

## Pantheon Report

Generated at 2019-05-30 02:48:22 (UTC).

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

Repeated the test of 21 congestion control schemes 5 times.

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

NTP offsets were measured against `nets.org.sg` and have been applied to correct the timestamps in logs.

### System info:

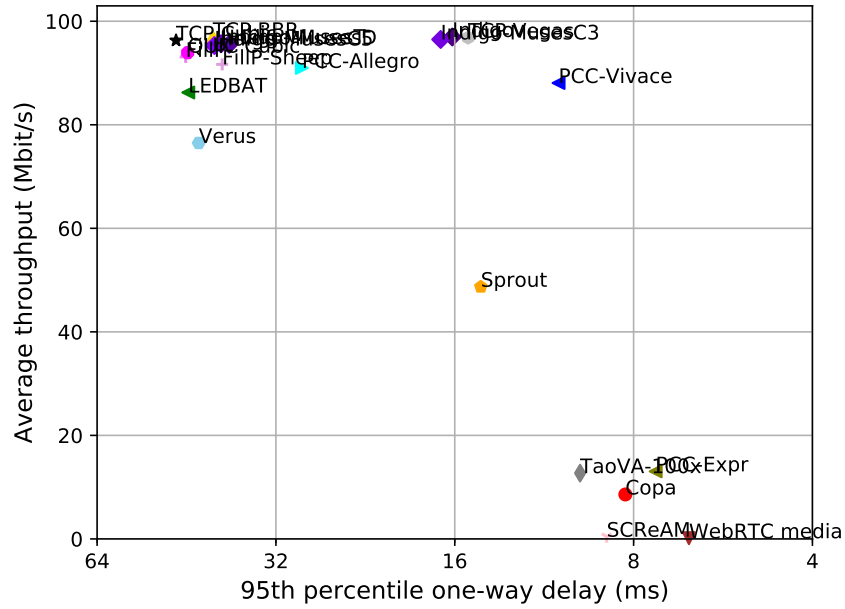
```
Linux 4.15.0-1035-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

### Git summary:

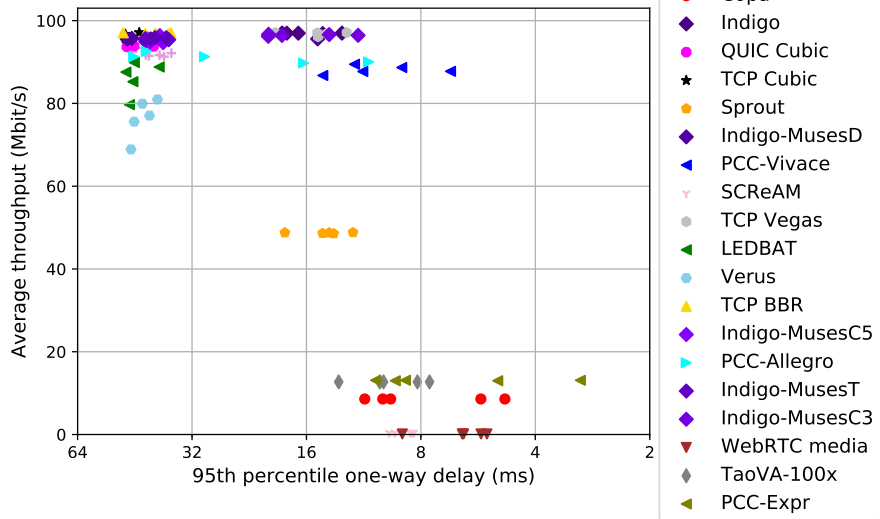
```
branch: muses @ 7a686f7c2ed0a333082c0bab1fa5c921ab47e6ee
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 5ce721187ad823da20955337730c746486ca4966
third_party/pantheon-tunnel @ f866d3f58d27afd942717625ee3a354cc2e802bd
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quick @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2
M src/ScreamClient
M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
M src/examples/cellsim.cc
M src/examples/sproutbt2.cc
M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
M src/verus.hpp
M tools/plot.py
```

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

test from AWS India 1 to India, 5 runs of 30s each per scheme  
 3 flows with 10s interval between flows (mean of all runs by scheme)



test from AWS India 1 to India, 5 runs of 30s each per scheme  
 3 flows with 10s interval between flows



scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	5	55.57	44.05	36.28	39.67	41.74	40.14	1.21	2.57	1.87
Copa	5	0.00	10.51	4.78	7.38	11.79	7.44	98.00	71.18	75.01
TCP Cubic	5	70.09	30.37	18.04	46.96	47.30	47.19	0.66	0.78	0.68
FillP	5	56.84	40.68	28.69	43.55	46.55	46.91	29.63	47.91	58.90
FillP-Sheep	5	55.95	38.59	30.73	36.67	40.78	42.62	4.66	8.83	15.06
Indigo	5	56.70	39.61	42.73	15.87	16.16	16.74	0.00	0.00	0.00
Indigo-MusesC3	5	49.32	53.28	41.62	16.12	17.35	16.74	0.00	0.00	0.00
Indigo-MusesC5	5	59.30	42.96	26.49	37.45	41.75	44.13	3.28	8.09	19.69
Indigo-MusesD	5	77.40	22.87	10.86	37.66	39.11	39.41	5.45	9.11	13.97
Indigo-MusesT	5	60.63	40.16	29.35	35.33	40.57	44.73	3.22	6.87	16.91
LEDBAT	5	52.83	36.90	26.77	44.43	45.56	45.38	0.26	0.52	0.54
PCC-Allegro	5	78.57	14.77	7.85	28.54	30.40	30.39	1.84	2.18	2.71
PCC-Expr	5	8.13	5.62	3.58	7.34	7.30	7.38	42.24	28.26	25.74
QUIC Cubic	5	69.19	27.08	20.67	45.02	45.09	45.10	1.67	2.04	2.68
SCReAM	5	0.21	0.21	0.22	8.89	8.84	8.83	0.00	0.00	0.00
Sprout	5	24.48	24.39	24.19	13.95	14.71	15.01	0.00	0.00	0.00
TaoVA-100x	5	7.45	8.02	2.74	10.44	9.84	9.60	87.84	90.94	97.23
TCP Vegas	5	55.02	42.57	40.43	16.04	13.09	11.61	0.54	0.00	0.01
Verus	5	52.27	27.51	23.75	42.35	45.51	42.42	28.96	49.67	33.90
PCC-Vivace	5	60.64	32.17	18.31	9.81	11.78	13.68	0.02	0.04	0.10
WebRTC media	5	0.05	0.05	0.05	6.35	6.38	6.55	0.01	0.00	0.00



Run 1: Statistics of TCP BBR

Start at: 2019-05-30 00:35:03  
End at: 2019-05-30 00:35:33  
Local clock offset: 2.172 ms  
Remote clock offset: -2.492 ms

# Below is generated by plot.py at 2019-05-30 02:37:46

# Datalink statistics

-- Total of 3 flows:

Average throughput: 96.91 Mbit/s  
95th percentile per-packet one-way delay: 42.476 ms  
Loss rate: 2.05%

-- Flow 1:

Average throughput: 55.29 Mbit/s  
95th percentile per-packet one-way delay: 42.039 ms  
Loss rate: 1.34%

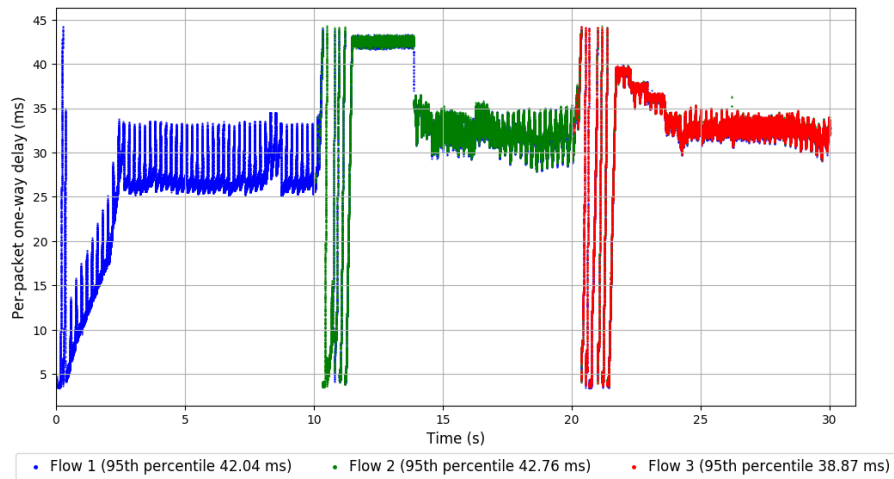
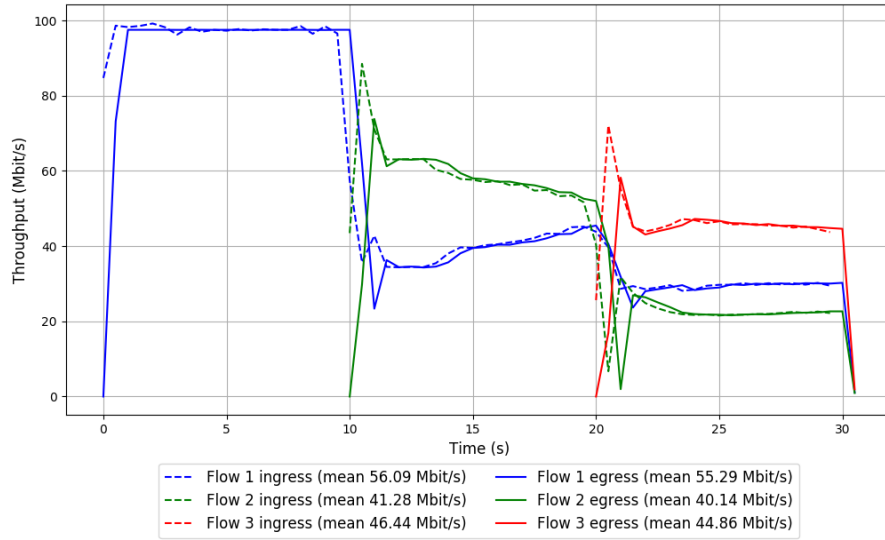
-- Flow 2:

Average throughput: 40.14 Mbit/s  
95th percentile per-packet one-way delay: 42.759 ms  
Loss rate: 2.74%

-- Flow 3:

Average throughput: 44.86 Mbit/s  
95th percentile per-packet one-way delay: 38.865 ms  
Loss rate: 3.38%

# Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2019-05-30 01:00:50

End at: 2019-05-30 01:01:20

Local clock offset: 6.6 ms

Remote clock offset: 0.516 ms

# Below is generated by plot.py at 2019-05-30 02:37:48

# Datalink statistics

-- Total of 3 flows:

Average throughput: 97.08 Mbit/s

95th percentile per-packet one-way delay: 36.397 ms

Loss rate: 1.64%

-- Flow 1:

Average throughput: 57.59 Mbit/s

95th percentile per-packet one-way delay: 35.399 ms

Loss rate: 1.15%

-- Flow 2:

Average throughput: 39.18 Mbit/s

95th percentile per-packet one-way delay: 38.195 ms

Loss rate: 2.77%

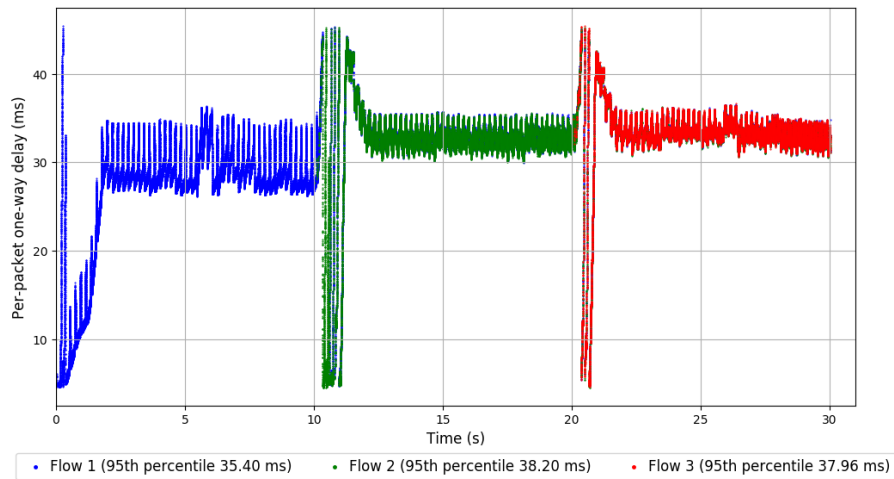
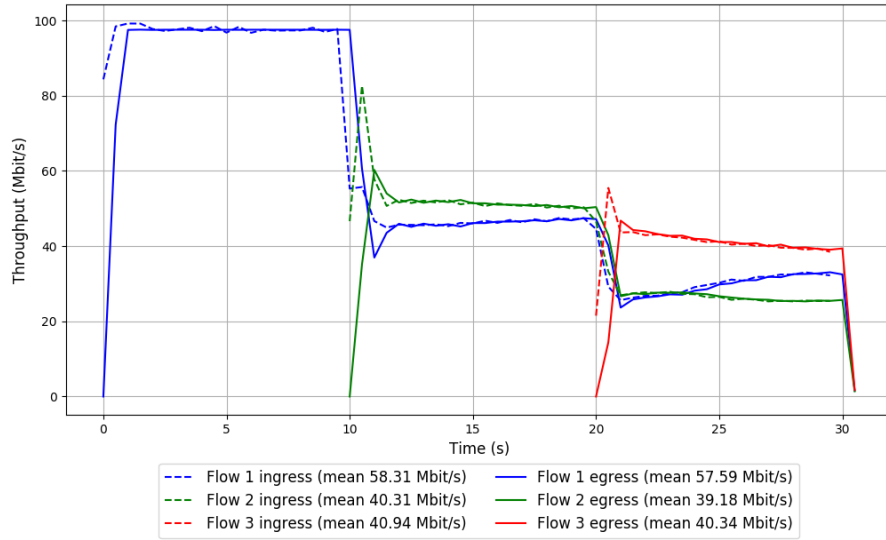
-- Flow 3:

Average throughput: 40.34 Mbit/s

95th percentile per-packet one-way delay: 37.956 ms

Loss rate: 1.48%

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



Run 3: Statistics of TCP BBR

Start at: 2019-05-30 01:26:11

End at: 2019-05-30 01:26:41

Local clock offset: 1.955 ms

Remote clock offset: 2.879 ms

# Below is generated by plot.py at 2019-05-30 02:37:48

# Datalink statistics

-- Total of 3 flows:

Average throughput: 96.81 Mbit/s

95th percentile per-packet one-way delay: 36.923 ms

Loss rate: 1.52%

-- Flow 1:

Average throughput: 54.73 Mbit/s

95th percentile per-packet one-way delay: 36.367 ms

Loss rate: 1.06%

-- Flow 2:

Average throughput: 47.04 Mbit/s

95th percentile per-packet one-way delay: 37.970 ms

Loss rate: 2.31%

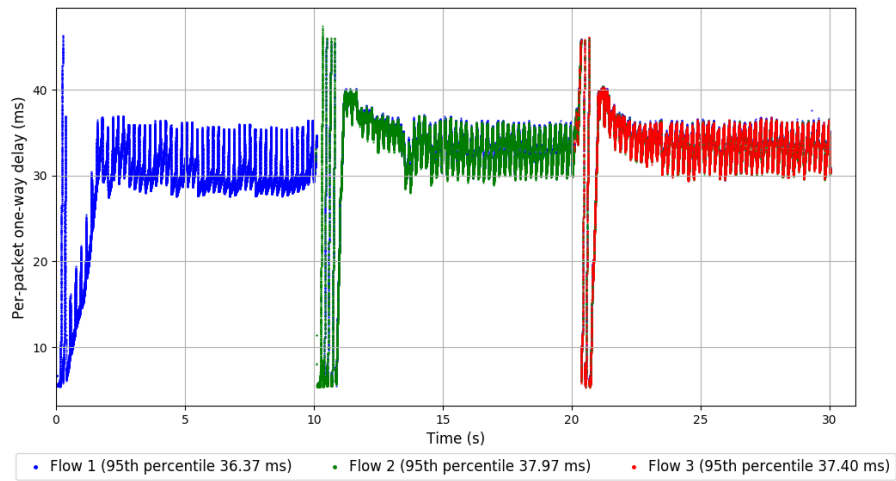
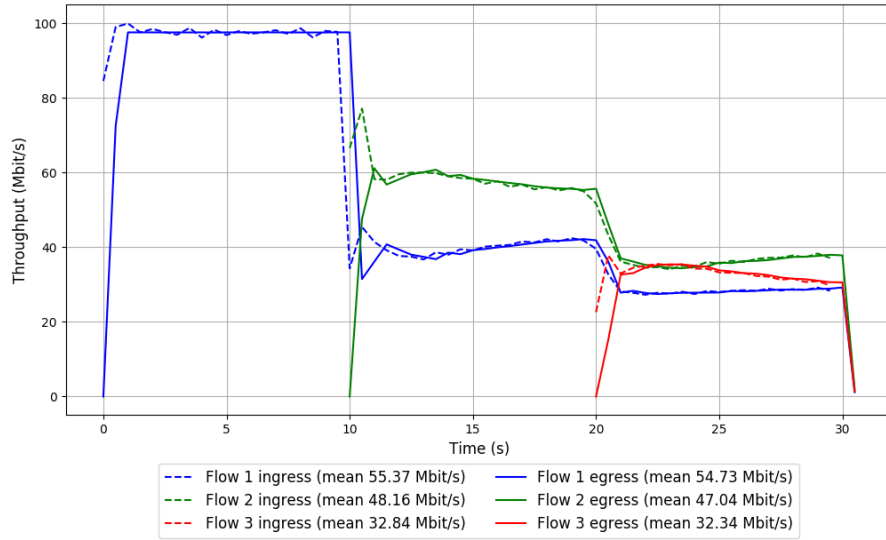
-- Flow 3:

Average throughput: 32.34 Mbit/s

95th percentile per-packet one-way delay: 37.395 ms

Loss rate: 1.53%

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



Run 4: Statistics of TCP BBR

Start at: 2019-05-30 01:52:49

End at: 2019-05-30 01:53:19

Local clock offset: 0.601 ms

Remote clock offset: 3.369 ms

# Below is generated by plot.py at 2019-05-30 02:37:48

# Datalink statistics

-- Total of 3 flows:

Average throughput: 96.95 Mbit/s

95th percentile per-packet one-way delay: 39.998 ms

Loss rate: 1.83%

-- Flow 1:

Average throughput: 57.95 Mbit/s

95th percentile per-packet one-way delay: 39.197 ms

Loss rate: 1.39%

-- Flow 2:

Average throughput: 41.82 Mbit/s

95th percentile per-packet one-way delay: 40.978 ms

Loss rate: 2.88%

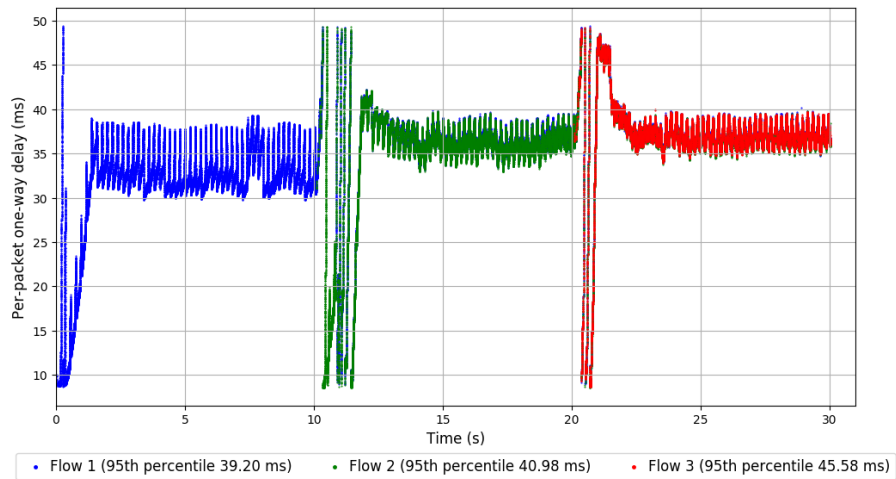
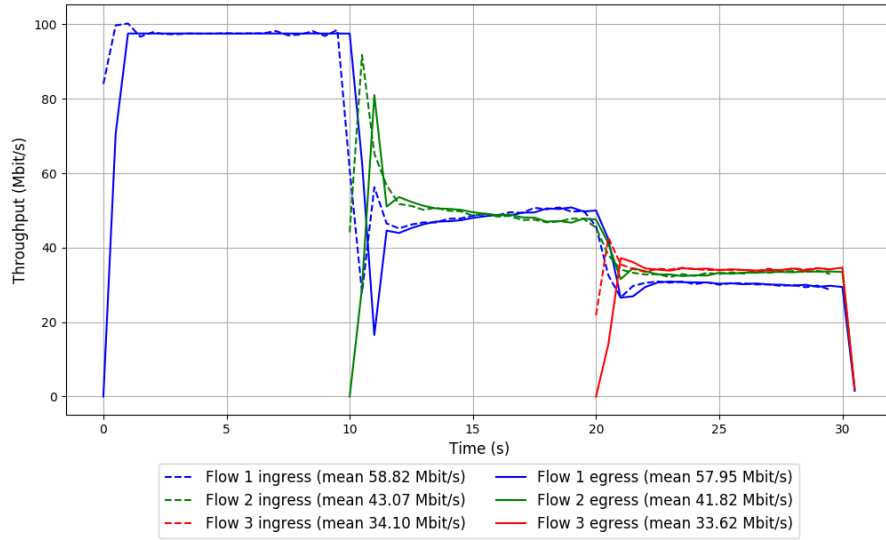
-- Flow 3:

Average throughput: 33.62 Mbit/s

95th percentile per-packet one-way delay: 45.583 ms

Loss rate: 1.45%

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





Run 5: Statistics of TCP BBR

Start at: 2019-05-30 02:19:07

End at: 2019-05-30 02:19:37

Local clock offset: -1.269 ms

Remote clock offset: 4.82 ms

# Below is generated by plot.py at 2019-05-30 02:37:49

# Datalink statistics

-- Total of 3 flows:

Average throughput: 97.06 Mbit/s

95th percentile per-packet one-way delay: 48.550 ms

Loss rate: 1.54%

-- Flow 1:

Average throughput: 52.31 Mbit/s

95th percentile per-packet one-way delay: 45.371 ms

Loss rate: 1.12%

-- Flow 2:

Average throughput: 52.09 Mbit/s

95th percentile per-packet one-way delay: 48.796 ms

Loss rate: 2.17%

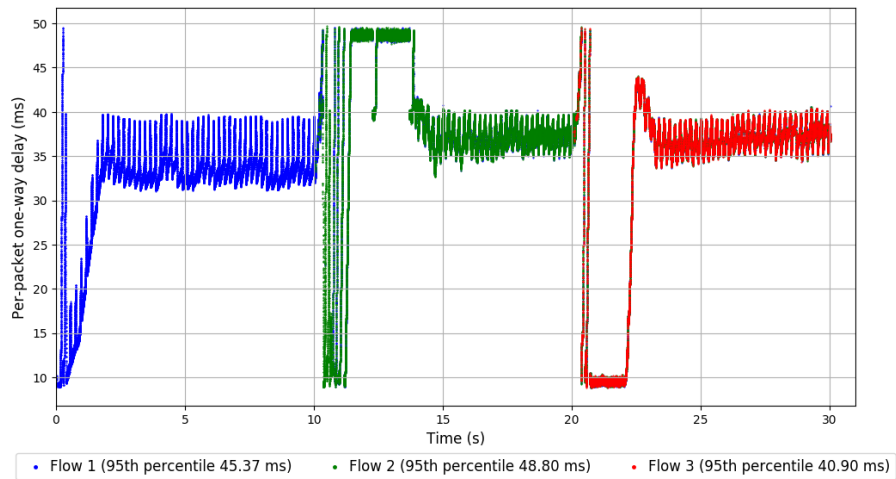
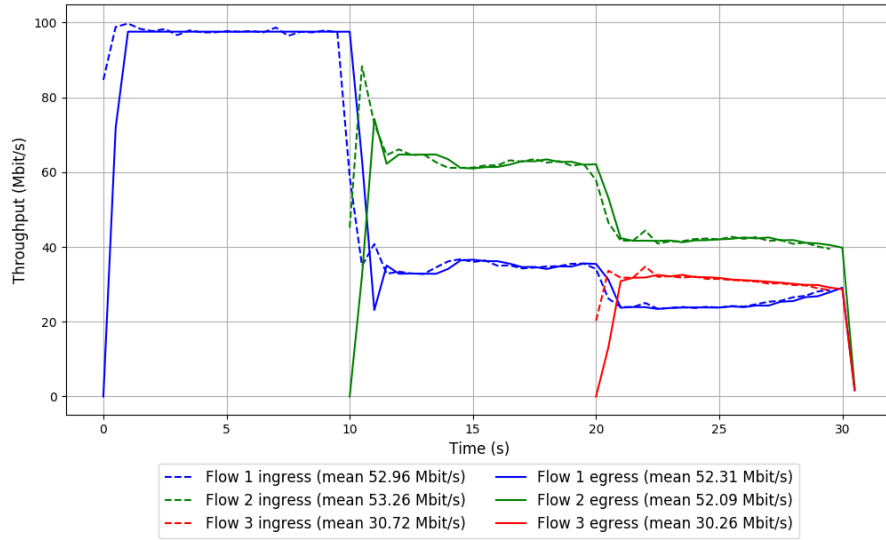
-- Flow 3:

Average throughput: 30.26 Mbit/s

95th percentile per-packet one-way delay: 40.902 ms

Loss rate: 1.51%

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



Run 1: Statistics of Copa

Start at: 2019-05-30 00:39:57  
End at: 2019-05-30 00:40:27  
Local clock offset: 2.544 ms  
Remote clock offset: -2.045 ms

# Below is generated by plot.py at 2019-05-30 02:37:49

# Datalink statistics

-- Total of 3 flows:

Average throughput: 8.59 Mbit/s  
95th percentile per-packet one-way delay: 5.563 ms  
Loss rate: 72.20%

-- Flow 1:

Average throughput: 0.00 Mbit/s  
95th percentile per-packet one-way delay: 4.947 ms  
Loss rate: 98.60%

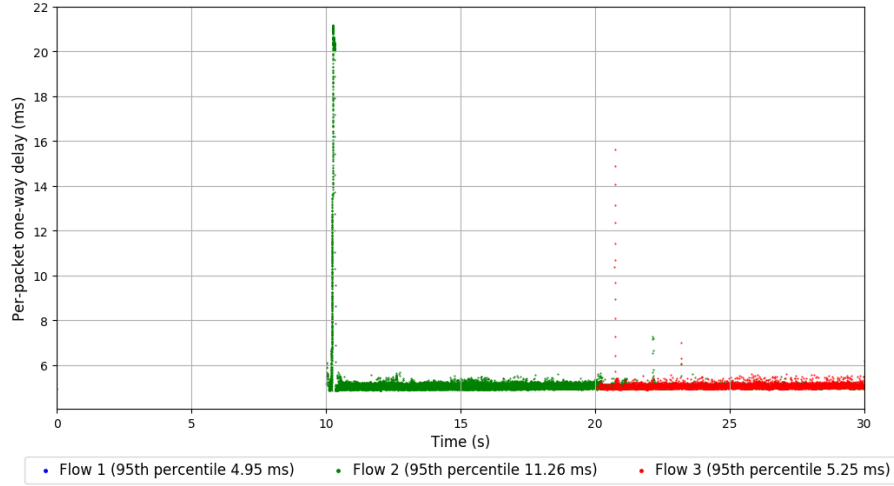
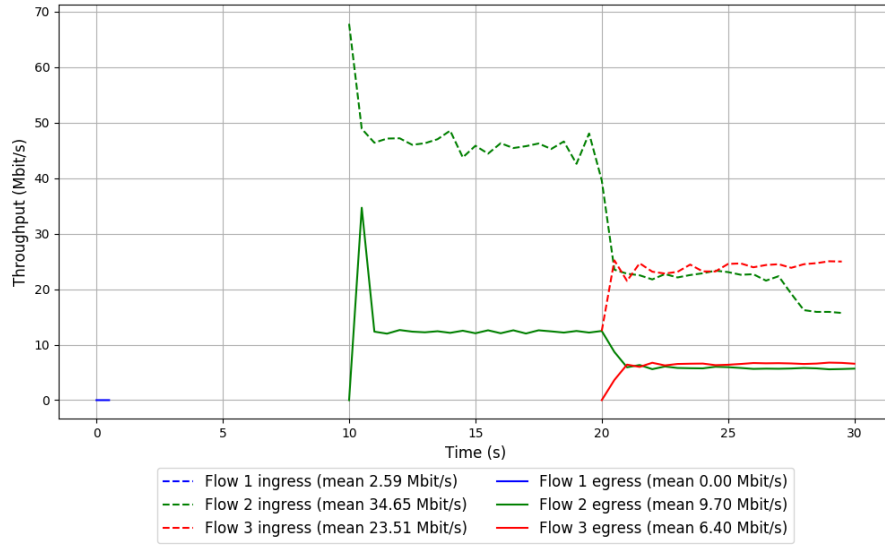
-- Flow 2:

Average throughput: 9.70 Mbit/s  
95th percentile per-packet one-way delay: 11.261 ms  
Loss rate: 72.01%

-- Flow 3:

Average throughput: 6.40 Mbit/s  
95th percentile per-packet one-way delay: 5.248 ms  
Loss rate: 72.76%

# Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2019-05-30 01:05:33  
End at: 2019-05-30 01:06:03  
Local clock offset: 6.324 ms  
Remote clock offset: -0.176 ms

# Below is generated by plot.py at 2019-05-30 02:37:49

# Datalink statistics

-- Total of 3 flows:

Average throughput: 8.59 Mbit/s  
95th percentile per-packet one-way delay: 4.810 ms  
Loss rate: 72.28%

-- Flow 1:

Average throughput: 0.00 Mbit/s  
95th percentile per-packet one-way delay: 4.120 ms  
Loss rate: 97.92%

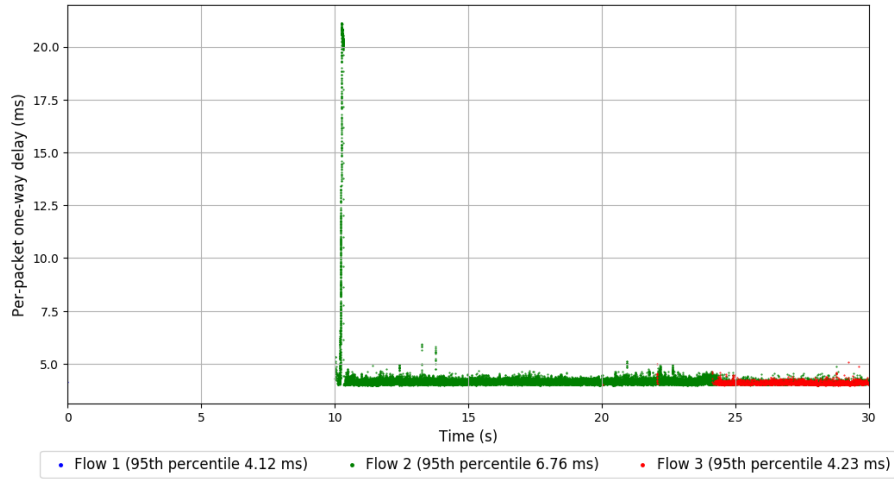
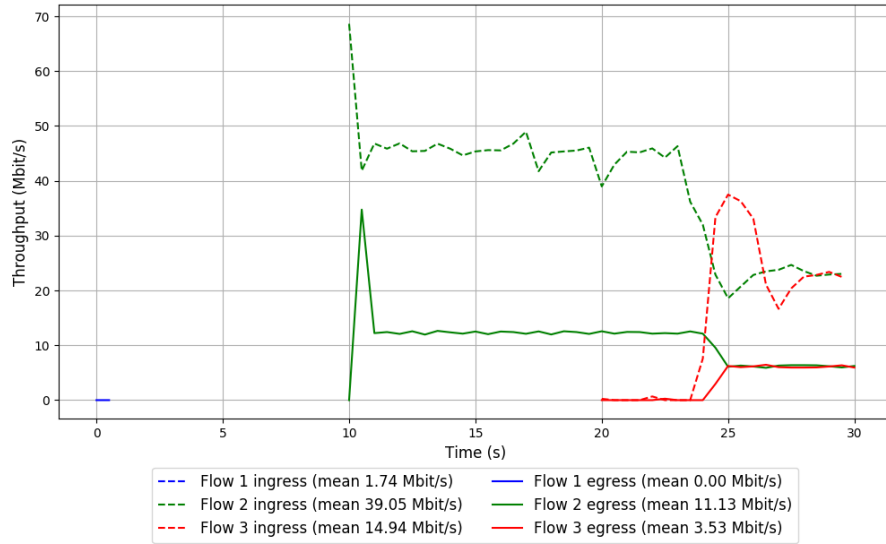
-- Flow 2:

Average throughput: 11.13 Mbit/s  
95th percentile per-packet one-way delay: 6.760 ms  
Loss rate: 71.50%

-- Flow 3:

Average throughput: 3.53 Mbit/s  
95th percentile per-packet one-way delay: 4.229 ms  
Loss rate: 76.39%

## Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2019-05-30 01:31:01

End at: 2019-05-30 01:31:31

Local clock offset: -2.702 ms

Remote clock offset: 2.339 ms

# Below is generated by plot.py at 2019-05-30 02:37:49

# Datalink statistics

-- Total of 3 flows:

Average throughput: 8.59 Mbit/s

95th percentile per-packet one-way delay: 11.241 ms

Loss rate: 70.76%

-- Flow 1:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 9.589 ms

Loss rate: 97.24%

-- Flow 2:

Average throughput: 11.17 Mbit/s

95th percentile per-packet one-way delay: 13.730 ms

Loss rate: 70.29%

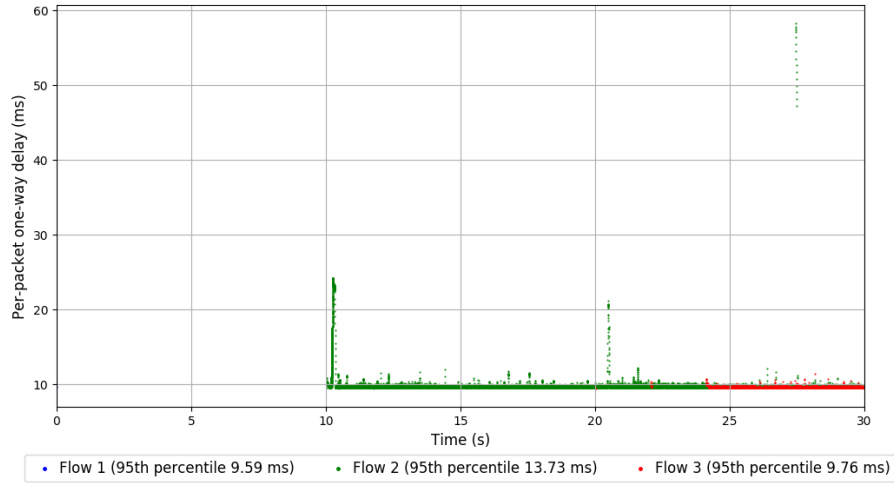
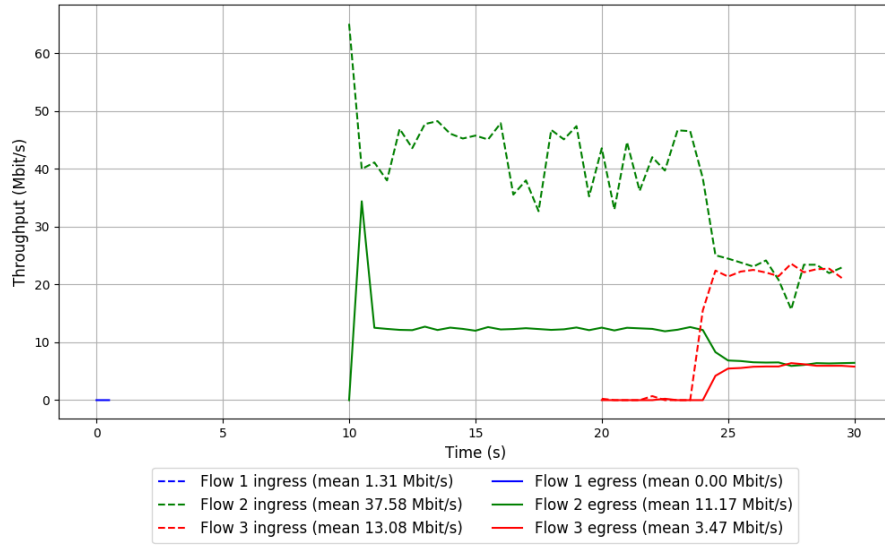
-- Flow 3:

Average throughput: 3.47 Mbit/s

95th percentile per-packet one-way delay: 9.757 ms

Loss rate: 73.48%

### Run 3: Report of Copa — Data Link





Run 4: Statistics of Copa

Start at: 2019-05-30 01:57:51

End at: 2019-05-30 01:58:21

Local clock offset: 0.372 ms

Remote clock offset: 3.767 ms

# Below is generated by plot.py at 2019-05-30 02:37:49

# Datalink statistics

-- Total of 3 flows:

Average throughput: 8.59 Mbit/s

95th percentile per-packet one-way delay: 10.078 ms

Loss rate: 72.55%

-- Flow 1:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 9.348 ms

Loss rate: 97.92%

-- Flow 2:

Average throughput: 9.97 Mbit/s

95th percentile per-packet one-way delay: 14.652 ms

Loss rate: 71.87%

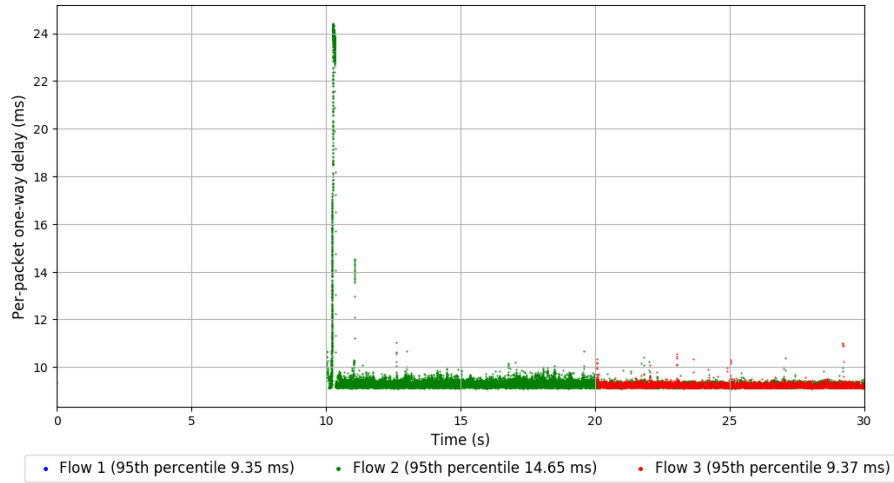
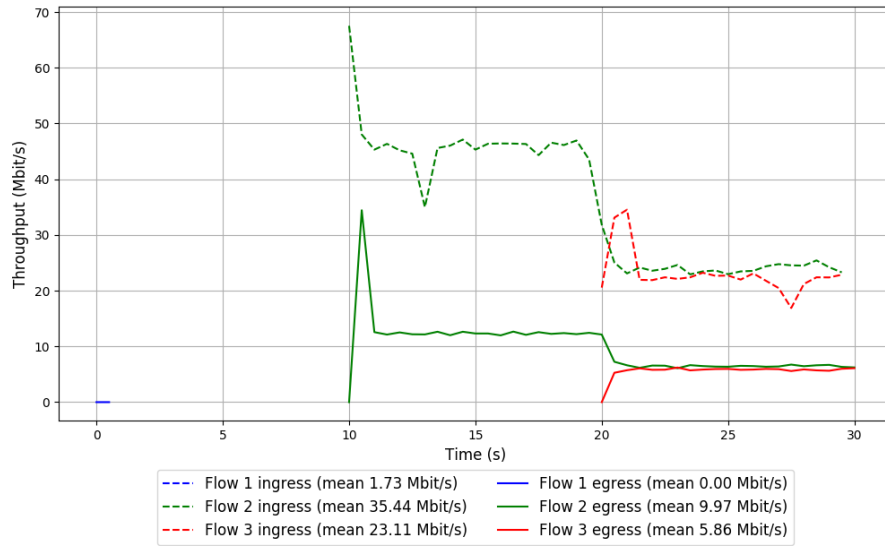
-- Flow 3:

Average throughput: 5.86 Mbit/s

95th percentile per-packet one-way delay: 9.370 ms

Loss rate: 74.65%

### Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2019-05-30 02:24:02

End at: 2019-05-30 02:24:32

Local clock offset: -1.808 ms

Remote clock offset: 4.859 ms

# Below is generated by plot.py at 2019-05-30 02:37:49

# Datalink statistics

-- Total of 3 flows:

Average throughput: 8.59 Mbit/s

95th percentile per-packet one-way delay: 9.608 ms

Loss rate: 71.94%

-- Flow 1:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 8.885 ms

Loss rate: 98.33%

-- Flow 2:

Average throughput: 10.58 Mbit/s

95th percentile per-packet one-way delay: 12.568 ms

Loss rate: 70.23%

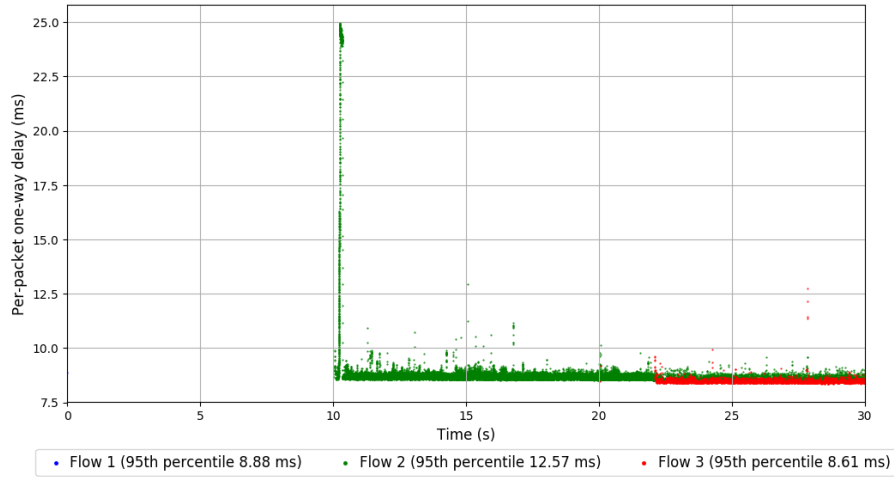
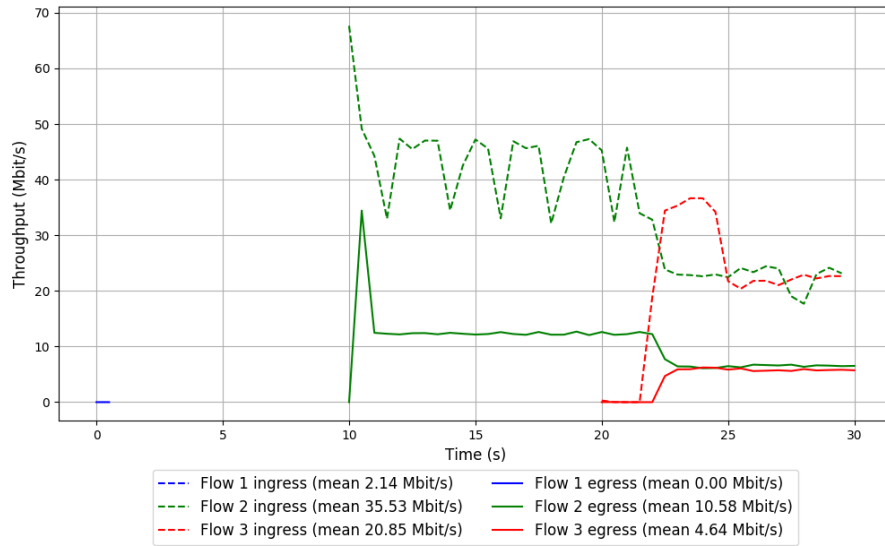
-- Flow 3:

Average throughput: 4.64 Mbit/s

95th percentile per-packet one-way delay: 8.613 ms

Loss rate: 77.77%

### Run 5: Report of Copa — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2019-05-30 00:29:02  
End at: 2019-05-30 00:29:32  
Local clock offset: -1.059 ms  
Remote clock offset: -0.976 ms

# Below is generated by plot.py at 2019-05-30 02:38:01

# Datalink statistics

-- Total of 3 flows:

Average throughput: 96.70 Mbit/s  
95th percentile per-packet one-way delay: 47.932 ms  
Loss rate: 0.86%

-- Flow 1:

Average throughput: 73.26 Mbit/s  
95th percentile per-packet one-way delay: 47.709 ms  
Loss rate: 0.78%

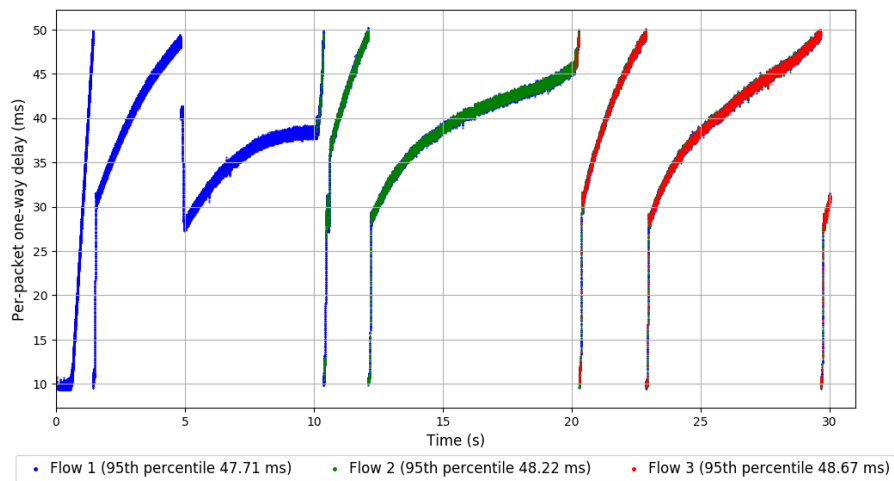
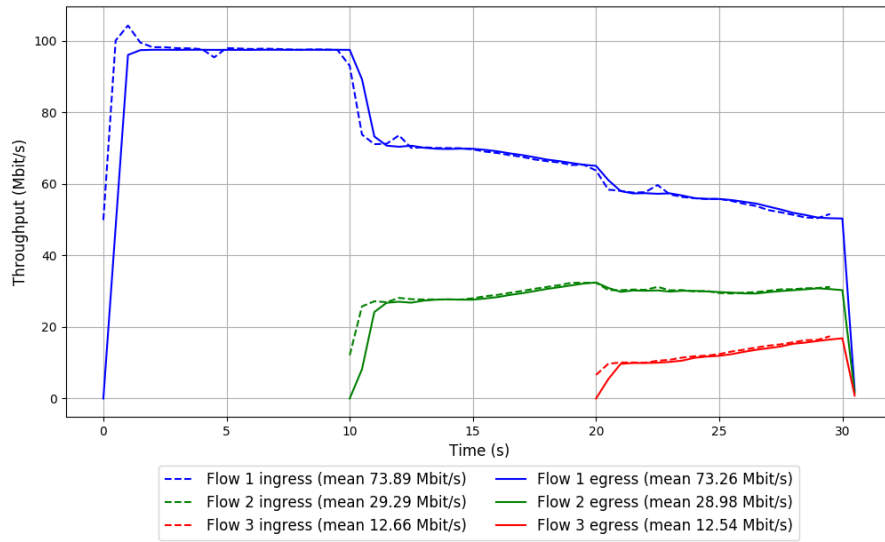
-- Flow 2:

Average throughput: 28.98 Mbit/s  
95th percentile per-packet one-way delay: 48.220 ms  
Loss rate: 1.12%

-- Flow 3:

Average throughput: 12.54 Mbit/s  
95th percentile per-packet one-way delay: 48.673 ms  
Loss rate: 1.03%

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



Run 2: Statistics of TCP Cubic

Start at: 2019-05-30 00:54:39  
End at: 2019-05-30 00:55:09  
Local clock offset: 1.124 ms  
Remote clock offset: -0.106 ms

# Below is generated by plot.py at 2019-05-30 02:38:09

# Datalink statistics

-- Total of 3 flows:

Average throughput: 96.34 Mbit/s  
95th percentile per-packet one-way delay: 47.879 ms  
Loss rate: 0.51%

-- Flow 1:

Average throughput: 64.01 Mbit/s  
95th percentile per-packet one-way delay: 47.437 ms  
Loss rate: 0.52%

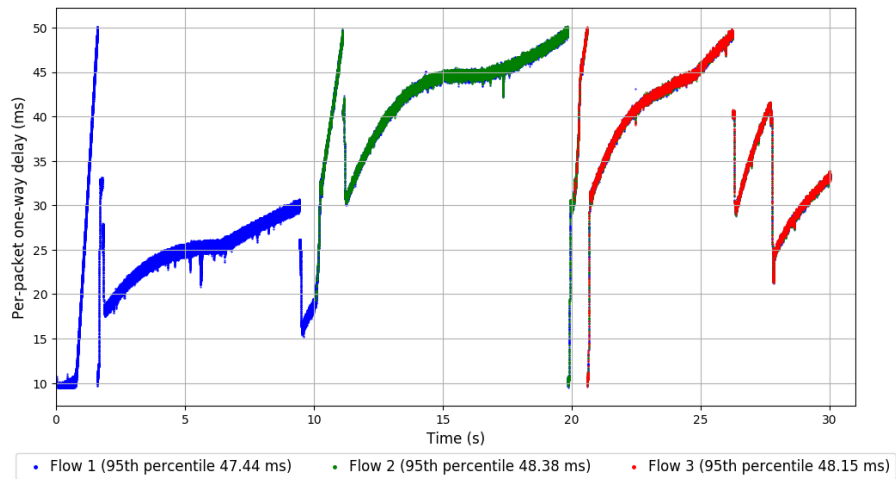
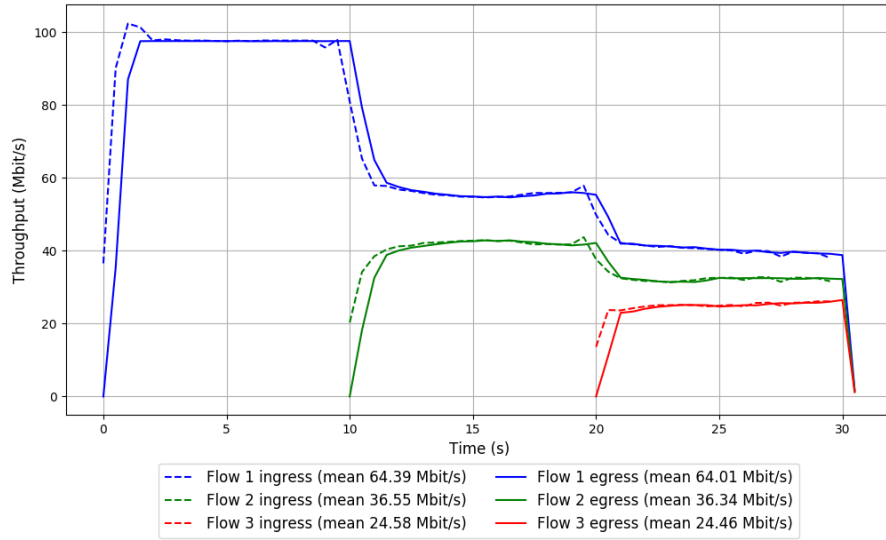
-- Flow 2:

Average throughput: 36.34 Mbit/s  
95th percentile per-packet one-way delay: 48.385 ms  
Loss rate: 0.50%

-- Flow 3:

Average throughput: 24.46 Mbit/s  
95th percentile per-packet one-way delay: 48.147 ms  
Loss rate: 0.45%

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





Run 3: Statistics of TCP Cubic

Start at: 2019-05-30 01:20:01

End at: 2019-05-30 01:20:31

Local clock offset: -2.055 ms

Remote clock offset: 1.448 ms

# Below is generated by plot.py at 2019-05-30 02:38:09

# Datalink statistics

-- Total of 3 flows:

Average throughput: 95.65 Mbit/s

95th percentile per-packet one-way delay: 47.819 ms

Loss rate: 0.66%

-- Flow 1:

Average throughput: 72.27 Mbit/s

95th percentile per-packet one-way delay: 47.801 ms

Loss rate: 0.63%

-- Flow 2:

Average throughput: 29.74 Mbit/s

95th percentile per-packet one-way delay: 47.793 ms

Loss rate: 0.76%

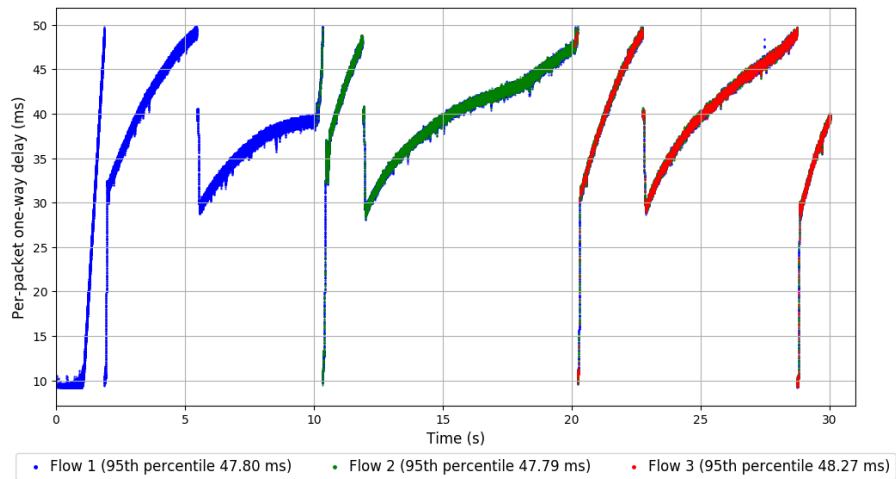
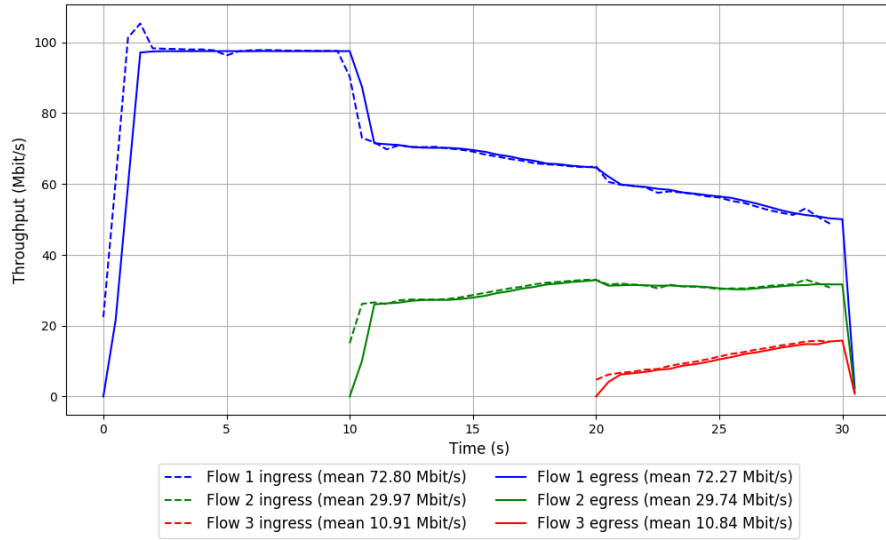
-- Flow 3:

Average throughput: 10.84 Mbit/s

95th percentile per-packet one-way delay: 48.274 ms

Loss rate: 0.73%

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



Run 4: Statistics of TCP Cubic

Start at: 2019-05-30 01:46:09

End at: 2019-05-30 01:46:39

Local clock offset: 3.402 ms

Remote clock offset: 3.413 ms

# Below is generated by plot.py at 2019-05-30 02:38:44

# Datalink statistics

-- Total of 3 flows:

Average throughput: 97.13 Mbit/s

95th percentile per-packet one-way delay: 44.042 ms

Loss rate: 0.74%

-- Flow 1:

Average throughput: 73.86 Mbit/s

95th percentile per-packet one-way delay: 44.072 ms

Loss rate: 0.73%

-- Flow 2:

Average throughput: 30.27 Mbit/s

95th percentile per-packet one-way delay: 44.014 ms

Loss rate: 0.83%

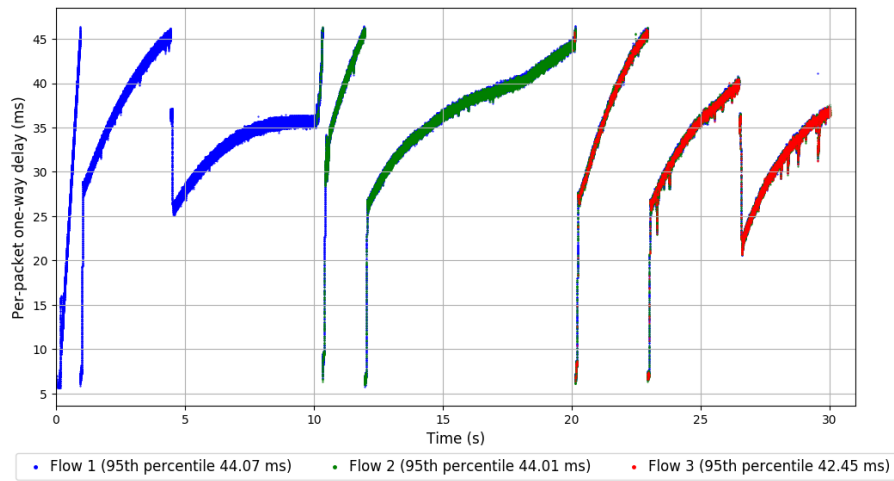
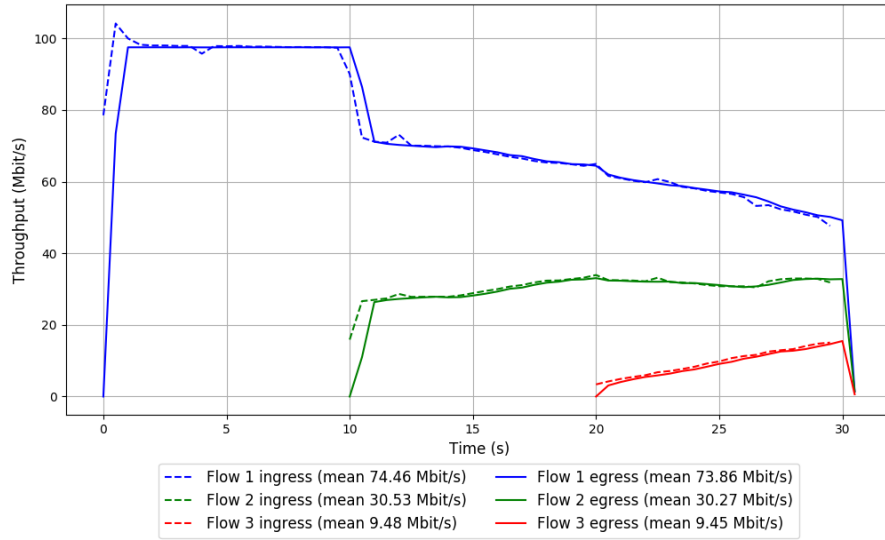
-- Flow 3:

Average throughput: 9.45 Mbit/s

95th percentile per-packet one-way delay: 42.452 ms

Loss rate: 0.39%

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



Run 5: Statistics of TCP Cubic

Start at: 2019-05-30 02:12:44

End at: 2019-05-30 02:13:14

Local clock offset: -0.32 ms

Remote clock offset: 4.506 ms

# Below is generated by plot.py at 2019-05-30 02:38:44

# Datalink statistics

-- Total of 3 flows:

Average throughput: 95.65 Mbit/s

95th percentile per-packet one-way delay: 47.974 ms

Loss rate: 0.67%

-- Flow 1:

Average throughput: 67.07 Mbit/s

95th percentile per-packet one-way delay: 47.803 ms

Loss rate: 0.63%

-- Flow 2:

Average throughput: 26.51 Mbit/s

95th percentile per-packet one-way delay: 48.111 ms

Loss rate: 0.71%

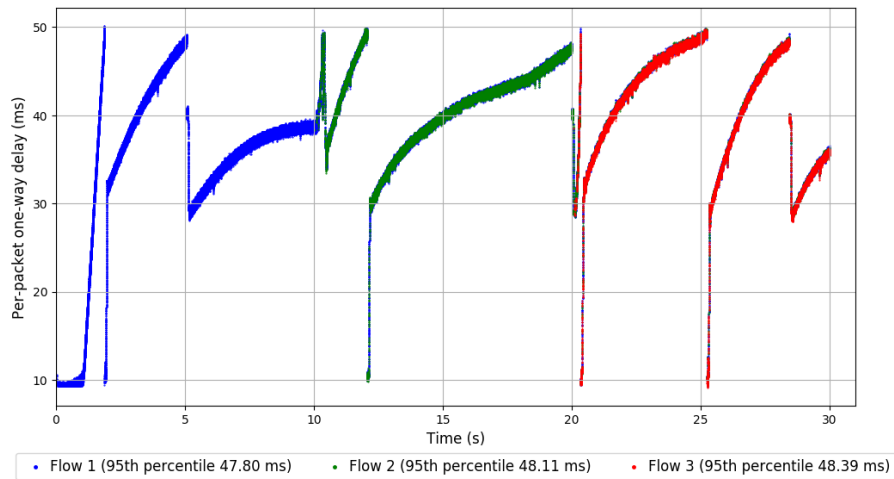
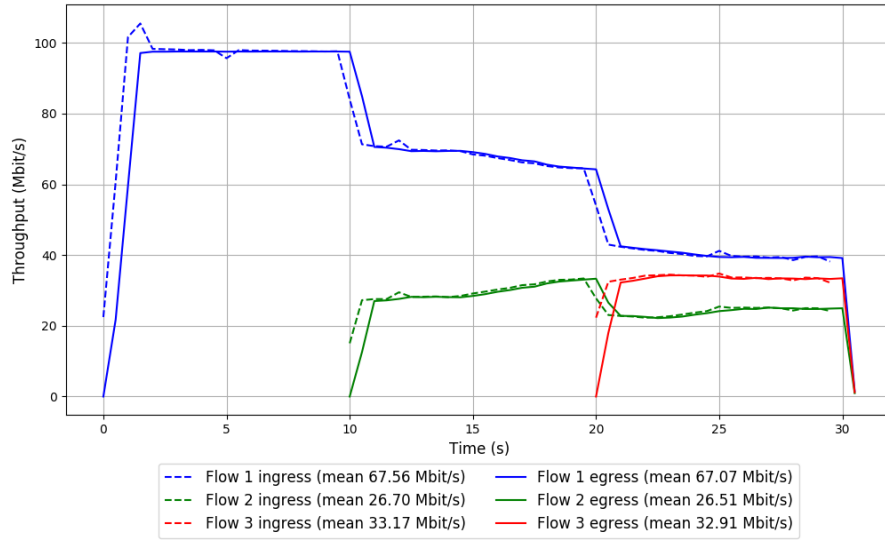
-- Flow 3:

Average throughput: 32.91 Mbit/s

95th percentile per-packet one-way delay: 48.392 ms

Loss rate: 0.82%

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

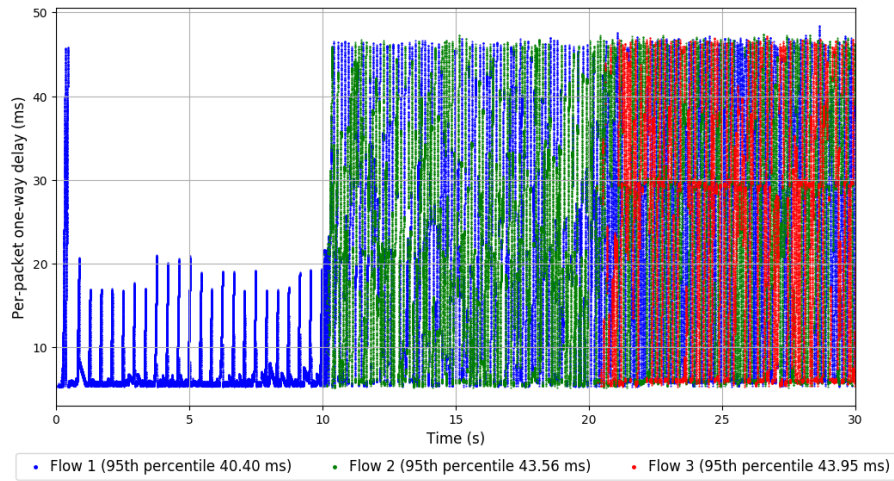
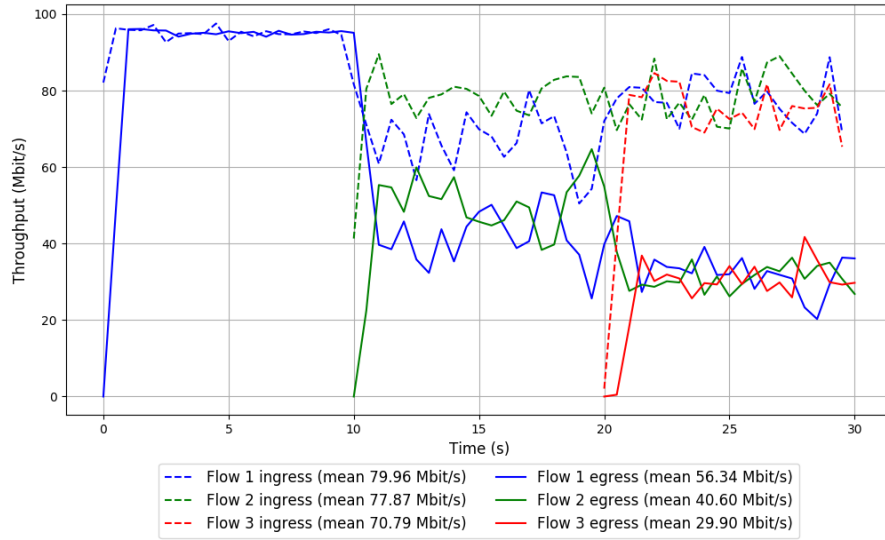


Run 1: Statistics of FillP

Start at: 2019-05-30 00:25:29  
End at: 2019-05-30 00:25:59  
Local clock offset: 2.284 ms  
Remote clock offset: -0.589 ms

```
# Below is generated by plot.py at 2019-05-30 02:39:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.97 Mbit/s
95th percentile per-packet one-way delay: 42.381 ms
Loss rate: 40.07%
-- Flow 1:
Average throughput: 56.34 Mbit/s
95th percentile per-packet one-way delay: 40.398 ms
Loss rate: 29.55%
-- Flow 2:
Average throughput: 40.60 Mbit/s
95th percentile per-packet one-way delay: 43.565 ms
Loss rate: 47.86%
-- Flow 3:
Average throughput: 29.90 Mbit/s
95th percentile per-packet one-way delay: 43.949 ms
Loss rate: 58.71%
```

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





Run 2: Statistics of FillP

Start at: 2019-05-30 00:50:47  
End at: 2019-05-30 00:51:17  
Local clock offset: 4.413 ms  
Remote clock offset: -1.541 ms

# Below is generated by plot.py at 2019-05-30 02:39:14

# Datalink statistics

-- Total of 3 flows:

Average throughput: 93.38 Mbit/s  
95th percentile per-packet one-way delay: 45.004 ms  
Loss rate: 38.87%

-- Flow 1:

Average throughput: 57.96 Mbit/s  
95th percentile per-packet one-way delay: 43.319 ms  
Loss rate: 27.95%

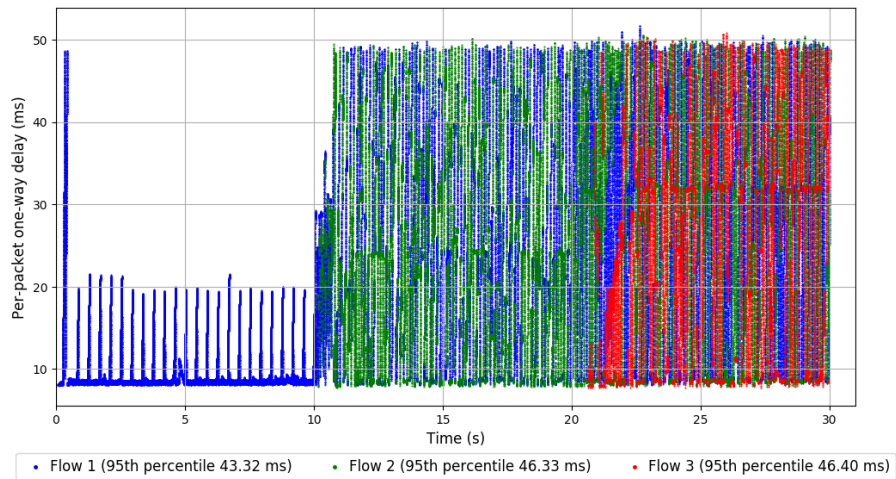
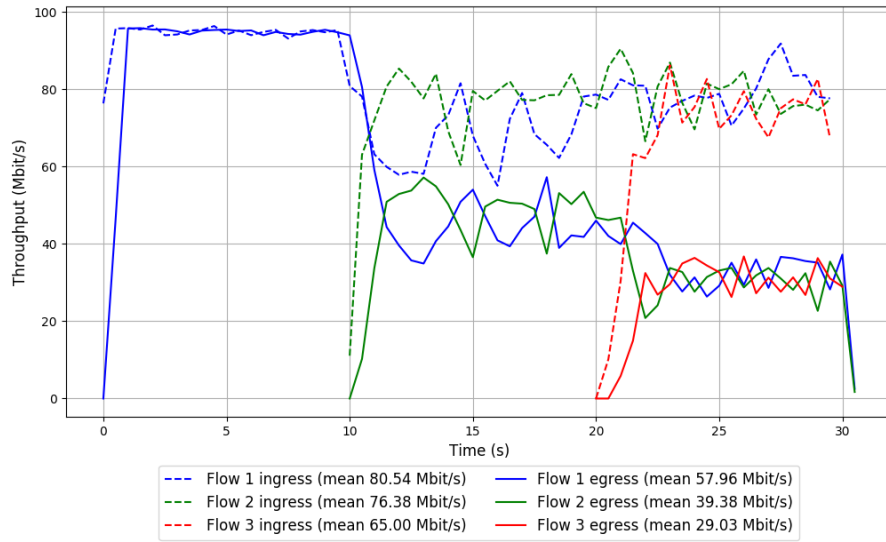
-- Flow 2:

Average throughput: 39.38 Mbit/s  
95th percentile per-packet one-way delay: 46.330 ms  
Loss rate: 48.36%

-- Flow 3:

Average throughput: 29.03 Mbit/s  
95th percentile per-packet one-way delay: 46.397 ms  
Loss rate: 57.26%

## Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2019-05-30 01:16:17

End at: 2019-05-30 01:16:47

Local clock offset: -1.623 ms

Remote clock offset: 0.513 ms

# Below is generated by plot.py at 2019-05-30 02:39:16

# Datalink statistics

-- Total of 3 flows:

Average throughput: 92.92 Mbit/s

95th percentile per-packet one-way delay: 45.923 ms

Loss rate: 40.62%

-- Flow 1:

Average throughput: 56.16 Mbit/s

95th percentile per-packet one-way delay: 44.180 ms

Loss rate: 29.98%

-- Flow 2:

Average throughput: 41.13 Mbit/s

95th percentile per-packet one-way delay: 47.019 ms

Loss rate: 47.38%

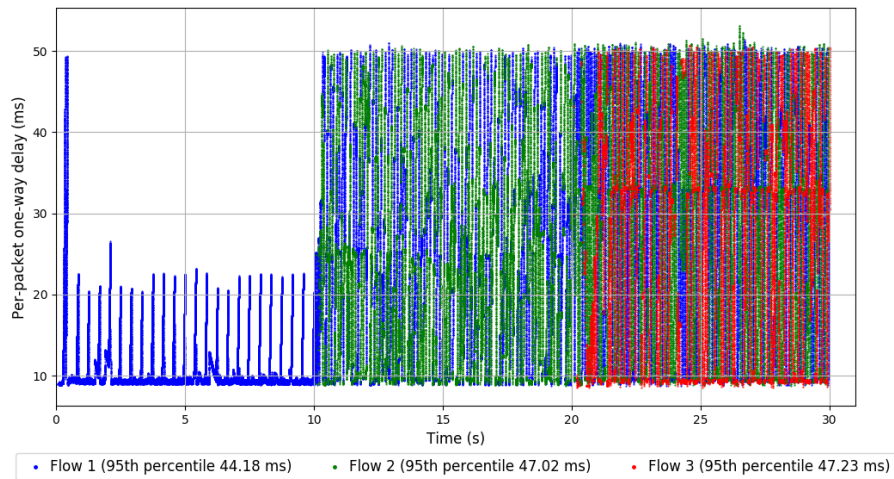
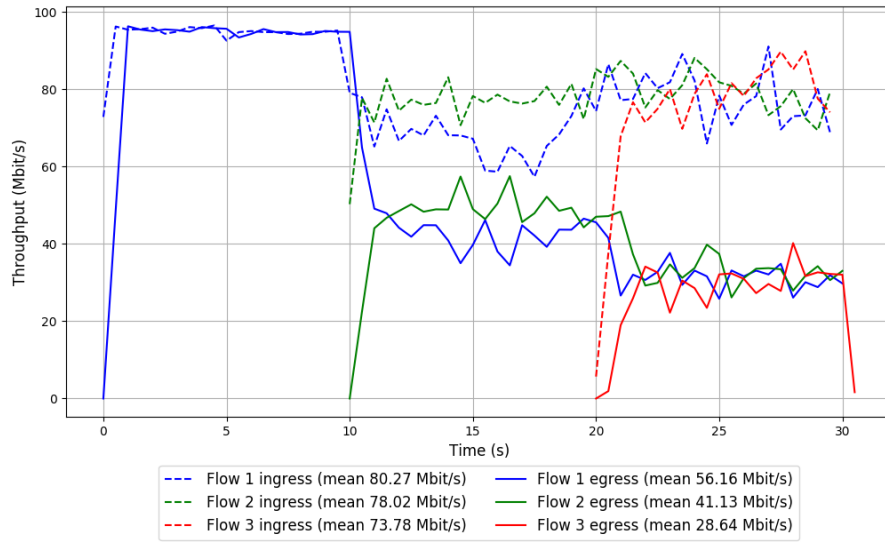
-- Flow 3:

Average throughput: 28.64 Mbit/s

95th percentile per-packet one-way delay: 47.233 ms

Loss rate: 61.19%

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



Run 4: Statistics of FillP

Start at: 2019-05-30 01:42:27

End at: 2019-05-30 01:42:57

Local clock offset: -1.724 ms

Remote clock offset: 3.3 ms

# Below is generated by plot.py at 2019-05-30 02:39:28

# Datalink statistics

-- Total of 3 flows:

Average throughput: 93.43 Mbit/s

95th percentile per-packet one-way delay: 47.029 ms

Loss rate: 40.27%

-- Flow 1:

Average throughput: 55.28 Mbit/s

95th percentile per-packet one-way delay: 45.566 ms

Loss rate: 30.83%

-- Flow 2:

Average throughput: 42.52 Mbit/s

95th percentile per-packet one-way delay: 47.808 ms

Loss rate: 45.96%

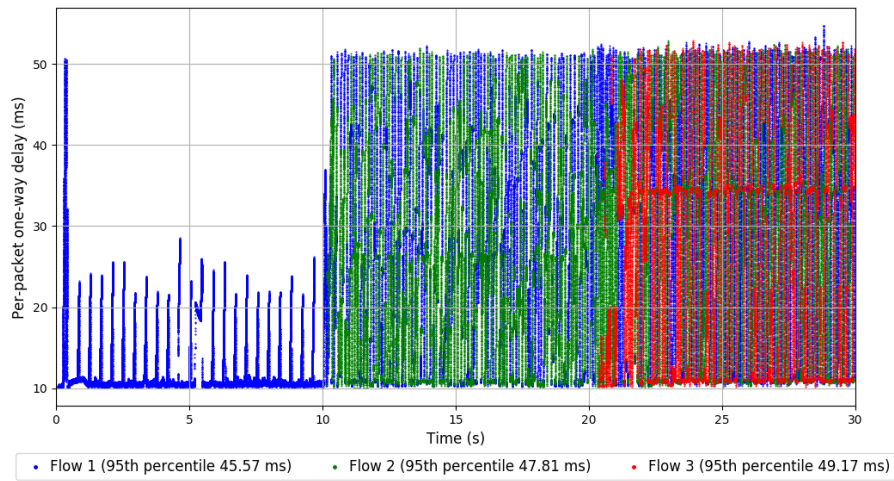
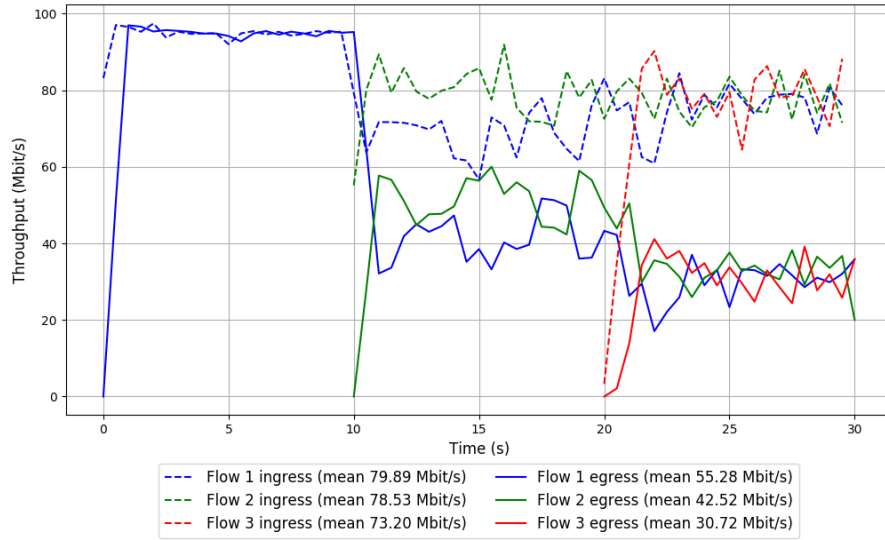
-- Flow 3:

Average throughput: 30.72 Mbit/s

95th percentile per-packet one-way delay: 49.167 ms

Loss rate: 59.06%

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



Run 5: Statistics of FillP

Start at: 2019-05-30 02:08:52

End at: 2019-05-30 02:09:22

Local clock offset: 0.956 ms

Remote clock offset: 5.301 ms

# Below is generated by plot.py at 2019-05-30 02:39:37

# Datalink statistics

-- Total of 3 flows:

Average throughput: 92.86 Mbit/s

95th percentile per-packet one-way delay: 46.650 ms

Loss rate: 40.18%

-- Flow 1:

Average throughput: 58.48 Mbit/s

95th percentile per-packet one-way delay: 44.309 ms

Loss rate: 29.82%

-- Flow 2:

Average throughput: 39.79 Mbit/s

95th percentile per-packet one-way delay: 48.021 ms

Loss rate: 49.98%

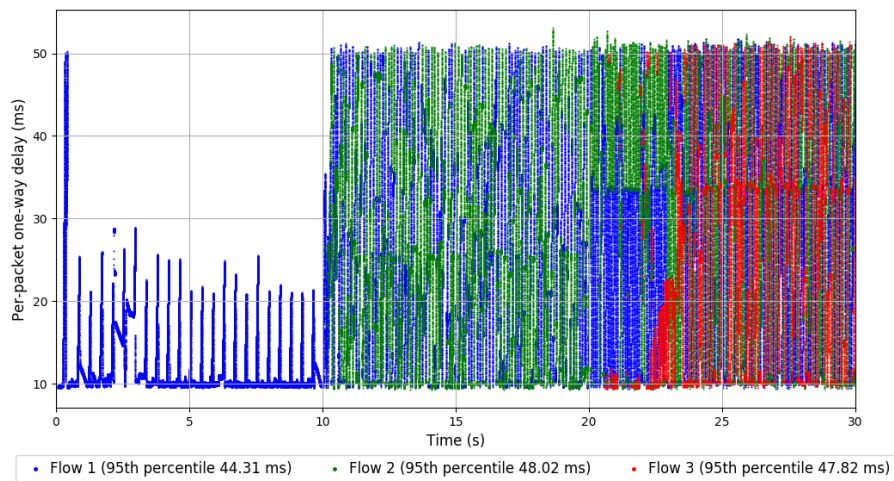
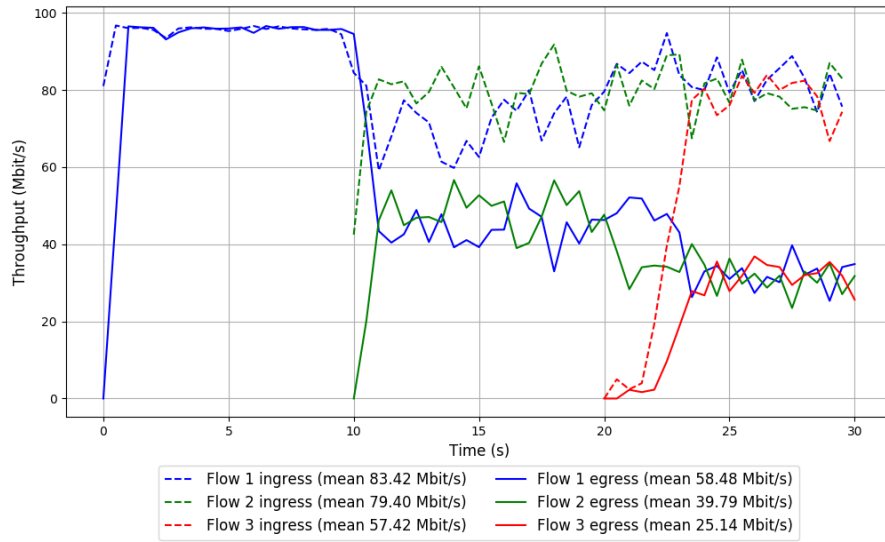
-- Flow 3:

Average throughput: 25.14 Mbit/s

95th percentile per-packet one-way delay: 47.823 ms

Loss rate: 58.29%

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





Run 1: Statistics of FillP-Sheep

Start at: 2019-05-30 00:30:14  
End at: 2019-05-30 00:30:44  
Local clock offset: -2.342 ms  
Remote clock offset: -2.666 ms

# Below is generated by plot.py at 2019-05-30 02:39:37

# Datalink statistics

-- Total of 3 flows:

Average throughput: 91.49 Mbit/s  
95th percentile per-packet one-way delay: 41.556 ms  
Loss rate: 7.44%

-- Flow 1:

Average throughput: 53.81 Mbit/s  
95th percentile per-packet one-way delay: 37.444 ms  
Loss rate: 4.52%

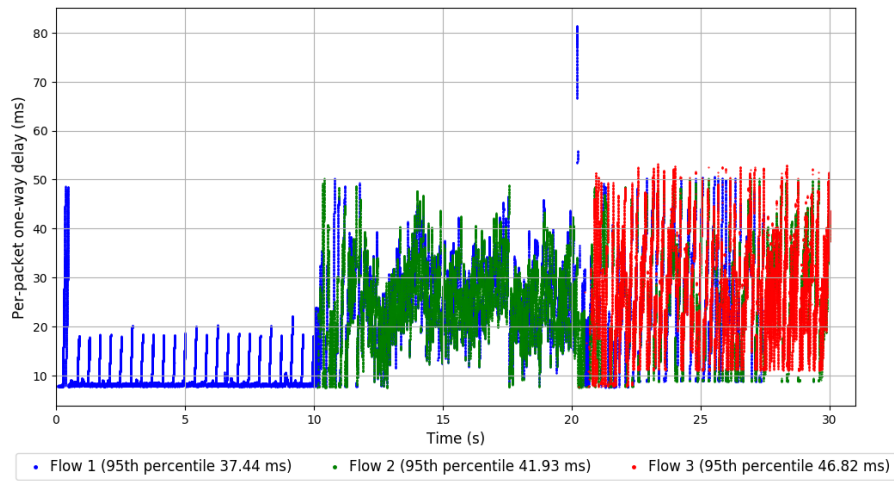
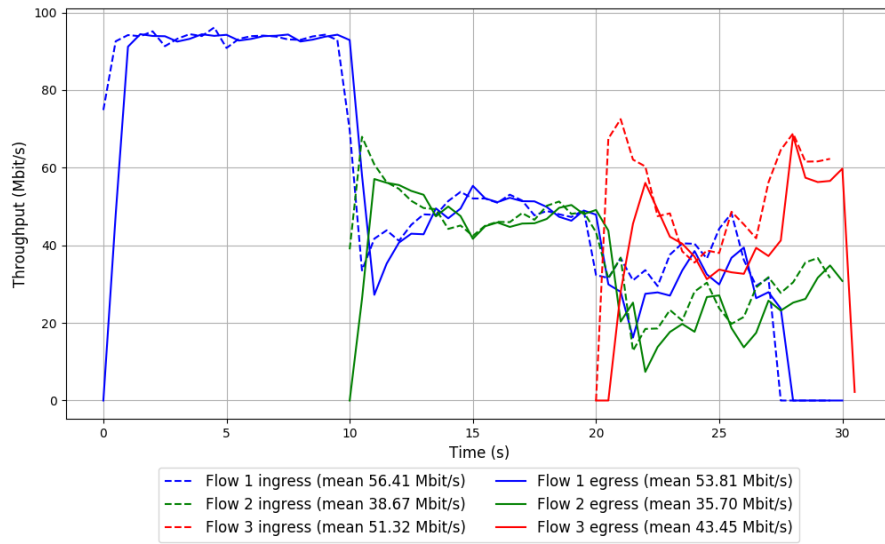
-- Flow 2:

Average throughput: 35.70 Mbit/s  
95th percentile per-packet one-way delay: 41.933 ms  
Loss rate: 7.55%

-- Flow 3:

Average throughput: 43.45 Mbit/s  
95th percentile per-packet one-way delay: 46.823 ms  
Loss rate: 16.89%

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



Run 2: Statistics of FillP-Sheep

Start at: 2019-05-30 00:55:54  
End at: 2019-05-30 00:56:24  
Local clock offset: 1.793 ms  
Remote clock offset: -0.557 ms

# Below is generated by plot.py at 2019-05-30 02:40:02

# Datalink statistics

-- Total of 3 flows:

Average throughput: 91.72 Mbit/s  
95th percentile per-packet one-way delay: 42.341 ms  
Loss rate: 7.47%

-- Flow 1:

Average throughput: 56.24 Mbit/s  
95th percentile per-packet one-way delay: 40.313 ms  
Loss rate: 5.51%

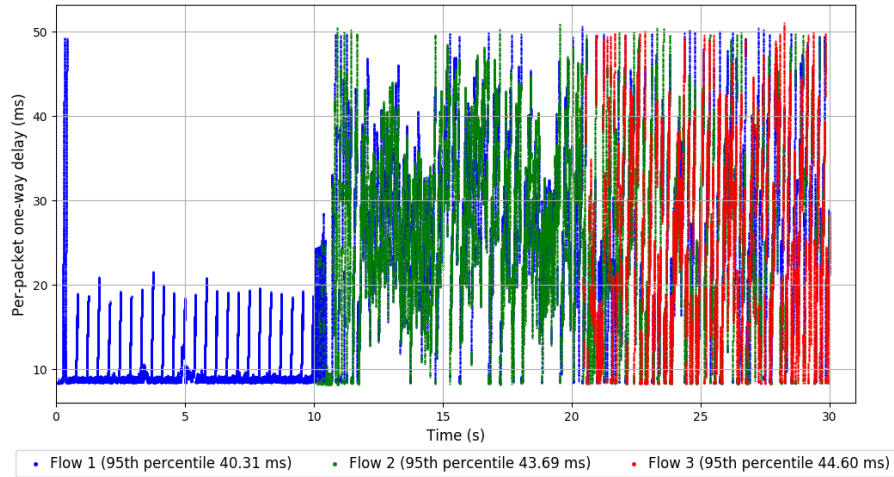
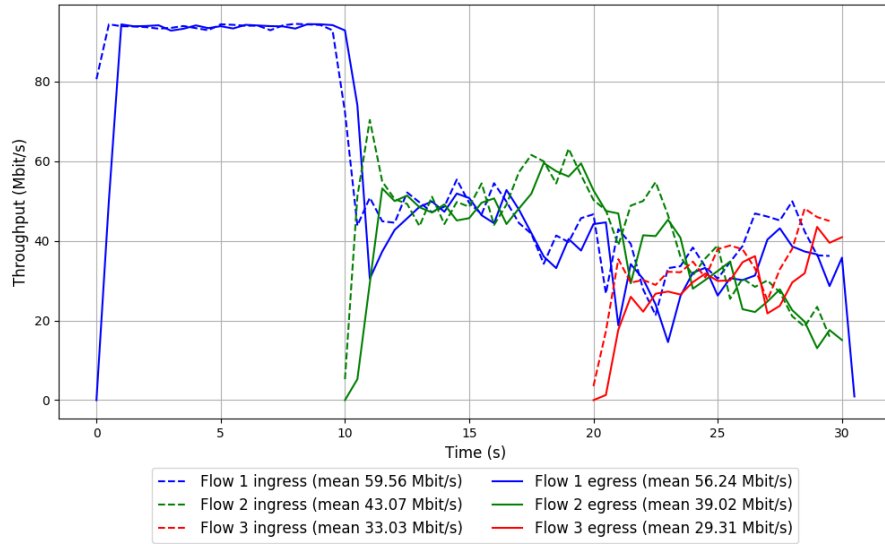
-- Flow 2:

Average throughput: 39.02 Mbit/s  
95th percentile per-packet one-way delay: 43.693 ms  
Loss rate: 9.35%

-- Flow 3:

Average throughput: 29.31 Mbit/s  
95th percentile per-packet one-way delay: 44.599 ms  
Loss rate: 13.19%

Run 2: Report of FillP-Sheep — Data Link



Run 3: Statistics of FillP-Sheep

Start at: 2019-05-30 01:21:16

End at: 2019-05-30 01:21:46

Local clock offset: 2.621 ms

Remote clock offset: 2.373 ms

# Below is generated by plot.py at 2019-05-30 02:40:02

# Datalink statistics

-- Total of 3 flows:

Average throughput: 91.66 Mbit/s

95th percentile per-packet one-way delay: 38.959 ms

Loss rate: 7.48%

-- Flow 1:

Average throughput: 55.22 Mbit/s

95th percentile per-packet one-way delay: 36.699 ms

Loss rate: 4.72%

-- Flow 2:

Average throughput: 38.86 Mbit/s

95th percentile per-packet one-way delay: 40.379 ms

Loss rate: 9.86%

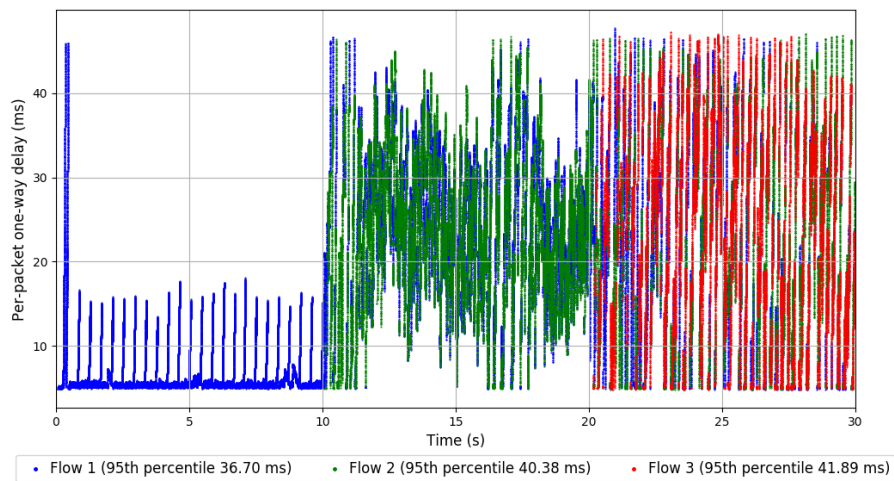
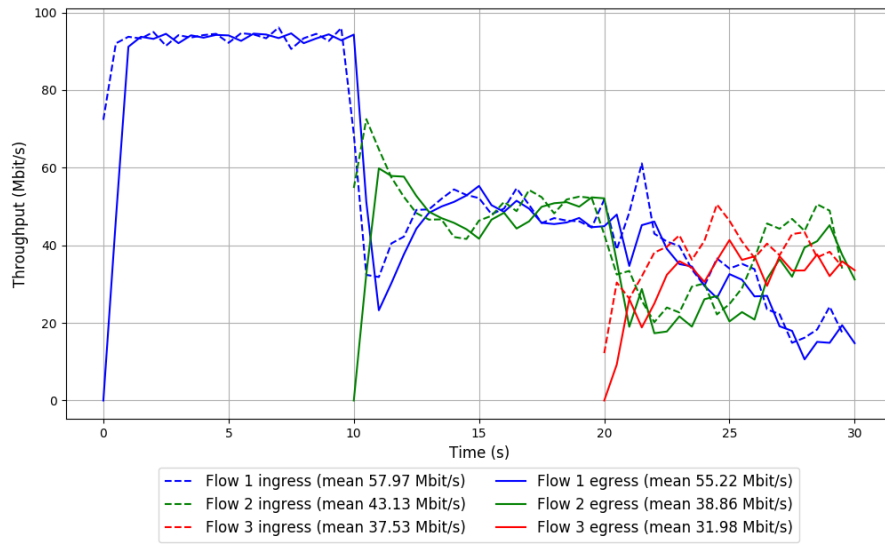
-- Flow 3:

Average throughput: 31.98 Mbit/s

95th percentile per-packet one-way delay: 41.889 ms

Loss rate: 14.86%

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



Run 4: Statistics of FillP-Sheep

Start at: 2019-05-30 01:47:35

End at: 2019-05-30 01:48:05

Local clock offset: 5.358 ms

Remote clock offset: 3.842 ms

# Below is generated by plot.py at 2019-05-30 02:40:32

# Datalink statistics

-- Total of 3 flows:

Average throughput: 91.31 Mbit/s

95th percentile per-packet one-way delay: 37.918 ms

Loss rate: 6.90%

-- Flow 1:

Average throughput: 57.47 Mbit/s

95th percentile per-packet one-way delay: 35.609 ms

Loss rate: 4.69%

-- Flow 2:

Average throughput: 40.30 Mbit/s

95th percentile per-packet one-way delay: 39.506 ms

Loss rate: 9.40%

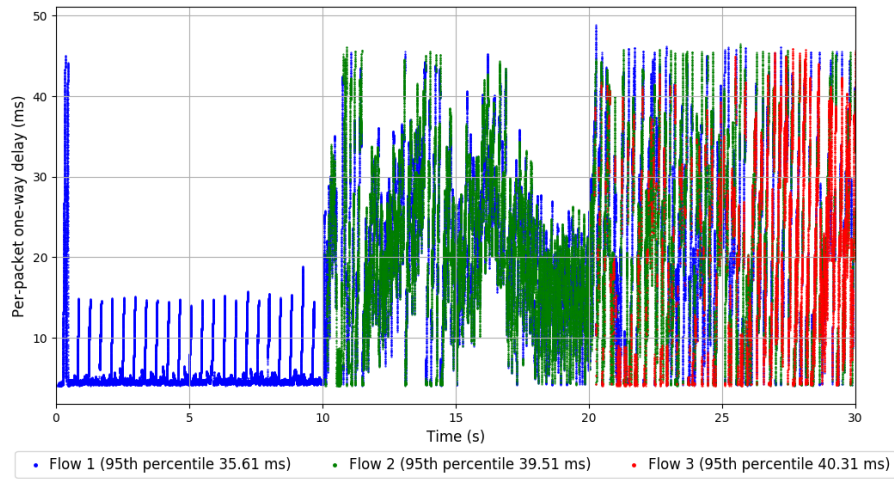
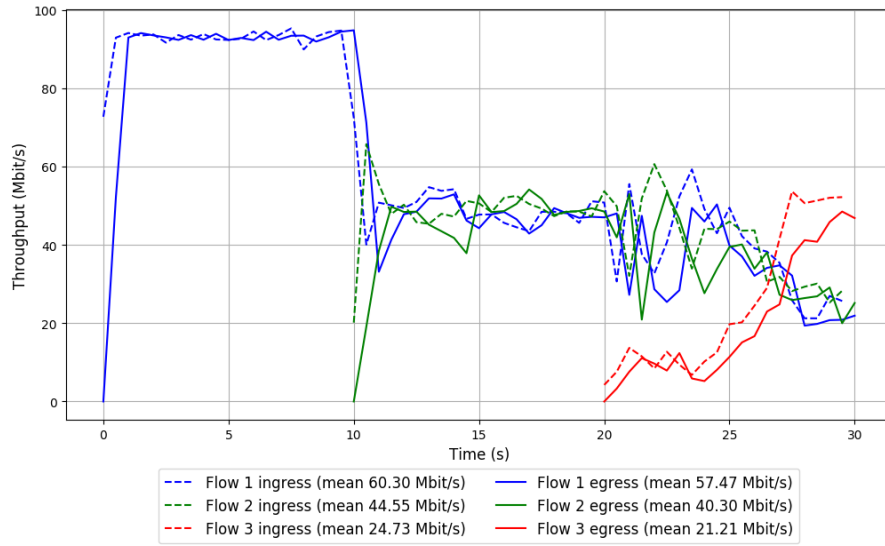
-- Flow 3:

Average throughput: 21.21 Mbit/s

95th percentile per-packet one-way delay: 40.310 ms

Loss rate: 14.12%

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





Run 5: Statistics of FillP-Sheep

Start at: 2019-05-30 02:14:04

End at: 2019-05-30 02:14:34

Local clock offset: 4.659 ms

Remote clock offset: 4.507 ms

# Below is generated by plot.py at 2019-05-30 02:40:32

# Datalink statistics

-- Total of 3 flows:

Average throughput: 92.15 Mbit/s

95th percentile per-packet one-way delay: 36.274 ms

Loss rate: 6.42%

-- Flow 1:

Average throughput: 57.00 Mbit/s

95th percentile per-packet one-way delay: 33.278 ms

Loss rate: 3.86%

-- Flow 2:

Average throughput: 39.06 Mbit/s

95th percentile per-packet one-way delay: 38.395 ms

Loss rate: 7.97%

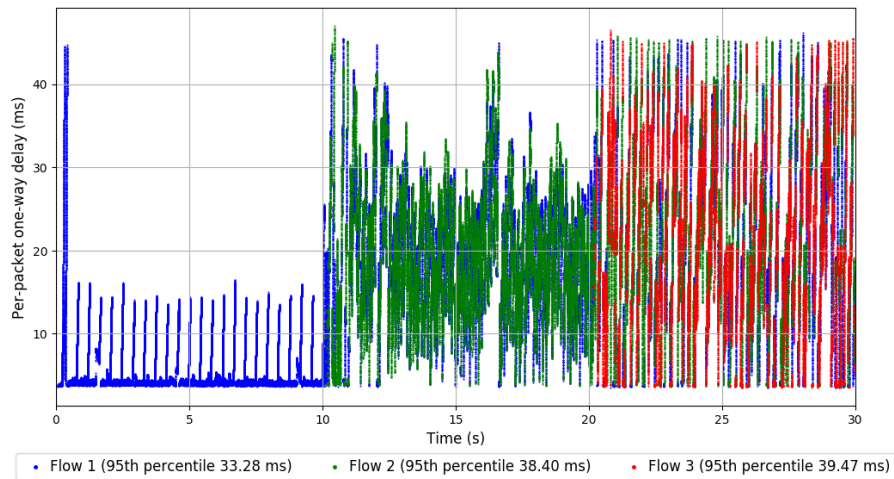
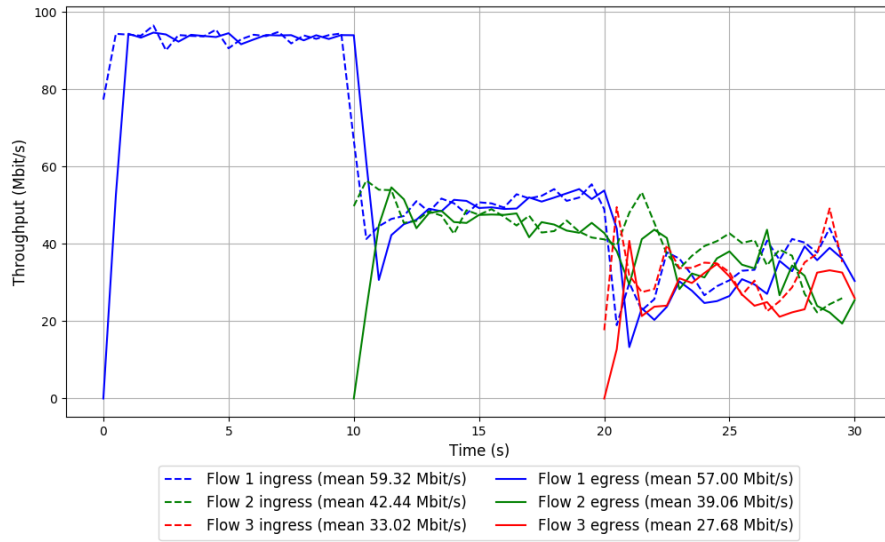
-- Flow 3:

Average throughput: 27.68 Mbit/s

95th percentile per-packet one-way delay: 39.471 ms

Loss rate: 16.26%

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



Run 1: Statistics of Indigo

Start at: 2019-05-30 00:31:26  
End at: 2019-05-30 00:31:56  
Local clock offset: -1.575 ms  
Remote clock offset: -1.134 ms

# Below is generated by plot.py at 2019-05-30 02:40:33

# Datalink statistics

-- Total of 3 flows:

Average throughput: 96.97 Mbit/s  
95th percentile per-packet one-way delay: 18.020 ms  
Loss rate: 0.00%

-- Flow 1:

Average throughput: 56.25 Mbit/s  
95th percentile per-packet one-way delay: 18.010 ms  
Loss rate: 0.00%

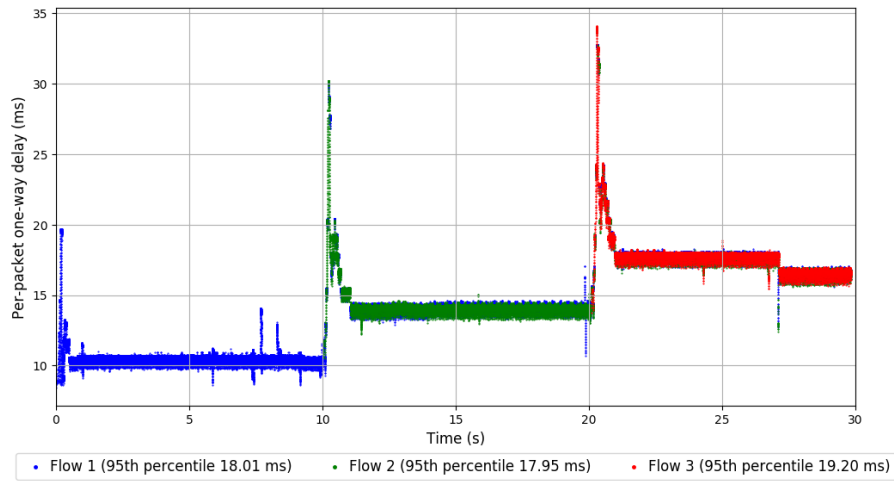
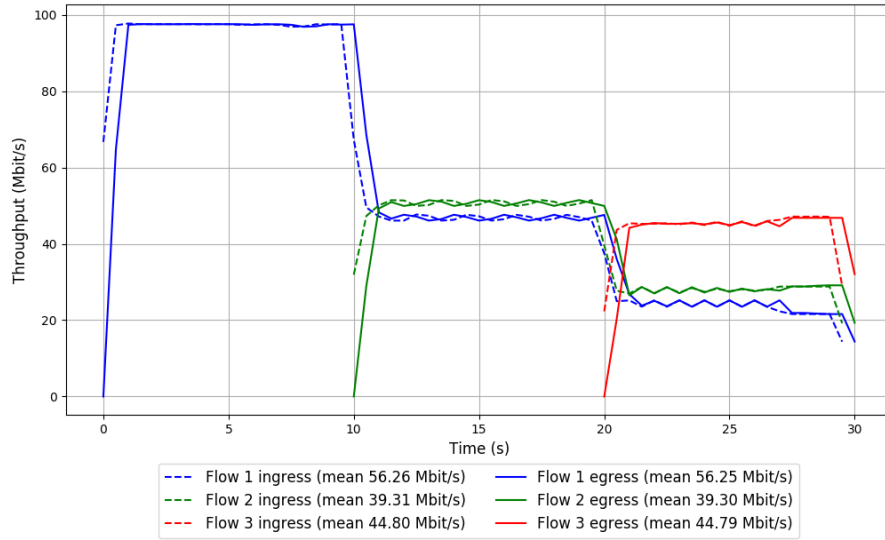
-- Flow 2:

Average throughput: 39.30 Mbit/s  
95th percentile per-packet one-way delay: 17.949 ms  
Loss rate: 0.00%

-- Flow 3:

Average throughput: 44.79 Mbit/s  
95th percentile per-packet one-way delay: 19.200 ms  
Loss rate: 0.00%

# Run 1: Report of Indigo — Data Link



Run 2: Statistics of Indigo

Start at: 2019-05-30 00:57:09  
End at: 2019-05-30 00:57:39  
Local clock offset: 6.567 ms  
Remote clock offset: -0.467 ms

# Below is generated by plot.py at 2019-05-30 02:40:33

# Datalink statistics

-- Total of 3 flows:

Average throughput: 96.98 Mbit/s  
95th percentile per-packet one-way delay: 12.904 ms  
Loss rate: 0.00%

-- Flow 1:

Average throughput: 57.12 Mbit/s  
95th percentile per-packet one-way delay: 11.841 ms  
Loss rate: 0.00%

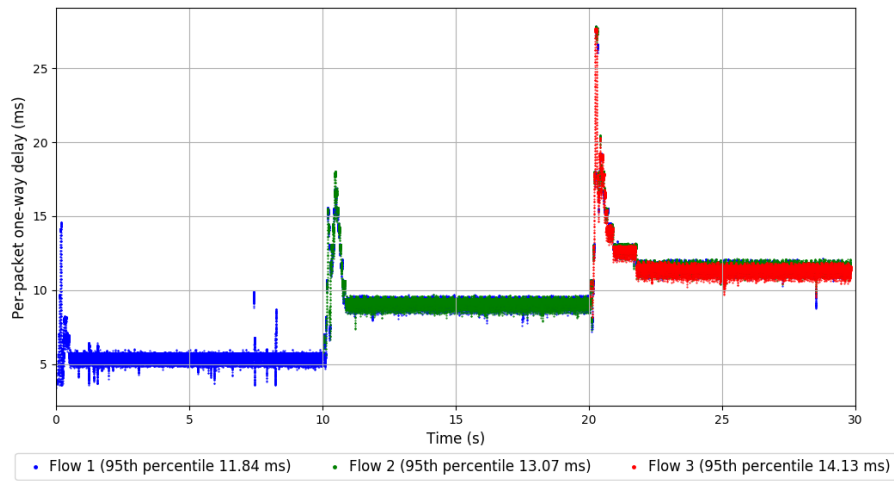
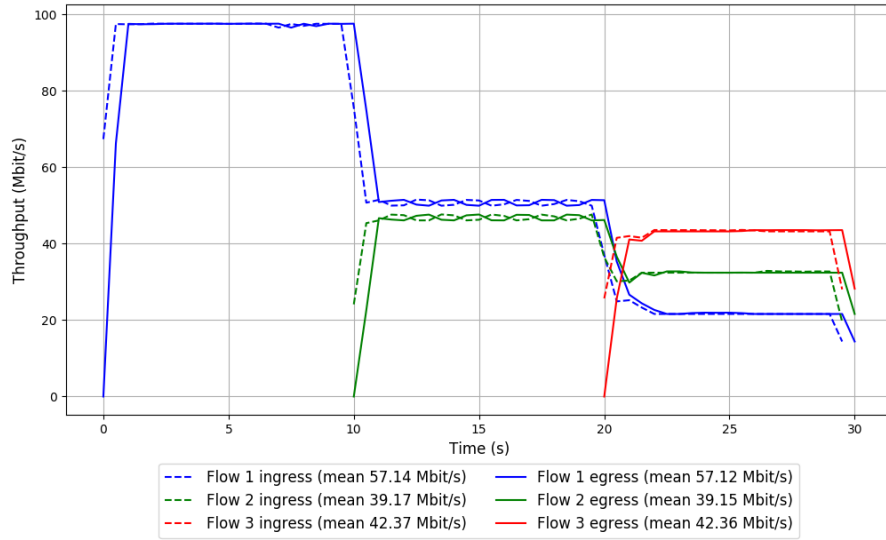
-- Flow 2:

Average throughput: 39.15 Mbit/s  
95th percentile per-packet one-way delay: 13.067 ms  
Loss rate: 0.00%

-- Flow 3:

Average throughput: 42.36 Mbit/s  
95th percentile per-packet one-way delay: 14.133 ms  
Loss rate: 0.00%

## Run 2: Report of Indigo — Data Link



Run 3: Statistics of Indigo

Start at: 2019-05-30 01:22:27

End at: 2019-05-30 01:22:57

Local clock offset: -1.906 ms

Remote clock offset: 1.756 ms

# Below is generated by plot.py at 2019-05-30 02:40:35

# Datalink statistics

-- Total of 3 flows:

Average throughput: 96.97 Mbit/s

95th percentile per-packet one-way delay: 16.810 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 61.65 Mbit/s

95th percentile per-packet one-way delay: 16.645 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 34.31 Mbit/s

95th percentile per-packet one-way delay: 16.699 ms

Loss rate: 0.00%

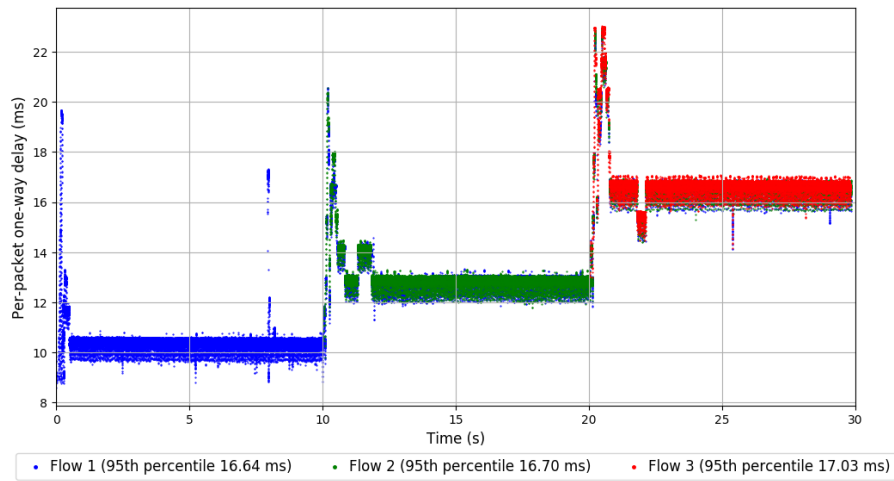
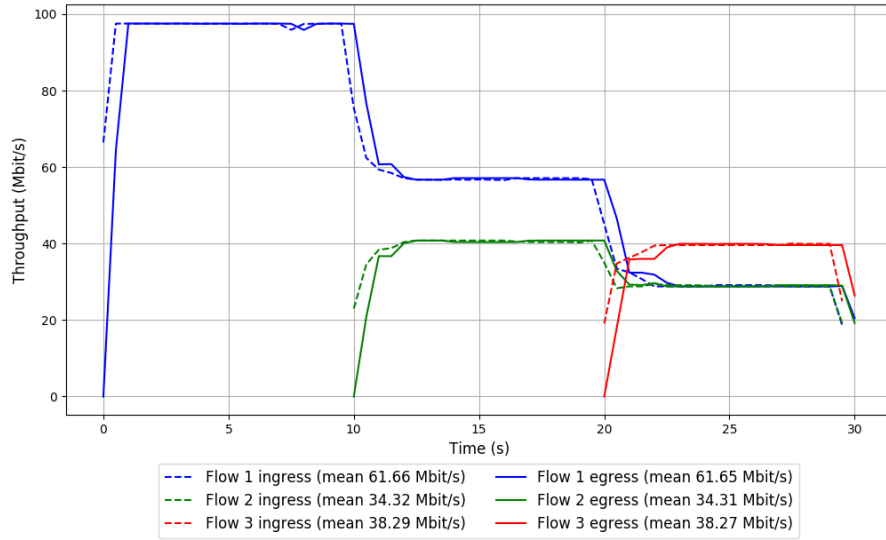
-- Flow 3:

Average throughput: 38.27 Mbit/s

95th percentile per-packet one-way delay: 17.026 ms

Loss rate: 0.00%

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





Run 4: Statistics of Indigo

Start at: 2019-05-30 01:48:56

End at: 2019-05-30 01:49:26

Local clock offset: 5.267 ms

Remote clock offset: 3.462 ms

# Below is generated by plot.py at 2019-05-30 02:40:44

# Datalink statistics

-- Total of 3 flows:

Average throughput: 96.89 Mbit/s

95th percentile per-packet one-way delay: 14.498 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 51.68 Mbit/s

95th percentile per-packet one-way delay: 14.434 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 42.63 Mbit/s

95th percentile per-packet one-way delay: 14.497 ms

Loss rate: 0.00%

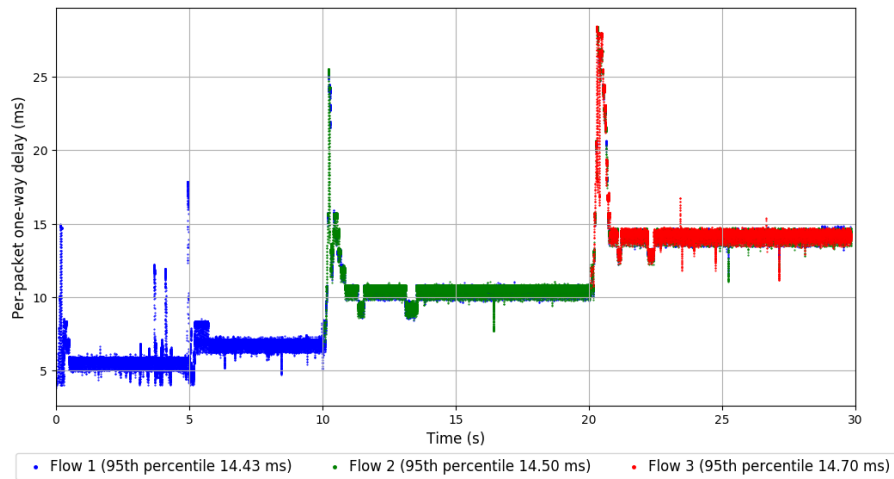
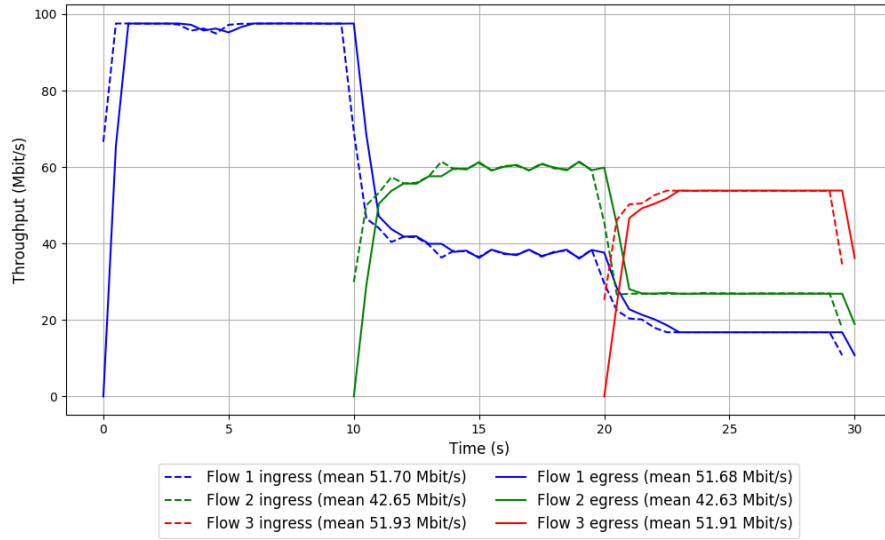
-- Flow 3:

Average throughput: 51.91 Mbit/s

95th percentile per-packet one-way delay: 14.697 ms

Loss rate: 0.00%

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



Run 5: Statistics of Indigo

Start at: 2019-05-30 02:15:21

End at: 2019-05-30 02:15:51

Local clock offset: -1.002 ms

Remote clock offset: 4.636 ms

# Below is generated by plot.py at 2019-05-30 02:41:08

# Datalink statistics

-- Total of 3 flows:

Average throughput: 97.00 Mbit/s

95th percentile per-packet one-way delay: 18.542 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 56.79 Mbit/s

95th percentile per-packet one-way delay: 18.427 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 42.66 Mbit/s

95th percentile per-packet one-way delay: 18.604 ms

Loss rate: 0.00%

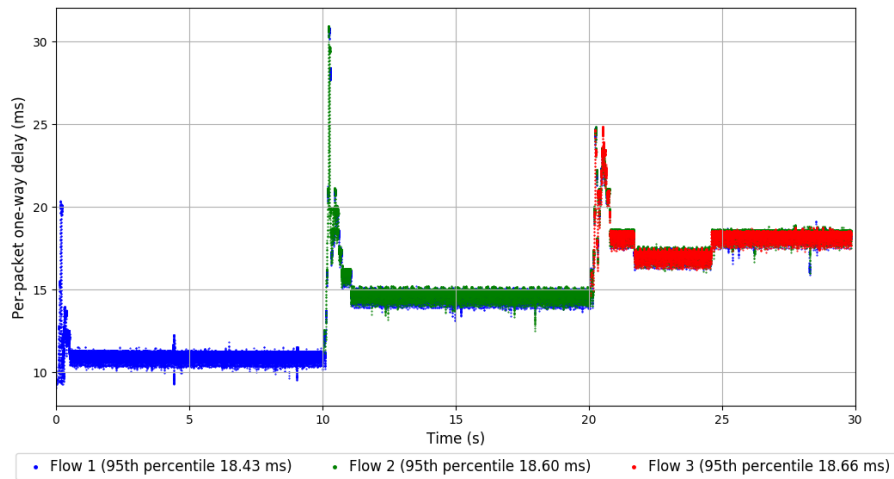
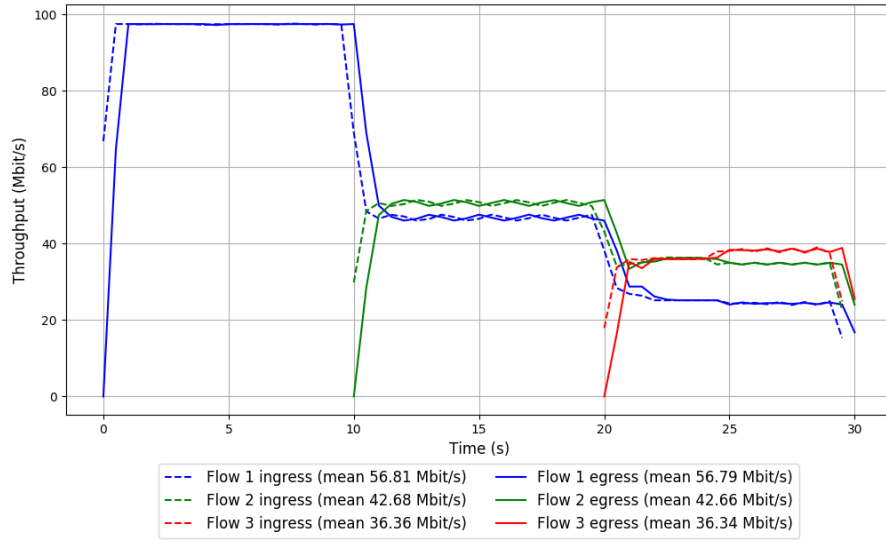
-- Flow 3:

Average throughput: 36.34 Mbit/s

95th percentile per-packet one-way delay: 18.657 ms

Loss rate: 0.01%

## Run 5: Report of Indigo — Data Link



Run 1: Statistics of Indigo-MusesC3

Start at: 2019-05-30 00:49:29  
End at: 2019-05-30 00:49:59  
Local clock offset: 0.476 ms  
Remote clock offset: -0.811 ms

# Below is generated by plot.py at 2019-05-30 02:41:08

# Datalink statistics

-- Total of 3 flows:

Average throughput: 96.21 Mbit/s  
95th percentile per-packet one-way delay: 20.166 ms  
Loss rate: 0.00%

-- Flow 1:

Average throughput: 48.61 Mbit/s  
95th percentile per-packet one-way delay: 20.161 ms  
Loss rate: 0.01%

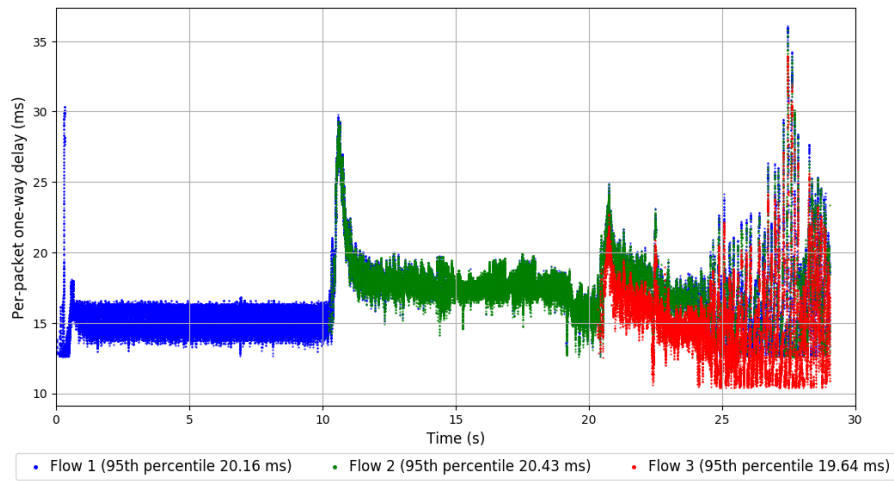
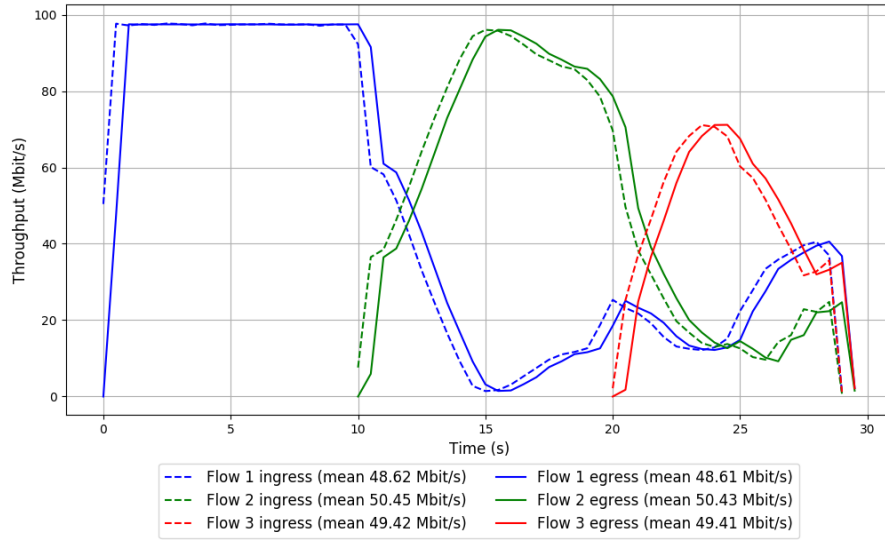
-- Flow 2:

Average throughput: 50.43 Mbit/s  
95th percentile per-packet one-way delay: 20.427 ms  
Loss rate: 0.00%

-- Flow 3:

Average throughput: 49.41 Mbit/s  
95th percentile per-packet one-way delay: 19.642 ms  
Loss rate: 0.00%

# Run 1: Report of Indigo-MusesC3 — Data Link



Run 2: Statistics of Indigo-MusesC3

Start at: 2019-05-30 01:15:03

End at: 2019-05-30 01:15:33

Local clock offset: -0.286 ms

Remote clock offset: 1.452 ms

# Below is generated by plot.py at 2019-05-30 02:41:27

# Datalink statistics

-- Total of 3 flows:

Average throughput: 96.69 Mbit/s

95th percentile per-packet one-way delay: 20.128 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 47.73 Mbit/s

95th percentile per-packet one-way delay: 19.075 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 52.38 Mbit/s

95th percentile per-packet one-way delay: 20.728 ms

Loss rate: 0.00%

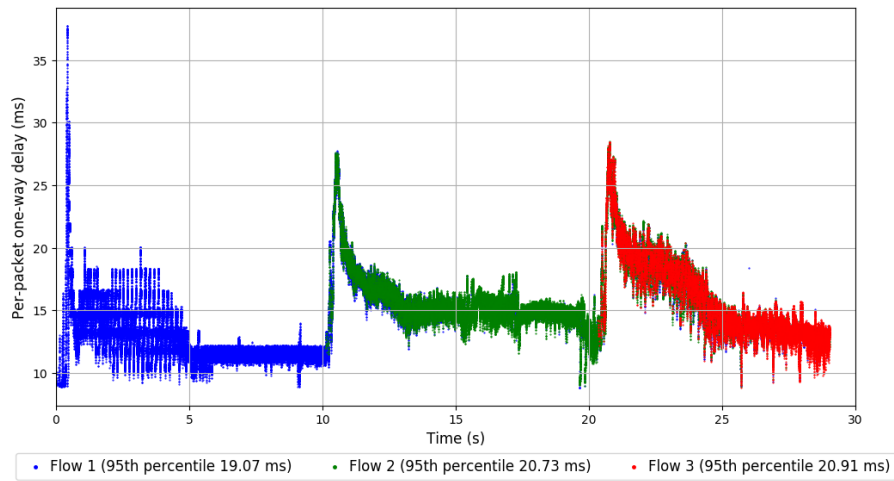
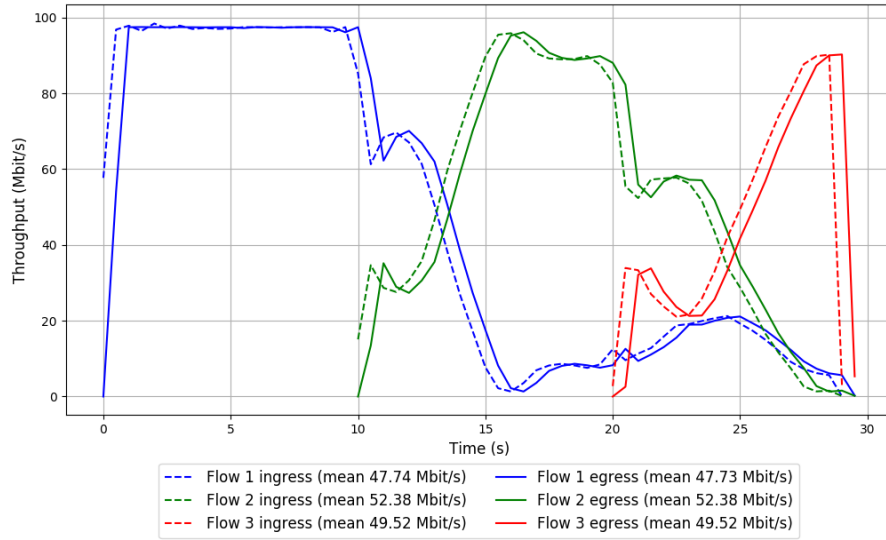
-- Flow 3:

Average throughput: 49.52 Mbit/s

95th percentile per-packet one-way delay: 20.905 ms

Loss rate: 0.00%

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





Run 3: Statistics of Indigo-MusesC3

Start at: 2019-05-30 01:41:11

End at: 2019-05-30 01:41:41

Local clock offset: -1.459 ms

Remote clock offset: 1.328 ms

# Below is generated by plot.py at 2019-05-30 02:41:31

# Datalink statistics

-- Total of 3 flows:

Average throughput: 96.42 Mbit/s

95th percentile per-packet one-way delay: 18.560 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 54.30 Mbit/s

95th percentile per-packet one-way delay: 18.019 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 40.91 Mbit/s

95th percentile per-packet one-way delay: 19.200 ms

Loss rate: 0.00%

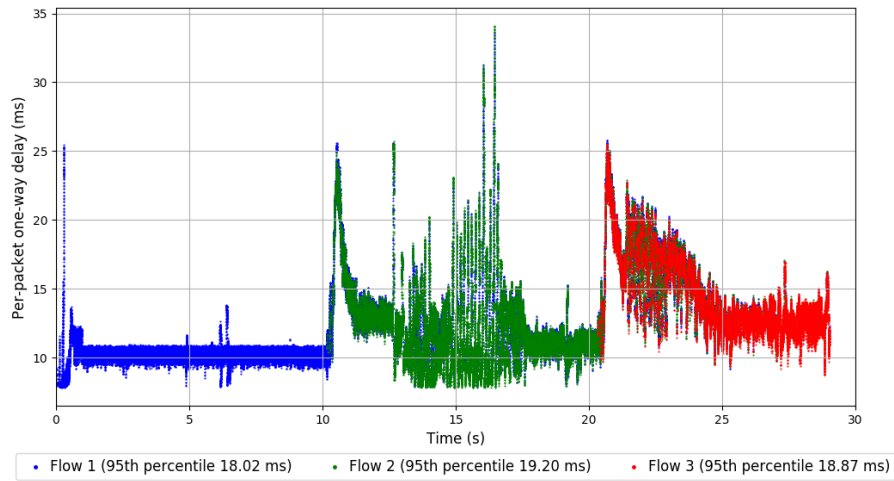
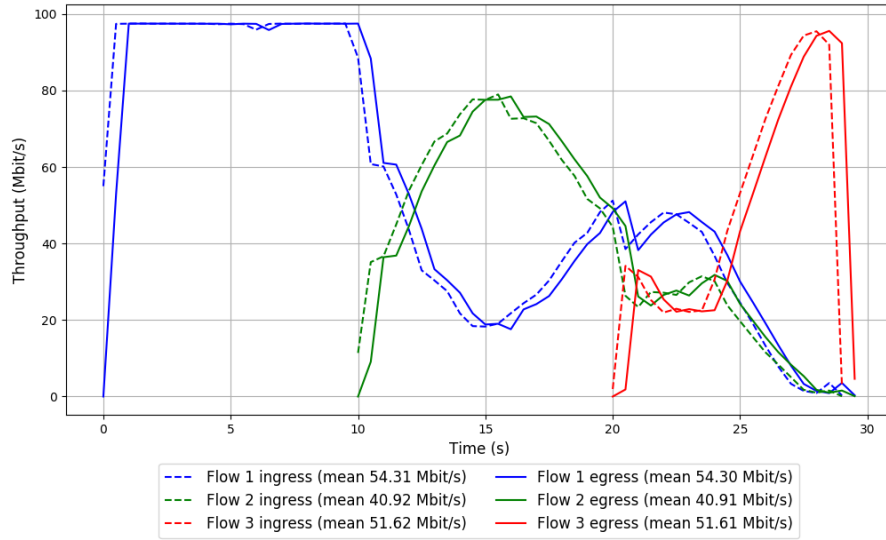
-- Flow 3:

Average throughput: 51.61 Mbit/s

95th percentile per-packet one-way delay: 18.867 ms

Loss rate: 0.00%

### Run 3: Report of Indigo-MusesC3 — Data Link



Run 4: Statistics of Indigo-MusesC3

Start at: 2019-05-30 02:07:37

End at: 2019-05-30 02:08:07

Local clock offset: 6.184 ms

Remote clock offset: 4.694 ms

# Below is generated by plot.py at 2019-05-30 02:41:37

# Datalink statistics

-- Total of 3 flows:

Average throughput: 96.63 Mbit/s

95th percentile per-packet one-way delay: 13.942 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 45.94 Mbit/s

95th percentile per-packet one-way delay: 11.821 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 62.86 Mbit/s

95th percentile per-packet one-way delay: 14.508 ms

Loss rate: 0.00%

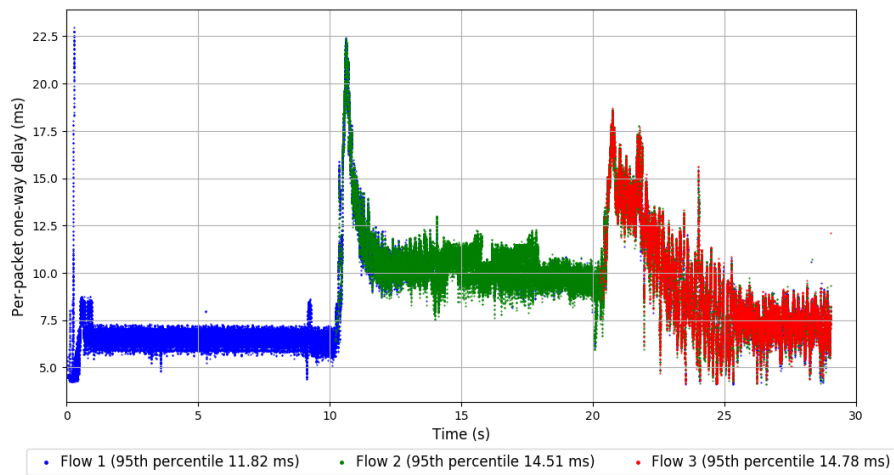
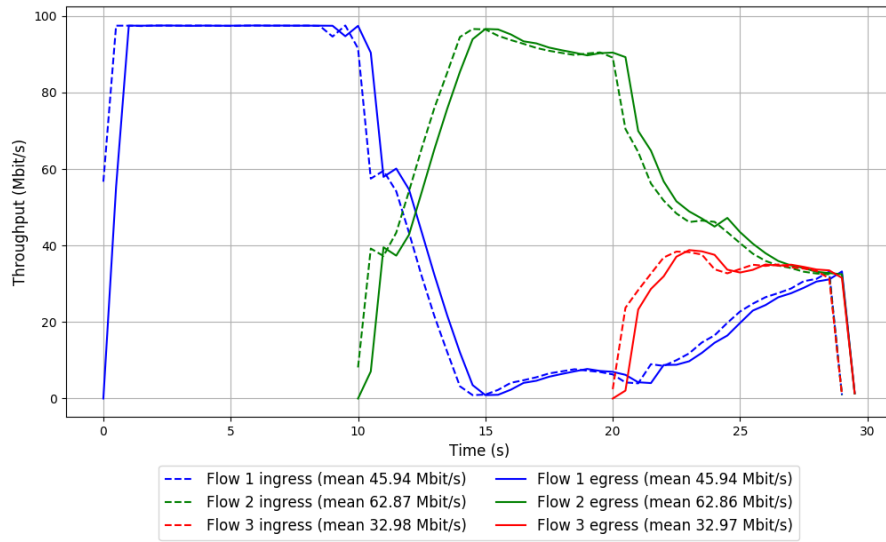
-- Flow 3:

Average throughput: 32.97 Mbit/s

95th percentile per-packet one-way delay: 14.775 ms

Loss rate: 0.00%

### Run 4: Report of Indigo-MusesC3 — Data Link



Run 5: Statistics of Indigo-MusesC3

Start at: 2019-05-30 02:34:02

End at: 2019-05-30 02:34:32

Local clock offset: 1.759 ms

Remote clock offset: 5.562 ms

# Below is generated by plot.py at 2019-05-30 02:41:37

# Datalink statistics

-- Total of 3 flows:

Average throughput: 96.44 Mbit/s

95th percentile per-packet one-way delay: 11.700 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 50.03 Mbit/s

95th percentile per-packet one-way delay: 11.509 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 59.80 Mbit/s

95th percentile per-packet one-way delay: 11.865 ms

Loss rate: 0.00%

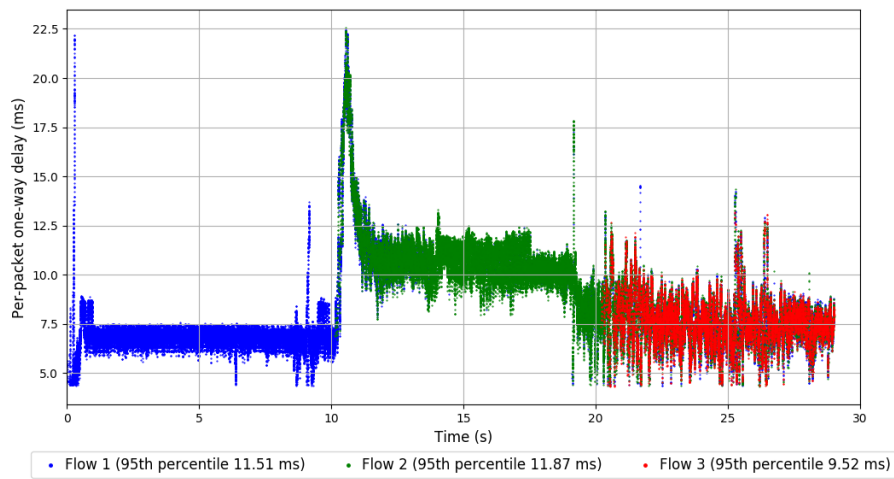
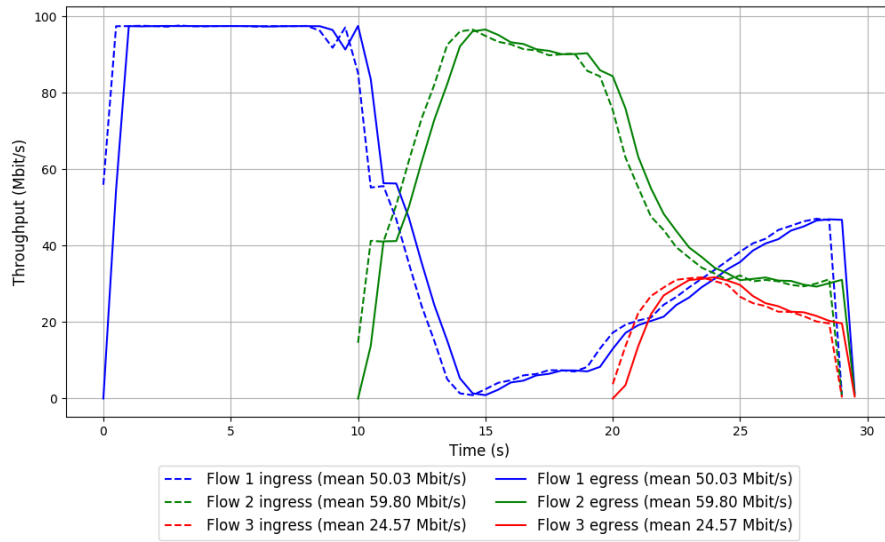
-- Flow 3:

Average throughput: 24.57 Mbit/s

95th percentile per-packet one-way delay: 9.517 ms

Loss rate: 0.00%

### Run 5: Report of Indigo-MusesC3 — Data Link



Run 1: Statistics of Indigo-MusesC5

Start at: 2019-05-30 00:43:22  
End at: 2019-05-30 00:43:52  
Local clock offset: -0.065 ms  
Remote clock offset: -1.733 ms

# Below is generated by plot.py at 2019-05-30 02:41:41

# Datalink statistics

-- Total of 3 flows:

Average throughput: 94.93 Mbit/s  
95th percentile per-packet one-way delay: 42.329 ms  
Loss rate: 7.59%

-- Flow 1:

Average throughput: 59.19 Mbit/s  
95th percentile per-packet one-way delay: 37.760 ms  
Loss rate: 3.70%

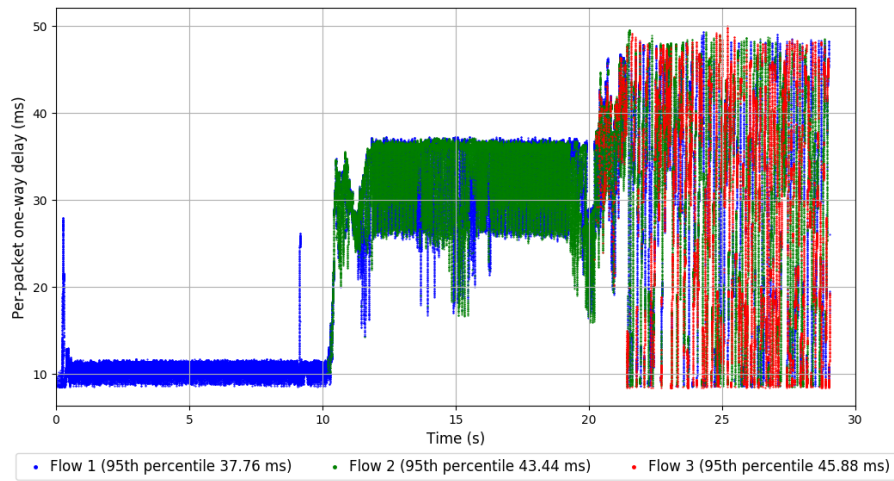
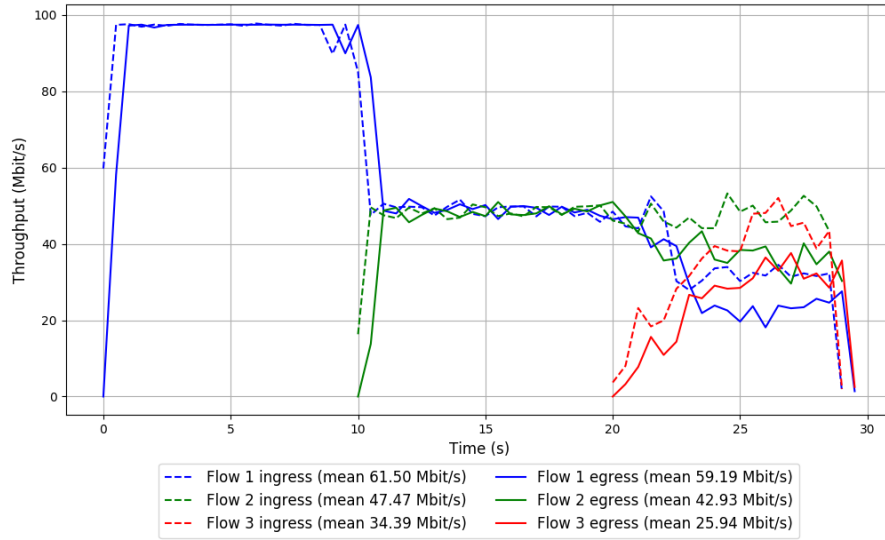
-- Flow 2:

Average throughput: 42.93 Mbit/s  
95th percentile per-packet one-way delay: 43.442 ms  
Loss rate: 9.57%

-- Flow 3:

Average throughput: 25.94 Mbit/s  
95th percentile per-packet one-way delay: 45.883 ms  
Loss rate: 24.60%

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





Run 2: Statistics of Indigo-MusesC5

Start at: 2019-05-30 01:08:59

End at: 2019-05-30 01:09:29

Local clock offset: 5.487 ms

Remote clock offset: 0.694 ms

# Below is generated by plot.py at 2019-05-30 02:41:50

# Datalink statistics

-- Total of 3 flows:

Average throughput: 94.69 Mbit/s

95th percentile per-packet one-way delay: 38.118 ms

Loss rate: 7.71%

-- Flow 1:

Average throughput: 59.13 Mbit/s

95th percentile per-packet one-way delay: 34.458 ms

Loss rate: 3.87%

-- Flow 2:

Average throughput: 42.70 Mbit/s

95th percentile per-packet one-way delay: 39.549 ms

Loss rate: 10.07%

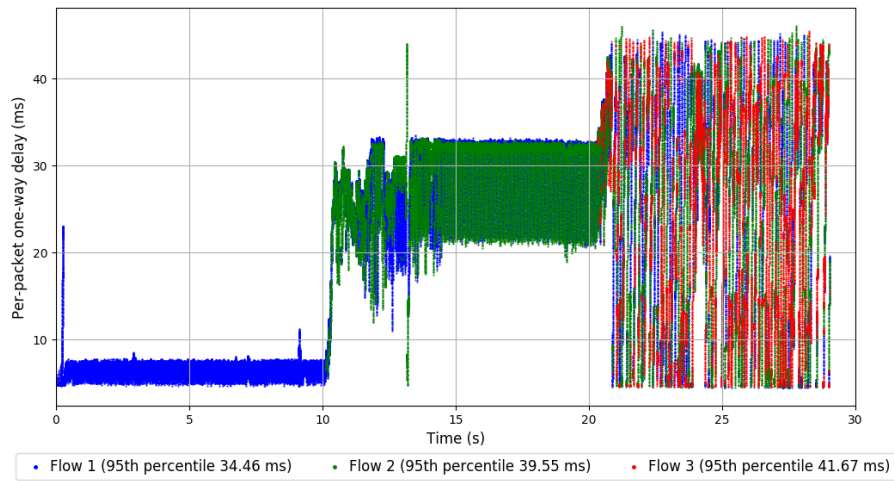
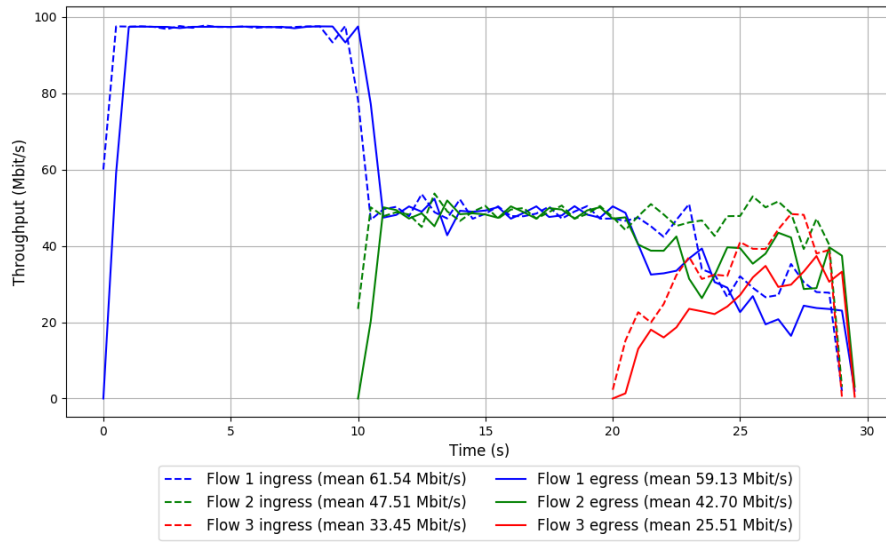
-- Flow 3:

Average throughput: 25.51 Mbit/s

95th percentile per-packet one-way delay: 41.669 ms

Loss rate: 23.88%

## Run 2: Report of Indigo-MusesC5 — Data Link



Run 3: Statistics of Indigo-MusesC5

Start at: 2019-05-30 01:34:31

End at: 2019-05-30 01:35:01

Local clock offset: 1.513 ms

Remote clock offset: 2.016 ms

# Below is generated by plot.py at 2019-05-30 02:42:14

# Datalink statistics

-- Total of 3 flows:

Average throughput: 96.38 Mbit/s

95th percentile per-packet one-way delay: 38.900 ms

Loss rate: 2.35%

-- Flow 1:

Average throughput: 58.31 Mbit/s

95th percentile per-packet one-way delay: 36.505 ms

Loss rate: 1.41%

-- Flow 2:

Average throughput: 45.26 Mbit/s

95th percentile per-packet one-way delay: 40.188 ms

Loss rate: 2.93%

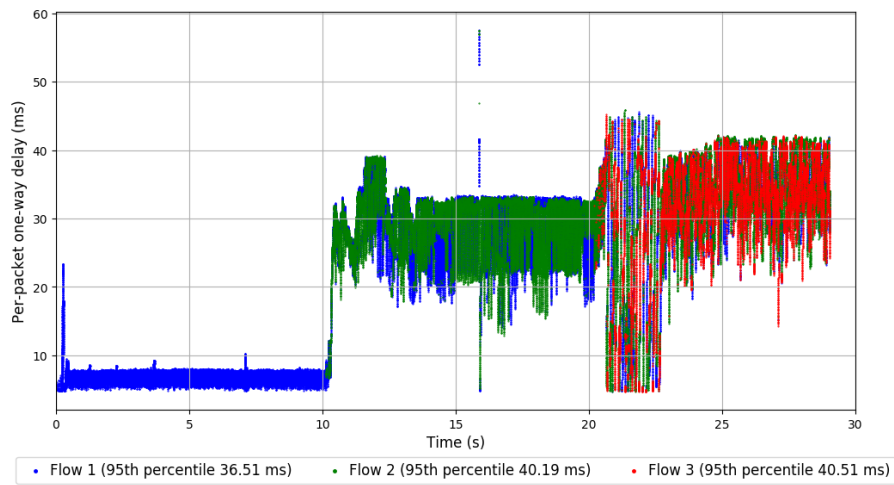
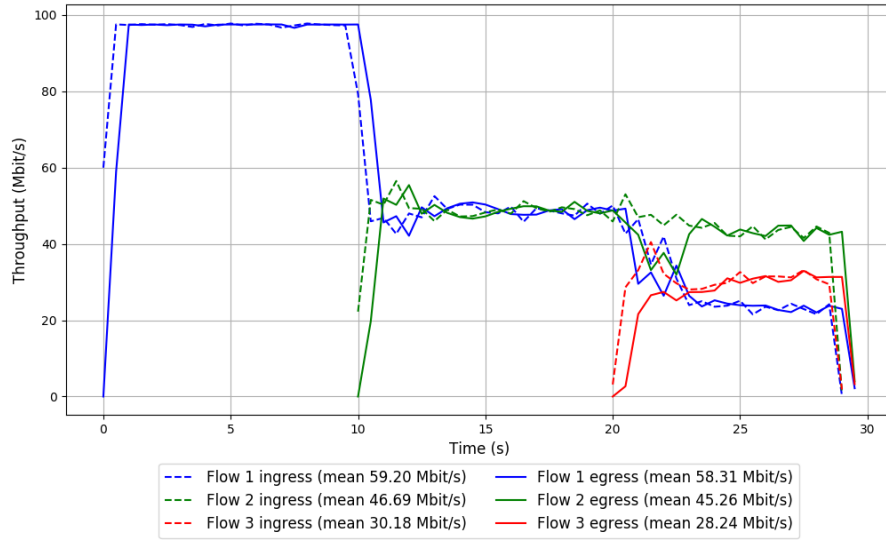
-- Flow 3:

Average throughput: 28.24 Mbit/s

95th percentile per-packet one-way delay: 40.507 ms

Loss rate: 6.44%

### Run 3: Report of Indigo-MusesC5 — Data Link



Run 4: Statistics of Indigo-MusesC5

Start at: 2019-05-30 02:01:23

End at: 2019-05-30 02:01:53

Local clock offset: 1.081 ms

Remote clock offset: 5.369 ms

# Below is generated by plot.py at 2019-05-30 02:42:14

# Datalink statistics

-- Total of 3 flows:

Average throughput: 95.68 Mbit/s

95th percentile per-packet one-way delay: 42.435 ms

Loss rate: 4.75%

-- Flow 1:

Average throughput: 60.02 Mbit/s

95th percentile per-packet one-way delay: 39.942 ms

Loss rate: 2.54%

-- Flow 2:

Average throughput: 41.07 Mbit/s

95th percentile per-packet one-way delay: 43.071 ms

Loss rate: 6.34%

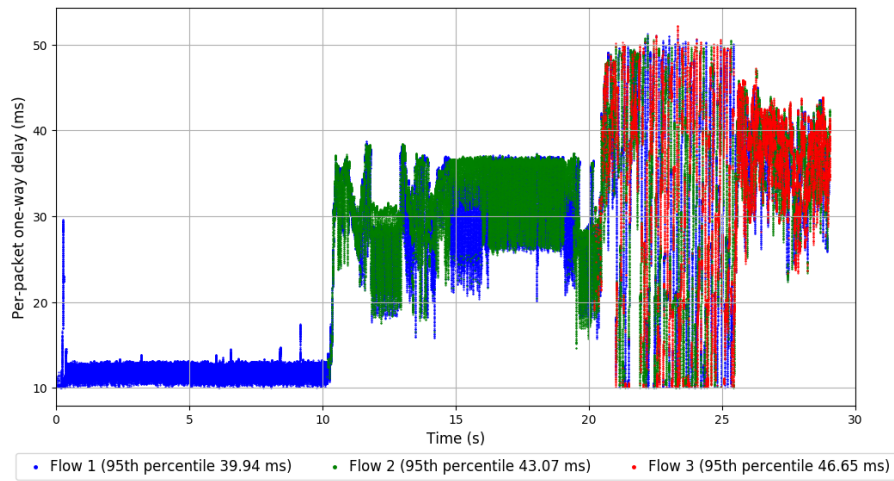
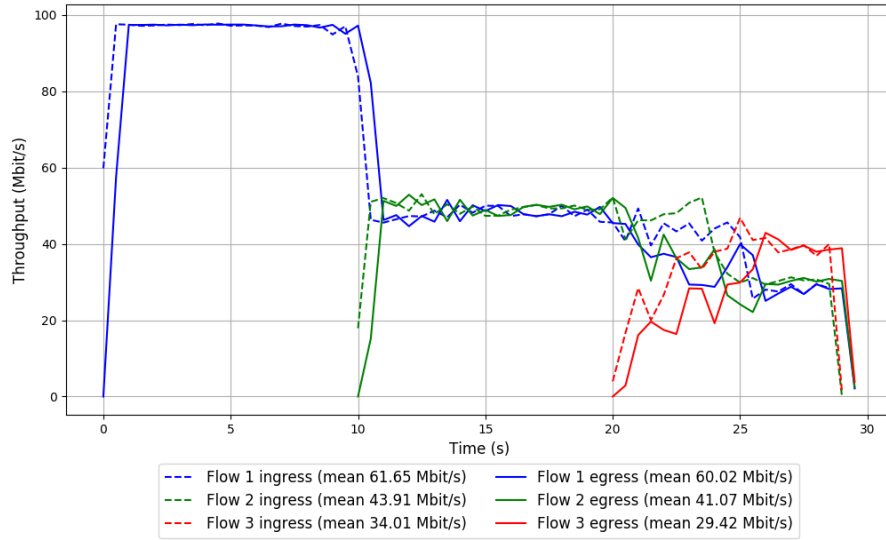
-- Flow 3:

Average throughput: 29.42 Mbit/s

95th percentile per-packet one-way delay: 46.653 ms

Loss rate: 13.45%

### Run 4: Report of Indigo-MusesC5 — Data Link



Run 5: Statistics of Indigo-MusesC5

Start at: 2019-05-30 02:27:36

End at: 2019-05-30 02:28:06

Local clock offset: -3.147 ms

Remote clock offset: 4.84 ms

# Below is generated by plot.py at 2019-05-30 02:42:34

# Datalink statistics

-- Total of 3 flows:

Average throughput: 94.87 Mbit/s

95th percentile per-packet one-way delay: 41.310 ms

Loss rate: 9.35%

-- Flow 1:

Average throughput: 59.86 Mbit/s

95th percentile per-packet one-way delay: 38.560 ms

Loss rate: 4.89%

-- Flow 2:

Average throughput: 42.85 Mbit/s

95th percentile per-packet one-way delay: 42.483 ms

Loss rate: 11.55%

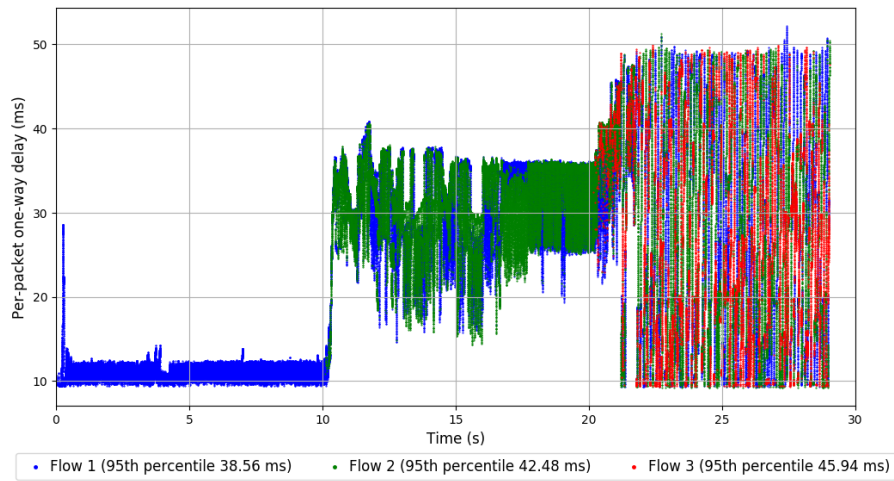
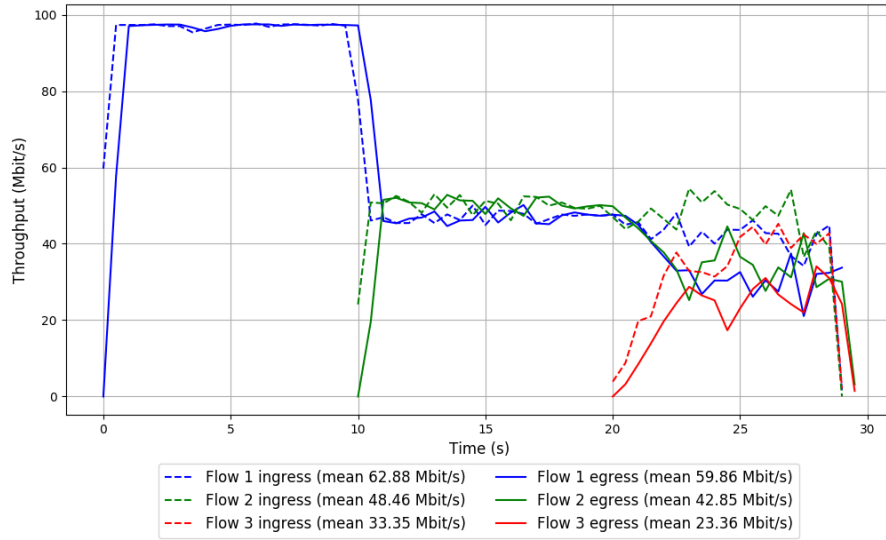
-- Flow 3:

Average throughput: 23.36 Mbit/s

95th percentile per-packet one-way delay: 45.944 ms

Loss rate: 30.09%

### Run 5: Report of Indigo-MusesC5 — Data Link





Run 1: Statistics of Indigo-MusesD

Start at: 2019-05-30 00:48:15  
End at: 2019-05-30 00:48:45  
Local clock offset: 1.014 ms  
Remote clock offset: -1.923 ms

# Below is generated by plot.py at 2019-05-30 02:42:37

# Datalink statistics

-- Total of 3 flows:

Average throughput: 95.53 Mbit/s  
95th percentile per-packet one-way delay: 47.398 ms  
Loss rate: 7.23%

-- Flow 1:

Average throughput: 88.00 Mbit/s  
95th percentile per-packet one-way delay: 47.298 ms  
Loss rate: 6.67%

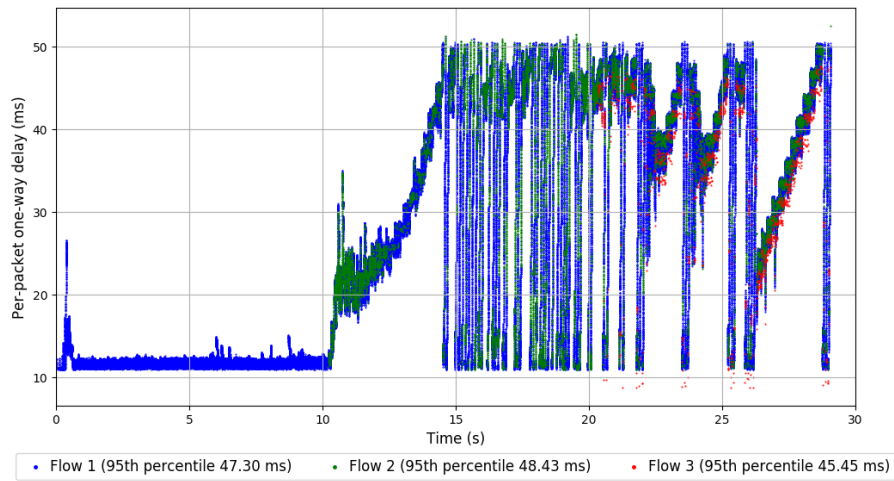
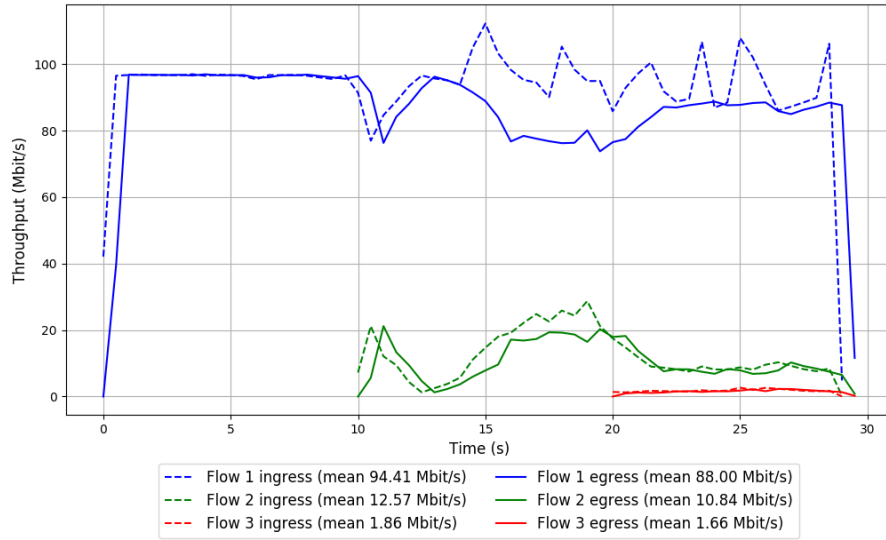
-- Flow 2:

Average throughput: 10.84 Mbit/s  
95th percentile per-packet one-way delay: 48.434 ms  
Loss rate: 13.56%

-- Flow 3:

Average throughput: 1.66 Mbit/s  
95th percentile per-packet one-way delay: 45.447 ms  
Loss rate: 10.47%

Run 1: Report of Indigo-MusesD — Data Link



Run 2: Statistics of Indigo-MusesD

Start at: 2019-05-30 01:13:51  
End at: 2019-05-30 01:14:21  
Local clock offset: -0.647 ms  
Remote clock offset: -0.328 ms

# Below is generated by plot.py at 2019-05-30 02:42:39

# Datalink statistics

-- Total of 3 flows:

Average throughput: 95.58 Mbit/s  
95th percentile per-packet one-way delay: 14.954 ms  
Loss rate: 0.00%

-- Flow 1:

Average throughput: 52.42 Mbit/s  
95th percentile per-packet one-way delay: 11.816 ms  
Loss rate: 0.00%

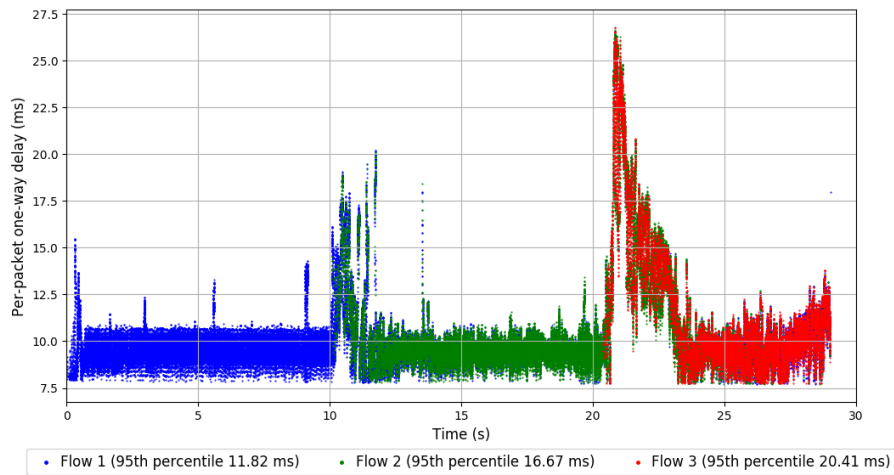
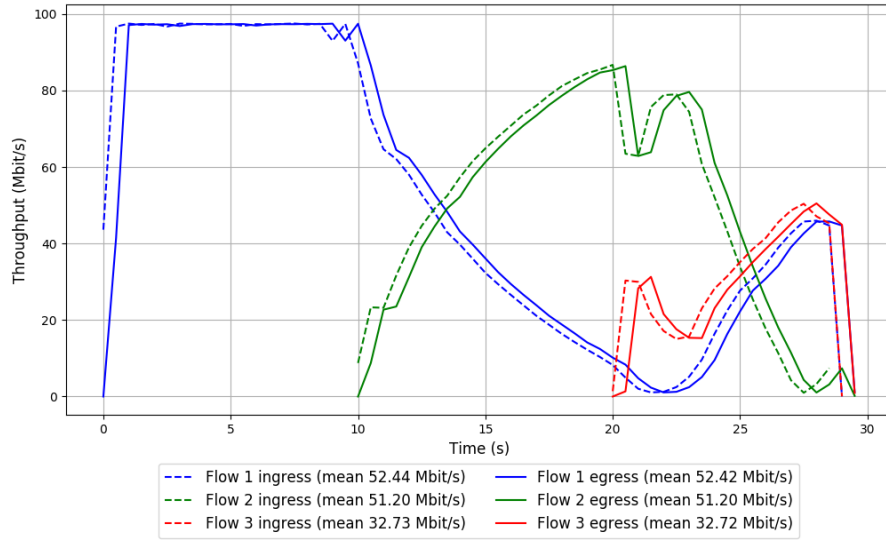
-- Flow 2:

Average throughput: 51.20 Mbit/s  
95th percentile per-packet one-way delay: 16.672 ms  
Loss rate: 0.00%

-- Flow 3:

Average throughput: 32.72 Mbit/s  
95th percentile per-packet one-way delay: 20.409 ms  
Loss rate: 0.00%

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



Run 3: Statistics of Indigo-MusesD

Start at: 2019-05-30 01:39:46

End at: 2019-05-30 01:40:16

Local clock offset: 2.679 ms

Remote clock offset: 1.403 ms

# Below is generated by plot.py at 2019-05-30 02:42:41

# Datalink statistics

-- Total of 3 flows:

Average throughput: 95.40 Mbit/s

95th percentile per-packet one-way delay: 41.617 ms

Loss rate: 5.70%

-- Flow 1:

Average throughput: 81.56 Mbit/s

95th percentile per-packet one-way delay: 41.633 ms

Loss rate: 5.26%

-- Flow 2:

Average throughput: 19.96 Mbit/s

95th percentile per-packet one-way delay: 41.479 ms

Loss rate: 7.31%

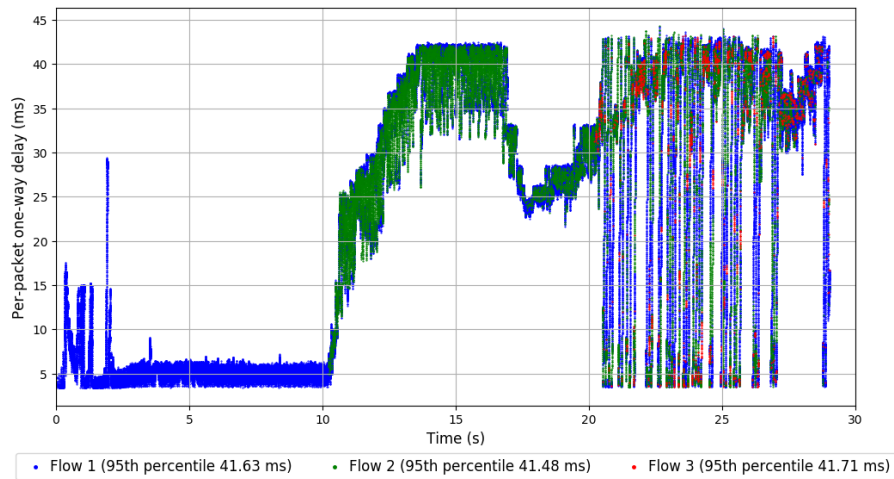
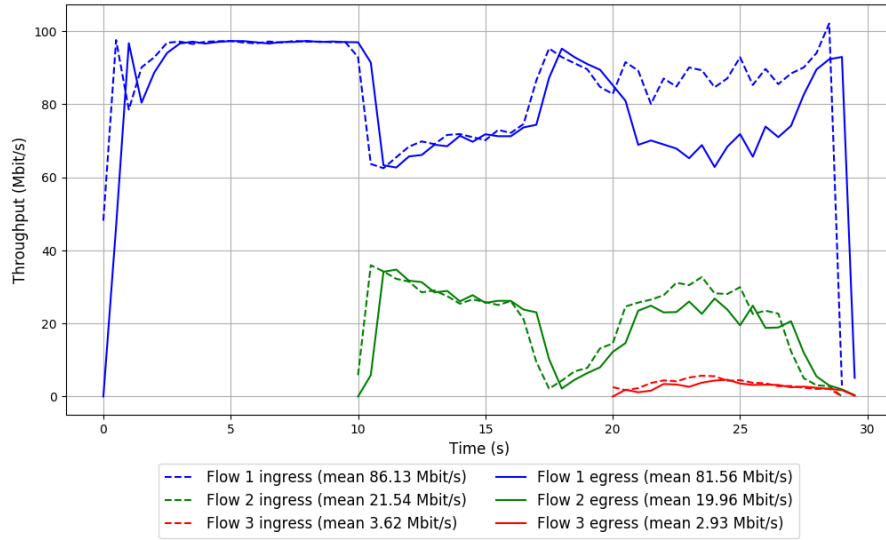
-- Flow 3:

Average throughput: 2.93 Mbit/s

95th percentile per-packet one-way delay: 41.711 ms

Loss rate: 19.20%

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



Run 4: Statistics of Indigo-MusesD

Start at: 2019-05-30 02:06:24

End at: 2019-05-30 02:06:54

Local clock offset: 6.168 ms

Remote clock offset: 5.111 ms

# Below is generated by plot.py at 2019-05-30 02:42:48

# Datalink statistics

-- Total of 3 flows:

Average throughput: 95.53 Mbit/s

95th percentile per-packet one-way delay: 41.741 ms

Loss rate: 8.53%

-- Flow 1:

Average throughput: 81.90 Mbit/s

95th percentile per-packet one-way delay: 41.507 ms

Loss rate: 7.45%

-- Flow 2:

Average throughput: 16.09 Mbit/s

95th percentile per-packet one-way delay: 42.673 ms

Loss rate: 12.72%

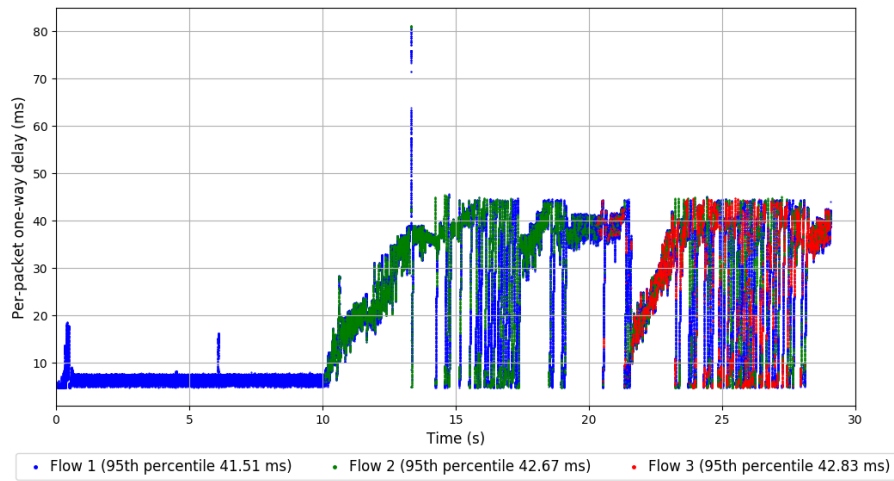
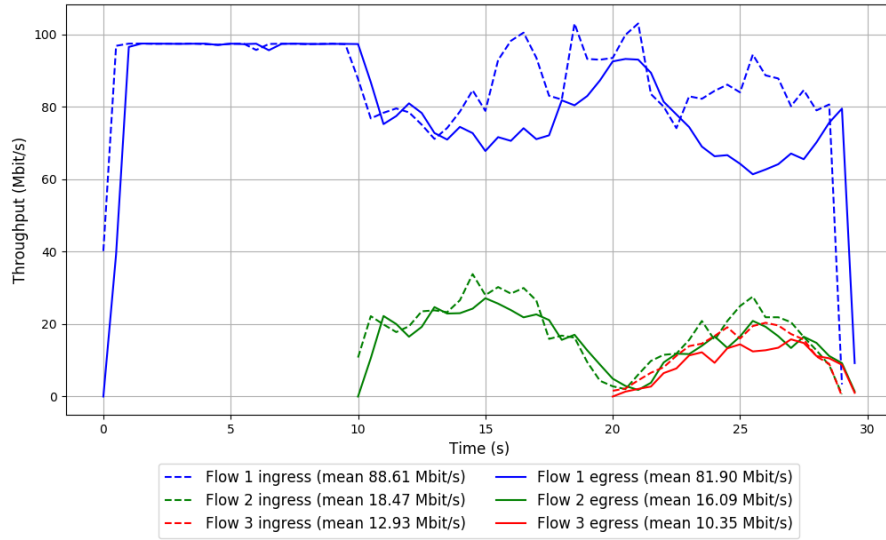
-- Flow 3:

Average throughput: 10.35 Mbit/s

95th percentile per-packet one-way delay: 42.832 ms

Loss rate: 19.95%

### Run 4: Report of Indigo-MusesD — Data Link





Run 5: Statistics of Indigo-MusesD

Start at: 2019-05-30 02:32:43

End at: 2019-05-30 02:33:13

Local clock offset: -3.417 ms

Remote clock offset: 4.884 ms

# Below is generated by plot.py at 2019-05-30 02:42:57

# Datalink statistics

-- Total of 3 flows:

Average throughput: 95.71 Mbit/s

95th percentile per-packet one-way delay: 46.071 ms

Loss rate: 8.66%

-- Flow 1:

Average throughput: 83.10 Mbit/s

95th percentile per-packet one-way delay: 46.041 ms

Loss rate: 7.89%

-- Flow 2:

Average throughput: 16.25 Mbit/s

95th percentile per-packet one-way delay: 46.301 ms

Loss rate: 11.96%

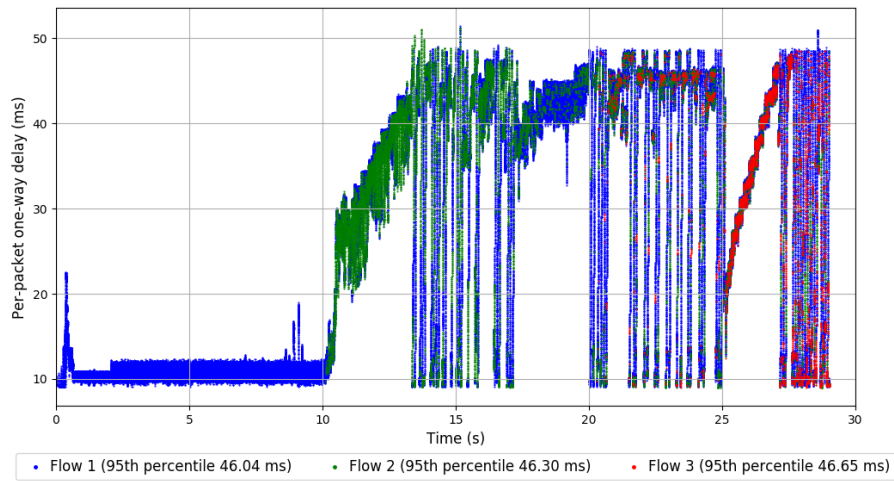
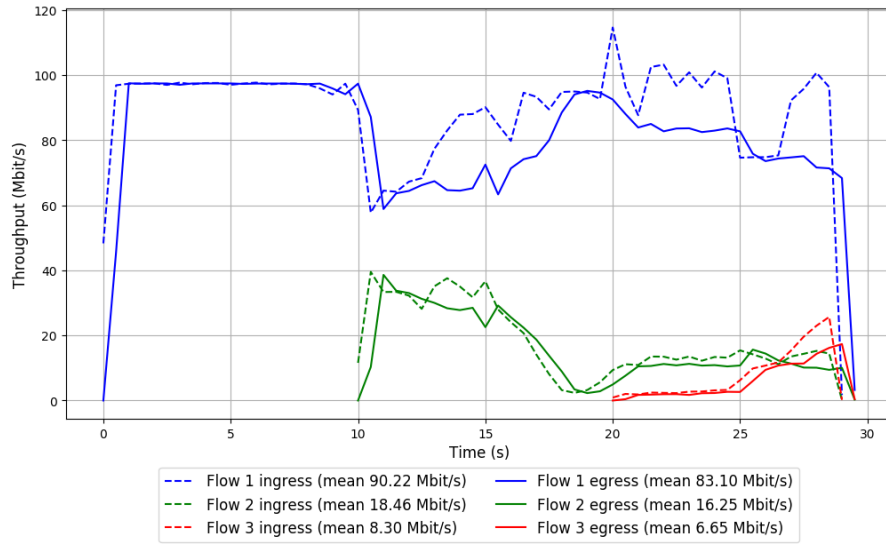
-- Flow 3:

Average throughput: 6.65 Mbit/s

95th percentile per-packet one-way delay: 46.650 ms

Loss rate: 20.23%

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



Run 1: Statistics of Indigo-MuseST

Start at: 2019-05-30 00:47:01  
End at: 2019-05-30 00:47:31  
Local clock offset: 0.663 ms  
Remote clock offset: -2.693 ms

# Below is generated by plot.py at 2019-05-30 02:43:19

# Datalink statistics

-- Total of 3 flows:

Average throughput: 95.88 Mbit/s  
95th percentile per-packet one-way delay: 37.420 ms  
Loss rate: 4.57%

-- Flow 1:

Average throughput: 60.11 Mbit/s  
95th percentile per-packet one-way delay: 33.393 ms  
Loss rate: 2.53%

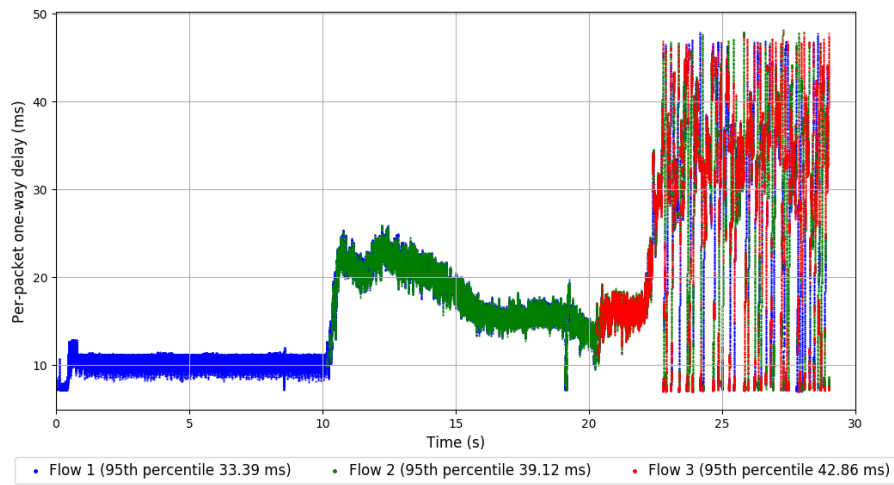
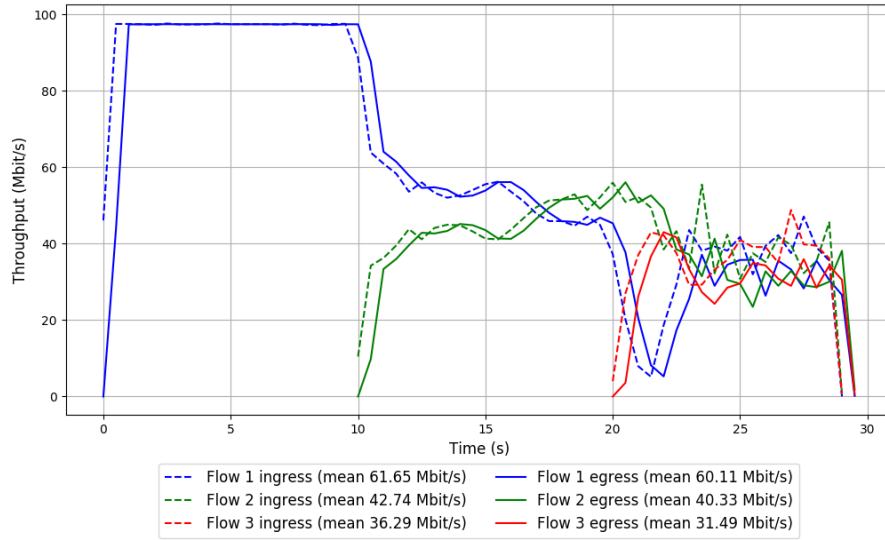
-- Flow 2:

Average throughput: 40.33 Mbit/s  
95th percentile per-packet one-way delay: 39.124 ms  
Loss rate: 5.66%

-- Flow 3:

Average throughput: 31.49 Mbit/s  
95th percentile per-packet one-way delay: 42.862 ms  
Loss rate: 13.25%

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



Run 2: Statistics of Indigo-MuseST

Start at: 2019-05-30 01:12:37

End at: 2019-05-30 01:13:07

Local clock offset: 0.114 ms

Remote clock offset: 1.331 ms

# Below is generated by plot.py at 2019-05-30 02:43:20

# Datalink statistics

-- Total of 3 flows:

Average throughput: 95.58 Mbit/s

95th percentile per-packet one-way delay: 41.065 ms

Loss rate: 5.92%

-- Flow 1:

Average throughput: 61.07 Mbit/s

95th percentile per-packet one-way delay: 36.650 ms

Loss rate: 3.63%

-- Flow 2:

Average throughput: 39.80 Mbit/s

95th percentile per-packet one-way delay: 41.567 ms

Loss rate: 6.62%

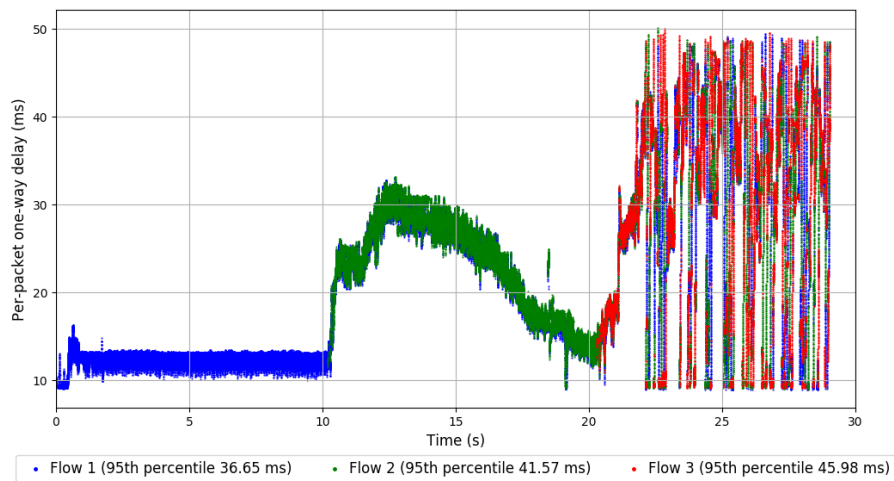
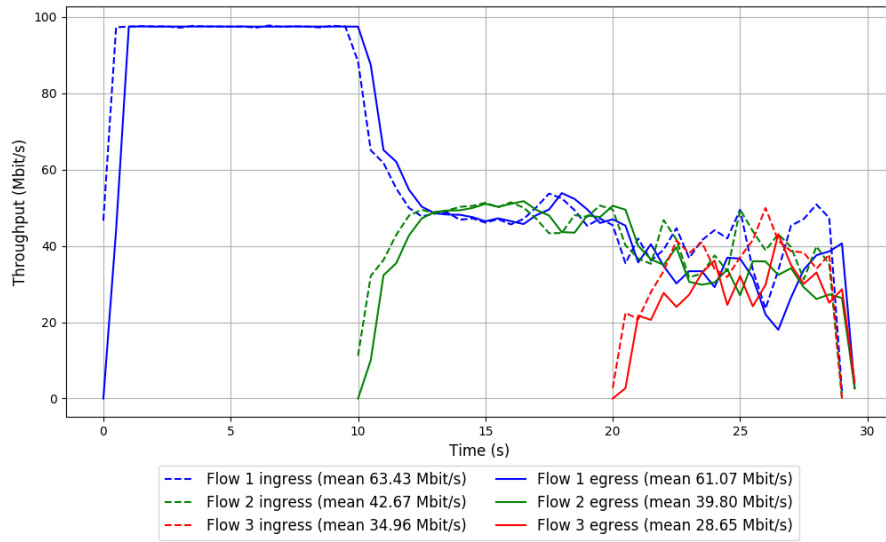
-- Flow 3:

Average throughput: 28.65 Mbit/s

95th percentile per-packet one-way delay: 45.977 ms

Loss rate: 17.83%

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



Run 3: Statistics of Indigo-MuseST

Start at: 2019-05-30 01:38:19

End at: 2019-05-30 01:38:49

Local clock offset: 1.85 ms

Remote clock offset: 2.308 ms

# Below is generated by plot.py at 2019-05-30 02:43:39

# Datalink statistics

-- Total of 3 flows:

Average throughput: 95.39 Mbit/s

95th percentile per-packet one-way delay: 36.848 ms

Loss rate: 6.23%

-- Flow 1:

Average throughput: 60.90 Mbit/s

95th percentile per-packet one-way delay: 32.901 ms

Loss rate: 3.75%

-- Flow 2:

Average throughput: 39.54 Mbit/s

95th percentile per-packet one-way delay: 37.820 ms

Loss rate: 7.79%

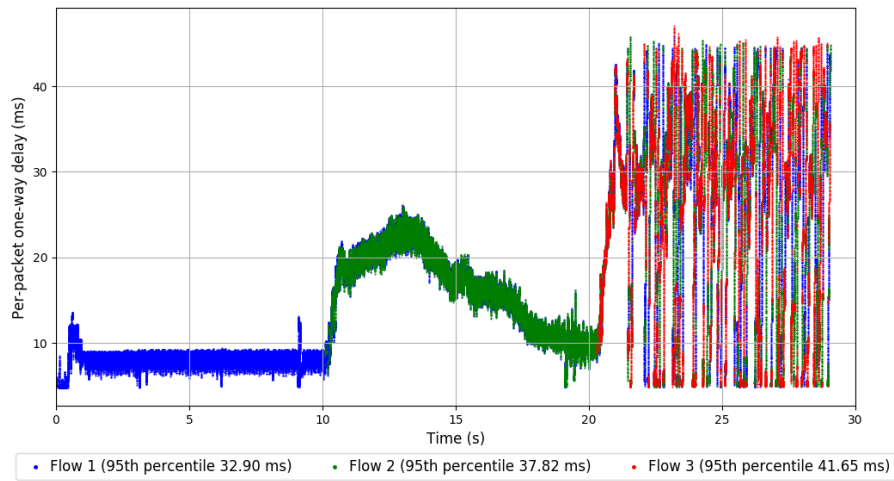
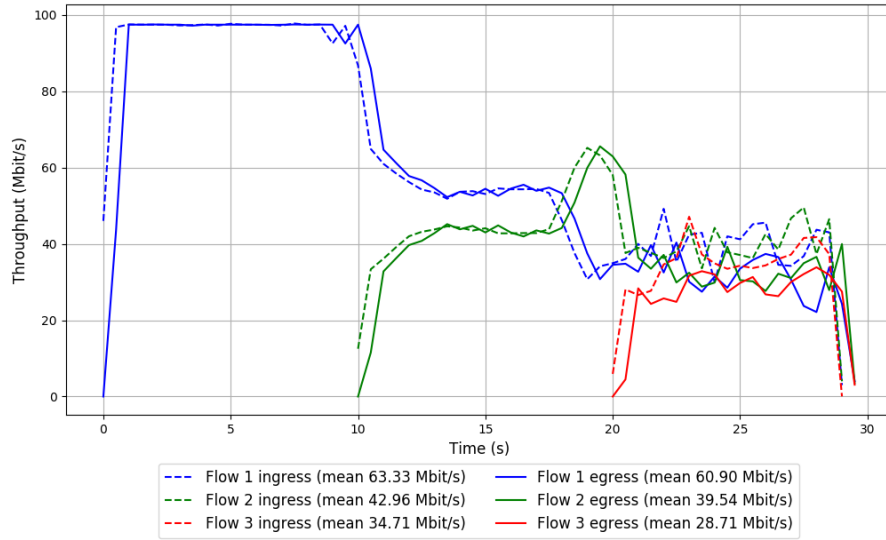
-- Flow 3:

Average throughput: 28.71 Mbit/s

95th percentile per-packet one-way delay: 41.646 ms

Loss rate: 17.10%

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





Run 4: Statistics of Indigo-MuseST

Start at: 2019-05-30 02:05:07

End at: 2019-05-30 02:05:37

Local clock offset: 0.847 ms

Remote clock offset: 5.688 ms

# Below is generated by plot.py at 2019-05-30 02:43:43

# Datalink statistics

-- Total of 3 flows:

Average throughput: 95.52 Mbit/s

95th percentile per-packet one-way delay: 42.523 ms

Loss rate: 6.54%

-- Flow 1:

Average throughput: 60.17 Mbit/s

95th percentile per-packet one-way delay: 38.815 ms

Loss rate: 3.47%

-- Flow 2:

Average throughput: 41.07 Mbit/s

95th percentile per-packet one-way delay: 43.027 ms

Loss rate: 8.40%

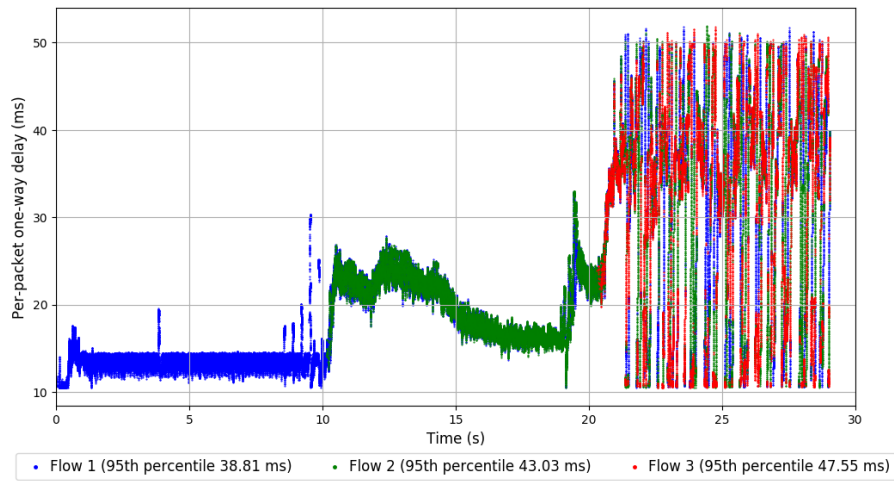
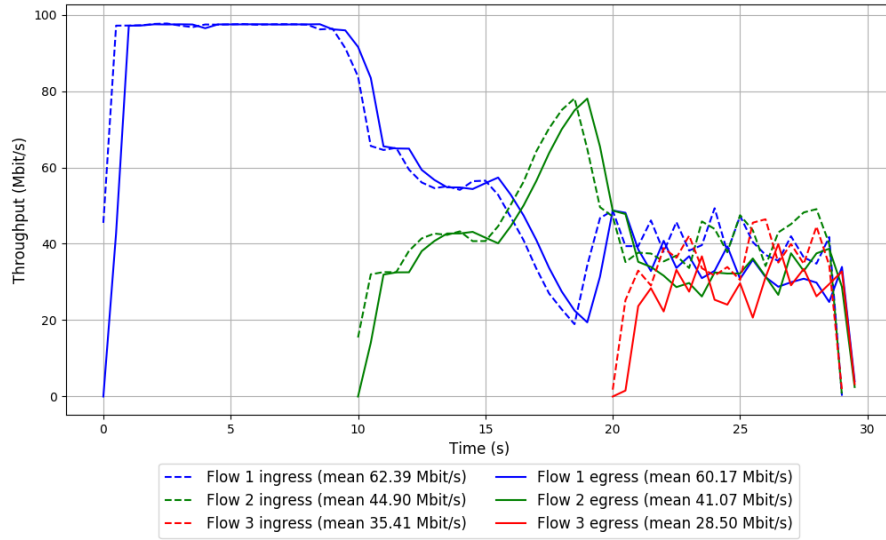
-- Flow 3:

Average throughput: 28.50 Mbit/s

95th percentile per-packet one-way delay: 47.552 ms

Loss rate: 19.40%

### Run 4: Report of Indigo-MusesT — Data Link



Run 5: Statistics of Indigo-MuseST

Start at: 2019-05-30 02:31:22

End at: 2019-05-30 02:31:52

Local clock offset: -2.866 ms

Remote clock offset: 5.5 ms

# Below is generated by plot.py at 2019-05-30 02:43:45

# Datalink statistics

-- Total of 3 flows:

Average throughput: 95.88 Mbit/s

95th percentile per-packet one-way delay: 40.062 ms

Loss rate: 5.11%

-- Flow 1:

Average throughput: 60.89 Mbit/s

95th percentile per-packet one-way delay: 34.883 ms

Loss rate: 2.72%

-- Flow 2:

Average throughput: 40.06 Mbit/s

95th percentile per-packet one-way delay: 41.310 ms

Loss rate: 5.89%

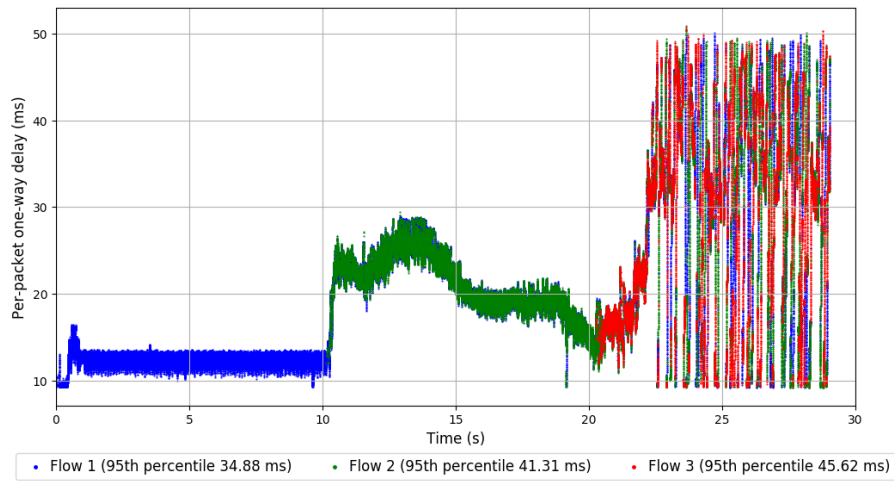
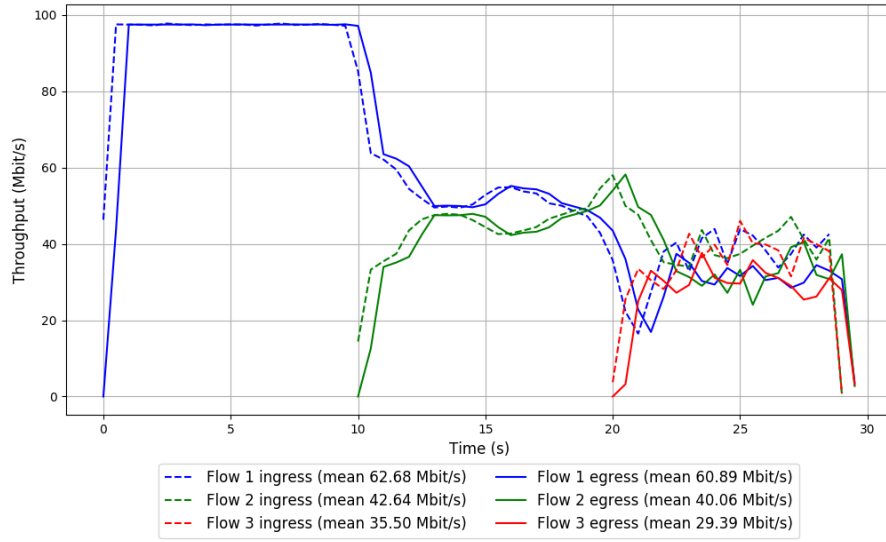
-- Flow 3:

Average throughput: 29.39 Mbit/s

95th percentile per-packet one-way delay: 45.616 ms

Loss rate: 16.99%

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



Run 1: Statistics of LEDBAT

Start at: 2019-05-30 00:38:45  
End at: 2019-05-30 00:39:15  
Local clock offset: -2.393 ms  
Remote clock offset: -1.195 ms

# Below is generated by plot.py at 2019-05-30 02:43:45

# Datalink statistics

-- Total of 3 flows:

Average throughput: 87.55 Mbit/s  
95th percentile per-packet one-way delay: 47.770 ms  
Loss rate: 0.58%

-- Flow 1:

Average throughput: 57.48 Mbit/s  
95th percentile per-packet one-way delay: 47.372 ms  
Loss rate: 0.43%

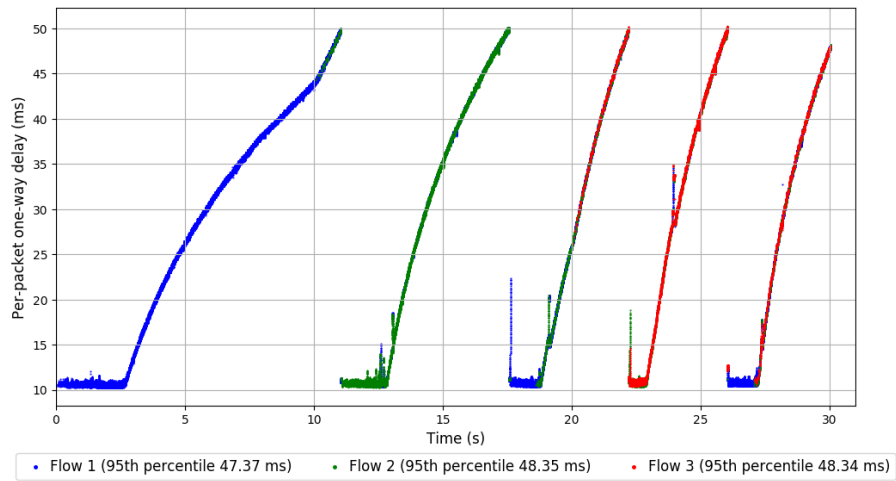
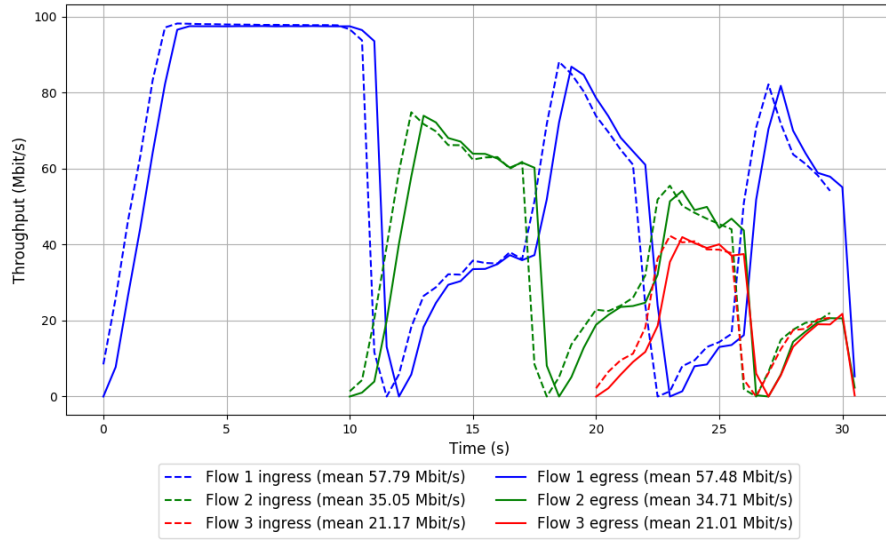
-- Flow 2:

Average throughput: 34.71 Mbit/s  
95th percentile per-packet one-way delay: 48.353 ms  
Loss rate: 0.95%

-- Flow 3:

Average throughput: 21.01 Mbit/s  
95th percentile per-packet one-way delay: 48.341 ms  
Loss rate: 0.56%

### Run 1: Report of LEDBAT — Data Link



Run 2: Statistics of LEDBAT

Start at: 2019-05-30 01:04:19

End at: 2019-05-30 01:04:49

Local clock offset: 2.048 ms

Remote clock offset: 0.564 ms

# Below is generated by plot.py at 2019-05-30 02:43:45

# Datalink statistics

-- Total of 3 flows:

Average throughput: 79.70 Mbit/s

95th percentile per-packet one-way delay: 46.752 ms

Loss rate: 0.53%

-- Flow 1:

Average throughput: 47.75 Mbit/s

95th percentile per-packet one-way delay: 46.341 ms

Loss rate: 0.39%

-- Flow 2:

Average throughput: 35.56 Mbit/s

95th percentile per-packet one-way delay: 47.084 ms

Loss rate: 0.64%

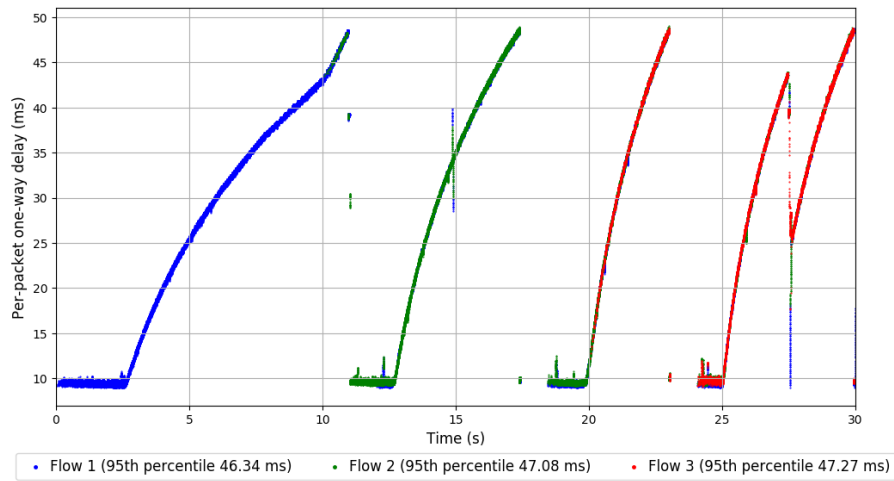
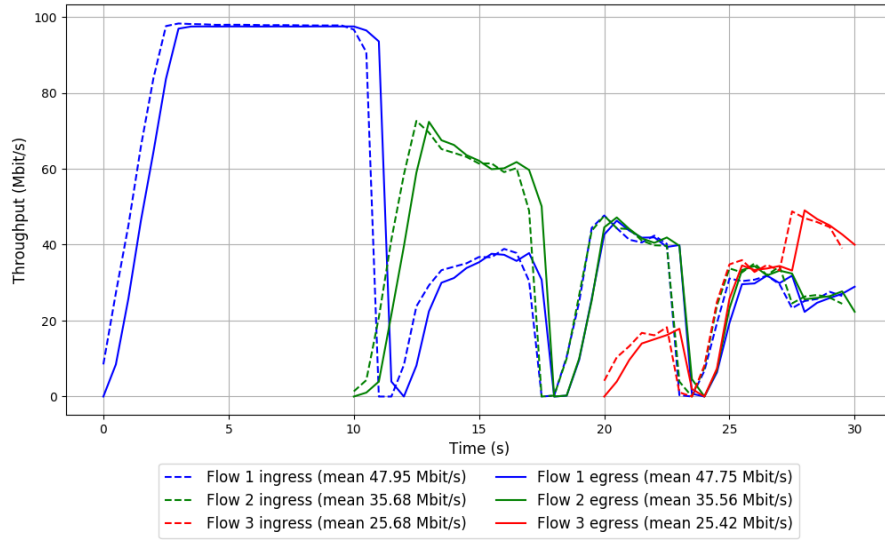
-- Flow 3:

Average throughput: 25.42 Mbit/s

95th percentile per-packet one-way delay: 47.265 ms

Loss rate: 1.06%

Run 2: Report of LEDBAT — Data Link





Run 3: Statistics of LEDBAT

Start at: 2019-05-30 01:29:42

End at: 2019-05-30 01:30:12

Local clock offset: 2.34 ms

Remote clock offset: 1.121 ms

# Below is generated by plot.py at 2019-05-30 02:44:00

# Datalink statistics

-- Total of 3 flows:

Average throughput: 88.80 Mbit/s

95th percentile per-packet one-way delay: 39.049 ms

Loss rate: 0.24%

-- Flow 1:

Average throughput: 59.17 Mbit/s

95th percentile per-packet one-way delay: 38.310 ms

Loss rate: 0.11%

-- Flow 2:

Average throughput: 31.86 Mbit/s

95th percentile per-packet one-way delay: 40.398 ms

Loss rate: 0.51%

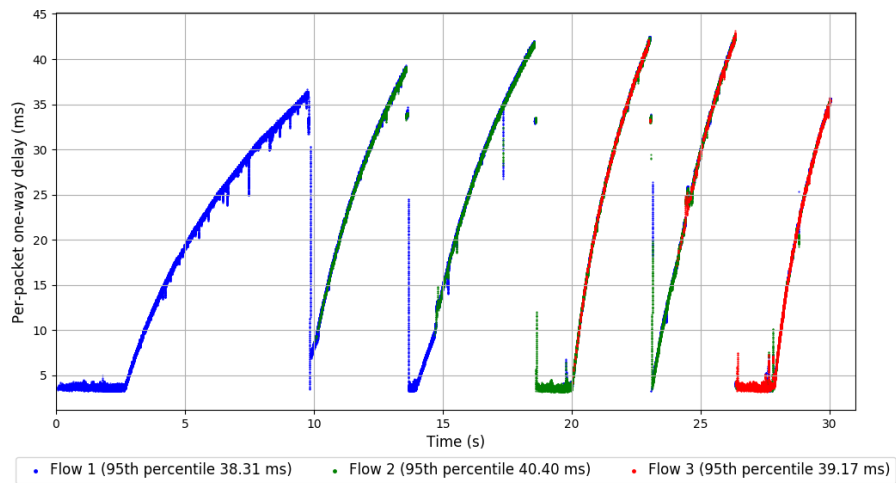
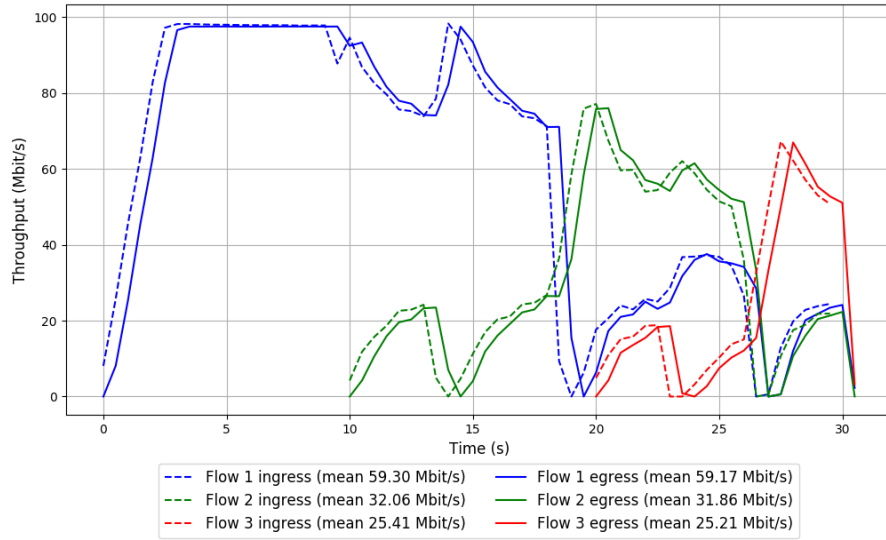
-- Flow 3:

Average throughput: 25.21 Mbit/s

95th percentile per-packet one-way delay: 39.174 ms

Loss rate: 0.44%

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



Run 4: Statistics of LEDBAT

Start at: 2019-05-30 01:56:29

End at: 2019-05-30 01:56:59

Local clock offset: 1.117 ms

Remote clock offset: 3.615 ms

# Below is generated by plot.py at 2019-05-30 02:44:20

# Datalink statistics

-- Total of 3 flows:

Average throughput: 85.25 Mbit/s

95th percentile per-packet one-way delay: 45.784 ms

Loss rate: 0.29%

-- Flow 1:

Average throughput: 50.31 Mbit/s

95th percentile per-packet one-way delay: 45.189 ms

Loss rate: 0.21%

-- Flow 2:

Average throughput: 39.01 Mbit/s

95th percentile per-packet one-way delay: 46.286 ms

Loss rate: 0.35%

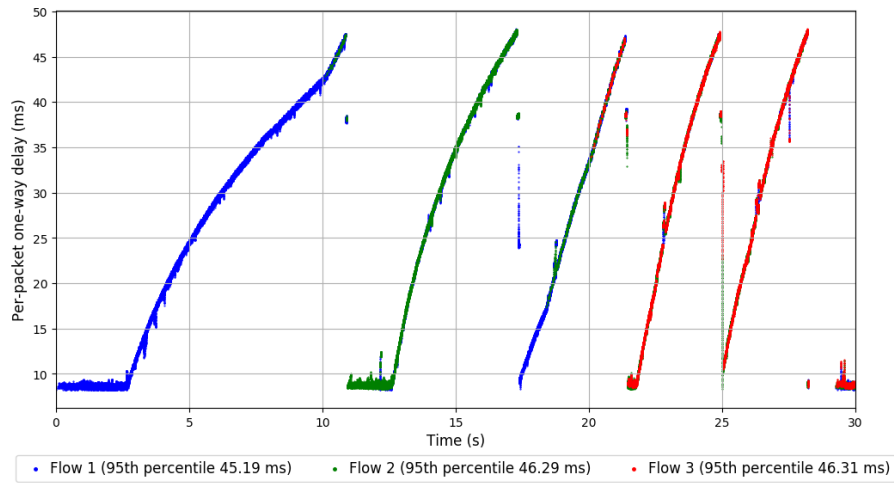
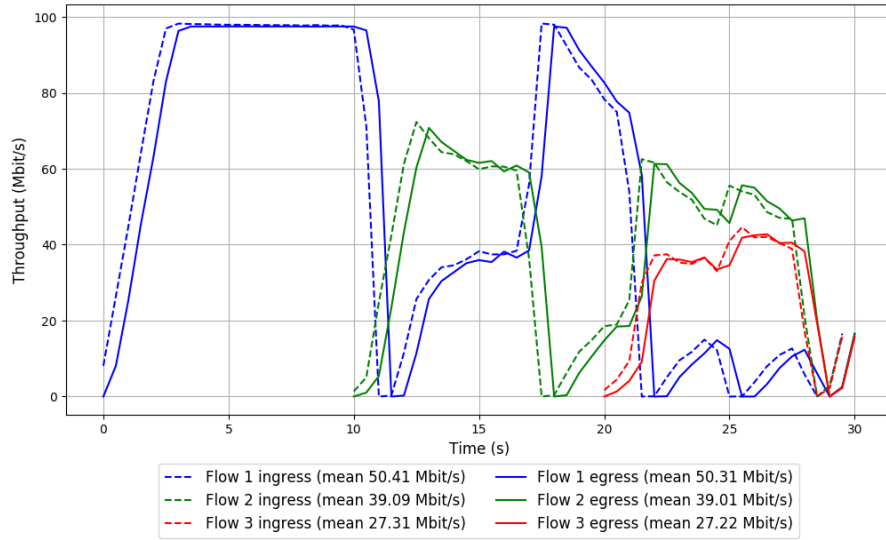
-- Flow 3:

Average throughput: 27.22 Mbit/s

95th percentile per-packet one-way delay: 46.313 ms

Loss rate: 0.56%

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



Run 5: Statistics of LEDBAT

Start at: 2019-05-30 02:22:42

End at: 2019-05-30 02:23:12

Local clock offset: -1.798 ms

Remote clock offset: 4.801 ms

# Below is generated by plot.py at 2019-05-30 02:44:30

# Datalink statistics

-- Total of 3 flows:

Average throughput: 89.88 Mbit/s

95th percentile per-packet one-way delay: 45.393 ms

Loss rate: 0.15%

-- Flow 1:

Average throughput: 49.43 Mbit/s

95th percentile per-packet one-way delay: 44.936 ms

Loss rate: 0.16%

-- Flow 2:

Average throughput: 43.37 Mbit/s

95th percentile per-packet one-way delay: 45.700 ms

Loss rate: 0.16%

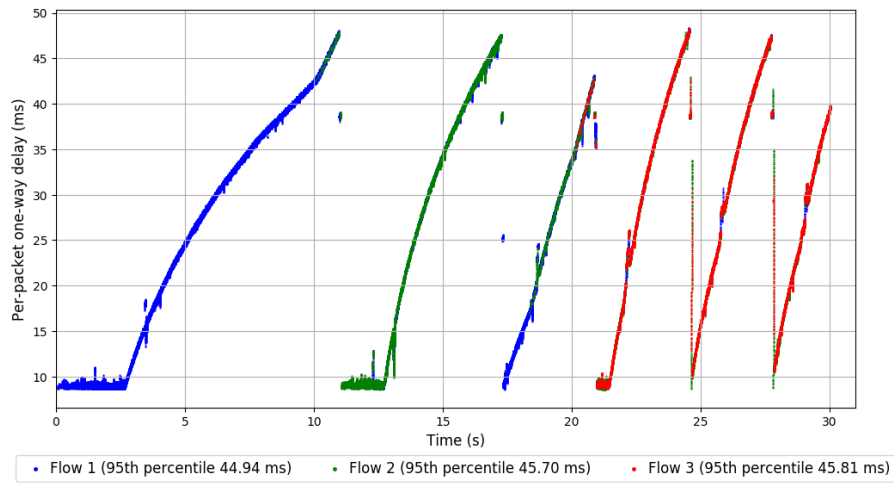
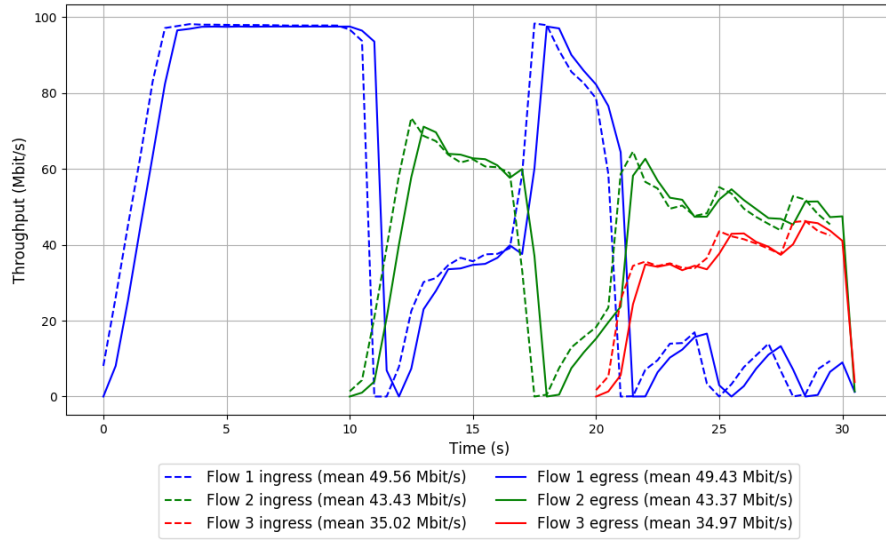
-- Flow 3:

Average throughput: 34.97 Mbit/s

95th percentile per-packet one-way delay: 45.812 ms

Loss rate: 0.09%

### Run 5: Report of LEDBAT — Data Link



Run 1: Statistics of PCC-Allegro

Start at: 2019-05-30 00:42:12  
End at: 2019-05-30 00:42:42  
Local clock offset: -0.836 ms  
Remote clock offset: -3.589 ms

# Below is generated by plot.py at 2019-05-30 02:44:49

# Datalink statistics

-- Total of 3 flows:

Average throughput: 92.59 Mbit/s  
95th percentile per-packet one-way delay: 42.196 ms  
Loss rate: 3.40%

-- Flow 1:

Average throughput: 75.22 Mbit/s  
95th percentile per-packet one-way delay: 42.031 ms  
Loss rate: 3.52%

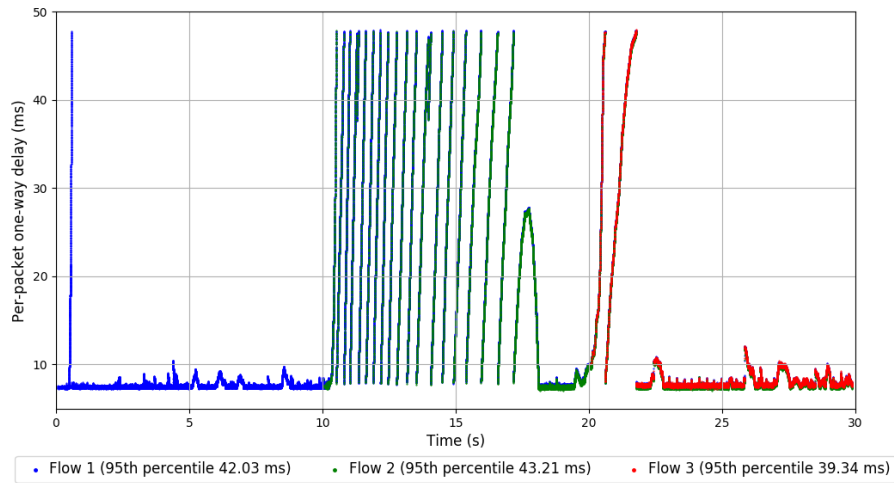
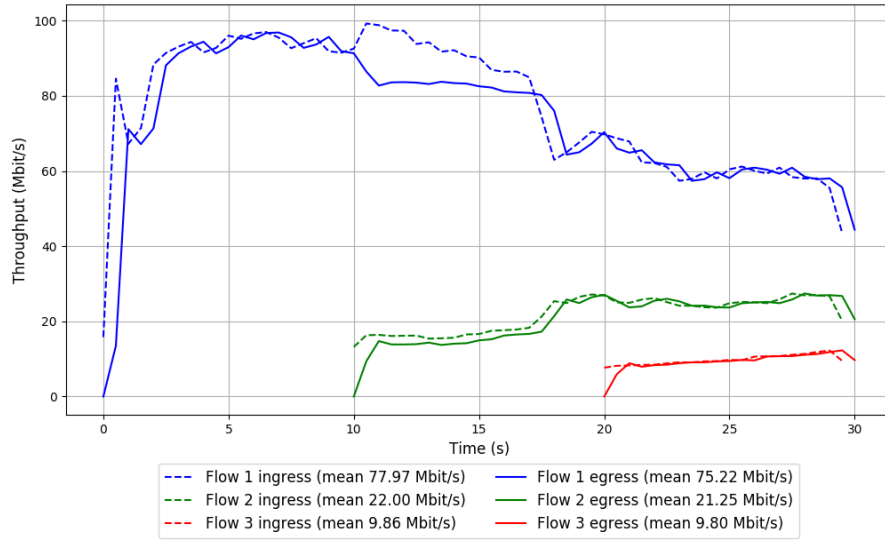
-- Flow 2:

Average throughput: 21.25 Mbit/s  
95th percentile per-packet one-way delay: 43.214 ms  
Loss rate: 3.40%

-- Flow 3:

Average throughput: 9.80 Mbit/s  
95th percentile per-packet one-way delay: 39.337 ms  
Loss rate: 0.66%

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





Run 2: Statistics of PCC-Allegro

Start at: 2019-05-30 01:07:48

End at: 2019-05-30 01:08:18

Local clock offset: 2.093 ms

Remote clock offset: 1.273 ms

# Below is generated by plot.py at 2019-05-30 02:44:49

# Datalink statistics

-- Total of 3 flows:

Average throughput: 91.29 Mbit/s

95th percentile per-packet one-way delay: 29.666 ms

Loss rate: 0.42%

-- Flow 1:

Average throughput: 79.18 Mbit/s

95th percentile per-packet one-way delay: 28.929 ms

Loss rate: 0.47%

-- Flow 2:

Average throughput: 15.86 Mbit/s

95th percentile per-packet one-way delay: 32.214 ms

Loss rate: 0.10%

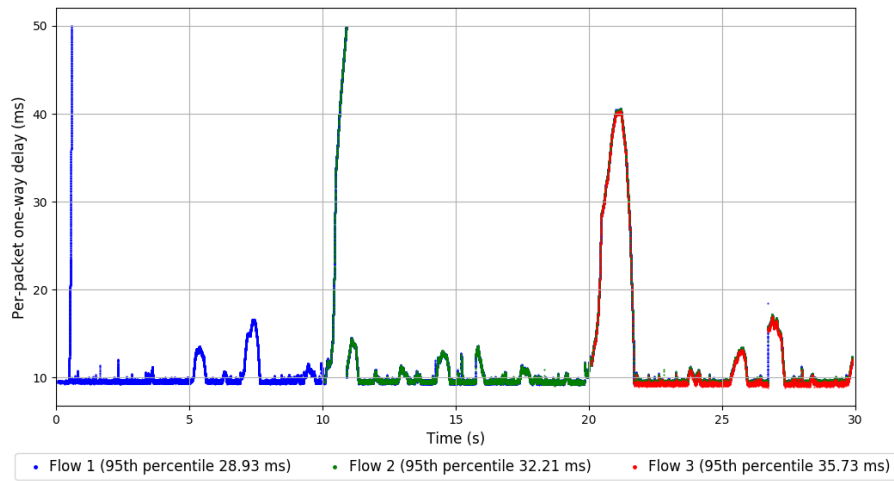
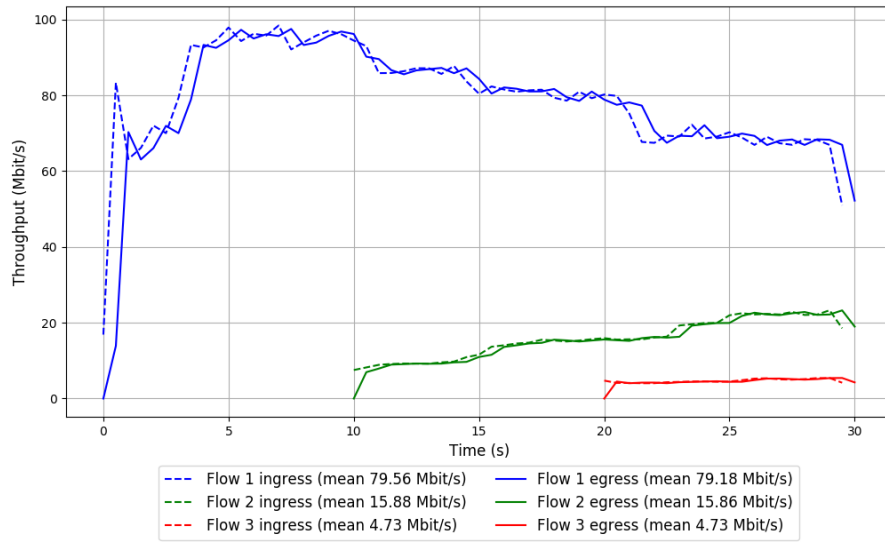
-- Flow 3:

Average throughput: 4.73 Mbit/s

95th percentile per-packet one-way delay: 35.725 ms

Loss rate: 0.00%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2019-05-30 01:33:17

End at: 2019-05-30 01:33:47

Local clock offset: -3.181 ms

Remote clock offset: 0.994 ms

# Below is generated by plot.py at 2019-05-30 02:44:49

# Datalink statistics

-- Total of 3 flows:

Average throughput: 89.75 Mbit/s

95th percentile per-packet one-way delay: 16.270 ms

Loss rate: 0.27%

-- Flow 1:

Average throughput: 84.23 Mbit/s

95th percentile per-packet one-way delay: 16.023 ms

Loss rate: 0.29%

-- Flow 2:

Average throughput: 5.95 Mbit/s

95th percentile per-packet one-way delay: 17.675 ms

Loss rate: 0.00%

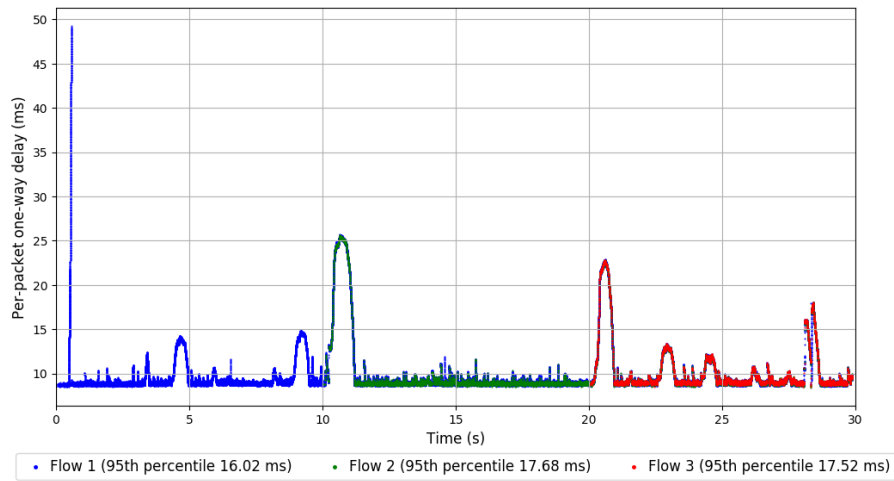
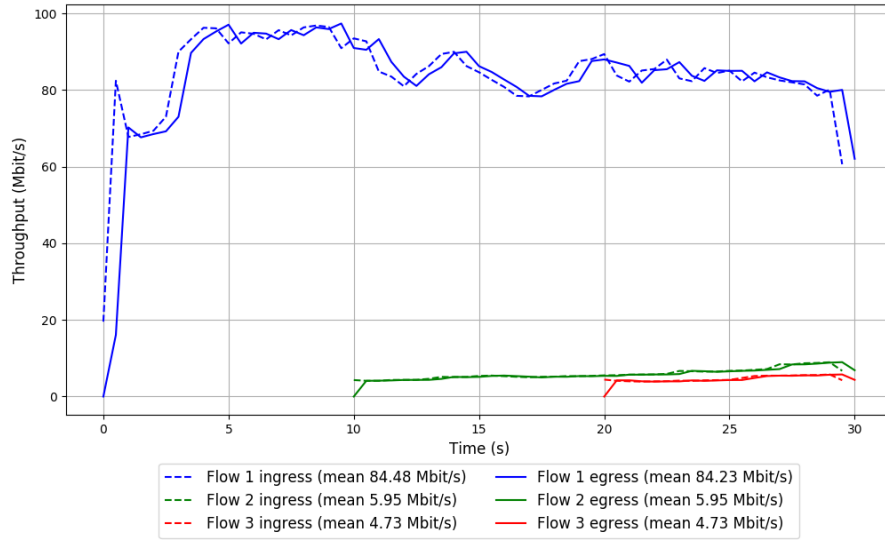
-- Flow 3:

Average throughput: 4.73 Mbit/s

95th percentile per-packet one-way delay: 17.522 ms

Loss rate: 0.00%

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



Run 4: Statistics of PCC-Allegro

Start at: 2019-05-30 02:00:09

End at: 2019-05-30 02:00:39

Local clock offset: 0.888 ms

Remote clock offset: 4.146 ms

# Below is generated by plot.py at 2019-05-30 02:44:54

# Datalink statistics

-- Total of 3 flows:

Average throughput: 91.28 Mbit/s

95th percentile per-packet one-way delay: 45.546 ms

Loss rate: 5.47%

-- Flow 1:

Average throughput: 73.04 Mbit/s

95th percentile per-packet one-way delay: 44.849 ms

Loss rate: 4.58%

-- Flow 2:

Average throughput: 20.35 Mbit/s

95th percentile per-packet one-way delay: 46.617 ms

Loss rate: 7.41%

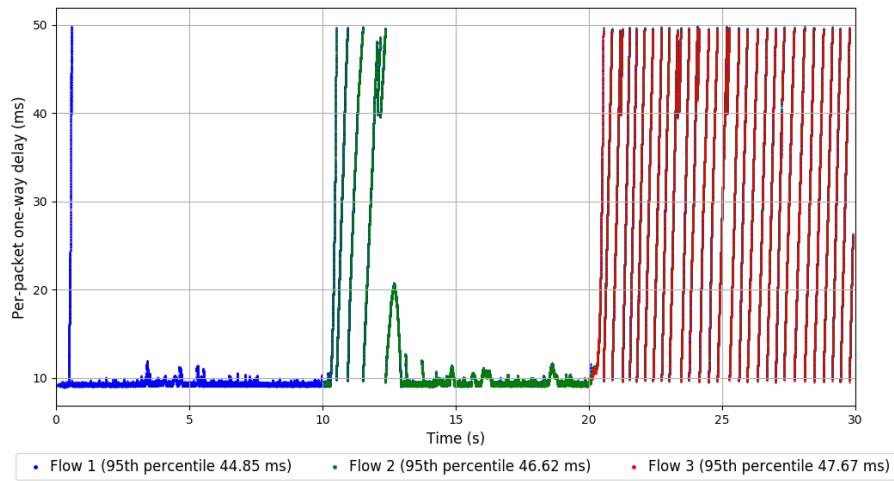
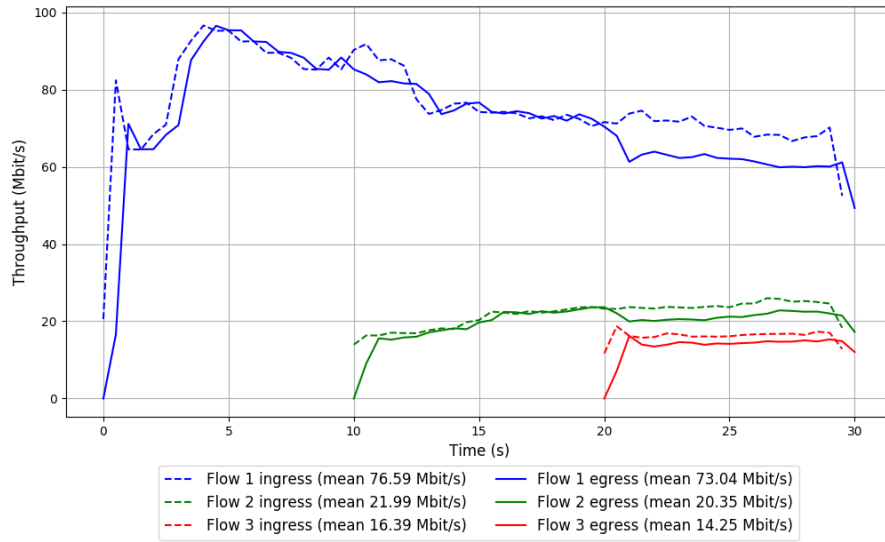
-- Flow 3:

Average throughput: 14.25 Mbit/s

95th percentile per-packet one-way delay: 47.675 ms

Loss rate: 12.91%

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



Run 5: Statistics of PCC-Allegro

Start at: 2019-05-30 02:26:22

End at: 2019-05-30 02:26:52

Local clock offset: 1.542 ms

Remote clock offset: 5.204 ms

# Below is generated by plot.py at 2019-05-30 02:44:56

# Datalink statistics

-- Total of 3 flows:

Average throughput: 90.02 Mbit/s

95th percentile per-packet one-way delay: 10.983 ms

Loss rate: 0.30%

-- Flow 1:

Average throughput: 81.17 Mbit/s

95th percentile per-packet one-way delay: 10.862 ms

Loss rate: 0.33%

-- Flow 2:

Average throughput: 10.45 Mbit/s

95th percentile per-packet one-way delay: 12.262 ms

Loss rate: 0.00%

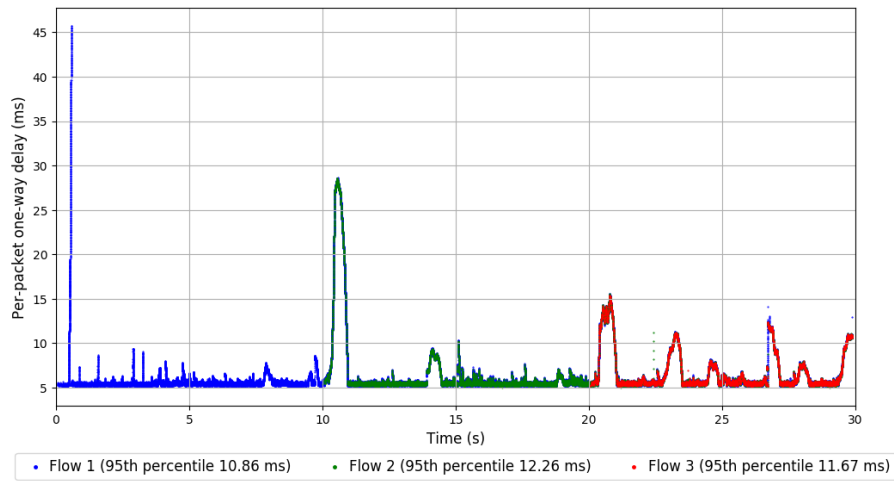
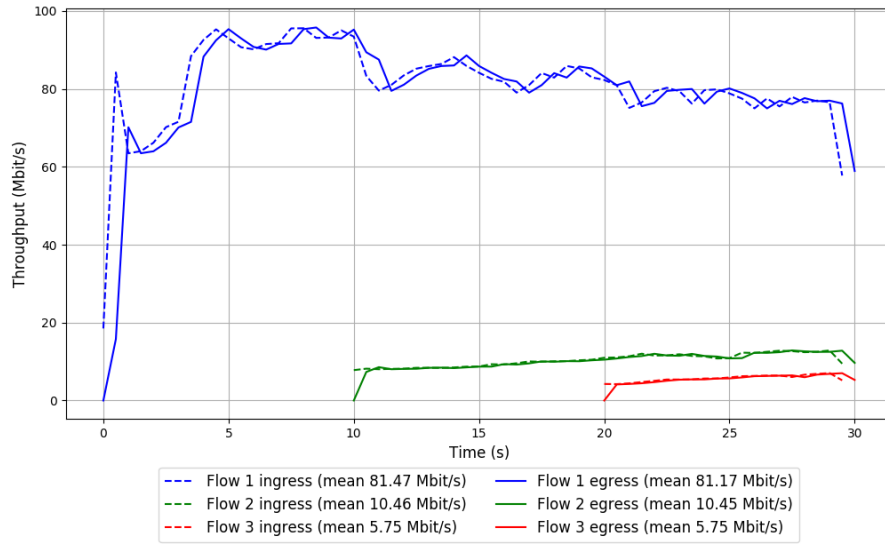
-- Flow 3:

Average throughput: 5.75 Mbit/s

95th percentile per-packet one-way delay: 11.669 ms

Loss rate: 0.00%

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





Run 1: Statistics of PCC-Expr

Start at: 2019-05-30 00:41:04  
End at: 2019-05-30 00:41:34  
Local clock offset: 3.231 ms  
Remote clock offset: -1.814 ms

# Below is generated by plot.py at 2019-05-30 02:44:56

# Datalink statistics

-- Total of 3 flows:

Average throughput: 12.99 Mbit/s  
95th percentile per-packet one-way delay: 5.024 ms  
Loss rate: 42.64%

-- Flow 1:

Average throughput: 7.81 Mbit/s  
95th percentile per-packet one-way delay: 5.008 ms  
Loss rate: 49.44%

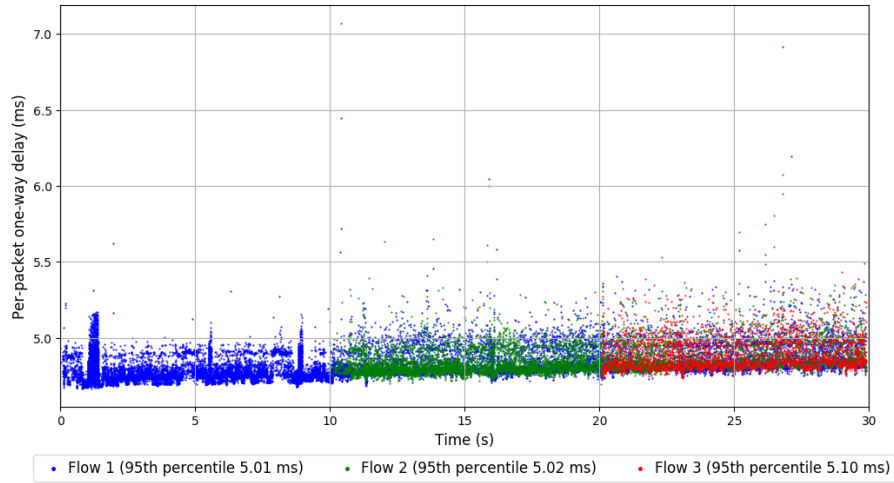
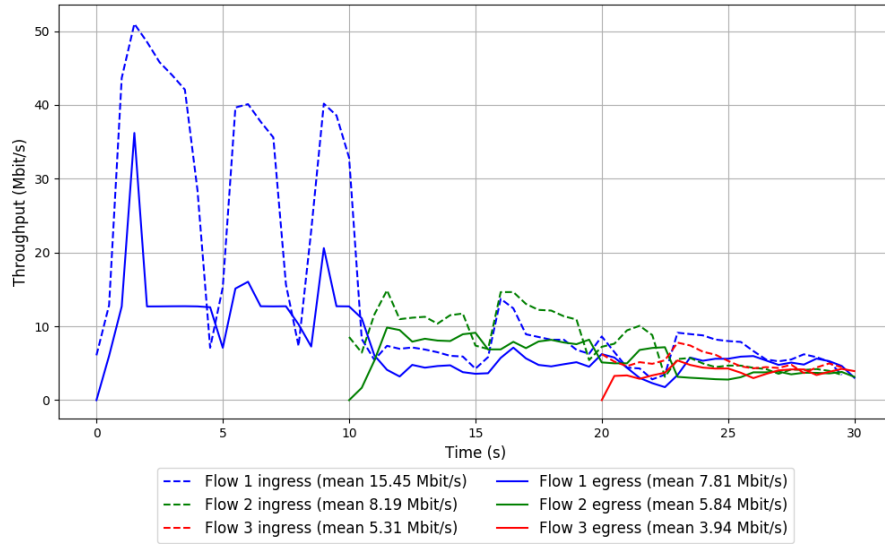
-- Flow 2:

Average throughput: 5.84 Mbit/s  
95th percentile per-packet one-way delay: 5.019 ms  
Loss rate: 28.75%

-- Flow 3:

Average throughput: 3.94 Mbit/s  
95th percentile per-packet one-way delay: 5.102 ms  
Loss rate: 25.84%

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



Run 2: Statistics of PCC-Expr

Start at: 2019-05-30 01:06:40  
End at: 2019-05-30 01:07:10  
Local clock offset: 1.936 ms  
Remote clock offset: -0.026 ms

# Below is generated by plot.py at 2019-05-30 02:44:56

# Datalink statistics

-- Total of 3 flows:

Average throughput: 13.10 Mbit/s  
95th percentile per-packet one-way delay: 8.787 ms  
Loss rate: 32.26%

-- Flow 1:

Average throughput: 8.03 Mbit/s  
95th percentile per-packet one-way delay: 8.775 ms  
Loss rate: 34.34%

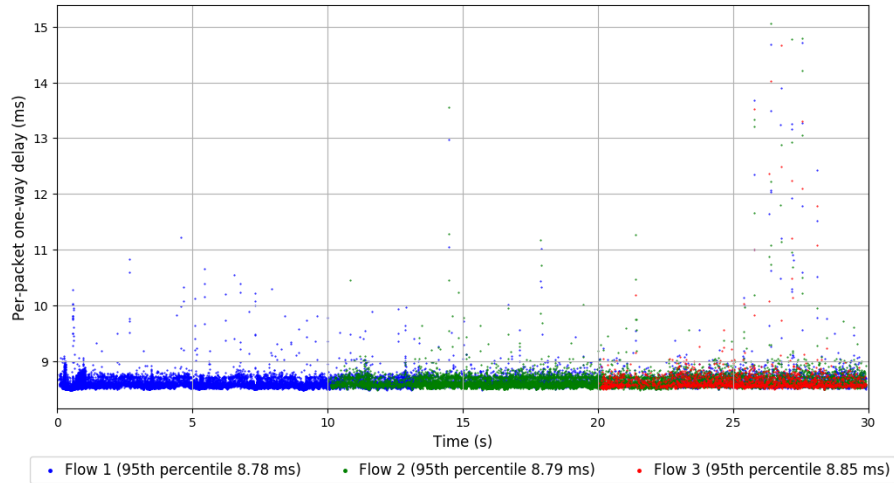
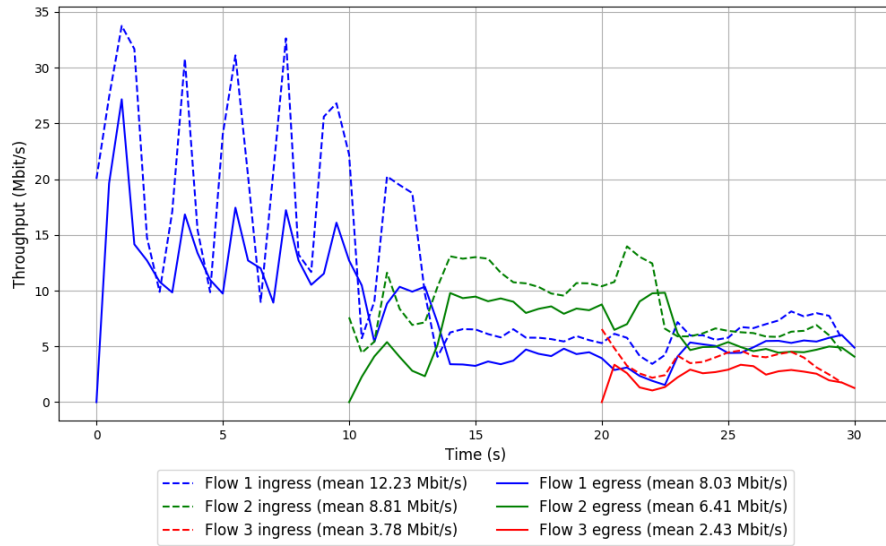
-- Flow 2:

Average throughput: 6.41 Mbit/s  
95th percentile per-packet one-way delay: 8.794 ms  
Loss rate: 27.21%

-- Flow 3:

Average throughput: 2.43 Mbit/s  
95th percentile per-packet one-way delay: 8.847 ms  
Loss rate: 35.61%

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



Run 3: Statistics of PCC-Expr

Start at: 2019-05-30 01:32:09

End at: 2019-05-30 01:32:39

Local clock offset: -2.749 ms

Remote clock offset: 1.863 ms

# Below is generated by plot.py at 2019-05-30 02:44:56

# Datalink statistics

-- Total of 3 flows:

Average throughput: 12.99 Mbit/s

95th percentile per-packet one-way delay: 9.344 ms

Loss rate: 39.86%

-- Flow 1:

Average throughput: 8.69 Mbit/s

95th percentile per-packet one-way delay: 9.336 ms

Loss rate: 42.00%

-- Flow 2:

Average throughput: 4.74 Mbit/s

95th percentile per-packet one-way delay: 9.355 ms

Loss rate: 37.86%

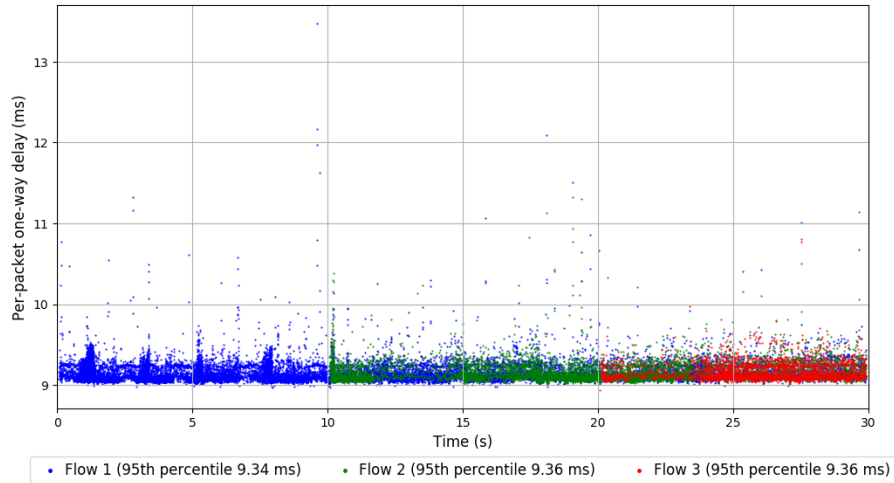
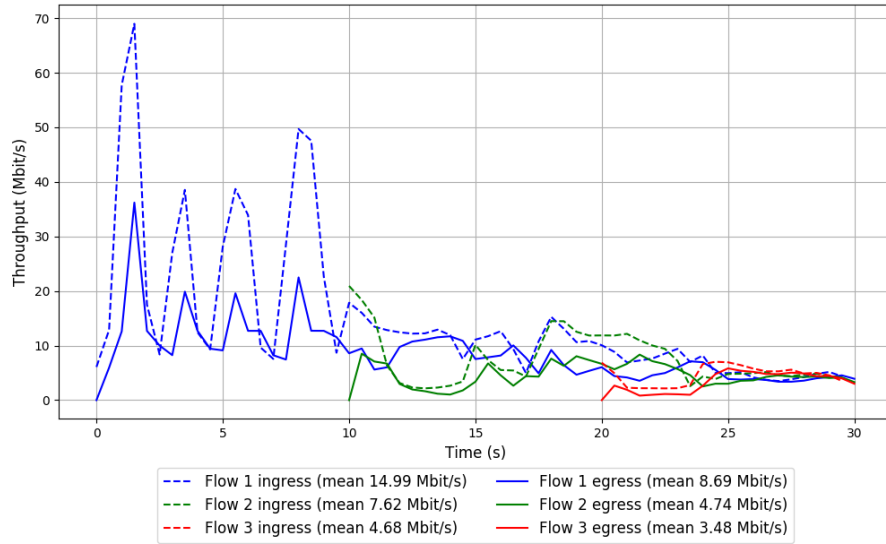
-- Flow 3:

Average throughput: 3.48 Mbit/s

95th percentile per-packet one-way delay: 9.364 ms

Loss rate: 25.70%

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



Run 4: Statistics of PCC-Expr

Start at: 2019-05-30 01:59:00

End at: 2019-05-30 01:59:30

Local clock offset: 6.035 ms

Remote clock offset: 2.95 ms

# Below is generated by plot.py at 2019-05-30 02:44:56

# Datalink statistics

-- Total of 3 flows:

Average throughput: 13.10 Mbit/s

95th percentile per-packet one-way delay: 3.046 ms

Loss rate: 41.27%

-- Flow 1:

Average throughput: 7.90 Mbit/s

95th percentile per-packet one-way delay: 3.003 ms

Loss rate: 49.94%

-- Flow 2:

Average throughput: 5.55 Mbit/s

95th percentile per-packet one-way delay: 2.927 ms

Loss rate: 21.89%

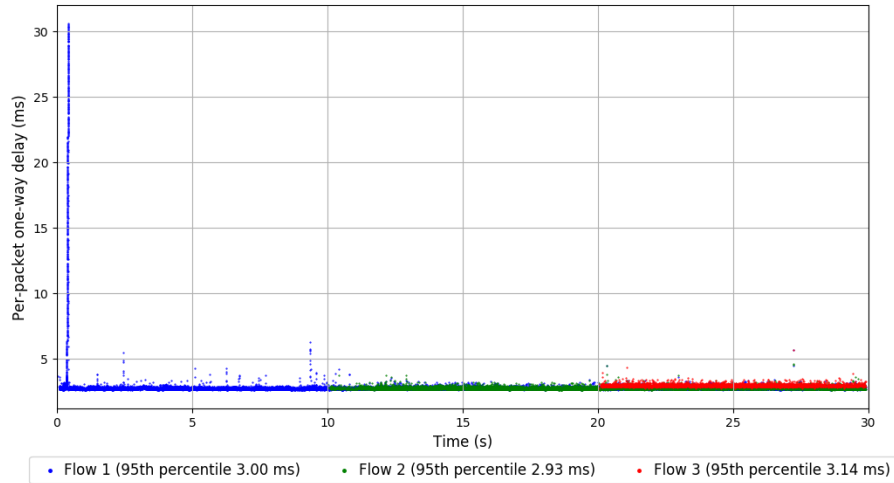
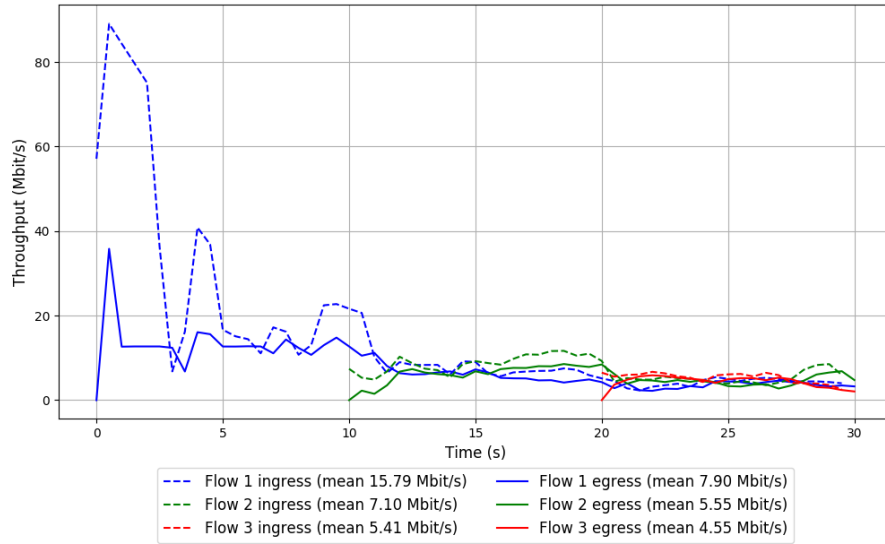
-- Flow 3:

Average throughput: 4.55 Mbit/s

95th percentile per-packet one-way delay: 3.141 ms

Loss rate: 15.84%

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





Run 5: Statistics of PCC-Expr

Start at: 2019-05-30 02:25:11

End at: 2019-05-30 02:25:41

Local clock offset: -2.314 ms

Remote clock offset: 6.221 ms

# Below is generated by plot.py at 2019-05-30 02:44:56

# Datalink statistics

-- Total of 3 flows:

Average throughput: 13.10 Mbit/s

95th percentile per-packet one-way delay: 10.523 ms

Loss rate: 32.13%

-- Flow 1:

Average throughput: 8.24 Mbit/s

95th percentile per-packet one-way delay: 10.569 ms

Loss rate: 35.46%

-- Flow 2:

Average throughput: 5.56 Mbit/s

95th percentile per-packet one-way delay: 10.404 ms

Loss rate: 25.58%

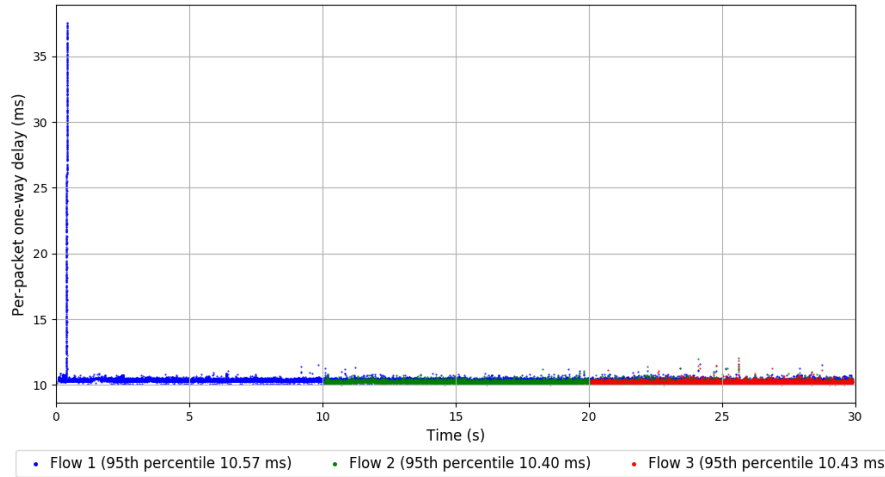
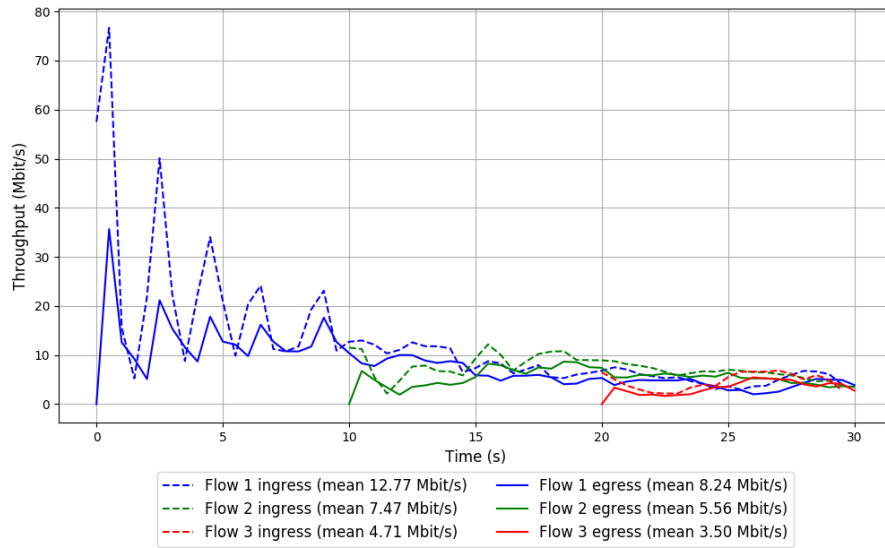
-- Flow 3:

Average throughput: 3.50 Mbit/s

95th percentile per-packet one-way delay: 10.431 ms

Loss rate: 25.71%

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



Run 1: Statistics of QUIC Cubic

Start at: 2019-05-30 00:27:50  
End at: 2019-05-30 00:28:20  
Local clock offset: -2.7 ms  
Remote clock offset: -1.018 ms

# Below is generated by plot.py at 2019-05-30 02:45:50

# Datalink statistics

-- Total of 3 flows:

Average throughput: 93.66 Mbit/s  
95th percentile per-packet one-way delay: 47.503 ms  
Loss rate: 2.14%

-- Flow 1:

Average throughput: 70.09 Mbit/s  
95th percentile per-packet one-way delay: 47.454 ms  
Loss rate: 1.96%

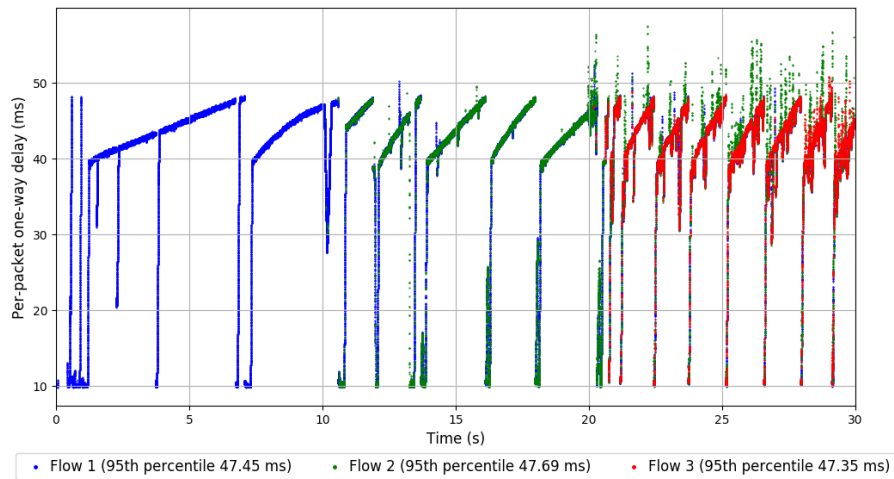
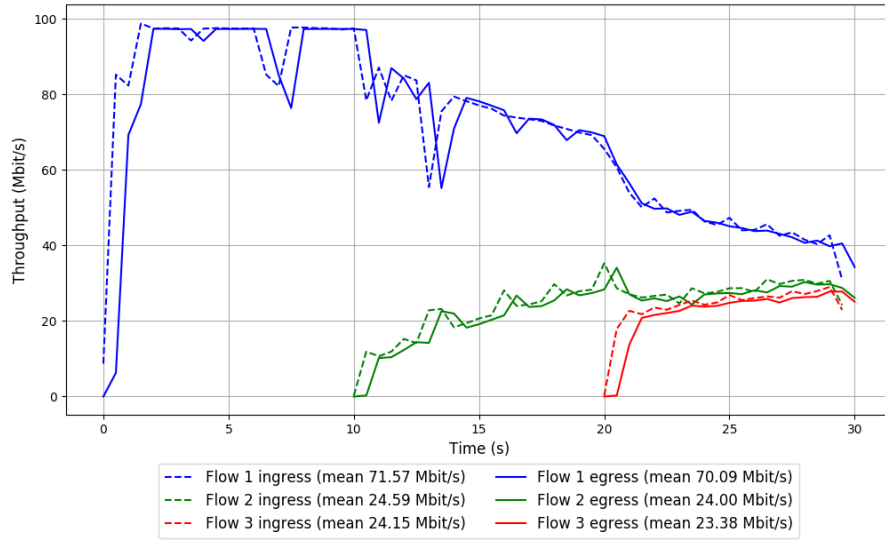
-- Flow 2:

Average throughput: 24.00 Mbit/s  
95th percentile per-packet one-way delay: 47.686 ms  
Loss rate: 2.38%

-- Flow 3:

Average throughput: 23.38 Mbit/s  
95th percentile per-packet one-way delay: 47.353 ms  
Loss rate: 3.22%

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



Run 2: Statistics of QUIC Cubic

Start at: 2019-05-30 00:53:22  
End at: 2019-05-30 00:53:52  
Local clock offset: 0.78 ms  
Remote clock offset: -1.166 ms

# Below is generated by plot.py at 2019-05-30 02:45:51

# Datalink statistics

-- Total of 3 flows:

Average throughput: 94.19 Mbit/s  
95th percentile per-packet one-way delay: 46.109 ms  
Loss rate: 1.93%

-- Flow 1:

Average throughput: 68.34 Mbit/s  
95th percentile per-packet one-way delay: 46.161 ms  
Loss rate: 1.81%

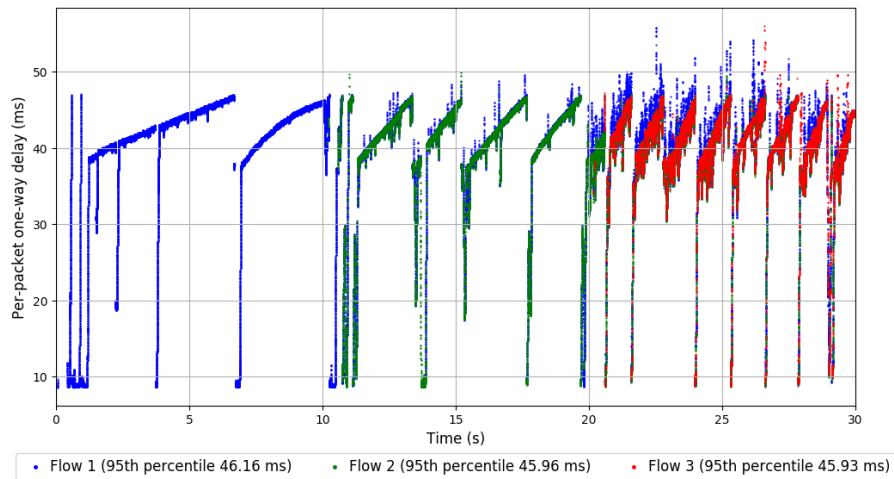
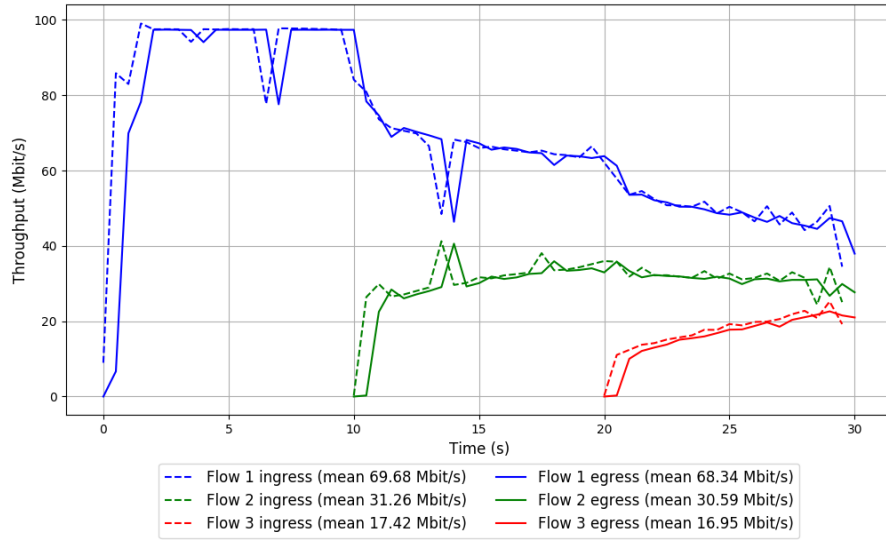
-- Flow 2:

Average throughput: 30.59 Mbit/s  
95th percentile per-packet one-way delay: 45.963 ms  
Loss rate: 2.14%

-- Flow 3:

Average throughput: 16.95 Mbit/s  
95th percentile per-packet one-way delay: 45.931 ms  
Loss rate: 2.64%

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



Run 3: Statistics of QUIC Cubic

Start at: 2019-05-30 01:18:46

End at: 2019-05-30 01:19:16

Local clock offset: 2.821 ms

Remote clock offset: 0.088 ms

# Below is generated by plot.py at 2019-05-30 02:45:53

# Datalink statistics

-- Total of 3 flows:

Average throughput: 93.76 Mbit/s

95th percentile per-packet one-way delay: 40.390 ms

Loss rate: 1.82%

-- Flow 1:

Average throughput: 71.19 Mbit/s

95th percentile per-packet one-way delay: 40.308 ms

Loss rate: 1.66%

-- Flow 2:

Average throughput: 27.41 Mbit/s

95th percentile per-packet one-way delay: 40.575 ms

Loss rate: 2.18%

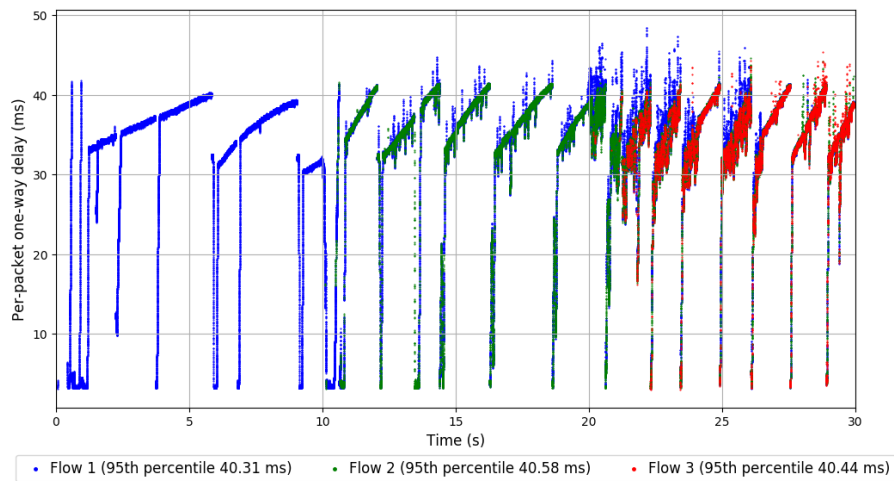
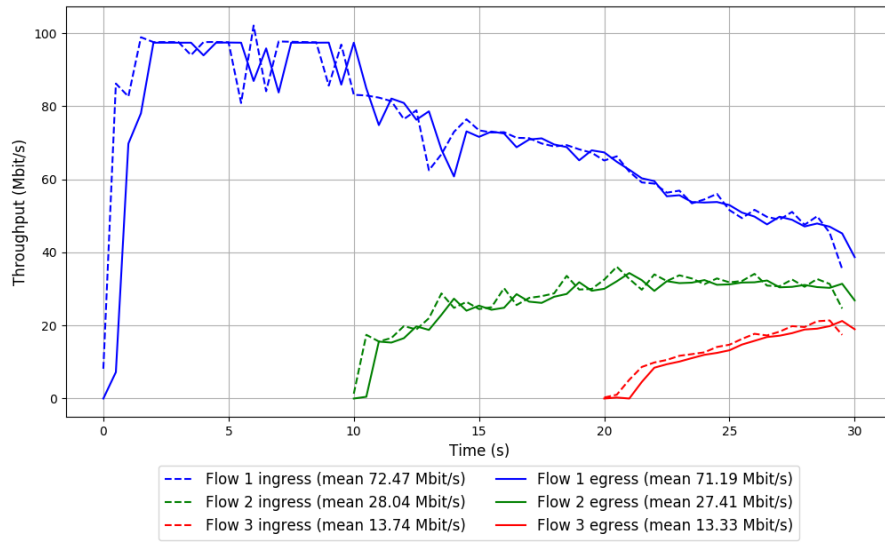
-- Flow 3:

Average throughput: 13.33 Mbit/s

95th percentile per-packet one-way delay: 40.443 ms

Loss rate: 2.89%

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





Run 4: Statistics of QUIC Cubic

Start at: 2019-05-30 01:44:54

End at: 2019-05-30 01:45:24

Local clock offset: 0.065 ms

Remote clock offset: 2.851 ms

# Below is generated by plot.py at 2019-05-30 02:46:01

# Datalink statistics

-- Total of 3 flows:

Average throughput: 93.88 Mbit/s

95th percentile per-packet one-way delay: 45.415 ms

Loss rate: 1.61%

-- Flow 1:

Average throughput: 69.49 Mbit/s

95th percentile per-packet one-way delay: 45.326 ms

Loss rate: 1.47%

-- Flow 2:

Average throughput: 23.87 Mbit/s

95th percentile per-packet one-way delay: 45.420 ms

Loss rate: 1.76%

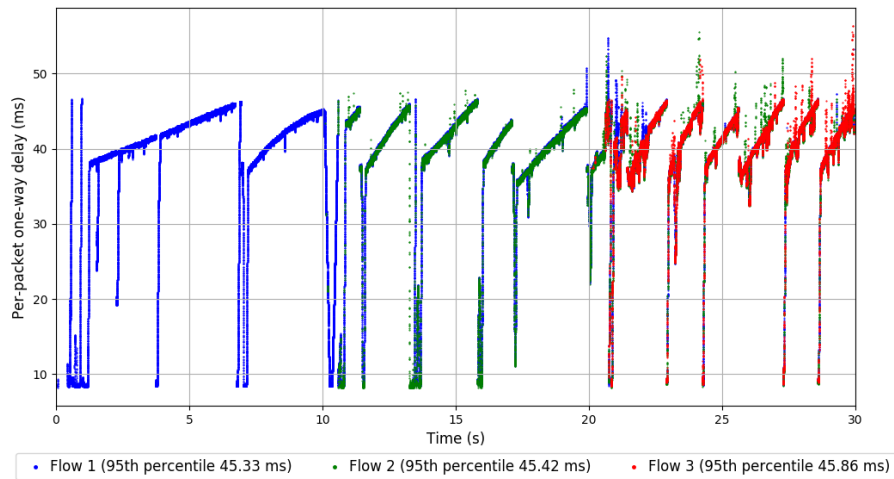
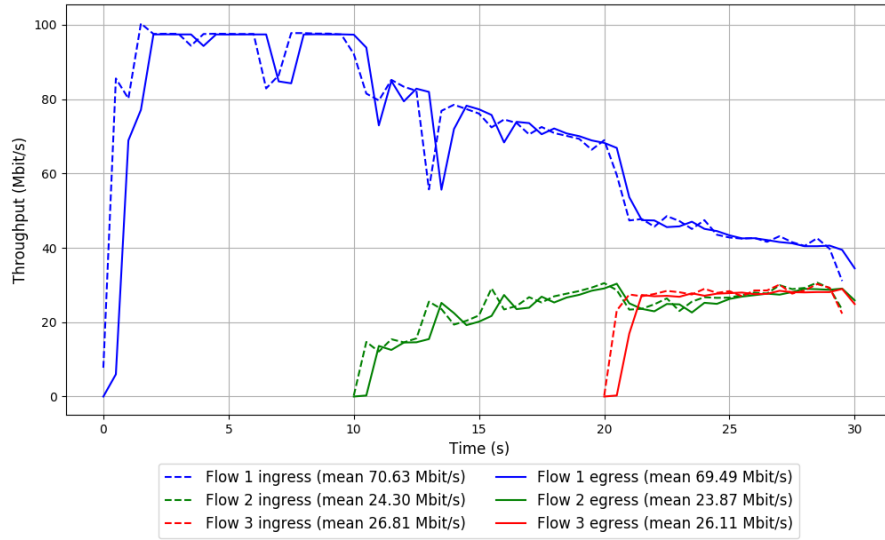
-- Flow 3:

Average throughput: 26.11 Mbit/s

95th percentile per-packet one-way delay: 45.859 ms

Loss rate: 2.53%

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



Run 5: Statistics of QUIC Cubic

Start at: 2019-05-30 02:11:25

End at: 2019-05-30 02:11:55

Local clock offset: 0.029 ms

Remote clock offset: 4.036 ms

# Below is generated by plot.py at 2019-05-30 02:46:01

# Datalink statistics

-- Total of 3 flows:

Average throughput: 94.16 Mbit/s

95th percentile per-packet one-way delay: 45.865 ms

Loss rate: 1.57%

-- Flow 1:

Average throughput: 66.85 Mbit/s

95th percentile per-packet one-way delay: 45.876 ms

Loss rate: 1.46%

-- Flow 2:

Average throughput: 29.51 Mbit/s

95th percentile per-packet one-way delay: 45.814 ms

Loss rate: 1.72%

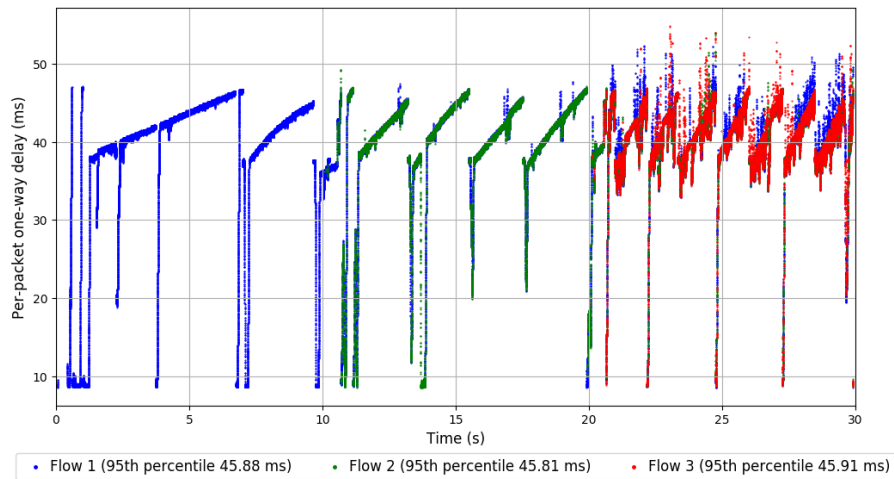
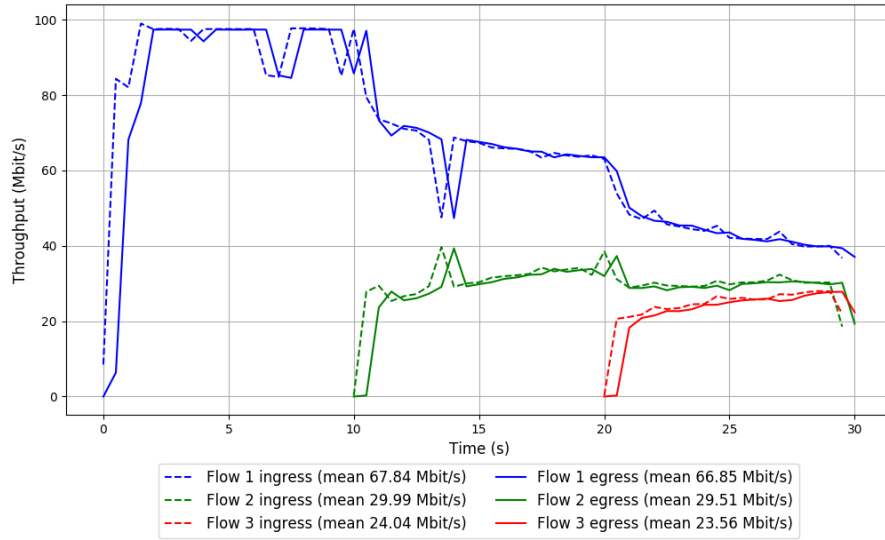
-- Flow 3:

Average throughput: 23.56 Mbit/s

95th percentile per-packet one-way delay: 45.906 ms

Loss rate: 2.10%

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



Run 1: Statistics of SCReAM

Start at: 2019-05-30 00:32:42  
End at: 2019-05-30 00:33:12  
Local clock offset: -2.968 ms  
Remote clock offset: -2.864 ms

# Below is generated by plot.py at 2019-05-30 02:46:01

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 8.531 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 8.529 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 8.542 ms

Loss rate: 0.00%

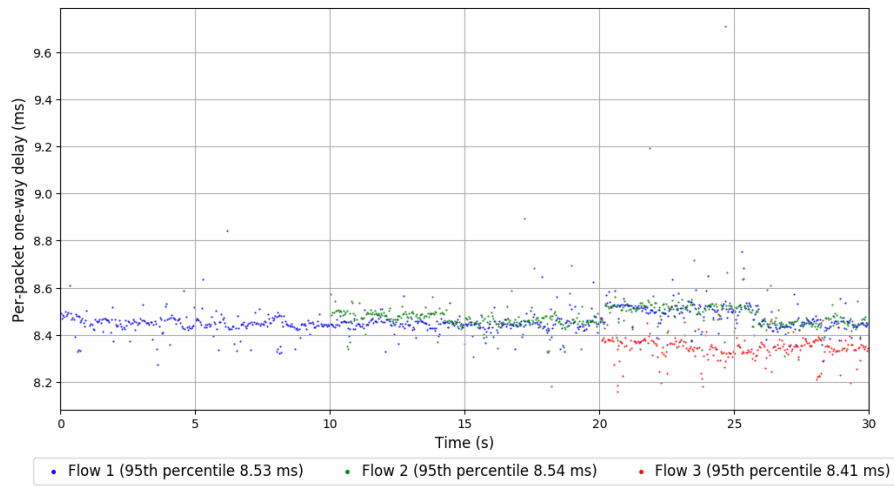
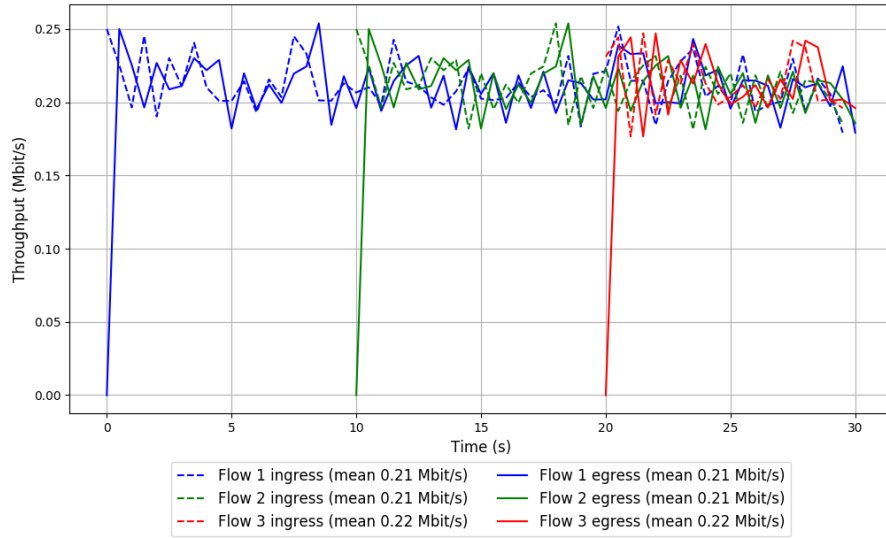
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 8.415 ms

Loss rate: 0.00%

### Run 1: Report of SCReAM — Data Link



Run 2: Statistics of SCReAM

Start at: 2019-05-30 00:58:25

End at: 2019-05-30 00:58:55

Local clock offset: 1.738 ms

Remote clock offset: -0.72 ms

# Below is generated by plot.py at 2019-05-30 02:46:01

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 8.460 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 8.463 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 8.338 ms

Loss rate: 0.00%

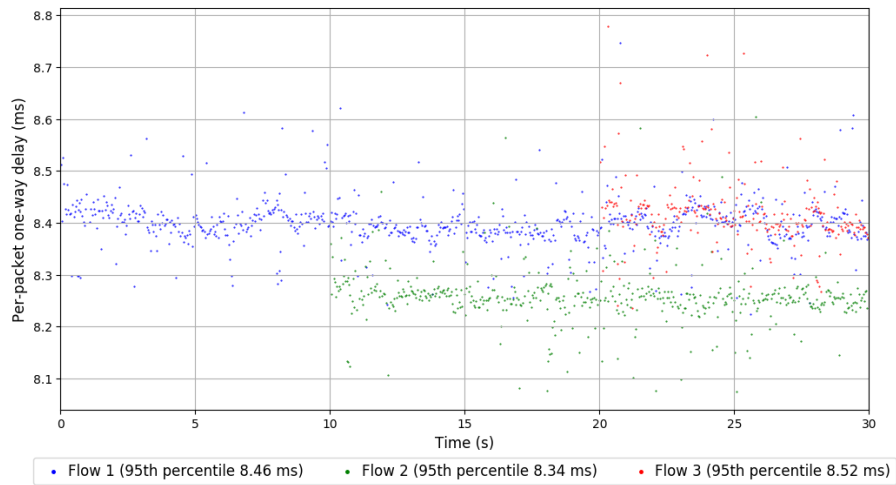
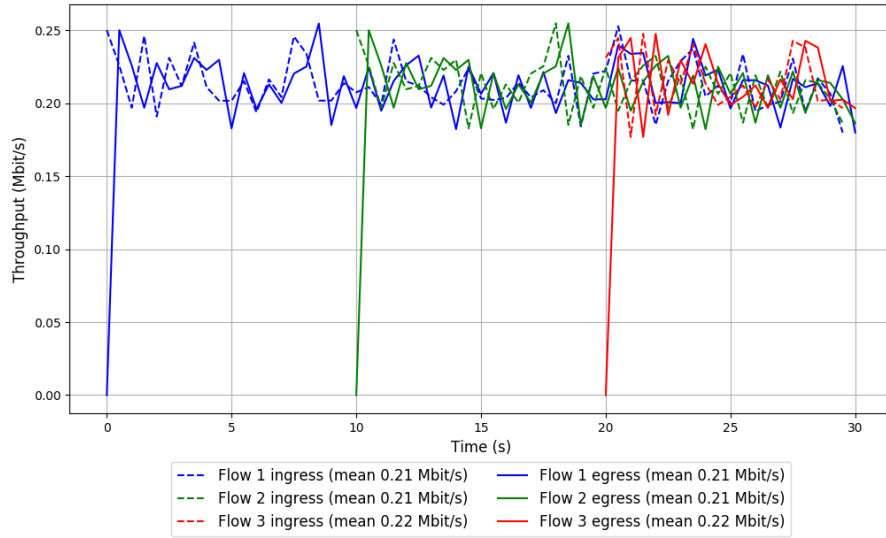
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 8.519 ms

Loss rate: 0.00%

## Run 2: Report of SCReAM — Data Link





Run 3: Statistics of SCReAM

Start at: 2019-05-30 01:23:43

End at: 2019-05-30 01:24:13

Local clock offset: -2.262 ms

Remote clock offset: 2.356 ms

# Below is generated by plot.py at 2019-05-30 02:46:01

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 9.690 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 9.699 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 9.683 ms

Loss rate: 0.00%

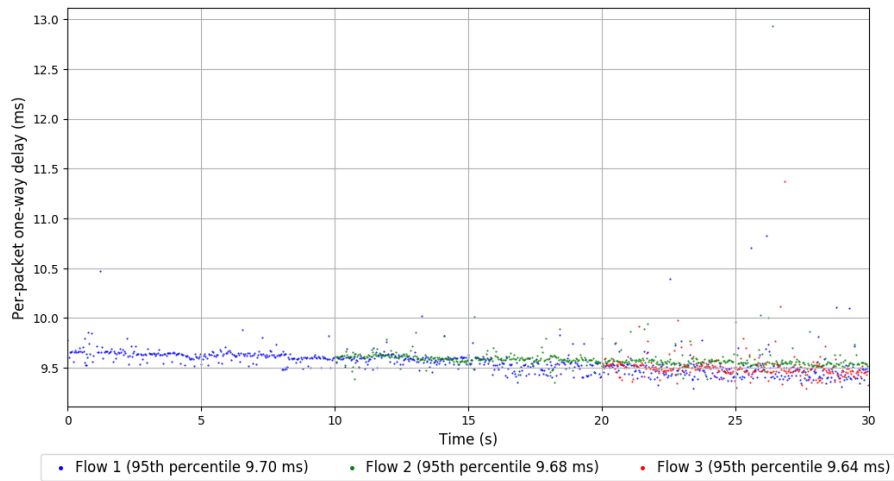
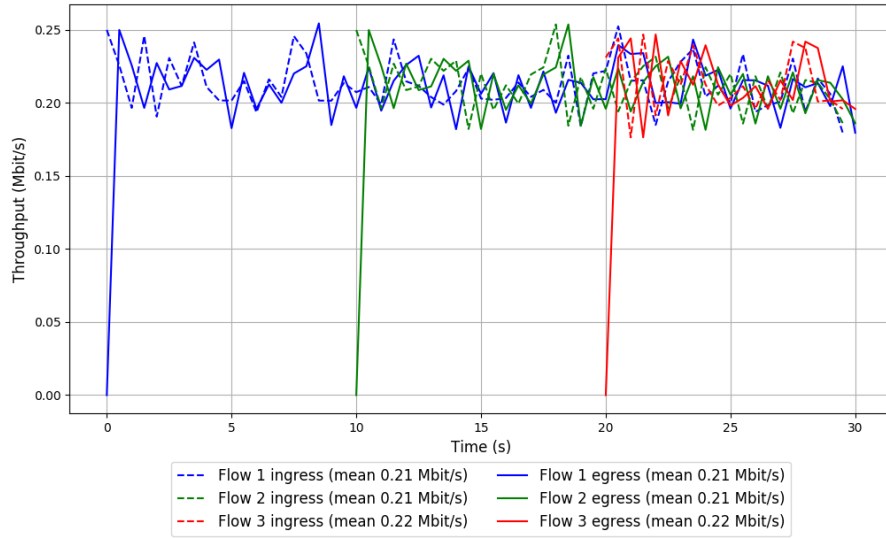
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 9.644 ms

Loss rate: 0.00%

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



Run 4: Statistics of SCReAM

Start at: 2019-05-30 01:50:21

End at: 2019-05-30 01:50:51

Local clock offset: 1.01 ms

Remote clock offset: 3.177 ms

# Below is generated by plot.py at 2019-05-30 02:46:01

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 8.348 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 8.385 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 8.328 ms

Loss rate: 0.00%

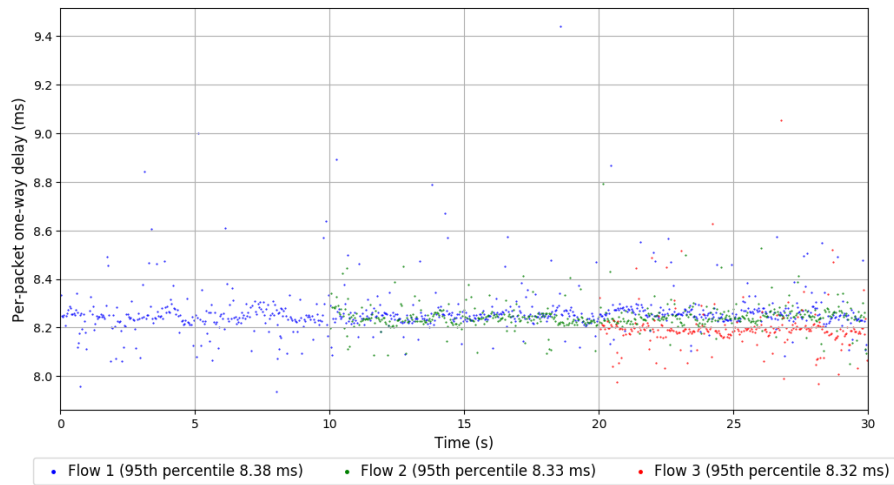
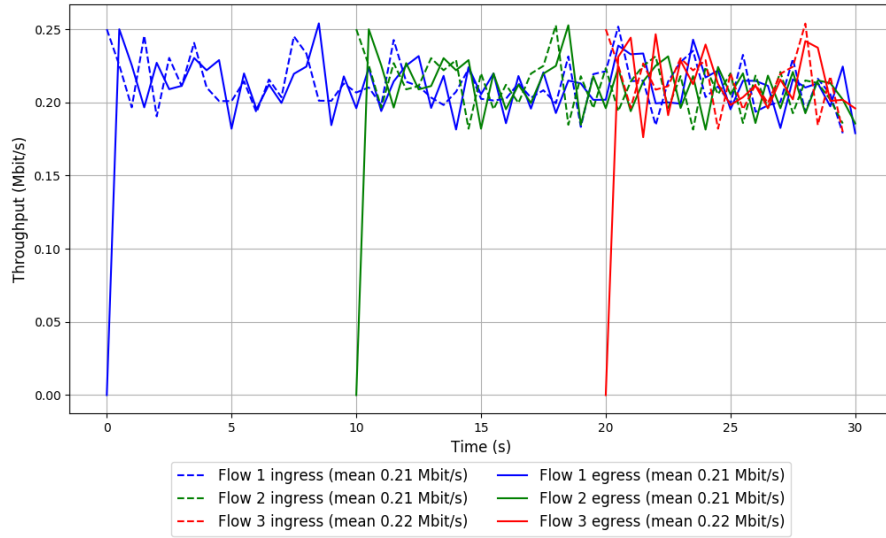
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 8.321 ms

Loss rate: 0.00%

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



Run 5: Statistics of SCReAM

Start at: 2019-05-30 02:16:40

End at: 2019-05-30 02:17:10

Local clock offset: -1.062 ms

Remote clock offset: 4.659 ms

# Below is generated by plot.py at 2019-05-30 02:46:01

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 9.369 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 9.393 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 9.334 ms

Loss rate: 0.00%

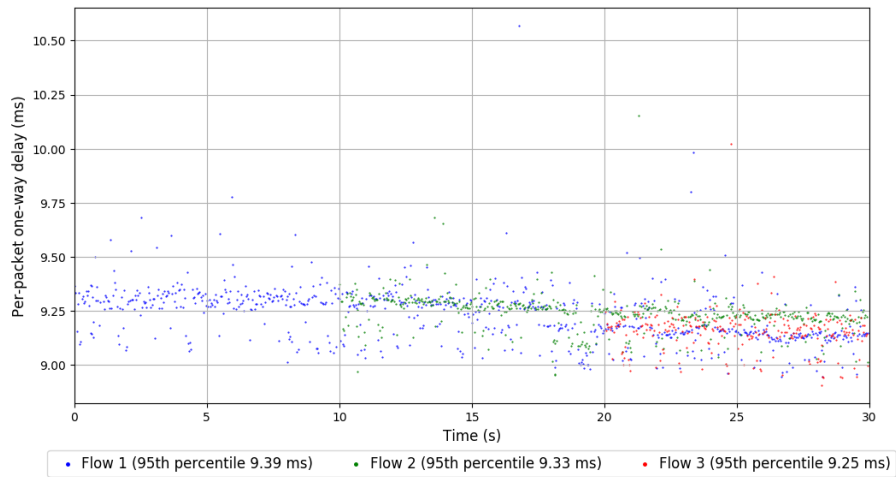
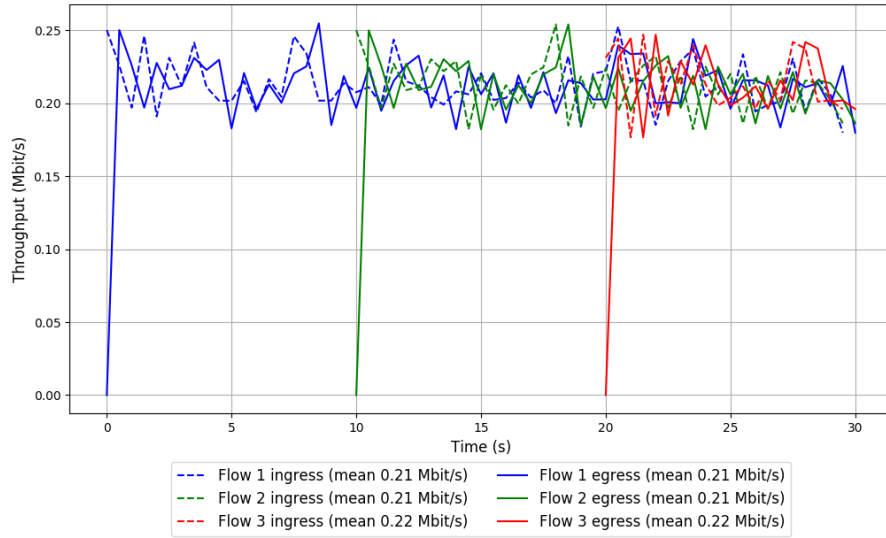
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 9.254 ms

Loss rate: 0.00%

### Run 5: Report of SCReAM — Data Link



Run 1: Statistics of Sprout

Start at: 2019-05-30 00:37:36  
End at: 2019-05-30 00:38:06  
Local clock offset: -2.43 ms  
Remote clock offset: -1.551 ms

# Below is generated by plot.py at 2019-05-30 02:46:01

# Datalink statistics

-- Total of 3 flows:

Average throughput: 48.76 Mbit/s  
95th percentile per-packet one-way delay: 18.233 ms  
Loss rate: 0.00%

-- Flow 1:

Average throughput: 24.54 Mbit/s  
95th percentile per-packet one-way delay: 17.574 ms  
Loss rate: 0.00%

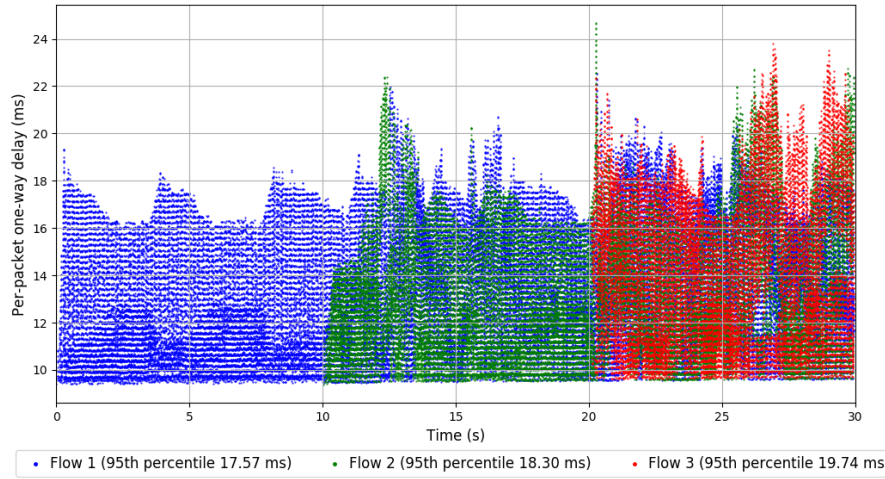
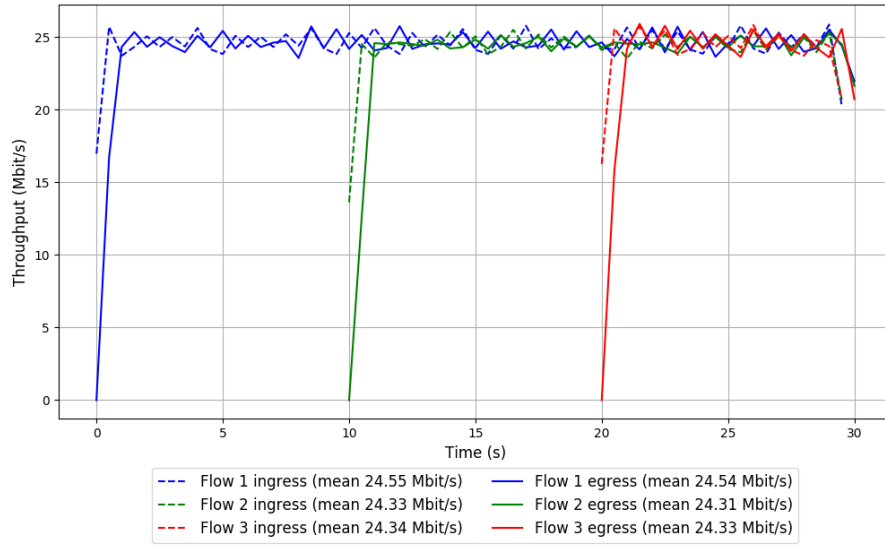
-- Flow 2:

Average throughput: 24.31 Mbit/s  
95th percentile per-packet one-way delay: 18.303 ms  
Loss rate: 0.00%

-- Flow 3:

Average throughput: 24.33 Mbit/s  
95th percentile per-packet one-way delay: 19.737 ms  
Loss rate: 0.00%

Run 1: Report of Sprout — Data Link





Run 2: Statistics of Sprout

Start at: 2019-05-30 01:03:10

End at: 2019-05-30 01:03:40

Local clock offset: 6.848 ms

Remote clock offset: 0.109 ms

# Below is generated by plot.py at 2019-05-30 02:46:01

# Datalink statistics

-- Total of 3 flows:

Average throughput: 48.83 Mbit/s

95th percentile per-packet one-way delay: 12.068 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 24.51 Mbit/s

95th percentile per-packet one-way delay: 12.194 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 24.47 Mbit/s

95th percentile per-packet one-way delay: 12.278 ms

Loss rate: 0.00%

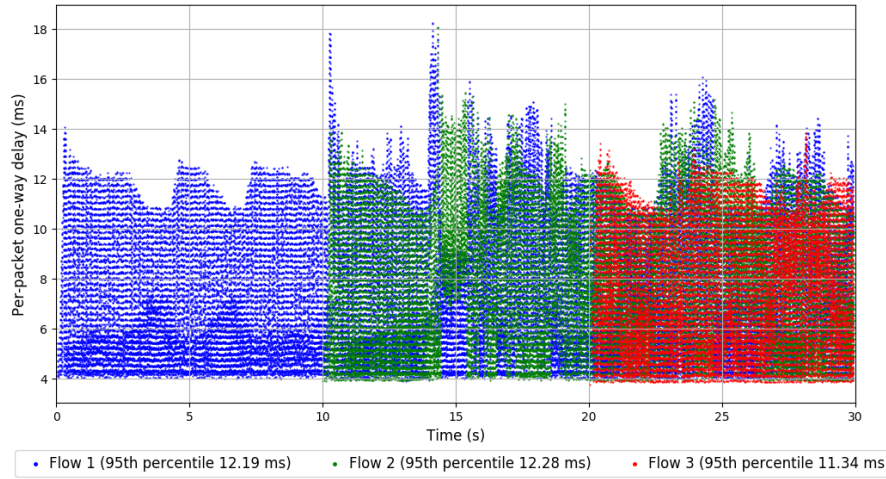
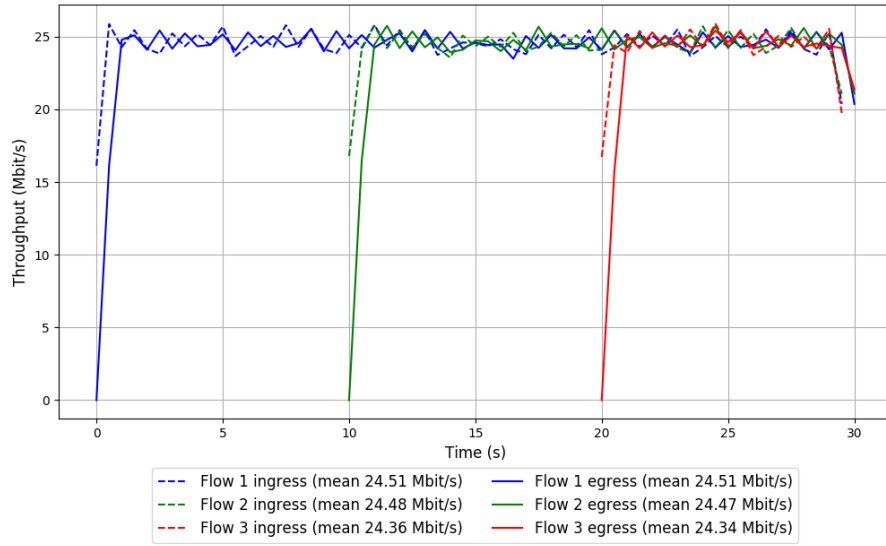
-- Flow 3:

Average throughput: 24.34 Mbit/s

95th percentile per-packet one-way delay: 11.335 ms

Loss rate: 0.00%

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2019-05-30 01:28:32

End at: 2019-05-30 01:29:02

Local clock offset: 2.116 ms

Remote clock offset: 2.202 ms

# Below is generated by plot.py at 2019-05-30 02:46:01

# Datalink statistics

-- Total of 3 flows:

Average throughput: 48.76 Mbit/s

95th percentile per-packet one-way delay: 13.942 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 24.50 Mbit/s

95th percentile per-packet one-way delay: 13.467 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 24.46 Mbit/s

95th percentile per-packet one-way delay: 14.205 ms

Loss rate: 0.00%

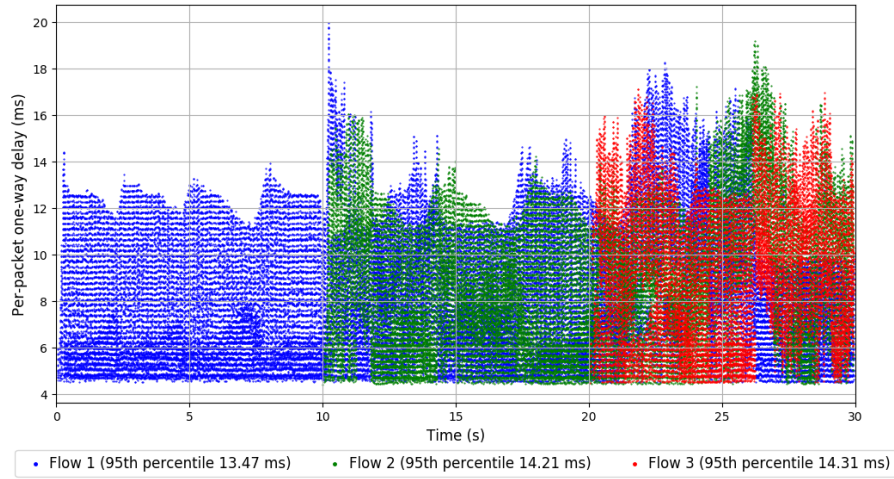
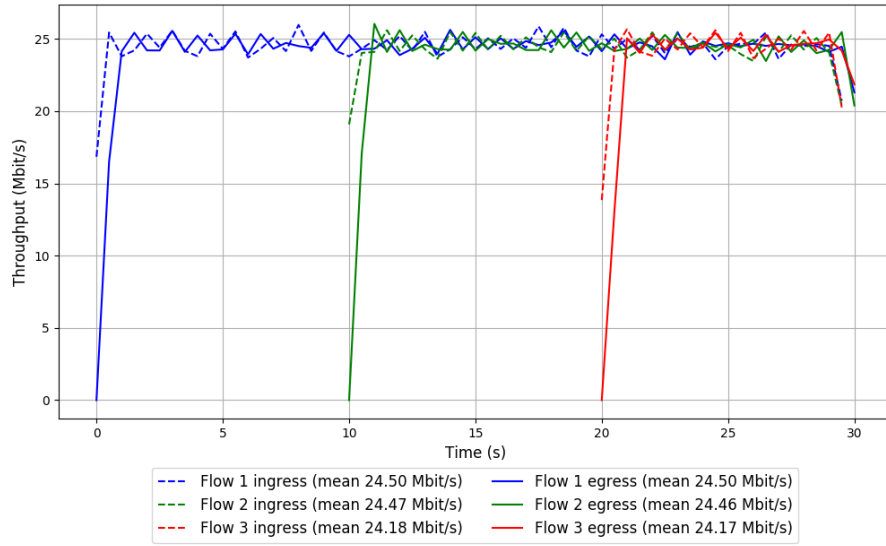
-- Flow 3:

Average throughput: 24.17 Mbit/s

95th percentile per-packet one-way delay: 14.313 ms

Loss rate: 0.00%

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



Run 4: Statistics of Sprout

Start at: 2019-05-30 01:55:11

End at: 2019-05-30 01:55:41

Local clock offset: 4.91 ms

Remote clock offset: 4.181 ms

# Below is generated by plot.py at 2019-05-30 02:46:06

# Datalink statistics

-- Total of 3 flows:

Average throughput: 48.62 Mbit/s

95th percentile per-packet one-way delay: 14.512 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 24.46 Mbit/s

95th percentile per-packet one-way delay: 13.887 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 24.40 Mbit/s

95th percentile per-packet one-way delay: 14.661 ms

Loss rate: 0.00%

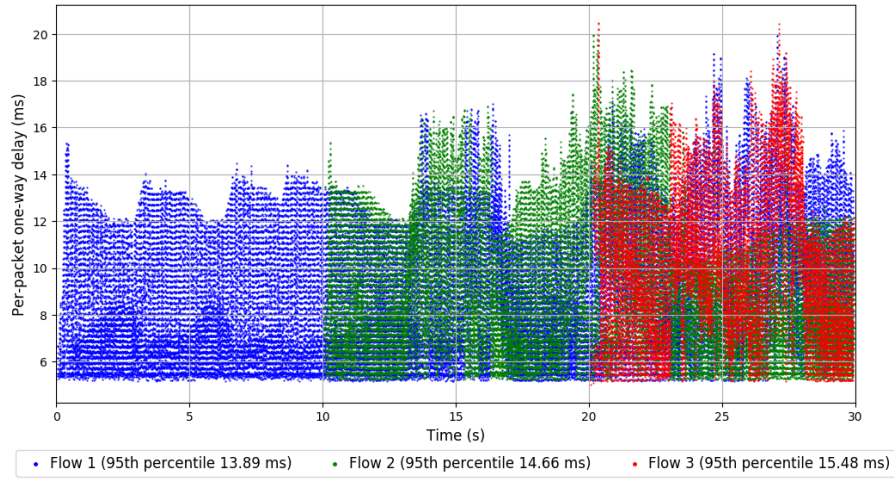
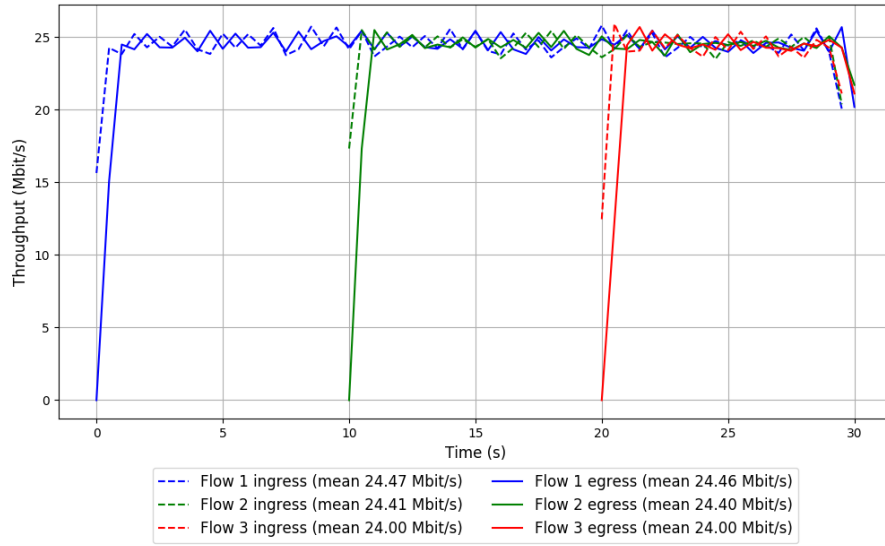
-- Flow 3:

Average throughput: 24.00 Mbit/s

95th percentile per-packet one-way delay: 15.479 ms

Loss rate: 0.00%

Run 4: Report of Sprout — Data Link



Run 5: Statistics of Sprout

Start at: 2019-05-30 02:21:31

End at: 2019-05-30 02:22:01

Local clock offset: 2.651 ms

Remote clock offset: 4.288 ms

# Below is generated by plot.py at 2019-05-30 02:46:06

# Datalink statistics

-- Total of 3 flows:

Average throughput: 48.54 Mbit/s

95th percentile per-packet one-way delay: 13.567 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 24.40 Mbit/s

95th percentile per-packet one-way delay: 12.628 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 24.33 Mbit/s

95th percentile per-packet one-way delay: 14.101 ms

Loss rate: 0.00%

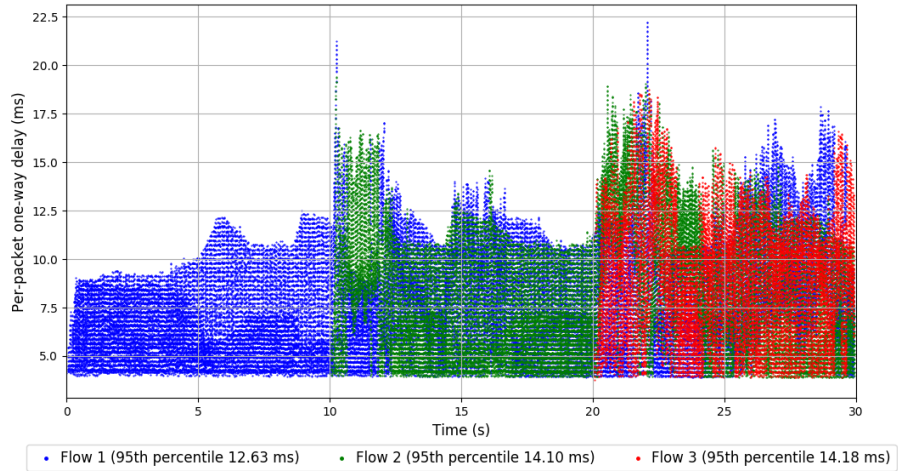
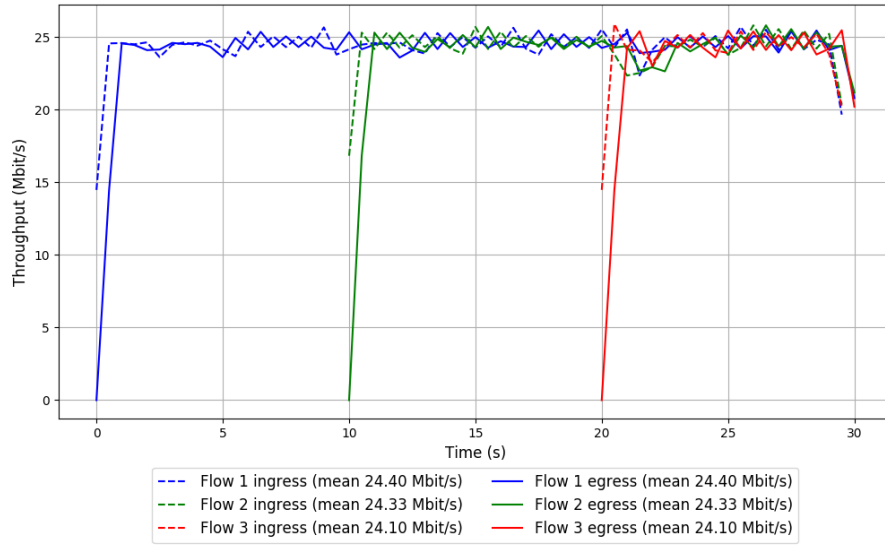
-- Flow 3:

Average throughput: 24.10 Mbit/s

95th percentile per-packet one-way delay: 14.179 ms

Loss rate: 0.00%

Run 5: Report of Sprout — Data Link





Run 1: Statistics of TaoVA-100x

Start at: 2019-05-30 00:45:52  
End at: 2019-05-30 00:46:22  
Local clock offset: 0.31 ms  
Remote clock offset: -0.548 ms

# Below is generated by plot.py at 2019-05-30 02:46:06

# Datalink statistics

-- Total of 3 flows:

Average throughput: 12.71 Mbit/s  
95th percentile per-packet one-way delay: 13.161 ms  
Loss rate: 87.16%

-- Flow 1:

Average throughput: 8.12 Mbit/s  
95th percentile per-packet one-way delay: 13.321 ms  
Loss rate: 86.69%

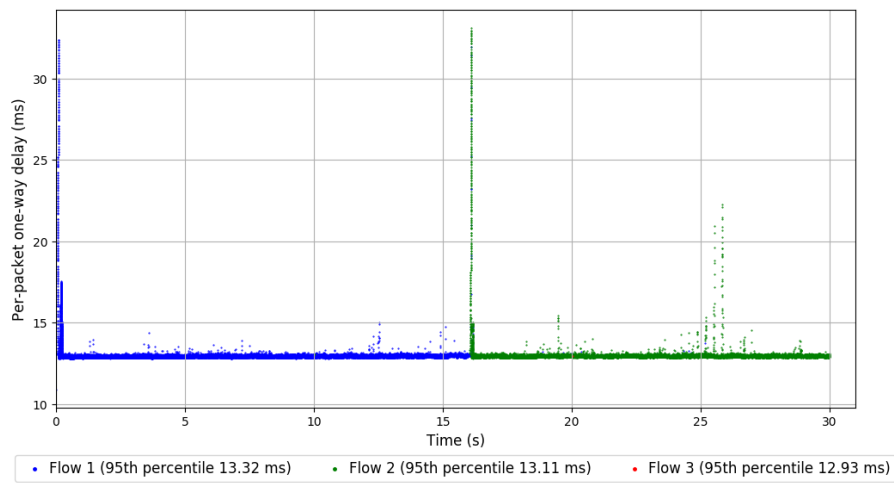
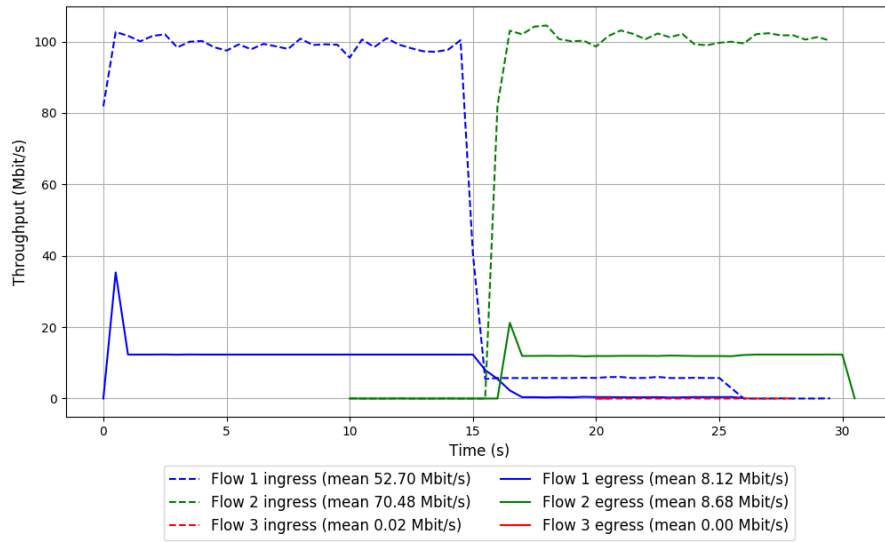
-- Flow 2:

Average throughput: 8.68 Mbit/s  
95th percentile per-packet one-way delay: 13.108 ms  
Loss rate: 87.68%

-- Flow 3:

Average throughput: 0.00 Mbit/s  
95th percentile per-packet one-way delay: 12.933 ms  
Loss rate: 99.16%

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



Run 2: Statistics of TaoVA-100x

Start at: 2019-05-30 01:11:26

End at: 2019-05-30 01:11:56

Local clock offset: 0.965 ms

Remote clock offset: 0.609 ms

# Below is generated by plot.py at 2019-05-30 02:46:42

# Datalink statistics

-- Total of 3 flows:

Average throughput: 12.71 Mbit/s

95th percentile per-packet one-way delay: 8.171 ms

Loss rate: 94.75%

-- Flow 1:

Average throughput: 6.99 Mbit/s

95th percentile per-packet one-way delay: 8.500 ms

Loss rate: 92.81%

-- Flow 2:

Average throughput: 8.59 Mbit/s

95th percentile per-packet one-way delay: 8.075 ms

Loss rate: 96.06%

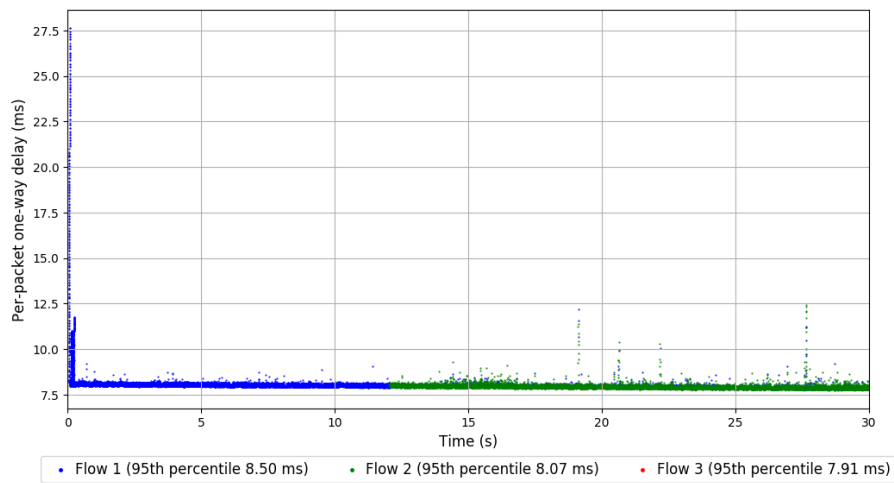
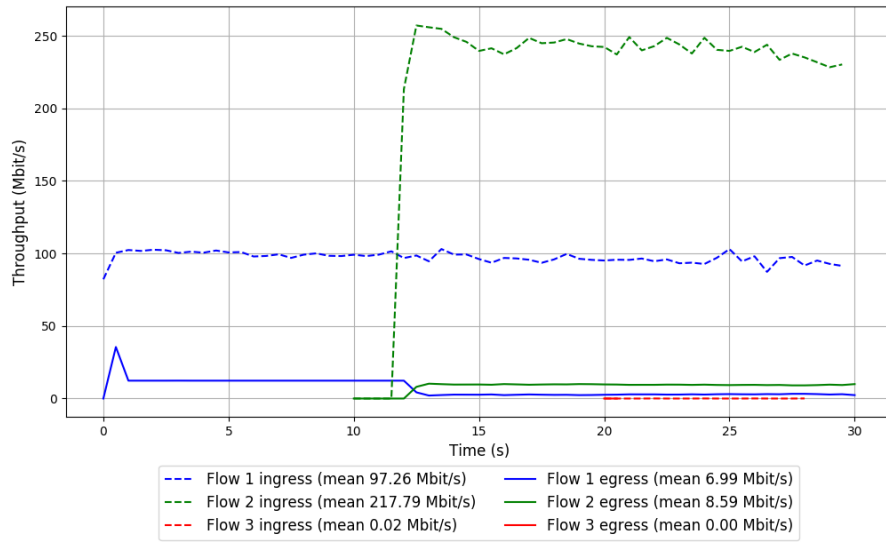
-- Flow 3:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 7.912 ms

Loss rate: 99.16%

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



Run 3: Statistics of TaoVA-100x

Start at: 2019-05-30 01:37:05

End at: 2019-05-30 01:37:35

Local clock offset: -2.318 ms

Remote clock offset: 0.876 ms

# Below is generated by plot.py at 2019-05-30 02:46:42

# Datalink statistics

-- Total of 3 flows:

Average throughput: 12.71 Mbit/s

95th percentile per-packet one-way delay: 7.593 ms

Loss rate: 91.94%

-- Flow 1:

Average throughput: 9.40 Mbit/s

95th percentile per-packet one-way delay: 7.772 ms

Loss rate: 86.68%

-- Flow 2:

Average throughput: 4.74 Mbit/s

95th percentile per-packet one-way delay: 8.121 ms

Loss rate: 92.62%

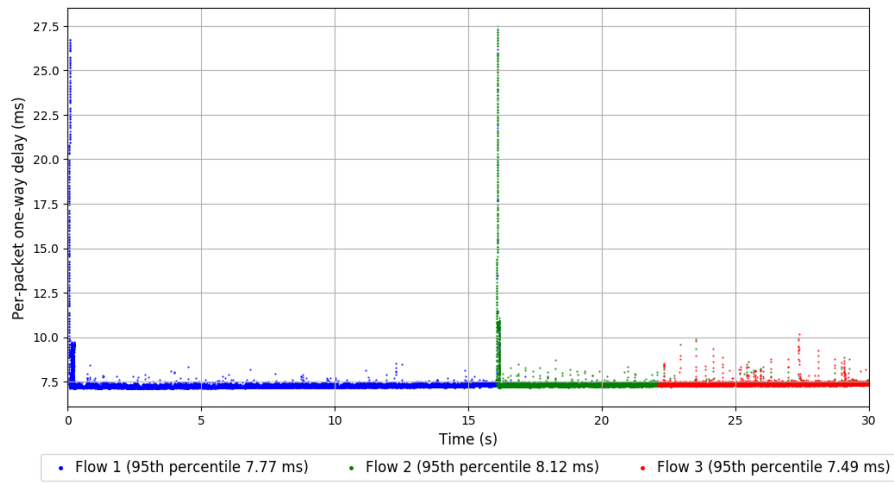
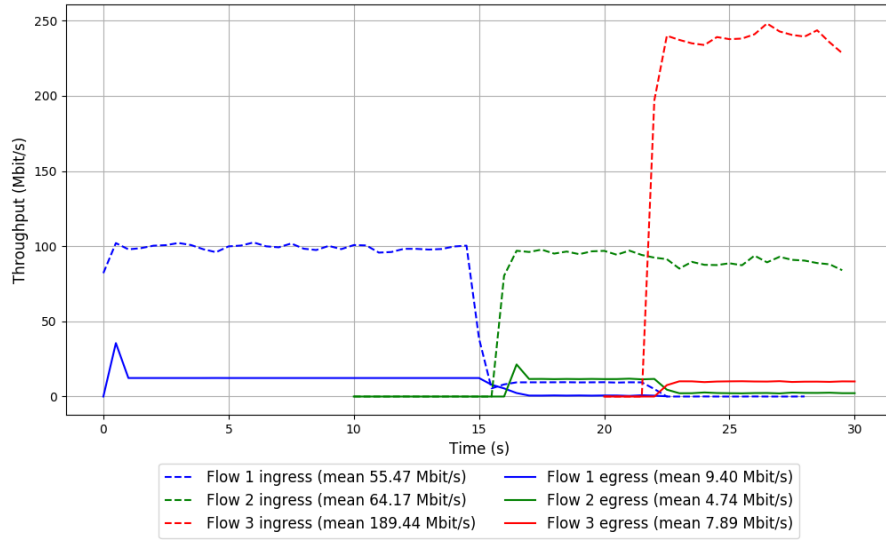
-- Flow 3:

Average throughput: 7.89 Mbit/s

95th percentile per-packet one-way delay: 7.493 ms

Loss rate: 95.84%

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



Run 4: Statistics of TaoVA-100x

Start at: 2019-05-30 02:03:58

End at: 2019-05-30 02:04:28

Local clock offset: 0.745 ms

Remote clock offset: 4.896 ms

# Below is generated by plot.py at 2019-05-30 02:46:42

# Datalink statistics

-- Total of 3 flows:

Average throughput: 12.71 Mbit/s

95th percentile per-packet one-way delay: 10.263 ms

Loss rate: 88.93%

-- Flow 1:

Average throughput: 4.76 Mbit/s

95th percentile per-packet one-way delay: 11.882 ms

Loss rate: 86.33%

-- Flow 2:

Average throughput: 11.34 Mbit/s

95th percentile per-packet one-way delay: 10.135 ms

Loss rate: 88.50%

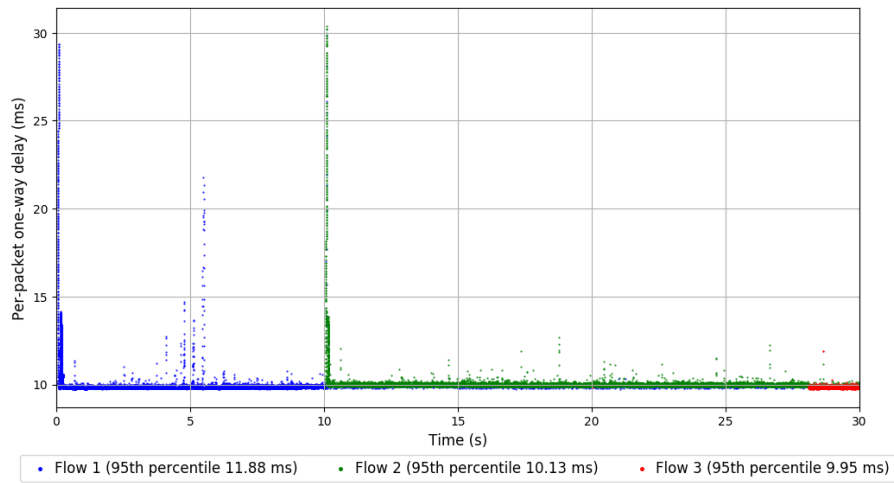
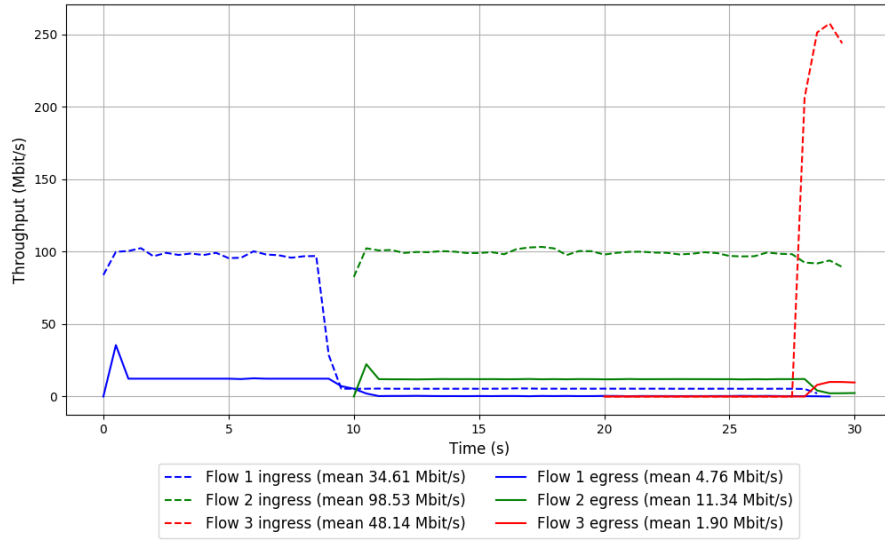
-- Flow 3:

Average throughput: 1.90 Mbit/s

95th percentile per-packet one-way delay: 9.946 ms

Loss rate: 96.06%

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





Run 5: Statistics of TaoVA-100x

Start at: 2019-05-30 02:30:13

End at: 2019-05-30 02:30:43

Local clock offset: -2.842 ms

Remote clock offset: 5.644 ms

# Below is generated by plot.py at 2019-05-30 02:46:42

# Datalink statistics

-- Total of 3 flows:

Average throughput: 12.71 Mbit/s

95th percentile per-packet one-way delay: 10.032 ms

Loss rate: 90.10%

-- Flow 1:

Average throughput: 8.00 Mbit/s

95th percentile per-packet one-way delay: 10.719 ms

Loss rate: 86.69%

-- Flow 2:

Average throughput: 6.75 Mbit/s

95th percentile per-packet one-way delay: 9.772 ms

Loss rate: 89.84%

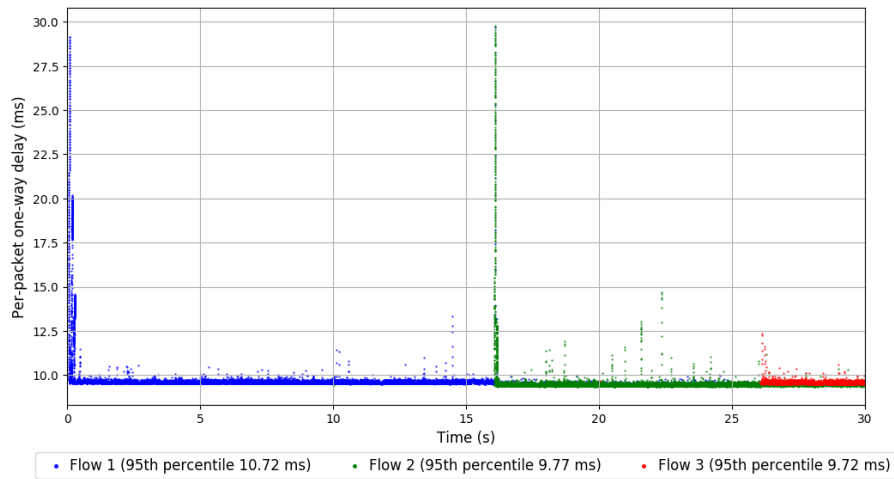
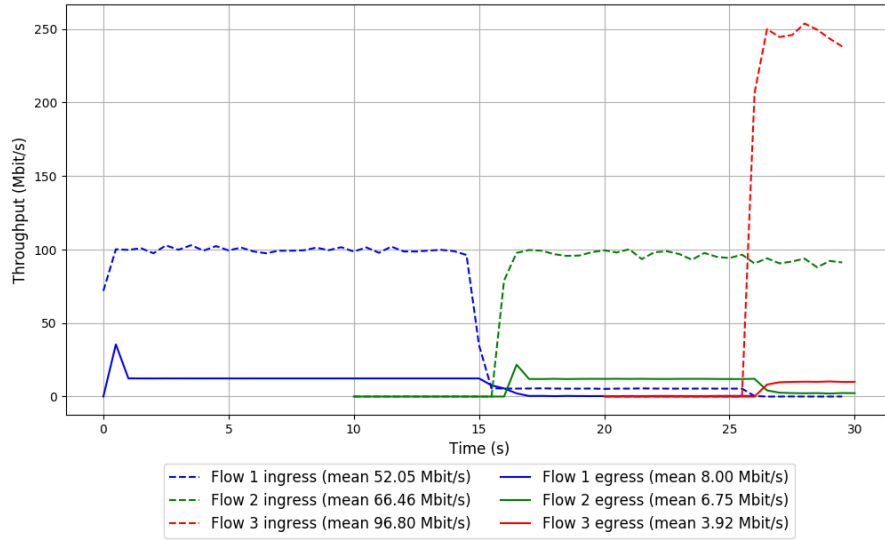
-- Flow 3:

Average throughput: 3.92 Mbit/s

95th percentile per-packet one-way delay: 9.720 ms

Loss rate: 95.95%

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



Run 1: Statistics of TCP Vegas

Start at: 2019-05-30 00:26:39  
End at: 2019-05-30 00:27:09  
Local clock offset: -1.559 ms  
Remote clock offset: -1.017 ms

# Below is generated by plot.py at 2019-05-30 02:46:59

# Datalink statistics

-- Total of 3 flows:

Average throughput: 96.11 Mbit/s  
95th percentile per-packet one-way delay: 14.923 ms  
Loss rate: 0.41%

-- Flow 1:

Average throughput: 52.26 Mbit/s  
95th percentile per-packet one-way delay: 15.628 ms  
Loss rate: 0.76%

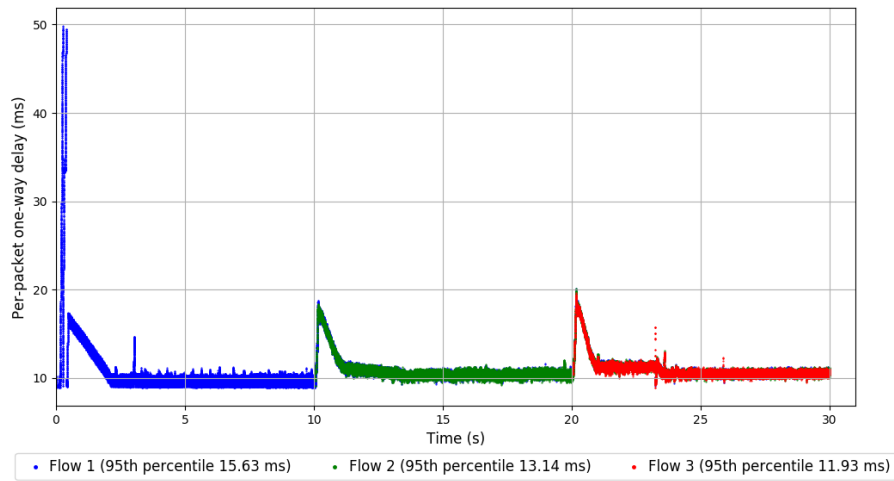
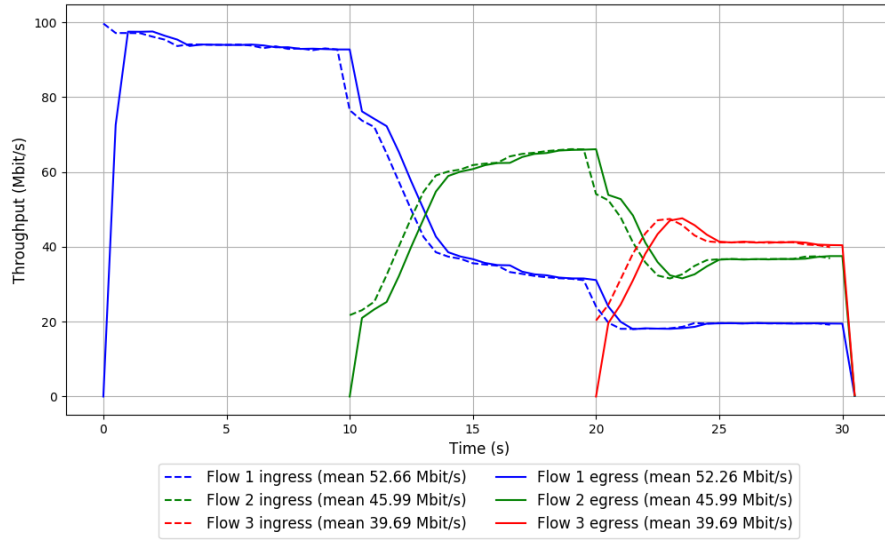
-- Flow 2:

Average throughput: 45.99 Mbit/s  
95th percentile per-packet one-way delay: 13.144 ms  
Loss rate: 0.00%

-- Flow 3:

Average throughput: 39.69 Mbit/s  
95th percentile per-packet one-way delay: 11.925 ms  
Loss rate: 0.00%

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



Run 2: Statistics of TCP Vegas

Start at: 2019-05-30 00:52:04  
End at: 2019-05-30 00:52:34  
Local clock offset: 1.255 ms  
Remote clock offset: -1.797 ms

# Below is generated by plot.py at 2019-05-30 02:47:00

# Datalink statistics

-- Total of 3 flows:

Average throughput: 97.04 Mbit/s  
95th percentile per-packet one-way delay: 14.990 ms  
Loss rate: 0.41%

-- Flow 1:

Average throughput: 60.23 Mbit/s  
95th percentile per-packet one-way delay: 15.170 ms  
Loss rate: 0.64%

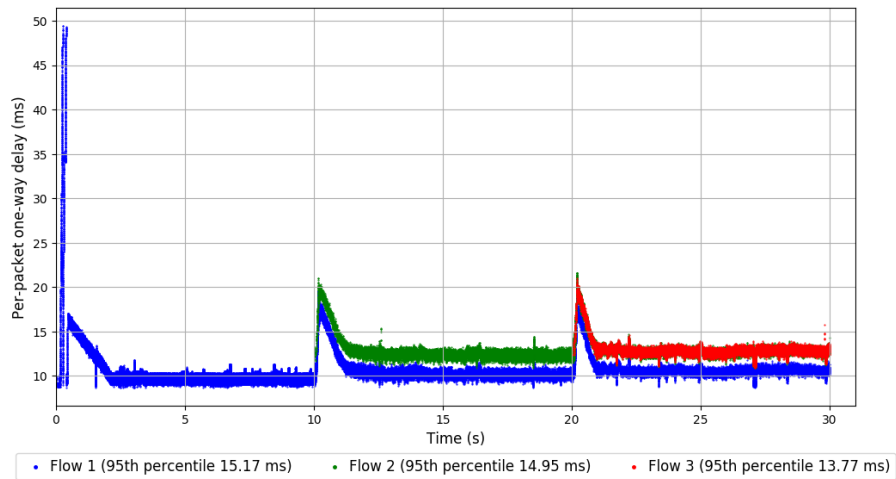
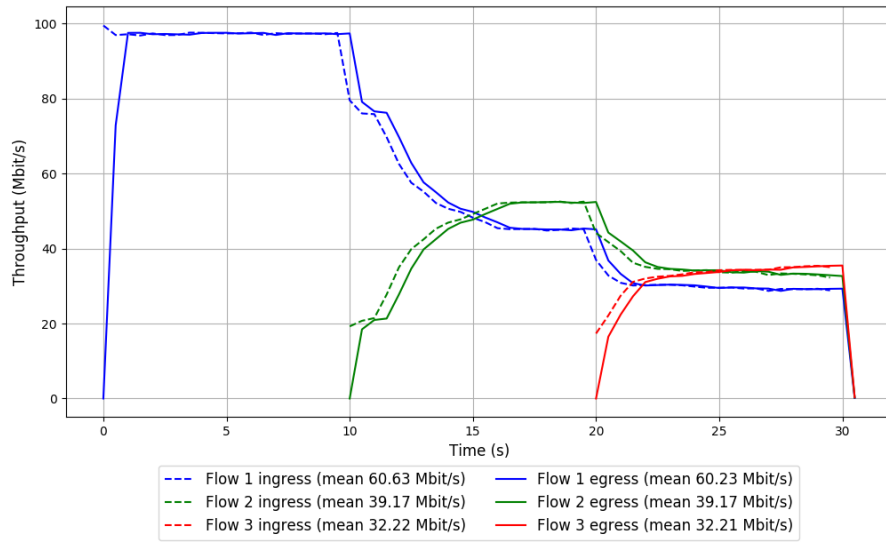
-- Flow 2:

Average throughput: 39.17 Mbit/s  
95th percentile per-packet one-way delay: 14.952 ms  
Loss rate: 0.01%

-- Flow 3:

Average throughput: 32.21 Mbit/s  
95th percentile per-packet one-way delay: 13.772 ms  
Loss rate: 0.02%

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



Run 3: Statistics of TCP Vegas

Start at: 2019-05-30 01:17:32

End at: 2019-05-30 01:18:02

Local clock offset: -1.471 ms

Remote clock offset: 0.204 ms

# Below is generated by plot.py at 2019-05-30 02:47:03

# Datalink statistics

-- Total of 3 flows:

Average throughput: 96.82 Mbit/s

95th percentile per-packet one-way delay: 14.181 ms

Loss rate: 0.40%

-- Flow 1:

Average throughput: 53.07 Mbit/s

95th percentile per-packet one-way delay: 14.764 ms

Loss rate: 0.73%

-- Flow 2:

Average throughput: 40.49 Mbit/s

95th percentile per-packet one-way delay: 13.142 ms

Loss rate: 0.00%

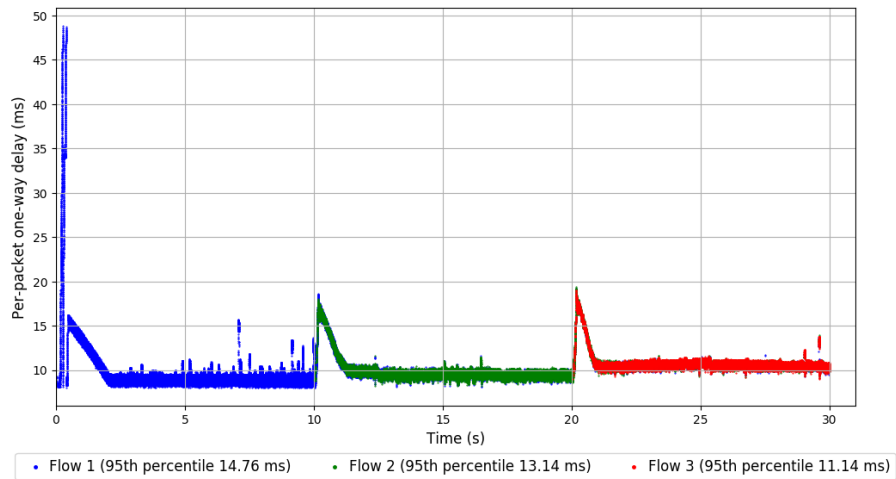
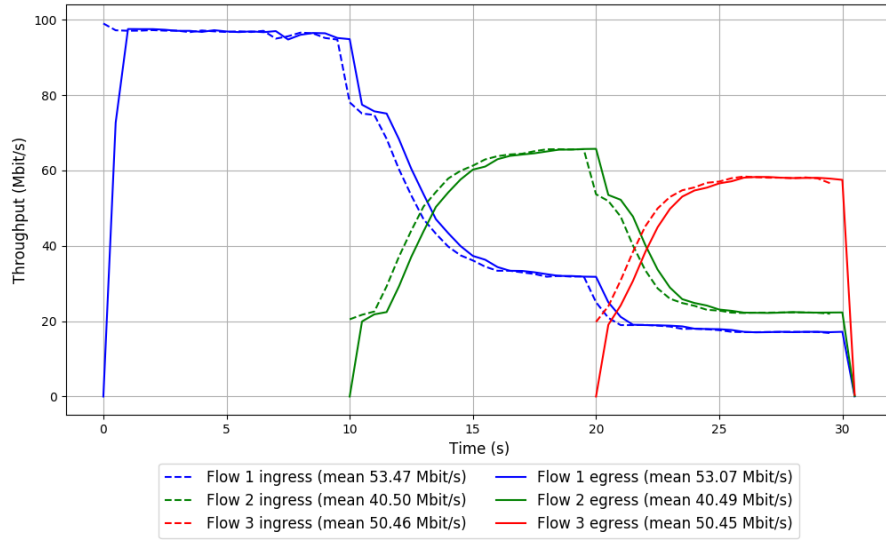
-- Flow 3:

Average throughput: 50.45 Mbit/s

95th percentile per-packet one-way delay: 11.138 ms

Loss rate: 0.00%

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





Run 4: Statistics of TCP Vegas

Start at: 2019-05-30 01:43:41

End at: 2019-05-30 01:44:11

Local clock offset: -1.058 ms

Remote clock offset: 4.862 ms

# Below is generated by plot.py at 2019-05-30 02:47:04

# Datalink statistics

-- Total of 3 flows:

Average throughput: 97.08 Mbit/s

95th percentile per-packet one-way delay: 19.343 ms

Loss rate: 0.16%

-- Flow 1:

Average throughput: 54.24 Mbit/s

95th percentile per-packet one-way delay: 21.035 ms

Loss rate: 0.29%

-- Flow 2:

Average throughput: 47.58 Mbit/s

95th percentile per-packet one-way delay: 14.425 ms

Loss rate: 0.00%

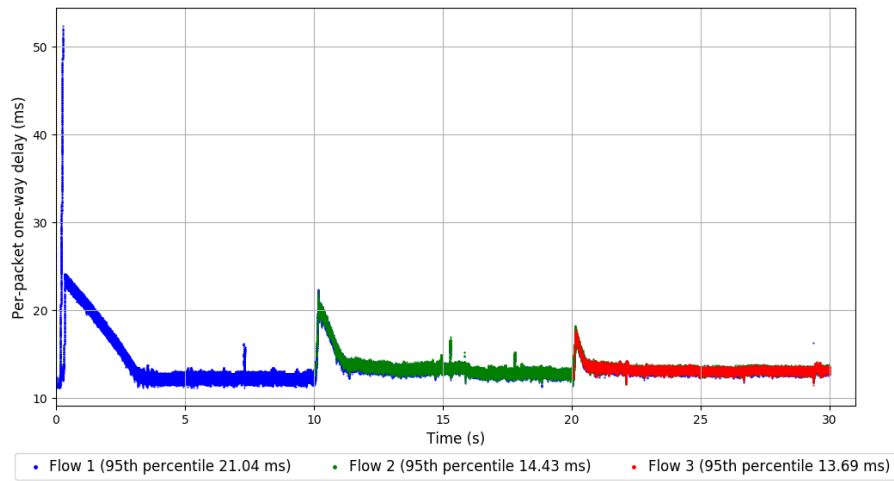
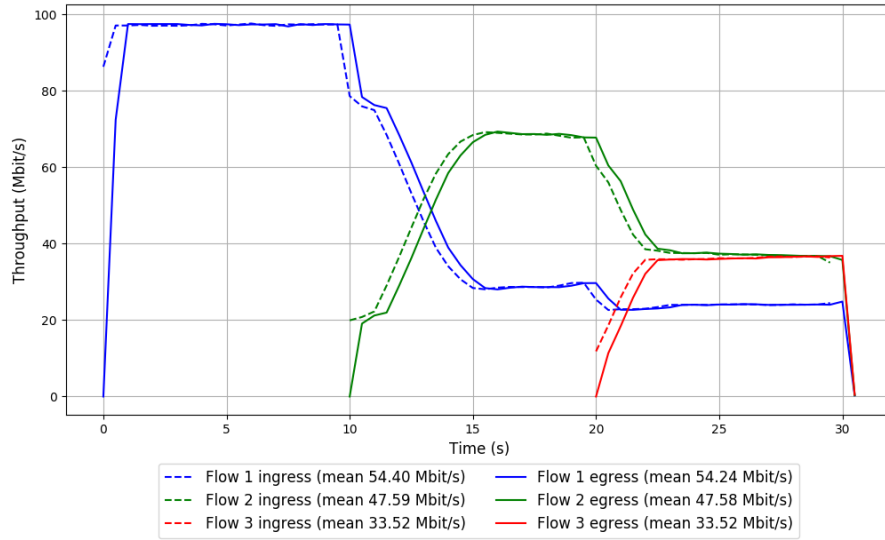
-- Flow 3:

Average throughput: 33.52 Mbit/s

95th percentile per-packet one-way delay: 13.691 ms

Loss rate: 0.01%

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



Run 5: Statistics of TCP Vegas

Start at: 2019-05-30 02:10:08

End at: 2019-05-30 02:10:38

Local clock offset: 4.399 ms

Remote clock offset: 4.176 ms

# Below is generated by plot.py at 2019-05-30 02:47:25

# Datalink statistics

-- Total of 3 flows:

Average throughput: 97.08 Mbit/s

95th percentile per-packet one-way delay: 12.540 ms

Loss rate: 0.15%

-- Flow 1:

Average throughput: 55.32 Mbit/s

95th percentile per-packet one-way delay: 13.603 ms

Loss rate: 0.27%

-- Flow 2:

Average throughput: 39.61 Mbit/s

95th percentile per-packet one-way delay: 9.781 ms

Loss rate: 0.00%

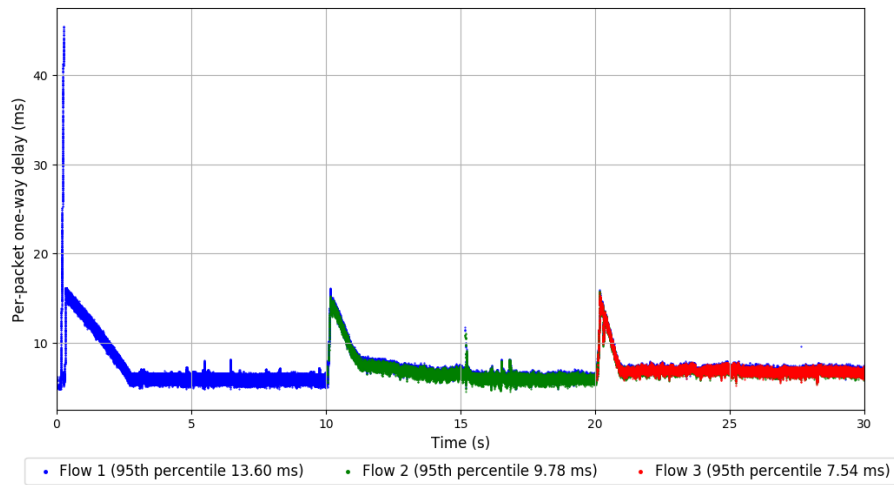
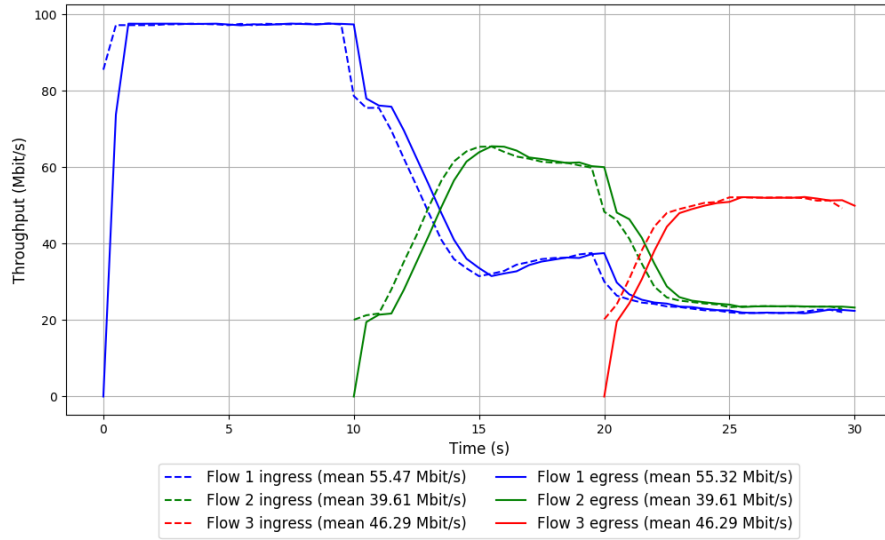
-- Flow 3:

Average throughput: 46.29 Mbit/s

95th percentile per-packet one-way delay: 7.545 ms

Loss rate: 0.00%

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



Run 1: Statistics of Verus

Start at: 2019-05-30 00:44:36  
End at: 2019-05-30 00:45:06  
Local clock offset: -0.343 ms  
Remote clock offset: -1.166 ms

# Below is generated by plot.py at 2019-05-30 02:47:25

# Datalink statistics

-- Total of 3 flows:

Average throughput: 68.90 Mbit/s  
95th percentile per-packet one-way delay: 46.319 ms  
Loss rate: 40.26%

-- Flow 1:

Average throughput: 47.37 Mbit/s  
95th percentile per-packet one-way delay: 46.097 ms  
Loss rate: 38.22%

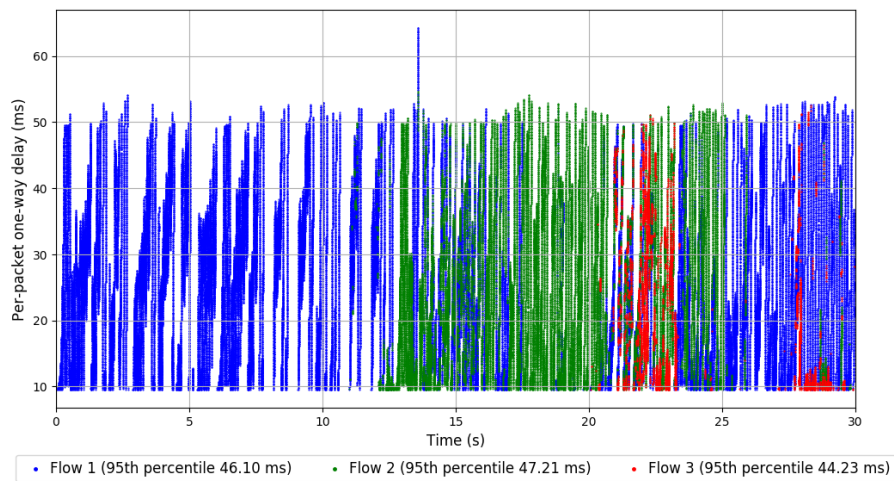
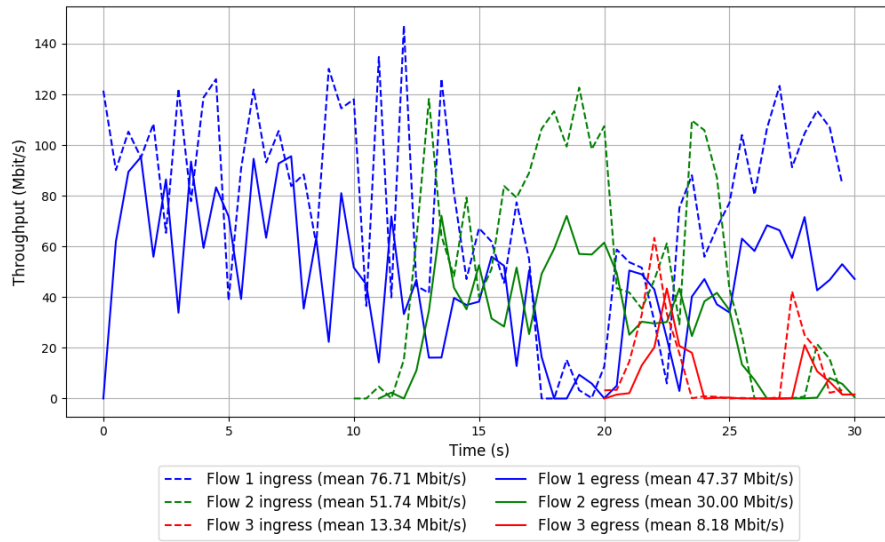
-- Flow 2:

Average throughput: 30.00 Mbit/s  
95th percentile per-packet one-way delay: 47.207 ms  
Loss rate: 45.02%

-- Flow 3:

Average throughput: 8.18 Mbit/s  
95th percentile per-packet one-way delay: 44.233 ms  
Loss rate: 38.58%

### Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2019-05-30 01:10:12

End at: 2019-05-30 01:10:42

Local clock offset: 1.053 ms

Remote clock offset: 1.59 ms

# Below is generated by plot.py at 2019-05-30 02:47:26

# Datalink statistics

-- Total of 3 flows:

Average throughput: 75.59 Mbit/s

95th percentile per-packet one-way delay: 45.424 ms

Loss rate: 33.06%

-- Flow 1:

Average throughput: 44.76 Mbit/s

95th percentile per-packet one-way delay: 44.535 ms

Loss rate: 22.40%

-- Flow 2:

Average throughput: 21.02 Mbit/s

95th percentile per-packet one-way delay: 48.302 ms

Loss rate: 55.98%

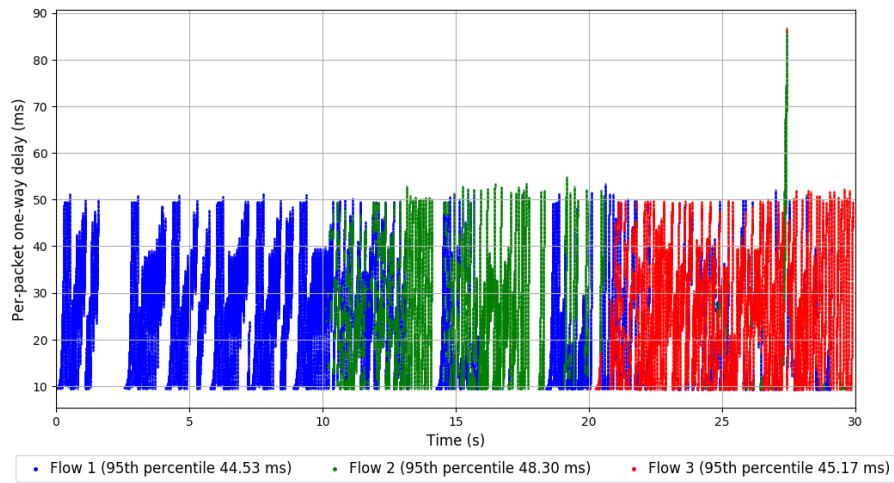
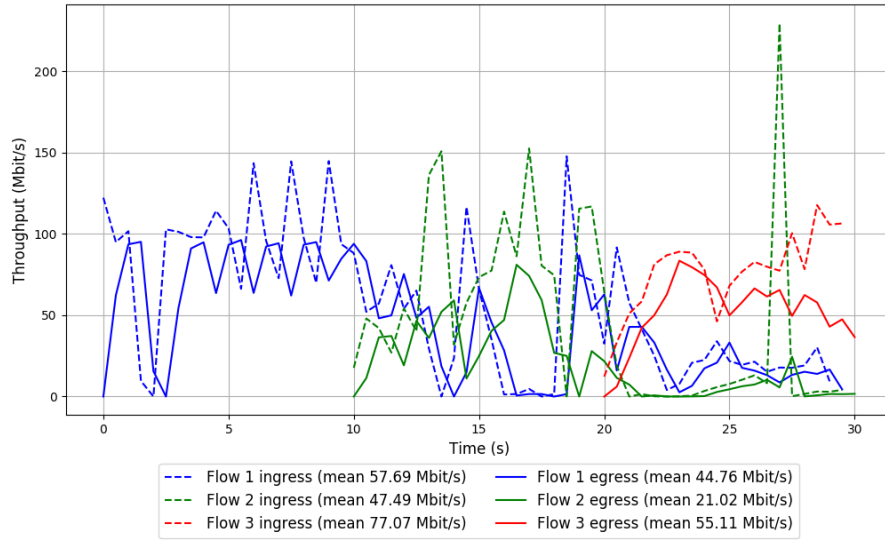
-- Flow 3:

Average throughput: 55.11 Mbit/s

95th percentile per-packet one-way delay: 45.169 ms

Loss rate: 28.36%

Run 2: Report of Verus — Data Link





Run 3: Statistics of Verus

Start at: 2019-05-30 01:35:46

End at: 2019-05-30 01:36:16

Local clock offset: 1.051 ms

Remote clock offset: 3.031 ms

# Below is generated by plot.py at 2019-05-30 02:47:45

# Datalink statistics

-- Total of 3 flows:

Average throughput: 79.93 Mbit/s

95th percentile per-packet one-way delay: 43.217 ms

Loss rate: 37.63%

-- Flow 1:

Average throughput: 55.77 Mbit/s

95th percentile per-packet one-way delay: 41.381 ms

Loss rate: 22.80%

-- Flow 2:

Average throughput: 32.48 Mbit/s

95th percentile per-packet one-way delay: 47.932 ms

Loss rate: 57.14%

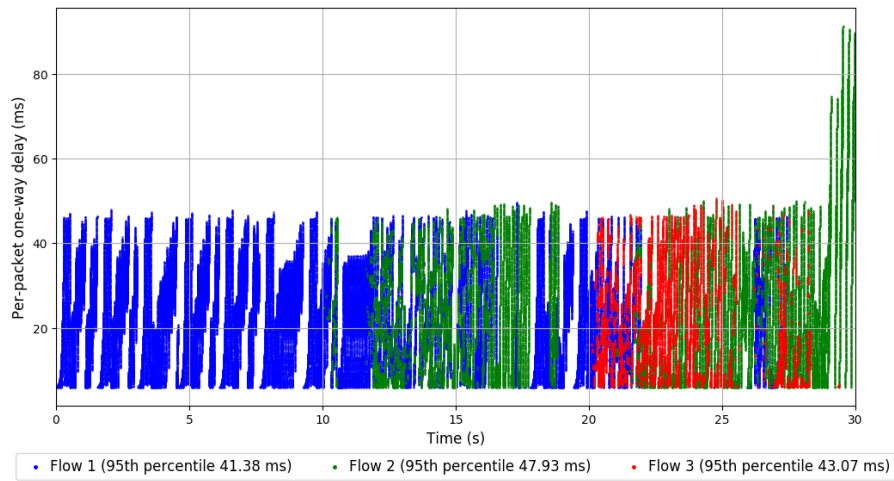
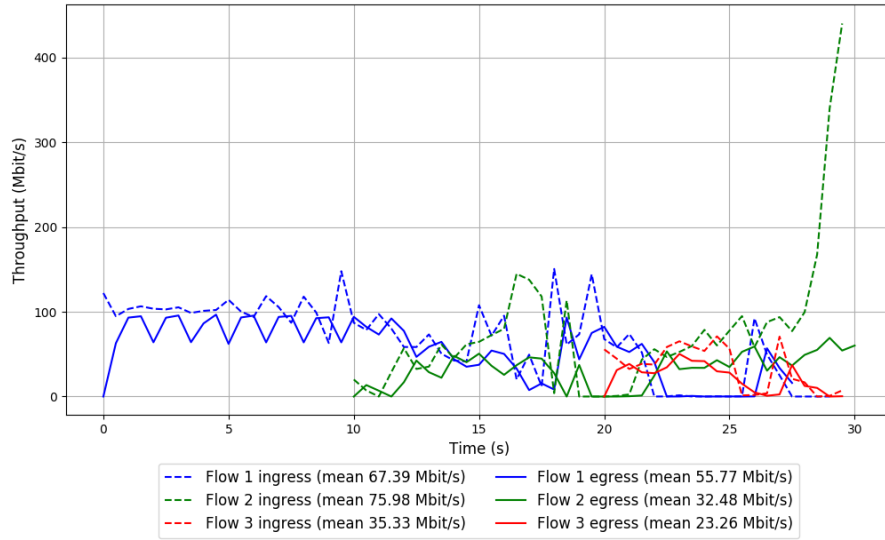
-- Flow 3:

Average throughput: 23.26 Mbit/s

95th percentile per-packet one-way delay: 43.073 ms

Loss rate: 37.41%

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



Run 4: Statistics of Verus

Start at: 2019-05-30 02:02:39

End at: 2019-05-30 02:03:09

Local clock offset: 6.347 ms

Remote clock offset: 4.455 ms

# Below is generated by plot.py at 2019-05-30 02:48:02

# Datalink statistics

-- Total of 3 flows:

Average throughput: 80.95 Mbit/s

95th percentile per-packet one-way delay: 39.458 ms

Loss rate: 26.40%

-- Flow 1:

Average throughput: 55.12 Mbit/s

95th percentile per-packet one-way delay: 39.384 ms

Loss rate: 25.52%

-- Flow 2:

Average throughput: 28.42 Mbit/s

95th percentile per-packet one-way delay: 39.901 ms

Loss rate: 29.05%

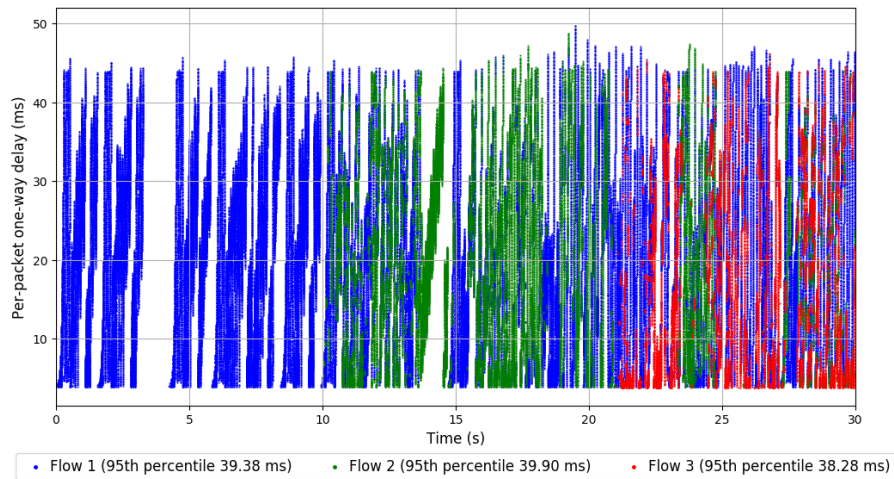
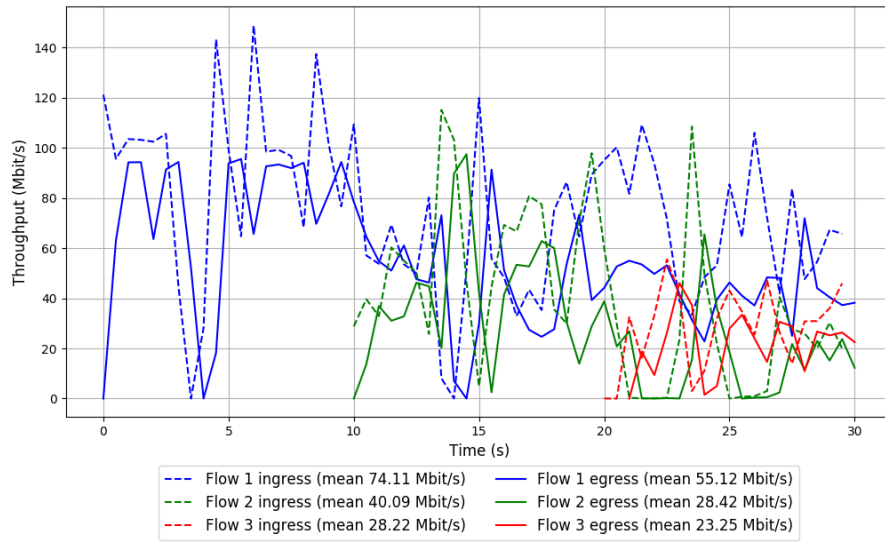
-- Flow 3:

Average throughput: 23.25 Mbit/s

95th percentile per-packet one-way delay: 38.277 ms

Loss rate: 25.85%

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



Run 5: Statistics of Verus

Start at: 2019-05-30 02:28:52

End at: 2019-05-30 02:29:22

Local clock offset: 1.497 ms

Remote clock offset: 4.583 ms

# Below is generated by plot.py at 2019-05-30 02:48:05

# Datalink statistics

-- Total of 3 flows:

Average throughput: 77.06 Mbit/s

95th percentile per-packet one-way delay: 41.396 ms

Loss rate: 44.01%

-- Flow 1:

Average throughput: 58.32 Mbit/s

95th percentile per-packet one-way delay: 40.363 ms

Loss rate: 35.88%

-- Flow 2:

Average throughput: 25.63 Mbit/s

95th percentile per-packet one-way delay: 44.223 ms

Loss rate: 61.16%

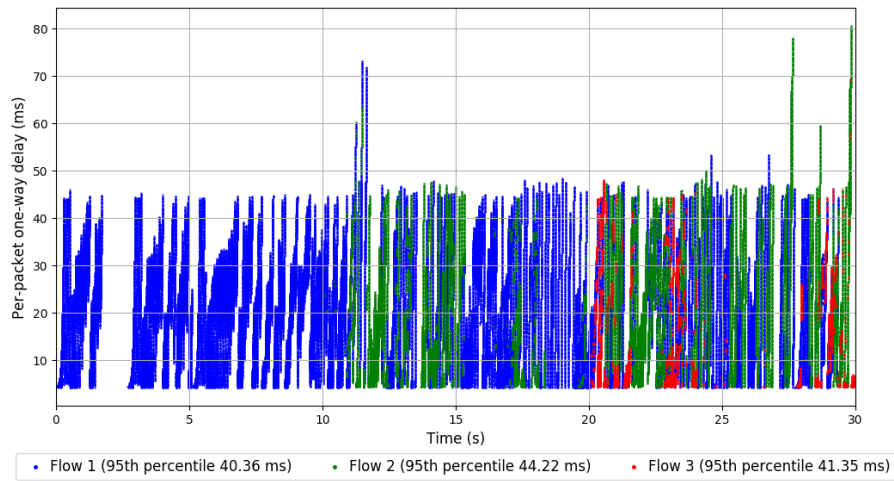
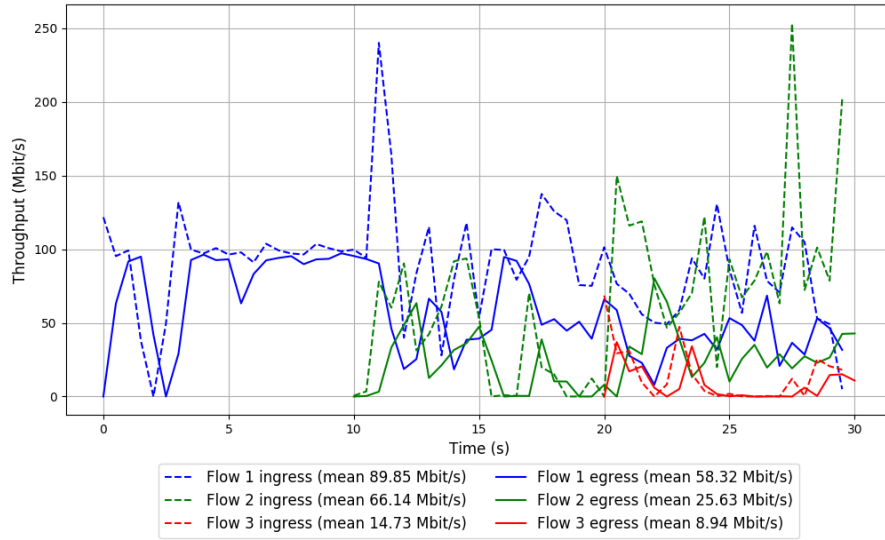
-- Flow 3:

Average throughput: 8.94 Mbit/s

95th percentile per-packet one-way delay: 41.348 ms

Loss rate: 39.28%

Run 5: Report of Verus — Data Link



Run 1: Statistics of PCC-Vivace

Start at: 2019-05-30 00:33:49  
End at: 2019-05-30 00:34:19  
Local clock offset: -3.366 ms  
Remote clock offset: -1.524 ms

# Below is generated by plot.py at 2019-05-30 02:48:08

# Datalink statistics

-- Total of 3 flows:

Average throughput: 89.46 Mbit/s  
95th percentile per-packet one-way delay: 11.962 ms  
Loss rate: 0.00%

-- Flow 1:

Average throughput: 59.44 Mbit/s  
95th percentile per-packet one-way delay: 11.659 ms  
Loss rate: 0.00%

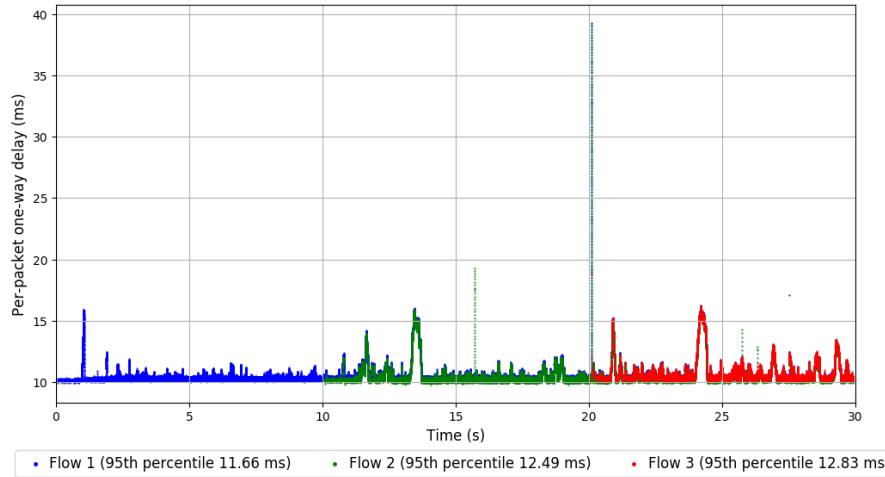
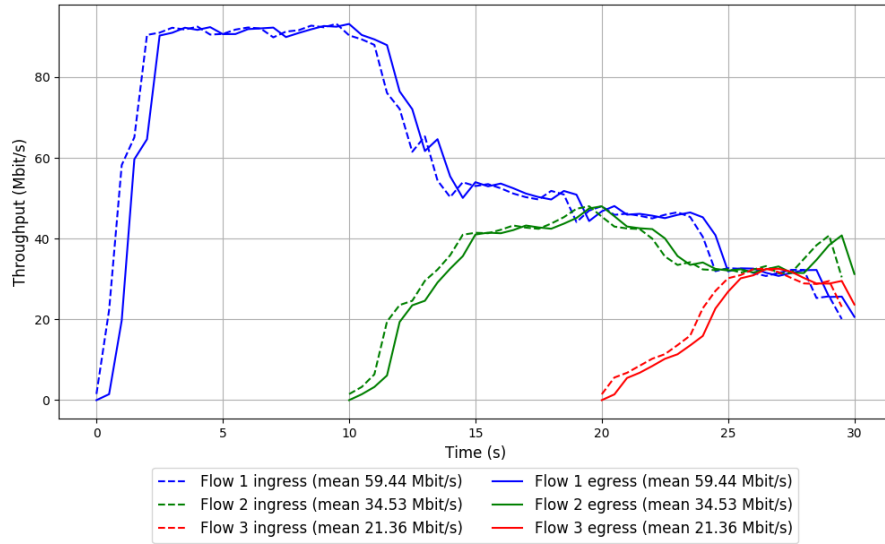
-- Flow 2:

Average throughput: 34.53 Mbit/s  
95th percentile per-packet one-way delay: 12.494 ms  
Loss rate: 0.00%

-- Flow 3:

Average throughput: 21.36 Mbit/s  
95th percentile per-packet one-way delay: 12.831 ms  
Loss rate: 0.00%

Run 1: Report of PCC-Vivace — Data Link





Run 2: Statistics of PCC-Vivace

Start at: 2019-05-30 00:59:31  
End at: 2019-05-30 01:00:01  
Local clock offset: 7.171 ms  
Remote clock offset: -0.555 ms

# Below is generated by plot.py at 2019-05-30 02:48:08

# Datalink statistics

-- Total of 3 flows:

Average throughput: 87.76 Mbit/s  
95th percentile per-packet one-way delay: 6.687 ms  
Loss rate: 0.00%

-- Flow 1:

Average throughput: 64.26 Mbit/s  
95th percentile per-packet one-way delay: 6.308 ms  
Loss rate: 0.00%

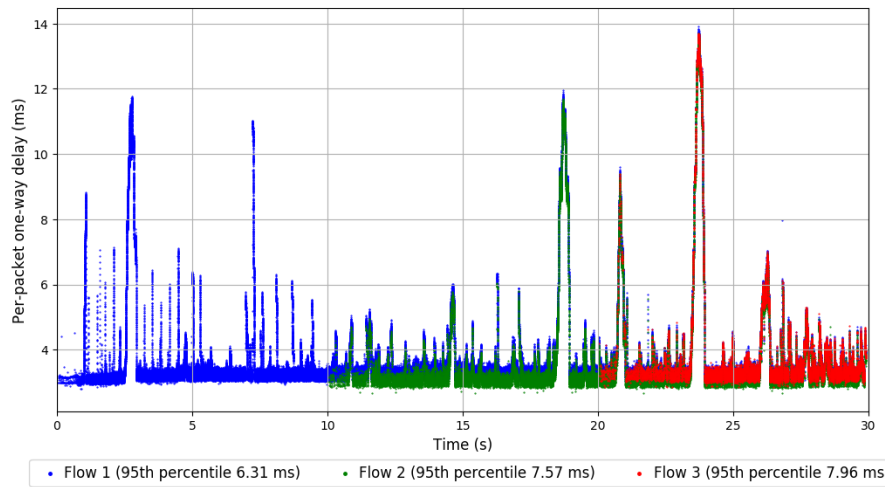
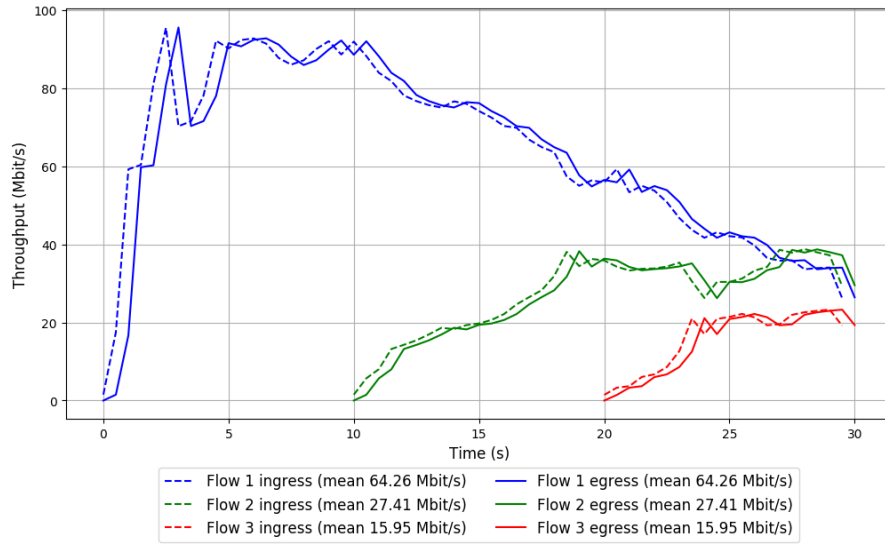
-- Flow 2:

Average throughput: 27.41 Mbit/s  
95th percentile per-packet one-way delay: 7.568 ms  
Loss rate: 0.00%

-- Flow 3:

Average throughput: 15.95 Mbit/s  
95th percentile per-packet one-way delay: 7.960 ms  
Loss rate: 0.00%

Run 2: Report of PCC-Vivace — Data Link



Run 3: Statistics of PCC-Vivace

Start at: 2019-05-30 01:24:49

End at: 2019-05-30 01:25:19

Local clock offset: -3.304 ms

Remote clock offset: -3.26 ms

# Below is generated by plot.py at 2019-05-30 02:48:18

# Datalink statistics

-- Total of 3 flows:

Average throughput: 88.67 Mbit/s

95th percentile per-packet one-way delay: 8.985 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 62.32 Mbit/s

95th percentile per-packet one-way delay: 8.866 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 30.74 Mbit/s

95th percentile per-packet one-way delay: 9.209 ms

Loss rate: 0.00%

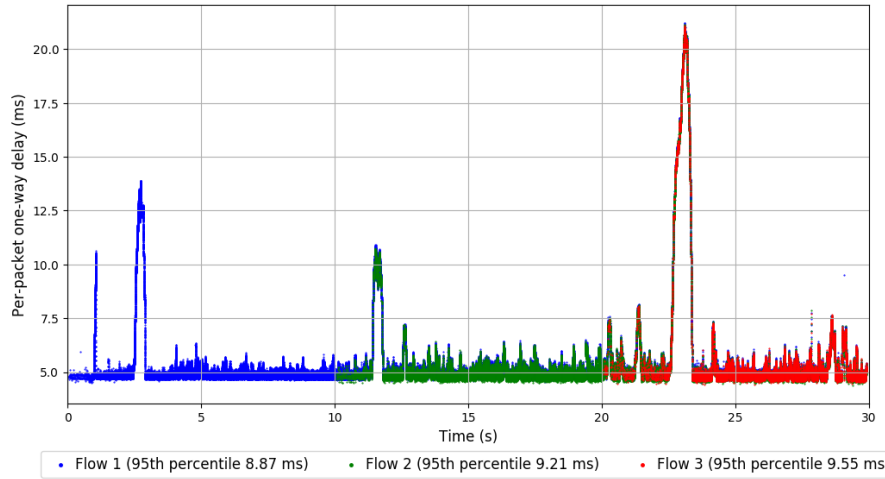
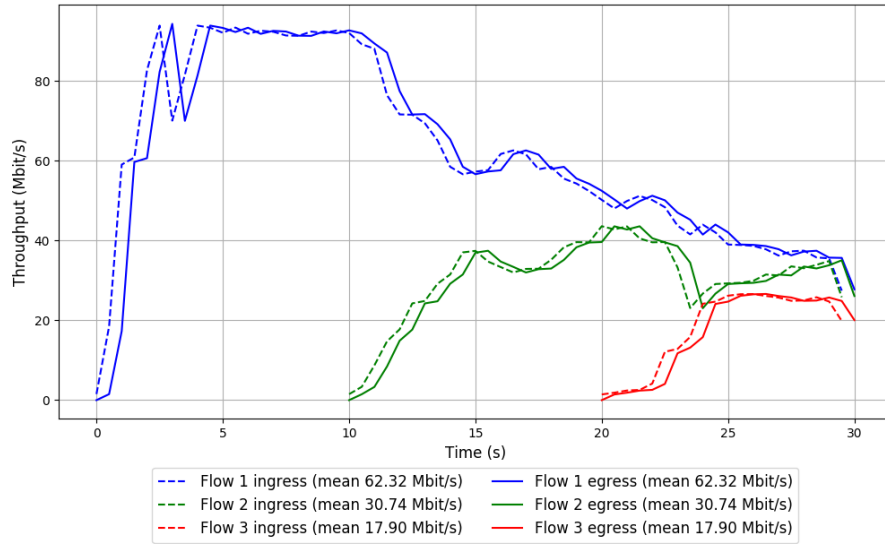
-- Flow 3:

Average throughput: 17.90 Mbit/s

95th percentile per-packet one-way delay: 9.546 ms

Loss rate: 0.00%

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



Run 4: Statistics of PCC-Vivace

Start at: 2019-05-30 01:51:28

End at: 2019-05-30 01:51:58

Local clock offset: 4.262 ms

Remote clock offset: 3.903 ms

# Below is generated by plot.py at 2019-05-30 02:48:19

# Datalink statistics

-- Total of 3 flows:

Average throughput: 86.75 Mbit/s

95th percentile per-packet one-way delay: 14.495 ms

Loss rate: 0.15%

-- Flow 1:

Average throughput: 57.39 Mbit/s

95th percentile per-packet one-way delay: 11.013 ms

Loss rate: 0.08%

-- Flow 2:

Average throughput: 33.29 Mbit/s

95th percentile per-packet one-way delay: 17.740 ms

Loss rate: 0.21%

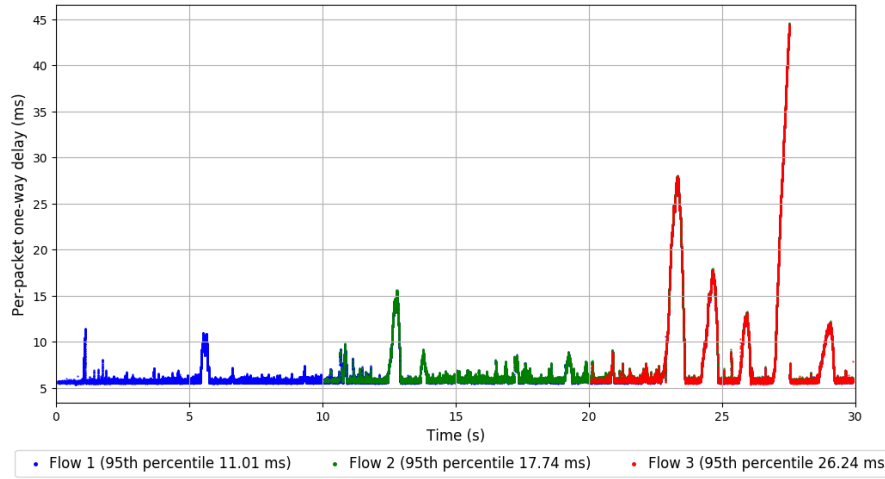
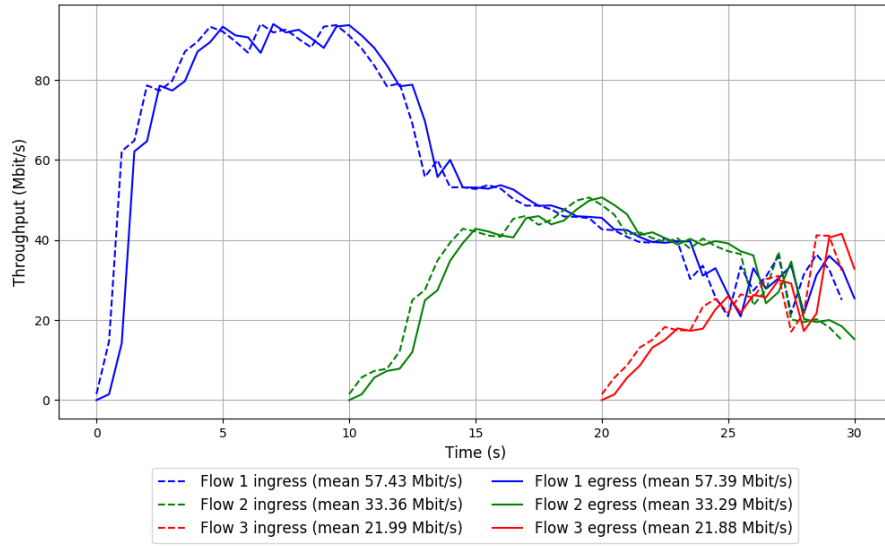
-- Flow 3:

Average throughput: 21.88 Mbit/s

95th percentile per-packet one-way delay: 26.244 ms

Loss rate: 0.49%

Run 4: Report of PCC-Vivace — Data Link



Run 5: Statistics of PCC-Vivace

Start at: 2019-05-30 02:17:46

End at: 2019-05-30 02:18:16

Local clock offset: -2.399 ms

Remote clock offset: 3.966 ms

# Below is generated by plot.py at 2019-05-30 02:48:20

# Datalink statistics

-- Total of 3 flows:

Average throughput: 87.71 Mbit/s

95th percentile per-packet one-way delay: 11.376 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 59.77 Mbit/s

95th percentile per-packet one-way delay: 11.187 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 34.86 Mbit/s

95th percentile per-packet one-way delay: 11.865 ms

Loss rate: 0.00%

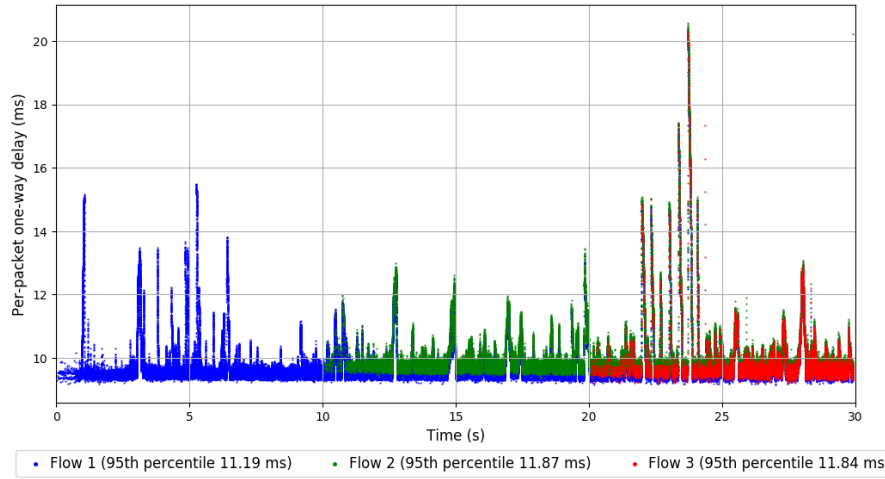
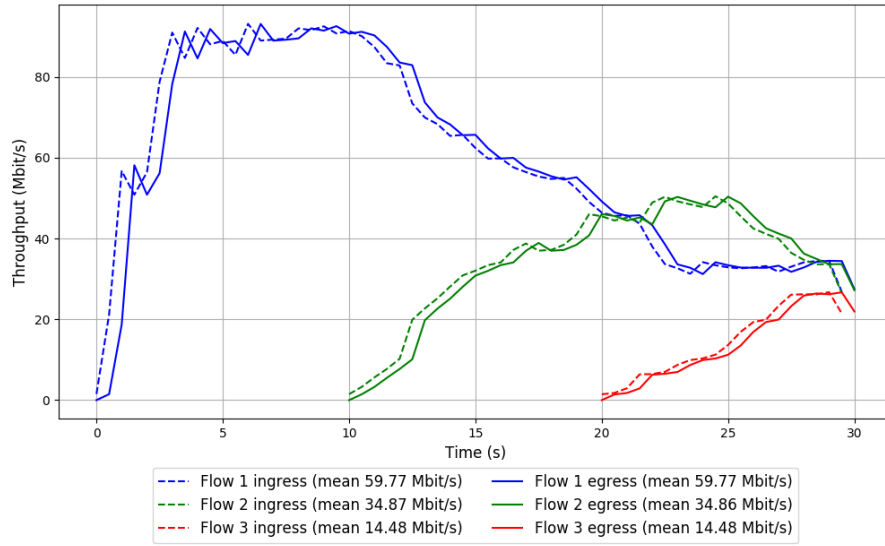
-- Flow 3:

Average throughput: 14.48 Mbit/s

95th percentile per-packet one-way delay: 11.843 ms

Loss rate: 0.00%

Run 5: Report of PCC-Vivace — Data Link





Run 1: Statistics of WebRTC media

Start at: 2019-05-30 00:36:15  
End at: 2019-05-30 00:36:45  
Local clock offset: -2.399 ms  
Remote clock offset: -2.588 ms

# Below is generated by plot.py at 2019-05-30 02:48:20

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.13 Mbit/s

95th percentile per-packet one-way delay: 8.953 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 8.873 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 8.886 ms

Loss rate: 0.00%

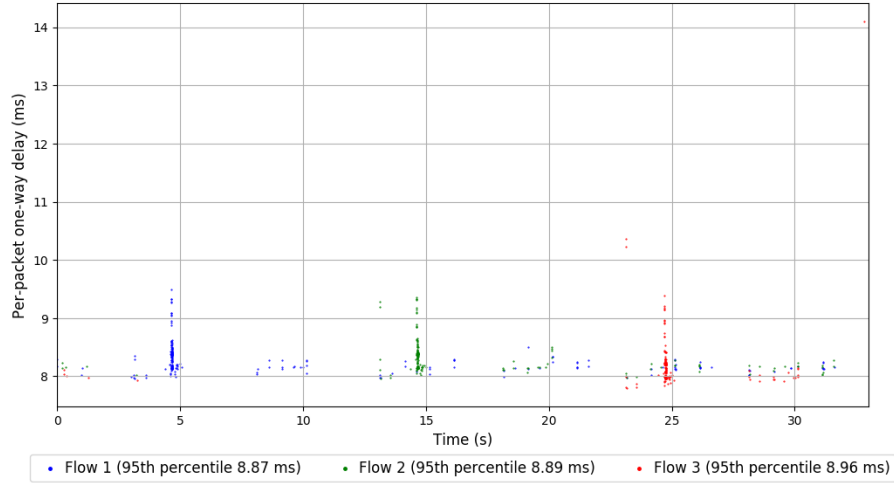
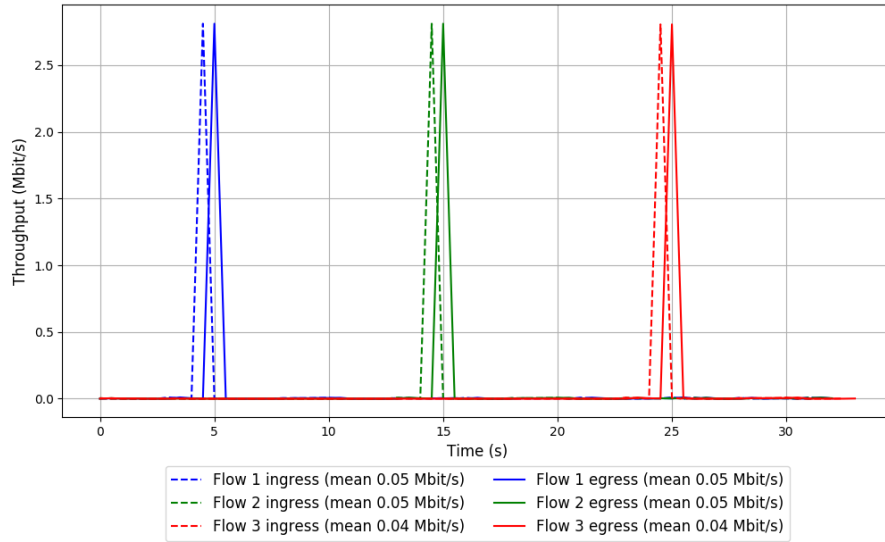
-- Flow 3:

Average throughput: 0.04 Mbit/s

95th percentile per-packet one-way delay: 8.965 ms

Loss rate: 0.00%

# Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2019-05-30 01:02:04

End at: 2019-05-30 01:02:34

Local clock offset: 5.771 ms

Remote clock offset: 0.408 ms

# Below is generated by plot.py at 2019-05-30 02:48:20

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 6.177 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 5.883 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 5.951 ms

Loss rate: 0.00%

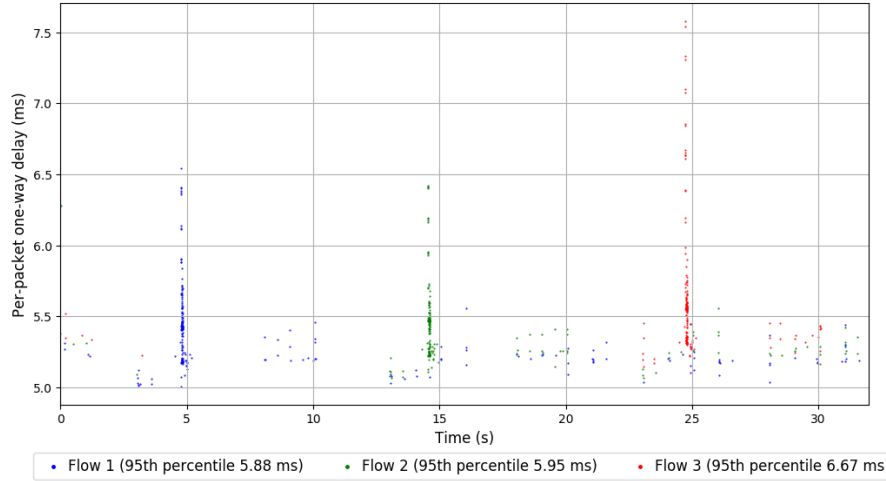
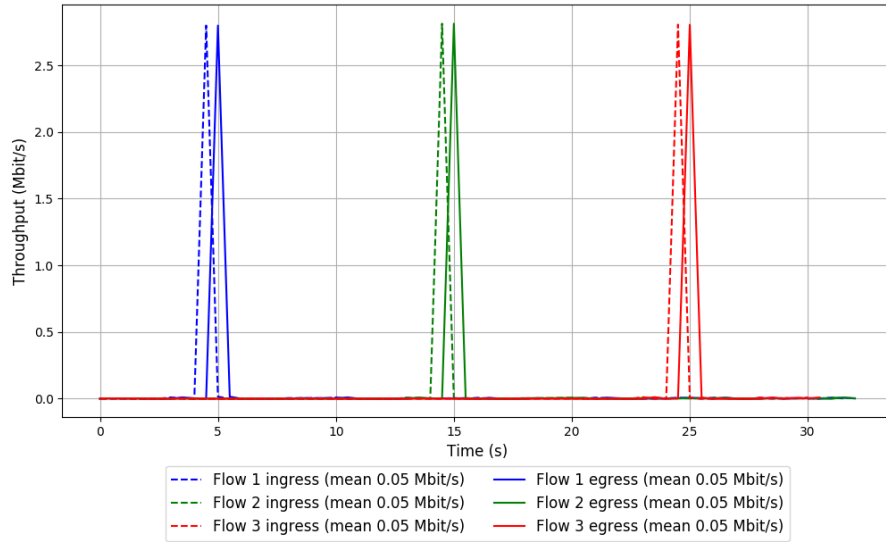
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 6.673 ms

Loss rate: 0.00%

## Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2019-05-30 01:27:26

End at: 2019-05-30 01:27:56

Local clock offset: 1.452 ms

Remote clock offset: 2.466 ms

# Below is generated by plot.py at 2019-05-30 02:48:20

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 6.227 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 6.261 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 6.164 ms

Loss rate: 0.00%

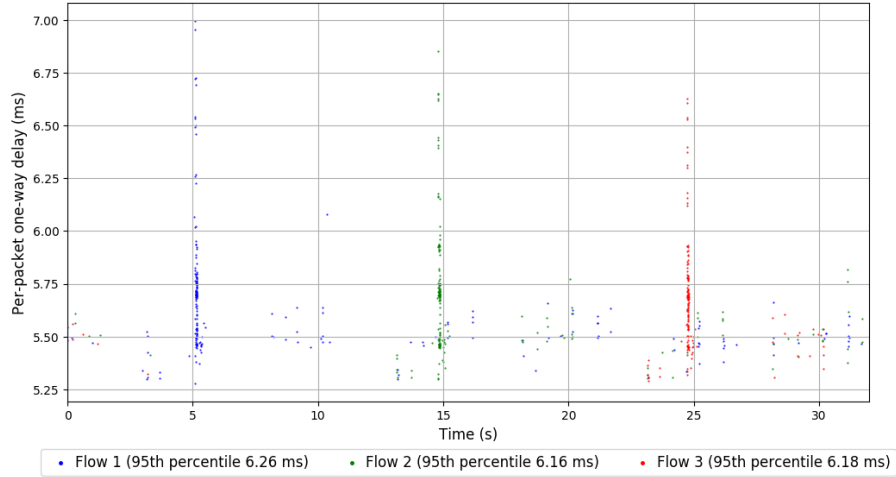
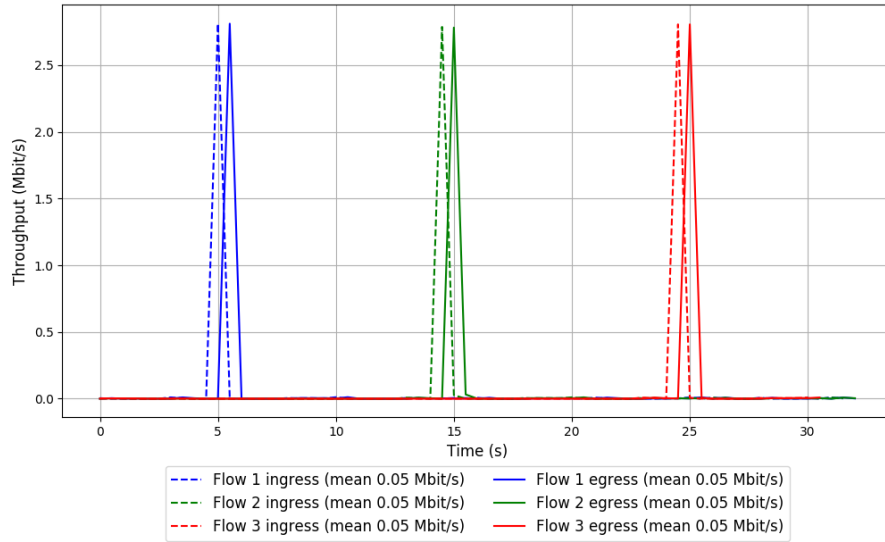
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 6.183 ms

Loss rate: 0.00%

### Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2019-05-30 01:54:05

End at: 2019-05-30 01:54:35

Local clock offset: 5.612 ms

Remote clock offset: 4.342 ms

# Below is generated by plot.py at 2019-05-30 02:48:20

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 5.364 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 5.364 ms

Loss rate: 0.05%

-- Flow 2:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 5.333 ms

Loss rate: 0.00%

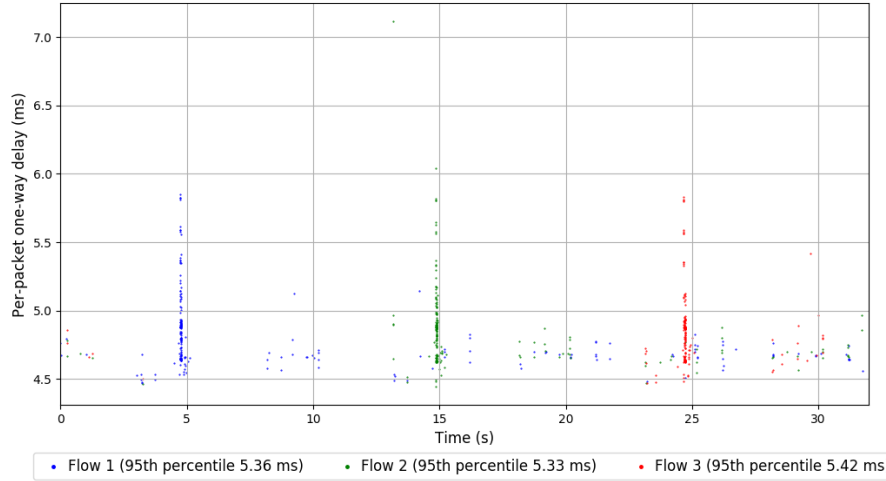
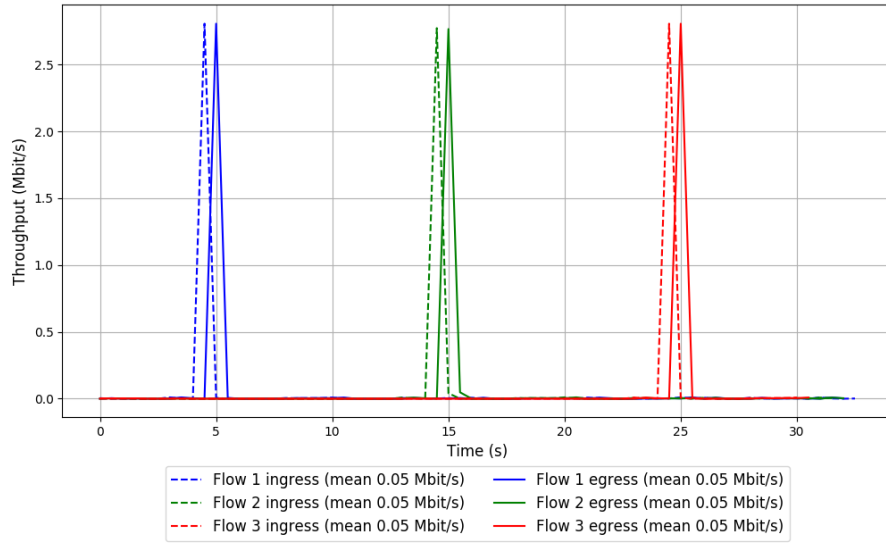
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 5.416 ms

Loss rate: 0.00%

#### Run 4: Report of WebRTC media — Data Link





Run 5: Statistics of WebRTC media

Start at: 2019-05-30 02:20:25

End at: 2019-05-30 02:20:55

Local clock offset: 1.75 ms

Remote clock offset: 3.84 ms

# Below is generated by plot.py at 2019-05-30 02:48:20

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 5.557 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 5.349 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 5.569 ms

Loss rate: 0.00%

-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 5.517 ms

Loss rate: 0.00%

Run 5: Report of WebRTC media — Data Link

