

## Pantheon Report

Generated at 2018-12-02 16:50:05 (UTC).

Data path: India on `em1` (*remote*) → AWS India 1 on `ens5` (*local*).

Repeated the test of 19 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 `nets.org.sg` and have been applied to correct the timestamps in logs.

### System info:

```
Linux 4.15.0-1027-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 @ 7b6dad87cde3ab65f7c4052140eb54098aa58e9d
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf5e58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecd90c077e64d
third_party/indigo-96d2da3 @ 8413272d46f8aa0bcb967ed7048b6a8f994abb95
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 65ac1b19bbefed0c6349ae986009b4fa8643c40a
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
```

Figure 10: Average throughput vs. 95th percentile one-way delay. The plot shows Average throughput (Mbps) on the Y-axis (0 to 100) and 95th percentile one-way delay (ms) on the X-axis (logarithmic scale, 1024 to 16). The data points represent different protocols, with TCP Vegas and PCC-Vivace showing the highest throughput at low delay, and PCC-Allegro showing the lowest throughput at high delay.

Protocol	95th percentile one-way delay (ms)	Average throughput (Mbps)
TCP Vegas	~20	~78
PCC-Vivace	~25	~35
Indigo-Muses	~25	~28
WebRTC media	~18	~5
SCReAM	~18	~2
PCC-Allegro	~1024	~65
PCC-Expr	~512	~70
TaoVA-100	~128	~95
Indigo	~64	~98
TCP BBR	~64	~98
PHIP-Straight	~64	~98
2da3	~64	~98
TCP Cubic	~32	~98
LED	~32	~90
Origo	~32	~90
Sprout	~32	~50
Copa	~20	~65



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	57.38	40.73	37.73	49.73	103.58	105.93	3.41	4.07	4.36
Copa	5	36.55	30.39	25.68	20.49	21.55	21.89	0.05	0.10	0.26
TCP Cubic	5	57.75	40.22	32.22	30.68	30.66	31.27	0.07	0.17	0.35
FillP	5	58.60	40.47	30.14	54.81	85.42	86.95	0.22	2.51	3.03
FillP-Sheep	5	55.59	39.89	37.02	52.04	57.50	60.41	0.11	0.25	0.54
Indigo	5	51.42	40.42	29.42	25.85	26.02	27.84	0.06	0.12	0.30
Indigo-96d2da3	5	57.98	39.99	34.76	71.86	90.62	80.91	1.59	2.23	3.82
LEDBAT	5	55.25	34.94	26.14	32.55	35.26	36.53	0.08	0.14	0.39
Indigo-Muses	5	13.50	13.96	15.12	23.10	24.29	37.83	0.07	0.05	0.18
PCC-Allegro	5	37.93	22.50	32.75	976.18	237.09	156.07	5.60	1.98	1.14
PCC-Expr	5	44.28	23.71	22.52	540.88	118.39	26.39	7.75	0.44	0.41
QUIC Cubic	5	57.07	37.57	35.70	34.41	34.57	36.48	0.10	0.19	0.43
SCReAM	5	0.21	0.21	0.22	21.56	21.57	21.57	0.10	0.19	0.36
Sprout	5	24.34	24.20	23.89	28.21	29.23	29.49	0.09	0.14	0.28
TaoVA-100x	5	54.51	36.56	40.02	120.82	170.57	91.86	0.56	1.08	2.55
TCP Vegas	5	41.99	35.52	34.75	21.34	21.23	25.11	0.05	0.11	0.26
Verus	5	54.07	39.42	34.14	74.05	69.41	233.22	0.23	0.35	0.79
PCC-Vivace	5	20.94	14.17	9.45	32.40	20.82	20.63	0.07	0.09	0.42
WebRTC media	5	1.61	0.95	0.44	19.94	19.92	20.15	0.00	0.00	0.38

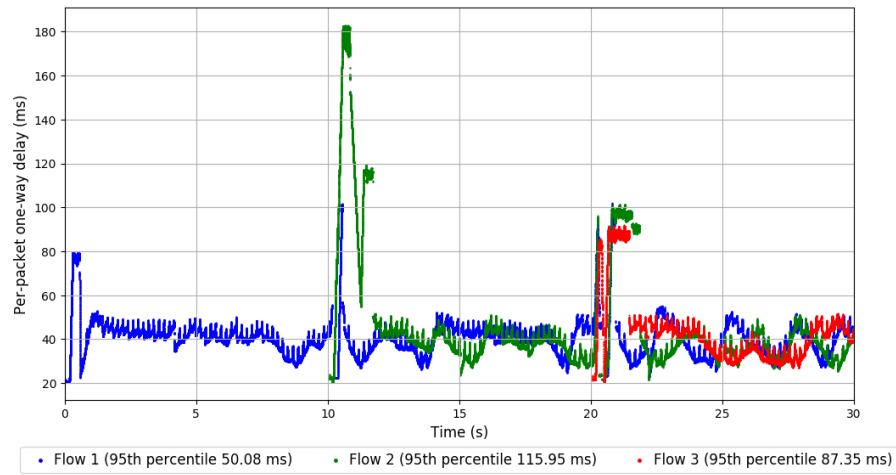
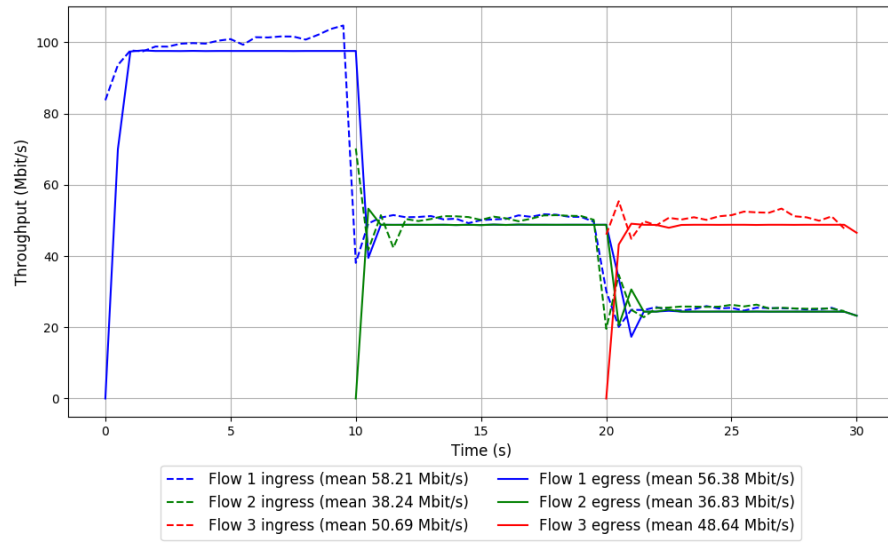


Run 1: Statistics of TCP BBR

Start at: 2018-12-02 14:42:24  
End at: 2018-12-02 14:42:54  
Local clock offset: 3.858 ms  
Remote clock offset: -3.431 ms

# Below is generated by plot.py at 2018-12-02 16:39:16  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 97.04 Mbit/s  
95th percentile per-packet one-way delay: 78.748 ms  
Loss rate: 3.55%  
-- Flow 1:  
Average throughput: 56.38 Mbit/s  
95th percentile per-packet one-way delay: 50.076 ms  
Loss rate: 3.21%  
-- Flow 2:  
Average throughput: 36.83 Mbit/s  
95th percentile per-packet one-way delay: 115.952 ms  
Loss rate: 3.84%  
-- Flow 3:  
Average throughput: 48.64 Mbit/s  
95th percentile per-packet one-way delay: 87.347 ms  
Loss rate: 4.28%

# Run 1: Report of TCP BBR — Data Link

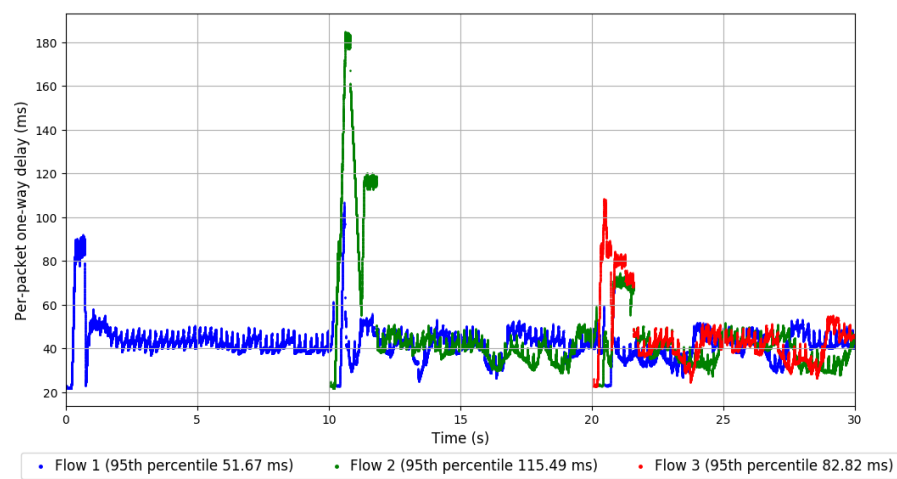
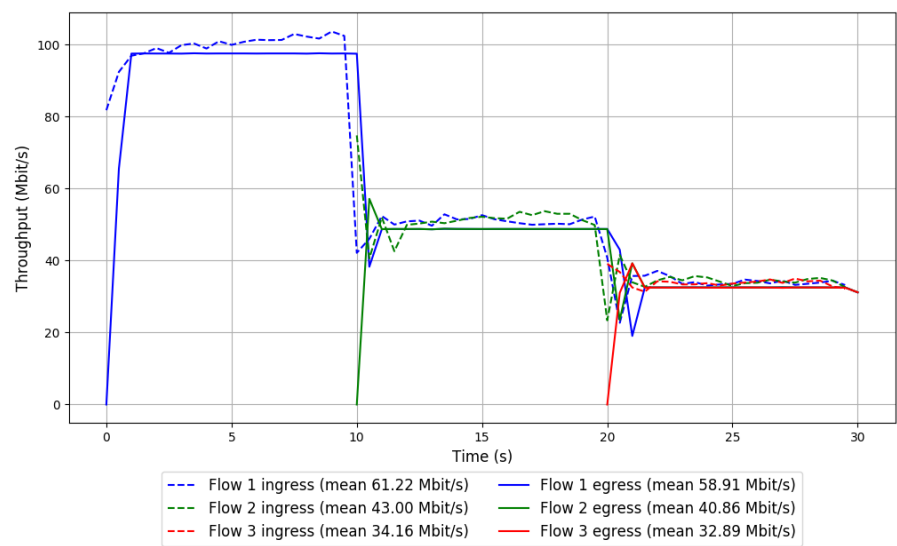


Run 2: Statistics of TCP BBR

Start at: 2018-12-02 15:06:24  
End at: 2018-12-02 15:06:54  
Local clock offset: 4.079 ms  
Remote clock offset: -4.089 ms

# Below is generated by plot.py at 2018-12-02 16:39:16  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 97.03 Mbit/s  
95th percentile per-packet one-way delay: 74.213 ms  
Loss rate: 4.22%  
-- Flow 1:  
Average throughput: 58.91 Mbit/s  
95th percentile per-packet one-way delay: 51.666 ms  
Loss rate: 3.85%  
-- Flow 2:  
Average throughput: 40.86 Mbit/s  
95th percentile per-packet one-way delay: 115.491 ms  
Loss rate: 5.11%  
-- Flow 3:  
Average throughput: 32.89 Mbit/s  
95th percentile per-packet one-way delay: 82.821 ms  
Loss rate: 3.94%

Run 2: Report of TCP BBR — Data Link

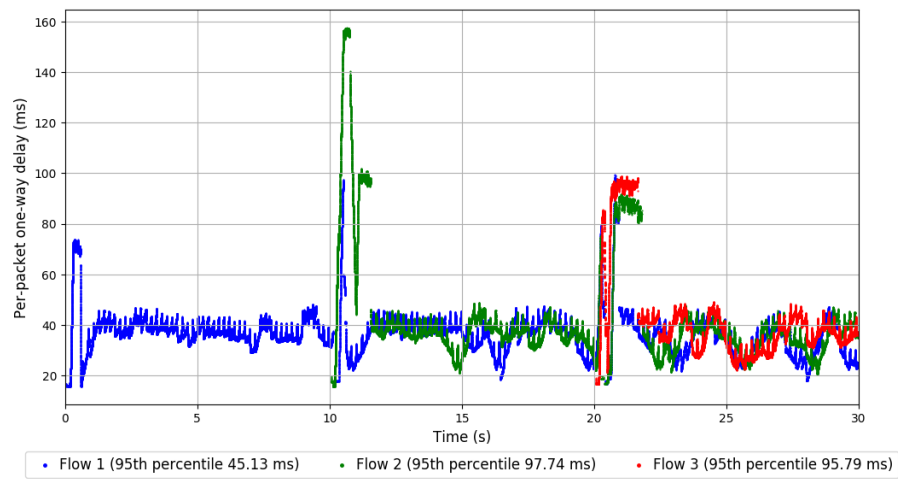
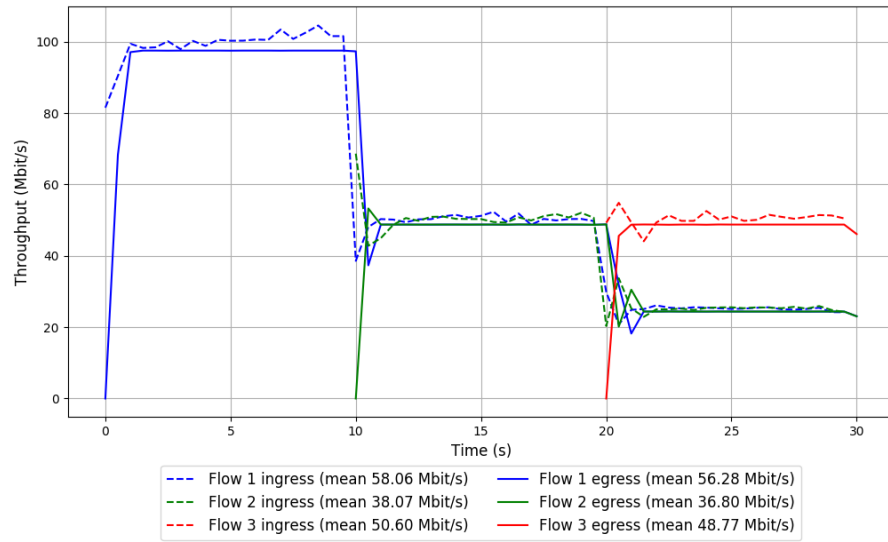


Run 3: Statistics of TCP BBR

Start at: 2018-12-02 15:30:14  
End at: 2018-12-02 15:30:44  
Local clock offset: -2.024 ms  
Remote clock offset: -2.793 ms

# Below is generated by plot.py at 2018-12-02 16:39:17  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 96.97 Mbit/s  
95th percentile per-packet one-way delay: 74.212 ms  
Loss rate: 3.34%  
-- Flow 1:  
Average throughput: 56.28 Mbit/s  
95th percentile per-packet one-way delay: 45.133 ms  
Loss rate: 3.13%  
-- Flow 2:  
Average throughput: 36.80 Mbit/s  
95th percentile per-packet one-way delay: 97.737 ms  
Loss rate: 3.46%  
-- Flow 3:  
Average throughput: 48.77 Mbit/s  
95th percentile per-packet one-way delay: 95.787 ms  
Loss rate: 3.87%

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

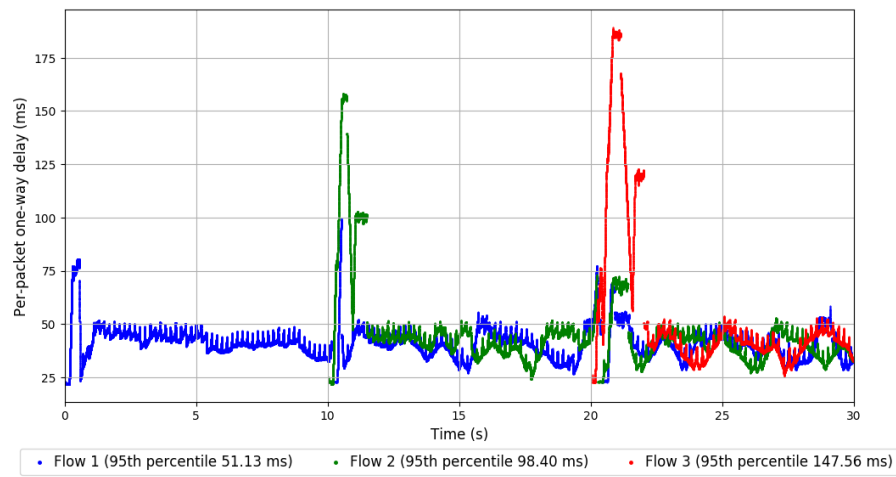
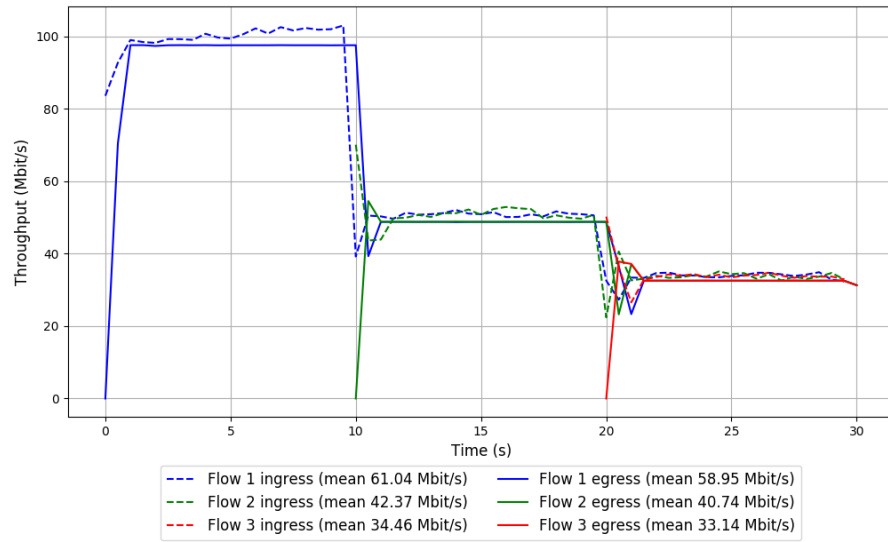


Run 4: Statistics of TCP BBR

Start at: 2018-12-02 15:53:24  
End at: 2018-12-02 15:53:54  
Local clock offset: 3.246 ms  
Remote clock offset: -3.189 ms

# Below is generated by plot.py at 2018-12-02 16:39:17  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 97.08 Mbit/s  
95th percentile per-packet one-way delay: 70.153 ms  
Loss rate: 3.69%  
-- Flow 1:  
Average throughput: 58.95 Mbit/s  
95th percentile per-packet one-way delay: 51.135 ms  
Loss rate: 3.49%  
-- Flow 2:  
Average throughput: 40.74 Mbit/s  
95th percentile per-packet one-way delay: 98.401 ms  
Loss rate: 3.96%  
-- Flow 3:  
Average throughput: 33.14 Mbit/s  
95th percentile per-packet one-way delay: 147.564 ms  
Loss rate: 4.08%

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



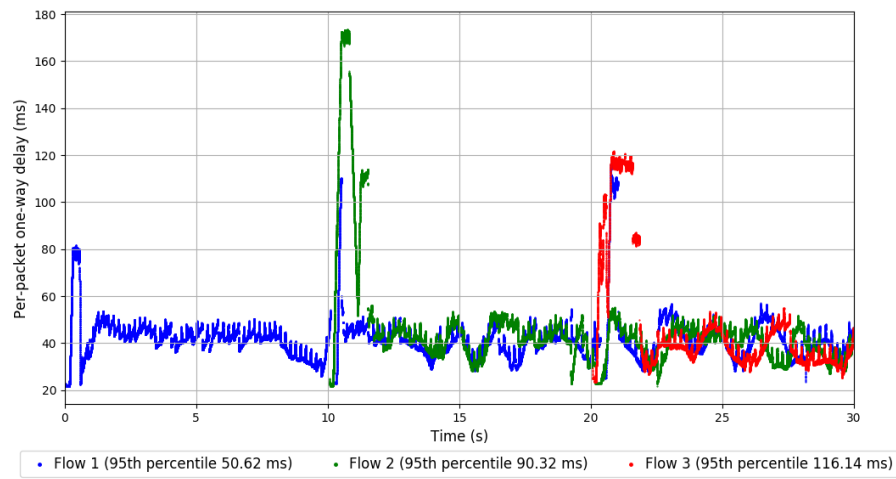
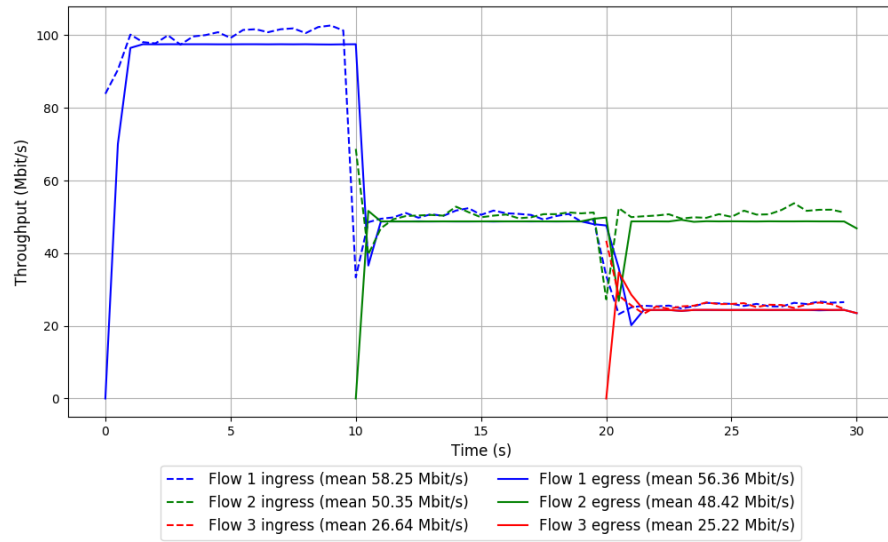


Run 5: Statistics of TCP BBR

Start at: 2018-12-02 16:16:17  
End at: 2018-12-02 16:16:47  
Local clock offset: 2.319 ms  
Remote clock offset: -3.817 ms

# Below is generated by plot.py at 2018-12-02 16:39:18  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 96.96 Mbit/s  
95th percentile per-packet one-way delay: 66.630 ms  
Loss rate: 3.76%  
-- Flow 1:  
Average throughput: 56.36 Mbit/s  
95th percentile per-packet one-way delay: 50.624 ms  
Loss rate: 3.35%  
-- Flow 2:  
Average throughput: 48.42 Mbit/s  
95th percentile per-packet one-way delay: 90.320 ms  
Loss rate: 3.99%  
-- Flow 3:  
Average throughput: 25.22 Mbit/s  
95th percentile per-packet one-way delay: 116.135 ms  
Loss rate: 5.62%

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

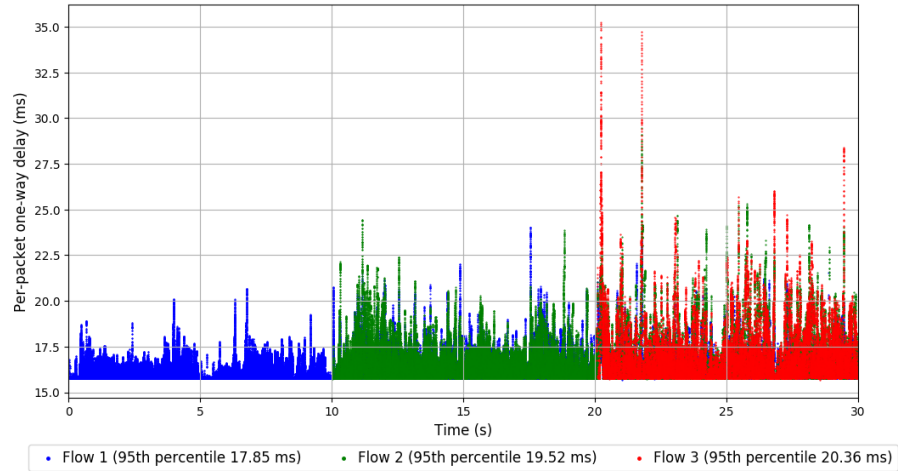
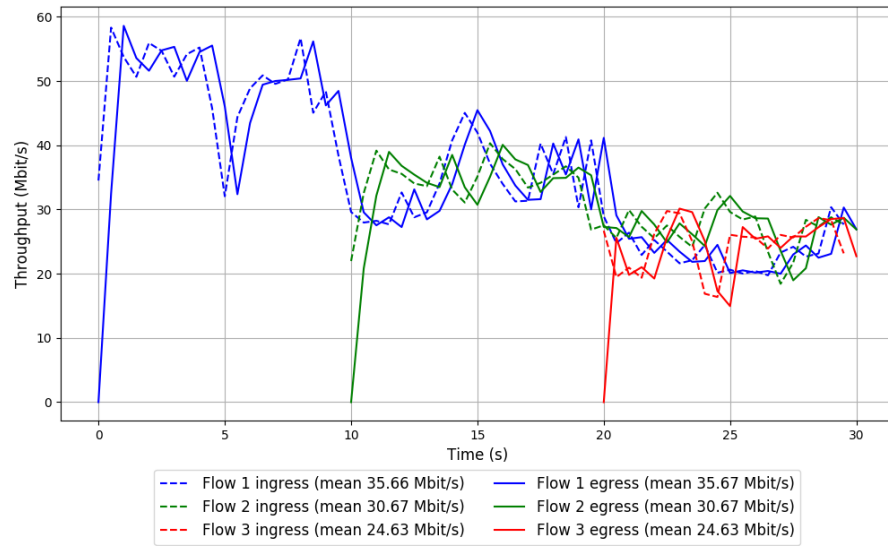


Run 1: Statistics of Copa

Start at: 2018-12-02 14:51:21  
End at: 2018-12-02 14:51:51  
Local clock offset: -0.438 ms  
Remote clock offset: -2.815 ms

# Below is generated by plot.py at 2018-12-02 16:39:36  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 64.27 Mbit/s  
95th percentile per-packet one-way delay: 18.890 ms  
Loss rate: 0.11%  
-- Flow 1:  
Average throughput: 35.67 Mbit/s  
95th percentile per-packet one-way delay: 17.848 ms  
Loss rate: 0.07%  
-- Flow 2:  
Average throughput: 30.67 Mbit/s  
95th percentile per-packet one-way delay: 19.520 ms  
Loss rate: 0.12%  
-- Flow 3:  
Average throughput: 24.63 Mbit/s  
95th percentile per-packet one-way delay: 20.364 ms  
Loss rate: 0.23%

## Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2018-12-02 15:15:15

End at: 2018-12-02 15:15:45

Local clock offset: 2.67 ms

Remote clock offset: -4.53 ms

# Below is generated by plot.py at 2018-12-02 16:39:36

# Datalink statistics

-- Total of 3 flows:

Average throughput: 51.64 Mbit/s

95th percentile per-packet one-way delay: 22.645 ms

Loss rate: 0.07%

-- Flow 1:

Average throughput: 29.43 Mbit/s

95th percentile per-packet one-way delay: 22.328 ms

Loss rate: 0.04%

-- Flow 2:

Average throughput: 22.60 Mbit/s

95th percentile per-packet one-way delay: 22.933 ms

Loss rate: 0.07%

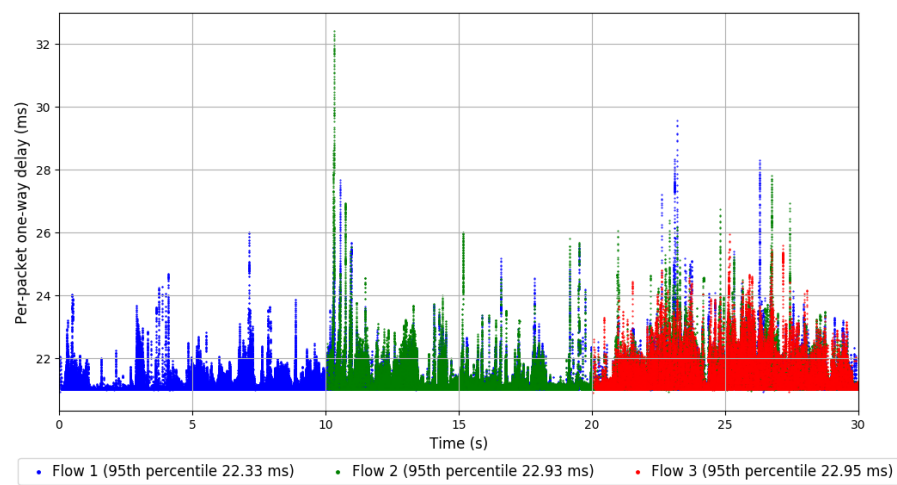
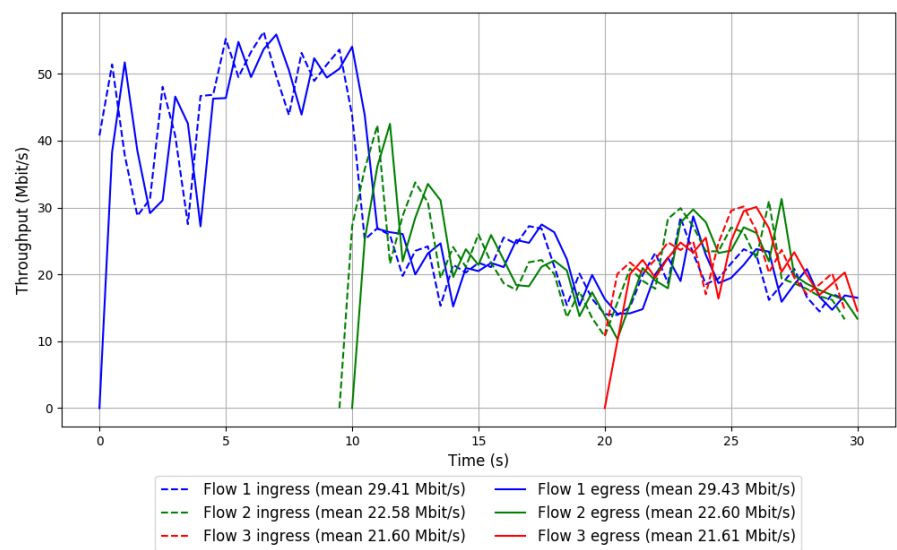
-- Flow 3:

Average throughput: 21.61 Mbit/s

95th percentile per-packet one-way delay: 22.947 ms

Loss rate: 0.17%

Run 2: Report of Copa — Data Link

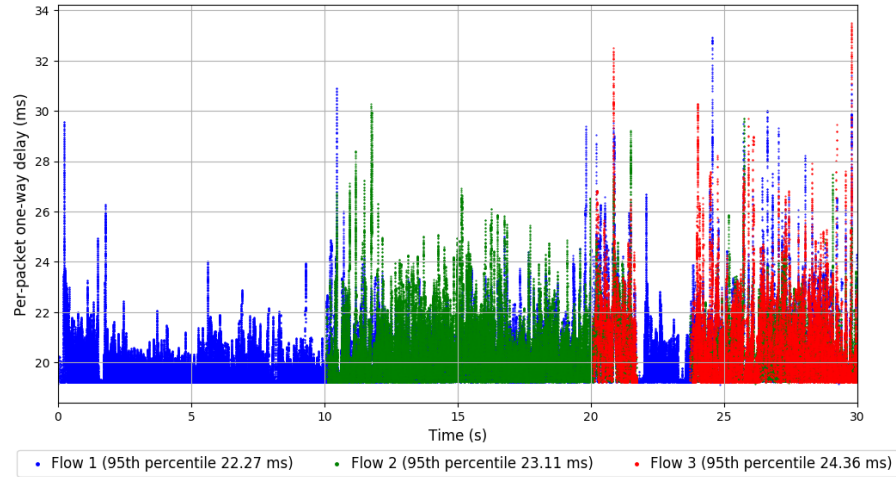
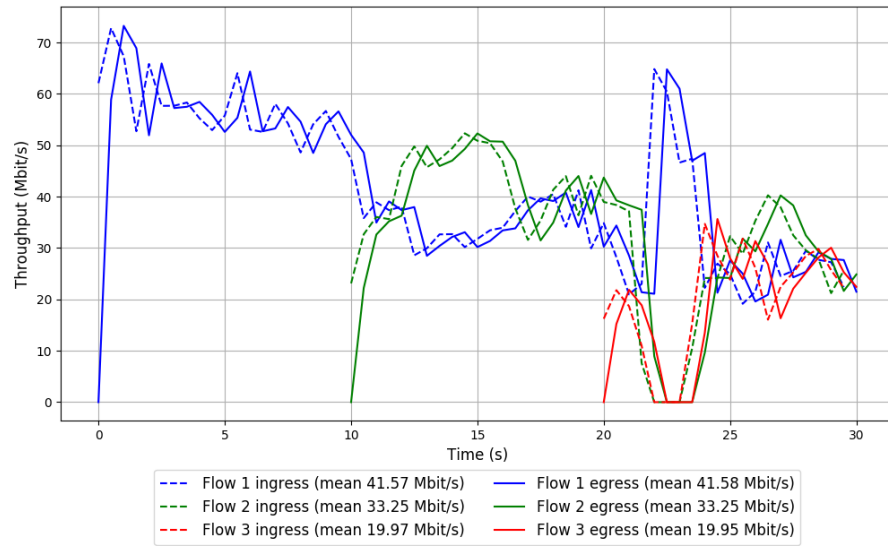


Run 3: Statistics of Copa

Start at: 2018-12-02 15:38:49  
End at: 2018-12-02 15:39:19  
Local clock offset: 0.358 ms  
Remote clock offset: -3.482 ms

# Below is generated by plot.py at 2018-12-02 16:39:44  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 70.34 Mbit/s  
95th percentile per-packet one-way delay: 22.822 ms  
Loss rate: 0.11%  
-- Flow 1:  
Average throughput: 41.58 Mbit/s  
95th percentile per-packet one-way delay: 22.272 ms  
Loss rate: 0.07%  
-- Flow 2:  
Average throughput: 33.25 Mbit/s  
95th percentile per-packet one-way delay: 23.111 ms  
Loss rate: 0.12%  
-- Flow 3:  
Average throughput: 19.95 Mbit/s  
95th percentile per-packet one-way delay: 24.365 ms  
Loss rate: 0.33%

### Run 3: Report of Copa — Data Link





Run 4: Statistics of Copa

Start at: 2018-12-02 16:01:52

End at: 2018-12-02 16:02:22

Local clock offset: -0.25 ms

Remote clock offset: -3.35 ms

# Below is generated by plot.py at 2018-12-02 16:40:45

# Datalink statistics

-- Total of 3 flows:

Average throughput: 67.74 Mbit/s

95th percentile per-packet one-way delay: 21.034 ms

Loss rate: 0.09%

-- Flow 1:

Average throughput: 36.28 Mbit/s

95th percentile per-packet one-way delay: 20.396 ms

Loss rate: 0.03%

-- Flow 2:

Average throughput: 33.09 Mbit/s

95th percentile per-packet one-way delay: 21.514 ms

Loss rate: 0.11%

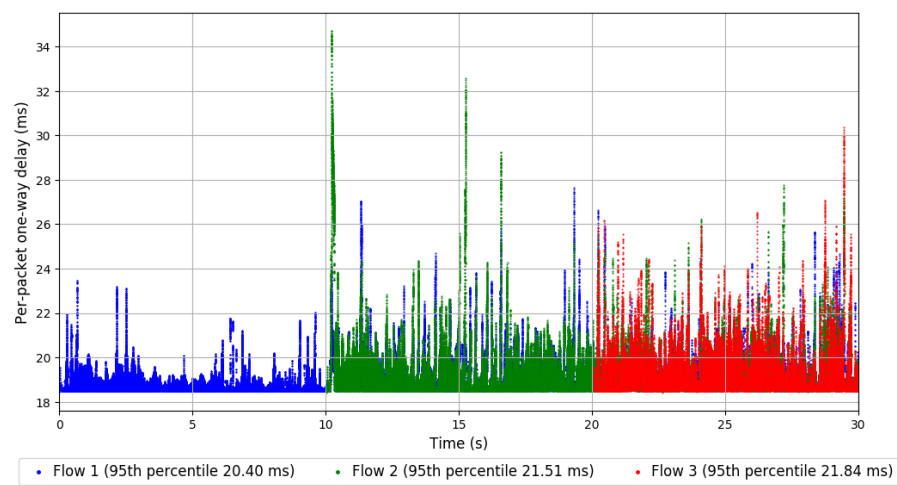
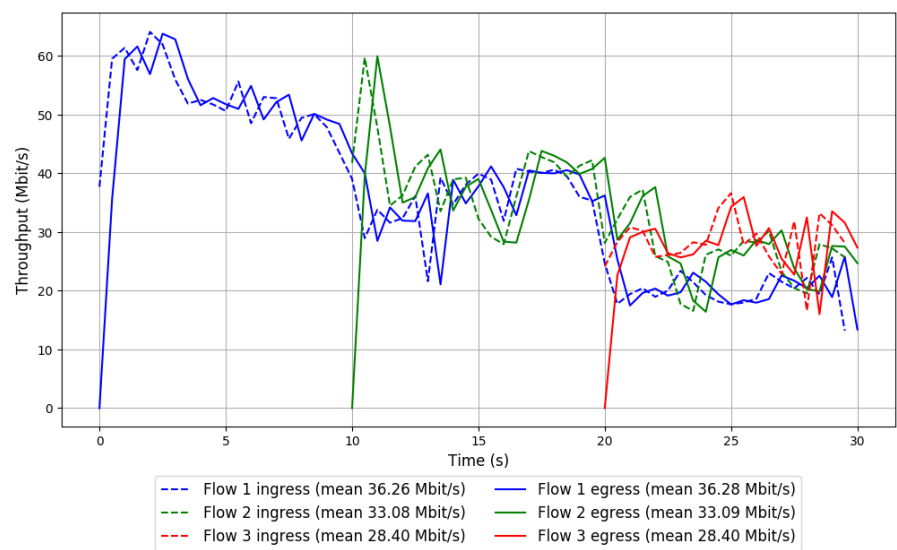
-- Flow 3:

Average throughput: 28.40 Mbit/s

95th percentile per-packet one-way delay: 21.840 ms

Loss rate: 0.24%

Run 4: Report of Copa — Data Link

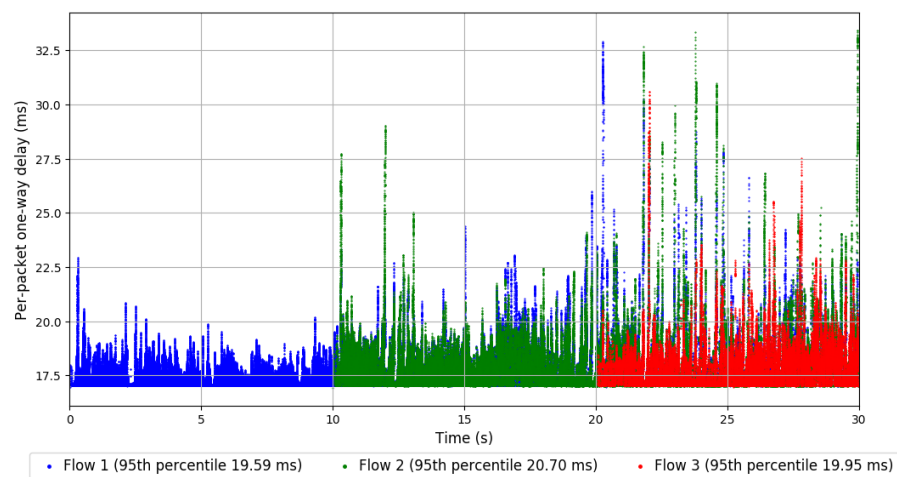
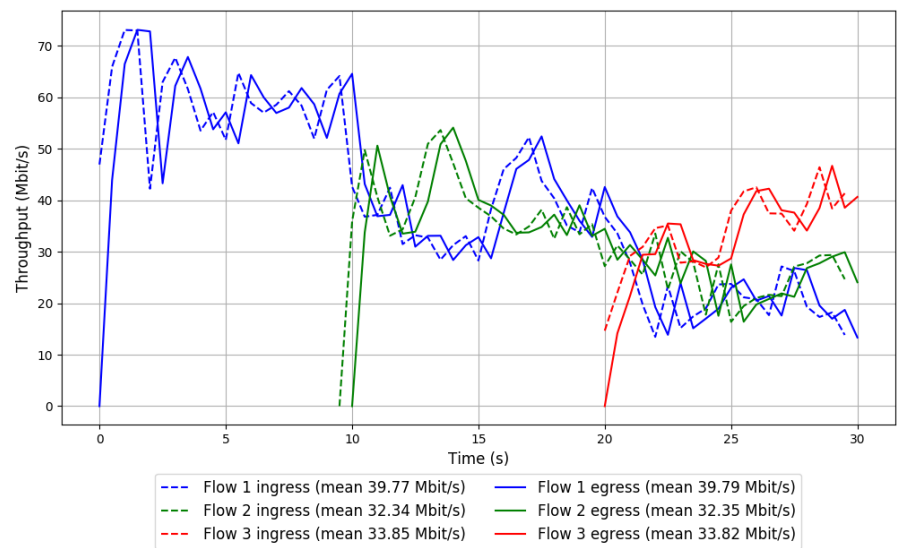


Run 5: Statistics of Copa

Start at: 2018-12-02 16:24:41  
End at: 2018-12-02 16:25:11  
Local clock offset: -2.931 ms  
Remote clock offset: -4.817 ms

# Below is generated by plot.py at 2018-12-02 16:40:52  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 72.57 Mbit/s  
95th percentile per-packet one-way delay: 20.005 ms  
Loss rate: 0.10%  
-- Flow 1:  
Average throughput: 39.79 Mbit/s  
95th percentile per-packet one-way delay: 19.588 ms  
Loss rate: 0.03%  
-- Flow 2:  
Average throughput: 32.35 Mbit/s  
95th percentile per-packet one-way delay: 20.697 ms  
Loss rate: 0.09%  
-- Flow 3:  
Average throughput: 33.82 Mbit/s  
95th percentile per-packet one-way delay: 19.951 ms  
Loss rate: 0.33%

Run 5: Report of Copa — Data Link

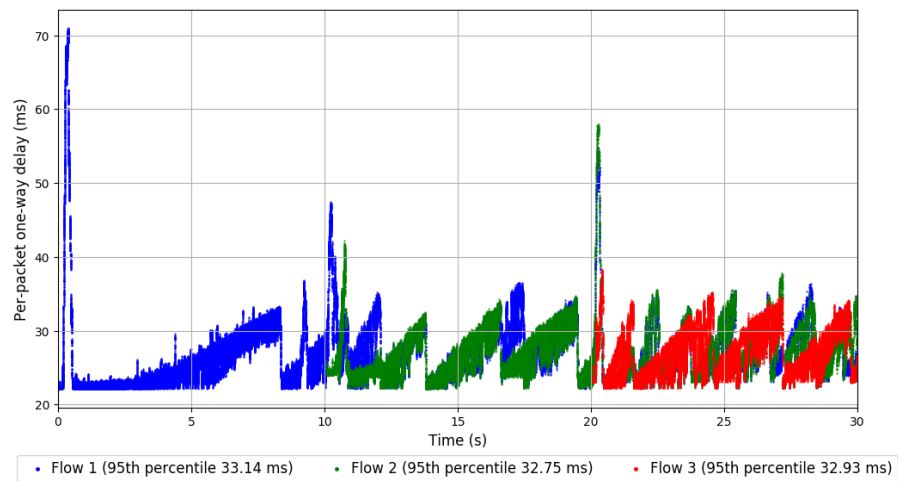
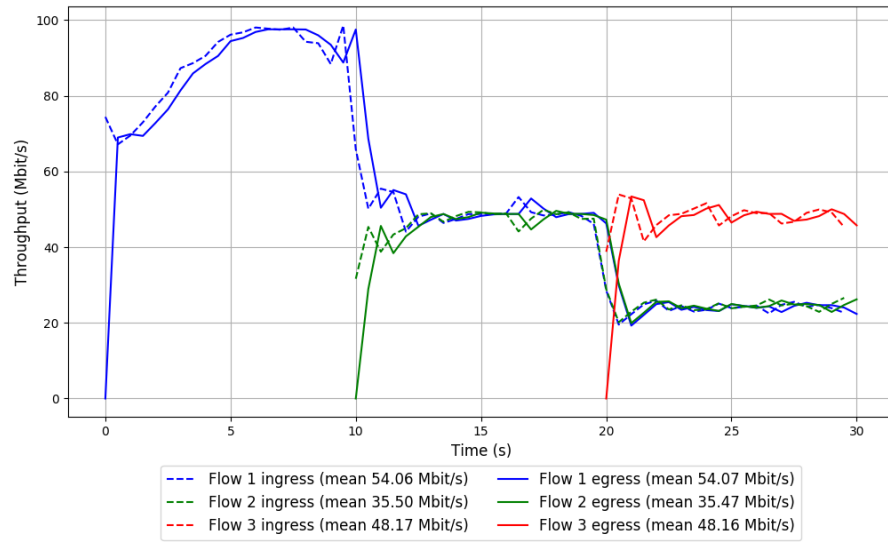


Run 1: Statistics of TCP Cubic

Start at: 2018-12-02 14:47:30  
End at: 2018-12-02 14:48:00  
Local clock offset: 4.873 ms  
Remote clock offset: -4.051 ms

# Below is generated by plot.py at 2018-12-02 16:40:52  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 93.65 Mbit/s  
95th percentile per-packet one-way delay: 32.957 ms  
Loss rate: 0.14%  
-- Flow 1:  
Average throughput: 54.07 Mbit/s  
95th percentile per-packet one-way delay: 33.138 ms  
Loss rate: 0.06%  
-- Flow 2:  
Average throughput: 35.47 Mbit/s  
95th percentile per-packet one-way delay: 32.750 ms  
Loss rate: 0.22%  
-- Flow 3:  
Average throughput: 48.16 Mbit/s  
95th percentile per-packet one-way delay: 32.926 ms  
Loss rate: 0.28%

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

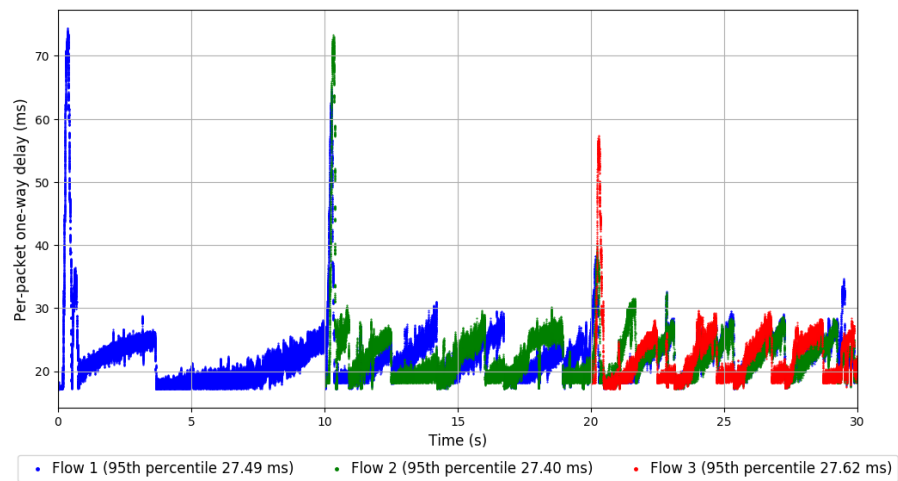
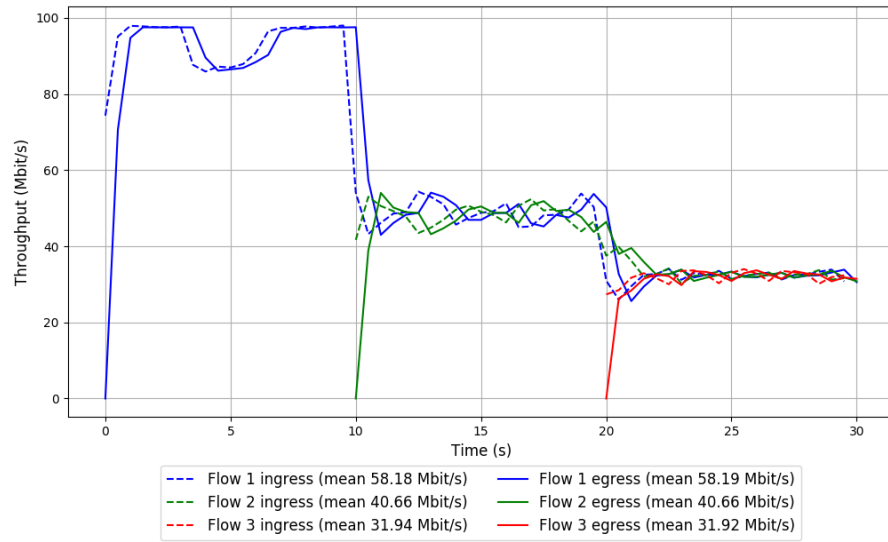


Run 2: Statistics of TCP Cubic

Start at: 2018-12-02 15:11:32  
End at: 2018-12-02 15:12:02  
Local clock offset: -0.55 ms  
Remote clock offset: -4.034 ms

# Below is generated by plot.py at 2018-12-02 16:40:52  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.85 Mbit/s  
95th percentile per-packet one-way delay: 27.484 ms  
Loss rate: 0.12%  
-- Flow 1:  
Average throughput: 58.19 Mbit/s  
95th percentile per-packet one-way delay: 27.490 ms  
Loss rate: 0.07%  
-- Flow 2:  
Average throughput: 40.66 Mbit/s  
95th percentile per-packet one-way delay: 27.399 ms  
Loss rate: 0.14%  
-- Flow 3:  
Average throughput: 31.92 Mbit/s  
95th percentile per-packet one-way delay: 27.624 ms  
Loss rate: 0.37%

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



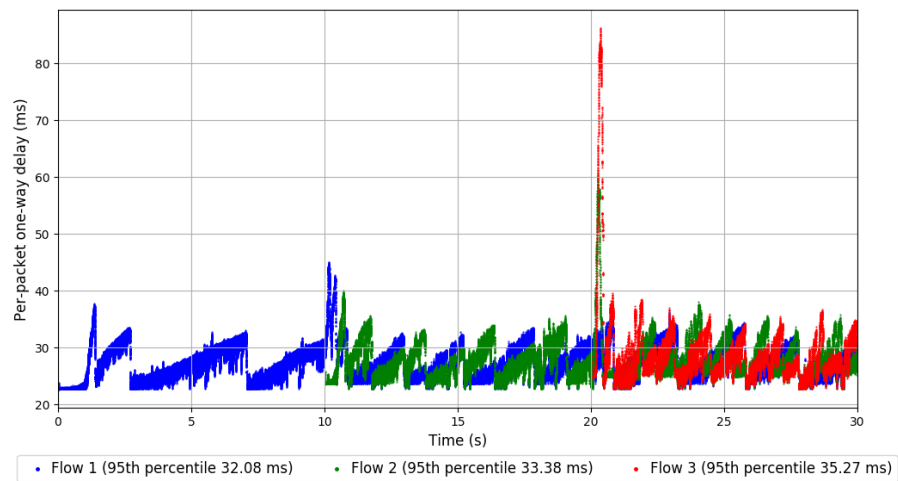
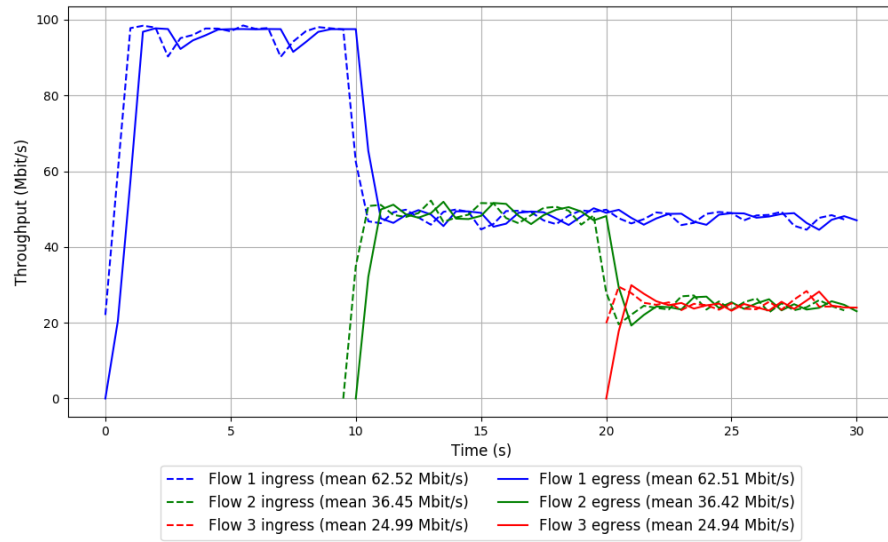


Run 3: Statistics of TCP Cubic

Start at: 2018-12-02 15:35:10  
End at: 2018-12-02 15:35:40  
Local clock offset: 3.81 ms  
Remote clock offset: -3.736 ms

# Below is generated by plot.py at 2018-12-02 16:40:52  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.04 Mbit/s  
95th percentile per-packet one-way delay: 32.713 ms  
Loss rate: 0.15%  
-- Flow 1:  
Average throughput: 62.51 Mbit/s  
95th percentile per-packet one-way delay: 32.077 ms  
Loss rate: 0.09%  
-- Flow 2:  
Average throughput: 36.42 Mbit/s  
95th percentile per-packet one-way delay: 33.382 ms  
Loss rate: 0.19%  
-- Flow 3:  
Average throughput: 24.94 Mbit/s  
95th percentile per-packet one-way delay: 35.273 ms  
Loss rate: 0.43%

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

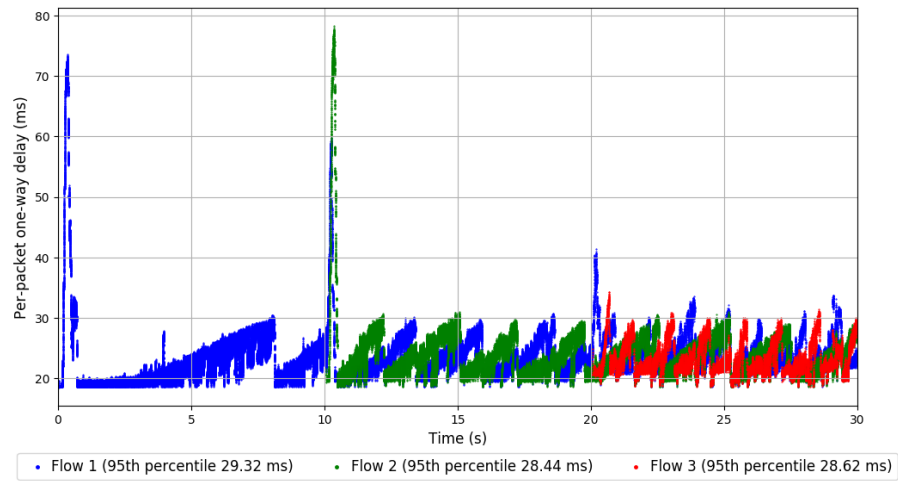
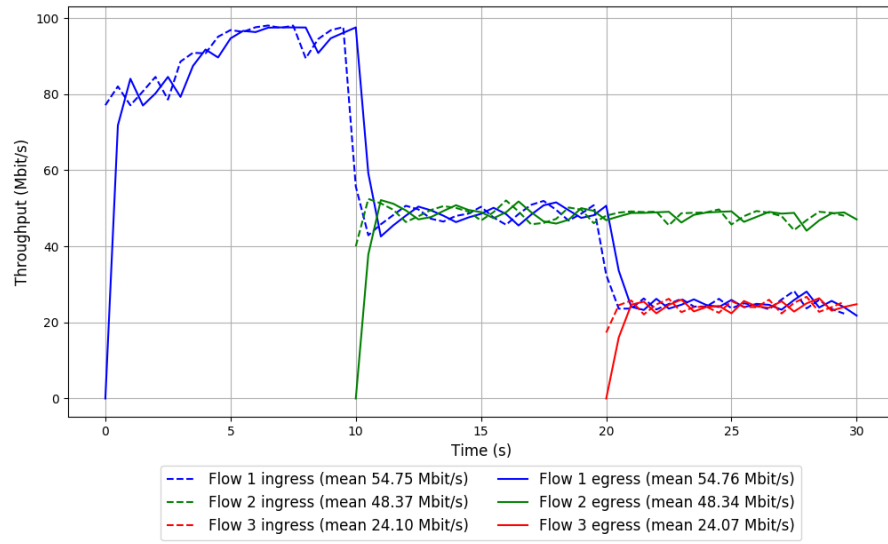


Run 4: Statistics of TCP Cubic

Start at: 2018-12-02 15:58:16  
End at: 2018-12-02 15:58:46  
Local clock offset: 0.521 ms  
Remote clock offset: -2.744 ms

# Below is generated by plot.py at 2018-12-02 16:40:52  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 94.92 Mbit/s  
95th percentile per-packet one-way delay: 28.839 ms  
Loss rate: 0.13%  
-- Flow 1:  
Average throughput: 54.76 Mbit/s  
95th percentile per-packet one-way delay: 29.317 ms  
Loss rate: 0.07%  
-- Flow 2:  
Average throughput: 48.34 Mbit/s  
95th percentile per-packet one-way delay: 28.441 ms  
Loss rate: 0.18%  
-- Flow 3:  
Average throughput: 24.07 Mbit/s  
95th percentile per-packet one-way delay: 28.617 ms  
Loss rate: 0.38%

# Run 4: Report of TCP Cubic — Data Link

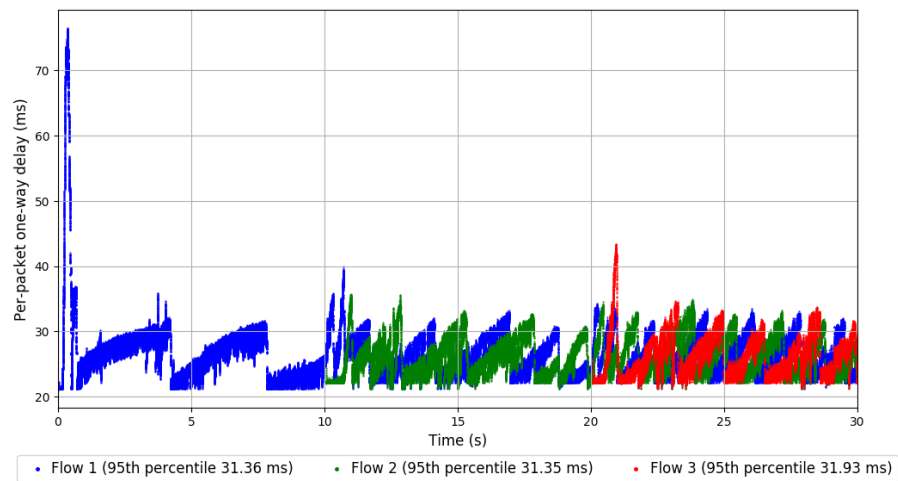
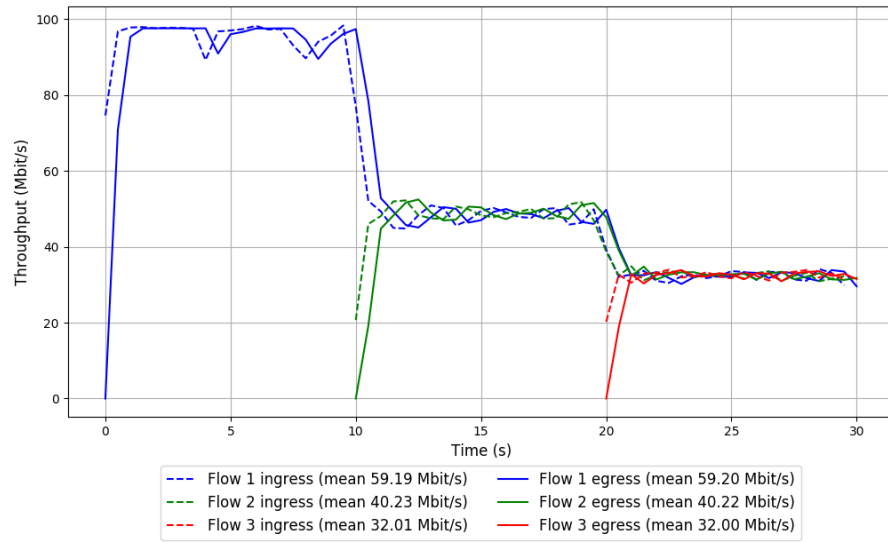


Run 5: Statistics of TCP Cubic

Start at: 2018-12-02 16:21:08  
End at: 2018-12-02 16:21:38  
Local clock offset: 3.207 ms  
Remote clock offset: -2.693 ms

# Below is generated by plot.py at 2018-12-02 16:40:52  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 96.61 Mbit/s  
95th percentile per-packet one-way delay: 31.437 ms  
Loss rate: 0.11%  
-- Flow 1:  
Average throughput: 59.20 Mbit/s  
95th percentile per-packet one-way delay: 31.358 ms  
Loss rate: 0.06%  
-- Flow 2:  
Average throughput: 40.22 Mbit/s  
95th percentile per-packet one-way delay: 31.351 ms  
Loss rate: 0.14%  
-- Flow 3:  
Average throughput: 32.00 Mbit/s  
95th percentile per-packet one-way delay: 31.930 ms  
Loss rate: 0.27%

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

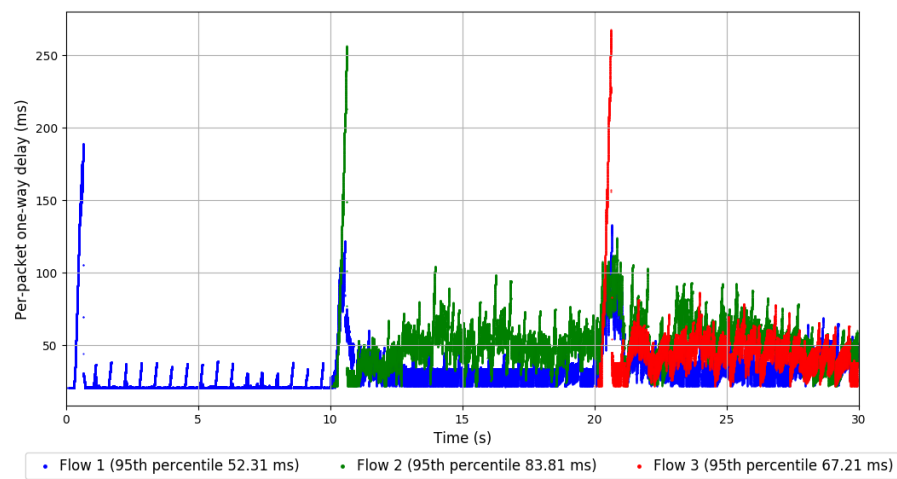
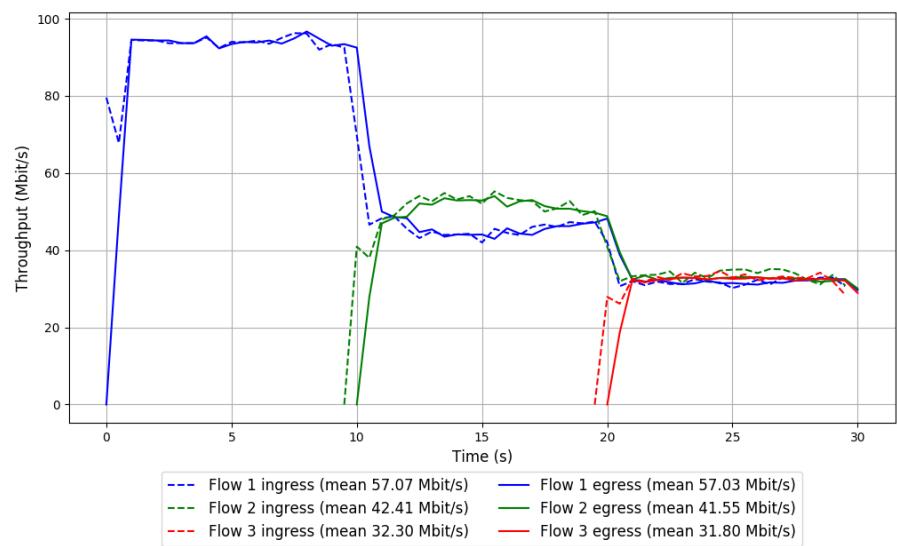


Run 1: Statistics of FillP

Start at: 2018-12-02 14:53:59  
End at: 2018-12-02 14:54:29  
Local clock offset: 3.605 ms  
Remote clock offset: -3.478 ms

# Below is generated by plot.py at 2018-12-02 16:41:08  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.27 Mbit/s  
95th percentile per-packet one-way delay: 73.087 ms  
Loss rate: 0.92%  
-- Flow 1:  
Average throughput: 57.03 Mbit/s  
95th percentile per-packet one-way delay: 52.309 ms  
Loss rate: 0.17%  
-- Flow 2:  
Average throughput: 41.55 Mbit/s  
95th percentile per-packet one-way delay: 83.815 ms  
Loss rate: 2.09%  
-- Flow 3:  
Average throughput: 31.80 Mbit/s  
95th percentile per-packet one-way delay: 67.211 ms  
Loss rate: 1.81%

Run 1: Report of FillP — Data Link



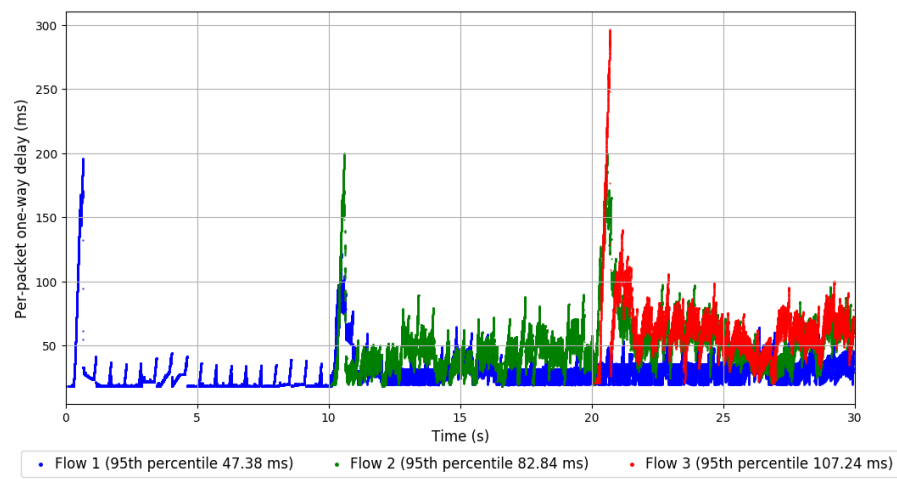
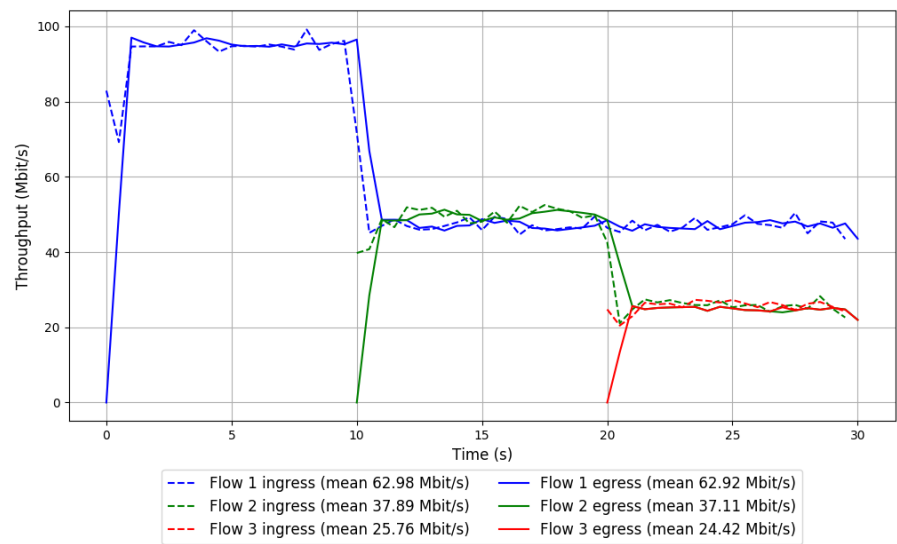


Run 2: Statistics of FillP

Start at: 2018-12-02 15:17:45  
End at: 2018-12-02 15:18:15  
Local clock offset: 0.923 ms  
Remote clock offset: -3.888 ms

# Below is generated by plot.py at 2018-12-02 16:41:38  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.70 Mbit/s  
95th percentile per-packet one-way delay: 76.152 ms  
Loss rate: 1.12%  
-- Flow 1:  
Average throughput: 62.92 Mbit/s  
95th percentile per-packet one-way delay: 47.375 ms  
Loss rate: 0.15%  
-- Flow 2:  
Average throughput: 37.11 Mbit/s  
95th percentile per-packet one-way delay: 82.842 ms  
Loss rate: 2.10%  
-- Flow 3:  
Average throughput: 24.42 Mbit/s  
95th percentile per-packet one-way delay: 107.241 ms  
Loss rate: 5.37%

Run 2: Report of FillP — Data Link

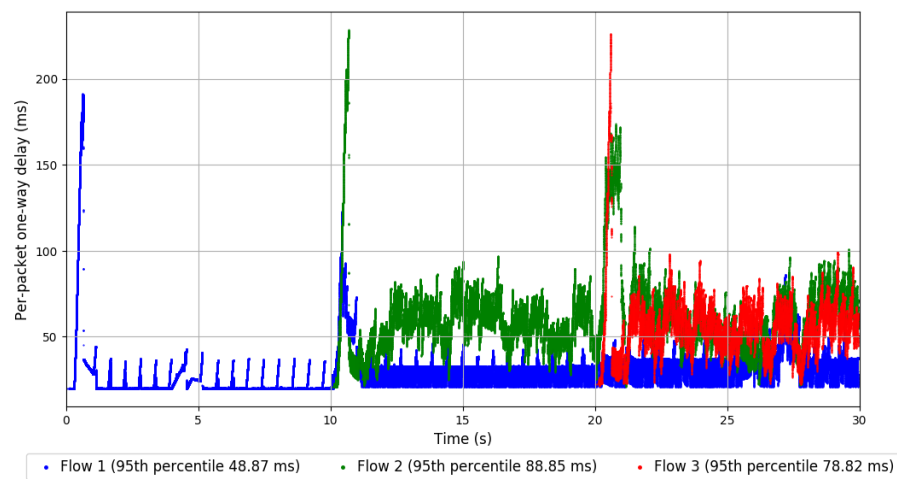
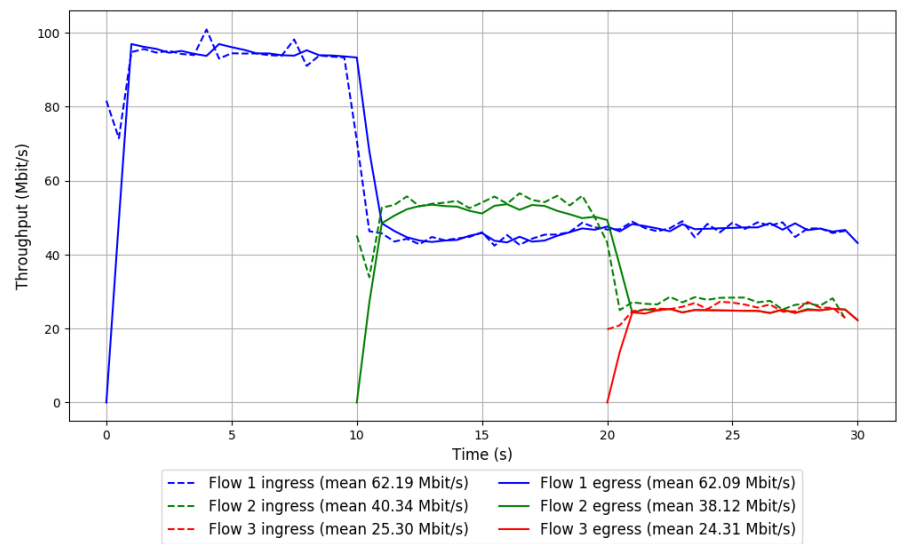


Run 3: Statistics of FillP

Start at: 2018-12-02 15:41:25  
End at: 2018-12-02 15:41:55  
Local clock offset: 0.76 ms  
Remote clock offset: -3.777 ms

# Below is generated by plot.py at 2018-12-02 16:41:42  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.52 Mbit/s  
95th percentile per-packet one-way delay: 76.717 ms  
Loss rate: 2.04%  
-- Flow 1:  
Average throughput: 62.09 Mbit/s  
95th percentile per-packet one-way delay: 48.872 ms  
Loss rate: 0.23%  
-- Flow 2:  
Average throughput: 38.12 Mbit/s  
95th percentile per-packet one-way delay: 88.846 ms  
Loss rate: 5.60%  
-- Flow 3:  
Average throughput: 24.31 Mbit/s  
95th percentile per-packet one-way delay: 78.816 ms  
Loss rate: 4.06%

Run 3: Report of FillP — Data Link

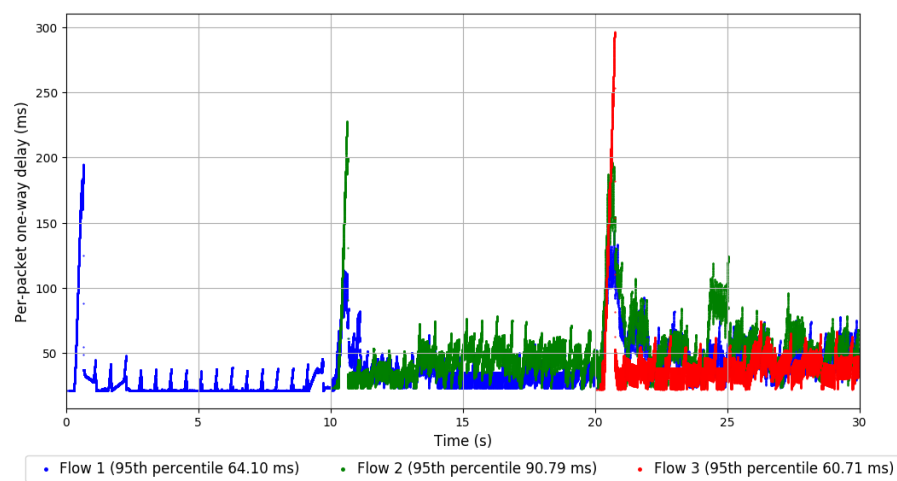
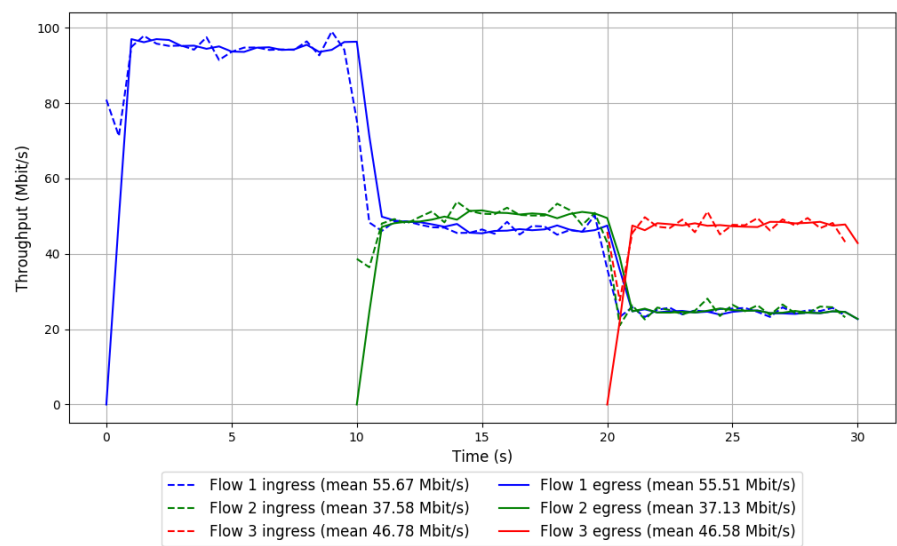


Run 4: Statistics of FillP

Start at: 2018-12-02 16:04:21  
End at: 2018-12-02 16:04:51  
Local clock offset: 2.781 ms  
Remote clock offset: -3.218 ms

# Below is generated by plot.py at 2018-12-02 16:41:43  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.64 Mbit/s  
95th percentile per-packet one-way delay: 73.900 ms  
Loss rate: 0.63%  
-- Flow 1:  
Average throughput: 55.51 Mbit/s  
95th percentile per-packet one-way delay: 64.103 ms  
Loss rate: 0.37%  
-- Flow 2:  
Average throughput: 37.13 Mbit/s  
95th percentile per-packet one-way delay: 90.789 ms  
Loss rate: 1.26%  
-- Flow 3:  
Average throughput: 46.58 Mbit/s  
95th percentile per-packet one-way delay: 60.710 ms  
Loss rate: 0.56%

Run 4: Report of FillP — Data Link



Run 5: Statistics of FillP

Start at: 2018-12-02 16:27:14

End at: 2018-12-02 16:27:44

Local clock offset: 1.757 ms

Remote clock offset: -3.66 ms

# Below is generated by plot.py at 2018-12-02 16:41:43

# Datalink statistics

-- Total of 3 flows:

Average throughput: 95.54 Mbit/s

95th percentile per-packet one-way delay: 80.994 ms

Loss rate: 0.90%

-- Flow 1:

Average throughput: 55.45 Mbit/s

95th percentile per-packet one-way delay: 61.372 ms

Loss rate: 0.17%

-- Flow 2:

Average throughput: 48.44 Mbit/s

95th percentile per-packet one-way delay: 80.804 ms

Loss rate: 1.52%

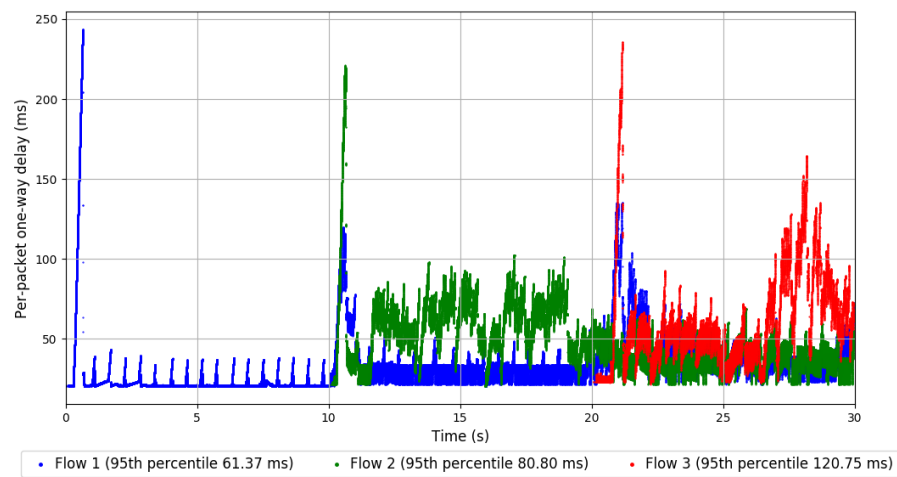
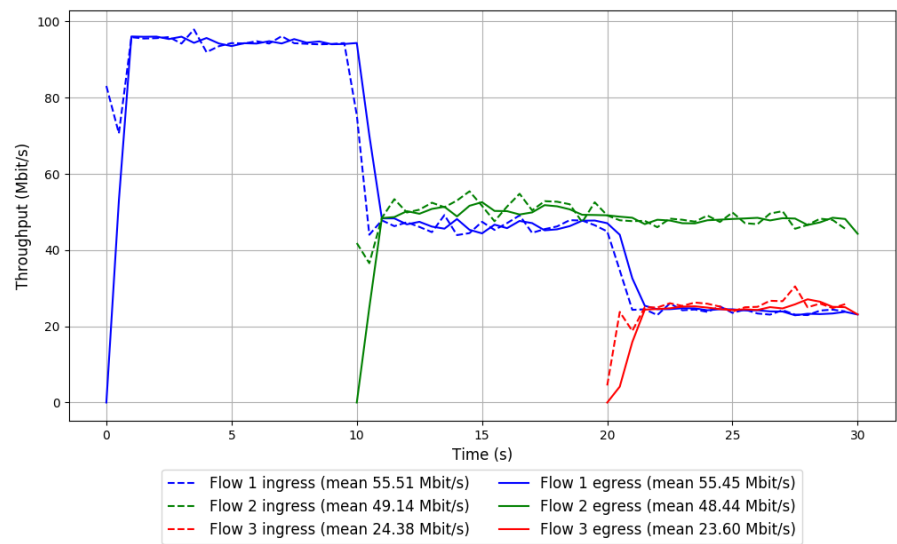
-- Flow 3:

Average throughput: 23.60 Mbit/s

95th percentile per-packet one-way delay: 120.753 ms

Loss rate: 3.35%

Run 5: Report of FillP — Data Link



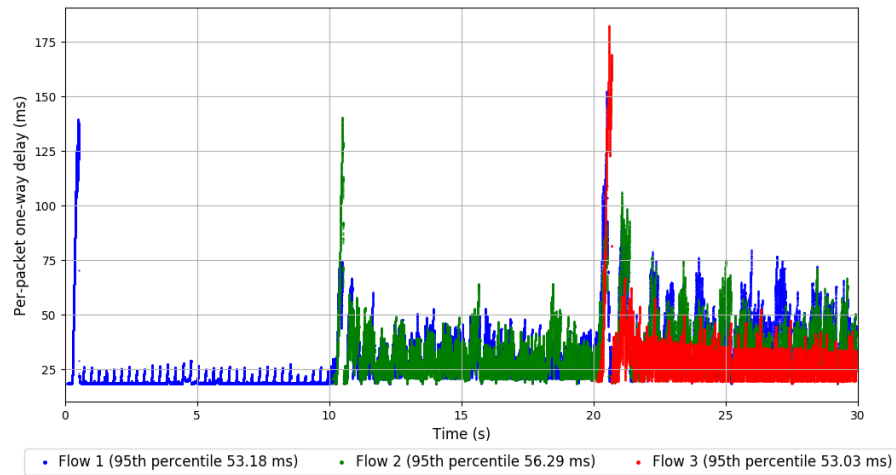
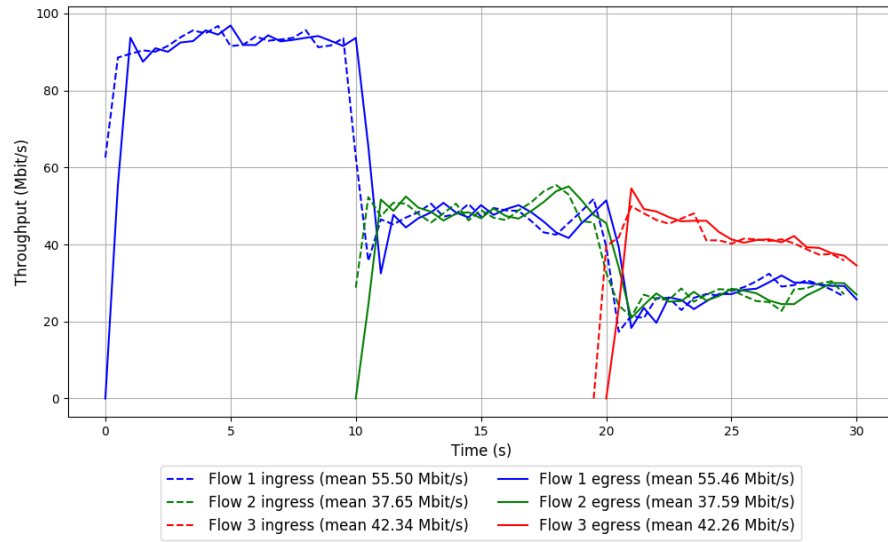


Run 1: Statistics of FillP-Sheep

Start at: 2018-12-02 14:55:14  
End at: 2018-12-02 14:55:44  
Local clock offset: 1.314 ms  
Remote clock offset: -3.885 ms

# Below is generated by plot.py at 2018-12-02 16:42:04  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 94.51 Mbit/s  
95th percentile per-packet one-way delay: 54.300 ms  
Loss rate: 0.20%  
-- Flow 1:  
Average throughput: 55.46 Mbit/s  
95th percentile per-packet one-way delay: 53.184 ms  
Loss rate: 0.12%  
-- Flow 2:  
Average throughput: 37.59 Mbit/s  
95th percentile per-packet one-way delay: 56.293 ms  
Loss rate: 0.25%  
-- Flow 3:  
Average throughput: 42.26 Mbit/s  
95th percentile per-packet one-way delay: 53.033 ms  
Loss rate: 0.46%

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

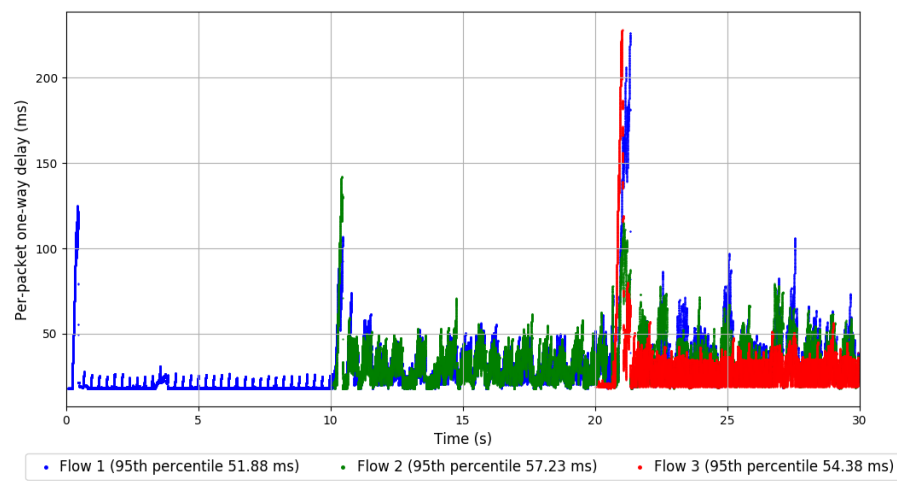
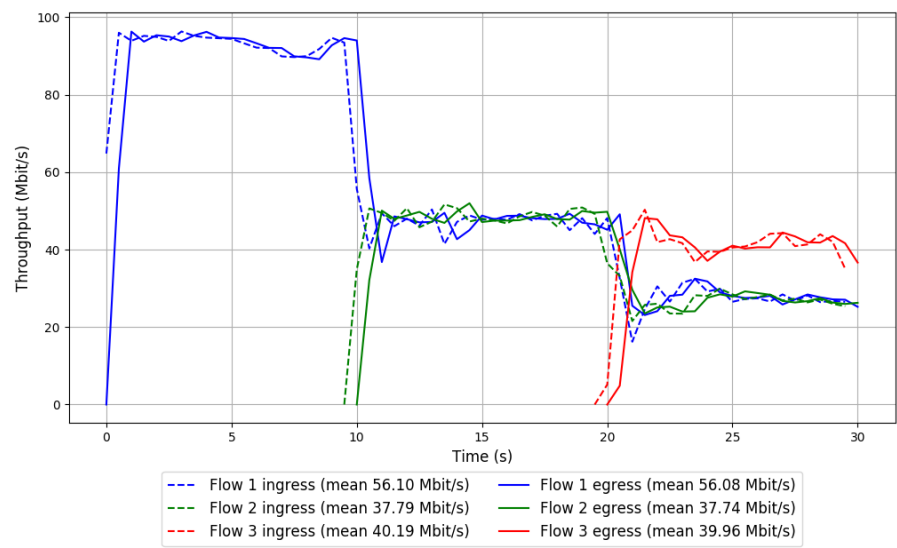


Run 2: Statistics of FillP-Sheep

Start at: 2018-12-02 15:19:00  
End at: 2018-12-02 15:19:30  
Local clock offset: 0.653 ms  
Remote clock offset: -3.267 ms

# Below is generated by plot.py at 2018-12-02 16:42:06  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 94.48 Mbit/s  
95th percentile per-packet one-way delay: 54.034 ms  
Loss rate: 0.22%  
-- Flow 1:  
Average throughput: 56.08 Mbit/s  
95th percentile per-packet one-way delay: 51.881 ms  
Loss rate: 0.12%  
-- Flow 2:  
Average throughput: 37.74 Mbit/s  
95th percentile per-packet one-way delay: 57.227 ms  
Loss rate: 0.22%  
-- Flow 3:  
Average throughput: 39.96 Mbit/s  
95th percentile per-packet one-way delay: 54.382 ms  
Loss rate: 0.65%

Run 2: Report of FillP-Sheep — Data Link

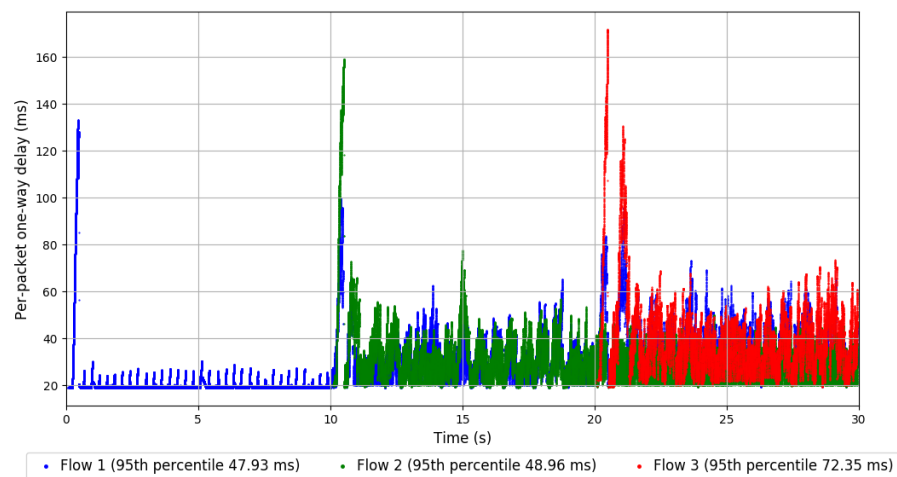
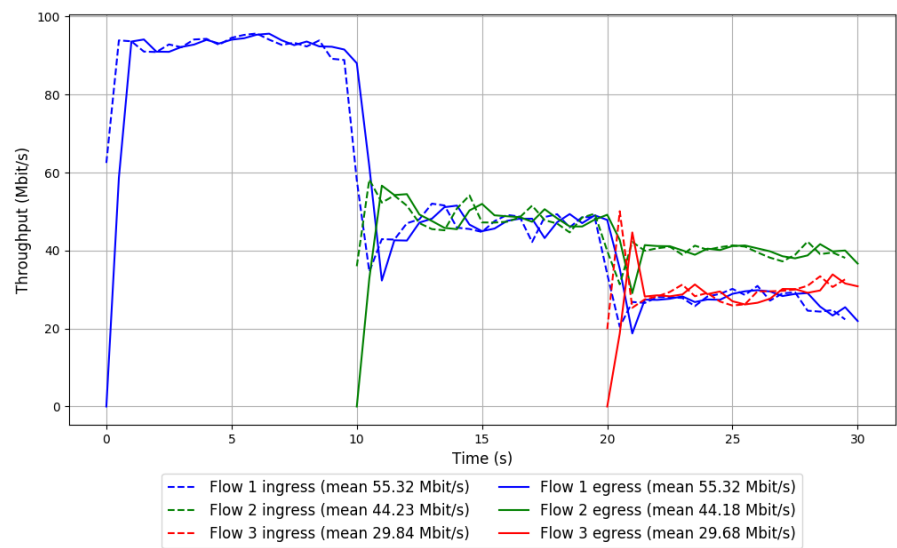


Run 3: Statistics of FillP-Sheep

Start at: 2018-12-02 15:42:37  
End at: 2018-12-02 15:43:07  
Local clock offset: -0.407 ms  
Remote clock offset: -3.987 ms

# Below is generated by plot.py at 2018-12-02 16:42:14  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 94.57 Mbit/s  
95th percentile per-packet one-way delay: 51.368 ms  
Loss rate: 0.19%  
-- Flow 1:  
Average throughput: 55.32 Mbit/s  
95th percentile per-packet one-way delay: 47.931 ms  
Loss rate: 0.07%  
-- Flow 2:  
Average throughput: 44.18 Mbit/s  
95th percentile per-packet one-way delay: 48.960 ms  
Loss rate: 0.19%  
-- Flow 3:  
Average throughput: 29.68 Mbit/s  
95th percentile per-packet one-way delay: 72.354 ms  
Loss rate: 0.82%

Run 3: Report of FillP-Sheep — Data Link

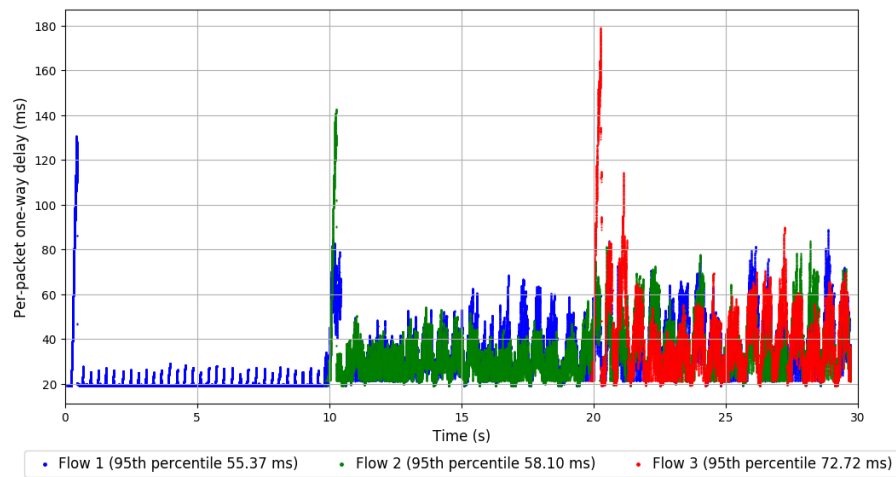
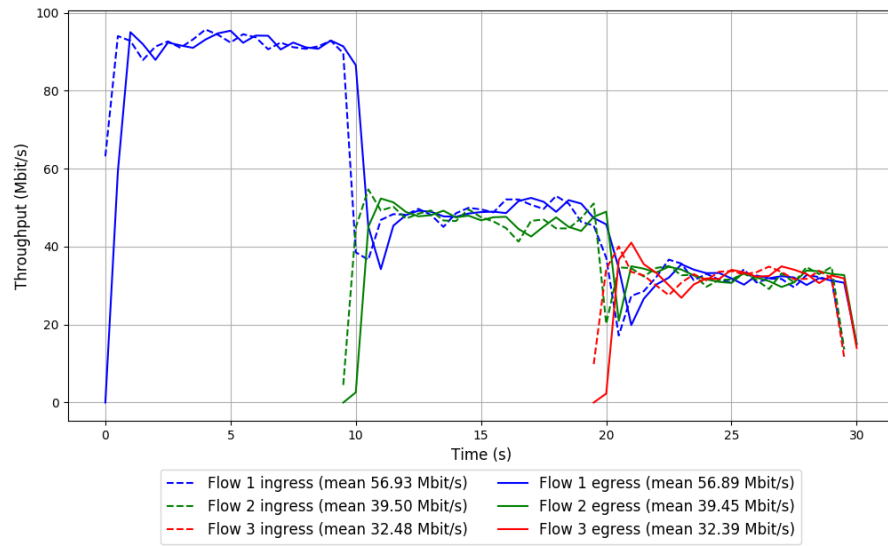


Run 4: Statistics of FillP-Sheep

Start at: 2018-12-02 16:05:37  
End at: 2018-12-02 16:06:08  
Local clock offset: 0.356 ms  
Remote clock offset: -3.628 ms

# Below is generated by plot.py at 2018-12-02 16:42:34  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 94.17 Mbit/s  
95th percentile per-packet one-way delay: 58.665 ms  
Loss rate: 0.18%  
-- Flow 1:  
Average throughput: 56.89 Mbit/s  
95th percentile per-packet one-way delay: 55.371 ms  
Loss rate: 0.10%  
-- Flow 2:  
Average throughput: 39.45 Mbit/s  
95th percentile per-packet one-way delay: 58.103 ms  
Loss rate: 0.24%  
-- Flow 3:  
Average throughput: 32.39 Mbit/s  
95th percentile per-packet one-way delay: 72.716 ms  
Loss rate: 0.42%

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



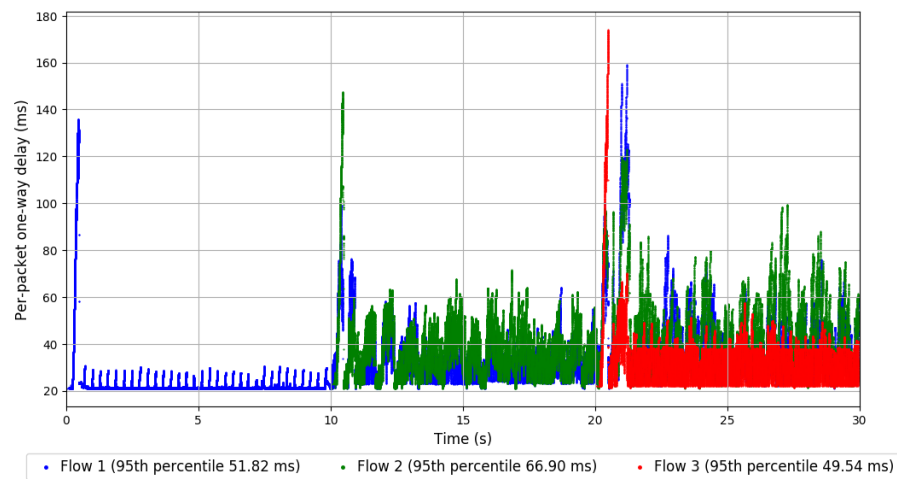
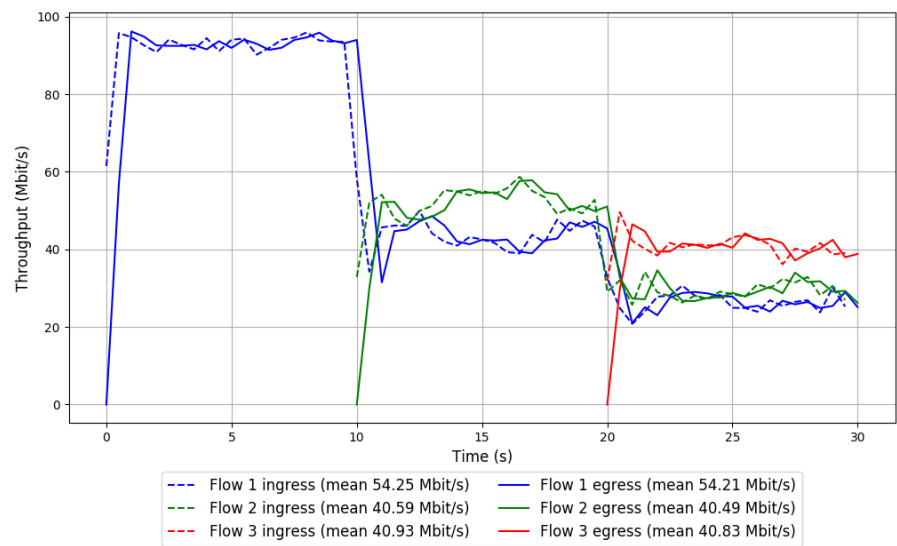


Run 5: Statistics of FillP-Sheep

Start at: 2018-12-02 16:28:25  
End at: 2018-12-02 16:28:55  
Local clock offset: 2.972 ms  
Remote clock offset: -3.111 ms

```
# Below is generated by plot.py at 2018-12-02 16:43:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.72 Mbit/s
95th percentile per-packet one-way delay: 58.463 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 54.21 Mbit/s
95th percentile per-packet one-way delay: 51.820 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 40.49 Mbit/s
95th percentile per-packet one-way delay: 66.902 ms
Loss rate: 0.37%
-- Flow 3:
Average throughput: 40.83 Mbit/s
95th percentile per-packet one-way delay: 49.541 ms
Loss rate: 0.35%
```

Run 5: Report of FillP-Sheep — Data Link

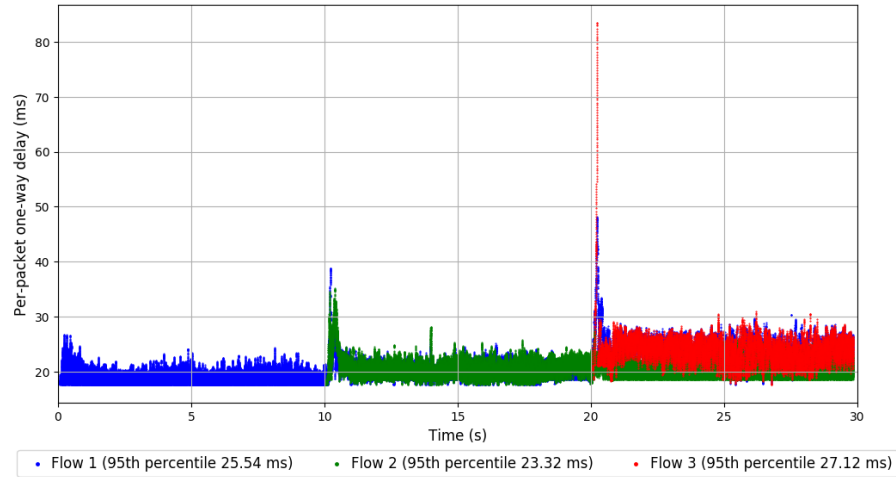
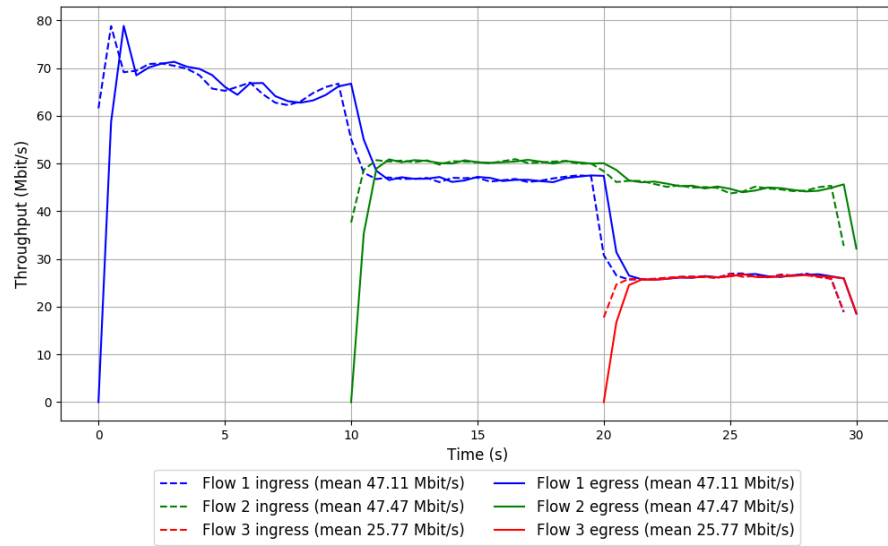


Run 1: Statistics of Indigo

Start at: 2018-12-02 14:52:39  
End at: 2018-12-02 14:53:09  
Local clock offset: 0.684 ms  
Remote clock offset: -3.519 ms

# Below is generated by plot.py at 2018-12-02 16:43:03  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 87.14 Mbit/s  
95th percentile per-packet one-way delay: 25.644 ms  
Loss rate: 0.11%  
-- Flow 1:  
Average throughput: 47.11 Mbit/s  
95th percentile per-packet one-way delay: 25.541 ms  
Loss rate: 0.06%  
-- Flow 2:  
Average throughput: 47.47 Mbit/s  
95th percentile per-packet one-way delay: 23.325 ms  
Loss rate: 0.13%  
-- Flow 3:  
Average throughput: 25.77 Mbit/s  
95th percentile per-packet one-way delay: 27.117 ms  
Loss rate: 0.31%

## Run 1: Report of Indigo — Data Link

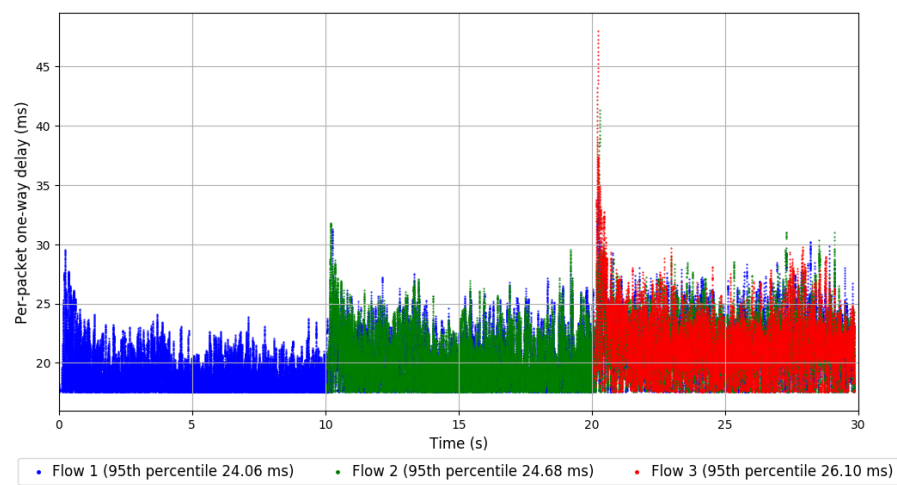
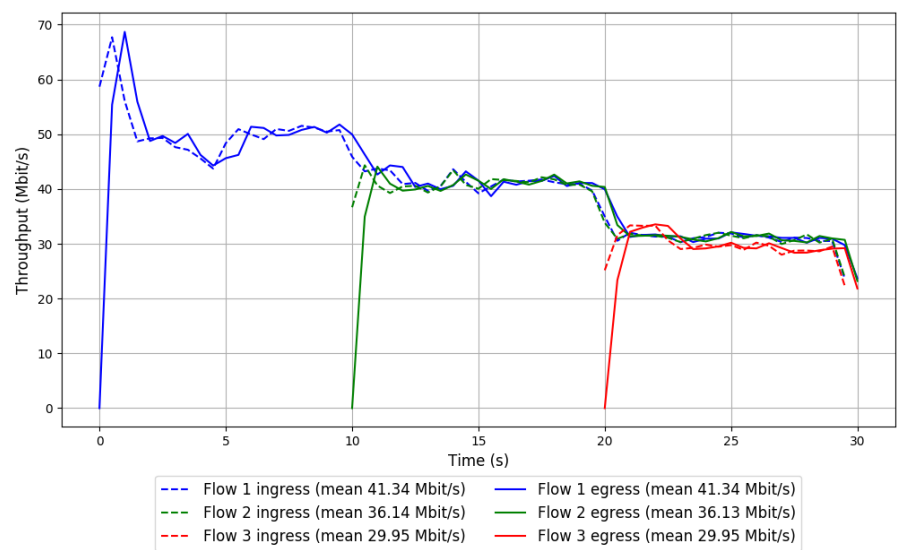


Run 2: Statistics of Indigo

Start at: 2018-12-02 15:16:30  
End at: 2018-12-02 15:17:00  
Local clock offset: 0.887 ms  
Remote clock offset: -2.855 ms

# Below is generated by plot.py at 2018-12-02 16:43:03  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 75.20 Mbit/s  
95th percentile per-packet one-way delay: 24.589 ms  
Loss rate: 0.12%  
-- Flow 1:  
Average throughput: 41.34 Mbit/s  
95th percentile per-packet one-way delay: 24.059 ms  
Loss rate: 0.08%  
-- Flow 2:  
Average throughput: 36.13 Mbit/s  
95th percentile per-packet one-way delay: 24.675 ms  
Loss rate: 0.13%  
-- Flow 3:  
Average throughput: 29.95 Mbit/s  
95th percentile per-packet one-way delay: 26.098 ms  
Loss rate: 0.30%

Run 2: Report of Indigo — Data Link

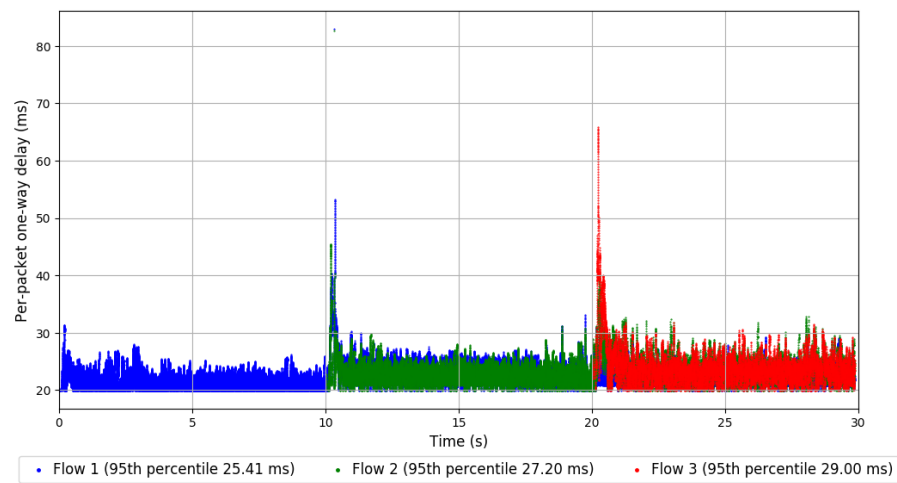
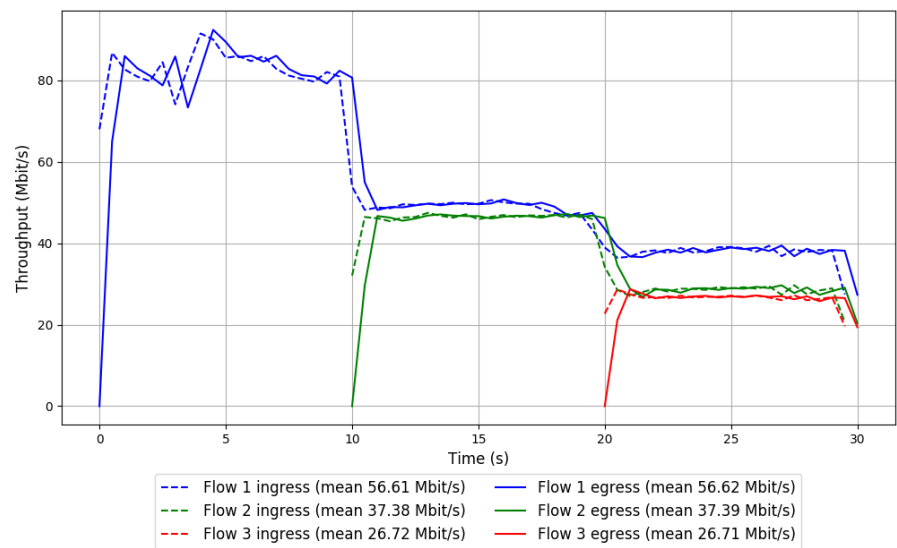


Run 3: Statistics of Indigo

Start at: 2018-12-02 15:40:09  
End at: 2018-12-02 15:40:39  
Local clock offset: 1.097 ms  
Remote clock offset: -3.414 ms

# Below is generated by plot.py at 2018-12-02 16:43:03  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 90.25 Mbit/s  
95th percentile per-packet one-way delay: 26.159 ms  
Loss rate: 0.10%  
-- Flow 1:  
Average throughput: 56.62 Mbit/s  
95th percentile per-packet one-way delay: 25.409 ms  
Loss rate: 0.06%  
-- Flow 2:  
Average throughput: 37.39 Mbit/s  
95th percentile per-packet one-way delay: 27.204 ms  
Loss rate: 0.11%  
-- Flow 3:  
Average throughput: 26.71 Mbit/s  
95th percentile per-packet one-way delay: 29.000 ms  
Loss rate: 0.29%

Run 3: Report of Indigo — Data Link



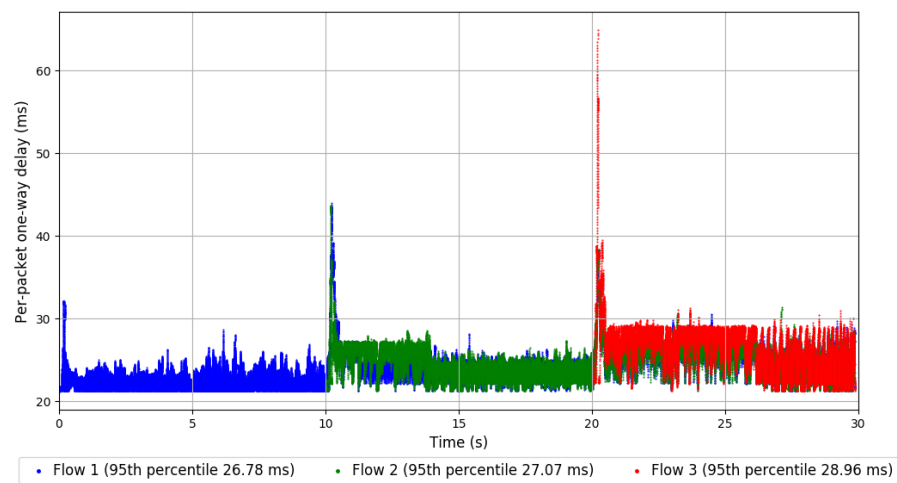
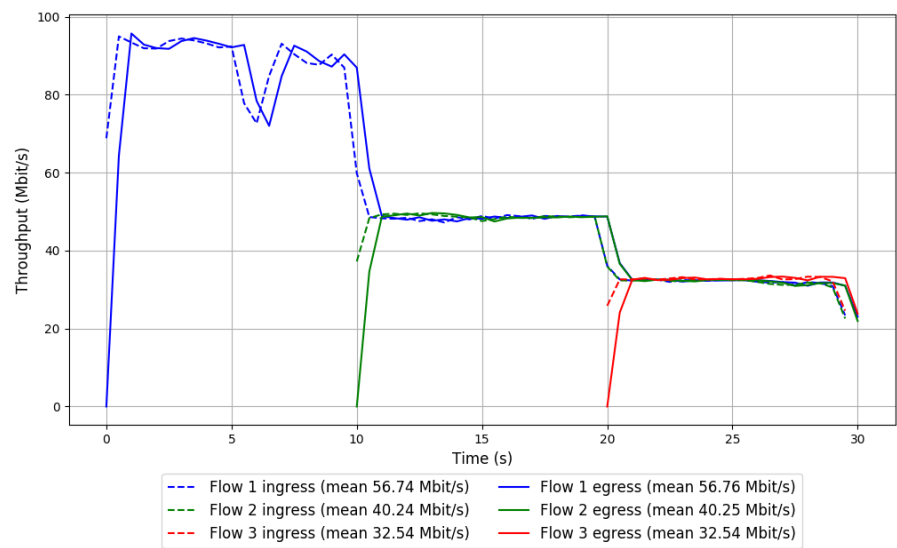


Run 4: Statistics of Indigo

Start at: 2018-12-02 16:03:07  
End at: 2018-12-02 16:03:37  
Local clock offset: 3.084 ms  
Remote clock offset: -2.726 ms

# Below is generated by plot.py at 2018-12-02 16:43:10  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 94.20 Mbit/s  
95th percentile per-packet one-way delay: 28.117 ms  
Loss rate: 0.10%  
-- Flow 1:  
Average throughput: 56.76 Mbit/s  
95th percentile per-packet one-way delay: 26.784 ms  
Loss rate: 0.06%  
-- Flow 2:  
Average throughput: 40.25 Mbit/s  
95th percentile per-packet one-way delay: 27.070 ms  
Loss rate: 0.12%  
-- Flow 3:  
Average throughput: 32.54 Mbit/s  
95th percentile per-packet one-way delay: 28.965 ms  
Loss rate: 0.28%

Run 4: Report of Indigo — Data Link

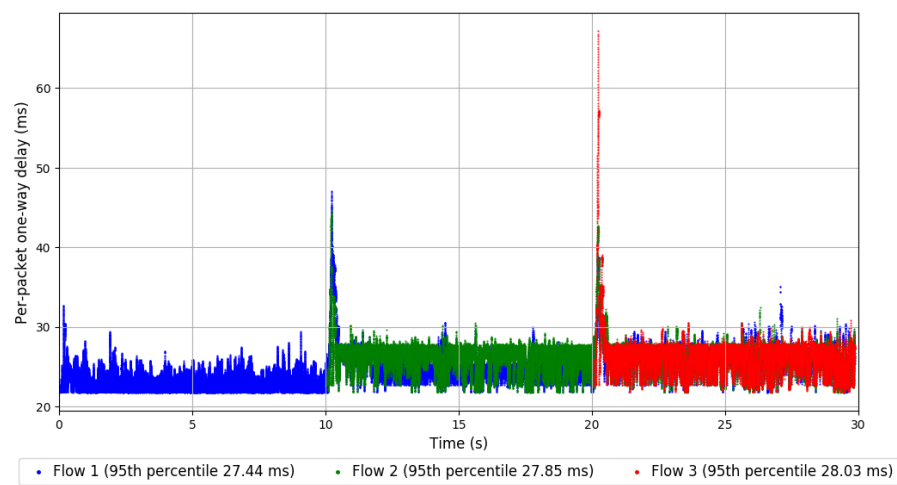
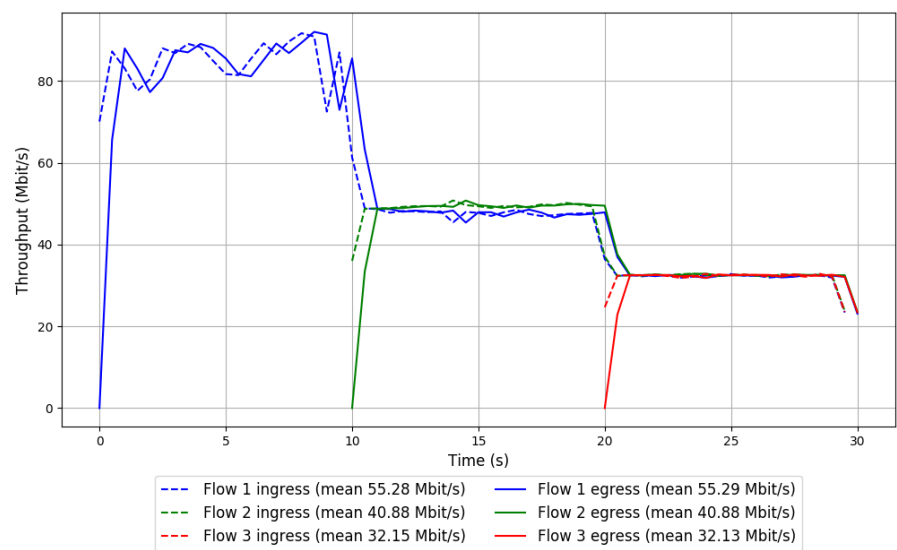


Run 5: Statistics of Indigo

Start at: 2018-12-02 16:25:57  
End at: 2018-12-02 16:26:27  
Local clock offset: 3.34 ms  
Remote clock offset: -3.318 ms

# Below is generated by plot.py at 2018-12-02 16:43:11  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 92.99 Mbit/s  
95th percentile per-packet one-way delay: 27.681 ms  
Loss rate: 0.10%  
-- Flow 1:  
Average throughput: 55.29 Mbit/s  
95th percentile per-packet one-way delay: 27.443 ms  
Loss rate: 0.06%  
-- Flow 2:  
Average throughput: 40.88 Mbit/s  
95th percentile per-packet one-way delay: 27.850 ms  
Loss rate: 0.12%  
-- Flow 3:  
Average throughput: 32.13 Mbit/s  
95th percentile per-packet one-way delay: 28.028 ms  
Loss rate: 0.30%

Run 5: Report of Indigo — Data Link

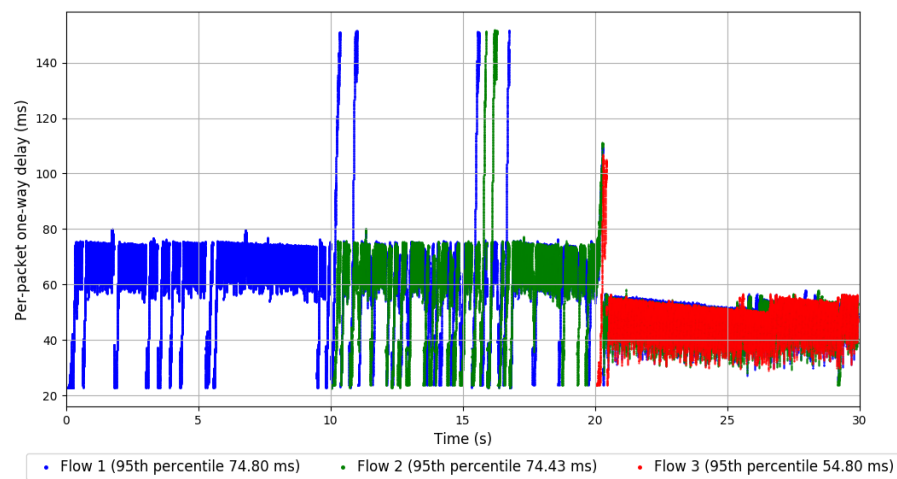
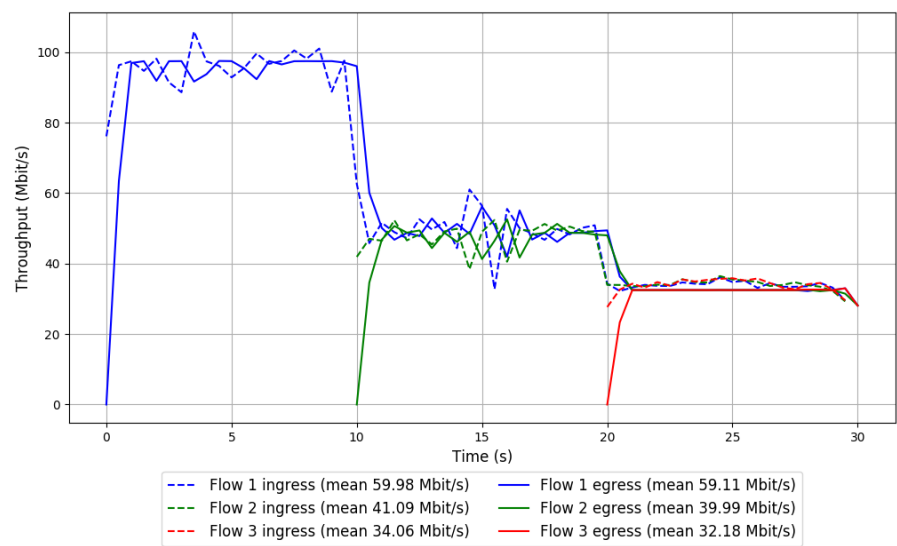


Run 1: Statistics of Indigo-96d2da3

Start at: 2018-12-02 14:44:51  
End at: 2018-12-02 14:45:21  
Local clock offset: 4.901 ms  
Remote clock offset: -4.585 ms

# Below is generated by plot.py at 2018-12-02 16:43:26  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 96.37 Mbit/s  
95th percentile per-packet one-way delay: 74.667 ms  
Loss rate: 2.35%  
-- Flow 1:  
Average throughput: 59.11 Mbit/s  
95th percentile per-packet one-way delay: 74.798 ms  
Loss rate: 1.53%  
-- Flow 2:  
Average throughput: 39.99 Mbit/s  
95th percentile per-packet one-way delay: 74.433 ms  
Loss rate: 2.74%  
-- Flow 3:  
Average throughput: 32.18 Mbit/s  
95th percentile per-packet one-way delay: 54.800 ms  
Loss rate: 5.74%

Run 1: Report of Indigo-96d2da3 — Data Link

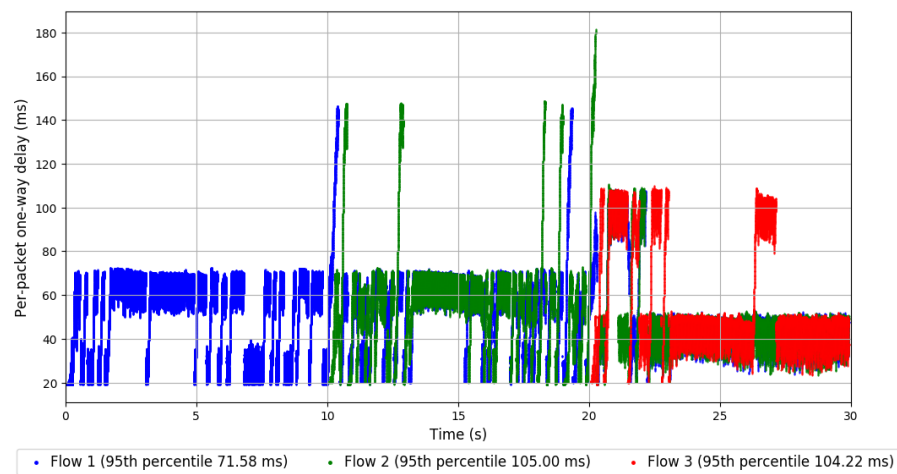
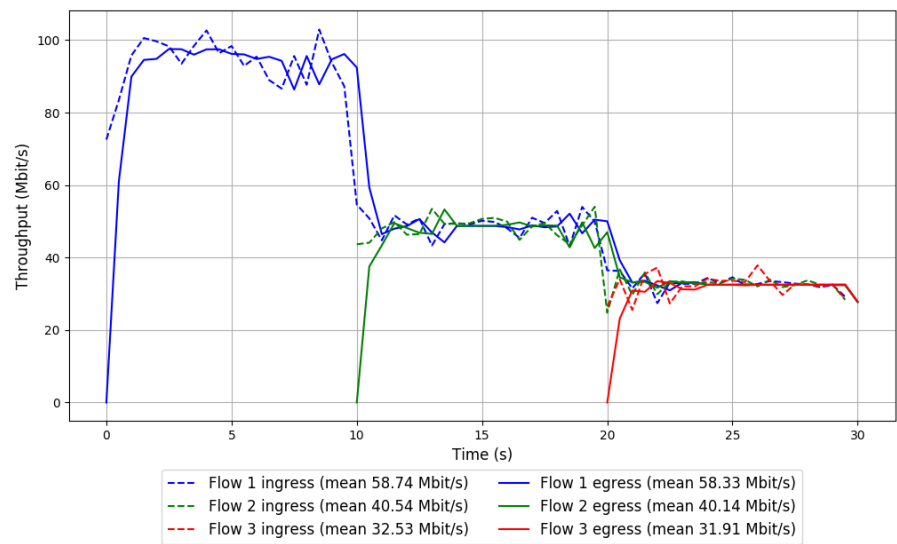


Run 2: Statistics of Indigo-96d2da3

Start at: 2018-12-02 15:08:48  
End at: 2018-12-02 15:09:18  
Local clock offset: 1.067 ms  
Remote clock offset: -4.358 ms

# Below is generated by plot.py at 2018-12-02 16:43:43  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.58 Mbit/s  
95th percentile per-packet one-way delay: 95.192 ms  
Loss rate: 1.00%  
-- Flow 1:  
Average throughput: 58.33 Mbit/s  
95th percentile per-packet one-way delay: 71.581 ms  
Loss rate: 0.76%  
-- Flow 2:  
Average throughput: 40.14 Mbit/s  
95th percentile per-packet one-way delay: 104.999 ms  
Loss rate: 1.10%  
-- Flow 3:  
Average throughput: 31.91 Mbit/s  
95th percentile per-packet one-way delay: 104.225 ms  
Loss rate: 2.05%

Run 2: Report of Indigo-96d2da3 — Data Link



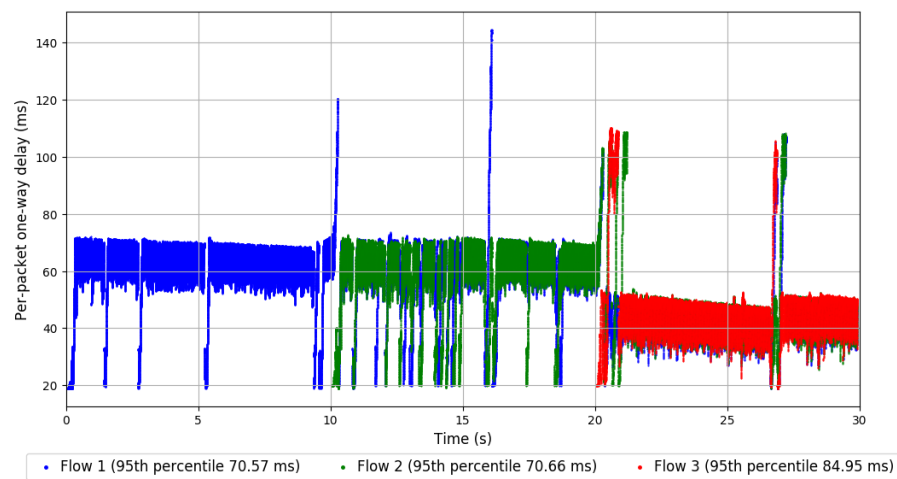
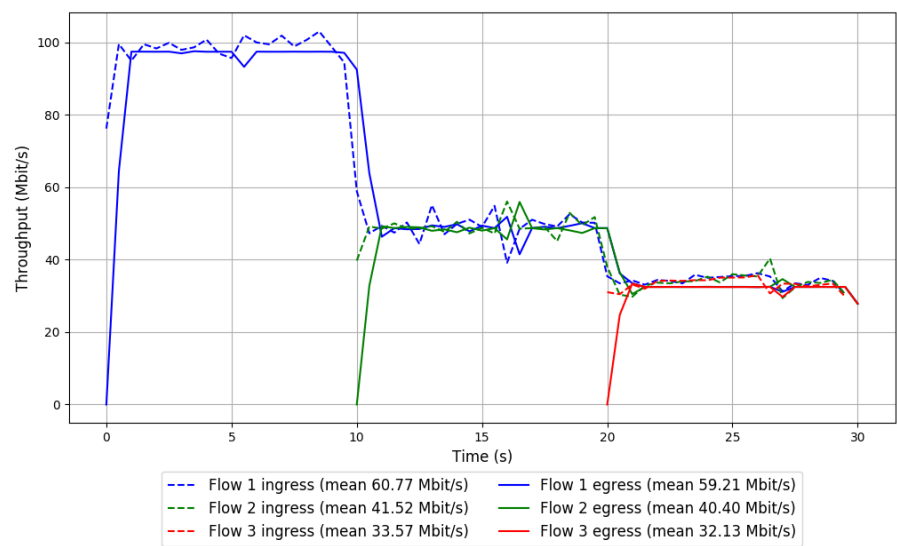


Run 3: Statistics of Indigo-96d2da3

Start at: 2018-12-02 15:32:36  
End at: 2018-12-02 15:33:06  
Local clock offset: 0.063 ms  
Remote clock offset: -3.807 ms

# Below is generated by plot.py at 2018-12-02 16:43:45  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 96.71 Mbit/s  
95th percentile per-packet one-way delay: 70.601 ms  
Loss rate: 2.88%  
-- Flow 1:  
Average throughput: 59.21 Mbit/s  
95th percentile per-packet one-way delay: 70.570 ms  
Loss rate: 2.63%  
-- Flow 2:  
Average throughput: 40.40 Mbit/s  
95th percentile per-packet one-way delay: 70.662 ms  
Loss rate: 2.80%  
-- Flow 3:  
Average throughput: 32.13 Mbit/s  
95th percentile per-packet one-way delay: 84.947 ms  
Loss rate: 4.46%

Run 3: Report of Indigo-96d2da3 — Data Link

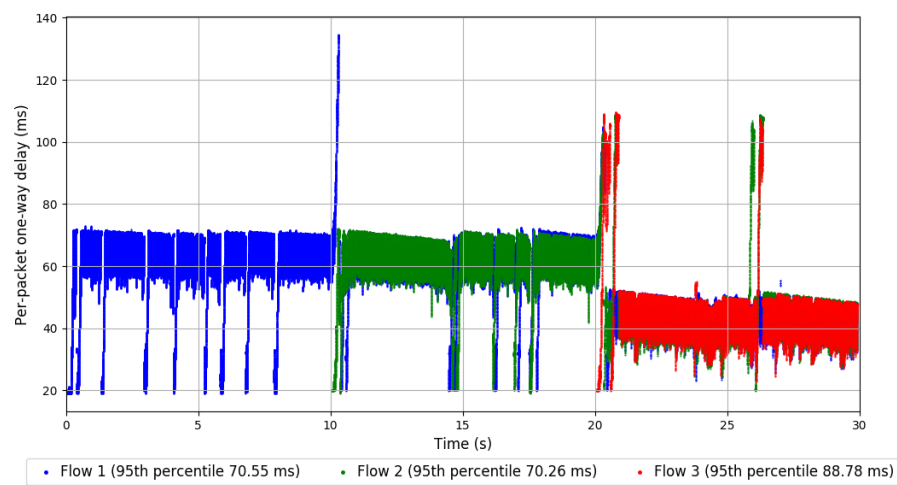
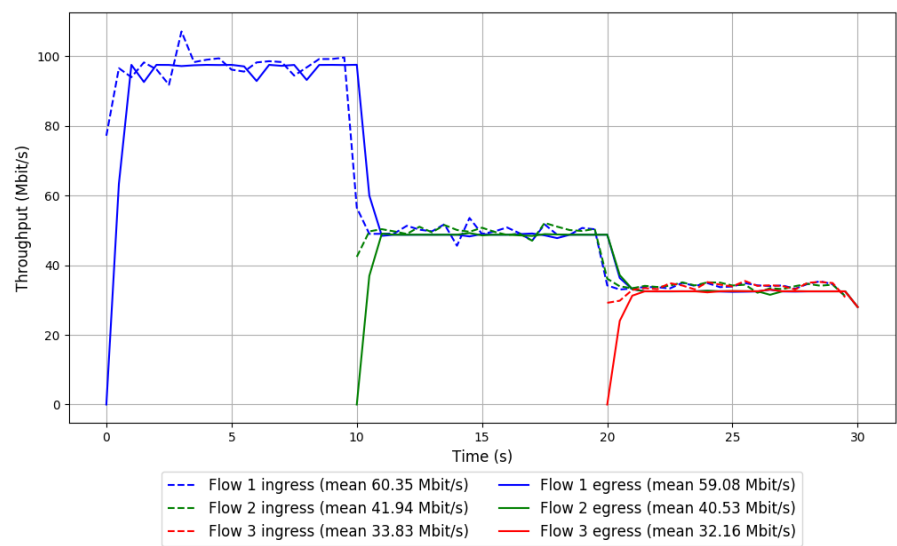


Run 4: Statistics of Indigo-96d2da3

Start at: 2018-12-02 15:55:45  
End at: 2018-12-02 15:56:15  
Local clock offset: -0.276 ms  
Remote clock offset: -3.863 ms

# Below is generated by plot.py at 2018-12-02 16:43:54  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 96.67 Mbit/s  
95th percentile per-packet one-way delay: 70.530 ms  
Loss rate: 2.87%  
-- Flow 1:  
Average throughput: 59.08 Mbit/s  
95th percentile per-packet one-way delay: 70.547 ms  
Loss rate: 2.17%  
-- Flow 2:  
Average throughput: 40.53 Mbit/s  
95th percentile per-packet one-way delay: 70.262 ms  
Loss rate: 3.46%  
-- Flow 3:  
Average throughput: 32.16 Mbit/s  
95th percentile per-packet one-way delay: 88.776 ms  
Loss rate: 5.15%

Run 4: Report of Indigo-96d2da3 — Data Link

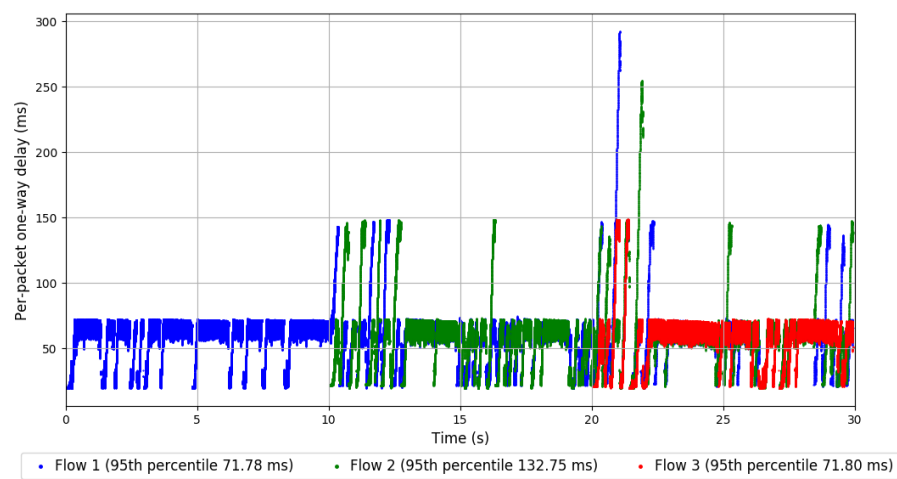
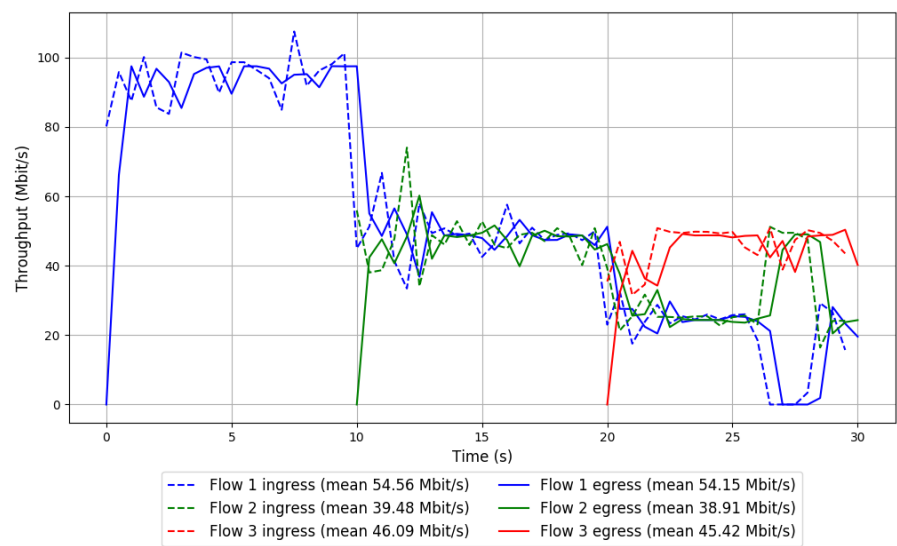


Run 5: Statistics of Indigo-96d2da3

Start at: 2018-12-02 16:18:40  
End at: 2018-12-02 16:19:10  
Local clock offset: 1.351 ms  
Remote clock offset: -2.714 ms

# Below is generated by plot.py at 2018-12-02 16:43:57  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.04 Mbit/s  
95th percentile per-packet one-way delay: 91.906 ms  
Loss rate: 1.03%  
-- Flow 1:  
Average throughput: 54.15 Mbit/s  
95th percentile per-packet one-way delay: 71.781 ms  
Loss rate: 0.84%  
-- Flow 2:  
Average throughput: 38.91 Mbit/s  
95th percentile per-packet one-way delay: 132.749 ms  
Loss rate: 1.04%  
-- Flow 3:  
Average throughput: 45.42 Mbit/s  
95th percentile per-packet one-way delay: 71.800 ms  
Loss rate: 1.70%

Run 5: Report of Indigo-96d2da3 — Data Link

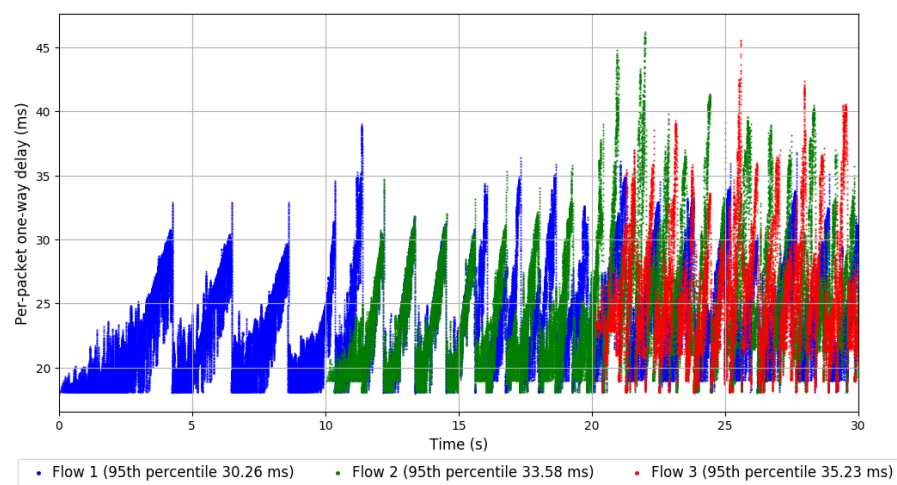
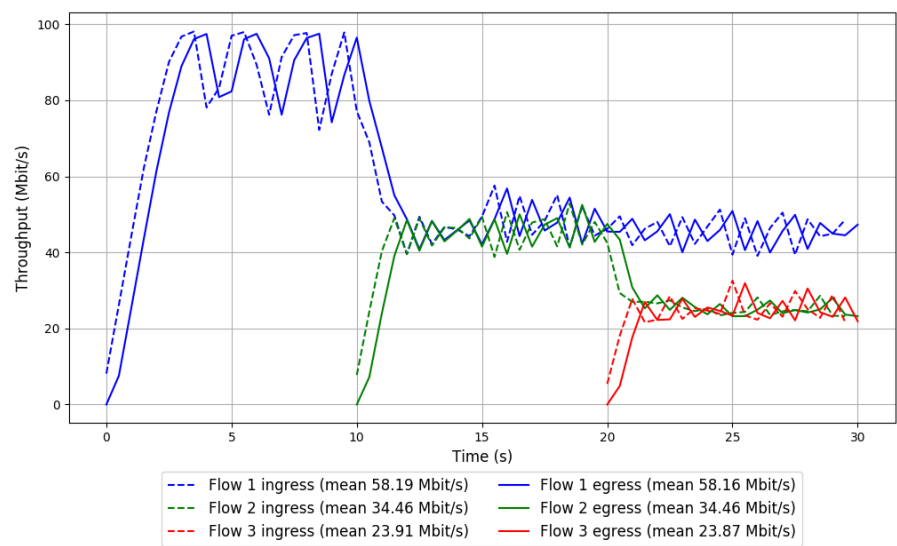


```
Run 1: Statistics of LEDBAT

Start at: 2018-12-02 14:48:47
End at: 2018-12-02 14:49:17
Local clock offset: 0.933 ms
Remote clock offset: -3.854 ms

# Below is generated by plot.py at 2018-12-02 16:44:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.03 Mbit/s
95th percentile per-packet one-way delay: 31.605 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 58.16 Mbit/s
95th percentile per-packet one-way delay: 30.261 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 34.46 Mbit/s
95th percentile per-packet one-way delay: 33.575 ms
Loss rate: 0.13%
-- Flow 3:
Average throughput: 23.87 Mbit/s
95th percentile per-packet one-way delay: 35.234 ms
Loss rate: 0.41%
```

Run 1: Report of LEDBAT — Data Link



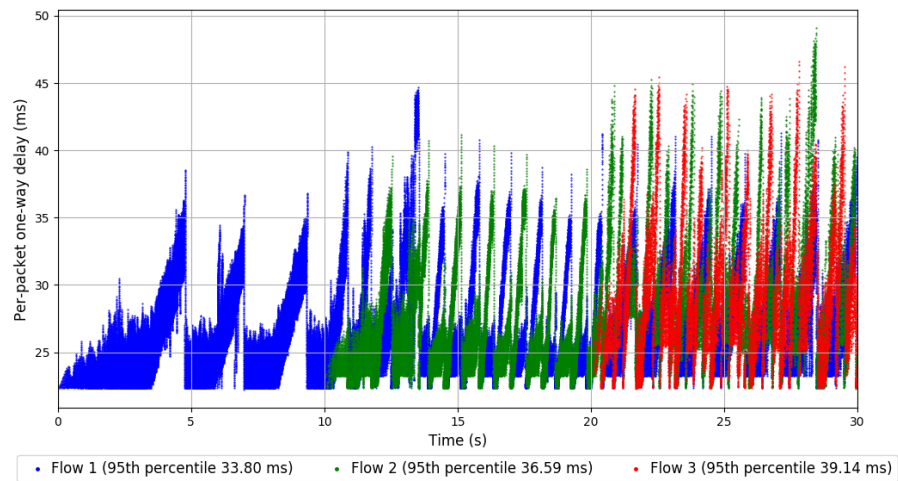
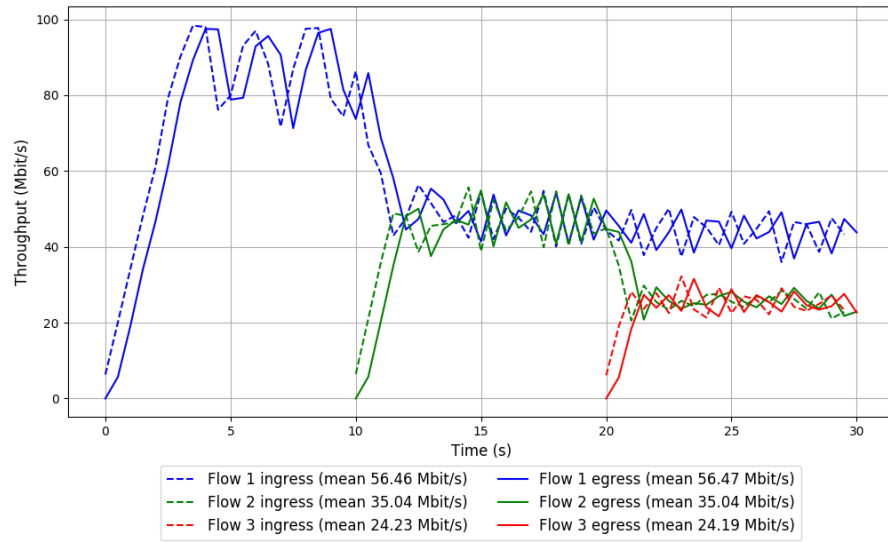


Run 2: Statistics of LEDBAT

Start at: 2018-12-02 15:12:50  
End at: 2018-12-02 15:13:20  
Local clock offset: 4.927 ms  
Remote clock offset: -3.631 ms

# Below is generated by plot.py at 2018-12-02 16:44:18  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 87.82 Mbit/s  
95th percentile per-packet one-way delay: 35.121 ms  
Loss rate: 0.12%  
-- Flow 1:  
Average throughput: 56.47 Mbit/s  
95th percentile per-packet one-way delay: 33.800 ms  
Loss rate: 0.07%  
-- Flow 2:  
Average throughput: 35.04 Mbit/s  
95th percentile per-packet one-way delay: 36.590 ms  
Loss rate: 0.12%  
-- Flow 3:  
Average throughput: 24.19 Mbit/s  
95th percentile per-packet one-way delay: 39.143 ms  
Loss rate: 0.45%

## Run 2: Report of LEDBAT — Data Link

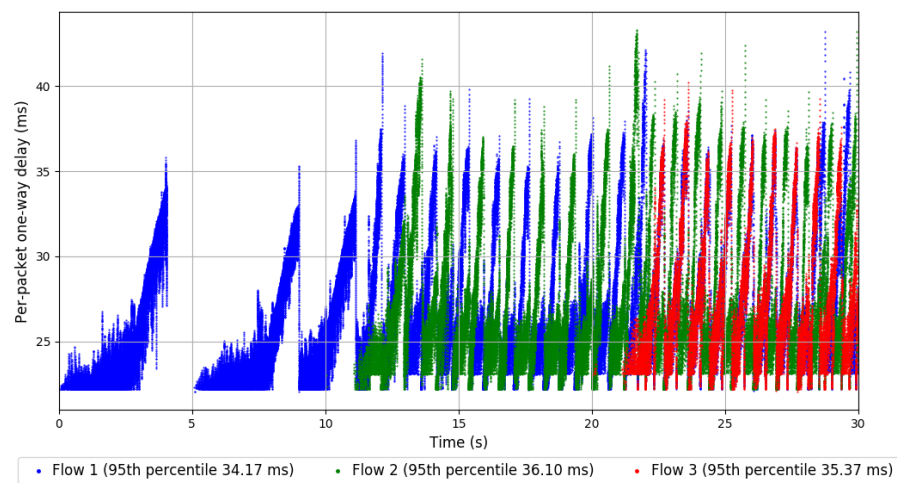
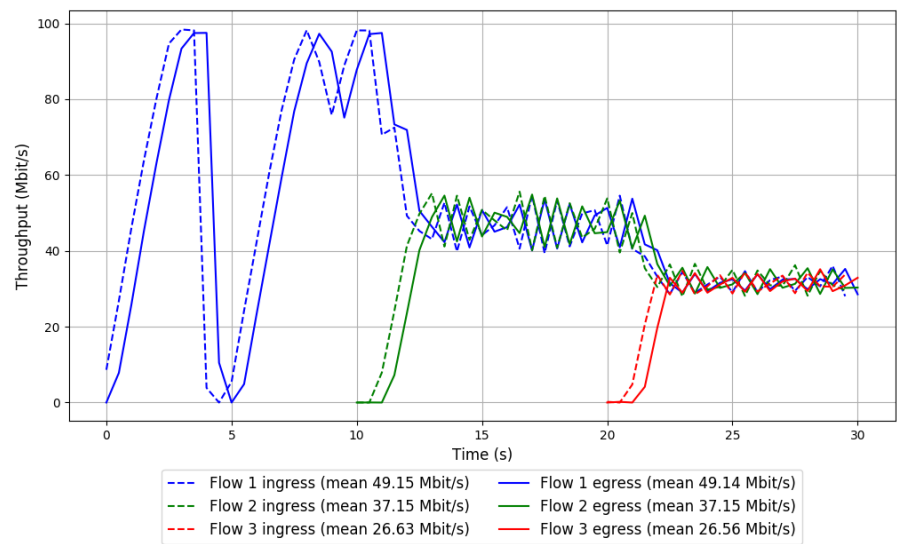


Run 3: Statistics of LEDBAT

Start at: 2018-12-02 15:36:25  
End at: 2018-12-02 15:36:55  
Local clock offset: 2.65 ms  
Remote clock offset: -4.259 ms

# Below is generated by plot.py at 2018-12-02 16:44:18  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 82.69 Mbit/s  
95th percentile per-packet one-way delay: 35.053 ms  
Loss rate: 0.14%  
-- Flow 1:  
Average throughput: 49.14 Mbit/s  
95th percentile per-packet one-way delay: 34.175 ms  
Loss rate: 0.08%  
-- Flow 2:  
Average throughput: 37.15 Mbit/s  
95th percentile per-packet one-way delay: 36.102 ms  
Loss rate: 0.12%  
-- Flow 3:  
Average throughput: 26.56 Mbit/s  
95th percentile per-packet one-way delay: 35.368 ms  
Loss rate: 0.47%

Run 3: Report of LEDBAT — Data Link

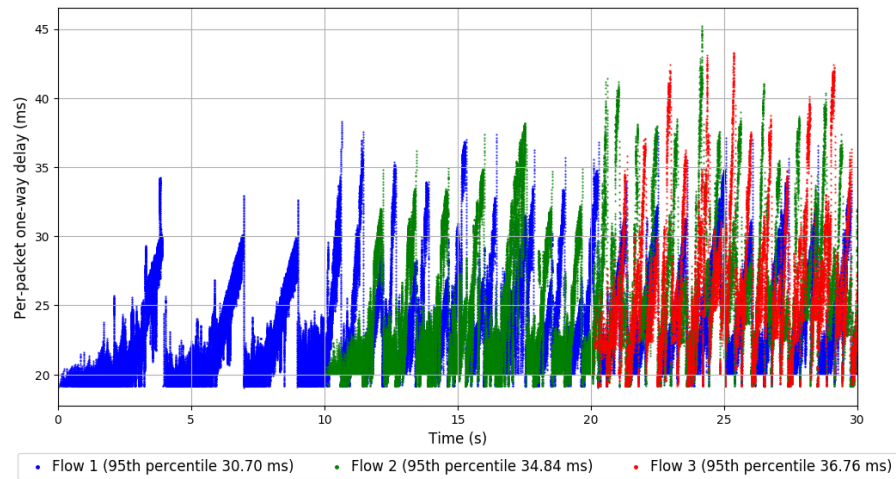
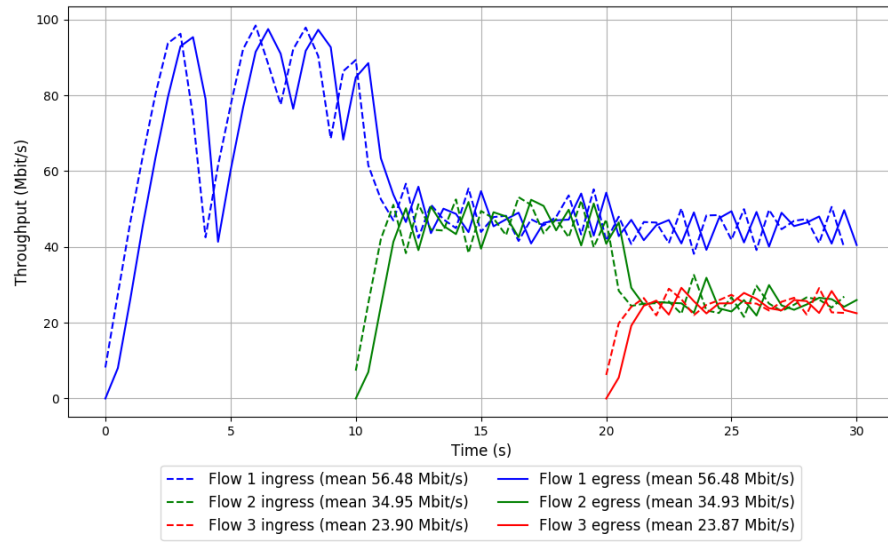


Run 4: Statistics of LEDBAT

Start at: 2018-12-02 15:59:31  
End at: 2018-12-02 16:00:01  
Local clock offset: -0.074 ms  
Remote clock offset: -3.821 ms

# Below is generated by plot.py at 2018-12-02 16:44:35  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 87.66 Mbit/s  
95th percentile per-packet one-way delay: 32.486 ms  
Loss rate: 0.13%  
-- Flow 1:  
Average throughput: 56.48 Mbit/s  
95th percentile per-packet one-way delay: 30.695 ms  
Loss rate: 0.08%  
-- Flow 2:  
Average throughput: 34.93 Mbit/s  
95th percentile per-packet one-way delay: 34.841 ms  
Loss rate: 0.17%  
-- Flow 3:  
Average throughput: 23.87 Mbit/s  
95th percentile per-packet one-way delay: 36.763 ms  
Loss rate: 0.35%

# Run 4: Report of LEDBAT — Data Link

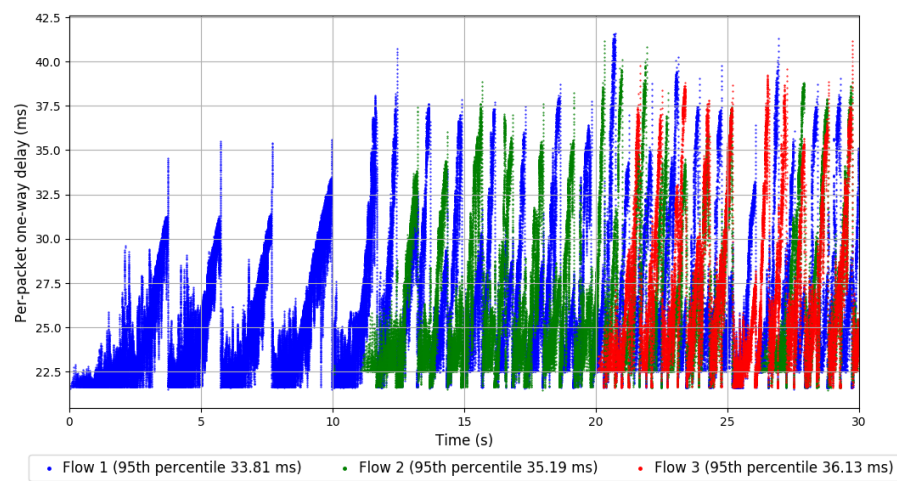
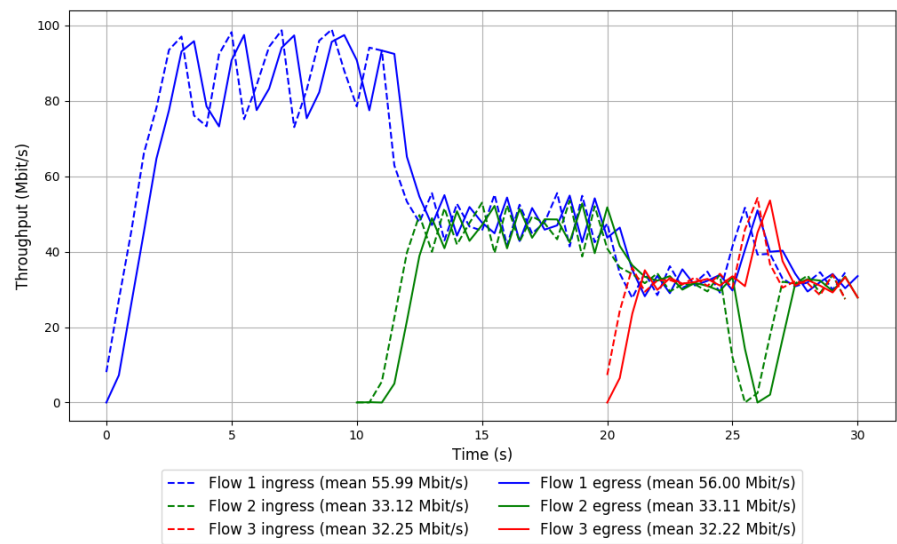


Run 5: Statistics of LEDBAT

Start at: 2018-12-02 16:22:20  
End at: 2018-12-02 16:22:50  
Local clock offset: 2.707 ms  
Remote clock offset: -3.634 ms

# Below is generated by plot.py at 2018-12-02 16:44:53  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 88.74 Mbit/s  
95th percentile per-packet one-way delay: 34.815 ms  
Loss rate: 0.12%  
-- Flow 1:  
Average throughput: 56.00 Mbit/s  
95th percentile per-packet one-way delay: 33.807 ms  
Loss rate: 0.08%  
-- Flow 2:  
Average throughput: 33.11 Mbit/s  
95th percentile per-packet one-way delay: 35.194 ms  
Loss rate: 0.15%  
-- Flow 3:  
Average throughput: 32.22 Mbit/s  
95th percentile per-packet one-way delay: 36.134 ms  
Loss rate: 0.27%

Run 5: Report of LEDBAT — Data Link





Run 1: Statistics of Indigo-Muses

Start at: 2018-12-02 14:56:29

End at: 2018-12-02 14:56:59

Local clock offset: 2.505 ms

Remote clock offset: -4.18 ms

# Below is generated by plot.py at 2018-12-02 16:44:53

# Datalink statistics

-- Total of 3 flows:

Average throughput: 14.04 Mbit/s

95th percentile per-packet one-way delay: 31.870 ms

Loss rate: 0.07%

-- Flow 1:

Average throughput: 5.46 Mbit/s

95th percentile per-packet one-way delay: 21.183 ms

Loss rate: 0.07%

-- Flow 2:

Average throughput: 7.79 Mbit/s

95th percentile per-packet one-way delay: 22.667 ms

Loss rate: 0.05%

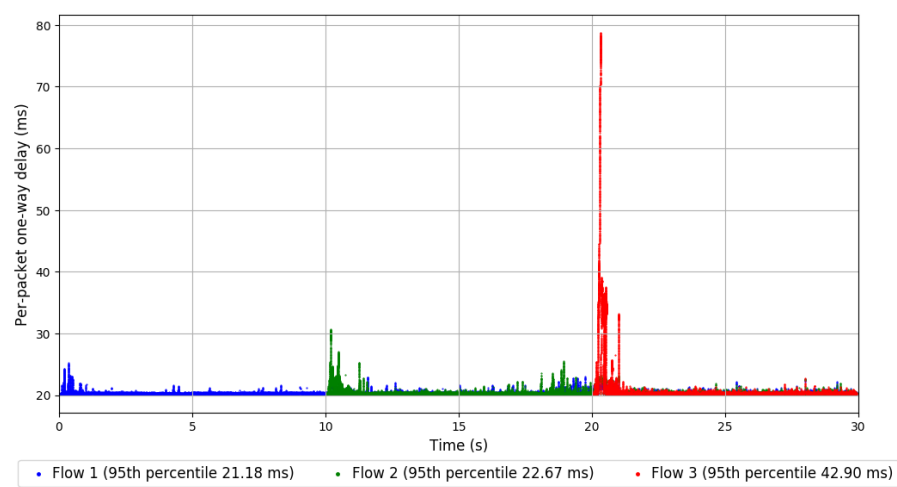
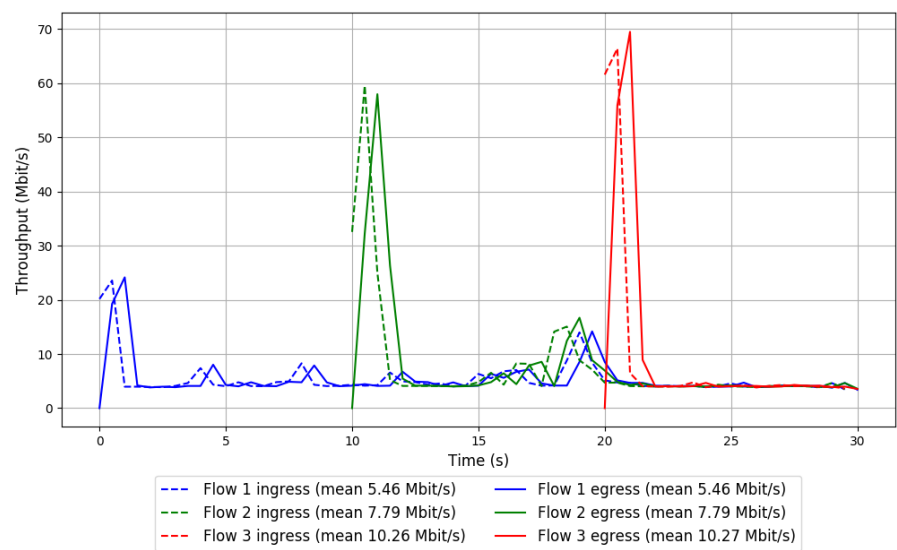
-- Flow 3:

Average throughput: 10.27 Mbit/s

95th percentile per-packet one-way delay: 42.897 ms

Loss rate: 0.13%

Run 1: Report of Indigo-Muses — Data Link

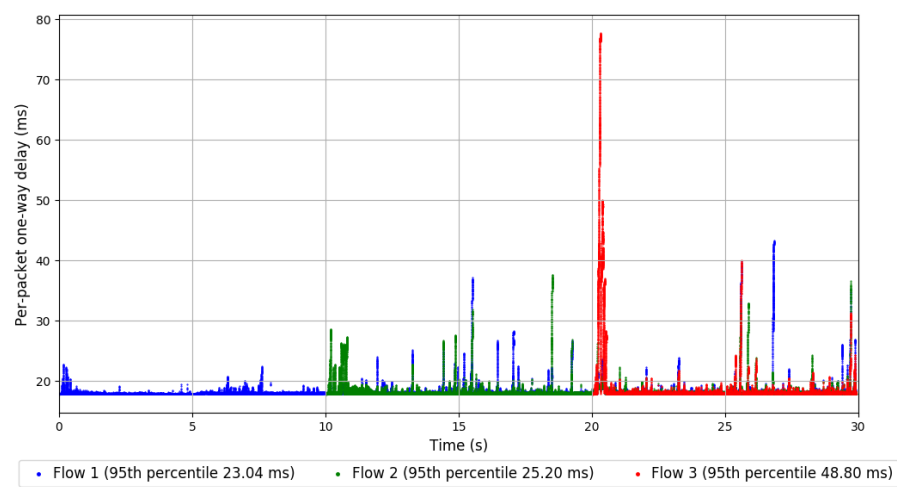
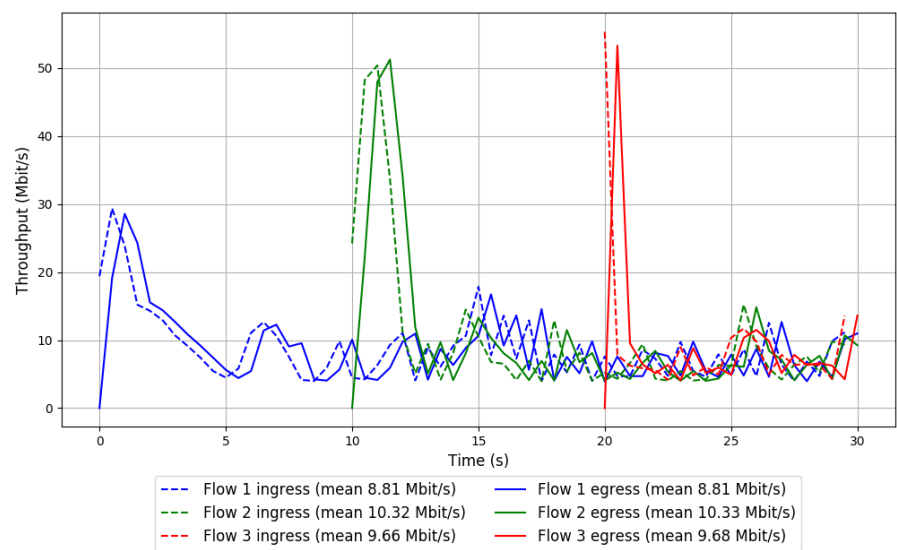


Run 2: Statistics of Indigo-Muses

Start at: 2018-12-02 15:20:15  
End at: 2018-12-02 15:20:45  
Local clock offset: -0.184 ms  
Remote clock offset: -3.804 ms

# Below is generated by plot.py at 2018-12-02 16:44:53  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 18.88 Mbit/s  
95th percentile per-packet one-way delay: 29.272 ms  
Loss rate: 0.06%  
-- Flow 1:  
Average throughput: 8.81 Mbit/s  
95th percentile per-packet one-way delay: 23.037 ms  
Loss rate: 0.04%  
-- Flow 2:  
Average throughput: 10.33 Mbit/s  
95th percentile per-packet one-way delay: 25.197 ms  
Loss rate: 0.06%  
-- Flow 3:  
Average throughput: 9.68 Mbit/s  
95th percentile per-packet one-way delay: 48.802 ms  
Loss rate: 0.13%

Run 2: Report of Indigo-Muses — Data Link

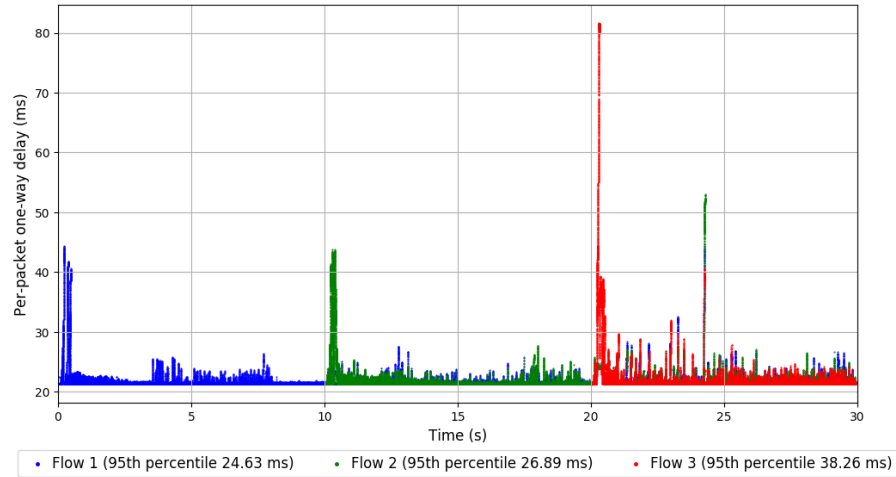
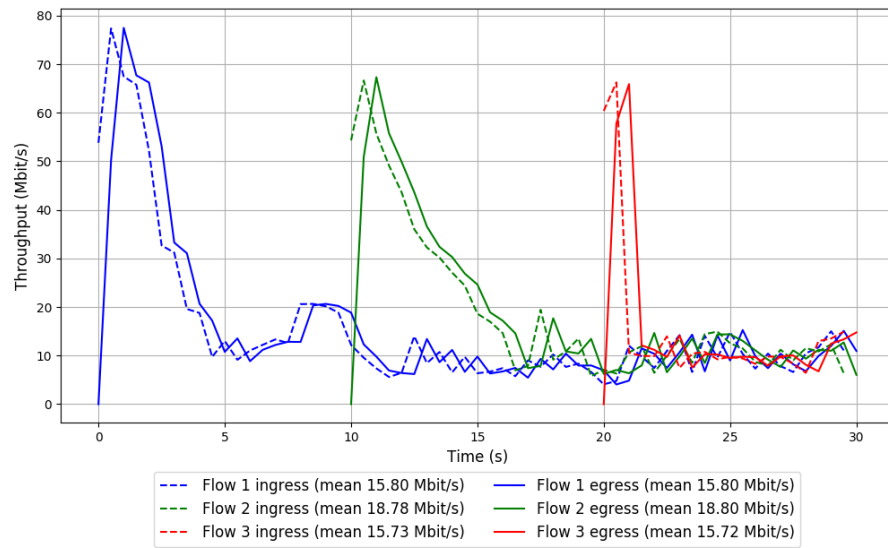


Run 3: Statistics of Indigo-Muses

Start at: 2018-12-02 15:43:49  
End at: 2018-12-02 15:44:19  
Local clock offset: 2.696 ms  
Remote clock offset: -3.108 ms

# Below is generated by plot.py at 2018-12-02 16:44:53  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 33.51 Mbit/s  
95th percentile per-packet one-way delay: 28.977 ms  
Loss rate: 0.10%  
-- Flow 1:  
Average throughput: 15.80 Mbit/s  
95th percentile per-packet one-way delay: 24.629 ms  
Loss rate: 0.05%  
-- Flow 2:  
Average throughput: 18.80 Mbit/s  
95th percentile per-packet one-way delay: 26.891 ms  
Loss rate: 0.06%  
-- Flow 3:  
Average throughput: 15.72 Mbit/s  
95th percentile per-packet one-way delay: 38.264 ms  
Loss rate: 0.32%

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

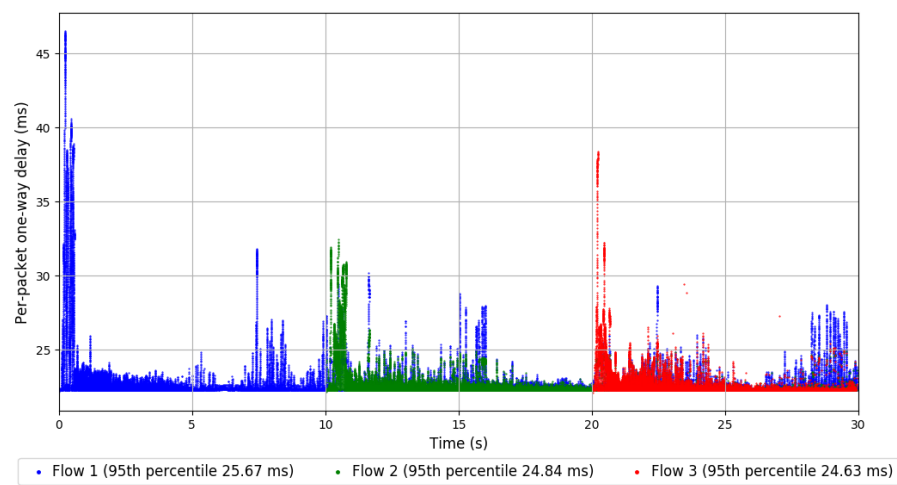
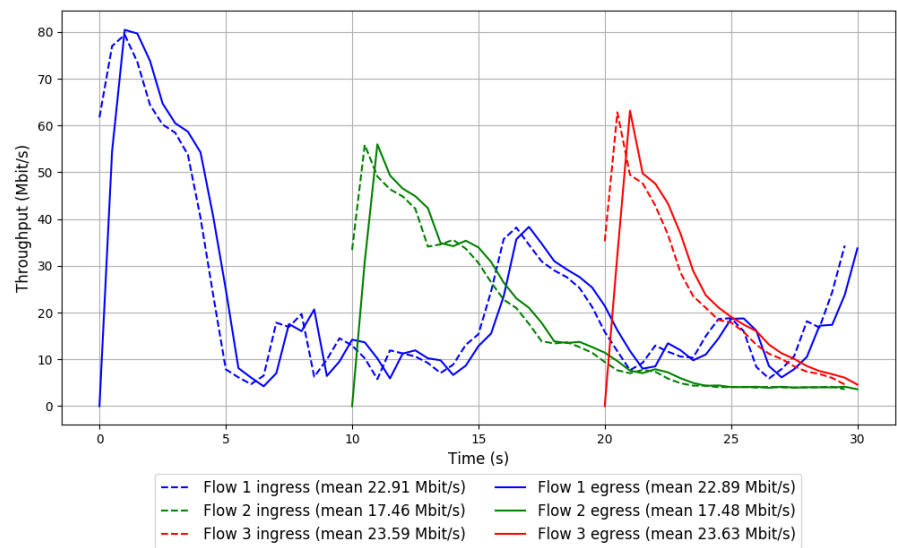


Run 4: Statistics of Indigo-Muses

Start at: 2018-12-02 16:06:48  
End at: 2018-12-02 16:07:18  
Local clock offset: 3.107 ms  
Remote clock offset: -3.688 ms

```
# Below is generated by plot.py at 2018-12-02 16:44:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 42.34 Mbit/s
95th percentile per-packet one-way delay: 25.144 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 22.89 Mbit/s
95th percentile per-packet one-way delay: 25.674 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 17.48 Mbit/s
95th percentile per-packet one-way delay: 24.838 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 23.63 Mbit/s
95th percentile per-packet one-way delay: 24.634 ms
Loss rate: 0.05%
```

Run 4: Report of Indigo-Muses — Data Link



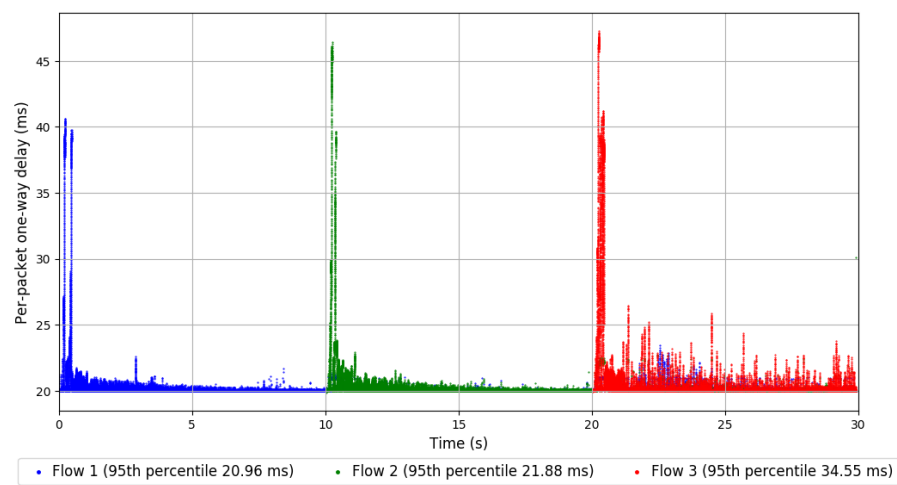
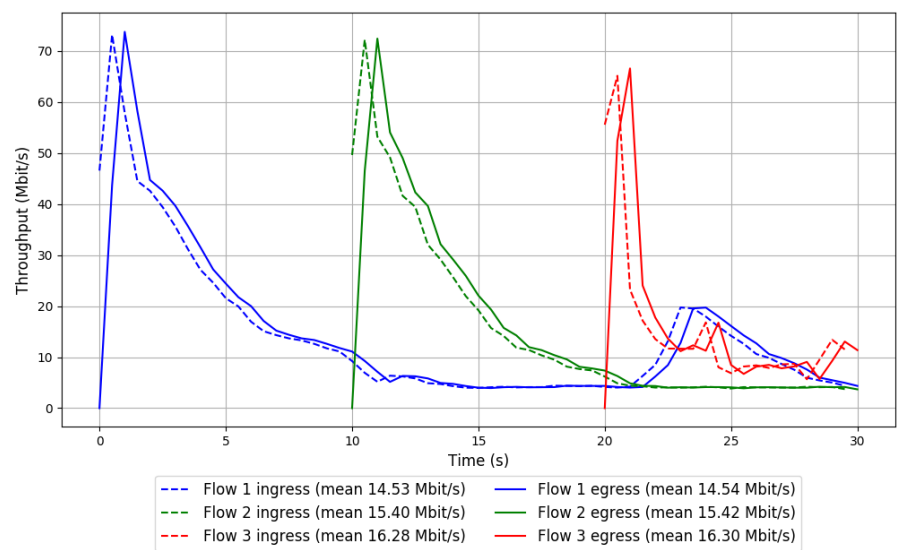


Run 5: Statistics of Indigo-Muses

Start at: 2018-12-02 16:29:37  
End at: 2018-12-02 16:30:07  
Local clock offset: 2.131 ms  
Remote clock offset: -2.833 ms

# Below is generated by plot.py at 2018-12-02 16:44:53  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 30.18 Mbit/s  
95th percentile per-packet one-way delay: 22.520 ms  
Loss rate: 0.08%  
-- Flow 1:  
Average throughput: 14.54 Mbit/s  
95th percentile per-packet one-way delay: 20.957 ms  
Loss rate: 0.03%  
-- Flow 2:  
Average throughput: 15.42 Mbit/s  
95th percentile per-packet one-way delay: 21.878 ms  
Loss rate: 0.04%  
-- Flow 3:  
Average throughput: 16.30 Mbit/s  
95th percentile per-packet one-way delay: 34.545 ms  
Loss rate: 0.28%

Run 5: Report of Indigo-Muses — Data Link

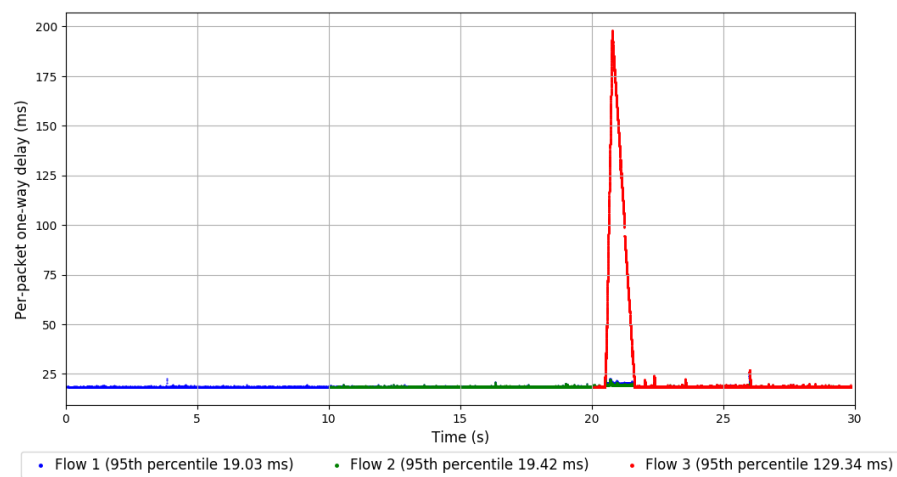
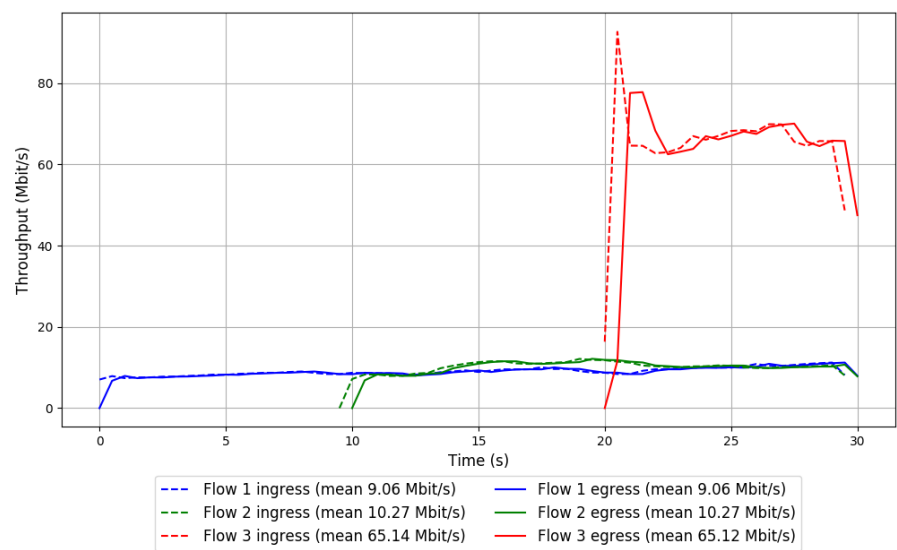


```
Run 1: Statistics of PCC-Allegro

Start at: 2018-12-02 14:41:14
End at: 2018-12-02 14:41:44
Local clock offset: 0.067 ms
Remote clock offset: -5.17 ms

# Below is generated by plot.py at 2018-12-02 16:44:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 37.31 Mbit/s
95th percentile per-packet one-way delay: 71.814 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 9.06 Mbit/s
95th percentile per-packet one-way delay: 19.028 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 10.27 Mbit/s
95th percentile per-packet one-way delay: 19.420 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 65.12 Mbit/s
95th percentile per-packet one-way delay: 129.340 ms
Loss rate: 0.34%
```

Run 1: Report of PCC-Allegro — Data Link

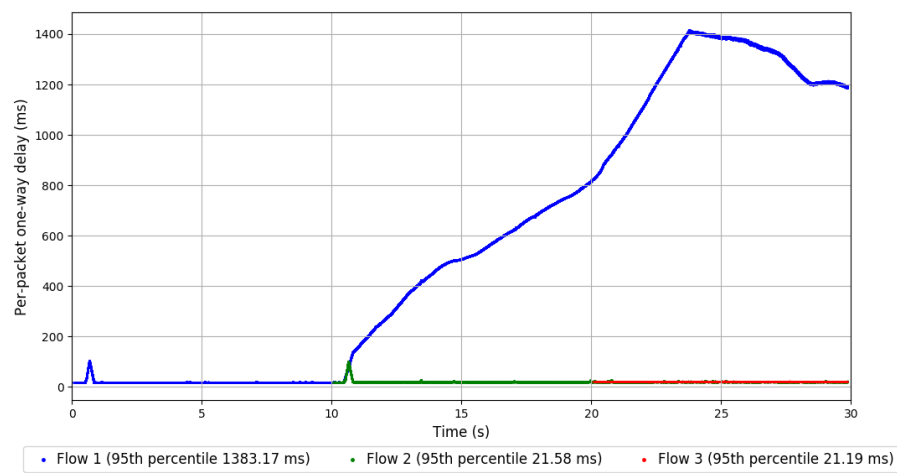
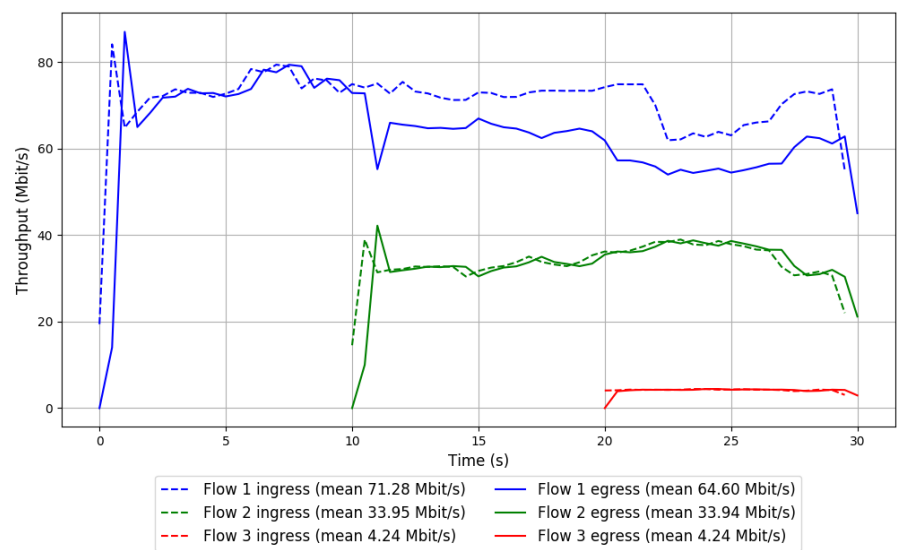


Run 2: Statistics of PCC-Allegro

Start at: 2018-12-02 15:05:09  
End at: 2018-12-02 15:05:39  
Local clock offset: 1.869 ms  
Remote clock offset: -2.567 ms

# Below is generated by plot.py at 2018-12-02 16:45:19  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 88.55 Mbit/s  
95th percentile per-packet one-way delay: 1371.882 ms  
Loss rate: 7.11%  
-- Flow 1:  
Average throughput: 64.60 Mbit/s  
95th percentile per-packet one-way delay: 1383.173 ms  
Loss rate: 9.45%  
-- Flow 2:  
Average throughput: 33.94 Mbit/s  
95th percentile per-packet one-way delay: 21.579 ms  
Loss rate: 0.15%  
-- Flow 3:  
Average throughput: 4.24 Mbit/s  
95th percentile per-packet one-way delay: 21.193 ms  
Loss rate: 0.35%

Run 2: Report of PCC-Allegro — Data Link

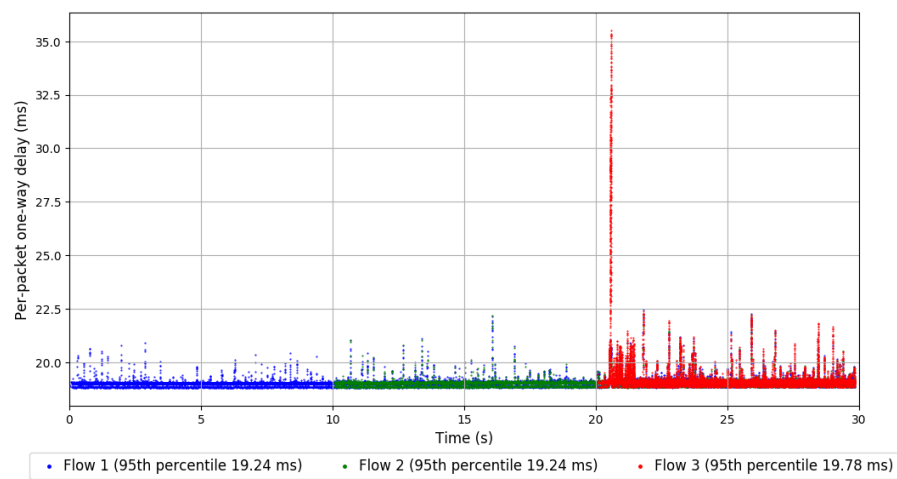
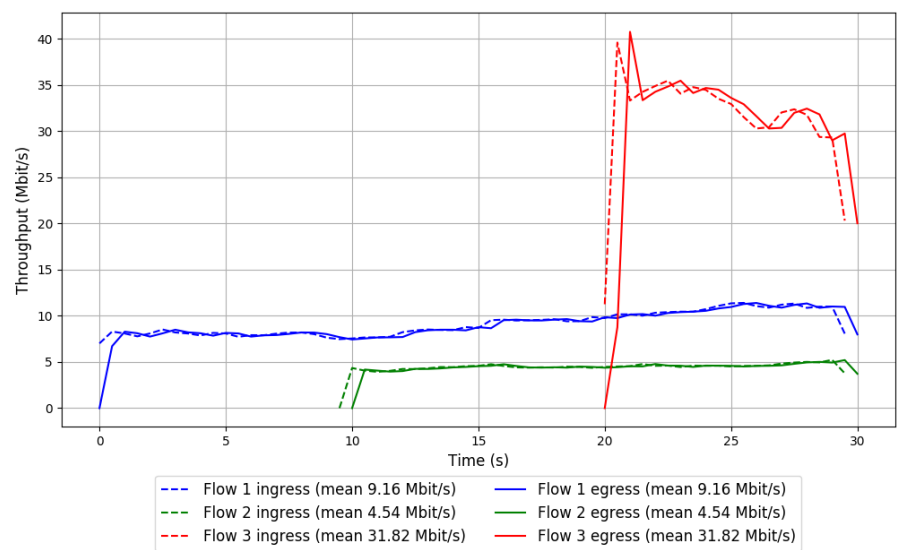


Run 3: Statistics of PCC-Allegro

Start at: 2018-12-02 15:29:06  
End at: 2018-12-02 15:29:36  
Local clock offset: 0.822 ms  
Remote clock offset: -3.266 ms

# Below is generated by plot.py at 2018-12-02 16:45:19  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 22.65 Mbit/s  
95th percentile per-packet one-way delay: 19.427 ms  
Loss rate: 0.16%  
-- Flow 1:  
Average throughput: 9.16 Mbit/s  
95th percentile per-packet one-way delay: 19.238 ms  
Loss rate: 0.09%  
-- Flow 2:  
Average throughput: 4.54 Mbit/s  
95th percentile per-packet one-way delay: 19.238 ms  
Loss rate: 0.15%  
-- Flow 3:  
Average throughput: 31.82 Mbit/s  
95th percentile per-packet one-way delay: 19.778 ms  
Loss rate: 0.22%

Run 3: Report of PCC-Allegro — Data Link





Run 4: Statistics of PCC-Allegro

Start at: 2018-12-02 15:52:13

End at: 2018-12-02 15:52:43

Local clock offset: 2.311 ms

Remote clock offset: -3.47 ms

# Below is generated by plot.py at 2018-12-02 16:45:25

# Datalink statistics

-- Total of 3 flows:

Average throughput: 83.00 Mbit/s

95th percentile per-packet one-way delay: 1268.238 ms

Loss rate: 7.73%

-- Flow 1:

Average throughput: 49.53 Mbit/s

95th percentile per-packet one-way delay: 1519.703 ms

Loss rate: 7.85%

-- Flow 2:

Average throughput: 35.44 Mbit/s

95th percentile per-packet one-way delay: 1098.409 ms

Loss rate: 9.32%

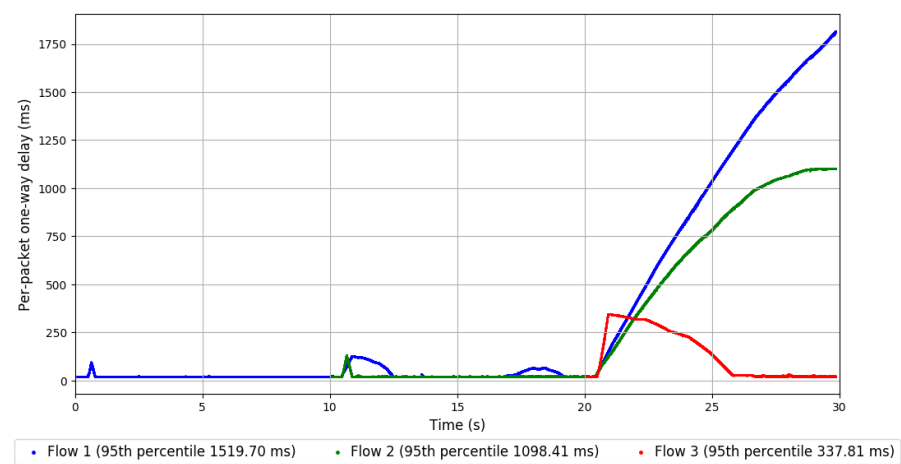
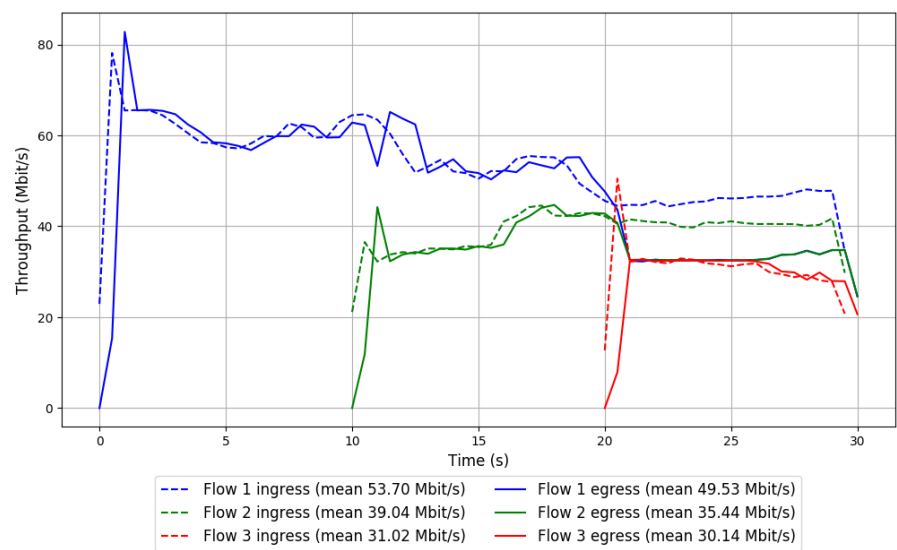
-- Flow 3:

Average throughput: 30.14 Mbit/s

95th percentile per-packet one-way delay: 337.812 ms

Loss rate: 3.07%

Run 4: Report of PCC-Allegro — Data Link

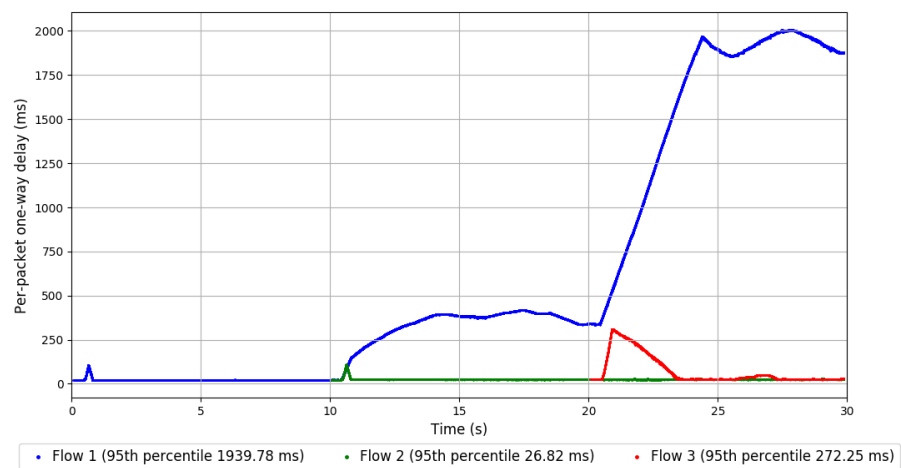
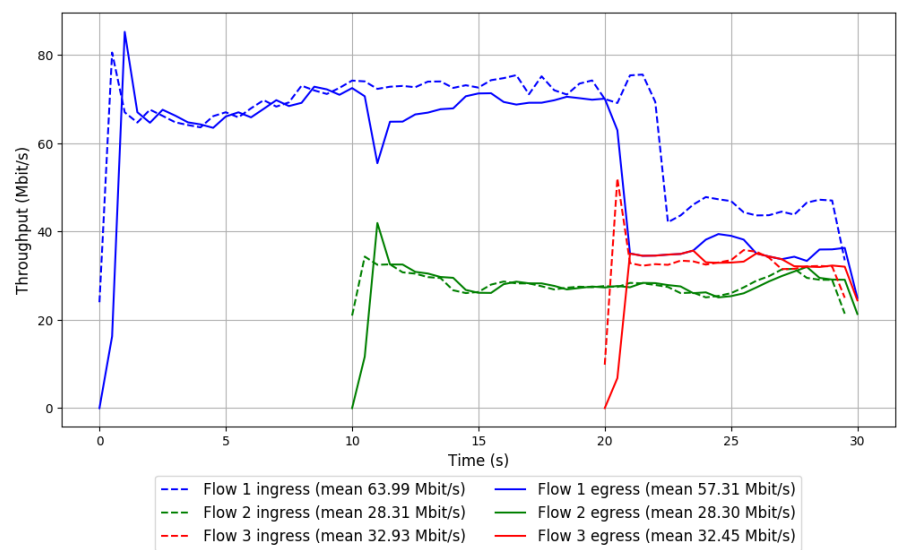


Run 5: Statistics of PCC-Allegro

Start at: 2018-12-02 16:15:04  
End at: 2018-12-02 16:15:34  
Local clock offset: 2.999 ms  
Remote clock offset: -3.646 ms

# Below is generated by plot.py at 2018-12-02 16:45:33  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 86.78 Mbit/s  
95th percentile per-packet one-way delay: 1901.622 ms  
Loss rate: 7.41%  
-- Flow 1:  
Average throughput: 57.31 Mbit/s  
95th percentile per-packet one-way delay: 1939.783 ms  
Loss rate: 10.51%  
-- Flow 2:  
Average throughput: 28.30 Mbit/s  
95th percentile per-packet one-way delay: 26.823 ms  
Loss rate: 0.14%  
-- Flow 3:  
Average throughput: 32.45 Mbit/s  
95th percentile per-packet one-way delay: 272.245 ms  
Loss rate: 1.71%

Run 5: Report of PCC-Allegro — Data Link

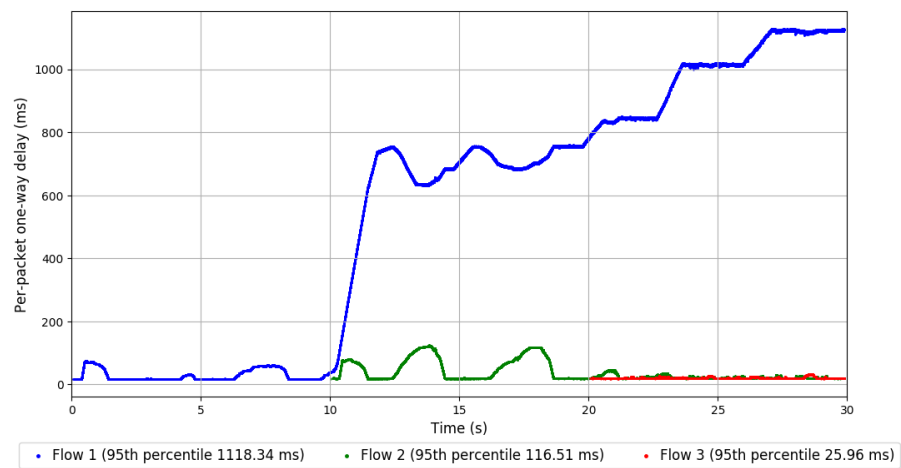
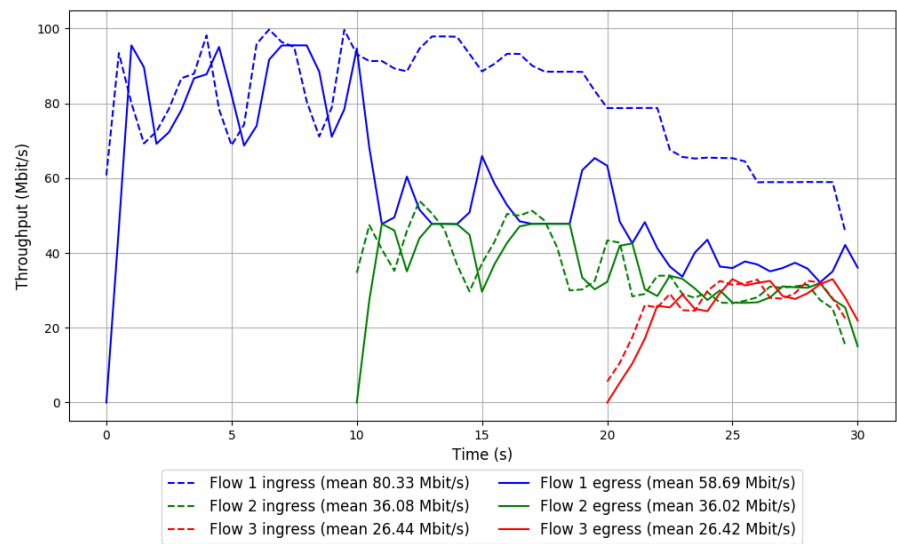


```
Run 1: Statistics of PCC-Expr

Start at: 2018-12-02 15:01:29
End at: 2018-12-02 15:01:59
Local clock offset: -0.061 ms
Remote clock offset: -3.007 ms

# Below is generated by plot.py at 2018-12-02 16:46:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.35 Mbit/s
95th percentile per-packet one-way delay: 1018.100 ms
Loss rate: 19.29%
-- Flow 1:
Average throughput: 58.69 Mbit/s
95th percentile per-packet one-way delay: 1118.340 ms
Loss rate: 27.03%
-- Flow 2:
Average throughput: 36.02 Mbit/s
95th percentile per-packet one-way delay: 116.507 ms
Loss rate: 0.31%
-- Flow 3:
Average throughput: 26.42 Mbit/s
95th percentile per-packet one-way delay: 25.962 ms
Loss rate: 0.31%
```

Run 1: Report of PCC-Expr — Data Link

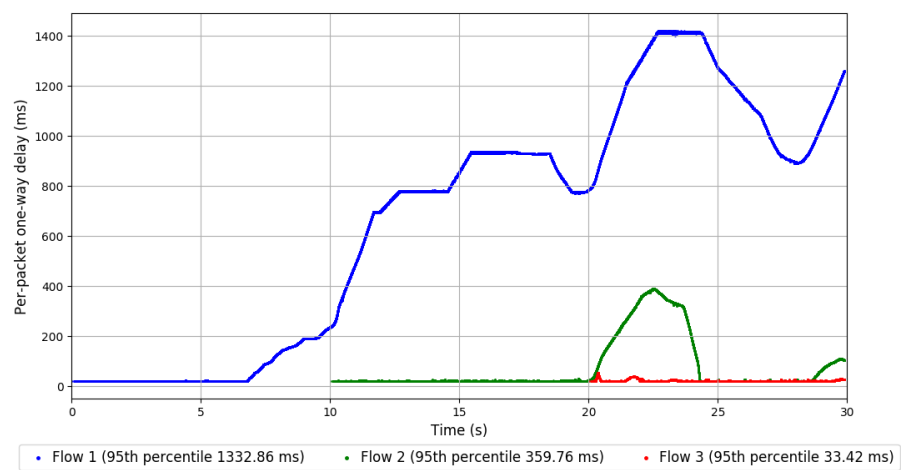
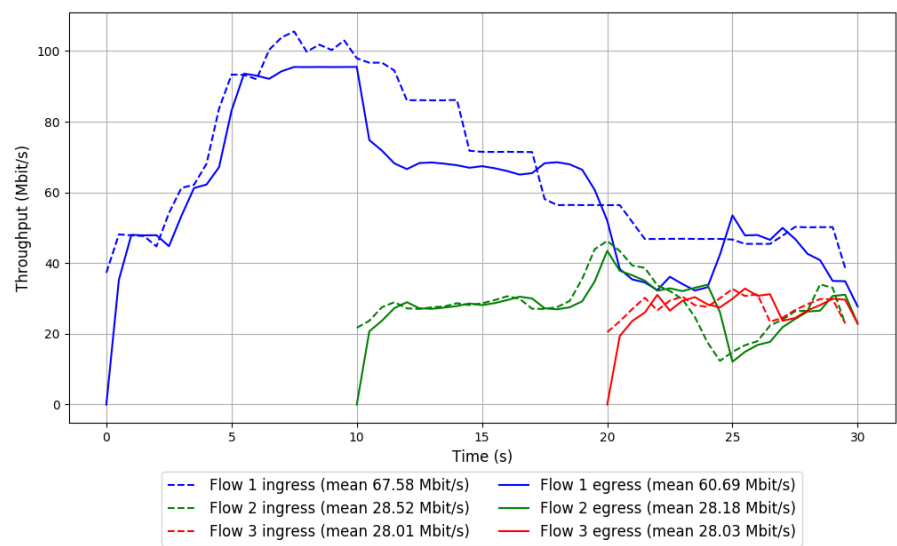


Run 2: Statistics of PCC-Expr

Start at: 2018-12-02 15:25:08  
End at: 2018-12-02 15:25:38  
Local clock offset: 3.115 ms  
Remote clock offset: -3.696 ms

# Below is generated by plot.py at 2018-12-02 16:46:44  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 88.67 Mbit/s  
95th percentile per-packet one-way delay: 1249.348 ms  
Loss rate: 7.53%  
-- Flow 1:  
Average throughput: 60.69 Mbit/s  
95th percentile per-packet one-way delay: 1332.864 ms  
Loss rate: 10.27%  
-- Flow 2:  
Average throughput: 28.18 Mbit/s  
95th percentile per-packet one-way delay: 359.765 ms  
Loss rate: 1.29%  
-- Flow 3:  
Average throughput: 28.03 Mbit/s  
95th percentile per-packet one-way delay: 33.416 ms  
Loss rate: 0.29%

Run 2: Report of PCC-Expr — Data Link



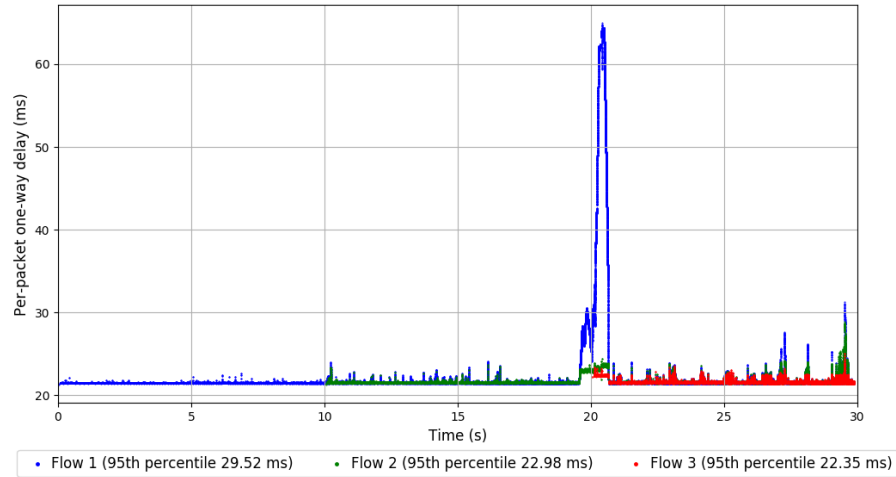
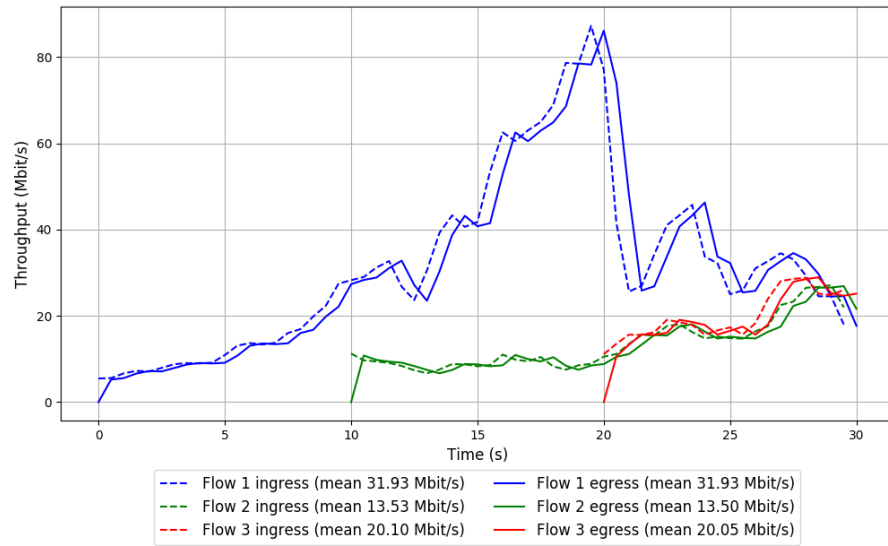


Run 3: Statistics of PCC-Expr

Start at: 2018-12-02 15:48:35  
End at: 2018-12-02 15:49:05  
Local clock offset: 1.734 ms  
Remote clock offset: -4.073 ms

# Below is generated by plot.py at 2018-12-02 16:46:44  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 47.52 Mbit/s  
95th percentile per-packet one-way delay: 26.794 ms  
Loss rate: 0.19%  
-- Flow 1:  
Average throughput: 31.93 Mbit/s  
95th percentile per-packet one-way delay: 29.524 ms  
Loss rate: 0.07%  
-- Flow 2:  
Average throughput: 13.50 Mbit/s  
95th percentile per-packet one-way delay: 22.978 ms  
Loss rate: 0.33%  
-- Flow 3:  
Average throughput: 20.05 Mbit/s  
95th percentile per-packet one-way delay: 22.351 ms  
Loss rate: 0.53%

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

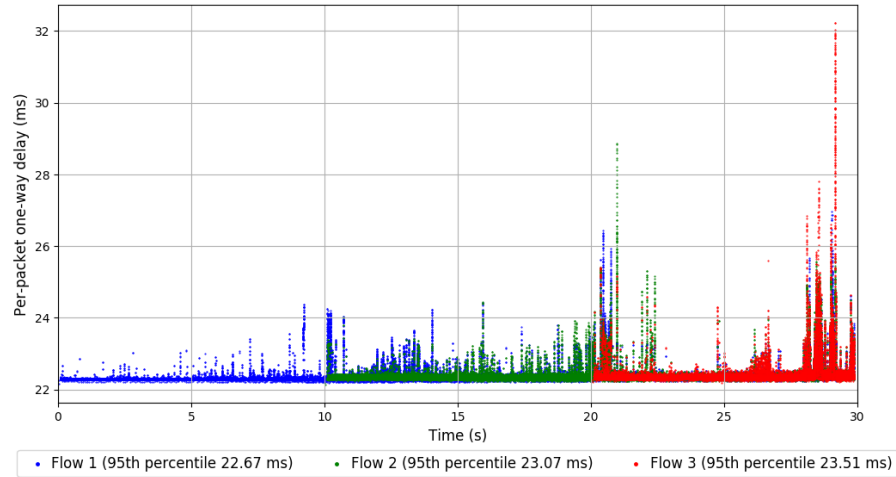
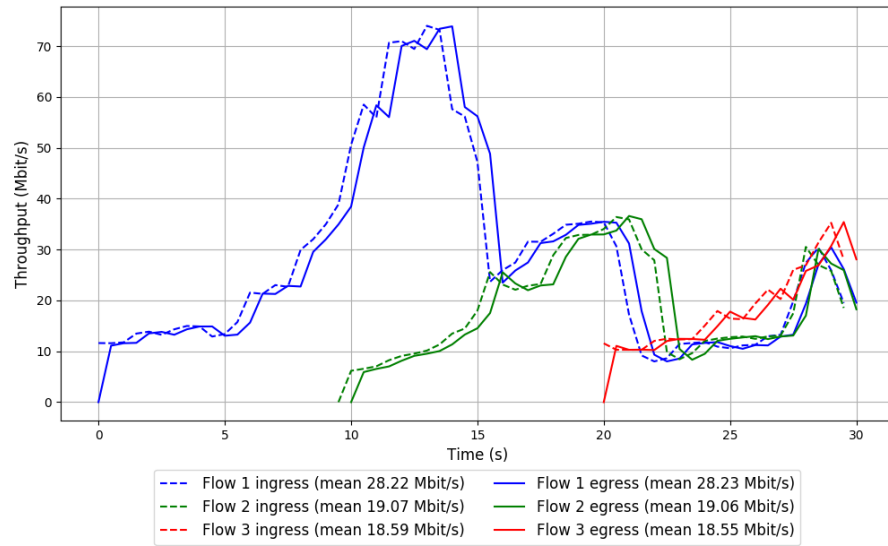


Run 4: Statistics of PCC-Expr

Start at: 2018-12-02 16:11:32  
End at: 2018-12-02 16:12:02  
Local clock offset: 2.959 ms  
Remote clock offset: -3.791 ms

# Below is generated by plot.py at 2018-12-02 16:46:44  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 47.02 Mbit/s  
95th percentile per-packet one-way delay: 22.930 ms  
Loss rate: 0.14%  
-- Flow 1:  
Average throughput: 28.23 Mbit/s  
95th percentile per-packet one-way delay: 22.673 ms  
Loss rate: 0.06%  
-- Flow 2:  
Average throughput: 19.06 Mbit/s  
95th percentile per-packet one-way delay: 23.075 ms  
Loss rate: 0.17%  
-- Flow 3:  
Average throughput: 18.55 Mbit/s  
95th percentile per-packet one-way delay: 23.507 ms  
Loss rate: 0.46%

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

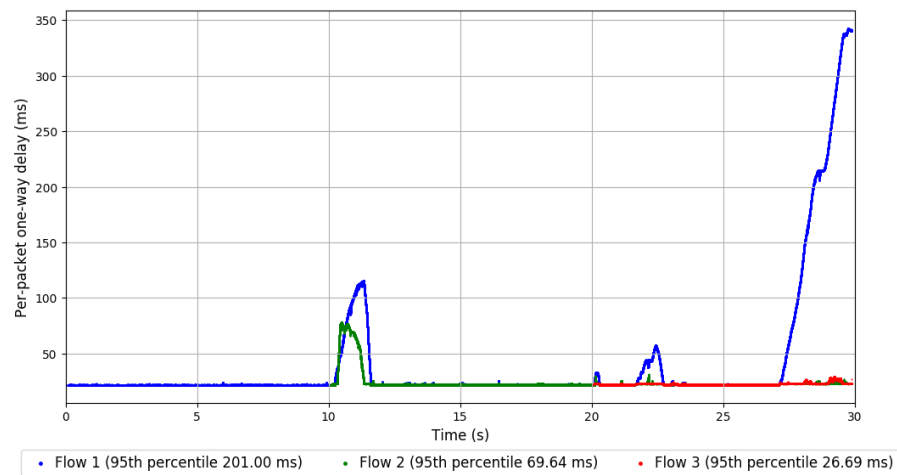
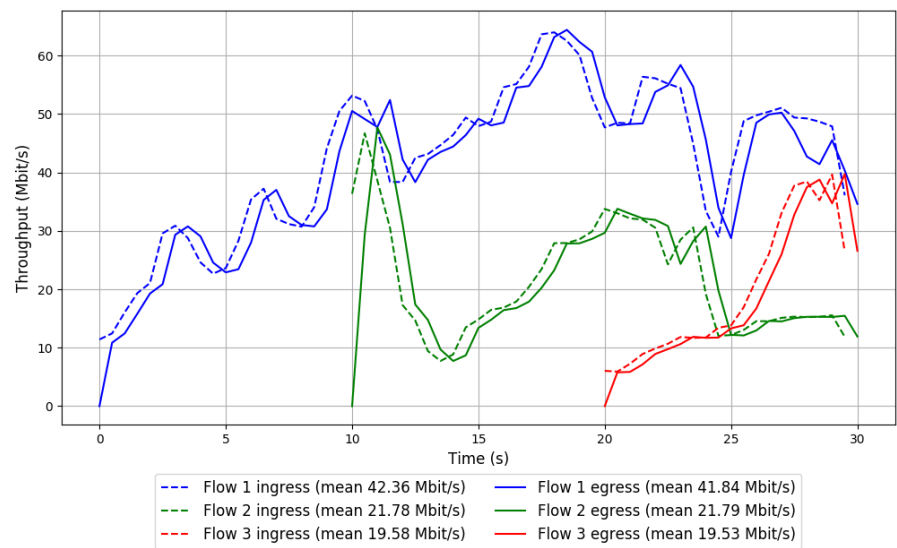


Run 5: Statistics of PCC-Expr

Start at: 2018-12-02 16:34:30  
End at: 2018-12-02 16:35:00  
Local clock offset: 3.37 ms  
Remote clock offset: -3.529 ms

# Below is generated by plot.py at 2018-12-02 16:46:44  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 62.77 Mbit/s  
95th percentile per-packet one-way delay: 111.872 ms  
Loss rate: 0.94%  
-- Flow 1:  
Average throughput: 41.84 Mbit/s  
95th percentile per-packet one-way delay: 201.005 ms  
Loss rate: 1.30%  
-- Flow 2:  
Average throughput: 21.79 Mbit/s  
95th percentile per-packet one-way delay: 69.636 ms  
Loss rate: 0.09%  
-- Flow 3:  
Average throughput: 19.53 Mbit/s  
95th percentile per-packet one-way delay: 26.691 ms  
Loss rate: 0.47%

Run 5: Report of PCC-Expr — Data Link

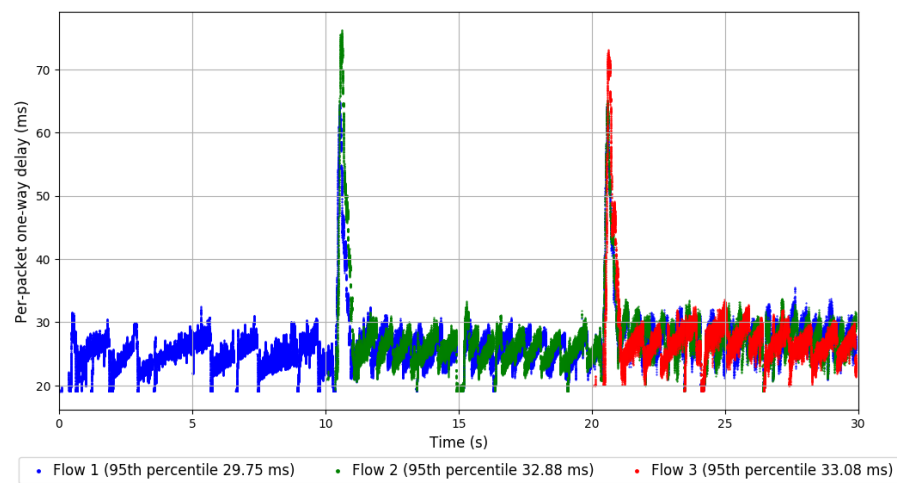
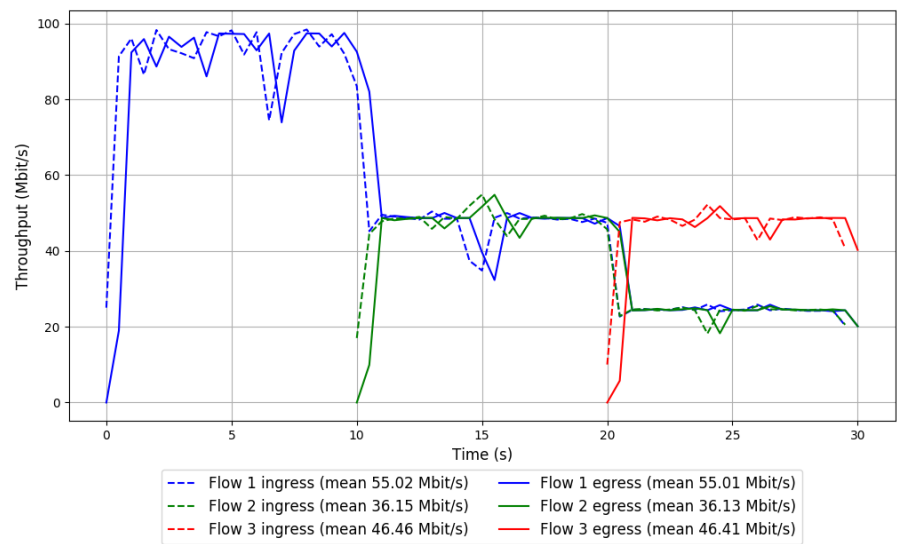


Run 1: Statistics of QUIC Cubic

Start at: 2018-12-02 15:00:05  
End at: 2018-12-02 15:00:35  
Local clock offset: 1.378 ms  
Remote clock offset: -4.176 ms

# Below is generated by plot.py at 2018-12-02 16:46:44  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 94.35 Mbit/s  
95th percentile per-packet one-way delay: 30.802 ms  
Loss rate: 0.16%  
-- Flow 1:  
Average throughput: 55.01 Mbit/s  
95th percentile per-packet one-way delay: 29.752 ms  
Loss rate: 0.09%  
-- Flow 2:  
Average throughput: 36.13 Mbit/s  
95th percentile per-packet one-way delay: 32.885 ms  
Loss rate: 0.19%  
-- Flow 3:  
Average throughput: 46.41 Mbit/s  
95th percentile per-packet one-way delay: 33.084 ms  
Loss rate: 0.36%

Run 1: Report of QUIC Cubic — Data Link



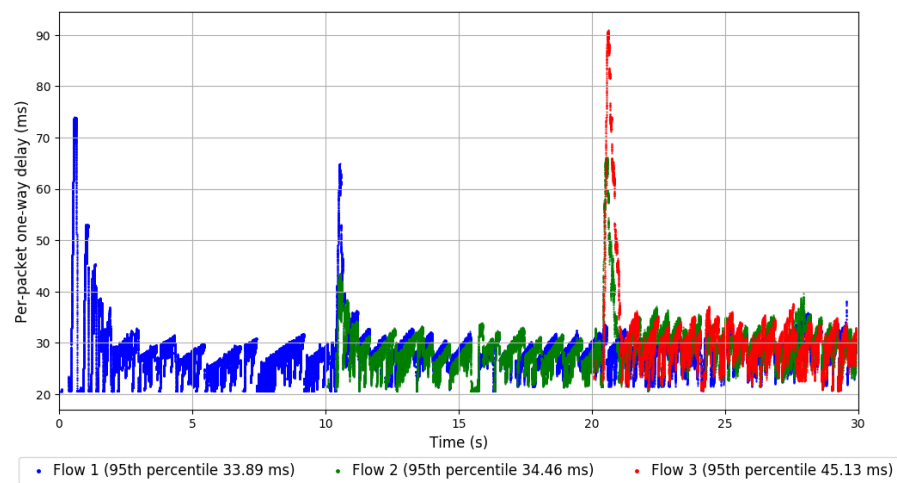
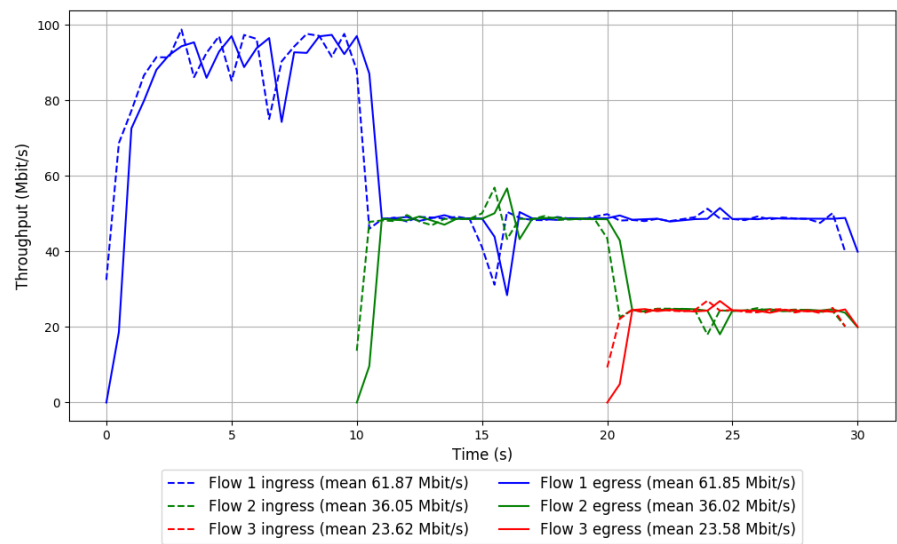


Run 2: Statistics of QUIC Cubic

Start at: 2018-12-02 15:23:53  
End at: 2018-12-02 15:24:23  
Local clock offset: 2.268 ms  
Remote clock offset: -3.833 ms

# Below is generated by plot.py at 2018-12-02 16:46:44  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 93.60 Mbit/s  
95th percentile per-packet one-way delay: 34.546 ms  
Loss rate: 0.16%  
-- Flow 1:  
Average throughput: 61.85 Mbit/s  
95th percentile per-packet one-way delay: 33.888 ms  
Loss rate: 0.11%  
-- Flow 2:  
Average throughput: 36.02 Mbit/s  
95th percentile per-packet one-way delay: 34.462 ms  
Loss rate: 0.18%  
-- Flow 3:  
Average throughput: 23.58 Mbit/s  
95th percentile per-packet one-way delay: 45.129 ms  
Loss rate: 0.53%

Run 2: Report of QUIC Cubic — Data Link

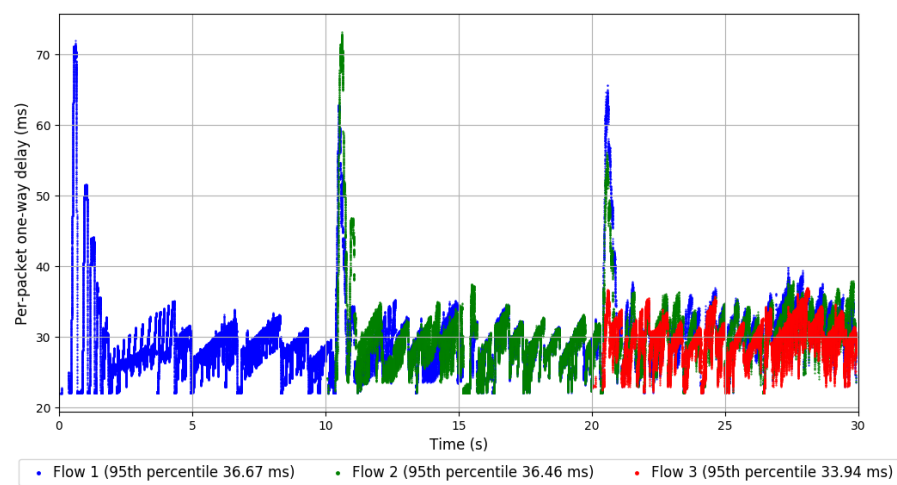
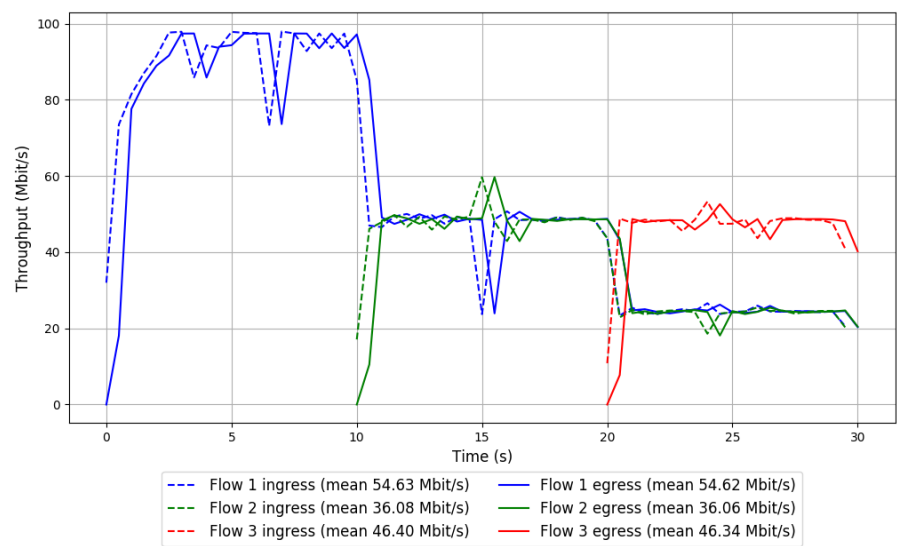


Run 3: Statistics of QUIC Cubic

Start at: 2018-12-02 15:47:22  
End at: 2018-12-02 15:47:52  
Local clock offset: 2.614 ms  
Remote clock offset: -3.744 ms

# Below is generated by plot.py at 2018-12-02 16:46:51  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 93.90 Mbit/s  
95th percentile per-packet one-way delay: 35.534 ms  
Loss rate: 0.15%  
-- Flow 1:  
Average throughput: 54.62 Mbit/s  
95th percentile per-packet one-way delay: 36.668 ms  
Loss rate: 0.09%  
-- Flow 2:  
Average throughput: 36.06 Mbit/s  
95th percentile per-packet one-way delay: 36.456 ms  
Loss rate: 0.16%  
-- Flow 3:  
Average throughput: 46.34 Mbit/s  
95th percentile per-packet one-way delay: 33.940 ms  
Loss rate: 0.37%

Run 3: Report of QUIC Cubic — Data Link

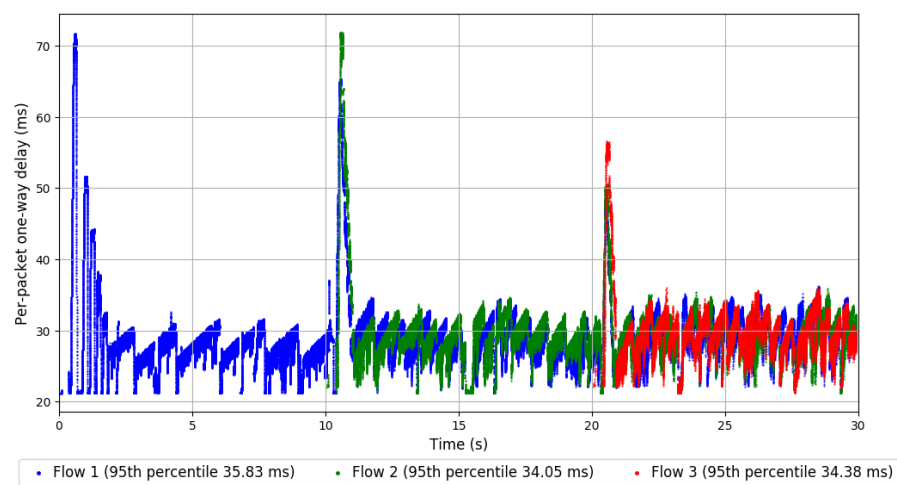
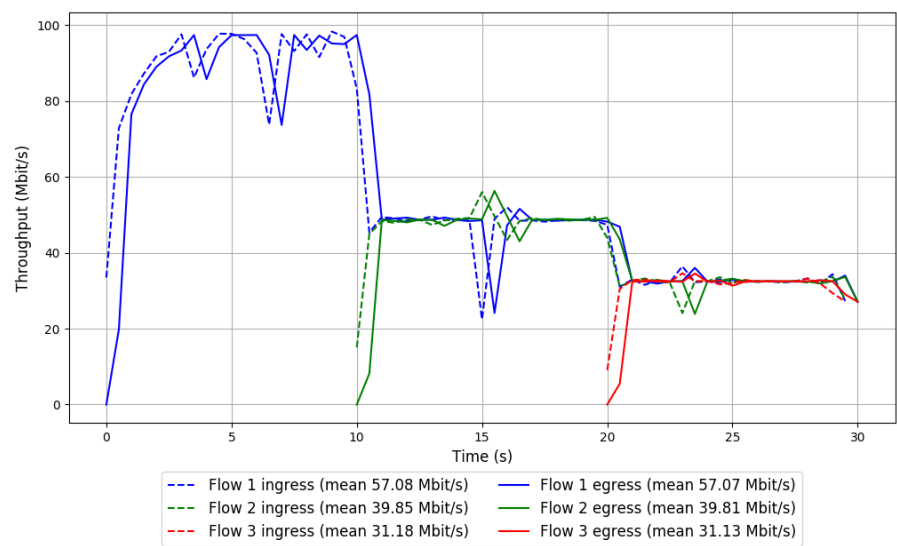


Run 4: Statistics of QUIC Cubic

Start at: 2018-12-02 16:10:21  
End at: 2018-12-02 16:10:51  
Local clock offset: 2.816 ms  
Remote clock offset: -2.946 ms

# Below is generated by plot.py at 2018-12-02 16:46:51  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 93.83 Mbit/s  
95th percentile per-packet one-way delay: 34.632 ms  
Loss rate: 0.17%  
-- Flow 1:  
Average throughput: 57.07 Mbit/s  
95th percentile per-packet one-way delay: 35.834 ms  
Loss rate: 0.10%  
-- Flow 2:  
Average throughput: 39.81 Mbit/s  
95th percentile per-packet one-way delay: 34.049 ms  
Loss rate: 0.21%  
-- Flow 3:  
Average throughput: 31.13 Mbit/s  
95th percentile per-packet one-way delay: 34.375 ms  
Loss rate: 0.41%

Run 4: Report of QUIC Cubic — Data Link

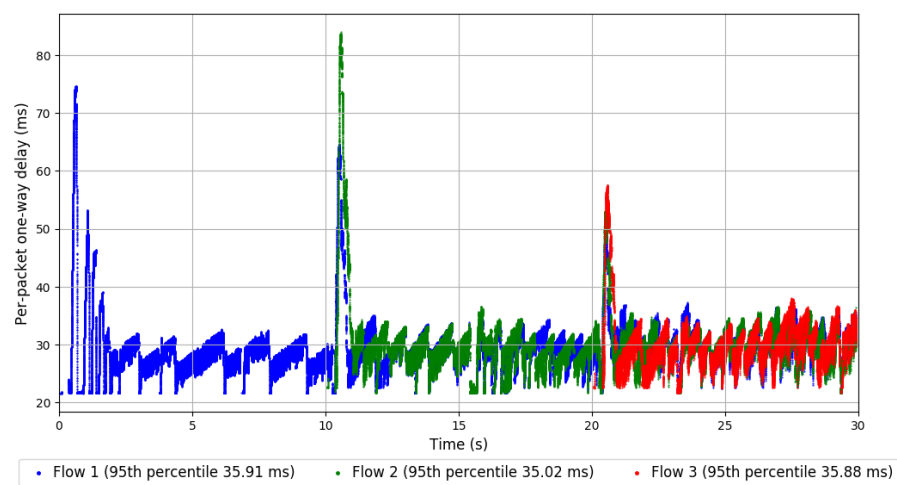
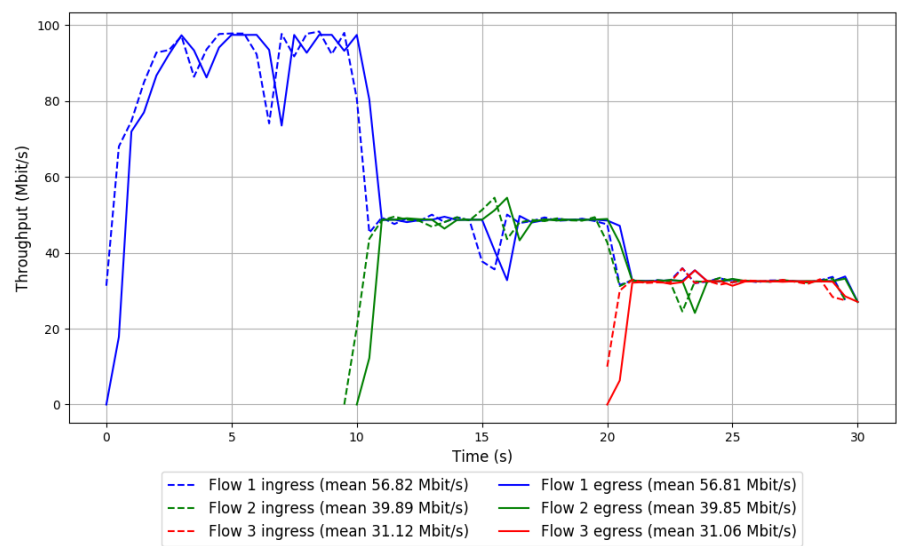


Run 5: Statistics of QUIC Cubic

Start at: 2018-12-02 16:33:18  
End at: 2018-12-02 16:33:48  
Local clock offset: 4.104 ms  
Remote clock offset: -2.543 ms

# Below is generated by plot.py at 2018-12-02 16:46:58  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 93.59 Mbit/s  
95th percentile per-packet one-way delay: 35.605 ms  
Loss rate: 0.18%  
-- Flow 1:  
Average throughput: 56.81 Mbit/s  
95th percentile per-packet one-way delay: 35.912 ms  
Loss rate: 0.10%  
-- Flow 2:  
Average throughput: 39.85 Mbit/s  
95th percentile per-packet one-way delay: 35.016 ms  
Loss rate: 0.22%  
-- Flow 3:  
Average throughput: 31.06 Mbit/s  
95th percentile per-packet one-way delay: 35.877 ms  
Loss rate: 0.47%

Run 5: Report of QUIC Cubic — Data Link



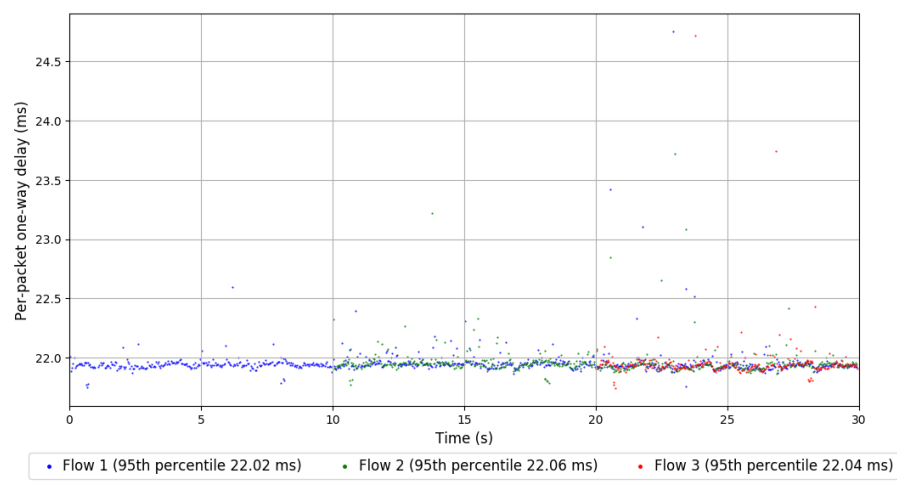
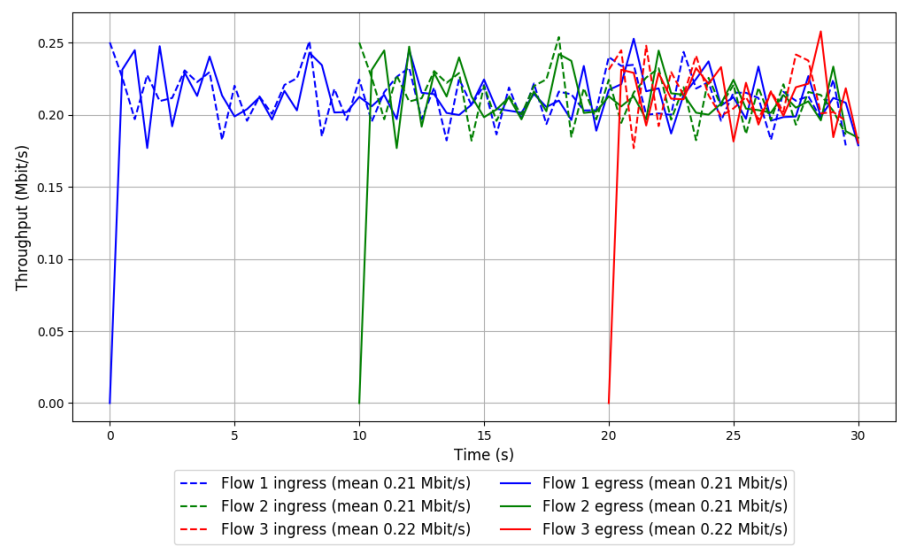


```
Run 1: Statistics of SCReAM

Start at: 2018-12-02 14:43:44
End at: 2018-12-02 14:44:14
Local clock offset: 4.397 ms
Remote clock offset: -4.26 ms

# Below is generated by plot.py at 2018-12-02 16:46:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 22.039 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 22.024 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 22.062 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 22.038 ms
Loss rate: 0.35%
```

Run 1: Report of SReAM — Data Link

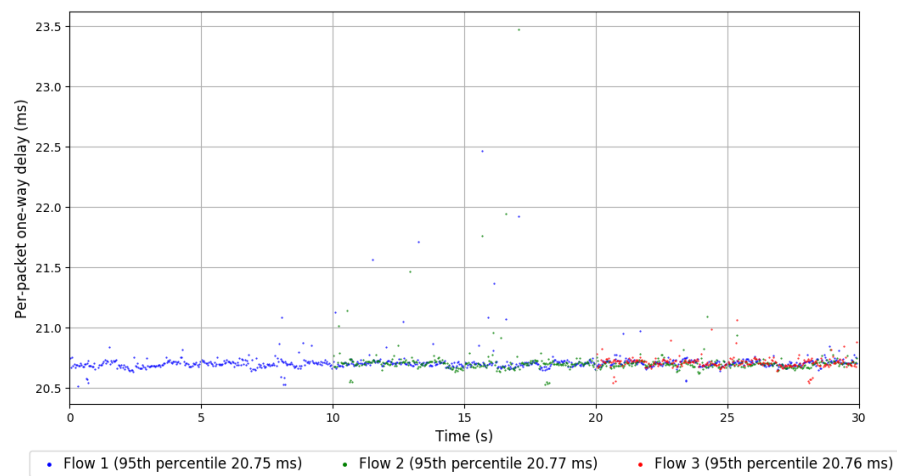
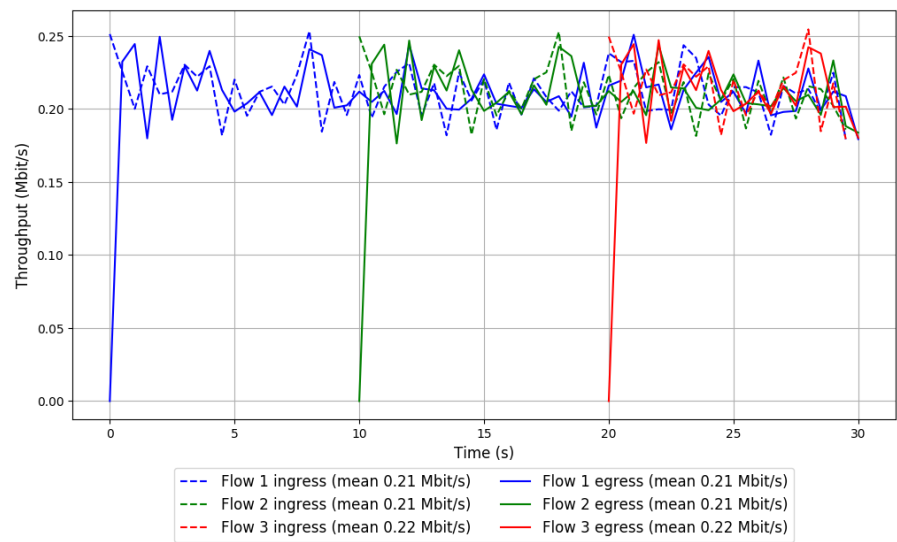


Run 2: Statistics of SReAM

Start at: 2018-12-02 15:07:42  
End at: 2018-12-02 15:08:12  
Local clock offset: 3.762 ms  
Remote clock offset: -3.186 ms

# Below is generated by plot.py at 2018-12-02 16:46:58  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.43 Mbit/s  
95th percentile per-packet one-way delay: 20.760 ms  
Loss rate: 0.19%  
-- Flow 1:  
Average throughput: 0.21 Mbit/s  
95th percentile per-packet one-way delay: 20.755 ms  
Loss rate: 0.13%  
-- Flow 2:  
Average throughput: 0.21 Mbit/s  
95th percentile per-packet one-way delay: 20.767 ms  
Loss rate: 0.19%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 20.756 ms  
Loss rate: 0.35%

Run 2: Report of SReAM — Data Link

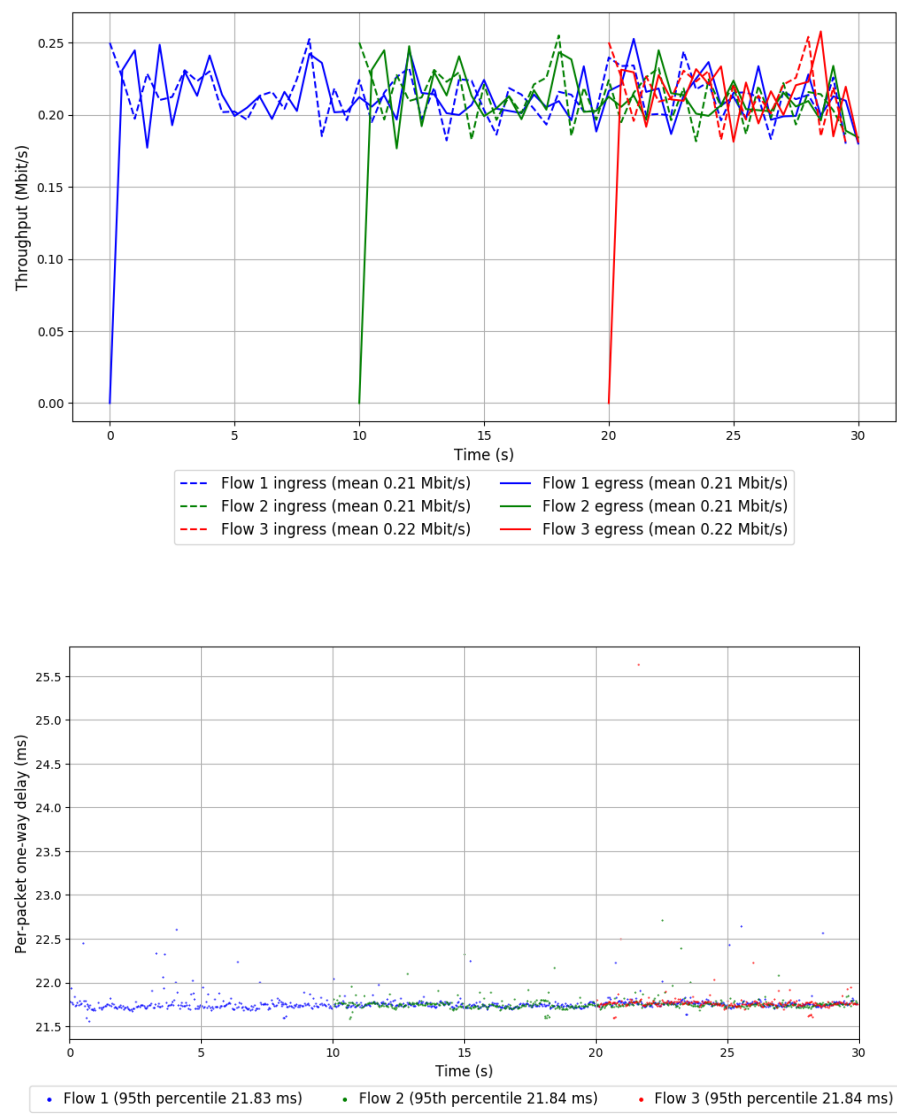


Run 3: Statistics of SReAM

Start at: 2018-12-02 15:31:30  
End at: 2018-12-02 15:32:00  
Local clock offset: 2.687 ms  
Remote clock offset: -3.998 ms

# Below is generated by plot.py at 2018-12-02 16:46:58  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.43 Mbit/s  
95th percentile per-packet one-way delay: 21.830 ms  
Loss rate: 0.19%  
-- Flow 1:  
Average throughput: 0.21 Mbit/s  
95th percentile per-packet one-way delay: 21.827 ms  
Loss rate: 0.13%  
-- Flow 2:  
Average throughput: 0.21 Mbit/s  
95th percentile per-packet one-way delay: 21.845 ms  
Loss rate: 0.19%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 21.835 ms  
Loss rate: 0.35%

Run 3: Report of SReAM — Data Link

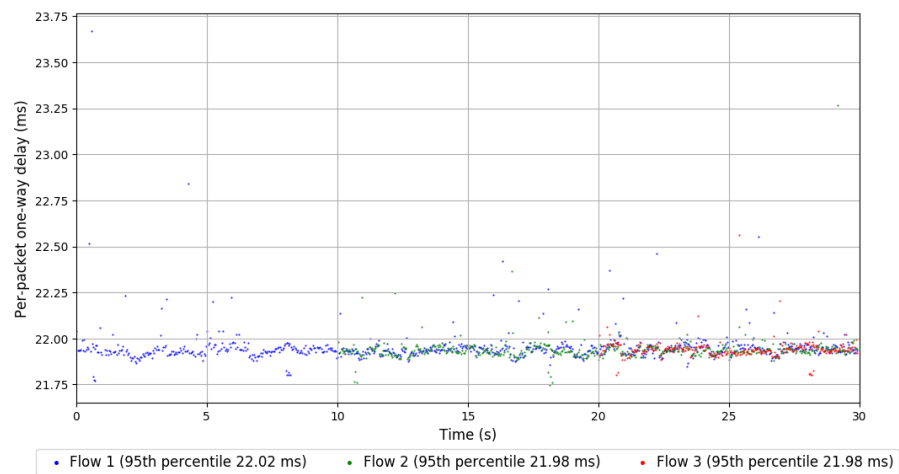
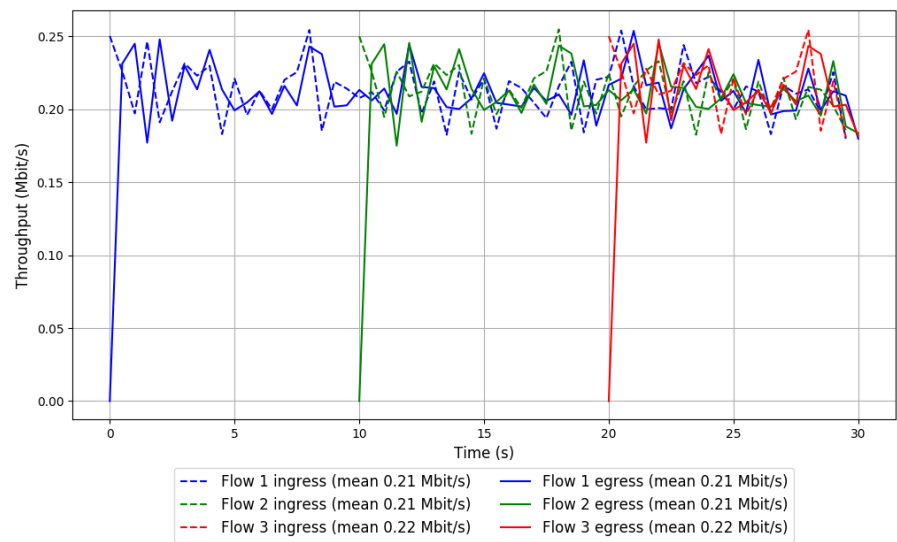


Run 4: Statistics of SReAM

Start at: 2018-12-02 15:54:38  
End at: 2018-12-02 15:55:08  
Local clock offset: 2.748 ms  
Remote clock offset: -3.729 ms

# Below is generated by plot.py at 2018-12-02 16:46:58  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.43 Mbit/s  
95th percentile per-packet one-way delay: 22.001 ms  
Loss rate: 0.19%  
-- Flow 1:  
Average throughput: 0.21 Mbit/s  
95th percentile per-packet one-way delay: 22.020 ms  
Loss rate: 0.13%  
-- Flow 2:  
Average throughput: 0.21 Mbit/s  
95th percentile per-packet one-way delay: 21.980 ms  
Loss rate: 0.19%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 21.981 ms  
Loss rate: 0.36%

Run 4: Report of SReAM — Data Link



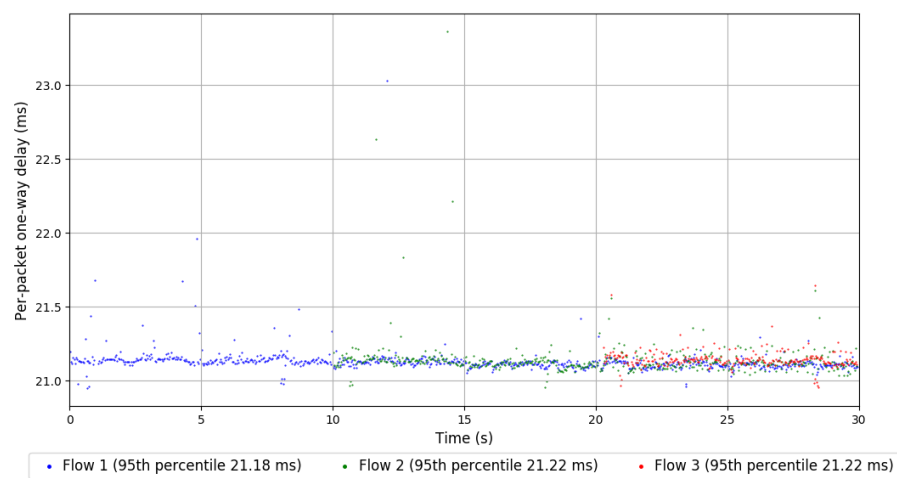
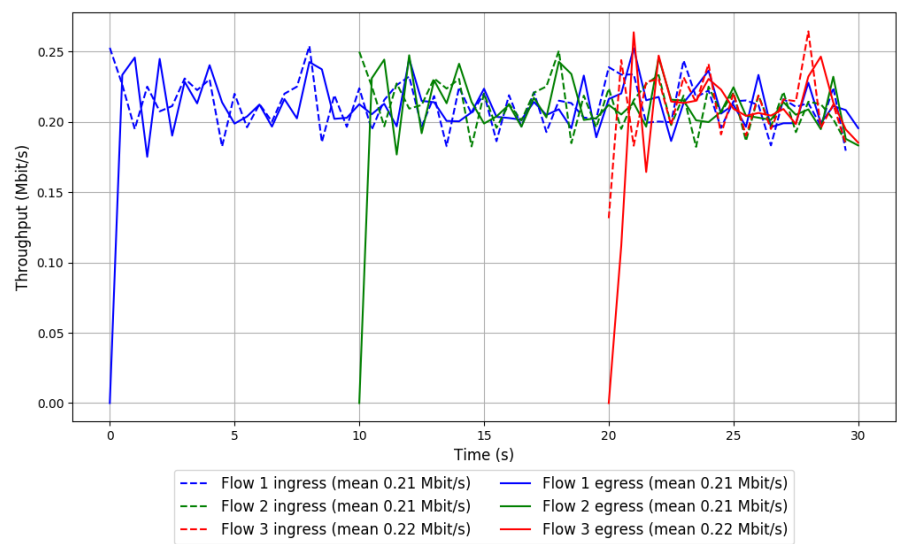


Run 5: Statistics of SReAM

Start at: 2018-12-02 16:17:33  
End at: 2018-12-02 16:18:03  
Local clock offset: 2.331 ms  
Remote clock offset: -3.171 ms

# Below is generated by plot.py at 2018-12-02 16:46:58  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.42 Mbit/s  
95th percentile per-packet one-way delay: 21.210 ms  
Loss rate: 0.13%  
-- Flow 1:  
Average throughput: 0.21 Mbit/s  
95th percentile per-packet one-way delay: 21.177 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.21 Mbit/s  
95th percentile per-packet one-way delay: 21.218 ms  
Loss rate: 0.19%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 21.223 ms  
Loss rate: 0.40%

Run 5: Report of SReAM — Data Link

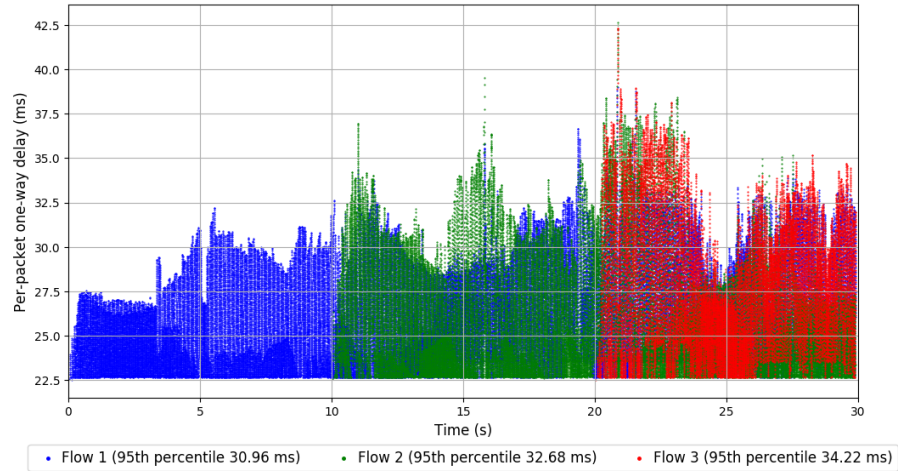
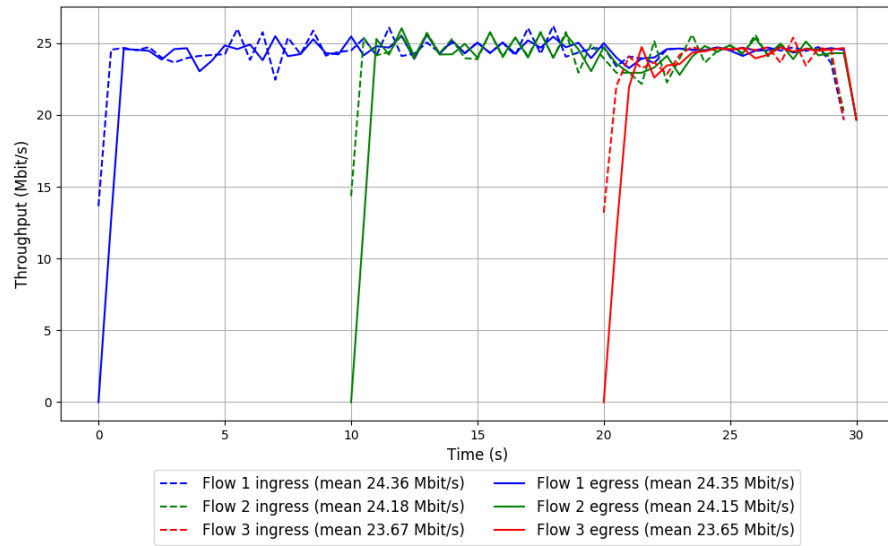


Run 1: Statistics of Sprout

Start at: 2018-12-02 14:40:03  
End at: 2018-12-02 14:40:33  
Local clock offset: 4.293 ms  
Remote clock offset: -5.062 ms

# Below is generated by plot.py at 2018-12-02 16:47:03  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 48.20 Mbit/s  
95th percentile per-packet one-way delay: 32.148 ms  
Loss rate: 0.14%  
-- Flow 1:  
Average throughput: 24.35 Mbit/s  
95th percentile per-packet one-way delay: 30.963 ms  
Loss rate: 0.07%  
-- Flow 2:  
Average throughput: 24.15 Mbit/s  
95th percentile per-packet one-way delay: 32.678 ms  
Loss rate: 0.20%  
-- Flow 3:  
Average throughput: 23.65 Mbit/s  
95th percentile per-packet one-way delay: 34.217 ms  
Loss rate: 0.20%

# Run 1: Report of Sprout — Data Link

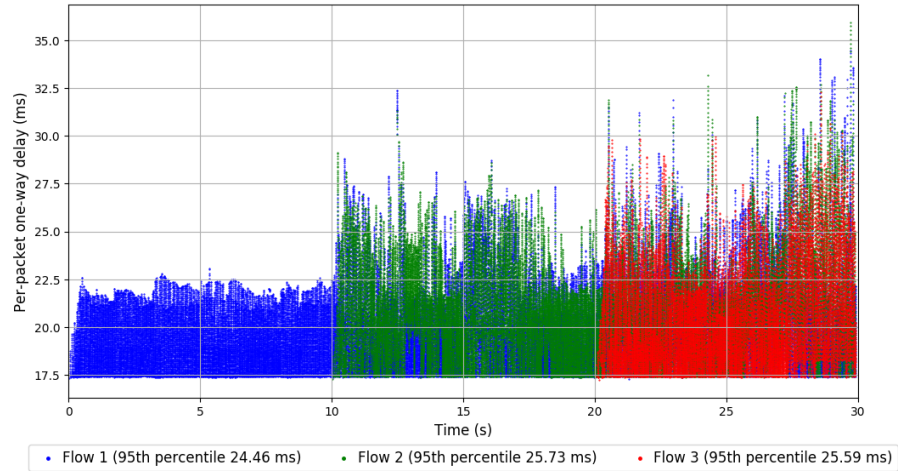
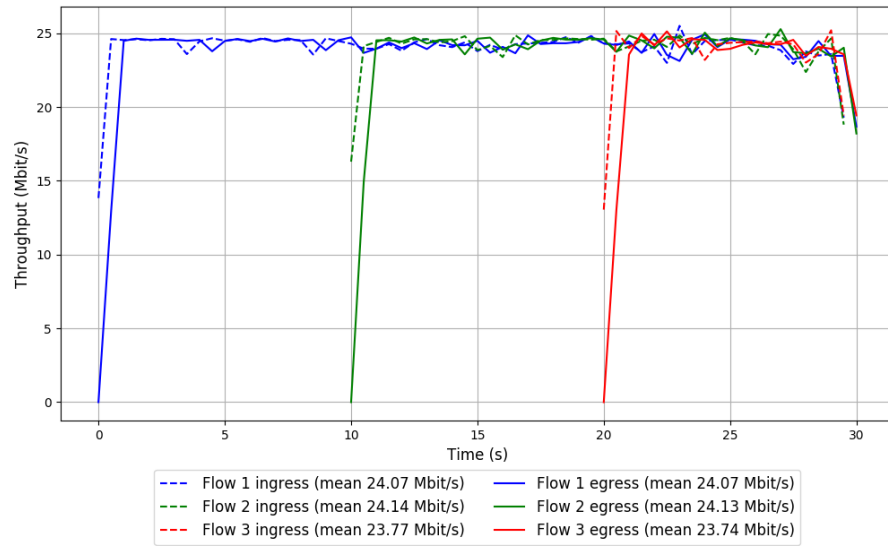


Run 2: Statistics of Sprout

Start at: 2018-12-02 15:03:59  
End at: 2018-12-02 15:04:29  
Local clock offset: -0.467 ms  
Remote clock offset: -4.156 ms

# Below is generated by plot.py at 2018-12-02 16:47:11  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 47.93 Mbit/s  
95th percentile per-packet one-way delay: 25.224 ms  
Loss rate: 0.17%  
-- Flow 1:  
Average throughput: 24.07 Mbit/s  
95th percentile per-packet one-way delay: 24.458 ms  
Loss rate: 0.06%  
-- Flow 2:  
Average throughput: 24.13 Mbit/s  
95th percentile per-packet one-way delay: 25.733 ms  
Loss rate: 0.20%  
-- Flow 3:  
Average throughput: 23.74 Mbit/s  
95th percentile per-packet one-way delay: 25.587 ms  
Loss rate: 0.42%

## Run 2: Report of Sprout — Data Link

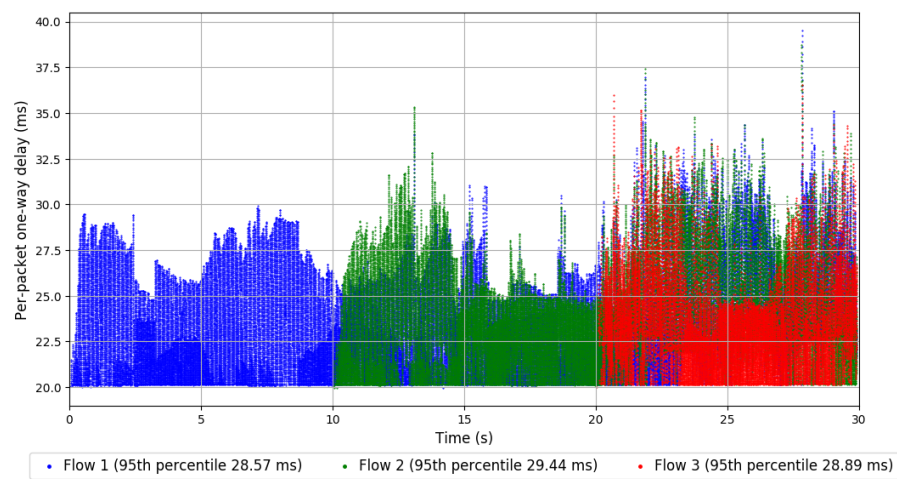
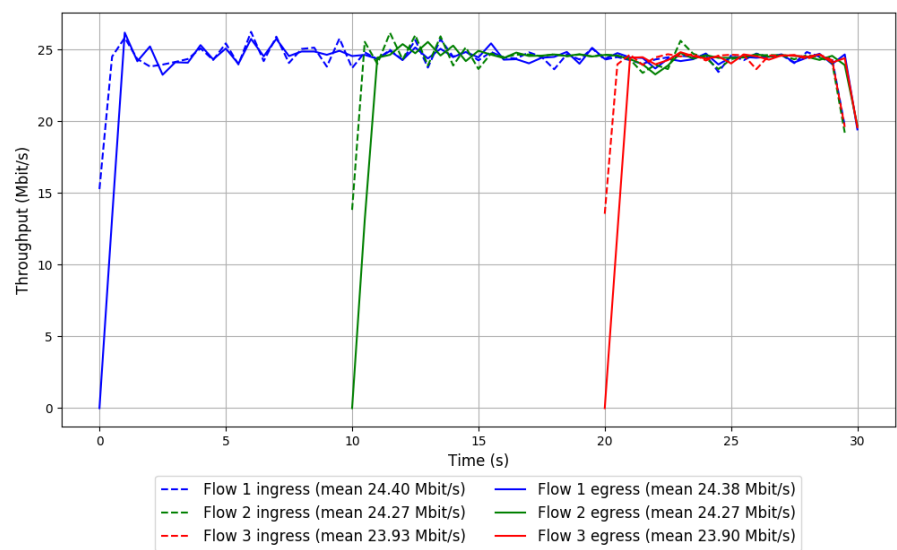


### Run 3: Statistics of Sprout

Start at: 2018-12-02 15:27:56  
End at: 2018-12-02 15:28:26  
Local clock offset: 1.662 ms  
Remote clock offset: -3.599 ms

```
# Below is generated by plot.py at 2018-12-02 16:47:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 48.41 Mbit/s
95th percentile per-packet one-way delay: 28.955 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 24.38 Mbit/s
95th percentile per-packet one-way delay: 28.566 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 24.27 Mbit/s
95th percentile per-packet one-way delay: 29.436 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 23.90 Mbit/s
95th percentile per-packet one-way delay: 28.893 ms
Loss rate: 0.26%
```

Run 3: Report of Sprout — Data Link



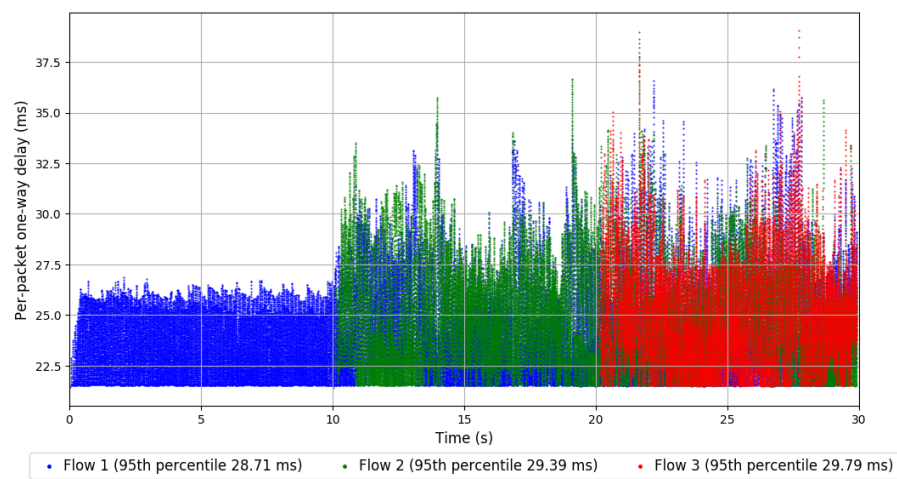
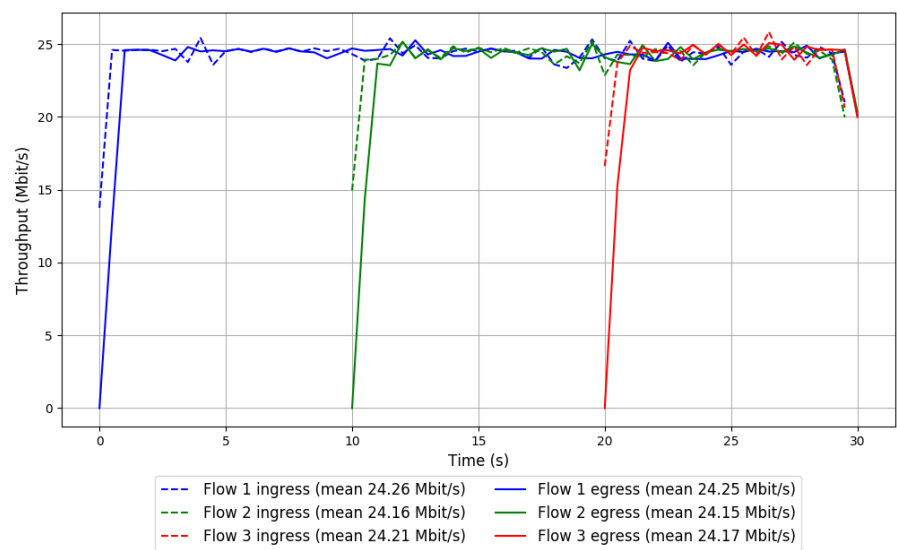


#### Run 4: Statistics of Sprout

Start at: 2018-12-02 15:51:03  
End at: 2018-12-02 15:51:33  
Local clock offset: 2.21 ms  
Remote clock offset: -3.753 ms

```
# Below is generated by plot.py at 2018-12-02 16:47:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 48.28 Mbit/s
95th percentile per-packet one-way delay: 29.209 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 24.25 Mbit/s
95th percentile per-packet one-way delay: 28.707 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 24.15 Mbit/s
95th percentile per-packet one-way delay: 29.391 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 24.17 Mbit/s
95th percentile per-packet one-way delay: 29.790 ms
Loss rate: 0.35%
```

Run 4: Report of Sprout — Data Link

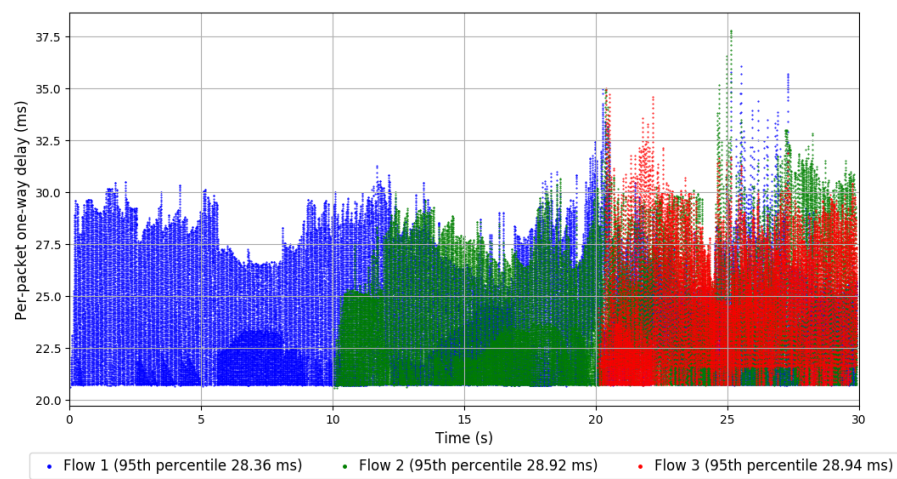
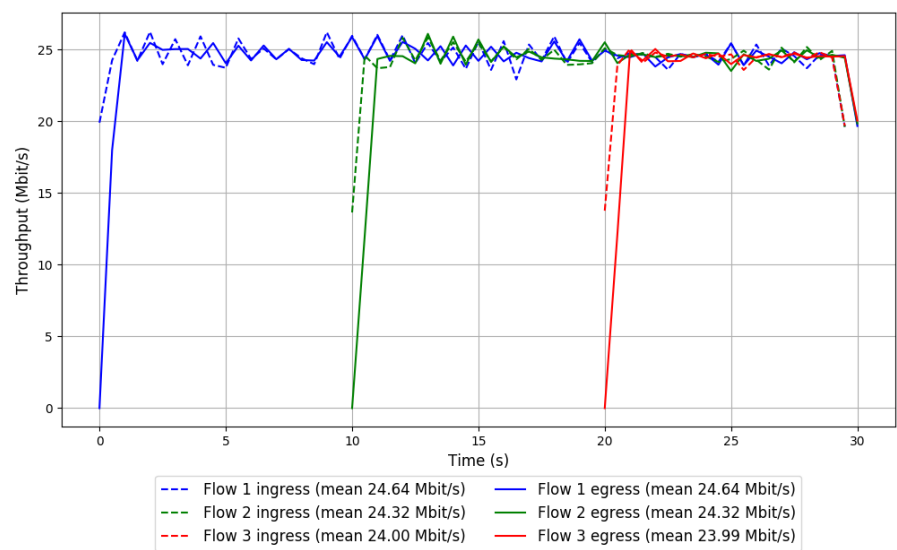


Run 5: Statistics of Sprout

Start at: 2018-12-02 16:13:55  
End at: 2018-12-02 16:14:25  
Local clock offset: 1.261 ms  
Remote clock offset: -3.857 ms

# Below is generated by plot.py at 2018-12-02 16:47:20  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 48.72 Mbit/s  
95th percentile per-packet one-way delay: 28.653 ms  
Loss rate: 0.10%  
-- Flow 1:  
Average throughput: 24.64 Mbit/s  
95th percentile per-packet one-way delay: 28.363 ms  
Loss rate: 0.06%  
-- Flow 2:  
Average throughput: 24.32 Mbit/s  
95th percentile per-packet one-way delay: 28.916 ms  
Loss rate: 0.13%  
-- Flow 3:  
Average throughput: 23.99 Mbit/s  
95th percentile per-packet one-way delay: 28.943 ms  
Loss rate: 0.19%

Run 5: Report of Sprout — Data Link

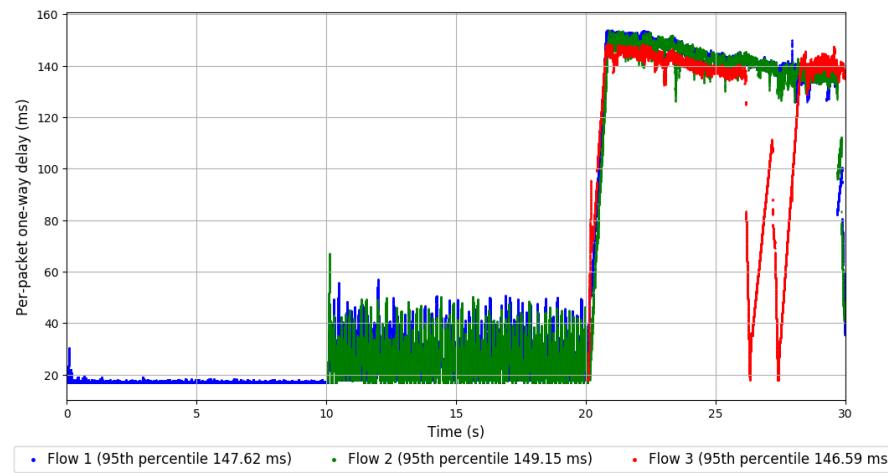
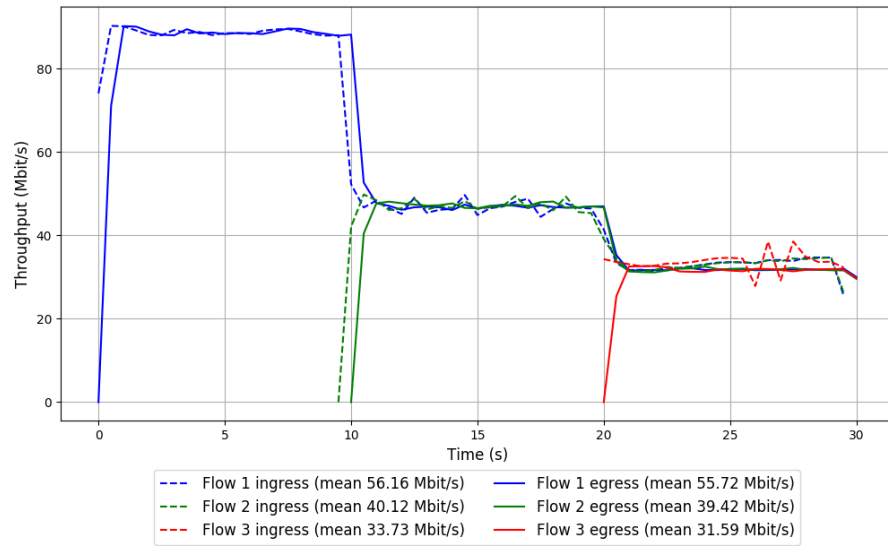


```
Run 1: Statistics of TaoVA-100x

Start at: 2018-12-02 14:46:10
End at: 2018-12-02 14:46:40
Local clock offset: -0.379 ms
Remote clock offset: -4.206 ms

# Below is generated by plot.py at 2018-12-02 16:48:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.46 Mbit/s
95th percentile per-packet one-way delay: 147.874 ms
Loss rate: 1.84%
-- Flow 1:
Average throughput: 55.72 Mbit/s
95th percentile per-packet one-way delay: 147.623 ms
Loss rate: 0.87%
-- Flow 2:
Average throughput: 39.42 Mbit/s
95th percentile per-packet one-way delay: 149.154 ms
Loss rate: 1.88%
-- Flow 3:
Average throughput: 31.59 Mbit/s
95th percentile per-packet one-way delay: 146.591 ms
Loss rate: 6.59%
```

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

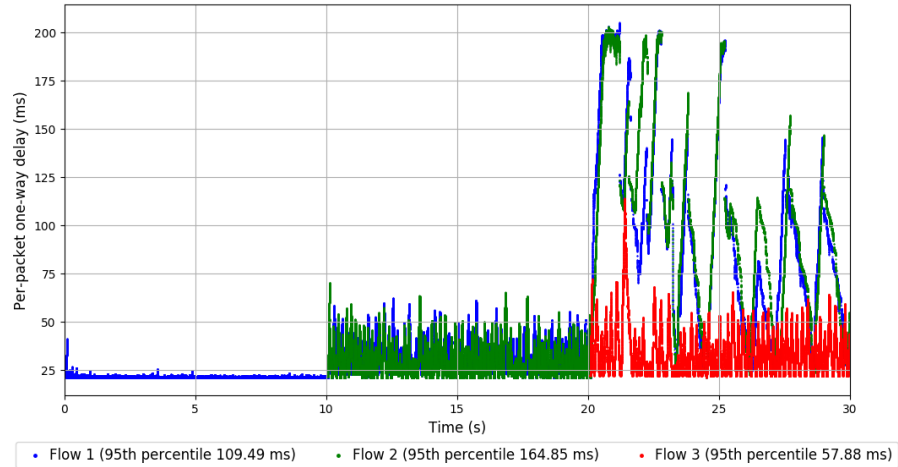
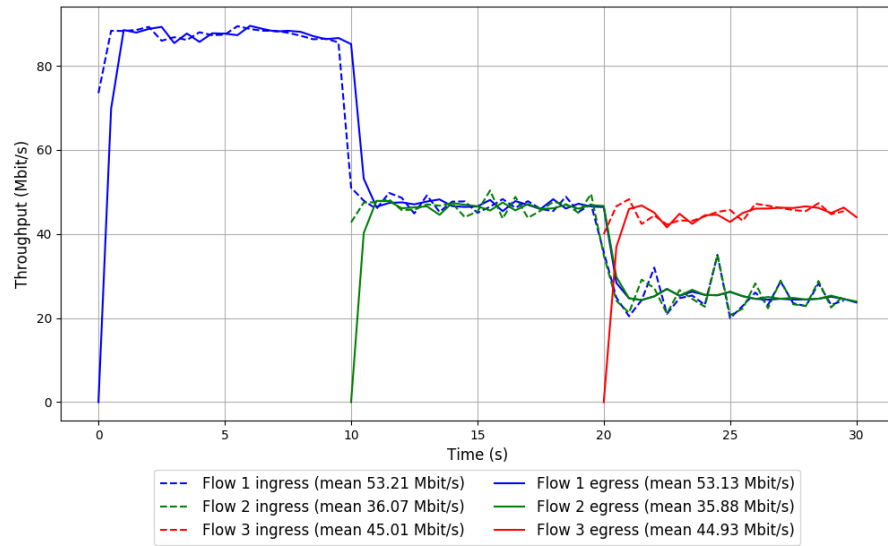


Run 2: Statistics of TaoVA-100x

Start at: 2018-12-02 15:10:01  
End at: 2018-12-02 15:10:31  
Local clock offset: -3.327 ms  
Remote clock offset: -10.995 ms

# Below is generated by plot.py at 2018-12-02 16:48:52  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 91.92 Mbit/s  
95th percentile per-packet one-way delay: 117.434 ms  
Loss rate: 0.40%  
-- Flow 1:  
Average throughput: 53.13 Mbit/s  
95th percentile per-packet one-way delay: 109.489 ms  
Loss rate: 0.25%  
-- Flow 2:  
Average throughput: 35.88 Mbit/s  
95th percentile per-packet one-way delay: 164.848 ms  
Loss rate: 0.66%  
-- Flow 3:  
Average throughput: 44.93 Mbit/s  
95th percentile per-packet one-way delay: 57.875 ms  
Loss rate: 0.48%

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



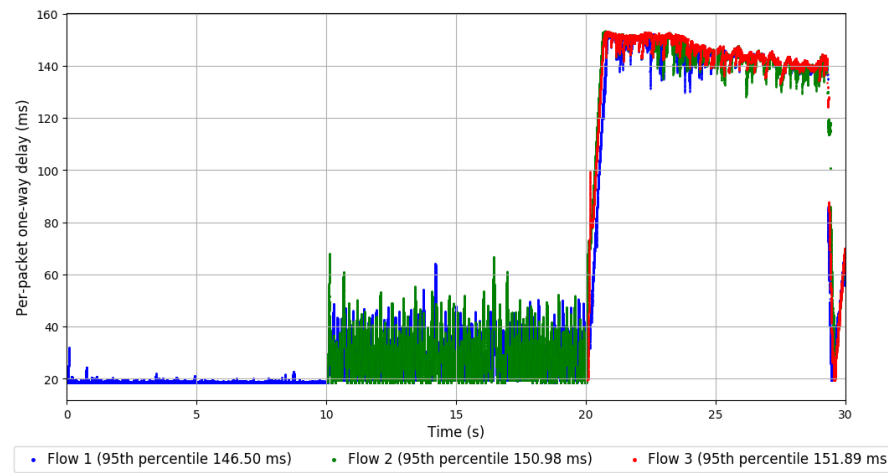
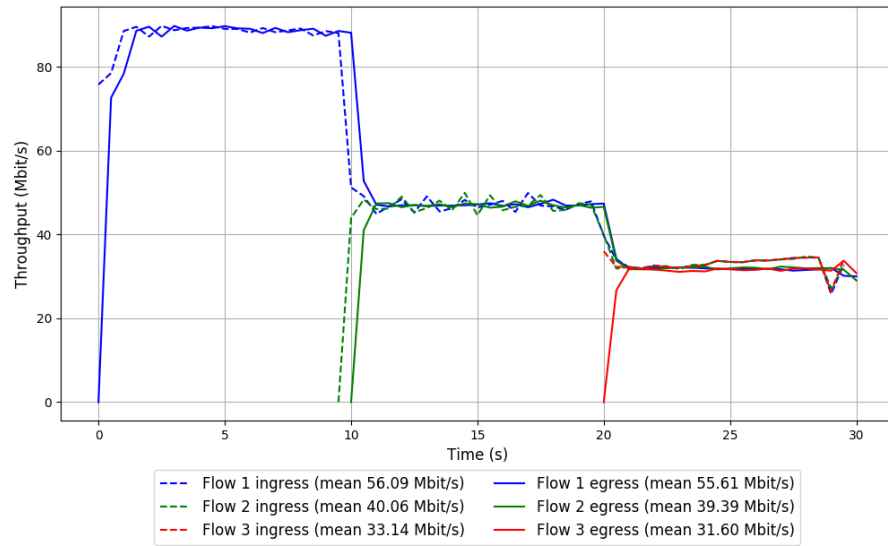


Run 3: Statistics of TaoVA-100x

Start at: 2018-12-02 15:33:50  
End at: 2018-12-02 15:34:20  
Local clock offset: -0.837 ms  
Remote clock offset: -4.198 ms

# Below is generated by plot.py at 2018-12-02 16:49:02  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 92.33 Mbit/s  
95th percentile per-packet one-way delay: 150.569 ms  
Loss rate: 1.65%  
-- Flow 1:  
Average throughput: 55.61 Mbit/s  
95th percentile per-packet one-way delay: 146.496 ms  
Loss rate: 0.93%  
-- Flow 2:  
Average throughput: 39.39 Mbit/s  
95th percentile per-packet one-way delay: 150.980 ms  
Loss rate: 1.83%  
-- Flow 3:  
Average throughput: 31.60 Mbit/s  
95th percentile per-packet one-way delay: 151.894 ms  
Loss rate: 4.91%

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

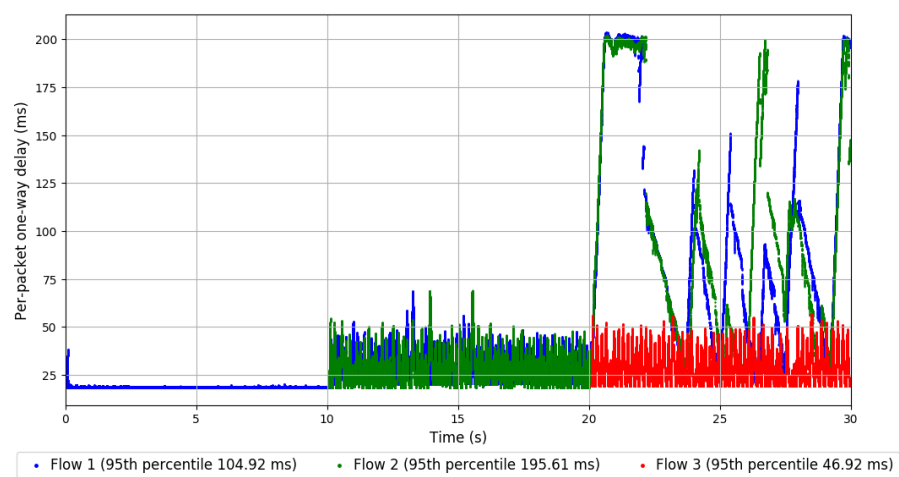
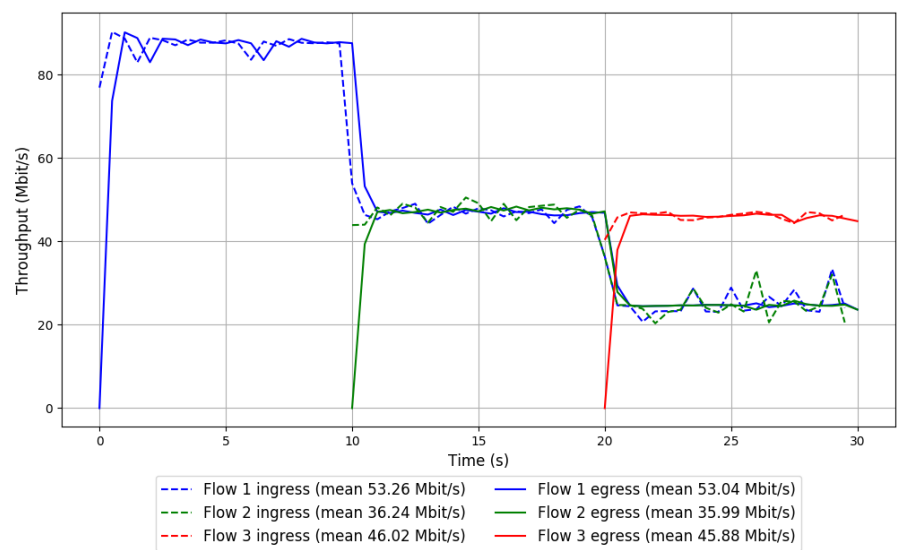


Run 4: Statistics of TaoVA-100x

Start at: 2018-12-02 15:56:57  
End at: 2018-12-02 15:57:27  
Local clock offset: -0.482 ms  
Remote clock offset: -3.586 ms

# Below is generated by plot.py at 2018-12-02 16:49:04  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 92.23 Mbit/s  
95th percentile per-packet one-way delay: 116.678 ms  
Loss rate: 0.59%  
-- Flow 1:  
Average throughput: 53.04 Mbit/s  
95th percentile per-packet one-way delay: 104.919 ms  
Loss rate: 0.50%  
-- Flow 2:  
Average throughput: 35.99 Mbit/s  
95th percentile per-packet one-way delay: 195.613 ms  
Loss rate: 0.81%  
-- Flow 3:  
Average throughput: 45.88 Mbit/s  
95th percentile per-packet one-way delay: 46.917 ms  
Loss rate: 0.56%

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



Run 5: Statistics of TaoVA-100x

Start at: 2018-12-02 16:19:52

End at: 2018-12-02 16:20:22

Local clock offset: 2.464 ms

Remote clock offset: -3.15 ms

# Below is generated by plot.py at 2018-12-02 16:49:12

# Datalink statistics

-- Total of 3 flows:

Average throughput: 91.73 Mbit/s

95th percentile per-packet one-way delay: 113.588 ms

Loss rate: 0.24%

-- Flow 1:

Average throughput: 55.05 Mbit/s

95th percentile per-packet one-way delay: 95.595 ms

Loss rate: 0.26%

-- Flow 2:

Average throughput: 32.11 Mbit/s

95th percentile per-packet one-way delay: 192.276 ms

Loss rate: 0.21%

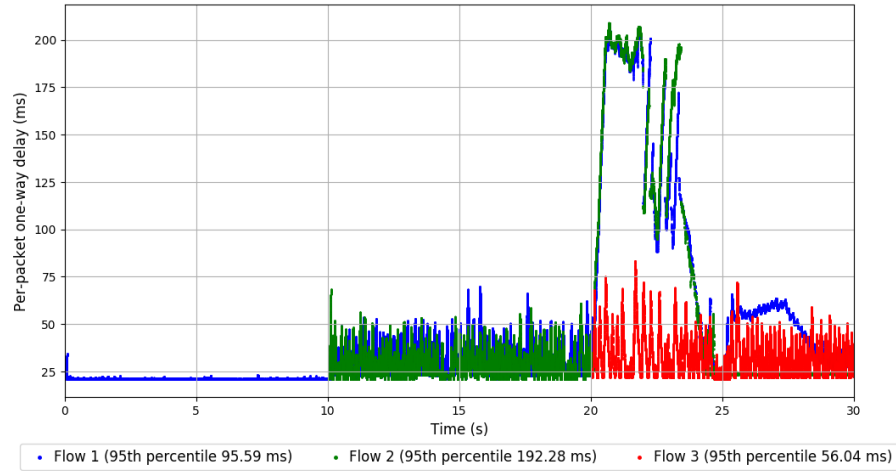
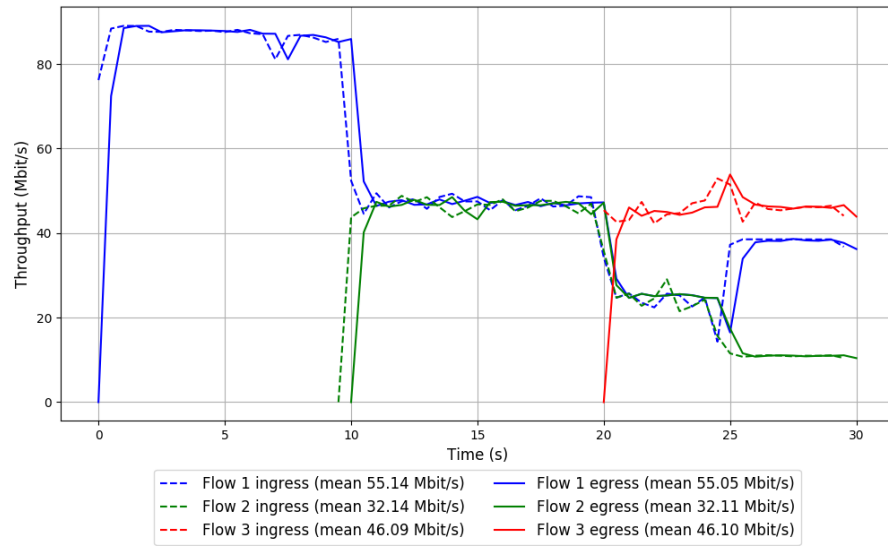
-- Flow 3:

Average throughput: 46.10 Mbit/s

95th percentile per-packet one-way delay: 56.042 ms

Loss rate: 0.23%

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

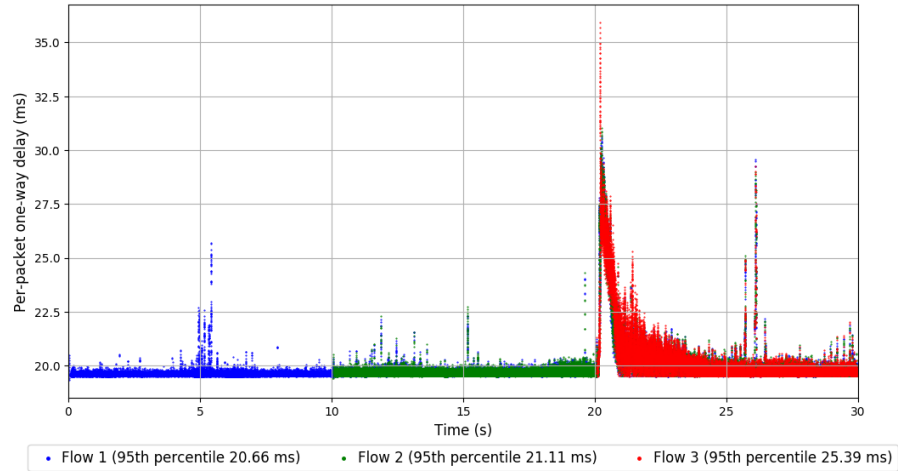
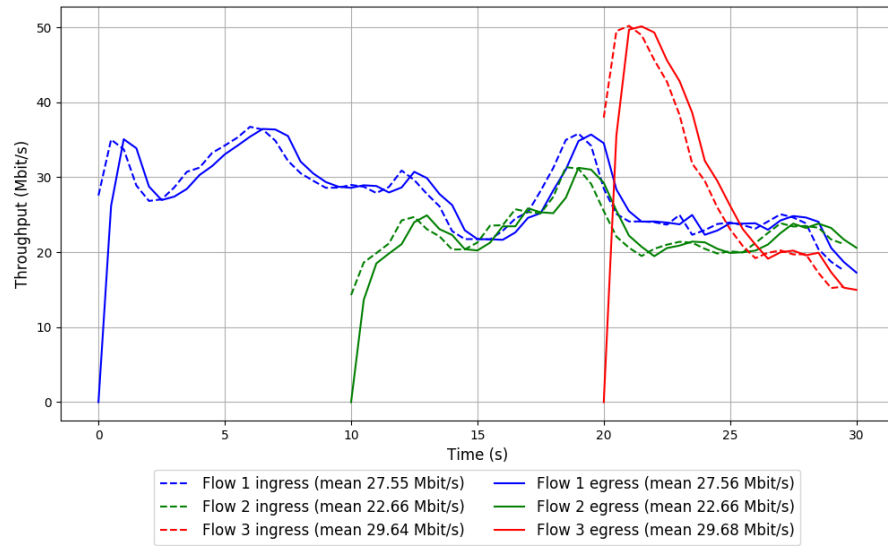


Run 1: Statistics of TCP Vegas

Start at: 2018-12-02 15:02:49  
End at: 2018-12-02 15:03:19  
Local clock offset: 1.572 ms  
Remote clock offset: -4.276 ms

# Below is generated by plot.py at 2018-12-02 16:49:12  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 52.49 Mbit/s  
95th percentile per-packet one-way delay: 21.676 ms  
Loss rate: 0.10%  
-- Flow 1:  
Average throughput: 27.56 Mbit/s  
95th percentile per-packet one-way delay: 20.663 ms  
Loss rate: 0.06%  
-- Flow 2:  
Average throughput: 22.66 Mbit/s  
95th percentile per-packet one-way delay: 21.106 ms  
Loss rate: 0.15%  
-- Flow 3:  
Average throughput: 29.68 Mbit/s  
95th percentile per-packet one-way delay: 25.394 ms  
Loss rate: 0.16%

# Run 1: Report of TCP Vegas — Data Link





Run 2: Statistics of TCP Vegas

Start at: 2018-12-02 15:26:41

End at: 2018-12-02 15:27:11

Local clock offset: 0.634 ms

Remote clock offset: -4.87 ms

# Below is generated by plot.py at 2018-12-02 16:49:12

# Datalink statistics

-- Total of 3 flows:

Average throughput: 81.39 Mbit/s

95th percentile per-packet one-way delay: 22.961 ms

Loss rate: 0.11%

-- Flow 1:

Average throughput: 46.57 Mbit/s

95th percentile per-packet one-way delay: 22.774 ms

Loss rate: 0.05%

-- Flow 2:

Average throughput: 34.95 Mbit/s

95th percentile per-packet one-way delay: 21.788 ms

Loss rate: 0.12%

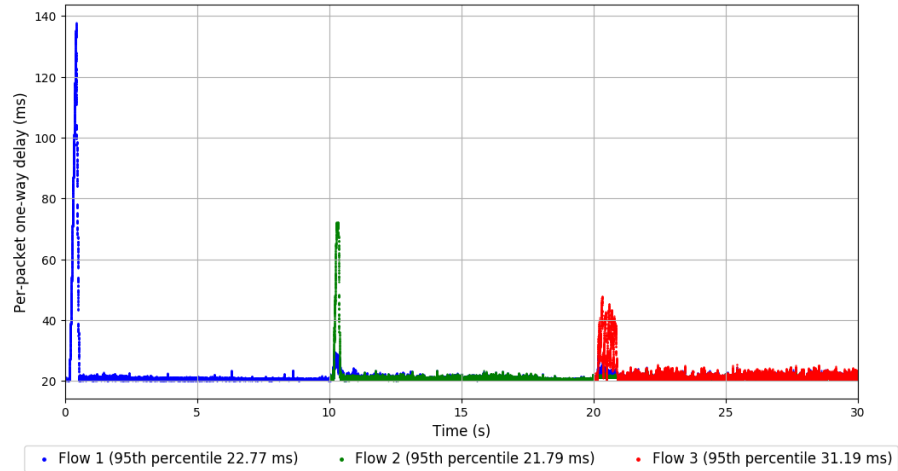
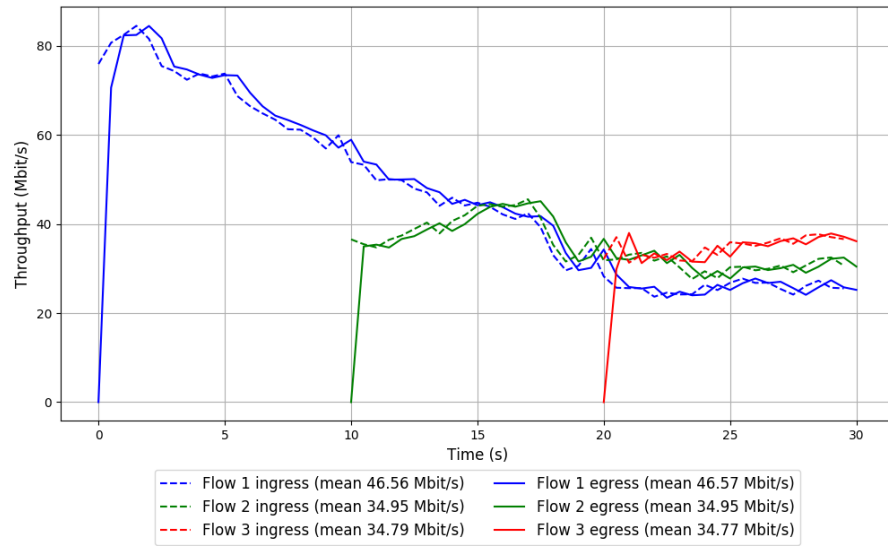
-- Flow 3:

Average throughput: 34.77 Mbit/s

95th percentile per-packet one-way delay: 31.192 ms

Loss rate: 0.29%

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

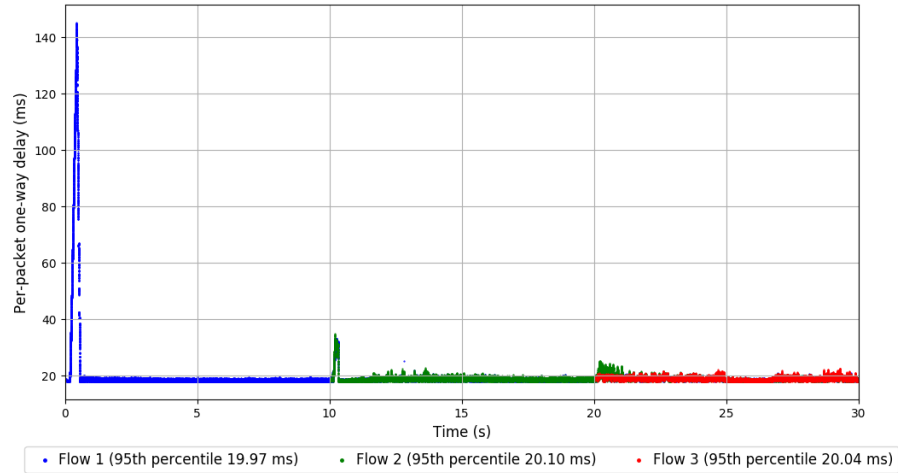
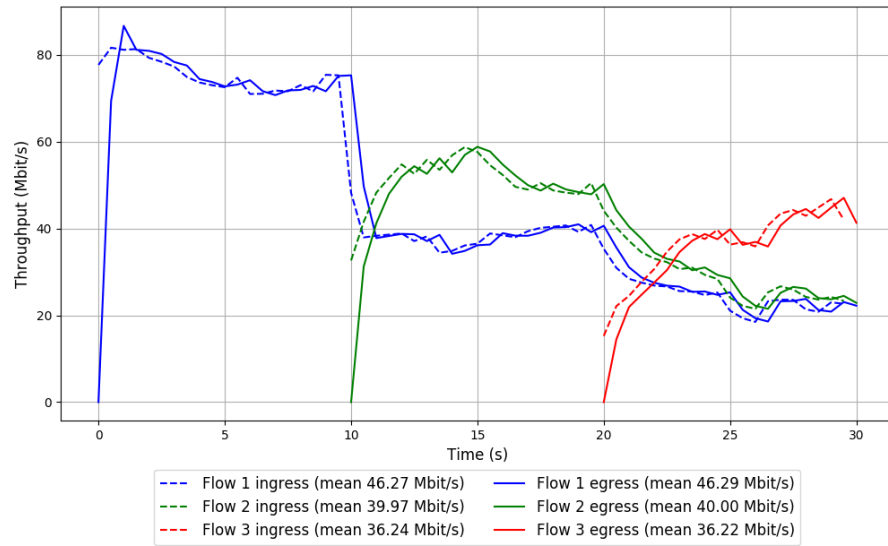


Run 3: Statistics of TCP Vegas

Start at: 2018-12-02 15:49:48  
End at: 2018-12-02 15:50:18  
Local clock offset: -0.471 ms  
Remote clock offset: -2.769 ms

# Below is generated by plot.py at 2018-12-02 16:49:12  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 84.94 Mbit/s  
95th percentile per-packet one-way delay: 20.031 ms  
Loss rate: 0.10%  
-- Flow 1:  
Average throughput: 46.29 Mbit/s  
95th percentile per-packet one-way delay: 19.967 ms  
Loss rate: 0.05%  
-- Flow 2:  
Average throughput: 40.00 Mbit/s  
95th percentile per-packet one-way delay: 20.103 ms  
Loss rate: 0.08%  
-- Flow 3:  
Average throughput: 36.22 Mbit/s  
95th percentile per-packet one-way delay: 20.035 ms  
Loss rate: 0.33%

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

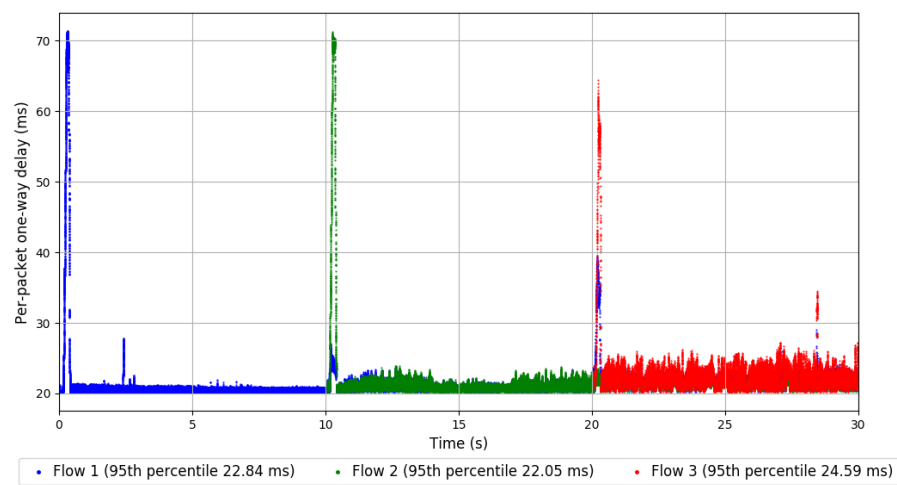
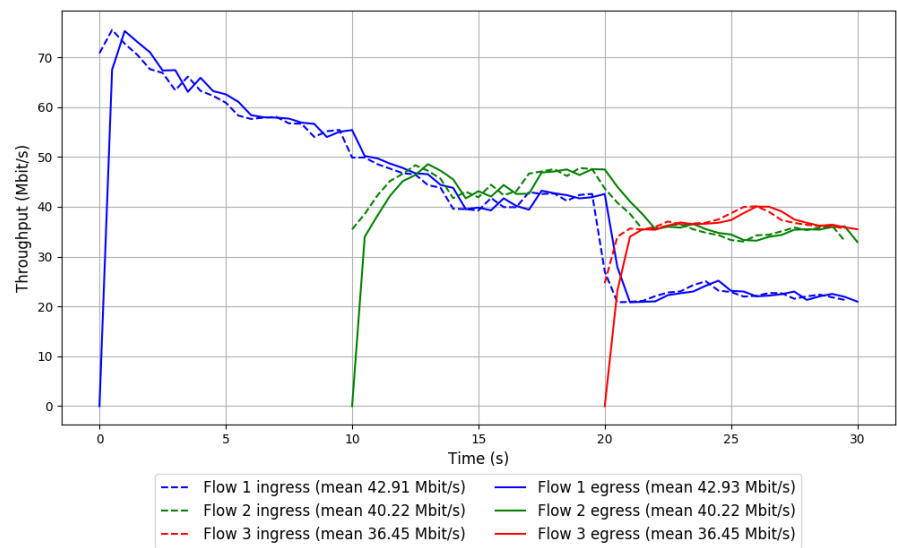


Run 4: Statistics of TCP Vegas

Start at: 2018-12-02 16:12:43  
End at: 2018-12-02 16:13:13  
Local clock offset: 2.706 ms  
Remote clock offset: -1.964 ms

# Below is generated by plot.py at 2018-12-02 16:49:12  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 81.80 Mbit/s  
95th percentile per-packet one-way delay: 23.323 ms  
Loss rate: 0.10%  
-- Flow 1:  
Average throughput: 42.93 Mbit/s  
95th percentile per-packet one-way delay: 22.839 ms  
Loss rate: 0.05%  
-- Flow 2:  
Average throughput: 40.22 Mbit/s  
95th percentile per-packet one-way delay: 22.047 ms  
Loss rate: 0.11%  
-- Flow 3:  
Average throughput: 36.45 Mbit/s  
95th percentile per-packet one-way delay: 24.592 ms  
Loss rate: 0.25%

Run 4: Report of TCP Vegas — Data Link

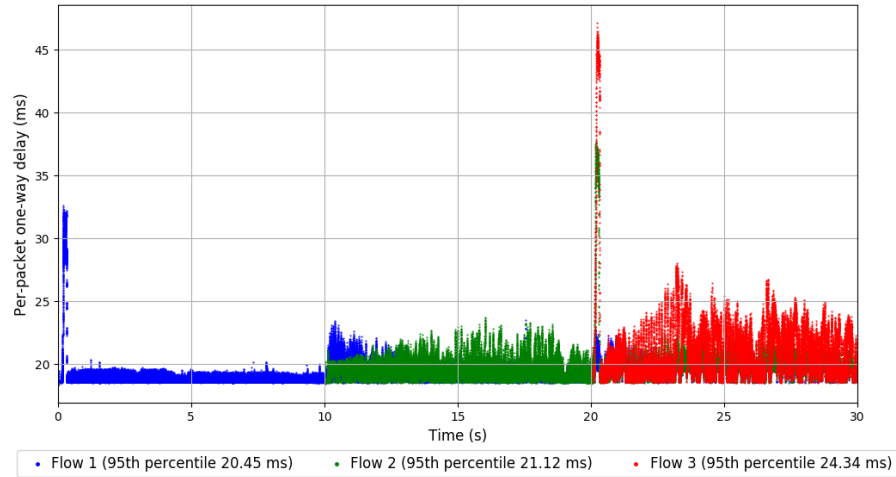
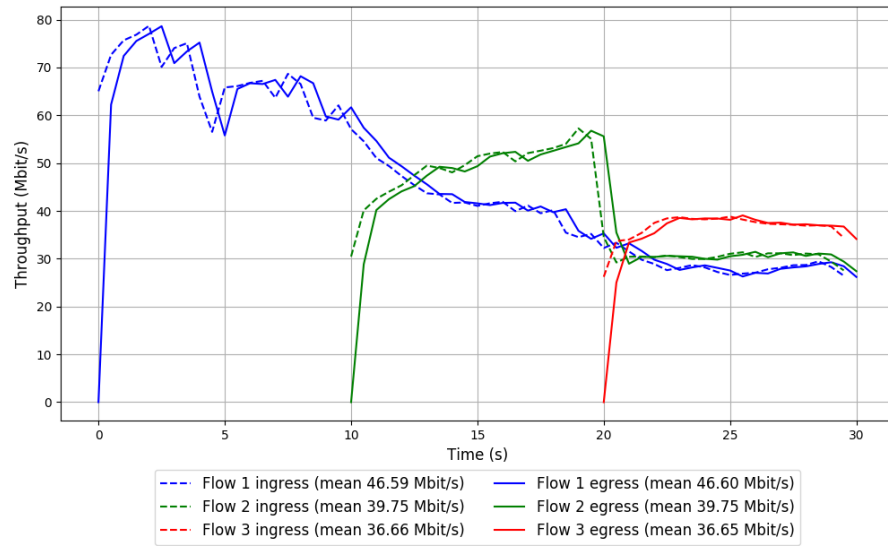


Run 5: Statistics of TCP Vegas

Start at: 2018-12-02 16:35:42  
End at: 2018-12-02 16:36:12  
Local clock offset: 1.242 ms  
Remote clock offset: -2.329 ms

# Below is generated by plot.py at 2018-12-02 16:49:16  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 85.23 Mbit/s  
95th percentile per-packet one-way delay: 22.029 ms  
Loss rate: 0.09%  
-- Flow 1:  
Average throughput: 46.60 Mbit/s  
95th percentile per-packet one-way delay: 20.450 ms  
Loss rate: 0.05%  
-- Flow 2:  
Average throughput: 39.75 Mbit/s  
95th percentile per-packet one-way delay: 21.119 ms  
Loss rate: 0.10%  
-- Flow 3:  
Average throughput: 36.65 Mbit/s  
95th percentile per-packet one-way delay: 24.338 ms  
Loss rate: 0.25%

# Run 5: Report of TCP Vegas — Data Link





Run 1: Statistics of Verus

Start at: 2018-12-02 14:58:48

End at: 2018-12-02 14:59:18

Local clock offset: 1.309 ms

Remote clock offset: -4.3 ms

# Below is generated by plot.py at 2018-12-02 16:49:30

# Datalink statistics

-- Total of 3 flows:

Average throughput: 94.98 Mbit/s

95th percentile per-packet one-way delay: 80.617 ms

Loss rate: 0.34%

-- Flow 1:

Average throughput: 56.58 Mbit/s

95th percentile per-packet one-way delay: 82.191 ms

Loss rate: 0.26%

-- Flow 2:

Average throughput: 45.70 Mbit/s

95th percentile per-packet one-way delay: 62.933 ms

Loss rate: 0.37%

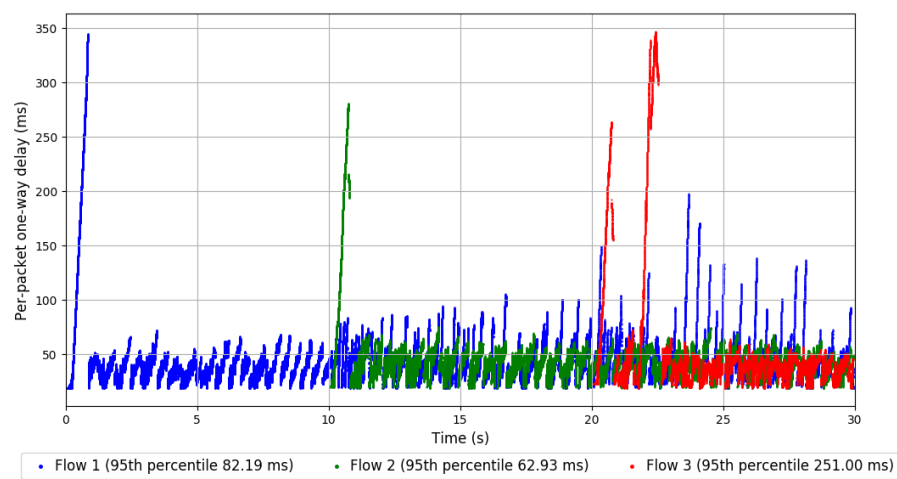
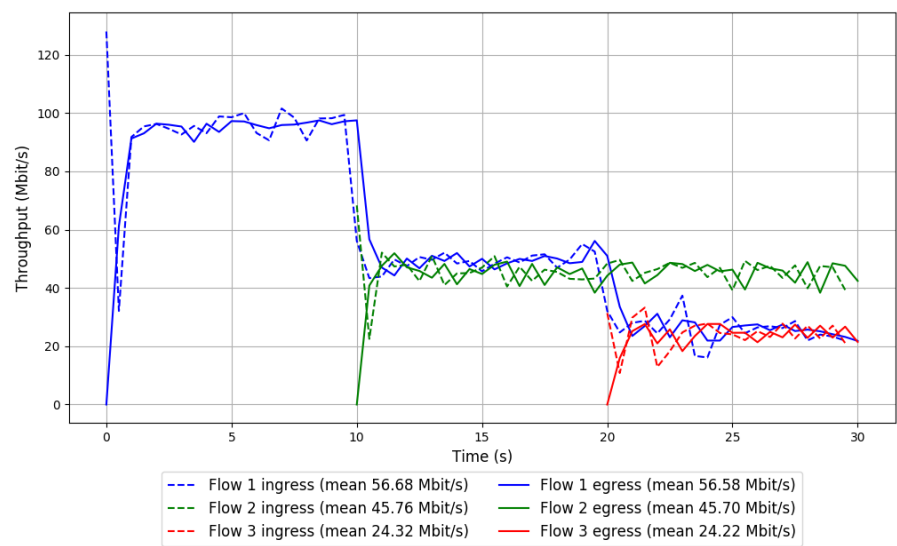
-- Flow 3:

Average throughput: 24.22 Mbit/s

95th percentile per-packet one-way delay: 251.004 ms

Loss rate: 0.76%

Run 1: Report of Verus — Data Link

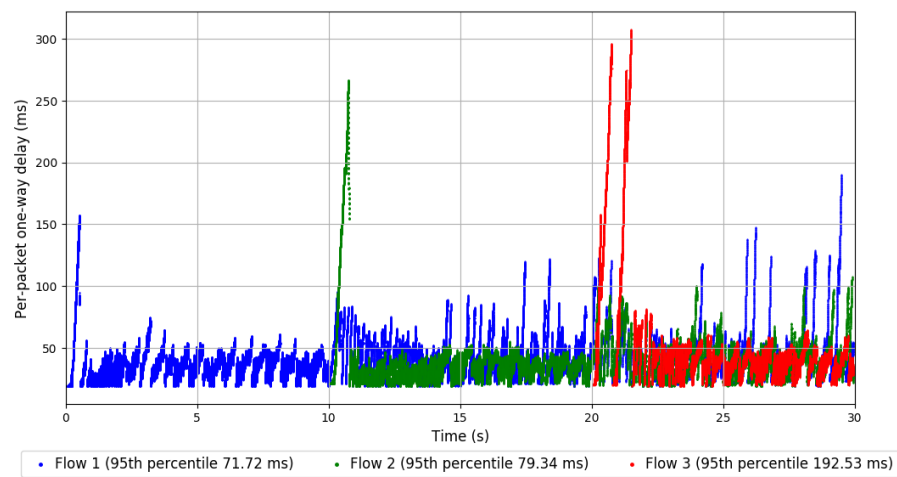
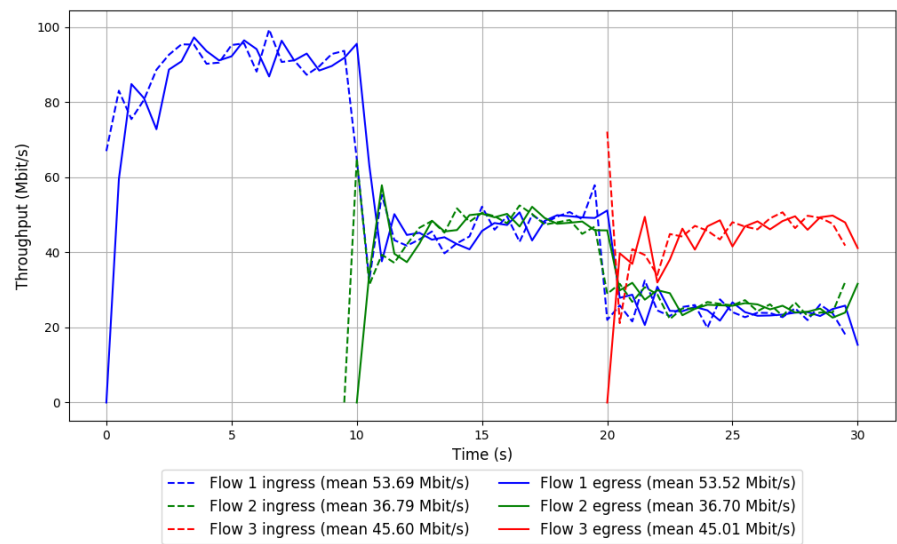


Run 2: Statistics of Verus

Start at: 2018-12-02 15:22:32  
End at: 2018-12-02 15:23:02  
Local clock offset: 1.521 ms  
Remote clock offset: -3.321 ms

# Below is generated by plot.py at 2018-12-02 16:49:55  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 92.88 Mbit/s  
95th percentile per-packet one-way delay: 80.266 ms  
Loss rate: 0.50%  
-- Flow 1:  
Average throughput: 53.52 Mbit/s  
95th percentile per-packet one-way delay: 71.723 ms  
Loss rate: 0.22%  
-- Flow 2:  
Average throughput: 36.70 Mbit/s  
95th percentile per-packet one-way delay: 79.342 ms  
Loss rate: 0.44%  
-- Flow 3:  
Average throughput: 45.01 Mbit/s  
95th percentile per-packet one-way delay: 192.529 ms  
Loss rate: 1.61%

Run 2: Report of Verus — Data Link

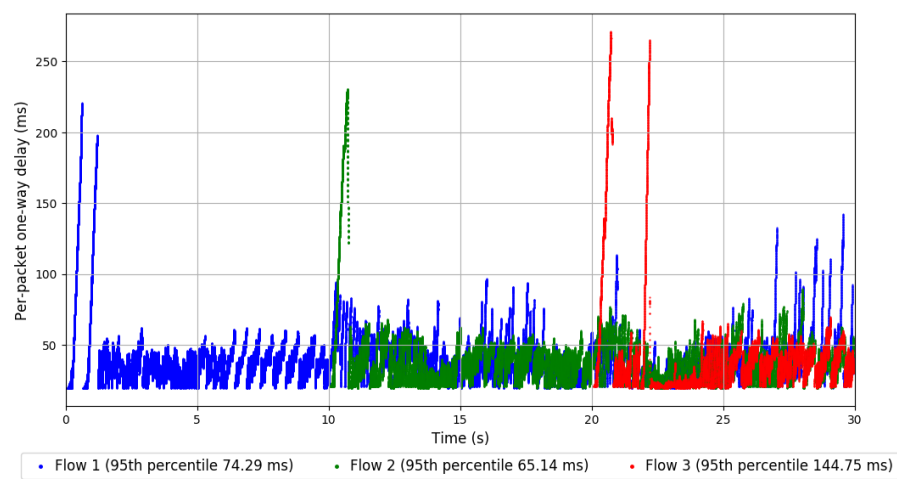
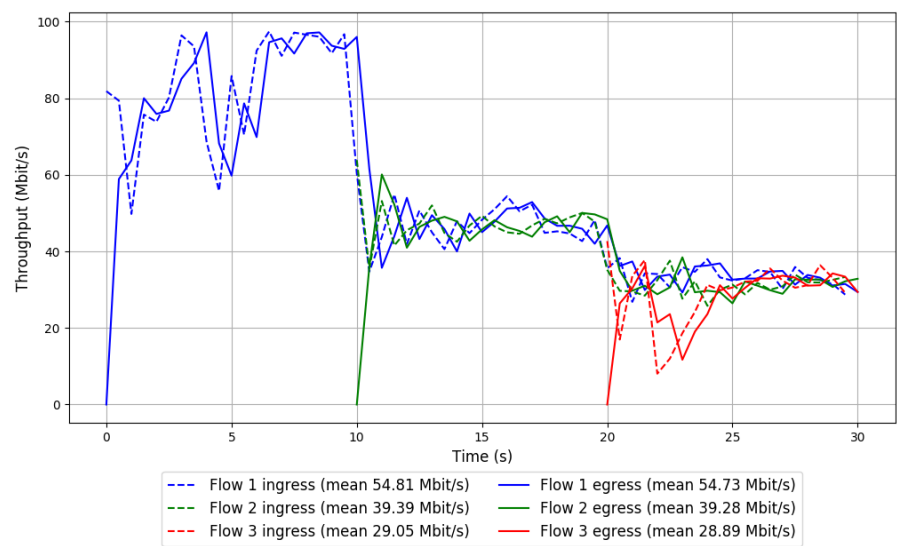


Run 3: Statistics of Verus

Start at: 2018-12-02 15:46:07  
End at: 2018-12-02 15:46:37  
Local clock offset: -0.194 ms  
Remote clock offset: -4.155 ms

# Below is generated by plot.py at 2018-12-02 16:49:58  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 90.45 Mbit/s  
95th percentile per-packet one-way delay: 74.461 ms  
Loss rate: 0.33%  
-- Flow 1:  
Average throughput: 54.73 Mbit/s  
95th percentile per-packet one-way delay: 74.288 ms  
Loss rate: 0.22%  
-- Flow 2:  
Average throughput: 39.28 Mbit/s  
95th percentile per-packet one-way delay: 65.138 ms  
Loss rate: 0.38%  
-- Flow 3:  
Average throughput: 28.89 Mbit/s  
95th percentile per-packet one-way delay: 144.746 ms  
Loss rate: 0.79%

Run 3: Report of Verus — Data Link

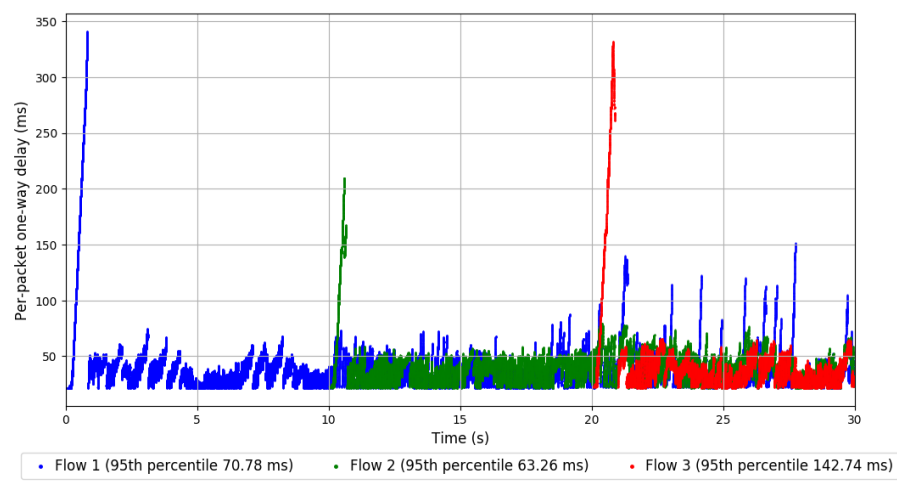
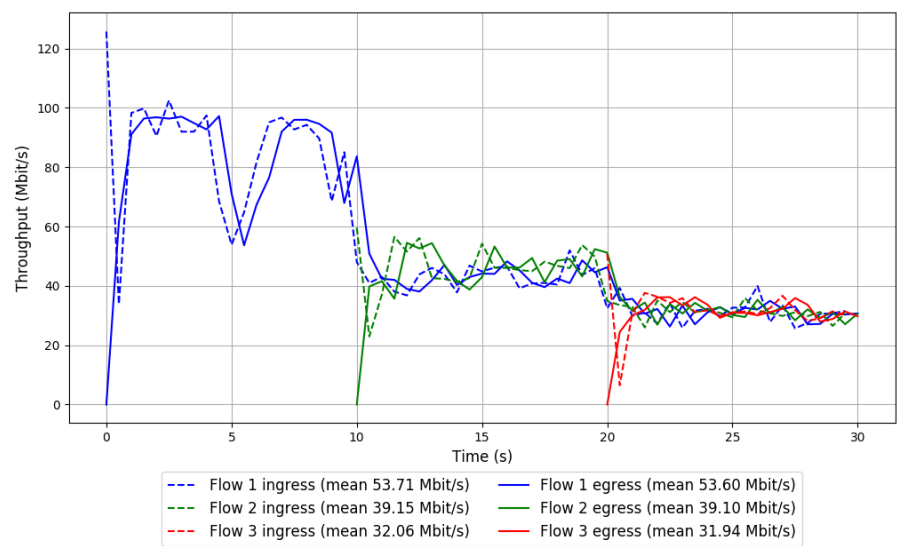


Run 4: Statistics of Verus

Start at: 2018-12-02 16:09:09  
End at: 2018-12-02 16:09:39  
Local clock offset: 2.318 ms  
Remote clock offset: -3.682 ms

# Below is generated by plot.py at 2018-12-02 16:49:58  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 90.23 Mbit/s  
95th percentile per-packet one-way delay: 68.969 ms  
Loss rate: 0.24%  
-- Flow 1:  
Average throughput: 53.60 Mbit/s  
95th percentile per-packet one-way delay: 70.776 ms  
Loss rate: 0.17%  
-- Flow 2:  
Average throughput: 39.10 Mbit/s  
95th percentile per-packet one-way delay: 63.263 ms  
Loss rate: 0.26%  
-- Flow 3:  
Average throughput: 31.94 Mbit/s  
95th percentile per-packet one-way delay: 142.736 ms  
Loss rate: 0.59%

Run 4: Report of Verus — Data Link



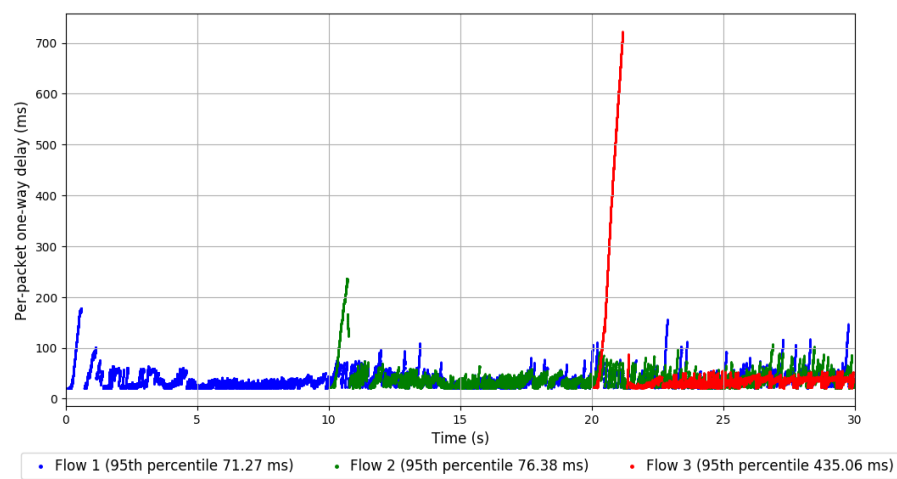
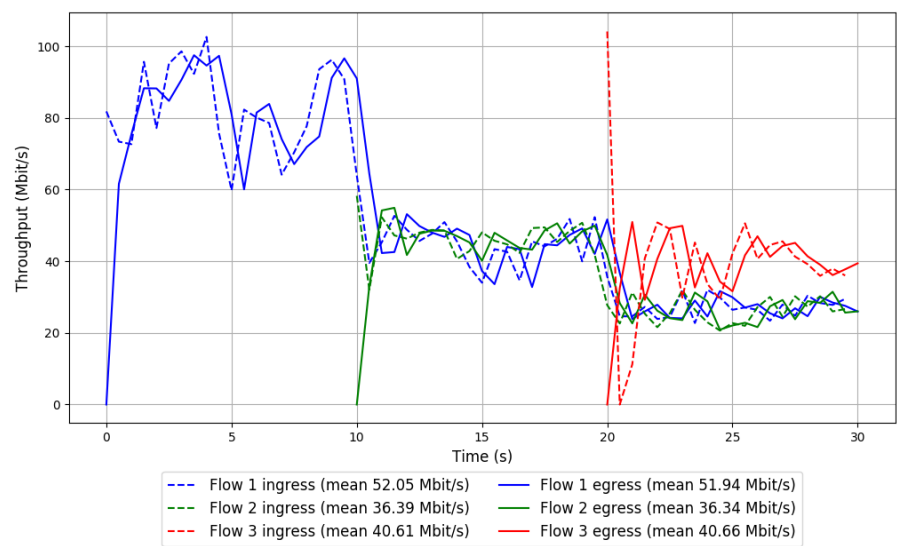


Run 5: Statistics of Verus

Start at: 2018-12-02 16:32:03  
End at: 2018-12-02 16:32:33  
Local clock offset: 2.436 ms  
Remote clock offset: -3.221 ms

# Below is generated by plot.py at 2018-12-02 16:50:01  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 89.60 Mbit/s  
95th percentile per-packet one-way delay: 80.991 ms  
Loss rate: 0.28%  
-- Flow 1:  
Average throughput: 51.94 Mbit/s  
95th percentile per-packet one-way delay: 71.269 ms  
Loss rate: 0.30%  
-- Flow 2:  
Average throughput: 36.34 Mbit/s  
95th percentile per-packet one-way delay: 76.378 ms  
Loss rate: 0.28%  
-- Flow 3:  
Average throughput: 40.66 Mbit/s  
95th percentile per-packet one-way delay: 435.060 ms  
Loss rate: 0.20%

Run 5: Report of Verus — Data Link

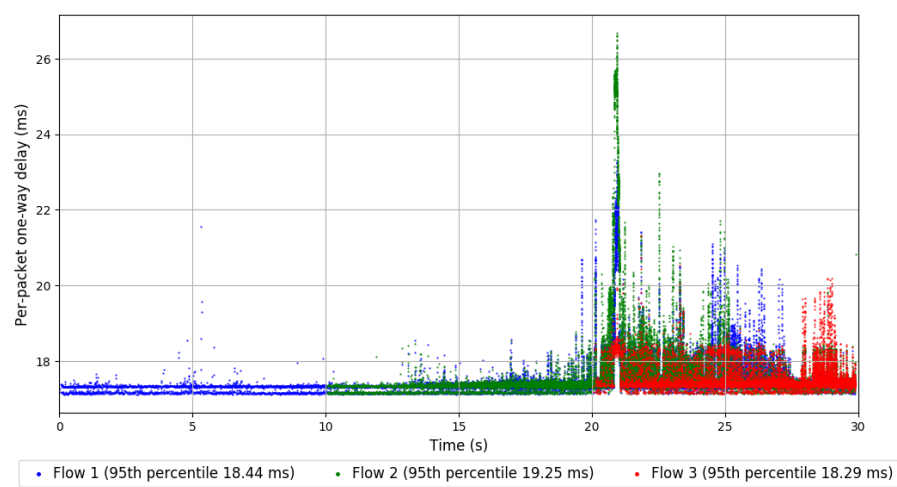
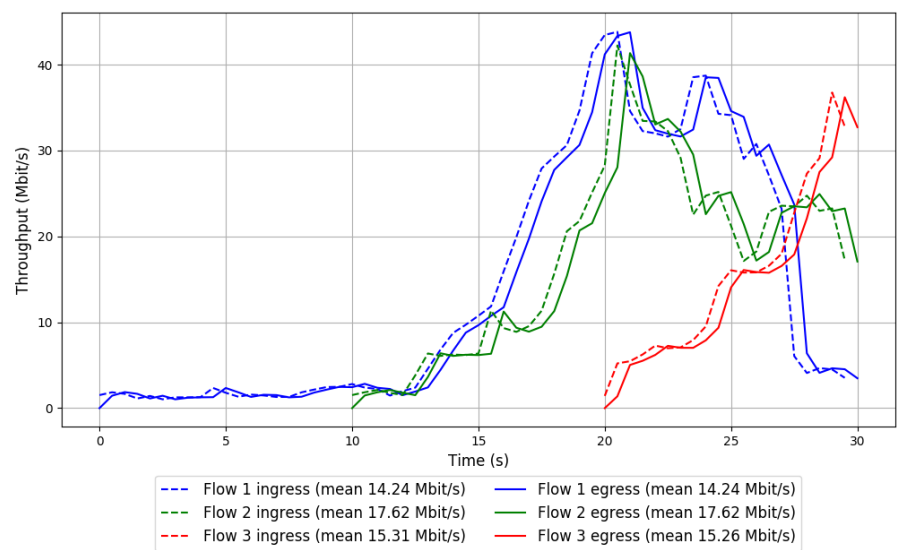


Run 1: Statistics of PCC-Vivace

Start at: 2018-12-02 14:57:37  
End at: 2018-12-02 14:58:07  
Local clock offset: -0.245 ms  
Remote clock offset: -4.044 ms

# Below is generated by plot.py at 2018-12-02 16:50:01  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 30.99 Mbit/s  
95th percentile per-packet one-way delay: 18.602 ms  
Loss rate: 0.15%  
-- Flow 1:  
Average throughput: 14.24 Mbit/s  
95th percentile per-packet one-way delay: 18.436 ms  
Loss rate: 0.02%  
-- Flow 2:  
Average throughput: 17.62 Mbit/s  
95th percentile per-packet one-way delay: 19.255 ms  
Loss rate: 0.14%  
-- Flow 3:  
Average throughput: 15.26 Mbit/s  
95th percentile per-packet one-way delay: 18.289 ms  
Loss rate: 0.55%

Run 1: Report of PCC-Vivace — Data Link

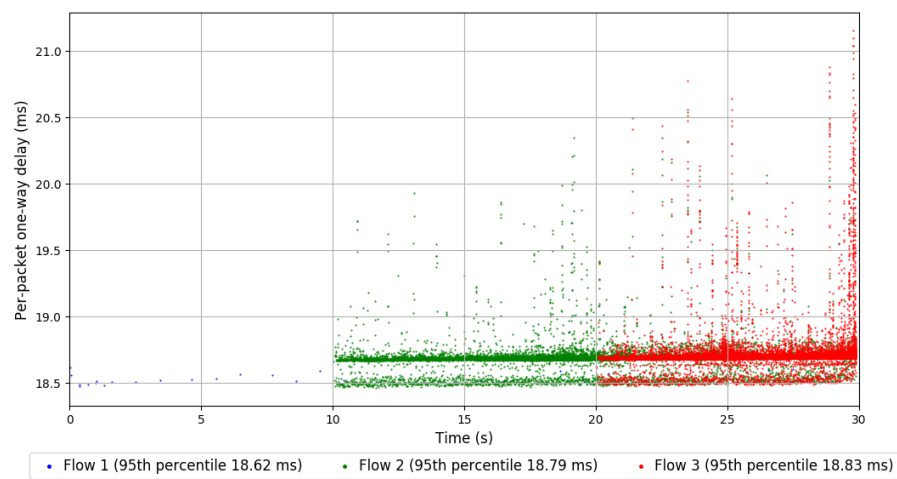
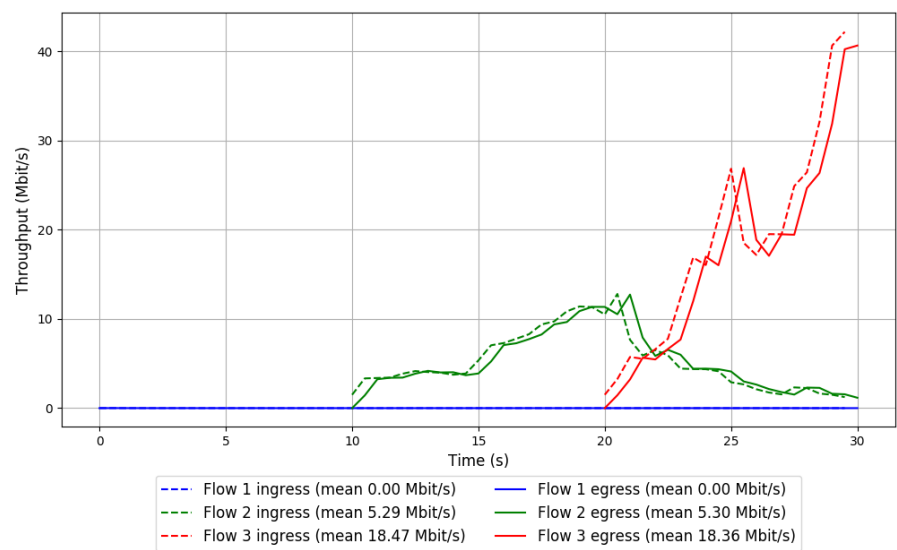


Run 2: Statistics of PCC-Vivace

Start at: 2018-12-02 15:21:24  
End at: 2018-12-02 15:21:54  
Local clock offset: 1.054 ms  
Remote clock offset: -3.278 ms

# Below is generated by plot.py at 2018-12-02 16:50:01  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 9.58 Mbit/s  
95th percentile per-packet one-way delay: 18.806 ms  
Loss rate: 0.57%  
-- Flow 1:  
Average throughput: 0.00 Mbit/s  
95th percentile per-packet one-way delay: 18.619 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 5.30 Mbit/s  
95th percentile per-packet one-way delay: 18.787 ms  
Loss rate: 0.04%  
-- Flow 3:  
Average throughput: 18.36 Mbit/s  
95th percentile per-packet one-way delay: 18.827 ms  
Loss rate: 0.88%

Run 2: Report of PCC-Vivace — Data Link

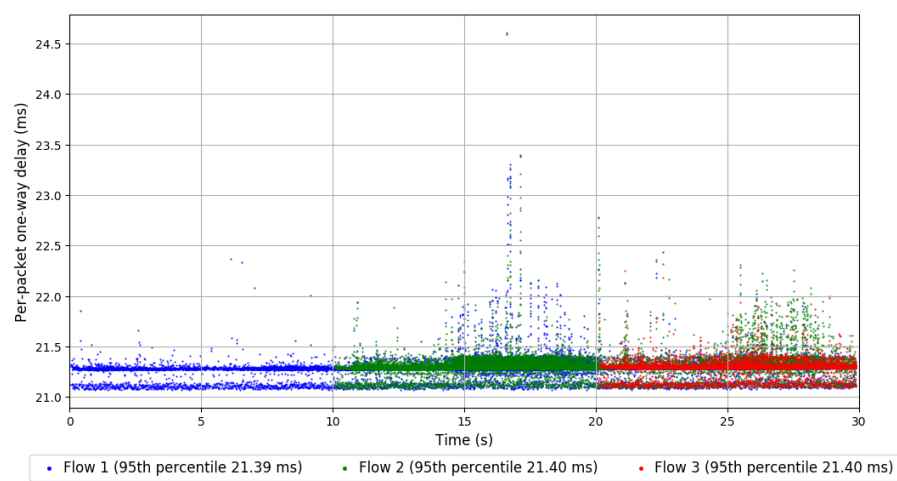
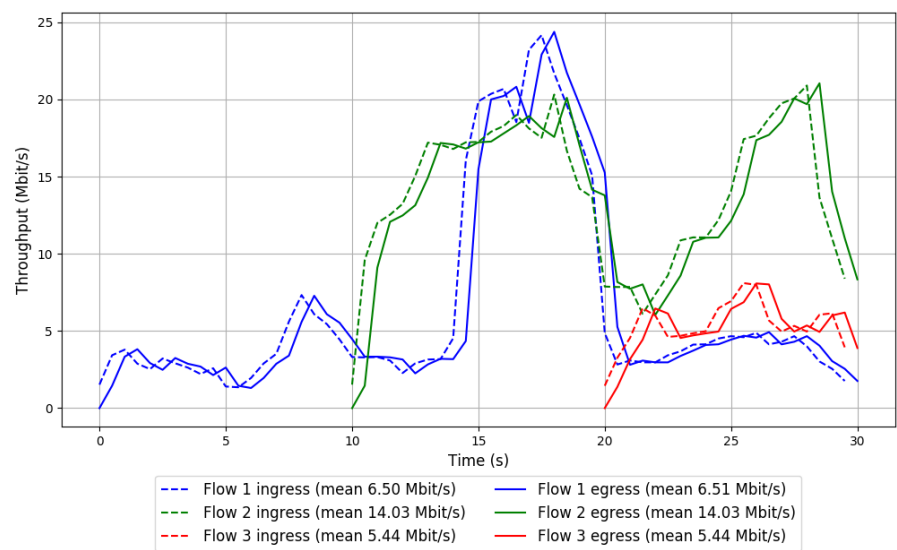


Run 3: Statistics of PCC-Vivace

Start at: 2018-12-02 15:44:59  
End at: 2018-12-02 15:45:29  
Local clock offset: 1.075 ms  
Remote clock offset: -4.612 ms

# Below is generated by plot.py at 2018-12-02 16:50:01  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 17.63 Mbit/s  
95th percentile per-packet one-way delay: 21.394 ms  
Loss rate: 0.09%  
-- Flow 1:  
Average throughput: 6.51 Mbit/s  
95th percentile per-packet one-way delay: 21.385 ms  
Loss rate: 0.03%  
-- Flow 2:  
Average throughput: 14.03 Mbit/s  
95th percentile per-packet one-way delay: 21.400 ms  
Loss rate: 0.10%  
-- Flow 3:  
Average throughput: 5.44 Mbit/s  
95th percentile per-packet one-way delay: 21.402 ms  
Loss rate: 0.26%

Run 3: Report of PCC-Vivace — Data Link



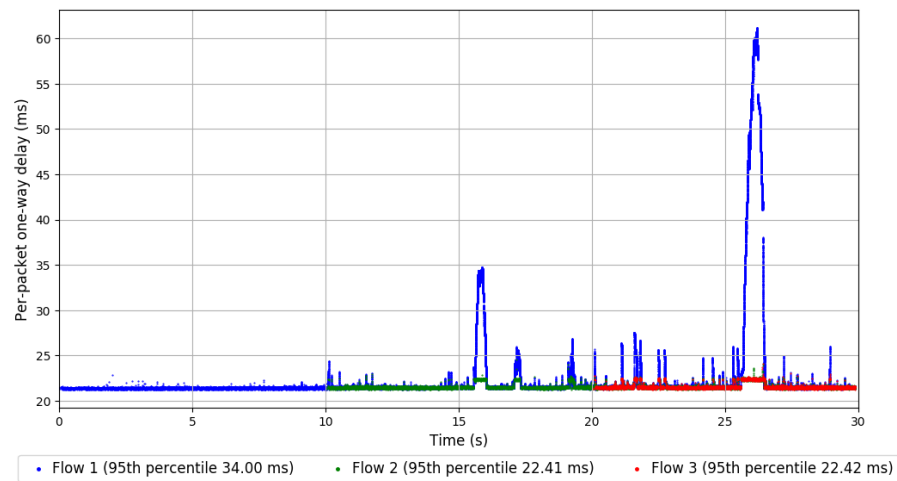
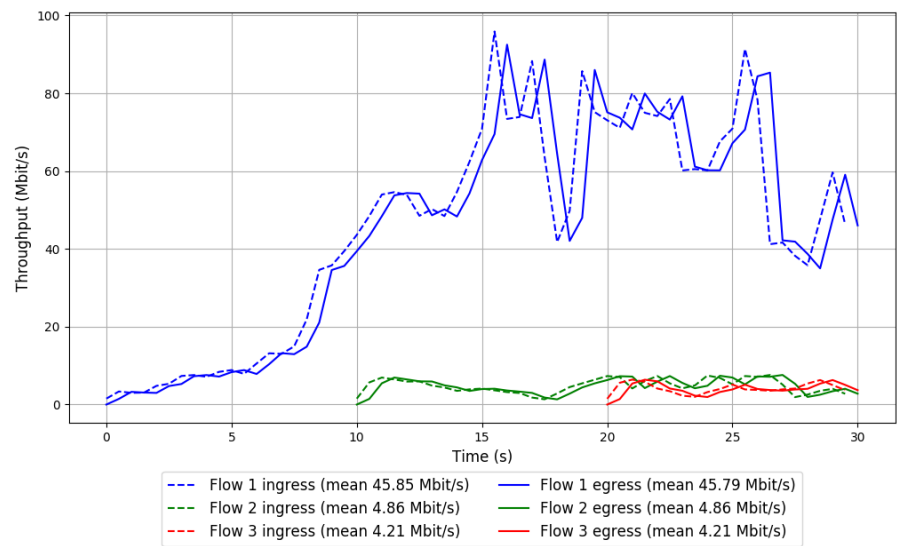


Run 4: Statistics of PCC-Vivace

Start at: 2018-12-02 16:07:58  
End at: 2018-12-02 16:08:28  
Local clock offset: 2.95 ms  
Remote clock offset: -3.044 ms

# Below is generated by plot.py at 2018-12-02 16:50:01  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 50.41 Mbit/s  
95th percentile per-packet one-way delay: 32.937 ms  
Loss rate: 0.21%  
-- Flow 1:  
Average throughput: 45.79 Mbit/s  
95th percentile per-packet one-way delay: 33.996 ms  
Loss rate: 0.22%  
-- Flow 2:  
Average throughput: 4.86 Mbit/s  
95th percentile per-packet one-way delay: 22.414 ms  
Loss rate: 0.08%  
-- Flow 3:  
Average throughput: 4.21 Mbit/s  
95th percentile per-packet one-way delay: 22.424 ms  
Loss rate: 0.28%

Run 4: Report of PCC-Vivace — Data Link

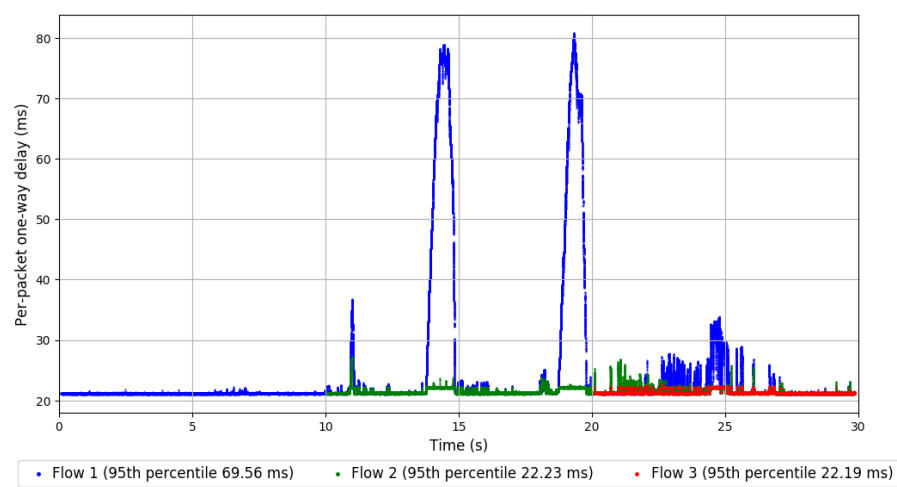
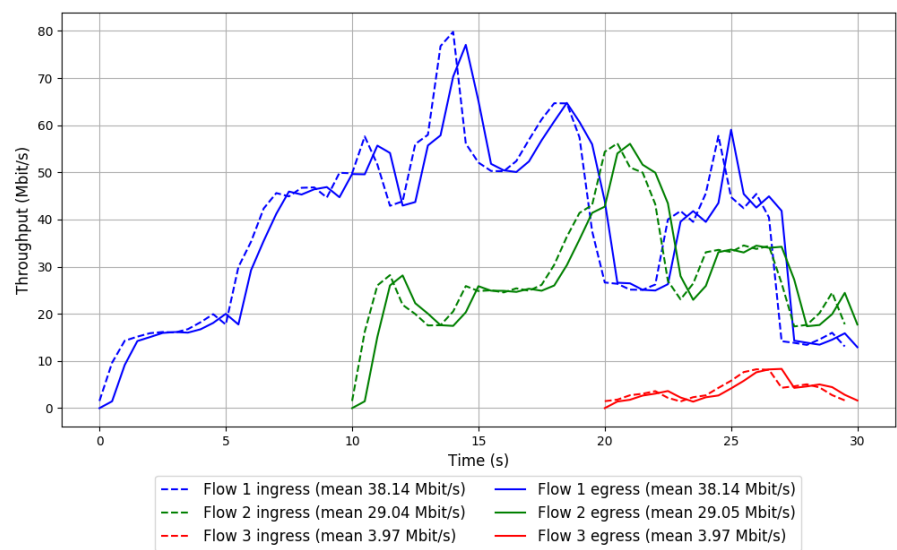


Run 5: Statistics of PCC-Vivace

Start at: 2018-12-02 16:30:51  
End at: 2018-12-02 16:31:21  
Local clock offset: 2.174 ms  
Remote clock offset: -4.015 ms

# Below is generated by plot.py at 2018-12-02 16:50:03  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 58.77 Mbit/s  
95th percentile per-packet one-way delay: 54.278 ms  
Loss rate: 0.09%  
-- Flow 1:  
Average throughput: 38.14 Mbit/s  
95th percentile per-packet one-way delay: 69.555 ms  
Loss rate: 0.09%  
-- Flow 2:  
Average throughput: 29.05 Mbit/s  
95th percentile per-packet one-way delay: 22.226 ms  
Loss rate: 0.09%  
-- Flow 3:  
Average throughput: 3.97 Mbit/s  
95th percentile per-packet one-way delay: 22.192 ms  
Loss rate: 0.15%

Run 5: Report of PCC-Vivace — Data Link



Run 1: Statistics of WebRTC media

Start at: 2018-12-02 14:50:14

End at: 2018-12-02 14:50:44

Local clock offset: 2.825 ms

Remote clock offset: -3.66 ms

# Below is generated by plot.py at 2018-12-02 16:50:03

# Datalink statistics

-- Total of 3 flows:

Average throughput: 2.98 Mbit/s

95th percentile per-packet one-way delay: 20.518 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 1.62 Mbit/s

95th percentile per-packet one-way delay: 20.559 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.92 Mbit/s

95th percentile per-packet one-way delay: 20.407 ms

Loss rate: 0.01%

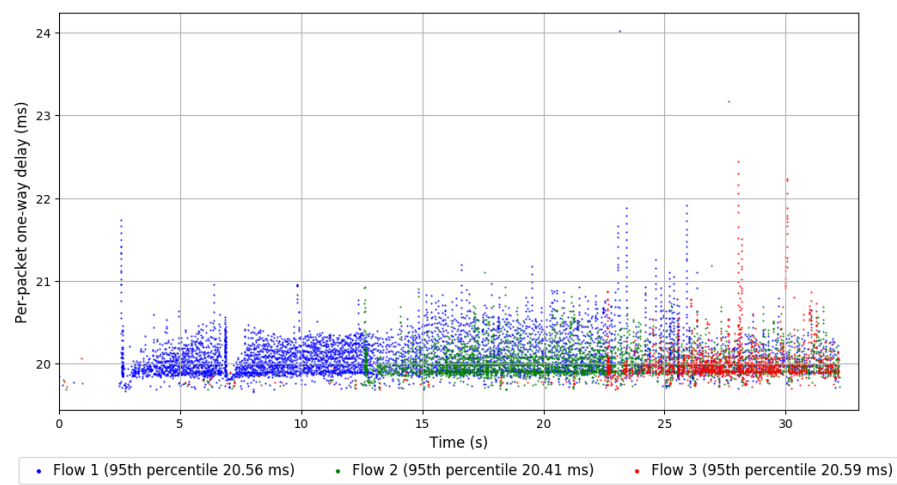
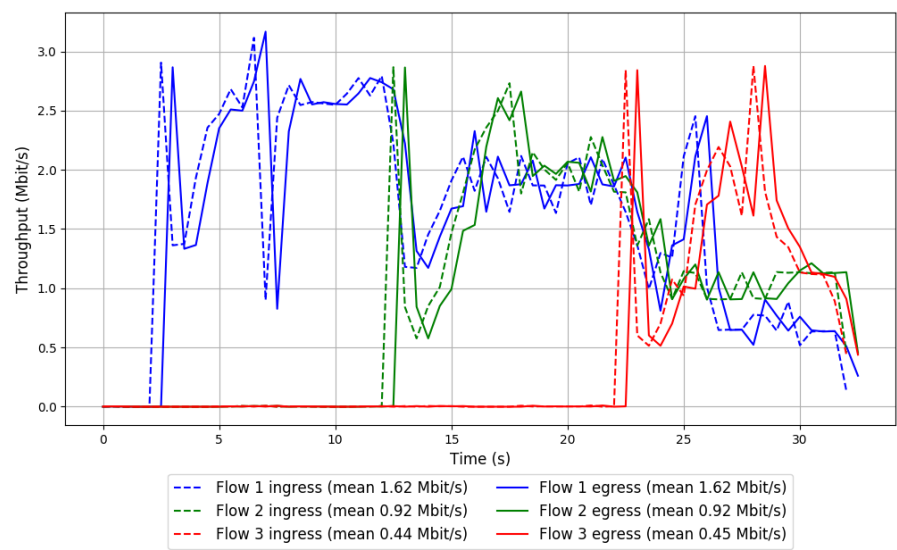
-- Flow 3:

Average throughput: 0.45 Mbit/s

95th percentile per-packet one-way delay: 20.590 ms

Loss rate: 0.01%

Run 1: Report of WebRTC media — Data Link

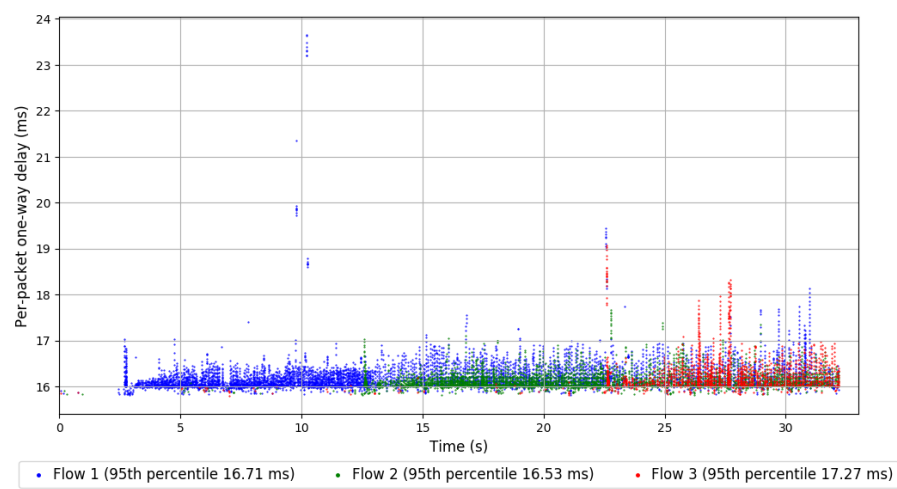
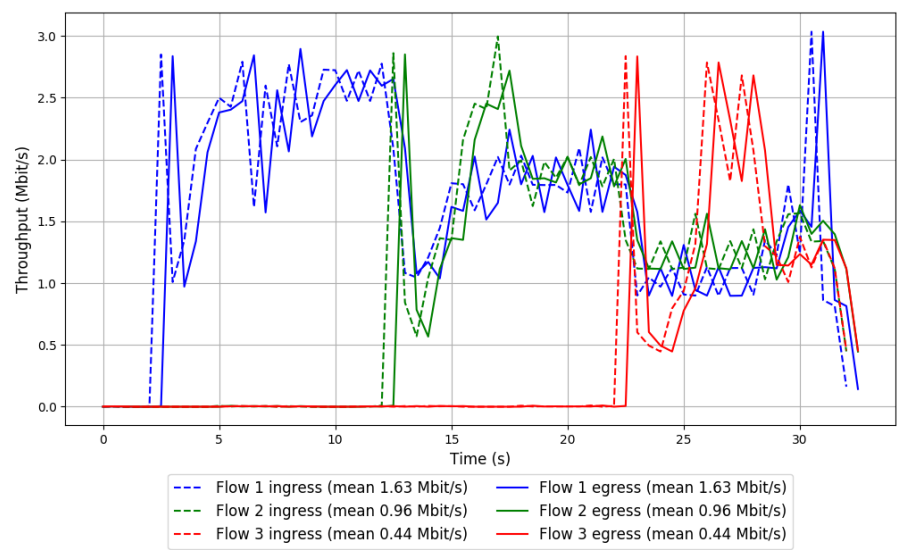


Run 2: Statistics of WebRTC media

Start at: 2018-12-02 15:14:07  
End at: 2018-12-02 15:14:37  
Local clock offset: -1.317 ms  
Remote clock offset: -3.502 ms

# Below is generated by plot.py at 2018-12-02 16:50:03  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 3.02 Mbit/s  
95th percentile per-packet one-way delay: 16.711 ms  
Loss rate: 0.01%  
-- Flow 1:  
Average throughput: 1.63 Mbit/s  
95th percentile per-packet one-way delay: 16.709 ms  
Loss rate: 0.02%  
-- Flow 2:  
Average throughput: 0.96 Mbit/s  
95th percentile per-packet one-way delay: 16.531 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.44 Mbit/s  
95th percentile per-packet one-way delay: 17.266 ms  
Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link





Run 3: Statistics of WebRTC media

Start at: 2018-12-02 15:37:43

End at: 2018-12-02 15:38:13

Local clock offset: -0.457 ms

Remote clock offset: -2.76 ms

# Below is generated by plot.py at 2018-12-02 16:50:03

# Datalink statistics

-- Total of 3 flows:

Average throughput: 3.02 Mbit/s

95th percentile per-packet one-way delay: 18.344 ms

Loss rate: 0.12%

-- Flow 1:

Average throughput: 1.61 Mbit/s

95th percentile per-packet one-way delay: 18.304 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.97 Mbit/s

95th percentile per-packet one-way delay: 18.380 ms

Loss rate: 0.00%

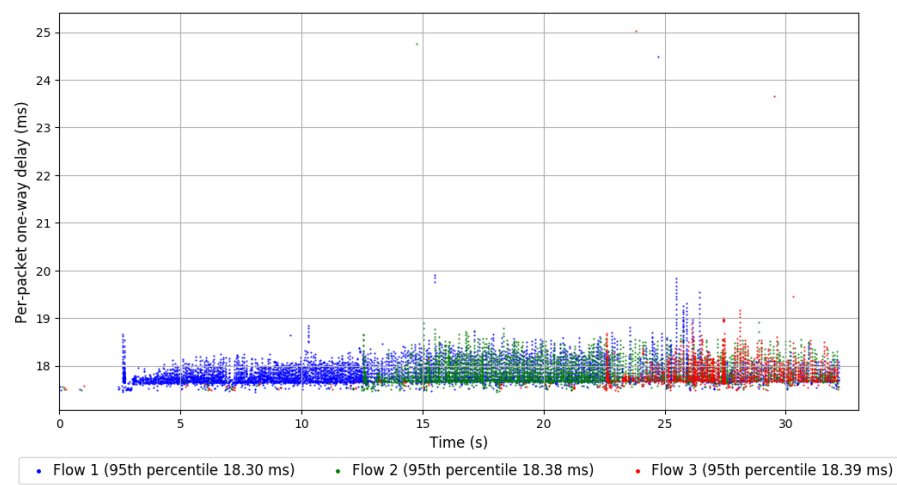
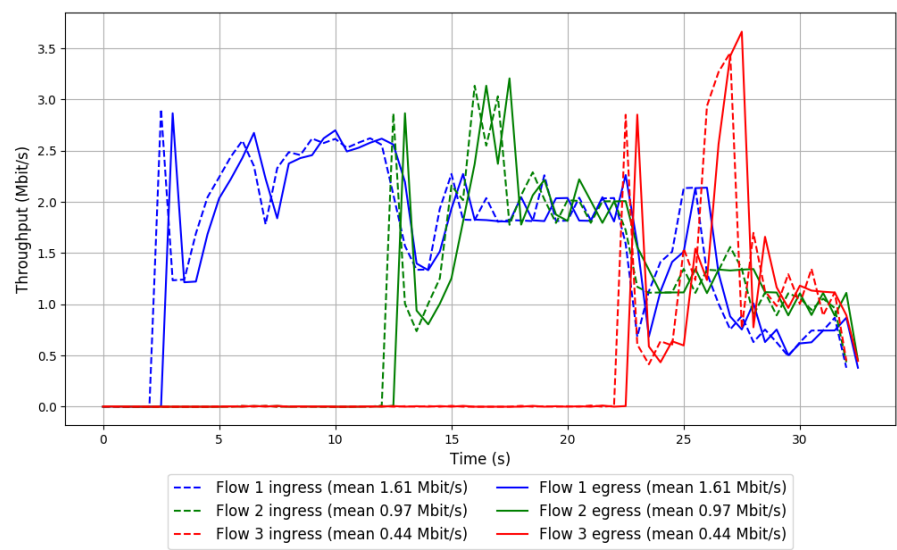
-- Flow 3:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 18.390 ms

Loss rate: 0.79%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2018-12-02 16:00:46

End at: 2018-12-02 16:01:16

Local clock offset: 3.134 ms

Remote clock offset: -4.19 ms

# Below is generated by plot.py at 2018-12-02 16:50:03

# Datalink statistics

-- Total of 3 flows:

Average throughput: 3.01 Mbit/s

95th percentile per-packet one-way delay: 23.510 ms

Loss rate: 0.04%

-- Flow 1:

Average throughput: 1.59 Mbit/s

95th percentile per-packet one-way delay: 23.370 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.99 Mbit/s

95th percentile per-packet one-way delay: 23.612 ms

Loss rate: 0.00%

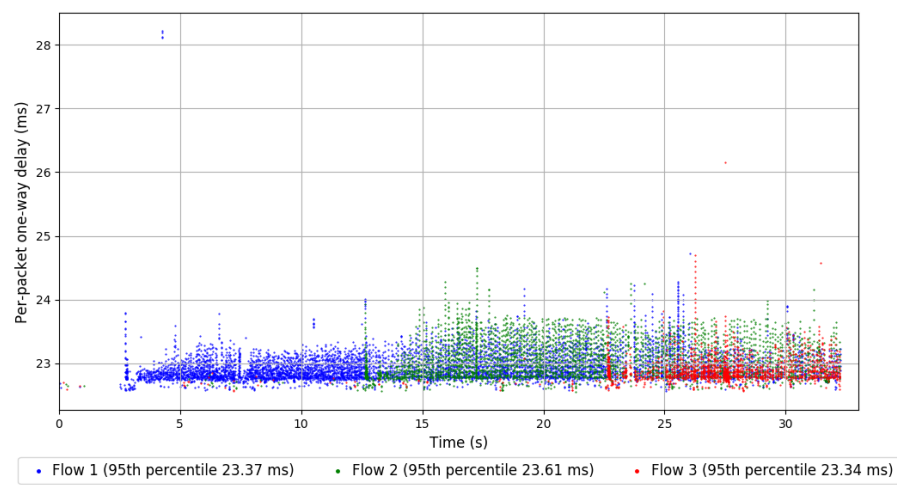
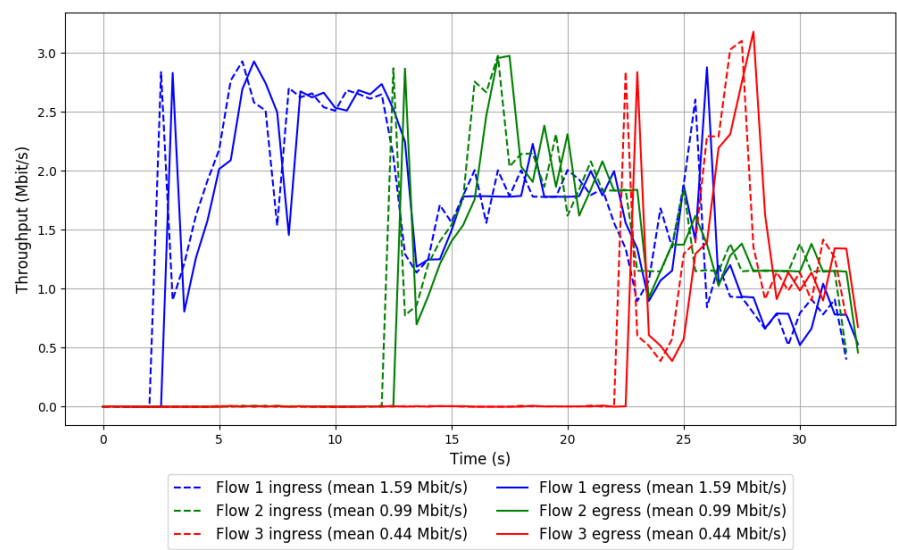
-- Flow 3:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 23.336 ms

Loss rate: 0.27%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2018-12-02 16:23:34  
End at: 2018-12-02 16:24:04  
Local clock offset: 1.012 ms  
Remote clock offset: -3.944 ms

# Below is generated by plot.py at 2018-12-02 16:50:03  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 2.93 Mbit/s  
95th percentile per-packet one-way delay: 20.843 ms  
Loss rate: 0.12%  
-- Flow 1:  
Average throughput: 1.61 Mbit/s  
95th percentile per-packet one-way delay: 20.772 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.90 Mbit/s  
95th percentile per-packet one-way delay: 20.651 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.43 Mbit/s  
95th percentile per-packet one-way delay: 21.174 ms  
Loss rate: 0.81%

Run 5: Report of WebRTC media — Data Link

