

## Pantheon Report

Generated at 2018-04-10 08:59:15 (UTC).

Data path: AWS Brazil 2 Ethernet (*local*) → Colombia 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).

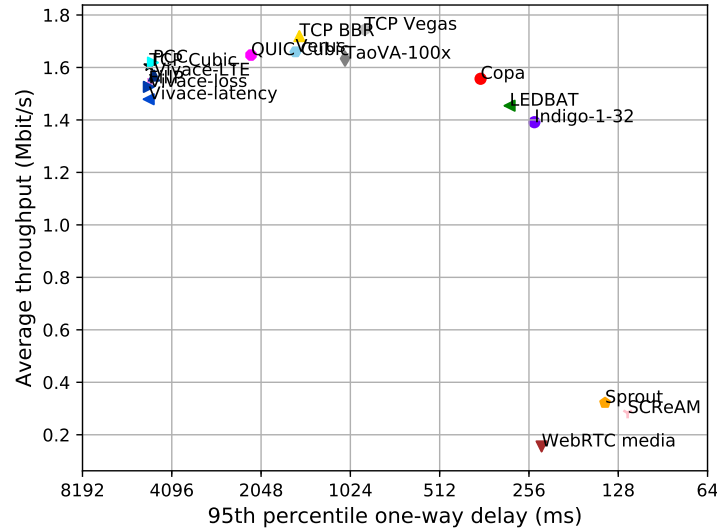
Tested BBR with qdisc of Fair Queuing (**fq**), and other schemes with the default Linux qdisc (**pfifo\_fast**).

NTP offsets were measured against **gps.ntp.br** and have been applied to correct the timestamps in logs.

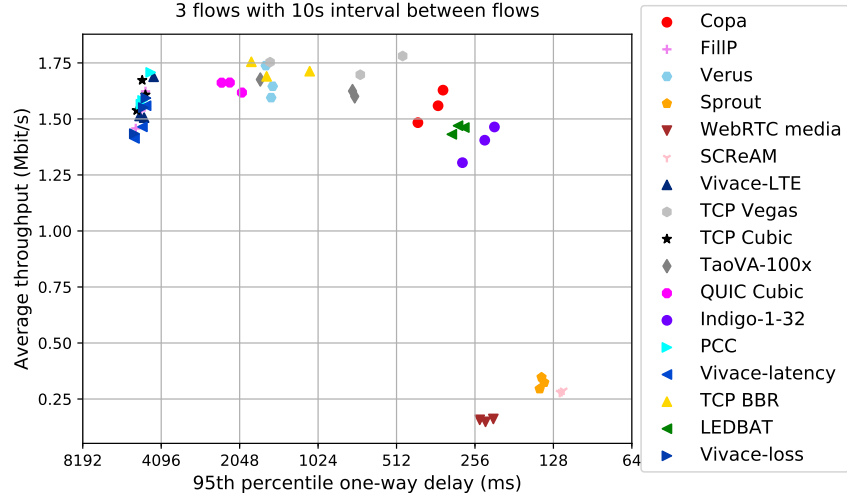
Git summary:

```
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 @ 2601c92e4aa9d58d38dc4dfe0ecd90c077e64d
third_party/indigo-1-layer-32-unit-no-calib @ 1f3a7f75b41135ed5b540c0fd3505939528e2a5f
third_party/indigo-no-calib @ 7224f2202e8a044d8306fa0b983ad84360c53d89
third_party/koho_cc @ f0f2e693303aee82ea808e6928eac4f1083a6681
  M datagrump/sender.cc
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ fb1053193c2861da659ba9013db26744ccfcf993
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
  M receiver/src/buffer.h
  M receiver/src/core.cpp
  M sender/src/buffer.h
  M sender/src/core.cpp
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream @ c3370fd7bd17265a79aeb34e4016ad23f5965885
third_party/sourdough @ f1a14bffe749737437f61b1eaeeb30b267cde681
third_party/sprout @ 6f2efe6e088d91066a9f023df375eee2665089ce
  M src/examples/cellsim.cc
  M src/examples/sproutbt2.cc
  M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
  M src/verus.hpp
  M tools/plot.py
third_party/vivace @ 7a4ba531e75b4a6f66f5c4580192120401784ce3
third_party/webrtc @ f271183af822eee5d0031620f4bebf38aedc5581
```

test from AWS Brazil 2 Ethernet to Colombia ppp0, 3 runs of 30s each per scheme  
3 flows with 10s interval between flows (mean of all runs by scheme)



test from AWS Brazil 2 Ethernet to Colombia 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	1.08	0.78	0.42	1511.28	1533.75	1177.67	1.21	2.19	7.99
TCP Cubic	3	1.57	0.06	0.00	4876.06	4872.95	4883.92	17.34	29.70	61.91
LEDBAT	3	1.02	0.46	0.41	293.98	310.88	310.70	0.27	0.87	2.94
PCC	3	1.62	0.00	0.00	4739.76	4581.05	4667.27	72.76	1.87	27.68
QUIC Cubic	3	1.33	0.42	0.13	2137.94	2300.55	2296.85	5.55	14.65	33.78
SCReAM	3	0.08	0.21	0.18	113.52	126.90	125.50	0.09	0.00	0.00
WebRTC media	3	0.06	0.06	0.05	221.68	233.45	245.63	0.00	0.00	0.00
Sprout	3	0.16	0.16	0.17	151.67	134.84	144.71	0.00	0.00	0.00
TaoVA-100x	3	0.95	0.72	0.63	711.63	1069.60	1247.08	1.07	2.17	6.41
TCP Vegas	3	1.19	0.54	0.65	895.11	925.26	935.27	1.41	2.90	7.30
Verus	3	1.65	0.01	0.01	1567.61	1599.41	1543.06	2.47	4.69	6.36
Copa	3	0.96	0.65	0.49	359.56	384.70	434.54	0.22	0.59	1.44
FillP	3	1.31	0.44	0.00	4876.27	4922.25	4893.78	28.94	85.99	86.80
Indigo-1-32	3	0.83	0.56	0.60	231.96	282.15	268.08	0.03	0.03	0.35
Vivace-latency	3	0.87	0.92	0.00	4892.37	4910.17	4933.52	34.44	44.28	40.42
Vivace-loss	3	1.40	0.20	0.00	4885.11	4947.44	4639.45	34.29	36.89	21.74
Vivace-LTE	3	0.95	0.95	0.00	4683.38	4722.89	4676.52	30.29	43.32	34.44

Run 1: Statistics of TCP BBR

Start at: 2018-04-10 07:52:47

End at: 2018-04-10 07:53:17

Local clock offset: -7.13 ms

Remote clock offset: 2.73 ms

# Below is generated by plot.py at 2018-04-10 08:58:34

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.69 Mbit/s

95th percentile per-packet one-way delay: 1614.034 ms

Loss rate: 1.64%

-- Flow 1:

Average throughput: 1.09 Mbit/s

95th percentile per-packet one-way delay: 1610.478 ms

Loss rate: 1.02%

-- Flow 2:

Average throughput: 0.79 Mbit/s

95th percentile per-packet one-way delay: 1621.411 ms

Loss rate: 2.03%

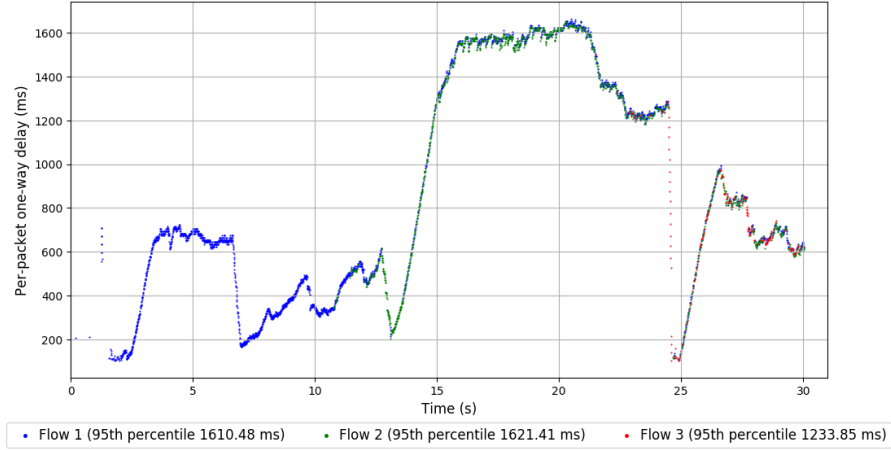
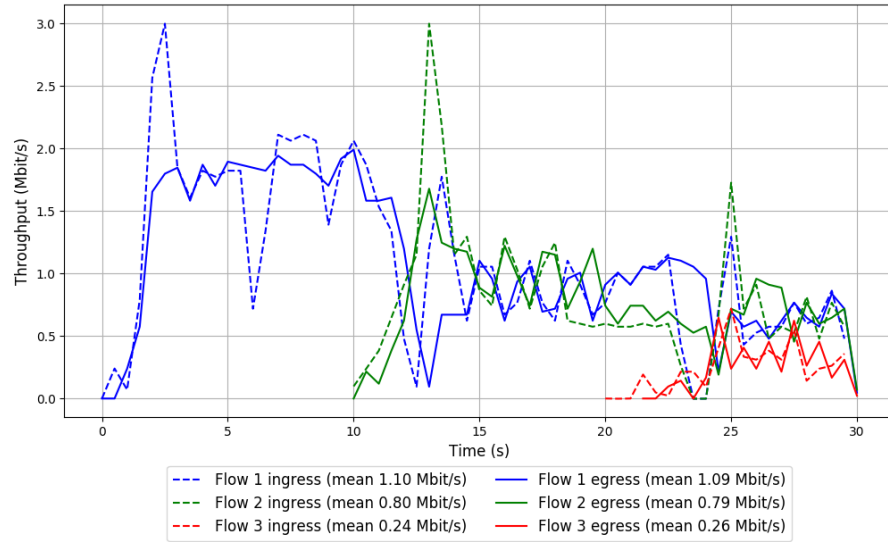
-- Flow 3:

Average throughput: 0.26 Mbit/s

95th percentile per-packet one-way delay: 1233.851 ms

Loss rate: 7.45%

# Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2018-04-10 08:15:25

End at: 2018-04-10 08:15:55

Local clock offset: -6.456 ms

Remote clock offset: 8.425 ms

# Below is generated by plot.py at 2018-04-10 08:58:35

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.76 Mbit/s

95th percentile per-packet one-way delay: 1846.568 ms

Loss rate: 1.91%

-- Flow 1:

Average throughput: 1.09 Mbit/s

95th percentile per-packet one-way delay: 1830.203 ms

Loss rate: 1.10%

-- Flow 2:

Average throughput: 0.89 Mbit/s

95th percentile per-packet one-way delay: 1856.788 ms

Loss rate: 1.82%

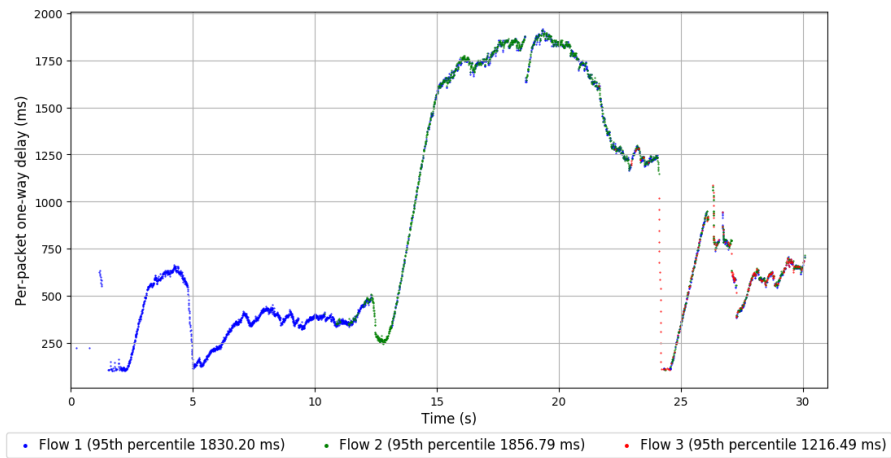
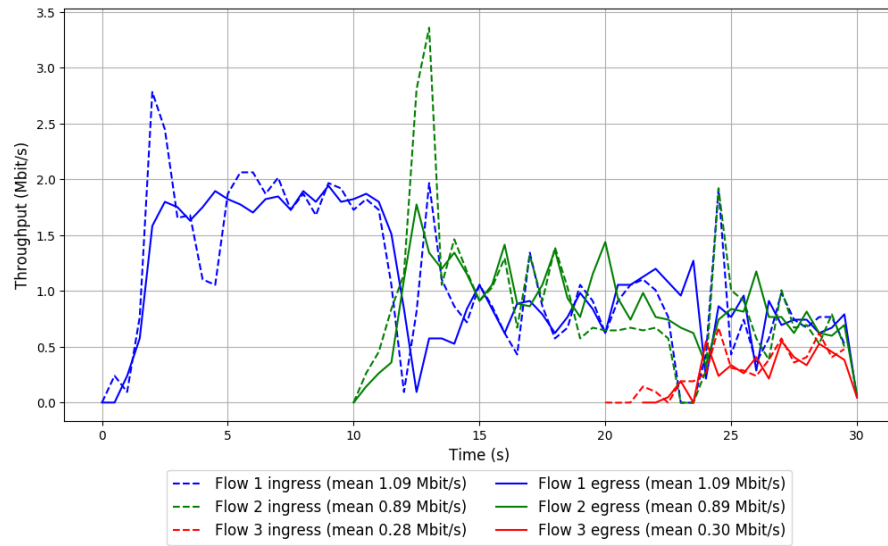
-- Flow 3:

Average throughput: 0.30 Mbit/s

95th percentile per-packet one-way delay: 1216.489 ms

Loss rate: 11.90%

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



Run 3: Statistics of TCP BBR

Start at: 2018-04-10 08:38:02

End at: 2018-04-10 08:38:32

Local clock offset: -6.463 ms

Remote clock offset: 7.547 ms

# Below is generated by plot.py at 2018-04-10 08:58:35

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.71 Mbit/s

95th percentile per-packet one-way delay: 1103.124 ms

Loss rate: 2.22%

-- Flow 1:

Average throughput: 1.07 Mbit/s

95th percentile per-packet one-way delay: 1093.167 ms

Loss rate: 1.52%

-- Flow 2:

Average throughput: 0.65 Mbit/s

95th percentile per-packet one-way delay: 1123.050 ms

Loss rate: 2.73%

-- Flow 3:

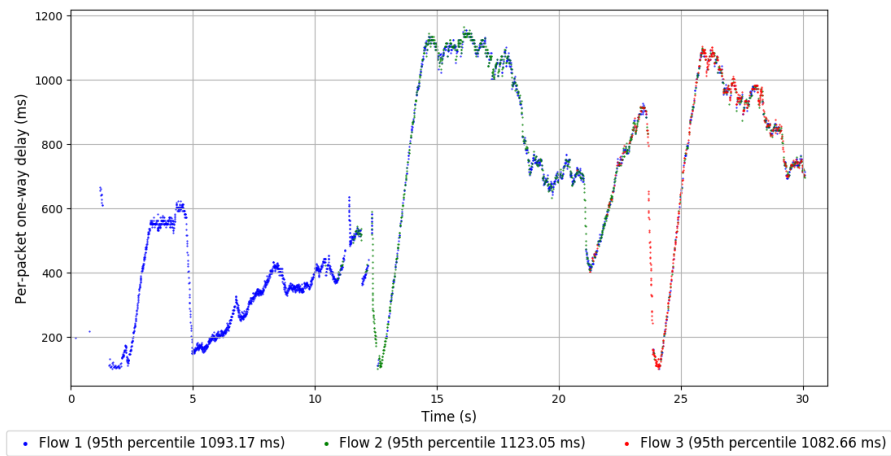
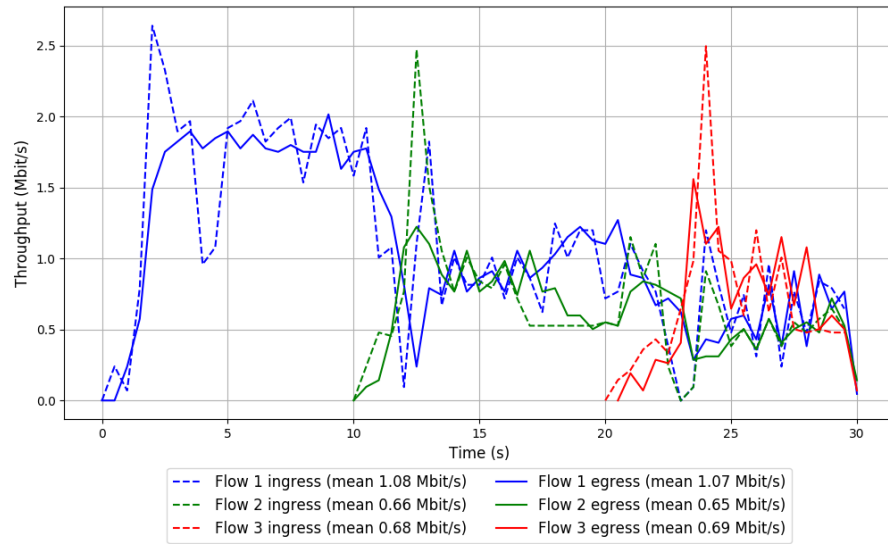
Average throughput: 0.69 Mbit/s

95th percentile per-packet one-way delay: 1082.665 ms

Loss rate: 4.61%



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



Run 1: Statistics of TCP Cubic

Start at: 2018-04-10 08:01:34

End at: 2018-04-10 08:02:04

Local clock offset: -6.772 ms

Remote clock offset: 8.324 ms

# Below is generated by plot.py at 2018-04-10 08:58:35

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.54 Mbit/s

95th percentile per-packet one-way delay: 5084.029 ms

Loss rate: 17.85%

-- Flow 1:

Average throughput: 1.52 Mbit/s

95th percentile per-packet one-way delay: 5084.041 ms

Loss rate: 17.35%

-- Flow 2:

Average throughput: 0.04 Mbit/s

95th percentile per-packet one-way delay: 4994.499 ms

Loss rate: 43.74%

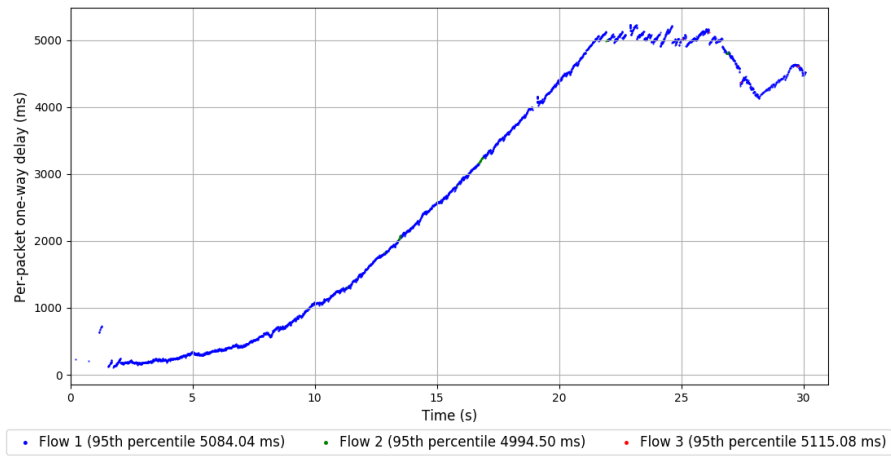
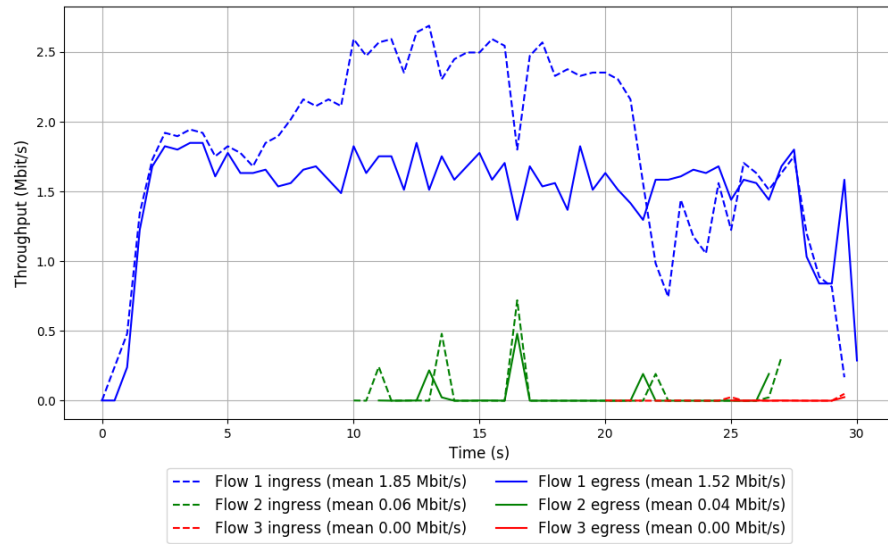
-- Flow 3:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 5115.077 ms

Loss rate: 63.50%

# Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2018-04-10 08:24:12

End at: 2018-04-10 08:24:42

Local clock offset: -6.334 ms

Remote clock offset: 3.655 ms

# Below is generated by plot.py at 2018-04-10 08:58:35

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.67 Mbit/s

95th percentile per-packet one-way delay: 4845.467 ms

Loss rate: 20.00%

-- Flow 1:

Average throughput: 1.62 Mbit/s

95th percentile per-packet one-way delay: 4845.163 ms

Loss rate: 20.15%

-- Flow 2:

Average throughput: 0.08 Mbit/s

95th percentile per-packet one-way delay: 4895.391 ms

Loss rate: 13.96%

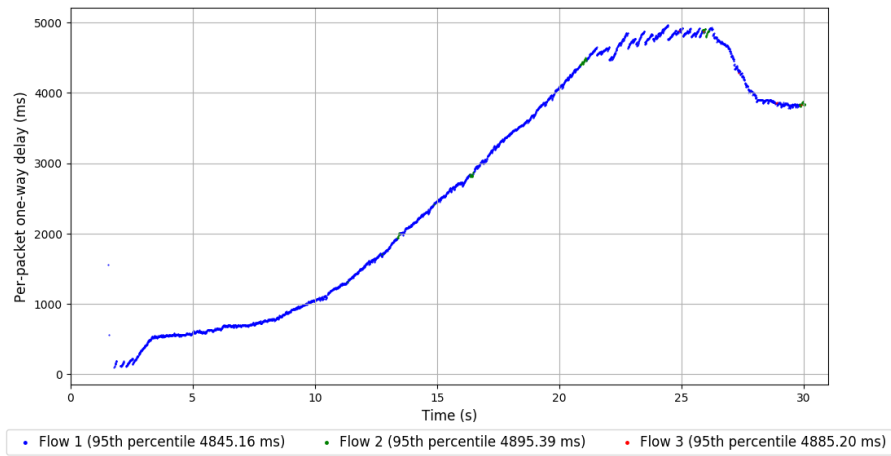
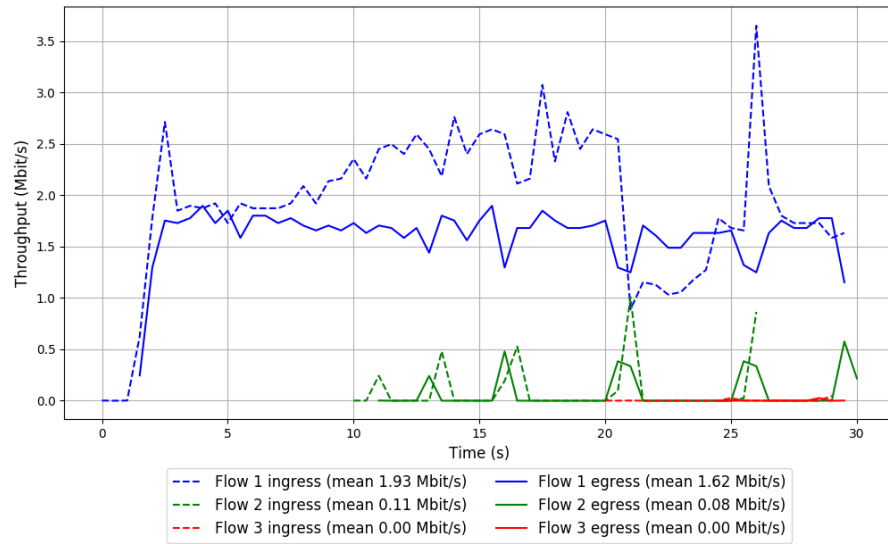
-- Flow 3:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 4885.203 ms

Loss rate: 61.12%

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



Run 3: Statistics of TCP Cubic

Start at: 2018-04-10 08:46:50

End at: 2018-04-10 08:47:20

Local clock offset: -6.45 ms

Remote clock offset: 2.222 ms

# Below is generated by plot.py at 2018-04-10 08:58:35

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.61 Mbit/s

95th percentile per-packet one-way delay: 4708.676 ms

Loss rate: 14.94%

-- Flow 1:

Average throughput: 1.58 Mbit/s

95th percentile per-packet one-way delay: 4698.989 ms

Loss rate: 14.52%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 4728.951 ms

Loss rate: 31.39%

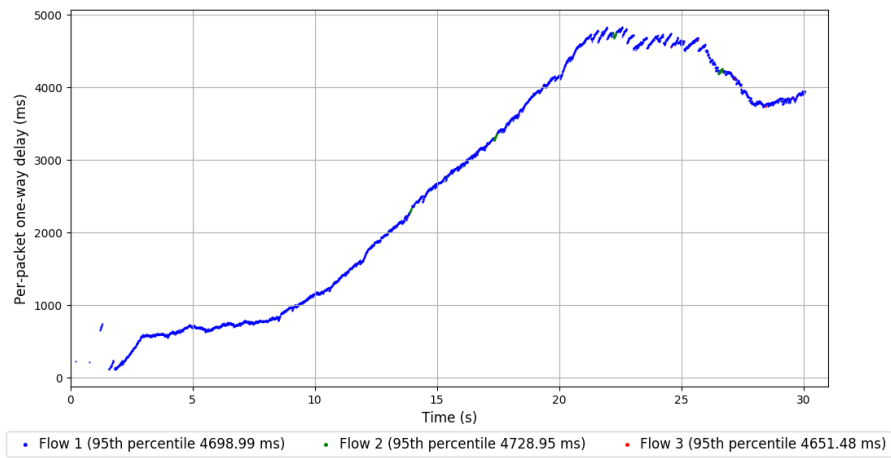
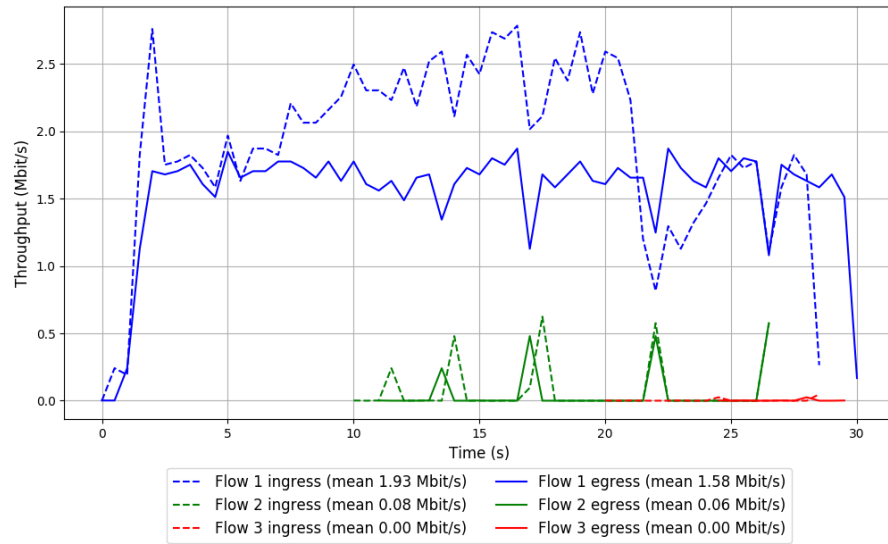
-- Flow 3:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 4651.477 ms

Loss rate: 61.12%

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



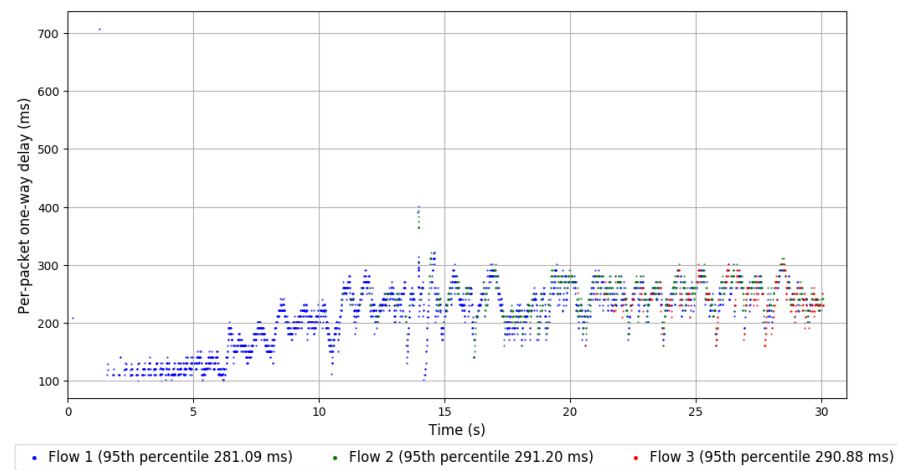
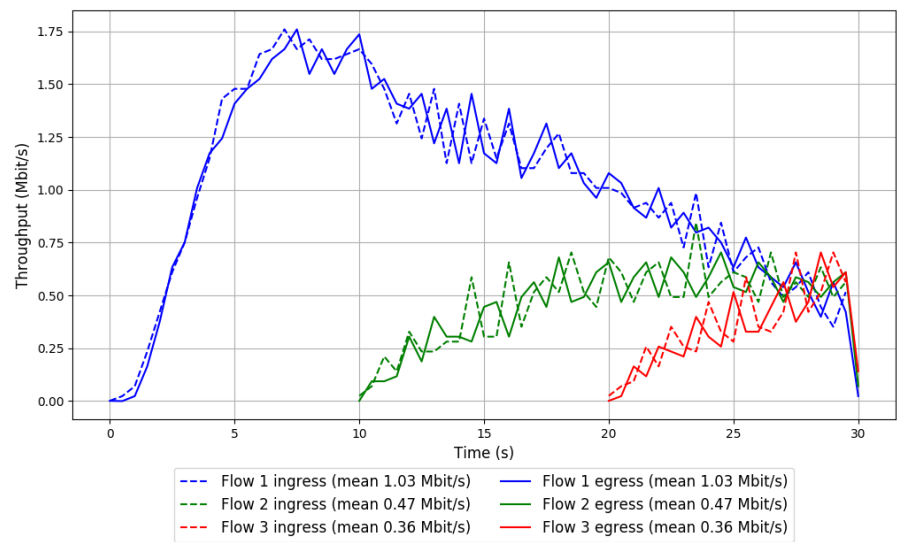
```
Run 1: Statistics of LEDBAT

Start at: 2018-04-10 08:09:07
End at: 2018-04-10 08:09:37
Local clock offset: -4.951 ms
Remote clock offset: 8.385 ms

# Below is generated by plot.py at 2018-04-10 08:58:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.46 Mbit/s
95th percentile per-packet one-way delay: 281.284 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 1.03 Mbit/s
95th percentile per-packet one-way delay: 281.089 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 0.47 Mbit/s
95th percentile per-packet one-way delay: 291.205 ms
Loss rate: 0.87%
-- Flow 3:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 290.878 ms
Loss rate: 1.97%
```



Run 1: Report of LEDBAT — Data Link



Run 2: Statistics of LEDBAT

Start at: 2018-04-10 08:31:44

End at: 2018-04-10 08:32:14

Local clock offset: -5.688 ms

Remote clock offset: 8.491 ms

# Below is generated by plot.py at 2018-04-10 08:58:35

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.47 Mbit/s

95th percentile per-packet one-way delay: 297.350 ms

Loss rate: 0.72%

-- Flow 1:

Average throughput: 1.18 Mbit/s

95th percentile per-packet one-way delay: 297.246 ms

Loss rate: 0.50%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 317.069 ms

Loss rate: 1.06%

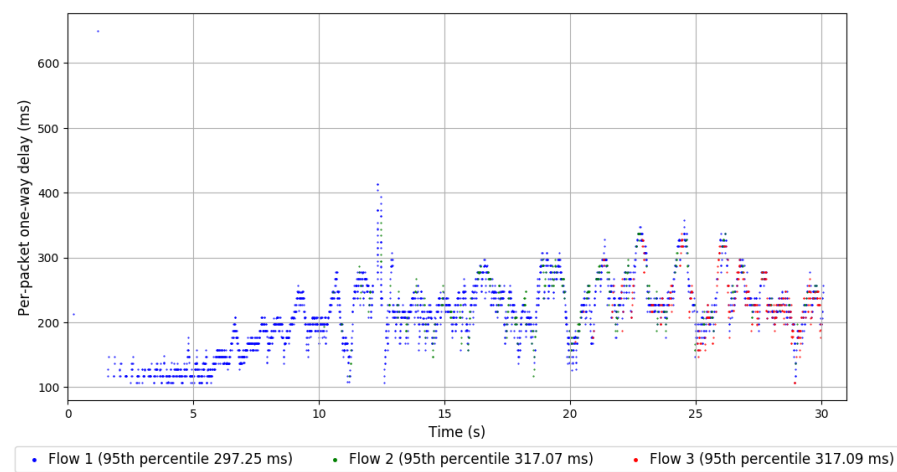
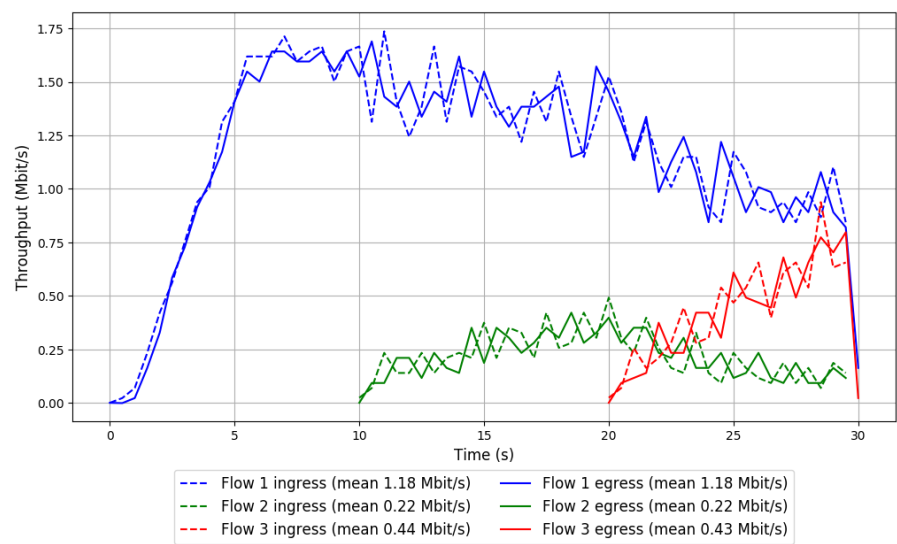
-- Flow 3:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 317.087 ms

Loss rate: 2.16%

Run 2: Report of LEDBAT — Data Link

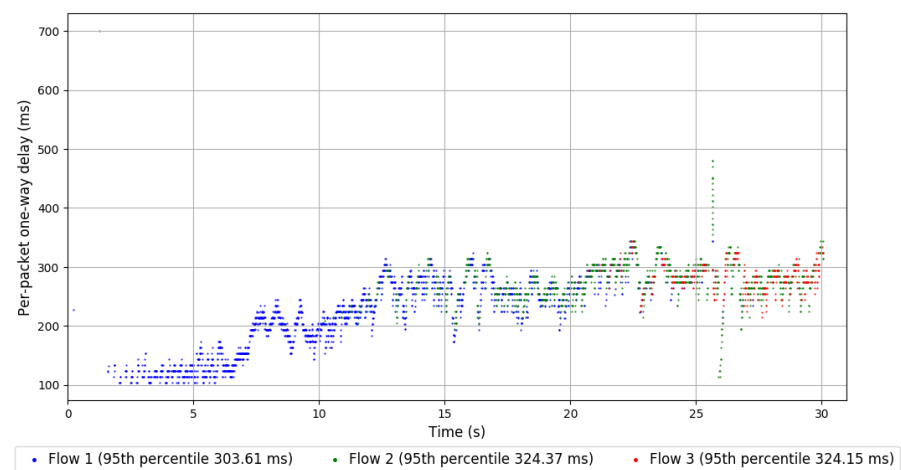
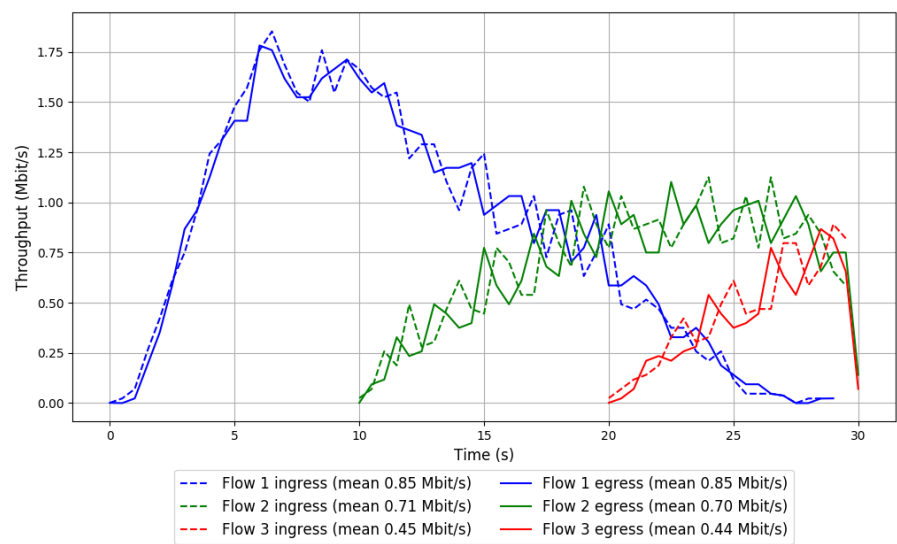


Run 3: Statistics of LEDBAT

Start at: 2018-04-10 08:54:21  
End at: 2018-04-10 08:54:51  
Local clock offset: -5.695 ms  
Remote clock offset: 7.532 ms

# Below is generated by plot.py at 2018-04-10 08:58:37  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 1.43 Mbit/s  
95th percentile per-packet one-way delay: 314.148 ms  
Loss rate: 0.71%  
-- Flow 1:  
Average throughput: 0.85 Mbit/s  
95th percentile per-packet one-way delay: 303.608 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.70 Mbit/s  
95th percentile per-packet one-way delay: 324.374 ms  
Loss rate: 0.67%  
-- Flow 3:  
Average throughput: 0.44 Mbit/s  
95th percentile per-packet one-way delay: 324.149 ms  
Loss rate: 4.70%

Run 3: Report of LEDBAT — Data Link

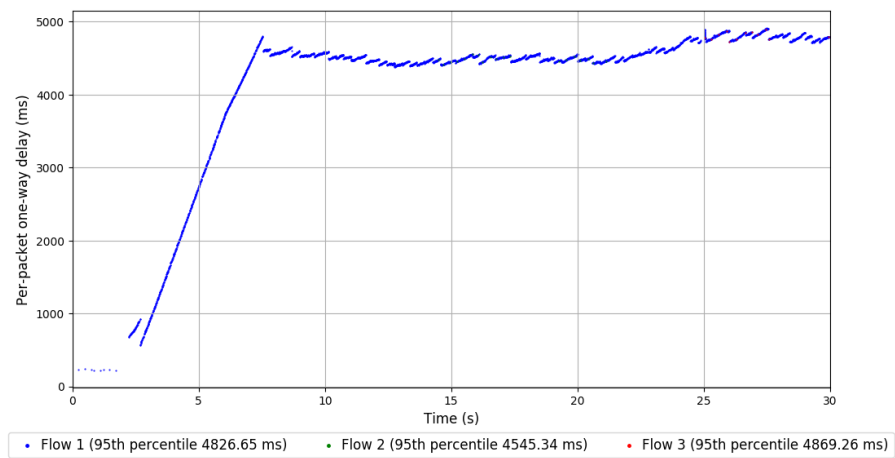
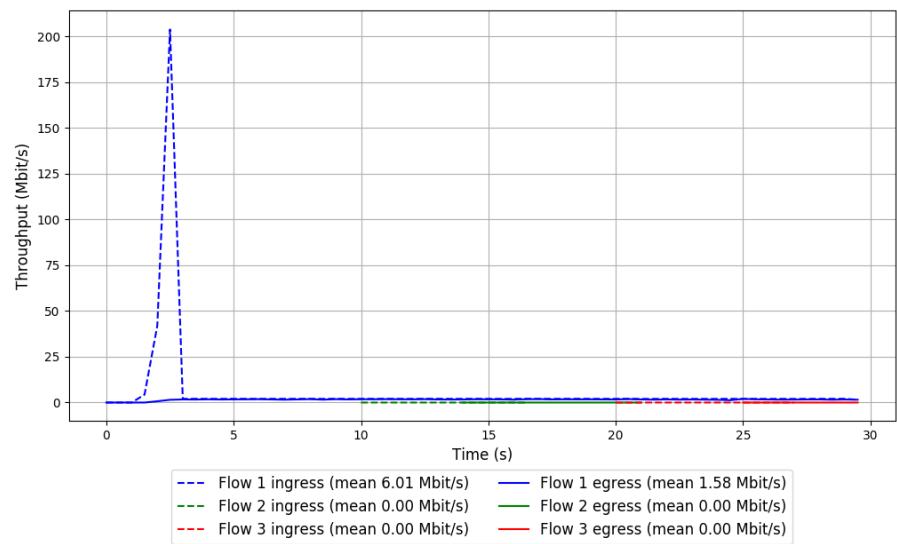


```
Run 1: Statistics of PCC

Start at: 2018-04-10 07:55:17
End at: 2018-04-10 07:55:47
Local clock offset: -7.034 ms
Remote clock offset: 8.351 ms

# Below is generated by plot.py at 2018-04-10 08:58:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.58 Mbit/s
95th percentile per-packet one-way delay: 4826.849 ms
Loss rate: 73.80%
-- Flow 1:
Average throughput: 1.58 Mbit/s
95th percentile per-packet one-way delay: 4826.654 ms
Loss rate: 73.81%
-- Flow 2:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 4545.340 ms
Loss rate: 5.60%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 4869.255 ms
Loss rate: 43.82%
```

Run 1: Report of PCC — Data Link



Run 2: Statistics of PCC

Start at: 2018-04-10 08:17:55

End at: 2018-04-10 08:18:25

Local clock offset: -5.678 ms

Remote clock offset: 2.831 ms

# Below is generated by plot.py at 2018-04-10 08:58:43

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.57 Mbit/s

95th percentile per-packet one-way delay: 4898.273 ms

Loss rate: 74.67%

-- Flow 1:

Average throughput: 1.56 Mbit/s

95th percentile per-packet one-way delay: 4898.273 ms

Loss rate: 74.69%

-- Flow 2:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 4923.849 ms

Loss rate: 0.00%

-- Flow 3:

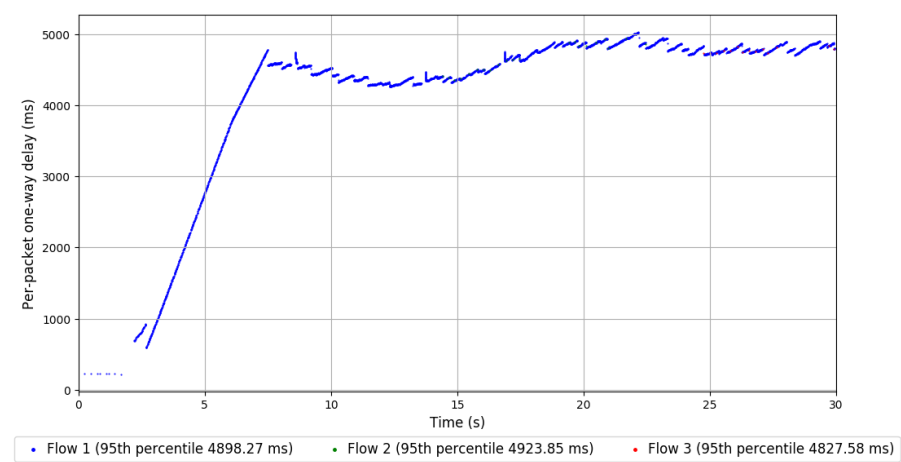
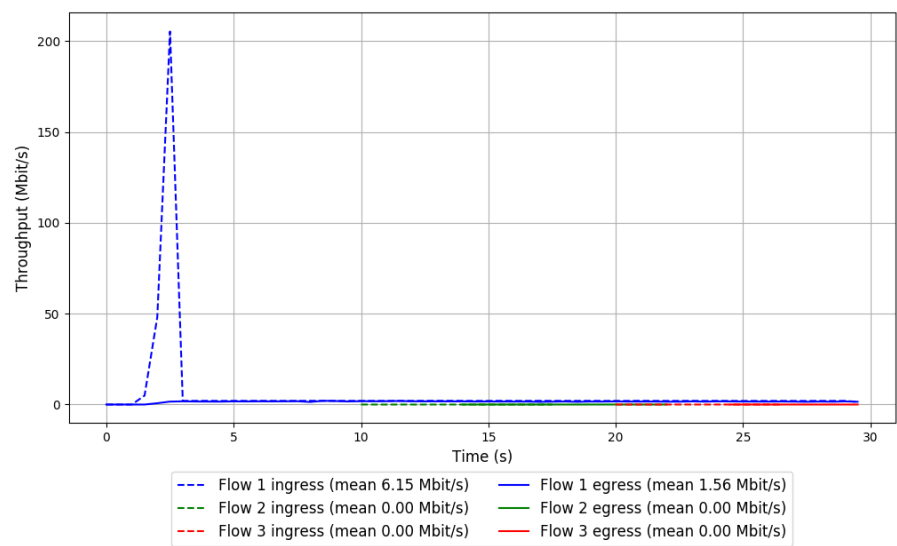
Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 4827.580 ms

Loss rate: 33.62%



Run 2: Report of PCC — Data Link



Run 3: Statistics of PCC

Start at: 2018-04-10 08:40:32

End at: 2018-04-10 08:41:02

Local clock offset: -5.732 ms

Remote clock offset: 2.552 ms

# Below is generated by plot.py at 2018-04-10 08:58:44

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.71 Mbit/s

95th percentile per-packet one-way delay: 4493.668 ms

Loss rate: 69.76%

-- Flow 1:

Average throughput: 1.71 Mbit/s

95th percentile per-packet one-way delay: 4494.347 ms

Loss rate: 69.78%

-- Flow 2:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 4273.955 ms

Loss rate: 0.00%

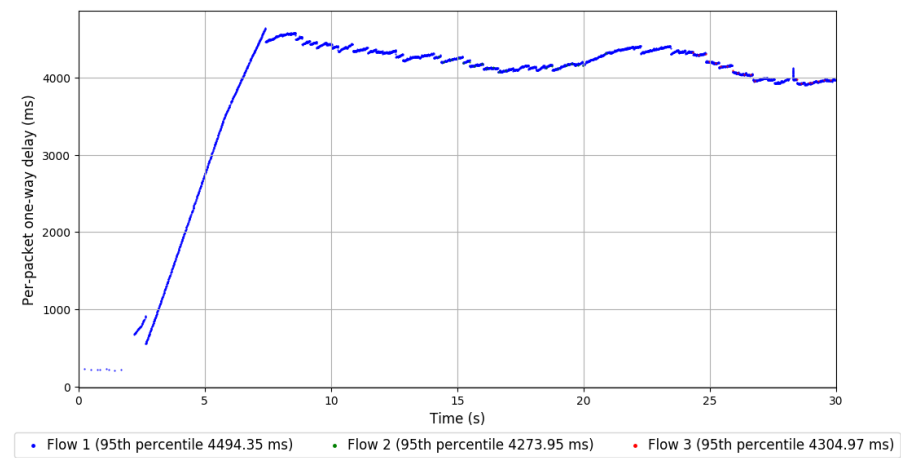
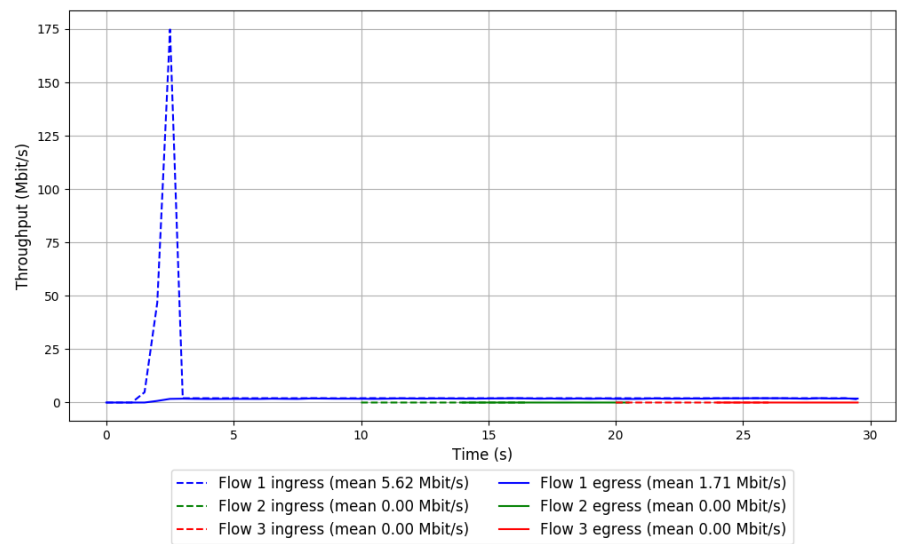
-- Flow 3:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 4304.974 ms

Loss rate: 5.60%

Run 3: Report of PCC — Data Link



Run 1: Statistics of QUIC Cubic

Start at: 2018-04-10 07:51:31

End at: 2018-04-10 07:52:01

Local clock offset: -7.06 ms

Remote clock offset: 3.577 ms

# Below is generated by plot.py at 2018-04-10 08:58:44

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.66 Mbit/s

95th percentile per-packet one-way delay: 2234.846 ms

Loss rate: 8.01%

-- Flow 1:

Average throughput: 1.33 Mbit/s

95th percentile per-packet one-way delay: 2104.140 ms

Loss rate: 5.12%

-- Flow 2:

Average throughput: 0.45 Mbit/s

95th percentile per-packet one-way delay: 2394.046 ms

Loss rate: 14.76%

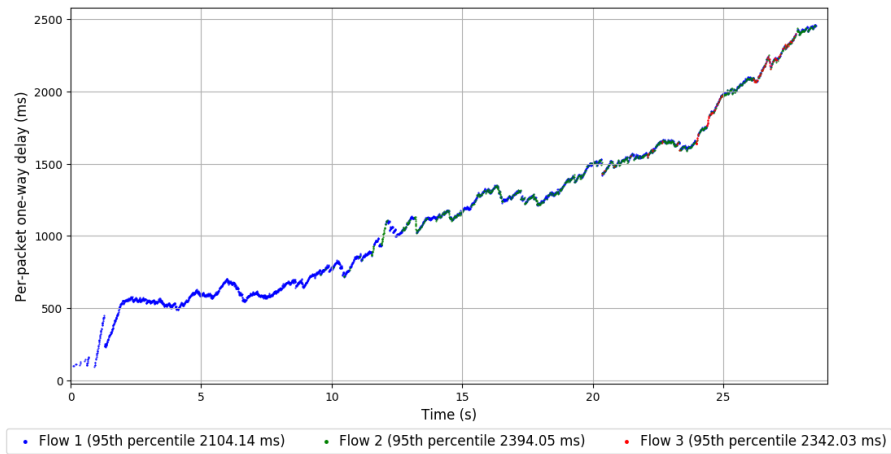
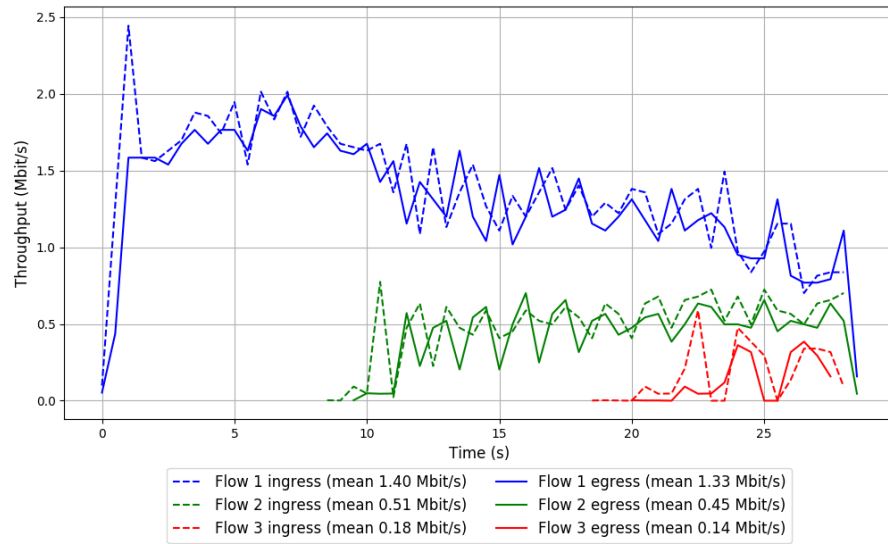
-- Flow 3:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 2342.030 ms

Loss rate: 36.33%

## Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2018-04-10 08:14:09

End at: 2018-04-10 08:14:39

Local clock offset: -5.634 ms

Remote clock offset: 2.75 ms

# Below is generated by plot.py at 2018-04-10 08:58:44

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.62 Mbit/s

95th percentile per-packet one-way delay: 2007.819 ms

Loss rate: 7.37%

-- Flow 1:

Average throughput: 1.28 Mbit/s

95th percentile per-packet one-way delay: 1937.555 ms

Loss rate: 4.98%

-- Flow 2:

Average throughput: 0.45 Mbit/s

95th percentile per-packet one-way delay: 2063.681 ms

Loss rate: 12.14%

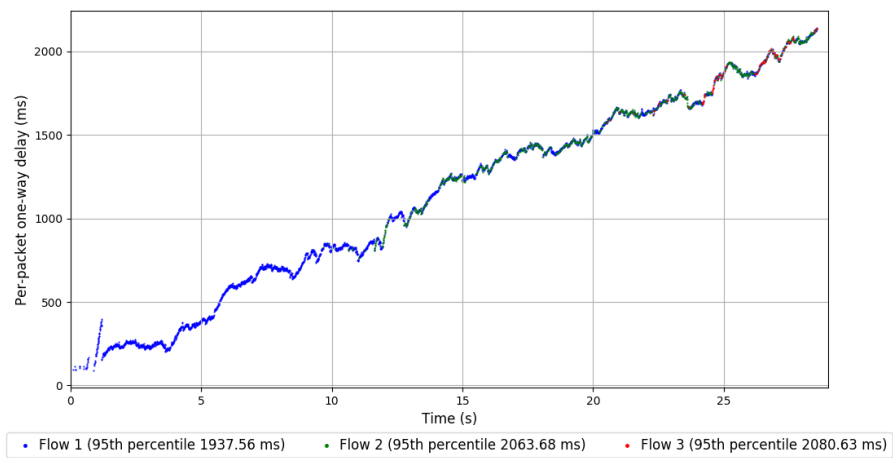
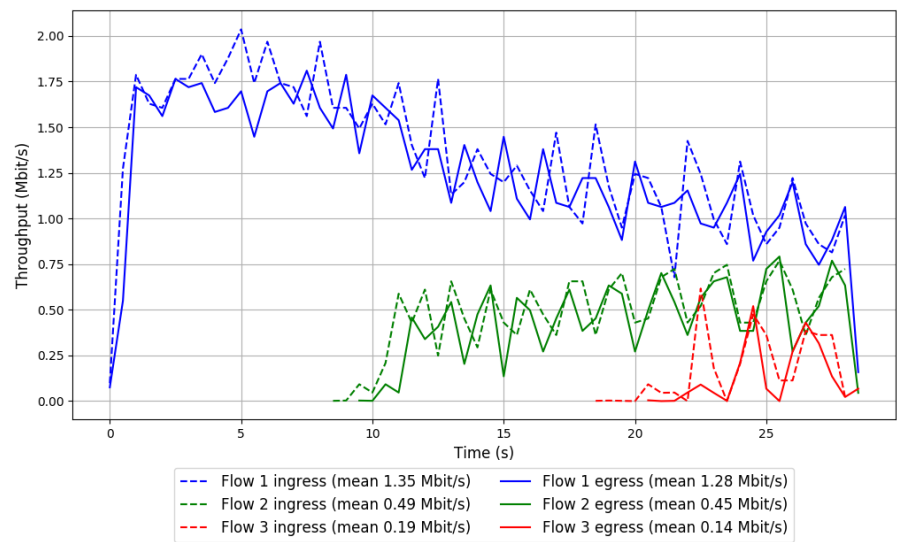
-- Flow 3:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 2080.629 ms

Loss rate: 34.08%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2018-04-10 08:36:46

End at: 2018-04-10 08:37:16

Local clock offset: -5.711 ms

Remote clock offset: 2.833 ms

# Below is generated by plot.py at 2018-04-10 08:58:44

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.66 Mbit/s

95th percentile per-packet one-way delay: 2400.787 ms

Loss rate: 8.85%

-- Flow 1:

Average throughput: 1.39 Mbit/s

95th percentile per-packet one-way delay: 2372.135 ms

Loss rate: 6.54%

-- Flow 2:

Average throughput: 0.37 Mbit/s

95th percentile per-packet one-way delay: 2443.928 ms

Loss rate: 17.04%

-- Flow 3:

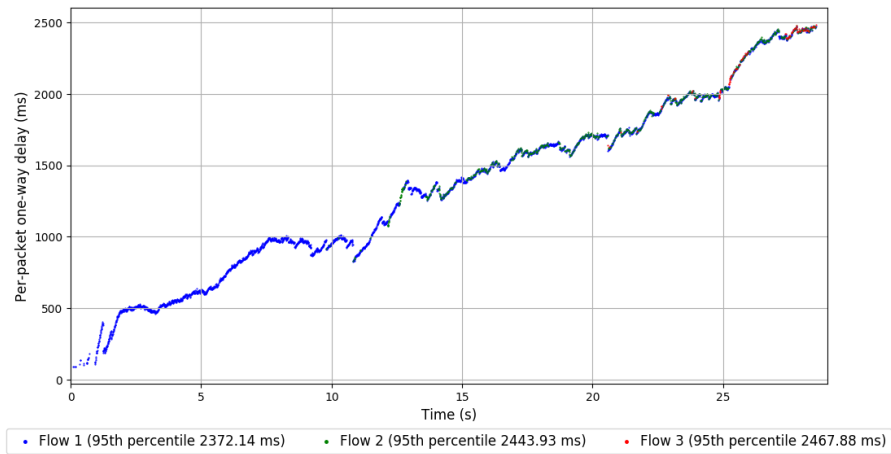
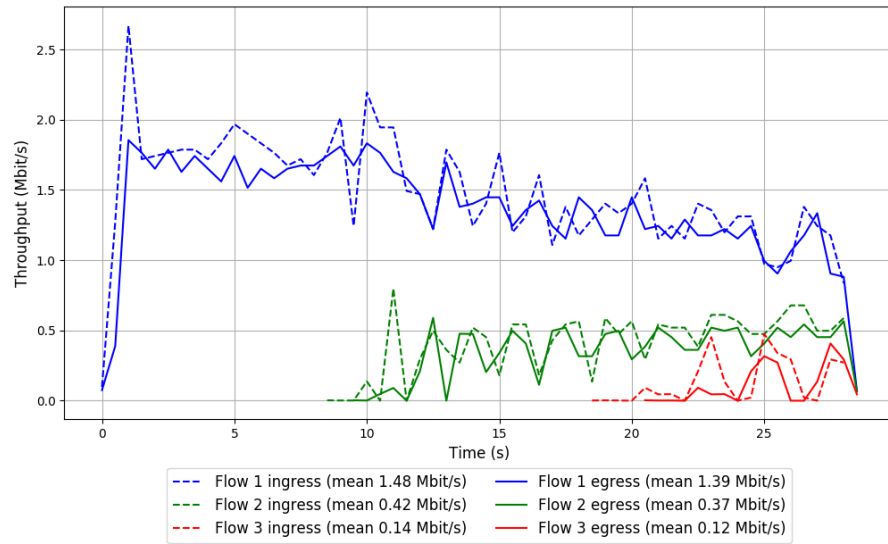
Average throughput: 0.12 Mbit/s

95th percentile per-packet one-way delay: 2467.879 ms

Loss rate: 30.93%



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

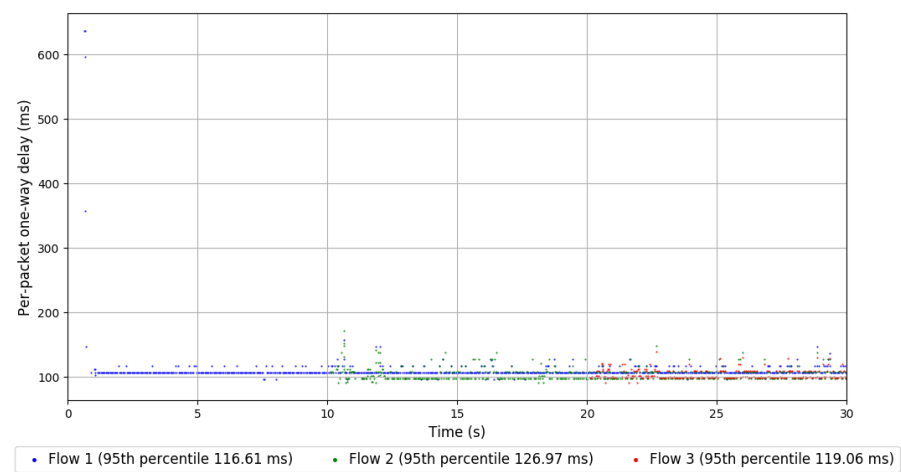
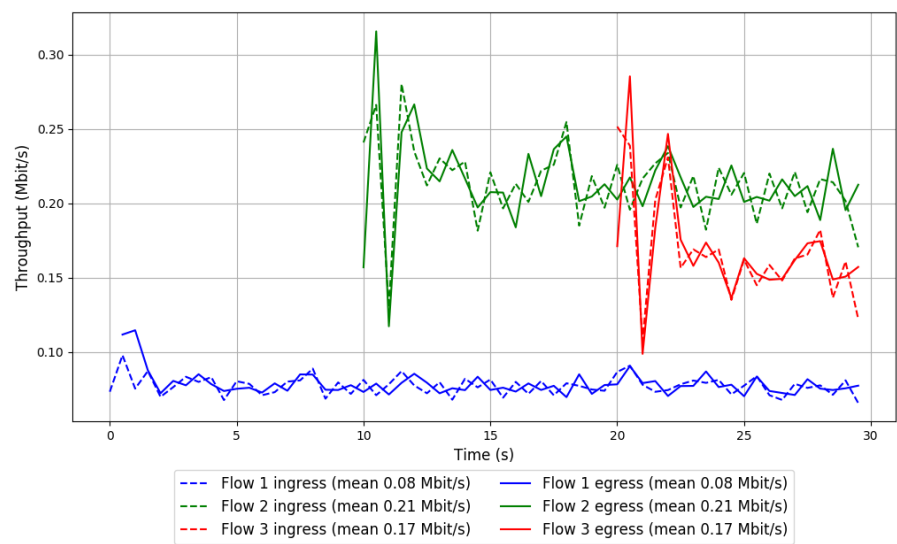


```
Run 1: Statistics of SCReAM

Start at: 2018-04-10 08:02:50
End at: 2018-04-10 08:03:20
Local clock offset: -5.878 ms
Remote clock offset: 3.517 ms

# Below is generated by plot.py at 2018-04-10 08:58:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.28 Mbit/s
95th percentile per-packet one-way delay: 119.013 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 116.607 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 126.965 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 119.061 ms
Loss rate: 0.00%
```

Run 1: Report of SReAM — Data Link

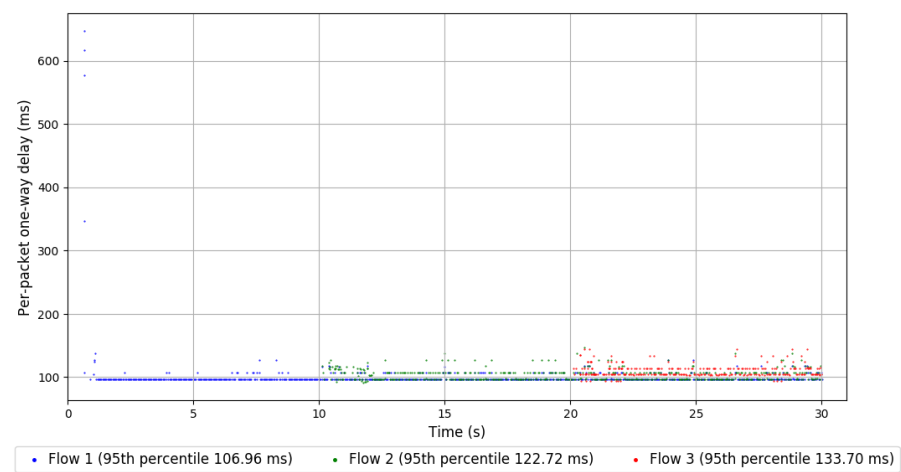
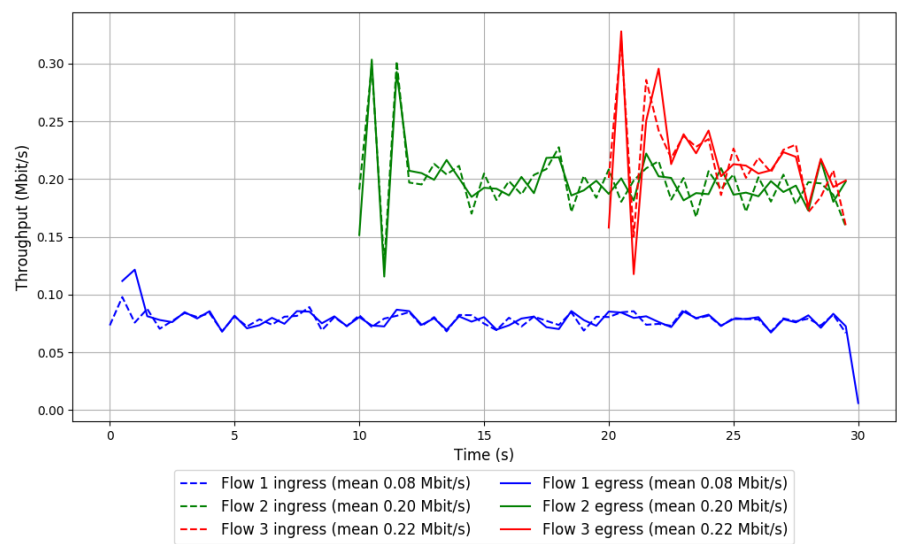


Run 2: Statistics of SReAM

Start at: 2018-04-10 08:25:28  
End at: 2018-04-10 08:25:58  
Local clock offset: -5.554 ms  
Remote clock offset: 3.66 ms

# Below is generated by plot.py at 2018-04-10 08:58:44  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.29 Mbit/s  
95th percentile per-packet one-way delay: 116.944 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.08 Mbit/s  
95th percentile per-packet one-way delay: 106.958 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.20 Mbit/s  
95th percentile per-packet one-way delay: 122.716 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 133.703 ms  
Loss rate: 0.00%

Run 2: Report of SReAM — Data Link

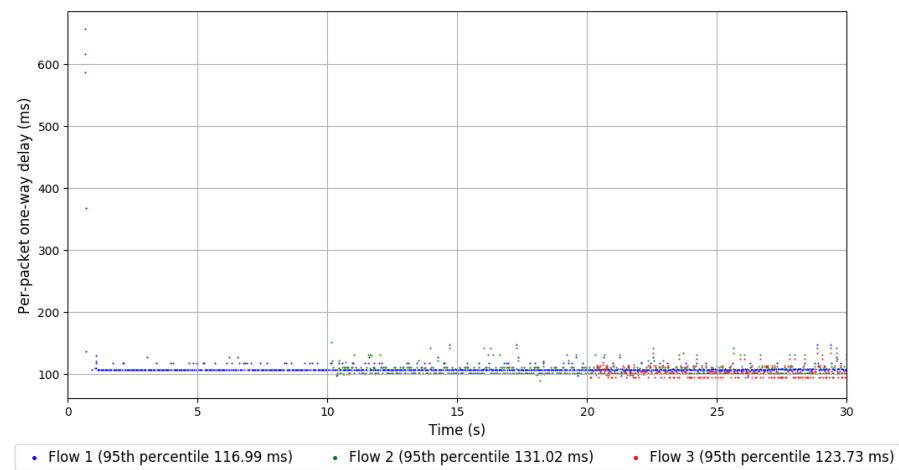
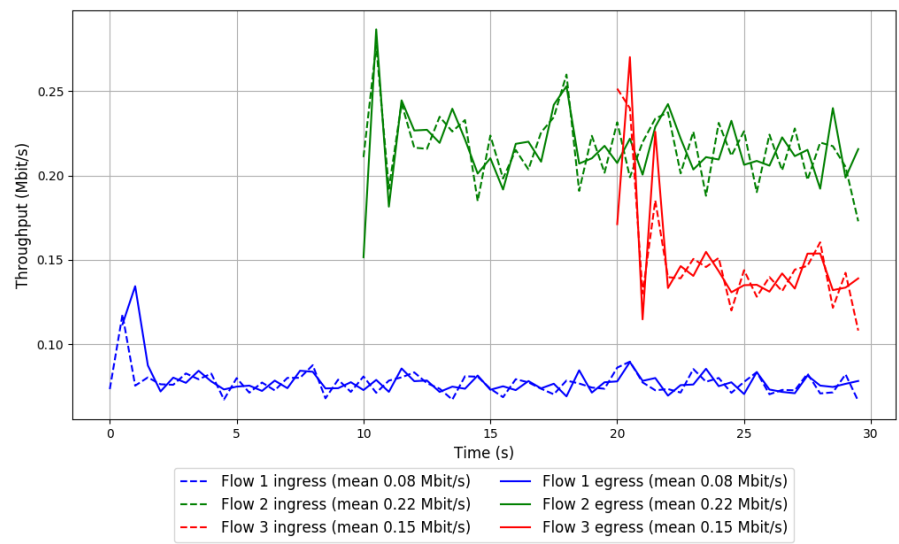


Run 3: Statistics of SReAM

Start at: 2018-04-10 08:48:05  
End at: 2018-04-10 08:48:35  
Local clock offset: -6.458 ms  
Remote clock offset: 2.137 ms

# Below is generated by plot.py at 2018-04-10 08:58:45  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.28 Mbit/s  
95th percentile per-packet one-way delay: 121.081 ms  
Loss rate: 0.04%  
-- Flow 1:  
Average throughput: 0.08 Mbit/s  
95th percentile per-packet one-way delay: 116.987 ms  
Loss rate: 0.13%  
-- Flow 2:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 131.018 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.15 Mbit/s  
95th percentile per-packet one-way delay: 123.735 ms  
Loss rate: 0.00%

Run 3: Report of SReAM — Data Link



Run 1: Statistics of WebRTC media

Start at: 2018-04-10 07:56:34

End at: 2018-04-10 07:57:04

Local clock offset: -6.223 ms

Remote clock offset: 9.189 ms

# Below is generated by plot.py at 2018-04-10 08:58:47

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 217.609 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 205.855 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 226.951 ms

Loss rate: 0.00%

-- Flow 3:

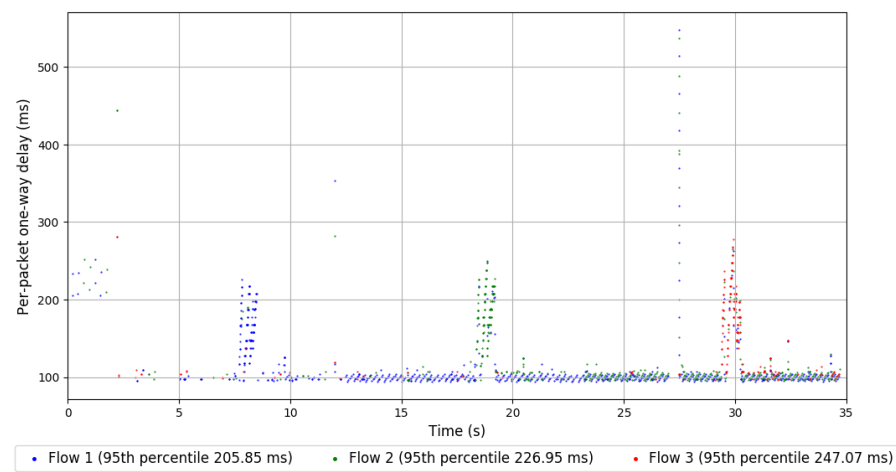
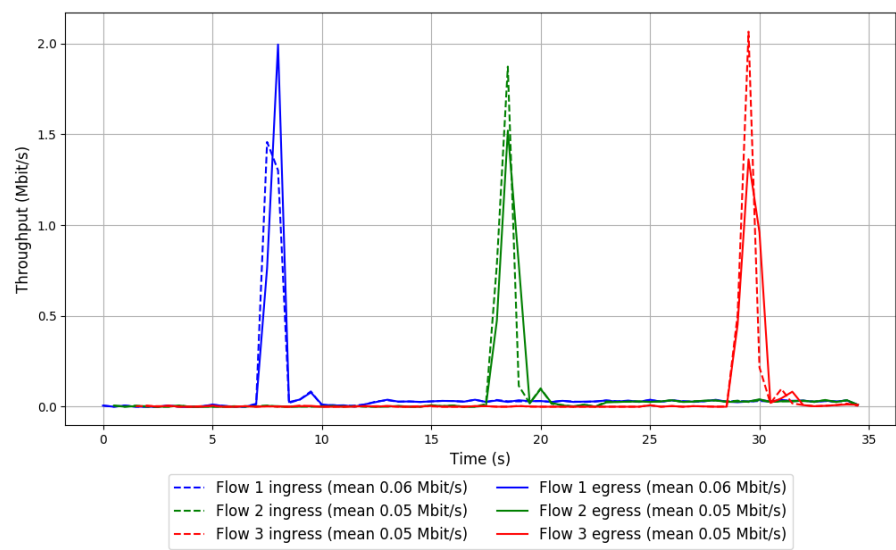
Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 247.066 ms

Loss rate: 0.00%



Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2018-04-10 08:19:11

End at: 2018-04-10 08:19:41

Local clock offset: -5.589 ms

Remote clock offset: 2.812 ms

# Below is generated by plot.py at 2018-04-10 08:58:47

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 245.453 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 225.212 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 254.935 ms

Loss rate: 0.00%

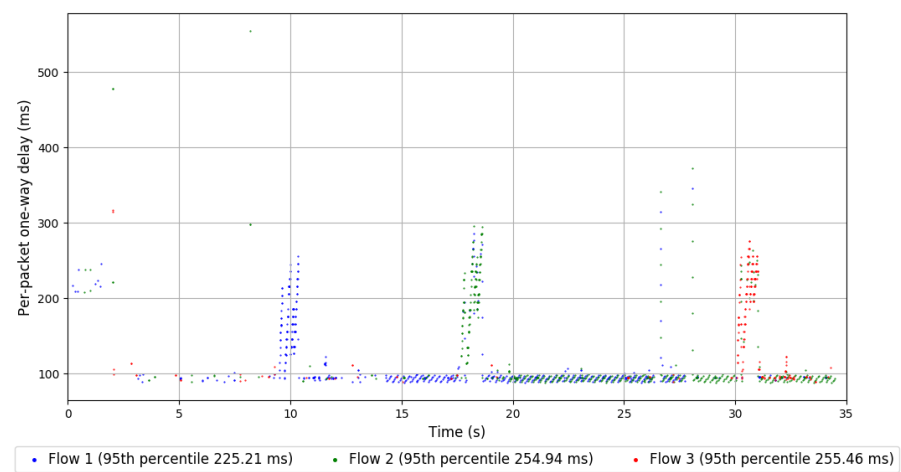
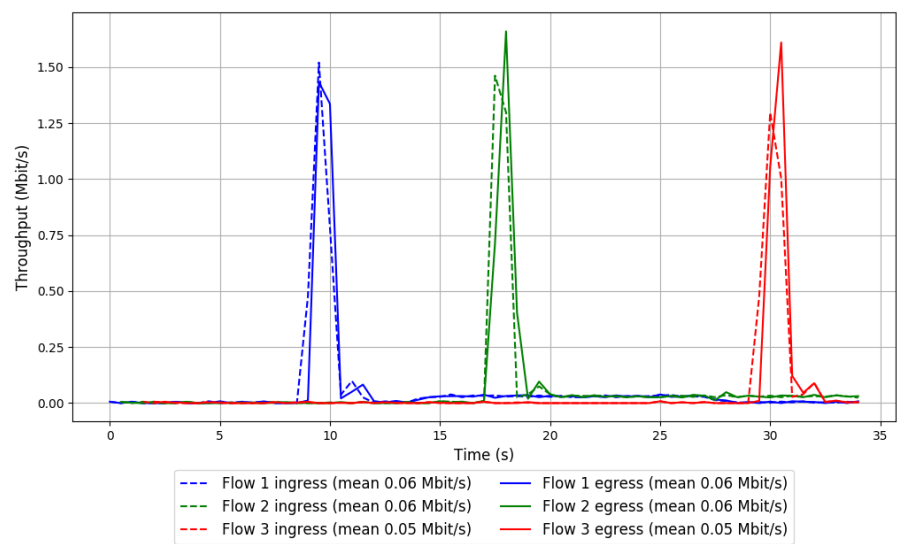
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 255.464 ms

Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2018-04-10 08:41:49

End at: 2018-04-10 08:42:19

Local clock offset: -4.943 ms

Remote clock offset: 2.474 ms

# Below is generated by plot.py at 2018-04-10 08:58:48

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.15 Mbit/s

95th percentile per-packet one-way delay: 233.258 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 233.983 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.06 Mbit/s

95th percentile per-packet one-way delay: 218.460 ms

Loss rate: 0.00%

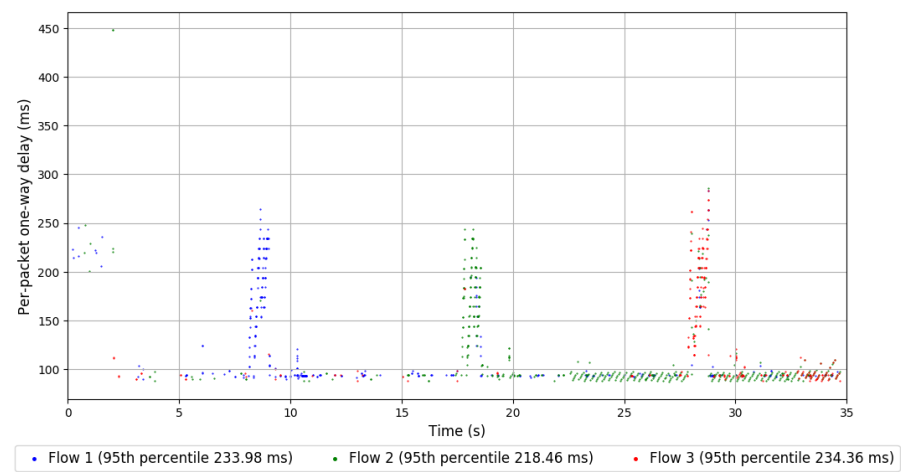
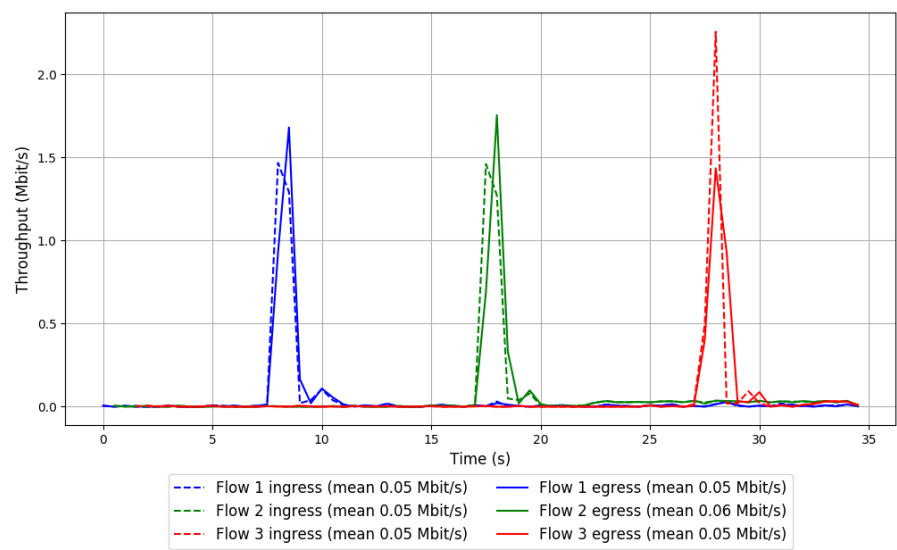
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 234.357 ms

Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link

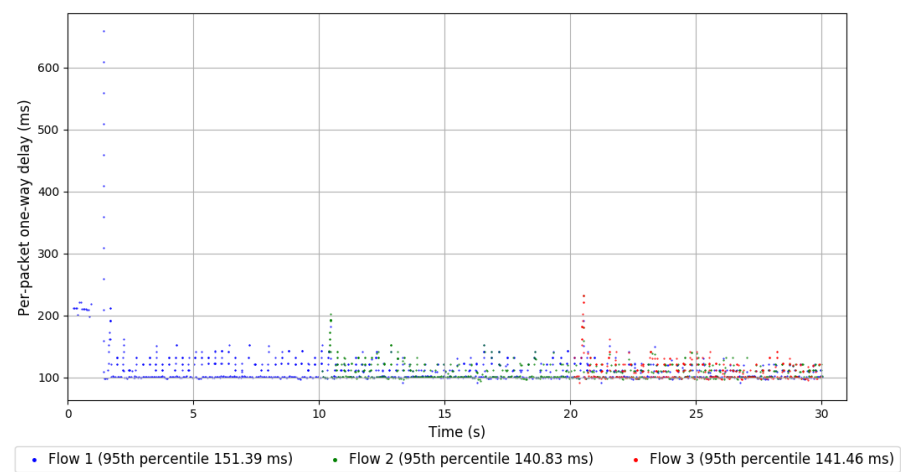
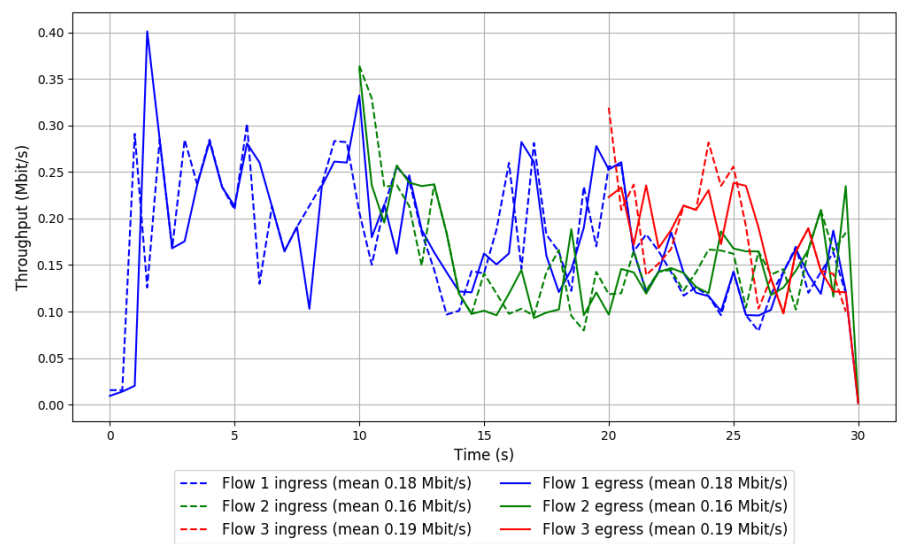


Run 1: Statistics of Sprout

Start at: 2018-04-10 07:59:04  
End at: 2018-04-10 07:59:34  
Local clock offset: -6.816 ms  
Remote clock offset: 8.331 ms

# Below is generated by plot.py at 2018-04-10 08:58:48  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.35 Mbit/s  
95th percentile per-packet one-way delay: 142.146 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.18 Mbit/s  
95th percentile per-packet one-way delay: 151.393 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.16 Mbit/s  
95th percentile per-packet one-way delay: 140.829 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.19 Mbit/s  
95th percentile per-packet one-way delay: 141.463 ms  
Loss rate: 0.00%

Run 1: Report of Sprout — Data Link



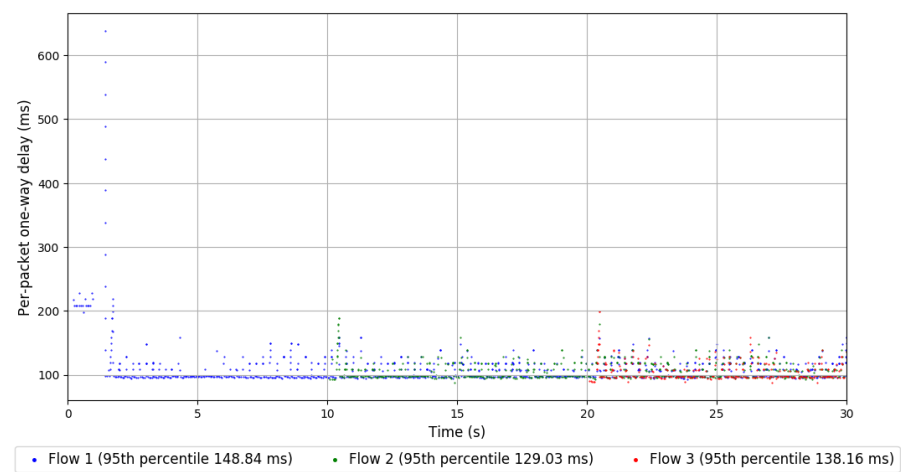
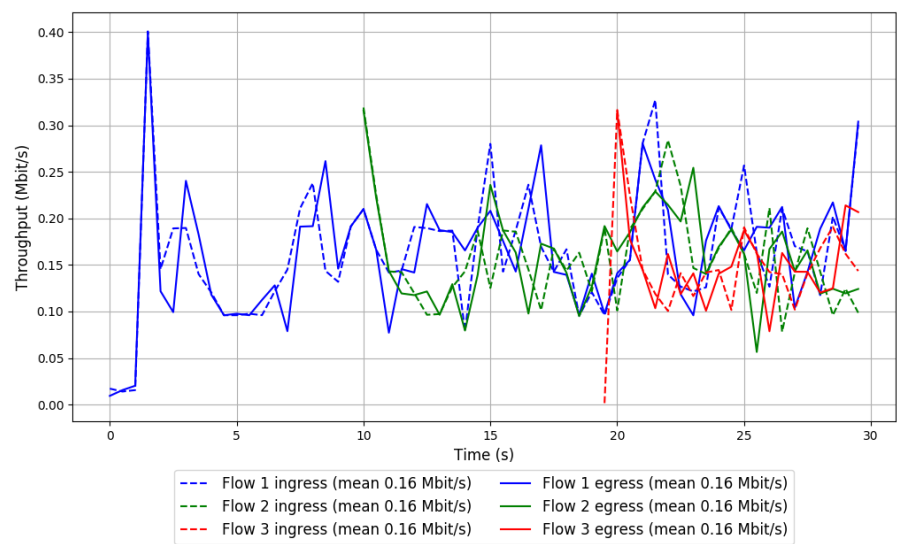
## Run 2: Statistics of Sprout

Start at: 2018-04-10 08:21:42  
End at: 2018-04-10 08:22:12  
Local clock offset: -6.328 ms  
Remote clock offset: 2.762 ms

```
# Below is generated by plot.py at 2018-04-10 08:58:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.32 Mbit/s
95th percentile per-packet one-way delay: 138.787 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 148.840 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 129.031 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 138.158 ms
Loss rate: 0.00%
```



Run 2: Report of Sprout — Data Link

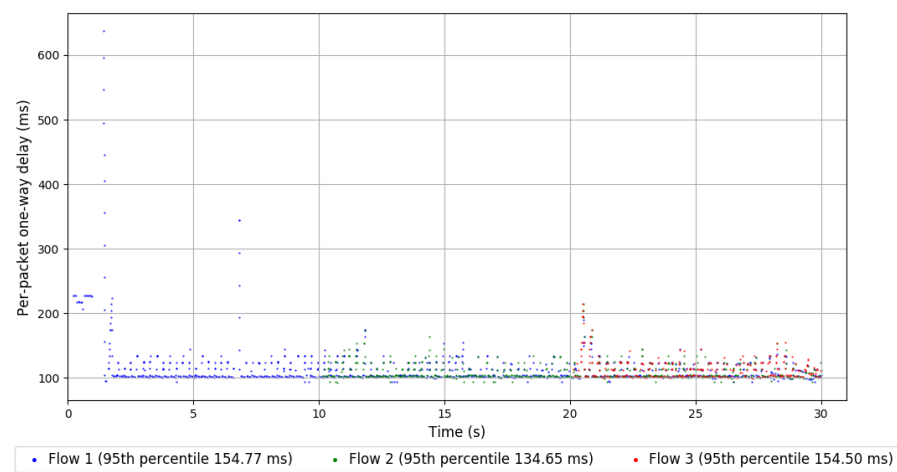
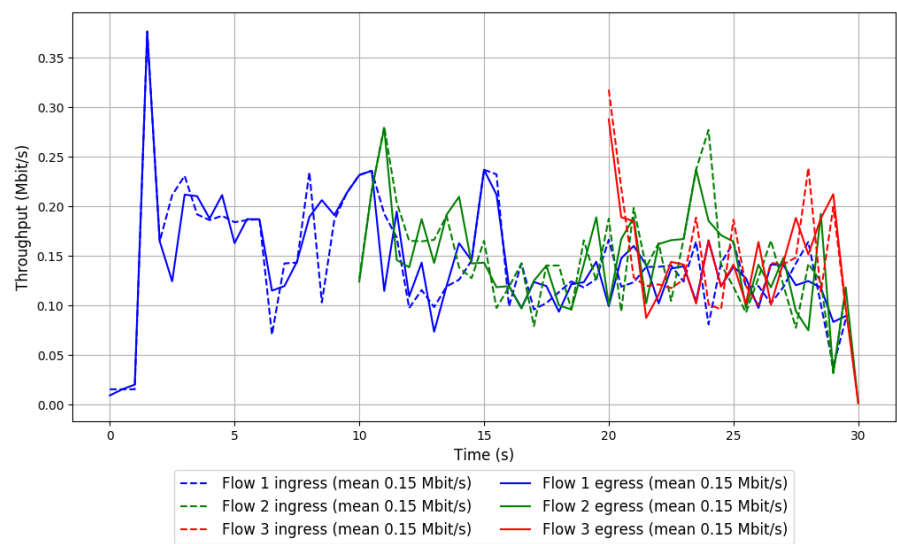


### Run 3: Statistics of Sprout

Start at: 2018-04-10 08:44:19  
End at: 2018-04-10 08:44:49  
Local clock offset: -5.669 ms  
Remote clock offset: 7.949 ms

```
# Below is generated by plot.py at 2018-04-10 08:58:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.30 Mbit/s
95th percentile per-packet one-way delay: 144.514 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 154.766 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 134.645 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 154.503 ms
Loss rate: 0.00%
```

Run 3: Report of Sprout — Data Link



Run 1: Statistics of TaoVA-100x

Start at: 2018-04-10 08:11:38

End at: 2018-04-10 08:12:08

Local clock offset: -5.662 ms

Remote clock offset: 8.348 ms

# Below is generated by plot.py at 2018-04-10 08:58:52

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.60 Mbit/s

95th percentile per-packet one-way delay: 740.825 ms

Loss rate: 2.15%

-- Flow 1:

Average throughput: 0.95 Mbit/s

95th percentile per-packet one-way delay: 728.379 ms

Loss rate: 1.17%

-- Flow 2:

Average throughput: 0.70 Mbit/s

95th percentile per-packet one-way delay: 747.656 ms

Loss rate: 1.83%

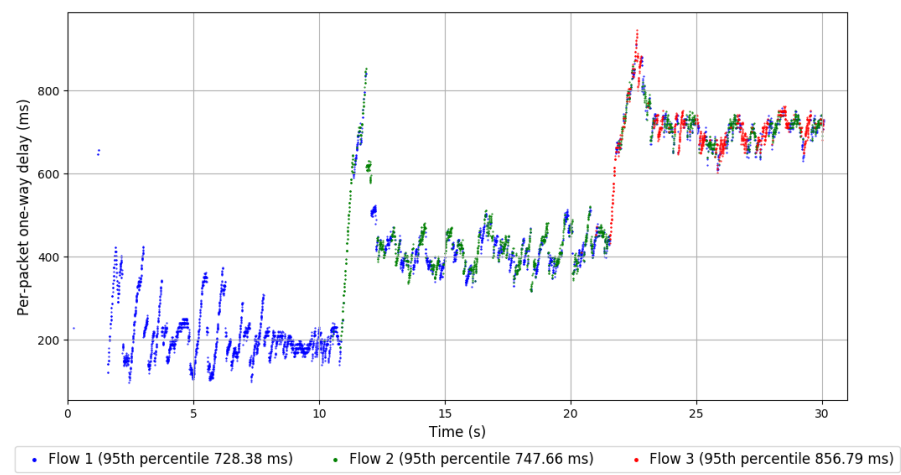
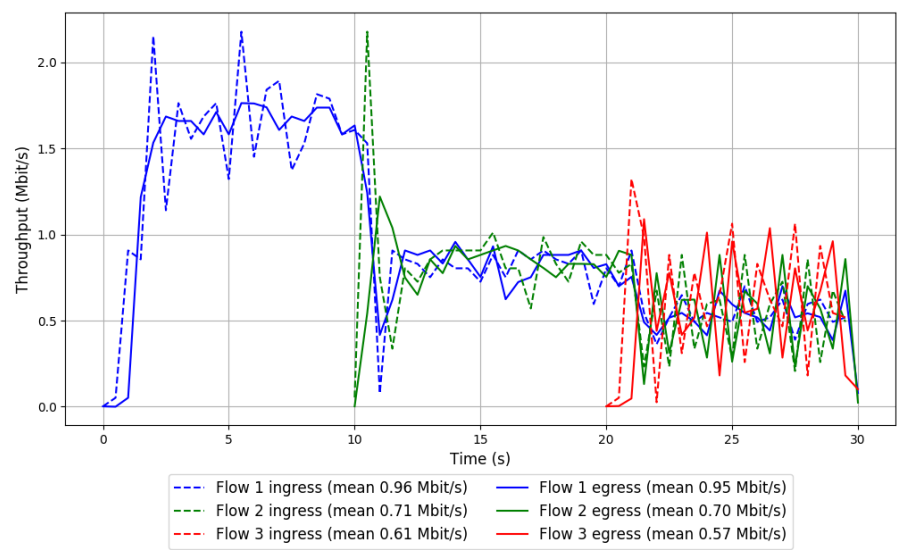
-- Flow 3:

Average throughput: 0.57 Mbit/s

95th percentile per-packet one-way delay: 856.794 ms

Loss rate: 7.59%

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



Run 2: Statistics of TaoVA-100x

Start at: 2018-04-10 08:34:15

End at: 2018-04-10 08:34:45

Local clock offset: -6.378 ms

Remote clock offset: 2.846 ms

# Below is generated by plot.py at 2018-04-10 08:58:54

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.62 Mbit/s

95th percentile per-packet one-way delay: 755.451 ms

Loss rate: 2.22%

-- Flow 1:

Average throughput: 0.96 Mbit/s

95th percentile per-packet one-way delay: 705.196 ms

Loss rate: 1.07%

-- Flow 2:

Average throughput: 0.71 Mbit/s

95th percentile per-packet one-way delay: 755.451 ms

Loss rate: 3.04%

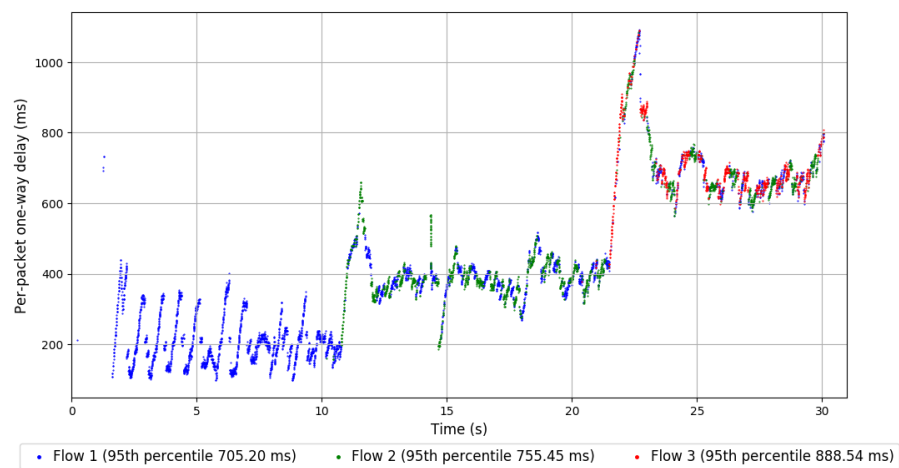
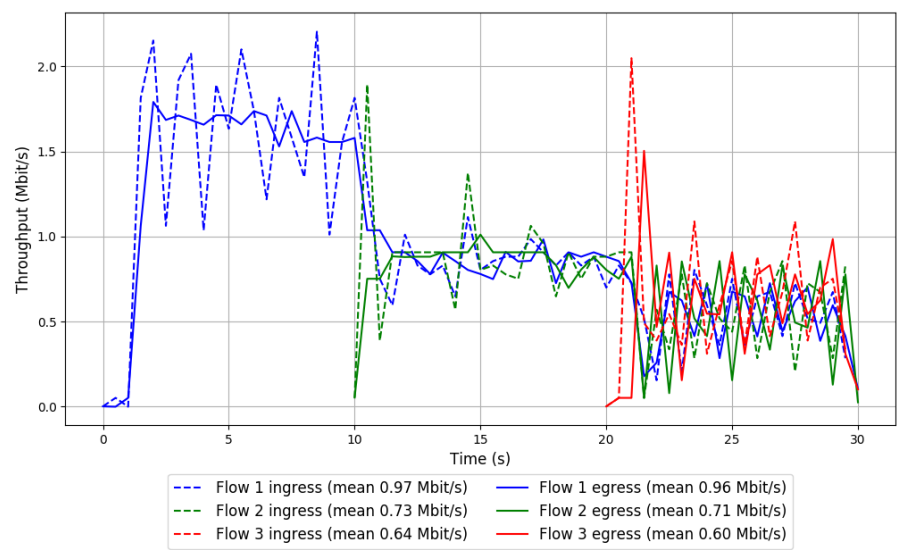
-- Flow 3:

Average throughput: 0.60 Mbit/s

95th percentile per-packet one-way delay: 888.542 ms

Loss rate: 5.67%

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



Run 3: Statistics of TaoVA-100x

Start at: 2018-04-10 08:56:52

End at: 2018-04-10 08:57:22

Local clock offset: -5.702 ms

Remote clock offset: 7.529 ms

# Below is generated by plot.py at 2018-04-10 08:58:56

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.68 Mbit/s

95th percentile per-packet one-way delay: 1705.680 ms

Loss rate: 1.88%

-- Flow 1:

Average throughput: 0.95 Mbit/s

95th percentile per-packet one-way delay: 701.328 ms

Loss rate: 0.96%

-- Flow 2:

Average throughput: 0.75 Mbit/s

95th percentile per-packet one-way delay: 1705.680 ms

Loss rate: 1.63%

-- Flow 3:

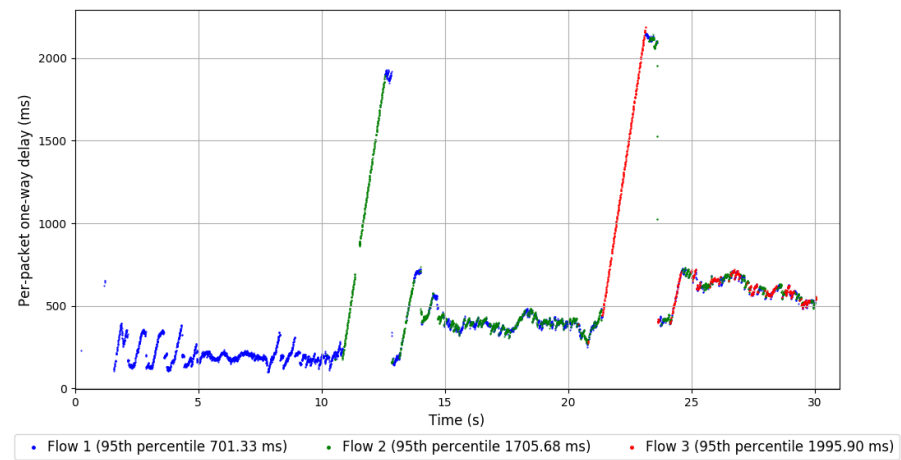
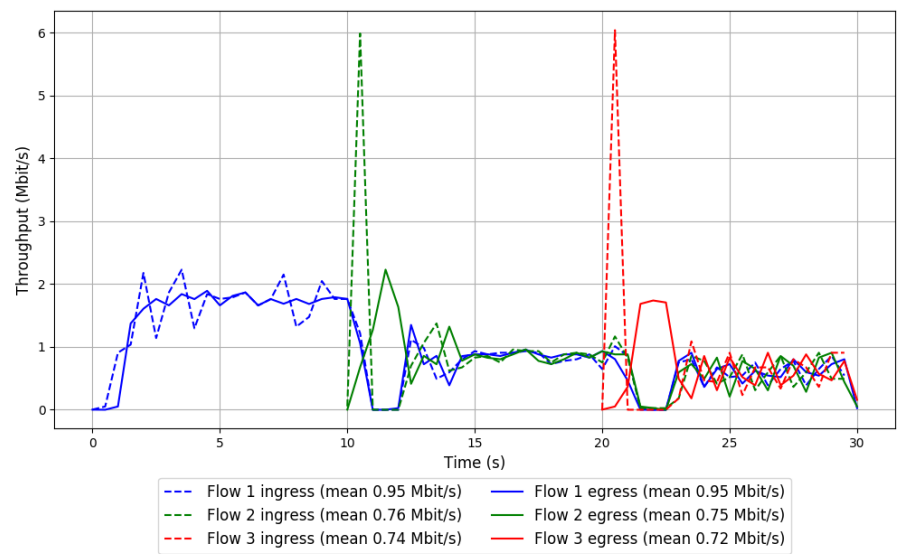
Average throughput: 0.72 Mbit/s

95th percentile per-packet one-way delay: 1995.897 ms

Loss rate: 5.98%



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



Run 1: Statistics of TCP Vegas

Start at: 2018-04-10 08:04:05

End at: 2018-04-10 08:04:35

Local clock offset: -5.88 ms

Remote clock offset: 2.64 ms

# Below is generated by plot.py at 2018-04-10 08:58:56

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.75 Mbit/s

95th percentile per-packet one-way delay: 1565.117 ms

Loss rate: 4.69%

-- Flow 1:

Average throughput: 1.32 Mbit/s

95th percentile per-packet one-way delay: 1545.125 ms

Loss rate: 3.35%

-- Flow 2:

Average throughput: 0.54 Mbit/s

95th percentile per-packet one-way delay: 1585.404 ms

Loss rate: 6.58%

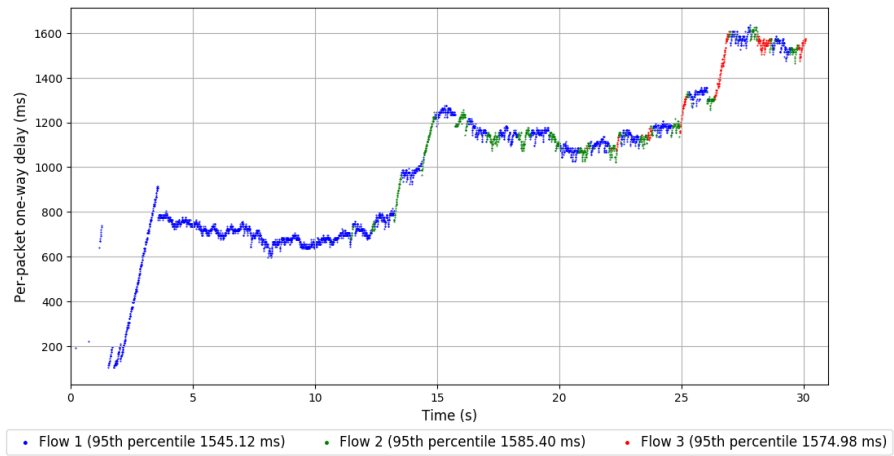
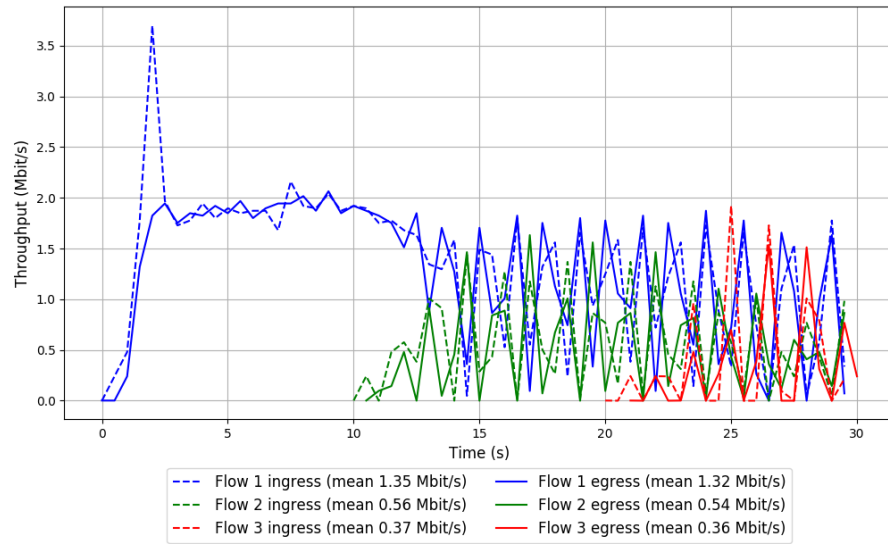
-- Flow 3:

Average throughput: 0.36 Mbit/s

95th percentile per-packet one-way delay: 1574.985 ms

Loss rate: 13.54%

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



Run 2: Statistics of TCP Vegas

Start at: 2018-04-10 08:26:43

End at: 2018-04-10 08:27:13

Local clock offset: -6.314 ms

Remote clock offset: 7.584 ms

# Below is generated by plot.py at 2018-04-10 08:58:56

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.78 Mbit/s

95th percentile per-packet one-way delay: 485.049 ms

Loss rate: 0.70%

-- Flow 1:

Average throughput: 1.18 Mbit/s

95th percentile per-packet one-way delay: 475.119 ms

Loss rate: 0.37%

-- Flow 2:

Average throughput: 0.57 Mbit/s

95th percentile per-packet one-way delay: 485.279 ms

Loss rate: 0.11%

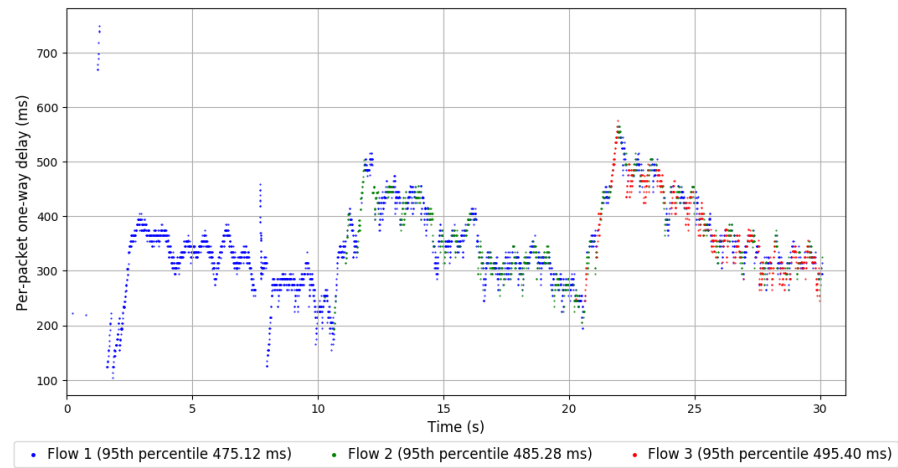
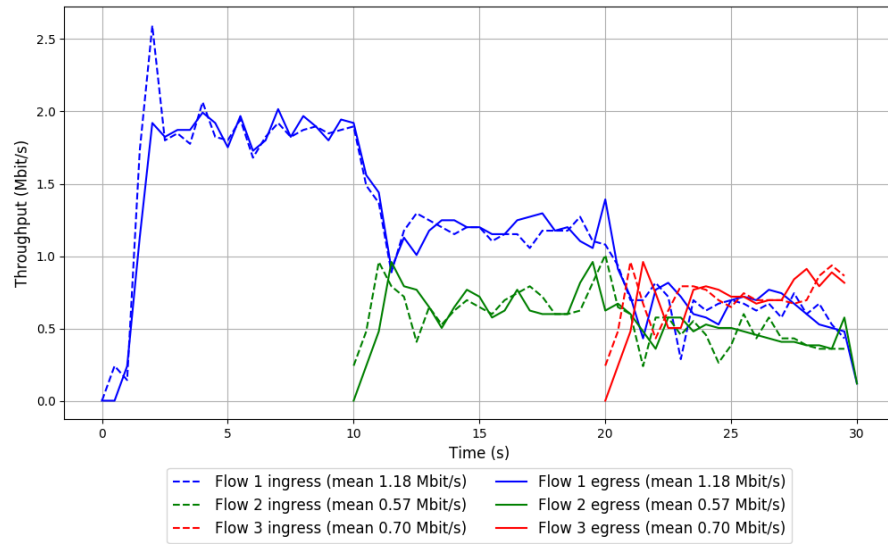
-- Flow 3:

Average throughput: 0.70 Mbit/s

95th percentile per-packet one-way delay: 495.397 ms

Loss rate: 3.26%

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



Run 3: Statistics of TCP Vegas

Start at: 2018-04-10 08:49:20

End at: 2018-04-10 08:49:50

Local clock offset: -6.526 ms

Remote clock offset: 2.918 ms

# Below is generated by plot.py at 2018-04-10 08:58:56

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.70 Mbit/s

95th percentile per-packet one-way delay: 705.257 ms

Loss rate: 1.61%

-- Flow 1:

Average throughput: 1.08 Mbit/s

95th percentile per-packet one-way delay: 665.078 ms

Loss rate: 0.52%

-- Flow 2:

Average throughput: 0.51 Mbit/s

95th percentile per-packet one-way delay: 705.092 ms

Loss rate: 2.00%

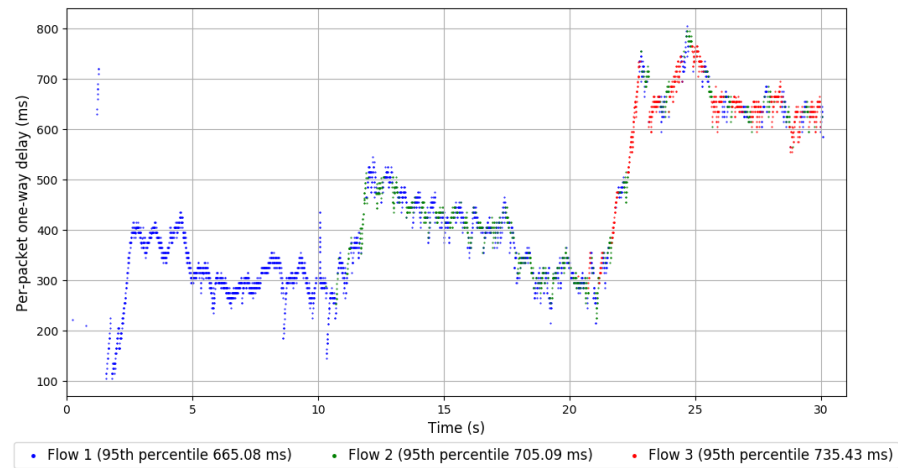
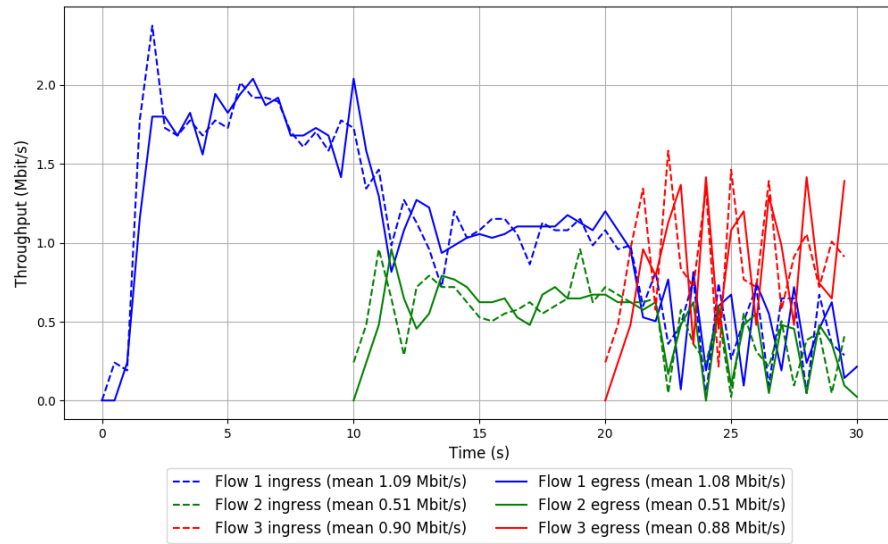
-- Flow 3:

Average throughput: 0.88 Mbit/s

95th percentile per-packet one-way delay: 735.430 ms

Loss rate: 5.11%

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



Run 1: Statistics of Verus

Start at: 2018-04-10 07:54:02

End at: 2018-04-10 07:54:32

Local clock offset: -6.289 ms

Remote clock offset: 2.669 ms

# Below is generated by plot.py at 2018-04-10 08:58:56

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.65 Mbit/s

95th percentile per-packet one-way delay: 1529.266 ms

Loss rate: 1.87%

-- Flow 1:

Average throughput: 1.63 Mbit/s

95th percentile per-packet one-way delay: 1528.836 ms

Loss rate: 1.83%

-- Flow 2:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 1598.528 ms

Loss rate: 4.55%

-- Flow 3:

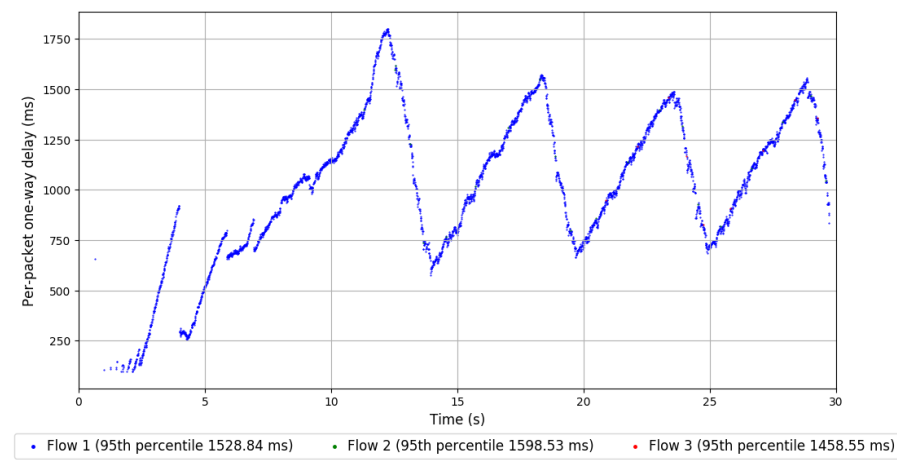
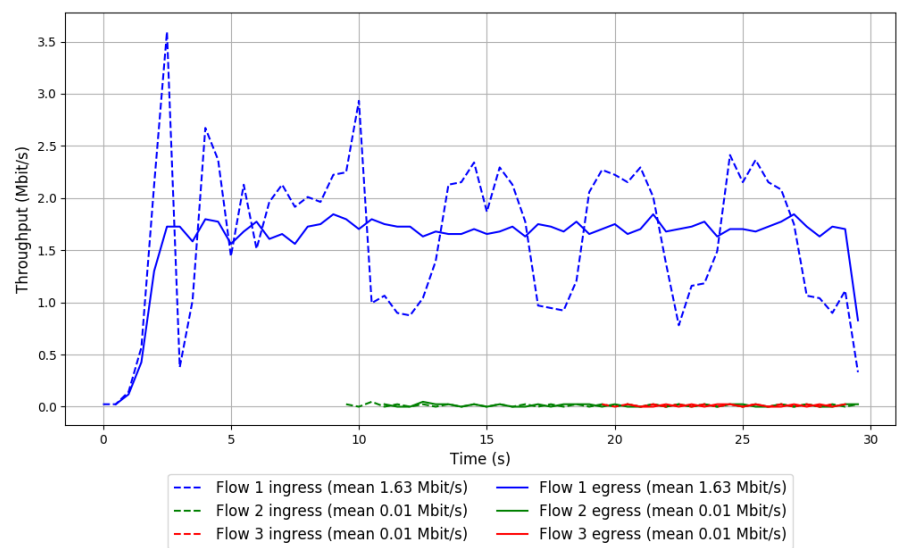
Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 1458.546 ms

Loss rate: 10.00%



Run 1: Report of Verus — Data Link

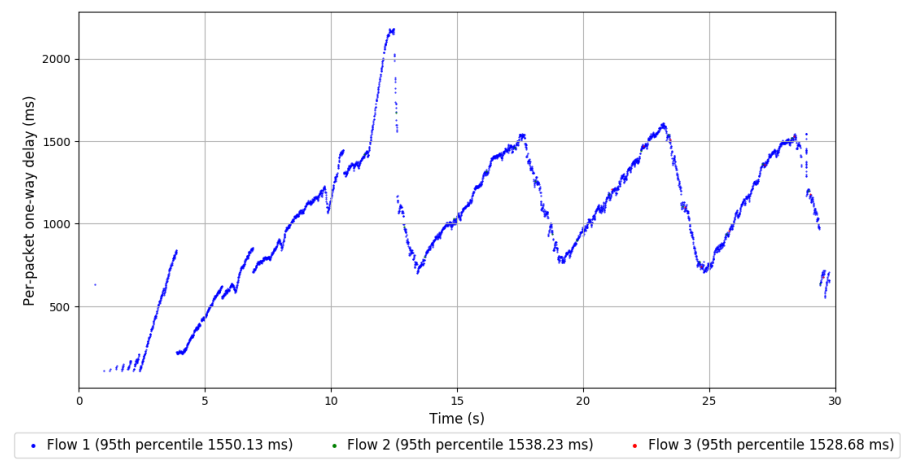
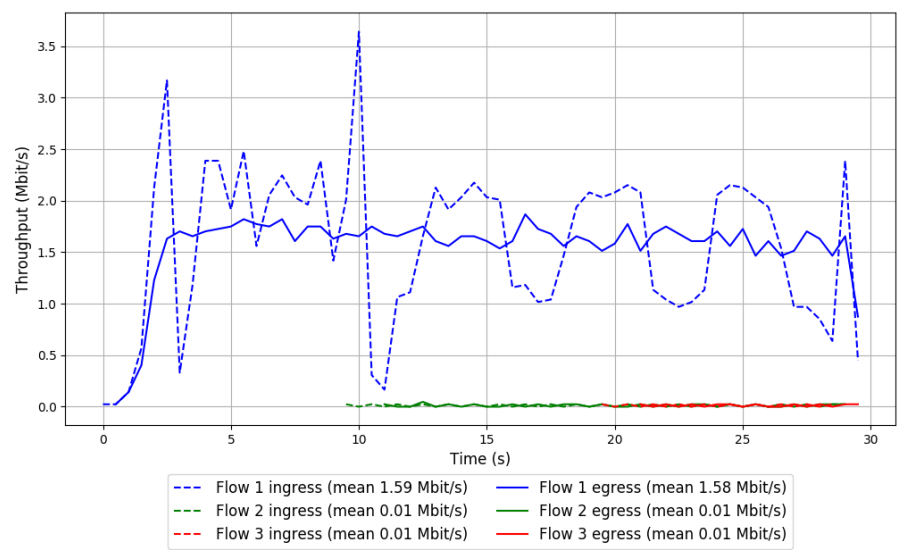


Run 2: Statistics of Verus

Start at: 2018-04-10 08:16:40  
End at: 2018-04-10 08:17:10  
Local clock offset: -6.402 ms  
Remote clock offset: 9.28 ms

# Below is generated by plot.py at 2018-04-10 08:58:56  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 1.60 Mbit/s  
95th percentile per-packet one-way delay: 1550.131 ms  
Loss rate: 2.29%  
-- Flow 1:  
Average throughput: 1.58 Mbit/s  
95th percentile per-packet one-way delay: 1550.131 ms  
Loss rate: 2.28%  
-- Flow 2:  
Average throughput: 0.01 Mbit/s  
95th percentile per-packet one-way delay: 1538.231 ms  
Loss rate: 4.76%  
-- Flow 3:  
Average throughput: 0.01 Mbit/s  
95th percentile per-packet one-way delay: 1528.685 ms  
Loss rate: 0.00%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2018-04-10 08:39:17

End at: 2018-04-10 08:39:47

Local clock offset: -5.666 ms

Remote clock offset: 9.176 ms

# Below is generated by plot.py at 2018-04-10 08:58:57

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.74 Mbit/s

95th percentile per-packet one-way delay: 1625.061 ms

Loss rate: 3.32%

-- Flow 1:

Average throughput: 1.73 Mbit/s

95th percentile per-packet one-way delay: 1623.860 ms

Loss rate: 3.30%

-- Flow 2:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 1661.469 ms

Loss rate: 4.76%

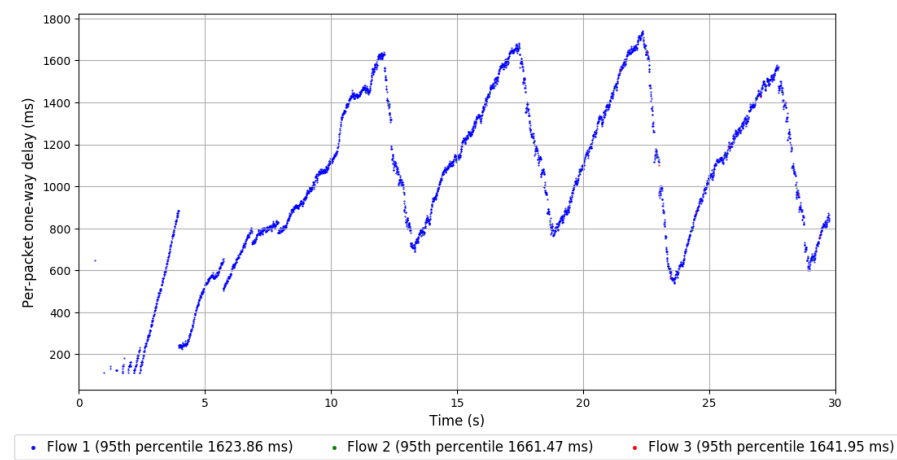
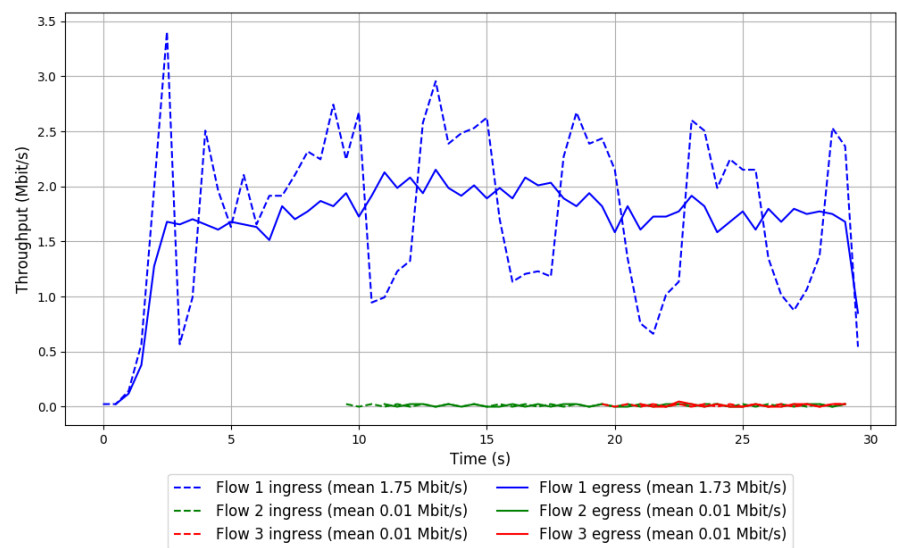
-- Flow 3:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 1641.954 ms

Loss rate: 9.09%

Run 3: Report of Verus — Data Link



Run 1: Statistics of Copa

Start at: 2018-04-10 08:05:21

End at: 2018-04-10 08:05:51

Local clock offset: -6.611 ms

Remote clock offset: 2.727 ms

# Below is generated by plot.py at 2018-04-10 08:59:03

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.56 Mbit/s

95th percentile per-packet one-way delay: 354.686 ms

Loss rate: 0.19%

-- Flow 1:

Average throughput: 0.98 Mbit/s

95th percentile per-packet one-way delay: 333.820 ms

Loss rate: 0.09%

-- Flow 2:

Average throughput: 0.63 Mbit/s

95th percentile per-packet one-way delay: 380.326 ms

Loss rate: 0.31%

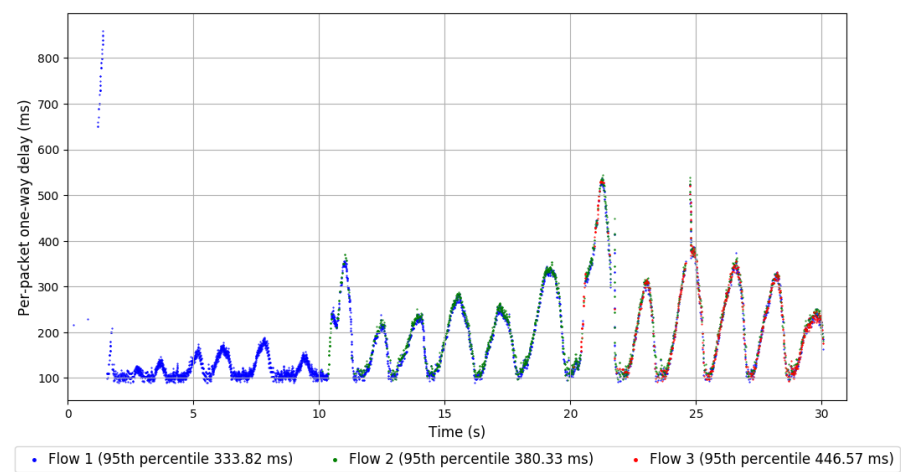
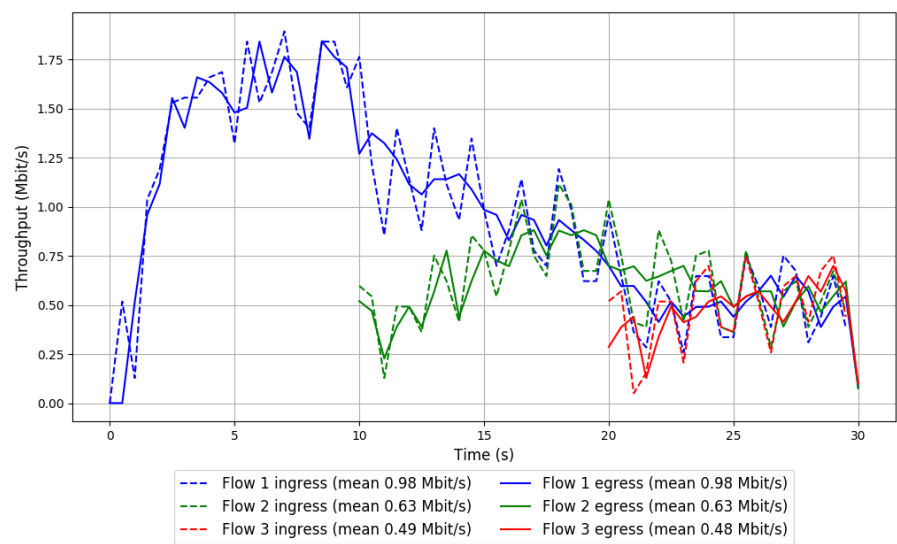
-- Flow 3:

Average throughput: 0.48 Mbit/s

95th percentile per-packet one-way delay: 446.567 ms

Loss rate: 0.54%

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2018-04-10 08:27:58

End at: 2018-04-10 08:28:28

Local clock offset: -4.795 ms

Remote clock offset: 2.794 ms

# Below is generated by plot.py at 2018-04-10 08:59:03

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.63 Mbit/s

95th percentile per-packet one-way delay: 339.512 ms

Loss rate: 0.79%

-- Flow 1:

Average throughput: 1.00 Mbit/s

95th percentile per-packet one-way delay: 334.477 ms

Loss rate: 0.39%

-- Flow 2:

Average throughput: 0.68 Mbit/s

95th percentile per-packet one-way delay: 342.299 ms

Loss rate: 0.94%

-- Flow 3:

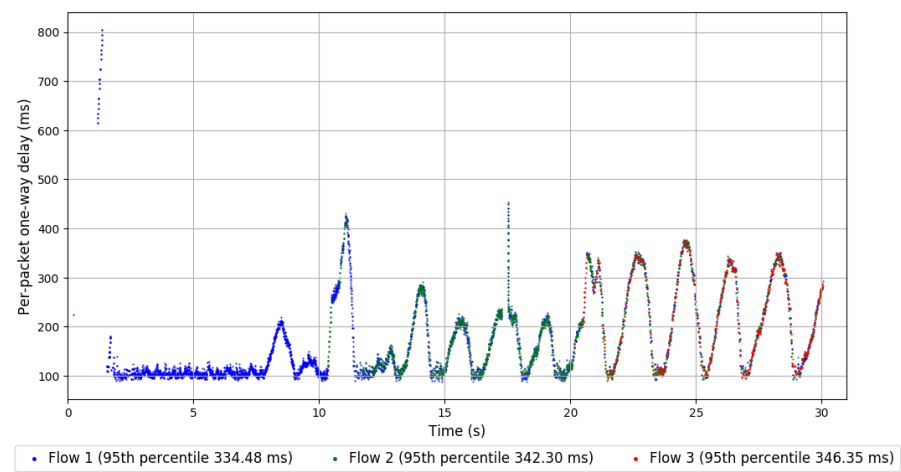
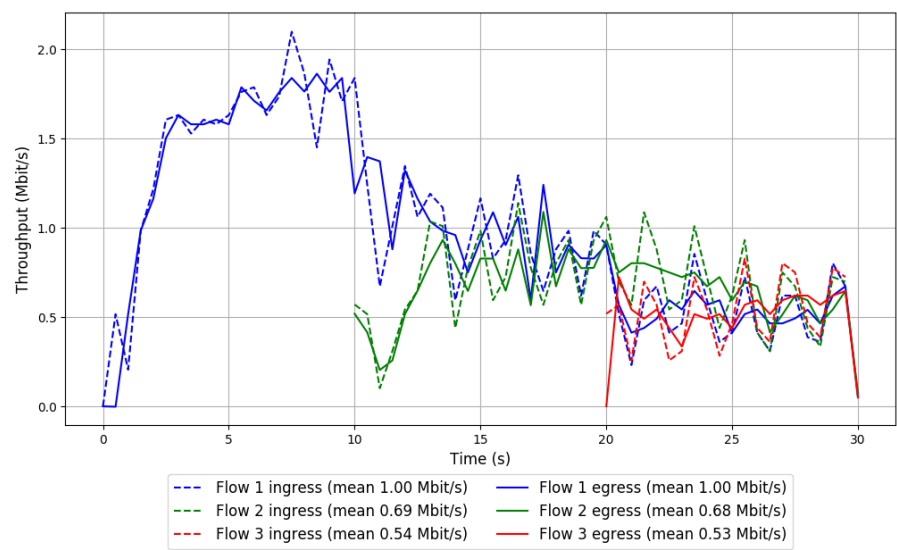
Average throughput: 0.53 Mbit/s

95th percentile per-packet one-way delay: 346.348 ms

Loss rate: 2.65%



Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2018-04-10 08:50:35

End at: 2018-04-10 08:51:05

Local clock offset: -5.778 ms

Remote clock offset: 2.041 ms

# Below is generated by plot.py at 2018-04-10 08:59:04

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.48 Mbit/s

95th percentile per-packet one-way delay: 423.904 ms

Loss rate: 0.38%

-- Flow 1:

Average throughput: 0.91 Mbit/s

95th percentile per-packet one-way delay: 410.380 ms

Loss rate: 0.19%

-- Flow 2:

Average throughput: 0.63 Mbit/s

95th percentile per-packet one-way delay: 431.486 ms

Loss rate: 0.51%

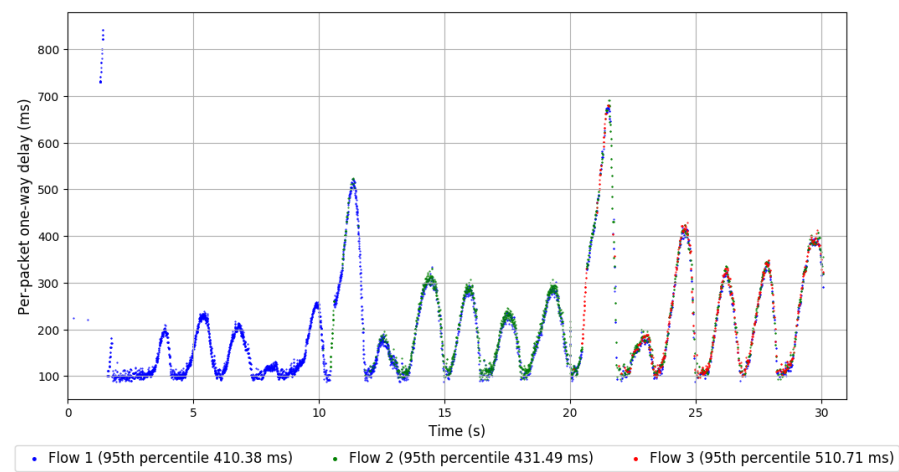
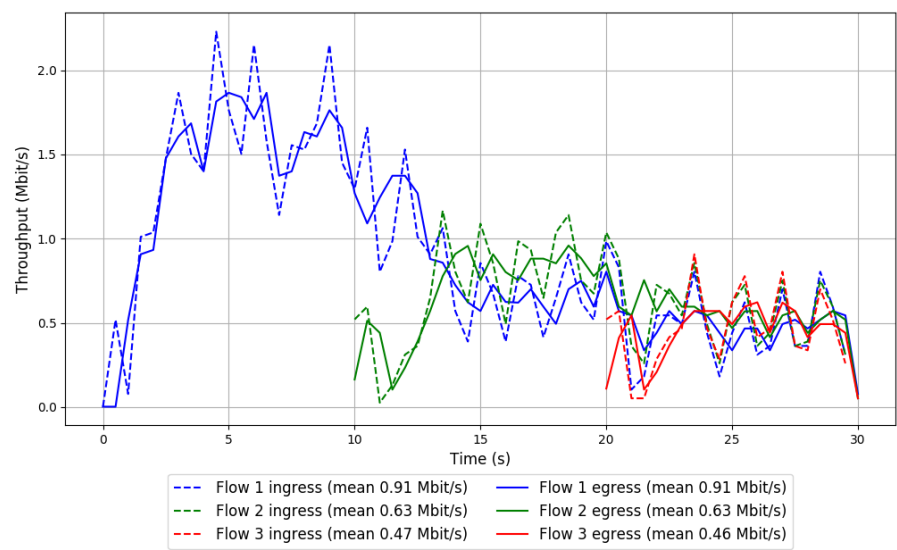
-- Flow 3:

Average throughput: 0.46 Mbit/s

95th percentile per-packet one-way delay: 510.714 ms

Loss rate: 1.12%

Run 3: Report of Copa — Data Link



Run 1: Statistics of FillP

Start at: 2018-04-10 08:06:36

End at: 2018-04-10 08:07:06

Local clock offset: -5.852 ms

Remote clock offset: 8.358 ms

# Below is generated by plot.py at 2018-04-10 08:59:04

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.62 Mbit/s

95th percentile per-packet one-way delay: 4705.979 ms

Loss rate: 58.07%

-- Flow 1:

Average throughput: 1.31 Mbit/s

95th percentile per-packet one-way delay: 4617.985 ms

Loss rate: 30.38%

-- Flow 2:

Average throughput: 0.58 Mbit/s

95th percentile per-packet one-way delay: 4752.683 ms

Loss rate: 84.12%

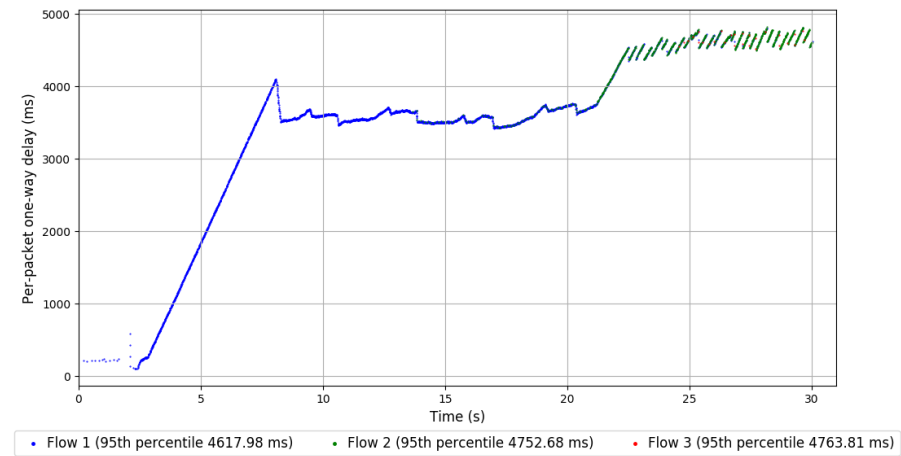
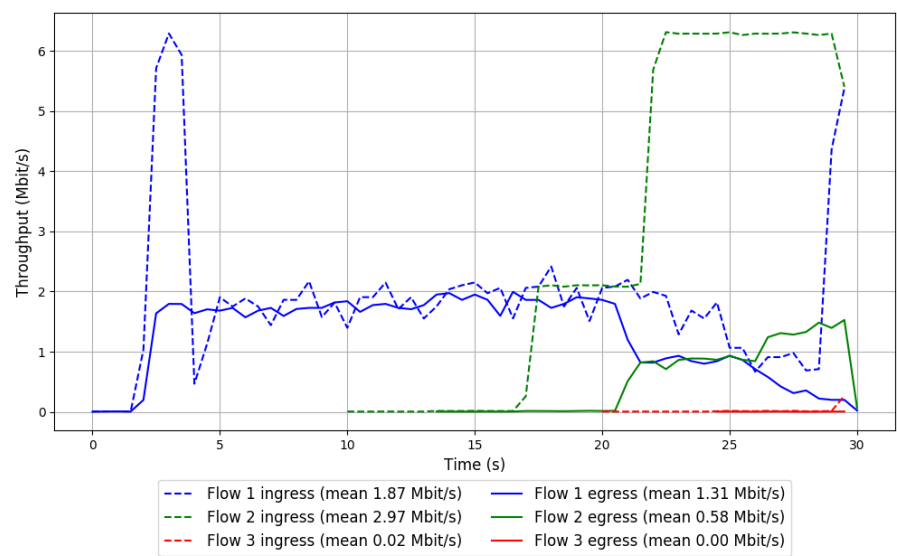
-- Flow 3:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 4763.813 ms

Loss rate: 89.64%

Run 1: Report of FillP — Data Link



Run 2: Statistics of FillP

Start at: 2018-04-10 08:29:13

End at: 2018-04-10 08:29:43

Local clock offset: -5.524 ms

Remote clock offset: 9.312 ms

# Below is generated by plot.py at 2018-04-10 08:59:04

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.54 Mbit/s

95th percentile per-packet one-way delay: 4889.939 ms

Loss rate: 51.57%

-- Flow 1:

Average throughput: 1.33 Mbit/s

95th percentile per-packet one-way delay: 4895.700 ms

Loss rate: 22.82%

-- Flow 2:

Average throughput: 0.40 Mbit/s

95th percentile per-packet one-way delay: 4853.227 ms

Loss rate: 85.36%

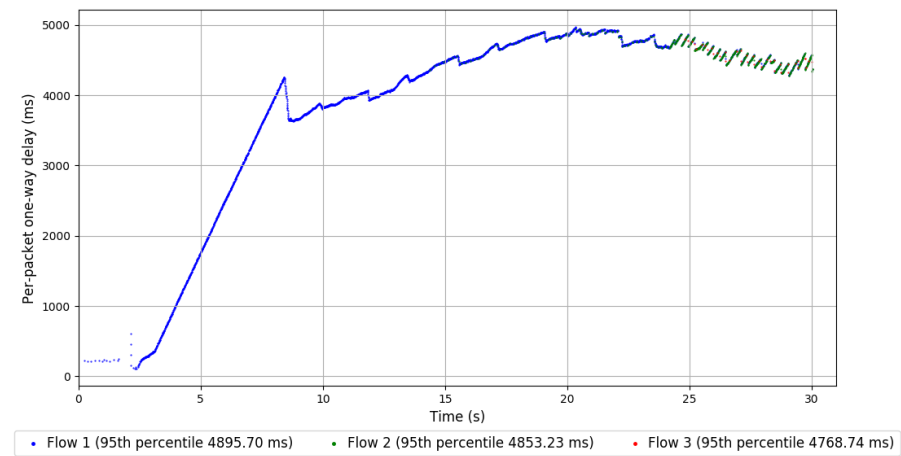
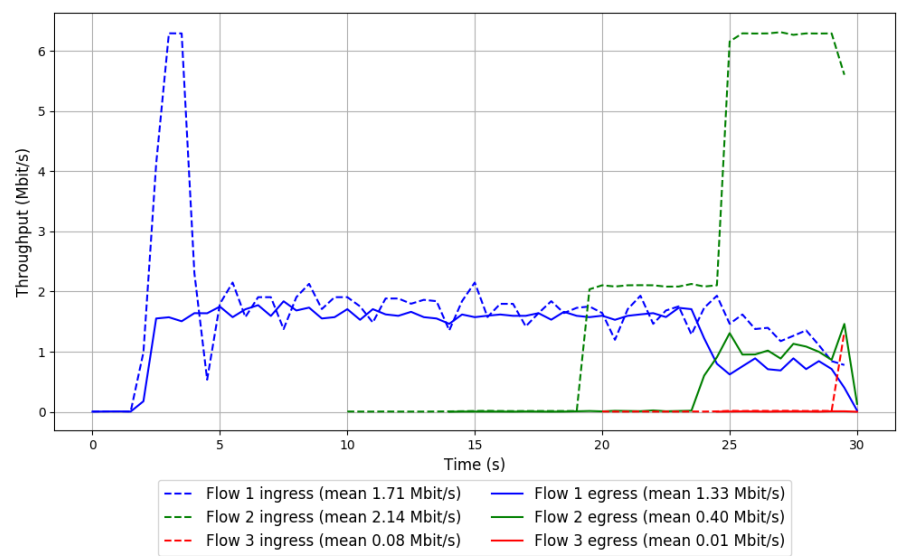
-- Flow 3:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 4768.742 ms

Loss rate: 95.66%

Run 2: Report of FillP — Data Link



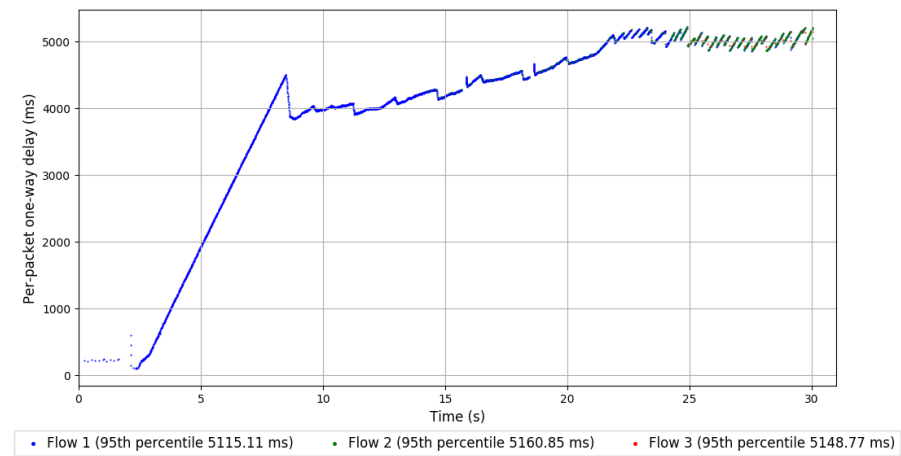
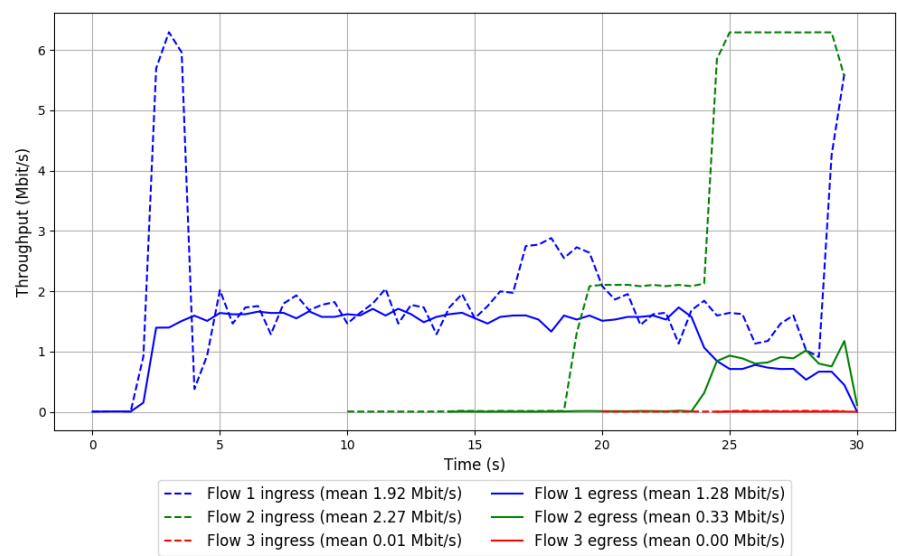
Run 3: Statistics of FillP

Start at: 2018-04-10 08:51:51  
End at: 2018-04-10 08:52:21  
Local clock offset: -6.469 ms  
Remote clock offset: 7.69 ms

# Below is generated by plot.py at 2018-04-10 08:59:04  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 1.46 Mbit/s  
95th percentile per-packet one-way delay: 5127.256 ms  
Loss rate: 57.77%  
-- Flow 1:  
Average throughput: 1.28 Mbit/s  
95th percentile per-packet one-way delay: 5115.113 ms  
Loss rate: 33.61%  
-- Flow 2:  
Average throughput: 0.33 Mbit/s  
95th percentile per-packet one-way delay: 5160.845 ms  
Loss rate: 88.49%  
-- Flow 3:  
Average throughput: 0.00 Mbit/s  
95th percentile per-packet one-way delay: 5148.772 ms  
Loss rate: 75.11%



Run 3: Report of FillP — Data Link



Run 1: Statistics of Indigo-1-32

Start at: 2018-04-10 07:50:16

End at: 2018-04-10 07:50:46

Local clock offset: -6.31 ms

Remote clock offset: 3.567 ms

# Below is generated by plot.py at 2018-04-10 08:59:04

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.30 Mbit/s

95th percentile per-packet one-way delay: 285.973 ms

Loss rate: 0.06%

-- Flow 1:

Average throughput: 0.84 Mbit/s

95th percentile per-packet one-way delay: 266.097 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.34 Mbit/s

95th percentile per-packet one-way delay: 386.027 ms

Loss rate: 0.00%

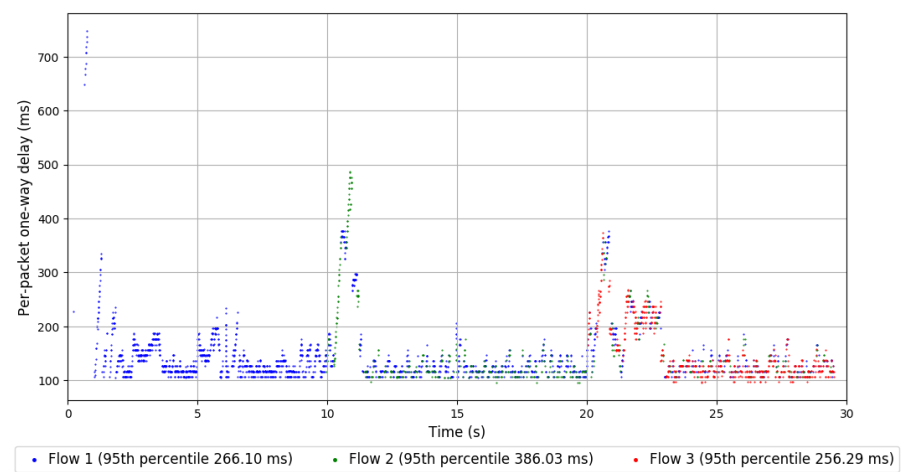
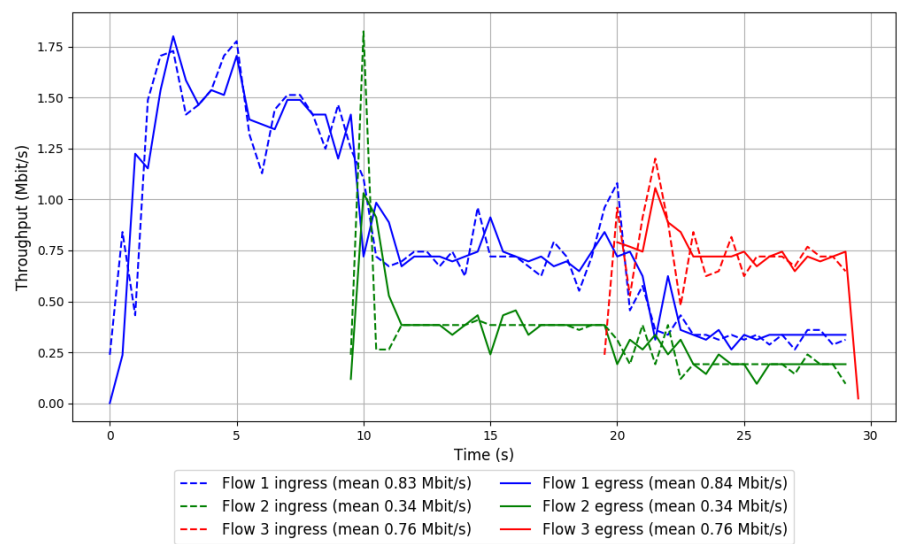
-- Flow 3:

Average throughput: 0.76 Mbit/s

95th percentile per-packet one-way delay: 256.289 ms

Loss rate: 0.33%

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



Run 2: Statistics of Indigo-1-32

Start at: 2018-04-10 08:12:54

End at: 2018-04-10 08:13:24

Local clock offset: -5.742 ms

Remote clock offset: 2.757 ms

# Below is generated by plot.py at 2018-04-10 08:59:04

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.46 Mbit/s

95th percentile per-packet one-way delay: 215.552 ms

Loss rate: 0.08%

-- Flow 1:

Average throughput: 0.83 Mbit/s

95th percentile per-packet one-way delay: 205.279 ms

Loss rate: 0.10%

-- Flow 2:

Average throughput: 0.70 Mbit/s

95th percentile per-packet one-way delay: 216.032 ms

Loss rate: 0.00%

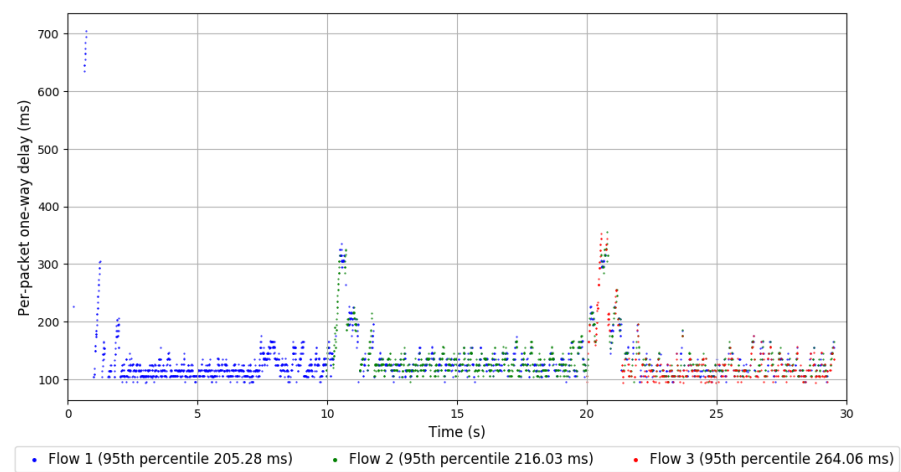
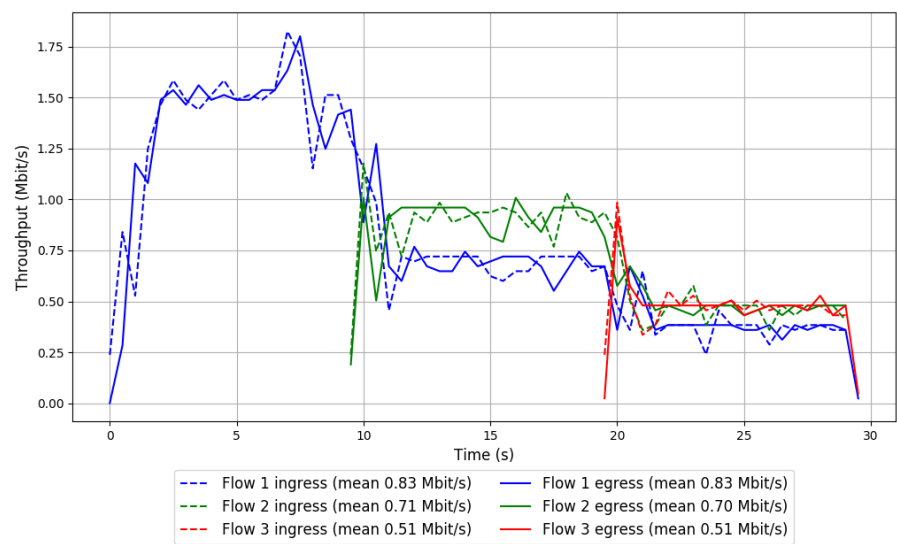
-- Flow 3:

Average throughput: 0.51 Mbit/s

95th percentile per-packet one-way delay: 264.061 ms

Loss rate: 0.25%

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



Run 3: Statistics of Indigo-1-32

Start at: 2018-04-10 08:35:31

End at: 2018-04-10 08:36:01

Local clock offset: -4.892 ms

Remote clock offset: 3.657 ms

# Below is generated by plot.py at 2018-04-10 08:59:06

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.41 Mbit/s

95th percentile per-packet one-way delay: 234.829 ms

Loss rate: 0.09%

-- Flow 1:

Average throughput: 0.81 Mbit/s

95th percentile per-packet one-way delay: 224.517 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.64 Mbit/s

95th percentile per-packet one-way delay: 244.403 ms

Loss rate: 0.10%

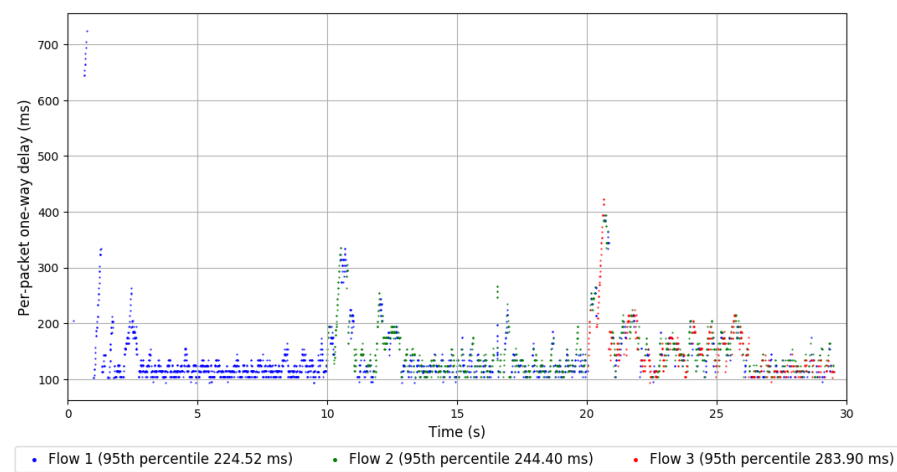
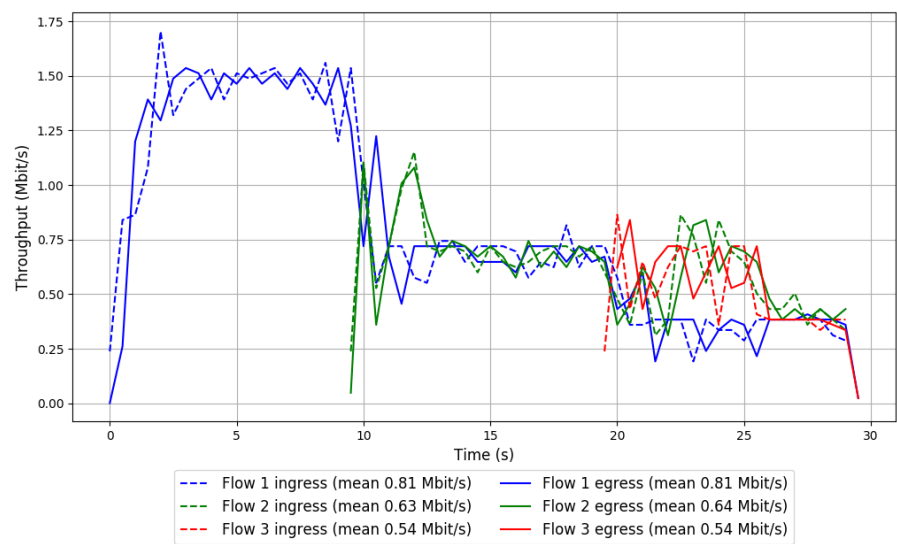
-- Flow 3:

Average throughput: 0.54 Mbit/s

95th percentile per-packet one-way delay: 283.896 ms

Loss rate: 0.47%

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



Run 1: Statistics of Vivace-latency

Start at: 2018-04-10 07:57:49

End at: 2018-04-10 07:58:19

Local clock offset: -6.095 ms

Remote clock offset: 8.346 ms

# Below is generated by plot.py at 2018-04-10 08:59:09

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.46 Mbit/s

95th percentile per-packet one-way delay: 4836.381 ms

Loss rate: 37.01%

-- Flow 1:

Average throughput: 0.84 Mbit/s

95th percentile per-packet one-way delay: 4828.593 ms

Loss rate: 33.26%

-- Flow 2:

Average throughput: 0.94 Mbit/s

95th percentile per-packet one-way delay: 4846.607 ms

Loss rate: 41.41%

-- Flow 3:

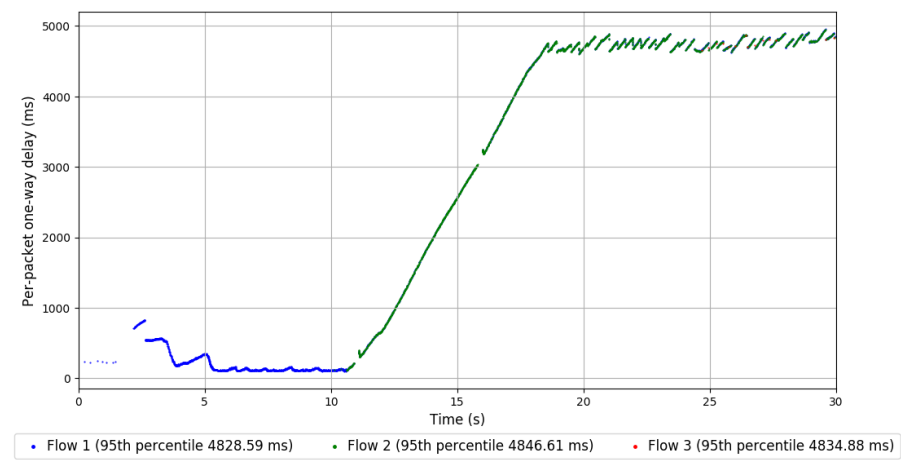
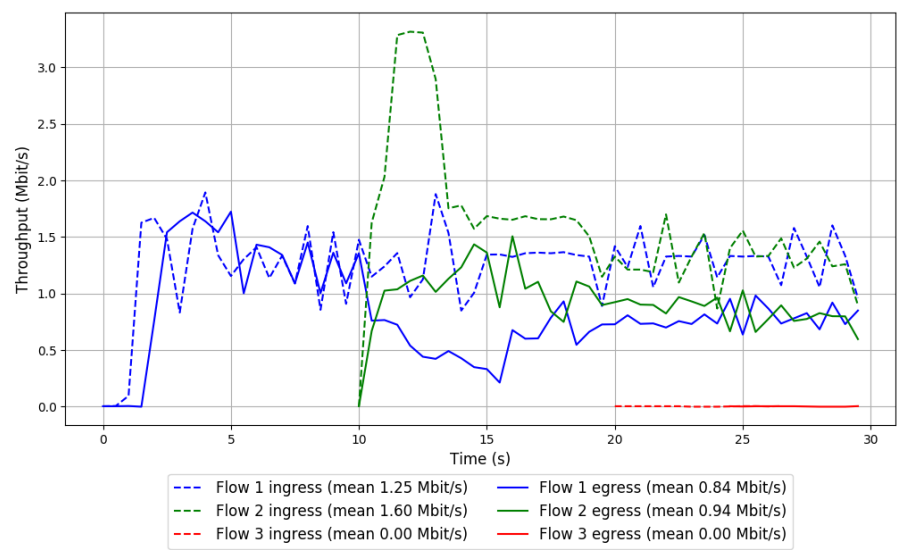
Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 4834.881 ms

Loss rate: 33.62%



Run 1: Report of Vivace-latency — Data Link



Run 2: Statistics of Vivace-latency

Start at: 2018-04-10 08:20:26

End at: 2018-04-10 08:20:56

Local clock offset: -6.392 ms

Remote clock offset: 7.63 ms

# Below is generated by plot.py at 2018-04-10 08:59:10

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.41 Mbit/s

95th percentile per-packet one-way delay: 5187.424 ms

Loss rate: 40.60%

-- Flow 1:

Average throughput: 0.80 Mbit/s

95th percentile per-packet one-way delay: 5175.958 ms

Loss rate: 36.90%

-- Flow 2:

Average throughput: 0.92 Mbit/s

95th percentile per-packet one-way delay: 5197.341 ms

Loss rate: 44.79%

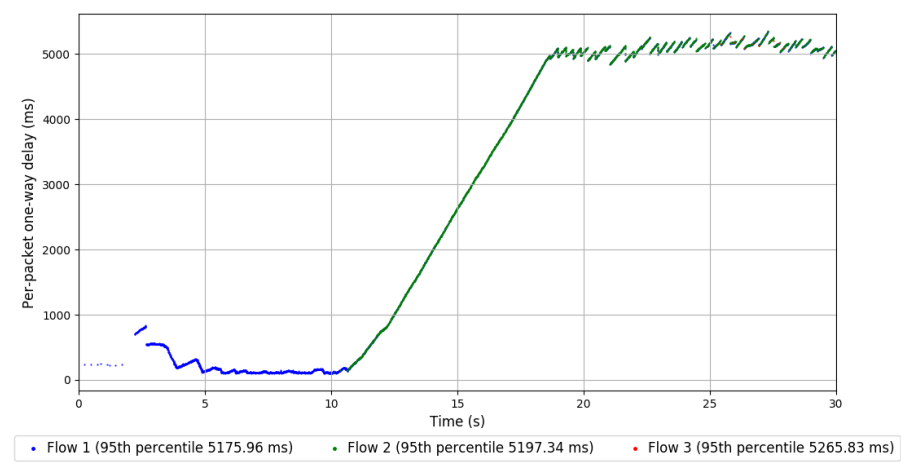
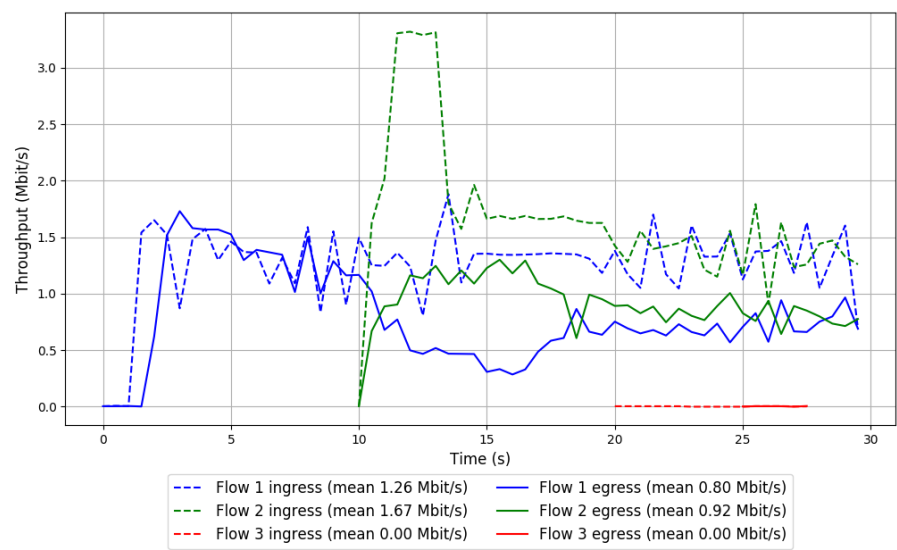
-- Flow 3:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 5265.831 ms

Loss rate: 54.02%

Run 2: Report of Vivace-latency — Data Link



Run 3: Statistics of Vivace-latency

Start at: 2018-04-10 08:43:04

End at: 2018-04-10 08:43:34

Local clock offset: -4.935 ms

Remote clock offset: 7.998 ms

# Below is generated by plot.py at 2018-04-10 08:59:11

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.56 Mbit/s

95th percentile per-packet one-way delay: 4680.978 ms

Loss rate: 39.09%

-- Flow 1:

Average throughput: 0.96 Mbit/s

95th percentile per-packet one-way delay: 4672.553 ms

Loss rate: 33.16%

-- Flow 2:

Average throughput: 0.90 Mbit/s

95th percentile per-packet one-way delay: 4686.551 ms

Loss rate: 46.63%

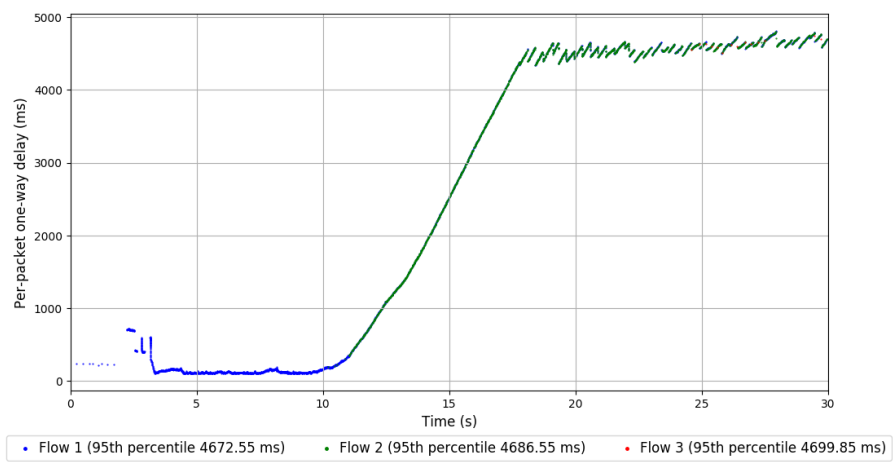
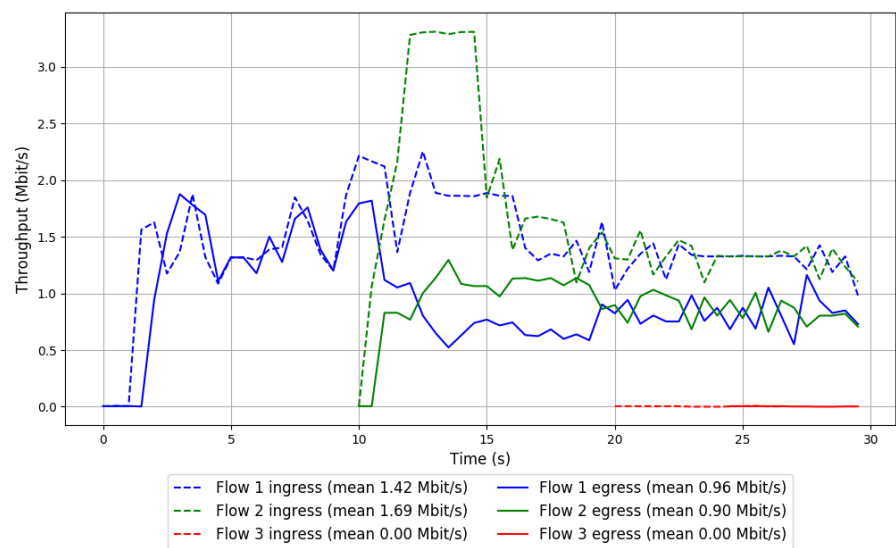
-- Flow 3:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 4699.849 ms

Loss rate: 33.62%

Run 3: Report of Vivace-latency — Data Link



Run 1: Statistics of Vivace-loss

Start at: 2018-04-10 08:00:19

End at: 2018-04-10 08:00:49

Local clock offset: -5.969 ms

Remote clock offset: 2.675 ms

# Below is generated by plot.py at 2018-04-10 08:59:11

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.43 Mbit/s

95th percentile per-packet one-way delay: 5194.914 ms

Loss rate: 31.40%

-- Flow 1:

Average throughput: 1.43 Mbit/s

95th percentile per-packet one-way delay: 5195.256 ms

Loss rate: 31.41%

-- Flow 2:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 5192.105 ms

Loss rate: 26.38%

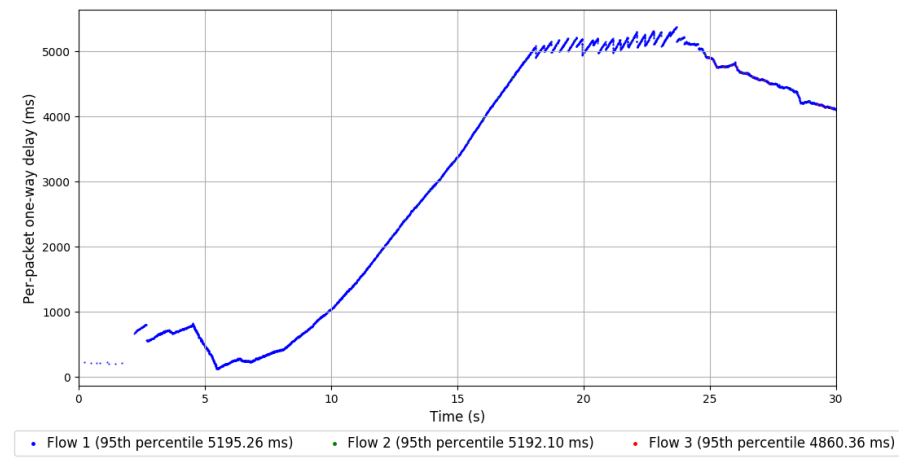
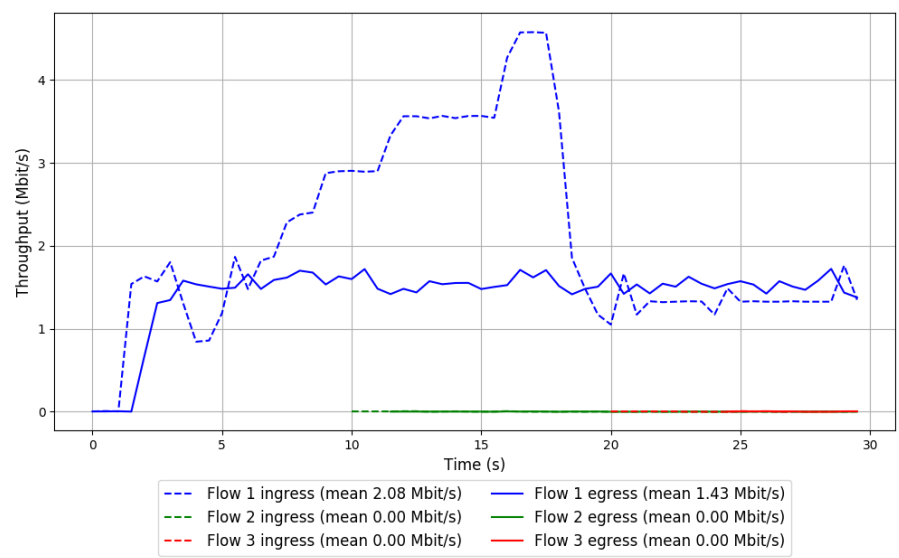
-- Flow 3:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 4860.360 ms

Loss rate: 22.41%

Run 1: Report of Vivace-loss — Data Link



Run 2: Statistics of Vivace-loss

Start at: 2018-04-10 08:22:57

End at: 2018-04-10 08:23:27

Local clock offset: -5.645 ms

Remote clock offset: 2.844 ms

# Below is generated by plot.py at 2018-04-10 08:59:12

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.59 Mbit/s

95th percentile per-packet one-way delay: 4688.977 ms

Loss rate: 46.52%

-- Flow 1:

Average throughput: 1.21 Mbit/s

95th percentile per-packet one-way delay: 4661.862 ms

Loss rate: 37.54%

-- Flow 2:

Average throughput: 0.61 Mbit/s

95th percentile per-packet one-way delay: 4723.521 ms

Loss rate: 63.20%

-- Flow 3:

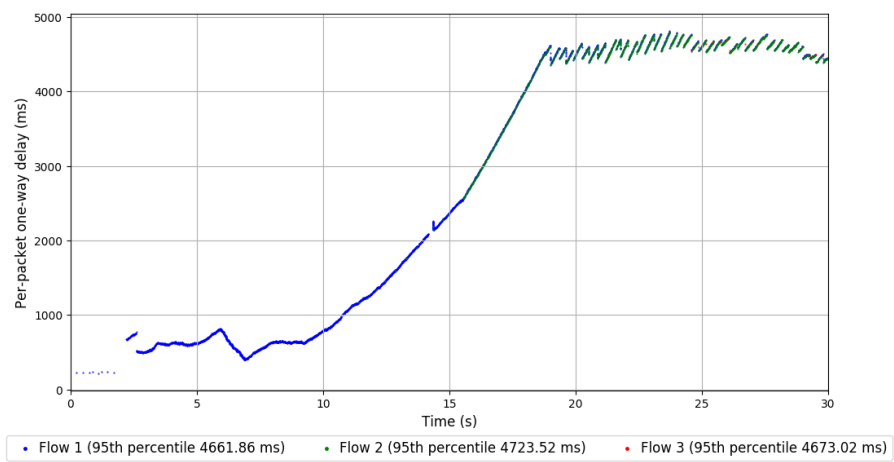
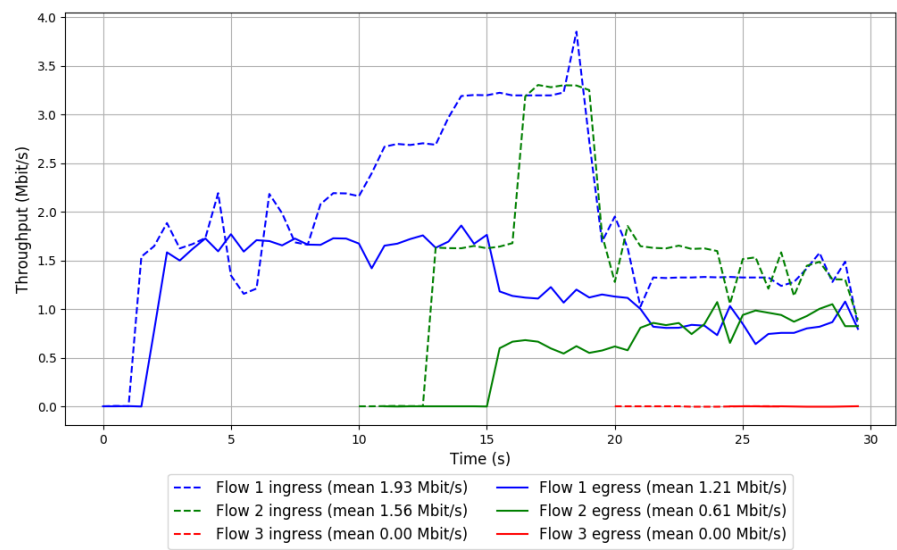
Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 4673.024 ms

Loss rate: 37.21%



Run 2: Report of Vivace-loss — Data Link



Run 3: Statistics of Vivace-loss

Start at: 2018-04-10 08:45:34

End at: 2018-04-10 08:46:04

Local clock offset: -5.68 ms

Remote clock offset: 7.058 ms

# Below is generated by plot.py at 2018-04-10 08:59:12

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.55 Mbit/s

95th percentile per-packet one-way delay: 4798.280 ms

Loss rate: 33.89%

-- Flow 1:

Average throughput: 1.55 Mbit/s

95th percentile per-packet one-way delay: 4798.204 ms

Loss rate: 33.91%

-- Flow 2:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 4926.695 ms

Loss rate: 21.08%

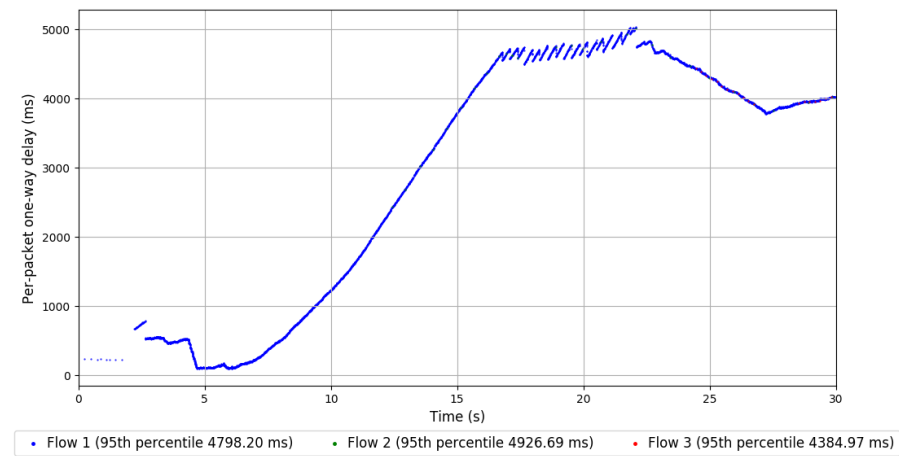
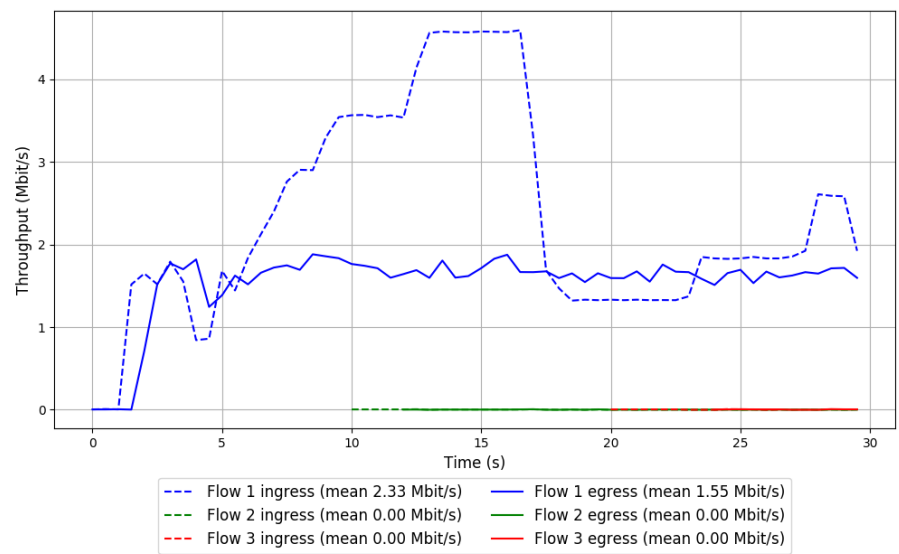
-- Flow 3:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 4384.965 ms

Loss rate: 5.60%

Run 3: Report of Vivace-loss — Data Link



Run 1: Statistics of Vivace-LTE

Start at: 2018-04-10 08:10:23

End at: 2018-04-10 08:10:53

Local clock offset: -5.681 ms

Remote clock offset: 9.248 ms

# Below is generated by plot.py at 2018-04-10 08:59:12

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.51 Mbit/s

95th percentile per-packet one-way delay: 4764.022 ms

Loss rate: 36.27%

-- Flow 1:

Average throughput: 0.86 Mbit/s

95th percentile per-packet one-way delay: 4749.999 ms

Loss rate: 32.38%

-- Flow 2:

Average throughput: 0.97 Mbit/s

95th percentile per-packet one-way delay: 4776.024 ms

Loss rate: 40.85%

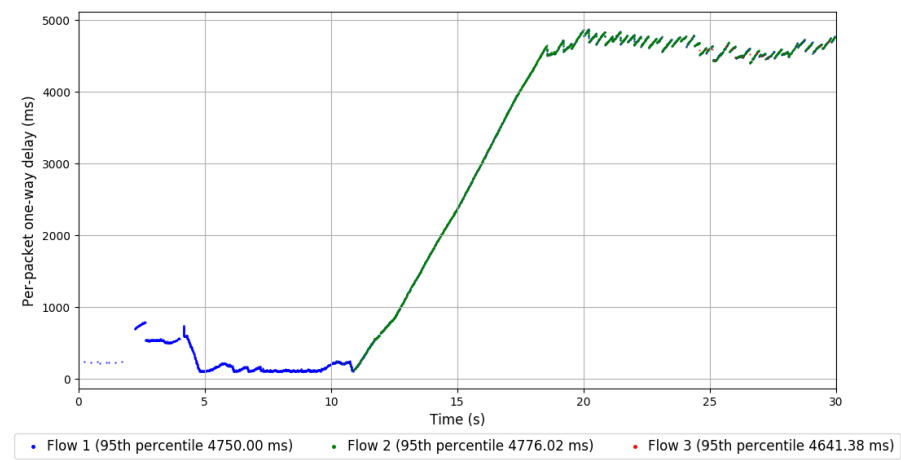
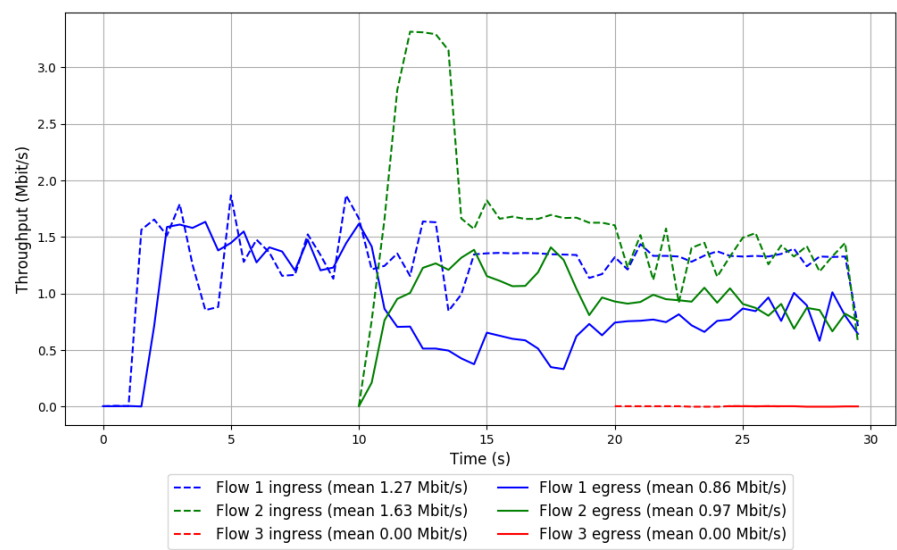
-- Flow 3:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 4641.379 ms

Loss rate: 33.62%

Run 1: Report of Vivace-LTE — Data Link



Run 2: Statistics of Vivace-LTE

Start at: 2018-04-10 08:32:59

End at: 2018-04-10 08:33:29

Local clock offset: -4.857 ms

Remote clock offset: 7.621 ms

# Below is generated by plot.py at 2018-04-10 08:59:13

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.51 Mbit/s

95th percentile per-packet one-way delay: 4959.178 ms

Loss rate: 38.79%

-- Flow 1:

Average throughput: 0.96 Mbit/s

95th percentile per-packet one-way delay: 4940.668 ms

Loss rate: 30.89%

-- Flow 2:

Average throughput: 0.87 Mbit/s

95th percentile per-packet one-way delay: 4979.108 ms

Loss rate: 48.90%

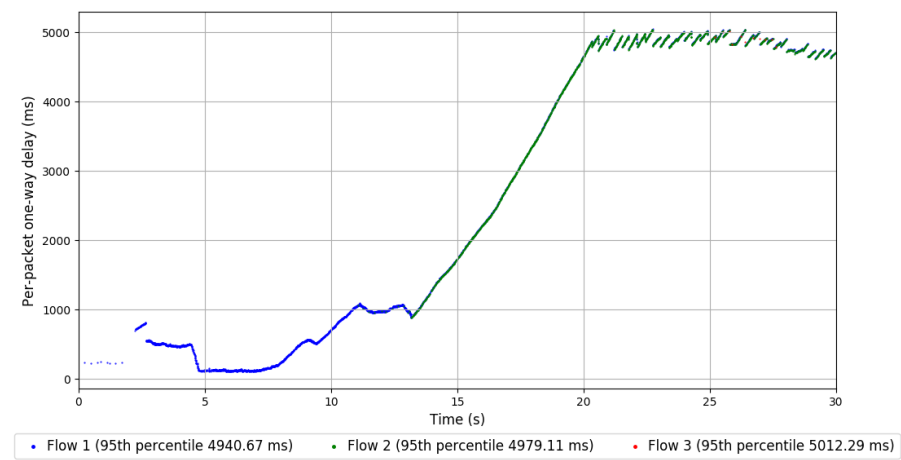
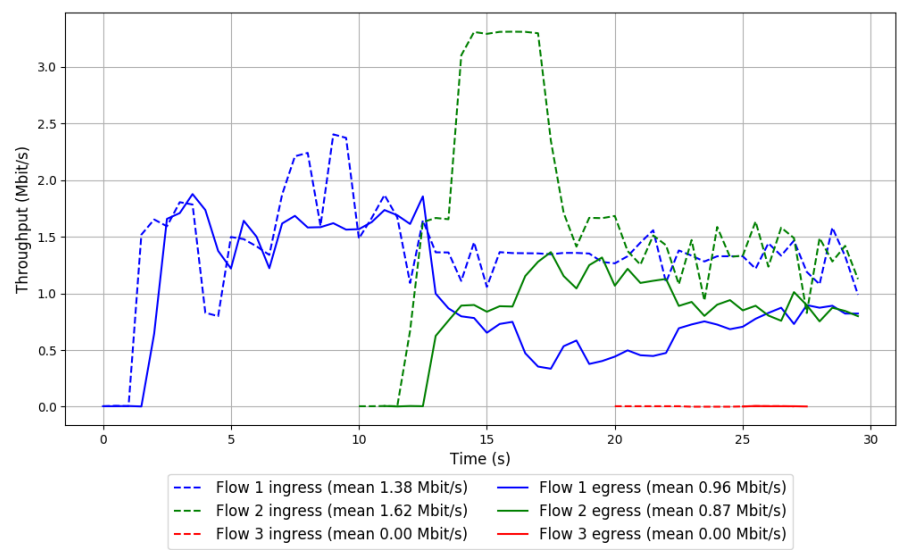
-- Flow 3:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 5012.290 ms

Loss rate: 49.43%

Run 2: Report of Vivace-LTE — Data Link



Run 3: Statistics of Vivace-LTE

Start at: 2018-04-10 08:55:37

End at: 2018-04-10 08:56:07

Local clock offset: -6.425 ms

Remote clock offset: 7.538 ms

# Below is generated by plot.py at 2018-04-10 08:59:13

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.69 Mbit/s

95th percentile per-packet one-way delay: 4380.591 ms

Loss rate: 33.13%

-- Flow 1:

Average throughput: 1.03 Mbit/s

95th percentile per-packet one-way delay: 4359.461 ms

Loss rate: 27.59%

-- Flow 2:

Average throughput: 1.00 Mbit/s

95th percentile per-packet one-way delay: 4413.544 ms

Loss rate: 40.21%

-- Flow 3:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 4375.886 ms

Loss rate: 20.27%



Run 3: Report of Vivace-LTE — Data Link

