

## Pantheon Report

Generated at 2019-06-27 11:00:09 (UTC).

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

Repeated the test of 22 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:

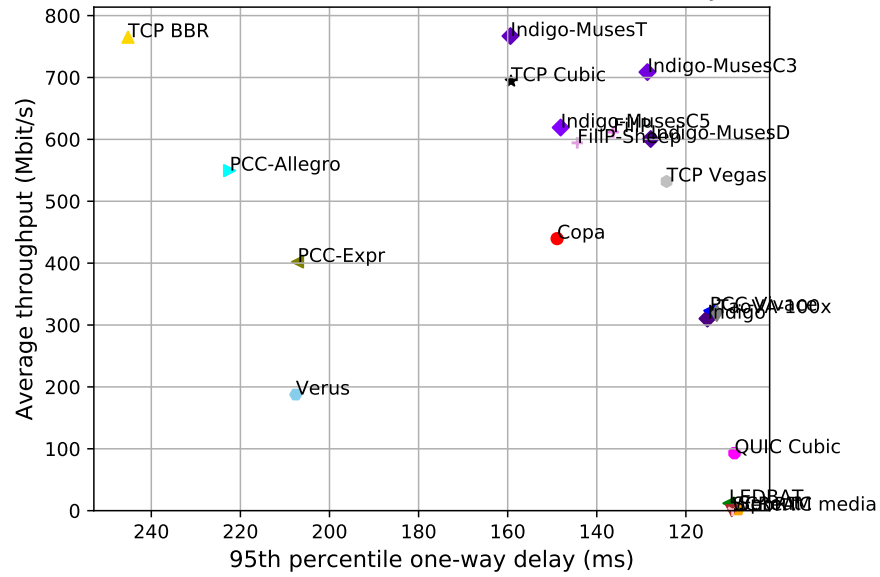
```
Linux 4.15.0-1032-gcp
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

### Git summary:

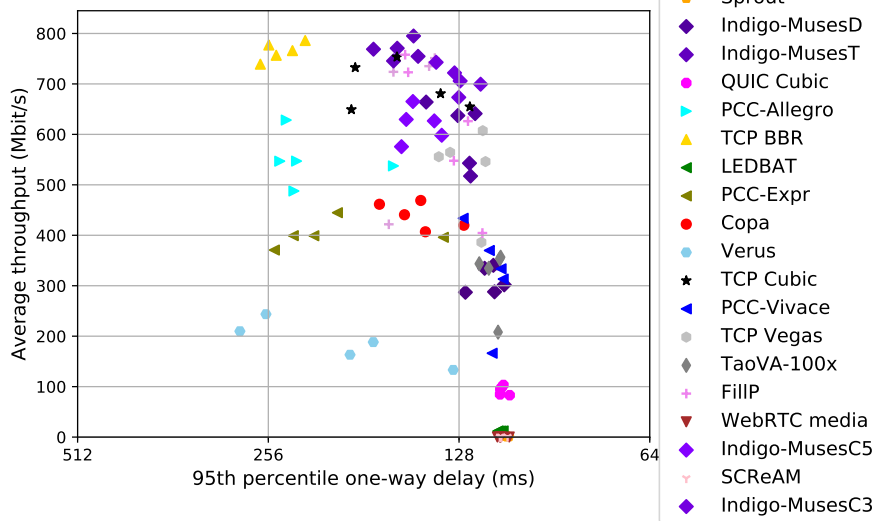
```
branch: muses @ c3953d08f32ec7ebbdede2d2f0cbdeed262571ef
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf5e58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecd90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 5ce721187ad823da20955337730c746486ca4966
third_party/muses_dtree @ 11c9498ecb1596b02ccd896791a02d03172af7ed
M helpers/__init__.pyc
M helpers/context.pyc
M helpers/utils.pyc
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)



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



scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	5	414.09	376.30	309.15	241.36	246.88	220.65	3.41	3.40	3.83
Copa	5	241.72	212.74	173.26	142.75	155.34	127.74	0.77	1.30	3.07
TCP Cubic	5	381.05	319.65	308.26	145.04	136.49	187.35	0.81	1.34	3.46
FillP	5	316.83	325.43	243.10	146.11	115.03	115.46	1.56	1.03	2.57
FillP-Sheep	5	316.14	304.81	233.48	150.85	122.70	113.75	1.39	1.06	2.37
Indigo	5	169.35	148.66	131.29	115.23	115.49	114.21	0.80	1.28	2.85
Indigo-MusesC3	5	417.70	351.56	254.58	129.89	132.83	115.05	0.70	1.16	4.10
Indigo-MusesC5	5	355.41	350.29	147.14	147.60	155.02	110.90	0.49	1.19	4.82
Indigo-MusesD	5	374.78	304.92	115.68	130.49	124.02	110.02	0.88	1.60	3.90
Indigo-MusesT	5	466.24	390.04	193.70	168.28	140.25	115.95	0.70	1.23	3.52
LEDBAT	5	7.77	5.09	2.49	109.60	109.71	109.43	1.47	2.23	4.45
Muses_DecisionTree	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PCC-Allegro	5	307.22	250.53	235.46	201.41	181.68	246.68	6.04	3.56	5.82
PCC-Expr	5	247.29	157.74	154.54	212.05	149.72	181.27	2.88	1.85	3.68
QUIC Cubic	5	50.44	45.76	36.45	107.37	108.23	108.93	1.05	1.80	3.94
SCReAM	5	0.22	0.22	0.22	107.59	108.23	108.30	0.72	1.25	2.08
Sprout	5	0.50	1.11	0.48	107.13	108.01	107.13	0.67	1.01	2.02
TaoVA-100x	5	184.97	141.87	122.80	111.46	114.33	117.33	0.80	1.22	2.21
TCP Vegas	5	282.57	272.34	209.66	122.47	117.04	146.63	0.66	1.13	2.71
Verus	5	90.61	109.05	77.03	182.83	196.19	187.33	1.16	1.62	2.83
PCC-Vivace	5	195.65	143.27	100.63	115.67	112.43	122.55	1.09	1.97	4.90
WebRTC media	5	0.05	0.05	0.05	107.47	109.65	108.44	0.00	0.00	0.01

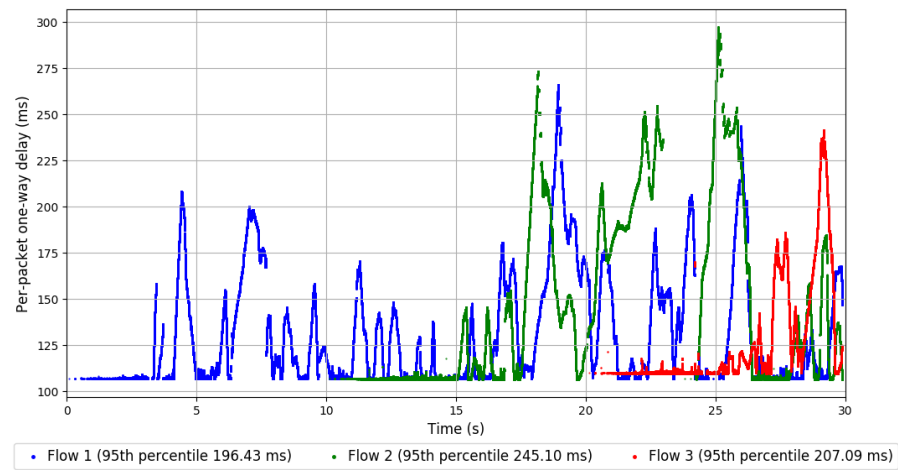
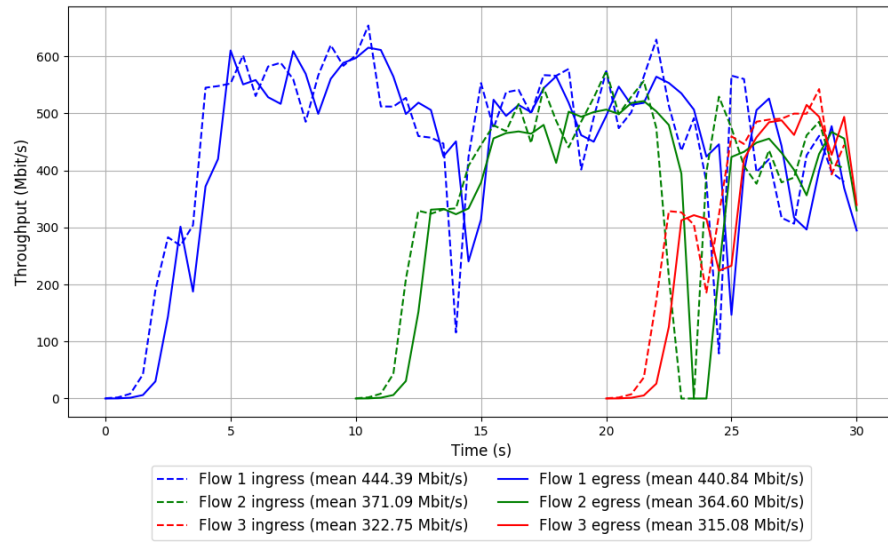


Run 1: Statistics of TCP BBR

Start at: 2019-06-27 05:45:32  
End at: 2019-06-27 05:46:02  
Local clock offset: -0.223 ms  
Remote clock offset: -0.067 ms

# Below is generated by plot.py at 2019-06-27 09:01:15  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 786.09 Mbit/s  
95th percentile per-packet one-way delay: 223.887 ms  
Loss rate: 2.32%  
-- Flow 1:  
Average throughput: 440.84 Mbit/s  
95th percentile per-packet one-way delay: 196.433 ms  
Loss rate: 1.51%  
-- Flow 2:  
Average throughput: 364.60 Mbit/s  
95th percentile per-packet one-way delay: 245.102 ms  
Loss rate: 2.81%  
-- Flow 3:  
Average throughput: 315.08 Mbit/s  
95th percentile per-packet one-way delay: 207.090 ms  
Loss rate: 4.51%

# Run 1: Report of TCP BBR — Data Link

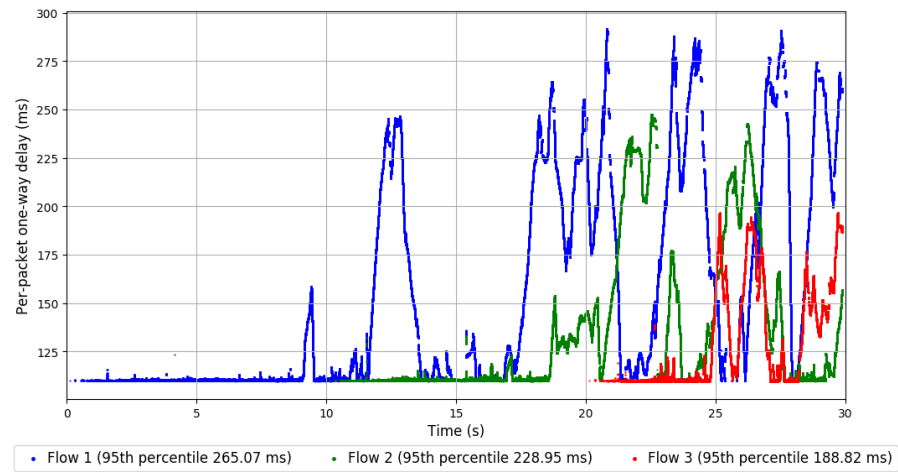
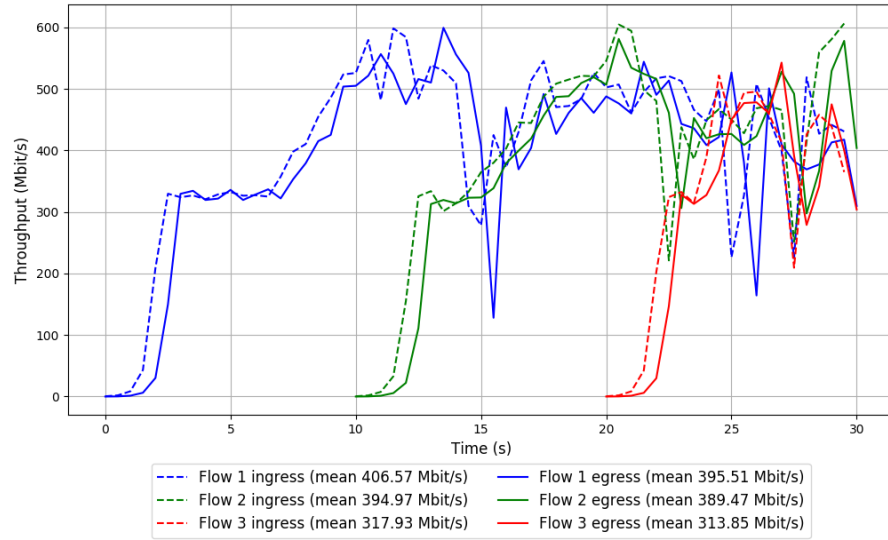


Run 2: Statistics of TCP BBR

Start at: 2019-06-27 06:23:41  
End at: 2019-06-27 06:24:11  
Local clock offset: -0.074 ms  
Remote clock offset: -0.034 ms

# Below is generated by plot.py at 2019-06-27 09:01:15  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 756.84 Mbit/s  
95th percentile per-packet one-way delay: 248.736 ms  
Loss rate: 3.12%  
-- Flow 1:  
Average throughput: 395.51 Mbit/s  
95th percentile per-packet one-way delay: 265.072 ms  
Loss rate: 3.44%  
-- Flow 2:  
Average throughput: 389.47 Mbit/s  
95th percentile per-packet one-way delay: 228.950 ms  
Loss rate: 2.48%  
-- Flow 3:  
Average throughput: 313.85 Mbit/s  
95th percentile per-packet one-way delay: 188.818 ms  
Loss rate: 3.48%

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

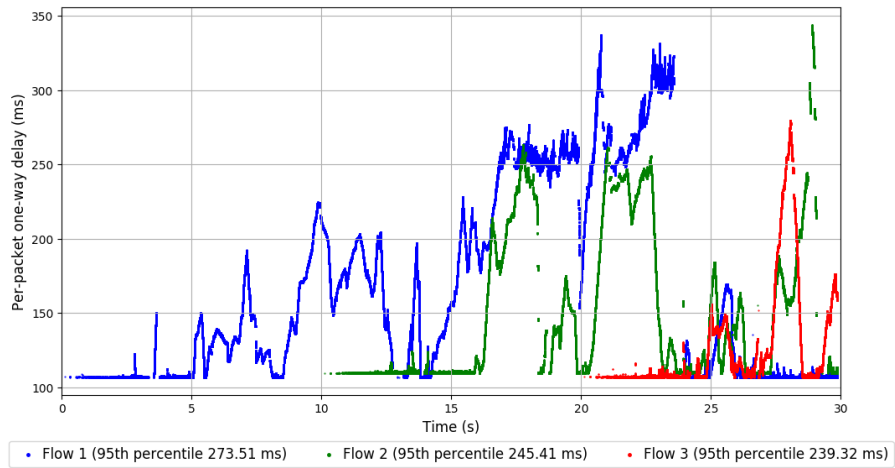
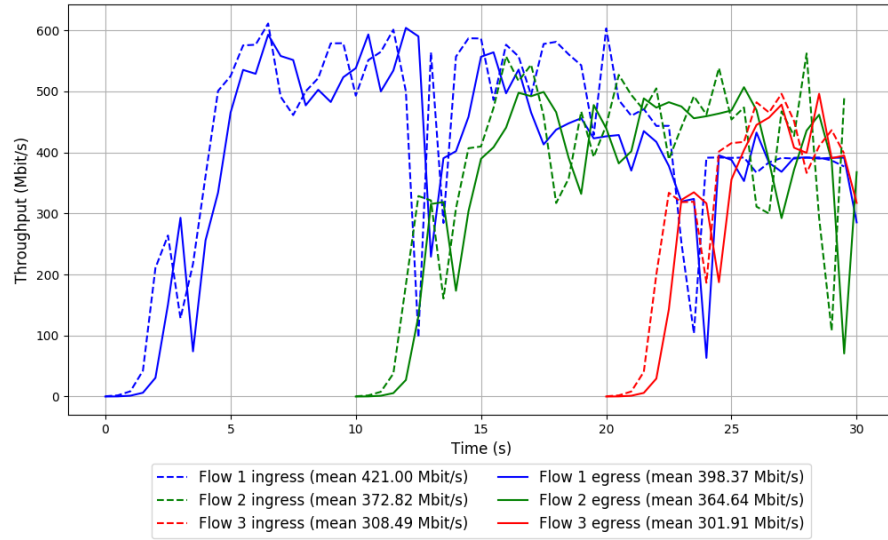


Run 3: Statistics of TCP BBR

Start at: 2019-06-27 07:01:33  
End at: 2019-06-27 07:02:03  
Local clock offset: -0.034 ms  
Remote clock offset: -0.192 ms

# Below is generated by plot.py at 2019-06-27 09:01:15  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 739.18 Mbit/s  
95th percentile per-packet one-way delay: 263.515 ms  
Loss rate: 4.93%  
-- Flow 1:  
Average throughput: 398.37 Mbit/s  
95th percentile per-packet one-way delay: 273.512 ms  
Loss rate: 6.07%  
-- Flow 2:  
Average throughput: 364.64 Mbit/s  
95th percentile per-packet one-way delay: 245.408 ms  
Loss rate: 3.28%  
-- Flow 3:  
Average throughput: 301.91 Mbit/s  
95th percentile per-packet one-way delay: 239.322 ms  
Loss rate: 4.27%

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



Run 4: Statistics of TCP BBR

Start at: 2019-06-27 07:39:41

End at: 2019-06-27 07:40:11

Local clock offset: 0.026 ms

Remote clock offset: 0.315 ms

# Below is generated by plot.py at 2019-06-27 09:01:15

# Datalink statistics

-- Total of 3 flows:

Average throughput: 766.06 Mbit/s

95th percentile per-packet one-way delay: 234.493 ms

Loss rate: 3.17%

-- Flow 1:

Average throughput: 402.21 Mbit/s

95th percentile per-packet one-way delay: 227.474 ms

Loss rate: 2.58%

-- Flow 2:

Average throughput: 391.18 Mbit/s

95th percentile per-packet one-way delay: 252.351 ms

Loss rate: 4.06%

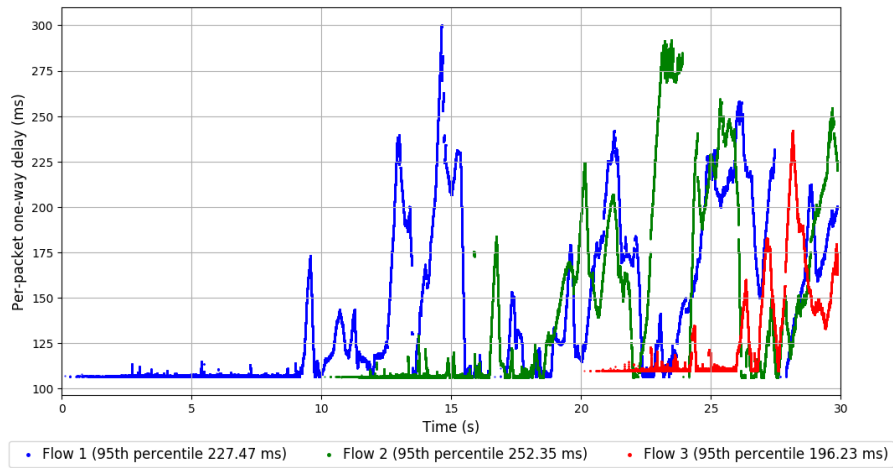
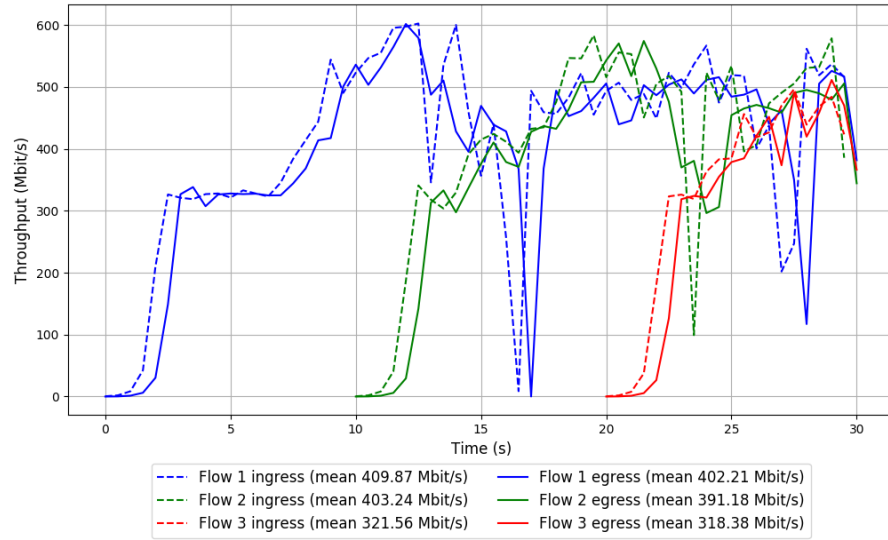
-- Flow 3:

Average throughput: 318.38 Mbit/s

95th percentile per-packet one-way delay: 196.231 ms

Loss rate: 3.19%

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



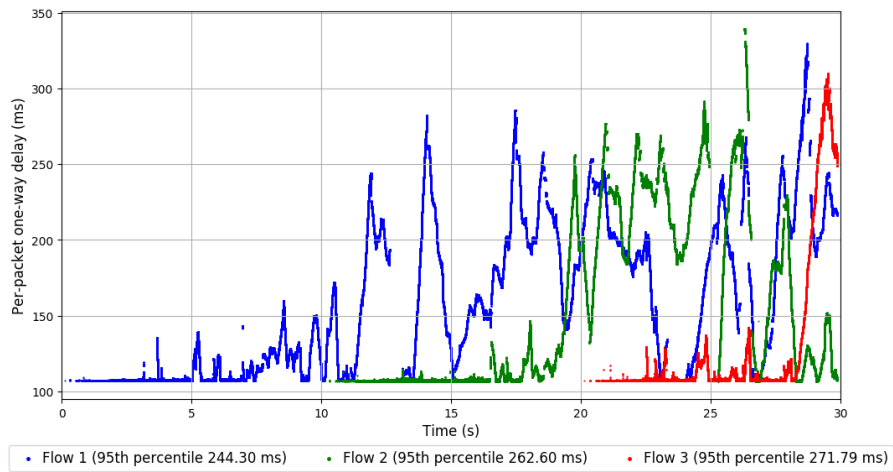
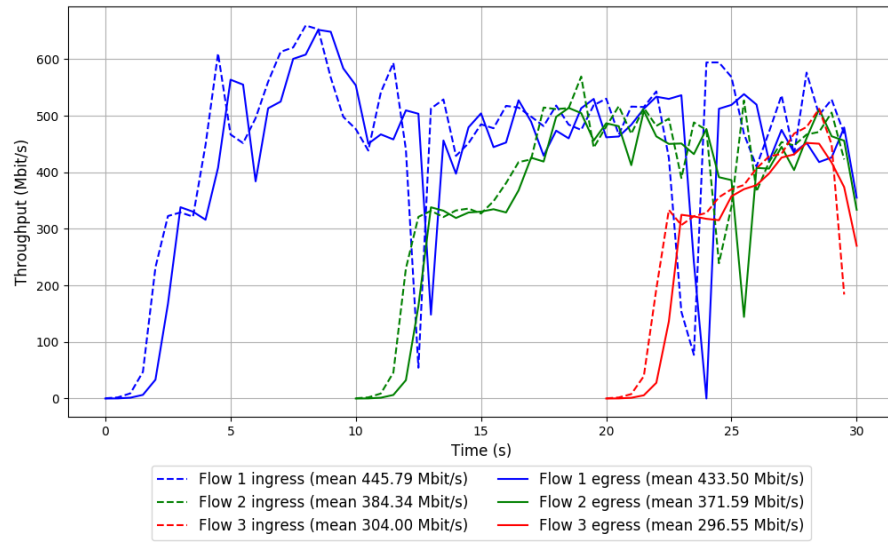


Run 5: Statistics of TCP BBR

Start at: 2019-06-27 08:17:50  
End at: 2019-06-27 08:18:20  
Local clock offset: -0.088 ms  
Remote clock offset: -0.063 ms

# Below is generated by plot.py at 2019-06-27 09:01:15  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 777.16 Mbit/s  
95th percentile per-packet one-way delay: 255.540 ms  
Loss rate: 3.79%  
-- Flow 1:  
Average throughput: 433.50 Mbit/s  
95th percentile per-packet one-way delay: 244.296 ms  
Loss rate: 3.47%  
-- Flow 2:  
Average throughput: 371.59 Mbit/s  
95th percentile per-packet one-way delay: 262.603 ms  
Loss rate: 4.38%  
-- Flow 3:  
Average throughput: 296.55 Mbit/s  
95th percentile per-packet one-way delay: 271.787 ms  
Loss rate: 3.72%

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

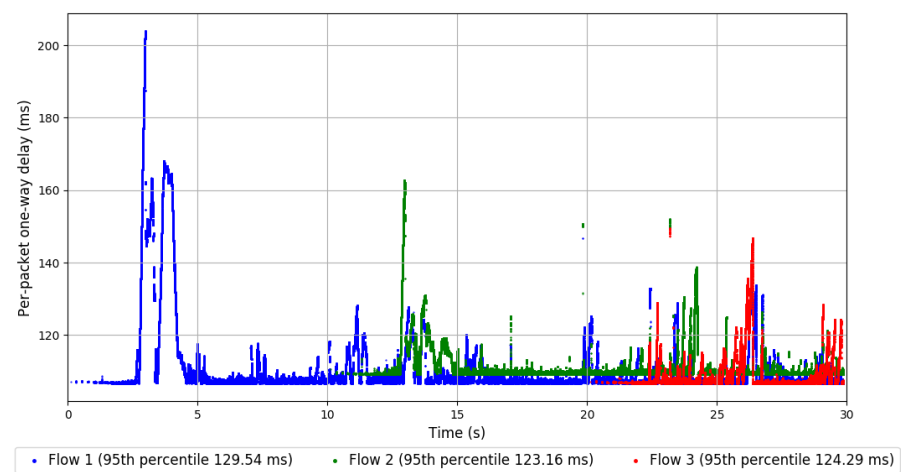
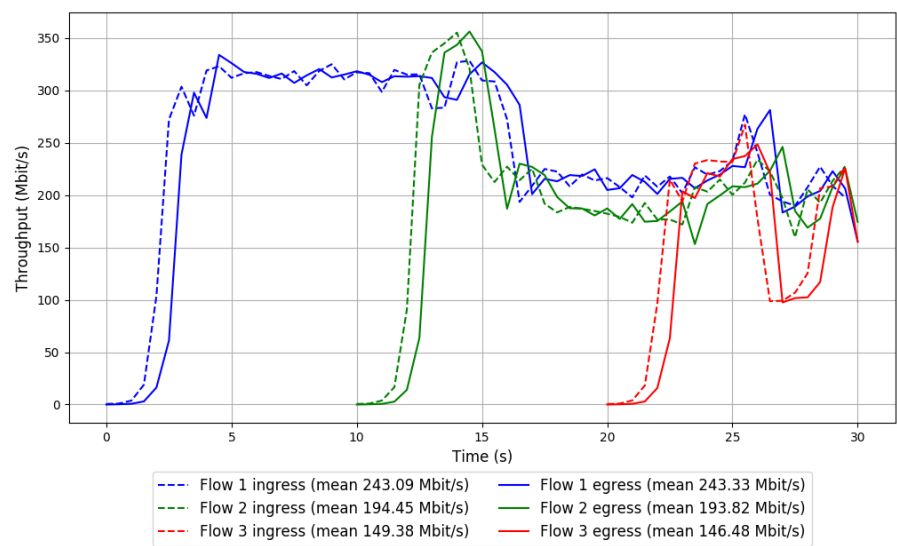


Run 1: Statistics of Copa

Start at: 2019-06-27 05:29:33  
End at: 2019-06-27 05:30:03  
Local clock offset: 0.082 ms  
Remote clock offset: -0.008 ms

# Below is generated by plot.py at 2019-06-27 09:01:15  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 419.88 Mbit/s  
95th percentile per-packet one-way delay: 125.780 ms  
Loss rate: 1.26%  
-- Flow 1:  
Average throughput: 243.33 Mbit/s  
95th percentile per-packet one-way delay: 129.541 ms  
Loss rate: 0.62%  
-- Flow 2:  
Average throughput: 193.82 Mbit/s  
95th percentile per-packet one-way delay: 123.161 ms  
Loss rate: 1.41%  
-- Flow 3:  
Average throughput: 146.48 Mbit/s  
95th percentile per-packet one-way delay: 124.291 ms  
Loss rate: 4.05%

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2019-06-27 06:07:04

End at: 2019-06-27 06:07:34

Local clock offset: -0.232 ms

Remote clock offset: -0.08 ms

# Below is generated by plot.py at 2019-06-27 09:02:48

# Datalink statistics

-- Total of 3 flows:

Average throughput: 468.99 Mbit/s

95th percentile per-packet one-way delay: 147.105 ms

Loss rate: 1.29%

-- Flow 1:

Average throughput: 249.97 Mbit/s

95th percentile per-packet one-way delay: 133.139 ms

Loss rate: 0.87%

-- Flow 2:

Average throughput: 230.68 Mbit/s

95th percentile per-packet one-way delay: 160.448 ms

Loss rate: 1.35%

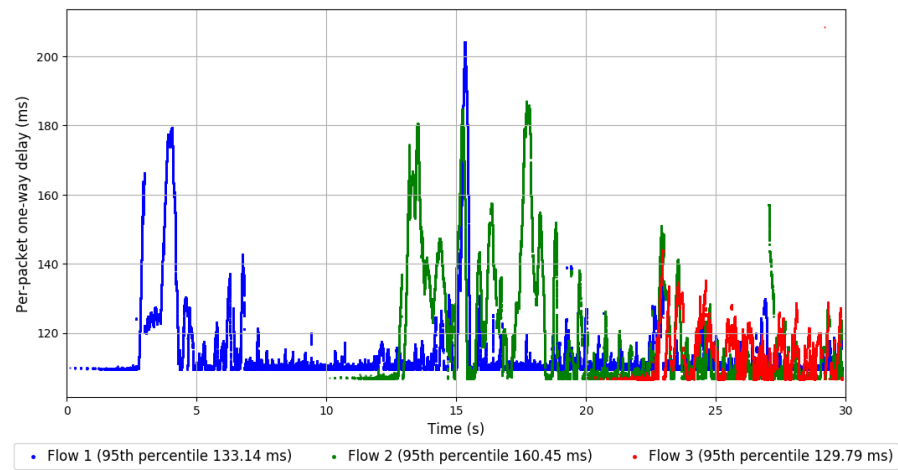
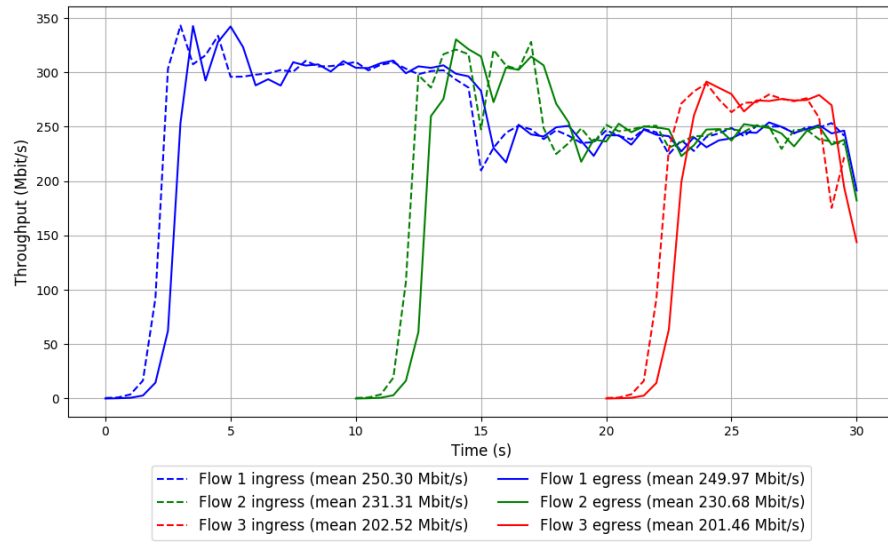
-- Flow 3:

Average throughput: 201.46 Mbit/s

95th percentile per-packet one-way delay: 129.792 ms

Loss rate: 2.69%

## Run 2: Report of Copa — Data Link

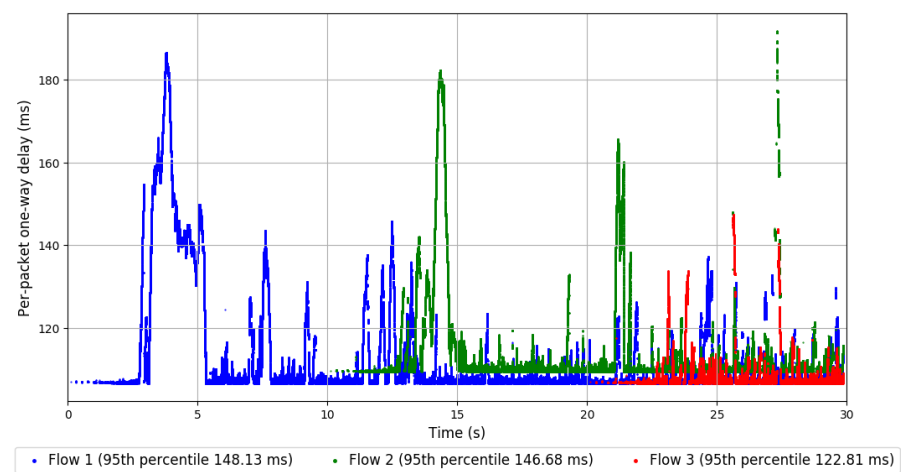
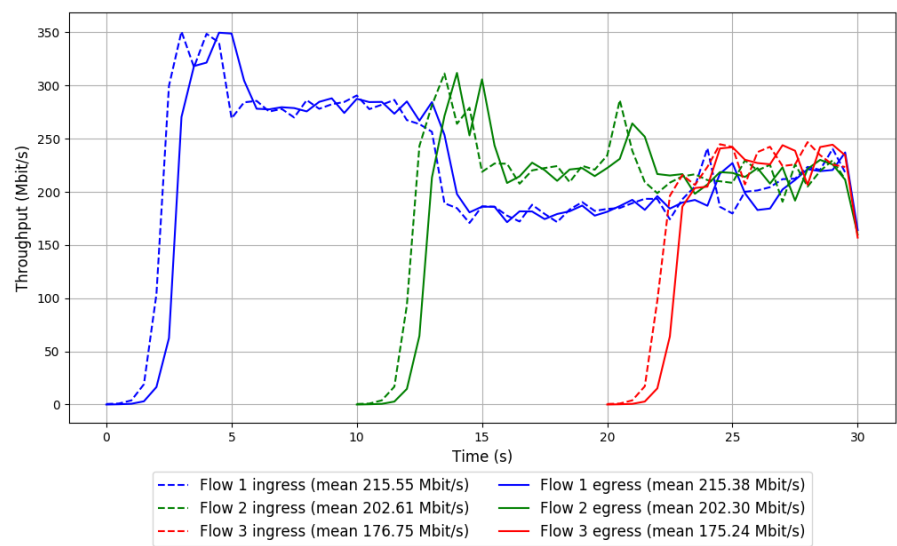


Run 3: Statistics of Copa

Start at: 2019-06-27 06:45:24  
End at: 2019-06-27 06:45:54  
Local clock offset: -0.154 ms  
Remote clock offset: -0.083 ms

# Below is generated by plot.py at 2019-06-27 09:02:48  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 406.93 Mbit/s  
95th percentile per-packet one-way delay: 144.644 ms  
Loss rate: 1.27%  
-- Flow 1:  
Average throughput: 215.38 Mbit/s  
95th percentile per-packet one-way delay: 148.129 ms  
Loss rate: 0.81%  
-- Flow 2:  
Average throughput: 202.30 Mbit/s  
95th percentile per-packet one-way delay: 146.682 ms  
Loss rate: 1.25%  
-- Flow 3:  
Average throughput: 175.24 Mbit/s  
95th percentile per-packet one-way delay: 122.808 ms  
Loss rate: 3.02%

Run 3: Report of Copa — Data Link



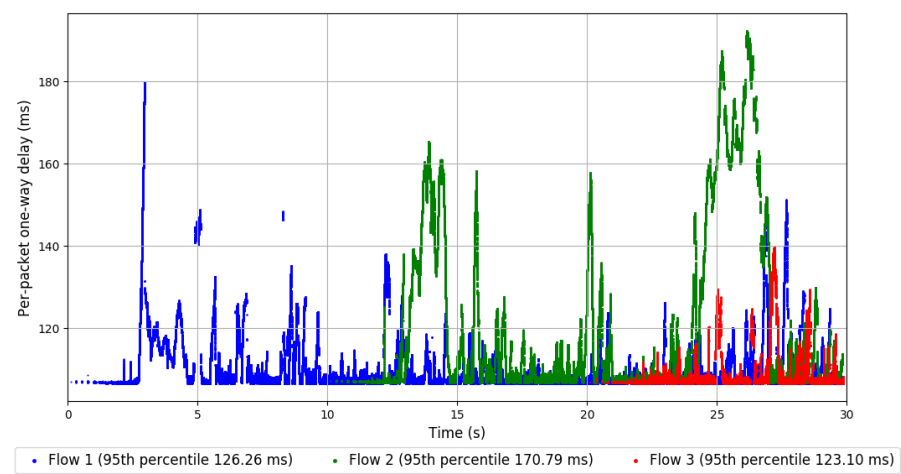
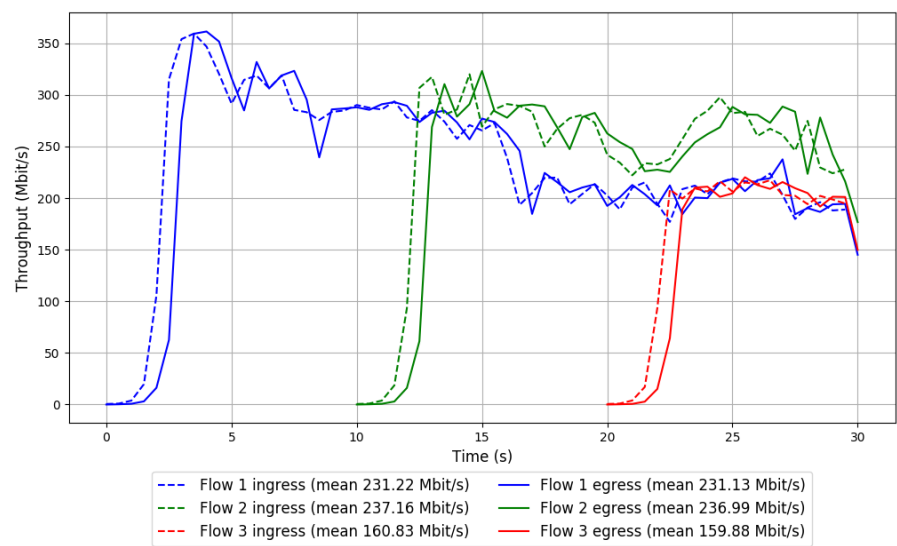


Run 4: Statistics of Copa

Start at: 2019-06-27 07:22:48  
End at: 2019-06-27 07:23:18  
Local clock offset: 0.112 ms  
Remote clock offset: -0.071 ms

# Below is generated by plot.py at 2019-06-27 09:16:19  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 440.74 Mbit/s  
95th percentile per-packet one-way delay: 156.069 ms  
Loss rate: 1.14%  
-- Flow 1:  
Average throughput: 231.13 Mbit/s  
95th percentile per-packet one-way delay: 126.260 ms  
Loss rate: 0.76%  
-- Flow 2:  
Average throughput: 236.99 Mbit/s  
95th percentile per-packet one-way delay: 170.795 ms  
Loss rate: 1.15%  
-- Flow 3:  
Average throughput: 159.88 Mbit/s  
95th percentile per-packet one-way delay: 123.096 ms  
Loss rate: 2.75%

Run 4: Report of Copa — Data Link

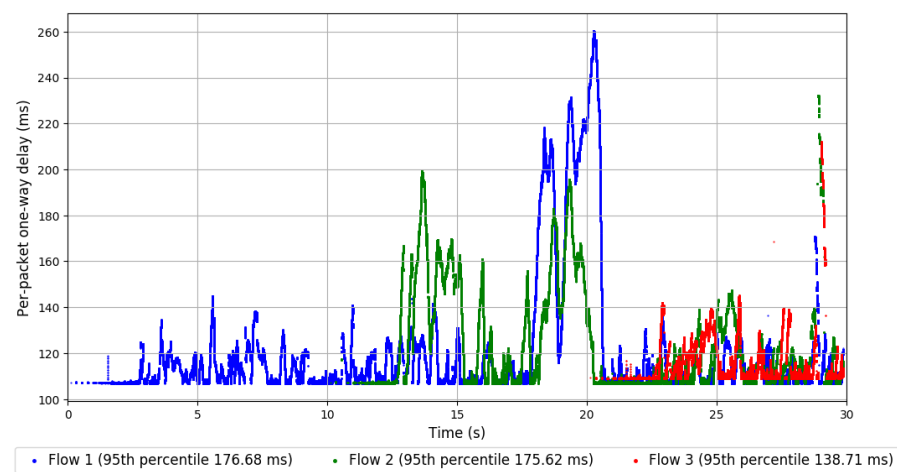
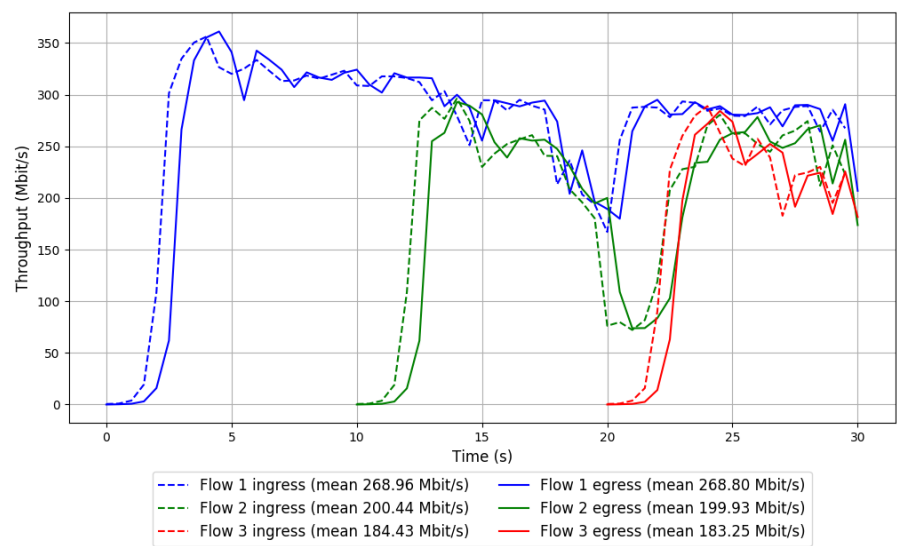


Run 5: Statistics of Copa

Start at: 2019-06-27 08:01:10  
End at: 2019-06-27 08:01:40  
Local clock offset: -0.047 ms  
Remote clock offset: -0.043 ms

# Below is generated by plot.py at 2019-06-27 09:17:03  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 461.47 Mbit/s  
95th percentile per-packet one-way delay: 170.943 ms  
Loss rate: 1.21%  
-- Flow 1:  
Average throughput: 268.80 Mbit/s  
95th percentile per-packet one-way delay: 176.679 ms  
Loss rate: 0.78%  
-- Flow 2:  
Average throughput: 199.93 Mbit/s  
95th percentile per-packet one-way delay: 175.618 ms  
Loss rate: 1.32%  
-- Flow 3:  
Average throughput: 183.25 Mbit/s  
95th percentile per-packet one-way delay: 138.714 ms  
Loss rate: 2.85%

Run 5: Report of Copa — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2019-06-27 05:34:51

End at: 2019-06-27 05:35:21

Local clock offset: -0.154 ms

Remote clock offset: -0.06 ms

# Below is generated by plot.py at 2019-06-27 09:17:03

# Datalink statistics

-- Total of 3 flows:

Average throughput: 680.77 Mbit/s

95th percentile per-packet one-way delay: 136.877 ms

Loss rate: 1.30%

-- Flow 1:

Average throughput: 361.33 Mbit/s

95th percentile per-packet one-way delay: 140.874 ms

Loss rate: 0.84%

-- Flow 2:

Average throughput: 351.12 Mbit/s

95th percentile per-packet one-way delay: 132.484 ms

Loss rate: 1.37%

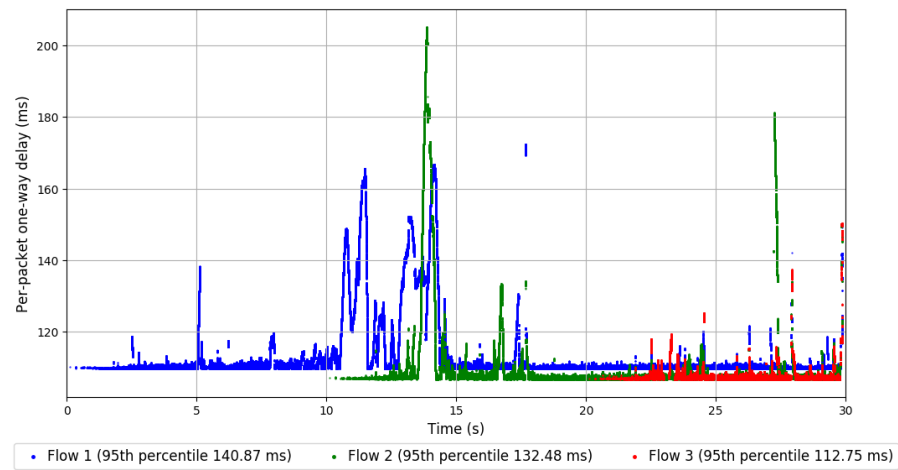
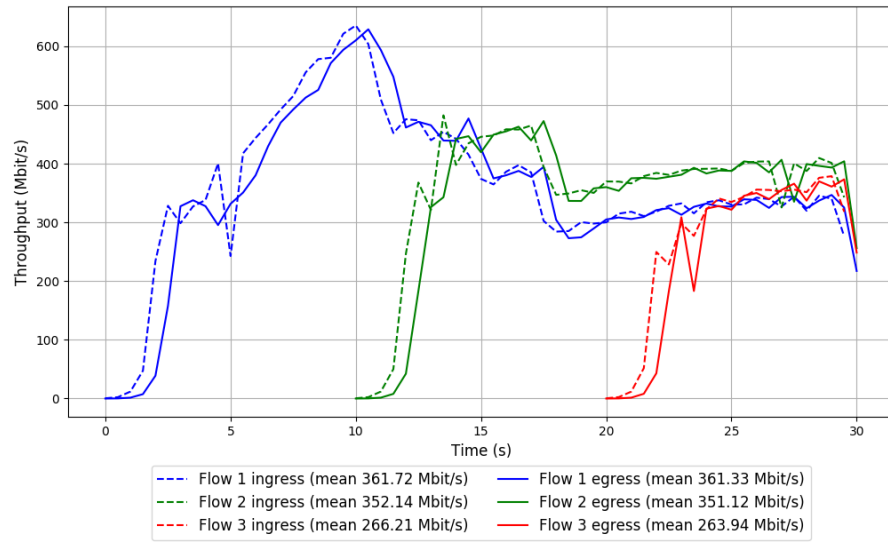
-- Flow 3:

Average throughput: 263.94 Mbit/s

95th percentile per-packet one-way delay: 112.748 ms

Loss rate: 2.99%

# Run 1: Report of TCP Cubic — Data Link

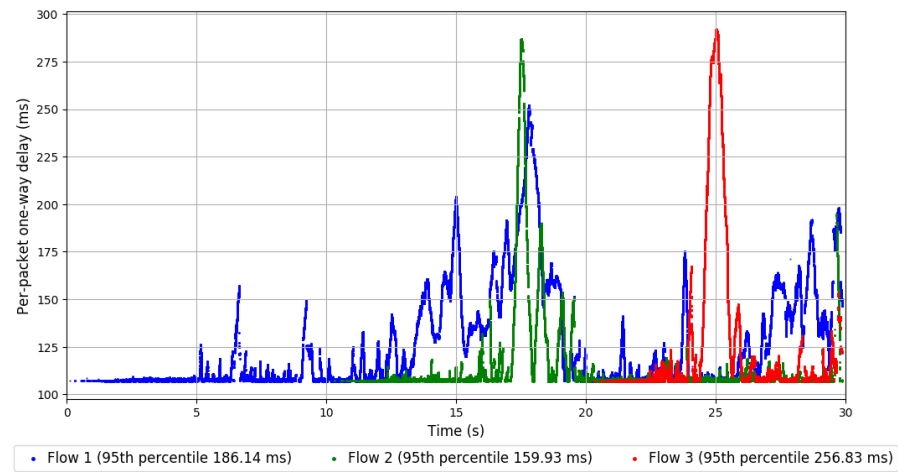
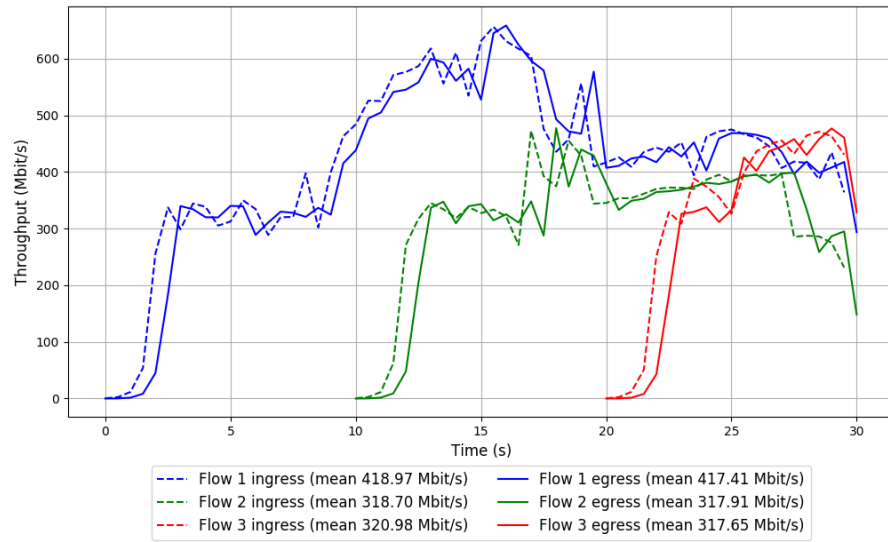


Run 2: Statistics of TCP Cubic

Start at: 2019-06-27 06:12:37  
End at: 2019-06-27 06:13:07  
Local clock offset: -0.04 ms  
Remote clock offset: -0.064 ms

# Below is generated by plot.py at 2019-06-27 09:17:03  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 732.50 Mbit/s  
95th percentile per-packet one-way delay: 186.650 ms  
Loss rate: 1.46%  
-- Flow 1:  
Average throughput: 417.41 Mbit/s  
95th percentile per-packet one-way delay: 186.141 ms  
Loss rate: 1.10%  
-- Flow 2:  
Average throughput: 317.91 Mbit/s  
95th percentile per-packet one-way delay: 159.925 ms  
Loss rate: 1.31%  
-- Flow 3:  
Average throughput: 317.65 Mbit/s  
95th percentile per-packet one-way delay: 256.833 ms  
Loss rate: 3.21%

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



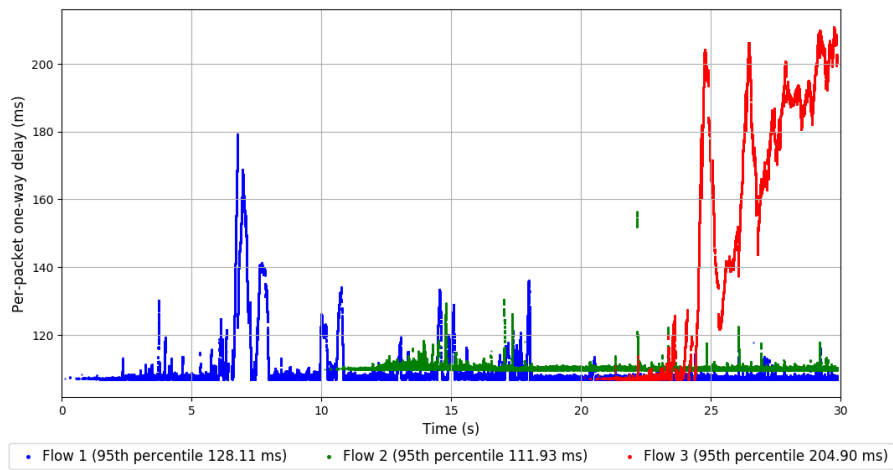
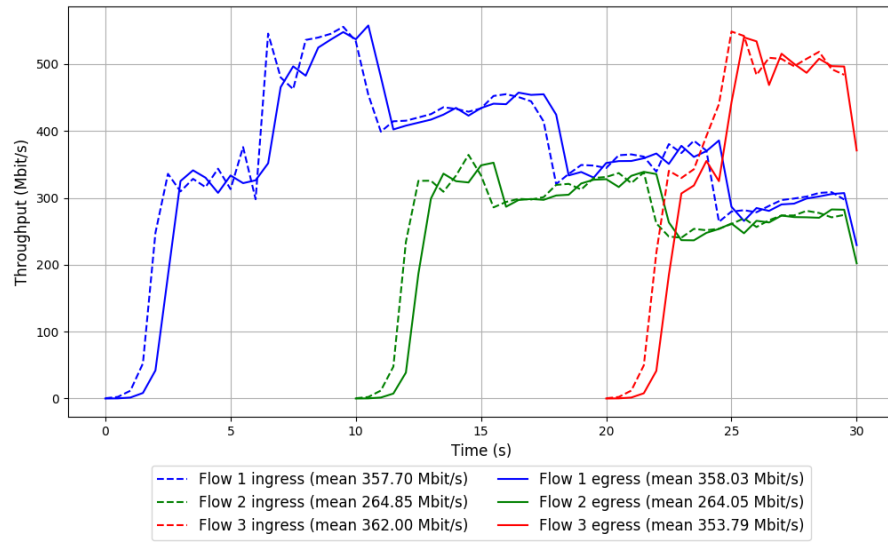


Run 3: Statistics of TCP Cubic

Start at: 2019-06-27 06:50:34  
End at: 2019-06-27 06:51:04  
Local clock offset: -0.044 ms  
Remote clock offset: -0.158 ms

# Below is generated by plot.py at 2019-06-27 09:17:03  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 649.17 Mbit/s  
95th percentile per-packet one-way delay: 189.293 ms  
Loss rate: 1.53%  
-- Flow 1:  
Average throughput: 358.03 Mbit/s  
95th percentile per-packet one-way delay: 128.112 ms  
Loss rate: 0.63%  
-- Flow 2:  
Average throughput: 264.05 Mbit/s  
95th percentile per-packet one-way delay: 111.933 ms  
Loss rate: 1.40%  
-- Flow 3:  
Average throughput: 353.79 Mbit/s  
95th percentile per-packet one-way delay: 204.897 ms  
Loss rate: 4.40%

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

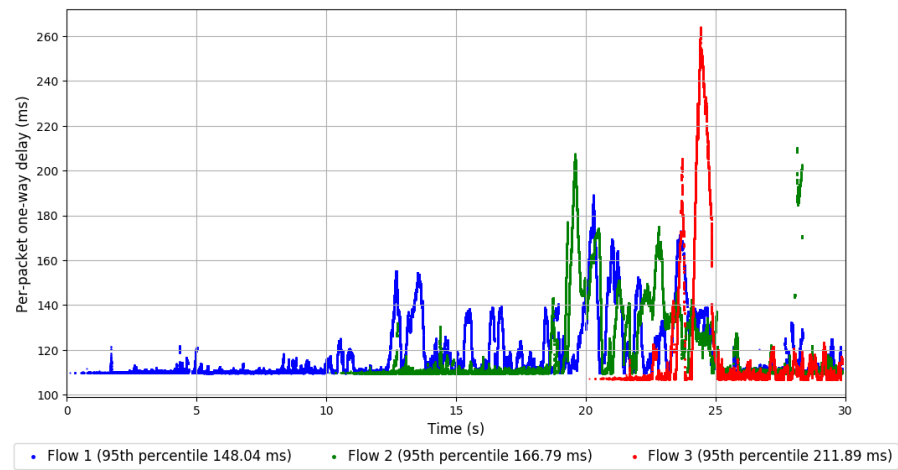
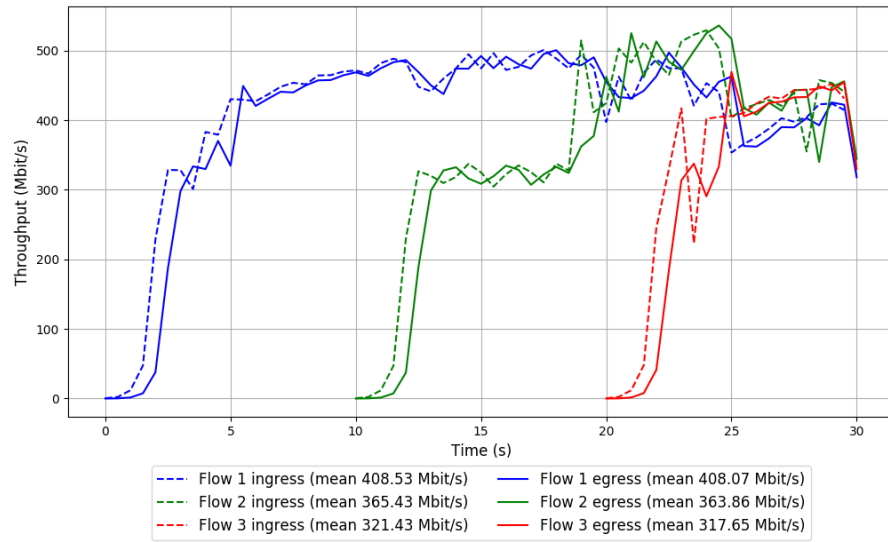


Run 4: Statistics of TCP Cubic

Start at: 2019-06-27 07:28:32  
End at: 2019-06-27 07:29:02  
Local clock offset: -0.064 ms  
Remote clock offset: -0.128 ms

# Below is generated by plot.py at 2019-06-27 09:17:03  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 753.51 Mbit/s  
95th percentile per-packet one-way delay: 160.389 ms  
Loss rate: 1.42%  
-- Flow 1:  
Average throughput: 408.07 Mbit/s  
95th percentile per-packet one-way delay: 148.038 ms  
Loss rate: 0.85%  
-- Flow 2:  
Average throughput: 363.86 Mbit/s  
95th percentile per-packet one-way delay: 166.788 ms  
Loss rate: 1.53%  
-- Flow 3:  
Average throughput: 317.65 Mbit/s  
95th percentile per-packet one-way delay: 211.893 ms  
Loss rate: 3.33%

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

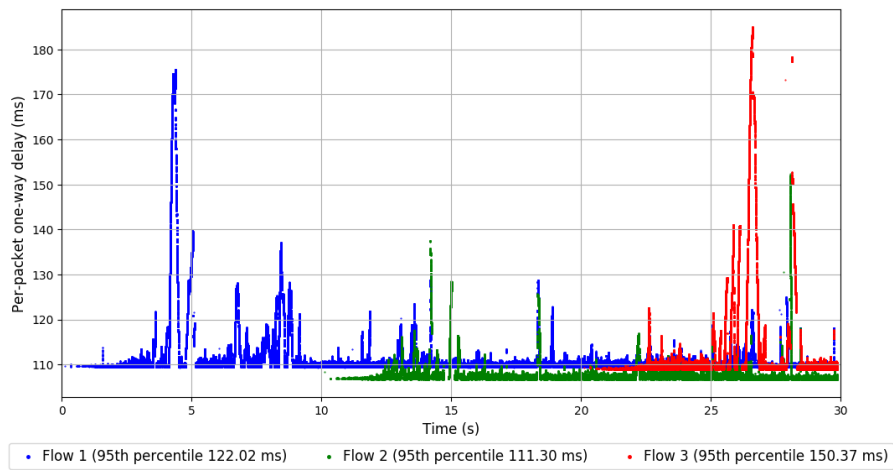
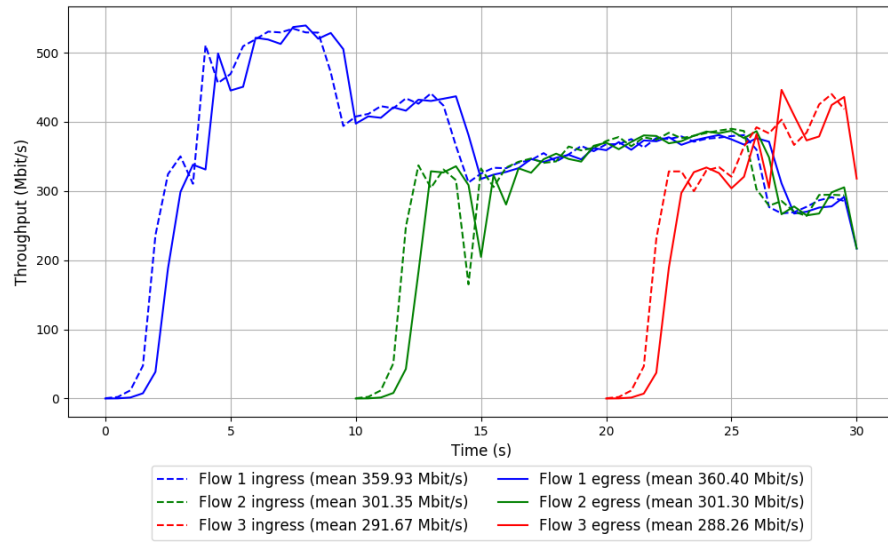


Run 5: Statistics of TCP Cubic

Start at: 2019-06-27 08:06:52  
End at: 2019-06-27 08:07:22  
Local clock offset: -0.235 ms  
Remote clock offset: -0.008 ms

# Below is generated by plot.py at 2019-06-27 09:17:03  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 654.71 Mbit/s  
95th percentile per-packet one-way delay: 123.066 ms  
Loss rate: 1.16%  
-- Flow 1:  
Average throughput: 360.40 Mbit/s  
95th percentile per-packet one-way delay: 122.020 ms  
Loss rate: 0.61%  
-- Flow 2:  
Average throughput: 301.30 Mbit/s  
95th percentile per-packet one-way delay: 111.297 ms  
Loss rate: 1.11%  
-- Flow 3:  
Average throughput: 288.26 Mbit/s  
95th percentile per-packet one-way delay: 150.369 ms  
Loss rate: 3.35%

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

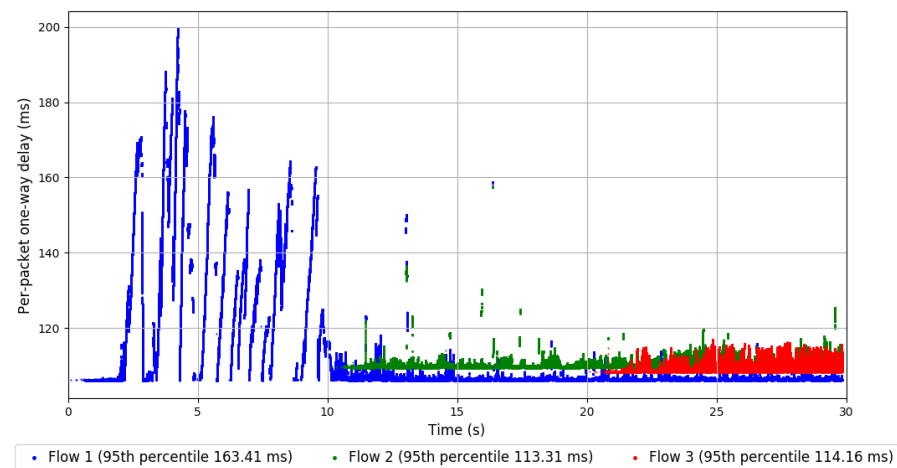
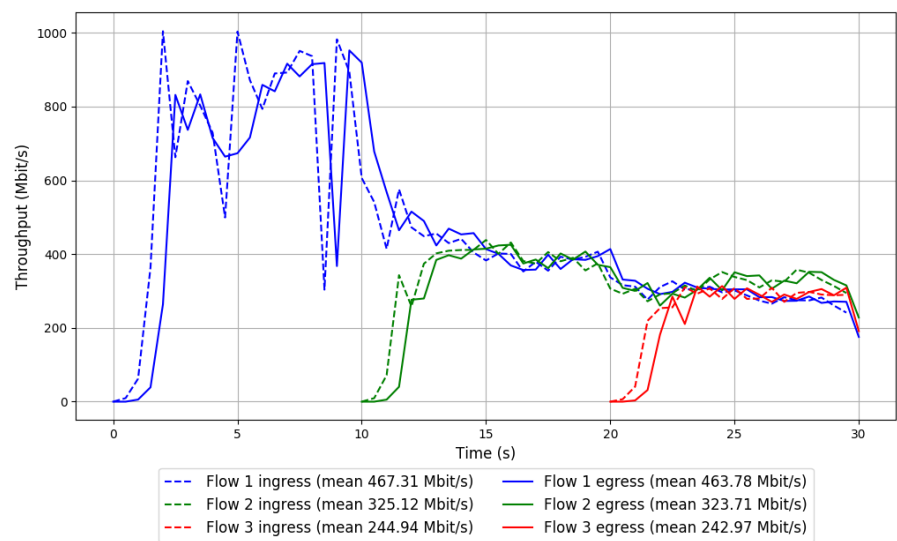


Run 1: Statistics of FillP

Start at: 2019-06-27 05:49:10  
End at: 2019-06-27 05:49:40  
Local clock offset: -0.819 ms  
Remote clock offset: -0.046 ms

# Below is generated by plot.py at 2019-06-27 09:20:40  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 757.88 Mbit/s  
95th percentile per-packet one-way delay: 155.700 ms  
Loss rate: 1.62%  
-- Flow 1:  
Average throughput: 463.78 Mbit/s  
95th percentile per-packet one-way delay: 163.411 ms  
Loss rate: 1.47%  
-- Flow 2:  
Average throughput: 323.71 Mbit/s  
95th percentile per-packet one-way delay: 113.310 ms  
Loss rate: 1.47%  
-- Flow 3:  
Average throughput: 242.97 Mbit/s  
95th percentile per-packet one-way delay: 114.159 ms  
Loss rate: 2.93%

Run 1: Report of FillP — Data Link



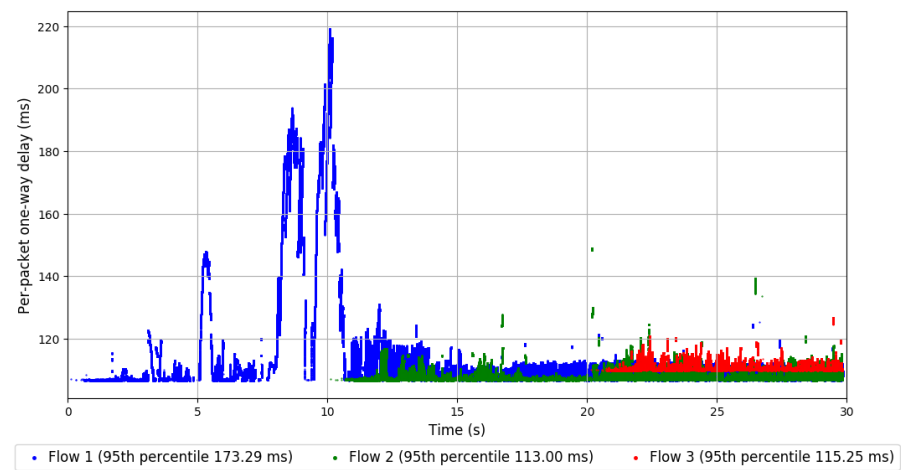
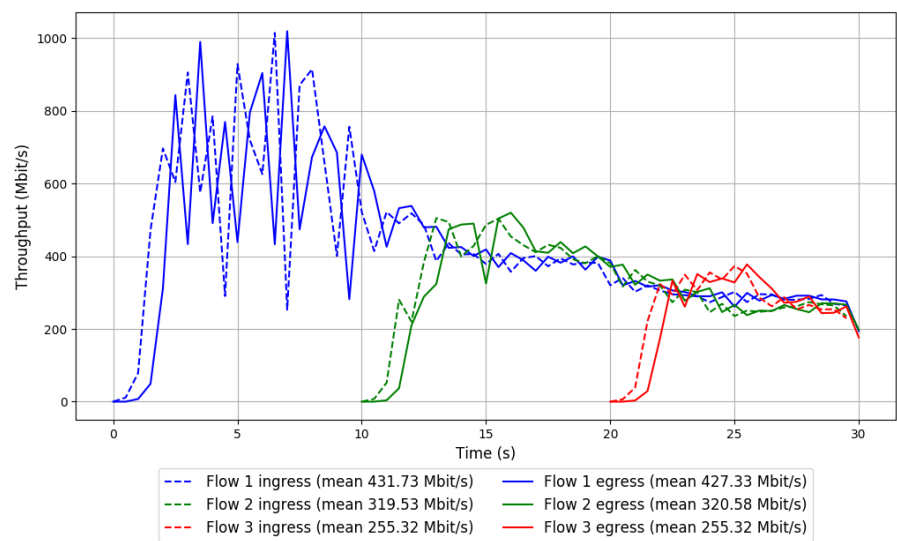


Run 2: Statistics of FillP

Start at: 2019-06-27 06:27:33  
End at: 2019-06-27 06:28:03  
Local clock offset: -0.058 ms  
Remote clock offset: -0.023 ms

# Below is generated by plot.py at 2019-06-27 09:30:19  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 723.03 Mbit/s  
95th percentile per-packet one-way delay: 153.995 ms  
Loss rate: 1.51%  
-- Flow 1:  
Average throughput: 427.33 Mbit/s  
95th percentile per-packet one-way delay: 173.294 ms  
Loss rate: 1.74%  
-- Flow 2:  
Average throughput: 320.58 Mbit/s  
95th percentile per-packet one-way delay: 112.997 ms  
Loss rate: 0.76%  
-- Flow 3:  
Average throughput: 255.32 Mbit/s  
95th percentile per-packet one-way delay: 115.245 ms  
Loss rate: 2.18%

Run 2: Report of FillP — Data Link

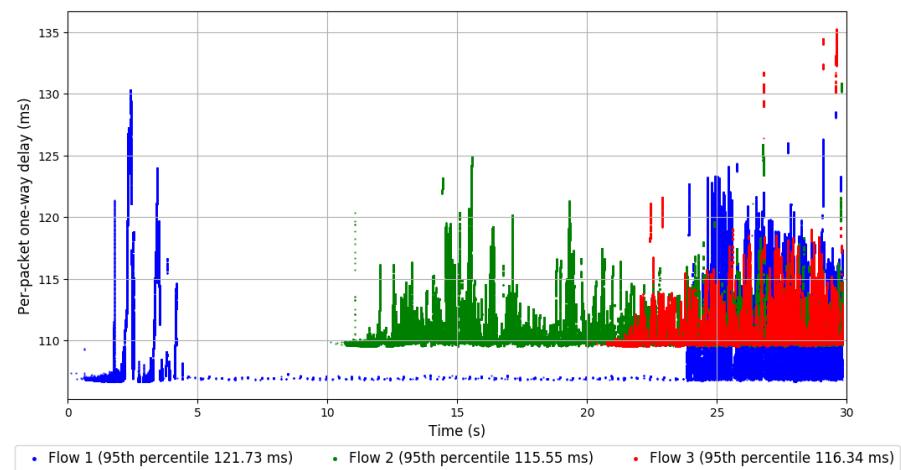
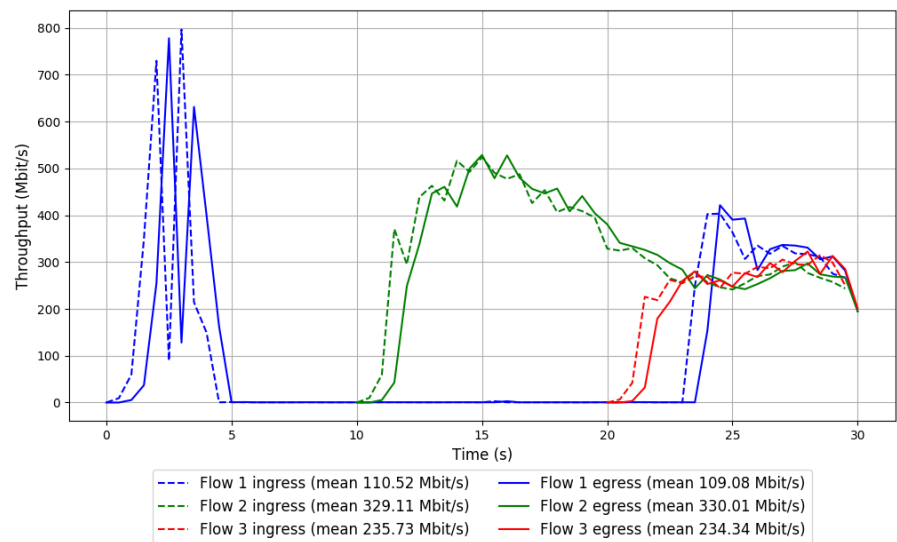


Run 3: Statistics of FillP

Start at: 2019-06-27 07:05:24  
End at: 2019-06-27 07:05:54  
Local clock offset: 0.047 ms  
Remote clock offset: -0.146 ms

# Below is generated by plot.py at 2019-06-27 09:30:19  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 404.50 Mbit/s  
95th percentile per-packet one-way delay: 117.575 ms  
Loss rate: 1.51%  
-- Flow 1:  
Average throughput: 109.08 Mbit/s  
95th percentile per-packet one-way delay: 121.732 ms  
Loss rate: 2.03%  
-- Flow 2:  
Average throughput: 330.01 Mbit/s  
95th percentile per-packet one-way delay: 115.550 ms  
Loss rate: 0.80%  
-- Flow 3:  
Average throughput: 234.34 Mbit/s  
95th percentile per-packet one-way delay: 116.343 ms  
Loss rate: 2.76%

Run 3: Report of FillP — Data Link

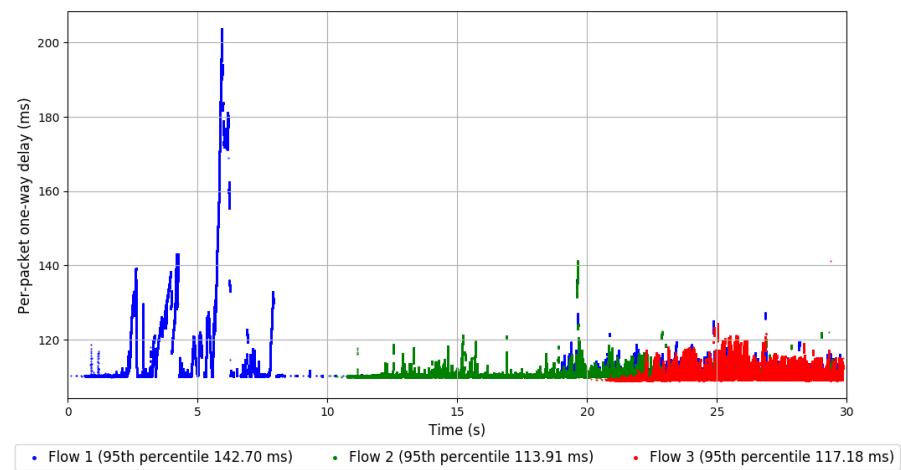
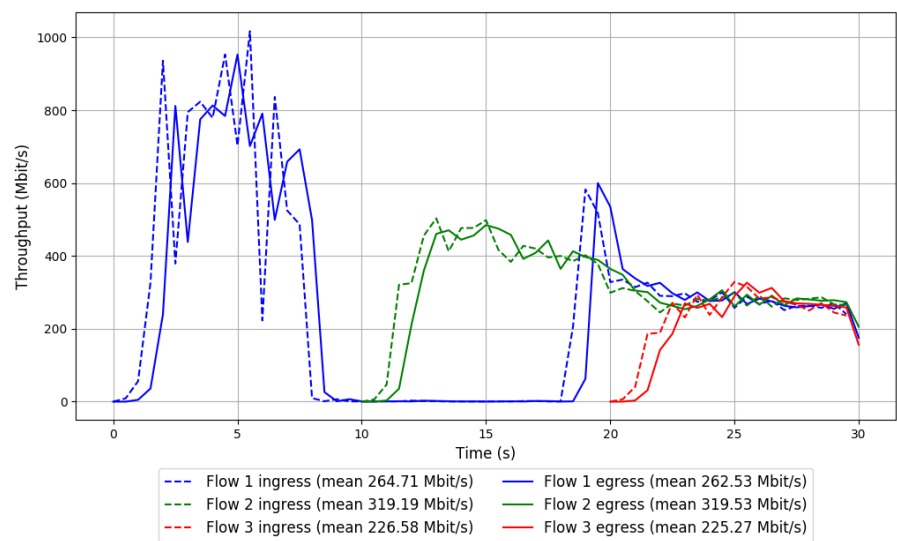


Run 4: Statistics of FillP

Start at: 2019-06-27 07:43:34  
End at: 2019-06-27 07:44:04  
Local clock offset: 0.086 ms  
Remote clock offset: -0.051 ms

# Below is generated by plot.py at 2019-06-27 09:30:19  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 547.72 Mbit/s  
95th percentile per-packet one-way delay: 130.438 ms  
Loss rate: 1.53%  
-- Flow 1:  
Average throughput: 262.53 Mbit/s  
95th percentile per-packet one-way delay: 142.699 ms  
Loss rate: 1.63%  
-- Flow 2:  
Average throughput: 319.53 Mbit/s  
95th percentile per-packet one-way delay: 113.909 ms  
Loss rate: 0.98%  
-- Flow 3:  
Average throughput: 225.27 Mbit/s  
95th percentile per-packet one-way delay: 117.183 ms  
Loss rate: 2.74%

Run 4: Report of FillP — Data Link

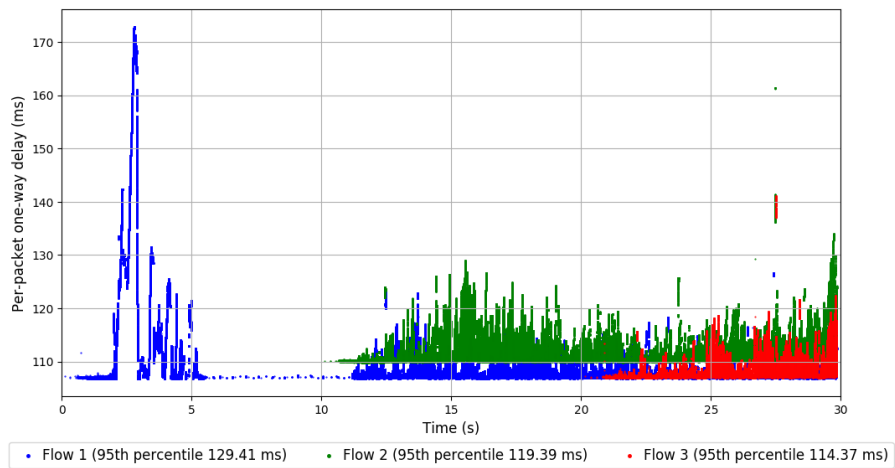
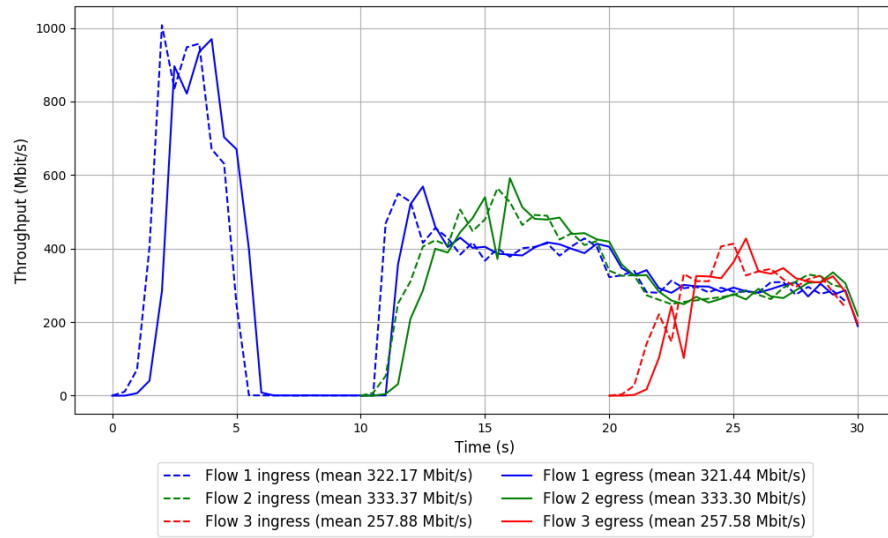


Run 5: Statistics of FillP

Start at: 2019-06-27 08:21:51  
End at: 2019-06-27 08:22:21  
Local clock offset: -0.106 ms  
Remote clock offset: -0.055 ms

# Below is generated by plot.py at 2019-06-27 09:30:19  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 626.22 Mbit/s  
95th percentile per-packet one-way delay: 123.907 ms  
Loss rate: 1.18%  
-- Flow 1:  
Average throughput: 321.44 Mbit/s  
95th percentile per-packet one-way delay: 129.414 ms  
Loss rate: 0.93%  
-- Flow 2:  
Average throughput: 333.30 Mbit/s  
95th percentile per-packet one-way delay: 119.391 ms  
Loss rate: 1.14%  
-- Flow 3:  
Average throughput: 257.58 Mbit/s  
95th percentile per-packet one-way delay: 114.366 ms  
Loss rate: 2.23%

## Run 5: Report of FillP — Data Link





Run 1: Statistics of FillP-Sheep

Start at: 2019-06-27 05:31:35

End at: 2019-06-27 05:32:05

Local clock offset: -0.18 ms

Remote clock offset: 0.012 ms

# Below is generated by plot.py at 2019-06-27 09:30:19

# Datalink statistics

-- Total of 3 flows:

Average throughput: 421.77 Mbit/s

95th percentile per-packet one-way delay: 165.212 ms

Loss rate: 2.06%

-- Flow 1:

Average throughput: 157.91 Mbit/s

95th percentile per-packet one-way delay: 175.672 ms

Loss rate: 2.98%

-- Flow 2:

Average throughput: 296.44 Mbit/s

95th percentile per-packet one-way delay: 109.156 ms

Loss rate: 1.20%

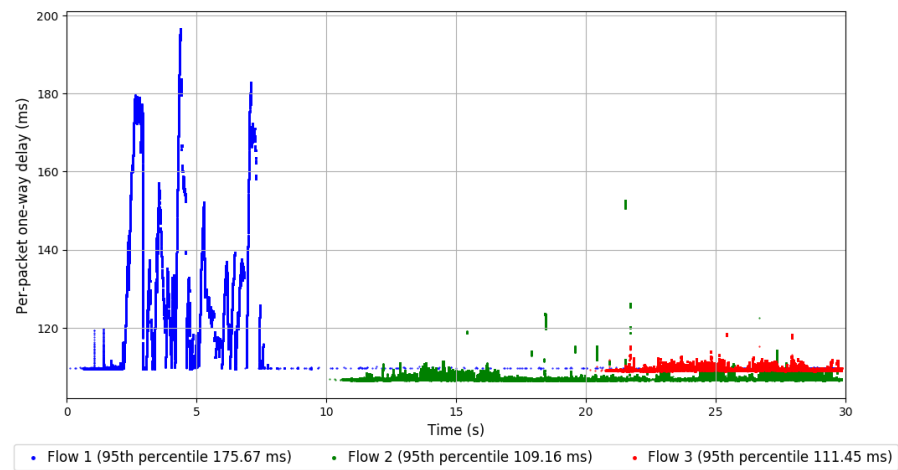
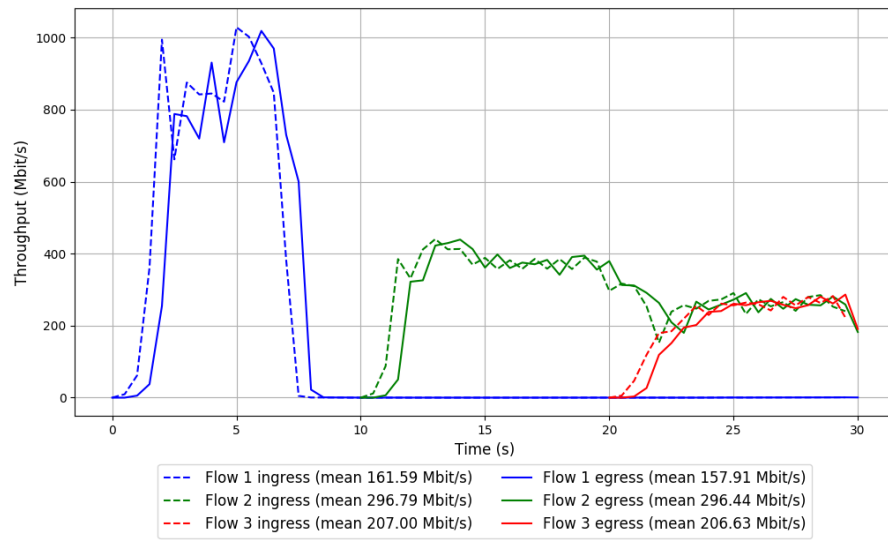
-- Flow 3:

Average throughput: 206.63 Mbit/s

95th percentile per-packet one-way delay: 111.451 ms

Loss rate: 2.36%

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

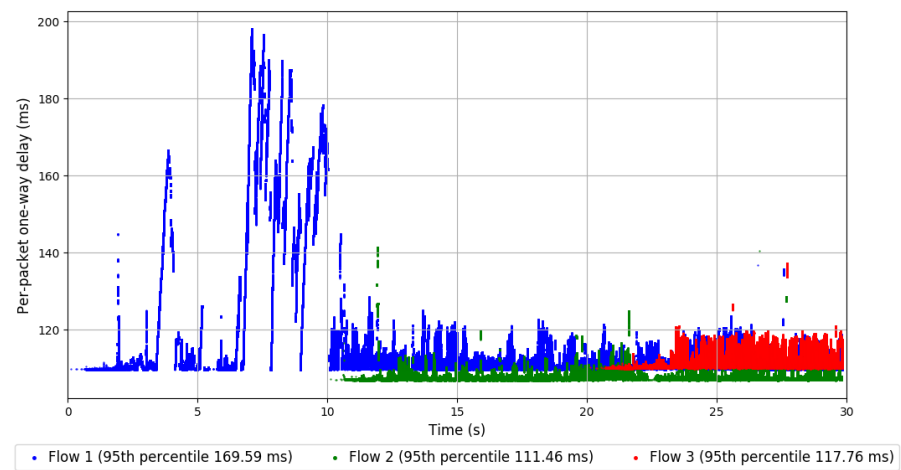
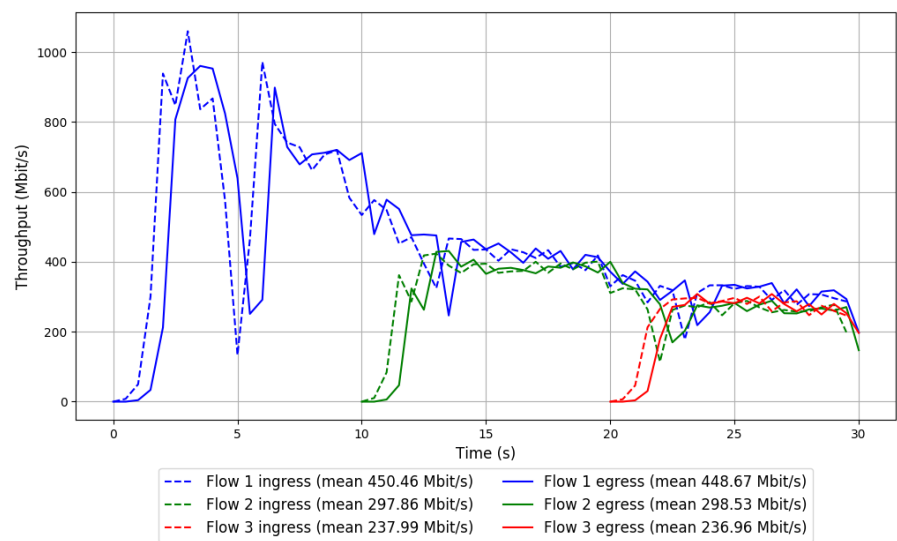


Run 2: Statistics of FillP-Sheep

Start at: 2019-06-27 06:09:13  
End at: 2019-06-27 06:09:43  
Local clock offset: -0.161 ms  
Remote clock offset: -0.044 ms

# Below is generated by plot.py at 2019-06-27 09:32:38  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 723.93 Mbit/s  
95th percentile per-packet one-way delay: 162.466 ms  
Loss rate: 1.23%  
-- Flow 1:  
Average throughput: 448.67 Mbit/s  
95th percentile per-packet one-way delay: 169.592 ms  
Loss rate: 1.12%  
-- Flow 2:  
Average throughput: 298.53 Mbit/s  
95th percentile per-packet one-way delay: 111.462 ms  
Loss rate: 0.98%  
-- Flow 3:  
Average throughput: 236.96 Mbit/s  
95th percentile per-packet one-way delay: 117.759 ms  
Loss rate: 2.55%

Run 2: Report of FillP-Sheep — Data Link

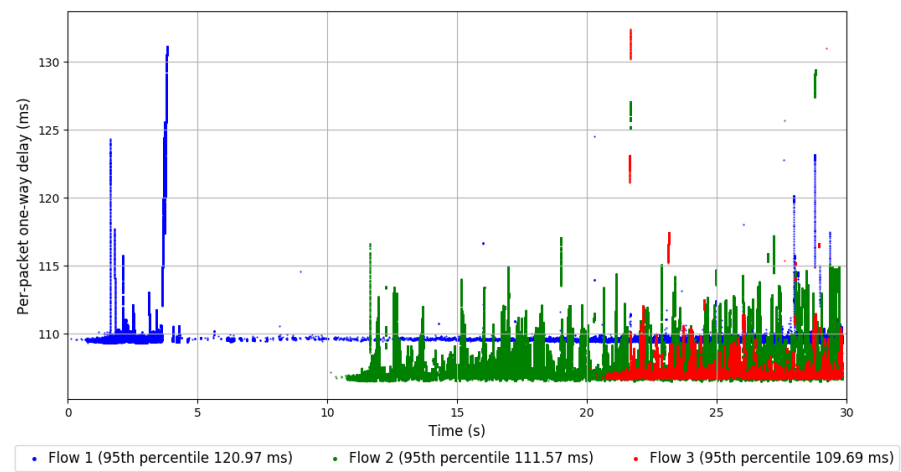
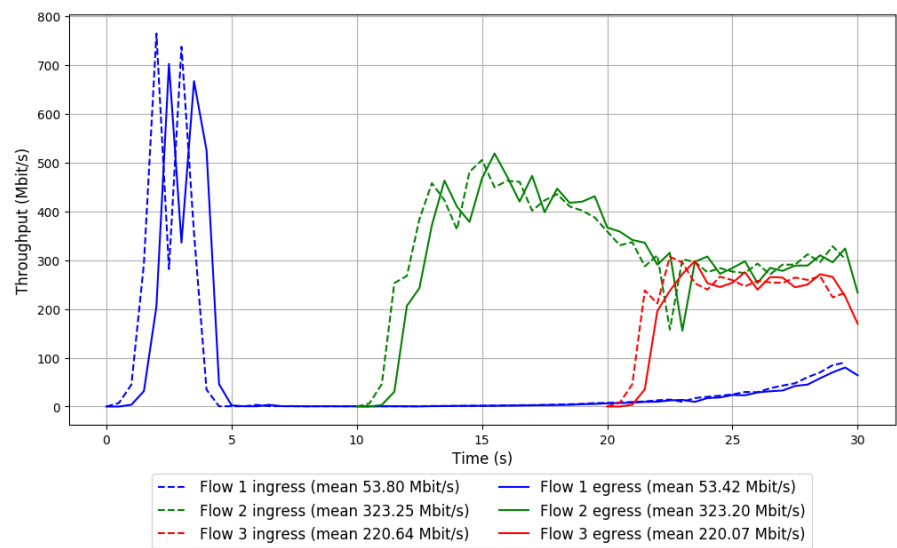


Run 3: Statistics of FillP-Sheep

Start at: 2019-06-27 06:47:24  
End at: 2019-06-27 06:47:54  
Local clock offset: -0.175 ms  
Remote clock offset: -0.148 ms

# Below is generated by plot.py at 2019-06-27 09:32:38  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 339.44 Mbit/s  
95th percentile per-packet one-way delay: 111.714 ms  
Loss rate: 1.49%  
-- Flow 1:  
Average throughput: 53.42 Mbit/s  
95th percentile per-packet one-way delay: 120.967 ms  
Loss rate: 1.42%  
-- Flow 2:  
Average throughput: 323.20 Mbit/s  
95th percentile per-packet one-way delay: 111.566 ms  
Loss rate: 1.11%  
-- Flow 3:  
Average throughput: 220.07 Mbit/s  
95th percentile per-packet one-way delay: 109.688 ms  
Loss rate: 2.68%

Run 3: Report of FillP-Sheep — Data Link

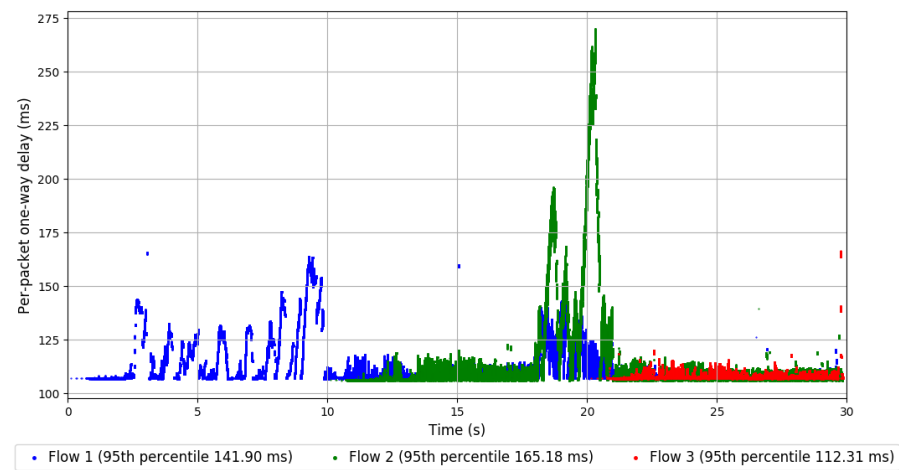
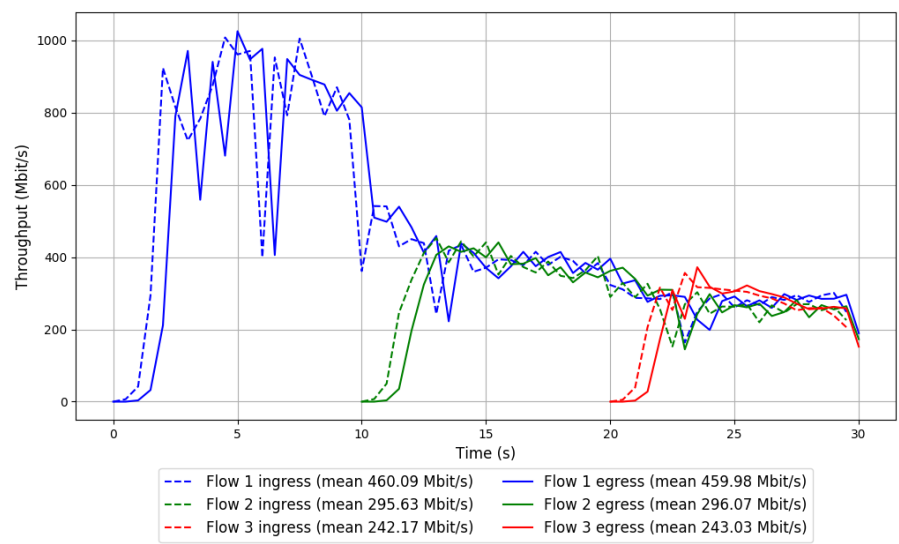


Run 4: Statistics of FillP-Sheep

Start at: 2019-06-27 07:24:54  
End at: 2019-06-27 07:25:24  
Local clock offset: 0.042 ms  
Remote clock offset: -0.105 ms

# Below is generated by plot.py at 2019-06-27 09:39:08  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 735.23 Mbit/s  
95th percentile per-packet one-way delay: 142.713 ms  
Loss rate: 0.92%  
-- Flow 1:  
Average throughput: 459.98 Mbit/s  
95th percentile per-packet one-way delay: 141.902 ms  
Loss rate: 0.74%  
-- Flow 2:  
Average throughput: 296.07 Mbit/s  
95th percentile per-packet one-way delay: 165.181 ms  
Loss rate: 0.94%  
-- Flow 3:  
Average throughput: 243.03 Mbit/s  
95th percentile per-packet one-way delay: 112.309 ms  
Loss rate: 1.85%

Run 4: Report of FillP-Sheep — Data Link



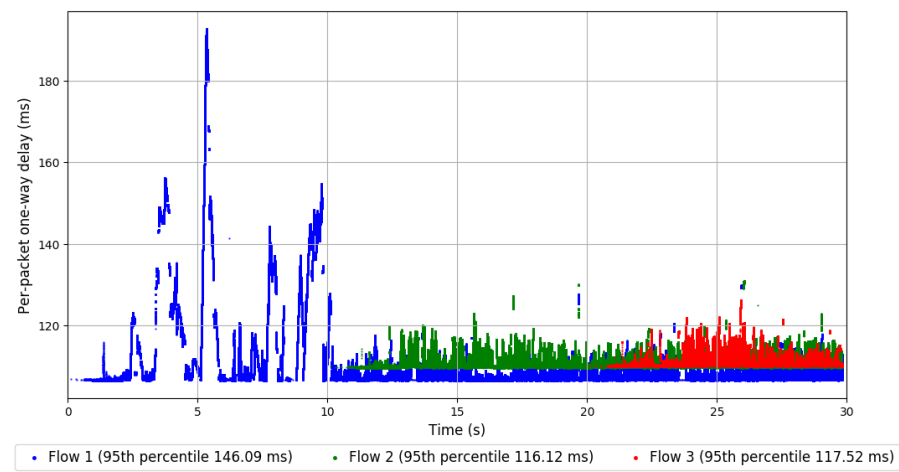
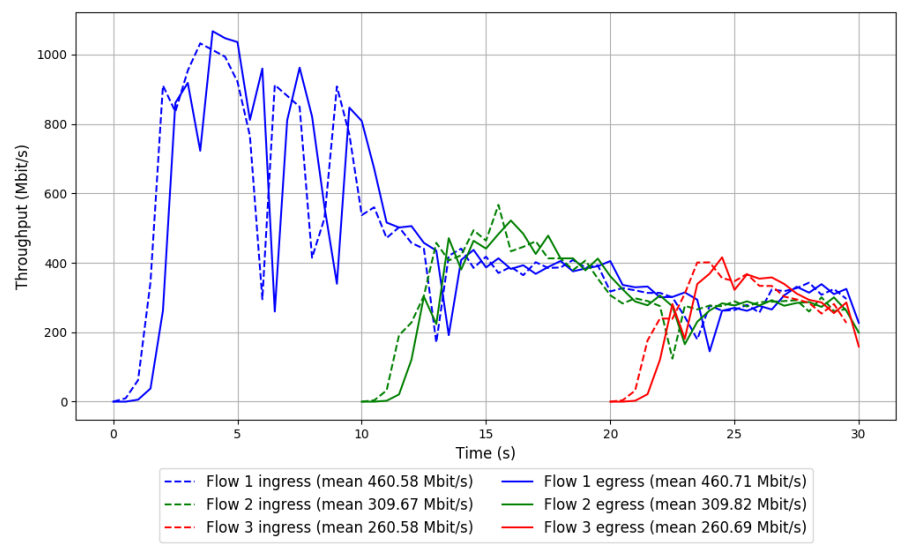


Run 5: Statistics of FillP-Sheep

Start at: 2019-06-27 08:03:17  
End at: 2019-06-27 08:03:47  
Local clock offset: -0.168 ms  
Remote clock offset: -0.041 ms

# Below is generated by plot.py at 2019-06-27 09:41:23  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 751.18 Mbit/s  
95th percentile per-packet one-way delay: 139.789 ms  
Loss rate: 0.98%  
-- Flow 1:  
Average throughput: 460.71 Mbit/s  
95th percentile per-packet one-way delay: 146.093 ms  
Loss rate: 0.68%  
-- Flow 2:  
Average throughput: 309.82 Mbit/s  
95th percentile per-packet one-way delay: 116.118 ms  
Loss rate: 1.05%  
-- Flow 3:  
Average throughput: 260.69 Mbit/s  
95th percentile per-packet one-way delay: 117.523 ms  
Loss rate: 2.41%

Run 5: Report of FillP-Sheep — Data Link

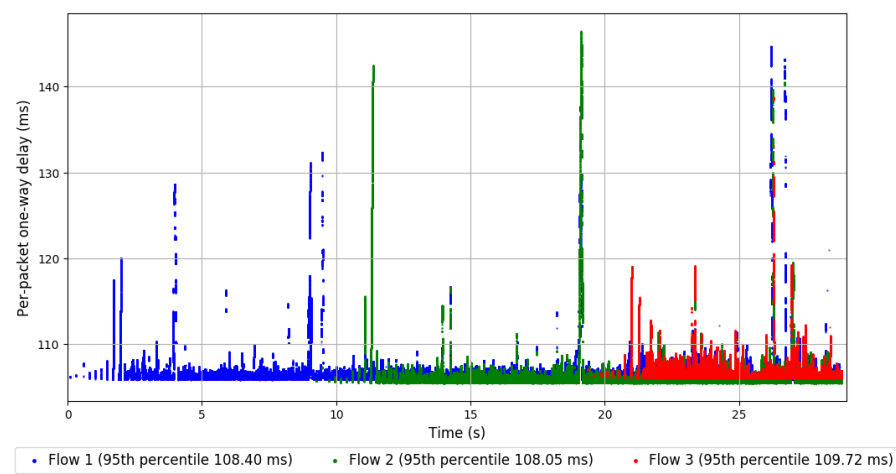
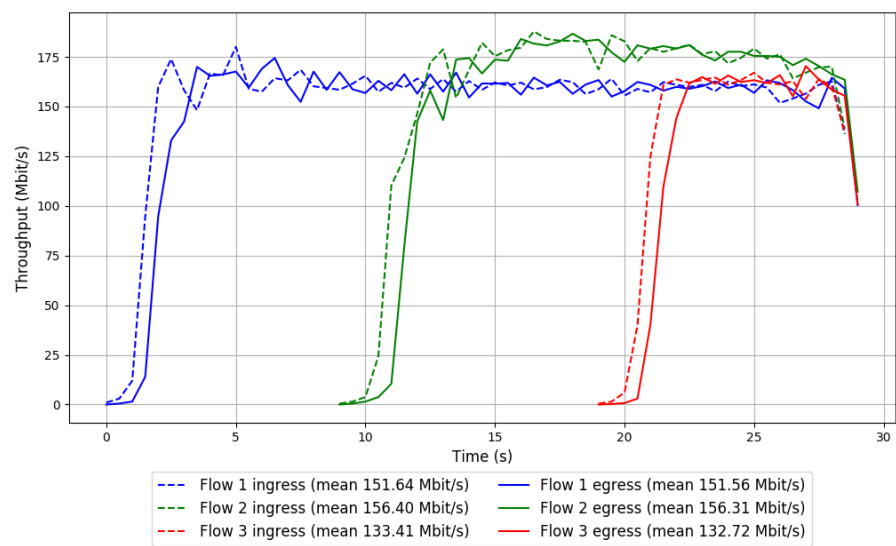


Run 1: Statistics of Indigo

Start at: 2019-06-27 05:52:56  
End at: 2019-06-27 05:53:26  
Local clock offset: -0.892 ms  
Remote clock offset: -0.058 ms

# Below is generated by plot.py at 2019-06-27 09:41:23  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 301.80 Mbit/s  
95th percentile per-packet one-way delay: 108.617 ms  
Loss rate: 1.22%  
-- Flow 1:  
Average throughput: 151.56 Mbit/s  
95th percentile per-packet one-way delay: 108.403 ms  
Loss rate: 0.81%  
-- Flow 2:  
Average throughput: 156.31 Mbit/s  
95th percentile per-packet one-way delay: 108.050 ms  
Loss rate: 1.17%  
-- Flow 3:  
Average throughput: 132.72 Mbit/s  
95th percentile per-packet one-way delay: 109.717 ms  
Loss rate: 2.77%

Run 1: Report of Indigo — Data Link

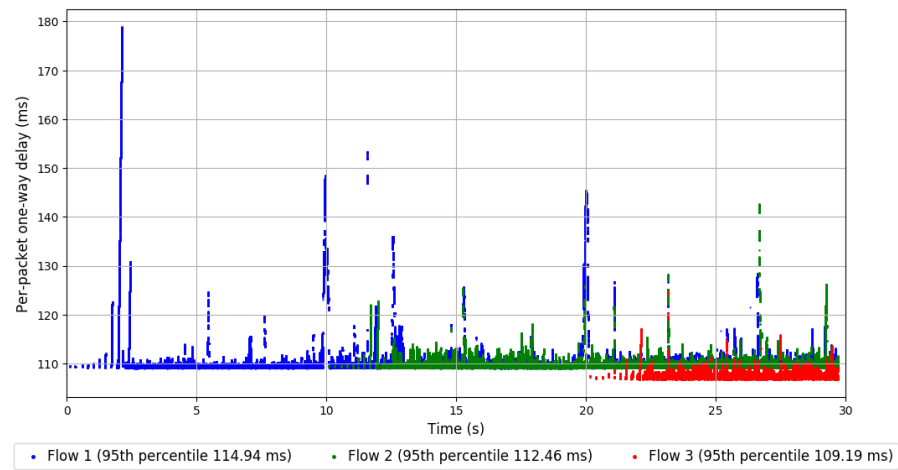
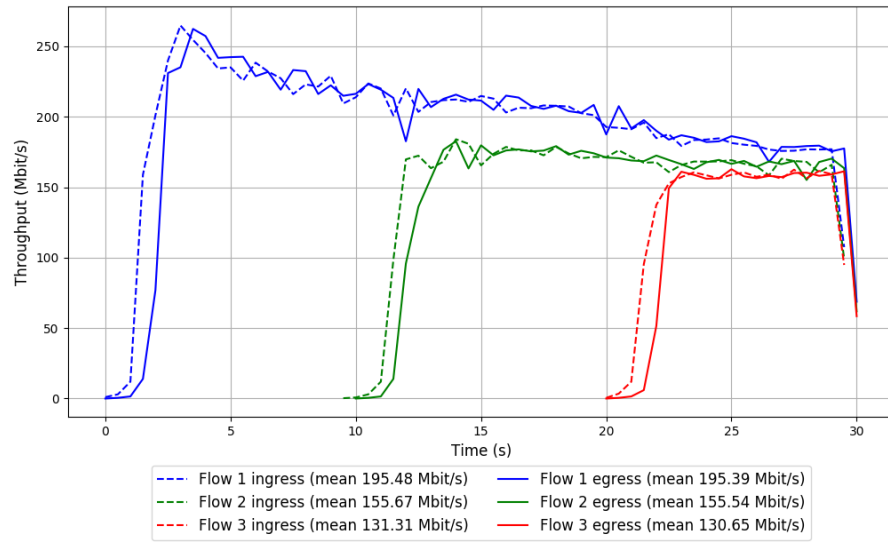


Run 2: Statistics of Indigo

Start at: 2019-06-27 06:31:15  
End at: 2019-06-27 06:31:45  
Local clock offset: -0.064 ms  
Remote clock offset: -0.089 ms

# Below is generated by plot.py at 2019-06-27 09:41:23  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 340.47 Mbit/s  
95th percentile per-packet one-way delay: 112.996 ms  
Loss rate: 1.15%  
-- Flow 1:  
Average throughput: 195.39 Mbit/s  
95th percentile per-packet one-way delay: 114.943 ms  
Loss rate: 0.79%  
-- Flow 2:  
Average throughput: 155.54 Mbit/s  
95th percentile per-packet one-way delay: 112.458 ms  
Loss rate: 1.18%  
-- Flow 3:  
Average throughput: 130.65 Mbit/s  
95th percentile per-packet one-way delay: 109.193 ms  
Loss rate: 2.72%

## Run 2: Report of Indigo — Data Link



Run 3: Statistics of Indigo

Start at: 2019-06-27 07:08:43

End at: 2019-06-27 07:09:13

Local clock offset: 0.036 ms

Remote clock offset: 0.228 ms

# Below is generated by plot.py at 2019-06-27 09:41:23

# Datalink statistics

-- Total of 3 flows:

Average throughput: 287.04 Mbit/s

95th percentile per-packet one-way delay: 125.088 ms

Loss rate: 1.21%

-- Flow 1:

Average throughput: 152.39 Mbit/s

95th percentile per-packet one-way delay: 118.725 ms

Loss rate: 0.75%

-- Flow 2:

Average throughput: 140.13 Mbit/s

95th percentile per-packet one-way delay: 133.883 ms

Loss rate: 1.21%

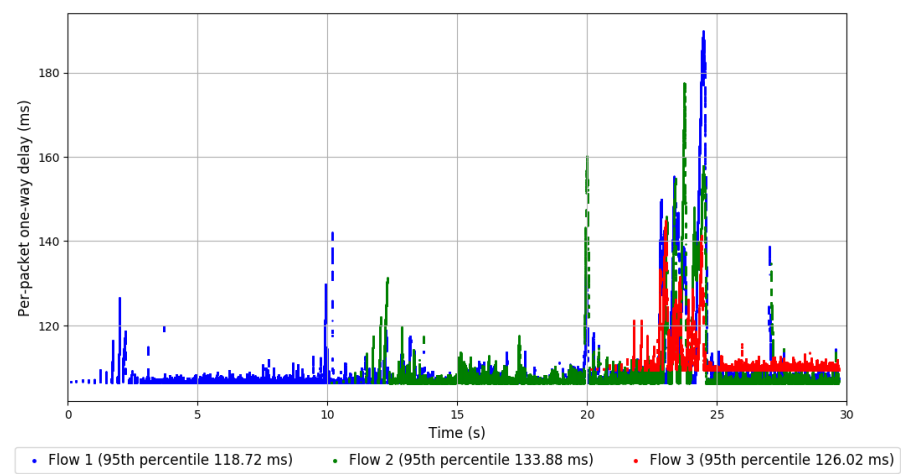
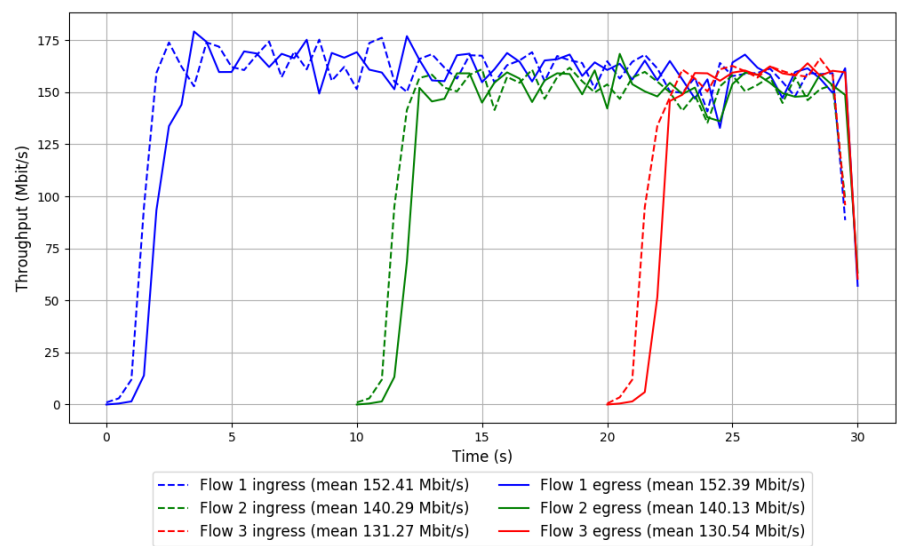
-- Flow 3:

Average throughput: 130.54 Mbit/s

95th percentile per-packet one-way delay: 126.018 ms

Loss rate: 2.80%

Run 3: Report of Indigo — Data Link



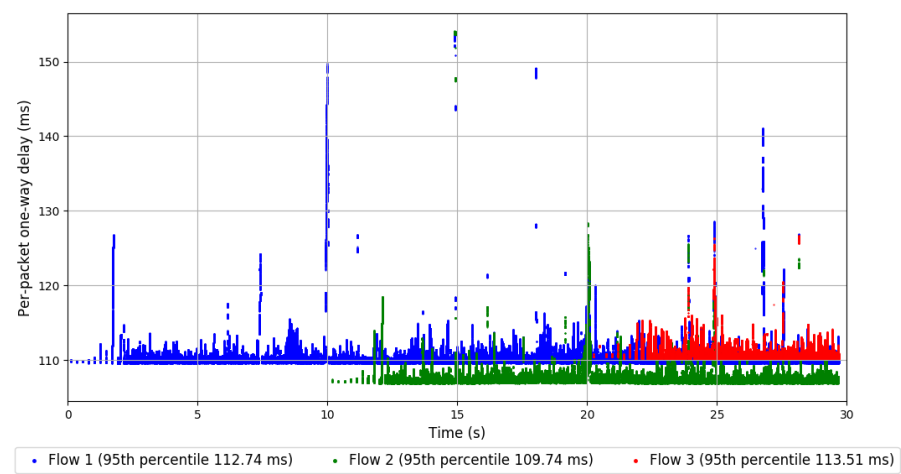
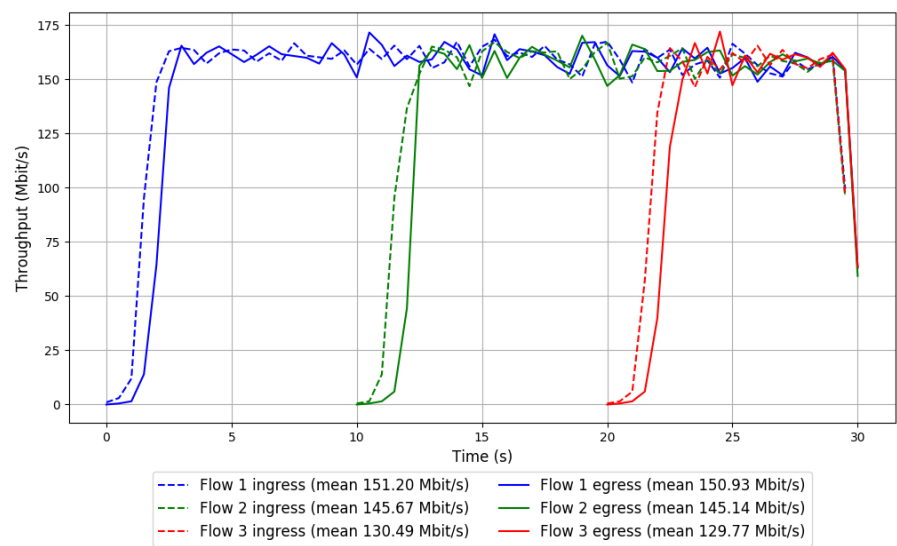


Run 4: Statistics of Indigo

Start at: 2019-06-27 07:47:08  
End at: 2019-06-27 07:47:38  
Local clock offset: -0.069 ms  
Remote clock offset: -0.066 ms

# Below is generated by plot.py at 2019-06-27 09:41:23  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 287.93 Mbit/s  
95th percentile per-packet one-way delay: 112.519 ms  
Loss rate: 1.37%  
-- Flow 1:  
Average throughput: 150.93 Mbit/s  
95th percentile per-packet one-way delay: 112.744 ms  
Loss rate: 0.91%  
-- Flow 2:  
Average throughput: 145.14 Mbit/s  
95th percentile per-packet one-way delay: 109.740 ms  
Loss rate: 1.46%  
-- Flow 3:  
Average throughput: 129.77 Mbit/s  
95th percentile per-packet one-way delay: 113.509 ms  
Loss rate: 2.81%

Run 4: Report of Indigo — Data Link

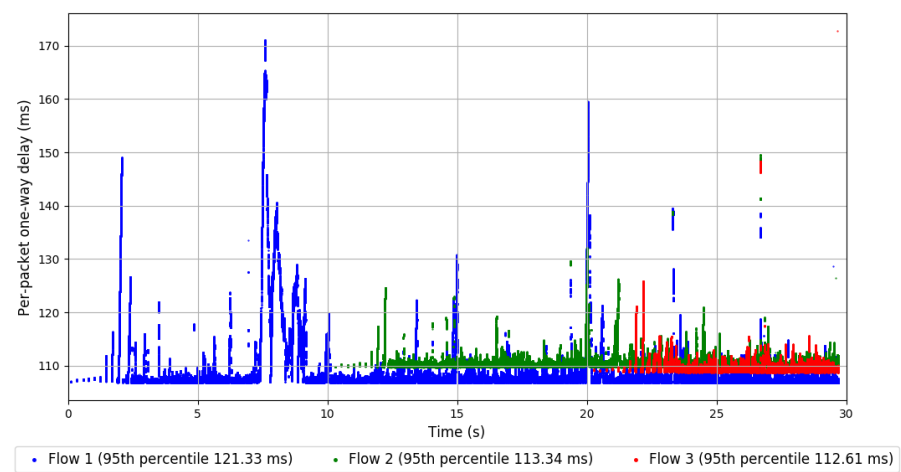
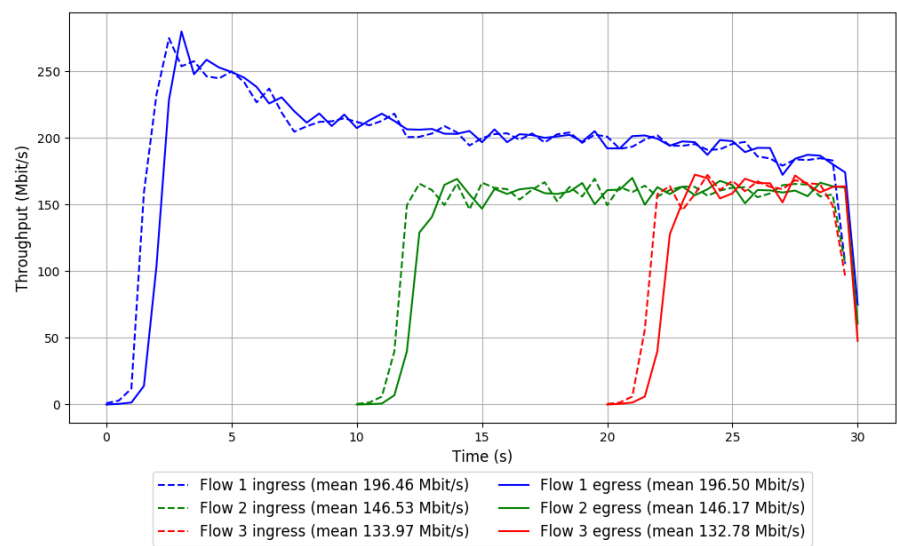


Run 5: Statistics of Indigo

Start at: 2019-06-27 08:25:30  
End at: 2019-06-27 08:26:00  
Local clock offset: 0.028 ms  
Remote clock offset: -0.076 ms

# Below is generated by plot.py at 2019-06-27 09:43:40  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 334.58 Mbit/s  
95th percentile per-packet one-way delay: 116.635 ms  
Loss rate: 1.22%  
-- Flow 1:  
Average throughput: 196.50 Mbit/s  
95th percentile per-packet one-way delay: 121.335 ms  
Loss rate: 0.72%  
-- Flow 2:  
Average throughput: 146.17 Mbit/s  
95th percentile per-packet one-way delay: 113.344 ms  
Loss rate: 1.36%  
-- Flow 3:  
Average throughput: 132.78 Mbit/s  
95th percentile per-packet one-way delay: 112.609 ms  
Loss rate: 3.15%

Run 5: Report of Indigo — Data Link



Run 1: Statistics of Indigo-MusesC3

Start at: 2019-06-27 05:23:46

End at: 2019-06-27 05:24:16

Local clock offset: 0.192 ms

Remote clock offset: 0.065 ms

# Below is generated by plot.py at 2019-06-27 09:47:38

# Datalink statistics

-- Total of 3 flows:

Average throughput: 721.90 Mbit/s

95th percentile per-packet one-way delay: 130.123 ms

Loss rate: 1.06%

-- Flow 1:

Average throughput: 421.98 Mbit/s

95th percentile per-packet one-way delay: 128.612 ms

Loss rate: 0.60%

-- Flow 2:

Average throughput: 361.30 Mbit/s

95th percentile per-packet one-way delay: 139.487 ms

Loss rate: 1.19%

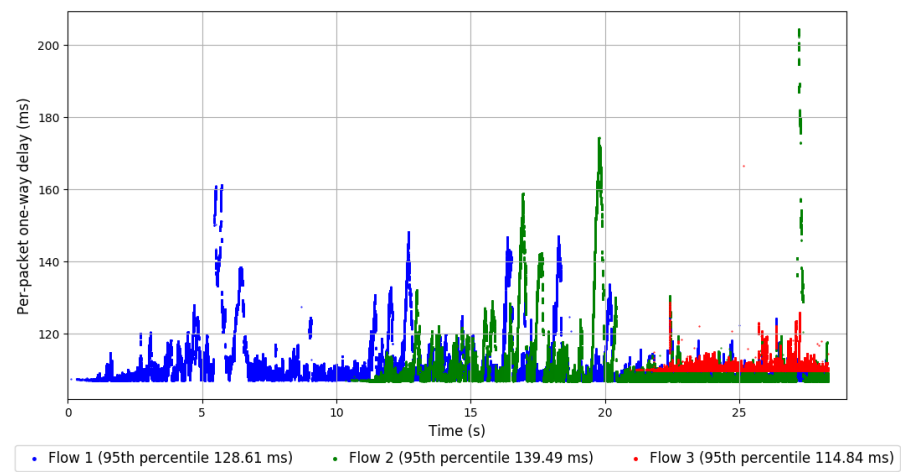
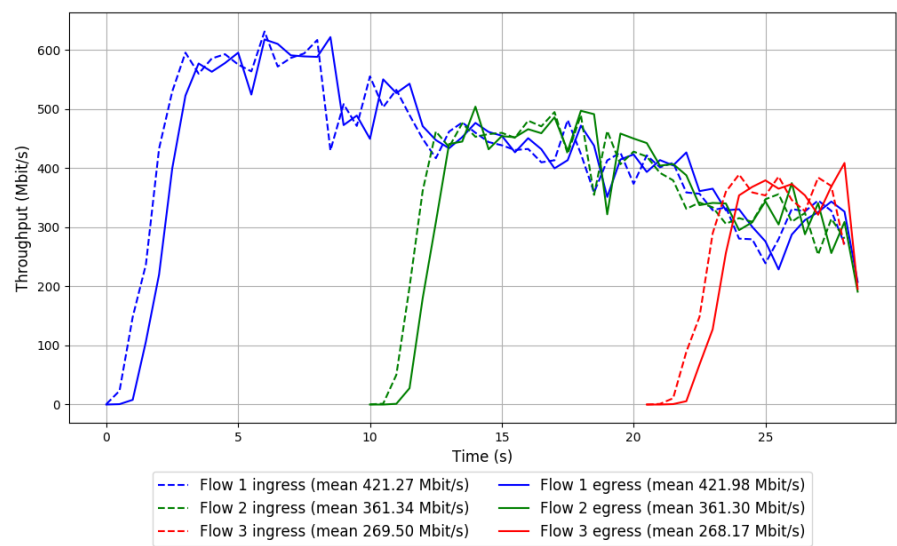
-- Flow 3:

Average throughput: 268.17 Mbit/s

95th percentile per-packet one-way delay: 114.837 ms

Loss rate: 3.31%

Run 1: Report of Indigo-MusesC3 — Data Link



Run 2: Statistics of Indigo-MusesC3

Start at: 2019-06-27 06:01:16

End at: 2019-06-27 06:01:46

Local clock offset: -0.095 ms

Remote clock offset: -0.04 ms

# Below is generated by plot.py at 2019-06-27 09:50:51

# Datalink statistics

-- Total of 3 flows:

Average throughput: 742.88 Mbit/s

95th percentile per-packet one-way delay: 139.104 ms

Loss rate: 1.25%

-- Flow 1:

Average throughput: 430.07 Mbit/s

95th percentile per-packet one-way delay: 140.150 ms

Loss rate: 0.98%

-- Flow 2:

Average throughput: 374.58 Mbit/s

95th percentile per-packet one-way delay: 142.803 ms

Loss rate: 0.81%

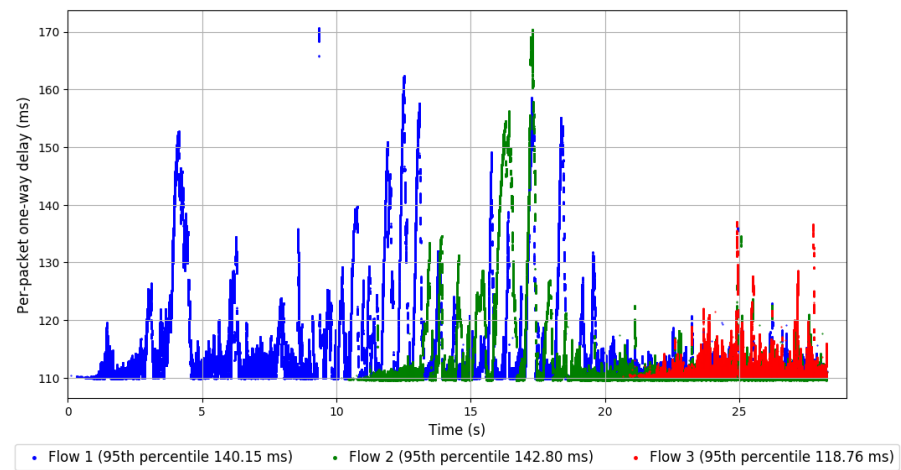
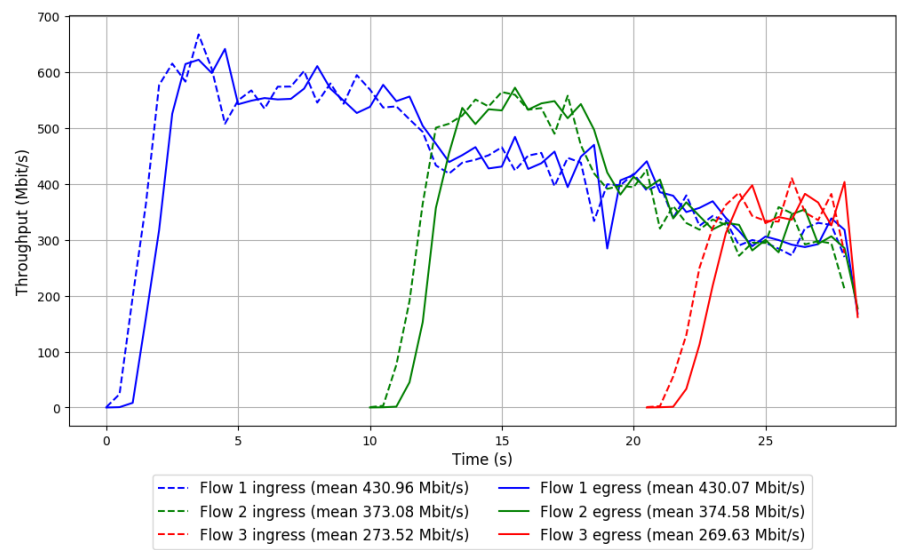
-- Flow 3:

Average throughput: 269.63 Mbit/s

95th percentile per-packet one-way delay: 118.760 ms

Loss rate: 4.20%

Run 2: Report of Indigo-MusesC3 — Data Link



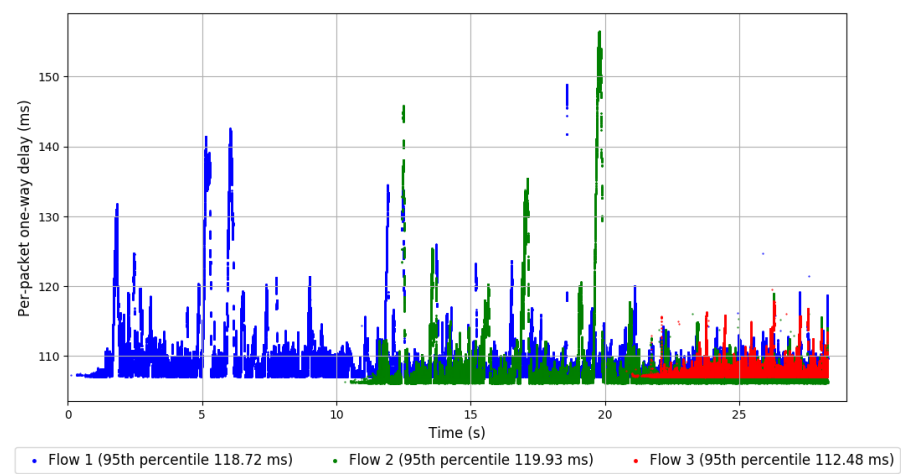
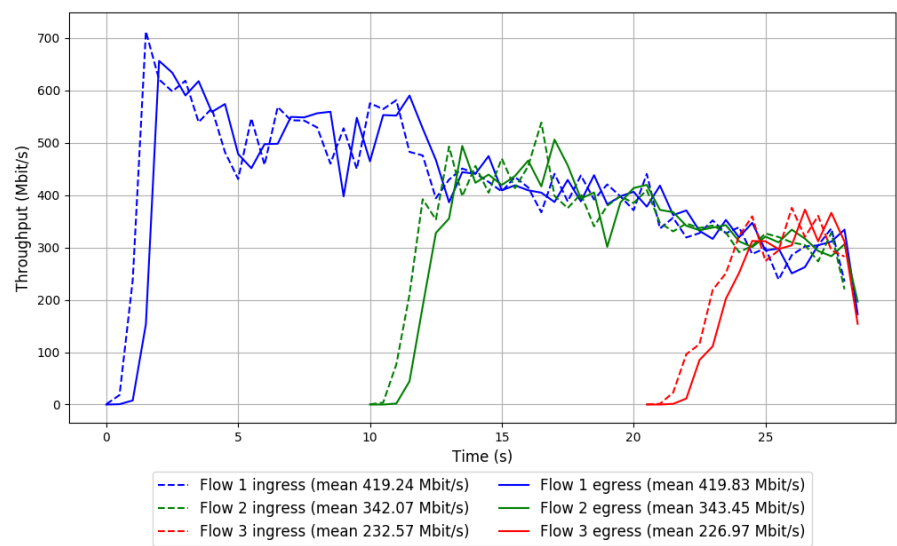


Run 3: Statistics of Indigo-MusesC3

Start at: 2019-06-27 06:39:36  
End at: 2019-06-27 06:40:07  
Local clock offset: 0.007 ms  
Remote clock offset: -0.132 ms

# Below is generated by plot.py at 2019-06-27 09:51:22  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 699.44 Mbit/s  
95th percentile per-packet one-way delay: 118.353 ms  
Loss rate: 1.10%  
-- Flow 1:  
Average throughput: 419.83 Mbit/s  
95th percentile per-packet one-way delay: 118.725 ms  
Loss rate: 0.65%  
-- Flow 2:  
Average throughput: 343.45 Mbit/s  
95th percentile per-packet one-way delay: 119.933 ms  
Loss rate: 0.79%  
-- Flow 3:  
Average throughput: 226.97 Mbit/s  
95th percentile per-packet one-way delay: 112.485 ms  
Loss rate: 5.19%

Run 3: Report of Indigo-MusesC3 — Data Link

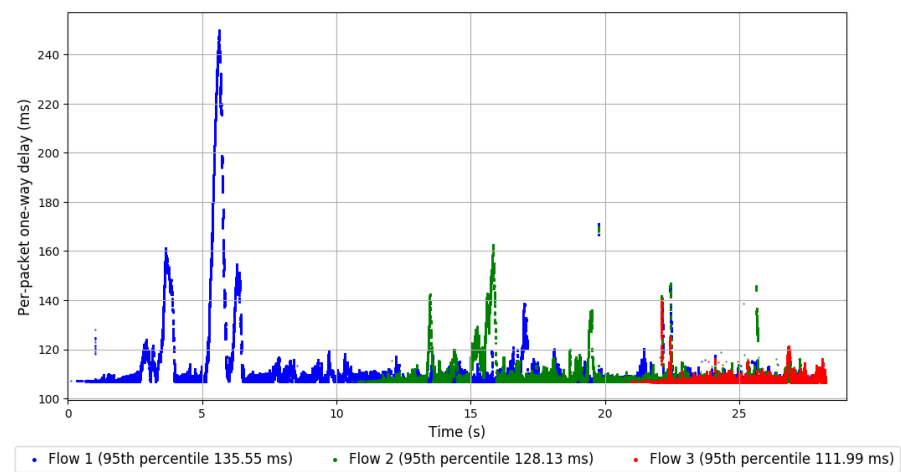
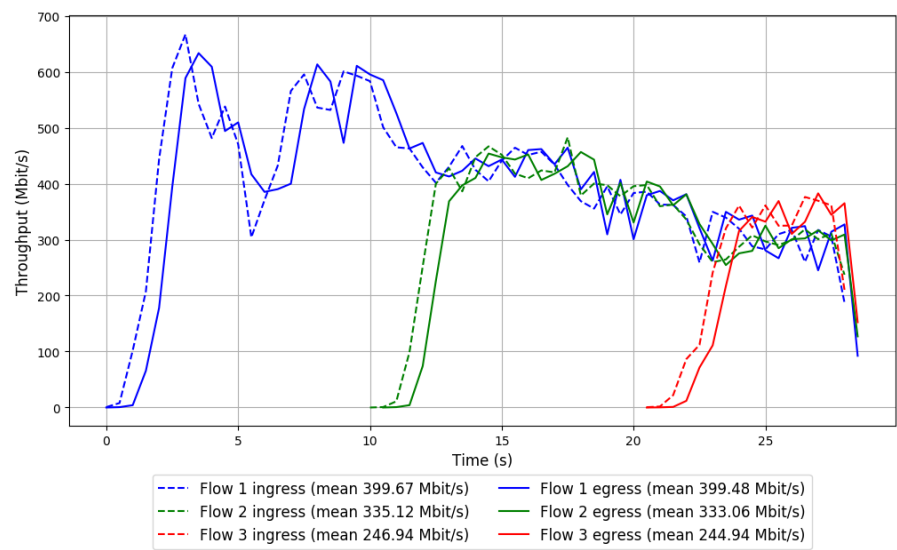


Run 4: Statistics of Indigo-MusesC3

Start at: 2019-06-27 07:17:02  
End at: 2019-06-27 07:17:32  
Local clock offset: -0.003 ms  
Remote clock offset: -0.112 ms

# Below is generated by plot.py at 2019-06-27 09:52:05  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 673.37 Mbit/s  
95th percentile per-packet one-way delay: 128.133 ms  
Loss rate: 1.42%  
-- Flow 1:  
Average throughput: 399.48 Mbit/s  
95th percentile per-packet one-way delay: 135.550 ms  
Loss rate: 0.82%  
-- Flow 2:  
Average throughput: 333.06 Mbit/s  
95th percentile per-packet one-way delay: 128.131 ms  
Loss rate: 1.86%  
-- Flow 3:  
Average throughput: 244.94 Mbit/s  
95th percentile per-packet one-way delay: 111.987 ms  
Loss rate: 3.64%

Run 4: Report of Indigo-MusesC3 — Data Link

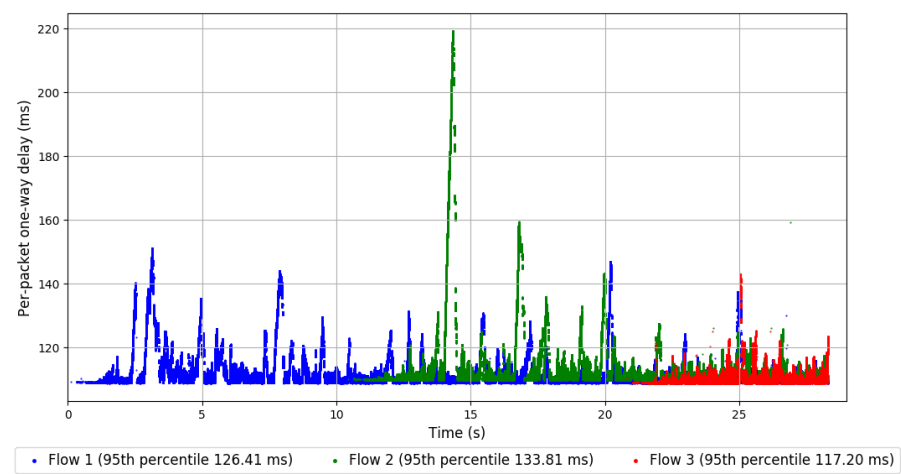
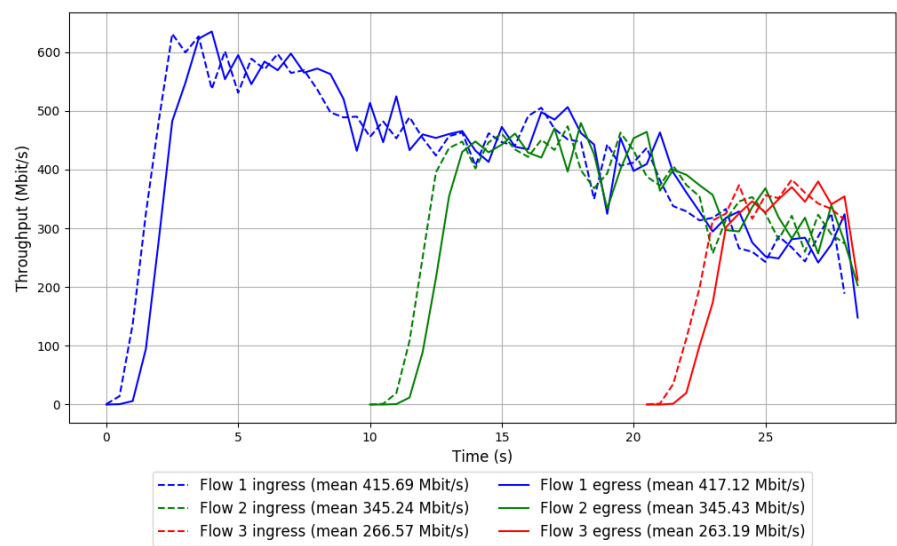


Run 5: Statistics of Indigo-MusesC3

Start at: 2019-06-27 07:55:23  
End at: 2019-06-27 07:55:53  
Local clock offset: -0.152 ms  
Remote clock offset: -0.076 ms

# Below is generated by plot.py at 2019-06-27 09:53:30  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 705.87 Mbit/s  
95th percentile per-packet one-way delay: 127.483 ms  
Loss rate: 1.04%  
-- Flow 1:  
Average throughput: 417.12 Mbit/s  
95th percentile per-packet one-way delay: 126.408 ms  
Loss rate: 0.43%  
-- Flow 2:  
Average throughput: 345.43 Mbit/s  
95th percentile per-packet one-way delay: 133.806 ms  
Loss rate: 1.17%  
-- Flow 3:  
Average throughput: 263.19 Mbit/s  
95th percentile per-packet one-way delay: 117.201 ms  
Loss rate: 4.15%

Run 5: Report of Indigo-MusesC3 — Data Link

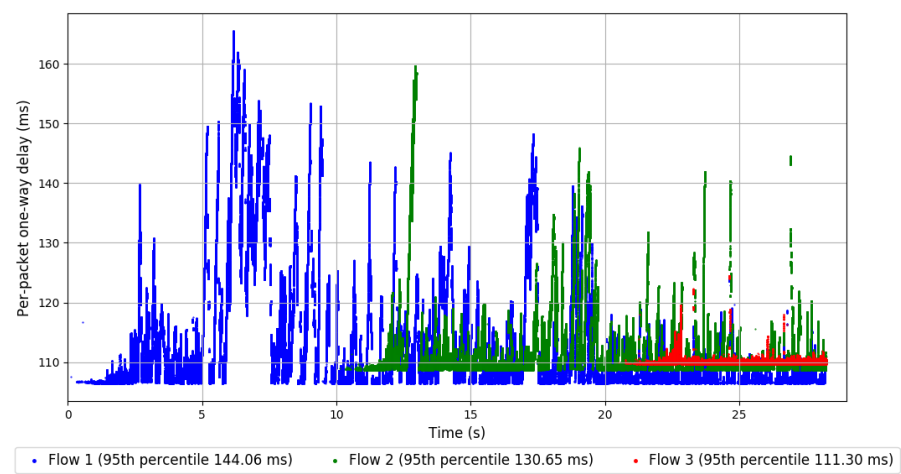
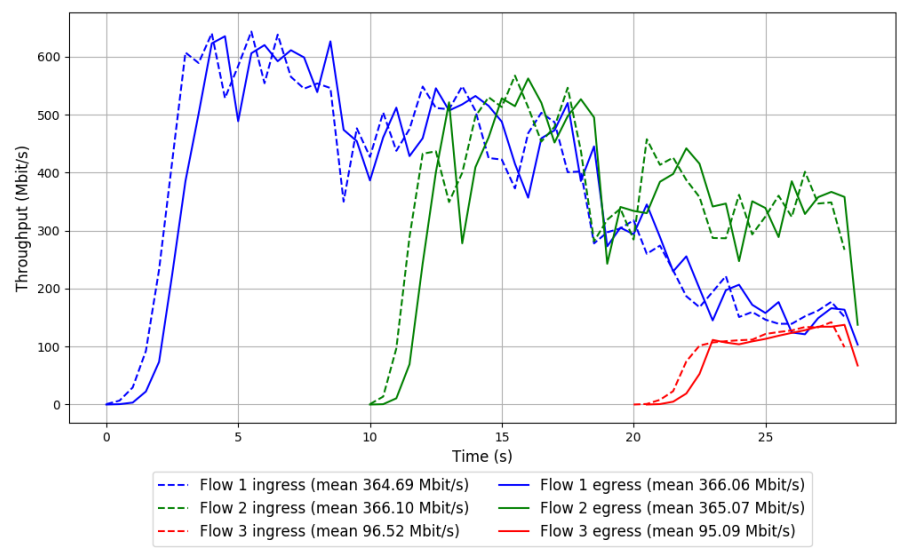


Run 1: Statistics of Indigo-MusesC5

Start at: 2019-06-27 05:41:43  
End at: 2019-06-27 05:42:13  
Local clock offset: -0.286 ms  
Remote clock offset: -0.065 ms

# Below is generated by plot.py at 2019-06-27 09:53:30  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 626.74 Mbit/s  
95th percentile per-packet one-way delay: 140.041 ms  
Loss rate: 1.02%  
-- Flow 1:  
Average throughput: 366.06 Mbit/s  
95th percentile per-packet one-way delay: 144.059 ms  
Loss rate: 0.50%  
-- Flow 2:  
Average throughput: 365.07 Mbit/s  
95th percentile per-packet one-way delay: 130.646 ms  
Loss rate: 1.46%  
-- Flow 3:  
Average throughput: 95.09 Mbit/s  
95th percentile per-packet one-way delay: 111.296 ms  
Loss rate: 4.18%

Run 1: Report of Indigo-MusesC5 — Data Link



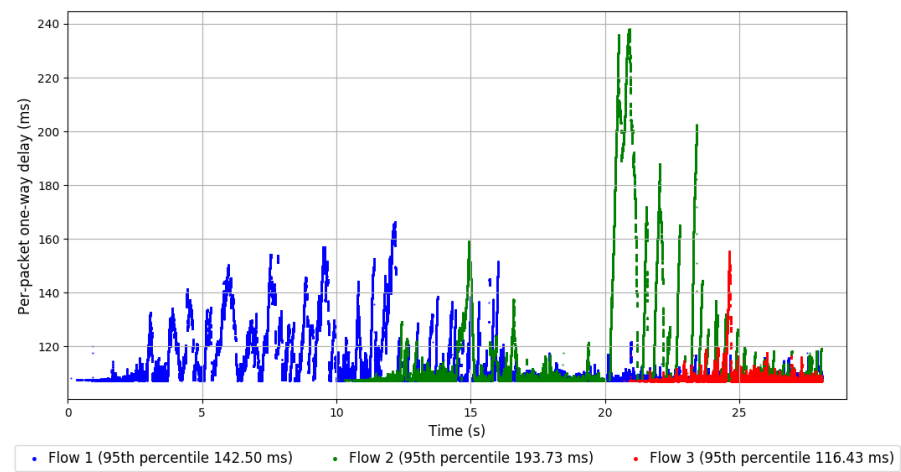
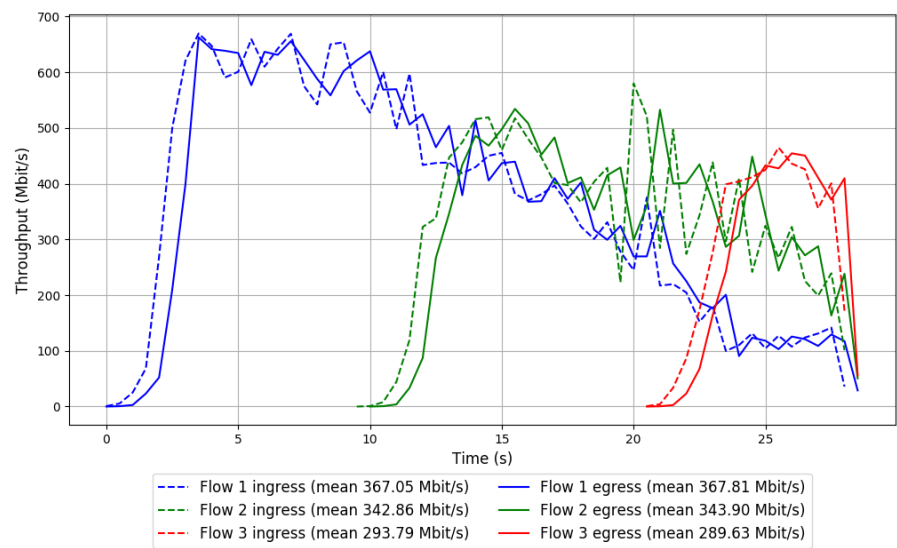


Run 2: Statistics of Indigo-MusesC5

Start at: 2019-06-27 06:19:47  
End at: 2019-06-27 06:20:17  
Local clock offset: 0.379 ms  
Remote clock offset: -0.039 ms

# Below is generated by plot.py at 2019-06-27 09:54:47  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 665.17 Mbit/s  
95th percentile per-packet one-way delay: 151.356 ms  
Loss rate: 1.14%  
-- Flow 1:  
Average throughput: 367.81 Mbit/s  
95th percentile per-packet one-way delay: 142.498 ms  
Loss rate: 0.54%  
-- Flow 2:  
Average throughput: 343.90 Mbit/s  
95th percentile per-packet one-way delay: 193.728 ms  
Loss rate: 1.02%  
-- Flow 3:  
Average throughput: 289.63 Mbit/s  
95th percentile per-packet one-way delay: 116.433 ms  
Loss rate: 4.25%

Run 2: Report of Indigo-MusesC5 — Data Link

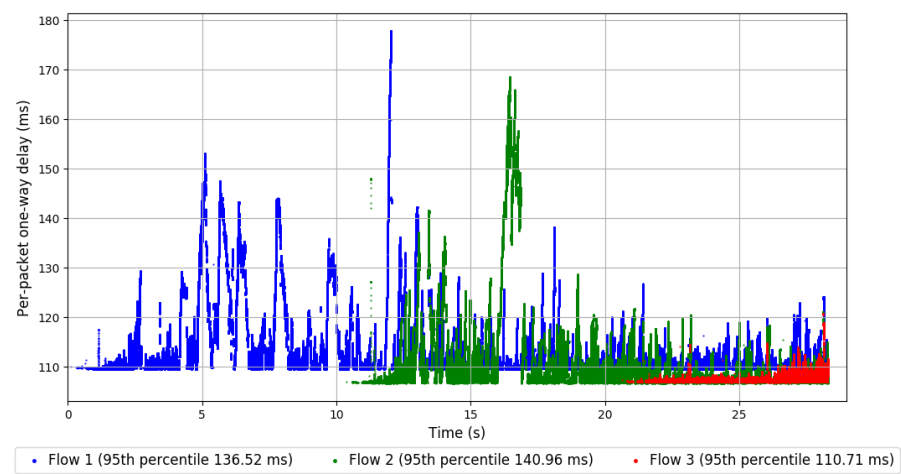
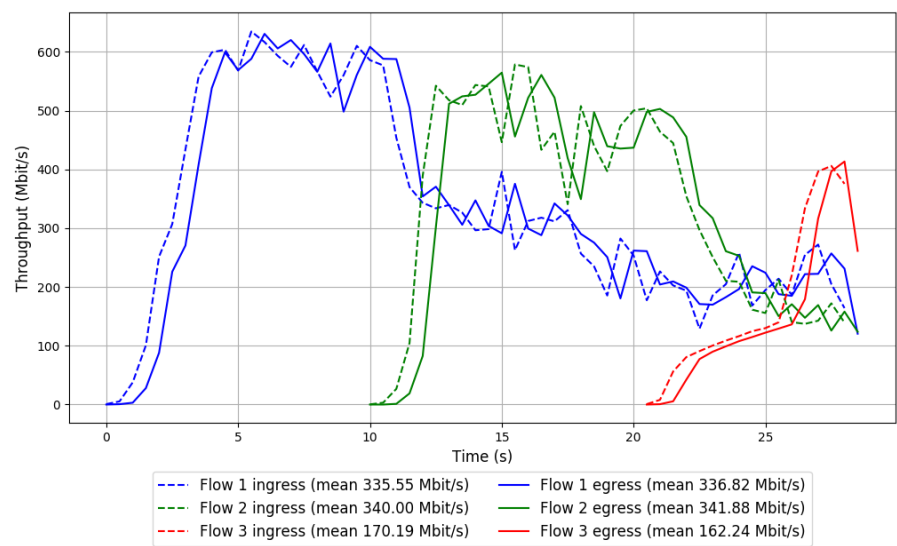


Run 3: Statistics of Indigo-MusesC5

Start at: 2019-06-27 06:57:44  
End at: 2019-06-27 06:58:14  
Local clock offset: 0.001 ms  
Remote clock offset: -0.173 ms

# Below is generated by plot.py at 2019-06-27 09:55:48  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 598.26 Mbit/s  
95th percentile per-packet one-way delay: 136.314 ms  
Loss rate: 1.05%  
-- Flow 1:  
Average throughput: 336.82 Mbit/s  
95th percentile per-packet one-way delay: 136.522 ms  
Loss rate: 0.46%  
-- Flow 2:  
Average throughput: 341.88 Mbit/s  
95th percentile per-packet one-way delay: 140.961 ms  
Loss rate: 0.59%  
-- Flow 3:  
Average throughput: 162.24 Mbit/s  
95th percentile per-packet one-way delay: 110.712 ms  
Loss rate: 7.31%

Run 3: Report of Indigo-MusesC5 — Data Link



Run 4: Statistics of Indigo-MusesC5

Start at: 2019-06-27 07:35:50

End at: 2019-06-27 07:36:20

Local clock offset: -0.121 ms

Remote clock offset: -0.1 ms

# Below is generated by plot.py at 2019-06-27 10:00:00

# Datalink statistics

-- Total of 3 flows:

Average throughput: 629.65 Mbit/s

95th percentile per-packet one-way delay: 155.075 ms

Loss rate: 0.79%

-- Flow 1:

Average throughput: 371.57 Mbit/s

95th percentile per-packet one-way delay: 158.515 ms

Loss rate: 0.39%

-- Flow 2:

Average throughput: 361.07 Mbit/s

95th percentile per-packet one-way delay: 148.162 ms

Loss rate: 1.02%

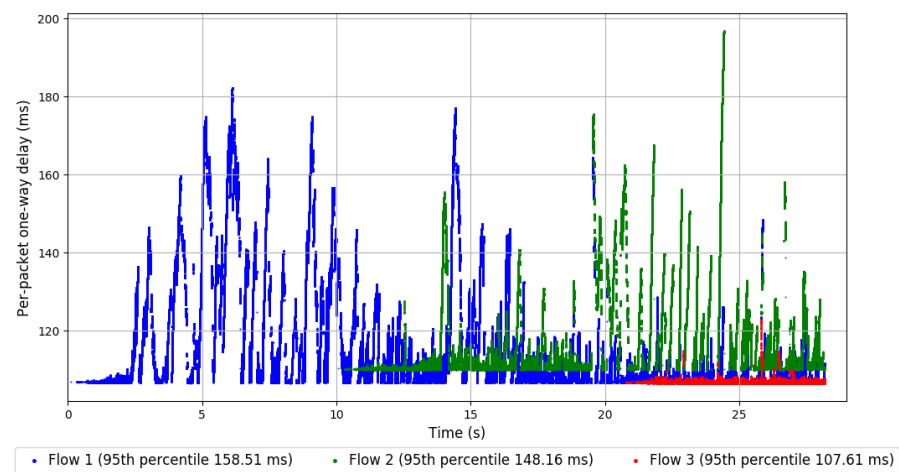
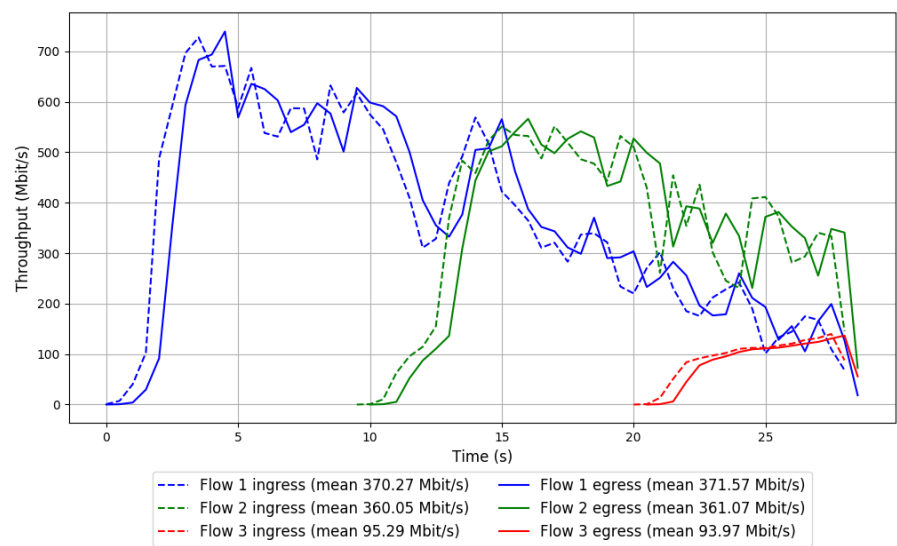
-- Flow 3:

Average throughput: 93.97 Mbit/s

95th percentile per-packet one-way delay: 107.606 ms

Loss rate: 4.26%

Run 4: Report of Indigo-MusesC5 — Data Link

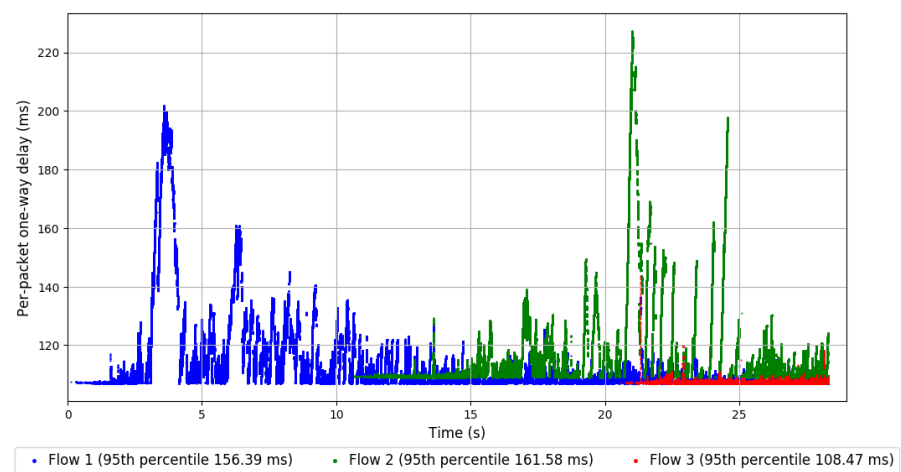
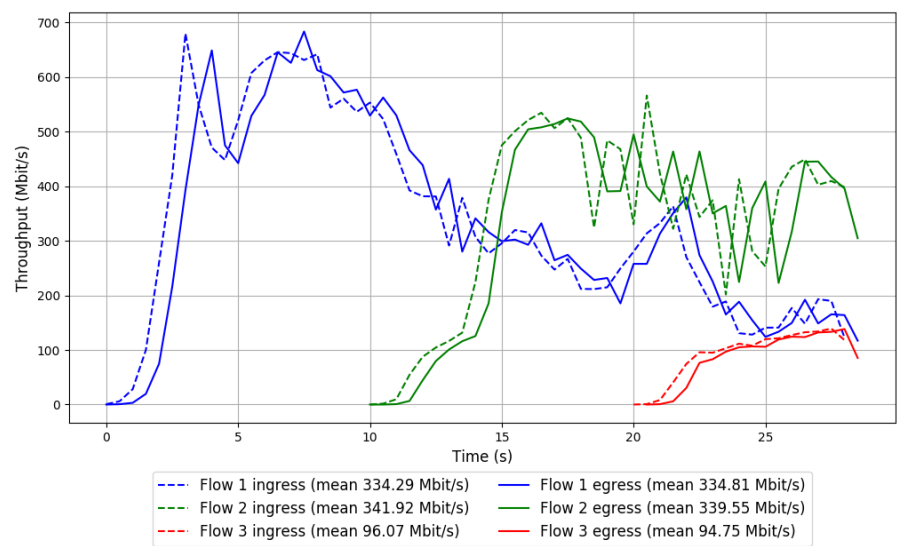


Run 5: Statistics of Indigo-MusesC5

Start at: 2019-06-27 08:14:00  
End at: 2019-06-27 08:14:30  
Local clock offset: -0.0 ms  
Remote clock offset: -0.042 ms

# Below is generated by plot.py at 2019-06-27 10:02:02  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 575.62 Mbit/s  
95th percentile per-packet one-way delay: 157.783 ms  
Loss rate: 1.22%  
-- Flow 1:  
Average throughput: 334.81 Mbit/s  
95th percentile per-packet one-way delay: 156.387 ms  
Loss rate: 0.57%  
-- Flow 2:  
Average throughput: 339.55 Mbit/s  
95th percentile per-packet one-way delay: 161.582 ms  
Loss rate: 1.86%  
-- Flow 3:  
Average throughput: 94.75 Mbit/s  
95th percentile per-packet one-way delay: 108.466 ms  
Loss rate: 4.08%

Run 5: Report of Indigo-MusesC5 — Data Link





Run 1: Statistics of Indigo-MusesD

Start at: 2019-06-27 05:21:54

End at: 2019-06-27 05:22:24

Local clock offset: 0.078 ms

Remote clock offset: 0.051 ms

# Below is generated by plot.py at 2019-06-27 10:03:47

# Datalink statistics

-- Total of 3 flows:

Average throughput: 641.14 Mbit/s

95th percentile per-packet one-way delay: 120.729 ms

Loss rate: 1.35%

-- Flow 1:

Average throughput: 336.57 Mbit/s

95th percentile per-packet one-way delay: 119.245 ms

Loss rate: 0.76%

-- Flow 2:

Average throughput: 373.90 Mbit/s

95th percentile per-packet one-way delay: 127.420 ms

Loss rate: 1.19%

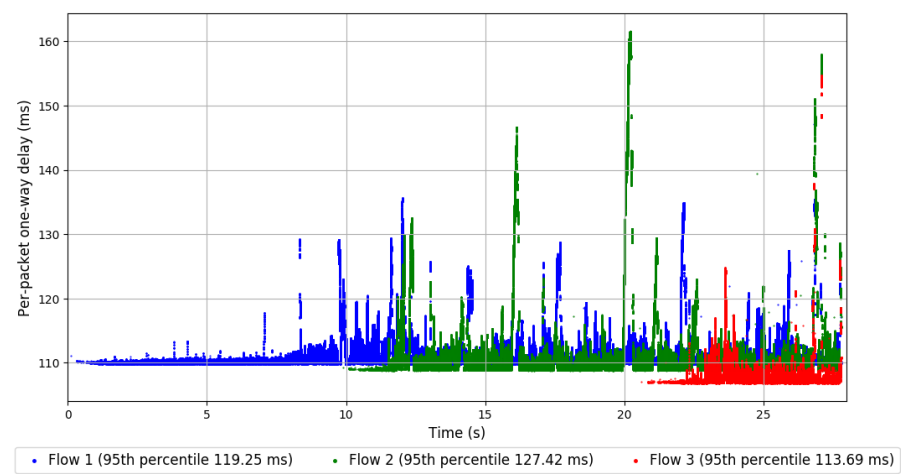
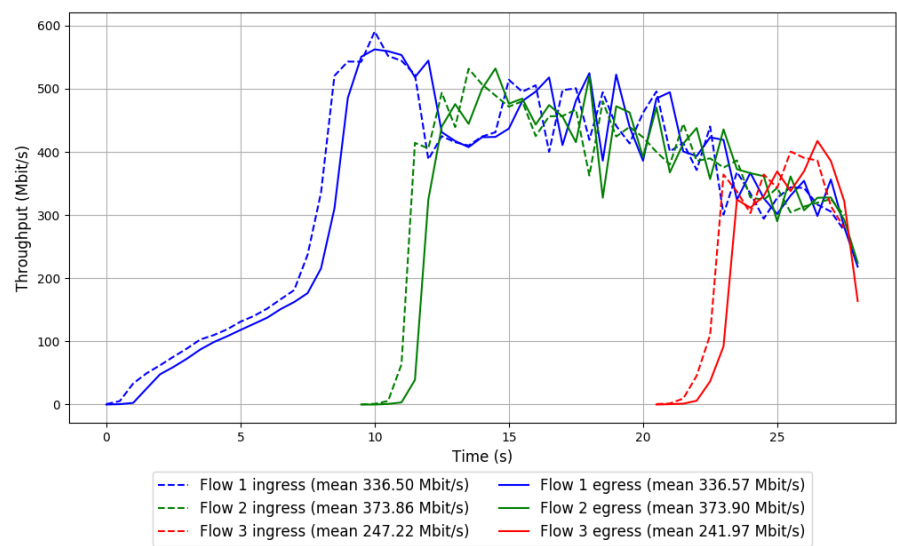
-- Flow 3:

Average throughput: 241.97 Mbit/s

95th percentile per-packet one-way delay: 113.694 ms

Loss rate: 4.99%

Run 1: Report of Indigo-MusesD — Data Link

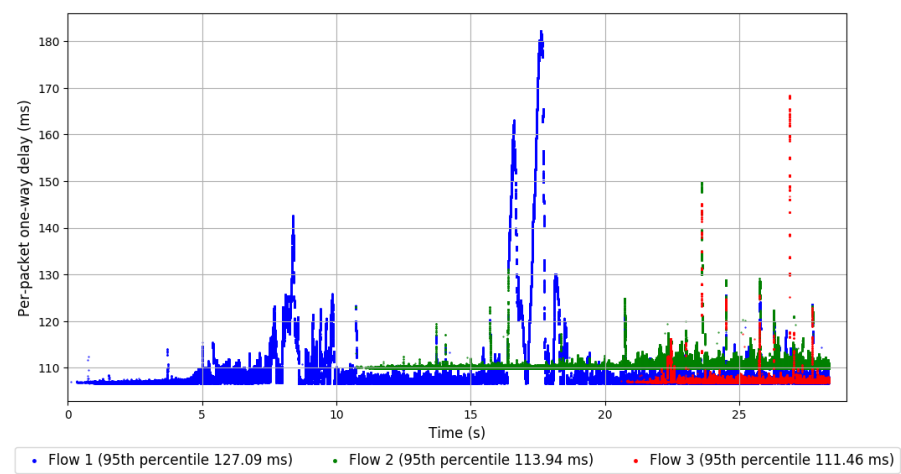
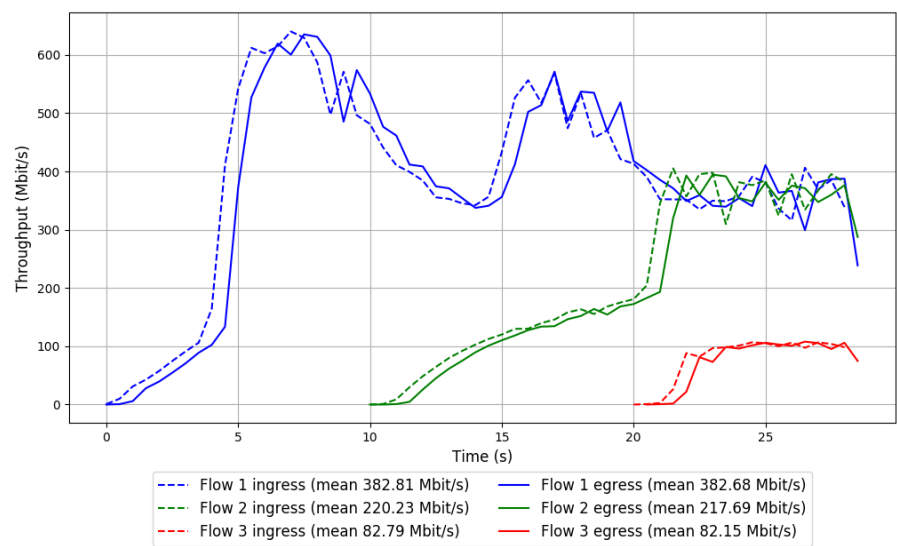


Run 2: Statistics of Indigo-MusesD

Start at: 2019-06-27 05:59:28  
End at: 2019-06-27 05:59:58  
Local clock offset: -0.131 ms  
Remote clock offset: -0.078 ms

# Below is generated by plot.py at 2019-06-27 10:03:47  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 542.89 Mbit/s  
95th percentile per-packet one-way delay: 123.220 ms  
Loss rate: 1.32%  
-- Flow 1:  
Average throughput: 382.68 Mbit/s  
95th percentile per-packet one-way delay: 127.087 ms  
Loss rate: 0.80%  
-- Flow 2:  
Average throughput: 217.69 Mbit/s  
95th percentile per-packet one-way delay: 113.936 ms  
Loss rate: 2.36%  
-- Flow 3:  
Average throughput: 82.15 Mbit/s  
95th percentile per-packet one-way delay: 111.459 ms  
Loss rate: 3.52%

Run 2: Report of Indigo-MusesD — Data Link

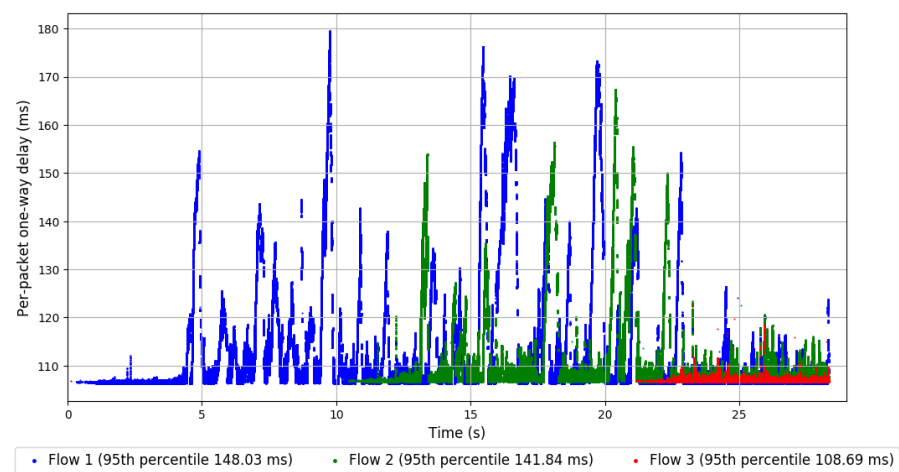
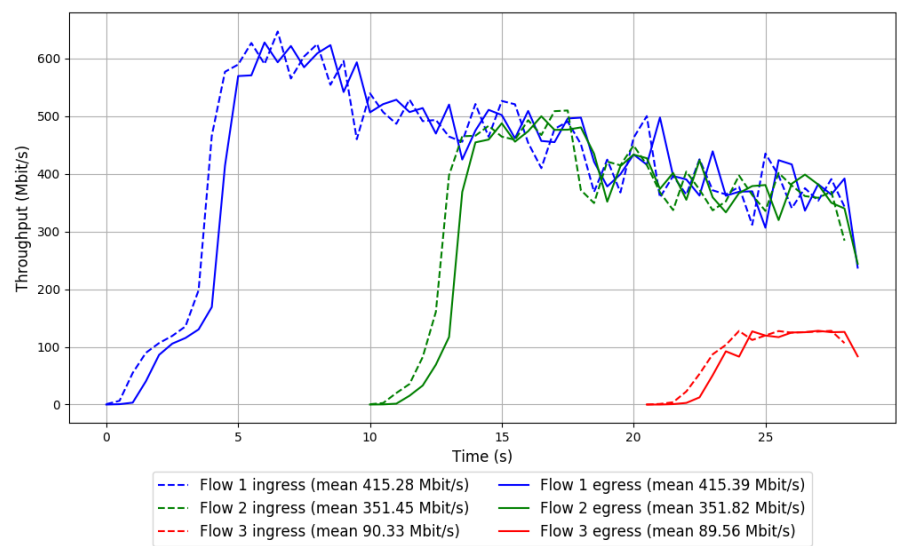


Run 3: Statistics of Indigo-MusesD

Start at: 2019-06-27 06:37:43  
End at: 2019-06-27 06:38:13  
Local clock offset: -0.011 ms  
Remote clock offset: -0.082 ms

# Below is generated by plot.py at 2019-06-27 10:05:46  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 664.07 Mbit/s  
95th percentile per-packet one-way delay: 144.255 ms  
Loss rate: 0.96%  
-- Flow 1:  
Average throughput: 415.39 Mbit/s  
95th percentile per-packet one-way delay: 148.029 ms  
Loss rate: 0.74%  
-- Flow 2:  
Average throughput: 351.82 Mbit/s  
95th percentile per-packet one-way delay: 141.838 ms  
Loss rate: 1.09%  
-- Flow 3:  
Average throughput: 89.56 Mbit/s  
95th percentile per-packet one-way delay: 108.687 ms  
Loss rate: 3.70%

Run 3: Report of Indigo-MusesD — Data Link



Run 4: Statistics of Indigo-MusesD

Start at: 2019-06-27 07:15:10

End at: 2019-06-27 07:15:40

Local clock offset: -0.035 ms

Remote clock offset: -0.12 ms

# Below is generated by plot.py at 2019-06-27 10:05:46

# Datalink statistics

-- Total of 3 flows:

Average throughput: 637.23 Mbit/s

95th percentile per-packet one-way delay: 128.554 ms

Loss rate: 1.09%

-- Flow 1:

Average throughput: 430.53 Mbit/s

95th percentile per-packet one-way delay: 130.814 ms

Loss rate: 0.80%

-- Flow 2:

Average throughput: 286.58 Mbit/s

95th percentile per-packet one-way delay: 120.750 ms

Loss rate: 1.46%

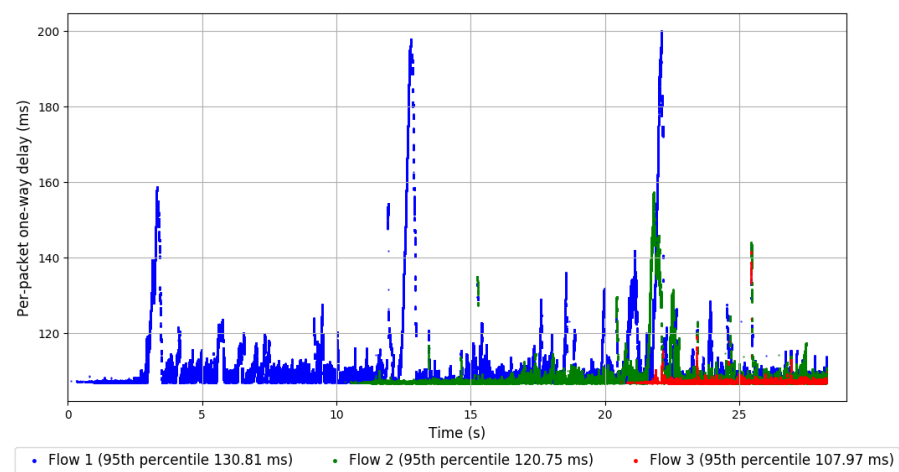
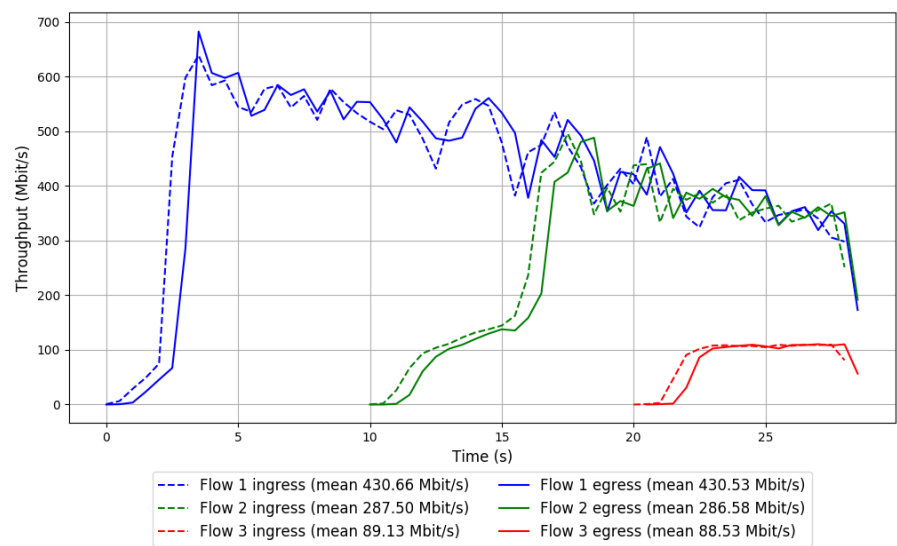
-- Flow 3:

Average throughput: 88.53 Mbit/s

95th percentile per-packet one-way delay: 107.974 ms

Loss rate: 3.39%

Run 4: Report of Indigo-MusesD — Data Link



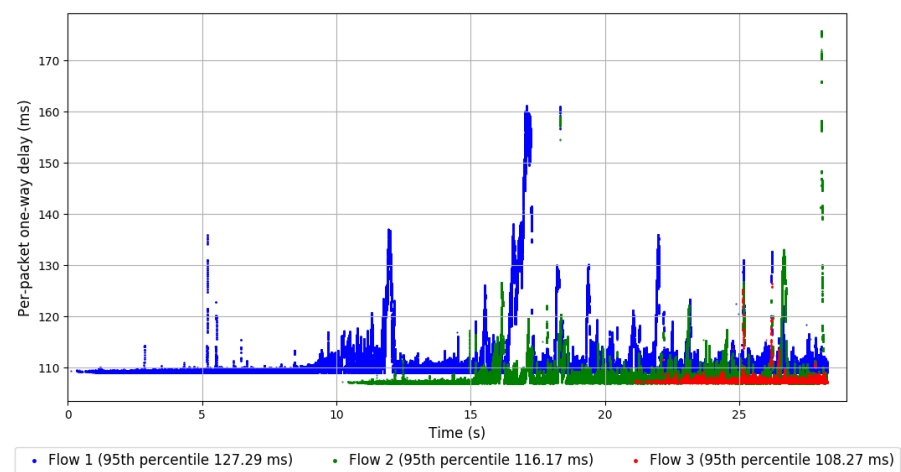
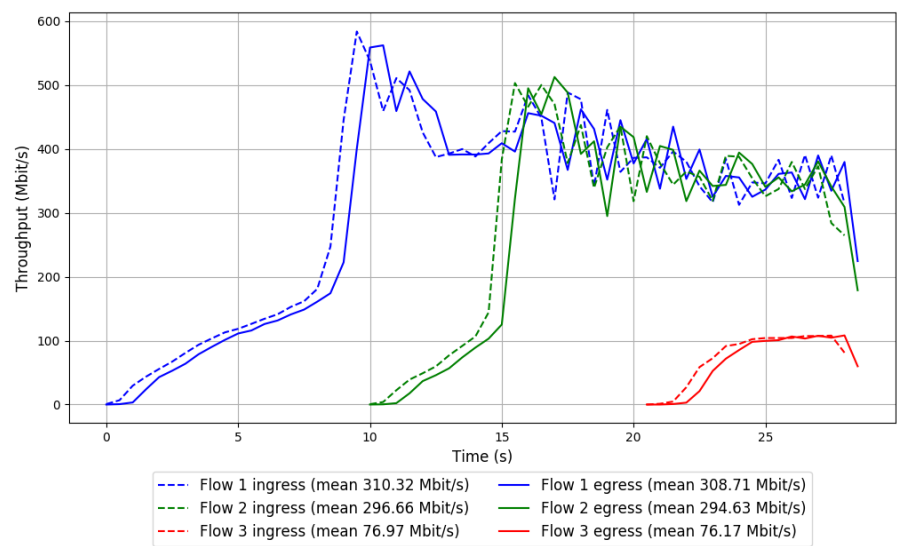


Run 5: Statistics of Indigo-MusesD

Start at: 2019-06-27 07:53:37  
End at: 2019-06-27 07:54:07  
Local clock offset: -0.031 ms  
Remote clock offset: -0.037 ms

# Below is generated by plot.py at 2019-06-27 10:05:46  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 517.38 Mbit/s  
95th percentile per-packet one-way delay: 122.751 ms  
Loss rate: 1.62%  
-- Flow 1:  
Average throughput: 308.71 Mbit/s  
95th percentile per-packet one-way delay: 127.286 ms  
Loss rate: 1.29%  
-- Flow 2:  
Average throughput: 294.63 Mbit/s  
95th percentile per-packet one-way delay: 116.172 ms  
Loss rate: 1.90%  
-- Flow 3:  
Average throughput: 76.17 Mbit/s  
95th percentile per-packet one-way delay: 108.269 ms  
Loss rate: 3.88%

Run 5: Report of Indigo-MusesD — Data Link

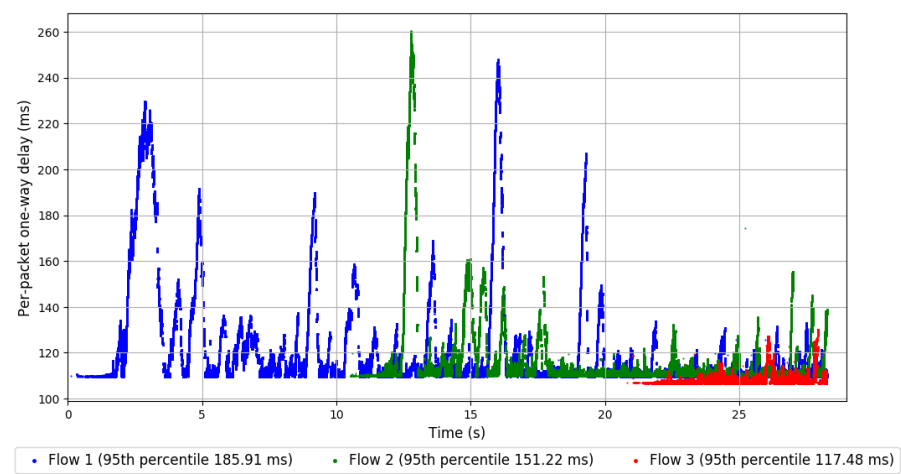
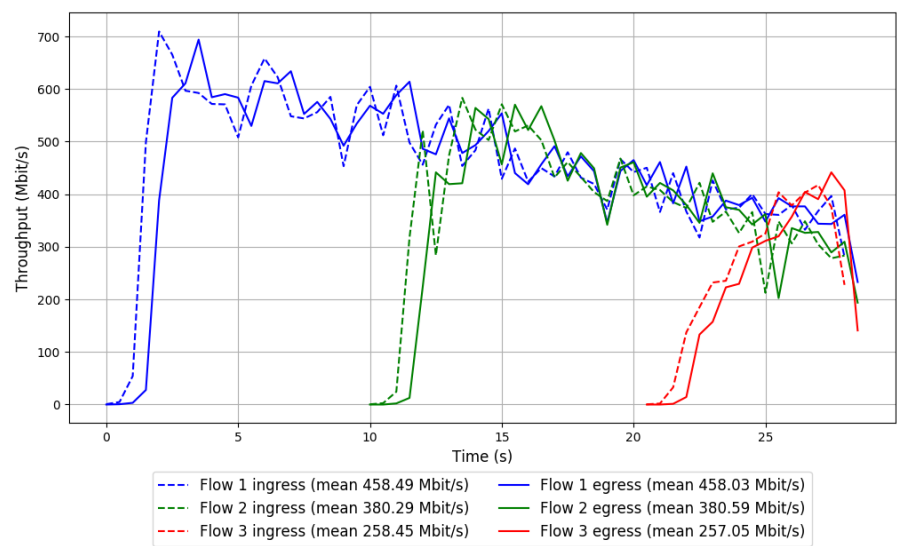


Run 1: Statistics of Indigo-MusesT

Start at: 2019-06-27 05:43:34  
End at: 2019-06-27 05:44:04  
Local clock offset: -0.123 ms  
Remote clock offset: -0.071 ms

# Below is generated by plot.py at 2019-06-27 10:10:28  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 768.85 Mbit/s  
95th percentile per-packet one-way delay: 174.683 ms  
Loss rate: 1.18%  
-- Flow 1:  
Average throughput: 458.03 Mbit/s  
95th percentile per-packet one-way delay: 185.905 ms  
Loss rate: 0.87%  
-- Flow 2:  
Average throughput: 380.59 Mbit/s  
95th percentile per-packet one-way delay: 151.216 ms  
Loss rate: 1.12%  
-- Flow 3:  
Average throughput: 257.05 Mbit/s  
95th percentile per-packet one-way delay: 117.482 ms  
Loss rate: 3.44%

Run 1: Report of Indigo-MusesT — Data Link

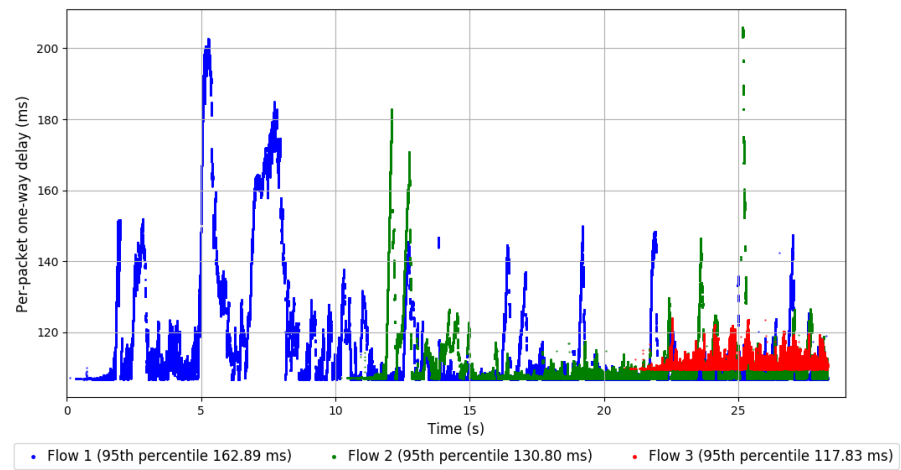
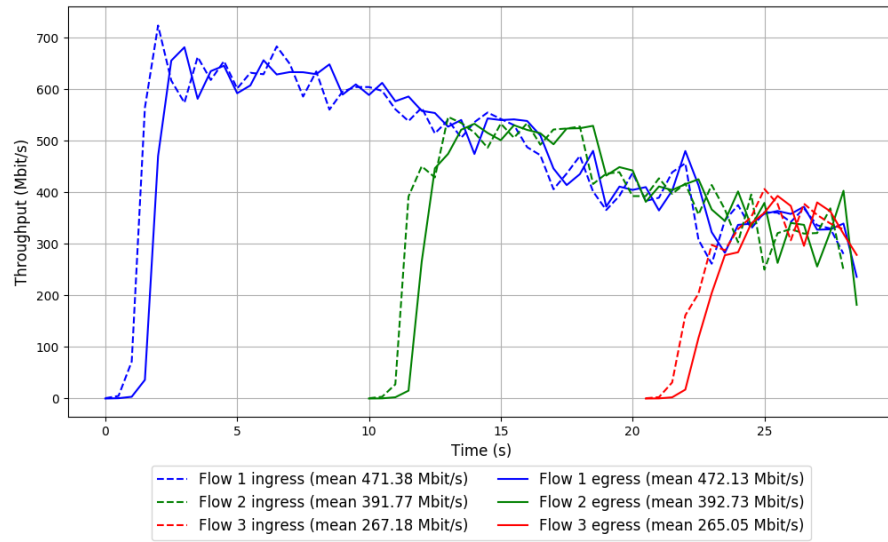


Run 2: Statistics of Indigo-MusesT

Start at: 2019-06-27 06:21:41  
End at: 2019-06-27 06:22:11  
Local clock offset: -0.048 ms  
Remote clock offset: -0.035 ms

# Below is generated by plot.py at 2019-06-27 10:15:05  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 794.98 Mbit/s  
95th percentile per-packet one-way delay: 151.020 ms  
Loss rate: 0.99%  
-- Flow 1:  
Average throughput: 472.13 Mbit/s  
95th percentile per-packet one-way delay: 162.889 ms  
Loss rate: 0.61%  
-- Flow 2:  
Average throughput: 392.73 Mbit/s  
95th percentile per-packet one-way delay: 130.803 ms  
Loss rate: 0.93%  
-- Flow 3:  
Average throughput: 265.05 Mbit/s  
95th percentile per-packet one-way delay: 117.831 ms  
Loss rate: 3.61%

## Run 2: Report of Indigo-MusesT — Data Link

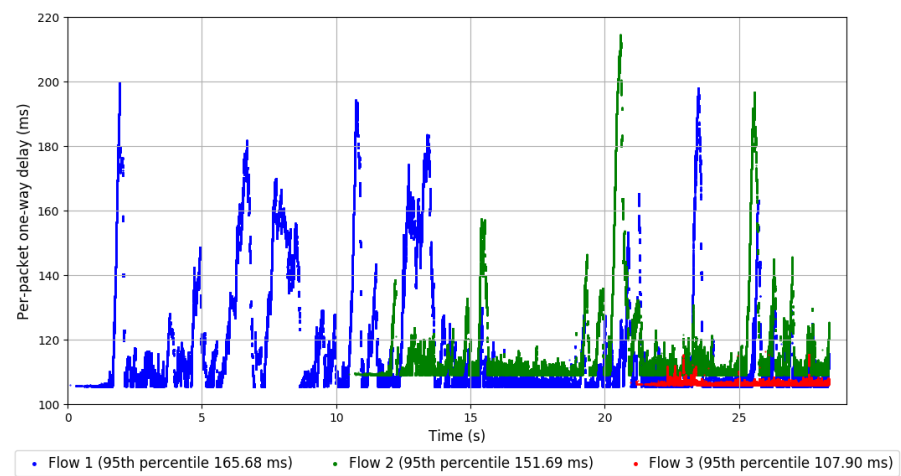
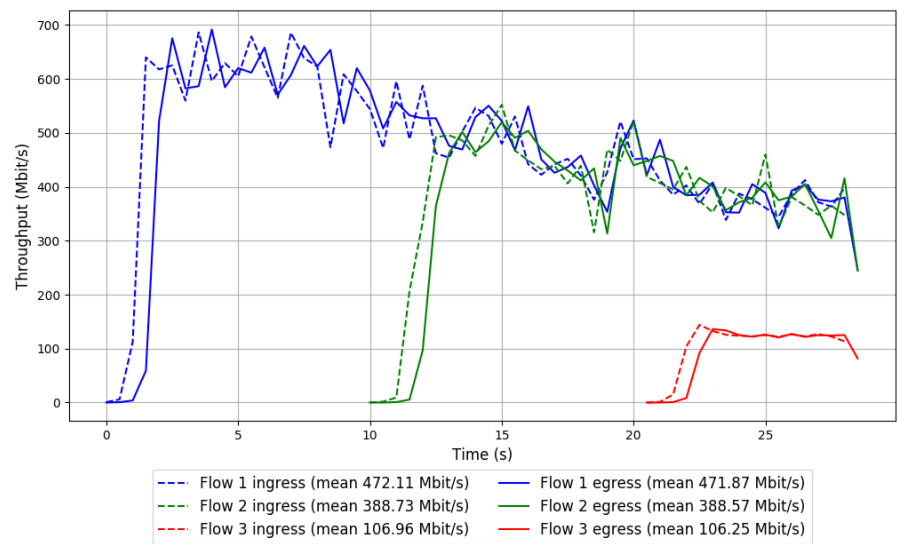


Run 3: Statistics of Indigo-MusesT

Start at: 2019-06-27 06:59:34  
End at: 2019-06-27 07:00:04  
Local clock offset: -0.157 ms  
Remote clock offset: 0.203 ms

# Below is generated by plot.py at 2019-06-27 10:15:33  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 745.55 Mbit/s  
95th percentile per-packet one-way delay: 162.408 ms  
Loss rate: 1.06%  
-- Flow 1:  
Average throughput: 471.87 Mbit/s  
95th percentile per-packet one-way delay: 165.676 ms  
Loss rate: 0.82%  
-- Flow 2:  
Average throughput: 388.57 Mbit/s  
95th percentile per-packet one-way delay: 151.690 ms  
Loss rate: 1.23%  
-- Flow 3:  
Average throughput: 106.25 Mbit/s  
95th percentile per-packet one-way delay: 107.899 ms  
Loss rate: 3.57%

Run 3: Report of Indigo-MusesT — Data Link



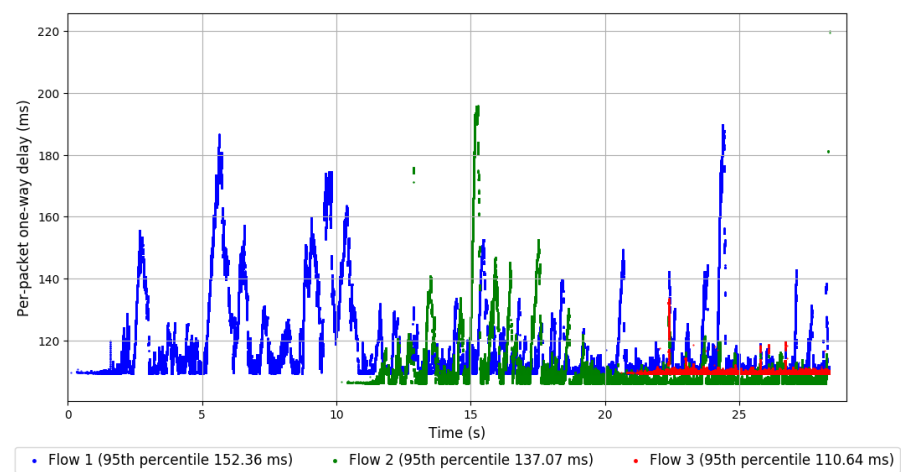
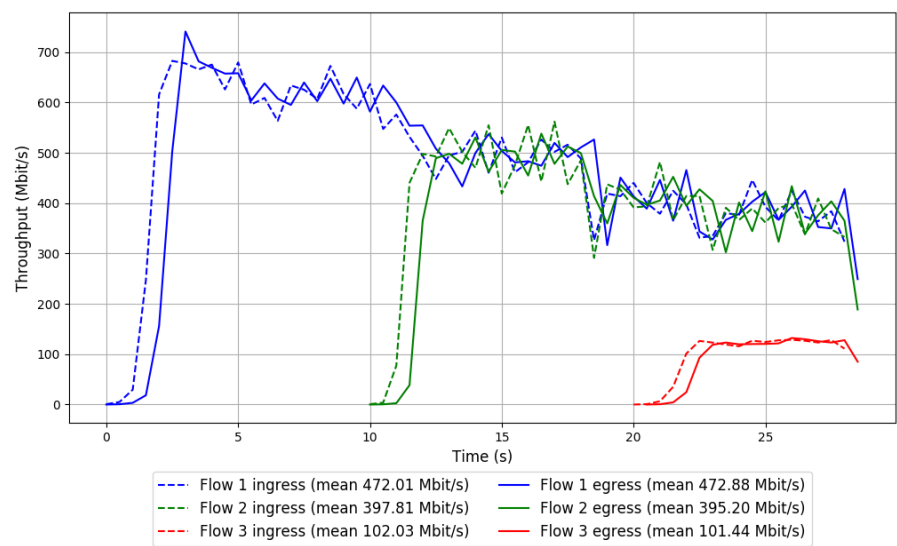


Run 4: Statistics of Indigo-MusesT

Start at: 2019-06-27 07:37:42  
End at: 2019-06-27 07:38:12  
Local clock offset: -0.601 ms  
Remote clock offset: -0.087 ms

# Below is generated by plot.py at 2019-06-27 10:16:19  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 754.66 Mbit/s  
95th percentile per-packet one-way delay: 148.550 ms  
Loss rate: 1.09%  
-- Flow 1:  
Average throughput: 472.88 Mbit/s  
95th percentile per-packet one-way delay: 152.362 ms  
Loss rate: 0.60%  
-- Flow 2:  
Average throughput: 395.20 Mbit/s  
95th percentile per-packet one-way delay: 137.067 ms  
Loss rate: 1.75%  
-- Flow 3:  
Average throughput: 101.44 Mbit/s  
95th percentile per-packet one-way delay: 110.635 ms  
Loss rate: 3.34%

Run 4: Report of Indigo-MusesT — Data Link

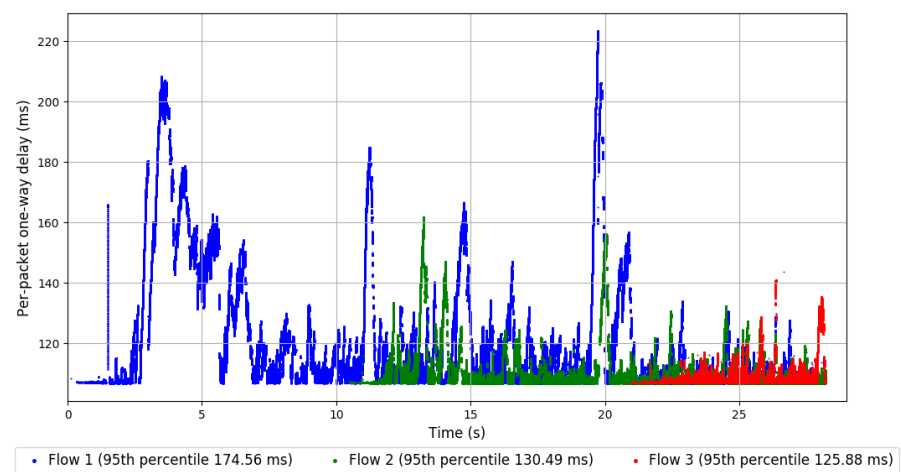
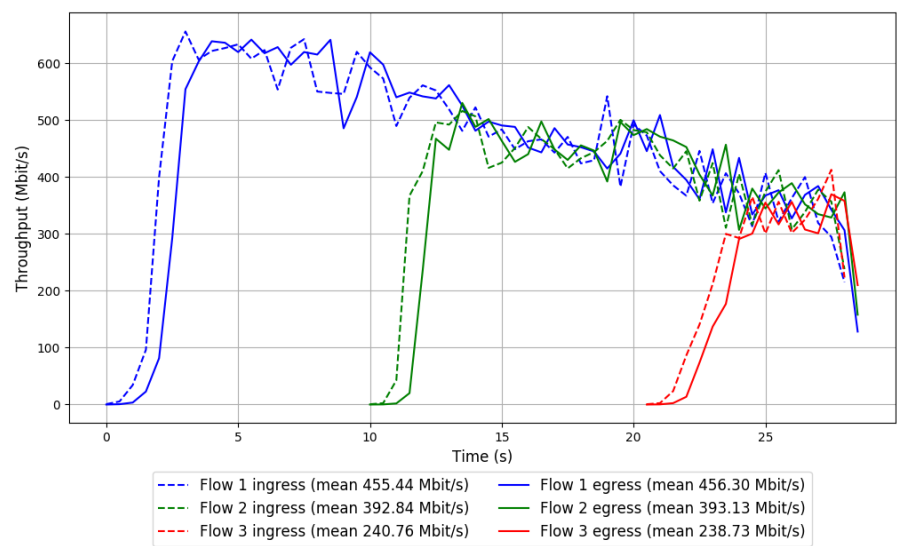


Run 5: Statistics of Indigo-MusesT

Start at: 2019-06-27 08:15:50  
End at: 2019-06-27 08:16:20  
Local clock offset: -0.098 ms  
Remote clock offset: -0.044 ms

# Below is generated by plot.py at 2019-06-27 10:17:30  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 770.74 Mbit/s  
95th percentile per-packet one-way delay: 160.244 ms  
Loss rate: 1.03%  
-- Flow 1:  
Average throughput: 456.30 Mbit/s  
95th percentile per-packet one-way delay: 174.560 ms  
Loss rate: 0.59%  
-- Flow 2:  
Average throughput: 393.13 Mbit/s  
95th percentile per-packet one-way delay: 130.485 ms  
Loss rate: 1.13%  
-- Flow 3:  
Average throughput: 238.73 Mbit/s  
95th percentile per-packet one-way delay: 125.883 ms  
Loss rate: 3.65%

Run 5: Report of Indigo-MusesT — Data Link

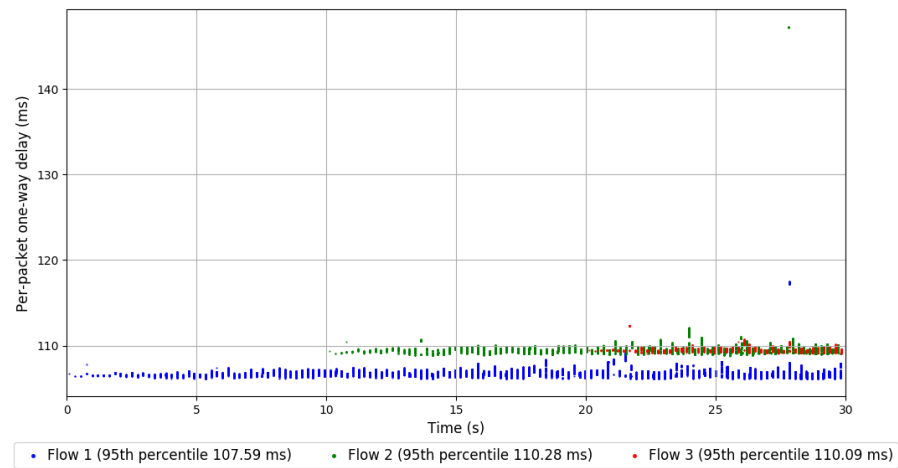
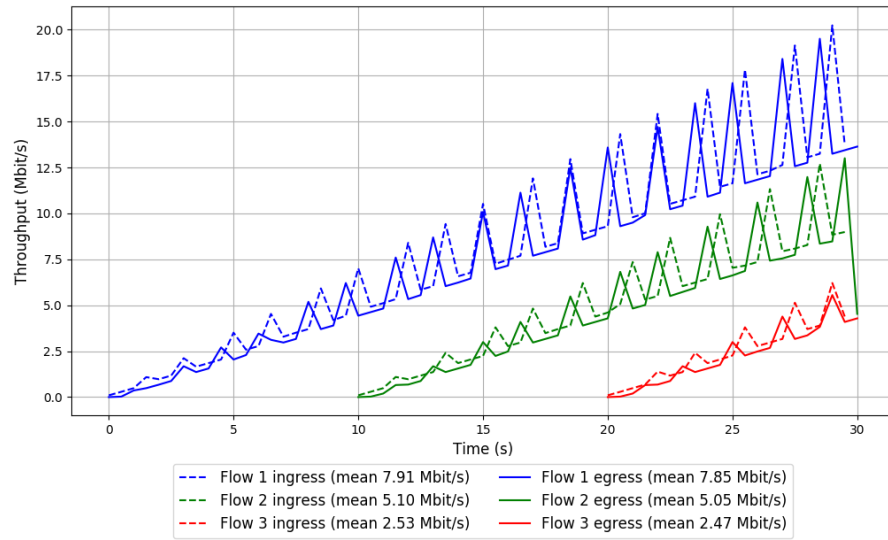


```
Run 1: Statistics of LEDBAT

Start at: 2019-06-27 05:26:59
End at: 2019-06-27 05:27:29
Local clock offset: -0.709 ms
Remote clock offset: 0.013 ms

# Below is generated by plot.py at 2019-06-27 10:17:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 11.99 Mbit/s
95th percentile per-packet one-way delay: 109.873 ms
Loss rate: 1.88%
-- Flow 1:
Average throughput: 7.85 Mbit/s
95th percentile per-packet one-way delay: 107.594 ms
Loss rate: 1.46%
-- Flow 2:
Average throughput: 5.05 Mbit/s
95th percentile per-packet one-way delay: 110.275 ms
Loss rate: 2.23%
-- Flow 3:
Average throughput: 2.47 Mbit/s
95th percentile per-packet one-way delay: 110.086 ms
Loss rate: 4.42%
```

## Run 1: Report of LEDBAT — Data Link

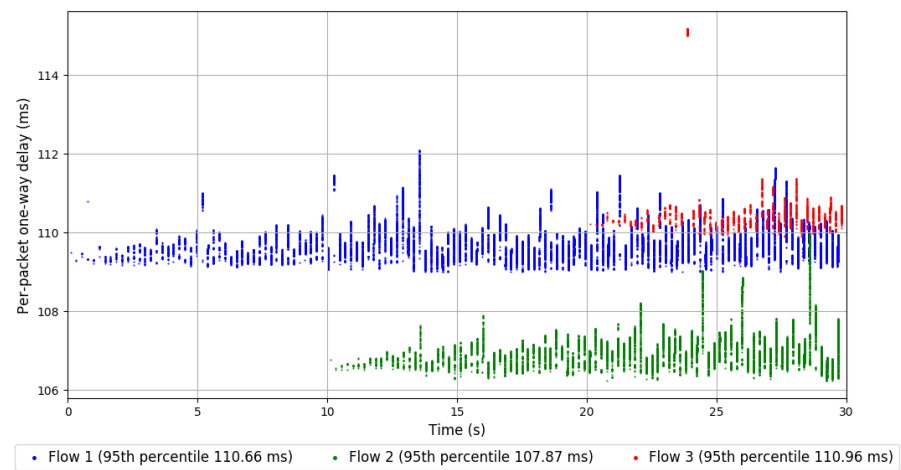
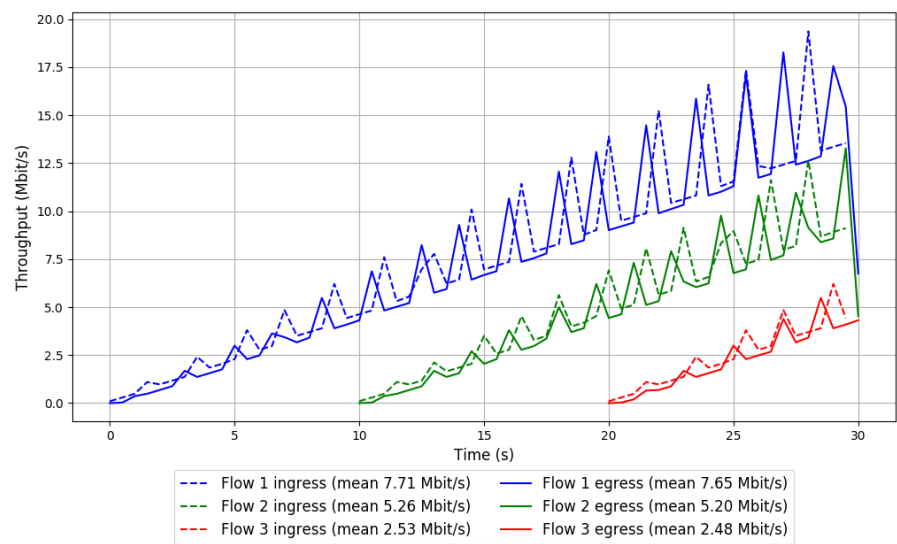


Run 2: Statistics of LEDBAT

Start at: 2019-06-27 06:04:30  
End at: 2019-06-27 06:05:00  
Local clock offset: -0.103 ms  
Remote clock offset: -0.079 ms

# Below is generated by plot.py at 2019-06-27 10:17:30  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 11.85 Mbit/s  
95th percentile per-packet one-way delay: 110.559 ms  
Loss rate: 1.90%  
-- Flow 1:  
Average throughput: 7.65 Mbit/s  
95th percentile per-packet one-way delay: 110.661 ms  
Loss rate: 1.48%  
-- Flow 2:  
Average throughput: 5.20 Mbit/s  
95th percentile per-packet one-way delay: 107.866 ms  
Loss rate: 2.20%  
-- Flow 3:  
Average throughput: 2.48 Mbit/s  
95th percentile per-packet one-way delay: 110.963 ms  
Loss rate: 4.46%

Run 2: Report of LEDBAT — Data Link



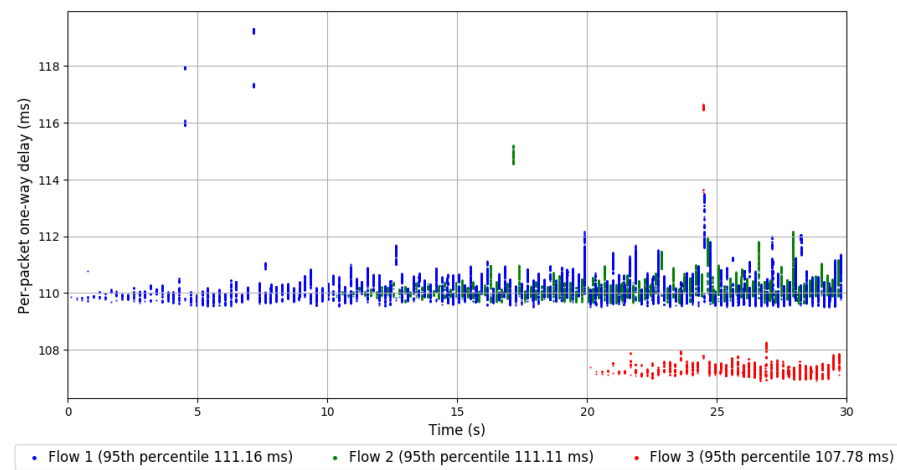
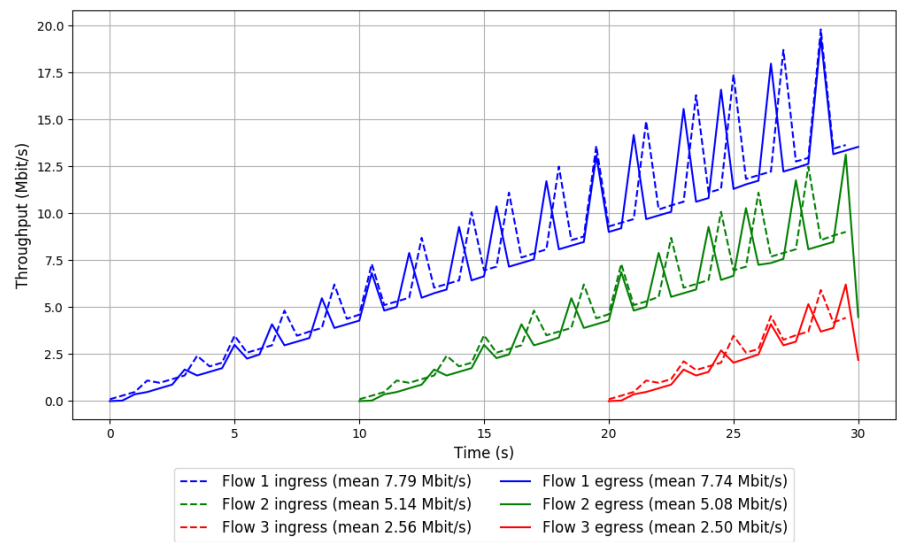


Run 3: Statistics of LEDBAT

Start at: 2019-06-27 06:42:49  
End at: 2019-06-27 06:43:19  
Local clock offset: -0.029 ms  
Remote clock offset: -0.126 ms

# Below is generated by plot.py at 2019-06-27 10:17:30  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 11.90 Mbit/s  
95th percentile per-packet one-way delay: 111.129 ms  
Loss rate: 1.89%  
-- Flow 1:  
Average throughput: 7.74 Mbit/s  
95th percentile per-packet one-way delay: 111.156 ms  
Loss rate: 1.47%  
-- Flow 2:  
Average throughput: 5.08 Mbit/s  
95th percentile per-packet one-way delay: 111.115 ms  
Loss rate: 2.23%  
-- Flow 3:  
Average throughput: 2.50 Mbit/s  
95th percentile per-packet one-way delay: 107.785 ms  
Loss rate: 4.47%

Run 3: Report of LEDBAT — Data Link

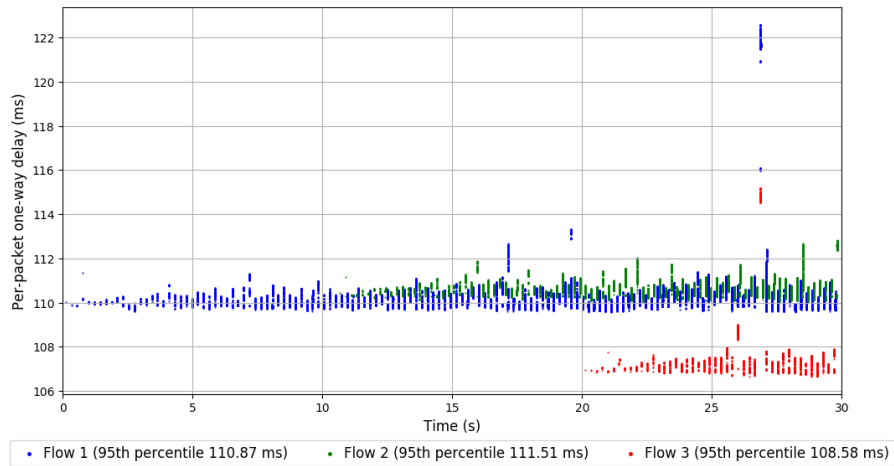
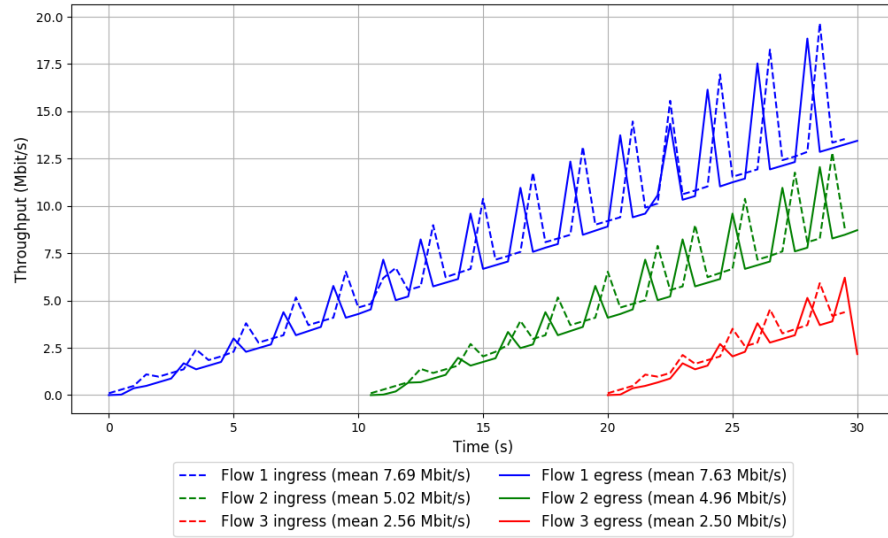


Run 4: Statistics of LEDBAT

Start at: 2019-06-27 07:20:13  
End at: 2019-06-27 07:20:43  
Local clock offset: 0.017 ms  
Remote clock offset: -0.091 ms

# Below is generated by plot.py at 2019-06-27 10:17:30  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 11.62 Mbit/s  
95th percentile per-packet one-way delay: 111.104 ms  
Loss rate: 1.91%  
-- Flow 1:  
Average throughput: 7.63 Mbit/s  
95th percentile per-packet one-way delay: 110.868 ms  
Loss rate: 1.48%  
-- Flow 2:  
Average throughput: 4.96 Mbit/s  
95th percentile per-packet one-way delay: 111.509 ms  
Loss rate: 2.28%  
-- Flow 3:  
Average throughput: 2.50 Mbit/s  
95th percentile per-packet one-way delay: 108.575 ms  
Loss rate: 4.42%

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



Run 5: Statistics of LEDBAT

Start at: 2019-06-27 07:58:35

End at: 2019-06-27 07:59:05

Local clock offset: -0.172 ms

Remote clock offset: 0.091 ms

# Below is generated by plot.py at 2019-06-27 10:17:30

# Datalink statistics

-- Total of 3 flows:

Average throughput: 12.19 Mbit/s

95th percentile per-packet one-way delay: 109.051 ms

Loss rate: 1.87%

-- Flow 1:

Average throughput: 7.96 Mbit/s

95th percentile per-packet one-way delay: 107.712 ms

Loss rate: 1.45%

-- Flow 2:

Average throughput: 5.18 Mbit/s

95th percentile per-packet one-way delay: 107.787 ms

Loss rate: 2.20%

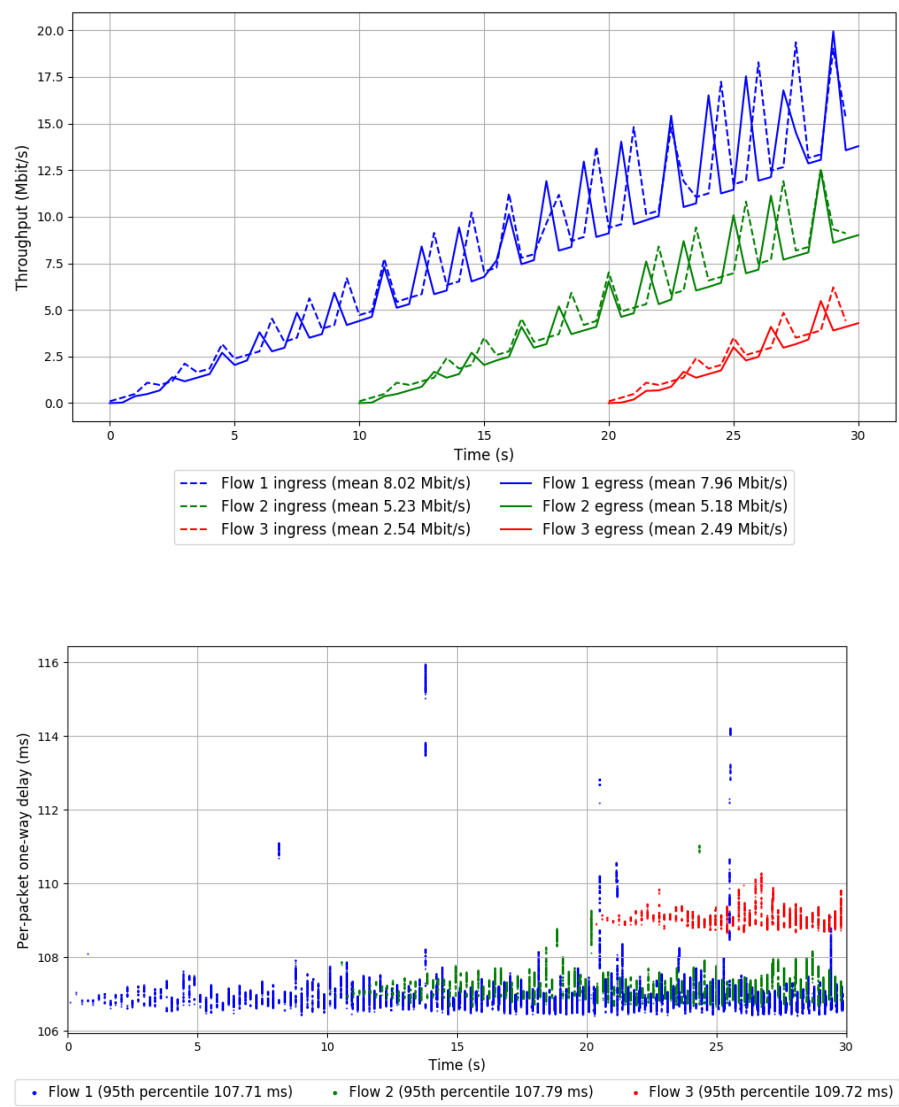
-- Flow 3:

Average throughput: 2.49 Mbit/s

95th percentile per-packet one-way delay: 109.720 ms

Loss rate: 4.46%

Run 5: Report of LEDBAT — Data Link



Run 1: Statistics of Muses\\_DecisionTree

Start at: 2019-06-27 05:56:07

End at: 2019-06-27 05:56:37

Local clock offset: -0.815 ms

Remote clock offset: 0.005 ms

Run 1: Report of Muses\_DecisionTree — Data Link

Figure is missing

Figure is missing



Run 2: Statistics of Muses\\_DecisionTree

Start at: 2019-06-27 06:34:32

End at: 2019-06-27 06:35:02

Local clock offset: -0.154 ms

Remote clock offset: -0.088 ms

Run 2: Report of Muses\_DecisionTree — Data Link

Figure is missing

Figure is missing

Run 3: Statistics of Muses\\_DecisionTree

Start at: 2019-06-27 07:11:56

End at: 2019-06-27 07:12:26

Local clock offset: 0.293 ms

Remote clock offset: -0.104 ms

Run 3: Report of Muses\_DecisionTree — Data Link

Figure is missing

Figure is missing

Run 4: Statistics of Muses\\_DecisionTree

Start at: 2019-06-27 07:50:21

End at: 2019-06-27 07:50:51

Local clock offset: 0.59 ms

Remote clock offset: -0.03 ms

Run 4: Report of Muses\_DecisionTree — Data Link

Figure is missing

Figure is missing

Run 5: Statistics of Muses\\_DecisionTree

Start at: 2019-06-27 08:28:47

End at: 2019-06-27 08:29:17

Local clock offset: -0.069 ms

Remote clock offset: -0.106 ms

Run 5: Report of Muses\_DecisionTree — Data Link

Figure is missing

Figure is missing



Run 1: Statistics of PCC-Allegro

Start at: 2019-06-27 05:57:23

End at: 2019-06-27 05:57:53

Local clock offset: -0.217 ms

Remote clock offset: 0.321 ms

# Below is generated by plot.py at 2019-06-27 10:30:36

# Datalink statistics

-- Total of 3 flows:

Average throughput: 628.36 Mbit/s

95th percentile per-packet one-way delay: 239.845 ms

Loss rate: 5.77%

-- Flow 1:

Average throughput: 357.80 Mbit/s

95th percentile per-packet one-way delay: 240.194 ms

Loss rate: 6.60%

-- Flow 2:

Average throughput: 273.02 Mbit/s

95th percentile per-packet one-way delay: 156.943 ms

Loss rate: 2.46%

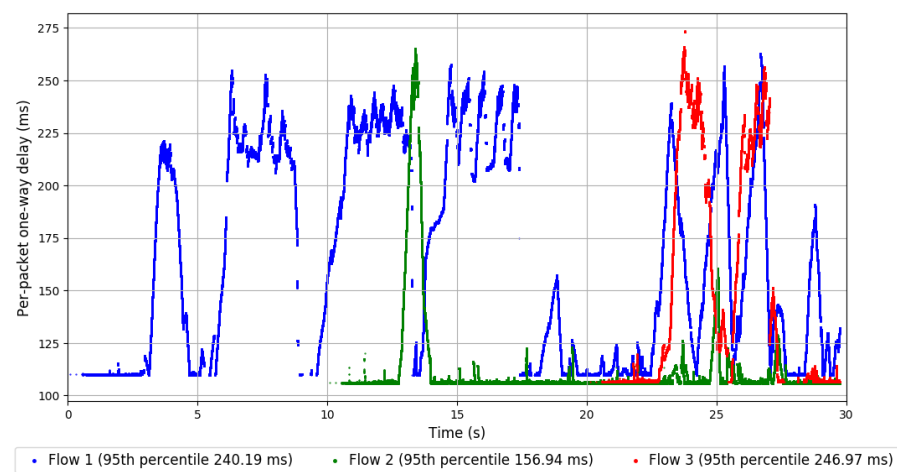
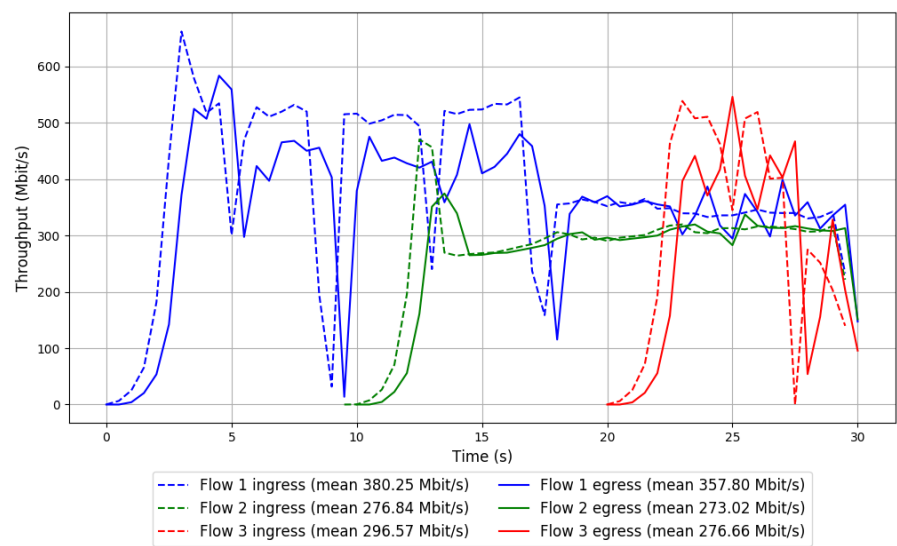
-- Flow 3:

Average throughput: 276.66 Mbit/s

95th percentile per-packet one-way delay: 246.966 ms

Loss rate: 8.78%

Run 1: Report of PCC-Allegro — Data Link

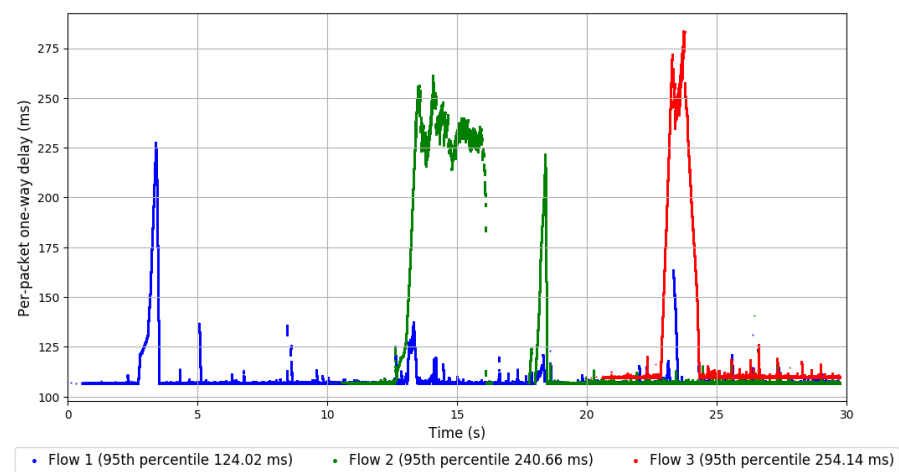
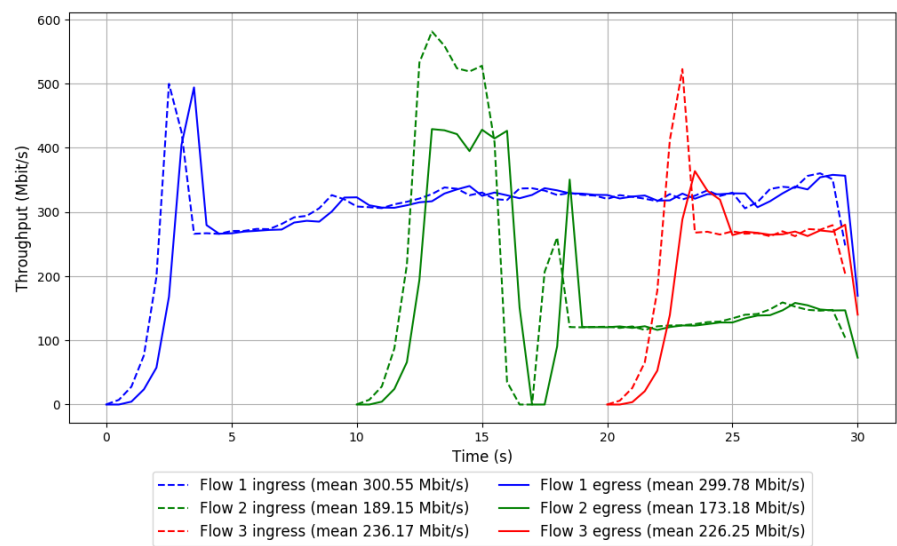


Run 2: Statistics of PCC-Allegro

Start at: 2019-06-27 06:35:48  
End at: 2019-06-27 06:36:18  
Local clock offset: -0.055 ms  
Remote clock offset: -0.093 ms

# Below is generated by plot.py at 2019-06-27 10:30:36  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 487.79 Mbit/s  
95th percentile per-packet one-way delay: 233.232 ms  
Loss rate: 3.92%  
-- Flow 1:  
Average throughput: 299.78 Mbit/s  
95th percentile per-packet one-way delay: 124.022 ms  
Loss rate: 0.98%  
-- Flow 2:  
Average throughput: 173.18 Mbit/s  
95th percentile per-packet one-way delay: 240.659 ms  
Loss rate: 9.45%  
-- Flow 3:  
Average throughput: 226.25 Mbit/s  
95th percentile per-packet one-way delay: 254.142 ms  
Loss rate: 6.34%

Run 2: Report of PCC-Allegro — Data Link

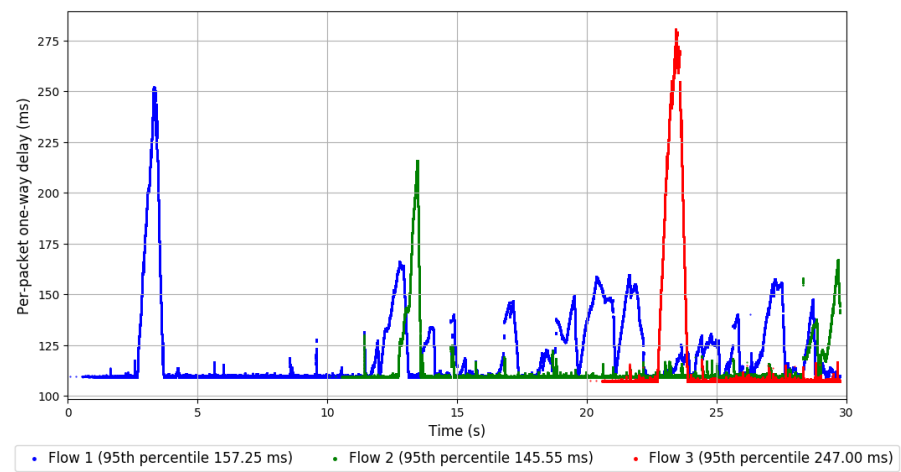
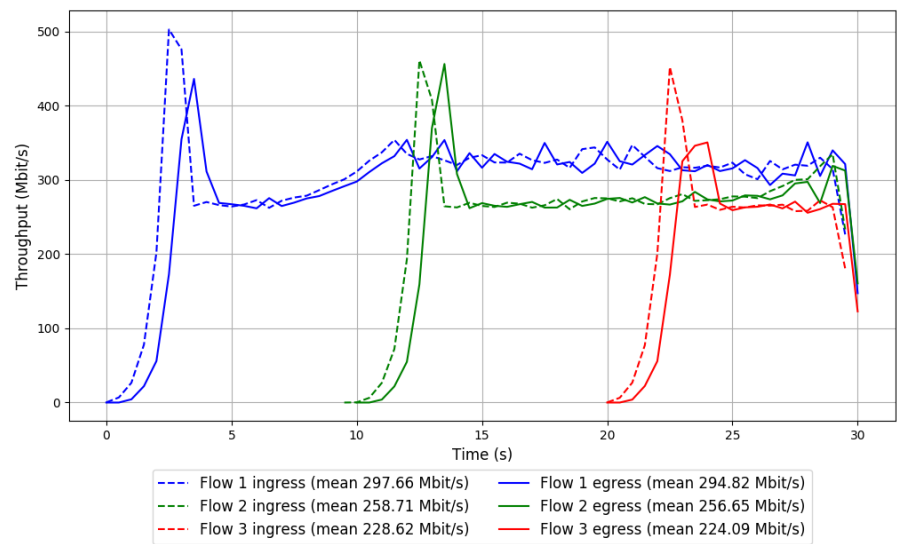


Run 3: Statistics of PCC-Allegro

Start at: 2019-06-27 07:13:12  
End at: 2019-06-27 07:13:42  
Local clock offset: -0.048 ms  
Remote clock offset: -0.514 ms

# Below is generated by plot.py at 2019-06-27 10:30:36  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 537.50 Mbit/s  
95th percentile per-packet one-way delay: 162.464 ms  
Loss rate: 2.10%  
-- Flow 1:  
Average throughput: 294.82 Mbit/s  
95th percentile per-packet one-way delay: 157.249 ms  
Loss rate: 1.69%  
-- Flow 2:  
Average throughput: 256.65 Mbit/s  
95th percentile per-packet one-way delay: 145.546 ms  
Loss rate: 1.90%  
-- Flow 3:  
Average throughput: 224.09 Mbit/s  
95th percentile per-packet one-way delay: 247.004 ms  
Loss rate: 4.16%

Run 3: Report of PCC-Allegro — Data Link

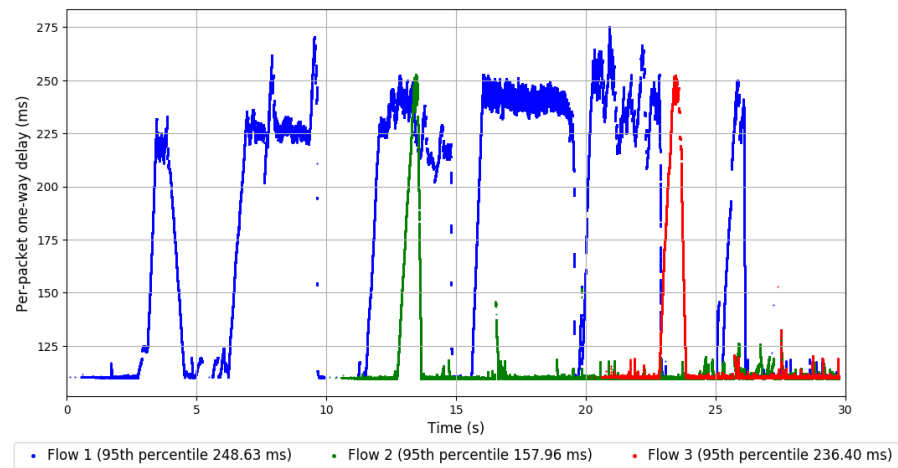
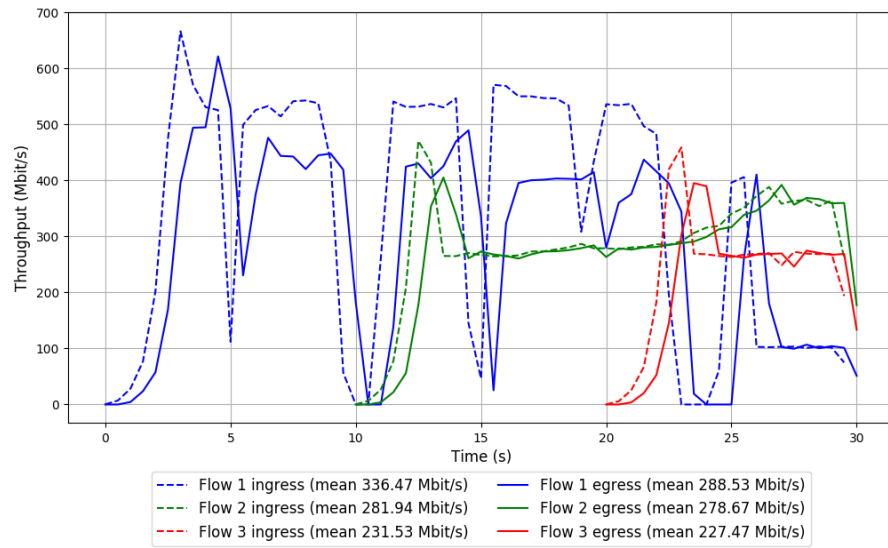


Run 4: Statistics of PCC-Allegro

Start at: 2019-06-27 07:51:37  
End at: 2019-06-27 07:52:07  
Local clock offset: -0.022 ms  
Remote clock offset: -0.009 ms

# Below is generated by plot.py at 2019-06-27 10:32:35  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 546.86 Mbit/s  
95th percentile per-packet one-way delay: 245.563 ms  
Loss rate: 9.55%  
-- Flow 1:  
Average throughput: 288.53 Mbit/s  
95th percentile per-packet one-way delay: 248.633 ms  
Loss rate: 14.88%  
-- Flow 2:  
Average throughput: 278.67 Mbit/s  
95th percentile per-packet one-way delay: 157.958 ms  
Loss rate: 2.26%  
-- Flow 3:  
Average throughput: 227.47 Mbit/s  
95th percentile per-packet one-way delay: 236.401 ms  
Loss rate: 3.96%

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



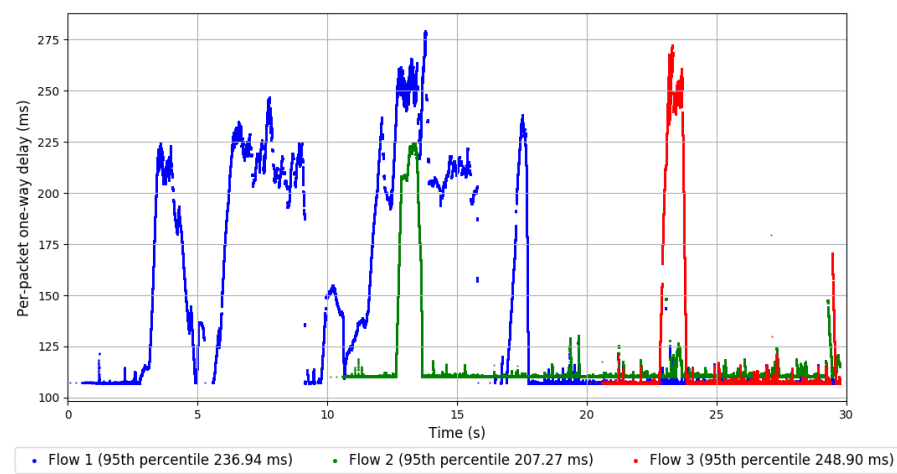
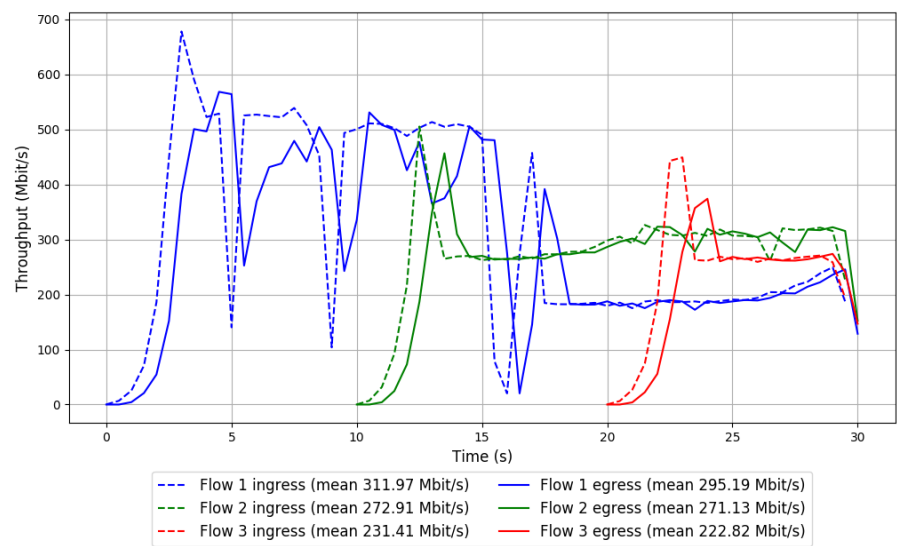


Run 5: Statistics of PCC-Allegro

Start at: 2019-06-27 08:30:03  
End at: 2019-06-27 08:30:33  
Local clock offset: 0.009 ms  
Remote clock offset: -0.057 ms

# Below is generated by plot.py at 2019-06-27 10:37:06  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 547.06 Mbit/s  
95th percentile per-packet one-way delay: 231.027 ms  
Loss rate: 4.66%  
-- Flow 1:  
Average throughput: 295.19 Mbit/s  
95th percentile per-packet one-way delay: 236.937 ms  
Loss rate: 6.06%  
-- Flow 2:  
Average throughput: 271.13 Mbit/s  
95th percentile per-packet one-way delay: 207.271 ms  
Loss rate: 1.75%  
-- Flow 3:  
Average throughput: 222.82 Mbit/s  
95th percentile per-packet one-way delay: 248.900 ms  
Loss rate: 5.86%

Run 5: Report of PCC-Allegro — Data Link

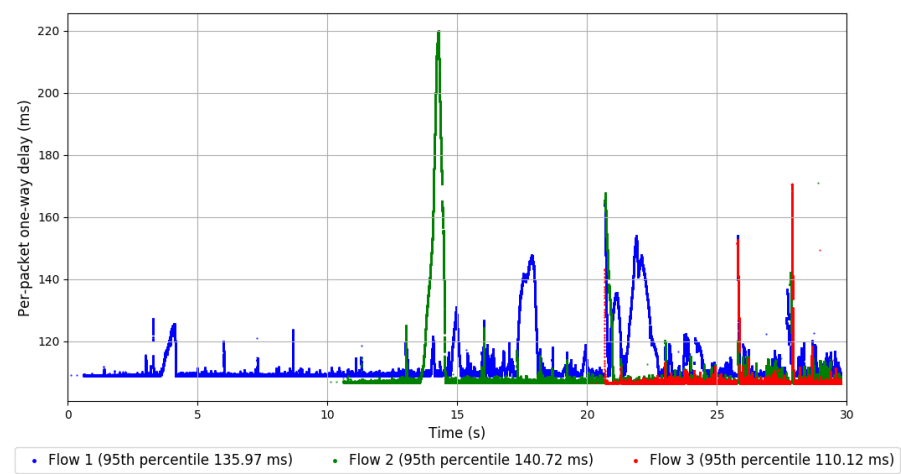
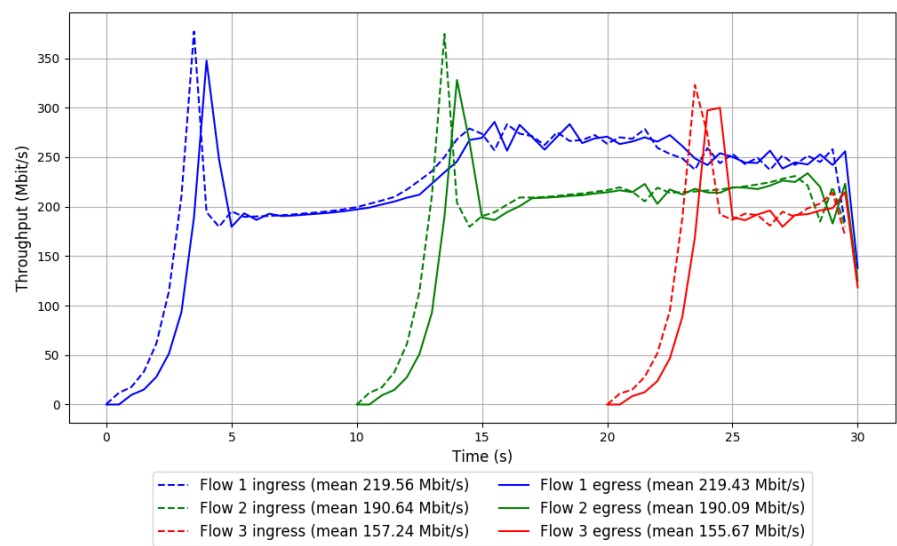


```
Run 1: Statistics of PCC-Expr

Start at: 2019-06-27 05:38:27
End at: 2019-06-27 05:38:57
Local clock offset: -0.251 ms
Remote clock offset: -0.025 ms

# Below is generated by plot.py at 2019-06-27 10:37:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 395.96 Mbit/s
95th percentile per-packet one-way delay: 135.521 ms
Loss rate: 1.29%
-- Flow 1:
Average throughput: 219.43 Mbit/s
95th percentile per-packet one-way delay: 135.975 ms
Loss rate: 0.80%
-- Flow 2:
Average throughput: 190.09 Mbit/s
95th percentile per-packet one-way delay: 140.720 ms
Loss rate: 1.38%
-- Flow 3:
Average throughput: 155.67 Mbit/s
95th percentile per-packet one-way delay: 110.124 ms
Loss rate: 3.17%
```

Run 1: Report of PCC-Expr — Data Link

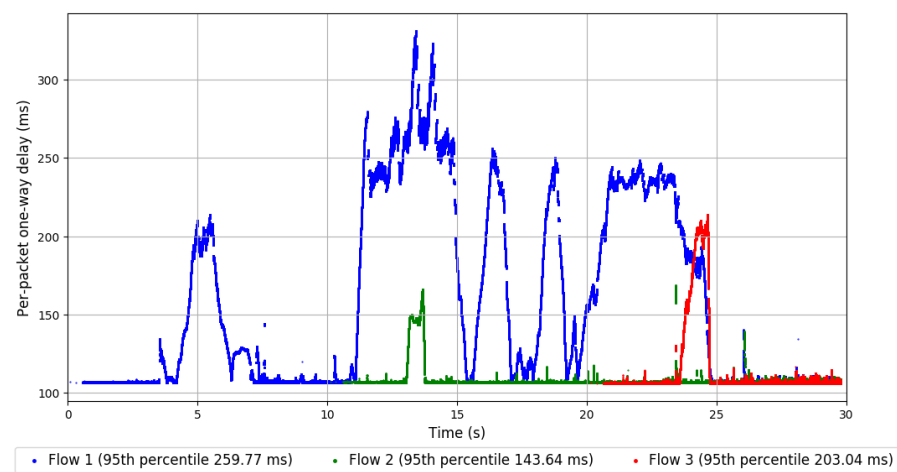
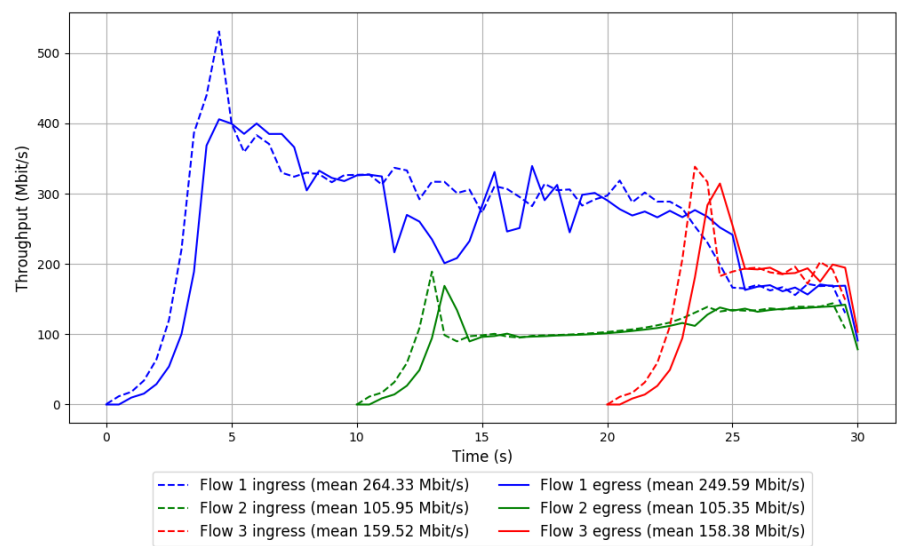


Run 2: Statistics of PCC-Expr

Start at: 2019-06-27 06:16:33  
End at: 2019-06-27 06:17:03  
Local clock offset: -0.206 ms  
Remote clock offset: -0.076 ms

# Below is generated by plot.py at 2019-06-27 10:37:06  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 370.73 Mbit/s  
95th percentile per-packet one-way delay: 250.427 ms  
Loss rate: 4.97%  
-- Flow 1:  
Average throughput: 249.59 Mbit/s  
95th percentile per-packet one-way delay: 259.768 ms  
Loss rate: 6.27%  
-- Flow 2:  
Average throughput: 105.35 Mbit/s  
95th percentile per-packet one-way delay: 143.643 ms  
Loss rate: 1.66%  
-- Flow 3:  
Average throughput: 158.38 Mbit/s  
95th percentile per-packet one-way delay: 203.038 ms  
Loss rate: 2.89%

Run 2: Report of PCC-Expr — Data Link

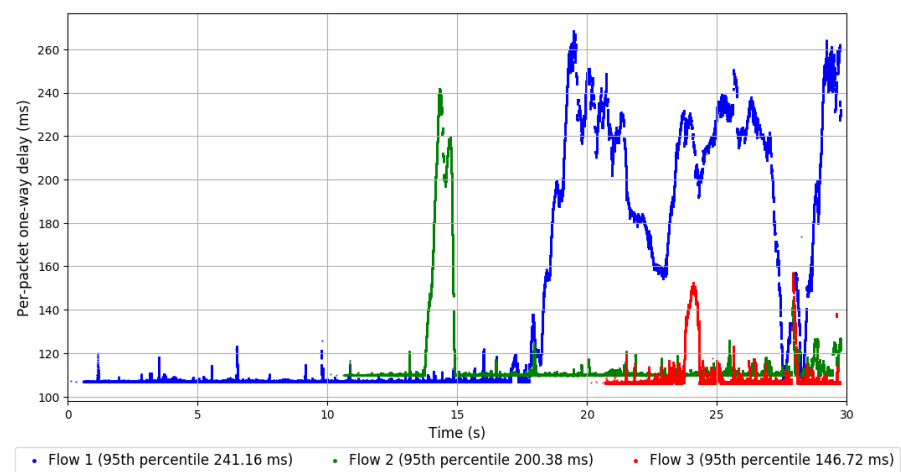
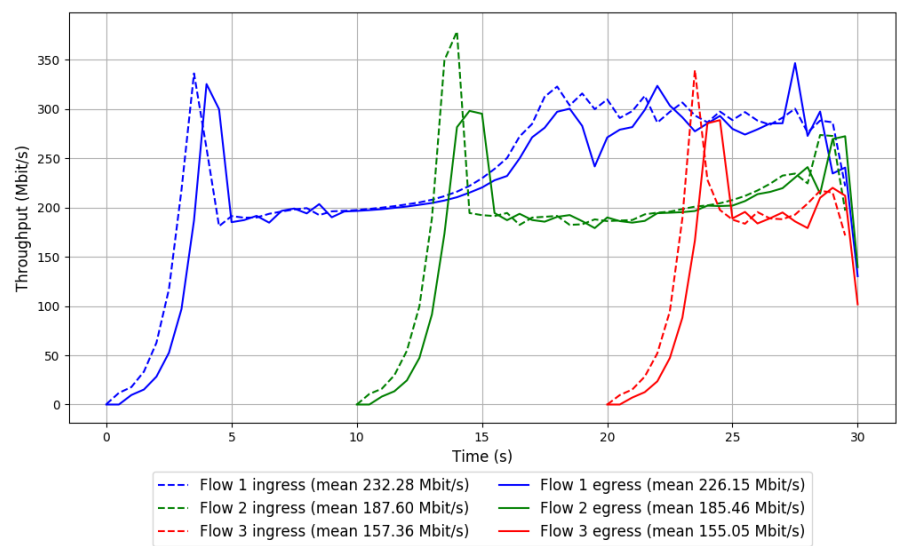


Run 3: Statistics of PCC-Expr

Start at: 2019-06-27 06:54:27  
End at: 2019-06-27 06:54:57  
Local clock offset: 0.151 ms  
Remote clock offset: -0.128 ms

# Below is generated by plot.py at 2019-06-27 10:37:06  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 399.25 Mbit/s  
95th percentile per-packet one-way delay: 233.812 ms  
Loss rate: 3.07%  
-- Flow 1:  
Average throughput: 226.15 Mbit/s  
95th percentile per-packet one-way delay: 241.161 ms  
Loss rate: 3.35%  
-- Flow 2:  
Average throughput: 185.46 Mbit/s  
95th percentile per-packet one-way delay: 200.385 ms  
Loss rate: 2.25%  
-- Flow 3:  
Average throughput: 155.05 Mbit/s  
95th percentile per-packet one-way delay: 146.724 ms  
Loss rate: 3.82%

Run 3: Report of PCC-Expr — Data Link



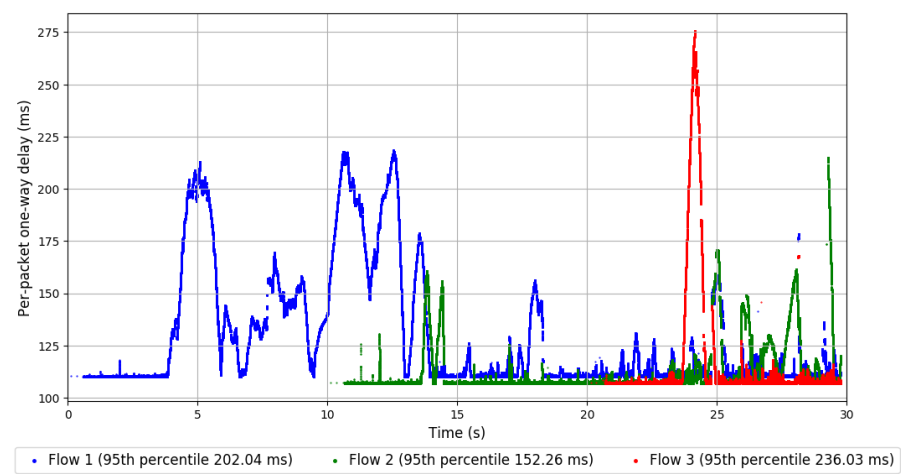
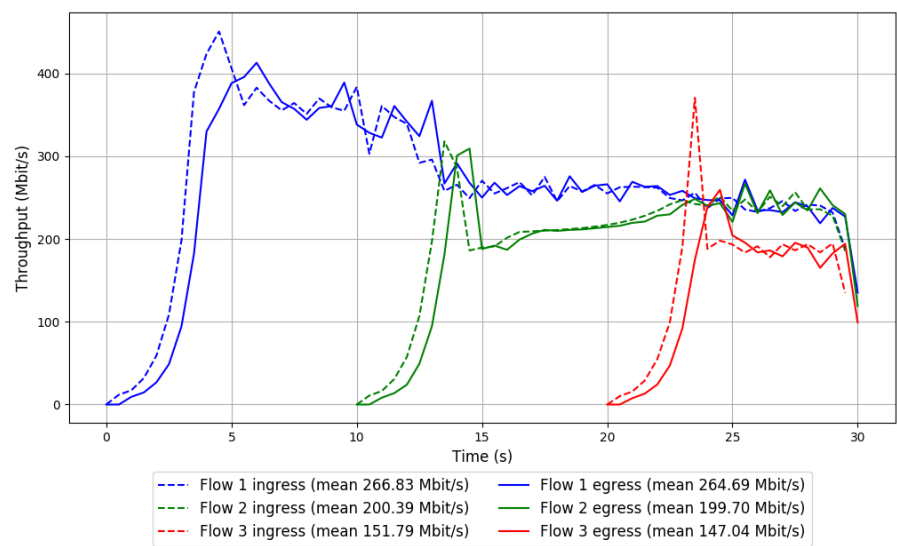


Run 4: Statistics of PCC-Expr

Start at: 2019-06-27 07:32:28  
End at: 2019-06-27 07:32:58  
Local clock offset: 0.049 ms  
Remote clock offset: -0.113 ms

# Below is generated by plot.py at 2019-06-27 10:41:24  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 444.77 Mbit/s  
95th percentile per-packet one-way delay: 199.172 ms  
Loss rate: 1.92%  
-- Flow 1:  
Average throughput: 264.69 Mbit/s  
95th percentile per-packet one-way delay: 202.041 ms  
Loss rate: 1.53%  
-- Flow 2:  
Average throughput: 199.70 Mbit/s  
95th percentile per-packet one-way delay: 152.256 ms  
Loss rate: 1.44%  
-- Flow 3:  
Average throughput: 147.04 Mbit/s  
95th percentile per-packet one-way delay: 236.035 ms  
Loss rate: 5.28%

Run 4: Report of PCC-Expr — Data Link

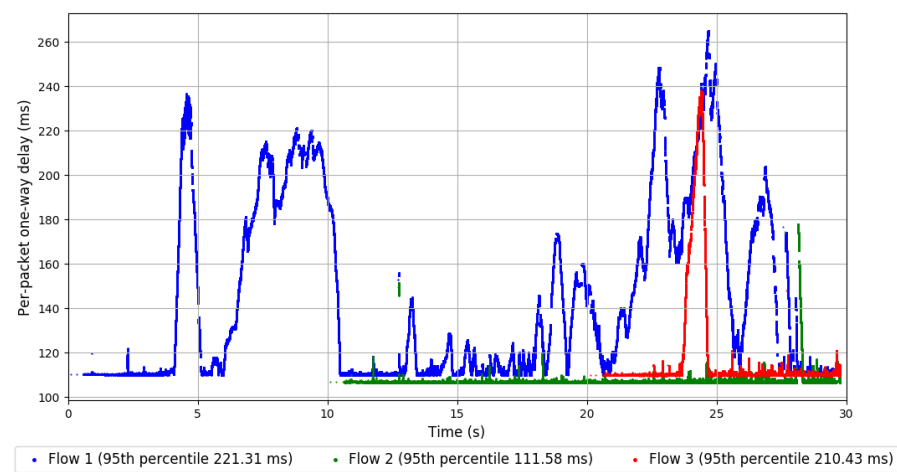
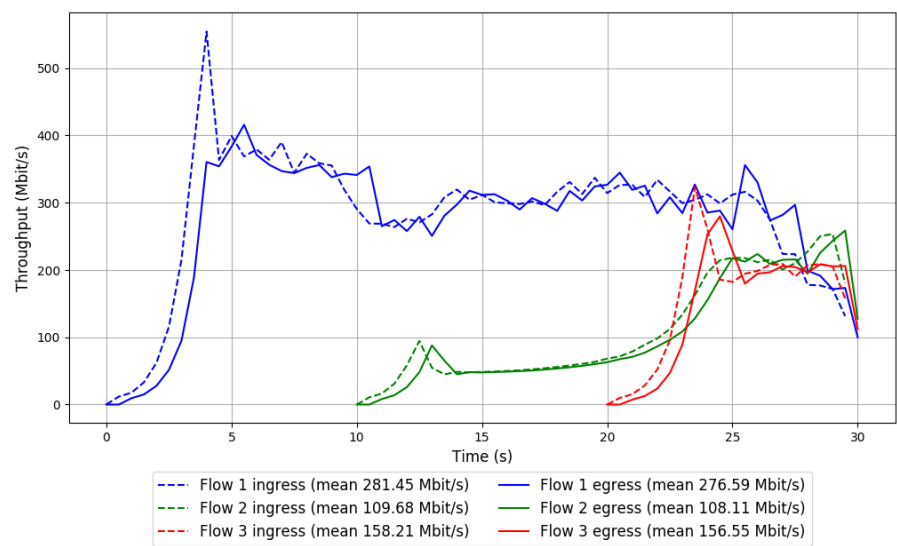


Run 5: Statistics of PCC-Expr

Start at: 2019-06-27 08:10:44  
End at: 2019-06-27 08:11:14  
Local clock offset: -0.088 ms  
Remote clock offset: -0.013 ms

# Below is generated by plot.py at 2019-06-27 10:41:37  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 399.09 Mbit/s  
95th percentile per-packet one-way delay: 216.977 ms  
Loss rate: 2.57%  
-- Flow 1:  
Average throughput: 276.59 Mbit/s  
95th percentile per-packet one-way delay: 221.311 ms  
Loss rate: 2.46%  
-- Flow 2:  
Average throughput: 108.11 Mbit/s  
95th percentile per-packet one-way delay: 111.583 ms  
Loss rate: 2.52%  
-- Flow 3:  
Average throughput: 156.55 Mbit/s  
95th percentile per-packet one-way delay: 210.426 ms  
Loss rate: 3.25%

Run 5: Report of PCC-Expr — Data Link

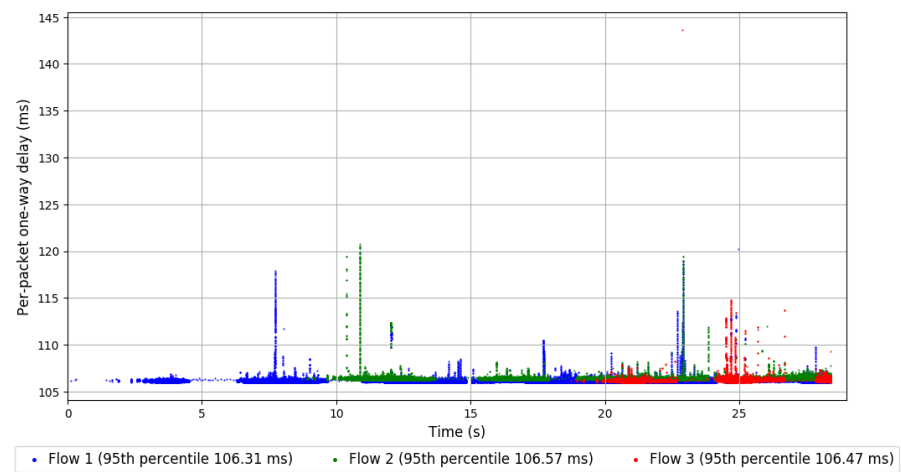
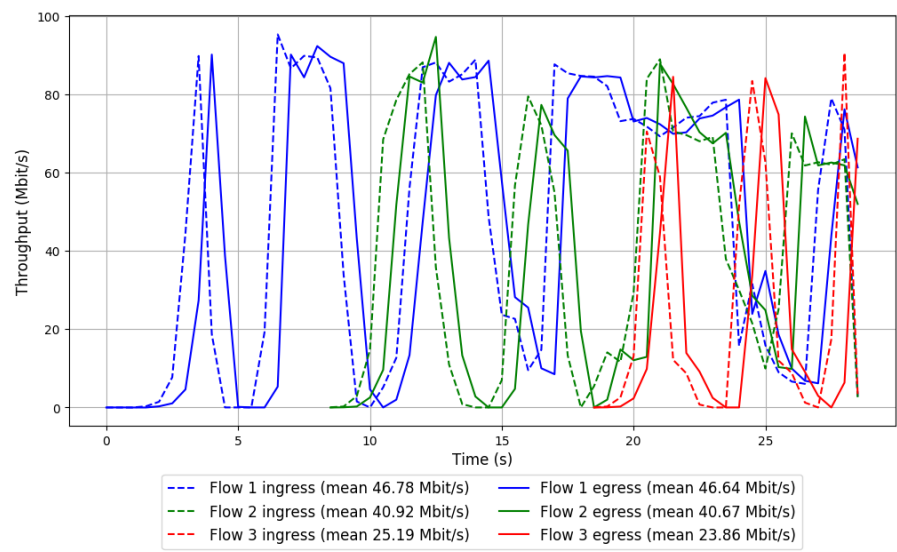


Run 1: Statistics of QUIC Cubic

Start at: 2019-06-27 05:54:44  
End at: 2019-06-27 05:55:14  
Local clock offset: -0.074 ms  
Remote clock offset: -0.028 ms

# Below is generated by plot.py at 2019-06-27 10:41:37  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 83.06 Mbit/s  
95th percentile per-packet one-way delay: 106.485 ms  
Loss rate: 1.92%  
-- Flow 1:  
Average throughput: 46.64 Mbit/s  
95th percentile per-packet one-way delay: 106.306 ms  
Loss rate: 1.06%  
-- Flow 2:  
Average throughput: 40.67 Mbit/s  
95th percentile per-packet one-way delay: 106.566 ms  
Loss rate: 1.68%  
-- Flow 3:  
Average throughput: 23.86 Mbit/s  
95th percentile per-packet one-way delay: 106.470 ms  
Loss rate: 7.30%

Run 1: Report of QUIC Cubic — Data Link

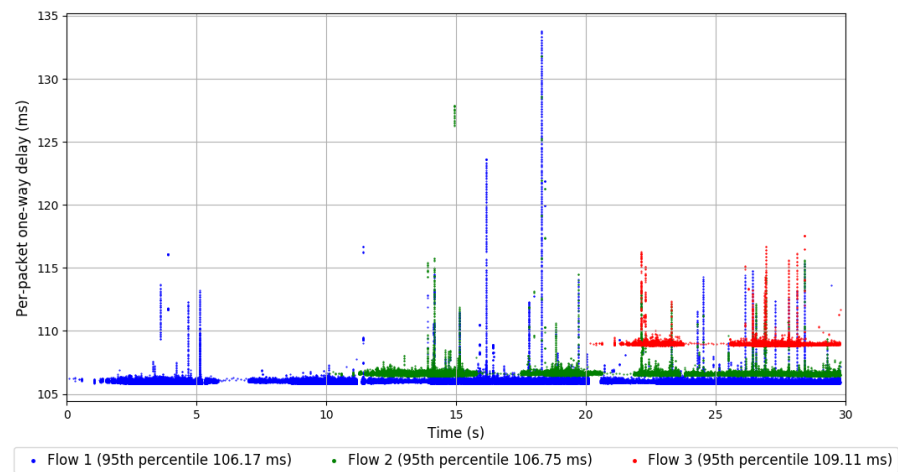
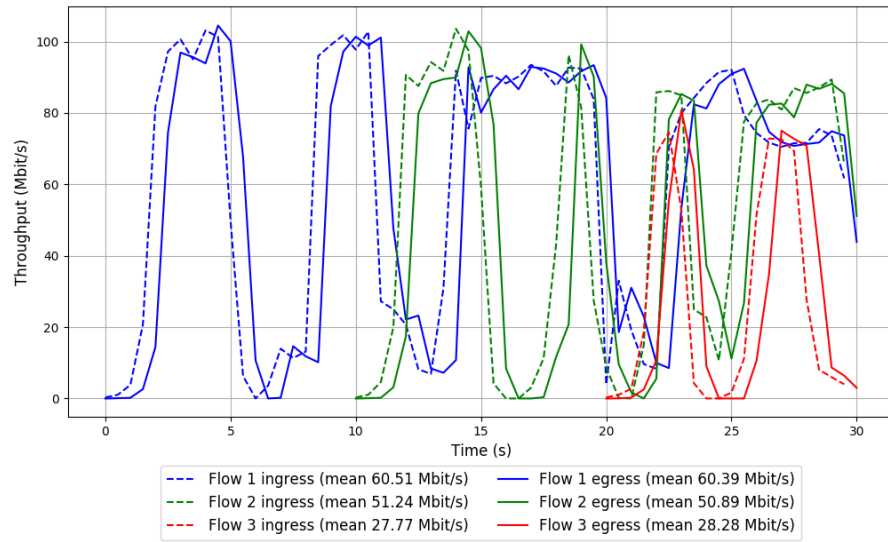


Run 2: Statistics of QUIC Cubic

Start at: 2019-06-27 06:33:08  
End at: 2019-06-27 06:33:38  
Local clock offset: -0.195 ms  
Remote clock offset: -0.076 ms

# Below is generated by plot.py at 2019-06-27 10:41:37  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 103.29 Mbit/s  
95th percentile per-packet one-way delay: 108.928 ms  
Loss rate: 1.15%  
-- Flow 1:  
Average throughput: 60.39 Mbit/s  
95th percentile per-packet one-way delay: 106.165 ms  
Loss rate: 0.93%  
-- Flow 2:  
Average throughput: 50.89 Mbit/s  
95th percentile per-packet one-way delay: 106.752 ms  
Loss rate: 1.75%  
-- Flow 3:  
Average throughput: 28.28 Mbit/s  
95th percentile per-packet one-way delay: 109.115 ms  
Loss rate: 0.40%

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



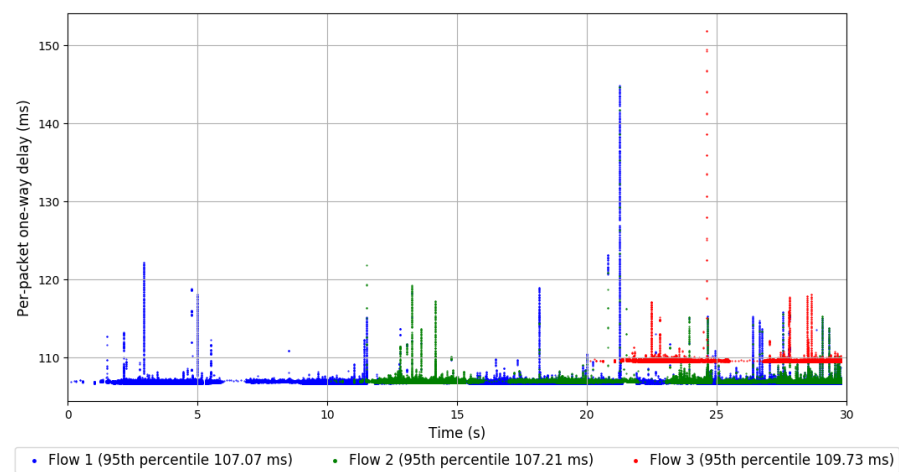
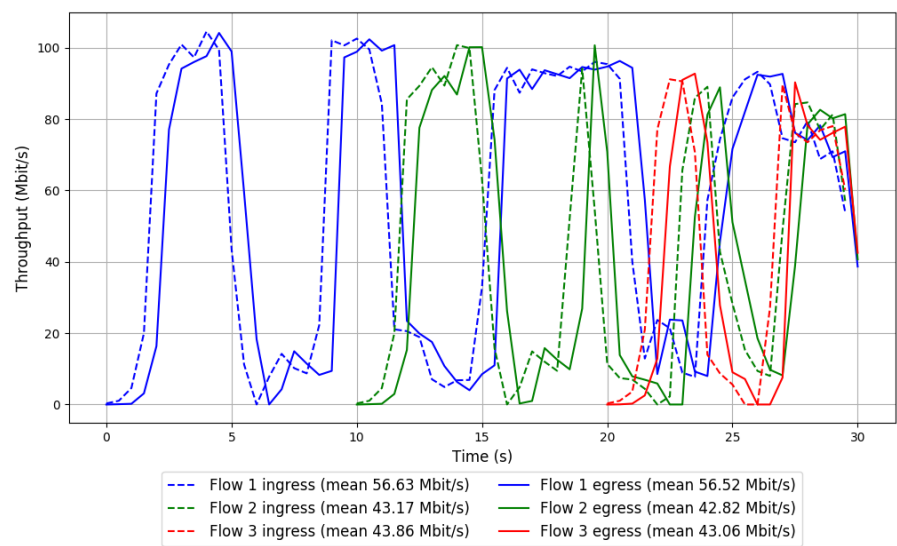


Run 3: Statistics of QUIC Cubic

Start at: 2019-06-27 07:10:32  
End at: 2019-06-27 07:11:02  
Local clock offset: -0.006 ms  
Remote clock offset: -0.105 ms

# Below is generated by plot.py at 2019-06-27 10:41:37  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 98.90 Mbit/s  
95th percentile per-packet one-way delay: 109.586 ms  
Loss rate: 1.65%  
-- Flow 1:  
Average throughput: 56.52 Mbit/s  
95th percentile per-packet one-way delay: 107.071 ms  
Loss rate: 0.91%  
-- Flow 2:  
Average throughput: 42.82 Mbit/s  
95th percentile per-packet one-way delay: 107.206 ms  
Loss rate: 1.90%  
-- Flow 3:  
Average throughput: 43.06 Mbit/s  
95th percentile per-packet one-way delay: 109.735 ms  
Loss rate: 4.01%

Run 3: Report of QUIC Cubic — Data Link

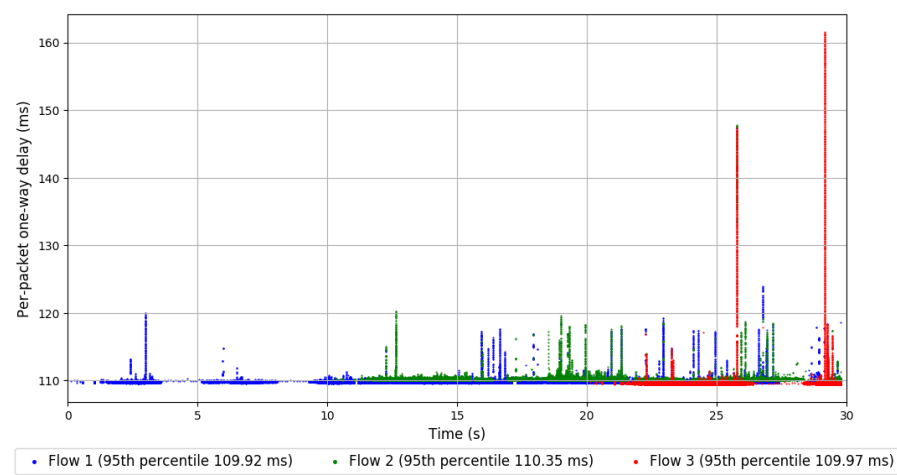
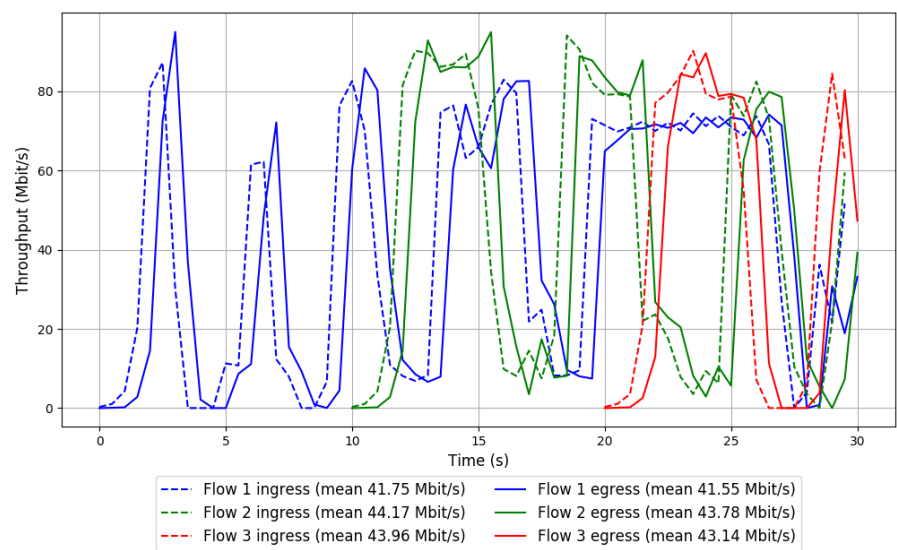


Run 4: Statistics of QUIC Cubic

Start at: 2019-06-27 07:48:57  
End at: 2019-06-27 07:49:27  
Local clock offset: -0.149 ms  
Remote clock offset: -0.017 ms

# Below is generated by plot.py at 2019-06-27 10:41:37  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 84.59 Mbit/s  
95th percentile per-packet one-way delay: 110.265 ms  
Loss rate: 1.95%  
-- Flow 1:  
Average throughput: 41.55 Mbit/s  
95th percentile per-packet one-way delay: 109.921 ms  
Loss rate: 1.20%  
-- Flow 2:  
Average throughput: 43.78 Mbit/s  
95th percentile per-packet one-way delay: 110.348 ms  
Loss rate: 1.98%  
-- Flow 3:  
Average throughput: 43.14 Mbit/s  
95th percentile per-packet one-way delay: 109.973 ms  
Loss rate: 4.04%

Run 4: Report of QUIC Cubic — Data Link

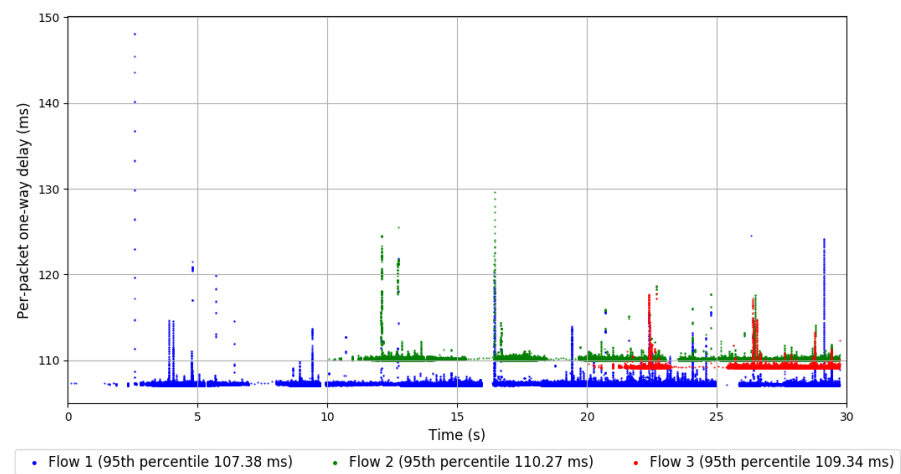
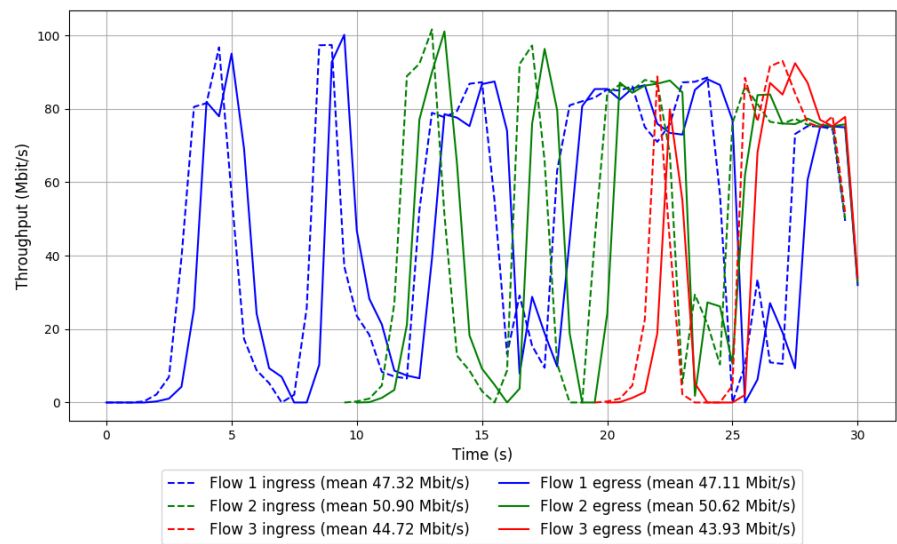


Run 5: Statistics of QUIC Cubic

Start at: 2019-06-27 08:27:24  
End at: 2019-06-27 08:27:54  
Local clock offset: 0.054 ms  
Remote clock offset: -0.042 ms

# Below is generated by plot.py at 2019-06-27 10:41:37  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.04 Mbit/s  
95th percentile per-packet one-way delay: 110.175 ms  
Loss rate: 1.77%  
-- Flow 1:  
Average throughput: 47.11 Mbit/s  
95th percentile per-packet one-way delay: 107.382 ms  
Loss rate: 1.17%  
-- Flow 2:  
Average throughput: 50.62 Mbit/s  
95th percentile per-packet one-way delay: 110.269 ms  
Loss rate: 1.67%  
-- Flow 3:  
Average throughput: 43.93 Mbit/s  
95th percentile per-packet one-way delay: 109.342 ms  
Loss rate: 3.93%

Run 5: Report of QUIC Cubic — Data Link



Run 1: Statistics of SReAM

Start at: 2019-06-27 05:28:17

End at: 2019-06-27 05:28:47

Local clock offset: -0.011 ms

Remote clock offset: -0.01 ms

# Below is generated by plot.py at 2019-06-27 10:41:37

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 110.271 ms

Loss rate: 1.05%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 107.316 ms

Loss rate: 0.64%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 110.353 ms

Loss rate: 1.24%

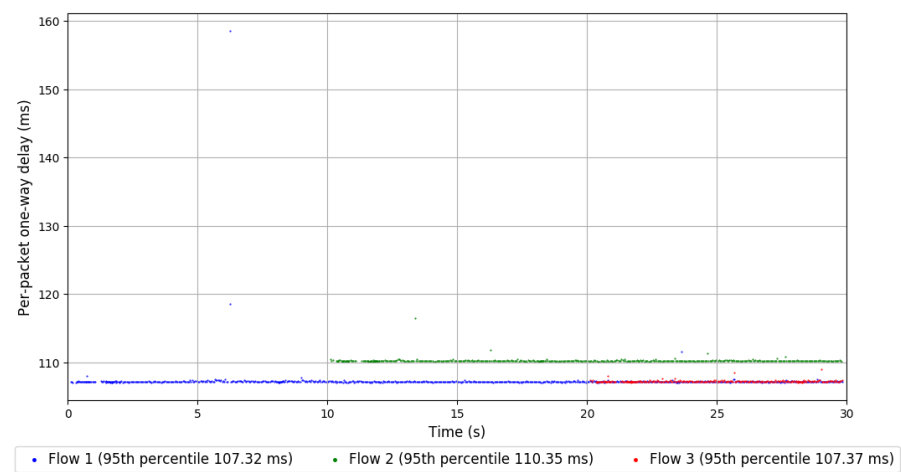
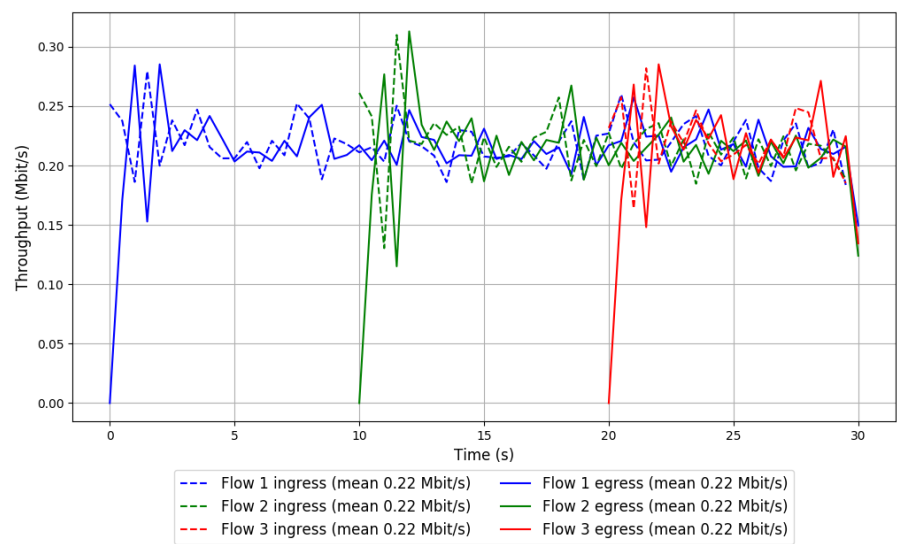
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 107.366 ms

Loss rate: 1.88%

Run 1: Report of SReAM — Data Link



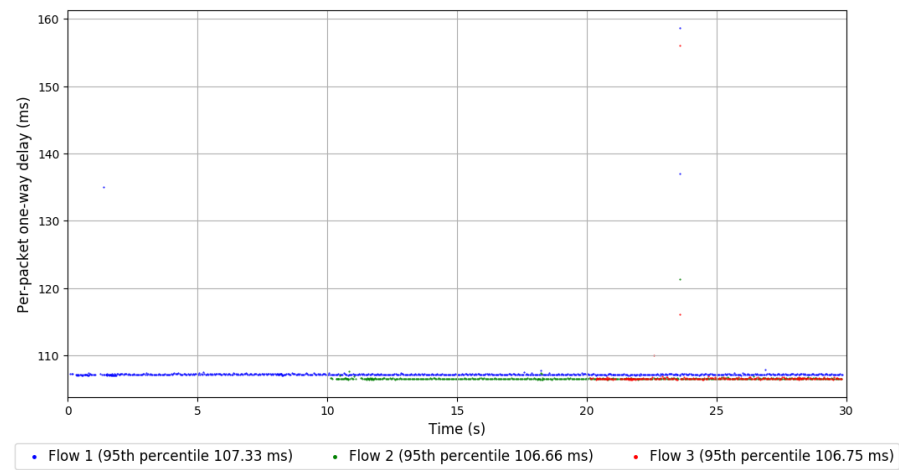
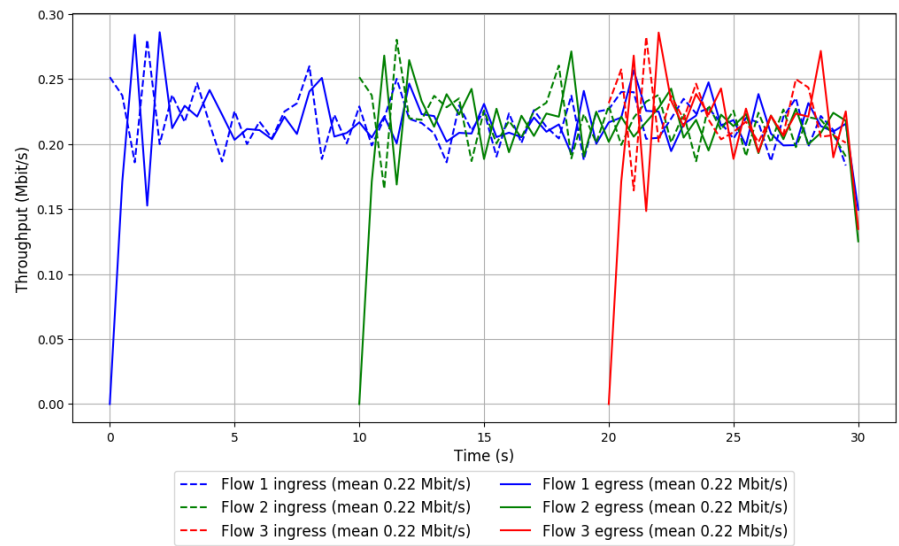


Run 2: Statistics of SReAM

Start at: 2019-06-27 06:05:48  
End at: 2019-06-27 06:06:18  
Local clock offset: -0.115 ms  
Remote clock offset: -0.077 ms

# Below is generated by plot.py at 2019-06-27 10:41:37  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.44 Mbit/s  
95th percentile per-packet one-way delay: 107.299 ms  
Loss rate: 1.11%  
-- Flow 1:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 107.332 ms  
Loss rate: 0.64%  
-- Flow 2:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 106.664 ms  
Loss rate: 1.25%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 106.751 ms  
Loss rate: 2.22%

Run 2: Report of SReAM — Data Link

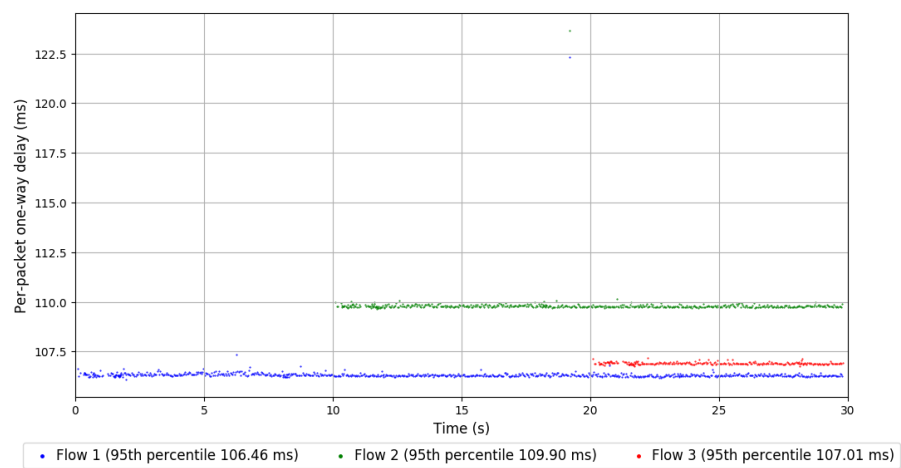
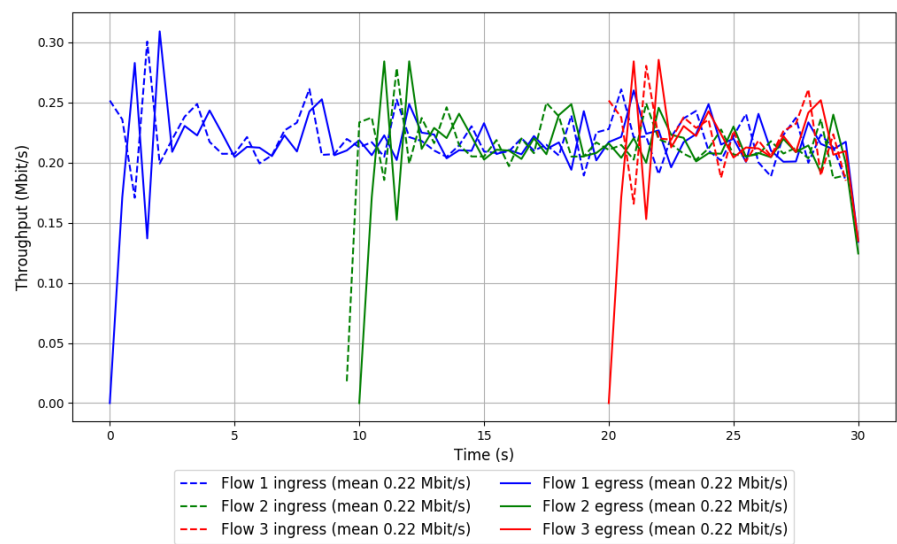


Run 3: Statistics of SReAM

Start at: 2019-06-27 06:44:07  
End at: 2019-06-27 06:44:37  
Local clock offset: -0.045 ms  
Remote clock offset: -0.172 ms

# Below is generated by plot.py at 2019-06-27 10:41:37  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.44 Mbit/s  
95th percentile per-packet one-way delay: 109.856 ms  
Loss rate: 1.17%  
-- Flow 1:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 106.464 ms  
Loss rate: 0.77%  
-- Flow 2:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 109.903 ms  
Loss rate: 1.25%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 107.009 ms  
Loss rate: 2.22%

Run 3: Report of SReAM — Data Link

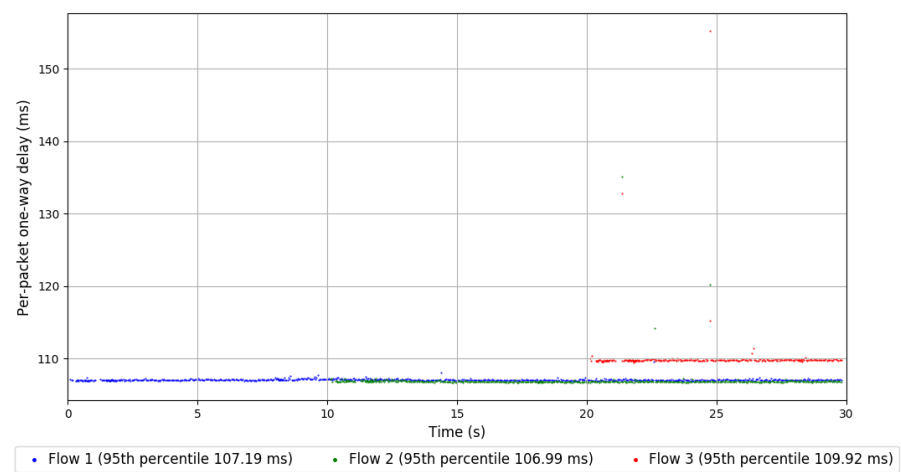
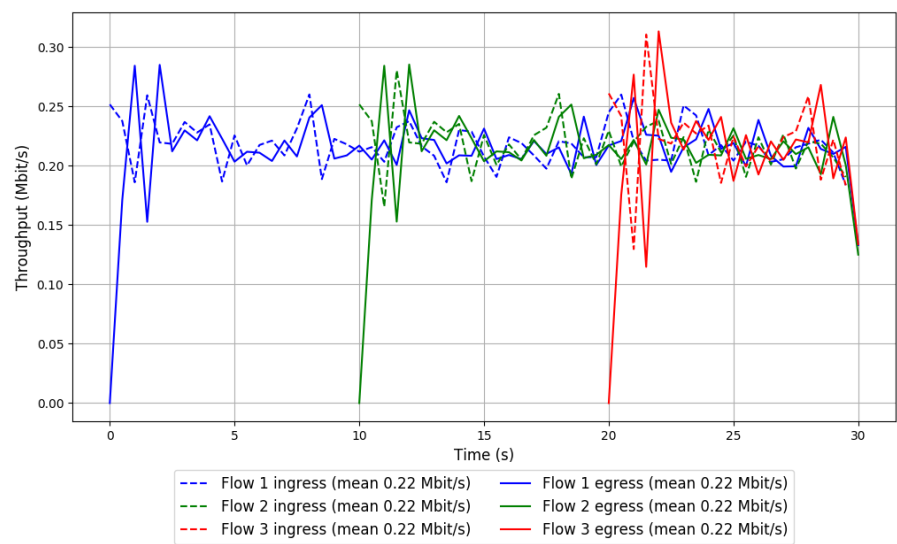


Run 4: Statistics of SReAM

Start at: 2019-06-27 07:21:32  
End at: 2019-06-27 07:22:02  
Local clock offset: -0.173 ms  
Remote clock offset: -0.103 ms

# Below is generated by plot.py at 2019-06-27 10:41:37  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.44 Mbit/s  
95th percentile per-packet one-way delay: 109.786 ms  
Loss rate: 1.17%  
-- Flow 1:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 107.193 ms  
Loss rate: 0.77%  
-- Flow 2:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 106.987 ms  
Loss rate: 1.25%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 109.924 ms  
Loss rate: 2.22%

Run 4: Report of SReAM — Data Link

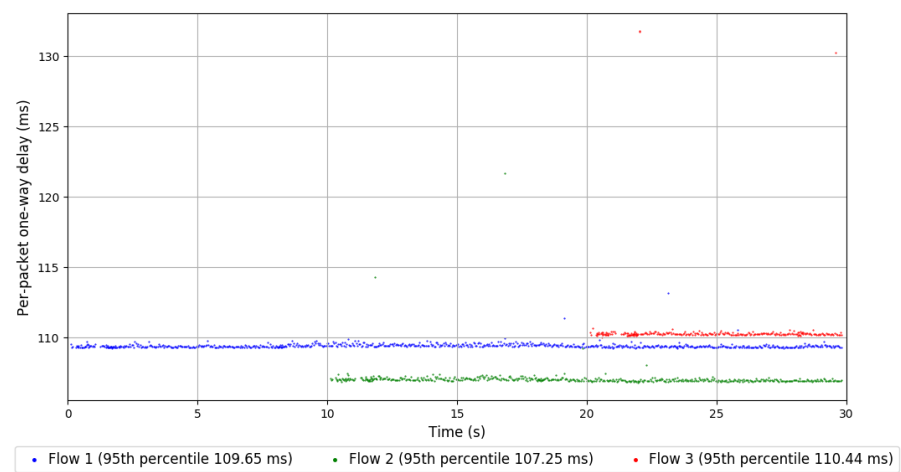
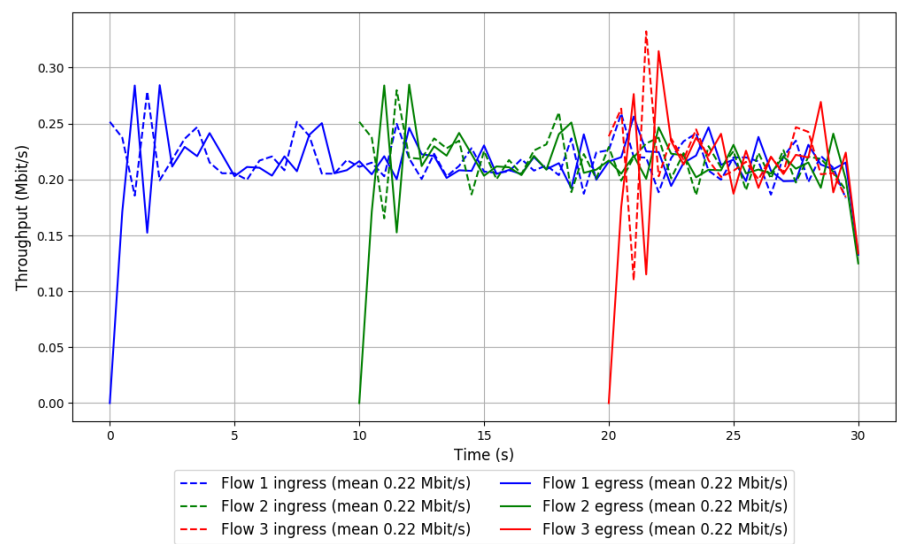


Run 5: Statistics of SReAM

Start at: 2019-06-27 07:59:54  
End at: 2019-06-27 08:00:24  
Local clock offset: -0.059 ms  
Remote clock offset: -0.051 ms

# Below is generated by plot.py at 2019-06-27 10:41:37  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.44 Mbit/s  
95th percentile per-packet one-way delay: 110.321 ms  
Loss rate: 1.11%  
-- Flow 1:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 109.651 ms  
Loss rate: 0.77%  
-- Flow 2:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 107.254 ms  
Loss rate: 1.25%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 110.437 ms  
Loss rate: 1.87%

Run 5: Report of SCSReAM — Data Link



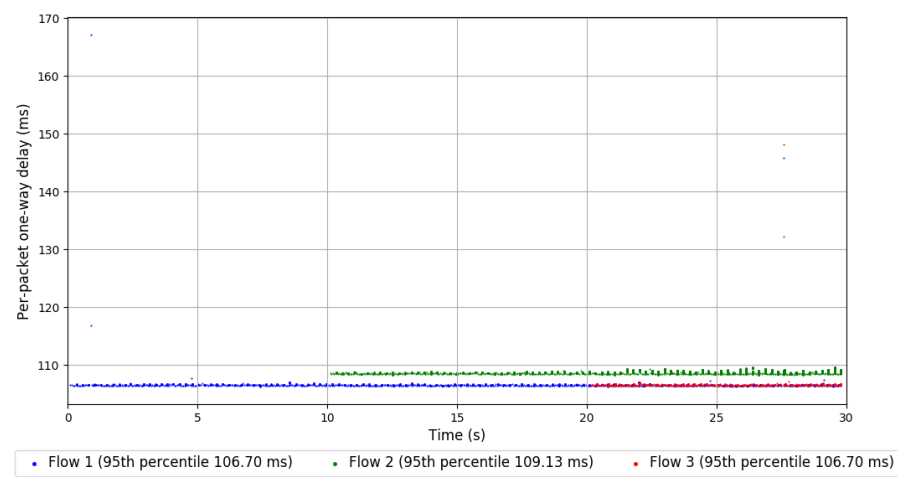
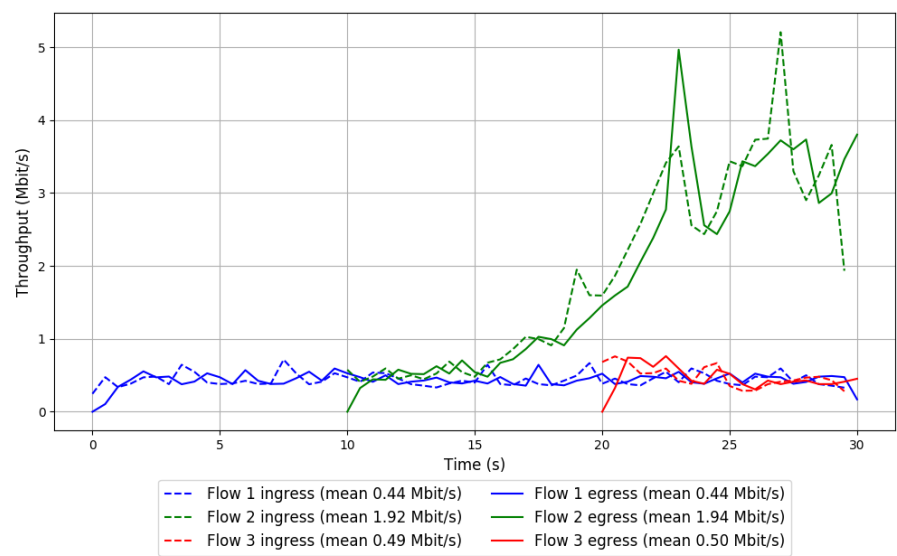


Run 1: Statistics of Sprout

Start at: 2019-06-27 05:40:26  
End at: 2019-06-27 05:40:56  
Local clock offset: -0.723 ms  
Remote clock offset: -0.044 ms

# Below is generated by plot.py at 2019-06-27 10:41:37  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 1.89 Mbit/s  
95th percentile per-packet one-way delay: 109.074 ms  
Loss rate: 0.19%  
-- Flow 1:  
Average throughput: 0.44 Mbit/s  
95th percentile per-packet one-way delay: 106.701 ms  
Loss rate: 0.62%  
-- Flow 2:  
Average throughput: 1.94 Mbit/s  
95th percentile per-packet one-way delay: 109.128 ms  
Loss rate: 0.01%  
-- Flow 3:  
Average throughput: 0.50 Mbit/s  
95th percentile per-packet one-way delay: 106.696 ms  
Loss rate: 0.44%

Run 1: Report of Sprout — Data Link

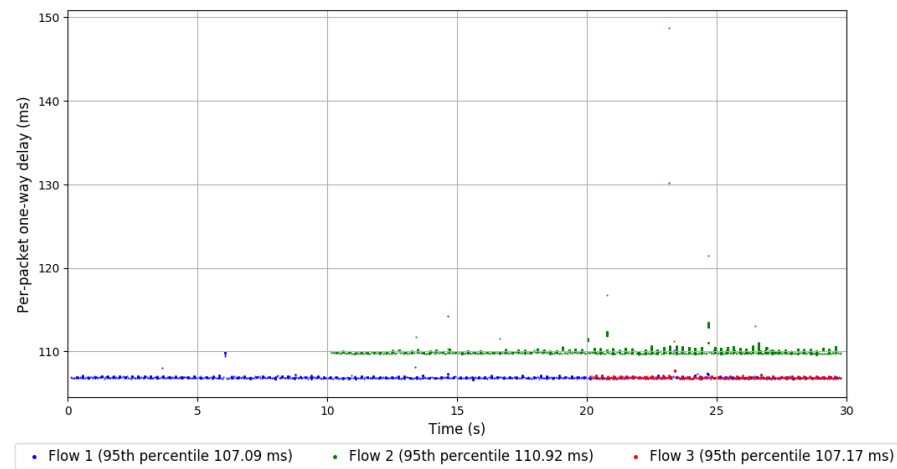
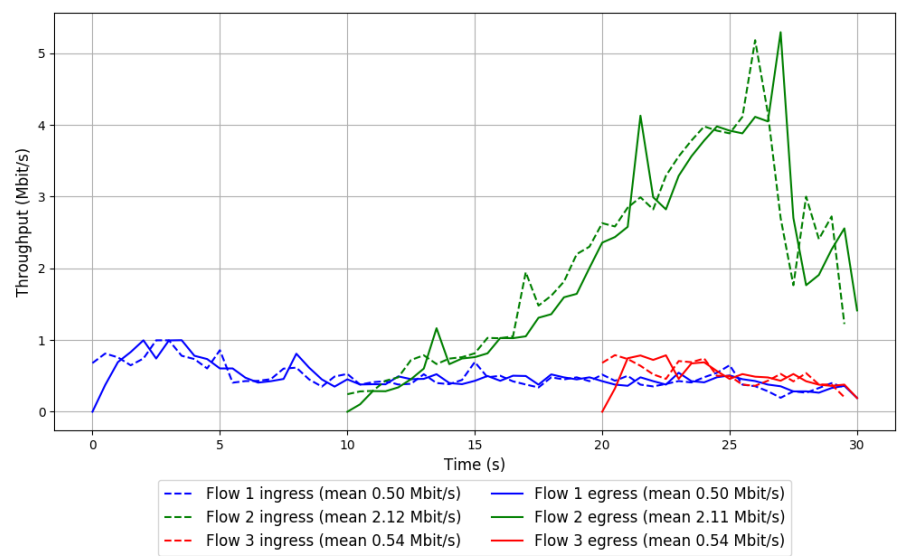


## Run 2: Statistics of Sprout

Start at: 2019-06-27 06:18:30  
End at: 2019-06-27 06:19:00  
Local clock offset: -0.189 ms  
Remote clock offset: 0.009 ms

```
# Below is generated by plot.py at 2019-06-27 10:41:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.07 Mbit/s
95th percentile per-packet one-way delay: 110.514 ms
Loss rate: 1.29%
-- Flow 1:
Average throughput: 0.50 Mbit/s
95th percentile per-packet one-way delay: 107.087 ms
Loss rate: 0.63%
-- Flow 2:
Average throughput: 2.11 Mbit/s
95th percentile per-packet one-way delay: 110.916 ms
Loss rate: 1.44%
-- Flow 3:
Average throughput: 0.54 Mbit/s
95th percentile per-packet one-way delay: 107.169 ms
Loss rate: 1.86%
```

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2019-06-27 06:56:27

End at: 2019-06-27 06:56:57

Local clock offset: -0.02 ms

Remote clock offset: 0.236 ms

# Below is generated by plot.py at 2019-06-27 10:41:37

# Datalink statistics

-- Total of 3 flows:

Average throughput: 1.01 Mbit/s

95th percentile per-packet one-way delay: 106.785 ms

Loss rate: 0.99%

-- Flow 1:

Average throughput: 0.58 Mbit/s

95th percentile per-packet one-way delay: 106.782 ms

Loss rate: 0.68%

-- Flow 2:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 106.665 ms

Loss rate: 1.11%

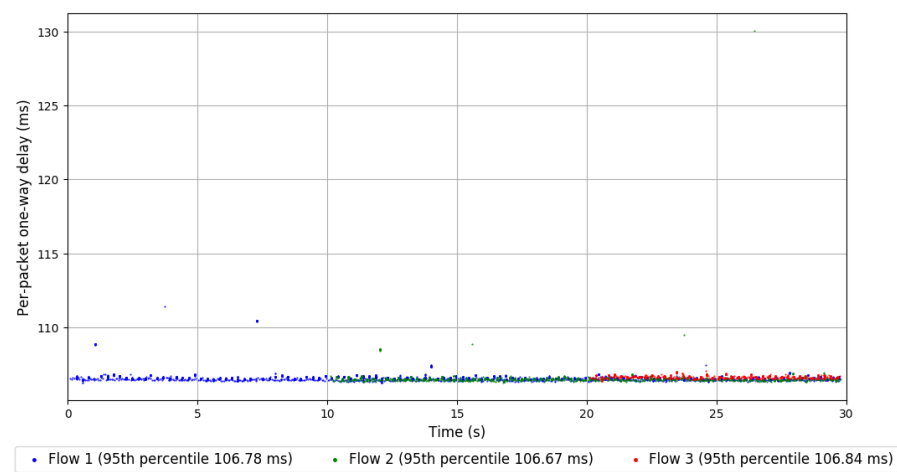
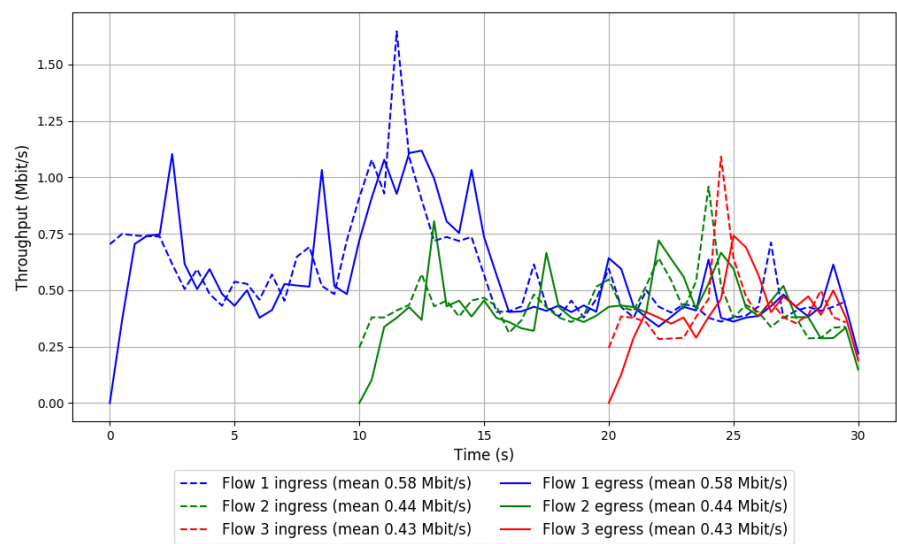
-- Flow 3:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 106.836 ms

Loss rate: 2.02%

Run 3: Report of Sprout — Data Link

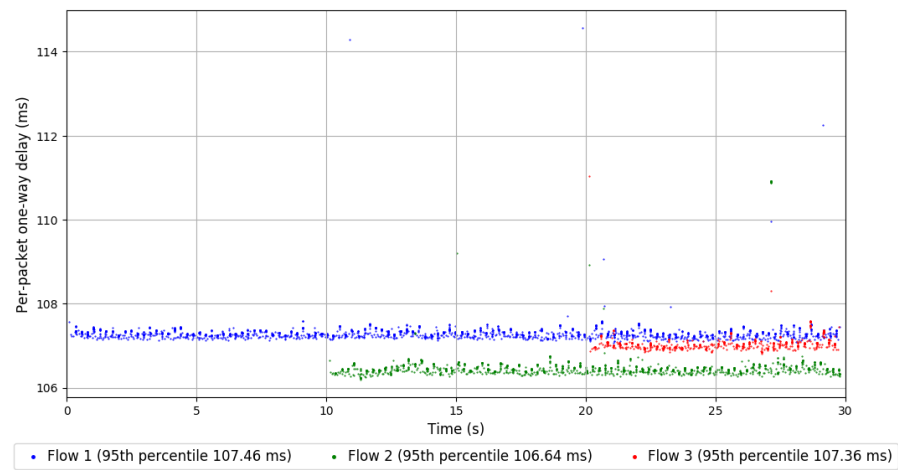
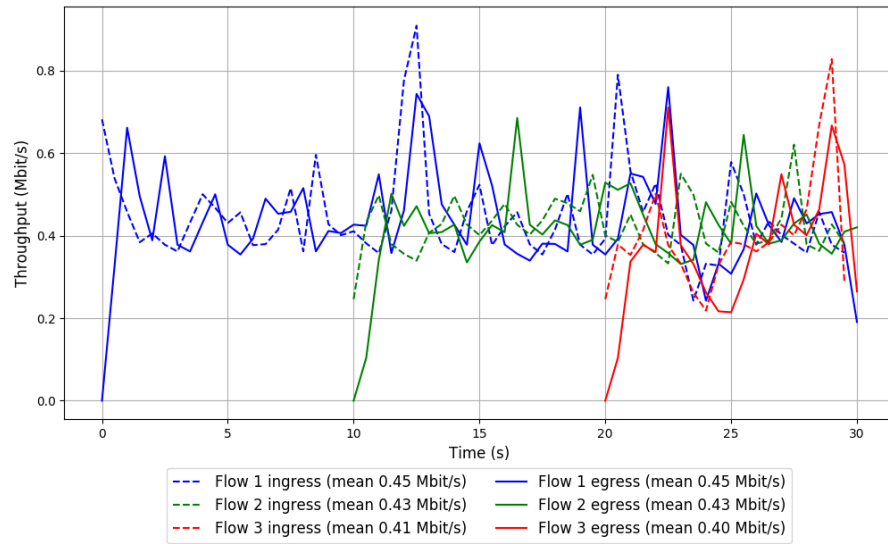


#### Run 4: Statistics of Sprout

Start at: 2019-06-27 07:34:33  
End at: 2019-06-27 07:35:03  
Local clock offset: 0.198 ms  
Remote clock offset: -0.054 ms

```
# Below is generated by plot.py at 2019-06-27 10:41:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.86 Mbit/s
95th percentile per-packet one-way delay: 107.433 ms
Loss rate: 1.21%
-- Flow 1:
Average throughput: 0.45 Mbit/s
95th percentile per-packet one-way delay: 107.464 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 106.636 ms
Loss rate: 1.00%
-- Flow 3:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 107.356 ms
Loss rate: 3.55%
```

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



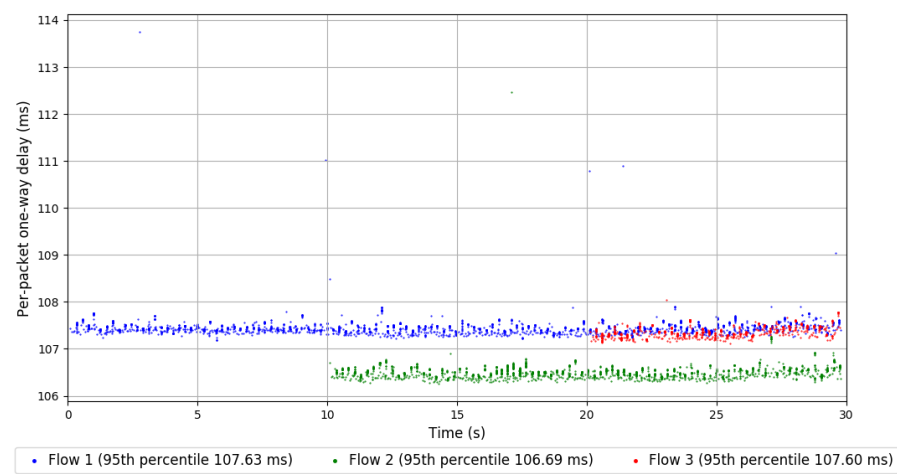
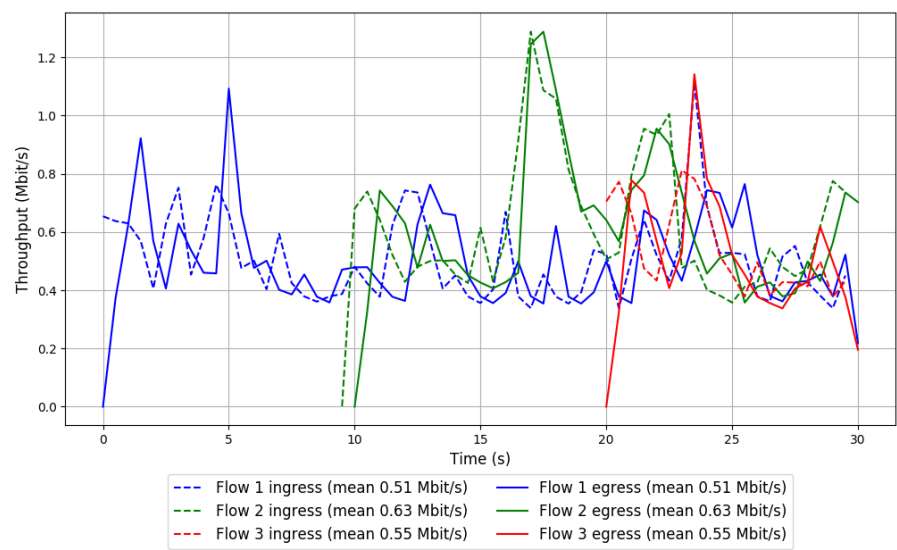


Run 5: Statistics of Sprout

Start at: 2019-06-27 08:12:43  
End at: 2019-06-27 08:13:13  
Local clock offset: 0.072 ms  
Remote clock offset: -0.017 ms

# Below is generated by plot.py at 2019-06-27 10:41:37  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 1.10 Mbit/s  
95th percentile per-packet one-way delay: 107.585 ms  
Loss rate: 1.29%  
-- Flow 1:  
Average throughput: 0.51 Mbit/s  
95th percentile per-packet one-way delay: 107.626 ms  
Loss rate: 0.78%  
-- Flow 2:  
Average throughput: 0.63 Mbit/s  
95th percentile per-packet one-way delay: 106.691 ms  
Loss rate: 1.51%  
-- Flow 3:  
Average throughput: 0.55 Mbit/s  
95th percentile per-packet one-way delay: 107.598 ms  
Loss rate: 2.22%

Run 5: Report of Sprout — Data Link

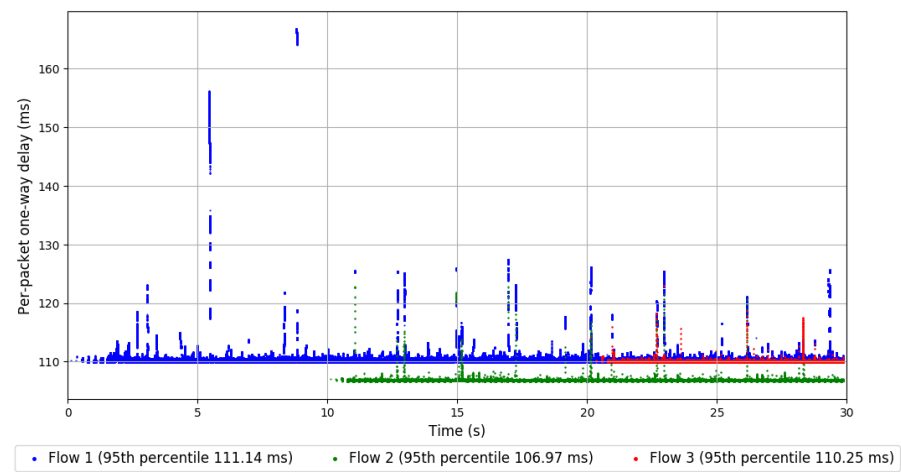
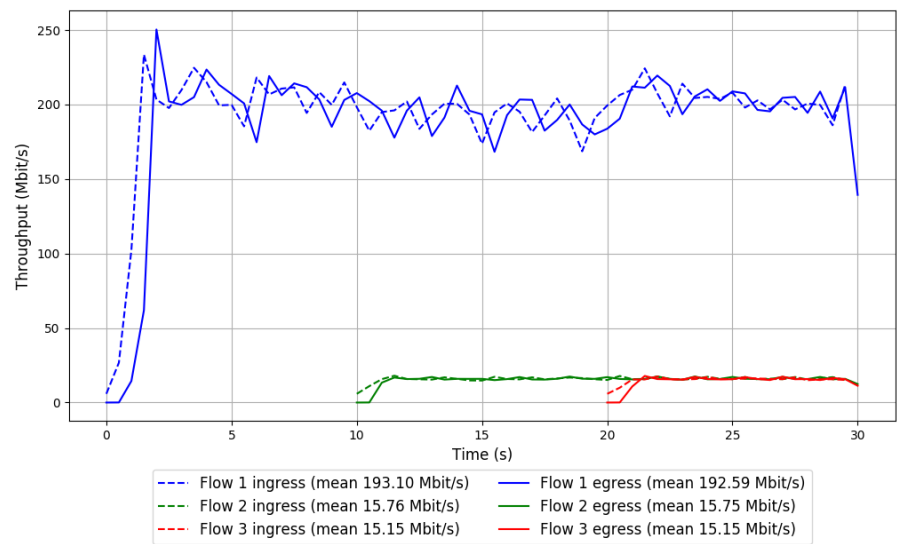


Run 1: Statistics of TaoVA-100x

Start at: 2019-06-27 05:36:48  
End at: 2019-06-27 05:37:18  
Local clock offset: -0.006 ms  
Remote clock offset: -0.056 ms

# Below is generated by plot.py at 2019-06-27 10:41:37  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 208.00 Mbit/s  
95th percentile per-packet one-way delay: 111.070 ms  
Loss rate: 1.02%  
-- Flow 1:  
Average throughput: 192.59 Mbit/s  
95th percentile per-packet one-way delay: 111.145 ms  
Loss rate: 0.99%  
-- Flow 2:  
Average throughput: 15.75 Mbit/s  
95th percentile per-packet one-way delay: 106.970 ms  
Loss rate: 1.10%  
-- Flow 3:  
Average throughput: 15.15 Mbit/s  
95th percentile per-packet one-way delay: 110.249 ms  
Loss rate: 2.26%

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



Run 2: Statistics of TaoVA-100x

Start at: 2019-06-27 06:14:37

End at: 2019-06-27 06:15:07

Local clock offset: -0.059 ms

Remote clock offset: 0.327 ms

# Below is generated by plot.py at 2019-06-27 10:47:12

# Datalink statistics

-- Total of 3 flows:

Average throughput: 356.56 Mbit/s

95th percentile per-packet one-way delay: 110.050 ms

Loss rate: 1.38%

-- Flow 1:

Average throughput: 185.19 Mbit/s

95th percentile per-packet one-way delay: 108.199 ms

Loss rate: 1.08%

-- Flow 2:

Average throughput: 184.26 Mbit/s

95th percentile per-packet one-way delay: 112.293 ms

Loss rate: 1.57%

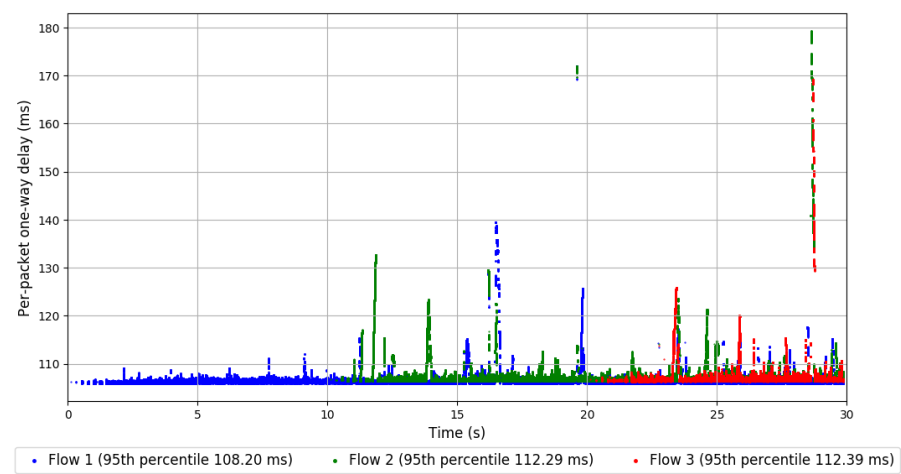
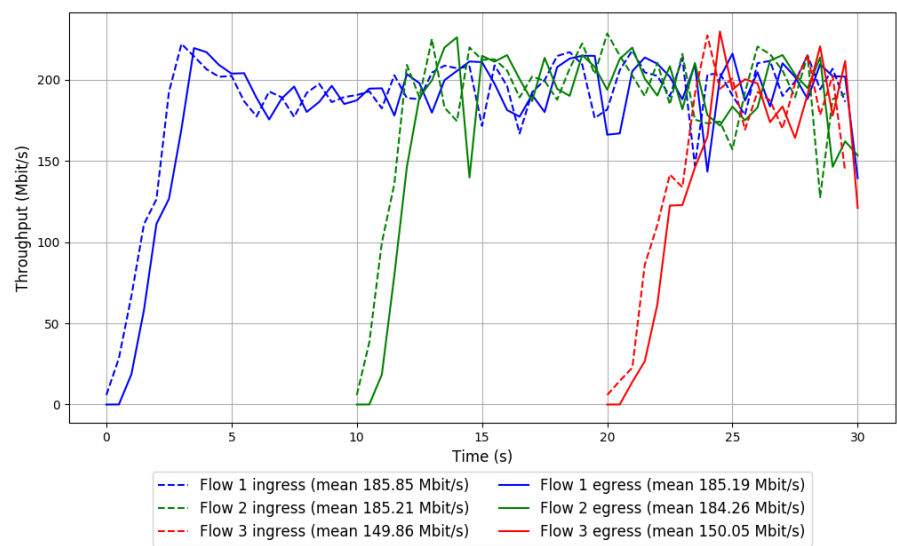
-- Flow 3:

Average throughput: 150.05 Mbit/s

95th percentile per-packet one-way delay: 112.389 ms

Loss rate: 2.07%

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

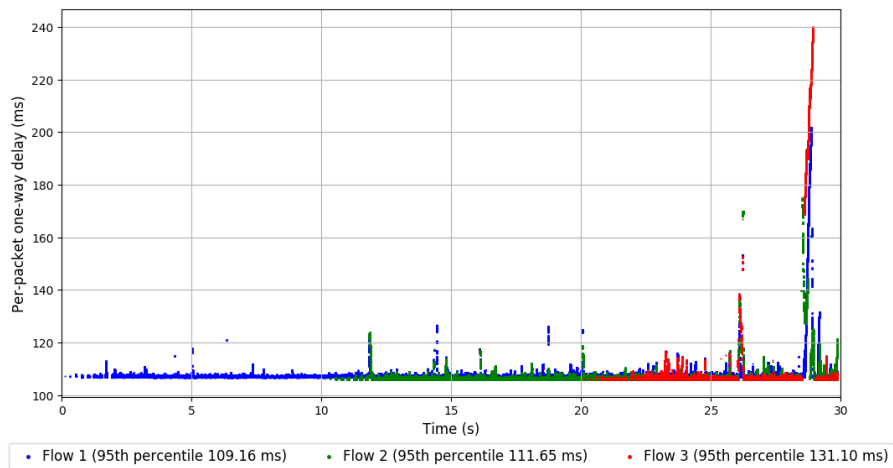
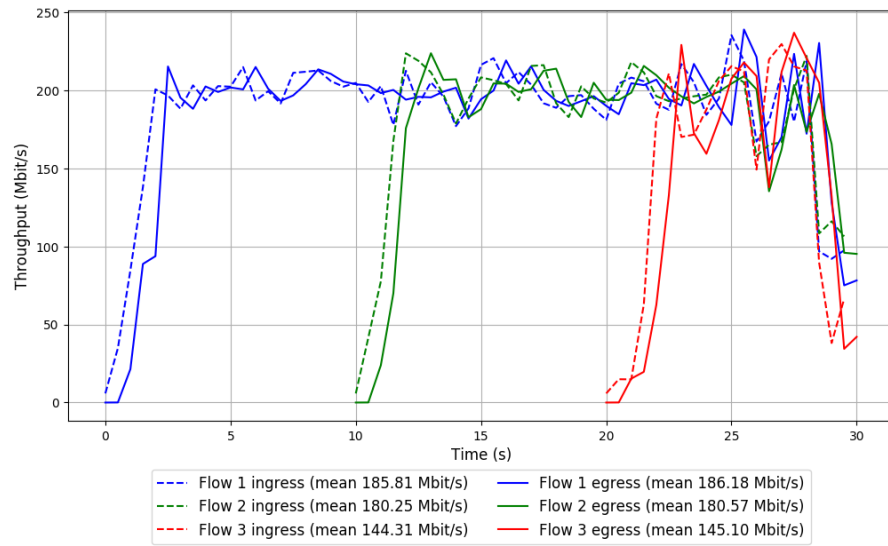


Run 3: Statistics of TaoVA-100x

Start at: 2019-06-27 06:52:30  
End at: 2019-06-27 06:53:00  
Local clock offset: 0.018 ms  
Remote clock offset: -0.141 ms

# Below is generated by plot.py at 2019-06-27 10:47:12  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 353.56 Mbit/s  
95th percentile per-packet one-way delay: 110.376 ms  
Loss rate: 0.81%  
-- Flow 1:  
Average throughput: 186.18 Mbit/s  
95th percentile per-packet one-way delay: 109.163 ms  
Loss rate: 0.53%  
-- Flow 2:  
Average throughput: 180.57 Mbit/s  
95th percentile per-packet one-way delay: 111.647 ms  
Loss rate: 0.91%  
-- Flow 3:  
Average throughput: 145.10 Mbit/s  
95th percentile per-packet one-way delay: 131.098 ms  
Loss rate: 1.65%

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



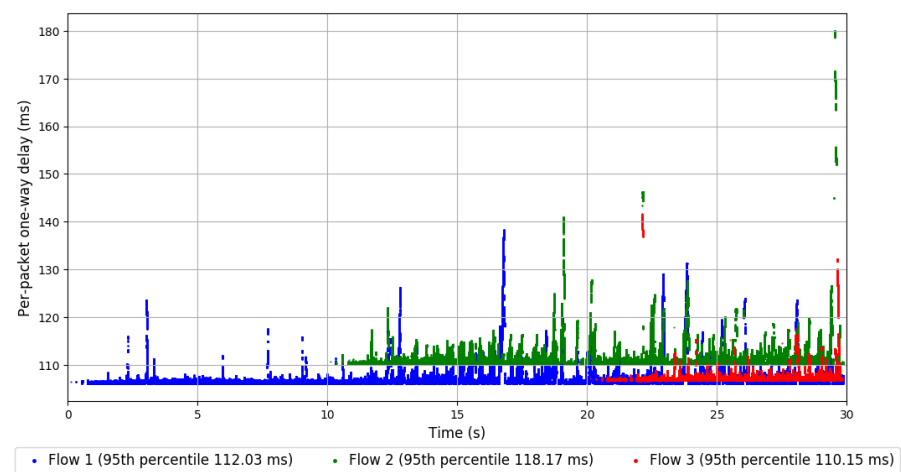
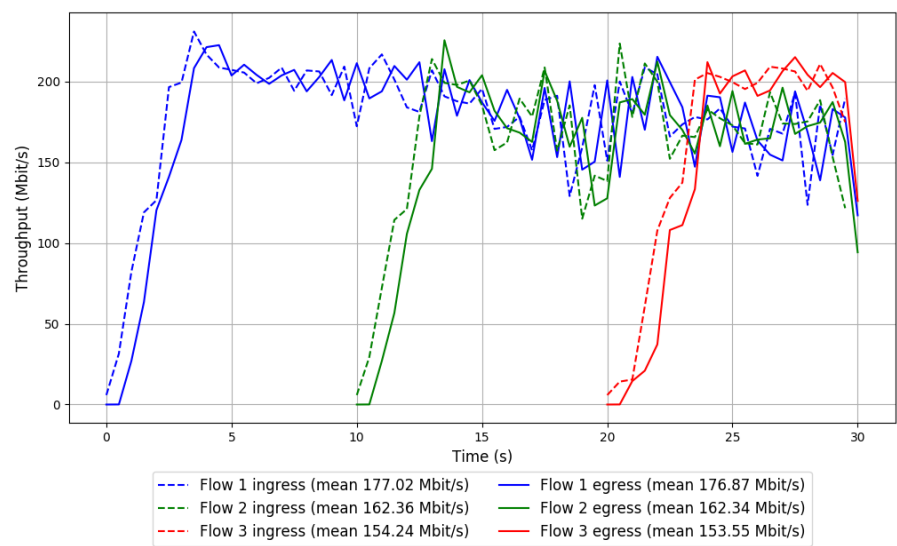


Run 4: Statistics of TaoVA-100x

Start at: 2019-06-27 07:30:34  
End at: 2019-06-27 07:31:04  
Local clock offset: 0.178 ms  
Remote clock offset: -0.096 ms

# Below is generated by plot.py at 2019-06-27 10:47:12  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 334.62 Mbit/s  
95th percentile per-packet one-way delay: 114.890 ms  
Loss rate: 1.25%  
-- Flow 1:  
Average throughput: 176.87 Mbit/s  
95th percentile per-packet one-way delay: 112.033 ms  
Loss rate: 0.81%  
-- Flow 2:  
Average throughput: 162.34 Mbit/s  
95th percentile per-packet one-way delay: 118.167 ms  
Loss rate: 1.13%  
-- Flow 3:  
Average throughput: 153.55 Mbit/s  
95th percentile per-packet one-way delay: 110.146 ms  
Loss rate: 3.05%

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

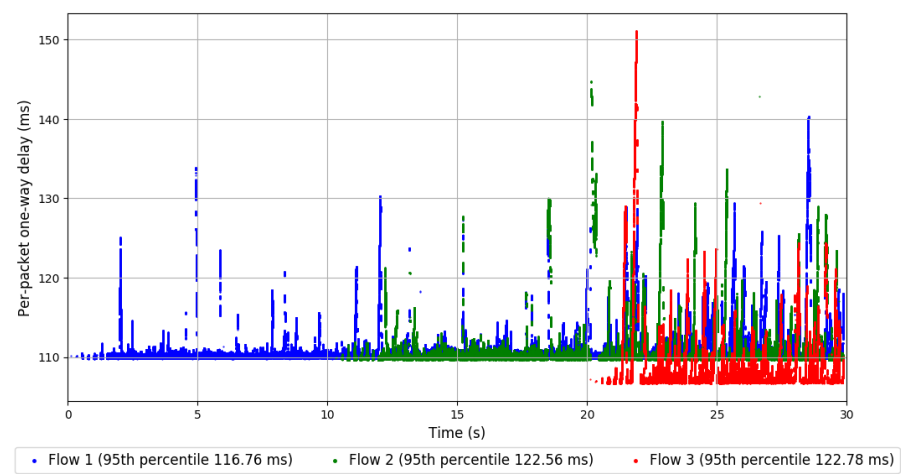
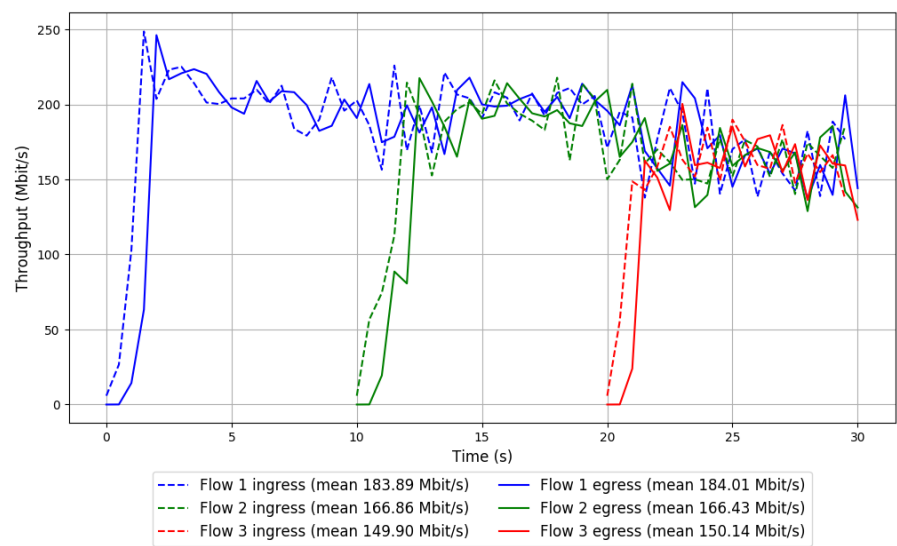


Run 5: Statistics of TaoVA-100x

Start at: 2019-06-27 08:08:48  
End at: 2019-06-27 08:09:18  
Local clock offset: -0.218 ms  
Remote clock offset: -0.033 ms

# Below is generated by plot.py at 2019-06-27 10:48:11  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 343.58 Mbit/s  
95th percentile per-packet one-way delay: 118.929 ms  
Loss rate: 1.07%  
-- Flow 1:  
Average throughput: 184.01 Mbit/s  
95th percentile per-packet one-way delay: 116.764 ms  
Loss rate: 0.60%  
-- Flow 2:  
Average throughput: 166.43 Mbit/s  
95th percentile per-packet one-way delay: 122.558 ms  
Loss rate: 1.41%  
-- Flow 3:  
Average throughput: 150.14 Mbit/s  
95th percentile per-packet one-way delay: 122.775 ms  
Loss rate: 2.03%

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

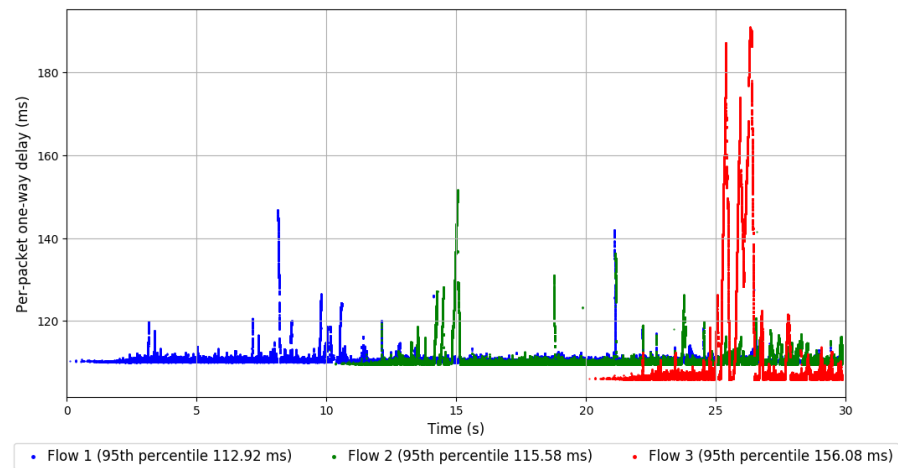
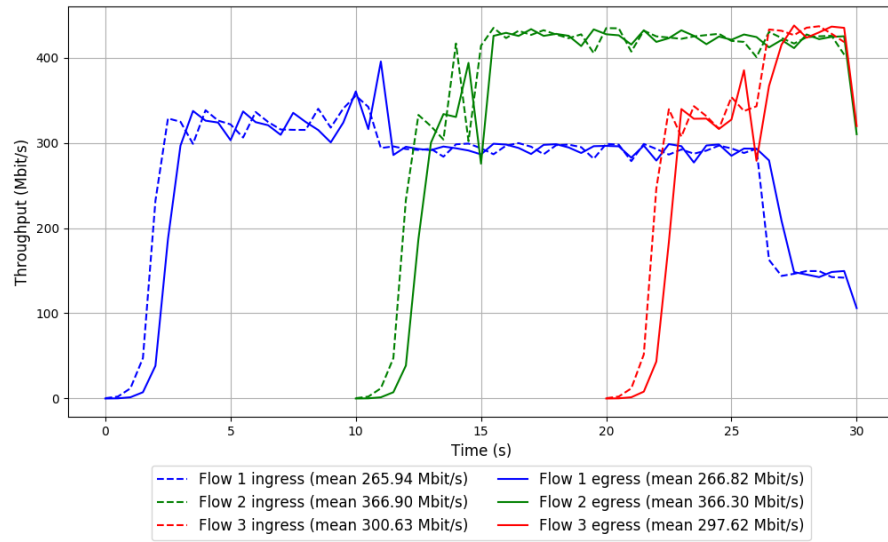


Run 1: Statistics of TCP Vegas

Start at: 2019-06-27 05:51:03  
End at: 2019-06-27 05:51:33  
Local clock offset: -0.203 ms  
Remote clock offset: -0.064 ms

# Below is generated by plot.py at 2019-06-27 10:49:55  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 607.36 Mbit/s  
95th percentile per-packet one-way delay: 117.430 ms  
Loss rate: 1.20%  
-- Flow 1:  
Average throughput: 266.82 Mbit/s  
95th percentile per-packet one-way delay: 112.915 ms  
Loss rate: 0.41%  
-- Flow 2:  
Average throughput: 366.30 Mbit/s  
95th percentile per-packet one-way delay: 115.577 ms  
Loss rate: 1.27%  
-- Flow 3:  
Average throughput: 297.62 Mbit/s  
95th percentile per-packet one-way delay: 156.076 ms  
Loss rate: 3.15%

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



Run 2: Statistics of TCP Vegas

Start at: 2019-06-27 06:29:25

End at: 2019-06-27 06:29:55

Local clock offset: -0.799 ms

Remote clock offset: 0.347 ms

# Below is generated by plot.py at 2019-06-27 10:53:02

# Datalink statistics

-- Total of 3 flows:

Average throughput: 546.08 Mbit/s

95th percentile per-packet one-way delay: 116.262 ms

Loss rate: 1.11%

-- Flow 1:

Average throughput: 382.25 Mbit/s

95th percentile per-packet one-way delay: 116.002 ms

Loss rate: 0.82%

-- Flow 2:

Average throughput: 123.30 Mbit/s

95th percentile per-packet one-way delay: 109.146 ms

Loss rate: 1.23%

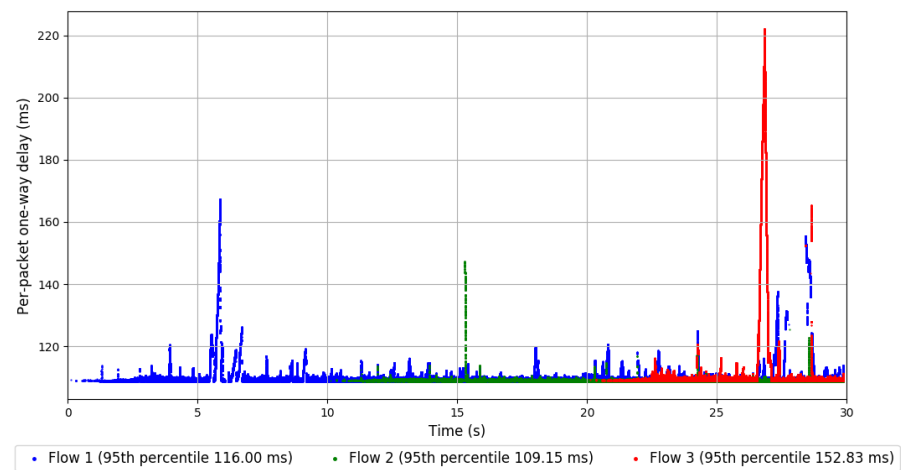
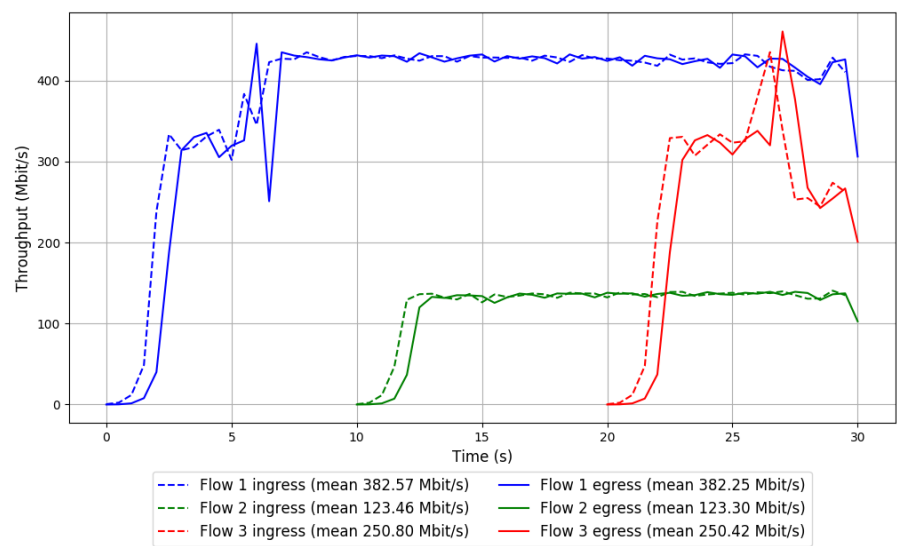
-- Flow 3:

Average throughput: 250.42 Mbit/s

95th percentile per-packet one-way delay: 152.834 ms

Loss rate: 2.36%

Run 2: Report of TCP Vegas — Data Link



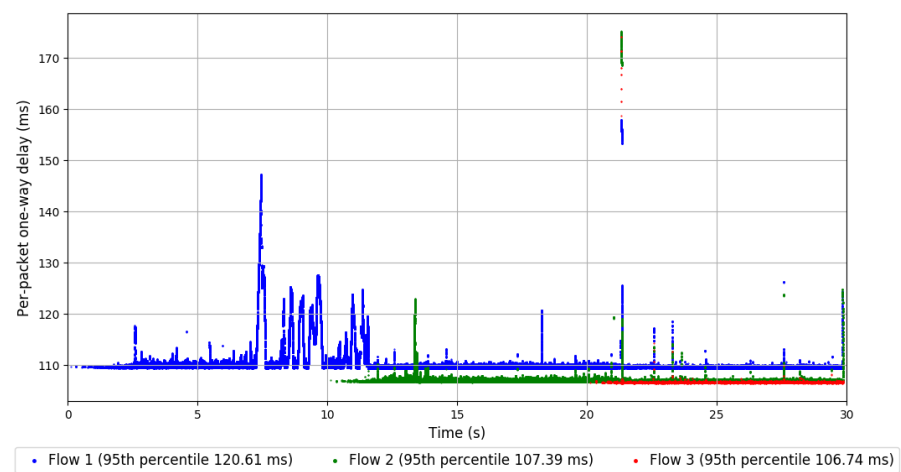
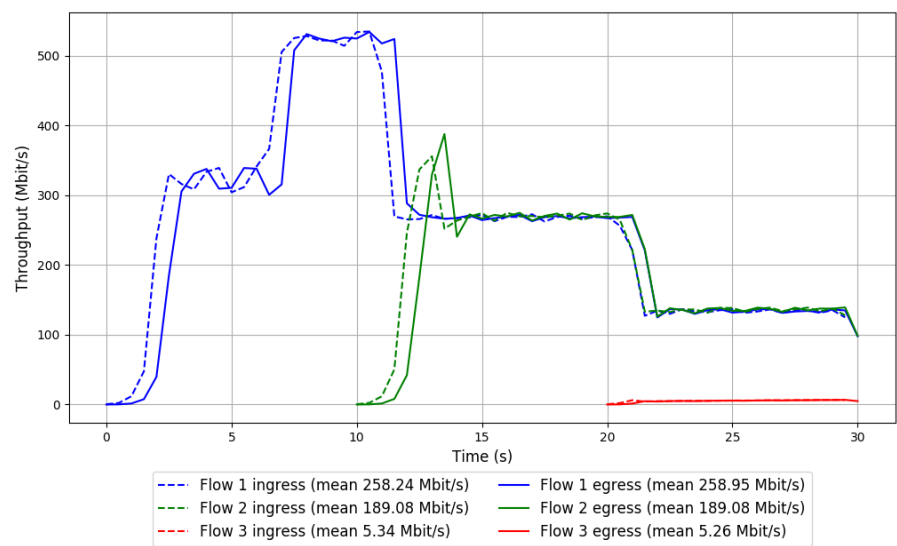


Run 3: Statistics of TCP Vegas

Start at: 2019-06-27 07:07:02  
End at: 2019-06-27 07:07:32  
Local clock offset: -0.301 ms  
Remote clock offset: -0.156 ms

# Below is generated by plot.py at 2019-06-27 10:53:02  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 386.17 Mbit/s  
95th percentile per-packet one-way delay: 118.013 ms  
Loss rate: 0.68%  
-- Flow 1:  
Average throughput: 258.95 Mbit/s  
95th percentile per-packet one-way delay: 120.605 ms  
Loss rate: 0.46%  
-- Flow 2:  
Average throughput: 189.08 Mbit/s  
95th percentile per-packet one-way delay: 107.387 ms  
Loss rate: 1.09%  
-- Flow 3:  
Average throughput: 5.26 Mbit/s  
95th percentile per-packet one-way delay: 106.737 ms  
Loss rate: 3.73%

Run 3: Report of TCP Vegas — Data Link

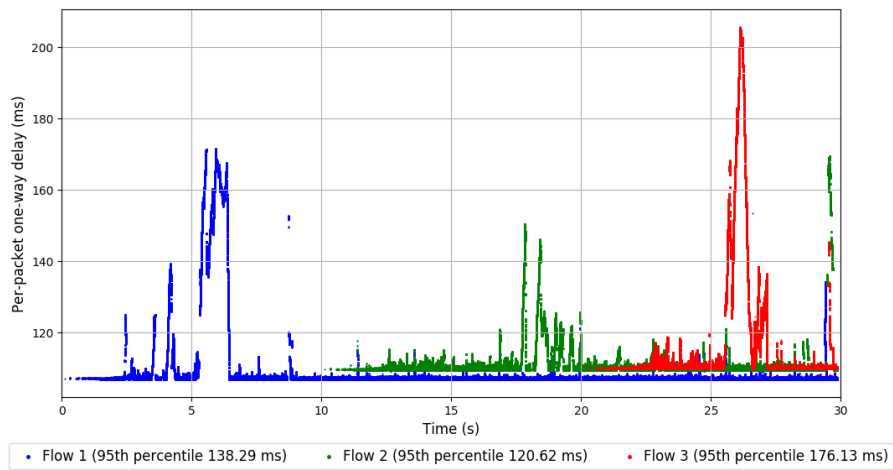
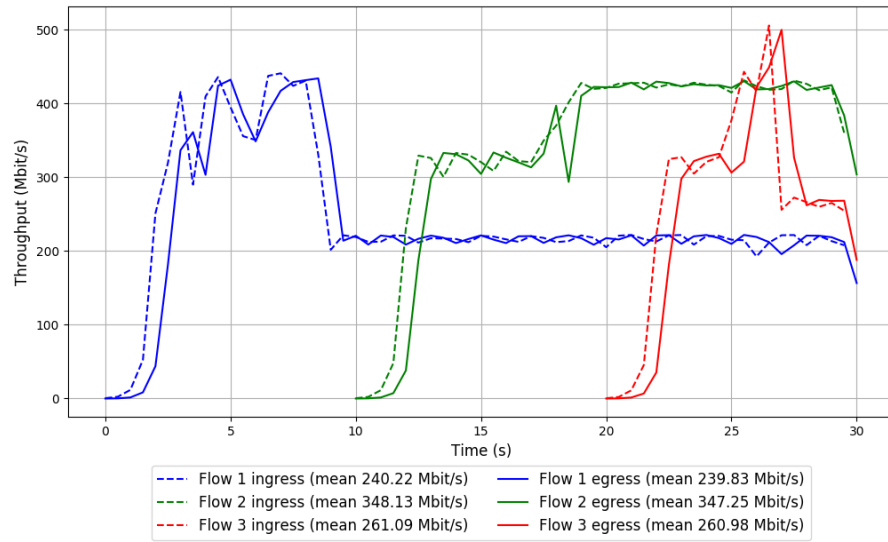


Run 4: Statistics of TCP Vegas

Start at: 2019-06-27 07:45:18  
End at: 2019-06-27 07:45:48  
Local clock offset: -0.114 ms  
Remote clock offset: -0.032 ms

# Below is generated by plot.py at 2019-06-27 10:53:51  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 555.69 Mbit/s  
95th percentile per-packet one-way delay: 137.770 ms  
Loss rate: 1.29%  
-- Flow 1:  
Average throughput: 239.83 Mbit/s  
95th percentile per-packet one-way delay: 138.288 ms  
Loss rate: 0.89%  
-- Flow 2:  
Average throughput: 347.25 Mbit/s  
95th percentile per-packet one-way delay: 120.622 ms  
Loss rate: 1.35%  
-- Flow 3:  
Average throughput: 260.98 Mbit/s  
95th percentile per-packet one-way delay: 176.126 ms  
Loss rate: 2.27%

# Run 4: Report of TCP Vegas — Data Link

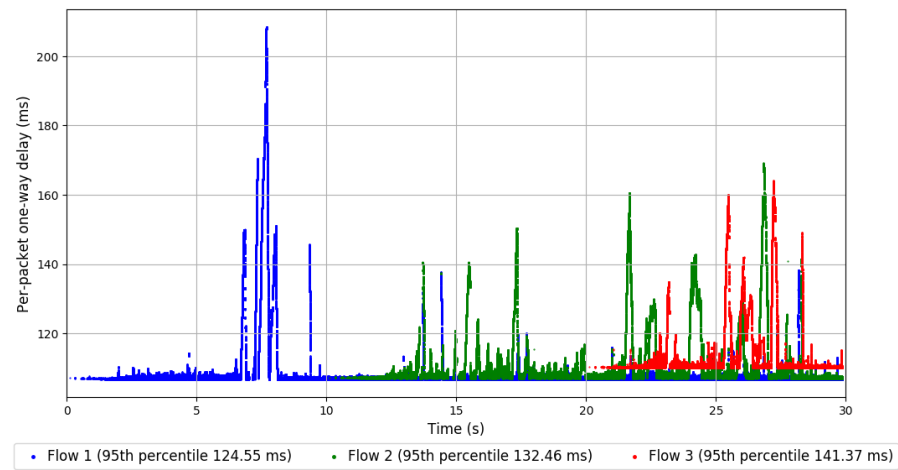
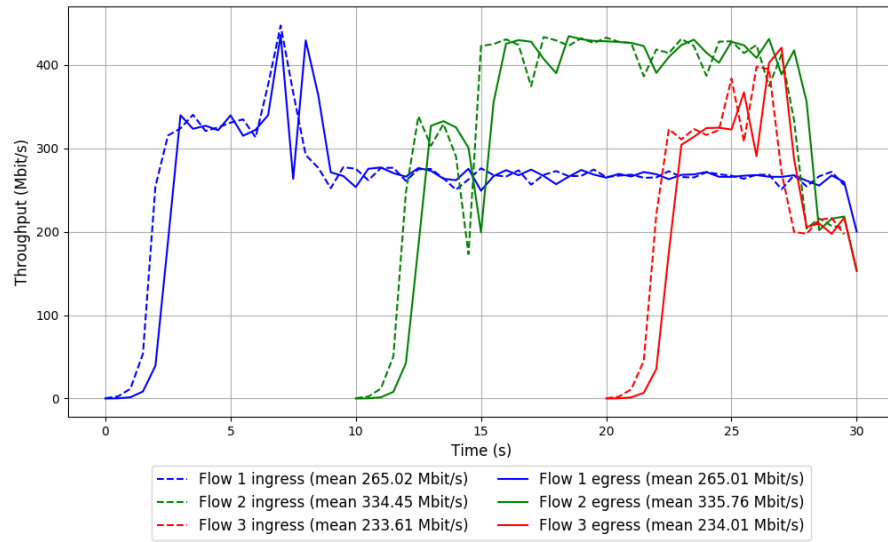


Run 5: Statistics of TCP Vegas

Start at: 2019-06-27 08:23:39  
End at: 2019-06-27 08:24:09  
Local clock offset: -0.012 ms  
Remote clock offset: -0.081 ms

# Below is generated by plot.py at 2019-06-27 10:58:43  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 564.42 Mbit/s  
95th percentile per-packet one-way delay: 132.212 ms  
Loss rate: 0.90%  
-- Flow 1:  
Average throughput: 265.01 Mbit/s  
95th percentile per-packet one-way delay: 124.545 ms  
Loss rate: 0.73%  
-- Flow 2:  
Average throughput: 335.76 Mbit/s  
95th percentile per-packet one-way delay: 132.456 ms  
Loss rate: 0.70%  
-- Flow 3:  
Average throughput: 234.01 Mbit/s  
95th percentile per-packet one-way delay: 141.373 ms  
Loss rate: 2.03%

# Run 5: Report of TCP Vegas — Data Link

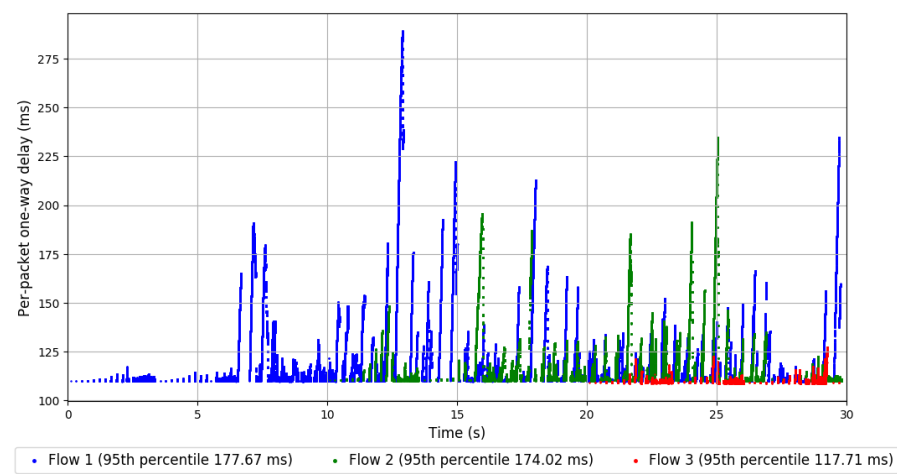
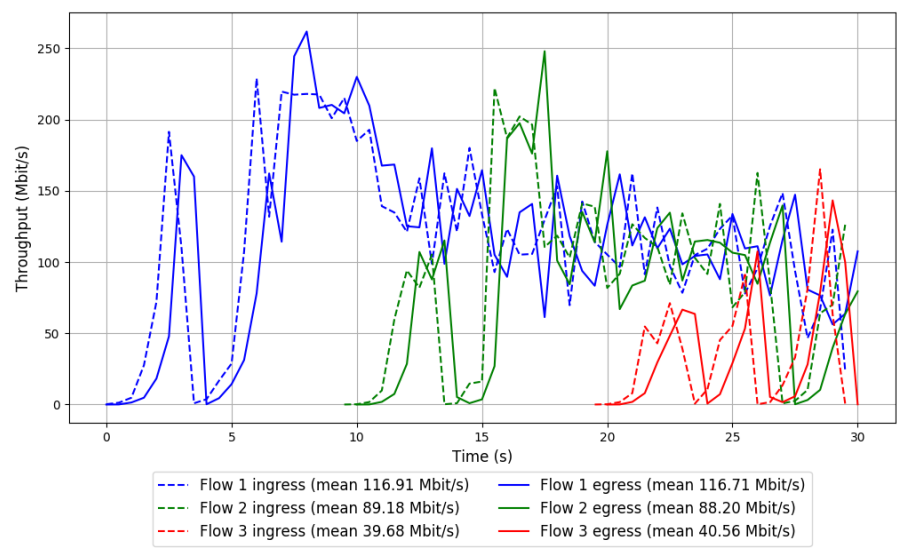


Run 1: Statistics of Verus

Start at: 2019-06-27 05:33:13  
End at: 2019-06-27 05:33:43  
Local clock offset: -0.091 ms  
Remote clock offset: -0.057 ms

# Below is generated by plot.py at 2019-06-27 10:58:43  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 188.26 Mbit/s  
95th percentile per-packet one-way delay: 174.806 ms  
Loss rate: 0.69%  
-- Flow 1:  
Average throughput: 116.71 Mbit/s  
95th percentile per-packet one-way delay: 177.673 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 88.20 Mbit/s  
95th percentile per-packet one-way delay: 174.016 ms  
Loss rate: 2.18%  
-- Flow 3:  
Average throughput: 40.56 Mbit/s  
95th percentile per-packet one-way delay: 117.710 ms  
Loss rate: 0.06%

Run 1: Report of Verus — Data Link



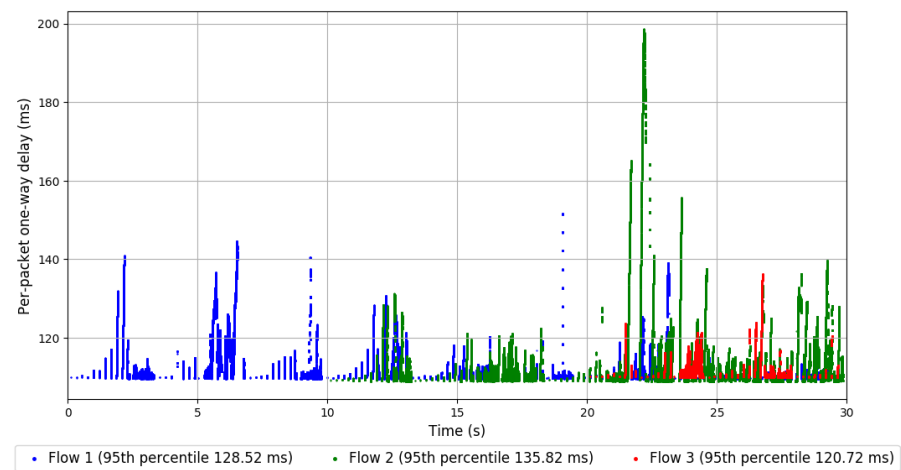
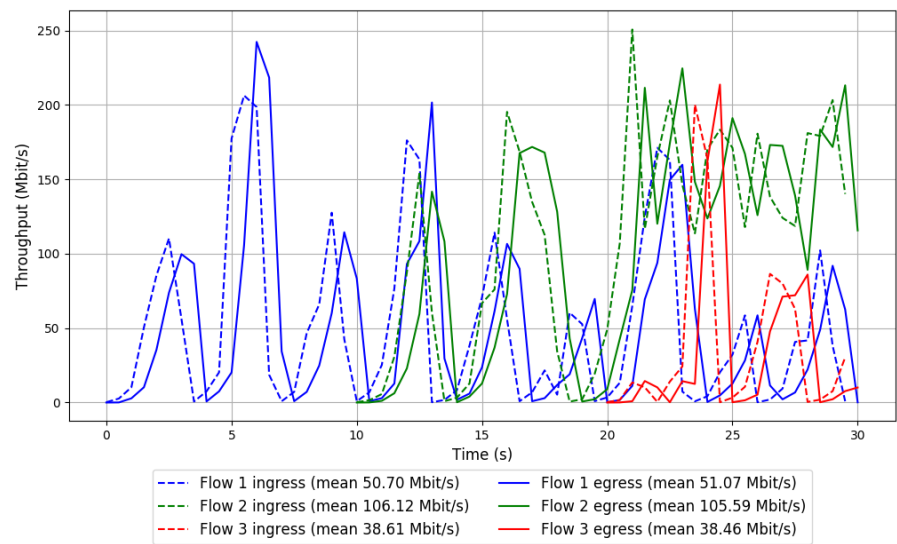


Run 2: Statistics of Verus

Start at: 2019-06-27 06:11:04  
End at: 2019-06-27 06:11:34  
Local clock offset: -0.163 ms  
Remote clock offset: -0.101 ms

# Below is generated by plot.py at 2019-06-27 10:58:43  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 133.17 Mbit/s  
95th percentile per-packet one-way delay: 130.723 ms  
Loss rate: 1.03%  
-- Flow 1:  
Average throughput: 51.07 Mbit/s  
95th percentile per-packet one-way delay: 128.520 ms  
Loss rate: 0.02%  
-- Flow 2:  
Average throughput: 105.59 Mbit/s  
95th percentile per-packet one-way delay: 135.819 ms  
Loss rate: 1.46%  
-- Flow 3:  
Average throughput: 38.46 Mbit/s  
95th percentile per-packet one-way delay: 120.724 ms  
Loss rate: 2.69%

Run 2: Report of Verus — Data Link

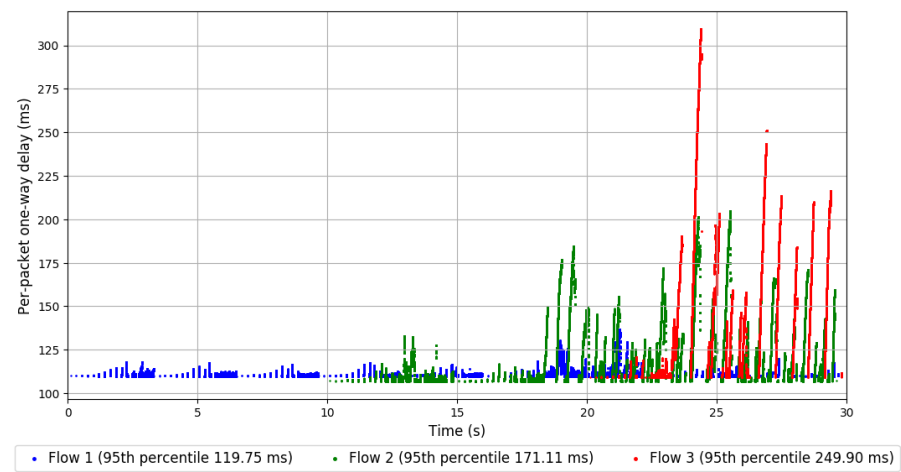
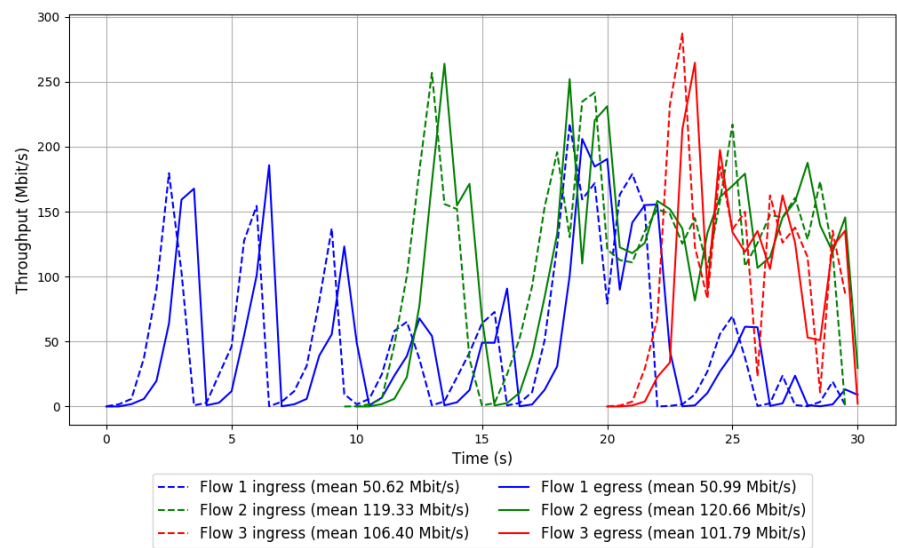


Run 3: Statistics of Verus

Start at: 2019-06-27 06:48:59  
End at: 2019-06-27 06:49:29  
Local clock offset: 0.053 ms  
Remote clock offset: -0.118 ms

# Below is generated by plot.py at 2019-06-27 10:58:43  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 163.23 Mbit/s  
95th percentile per-packet one-way delay: 190.232 ms  
Loss rate: 1.23%  
-- Flow 1:  
Average throughput: 50.99 Mbit/s  
95th percentile per-packet one-way delay: 119.746 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 120.66 Mbit/s  
95th percentile per-packet one-way delay: 171.111 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 101.79 Mbit/s  
95th percentile per-packet one-way delay: 249.904 ms  
Loss rate: 5.78%

Run 3: Report of Verus — Data Link

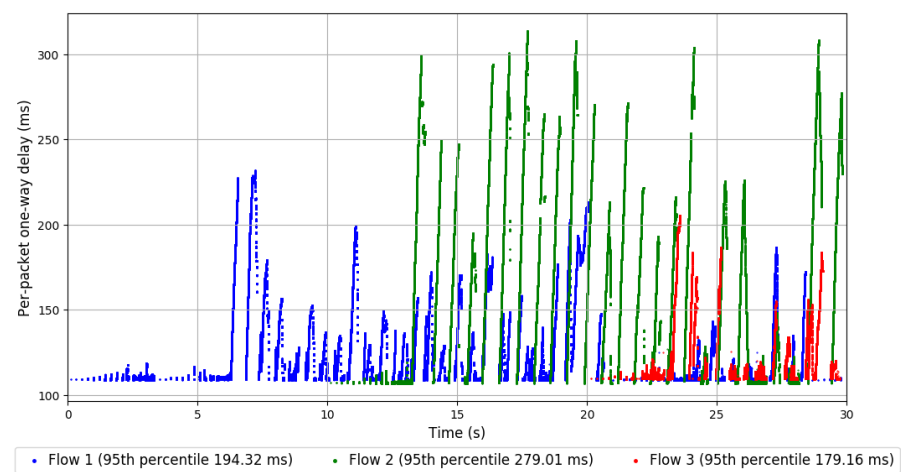
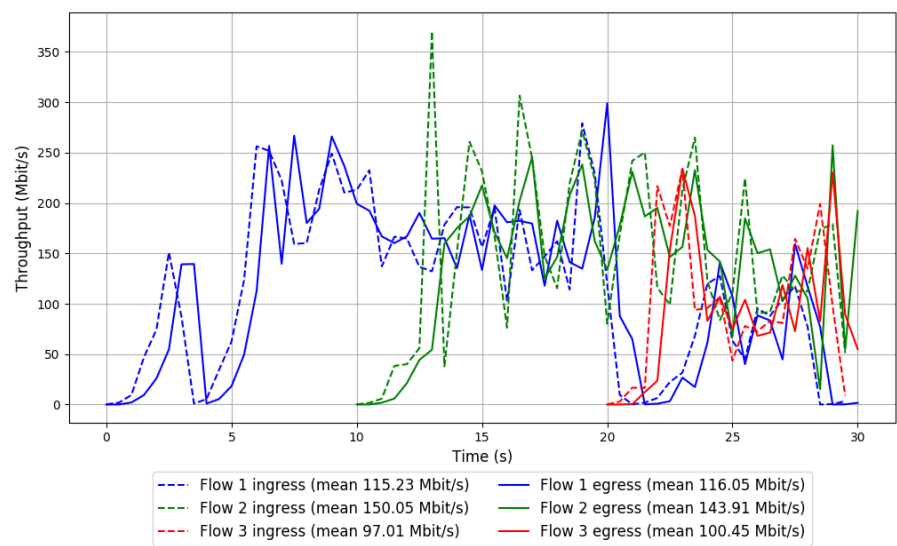


Run 4: Statistics of Verus

Start at: 2019-06-27 07:26:46  
End at: 2019-06-27 07:27:16  
Local clock offset: 0.124 ms  
Remote clock offset: -0.078 ms

# Below is generated by plot.py at 2019-06-27 10:59:04  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 243.62 Mbit/s  
95th percentile per-packet one-way delay: 258.200 ms  
Loss rate: 1.41%  
-- Flow 1:  
Average throughput: 116.05 Mbit/s  
95th percentile per-packet one-way delay: 194.324 ms  
Loss rate: 0.03%  
-- Flow 2:  
Average throughput: 143.91 Mbit/s  
95th percentile per-packet one-way delay: 279.010 ms  
Loss rate: 3.49%  
-- Flow 3:  
Average throughput: 100.45 Mbit/s  
95th percentile per-packet one-way delay: 179.157 ms  
Loss rate: 0.02%

Run 4: Report of Verus — Data Link

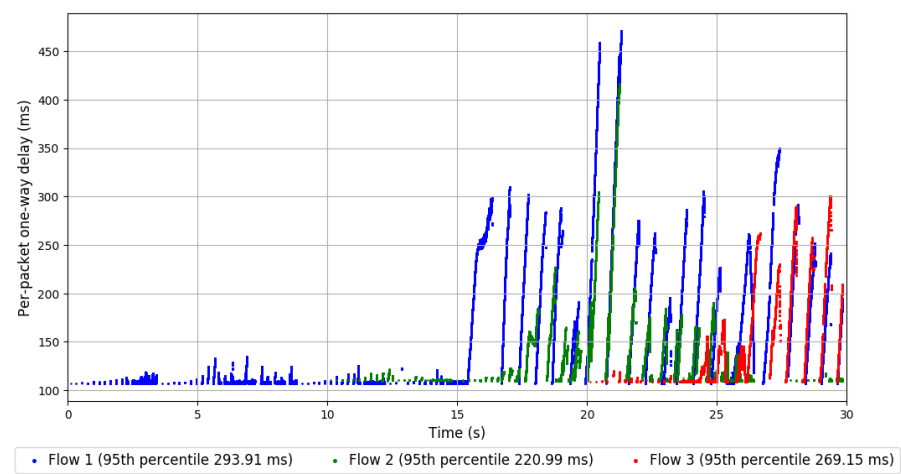
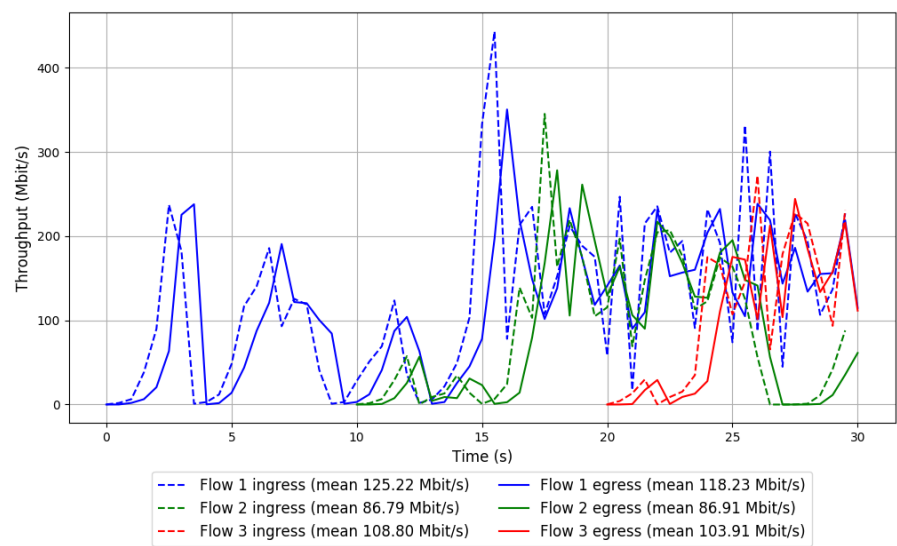


Run 5: Statistics of Verus

Start at: 2019-06-27 08:05:10  
End at: 2019-06-27 08:05:40  
Local clock offset: -0.115 ms  
Remote clock offset: -0.013 ms

# Below is generated by plot.py at 2019-06-27 10:59:04  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 209.83 Mbit/s  
95th percentile per-packet one-way delay: 283.857 ms  
Loss rate: 4.47%  
-- Flow 1:  
Average throughput: 118.23 Mbit/s  
95th percentile per-packet one-way delay: 293.912 ms  
Loss rate: 5.77%  
-- Flow 2:  
Average throughput: 86.91 Mbit/s  
95th percentile per-packet one-way delay: 220.991 ms  
Loss rate: 0.98%  
-- Flow 3:  
Average throughput: 103.91 Mbit/s  
95th percentile per-packet one-way delay: 269.155 ms  
Loss rate: 5.58%

Run 5: Report of Verus — Data Link



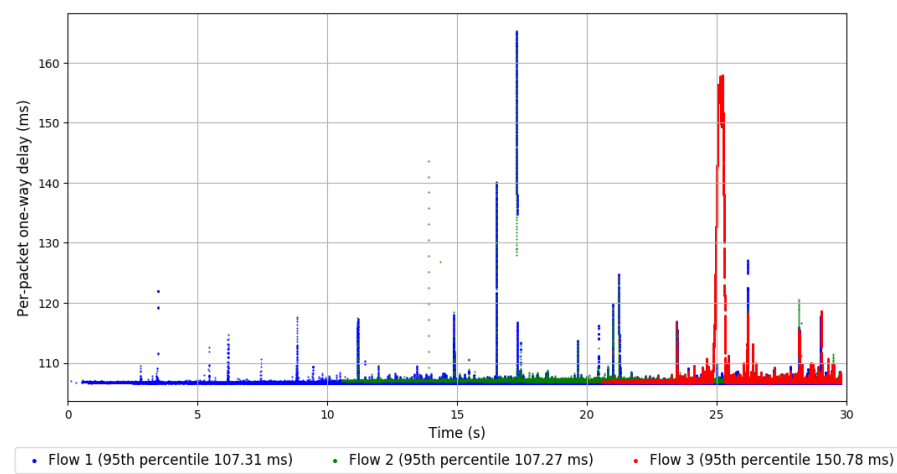
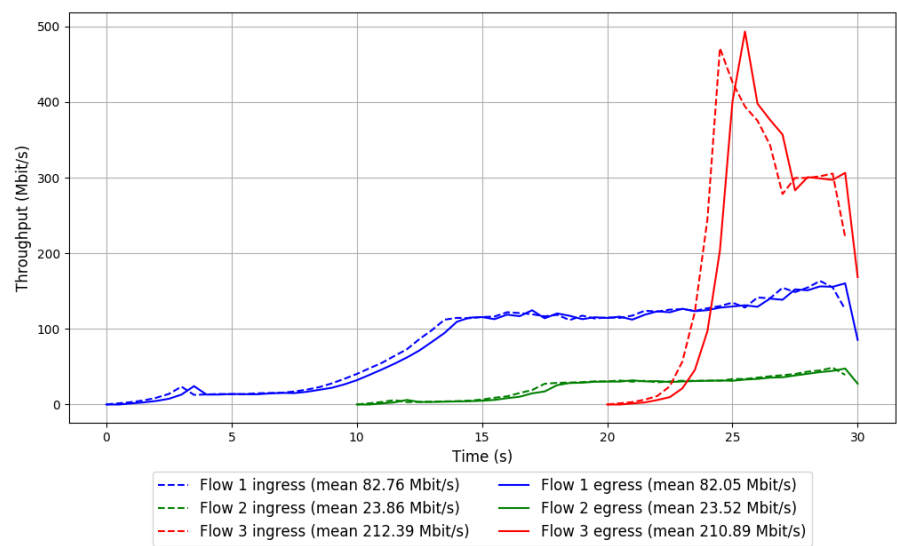


Run 1: Statistics of PCC-Vivace

Start at: 2019-06-27 05:47:39  
End at: 2019-06-27 05:48:09  
Local clock offset: -0.097 ms  
Remote clock offset: -0.041 ms

# Below is generated by plot.py at 2019-06-27 10:59:04  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 166.19 Mbit/s  
95th percentile per-packet one-way delay: 113.501 ms  
Loss rate: 2.20%  
-- Flow 1:  
Average throughput: 82.05 Mbit/s  
95th percentile per-packet one-way delay: 107.311 ms  
Loss rate: 1.58%  
-- Flow 2:  
Average throughput: 23.52 Mbit/s  
95th percentile per-packet one-way delay: 107.267 ms  
Loss rate: 2.47%  
-- Flow 3:  
Average throughput: 210.89 Mbit/s  
95th percentile per-packet one-way delay: 150.777 ms  
Loss rate: 2.87%

Run 1: Report of PCC-Vivace — Data Link

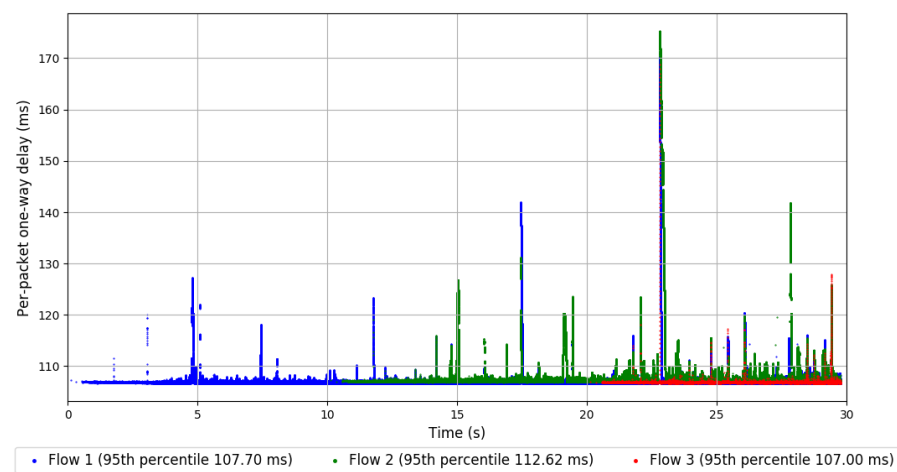
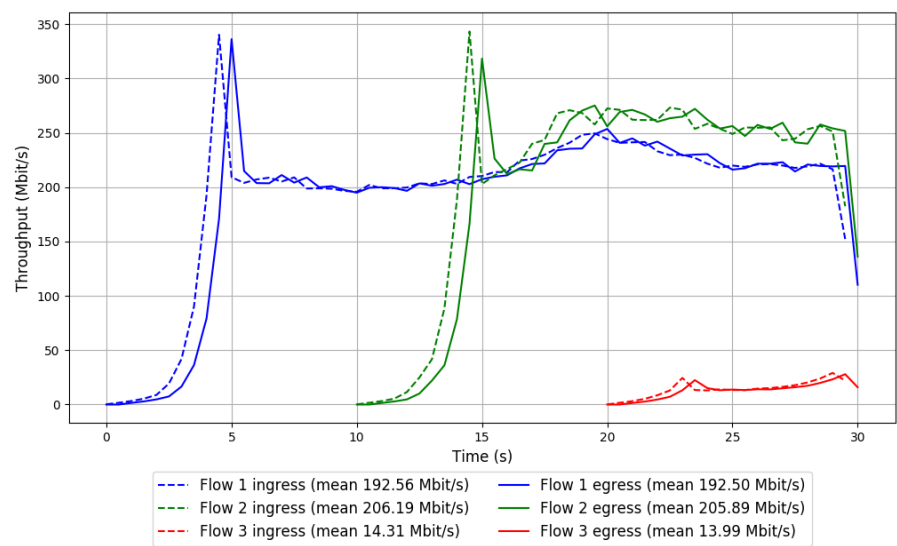


Run 2: Statistics of PCC-Vivace

Start at: 2019-06-27 06:25:49  
End at: 2019-06-27 06:26:19  
Local clock offset: -0.1 ms  
Remote clock offset: -0.051 ms

# Below is generated by plot.py at 2019-06-27 10:59:21  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 333.45 Mbit/s  
95th percentile per-packet one-way delay: 109.879 ms  
Loss rate: 1.01%  
-- Flow 1:  
Average throughput: 192.50 Mbit/s  
95th percentile per-packet one-way delay: 107.698 ms  
Loss rate: 0.76%  
-- Flow 2:  
Average throughput: 205.89 Mbit/s  
95th percentile per-packet one-way delay: 112.619 ms  
Loss rate: 1.24%  
-- Flow 3:  
Average throughput: 13.99 Mbit/s  
95th percentile per-packet one-way delay: 106.997 ms  
Loss rate: 4.46%

Run 2: Report of PCC-Vivace — Data Link

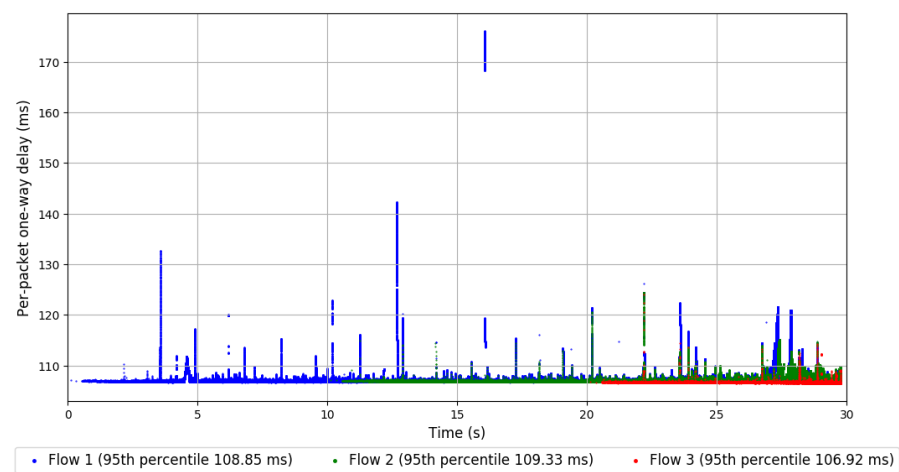
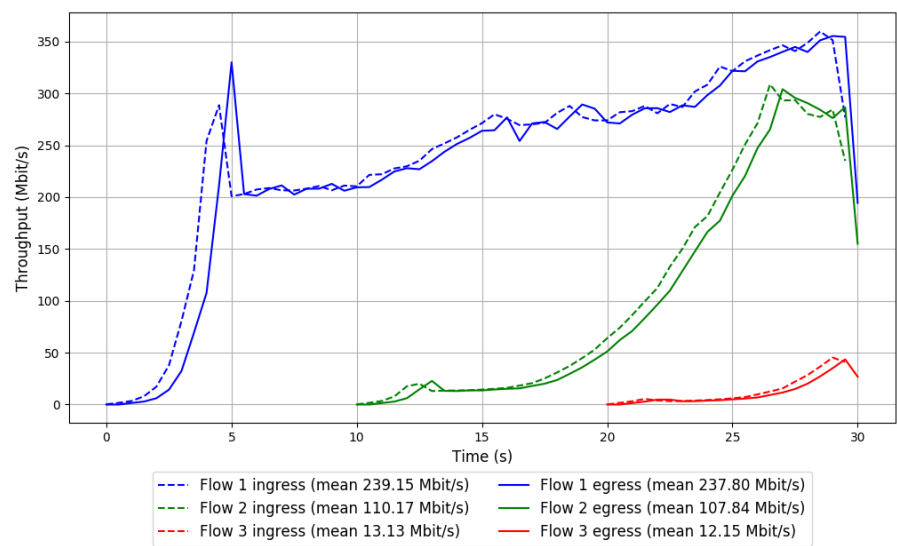


Run 3: Statistics of PCC-Vivace

Start at: 2019-06-27 07:03:41  
End at: 2019-06-27 07:04:11  
Local clock offset: -0.105 ms  
Remote clock offset: -0.167 ms

# Below is generated by plot.py at 2019-06-27 10:59:33  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 313.18 Mbit/s  
95th percentile per-packet one-way delay: 109.037 ms  
Loss rate: 1.84%  
-- Flow 1:  
Average throughput: 237.80 Mbit/s  
95th percentile per-packet one-way delay: 108.853 ms  
Loss rate: 1.29%  
-- Flow 2:  
Average throughput: 107.84 Mbit/s  
95th percentile per-packet one-way delay: 109.330 ms  
Loss rate: 3.19%  
-- Flow 3:  
Average throughput: 12.15 Mbit/s  
95th percentile per-packet one-way delay: 106.916 ms  
Loss rate: 9.48%

Run 3: Report of PCC-Vivace — Data Link



Run 4: Statistics of PCC-Vivace

Start at: 2019-06-27 07:41:46

End at: 2019-06-27 07:42:16

Local clock offset: -0.178 ms

Remote clock offset: -0.06 ms

# Below is generated by plot.py at 2019-06-27 11:00:00

# Datalink statistics

-- Total of 3 flows:

Average throughput: 369.89 Mbit/s

95th percentile per-packet one-way delay: 114.677 ms

Loss rate: 1.51%

-- Flow 1:

Average throughput: 186.02 Mbit/s

95th percentile per-packet one-way delay: 113.767 ms

Loss rate: 0.84%

-- Flow 2:

Average throughput: 209.27 Mbit/s

95th percentile per-packet one-way delay: 114.620 ms

Loss rate: 1.51%

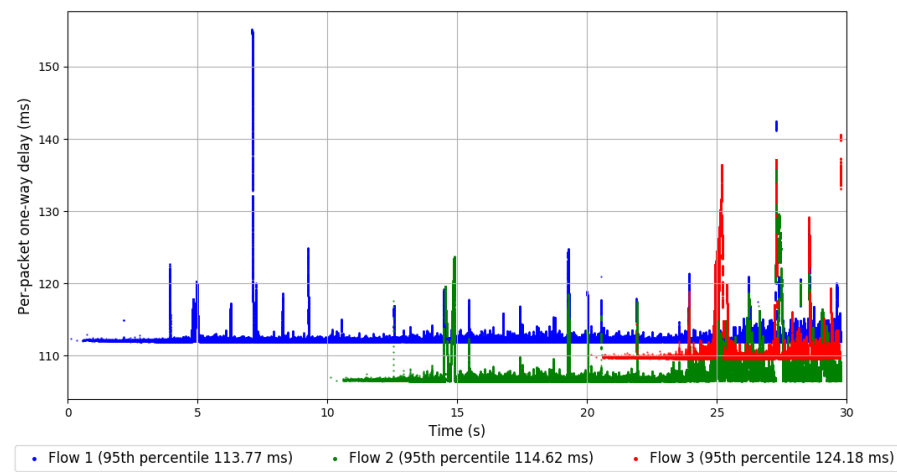
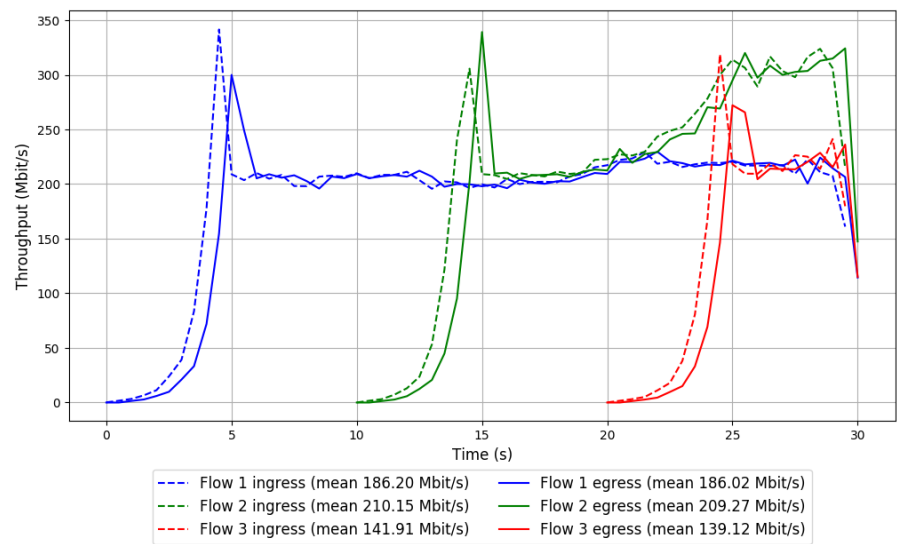
-- Flow 3:

Average throughput: 139.12 Mbit/s

95th percentile per-packet one-way delay: 124.183 ms

Loss rate: 4.17%

Run 4: Report of PCC-Vivace — Data Link



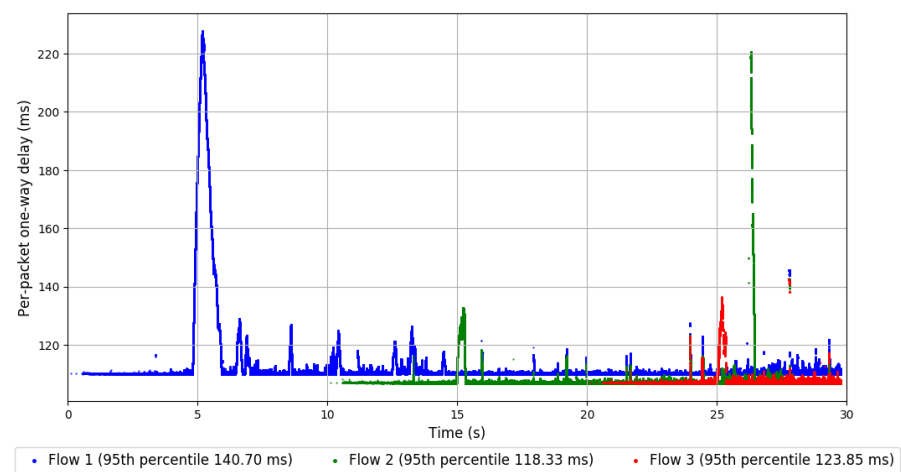
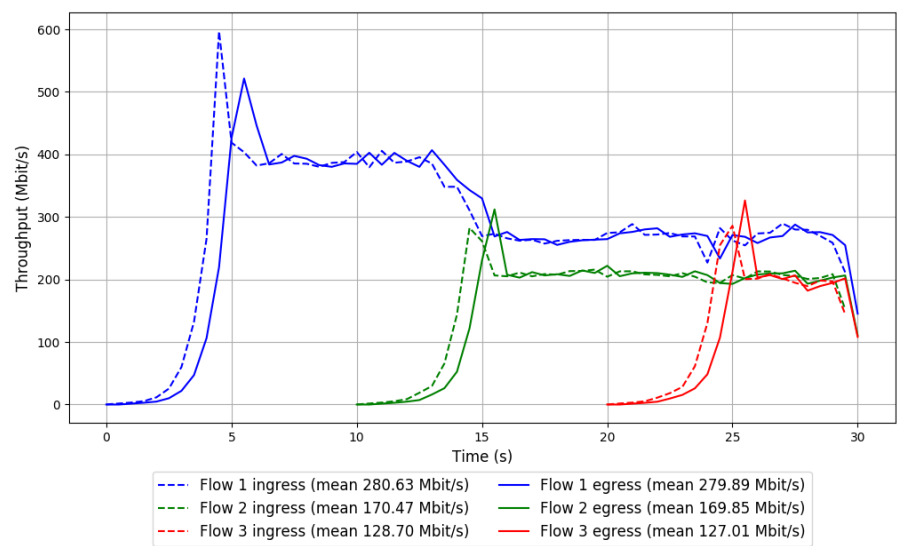


Run 5: Statistics of PCC-Vivace

Start at: 2019-06-27 08:19:59  
End at: 2019-06-27 08:20:29  
Local clock offset: -0.123 ms  
Remote clock offset: -0.081 ms

# Below is generated by plot.py at 2019-06-27 11:00:06  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 433.67 Mbit/s  
95th percentile per-packet one-way delay: 126.109 ms  
Loss rate: 1.37%  
-- Flow 1:  
Average throughput: 279.89 Mbit/s  
95th percentile per-packet one-way delay: 140.696 ms  
Loss rate: 1.00%  
-- Flow 2:  
Average throughput: 169.85 Mbit/s  
95th percentile per-packet one-way delay: 118.330 ms  
Loss rate: 1.46%  
-- Flow 3:  
Average throughput: 127.01 Mbit/s  
95th percentile per-packet one-way delay: 123.852 ms  
Loss rate: 3.52%

Run 5: Report of PCC-Vivace — Data Link



Run 1: Statistics of WebRTC media

Start at: 2019-06-27 05:25:43

End at: 2019-06-27 05:26:13

Local clock offset: 0.131 ms

Remote clock offset: 0.026 ms

# Below is generated by plot.py at 2019-06-27 11:00:06

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 111.329 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.07 Mbit/s

95th percentile per-packet one-way delay: 107.191 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 109.325 ms

Loss rate: 0.00%

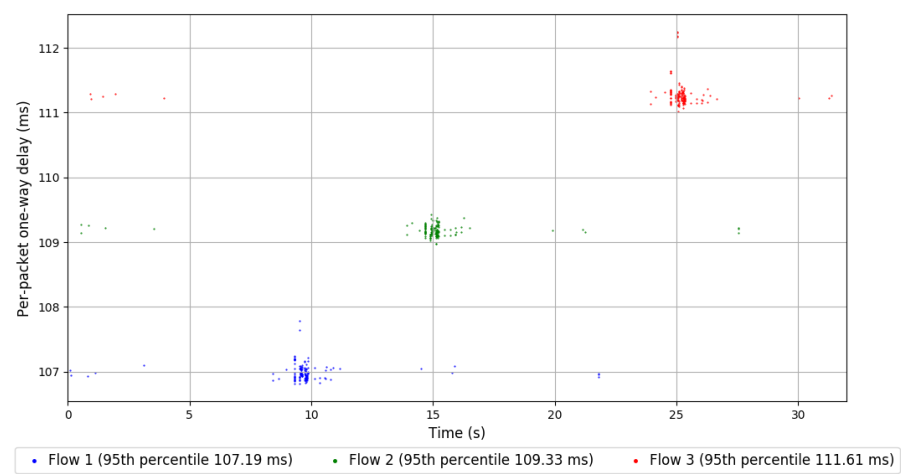
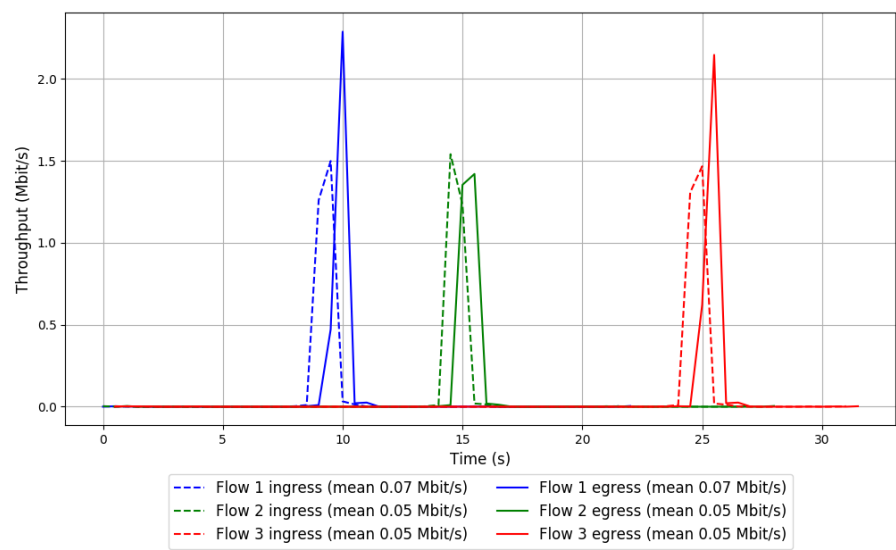
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 111.609 ms

Loss rate: 0.00%

Run 1: Report of WebRTC media — Data Link

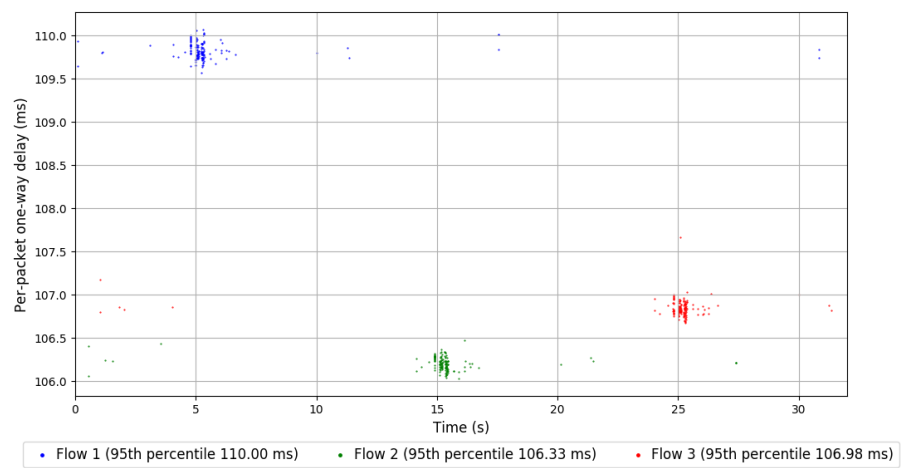
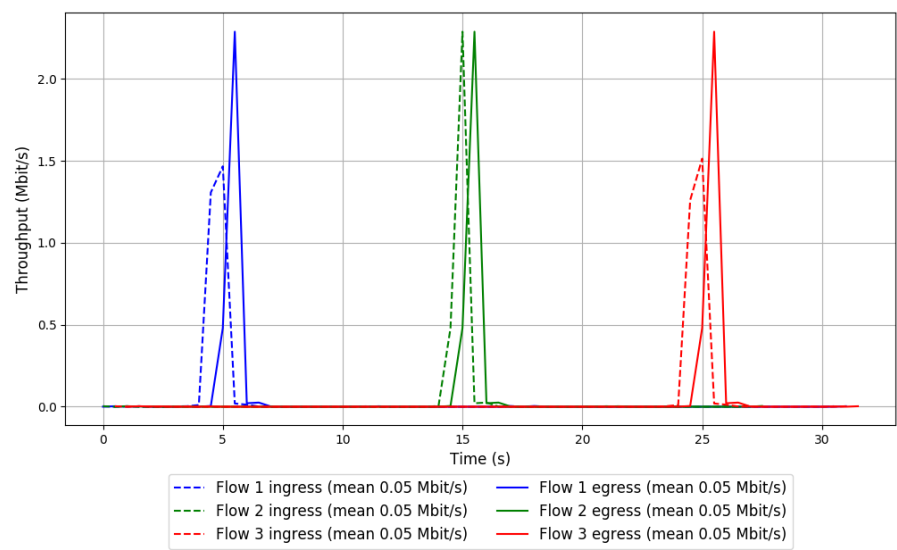


Run 2: Statistics of WebRTC media

Start at: 2019-06-27 06:03:13  
End at: 2019-06-27 06:03:44  
Local clock offset: -0.137 ms  
Remote clock offset: -0.036 ms

# Below is generated by plot.py at 2019-06-27 11:00:06  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.14 Mbit/s  
95th percentile per-packet one-way delay: 109.929 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 109.997 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 106.334 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 106.984 ms  
Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2019-06-27 06:41:33

End at: 2019-06-27 06:42:03

Local clock offset: -0.13 ms

Remote clock offset: 0.24 ms

# Below is generated by plot.py at 2019-06-27 11:00:06

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 106.650 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 106.528 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 106.691 ms

Loss rate: 0.00%

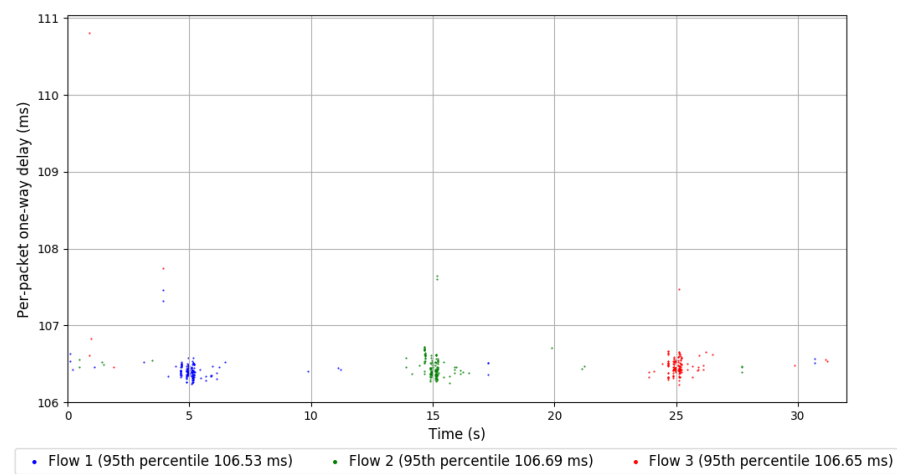
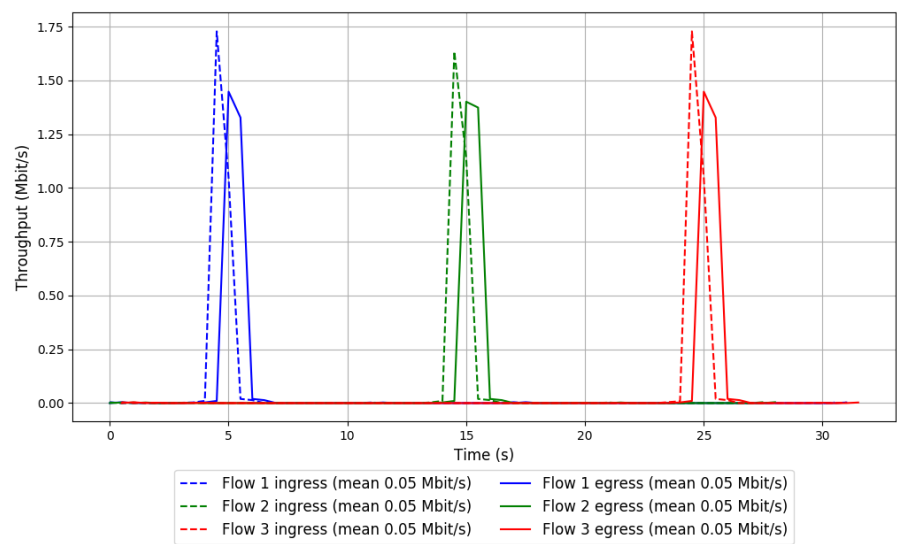
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 106.654 ms

Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link



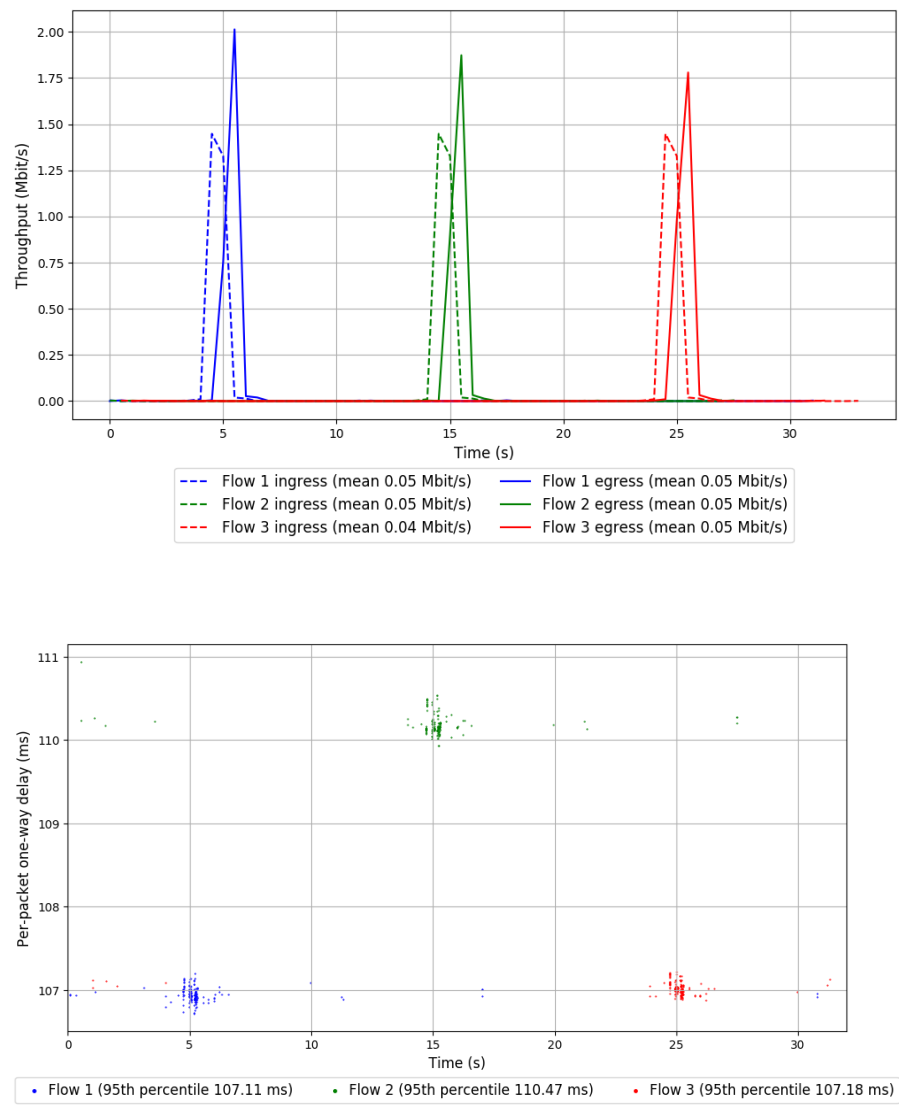


Run 4: Statistics of WebRTC media

Start at: 2019-06-27 07:18:57  
End at: 2019-06-27 07:19:27  
Local clock offset: 0.022 ms  
Remote clock offset: -0.116 ms

# Below is generated by plot.py at 2019-06-27 11:00:06  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.14 Mbit/s  
95th percentile per-packet one-way delay: 110.301 ms  
Loss rate: 0.02%  
-- Flow 1:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 107.106 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 110.473 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 107.177 ms  
Loss rate: 0.05%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2019-06-27 07:57:19

End at: 2019-06-27 07:57:49

Local clock offset: -0.001 ms

Remote clock offset: 0.008 ms

# Below is generated by plot.py at 2019-06-27 11:00:06

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 110.300 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 106.514 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 115.426 ms

Loss rate: 0.00%

-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 109.797 ms

Loss rate: 0.00%

Run 5: Report of WebRTC media — Data Link

