

## Pantheon Report

Generated at 2019-03-09 04:43:53 (UTC).

Data path: AWS Brazil 2 on **ens5** (*local*) → Colombia on **p4p1** (*remote*).

Repeated the test of 21 congestion control schemes 5 times.

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

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

### System info:

```
Linux 4.15.0-1031-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

### Git summary:

```
branch: muses @ 7a686f7c2ed0a333082c0bab1fa5c921ab47e6ee
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecd90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 5ce721187ad823da20955337730c746486ca4966
third_party/pantheon-tunnel @ f866d3f58d27afd942717625ee3a354cc2e802bd
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quick @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2
M src/ScreamClient
M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
M src/examples/cellsim.cc
M src/examples/sproutbt2.cc
M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
M src/verus.hpp
M tools/plot.py
```

third\_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4  
third\_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851

A scatter plot comparing different congestion control algorithms based on their average throughput and 95th percentile one-way delay. The y-axis represents Average throughput (Mbps) from 0 to 100, and the x-axis represents 95th percentile one-way delay (ms) from 120 down to 80. Algorithms are plotted as colored dots with labels.

Algorithm	95th percentile one-way delay (ms)	Average throughput (Mbps)
Verus	~125	~45
PCC-Allegro	~115	~88
TCP-BBR Cubic	~115	~95
Indigo	~115	~98
MusesD	~110	~98
FillP-Sheep	~110	~78
QUIC Cubic	~105	~68
PCC-Vivace	~100	~78
TCP Vegas	~92	~78
LED BAT	~88	~18
PCC-5star	~88	~15
TaoVA-100x	~88	~10
Sprout	~88	~5
SCARAB	~85	~2
RTT media	~85	~2



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	53.29	40.83	31.29	115.77	115.60	115.24	12.53	20.49	25.86
Copa	5	9.52	3.46	1.50	82.85	81.50	81.89	76.28	78.81	83.50
TCP Cubic	5	73.47	16.67	18.75	112.15	112.05	103.88	0.67	0.18	0.18
FillP	5	43.88	54.85	27.04	109.41	109.75	110.32	13.45	20.38	24.14
FillP-Sheep	5	18.48	69.48	31.67	109.55	112.01	112.29	8.57	6.97	11.60
Indigo	5	64.83	26.47	30.04	112.55	112.88	113.38	11.63	36.06	74.24
Indigo-MusesC3	5	48.67	50.24	45.49	111.92	112.88	113.23	2.02	2.39	5.16
Indigo-MusesC5	5	53.67	54.91	14.28	113.54	114.40	114.62	1.29	3.31	5.91
Indigo-MusesD	5	55.39	46.62	27.46	103.72	106.79	112.14	0.24	0.32	1.61
Indigo-MusesT	5	54.10	52.74	21.37	114.52	114.71	115.56	5.12	5.41	7.48
LEDBAT	5	11.35	7.77	3.82	84.46	85.58	84.44	0.00	0.01	0.00
PCC-Allegro	5	78.73	8.66	7.51	115.84	115.38	115.51	2.52	3.46	4.61
PCC-Expr	5	8.07	5.51	3.35	84.27	84.64	85.36	54.44	32.01	43.00
QUIC Cubic	5	45.14	24.94	12.92	107.87	104.67	107.22	0.90	0.52	3.61
SCReAM	5	0.22	0.22	0.22	83.90	84.89	84.88	0.00	0.00	0.00
Sprout	5	2.47	2.33	1.97	90.10	88.75	88.18	0.00	0.00	0.00
TaoVA-100x	5	0.00	9.83	5.80	83.73	92.62	83.64	95.92	33.12	23.94
TCP Vegas	5	46.01	25.36	35.23	93.58	93.40	92.37	1.17	0.63	1.07
Verus	5	25.31	18.53	18.88	132.54	114.69	116.07	44.30	30.41	35.11
PCC-Vivace	5	65.55	12.88	8.72	102.40	103.51	105.79	0.14	0.20	0.30
WebRTC media	5	0.05	0.04	0.04	81.82	81.62	83.11	0.00	0.00	0.00



Run 1: Statistics of TCP BBR

Start at: 2019-03-09 02:23:09

End at: 2019-03-09 02:23:39

Local clock offset: -7.129 ms

Remote clock offset: 0.8 ms

# Below is generated by plot.py at 2019-03-09 04:34:41

# Datalink statistics

-- Total of 3 flows:

Average throughput: 91.11 Mbit/s

95th percentile per-packet one-way delay: 115.266 ms

Loss rate: 16.51%

-- Flow 1:

Average throughput: 55.09 Mbit/s

95th percentile per-packet one-way delay: 114.751 ms

Loss rate: 11.60%

-- Flow 2:

Average throughput: 37.94 Mbit/s

95th percentile per-packet one-way delay: 112.503 ms

Loss rate: 22.89%

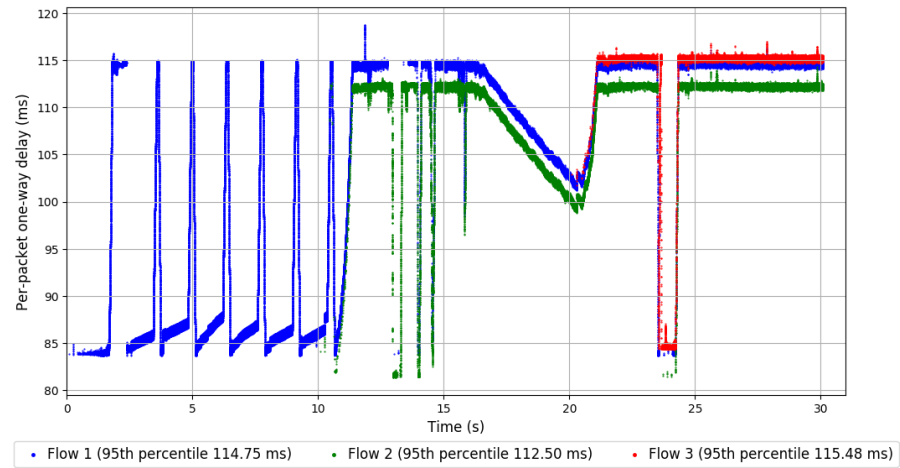
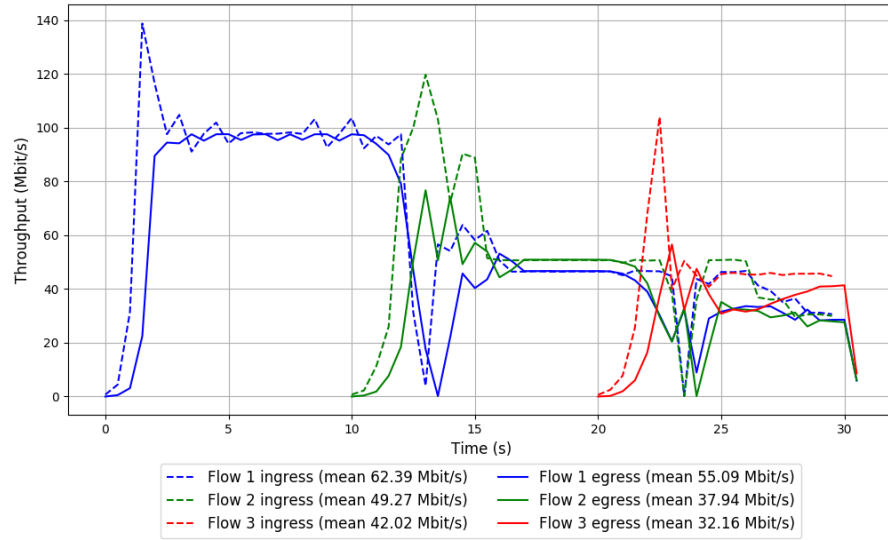
-- Flow 3:

Average throughput: 32.16 Mbit/s

95th percentile per-packet one-way delay: 115.476 ms

Loss rate: 23.39%

# Run 1: Report of TCP BBR — Data Link

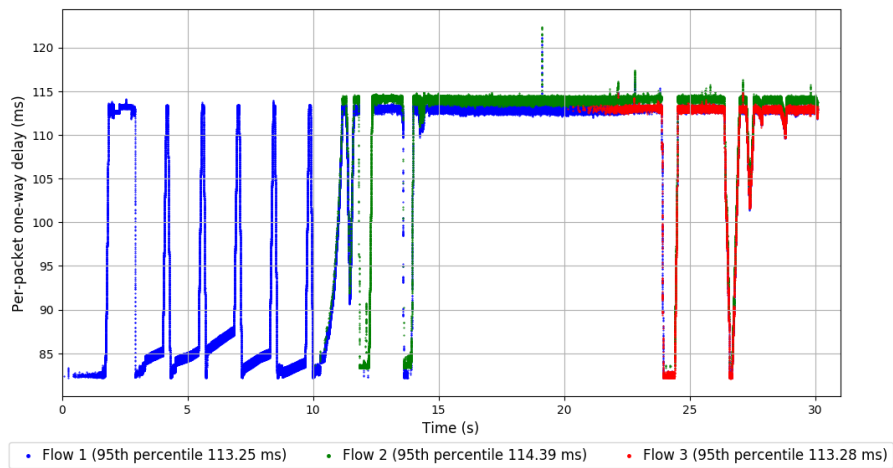
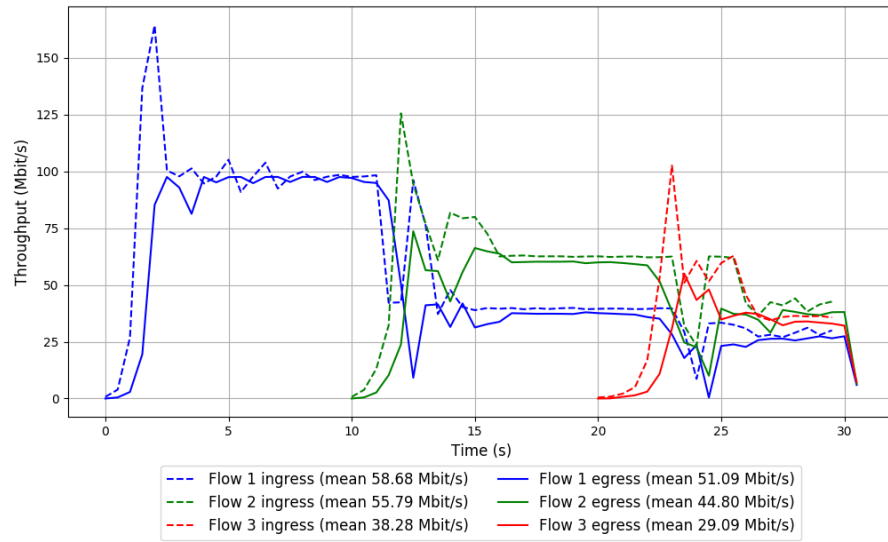


Run 2: Statistics of TCP BBR

Start at: 2019-03-09 02:49:47  
End at: 2019-03-09 02:50:17  
Local clock offset: -6.88 ms  
Remote clock offset: 11.468 ms

# Below is generated by plot.py at 2019-03-09 04:34:42  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 90.61 Mbit/s  
95th percentile per-packet one-way delay: 114.284 ms  
Loss rate: 16.46%  
-- Flow 1:  
Average throughput: 51.09 Mbit/s  
95th percentile per-packet one-way delay: 113.246 ms  
Loss rate: 12.85%  
-- Flow 2:  
Average throughput: 44.80 Mbit/s  
95th percentile per-packet one-way delay: 114.386 ms  
Loss rate: 19.58%  
-- Flow 3:  
Average throughput: 29.09 Mbit/s  
95th percentile per-packet one-way delay: 113.276 ms  
Loss rate: 24.00%

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

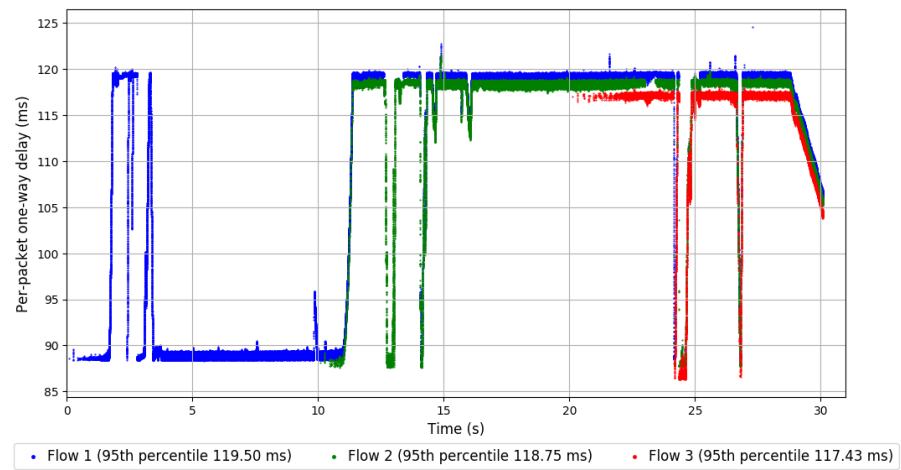
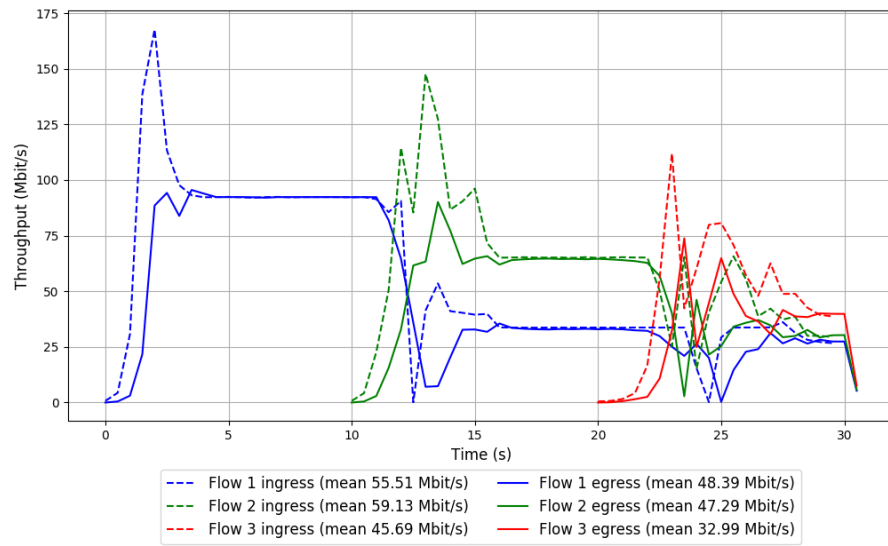


Run 3: Statistics of TCP BBR

Start at: 2019-03-09 03:16:24  
End at: 2019-03-09 03:16:54  
Local clock offset: -5.741 ms  
Remote clock offset: 19.355 ms

# Below is generated by plot.py at 2019-03-09 04:34:42  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 90.85 Mbit/s  
95th percentile per-packet one-way delay: 119.427 ms  
Loss rate: 17.44%  
-- Flow 1:  
Average throughput: 48.39 Mbit/s  
95th percentile per-packet one-way delay: 119.502 ms  
Loss rate: 12.78%  
-- Flow 2:  
Average throughput: 47.29 Mbit/s  
95th percentile per-packet one-way delay: 118.755 ms  
Loss rate: 19.97%  
-- Flow 3:  
Average throughput: 32.99 Mbit/s  
95th percentile per-packet one-way delay: 117.430 ms  
Loss rate: 27.89%

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

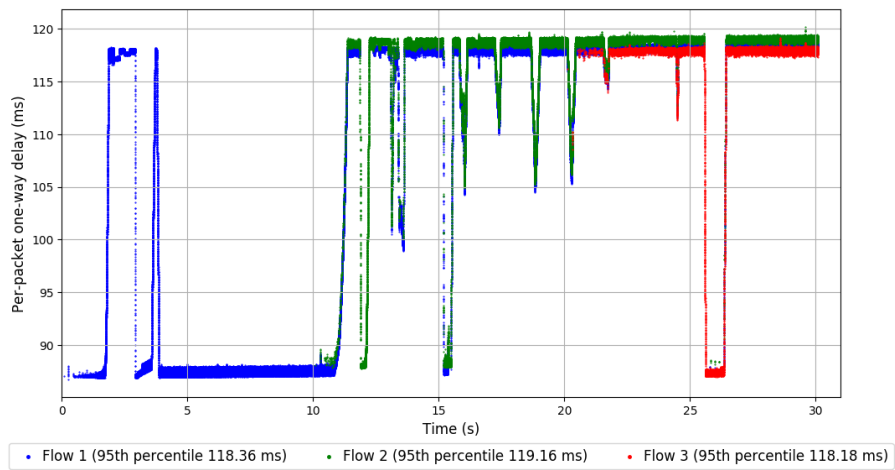
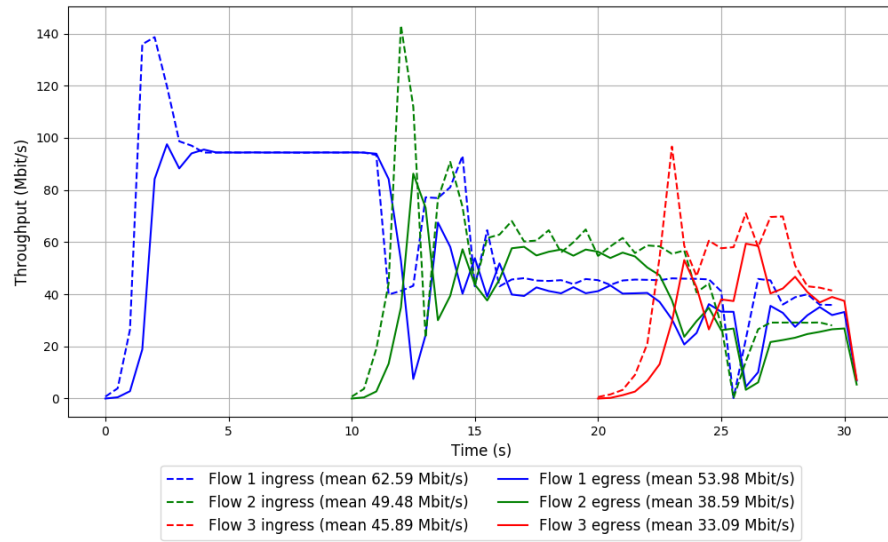


Run 4: Statistics of TCP BBR

Start at: 2019-03-09 03:43:05  
End at: 2019-03-09 03:43:35  
Local clock offset: 0.603 ms  
Remote clock offset: 13.151 ms

# Below is generated by plot.py at 2019-03-09 04:34:42  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 90.69 Mbit/s  
95th percentile per-packet one-way delay: 119.015 ms  
Loss rate: 18.07%  
-- Flow 1:  
Average throughput: 53.98 Mbit/s  
95th percentile per-packet one-way delay: 118.357 ms  
Loss rate: 13.67%  
-- Flow 2:  
Average throughput: 38.59 Mbit/s  
95th percentile per-packet one-way delay: 119.161 ms  
Loss rate: 21.88%  
-- Flow 3:  
Average throughput: 33.09 Mbit/s  
95th percentile per-packet one-way delay: 118.178 ms  
Loss rate: 27.88%

# Run 4: Report of TCP BBR — Data Link



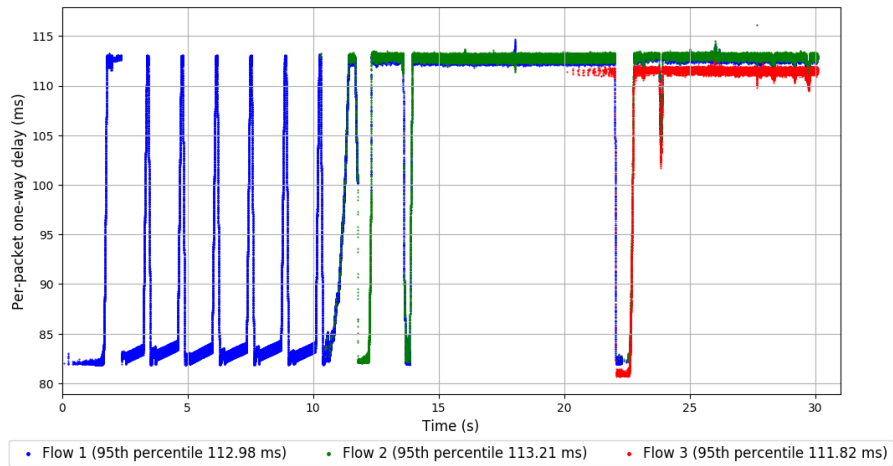
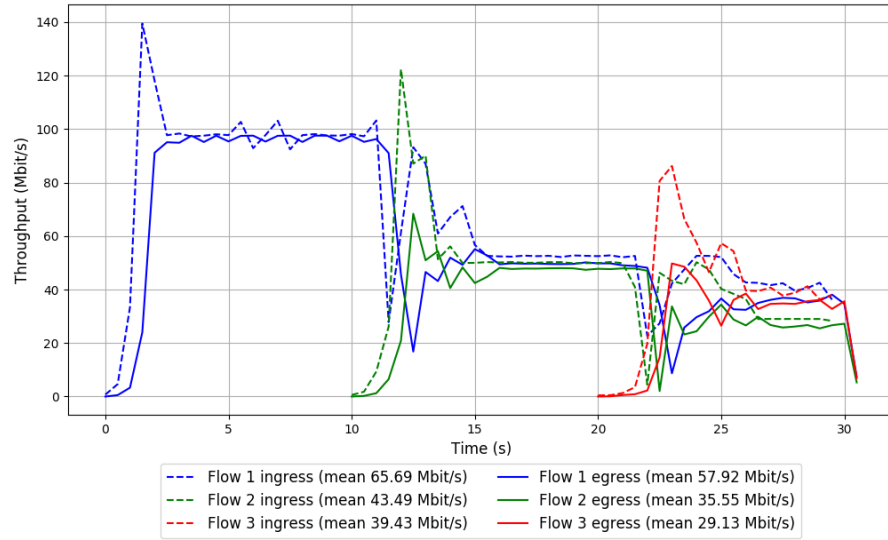


Run 5: Statistics of TCP BBR

Start at: 2019-03-09 04:09:42  
End at: 2019-03-09 04:10:12  
Local clock offset: 3.96 ms  
Remote clock offset: -4.304 ms

# Below is generated by plot.py at 2019-03-09 04:34:42  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 91.29 Mbit/s  
95th percentile per-packet one-way delay: 113.095 ms  
Loss rate: 15.21%  
-- Flow 1:  
Average throughput: 57.92 Mbit/s  
95th percentile per-packet one-way delay: 112.977 ms  
Loss rate: 11.73%  
-- Flow 2:  
Average throughput: 35.55 Mbit/s  
95th percentile per-packet one-way delay: 113.213 ms  
Loss rate: 18.14%  
-- Flow 3:  
Average throughput: 29.13 Mbit/s  
95th percentile per-packet one-way delay: 111.817 ms  
Loss rate: 26.13%

# Run 5: Report of TCP BBR — Data Link



Run 1: Statistics of Copa

Start at: 2019-03-09 02:29:36

End at: 2019-03-09 02:30:06

Local clock offset: -6.22 ms

Remote clock offset: 1.036 ms

# Below is generated by plot.py at 2019-03-09 04:34:42

# Datalink statistics

-- Total of 3 flows:

Average throughput: 12.31 Mbit/s

95th percentile per-packet one-way delay: 83.253 ms

Loss rate: 78.15%

-- Flow 1:

Average throughput: 8.72 Mbit/s

95th percentile per-packet one-way delay: 83.675 ms

Loss rate: 77.16%

-- Flow 2:

Average throughput: 5.42 Mbit/s

95th percentile per-packet one-way delay: 80.179 ms

Loss rate: 80.20%

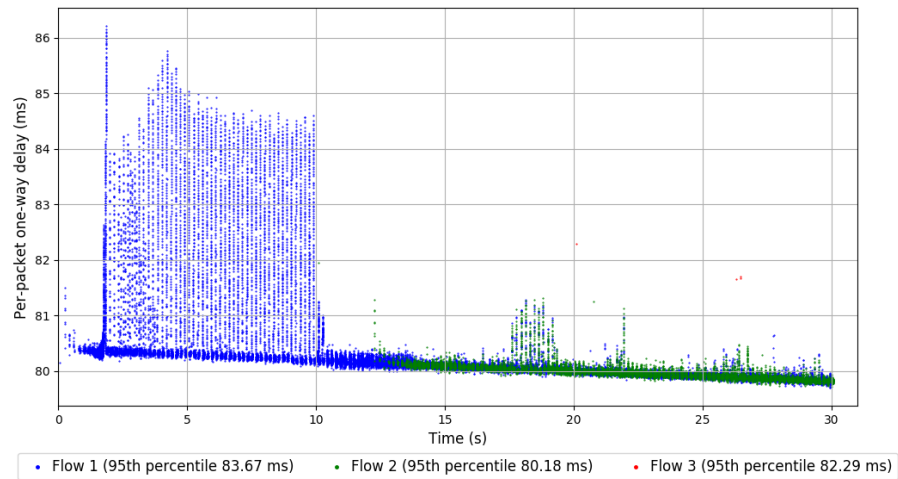
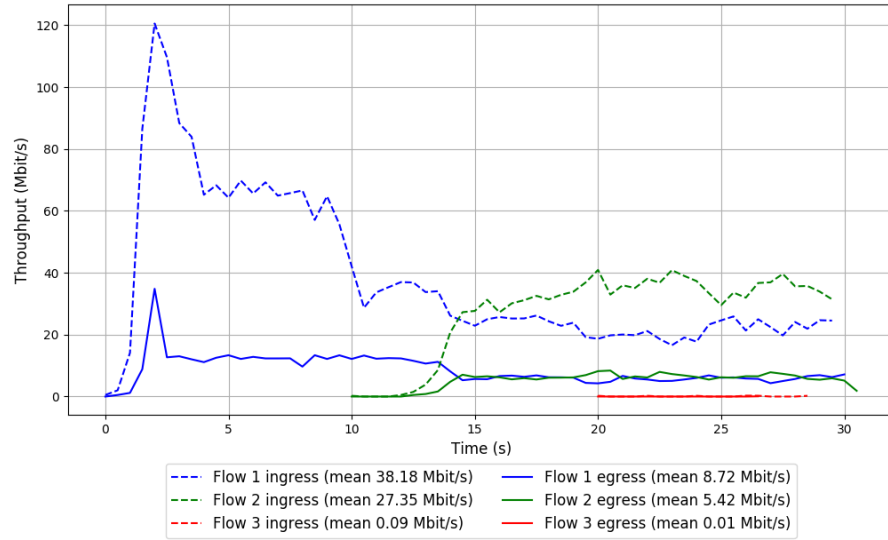
-- Flow 3:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 82.289 ms

Loss rate: 95.11%

## Run 1: Report of Copa — Data Link

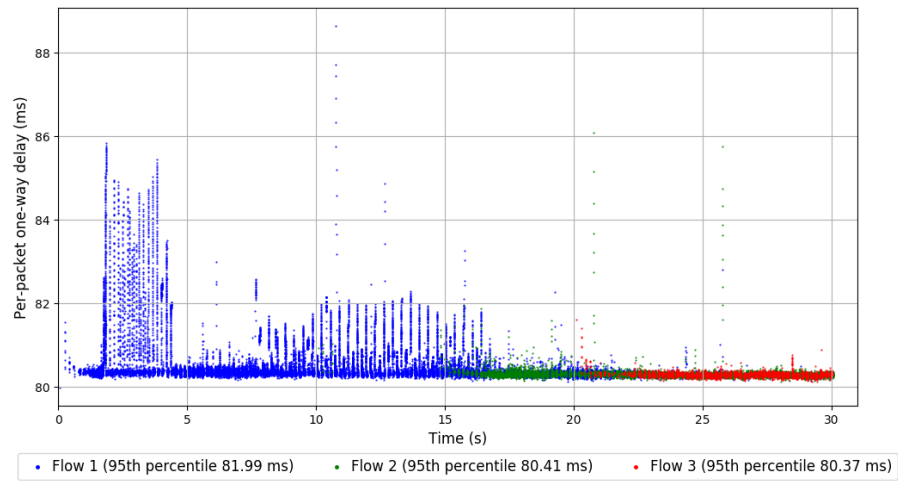
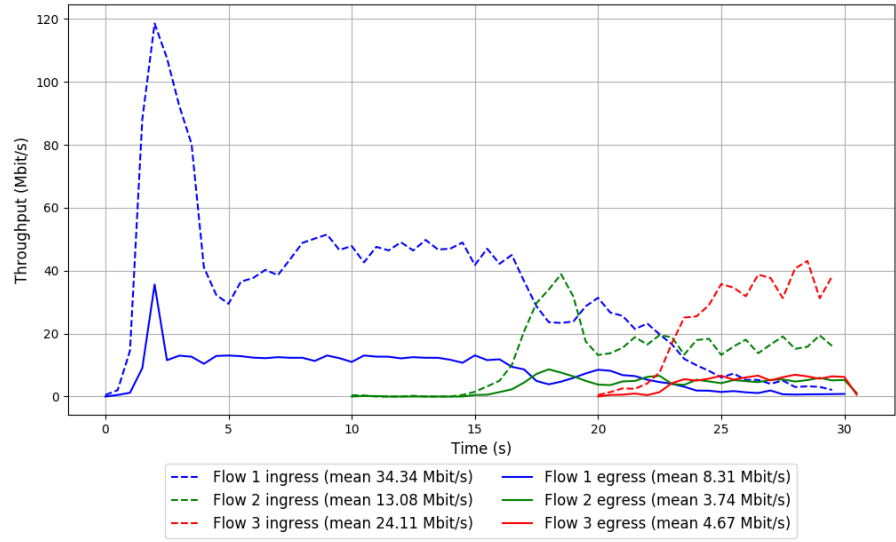


Run 2: Statistics of Copa

Start at: 2019-03-09 02:56:13  
End at: 2019-03-09 02:56:43  
Local clock offset: -6.127 ms  
Remote clock offset: 12.648 ms

# Below is generated by plot.py at 2019-03-09 04:34:42  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 12.31 Mbit/s  
95th percentile per-packet one-way delay: 81.629 ms  
Loss rate: 75.83%  
-- Flow 1:  
Average throughput: 8.31 Mbit/s  
95th percentile per-packet one-way delay: 81.987 ms  
Loss rate: 75.83%  
-- Flow 2:  
Average throughput: 3.74 Mbit/s  
95th percentile per-packet one-way delay: 80.408 ms  
Loss rate: 71.43%  
-- Flow 3:  
Average throughput: 4.67 Mbit/s  
95th percentile per-packet one-way delay: 80.366 ms  
Loss rate: 80.65%

## Run 2: Report of Copa — Data Link

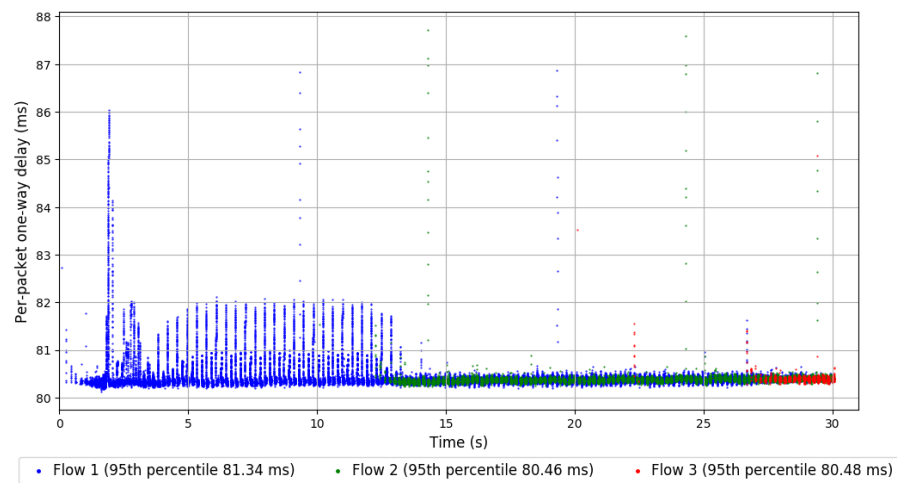
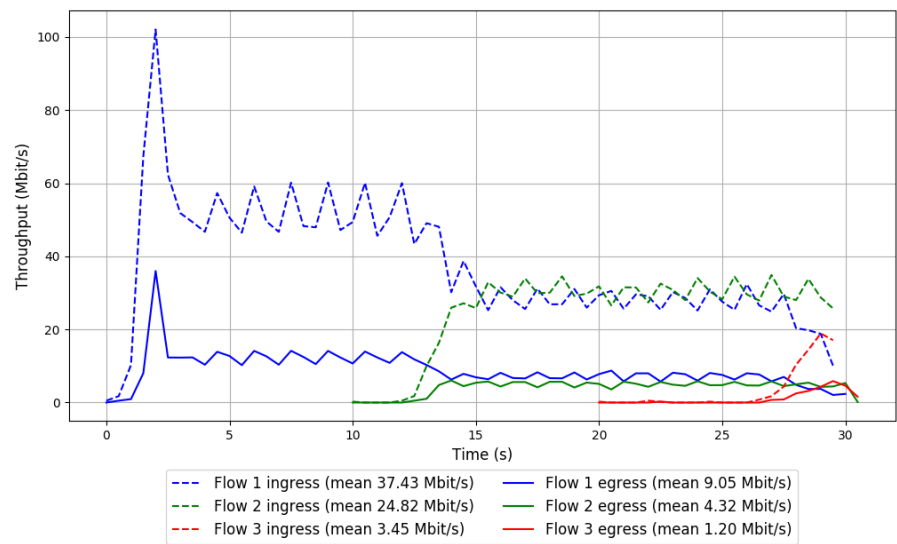


Run 3: Statistics of Copa

Start at: 2019-03-09 03:22:55  
End at: 2019-03-09 03:23:25  
Local clock offset: -2.2 ms  
Remote clock offset: 16.036 ms

# Below is generated by plot.py at 2019-03-09 04:34:42  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 12.29 Mbit/s  
95th percentile per-packet one-way delay: 81.145 ms  
Loss rate: 77.70%  
-- Flow 1:  
Average throughput: 9.05 Mbit/s  
95th percentile per-packet one-way delay: 81.339 ms  
Loss rate: 75.93%  
-- Flow 2:  
Average throughput: 4.32 Mbit/s  
95th percentile per-packet one-way delay: 80.456 ms  
Loss rate: 82.58%  
-- Flow 3:  
Average throughput: 1.20 Mbit/s  
95th percentile per-packet one-way delay: 80.479 ms  
Loss rate: 65.31%

Run 3: Report of Copa — Data Link





Run 4: Statistics of Copa

Start at: 2019-03-09 03:49:31

End at: 2019-03-09 03:50:01

Local clock offset: 2.013 ms

Remote clock offset: 7.041 ms

# Below is generated by plot.py at 2019-03-09 04:34:42

# Datalink statistics

-- Total of 3 flows:

Average throughput: 12.31 Mbit/s

95th percentile per-packet one-way delay: 85.926 ms

Loss rate: 76.40%

-- Flow 1:

Average throughput: 11.33 Mbit/s

95th percentile per-packet one-way delay: 85.965 ms

Loss rate: 76.20%

-- Flow 2:

Average throughput: 1.47 Mbit/s

95th percentile per-packet one-way delay: 84.882 ms

Loss rate: 78.39%

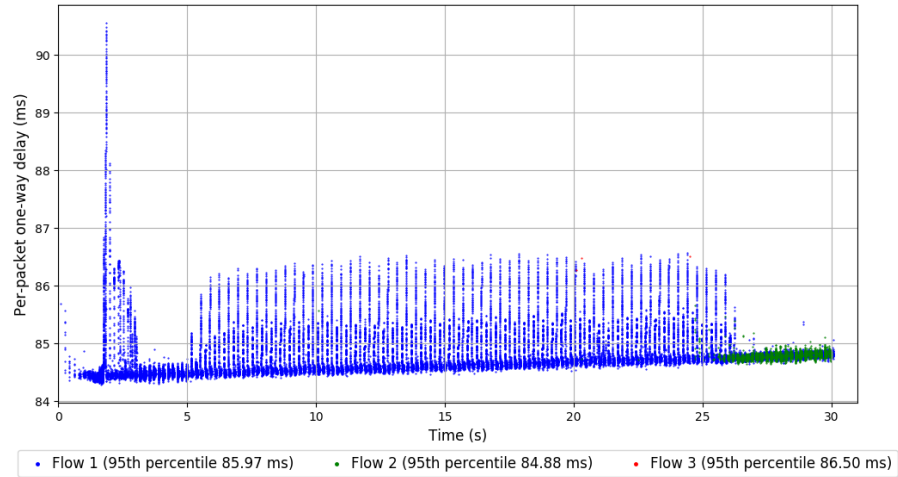
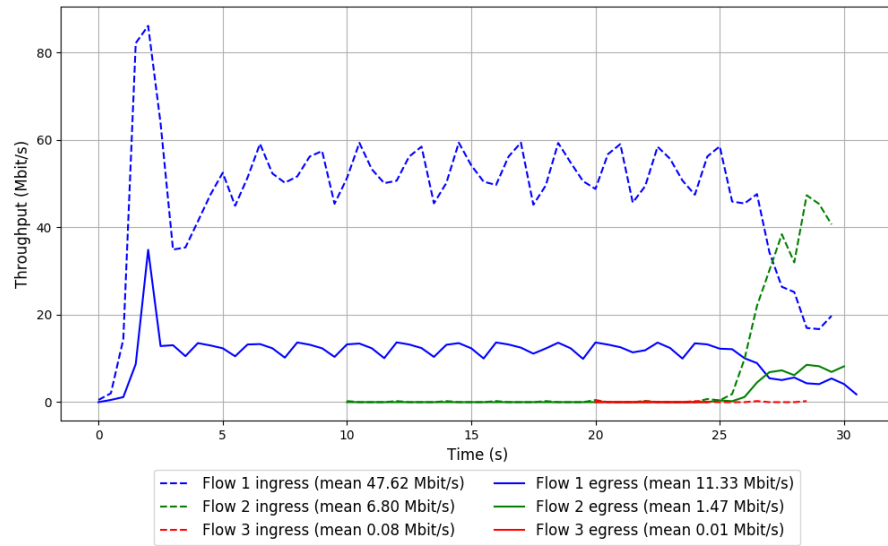
-- Flow 3:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 86.498 ms

Loss rate: 96.35%

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

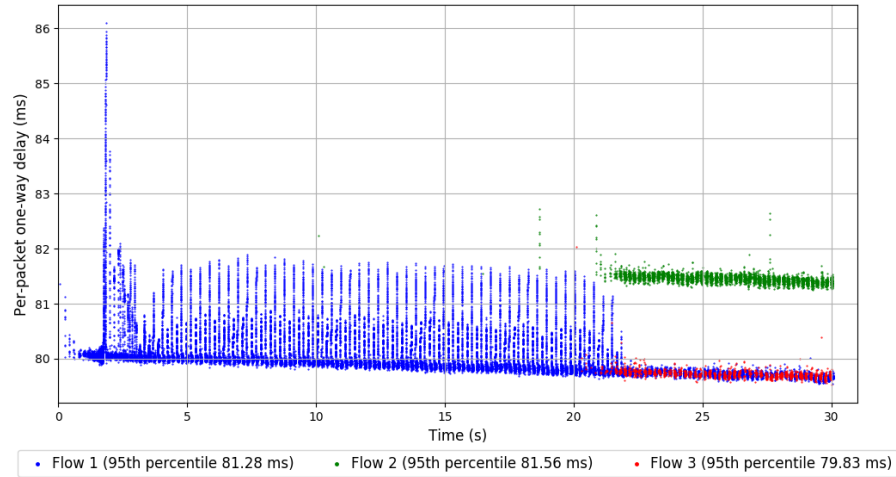
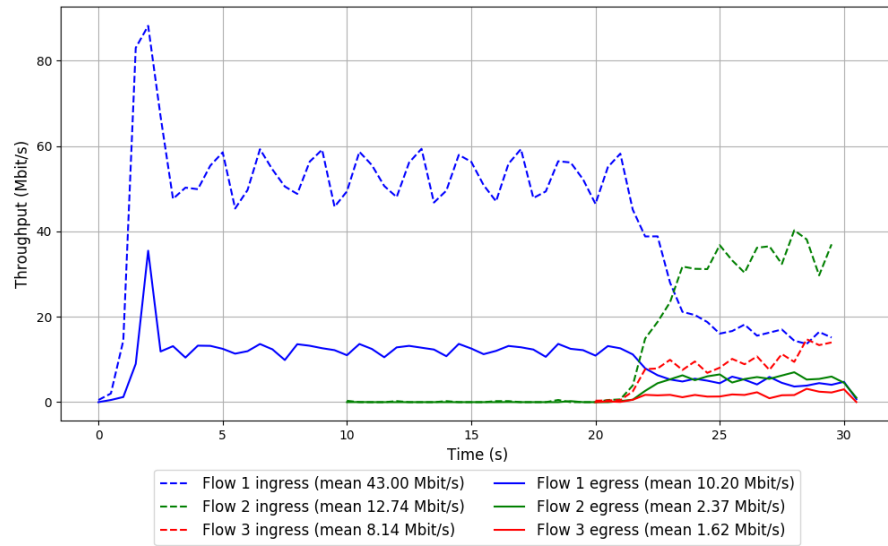


Run 5: Statistics of Copa

Start at: 2019-03-09 04:16:08  
End at: 2019-03-09 04:16:38  
Local clock offset: 3.245 ms  
Remote clock offset: -2.885 ms

# Below is generated by plot.py at 2019-03-09 04:34:42  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 12.31 Mbit/s  
95th percentile per-packet one-way delay: 81.500 ms  
Loss rate: 77.28%  
-- Flow 1:  
Average throughput: 10.20 Mbit/s  
95th percentile per-packet one-way delay: 81.280 ms  
Loss rate: 76.28%  
-- Flow 2:  
Average throughput: 2.37 Mbit/s  
95th percentile per-packet one-way delay: 81.559 ms  
Loss rate: 81.44%  
-- Flow 3:  
Average throughput: 1.62 Mbit/s  
95th percentile per-packet one-way delay: 79.827 ms  
Loss rate: 80.09%

## Run 5: Report of Copa — Data Link

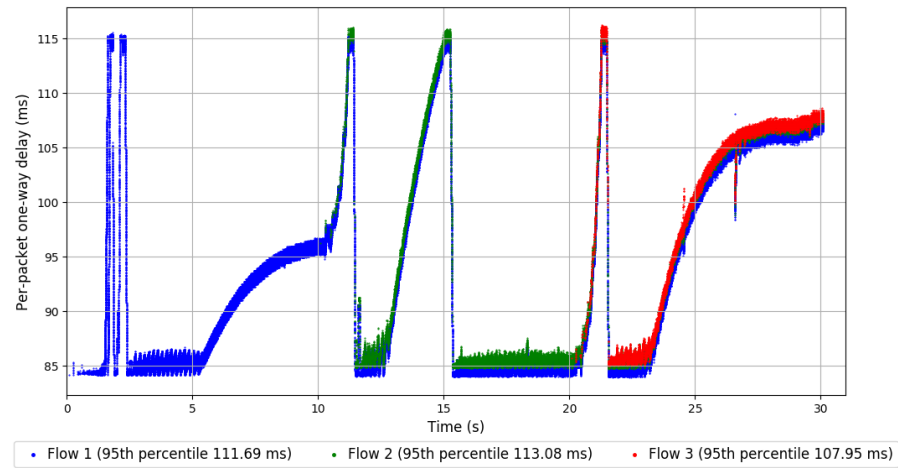
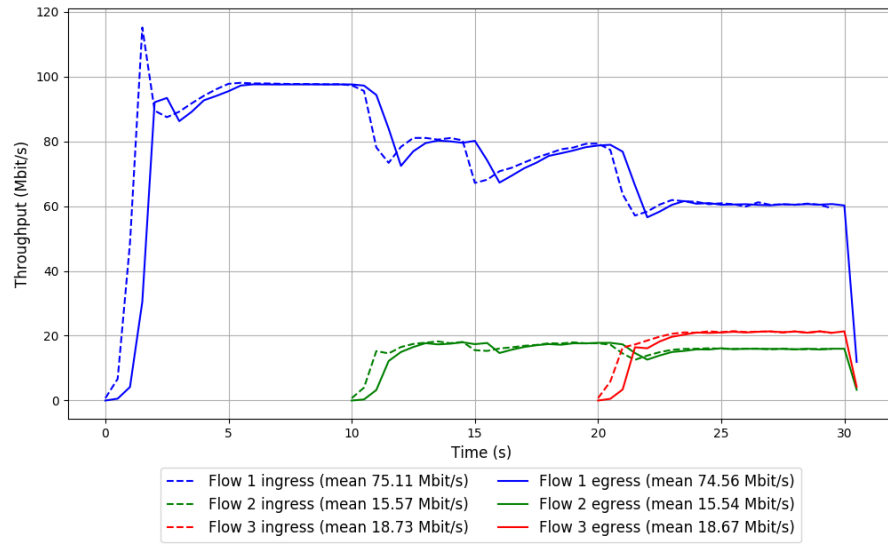


Run 1: Statistics of TCP Cubic

Start at: 2019-03-09 02:38:26  
End at: 2019-03-09 02:38:56  
Local clock offset: -6.143 ms  
Remote clock offset: 11.505 ms

# Below is generated by plot.py at 2019-03-09 04:34:58  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 91.13 Mbit/s  
95th percentile per-packet one-way delay: 111.634 ms  
Loss rate: 0.57%  
-- Flow 1:  
Average throughput: 74.56 Mbit/s  
95th percentile per-packet one-way delay: 111.686 ms  
Loss rate: 0.66%  
-- Flow 2:  
Average throughput: 15.54 Mbit/s  
95th percentile per-packet one-way delay: 113.083 ms  
Loss rate: 0.16%  
-- Flow 3:  
Average throughput: 18.67 Mbit/s  
95th percentile per-packet one-way delay: 107.947 ms  
Loss rate: 0.13%

# Run 1: Report of TCP Cubic — Data Link

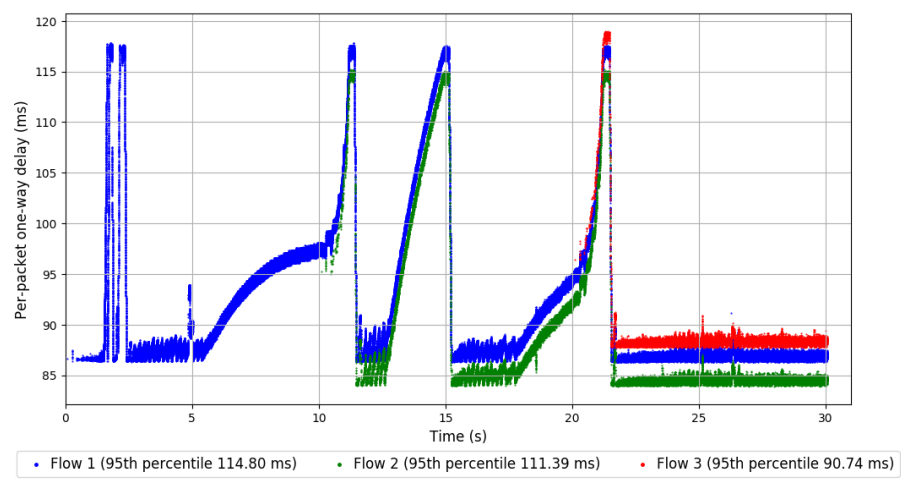
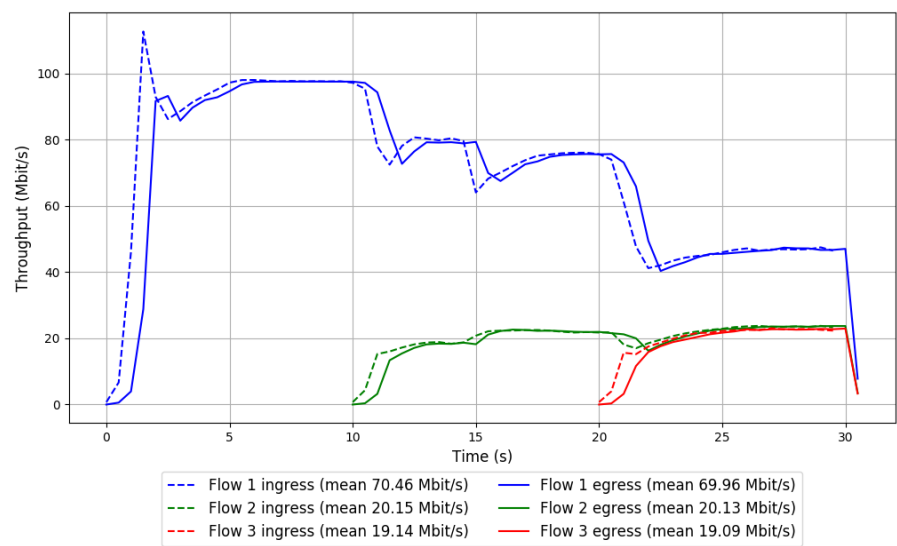


Run 2: Statistics of TCP Cubic

Start at: 2019-03-09 03:05:04  
End at: 2019-03-09 03:05:34  
Local clock offset: -6.96 ms  
Remote clock offset: 17.624 ms

# Below is generated by plot.py at 2019-03-09 04:35:09  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 89.70 Mbit/s  
95th percentile per-packet one-way delay: 113.789 ms  
Loss rate: 0.61%  
-- Flow 1:  
Average throughput: 69.96 Mbit/s  
95th percentile per-packet one-way delay: 114.802 ms  
Loss rate: 0.71%  
-- Flow 2:  
Average throughput: 20.13 Mbit/s  
95th percentile per-packet one-way delay: 111.389 ms  
Loss rate: 0.15%  
-- Flow 3:  
Average throughput: 19.09 Mbit/s  
95th percentile per-packet one-way delay: 90.742 ms  
Loss rate: 0.36%

Run 2: Report of TCP Cubic — Data Link





Run 3: Statistics of TCP Cubic

Start at: 2019-03-09 03:31:45

End at: 2019-03-09 03:32:15

Local clock offset: -0.207 ms

Remote clock offset: 21.28 ms

# Below is generated by plot.py at 2019-03-09 04:35:12

# Datalink statistics

-- Total of 3 flows:

Average throughput: 91.15 Mbit/s

95th percentile per-packet one-way delay: 111.612 ms

Loss rate: 0.57%

-- Flow 1:

Average throughput: 74.48 Mbit/s

95th percentile per-packet one-way delay: 111.578 ms

Loss rate: 0.66%

-- Flow 2:

Average throughput: 15.68 Mbit/s

95th percentile per-packet one-way delay: 114.029 ms

Loss rate: 0.19%

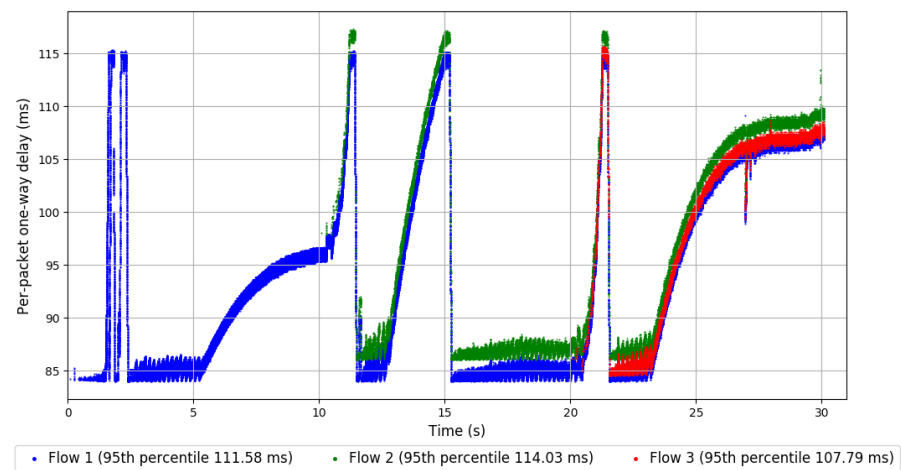
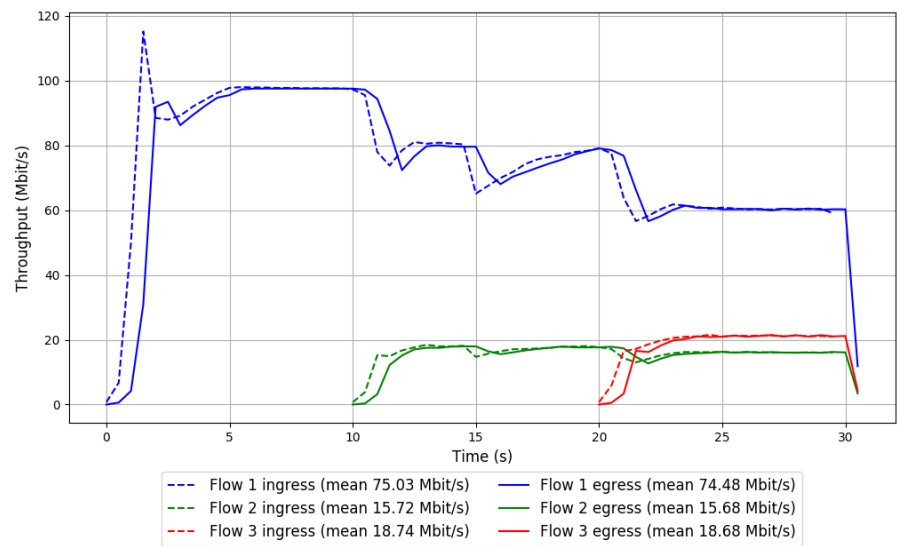
-- Flow 3:

Average throughput: 18.68 Mbit/s

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

Loss rate: 0.10%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2019-03-09 03:58:21

End at: 2019-03-09 03:58:51

Local clock offset: 2.883 ms

Remote clock offset: 2.772 ms

# Below is generated by plot.py at 2019-03-09 04:35:42

# Datalink statistics

-- Total of 3 flows:

Average throughput: 91.01 Mbit/s

95th percentile per-packet one-way delay: 112.648 ms

Loss rate: 0.56%

-- Flow 1:

Average throughput: 74.02 Mbit/s

95th percentile per-packet one-way delay: 113.041 ms

Loss rate: 0.65%

-- Flow 2:

Average throughput: 16.15 Mbit/s

95th percentile per-packet one-way delay: 113.138 ms

Loss rate: 0.21%

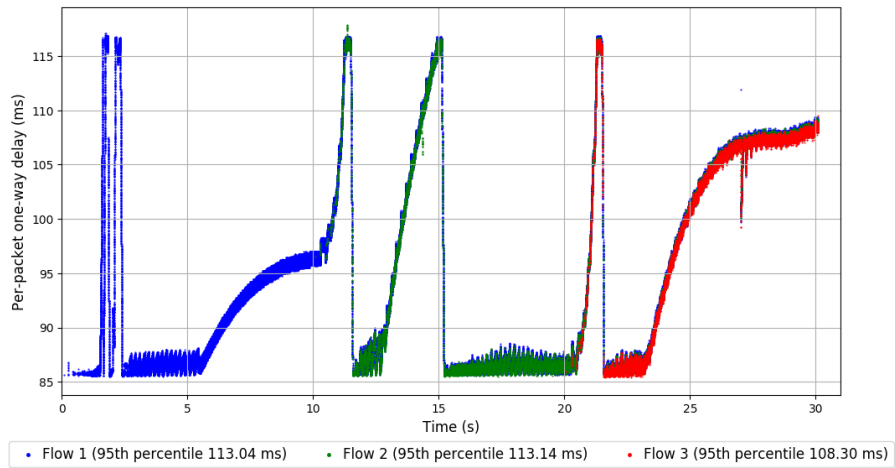
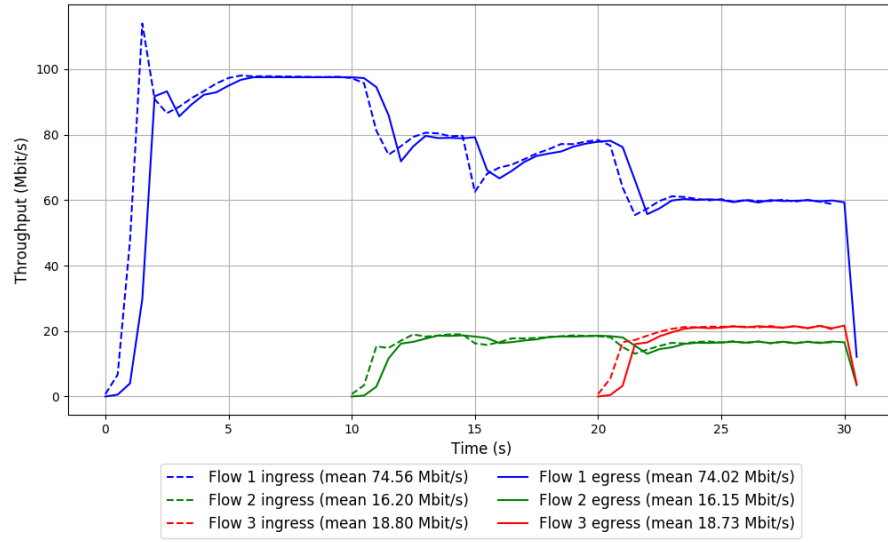
-- Flow 3:

Average throughput: 18.73 Mbit/s

95th percentile per-packet one-way delay: 108.302 ms

Loss rate: 0.12%

# Run 4: Report of TCP Cubic — Data Link

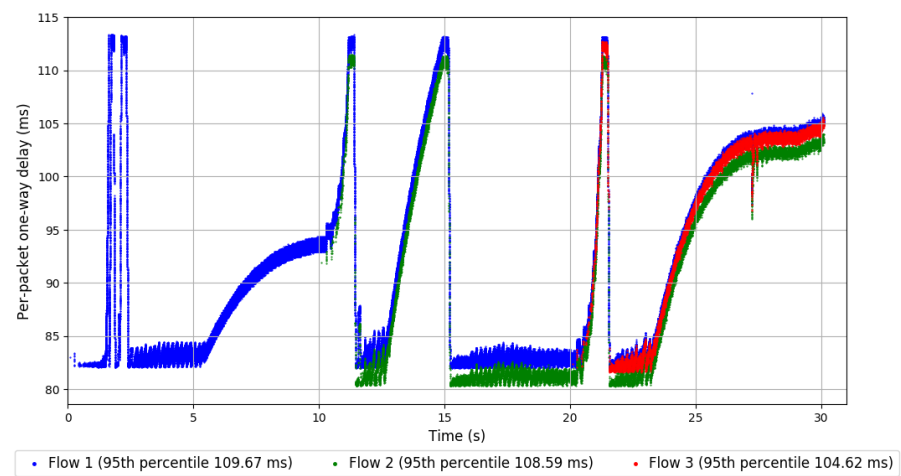
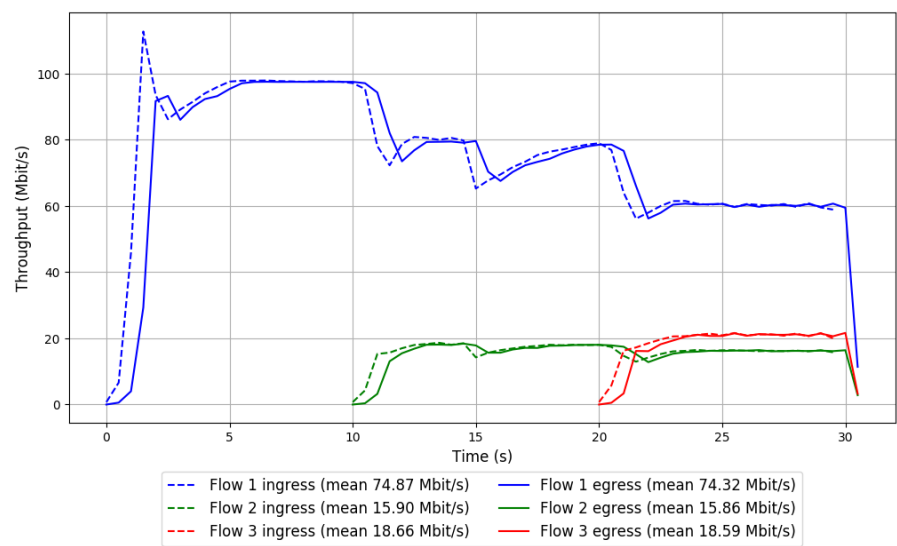


Run 5: Statistics of TCP Cubic

Start at: 2019-03-09 04:24:59  
End at: 2019-03-09 04:25:29  
Local clock offset: -0.865 ms  
Remote clock offset: -1.382 ms

# Below is generated by plot.py at 2019-03-09 04:35:43  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 91.08 Mbit/s  
95th percentile per-packet one-way delay: 109.145 ms  
Loss rate: 0.57%  
-- Flow 1:  
Average throughput: 74.32 Mbit/s  
95th percentile per-packet one-way delay: 109.666 ms  
Loss rate: 0.66%  
-- Flow 2:  
Average throughput: 15.86 Mbit/s  
95th percentile per-packet one-way delay: 108.594 ms  
Loss rate: 0.17%  
-- Flow 3:  
Average throughput: 18.59 Mbit/s  
95th percentile per-packet one-way delay: 104.622 ms  
Loss rate: 0.19%

Run 5: Report of TCP Cubic — Data Link



Run 1: Statistics of FillP

Start at: 2019-03-09 02:37:09

End at: 2019-03-09 02:37:39

Local clock offset: -6.958 ms

Remote clock offset: 7.147 ms

# Below is generated by plot.py at 2019-03-09 04:36:02

# Datalink statistics

-- Total of 3 flows:

Average throughput: 89.14 Mbit/s

95th percentile per-packet one-way delay: 110.035 ms

Loss rate: 15.55%

-- Flow 1:

Average throughput: 42.30 Mbit/s

95th percentile per-packet one-way delay: 109.930 ms

Loss rate: 14.16%

-- Flow 2:

Average throughput: 63.95 Mbit/s

95th percentile per-packet one-way delay: 110.110 ms

Loss rate: 15.80%

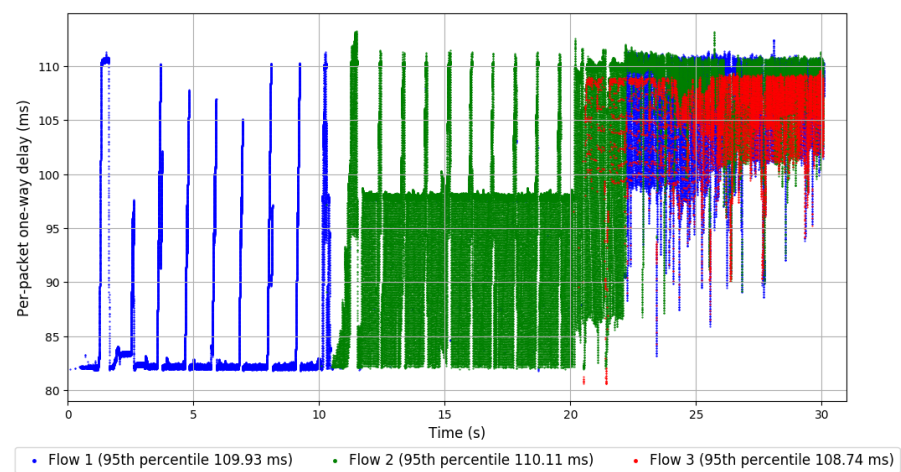
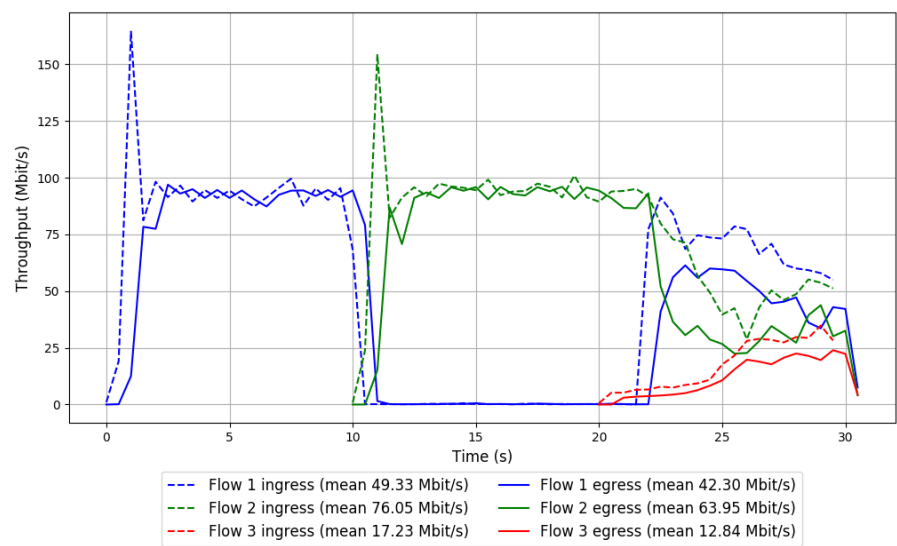
-- Flow 3:

Average throughput: 12.84 Mbit/s

95th percentile per-packet one-way delay: 108.738 ms

Loss rate: 25.43%

Run 1: Report of FillP — Data Link



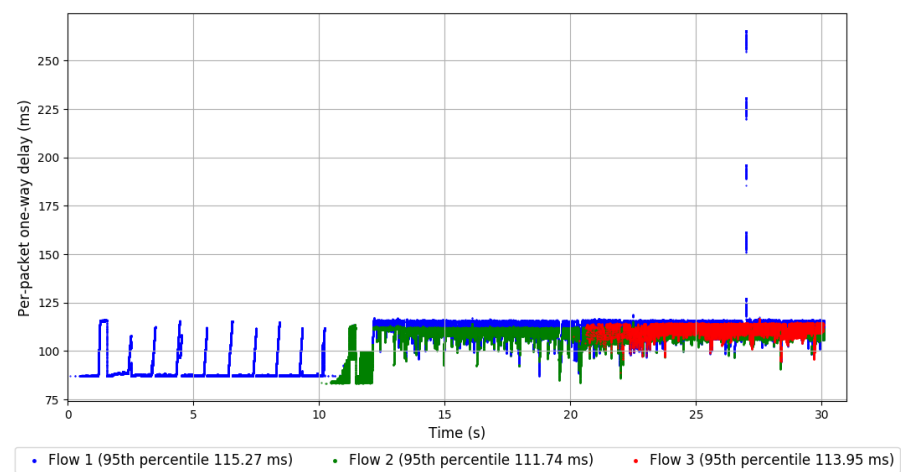
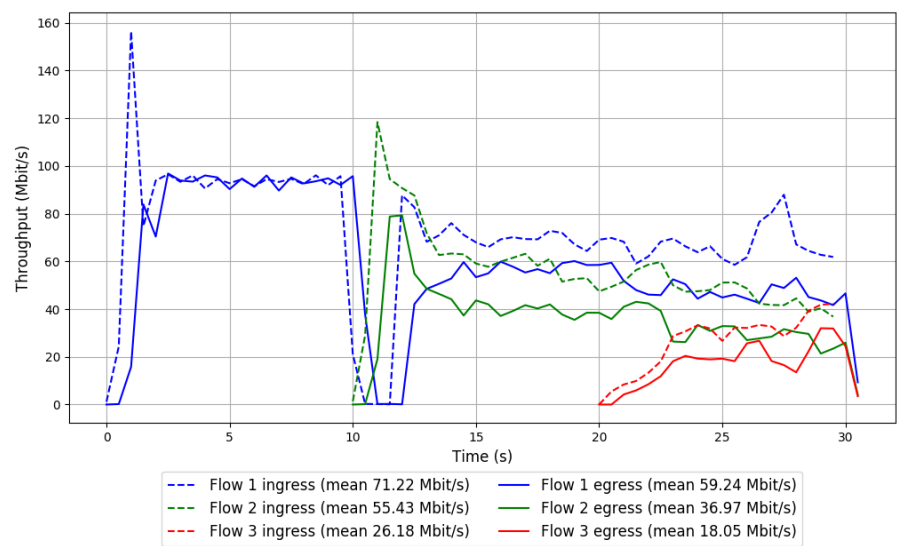


Run 2: Statistics of FillP

Start at: 2019-03-09 03:03:46  
End at: 2019-03-09 03:04:16  
Local clock offset: -6.141 ms  
Remote clock offset: 17.621 ms

# Below is generated by plot.py at 2019-03-09 04:36:06  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 89.85 Mbit/s  
95th percentile per-packet one-way delay: 115.093 ms  
Loss rate: 23.01%  
-- Flow 1:  
Average throughput: 59.24 Mbit/s  
95th percentile per-packet one-way delay: 115.273 ms  
Loss rate: 16.74%  
-- Flow 2:  
Average throughput: 36.97 Mbit/s  
95th percentile per-packet one-way delay: 111.736 ms  
Loss rate: 33.22%  
-- Flow 3:  
Average throughput: 18.05 Mbit/s  
95th percentile per-packet one-way delay: 113.950 ms  
Loss rate: 31.02%

Run 2: Report of FillP — Data Link

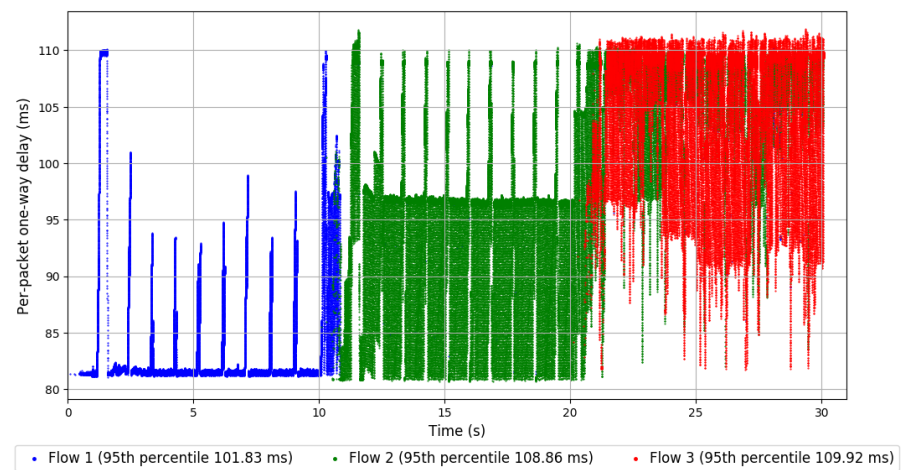
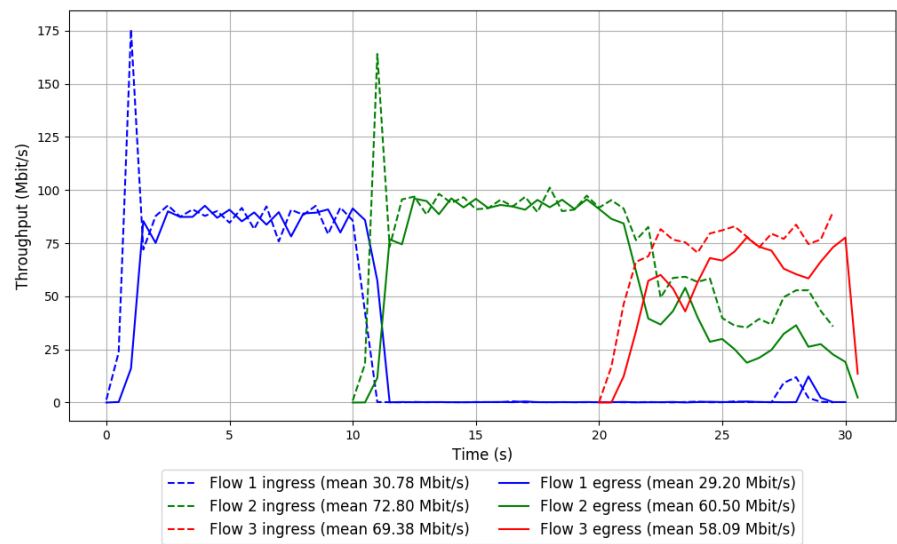


Run 3: Statistics of FillP

Start at: 2019-03-09 03:30:28  
End at: 2019-03-09 03:30:58  
Local clock offset: -1.216 ms  
Remote clock offset: 17.216 ms

# Below is generated by plot.py at 2019-03-09 04:36:06  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 88.61 Mbit/s  
95th percentile per-packet one-way delay: 109.397 ms  
Loss rate: 13.12%  
-- Flow 1:  
Average throughput: 29.20 Mbit/s  
95th percentile per-packet one-way delay: 101.831 ms  
Loss rate: 5.06%  
-- Flow 2:  
Average throughput: 60.50 Mbit/s  
95th percentile per-packet one-way delay: 108.860 ms  
Loss rate: 16.83%  
-- Flow 3:  
Average throughput: 58.09 Mbit/s  
95th percentile per-packet one-way delay: 109.923 ms  
Loss rate: 16.06%

Run 3: Report of FillP — Data Link

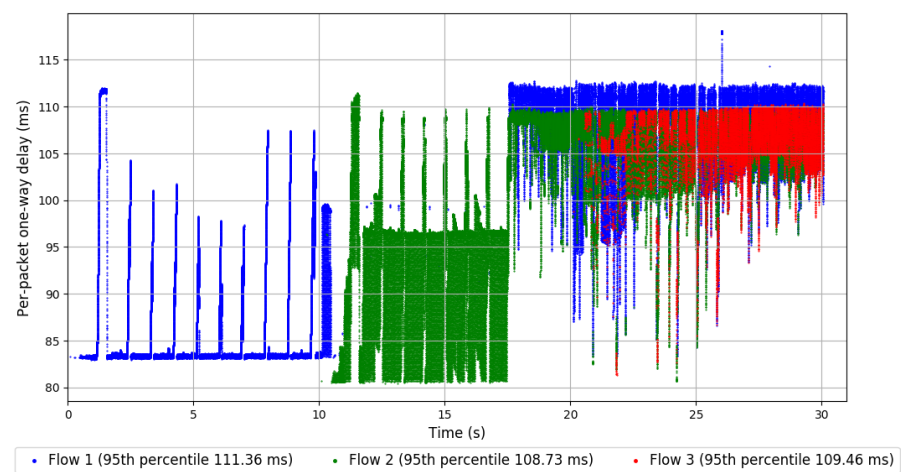
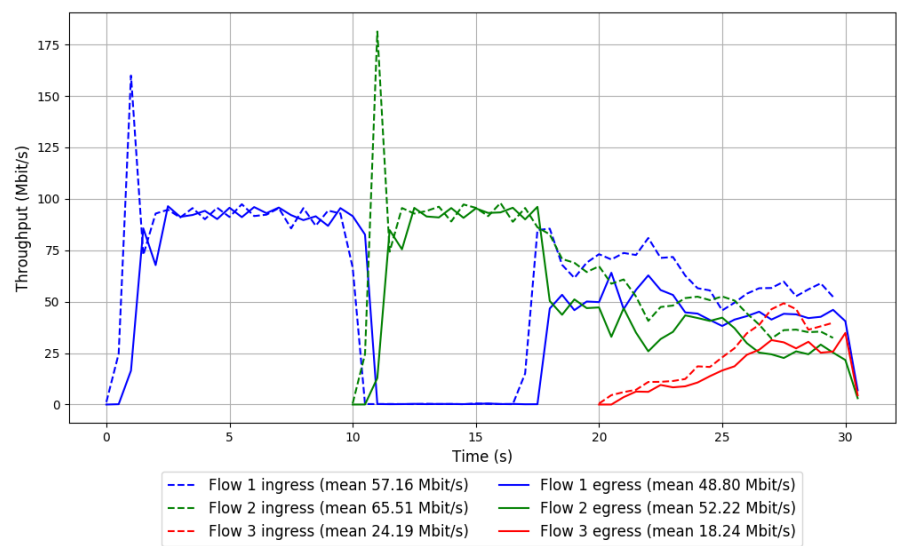


Run 4: Statistics of FillP

Start at: 2019-03-09 03:57:04  
End at: 2019-03-09 03:57:34  
Local clock offset: 2.023 ms  
Remote clock offset: -0.776 ms

# Below is generated by plot.py at 2019-03-09 04:36:19  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 89.60 Mbit/s  
95th percentile per-packet one-way delay: 111.019 ms  
Loss rate: 17.54%  
-- Flow 1:  
Average throughput: 48.80 Mbit/s  
95th percentile per-packet one-way delay: 111.358 ms  
Loss rate: 14.53%  
-- Flow 2:  
Average throughput: 52.22 Mbit/s  
95th percentile per-packet one-way delay: 108.732 ms  
Loss rate: 20.20%  
-- Flow 3:  
Average throughput: 18.24 Mbit/s  
95th percentile per-packet one-way delay: 109.461 ms  
Loss rate: 24.52%

Run 4: Report of FillP — Data Link

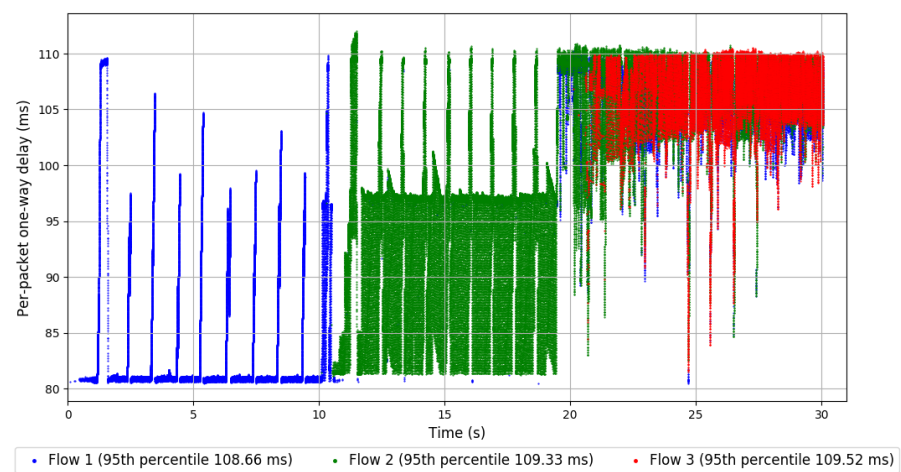
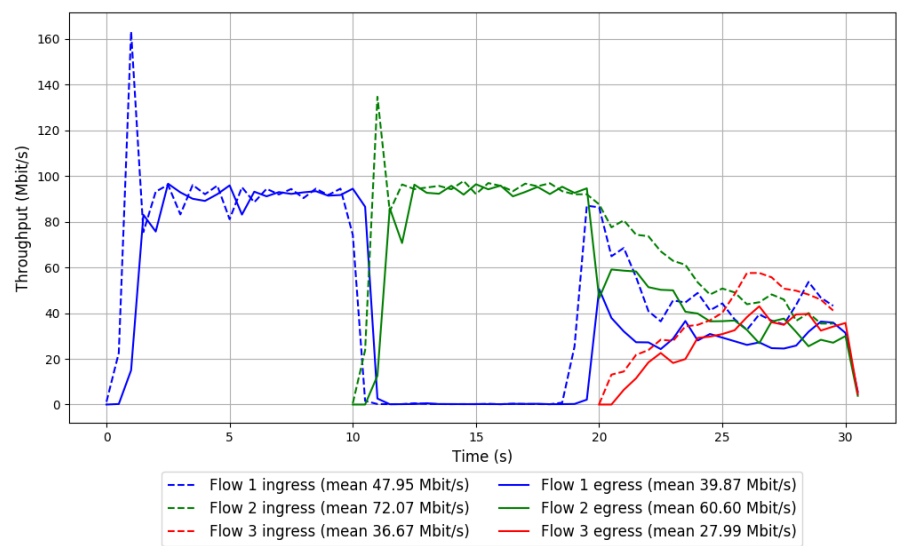


Run 5: Statistics of FillP

Start at: 2019-03-09 04:23:41  
End at: 2019-03-09 04:24:11  
Local clock offset: -0.557 ms  
Remote clock offset: -1.372 ms

# Below is generated by plot.py at 2019-03-09 04:36:34  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 89.51 Mbit/s  
95th percentile per-packet one-way delay: 109.180 ms  
Loss rate: 17.14%  
-- Flow 1:  
Average throughput: 39.87 Mbit/s  
95th percentile per-packet one-way delay: 108.655 ms  
Loss rate: 16.78%  
-- Flow 2:  
Average throughput: 60.60 Mbit/s  
95th percentile per-packet one-way delay: 109.330 ms  
Loss rate: 15.83%  
-- Flow 3:  
Average throughput: 27.99 Mbit/s  
95th percentile per-packet one-way delay: 109.517 ms  
Loss rate: 23.69%

Run 5: Report of FillP — Data Link





Run 1: Statistics of FillP-Sheep

Start at: 2019-03-09 02:34:35

End at: 2019-03-09 02:35:06

Local clock offset: -6.231 ms

Remote clock offset: 9.132 ms

# Below is generated by plot.py at 2019-03-09 04:36:34

# Datalink statistics

-- Total of 3 flows:

Average throughput: 68.61 Mbit/s

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

Loss rate: 6.17%

-- Flow 1:

Average throughput: 10.17 Mbit/s

95th percentile per-packet one-way delay: 112.040 ms

Loss rate: 12.72%

-- Flow 2:

Average throughput: 80.87 Mbit/s

95th percentile per-packet one-way delay: 111.798 ms

Loss rate: 4.18%

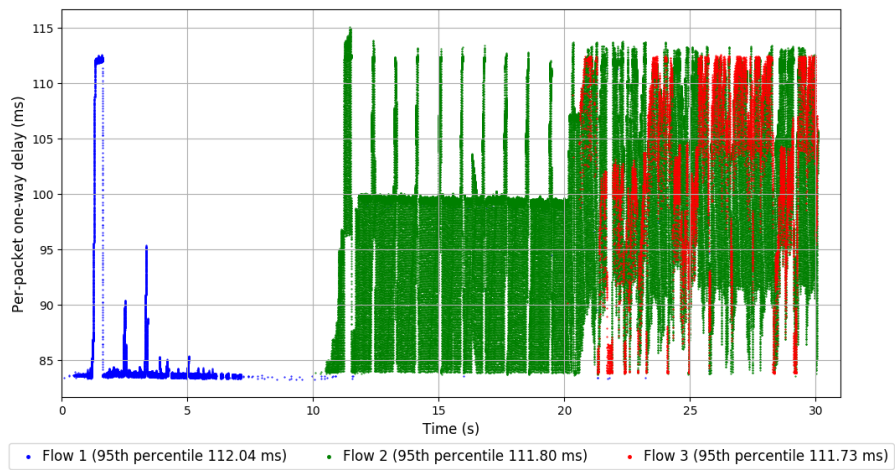
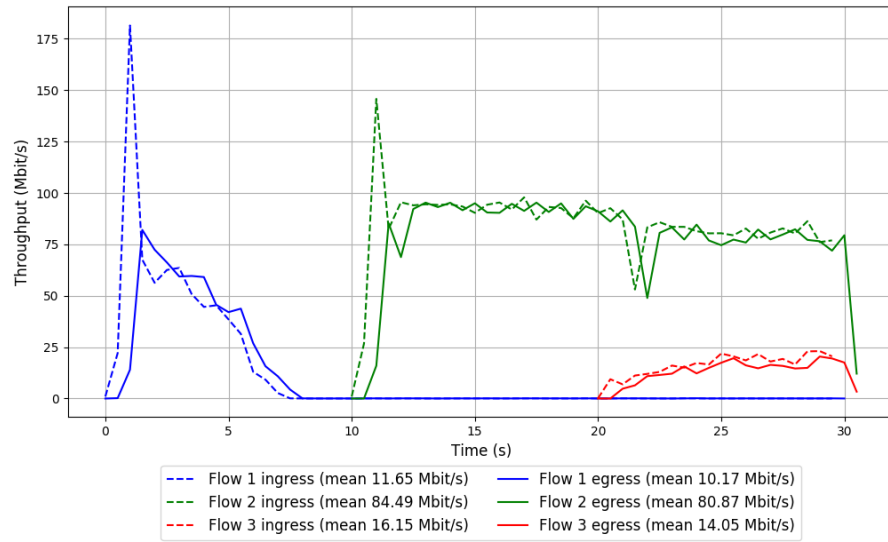
-- Flow 3:

Average throughput: 14.05 Mbit/s

95th percentile per-packet one-way delay: 111.734 ms

Loss rate: 12.95%

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

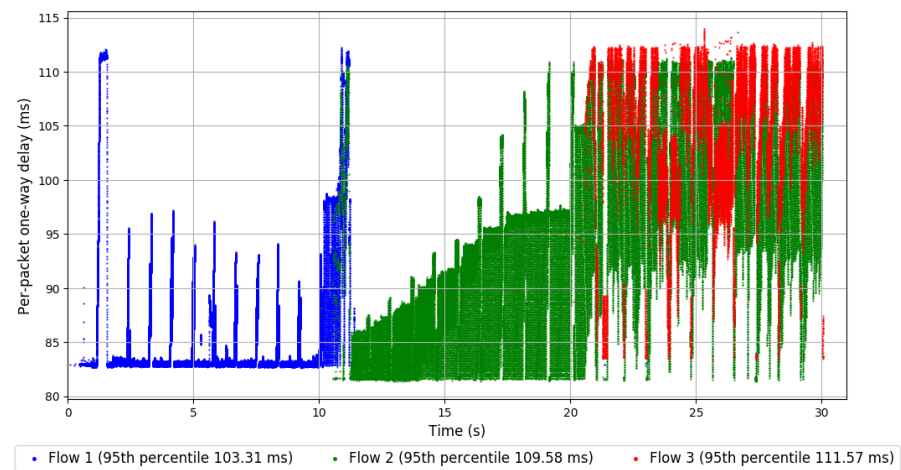
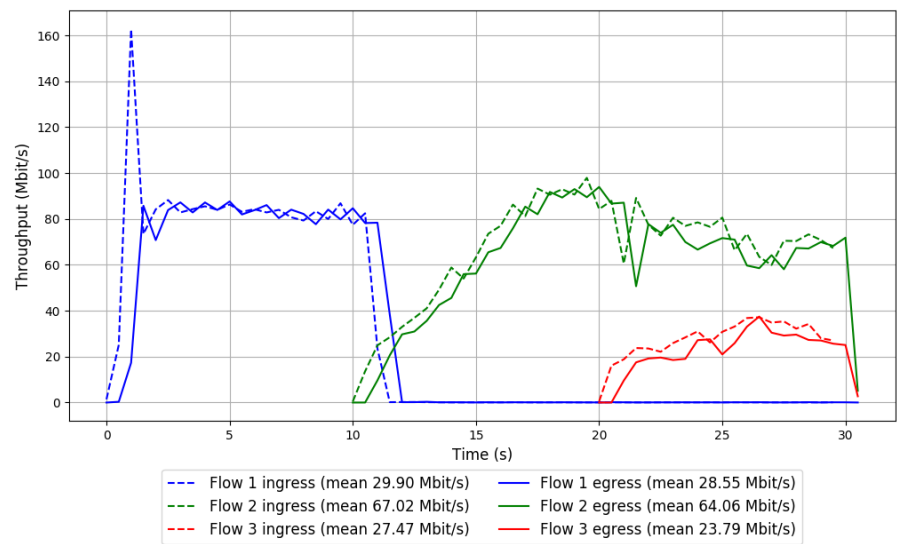


Run 2: Statistics of FillP-Sheep

Start at: 2019-03-09 03:01:13  
End at: 2019-03-09 03:01:43  
Local clock offset: -6.9 ms  
Remote clock offset: 13.535 ms

# Below is generated by plot.py at 2019-03-09 04:36:51  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 79.02 Mbit/s  
95th percentile per-packet one-way delay: 109.737 ms  
Loss rate: 5.35%  
-- Flow 1:  
Average throughput: 28.55 Mbit/s  
95th percentile per-packet one-way delay: 103.312 ms  
Loss rate: 4.43%  
-- Flow 2:  
Average throughput: 64.06 Mbit/s  
95th percentile per-packet one-way delay: 109.579 ms  
Loss rate: 4.32%  
-- Flow 3:  
Average throughput: 23.79 Mbit/s  
95th percentile per-packet one-way delay: 111.573 ms  
Loss rate: 13.45%

Run 2: Report of FillP-Sheep — Data Link

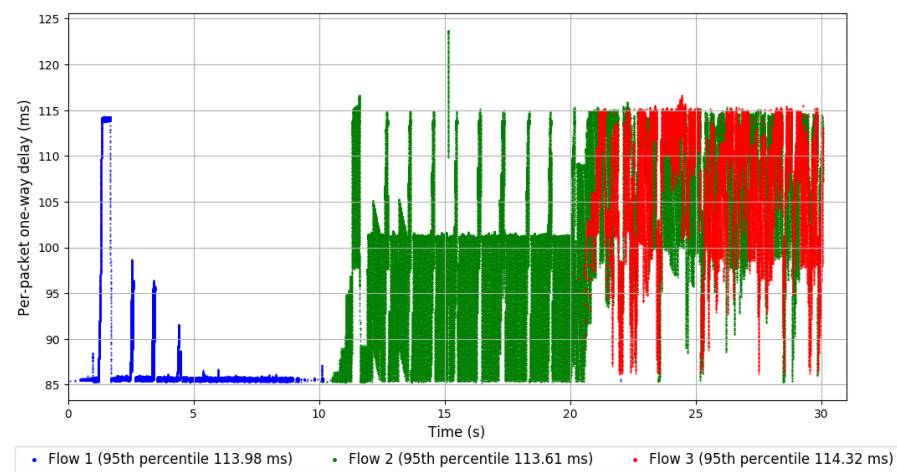
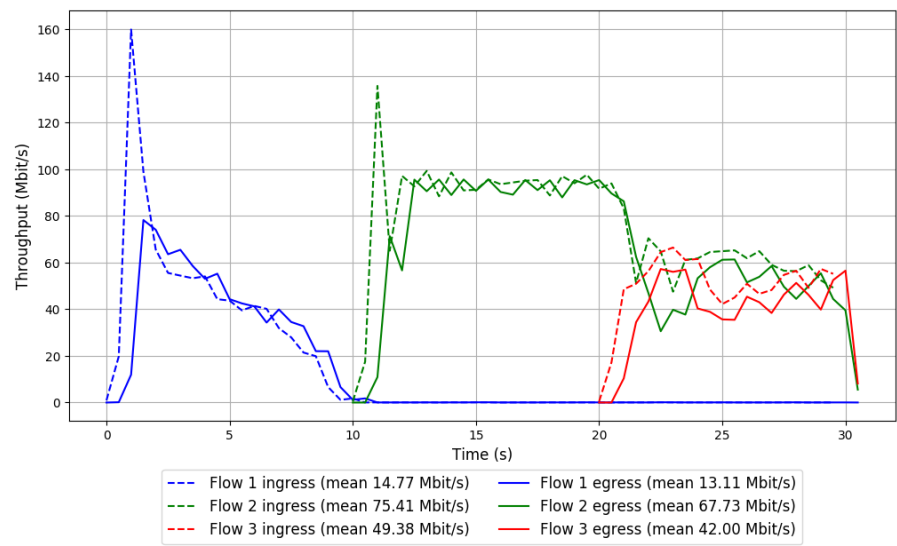


Run 3: Statistics of FillP-Sheep

Start at: 2019-03-09 03:27:55  
End at: 2019-03-09 03:28:25  
Local clock offset: -0.958 ms  
Remote clock offset: 21.019 ms

# Below is generated by plot.py at 2019-03-09 04:36:51  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 72.19 Mbit/s  
95th percentile per-packet one-way delay: 113.762 ms  
Loss rate: 11.23%  
-- Flow 1:  
Average throughput: 13.11 Mbit/s  
95th percentile per-packet one-way delay: 113.981 ms  
Loss rate: 11.18%  
-- Flow 2:  
Average throughput: 67.73 Mbit/s  
95th percentile per-packet one-way delay: 113.609 ms  
Loss rate: 10.09%  
-- Flow 3:  
Average throughput: 42.00 Mbit/s  
95th percentile per-packet one-way delay: 114.316 ms  
Loss rate: 14.80%

Run 3: Report of FillP-Sheep — Data Link



Run 4: Statistics of FillP-Sheep

Start at: 2019-03-09 03:54:31

End at: 2019-03-09 03:55:01

Local clock offset: 1.784 ms

Remote clock offset: 0.619 ms

# Below is generated by plot.py at 2019-03-09 04:37:16

# Datalink statistics

-- Total of 3 flows:

Average throughput: 84.59 Mbit/s

95th percentile per-packet one-way delay: 111.091 ms

Loss rate: 4.92%

-- Flow 1:

Average throughput: 28.28 Mbit/s

95th percentile per-packet one-way delay: 104.195 ms

Loss rate: 5.27%

-- Flow 2:

Average throughput: 71.65 Mbit/s

95th percentile per-packet one-way delay: 111.222 ms

Loss rate: 4.79%

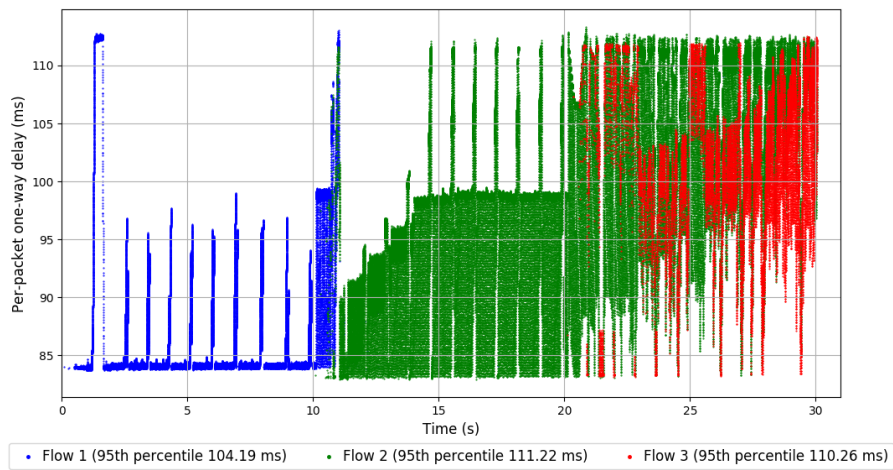
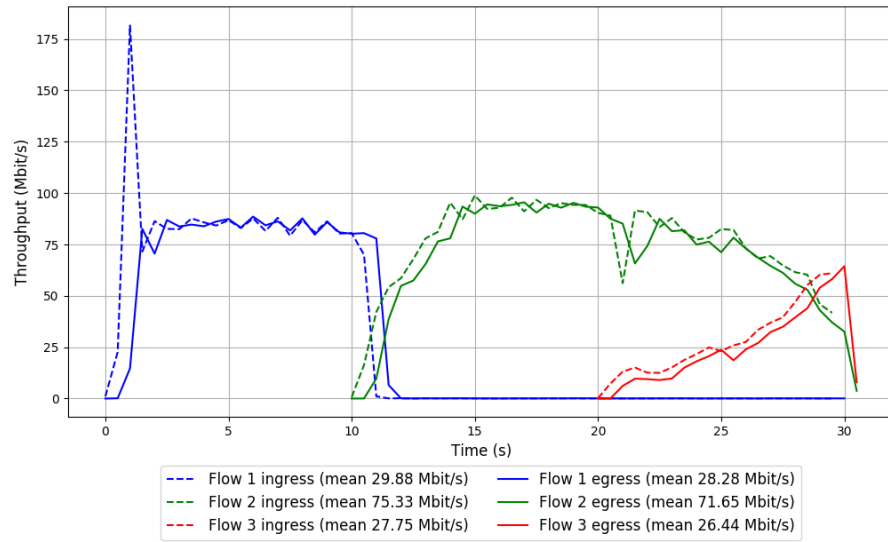
-- Flow 3:

Average throughput: 26.44 Mbit/s

95th percentile per-packet one-way delay: 110.262 ms

Loss rate: 4.52%

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





Run 5: Statistics of FillP-Sheep

Start at: 2019-03-09 04:21:08

End at: 2019-03-09 04:21:38

Local clock offset: 0.116 ms

Remote clock offset: 1.945 ms

# Below is generated by plot.py at 2019-03-09 04:37:16

# Datalink statistics

-- Total of 3 flows:

Average throughput: 71.59 Mbit/s

95th percentile per-packet one-way delay: 113.810 ms

Loss rate: 11.30%

-- Flow 1:

Average throughput: 12.27 Mbit/s

95th percentile per-packet one-way delay: 114.203 ms

Loss rate: 9.27%

-- Flow 2:

Average throughput: 63.08 Mbit/s

95th percentile per-packet one-way delay: 113.848 ms

Loss rate: 11.48%

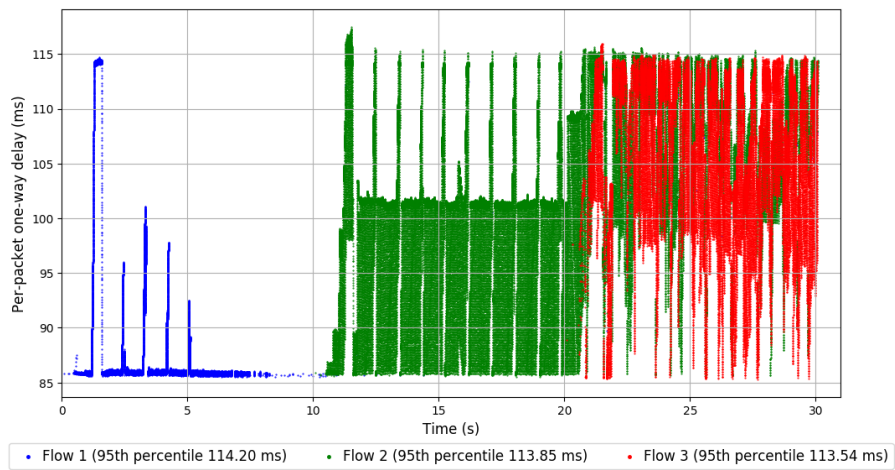
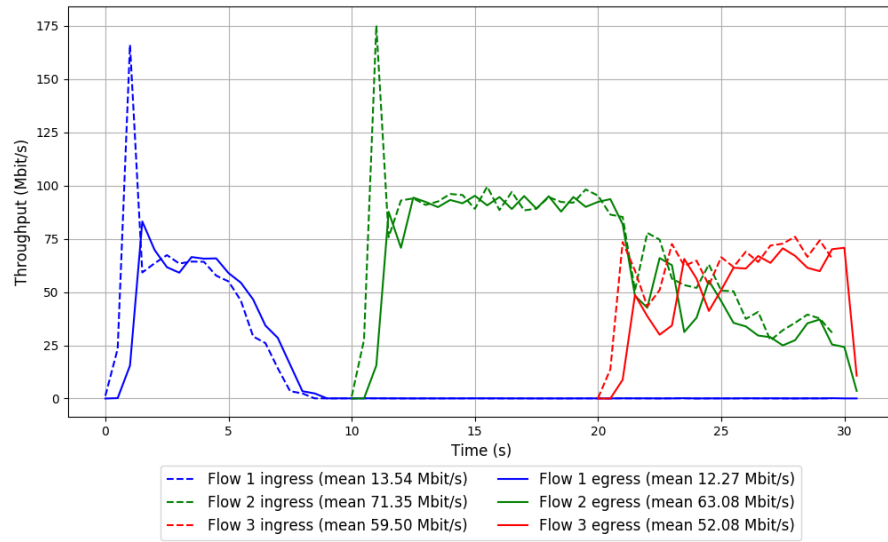
-- Flow 3:

Average throughput: 52.08 Mbit/s

95th percentile per-packet one-way delay: 113.542 ms

Loss rate: 12.26%

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



Run 1: Statistics of Indigo

Start at: 2019-03-09 02:42:18

End at: 2019-03-09 02:42:48

Local clock offset: -6.893 ms

Remote clock offset: 9.312 ms

# Below is generated by plot.py at 2019-03-09 04:37:21

# Datalink statistics

-- Total of 3 flows:

Average throughput: 91.75 Mbit/s

95th percentile per-packet one-way delay: 113.110 ms

Loss rate: 34.42%

-- Flow 1:

Average throughput: 61.40 Mbit/s

95th percentile per-packet one-way delay: 113.068 ms

Loss rate: 13.80%

-- Flow 2:

Average throughput: 30.76 Mbit/s

95th percentile per-packet one-way delay: 111.909 ms

Loss rate: 37.01%

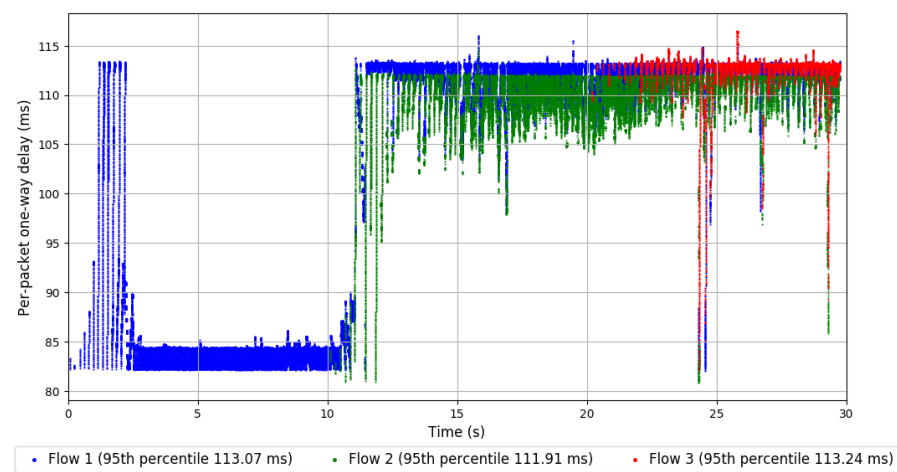
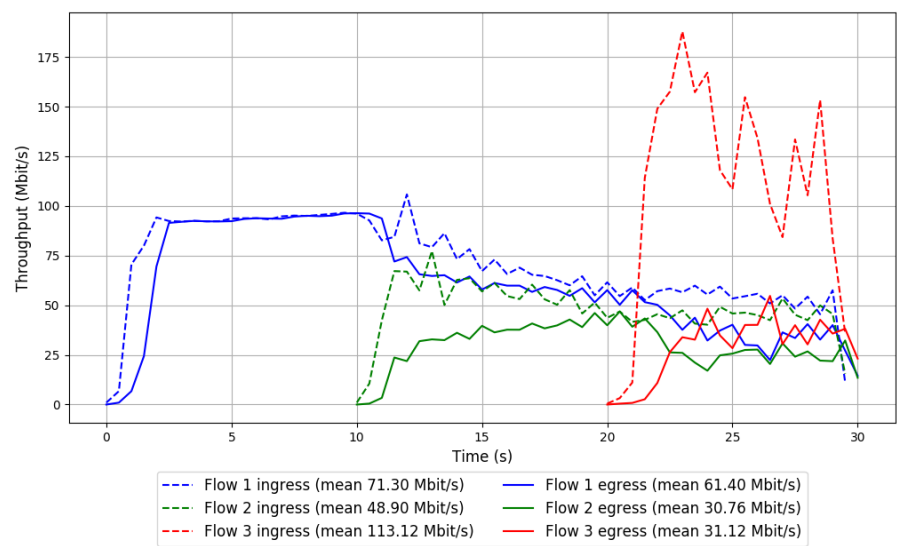
-- Flow 3:

Average throughput: 31.12 Mbit/s

95th percentile per-packet one-way delay: 113.237 ms

Loss rate: 72.48%

Run 1: Report of Indigo — Data Link

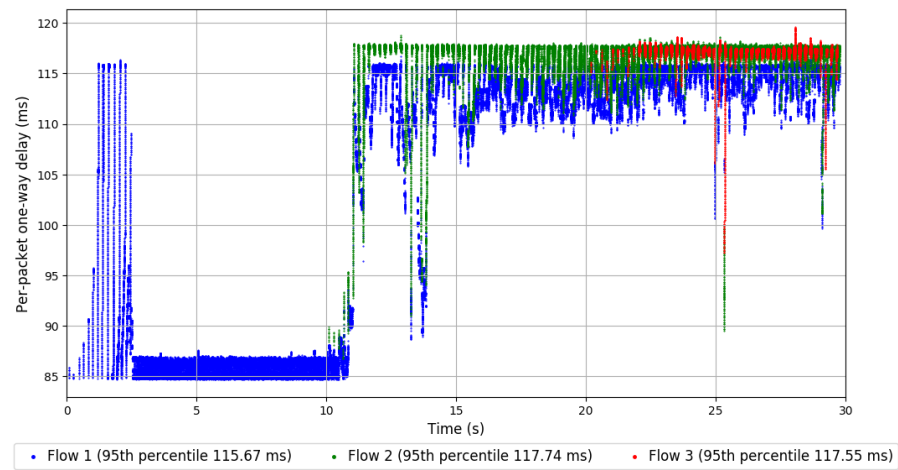
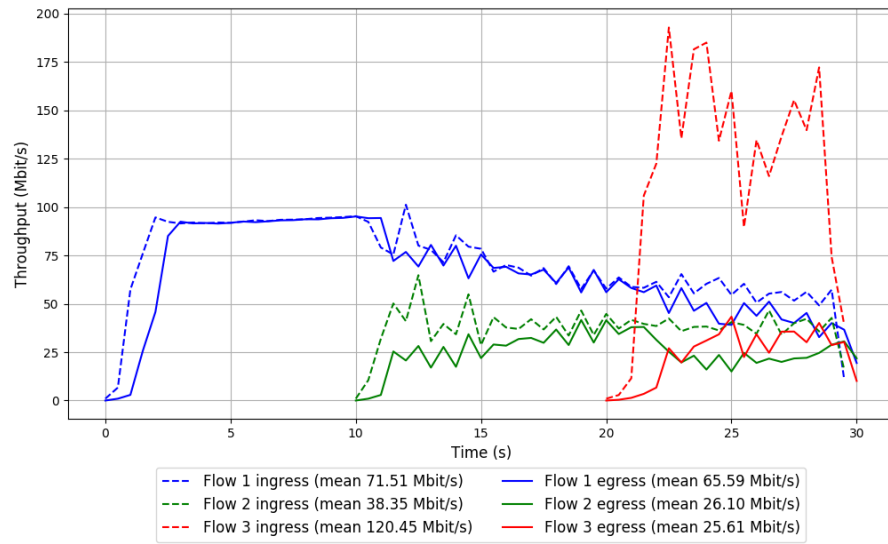


Run 2: Statistics of Indigo

Start at: 2019-03-09 03:08:55  
End at: 2019-03-09 03:09:25  
Local clock offset: -6.91 ms  
Remote clock offset: 18.607 ms

# Below is generated by plot.py at 2019-03-09 04:37:27  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 91.09 Mbit/s  
95th percentile per-packet one-way delay: 117.589 ms  
Loss rate: 32.73%  
-- Flow 1:  
Average throughput: 65.59 Mbit/s  
95th percentile per-packet one-way delay: 115.673 ms  
Loss rate: 8.19%  
-- Flow 2:  
Average throughput: 26.10 Mbit/s  
95th percentile per-packet one-way delay: 117.740 ms  
Loss rate: 31.84%  
-- Flow 3:  
Average throughput: 25.61 Mbit/s  
95th percentile per-packet one-way delay: 117.550 ms  
Loss rate: 78.73%

## Run 2: Report of Indigo — Data Link

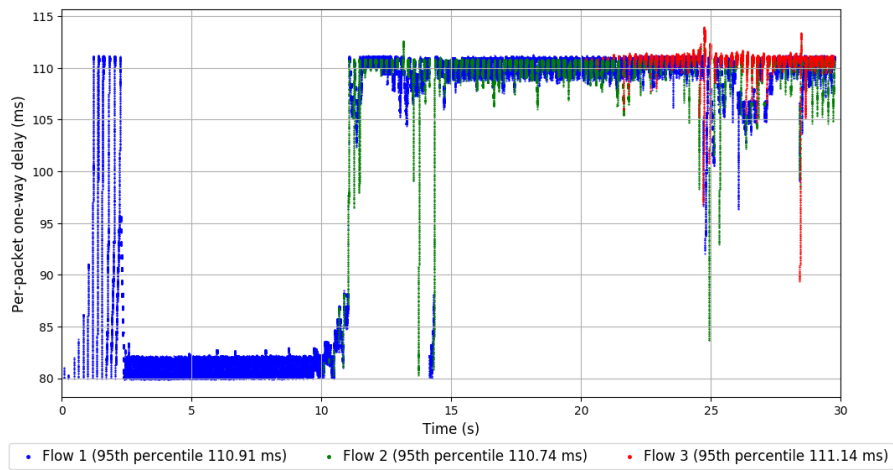
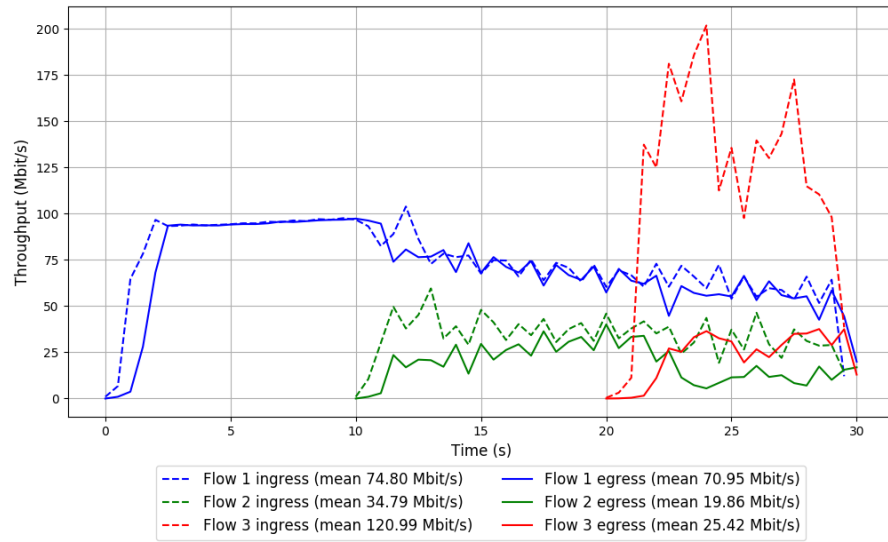


Run 3: Statistics of Indigo

Start at: 2019-03-09 03:35:36  
End at: 2019-03-09 03:36:06  
Local clock offset: 0.397 ms  
Remote clock offset: 17.723 ms

# Below is generated by plot.py at 2019-03-09 04:37:34  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 92.24 Mbit/s  
95th percentile per-packet one-way delay: 110.954 ms  
Loss rate: 32.41%  
-- Flow 1:  
Average throughput: 70.95 Mbit/s  
95th percentile per-packet one-way delay: 110.914 ms  
Loss rate: 5.05%  
-- Flow 2:  
Average throughput: 19.86 Mbit/s  
95th percentile per-packet one-way delay: 110.743 ms  
Loss rate: 42.83%  
-- Flow 3:  
Average throughput: 25.42 Mbit/s  
95th percentile per-packet one-way delay: 111.145 ms  
Loss rate: 78.99%

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



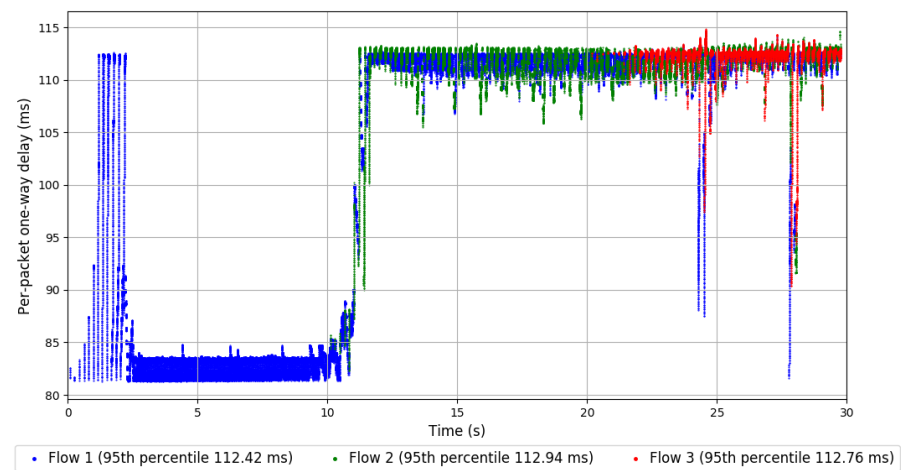
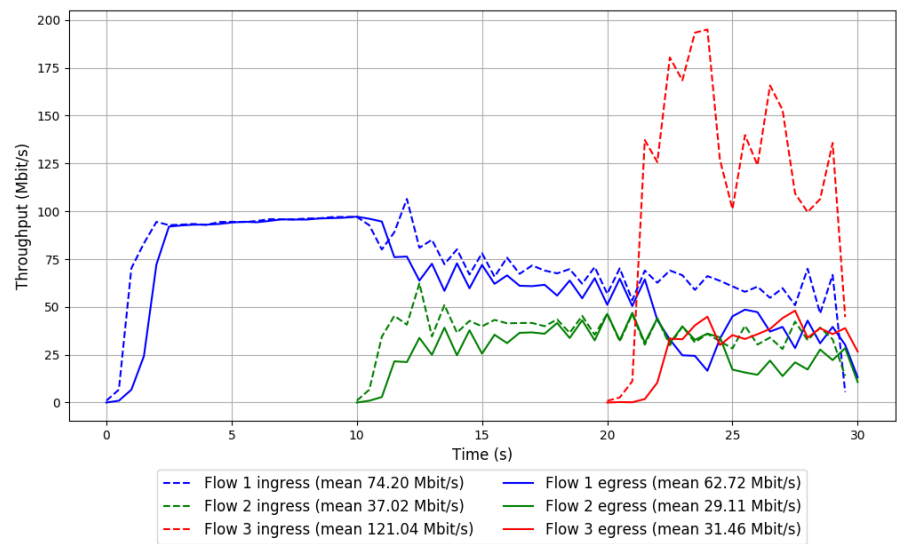


Run 4: Statistics of Indigo

Start at: 2019-03-09 04:02:13  
End at: 2019-03-09 04:02:43  
Local clock offset: 3.179 ms  
Remote clock offset: -2.287 ms

# Below is generated by plot.py at 2019-03-09 04:37:48  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 92.15 Mbit/s  
95th percentile per-packet one-way delay: 112.810 ms  
Loss rate: 33.08%  
-- Flow 1:  
Average throughput: 62.72 Mbit/s  
95th percentile per-packet one-way delay: 112.415 ms  
Loss rate: 15.38%  
-- Flow 2:  
Average throughput: 29.11 Mbit/s  
95th percentile per-packet one-way delay: 112.936 ms  
Loss rate: 21.25%  
-- Flow 3:  
Average throughput: 31.46 Mbit/s  
95th percentile per-packet one-way delay: 112.763 ms  
Loss rate: 74.01%

Run 4: Report of Indigo — Data Link

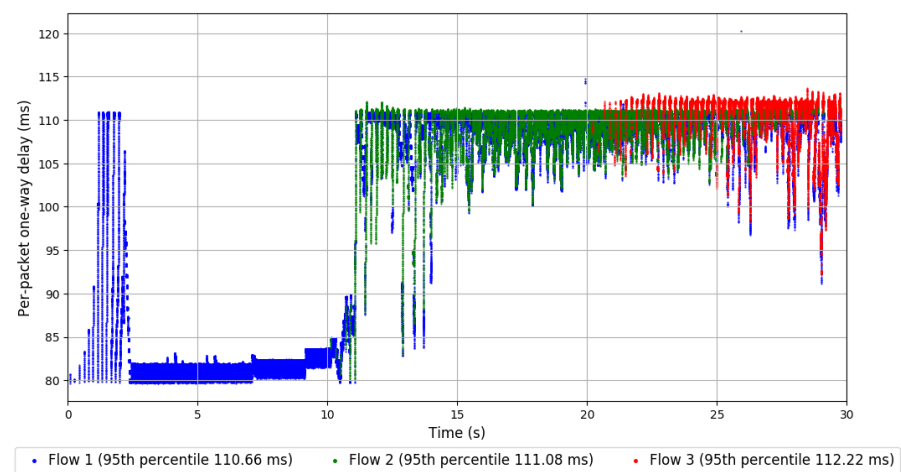
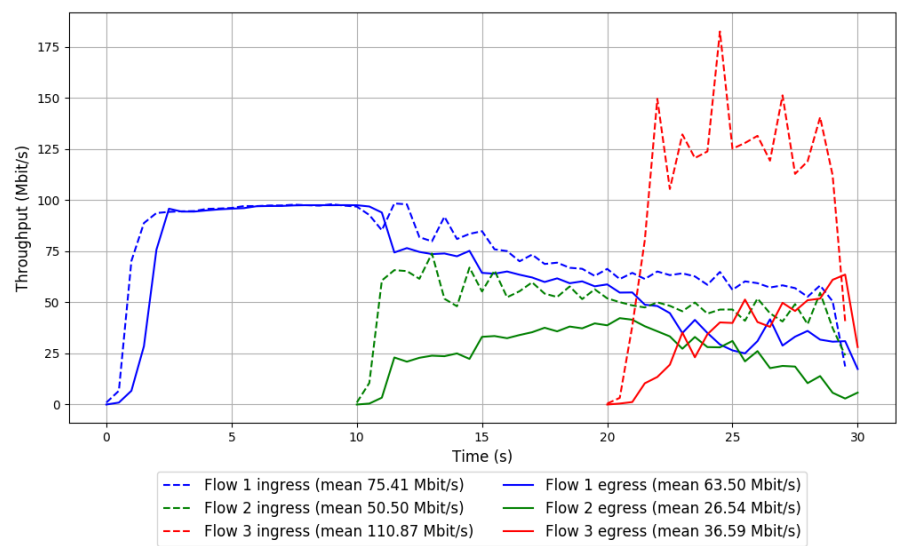


Run 5: Statistics of Indigo

Start at: 2019-03-09 04:28:50  
End at: 2019-03-09 04:29:20  
Local clock offset: -0.816 ms  
Remote clock offset: -1.241 ms

# Below is generated by plot.py at 2019-03-09 04:38:05  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 92.81 Mbit/s  
95th percentile per-packet one-way delay: 111.975 ms  
Loss rate: 35.69%  
-- Flow 1:  
Average throughput: 63.50 Mbit/s  
95th percentile per-packet one-way delay: 110.656 ms  
Loss rate: 15.71%  
-- Flow 2:  
Average throughput: 26.54 Mbit/s  
95th percentile per-packet one-way delay: 111.077 ms  
Loss rate: 47.36%  
-- Flow 3:  
Average throughput: 36.59 Mbit/s  
95th percentile per-packet one-way delay: 112.222 ms  
Loss rate: 66.99%

Run 5: Report of Indigo — Data Link



Run 1: Statistics of Indigo-MusesC3

Start at: 2019-03-09 02:41:00

End at: 2019-03-09 02:41:30

Local clock offset: -6.135 ms

Remote clock offset: 8.951 ms

# Below is generated by plot.py at 2019-03-09 04:38:05

# Datalink statistics

-- Total of 3 flows:

Average throughput: 94.98 Mbit/s

95th percentile per-packet one-way delay: 111.346 ms

Loss rate: 2.70%

-- Flow 1:

Average throughput: 48.79 Mbit/s

95th percentile per-packet one-way delay: 111.187 ms

Loss rate: 1.55%

-- Flow 2:

Average throughput: 50.27 Mbit/s

95th percentile per-packet one-way delay: 111.452 ms

Loss rate: 2.03%

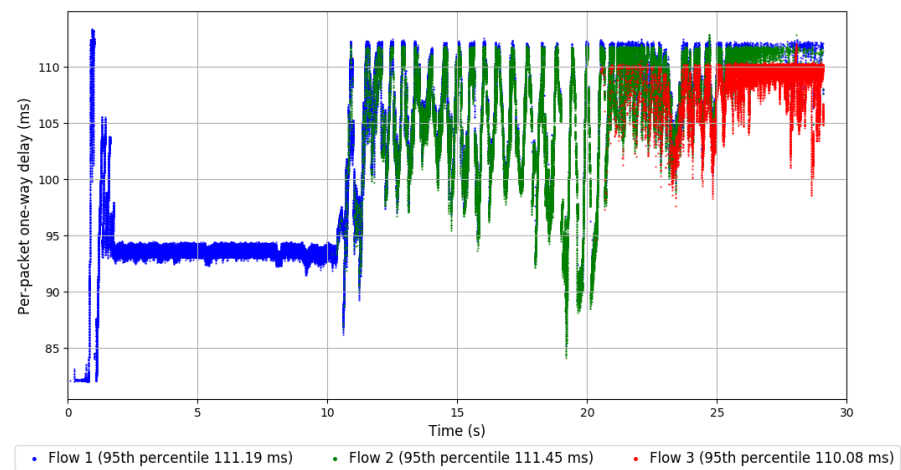
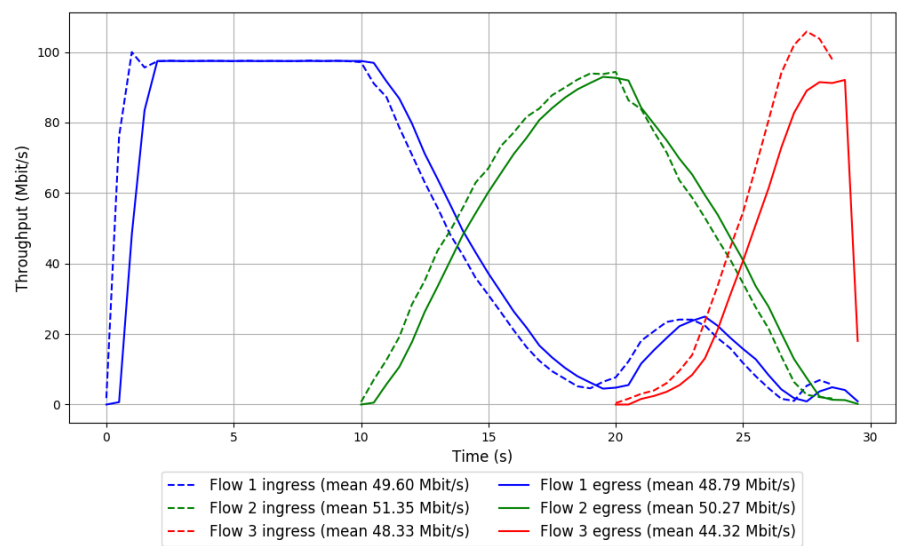
-- Flow 3:

Average throughput: 44.32 Mbit/s

95th percentile per-packet one-way delay: 110.080 ms

Loss rate: 8.16%

Run 1: Report of Indigo-MusesC3 — Data Link

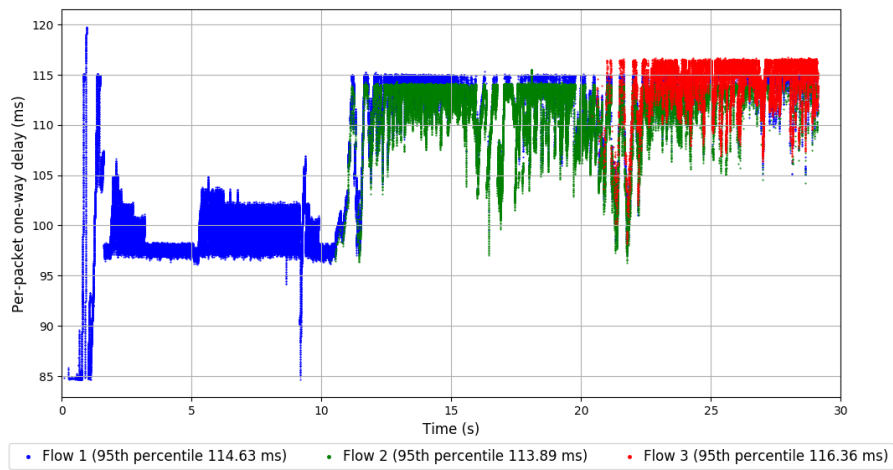
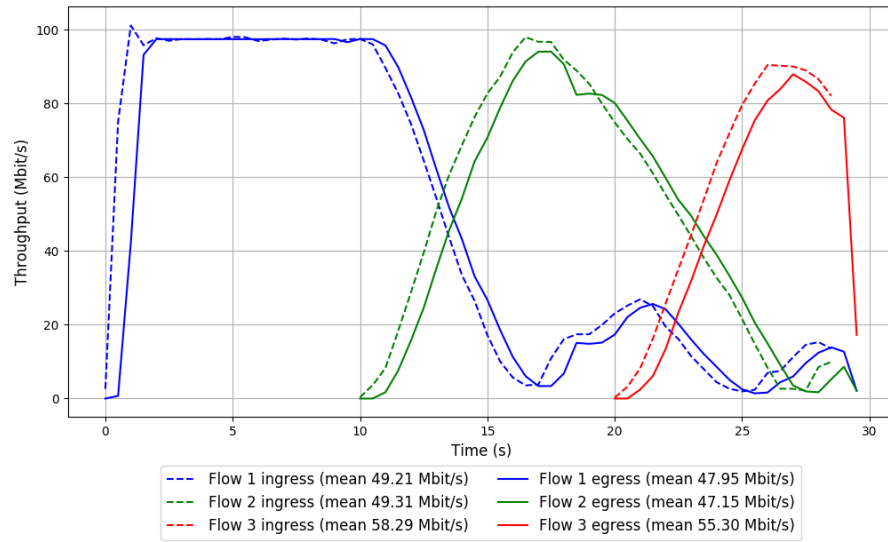


Run 2: Statistics of Indigo-MusesC3

Start at: 2019-03-09 03:07:38  
End at: 2019-03-09 03:08:08  
Local clock offset: -6.142 ms  
Remote clock offset: 18.225 ms

# Below is generated by plot.py at 2019-03-09 04:38:12  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.03 Mbit/s  
95th percentile per-packet one-way delay: 116.031 ms  
Loss rate: 3.53%  
-- Flow 1:  
Average throughput: 47.95 Mbit/s  
95th percentile per-packet one-way delay: 114.632 ms  
Loss rate: 2.45%  
-- Flow 2:  
Average throughput: 47.15 Mbit/s  
95th percentile per-packet one-way delay: 113.887 ms  
Loss rate: 4.31%  
-- Flow 3:  
Average throughput: 55.30 Mbit/s  
95th percentile per-packet one-way delay: 116.361 ms  
Loss rate: 5.13%

## Run 2: Report of Indigo-MusesC3 — Data Link



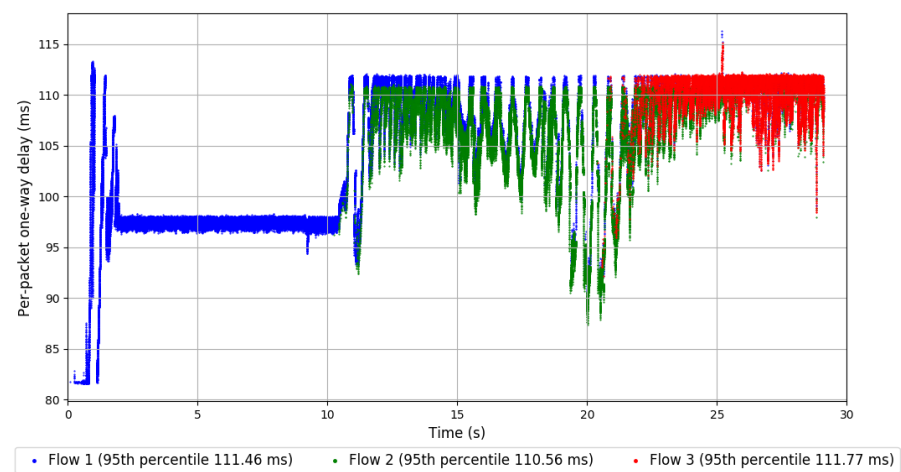
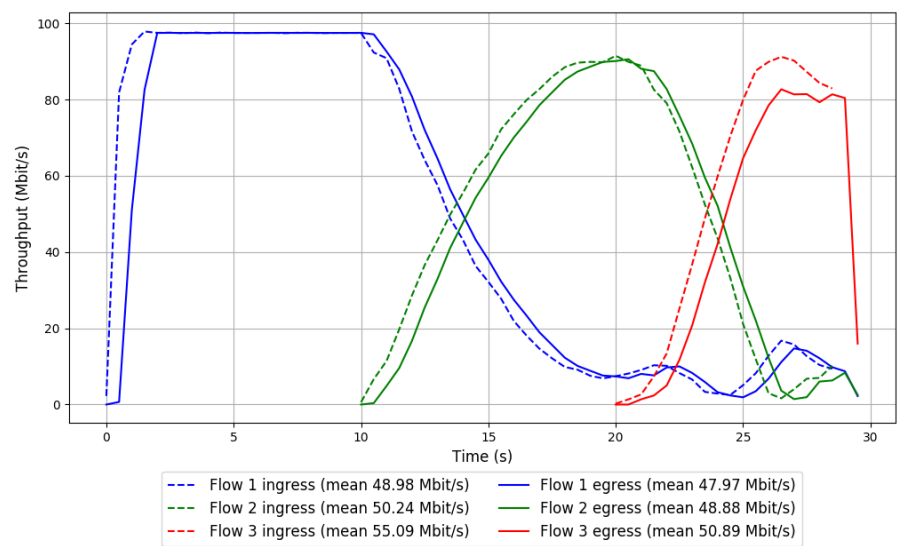


Run 3: Statistics of Indigo-MusesC3

Start at: 2019-03-09 03:34:18  
End at: 2019-03-09 03:34:48  
Local clock offset: 0.224 ms  
Remote clock offset: 17.668 ms

# Below is generated by plot.py at 2019-03-09 04:38:24  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.01 Mbit/s  
95th percentile per-packet one-way delay: 111.588 ms  
Loss rate: 3.14%  
-- Flow 1:  
Average throughput: 47.97 Mbit/s  
95th percentile per-packet one-way delay: 111.460 ms  
Loss rate: 1.98%  
-- Flow 2:  
Average throughput: 48.88 Mbit/s  
95th percentile per-packet one-way delay: 110.563 ms  
Loss rate: 2.64%  
-- Flow 3:  
Average throughput: 50.89 Mbit/s  
95th percentile per-packet one-way delay: 111.774 ms  
Loss rate: 7.56%

Run 3: Report of Indigo-MusesC3 — Data Link

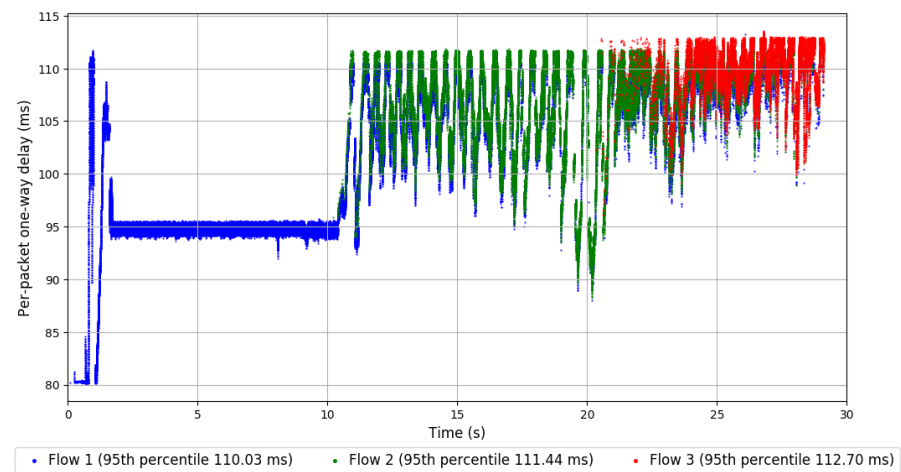
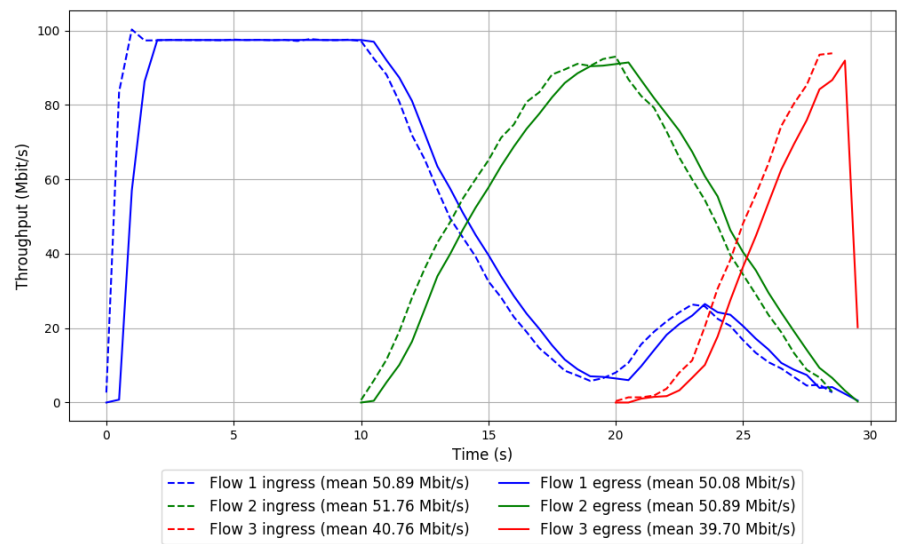


Run 4: Statistics of Indigo-MusesC3

Start at: 2019-03-09 04:00:55  
End at: 2019-03-09 04:01:25  
Local clock offset: 3.146 ms  
Remote clock offset: -1.725 ms

# Below is generated by plot.py at 2019-03-09 04:38:29  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.17 Mbit/s  
95th percentile per-packet one-way delay: 111.610 ms  
Loss rate: 1.65%  
-- Flow 1:  
Average throughput: 50.08 Mbit/s  
95th percentile per-packet one-way delay: 110.035 ms  
Loss rate: 1.49%  
-- Flow 2:  
Average throughput: 50.89 Mbit/s  
95th percentile per-packet one-way delay: 111.444 ms  
Loss rate: 1.60%  
-- Flow 3:  
Average throughput: 39.70 Mbit/s  
95th percentile per-packet one-way delay: 112.703 ms  
Loss rate: 2.49%

Run 4: Report of Indigo-MusesC3 — Data Link



Run 5: Statistics of Indigo-MusesC3

Start at: 2019-03-09 04:27:32

End at: 2019-03-09 04:28:02

Local clock offset: -0.591 ms

Remote clock offset: 2.45 ms

# Below is generated by plot.py at 2019-03-09 04:38:35

# Datalink statistics

-- Total of 3 flows:

Average throughput: 94.94 Mbit/s

95th percentile per-packet one-way delay: 116.446 ms

Loss rate: 2.16%

-- Flow 1:

Average throughput: 48.54 Mbit/s

95th percentile per-packet one-way delay: 112.279 ms

Loss rate: 2.65%

-- Flow 2:

Average throughput: 54.01 Mbit/s

95th percentile per-packet one-way delay: 117.039 ms

Loss rate: 1.38%

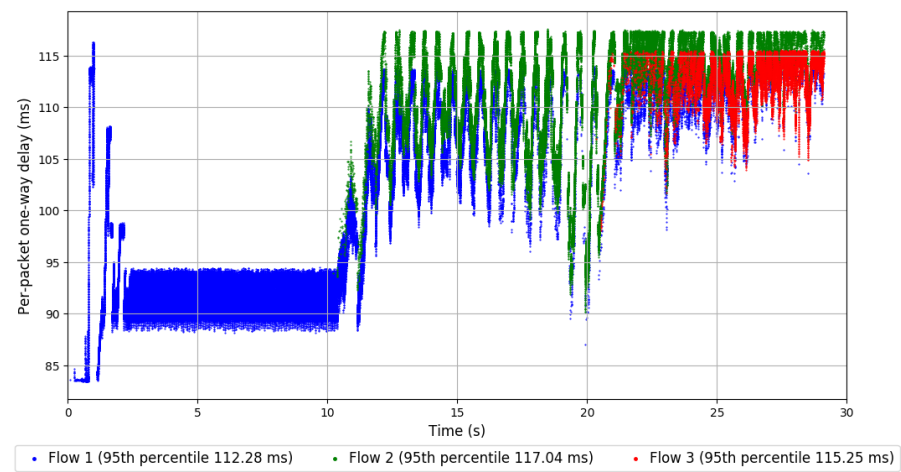
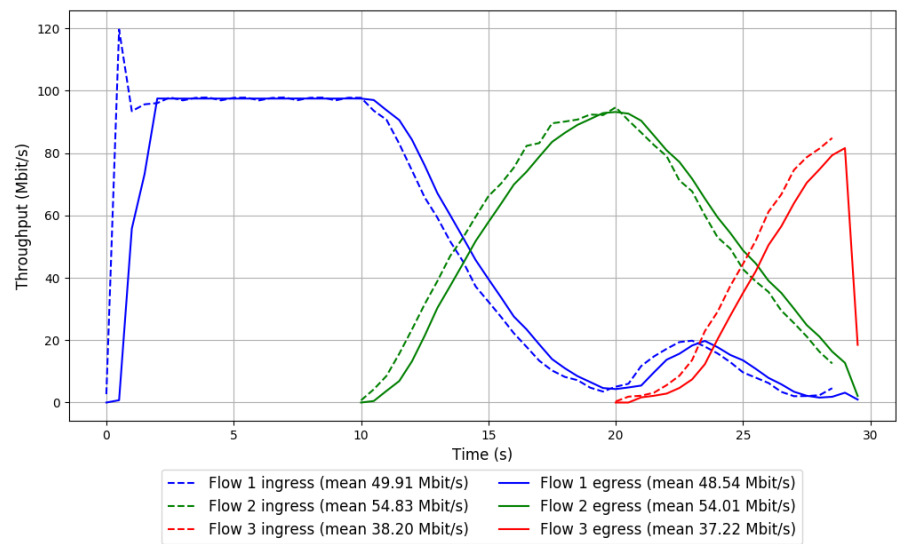
-- Flow 3:

Average throughput: 37.22 Mbit/s

95th percentile per-packet one-way delay: 115.253 ms

Loss rate: 2.48%

Run 5: Report of Indigo-MusesC3 — Data Link



Run 1: Statistics of Indigo-MusesC5

Start at: 2019-03-09 02:27:00

End at: 2019-03-09 02:27:30

Local clock offset: -6.235 ms

Remote clock offset: 0.512 ms

# Below is generated by plot.py at 2019-03-09 04:38:41

# Datalink statistics

-- Total of 3 flows:

Average throughput: 93.44 Mbit/s

95th percentile per-packet one-way delay: 109.833 ms

Loss rate: 2.56%

-- Flow 1:

Average throughput: 50.04 Mbit/s

95th percentile per-packet one-way delay: 111.549 ms

Loss rate: 1.23%

-- Flow 2:

Average throughput: 61.62 Mbit/s

95th percentile per-packet one-way delay: 109.595 ms

Loss rate: 3.80%

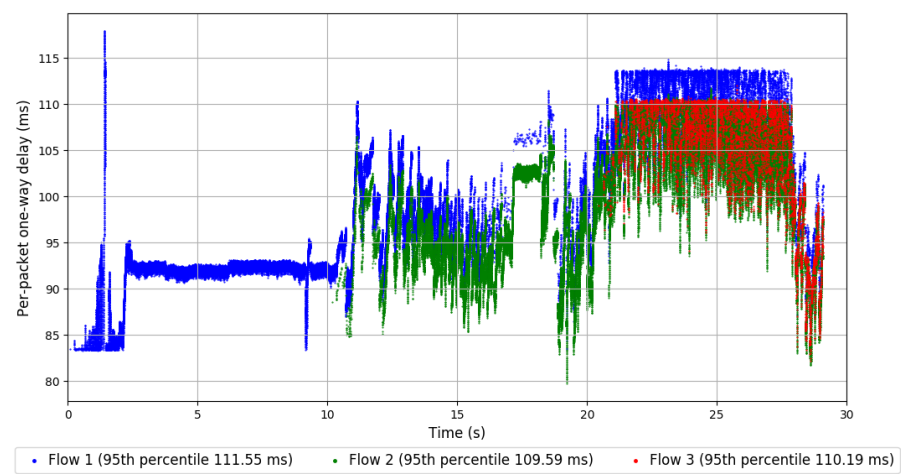
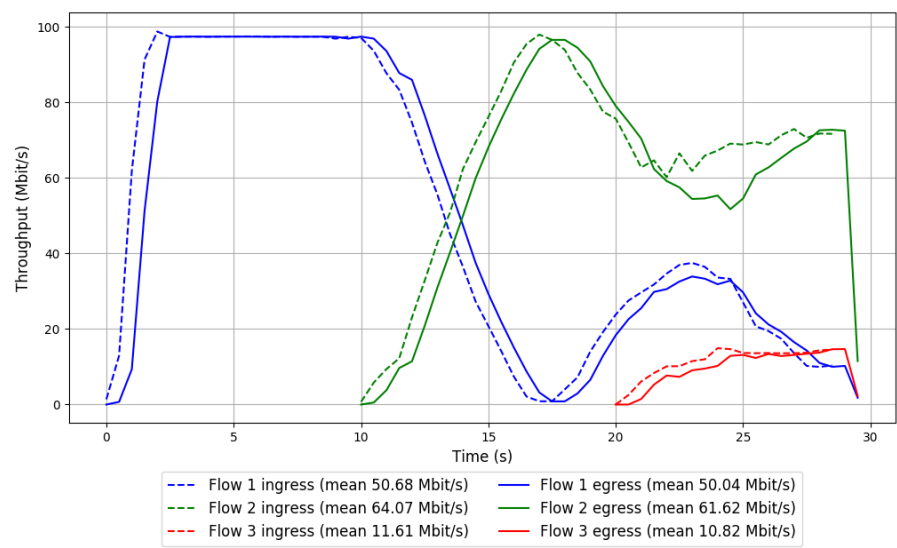
-- Flow 3:

Average throughput: 10.82 Mbit/s

95th percentile per-packet one-way delay: 110.190 ms

Loss rate: 6.90%

Run 1: Report of Indigo-MusesC5 — Data Link



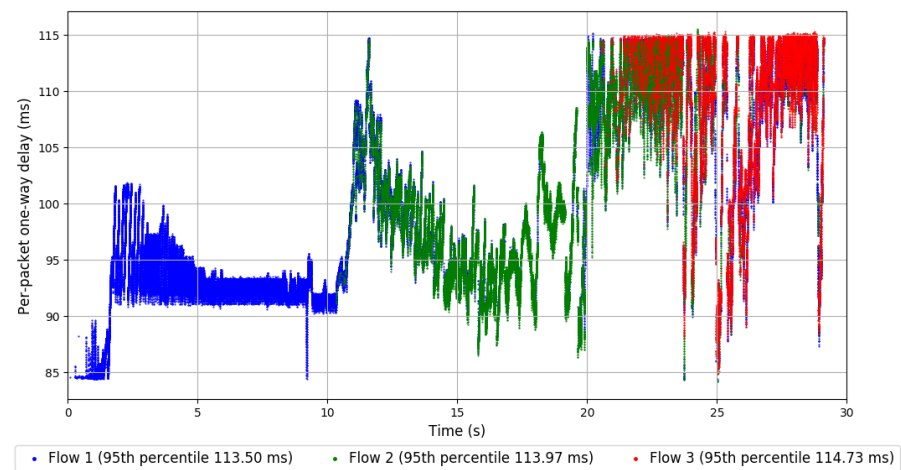
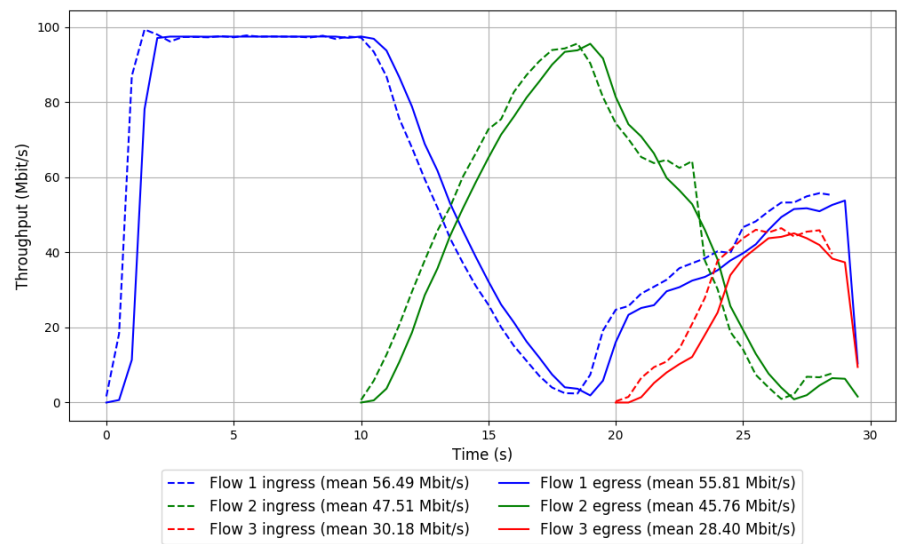


Run 2: Statistics of Indigo-MusesC5

Start at: 2019-03-09 02:53:38  
End at: 2019-03-09 02:54:08  
Local clock offset: -6.127 ms  
Remote clock offset: 16.048 ms

# Below is generated by plot.py at 2019-03-09 04:38:57  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 94.23 Mbit/s  
95th percentile per-packet one-way delay: 114.045 ms  
Loss rate: 2.34%  
-- Flow 1:  
Average throughput: 55.81 Mbit/s  
95th percentile per-packet one-way delay: 113.505 ms  
Loss rate: 1.10%  
-- Flow 2:  
Average throughput: 45.76 Mbit/s  
95th percentile per-packet one-way delay: 113.970 ms  
Loss rate: 3.57%  
-- Flow 3:  
Average throughput: 28.40 Mbit/s  
95th percentile per-packet one-way delay: 114.734 ms  
Loss rate: 5.86%

Run 2: Report of Indigo-MusesC5 — Data Link

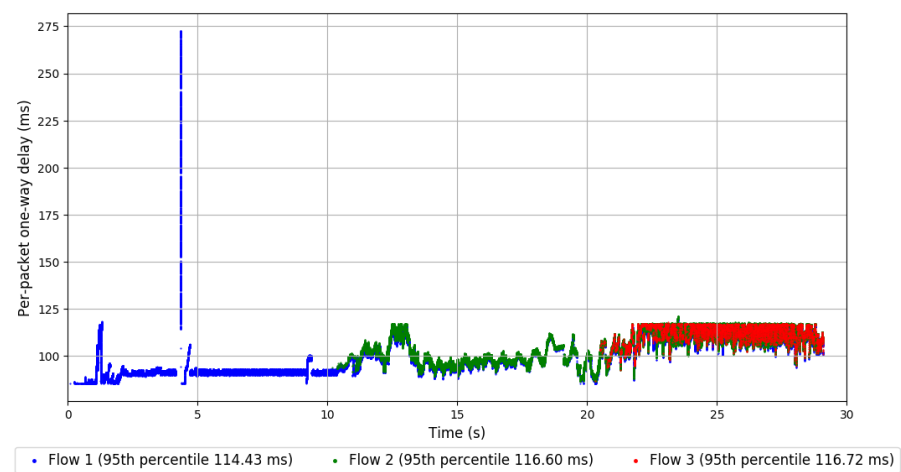
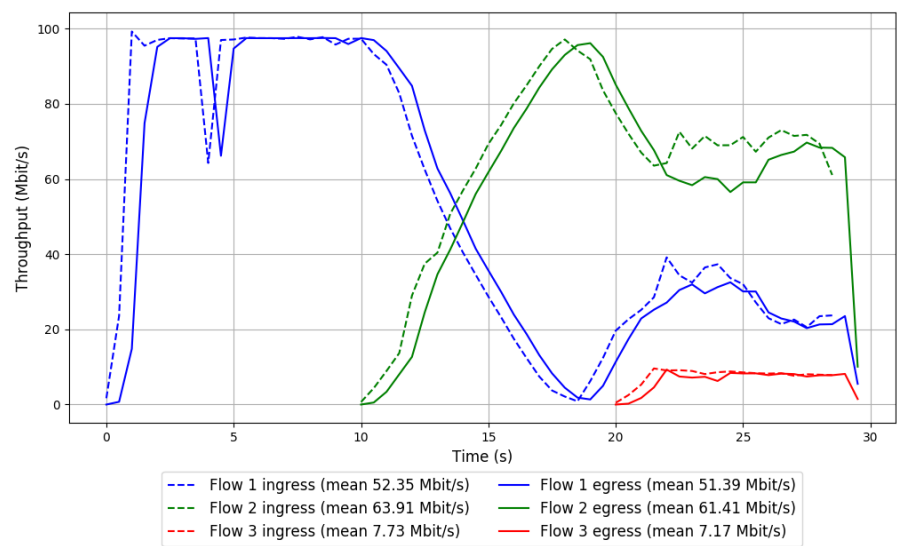


Run 3: Statistics of Indigo-MusesC5

Start at: 2019-03-09 03:20:15  
End at: 2019-03-09 03:20:45  
Local clock offset: -3.858 ms  
Remote clock offset: 20.053 ms

# Below is generated by plot.py at 2019-03-09 04:39:07  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 93.57 Mbit/s  
95th percentile per-packet one-way delay: 116.120 ms  
Loss rate: 2.83%  
-- Flow 1:  
Average throughput: 51.39 Mbit/s  
95th percentile per-packet one-way delay: 114.427 ms  
Loss rate: 1.78%  
-- Flow 2:  
Average throughput: 61.41 Mbit/s  
95th percentile per-packet one-way delay: 116.598 ms  
Loss rate: 3.90%  
-- Flow 3:  
Average throughput: 7.17 Mbit/s  
95th percentile per-packet one-way delay: 116.720 ms  
Loss rate: 7.09%

Run 3: Report of Indigo-MusesC5 — Data Link



Run 4: Statistics of Indigo-MusesC5

Start at: 2019-03-09 03:46:56

End at: 2019-03-09 03:47:26

Local clock offset: 1.674 ms

Remote clock offset: 8.952 ms

# Below is generated by plot.py at 2019-03-09 04:39:14

# Datalink statistics

-- Total of 3 flows:

Average throughput: 94.18 Mbit/s

95th percentile per-packet one-way delay: 115.987 ms

Loss rate: 1.72%

-- Flow 1:

Average throughput: 58.82 Mbit/s

95th percentile per-packet one-way delay: 116.310 ms

Loss rate: 1.19%

-- Flow 2:

Average throughput: 46.34 Mbit/s

95th percentile per-packet one-way delay: 115.799 ms

Loss rate: 2.31%

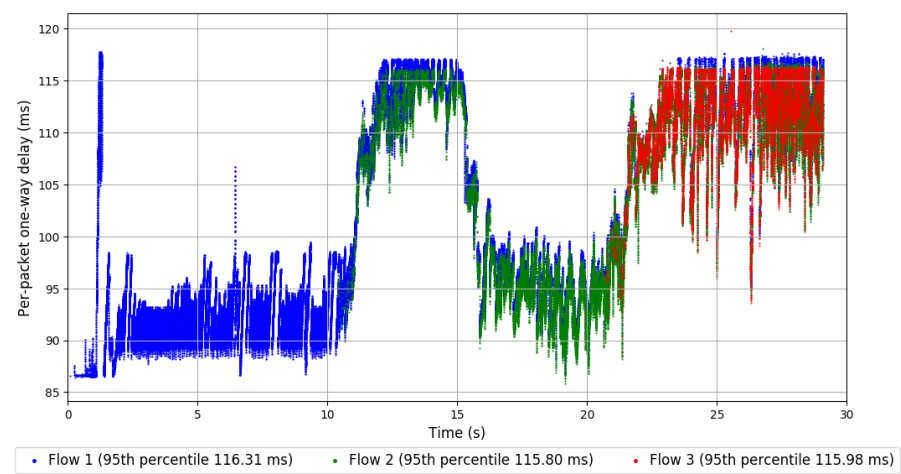
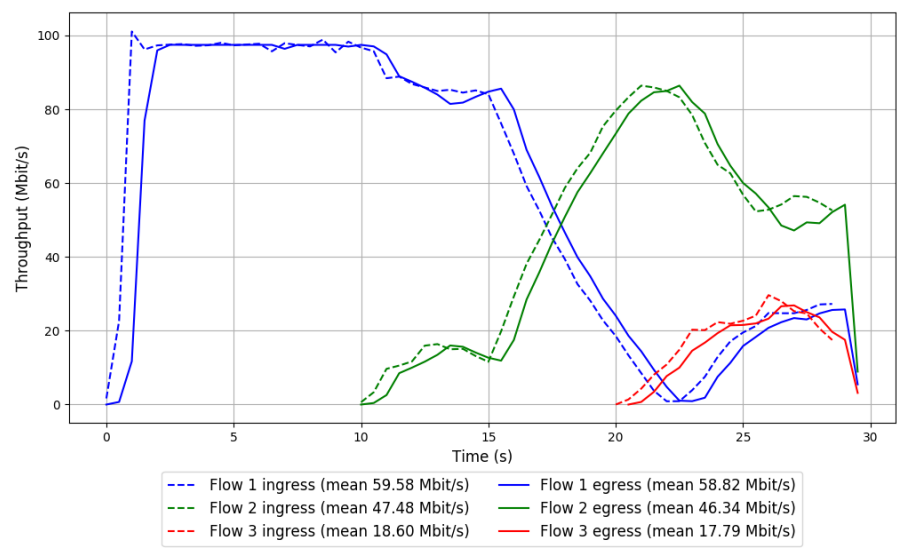
-- Flow 3:

Average throughput: 17.79 Mbit/s

95th percentile per-packet one-way delay: 115.981 ms

Loss rate: 4.19%

Run 4: Report of Indigo-MusesC5 — Data Link

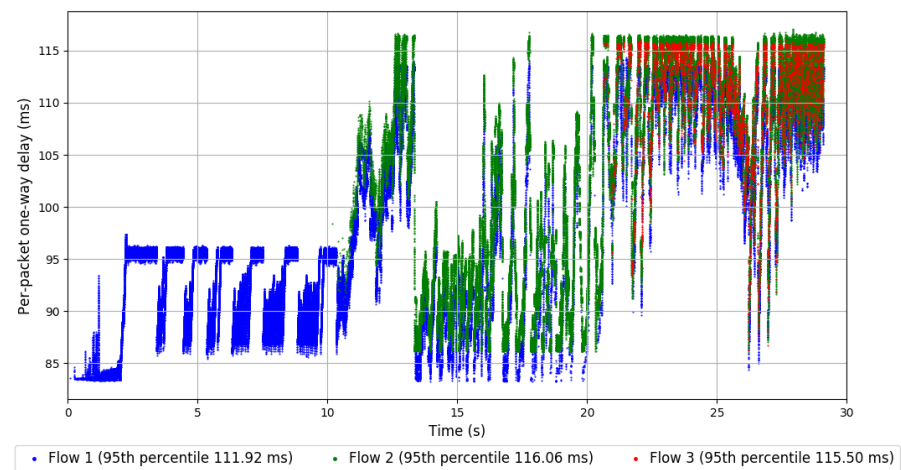
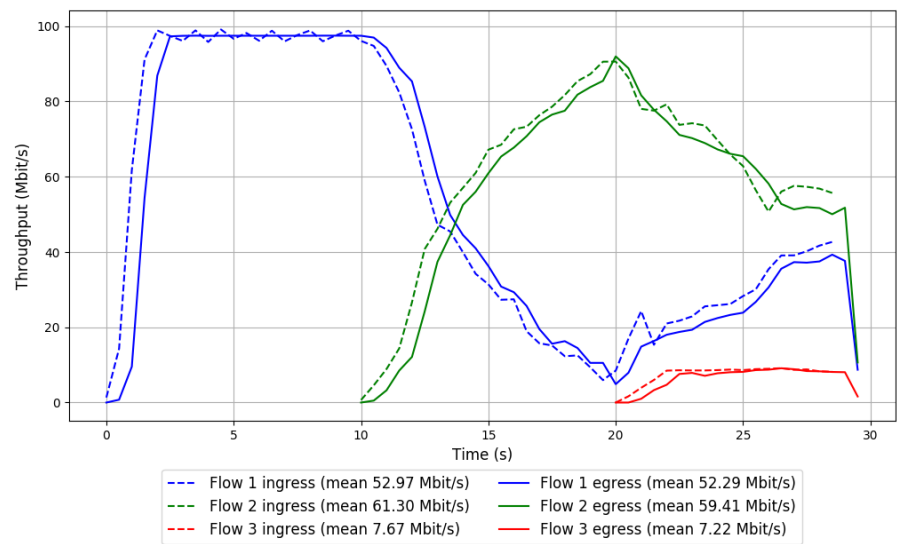


Run 5: Statistics of Indigo-MusesC5

Start at: 2019-03-09 04:13:33  
End at: 2019-03-09 04:14:03  
Local clock offset: 4.332 ms  
Remote clock offset: -0.272 ms

# Below is generated by plot.py at 2019-03-09 04:39:20  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 93.17 Mbit/s  
95th percentile per-packet one-way delay: 115.503 ms  
Loss rate: 2.04%  
-- Flow 1:  
Average throughput: 52.29 Mbit/s  
95th percentile per-packet one-way delay: 111.925 ms  
Loss rate: 1.17%  
-- Flow 2:  
Average throughput: 59.41 Mbit/s  
95th percentile per-packet one-way delay: 116.056 ms  
Loss rate: 2.99%  
-- Flow 3:  
Average throughput: 7.22 Mbit/s  
95th percentile per-packet one-way delay: 115.499 ms  
Loss rate: 5.49%

Run 5: Report of Indigo-MusesC5 — Data Link



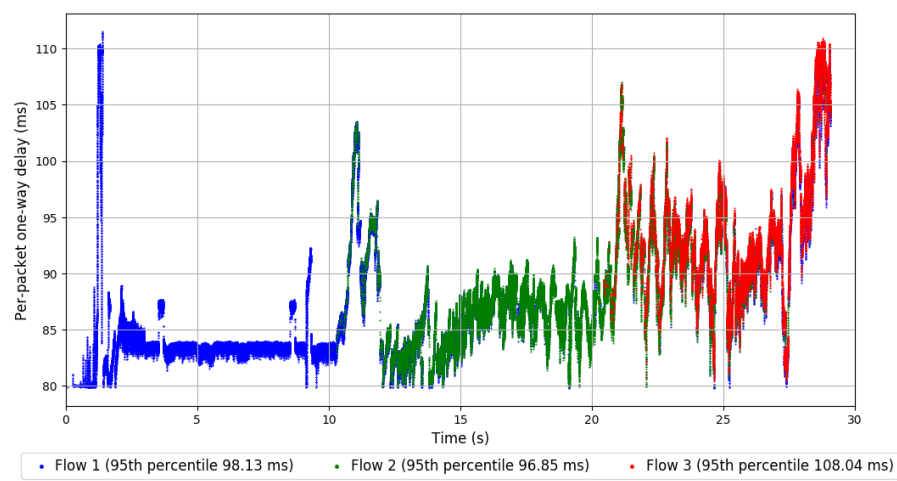
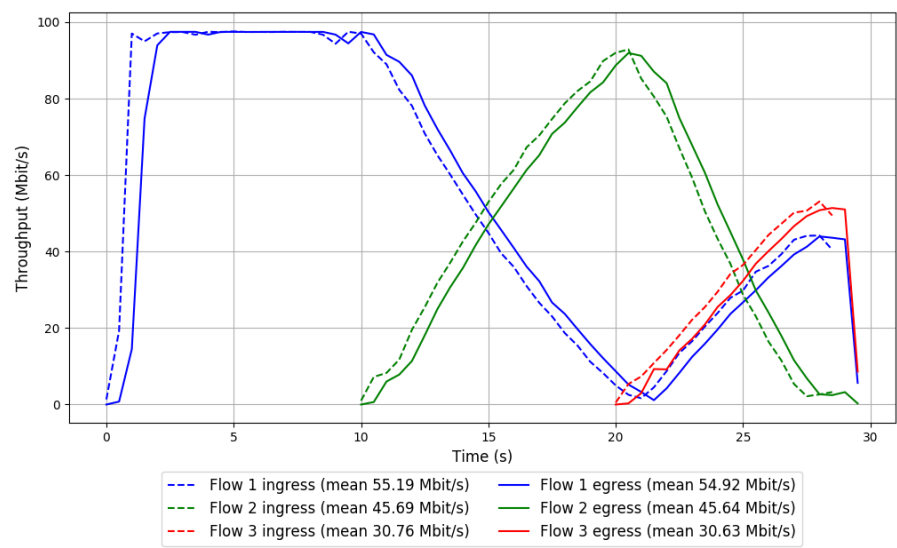


Run 1: Statistics of Indigo-MusesD

Start at: 2019-03-09 02:44:49  
End at: 2019-03-09 02:45:19  
Local clock offset: -6.13 ms  
Remote clock offset: 10.196 ms

# Below is generated by plot.py at 2019-03-09 04:39:32  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 94.00 Mbit/s  
95th percentile per-packet one-way delay: 99.860 ms  
Loss rate: 0.26%  
-- Flow 1:  
Average throughput: 54.92 Mbit/s  
95th percentile per-packet one-way delay: 98.132 ms  
Loss rate: 0.41%  
-- Flow 2:  
Average throughput: 45.64 Mbit/s  
95th percentile per-packet one-way delay: 96.850 ms  
Loss rate: 0.01%  
-- Flow 3:  
Average throughput: 30.63 Mbit/s  
95th percentile per-packet one-way delay: 108.036 ms  
Loss rate: 0.23%

Run 1: Report of Indigo-MusesD — Data Link

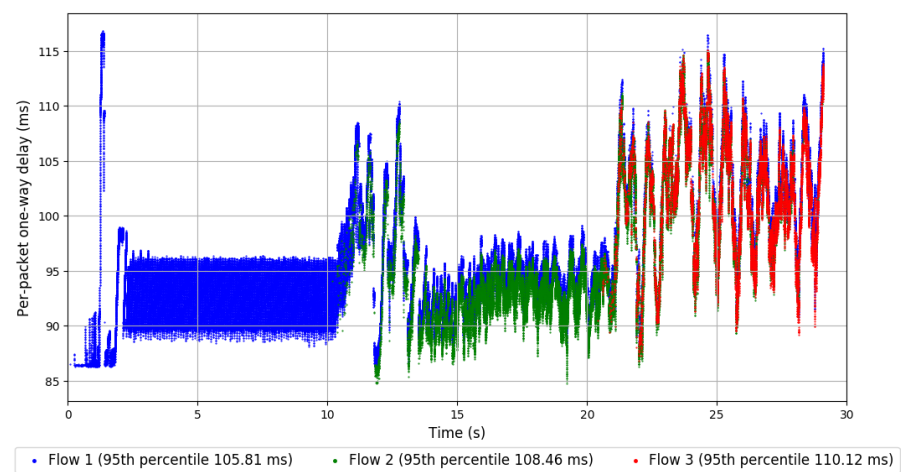
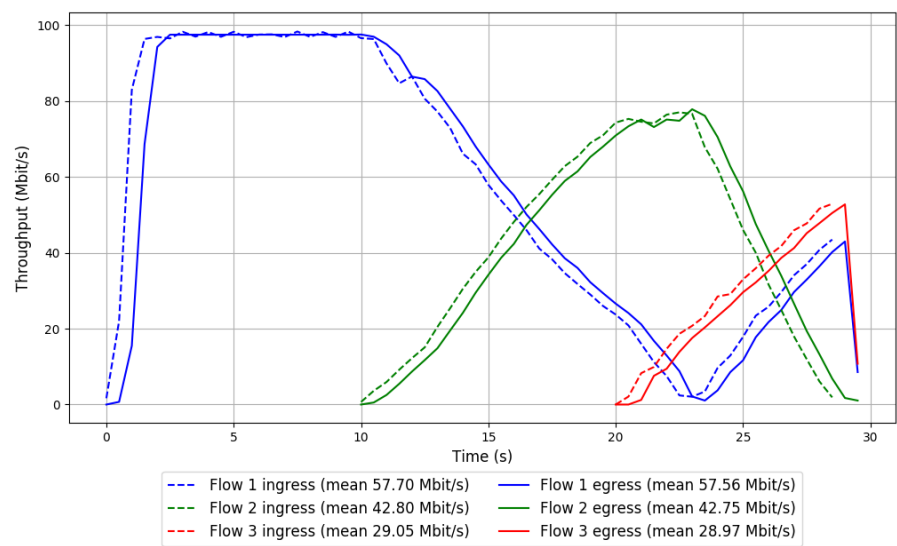


Run 2: Statistics of Indigo-MusesD

Start at: 2019-03-09 03:11:27  
End at: 2019-03-09 03:11:57  
Local clock offset: -6.209 ms  
Remote clock offset: 18.733 ms

# Below is generated by plot.py at 2019-03-09 04:39:37  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 94.07 Mbit/s  
95th percentile per-packet one-way delay: 107.704 ms  
Loss rate: 0.10%  
-- Flow 1:  
Average throughput: 57.56 Mbit/s  
95th percentile per-packet one-way delay: 105.813 ms  
Loss rate: 0.15%  
-- Flow 2:  
Average throughput: 42.75 Mbit/s  
95th percentile per-packet one-way delay: 108.456 ms  
Loss rate: 0.01%  
-- Flow 3:  
Average throughput: 28.97 Mbit/s  
95th percentile per-packet one-way delay: 110.124 ms  
Loss rate: 0.02%

Run 2: Report of Indigo-MusesD — Data Link

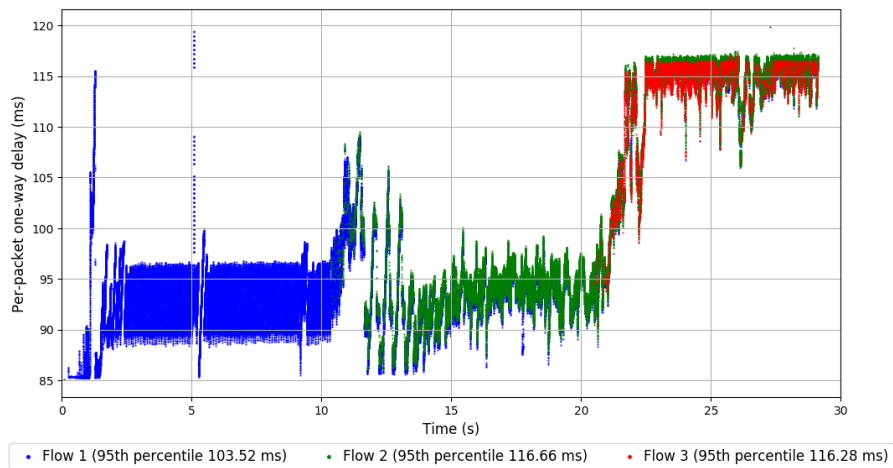
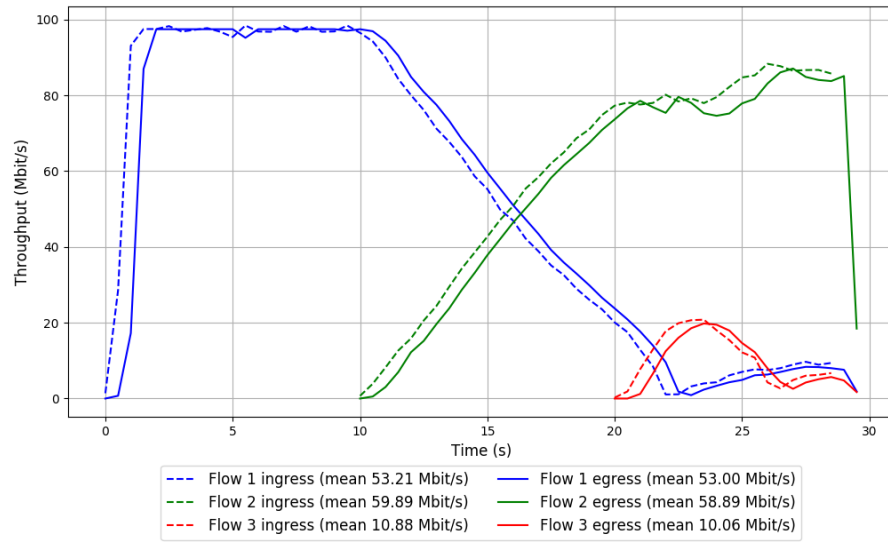


Run 3: Statistics of Indigo-MusesD

Start at: 2019-03-09 03:38:08  
End at: 2019-03-09 03:38:38  
Local clock offset: 0.661 ms  
Remote clock offset: 20.778 ms

# Below is generated by plot.py at 2019-03-09 04:39:44  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 94.42 Mbit/s  
95th percentile per-packet one-way delay: 116.376 ms  
Loss rate: 1.05%  
-- Flow 1:  
Average throughput: 53.00 Mbit/s  
95th percentile per-packet one-way delay: 103.522 ms  
Loss rate: 0.30%  
-- Flow 2:  
Average throughput: 58.89 Mbit/s  
95th percentile per-packet one-way delay: 116.656 ms  
Loss rate: 1.55%  
-- Flow 3:  
Average throughput: 10.06 Mbit/s  
95th percentile per-packet one-way delay: 116.281 ms  
Loss rate: 7.29%

### Run 3: Report of Indigo-MusesD — Data Link



Run 4: Statistics of Indigo-MusesD

Start at: 2019-03-09 04:04:45

End at: 2019-03-09 04:05:15

Local clock offset: 2.757 ms

Remote clock offset: 0.762 ms

# Below is generated by plot.py at 2019-03-09 04:39:50

# Datalink statistics

-- Total of 3 flows:

Average throughput: 93.86 Mbit/s

95th percentile per-packet one-way delay: 109.088 ms

Loss rate: 0.27%

-- Flow 1:

Average throughput: 55.91 Mbit/s

95th percentile per-packet one-way delay: 106.198 ms

Loss rate: 0.35%

-- Flow 2:

Average throughput: 42.89 Mbit/s

95th percentile per-packet one-way delay: 105.375 ms

Loss rate: 0.04%

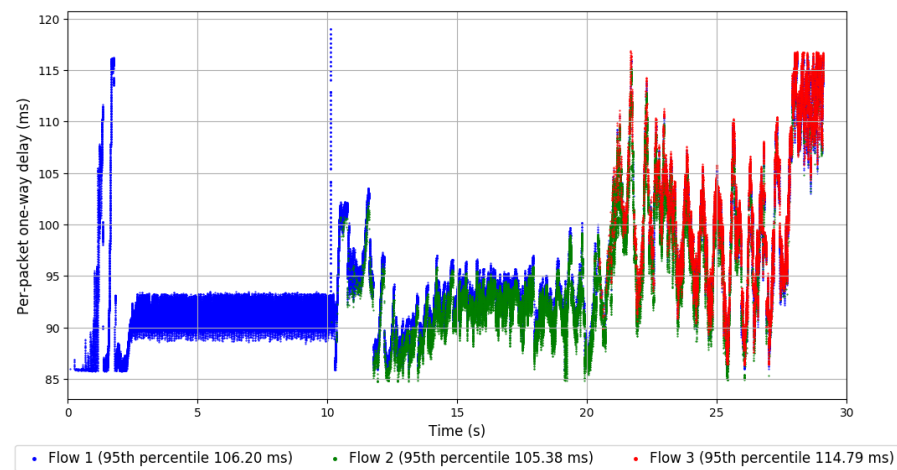
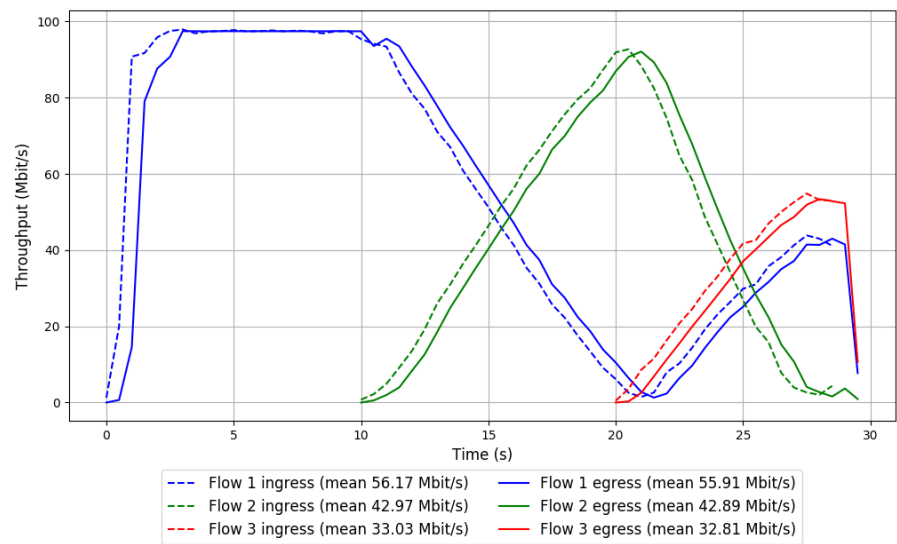
-- Flow 3:

Average throughput: 32.81 Mbit/s

95th percentile per-packet one-way delay: 114.787 ms

Loss rate: 0.48%

Run 4: Report of Indigo-MusesD — Data Link





Run 5: Statistics of Indigo-MusesD

Start at: 2019-03-09 04:31:22

End at: 2019-03-09 04:31:52

Local clock offset: -1.921 ms

Remote clock offset: 2.409 ms

# Below is generated by plot.py at 2019-03-09 04:40:07

# Datalink statistics

-- Total of 3 flows:

Average throughput: 93.83 Mbit/s

95th percentile per-packet one-way delay: 107.883 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 55.57 Mbit/s

95th percentile per-packet one-way delay: 104.917 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 42.93 Mbit/s

95th percentile per-packet one-way delay: 106.614 ms

Loss rate: 0.00%

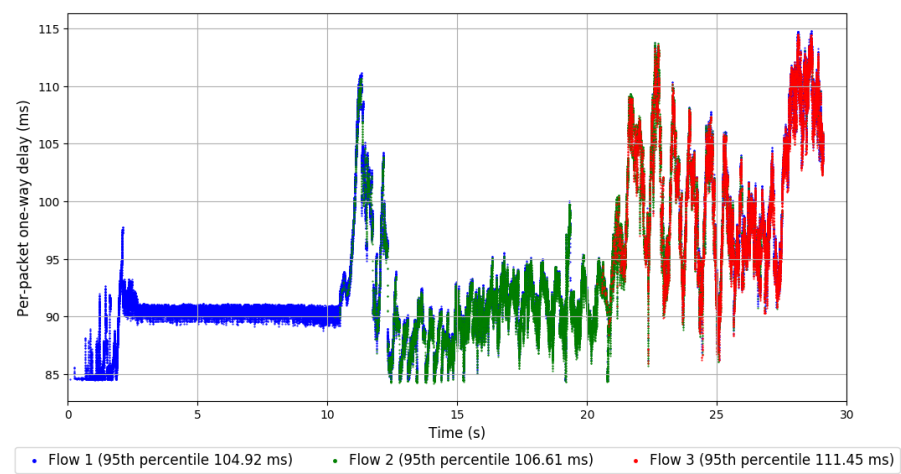
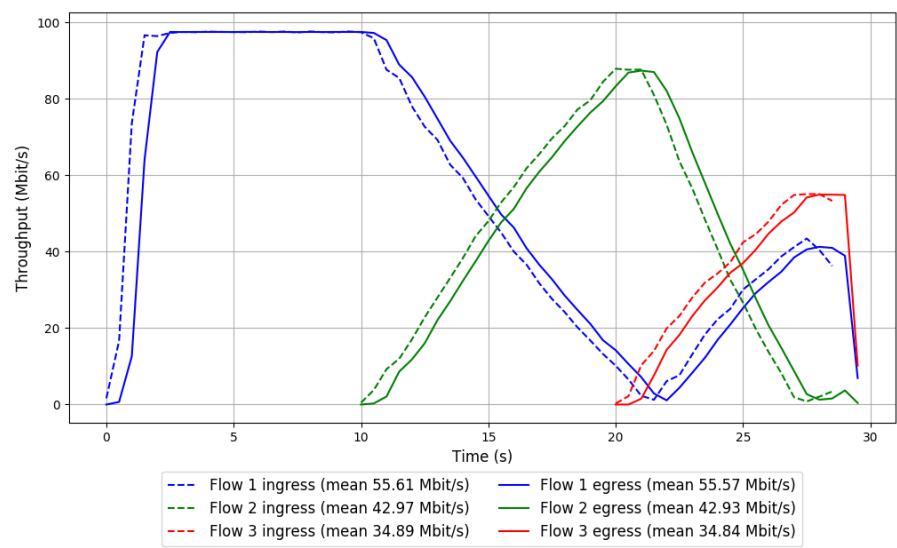
-- Flow 3:

Average throughput: 34.84 Mbit/s

95th percentile per-packet one-way delay: 111.450 ms

Loss rate: 0.02%

Run 5: Report of Indigo-MusesD — Data Link



Run 1: Statistics of Indigo-MusesT

Start at: 2019-03-09 02:28:18

End at: 2019-03-09 02:28:48

Local clock offset: -6.977 ms

Remote clock offset: 4.714 ms

# Below is generated by plot.py at 2019-03-09 04:40:20

# Datalink statistics

-- Total of 3 flows:

Average throughput: 94.78 Mbit/s

95th percentile per-packet one-way delay: 116.369 ms

Loss rate: 4.70%

-- Flow 1:

Average throughput: 59.06 Mbit/s

95th percentile per-packet one-way delay: 116.355 ms

Loss rate: 4.66%

-- Flow 2:

Average throughput: 45.10 Mbit/s

95th percentile per-packet one-way delay: 114.755 ms

Loss rate: 4.36%

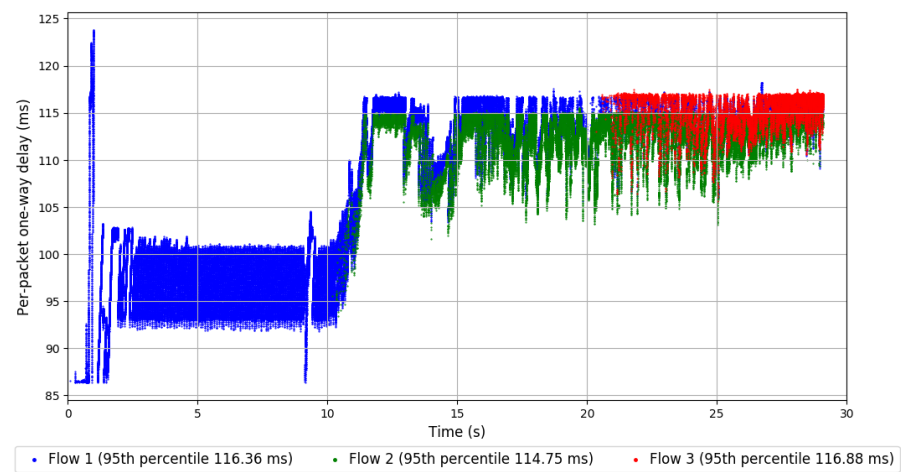
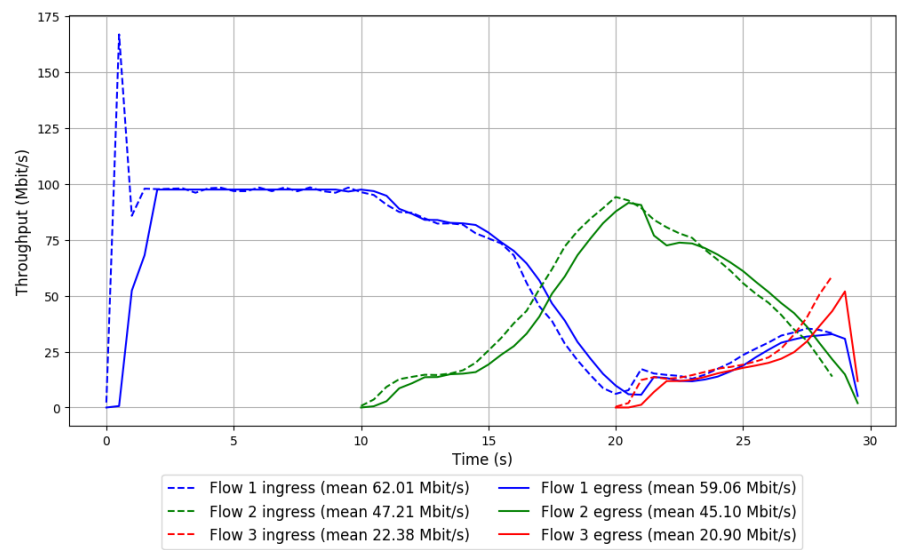
-- Flow 3:

Average throughput: 20.90 Mbit/s

95th percentile per-packet one-way delay: 116.883 ms

Loss rate: 6.55%

Run 1: Report of Indigo-MusesT — Data Link

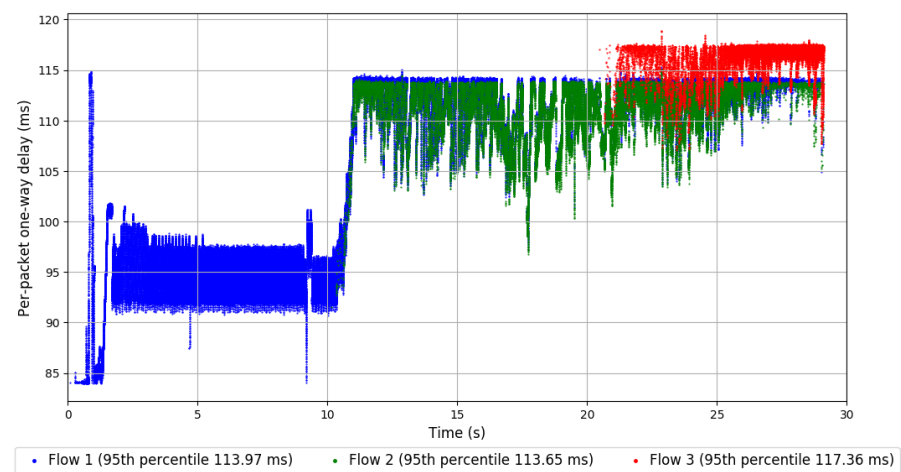
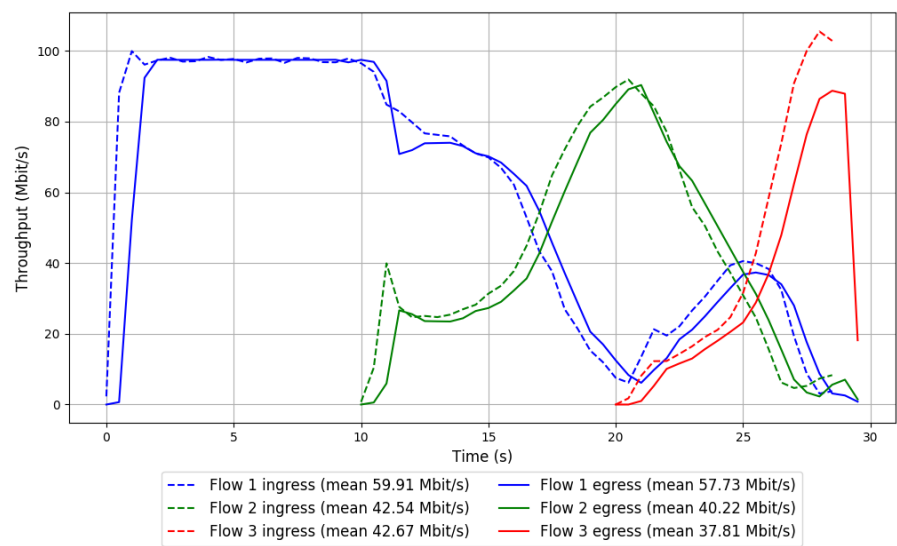


Run 2: Statistics of Indigo-MusesT

Start at: 2019-03-09 02:54:55  
End at: 2019-03-09 02:55:25  
Local clock offset: -6.14 ms  
Remote clock offset: 16.244 ms

# Below is generated by plot.py at 2019-03-09 04:40:28  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.20 Mbit/s  
95th percentile per-packet one-way delay: 117.038 ms  
Loss rate: 5.03%  
-- Flow 1:  
Average throughput: 57.73 Mbit/s  
95th percentile per-packet one-way delay: 113.970 ms  
Loss rate: 3.54%  
-- Flow 2:  
Average throughput: 40.22 Mbit/s  
95th percentile per-packet one-way delay: 113.647 ms  
Loss rate: 5.35%  
-- Flow 3:  
Average throughput: 37.81 Mbit/s  
95th percentile per-packet one-way delay: 117.359 ms  
Loss rate: 11.38%

Run 2: Report of Indigo-MusesT — Data Link

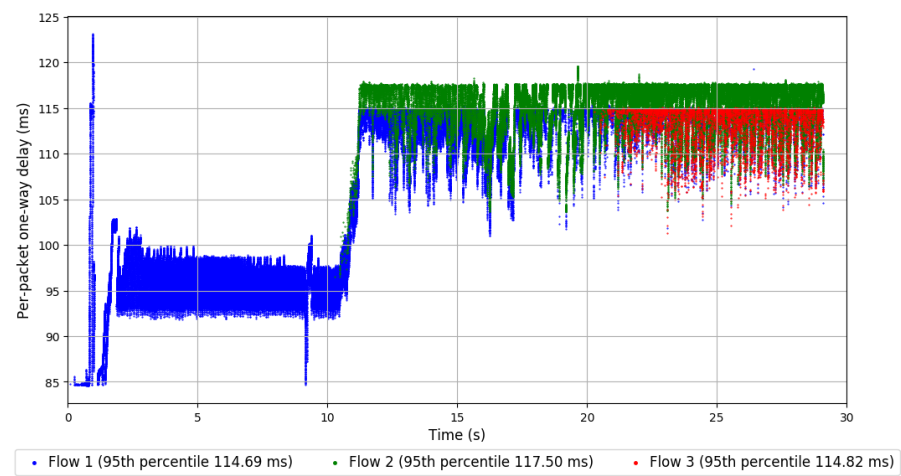
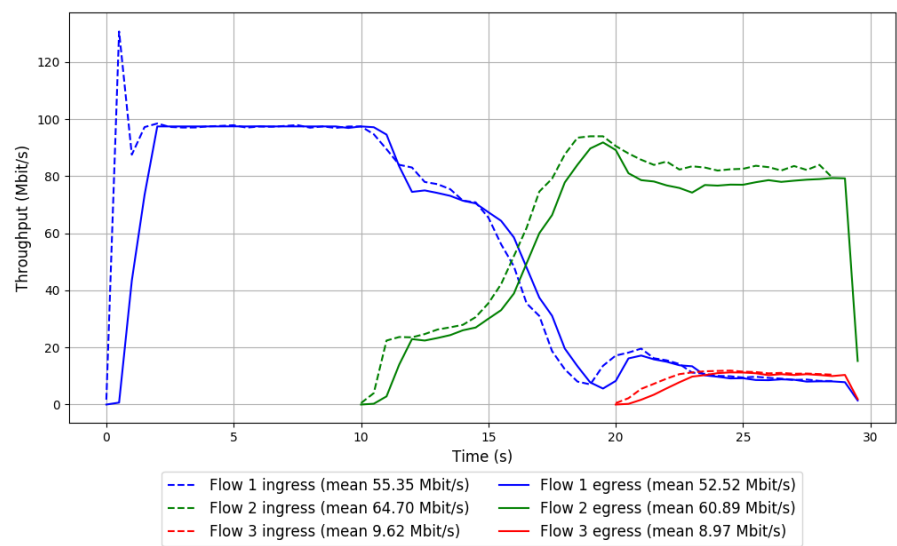


Run 3: Statistics of Indigo-MusesT

Start at: 2019-03-09 03:21:37  
End at: 2019-03-09 03:22:07  
Local clock offset: -3.415 ms  
Remote clock offset: 19.968 ms

# Below is generated by plot.py at 2019-03-09 04:40:34  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 94.72 Mbit/s  
95th percentile per-packet one-way delay: 117.378 ms  
Loss rate: 5.42%  
-- Flow 1:  
Average throughput: 52.52 Mbit/s  
95th percentile per-packet one-way delay: 114.690 ms  
Loss rate: 5.03%  
-- Flow 2:  
Average throughput: 60.89 Mbit/s  
95th percentile per-packet one-way delay: 117.497 ms  
Loss rate: 5.83%  
-- Flow 3:  
Average throughput: 8.97 Mbit/s  
95th percentile per-packet one-way delay: 114.821 ms  
Loss rate: 6.86%

Run 3: Report of Indigo-MusesT — Data Link





Run 4: Statistics of Indigo-MusesT

Start at: 2019-03-09 03:48:14

End at: 2019-03-09 03:48:44

Local clock offset: 1.884 ms

Remote clock offset: 4.119 ms

# Below is generated by plot.py at 2019-03-09 04:40:45

# Datalink statistics

-- Total of 3 flows:

Average throughput: 94.37 Mbit/s

95th percentile per-packet one-way delay: 112.168 ms

Loss rate: 7.26%

-- Flow 1:

Average throughput: 47.75 Mbit/s

95th percentile per-packet one-way delay: 112.126 ms

Loss rate: 7.70%

-- Flow 2:

Average throughput: 66.83 Mbit/s

95th percentile per-packet one-way delay: 112.142 ms

Loss rate: 7.03%

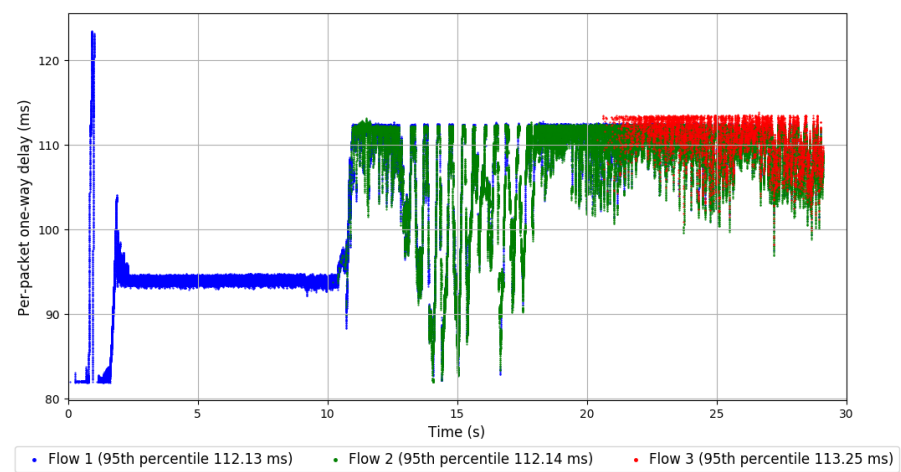
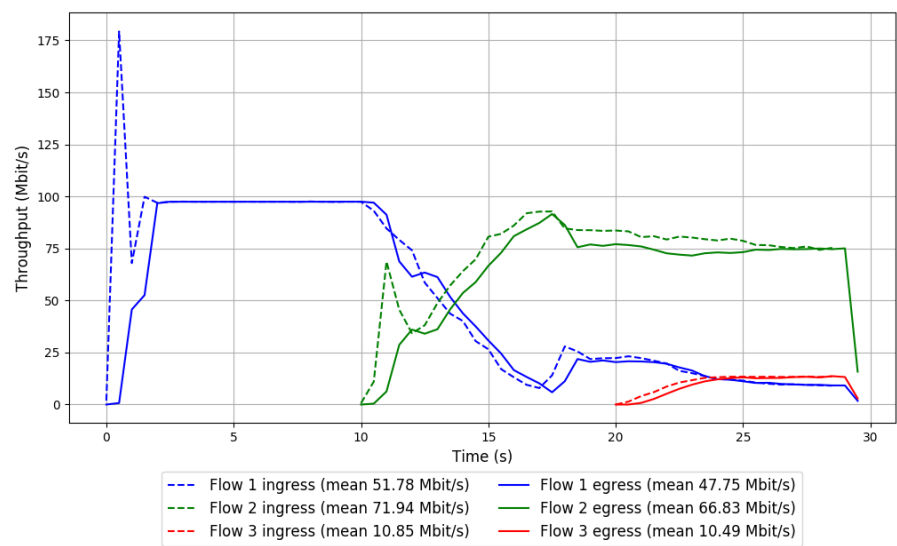
-- Flow 3:

Average throughput: 10.49 Mbit/s

95th percentile per-packet one-way delay: 113.253 ms

Loss rate: 3.36%

Run 4: Report of Indigo-MusesT — Data Link



Run 5: Statistics of Indigo-MusesT

Start at: 2019-03-09 04:14:50

End at: 2019-03-09 04:15:20

Local clock offset: 3.378 ms

Remote clock offset: 0.569 ms

# Below is generated by plot.py at 2019-03-09 04:40:49

# Datalink statistics

-- Total of 3 flows:

Average throughput: 94.97 Mbit/s

95th percentile per-packet one-way delay: 115.493 ms

Loss rate: 5.05%

-- Flow 1:

Average throughput: 53.45 Mbit/s

95th percentile per-packet one-way delay: 115.472 ms

Loss rate: 4.68%

-- Flow 2:

Average throughput: 50.64 Mbit/s

95th percentile per-packet one-way delay: 115.512 ms

Loss rate: 4.48%

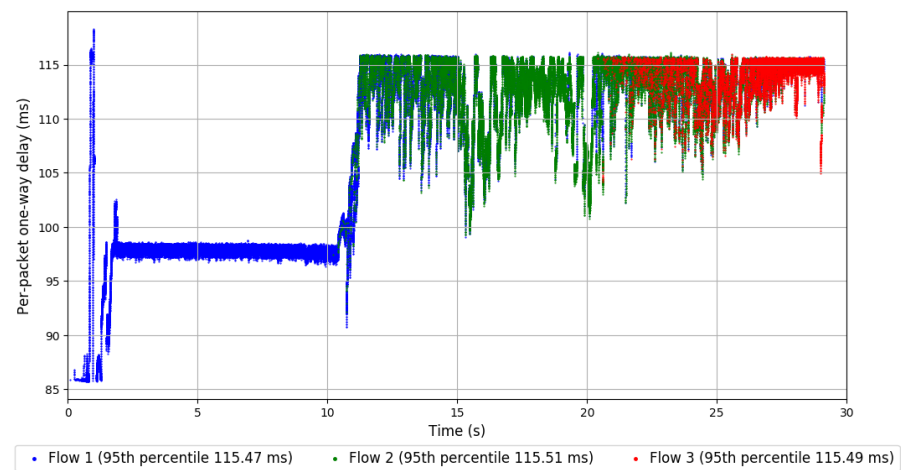
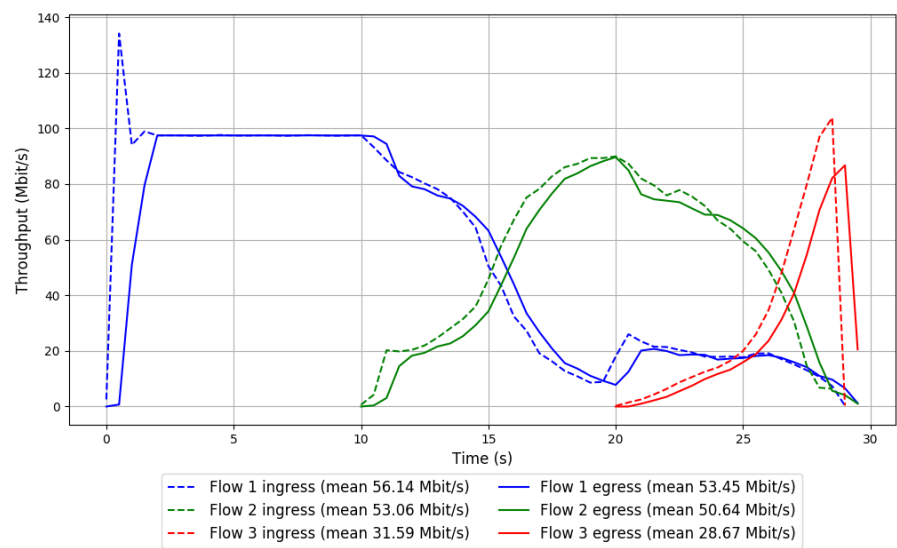
-- Flow 3:

Average throughput: 28.67 Mbit/s

95th percentile per-packet one-way delay: 115.490 ms

Loss rate: 9.26%

Run 5: Report of Indigo-MusesT — Data Link

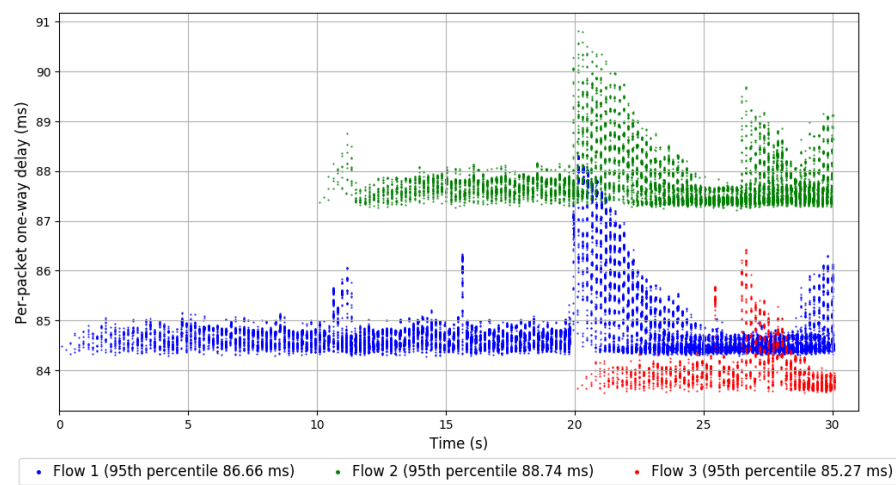
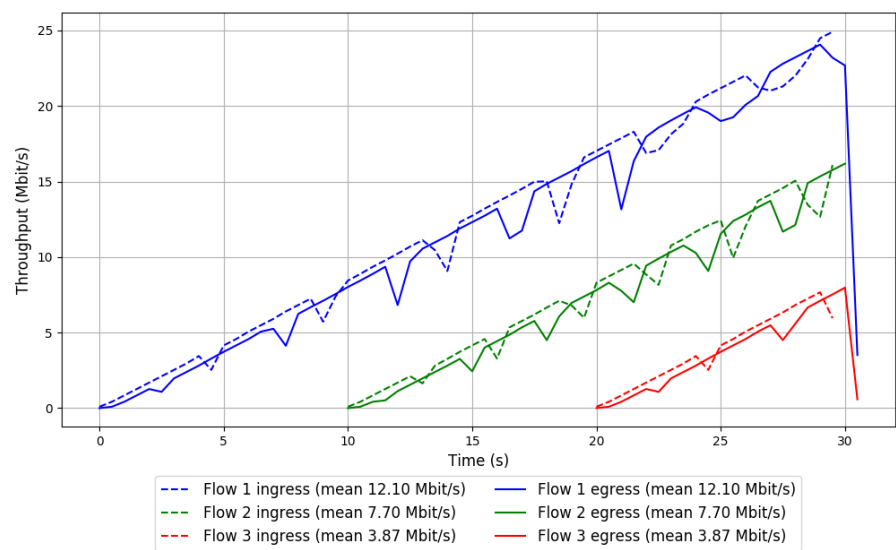


```
Run 1: Statistics of LEDBAT

Start at: 2019-03-09 02:19:29
End at: 2019-03-09 02:19:59
Local clock offset: -6.403 ms
Remote clock offset: 4.604 ms

# Below is generated by plot.py at 2019-03-09 04:40:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.47 Mbit/s
95th percentile per-packet one-way delay: 88.036 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 12.10 Mbit/s
95th percentile per-packet one-way delay: 86.656 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 7.70 Mbit/s
95th percentile per-packet one-way delay: 88.743 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 3.87 Mbit/s
95th percentile per-packet one-way delay: 85.267 ms
Loss rate: 0.00%
```

Run 1: Report of LEDBAT — Data Link

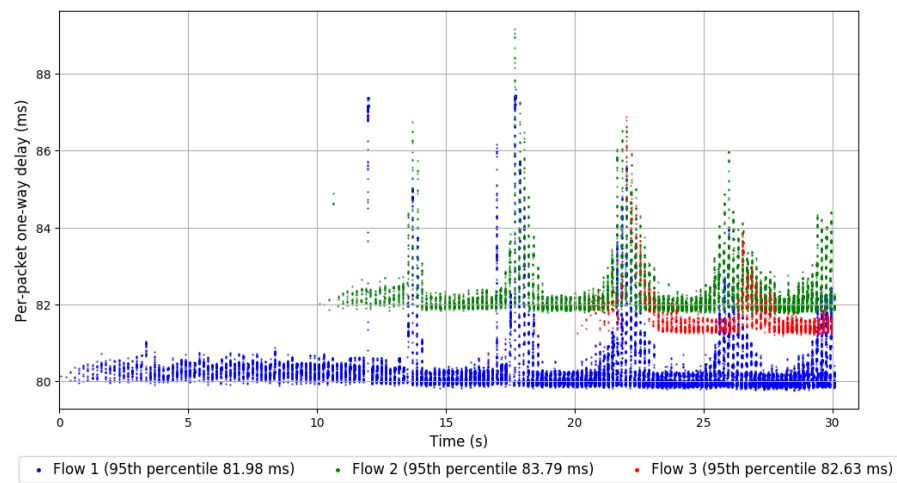
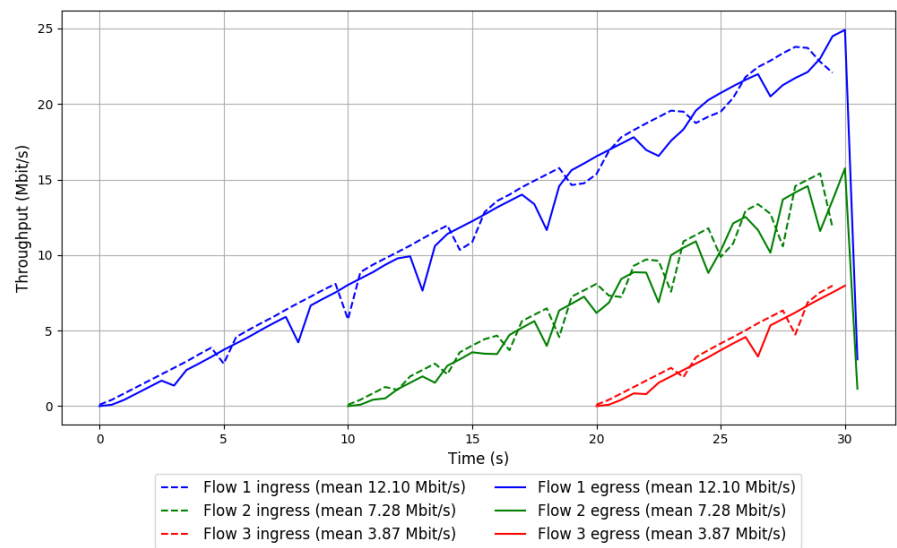


Run 2: Statistics of LEDBAT

Start at: 2019-03-09 02:46:07  
End at: 2019-03-09 02:46:37  
Local clock offset: -6.138 ms  
Remote clock offset: 10.536 ms

# Below is generated by plot.py at 2019-03-09 04:40:49  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 18.22 Mbit/s  
95th percentile per-packet one-way delay: 83.110 ms  
Loss rate: 0.01%  
-- Flow 1:  
Average throughput: 12.10 Mbit/s  
95th percentile per-packet one-way delay: 81.983 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 7.28 Mbit/s  
95th percentile per-packet one-way delay: 83.788 ms  
Loss rate: 0.04%  
-- Flow 3:  
Average throughput: 3.87 Mbit/s  
95th percentile per-packet one-way delay: 82.627 ms  
Loss rate: 0.00%

Run 2: Report of LEDBAT — Data Link



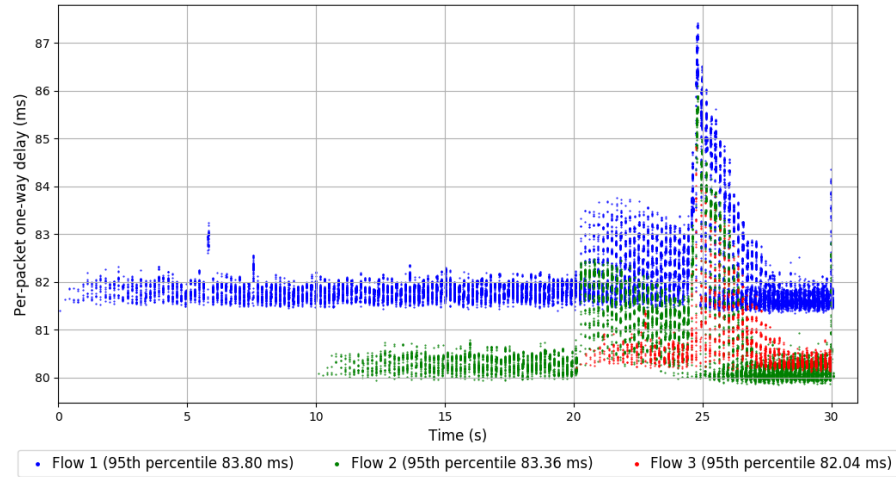
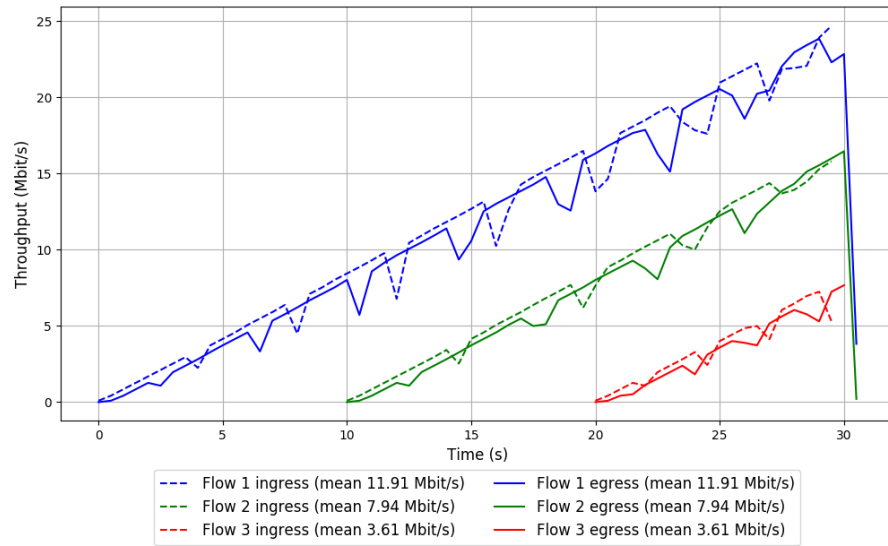


Run 3: Statistics of LEDBAT

Start at: 2019-03-09 03:12:44  
End at: 2019-03-09 03:13:14  
Local clock offset: -6.17 ms  
Remote clock offset: 15.019 ms

# Below is generated by plot.py at 2019-03-09 04:40:49  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 18.37 Mbit/s  
95th percentile per-packet one-way delay: 83.573 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 11.91 Mbit/s  
95th percentile per-packet one-way delay: 83.804 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 7.94 Mbit/s  
95th percentile per-packet one-way delay: 83.360 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 3.61 Mbit/s  
95th percentile per-packet one-way delay: 82.036 ms  
Loss rate: 0.00%

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

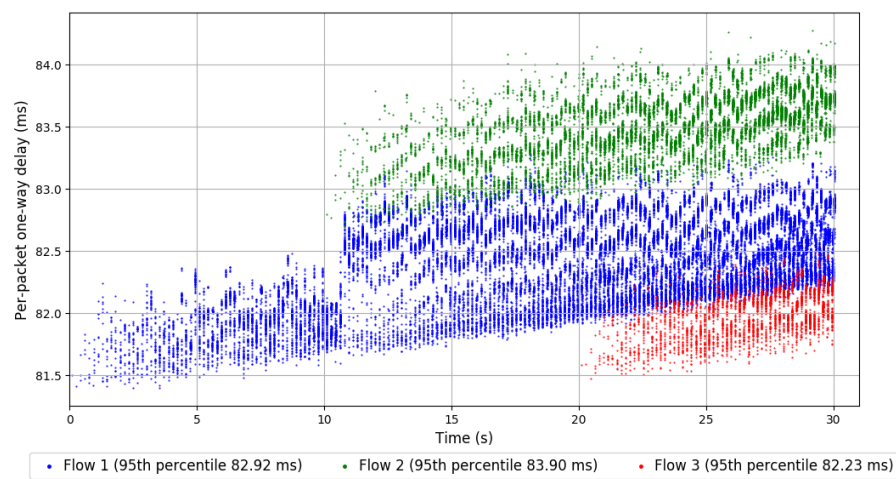
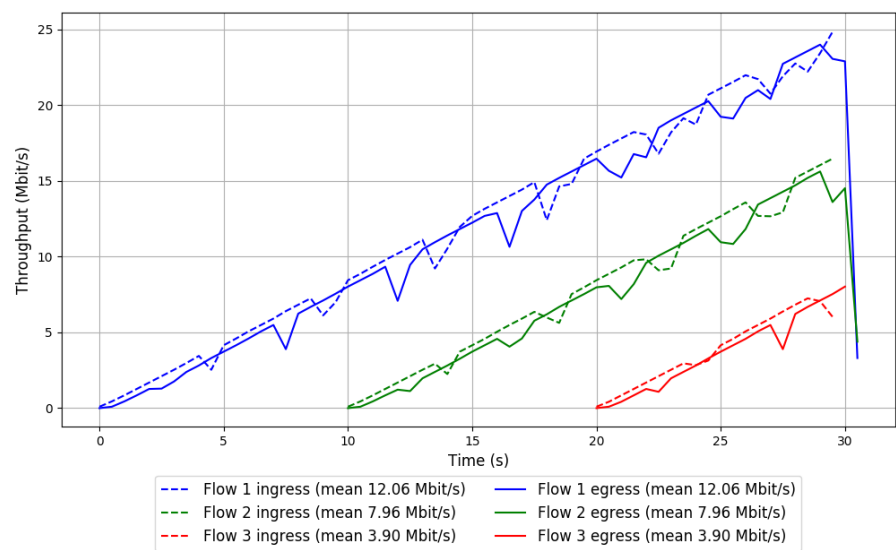


Run 4: Statistics of LEDBAT

Start at: 2019-03-09 03:39:25  
End at: 2019-03-09 03:39:55  
Local clock offset: 0.144 ms  
Remote clock offset: 14.289 ms

# Below is generated by plot.py at 2019-03-09 04:40:49  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 18.63 Mbit/s  
95th percentile per-packet one-way delay: 83.743 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 12.06 Mbit/s  
95th percentile per-packet one-way delay: 82.917 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 7.96 Mbit/s  
95th percentile per-packet one-way delay: 83.900 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 3.90 Mbit/s  
95th percentile per-packet one-way delay: 82.230 ms  
Loss rate: 0.00%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2019-03-09 04:06:02

End at: 2019-03-09 04:06:32

Local clock offset: 2.853 ms

Remote clock offset: 0.694 ms

# Below is generated by plot.py at 2019-03-09 04:40:49

# Datalink statistics

-- Total of 3 flows:

Average throughput: 15.14 Mbit/s

95th percentile per-packet one-way delay: 87.865 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 8.59 Mbit/s

95th percentile per-packet one-way delay: 86.922 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 7.97 Mbit/s

95th percentile per-packet one-way delay: 88.132 ms

Loss rate: 0.00%

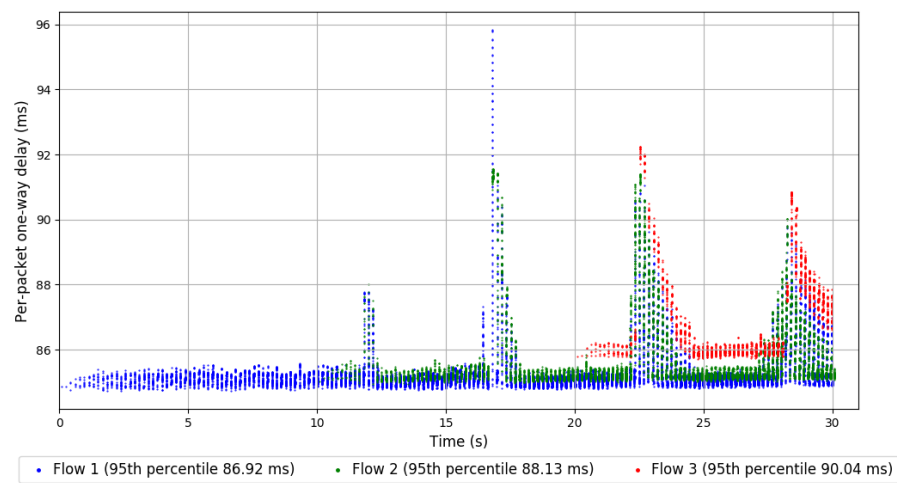
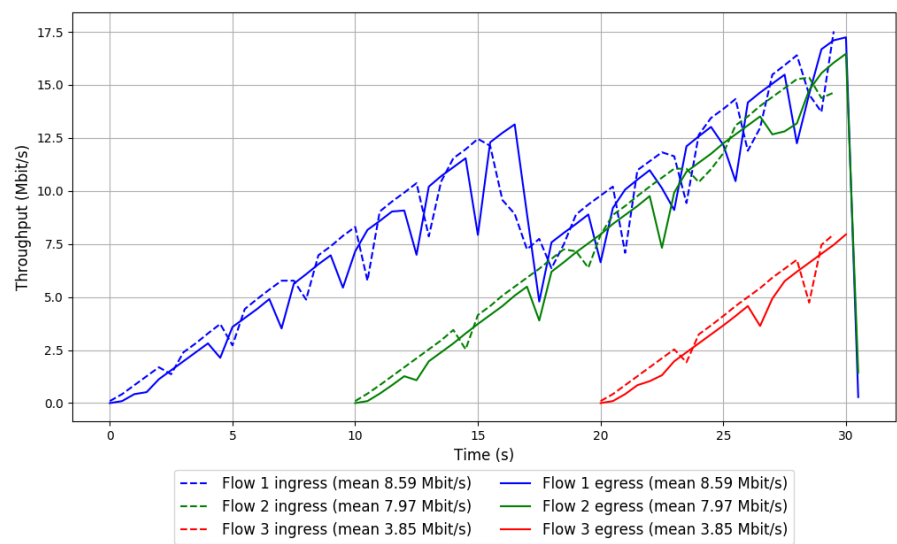
-- Flow 3:

Average throughput: 3.85 Mbit/s

95th percentile per-packet one-way delay: 90.040 ms

Loss rate: 0.00%

Run 5: Report of LEDBAT — Data Link

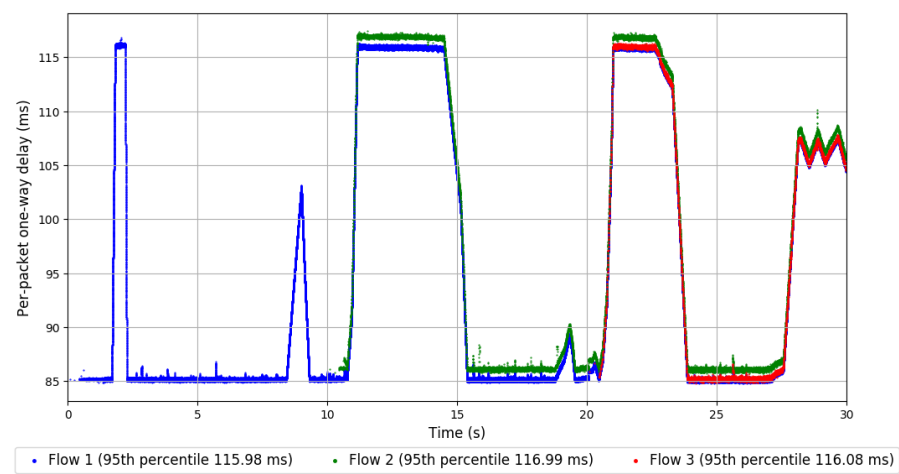
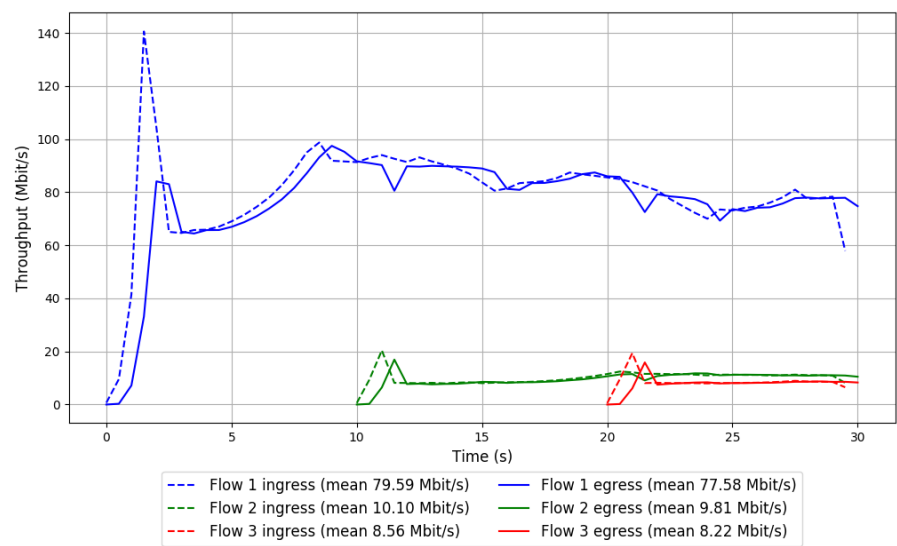


Run 1: Statistics of PCC-Allegro

Start at: 2019-03-09 02:39:44  
End at: 2019-03-09 02:40:14  
Local clock offset: -6.966 ms  
Remote clock offset: 12.122 ms

# Below is generated by plot.py at 2019-03-09 04:41:25  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 86.81 Mbit/s  
95th percentile per-packet one-way delay: 116.020 ms  
Loss rate: 2.53%  
-- Flow 1:  
Average throughput: 77.58 Mbit/s  
95th percentile per-packet one-way delay: 115.981 ms  
Loss rate: 2.47%  
-- Flow 2:  
Average throughput: 9.81 Mbit/s  
95th percentile per-packet one-way delay: 116.989 ms  
Loss rate: 2.80%  
-- Flow 3:  
Average throughput: 8.22 Mbit/s  
95th percentile per-packet one-way delay: 116.075 ms  
Loss rate: 3.81%

Run 1: Report of PCC-Allegro — Data Link



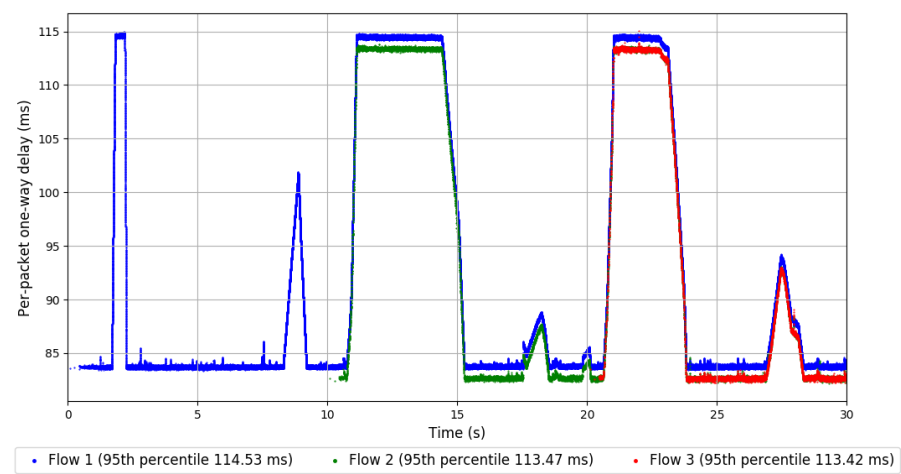
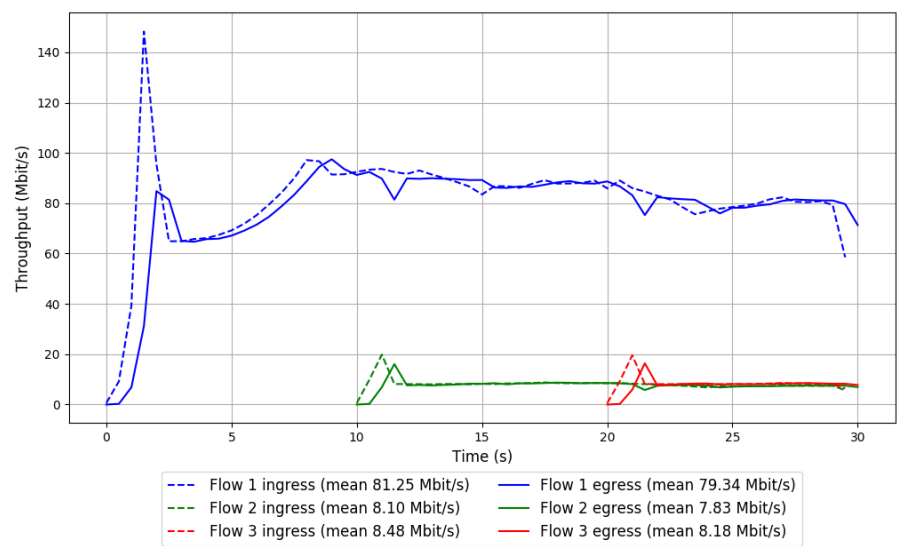


Run 2: Statistics of PCC-Allegro

Start at: 2019-03-09 03:06:22  
End at: 2019-03-09 03:06:52  
Local clock offset: -6.965 ms  
Remote clock offset: 14.353 ms

# Below is generated by plot.py at 2019-03-09 04:41:29  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 87.25 Mbit/s  
95th percentile per-packet one-way delay: 114.519 ms  
Loss rate: 2.44%  
-- Flow 1:  
Average throughput: 79.34 Mbit/s  
95th percentile per-packet one-way delay: 114.529 ms  
Loss rate: 2.35%  
-- Flow 2:  
Average throughput: 7.83 Mbit/s  
95th percentile per-packet one-way delay: 113.469 ms  
Loss rate: 3.27%  
-- Flow 3:  
Average throughput: 8.18 Mbit/s  
95th percentile per-packet one-way delay: 113.416 ms  
Loss rate: 3.47%

Run 2: Report of PCC-Allegro — Data Link

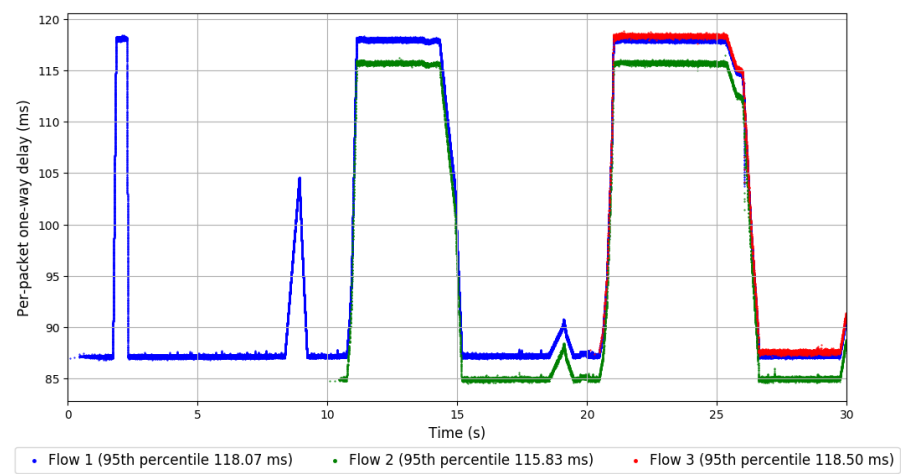
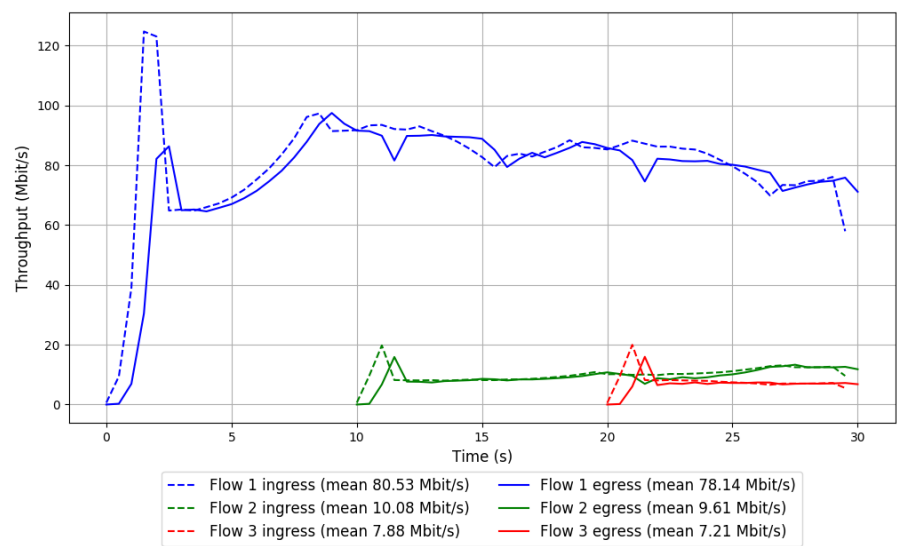


Run 3: Statistics of PCC-Allegro

Start at: 2019-03-09 03:33:02  
End at: 2019-03-09 03:33:32  
Local clock offset: -0.814 ms  
Remote clock offset: 21.624 ms

# Below is generated by plot.py at 2019-03-09 04:41:30  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 86.91 Mbit/s  
95th percentile per-packet one-way delay: 118.080 ms  
Loss rate: 3.24%  
-- Flow 1:  
Average throughput: 78.14 Mbit/s  
95th percentile per-packet one-way delay: 118.068 ms  
Loss rate: 2.95%  
-- Flow 2:  
Average throughput: 9.61 Mbit/s  
95th percentile per-packet one-way delay: 115.835 ms  
Loss rate: 4.62%  
-- Flow 3:  
Average throughput: 7.21 Mbit/s  
95th percentile per-packet one-way delay: 118.504 ms  
Loss rate: 8.41%

Run 3: Report of PCC-Allegro — Data Link

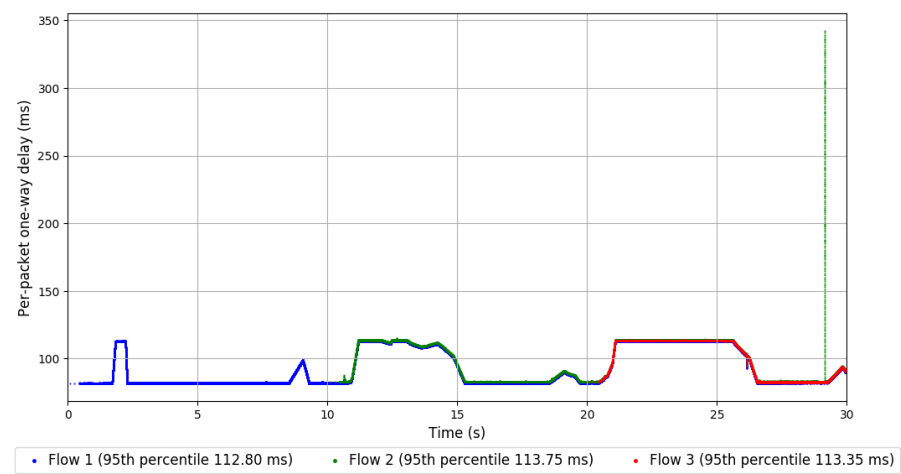
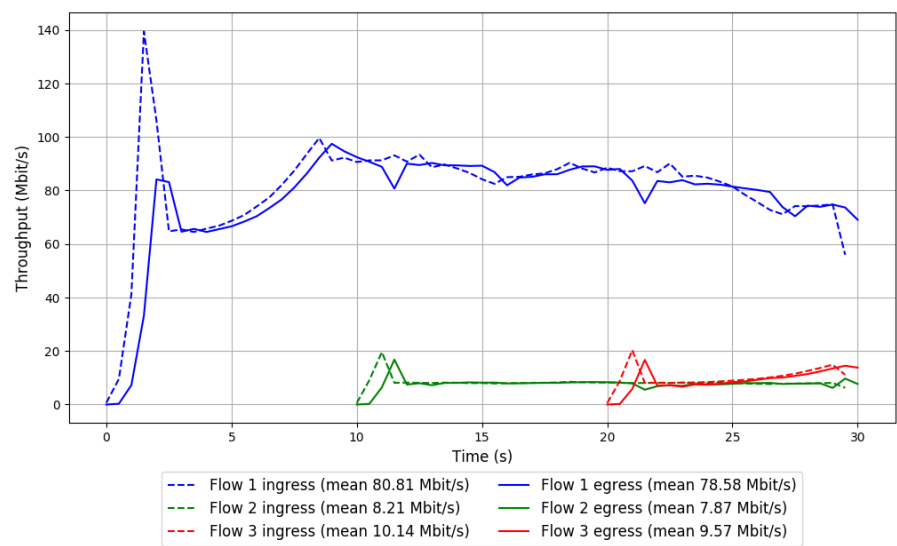


Run 4: Statistics of PCC-Allegro

Start at: 2019-03-09 03:59:39  
End at: 2019-03-09 04:00:09  
Local clock offset: 3.002 ms  
Remote clock offset: -1.562 ms

# Below is generated by plot.py at 2019-03-09 04:41:30  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 86.97 Mbit/s  
95th percentile per-packet one-way delay: 112.860 ms  
Loss rate: 2.93%  
-- Flow 1:  
Average throughput: 78.58 Mbit/s  
95th percentile per-packet one-way delay: 112.796 ms  
Loss rate: 2.74%  
-- Flow 2:  
Average throughput: 7.87 Mbit/s  
95th percentile per-packet one-way delay: 113.754 ms  
Loss rate: 4.10%  
-- Flow 3:  
Average throughput: 9.57 Mbit/s  
95th percentile per-packet one-way delay: 113.351 ms  
Loss rate: 5.56%

Run 4: Report of PCC-Allegro — Data Link



Run 5: Statistics of PCC-Allegro

Start at: 2019-03-09 04:26:16

End at: 2019-03-09 04:26:46

Local clock offset: -1.138 ms

Remote clock offset: 2.474 ms

# Below is generated by plot.py at 2019-03-09 04:41:38

# Datalink statistics

-- Total of 3 flows:

Average throughput: 86.89 Mbit/s

95th percentile per-packet one-way delay: 117.816 ms

Loss rate: 2.12%

-- Flow 1:

Average throughput: 80.01 Mbit/s

95th percentile per-packet one-way delay: 117.826 ms

Loss rate: 2.10%

-- Flow 2:

Average throughput: 8.19 Mbit/s

95th percentile per-packet one-way delay: 116.872 ms

Loss rate: 2.52%

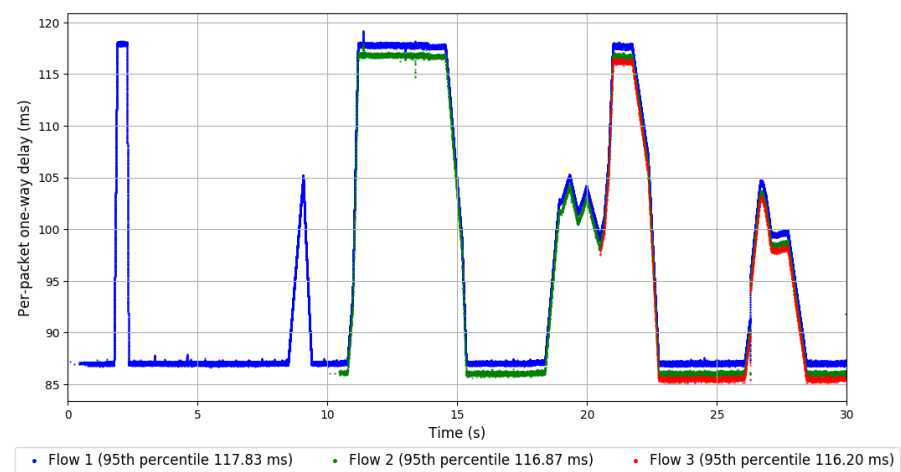
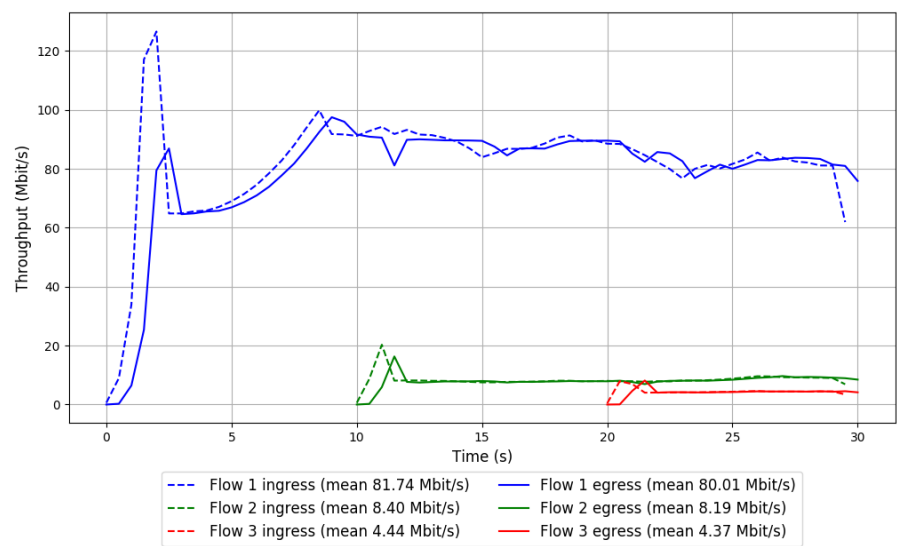
-- Flow 3:

Average throughput: 4.37 Mbit/s

95th percentile per-packet one-way delay: 116.203 ms

Loss rate: 1.79%

Run 5: Report of PCC-Allegro — Data Link



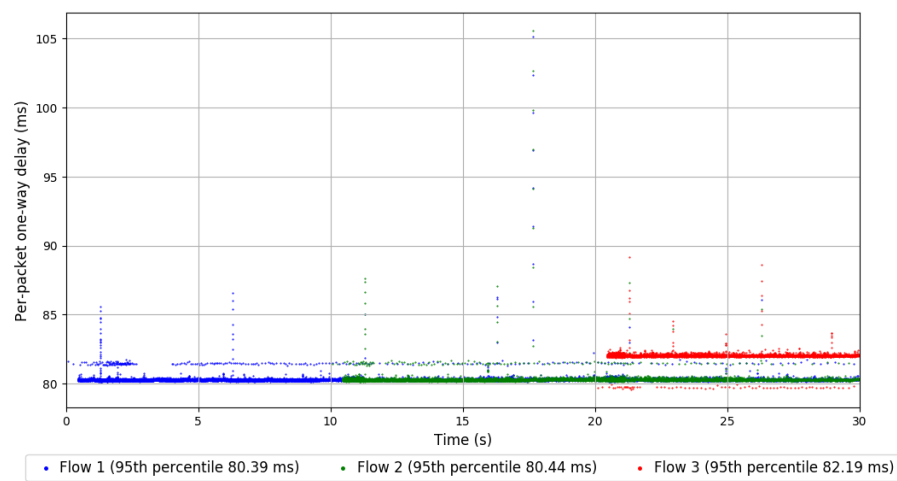
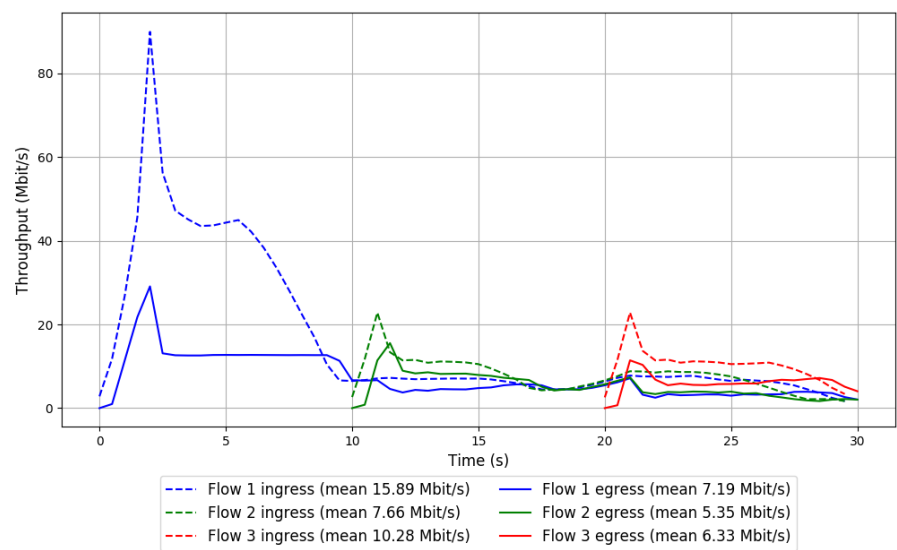


```
Run 1: Statistics of PCC-Expr

Start at: 2019-03-09 02:24:28
End at: 2019-03-09 02:24:58
Local clock offset: -6.274 ms
Remote clock offset: 0.549 ms

# Below is generated by plot.py at 2019-03-09 04:41:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.83 Mbit/s
95th percentile per-packet one-way delay: 82.043 ms
Loss rate: 47.36%
-- Flow 1:
Average throughput: 7.19 Mbit/s
95th percentile per-packet one-way delay: 80.386 ms
Loss rate: 54.77%
-- Flow 2:
Average throughput: 5.35 Mbit/s
95th percentile per-packet one-way delay: 80.435 ms
Loss rate: 30.18%
-- Flow 3:
Average throughput: 6.33 Mbit/s
95th percentile per-packet one-way delay: 82.185 ms
Loss rate: 38.49%
```

Run 1: Report of PCC-Expr — Data Link

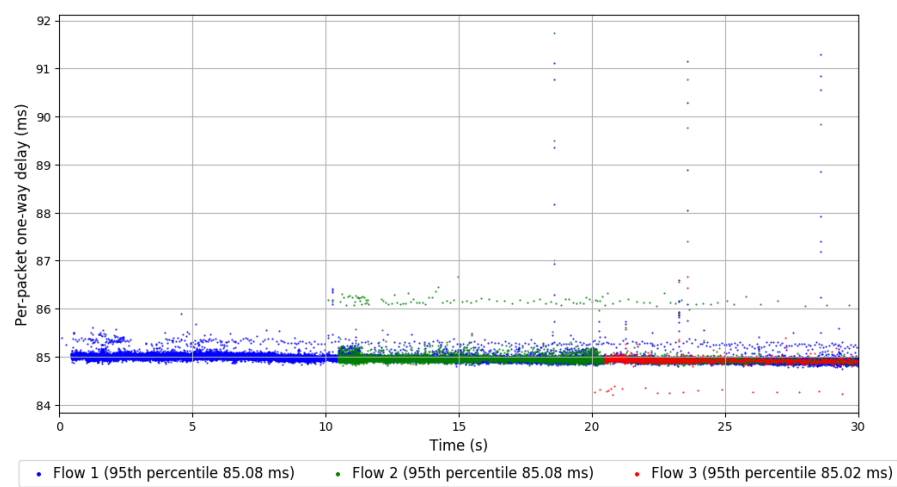
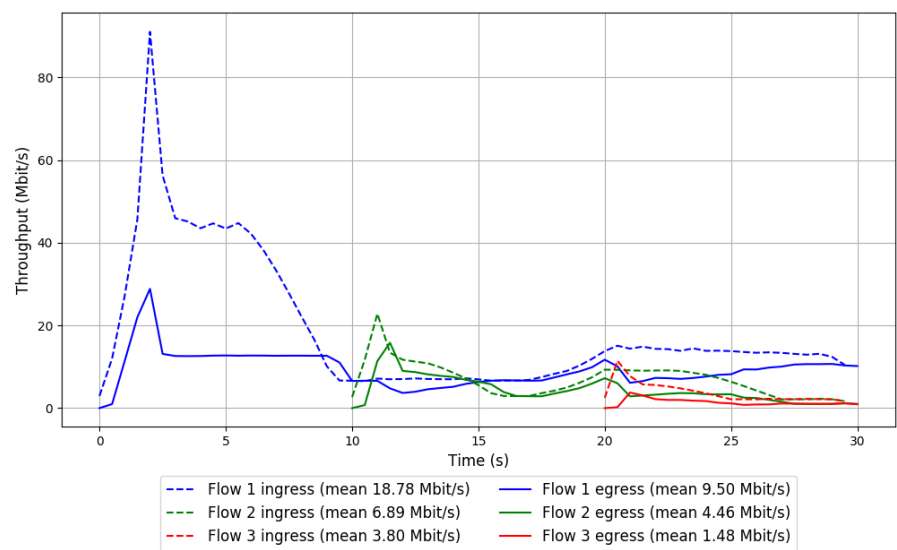


Run 2: Statistics of PCC-Expr

Start at: 2019-03-09 02:51:05  
End at: 2019-03-09 02:51:35  
Local clock offset: -6.94 ms  
Remote clock offset: 15.553 ms

# Below is generated by plot.py at 2019-03-09 04:41:38  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 12.95 Mbit/s  
95th percentile per-packet one-way delay: 85.078 ms  
Loss rate: 47.37%  
-- Flow 1:  
Average throughput: 9.50 Mbit/s  
95th percentile per-packet one-way delay: 85.080 ms  
Loss rate: 49.41%  
-- Flow 2:  
Average throughput: 4.46 Mbit/s  
95th percentile per-packet one-way delay: 85.082 ms  
Loss rate: 35.28%  
-- Flow 3:  
Average throughput: 1.48 Mbit/s  
95th percentile per-packet one-way delay: 85.018 ms  
Loss rate: 61.06%

Run 2: Report of PCC-Expr — Data Link



Run 3: Statistics of PCC-Expr

Start at: 2019-03-09 03:17:42

End at: 2019-03-09 03:18:12

Local clock offset: -4.99 ms

Remote clock offset: 19.79 ms

# Below is generated by plot.py at 2019-03-09 04:41:38

# Datalink statistics

-- Total of 3 flows:

Average throughput: 12.81 Mbit/s

95th percentile per-packet one-way delay: 85.759 ms

Loss rate: 43.92%

-- Flow 1:

Average throughput: 7.20 Mbit/s

95th percentile per-packet one-way delay: 85.744 ms

Loss rate: 53.83%

-- Flow 2:

Average throughput: 6.54 Mbit/s

95th percentile per-packet one-way delay: 85.757 ms

Loss rate: 22.76%

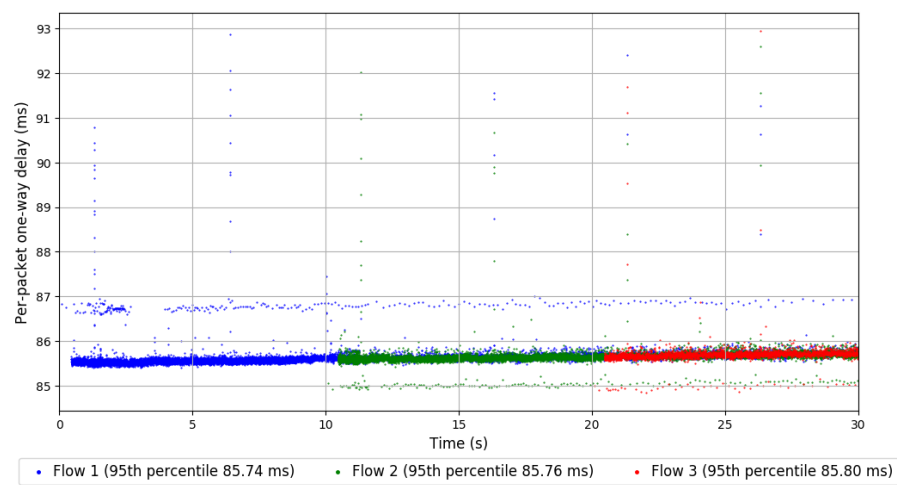
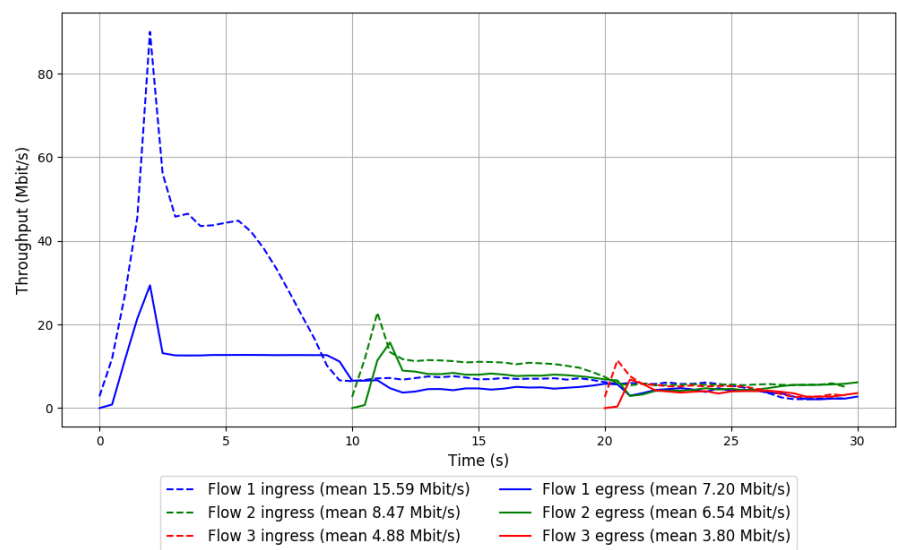
-- Flow 3:

Average throughput: 3.80 Mbit/s

95th percentile per-packet one-way delay: 85.799 ms

Loss rate: 22.08%

Run 3: Report of PCC-Expr — Data Link



Run 4: Statistics of PCC-Expr

Start at: 2019-03-09 03:44:24

End at: 2019-03-09 03:44:54

Local clock offset: 0.661 ms

Remote clock offset: 11.21 ms

# Below is generated by plot.py at 2019-03-09 04:41:38

# Datalink statistics

-- Total of 3 flows:

Average throughput: 12.63 Mbit/s

95th percentile per-packet one-way delay: 85.649 ms

Loss rate: 58.30%

-- Flow 1:

Average throughput: 9.04 Mbit/s

95th percentile per-packet one-way delay: 85.567 ms

Loss rate: 60.91%

-- Flow 2:

Average throughput: 4.80 Mbit/s

95th percentile per-packet one-way delay: 85.646 ms

Loss rate: 46.11%

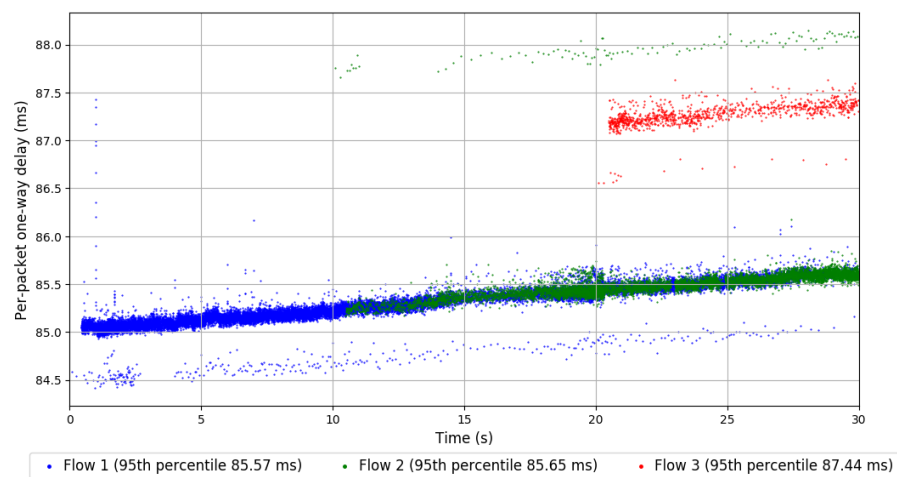
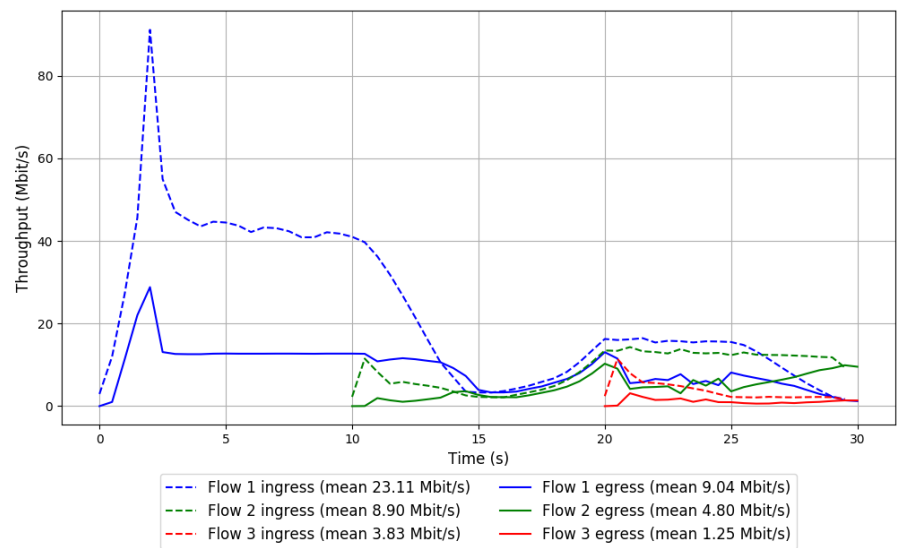
-- Flow 3:

Average throughput: 1.25 Mbit/s

95th percentile per-packet one-way delay: 87.441 ms

Loss rate: 67.50%

Run 4: Report of PCC-Expr — Data Link



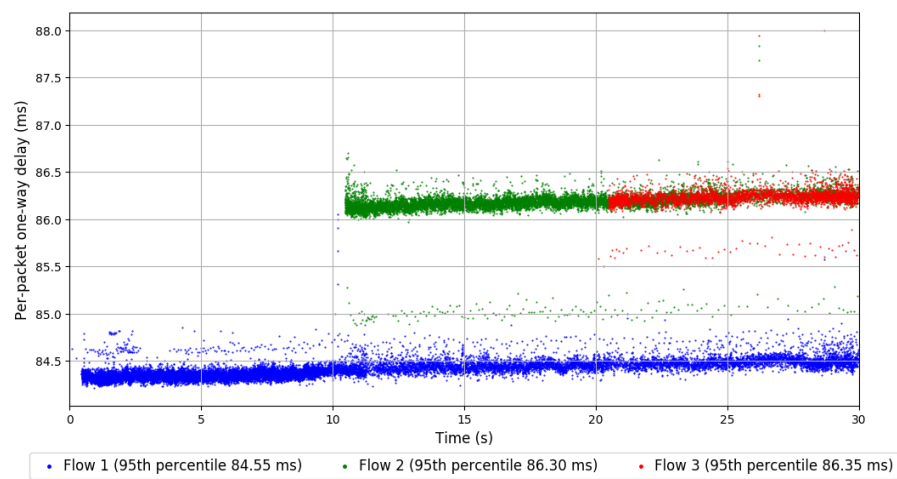
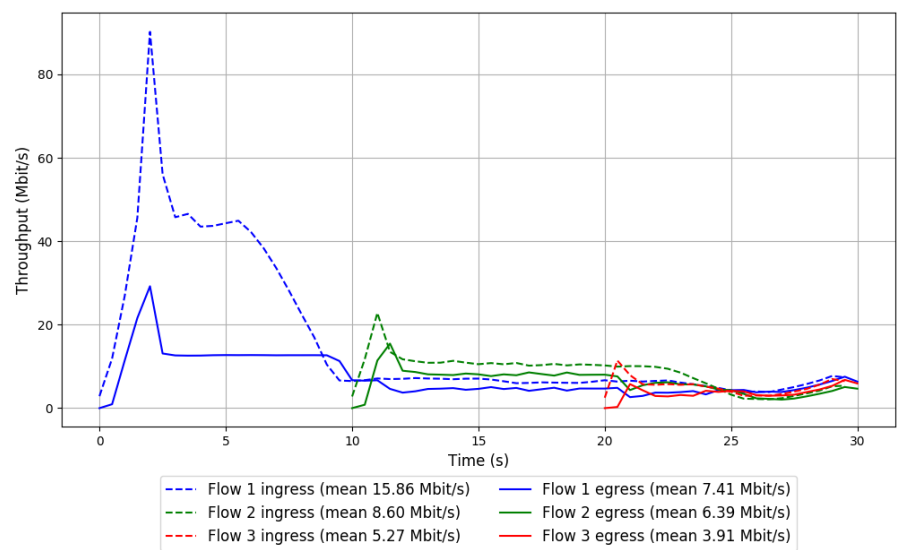


Run 5: Statistics of PCC-Expr

Start at: 2019-03-09 04:11:00  
End at: 2019-03-09 04:11:30  
Local clock offset: 4.017 ms  
Remote clock offset: -0.904 ms

# Below is generated by plot.py at 2019-03-09 04:41:38  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 12.95 Mbit/s  
95th percentile per-packet one-way delay: 86.274 ms  
Loss rate: 44.47%  
-- Flow 1:  
Average throughput: 7.41 Mbit/s  
95th percentile per-packet one-way delay: 84.552 ms  
Loss rate: 53.27%  
-- Flow 2:  
Average throughput: 6.39 Mbit/s  
95th percentile per-packet one-way delay: 86.303 ms  
Loss rate: 25.74%  
-- Flow 3:  
Average throughput: 3.91 Mbit/s  
95th percentile per-packet one-way delay: 86.352 ms  
Loss rate: 25.88%

Run 5: Report of PCC-Expr — Data Link



Run 1: Statistics of QUIC Cubic

Start at: 2019-03-09 02:32:03

End at: 2019-03-09 02:32:33

Local clock offset: -6.247 ms

Remote clock offset: 7.413 ms

# Below is generated by plot.py at 2019-03-09 04:41:59

# Datalink statistics

-- Total of 3 flows:

Average throughput: 64.92 Mbit/s

95th percentile per-packet one-way delay: 113.051 ms

Loss rate: 0.76%

-- Flow 1:

Average throughput: 38.13 Mbit/s

95th percentile per-packet one-way delay: 113.725 ms

Loss rate: 0.97%

-- Flow 2:

Average throughput: 35.89 Mbit/s

95th percentile per-packet one-way delay: 111.737 ms

Loss rate: 0.53%

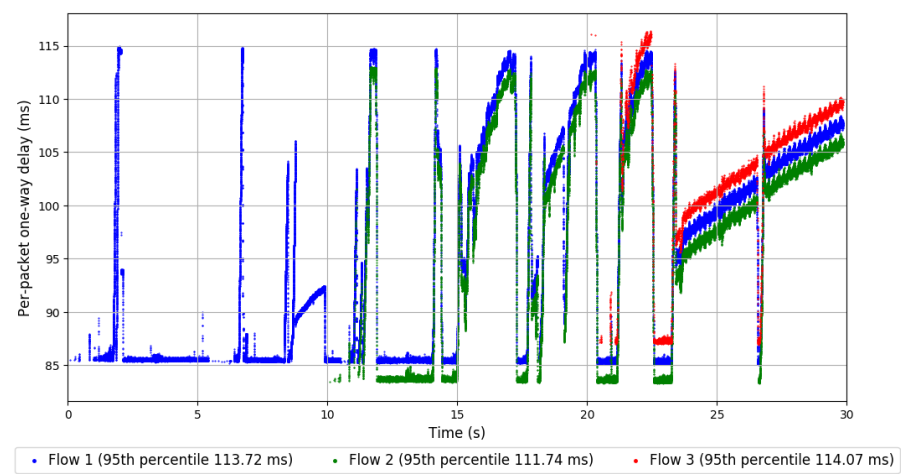
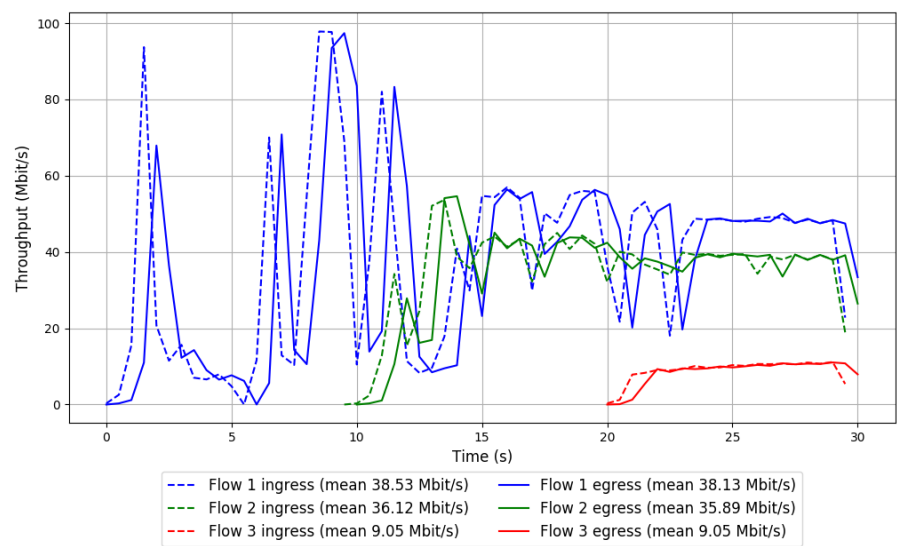
-- Flow 3:

Average throughput: 9.05 Mbit/s

95th percentile per-packet one-way delay: 114.070 ms

Loss rate: 0.05%

Run 1: Report of QUIC Cubic — Data Link

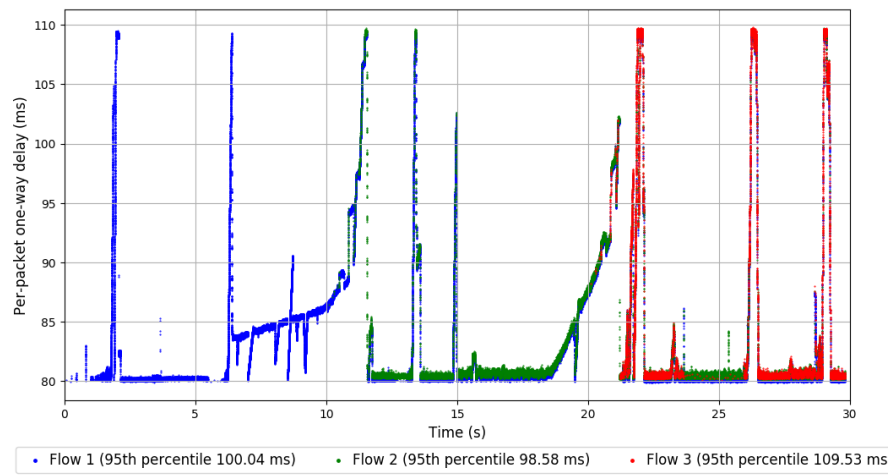
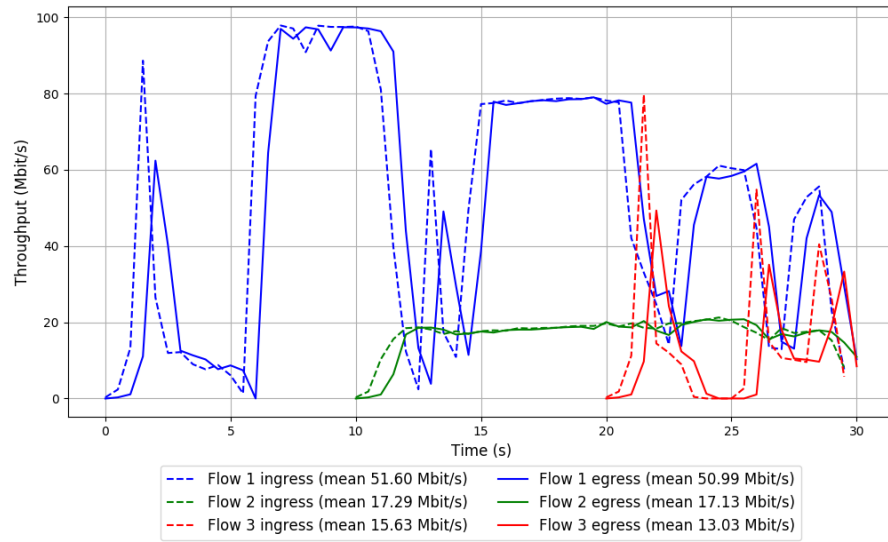


Run 2: Statistics of QUIC Cubic

Start at: 2019-03-09 02:58:40  
End at: 2019-03-09 02:59:10  
Local clock offset: -6.139 ms  
Remote clock offset: 12.875 ms

# Below is generated by plot.py at 2019-03-09 04:42:07  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 66.61 Mbit/s  
95th percentile per-packet one-way delay: 104.517 ms  
Loss rate: 2.30%  
-- Flow 1:  
Average throughput: 50.99 Mbit/s  
95th percentile per-packet one-way delay: 100.036 ms  
Loss rate: 1.18%  
-- Flow 2:  
Average throughput: 17.13 Mbit/s  
95th percentile per-packet one-way delay: 98.579 ms  
Loss rate: 0.91%  
-- Flow 3:  
Average throughput: 13.03 Mbit/s  
95th percentile per-packet one-way delay: 109.533 ms  
Loss rate: 16.70%

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

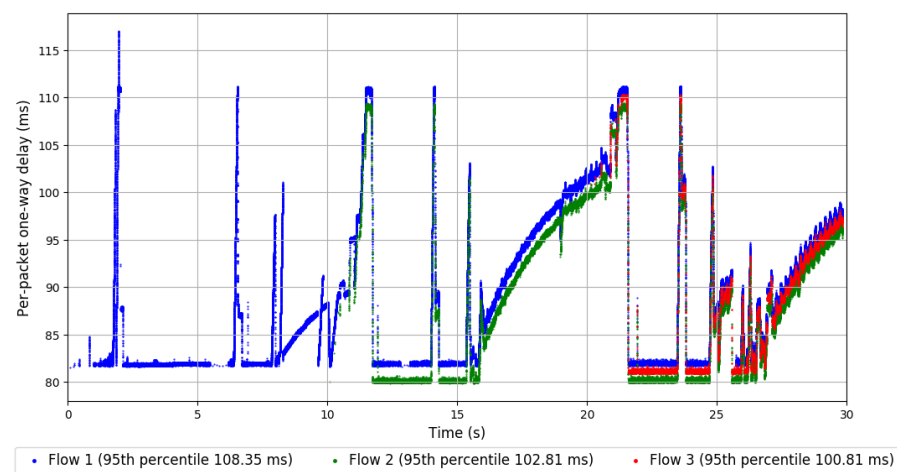
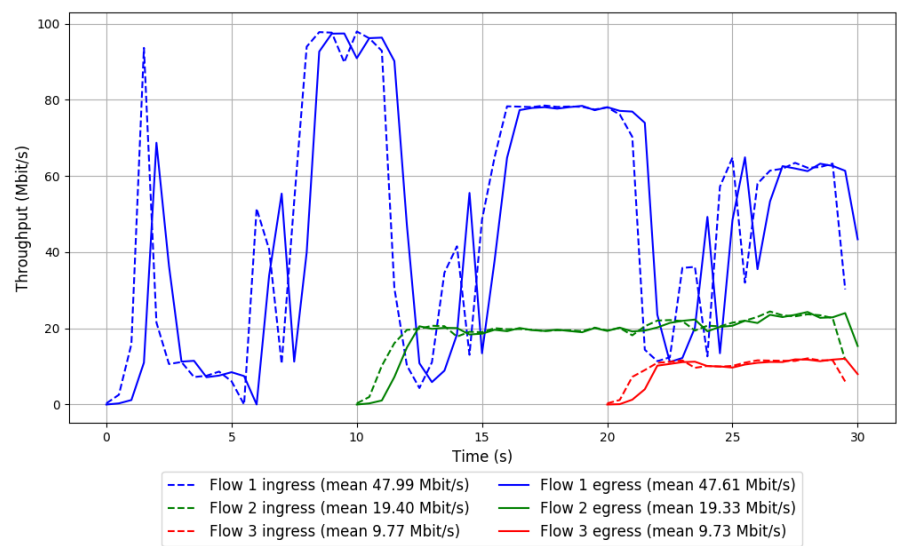


Run 3: Statistics of QUIC Cubic

Start at: 2019-03-09 03:25:22  
End at: 2019-03-09 03:25:52  
Local clock offset: -1.557 ms  
Remote clock offset: 16.611 ms

# Below is generated by plot.py at 2019-03-09 04:42:09  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 63.63 Mbit/s  
95th percentile per-packet one-way delay: 107.972 ms  
Loss rate: 0.63%  
-- Flow 1:  
Average throughput: 47.61 Mbit/s  
95th percentile per-packet one-way delay: 108.351 ms  
Loss rate: 0.74%  
-- Flow 2:  
Average throughput: 19.33 Mbit/s  
95th percentile per-packet one-way delay: 102.805 ms  
Loss rate: 0.29%  
-- Flow 3:  
Average throughput: 9.73 Mbit/s  
95th percentile per-packet one-way delay: 100.811 ms  
Loss rate: 0.49%

Run 3: Report of QUIC Cubic — Data Link





Run 4: Statistics of QUIC Cubic

Start at: 2019-03-09 03:51:58

End at: 2019-03-09 03:52:28

Local clock offset: 1.498 ms

Remote clock offset: 1.697 ms

# Below is generated by plot.py at 2019-03-09 04:42:24

# Datalink statistics

-- Total of 3 flows:

Average throughput: 66.26 Mbit/s

95th percentile per-packet one-way delay: 102.849 ms

Loss rate: 0.61%

-- Flow 1:

Average throughput: 47.13 Mbit/s

95th percentile per-packet one-way delay: 104.684 ms

Loss rate: 0.73%

-- Flow 2:

Average throughput: 20.36 Mbit/s

95th percentile per-packet one-way delay: 102.287 ms

Loss rate: 0.29%

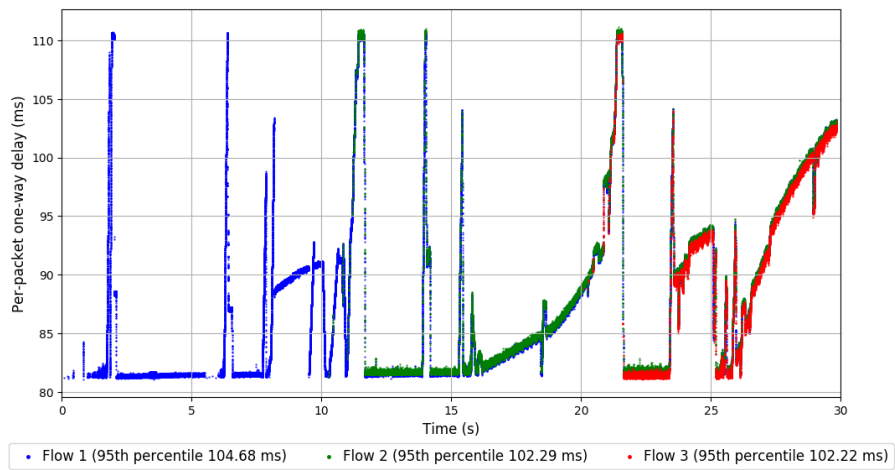
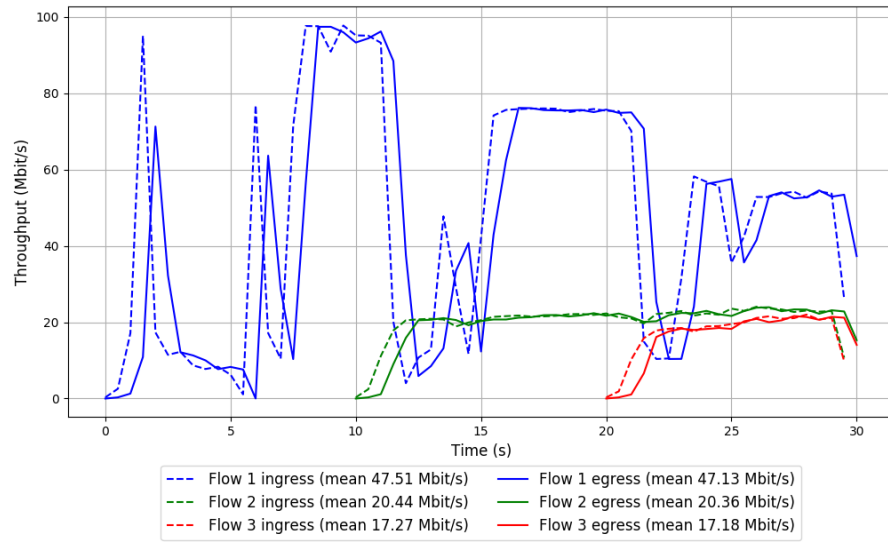
-- Flow 3:

Average throughput: 17.18 Mbit/s

95th percentile per-packet one-way delay: 102.225 ms

Loss rate: 0.38%

# Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2019-03-09 04:18:35

End at: 2019-03-09 04:19:05

Local clock offset: 1.837 ms

Remote clock offset: 1.695 ms

# Below is generated by plot.py at 2019-03-09 04:42:28

# Datalink statistics

-- Total of 3 flows:

Average throughput: 68.17 Mbit/s

95th percentile per-packet one-way delay: 110.970 ms

Loss rate: 0.74%

-- Flow 1:

Average throughput: 41.83 Mbit/s

95th percentile per-packet one-way delay: 112.534 ms

Loss rate: 0.86%

-- Flow 2:

Average throughput: 31.99 Mbit/s

95th percentile per-packet one-way delay: 107.936 ms

Loss rate: 0.57%

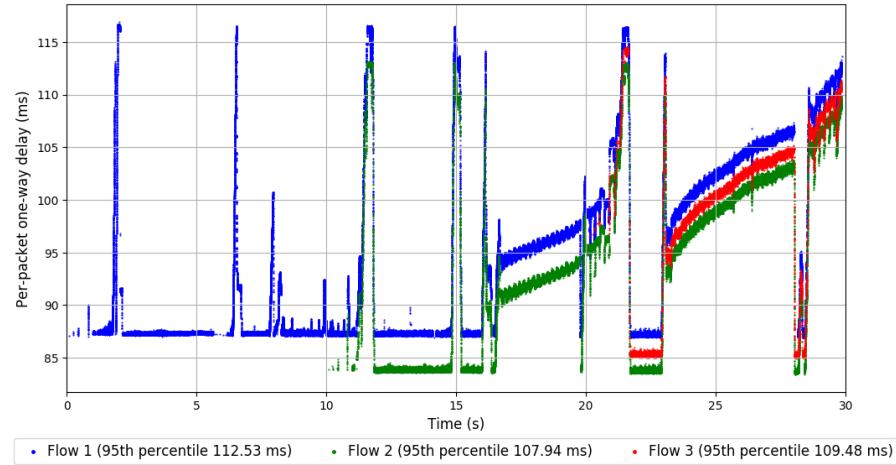
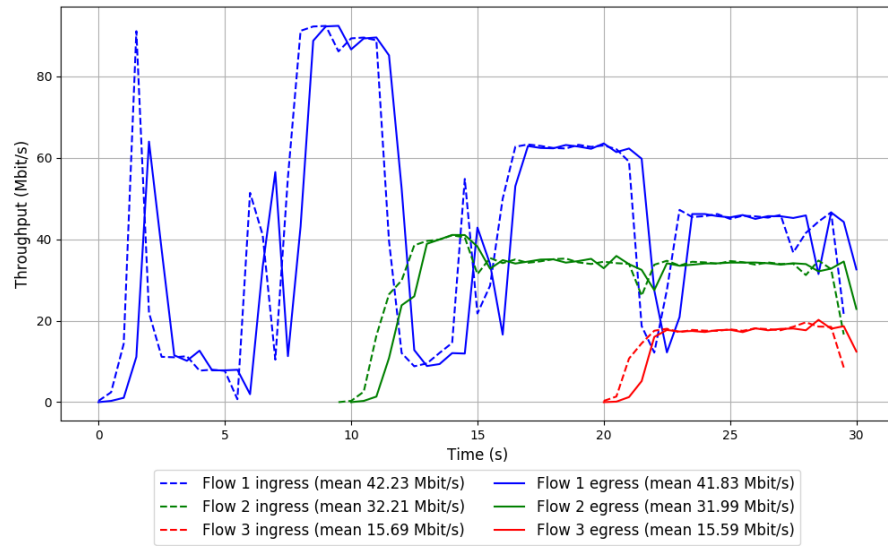
-- Flow 3:

Average throughput: 15.59 Mbit/s

95th percentile per-packet one-way delay: 109.484 ms

Loss rate: 0.45%

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

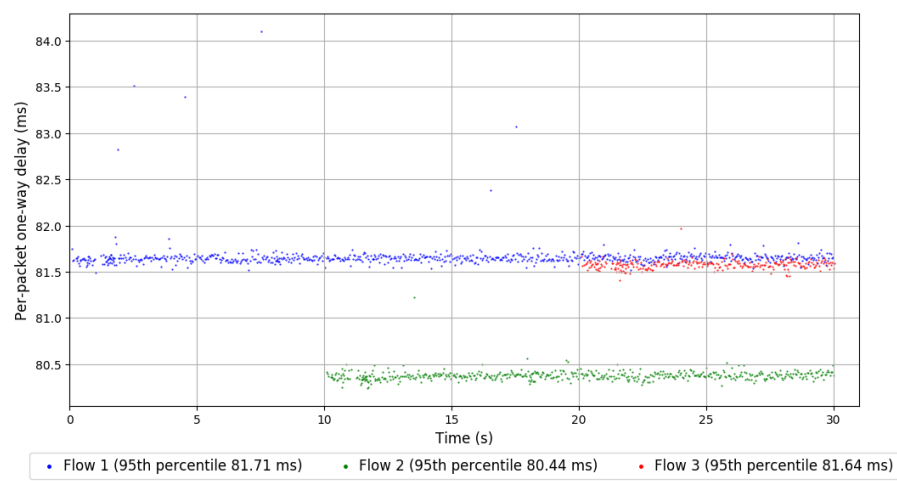
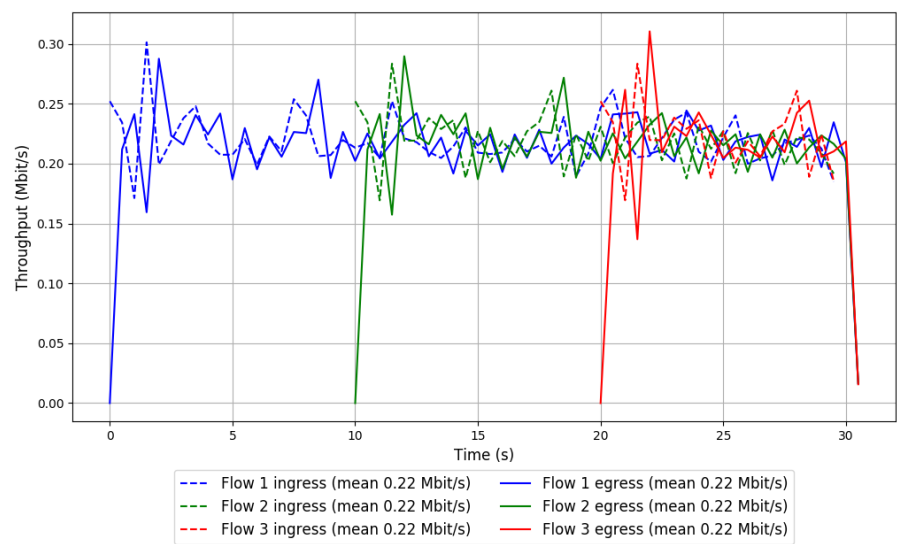


```
Run 1: Statistics of SReAM

Start at: 2019-03-09 02:20:43
End at: 2019-03-09 02:21:13
Local clock offset: -6.378 ms
Remote clock offset: 0.744 ms

# Below is generated by plot.py at 2019-03-09 04:42:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 81.693 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 81.711 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 80.439 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 81.643 ms
Loss rate: 0.00%
```

Run 1: Report of SReAM — Data Link

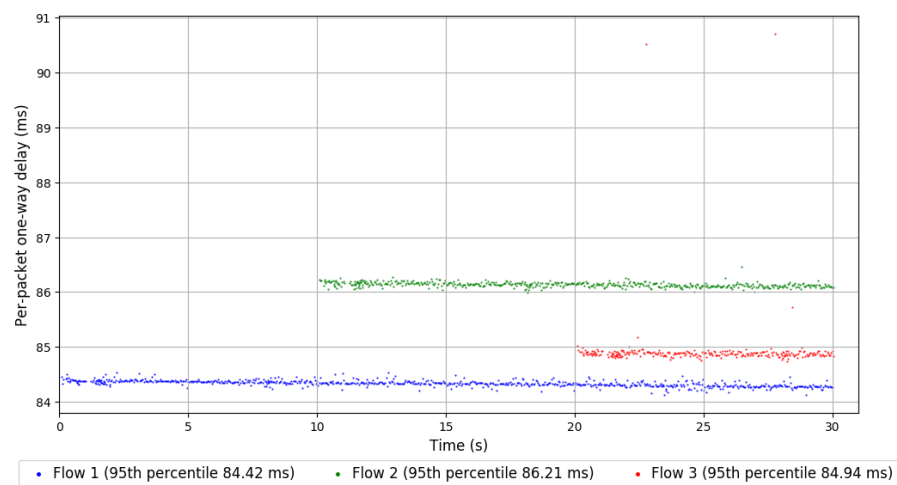
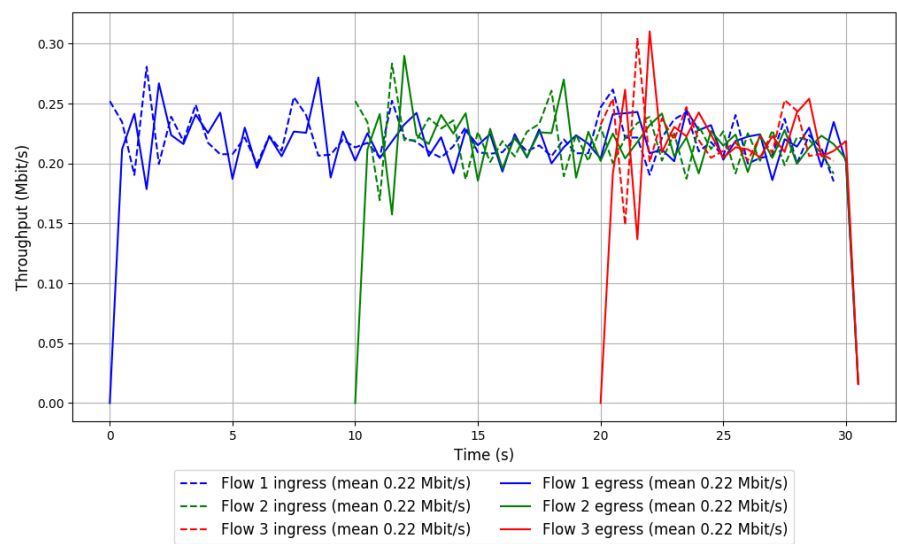


Run 2: Statistics of SReAM

Start at: 2019-03-09 02:47:21  
End at: 2019-03-09 02:47:51  
Local clock offset: -6.902 ms  
Remote clock offset: 14.729 ms

# Below is generated by plot.py at 2019-03-09 04:42:28  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.44 Mbit/s  
95th percentile per-packet one-way delay: 86.181 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 84.421 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 86.211 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 84.945 ms  
Loss rate: 0.00%

Run 2: Report of SReAM — Data Link



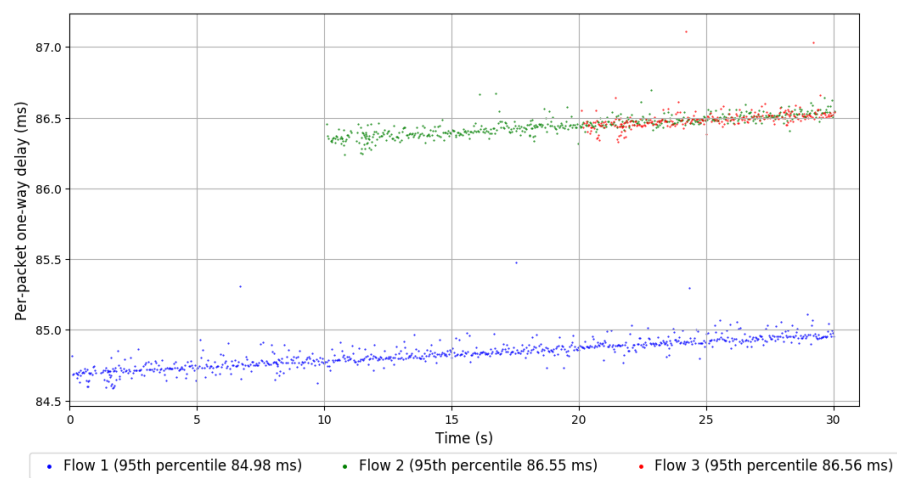
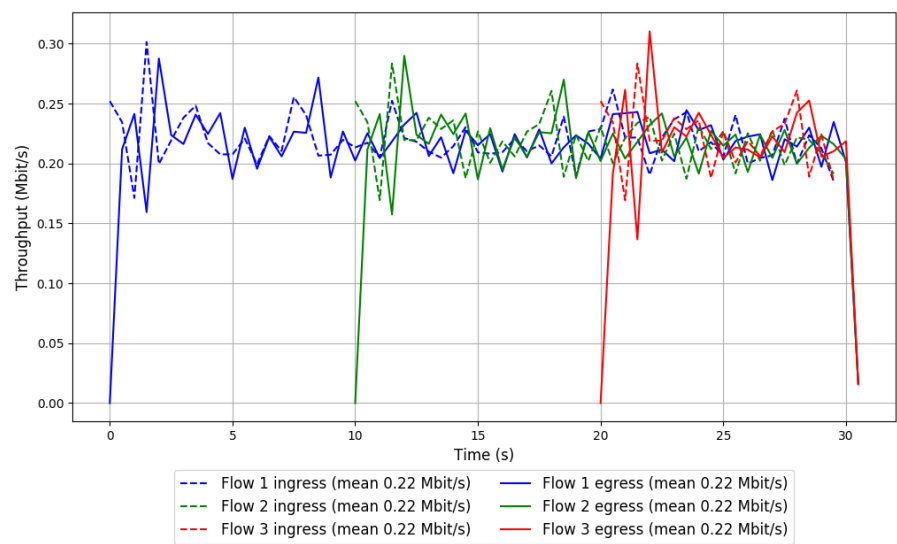


Run 3: Statistics of SReAM

Start at: 2019-03-09 03:13:58  
End at: 2019-03-09 03:14:28  
Local clock offset: -6.987 ms  
Remote clock offset: 18.968 ms

# Below is generated by plot.py at 2019-03-09 04:42:28  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.44 Mbit/s  
95th percentile per-packet one-way delay: 86.537 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 84.976 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 86.549 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 86.559 ms  
Loss rate: 0.00%

Run 3: Report of SReAM — Data Link

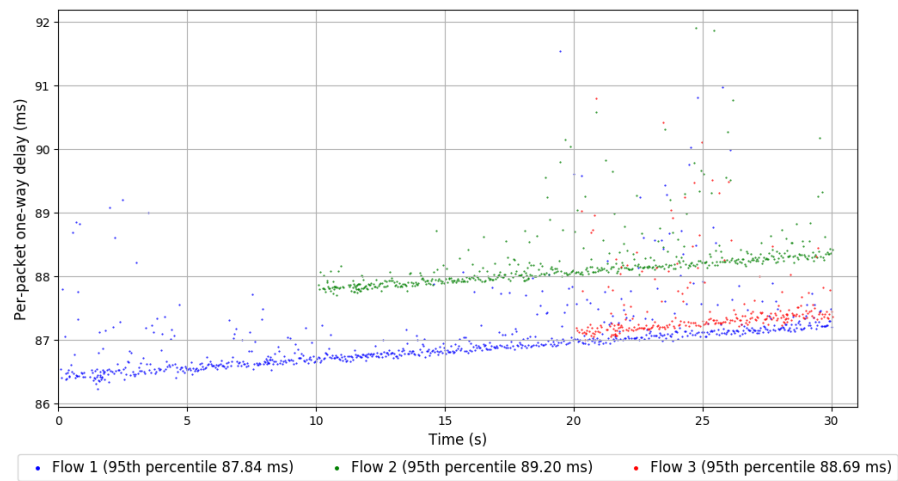
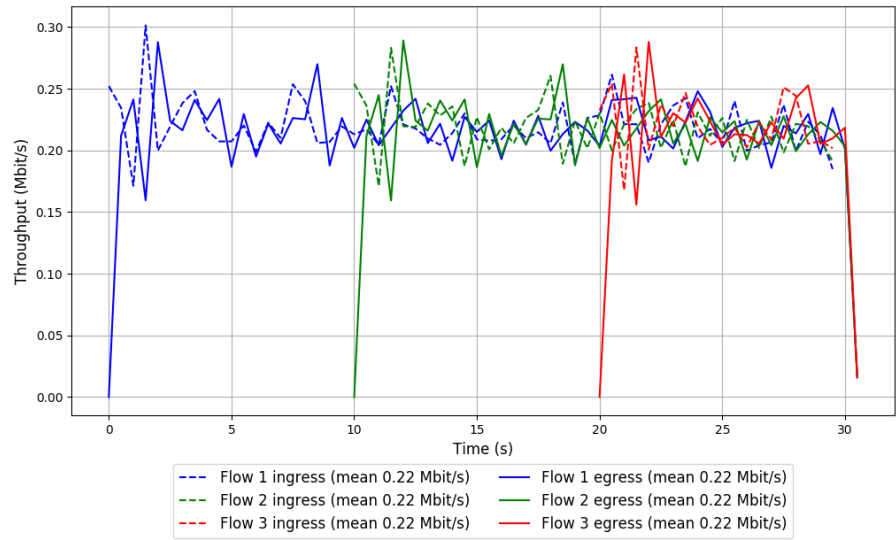


Run 4: Statistics of SReAM

Start at: 2019-03-09 03:40:40  
End at: 2019-03-09 03:41:10  
Local clock offset: 0.305 ms  
Remote clock offset: 16.262 ms

# Below is generated by plot.py at 2019-03-09 04:42:28  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.44 Mbit/s  
95th percentile per-packet one-way delay: 88.627 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 87.843 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 89.199 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 88.692 ms  
Loss rate: 0.00%

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

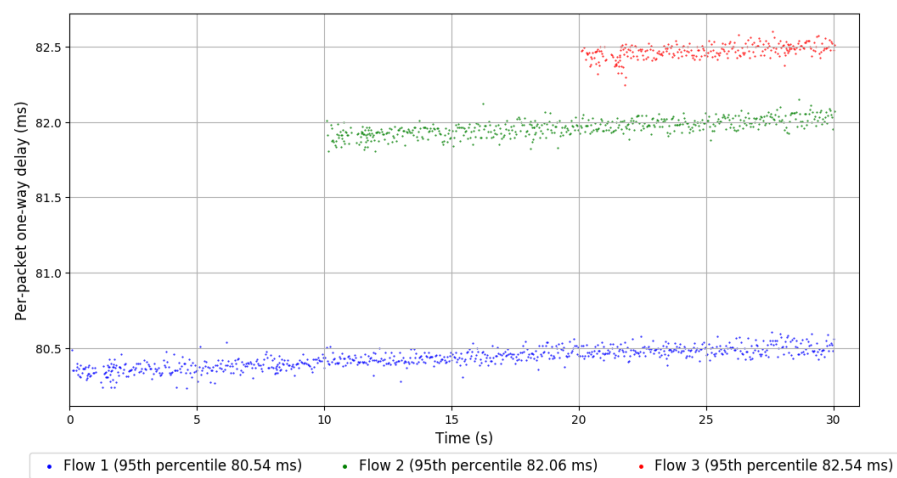
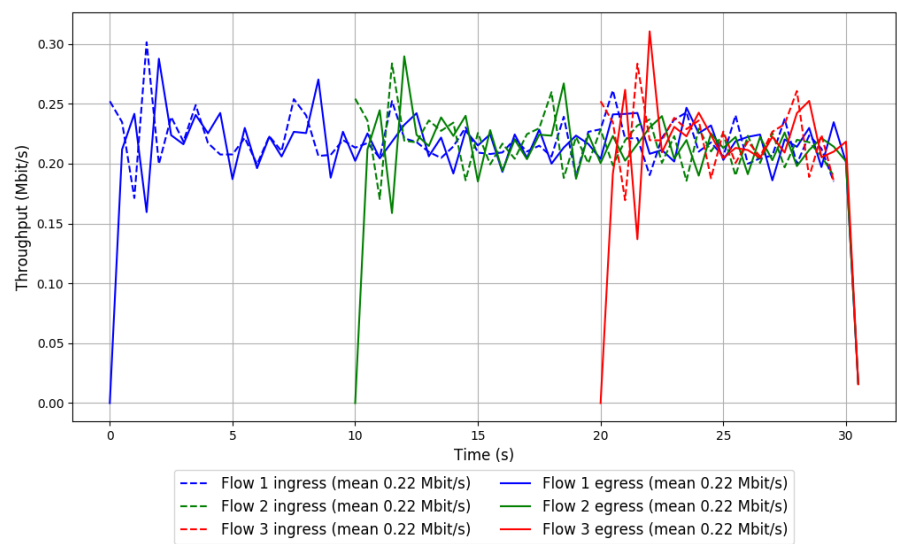


Run 5: Statistics of SReAM

Start at: 2019-03-09 04:07:16  
End at: 2019-03-09 04:07:46  
Local clock offset: 3.713 ms  
Remote clock offset: -3.637 ms

# Below is generated by plot.py at 2019-03-09 04:42:28  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.44 Mbit/s  
95th percentile per-packet one-way delay: 82.497 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 80.537 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 82.056 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 82.541 ms  
Loss rate: 0.00%

Run 5: Report of SReAM — Data Link

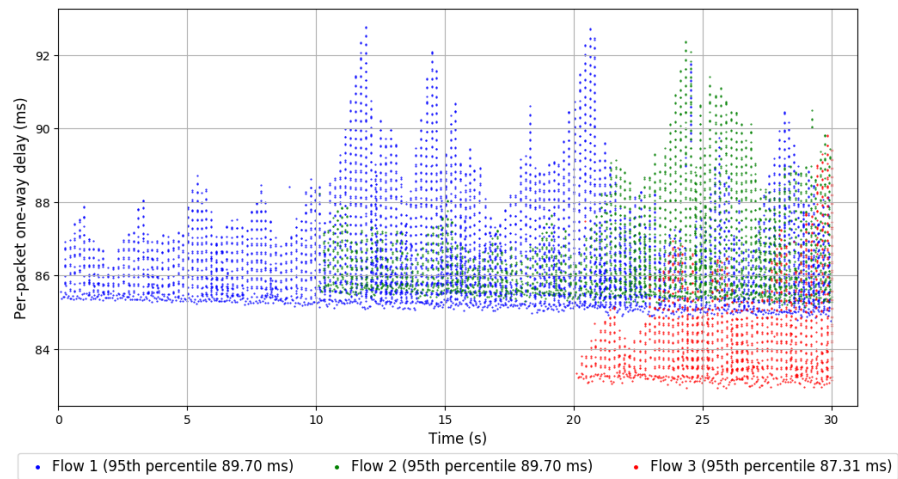
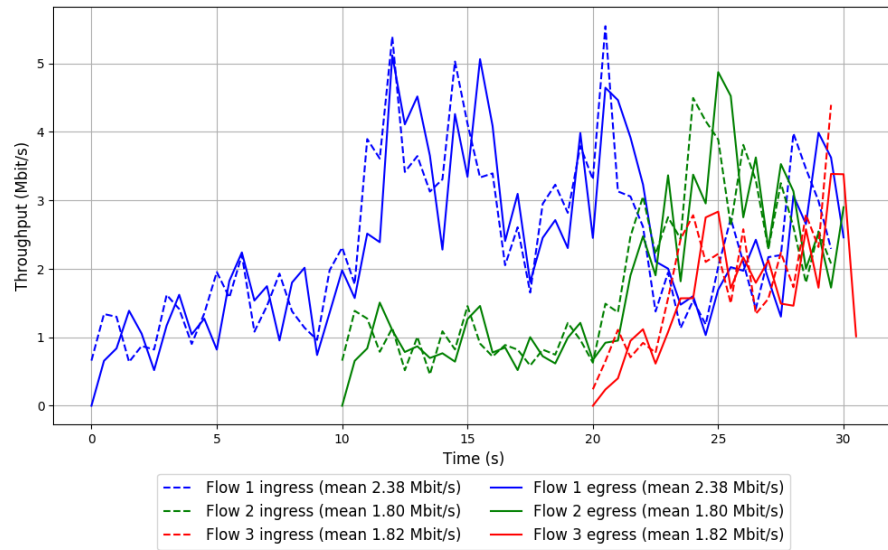


Run 1: Statistics of Sprout

Start at: 2019-03-09 02:30:50  
End at: 2019-03-09 02:31:20  
Local clock offset: -6.248 ms  
Remote clock offset: 6.153 ms

# Below is generated by plot.py at 2019-03-09 04:42:28  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 4.17 Mbit/s  
95th percentile per-packet one-way delay: 89.489 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 2.38 Mbit/s  
95th percentile per-packet one-way delay: 89.700 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 1.80 Mbit/s  
95th percentile per-packet one-way delay: 89.701 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 1.82 Mbit/s  
95th percentile per-packet one-way delay: 87.309 ms  
Loss rate: 0.00%

## Run 1: Report of Sprout — Data Link



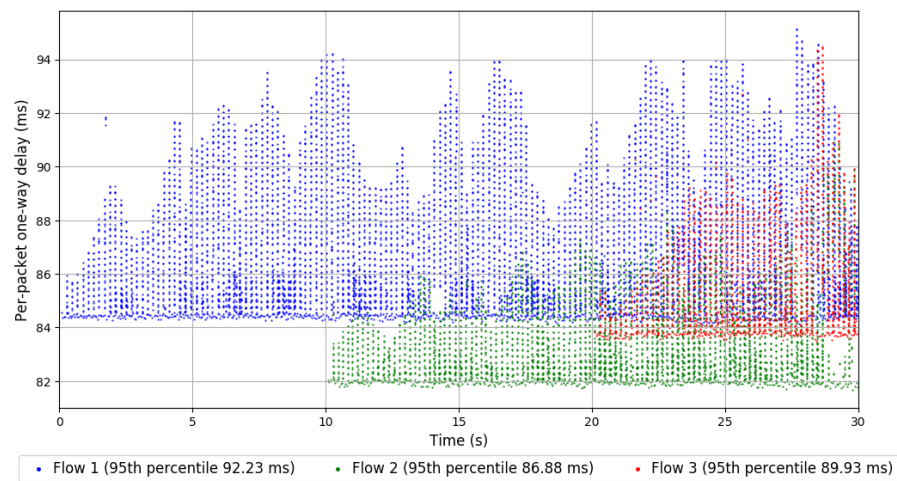
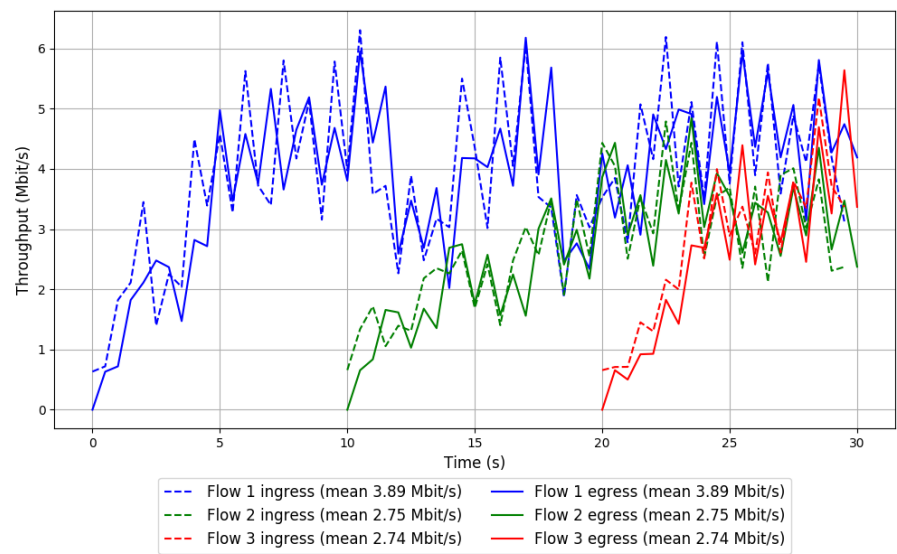


Run 2: Statistics of Sprout

Start at: 2019-03-09 02:57:27  
End at: 2019-03-09 02:57:57  
Local clock offset: -6.894 ms  
Remote clock offset: 13.124 ms

# Below is generated by plot.py at 2019-03-09 04:42:28  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 6.62 Mbit/s  
95th percentile per-packet one-way delay: 91.573 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 3.89 Mbit/s  
95th percentile per-packet one-way delay: 92.232 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 2.75 Mbit/s  
95th percentile per-packet one-way delay: 86.877 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 2.74 Mbit/s  
95th percentile per-packet one-way delay: 89.926 ms  
Loss rate: 0.00%

Run 2: Report of Sprout — Data Link

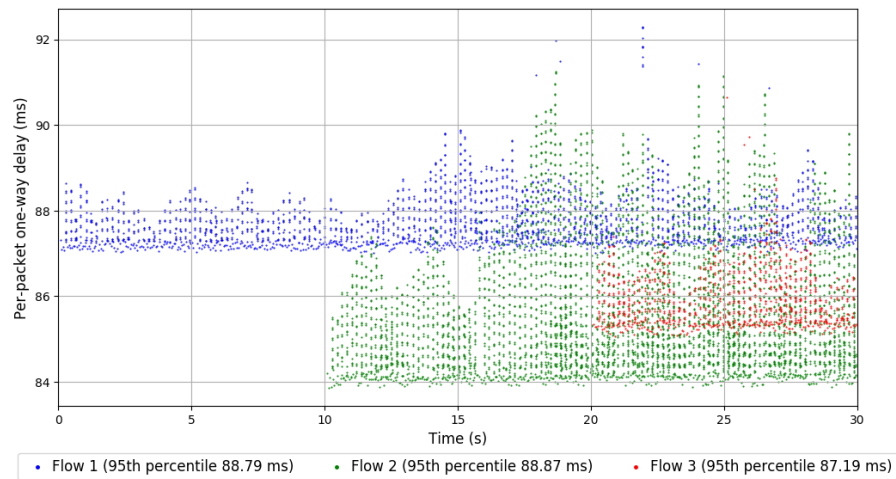
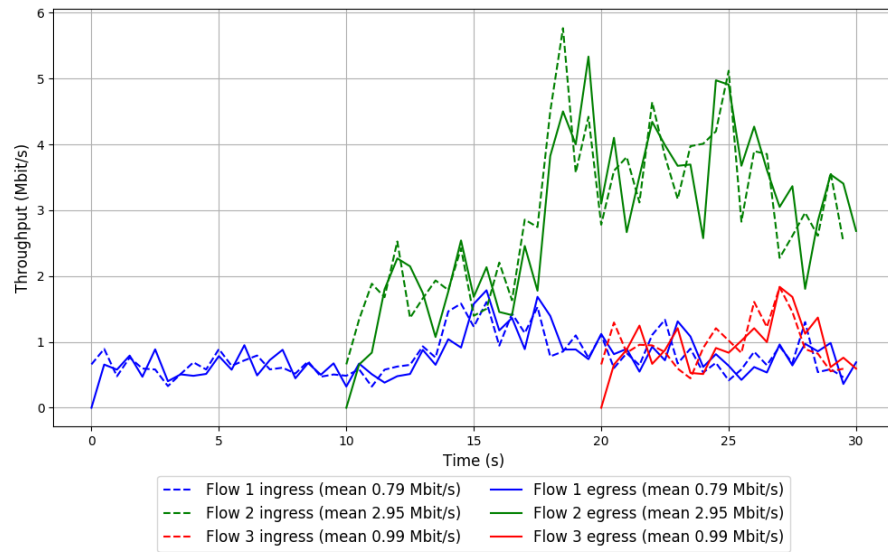


Run 3: Statistics of Sprout

Start at: 2019-03-09 03:24:09  
End at: 2019-03-09 03:24:39  
Local clock offset: -1.831 ms  
Remote clock offset: 20.027 ms

# Below is generated by plot.py at 2019-03-09 04:42:28  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 3.08 Mbit/s  
95th percentile per-packet one-way delay: 88.765 ms  
Loss rate: 0.01%  
-- Flow 1:  
Average throughput: 0.79 Mbit/s  
95th percentile per-packet one-way delay: 88.792 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 2.95 Mbit/s  
95th percentile per-packet one-way delay: 88.867 ms  
Loss rate: 0.02%  
-- Flow 3:  
Average throughput: 0.99 Mbit/s  
95th percentile per-packet one-way delay: 87.189 ms  
Loss rate: 0.00%

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



#### Run 4: Statistics of Sprout

Start at: 2019-03-09 03:50:45

End at: 2019-03-09 03:51:15

Local clock offset: 2.147 ms

Remote clock offset: 6.46 ms

# Below is generated by plot.py at 2019-03-09 04:42:28

# Datalink statistics

-- Total of 3 flows:

Average throughput: 5.14 Mbit/s

95th percentile per-packet one-way delay: 89.332 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 3.29 Mbit/s

95th percentile per-packet one-way delay: 89.691 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.88 Mbit/s

95th percentile per-packet one-way delay: 88.650 ms

Loss rate: 0.00%

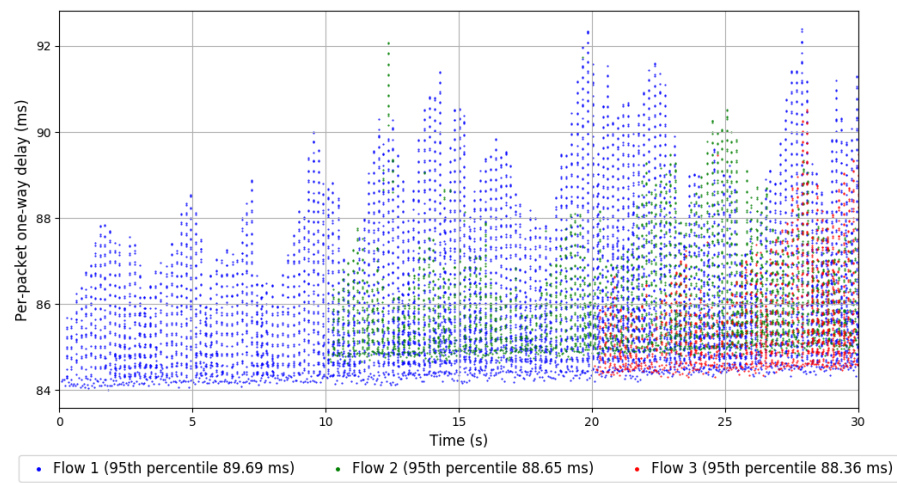
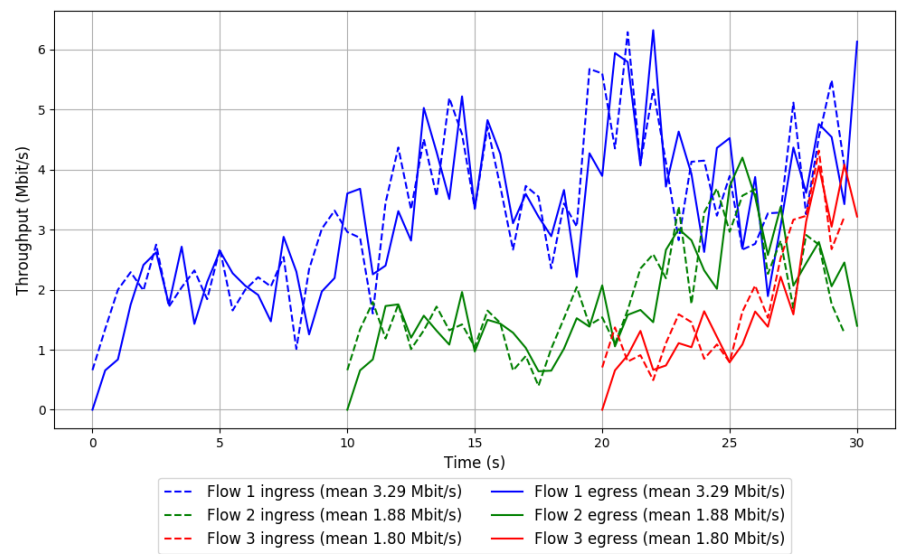
-- Flow 3:

Average throughput: 1.80 Mbit/s

95th percentile per-packet one-way delay: 88.355 ms

Loss rate: 0.00%

Run 4: Report of Sprout — Data Link



Run 5: Statistics of Sprout

Start at: 2019-03-09 04:17:22

End at: 2019-03-09 04:17:52

Local clock offset: 2.566 ms

Remote clock offset: 1.495 ms

# Below is generated by plot.py at 2019-03-09 04:42:28

# Datalink statistics

-- Total of 3 flows:

Average throughput: 4.36 Mbit/s

95th percentile per-packet one-way delay: 89.661 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 2.02 Mbit/s

95th percentile per-packet one-way delay: 90.079 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 2.29 Mbit/s

95th percentile per-packet one-way delay: 89.664 ms

Loss rate: 0.00%

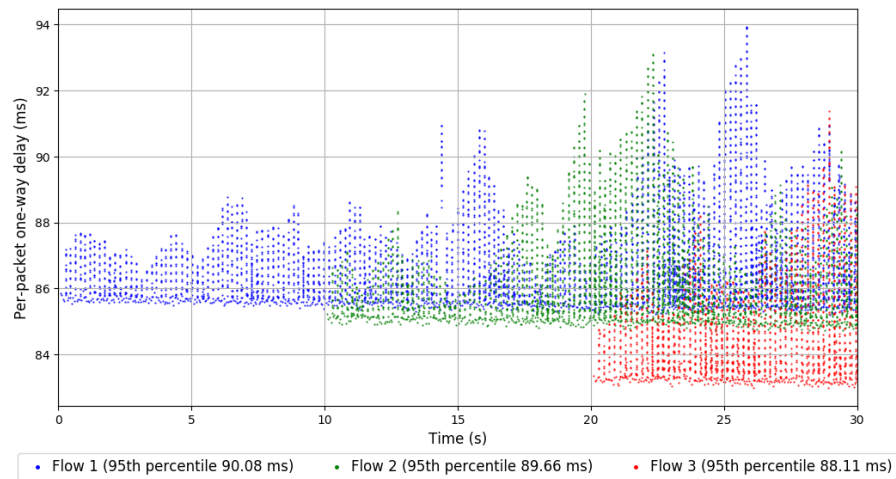
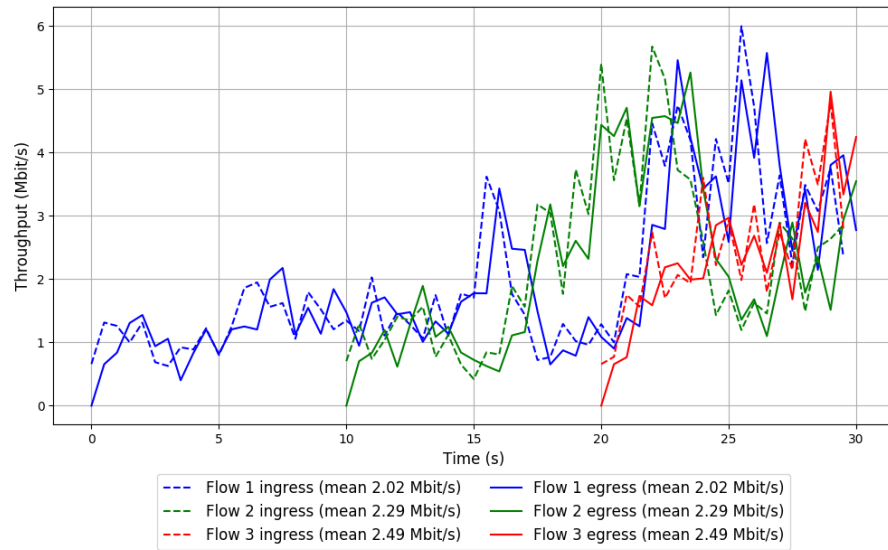
-- Flow 3:

Average throughput: 2.49 Mbit/s

95th percentile per-packet one-way delay: 88.110 ms

Loss rate: 0.00%

## Run 5: Report of Sprout — Data Link





Run 1: Statistics of TaoVA-100x

Start at: 2019-03-09 02:21:55

End at: 2019-03-09 02:22:25

Local clock offset: -6.339 ms

Remote clock offset: 4.569 ms

# Below is generated by plot.py at 2019-03-09 04:42:28

# Datalink statistics

-- Total of 3 flows:

Average throughput: 8.48 Mbit/s

95th percentile per-packet one-way delay: 90.275 ms

Loss rate: 30.60%

-- Flow 1:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 85.534 ms

Loss rate: 95.92%

-- Flow 2:

Average throughput: 9.85 Mbit/s

95th percentile per-packet one-way delay: 93.988 ms

Loss rate: 33.09%

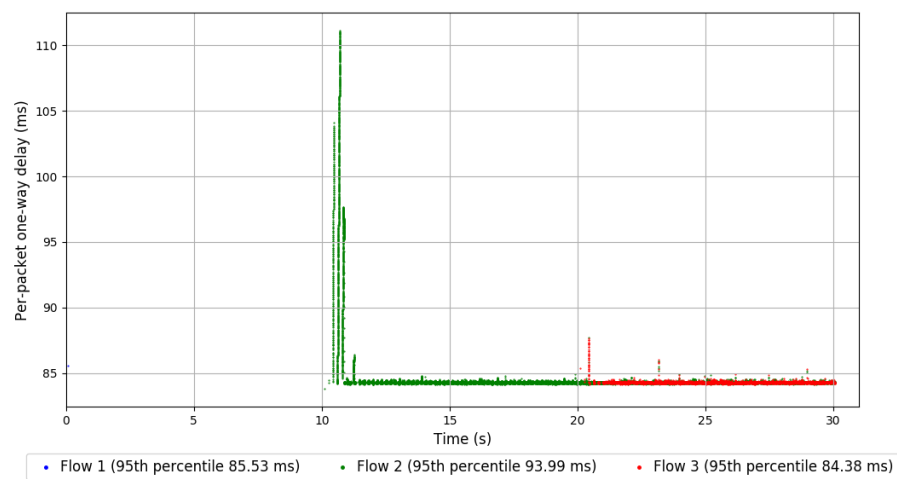
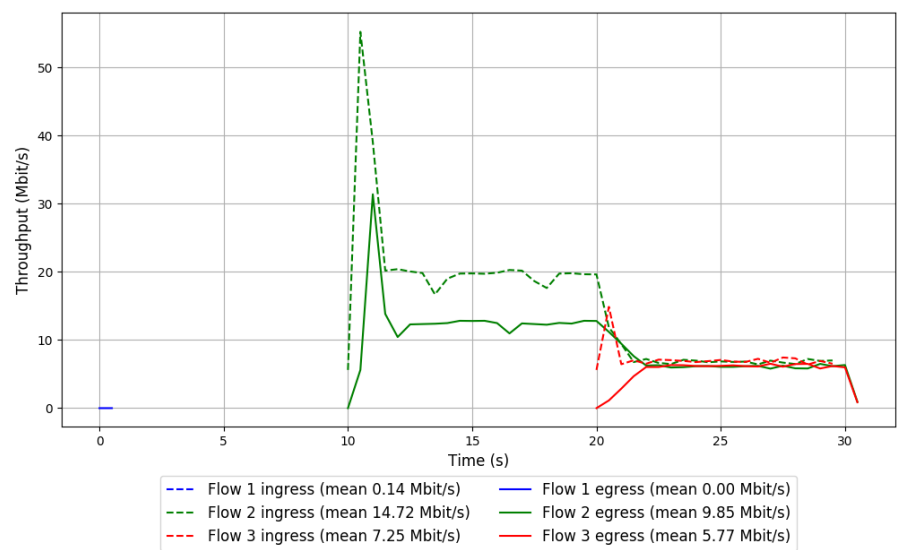
-- Flow 3:

Average throughput: 5.77 Mbit/s

95th percentile per-packet one-way delay: 84.378 ms

Loss rate: 20.42%

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

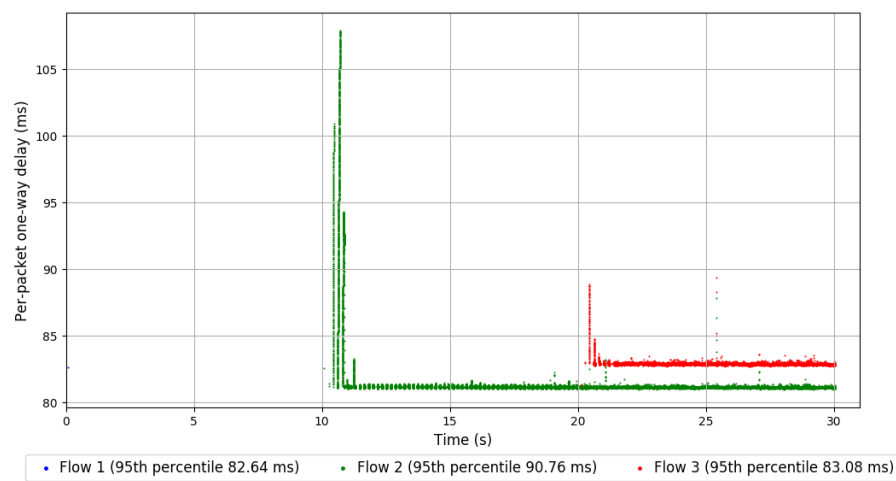
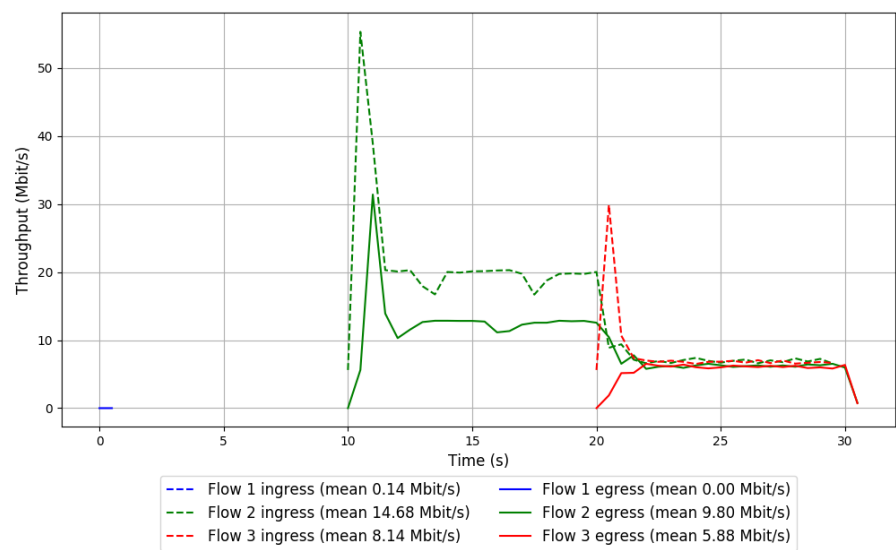


Run 2: Statistics of TaoVA-100x

Start at: 2019-03-09 02:48:34  
End at: 2019-03-09 02:49:04  
Local clock offset: -6.892 ms  
Remote clock offset: 11.263 ms

# Below is generated by plot.py at 2019-03-09 04:42:28  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 8.48 Mbit/s  
95th percentile per-packet one-way delay: 87.388 ms  
Loss rate: 32.11%  
-- Flow 1:  
Average throughput: 0.00 Mbit/s  
95th percentile per-packet one-way delay: 82.638 ms  
Loss rate: 95.92%  
-- Flow 2:  
Average throughput: 9.80 Mbit/s  
95th percentile per-packet one-way delay: 90.763 ms  
Loss rate: 33.29%  
-- Flow 3:  
Average throughput: 5.88 Mbit/s  
95th percentile per-packet one-way delay: 83.085 ms  
Loss rate: 27.81%

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



Run 3: Statistics of TaoVA-100x

Start at: 2019-03-09 03:15:11

End at: 2019-03-09 03:15:41

Local clock offset: -6.505 ms

Remote clock offset: 15.55 ms

# Below is generated by plot.py at 2019-03-09 04:42:28

# Datalink statistics

-- Total of 3 flows:

Average throughput: 8.48 Mbit/s

95th percentile per-packet one-way delay: 87.963 ms

Loss rate: 31.89%

-- Flow 1:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 83.059 ms

Loss rate: 95.92%

-- Flow 2:

Average throughput: 9.84 Mbit/s

95th percentile per-packet one-way delay: 91.391 ms

Loss rate: 33.40%

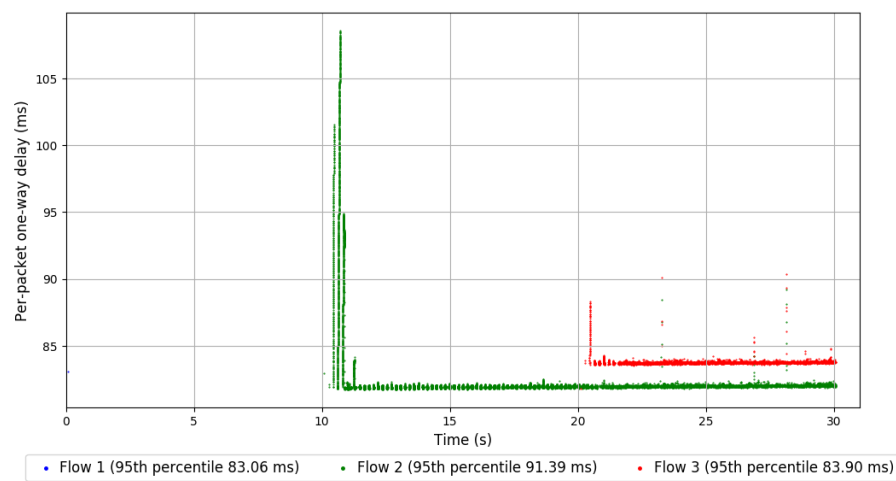
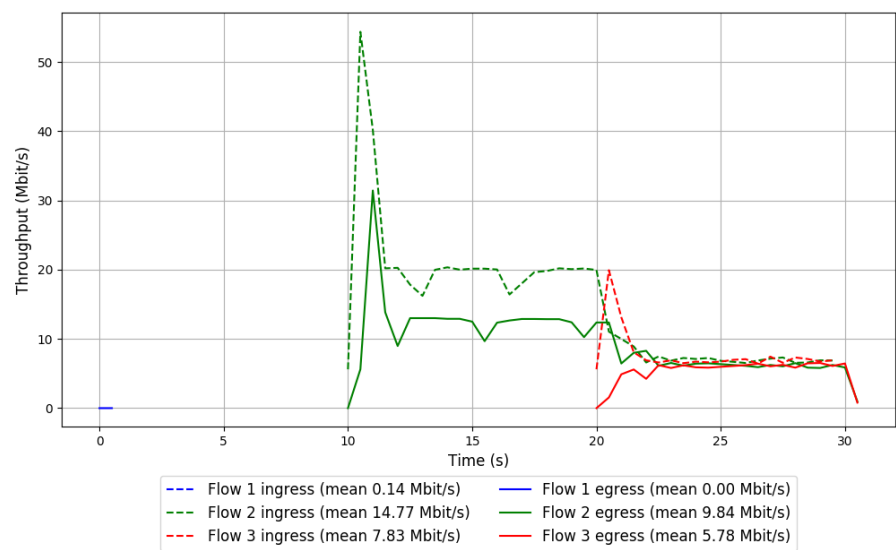
-- Flow 3:

Average throughput: 5.78 Mbit/s

95th percentile per-packet one-way delay: 83.897 ms

Loss rate: 26.15%

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

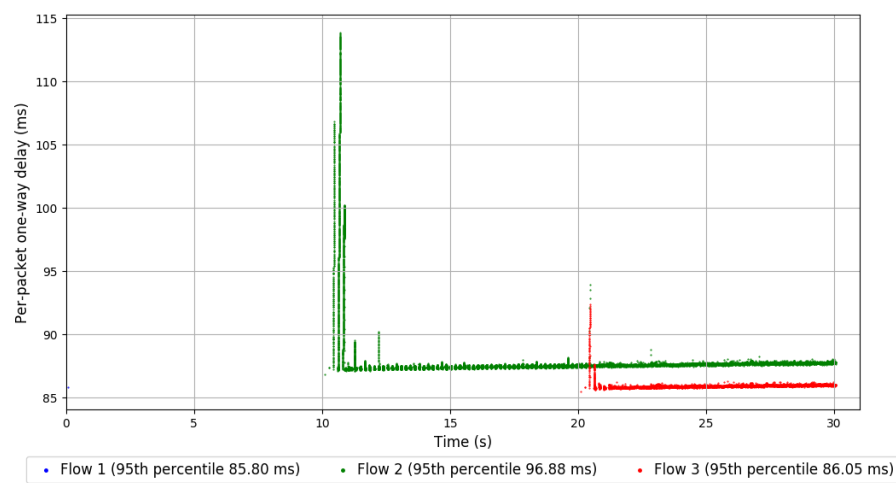
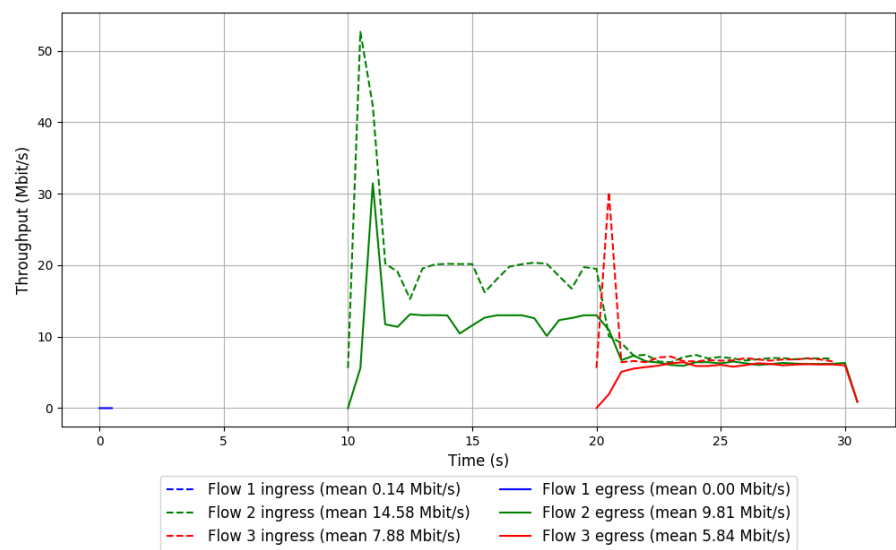


Run 4: Statistics of TaoVA-100x

Start at: 2019-03-09 03:41:52  
End at: 2019-03-09 03:42:22  
Local clock offset: 0.433 ms  
Remote clock offset: 14.557 ms

# Below is generated by plot.py at 2019-03-09 04:42:28  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 8.48 Mbit/s  
95th percentile per-packet one-way delay: 93.157 ms  
Loss rate: 31.26%  
-- Flow 1:  
Average throughput: 0.00 Mbit/s  
95th percentile per-packet one-way delay: 85.800 ms  
Loss rate: 95.92%  
-- Flow 2:  
Average throughput: 9.81 Mbit/s  
95th percentile per-packet one-way delay: 96.875 ms  
Loss rate: 32.70%  
-- Flow 3:  
Average throughput: 5.84 Mbit/s  
95th percentile per-packet one-way delay: 86.052 ms  
Loss rate: 25.90%

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



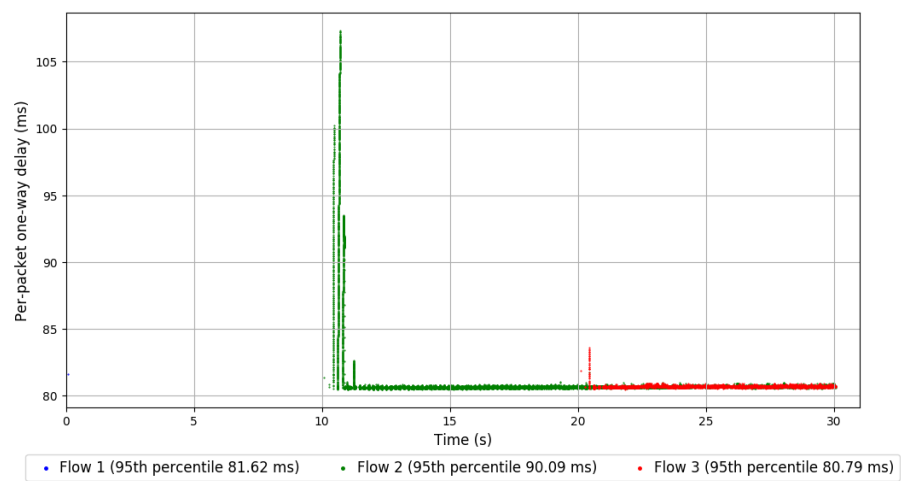
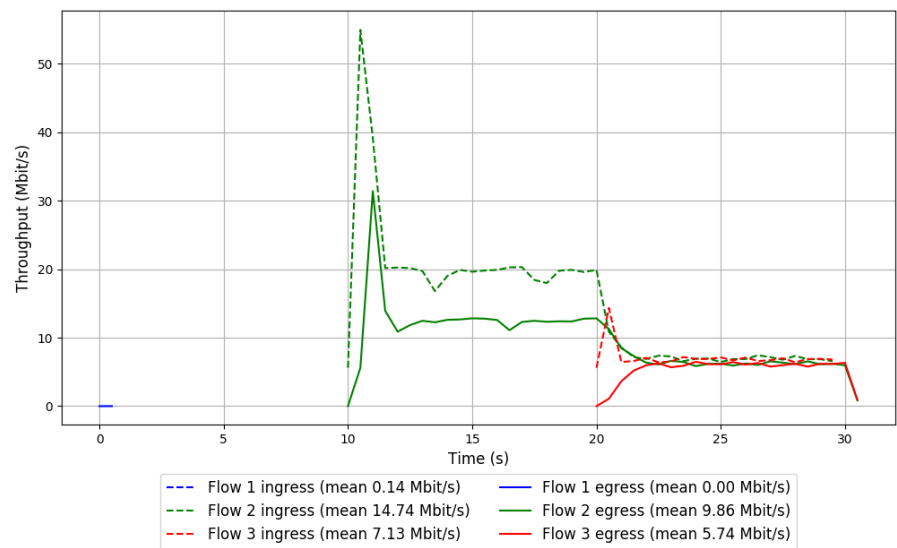


Run 5: Statistics of TaoVA-100x

Start at: 2019-03-09 04:08:28  
End at: 2019-03-09 04:08:58  
Local clock offset: 3.866 ms  
Remote clock offset: -4.037 ms

# Below is generated by plot.py at 2019-03-09 04:42:28  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 8.48 Mbit/s  
95th percentile per-packet one-way delay: 86.476 ms  
Loss rate: 30.45%  
-- Flow 1:  
Average throughput: 0.00 Mbit/s  
95th percentile per-packet one-way delay: 81.621 ms  
Loss rate: 95.92%  
-- Flow 2:  
Average throughput: 9.86 Mbit/s  
95th percentile per-packet one-way delay: 90.088 ms  
Loss rate: 33.10%  
-- Flow 3:  
Average throughput: 5.74 Mbit/s  
95th percentile per-packet one-way delay: 80.793 ms  
Loss rate: 19.43%

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

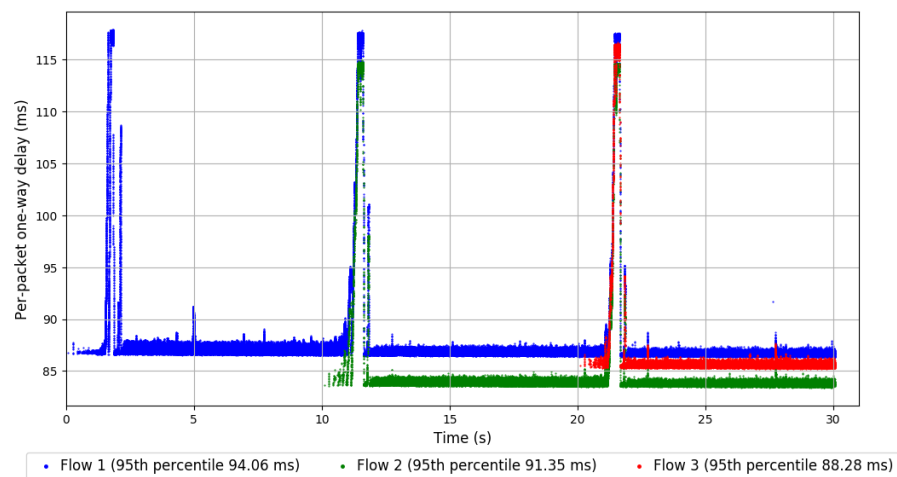
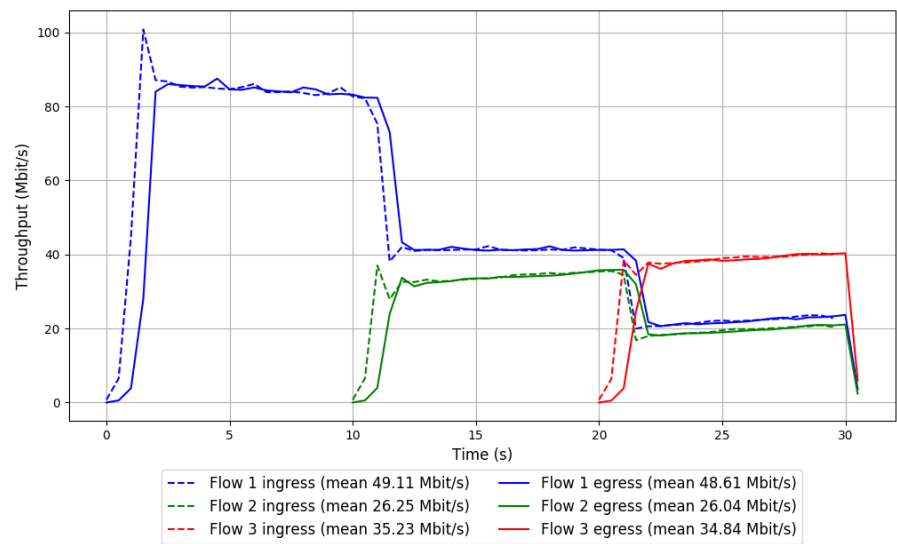


Run 1: Statistics of TCP Vegas

Start at: 2019-03-09 02:35:52  
End at: 2019-03-09 02:36:22  
Local clock offset: -6.212 ms  
Remote clock offset: 10.321 ms

# Below is generated by plot.py at 2019-03-09 04:42:54  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 77.55 Mbit/s  
95th percentile per-packet one-way delay: 93.113 ms  
Loss rate: 0.99%  
-- Flow 1:  
Average throughput: 48.61 Mbit/s  
95th percentile per-packet one-way delay: 94.061 ms  
Loss rate: 1.02%  
-- Flow 2:  
Average throughput: 26.04 Mbit/s  
95th percentile per-packet one-way delay: 91.347 ms  
Loss rate: 0.81%  
-- Flow 3:  
Average throughput: 34.84 Mbit/s  
95th percentile per-packet one-way delay: 88.283 ms  
Loss rate: 1.13%

Run 1: Report of TCP Vegas — Data Link

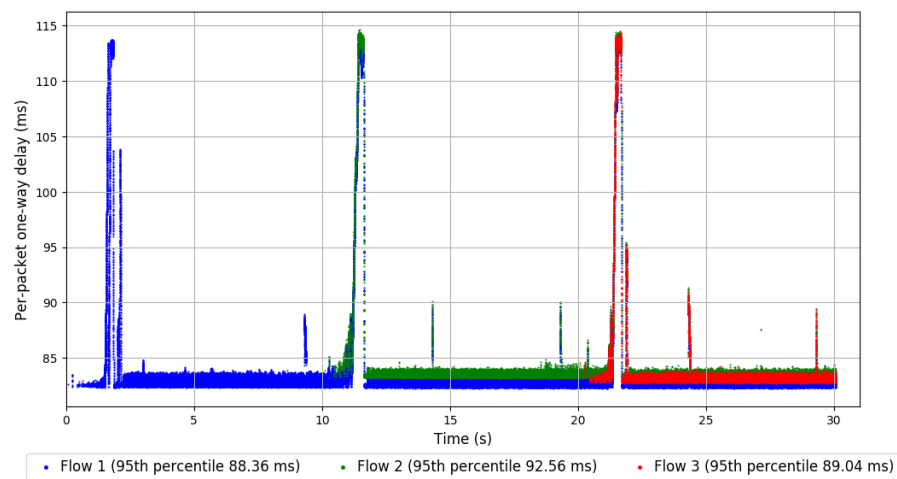
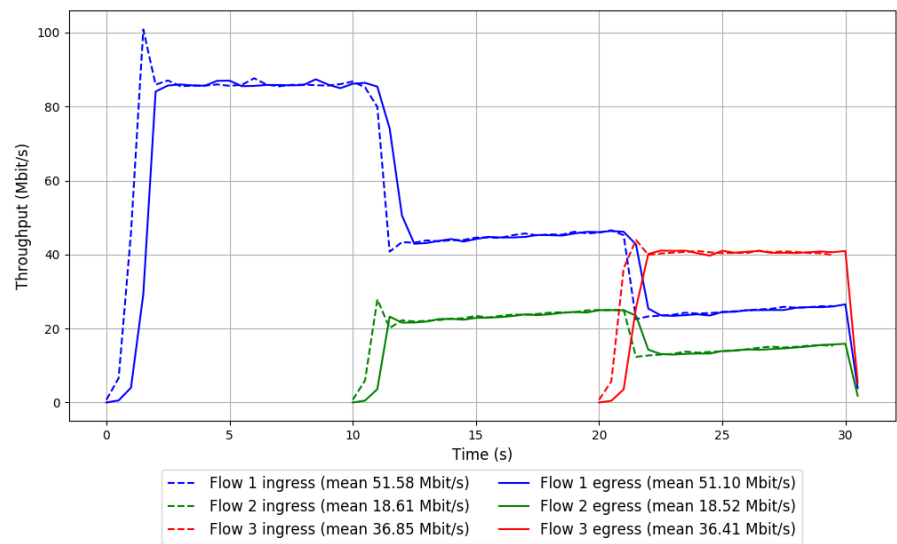


Run 2: Statistics of TCP Vegas

Start at: 2019-03-09 03:02:30  
End at: 2019-03-09 03:03:00  
Local clock offset: -6.959 ms  
Remote clock offset: 13.679 ms

# Below is generated by plot.py at 2019-03-09 04:42:55  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 75.54 Mbit/s  
95th percentile per-packet one-way delay: 88.890 ms  
Loss rate: 0.90%  
-- Flow 1:  
Average throughput: 51.10 Mbit/s  
95th percentile per-packet one-way delay: 88.361 ms  
Loss rate: 0.92%  
-- Flow 2:  
Average throughput: 18.52 Mbit/s  
95th percentile per-packet one-way delay: 92.564 ms  
Loss rate: 0.49%  
-- Flow 3:  
Average throughput: 36.41 Mbit/s  
95th percentile per-packet one-way delay: 89.041 ms  
Loss rate: 1.21%

Run 2: Report of TCP Vegas — Data Link

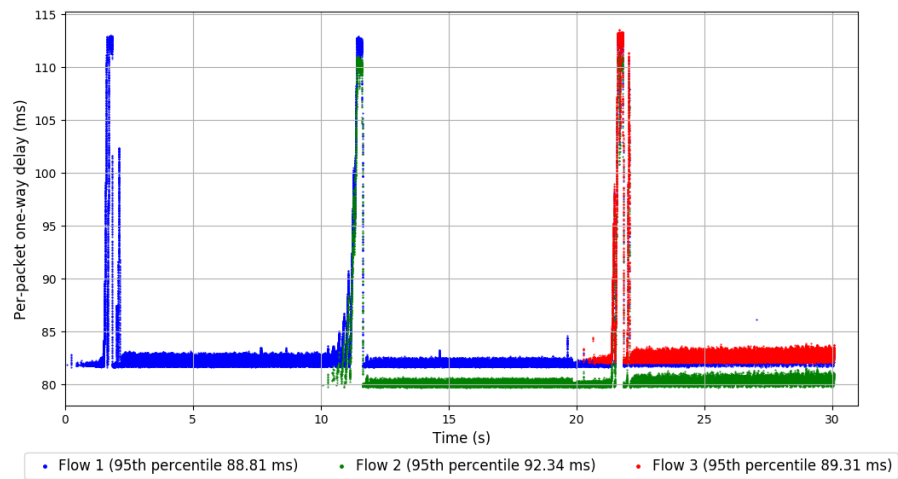
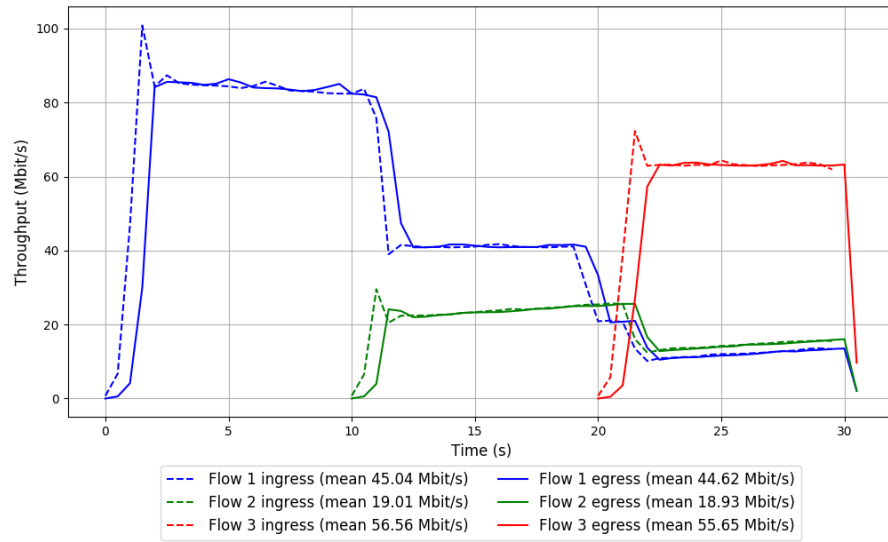


Run 3: Statistics of TCP Vegas

Start at: 2019-03-09 03:29:11  
End at: 2019-03-09 03:29:41  
Local clock offset: -0.744 ms  
Remote clock offset: 16.845 ms

# Below is generated by plot.py at 2019-03-09 04:42:57  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 75.74 Mbit/s  
95th percentile per-packet one-way delay: 89.313 ms  
Loss rate: 1.01%  
-- Flow 1:  
Average throughput: 44.62 Mbit/s  
95th percentile per-packet one-way delay: 88.808 ms  
Loss rate: 0.94%  
-- Flow 2:  
Average throughput: 18.93 Mbit/s  
95th percentile per-packet one-way delay: 92.343 ms  
Loss rate: 0.40%  
-- Flow 3:  
Average throughput: 55.65 Mbit/s  
95th percentile per-packet one-way delay: 89.313 ms  
Loss rate: 1.60%

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





Run 4: Statistics of TCP Vegas

Start at: 2019-03-09 03:55:47

End at: 2019-03-09 03:56:17

Local clock offset: 2.631 ms

Remote clock offset: 3.694 ms

# Below is generated by plot.py at 2019-03-09 04:42:57

# Datalink statistics

-- Total of 3 flows:

Average throughput: 68.04 Mbit/s

95th percentile per-packet one-way delay: 100.496 ms

Loss rate: 1.46%

-- Flow 1:

Average throughput: 34.48 Mbit/s

95th percentile per-packet one-way delay: 104.206 ms

Loss rate: 2.08%

-- Flow 2:

Average throughput: 44.58 Mbit/s

95th percentile per-packet one-way delay: 96.853 ms

Loss rate: 0.91%

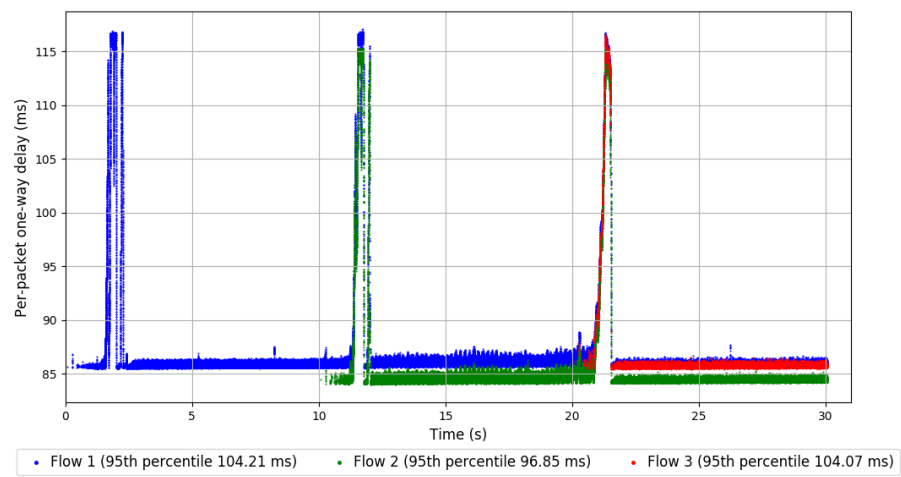
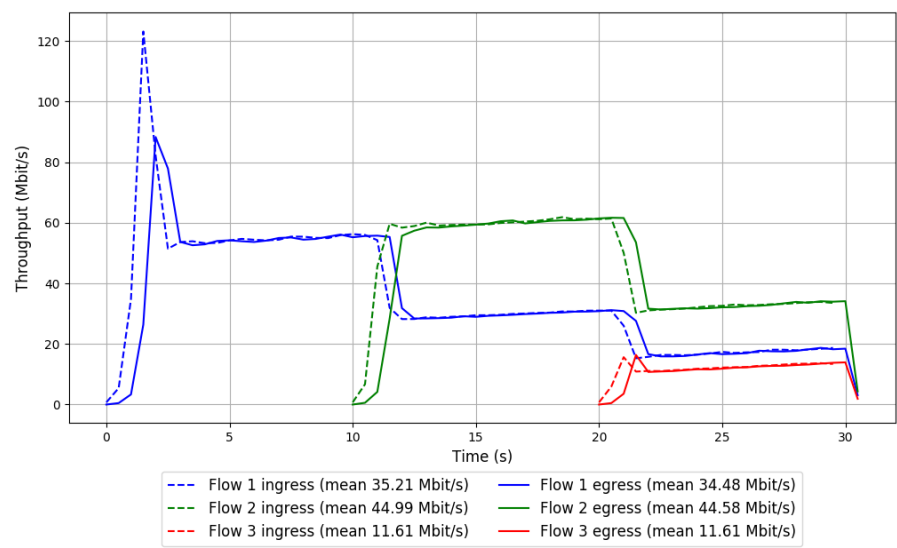
-- Flow 3:

Average throughput: 11.61 Mbit/s

95th percentile per-packet one-way delay: 104.066 ms

Loss rate: 0.06%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2019-03-09 04:22:24

End at: 2019-03-09 04:22:54

Local clock offset: 0.566 ms

Remote clock offset: 2.558 ms

# Below is generated by plot.py at 2019-03-09 04:43:03

# Datalink statistics

-- Total of 3 flows:

Average throughput: 76.25 Mbit/s

95th percentile per-packet one-way delay: 92.583 ms

Loss rate: 0.91%

-- Flow 1:

Average throughput: 51.25 Mbit/s

95th percentile per-packet one-way delay: 92.451 ms

Loss rate: 0.89%

-- Flow 2:

Average throughput: 18.74 Mbit/s

95th percentile per-packet one-way delay: 93.903 ms

Loss rate: 0.54%

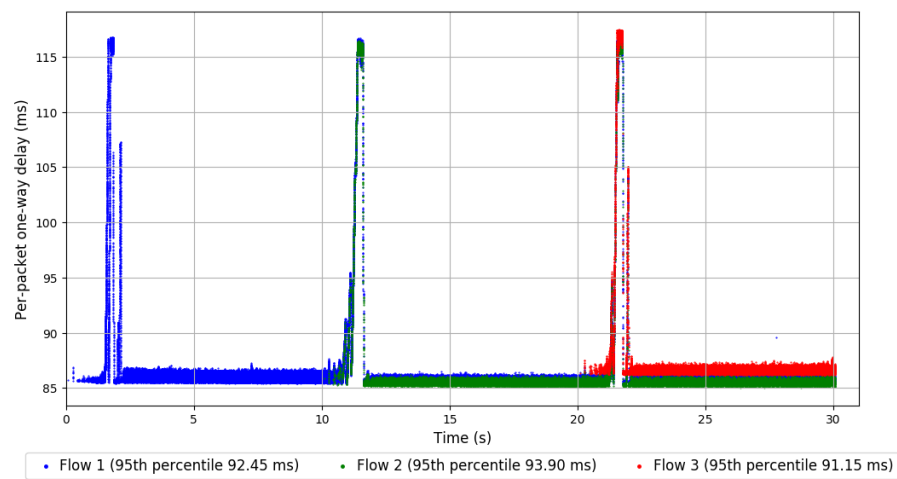
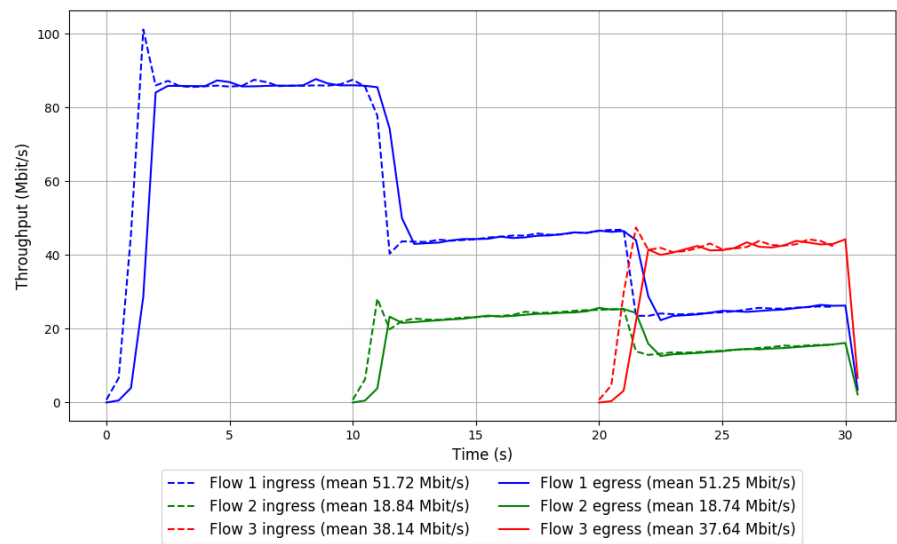
-- Flow 3:

Average throughput: 37.64 Mbit/s

95th percentile per-packet one-way delay: 91.147 ms

Loss rate: 1.33%

Run 5: Report of TCP Vegas — Data Link



Run 1: Statistics of Verus

Start at: 2019-03-09 02:33:20

End at: 2019-03-09 02:33:50

Local clock offset: -6.156 ms

Remote clock offset: 4.606 ms

# Below is generated by plot.py at 2019-03-09 04:43:03

# Datalink statistics

-- Total of 3 flows:

Average throughput: 41.50 Mbit/s

95th percentile per-packet one-way delay: 111.810 ms

Loss rate: 13.14%

-- Flow 1:

Average throughput: 24.37 Mbit/s

95th percentile per-packet one-way delay: 111.787 ms

Loss rate: 12.14%

-- Flow 2:

Average throughput: 20.63 Mbit/s

95th percentile per-packet one-way delay: 111.736 ms

Loss rate: 13.83%

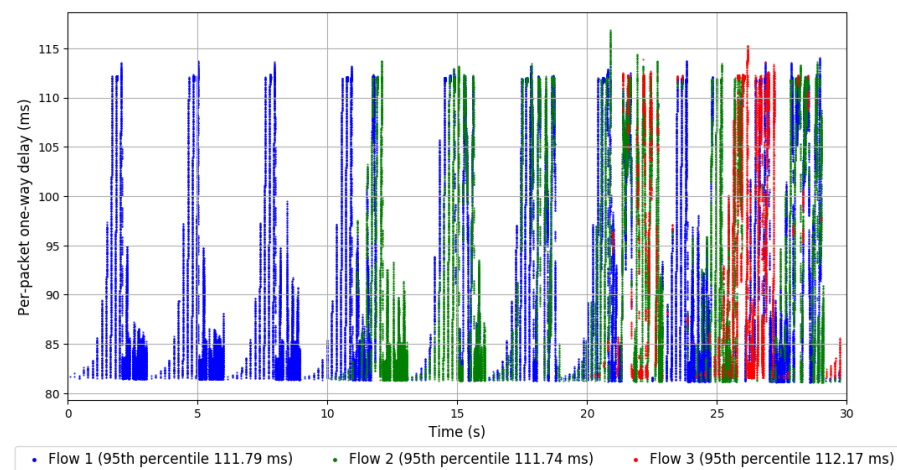
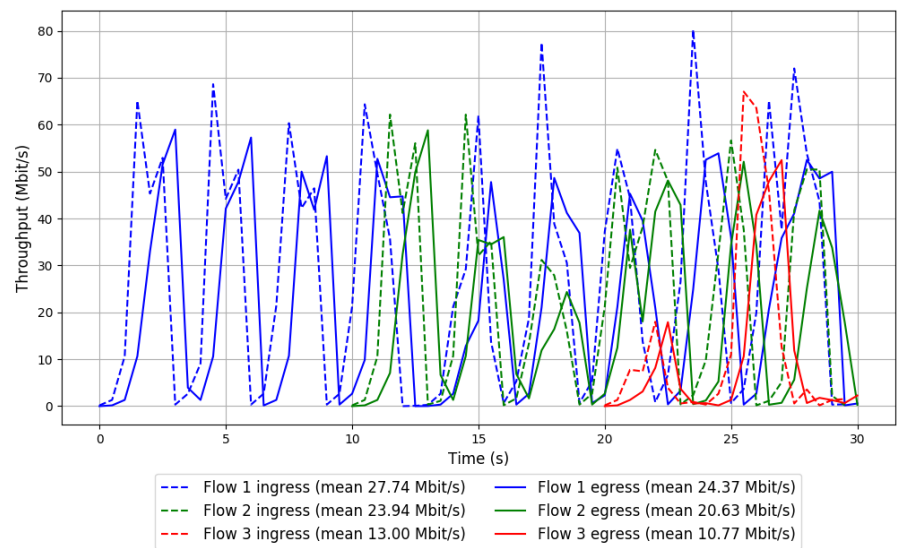
-- Flow 3:

Average throughput: 10.77 Mbit/s

95th percentile per-packet one-way delay: 112.175 ms

Loss rate: 17.13%

Run 1: Report of Verus — Data Link

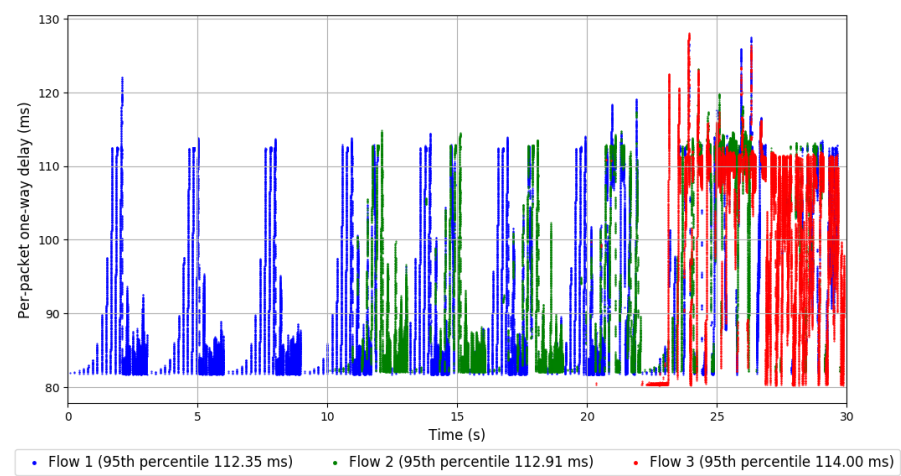
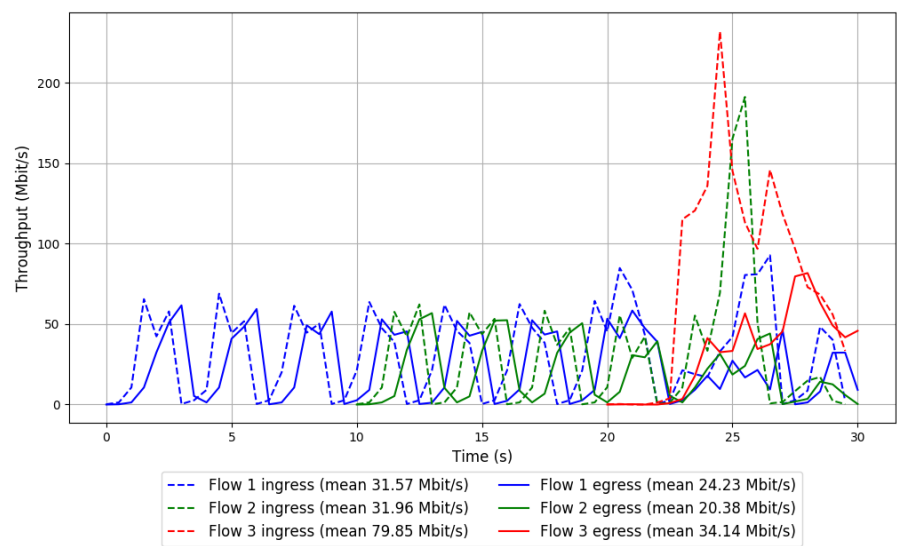


Run 2: Statistics of Verus

Start at: 2019-03-09 02:59:57  
End at: 2019-03-09 03:00:27  
Local clock offset: -6.144 ms  
Remote clock offset: 13.373 ms

# Below is generated by plot.py at 2019-03-09 04:43:08  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 48.74 Mbit/s  
95th percentile per-packet one-way delay: 112.669 ms  
Loss rate: 38.01%  
-- Flow 1:  
Average throughput: 24.23 Mbit/s  
95th percentile per-packet one-way delay: 112.349 ms  
Loss rate: 23.23%  
-- Flow 2:  
Average throughput: 20.38 Mbit/s  
95th percentile per-packet one-way delay: 112.907 ms  
Loss rate: 36.24%  
-- Flow 3:  
Average throughput: 34.14 Mbit/s  
95th percentile per-packet one-way delay: 114.000 ms  
Loss rate: 57.26%

Run 2: Report of Verus — Data Link



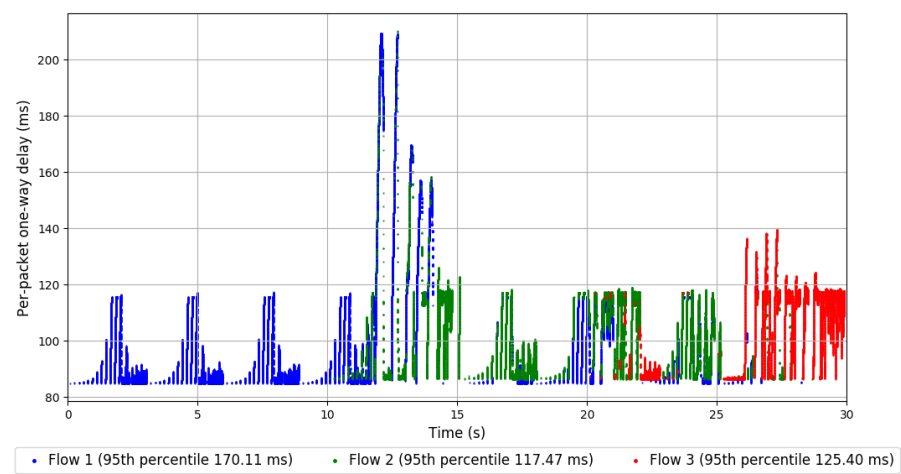
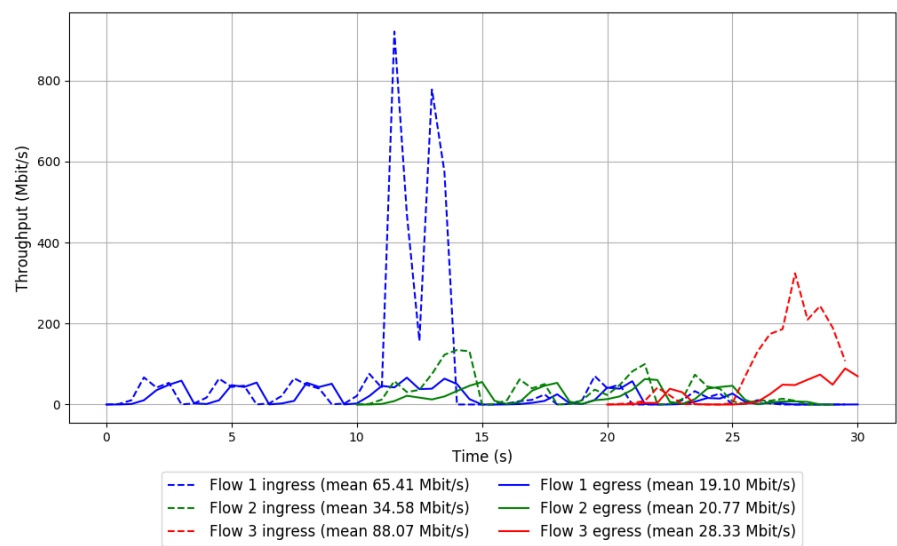


Run 3: Statistics of Verus

Start at: 2019-03-09 03:26:38  
End at: 2019-03-09 03:27:08  
Local clock offset: -1.935 ms  
Remote clock offset: 20.802 ms

# Below is generated by plot.py at 2019-03-09 04:43:18  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 41.33 Mbit/s  
95th percentile per-packet one-way delay: 150.701 ms  
Loss rate: 64.33%  
-- Flow 1:  
Average throughput: 19.10 Mbit/s  
95th percentile per-packet one-way delay: 170.109 ms  
Loss rate: 70.76%  
-- Flow 2:  
Average throughput: 20.77 Mbit/s  
95th percentile per-packet one-way delay: 117.472 ms  
Loss rate: 40.49%  
-- Flow 3:  
Average throughput: 28.33 Mbit/s  
95th percentile per-packet one-way delay: 125.400 ms  
Loss rate: 67.74%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

Start at: 2019-03-09 03:53:15

End at: 2019-03-09 03:53:45

Local clock offset: 2.42 ms

Remote clock offset: 1.128 ms

# Below is generated by plot.py at 2019-03-09 04:43:24

# Datalink statistics

-- Total of 3 flows:

Average throughput: 41.06 Mbit/s

95th percentile per-packet one-way delay: 140.107 ms

Loss rate: 54.87%

-- Flow 1:

Average throughput: 25.90 Mbit/s

95th percentile per-packet one-way delay: 146.994 ms

Loss rate: 64.58%

-- Flow 2:

Average throughput: 18.92 Mbit/s

95th percentile per-packet one-way delay: 112.419 ms

Loss rate: 15.01%

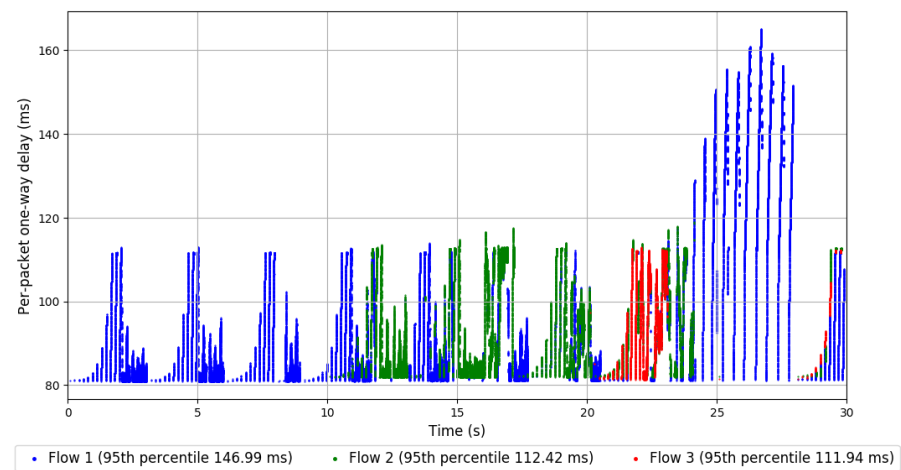
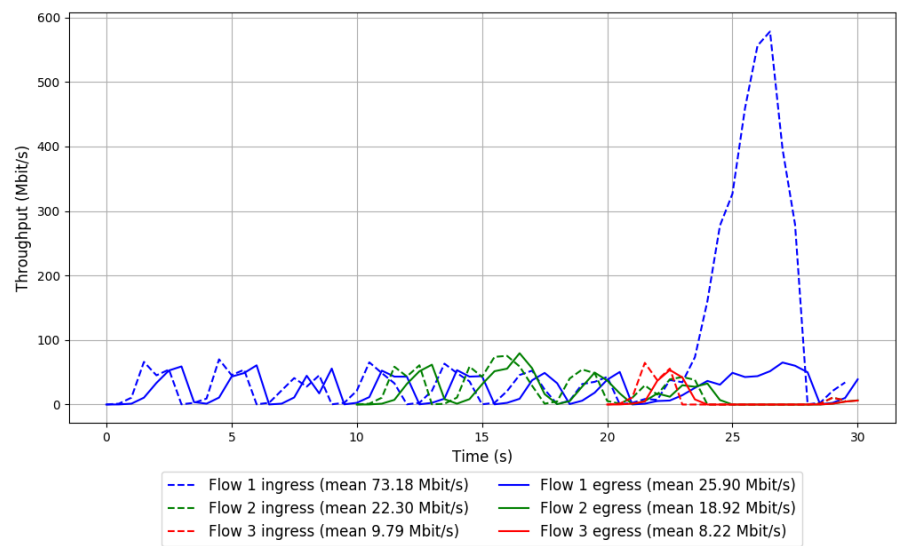
-- Flow 3:

Average throughput: 8.22 Mbit/s

95th percentile per-packet one-way delay: 111.942 ms

Loss rate: 15.92%

Run 4: Report of Verus — Data Link



Run 5: Statistics of Verus

Start at: 2019-03-09 04:19:52

End at: 2019-03-09 04:20:22

Local clock offset: 0.679 ms

Remote clock offset: 1.929 ms

# Below is generated by plot.py at 2019-03-09 04:43:31

# Datalink statistics

-- Total of 3 flows:

Average throughput: 45.07 Mbit/s

95th percentile per-packet one-way delay: 119.469 ms

Loss rate: 48.10%

-- Flow 1:

Average throughput: 32.95 Mbit/s

95th percentile per-packet one-way delay: 121.485 ms

Loss rate: 50.80%

-- Flow 2:

Average throughput: 11.95 Mbit/s

95th percentile per-packet one-way delay: 118.896 ms

Loss rate: 46.49%

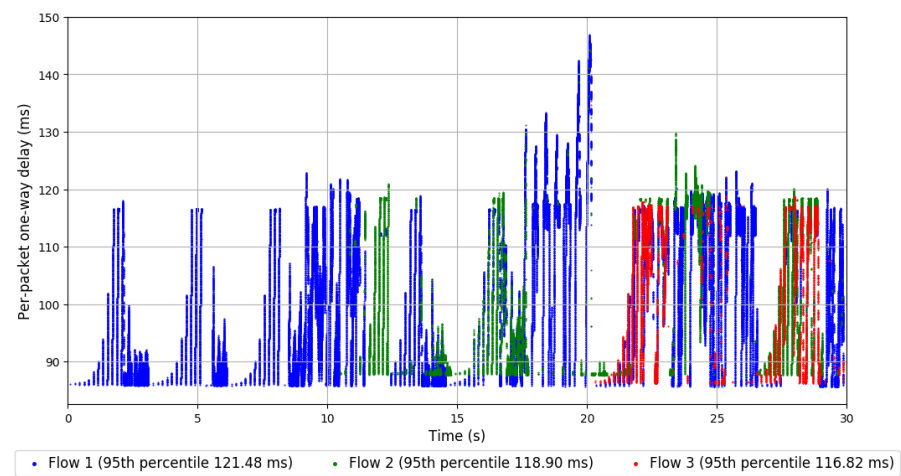
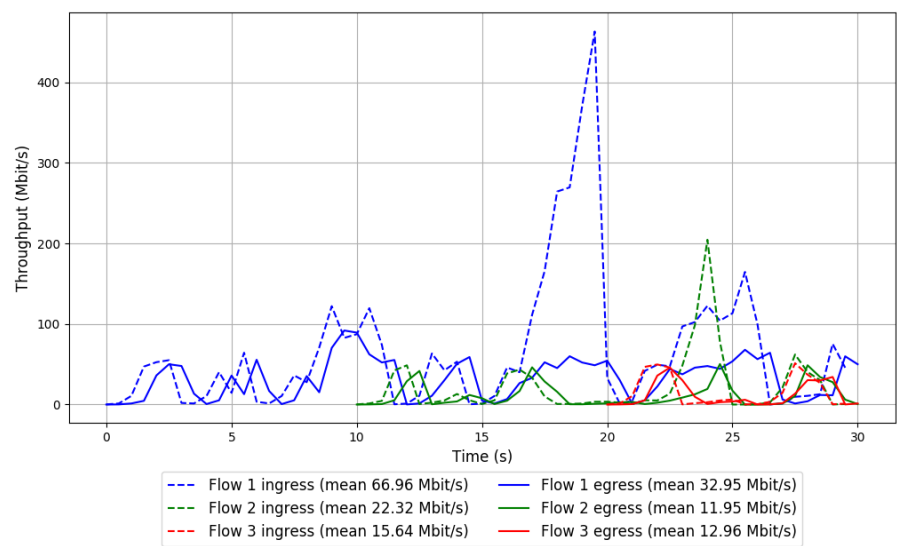
-- Flow 3:

Average throughput: 12.96 Mbit/s

95th percentile per-packet one-way delay: 116.817 ms

Loss rate: 17.52%

Run 5: Report of Verus — Data Link



Run 1: Statistics of PCC-Vivace

Start at: 2019-03-09 02:25:41

End at: 2019-03-09 02:26:11

Local clock offset: -7.075 ms

Remote clock offset: 4.474 ms

# Below is generated by plot.py at 2019-03-09 04:43:46

# Datalink statistics

-- Total of 3 flows:

Average throughput: 76.02 Mbit/s

95th percentile per-packet one-way delay: 113.857 ms

Loss rate: 0.36%

-- Flow 1:

Average throughput: 58.93 Mbit/s

95th percentile per-packet one-way delay: 114.239 ms

Loss rate: 0.34%

-- Flow 2:

Average throughput: 19.30 Mbit/s

95th percentile per-packet one-way delay: 113.228 ms

Loss rate: 0.53%

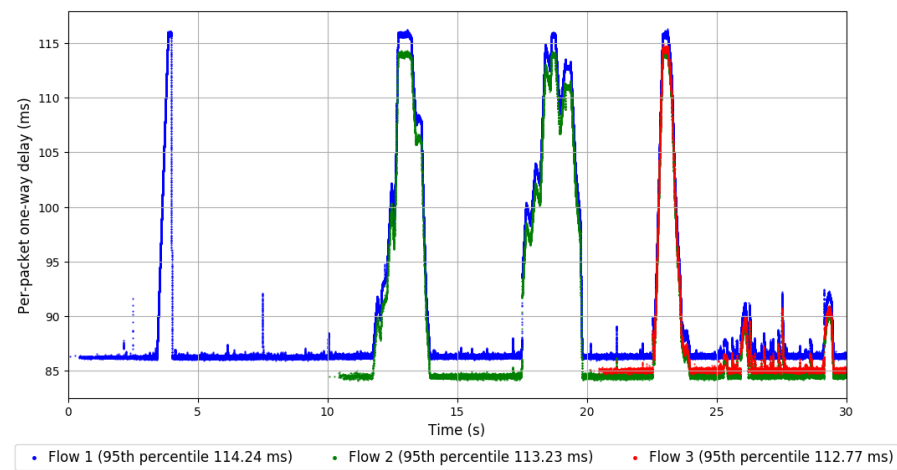
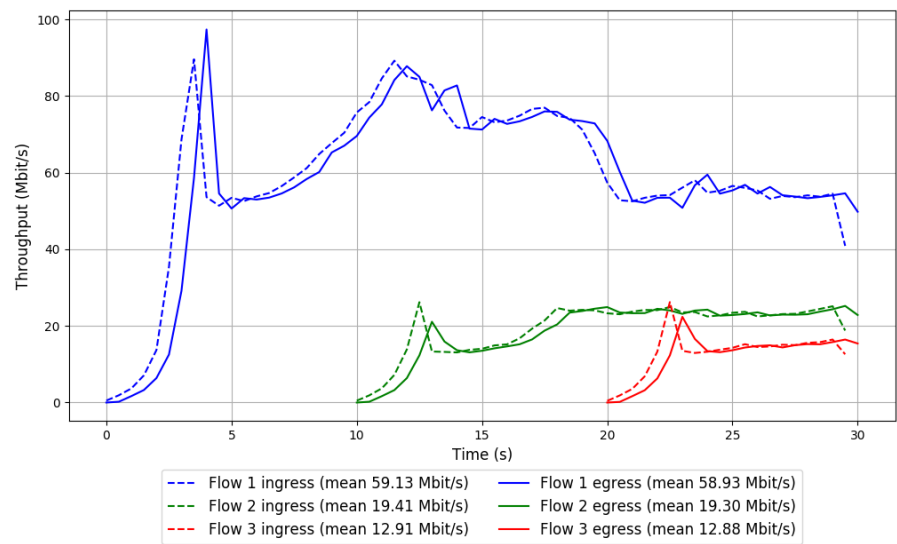
-- Flow 3:

Average throughput: 12.88 Mbit/s

95th percentile per-packet one-way delay: 112.768 ms

Loss rate: 0.19%

Run 1: Report of PCC-Vivace — Data Link



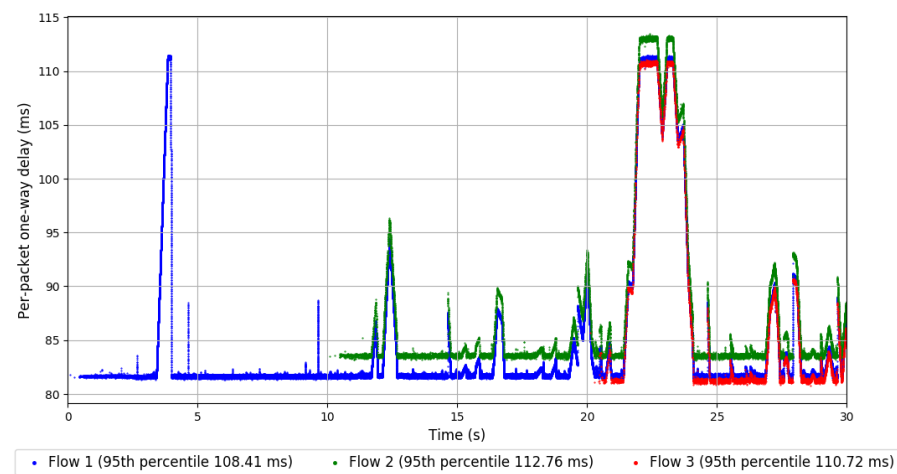
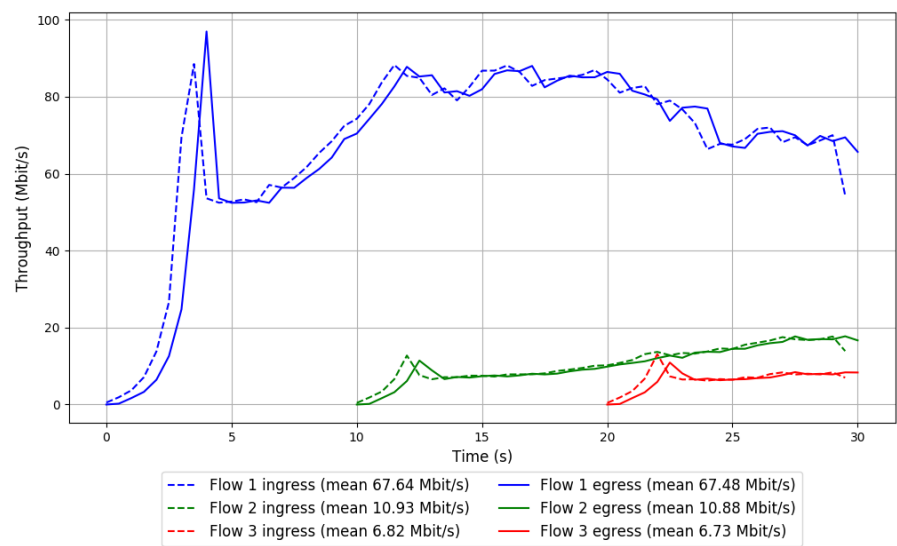


Run 2: Statistics of PCC-Vivace

Start at: 2019-03-09 02:52:19  
End at: 2019-03-09 02:52:49  
Local clock offset: -6.945 ms  
Remote clock offset: 11.839 ms

# Below is generated by plot.py at 2019-03-09 04:43:50  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 76.93 Mbit/s  
95th percentile per-packet one-way delay: 109.583 ms  
Loss rate: 0.28%  
-- Flow 1:  
Average throughput: 67.48 Mbit/s  
95th percentile per-packet one-way delay: 108.409 ms  
Loss rate: 0.22%  
-- Flow 2:  
Average throughput: 10.88 Mbit/s  
95th percentile per-packet one-way delay: 112.756 ms  
Loss rate: 0.44%  
-- Flow 3:  
Average throughput: 6.73 Mbit/s  
95th percentile per-packet one-way delay: 110.721 ms  
Loss rate: 1.30%

Run 2: Report of PCC-Vivace — Data Link

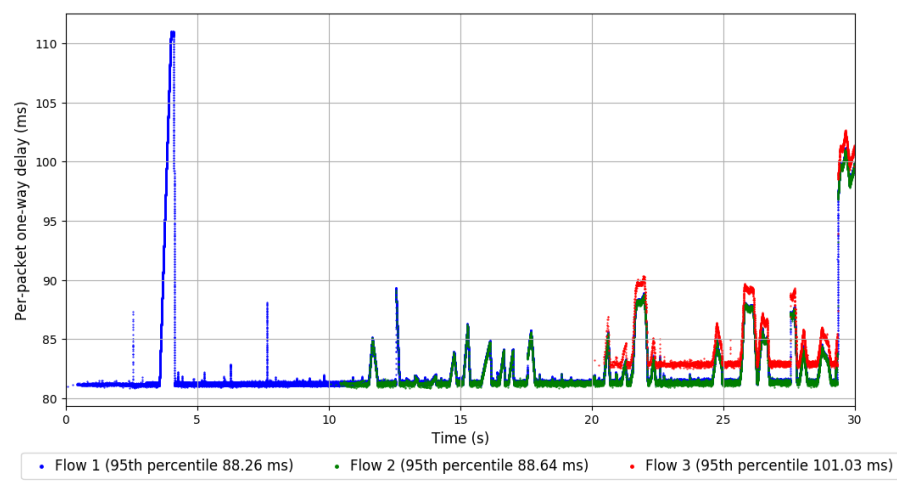
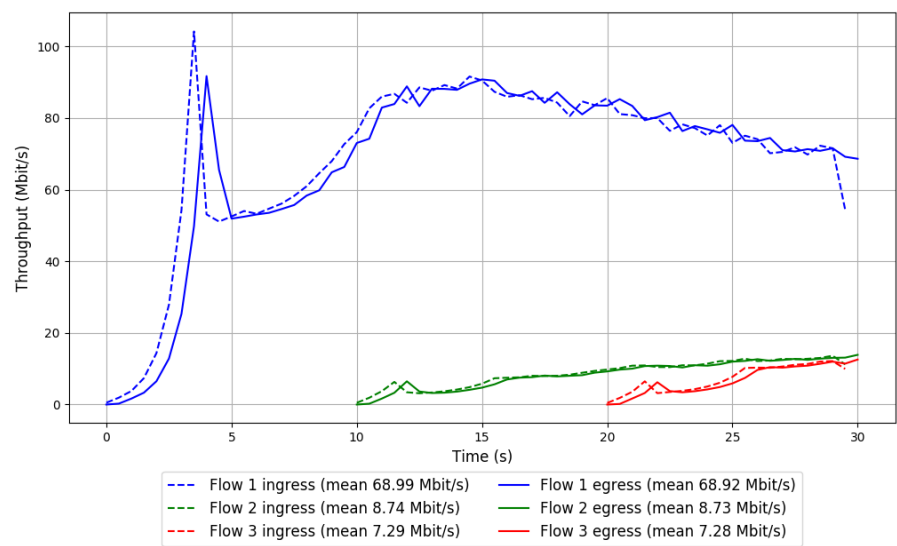


Run 3: Statistics of PCC-Vivace

Start at: 2019-03-09 03:18:56  
End at: 2019-03-09 03:19:26  
Local clock offset: -4.469 ms  
Remote clock offset: 15.874 ms

# Below is generated by plot.py at 2019-03-09 04:43:51  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 77.13 Mbit/s  
95th percentile per-packet one-way delay: 88.764 ms  
Loss rate: 0.03%  
-- Flow 1:  
Average throughput: 68.92 Mbit/s  
95th percentile per-packet one-way delay: 88.264 ms  
Loss rate: 0.04%  
-- Flow 2:  
Average throughput: 8.73 Mbit/s  
95th percentile per-packet one-way delay: 88.635 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 7.28 Mbit/s  
95th percentile per-packet one-way delay: 101.027 ms  
Loss rate: 0.00%

Run 3: Report of PCC-Vivace — Data Link

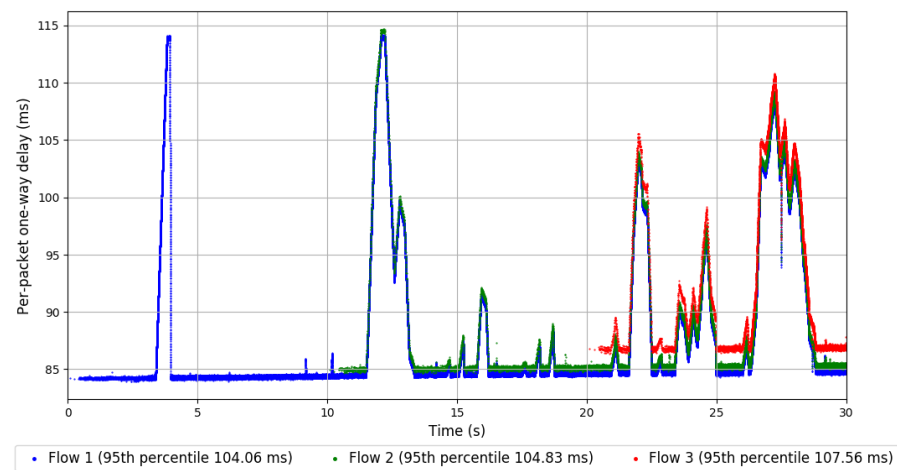
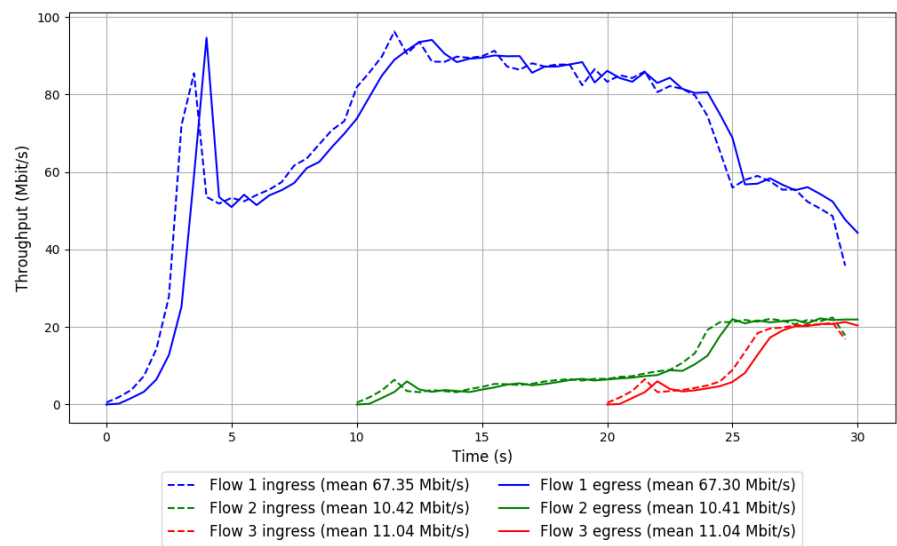


Run 4: Statistics of PCC-Vivace

Start at: 2019-03-09 03:45:37  
End at: 2019-03-09 03:46:07  
Local clock offset: 1.542 ms  
Remote clock offset: 10.258 ms

# Below is generated by plot.py at 2019-03-09 04:43:52  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 77.87 Mbit/s  
95th percentile per-packet one-way delay: 104.852 ms  
Loss rate: 0.06%  
-- Flow 1:  
Average throughput: 67.30 Mbit/s  
95th percentile per-packet one-way delay: 104.055 ms  
Loss rate: 0.07%  
-- Flow 2:  
Average throughput: 10.41 Mbit/s  
95th percentile per-packet one-way delay: 104.829 ms  
Loss rate: 0.03%  
-- Flow 3:  
Average throughput: 11.04 Mbit/s  
95th percentile per-packet one-way delay: 107.555 ms  
Loss rate: 0.00%

Run 4: Report of PCC-Vivace — Data Link

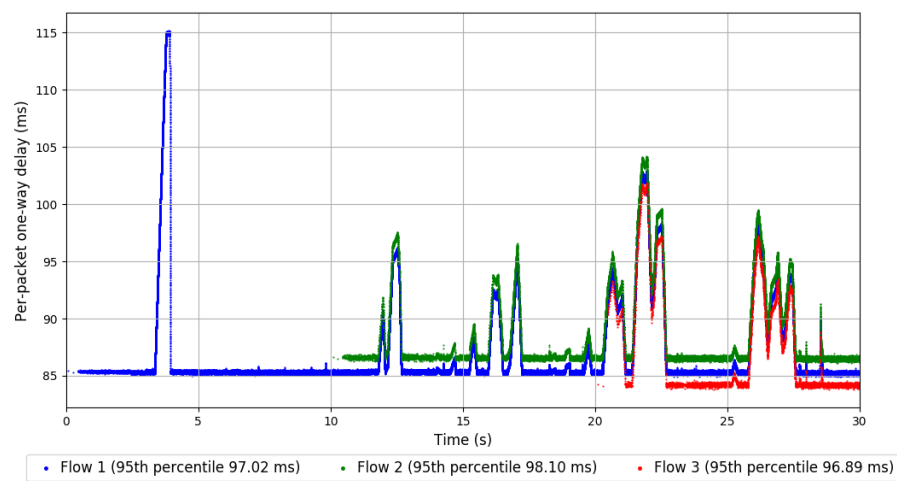
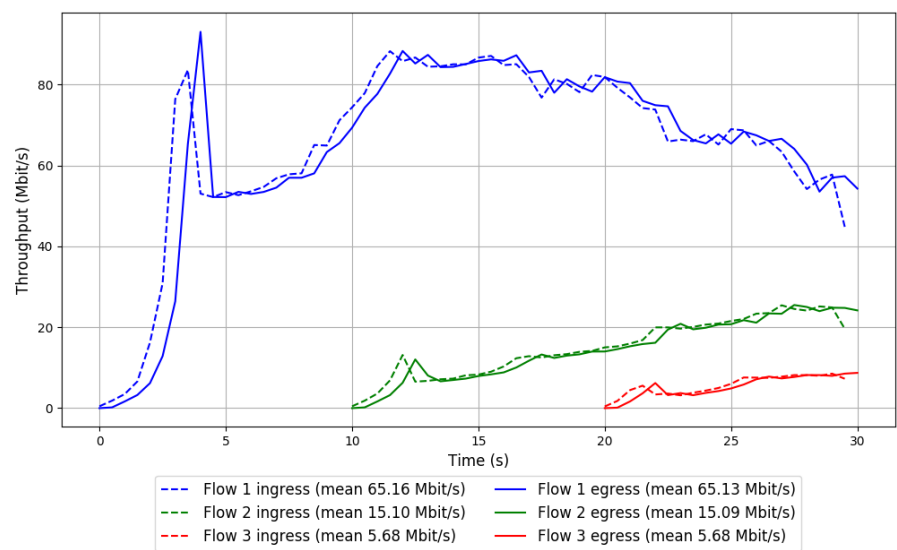


Run 5: Statistics of PCC-Vivace

Start at: 2019-03-09 04:12:14  
End at: 2019-03-09 04:12:44  
Local clock offset: 4.216 ms  
Remote clock offset: -0.802 ms

# Below is generated by plot.py at 2019-03-09 04:43:52  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 77.04 Mbit/s  
95th percentile per-packet one-way delay: 97.210 ms  
Loss rate: 0.05%  
-- Flow 1:  
Average throughput: 65.13 Mbit/s  
95th percentile per-packet one-way delay: 97.016 ms  
Loss rate: 0.05%  
-- Flow 2:  
Average throughput: 15.09 Mbit/s  
95th percentile per-packet one-way delay: 98.102 ms  
Loss rate: 0.01%  
-- Flow 3:  
Average throughput: 5.68 Mbit/s  
95th percentile per-packet one-way delay: 96.886 ms  
Loss rate: 0.00%

Run 5: Report of PCC-Vivace — Data Link





Run 1: Statistics of WebRTC media

Start at: 2019-03-09 02:43:37

End at: 2019-03-09 02:44:07

Local clock offset: -6.926 ms

Remote clock offset: 9.799 ms

# Below is generated by plot.py at 2019-03-09 04:43:52

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.13 Mbit/s

95th percentile per-packet one-way delay: 84.391 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 81.903 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.04 Mbit/s

95th percentile per-packet one-way delay: 81.215 ms

Loss rate: 0.00%

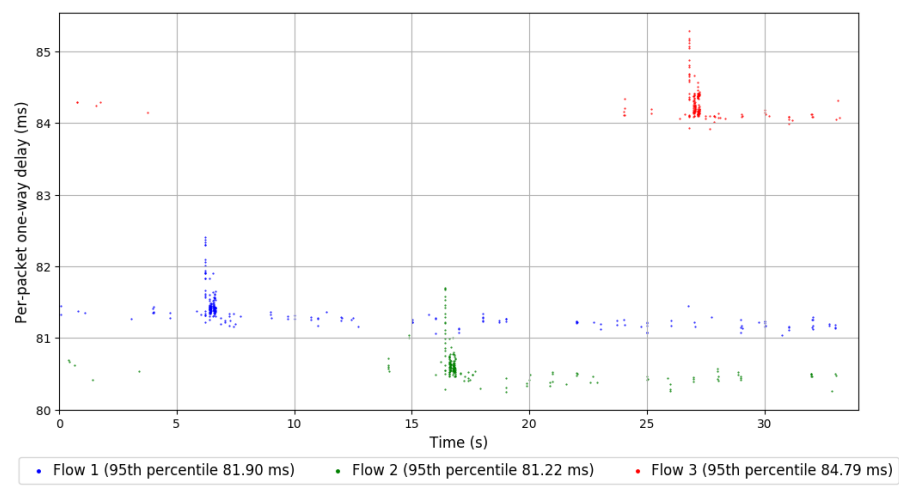
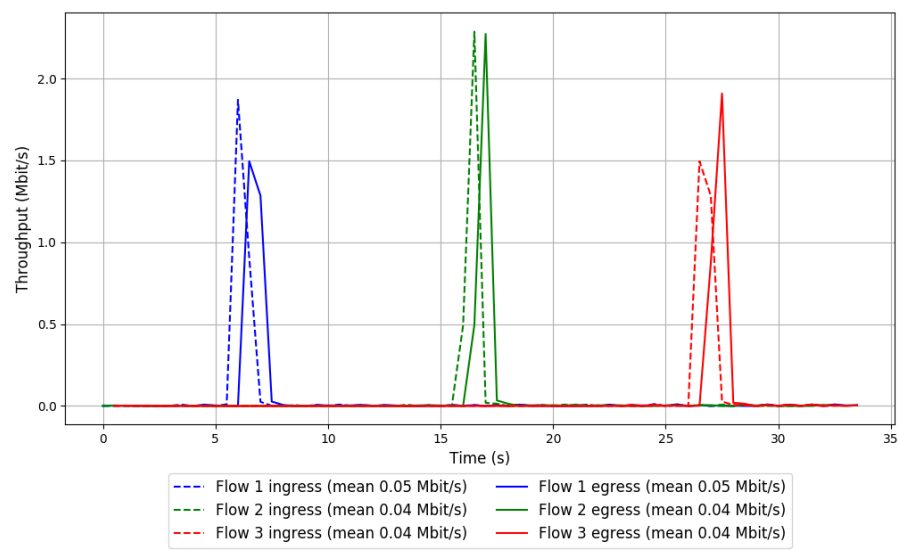
-- Flow 3:

Average throughput: 0.04 Mbit/s

95th percentile per-packet one-way delay: 84.787 ms

Loss rate: 0.00%

Run 1: Report of WebRTC media — Data Link

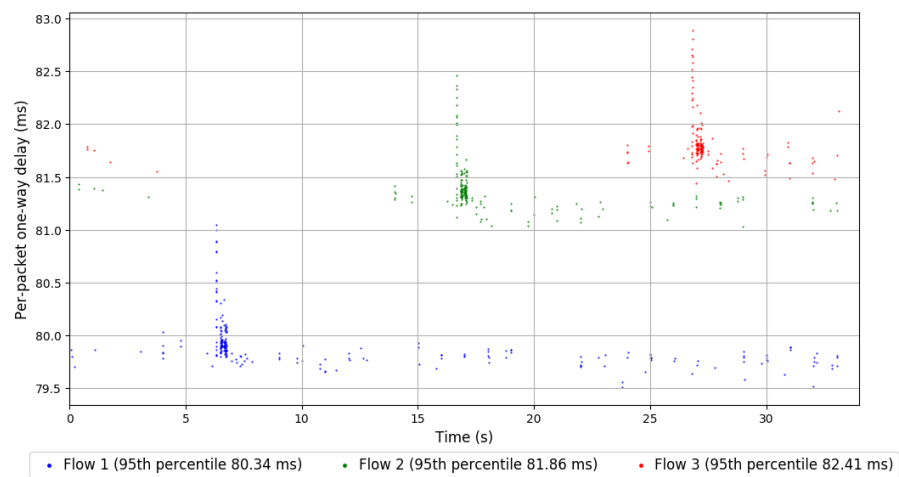
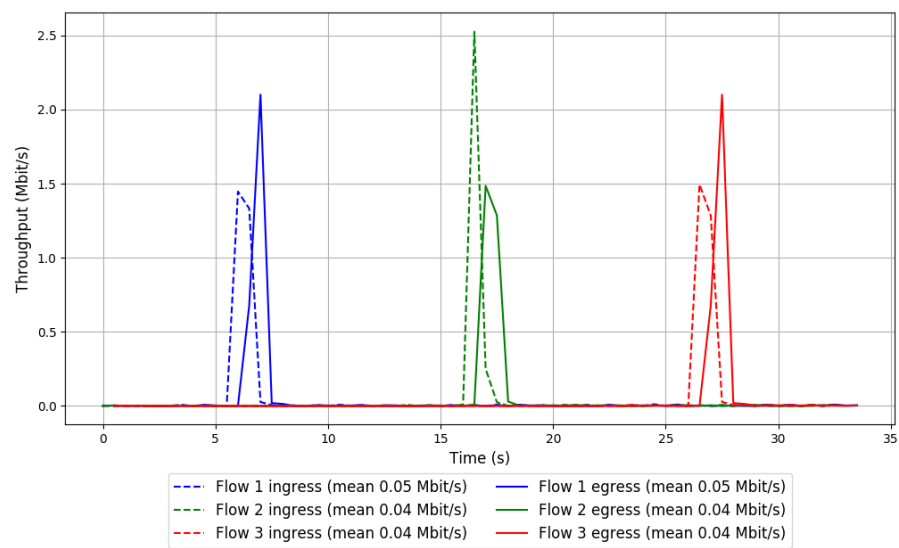


Run 2: Statistics of WebRTC media

Start at: 2019-03-09 03:10:15  
End at: 2019-03-09 03:10:45  
Local clock offset: -6.226 ms  
Remote clock offset: 14.799 ms

# Below is generated by plot.py at 2019-03-09 04:43:52  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.13 Mbit/s  
95th percentile per-packet one-way delay: 81.966 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 80.337 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.04 Mbit/s  
95th percentile per-packet one-way delay: 81.858 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.04 Mbit/s  
95th percentile per-packet one-way delay: 82.412 ms  
Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link

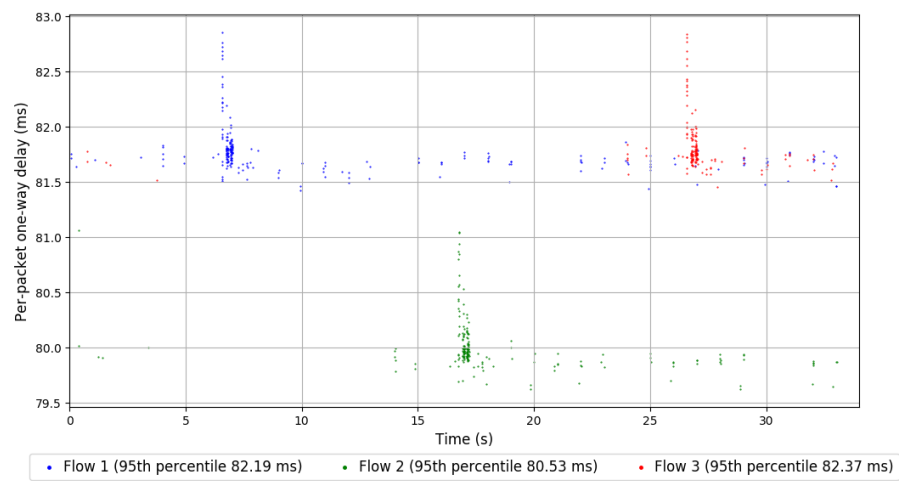
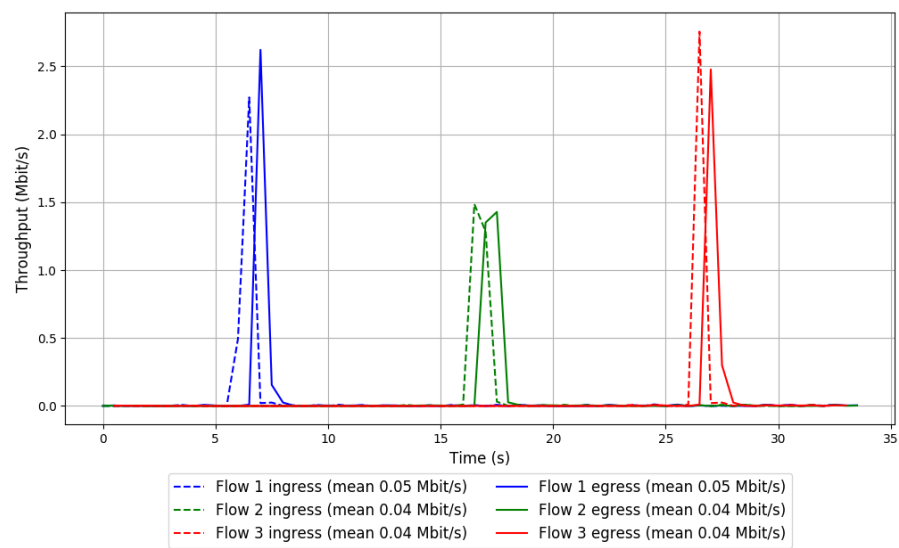


Run 3: Statistics of WebRTC media

Start at: 2019-03-09 03:36:56  
End at: 2019-03-09 03:37:26  
Local clock offset: 0.604 ms  
Remote clock offset: 18.053 ms

# Below is generated by plot.py at 2019-03-09 04:43:52  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.13 Mbit/s  
95th percentile per-packet one-way delay: 82.084 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 82.191 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.04 Mbit/s  
95th percentile per-packet one-way delay: 80.527 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.04 Mbit/s  
95th percentile per-packet one-way delay: 82.374 ms  
Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link

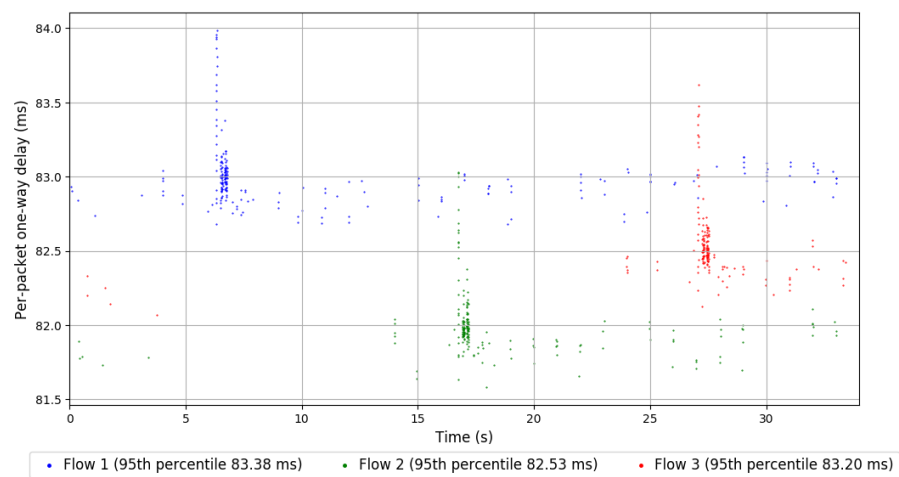
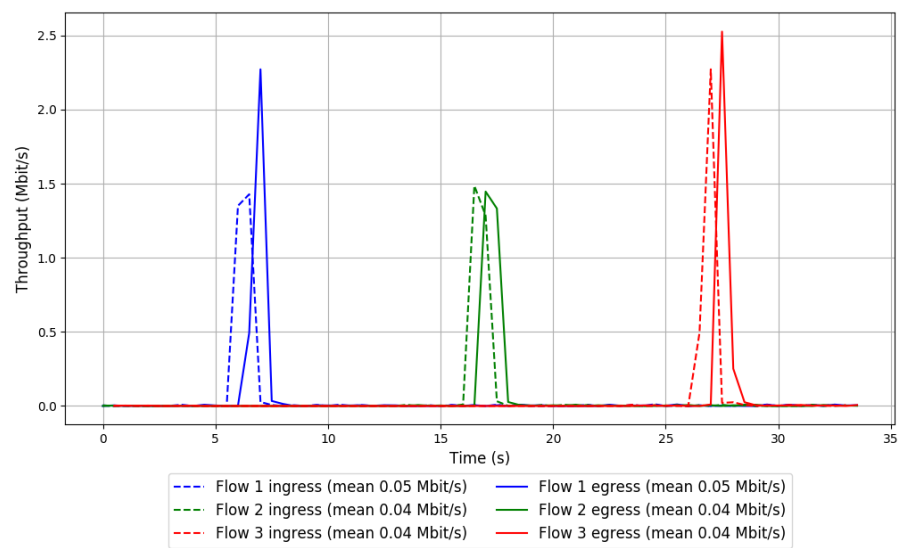


Run 4: Statistics of WebRTC media

Start at: 2019-03-09 04:03:32  
End at: 2019-03-09 04:04:02  
Local clock offset: 3.399 ms  
Remote clock offset: -2.662 ms

# Below is generated by plot.py at 2019-03-09 04:43:52  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.13 Mbit/s  
95th percentile per-packet one-way delay: 83.156 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 83.382 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.04 Mbit/s  
95th percentile per-packet one-way delay: 82.527 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.04 Mbit/s  
95th percentile per-packet one-way delay: 83.201 ms  
Loss rate: 0.00%

Run 4: Report of WebRTC media — Data Link





Run 5: Statistics of WebRTC media

Start at: 2019-03-09 04:30:09  
End at: 2019-03-09 04:30:40  
Local clock offset: -1.857 ms  
Remote clock offset: -1.401 ms

# Below is generated by plot.py at 2019-03-09 04:43:52  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.13 Mbit/s  
95th percentile per-packet one-way delay: 82.291 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 81.278 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.04 Mbit/s  
95th percentile per-packet one-way delay: 81.960 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.04 Mbit/s  
95th percentile per-packet one-way delay: 82.772 ms  
Loss rate: 0.00%

Run 5: Report of WebRTC media — Data Link

