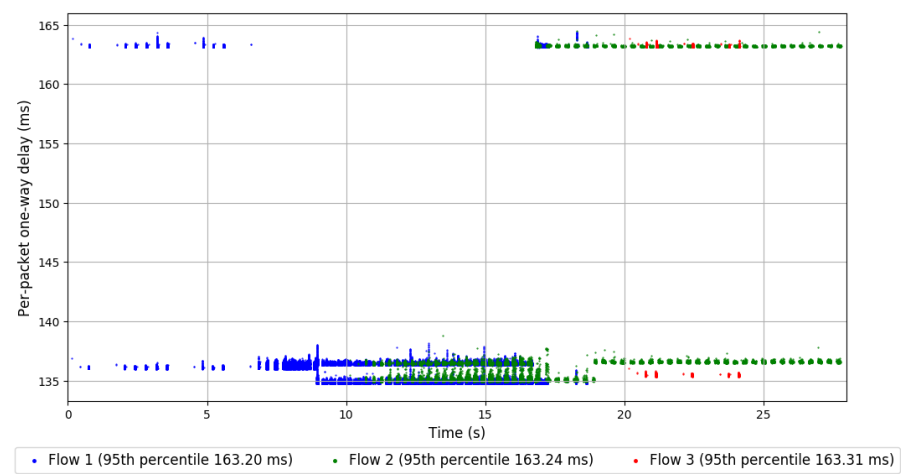
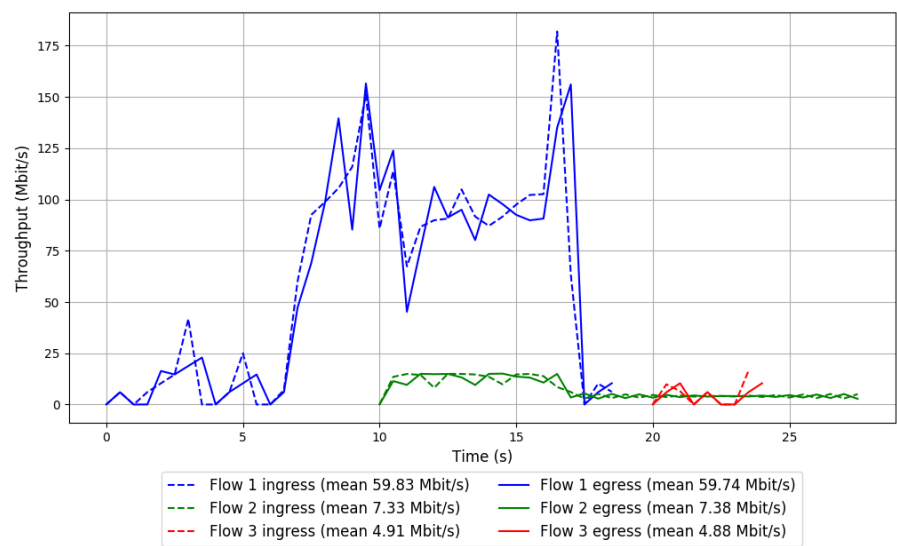
-- Flow 3:

Average throughput: 4.88 Mbit/s

95th percentile per-packet one-way delay: 163.307 ms

Loss rate: 0.00%

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



Run 7: Statistics of TaoVA-100x

Start at: 2017-12-21 06:35:09

End at: 2017-12-21 06:35:39

Below is generated by plot.py at 2017-12-21 10:33:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 59.44 Mbit/s

95th percentile per-packet one-way delay: 163.568 ms

Loss rate: 0.72%

-- Flow 1:

Average throughput: 9.49 Mbit/s

95th percentile per-packet one-way delay: 163.545 ms

Loss rate: 0.60%

-- Flow 2:

Average throughput: 81.61 Mbit/s

95th percentile per-packet one-way delay: 163.533 ms

Loss rate: 0.00%

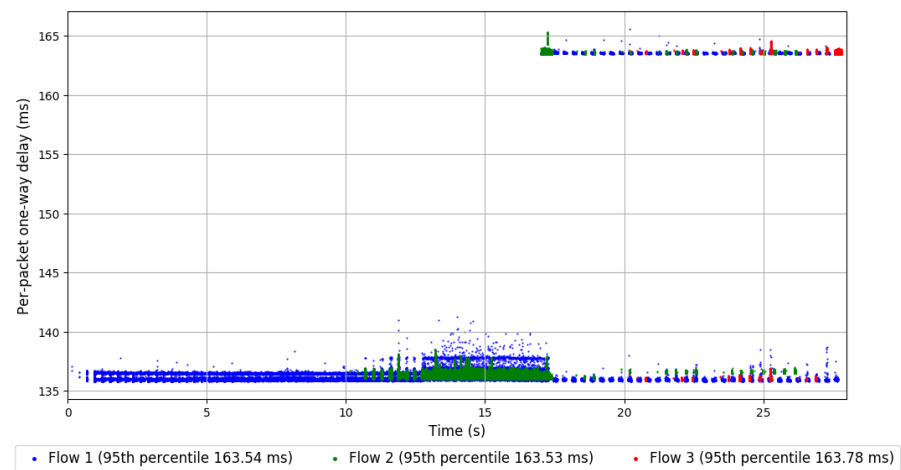
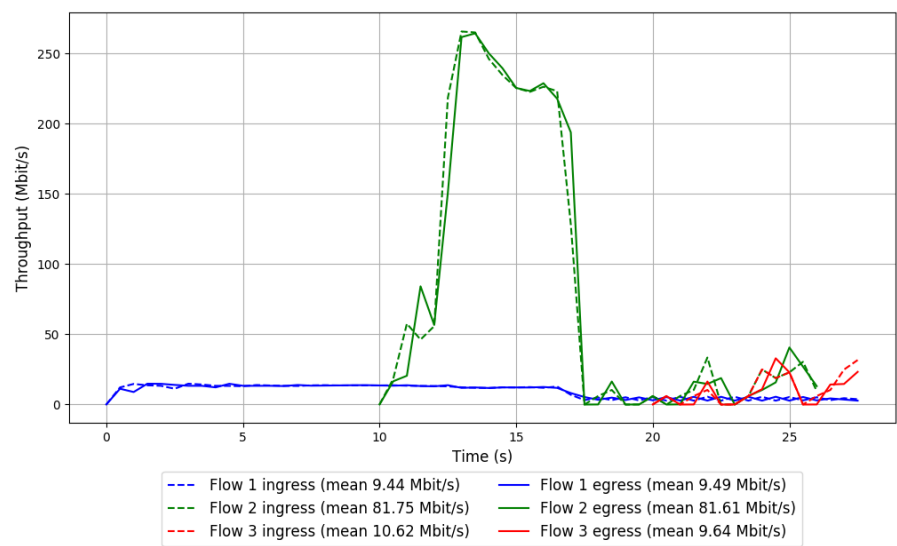
-- Flow 3:

Average throughput: 9.64 Mbit/s

95th percentile per-packet one-way delay: 163.775 ms

Loss rate: 12.35%

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



Run 8: Statistics of TaoVA-100x

Start at: 2017-12-21 06:50:39

End at: 2017-12-21 06:51:09

Below is generated by plot.py at 2017-12-21 10:33:27

Datalink statistics

-- Total of 3 flows:

Average throughput: 67.45 Mbit/s

95th percentile per-packet one-way delay: 136.709 ms

Loss rate: 3.62%

-- Flow 1:

Average throughput: 7.58 Mbit/s

95th percentile per-packet one-way delay: 163.566 ms

Loss rate: 1.07%

-- Flow 2:

Average throughput: 88.32 Mbit/s

95th percentile per-packet one-way delay: 136.655 ms

Loss rate: 3.95%

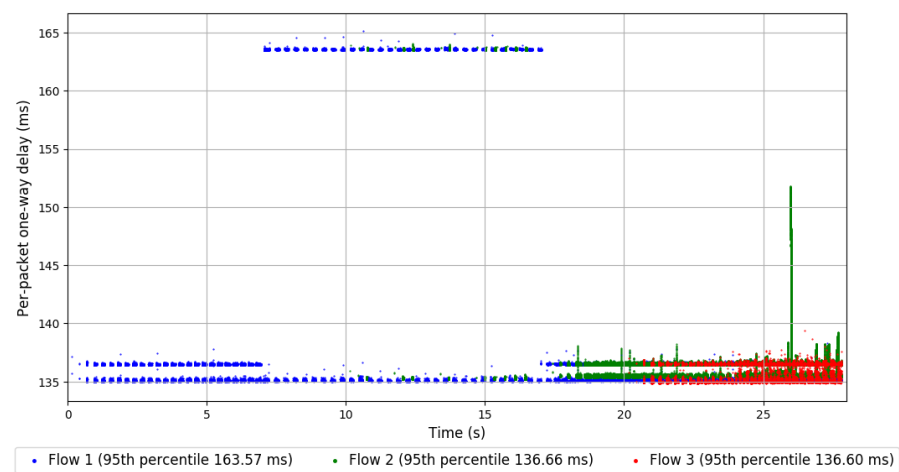
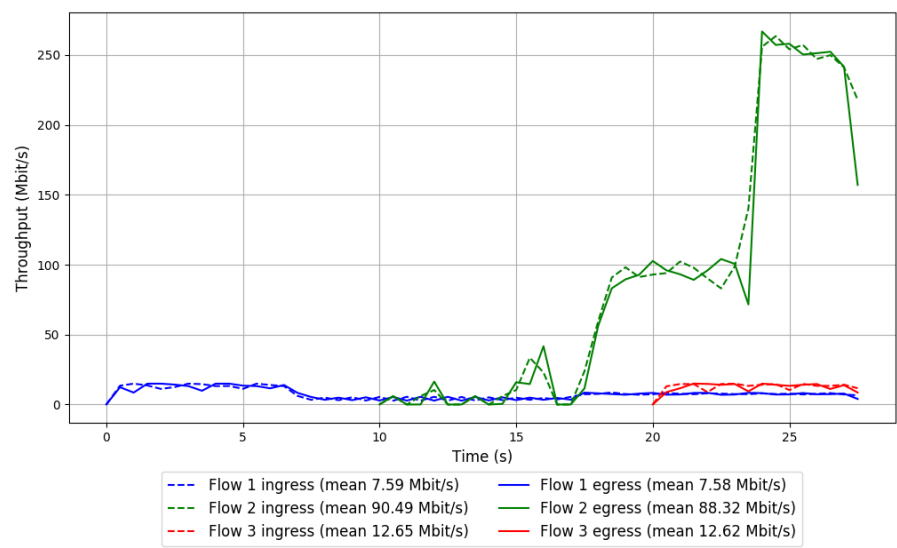
-- Flow 3:

Average throughput: 12.62 Mbit/s

95th percentile per-packet one-way delay: 136.596 ms

Loss rate: 3.69%

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

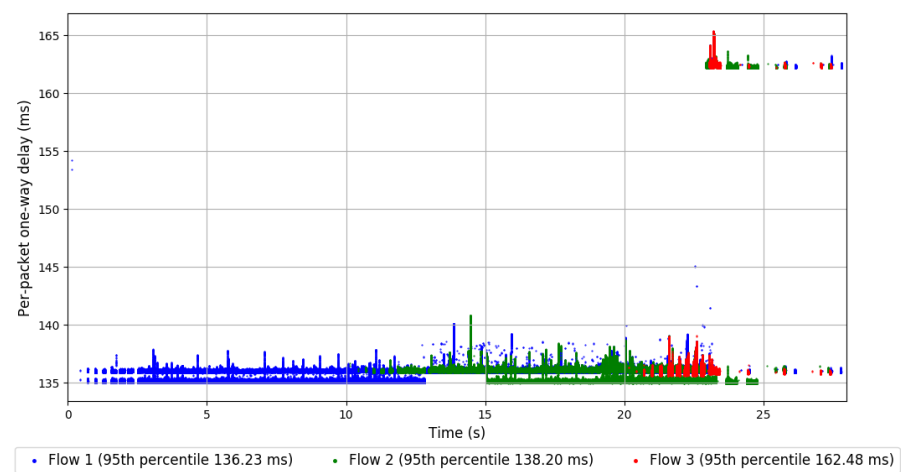
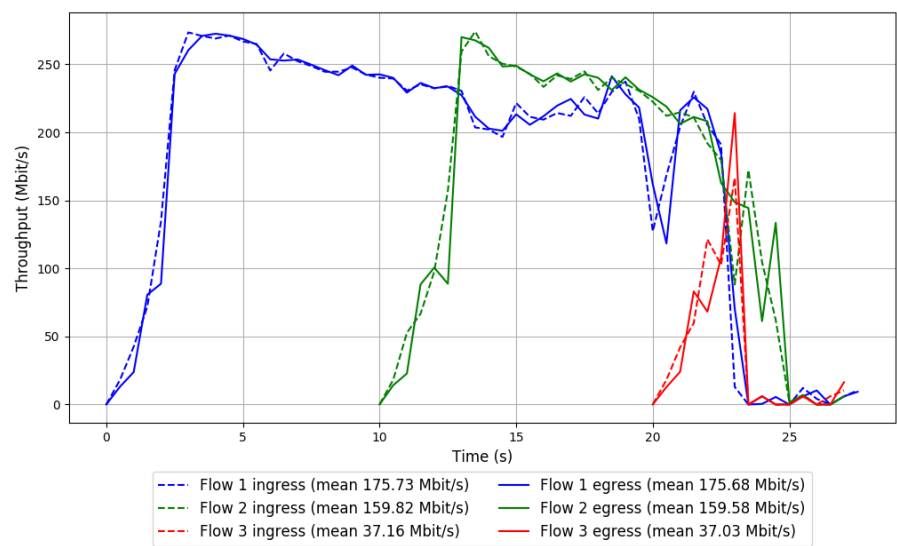


```
Run 9: Statistics of TaoVA-100x

Start at: 2017-12-21 07:06:13
End at: 2017-12-21 07:06:43

# Below is generated by plot.py at 2017-12-21 10:36:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 284.73 Mbit/s
95th percentile per-packet one-way delay: 136.466 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 175.68 Mbit/s
95th percentile per-packet one-way delay: 136.230 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 159.58 Mbit/s
95th percentile per-packet one-way delay: 138.196 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 37.03 Mbit/s
95th percentile per-packet one-way delay: 162.482 ms
Loss rate: 0.00%
```


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

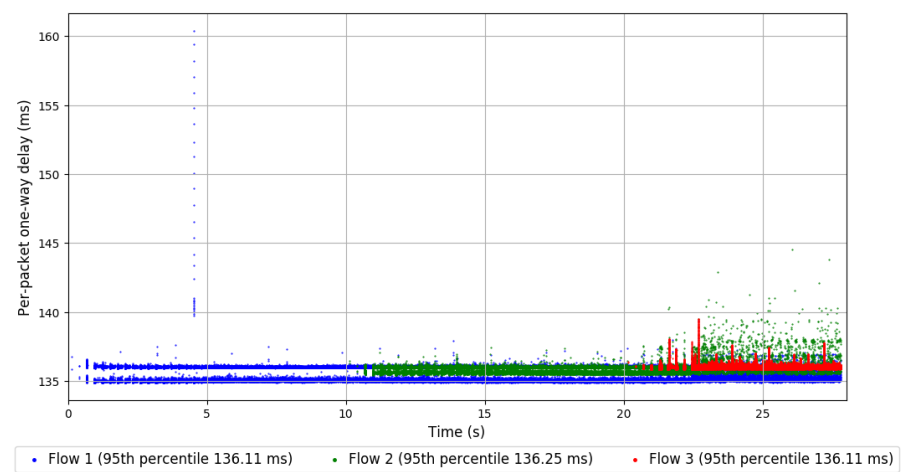
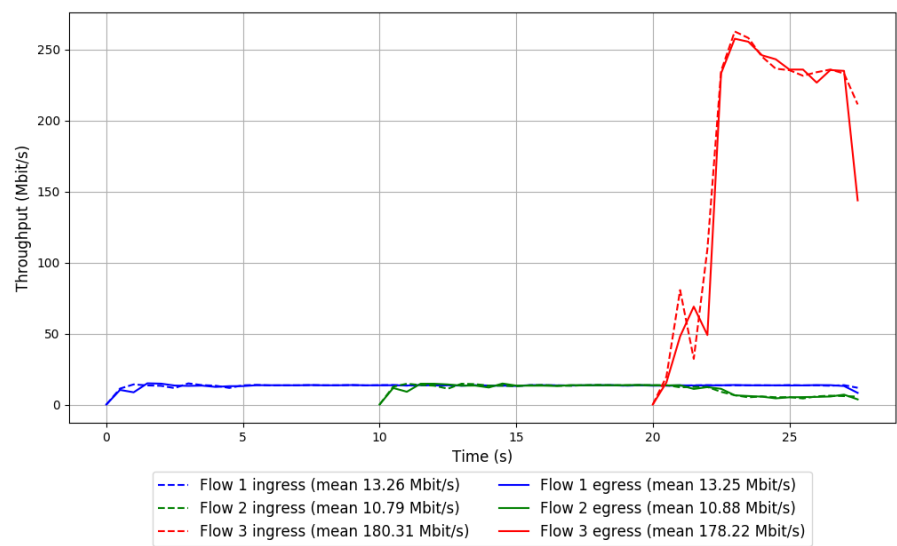


```
Run 10: Statistics of TaoVA-100x

Start at: 2017-12-21 07:22:11
End at: 2017-12-21 07:22:41

# Below is generated by plot.py at 2017-12-21 10:36:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 69.52 Mbit/s
95th percentile per-packet one-way delay: 136.113 ms
Loss rate: 3.55%
-- Flow 1:
Average throughput: 13.25 Mbit/s
95th percentile per-packet one-way delay: 136.111 ms
Loss rate: 1.07%
-- Flow 2:
Average throughput: 10.88 Mbit/s
95th percentile per-packet one-way delay: 136.247 ms
Loss rate: 0.75%
-- Flow 3:
Average throughput: 178.22 Mbit/s
95th percentile per-packet one-way delay: 136.108 ms
Loss rate: 4.58%
```

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



Run 1: Statistics of TCP Vegas

Start at: 2017-12-21 04:55:45

End at: 2017-12-21 04:56:15

Below is generated by plot.py at 2017-12-21 10:36:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 73.21 Mbit/s

95th percentile per-packet one-way delay: 146.262 ms

Loss rate: 1.80%

-- Flow 1:

Average throughput: 2.92 Mbit/s

95th percentile per-packet one-way delay: 144.614 ms

Loss rate: 1.64%

-- Flow 2:

Average throughput: 72.97 Mbit/s

95th percentile per-packet one-way delay: 144.524 ms

Loss rate: 0.98%

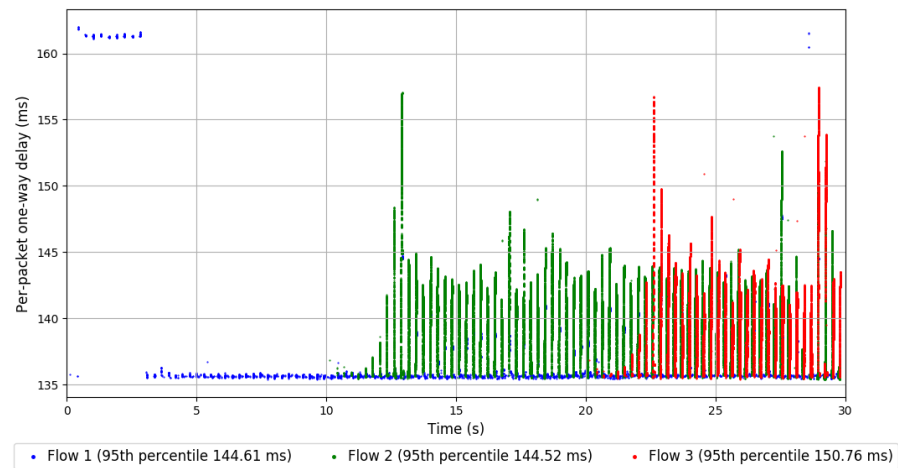
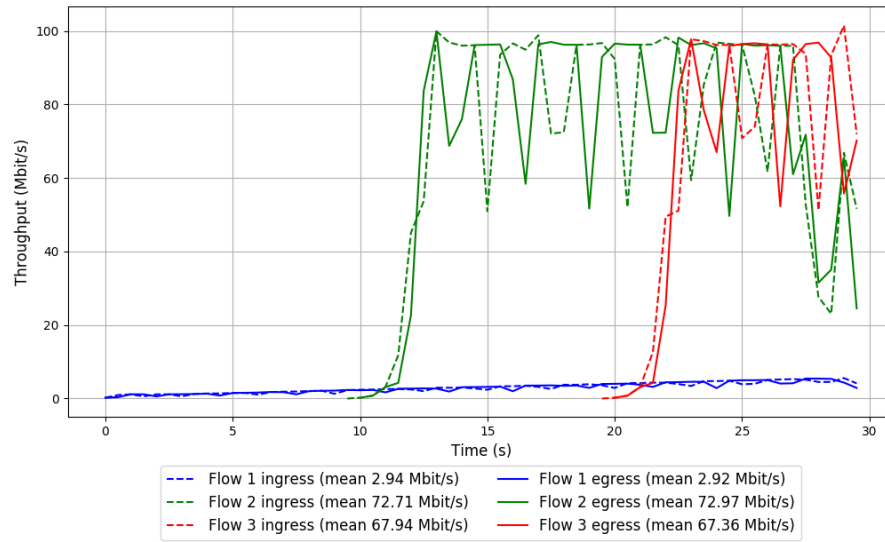
-- Flow 3:

Average throughput: 67.36 Mbit/s

95th percentile per-packet one-way delay: 150.758 ms

Loss rate: 3.56%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2017-12-21 05:11:21

End at: 2017-12-21 05:11:51

Below is generated by plot.py at 2017-12-21 10:36:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 2.80 Mbit/s

95th percentile per-packet one-way delay: 161.592 ms

Loss rate: 1.91%

-- Flow 1:

Average throughput: 1.33 Mbit/s

95th percentile per-packet one-way delay: 161.595 ms

Loss rate: 1.26%

-- Flow 2:

Average throughput: 1.48 Mbit/s

95th percentile per-packet one-way delay: 161.574 ms

Loss rate: 1.90%

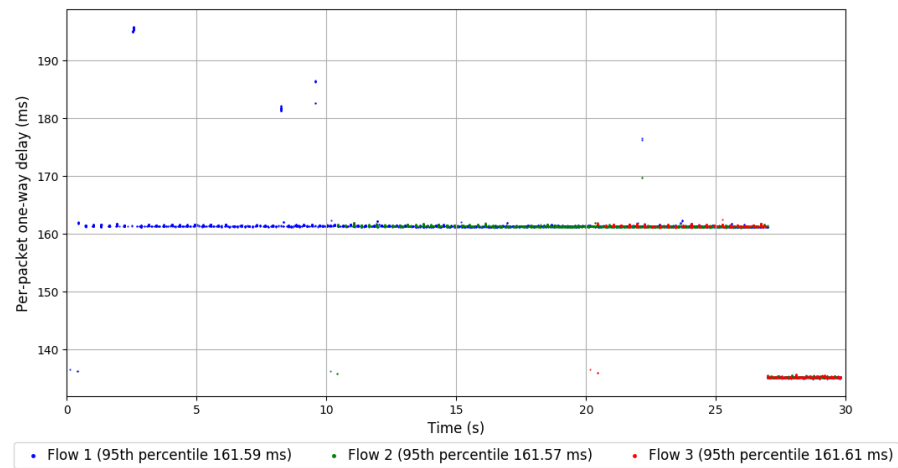
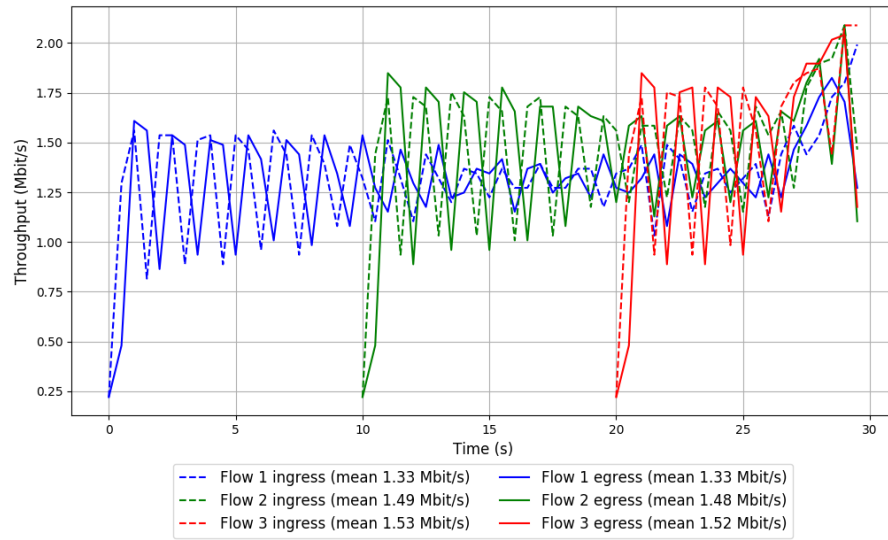
-- Flow 3:

Average throughput: 1.52 Mbit/s

95th percentile per-packet one-way delay: 161.611 ms

Loss rate: 3.63%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2017-12-21 05:26:48

End at: 2017-12-21 05:27:18

Below is generated by plot.py at 2017-12-21 10:36:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 72.83 Mbit/s

95th percentile per-packet one-way delay: 161.820 ms

Loss rate: 1.11%

-- Flow 1:

Average throughput: 55.70 Mbit/s

95th percentile per-packet one-way delay: 161.693 ms

Loss rate: 0.99%

-- Flow 2:

Average throughput: 25.17 Mbit/s

95th percentile per-packet one-way delay: 161.999 ms

Loss rate: 1.47%

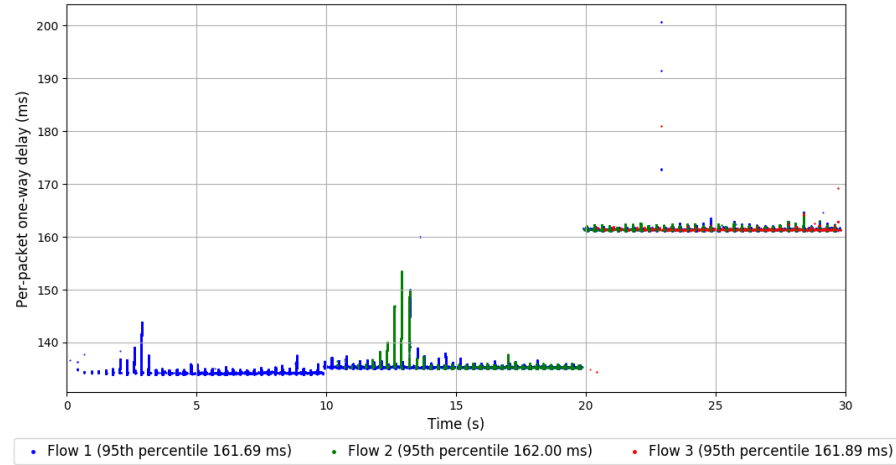
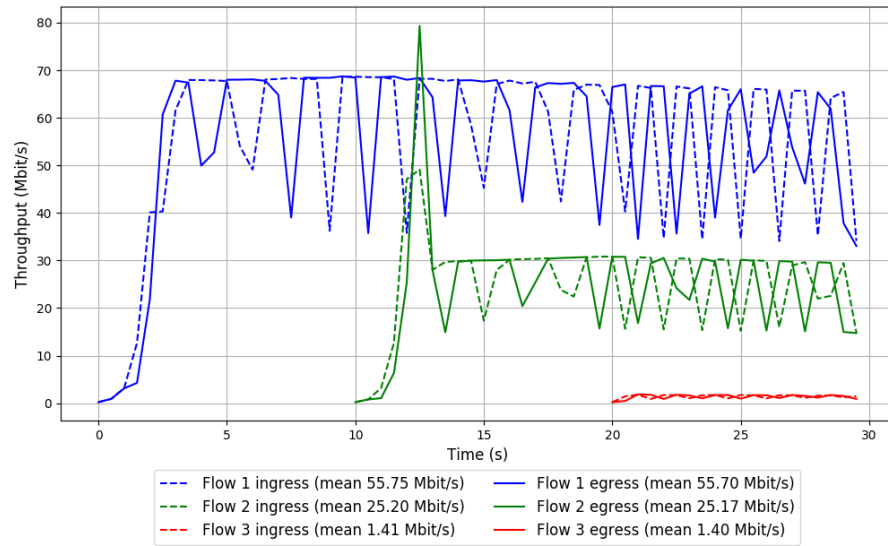
-- Flow 3:

Average throughput: 1.40 Mbit/s

95th percentile per-packet one-way delay: 161.894 ms

Loss rate: 3.18%

Run 3: Report of TCP Vegas — Data Link



Run 4: Statistics of TCP Vegas

Start at: 2017-12-21 05:42:14

End at: 2017-12-21 05:42:44

Below is generated by plot.py at 2017-12-21 10:36:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 30.56 Mbit/s

95th percentile per-packet one-way delay: 161.966 ms

Loss rate: 1.46%

-- Flow 1:

Average throughput: 15.43 Mbit/s

95th percentile per-packet one-way delay: 161.583 ms

Loss rate: 1.35%

-- Flow 2:

Average throughput: 22.14 Mbit/s

95th percentile per-packet one-way delay: 162.267 ms

Loss rate: 1.51%

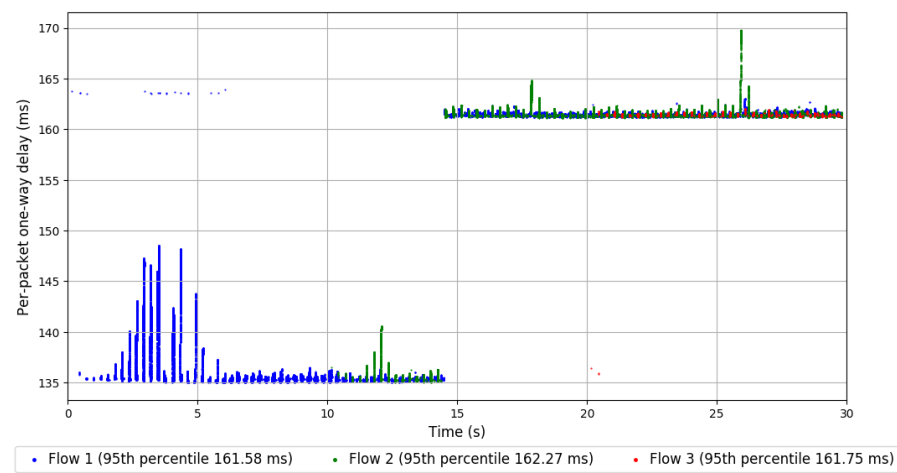
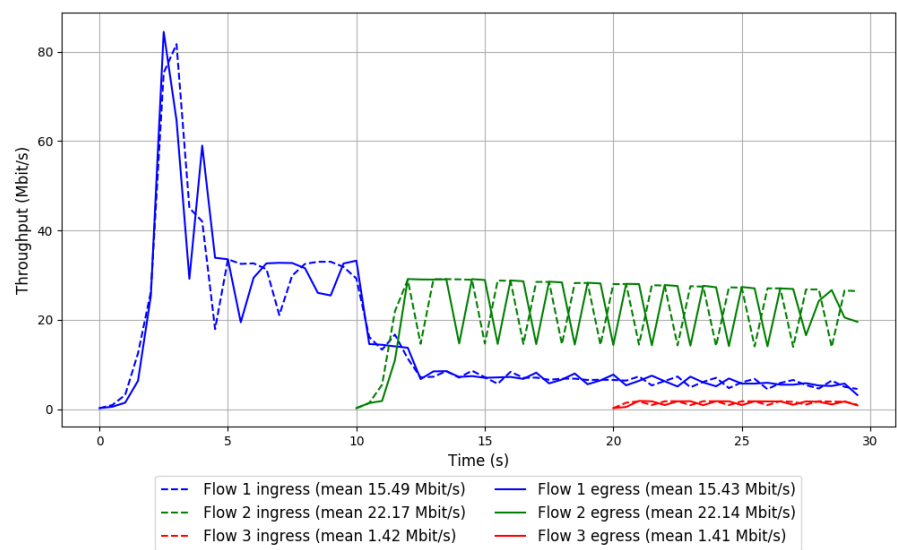
-- Flow 3:

Average throughput: 1.41 Mbit/s

95th percentile per-packet one-way delay: 161.751 ms

Loss rate: 3.15%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2017-12-21 05:57:40

End at: 2017-12-21 05:58:10

Below is generated by plot.py at 2017-12-21 10:36:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 36.22 Mbit/s

95th percentile per-packet one-way delay: 165.001 ms

Loss rate: 2.77%

-- Flow 1:

Average throughput: 35.02 Mbit/s

95th percentile per-packet one-way delay: 165.043 ms

Loss rate: 2.80%

-- Flow 2:

Average throughput: 1.42 Mbit/s

95th percentile per-packet one-way delay: 163.553 ms

Loss rate: 1.56%

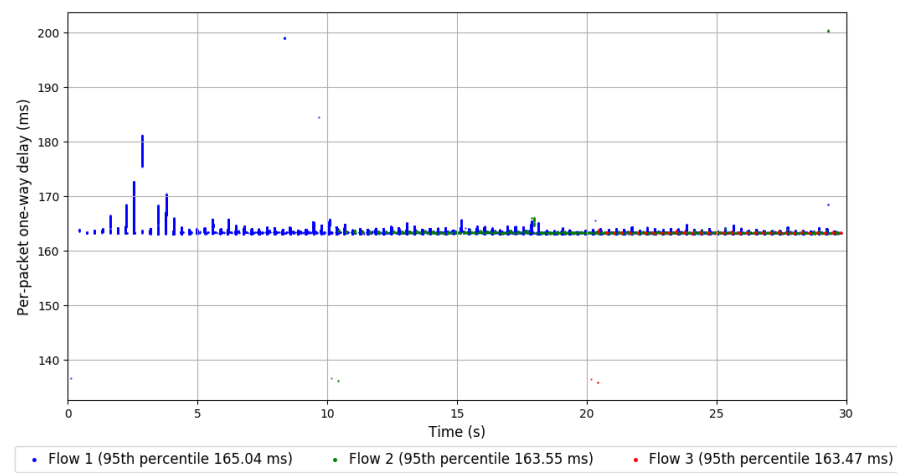
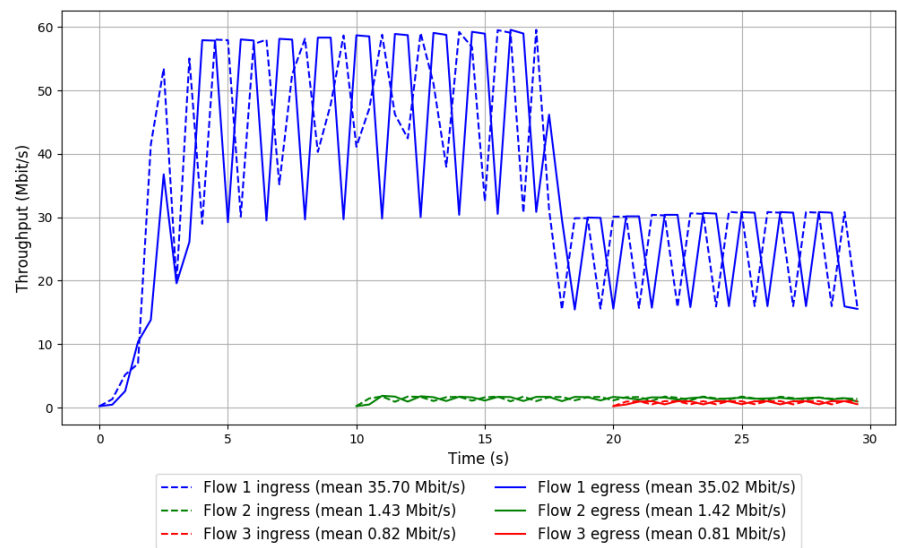
-- Flow 3:

Average throughput: 0.81 Mbit/s

95th percentile per-packet one-way delay: 163.469 ms

Loss rate: 3.11%

Run 5: Report of TCP Vegas — Data Link



Run 6: Statistics of TCP Vegas

Start at: 2017-12-21 06:13:07

End at: 2017-12-21 06:13:37

Below is generated by plot.py at 2017-12-21 10:36:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 19.17 Mbit/s

95th percentile per-packet one-way delay: 172.954 ms

Loss rate: 1.59%

-- Flow 1:

Average throughput: 1.40 Mbit/s

95th percentile per-packet one-way delay: 163.668 ms

Loss rate: 1.03%

-- Flow 2:

Average throughput: 1.42 Mbit/s

95th percentile per-packet one-way delay: 163.627 ms

Loss rate: 1.53%

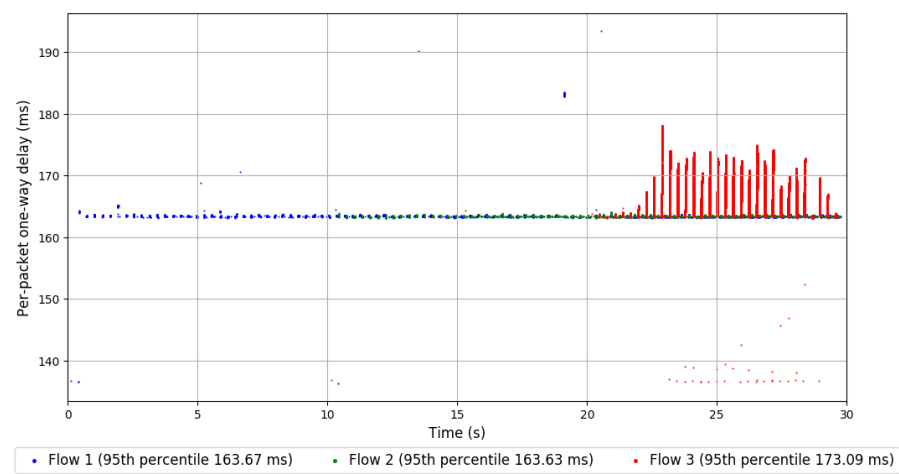
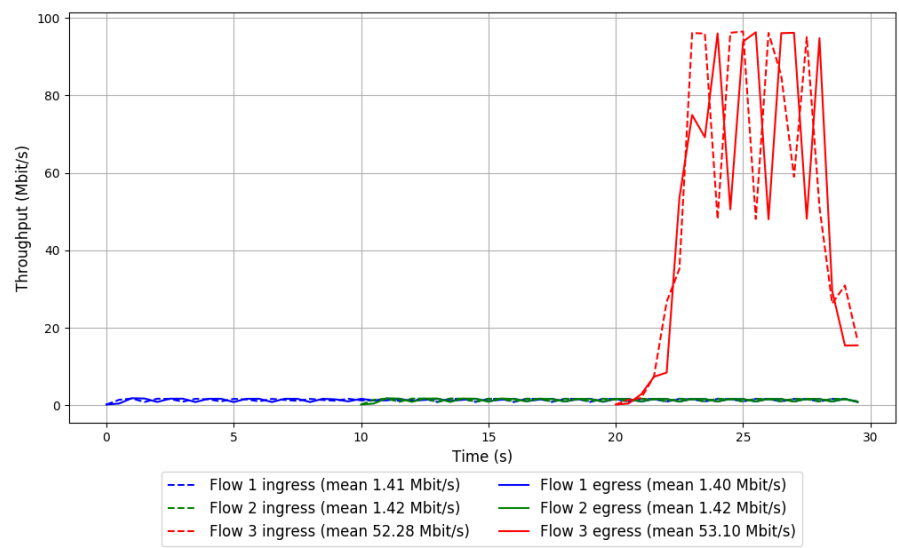
-- Flow 3:

Average throughput: 53.10 Mbit/s

95th percentile per-packet one-way delay: 173.094 ms

Loss rate: 1.64%

Run 6: Report of TCP Vegas — Data Link



Run 7: Statistics of TCP Vegas

Start at: 2017-12-21 06:28:30

End at: 2017-12-21 06:29:00

Below is generated by plot.py at 2017-12-21 10:36:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 14.10 Mbit/s

95th percentile per-packet one-way delay: 163.646 ms

Loss rate: 2.68%

-- Flow 1:

Average throughput: 1.20 Mbit/s

95th percentile per-packet one-way delay: 163.839 ms

Loss rate: 2.04%

-- Flow 2:

Average throughput: 1.67 Mbit/s

95th percentile per-packet one-way delay: 163.890 ms

Loss rate: 2.50%

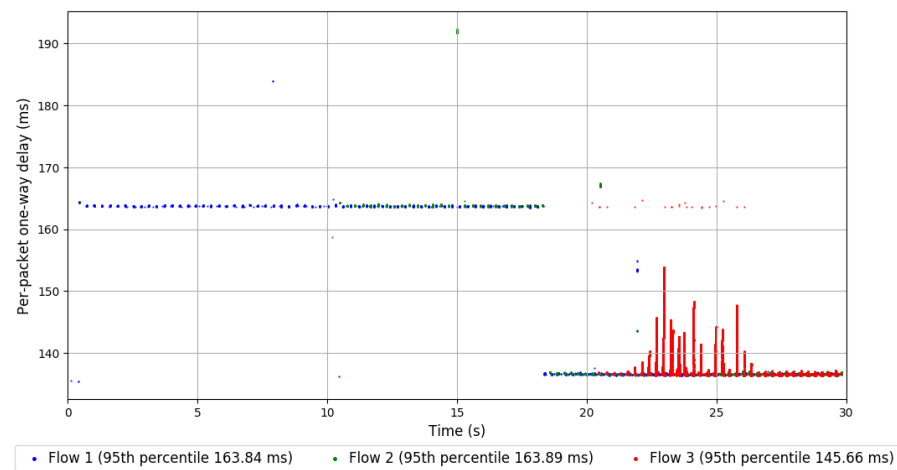
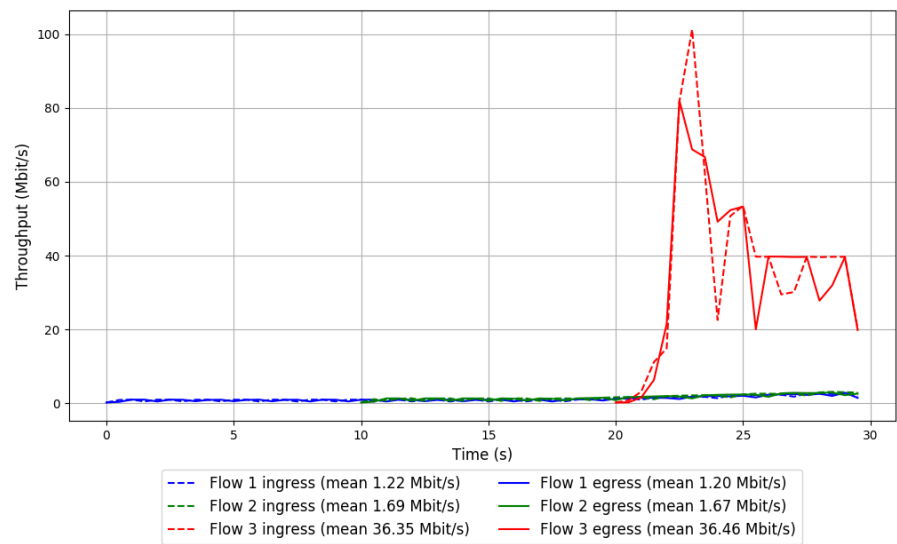
-- Flow 3:

Average throughput: 36.46 Mbit/s

95th percentile per-packet one-way delay: 145.659 ms

Loss rate: 2.76%

Run 7: Report of TCP Vegas — Data Link



Run 8: Statistics of TCP Vegas

Start at: 2017-12-21 06:44:03

End at: 2017-12-21 06:44:33

Below is generated by plot.py at 2017-12-21 10:36:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 16.32 Mbit/s

95th percentile per-packet one-way delay: 164.363 ms

Loss rate: 3.28%

-- Flow 1:

Average throughput: 1.36 Mbit/s

95th percentile per-packet one-way delay: 163.902 ms

Loss rate: 1.43%

-- Flow 2:

Average throughput: 1.51 Mbit/s

95th percentile per-packet one-way delay: 163.874 ms

Loss rate: 1.82%

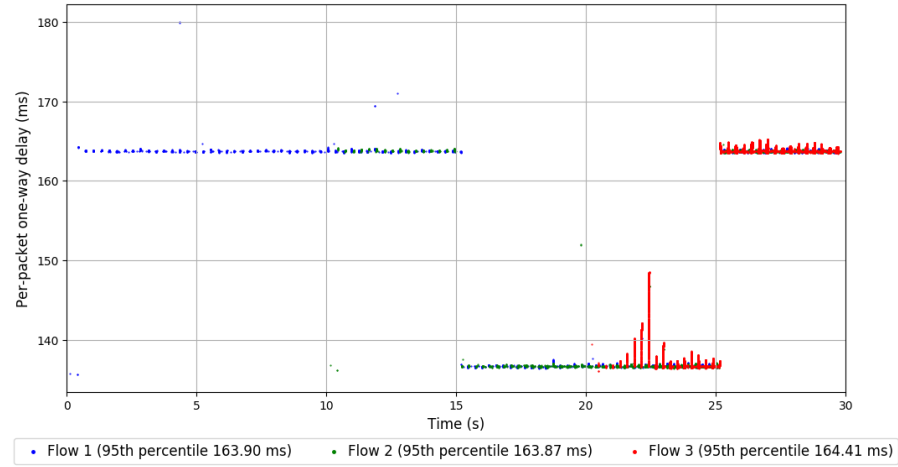
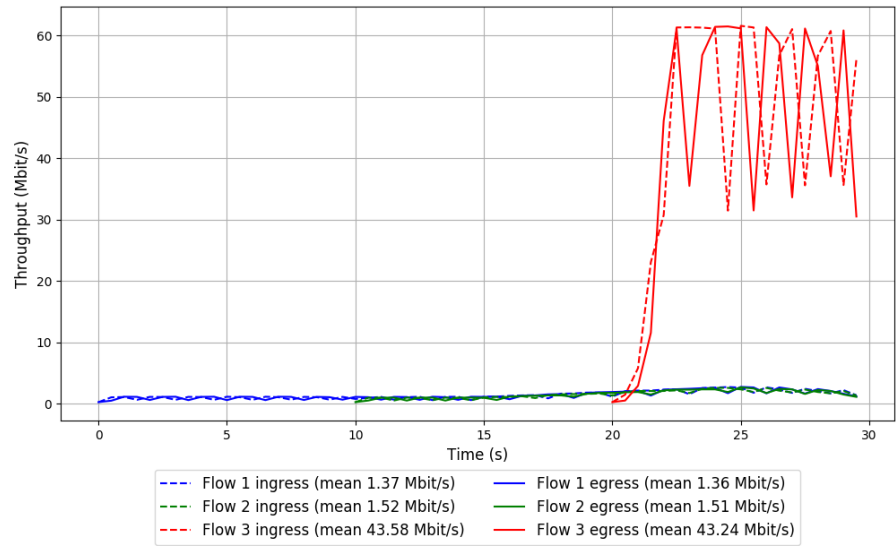
-- Flow 3:

Average throughput: 43.24 Mbit/s

95th percentile per-packet one-way delay: 164.414 ms

Loss rate: 3.56%

Run 8: Report of TCP Vegas — Data Link



Run 9: Statistics of TCP Vegas

Start at: 2017-12-21 06:59:13

End at: 2017-12-21 06:59:43

Below is generated by plot.py at 2017-12-21 10:36:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 63.68 Mbit/s

95th percentile per-packet one-way delay: 144.518 ms

Loss rate: 1.80%

-- Flow 1:

Average throughput: 4.46 Mbit/s

95th percentile per-packet one-way delay: 137.067 ms

Loss rate: 2.68%

-- Flow 2:

Average throughput: 80.07 Mbit/s

95th percentile per-packet one-way delay: 144.735 ms

Loss rate: 1.52%

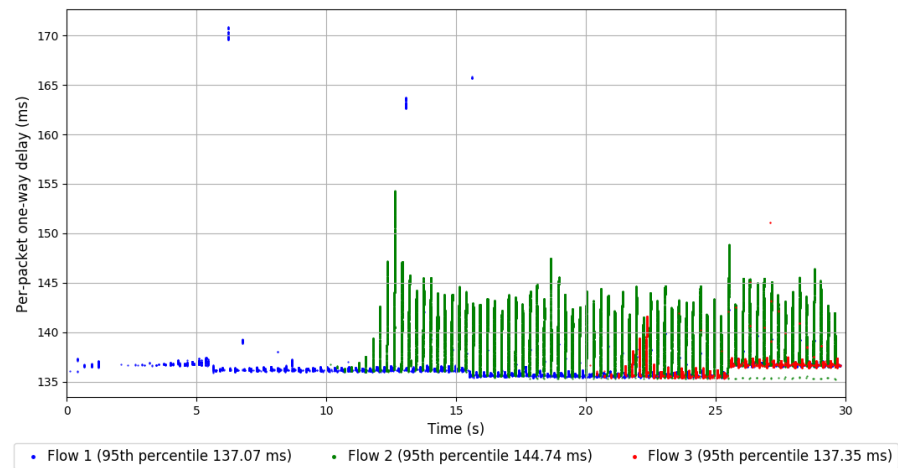
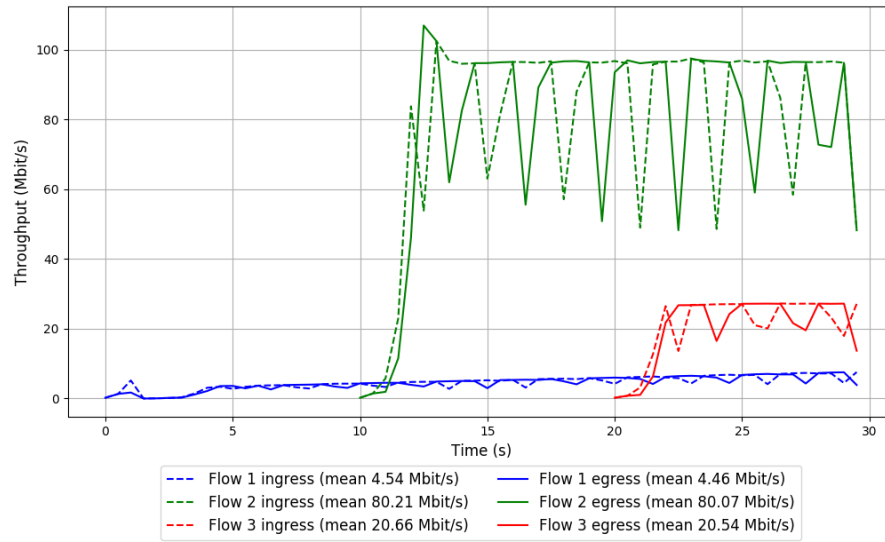
-- Flow 3:

Average throughput: 20.54 Mbit/s

95th percentile per-packet one-way delay: 137.349 ms

Loss rate: 3.33%

Run 9: Report of TCP Vegas — Data Link



Run 10: Statistics of TCP Vegas

Start at: 2017-12-21 07:15:25

End at: 2017-12-21 07:15:55

Below is generated by plot.py at 2017-12-21 10:36:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 33.79 Mbit/s

95th percentile per-packet one-way delay: 162.220 ms

Loss rate: 2.31%

-- Flow 1:

Average throughput: 12.26 Mbit/s

95th percentile per-packet one-way delay: 161.541 ms

Loss rate: 3.47%

-- Flow 2:

Average throughput: 22.54 Mbit/s

95th percentile per-packet one-way delay: 162.528 ms

Loss rate: 0.81%

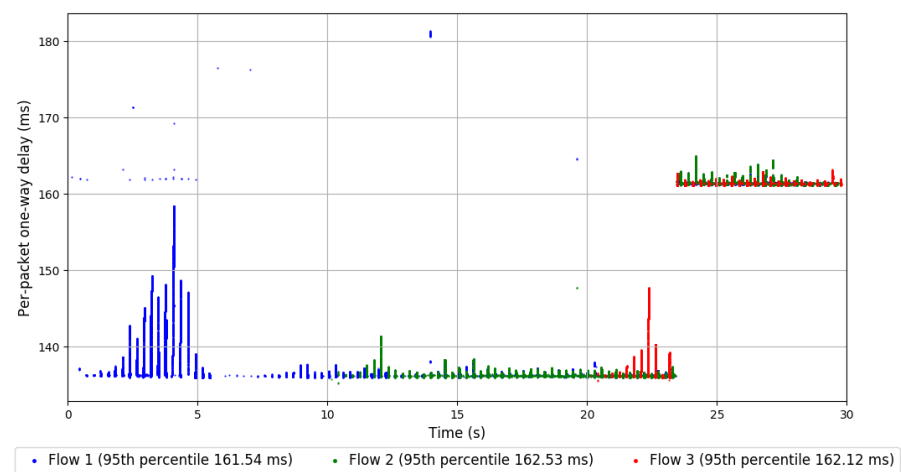
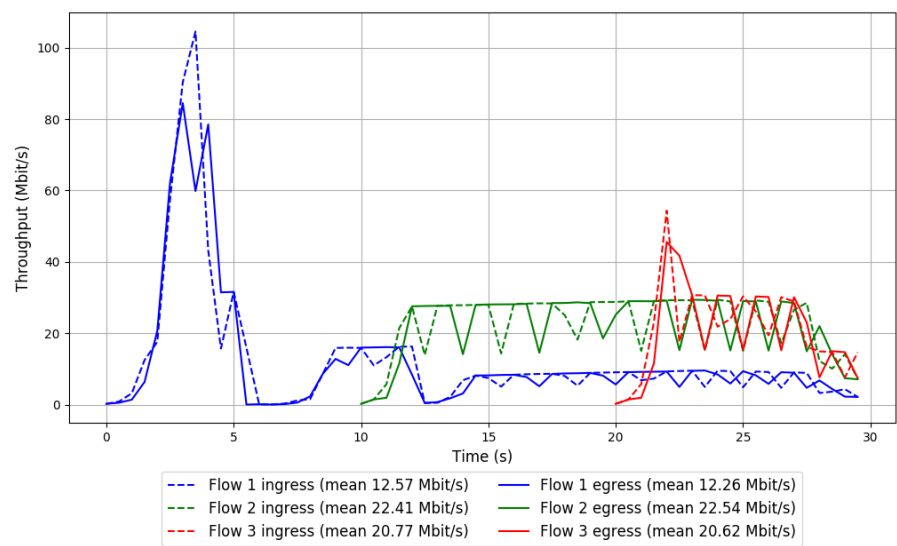
-- Flow 3:

Average throughput: 20.62 Mbit/s

95th percentile per-packet one-way delay: 162.117 ms

Loss rate: 3.45%

Run 10: Report of TCP Vegas — Data Link

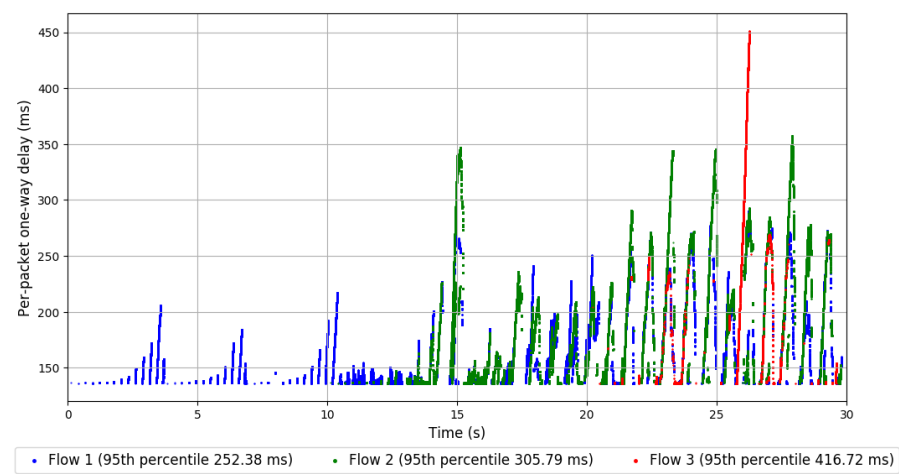
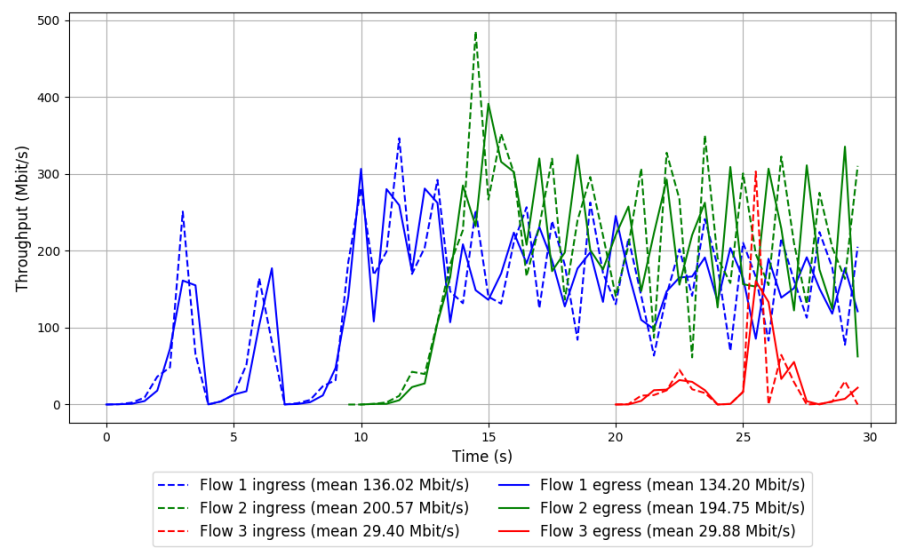


```
Run 1: Statistics of Verus

Start at: 2017-12-21 04:52:36
End at: 2017-12-21 04:53:06

# Below is generated by plot.py at 2017-12-21 10:36:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 272.66 Mbit/s
95th percentile per-packet one-way delay: 281.256 ms
Loss rate: 3.24%
-- Flow 1:
Average throughput: 134.20 Mbit/s
95th percentile per-packet one-way delay: 252.384 ms
Loss rate: 2.25%
-- Flow 2:
Average throughput: 194.75 Mbit/s
95th percentile per-packet one-way delay: 305.786 ms
Loss rate: 4.34%
-- Flow 3:
Average throughput: 29.88 Mbit/s
95th percentile per-packet one-way delay: 416.719 ms
Loss rate: 1.95%
```


Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2017-12-21 05:08:22

End at: 2017-12-21 05:08:52

Below is generated by plot.py at 2017-12-21 10:36:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 206.04 Mbit/s

95th percentile per-packet one-way delay: 207.967 ms

Loss rate: 1.24%

-- Flow 1:

Average throughput: 146.72 Mbit/s

95th percentile per-packet one-way delay: 215.842 ms

Loss rate: 0.98%

-- Flow 2:

Average throughput: 77.08 Mbit/s

95th percentile per-packet one-way delay: 180.142 ms

Loss rate: 0.76%

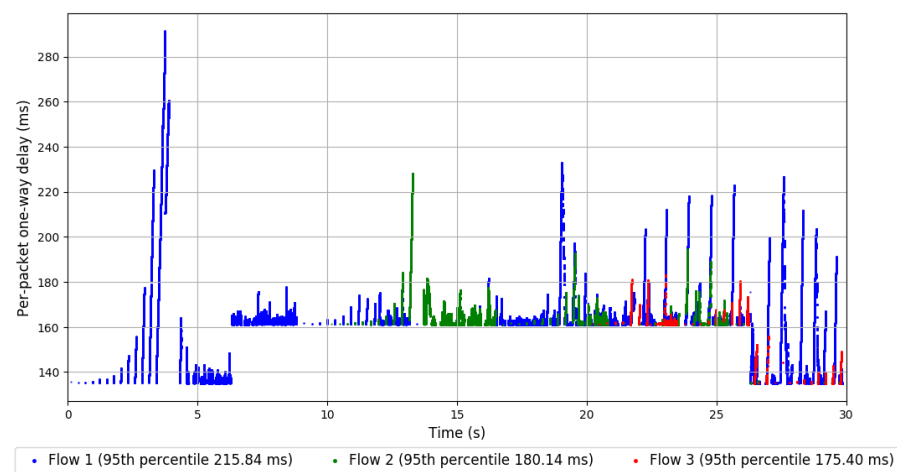
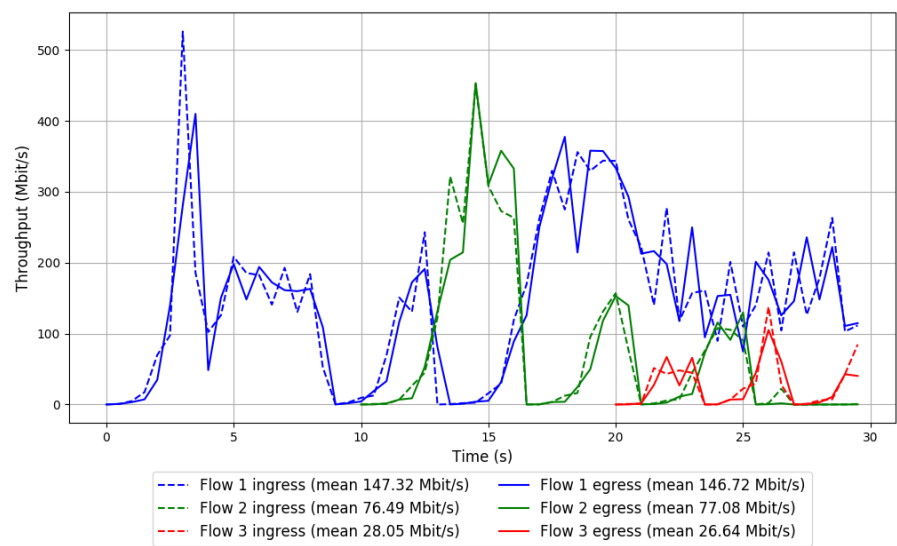
-- Flow 3:

Average throughput: 26.64 Mbit/s

95th percentile per-packet one-way delay: 175.400 ms

Loss rate: 7.96%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2017-12-21 05:23:43

End at: 2017-12-21 05:24:13

Below is generated by plot.py at 2017-12-21 10:36:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 302.66 Mbit/s

95th percentile per-packet one-way delay: 208.422 ms

Loss rate: 1.07%

-- Flow 1:

Average throughput: 236.77 Mbit/s

95th percentile per-packet one-way delay: 212.497 ms

Loss rate: 0.35%

-- Flow 2:

Average throughput: 27.58 Mbit/s

95th percentile per-packet one-way delay: 189.345 ms

Loss rate: 3.21%

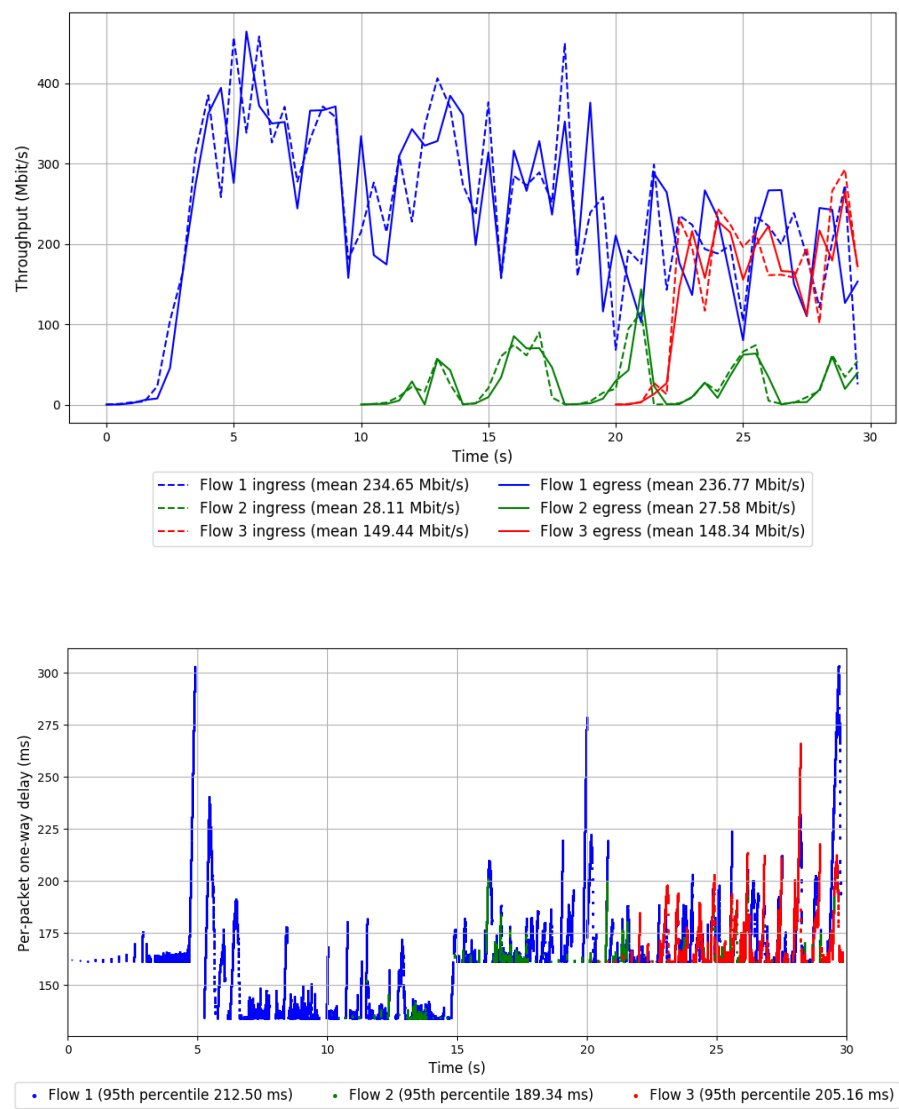
-- Flow 3:

Average throughput: 148.34 Mbit/s

95th percentile per-packet one-way delay: 205.159 ms

Loss rate: 3.72%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

Start at: 2017-12-21 05:39:19

End at: 2017-12-21 05:39:49

Below is generated by plot.py at 2017-12-21 10:36:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 171.25 Mbit/s

95th percentile per-packet one-way delay: 258.807 ms

Loss rate: 1.61%

-- Flow 1:

Average throughput: 123.84 Mbit/s

95th percentile per-packet one-way delay: 316.463 ms

Loss rate: 1.50%

-- Flow 2:

Average throughput: 33.06 Mbit/s

95th percentile per-packet one-way delay: 164.850 ms

Loss rate: 1.24%

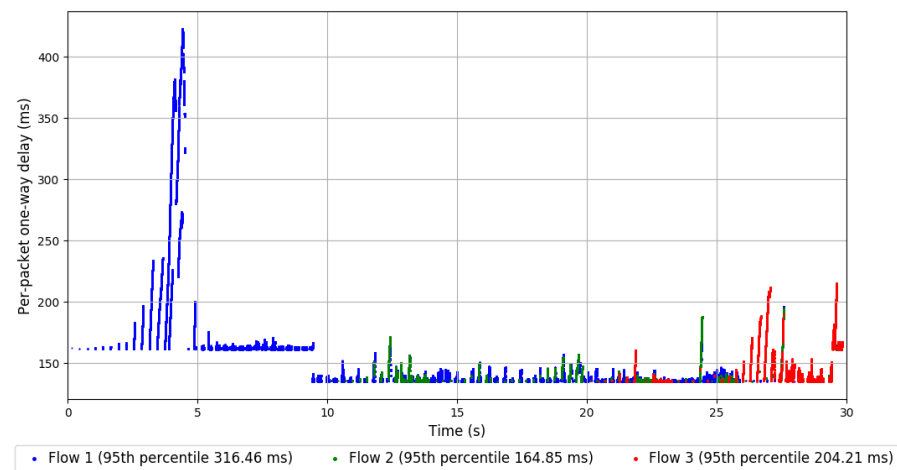
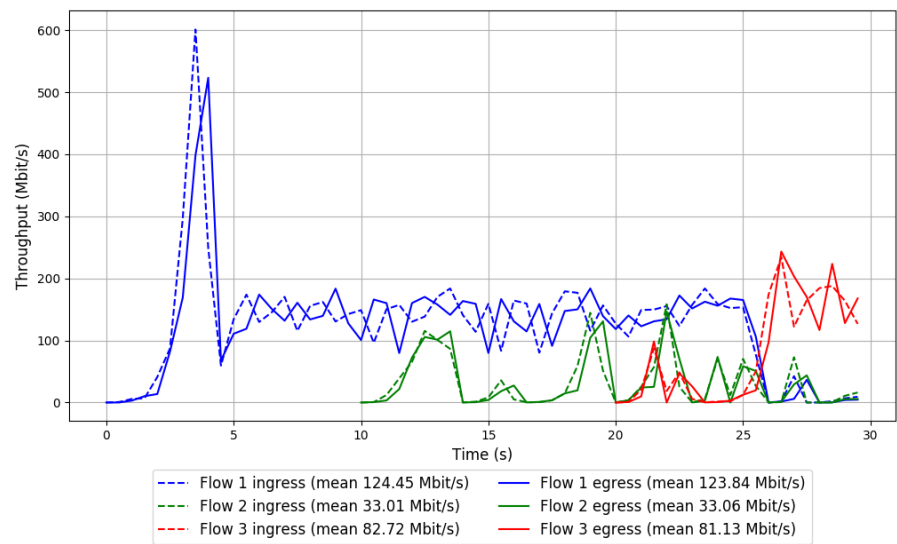
-- Flow 3:

Average throughput: 81.13 Mbit/s

95th percentile per-packet one-way delay: 204.208 ms

Loss rate: 2.39%

Run 4: Report of Verus — Data Link



Run 5: Statistics of Verus

Start at: 2017-12-21 05:54:48

End at: 2017-12-21 05:55:18

Below is generated by plot.py at 2017-12-21 10:36:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 118.88 Mbit/s

95th percentile per-packet one-way delay: 168.145 ms

Loss rate: 1.29%

-- Flow 1:

Average throughput: 65.01 Mbit/s

95th percentile per-packet one-way delay: 158.014 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 65.46 Mbit/s

95th percentile per-packet one-way delay: 160.486 ms

Loss rate: 2.79%

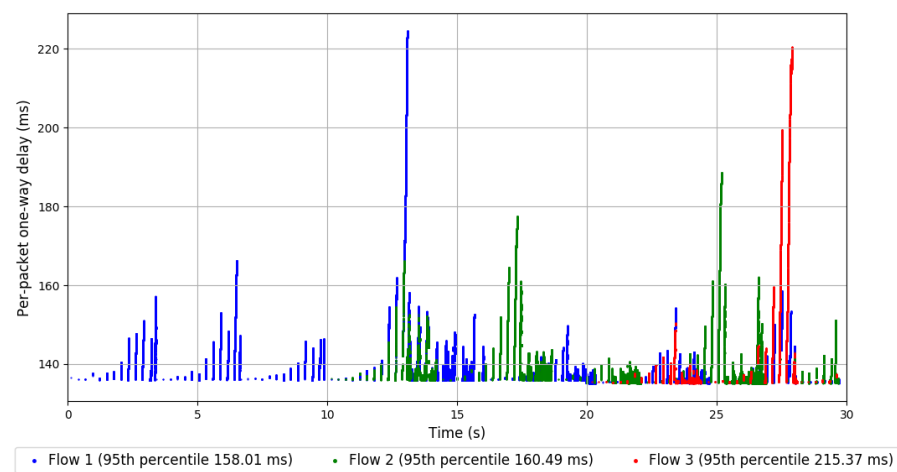
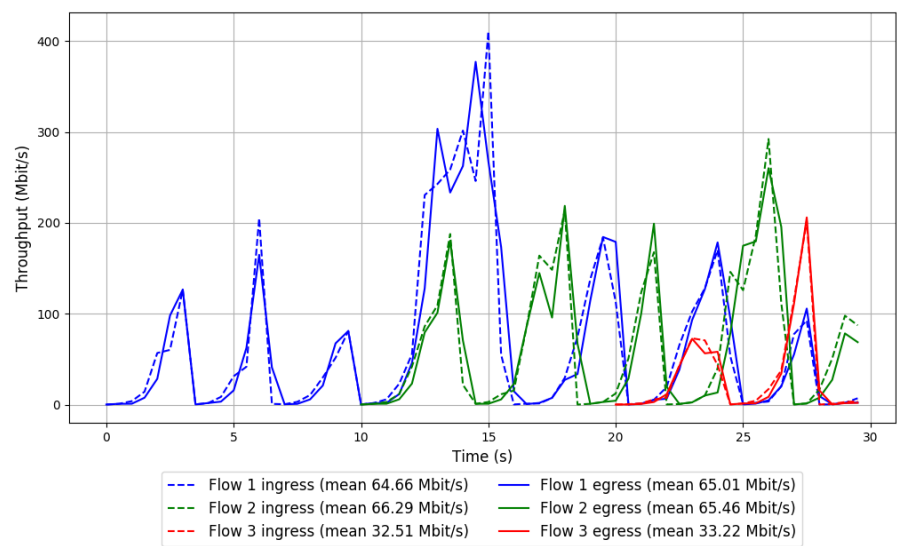
-- Flow 3:

Average throughput: 33.22 Mbit/s

95th percentile per-packet one-way delay: 215.365 ms

Loss rate: 0.68%

Run 5: Report of Verus — Data Link



Run 6: Statistics of Verus

Start at: 2017-12-21 06:10:01

End at: 2017-12-21 06:10:31

Below is generated by plot.py at 2017-12-21 10:36:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 230.89 Mbit/s

95th percentile per-packet one-way delay: 207.798 ms

Loss rate: 2.35%

-- Flow 1:

Average throughput: 139.20 Mbit/s

95th percentile per-packet one-way delay: 207.054 ms

Loss rate: 1.46%

-- Flow 2:

Average throughput: 104.41 Mbit/s

95th percentile per-packet one-way delay: 207.287 ms

Loss rate: 1.67%

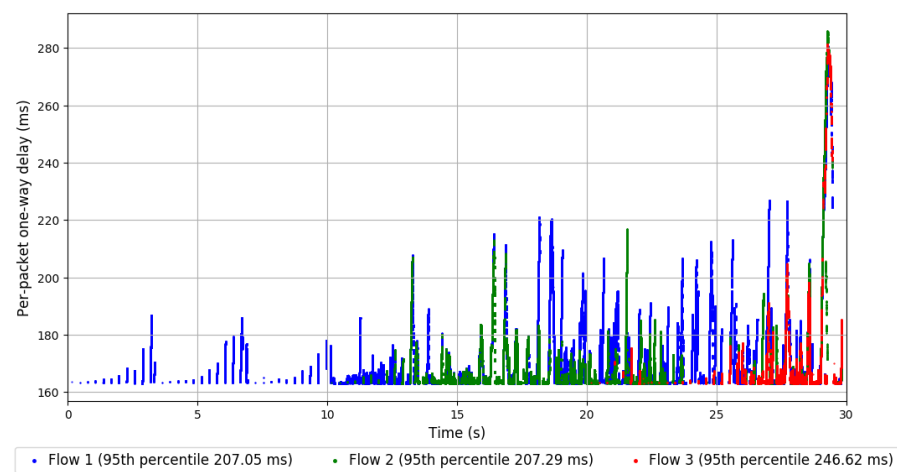
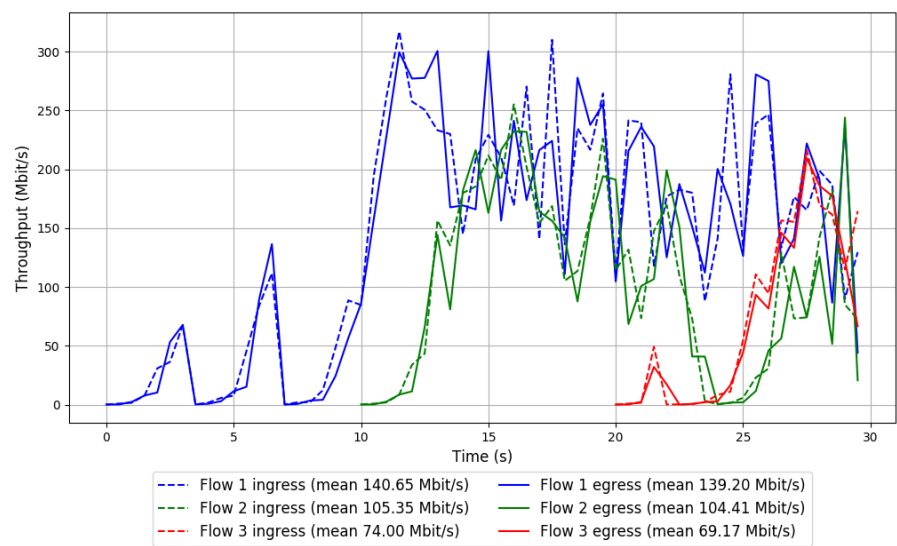
-- Flow 3:

Average throughput: 69.17 Mbit/s

95th percentile per-packet one-way delay: 246.621 ms

Loss rate: 9.36%

Run 6: Report of Verus — Data Link



Run 7: Statistics of Verus

Start at: 2017-12-21 06:25:22

End at: 2017-12-21 06:25:52

Below is generated by plot.py at 2017-12-21 10:38:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 292.89 Mbit/s

95th percentile per-packet one-way delay: 208.128 ms

Loss rate: 1.93%

-- Flow 1:

Average throughput: 176.57 Mbit/s

95th percentile per-packet one-way delay: 195.556 ms

Loss rate: 0.67%

-- Flow 2:

Average throughput: 146.94 Mbit/s

95th percentile per-packet one-way delay: 223.153 ms

Loss rate: 2.42%

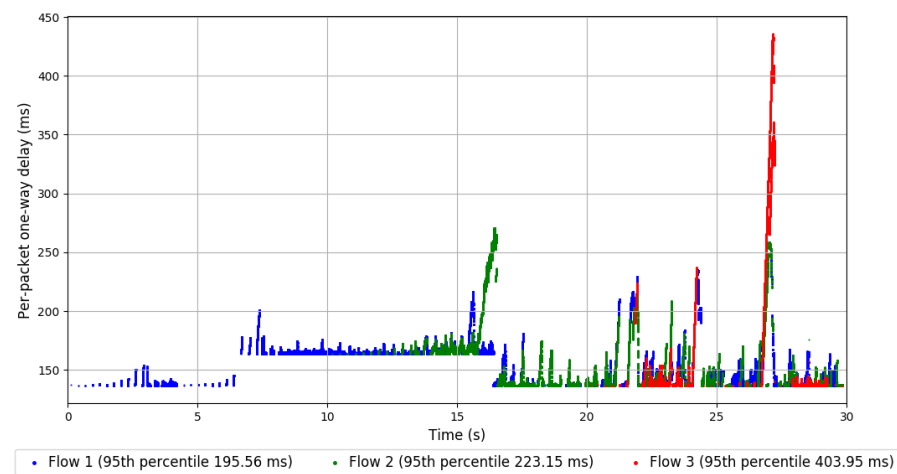
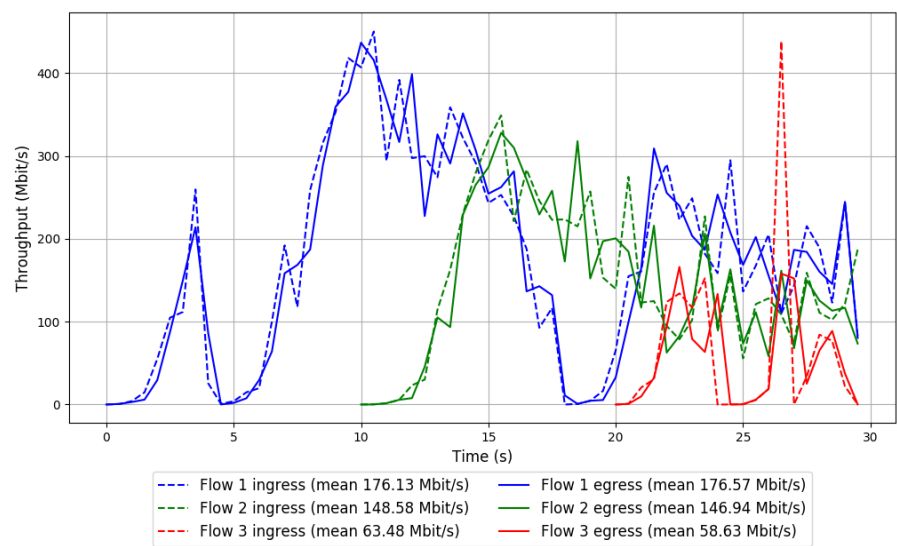
-- Flow 3:

Average throughput: 58.63 Mbit/s

95th percentile per-packet one-way delay: 403.951 ms

Loss rate: 10.20%

Run 7: Report of Verus — Data Link



Run 8: Statistics of Verus

Start at: 2017-12-21 06:41:00

End at: 2017-12-21 06:41:30

Below is generated by plot.py at 2017-12-21 10:38:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 243.57 Mbit/s

95th percentile per-packet one-way delay: 253.873 ms

Loss rate: 2.92%

-- Flow 1:

Average throughput: 180.58 Mbit/s

95th percentile per-packet one-way delay: 240.975 ms

Loss rate: 0.85%

-- Flow 2:

Average throughput: 68.54 Mbit/s

95th percentile per-packet one-way delay: 272.675 ms

Loss rate: 1.55%

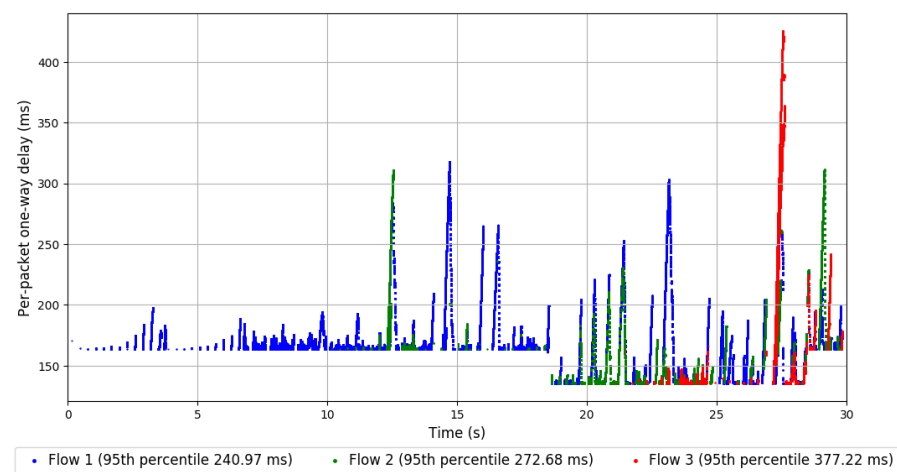
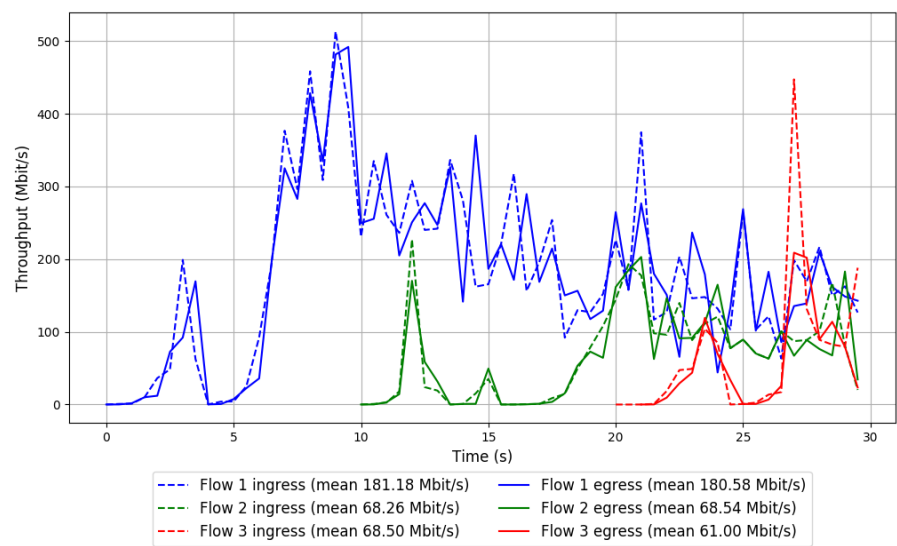
-- Flow 3:

Average throughput: 61.00 Mbit/s

95th percentile per-packet one-way delay: 377.223 ms

Loss rate: 22.13%

Run 8: Report of Verus — Data Link



Run 9: Statistics of Verus

Start at: 2017-12-21 06:56:09

End at: 2017-12-21 06:56:39

Below is generated by plot.py at 2017-12-21 10:38:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 200.99 Mbit/s

95th percentile per-packet one-way delay: 199.312 ms

Loss rate: 2.31%

-- Flow 1:

Average throughput: 143.51 Mbit/s

95th percentile per-packet one-way delay: 226.514 ms

Loss rate: 1.62%

-- Flow 2:

Average throughput: 35.10 Mbit/s

95th percentile per-packet one-way delay: 156.662 ms

Loss rate: 3.96%

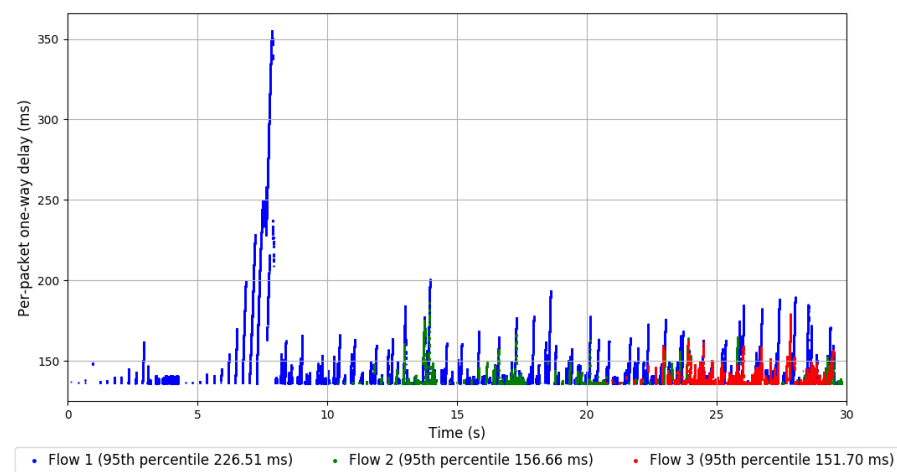
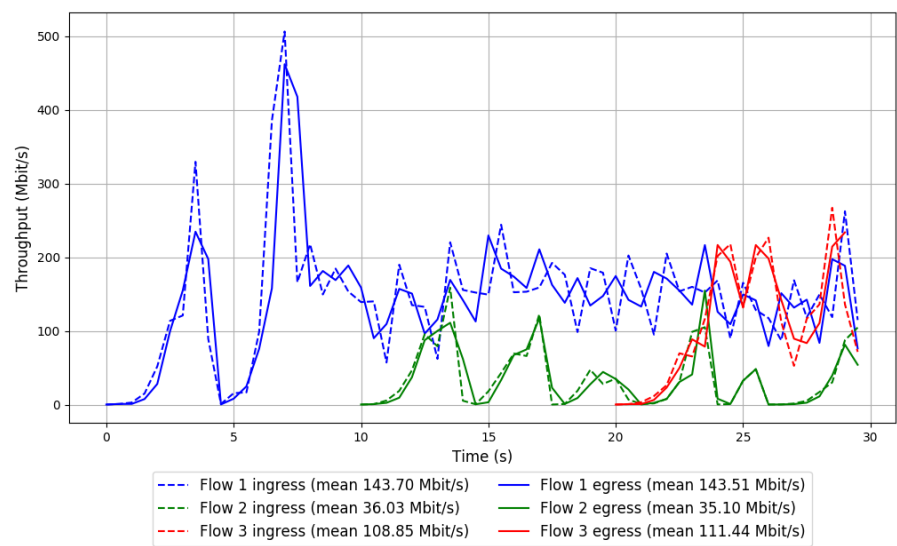
-- Flow 3:

Average throughput: 111.44 Mbit/s

95th percentile per-packet one-way delay: 151.704 ms

Loss rate: 3.93%

Run 9: Report of Verus — Data Link



Run 10: Statistics of Verus

Start at: 2017-12-21 07:12:22

End at: 2017-12-21 07:12:52

Below is generated by plot.py at 2017-12-21 10:38:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 218.48 Mbit/s

95th percentile per-packet one-way delay: 375.124 ms

Loss rate: 9.80%

-- Flow 1:

Average throughput: 72.36 Mbit/s

95th percentile per-packet one-way delay: 310.242 ms

Loss rate: 4.62%

-- Flow 2:

Average throughput: 175.97 Mbit/s

95th percentile per-packet one-way delay: 399.003 ms

Loss rate: 14.11%

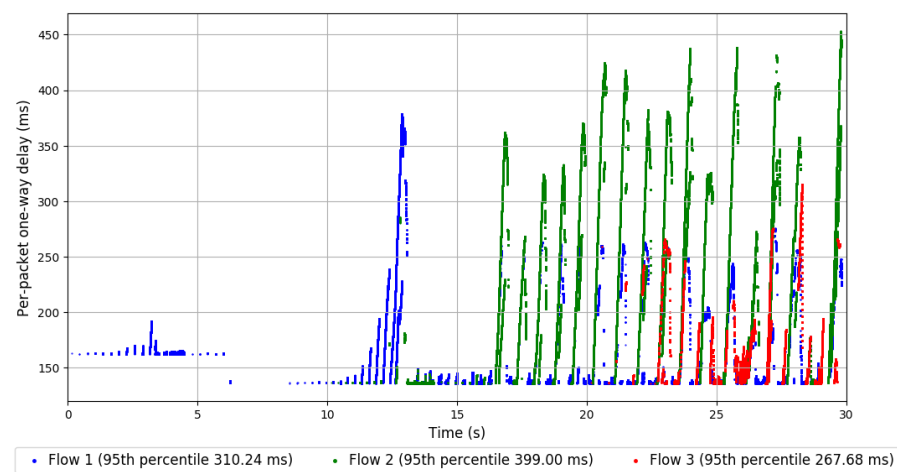
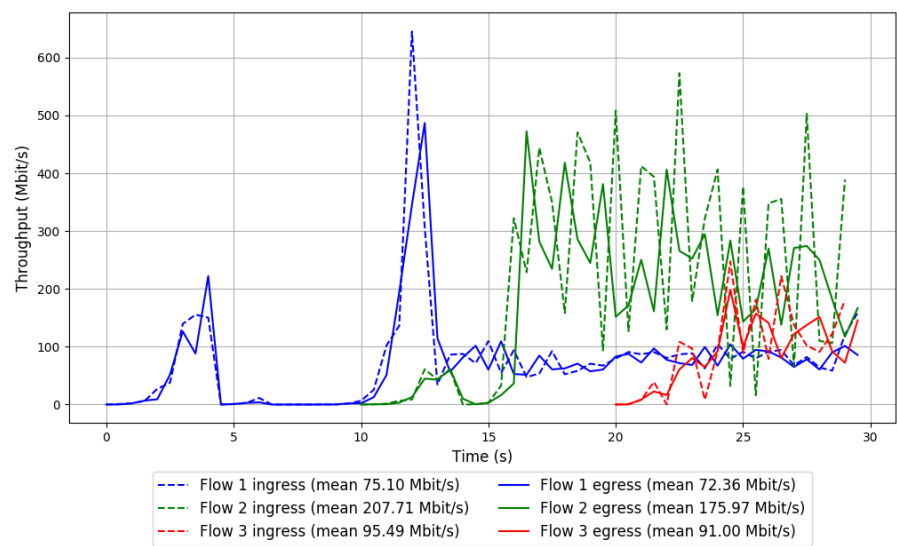
-- Flow 3:

Average throughput: 91.00 Mbit/s

95th percentile per-packet one-way delay: 267.679 ms

Loss rate: 3.46%

Run 10: Report of Verus — Data Link



Run 1: Statistics of Copa

Start at: 2017-12-21 05:00:51

End at: 2017-12-21 05:01:21

Below is generated by plot.py at 2017-12-21 10:38:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 41.83 Mbit/s

95th percentile per-packet one-way delay: 136.201 ms

Loss rate: 0.16%

-- Flow 1:

Average throughput: 0.11 Mbit/s

95th percentile per-packet one-way delay: 163.629 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 61.46 Mbit/s

95th percentile per-packet one-way delay: 136.135 ms

Loss rate: 0.06%

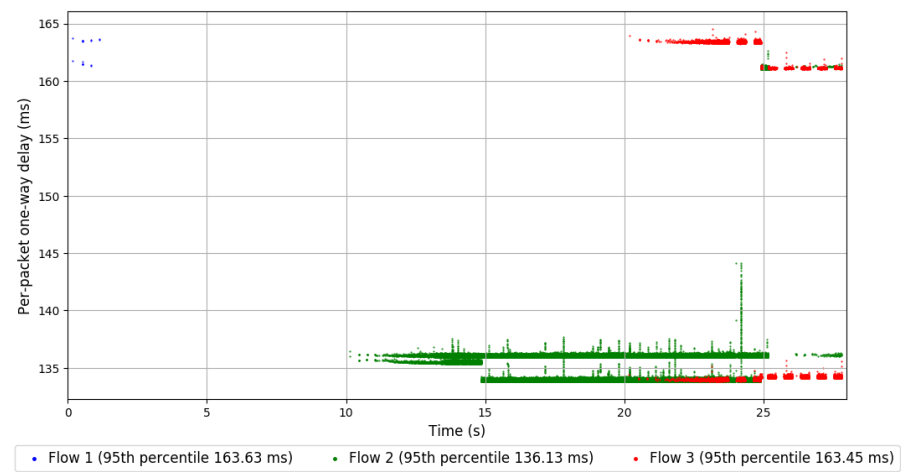
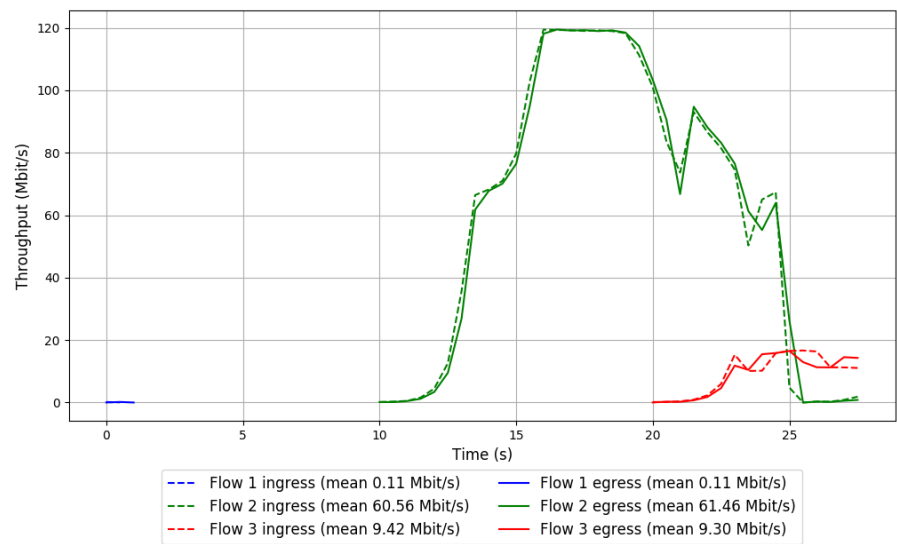
-- Flow 3:

Average throughput: 9.30 Mbit/s

95th percentile per-packet one-way delay: 163.448 ms

Loss rate: 1.59%

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2017-12-21 05:16:04

End at: 2017-12-21 05:16:34

Below is generated by plot.py at 2017-12-21 10:39:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 119.44 Mbit/s

95th percentile per-packet one-way delay: 136.320 ms

Loss rate: 1.58%

-- Flow 1:

Average throughput: 70.34 Mbit/s

95th percentile per-packet one-way delay: 136.350 ms

Loss rate: 0.68%

-- Flow 2:

Average throughput: 61.81 Mbit/s

95th percentile per-packet one-way delay: 136.122 ms

Loss rate: 1.00%

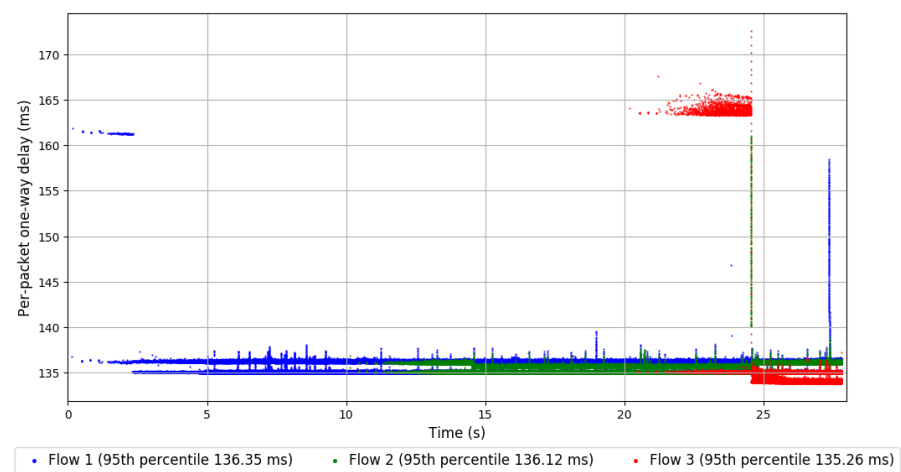
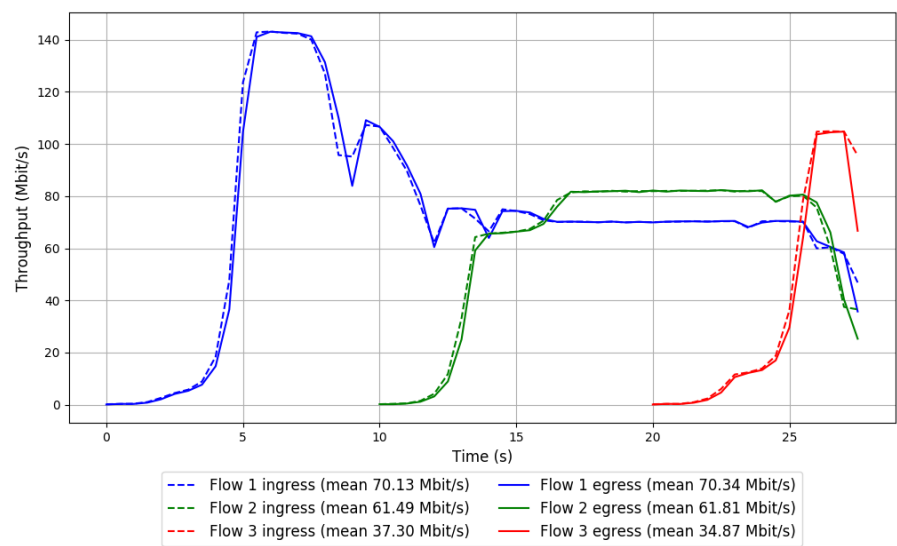
-- Flow 3:

Average throughput: 34.87 Mbit/s

95th percentile per-packet one-way delay: 135.257 ms

Loss rate: 9.69%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2017-12-21 05:31:59

End at: 2017-12-21 05:32:29

Below is generated by plot.py at 2017-12-21 10:39:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 70.04 Mbit/s

95th percentile per-packet one-way delay: 161.206 ms

Loss rate: 1.34%

-- Flow 1:

Average throughput: 23.57 Mbit/s

95th percentile per-packet one-way delay: 161.195 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 59.73 Mbit/s

95th percentile per-packet one-way delay: 135.272 ms

Loss rate: 0.00%

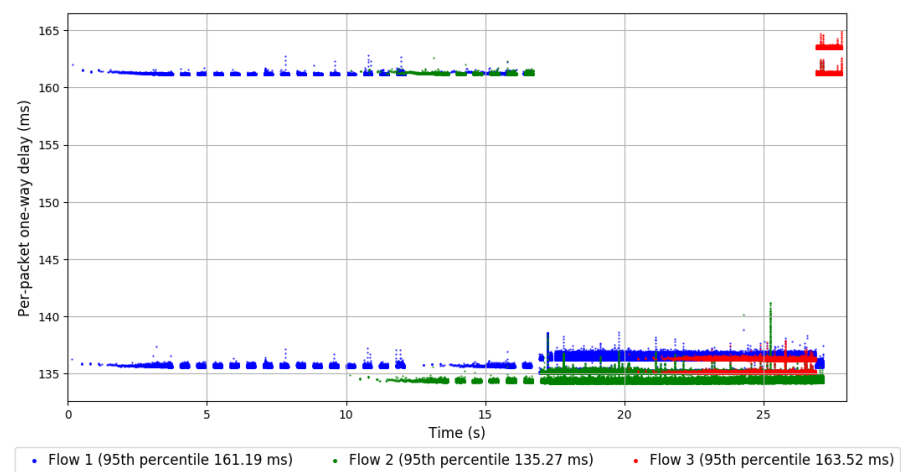
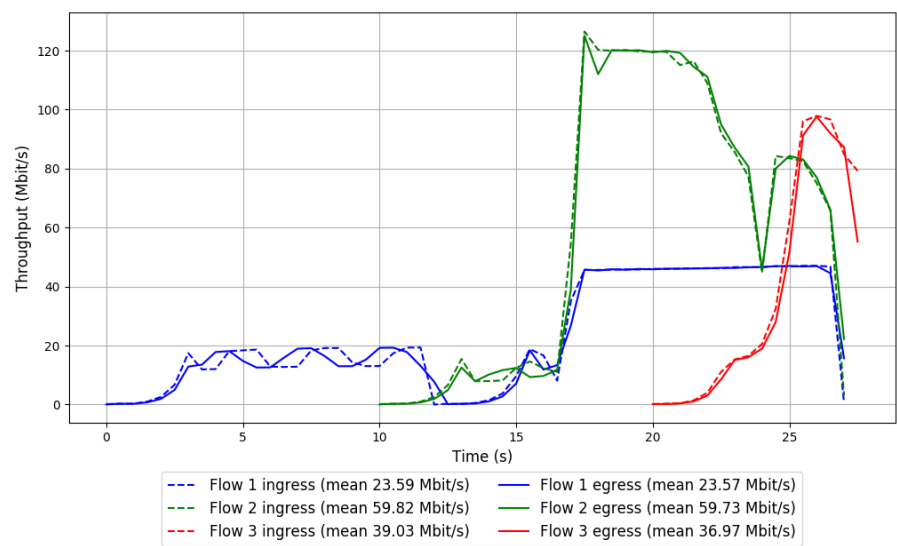
-- Flow 3:

Average throughput: 36.97 Mbit/s

95th percentile per-packet one-way delay: 163.523 ms

Loss rate: 8.52%

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

Start at: 2017-12-21 05:46:58

End at: 2017-12-21 05:47:28

Below is generated by plot.py at 2017-12-21 10:39:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 31.35 Mbit/s

95th percentile per-packet one-way delay: 161.264 ms

Loss rate: 1.04%

-- Flow 1:

Average throughput: 22.52 Mbit/s

95th percentile per-packet one-way delay: 161.241 ms

Loss rate: 0.74%

-- Flow 2:

Average throughput: 9.85 Mbit/s

95th percentile per-packet one-way delay: 161.296 ms

Loss rate: 0.36%

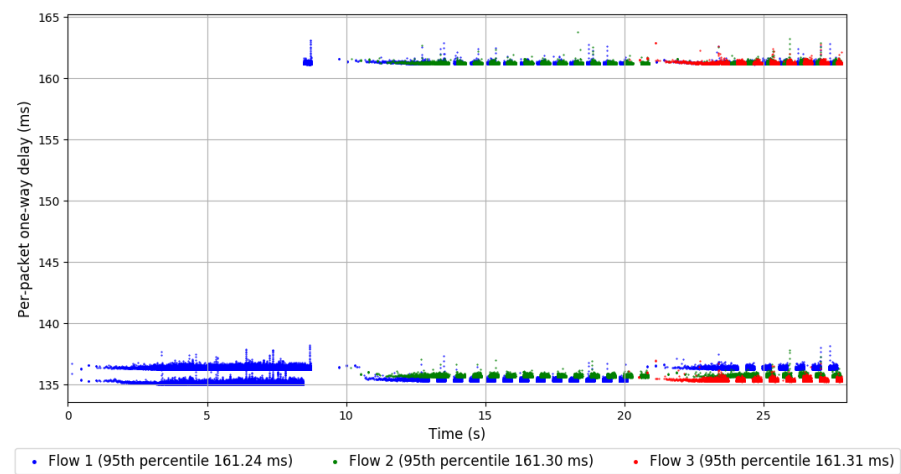
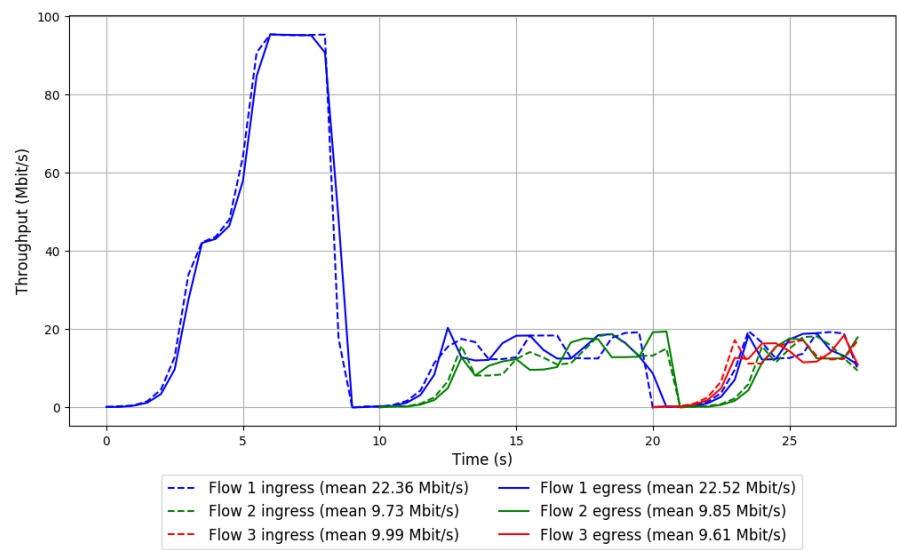
-- Flow 3:

Average throughput: 9.61 Mbit/s

95th percentile per-packet one-way delay: 161.311 ms

Loss rate: 4.96%

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2017-12-21 06:02:45

End at: 2017-12-21 06:03:15

Below is generated by plot.py at 2017-12-21 10:39:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 57.26 Mbit/s

95th percentile per-packet one-way delay: 163.129 ms

Loss rate: 0.61%

-- Flow 1:

Average throughput: 30.24 Mbit/s

95th percentile per-packet one-way delay: 163.149 ms

Loss rate: 0.98%

-- Flow 2:

Average throughput: 42.44 Mbit/s

95th percentile per-packet one-way delay: 135.929 ms

Loss rate: 0.19%

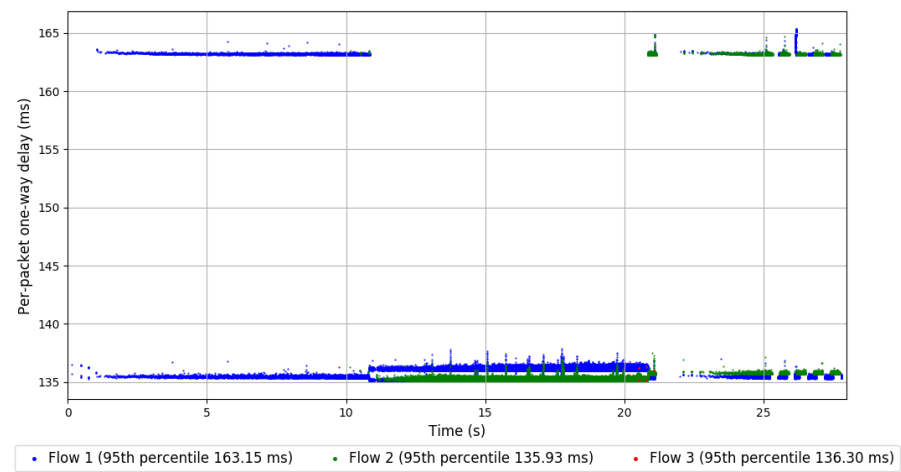
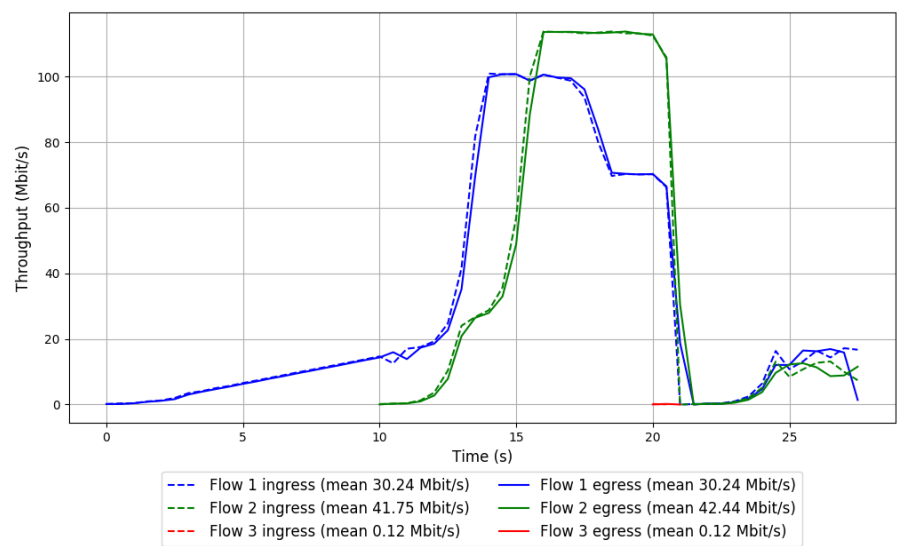
-- Flow 3:

Average throughput: 0.12 Mbit/s

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

Loss rate: 0.00%

Run 5: Report of Copa — Data Link



Run 6: Statistics of Copa

Start at: 2017-12-21 06:17:57

End at: 2017-12-21 06:18:27

Below is generated by plot.py at 2017-12-21 10:39:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 37.61 Mbit/s

95th percentile per-packet one-way delay: 163.370 ms

Loss rate: 1.48%

-- Flow 1:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 135.906 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 50.33 Mbit/s

95th percentile per-packet one-way delay: 163.300 ms

Loss rate: 0.07%

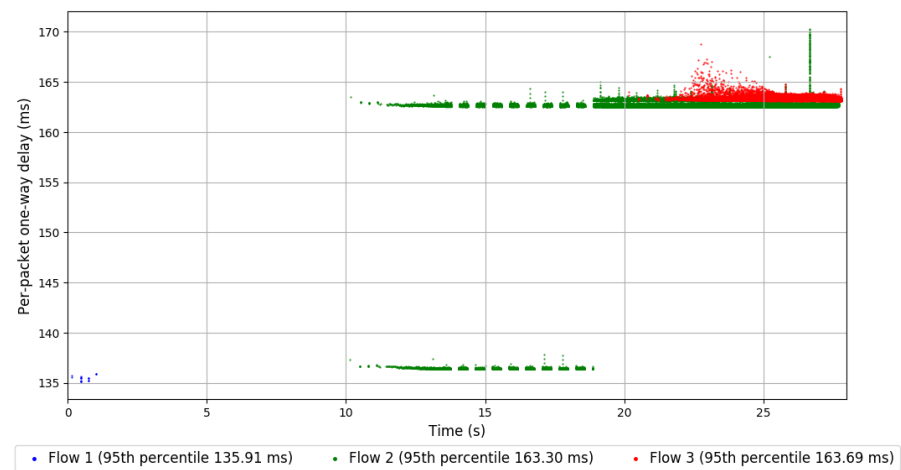
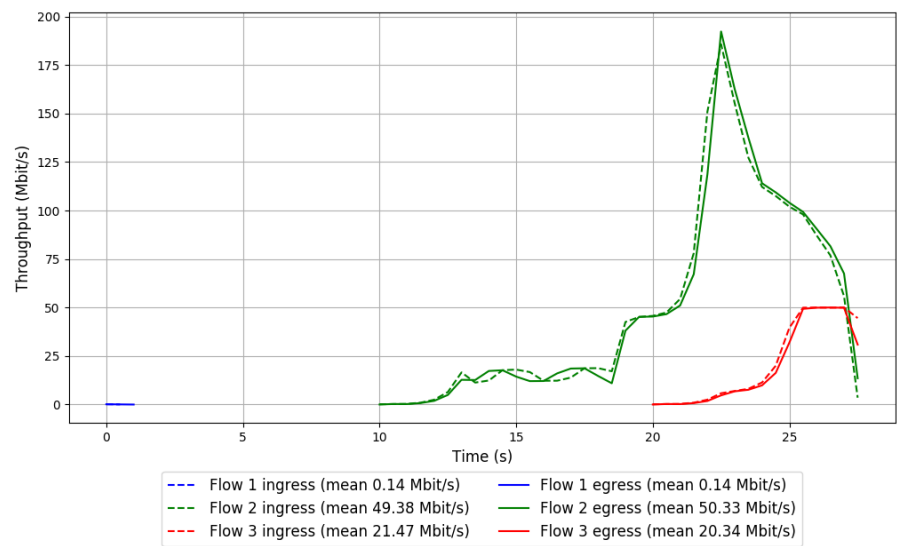
-- Flow 3:

Average throughput: 20.34 Mbit/s

95th percentile per-packet one-way delay: 163.685 ms

Loss rate: 8.83%

Run 6: Report of Copa — Data Link



Run 7: Statistics of Copa

Start at: 2017-12-21 06:33:31

End at: 2017-12-21 06:34:01

Below is generated by plot.py at 2017-12-21 10:39:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 3.99 Mbit/s

95th percentile per-packet one-way delay: 163.721 ms

Loss rate: 12.44%

-- Flow 1:

Average throughput: 0.15 Mbit/s

95th percentile per-packet one-way delay: 137.088 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.12 Mbit/s

95th percentile per-packet one-way delay: 136.621 ms

Loss rate: 0.00%

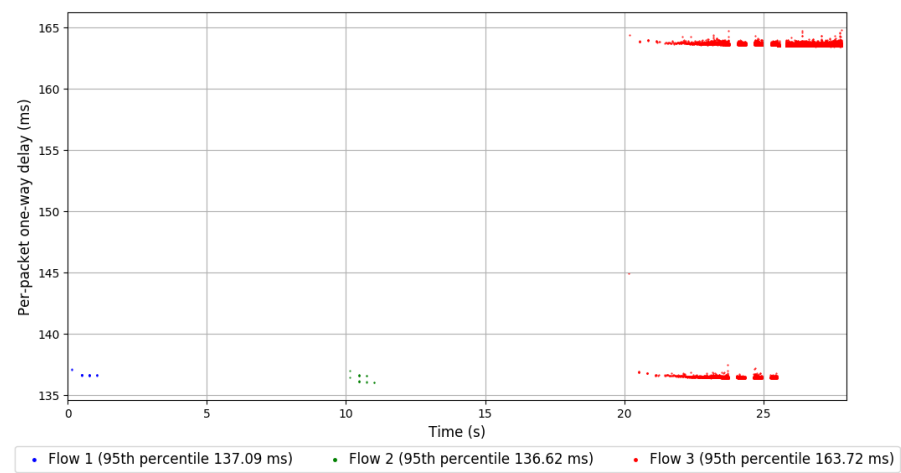
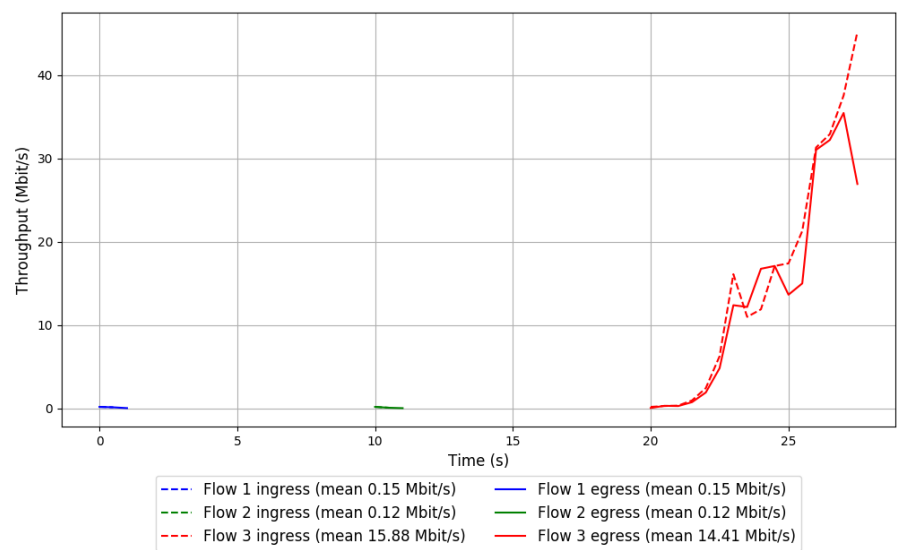
-- Flow 3:

Average throughput: 14.41 Mbit/s

95th percentile per-packet one-way delay: 163.721 ms

Loss rate: 12.47%

Run 7: Report of Copa — Data Link



Run 8: Statistics of Copa

Start at: 2017-12-21 06:48:59

End at: 2017-12-21 06:49:29

Below is generated by plot.py at 2017-12-21 10:39:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 16.09 Mbit/s

95th percentile per-packet one-way delay: 163.624 ms

Loss rate: 3.35%

-- Flow 1:

Average throughput: 9.63 Mbit/s

95th percentile per-packet one-way delay: 163.632 ms

Loss rate: 1.20%

-- Flow 2:

Average throughput: 10.12 Mbit/s

95th percentile per-packet one-way delay: 163.612 ms

Loss rate: 6.41%

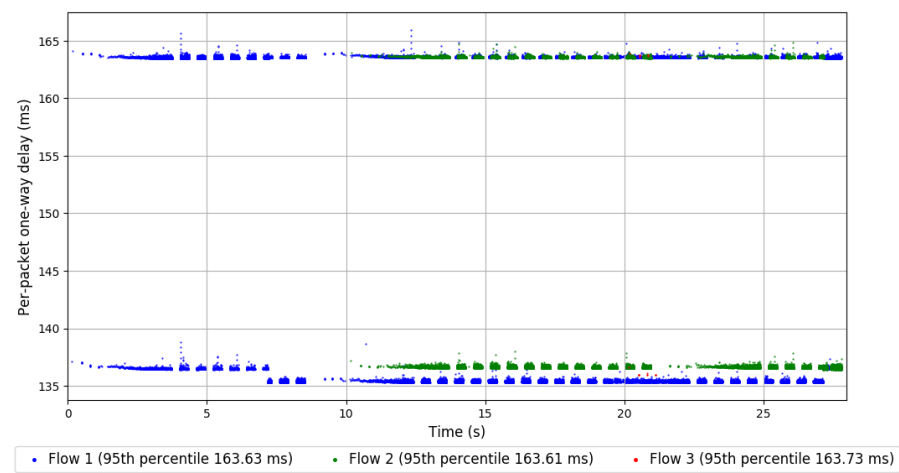
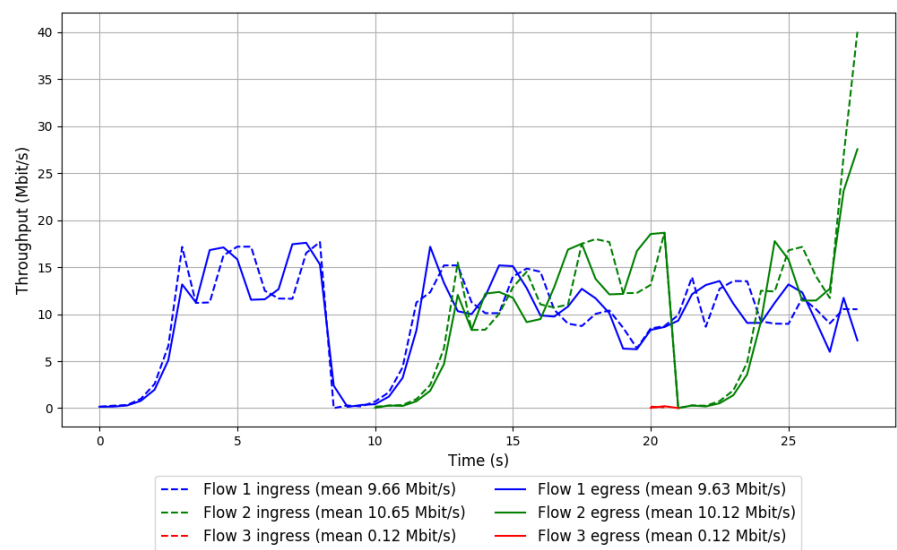
-- Flow 3:

Average throughput: 0.12 Mbit/s

95th percentile per-packet one-way delay: 163.734 ms

Loss rate: 0.00%

Run 8: Report of Copa — Data Link



Run 9: Statistics of Copa

Start at: 2017-12-21 07:04:22

End at: 2017-12-21 07:04:52

Below is generated by plot.py at 2017-12-21 10:41:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 115.08 Mbit/s

95th percentile per-packet one-way delay: 136.530 ms

Loss rate: 1.90%

-- Flow 1:

Average throughput: 67.28 Mbit/s

95th percentile per-packet one-way delay: 136.565 ms

Loss rate: 1.04%

-- Flow 2:

Average throughput: 58.25 Mbit/s

95th percentile per-packet one-way delay: 136.236 ms

Loss rate: 1.51%

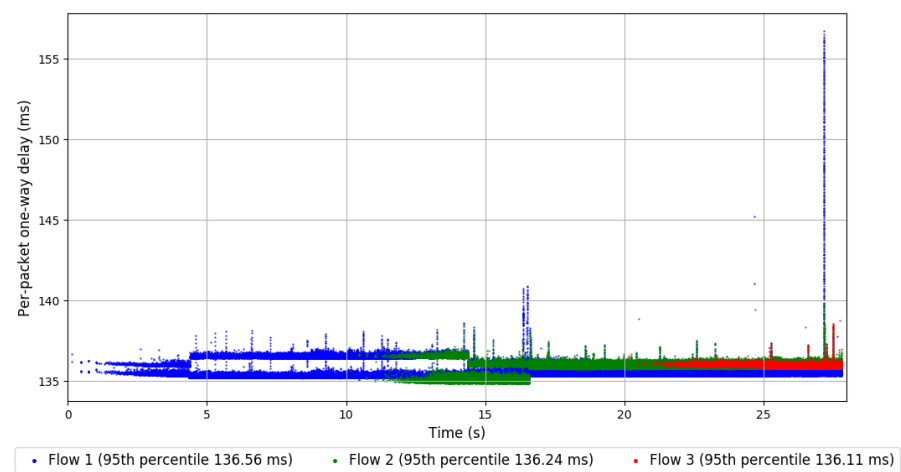
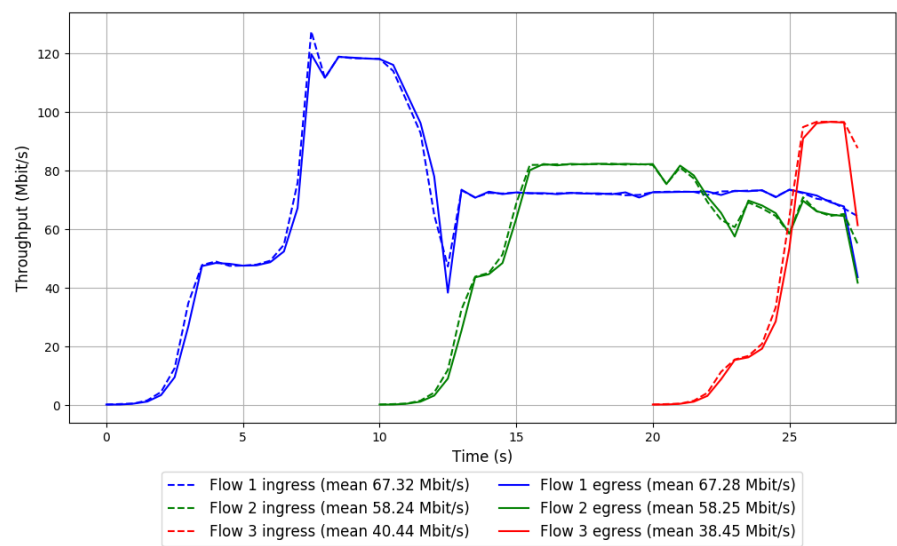
-- Flow 3:

Average throughput: 38.45 Mbit/s

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

Loss rate: 8.22%

Run 9: Report of Copa — Data Link



Run 10: Statistics of Copa

Start at: 2017-12-21 07:20:28

End at: 2017-12-21 07:20:58

Below is generated by plot.py at 2017-12-21 10:41:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 45.47 Mbit/s

95th percentile per-packet one-way delay: 161.233 ms

Loss rate: 0.57%

-- Flow 1:

Average throughput: 42.80 Mbit/s

95th percentile per-packet one-way delay: 161.215 ms

Loss rate: 0.13%

-- Flow 2:

Average throughput: 0.15 Mbit/s

95th percentile per-packet one-way delay: 136.334 ms

Loss rate: 0.00%

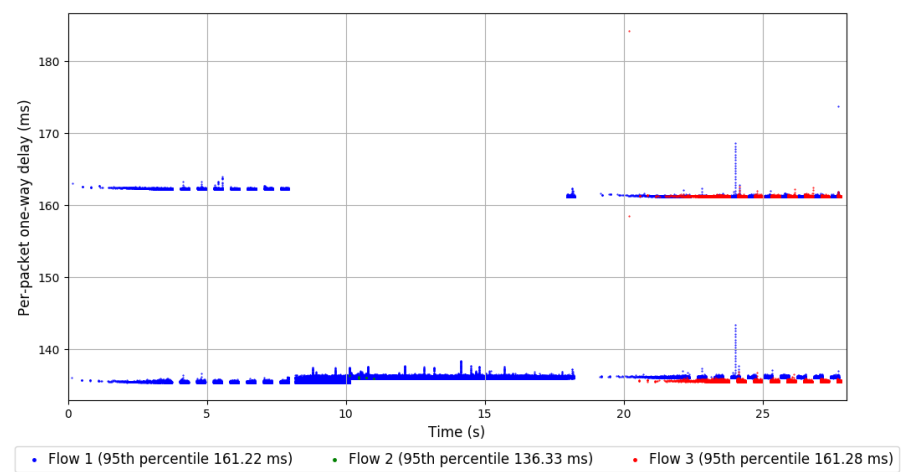
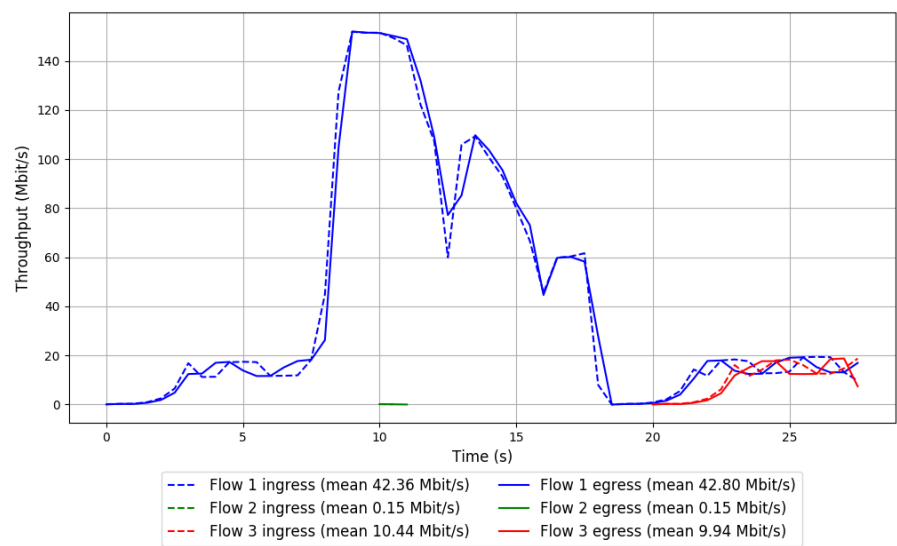
-- Flow 3:

Average throughput: 9.94 Mbit/s

95th percentile per-packet one-way delay: 161.282 ms

Loss rate: 6.93%

Run 10: Report of Copa — Data Link

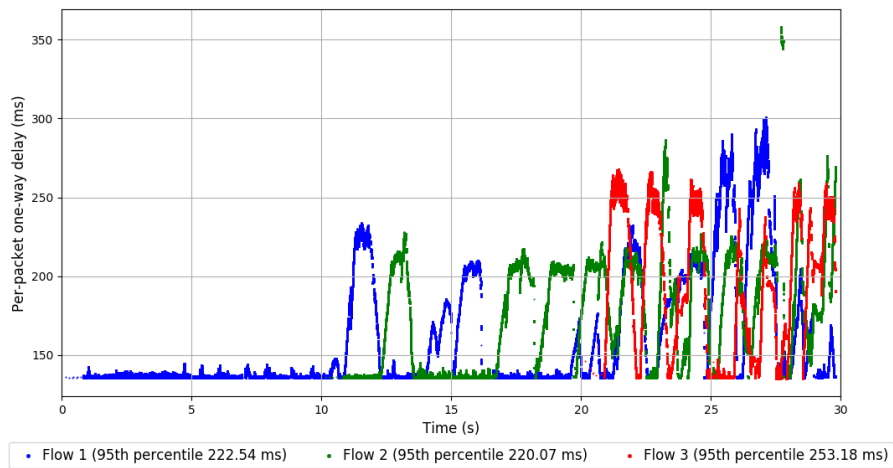
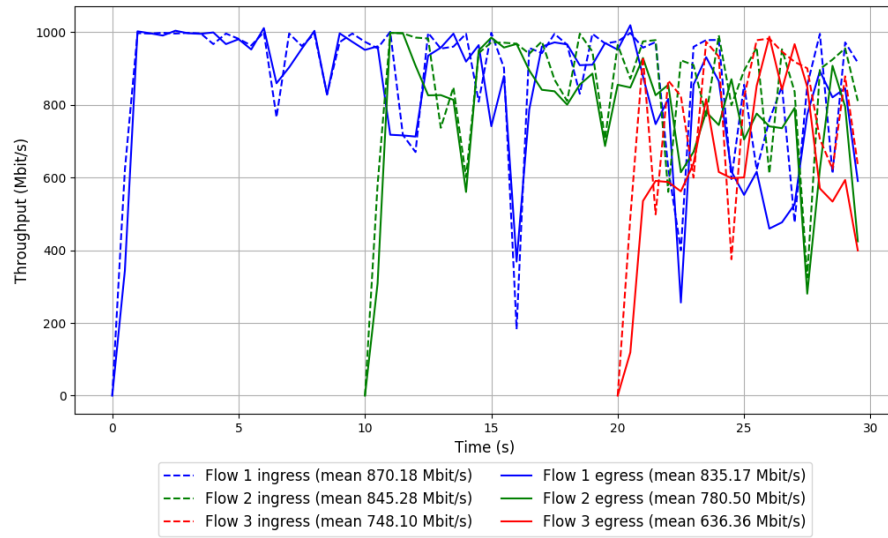


```
Run 1: Statistics of FillP

Start at: 2017-12-21 04:56:41
End at: 2017-12-21 04:57:11

# Below is generated by plot.py at 2017-12-21 11:06:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1558.89 Mbit/s
95th percentile per-packet one-way delay: 239.813 ms
Loss rate: 8.23%
-- Flow 1:
Average throughput: 835.17 Mbit/s
95th percentile per-packet one-way delay: 222.536 ms
Loss rate: 5.00%
-- Flow 2:
Average throughput: 780.50 Mbit/s
95th percentile per-packet one-way delay: 220.075 ms
Loss rate: 9.07%
-- Flow 3:
Average throughput: 636.36 Mbit/s
95th percentile per-packet one-way delay: 253.184 ms
Loss rate: 17.62%
```


Run 1: Report of FillP — Data Link

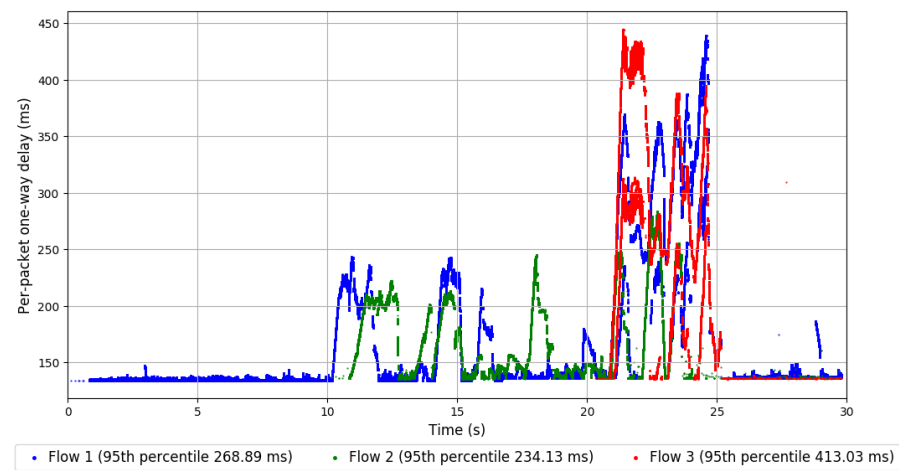
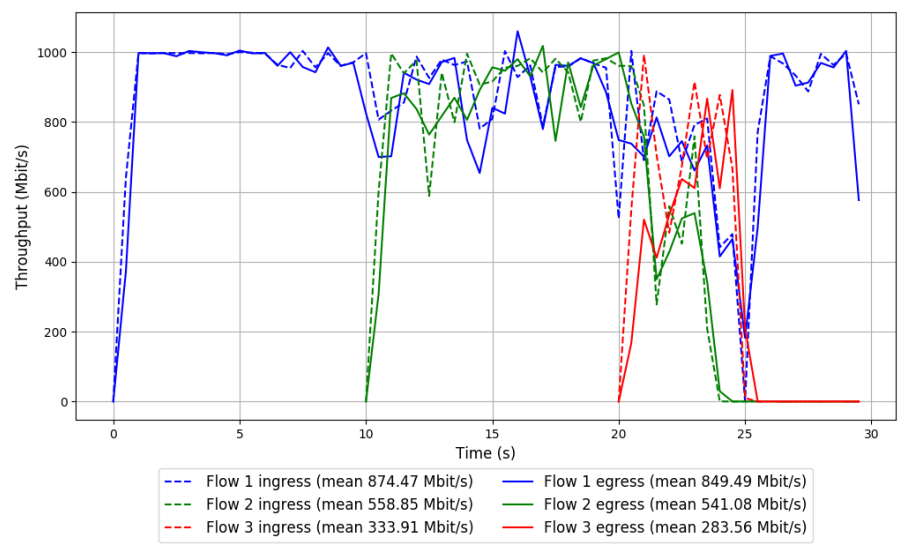


```
Run 2: Statistics of FillP

Start at: 2017-12-21 05:12:11
End at: 2017-12-21 05:12:41

# Below is generated by plot.py at 2017-12-21 11:06:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1299.04 Mbit/s
95th percentile per-packet one-way delay: 293.962 ms
Loss rate: 5.02%
-- Flow 1:
Average throughput: 849.49 Mbit/s
95th percentile per-packet one-way delay: 268.891 ms
Loss rate: 3.74%
-- Flow 2:
Average throughput: 541.08 Mbit/s
95th percentile per-packet one-way delay: 234.135 ms
Loss rate: 4.53%
-- Flow 3:
Average throughput: 283.56 Mbit/s
95th percentile per-packet one-way delay: 413.033 ms
Loss rate: 16.88%
```

Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2017-12-21 05:27:44

End at: 2017-12-21 05:28:14

Below is generated by plot.py at 2017-12-21 11:07:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 1593.37 Mbit/s

95th percentile per-packet one-way delay: 251.831 ms

Loss rate: 7.69%

-- Flow 1:

Average throughput: 872.54 Mbit/s

95th percentile per-packet one-way delay: 227.749 ms

Loss rate: 4.01%

-- Flow 2:

Average throughput: 793.05 Mbit/s

95th percentile per-packet one-way delay: 257.495 ms

Loss rate: 8.36%

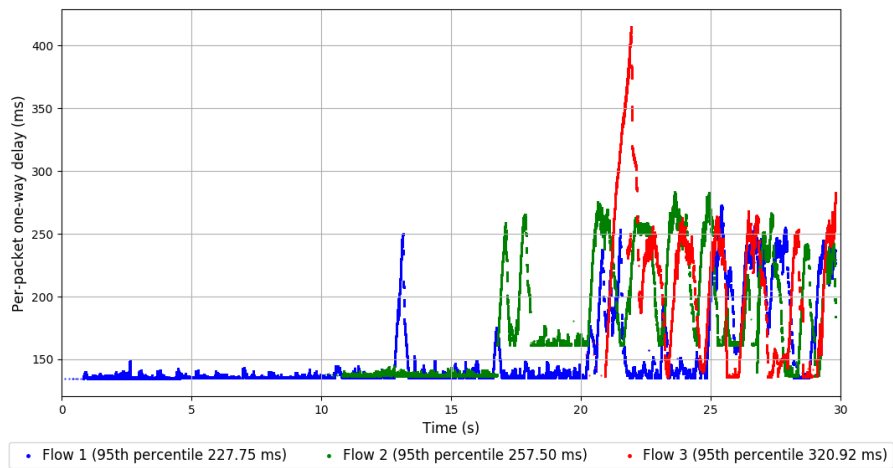
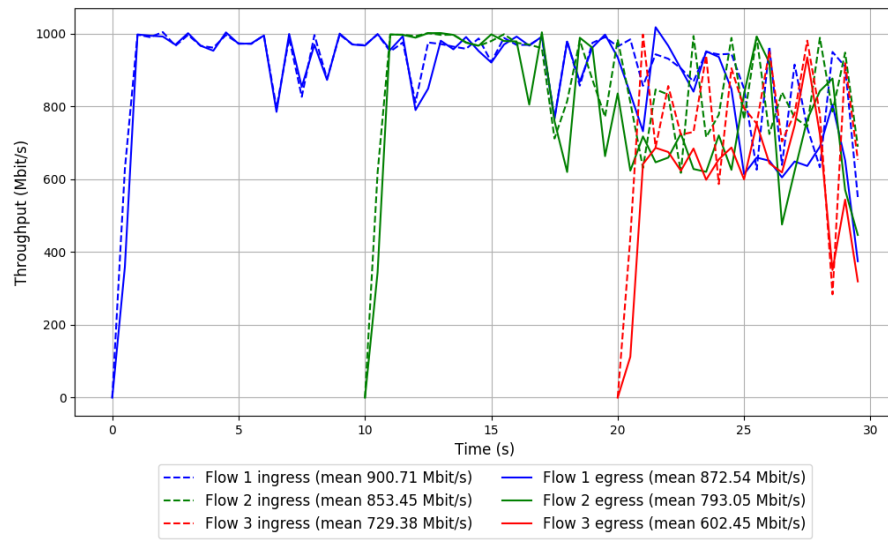
-- Flow 3:

Average throughput: 602.45 Mbit/s

95th percentile per-packet one-way delay: 320.921 ms

Loss rate: 19.83%

Run 3: Report of FillP — Data Link



Run 4: Statistics of FillP

Start at: 2017-12-21 05:43:06

End at: 2017-12-21 05:43:36

Below is generated by plot.py at 2017-12-21 11:07:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 1213.73 Mbit/s

95th percentile per-packet one-way delay: 312.059 ms

Loss rate: 2.79%

-- Flow 1:

Average throughput: 492.25 Mbit/s

95th percentile per-packet one-way delay: 150.708 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 797.57 Mbit/s

95th percentile per-packet one-way delay: 378.059 ms

Loss rate: 6.09%

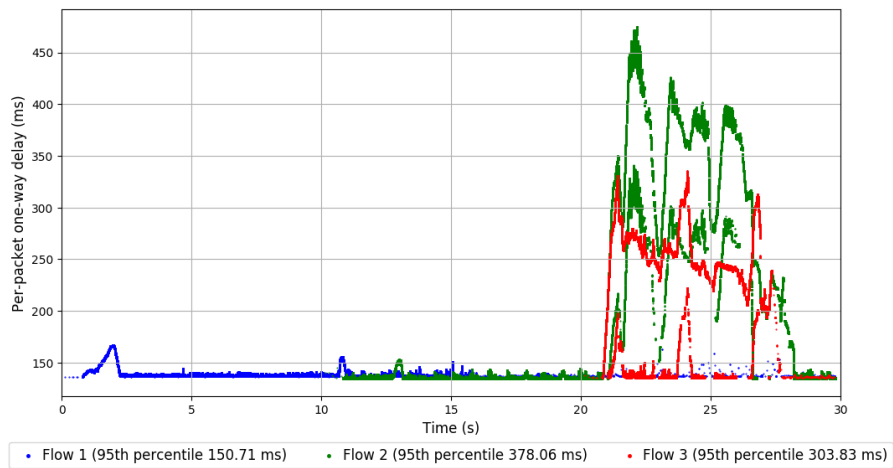
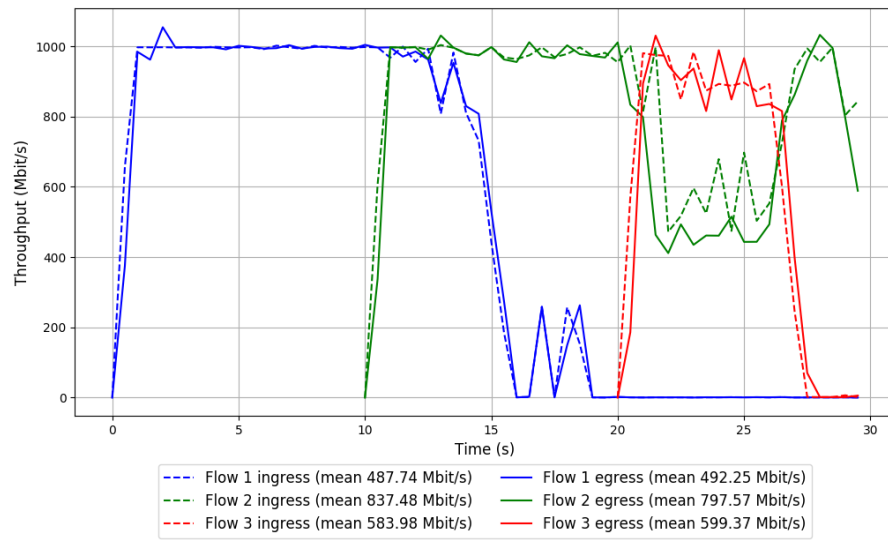
-- Flow 3:

Average throughput: 599.37 Mbit/s

95th percentile per-packet one-way delay: 303.835 ms

Loss rate: 0.27%

Run 4: Report of FillP — Data Link



Run 5: Statistics of FillP

Start at: 2017-12-21 05:58:33

End at: 2017-12-21 05:59:03

Below is generated by plot.py at 2017-12-21 11:07:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 1568.09 Mbit/s

95th percentile per-packet one-way delay: 233.096 ms

Loss rate: 7.53%

-- Flow 1:

Average throughput: 828.52 Mbit/s

95th percentile per-packet one-way delay: 223.393 ms

Loss rate: 4.49%

-- Flow 2:

Average throughput: 785.46 Mbit/s

95th percentile per-packet one-way delay: 240.640 ms

Loss rate: 7.88%

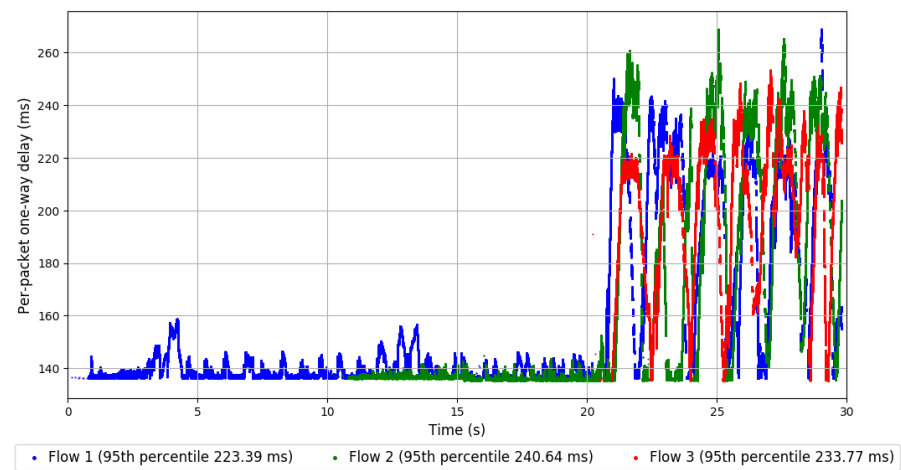
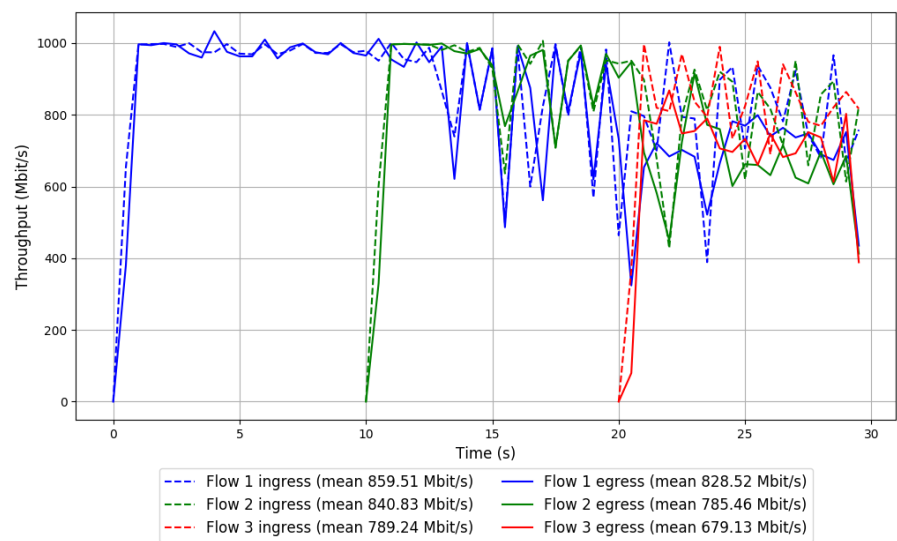
-- Flow 3:

Average throughput: 679.13 Mbit/s

95th percentile per-packet one-way delay: 233.773 ms

Loss rate: 16.80%

Run 5: Report of FillP — Data Link



Run 6: Statistics of FillP

Start at: 2017-12-21 06:14:00

End at: 2017-12-21 06:14:30

Below is generated by plot.py at 2017-12-21 11:07:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 1197.02 Mbit/s

95th percentile per-packet one-way delay: 239.895 ms

Loss rate: 5.09%

-- Flow 1:

Average throughput: 607.51 Mbit/s

95th percentile per-packet one-way delay: 230.778 ms

Loss rate: 3.11%

-- Flow 2:

Average throughput: 828.25 Mbit/s

95th percentile per-packet one-way delay: 247.067 ms

Loss rate: 7.07%

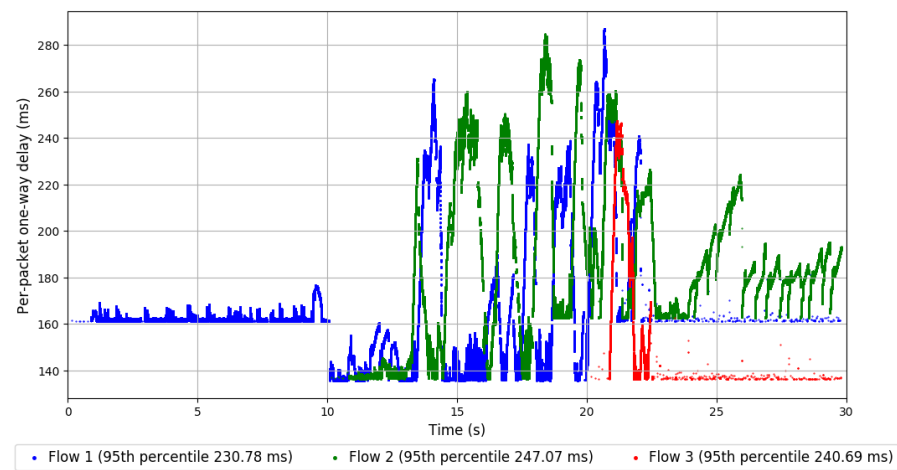
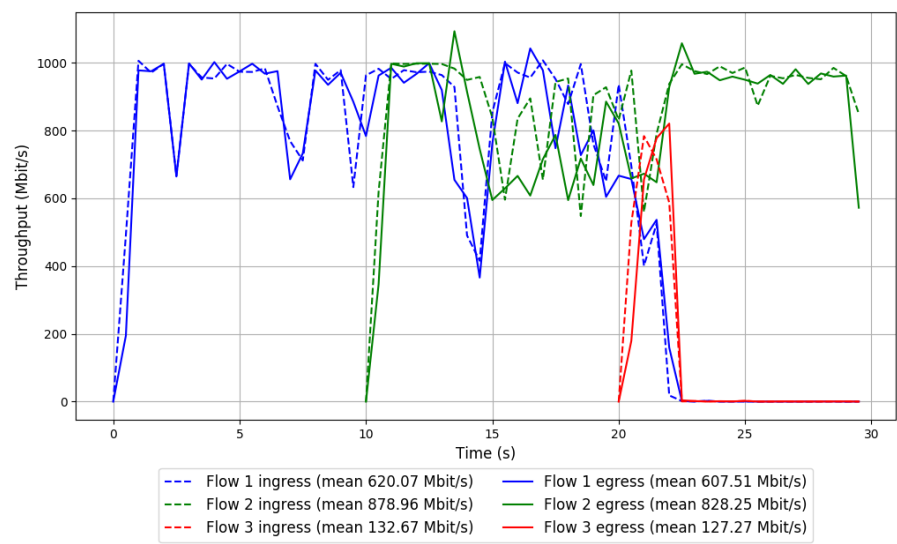
-- Flow 3:

Average throughput: 127.27 Mbit/s

95th percentile per-packet one-way delay: 240.687 ms

Loss rate: 6.76%

Run 6: Report of FillP — Data Link



Run 7: Statistics of FillP

Start at: 2017-12-21 06:29:21

End at: 2017-12-21 06:29:51

Below is generated by plot.py at 2017-12-21 11:07:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 1484.77 Mbit/s

95th percentile per-packet one-way delay: 247.737 ms

Loss rate: 8.21%

-- Flow 1:

Average throughput: 774.03 Mbit/s

95th percentile per-packet one-way delay: 240.950 ms

Loss rate: 4.48%

-- Flow 2:

Average throughput: 766.99 Mbit/s

95th percentile per-packet one-way delay: 244.879 ms

Loss rate: 8.18%

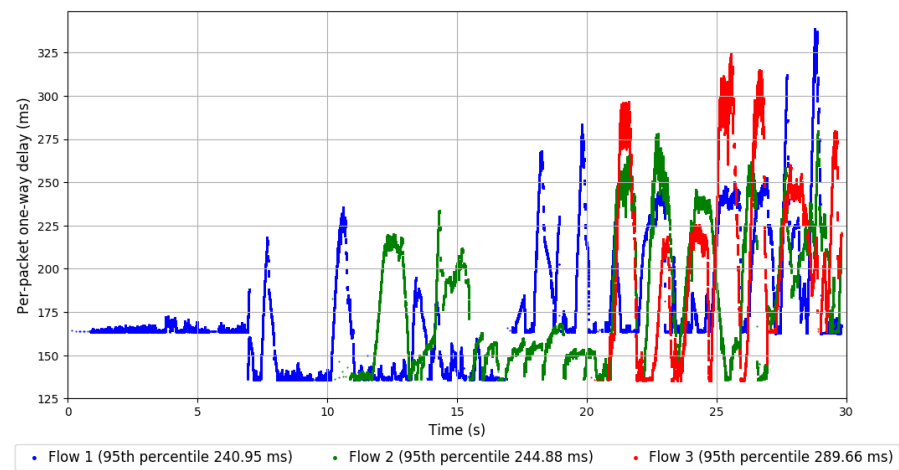
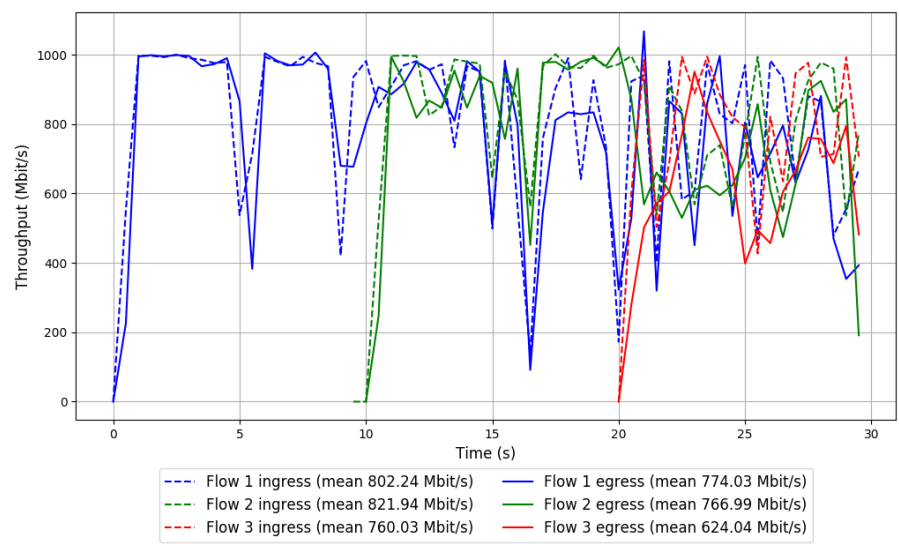
-- Flow 3:

Average throughput: 624.04 Mbit/s

95th percentile per-packet one-way delay: 289.658 ms

Loss rate: 20.16%

Run 7: Report of FillP — Data Link



Run 8: Statistics of FillP

Start at: 2017-12-21 06:44:55

End at: 2017-12-21 06:45:25

Below is generated by plot.py at 2017-12-21 11:07:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 1398.27 Mbit/s

95th percentile per-packet one-way delay: 244.411 ms

Loss rate: 6.75%

-- Flow 1:

Average throughput: 642.83 Mbit/s

95th percentile per-packet one-way delay: 244.841 ms

Loss rate: 2.63%

-- Flow 2:

Average throughput: 816.19 Mbit/s

95th percentile per-packet one-way delay: 219.554 ms

Loss rate: 7.06%

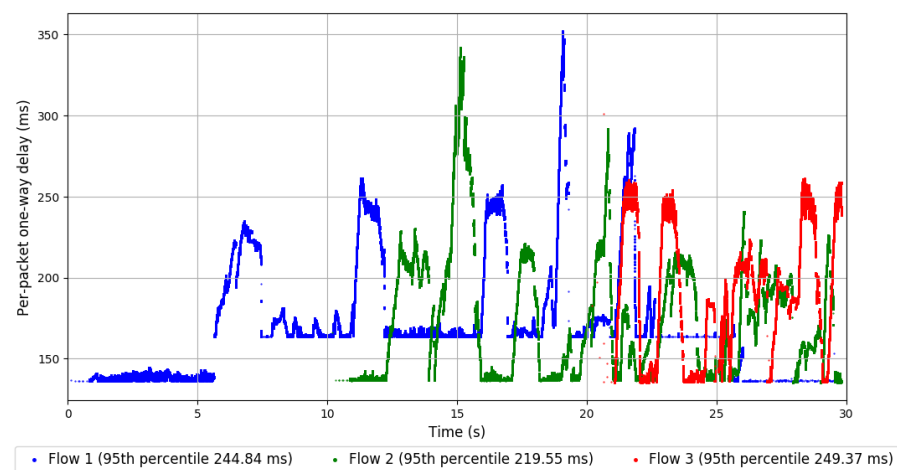
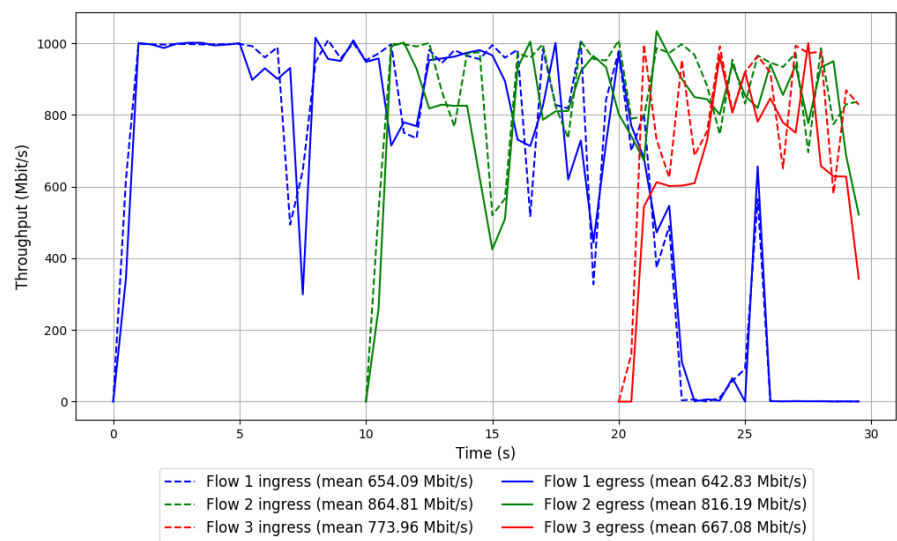
-- Flow 3:

Average throughput: 667.08 Mbit/s

95th percentile per-packet one-way delay: 249.371 ms

Loss rate: 16.59%

Run 8: Report of FillP — Data Link



Run 9: Statistics of FillP

Start at: 2017-12-21 07:00:08

End at: 2017-12-21 07:00:38

Below is generated by plot.py at 2017-12-21 11:14:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 1554.27 Mbit/s

95th percentile per-packet one-way delay: 240.807 ms

Loss rate: 9.34%

-- Flow 1:

Average throughput: 866.78 Mbit/s

95th percentile per-packet one-way delay: 229.816 ms

Loss rate: 5.88%

-- Flow 2:

Average throughput: 726.03 Mbit/s

95th percentile per-packet one-way delay: 238.626 ms

Loss rate: 10.86%

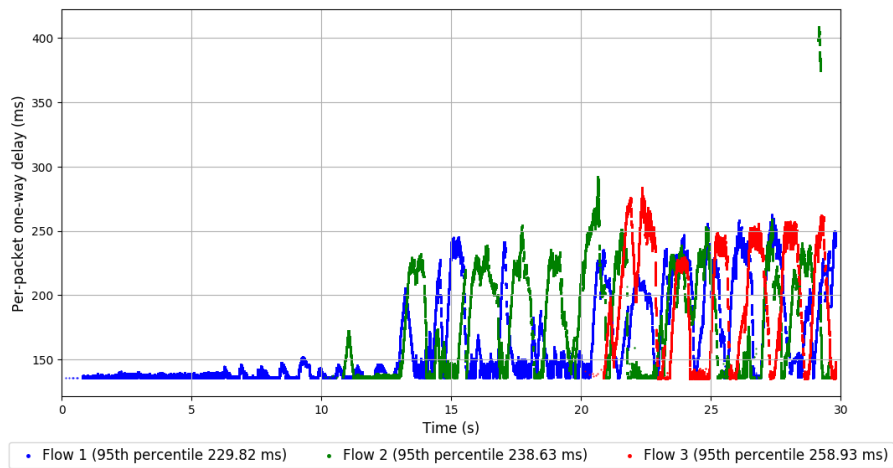
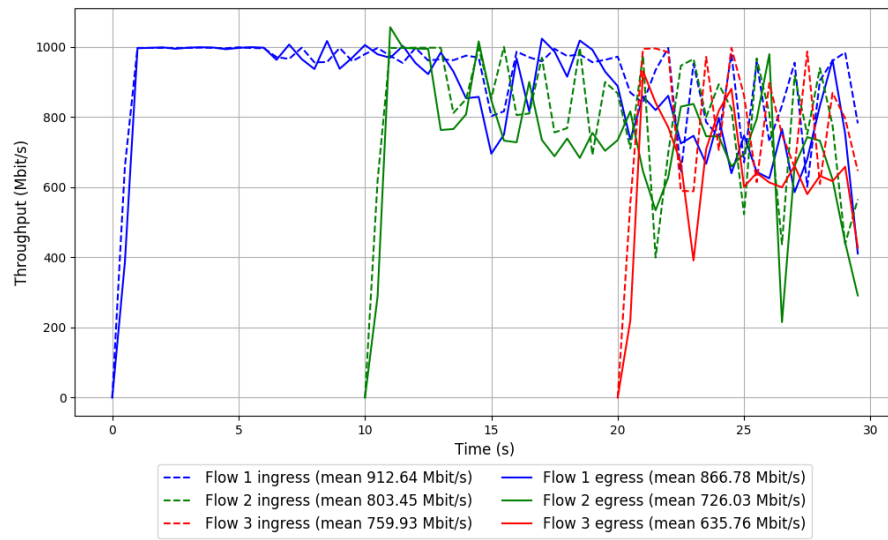
-- Flow 3:

Average throughput: 635.76 Mbit/s

95th percentile per-packet one-way delay: 258.926 ms

Loss rate: 18.64%

Run 9: Report of FillP — Data Link



Run 10: Statistics of FillP

Start at: 2017-12-21 07:16:18

End at: 2017-12-21 07:16:48

Below is generated by plot.py at 2017-12-21 11:14:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 1492.42 Mbit/s

95th percentile per-packet one-way delay: 251.710 ms

Loss rate: 7.15%

-- Flow 1:

Average throughput: 814.72 Mbit/s

95th percentile per-packet one-way delay: 223.483 ms

Loss rate: 4.35%

-- Flow 2:

Average throughput: 737.64 Mbit/s

95th percentile per-packet one-way delay: 264.294 ms

Loss rate: 7.31%

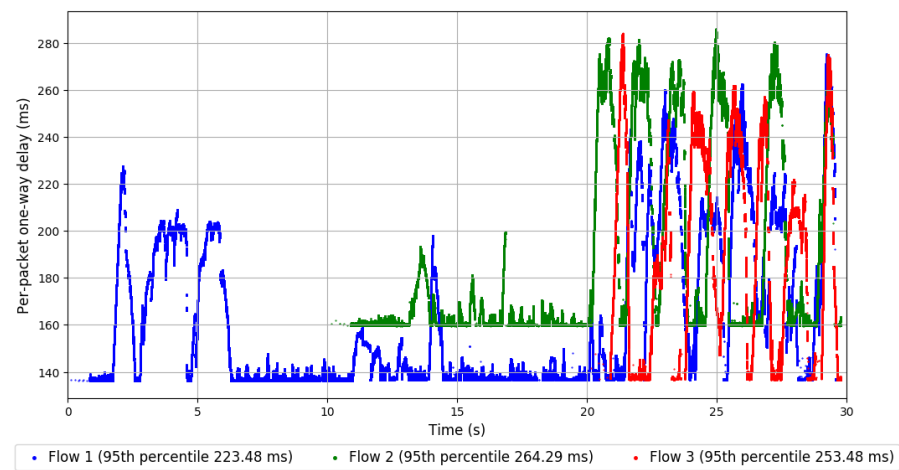
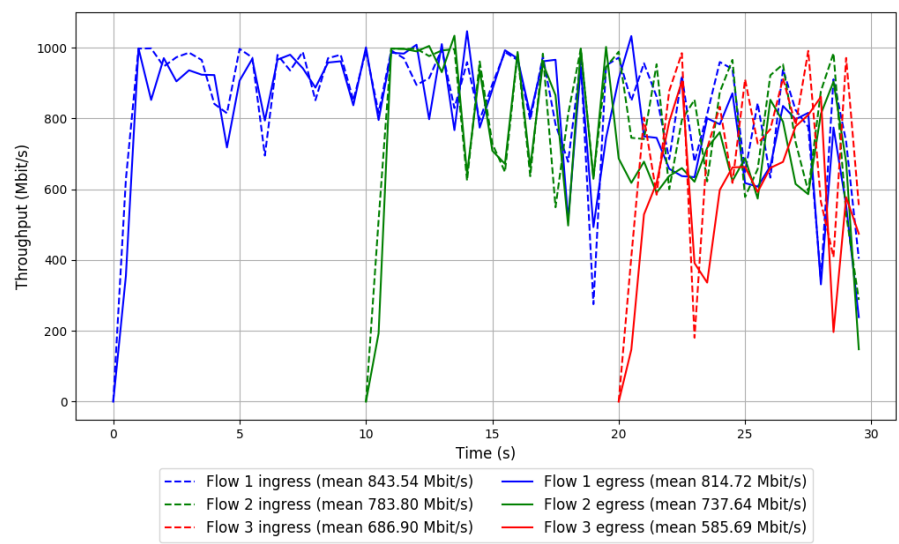
-- Flow 3:

Average throughput: 585.69 Mbit/s

95th percentile per-packet one-way delay: 253.484 ms

Loss rate: 17.15%

Run 10: Report of FillP — Data Link

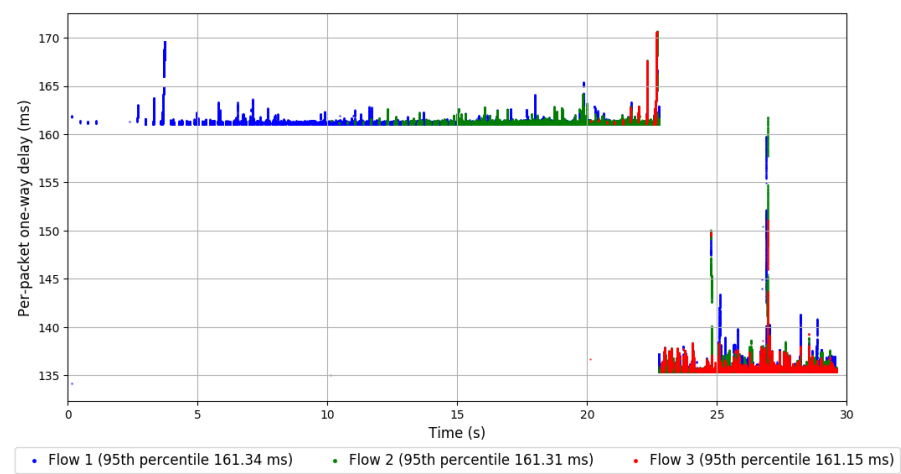
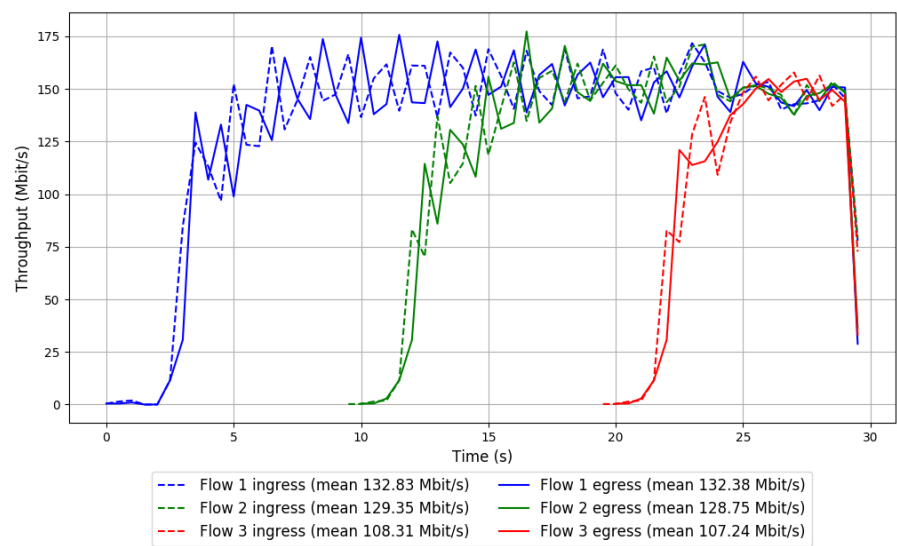


```
Run 1: Statistics of Indigo

Start at: 2017-12-21 05:04:15
End at: 2017-12-21 05:04:45

# Below is generated by plot.py at 2017-12-21 11:14:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 251.99 Mbit/s
95th percentile per-packet one-way delay: 161.324 ms
Loss rate: 1.81%
-- Flow 1:
Average throughput: 132.38 Mbit/s
95th percentile per-packet one-way delay: 161.342 ms
Loss rate: 1.26%
-- Flow 2:
Average throughput: 128.75 Mbit/s
95th percentile per-packet one-way delay: 161.315 ms
Loss rate: 1.84%
-- Flow 3:
Average throughput: 107.24 Mbit/s
95th percentile per-packet one-way delay: 161.154 ms
Loss rate: 3.78%
```

Run 1: Report of Indigo — Data Link



Run 2: Statistics of Indigo

Start at: 2017-12-21 05:19:42

End at: 2017-12-21 05:20:12

Below is generated by plot.py at 2017-12-21 11:14:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 199.75 Mbit/s

95th percentile per-packet one-way delay: 161.283 ms

Loss rate: 1.15%

-- Flow 1:

Average throughput: 86.03 Mbit/s

95th percentile per-packet one-way delay: 161.282 ms

Loss rate: 0.81%

-- Flow 2:

Average throughput: 126.21 Mbit/s

95th percentile per-packet one-way delay: 161.291 ms

Loss rate: 0.99%

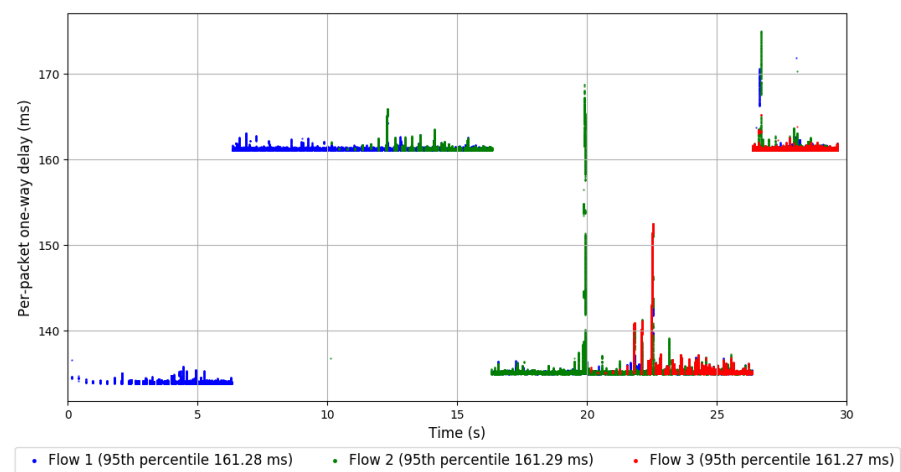
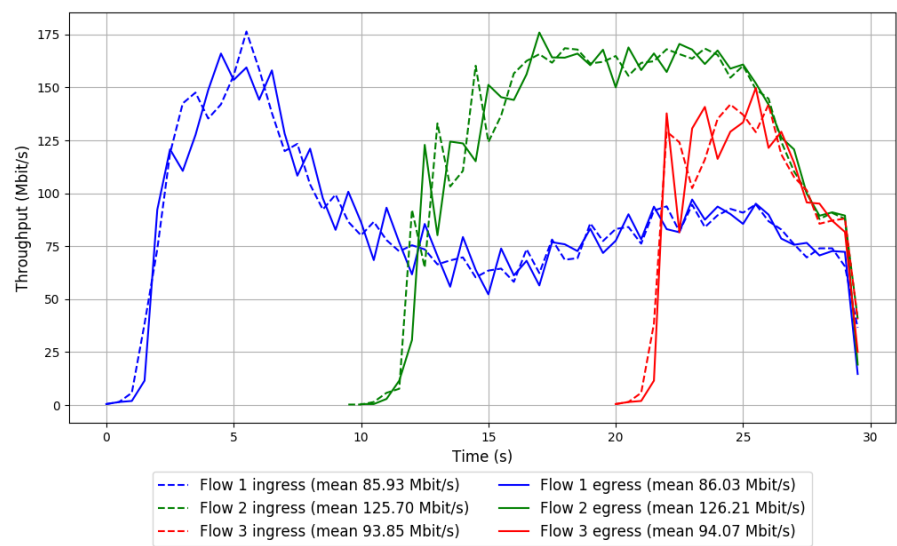
-- Flow 3:

Average throughput: 94.07 Mbit/s

95th percentile per-packet one-way delay: 161.271 ms

Loss rate: 2.57%

Run 2: Report of Indigo — Data Link



Run 3: Statistics of Indigo

Start at: 2017-12-21 05:35:38

End at: 2017-12-21 05:36:08

Below is generated by plot.py at 2017-12-21 11:14:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 228.52 Mbit/s

95th percentile per-packet one-way delay: 161.343 ms

Loss rate: 1.17%

-- Flow 1:

Average throughput: 122.80 Mbit/s

95th percentile per-packet one-way delay: 161.288 ms

Loss rate: 0.45%

-- Flow 2:

Average throughput: 108.91 Mbit/s

95th percentile per-packet one-way delay: 161.350 ms

Loss rate: 0.82%

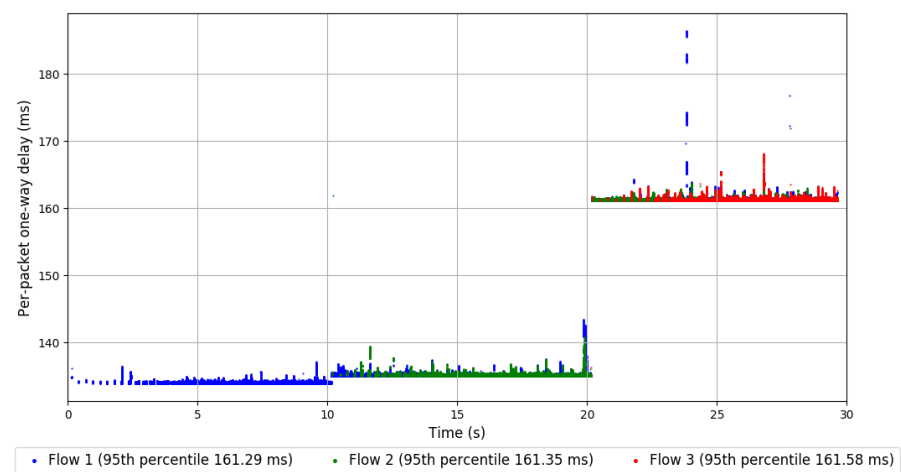
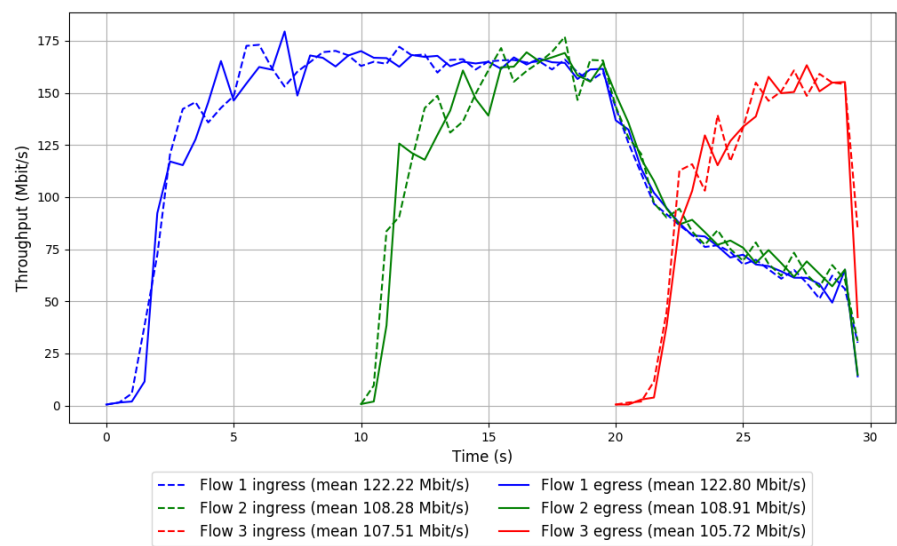
-- Flow 3:

Average throughput: 105.72 Mbit/s

95th percentile per-packet one-way delay: 161.576 ms

Loss rate: 4.38%

Run 3: Report of Indigo — Data Link



Run 4: Statistics of Indigo

Start at: 2017-12-21 05:50:40

End at: 2017-12-21 05:51:10

Below is generated by plot.py at 2017-12-21 11:14:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 269.47 Mbit/s

95th percentile per-packet one-way delay: 136.541 ms

Loss rate: 1.58%

-- Flow 1:

Average throughput: 145.09 Mbit/s

95th percentile per-packet one-way delay: 136.371 ms

Loss rate: 1.00%

-- Flow 2:

Average throughput: 133.62 Mbit/s

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

Loss rate: 1.51%

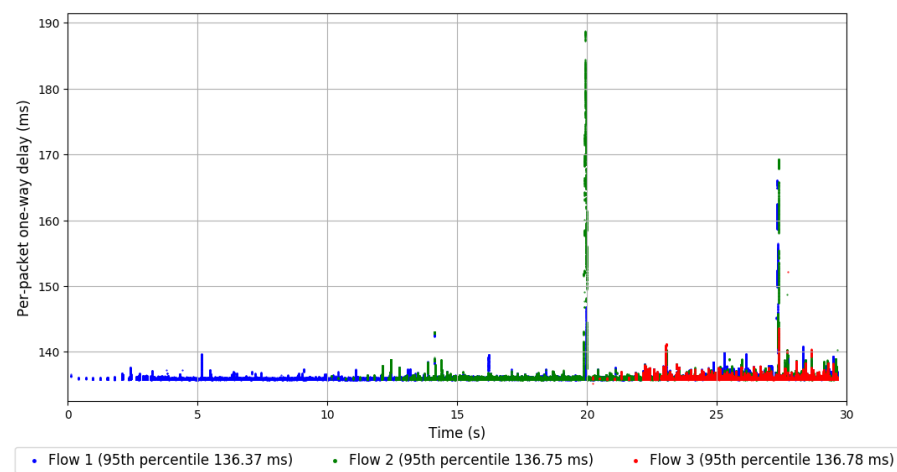
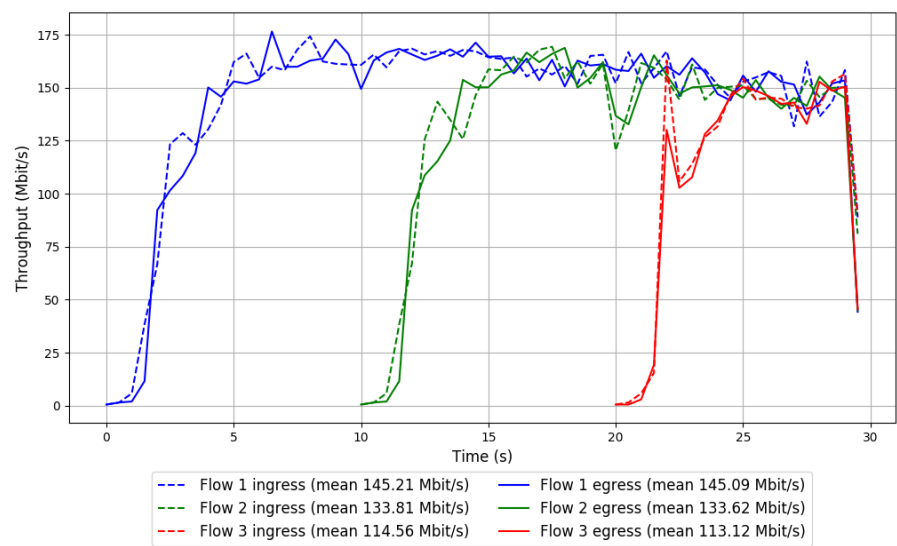
-- Flow 3:

Average throughput: 113.12 Mbit/s

95th percentile per-packet one-way delay: 136.775 ms

Loss rate: 4.02%

Run 4: Report of Indigo — Data Link



Run 5: Statistics of Indigo

Start at: 2017-12-21 06:06:10

End at: 2017-12-21 06:06:40

Below is generated by plot.py at 2017-12-21 11:14:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 245.94 Mbit/s

95th percentile per-packet one-way delay: 163.874 ms

Loss rate: 1.80%

-- Flow 1:

Average throughput: 127.93 Mbit/s

95th percentile per-packet one-way delay: 163.564 ms

Loss rate: 1.55%

-- Flow 2:

Average throughput: 128.76 Mbit/s

95th percentile per-packet one-way delay: 163.942 ms

Loss rate: 1.46%

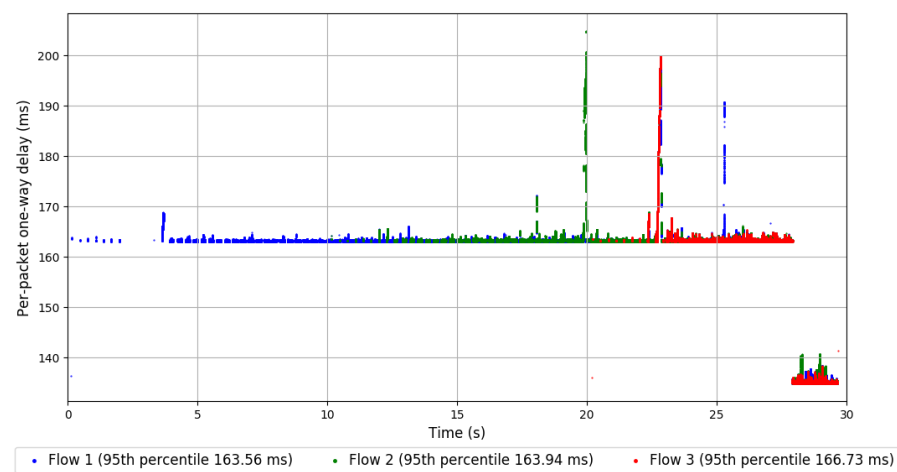
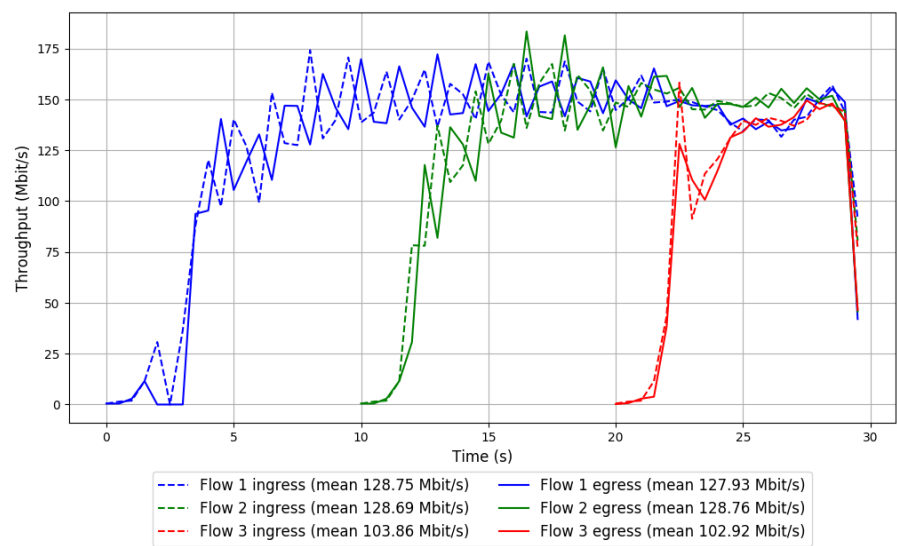
-- Flow 3:

Average throughput: 102.92 Mbit/s

95th percentile per-packet one-way delay: 166.730 ms

Loss rate: 3.62%

Run 5: Report of Indigo — Data Link



Run 6: Statistics of Indigo

Start at: 2017-12-21 06:21:23

End at: 2017-12-21 06:21:53

Below is generated by plot.py at 2017-12-21 11:14:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 189.01 Mbit/s

95th percentile per-packet one-way delay: 163.549 ms

Loss rate: 1.58%

-- Flow 1:

Average throughput: 104.99 Mbit/s

95th percentile per-packet one-way delay: 163.469 ms

Loss rate: 0.81%

-- Flow 2:

Average throughput: 76.83 Mbit/s

95th percentile per-packet one-way delay: 163.571 ms

Loss rate: 1.33%

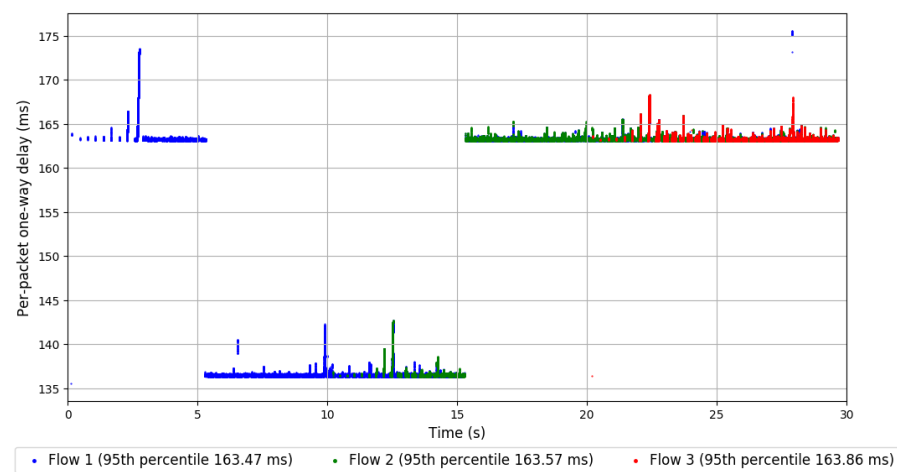
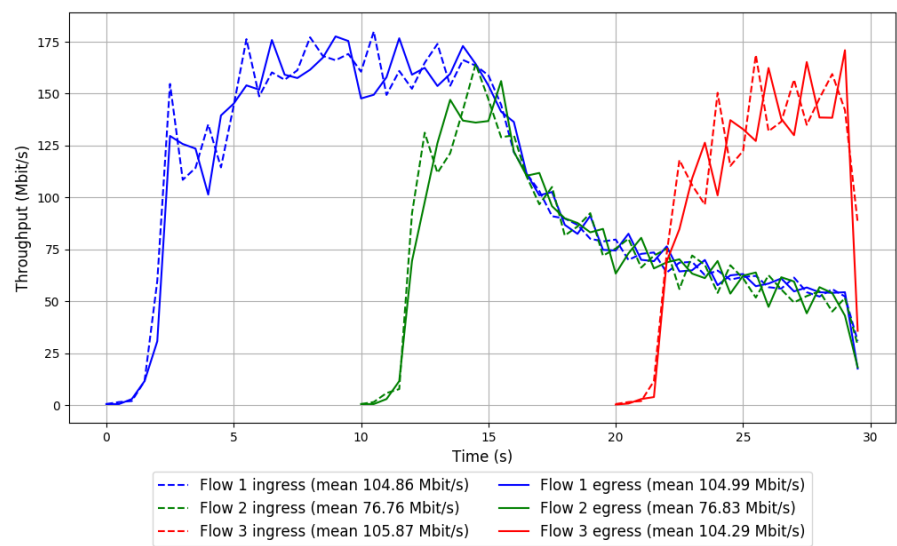
-- Flow 3:

Average throughput: 104.29 Mbit/s

95th percentile per-packet one-way delay: 163.858 ms

Loss rate: 4.27%

Run 6: Report of Indigo — Data Link



Run 7: Statistics of Indigo

Start at: 2017-12-21 06:36:54

End at: 2017-12-21 06:37:24

Below is generated by plot.py at 2017-12-21 11:14:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 254.86 Mbit/s

95th percentile per-packet one-way delay: 163.841 ms

Loss rate: 1.60%

-- Flow 1:

Average throughput: 138.20 Mbit/s

95th percentile per-packet one-way delay: 163.721 ms

Loss rate: 0.99%

-- Flow 2:

Average throughput: 126.91 Mbit/s

95th percentile per-packet one-way delay: 163.961 ms

Loss rate: 1.60%

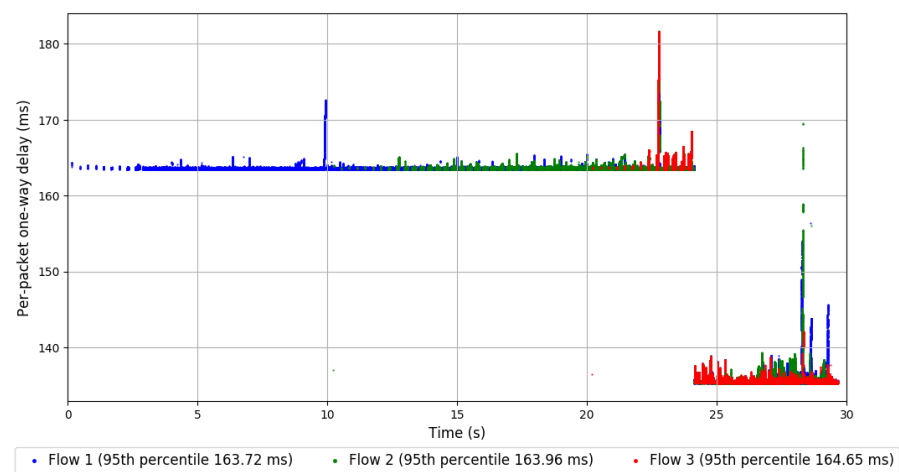
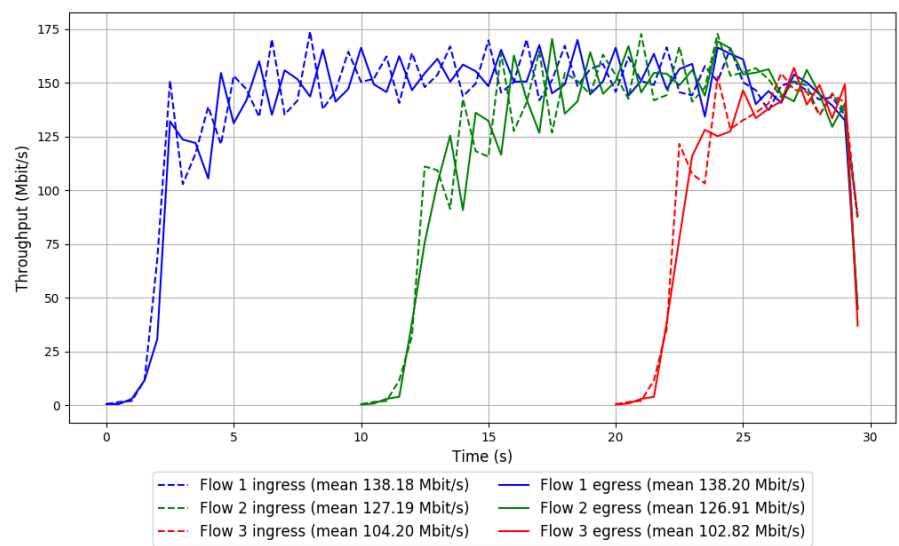
-- Flow 3:

Average throughput: 102.82 Mbit/s

95th percentile per-packet one-way delay: 164.645 ms

Loss rate: 4.08%

Run 7: Report of Indigo — Data Link



Run 8: Statistics of Indigo

Start at: 2017-12-21 06:52:27

End at: 2017-12-21 06:52:57

Below is generated by plot.py at 2017-12-21 11:14:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 249.44 Mbit/s

95th percentile per-packet one-way delay: 164.358 ms

Loss rate: 1.70%

-- Flow 1:

Average throughput: 135.80 Mbit/s

95th percentile per-packet one-way delay: 164.111 ms

Loss rate: 1.06%

-- Flow 2:

Average throughput: 123.41 Mbit/s

95th percentile per-packet one-way delay: 164.515 ms

Loss rate: 1.66%

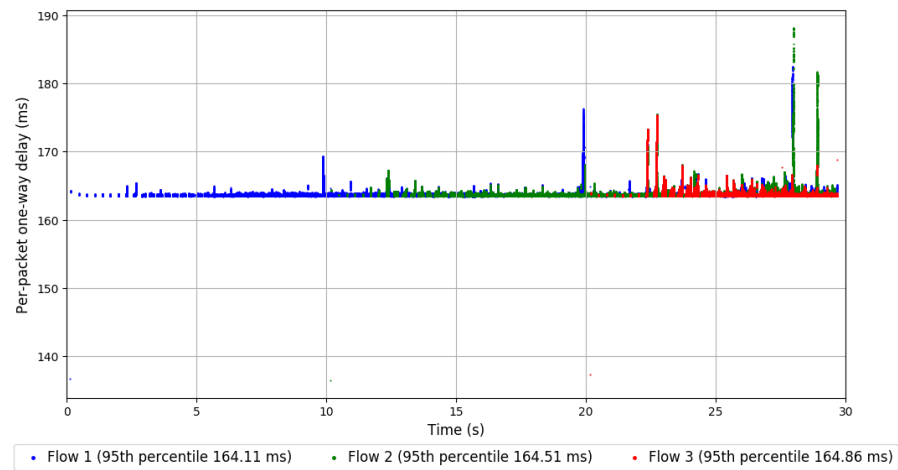
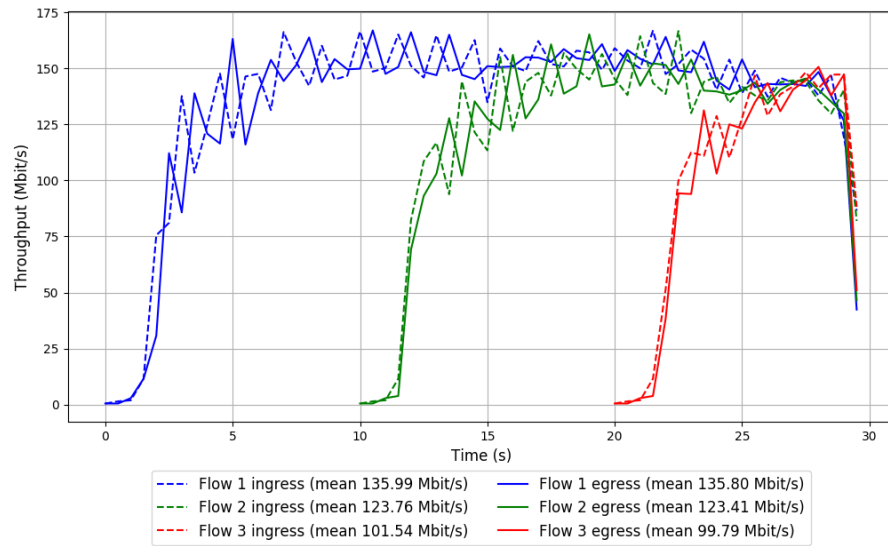
-- Flow 3:

Average throughput: 99.79 Mbit/s

95th percentile per-packet one-way delay: 164.857 ms

Loss rate: 4.41%

Run 8: Report of Indigo — Data Link



Run 9: Statistics of Indigo

Start at: 2017-12-21 07:08:25

End at: 2017-12-21 07:08:55

Below is generated by plot.py at 2017-12-21 11:14:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 232.31 Mbit/s

95th percentile per-packet one-way delay: 162.361 ms

Loss rate: 0.86%

-- Flow 1:

Average throughput: 126.89 Mbit/s

95th percentile per-packet one-way delay: 162.331 ms

Loss rate: 0.53%

-- Flow 2:

Average throughput: 123.09 Mbit/s

95th percentile per-packet one-way delay: 162.367 ms

Loss rate: 0.88%

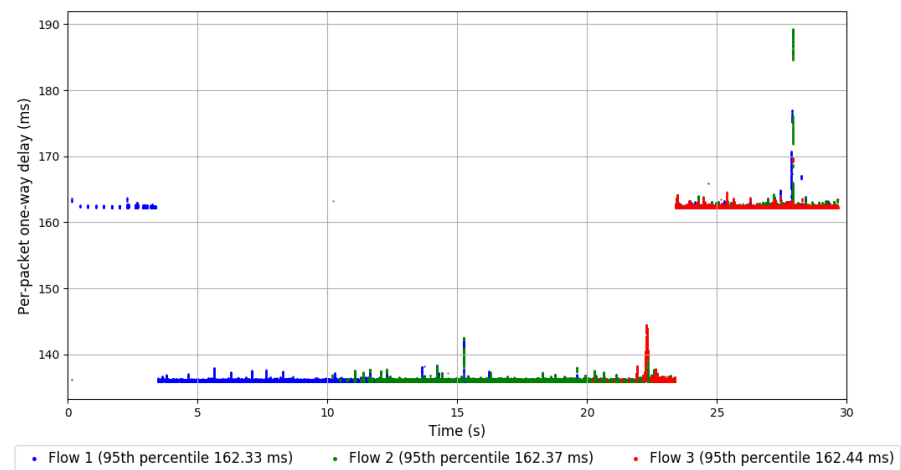
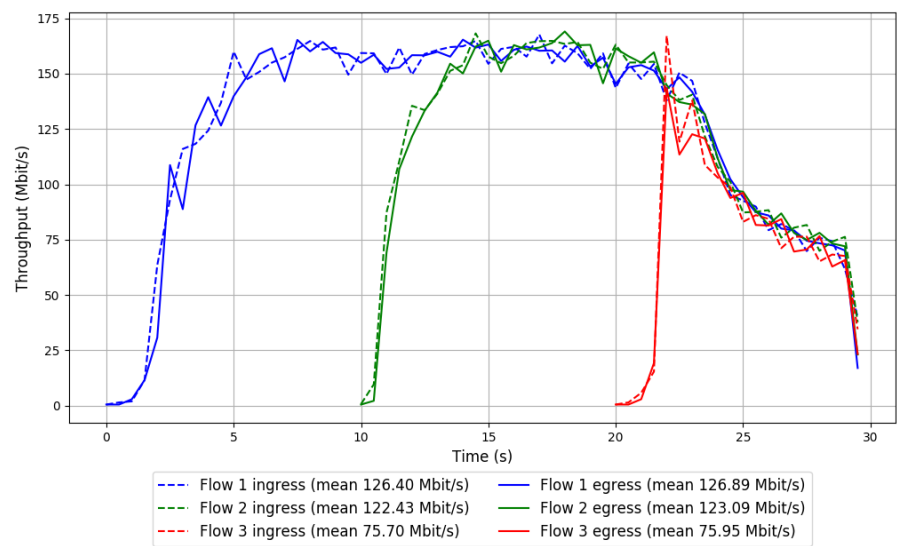
-- Flow 3:

Average throughput: 75.95 Mbit/s

95th percentile per-packet one-way delay: 162.441 ms

Loss rate: 2.48%

Run 9: Report of Indigo — Data Link



Run 10: Statistics of Indigo

Start at: 2017-12-21 07:23:58

End at: 2017-12-21 07:24:28

Below is generated by plot.py at 2017-12-21 11:14:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 193.77 Mbit/s

95th percentile per-packet one-way delay: 161.291 ms

Loss rate: 0.65%

-- Flow 1:

Average throughput: 125.41 Mbit/s

95th percentile per-packet one-way delay: 161.270 ms

Loss rate: 0.43%

-- Flow 2:

Average throughput: 103.69 Mbit/s

95th percentile per-packet one-way delay: 161.323 ms

Loss rate: 1.02%

-- Flow 3:

Average throughput: 1.30 Mbit/s

95th percentile per-packet one-way delay: 161.483 ms

Loss rate: 3.81%

Run 10: Report of Indigo — Data Link

