

## Pantheon Report

Generated at 2019-03-27 05:12:31 (UTC).

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

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:

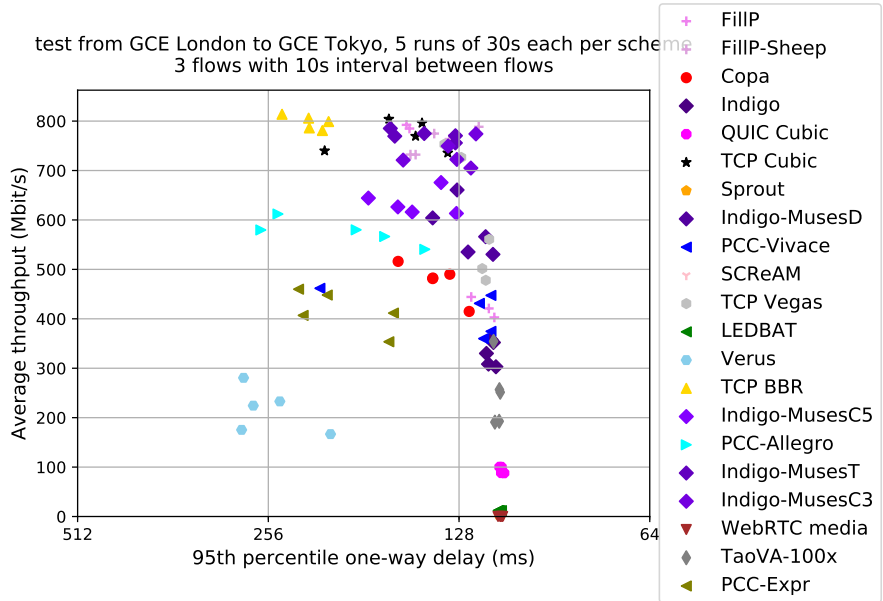
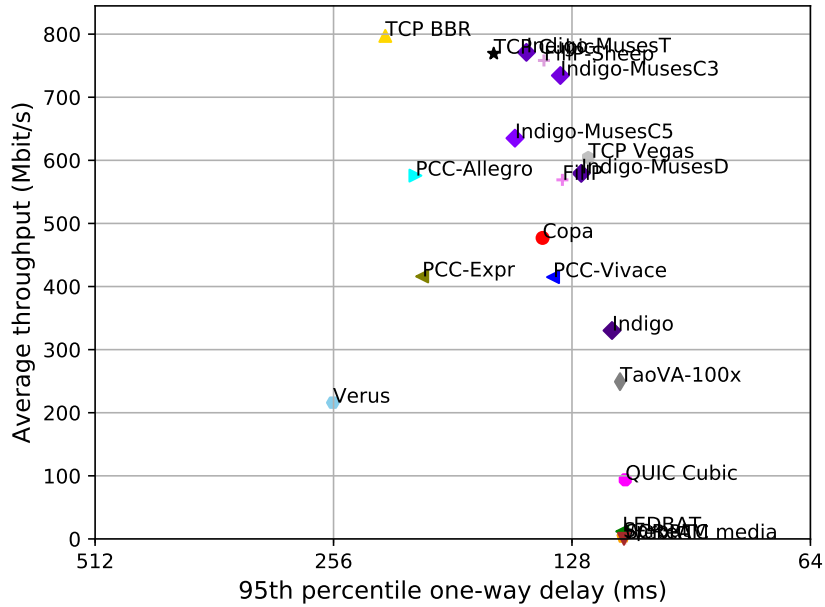
```
Linux 4.15.0-1028-gcp
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

### Git summary:

```
branch: muses @ 7a686f7c2ed0a333082c0bab1fa5c921ab47e6ee
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecd90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 5ce721187ad823da20955337730c746486ca4966
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 London to GCE Tokyo, 5 runs of 30s each per scheme  
 3 flows with 10s interval between flows (mean of all runs by scheme)



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	433.67	398.94	303.64	210.98	205.60	194.80	1.48	2.41	4.05
Copa	5	252.14	229.85	221.02	132.05	147.14	144.43	0.81	1.21	3.07
TCP Cubic	5	425.30	365.29	309.67	157.91	155.51	161.41	0.71	1.13	2.71
FillP	5	268.23	339.03	233.69	140.67	112.43	111.78	0.91	0.96	2.71
FillP-Sheep	5	484.08	301.68	227.83	148.97	111.99	112.31	1.04	0.87	2.58
Indigo	5	176.57	157.53	150.08	112.24	113.96	118.20	0.75	1.17	2.65
Indigo-MusesC3	5	435.81	353.71	270.48	137.38	118.59	114.36	0.62	1.04	3.59
Indigo-MusesC5	5	392.33	335.18	104.47	151.05	144.70	109.99	0.37	1.05	4.94
Indigo-MusesD	5	363.29	277.61	142.60	122.85	132.26	111.23	0.68	1.62	3.92
Indigo-MusesT	5	474.85	398.05	151.77	151.12	128.01	112.43	0.70	1.07	3.92
LEDBAT	5	7.76	5.13	2.48	110.73	110.19	110.43	1.47	2.21	4.45
PCC-Allegro	5	329.49	263.39	226.31	198.22	185.76	216.40	4.10	2.90	4.38
PCC-Expr	5	240.06	191.61	151.19	196.52	193.66	212.65	2.35	1.55	6.02
QUIC Cubic	5	48.69	50.52	34.24	109.32	109.34	109.43	1.14	1.68	1.52
SCReAM	5	0.22	0.22	0.21	109.39	109.67	109.19	0.67	1.25	2.13
Sprout	5	1.67	1.46	1.71	109.97	109.81	110.11	0.81	1.66	2.43
TaoVA-100x	5	118.26	113.36	170.26	110.28	111.34	111.08	0.77	1.20	2.67
TCP Vegas	5	325.14	275.94	292.55	119.60	122.51	134.40	0.46	0.88	2.88
Verus	5	132.88	106.00	40.62	265.33	201.66	134.21	4.59	1.79	1.59
PCC-Vivace	5	254.76	187.82	109.99	162.12	122.20	124.03	1.27	1.38	3.18
WebRTC media	5	0.05	0.05	0.05	109.65	109.89	109.71	0.00	0.00	0.00

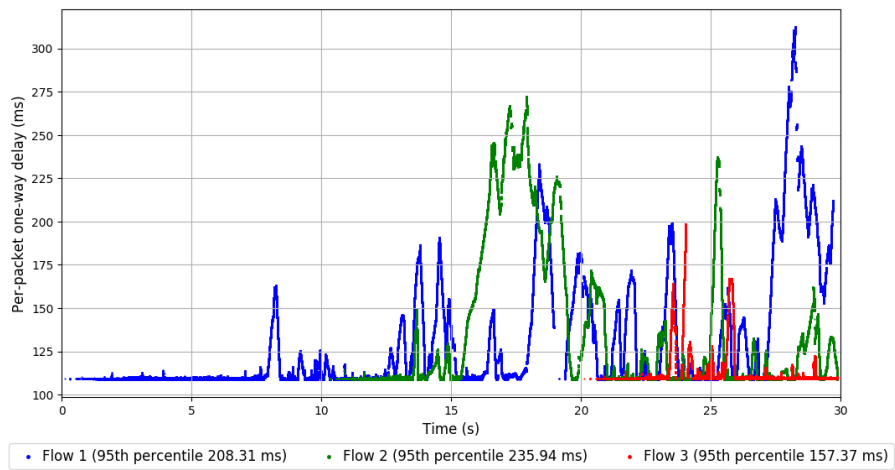
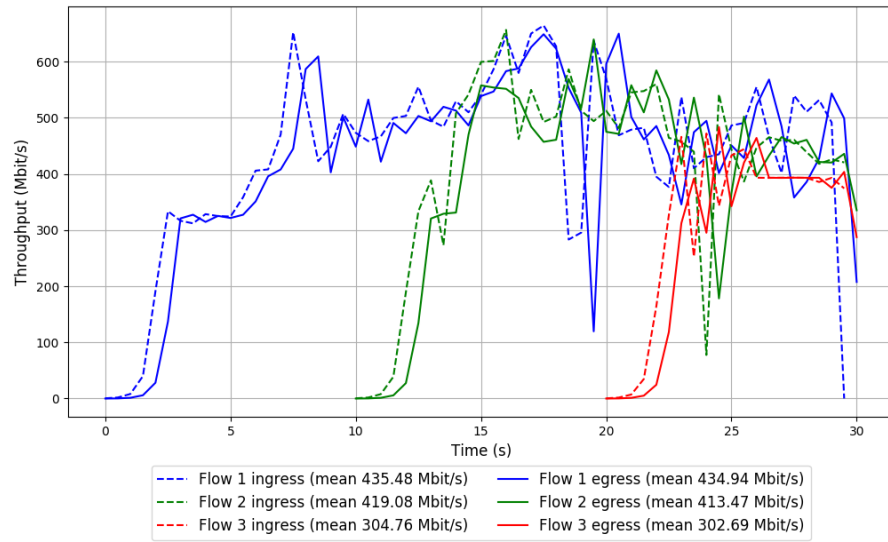


Run 1: Statistics of TCP BBR

Start at: 2019-03-26 23:37:34  
End at: 2019-03-26 23:38:04  
Local clock offset: -0.312 ms  
Remote clock offset: -0.049 ms

# Below is generated by plot.py at 2019-03-27 03:10:47  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 806.01 Mbit/s  
95th percentile per-packet one-way delay: 221.118 ms  
Loss rate: 1.57%  
-- Flow 1:  
Average throughput: 434.94 Mbit/s  
95th percentile per-packet one-way delay: 208.305 ms  
Loss rate: 0.71%  
-- Flow 2:  
Average throughput: 413.47 Mbit/s  
95th percentile per-packet one-way delay: 235.942 ms  
Loss rate: 2.42%  
-- Flow 3:  
Average throughput: 302.69 Mbit/s  
95th percentile per-packet one-way delay: 157.374 ms  
Loss rate: 2.87%

# Run 1: Report of TCP BBR — Data Link

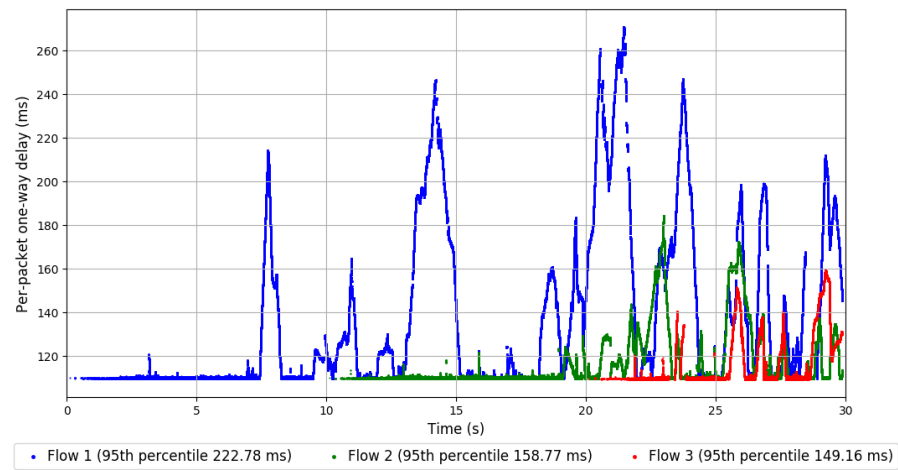
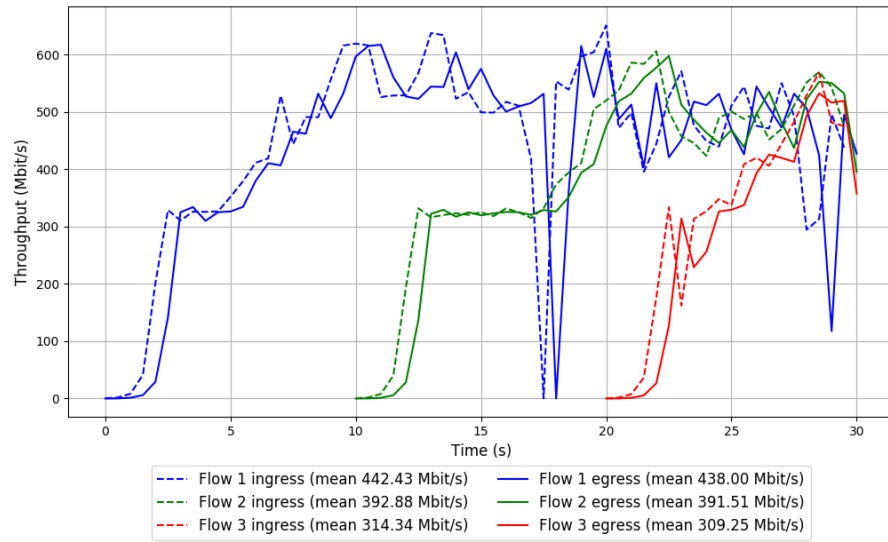


Run 2: Statistics of TCP BBR

Start at: 2019-03-27 00:19:27  
End at: 2019-03-27 00:19:57  
Local clock offset: -0.002 ms  
Remote clock offset: -0.067 ms

# Below is generated by plot.py at 2019-03-27 03:10:47  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 799.09 Mbit/s  
95th percentile per-packet one-way delay: 205.645 ms  
Loss rate: 1.90%  
-- Flow 1:  
Average throughput: 438.00 Mbit/s  
95th percentile per-packet one-way delay: 222.775 ms  
Loss rate: 1.73%  
-- Flow 2:  
Average throughput: 391.51 Mbit/s  
95th percentile per-packet one-way delay: 158.769 ms  
Loss rate: 1.45%  
-- Flow 3:  
Average throughput: 309.25 Mbit/s  
95th percentile per-packet one-way delay: 149.158 ms  
Loss rate: 3.79%

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

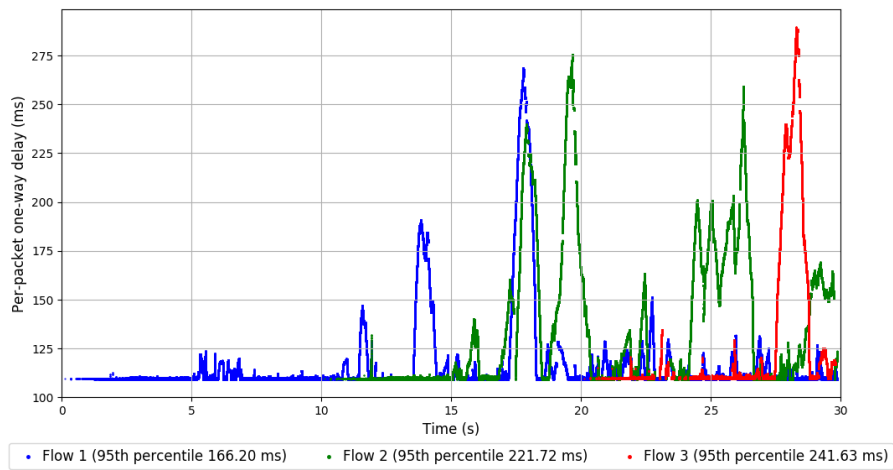
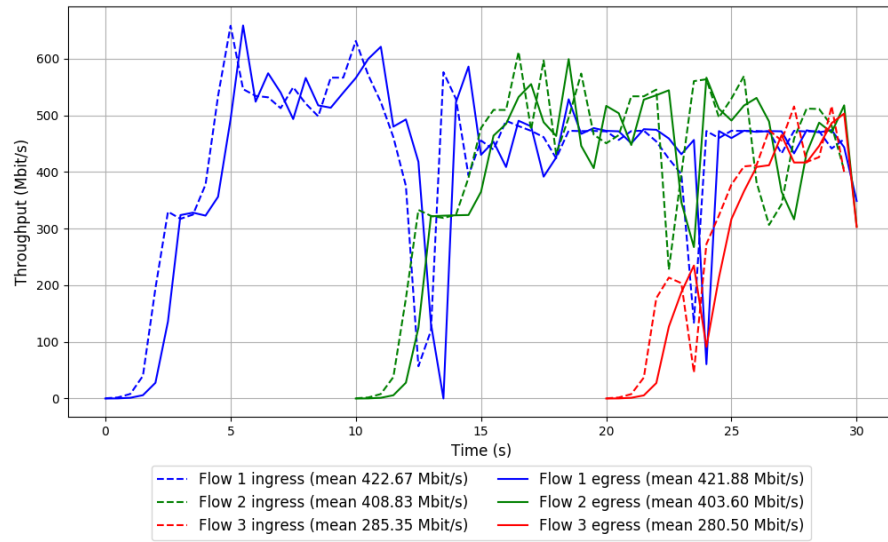


Run 3: Statistics of TCP BBR

Start at: 2019-03-27 01:00:17  
End at: 2019-03-27 01:00:47  
Local clock offset: 0.021 ms  
Remote clock offset: -0.069 ms

# Below is generated by plot.py at 2019-03-27 03:10:47  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 780.95 Mbit/s  
95th percentile per-packet one-way delay: 210.307 ms  
Loss rate: 1.85%  
-- Flow 1:  
Average throughput: 421.88 Mbit/s  
95th percentile per-packet one-way delay: 166.202 ms  
Loss rate: 0.92%  
-- Flow 2:  
Average throughput: 403.60 Mbit/s  
95th percentile per-packet one-way delay: 221.715 ms  
Loss rate: 2.36%  
-- Flow 3:  
Average throughput: 280.50 Mbit/s  
95th percentile per-packet one-way delay: 241.626 ms  
Loss rate: 4.54%

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

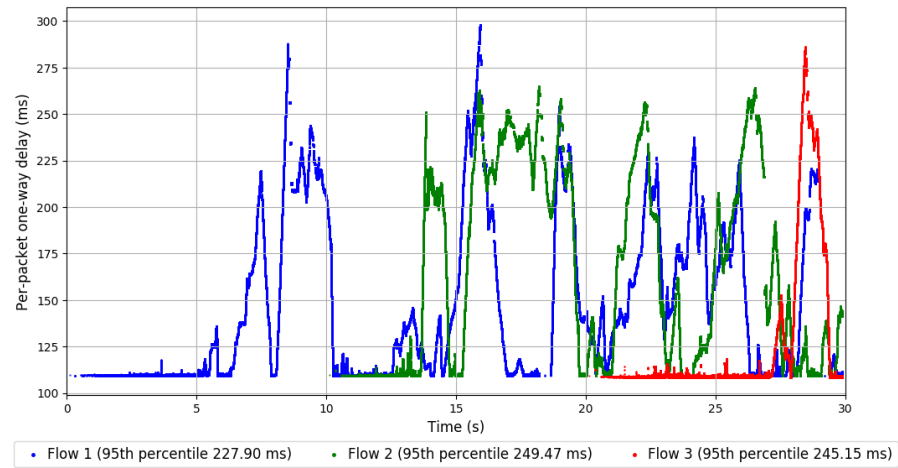
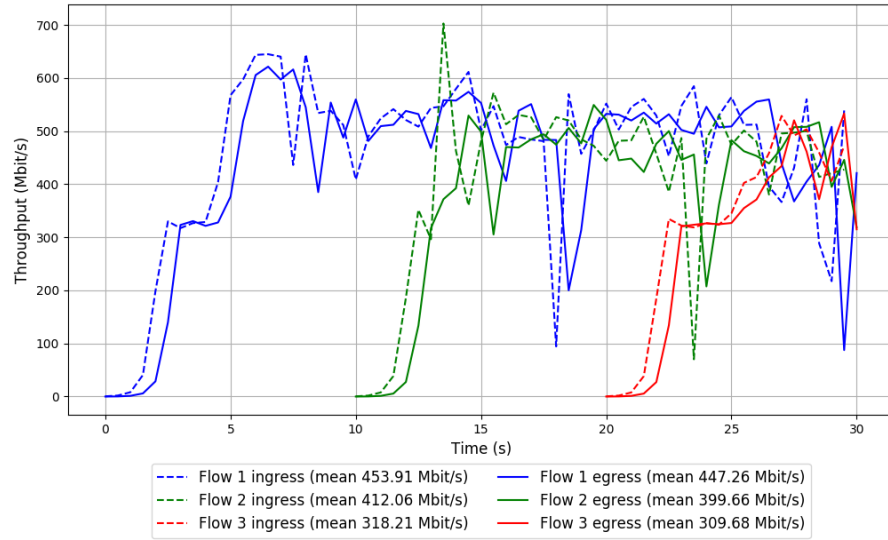


Run 4: Statistics of TCP BBR

Start at: 2019-03-27 01:40:13  
End at: 2019-03-27 01:40:43  
Local clock offset: -0.118 ms  
Remote clock offset: -0.164 ms

# Below is generated by plot.py at 2019-03-27 03:10:58  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 813.85 Mbit/s  
95th percentile per-packet one-way delay: 243.544 ms  
Loss rate: 3.14%  
-- Flow 1:  
Average throughput: 447.26 Mbit/s  
95th percentile per-packet one-way delay: 227.904 ms  
Loss rate: 2.19%  
-- Flow 2:  
Average throughput: 399.66 Mbit/s  
95th percentile per-packet one-way delay: 249.473 ms  
Loss rate: 4.08%  
-- Flow 3:  
Average throughput: 309.68 Mbit/s  
95th percentile per-packet one-way delay: 245.151 ms  
Loss rate: 4.81%

# Run 4: Report of TCP BBR — Data Link



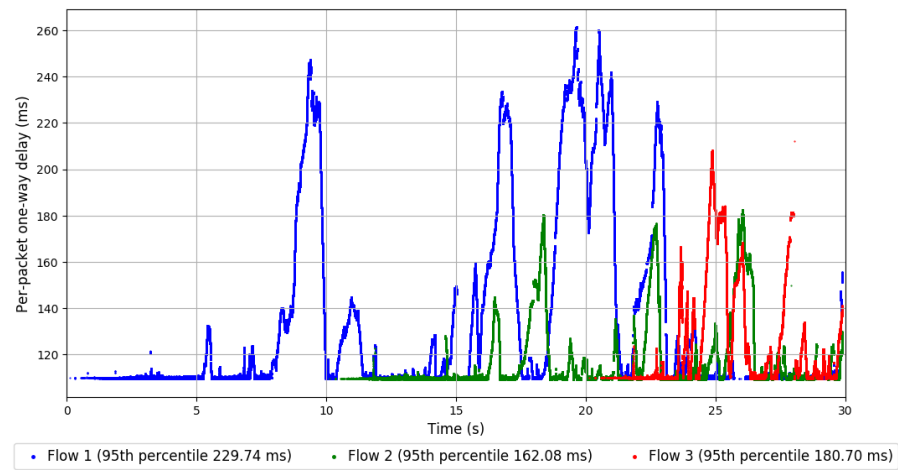
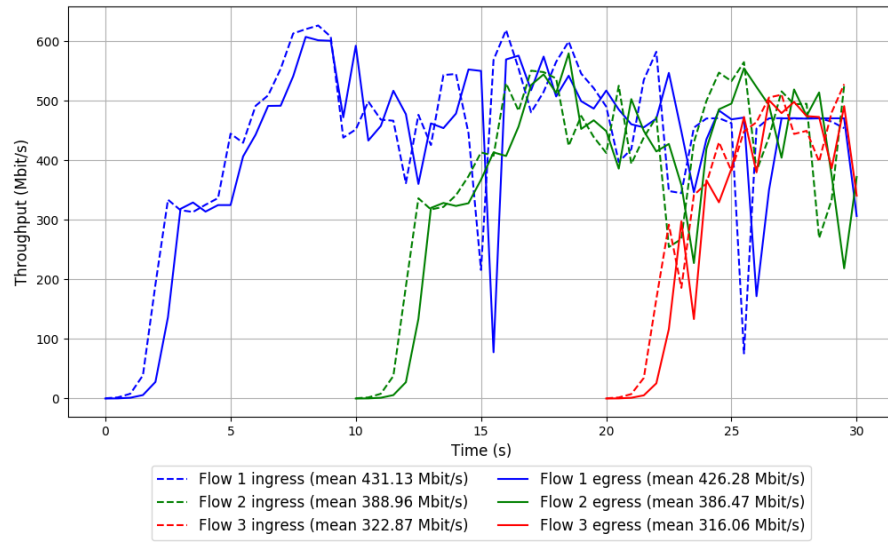


Run 5: Statistics of TCP BBR

Start at: 2019-03-27 02:21:42  
End at: 2019-03-27 02:22:12  
Local clock offset: 0.153 ms  
Remote clock offset: -0.076 ms

# Below is generated by plot.py at 2019-03-27 03:10:58  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 786.22 Mbit/s  
95th percentile per-packet one-way delay: 220.562 ms  
Loss rate: 2.13%  
-- Flow 1:  
Average throughput: 426.28 Mbit/s  
95th percentile per-packet one-way delay: 229.738 ms  
Loss rate: 1.85%  
-- Flow 2:  
Average throughput: 386.47 Mbit/s  
95th percentile per-packet one-way delay: 162.077 ms  
Loss rate: 1.73%  
-- Flow 3:  
Average throughput: 316.06 Mbit/s  
95th percentile per-packet one-way delay: 180.702 ms  
Loss rate: 4.26%

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

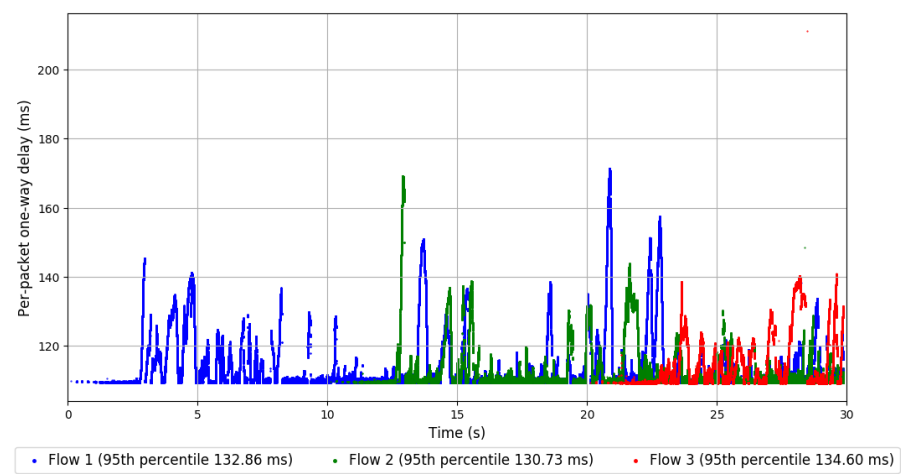
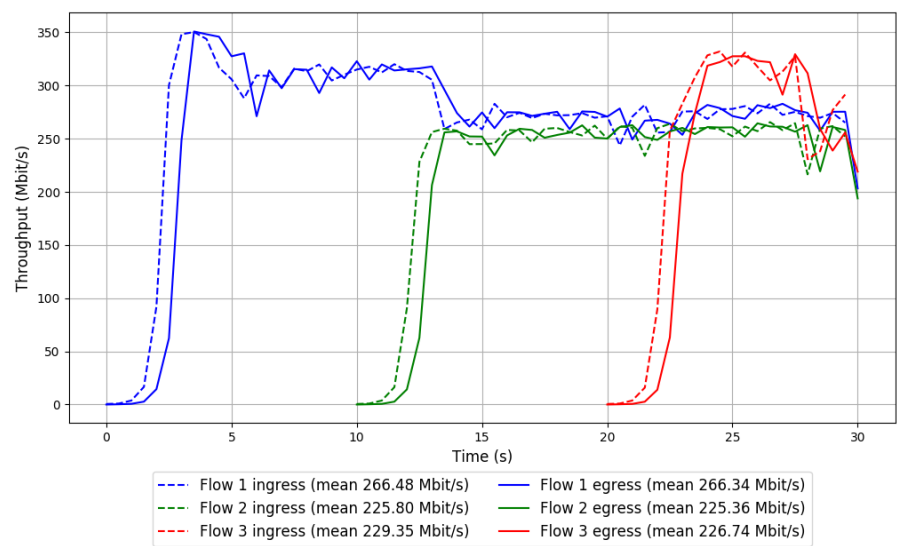


Run 1: Statistics of Copa

Start at: 2019-03-26 23:47:48  
End at: 2019-03-26 23:48:18  
Local clock offset: -0.057 ms  
Remote clock offset: -0.038 ms

# Below is generated by plot.py at 2019-03-27 03:12:35  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 490.13 Mbit/s  
95th percentile per-packet one-way delay: 132.372 ms  
Loss rate: 1.33%  
-- Flow 1:  
Average throughput: 266.34 Mbit/s  
95th percentile per-packet one-way delay: 132.859 ms  
Loss rate: 0.78%  
-- Flow 2:  
Average throughput: 225.36 Mbit/s  
95th percentile per-packet one-way delay: 130.734 ms  
Loss rate: 1.29%  
-- Flow 3:  
Average throughput: 226.74 Mbit/s  
95th percentile per-packet one-way delay: 134.599 ms  
Loss rate: 3.30%

Run 1: Report of Copa — Data Link

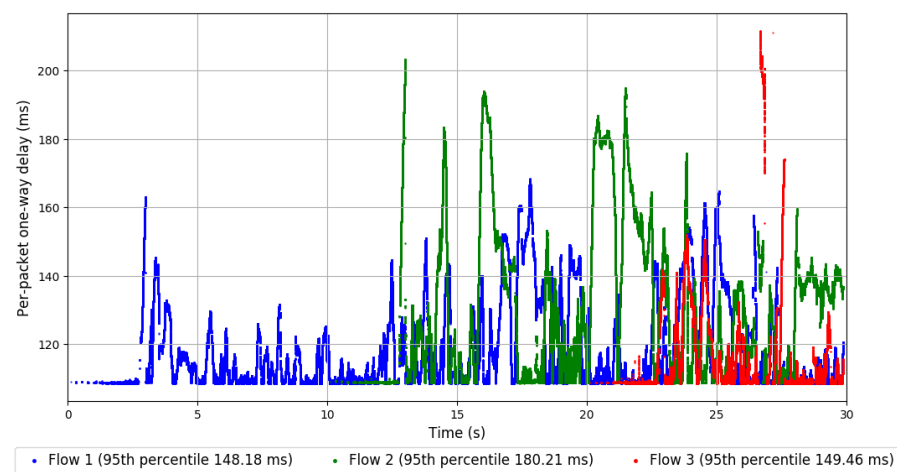
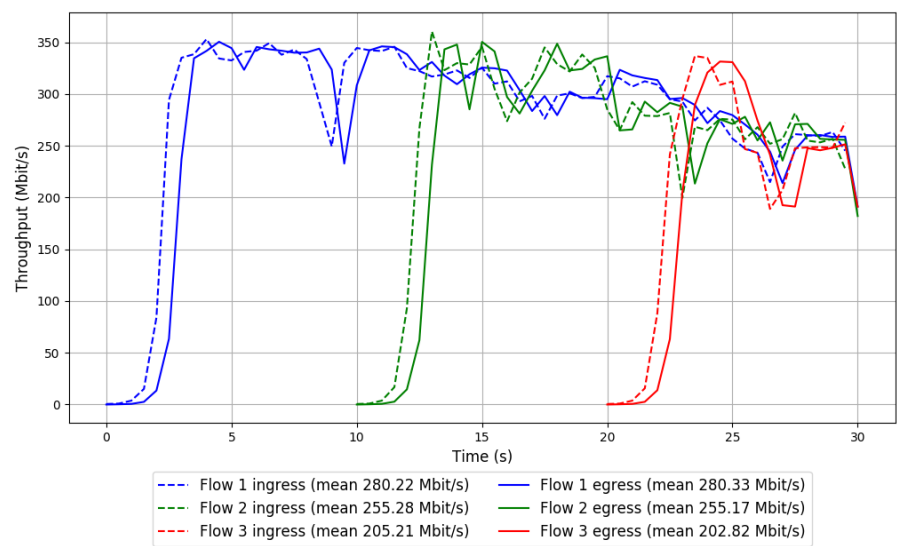


Run 2: Statistics of Copa

Start at: 2019-03-27 00:29:40  
End at: 2019-03-27 00:30:10  
Local clock offset: -0.653 ms  
Remote clock offset: -0.076 ms

# Below is generated by plot.py at 2019-03-27 03:13:44  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 516.18 Mbit/s  
95th percentile per-packet one-way delay: 159.719 ms  
Loss rate: 1.18%  
-- Flow 1:  
Average throughput: 280.33 Mbit/s  
95th percentile per-packet one-way delay: 148.175 ms  
Loss rate: 0.69%  
-- Flow 2:  
Average throughput: 255.17 Mbit/s  
95th percentile per-packet one-way delay: 180.214 ms  
Loss rate: 1.13%  
-- Flow 3:  
Average throughput: 202.82 Mbit/s  
95th percentile per-packet one-way delay: 149.458 ms  
Loss rate: 3.33%

Run 2: Report of Copa — Data Link

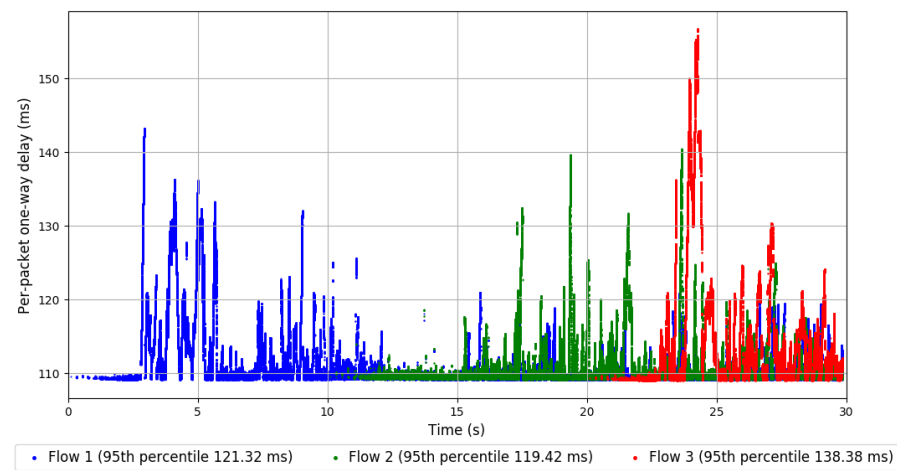
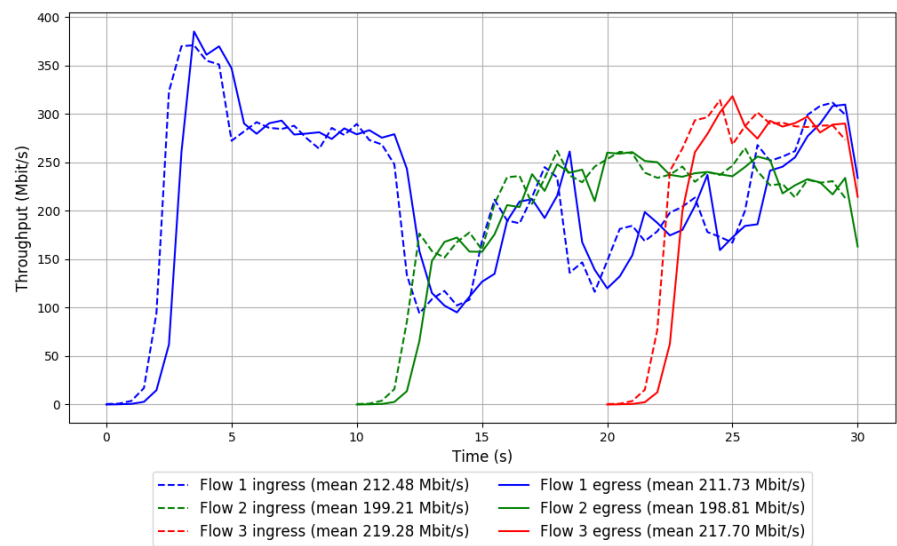


Run 3: Statistics of Copa

Start at: 2019-03-27 01:09:36  
End at: 2019-03-27 01:10:06  
Local clock offset: -0.135 ms  
Remote clock offset: -0.141 ms

# Below is generated by plot.py at 2019-03-27 03:13:44  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 414.92 Mbit/s  
95th percentile per-packet one-way delay: 123.370 ms  
Loss rate: 1.47%  
-- Flow 1:  
Average throughput: 211.73 Mbit/s  
95th percentile per-packet one-way delay: 121.319 ms  
Loss rate: 1.08%  
-- Flow 2:  
Average throughput: 198.81 Mbit/s  
95th percentile per-packet one-way delay: 119.416 ms  
Loss rate: 1.29%  
-- Flow 3:  
Average throughput: 217.70 Mbit/s  
95th percentile per-packet one-way delay: 138.381 ms  
Loss rate: 2.90%

Run 3: Report of Copa — Data Link



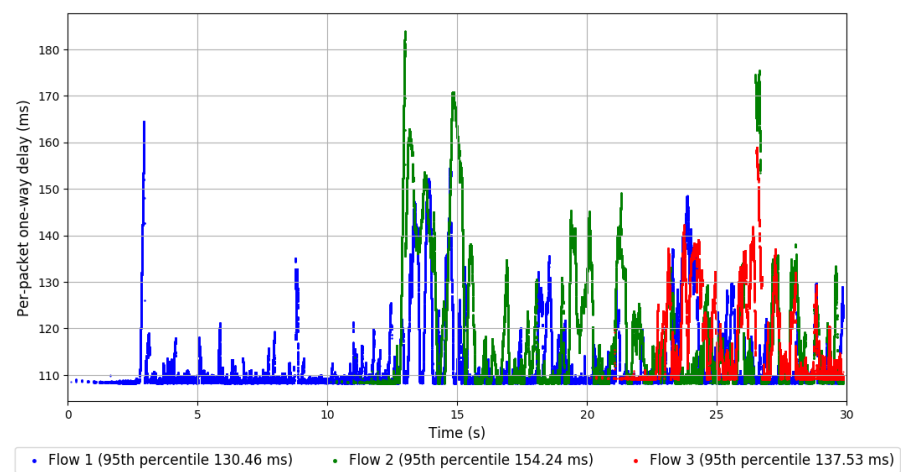
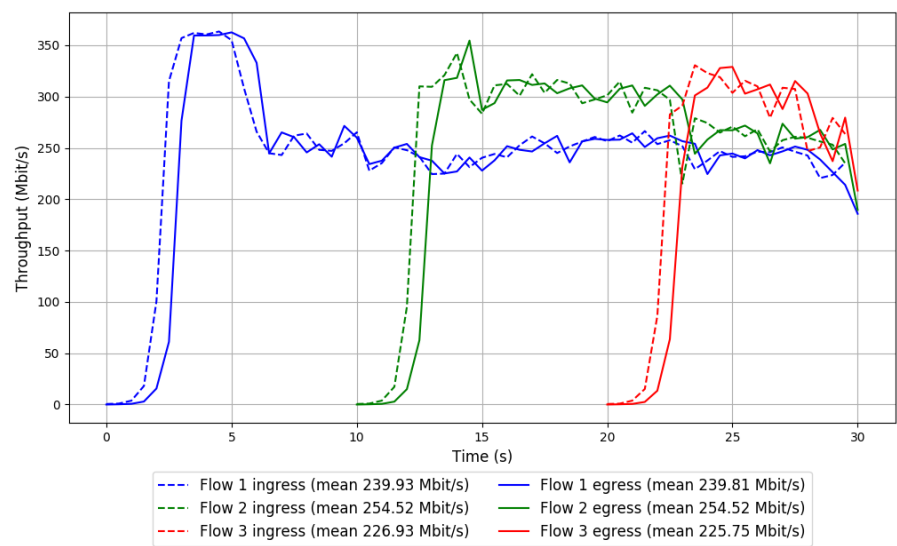


Run 4: Statistics of Copa

Start at: 2019-03-27 01:50:33  
End at: 2019-03-27 01:51:03  
Local clock offset: -0.081 ms  
Remote clock offset: -0.056 ms

# Below is generated by plot.py at 2019-03-27 03:27:11  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 482.56 Mbit/s  
95th percentile per-packet one-way delay: 140.780 ms  
Loss rate: 1.19%  
-- Flow 1:  
Average throughput: 239.81 Mbit/s  
95th percentile per-packet one-way delay: 130.460 ms  
Loss rate: 0.78%  
-- Flow 2:  
Average throughput: 254.52 Mbit/s  
95th percentile per-packet one-way delay: 154.238 ms  
Loss rate: 1.09%  
-- Flow 3:  
Average throughput: 225.75 Mbit/s  
95th percentile per-packet one-way delay: 137.534 ms  
Loss rate: 2.70%

Run 4: Report of Copa — Data Link

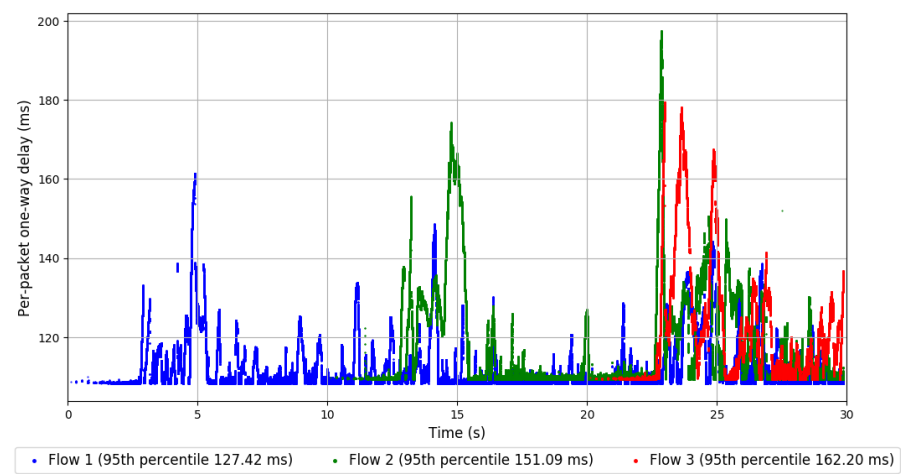
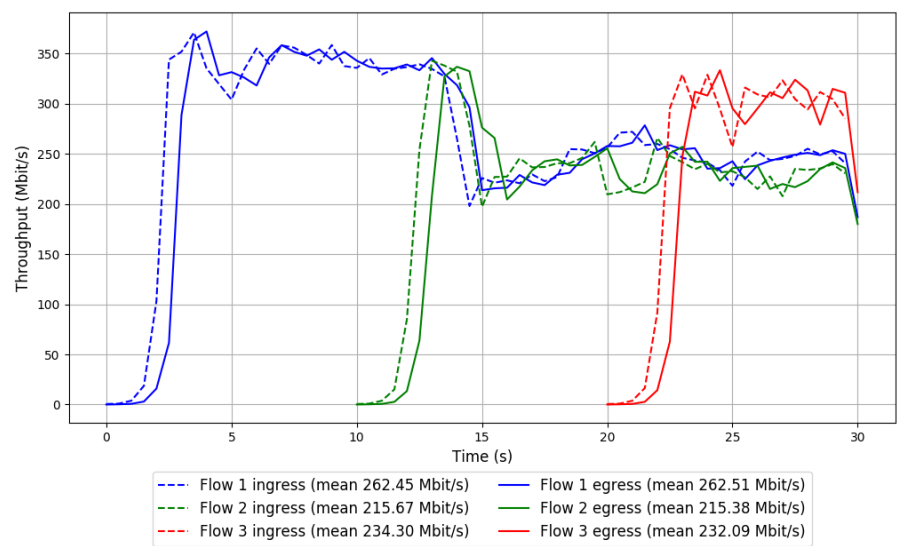


Run 5: Statistics of Copa

Start at: 2019-03-27 02:31:27  
End at: 2019-03-27 02:31:57  
Local clock offset: -0.153 ms  
Remote clock offset: -0.105 ms

# Below is generated by plot.py at 2019-03-27 03:27:11  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 481.38 Mbit/s  
95th percentile per-packet one-way delay: 140.882 ms  
Loss rate: 1.25%  
-- Flow 1:  
Average throughput: 262.51 Mbit/s  
95th percentile per-packet one-way delay: 127.422 ms  
Loss rate: 0.70%  
-- Flow 2:  
Average throughput: 215.38 Mbit/s  
95th percentile per-packet one-way delay: 151.095 ms  
Loss rate: 1.23%  
-- Flow 3:  
Average throughput: 232.09 Mbit/s  
95th percentile per-packet one-way delay: 162.197 ms  
Loss rate: 3.13%

Run 5: Report of Copa — Data Link

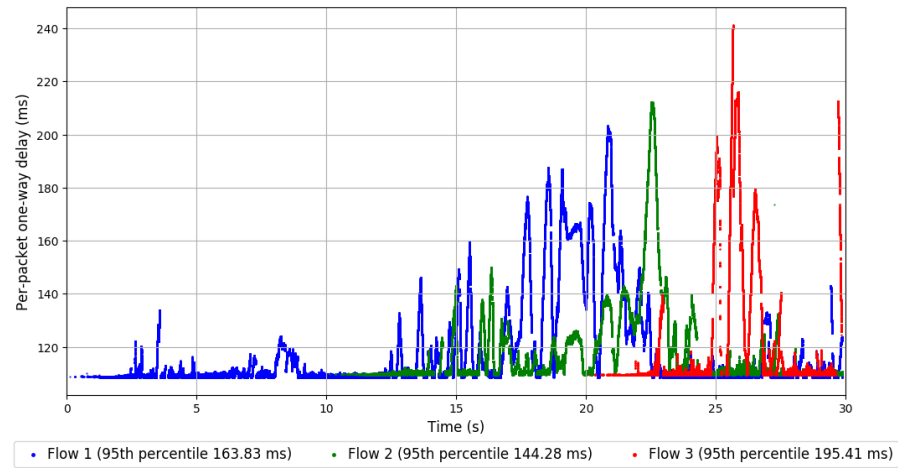
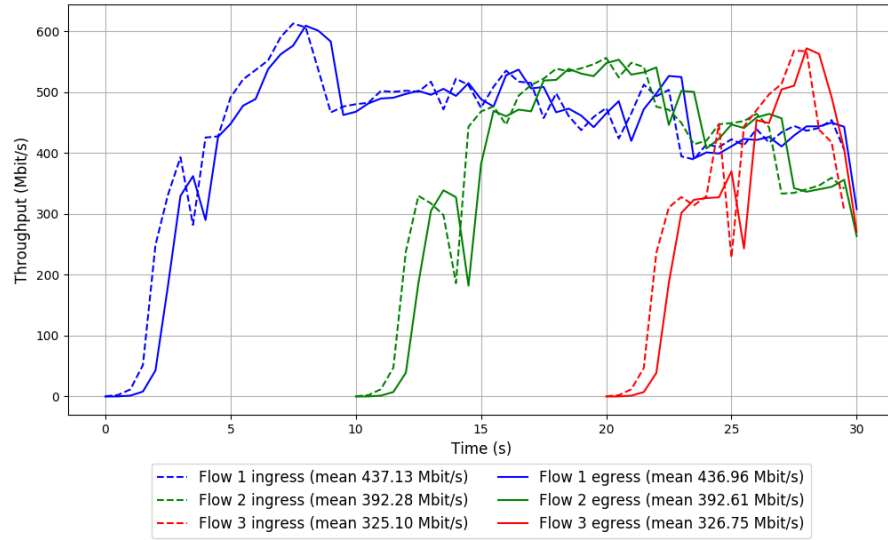


Run 1: Statistics of TCP Cubic

Start at: 2019-03-26 23:31:39  
End at: 2019-03-26 23:32:09  
Local clock offset: 0.156 ms  
Remote clock offset: -0.065 ms

# Below is generated by plot.py at 2019-03-27 03:27:11  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 804.11 Mbit/s  
95th percentile per-packet one-way delay: 165.189 ms  
Loss rate: 1.01%  
-- Flow 1:  
Average throughput: 436.96 Mbit/s  
95th percentile per-packet one-way delay: 163.831 ms  
Loss rate: 0.76%  
-- Flow 2:  
Average throughput: 392.61 Mbit/s  
95th percentile per-packet one-way delay: 144.284 ms  
Loss rate: 1.01%  
-- Flow 3:  
Average throughput: 326.75 Mbit/s  
95th percentile per-packet one-way delay: 195.410 ms  
Loss rate: 1.99%

# Run 1: Report of TCP Cubic — Data Link

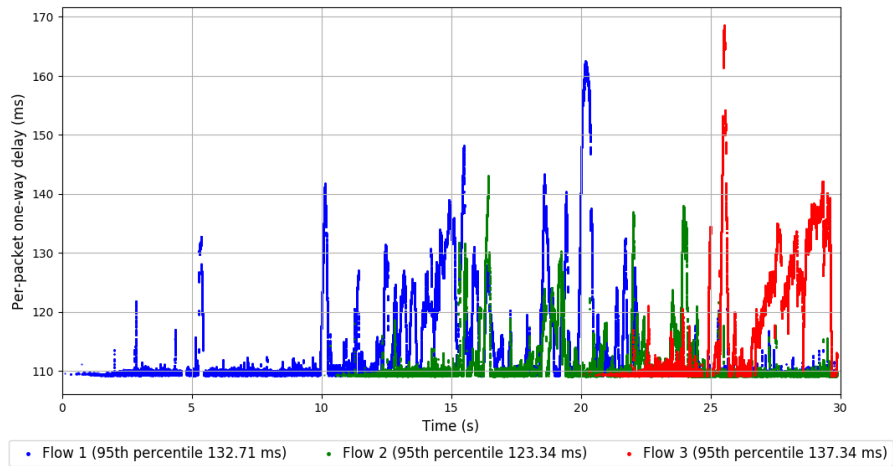
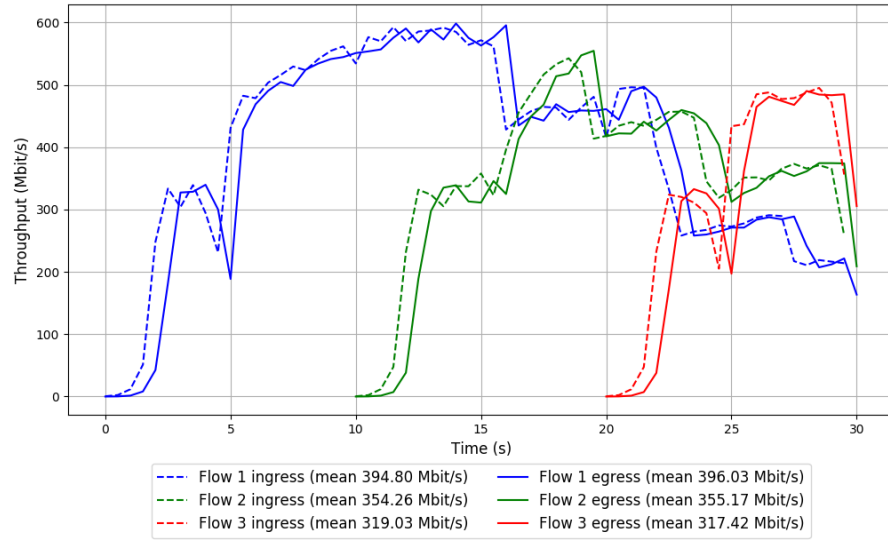


Run 2: Statistics of TCP Cubic

Start at: 2019-03-27 00:13:23  
End at: 2019-03-27 00:13:53  
Local clock offset: -0.179 ms  
Remote clock offset: -0.027 ms

# Below is generated by plot.py at 2019-03-27 03:27:11  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 735.75 Mbit/s  
95th percentile per-packet one-way delay: 133.338 ms  
Loss rate: 0.88%  
-- Flow 1:  
Average throughput: 396.03 Mbit/s  
95th percentile per-packet one-way delay: 132.712 ms  
Loss rate: 0.42%  
-- Flow 2:  
Average throughput: 355.17 Mbit/s  
95th percentile per-packet one-way delay: 123.339 ms  
Loss rate: 0.84%  
-- Flow 3:  
Average throughput: 317.42 Mbit/s  
95th percentile per-packet one-way delay: 137.345 ms  
Loss rate: 2.69%

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



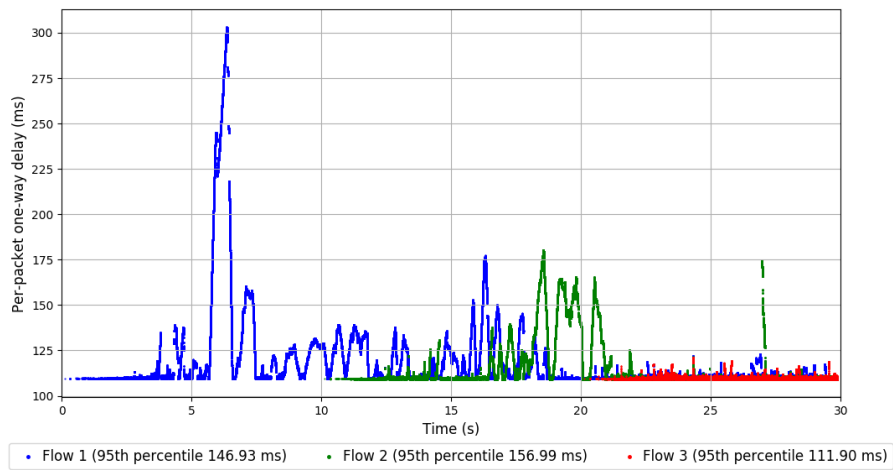
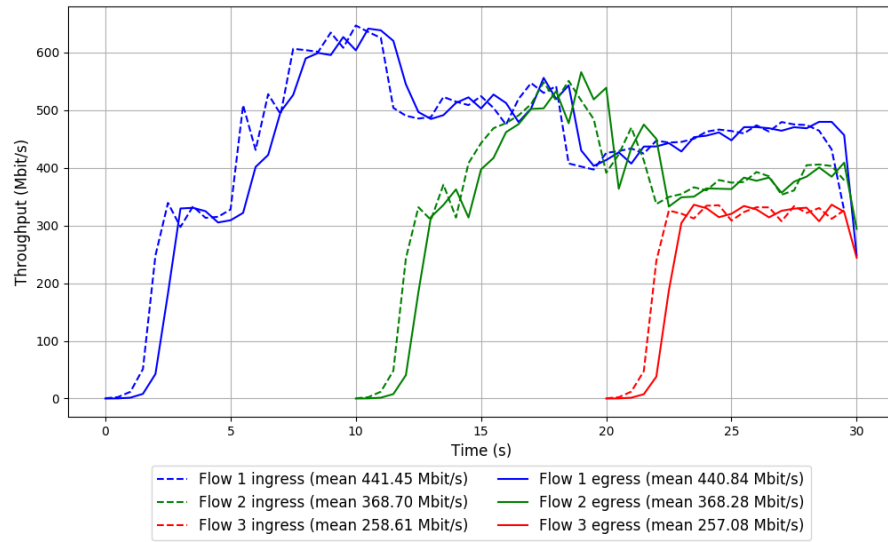


Run 3: Statistics of TCP Cubic

Start at: 2019-03-27 00:54:39  
End at: 2019-03-27 00:55:09  
Local clock offset: 0.015 ms  
Remote clock offset: -0.064 ms

# Below is generated by plot.py at 2019-03-27 03:27:11  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 769.51 Mbit/s  
95th percentile per-packet one-way delay: 149.898 ms  
Loss rate: 1.19%  
-- Flow 1:  
Average throughput: 440.84 Mbit/s  
95th percentile per-packet one-way delay: 146.927 ms  
Loss rate: 0.87%  
-- Flow 2:  
Average throughput: 368.28 Mbit/s  
95th percentile per-packet one-way delay: 156.986 ms  
Loss rate: 1.21%  
-- Flow 3:  
Average throughput: 257.08 Mbit/s  
95th percentile per-packet one-way delay: 111.899 ms  
Loss rate: 2.77%

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

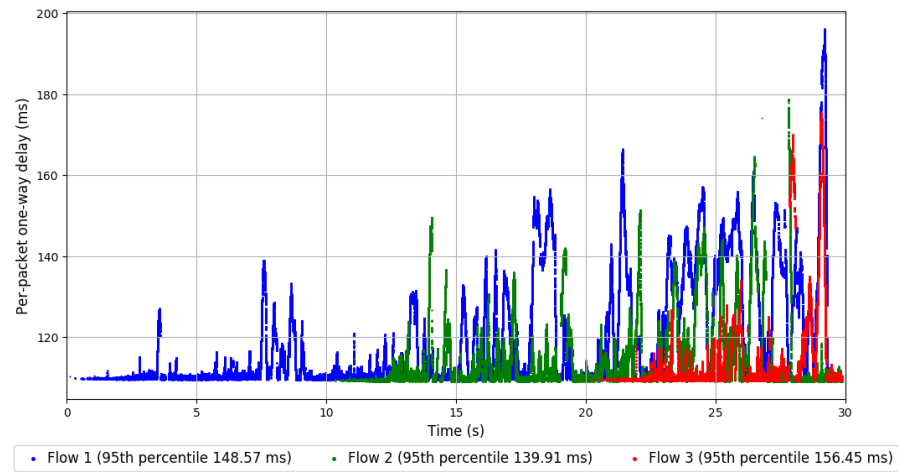
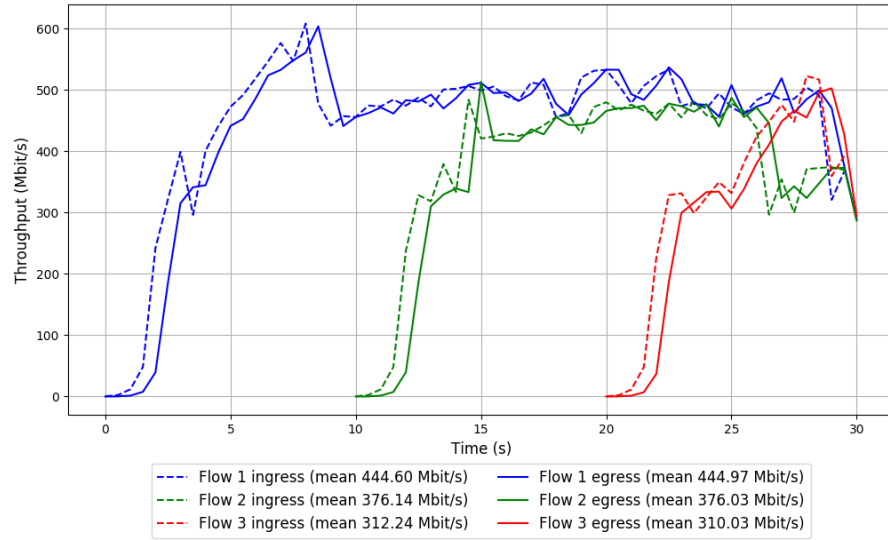


Run 4: Statistics of TCP Cubic

Start at: 2019-03-27 01:34:10  
End at: 2019-03-27 01:34:40  
Local clock offset: -0.034 ms  
Remote clock offset: -0.184 ms

# Below is generated by plot.py at 2019-03-27 03:27:11  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 796.07 Mbit/s  
95th percentile per-packet one-way delay: 146.426 ms  
Loss rate: 1.09%  
-- Flow 1:  
Average throughput: 444.97 Mbit/s  
95th percentile per-packet one-way delay: 148.567 ms  
Loss rate: 0.65%  
-- Flow 2:  
Average throughput: 376.03 Mbit/s  
95th percentile per-packet one-way delay: 139.910 ms  
Loss rate: 1.12%  
-- Flow 3:  
Average throughput: 310.03 Mbit/s  
95th percentile per-packet one-way delay: 156.450 ms  
Loss rate: 2.88%

# Run 4: Report of TCP Cubic — Data Link

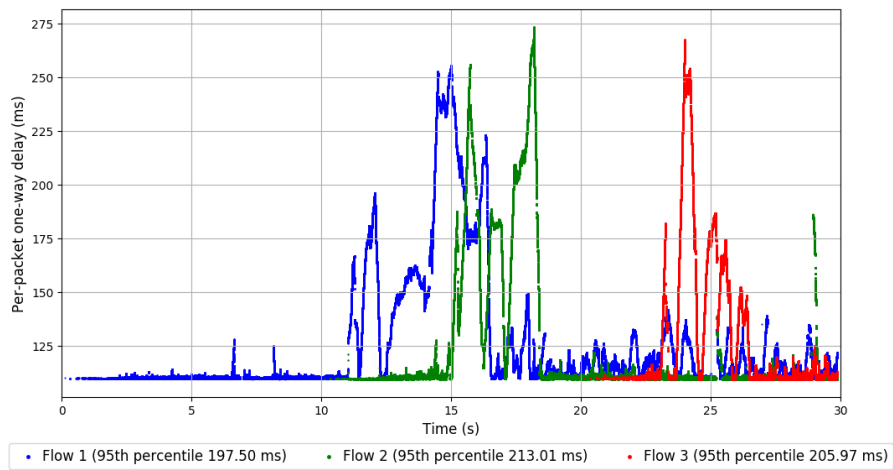
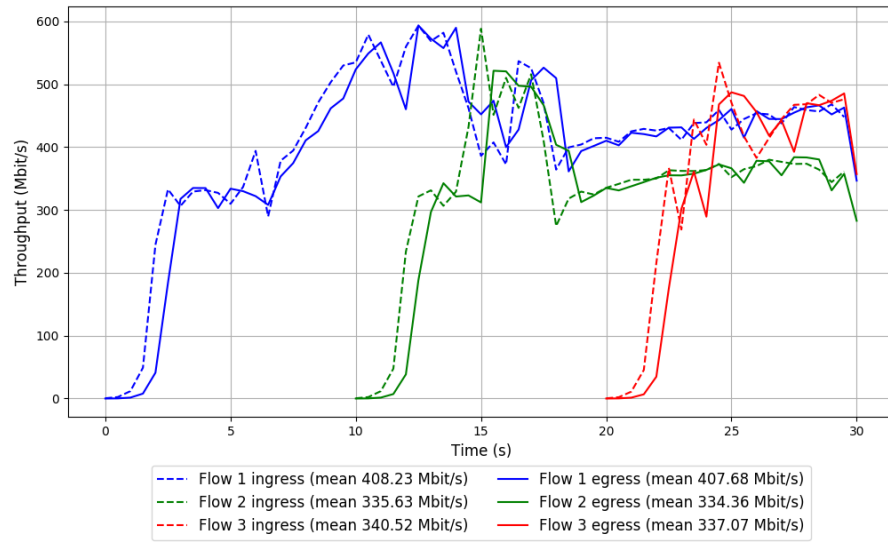


Run 5: Statistics of TCP Cubic

Start at: 2019-03-27 02:15:25  
End at: 2019-03-27 02:15:55  
Local clock offset: 0.104 ms  
Remote clock offset: -0.127 ms

# Below is generated by plot.py at 2019-03-27 03:27:11  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 739.94 Mbit/s  
95th percentile per-packet one-way delay: 208.633 ms  
Loss rate: 1.40%  
-- Flow 1:  
Average throughput: 407.68 Mbit/s  
95th percentile per-packet one-way delay: 197.505 ms  
Loss rate: 0.86%  
-- Flow 2:  
Average throughput: 334.36 Mbit/s  
95th percentile per-packet one-way delay: 213.010 ms  
Loss rate: 1.47%  
-- Flow 3:  
Average throughput: 337.07 Mbit/s  
95th percentile per-packet one-way delay: 205.967 ms  
Loss rate: 3.20%

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

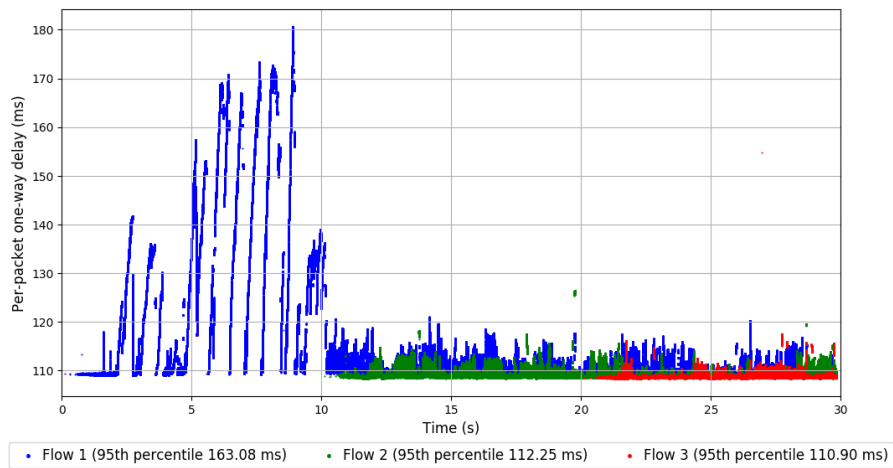
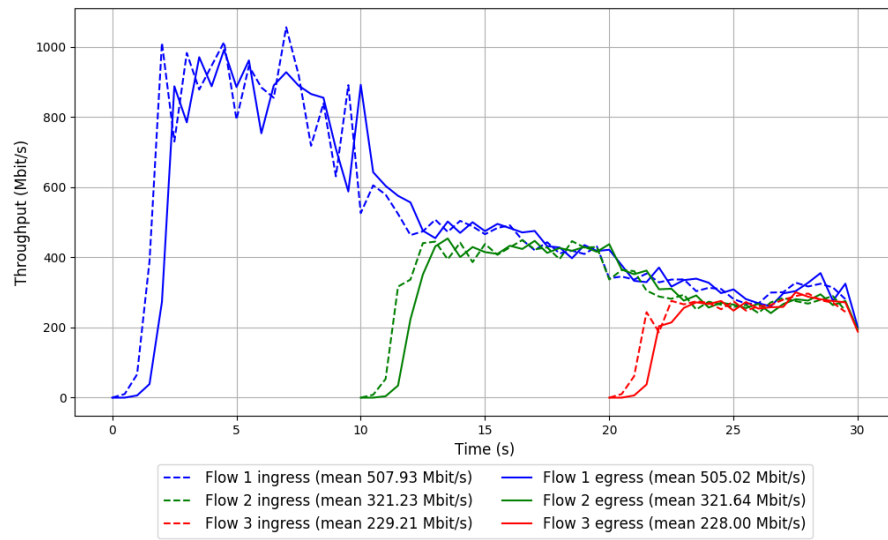


Run 1: Statistics of FillP

Start at: 2019-03-26 23:50:24  
End at: 2019-03-26 23:50:54  
Local clock offset: -0.064 ms  
Remote clock offset: -0.058 ms

# Below is generated by plot.py at 2019-03-27 03:32:23  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 792.36 Mbit/s  
95th percentile per-packet one-way delay: 154.924 ms  
Loss rate: 1.37%  
-- Flow 1:  
Average throughput: 505.02 Mbit/s  
95th percentile per-packet one-way delay: 163.083 ms  
Loss rate: 1.36%  
-- Flow 2:  
Average throughput: 321.64 Mbit/s  
95th percentile per-packet one-way delay: 112.254 ms  
Loss rate: 0.94%  
-- Flow 3:  
Average throughput: 228.00 Mbit/s  
95th percentile per-packet one-way delay: 110.897 ms  
Loss rate: 2.63%

# Run 1: Report of FillP — Data Link





Run 2: Statistics of FillP

Start at: 2019-03-27 00:32:23

End at: 2019-03-27 00:32:53

Local clock offset: -0.767 ms

Remote clock offset: -0.09 ms

# Below is generated by plot.py at 2019-03-27 03:42:10

# Datalink statistics

-- Total of 3 flows:

Average throughput: 784.94 Mbit/s

95th percentile per-packet one-way delay: 153.268 ms

Loss rate: 1.27%

-- Flow 1:

Average throughput: 491.06 Mbit/s

95th percentile per-packet one-way delay: 163.151 ms

Loss rate: 1.17%

-- Flow 2:

Average throughput: 332.92 Mbit/s

95th percentile per-packet one-way delay: 112.645 ms

Loss rate: 0.88%

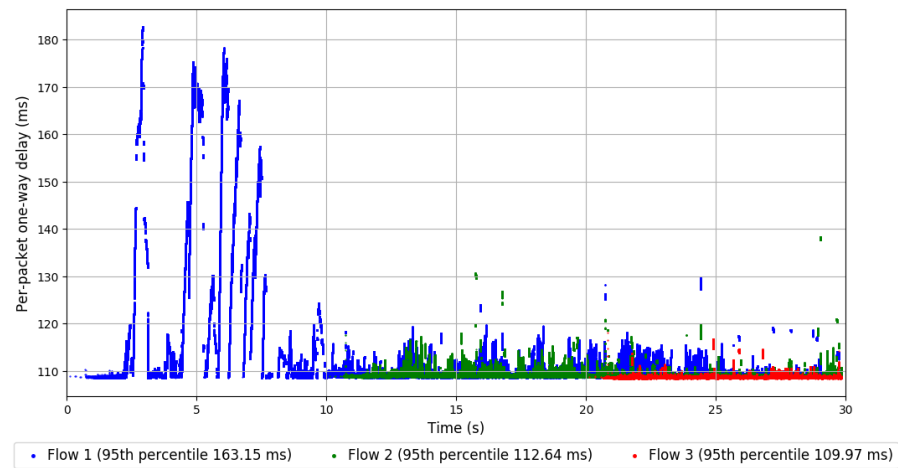
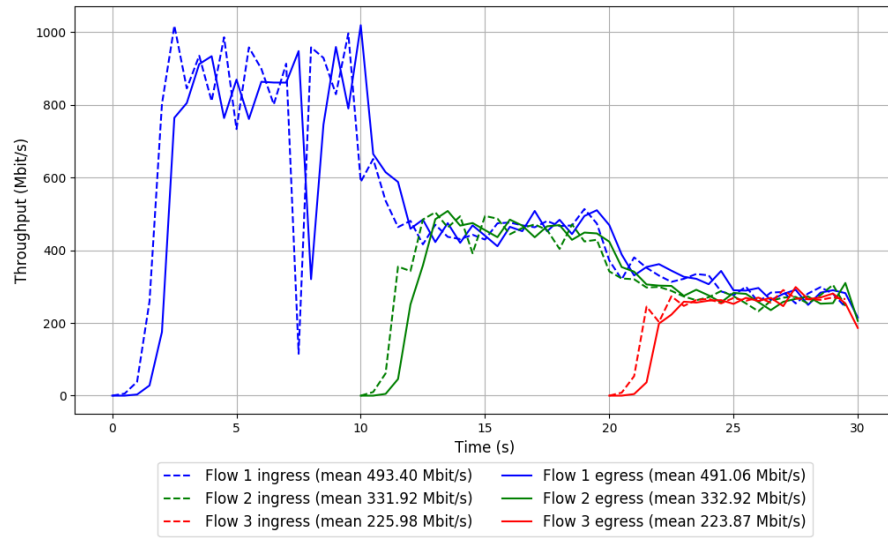
-- Flow 3:

Average throughput: 223.87 Mbit/s

95th percentile per-packet one-way delay: 109.965 ms

Loss rate: 3.06%

## Run 2: Report of FillP — Data Link

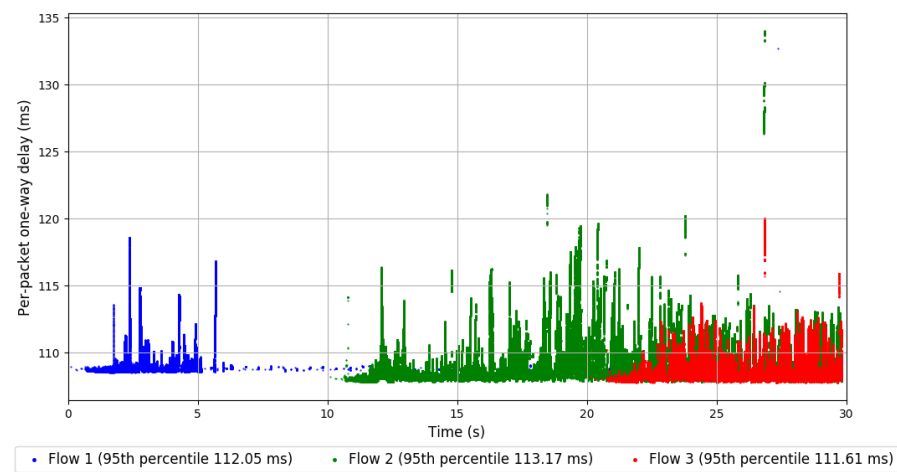
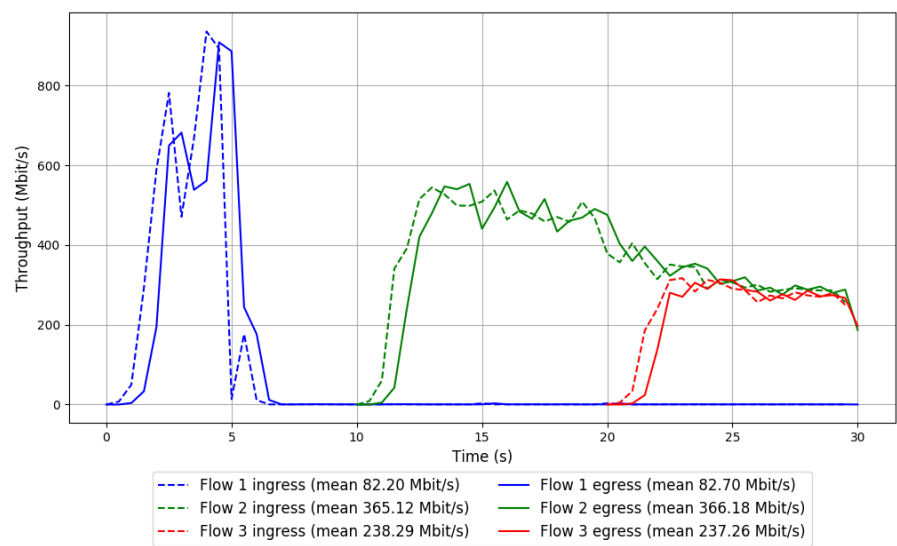


Run 3: Statistics of FillP

Start at: 2019-03-27 01:11:43  
End at: 2019-03-27 01:12:13  
Local clock offset: -0.746 ms  
Remote clock offset: -0.177 ms

# Below is generated by plot.py at 2019-03-27 03:42:10  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 402.77 Mbit/s  
95th percentile per-packet one-way delay: 112.588 ms  
Loss rate: 1.07%  
-- Flow 1:  
Average throughput: 82.70 Mbit/s  
95th percentile per-packet one-way delay: 112.053 ms  
Loss rate: 0.01%  
-- Flow 2:  
Average throughput: 366.18 Mbit/s  
95th percentile per-packet one-way delay: 113.170 ms  
Loss rate: 0.94%  
-- Flow 3:  
Average throughput: 237.26 Mbit/s  
95th percentile per-packet one-way delay: 111.605 ms  
Loss rate: 2.58%

Run 3: Report of FillP — Data Link

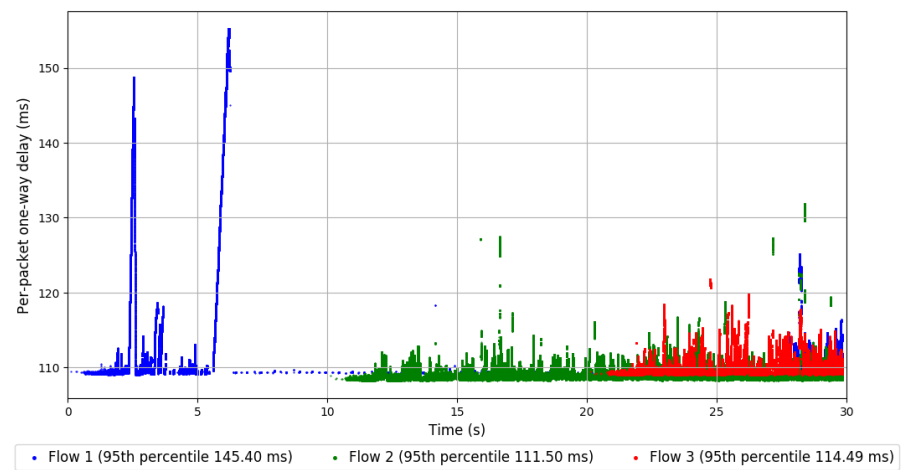
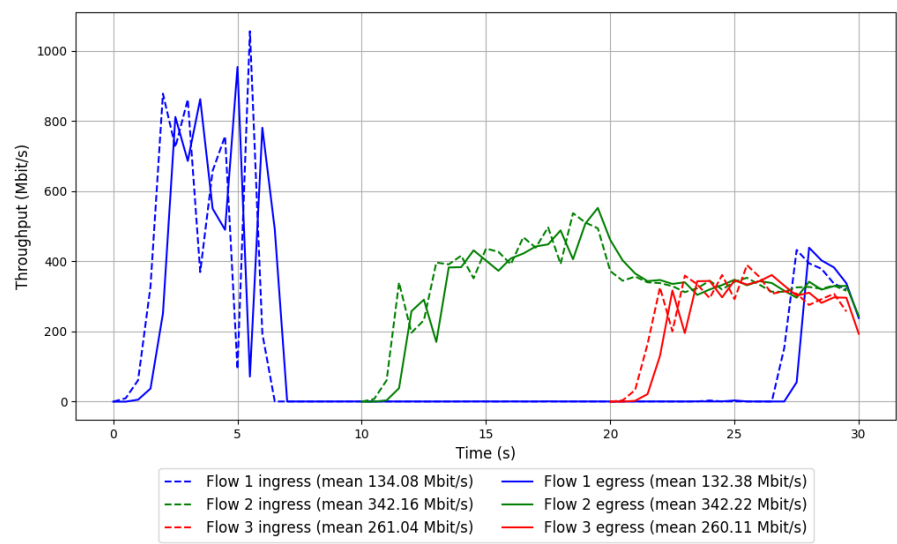


Run 4: Statistics of FillP

Start at: 2019-03-27 01:52:45  
End at: 2019-03-27 01:53:15  
Local clock offset: -0.056 ms  
Remote clock offset: -0.085 ms

# Below is generated by plot.py at 2019-03-27 03:42:10  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 444.21 Mbit/s  
95th percentile per-packet one-way delay: 122.450 ms  
Loss rate: 1.62%  
-- Flow 1:  
Average throughput: 132.38 Mbit/s  
95th percentile per-packet one-way delay: 145.399 ms  
Loss rate: 2.00%  
-- Flow 2:  
Average throughput: 342.22 Mbit/s  
95th percentile per-packet one-way delay: 111.500 ms  
Loss rate: 1.06%  
-- Flow 3:  
Average throughput: 260.11 Mbit/s  
95th percentile per-packet one-way delay: 114.492 ms  
Loss rate: 2.50%

Run 4: Report of FillP — Data Link

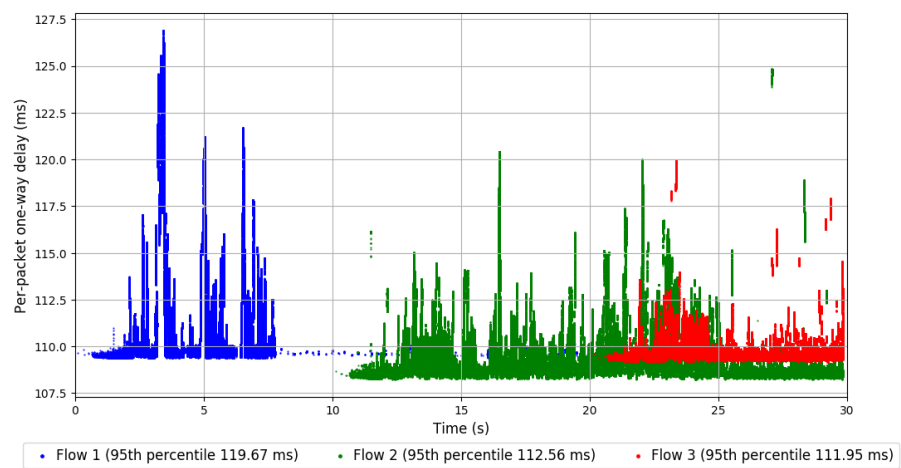
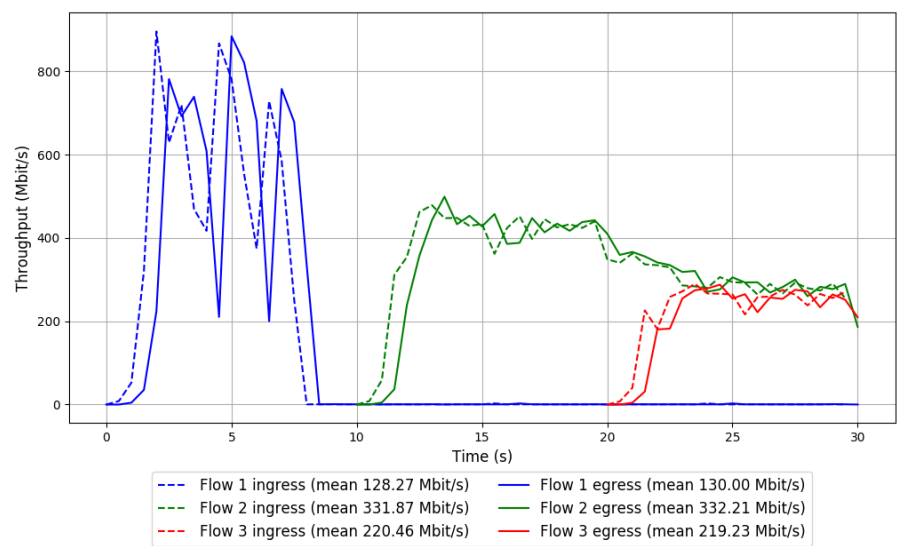


Run 5: Statistics of FillP

Start at: 2019-03-27 02:33:50  
End at: 2019-03-27 02:34:20  
Local clock offset: -0.079 ms  
Remote clock offset: -0.139 ms

# Below is generated by plot.py at 2019-03-27 03:42:10  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 420.95 Mbit/s  
95th percentile per-packet one-way delay: 114.856 ms  
Loss rate: 1.00%  
-- Flow 1:  
Average throughput: 130.00 Mbit/s  
95th percentile per-packet one-way delay: 119.668 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 332.21 Mbit/s  
95th percentile per-packet one-way delay: 112.564 ms  
Loss rate: 0.99%  
-- Flow 3:  
Average throughput: 219.23 Mbit/s  
95th percentile per-packet one-way delay: 111.953 ms  
Loss rate: 2.79%

Run 5: Report of FillP — Data Link





Run 1: Statistics of FillP-Sheep

Start at: 2019-03-26 23:52:34

End at: 2019-03-26 23:53:04

Local clock offset: -0.134 ms

Remote clock offset: -0.05 ms

# Below is generated by plot.py at 2019-03-27 03:43:36

# Datalink statistics

-- Total of 3 flows:

Average throughput: 763.73 Mbit/s

95th percentile per-packet one-way delay: 132.516 ms

Loss rate: 0.98%

-- Flow 1:

Average throughput: 490.91 Mbit/s

95th percentile per-packet one-way delay: 142.906 ms

Loss rate: 0.75%

-- Flow 2:

Average throughput: 297.22 Mbit/s

95th percentile per-packet one-way delay: 111.519 ms

Loss rate: 0.84%

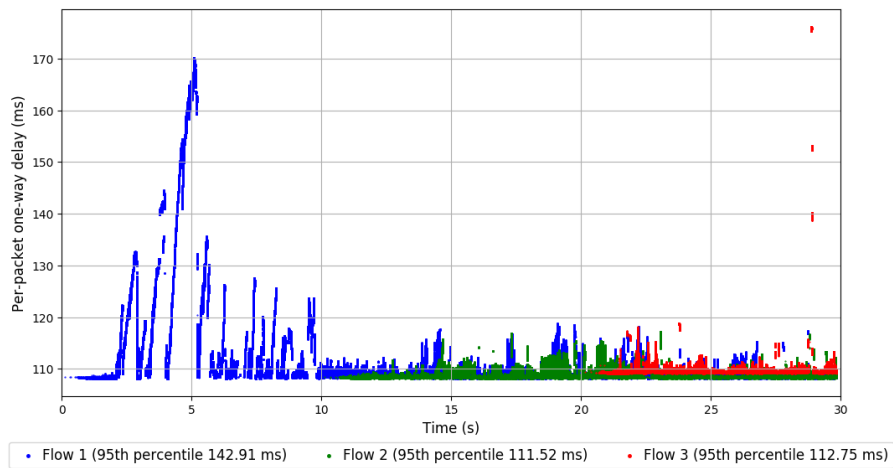
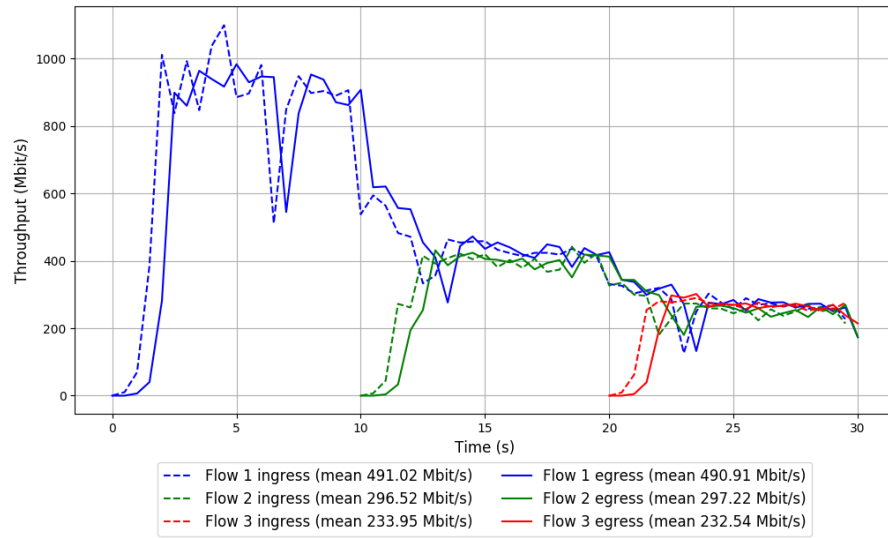
-- Flow 3:

Average throughput: 232.54 Mbit/s

95th percentile per-packet one-way delay: 112.745 ms

Loss rate: 2.77%

## Run 1: Report of FillP-Sheep — Data Link

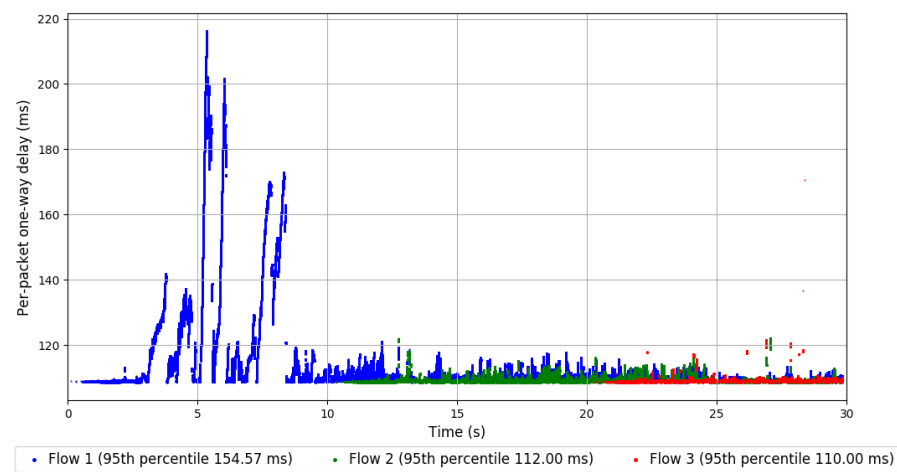
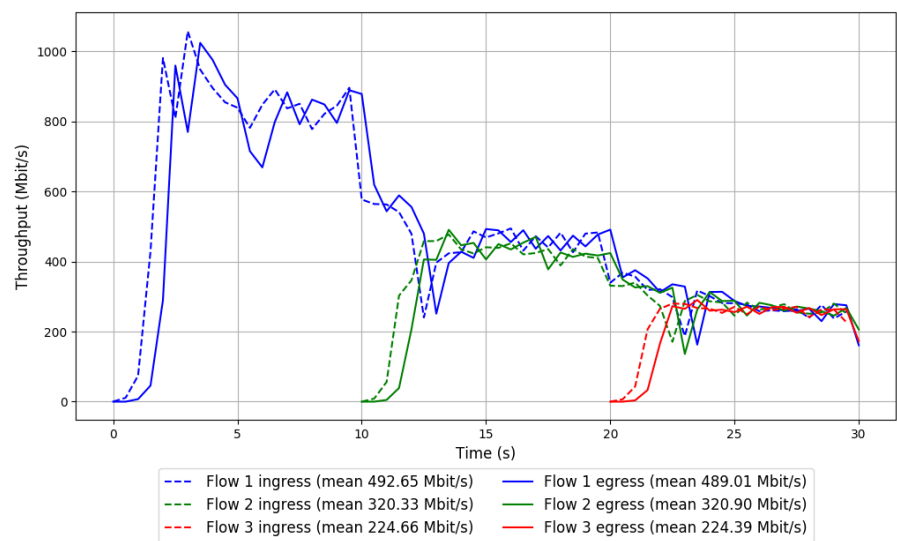


Run 2: Statistics of FillP-Sheep

Start at: 2019-03-27 00:34:39  
End at: 2019-03-27 00:35:09  
Local clock offset: -0.621 ms  
Remote clock offset: -0.079 ms

# Below is generated by plot.py at 2019-03-27 03:44:21  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 774.76 Mbit/s  
95th percentile per-packet one-way delay: 140.088 ms  
Loss rate: 1.41%  
-- Flow 1:  
Average throughput: 489.01 Mbit/s  
95th percentile per-packet one-way delay: 154.570 ms  
Loss rate: 1.46%  
-- Flow 2:  
Average throughput: 320.90 Mbit/s  
95th percentile per-packet one-way delay: 112.000 ms  
Loss rate: 0.90%  
-- Flow 3:  
Average throughput: 224.39 Mbit/s  
95th percentile per-packet one-way delay: 110.003 ms  
Loss rate: 2.53%

Run 2: Report of FillP-Sheep — Data Link



Run 3: Statistics of FillP-Sheep

Start at: 2019-03-27 01:13:29

End at: 2019-03-27 01:13:59

Local clock offset: -0.238 ms

Remote clock offset: 0.231 ms

# Below is generated by plot.py at 2019-03-27 03:45:28

# Datalink statistics

-- Total of 3 flows:

Average throughput: 788.48 Mbit/s

95th percentile per-packet one-way delay: 119.154 ms

Loss rate: 0.88%

-- Flow 1:

Average throughput: 495.02 Mbit/s

95th percentile per-packet one-way delay: 126.987 ms

Loss rate: 0.62%

-- Flow 2:

Average throughput: 334.29 Mbit/s

95th percentile per-packet one-way delay: 113.548 ms

Loss rate: 0.89%

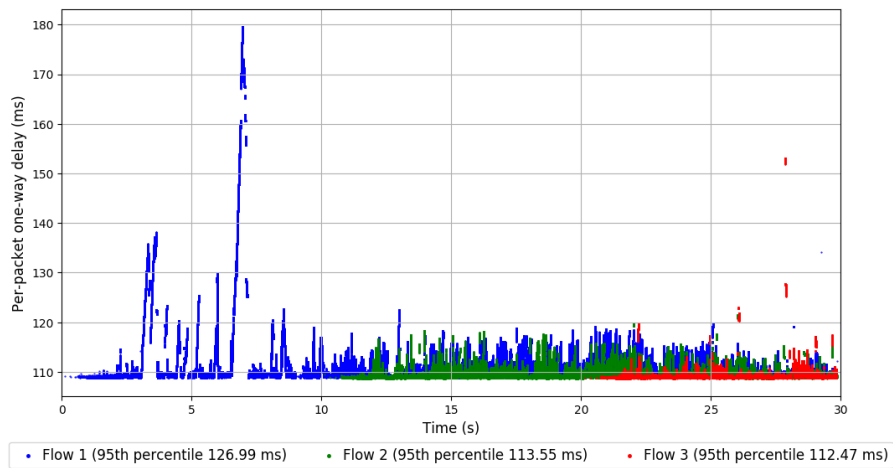
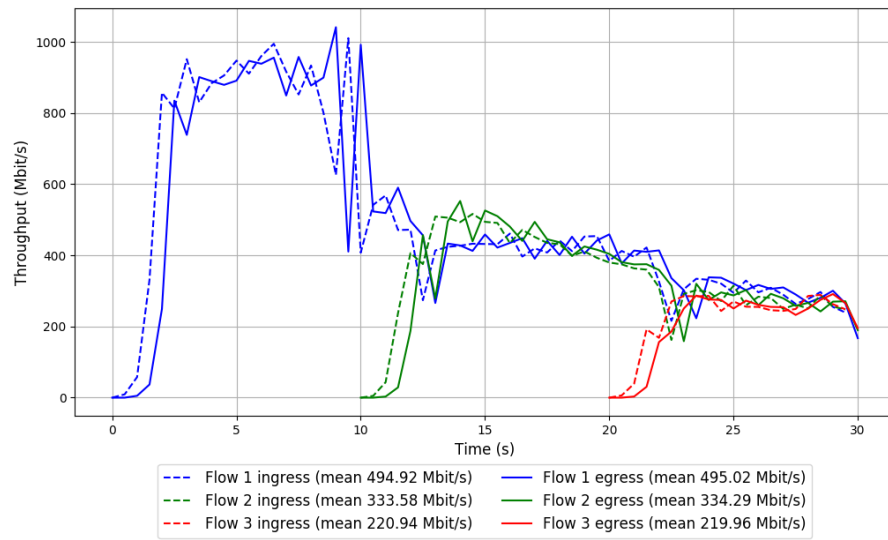
-- Flow 3:

Average throughput: 219.96 Mbit/s

95th percentile per-packet one-way delay: 112.475 ms

Loss rate: 2.61%

### Run 3: Report of FillP-Sheep — Data Link

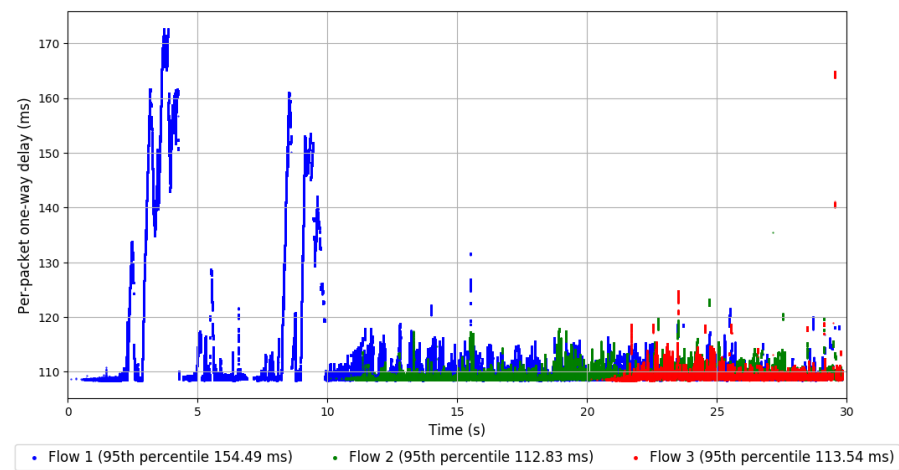
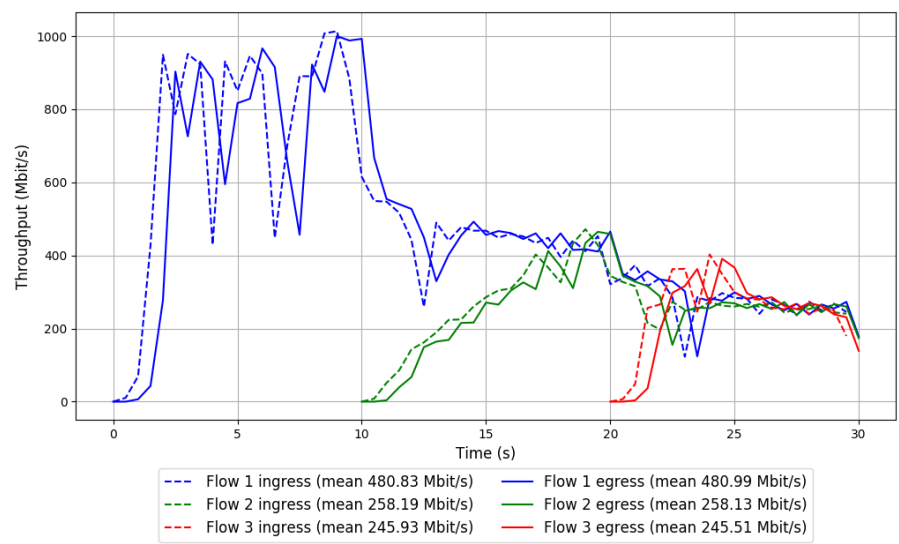


Run 4: Statistics of FillP-Sheep

Start at: 2019-03-27 01:54:27  
End at: 2019-03-27 01:54:57  
Local clock offset: -0.666 ms  
Remote clock offset: -0.115 ms

# Below is generated by plot.py at 2019-03-27 03:49:47  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 732.12 Mbit/s  
95th percentile per-packet one-way delay: 149.887 ms  
Loss rate: 0.98%  
-- Flow 1:  
Average throughput: 480.99 Mbit/s  
95th percentile per-packet one-way delay: 154.488 ms  
Loss rate: 0.70%  
-- Flow 2:  
Average throughput: 258.13 Mbit/s  
95th percentile per-packet one-way delay: 112.825 ms  
Loss rate: 1.10%  
-- Flow 3:  
Average throughput: 245.51 Mbit/s  
95th percentile per-packet one-way delay: 113.539 ms  
Loss rate: 2.34%

Run 4: Report of FillP-Sheep — Data Link





Run 5: Statistics of FillP-Sheep

Start at: 2019-03-27 02:35:34

End at: 2019-03-27 02:36:04

Local clock offset: -0.081 ms

Remote clock offset: -0.13 ms

# Below is generated by plot.py at 2019-03-27 03:51:21

# Datalink statistics

-- Total of 3 flows:

Average throughput: 732.27 Mbit/s

95th percentile per-packet one-way delay: 152.720 ms

Loss rate: 1.49%

-- Flow 1:

Average throughput: 464.45 Mbit/s

95th percentile per-packet one-way delay: 165.919 ms

Loss rate: 1.69%

-- Flow 2:

Average throughput: 297.87 Mbit/s

95th percentile per-packet one-way delay: 110.034 ms

Loss rate: 0.62%

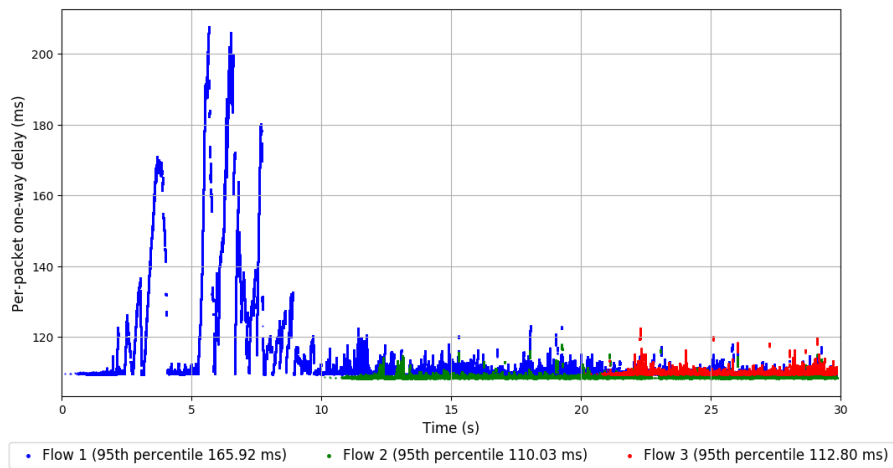
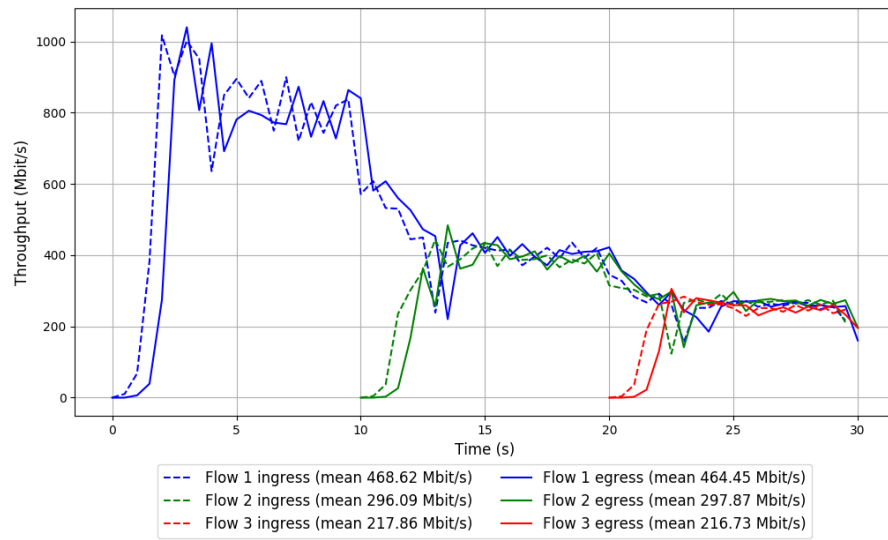
-- Flow 3:

Average throughput: 216.73 Mbit/s

95th percentile per-packet one-way delay: 112.802 ms

Loss rate: 2.63%

## Run 5: Report of FillP-Sheep — Data Link

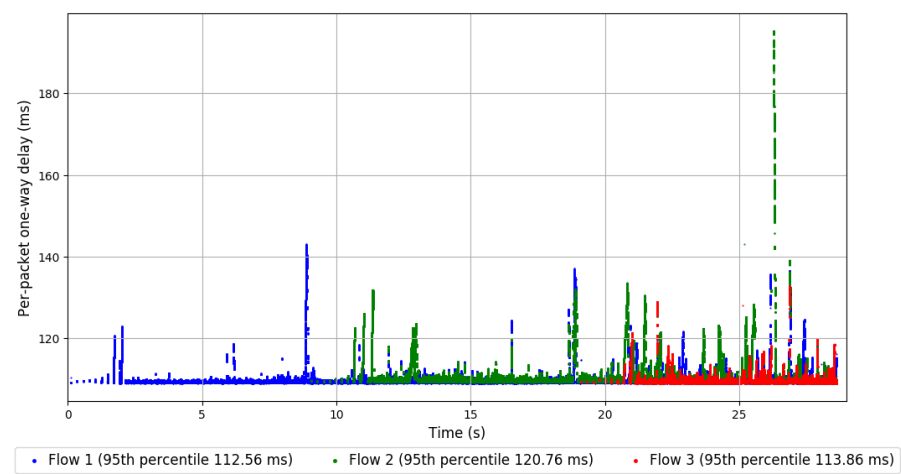
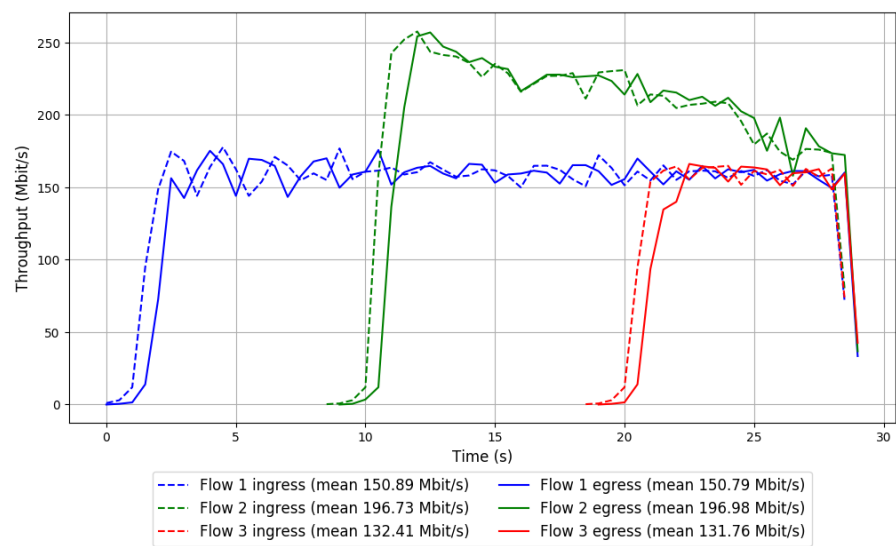


```
Run 1: Statistics of Indigo

Start at: 2019-03-26 23:20:40
End at: 2019-03-26 23:21:10
Local clock offset: -0.124 ms
Remote clock offset: 0.04 ms

# Below is generated by plot.py at 2019-03-27 03:51:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 329.99 Mbit/s
95th percentile per-packet one-way delay: 115.873 ms
Loss rate: 1.15%
-- Flow 1:
Average throughput: 150.79 Mbit/s
95th percentile per-packet one-way delay: 112.565 ms
Loss rate: 0.83%
-- Flow 2:
Average throughput: 196.98 Mbit/s
95th percentile per-packet one-way delay: 120.757 ms
Loss rate: 0.98%
-- Flow 3:
Average throughput: 131.76 Mbit/s
95th percentile per-packet one-way delay: 113.863 ms
Loss rate: 2.73%
```

Run 1: Report of Indigo — Data Link

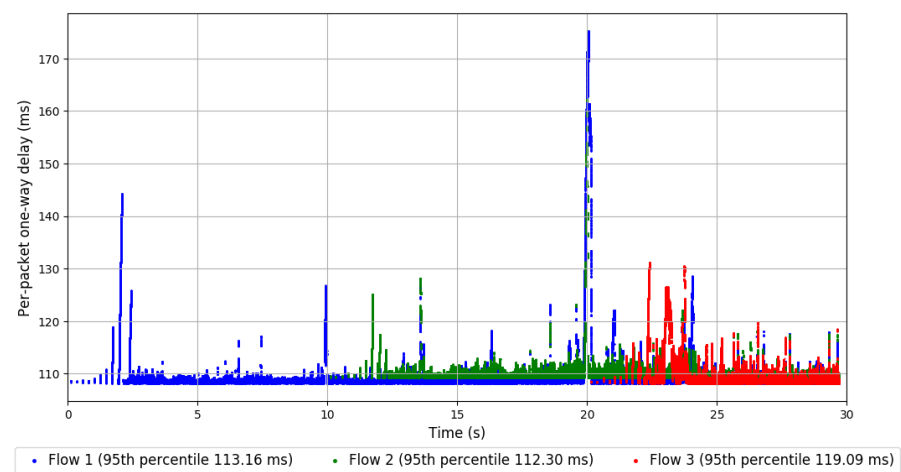
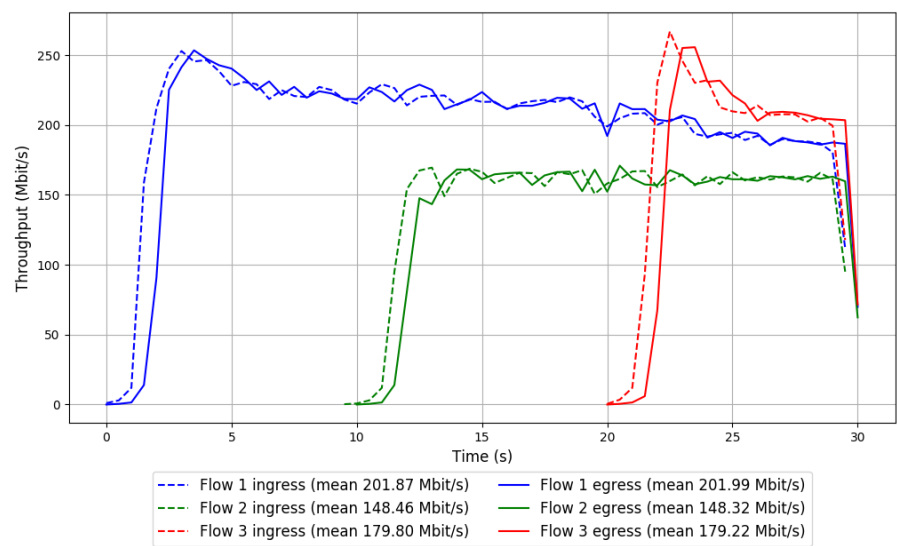


Run 2: Statistics of Indigo

Start at: 2019-03-27 00:02:54  
End at: 2019-03-27 00:03:24  
Local clock offset: -0.17 ms  
Remote clock offset: -0.056 ms

# Below is generated by plot.py at 2019-03-27 03:51:21  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 357.96 Mbit/s  
95th percentile per-packet one-way delay: 113.937 ms  
Loss rate: 1.13%  
-- Flow 1:  
Average throughput: 201.99 Mbit/s  
95th percentile per-packet one-way delay: 113.164 ms  
Loss rate: 0.67%  
-- Flow 2:  
Average throughput: 148.32 Mbit/s  
95th percentile per-packet one-way delay: 112.299 ms  
Loss rate: 1.21%  
-- Flow 3:  
Average throughput: 179.22 Mbit/s  
95th percentile per-packet one-way delay: 119.089 ms  
Loss rate: 2.55%

Run 2: Report of Indigo — Data Link

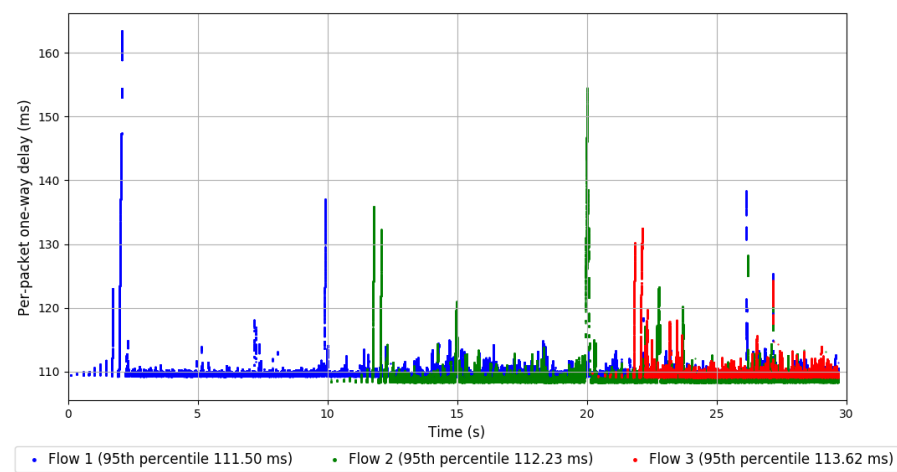
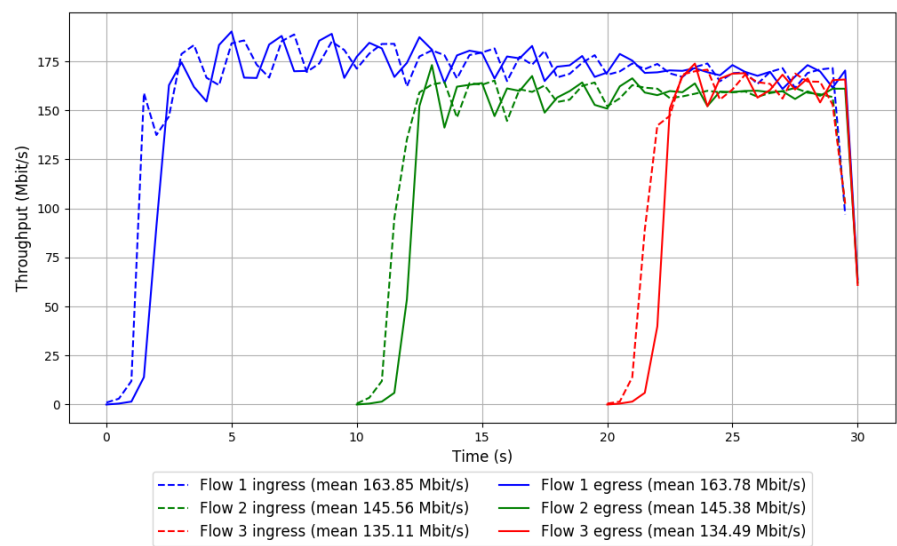


Run 3: Statistics of Indigo

Start at: 2019-03-27 00:44:21  
End at: 2019-03-27 00:44:51  
Local clock offset: -0.001 ms  
Remote clock offset: -0.071 ms

# Below is generated by plot.py at 2019-03-27 03:53:33  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 302.96 Mbit/s  
95th percentile per-packet one-way delay: 111.946 ms  
Loss rate: 1.19%  
-- Flow 1:  
Average throughput: 163.78 Mbit/s  
95th percentile per-packet one-way delay: 111.498 ms  
Loss rate: 0.76%  
-- Flow 2:  
Average throughput: 145.38 Mbit/s  
95th percentile per-packet one-way delay: 112.231 ms  
Loss rate: 1.22%  
-- Flow 3:  
Average throughput: 134.49 Mbit/s  
95th percentile per-packet one-way delay: 113.623 ms  
Loss rate: 2.71%

Run 3: Report of Indigo — Data Link



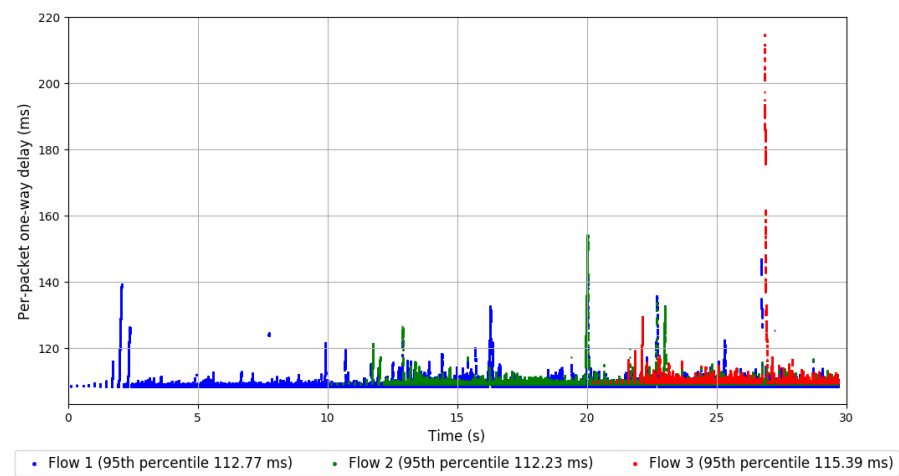
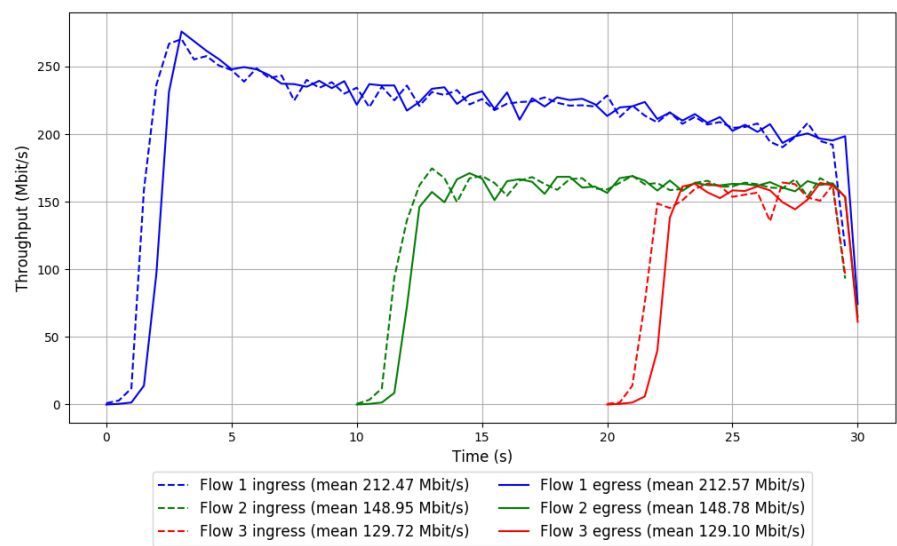


Run 4: Statistics of Indigo

Start at: 2019-03-27 01:23:52  
End at: 2019-03-27 01:24:22  
Local clock offset: -0.037 ms  
Remote clock offset: -0.204 ms

# Below is generated by plot.py at 2019-03-27 03:56:48  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 352.11 Mbit/s  
95th percentile per-packet one-way delay: 112.960 ms  
Loss rate: 1.08%  
-- Flow 1:  
Average throughput: 212.57 Mbit/s  
95th percentile per-packet one-way delay: 112.768 ms  
Loss rate: 0.69%  
-- Flow 2:  
Average throughput: 148.78 Mbit/s  
95th percentile per-packet one-way delay: 112.233 ms  
Loss rate: 1.23%  
-- Flow 3:  
Average throughput: 129.10 Mbit/s  
95th percentile per-packet one-way delay: 115.385 ms  
Loss rate: 2.74%

Run 4: Report of Indigo — Data Link

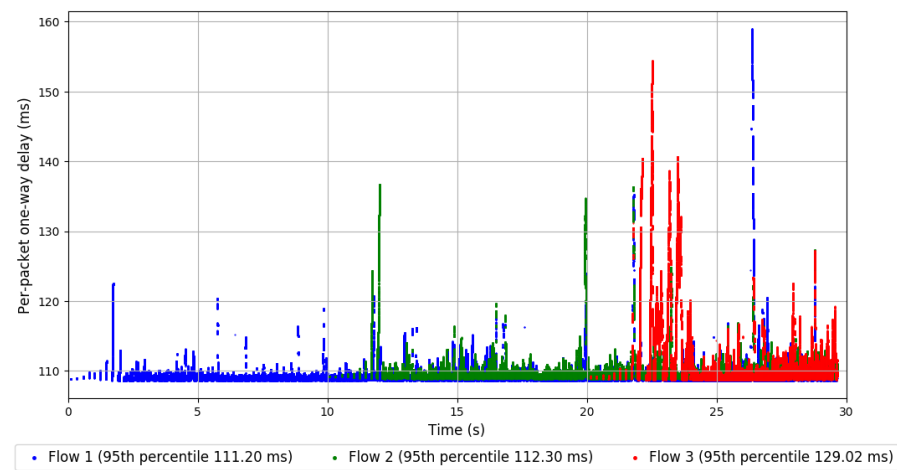
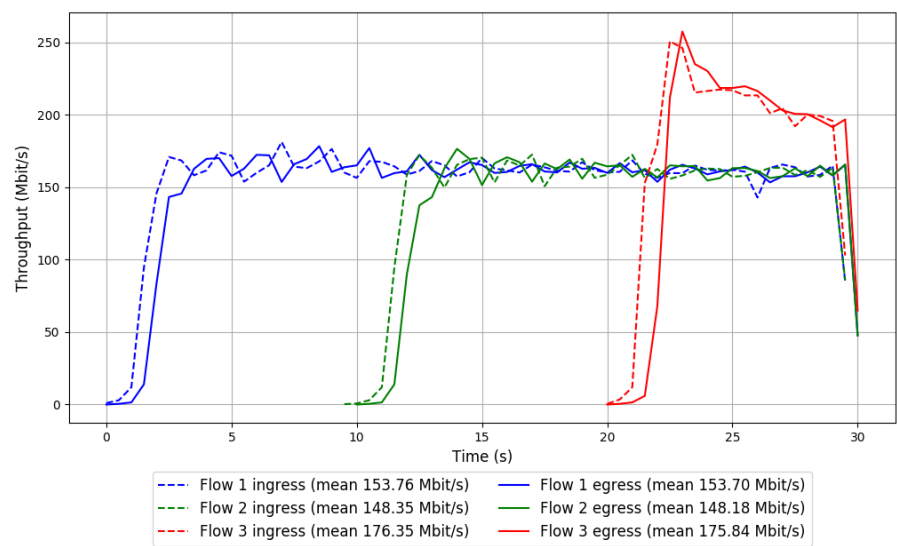


Run 5: Statistics of Indigo

Start at: 2019-03-27 02:04:47  
End at: 2019-03-27 02:05:17  
Local clock offset: -0.569 ms  
Remote clock offset: -0.112 ms

# Below is generated by plot.py at 2019-03-27 03:56:48  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 308.37 Mbit/s  
95th percentile per-packet one-way delay: 115.003 ms  
Loss rate: 1.26%  
-- Flow 1:  
Average throughput: 153.70 Mbit/s  
95th percentile per-packet one-way delay: 111.198 ms  
Loss rate: 0.79%  
-- Flow 2:  
Average throughput: 148.18 Mbit/s  
95th percentile per-packet one-way delay: 112.303 ms  
Loss rate: 1.23%  
-- Flow 3:  
Average throughput: 175.84 Mbit/s  
95th percentile per-packet one-way delay: 129.020 ms  
Loss rate: 2.54%

Run 5: Report of Indigo — Data Link

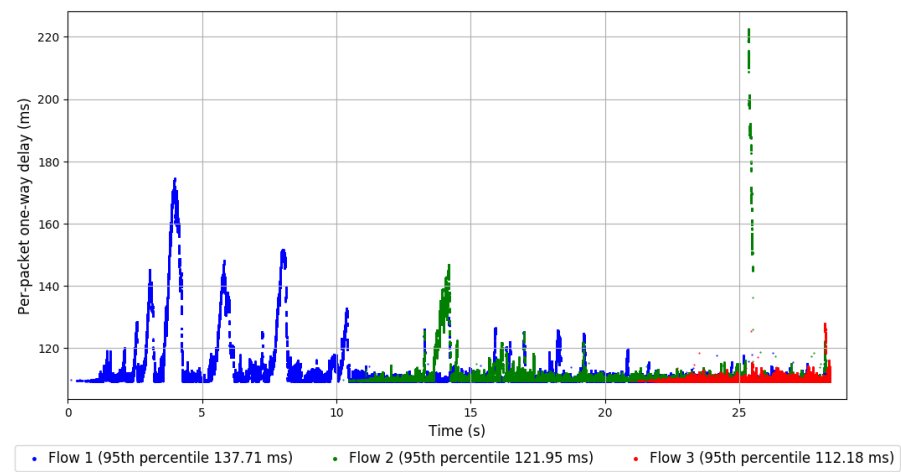
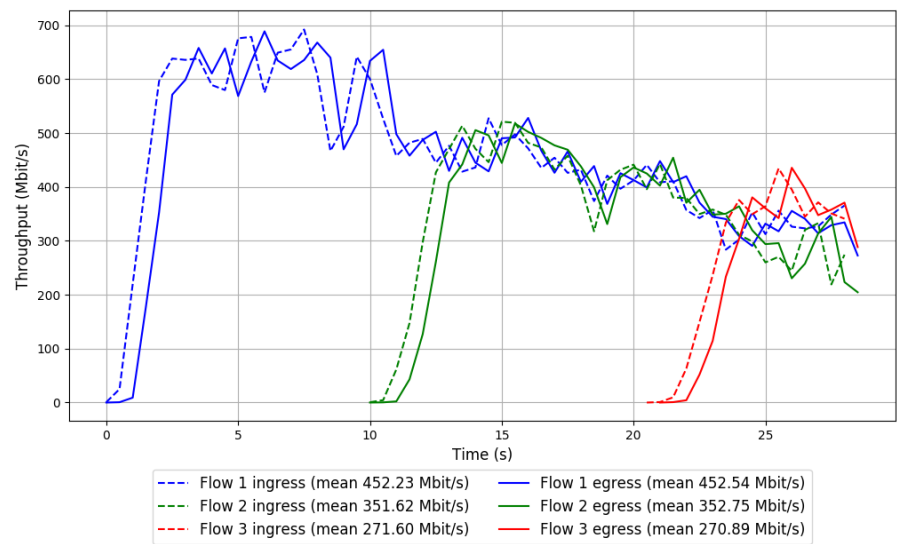


Run 1: Statistics of Indigo-MusesC3

Start at: 2019-03-26 23:27:13  
End at: 2019-03-26 23:27:43  
Local clock offset: 0.128 ms  
Remote clock offset: -0.059 ms

# Below is generated by plot.py at 2019-03-27 03:59:16  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 749.50 Mbit/s  
95th percentile per-packet one-way delay: 133.156 ms  
Loss rate: 1.00%  
-- Flow 1:  
Average throughput: 452.54 Mbit/s  
95th percentile per-packet one-way delay: 137.714 ms  
Loss rate: 0.71%  
-- Flow 2:  
Average throughput: 352.75 Mbit/s  
95th percentile per-packet one-way delay: 121.947 ms  
Loss rate: 0.88%  
-- Flow 3:  
Average throughput: 270.89 Mbit/s  
95th percentile per-packet one-way delay: 112.180 ms  
Loss rate: 3.17%

Run 1: Report of Indigo-MusesC3 — Data Link



Run 2: Statistics of Indigo-MusesC3

Start at: 2019-03-27 00:09:14

End at: 2019-03-27 00:09:44

Local clock offset: -0.706 ms

Remote clock offset: -0.07 ms

# Below is generated by plot.py at 2019-03-27 04:01:28

# Datalink statistics

-- Total of 3 flows:

Average throughput: 774.08 Mbit/s

95th percentile per-packet one-way delay: 120.390 ms

Loss rate: 1.05%

-- Flow 1:

Average throughput: 464.08 Mbit/s

95th percentile per-packet one-way delay: 124.838 ms

Loss rate: 0.61%

-- Flow 2:

Average throughput: 365.87 Mbit/s

95th percentile per-packet one-way delay: 112.514 ms

Loss rate: 1.02%

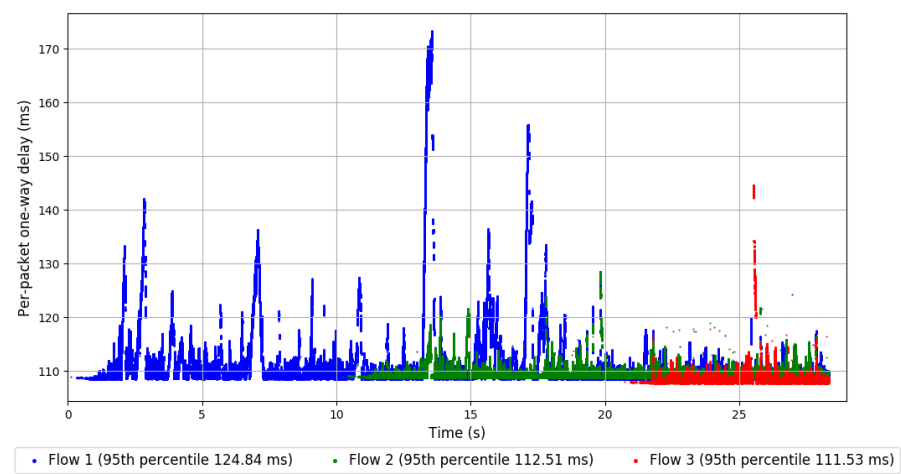
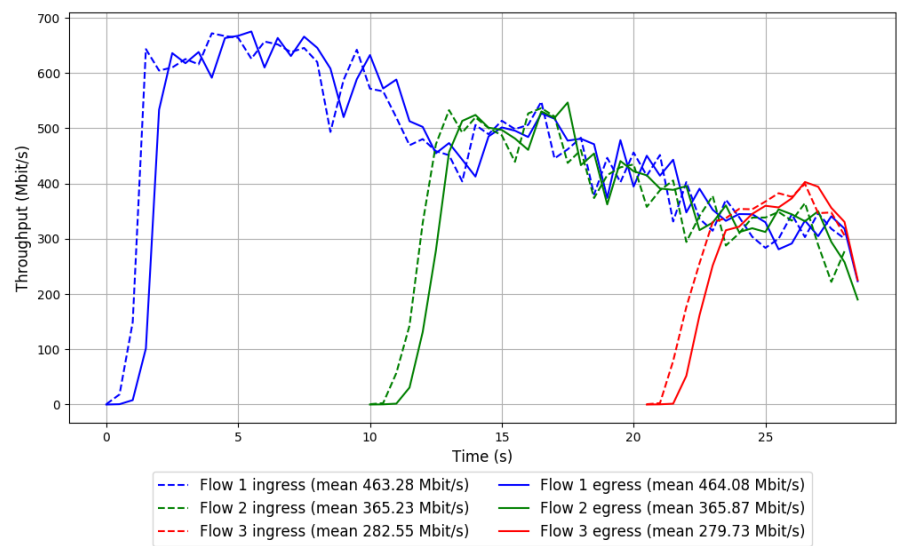
-- Flow 3:

Average throughput: 279.73 Mbit/s

95th percentile per-packet one-way delay: 111.534 ms

Loss rate: 3.78%

Run 2: Report of Indigo-MusesC3 — Data Link





Run 3: Statistics of Indigo-MusesC3

Start at: 2019-03-27 00:50:30

End at: 2019-03-27 00:51:00

Local clock offset: -0.007 ms

Remote clock offset: 0.266 ms

# Below is generated by plot.py at 2019-03-27 04:01:42

# Datalink statistics

-- Total of 3 flows:

Average throughput: 704.99 Mbit/s

95th percentile per-packet one-way delay: 122.616 ms

Loss rate: 1.08%

-- Flow 1:

Average throughput: 412.31 Mbit/s

95th percentile per-packet one-way delay: 129.282 ms

Loss rate: 0.60%

-- Flow 2:

Average throughput: 351.76 Mbit/s

95th percentile per-packet one-way delay: 120.332 ms

Loss rate: 1.05%

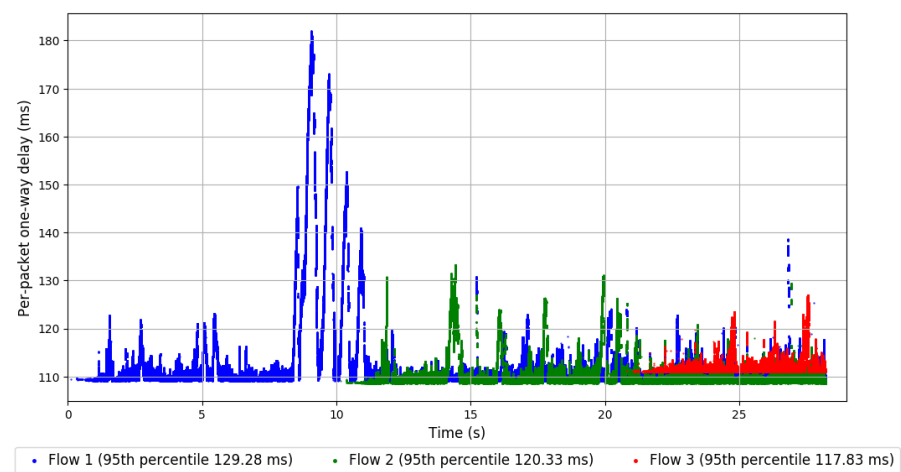
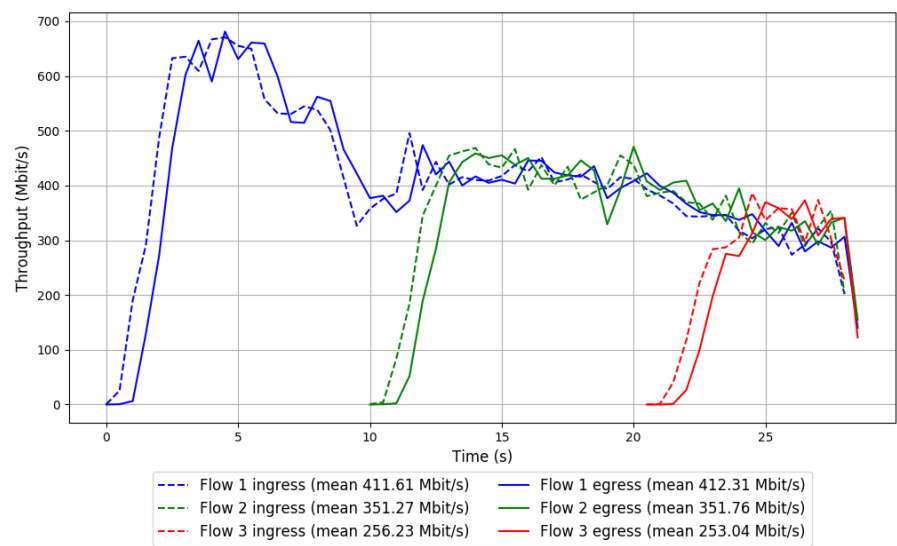
-- Flow 3:

Average throughput: 253.04 Mbit/s

95th percentile per-packet one-way delay: 117.835 ms

Loss rate: 4.11%

Run 3: Report of Indigo-MusesC3 — Data Link

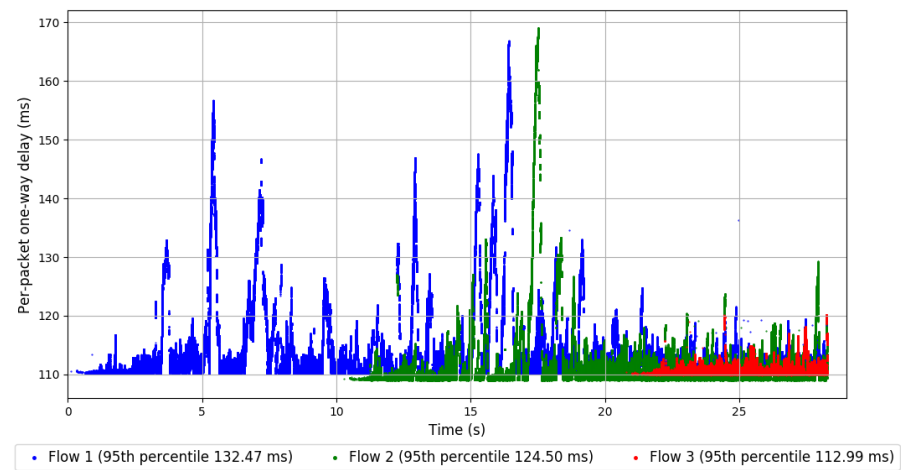
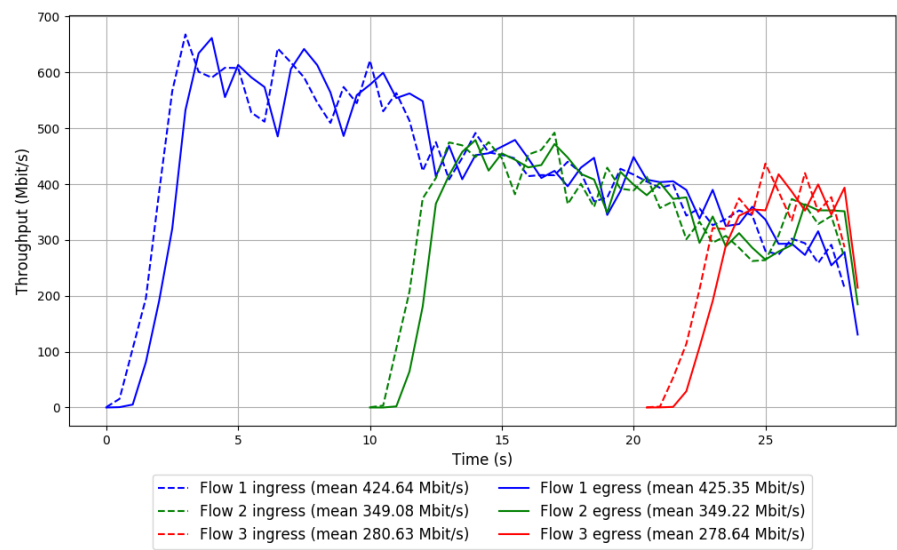


Run 4: Statistics of Indigo-MusesC3

Start at: 2019-03-27 01:29:54  
End at: 2019-03-27 01:30:24  
Local clock offset: 0.105 ms  
Remote clock offset: -0.566 ms

# Below is generated by plot.py at 2019-03-27 04:03:29  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 722.44 Mbit/s  
95th percentile per-packet one-way delay: 129.034 ms  
Loss rate: 1.09%  
-- Flow 1:  
Average throughput: 425.35 Mbit/s  
95th percentile per-packet one-way delay: 132.470 ms  
Loss rate: 0.62%  
-- Flow 2:  
Average throughput: 349.22 Mbit/s  
95th percentile per-packet one-way delay: 124.504 ms  
Loss rate: 1.14%  
-- Flow 3:  
Average throughput: 278.64 Mbit/s  
95th percentile per-packet one-way delay: 112.987 ms  
Loss rate: 3.54%

Run 4: Report of Indigo-MusesC3 — Data Link

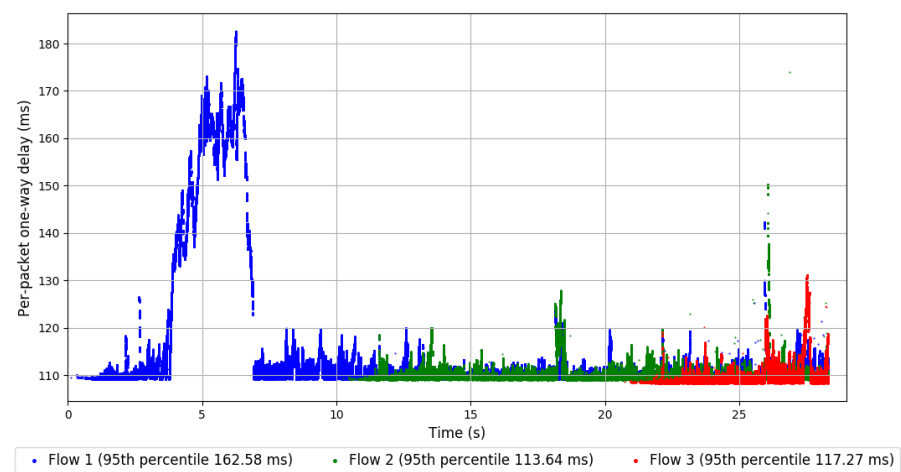
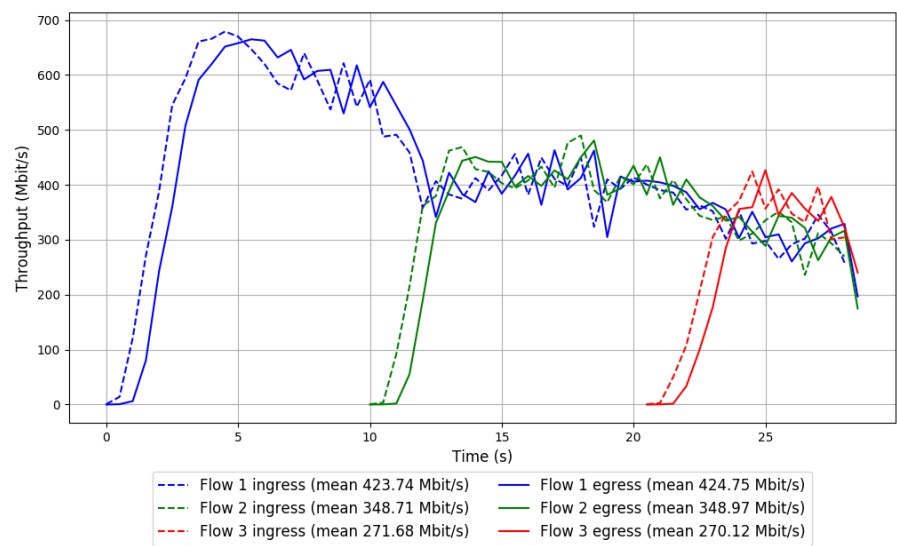


Run 5: Statistics of Indigo-MusesC3

Start at: 2019-03-27 02:11:19  
End at: 2019-03-27 02:11:49  
Local clock offset: -0.108 ms  
Remote clock offset: -0.119 ms

# Below is generated by plot.py at 2019-03-27 04:05:25  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 721.08 Mbit/s  
95th percentile per-packet one-way delay: 156.809 ms  
Loss rate: 1.01%  
-- Flow 1:  
Average throughput: 424.75 Mbit/s  
95th percentile per-packet one-way delay: 162.580 ms  
Loss rate: 0.54%  
-- Flow 2:  
Average throughput: 348.97 Mbit/s  
95th percentile per-packet one-way delay: 113.637 ms  
Loss rate: 1.13%  
-- Flow 3:  
Average throughput: 270.12 Mbit/s  
95th percentile per-packet one-way delay: 117.265 ms  
Loss rate: 3.36%

Run 5: Report of Indigo-MusesC3 — Data Link



Run 1: Statistics of Indigo-MusesC5

Start at: 2019-03-26 23:29:23

End at: 2019-03-26 23:29:53

Local clock offset: -0.194 ms

Remote clock offset: 0.35 ms

# Below is generated by plot.py at 2019-03-27 04:06:10

# Datalink statistics

-- Total of 3 flows:

Average throughput: 644.29 Mbit/s

95th percentile per-packet one-way delay: 177.950 ms

Loss rate: 0.85%

-- Flow 1:

Average throughput: 416.76 Mbit/s

95th percentile per-packet one-way delay: 185.680 ms

Loss rate: 0.24%

-- Flow 2:

Average throughput: 314.79 Mbit/s

95th percentile per-packet one-way delay: 141.481 ms

Loss rate: 1.70%

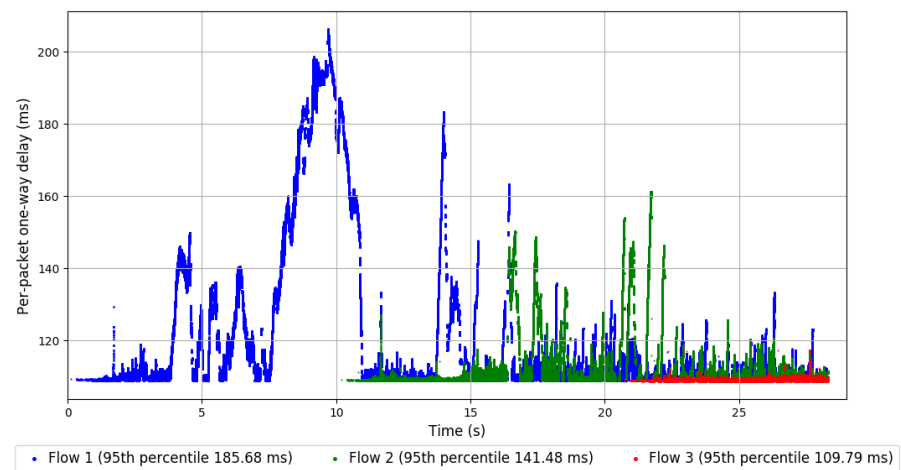
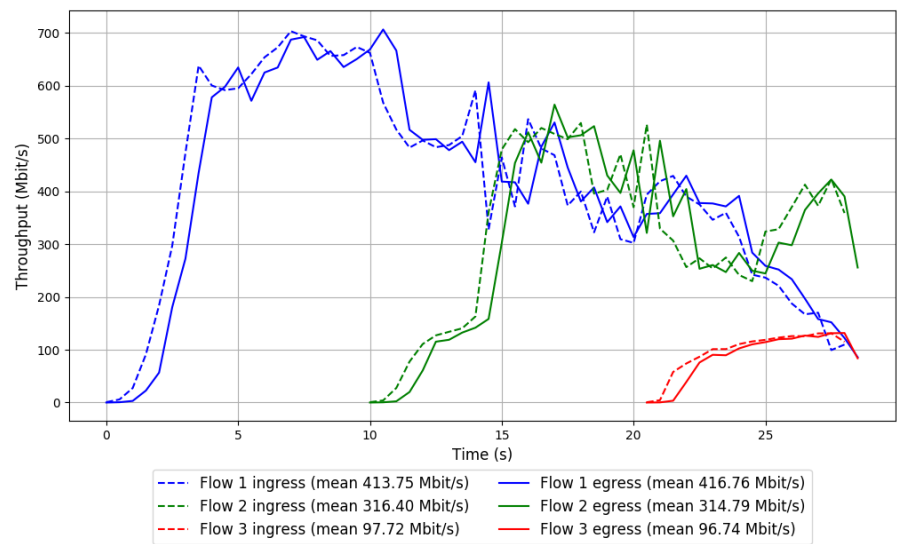
-- Flow 3:

Average throughput: 96.74 Mbit/s

95th percentile per-packet one-way delay: 109.788 ms

Loss rate: 3.83%

Run 1: Report of Indigo-MusesC5 — Data Link



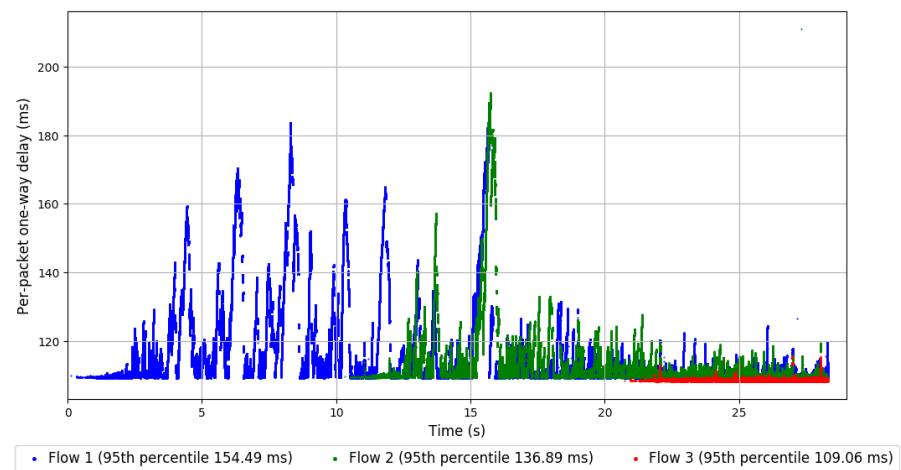
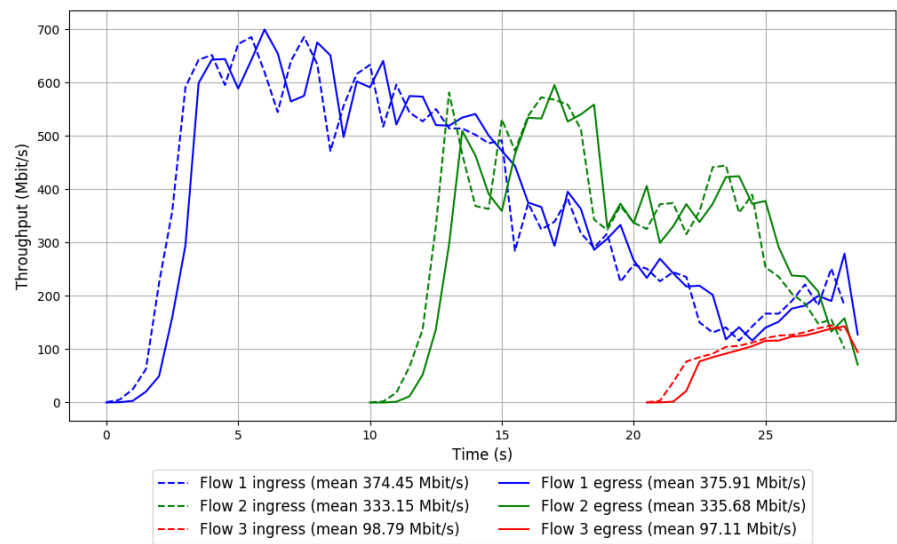


Run 2: Statistics of Indigo-MusesC5

Start at: 2019-03-27 00:11:25  
End at: 2019-03-27 00:11:55  
Local clock offset: -0.164 ms  
Remote clock offset: -0.071 ms

# Below is generated by plot.py at 2019-03-27 04:07:32  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 616.05 Mbit/s  
95th percentile per-packet one-way delay: 151.758 ms  
Loss rate: 0.58%  
-- Flow 1:  
Average throughput: 375.91 Mbit/s  
95th percentile per-packet one-way delay: 154.486 ms  
Loss rate: 0.38%  
-- Flow 2:  
Average throughput: 335.68 Mbit/s  
95th percentile per-packet one-way delay: 136.890 ms  
Loss rate: 0.44%  
-- Flow 3:  
Average throughput: 97.11 Mbit/s  
95th percentile per-packet one-way delay: 109.062 ms  
Loss rate: 4.46%

Run 2: Report of Indigo-MusesC5 — Data Link

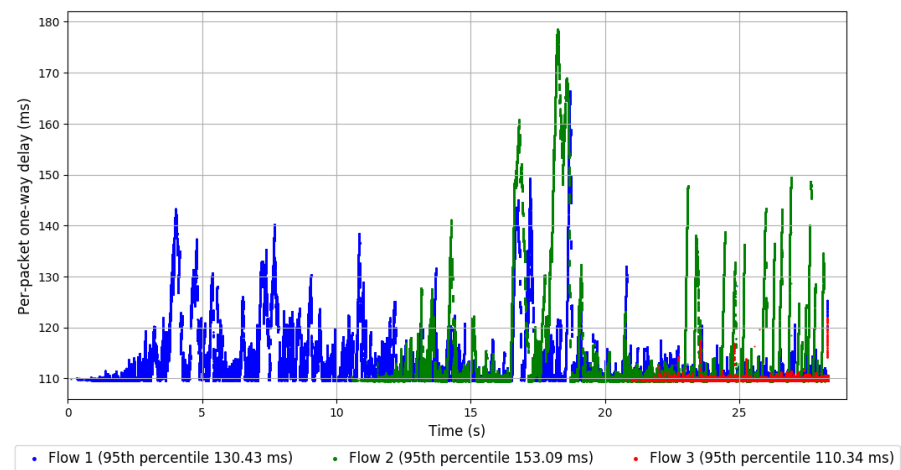
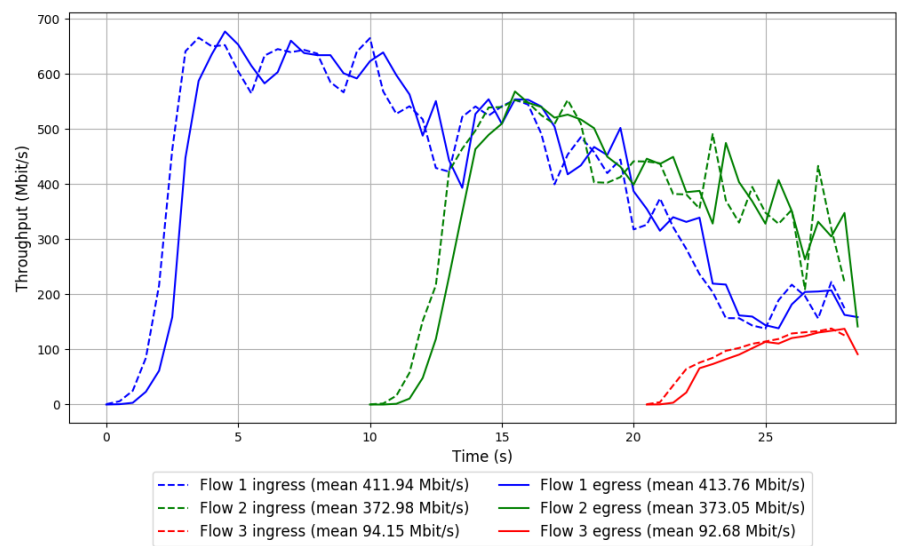


Run 3: Statistics of Indigo-MusesC5

Start at: 2019-03-27 00:52:37  
End at: 2019-03-27 00:53:07  
Local clock offset: -0.001 ms  
Remote clock offset: -0.416 ms

# Below is generated by plot.py at 2019-03-27 04:09:44  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 675.70 Mbit/s  
95th percentile per-packet one-way delay: 136.644 ms  
Loss rate: 0.84%  
-- Flow 1:  
Average throughput: 413.76 Mbit/s  
95th percentile per-packet one-way delay: 130.432 ms  
Loss rate: 0.33%  
-- Flow 2:  
Average throughput: 373.05 Mbit/s  
95th percentile per-packet one-way delay: 153.085 ms  
Loss rate: 1.33%  
-- Flow 3:  
Average throughput: 92.68 Mbit/s  
95th percentile per-packet one-way delay: 110.341 ms  
Loss rate: 4.32%

Run 3: Report of Indigo-MusesC5 — Data Link

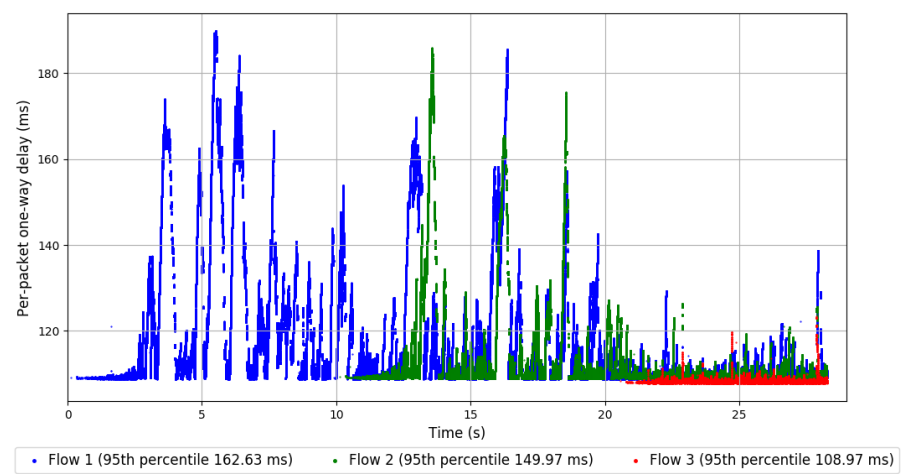
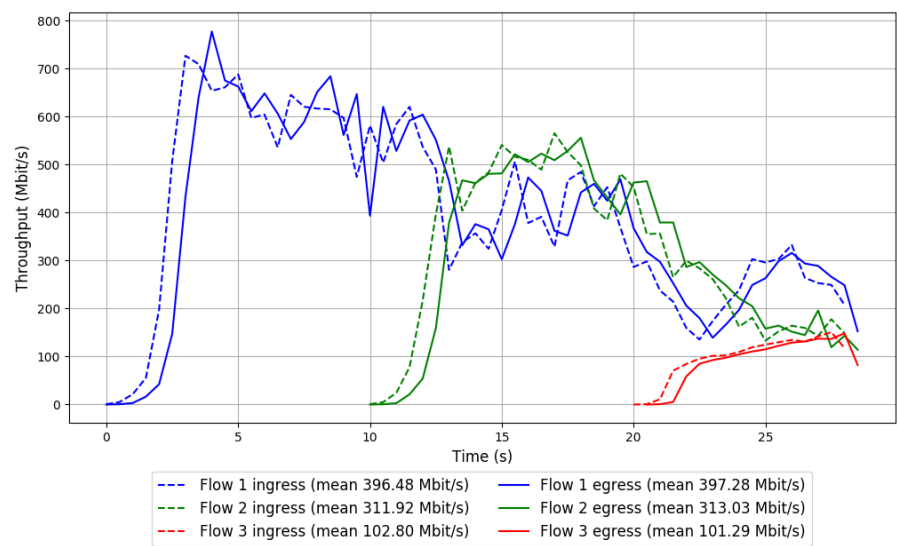


Run 4: Statistics of Indigo-MusesC5

Start at: 2019-03-27 01:32:04  
End at: 2019-03-27 01:32:34  
Local clock offset: -0.711 ms  
Remote clock offset: -0.219 ms

# Below is generated by plot.py at 2019-03-27 04:11:35  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 626.36 Mbit/s  
95th percentile per-packet one-way delay: 159.870 ms  
Loss rate: 0.80%  
-- Flow 1:  
Average throughput: 397.28 Mbit/s  
95th percentile per-packet one-way delay: 162.633 ms  
Loss rate: 0.54%  
-- Flow 2:  
Average throughput: 313.03 Mbit/s  
95th percentile per-packet one-way delay: 149.972 ms  
Loss rate: 0.82%  
-- Flow 3:  
Average throughput: 101.29 Mbit/s  
95th percentile per-packet one-way delay: 108.974 ms  
Loss rate: 4.19%

Run 4: Report of Indigo-MusesC5 — Data Link

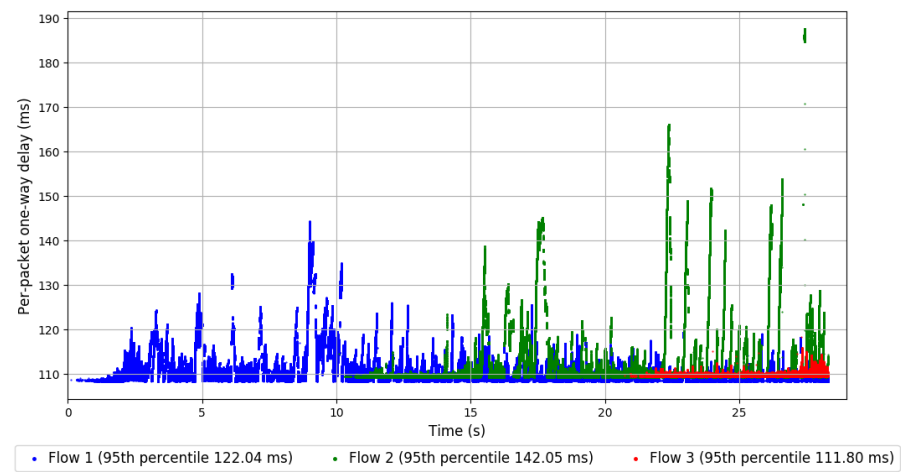
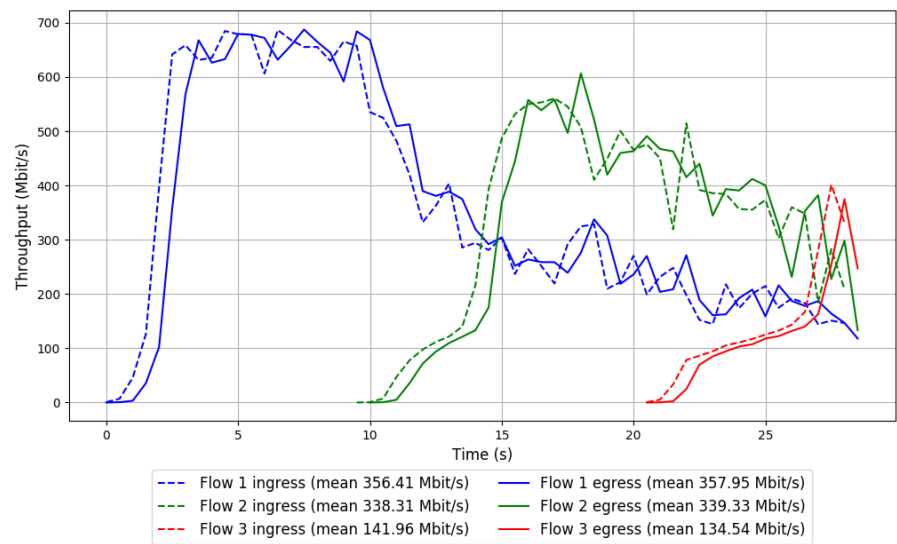


Run 5: Statistics of Indigo-MusesC5

Start at: 2019-03-27 02:13:32  
End at: 2019-03-27 02:14:02  
Local clock offset: -0.016 ms  
Remote clock offset: -0.095 ms

# Below is generated by plot.py at 2019-03-27 04:13:19  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 613.21 Mbit/s  
95th percentile per-packet one-way delay: 129.224 ms  
Loss rate: 1.03%  
-- Flow 1:  
Average throughput: 357.95 Mbit/s  
95th percentile per-packet one-way delay: 122.042 ms  
Loss rate: 0.34%  
-- Flow 2:  
Average throughput: 339.33 Mbit/s  
95th percentile per-packet one-way delay: 142.049 ms  
Loss rate: 0.94%  
-- Flow 3:  
Average throughput: 134.54 Mbit/s  
95th percentile per-packet one-way delay: 111.803 ms  
Loss rate: 7.89%

Run 5: Report of Indigo-MusesC5 — Data Link





Run 1: Statistics of Indigo-MusesD

Start at: 2019-03-26 23:16:12

End at: 2019-03-26 23:16:42

Local clock offset: -0.893 ms

Remote clock offset: 0.038 ms

# Below is generated by plot.py at 2019-03-27 04:14:28

# Datalink statistics

-- Total of 3 flows:

Average throughput: 660.66 Mbit/s

95th percentile per-packet one-way delay: 128.912 ms

Loss rate: 0.75%

-- Flow 1:

Average throughput: 423.28 Mbit/s

95th percentile per-packet one-way delay: 133.730 ms

Loss rate: 0.53%

-- Flow 2:

Average throughput: 338.17 Mbit/s

95th percentile per-packet one-way delay: 122.499 ms

Loss rate: 0.93%

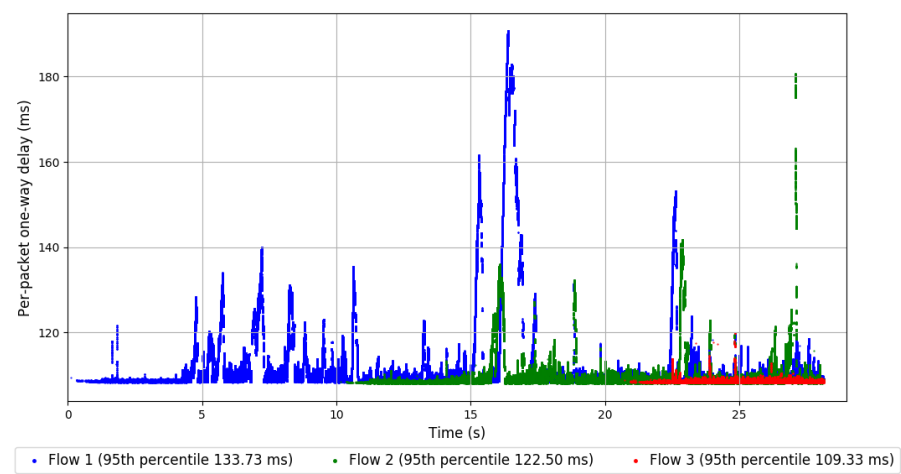
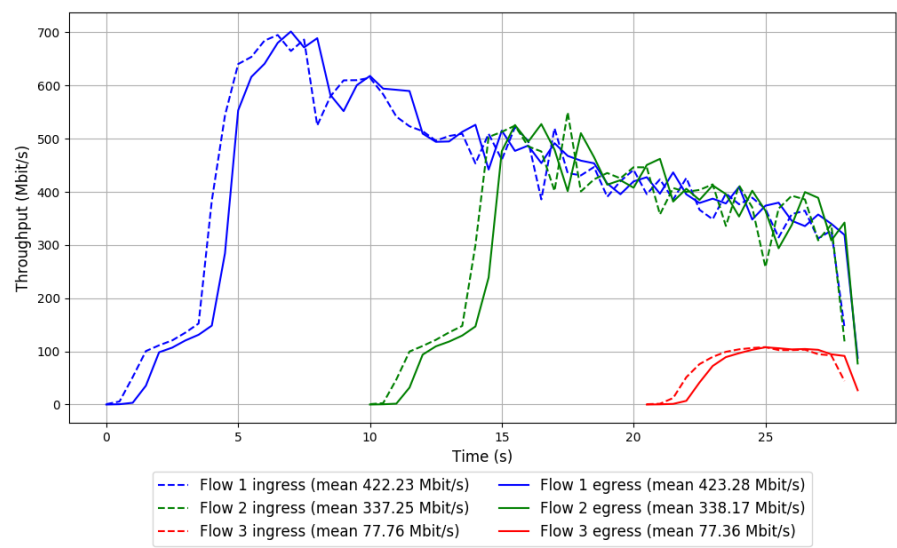
-- Flow 3:

Average throughput: 77.36 Mbit/s

95th percentile per-packet one-way delay: 109.328 ms

Loss rate: 3.32%

Run 1: Report of Indigo-MusesD — Data Link

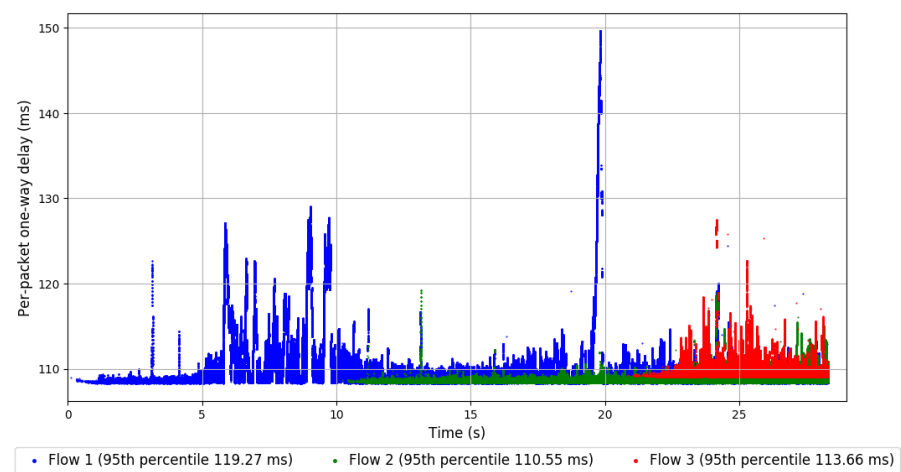
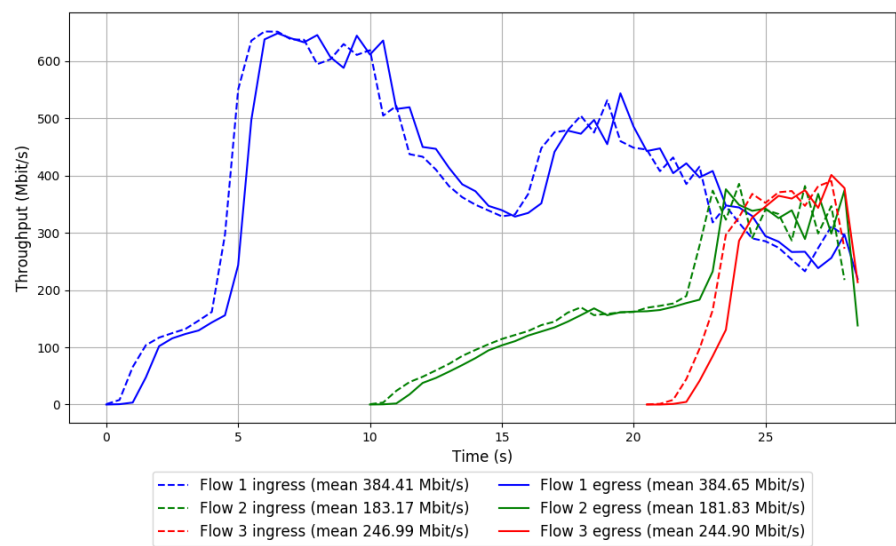


Run 2: Statistics of Indigo-MusesD

Start at: 2019-03-26 23:58:18  
End at: 2019-03-26 23:58:48  
Local clock offset: -0.044 ms  
Remote clock offset: -0.057 ms

# Below is generated by plot.py at 2019-03-27 04:14:36  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 566.15 Mbit/s  
95th percentile per-packet one-way delay: 116.215 ms  
Loss rate: 1.31%  
-- Flow 1:  
Average throughput: 384.65 Mbit/s  
95th percentile per-packet one-way delay: 119.267 ms  
Loss rate: 0.71%  
-- Flow 2:  
Average throughput: 181.83 Mbit/s  
95th percentile per-packet one-way delay: 110.548 ms  
Loss rate: 1.91%  
-- Flow 3:  
Average throughput: 244.90 Mbit/s  
95th percentile per-packet one-way delay: 113.657 ms  
Loss rate: 3.67%

Run 2: Report of Indigo-MusesD — Data Link

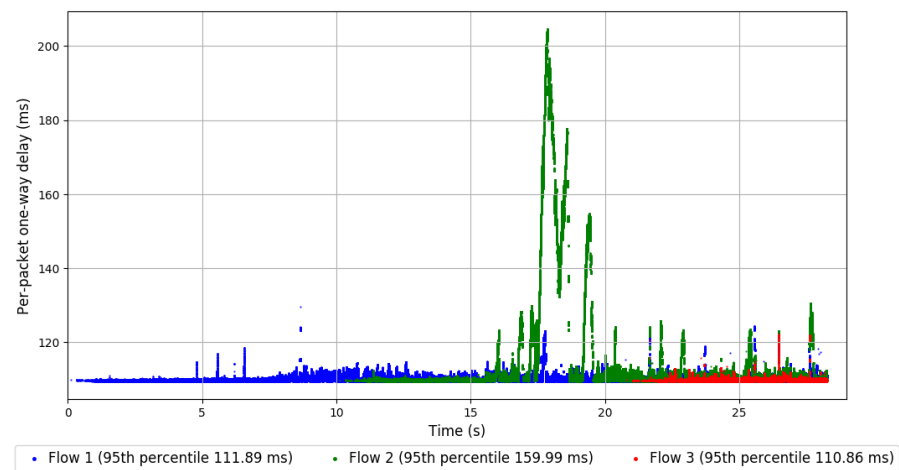
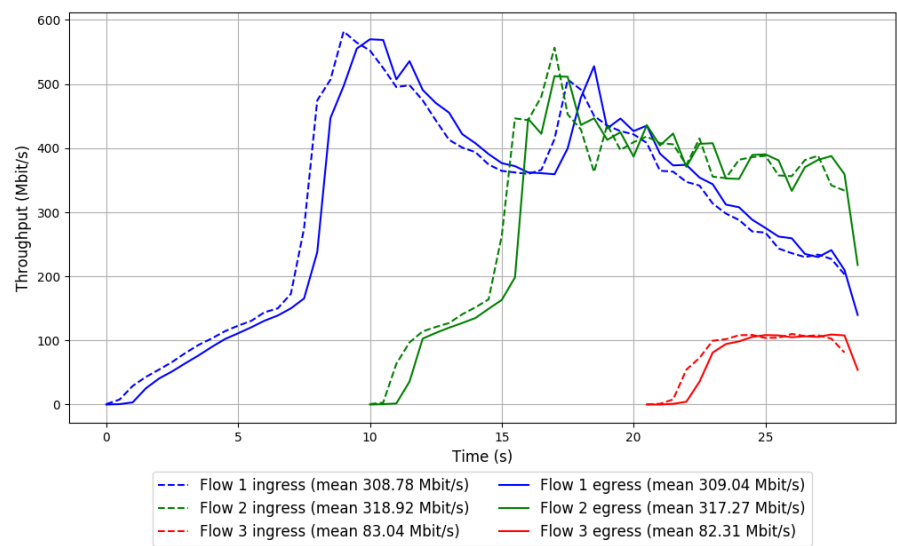


Run 3: Statistics of Indigo-MusesD

Start at: 2019-03-27 00:39:55  
End at: 2019-03-27 00:40:25  
Local clock offset: 0.246 ms  
Remote clock offset: -0.065 ms

# Below is generated by plot.py at 2019-03-27 04:16:06  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 535.19 Mbit/s  
95th percentile per-packet one-way delay: 123.874 ms  
Loss rate: 1.20%  
-- Flow 1:  
Average throughput: 309.04 Mbit/s  
95th percentile per-packet one-way delay: 111.886 ms  
Loss rate: 0.69%  
-- Flow 2:  
Average throughput: 317.27 Mbit/s  
95th percentile per-packet one-way delay: 159.990 ms  
Loss rate: 1.68%  
-- Flow 3:  
Average throughput: 82.31 Mbit/s  
95th percentile per-packet one-way delay: 110.862 ms  
Loss rate: 3.70%

Run 3: Report of Indigo-MusesD — Data Link

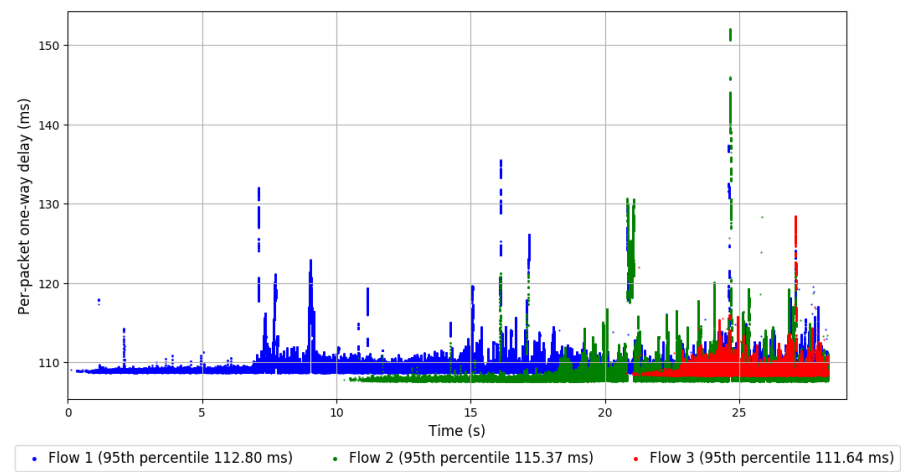
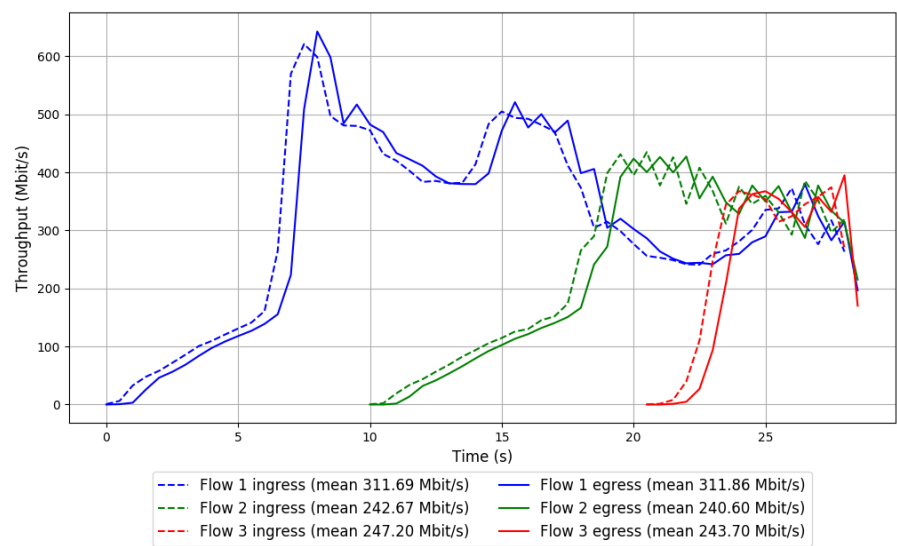


Run 4: Statistics of Indigo-MusesD

Start at: 2019-03-27 01:19:15  
End at: 2019-03-27 01:19:45  
Local clock offset: -0.84 ms  
Remote clock offset: -0.172 ms

# Below is generated by plot.py at 2019-03-27 04:16:33  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 530.35 Mbit/s  
95th percentile per-packet one-way delay: 113.152 ms  
Loss rate: 1.58%  
-- Flow 1:  
Average throughput: 311.86 Mbit/s  
95th percentile per-packet one-way delay: 112.798 ms  
Loss rate: 0.72%  
-- Flow 2:  
Average throughput: 240.60 Mbit/s  
95th percentile per-packet one-way delay: 115.374 ms  
Loss rate: 2.05%  
-- Flow 3:  
Average throughput: 243.70 Mbit/s  
95th percentile per-packet one-way delay: 111.643 ms  
Loss rate: 4.46%

Run 4: Report of Indigo-MusesD — Data Link



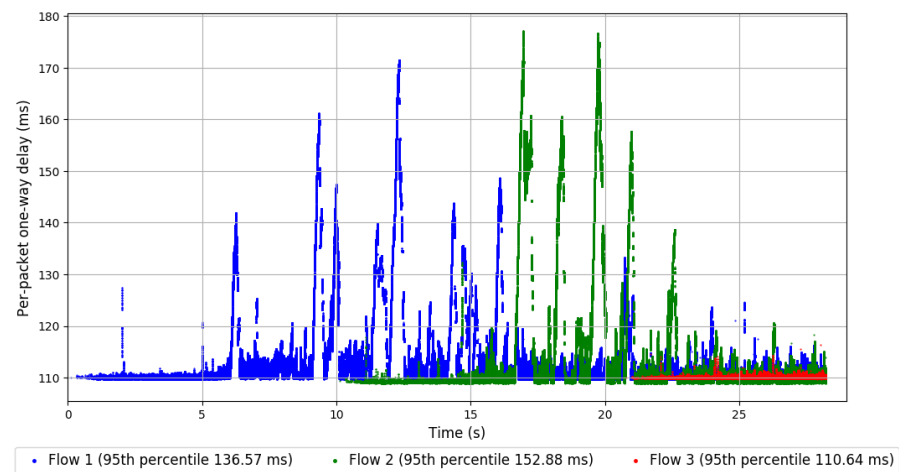
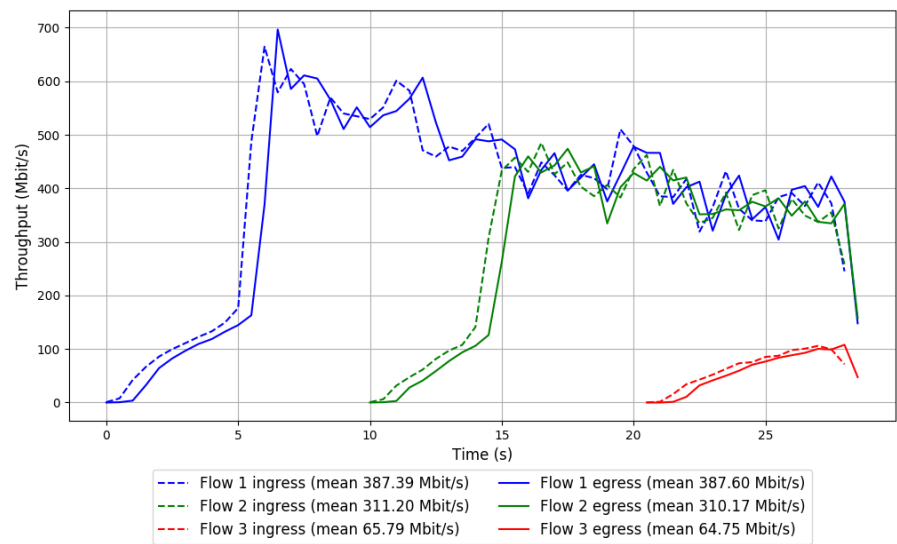


Run 5: Statistics of Indigo-MusesD

Start at: 2019-03-27 02:00:00  
End at: 2019-03-27 02:00:30  
Local clock offset: 0.57 ms  
Remote clock offset: -0.107 ms

# Below is generated by plot.py at 2019-03-27 04:18:52  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 604.13 Mbit/s  
95th percentile per-packet one-way delay: 140.884 ms  
Loss rate: 1.11%  
-- Flow 1:  
Average throughput: 387.60 Mbit/s  
95th percentile per-packet one-way delay: 136.573 ms  
Loss rate: 0.76%  
-- Flow 2:  
Average throughput: 310.17 Mbit/s  
95th percentile per-packet one-way delay: 152.879 ms  
Loss rate: 1.52%  
-- Flow 3:  
Average throughput: 64.75 Mbit/s  
95th percentile per-packet one-way delay: 110.640 ms  
Loss rate: 4.43%

Run 5: Report of Indigo-MusesD — Data Link

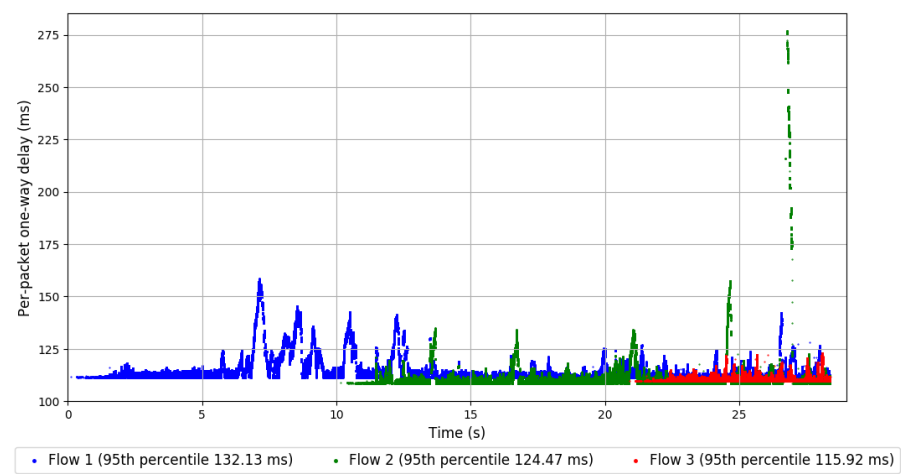
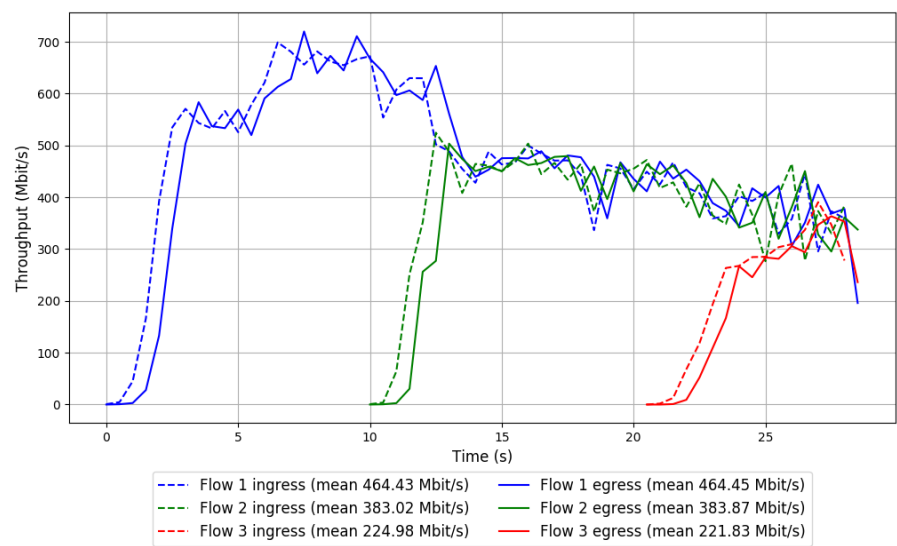


```
Run 1: Statistics of Indigo-MusesT

Start at: 2019-03-26 23:42:21
End at: 2019-03-26 23:42:51
Local clock offset: 0.059 ms
Remote clock offset: -0.062 ms

# Below is generated by plot.py at 2019-03-27 04:24:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 770.35 Mbit/s
95th percentile per-packet one-way delay: 129.686 ms
Loss rate: 1.11%
-- Flow 1:
Average throughput: 464.45 Mbit/s
95th percentile per-packet one-way delay: 132.132 ms
Loss rate: 0.78%
-- Flow 2:
Average throughput: 383.87 Mbit/s
95th percentile per-packet one-way delay: 124.465 ms
Loss rate: 0.97%
-- Flow 3:
Average throughput: 221.83 Mbit/s
95th percentile per-packet one-way delay: 115.915 ms
Loss rate: 4.21%
```

Run 1: Report of Indigo-MusesT — Data Link

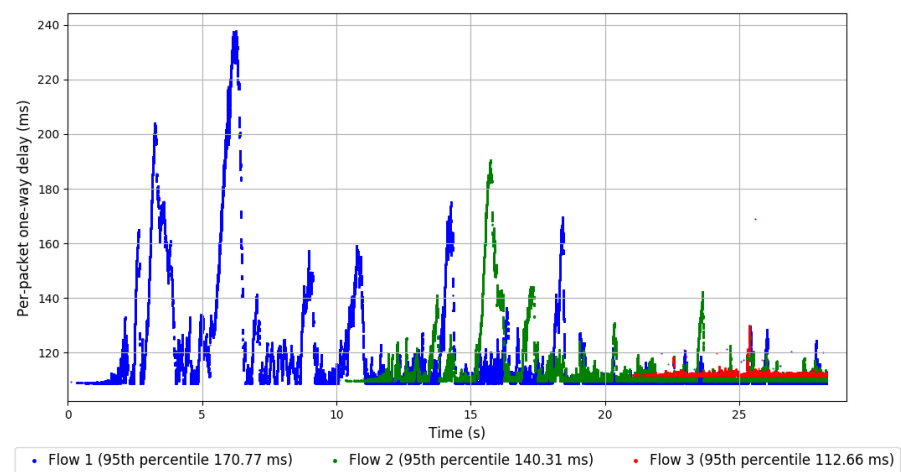
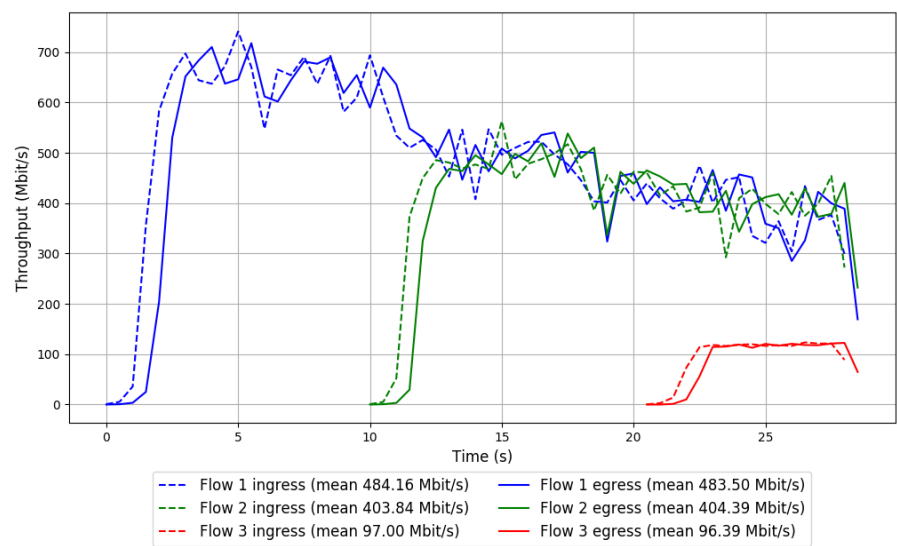


Run 2: Statistics of Indigo-MusesT

Start at: 2019-03-27 00:24:17  
End at: 2019-03-27 00:24:47  
Local clock offset: 0.159 ms  
Remote clock offset: -0.042 ms

# Below is generated by plot.py at 2019-03-27 04:25:45  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 769.45 Mbit/s  
95th percentile per-packet one-way delay: 161.682 ms  
Loss rate: 1.05%  
-- Flow 1:  
Average throughput: 483.50 Mbit/s  
95th percentile per-packet one-way delay: 170.768 ms  
Loss rate: 0.92%  
-- Flow 2:  
Average throughput: 404.39 Mbit/s  
95th percentile per-packet one-way delay: 140.313 ms  
Loss rate: 1.05%  
-- Flow 3:  
Average throughput: 96.39 Mbit/s  
95th percentile per-packet one-way delay: 112.655 ms  
Loss rate: 3.50%

Run 2: Report of Indigo-MusesT — Data Link

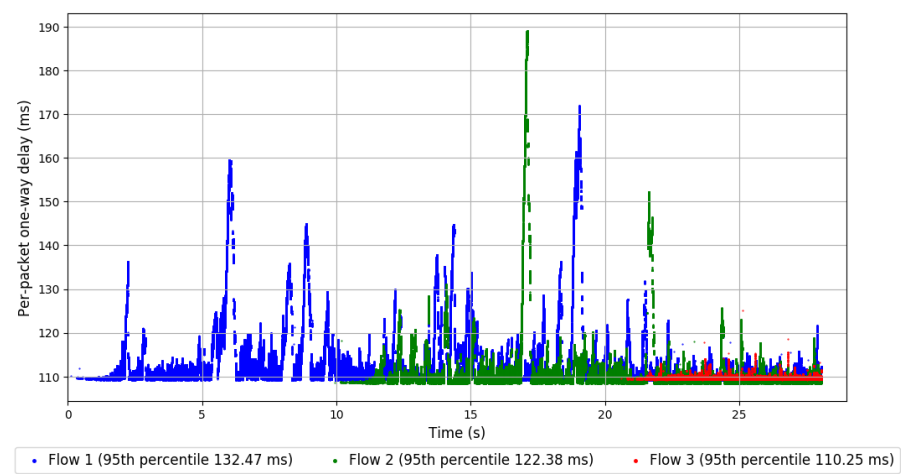
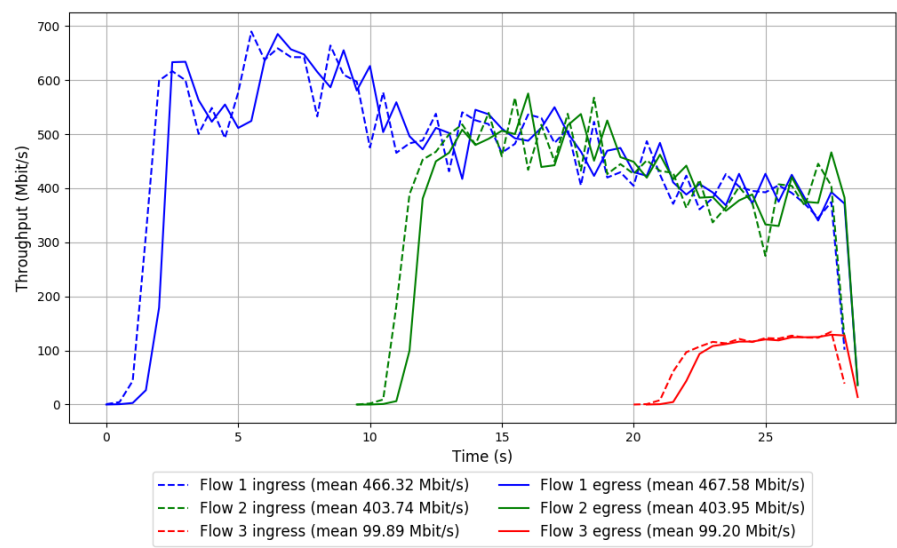


Run 3: Statistics of Indigo-MusesT

Start at: 2019-03-27 01:04:36  
End at: 2019-03-27 01:05:06  
Local clock offset: -0.023 ms  
Remote clock offset: -0.082 ms

# Below is generated by plot.py at 2019-03-27 04:26:37  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 755.86 Mbit/s  
95th percentile per-packet one-way delay: 129.720 ms  
Loss rate: 0.83%  
-- Flow 1:  
Average throughput: 467.58 Mbit/s  
95th percentile per-packet one-way delay: 132.465 ms  
Loss rate: 0.50%  
-- Flow 2:  
Average throughput: 403.95 Mbit/s  
95th percentile per-packet one-way delay: 122.382 ms  
Loss rate: 1.13%  
-- Flow 3:  
Average throughput: 99.20 Mbit/s  
95th percentile per-packet one-way delay: 110.251 ms  
Loss rate: 3.53%

Run 3: Report of Indigo-MusesT — Data Link





Run 4: Statistics of Indigo-MusesT

Start at: 2019-03-27 01:44:44

End at: 2019-03-27 01:45:14

Local clock offset: -0.809 ms

Remote clock offset: -0.15 ms

# Below is generated by plot.py at 2019-03-27 04:28:18

# Datalink statistics

-- Total of 3 flows:

Average throughput: 774.83 Mbit/s

95th percentile per-packet one-way delay: 145.268 ms

Loss rate: 0.91%

-- Flow 1:

Average throughput: 482.63 Mbit/s

95th percentile per-packet one-way delay: 150.411 ms

Loss rate: 0.61%

-- Flow 2:

Average throughput: 413.09 Mbit/s

95th percentile per-packet one-way delay: 126.996 ms

Loss rate: 1.16%

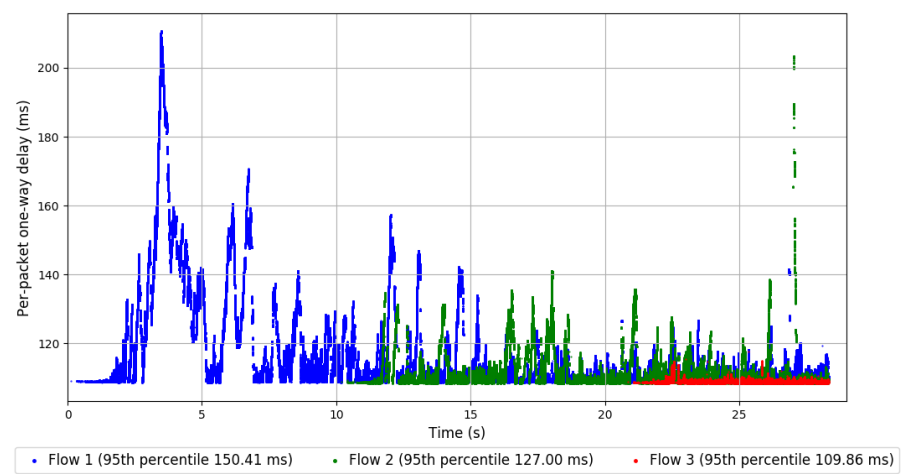
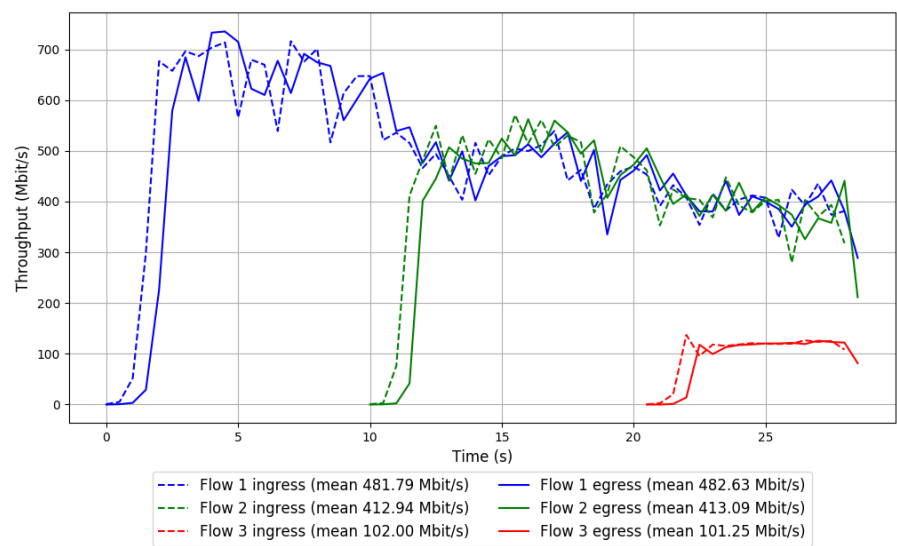
-- Flow 3:

Average throughput: 101.25 Mbit/s

95th percentile per-packet one-way delay: 109.858 ms

Loss rate: 3.60%

Run 4: Report of Indigo-MusesT — Data Link

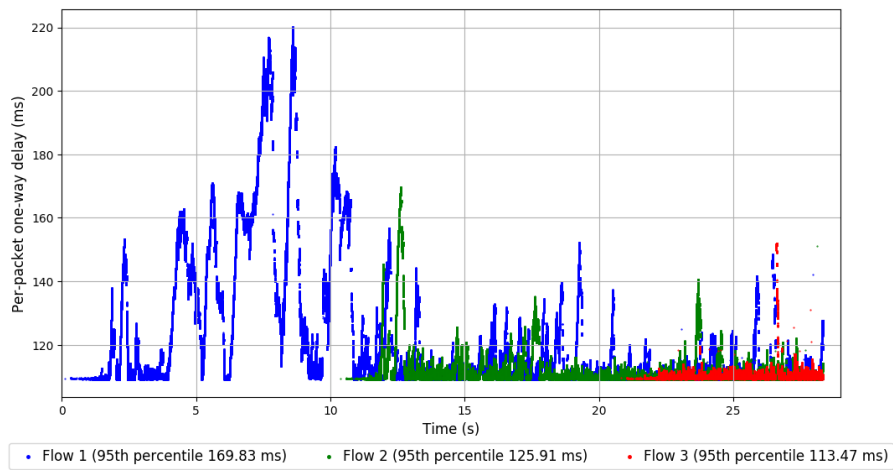
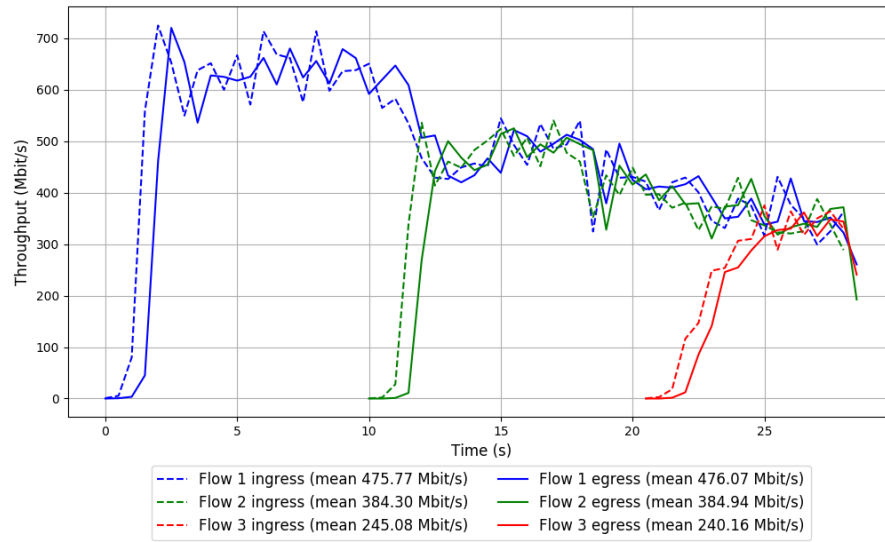


Run 5: Statistics of Indigo-MusesT

Start at: 2019-03-27 02:26:18  
End at: 2019-03-27 02:26:48  
Local clock offset: -0.164 ms  
Remote clock offset: -0.126 ms

# Below is generated by plot.py at 2019-03-27 04:28:35  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 785.19 Mbit/s  
95th percentile per-packet one-way delay: 164.315 ms  
Loss rate: 1.15%  
-- Flow 1:  
Average throughput: 476.07 Mbit/s  
95th percentile per-packet one-way delay: 169.826 ms  
Loss rate: 0.71%  
-- Flow 2:  
Average throughput: 384.94 Mbit/s  
95th percentile per-packet one-way delay: 125.913 ms  
Loss rate: 1.03%  
-- Flow 3:  
Average throughput: 240.16 Mbit/s  
95th percentile per-packet one-way delay: 113.475 ms  
Loss rate: 4.78%

# Run 5: Report of Indigo-MusesT — Data Link

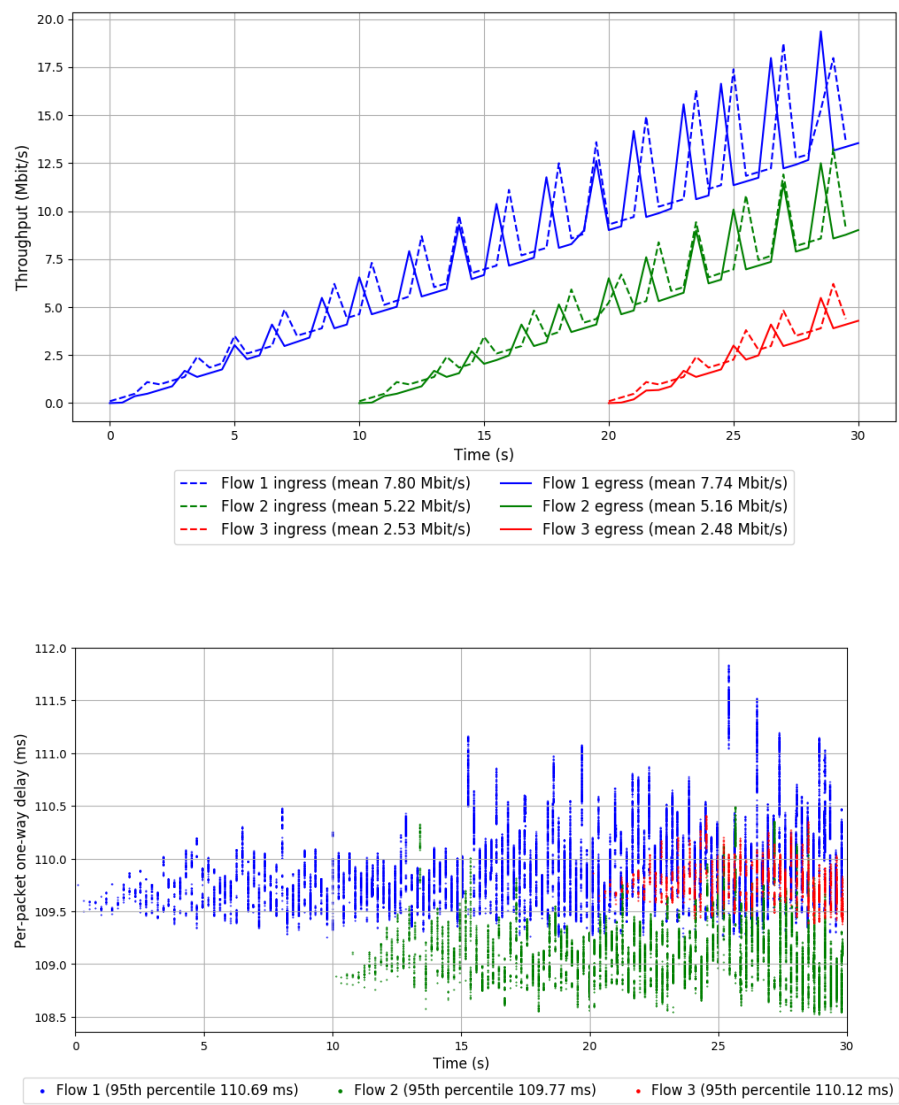


Run 1: Statistics of LEDBAT

Start at: 2019-03-26 23:36:15  
End at: 2019-03-26 23:36:45  
Local clock offset: 0.03 ms  
Remote clock offset: -0.105 ms

# Below is generated by plot.py at 2019-03-27 04:28:36  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 11.97 Mbit/s  
95th percentile per-packet one-way delay: 110.527 ms  
Loss rate: 1.88%  
-- Flow 1:  
Average throughput: 7.74 Mbit/s  
95th percentile per-packet one-way delay: 110.690 ms  
Loss rate: 1.47%  
-- Flow 2:  
Average throughput: 5.16 Mbit/s  
95th percentile per-packet one-way delay: 109.772 ms  
Loss rate: 2.20%  
-- Flow 3:  
Average throughput: 2.48 Mbit/s  
95th percentile per-packet one-way delay: 110.123 ms  
Loss rate: 4.42%

Run 1: Report of LEDBAT — Data Link

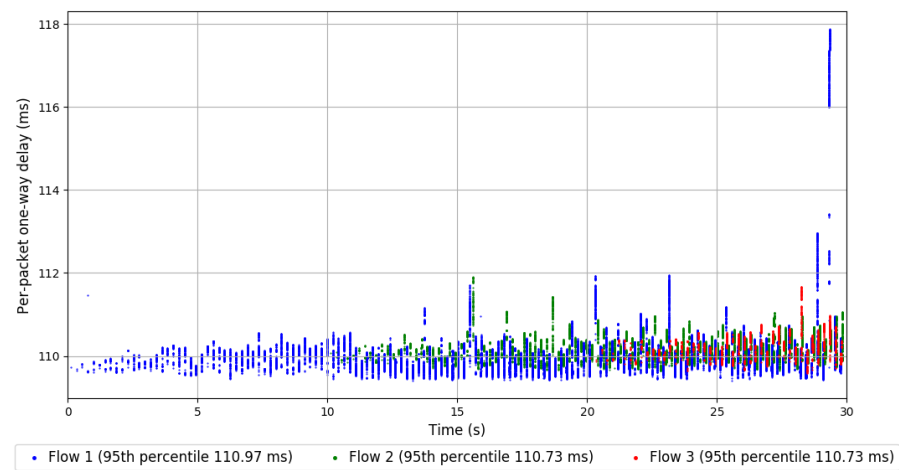
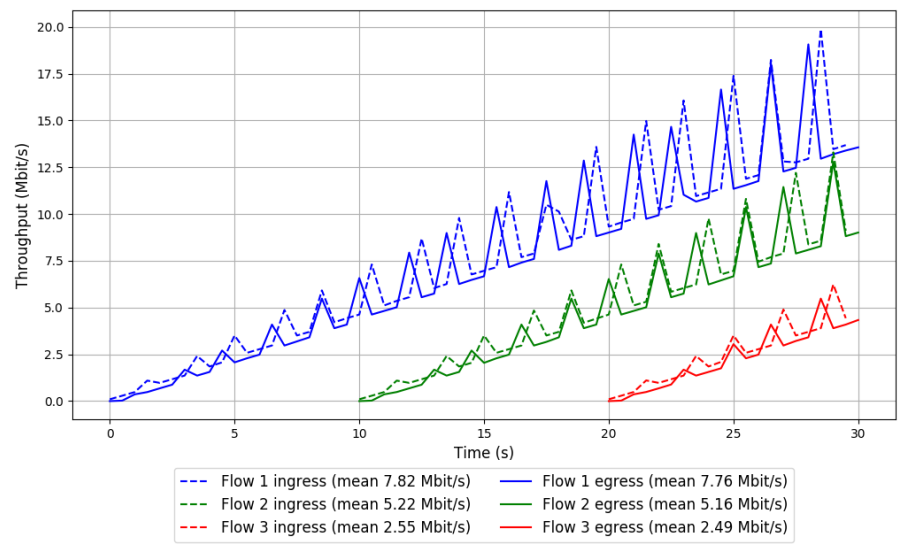


Run 2: Statistics of LEDBAT

Start at: 2019-03-27 00:18:08  
End at: 2019-03-27 00:18:38  
Local clock offset: 0.201 ms  
Remote clock offset: -0.055 ms

# Below is generated by plot.py at 2019-03-27 04:28:36  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 11.98 Mbit/s  
95th percentile per-packet one-way delay: 110.825 ms  
Loss rate: 1.89%  
-- Flow 1:  
Average throughput: 7.76 Mbit/s  
95th percentile per-packet one-way delay: 110.975 ms  
Loss rate: 1.47%  
-- Flow 2:  
Average throughput: 5.16 Mbit/s  
95th percentile per-packet one-way delay: 110.731 ms  
Loss rate: 2.20%  
-- Flow 3:  
Average throughput: 2.49 Mbit/s  
95th percentile per-packet one-way delay: 110.726 ms  
Loss rate: 4.45%

Run 2: Report of LEDBAT — Data Link



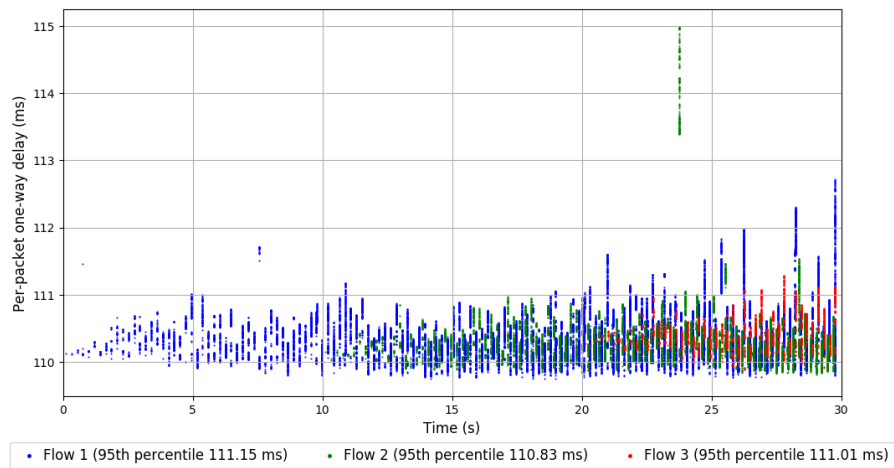
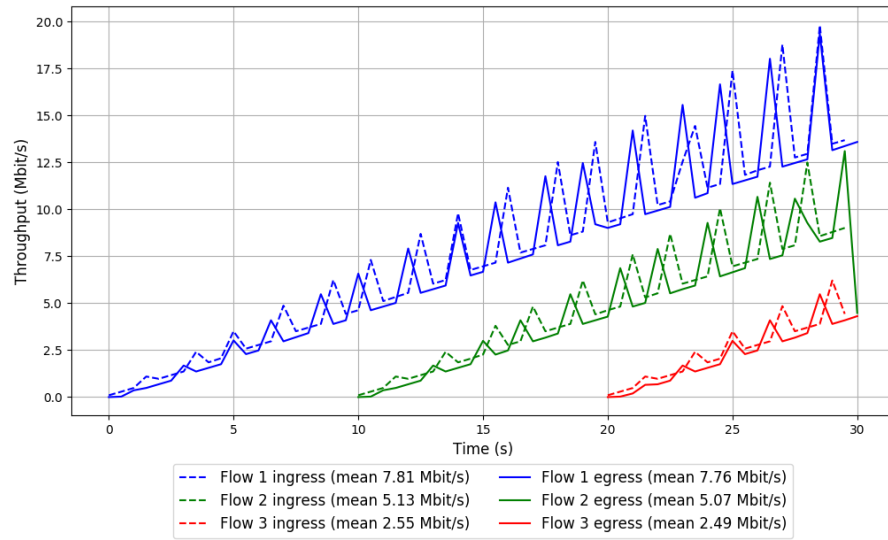


Run 3: Statistics of LEDBAT

Start at: 2019-03-27 00:58:58  
End at: 2019-03-27 00:59:28  
Local clock offset: 0.075 ms  
Remote clock offset: -0.452 ms

# Below is generated by plot.py at 2019-03-27 04:28:36  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 11.91 Mbit/s  
95th percentile per-packet one-way delay: 111.037 ms  
Loss rate: 1.89%  
-- Flow 1:  
Average throughput: 7.76 Mbit/s  
95th percentile per-packet one-way delay: 111.153 ms  
Loss rate: 1.47%  
-- Flow 2:  
Average throughput: 5.07 Mbit/s  
95th percentile per-packet one-way delay: 110.832 ms  
Loss rate: 2.23%  
-- Flow 3:  
Average throughput: 2.49 Mbit/s  
95th percentile per-packet one-way delay: 111.013 ms  
Loss rate: 4.46%

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

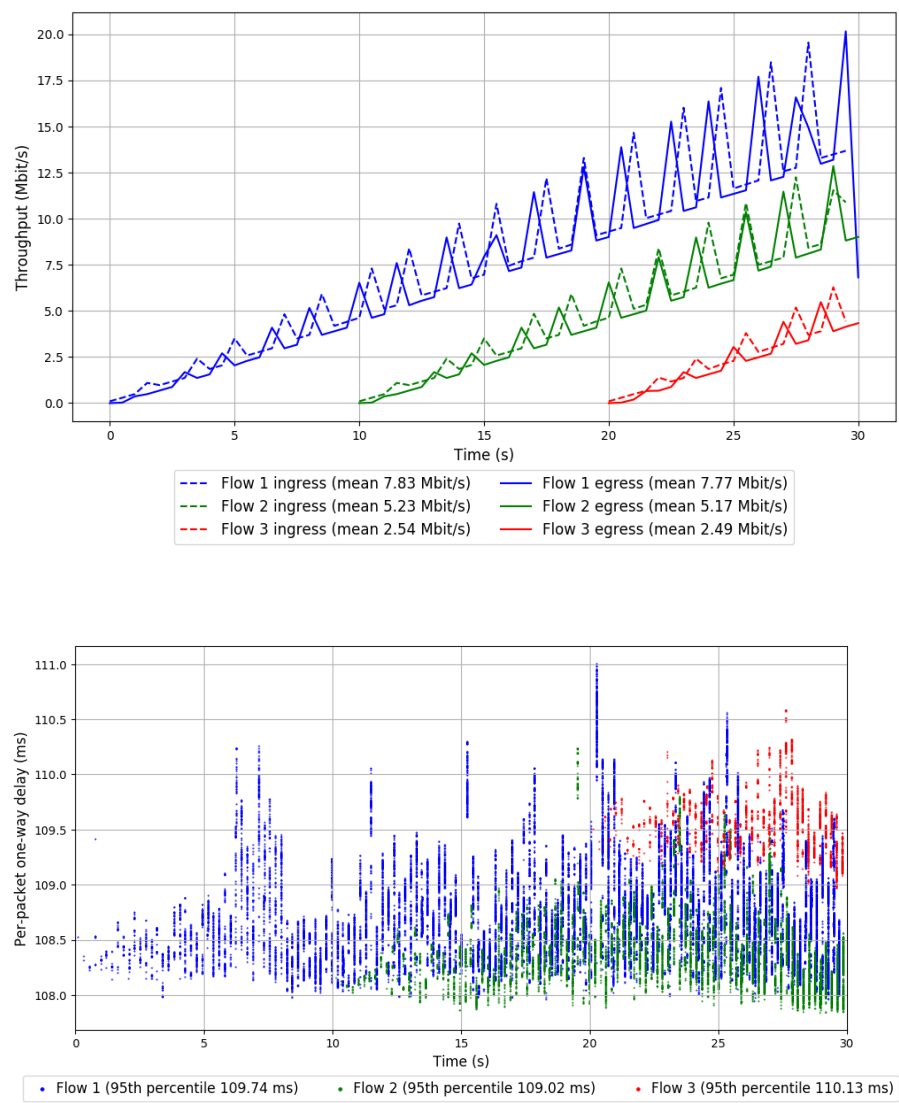


Run 4: Statistics of LEDBAT

Start at: 2019-03-27 01:38:55  
End at: 2019-03-27 01:39:25  
Local clock offset: -0.657 ms  
Remote clock offset: -0.183 ms

# Below is generated by plot.py at 2019-03-27 04:28:36  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 11.97 Mbit/s  
95th percentile per-packet one-way delay: 109.725 ms  
Loss rate: 1.89%  
-- Flow 1:  
Average throughput: 7.77 Mbit/s  
95th percentile per-packet one-way delay: 109.737 ms  
Loss rate: 1.47%  
-- Flow 2:  
Average throughput: 5.17 Mbit/s  
95th percentile per-packet one-way delay: 109.015 ms  
Loss rate: 2.21%  
-- Flow 3:  
Average throughput: 2.49 Mbit/s  
95th percentile per-packet one-way delay: 110.126 ms  
Loss rate: 4.45%

Run 4: Report of LEDBAT — Data Link

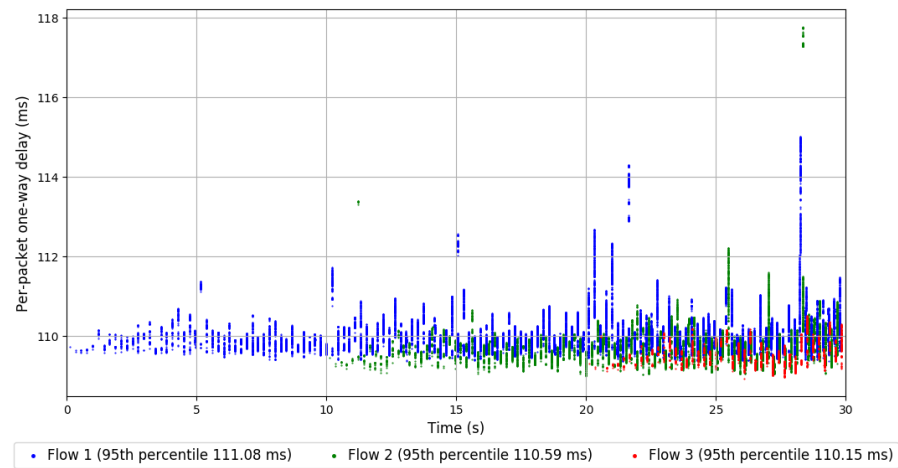
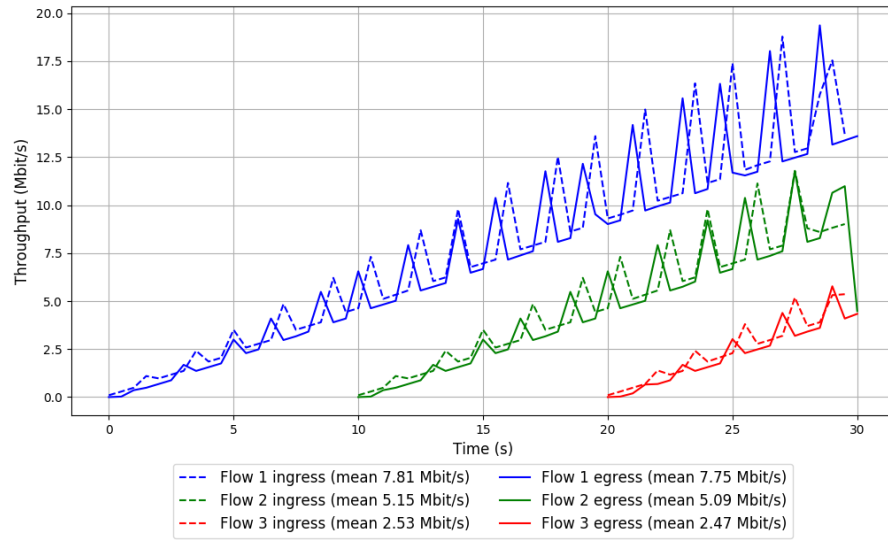


Run 5: Statistics of LEDBAT

Start at: 2019-03-27 02:20:23  
End at: 2019-03-27 02:20:53  
Local clock offset: -0.146 ms  
Remote clock offset: -0.118 ms

# Below is generated by plot.py at 2019-03-27 04:28:36  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 11.89 Mbit/s  
95th percentile per-packet one-way delay: 110.916 ms  
Loss rate: 1.89%  
-- Flow 1:  
Average throughput: 7.75 Mbit/s  
95th percentile per-packet one-way delay: 111.079 ms  
Loss rate: 1.47%  
-- Flow 2:  
Average throughput: 5.09 Mbit/s  
95th percentile per-packet one-way delay: 110.589 ms  
Loss rate: 2.23%  
-- Flow 3:  
Average throughput: 2.47 Mbit/s  
95th percentile per-packet one-way delay: 110.150 ms  
Loss rate: 4.46%

## Run 5: Report of LEDBAT — Data Link

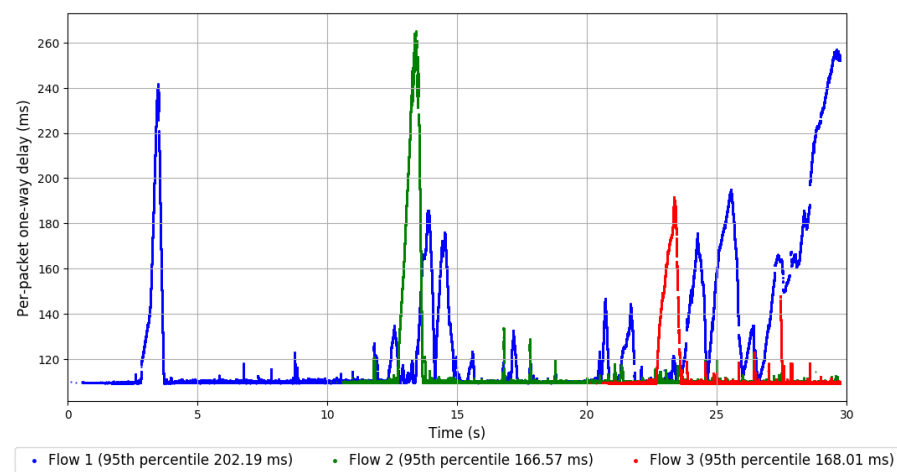
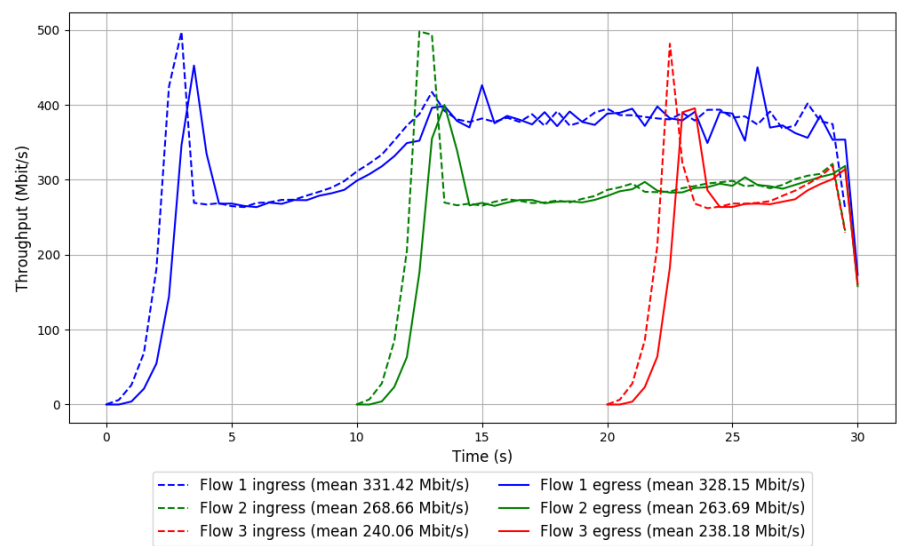


```
Run 1: Statistics of PCC-Allegro

Start at: 2019-03-26 23:34:06
End at: 2019-03-26 23:34:36
Local clock offset: 0.002 ms
Remote clock offset: -0.037 ms

# Below is generated by plot.py at 2019-03-27 04:37:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 580.02 Mbit/s
95th percentile per-packet one-way delay: 186.008 ms
Loss rate: 2.26%
-- Flow 1:
Average throughput: 328.15 Mbit/s
95th percentile per-packet one-way delay: 202.187 ms
Loss rate: 1.72%
-- Flow 2:
Average throughput: 263.69 Mbit/s
95th percentile per-packet one-way delay: 166.569 ms
Loss rate: 2.94%
-- Flow 3:
Average throughput: 238.18 Mbit/s
95th percentile per-packet one-way delay: 168.006 ms
Loss rate: 3.00%
```

Run 1: Report of PCC-Allegro — Data Link



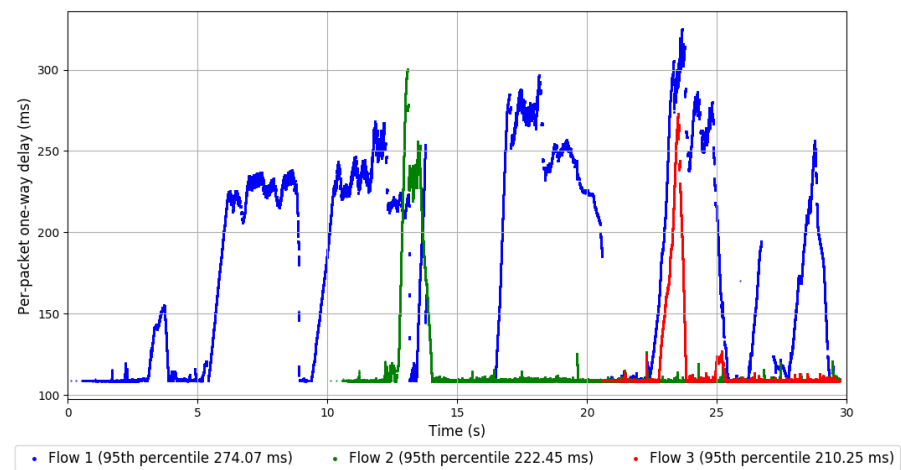
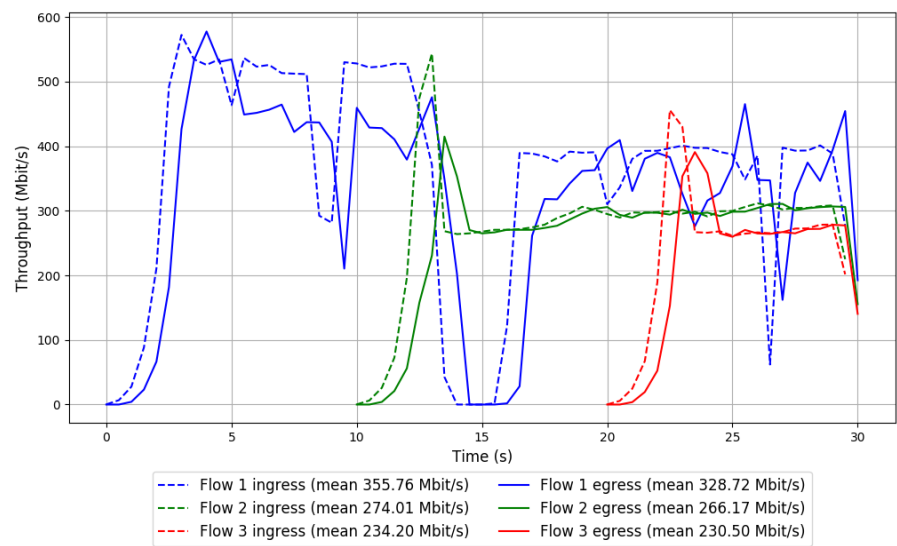


Run 2: Statistics of PCC-Allegro

Start at: 2019-03-27 00:15:41  
End at: 2019-03-27 00:16:11  
Local clock offset: -0.842 ms  
Remote clock offset: -0.081 ms

# Below is generated by plot.py at 2019-03-27 04:38:32  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 579.74 Mbit/s  
95th percentile per-packet one-way delay: 263.040 ms  
Loss rate: 6.44%  
-- Flow 1:  
Average throughput: 328.72 Mbit/s  
95th percentile per-packet one-way delay: 274.071 ms  
Loss rate: 8.28%  
-- Flow 2:  
Average throughput: 266.17 Mbit/s  
95th percentile per-packet one-way delay: 222.453 ms  
Loss rate: 3.94%  
-- Flow 3:  
Average throughput: 230.50 Mbit/s  
95th percentile per-packet one-way delay: 210.252 ms  
Loss rate: 3.80%

Run 2: Report of PCC-Allegro — Data Link

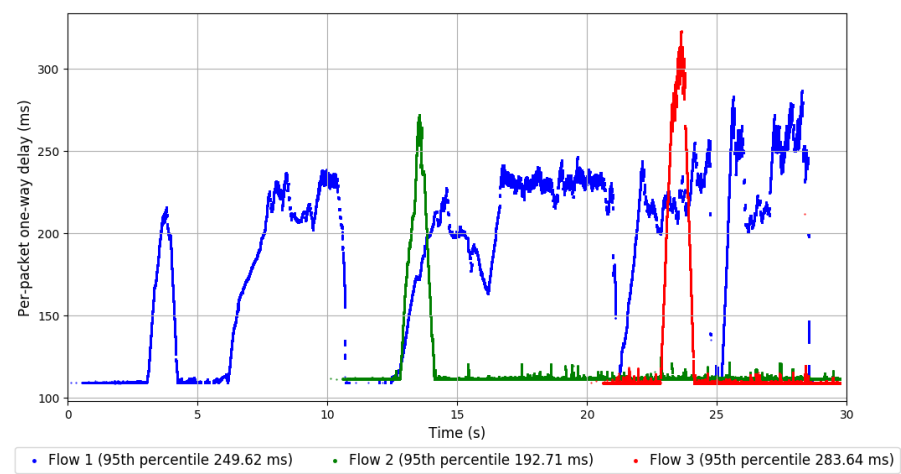
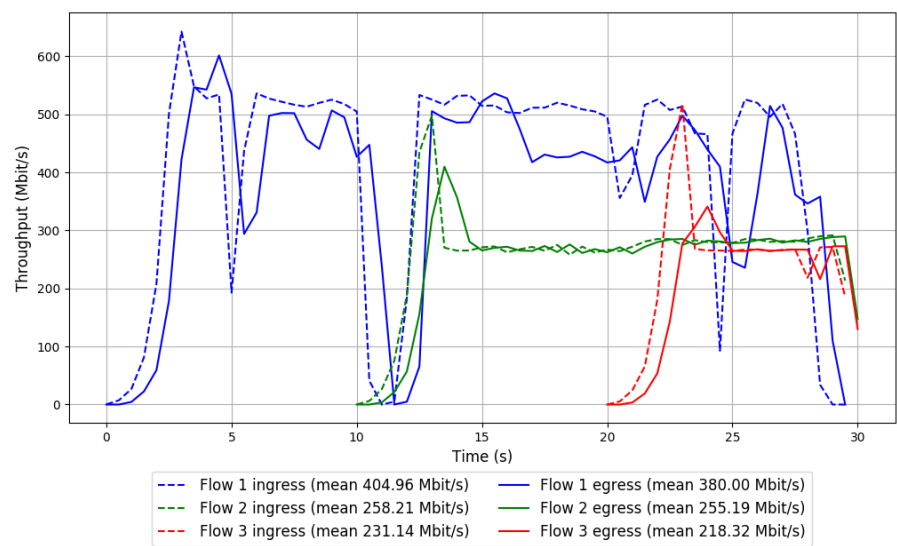


Run 3: Statistics of PCC-Allegro

Start at: 2019-03-27 00:56:43  
End at: 2019-03-27 00:57:13  
Local clock offset: -0.062 ms  
Remote clock offset: -0.045 ms

# Below is generated by plot.py at 2019-03-27 04:42:07  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 612.00 Mbit/s  
95th percentile per-packet one-way delay: 247.162 ms  
Loss rate: 6.55%  
-- Flow 1:  
Average throughput: 380.00 Mbit/s  
95th percentile per-packet one-way delay: 249.624 ms  
Loss rate: 8.16%  
-- Flow 2:  
Average throughput: 255.19 Mbit/s  
95th percentile per-packet one-way delay: 192.712 ms  
Loss rate: 2.28%  
-- Flow 3:  
Average throughput: 218.32 Mbit/s  
95th percentile per-packet one-way delay: 283.640 ms  
Loss rate: 7.65%

Run 3: Report of PCC-Allegro — Data Link

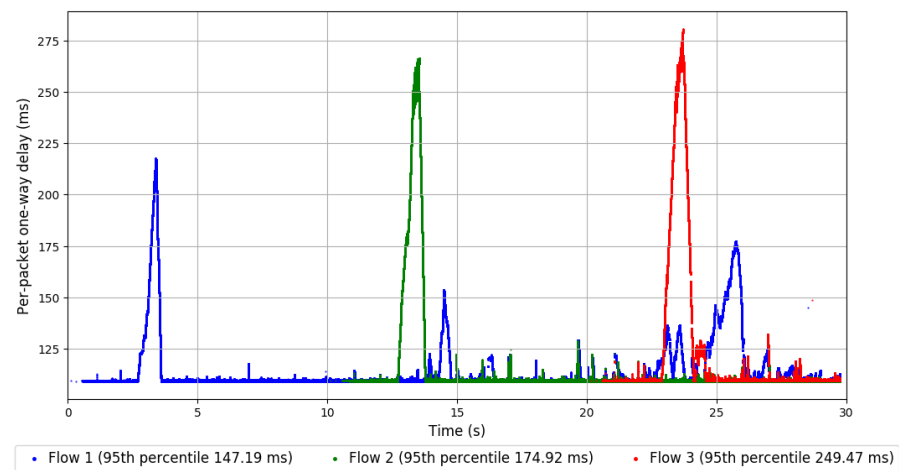
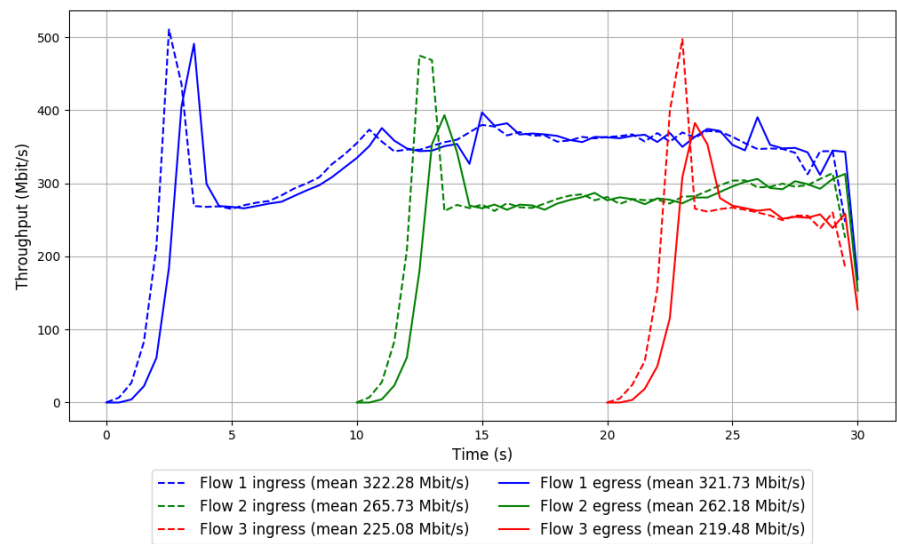


Run 4: Statistics of PCC-Allegro

Start at: 2019-03-27 01:36:36  
End at: 2019-03-27 01:37:06  
Local clock offset: -0.157 ms  
Remote clock offset: -0.167 ms

# Below is generated by plot.py at 2019-03-27 04:45:53  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 566.50 Mbit/s  
95th percentile per-packet one-way delay: 167.706 ms  
Loss rate: 1.87%  
-- Flow 1:  
Average throughput: 321.73 Mbit/s  
95th percentile per-packet one-way delay: 147.187 ms  
Loss rate: 0.91%  
-- Flow 2:  
Average throughput: 262.18 Mbit/s  
95th percentile per-packet one-way delay: 174.923 ms  
Loss rate: 2.44%  
-- Flow 3:  
Average throughput: 219.48 Mbit/s  
95th percentile per-packet one-way delay: 249.465 ms  
Loss rate: 4.67%

Run 4: Report of PCC-Allegro — Data Link

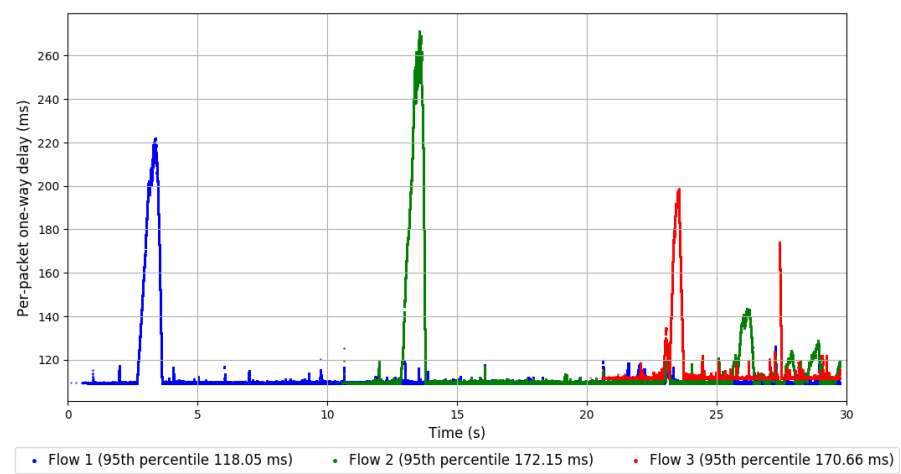
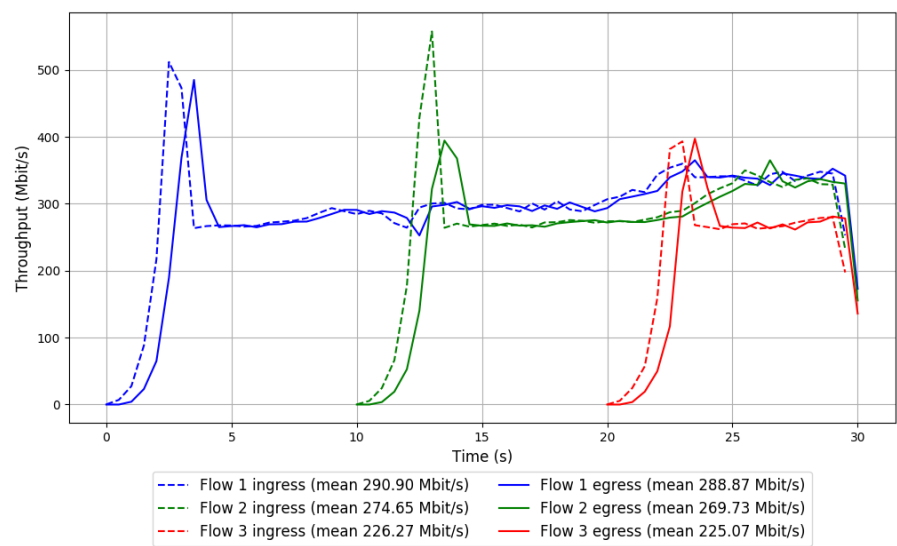


Run 5: Statistics of PCC-Allegro

Start at: 2019-03-27 02:17:51  
End at: 2019-03-27 02:18:21  
Local clock offset: -0.21 ms  
Remote clock offset: -0.097 ms

# Below is generated by plot.py at 2019-03-27 04:46:24  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 540.54 Mbit/s  
95th percentile per-packet one-way delay: 144.951 ms  
Loss rate: 2.10%  
-- Flow 1:  
Average throughput: 288.87 Mbit/s  
95th percentile per-packet one-way delay: 118.045 ms  
Loss rate: 1.43%  
-- Flow 2:  
Average throughput: 269.73 Mbit/s  
95th percentile per-packet one-way delay: 172.151 ms  
Loss rate: 2.88%  
-- Flow 3:  
Average throughput: 225.07 Mbit/s  
95th percentile per-packet one-way delay: 170.661 ms  
Loss rate: 2.77%

Run 5: Report of PCC-Allegro — Data Link



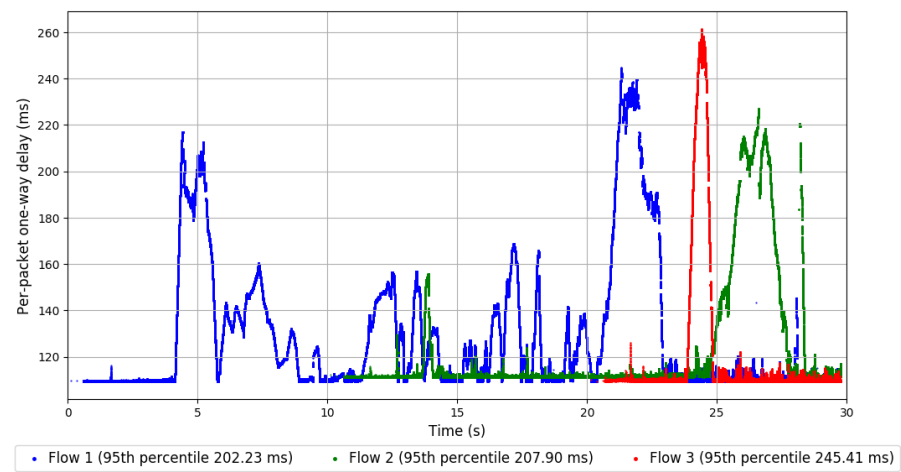
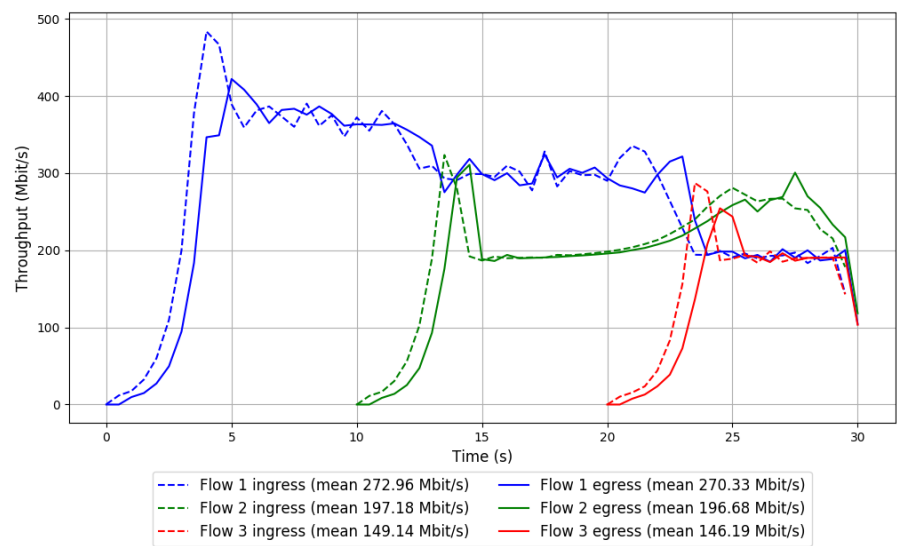


Run 1: Statistics of PCC-Expr

Start at: 2019-03-26 23:39:51  
End at: 2019-03-26 23:40:21  
Local clock offset: -0.013 ms  
Remote clock offset: -0.078 ms

# Below is generated by plot.py at 2019-03-27 04:46:24  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 448.08 Mbit/s  
95th percentile per-packet one-way delay: 206.664 ms  
Loss rate: 1.87%  
-- Flow 1:  
Average throughput: 270.33 Mbit/s  
95th percentile per-packet one-way delay: 202.226 ms  
Loss rate: 1.70%  
-- Flow 2:  
Average throughput: 196.68 Mbit/s  
95th percentile per-packet one-way delay: 207.903 ms  
Loss rate: 1.37%  
-- Flow 3:  
Average throughput: 146.19 Mbit/s  
95th percentile per-packet one-way delay: 245.410 ms  
Loss rate: 4.16%

Run 1: Report of PCC-Expr — Data Link

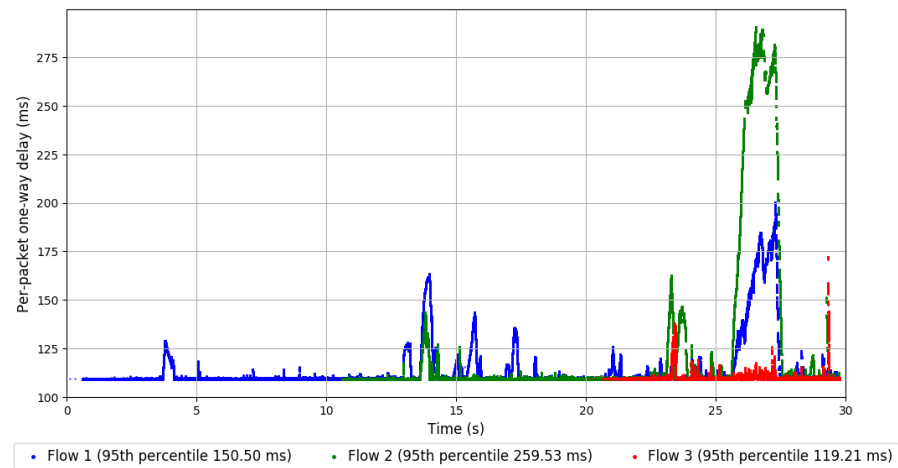
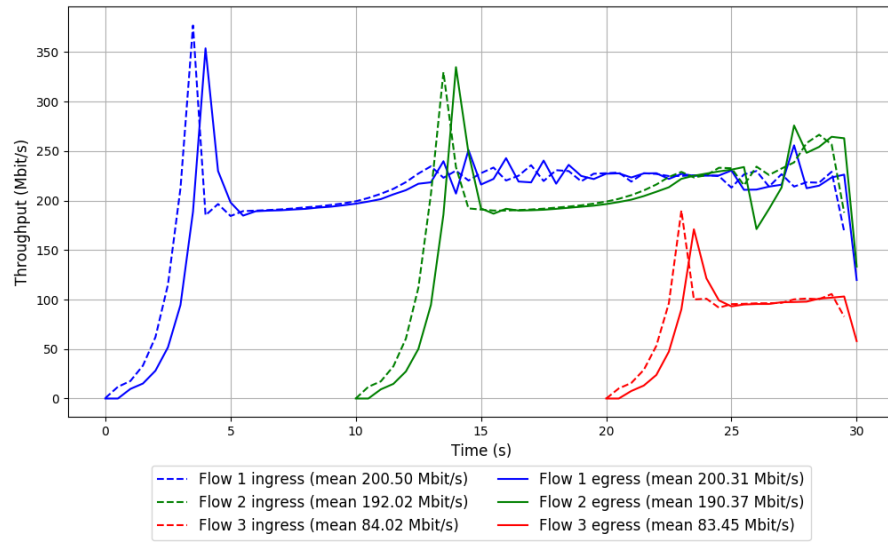


Run 2: Statistics of PCC-Expr

Start at: 2019-03-27 00:21:58  
End at: 2019-03-27 00:22:28  
Local clock offset: -0.335 ms  
Remote clock offset: -0.101 ms

# Below is generated by plot.py at 2019-03-27 04:46:24  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 353.58 Mbit/s  
95th percentile per-packet one-way delay: 165.199 ms  
Loss rate: 1.39%  
-- Flow 1:  
Average throughput: 200.31 Mbit/s  
95th percentile per-packet one-way delay: 150.503 ms  
Loss rate: 0.83%  
-- Flow 2:  
Average throughput: 190.37 Mbit/s  
95th percentile per-packet one-way delay: 259.529 ms  
Loss rate: 1.95%  
-- Flow 3:  
Average throughput: 83.45 Mbit/s  
95th percentile per-packet one-way delay: 119.210 ms  
Loss rate: 2.89%

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

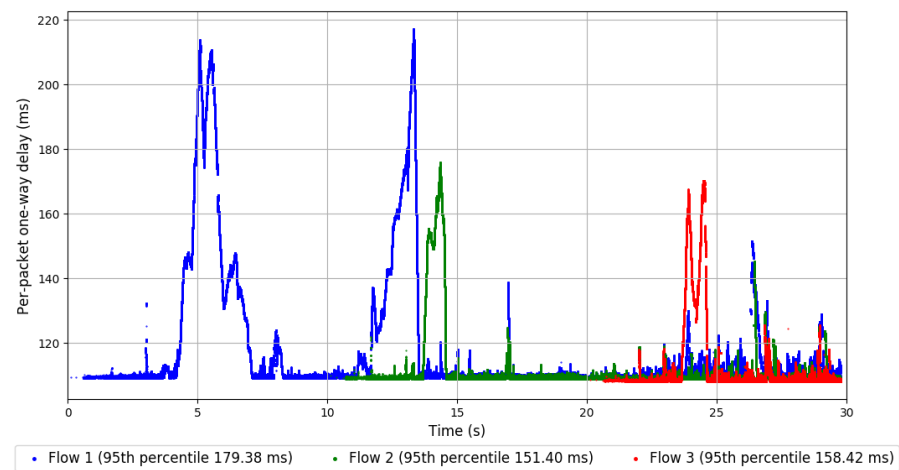
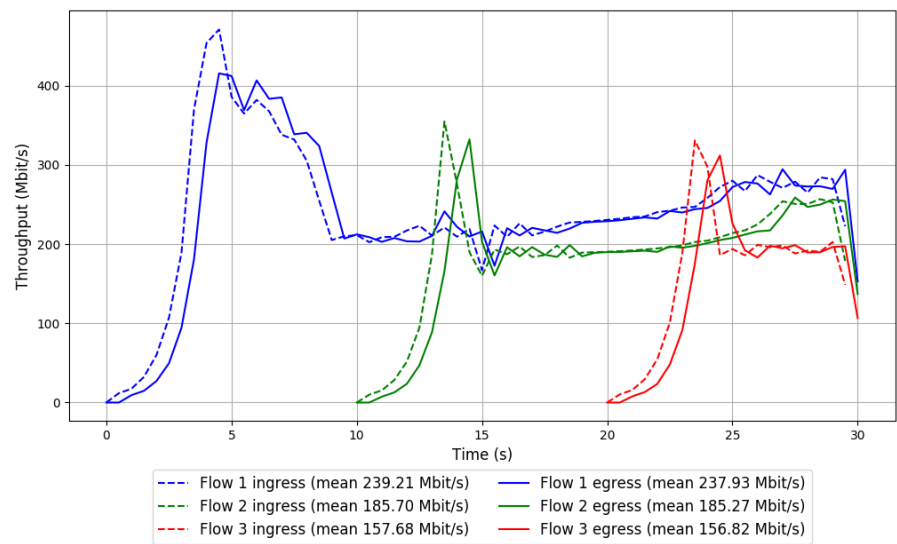


Run 3: Statistics of PCC-Expr

Start at: 2019-03-27 01:02:35  
End at: 2019-03-27 01:03:05  
Local clock offset: -0.122 ms  
Remote clock offset: -0.067 ms

# Below is generated by plot.py at 2019-03-27 04:46:24  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 411.59 Mbit/s  
95th percentile per-packet one-way delay: 162.470 ms  
Loss rate: 1.48%  
-- Flow 1:  
Average throughput: 237.93 Mbit/s  
95th percentile per-packet one-way delay: 179.384 ms  
Loss rate: 1.27%  
-- Flow 2:  
Average throughput: 185.27 Mbit/s  
95th percentile per-packet one-way delay: 151.399 ms  
Loss rate: 1.36%  
-- Flow 3:  
Average throughput: 156.82 Mbit/s  
95th percentile per-packet one-way delay: 158.417 ms  
Loss rate: 2.76%

Run 3: Report of PCC-Expr — Data Link

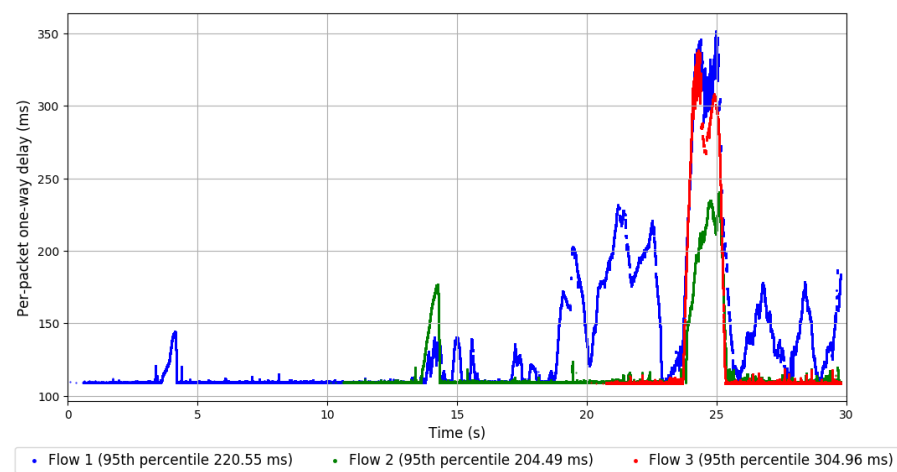
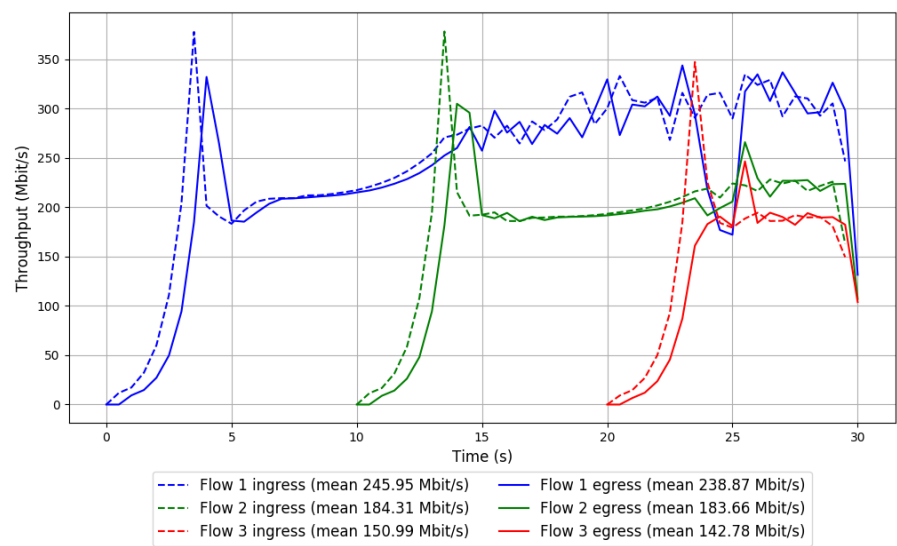


Run 4: Statistics of PCC-Expr

Start at: 2019-03-27 01:42:39  
End at: 2019-03-27 01:43:09  
Local clock offset: -0.339 ms  
Remote clock offset: -0.095 ms

# Below is generated by plot.py at 2019-03-27 04:54:04  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 406.90 Mbit/s  
95th percentile per-packet one-way delay: 225.583 ms  
Loss rate: 3.44%  
-- Flow 1:  
Average throughput: 238.87 Mbit/s  
95th percentile per-packet one-way delay: 220.548 ms  
Loss rate: 3.60%  
-- Flow 2:  
Average throughput: 183.66 Mbit/s  
95th percentile per-packet one-way delay: 204.488 ms  
Loss rate: 1.45%  
-- Flow 3:  
Average throughput: 142.78 Mbit/s  
95th percentile per-packet one-way delay: 304.959 ms  
Loss rate: 7.54%

Run 4: Report of PCC-Expr — Data Link





Run 5: Statistics of PCC-Expr

Start at: 2019-03-27 02:23:52

End at: 2019-03-27 02:24:22

Local clock offset: -0.262 ms

Remote clock offset: 0.239 ms

# Below is generated by plot.py at 2019-03-27 04:56:12

# Datalink statistics

-- Total of 3 flows:

Average throughput: 459.90 Mbit/s

95th percentile per-packet one-way delay: 229.382 ms

Loss rate: 5.05%

-- Flow 1:

Average throughput: 252.85 Mbit/s

95th percentile per-packet one-way delay: 229.961 ms

Loss rate: 4.35%

-- Flow 2:

Average throughput: 202.06 Mbit/s

95th percentile per-packet one-way delay: 144.976 ms

Loss rate: 1.63%

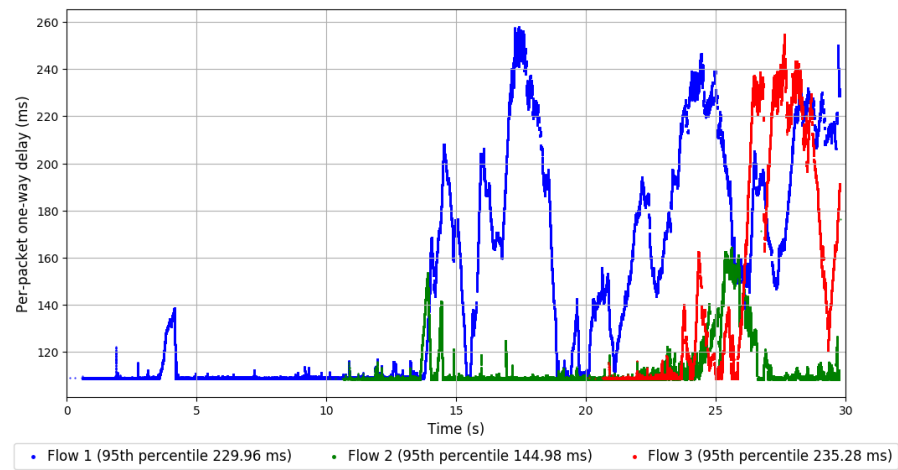
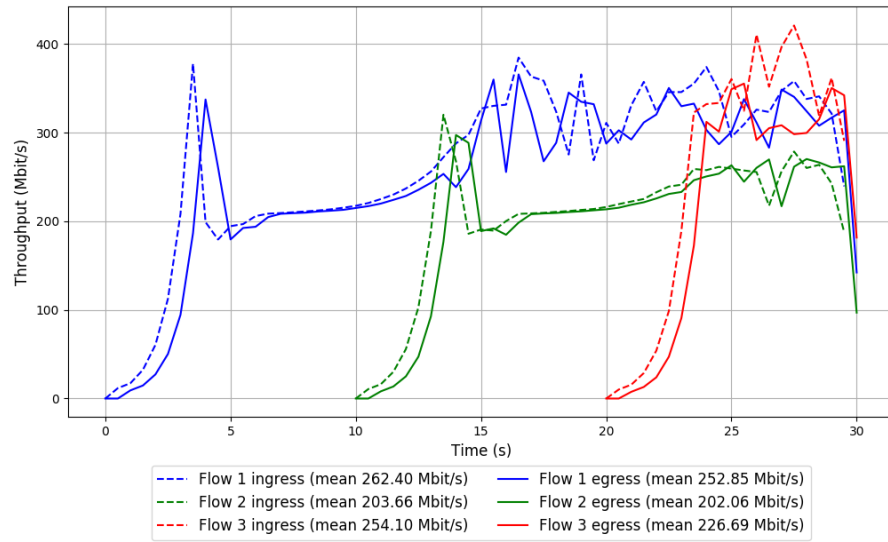
-- Flow 3:

Average throughput: 226.69 Mbit/s

95th percentile per-packet one-way delay: 235.276 ms

Loss rate: 12.77%

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

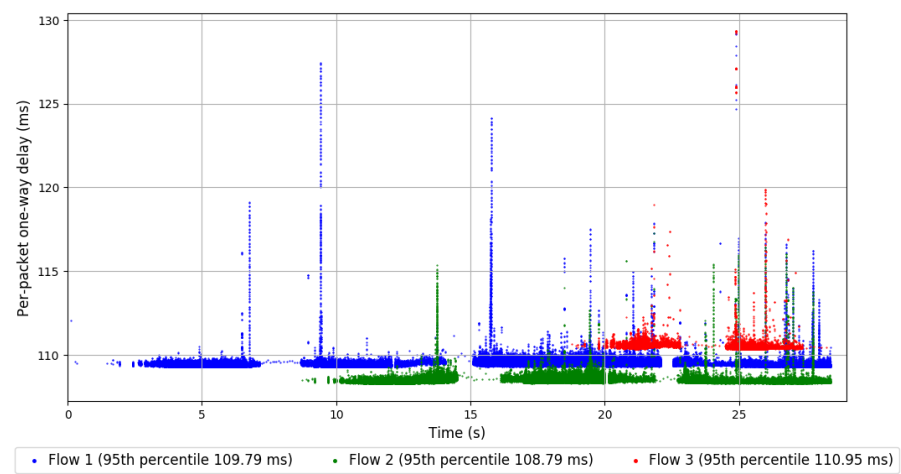
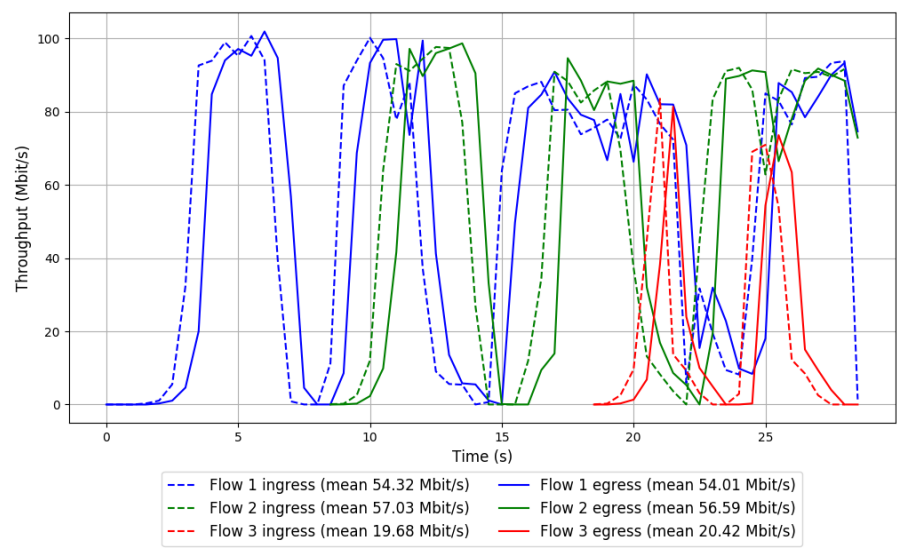


Run 1: Statistics of QUIC Cubic

Start at: 2019-03-26 23:54:45  
End at: 2019-03-26 23:55:15  
Local clock offset: 0.033 ms  
Remote clock offset: -0.036 ms

# Below is generated by plot.py at 2019-03-27 04:56:12  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 100.22 Mbit/s  
95th percentile per-packet one-way delay: 110.461 ms  
Loss rate: 1.43%  
-- Flow 1:  
Average throughput: 54.01 Mbit/s  
95th percentile per-packet one-way delay: 109.792 ms  
Loss rate: 1.34%  
-- Flow 2:  
Average throughput: 56.59 Mbit/s  
95th percentile per-packet one-way delay: 108.792 ms  
Loss rate: 1.80%  
-- Flow 3:  
Average throughput: 20.42 Mbit/s  
95th percentile per-packet one-way delay: 110.946 ms  
Loss rate: 0.00%

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2019-03-27 00:36:47

End at: 2019-03-27 00:37:17

Local clock offset: 0.038 ms

Remote clock offset: -0.07 ms

# Below is generated by plot.py at 2019-03-27 04:56:13

# Datalink statistics

-- Total of 3 flows:

Average throughput: 88.34 Mbit/s

95th percentile per-packet one-way delay: 109.804 ms

Loss rate: 1.19%

-- Flow 1:

Average throughput: 42.17 Mbit/s

95th percentile per-packet one-way delay: 109.937 ms

Loss rate: 1.13%

-- Flow 2:

Average throughput: 52.72 Mbit/s

95th percentile per-packet one-way delay: 109.779 ms

Loss rate: 1.63%

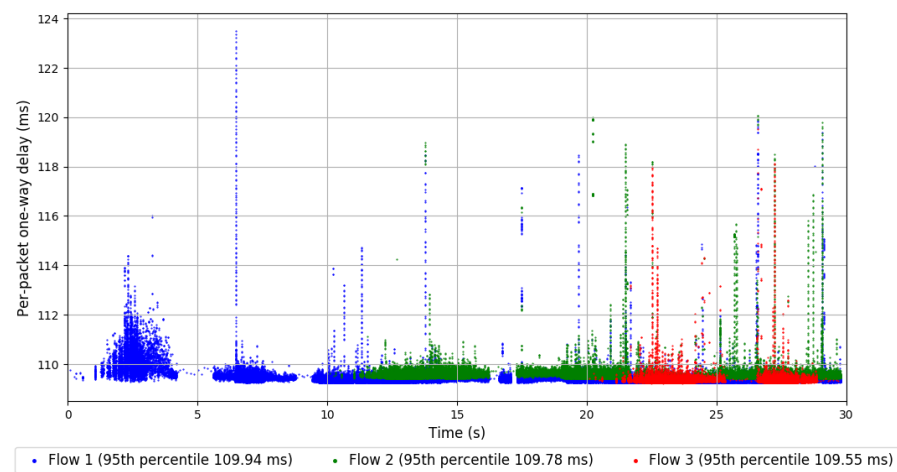
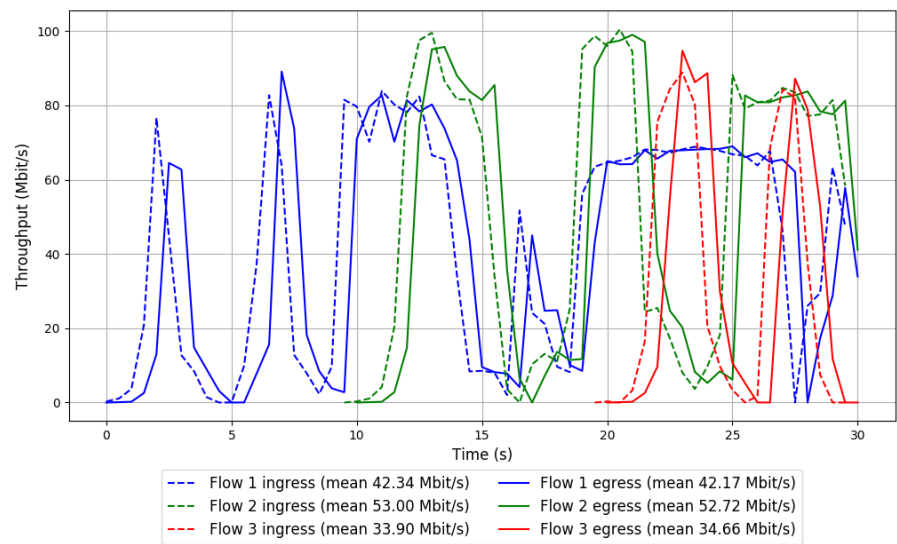
-- Flow 3:

Average throughput: 34.66 Mbit/s

95th percentile per-packet one-way delay: 109.554 ms

Loss rate: 0.00%

Run 2: Report of QUIC Cubic — Data Link

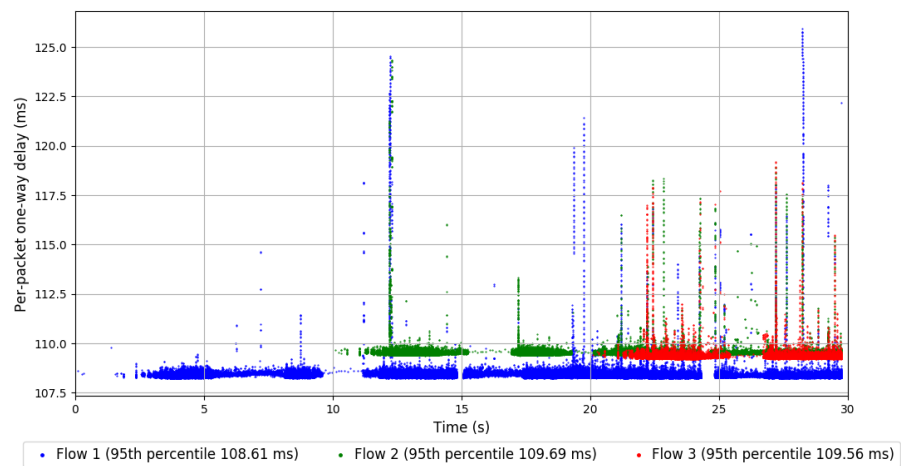
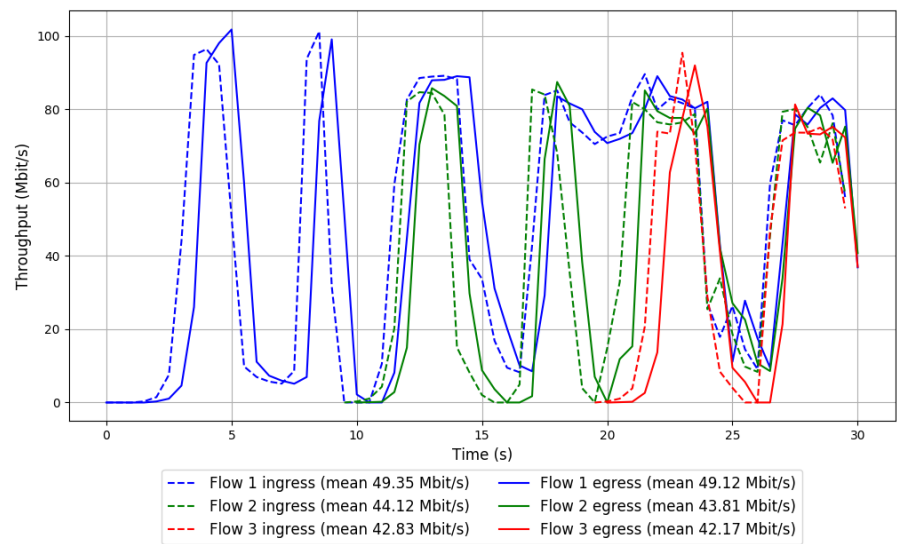


Run 3: Statistics of QUIC Cubic

Start at: 2019-03-27 01:15:41  
End at: 2019-03-27 01:16:11  
Local clock offset: -0.114 ms  
Remote clock offset: -0.146 ms

# Below is generated by plot.py at 2019-03-27 04:56:13  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 91.92 Mbit/s  
95th percentile per-packet one-way delay: 109.593 ms  
Loss rate: 1.77%  
-- Flow 1:  
Average throughput: 49.12 Mbit/s  
95th percentile per-packet one-way delay: 108.605 ms  
Loss rate: 1.19%  
-- Flow 2:  
Average throughput: 43.81 Mbit/s  
95th percentile per-packet one-way delay: 109.685 ms  
Loss rate: 1.80%  
-- Flow 3:  
Average throughput: 42.17 Mbit/s  
95th percentile per-packet one-way delay: 109.557 ms  
Loss rate: 3.74%

Run 3: Report of QUIC Cubic — Data Link



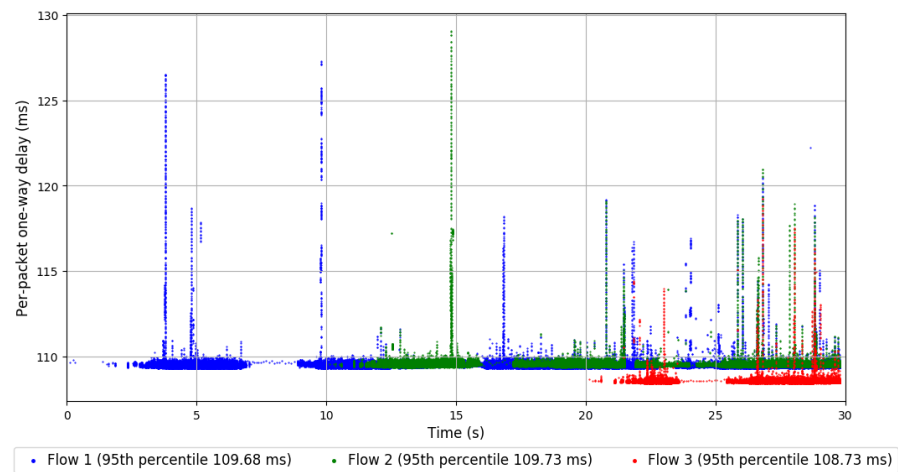
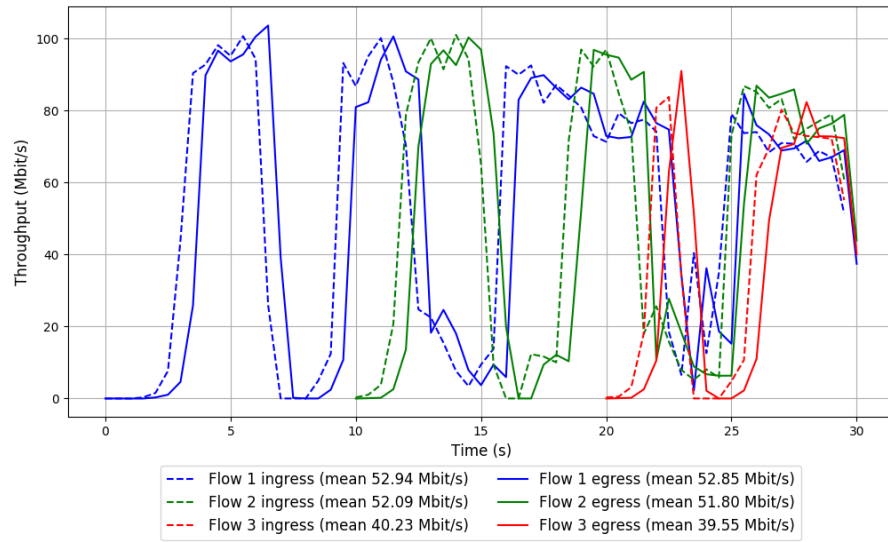


Run 4: Statistics of QUIC Cubic

Start at: 2019-03-27 01:56:39  
End at: 2019-03-27 01:57:09  
Local clock offset: 0.106 ms  
Remote clock offset: -0.106 ms

# Below is generated by plot.py at 2019-03-27 04:56:13  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 100.05 Mbit/s  
95th percentile per-packet one-way delay: 109.690 ms  
Loss rate: 1.55%  
-- Flow 1:  
Average throughput: 52.85 Mbit/s  
95th percentile per-packet one-way delay: 109.680 ms  
Loss rate: 0.90%  
-- Flow 2:  
Average throughput: 51.80 Mbit/s  
95th percentile per-packet one-way delay: 109.734 ms  
Loss rate: 1.65%  
-- Flow 3:  
Average throughput: 39.55 Mbit/s  
95th percentile per-packet one-way delay: 108.726 ms  
Loss rate: 3.84%

# Run 4: Report of QUIC Cubic — Data Link

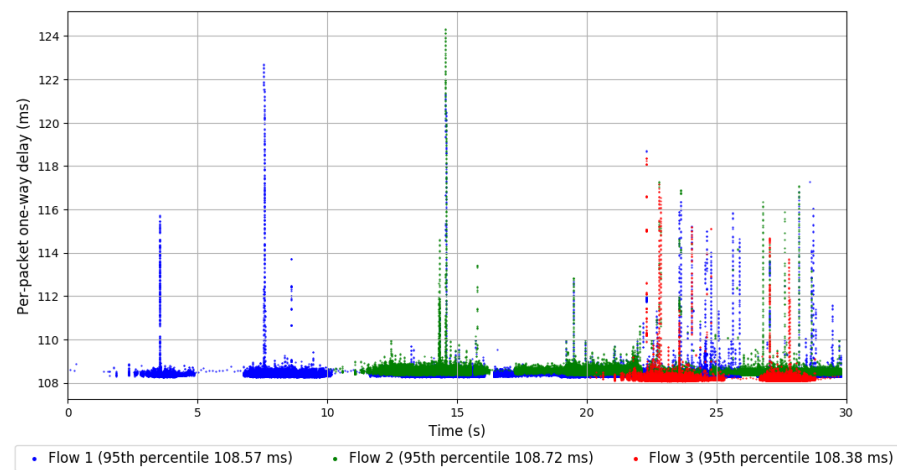
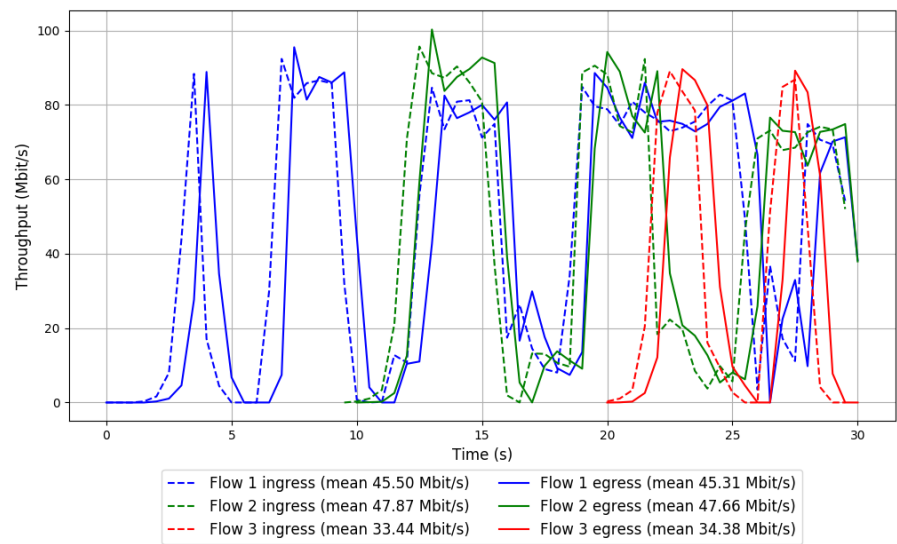


Run 5: Statistics of QUIC Cubic

Start at: 2019-03-27 02:37:39  
End at: 2019-03-27 02:38:09  
Local clock offset: -1.059 ms  
Remote clock offset: -0.118 ms

# Below is generated by plot.py at 2019-03-27 04:56:13  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 87.97 Mbit/s  
95th percentile per-packet one-way delay: 108.656 ms  
Loss rate: 1.14%  
-- Flow 1:  
Average throughput: 45.31 Mbit/s  
95th percentile per-packet one-way delay: 108.566 ms  
Loss rate: 1.13%  
-- Flow 2:  
Average throughput: 47.66 Mbit/s  
95th percentile per-packet one-way delay: 108.722 ms  
Loss rate: 1.53%  
-- Flow 3:  
Average throughput: 34.38 Mbit/s  
95th percentile per-packet one-way delay: 108.376 ms  
Loss rate: 0.00%

Run 5: Report of QUIC Cubic — Data Link

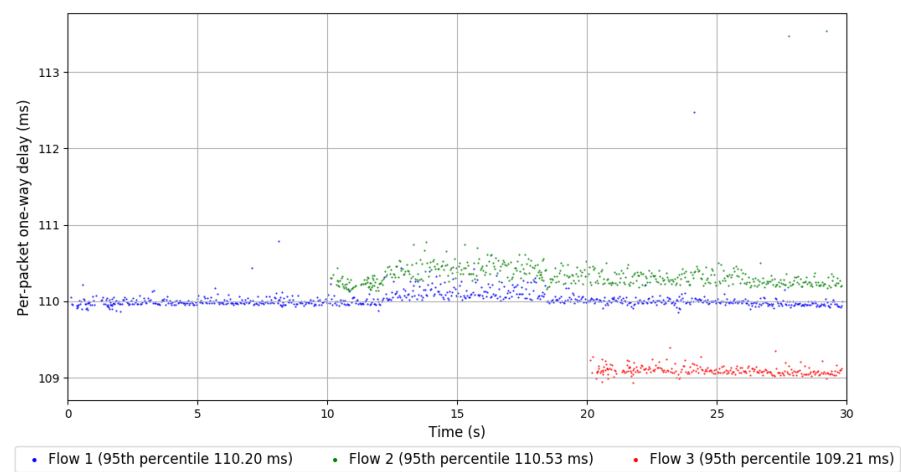
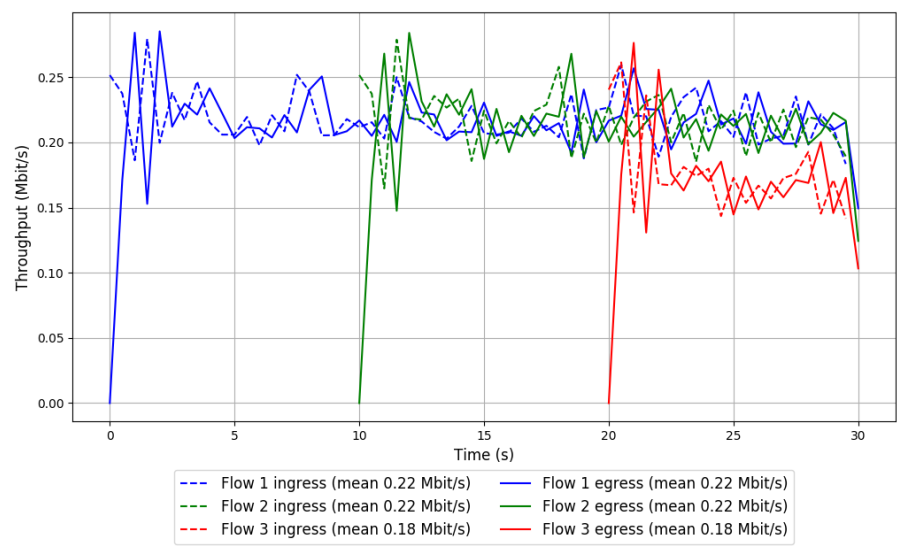


```
Run 1: Statistics of SReAM

Start at: 2019-03-26 23:19:24
End at: 2019-03-26 23:19:54
Local clock offset: 0.488 ms
Remote clock offset: 0.051 ms

# Below is generated by plot.py at 2019-03-27 04:56:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.42 Mbit/s
95th percentile per-packet one-way delay: 110.456 ms
Loss rate: 1.06%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 110.197 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 110.526 ms
Loss rate: 1.25%
-- Flow 3:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 109.209 ms
Loss rate: 2.13%
```

Run 1: Report of SReAM — Data Link

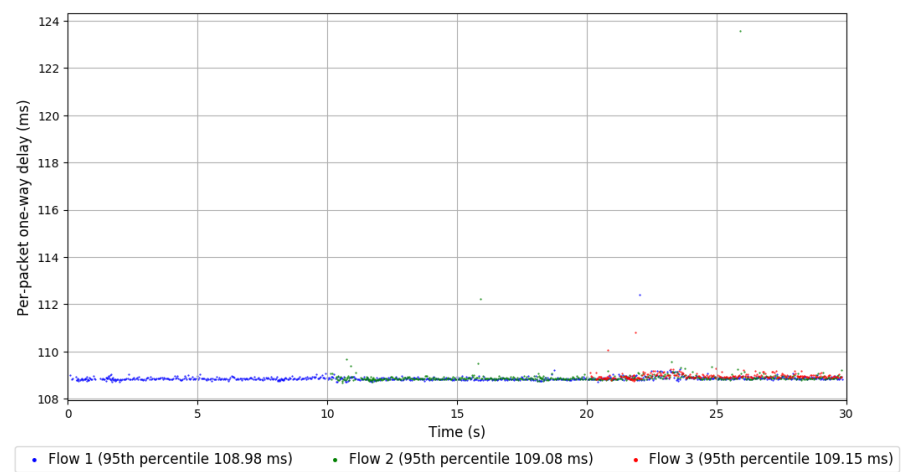
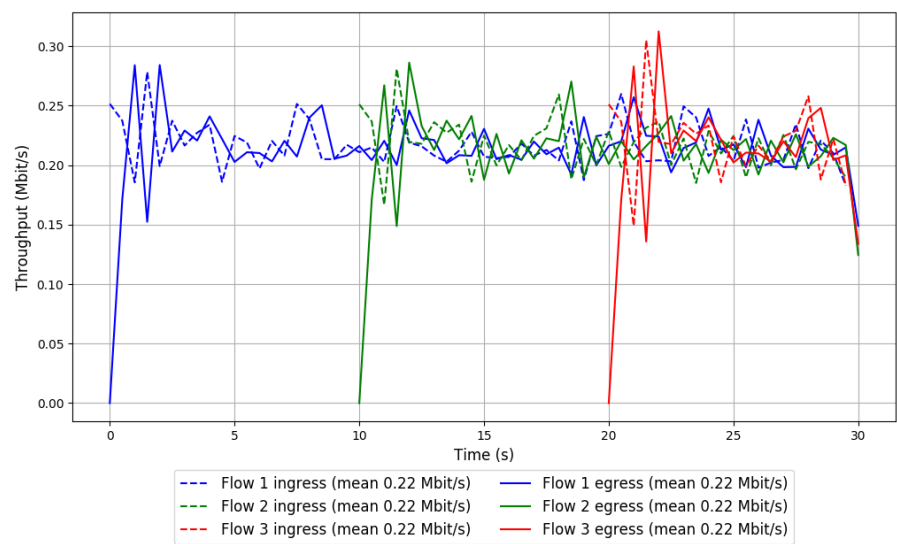


Run 2: Statistics of SReAM

Start at: 2019-03-27 00:01:38  
End at: 2019-03-27 00:02:08  
Local clock offset: -0.812 ms  
Remote clock offset: -0.05 ms

# Below is generated by plot.py at 2019-03-27 04:56:13  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.43 Mbit/s  
95th percentile per-packet one-way delay: 109.074 ms  
Loss rate: 1.11%  
-- Flow 1:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 108.977 ms  
Loss rate: 0.64%  
-- Flow 2:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 109.076 ms  
Loss rate: 1.25%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 109.152 ms  
Loss rate: 2.22%

Run 2: Report of SReAM — Data Link



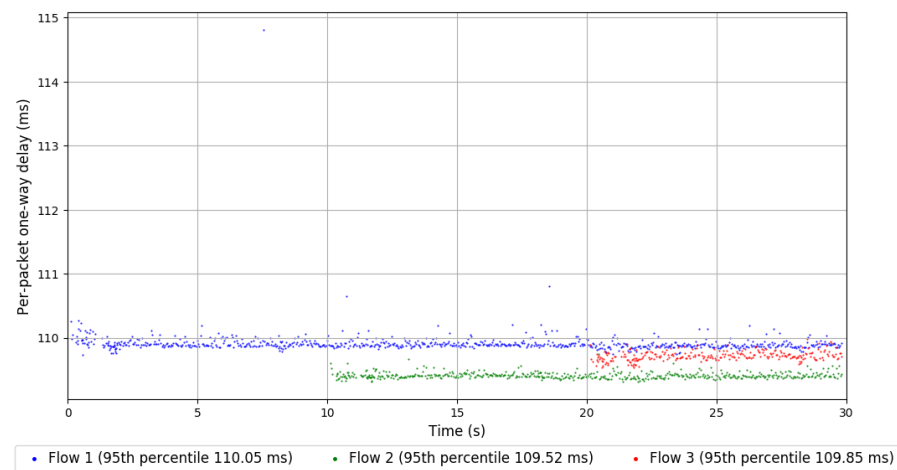
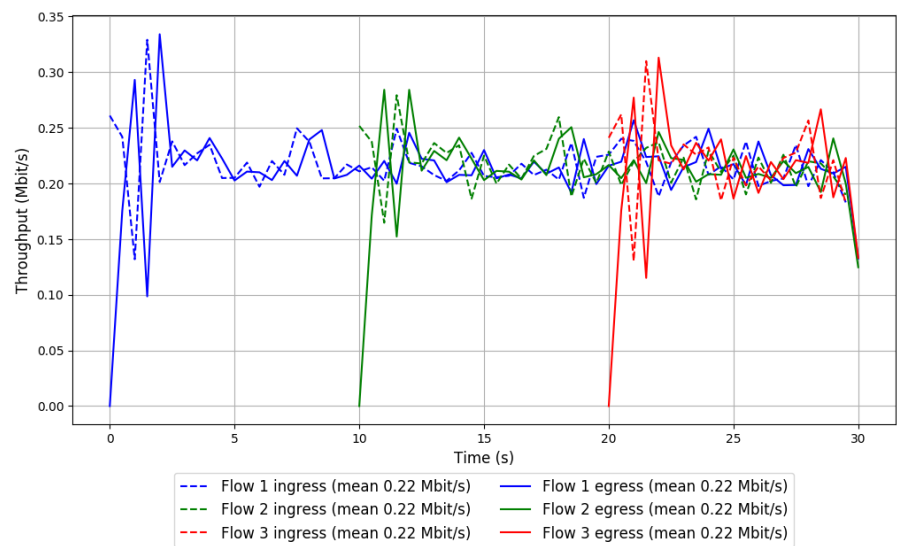


Run 3: Statistics of SReAM

Start at: 2019-03-27 00:43:05  
End at: 2019-03-27 00:43:35  
Local clock offset: 0.209 ms  
Remote clock offset: -0.057 ms

# Below is generated by plot.py at 2019-03-27 04:56:13  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.43 Mbit/s  
95th percentile per-packet one-way delay: 109.994 ms  
Loss rate: 1.17%  
-- Flow 1:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 110.053 ms  
Loss rate: 0.77%  
-- Flow 2:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 109.516 ms  
Loss rate: 1.25%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 109.853 ms  
Loss rate: 2.21%

Run 3: Report of SReAM — Data Link

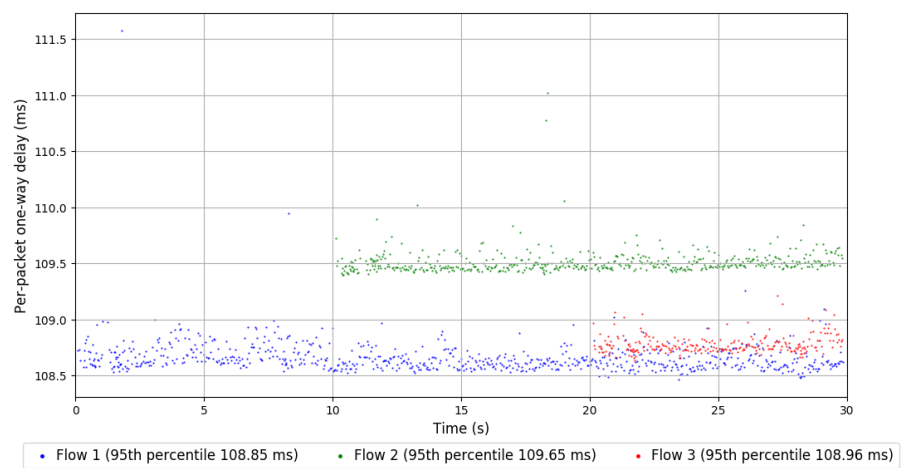
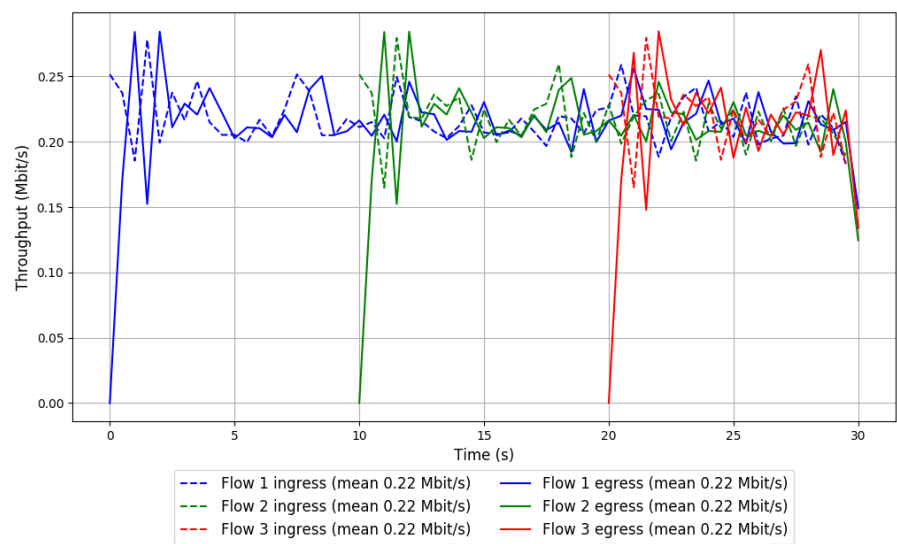


Run 4: Statistics of SCReAM

Start at: 2019-03-27 01:22:35  
End at: 2019-03-27 01:23:05  
Local clock offset: -0.053 ms  
Remote clock offset: -0.156 ms

# Below is generated by plot.py at 2019-03-27 04:56:13  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.43 Mbit/s  
95th percentile per-packet one-way delay: 109.571 ms  
Loss rate: 1.11%  
-- Flow 1:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 108.853 ms  
Loss rate: 0.64%  
-- Flow 2:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 109.653 ms  
Loss rate: 1.25%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 108.958 ms  
Loss rate: 2.22%

Run 4: Report of SReAM — Data Link

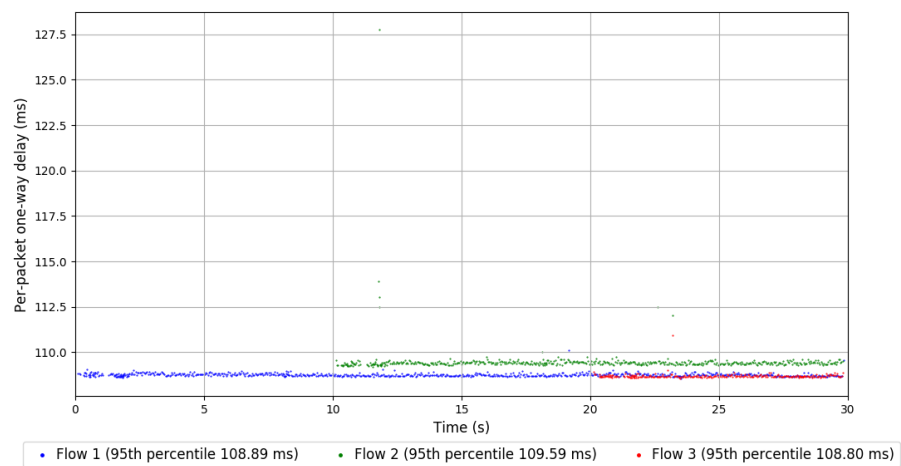
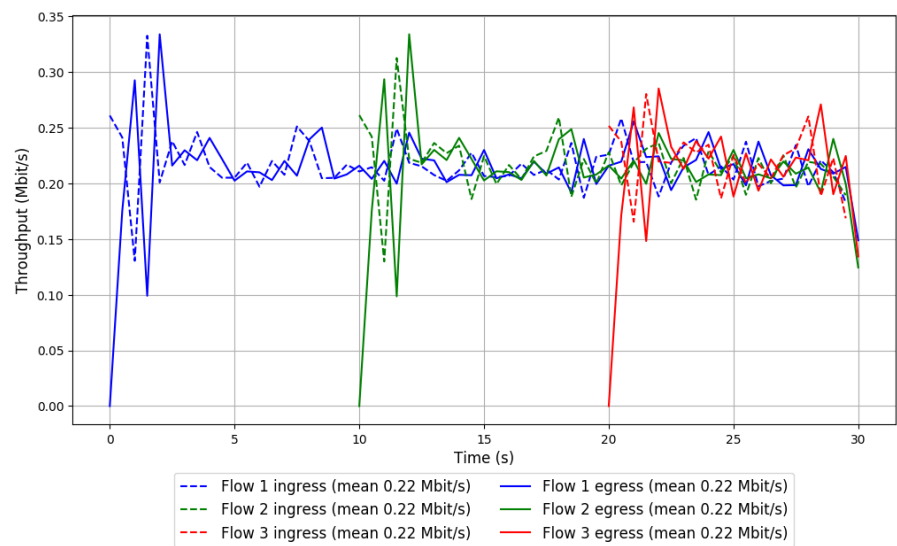


Run 5: Statistics of SReAM

Start at: 2019-03-27 02:03:30  
End at: 2019-03-27 02:04:00  
Local clock offset: -0.016 ms  
Remote clock offset: -0.113 ms

# Below is generated by plot.py at 2019-03-27 04:56:13  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.43 Mbit/s  
95th percentile per-packet one-way delay: 109.498 ms  
Loss rate: 1.05%  
-- Flow 1:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 108.888 ms  
Loss rate: 0.64%  
-- Flow 2:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 109.592 ms  
Loss rate: 1.24%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 108.802 ms  
Loss rate: 1.88%

Run 5: Report of SReAM — Data Link

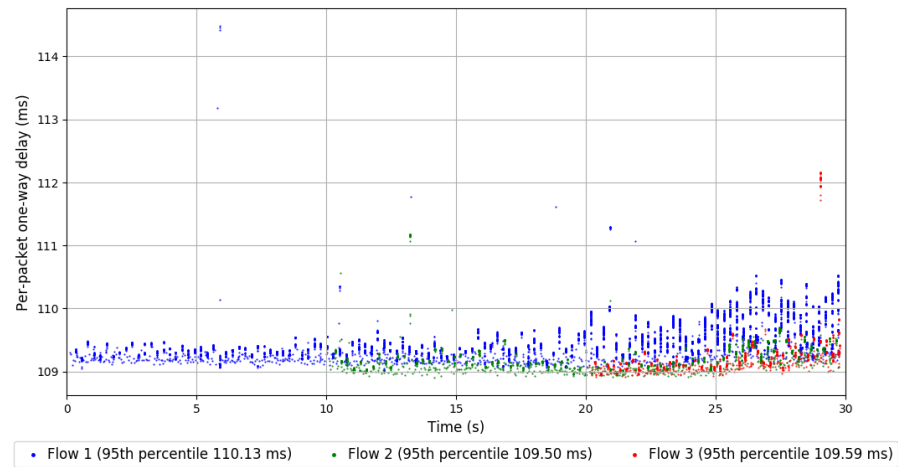
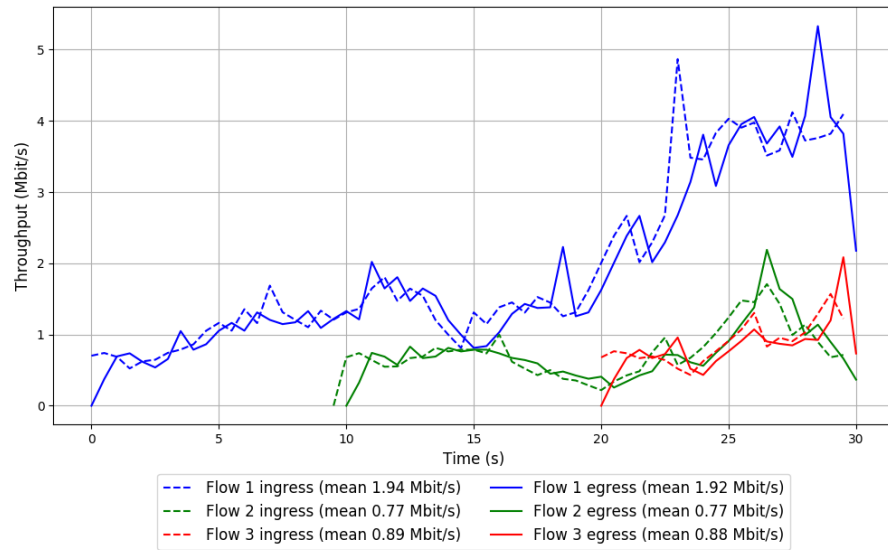


Run 1: Statistics of Sprout

Start at: 2019-03-26 23:18:07  
End at: 2019-03-26 23:18:37  
Local clock offset: -0.686 ms  
Remote clock offset: -0.338 ms

# Below is generated by plot.py at 2019-03-27 04:56:13  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 2.71 Mbit/s  
95th percentile per-packet one-way delay: 110.090 ms  
Loss rate: 1.77%  
-- Flow 1:  
Average throughput: 1.92 Mbit/s  
95th percentile per-packet one-way delay: 110.134 ms  
Loss rate: 1.66%  
-- Flow 2:  
Average throughput: 0.77 Mbit/s  
95th percentile per-packet one-way delay: 109.497 ms  
Loss rate: 1.21%  
-- Flow 3:  
Average throughput: 0.88 Mbit/s  
95th percentile per-packet one-way delay: 109.588 ms  
Loss rate: 3.48%

## Run 1: Report of Sprout — Data Link



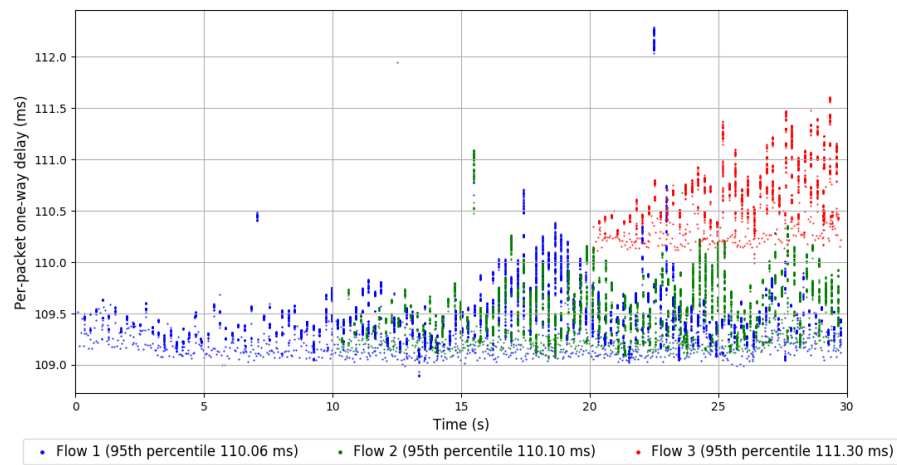
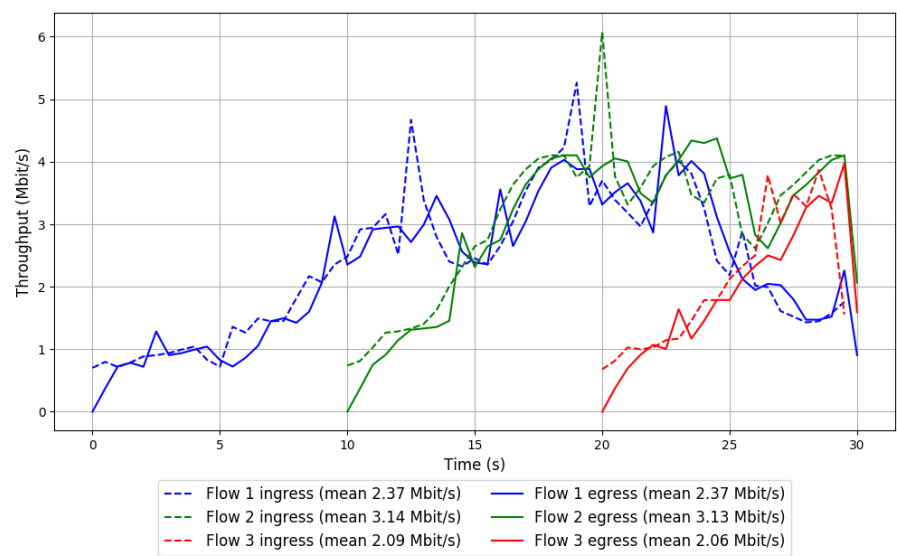


## Run 2: Statistics of Sprout

Start at: 2019-03-27 00:00:20  
End at: 2019-03-27 00:00:50  
Local clock offset: 0.107 ms  
Remote clock offset: -0.457 ms

```
# Below is generated by plot.py at 2019-03-27 04:56:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 5.11 Mbit/s
95th percentile per-packet one-way delay: 110.856 ms
Loss rate: 1.39%
-- Flow 1:
Average throughput: 2.37 Mbit/s
95th percentile per-packet one-way delay: 110.064 ms
Loss rate: 0.61%
-- Flow 2:
Average throughput: 3.13 Mbit/s
95th percentile per-packet one-way delay: 110.096 ms
Loss rate: 1.63%
-- Flow 3:
Average throughput: 2.06 Mbit/s
95th percentile per-packet one-way delay: 111.296 ms
Loss rate: 3.34%
```

Run 2: Report of Sprout — Data Link

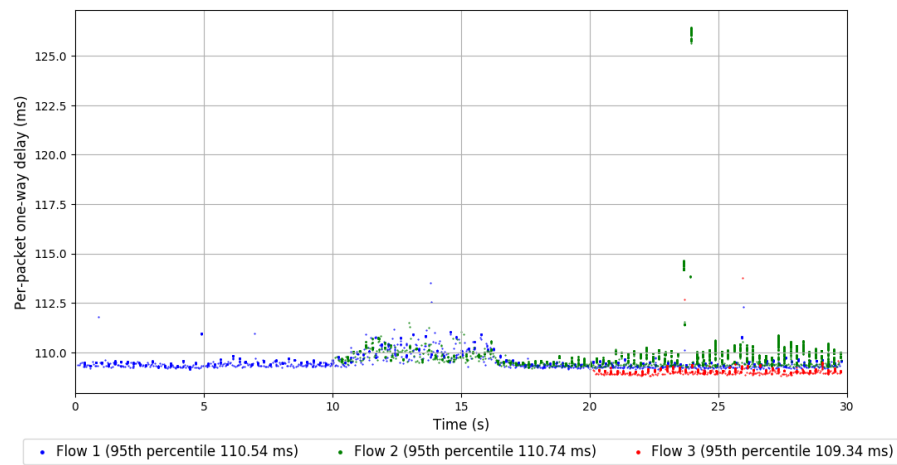
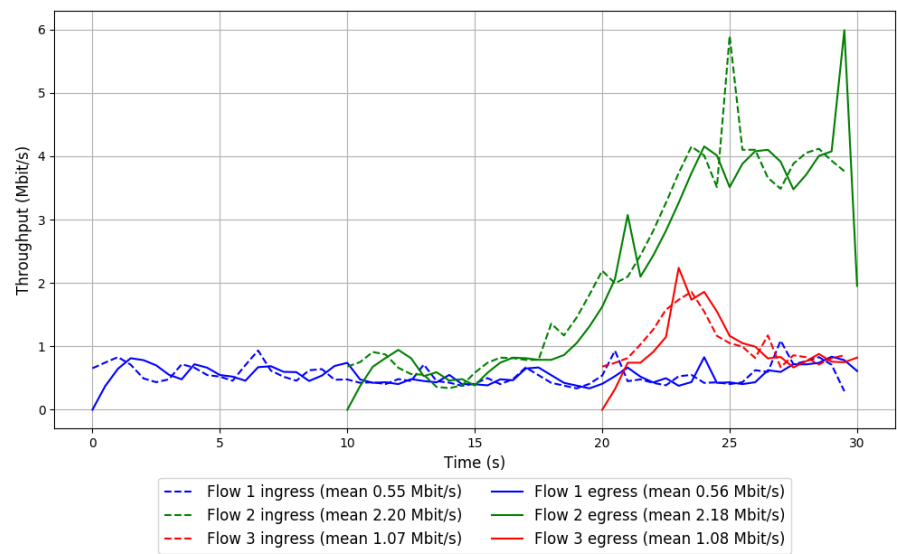


Run 3: Statistics of Sprout

Start at: 2019-03-27 00:41:48  
End at: 2019-03-27 00:42:18  
Local clock offset: -0.27 ms  
Remote clock offset: -0.085 ms

```
# Below is generated by plot.py at 2019-03-27 04:56:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.35 Mbit/s
95th percentile per-packet one-way delay: 110.553 ms
Loss rate: 1.60%
-- Flow 1:
Average throughput: 0.56 Mbit/s
95th percentile per-packet one-way delay: 110.543 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 2.18 Mbit/s
95th percentile per-packet one-way delay: 110.742 ms
Loss rate: 2.07%
-- Flow 3:
Average throughput: 1.08 Mbit/s
95th percentile per-packet one-way delay: 109.340 ms
Loss rate: 2.15%
```

Run 3: Report of Sprout — Data Link

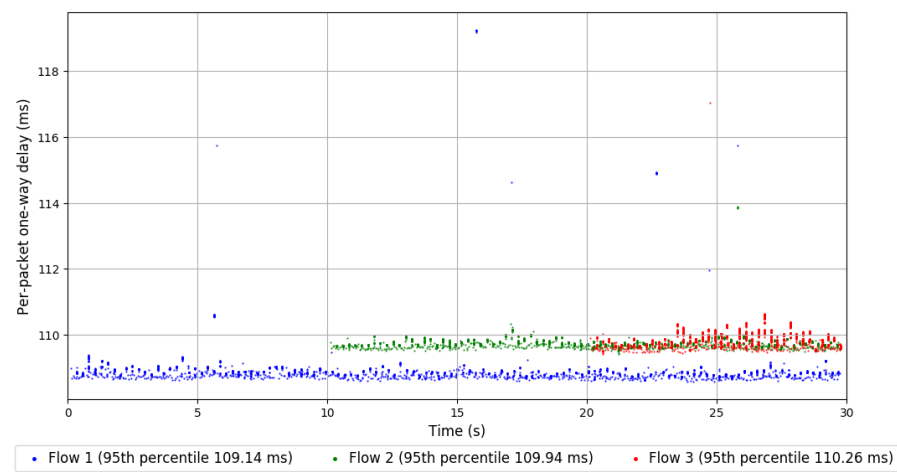
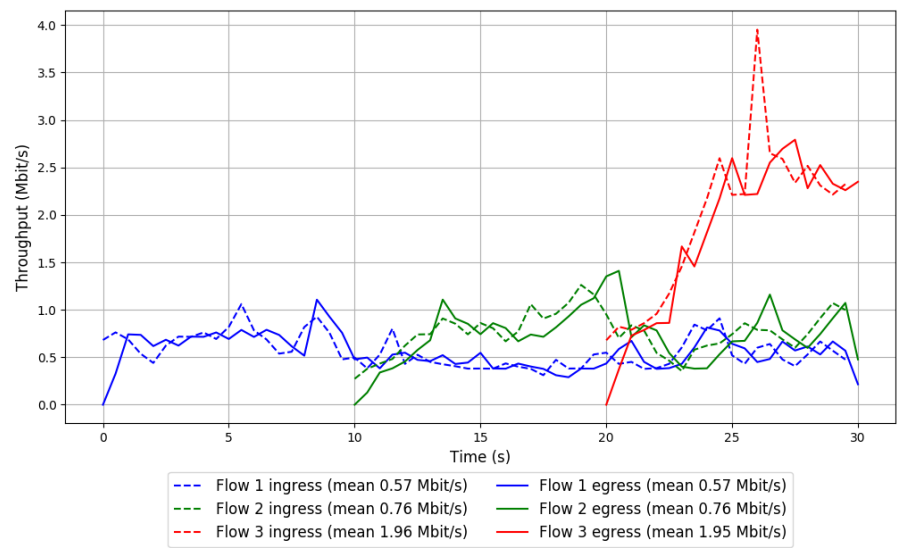


#### Run 4: Statistics of Sprout

Start at: 2019-03-27 01:21:18  
End at: 2019-03-27 01:21:48  
Local clock offset: 0.021 ms  
Remote clock offset: -0.154 ms

```
# Below is generated by plot.py at 2019-03-27 04:56:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.71 Mbit/s
95th percentile per-packet one-way delay: 110.084 ms
Loss rate: 1.85%
-- Flow 1:
Average throughput: 0.57 Mbit/s
95th percentile per-packet one-way delay: 109.140 ms
Loss rate: 0.77%
-- Flow 2:
Average throughput: 0.76 Mbit/s
95th percentile per-packet one-way delay: 109.938 ms
Loss rate: 1.72%
-- Flow 3:
Average throughput: 1.95 Mbit/s
95th percentile per-packet one-way delay: 110.259 ms
Loss rate: 2.89%
```

Run 4: Report of Sprout — Data Link

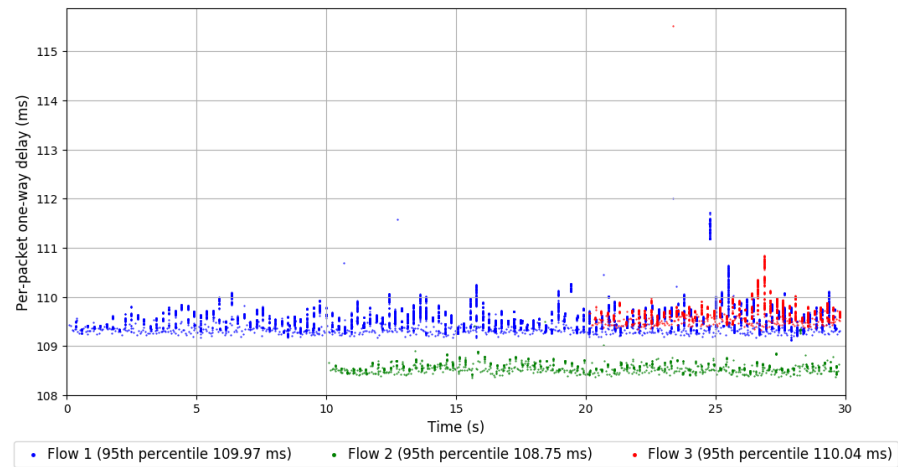
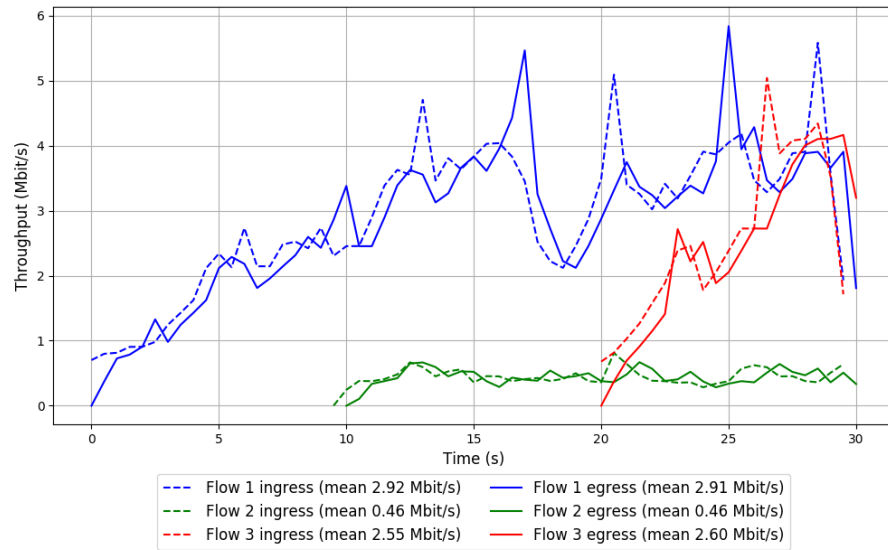


Run 5: Statistics of Sprout

Start at: 2019-03-27 02:02:13  
End at: 2019-03-27 02:02:43  
Local clock offset: 0.048 ms  
Remote clock offset: -0.088 ms

```
# Below is generated by plot.py at 2019-03-27 04:56:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.06 Mbit/s
95th percentile per-packet one-way delay: 109.967 ms
Loss rate: 0.89%
-- Flow 1:
Average throughput: 2.91 Mbit/s
95th percentile per-packet one-way delay: 109.975 ms
Loss rate: 0.98%
-- Flow 2:
Average throughput: 0.46 Mbit/s
95th percentile per-packet one-way delay: 108.753 ms
Loss rate: 1.69%
-- Flow 3:
Average throughput: 2.60 Mbit/s
95th percentile per-packet one-way delay: 110.043 ms
Loss rate: 0.31%
```

## Run 5: Report of Sprout — Data Link



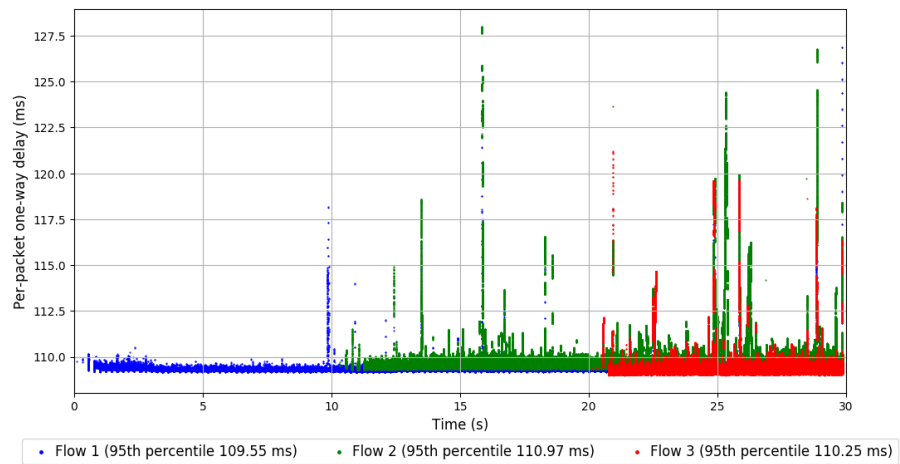
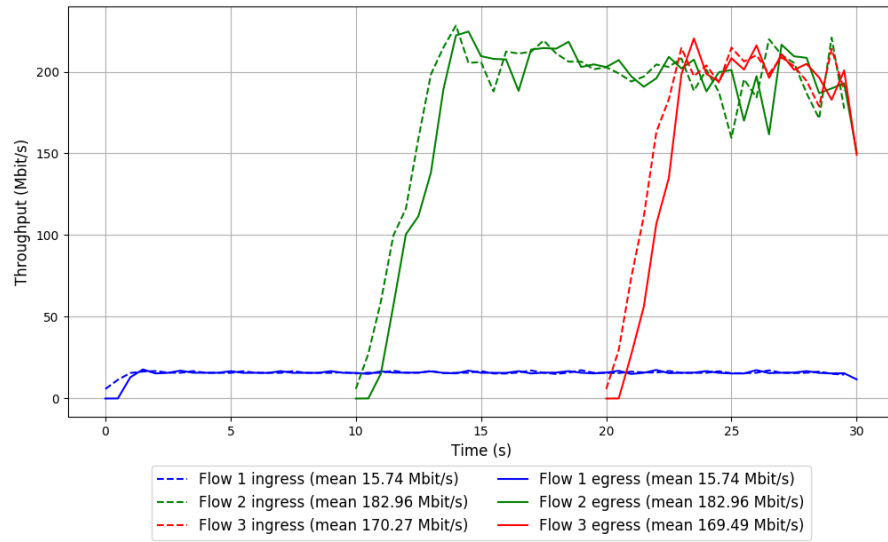


```
Run 1: Statistics of TaoVA-100x

Start at: 2019-03-26 23:44:43
End at: 2019-03-26 23:45:13
Local clock offset: -0.058 ms
Remote clock offset: -0.06 ms

# Below is generated by plot.py at 2019-03-27 04:56:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 192.66 Mbit/s
95th percentile per-packet one-way delay: 110.616 ms
Loss rate: 1.52%
-- Flow 1:
Average throughput: 15.74 Mbit/s
95th percentile per-packet one-way delay: 109.545 ms
Loss rate: 0.70%
-- Flow 2:
Average throughput: 182.96 Mbit/s
95th percentile per-packet one-way delay: 110.966 ms
Loss rate: 1.10%
-- Flow 3:
Average throughput: 169.49 Mbit/s
95th percentile per-packet one-way delay: 110.251 ms
Loss rate: 2.65%
```

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

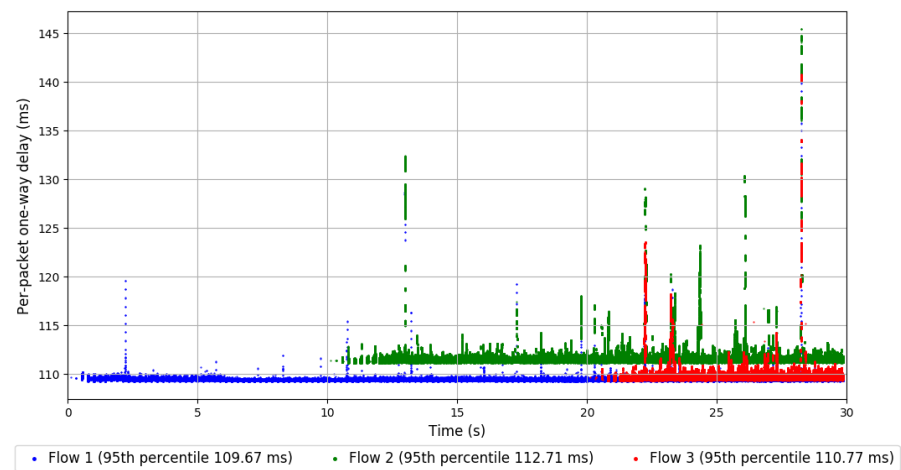
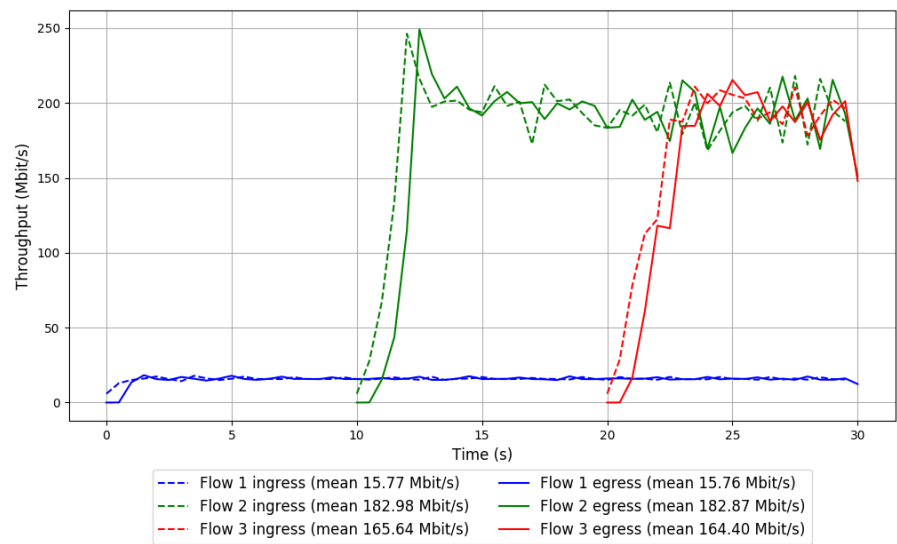


Run 2: Statistics of TaoVA-100x

Start at: 2019-03-27 00:26:30  
End at: 2019-03-27 00:27:00  
Local clock offset: -0.089 ms  
Remote clock offset: -0.074 ms

# Below is generated by plot.py at 2019-03-27 04:56:13  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 190.94 Mbit/s  
95th percentile per-packet one-way delay: 112.370 ms  
Loss rate: 1.64%  
-- Flow 1:  
Average throughput: 15.76 Mbit/s  
95th percentile per-packet one-way delay: 109.672 ms  
Loss rate: 0.76%  
-- Flow 2:  
Average throughput: 182.87 Mbit/s  
95th percentile per-packet one-way delay: 112.706 ms  
Loss rate: 1.17%  
-- Flow 3:  
Average throughput: 164.40 Mbit/s  
95th percentile per-packet one-way delay: 110.766 ms  
Loss rate: 2.94%

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

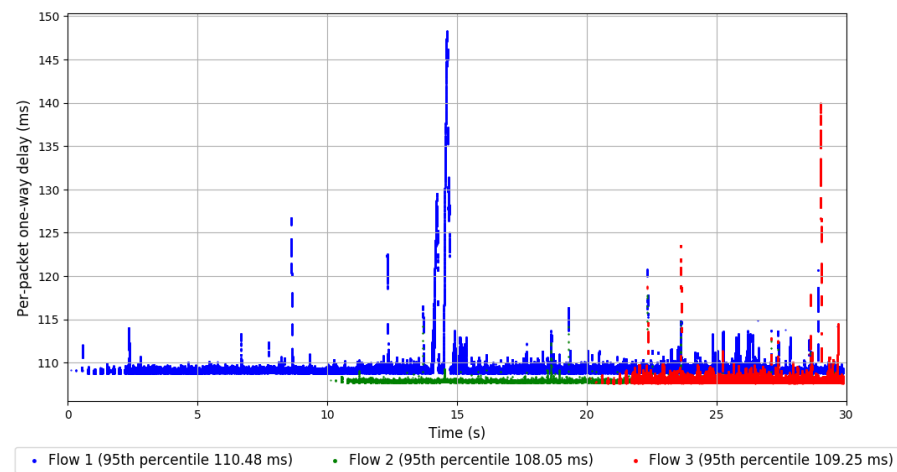
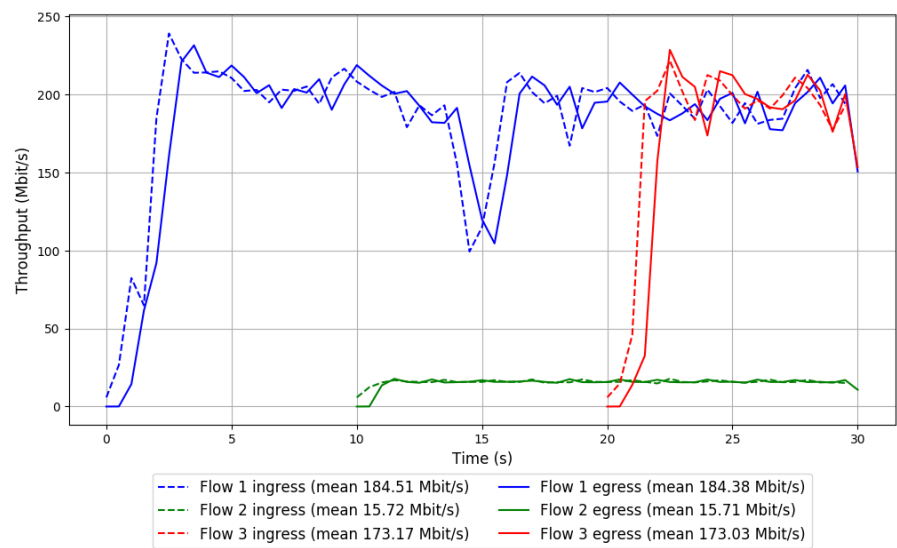


Run 3: Statistics of TaoVA-100x

Start at: 2019-03-27 01:06:35  
End at: 2019-03-27 01:07:05  
Local clock offset: -0.667 ms  
Remote clock offset: -0.112 ms

# Below is generated by plot.py at 2019-03-27 04:56:13  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 251.43 Mbit/s  
95th percentile per-packet one-way delay: 110.202 ms  
Loss rate: 1.15%  
-- Flow 1:  
Average throughput: 184.38 Mbit/s  
95th percentile per-packet one-way delay: 110.478 ms  
Loss rate: 0.81%  
-- Flow 2:  
Average throughput: 15.71 Mbit/s  
95th percentile per-packet one-way delay: 108.045 ms  
Loss rate: 1.15%  
-- Flow 3:  
Average throughput: 173.03 Mbit/s  
95th percentile per-packet one-way delay: 109.245 ms  
Loss rate: 2.28%

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

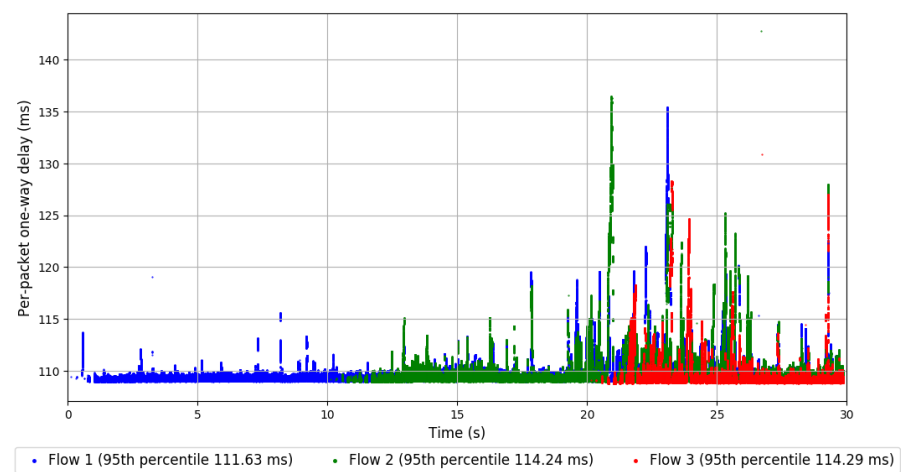
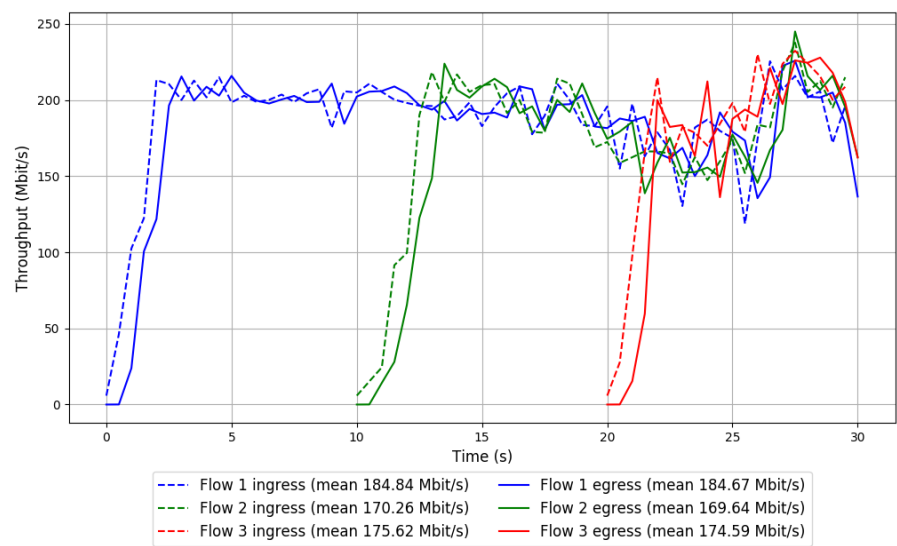


Run 4: Statistics of TaoVA-100x

Start at: 2019-03-27 01:47:04  
End at: 2019-03-27 01:47:34  
Local clock offset: -0.254 ms  
Remote clock offset: -0.112 ms

# Below is generated by plot.py at 2019-03-27 04:58:57  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 354.36 Mbit/s  
95th percentile per-packet one-way delay: 112.901 ms  
Loss rate: 1.35%  
-- Flow 1:  
Average throughput: 184.67 Mbit/s  
95th percentile per-packet one-way delay: 111.631 ms  
Loss rate: 0.83%  
-- Flow 2:  
Average throughput: 169.64 Mbit/s  
95th percentile per-packet one-way delay: 114.244 ms  
Loss rate: 1.46%  
-- Flow 3:  
Average throughput: 174.59 Mbit/s  
95th percentile per-packet one-way delay: 114.293 ms  
Loss rate: 2.77%

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



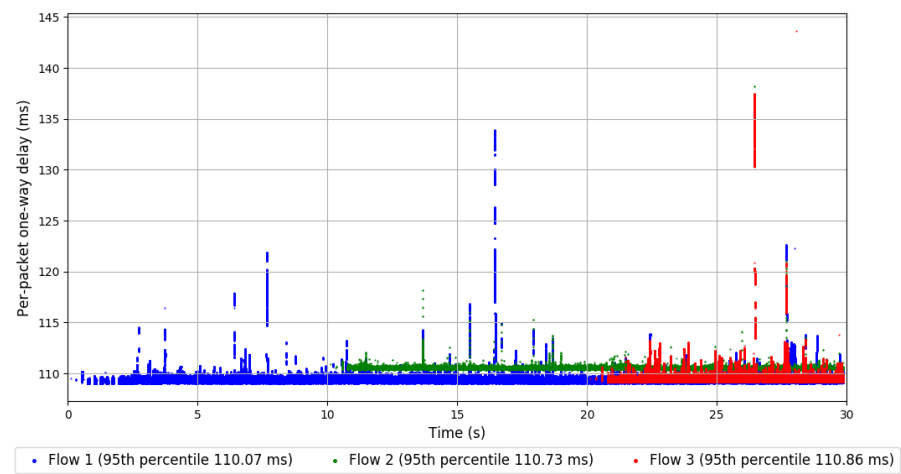
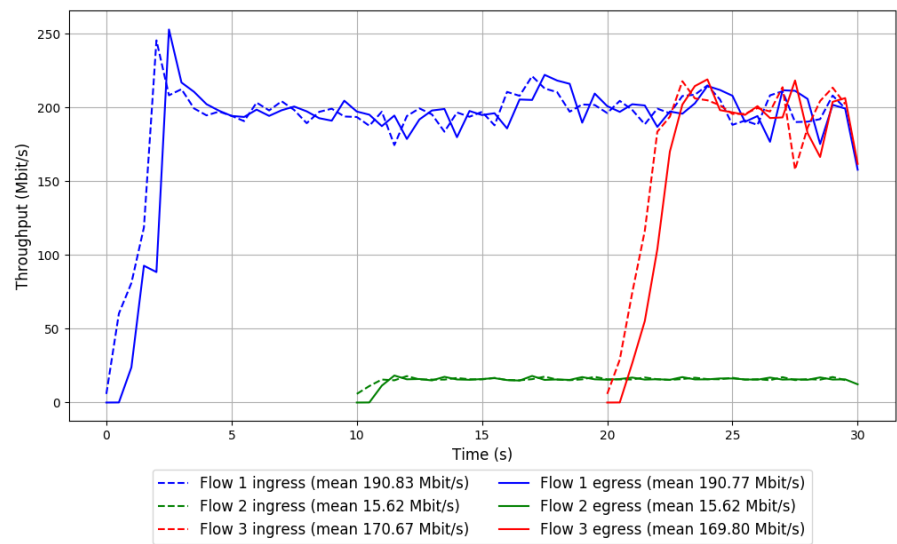


Run 5: Statistics of TaoVA-100x

Start at: 2019-03-27 02:28:25  
End at: 2019-03-27 02:28:55  
Local clock offset: -0.088 ms  
Remote clock offset: -0.097 ms

# Below is generated by plot.py at 2019-03-27 04:58:57  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 256.69 Mbit/s  
95th percentile per-packet one-way delay: 110.526 ms  
Loss rate: 1.20%  
-- Flow 1:  
Average throughput: 190.77 Mbit/s  
95th percentile per-packet one-way delay: 110.073 ms  
Loss rate: 0.76%  
-- Flow 2:  
Average throughput: 15.62 Mbit/s  
95th percentile per-packet one-way delay: 110.729 ms  
Loss rate: 1.13%  
-- Flow 3:  
Average throughput: 169.80 Mbit/s  
95th percentile per-packet one-way delay: 110.855 ms  
Loss rate: 2.71%

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



Run 1: Statistics of TCP Vegas

Start at: 2019-03-26 23:24:58

End at: 2019-03-26 23:25:28

Local clock offset: -0.183 ms

Remote clock offset: 0.0 ms

# Below is generated by plot.py at 2019-03-27 05:00:53

# Datalink statistics

-- Total of 3 flows:

Average throughput: 726.56 Mbit/s

95th percentile per-packet one-way delay: 126.982 ms

Loss rate: 1.29%

-- Flow 1:

Average throughput: 389.34 Mbit/s

95th percentile per-packet one-way delay: 122.908 ms

Loss rate: 0.80%

-- Flow 2:

Average throughput: 366.54 Mbit/s

95th percentile per-packet one-way delay: 126.674 ms

Loss rate: 1.29%

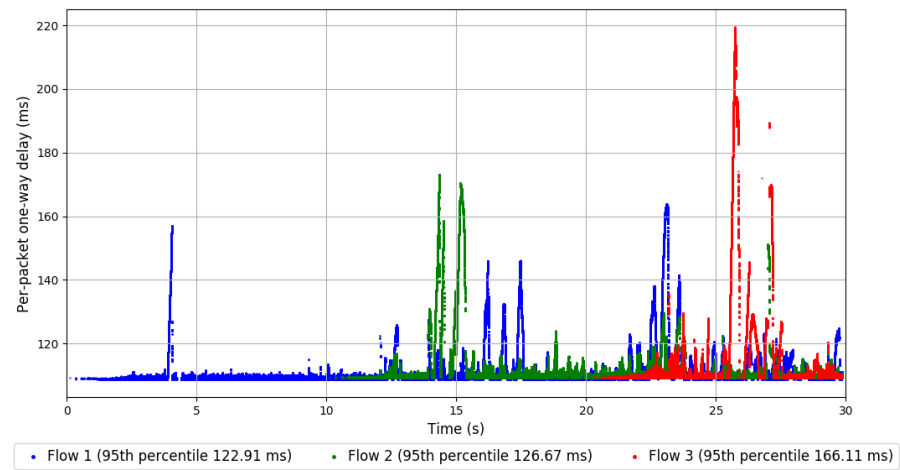
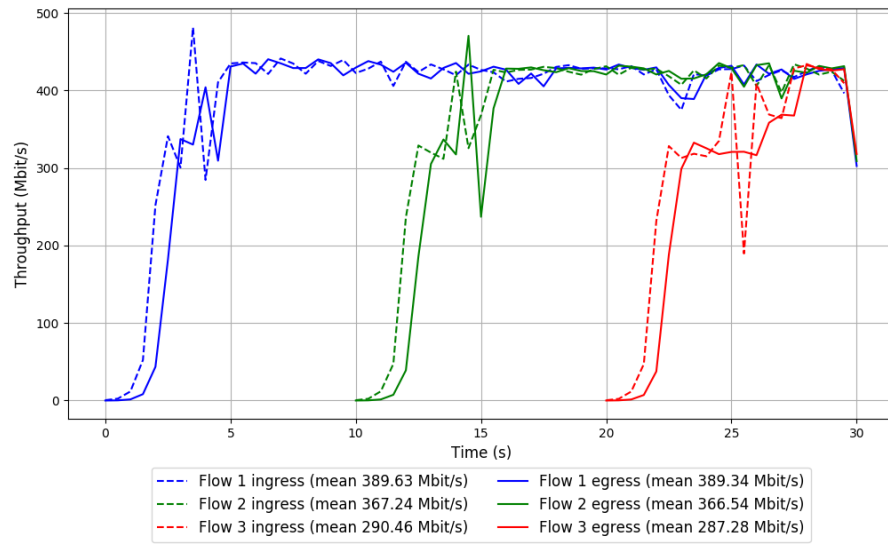
-- Flow 3:

Average throughput: 287.28 Mbit/s

95th percentile per-packet one-way delay: 166.113 ms

Loss rate: 3.27%

# Run 1: Report of TCP Vegas — Data Link

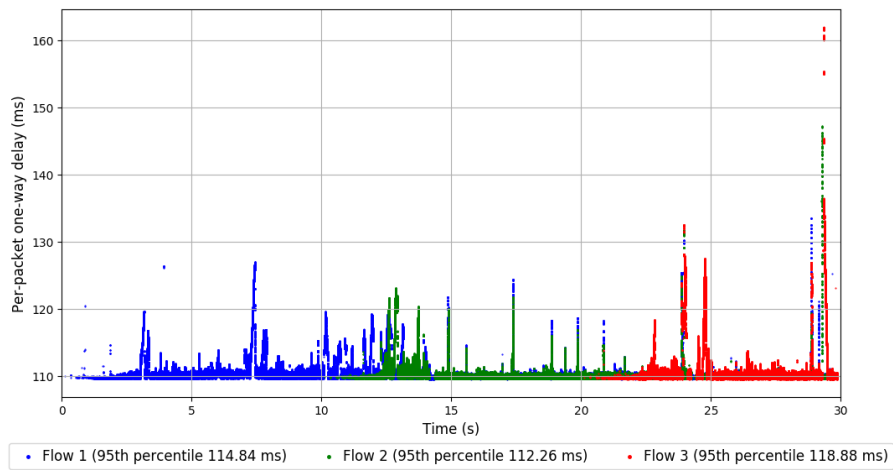
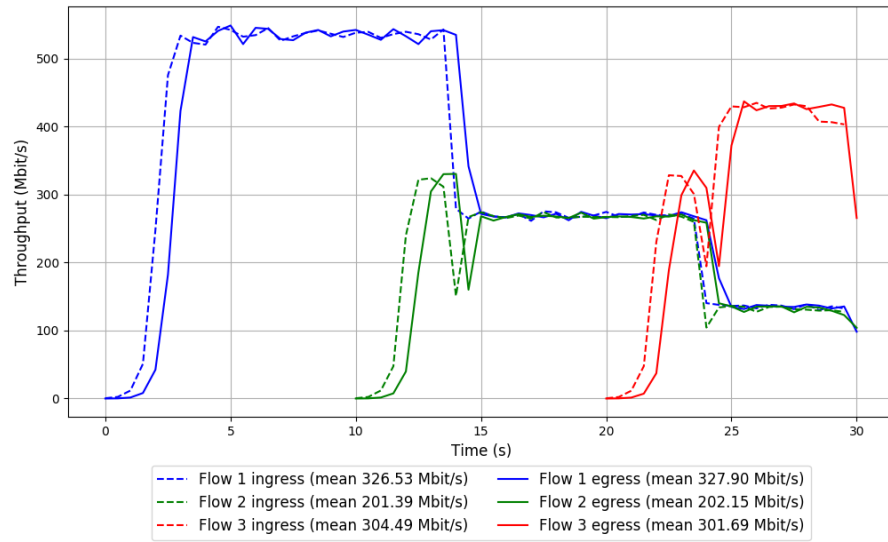


Run 2: Statistics of TCP Vegas

Start at: 2019-03-27 00:07:24  
End at: 2019-03-27 00:07:54  
Local clock offset: 0.163 ms  
Remote clock offset: -0.066 ms

# Below is generated by plot.py at 2019-03-27 05:03:47  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 560.85 Mbit/s  
95th percentile per-packet one-way delay: 114.708 ms  
Loss rate: 0.91%  
-- Flow 1:  
Average throughput: 327.90 Mbit/s  
95th percentile per-packet one-way delay: 114.836 ms  
Loss rate: 0.31%  
-- Flow 2:  
Average throughput: 202.15 Mbit/s  
95th percentile per-packet one-way delay: 112.260 ms  
Loss rate: 0.73%  
-- Flow 3:  
Average throughput: 301.69 Mbit/s  
95th percentile per-packet one-way delay: 118.879 ms  
Loss rate: 3.10%

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

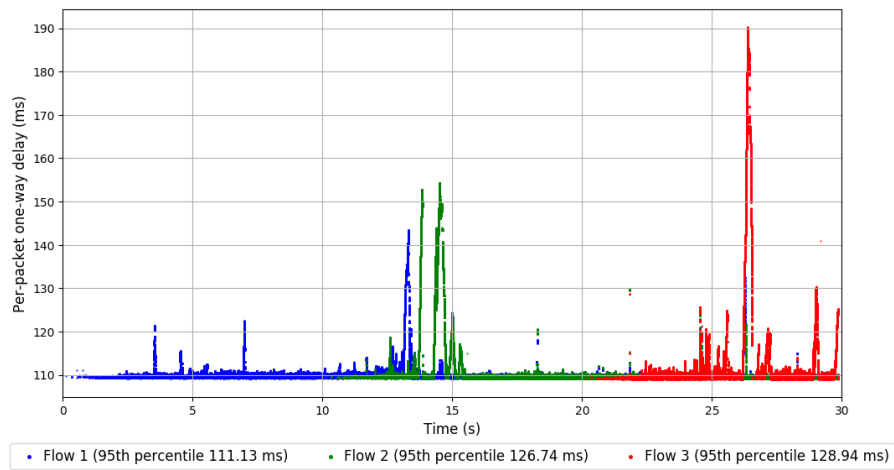
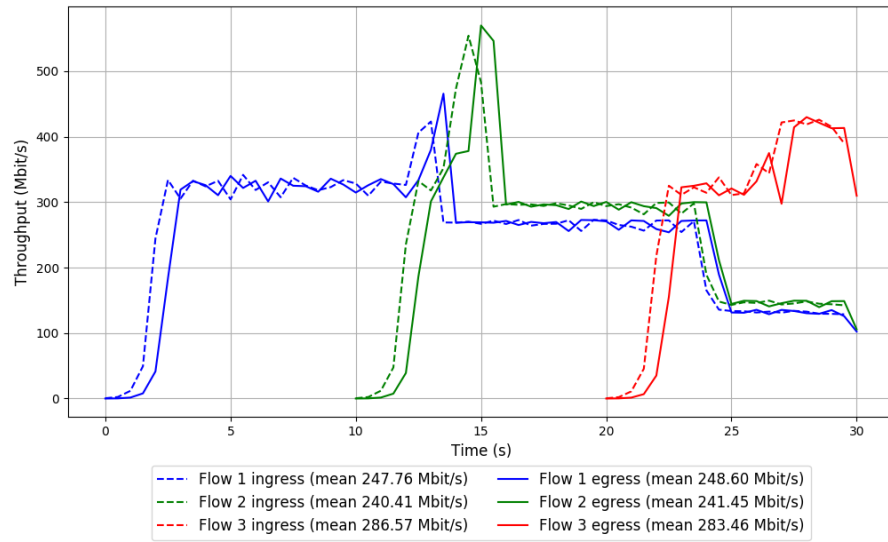


Run 3: Statistics of TCP Vegas

Start at: 2019-03-27 00:48:39  
End at: 2019-03-27 00:49:09  
Local clock offset: -0.0 ms  
Remote clock offset: -0.059 ms

# Below is generated by plot.py at 2019-03-27 05:03:47  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 501.60 Mbit/s  
95th percentile per-packet one-way delay: 117.654 ms  
Loss rate: 1.02%  
-- Flow 1:  
Average throughput: 248.60 Mbit/s  
95th percentile per-packet one-way delay: 111.133 ms  
Loss rate: 0.39%  
-- Flow 2:  
Average throughput: 241.45 Mbit/s  
95th percentile per-packet one-way delay: 126.739 ms  
Loss rate: 0.67%  
-- Flow 3:  
Average throughput: 283.46 Mbit/s  
95th percentile per-packet one-way delay: 128.940 ms  
Loss rate: 3.27%

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



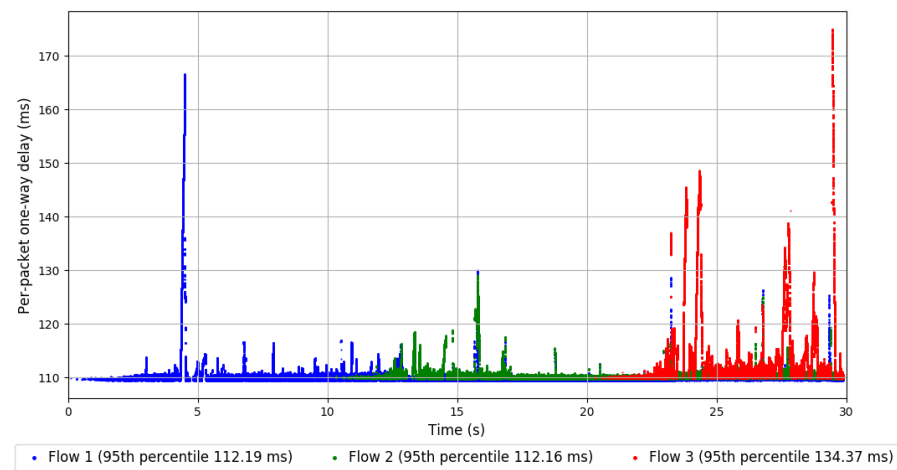
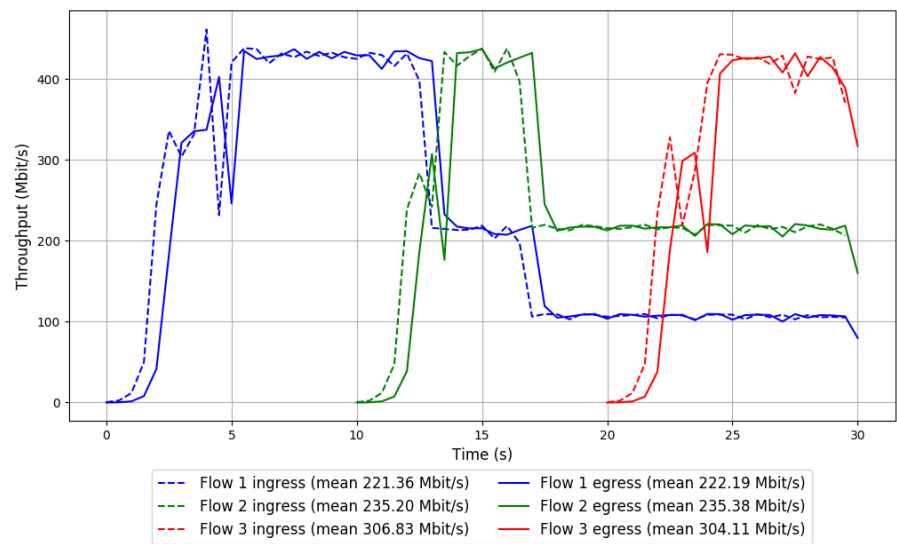


Run 4: Statistics of TCP Vegas

Start at: 2019-03-27 01:27:57  
End at: 2019-03-27 01:28:27  
Local clock offset: 0.136 ms  
Remote clock offset: -0.184 ms

# Below is generated by plot.py at 2019-03-27 05:03:54  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 477.95 Mbit/s  
95th percentile per-packet one-way delay: 116.151 ms  
Loss rate: 1.15%  
-- Flow 1:  
Average throughput: 222.19 Mbit/s  
95th percentile per-packet one-way delay: 112.186 ms  
Loss rate: 0.36%  
-- Flow 2:  
Average throughput: 235.38 Mbit/s  
95th percentile per-packet one-way delay: 112.163 ms  
Loss rate: 1.02%  
-- Flow 3:  
Average throughput: 304.11 Mbit/s  
95th percentile per-packet one-way delay: 134.374 ms  
Loss rate: 3.08%

Run 4: Report of TCP Vegas — Data Link

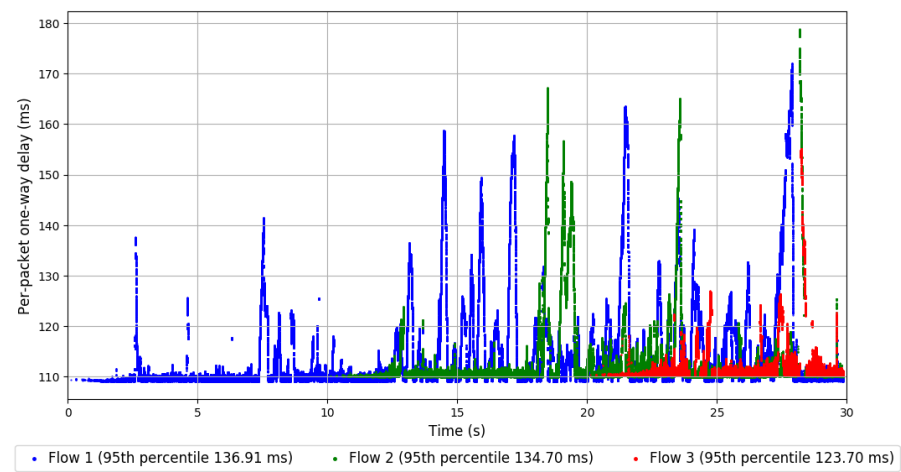
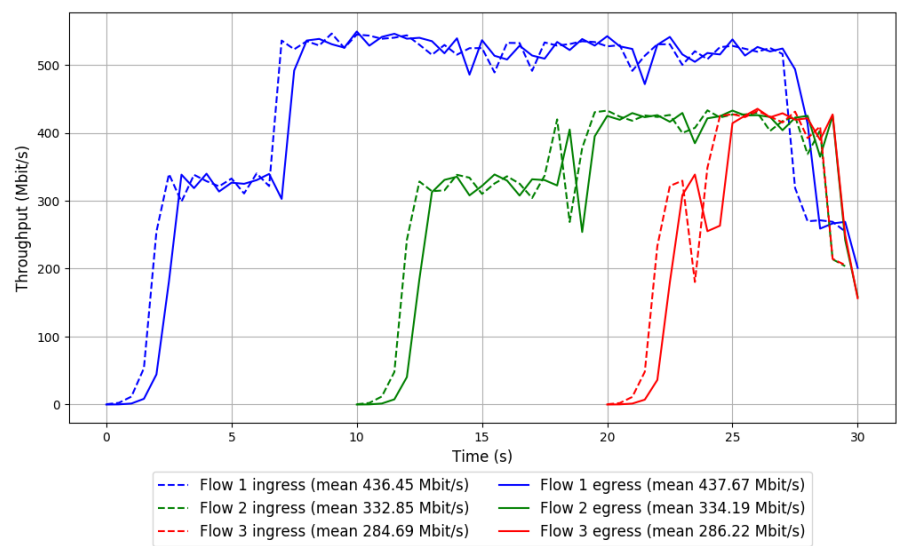


Run 5: Statistics of TCP Vegas

Start at: 2019-03-27 02:09:04  
End at: 2019-03-27 02:09:34  
Local clock offset: 0.738 ms  
Remote clock offset: -0.061 ms

# Below is generated by plot.py at 2019-03-27 05:10:18  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 753.20 Mbit/s  
95th percentile per-packet one-way delay: 134.987 ms  
Loss rate: 0.68%  
-- Flow 1:  
Average throughput: 437.67 Mbit/s  
95th percentile per-packet one-way delay: 136.914 ms  
Loss rate: 0.45%  
-- Flow 2:  
Average throughput: 334.19 Mbit/s  
95th percentile per-packet one-way delay: 134.696 ms  
Loss rate: 0.71%  
-- Flow 3:  
Average throughput: 286.22 Mbit/s  
95th percentile per-packet one-way delay: 123.705 ms  
Loss rate: 1.67%

Run 5: Report of TCP Vegas — Data Link

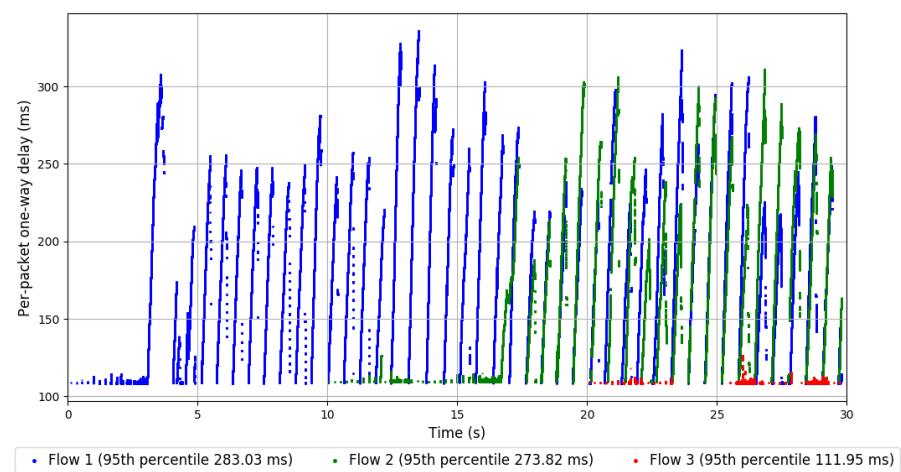
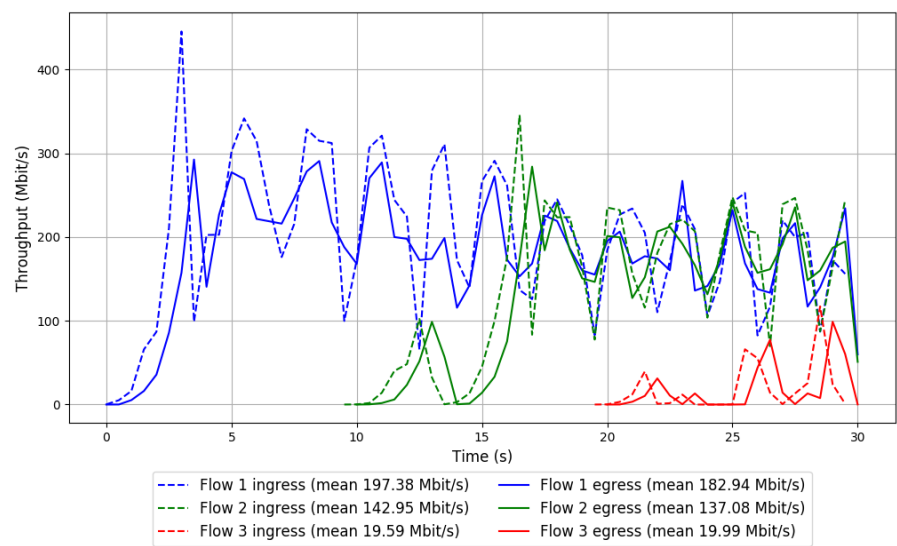


Run 1: Statistics of Verus

Start at: 2019-03-26 23:56:12  
End at: 2019-03-26 23:56:42  
Local clock offset: -0.12 ms  
Remote clock offset: -0.065 ms

# Below is generated by plot.py at 2019-03-27 05:10:18  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 280.57 Mbit/s  
95th percentile per-packet one-way delay: 280.094 ms  
Loss rate: 6.81%  
-- Flow 1:  
Average throughput: 182.94 Mbit/s  
95th percentile per-packet one-way delay: 283.028 ms  
Loss rate: 7.99%  
-- Flow 2:  
Average throughput: 137.08 Mbit/s  
95th percentile per-packet one-way delay: 273.822 ms  
Loss rate: 4.80%  
-- Flow 3:  
Average throughput: 19.99 Mbit/s  
95th percentile per-packet one-way delay: 111.954 ms  
Loss rate: 0.20%

Run 1: Report of Verus — Data Link

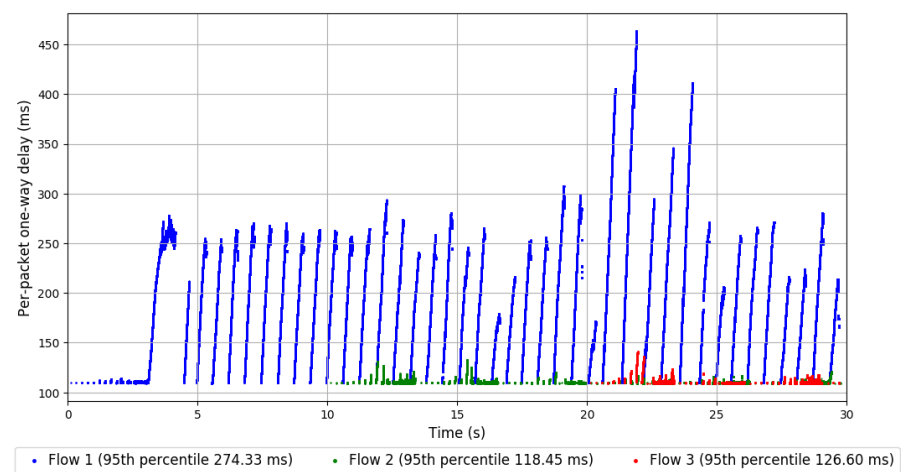
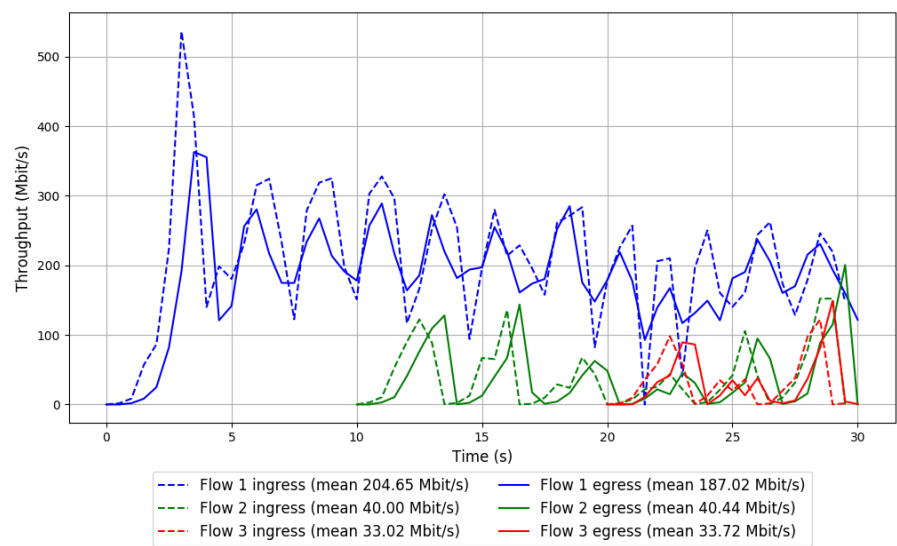


Run 2: Statistics of Verus

Start at: 2019-03-27 00:38:10  
End at: 2019-03-27 00:38:40  
Local clock offset: -0.011 ms  
Remote clock offset: -0.064 ms

# Below is generated by plot.py at 2019-03-27 05:10:18  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 224.32 Mbit/s  
95th percentile per-packet one-way delay: 270.371 ms  
Loss rate: 8.23%  
-- Flow 1:  
Average throughput: 187.02 Mbit/s  
95th percentile per-packet one-way delay: 274.331 ms  
Loss rate: 9.72%  
-- Flow 2:  
Average throughput: 40.44 Mbit/s  
95th percentile per-packet one-way delay: 118.454 ms  
Loss rate: 0.01%  
-- Flow 3:  
Average throughput: 33.72 Mbit/s  
95th percentile per-packet one-way delay: 126.596 ms  
Loss rate: 0.15%

Run 2: Report of Verus — Data Link



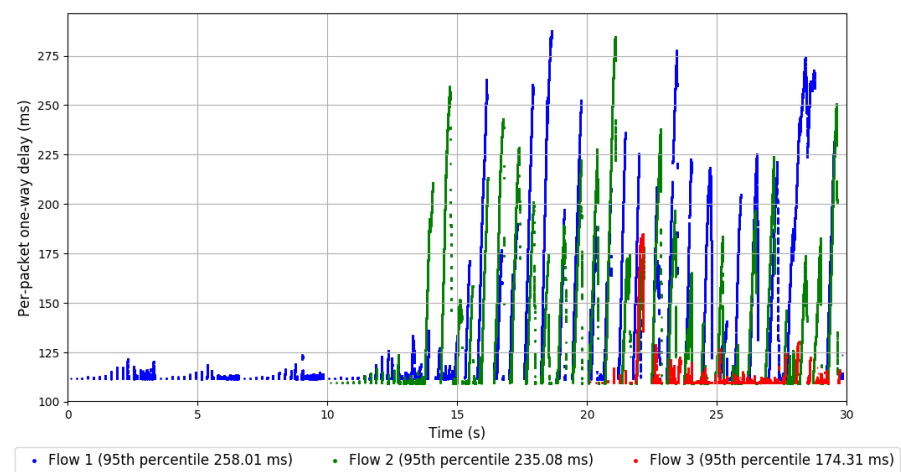
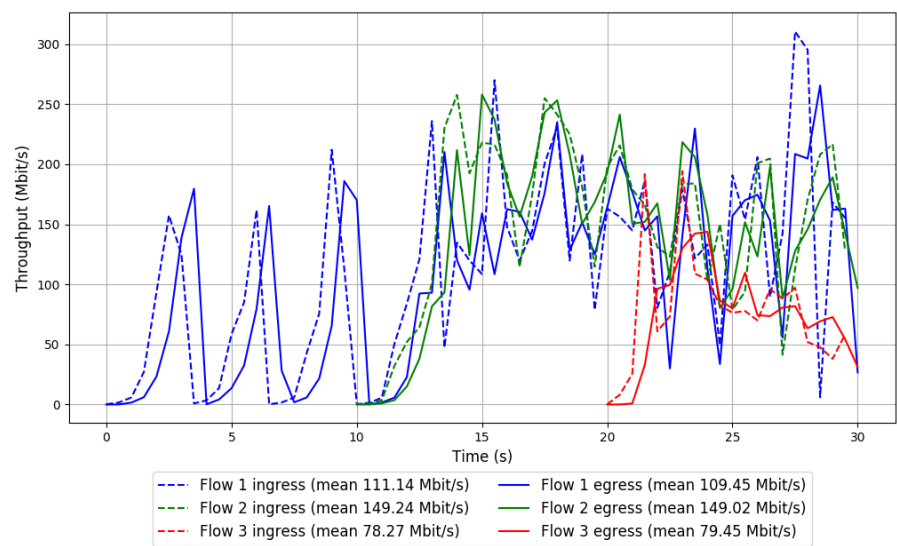


Run 3: Statistics of Verus

Start at: 2019-03-27 01:17:09  
End at: 2019-03-27 01:17:39  
Local clock offset: -0.025 ms  
Remote clock offset: -0.155 ms

# Below is generated by plot.py at 2019-03-27 05:10:18  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 232.93 Mbit/s  
95th percentile per-packet one-way delay: 245.506 ms  
Loss rate: 2.20%  
-- Flow 1:  
Average throughput: 109.45 Mbit/s  
95th percentile per-packet one-way delay: 258.006 ms  
Loss rate: 2.25%  
-- Flow 2:  
Average throughput: 149.02 Mbit/s  
95th percentile per-packet one-way delay: 235.079 ms  
Loss rate: 2.27%  
-- Flow 3:  
Average throughput: 79.45 Mbit/s  
95th percentile per-packet one-way delay: 174.310 ms  
Loss rate: 1.76%

Run 3: Report of Verus — Data Link

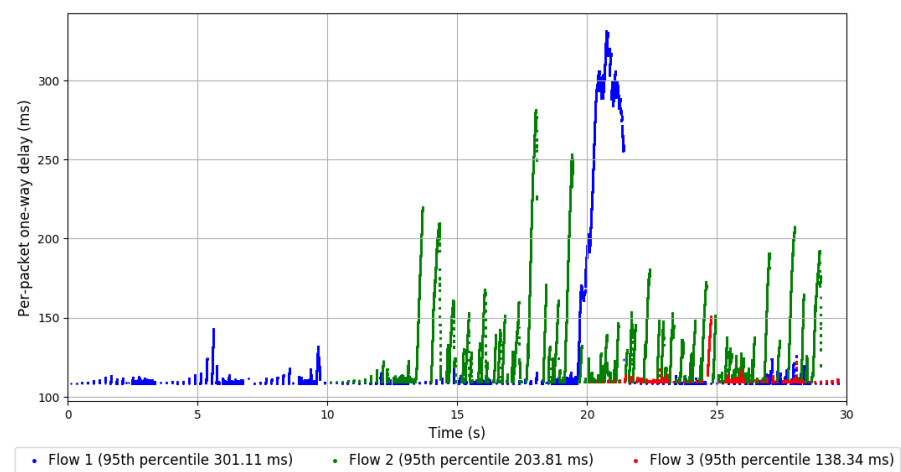
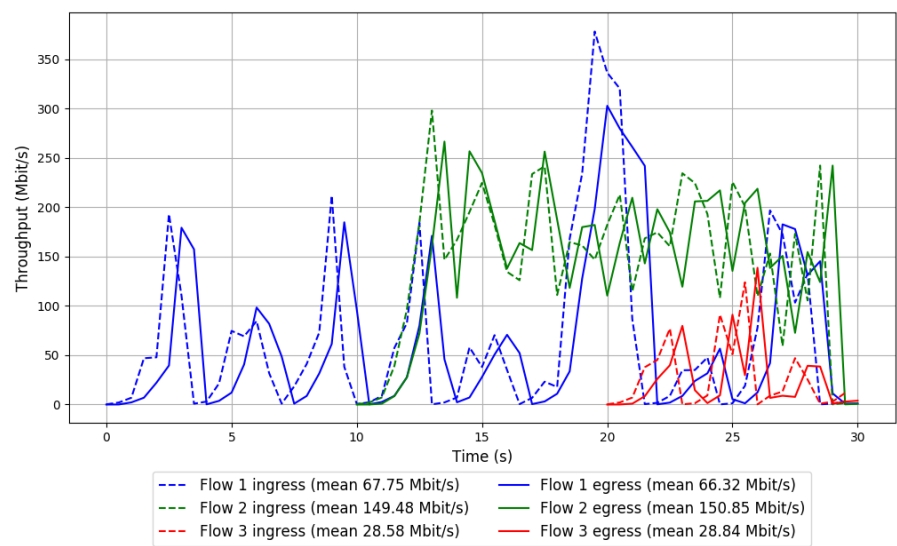


Run 4: Statistics of Verus

Start at: 2019-03-27 01:58:06  
End at: 2019-03-27 01:58:36  
Local clock offset: -0.065 ms  
Remote clock offset: -0.131 ms

# Below is generated by plot.py at 2019-03-27 05:10:18  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 175.32 Mbit/s  
95th percentile per-packet one-way delay: 282.084 ms  
Loss rate: 1.28%  
-- Flow 1:  
Average throughput: 66.32 Mbit/s  
95th percentile per-packet one-way delay: 301.107 ms  
Loss rate: 2.83%  
-- Flow 2:  
Average throughput: 150.85 Mbit/s  
95th percentile per-packet one-way delay: 203.812 ms  
Loss rate: 0.20%  
-- Flow 3:  
Average throughput: 28.84 Mbit/s  
95th percentile per-packet one-way delay: 138.339 ms  
Loss rate: 1.42%

Run 4: Report of Verus — Data Link

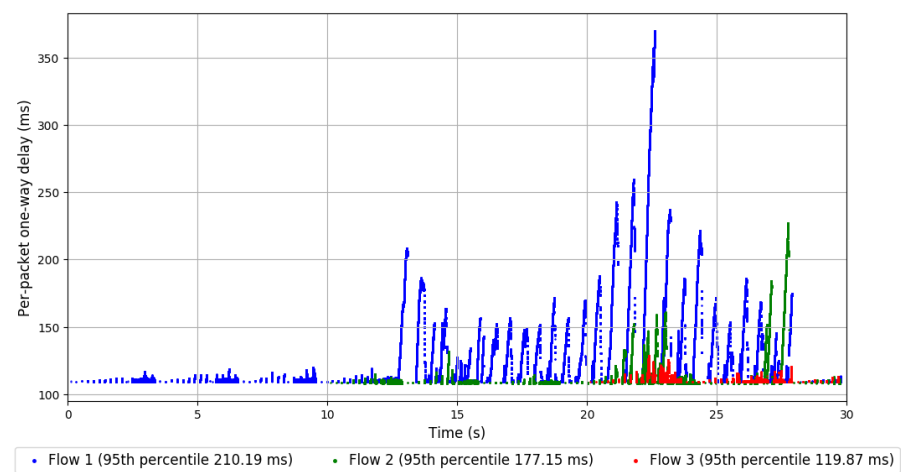
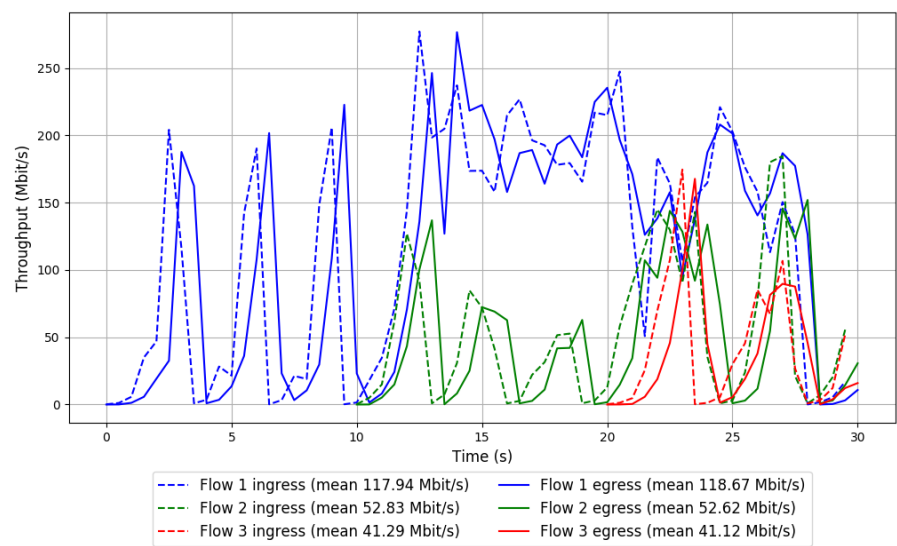


Run 5: Statistics of Verus

Start at: 2019-03-27 02:39:04  
End at: 2019-03-27 02:39:34  
Local clock offset: -0.125 ms  
Remote clock offset: -0.109 ms

# Below is generated by plot.py at 2019-03-27 05:10:18  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 166.72 Mbit/s  
95th percentile per-packet one-way delay: 204.197 ms  
Loss rate: 0.82%  
-- Flow 1:  
Average throughput: 118.67 Mbit/s  
95th percentile per-packet one-way delay: 210.185 ms  
Loss rate: 0.14%  
-- Flow 2:  
Average throughput: 52.62 Mbit/s  
95th percentile per-packet one-way delay: 177.147 ms  
Loss rate: 1.69%  
-- Flow 3:  
Average throughput: 41.12 Mbit/s  
95th percentile per-packet one-way delay: 119.873 ms  
Loss rate: 4.41%

Run 5: Report of Verus — Data Link



Run 1: Statistics of PCC-Vivace

Start at: 2019-03-26 23:22:49

End at: 2019-03-26 23:23:19

Local clock offset: -0.718 ms

Remote clock offset: 0.353 ms

# Below is generated by plot.py at 2019-03-27 05:11:39

# Datalink statistics

-- Total of 3 flows:

Average throughput: 447.34 Mbit/s

95th percentile per-packet one-way delay: 114.012 ms

Loss rate: 1.35%

-- Flow 1:

Average throughput: 276.24 Mbit/s

95th percentile per-packet one-way delay: 113.457 ms

Loss rate: 0.97%

-- Flow 2:

Average throughput: 194.35 Mbit/s

95th percentile per-packet one-way delay: 110.425 ms

Loss rate: 1.38%

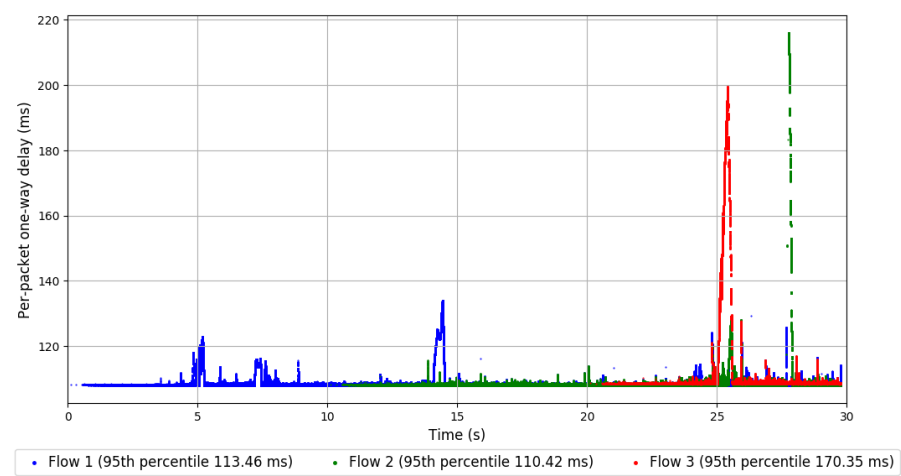
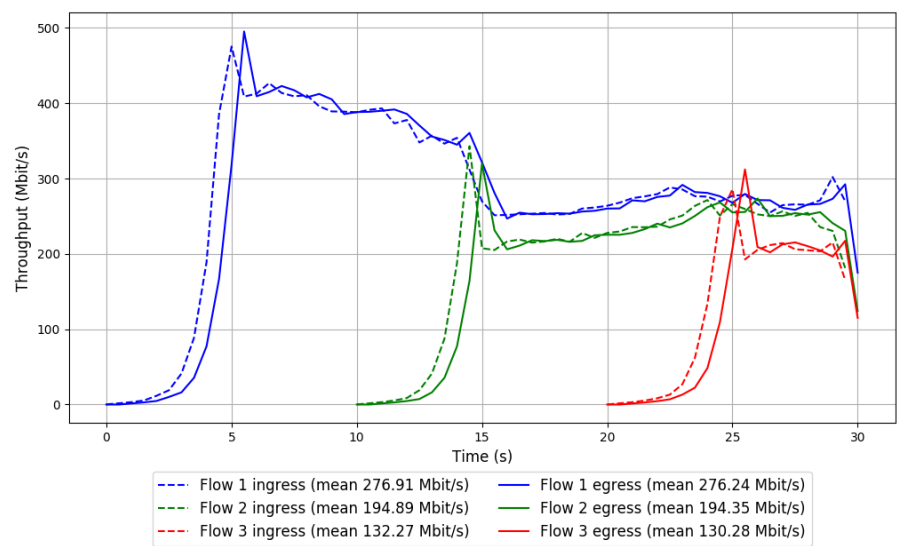
-- Flow 3:

Average throughput: 130.28 Mbit/s

95th percentile per-packet one-way delay: 170.353 ms

Loss rate: 3.71%

Run 1: Report of PCC-Vivace — Data Link





Run 2: Statistics of PCC-Vivace

Start at: 2019-03-27 00:05:08

End at: 2019-03-27 00:05:38

Local clock offset: -0.077 ms

Remote clock offset: -0.07 ms

# Below is generated by plot.py at 2019-03-27 05:11:39

# Datalink statistics

-- Total of 3 flows:

Average throughput: 431.21 Mbit/s

95th percentile per-packet one-way delay: 118.892 ms

Loss rate: 1.06%

-- Flow 1:

Average throughput: 284.78 Mbit/s

95th percentile per-packet one-way delay: 126.061 ms

Loss rate: 0.80%

-- Flow 2:

Average throughput: 184.94 Mbit/s

95th percentile per-packet one-way delay: 109.641 ms

Loss rate: 1.31%

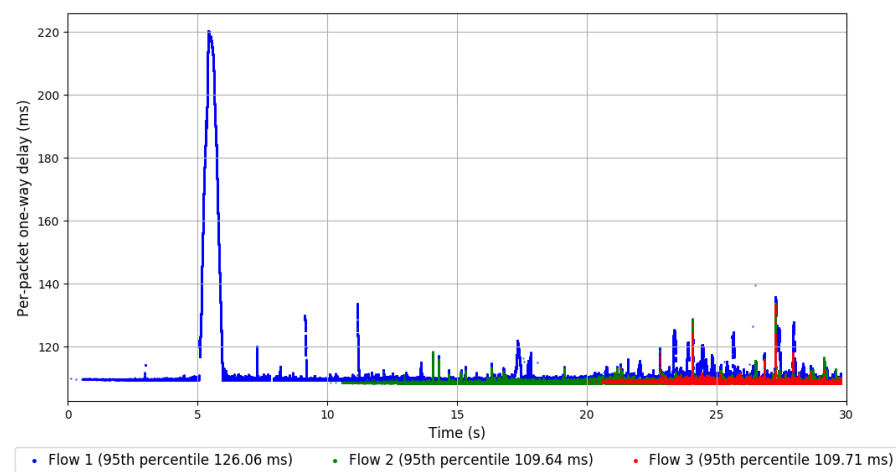
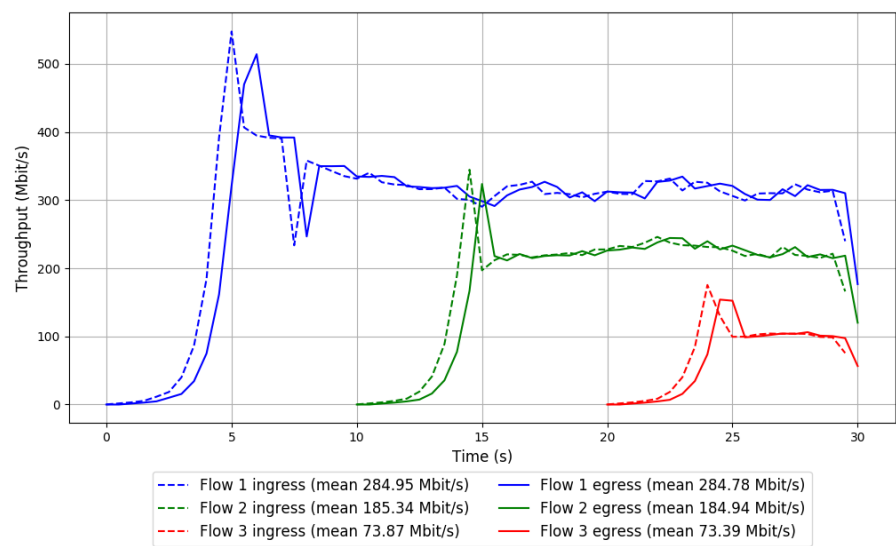
-- Flow 3:

Average throughput: 73.39 Mbit/s

95th percentile per-packet one-way delay: 109.707 ms

Loss rate: 2.86%

Run 2: Report of PCC-Vivace — Data Link

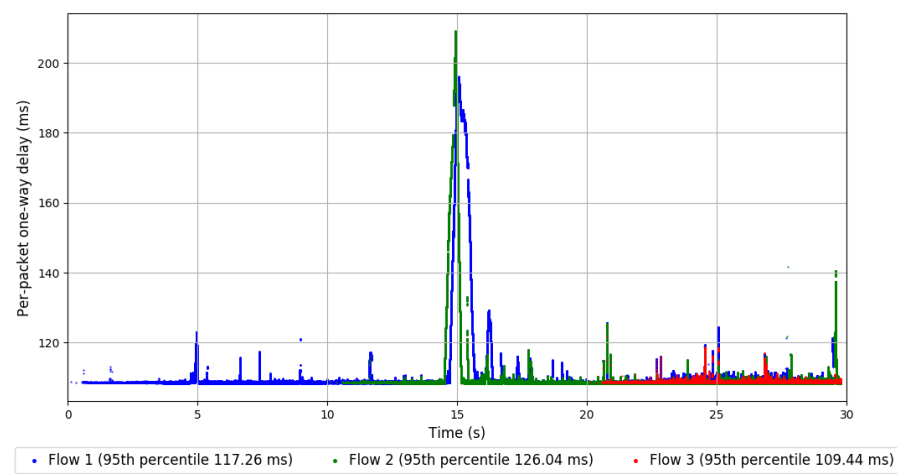
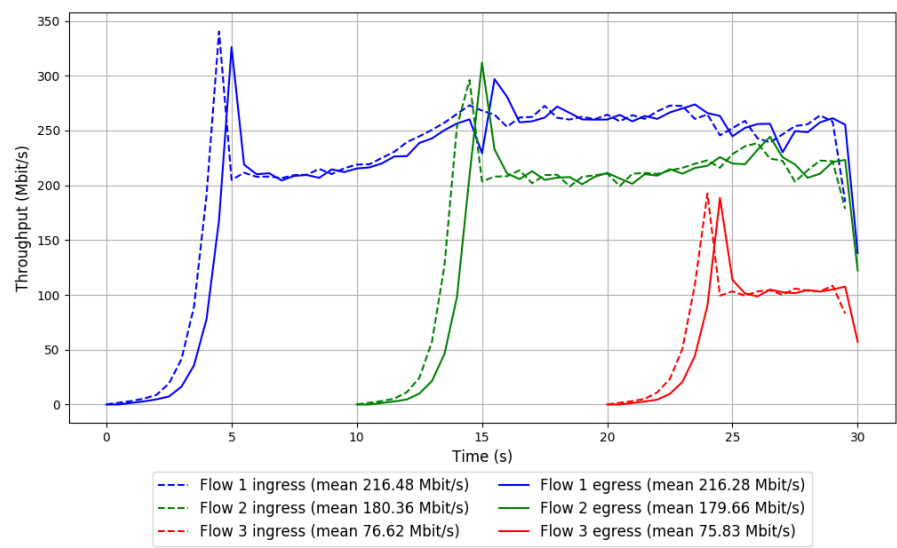


Run 3: Statistics of PCC-Vivace

Start at: 2019-03-27 00:46:22  
End at: 2019-03-27 00:46:52  
Local clock offset: -0.767 ms  
Remote clock offset: -0.054 ms

# Below is generated by plot.py at 2019-03-27 05:11:39  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 359.94 Mbit/s  
95th percentile per-packet one-way delay: 117.080 ms  
Loss rate: 1.22%  
-- Flow 1:  
Average throughput: 216.28 Mbit/s  
95th percentile per-packet one-way delay: 117.262 ms  
Loss rate: 0.84%  
-- Flow 2:  
Average throughput: 179.66 Mbit/s  
95th percentile per-packet one-way delay: 126.038 ms  
Loss rate: 1.49%  
-- Flow 3:  
Average throughput: 75.83 Mbit/s  
95th percentile per-packet one-way delay: 109.437 ms  
Loss rate: 3.24%

Run 3: Report of PCC-Vivace — Data Link

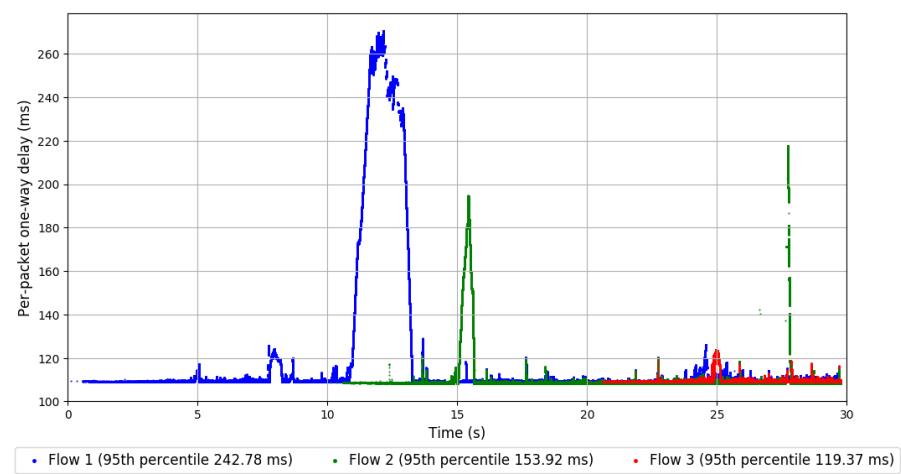
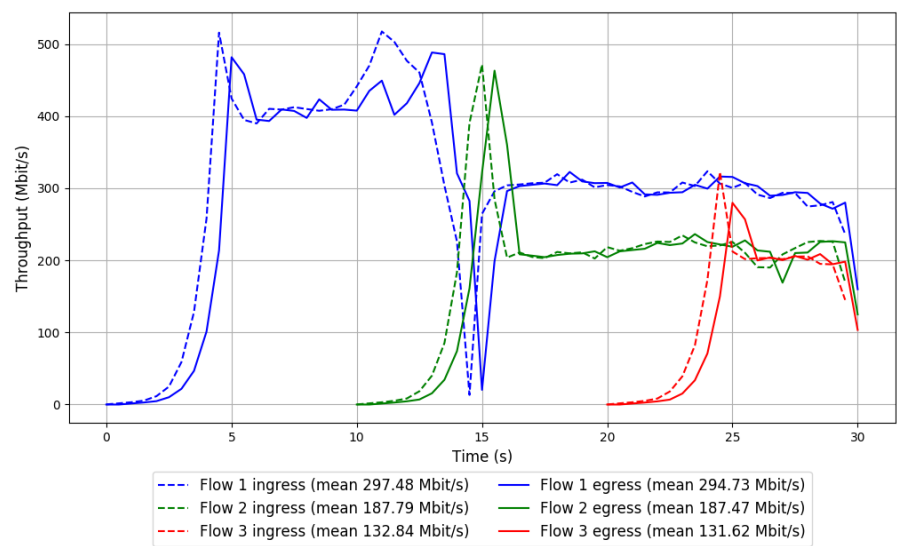


Run 4: Statistics of PCC-Vivace

Start at: 2019-03-27 01:25:55  
End at: 2019-03-27 01:26:25  
Local clock offset: -0.24 ms  
Remote clock offset: -0.184 ms

# Below is generated by plot.py at 2019-03-27 05:12:26  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 461.66 Mbit/s  
95th percentile per-packet one-way delay: 212.262 ms  
Loss rate: 1.69%  
-- Flow 1:  
Average throughput: 294.73 Mbit/s  
95th percentile per-packet one-way delay: 242.783 ms  
Loss rate: 1.66%  
-- Flow 2:  
Average throughput: 187.47 Mbit/s  
95th percentile per-packet one-way delay: 153.919 ms  
Loss rate: 1.27%  
-- Flow 3:  
Average throughput: 131.62 Mbit/s  
95th percentile per-packet one-way delay: 119.371 ms  
Loss rate: 3.13%

Run 4: Report of PCC-Vivace — Data Link

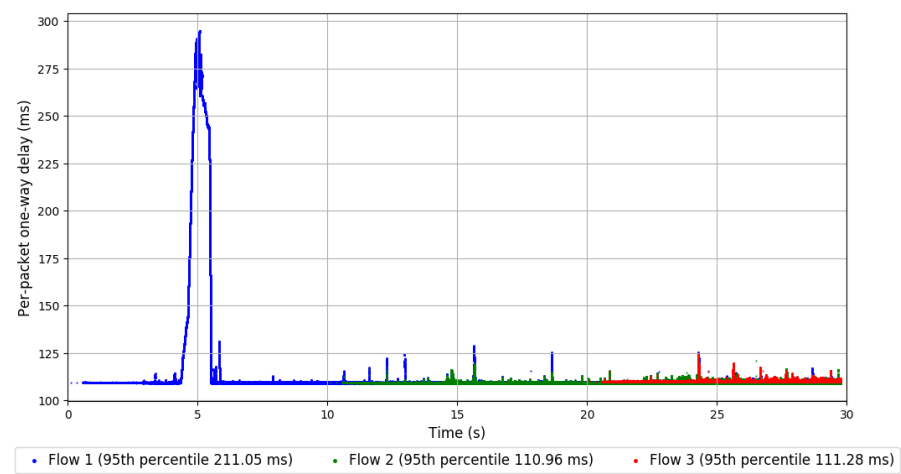
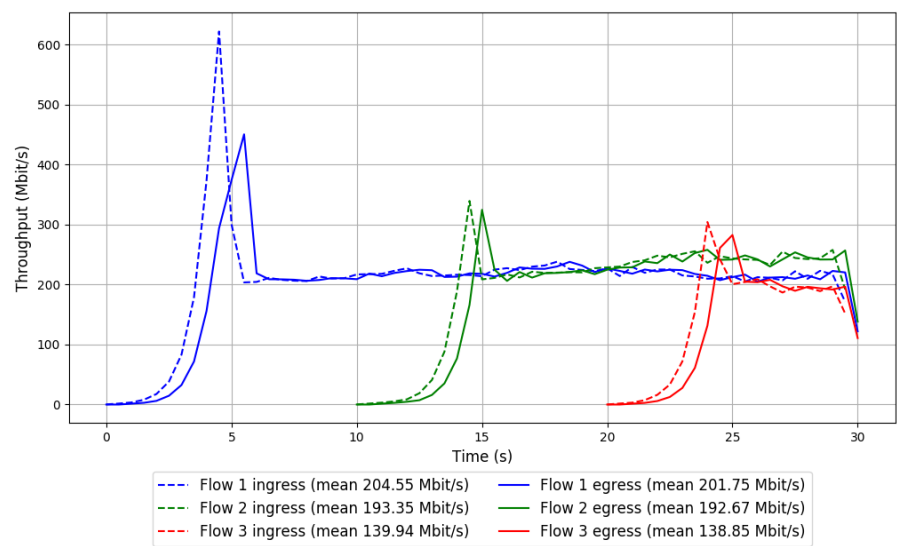


Run 5: Statistics of PCC-Vivace

Start at: 2019-03-27 02:07:08  
End at: 2019-03-27 02:07:38  
Local clock offset: 0.863 ms  
Remote clock offset: -0.097 ms

# Below is generated by plot.py at 2019-03-27 05:12:27  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 374.58 Mbit/s  
95th percentile per-packet one-way delay: 113.996 ms  
Loss rate: 1.98%  
-- Flow 1:  
Average throughput: 201.75 Mbit/s  
95th percentile per-packet one-way delay: 211.051 ms  
Loss rate: 2.09%  
-- Flow 2:  
Average throughput: 192.67 Mbit/s  
95th percentile per-packet one-way delay: 110.957 ms  
Loss rate: 1.45%  
-- Flow 3:  
Average throughput: 138.85 Mbit/s  
95th percentile per-packet one-way delay: 111.276 ms  
Loss rate: 2.98%

Run 5: Report of PCC-Vivace — Data Link



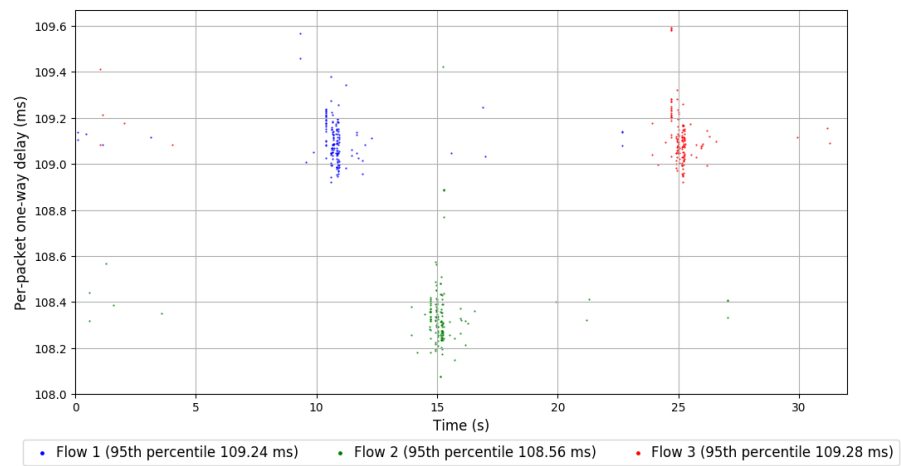
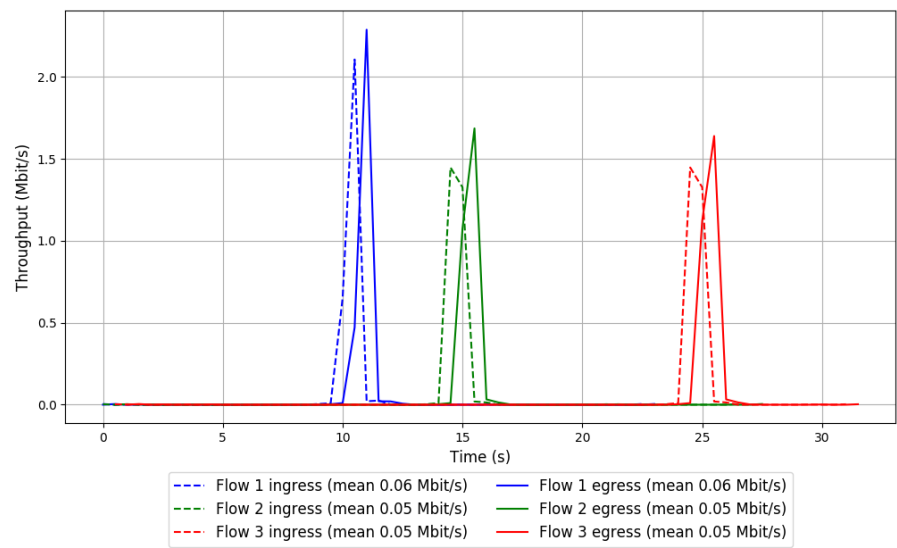


Run 1: Statistics of WebRTC media

Start at: 2019-03-26 23:46:32  
End at: 2019-03-26 23:47:02  
Local clock offset: -0.215 ms  
Remote clock offset: -0.016 ms

# Below is generated by plot.py at 2019-03-27 05:12:27  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.14 Mbit/s  
95th percentile per-packet one-way delay: 109.240 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.06 Mbit/s  
95th percentile per-packet one-way delay: 109.240 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 108.565 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 109.283 ms  
Loss rate: 0.00%

Run 1: Report of WebRTC media — Data Link

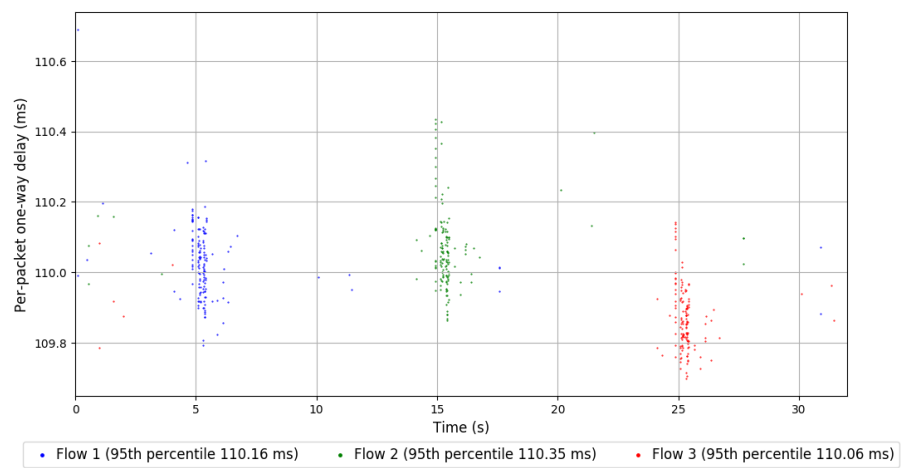
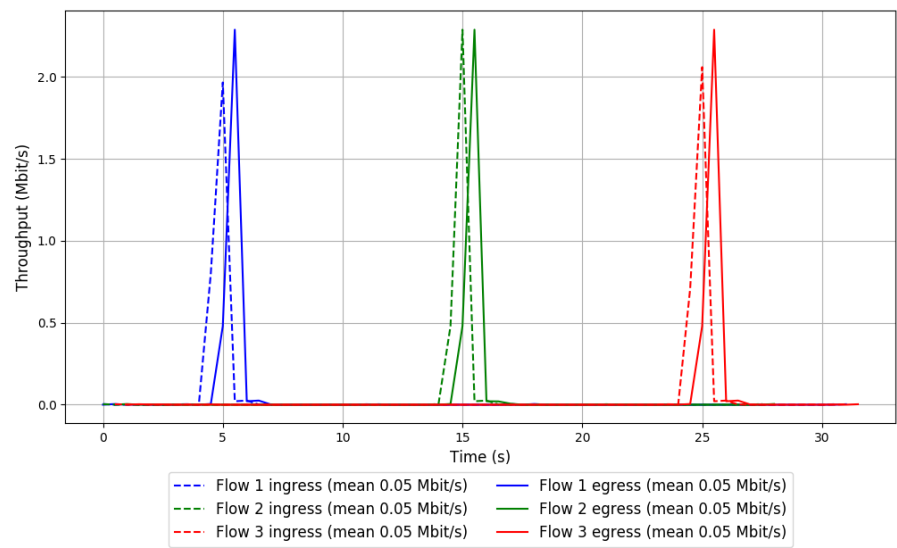


Run 2: Statistics of WebRTC media

Start at: 2019-03-27 00:28:24  
End at: 2019-03-27 00:28:54  
Local clock offset: 0.033 ms  
Remote clock offset: -0.437 ms

# Below is generated by plot.py at 2019-03-27 05:12:27  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.14 Mbit/s  
95th percentile per-packet one-way delay: 110.187 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 110.163 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 110.352 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 110.065 ms  
Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link

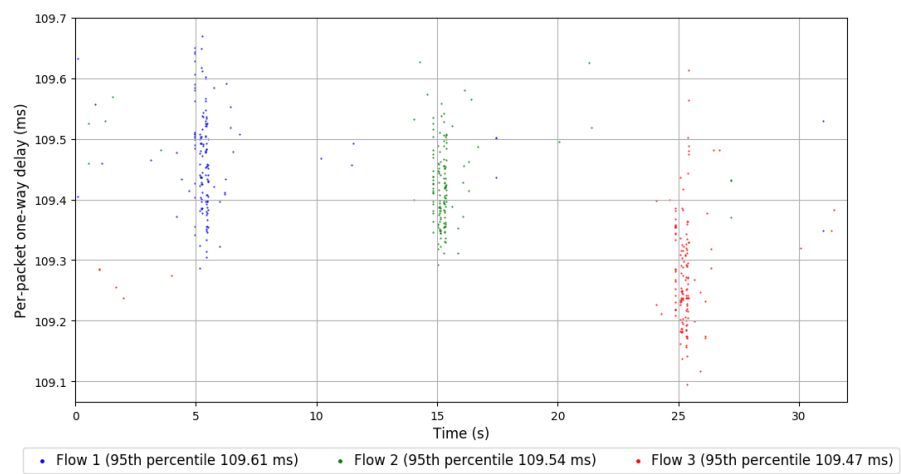
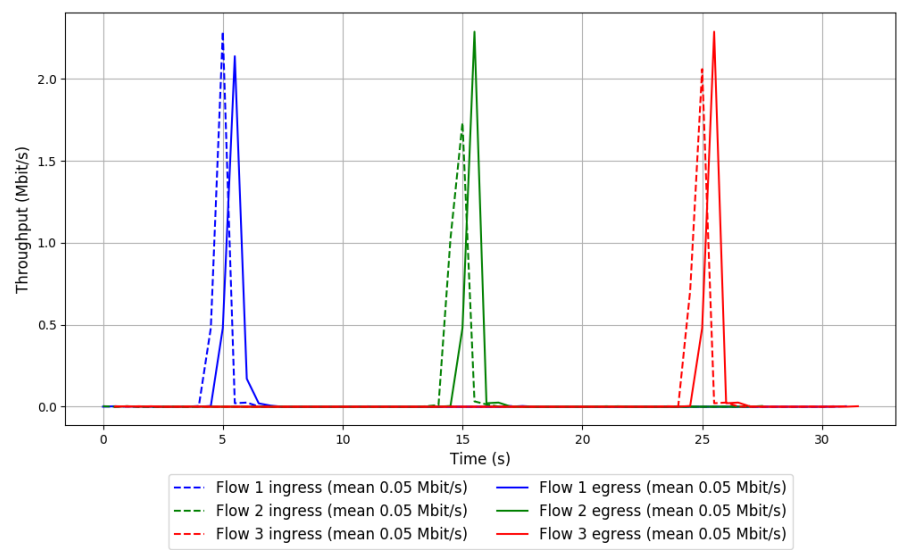


Run 3: Statistics of WebRTC media

Start at: 2019-03-27 01:08:20  
End at: 2019-03-27 01:08:50  
Local clock offset: -0.243 ms  
Remote clock offset: -0.131 ms

# Below is generated by plot.py at 2019-03-27 05:12:27  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.14 Mbit/s  
95th percentile per-packet one-way delay: 109.570 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 109.612 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 109.542 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 109.475 ms  
Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2019-03-27 01:49:17

End at: 2019-03-27 01:49:47

Local clock offset: -0.072 ms

Remote clock offset: 0.271 ms

# Below is generated by plot.py at 2019-03-27 05:12:27

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 111.085 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 109.072 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 111.224 ms

Loss rate: 0.00%

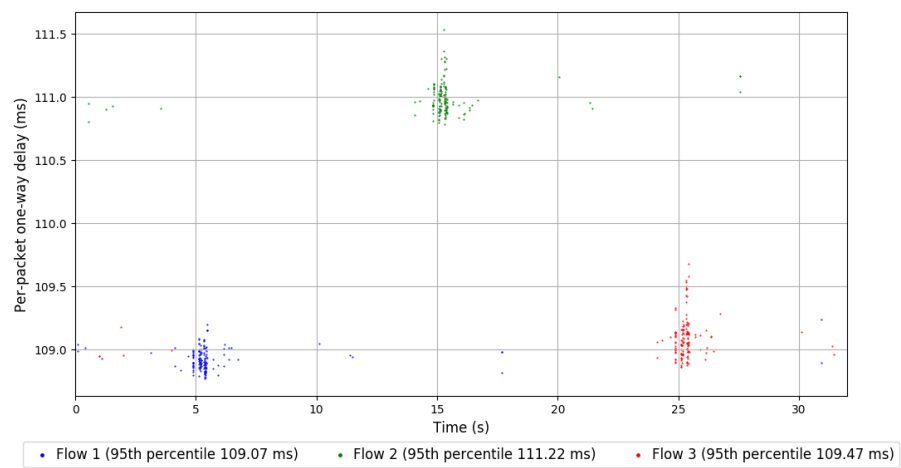
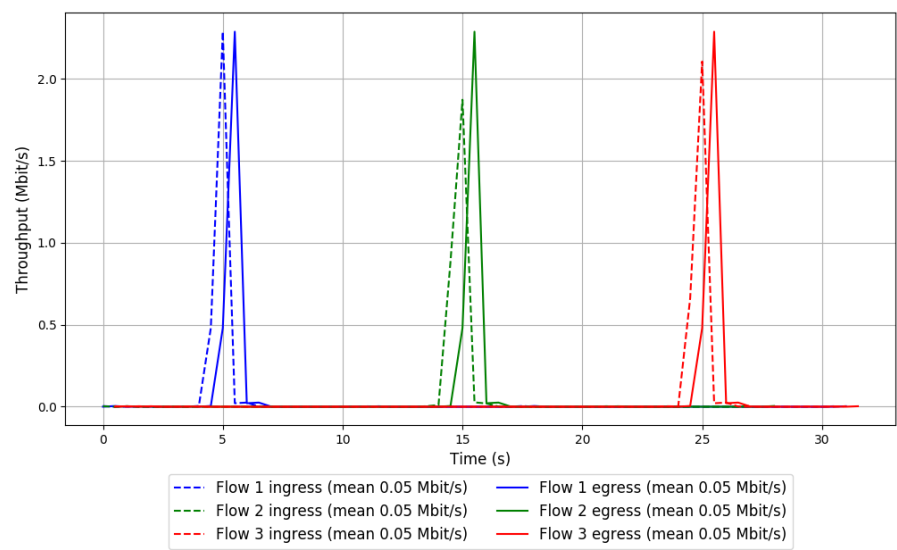
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 109.473 ms

Loss rate: 0.00%

Run 4: Report of WebRTC media — Data Link





Run 5: Statistics of WebRTC media

Start at: 2019-03-27 02:30:11  
End at: 2019-03-27 02:30:41  
Local clock offset: 0.125 ms  
Remote clock offset: -0.114 ms

# Below is generated by plot.py at 2019-03-27 05:12:27  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.14 Mbit/s  
95th percentile per-packet one-way delay: 110.164 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 110.182 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 109.747 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 110.270 ms  
Loss rate: 0.00%

Run 5: Report of WebRTC media — Data Link

