

## Pantheon Report

Generated at 2019-01-25 00:03:07 (UTC).

Data path: GCE Tokyo on *ens4 (local)* → GCE London on *ens4 (remote)*.

Repeated the test of 21 congestion control schemes 5 times.

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

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

### System info:

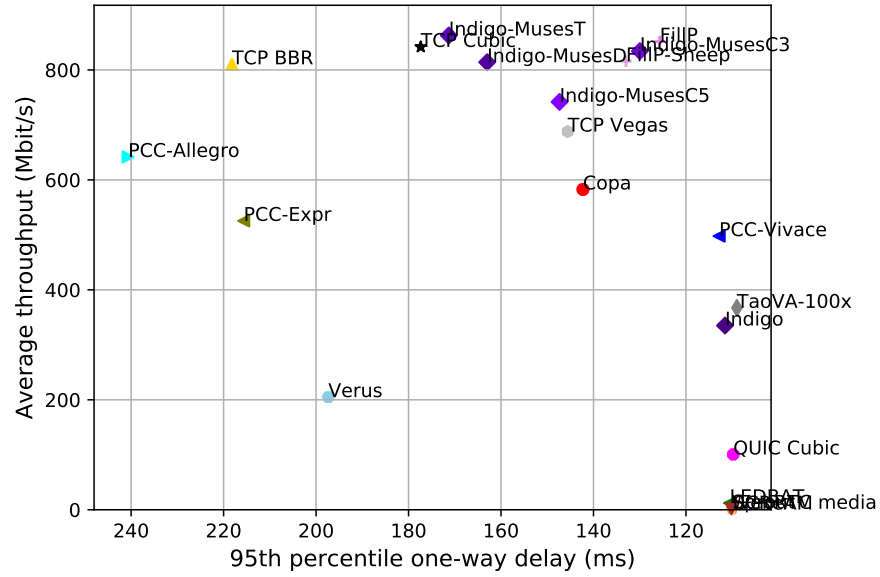
```
Linux 4.15.0-1026-gcp
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

### Git summary:

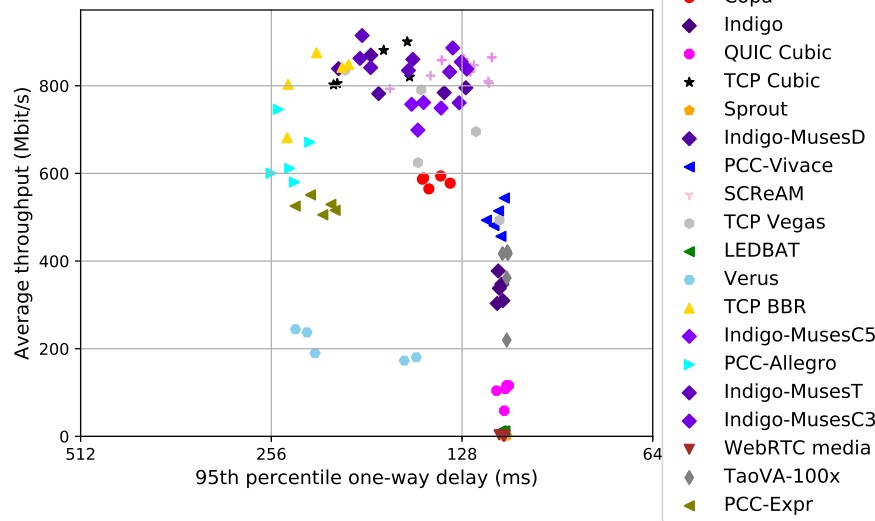
```
branch: muses @ 0b8e9a949603c3842368430acf469eec3b941f9f
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecd90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ d9c5ea33091330aca25ecd105ab2db6d34d5c40d
third_party/pantheon-tunnel @ f866d3f58d27afd942717625ee3a354cc2e802bd
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/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quick @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2
M src/ScreamClient
M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
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 @ 2baf86211435ae071a32f96b7d8c504587f5d7f4  
third\_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851

test from GCE Tokyo to GCE London, 5 runs of 30s each per scheme  
3 flows with 10s interval between flows (mean of all runs by scheme)



test from GCE Tokyo to GCE London, 5 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	5	421.41	429.10	311.39	217.99	211.50	190.30	1.34	1.25	1.15
Copa	5	319.63	277.21	235.52	134.14	156.78	151.47	0.01	0.00	0.00
TCP Cubic	5	446.57	423.80	340.02	173.02	163.26	149.58	0.06	0.11	0.50
FillP	5	549.46	336.17	236.58	130.15	113.94	112.07	0.15	0.01	0.00
FillP-Sheep	5	529.74	317.69	226.29	137.83	112.85	112.04	0.55	0.00	0.00
Indigo	5	171.77	164.45	168.77	110.77	111.12	115.15	0.00	0.00	0.00
Indigo-MusesC3	5	492.91	406.45	290.17	135.26	115.99	114.06	0.00	0.01	0.01
Indigo-MusesC5	4	462.74	380.38	122.66	148.62	143.15	111.68	0.07	0.06	0.08
Indigo-MusesD	5	497.56	435.82	127.39	168.11	135.65	113.62	0.41	0.00	0.02
Indigo-MusesT	5	536.26	431.20	169.40	172.63	143.63	117.61	0.32	0.02	0.01
LEDBAT	5	7.82	5.20	2.52	110.51	110.47	110.36	0.00	0.00	0.00
PCC-Allegro	5	338.48	327.50	259.51	242.94	212.39	198.24	4.85	6.79	1.69
PCC-Expr	5	292.07	254.97	192.77	198.53	188.39	177.07	1.48	2.25	2.26
QUIC Cubic	5	50.40	54.28	44.61	109.40	109.35	109.76	0.00	0.00	0.00
SCReAM	5	0.22	0.22	0.22	109.66	109.48	109.70	0.00	0.00	0.00
Sprout	5	1.60	0.78	0.77	109.90	109.81	109.72	0.00	0.00	0.00
TaoVA-100x	5	173.67	209.07	163.79	108.63	109.00	109.12	0.00	0.00	0.17
TCP Vegas	5	339.93	374.70	295.45	129.93	132.82	161.59	0.06	0.05	0.14
Verus	5	113.35	106.07	66.60	168.87	186.42	131.57	0.41	1.93	0.00
PCC-Vivace	5	311.14	213.59	134.98	115.15	111.01	113.06	0.04	0.00	0.00
WebRTC media	5	1.14	0.51	0.20	110.10	109.45	109.82	0.00	0.00	0.00

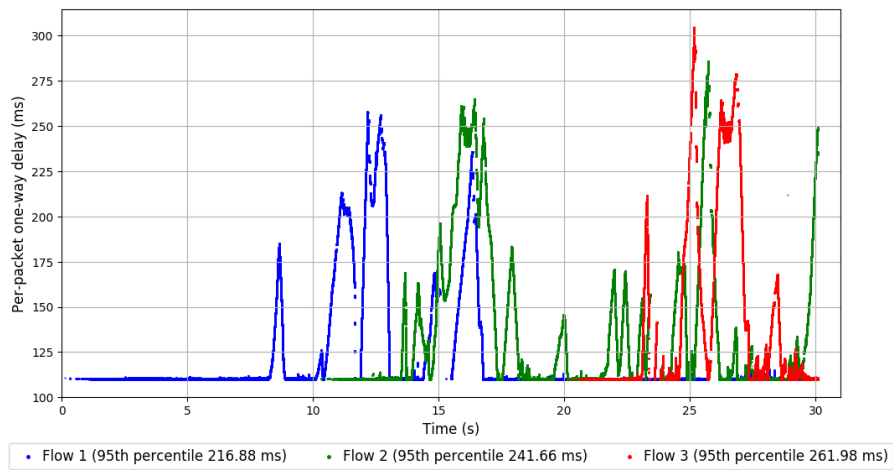
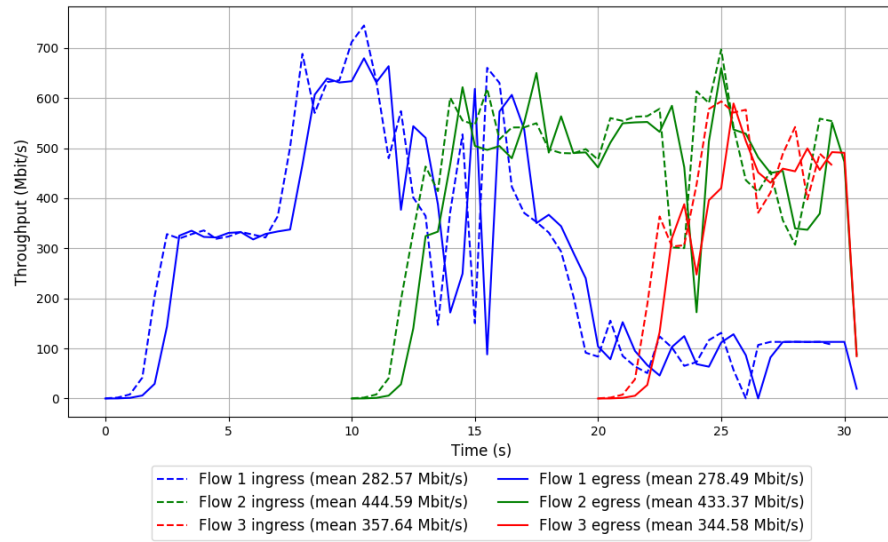


Run 1: Statistics of TCP BBR

Start at: 2019-01-24 18:07:49  
End at: 2019-01-24 18:08:19  
Local clock offset: -0.824 ms  
Remote clock offset: -0.107 ms

# Below is generated by plot.py at 2019-01-24 21:43:10  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 681.60 Mbit/s  
95th percentile per-packet one-way delay: 241.664 ms  
Loss rate: 2.28%  
-- Flow 1:  
Average throughput: 278.49 Mbit/s  
95th percentile per-packet one-way delay: 216.882 ms  
Loss rate: 1.44%  
-- Flow 2:  
Average throughput: 433.37 Mbit/s  
95th percentile per-packet one-way delay: 241.663 ms  
Loss rate: 2.52%  
-- Flow 3:  
Average throughput: 344.58 Mbit/s  
95th percentile per-packet one-way delay: 261.984 ms  
Loss rate: 3.65%

# Run 1: Report of TCP BBR — Data Link

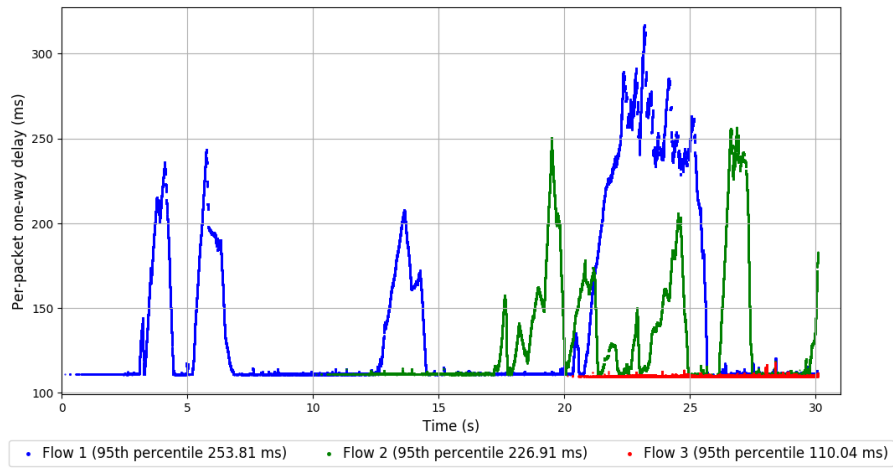
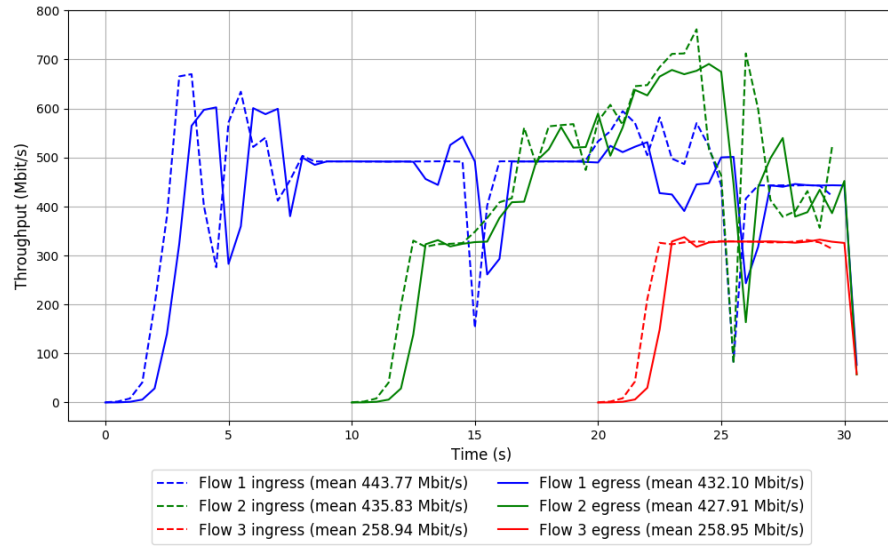


Run 2: Statistics of TCP BBR

Start at: 2019-01-24 18:46:15  
End at: 2019-01-24 18:46:45  
Local clock offset: -1.321 ms  
Remote clock offset: -0.112 ms

# Below is generated by plot.py at 2019-01-24 21:47:00  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 803.37 Mbit/s  
95th percentile per-packet one-way delay: 240.856 ms  
Loss rate: 2.06%  
-- Flow 1:  
Average throughput: 432.10 Mbit/s  
95th percentile per-packet one-way delay: 253.805 ms  
Loss rate: 2.63%  
-- Flow 2:  
Average throughput: 427.91 Mbit/s  
95th percentile per-packet one-way delay: 226.905 ms  
Loss rate: 1.81%  
-- Flow 3:  
Average throughput: 258.95 Mbit/s  
95th percentile per-packet one-way delay: 110.043 ms  
Loss rate: 0.00%

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

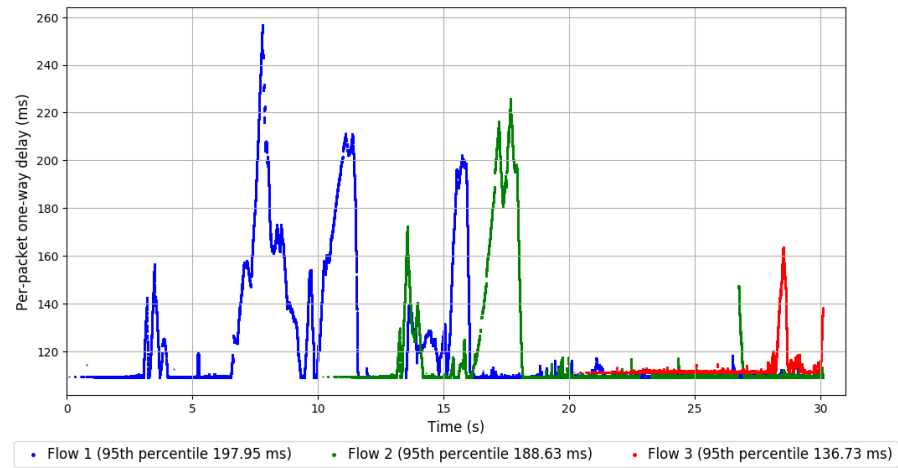
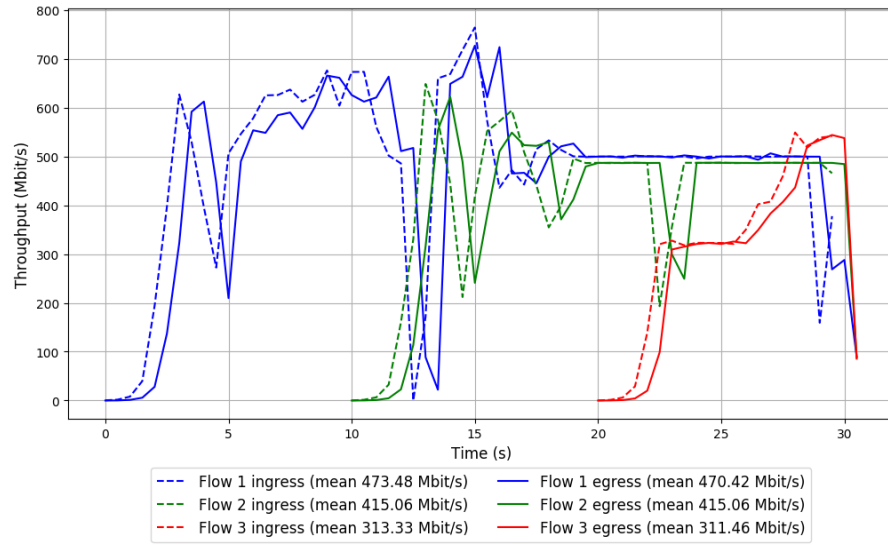


Run 3: Statistics of TCP BBR

Start at: 2019-01-24 19:25:13  
End at: 2019-01-24 19:25:43  
Local clock offset: 0.128 ms  
Remote clock offset: -0.157 ms

# Below is generated by plot.py at 2019-01-24 21:47:39  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 848.63 Mbit/s  
95th percentile per-packet one-way delay: 193.323 ms  
Loss rate: 0.43%  
-- Flow 1:  
Average throughput: 470.42 Mbit/s  
95th percentile per-packet one-way delay: 197.949 ms  
Loss rate: 0.65%  
-- Flow 2:  
Average throughput: 415.06 Mbit/s  
95th percentile per-packet one-way delay: 188.633 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 311.46 Mbit/s  
95th percentile per-packet one-way delay: 136.729 ms  
Loss rate: 0.61%

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



Run 4: Statistics of TCP BBR

Start at: 2019-01-24 20:03:37

End at: 2019-01-24 20:04:07

Local clock offset: -0.157 ms

Remote clock offset: 0.444 ms

# Below is generated by plot.py at 2019-01-24 21:47:39

# Datalink statistics

-- Total of 3 flows:

Average throughput: 842.07 Mbit/s

95th percentile per-packet one-way delay: 197.939 ms

Loss rate: 0.74%

-- Flow 1:

Average throughput: 449.03 Mbit/s

95th percentile per-packet one-way delay: 197.863 ms

Loss rate: 0.85%

-- Flow 2:

Average throughput: 430.52 Mbit/s

95th percentile per-packet one-way delay: 191.895 ms

Loss rate: 0.27%

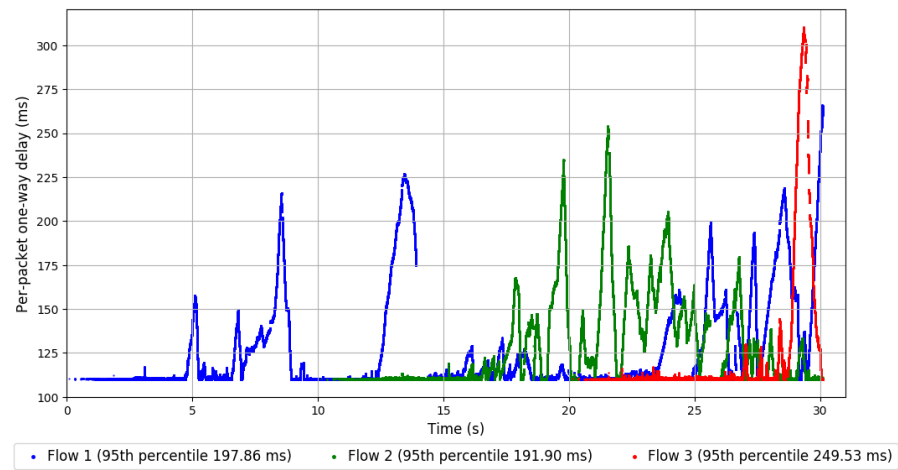
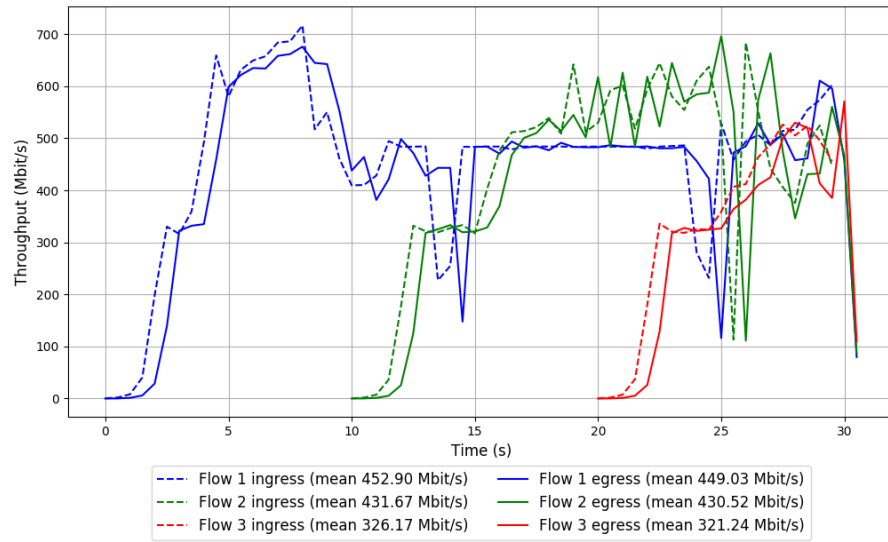
-- Flow 3:

Average throughput: 321.24 Mbit/s

95th percentile per-packet one-way delay: 249.535 ms

Loss rate: 1.51%

#### Run 4: Report of TCP BBR — Data Link



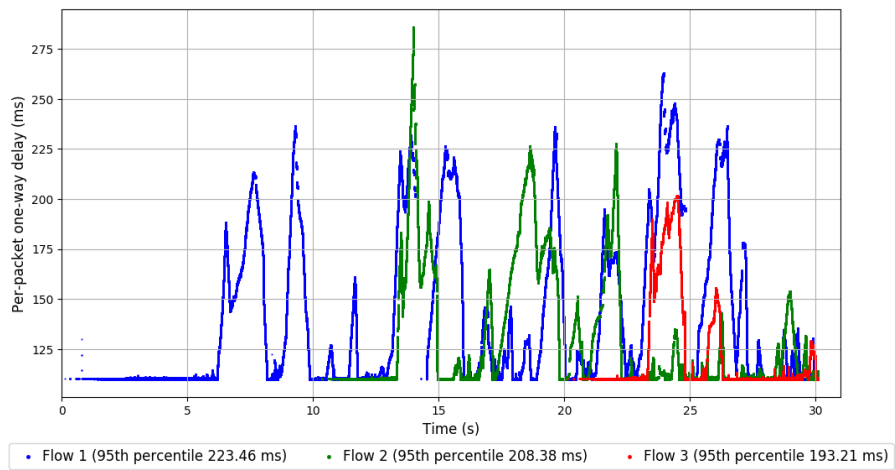
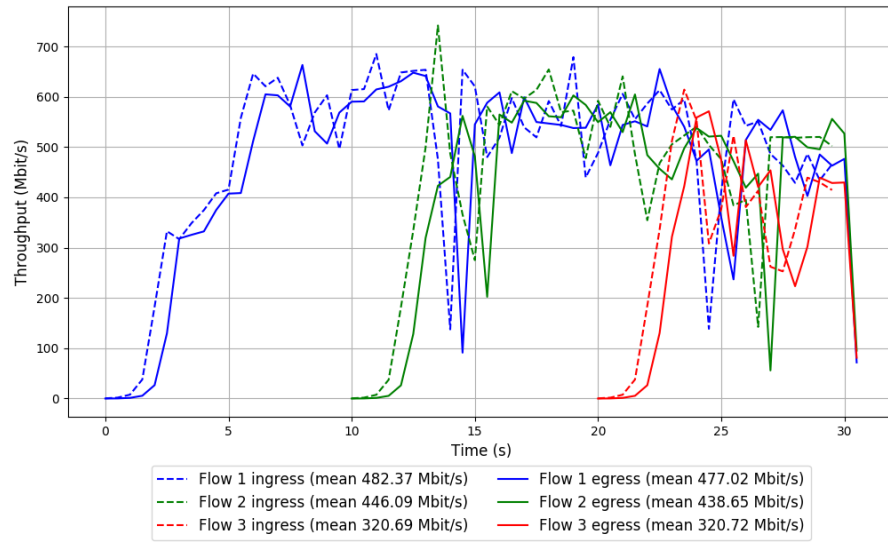


Run 5: Statistics of TCP BBR

Start at: 2019-01-24 20:42:09  
End at: 2019-01-24 20:42:39  
Local clock offset: -0.605 ms  
Remote clock offset: -0.031 ms

# Below is generated by plot.py at 2019-01-24 21:48:06  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 875.41 Mbit/s  
95th percentile per-packet one-way delay: 217.170 ms  
Loss rate: 1.17%  
-- Flow 1:  
Average throughput: 477.02 Mbit/s  
95th percentile per-packet one-way delay: 223.458 ms  
Loss rate: 1.11%  
-- Flow 2:  
Average throughput: 438.65 Mbit/s  
95th percentile per-packet one-way delay: 208.385 ms  
Loss rate: 1.67%  
-- Flow 3:  
Average throughput: 320.72 Mbit/s  
95th percentile per-packet one-way delay: 193.212 ms  
Loss rate: 0.00%

## Run 5: Report of TCP BBR — Data Link

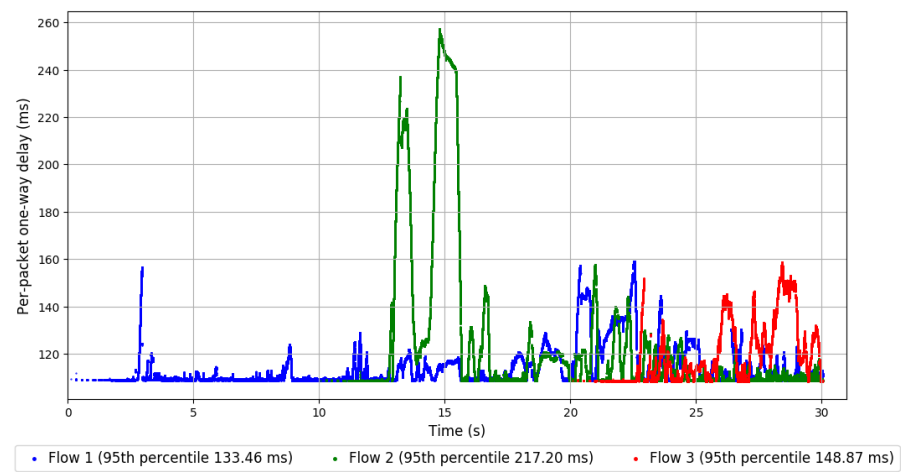
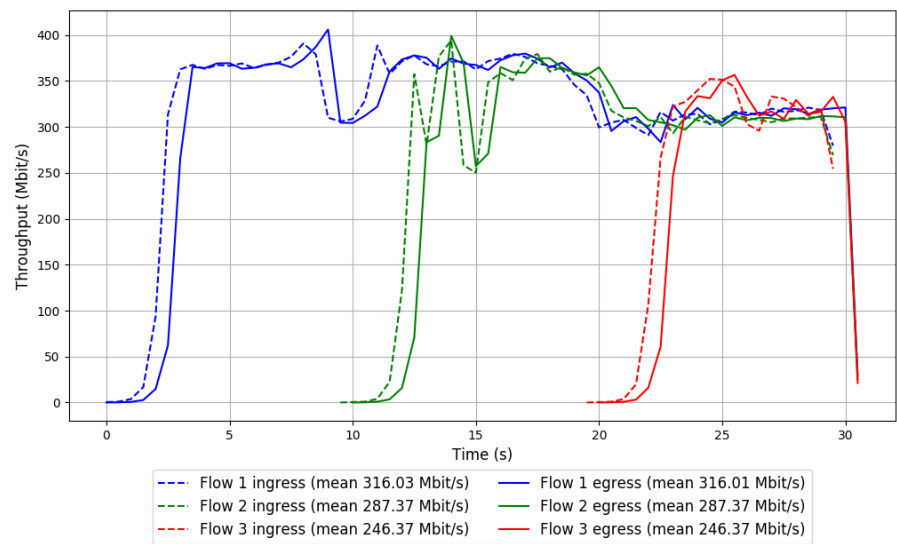


Run 1: Statistics of Copa

Start at: 2019-01-24 18:16:41  
End at: 2019-01-24 18:17:11  
Local clock offset: 0.523 ms  
Remote clock offset: -0.064 ms

# Below is generated by plot.py at 2019-01-24 21:51:59  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 589.69 Mbit/s  
95th percentile per-packet one-way delay: 147.186 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 316.01 Mbit/s  
95th percentile per-packet one-way delay: 133.458 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 287.37 Mbit/s  
95th percentile per-packet one-way delay: 217.199 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 246.37 Mbit/s  
95th percentile per-packet one-way delay: 148.869 ms  
Loss rate: 0.00%

Run 1: Report of Copa — Data Link

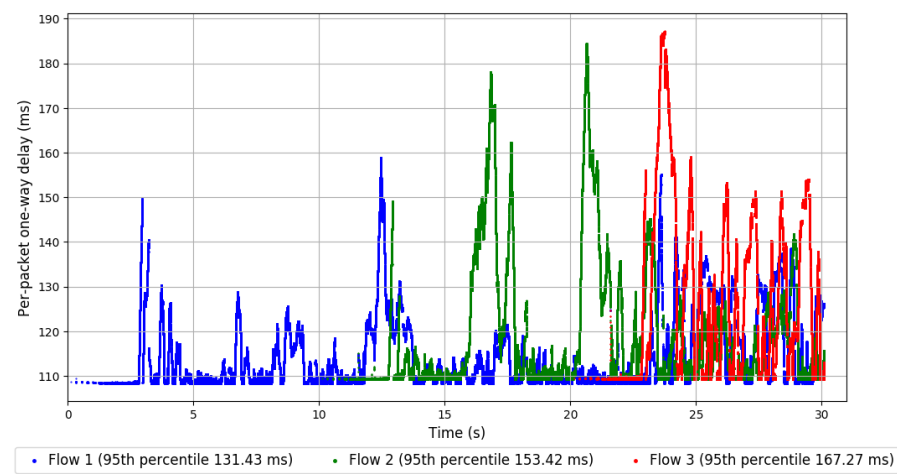
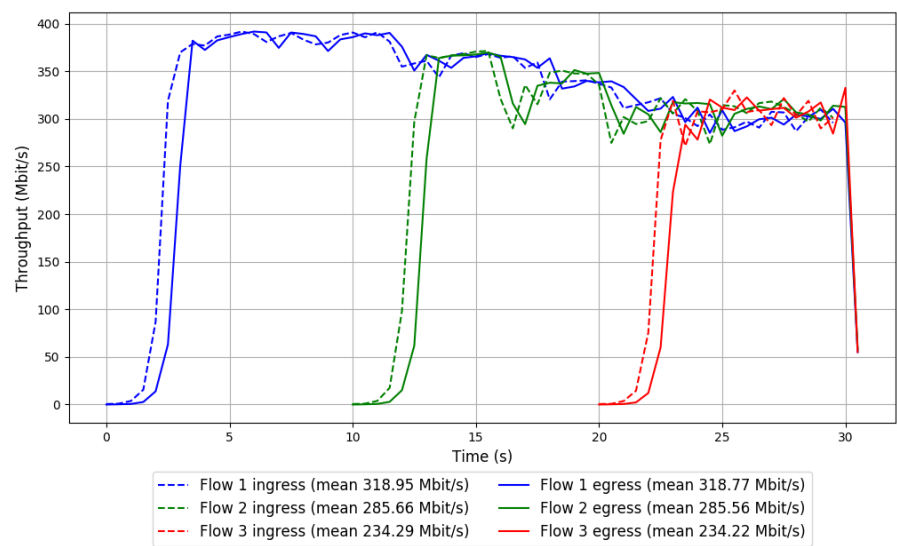


Run 2: Statistics of Copa

Start at: 2019-01-24 18:55:01  
End at: 2019-01-24 18:55:31  
Local clock offset: 0.081 ms  
Remote clock offset: -0.135 ms

# Below is generated by plot.py at 2019-01-24 21:51:59  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 586.77 Mbit/s  
95th percentile per-packet one-way delay: 147.833 ms  
Loss rate: 0.03%  
-- Flow 1:  
Average throughput: 318.77 Mbit/s  
95th percentile per-packet one-way delay: 131.426 ms  
Loss rate: 0.04%  
-- Flow 2:  
Average throughput: 285.56 Mbit/s  
95th percentile per-packet one-way delay: 153.423 ms  
Loss rate: 0.02%  
-- Flow 3:  
Average throughput: 234.22 Mbit/s  
95th percentile per-packet one-way delay: 167.270 ms  
Loss rate: 0.01%

Run 2: Report of Copa — Data Link

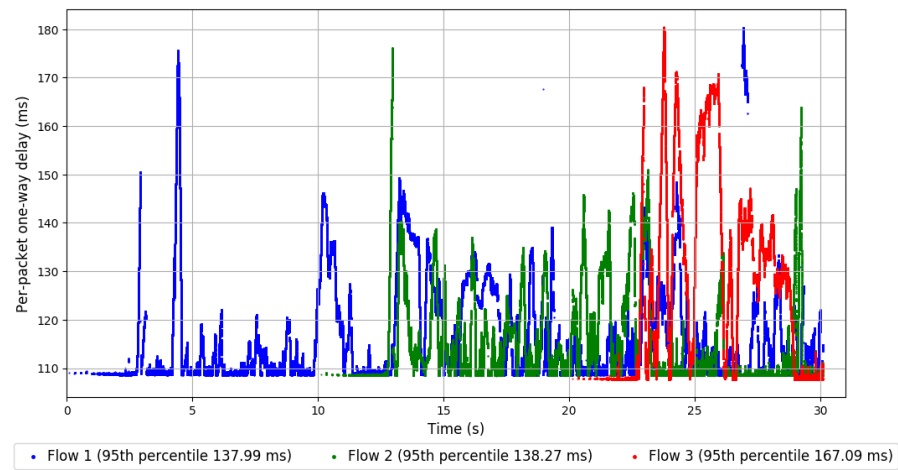
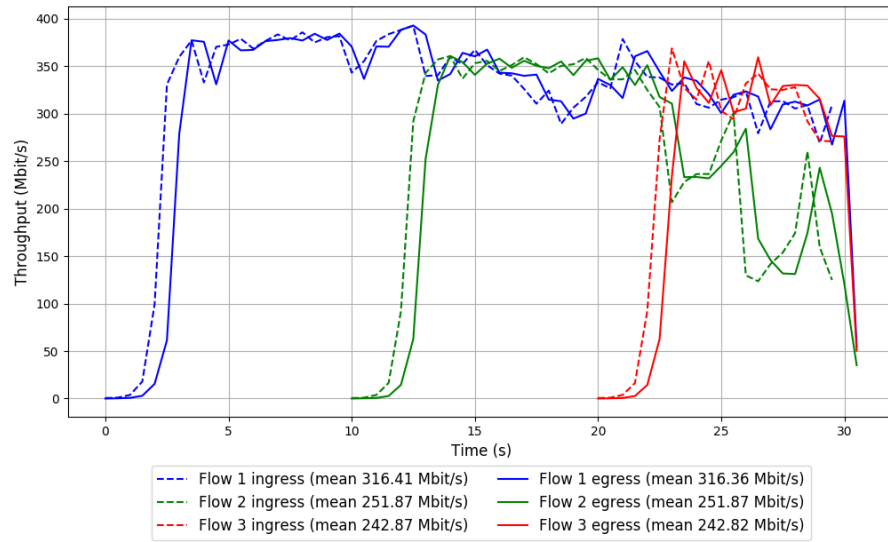


Run 3: Statistics of Copa

Start at: 2019-01-24 19:34:03  
End at: 2019-01-24 19:34:33  
Local clock offset: 0.532 ms  
Remote clock offset: -0.187 ms

# Below is generated by plot.py at 2019-01-24 21:51:59  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 564.77 Mbit/s  
95th percentile per-packet one-way delay: 144.403 ms  
Loss rate: 0.01%  
-- Flow 1:  
Average throughput: 316.36 Mbit/s  
95th percentile per-packet one-way delay: 137.990 ms  
Loss rate: 0.02%  
-- Flow 2:  
Average throughput: 251.87 Mbit/s  
95th percentile per-packet one-way delay: 138.267 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 242.82 Mbit/s  
95th percentile per-packet one-way delay: 167.089 ms  
Loss rate: 0.00%

### Run 3: Report of Copa — Data Link





Run 4: Statistics of Copa

Start at: 2019-01-24 20:12:28

End at: 2019-01-24 20:12:58

Local clock offset: 0.002 ms

Remote clock offset: -0.07 ms

# Below is generated by plot.py at 2019-01-24 22:04:07

# Datalink statistics

-- Total of 3 flows:

Average throughput: 577.69 Mbit/s

95th percentile per-packet one-way delay: 133.637 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 325.13 Mbit/s

95th percentile per-packet one-way delay: 133.260 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 272.99 Mbit/s

95th percentile per-packet one-way delay: 133.204 ms

Loss rate: 0.00%

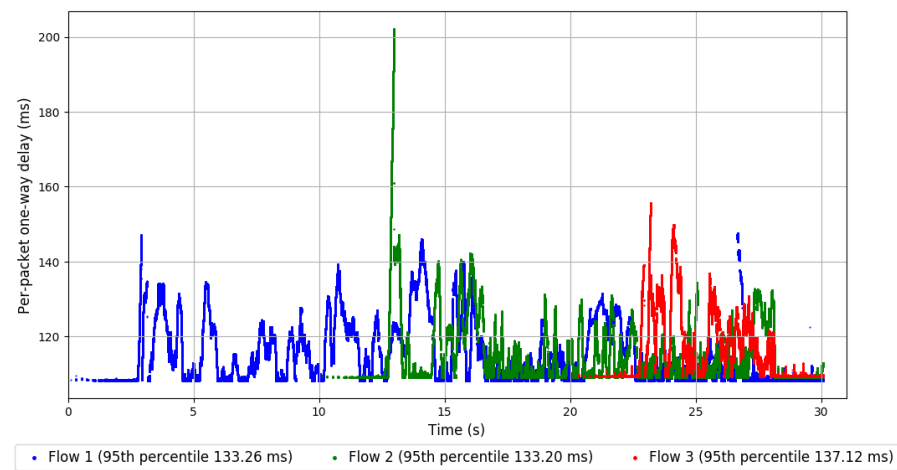
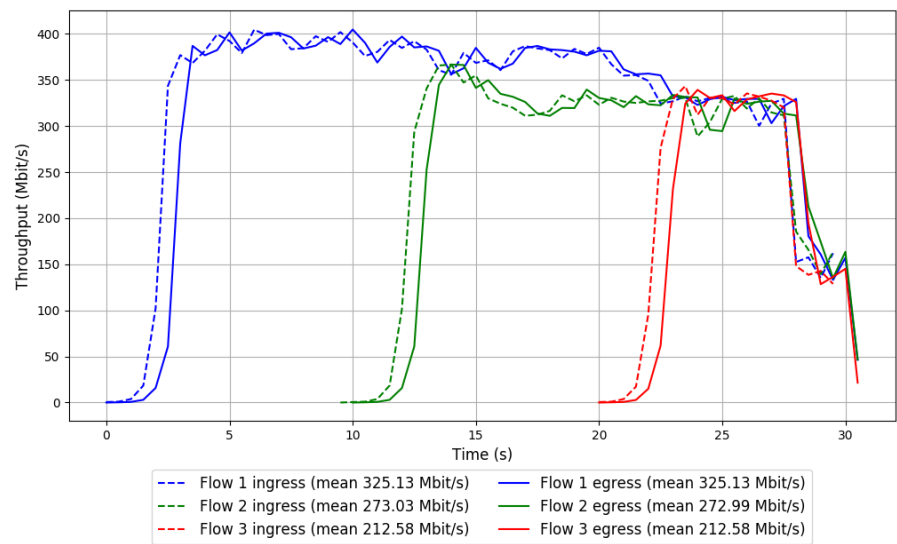
-- Flow 3:

Average throughput: 212.58 Mbit/s

95th percentile per-packet one-way delay: 137.117 ms

Loss rate: 0.00%

Run 4: Report of Copa — Data Link

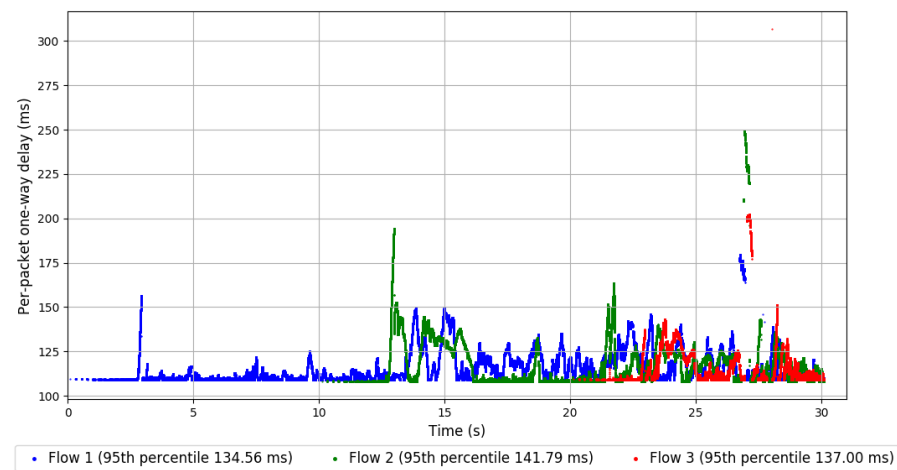
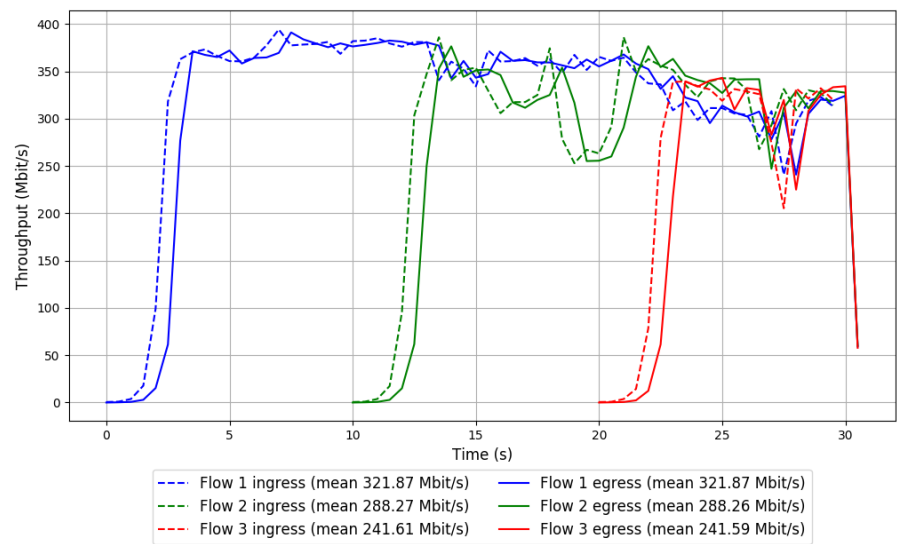


Run 5: Statistics of Copa

Start at: 2019-01-24 20:51:02  
End at: 2019-01-24 20:51:32  
Local clock offset: -0.006 ms  
Remote clock offset: -0.088 ms

```
# Below is generated by plot.py at 2019-01-24 22:07:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 594.11 Mbit/s
95th percentile per-packet one-way delay: 138.324 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 321.87 Mbit/s
95th percentile per-packet one-way delay: 134.557 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 288.26 Mbit/s
95th percentile per-packet one-way delay: 141.788 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 241.59 Mbit/s
95th percentile per-packet one-way delay: 137.005 ms
Loss rate: 0.01%
```

Run 5: Report of Copa — Data Link

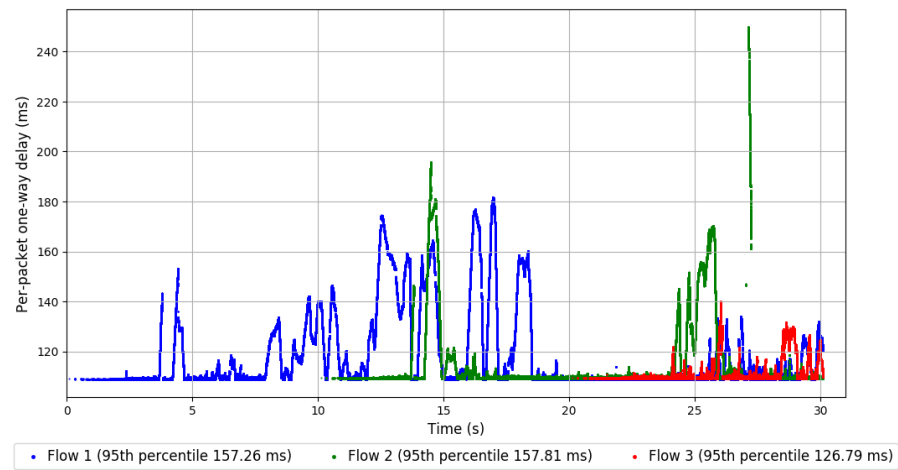
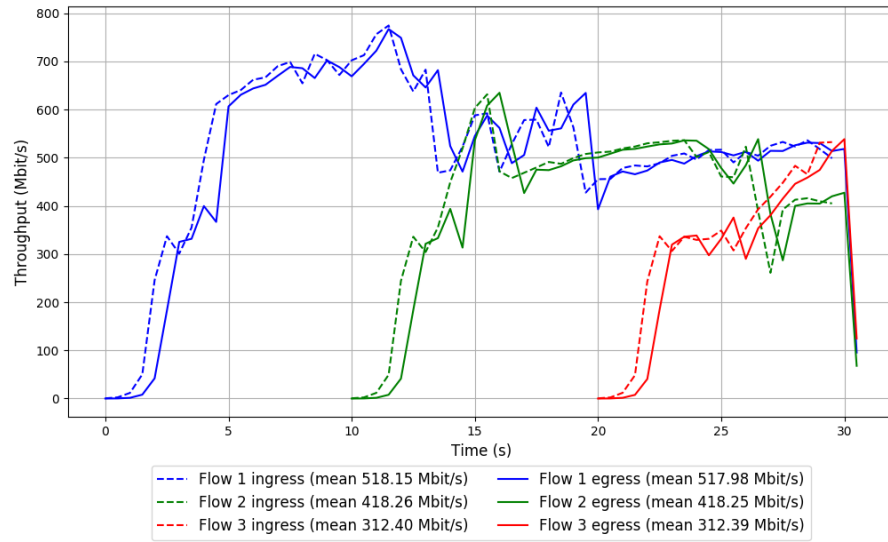


Run 1: Statistics of TCP Cubic

Start at: 2019-01-24 18:14:32  
End at: 2019-01-24 18:15:02  
Local clock offset: 0.066 ms  
Remote clock offset: -0.058 ms

# Below is generated by plot.py at 2019-01-24 22:07:41  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 900.55 Mbit/s  
95th percentile per-packet one-way delay: 156.184 ms  
Loss rate: 0.02%  
-- Flow 1:  
Average throughput: 517.98 Mbit/s  
95th percentile per-packet one-way delay: 157.264 ms  
Loss rate: 0.03%  
-- Flow 2:  
Average throughput: 418.25 Mbit/s  
95th percentile per-packet one-way delay: 157.813 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 312.39 Mbit/s  
95th percentile per-packet one-way delay: 126.792 ms  
Loss rate: 0.00%

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

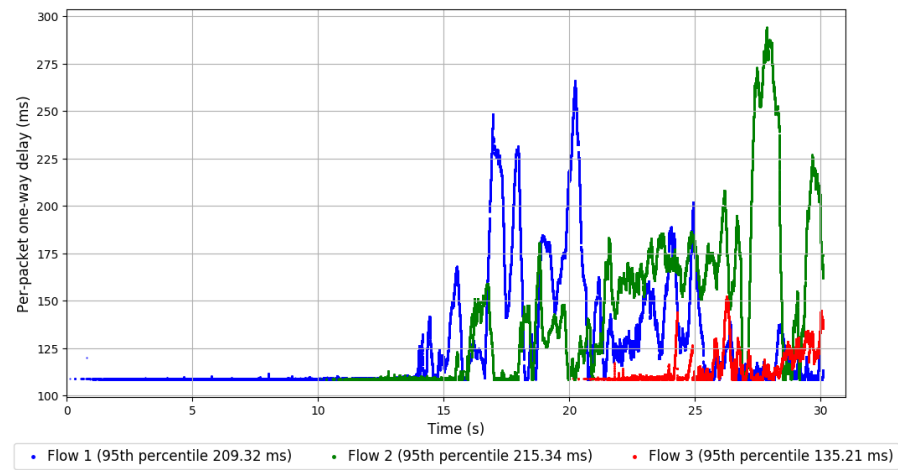
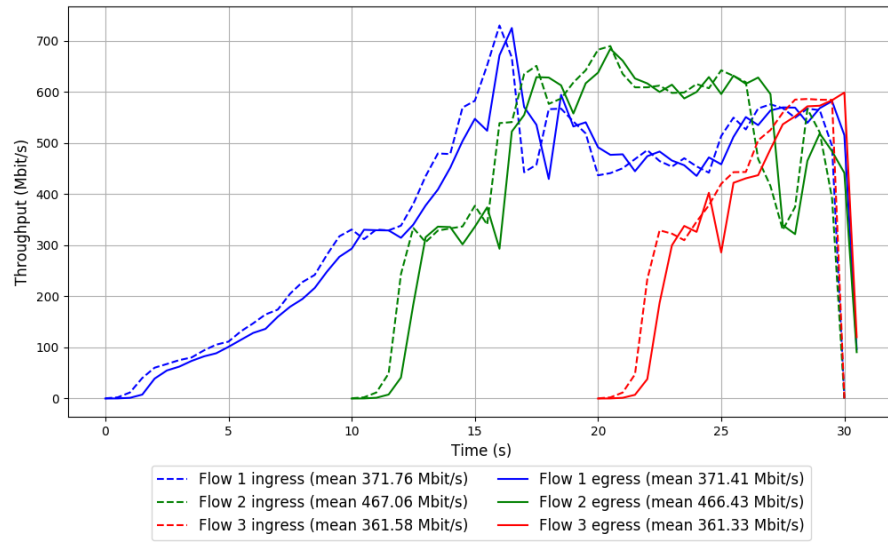


Run 2: Statistics of TCP Cubic

Start at: 2019-01-24 18:52:57  
End at: 2019-01-24 18:53:27  
Local clock offset: 0.574 ms  
Remote clock offset: -0.132 ms

# Below is generated by plot.py at 2019-01-24 22:07:41  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 802.27 Mbit/s  
95th percentile per-packet one-way delay: 204.170 ms  
Loss rate: 0.20%  
-- Flow 1:  
Average throughput: 371.41 Mbit/s  
95th percentile per-packet one-way delay: 209.323 ms  
Loss rate: 0.18%  
-- Flow 2:  
Average throughput: 466.43 Mbit/s  
95th percentile per-packet one-way delay: 215.342 ms  
Loss rate: 0.21%  
-- Flow 3:  
Average throughput: 361.33 Mbit/s  
95th percentile per-packet one-way delay: 135.211 ms  
Loss rate: 0.23%

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



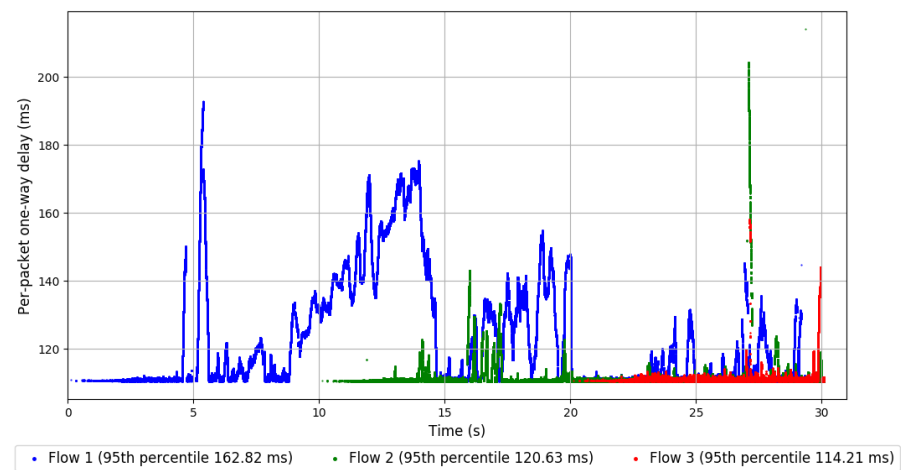
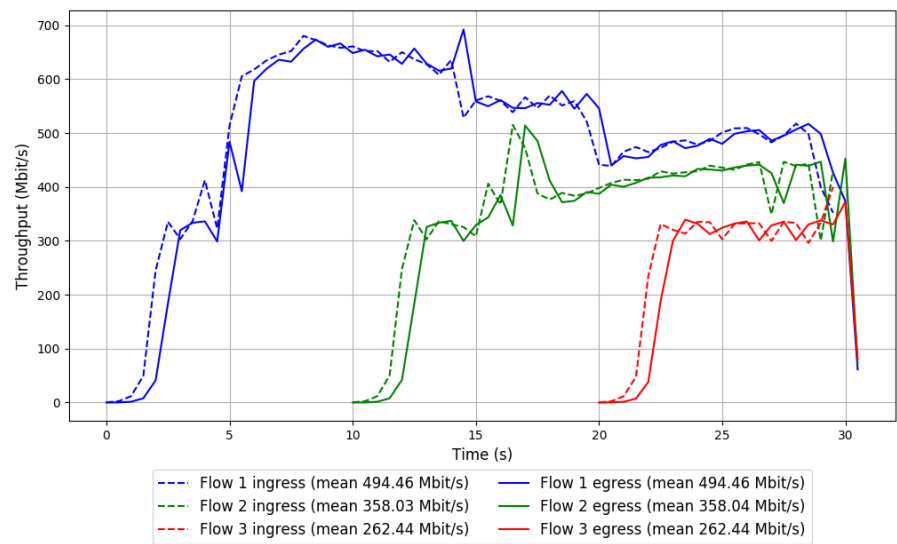


Run 3: Statistics of TCP Cubic

Start at: 2019-01-24 19:31:58  
End at: 2019-01-24 19:32:28  
Local clock offset: -1.216 ms  
Remote clock offset: -0.182 ms

# Below is generated by plot.py at 2019-01-24 22:07:41  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 820.23 Mbit/s  
95th percentile per-packet one-way delay: 154.903 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 494.46 Mbit/s  
95th percentile per-packet one-way delay: 162.824 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 358.04 Mbit/s  
95th percentile per-packet one-way delay: 120.627 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 262.44 Mbit/s  
95th percentile per-packet one-way delay: 114.213 ms  
Loss rate: 0.00%

Run 3: Report of TCP Cubic — Data Link



#### Run 4: Statistics of TCP Cubic

Start at: 2019-01-24 20:10:21

End at: 2019-01-24 20:10:51

Local clock offset: 0.471 ms

Remote clock offset: 0.291 ms

# Below is generated by plot.py at 2019-01-24 22:07:51

# Datalink statistics

-- Total of 3 flows:

Average throughput: 880.99 Mbit/s

95th percentile per-packet one-way delay: 170.192 ms

Loss rate: 0.28%

-- Flow 1:

Average throughput: 450.80 Mbit/s

95th percentile per-packet one-way delay: 130.067 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 456.72 Mbit/s

95th percentile per-packet one-way delay: 181.275 ms

Loss rate: 0.34%

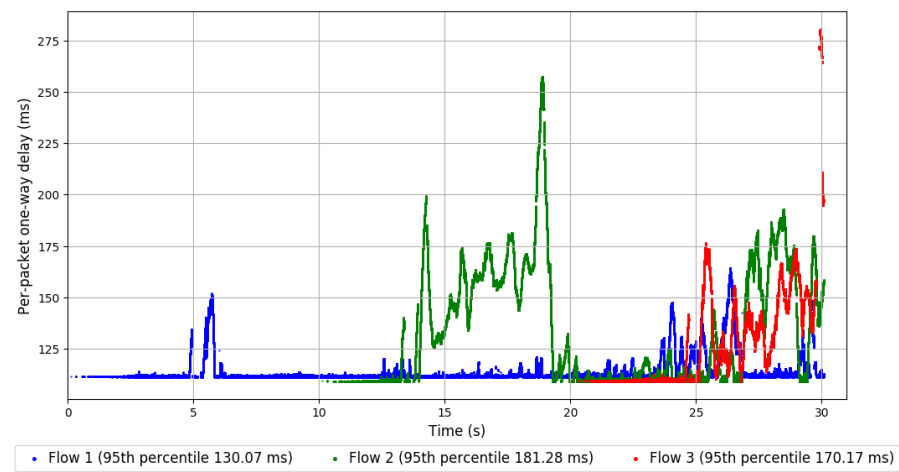
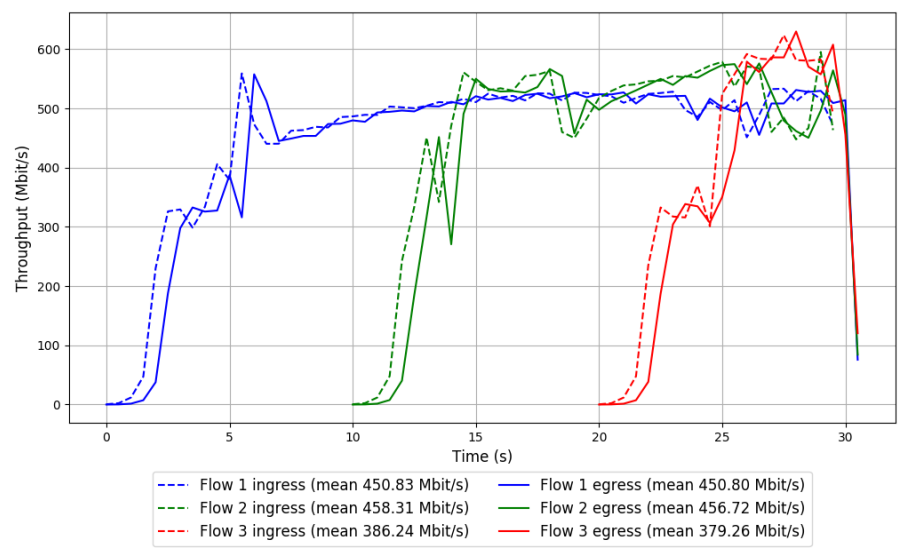
-- Flow 3:

Average throughput: 379.26 Mbit/s

95th percentile per-packet one-way delay: 170.169 ms

Loss rate: 1.06%

Run 4: Report of TCP Cubic — Data Link

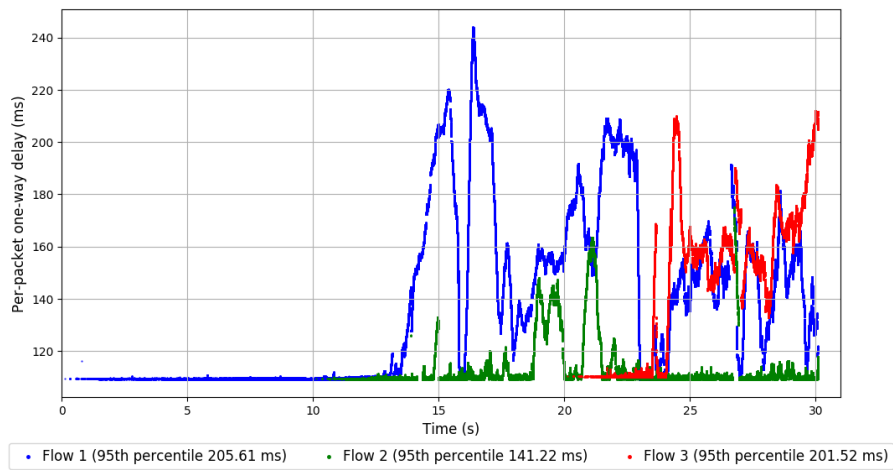
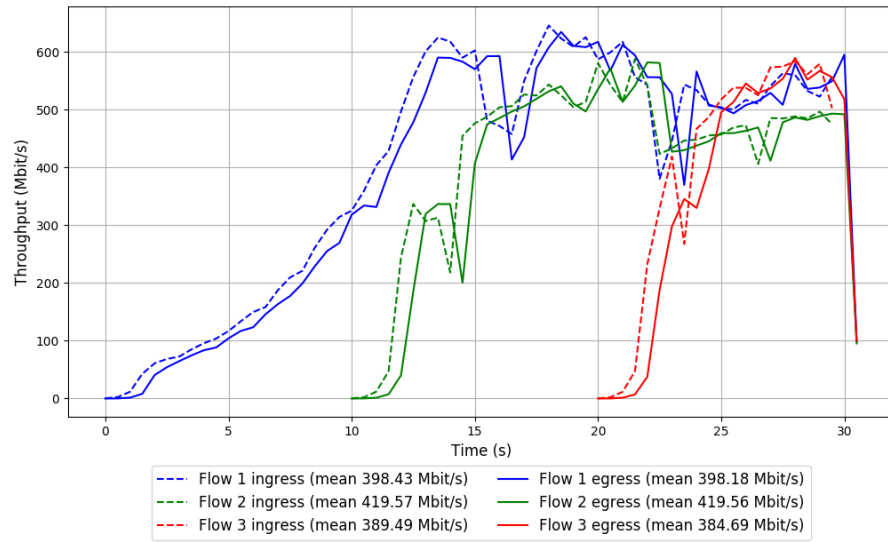


Run 5: Statistics of TCP Cubic

Start at: 2019-01-24 20:49:00  
End at: 2019-01-24 20:49:30  
Local clock offset: -0.846 ms  
Remote clock offset: -0.088 ms

# Below is generated by plot.py at 2019-01-24 22:07:51  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 805.27 Mbit/s  
95th percentile per-packet one-way delay: 201.399 ms  
Loss rate: 0.23%  
-- Flow 1:  
Average throughput: 398.18 Mbit/s  
95th percentile per-packet one-way delay: 205.606 ms  
Loss rate: 0.06%  
-- Flow 2:  
Average throughput: 419.56 Mbit/s  
95th percentile per-packet one-way delay: 141.224 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 384.69 Mbit/s  
95th percentile per-packet one-way delay: 201.521 ms  
Loss rate: 1.23%

## Run 5: Report of TCP Cubic — Data Link



Run 1: Statistics of FillP

Start at: 2019-01-24 18:03:49

End at: 2019-01-24 18:04:19

Local clock offset: -0.717 ms

Remote clock offset: 0.443 ms

# Below is generated by plot.py at 2019-01-24 22:10:24

# Datalink statistics

-- Total of 3 flows:

Average throughput: 861.42 Mbit/s

95th percentile per-packet one-way delay: 127.293 ms

Loss rate: 0.22%

-- Flow 1:

Average throughput: 541.79 Mbit/s

95th percentile per-packet one-way delay: 133.350 ms

Loss rate: 0.34%

-- Flow 2:

Average throughput: 361.19 Mbit/s

95th percentile per-packet one-way delay: 116.397 ms

Loss rate: 0.00%

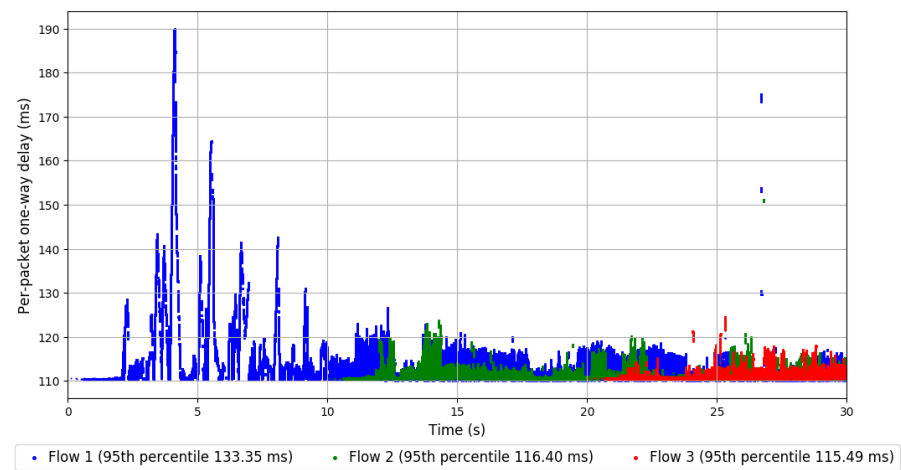
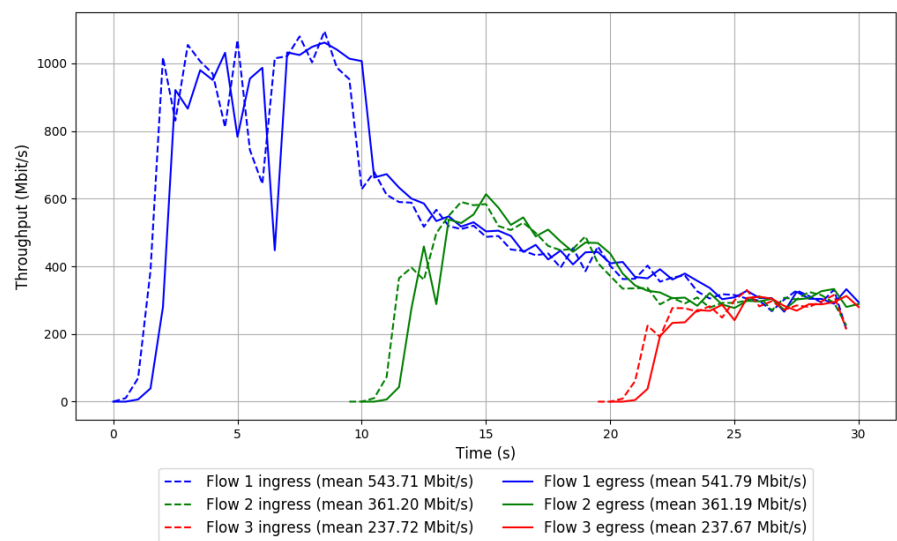
-- Flow 3:

Average throughput: 237.67 Mbit/s

95th percentile per-packet one-way delay: 115.494 ms

Loss rate: 0.00%

Run 1: Report of FillP — Data Link



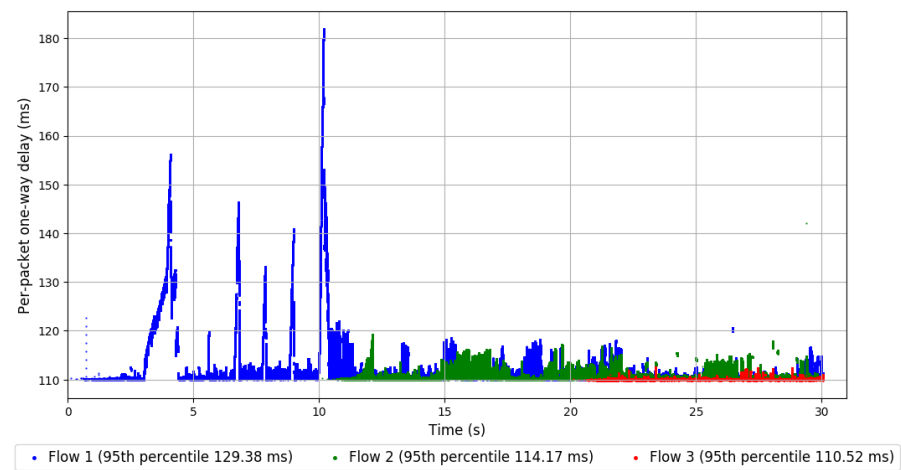
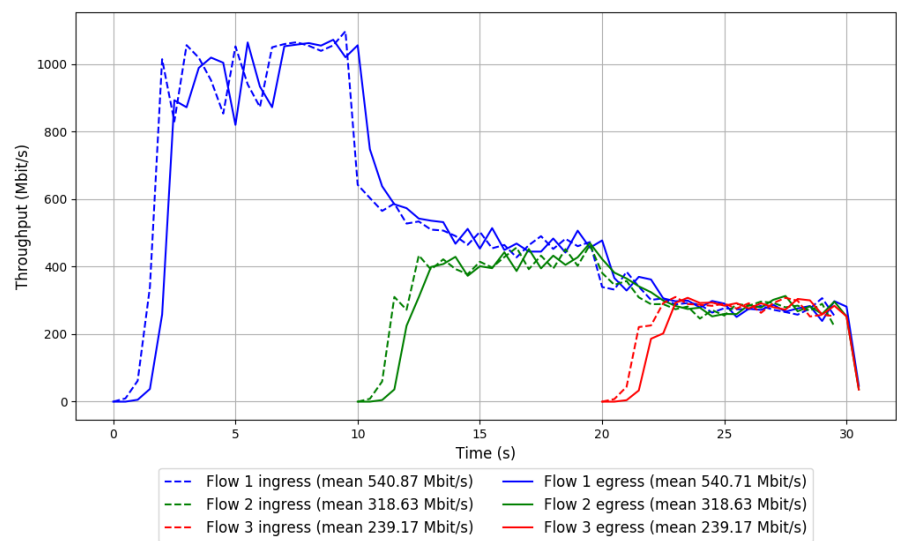


Run 2: Statistics of FillP

Start at: 2019-01-24 18:42:32  
End at: 2019-01-24 18:43:02  
Local clock offset: -0.602 ms  
Remote clock offset: 0.062 ms

# Below is generated by plot.py at 2019-01-24 22:20:18  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 831.83 Mbit/s  
95th percentile per-packet one-way delay: 124.197 ms  
Loss rate: 0.02%  
-- Flow 1:  
Average throughput: 540.71 Mbit/s  
95th percentile per-packet one-way delay: 129.375 ms  
Loss rate: 0.03%  
-- Flow 2:  
Average throughput: 318.63 Mbit/s  
95th percentile per-packet one-way delay: 114.175 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 239.17 Mbit/s  
95th percentile per-packet one-way delay: 110.518 ms  
Loss rate: 0.00%

Run 2: Report of FillP — Data Link

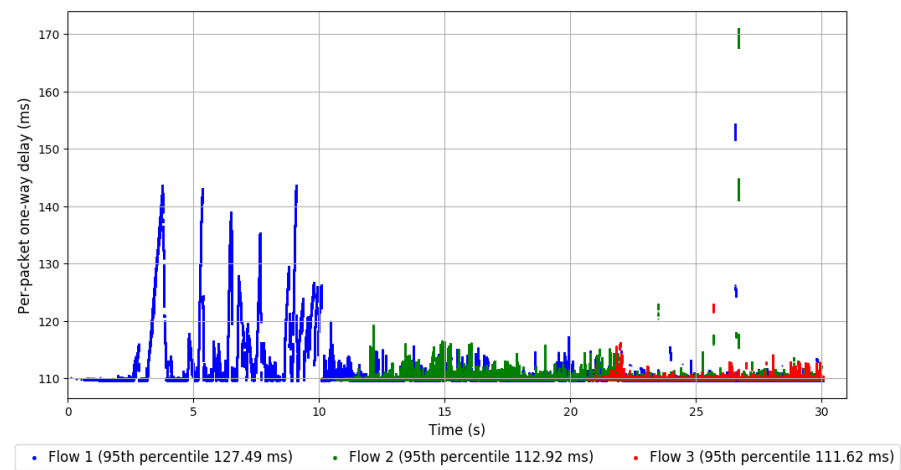
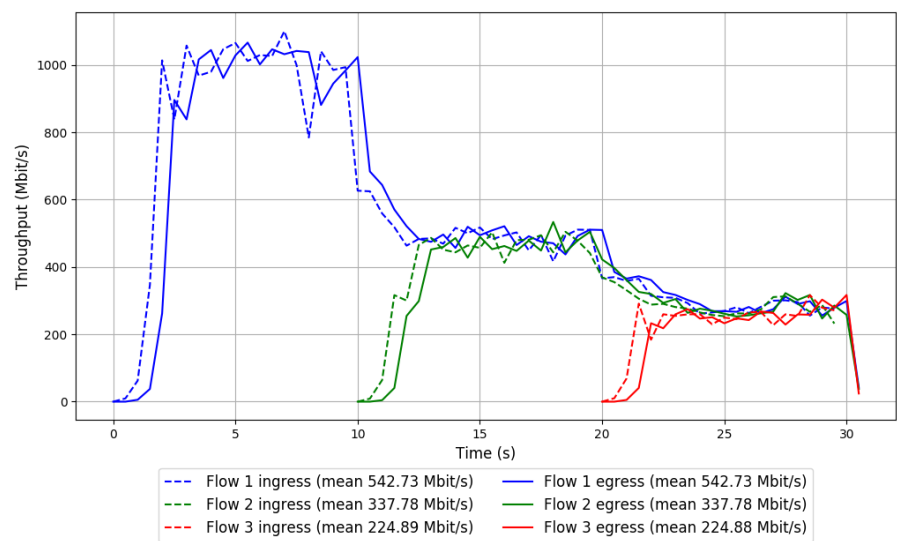


Run 3: Statistics of FillP

Start at: 2019-01-24 19:21:20  
End at: 2019-01-24 19:21:50  
Local clock offset: -0.521 ms  
Remote clock offset: -0.137 ms

# Below is generated by plot.py at 2019-01-24 22:22:05  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 841.78 Mbit/s  
95th percentile per-packet one-way delay: 124.136 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 542.73 Mbit/s  
95th percentile per-packet one-way delay: 127.490 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 337.78 Mbit/s  
95th percentile per-packet one-way delay: 112.925 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 224.88 Mbit/s  
95th percentile per-packet one-way delay: 111.617 ms  
Loss rate: 0.00%

Run 3: Report of FillP — Data Link

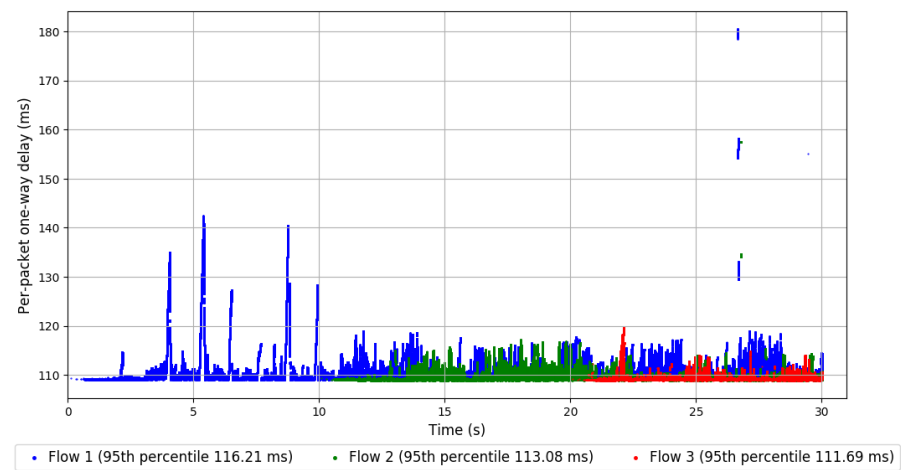
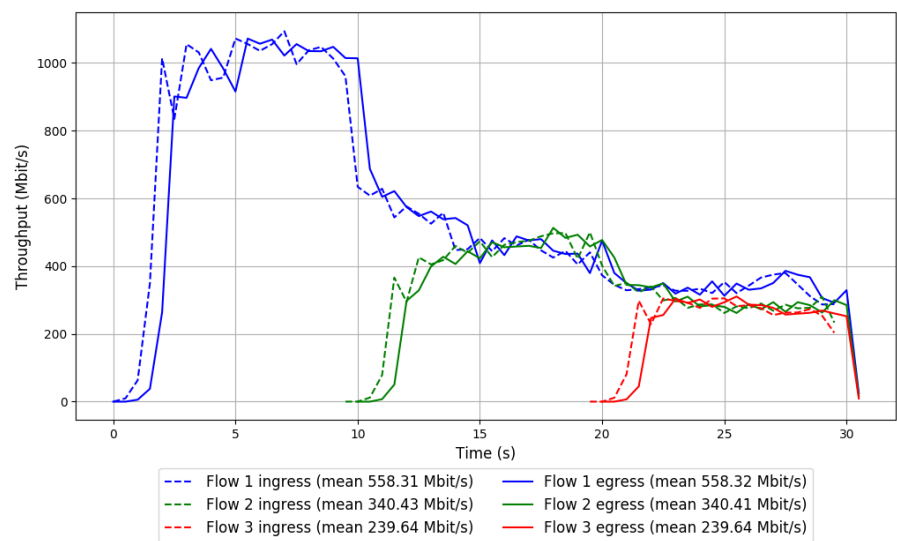


Run 4: Statistics of FillP

Start at: 2019-01-24 19:59:41  
End at: 2019-01-24 20:00:11  
Local clock offset: -0.03 ms  
Remote clock offset: -0.481 ms

# Below is generated by plot.py at 2019-01-24 22:23:14  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 864.79 Mbit/s  
95th percentile per-packet one-way delay: 114.882 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 558.32 Mbit/s  
95th percentile per-packet one-way delay: 116.211 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 340.41 Mbit/s  
95th percentile per-packet one-way delay: 113.078 ms  
Loss rate: 0.02%  
-- Flow 3:  
Average throughput: 239.64 Mbit/s  
95th percentile per-packet one-way delay: 111.694 ms  
Loss rate: 0.00%

Run 4: Report of FillP — Data Link

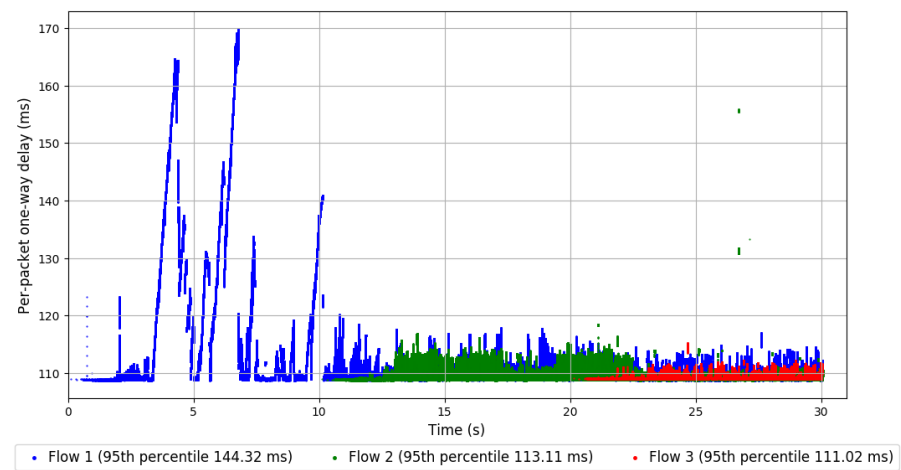
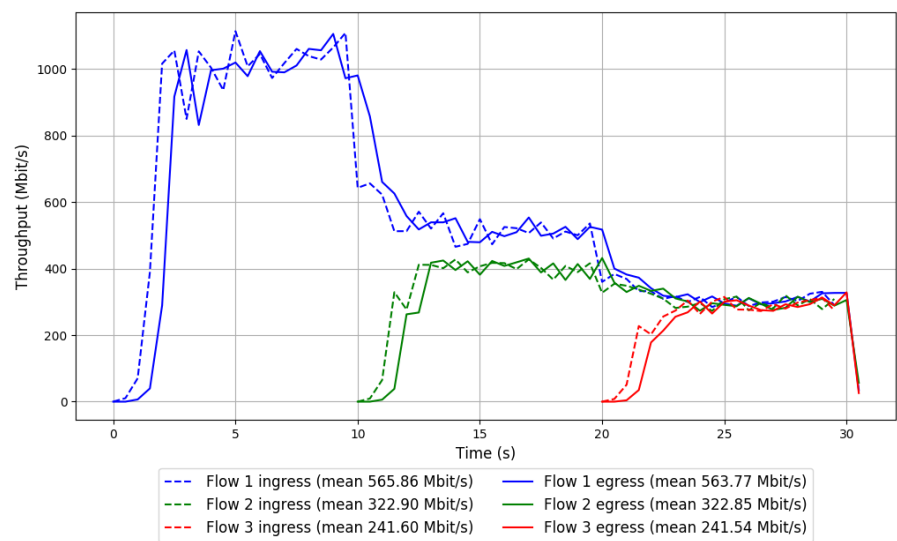


Run 5: Statistics of FillP

Start at: 2019-01-24 20:38:07  
End at: 2019-01-24 20:38:37  
Local clock offset: -0.645 ms  
Remote clock offset: -0.112 ms

# Below is generated by plot.py at 2019-01-24 22:23:25  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 858.47 Mbit/s  
95th percentile per-packet one-way delay: 137.800 ms  
Loss rate: 0.24%  
-- Flow 1:  
Average throughput: 563.77 Mbit/s  
95th percentile per-packet one-way delay: 144.324 ms  
Loss rate: 0.36%  
-- Flow 2:  
Average throughput: 322.85 Mbit/s  
95th percentile per-packet one-way delay: 113.113 ms  
Loss rate: 0.01%  
-- Flow 3:  
Average throughput: 241.54 Mbit/s  
95th percentile per-packet one-way delay: 111.021 ms  
Loss rate: 0.00%

Run 5: Report of FillP — Data Link



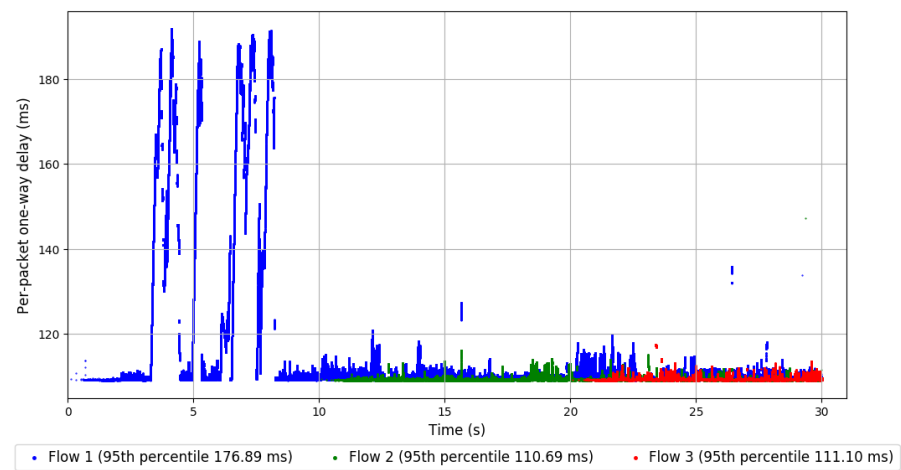
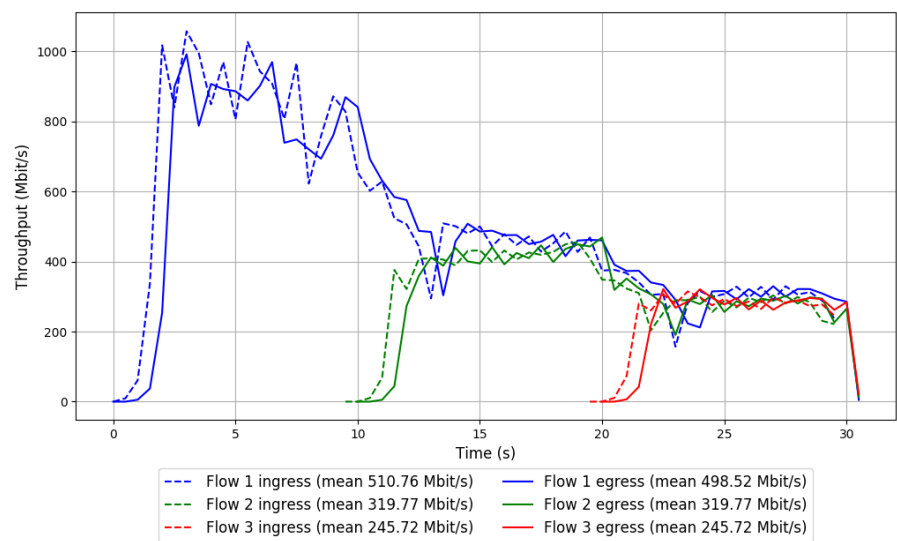


Run 1: Statistics of FillP-Sheep

Start at: 2019-01-24 18:20:57  
End at: 2019-01-24 18:21:27  
Local clock offset: 0.132 ms  
Remote clock offset: -0.067 ms

# Below is generated by plot.py at 2019-01-24 22:24:53  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 792.99 Mbit/s  
95th percentile per-packet one-way delay: 166.313 ms  
Loss rate: 1.52%  
-- Flow 1:  
Average throughput: 498.52 Mbit/s  
95th percentile per-packet one-way delay: 176.890 ms  
Loss rate: 2.40%  
-- Flow 2:  
Average throughput: 319.77 Mbit/s  
95th percentile per-packet one-way delay: 110.690 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 245.72 Mbit/s  
95th percentile per-packet one-way delay: 111.104 ms  
Loss rate: 0.00%

Run 1: Report of FillP-Sheep — Data Link



Run 2: Statistics of FillP-Sheep

Start at: 2019-01-24 18:59:16

End at: 2019-01-24 18:59:46

Local clock offset: 0.108 ms

Remote clock offset: 0.227 ms

# Below is generated by plot.py at 2019-01-24 22:25:42

# Datalink statistics

-- Total of 3 flows:

Average throughput: 810.12 Mbit/s

95th percentile per-packet one-way delay: 116.368 ms

Loss rate: 0.06%

-- Flow 1:

Average throughput: 536.02 Mbit/s

95th percentile per-packet one-way delay: 119.942 ms

Loss rate: 0.09%

-- Flow 2:

Average throughput: 307.32 Mbit/s

95th percentile per-packet one-way delay: 112.236 ms

Loss rate: 0.00%

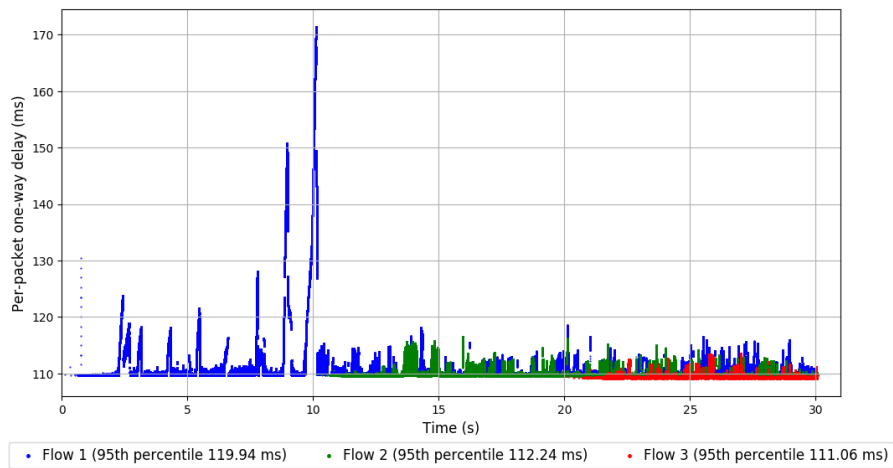
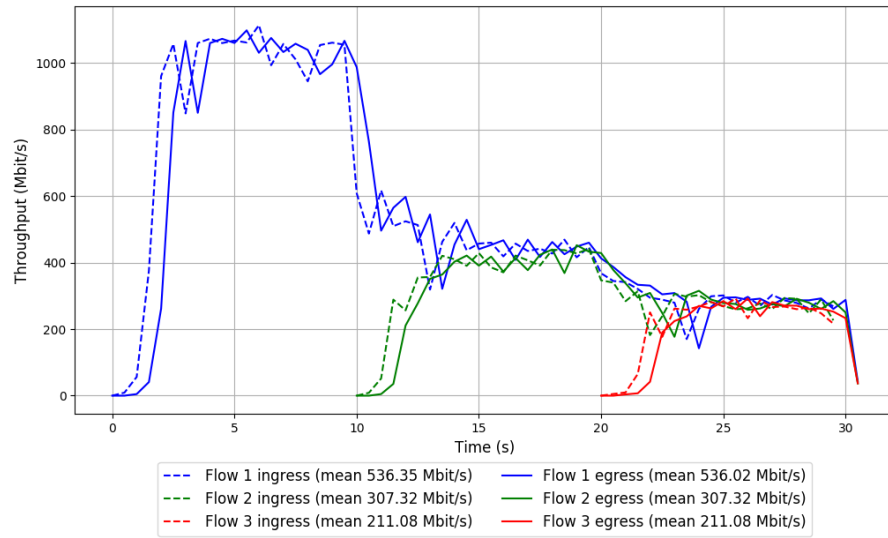
-- Flow 3:

Average throughput: 211.08 Mbit/s

95th percentile per-packet one-way delay: 111.056 ms

Loss rate: 0.00%

## Run 2: Report of FillP-Sheep — Data Link

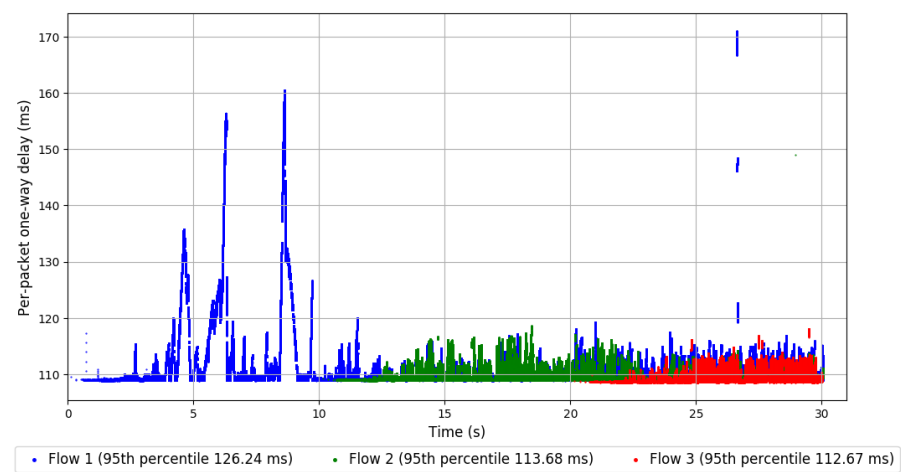
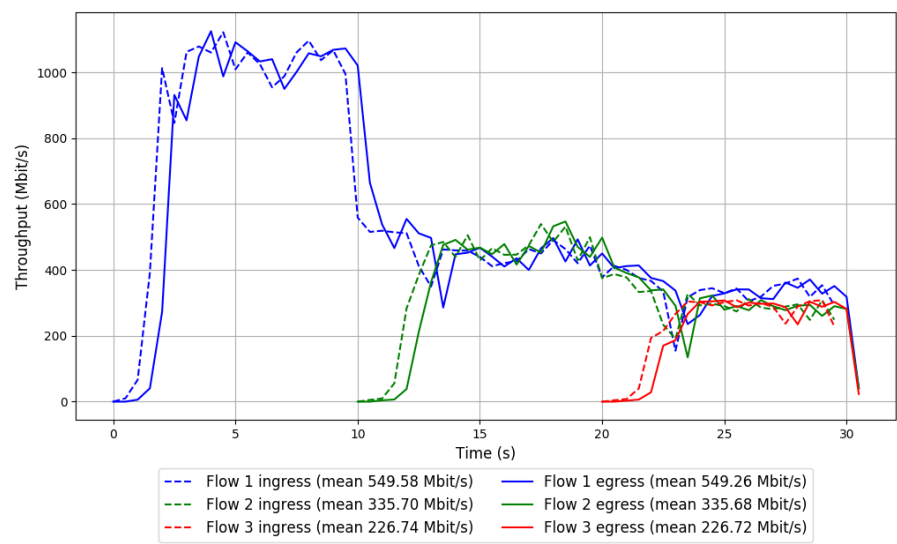


Run 3: Statistics of FillP-Sheep

Start at: 2019-01-24 19:38:13  
End at: 2019-01-24 19:38:43  
Local clock offset: -0.042 ms  
Remote clock offset: -0.499 ms

# Below is generated by plot.py at 2019-01-24 22:26:29  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 847.17 Mbit/s  
95th percentile per-packet one-way delay: 122.586 ms  
Loss rate: 0.04%  
-- Flow 1:  
Average throughput: 549.26 Mbit/s  
95th percentile per-packet one-way delay: 126.240 ms  
Loss rate: 0.06%  
-- Flow 2:  
Average throughput: 335.68 Mbit/s  
95th percentile per-packet one-way delay: 113.679 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 226.72 Mbit/s  
95th percentile per-packet one-way delay: 112.669 ms  
Loss rate: 0.00%

Run 3: Report of FillP-Sheep — Data Link



Run 4: Statistics of FillP-Sheep

Start at: 2019-01-24 20:16:44

End at: 2019-01-24 20:17:14

Local clock offset: -0.684 ms

Remote clock offset: -0.07 ms

# Below is generated by plot.py at 2019-01-24 22:28:14

# Datalink statistics

-- Total of 3 flows:

Average throughput: 806.14 Mbit/s

95th percentile per-packet one-way delay: 115.990 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 530.18 Mbit/s

95th percentile per-packet one-way delay: 117.833 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 308.79 Mbit/s

95th percentile per-packet one-way delay: 112.372 ms

Loss rate: 0.00%

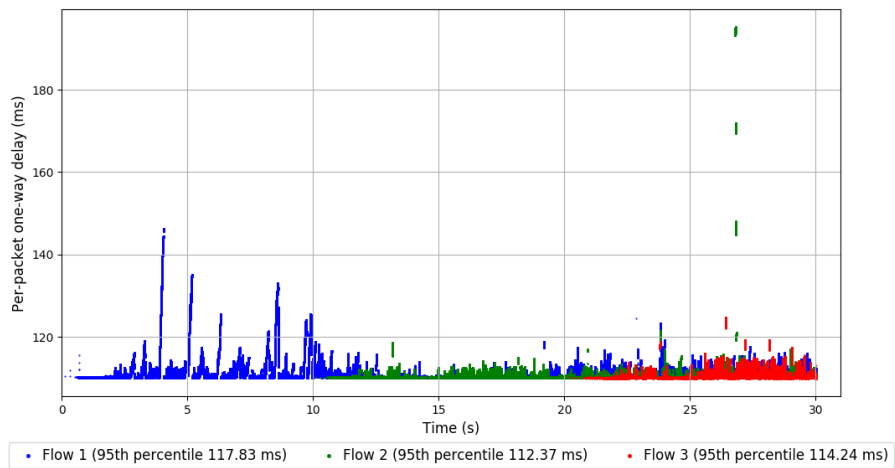
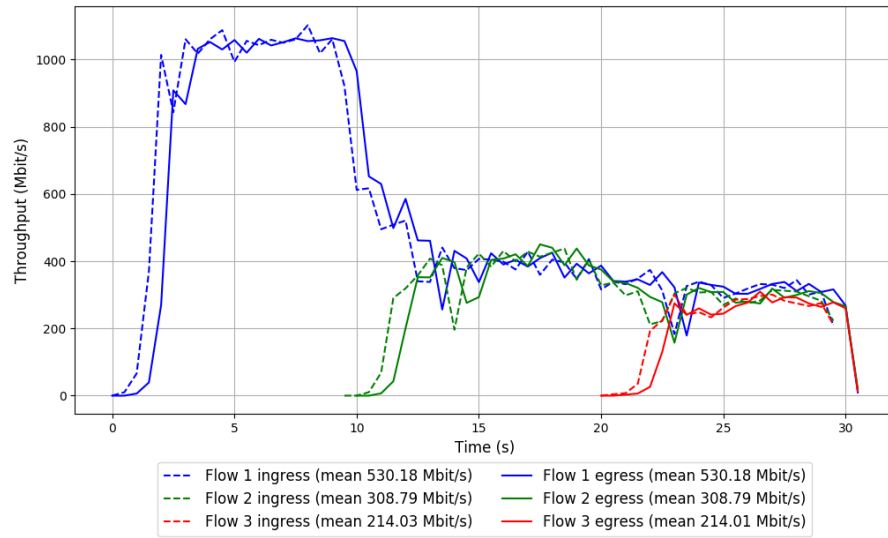
-- Flow 3:

Average throughput: 214.01 Mbit/s

95th percentile per-packet one-way delay: 114.241 ms

Loss rate: 0.00%

# Run 4: Report of FillP-Sheep — Data Link



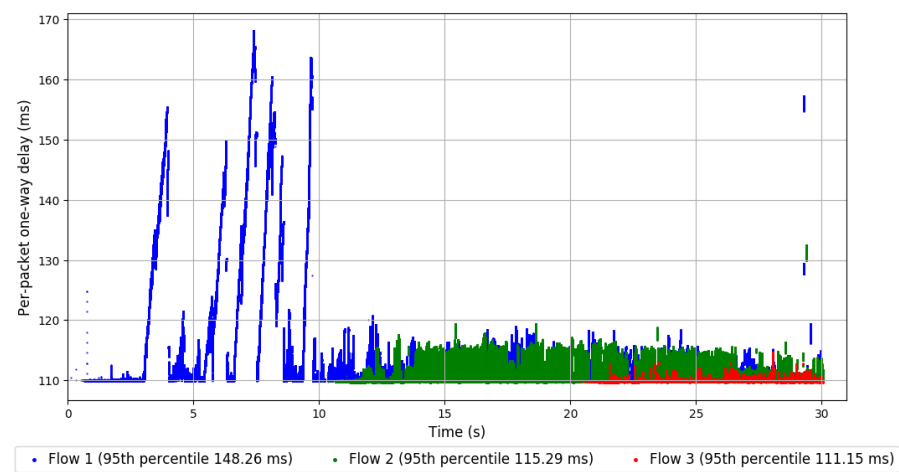
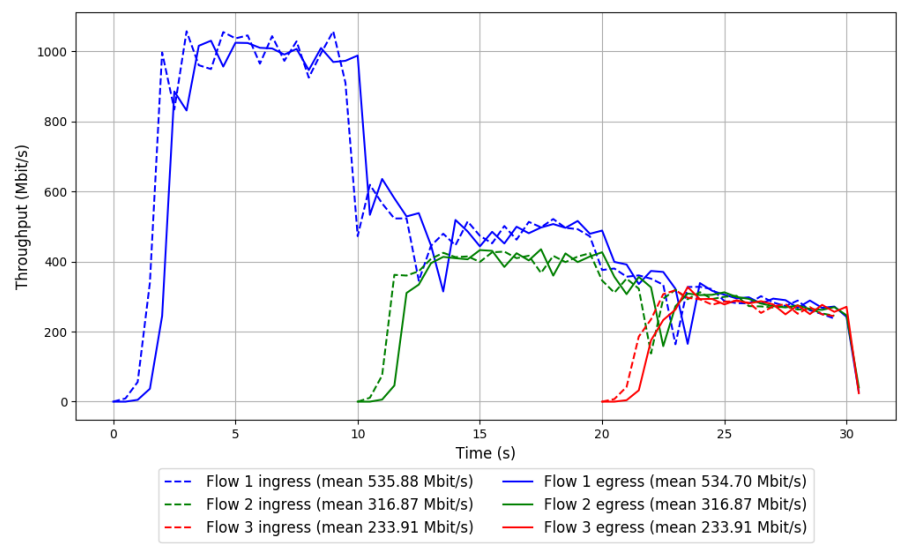


Run 5: Statistics of FillP-Sheep

Start at: 2019-01-24 20:55:16  
End at: 2019-01-24 20:55:46  
Local clock offset: -0.698 ms  
Remote clock offset: -0.143 ms

# Below is generated by plot.py at 2019-01-24 22:38:37  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 823.01 Mbit/s  
95th percentile per-packet one-way delay: 143.571 ms  
Loss rate: 0.15%  
-- Flow 1:  
Average throughput: 534.70 Mbit/s  
95th percentile per-packet one-way delay: 148.256 ms  
Loss rate: 0.22%  
-- Flow 2:  
Average throughput: 316.87 Mbit/s  
95th percentile per-packet one-way delay: 115.292 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 233.91 Mbit/s  
95th percentile per-packet one-way delay: 111.146 ms  
Loss rate: 0.00%

Run 5: Report of FillP-Sheep — Data Link

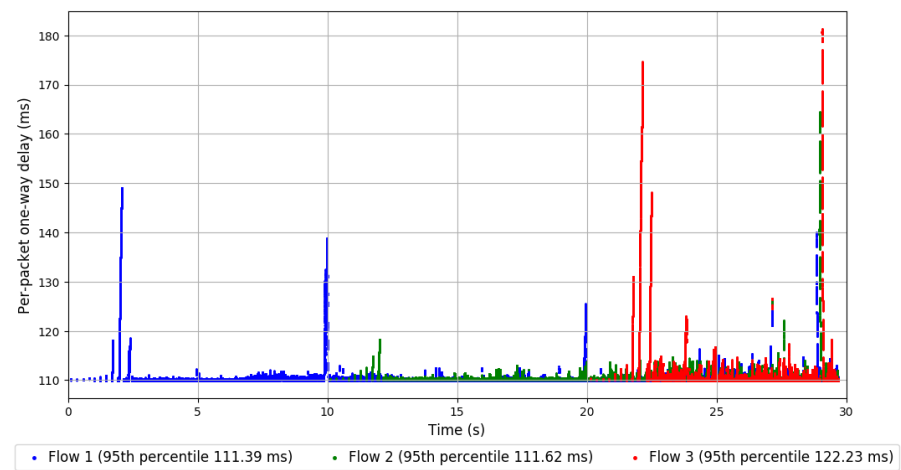
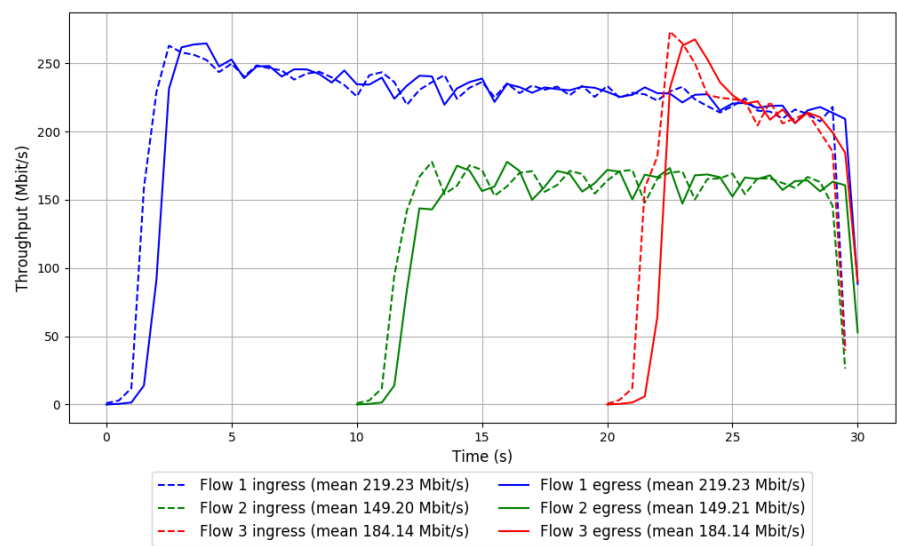


Run 1: Statistics of Indigo

Start at: 2019-01-24 18:27:39  
End at: 2019-01-24 18:28:09  
Local clock offset: -0.748 ms  
Remote clock offset: -0.091 ms

# Below is generated by plot.py at 2019-01-24 22:38:37  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 377.43 Mbit/s  
95th percentile per-packet one-way delay: 112.211 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 219.23 Mbit/s  
95th percentile per-packet one-way delay: 111.390 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 149.21 Mbit/s  
95th percentile per-packet one-way delay: 111.621 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 184.14 Mbit/s  
95th percentile per-packet one-way delay: 122.231 ms  
Loss rate: 0.00%

Run 1: Report of Indigo — Data Link

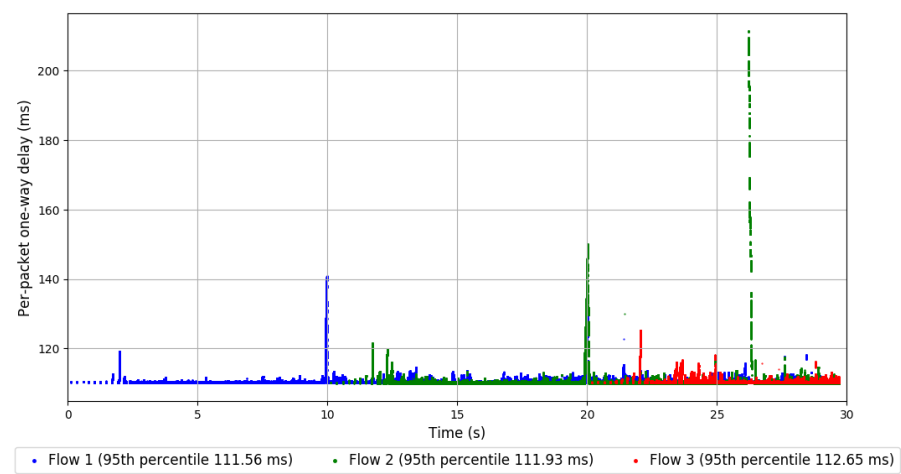
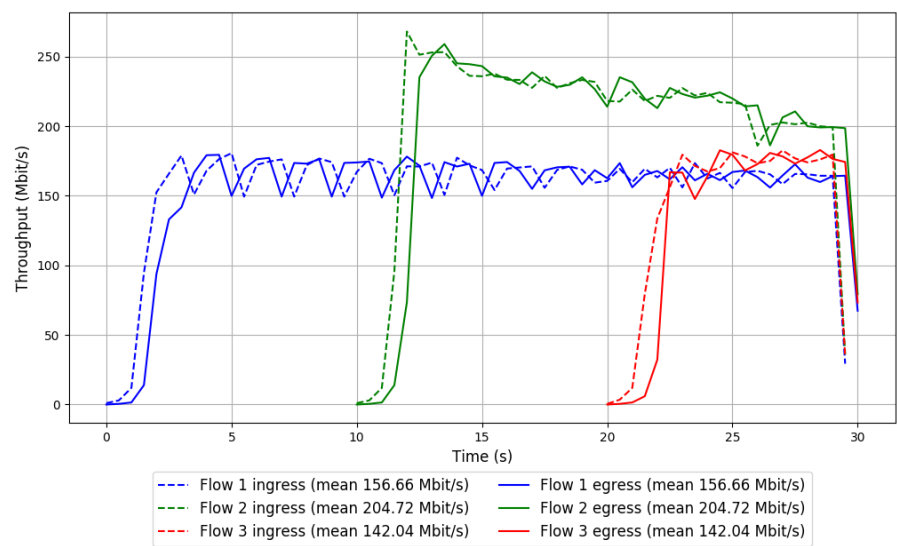


Run 2: Statistics of Indigo

Start at: 2019-01-24 19:06:03  
End at: 2019-01-24 19:06:33  
Local clock offset: -0.763 ms  
Remote clock offset: -0.112 ms

# Below is generated by plot.py at 2019-01-24 22:38:37  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 337.82 Mbit/s  
95th percentile per-packet one-way delay: 111.775 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 156.66 Mbit/s  
95th percentile per-packet one-way delay: 111.559 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 204.72 Mbit/s  
95th percentile per-packet one-way delay: 111.931 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 142.04 Mbit/s  
95th percentile per-packet one-way delay: 112.647 ms  
Loss rate: 0.00%

Run 2: Report of Indigo — Data Link

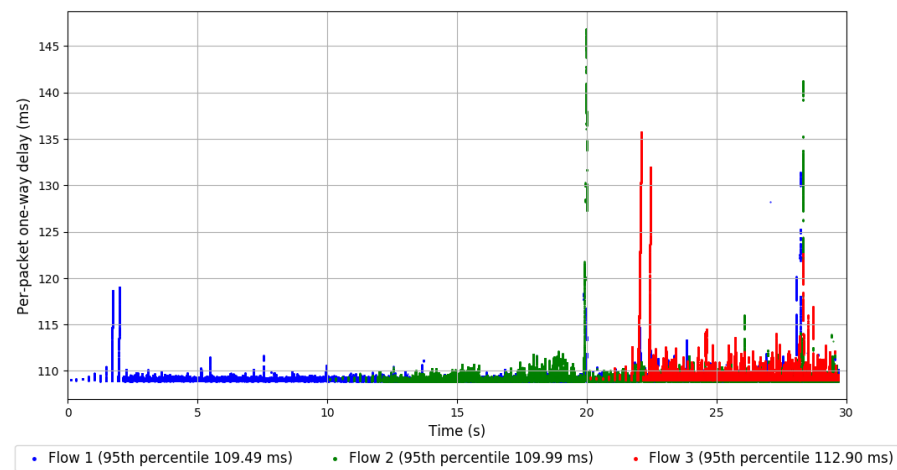
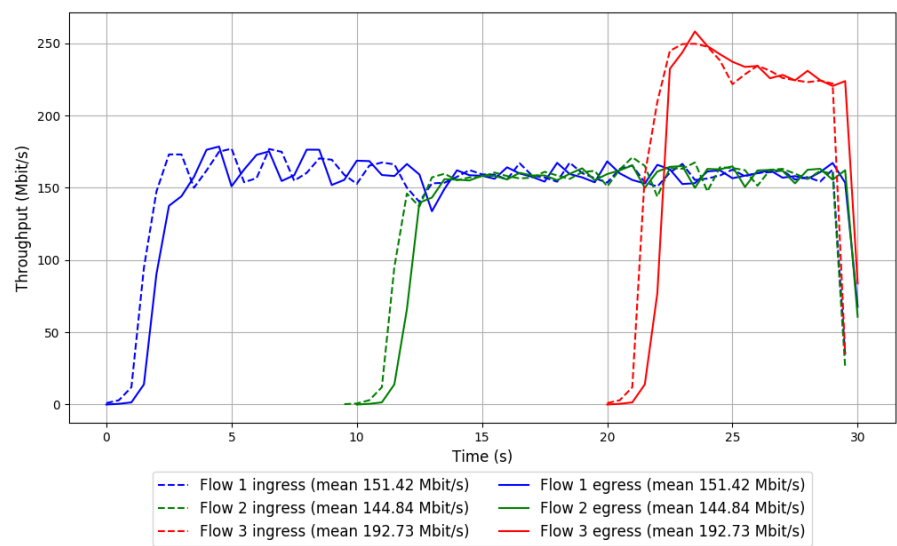


Run 3: Statistics of Indigo

Start at: 2019-01-24 19:45:03  
End at: 2019-01-24 19:45:33  
Local clock offset: 0.271 ms  
Remote clock offset: -0.134 ms

# Below is generated by plot.py at 2019-01-24 22:38:37  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 309.64 Mbit/s  
95th percentile per-packet one-way delay: 110.357 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 151.42 Mbit/s  
95th percentile per-packet one-way delay: 109.488 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 144.84 Mbit/s  
95th percentile per-packet one-way delay: 109.986 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 192.73 Mbit/s  
95th percentile per-packet one-way delay: 112.897 ms  
Loss rate: 0.00%

Run 3: Report of Indigo — Data Link



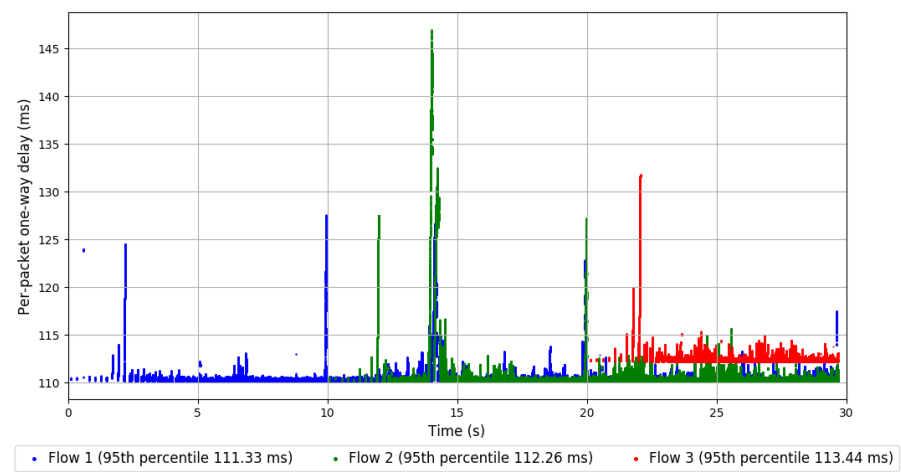
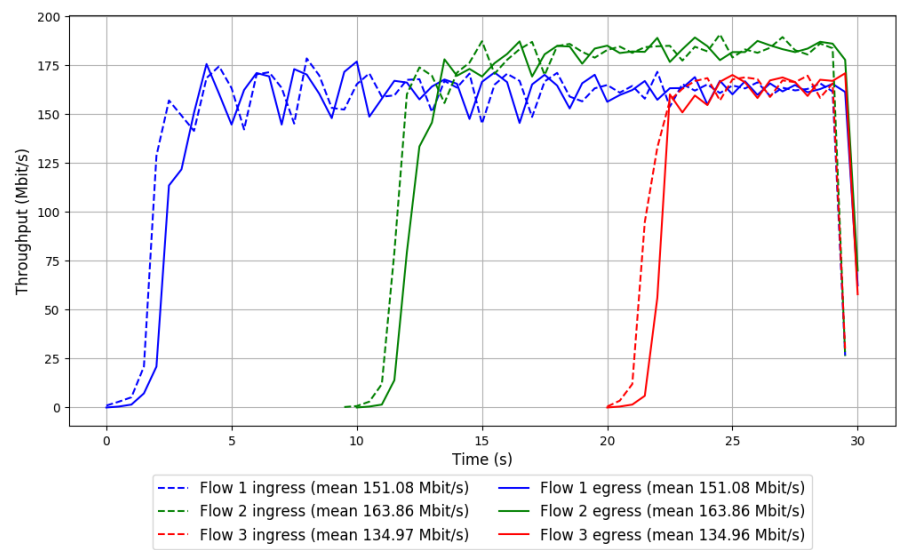


Run 4: Statistics of Indigo

Start at: 2019-01-24 20:23:28  
End at: 2019-01-24 20:23:58  
Local clock offset: -1.19 ms  
Remote clock offset: -0.425 ms

```
# Below is generated by plot.py at 2019-01-24 22:38:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 303.18 Mbit/s
95th percentile per-packet one-way delay: 112.642 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 151.08 Mbit/s
95th percentile per-packet one-way delay: 111.329 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 163.86 Mbit/s
95th percentile per-packet one-way delay: 112.260 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 134.96 Mbit/s
95th percentile per-packet one-way delay: 113.438 ms
Loss rate: 0.02%
```

Run 4: Report of Indigo — Data Link



Run 5: Statistics of Indigo

Start at: 2019-01-24 21:02:00

End at: 2019-01-24 21:02:30

Local clock offset: -0.025 ms

Remote clock offset: 0.001 ms

# Below is generated by plot.py at 2019-01-24 22:38:37

# Datalink statistics

-- Total of 3 flows:

Average throughput: 347.38 Mbit/s

95th percentile per-packet one-way delay: 110.780 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 180.44 Mbit/s

95th percentile per-packet one-way delay: 110.060 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 159.60 Mbit/s

95th percentile per-packet one-way delay: 109.817 ms

Loss rate: 0.00%

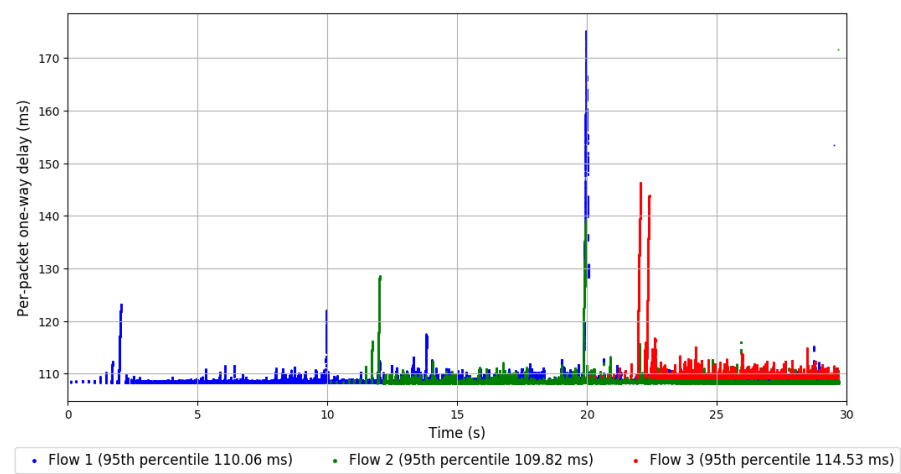
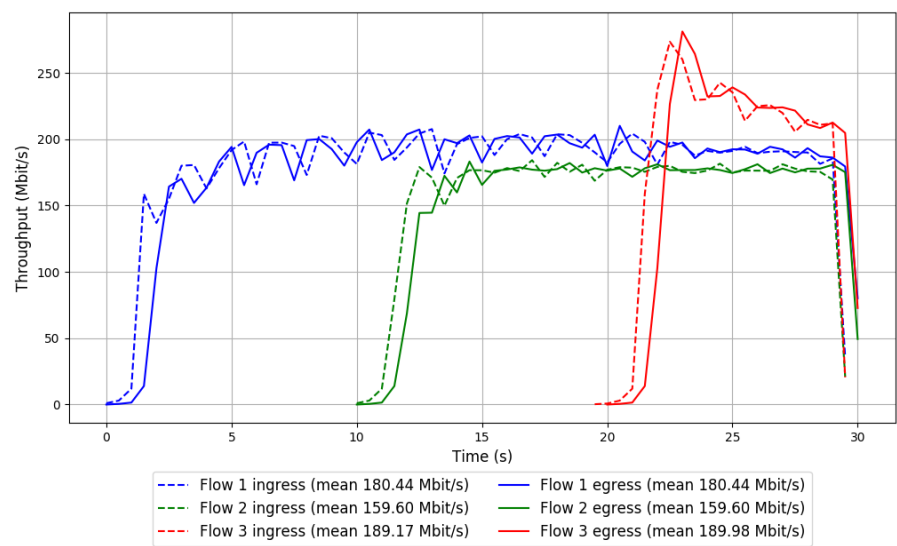
-- Flow 3:

Average throughput: 189.98 Mbit/s

95th percentile per-packet one-way delay: 114.525 ms

Loss rate: 0.00%

Run 5: Report of Indigo — Data Link

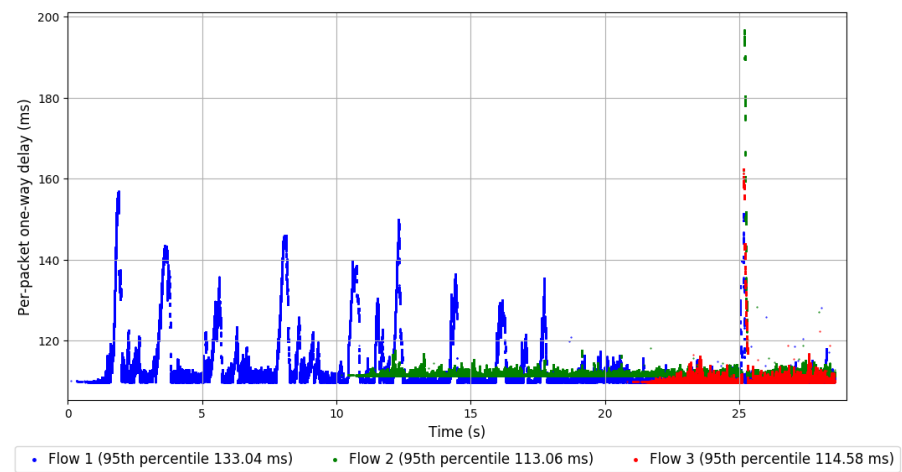
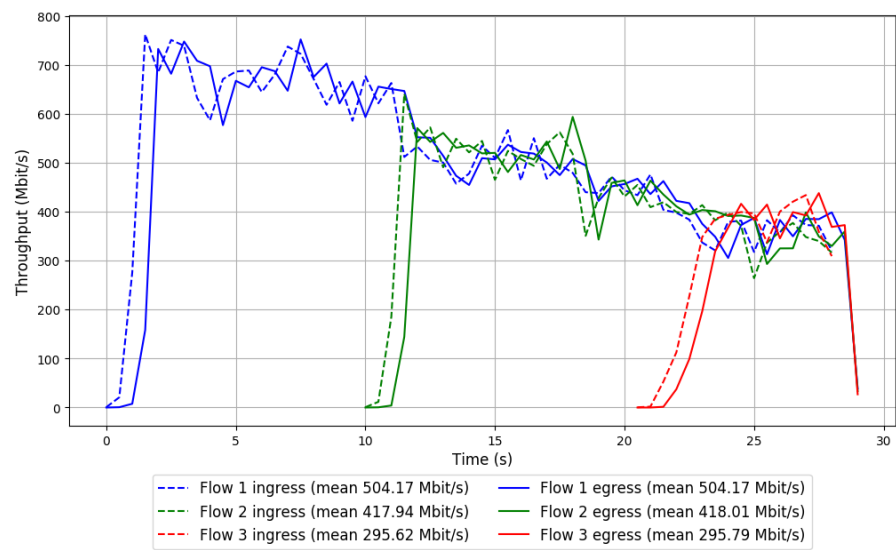


Run 1: Statistics of Indigo-MusesC3

Start at: 2019-01-24 18:36:56  
End at: 2019-01-24 18:37:26  
Local clock offset: -0.588 ms  
Remote clock offset: -0.101 ms

# Below is generated by plot.py at 2019-01-24 22:41:14  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 854.37 Mbit/s  
95th percentile per-packet one-way delay: 128.378 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 504.17 Mbit/s  
95th percentile per-packet one-way delay: 133.044 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 418.01 Mbit/s  
95th percentile per-packet one-way delay: 113.062 ms  
Loss rate: 0.01%  
-- Flow 3:  
Average throughput: 295.79 Mbit/s  
95th percentile per-packet one-way delay: 114.577 ms  
Loss rate: 0.00%

Run 1: Report of Indigo-MusesC3 — Data Link

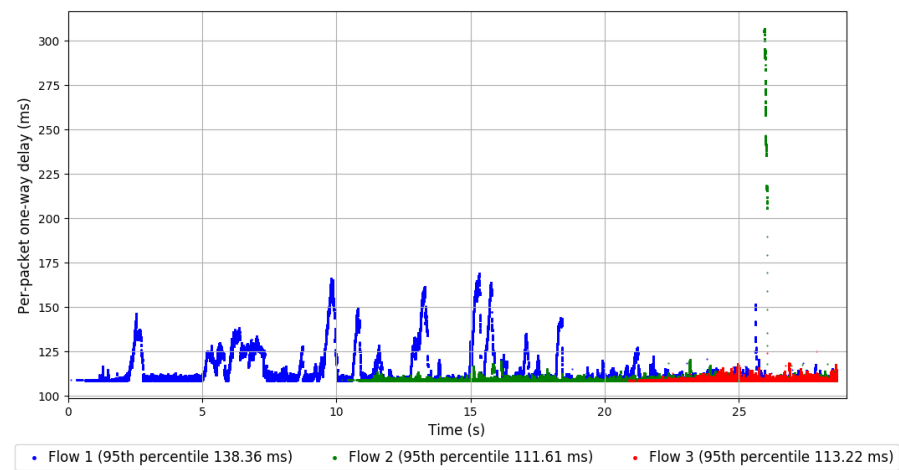
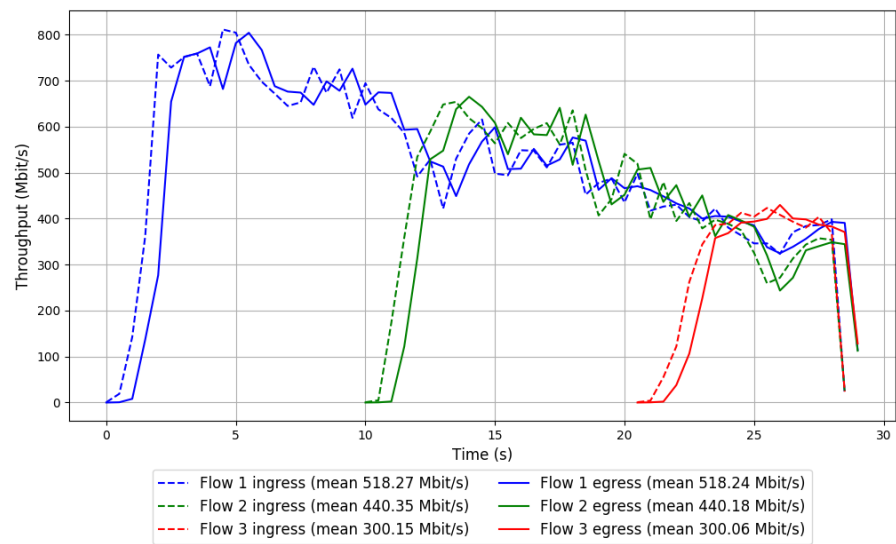


Run 2: Statistics of Indigo-MusesC3

Start at: 2019-01-24 19:15:34  
End at: 2019-01-24 19:16:04  
Local clock offset: 0.252 ms  
Remote clock offset: -0.507 ms

# Below is generated by plot.py at 2019-01-24 22:43:18  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 886.33 Mbit/s  
95th percentile per-packet one-way delay: 132.379 ms  
Loss rate: 0.01%  
-- Flow 1:  
Average throughput: 518.24 Mbit/s  
95th percentile per-packet one-way delay: 138.356 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 440.18 Mbit/s  
95th percentile per-packet one-way delay: 111.609 ms  
Loss rate: 0.04%  
-- Flow 3:  
Average throughput: 300.06 Mbit/s  
95th percentile per-packet one-way delay: 113.223 ms  
Loss rate: 0.01%

Run 2: Report of Indigo-MusesC3 — Data Link



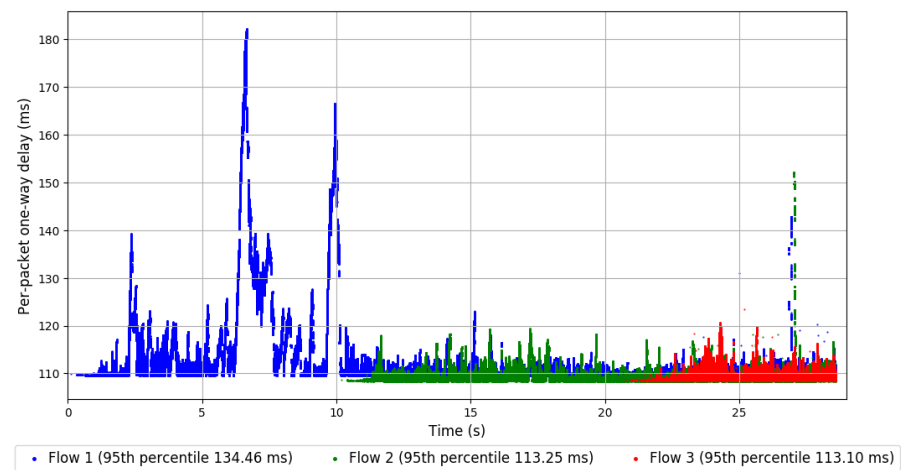
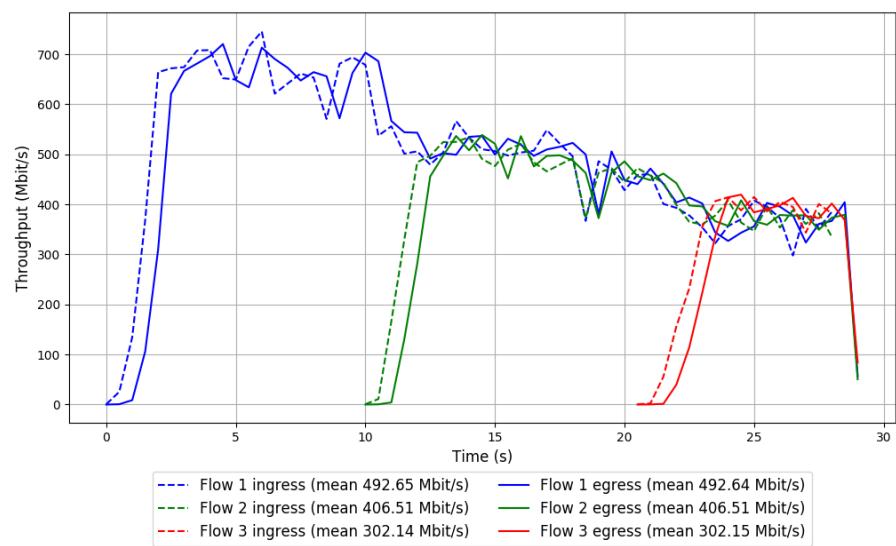


Run 3: Statistics of Indigo-MusesC3

Start at: 2019-01-24 19:53:57  
End at: 2019-01-24 19:54:27  
Local clock offset: -0.28 ms  
Remote clock offset: -0.129 ms

# Below is generated by plot.py at 2019-01-24 22:48:59  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 838.07 Mbit/s  
95th percentile per-packet one-way delay: 125.843 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 492.64 Mbit/s  
95th percentile per-packet one-way delay: 134.457 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 406.51 Mbit/s  
95th percentile per-packet one-way delay: 113.252 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 302.15 Mbit/s  
95th percentile per-packet one-way delay: 113.100 ms  
Loss rate: 0.00%

Run 3: Report of Indigo-MusesC3 — Data Link

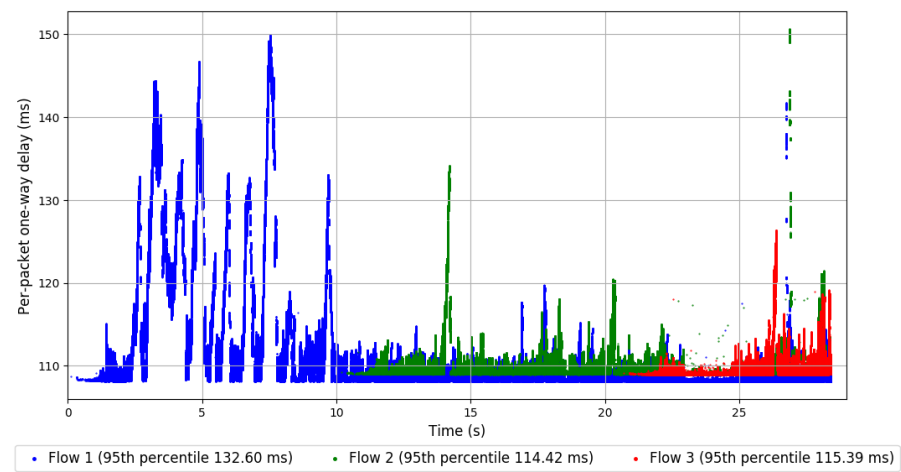
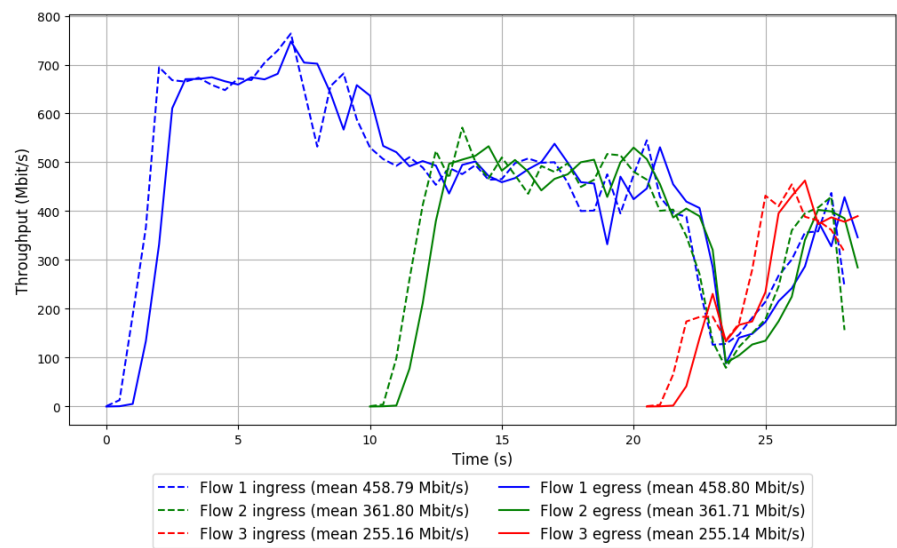


Run 4: Statistics of Indigo-MusesC3

Start at: 2019-01-24 20:32:37  
End at: 2019-01-24 20:33:07  
Local clock offset: -0.162 ms  
Remote clock offset: -0.489 ms

# Below is generated by plot.py at 2019-01-24 22:48:59  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 761.11 Mbit/s  
95th percentile per-packet one-way delay: 129.337 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 458.80 Mbit/s  
95th percentile per-packet one-way delay: 132.599 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 361.71 Mbit/s  
95th percentile per-packet one-way delay: 114.420 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 255.14 Mbit/s  
95th percentile per-packet one-way delay: 115.392 ms  
Loss rate: 0.00%

Run 4: Report of Indigo-MusesC3 — Data Link

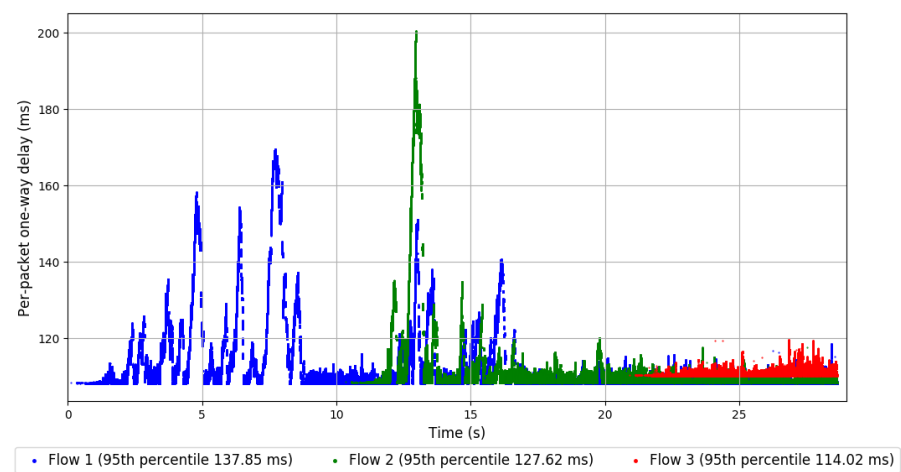
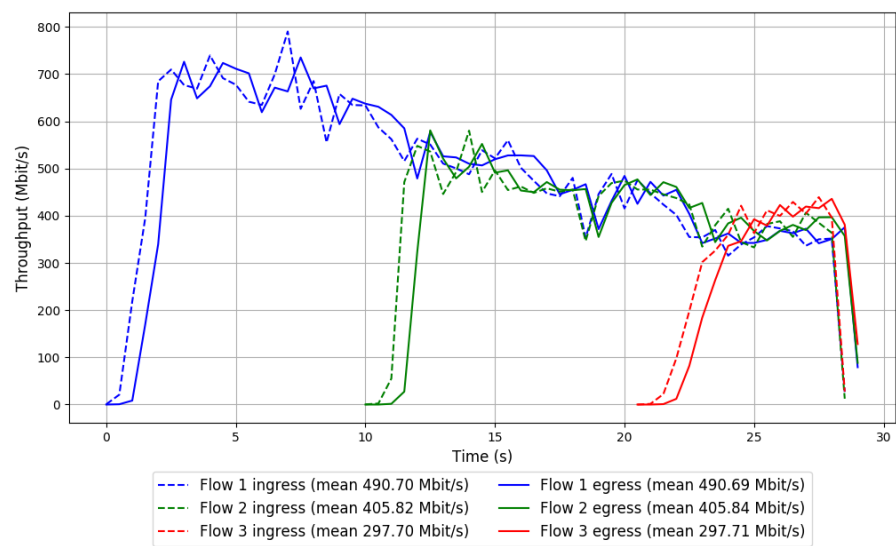


Run 5: Statistics of Indigo-MusesC3

Start at: 2019-01-24 21:11:13  
End at: 2019-01-24 21:11:43  
Local clock offset: -0.125 ms  
Remote clock offset: -0.1 ms

# Below is generated by plot.py at 2019-01-24 22:49:42  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 831.50 Mbit/s  
95th percentile per-packet one-way delay: 133.908 ms  
Loss rate: 0.01%  
-- Flow 1:  
Average throughput: 490.69 Mbit/s  
95th percentile per-packet one-way delay: 137.848 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 405.84 Mbit/s  
95th percentile per-packet one-way delay: 127.618 ms  
Loss rate: 0.01%  
-- Flow 3:  
Average throughput: 297.71 Mbit/s  
95th percentile per-packet one-way delay: 114.022 ms  
Loss rate: 0.03%

Run 5: Report of Indigo-MusesC3 — Data Link



Run 1: Statistics of Indigo-MusesC5

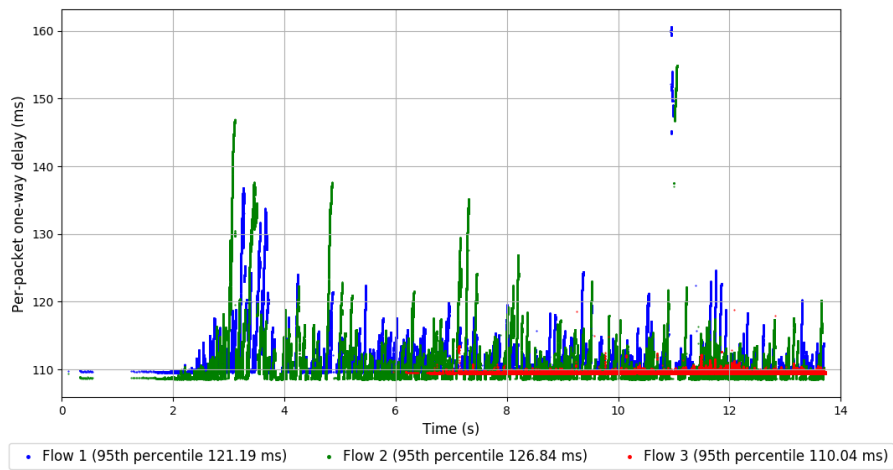
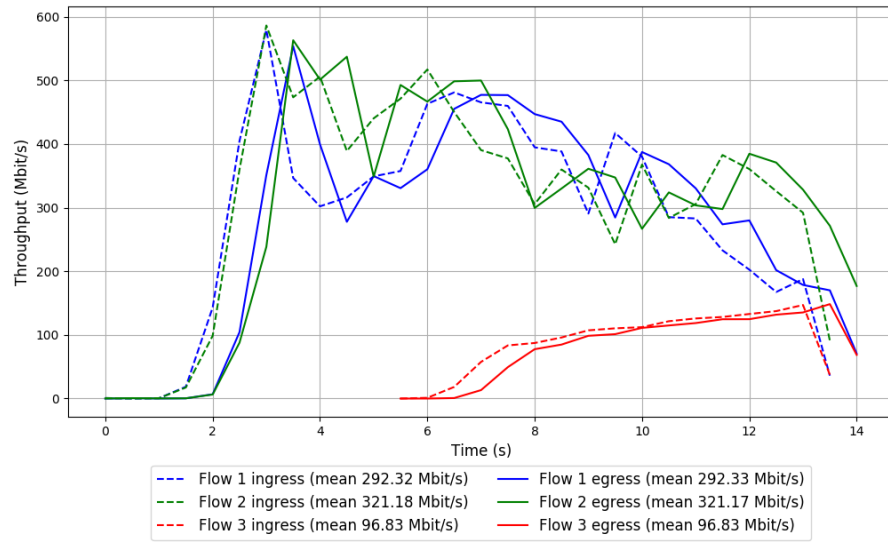
Start at: 2019-01-24 18:02:13

End at: 2019-01-24 18:02:43

Local clock offset: -0.178 ms

Remote clock offset: -0.113 ms

# Run 1: Report of Indigo-MusesC5 — Data Link



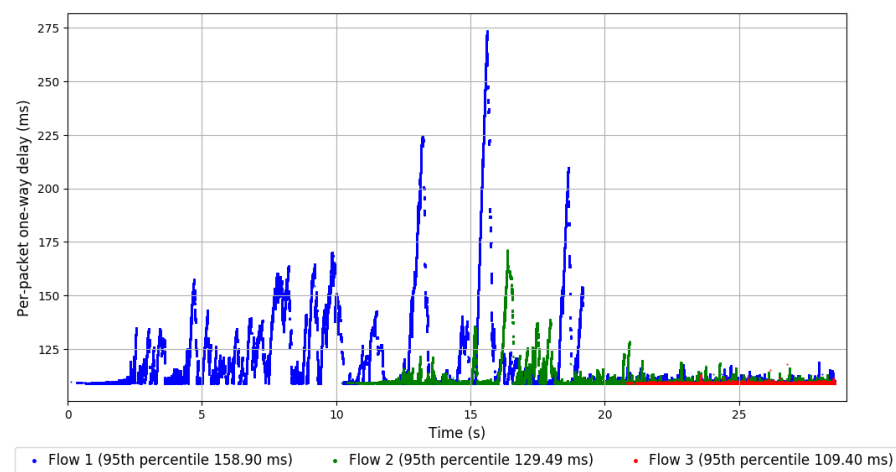
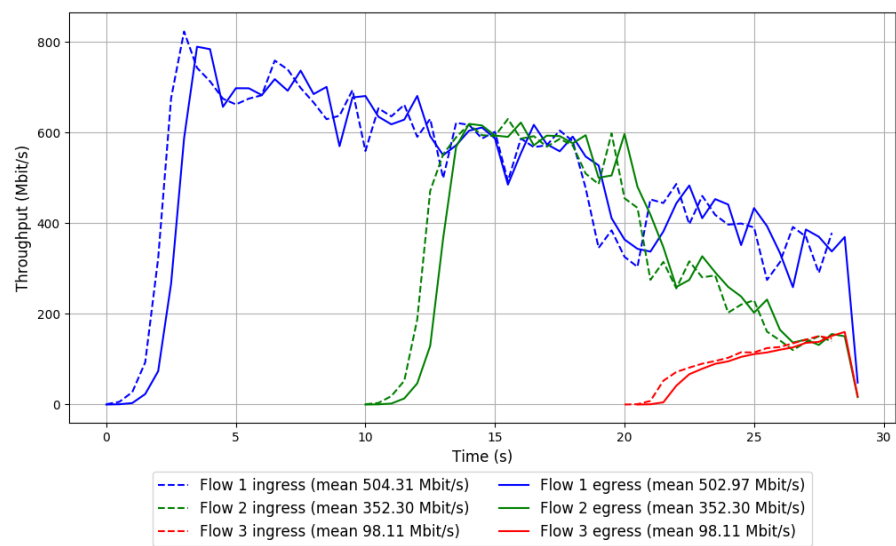


Run 2: Statistics of Indigo-MusesC5

Start at: 2019-01-24 18:40:35  
End at: 2019-01-24 18:41:05  
Local clock offset: 0.32 ms  
Remote clock offset: -0.006 ms

# Below is generated by plot.py at 2019-01-24 22:51:13  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 757.62 Mbit/s  
95th percentile per-packet one-way delay: 153.720 ms  
Loss rate: 0.17%  
-- Flow 1:  
Average throughput: 502.97 Mbit/s  
95th percentile per-packet one-way delay: 158.902 ms  
Loss rate: 0.26%  
-- Flow 2:  
Average throughput: 352.30 Mbit/s  
95th percentile per-packet one-way delay: 129.492 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 98.11 Mbit/s  
95th percentile per-packet one-way delay: 109.404 ms  
Loss rate: 0.00%

Run 2: Report of Indigo-MusesC5 — Data Link

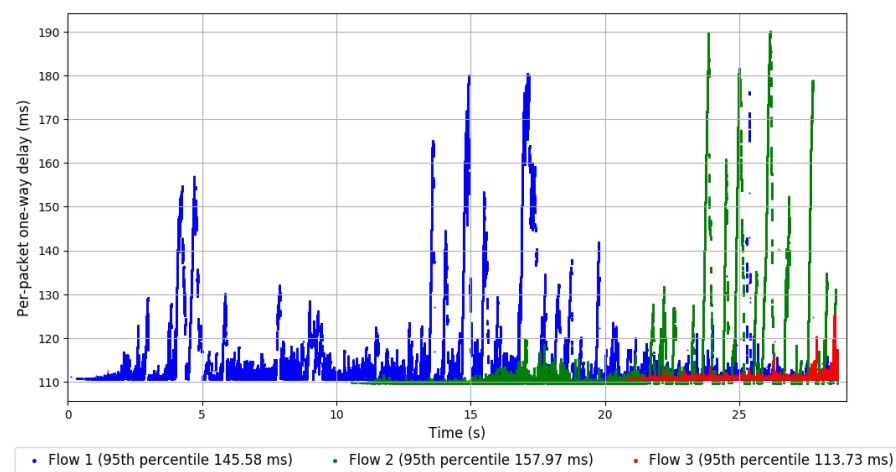
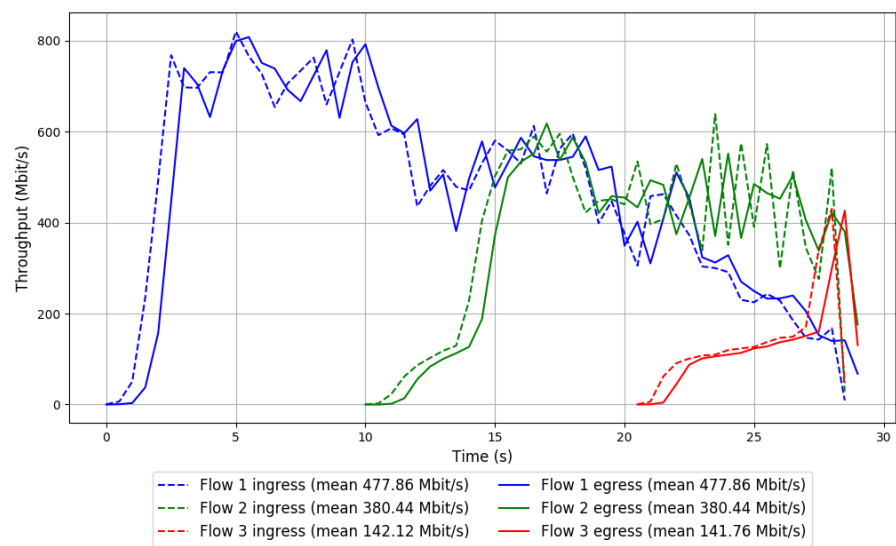


Run 3: Statistics of Indigo-MusesC5

Start at: 2019-01-24 19:19:22  
End at: 2019-01-24 19:19:52  
Local clock offset: -1.308 ms  
Remote clock offset: -0.162 ms

# Below is generated by plot.py at 2019-01-24 22:52:46  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 761.75 Mbit/s  
95th percentile per-packet one-way delay: 147.206 ms  
Loss rate: 0.01%  
-- Flow 1:  
Average throughput: 477.86 Mbit/s  
95th percentile per-packet one-way delay: 145.578 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 380.44 Mbit/s  
95th percentile per-packet one-way delay: 157.968 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 141.76 Mbit/s  
95th percentile per-packet one-way delay: 113.726 ms  
Loss rate: 0.22%

Run 3: Report of Indigo-MusesC5 — Data Link

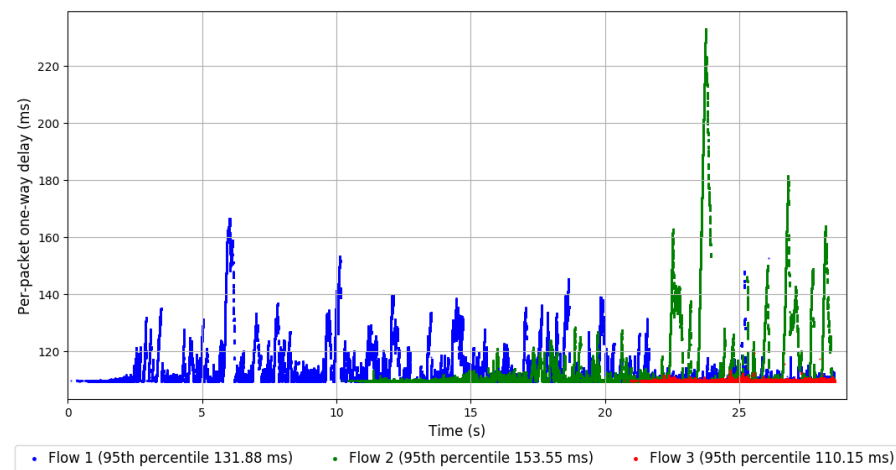
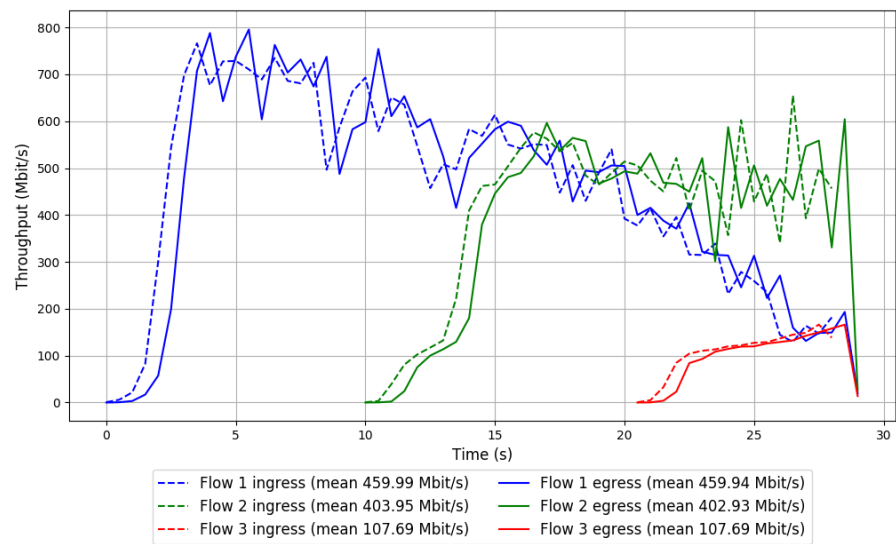


Run 4: Statistics of Indigo-MusesC5

Start at: 2019-01-24 19:57:44  
End at: 2019-01-24 19:58:14  
Local clock offset: -0.056 ms  
Remote clock offset: 0.035 ms

# Below is generated by plot.py at 2019-01-24 22:53:44  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 749.09 Mbit/s  
95th percentile per-packet one-way delay: 138.138 ms  
Loss rate: 0.09%  
-- Flow 1:  
Average throughput: 459.94 Mbit/s  
95th percentile per-packet one-way delay: 131.882 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 402.93 Mbit/s  
95th percentile per-packet one-way delay: 153.548 ms  
Loss rate: 0.25%  
-- Flow 3:  
Average throughput: 107.69 Mbit/s  
95th percentile per-packet one-way delay: 110.148 ms  
Loss rate: 0.00%

Run 4: Report of Indigo-MusesC5 — Data Link

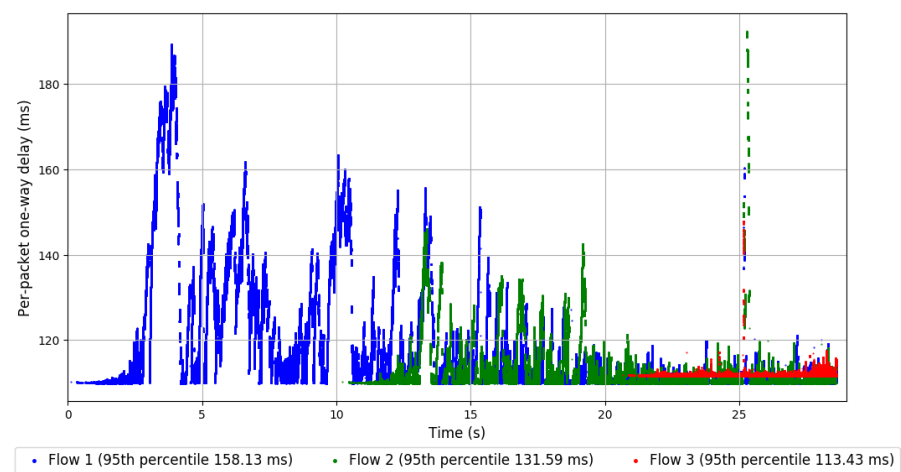
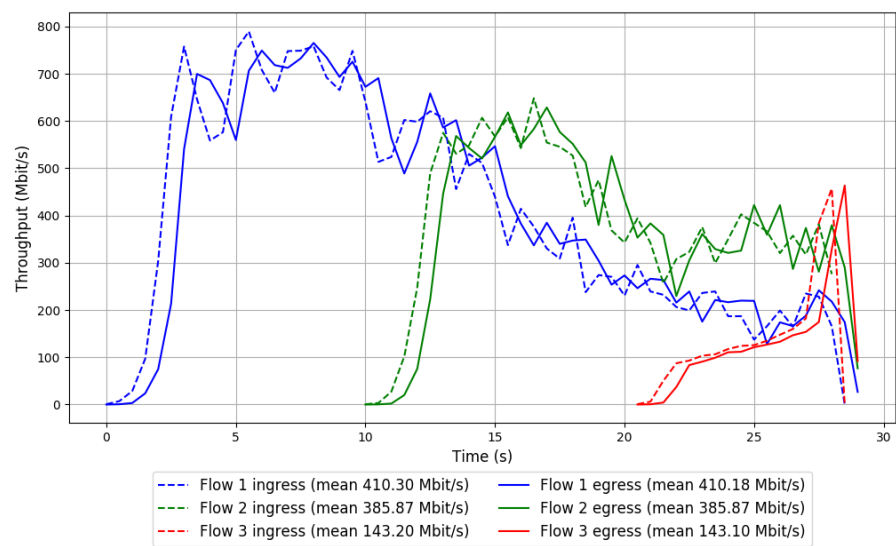


Run 5: Statistics of Indigo-MusesC5

Start at: 2019-01-24 20:36:13  
End at: 2019-01-24 20:36:43  
Local clock offset: -0.69 ms  
Remote clock offset: -0.095 ms

# Below is generated by plot.py at 2019-01-24 22:53:48  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 698.91 Mbit/s  
95th percentile per-packet one-way delay: 150.292 ms  
Loss rate: 0.02%  
-- Flow 1:  
Average throughput: 410.18 Mbit/s  
95th percentile per-packet one-way delay: 158.133 ms  
Loss rate: 0.03%  
-- Flow 2:  
Average throughput: 385.87 Mbit/s  
95th percentile per-packet one-way delay: 131.588 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 143.10 Mbit/s  
95th percentile per-packet one-way delay: 113.430 ms  
Loss rate: 0.09%

Run 5: Report of Indigo-MusesC5 — Data Link



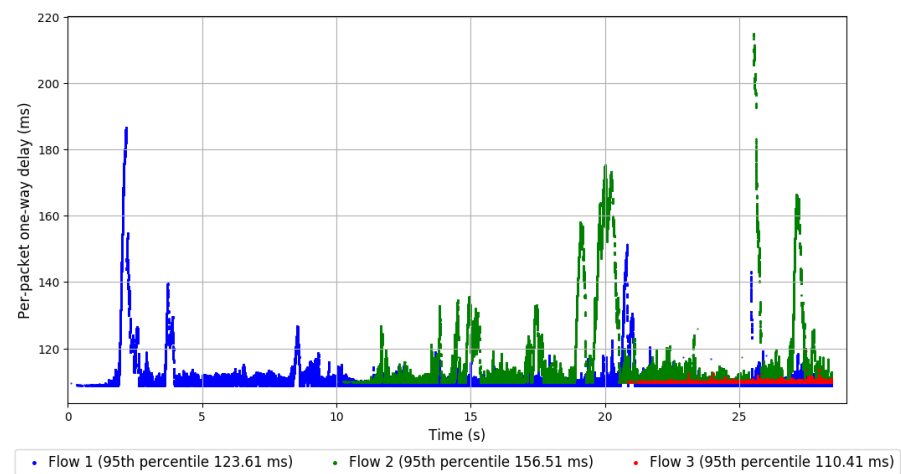
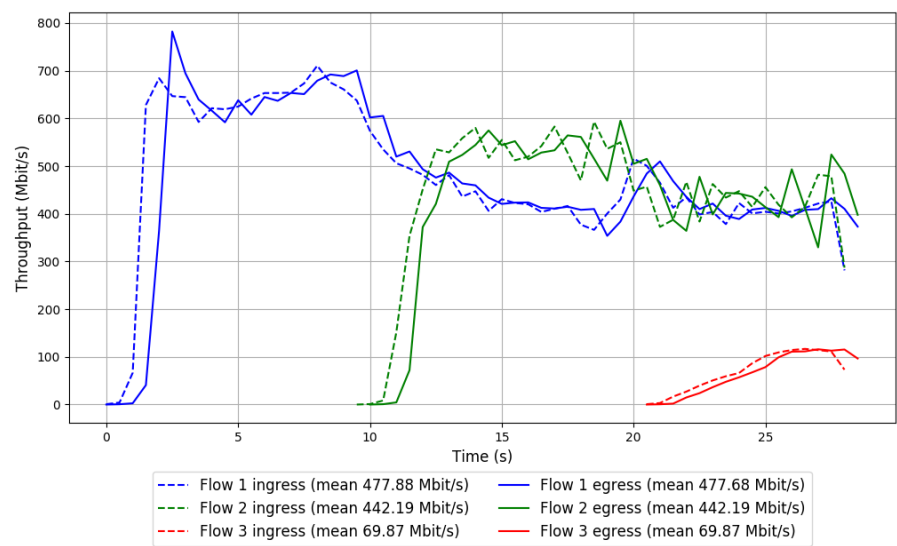


Run 1: Statistics of Indigo-MusesD

Start at: 2019-01-24 18:34:57  
End at: 2019-01-24 18:35:27  
Local clock offset: -0.653 ms  
Remote clock offset: -0.079 ms

# Below is generated by plot.py at 2019-01-24 22:57:01  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 784.20 Mbit/s  
95th percentile per-packet one-way delay: 136.576 ms  
Loss rate: 0.03%  
-- Flow 1:  
Average throughput: 477.68 Mbit/s  
95th percentile per-packet one-way delay: 123.609 ms  
Loss rate: 0.04%  
-- Flow 2:  
Average throughput: 442.19 Mbit/s  
95th percentile per-packet one-way delay: 156.507 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 69.87 Mbit/s  
95th percentile per-packet one-way delay: 110.409 ms  
Loss rate: 0.00%

Run 1: Report of Indigo-MusesD — Data Link

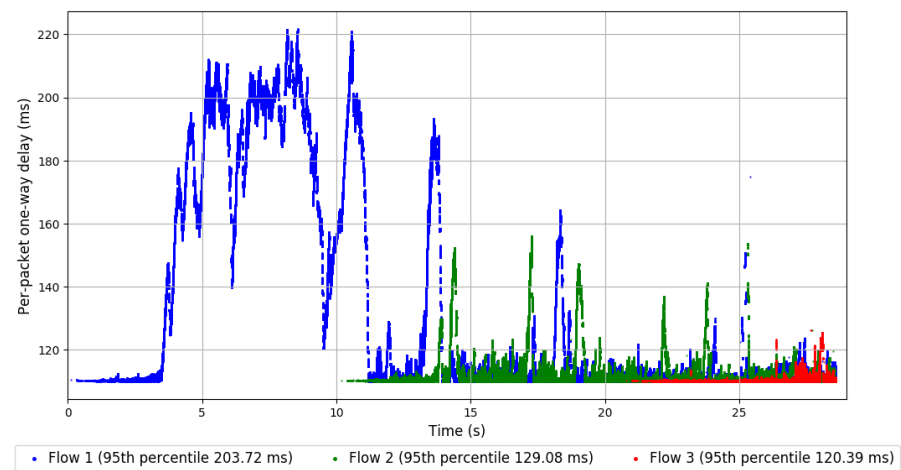
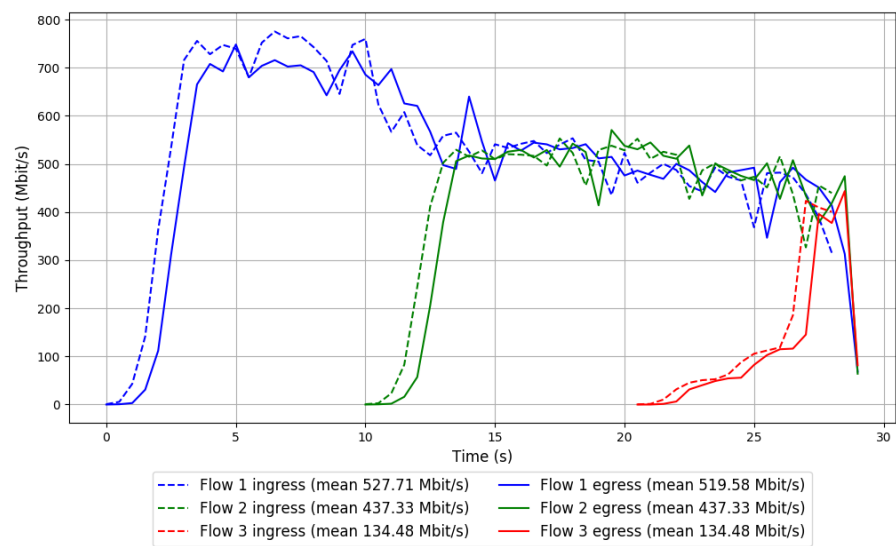


Run 2: Statistics of Indigo-MusesD

Start at: 2019-01-24 19:13:31  
End at: 2019-01-24 19:14:01  
Local clock offset: -0.727 ms  
Remote clock offset: -0.148 ms

# Below is generated by plot.py at 2019-01-24 23:02:31  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 839.01 Mbit/s  
95th percentile per-packet one-way delay: 200.514 ms  
Loss rate: 0.96%  
-- Flow 1:  
Average throughput: 519.58 Mbit/s  
95th percentile per-packet one-way delay: 203.724 ms  
Loss rate: 1.54%  
-- Flow 2:  
Average throughput: 437.33 Mbit/s  
95th percentile per-packet one-way delay: 129.083 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 134.48 Mbit/s  
95th percentile per-packet one-way delay: 120.389 ms  
Loss rate: 0.00%

Run 2: Report of Indigo-MusesD — Data Link

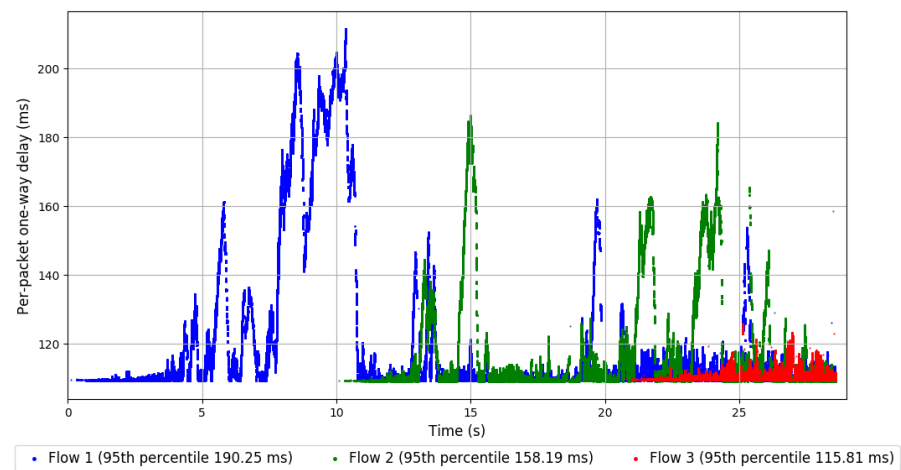
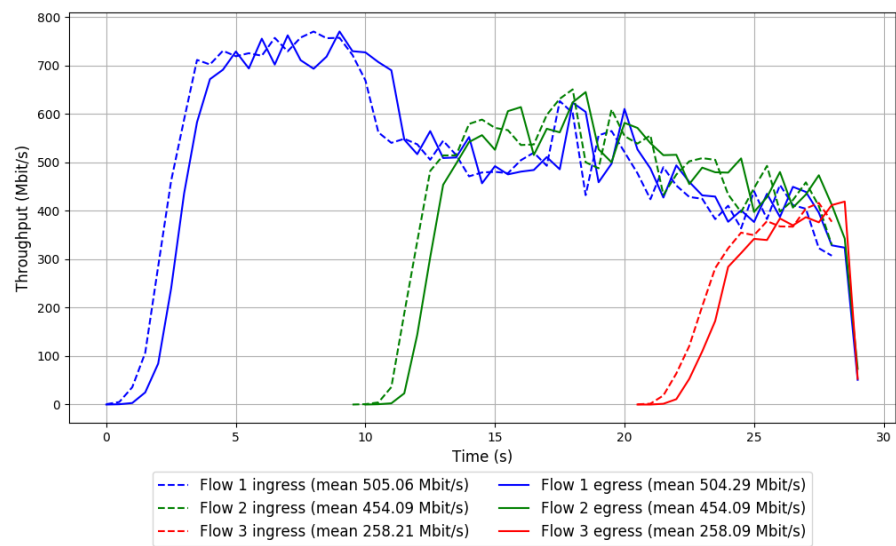


Run 3: Statistics of Indigo-MusesD

Start at: 2019-01-24 19:51:54  
End at: 2019-01-24 19:52:24  
Local clock offset: -0.149 ms  
Remote clock offset: -0.142 ms

# Below is generated by plot.py at 2019-01-24 23:04:39  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 869.79 Mbit/s  
95th percentile per-packet one-way delay: 178.330 ms  
Loss rate: 0.09%  
-- Flow 1:  
Average throughput: 504.29 Mbit/s  
95th percentile per-packet one-way delay: 190.251 ms  
Loss rate: 0.15%  
-- Flow 2:  
Average throughput: 454.09 Mbit/s  
95th percentile per-packet one-way delay: 158.190 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 258.09 Mbit/s  
95th percentile per-packet one-way delay: 115.810 ms  
Loss rate: 0.04%

Run 3: Report of Indigo-MusesD — Data Link

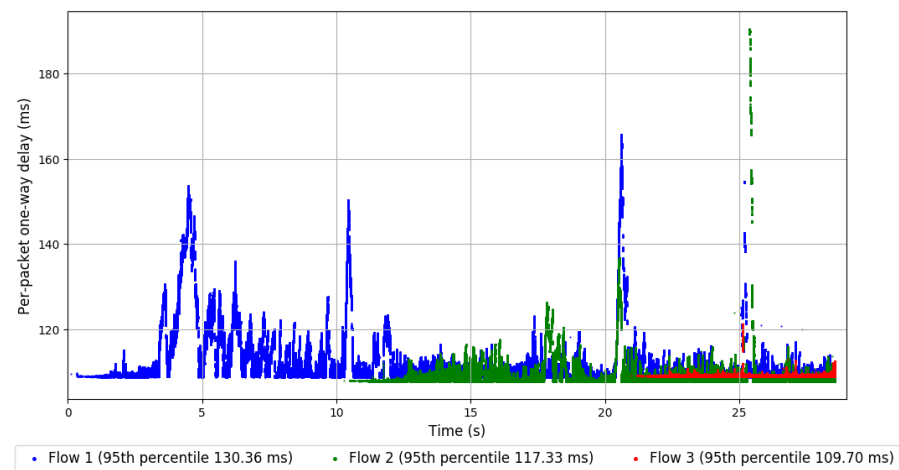
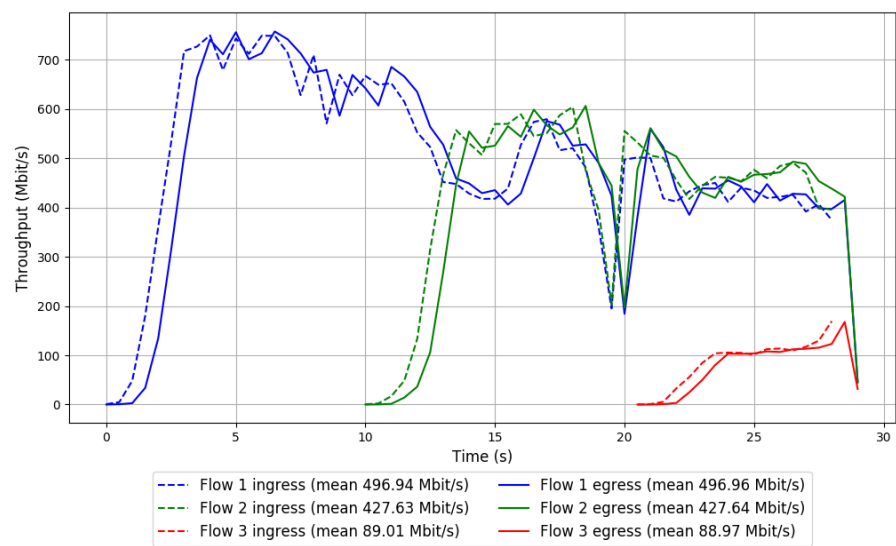


Run 4: Statistics of Indigo-MusesD

Start at: 2019-01-24 20:30:37  
End at: 2019-01-24 20:31:07  
Local clock offset: -0.019 ms  
Remote clock offset: -0.457 ms

# Below is generated by plot.py at 2019-01-24 23:04:39  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 795.41 Mbit/s  
95th percentile per-packet one-way delay: 126.251 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 496.96 Mbit/s  
95th percentile per-packet one-way delay: 130.363 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 427.64 Mbit/s  
95th percentile per-packet one-way delay: 117.328 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 88.97 Mbit/s  
95th percentile per-packet one-way delay: 109.696 ms  
Loss rate: 0.07%

Run 4: Report of Indigo-MusesD — Data Link



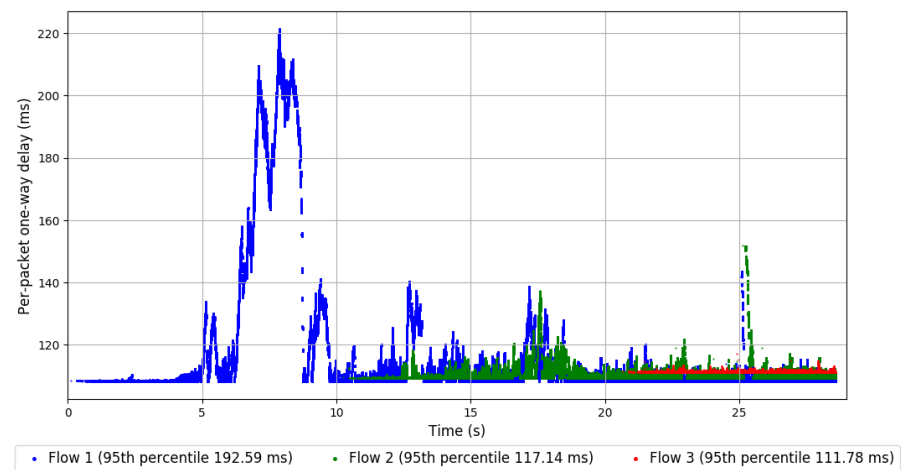
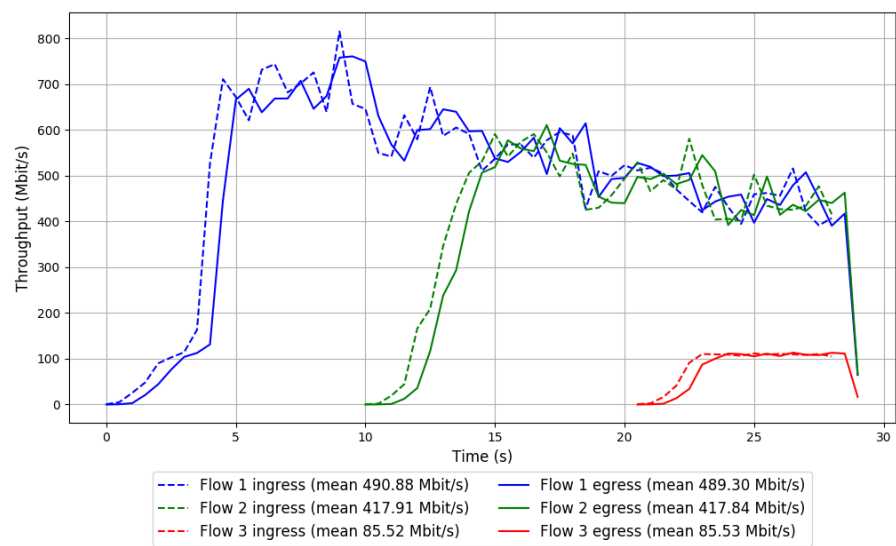


Run 5: Statistics of Indigo-MusesD

Start at: 2019-01-24 21:09:14  
End at: 2019-01-24 21:09:44  
Local clock offset: -0.369 ms  
Remote clock offset: -0.407 ms

# Below is generated by plot.py at 2019-01-24 23:04:58  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 782.07 Mbit/s  
95th percentile per-packet one-way delay: 173.333 ms  
Loss rate: 0.21%  
-- Flow 1:  
Average throughput: 489.30 Mbit/s  
95th percentile per-packet one-way delay: 192.586 ms  
Loss rate: 0.32%  
-- Flow 2:  
Average throughput: 417.84 Mbit/s  
95th percentile per-packet one-way delay: 117.142 ms  
Loss rate: 0.02%  
-- Flow 3:  
Average throughput: 85.53 Mbit/s  
95th percentile per-packet one-way delay: 111.775 ms  
Loss rate: 0.00%

Run 5: Report of Indigo-MusesD — Data Link

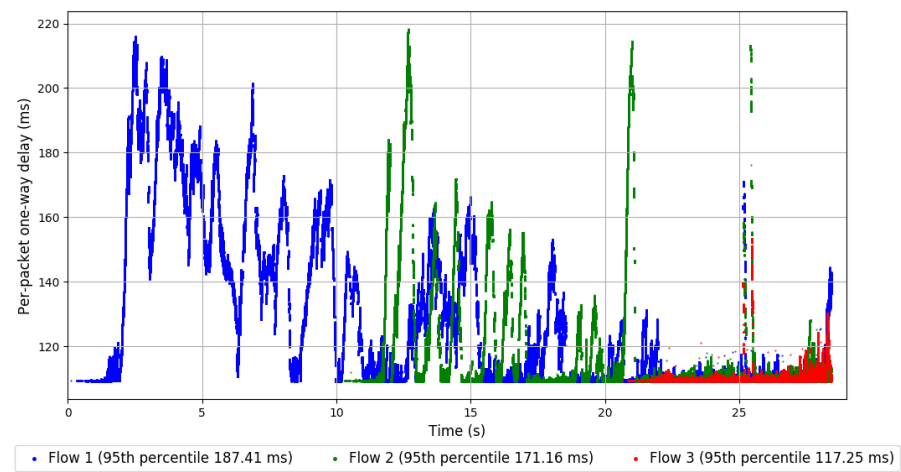
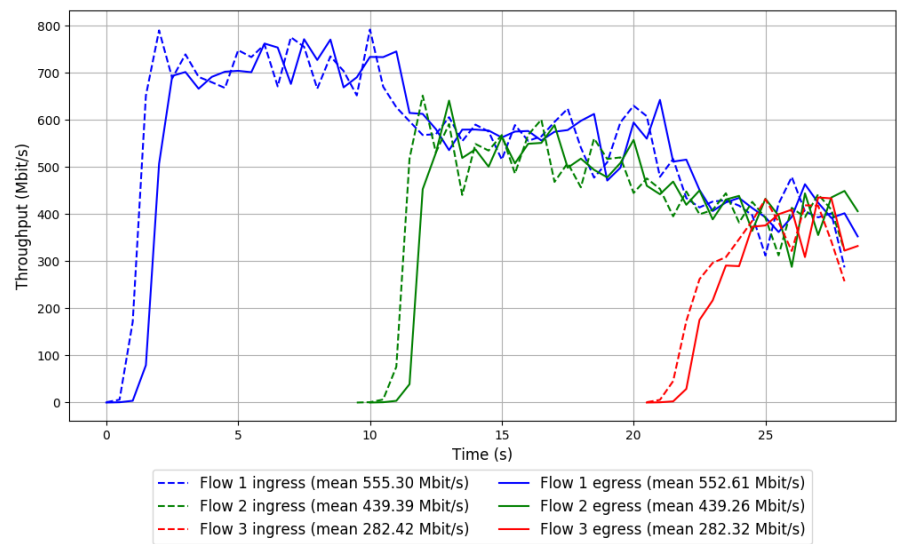


Run 1: Statistics of Indigo-MusesT

Start at: 2019-01-24 18:11:09  
End at: 2019-01-24 18:11:39  
Local clock offset: -0.026 ms  
Remote clock offset: -0.054 ms

# Below is generated by plot.py at 2019-01-24 23:08:41  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 914.61 Mbit/s  
95th percentile per-packet one-way delay: 184.041 ms  
Loss rate: 0.31%  
-- Flow 1:  
Average throughput: 552.61 Mbit/s  
95th percentile per-packet one-way delay: 187.414 ms  
Loss rate: 0.49%  
-- Flow 2:  
Average throughput: 439.26 Mbit/s  
95th percentile per-packet one-way delay: 171.164 ms  
Loss rate: 0.03%  
-- Flow 3:  
Average throughput: 282.32 Mbit/s  
95th percentile per-packet one-way delay: 117.253 ms  
Loss rate: 0.04%

Run 1: Report of Indigo-MusesT — Data Link



Run 2: Statistics of Indigo-MusesT

Start at: 2019-01-24 18:49:37

End at: 2019-01-24 18:50:07

Local clock offset: -1.276 ms

Remote clock offset: 0.056 ms

# Below is generated by plot.py at 2019-01-24 23:09:28

# Datalink statistics

-- Total of 3 flows:

Average throughput: 860.26 Mbit/s

95th percentile per-packet one-way delay: 153.076 ms

Loss rate: 0.41%

-- Flow 1:

Average throughput: 558.80 Mbit/s

95th percentile per-packet one-way delay: 169.563 ms

Loss rate: 0.63%

-- Flow 2:

Average throughput: 424.50 Mbit/s

95th percentile per-packet one-way delay: 132.731 ms

Loss rate: 0.00%

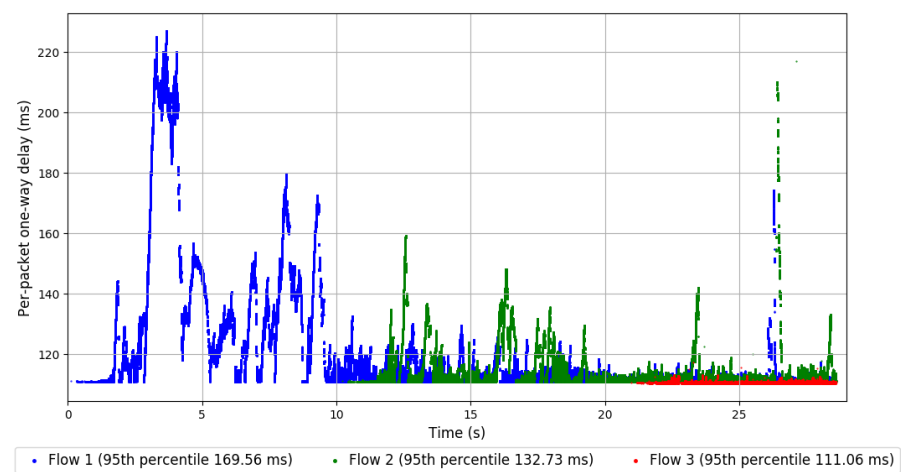
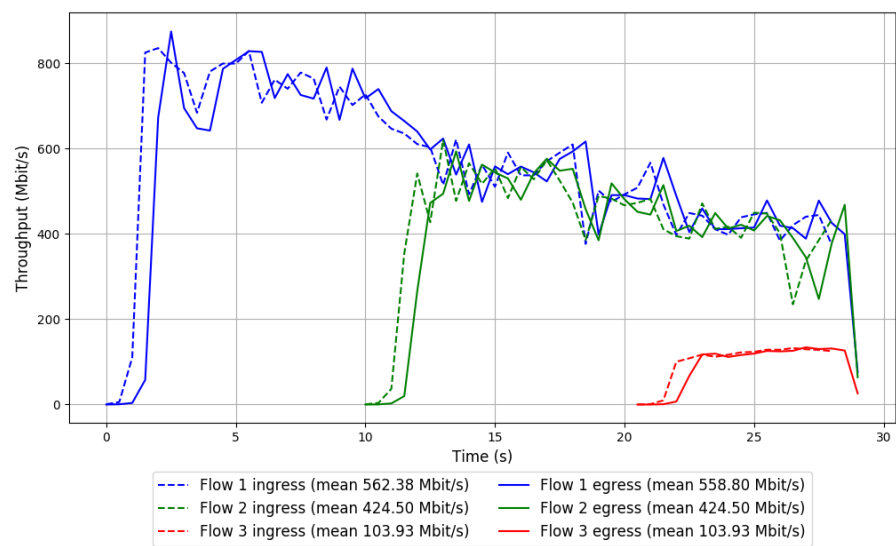
-- Flow 3:

Average throughput: 103.93 Mbit/s

95th percentile per-packet one-way delay: 111.058 ms

Loss rate: 0.00%

Run 2: Report of Indigo-MusesT — Data Link

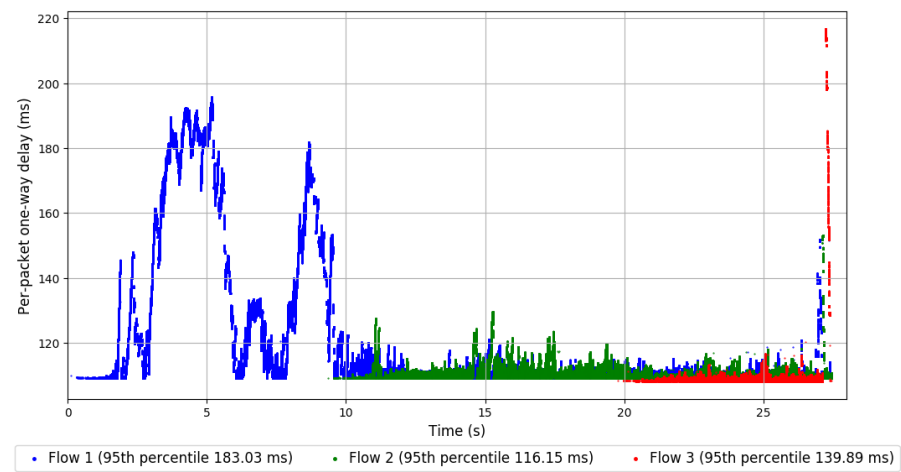
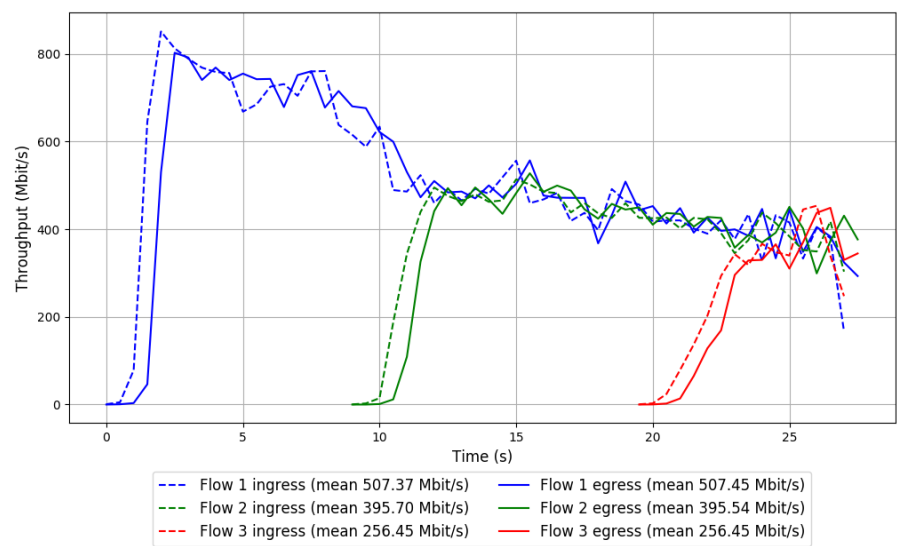


Run 3: Statistics of Indigo-MusesT

Start at: 2019-01-24 19:28:40  
End at: 2019-01-24 19:29:11  
Local clock offset: 0.121 ms  
Remote clock offset: -0.159 ms

# Below is generated by plot.py at 2019-01-24 23:09:28  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 841.39 Mbit/s  
95th percentile per-packet one-way delay: 178.419 ms  
Loss rate: 0.04%  
-- Flow 1:  
Average throughput: 507.45 Mbit/s  
95th percentile per-packet one-way delay: 183.033 ms  
Loss rate: 0.03%  
-- Flow 2:  
Average throughput: 395.54 Mbit/s  
95th percentile per-packet one-way delay: 116.152 ms  
Loss rate: 0.07%  
-- Flow 3:  
Average throughput: 256.45 Mbit/s  
95th percentile per-packet one-way delay: 139.888 ms  
Loss rate: 0.00%

Run 3: Report of Indigo-MusesT — Data Link





Run 4: Statistics of Indigo-MusesT

Start at: 2019-01-24 20:07:02

End at: 2019-01-24 20:07:32

Local clock offset: -0.176 ms

Remote clock offset: 0.041 ms

# Below is generated by plot.py at 2019-01-24 23:11:55

# Datalink statistics

-- Total of 3 flows:

Average throughput: 835.00 Mbit/s

95th percentile per-packet one-way delay: 155.510 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 518.14 Mbit/s

95th percentile per-packet one-way delay: 132.008 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 448.90 Mbit/s

95th percentile per-packet one-way delay: 162.302 ms

Loss rate: 0.00%

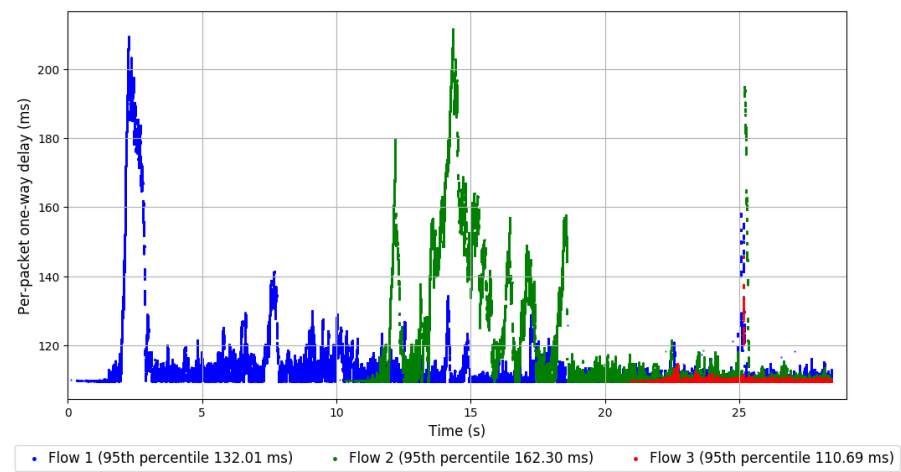
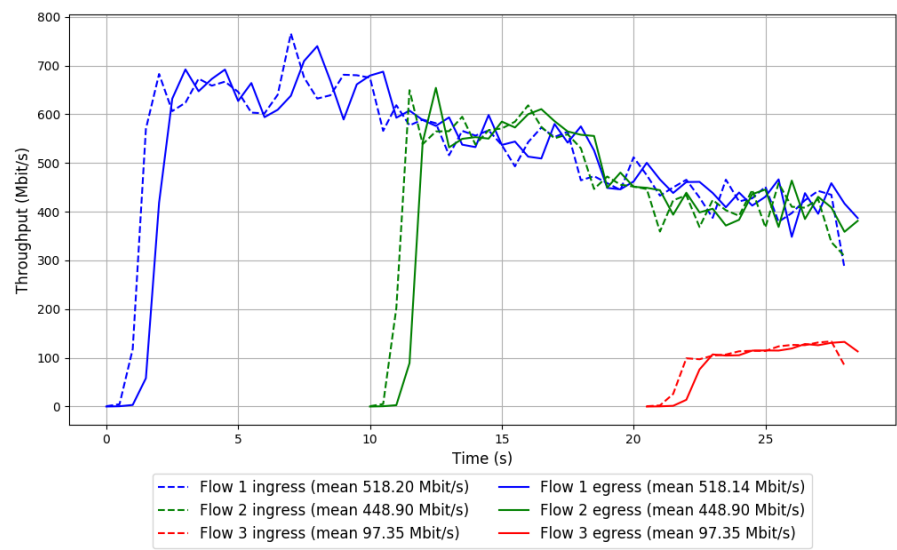
-- Flow 3:

Average throughput: 97.35 Mbit/s

95th percentile per-packet one-way delay: 110.691 ms

Loss rate: 0.00%

Run 4: Report of Indigo-MusesT — Data Link

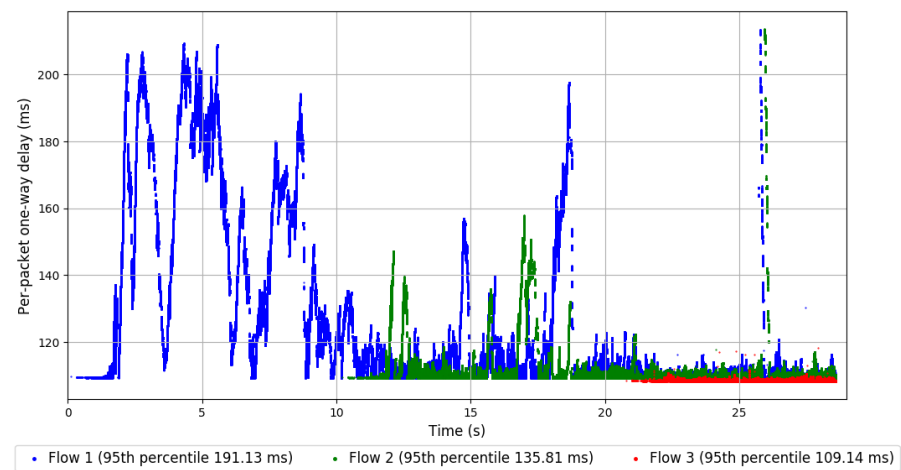
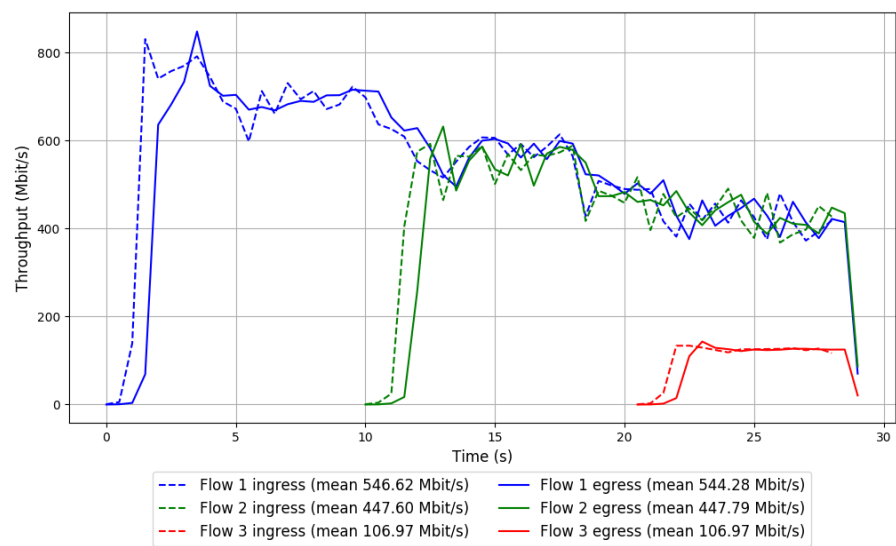


Run 5: Statistics of Indigo-MusesT

Start at: 2019-01-24 20:45:39  
End at: 2019-01-24 20:46:09  
Local clock offset: -0.081 ms  
Remote clock offset: -0.116 ms

# Below is generated by plot.py at 2019-01-24 23:16:06  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 862.39 Mbit/s  
95th percentile per-packet one-way delay: 185.470 ms  
Loss rate: 0.27%  
-- Flow 1:  
Average throughput: 544.28 Mbit/s  
95th percentile per-packet one-way delay: 191.128 ms  
Loss rate: 0.43%  
-- Flow 2:  
Average throughput: 447.79 Mbit/s  
95th percentile per-packet one-way delay: 135.812 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 106.97 Mbit/s  
95th percentile per-packet one-way delay: 109.142 ms  
Loss rate: 0.00%

Run 5: Report of Indigo-MusesT — Data Link

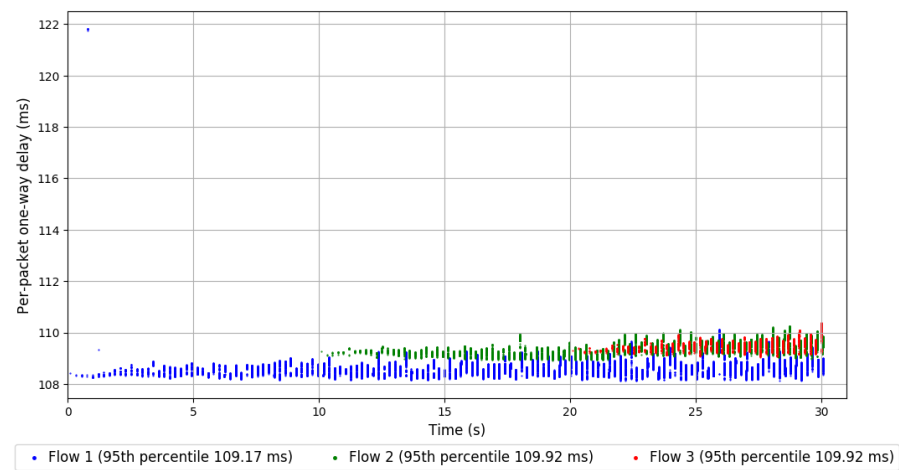
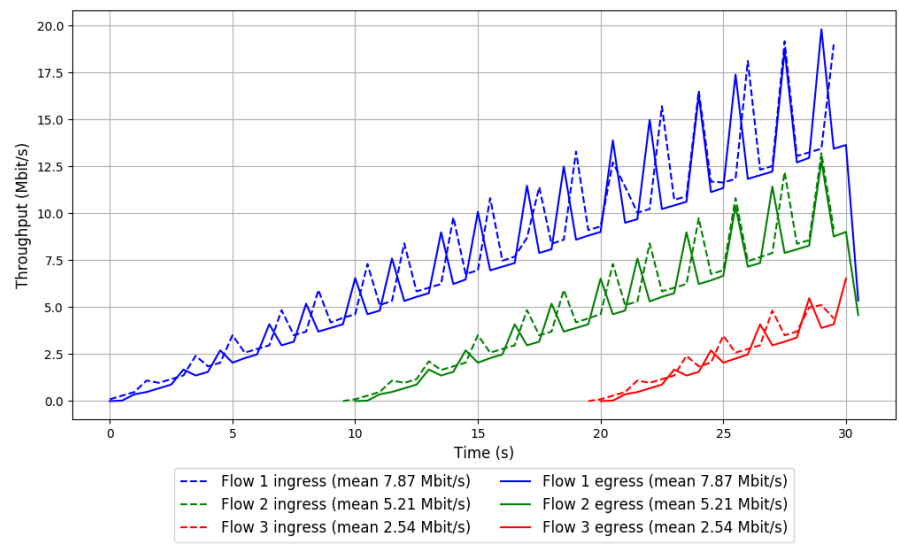


```
Run 1: Statistics of LEDBAT

Start at: 2019-01-24 18:31:36
End at: 2019-01-24 18:32:06
Local clock offset: 0.205 ms
Remote clock offset: -0.062 ms

# Below is generated by plot.py at 2019-01-24 23:16:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.18 Mbit/s
95th percentile per-packet one-way delay: 109.768 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 7.87 Mbit/s
95th percentile per-packet one-way delay: 109.169 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 5.21 Mbit/s
95th percentile per-packet one-way delay: 109.918 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 2.54 Mbit/s
95th percentile per-packet one-way delay: 109.918 ms
Loss rate: 0.00%
```

Run 1: Report of LEDBAT — Data Link

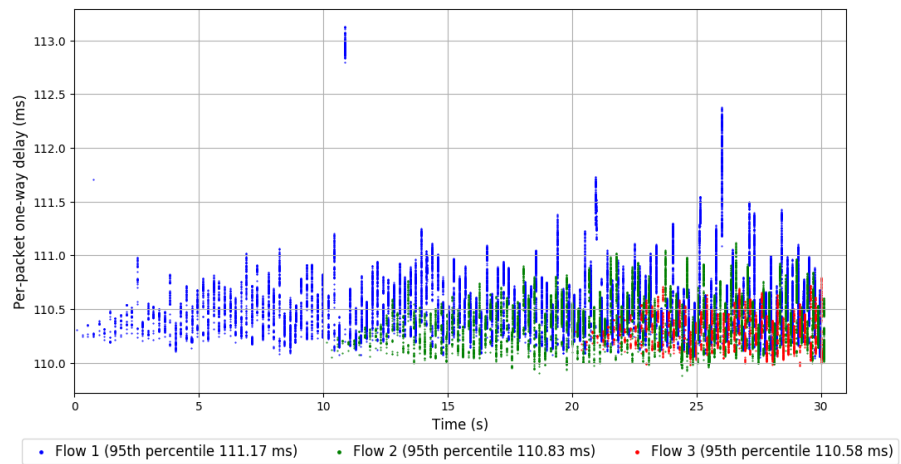
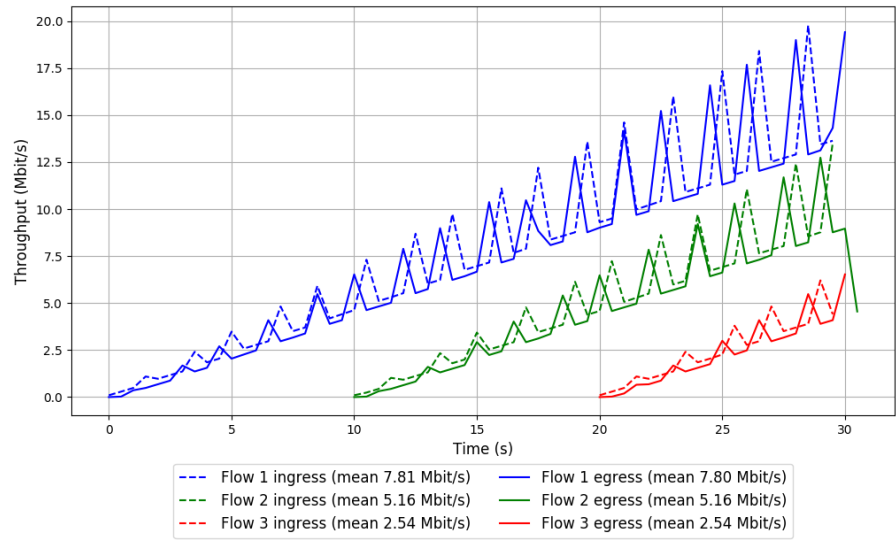


Run 2: Statistics of LEDBAT

Start at: 2019-01-24 19:09:57  
End at: 2019-01-24 19:10:27  
Local clock offset: -0.617 ms  
Remote clock offset: -0.129 ms

# Below is generated by plot.py at 2019-01-24 23:16:06  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 12.04 Mbit/s  
95th percentile per-packet one-way delay: 111.018 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 7.80 Mbit/s  
95th percentile per-packet one-way delay: 111.171 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 5.16 Mbit/s  
95th percentile per-packet one-way delay: 110.827 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 2.54 Mbit/s  
95th percentile per-packet one-way delay: 110.581 ms  
Loss rate: 0.00%

## Run 2: Report of LEDBAT — Data Link



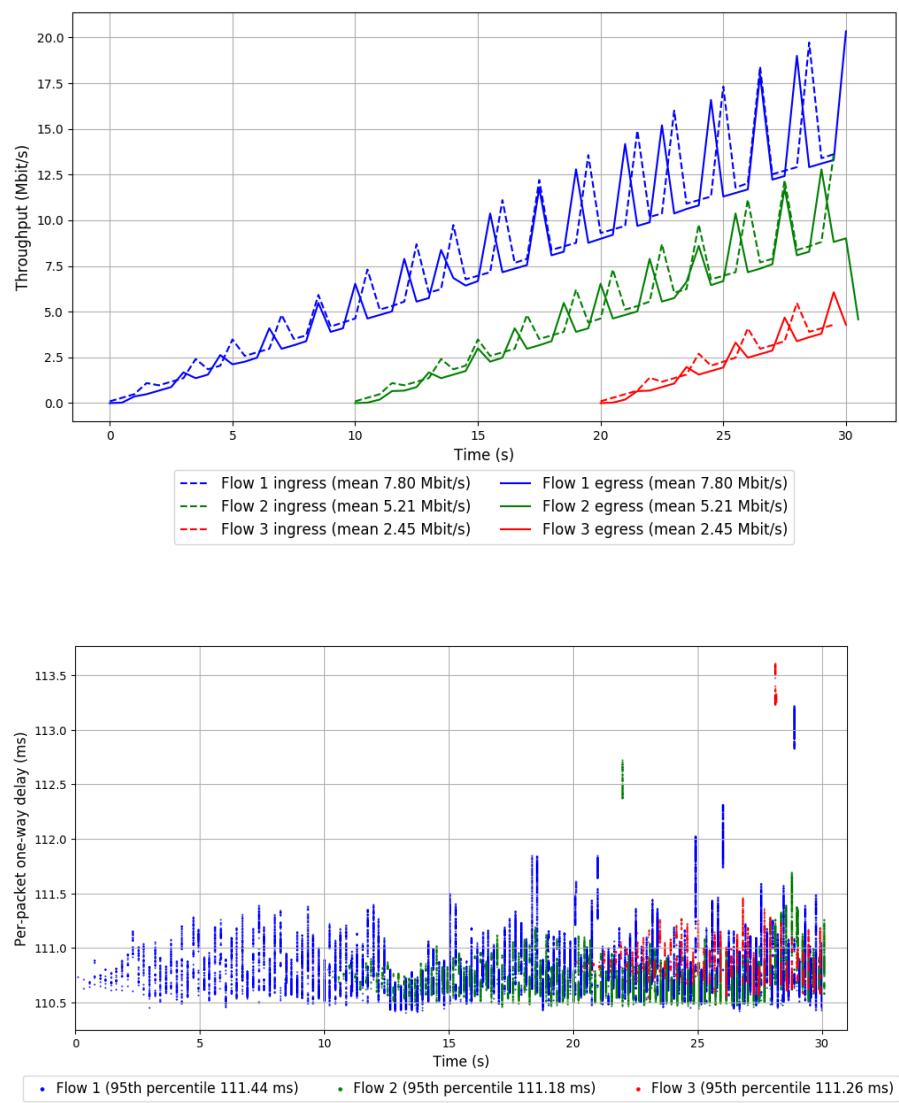


Run 3: Statistics of LEDBAT

Start at: 2019-01-24 19:48:33  
End at: 2019-01-24 19:49:03  
Local clock offset: -1.258 ms  
Remote clock offset: -0.109 ms

# Below is generated by plot.py at 2019-01-24 23:16:06  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 12.03 Mbit/s  
95th percentile per-packet one-way delay: 111.337 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 7.80 Mbit/s  
95th percentile per-packet one-way delay: 111.440 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 5.21 Mbit/s  
95th percentile per-packet one-way delay: 111.183 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 2.45 Mbit/s  
95th percentile per-packet one-way delay: 111.261 ms  
Loss rate: 0.00%

Run 3: Report of LEDBAT — Data Link

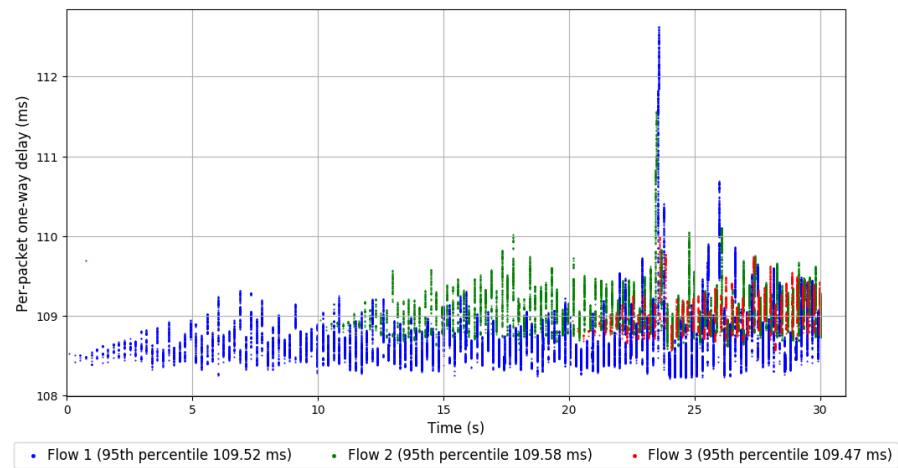
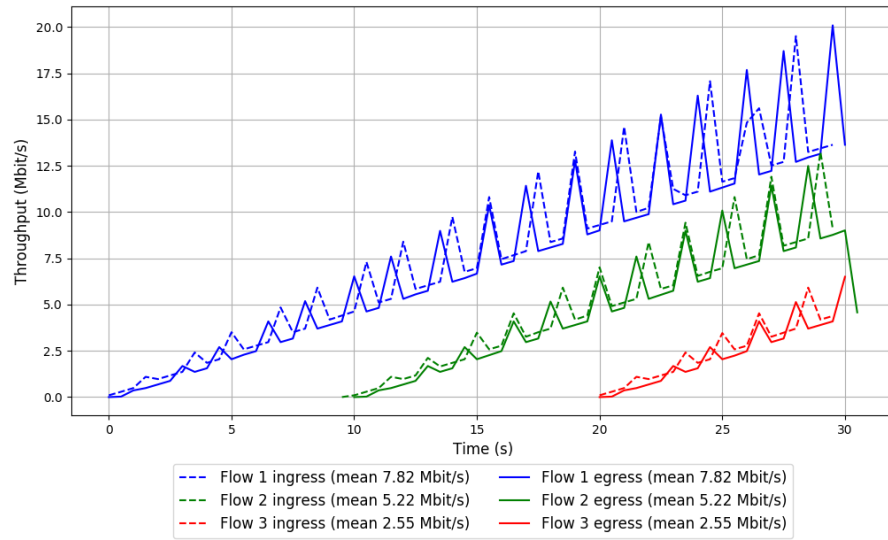


Run 4: Statistics of LEDBAT

Start at: 2019-01-24 20:27:19  
End at: 2019-01-24 20:27:49  
Local clock offset: 0.753 ms  
Remote clock offset: -0.043 ms

# Below is generated by plot.py at 2019-01-24 23:16:06  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 12.11 Mbit/s  
95th percentile per-packet one-way delay: 109.545 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 7.82 Mbit/s  
95th percentile per-packet one-way delay: 109.518 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 5.22 Mbit/s  
95th percentile per-packet one-way delay: 109.584 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 2.55 Mbit/s  
95th percentile per-packet one-way delay: 109.466 ms  
Loss rate: 0.00%

#### Run 4: Report of LEDBAT — Data Link

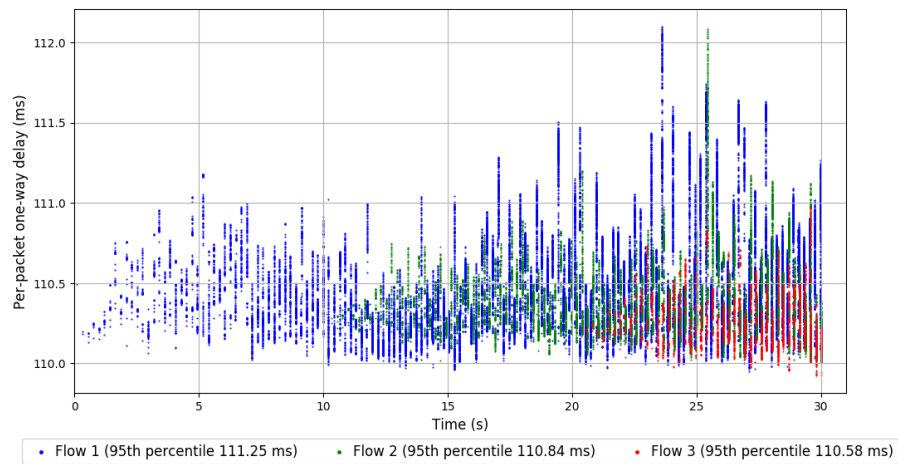
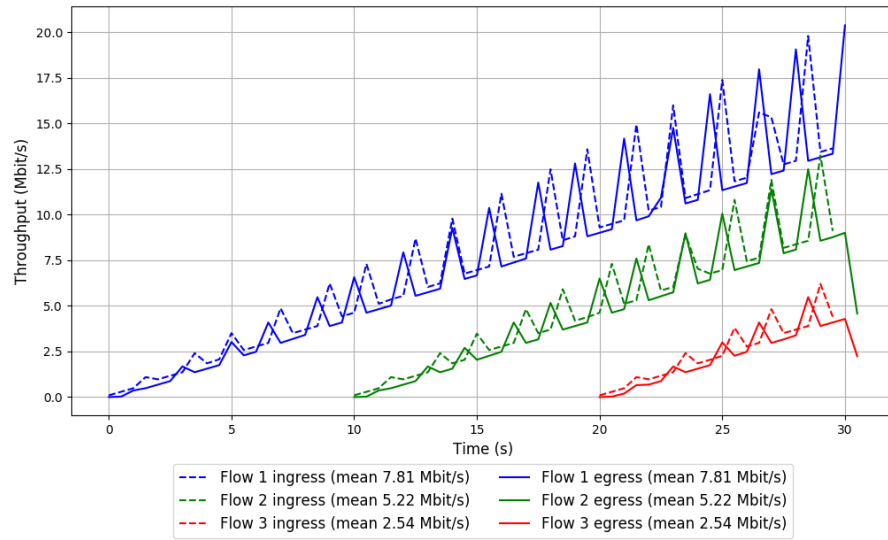


Run 5: Statistics of LEDBAT

Start at: 2019-01-24 21:05:49  
End at: 2019-01-24 21:06:19  
Local clock offset: -0.698 ms  
Remote clock offset: -0.001 ms

# Below is generated by plot.py at 2019-01-24 23:16:06  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 12.11 Mbit/s  
95th percentile per-packet one-way delay: 111.127 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 7.81 Mbit/s  
95th percentile per-packet one-way delay: 111.247 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 5.22 Mbit/s  
95th percentile per-packet one-way delay: 110.840 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 2.54 Mbit/s  
95th percentile per-packet one-way delay: 110.577 ms  
Loss rate: 0.00%

## Run 5: Report of LEDBAT — Data Link

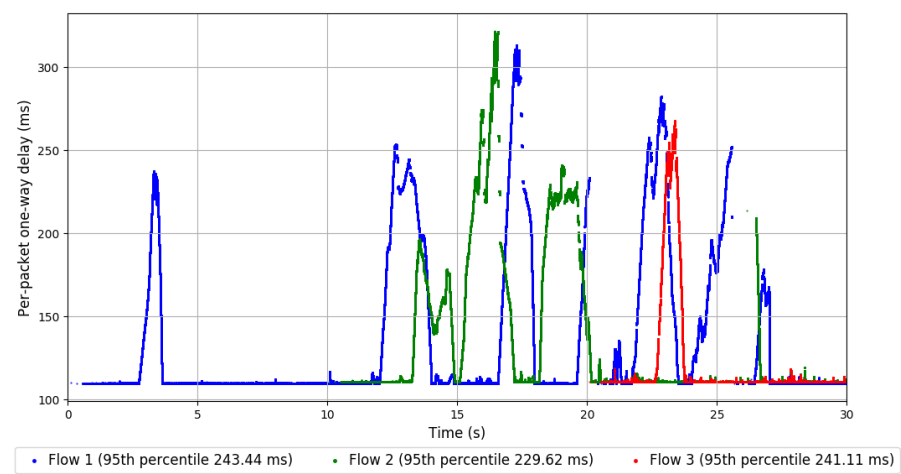
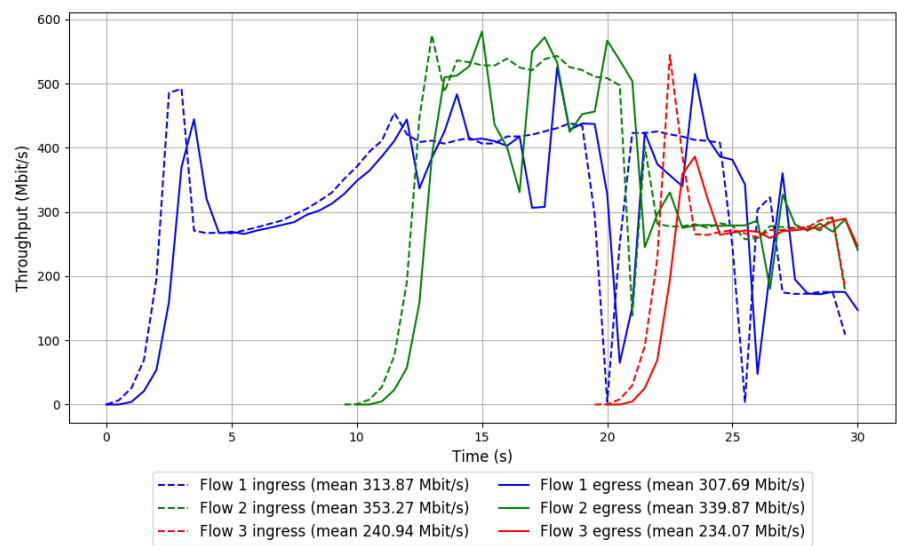


Run 1: Statistics of PCC-Allegro

Start at: 2019-01-24 18:32:54  
End at: 2019-01-24 18:33:24  
Local clock offset: -1.398 ms  
Remote clock offset: -0.422 ms

# Below is generated by plot.py at 2019-01-24 23:26:21  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 611.27 Mbit/s  
95th percentile per-packet one-way delay: 239.426 ms  
Loss rate: 2.76%  
-- Flow 1:  
Average throughput: 307.69 Mbit/s  
95th percentile per-packet one-way delay: 243.441 ms  
Loss rate: 1.97%  
-- Flow 2:  
Average throughput: 339.87 Mbit/s  
95th percentile per-packet one-way delay: 229.620 ms  
Loss rate: 3.79%  
-- Flow 3:  
Average throughput: 234.07 Mbit/s  
95th percentile per-packet one-way delay: 241.112 ms  
Loss rate: 2.85%

Run 1: Report of PCC-Allegro — Data Link



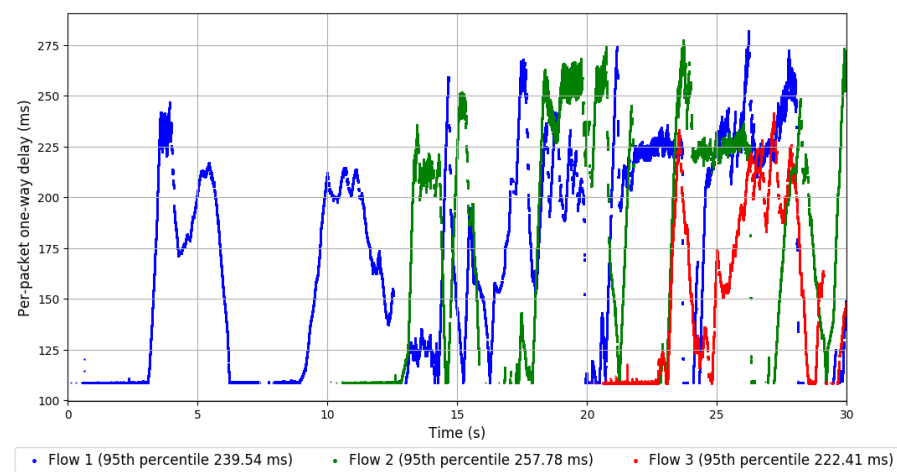
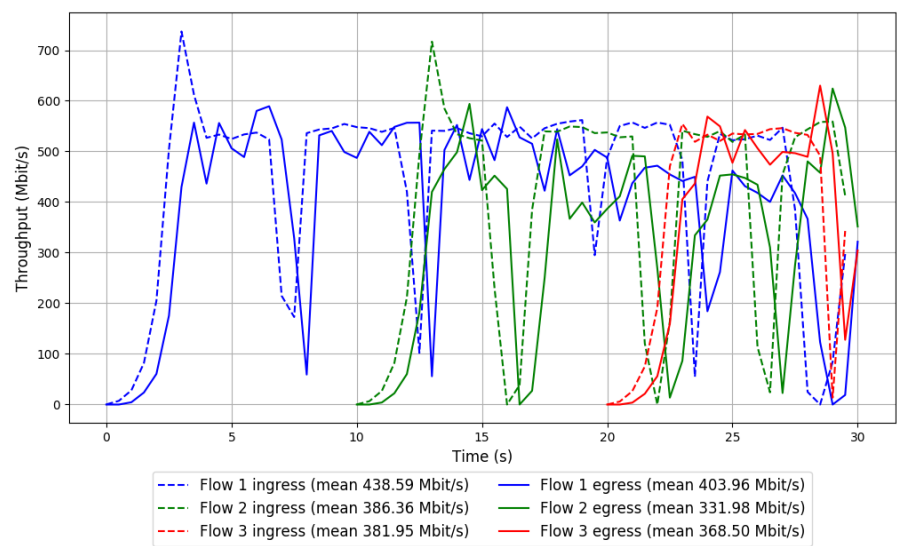


Run 2: Statistics of PCC-Allegro

Start at: 2019-01-24 19:11:15  
End at: 2019-01-24 19:11:45  
Local clock offset: 0.692 ms  
Remote clock offset: -0.147 ms

# Below is generated by plot.py at 2019-01-24 23:32:31  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 745.95 Mbit/s  
95th percentile per-packet one-way delay: 249.548 ms  
Loss rate: 9.15%  
-- Flow 1:  
Average throughput: 403.96 Mbit/s  
95th percentile per-packet one-way delay: 239.540 ms  
Loss rate: 7.89%  
-- Flow 2:  
Average throughput: 331.98 Mbit/s  
95th percentile per-packet one-way delay: 257.781 ms  
Loss rate: 14.07%  
-- Flow 3:  
Average throughput: 368.50 Mbit/s  
95th percentile per-packet one-way delay: 222.415 ms  
Loss rate: 3.50%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2019-01-24 19:49:51

End at: 2019-01-24 19:50:21

Local clock offset: -1.461 ms

Remote clock offset: -0.47 ms

# Below is generated by plot.py at 2019-01-24 23:32:31

# Datalink statistics

-- Total of 3 flows:

Average throughput: 600.26 Mbit/s

95th percentile per-packet one-way delay: 256.183 ms

Loss rate: 6.33%

-- Flow 1:

Average throughput: 287.21 Mbit/s

95th percentile per-packet one-way delay: 254.050 ms

Loss rate: 2.13%

-- Flow 2:

Average throughput: 355.66 Mbit/s

95th percentile per-packet one-way delay: 262.297 ms

Loss rate: 12.43%

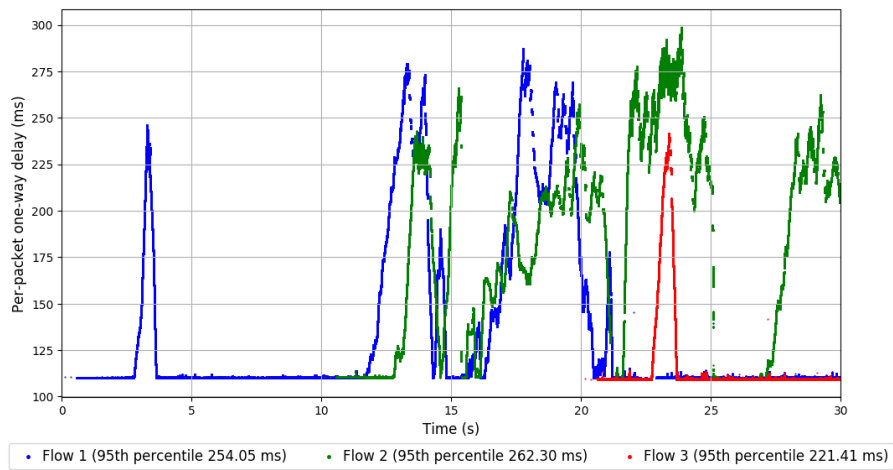
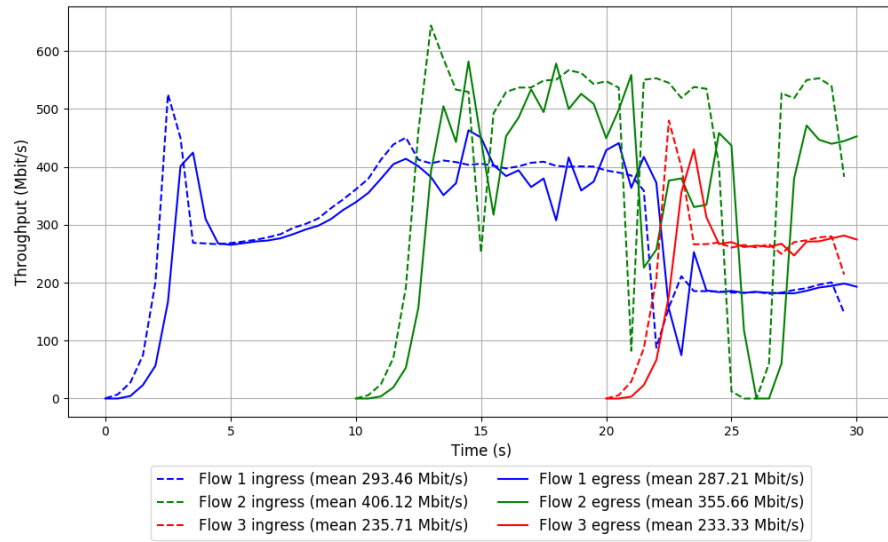
-- Flow 3:

Average throughput: 233.33 Mbit/s

95th percentile per-packet one-way delay: 221.413 ms

Loss rate: 1.01%

### Run 3: Report of PCC-Allegro — Data Link

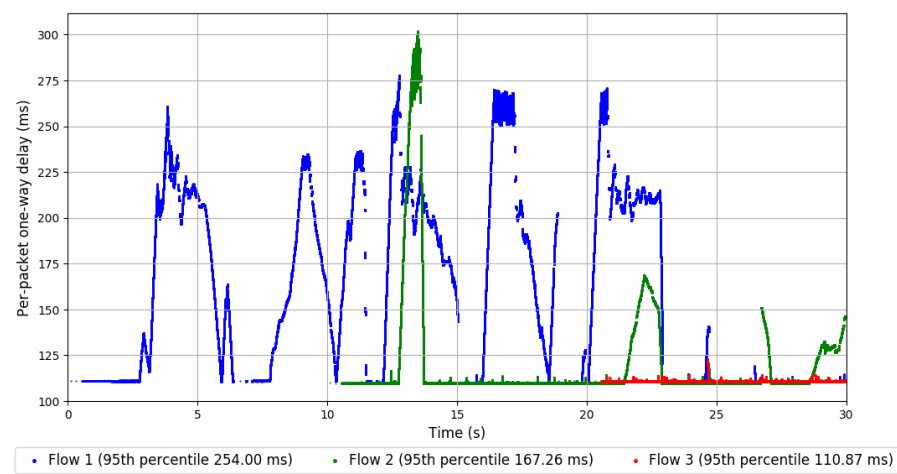
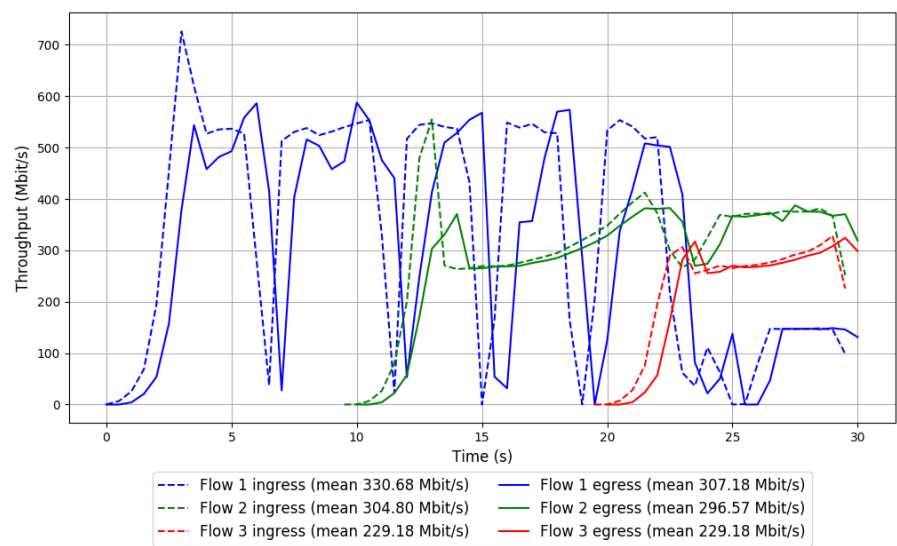


Run 4: Statistics of PCC-Allegro

Start at: 2019-01-24 20:28:37  
End at: 2019-01-24 20:29:07  
Local clock offset: -1.333 ms  
Remote clock offset: -0.079 ms

# Below is generated by plot.py at 2019-01-24 23:32:31  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 580.13 Mbit/s  
95th percentile per-packet one-way delay: 235.367 ms  
Loss rate: 4.76%  
-- Flow 1:  
Average throughput: 307.18 Mbit/s  
95th percentile per-packet one-way delay: 253.999 ms  
Loss rate: 7.11%  
-- Flow 2:  
Average throughput: 296.57 Mbit/s  
95th percentile per-packet one-way delay: 167.264 ms  
Loss rate: 2.70%  
-- Flow 3:  
Average throughput: 229.18 Mbit/s  
95th percentile per-packet one-way delay: 110.874 ms  
Loss rate: 0.00%

Run 4: Report of PCC-Allegro — Data Link

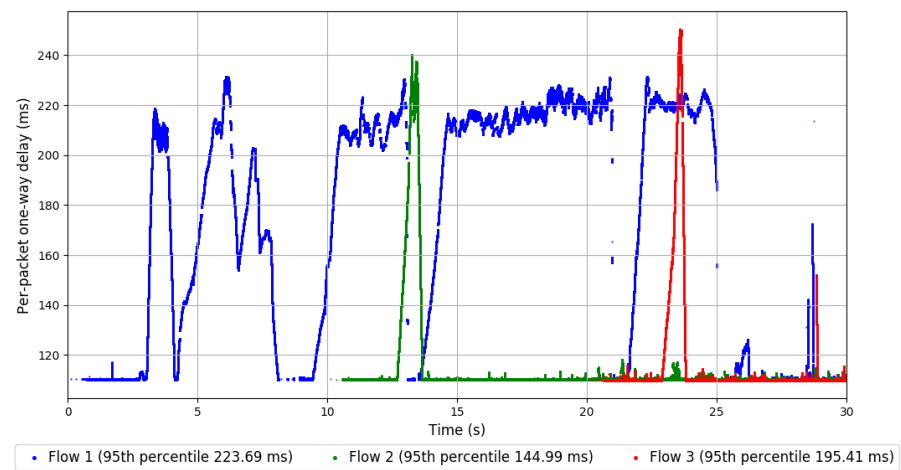
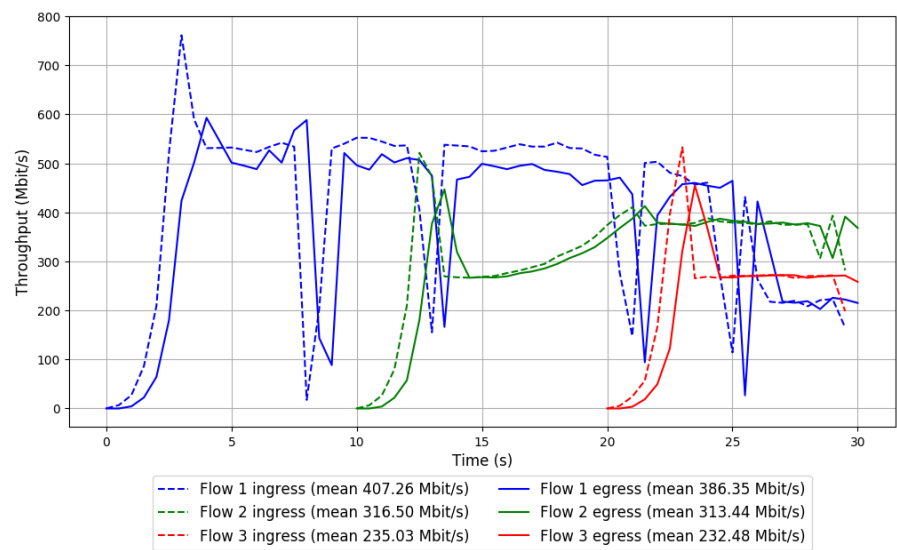


Run 5: Statistics of PCC-Allegro

Start at: 2019-01-24 21:07:07  
End at: 2019-01-24 21:07:37  
Local clock offset: -0.888 ms  
Remote clock offset: -0.116 ms

# Below is generated by plot.py at 2019-01-24 23:32:57  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 671.12 Mbit/s  
95th percentile per-packet one-way delay: 222.637 ms  
Loss rate: 3.42%  
-- Flow 1:  
Average throughput: 386.35 Mbit/s  
95th percentile per-packet one-way delay: 223.695 ms  
Loss rate: 5.14%  
-- Flow 2:  
Average throughput: 313.44 Mbit/s  
95th percentile per-packet one-way delay: 144.988 ms  
Loss rate: 0.97%  
-- Flow 3:  
Average throughput: 232.48 Mbit/s  
95th percentile per-packet one-way delay: 195.407 ms  
Loss rate: 1.09%

Run 5: Report of PCC-Allegro — Data Link



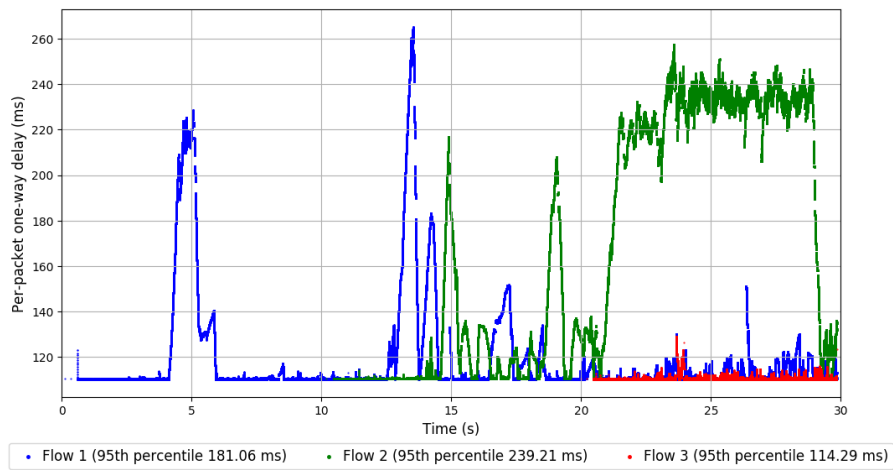
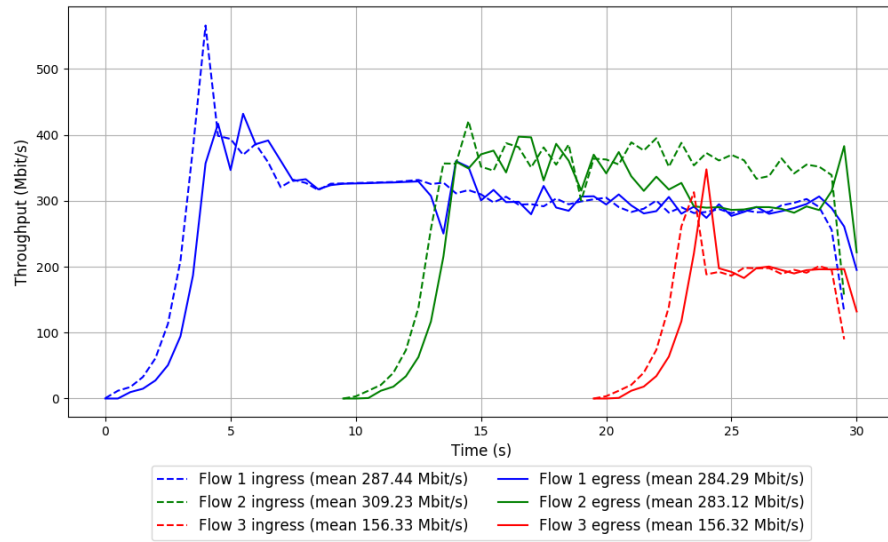


```
Run 1: Statistics of PCC-Expr

Start at: 2019-01-24 18:22:51
End at: 2019-01-24 18:23:21
Local clock offset: -0.689 ms
Remote clock offset: 0.27 ms

# Below is generated by plot.py at 2019-01-24 23:32:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 525.42 Mbit/s
95th percentile per-packet one-way delay: 234.720 ms
Loss rate: 3.77%
-- Flow 1:
Average throughput: 284.29 Mbit/s
95th percentile per-packet one-way delay: 181.056 ms
Loss rate: 1.09%
-- Flow 2:
Average throughput: 283.12 Mbit/s
95th percentile per-packet one-way delay: 239.212 ms
Loss rate: 8.44%
-- Flow 3:
Average throughput: 156.32 Mbit/s
95th percentile per-packet one-way delay: 114.290 ms
Loss rate: 0.00%
```

## Run 1: Report of PCC-Expr — Data Link

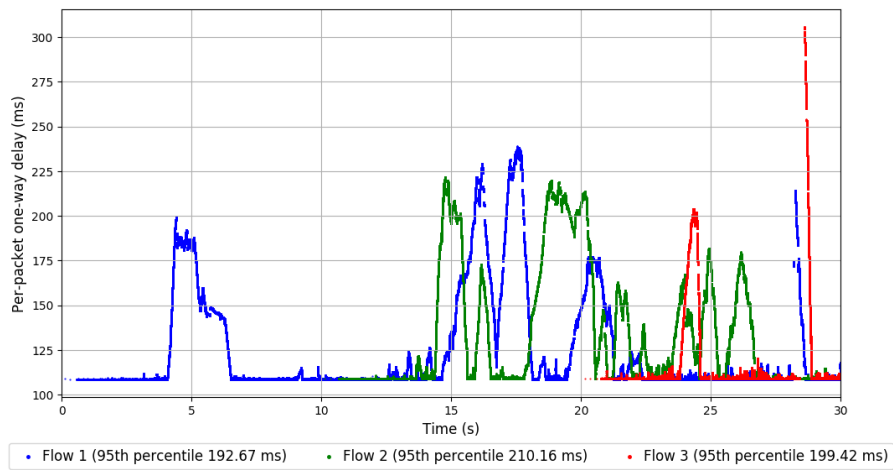
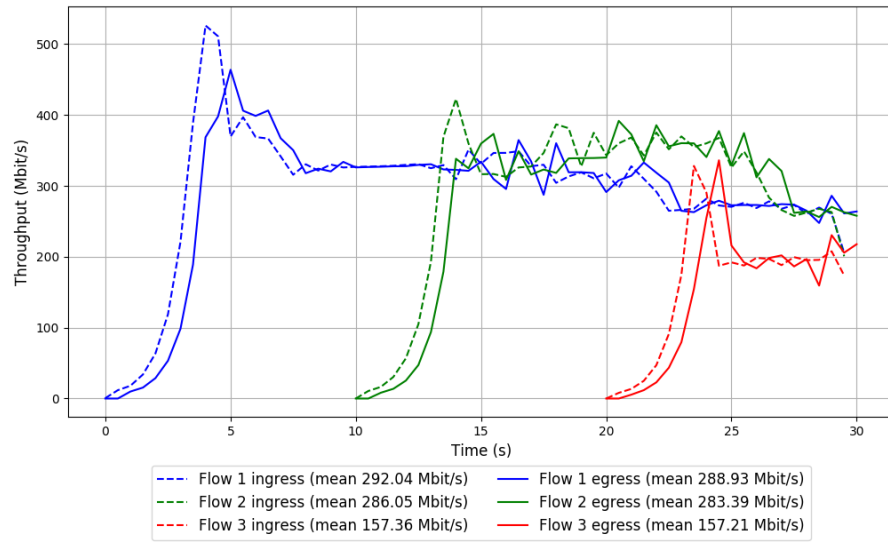


Run 2: Statistics of PCC-Expr

Start at: 2019-01-24 19:01:12  
End at: 2019-01-24 19:01:42  
Local clock offset: 0.657 ms  
Remote clock offset: -0.108 ms

# Below is generated by plot.py at 2019-01-24 23:32:57  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 529.19 Mbit/s  
95th percentile per-packet one-way delay: 206.194 ms  
Loss rate: 0.93%  
-- Flow 1:  
Average throughput: 288.93 Mbit/s  
95th percentile per-packet one-way delay: 192.668 ms  
Loss rate: 1.07%  
-- Flow 2:  
Average throughput: 283.39 Mbit/s  
95th percentile per-packet one-way delay: 210.164 ms  
Loss rate: 0.94%  
-- Flow 3:  
Average throughput: 157.21 Mbit/s  
95th percentile per-packet one-way delay: 199.419 ms  
Loss rate: 0.12%

## Run 2: Report of PCC-Expr — Data Link

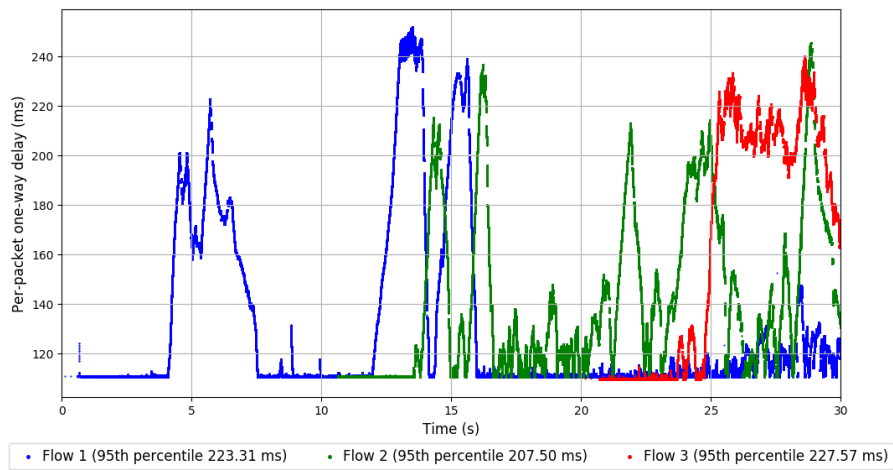
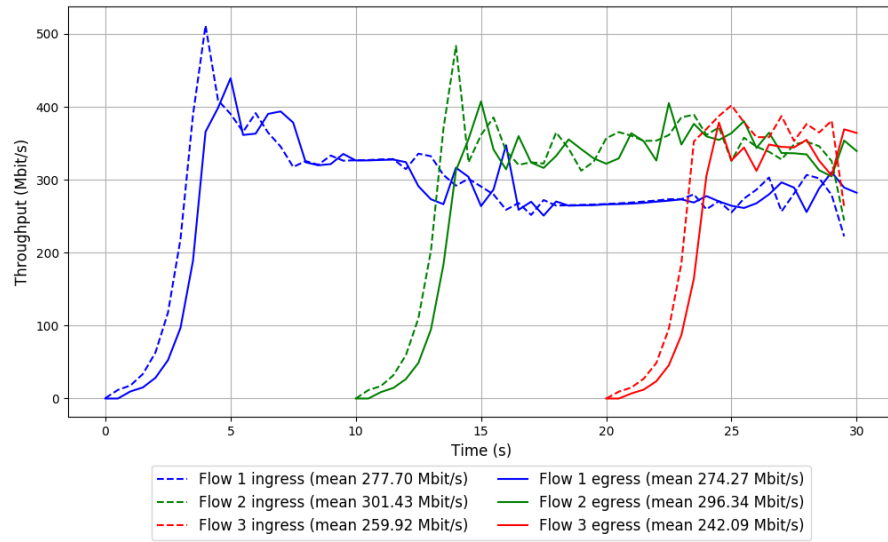


Run 3: Statistics of PCC-Expr

Start at: 2019-01-24 19:40:09  
End at: 2019-01-24 19:40:39  
Local clock offset: -1.382 ms  
Remote clock offset: -0.099 ms

# Below is generated by plot.py at 2019-01-24 23:36:13  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 551.02 Mbit/s  
95th percentile per-packet one-way delay: 222.053 ms  
Loss rate: 2.24%  
-- Flow 1:  
Average throughput: 274.27 Mbit/s  
95th percentile per-packet one-way delay: 223.311 ms  
Loss rate: 1.23%  
-- Flow 2:  
Average throughput: 296.34 Mbit/s  
95th percentile per-packet one-way delay: 207.495 ms  
Loss rate: 1.68%  
-- Flow 3:  
Average throughput: 242.09 Mbit/s  
95th percentile per-packet one-way delay: 227.568 ms  
Loss rate: 6.84%

### Run 3: Report of PCC-Expr — Data Link

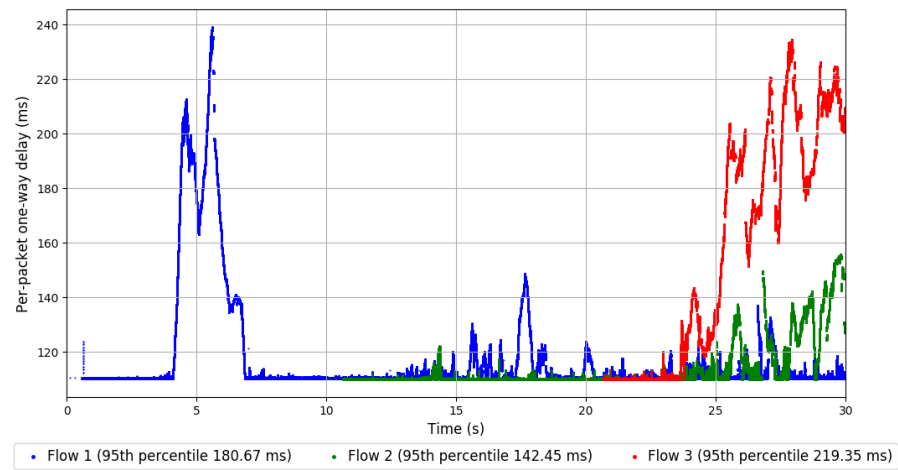
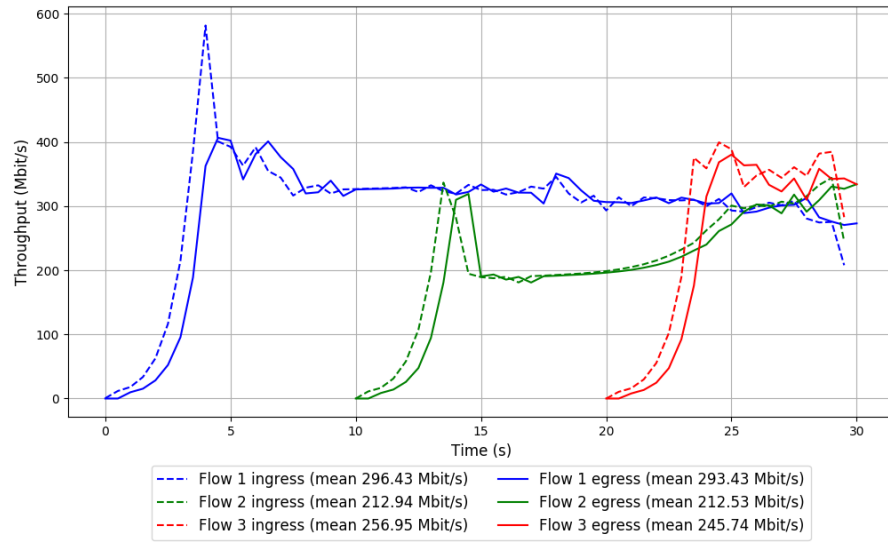


Run 4: Statistics of PCC-Expr

Start at: 2019-01-24 20:18:38  
End at: 2019-01-24 20:19:08  
Local clock offset: -1.182 ms  
Remote clock offset: -0.423 ms

# Below is generated by plot.py at 2019-01-24 23:44:28  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 515.76 Mbit/s  
95th percentile per-packet one-way delay: 203.047 ms  
Loss rate: 1.34%  
-- Flow 1:  
Average throughput: 293.43 Mbit/s  
95th percentile per-packet one-way delay: 180.668 ms  
Loss rate: 1.03%  
-- Flow 2:  
Average throughput: 212.53 Mbit/s  
95th percentile per-packet one-way delay: 142.452 ms  
Loss rate: 0.19%  
-- Flow 3:  
Average throughput: 245.74 Mbit/s  
95th percentile per-packet one-way delay: 219.347 ms  
Loss rate: 4.36%

#### Run 4: Report of PCC-Expr — Data Link





Run 5: Statistics of PCC-Expr

Start at: 2019-01-24 20:57:12

End at: 2019-01-24 20:57:42

Local clock offset: -0.203 ms

Remote clock offset: 0.004 ms

# Below is generated by plot.py at 2019-01-24 23:44:28

# Datalink statistics

-- Total of 3 flows:

Average throughput: 505.64 Mbit/s

95th percentile per-packet one-way delay: 212.325 ms

Loss rate: 1.91%

-- Flow 1:

Average throughput: 319.43 Mbit/s

95th percentile per-packet one-way delay: 214.937 ms

Loss rate: 2.98%

-- Flow 2:

Average throughput: 199.49 Mbit/s

95th percentile per-packet one-way delay: 142.625 ms

Loss rate: 0.00%

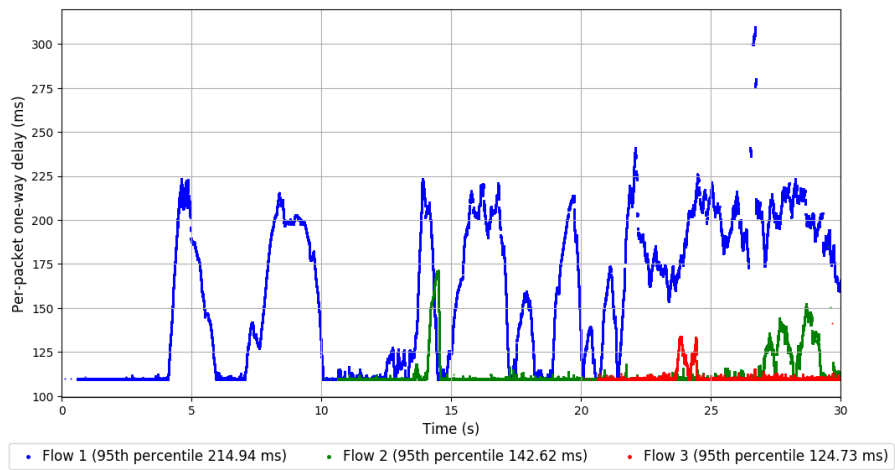
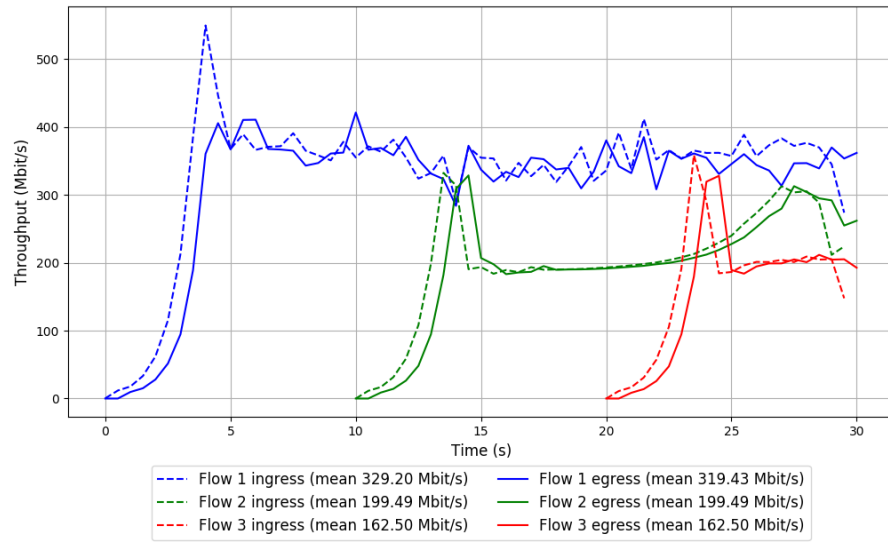
-- Flow 3:

Average throughput: 162.50 Mbit/s

95th percentile per-packet one-way delay: 124.735 ms

Loss rate: 0.00%

# Run 5: Report of PCC-Expr — Data Link



Run 1: Statistics of QUIC Cubic

Start at: 2019-01-24 18:26:18

End at: 2019-01-24 18:26:48

Local clock offset: -0.661 ms

Remote clock offset: -0.11 ms

# Below is generated by plot.py at 2019-01-24 23:44:28

# Datalink statistics

-- Total of 3 flows:

Average throughput: 58.53 Mbit/s

95th percentile per-packet one-way delay: 109.776 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 109.957 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 60.12 Mbit/s

95th percentile per-packet one-way delay: 109.790 ms

Loss rate: 0.00%

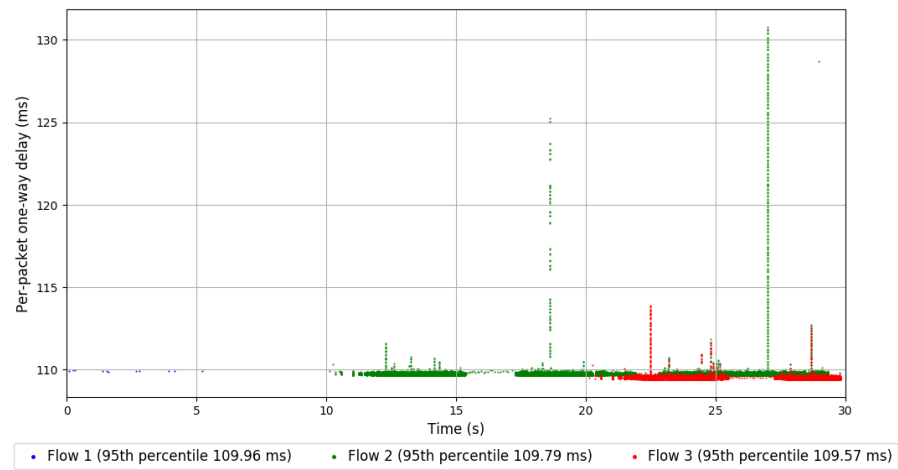
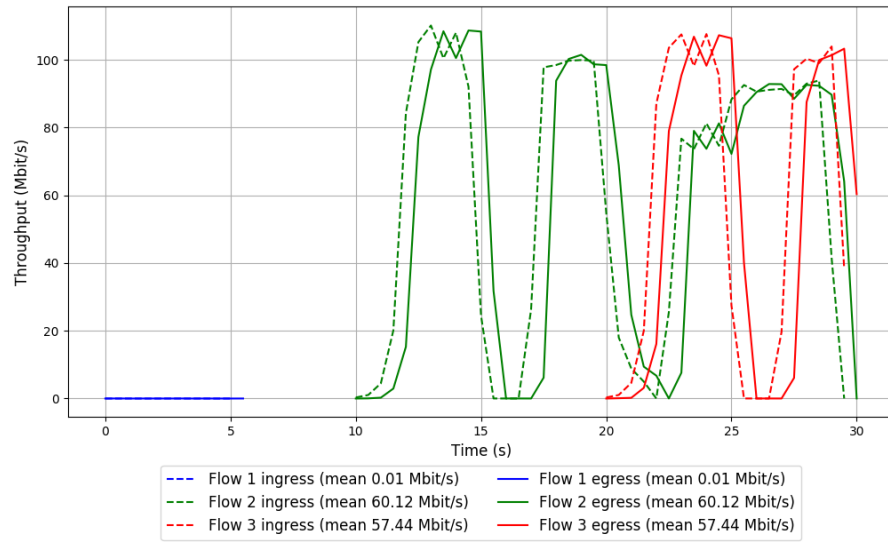
-- Flow 3:

Average throughput: 57.44 Mbit/s

95th percentile per-packet one-way delay: 109.568 ms

Loss rate: 0.00%

# Run 1: Report of QUIC Cubic — Data Link

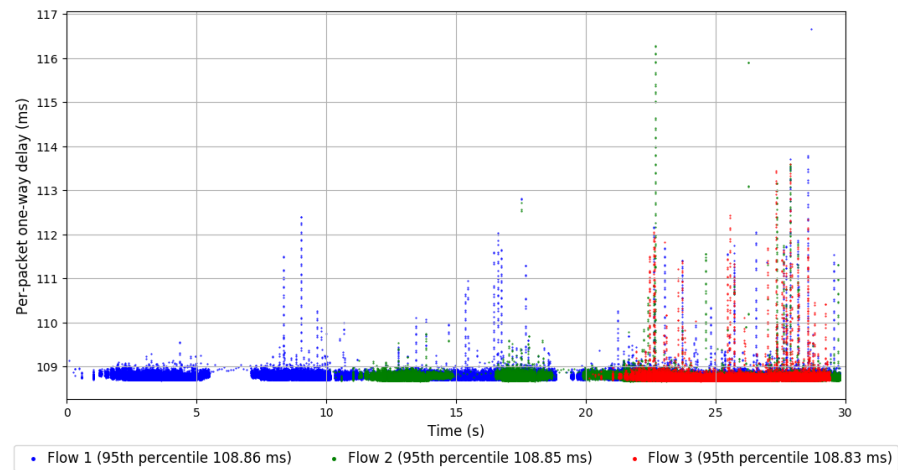
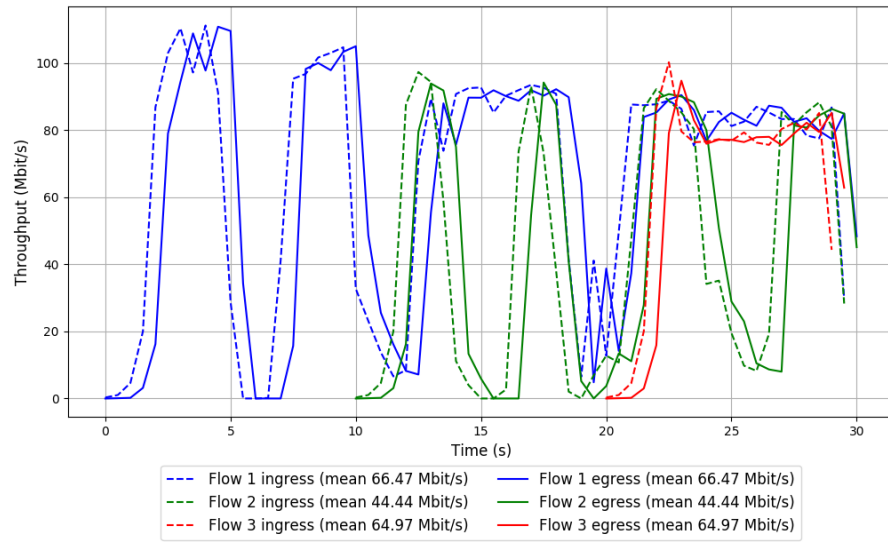


Run 2: Statistics of QUIC Cubic

Start at: 2019-01-24 19:04:39  
End at: 2019-01-24 19:05:09  
Local clock offset: 0.6 ms  
Remote clock offset: -0.141 ms

# Below is generated by plot.py at 2019-01-24 23:44:28  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 116.18 Mbit/s  
95th percentile per-packet one-way delay: 108.856 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 66.47 Mbit/s  
95th percentile per-packet one-way delay: 108.864 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 44.44 Mbit/s  
95th percentile per-packet one-way delay: 108.847 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 64.97 Mbit/s  
95th percentile per-packet one-way delay: 108.825 ms  
Loss rate: 0.00%

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



Run 3: Statistics of QUIC Cubic

Start at: 2019-01-24 19:43:38

End at: 2019-01-24 19:44:08

Local clock offset: 1.267 ms

Remote clock offset: -0.14 ms

# Below is generated by plot.py at 2019-01-24 23:44:29

# Datalink statistics

-- Total of 3 flows:

Average throughput: 116.06 Mbit/s

95th percentile per-packet one-way delay: 108.030 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 67.18 Mbit/s

95th percentile per-packet one-way delay: 107.923 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 57.85 Mbit/s

95th percentile per-packet one-way delay: 108.068 ms

Loss rate: 0.00%

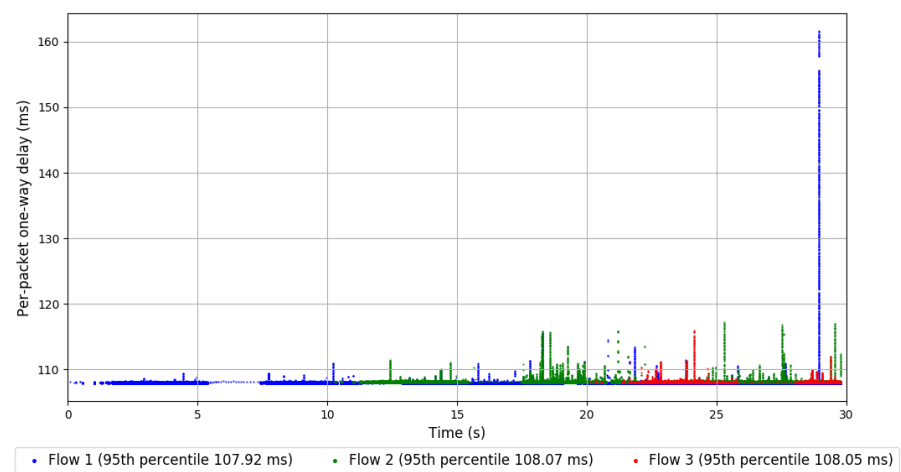
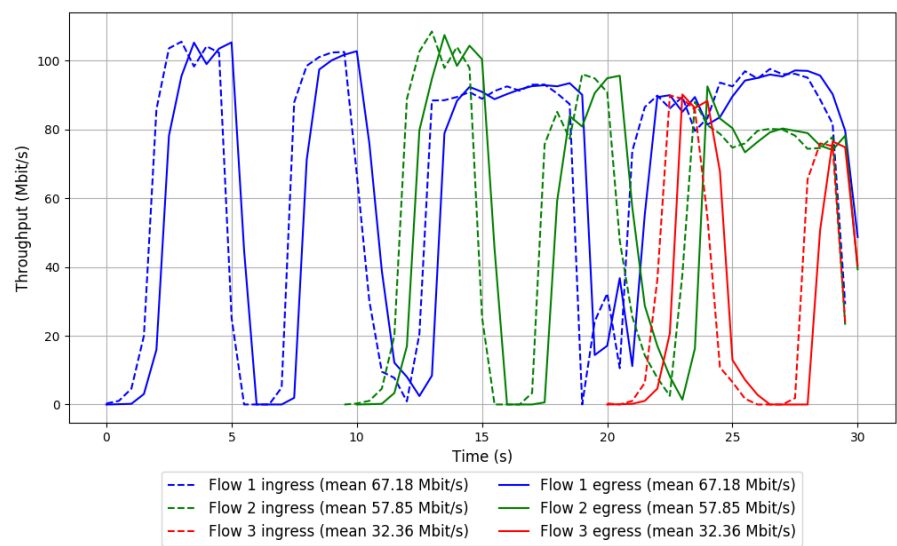
-- Flow 3:

Average throughput: 32.36 Mbit/s

95th percentile per-packet one-way delay: 108.054 ms

Loss rate: 0.00%

Run 3: Report of QUIC Cubic — Data Link





Run 4: Statistics of QUIC Cubic

Start at: 2019-01-24 20:22:04

End at: 2019-01-24 20:22:34

Local clock offset: -1.241 ms

Remote clock offset: 0.275 ms

# Below is generated by plot.py at 2019-01-24 23:44:29

# Datalink statistics

-- Total of 3 flows:

Average throughput: 104.19 Mbit/s

95th percentile per-packet one-way delay: 112.907 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 58.83 Mbit/s

95th percentile per-packet one-way delay: 110.997 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 51.79 Mbit/s

95th percentile per-packet one-way delay: 111.012 ms

Loss rate: 0.00%

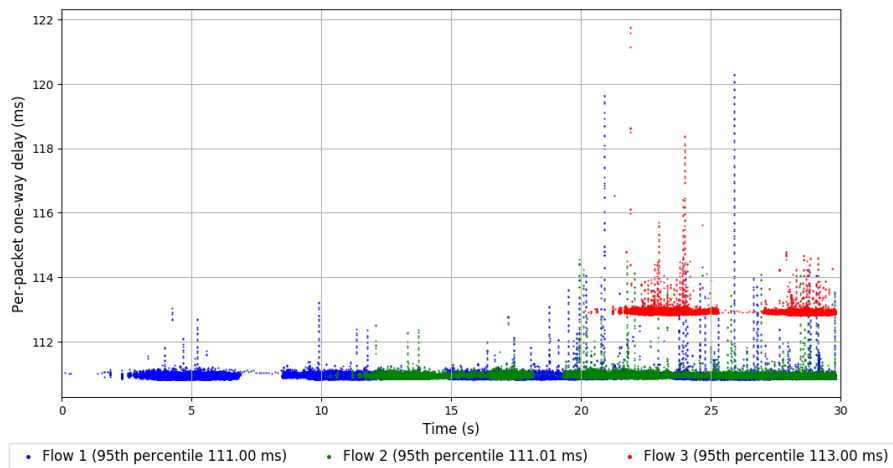
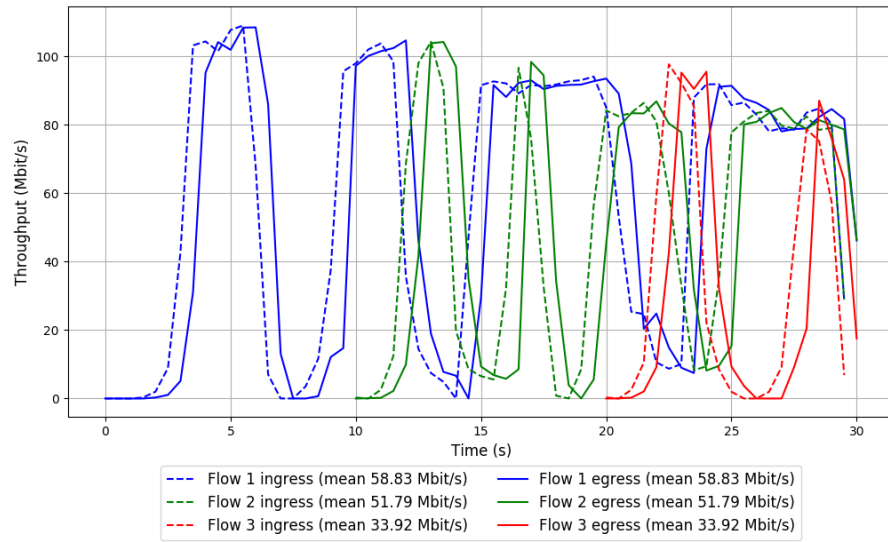
-- Flow 3:

Average throughput: 33.92 Mbit/s

95th percentile per-packet one-way delay: 113.003 ms

Loss rate: 0.01%

#### Run 4: Report of QUIC Cubic — Data Link

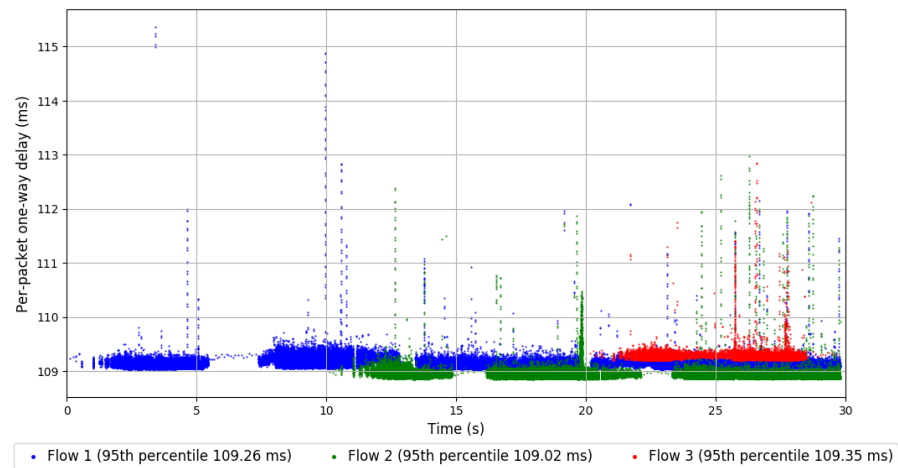
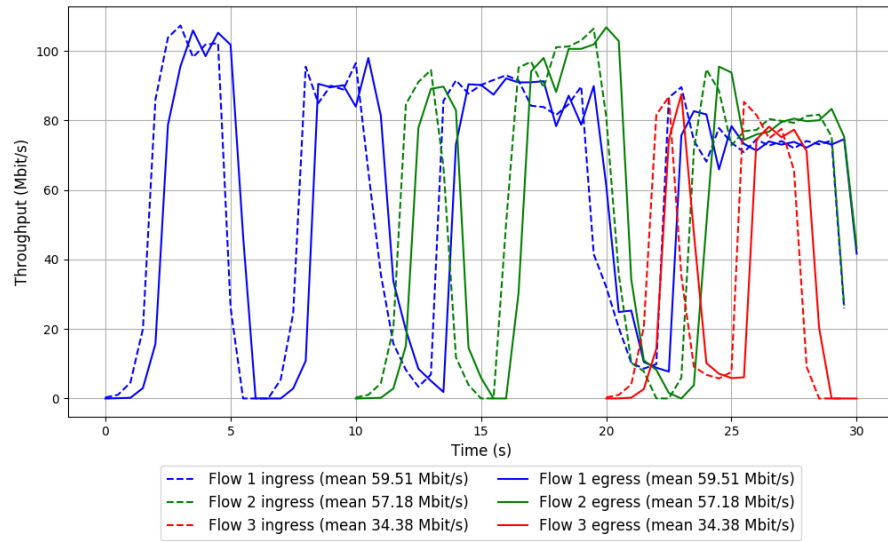


Run 5: Statistics of QUIC Cubic

Start at: 2019-01-24 21:00:36  
End at: 2019-01-24 21:01:06  
Local clock offset: 0.071 ms  
Remote clock offset: -0.035 ms

# Below is generated by plot.py at 2019-01-24 23:44:29  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 108.41 Mbit/s  
95th percentile per-packet one-way delay: 109.284 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 59.51 Mbit/s  
95th percentile per-packet one-way delay: 109.261 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 57.18 Mbit/s  
95th percentile per-packet one-way delay: 109.024 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 34.38 Mbit/s  
95th percentile per-packet one-way delay: 109.347 ms  
Loss rate: 0.00%

## Run 5: Report of QUIC Cubic — Data Link

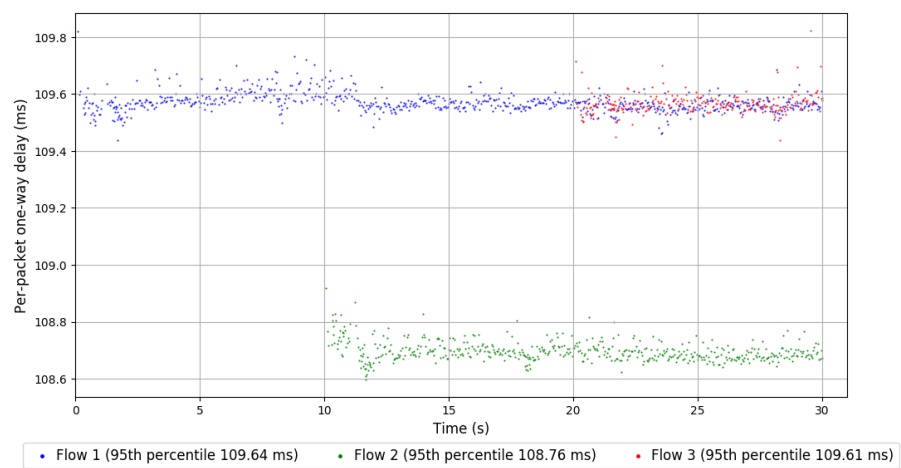
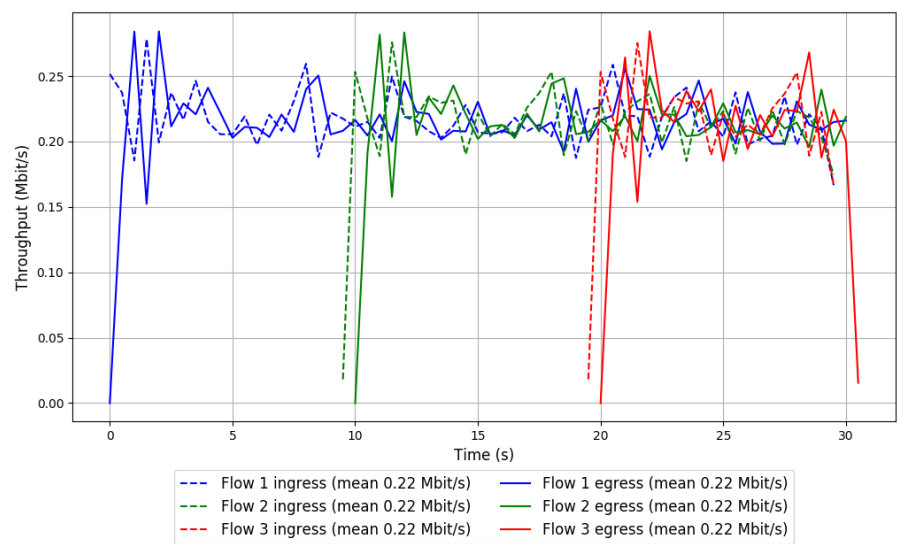


Run 1: Statistics of SReAM

Start at: 2019-01-24 18:25:02  
End at: 2019-01-24 18:25:32  
Local clock offset: -0.223 ms  
Remote clock offset: -0.119 ms

# Below is generated by plot.py at 2019-01-24 23:44:29  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.44 Mbit/s  
95th percentile per-packet one-way delay: 109.618 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 109.635 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 108.760 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 109.614 ms  
Loss rate: 0.00%

Run 1: Report of SReAM — Data Link

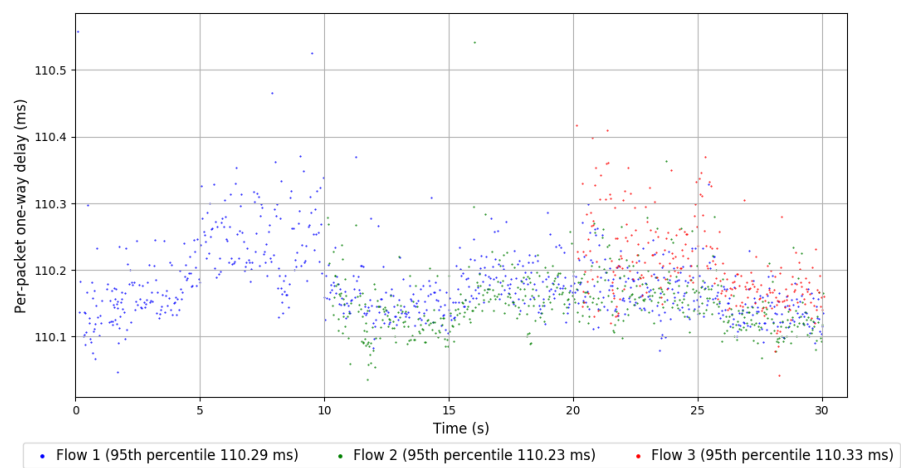
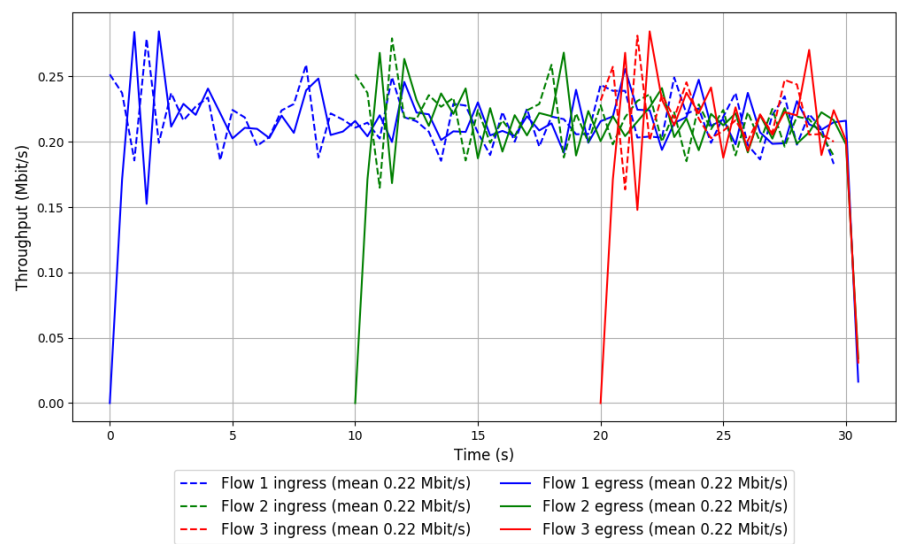


Run 2: Statistics of SReAM

Start at: 2019-01-24 19:03:23  
End at: 2019-01-24 19:03:53  
Local clock offset: -0.287 ms  
Remote clock offset: 0.23 ms

# Below is generated by plot.py at 2019-01-24 23:44:29  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.44 Mbit/s  
95th percentile per-packet one-way delay: 110.283 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 110.286 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 110.227 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 110.332 ms  
Loss rate: 0.00%

Run 2: Report of SReAM — Data Link



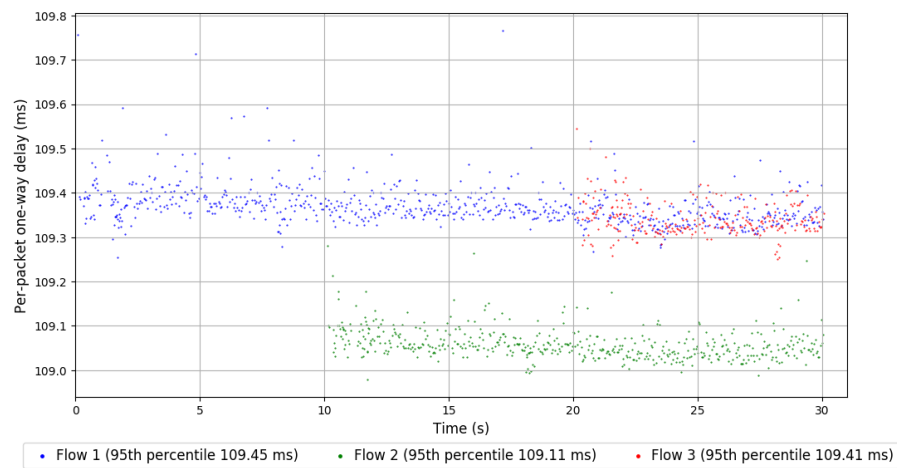
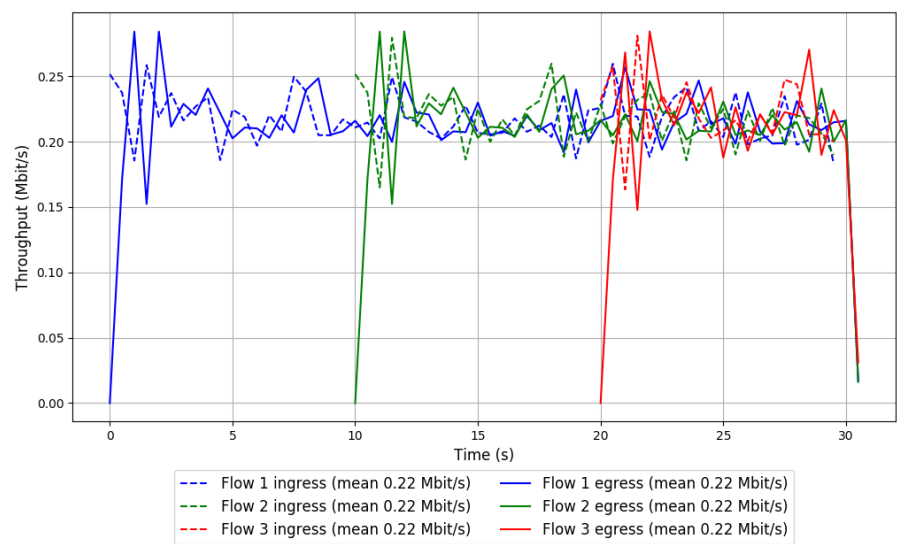


Run 3: Statistics of SReAM

Start at: 2019-01-24 19:42:22  
End at: 2019-01-24 19:42:52  
Local clock offset: -0.063 ms  
Remote clock offset: -0.182 ms

# Below is generated by plot.py at 2019-01-24 23:44:29  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.44 Mbit/s  
95th percentile per-packet one-way delay: 109.422 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 109.446 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 109.115 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 109.406 ms  
Loss rate: 0.00%

Run 3: Report of SReAM — Data Link

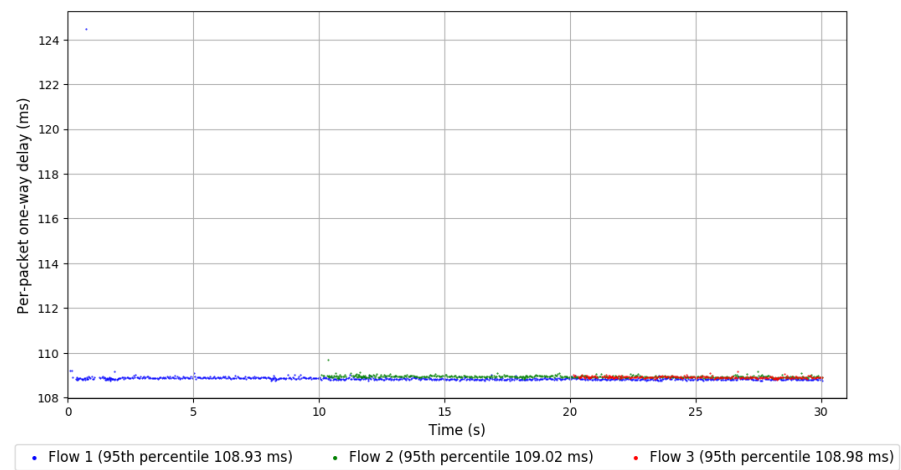
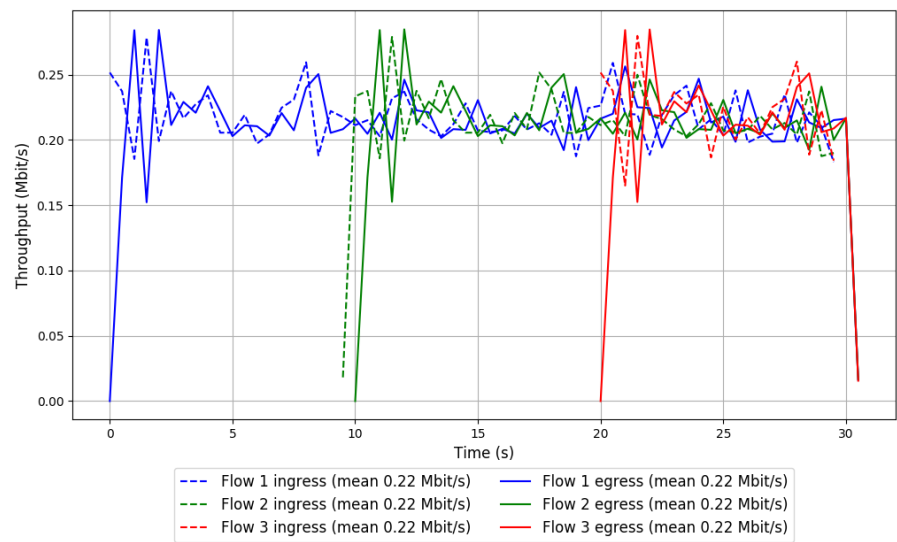


Run 4: Statistics of SReAM

Start at: 2019-01-24 20:20:48  
End at: 2019-01-24 20:21:18  
Local clock offset: 0.6 ms  
Remote clock offset: -0.042 ms

# Below is generated by plot.py at 2019-01-24 23:44:29  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.44 Mbit/s  
95th percentile per-packet one-way delay: 108.984 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 108.928 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 109.016 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 108.981 ms  
Loss rate: 0.00%

Run 4: Report of SReAM — Data Link

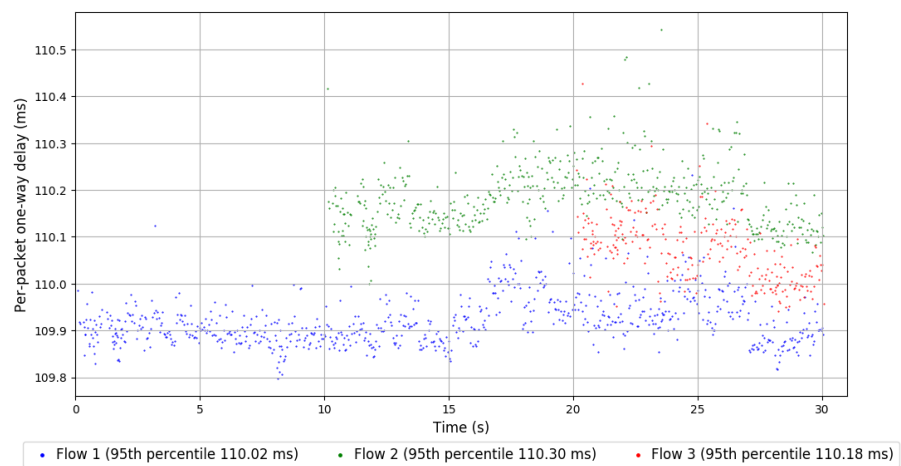
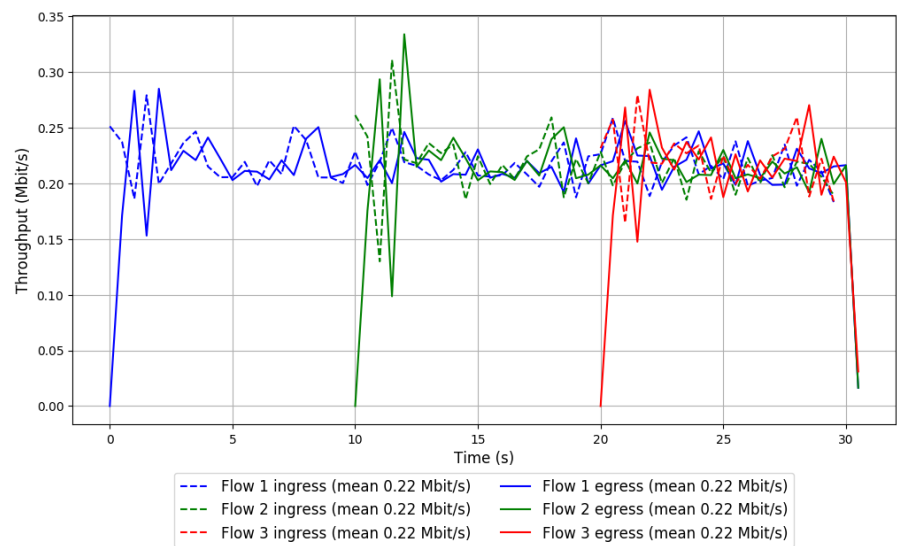


Run 5: Statistics of SReAM

Start at: 2019-01-24 20:59:21  
End at: 2019-01-24 20:59:51  
Local clock offset: -0.66 ms  
Remote clock offset: -0.131 ms

# Below is generated by plot.py at 2019-01-24 23:44:29  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.44 Mbit/s  
95th percentile per-packet one-way delay: 110.244 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 110.022 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 110.304 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 110.178 ms  
Loss rate: 0.00%

Run 5: Report of SReAM — Data Link



Run 1: Statistics of Sprout

Start at: 2019-01-24 18:13:15

End at: 2019-01-24 18:13:45

Local clock offset: -0.752 ms

Remote clock offset: 0.055 ms

# Below is generated by plot.py at 2019-01-24 23:44:29

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.57 Mbit/s

95th percentile per-packet one-way delay: 110.404 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.77 Mbit/s

95th percentile per-packet one-way delay: 110.161 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.74 Mbit/s

95th percentile per-packet one-way delay: 110.125 ms

Loss rate: 0.00%

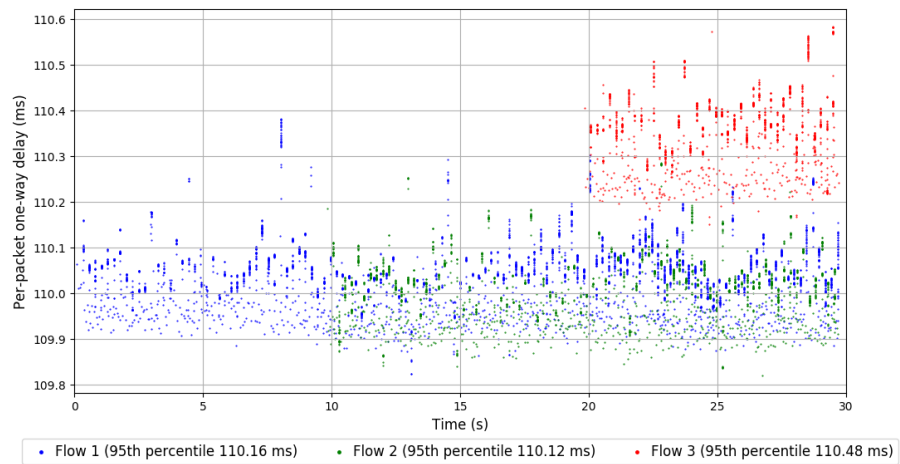
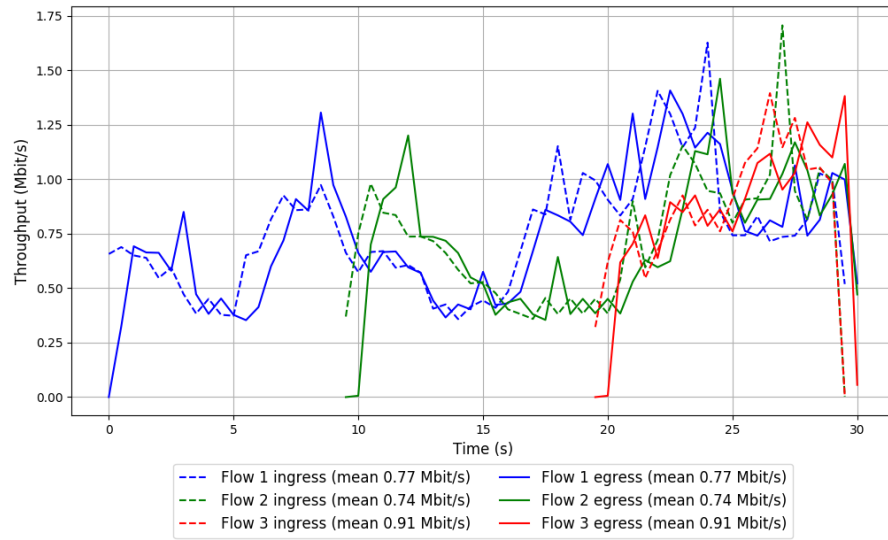
-- Flow 3:

Average throughput: 0.91 Mbit/s

95th percentile per-packet one-way delay: 110.480 ms

Loss rate: 0.00%

## Run 1: Report of Sprout — Data Link



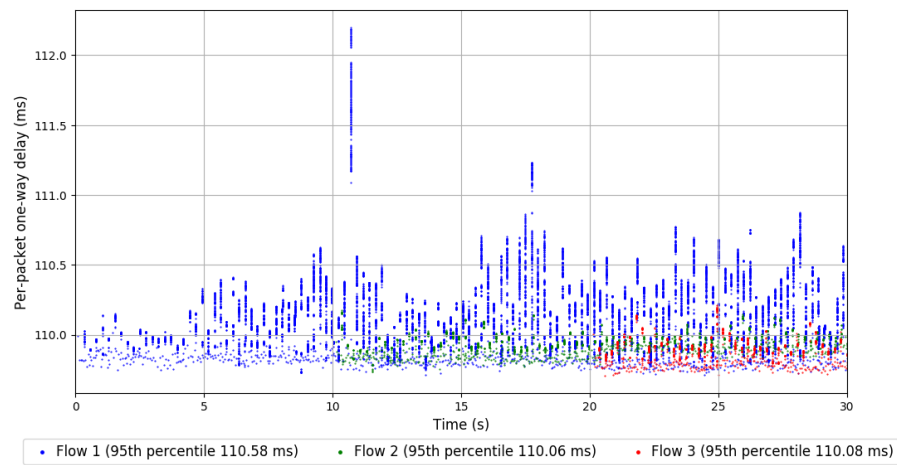
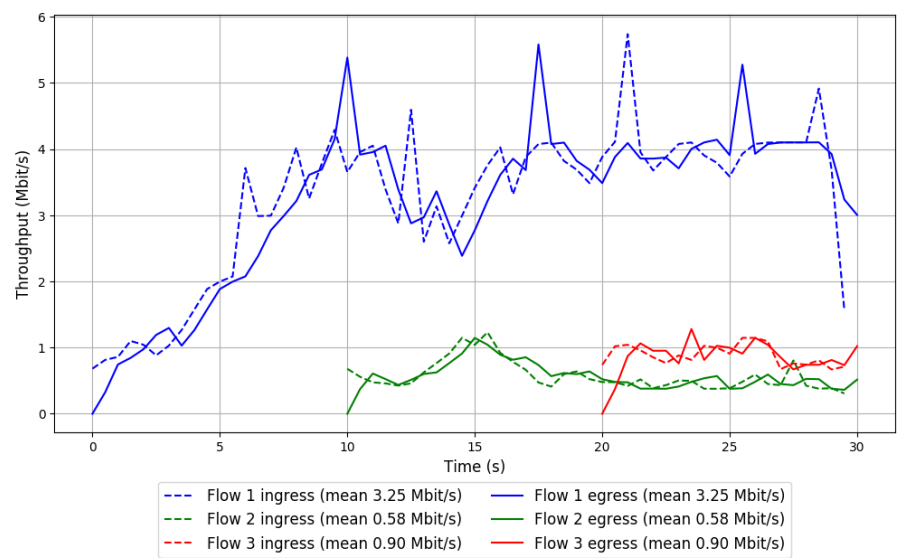


Run 2: Statistics of Sprout

Start at: 2019-01-24 18:51:40  
End at: 2019-01-24 18:52:10  
Local clock offset: -0.407 ms  
Remote clock offset: -0.137 ms

# Below is generated by plot.py at 2019-01-24 23:44:29  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 3.93 Mbit/s  
95th percentile per-packet one-way delay: 110.545 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 3.25 Mbit/s  
95th percentile per-packet one-way delay: 110.579 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.58 Mbit/s  
95th percentile per-packet one-way delay: 110.065 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.90 Mbit/s  
95th percentile per-packet one-way delay: 110.078 ms  
Loss rate: 0.00%

Run 2: Report of Sprout — Data Link

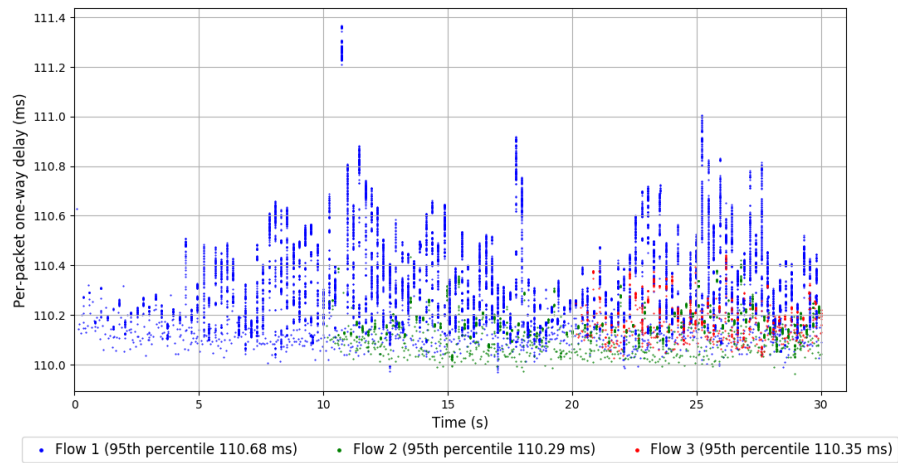
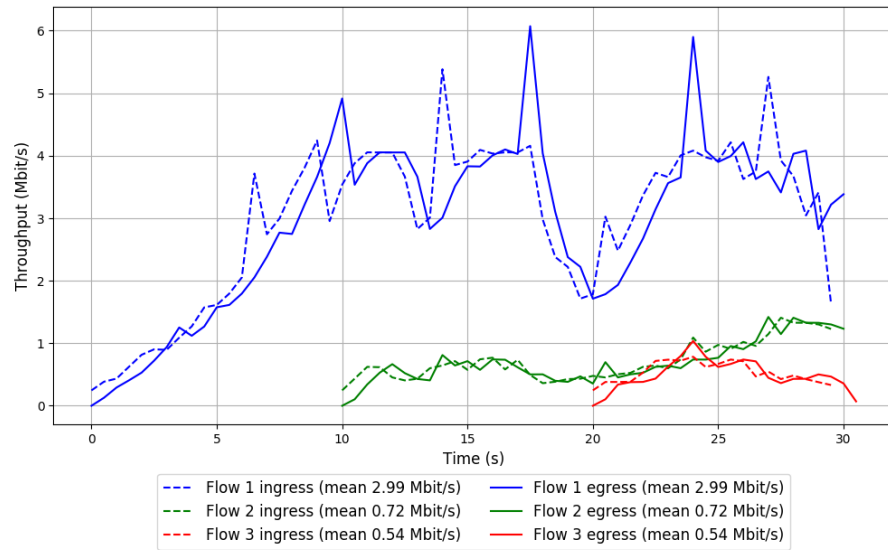


### Run 3: Statistics of Sprout

Start at: 2019-01-24 19:30:41  
End at: 2019-01-24 19:31:11  
Local clock offset: -0.671 ms  
Remote clock offset: -0.095 ms

```
# Below is generated by plot.py at 2019-01-24 23:44:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.65 Mbit/s
95th percentile per-packet one-way delay: 110.651 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.99 Mbit/s
95th percentile per-packet one-way delay: 110.683 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.72 Mbit/s
95th percentile per-packet one-way delay: 110.292 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.54 Mbit/s
95th percentile per-packet one-way delay: 110.352 ms
Loss rate: 0.00%
```

### Run 3: Report of Sprout — Data Link

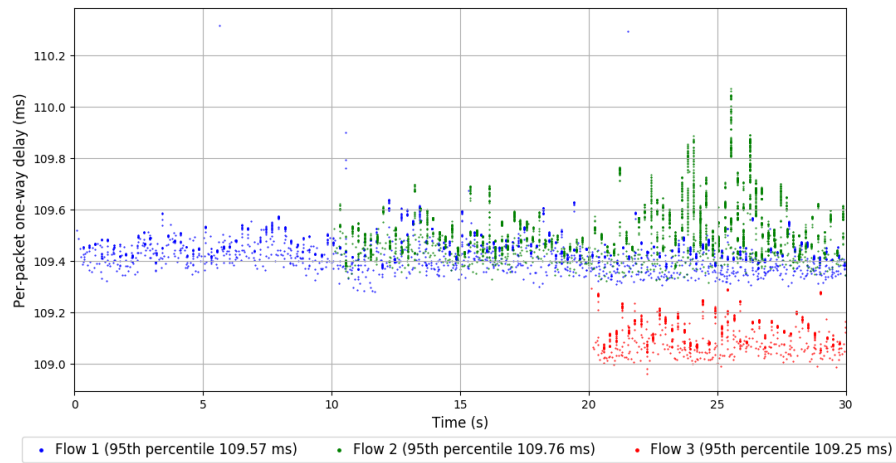
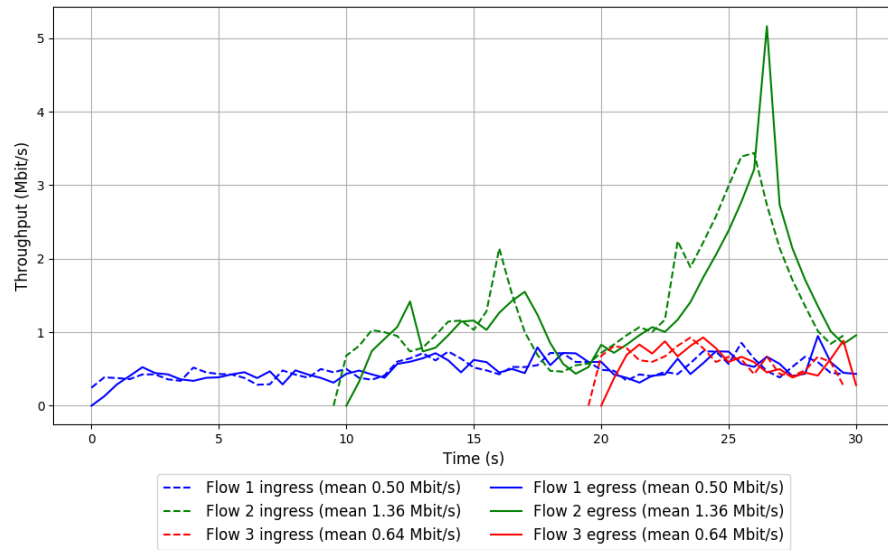


#### Run 4: Statistics of Sprout

Start at: 2019-01-24 20:09:04  
End at: 2019-01-24 20:09:34  
Local clock offset: 0.008 ms  
Remote clock offset: -0.122 ms

```
# Below is generated by plot.py at 2019-01-24 23:44:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.62 Mbit/s
95th percentile per-packet one-way delay: 109.686 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.50 Mbit/s
95th percentile per-packet one-way delay: 109.569 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.36 Mbit/s
95th percentile per-packet one-way delay: 109.758 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.64 Mbit/s
95th percentile per-packet one-way delay: 109.245 ms
Loss rate: 0.00%
```

#### Run 4: Report of Sprout — Data Link

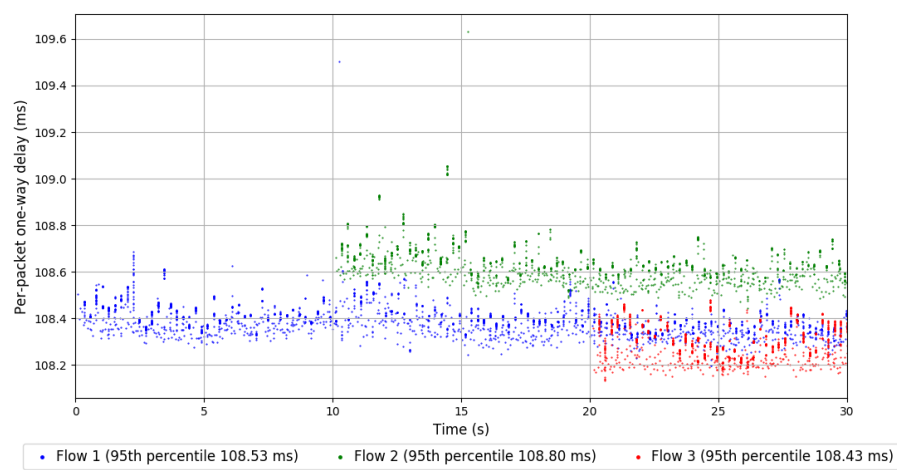
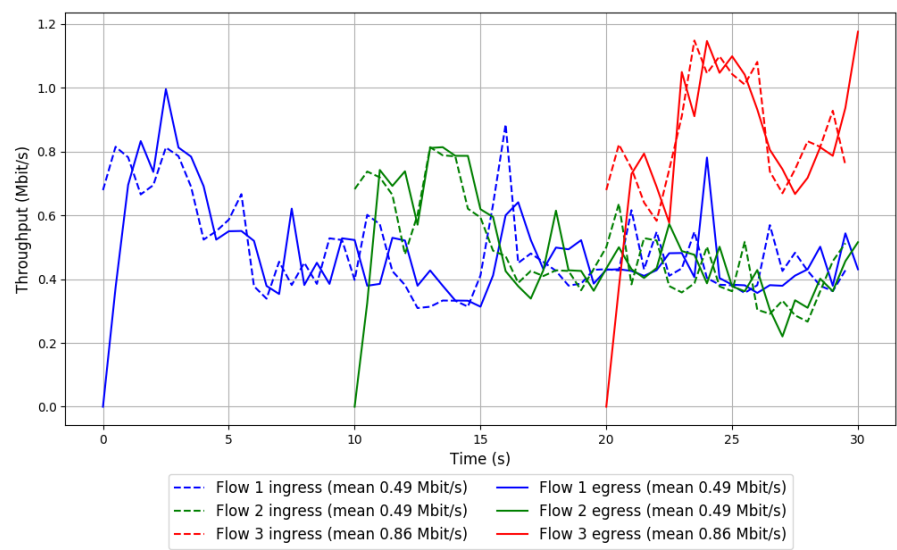


Run 5: Statistics of Sprout

Start at: 2019-01-24 20:47:43  
End at: 2019-01-24 20:48:13  
Local clock offset: 0.493 ms  
Remote clock offset: -0.441 ms

```
# Below is generated by plot.py at 2019-01-24 23:44:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.11 Mbit/s
95th percentile per-packet one-way delay: 108.709 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.49 Mbit/s
95th percentile per-packet one-way delay: 108.526 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.49 Mbit/s
95th percentile per-packet one-way delay: 108.799 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.86 Mbit/s
95th percentile per-packet one-way delay: 108.432 ms
Loss rate: 0.00%
```

Run 5: Report of Sprout — Data Link



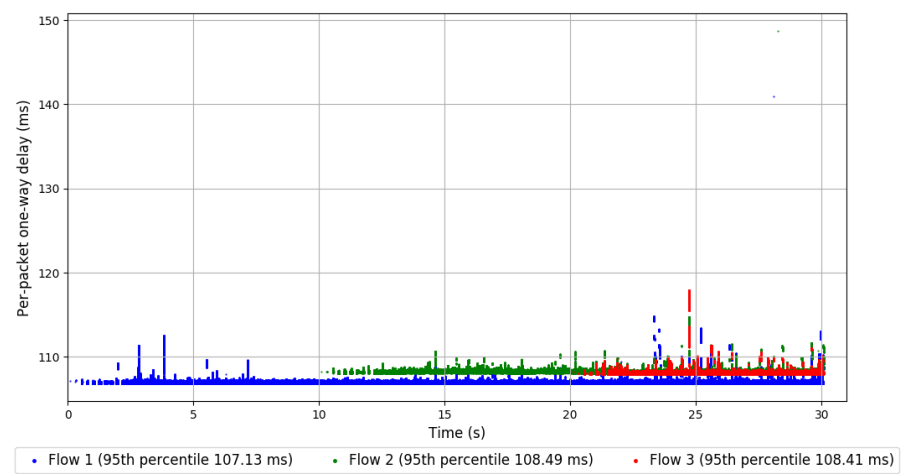
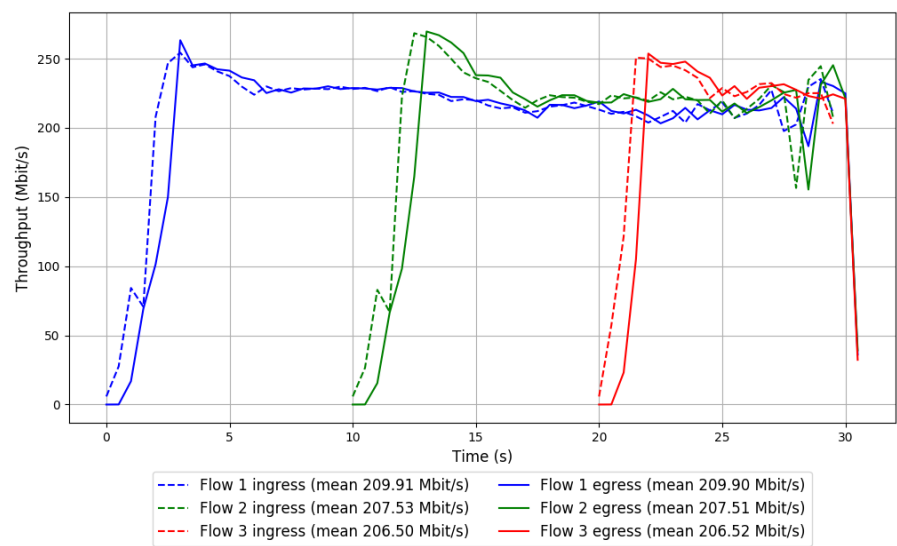


```
Run 1: Statistics of TaoVA-100x

Start at: 2019-01-24 18:29:36
End at: 2019-01-24 18:30:06
Local clock offset: 1.298 ms
Remote clock offset: -0.052 ms

# Below is generated by plot.py at 2019-01-24 23:46:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 416.80 Mbit/s
95th percentile per-packet one-way delay: 108.339 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 209.90 Mbit/s
95th percentile per-packet one-way delay: 107.129 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 207.51 Mbit/s
95th percentile per-packet one-way delay: 108.489 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 206.52 Mbit/s
95th percentile per-packet one-way delay: 108.413 ms
Loss rate: 0.00%
```

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



Run 2: Statistics of TaoVA-100x

Start at: 2019-01-24 19:07:56

End at: 2019-01-24 19:08:26

Local clock offset: -0.756 ms

Remote clock offset: 0.007 ms

# Below is generated by plot.py at 2019-01-24 23:47:00

# Datalink statistics

-- Total of 3 flows:

Average throughput: 416.94 Mbit/s

95th percentile per-packet one-way delay: 110.479 ms

Loss rate: 0.12%

-- Flow 1:

Average throughput: 212.69 Mbit/s

95th percentile per-packet one-way delay: 110.525 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 212.97 Mbit/s

95th percentile per-packet one-way delay: 110.367 ms

Loss rate: 0.00%

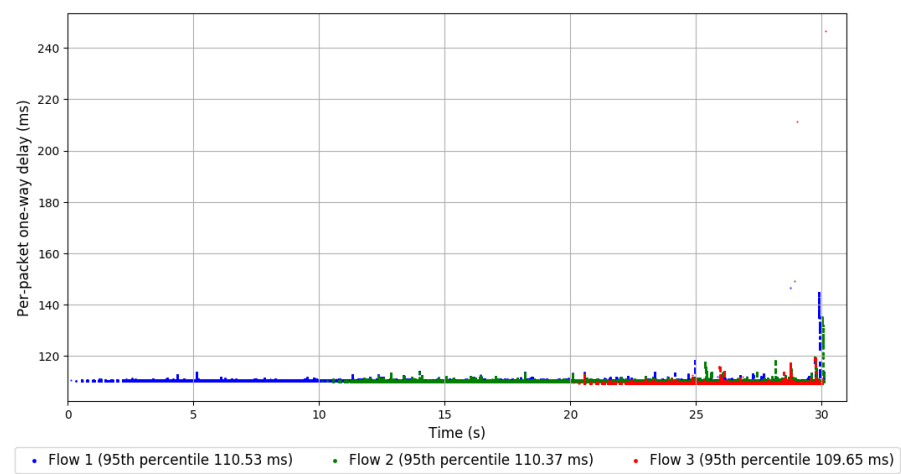
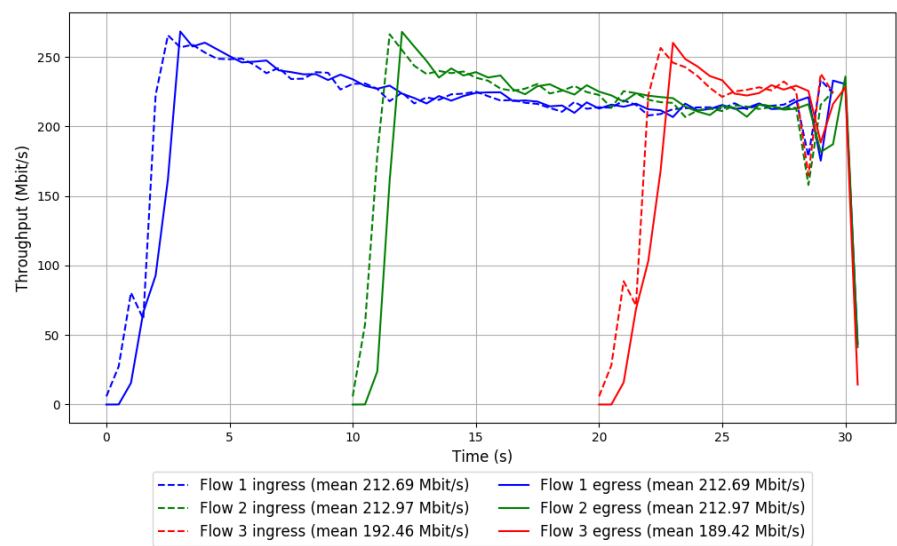
-- Flow 3:

Average throughput: 189.42 Mbit/s

95th percentile per-packet one-way delay: 109.653 ms

Loss rate: 0.82%

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

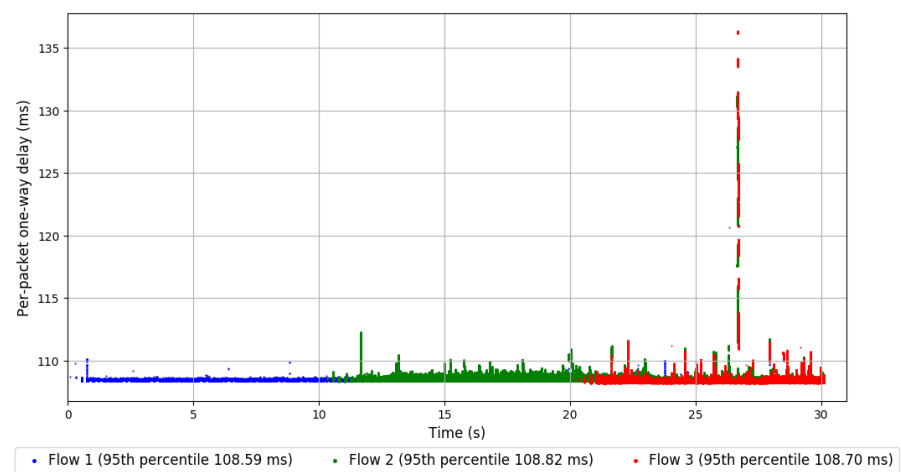
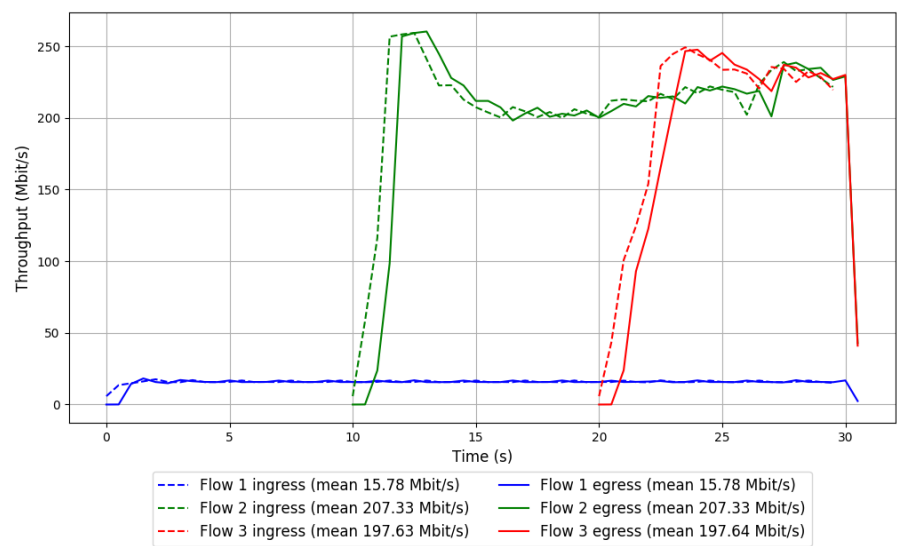


Run 3: Statistics of TaoVA-100x

Start at: 2019-01-24 19:46:53  
End at: 2019-01-24 19:47:23  
Local clock offset: 0.578 ms  
Remote clock offset: -0.505 ms

# Below is generated by plot.py at 2019-01-24 23:47:00  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 219.56 Mbit/s  
95th percentile per-packet one-way delay: 108.796 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 15.78 Mbit/s  
95th percentile per-packet one-way delay: 108.594 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 207.33 Mbit/s  
95th percentile per-packet one-way delay: 108.823 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 197.64 Mbit/s  
95th percentile per-packet one-way delay: 108.698 ms  
Loss rate: 0.00%

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

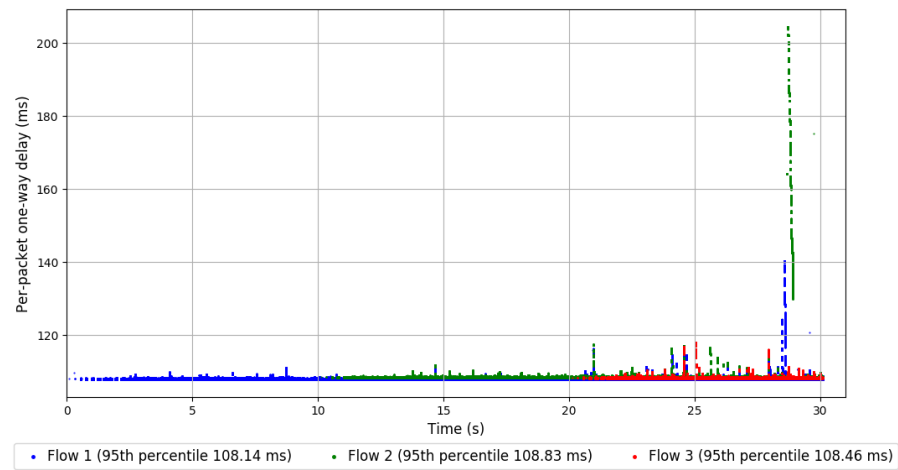
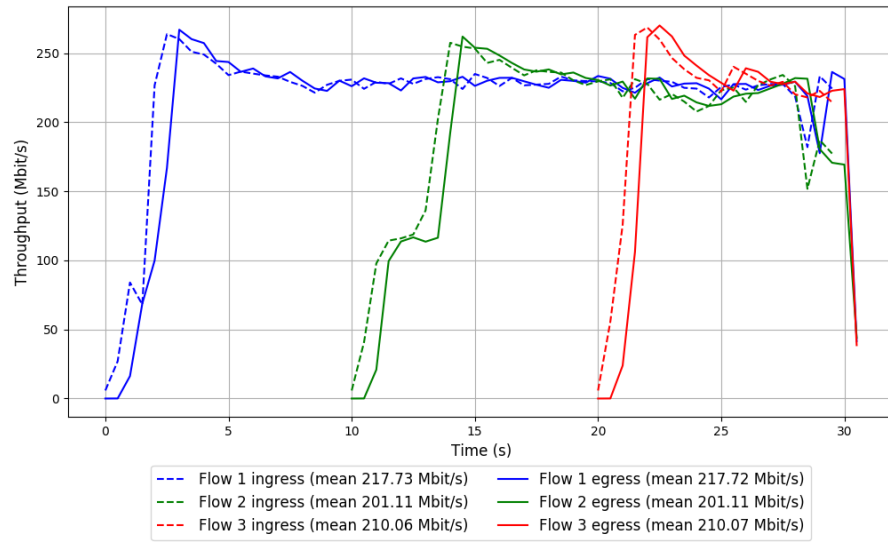


Run 4: Statistics of TaoVA-100x

Start at: 2019-01-24 20:25:17  
End at: 2019-01-24 20:25:47  
Local clock offset: 0.762 ms  
Remote clock offset: -0.448 ms

# Below is generated by plot.py at 2019-01-24 23:47:31  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 421.45 Mbit/s  
95th percentile per-packet one-way delay: 108.544 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 217.72 Mbit/s  
95th percentile per-packet one-way delay: 108.141 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 201.11 Mbit/s  
95th percentile per-packet one-way delay: 108.831 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 210.07 Mbit/s  
95th percentile per-packet one-way delay: 108.462 ms  
Loss rate: 0.00%

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



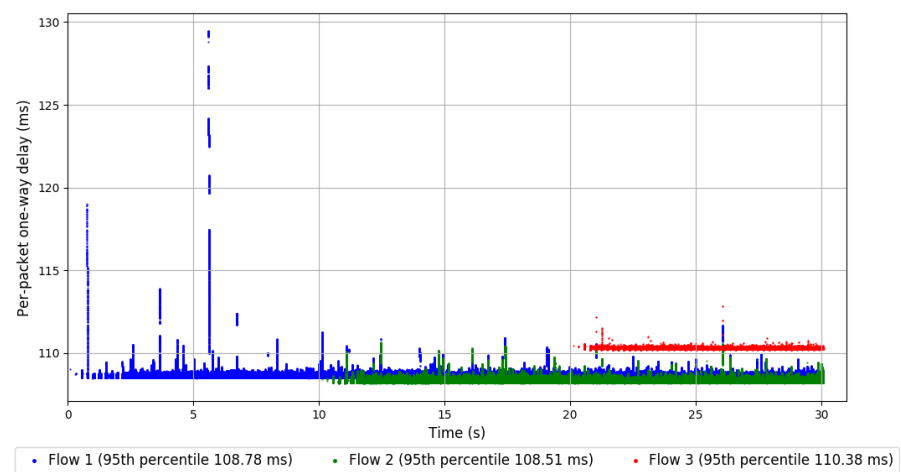
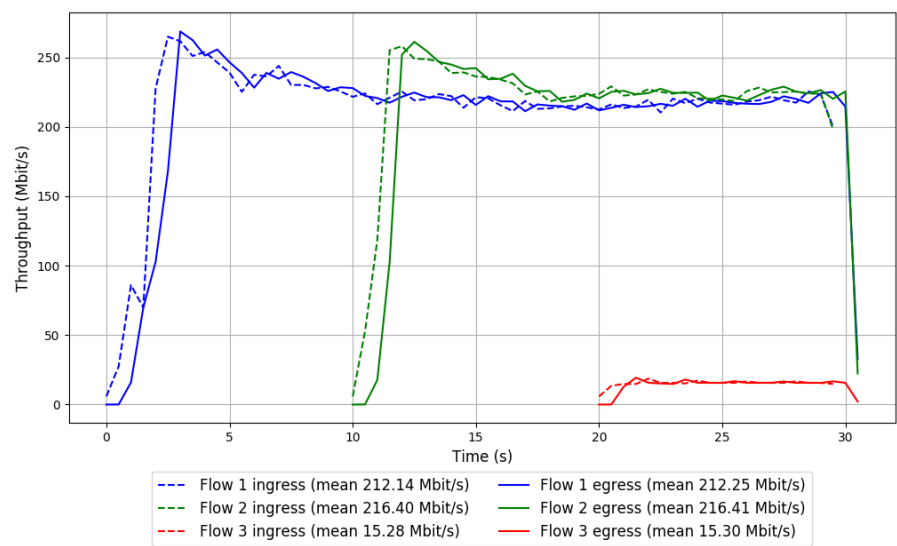


Run 5: Statistics of TaoVA-100x

Start at: 2019-01-24 21:03:54  
End at: 2019-01-24 21:04:24  
Local clock offset: 0.678 ms  
Remote clock offset: -0.106 ms

# Below is generated by plot.py at 2019-01-24 23:47:31  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 361.42 Mbit/s  
95th percentile per-packet one-way delay: 108.771 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 212.25 Mbit/s  
95th percentile per-packet one-way delay: 108.776 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 216.41 Mbit/s  
95th percentile per-packet one-way delay: 108.510 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 15.30 Mbit/s  
95th percentile per-packet one-way delay: 110.382 ms  
Loss rate: 0.01%

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

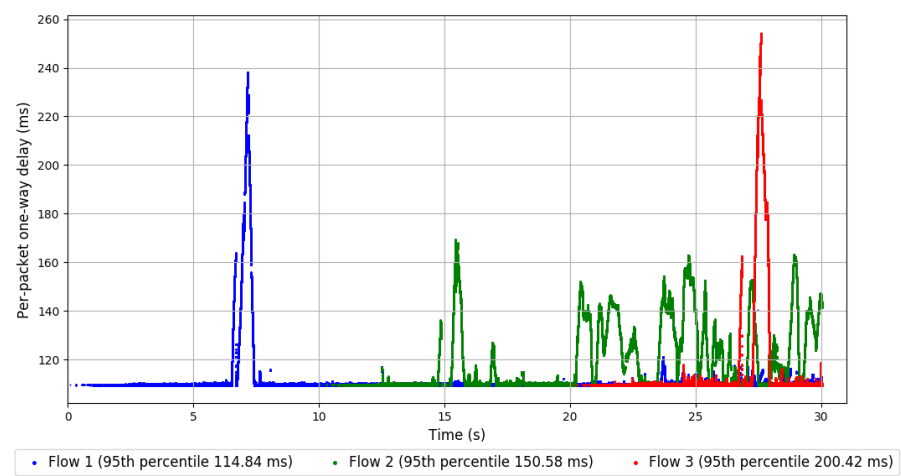
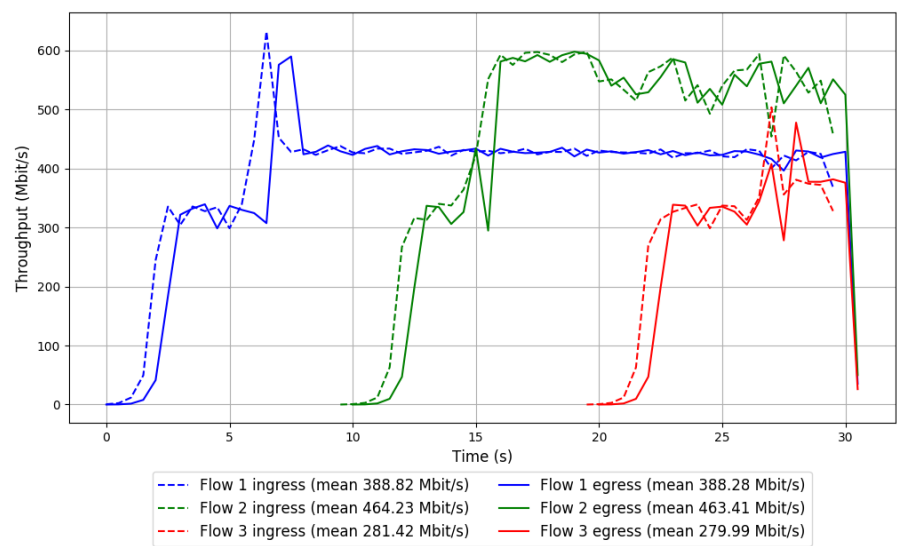


Run 1: Statistics of TCP Vegas

Start at: 2019-01-24 18:05:46  
End at: 2019-01-24 18:06:16  
Local clock offset: -0.192 ms  
Remote clock offset: -0.109 ms

# Below is generated by plot.py at 2019-01-24 23:51:25  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 790.87 Mbit/s  
95th percentile per-packet one-way delay: 148.412 ms  
Loss rate: 0.20%  
-- Flow 1:  
Average throughput: 388.28 Mbit/s  
95th percentile per-packet one-way delay: 114.845 ms  
Loss rate: 0.14%  
-- Flow 2:  
Average throughput: 463.41 Mbit/s  
95th percentile per-packet one-way delay: 150.583 ms  
Loss rate: 0.17%  
-- Flow 3:  
Average throughput: 279.99 Mbit/s  
95th percentile per-packet one-way delay: 200.416 ms  
Loss rate: 0.51%

Run 1: Report of TCP Vegas — Data Link

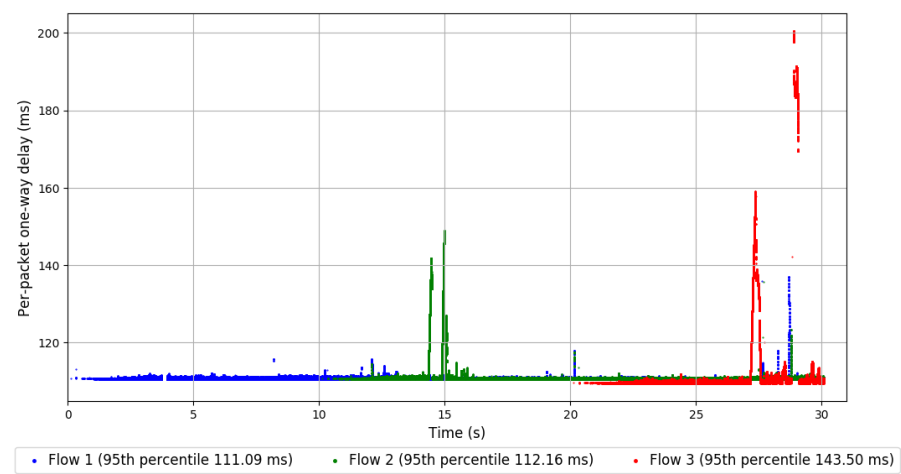
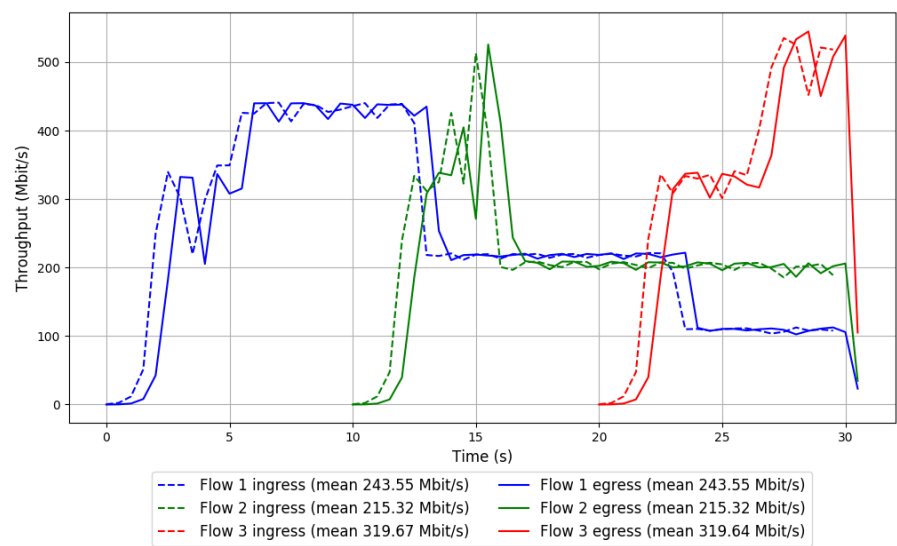


Run 2: Statistics of TCP Vegas

Start at: 2019-01-24 18:44:28  
End at: 2019-01-24 18:44:58  
Local clock offset: -1.394 ms  
Remote clock offset: -0.139 ms

# Below is generated by plot.py at 2019-01-24 23:51:25  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 493.10 Mbit/s  
95th percentile per-packet one-way delay: 111.712 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 243.55 Mbit/s  
95th percentile per-packet one-way delay: 111.093 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 215.32 Mbit/s  
95th percentile per-packet one-way delay: 112.164 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 319.64 Mbit/s  
95th percentile per-packet one-way delay: 143.501 ms  
Loss rate: 0.00%

Run 2: Report of TCP Vegas — Data Link

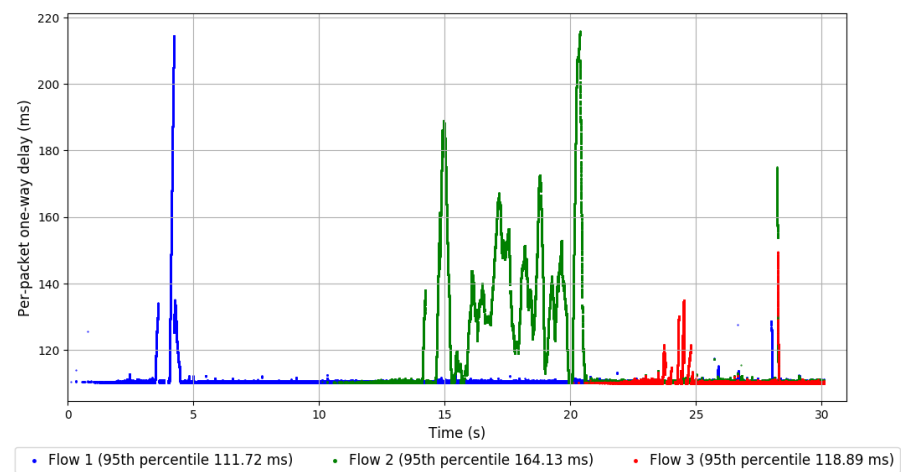
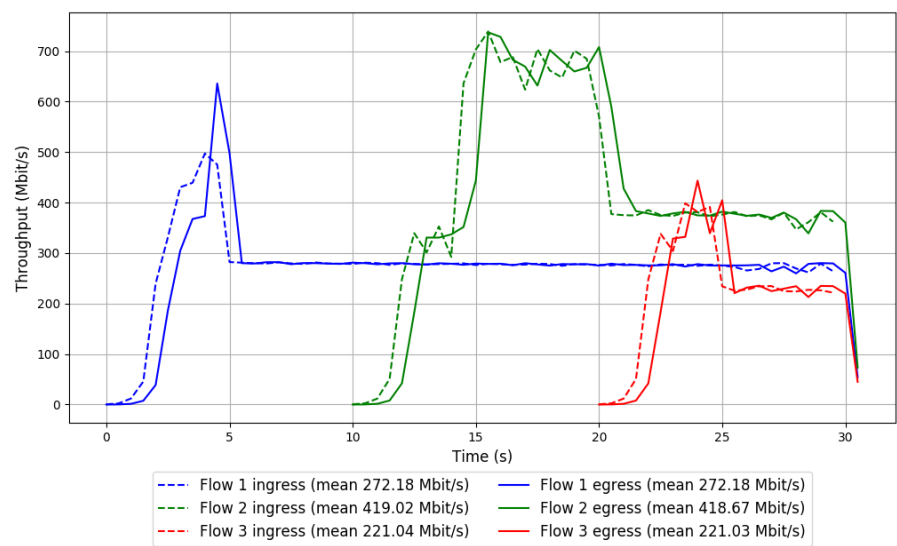


Run 3: Statistics of TCP Vegas

Start at: 2019-01-24 19:23:17  
End at: 2019-01-24 19:23:47  
Local clock offset: -1.246 ms  
Remote clock offset: -0.504 ms

# Below is generated by plot.py at 2019-01-24 23:55:50  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 624.60 Mbit/s  
95th percentile per-packet one-way delay: 150.220 ms  
Loss rate: 0.04%  
-- Flow 1:  
Average throughput: 272.18 Mbit/s  
95th percentile per-packet one-way delay: 111.722 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 418.67 Mbit/s  
95th percentile per-packet one-way delay: 164.133 ms  
Loss rate: 0.08%  
-- Flow 3:  
Average throughput: 221.03 Mbit/s  
95th percentile per-packet one-way delay: 118.890 ms  
Loss rate: 0.00%

Run 3: Report of TCP Vegas — Data Link



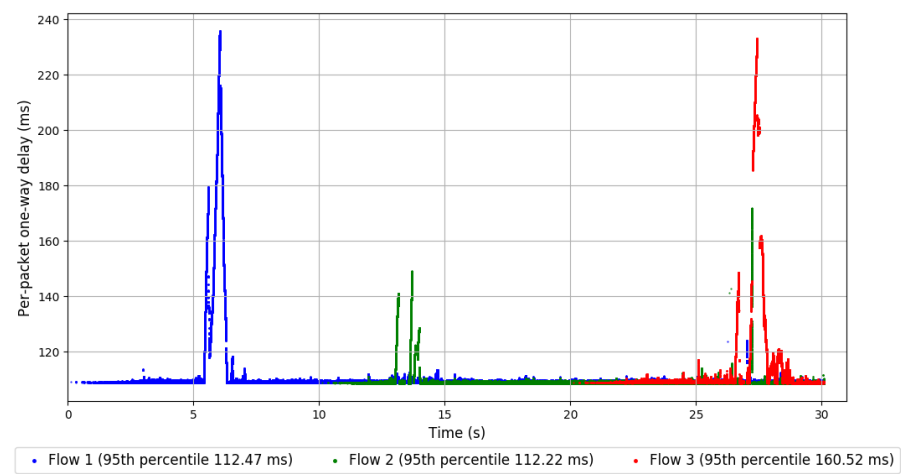
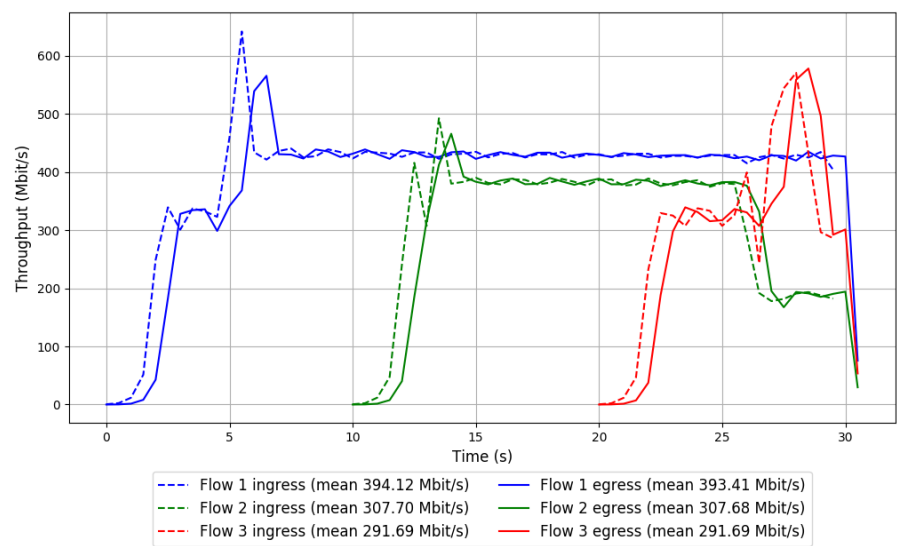


Run 4: Statistics of TCP Vegas

Start at: 2019-01-24 20:01:39  
End at: 2019-01-24 20:02:09  
Local clock offset: 0.508 ms  
Remote clock offset: -0.091 ms

# Below is generated by plot.py at 2019-01-24 23:57:46  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 695.25 Mbit/s  
95th percentile per-packet one-way delay: 121.690 ms  
Loss rate: 0.10%  
-- Flow 1:  
Average throughput: 393.41 Mbit/s  
95th percentile per-packet one-way delay: 112.466 ms  
Loss rate: 0.18%  
-- Flow 2:  
Average throughput: 307.68 Mbit/s  
95th percentile per-packet one-way delay: 112.220 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 291.69 Mbit/s  
95th percentile per-packet one-way delay: 160.520 ms  
Loss rate: 0.00%

Run 4: Report of TCP Vegas — Data Link

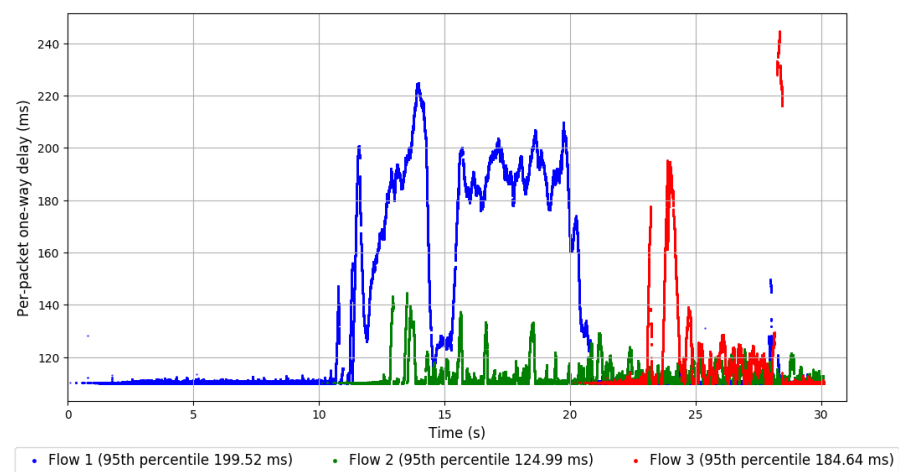
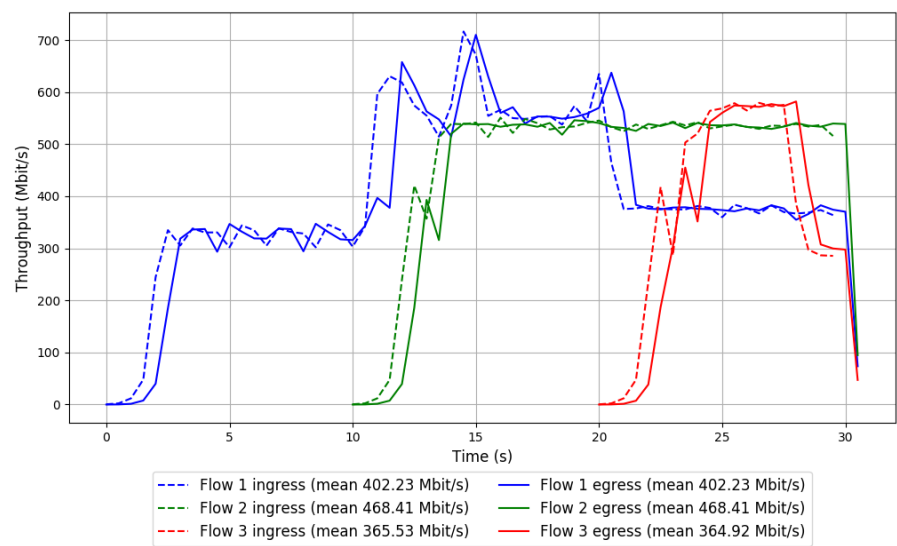


Run 5: Statistics of TCP Vegas

Start at: 2019-01-24 20:40:04  
End at: 2019-01-24 20:40:34  
Local clock offset: -0.805 ms  
Remote clock offset: -0.082 ms

# Below is generated by plot.py at 2019-01-25 00:00:17  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 835.52 Mbit/s  
95th percentile per-packet one-way delay: 195.830 ms  
Loss rate: 0.03%  
-- Flow 1:  
Average throughput: 402.23 Mbit/s  
95th percentile per-packet one-way delay: 199.522 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 468.41 Mbit/s  
95th percentile per-packet one-way delay: 124.994 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 364.92 Mbit/s  
95th percentile per-packet one-way delay: 184.636 ms  
Loss rate: 0.17%

Run 5: Report of TCP Vegas — Data Link

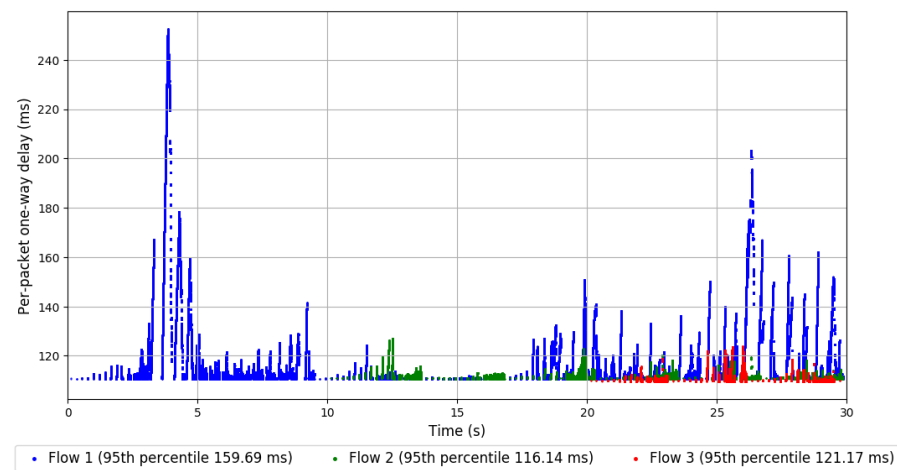
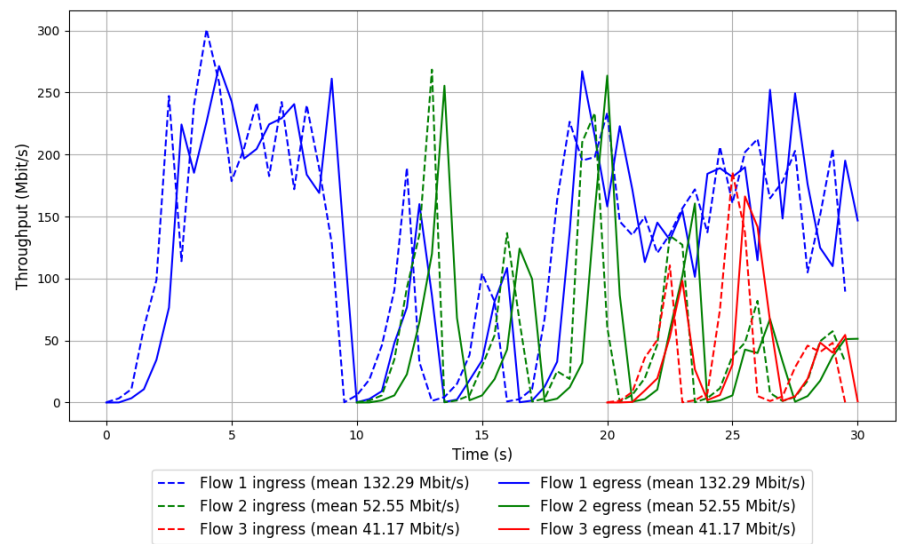


Run 1: Statistics of Verus

Start at: 2019-01-24 18:38:59  
End at: 2019-01-24 18:39:29  
Local clock offset: -1.404 ms  
Remote clock offset: -0.104 ms

# Below is generated by plot.py at 2019-01-25 00:00:17  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 180.40 Mbit/s  
95th percentile per-packet one-way delay: 151.161 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 132.29 Mbit/s  
95th percentile per-packet one-way delay: 159.692 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 52.55 Mbit/s  
95th percentile per-packet one-way delay: 116.145 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 41.17 Mbit/s  
95th percentile per-packet one-way delay: 121.173 ms  
Loss rate: 0.00%

Run 1: Report of Verus — Data Link

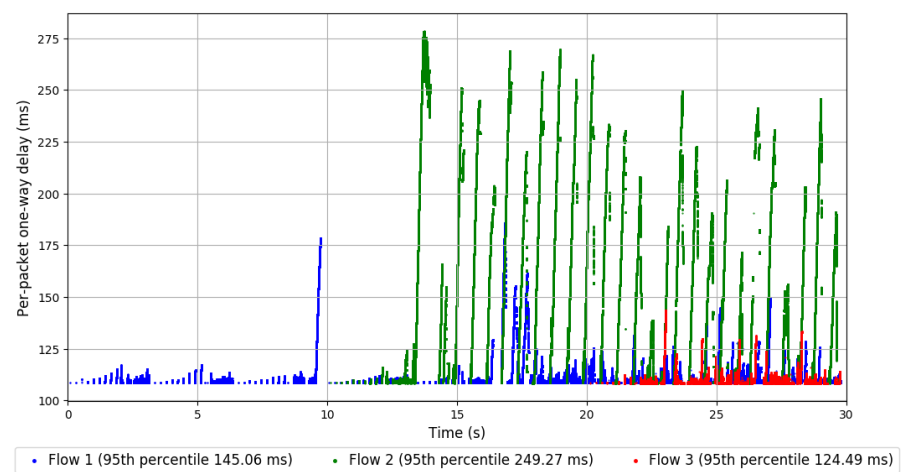
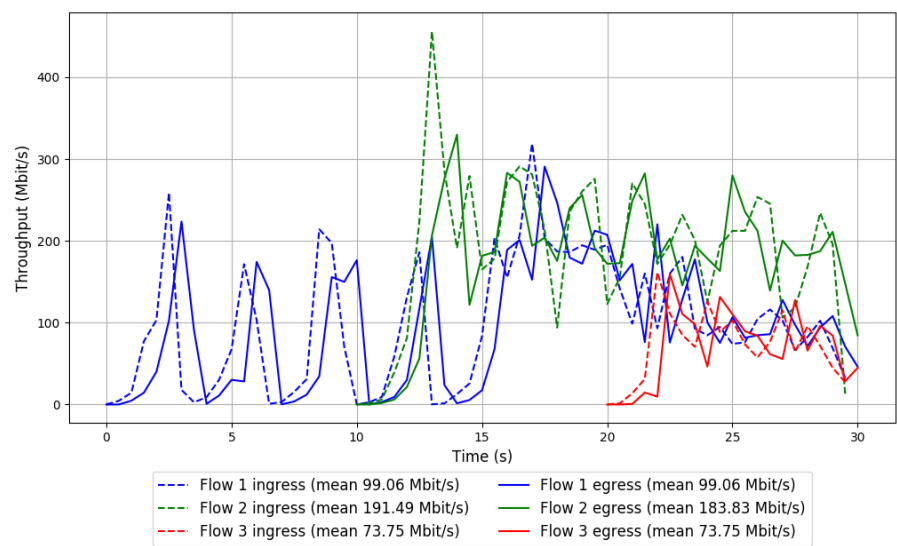


Run 2: Statistics of Verus

Start at: 2019-01-24 19:17:39  
End at: 2019-01-24 19:18:09  
Local clock offset: 0.668 ms  
Remote clock offset: -0.171 ms

# Below is generated by plot.py at 2019-01-25 00:00:17  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 244.39 Mbit/s  
95th percentile per-packet one-way delay: 234.495 ms  
Loss rate: 2.03%  
-- Flow 1:  
Average throughput: 99.06 Mbit/s  
95th percentile per-packet one-way delay: 145.065 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 183.83 Mbit/s  
95th percentile per-packet one-way delay: 249.266 ms  
Loss rate: 4.00%  
-- Flow 3:  
Average throughput: 73.75 Mbit/s  
95th percentile per-packet one-way delay: 124.494 ms  
Loss rate: 0.00%

Run 2: Report of Verus — Data Link



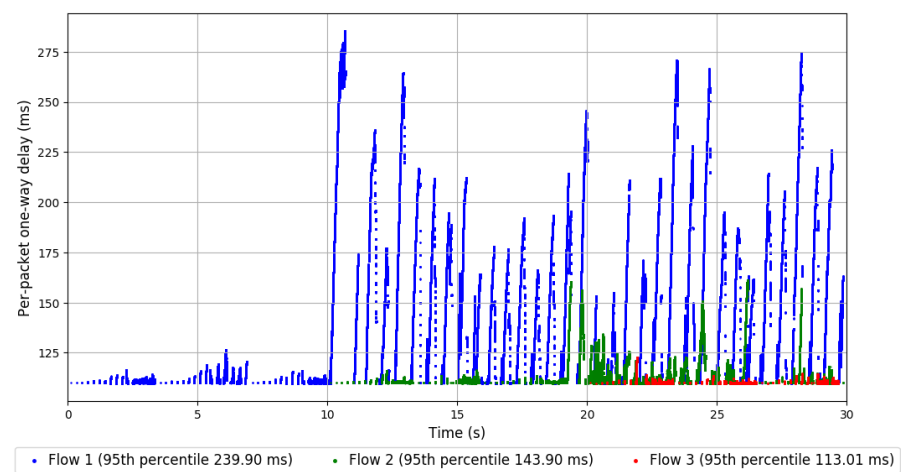
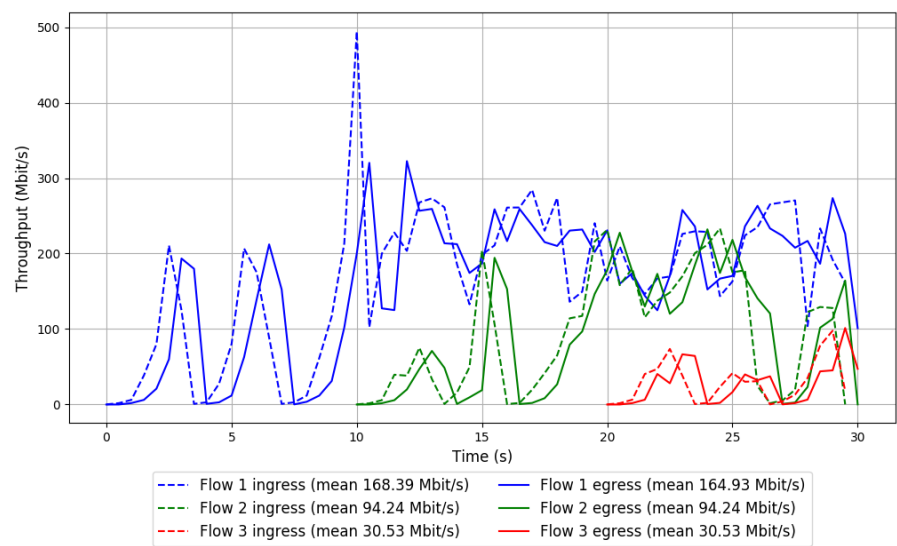


Run 3: Statistics of Verus

Start at: 2019-01-24 19:55:59  
End at: 2019-01-24 19:56:29  
Local clock offset: -0.657 ms  
Remote clock offset: -0.172 ms

# Below is generated by plot.py at 2019-01-25 00:00:17  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 237.27 Mbit/s  
95th percentile per-packet one-way delay: 224.922 ms  
Loss rate: 1.44%  
-- Flow 1:  
Average throughput: 164.93 Mbit/s  
95th percentile per-packet one-way delay: 239.903 ms  
Loss rate: 2.05%  
-- Flow 2:  
Average throughput: 94.24 Mbit/s  
95th percentile per-packet one-way delay: 143.895 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 30.53 Mbit/s  
95th percentile per-packet one-way delay: 113.011 ms  
Loss rate: 0.00%

Run 3: Report of Verus — Data Link

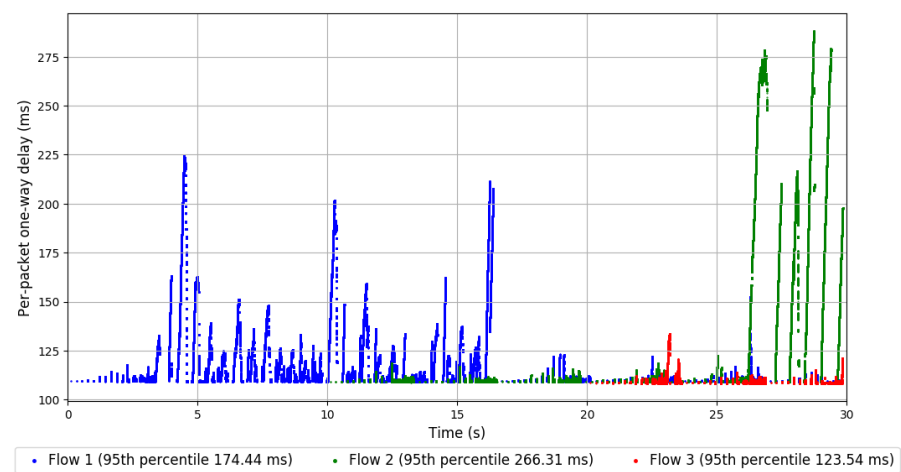
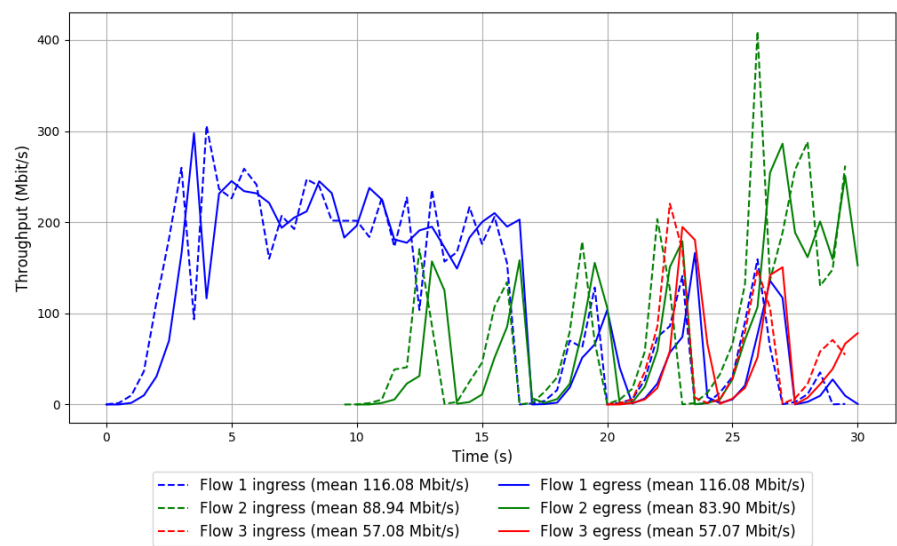


Run 4: Statistics of Verus

Start at: 2019-01-24 20:34:35  
End at: 2019-01-24 20:35:05  
Local clock offset: -0.023 ms  
Remote clock offset: -0.1 ms

# Below is generated by plot.py at 2019-01-25 00:00:17  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 189.86 Mbit/s  
95th percentile per-packet one-way delay: 218.383 ms  
Loss rate: 1.73%  
-- Flow 1:  
Average throughput: 116.08 Mbit/s  
95th percentile per-packet one-way delay: 174.441 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 83.90 Mbit/s  
95th percentile per-packet one-way delay: 266.312 ms  
Loss rate: 5.67%  
-- Flow 3:  
Average throughput: 57.07 Mbit/s  
95th percentile per-packet one-way delay: 123.541 ms  
Loss rate: 0.00%

Run 4: Report of Verus — Data Link

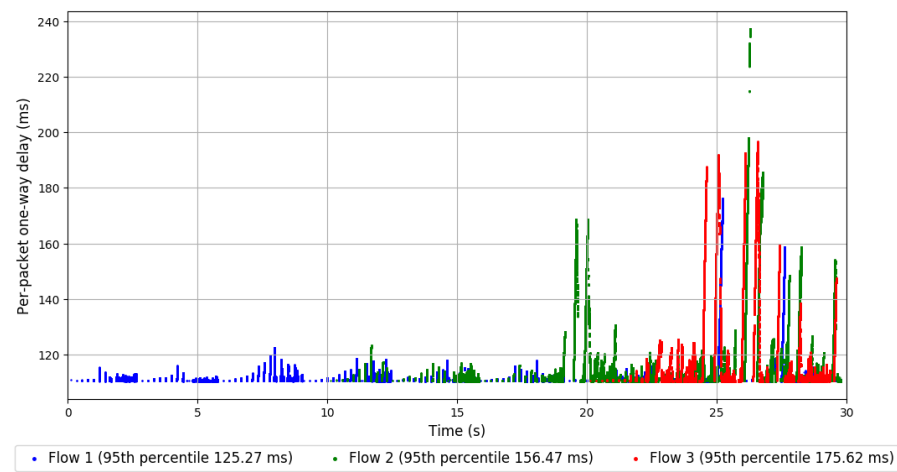
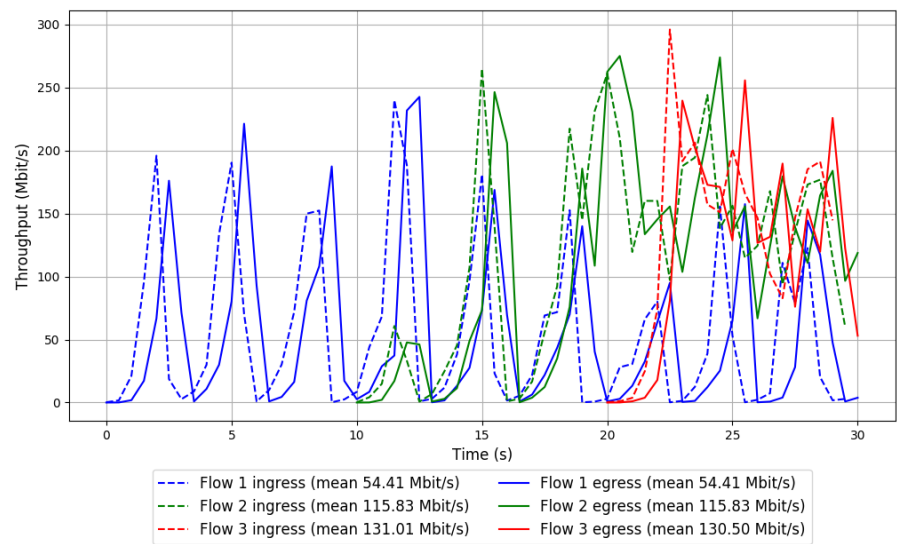


Run 5: Statistics of Verus

Start at: 2019-01-24 21:13:15  
End at: 2019-01-24 21:13:45  
Local clock offset: -1.287 ms  
Remote clock offset: -0.138 ms

# Below is generated by plot.py at 2019-01-25 00:00:17  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 172.77 Mbit/s  
95th percentile per-packet one-way delay: 157.876 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 54.41 Mbit/s  
95th percentile per-packet one-way delay: 125.273 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 115.83 Mbit/s  
95th percentile per-packet one-way delay: 156.466 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 130.50 Mbit/s  
95th percentile per-packet one-way delay: 175.617 ms  
Loss rate: 0.00%

Run 5: Report of Verus — Data Link

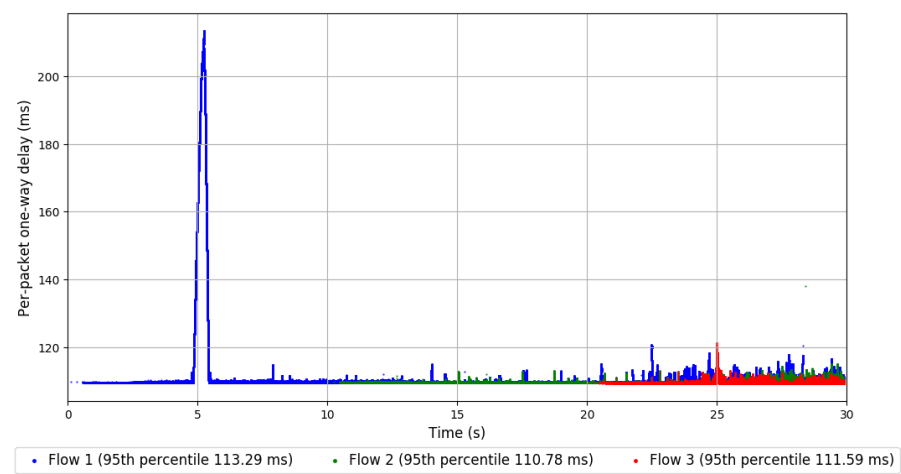
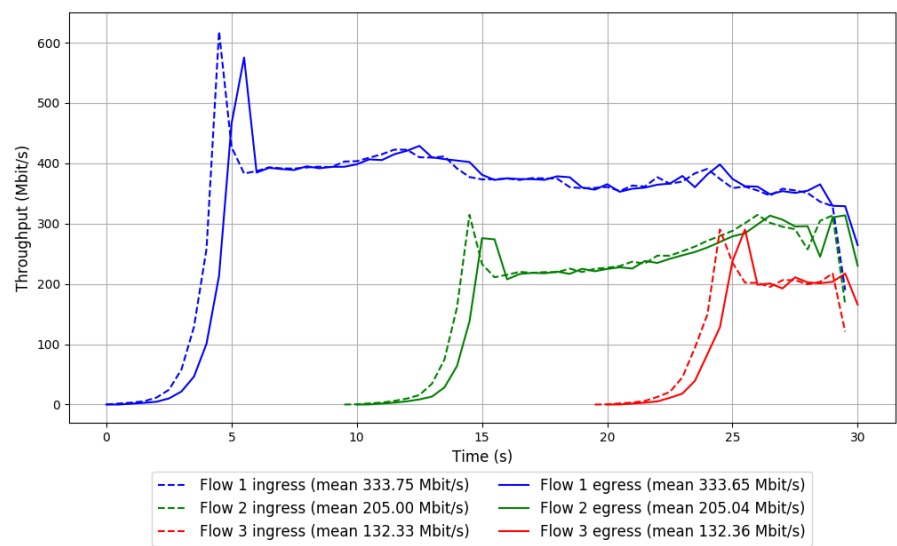


Run 1: Statistics of PCC-Vivace

Start at: 2019-01-24 18:18:59  
End at: 2019-01-24 18:19:29  
Local clock offset: -0.109 ms  
Remote clock offset: -0.068 ms

# Below is generated by plot.py at 2019-01-25 00:01:04  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 514.32 Mbit/s  
95th percentile per-packet one-way delay: 112.117 ms  
Loss rate: 0.02%  
-- Flow 1:  
Average throughput: 333.65 Mbit/s  
95th percentile per-packet one-way delay: 113.293 ms  
Loss rate: 0.03%  
-- Flow 2:  
Average throughput: 205.04 Mbit/s  
95th percentile per-packet one-way delay: 110.781 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 132.36 Mbit/s  
95th percentile per-packet one-way delay: 111.587 ms  
Loss rate: 0.01%

Run 1: Report of PCC-Vivace — Data Link



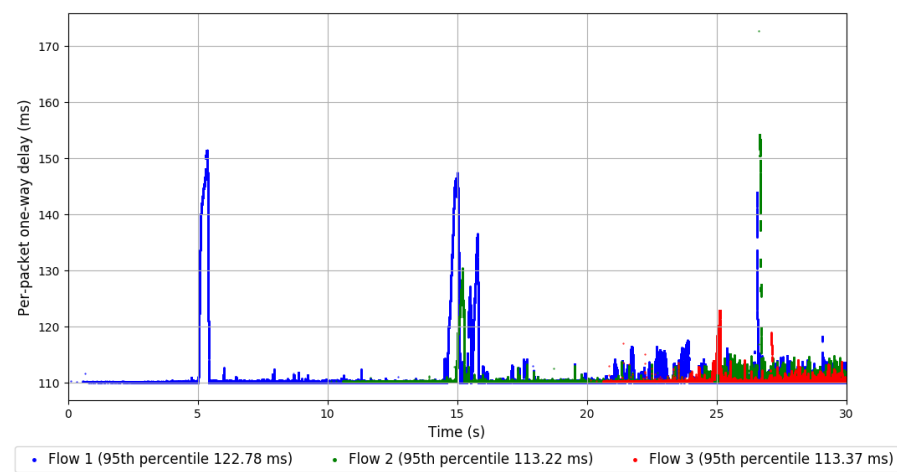
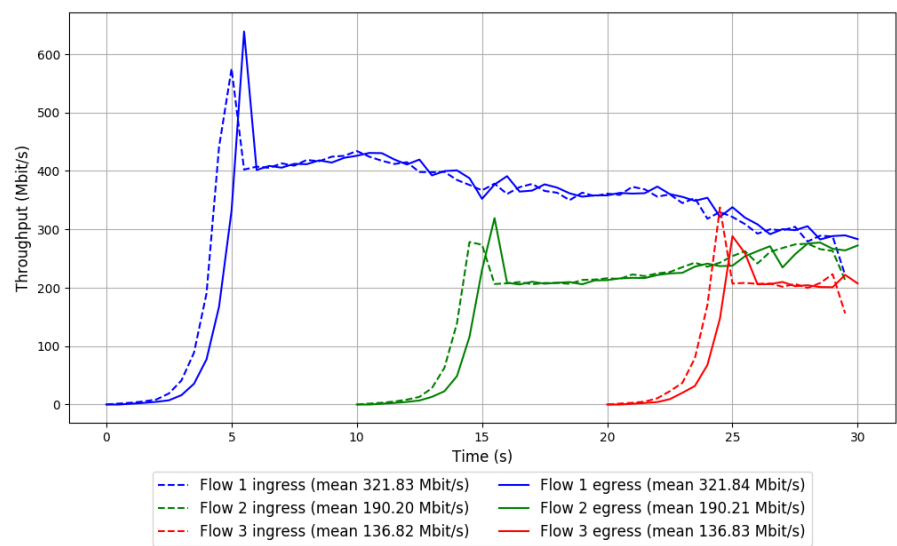


Run 2: Statistics of PCC-Vivace

Start at: 2019-01-24 18:57:21  
End at: 2019-01-24 18:57:51  
Local clock offset: -0.738 ms  
Remote clock offset: -0.105 ms

# Below is generated by plot.py at 2019-01-25 00:02:54  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 493.29 Mbit/s  
95th percentile per-packet one-way delay: 117.158 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 321.84 Mbit/s  
95th percentile per-packet one-way delay: 122.784 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 190.21 Mbit/s  
95th percentile per-packet one-way delay: 113.224 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 136.83 Mbit/s  
95th percentile per-packet one-way delay: 113.366 ms  
Loss rate: 0.00%

Run 2: Report of PCC-Vivace — Data Link



Run 3: Statistics of PCC-Vivace

Start at: 2019-01-24 19:36:20

End at: 2019-01-24 19:36:50

Local clock offset: -0.035 ms

Remote clock offset: -0.17 ms

# Below is generated by plot.py at 2019-01-25 00:02:54

# Datalink statistics

-- Total of 3 flows:

Average throughput: 456.37 Mbit/s

95th percentile per-packet one-way delay: 111.149 ms

Loss rate: 0.07%

-- Flow 1:

Average throughput: 294.59 Mbit/s

95th percentile per-packet one-way delay: 110.919 ms

Loss rate: 0.10%

-- Flow 2:

Average throughput: 177.89 Mbit/s

95th percentile per-packet one-way delay: 110.017 ms

Loss rate: 0.00%

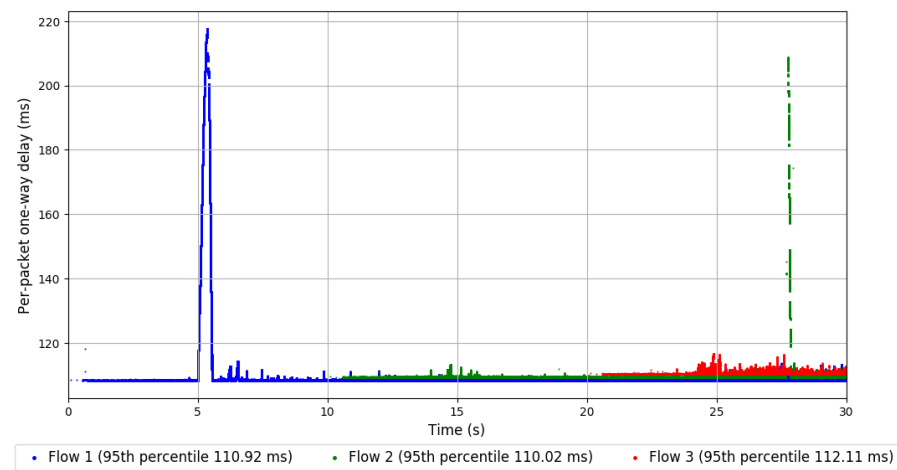
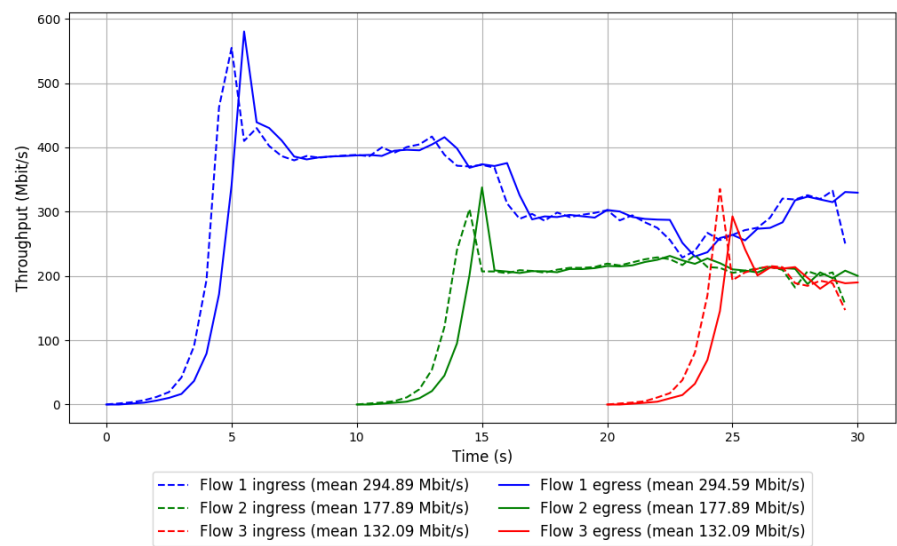
-- Flow 3:

Average throughput: 132.09 Mbit/s

95th percentile per-packet one-way delay: 112.109 ms

Loss rate: 0.00%

Run 3: Report of PCC-Vivace — Data Link

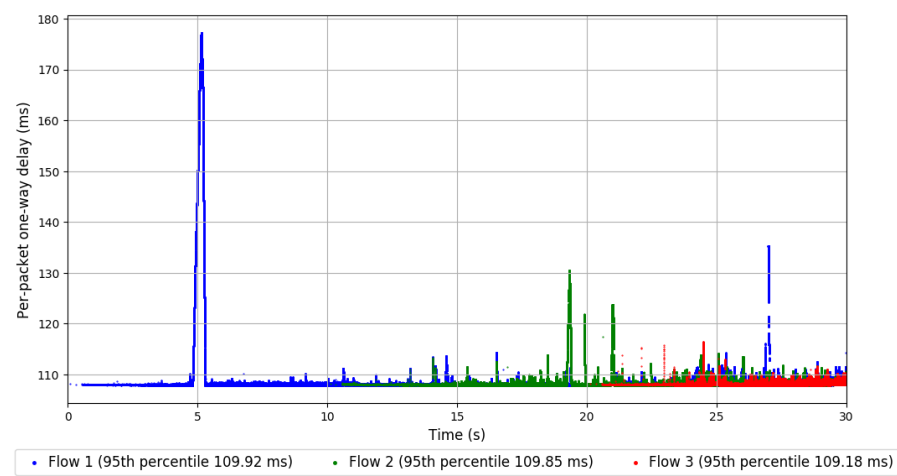
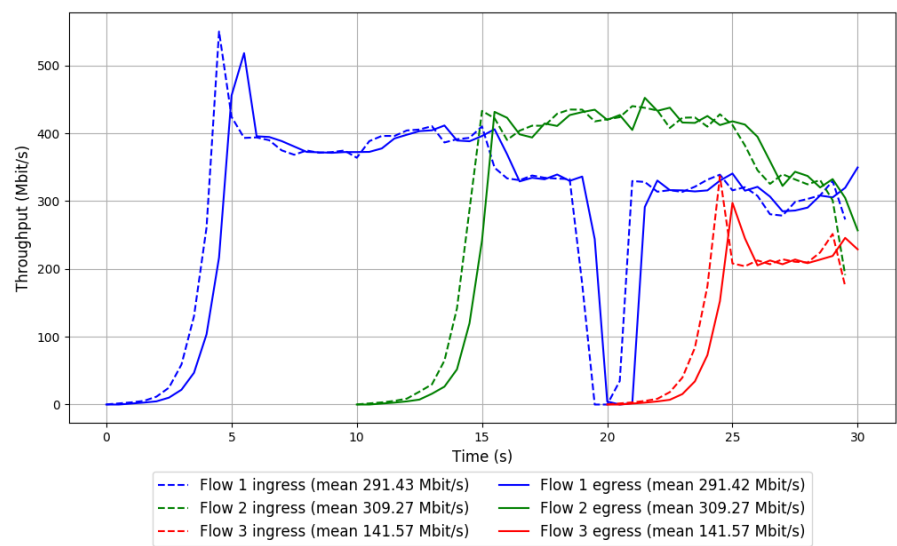


Run 4: Statistics of PCC-Vivace

Start at: 2019-01-24 20:14:45  
End at: 2019-01-24 20:15:15  
Local clock offset: 1.381 ms  
Remote clock offset: -0.077 ms

# Below is generated by plot.py at 2019-01-25 00:03:03  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 543.75 Mbit/s  
95th percentile per-packet one-way delay: 109.751 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 291.42 Mbit/s  
95th percentile per-packet one-way delay: 109.922 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 309.27 Mbit/s  
95th percentile per-packet one-way delay: 109.849 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 141.57 Mbit/s  
95th percentile per-packet one-way delay: 109.179 ms  
Loss rate: 0.00%

Run 4: Report of PCC-Vivace — Data Link

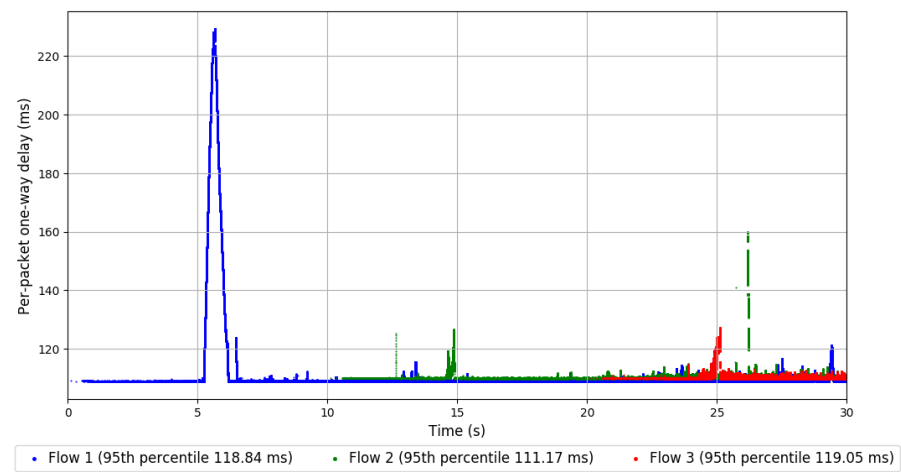
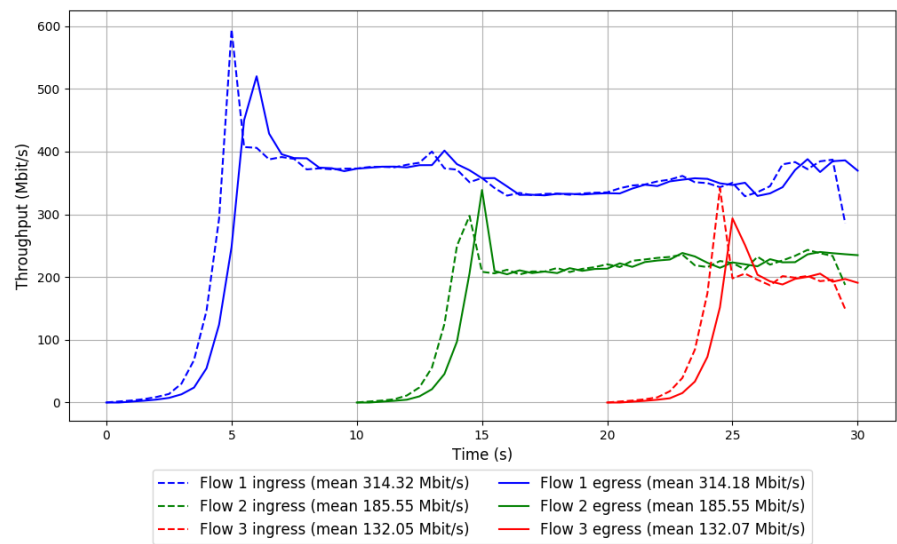


Run 5: Statistics of PCC-Vivace

Start at: 2019-01-24 20:53:21  
End at: 2019-01-24 20:53:51  
Local clock offset: -0.696 ms  
Remote clock offset: -0.088 ms

# Below is generated by plot.py at 2019-01-25 00:03:03  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 481.03 Mbit/s  
95th percentile per-packet one-way delay: 113.984 ms  
Loss rate: 0.04%  
-- Flow 1:  
Average throughput: 314.18 Mbit/s  
95th percentile per-packet one-way delay: 118.839 ms  
Loss rate: 0.05%  
-- Flow 2:  
Average throughput: 185.55 Mbit/s  
95th percentile per-packet one-way delay: 111.167 ms  
Loss rate: 0.02%  
-- Flow 3:  
Average throughput: 132.07 Mbit/s  
95th percentile per-packet one-way delay: 119.049 ms  
Loss rate: 0.01%

Run 5: Report of PCC-Vivace — Data Link





Run 1: Statistics of WebRTC media

Start at: 2019-01-24 18:09:52

End at: 2019-01-24 18:10:22

Local clock offset: -0.648 ms

Remote clock offset: 0.019 ms

# Below is generated by plot.py at 2019-01-25 00:03:03

# Datalink statistics

-- Total of 3 flows:

Average throughput: 3.48 Mbit/s

95th percentile per-packet one-way delay: 111.872 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 1.87 Mbit/s

95th percentile per-packet one-way delay: 111.899 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.34 Mbit/s

95th percentile per-packet one-way delay: 110.255 ms

Loss rate: 0.00%

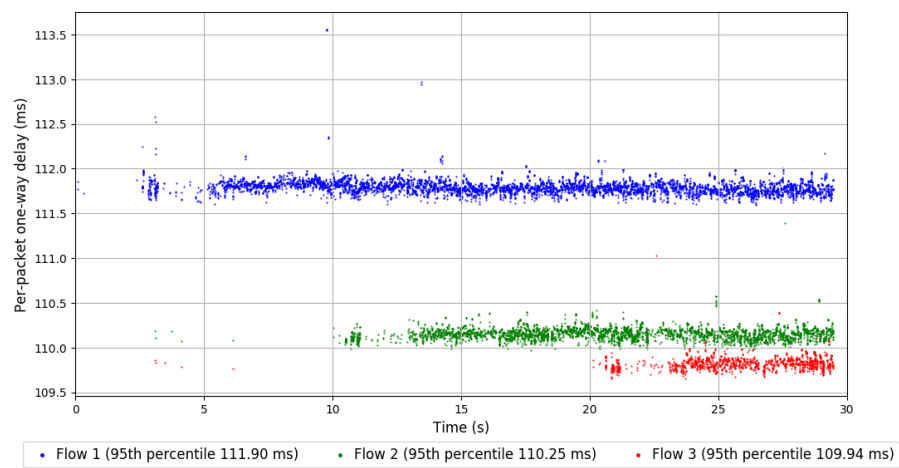
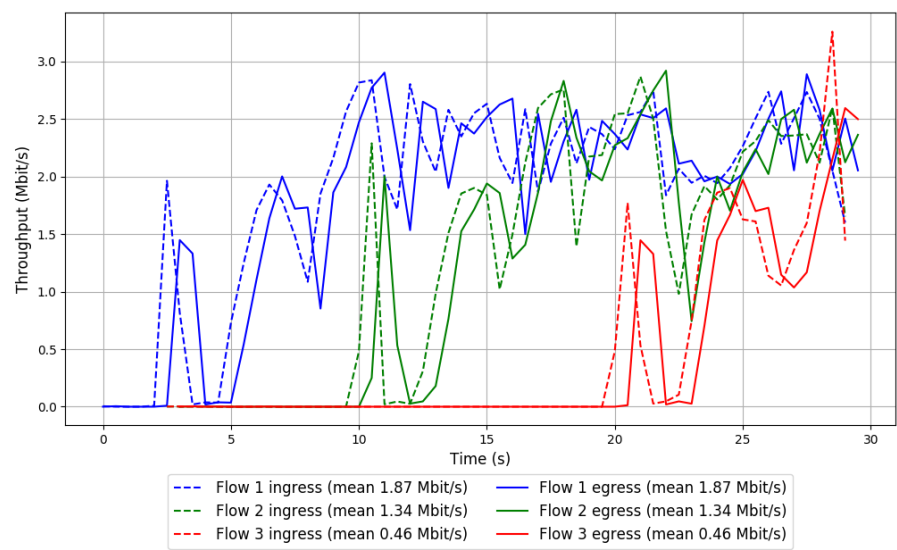
-- Flow 3:

Average throughput: 0.46 Mbit/s

95th percentile per-packet one-way delay: 109.935 ms

Loss rate: 0.00%

Run 1: Report of WebRTC media — Data Link

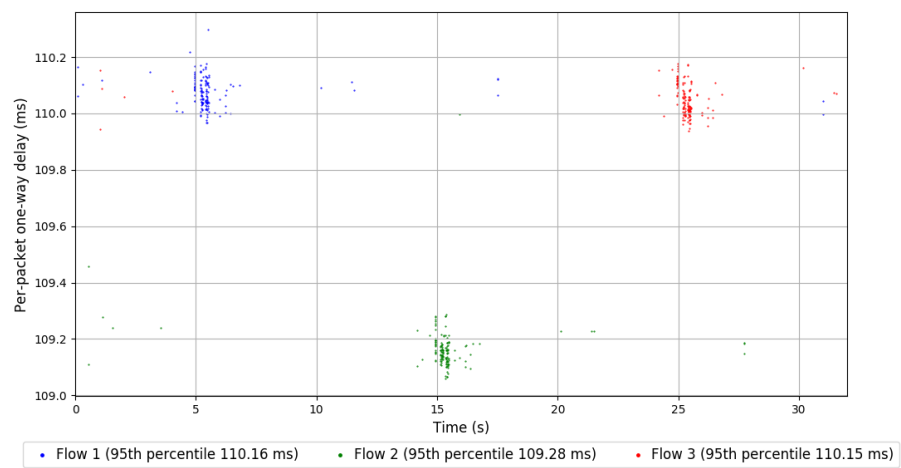
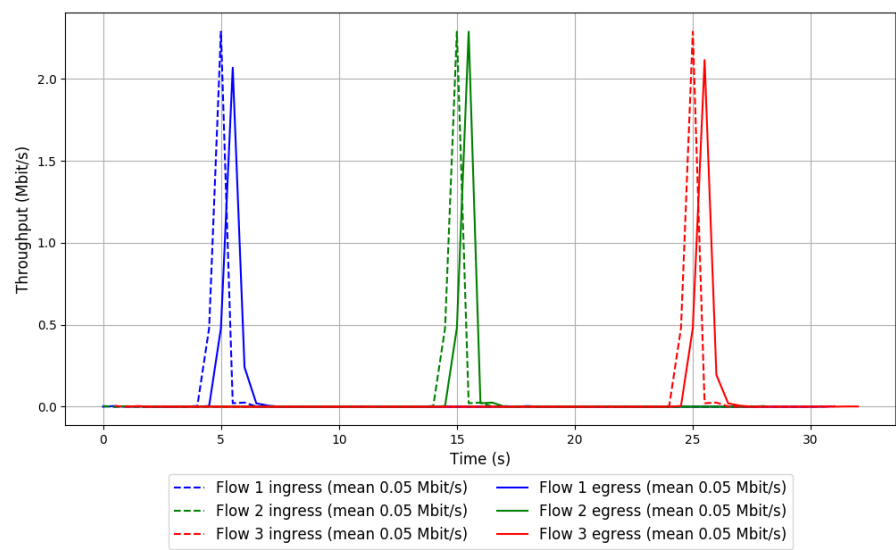


Run 2: Statistics of WebRTC media

Start at: 2019-01-24 18:48:22  
End at: 2019-01-24 18:48:52  
Local clock offset: -0.649 ms  
Remote clock offset: -0.116 ms

# Below is generated by plot.py at 2019-01-25 00:03:03  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.14 Mbit/s  
95th percentile per-packet one-way delay: 110.145 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 110.155 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 109.277 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 110.152 ms  
Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link

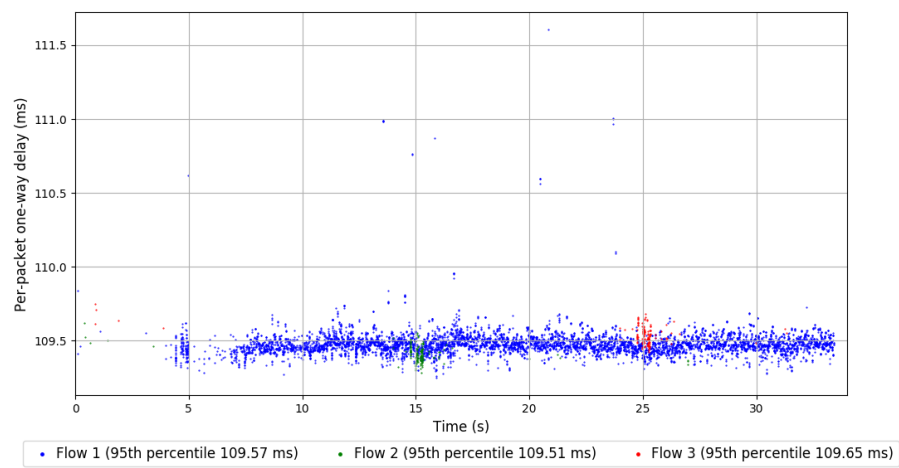
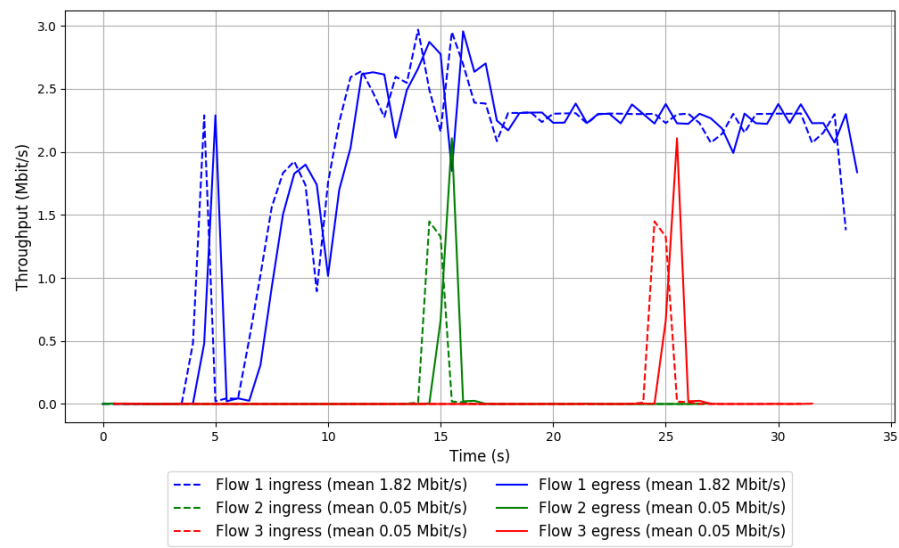


Run 3: Statistics of WebRTC media

Start at: 2019-01-24 19:27:24  
End at: 2019-01-24 19:27:54  
Local clock offset: -0.067 ms  
Remote clock offset: -0.147 ms

# Below is generated by plot.py at 2019-01-25 00:03:03  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 1.90 Mbit/s  
95th percentile per-packet one-way delay: 109.578 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 1.82 Mbit/s  
95th percentile per-packet one-way delay: 109.574 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 109.510 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 109.648 ms  
Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link

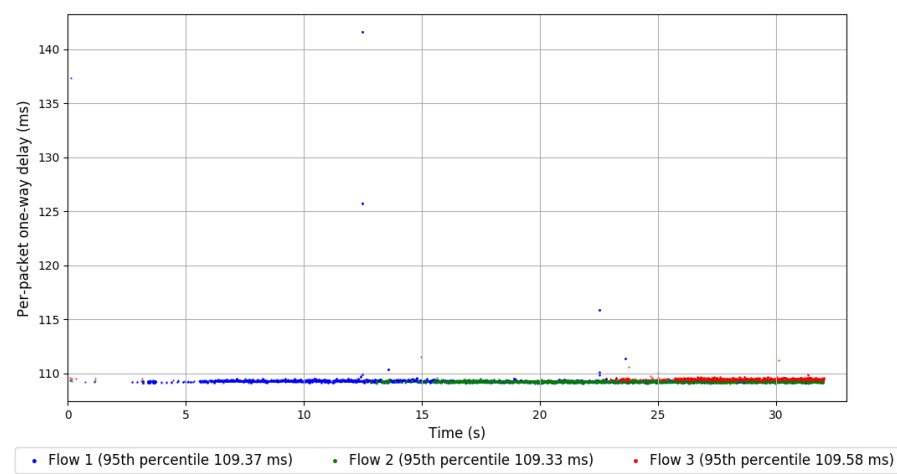
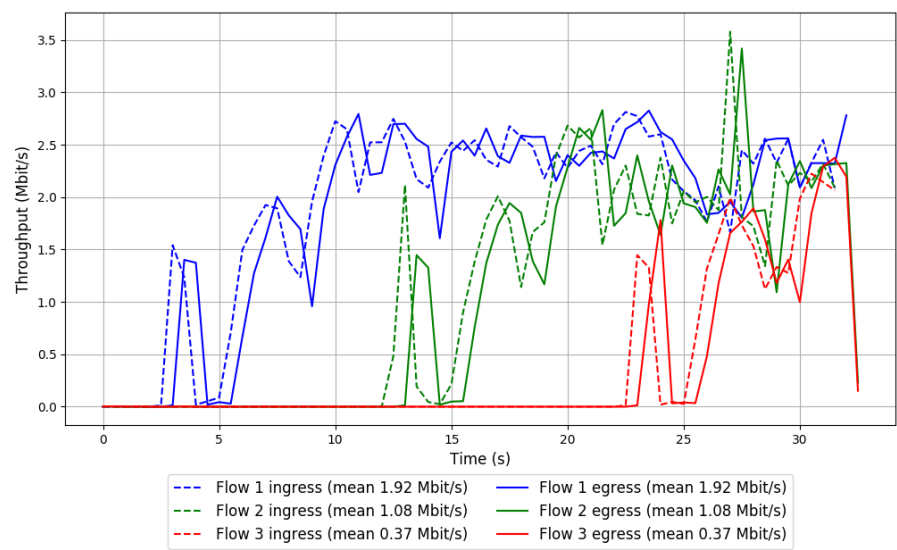


Run 4: Statistics of WebRTC media

Start at: 2019-01-24 20:05:45  
End at: 2019-01-24 20:06:15  
Local clock offset: 0.079 ms  
Remote clock offset: -0.108 ms

```
# Below is generated by plot.py at 2019-01-25 00:03:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.37 Mbit/s
95th percentile per-packet one-way delay: 109.483 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.92 Mbit/s
95th percentile per-packet one-way delay: 109.372 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.08 Mbit/s
95th percentile per-packet one-way delay: 109.329 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.37 Mbit/s
95th percentile per-packet one-way delay: 109.579 ms
Loss rate: 0.00%
```

Run 4: Report of WebRTC media — Data Link





Run 5: Statistics of WebRTC media

Start at: 2019-01-24 20:44:23  
End at: 2019-01-24 20:44:53  
Local clock offset: -0.309 ms  
Remote clock offset: -0.101 ms

# Below is generated by plot.py at 2019-01-25 00:03:03  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.14 Mbit/s  
95th percentile per-packet one-way delay: 109.752 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 109.483 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 108.903 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 109.794 ms  
Loss rate: 0.00%

Run 5: Report of WebRTC media — Data Link

