

Pantheon Report

Generated at 2018-04-03 04:23:56 (UTC).

Data path: AWS California 1 Ethernet (*local*) → Stanford ppp0 (*remote*).

Repeated the test of 17 congestion control schemes 3 times.

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

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

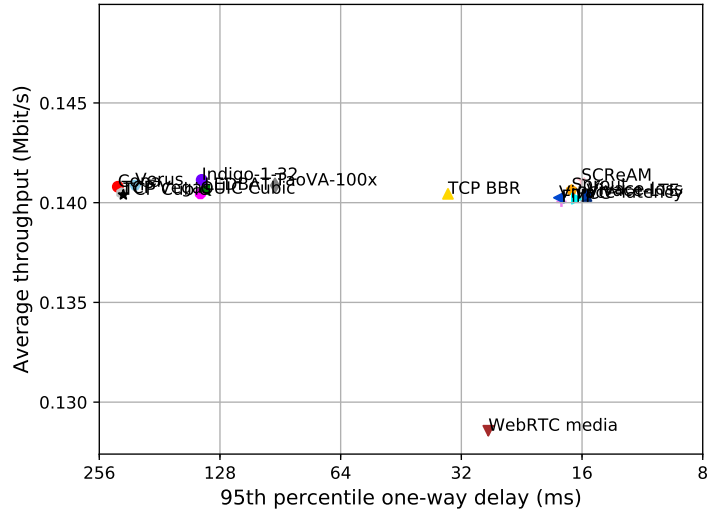
Tested BBR with qdisc of Fair Queuing (*fq*), and other schemes with the default Linux qdisc (*pfifo_fast*).

NTP offsets were measured against `time.stanford.edu` and have been applied to correct the timestamps in logs.

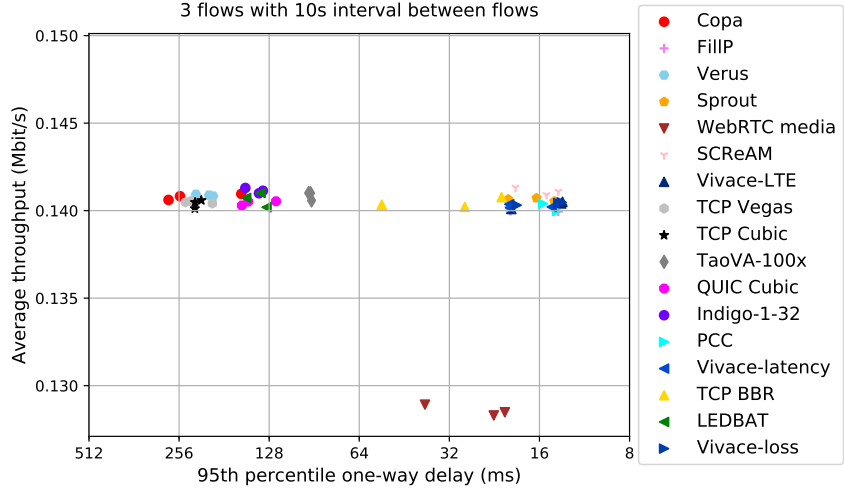
Git summary:

```
branch: master @ eb420b5be9bafccd22cf68b99ff5a2000462fc59
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
  M datagrump/sender.cc
third_party/fillp @ 11f8c46a2bf1dc797253db7e8ca04076272b2a44
third_party/genericCC @ 9249eea3238475c4d8cca1443d28df70bff6c4a2
third_party/indigo @ a9b2060d39e4da2e8987e893e3eca2a6c7cd0ab9
third_party/indigo-1-layer-128-unit @ 3ae9e4ef4230db7484501f82ce8b377695f2f66d
third_party/indigo-1-layer-32-unit @ 2601c92e4aa9d58d38dc4dfe0ecd9c077e64d
third_party/indigo-1-layer-32-unit-no-calib @ 1f3a7f75b41135ed5b540c0fd3505939528e2a5f
third_party/indigo-no-calib @ 7224f2202e8a044d8306fa0b983ad84360c53d89
third_party/koho_cc @ f0f2e693303aee82ea808e6928eac4f1083a6681
  M datagrump/sender.cc
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ fb1053193c2861da659ba9013db26744ccfcf993
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
  M receiver/src/buffer.h
  M receiver/src/core.cpp
  M sender/src/buffer.h
  M sender/src/core.cpp
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream @ c3370fd7bd17265a79aeb34e4016ad23f5965885
third_party/sourdough @ f1a14bffe749737437f61b1eae30b267cde681
third_party/sprout @ 6f2efe6e088d91066a9f023df375eee2665089ce
  M src/examples/cellsim.cc
  M src/examples/sproutbt2.cc
  M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
  M src/verus.hpp
  M tools/plot.py
third_party/vivace @ 7a4ba531e75b4a6f66f5c4580192120401784ce3
third_party/webrtc @ f271183af822eee5d0031620f4bebf38aedc5581
```

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



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



scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	3	0.12	0.04	0.07	32.98	27.27	57.17	30.32	58.94	80.40
TCP Cubic	3	0.09	0.06	0.04	215.30	225.69	220.35	38.97	45.85	53.03
LEDBAT	3	0.09	0.06	0.04	138.30	104.33	160.06	40.49	48.84	54.96
PCC	3	0.08	0.05	0.06	16.00	15.47	20.17	96.73	99.25	99.59
QUIC Cubic	3	0.10	0.07	0.05	165.58	133.55	65.01	68.26	67.37	83.36
SCReAM	3	0.11	0.04	0.03	17.48	15.76	13.04	3.27	40.80	54.43
WebRTC media	3	0.06	0.05	0.02	24.21	26.27	39.61	39.32	60.45	63.93
Sprout	3	0.09	0.05	0.05	19.52	13.24	16.69	65.53	78.25	79.65
TaoVA-100x	3	0.08	0.07	0.05	71.86	92.39	104.44	94.51	95.63	97.17
TCP Vegas	3	0.10	0.05	0.05	227.97	230.59	258.56	39.01	47.07	52.75
Verus	3	0.09	0.06	0.05	218.34	193.51	190.34	79.49	70.78	60.52
Copa	3	0.08	0.08	0.04	258.91	114.66	183.77	66.07	71.19	84.24
FillP	3	0.07	0.07	0.07	18.11	18.13	15.42	93.78	90.39	93.13
Indigo-1-32	3	0.09	0.05	0.05	88.01	153.67	192.73	79.41	90.66	93.84
Vivace-latency	3	0.09	0.05	0.04	18.49	15.83	18.00	92.60	95.56	96.80
Vivace-loss	3	0.09	0.06	0.04	14.52	15.37	14.98	92.59	95.46	97.05
Vivace-LTE	3	0.09	0.06	0.04	15.78	15.06	15.69	92.70	95.42	96.89

Run 1: Statistics of TCP BBR

Start at: 2018-04-03 03:16:01

End at: 2018-04-03 03:16:31

Local clock offset: 0.316 ms

Remote clock offset: -5.17 ms

Below is generated by plot.py at 2018-04-03 04:23:22

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 28.418 ms

Loss rate: 47.17%

-- Flow 1:

Average throughput: 0.12 Mbit/s

95th percentile per-packet one-way delay: 28.461 ms

Loss rate: 29.38%

-- Flow 2:

Average throughput: 0.02 Mbit/s

95th percentile per-packet one-way delay: 20.894 ms

Loss rate: 79.16%

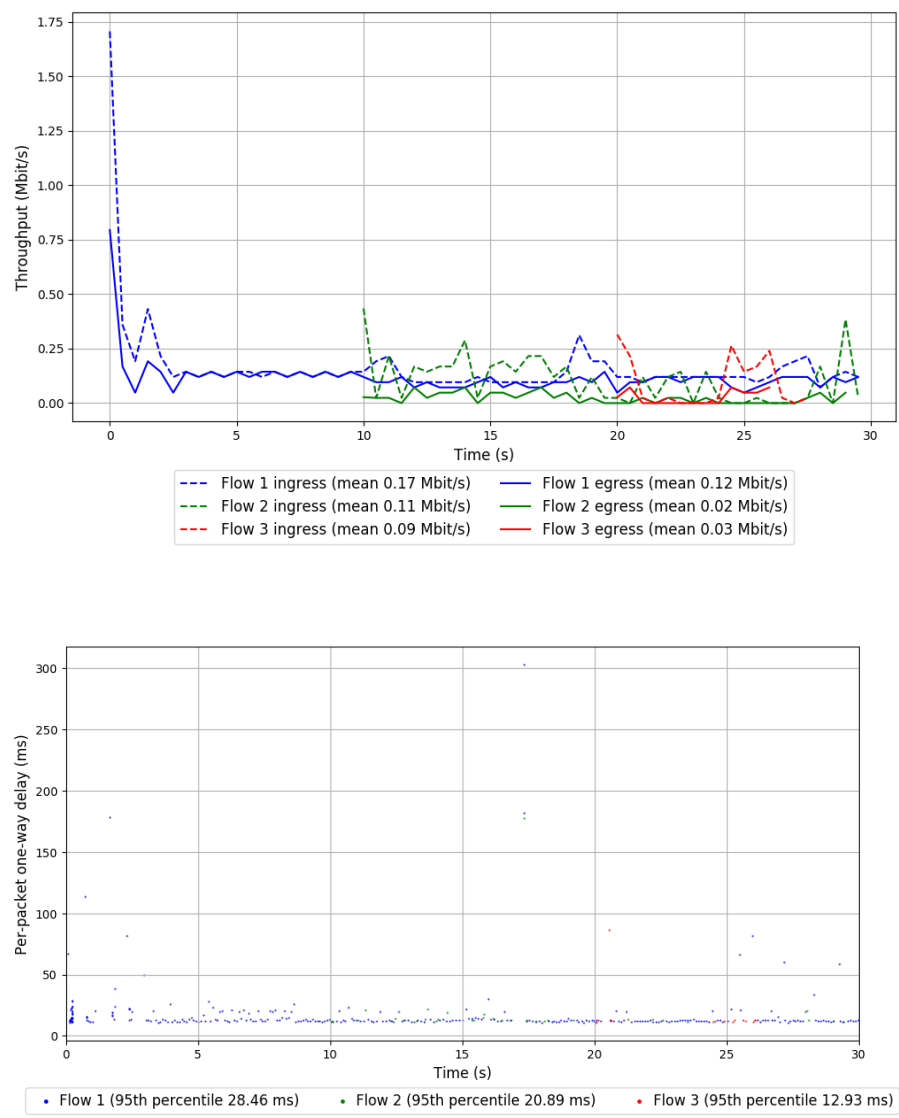
-- Flow 3:

Average throughput: 0.03 Mbit/s

95th percentile per-packet one-way delay: 12.930 ms

Loss rate: 76.89%

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2018-04-03 03:39:40

End at: 2018-04-03 03:40:10

Local clock offset: 0.231 ms

Remote clock offset: -5.29 ms

Below is generated by plot.py at 2018-04-03 04:23:22

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 21.410 ms

Loss rate: 34.56%

-- Flow 1:

Average throughput: 0.13 Mbit/s

95th percentile per-packet one-way delay: 21.552 ms

Loss rate: 25.98%

-- Flow 2:

Average throughput: 0.04 Mbit/s

95th percentile per-packet one-way delay: 13.523 ms

Loss rate: 50.73%

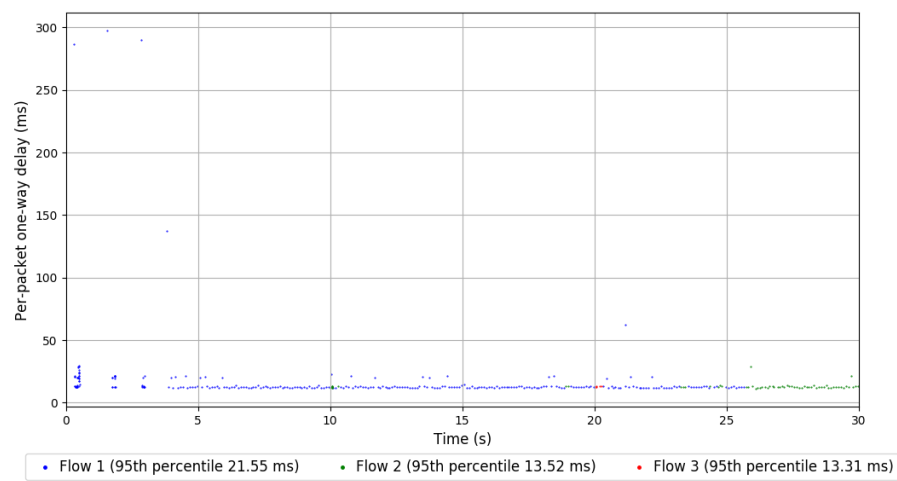
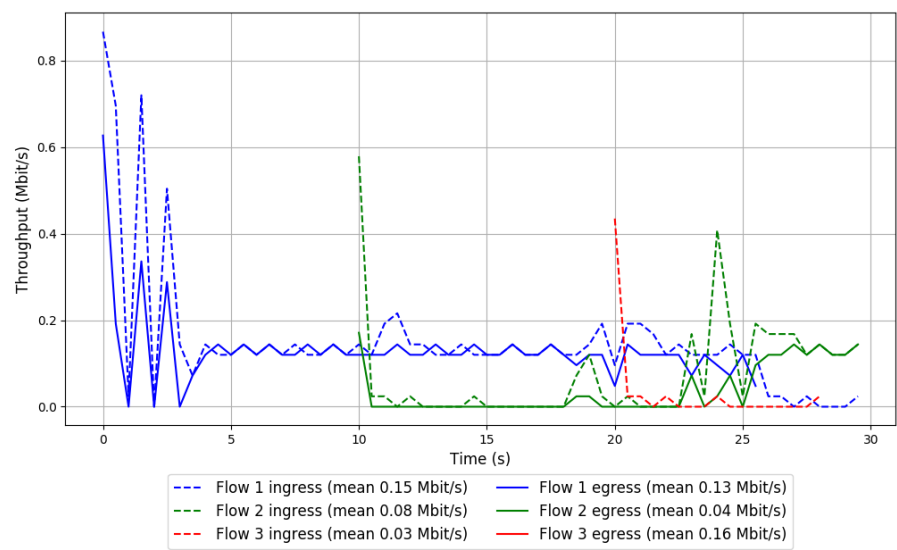
-- Flow 3:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 13.312 ms

Loss rate: 86.50%

Run 2: Report of TCP BBR — Data Link

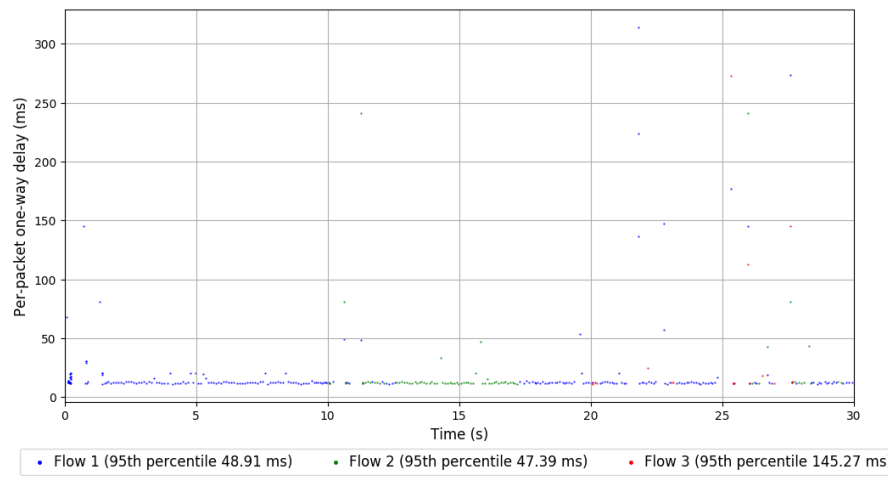
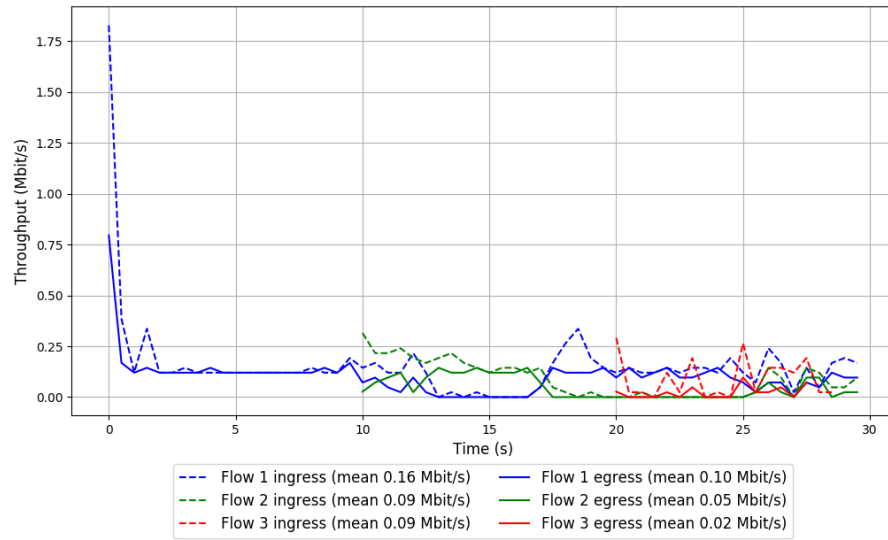


Run 3: Statistics of TCP BBR

Start at: 2018-04-03 04:03:20
End at: 2018-04-03 04:03:50
Local clock offset: 0.255 ms
Remote clock offset: -5.188 ms

Below is generated by plot.py at 2018-04-03 04:23:22
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 53.843 ms
Loss rate: 43.04%
-- Flow 1:
Average throughput: 0.10 Mbit/s
95th percentile per-packet one-way delay: 48.913 ms
Loss rate: 35.60%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 47.389 ms
Loss rate: 46.94%
-- Flow 3:
Average throughput: 0.02 Mbit/s
95th percentile per-packet one-way delay: 145.270 ms
Loss rate: 77.80%

Run 3: Report of TCP BBR — Data Link

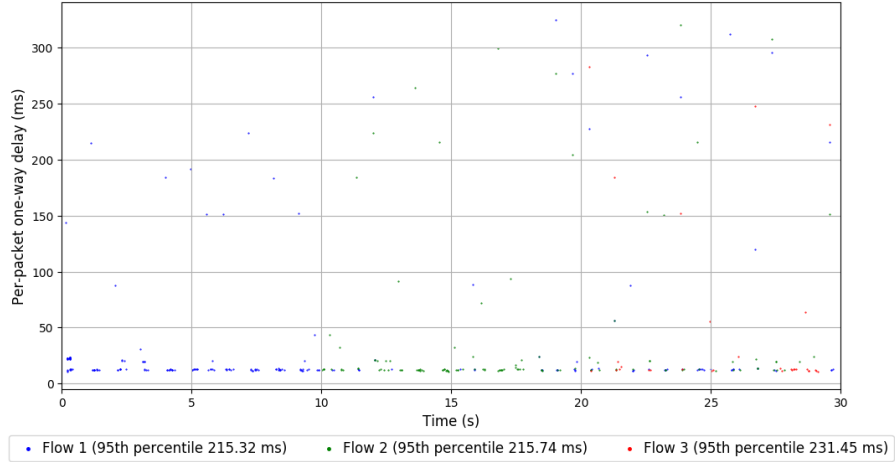
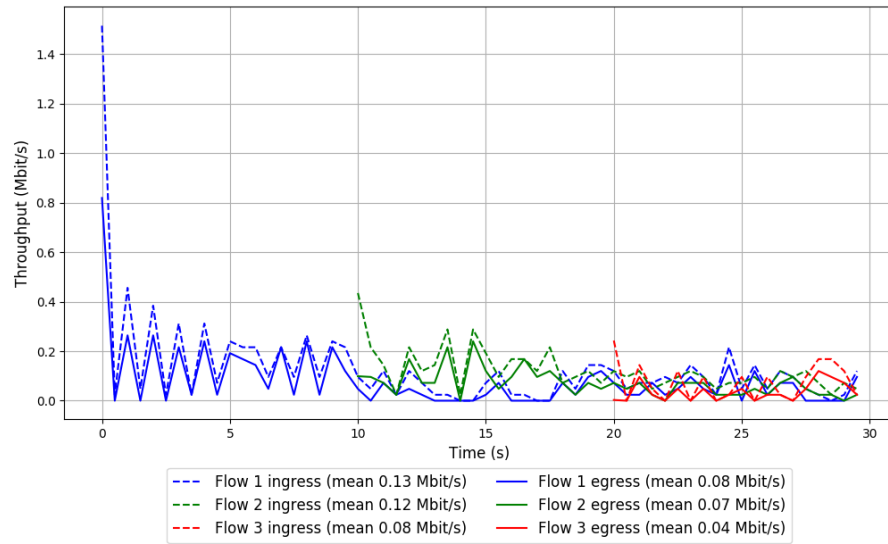


Run 1: Statistics of TCP Cubic

Start at: 2018-04-03 03:22:34
End at: 2018-04-03 03:23:04
Local clock offset: 0.311 ms
Remote clock offset: -5.216 ms

Below is generated by plot.py at 2018-04-03 04:23:22
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 215.742 ms
Loss rate: 41.72%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 215.320 ms
Loss rate: 39.08%
-- Flow 2:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 215.742 ms
Loss rate: 42.83%
-- Flow 3:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 231.447 ms
Loss rate: 52.35%

Run 1: Report of TCP Cubic — Data Link

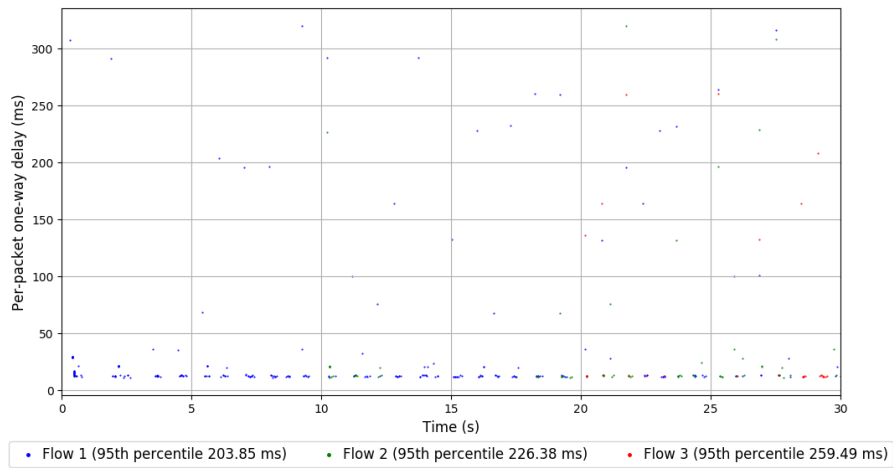
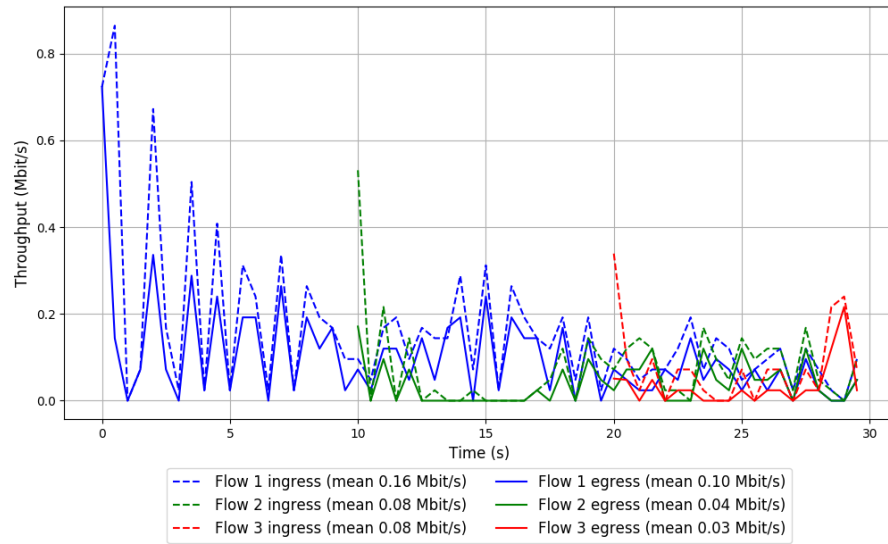


Run 2: Statistics of TCP Cubic

Start at: 2018-04-03 03:46:14
End at: 2018-04-03 03:46:44
Local clock offset: 0.355 ms
Remote clock offset: -5.261 ms

Below is generated by plot.py at 2018-04-03 04:23:22
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 226.382 ms
Loss rate: 42.04%
-- Flow 1:
Average throughput: 0.10 Mbit/s
95th percentile per-packet one-way delay: 203.850 ms
Loss rate: 37.49%
-- Flow 2:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 226.382 ms
Loss rate: 49.16%
-- Flow 3:
Average throughput: 0.03 Mbit/s
95th percentile per-packet one-way delay: 259.493 ms
Loss rate: 56.82%

Run 2: Report of TCP Cubic — Data Link

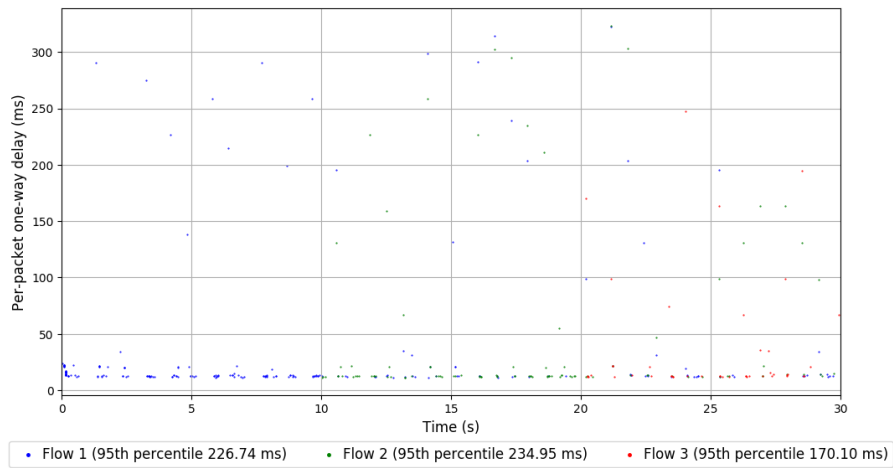
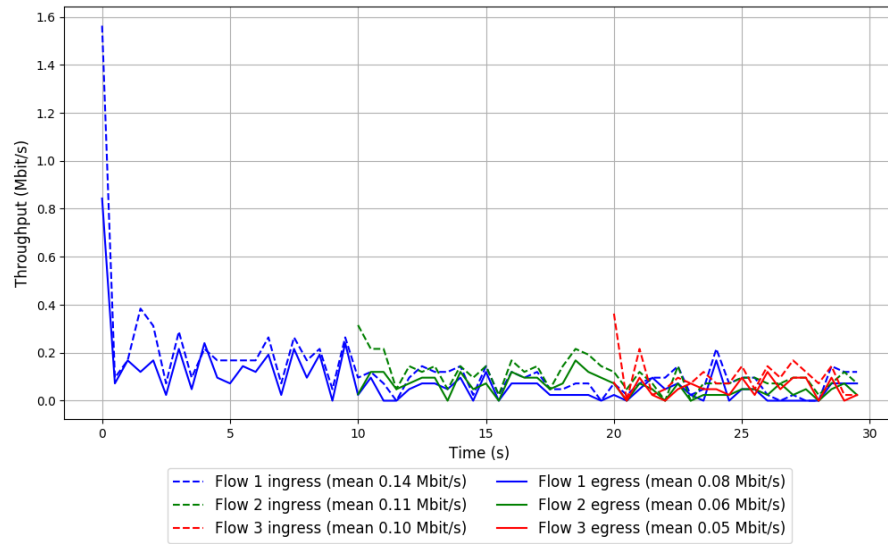


Run 3: Statistics of TCP Cubic

Start at: 2018-04-03 04:09:54
End at: 2018-04-03 04:10:24
Local clock offset: 0.363 ms
Remote clock offset: -5.069 ms

Below is generated by plot.py at 2018-04-03 04:23:22
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 226.739 ms
Loss rate: 43.23%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 226.739 ms
Loss rate: 40.33%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 234.947 ms
Loss rate: 45.57%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 170.096 ms
Loss rate: 49.93%

Run 3: Report of TCP Cubic — Data Link

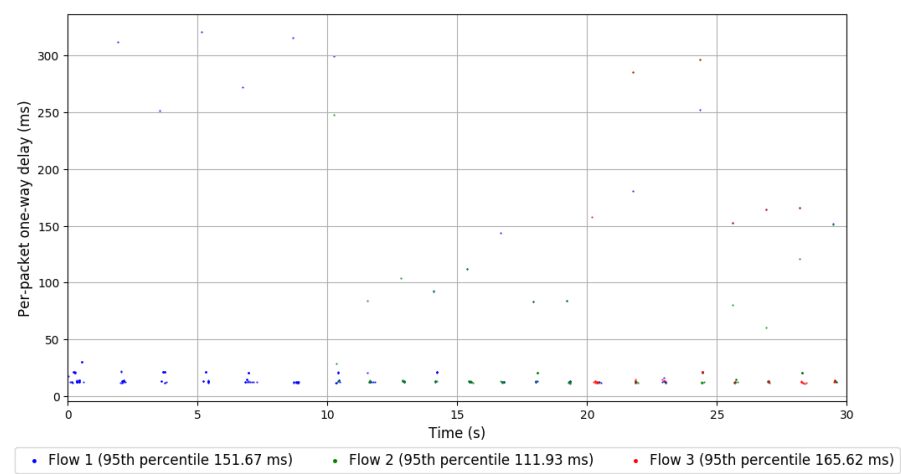
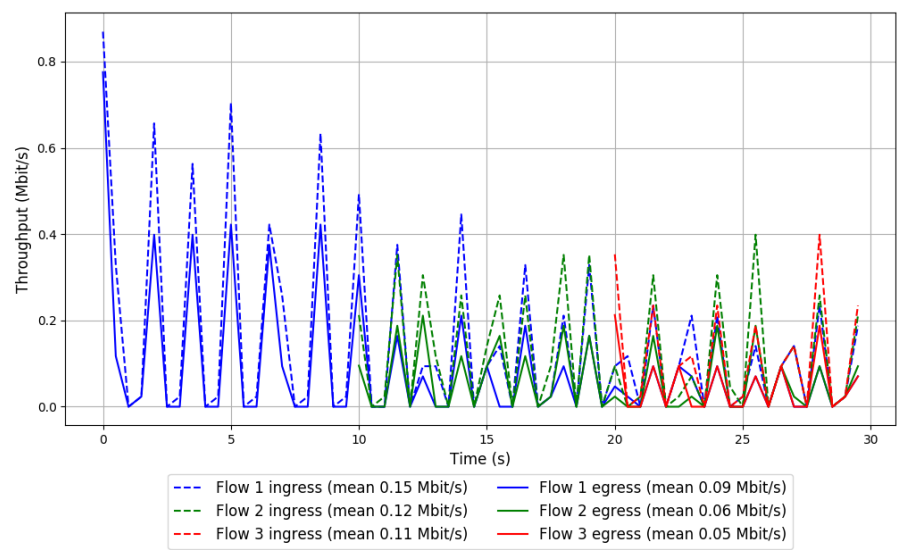


Run 1: Statistics of LEDBAT

Start at: 2018-04-03 03:33:05
End at: 2018-04-03 03:33:35
Local clock offset: 0.319 ms
Remote clock offset: -5.193 ms

Below is generated by plot.py at 2018-04-03 04:23:22
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 152.781 ms
Loss rate: 47.55%
-- Flow 1:
Average throughput: 0.09 Mbit/s
95th percentile per-packet one-way delay: 151.668 ms
Loss rate: 43.22%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 111.927 ms
Loss rate: 51.73%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 165.620 ms
Loss rate: 56.49%

Run 1: Report of LEDBAT — Data Link

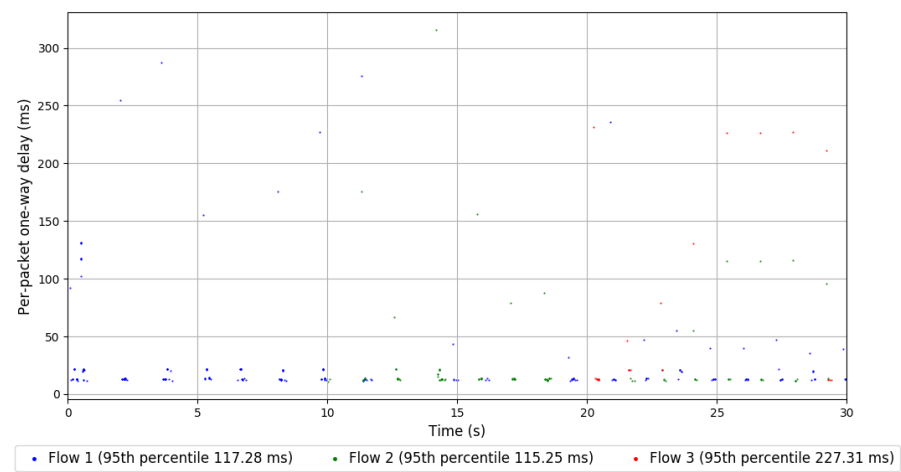
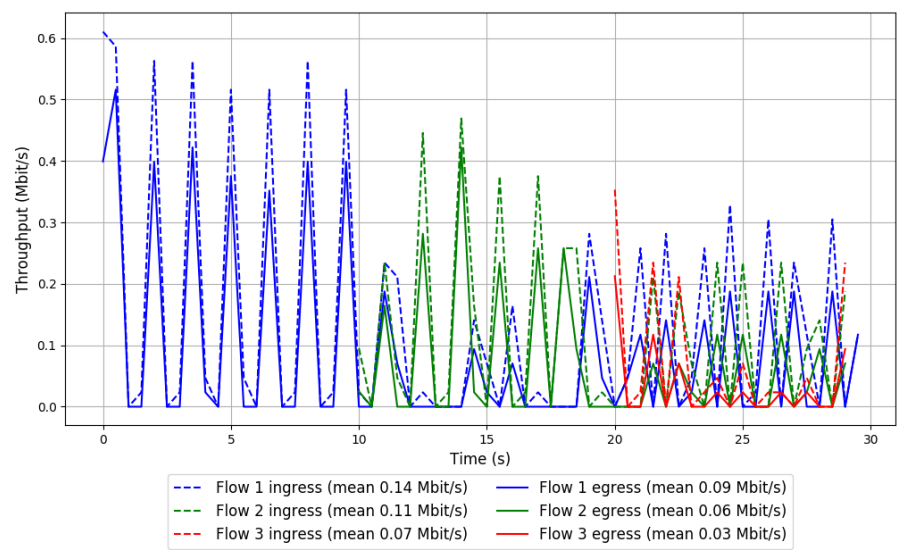


Run 2: Statistics of LEDBAT

Start at: 2018-04-03 03:56:45
End at: 2018-04-03 03:57:15
Local clock offset: 0.357 ms
Remote clock offset: -5.174 ms

Below is generated by plot.py at 2018-04-03 04:23:22
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 130.638 ms
Loss rate: 39.89%
-- Flow 1:
Average throughput: 0.09 Mbit/s
95th percentile per-packet one-way delay: 117.276 ms
Loss rate: 35.51%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 115.249 ms
Loss rate: 43.84%
-- Flow 3:
Average throughput: 0.03 Mbit/s
95th percentile per-packet one-way delay: 227.305 ms
Loss rate: 54.49%

Run 2: Report of LEDBAT — Data Link

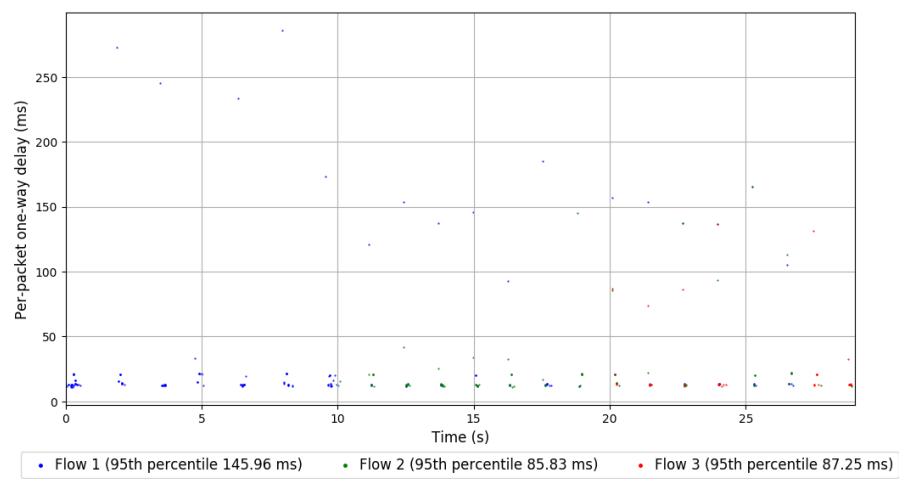
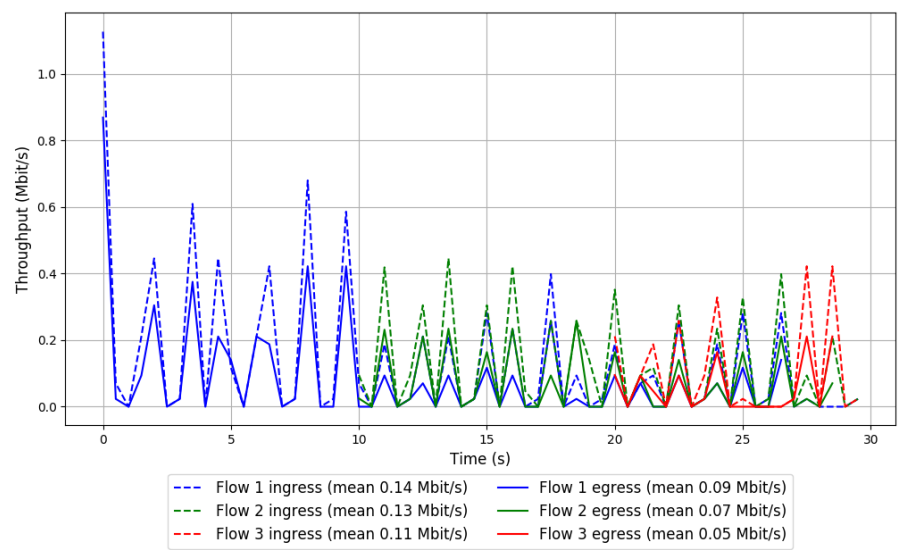


Run 3: Statistics of LEDBAT

Start at: 2018-04-03 04:20:32
End at: 2018-04-03 04:21:02
Local clock offset: 0.436 ms
Remote clock offset: -5.516 ms

Below is generated by plot.py at 2018-04-03 04:23:25
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 136.767 ms
Loss rate: 46.94%
-- Flow 1:
Average throughput: 0.09 Mbit/s
95th percentile per-packet one-way delay: 145.956 ms
Loss rate: 42.73%
-- Flow 2:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 85.825 ms
Loss rate: 50.95%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 87.249 ms
Loss rate: 53.90%

Run 3: Report of LEDBAT — Data Link

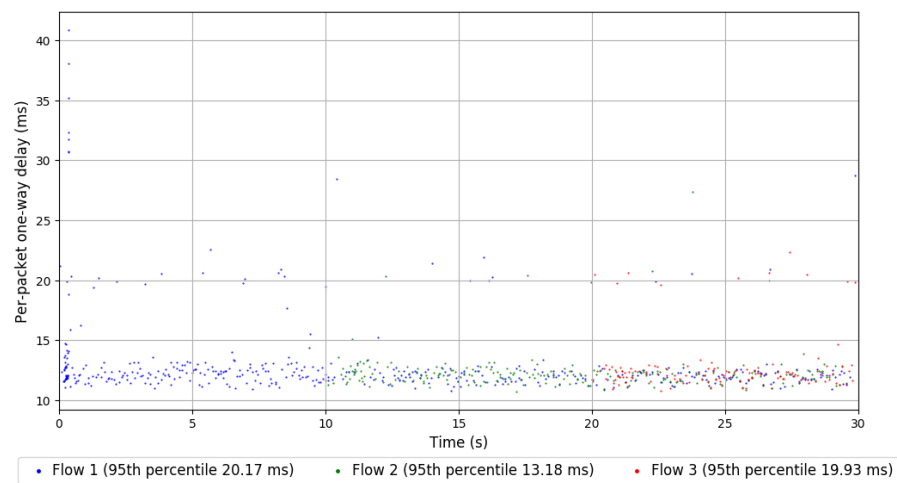
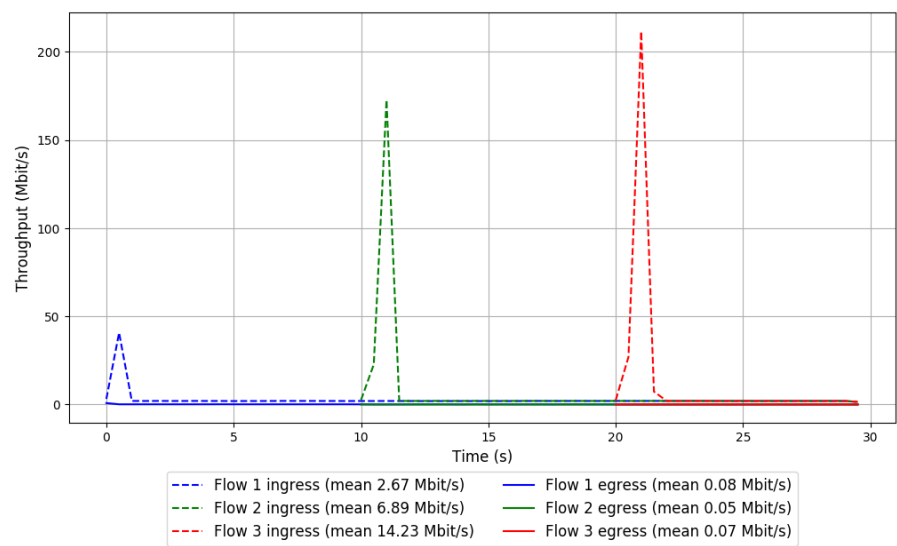


Run 1: Statistics of PCC

Start at: 2018-04-03 03:30:27
End at: 2018-04-03 03:30:57
Local clock offset: 0.322 ms
Remote clock offset: -5.172 ms

Below is generated by plot.py at 2018-04-03 04:23:32
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 19.894 ms
Loss rate: 98.83%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 20.166 ms
Loss rate: 96.90%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 13.182 ms
Loss rate: 99.23%
-- Flow 3:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 19.931 ms
Loss rate: 99.53%

Run 1: Report of PCC — Data Link

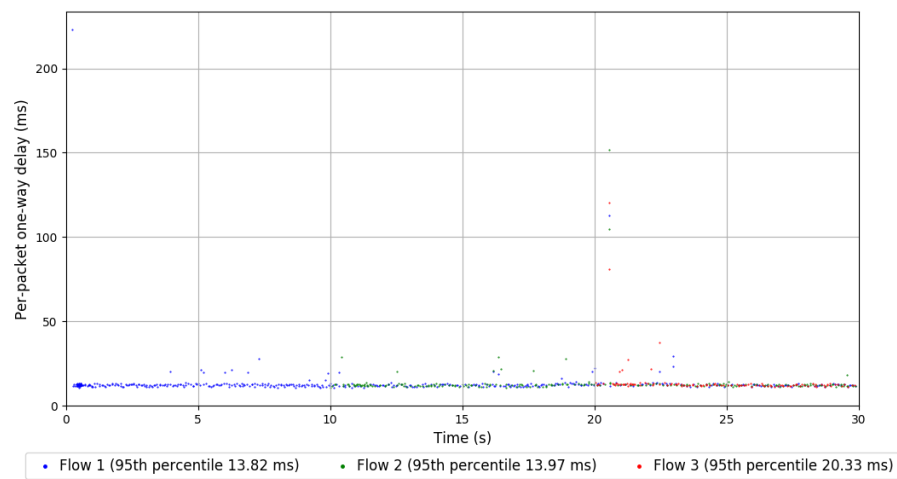
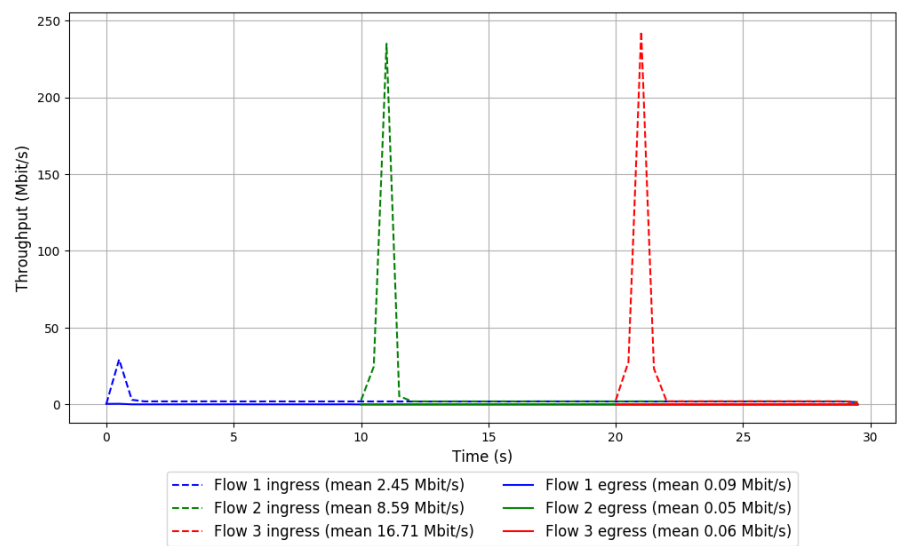


Run 2: Statistics of PCC

Start at: 2018-04-03 03:54:07
End at: 2018-04-03 03:54:37
Local clock offset: 0.366 ms
Remote clock offset: -5.111 ms

Below is generated by plot.py at 2018-04-03 04:23:34
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 13.975 ms
Loss rate: 98.98%
-- Flow 1:
Average throughput: 0.09 Mbit/s
95th percentile per-packet one-way delay: 13.817 ms
Loss rate: 96.46%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 13.975 ms
Loss rate: 99.42%
-- Flow 3:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 20.331 ms
Loss rate: 99.66%

Run 2: Report of PCC — Data Link



Run 3: Statistics of PCC

Start at: 2018-04-03 04:17:53

End at: 2018-04-03 04:18:23

Local clock offset: 0.441 ms

Remote clock offset: -5.25 ms

Below is generated by plot.py at 2018-04-03 04:23:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 15.566 ms

Loss rate: 98.82%

-- Flow 1:

Average throughput: 0.08 Mbit/s

95th percentile per-packet one-way delay: 14.010 ms

Loss rate: 96.84%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 19.246 ms

Loss rate: 99.10%

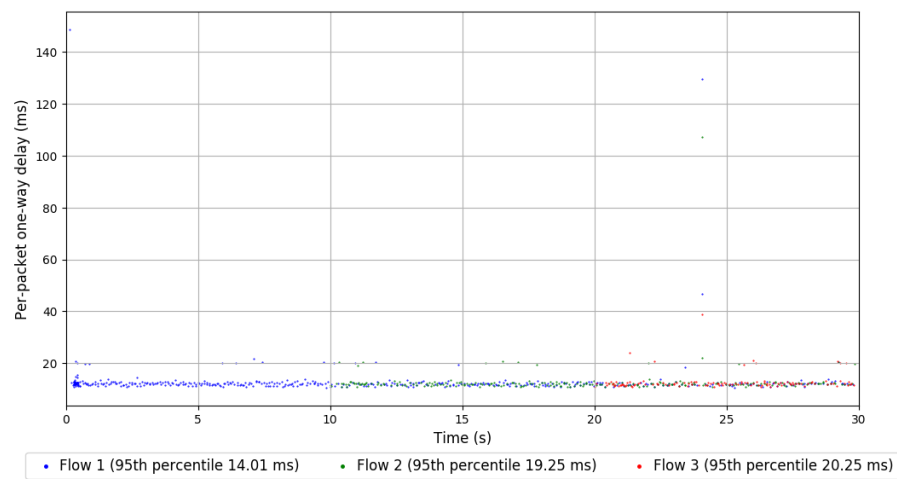
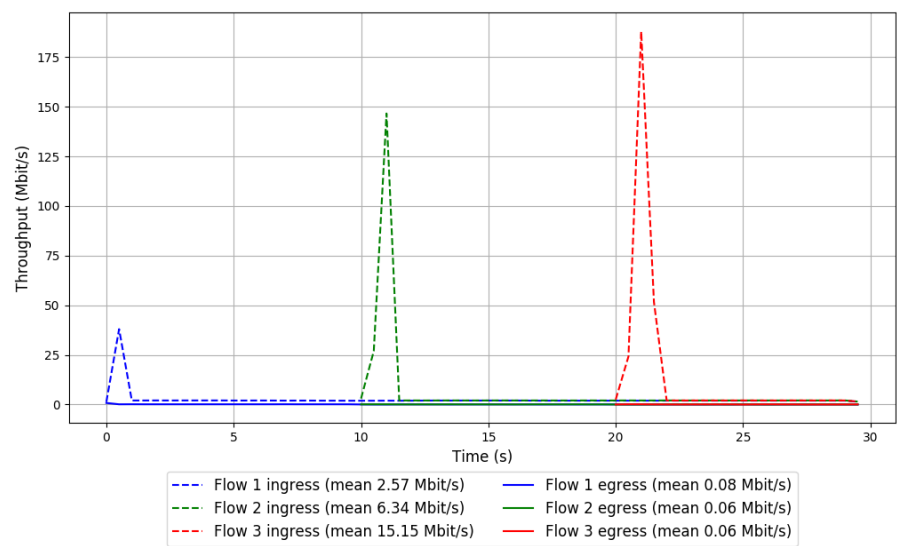
-- Flow 3:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 20.252 ms

Loss rate: 99.59%

Run 3: Report of PCC — Data Link

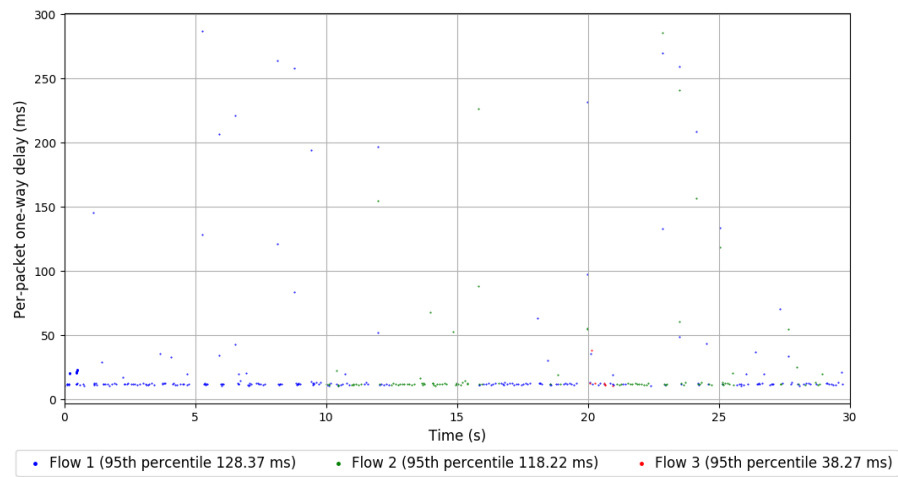
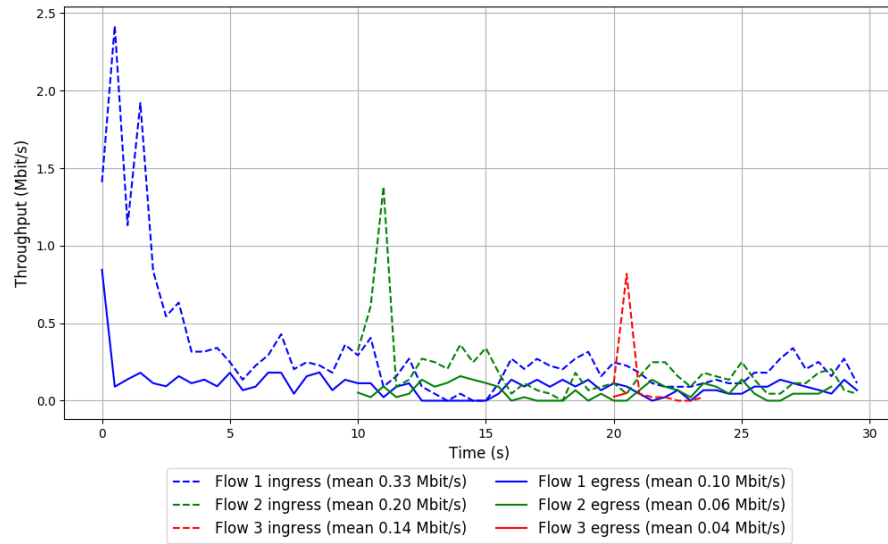


Run 1: Statistics of QUIC Cubic

Start at: 2018-04-03 03:26:30
End at: 2018-04-03 03:27:00
Local clock offset: 0.21 ms
Remote clock offset: -5.237 ms

Below is generated by plot.py at 2018-04-03 04:23:34
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 121.447 ms
Loss rate: 70.29%
-- Flow 1:
Average throughput: 0.10 Mbit/s
95th percentile per-packet one-way delay: 128.365 ms
Loss rate: 68.81%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 118.222 ms
Loss rate: 70.93%
-- Flow 3:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 38.273 ms
Loss rate: 92.84%

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2018-04-03 03:50:11

End at: 2018-04-03 03:50:41

Local clock offset: 0.362 ms

Remote clock offset: -5.23 ms

Below is generated by plot.py at 2018-04-03 04:23:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 157.885 ms

Loss rate: 68.40%

-- Flow 1:

Average throughput: 0.12 Mbit/s

95th percentile per-packet one-way delay: 198.436 ms

Loss rate: 69.20%

-- Flow 2:

Average throughput: 0.08 Mbit/s

95th percentile per-packet one-way delay: 150.041 ms

Loss rate: 63.70%

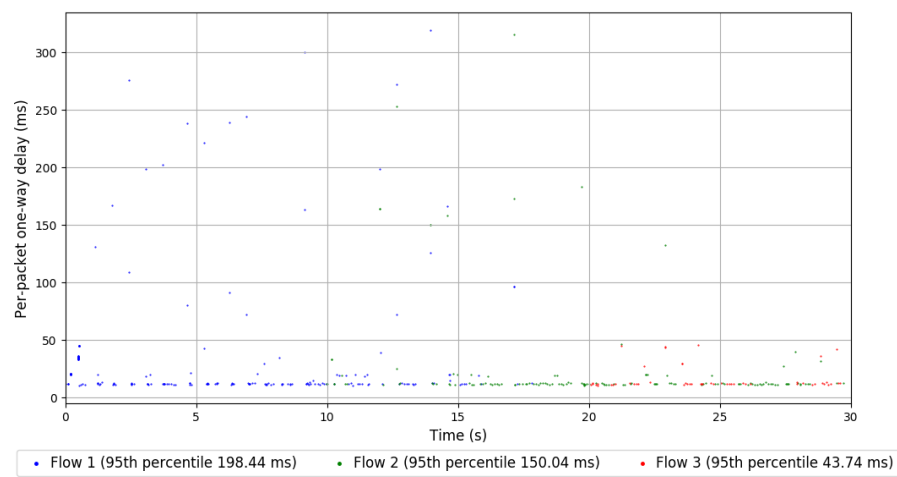
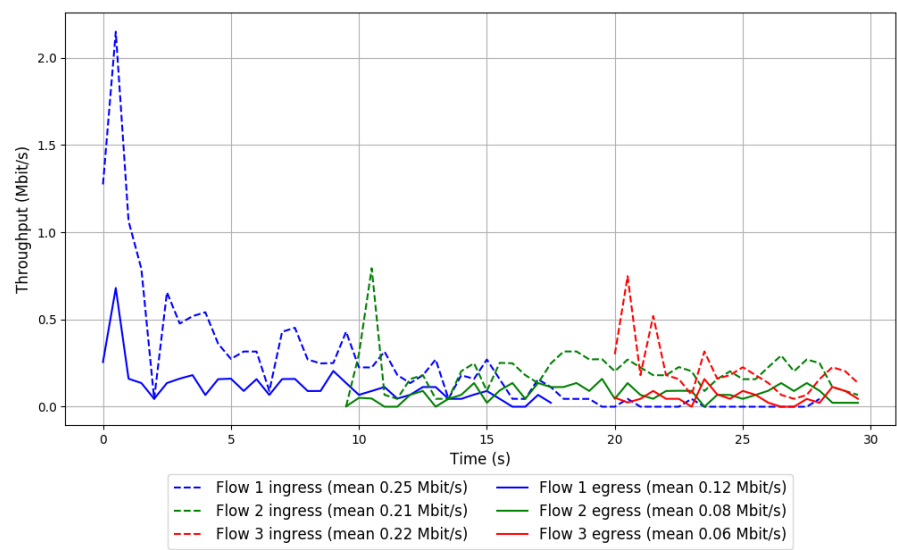
-- Flow 3:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 43.740 ms

Loss rate: 74.82%

Run 2: Report of QUIC Cubic — Data Link

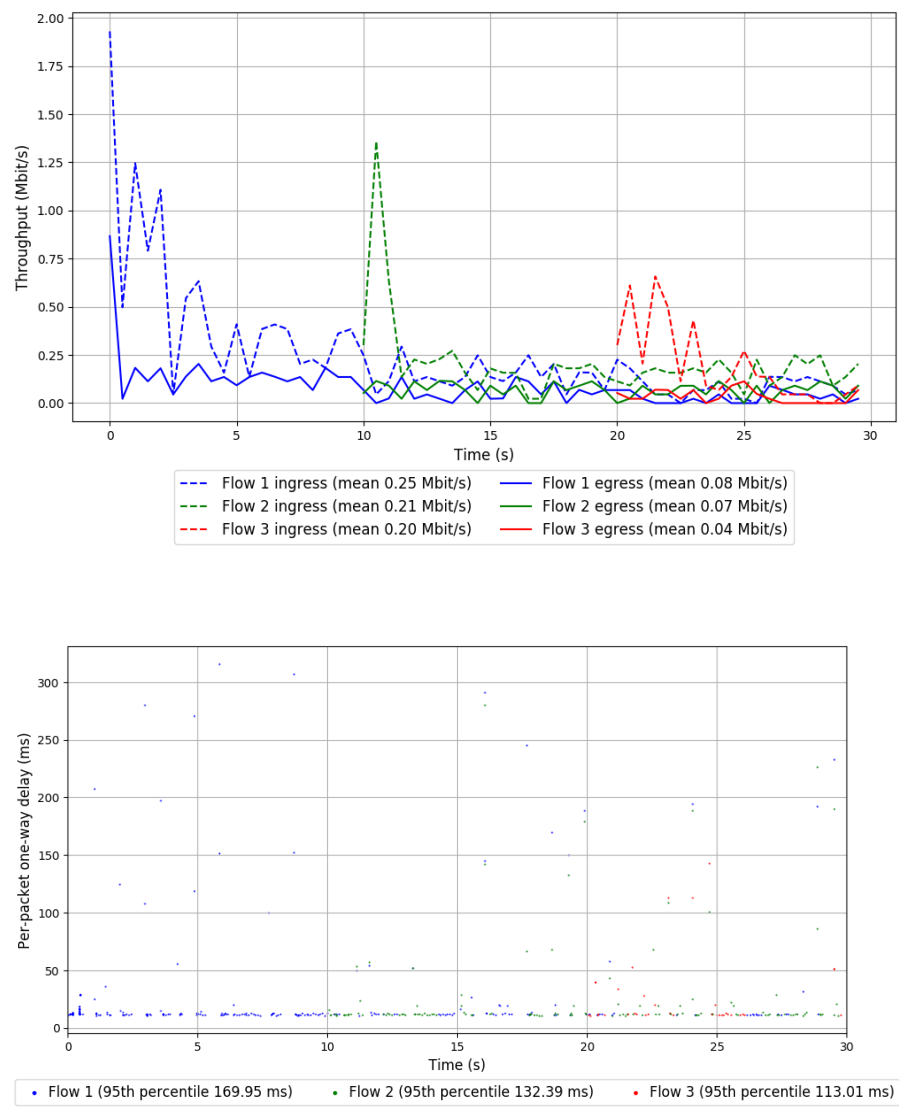


Run 3: Statistics of QUIC Cubic

Start at: 2018-04-03 04:13:53
End at: 2018-04-03 04:14:23
Local clock offset: 0.395 ms
Remote clock offset: -5.191 ms

Below is generated by plot.py at 2018-04-03 04:23:34
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 150.358 ms
Loss rate: 69.24%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 169.948 ms
Loss rate: 66.77%
-- Flow 2:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 132.386 ms
Loss rate: 67.47%
-- Flow 3:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 113.011 ms
Loss rate: 82.43%

Run 3: Report of QUIC Cubic — Data Link

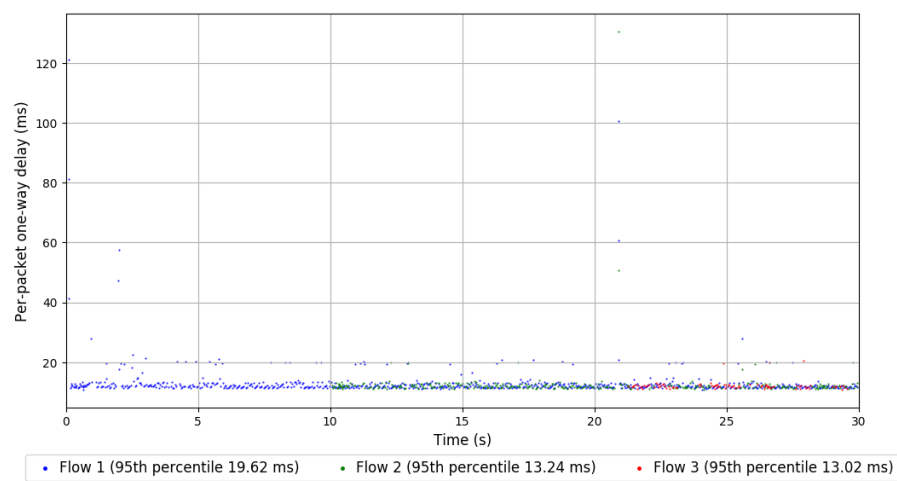
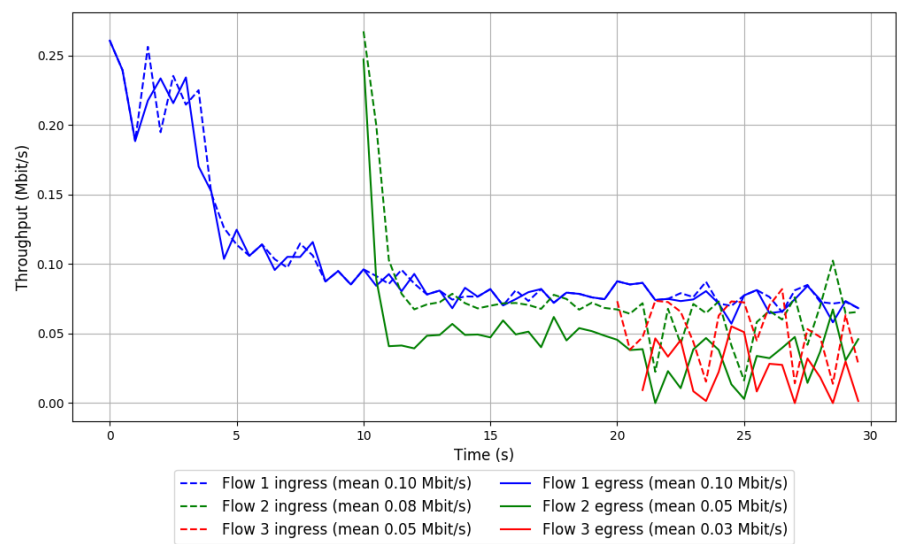


```
Run 1: Statistics of SCReAM

Start at: 2018-04-03 03:13:23
End at: 2018-04-03 03:13:53
Local clock offset: 0.193 ms
Remote clock offset: -5.161 ms

# Below is generated by plot.py at 2018-04-03 04:23:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 19.241 ms
Loss rate: 18.42%
-- Flow 1:
Average throughput: 0.10 Mbit/s
95th percentile per-packet one-way delay: 19.624 ms
Loss rate: 2.07%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 13.245 ms
Loss rate: 37.83%
-- Flow 3:
Average throughput: 0.03 Mbit/s
95th percentile per-packet one-way delay: 13.021 ms
Loss rate: 60.30%
```

Run 1: Report of SReAM — Data Link

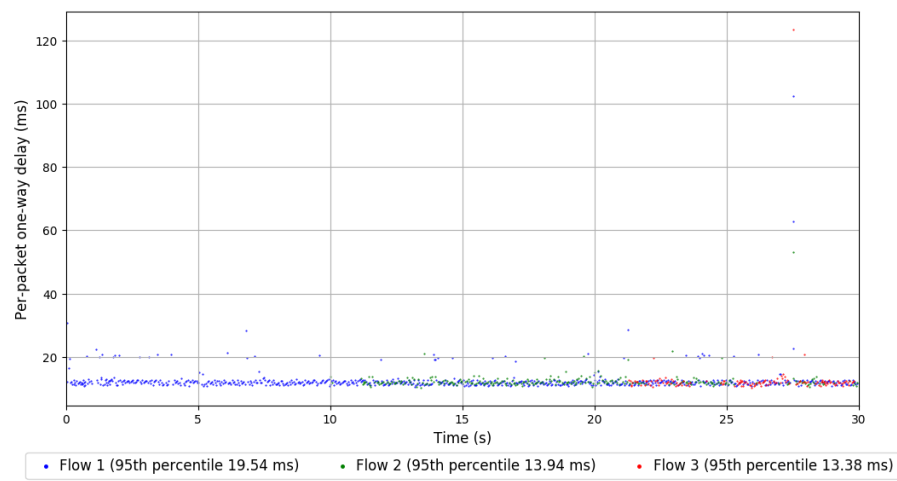
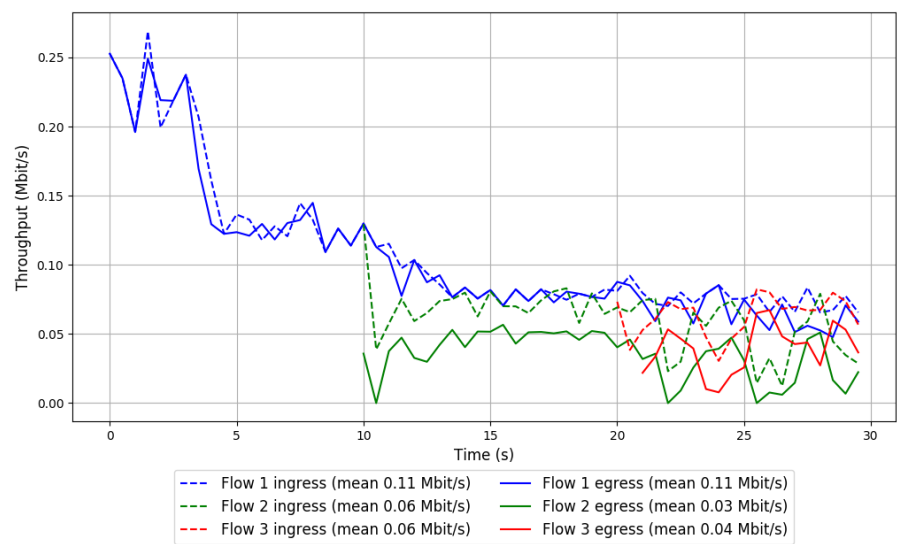


Run 2: Statistics of SCReAM

Start at: 2018-04-03 03:37:02
End at: 2018-04-03 03:37:32
Local clock offset: 0.331 ms
Remote clock offset: -5.259 ms

Below is generated by plot.py at 2018-04-03 04:23:34
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 15.158 ms
Loss rate: 18.57%
-- Flow 1:
Average throughput: 0.11 Mbit/s
95th percentile per-packet one-way delay: 19.536 ms
Loss rate: 4.41%
-- Flow 2:
Average throughput: 0.03 Mbit/s
95th percentile per-packet one-way delay: 13.937 ms
Loss rate: 43.52%
-- Flow 3:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 13.377 ms
Loss rate: 44.22%

Run 2: Report of SReAM — Data Link

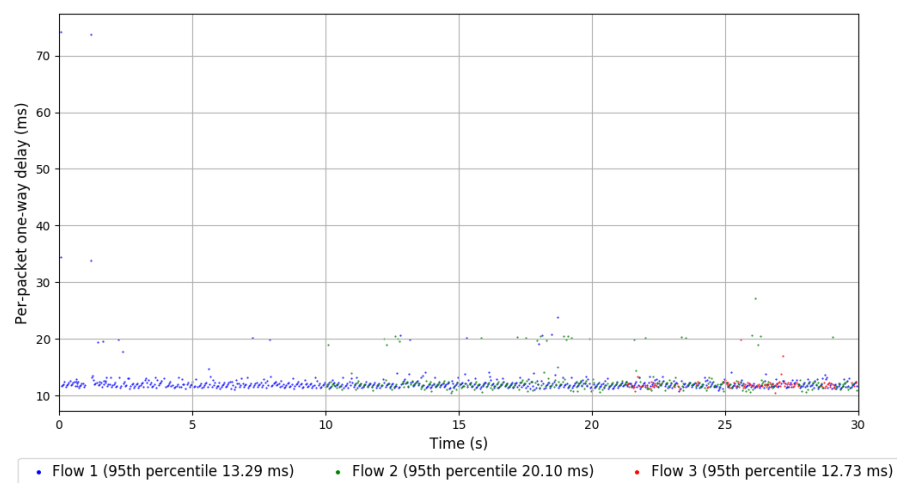
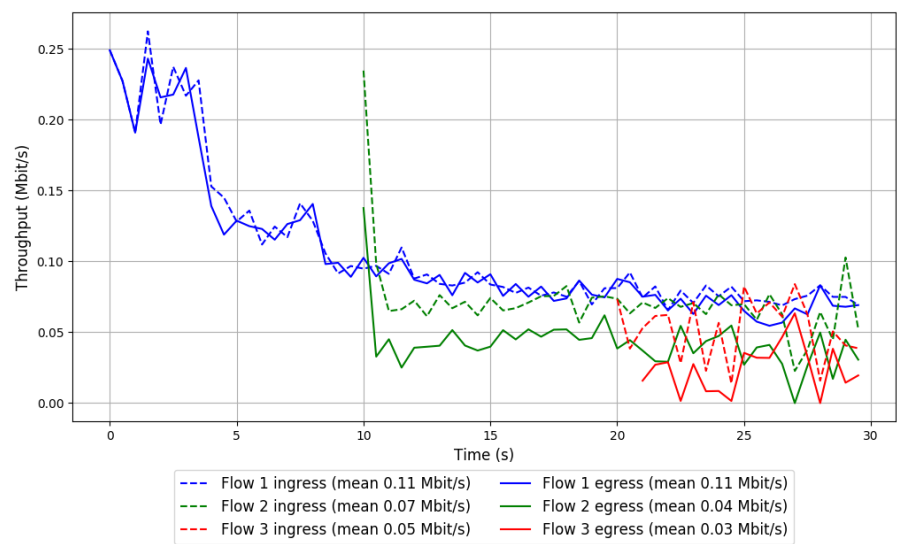


Run 3: Statistics of SCReAM

Start at: 2018-04-03 04:00:42
End at: 2018-04-03 04:01:12
Local clock offset: 0.339 ms
Remote clock offset: -5.165 ms

Below is generated by plot.py at 2018-04-03 04:23:34
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 13.832 ms
Loss rate: 19.31%
-- Flow 1:
Average throughput: 0.11 Mbit/s
95th percentile per-packet one-way delay: 13.295 ms
Loss rate: 3.34%
-- Flow 2:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 20.101 ms
Loss rate: 41.04%
-- Flow 3:
Average throughput: 0.03 Mbit/s
95th percentile per-packet one-way delay: 12.734 ms
Loss rate: 58.77%

Run 3: Report of SReAM — Data Link

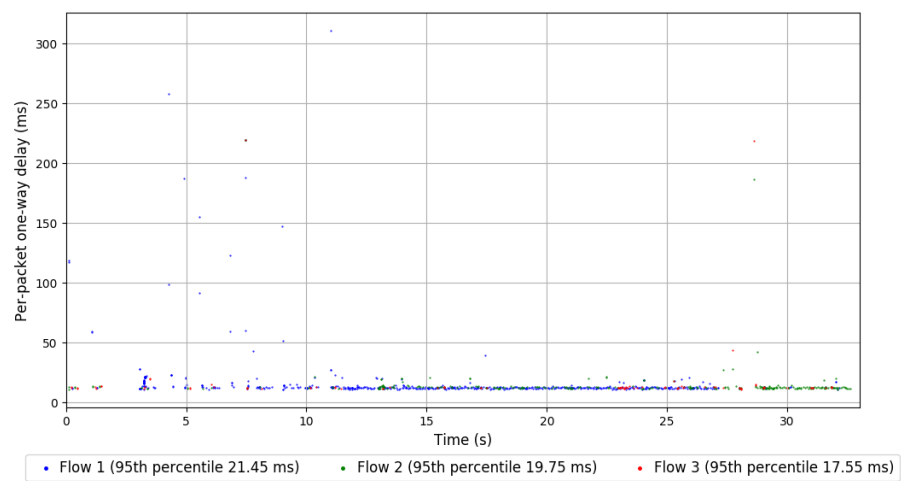
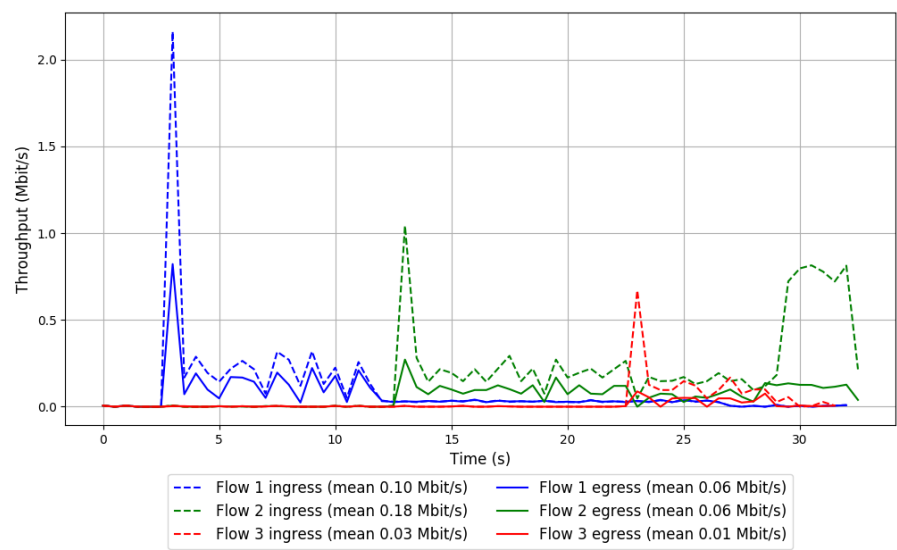


Run 1: Statistics of WebRTC media

Start at: 2018-04-03 03:14:42
End at: 2018-04-03 03:15:12
Local clock offset: 0.168 ms
Remote clock offset: -5.173 ms

Below is generated by plot.py at 2018-04-03 04:23:34
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 20.883 ms
Loss rate: 58.60%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 21.446 ms
Loss rate: 39.86%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 19.752 ms
Loss rate: 67.12%
-- Flow 3:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 17.555 ms
Loss rate: 70.32%

Run 1: Report of WebRTC media — Data Link

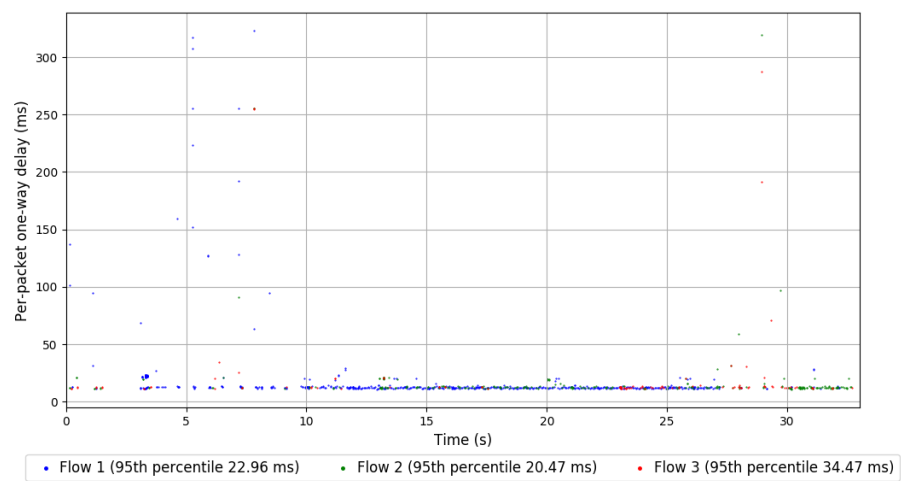
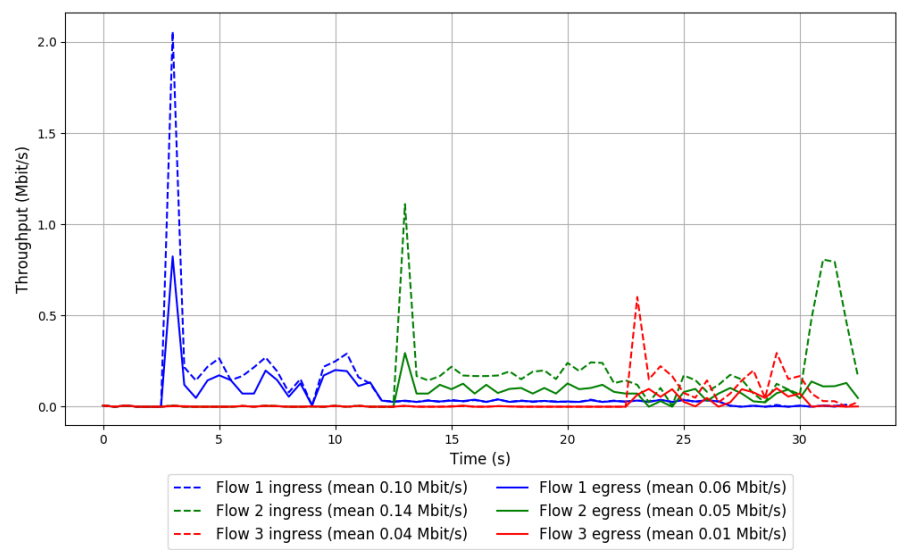


Run 2: Statistics of WebRTC media

Start at: 2018-04-03 03:38:21
End at: 2018-04-03 03:38:51
Local clock offset: 0.242 ms
Remote clock offset: -5.278 ms

Below is generated by plot.py at 2018-04-03 04:23:34
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 22.740 ms
Loss rate: 52.80%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 22.958 ms
Loss rate: 36.48%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 20.470 ms
Loss rate: 60.21%
-- Flow 3:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 34.467 ms
Loss rate: 65.83%

Run 2: Report of WebRTC media — Data Link

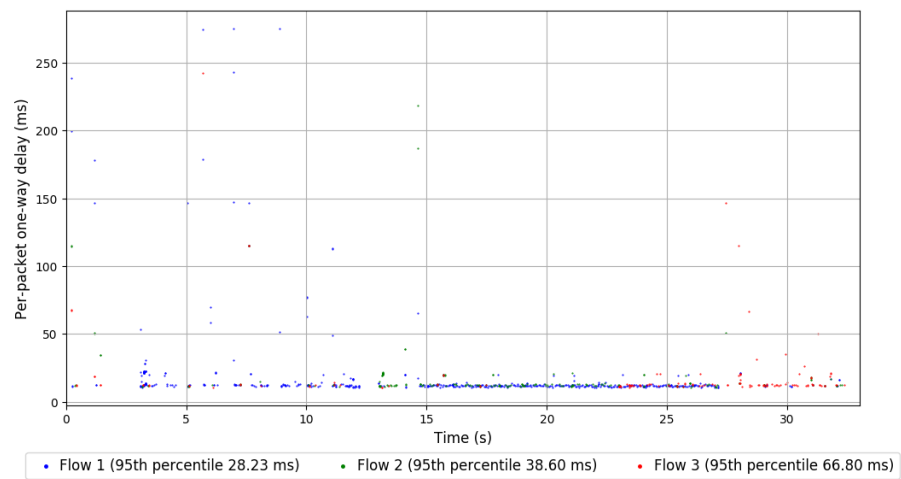
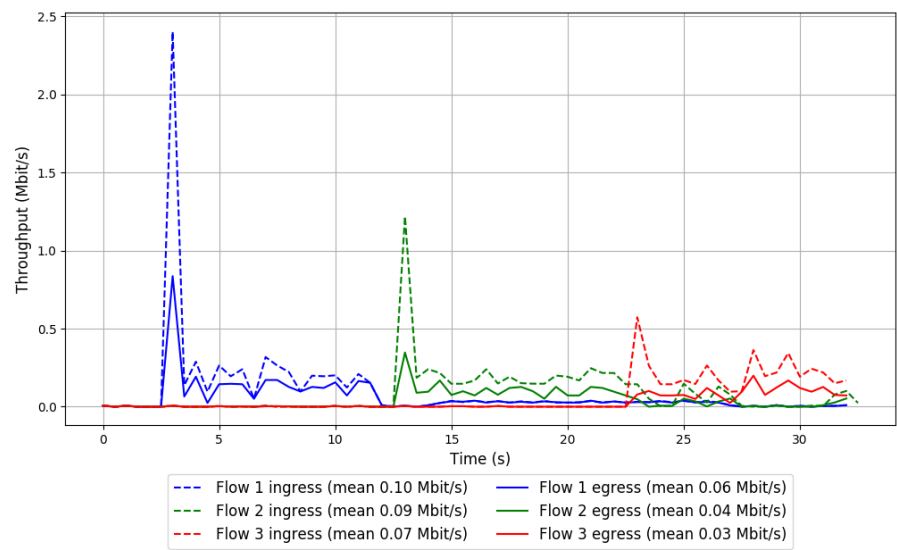


Run 3: Statistics of WebRTC media

Start at: 2018-04-03 04:02:01
End at: 2018-04-03 04:02:31
Local clock offset: 0.327 ms
Remote clock offset: -5.172 ms

Below is generated by plot.py at 2018-04-03 04:23:34
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 38.602 ms
Loss rate: 49.51%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 28.231 ms
Loss rate: 41.63%
-- Flow 2:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 38.602 ms
Loss rate: 54.03%
-- Flow 3:
Average throughput: 0.03 Mbit/s
95th percentile per-packet one-way delay: 66.804 ms
Loss rate: 55.64%

Run 3: Report of WebRTC media — Data Link

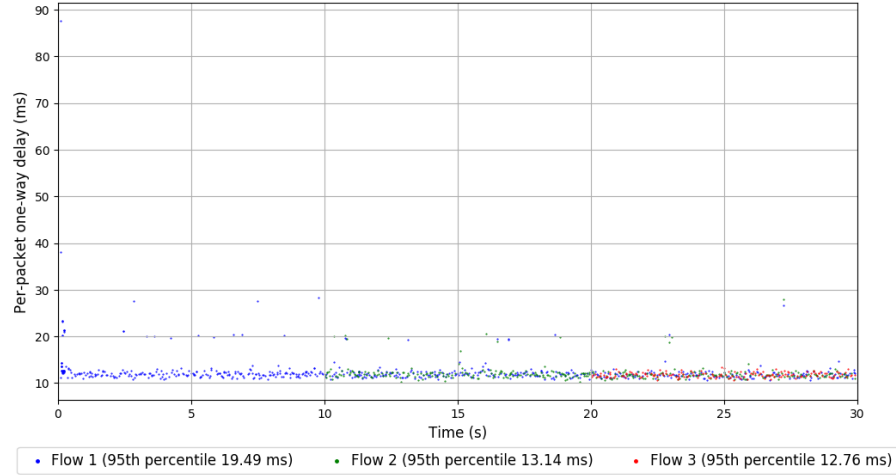
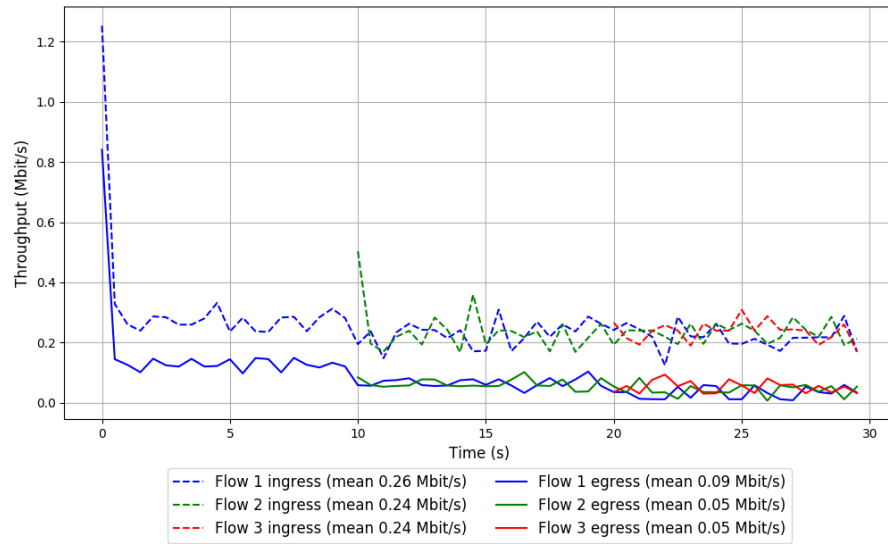


Run 1: Statistics of Sprout

Start at: 2018-04-03 03:18:38
End at: 2018-04-03 03:19:08
Local clock offset: 0.307 ms
Remote clock offset: -5.127 ms

Below is generated by plot.py at 2018-04-03 04:23:34
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 14.271 ms
Loss rate: 71.64%
-- Flow 1:
Average throughput: 0.09 Mbit/s
95th percentile per-packet one-way delay: 19.488 ms
Loss rate: 66.13%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 13.145 ms
Loss rate: 77.52%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 12.759 ms
Loss rate: 77.88%

Run 1: Report of Sprout — Data Link

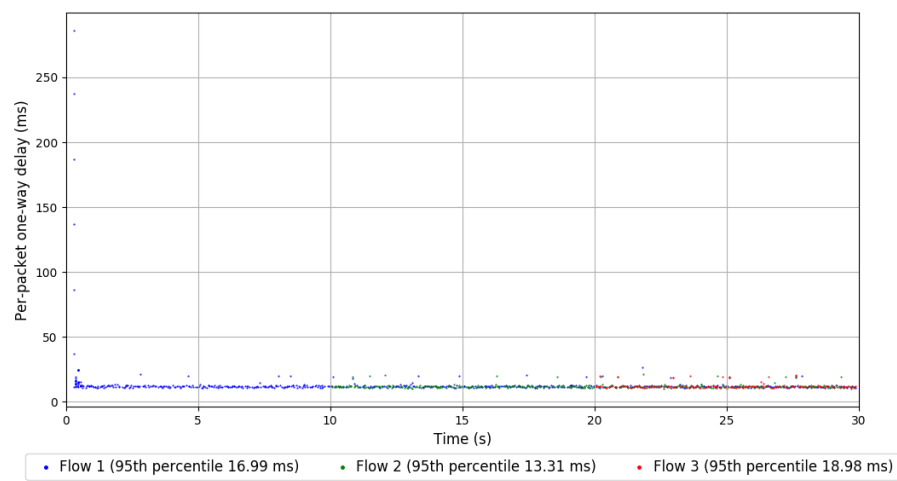
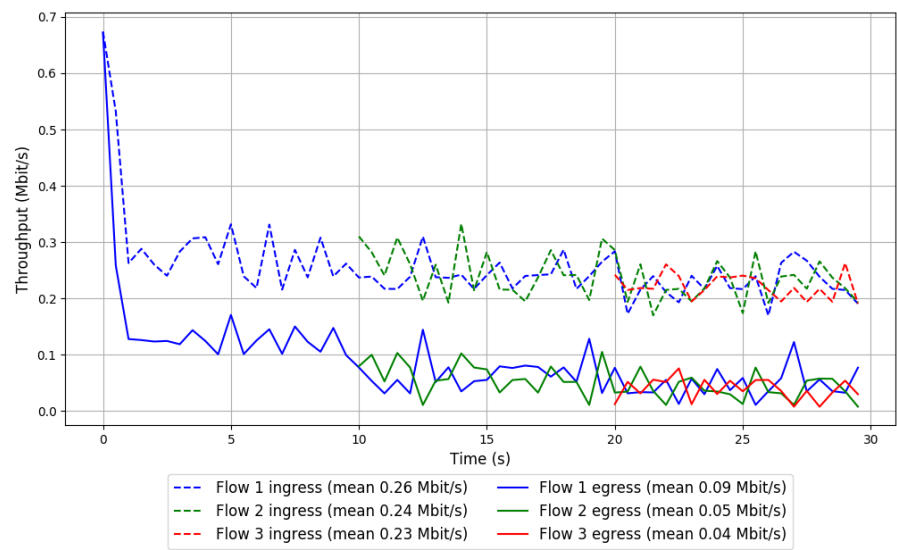


Run 2: Statistics of Sprout

Start at: 2018-04-03 03:42:17
End at: 2018-04-03 03:42:47
Local clock offset: 0.337 ms
Remote clock offset: -5.298 ms

Below is generated by plot.py at 2018-04-03 04:23:35
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 16.360 ms
Loss rate: 71.73%
-- Flow 1:
Average throughput: 0.09 Mbit/s
95th percentile per-packet one-way delay: 16.991 ms
Loss rate: 64.52%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 13.311 ms
Loss rate: 78.47%
-- Flow 3:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 18.977 ms
Loss rate: 82.38%

Run 2: Report of Sprout — Data Link

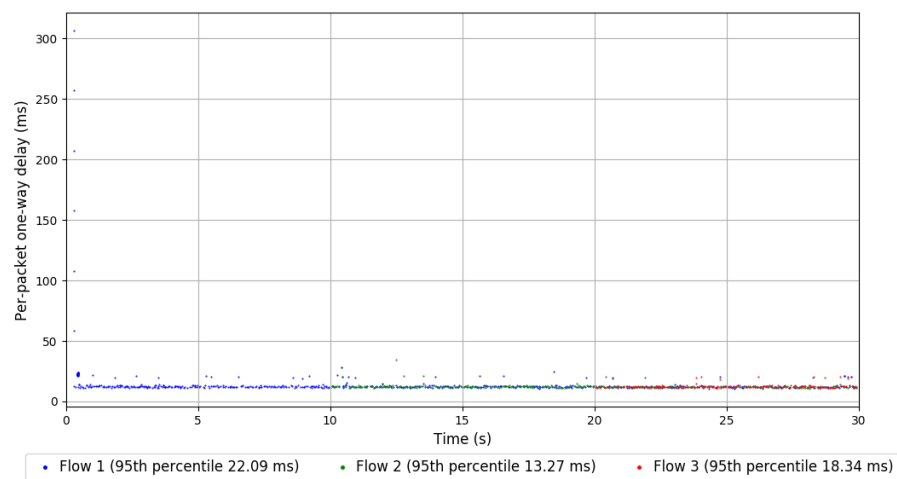
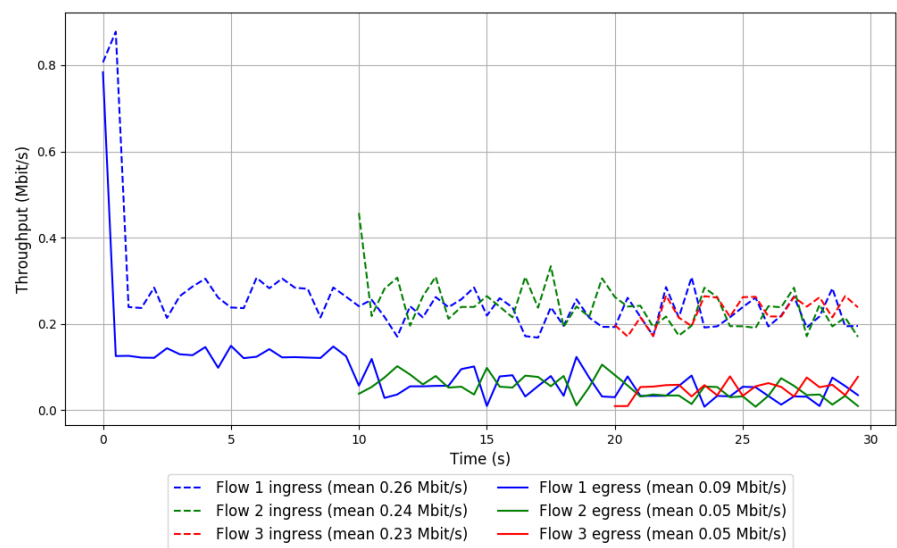


Run 3: Statistics of Sprout

Start at: 2018-04-03 04:05:58
End at: 2018-04-03 04:06:28
Local clock offset: 0.224 ms
Remote clock offset: -5.172 ms

```
# Below is generated by plot.py at 2018-04-03 04:23:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 20.346 ms
Loss rate: 72.07%
-- Flow 1:
Average throughput: 0.09 Mbit/s
95th percentile per-packet one-way delay: 22.085 ms
Loss rate: 65.93%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 13.268 ms
Loss rate: 78.75%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 18.339 ms
Loss rate: 78.70%
```

Run 3: Report of Sprout — Data Link

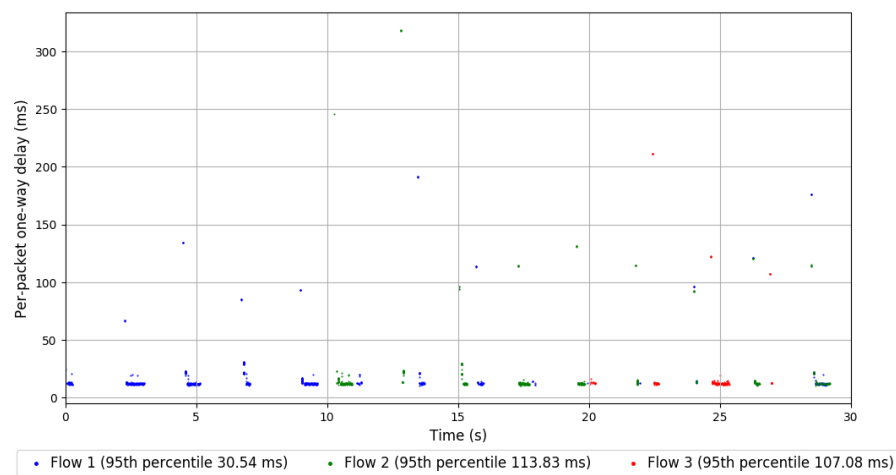
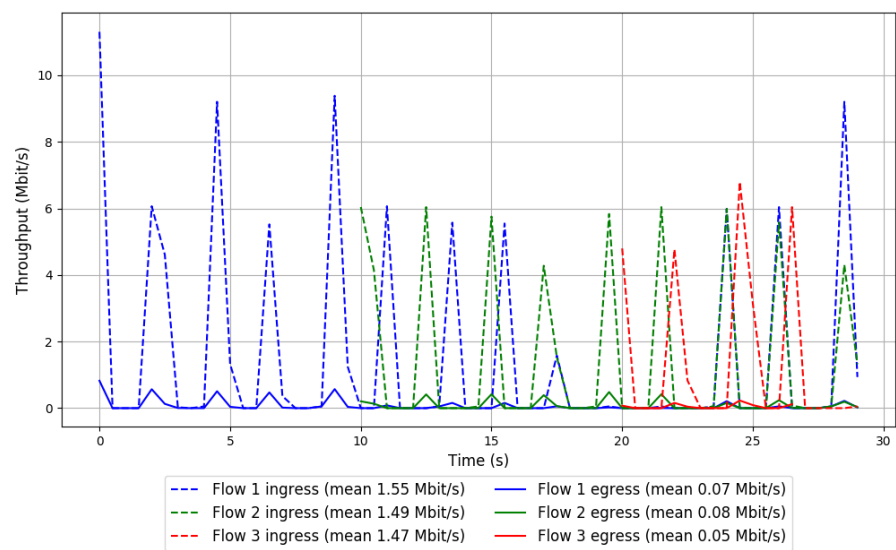


Run 1: Statistics of TaoVA-100x

Start at: 2018-04-03 03:21:16
End at: 2018-04-03 03:21:46
Local clock offset: 0.311 ms
Remote clock offset: -5.184 ms

Below is generated by plot.py at 2018-04-03 04:23:39
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 93.113 ms
Loss rate: 95.27%
-- Flow 1:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 30.537 ms
Loss rate: 95.23%
-- Flow 2:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 113.831 ms
Loss rate: 94.40%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 107.084 ms
Loss rate: 97.29%

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



Run 2: Statistics of TaoVA-100x

Start at: 2018-04-03 03:44:55

End at: 2018-04-03 03:45:25

Local clock offset: 0.263 ms

Remote clock offset: -5.27 ms

Below is generated by plot.py at 2018-04-03 04:23:40

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 92.395 ms

Loss rate: 95.29%

-- Flow 1:

Average throughput: 0.09 Mbit/s

95th percentile per-packet one-way delay: 90.065 ms

Loss rate: 93.33%

-- Flow 2:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 85.290 ms

Loss rate: 96.77%

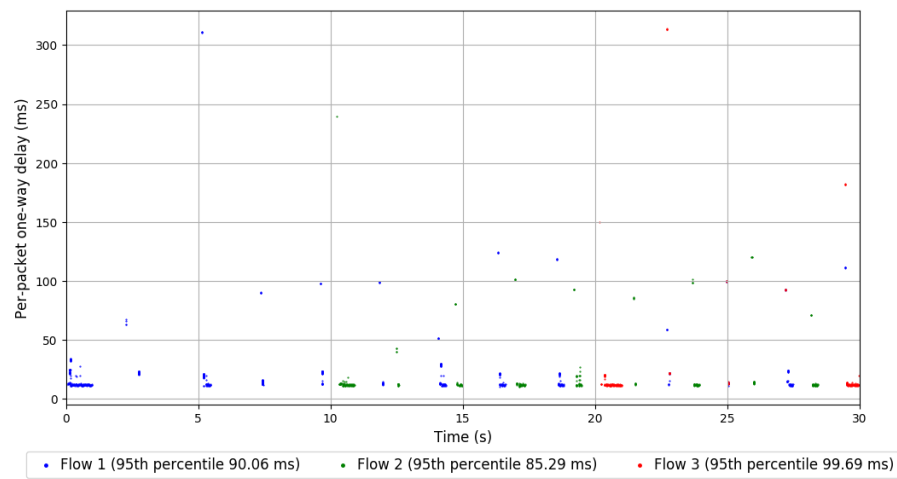
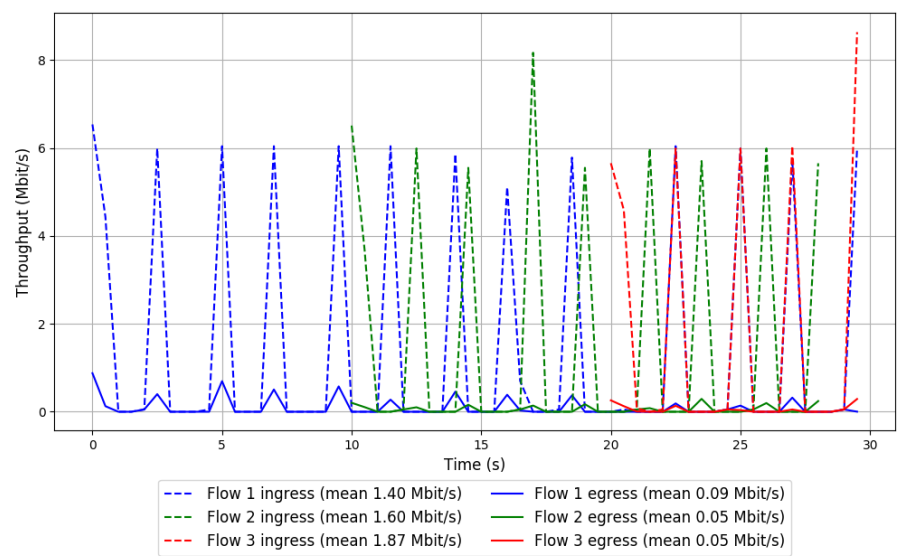
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 99.688 ms

Loss rate: 97.28%

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



Run 3: Statistics of TaoVA-100x

Start at: 2018-04-03 04:08:36

End at: 2018-04-03 04:09:06

Local clock offset: 0.262 ms

Remote clock offset: -5.07 ms

Below is generated by plot.py at 2018-04-03 04:23:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 94.482 ms

Loss rate: 95.56%

-- Flow 1:

Average throughput: 0.08 Mbit/s

95th percentile per-packet one-way delay: 94.975 ms

Loss rate: 94.97%

-- Flow 2:

Average throughput: 0.08 Mbit/s

95th percentile per-packet one-way delay: 78.052 ms

Loss rate: 95.71%

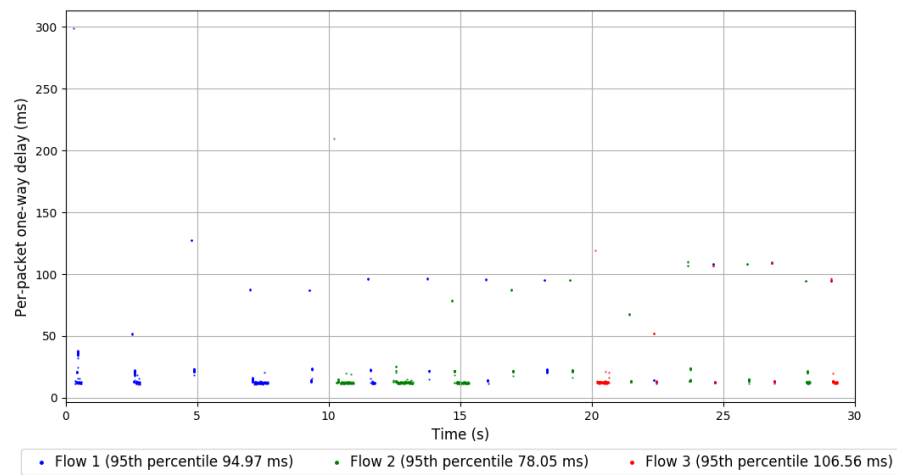
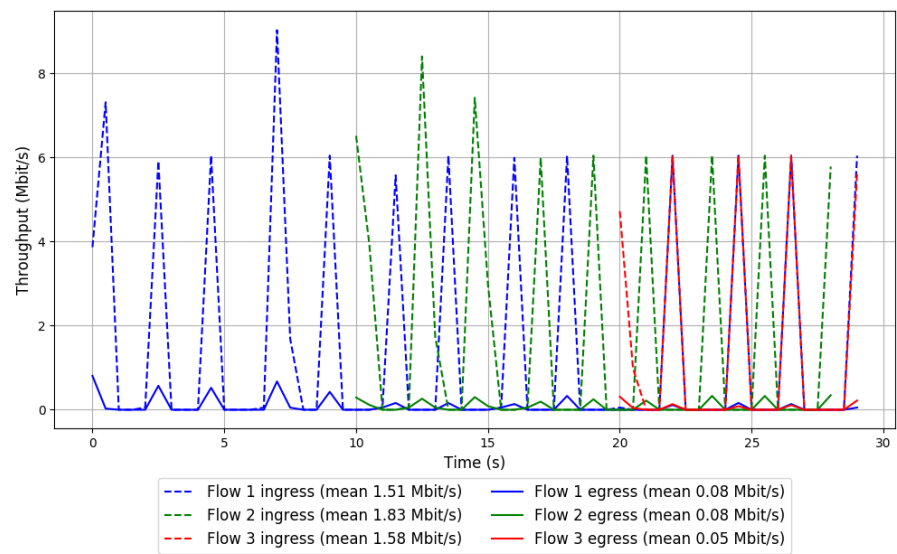
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 106.559 ms

Loss rate: 96.95%

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

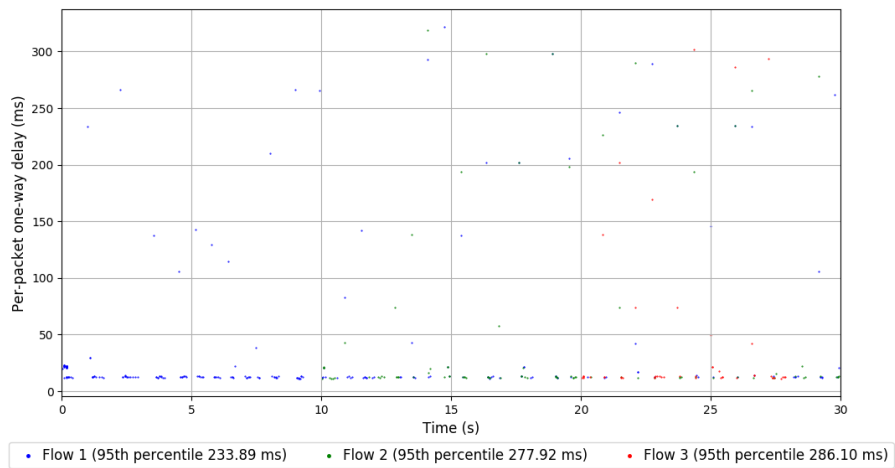
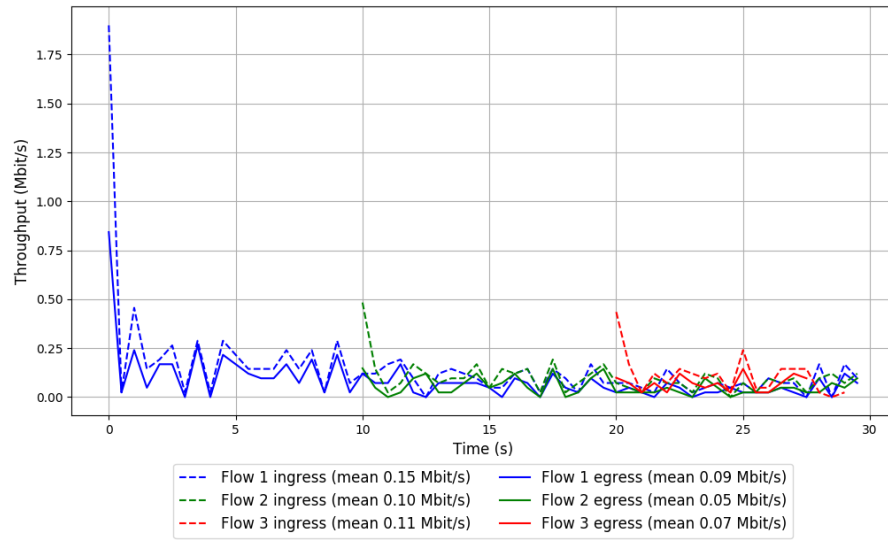


Run 1: Statistics of TCP Vegas

Start at: 2018-04-03 03:19:57
End at: 2018-04-03 03:20:27
Local clock offset: 0.297 ms
Remote clock offset: -5.199 ms

Below is generated by plot.py at 2018-04-03 04:23:41
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 234.154 ms
Loss rate: 43.06%
-- Flow 1:
Average throughput: 0.09 Mbit/s
95th percentile per-packet one-way delay: 233.892 ms
Loss rate: 40.48%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 277.920 ms
Loss rate: 45.98%
-- Flow 3:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 286.104 ms
Loss rate: 48.25%

Run 1: Report of TCP Vegas — Data Link

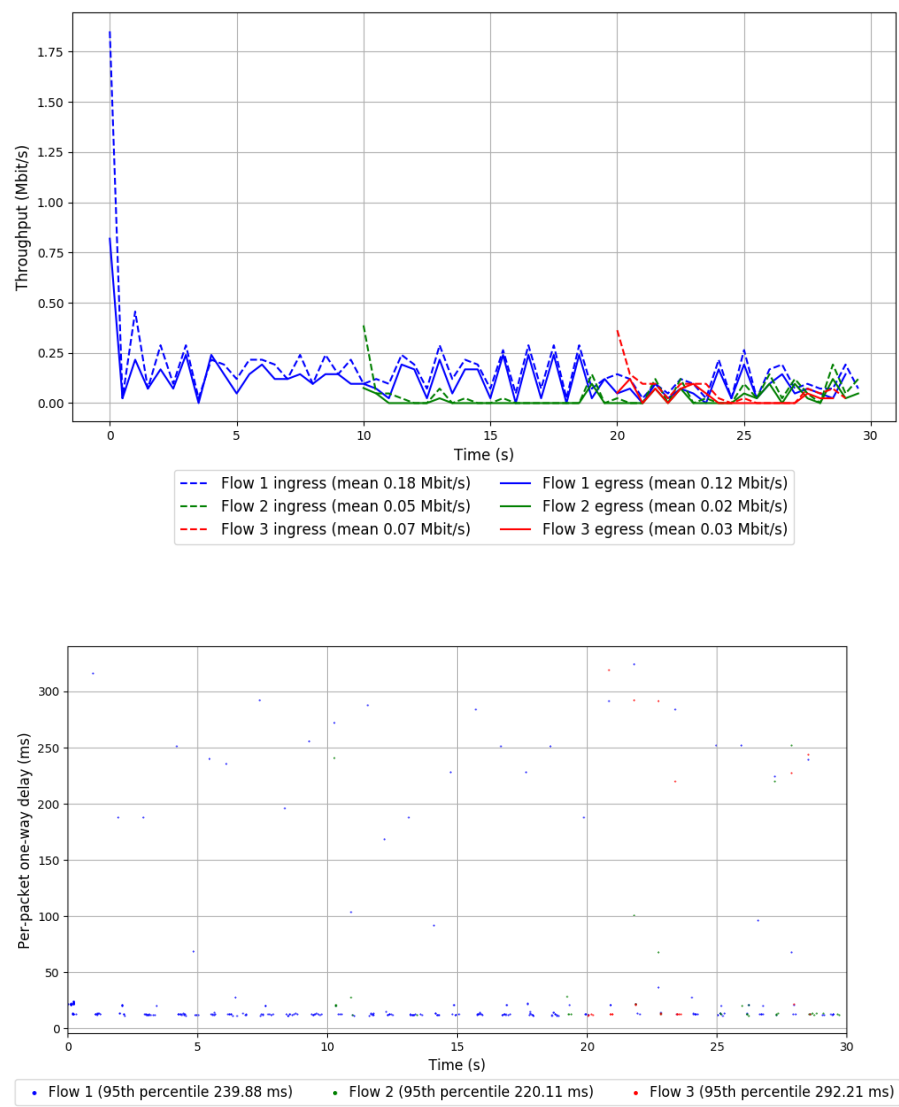


Run 2: Statistics of TCP Vegas

Start at: 2018-04-03 03:43:36
End at: 2018-04-03 03:44:06
Local clock offset: 0.332 ms
Remote clock offset: -5.222 ms

Below is generated by plot.py at 2018-04-03 04:23:41
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 243.558 ms
Loss rate: 39.42%
-- Flow 1:
Average throughput: 0.12 Mbit/s
95th percentile per-packet one-way delay: 239.883 ms
Loss rate: 34.83%
-- Flow 2:
Average throughput: 0.02 Mbit/s
95th percentile per-packet one-way delay: 220.111 ms
Loss rate: 53.76%
-- Flow 3:
Average throughput: 0.03 Mbit/s
95th percentile per-packet one-way delay: 292.209 ms
Loss rate: 56.47%

Run 2: Report of TCP Vegas — Data Link

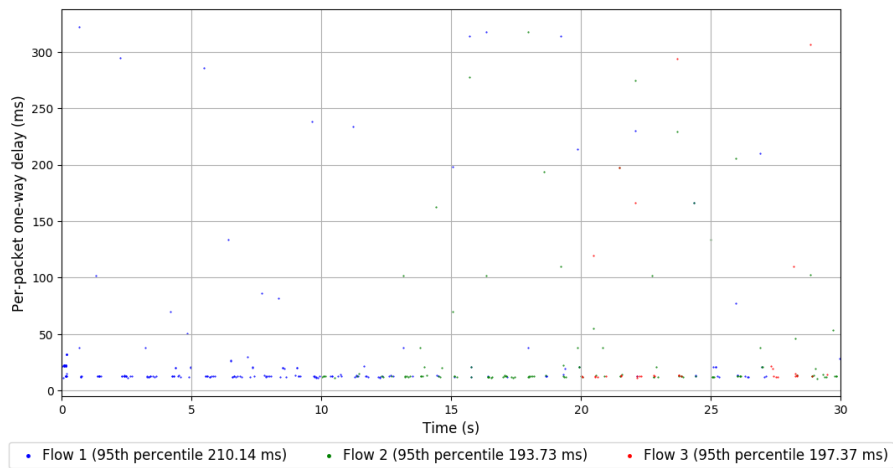
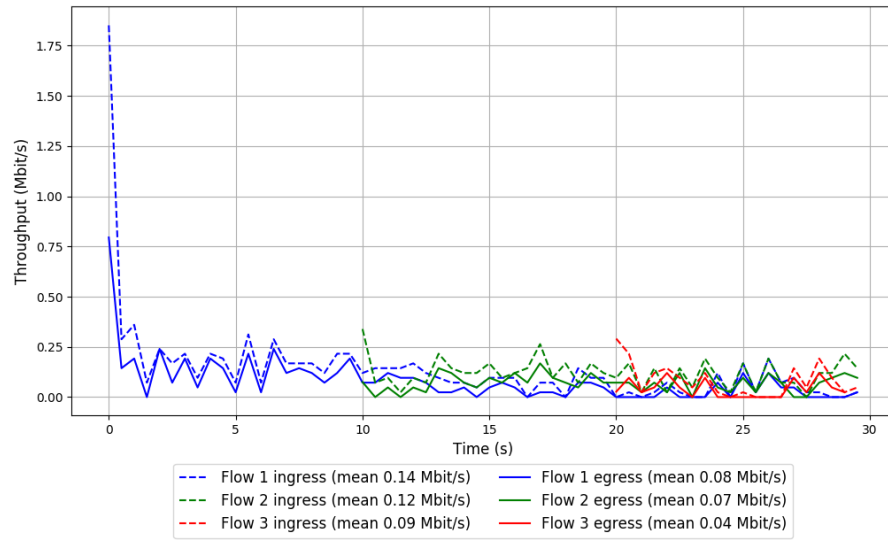


Run 3: Statistics of TCP Vegas

Start at: 2018-04-03 04:07:17
End at: 2018-04-03 04:07:47
Local clock offset: 0.22 ms
Remote clock offset: -5.171 ms

Below is generated by plot.py at 2018-04-03 04:23:41
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 198.143 ms
Loss rate: 42.97%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 210.141 ms
Loss rate: 41.72%
-- Flow 2:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 193.732 ms
Loss rate: 41.47%
-- Flow 3:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 197.369 ms
Loss rate: 53.53%

Run 3: Report of TCP Vegas — Data Link

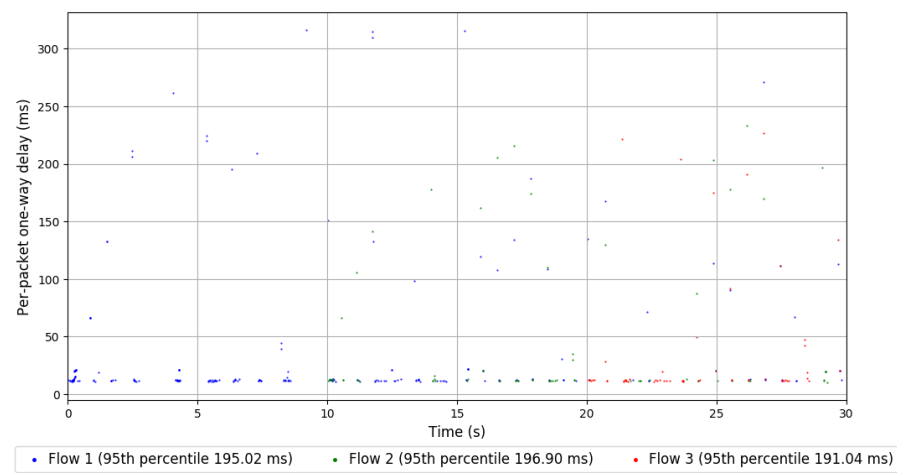
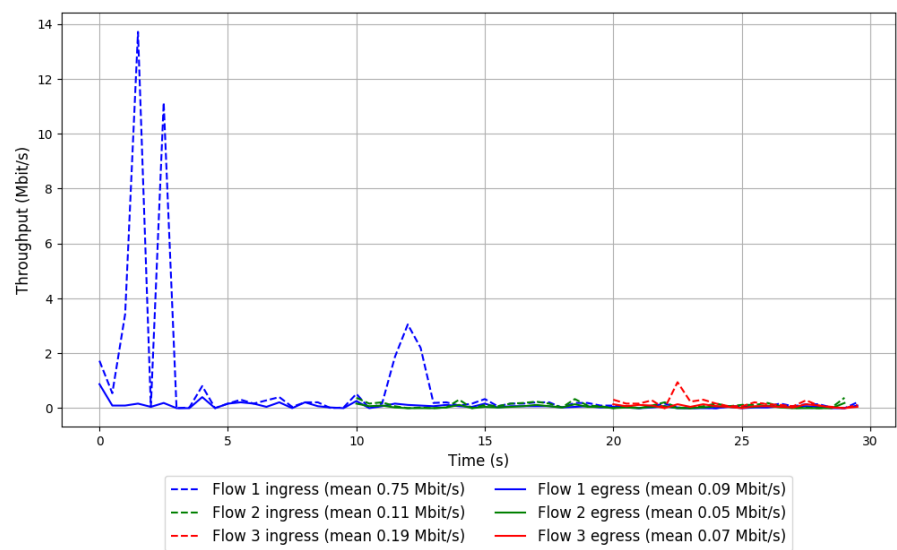


Run 1: Statistics of Verus

Start at: 2018-04-03 03:25:12
End at: 2018-04-03 03:25:42
Local clock offset: 0.33 ms
Remote clock offset: -5.192 ms

Below is generated by plot.py at 2018-04-03 04:23:41
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 196.900 ms
Loss rate: 84.14%
-- Flow 1:
Average throughput: 0.09 Mbit/s
95th percentile per-packet one-way delay: 195.019 ms
Loss rate: 88.40%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 196.900 ms
Loss rate: 58.01%
-- Flow 3:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 191.042 ms
Loss rate: 63.35%

Run 1: Report of Verus — Data Link

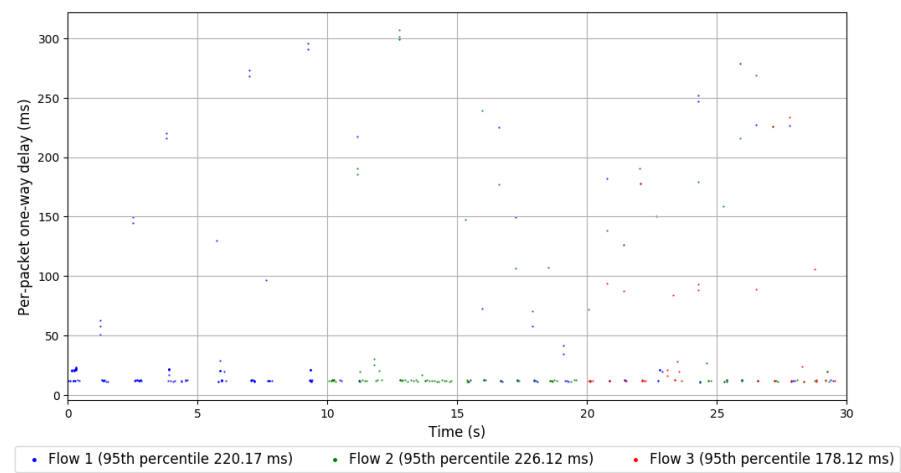
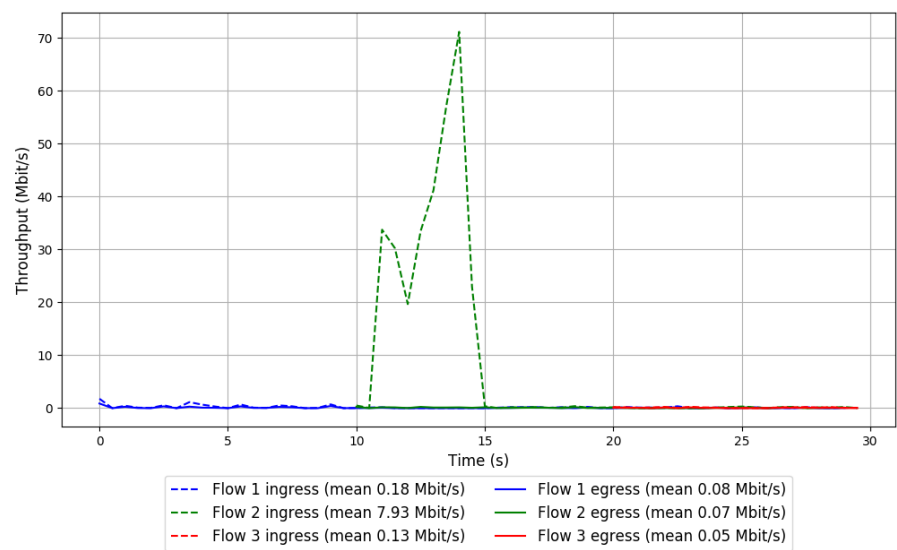


Run 2: Statistics of Verus

Start at: 2018-04-03 03:48:52
End at: 2018-04-03 03:49:22
Local clock offset: 0.371 ms
Remote clock offset: -5.252 ms

Below is generated by plot.py at 2018-04-03 04:23:43
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 224.829 ms
Loss rate: 97.46%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 220.172 ms
Loss rate: 58.48%
-- Flow 2:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 226.124 ms
Loss rate: 99.10%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 178.120 ms
Loss rate: 60.19%

Run 2: Report of Verus — Data Link

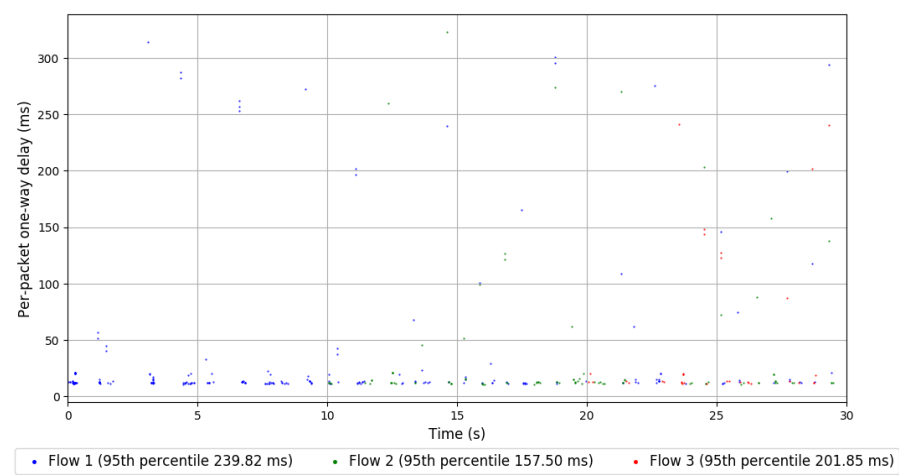
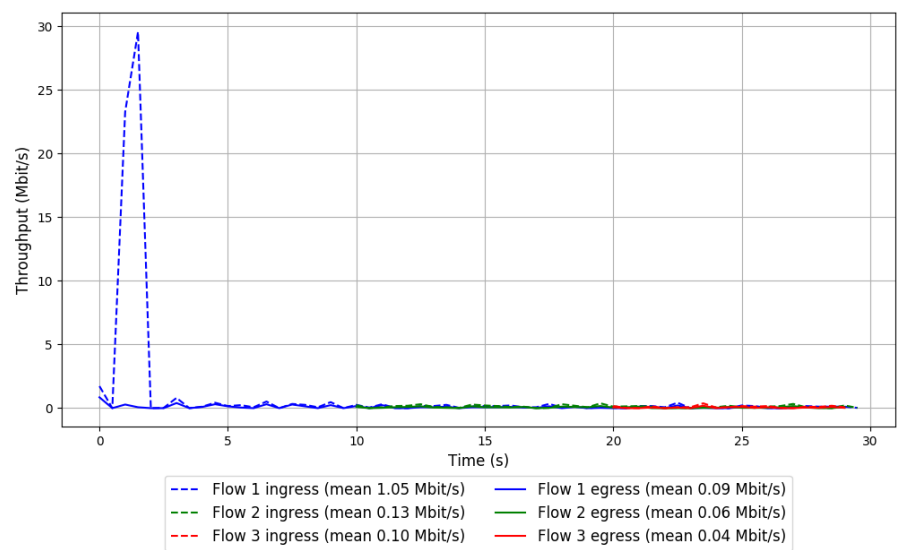


Run 3: Statistics of Verus

Start at: 2018-04-03 04:12:33
End at: 2018-04-03 04:13:03
Local clock offset: 0.363 ms
Remote clock offset: -5.186 ms

Below is generated by plot.py at 2018-04-03 04:23:43
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 203.332 ms
Loss rate: 88.07%
-- Flow 1:
Average throughput: 0.09 Mbit/s
95th percentile per-packet one-way delay: 239.823 ms
Loss rate: 91.58%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 157.504 ms
Loss rate: 55.24%
-- Flow 3:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 201.846 ms
Loss rate: 58.02%

Run 3: Report of Verus — Data Link

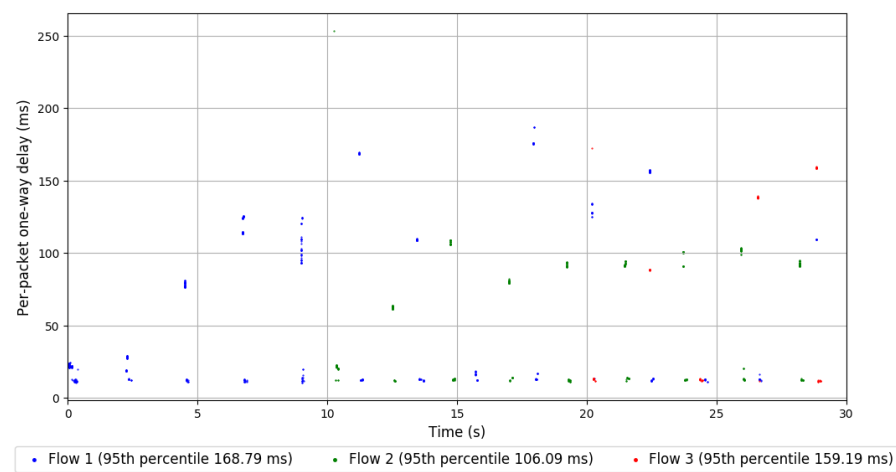
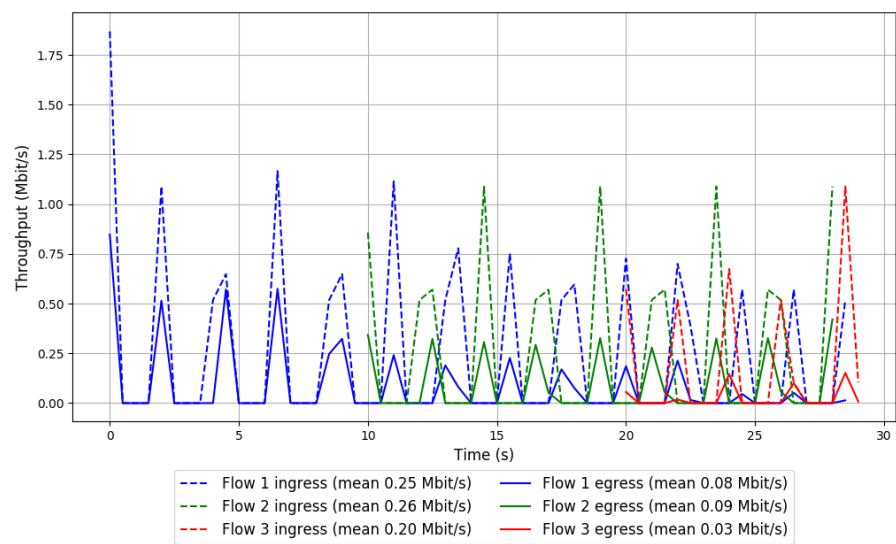


Run 1: Statistics of Copa

Start at: 2018-04-03 03:12:04
End at: 2018-04-03 03:12:34
Local clock offset: 0.234 ms
Remote clock offset: -5.105 ms

Below is generated by plot.py at 2018-04-03 04:23:44
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 158.614 ms
Loss rate: 70.12%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 168.788 ms
Loss rate: 67.71%
-- Flow 2:
Average throughput: 0.09 Mbit/s
95th percentile per-packet one-way delay: 106.089 ms
Loss rate: 67.53%
-- Flow 3:
Average throughput: 0.03 Mbit/s
95th percentile per-packet one-way delay: 159.195 ms
Loss rate: 86.64%

Run 1: Report of Copa — Data Link

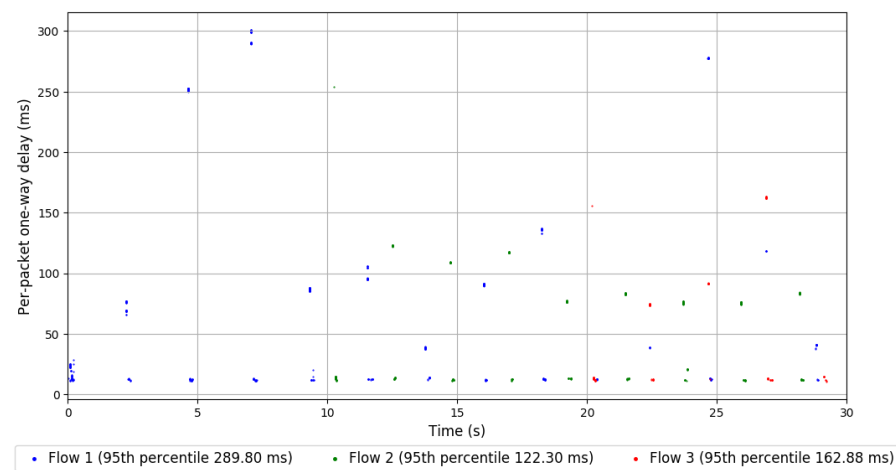
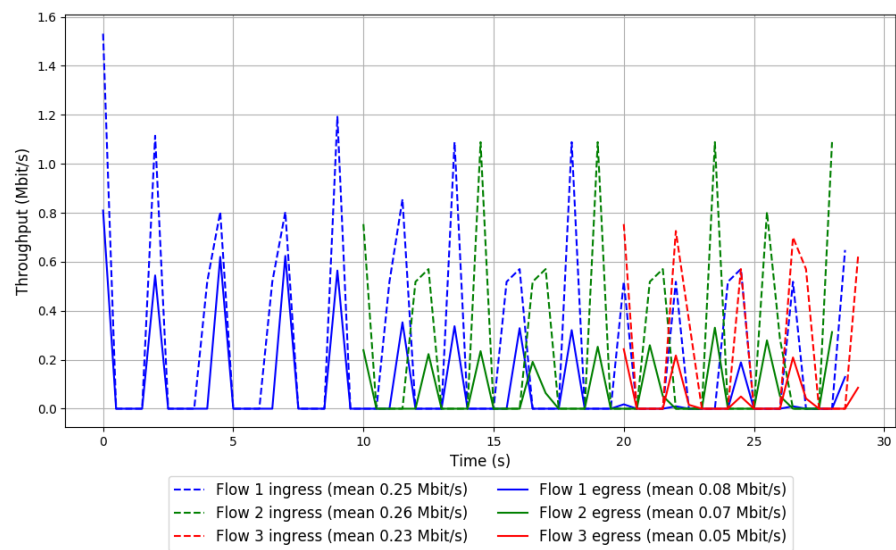


Run 2: Statistics of Copa

Start at: 2018-04-03 03:35:43
End at: 2018-04-03 03:36:13
Local clock offset: 0.306 ms
Remote clock offset: -5.223 ms

Below is generated by plot.py at 2018-04-03 04:23:45
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 277.613 ms
Loss rate: 70.86%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 289.802 ms
Loss rate: 66.30%
-- Flow 2:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 122.295 ms
Loss rate: 73.68%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 162.885 ms
Loss rate: 79.96%

Run 2: Report of Copa — Data Link

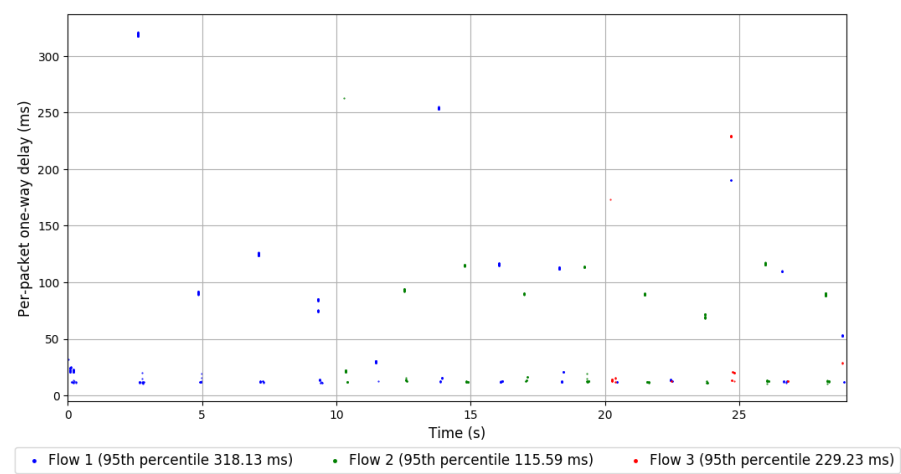
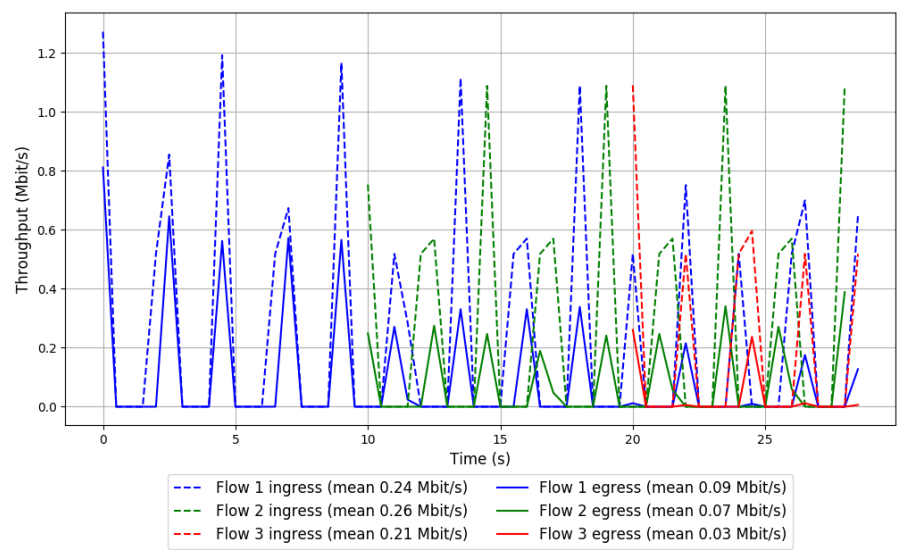


Run 3: Statistics of Copa

Start at: 2018-04-03 03:59:23
End at: 2018-04-03 03:59:53
Local clock offset: 0.239 ms
Remote clock offset: -5.181 ms

Below is generated by plot.py at 2018-04-03 04:23:45
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 254.176 ms
Loss rate: 70.08%
-- Flow 1:
Average throughput: 0.09 Mbit/s
95th percentile per-packet one-way delay: 318.128 ms
Loss rate: 64.20%
-- Flow 2:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 115.586 ms
Loss rate: 72.37%
-- Flow 3:
Average throughput: 0.03 Mbit/s
95th percentile per-packet one-way delay: 229.226 ms
Loss rate: 86.12%

Run 3: Report of Copa — Data Link

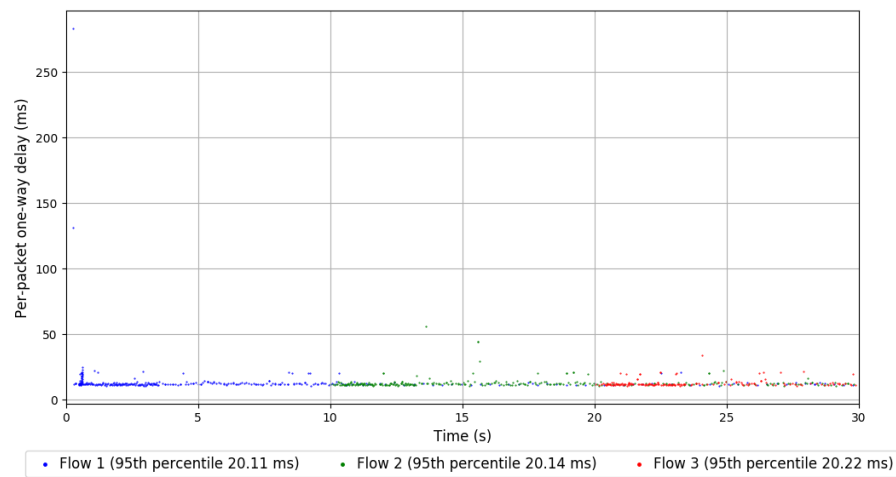
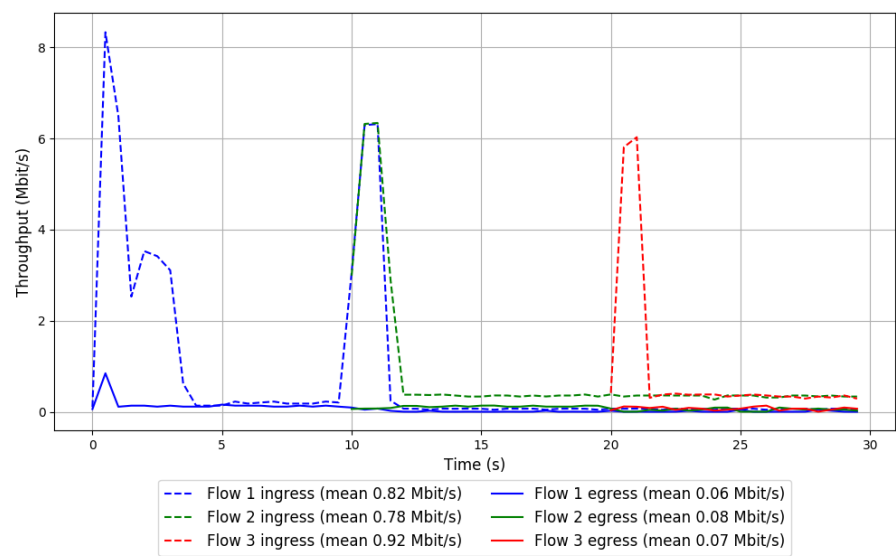


Run 1: Statistics of FillP

Start at: 2018-04-03 03:34:24
End at: 2018-04-03 03:34:54
Local clock offset: 0.299 ms
Remote clock offset: -5.269 ms

Below is generated by plot.py at 2018-04-03 04:23:46
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 20.190 ms
Loss rate: 91.52%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 20.107 ms
Loss rate: 92.38%
-- Flow 2:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 20.136 ms
Loss rate: 89.85%
-- Flow 3:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 20.217 ms
Loss rate: 92.09%

Run 1: Report of FillP — Data Link

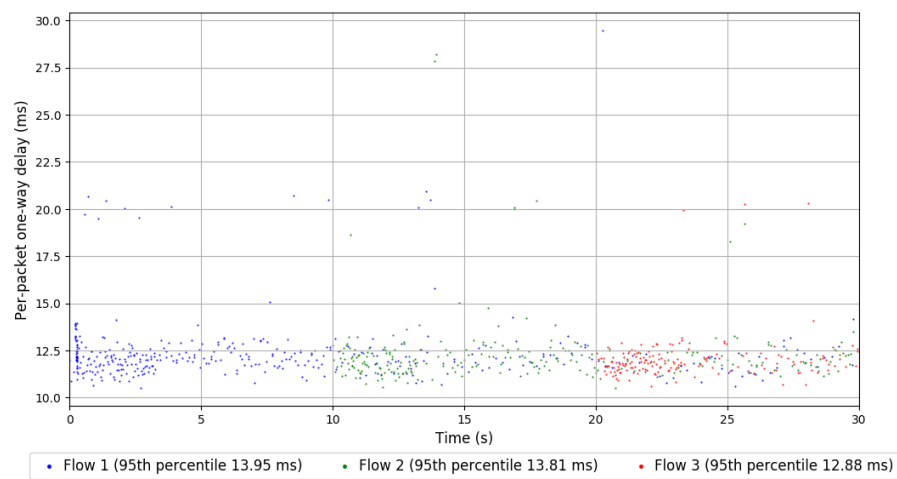
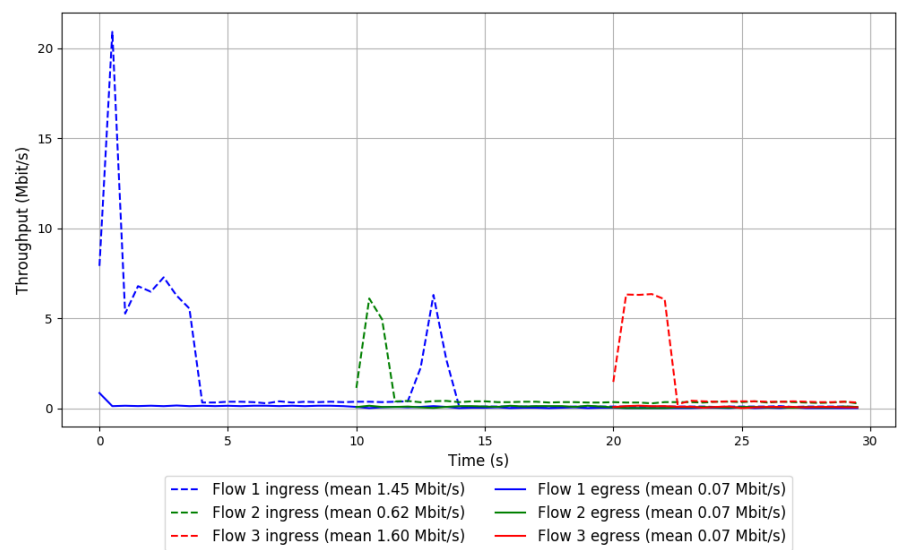


Run 2: Statistics of FillP

Start at: 2018-04-03 03:58:04
End at: 2018-04-03 03:58:34
Local clock offset: 0.35 ms
Remote clock offset: -5.175 ms

Below is generated by plot.py at 2018-04-03 04:23:46
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 13.846 ms
Loss rate: 94.13%
-- Flow 1:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 13.952 ms
Loss rate: 95.08%
-- Flow 2:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 13.815 ms
Loss rate: 89.11%
-- Flow 3:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 12.884 ms
Loss rate: 95.47%

Run 2: Report of FillP — Data Link

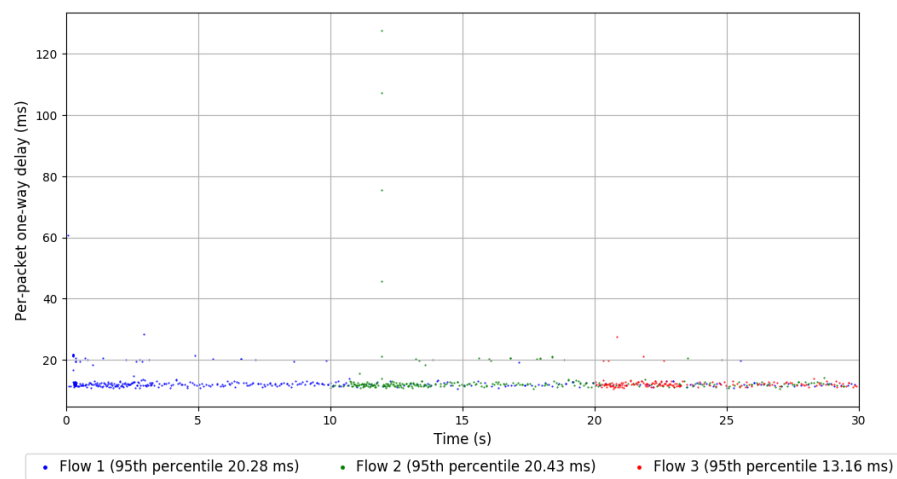
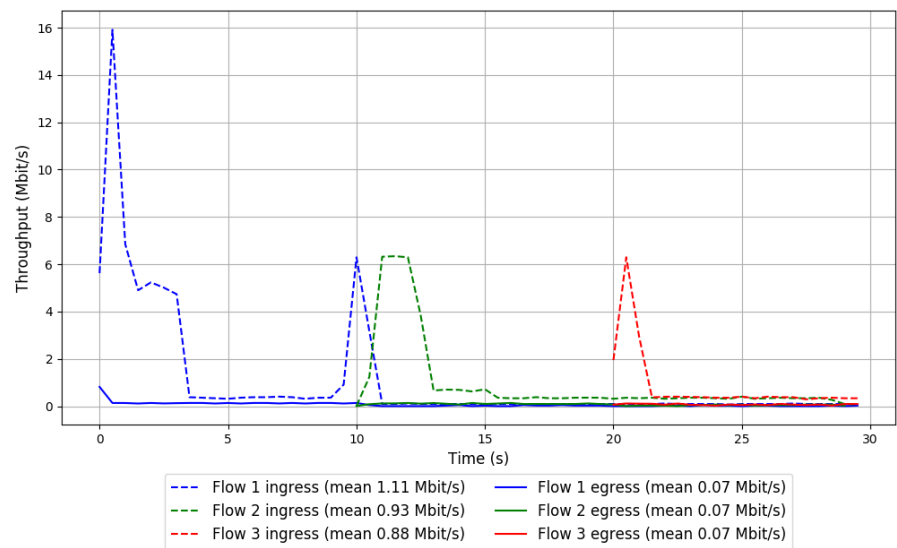


Run 3: Statistics of FillP

Start at: 2018-04-03 04:21:52
End at: 2018-04-03 04:22:22
Local clock offset: 0.49 ms
Remote clock offset: -5.596 ms

Below is generated by plot.py at 2018-04-03 04:23:47
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 19.993 ms
Loss rate: 93.08%
-- Flow 1:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 20.283 ms
Loss rate: 93.88%
-- Flow 2:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 20.429 ms
Loss rate: 92.21%
-- Flow 3:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 13.161 ms
Loss rate: 91.82%

Run 3: Report of FillP — Data Link

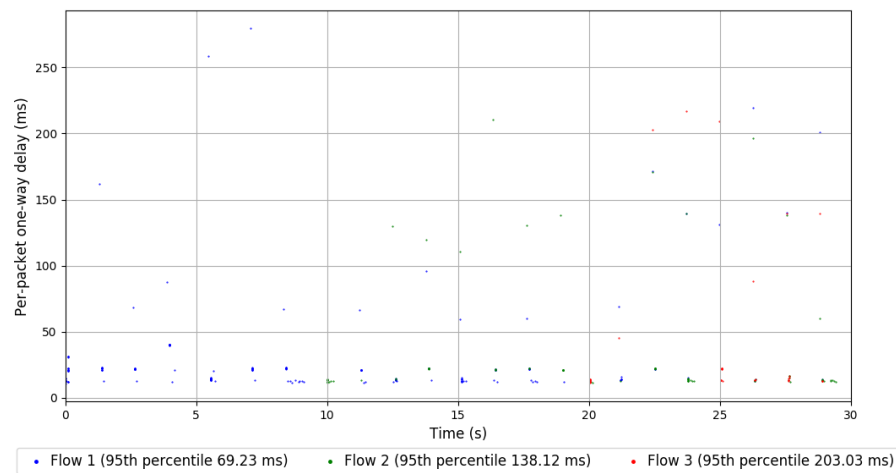
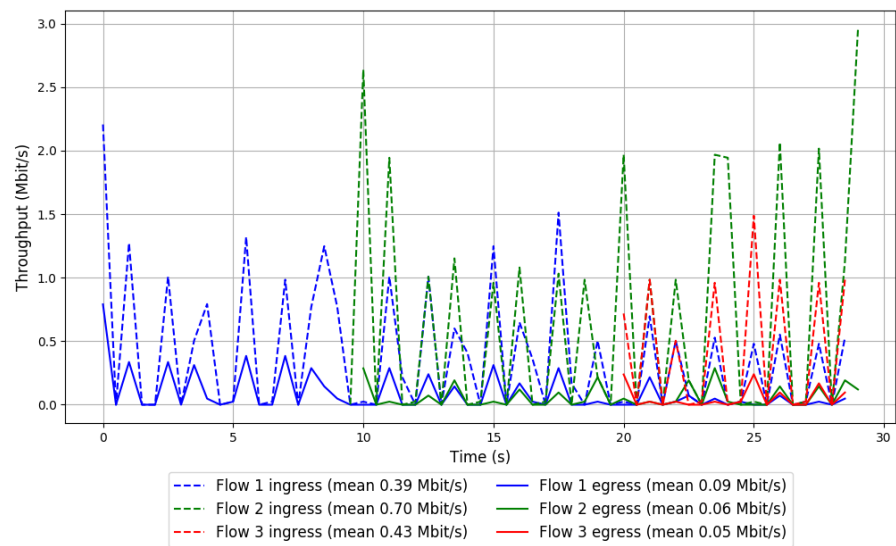


Run 1: Statistics of Indigo-1-32

Start at: 2018-04-03 03:29:08
End at: 2018-04-03 03:29:38
Local clock offset: 0.24 ms
Remote clock offset: -5.241 ms

Below is generated by plot.py at 2018-04-03 04:23:48
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 138.444 ms
Loss rate: 85.57%
-- Flow 1:
Average throughput: 0.09 Mbit/s
95th percentile per-packet one-way delay: 69.228 ms
Loss rate: 77.32%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 138.115 ms
Loss rate: 91.75%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 203.030 ms
Loss rate: 87.80%

Run 1: Report of Indigo-1-32 — Data Link



Run 2: Statistics of Indigo-1-32

Start at: 2018-04-03 03:52:49

End at: 2018-04-03 03:53:19

Local clock offset: 0.343 ms

Remote clock offset: -5.21 ms

Below is generated by plot.py at 2018-04-03 04:23:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 134.296 ms

Loss rate: 88.02%

-- Flow 1:

Average throughput: 0.09 Mbit/s

95th percentile per-packet one-way delay: 78.818 ms

Loss rate: 83.71%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 133.919 ms

Loss rate: 86.28%

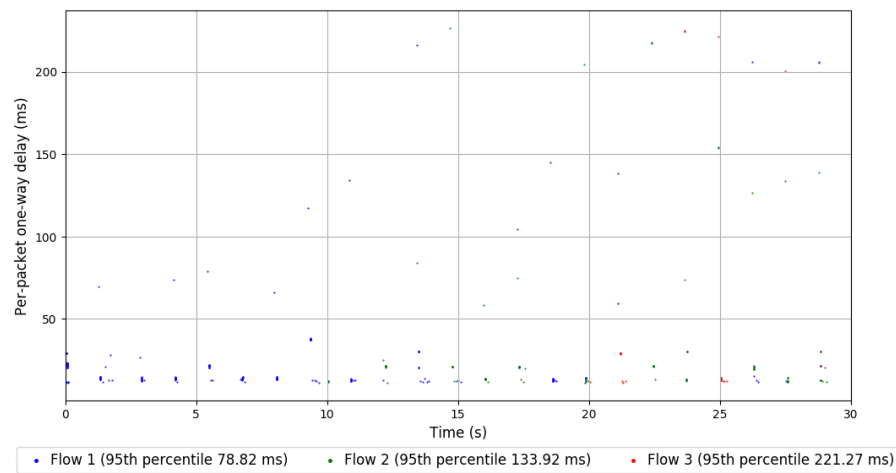
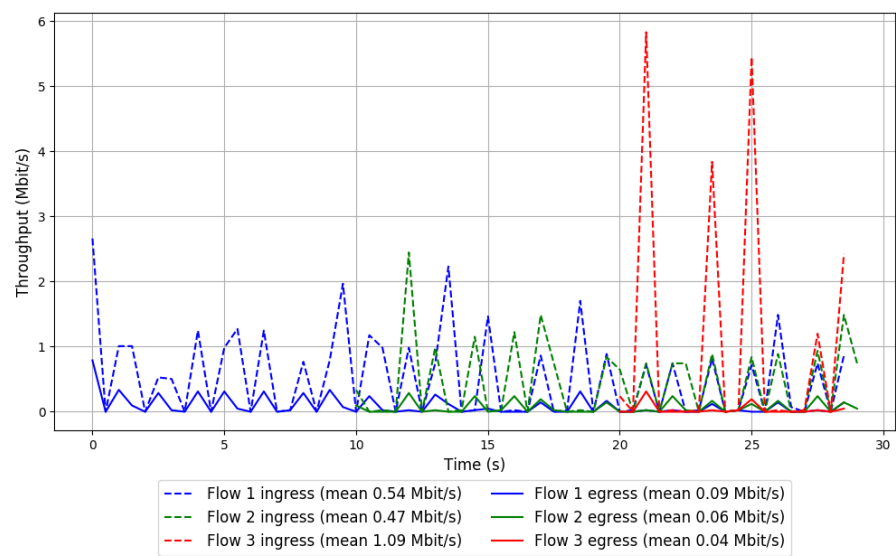
-- Flow 3:

Average throughput: 0.04 Mbit/s

95th percentile per-packet one-way delay: 221.274 ms

Loss rate: 96.73%

Run 2: Report of Indigo-1-32 — Data Link

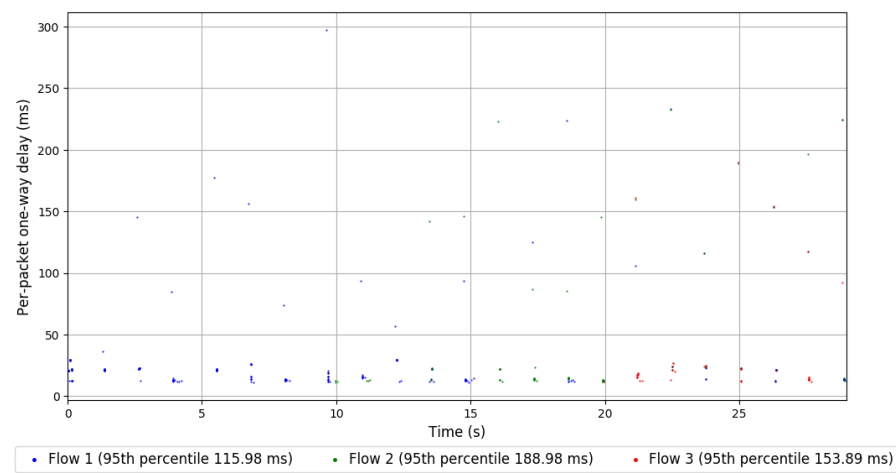
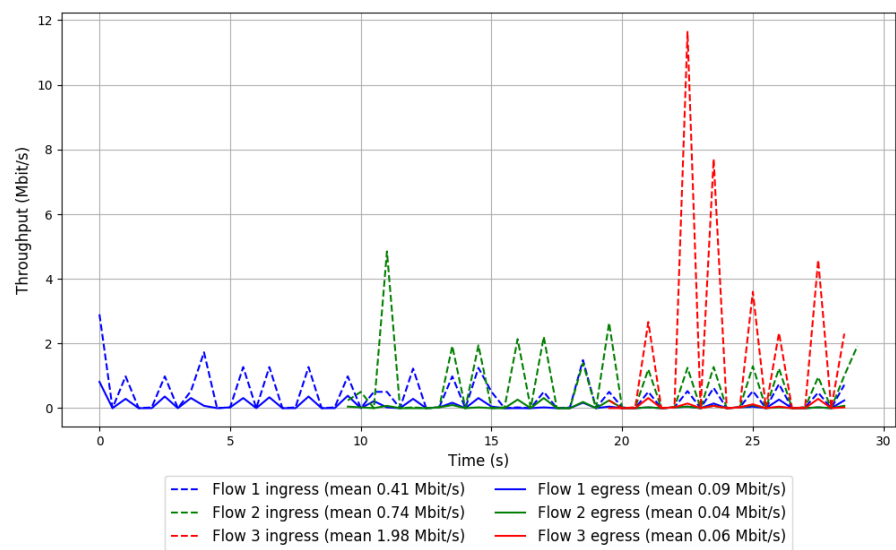


Run 3: Statistics of Indigo-1-32

Start at: 2018-04-03 04:16:32
End at: 2018-04-03 04:17:03
Local clock offset: 0.445 ms
Remote clock offset: -5.186 ms

Below is generated by plot.py at 2018-04-03 04:23:49
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 153.772 ms
Loss rate: 90.60%
-- Flow 1:
Average throughput: 0.09 Mbit/s
95th percentile per-packet one-way delay: 115.976 ms
Loss rate: 77.20%
-- Flow 2:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 188.979 ms
Loss rate: 93.94%
-- Flow 3:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 153.886 ms
Loss rate: 96.99%

Run 3: Report of Indigo-1-32 — Data Link

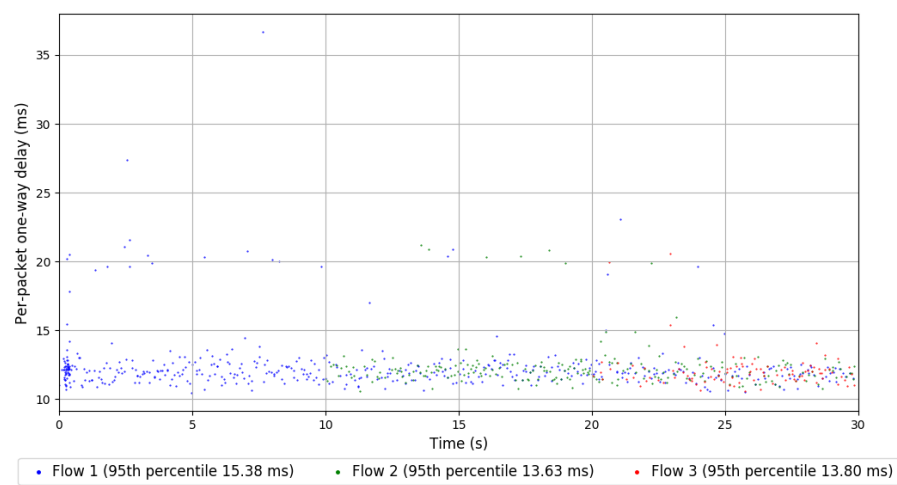
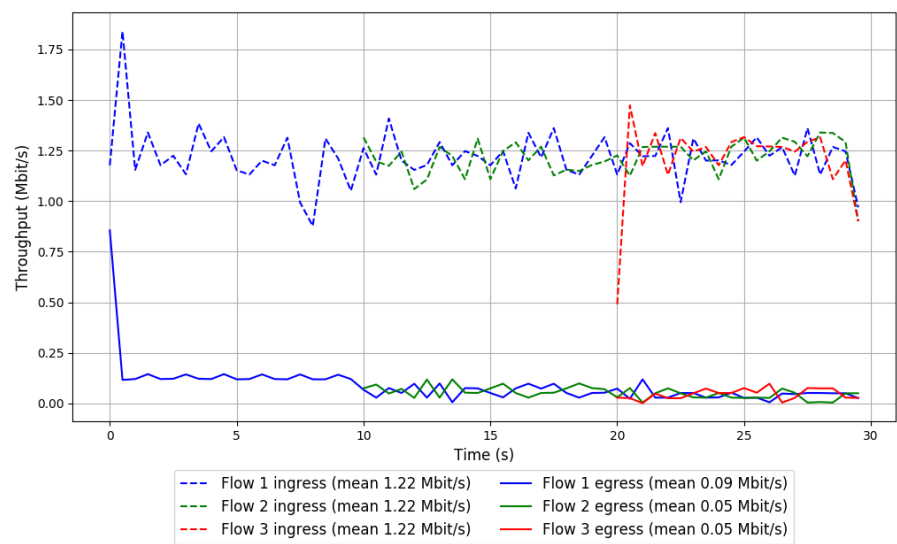


Run 1: Statistics of Vivace-latency

Start at: 2018-04-03 03:27:49
End at: 2018-04-03 03:28:19
Local clock offset: 0.301 ms
Remote clock offset: -5.257 ms

Below is generated by plot.py at 2018-04-03 04:23:50
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 14.566 ms
Loss rate: 94.26%
-- Flow 1:
Average throughput: 0.09 Mbit/s
95th percentile per-packet one-way delay: 15.377 ms
Loss rate: 92.69%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 13.626 ms
Loss rate: 95.68%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 13.797 ms
Loss rate: 96.19%

Run 1: Report of Vivace-latency — Data Link

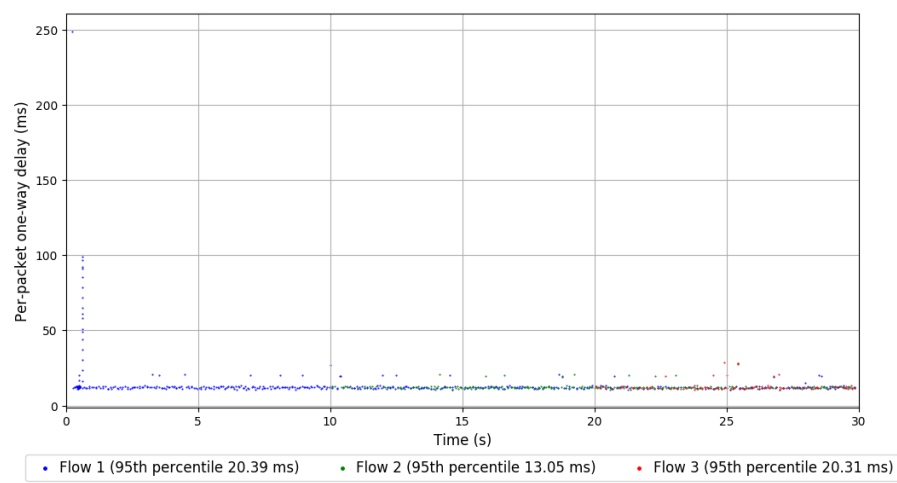
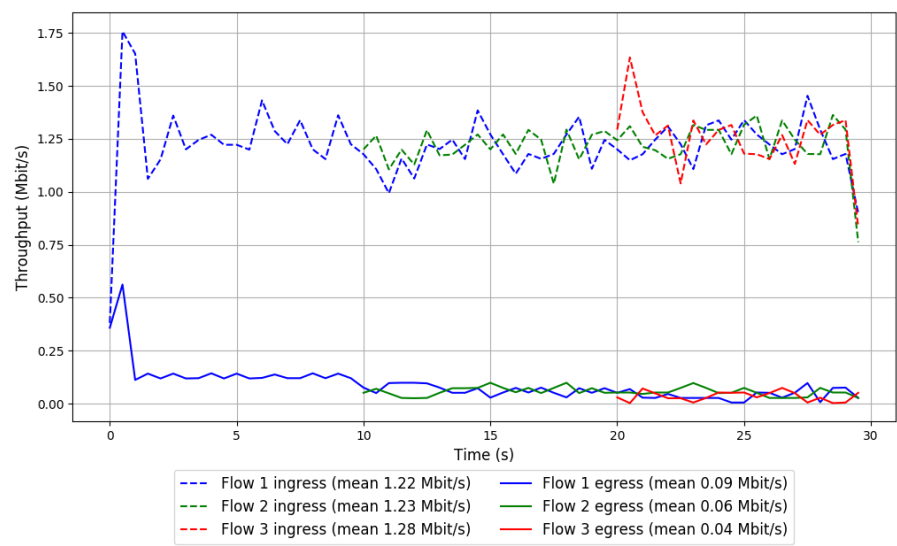


Run 2: Statistics of Vivace-latency

Start at: 2018-04-03 03:51:30
End at: 2018-04-03 03:52:00
Local clock offset: 0.248 ms
Remote clock offset: -5.216 ms

Below is generated by plot.py at 2018-04-03 04:23:51
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 20.194 ms
Loss rate: 94.35%
-- Flow 1:
Average throughput: 0.09 Mbit/s
95th percentile per-packet one-way delay: 20.390 ms
Loss rate: 92.68%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 13.054 ms
Loss rate: 95.36%
-- Flow 3:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 20.309 ms
Loss rate: 97.25%

Run 2: Report of Vivace-latency — Data Link

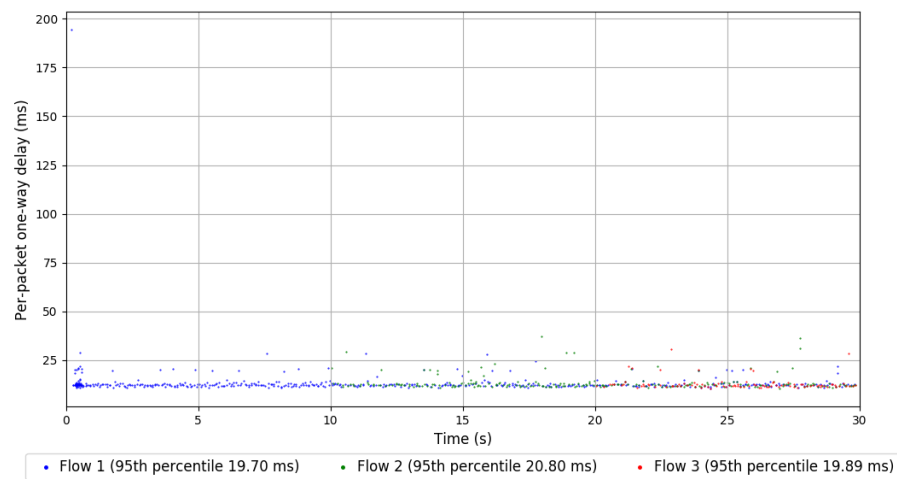
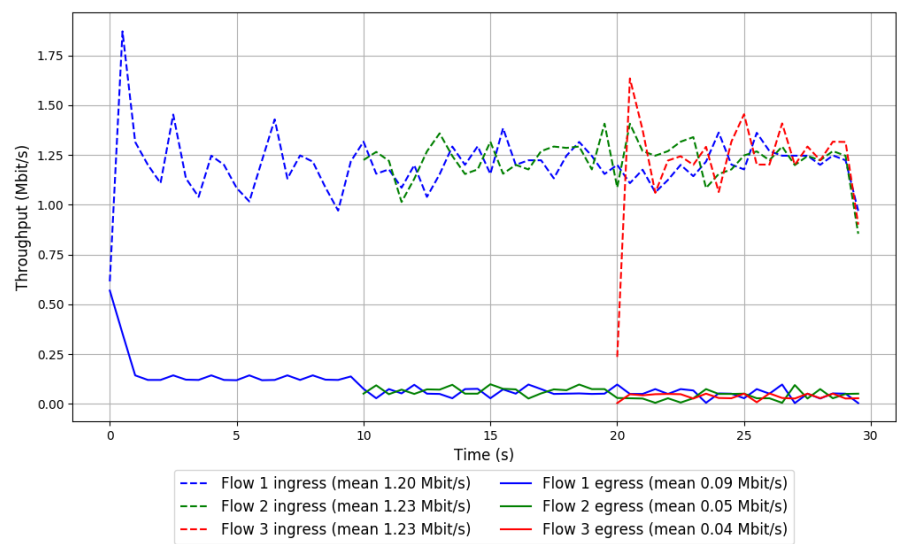


Run 3: Statistics of Vivace-latency

Start at: 2018-04-03 04:15:13
End at: 2018-04-03 04:15:43
Local clock offset: 0.338 ms
Remote clock offset: -5.192 ms

Below is generated by plot.py at 2018-04-03 04:23:52
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 20.065 ms
Loss rate: 94.27%
-- Flow 1:
Average throughput: 0.09 Mbit/s
95th percentile per-packet one-way delay: 19.701 ms
Loss rate: 92.44%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 20.800 ms
Loss rate: 95.64%
-- Flow 3:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 19.885 ms
Loss rate: 96.96%

Run 3: Report of Vivace-latency — Data Link

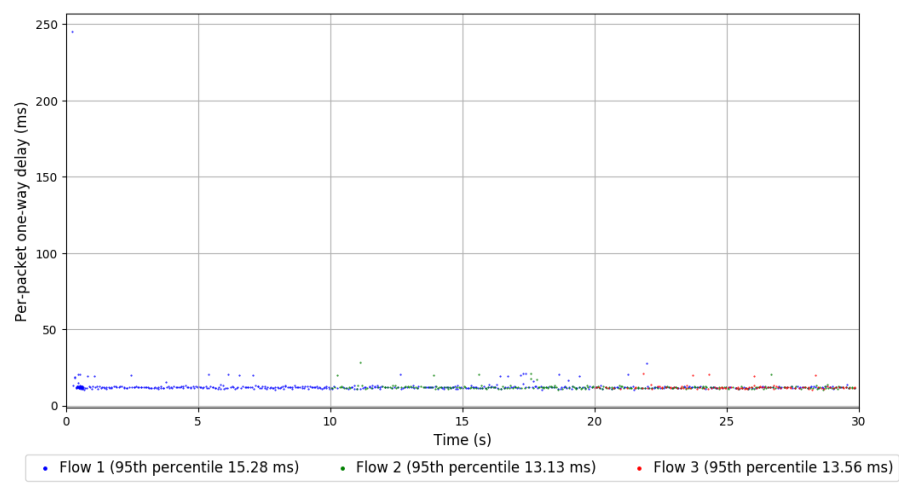
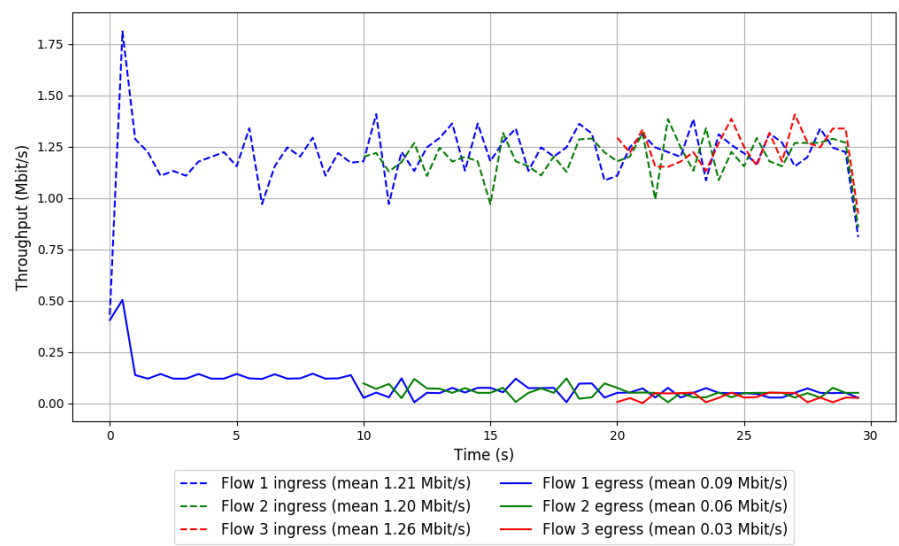


Run 1: Statistics of Vivace-loss

Start at: 2018-04-03 03:17:19
End at: 2018-04-03 03:17:49
Local clock offset: 0.307 ms
Remote clock offset: -5.186 ms

Below is generated by plot.py at 2018-04-03 04:23:52
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 13.841 ms
Loss rate: 94.27%
-- Flow 1:
Average throughput: 0.09 Mbit/s
95th percentile per-packet one-way delay: 15.277 ms
Loss rate: 92.47%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 13.131 ms
Loss rate: 95.34%
-- Flow 3:
Average throughput: 0.03 Mbit/s
95th percentile per-packet one-way delay: 13.559 ms
Loss rate: 97.46%

Run 1: Report of Vivace-loss — Data Link

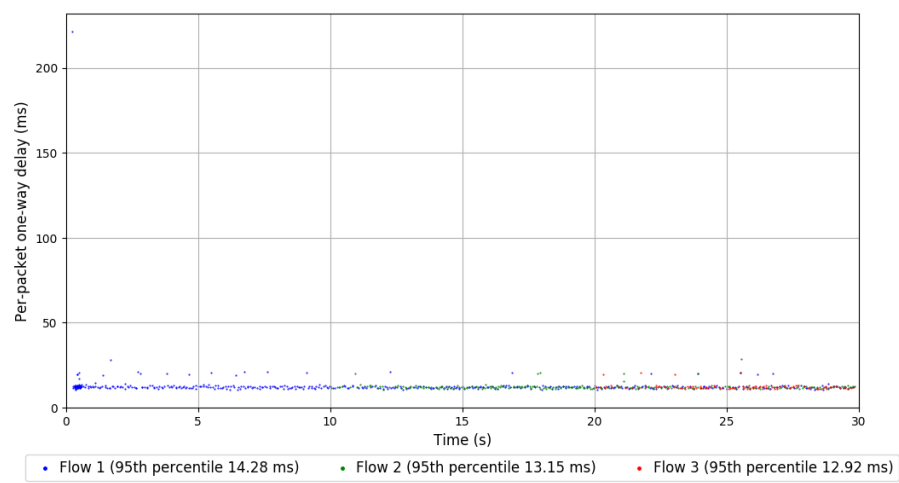
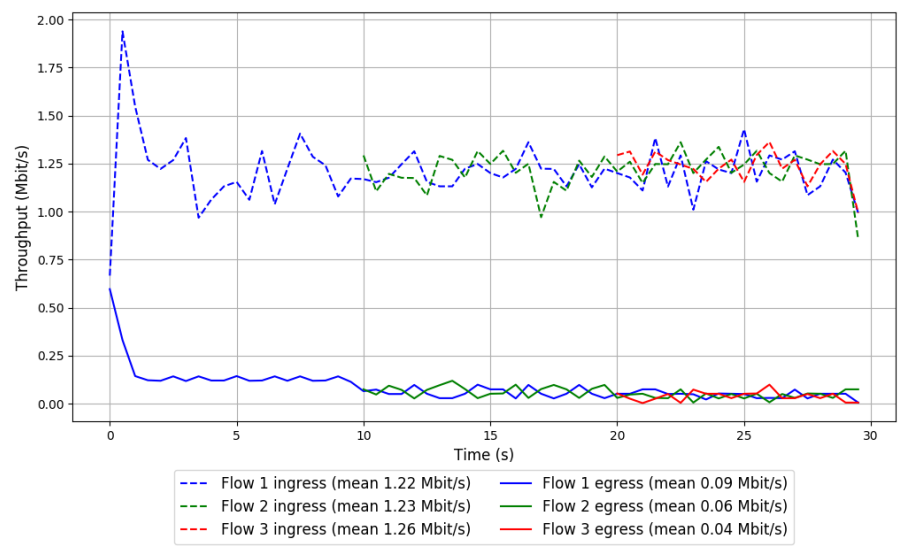


Run 2: Statistics of Vivace-loss

Start at: 2018-04-03 03:40:59
End at: 2018-04-03 03:41:29
Local clock offset: 0.303 ms
Remote clock offset: -5.253 ms

Below is generated by plot.py at 2018-04-03 04:23:53
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 13.482 ms
Loss rate: 94.30%
-- Flow 1:
Average throughput: 0.09 Mbit/s
95th percentile per-packet one-way delay: 14.279 ms
Loss rate: 92.66%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 13.148 ms
Loss rate: 95.42%
-- Flow 3:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 12.917 ms
Loss rate: 96.91%

Run 2: Report of Vivace-loss — Data Link

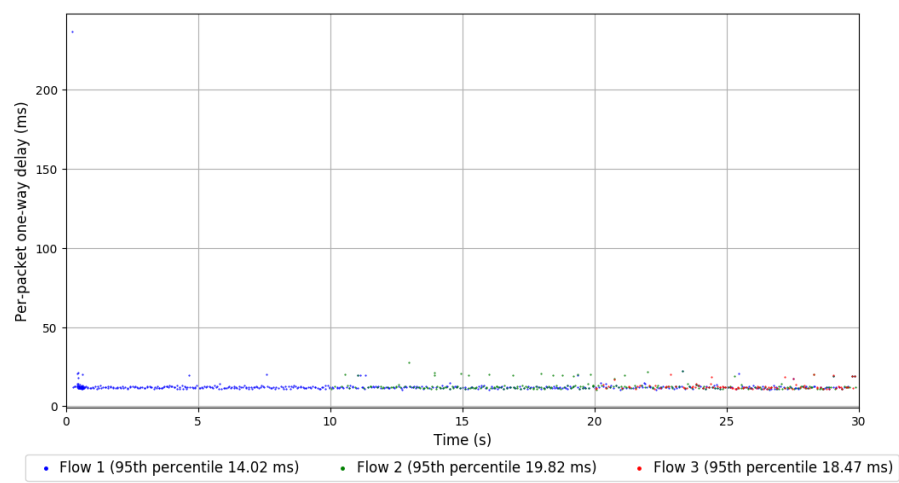
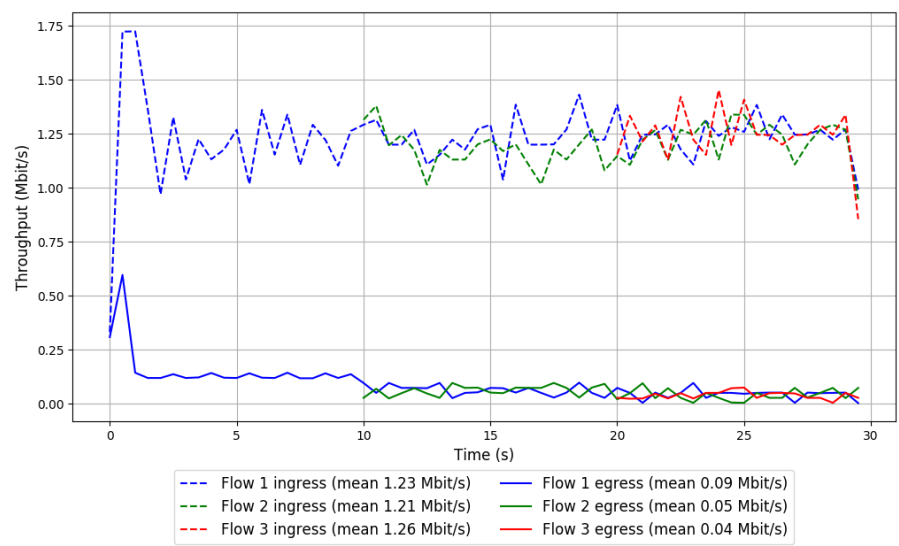


Run 3: Statistics of Vivace-loss

Start at: 2018-04-03 04:04:39
End at: 2018-04-03 04:05:09
Local clock offset: 0.243 ms
Remote clock offset: -5.177 ms

Below is generated by plot.py at 2018-04-03 04:23:53
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 19.054 ms
Loss rate: 94.32%
-- Flow 1:
Average throughput: 0.09 Mbit/s
95th percentile per-packet one-way delay: 14.016 ms
Loss rate: 92.65%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 19.818 ms
Loss rate: 95.62%
-- Flow 3:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 18.474 ms
Loss rate: 96.79%

Run 3: Report of Vivace-loss — Data Link

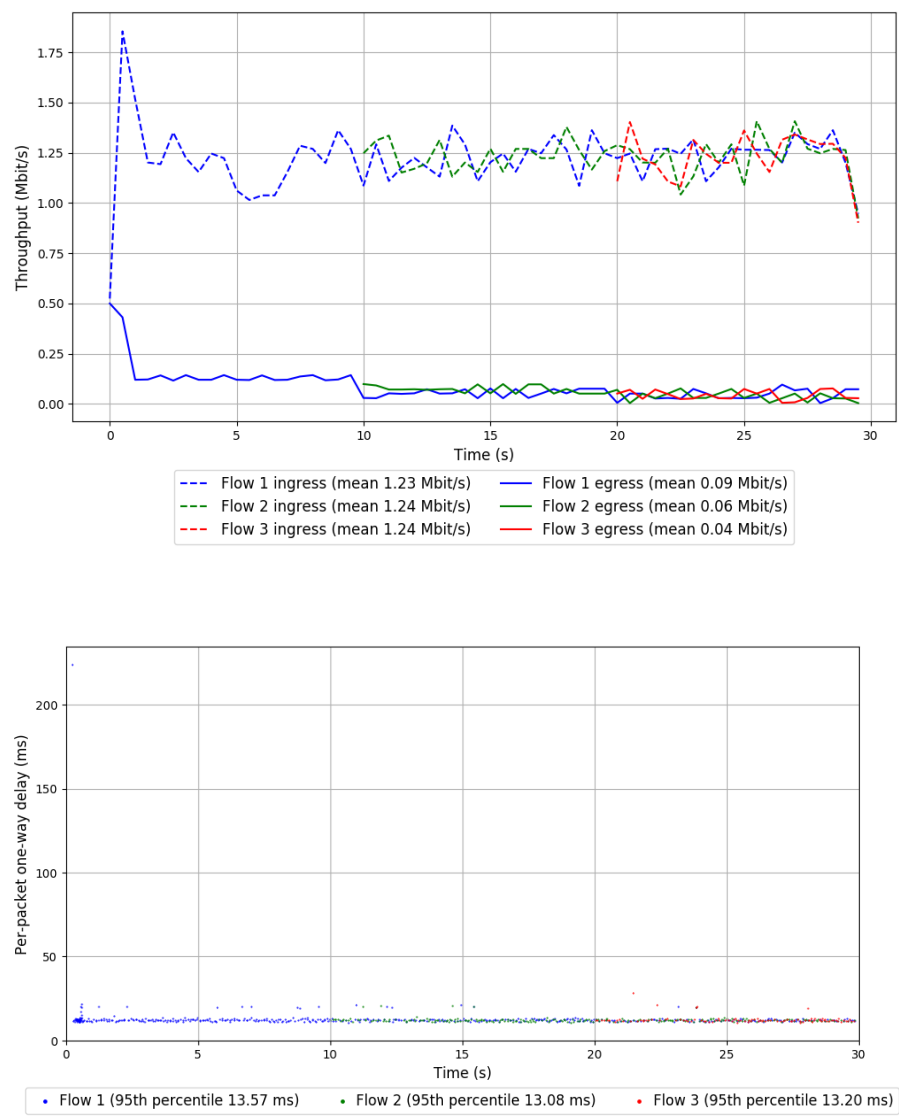


Run 1: Statistics of Vivace-LTE

Start at: 2018-04-03 03:31:47
End at: 2018-04-03 03:32:17
Local clock offset: 0.199 ms
Remote clock offset: -5.254 ms

Below is generated by plot.py at 2018-04-03 04:23:53
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 13.406 ms
Loss rate: 94.33%
-- Flow 1:
Average throughput: 0.09 Mbit/s
95th percentile per-packet one-way delay: 13.573 ms
Loss rate: 92.83%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 13.081 ms
Loss rate: 95.53%
-- Flow 3:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 13.197 ms
Loss rate: 96.42%

Run 1: Report of Vivace-LTE — Data Link

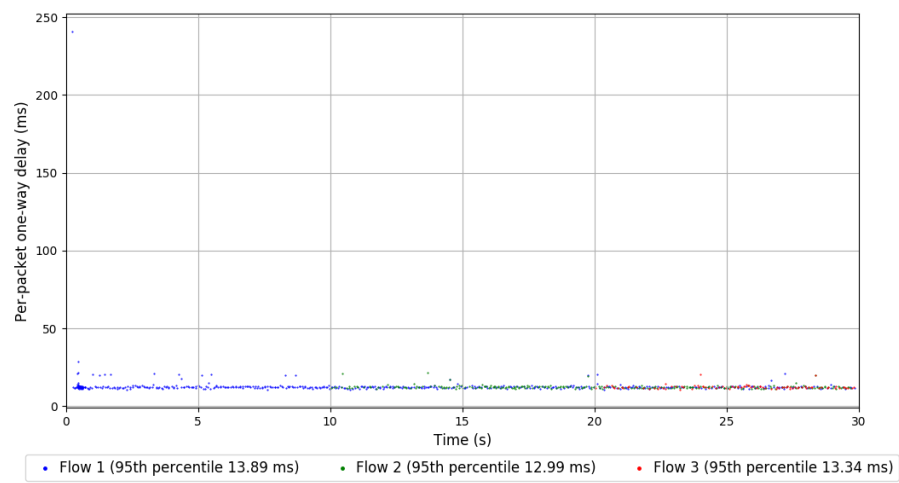
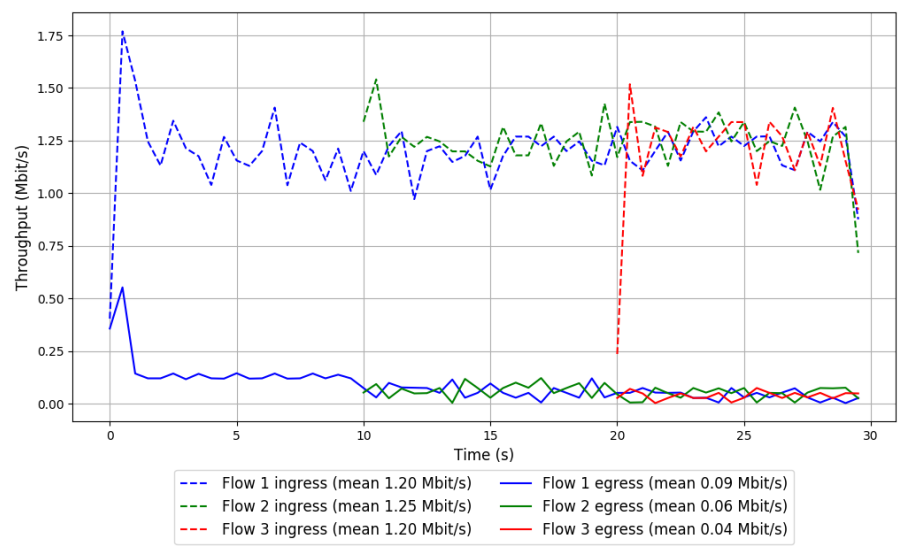


Run 2: Statistics of Vivace-LTE

Start at: 2018-04-03 03:55:26
End at: 2018-04-03 03:55:56
Local clock offset: 0.326 ms
Remote clock offset: -5.198 ms

Below is generated by plot.py at 2018-04-03 04:23:54
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 13.527 ms
Loss rate: 94.28%
-- Flow 1:
Average throughput: 0.09 Mbit/s
95th percentile per-packet one-way delay: 13.893 ms
Loss rate: 92.73%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 12.988 ms
Loss rate: 95.36%
-- Flow 3:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 13.343 ms
Loss rate: 96.74%

Run 2: Report of Vivace-LTE — Data Link



Run 3: Statistics of Vivace-LTE

Start at: 2018-04-03 04:19:12
End at: 2018-04-03 04:19:42
Local clock offset: 0.431 ms
Remote clock offset: -5.432 ms

Below is generated by plot.py at 2018-04-03 04:23:54
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 19.863 ms
Loss rate: 94.32%
-- Flow 1:
Average throughput: 0.09 Mbit/s
95th percentile per-packet one-way delay: 19.863 ms
Loss rate: 92.53%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 19.118 ms
Loss rate: 95.37%
-- Flow 3:
Average throughput: 0.03 Mbit/s
95th percentile per-packet one-way delay: 20.531 ms
Loss rate: 97.50%

Run 3: Report of Vivace-LTE — Data Link

