

## Pantheon Report

Generated at 2019-02-11 19:29:46 (UTC).

Data path: AWS Brazil 1 on `ens5` (*local*) → Brazil on `p4p1` (*remote*).

Repeated the test of 21 congestion control schemes 5 times.

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

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

### System info:

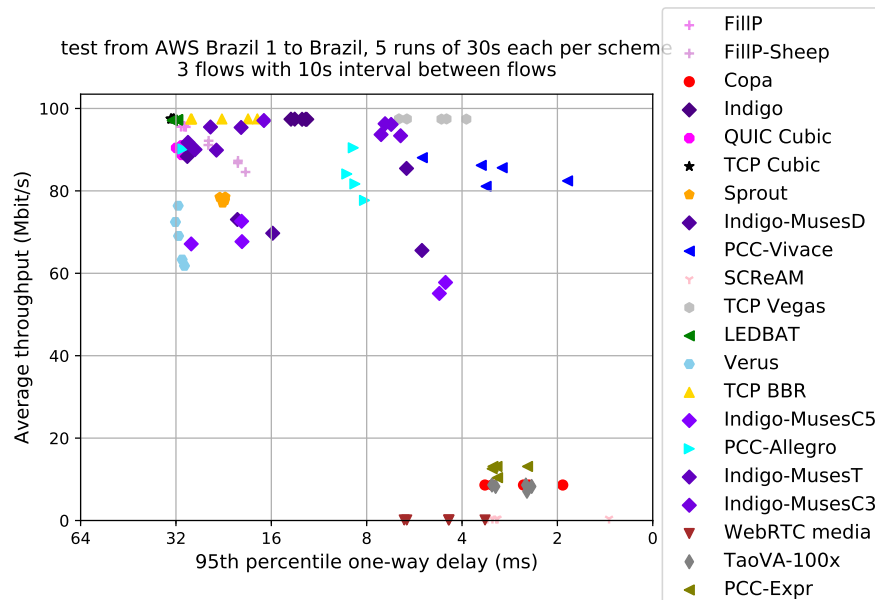
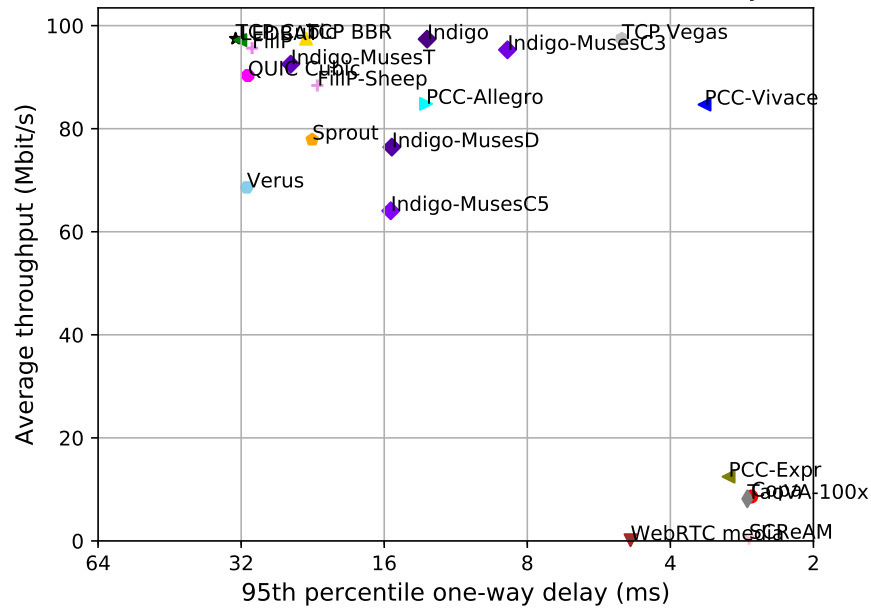
```
Linux 4.15.0-1031-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

### Git summary:

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

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

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



scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	5	67.15	33.89	23.27	23.02	22.72	26.38	0.01	0.01	0.09
Copa	5	0.00	12.55	2.78	2.33	2.72	2.72	98.27	64.56	84.02
TCP Cubic	5	63.05	37.12	29.21	32.75	32.89	32.04	0.04	0.04	0.04
FillP	5	44.40	59.86	34.36	28.89	30.37	30.16	12.82	18.17	43.49
FillP-Sheep	5	56.16	30.69	35.63	19.88	22.42	25.10	0.78	1.00	3.55
Indigo	5	46.68	44.19	65.64	11.29	13.25	13.04	0.00	0.00	0.00
Indigo-MusesC3	5	64.37	32.35	32.75	8.39	9.22	9.84	0.00	0.00	0.00
Indigo-MusesC5	5	34.43	30.33	32.65	14.54	16.06	15.76	0.00	0.00	0.00
Indigo-MusesD	5	46.00	35.25	25.03	13.76	15.86	17.29	0.05	0.05	0.48
Indigo-MusesT	5	58.08	40.33	27.12	23.29	25.59	28.31	0.12	0.28	0.64
LEDBAT	5	60.69	39.75	30.31	32.22	31.78	31.58	0.03	0.06	0.12
PCC-Allegro	5	66.39	22.92	9.69	9.39	15.45	20.43	0.03	0.06	0.30
PCC-Expr	5	7.21	5.53	4.80	3.12	2.72	2.45	32.28	24.00	25.31
QUIC Cubic	5	57.93	34.80	28.16	30.45	31.20	30.94	0.16	0.23	0.29
SCReAM	5	0.22	0.22	0.22	1.57	2.15	2.45	0.00	0.00	0.00
Sprout	5	41.87	39.54	29.41	20.98	21.95	25.43	0.00	0.00	0.00
TaoVA-100x	5	0.00	9.20	6.16	2.15	2.75	2.58	95.92	81.38	92.33
TCP Vegas	5	53.34	40.65	51.19	6.90	3.83	4.31	0.00	0.00	0.00
Verus	5	36.96	33.81	27.63	29.29	31.65	32.16	9.21	15.10	20.80
PCC-Vivace	5	53.27	33.18	28.29	2.33	4.77	7.34	0.00	0.02	0.02
WebRTC media	5	0.05	0.05	0.05	4.61	5.50	4.43	0.00	0.00	0.00

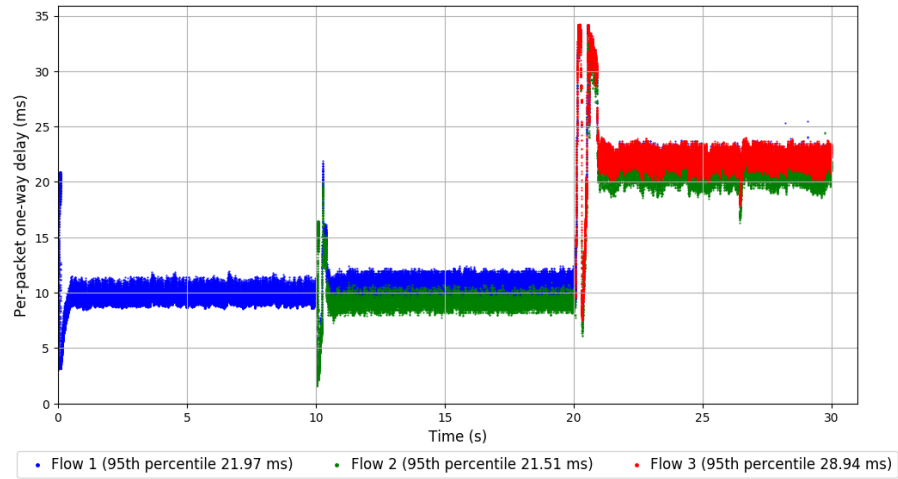
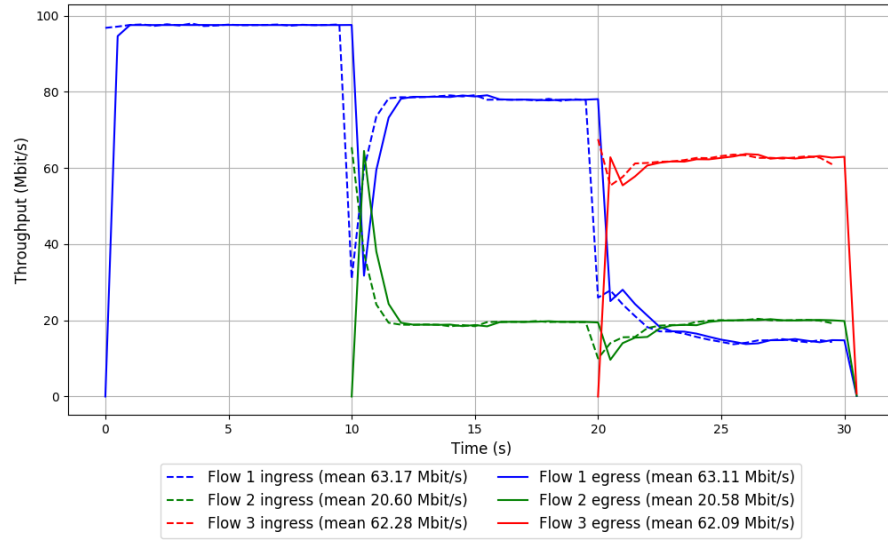


Run 1: Statistics of TCP BBR

Start at: 2019-02-11 17:26:33  
End at: 2019-02-11 17:27:03  
Local clock offset: -1.005 ms  
Remote clock offset: -0.381 ms

# Below is generated by plot.py at 2019-02-11 19:19:26  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 97.46 Mbit/s  
95th percentile per-packet one-way delay: 22.914 ms  
Loss rate: 0.06%  
-- Flow 1:  
Average throughput: 63.11 Mbit/s  
95th percentile per-packet one-way delay: 21.966 ms  
Loss rate: 0.03%  
-- Flow 2:  
Average throughput: 20.58 Mbit/s  
95th percentile per-packet one-way delay: 21.513 ms  
Loss rate: 0.01%  
-- Flow 3:  
Average throughput: 62.09 Mbit/s  
95th percentile per-packet one-way delay: 28.937 ms  
Loss rate: 0.18%

# Run 1: Report of TCP BBR — Data Link

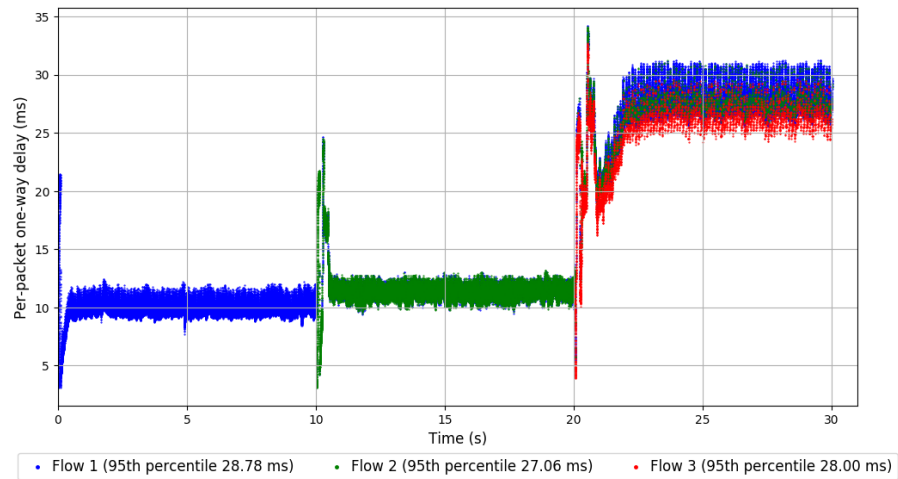
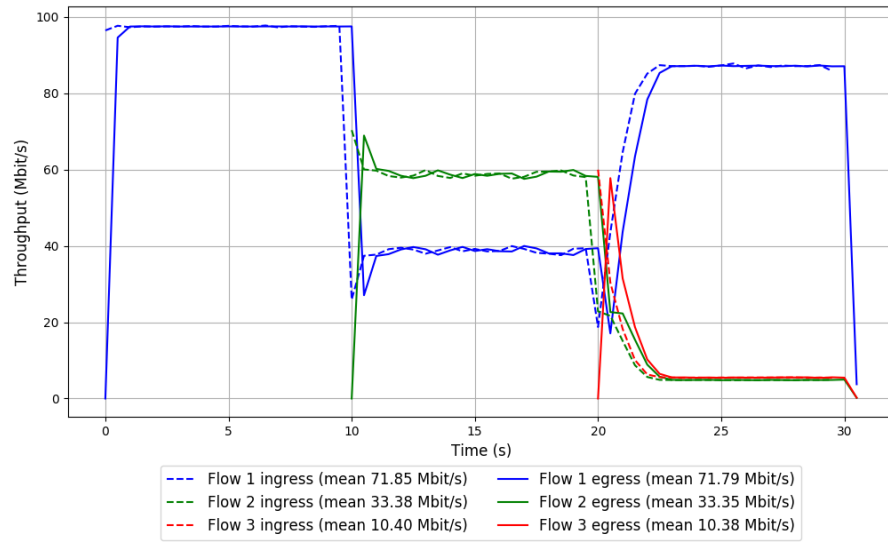


Run 2: Statistics of TCP BBR

Start at: 2019-02-11 17:50:29  
End at: 2019-02-11 17:50:59  
Local clock offset: -1.699 ms  
Remote clock offset: -0.221 ms

# Below is generated by plot.py at 2019-02-11 19:19:26  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 97.46 Mbit/s  
95th percentile per-packet one-way delay: 28.555 ms  
Loss rate: 0.01%  
-- Flow 1:  
Average throughput: 71.79 Mbit/s  
95th percentile per-packet one-way delay: 28.777 ms  
Loss rate: 0.01%  
-- Flow 2:  
Average throughput: 33.35 Mbit/s  
95th percentile per-packet one-way delay: 27.064 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 10.38 Mbit/s  
95th percentile per-packet one-way delay: 27.996 ms  
Loss rate: 0.03%

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



Run 3: Statistics of TCP BBR

Start at: 2019-02-11 18:14:25

End at: 2019-02-11 18:14:55

Local clock offset: -3.084 ms

Remote clock offset: 0.031 ms

# Below is generated by plot.py at 2019-02-11 19:19:28

# Datalink statistics

-- Total of 3 flows:

Average throughput: 97.48 Mbit/s

95th percentile per-packet one-way delay: 17.708 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 63.02 Mbit/s

95th percentile per-packet one-way delay: 17.014 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 42.92 Mbit/s

95th percentile per-packet one-way delay: 17.875 ms

Loss rate: 0.00%

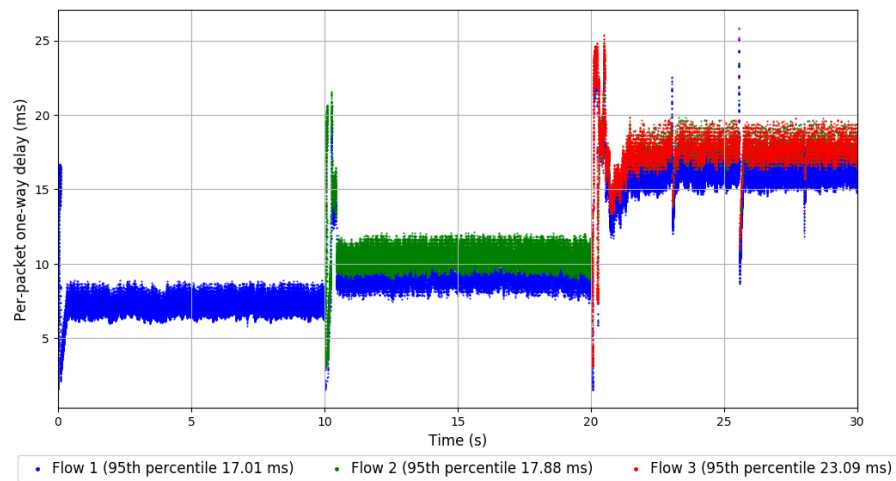
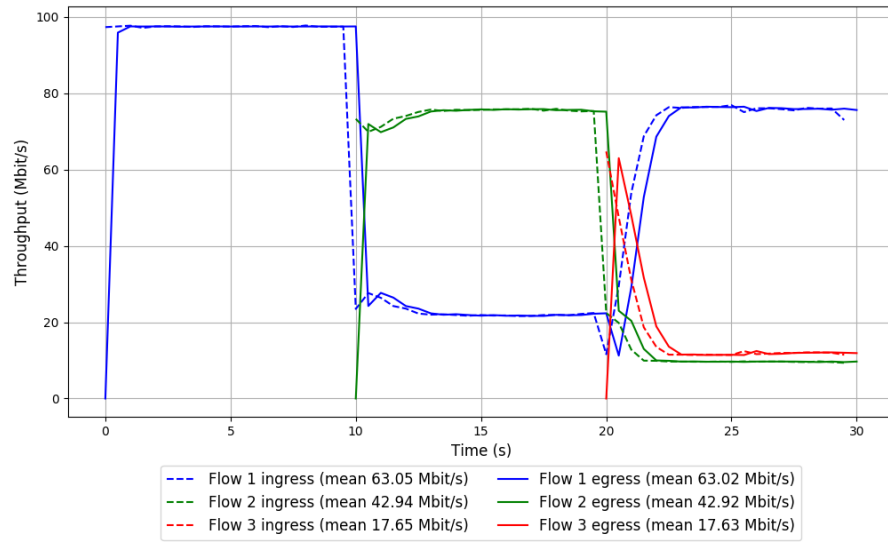
-- Flow 3:

Average throughput: 17.63 Mbit/s

95th percentile per-packet one-way delay: 23.089 ms

Loss rate: 0.00%

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



Run 4: Statistics of TCP BBR

Start at: 2019-02-11 18:38:20

End at: 2019-02-11 18:38:50

Local clock offset: -2.44 ms

Remote clock offset: 0.099 ms

# Below is generated by plot.py at 2019-02-11 19:19:28

# Datalink statistics

-- Total of 3 flows:

Average throughput: 97.45 Mbit/s

95th percentile per-packet one-way delay: 28.727 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 72.44 Mbit/s

95th percentile per-packet one-way delay: 28.530 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 29.99 Mbit/s

95th percentile per-packet one-way delay: 27.829 ms

Loss rate: 0.02%

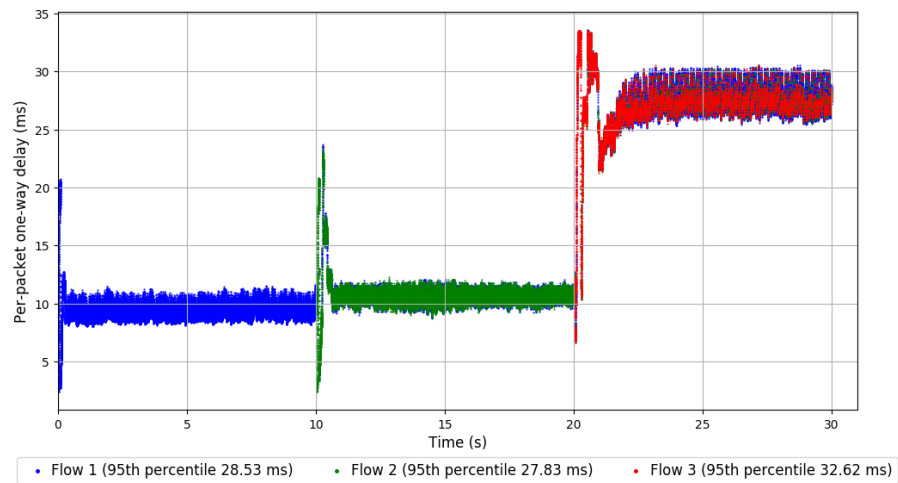
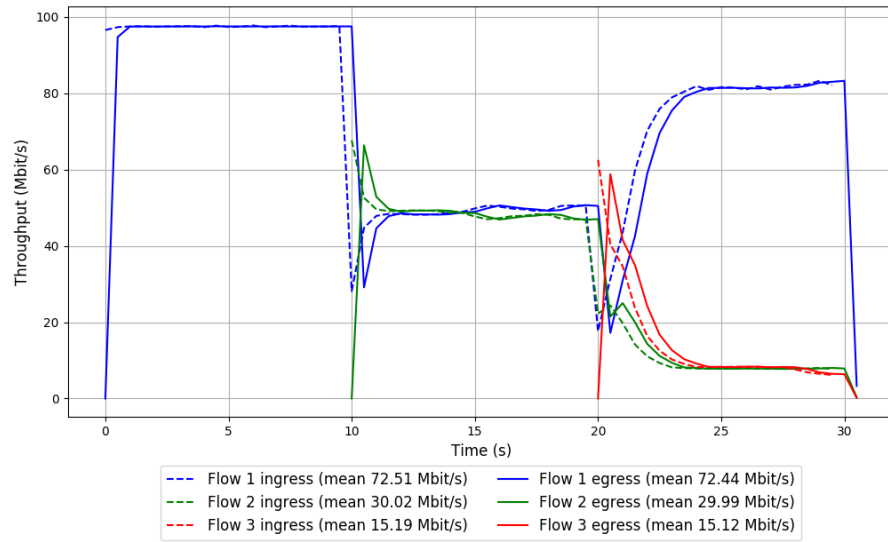
-- Flow 3:

Average throughput: 15.12 Mbit/s

95th percentile per-packet one-way delay: 32.621 ms

Loss rate: 0.25%

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





Run 5: Statistics of TCP BBR

Start at: 2019-02-11 19:02:16

End at: 2019-02-11 19:02:46

Local clock offset: -1.684 ms

Remote clock offset: 0.176 ms

# Below is generated by plot.py at 2019-02-11 19:19:28

# Datalink statistics

-- Total of 3 flows:

Average throughput: 97.48 Mbit/s

95th percentile per-packet one-way delay: 18.946 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 65.39 Mbit/s

95th percentile per-packet one-way delay: 18.815 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 42.61 Mbit/s

95th percentile per-packet one-way delay: 19.313 ms

Loss rate: 0.00%

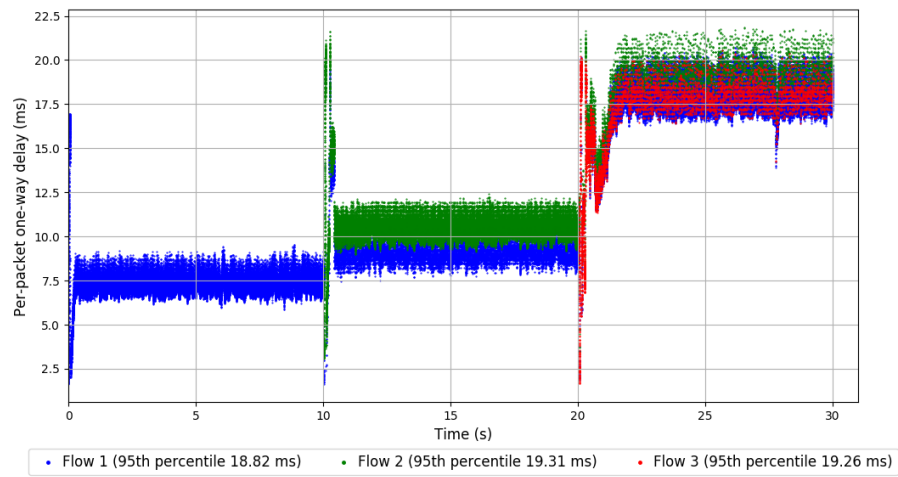
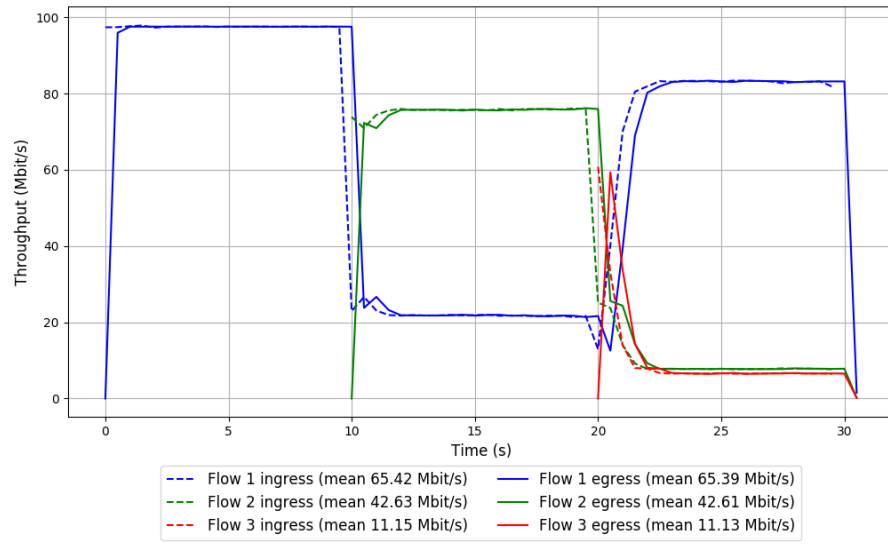
-- Flow 3:

Average throughput: 11.13 Mbit/s

95th percentile per-packet one-way delay: 19.260 ms

Loss rate: 0.00%

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

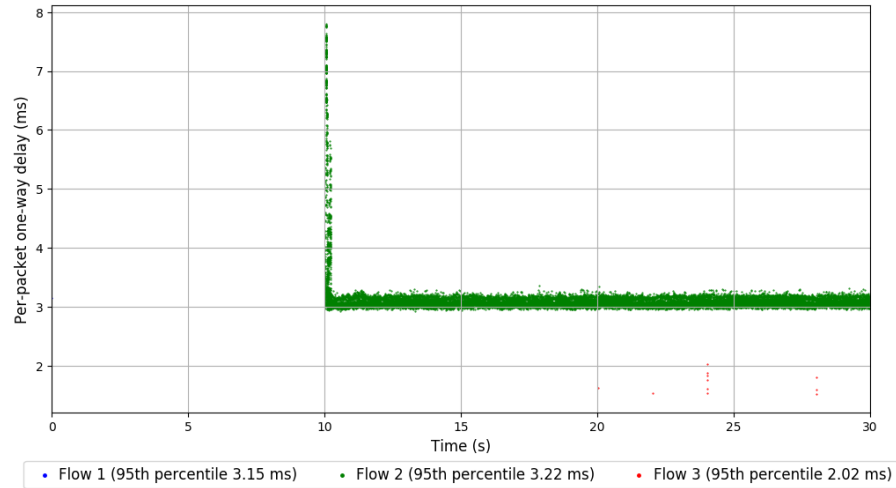
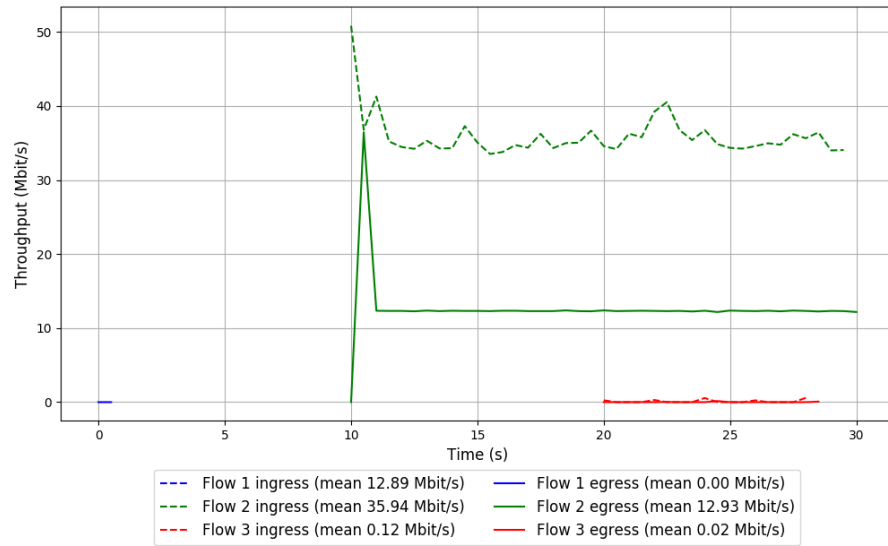


Run 1: Statistics of Copa

Start at: 2019-02-11 17:20:55  
End at: 2019-02-11 17:21:25  
Local clock offset: -1.214 ms  
Remote clock offset: -0.515 ms

# Below is generated by plot.py at 2019-02-11 19:19:28  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 8.62 Mbit/s  
95th percentile per-packet one-way delay: 3.216 ms  
Loss rate: 64.06%  
-- Flow 1:  
Average throughput: 0.00 Mbit/s  
95th percentile per-packet one-way delay: 3.153 ms  
Loss rate: 98.60%  
-- Flow 2:  
Average throughput: 12.93 Mbit/s  
95th percentile per-packet one-way delay: 3.216 ms  
Loss rate: 64.03%  
-- Flow 3:  
Average throughput: 0.02 Mbit/s  
95th percentile per-packet one-way delay: 2.019 ms  
Loss rate: 87.25%

## Run 1: Report of Copa — Data Link

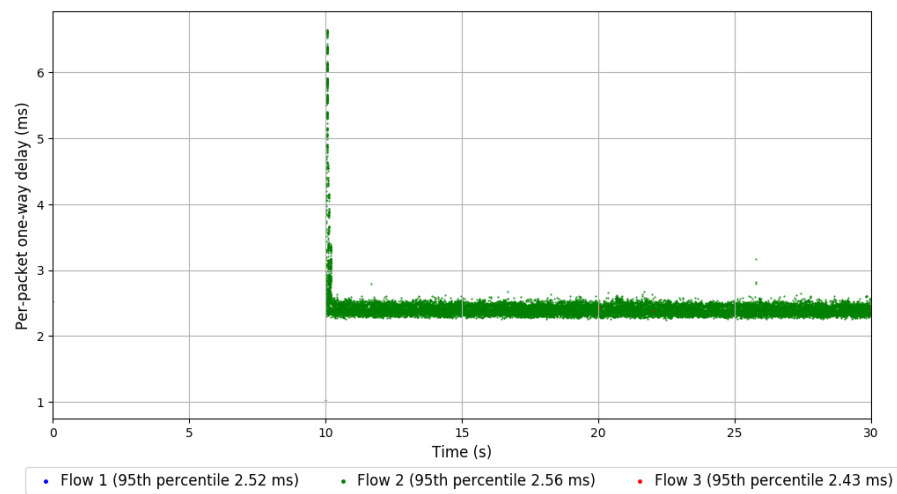
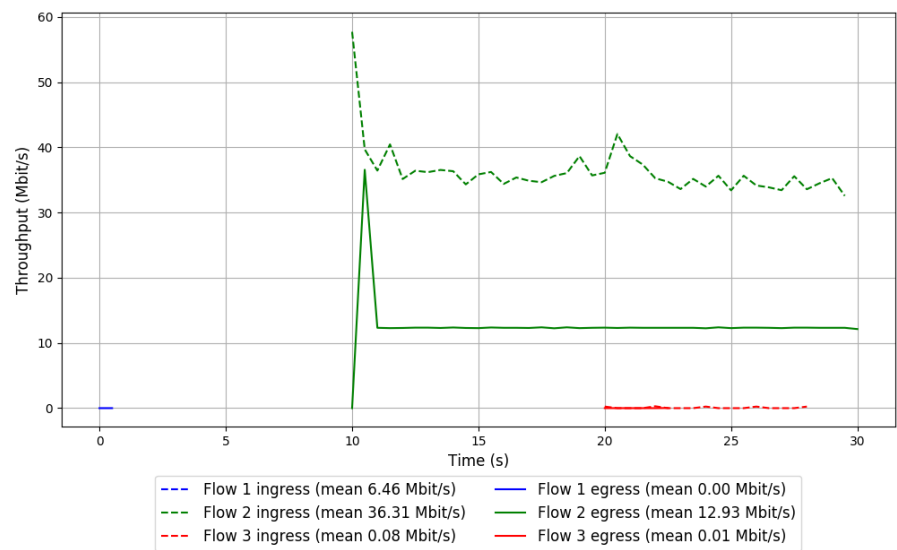


Run 2: Statistics of Copa

Start at: 2019-02-11 17:44:51  
End at: 2019-02-11 17:45:21  
Local clock offset: -0.799 ms  
Remote clock offset: -0.255 ms

# Below is generated by plot.py at 2019-02-11 19:19:28  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 8.62 Mbit/s  
95th percentile per-packet one-way delay: 2.559 ms  
Loss rate: 64.41%  
-- Flow 1:  
Average throughput: 0.00 Mbit/s  
95th percentile per-packet one-way delay: 2.523 ms  
Loss rate: 97.24%  
-- Flow 2:  
Average throughput: 12.93 Mbit/s  
95th percentile per-packet one-way delay: 2.559 ms  
Loss rate: 64.38%  
-- Flow 3:  
Average throughput: 0.01 Mbit/s  
95th percentile per-packet one-way delay: 2.432 ms  
Loss rate: 97.92%

Run 2: Report of Copa — Data Link

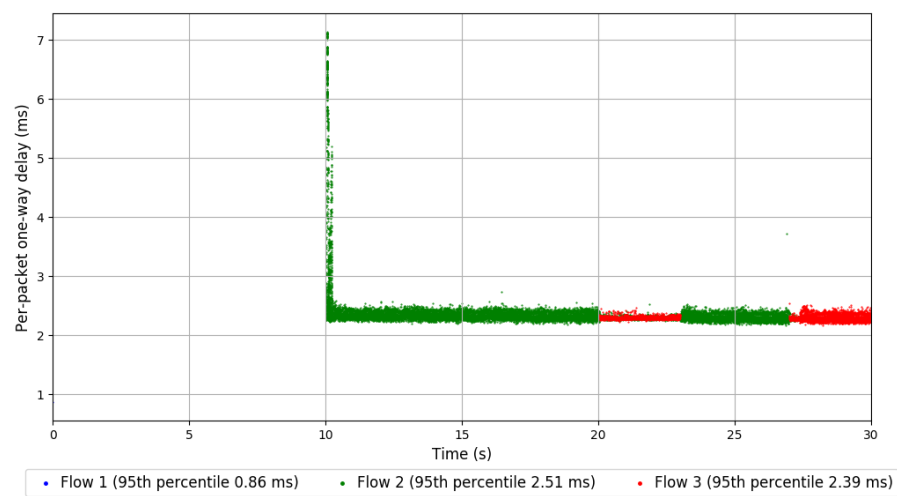
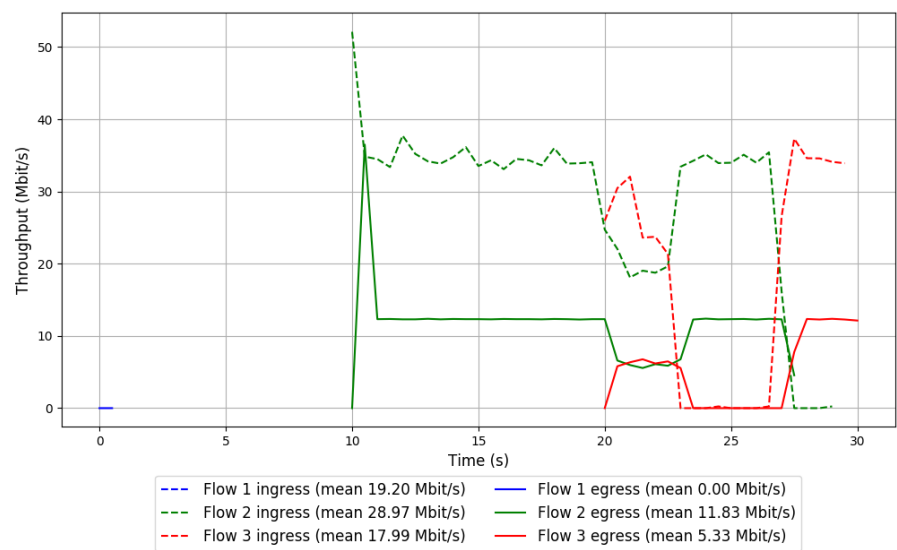


Run 3: Statistics of Copa

Start at: 2019-02-11 18:08:46  
End at: 2019-02-11 18:09:16  
Local clock offset: -1.702 ms  
Remote clock offset: -0.054 ms

# Below is generated by plot.py at 2019-02-11 19:19:28  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 8.62 Mbit/s  
95th percentile per-packet one-way delay: 2.463 ms  
Loss rate: 65.09%  
-- Flow 1:  
Average throughput: 0.00 Mbit/s  
95th percentile per-packet one-way delay: 0.862 ms  
Loss rate: 98.60%  
-- Flow 2:  
Average throughput: 11.83 Mbit/s  
95th percentile per-packet one-way delay: 2.511 ms  
Loss rate: 63.40%  
-- Flow 3:  
Average throughput: 5.33 Mbit/s  
95th percentile per-packet one-way delay: 2.387 ms  
Loss rate: 70.36%

Run 3: Report of Copa — Data Link





Run 4: Statistics of Copa

Start at: 2019-02-11 18:32:42

End at: 2019-02-11 18:33:12

Local clock offset: -3.931 ms

Remote clock offset: 0.132 ms

# Below is generated by plot.py at 2019-02-11 19:19:28

# Datalink statistics

-- Total of 3 flows:

Average throughput: 8.62 Mbit/s

95th percentile per-packet one-way delay: 3.387 ms

Loss rate: 66.08%

-- Flow 1:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 3.349 ms

Loss rate: 98.33%

-- Flow 2:

Average throughput: 12.15 Mbit/s

95th percentile per-packet one-way delay: 3.450 ms

Loss rate: 63.65%

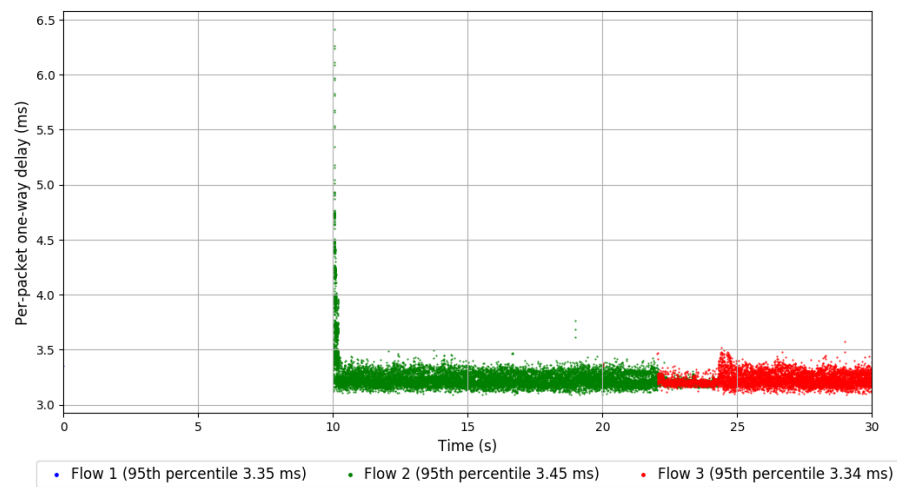
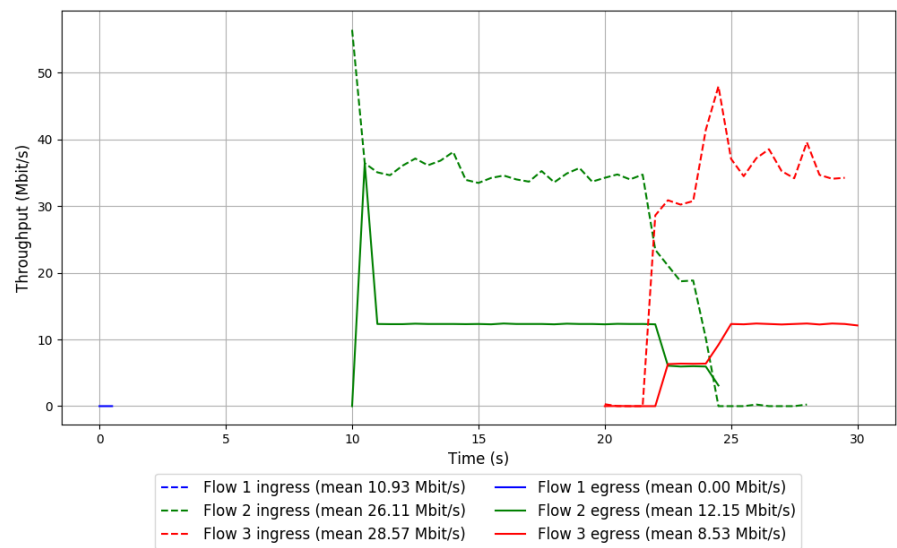
-- Flow 3:

Average throughput: 8.53 Mbit/s

95th percentile per-packet one-way delay: 3.340 ms

Loss rate: 70.15%

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2019-02-11 18:56:37

End at: 2019-02-11 18:57:07

Local clock offset: -1.939 ms

Remote clock offset: 0.132 ms

# Below is generated by plot.py at 2019-02-11 19:19:28

# Datalink statistics

-- Total of 3 flows:

Average throughput: 8.62 Mbit/s

95th percentile per-packet one-way delay: 1.888 ms

Loss rate: 67.37%

-- Flow 1:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 1.781 ms

Loss rate: 98.60%

-- Flow 2:

Average throughput: 12.93 Mbit/s

95th percentile per-packet one-way delay: 1.888 ms

Loss rate: 67.35%

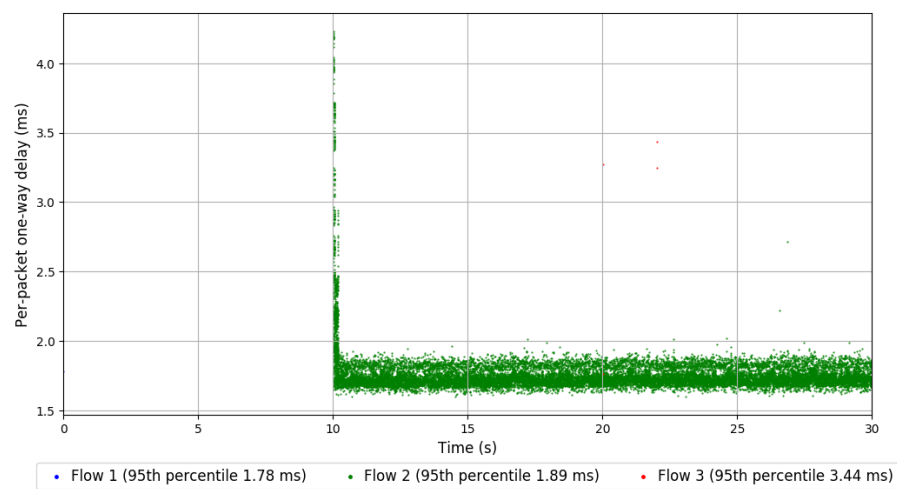
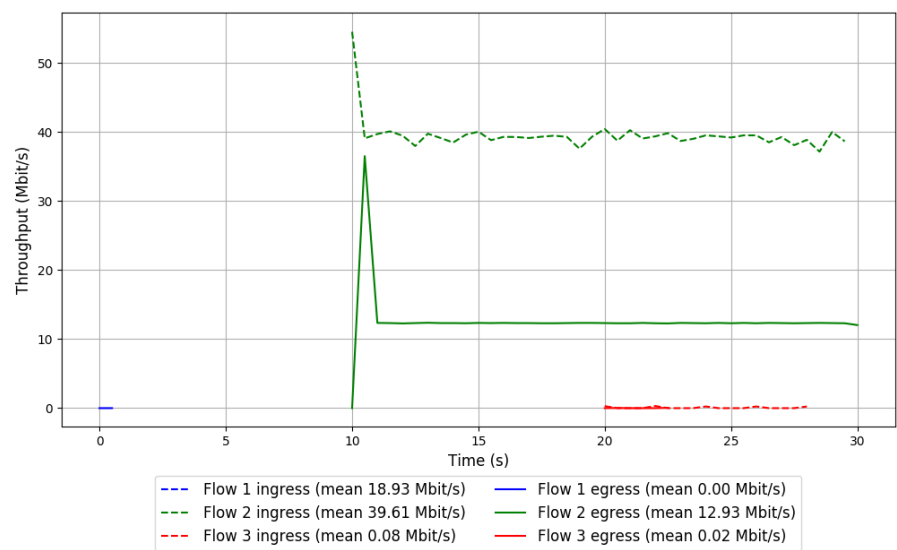
-- Flow 3:

Average throughput: 0.02 Mbit/s

95th percentile per-packet one-way delay: 3.437 ms

Loss rate: 94.40%

Run 5: Report of Copa — Data Link

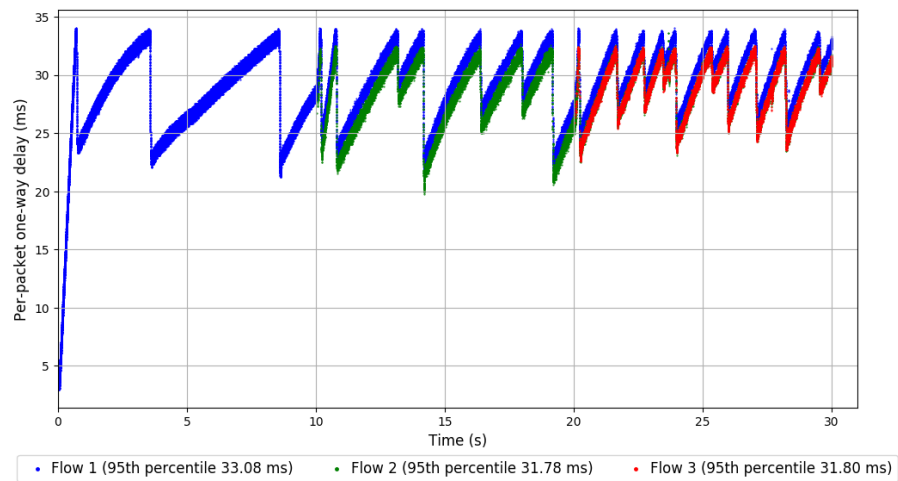
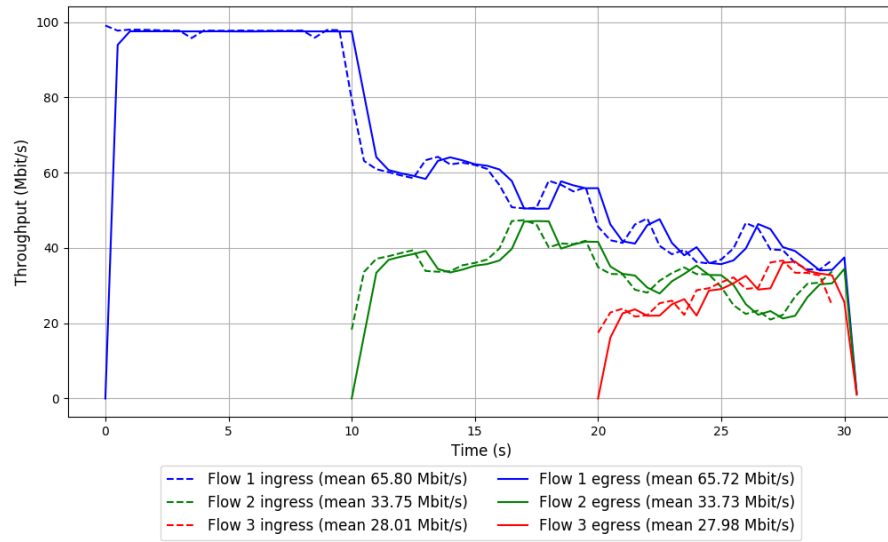


Run 1: Statistics of TCP Cubic

Start at: 2019-02-11 17:40:18  
End at: 2019-02-11 17:40:48  
Local clock offset: -1.347 ms  
Remote clock offset: -0.404 ms

# Below is generated by plot.py at 2019-02-11 19:19:40  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 97.47 Mbit/s  
95th percentile per-packet one-way delay: 32.978 ms  
Loss rate: 0.04%  
-- Flow 1:  
Average throughput: 65.72 Mbit/s  
95th percentile per-packet one-way delay: 33.080 ms  
Loss rate: 0.03%  
-- Flow 2:  
Average throughput: 33.73 Mbit/s  
95th percentile per-packet one-way delay: 31.776 ms  
Loss rate: 0.05%  
-- Flow 3:  
Average throughput: 27.98 Mbit/s  
95th percentile per-packet one-way delay: 31.801 ms  
Loss rate: 0.07%

# Run 1: Report of TCP Cubic — Data Link

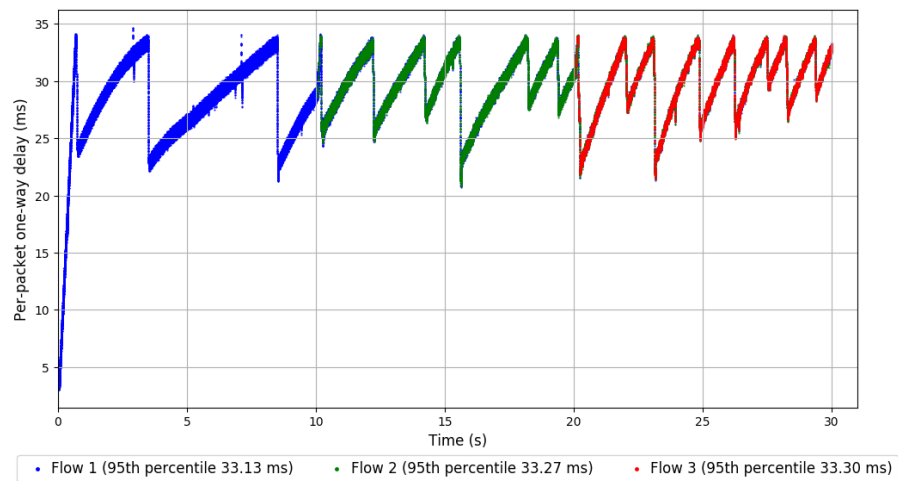
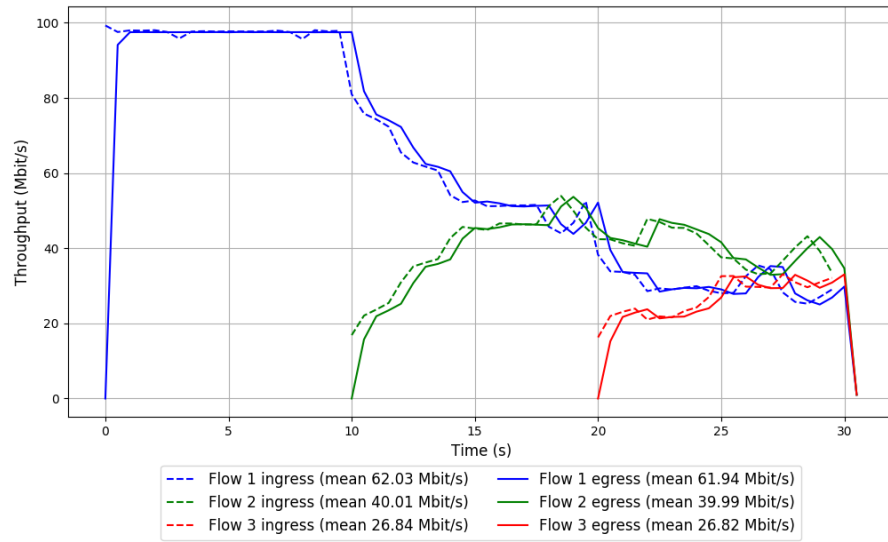


Run 2: Statistics of TCP Cubic

Start at: 2019-02-11 18:04:14  
End at: 2019-02-11 18:04:44  
Local clock offset: -1.532 ms  
Remote clock offset: -0.116 ms

# Below is generated by plot.py at 2019-02-11 19:19:49  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 97.48 Mbit/s  
95th percentile per-packet one-way delay: 33.230 ms  
Loss rate: 0.04%  
-- Flow 1:  
Average throughput: 61.94 Mbit/s  
95th percentile per-packet one-way delay: 33.127 ms  
Loss rate: 0.05%  
-- Flow 2:  
Average throughput: 39.99 Mbit/s  
95th percentile per-packet one-way delay: 33.267 ms  
Loss rate: 0.02%  
-- Flow 3:  
Average throughput: 26.82 Mbit/s  
95th percentile per-packet one-way delay: 33.295 ms  
Loss rate: 0.02%

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





Run 3: Statistics of TCP Cubic

Start at: 2019-02-11 18:28:10

End at: 2019-02-11 18:28:40

Local clock offset: -2.996 ms

Remote clock offset: 0.128 ms

# Below is generated by plot.py at 2019-02-11 19:19:49

# Datalink statistics

-- Total of 3 flows:

Average throughput: 97.47 Mbit/s

95th percentile per-packet one-way delay: 32.492 ms

Loss rate: 0.04%

-- Flow 1:

Average throughput: 63.79 Mbit/s

95th percentile per-packet one-way delay: 32.551 ms

Loss rate: 0.04%

-- Flow 2:

Average throughput: 35.08 Mbit/s

95th percentile per-packet one-way delay: 32.655 ms

Loss rate: 0.04%

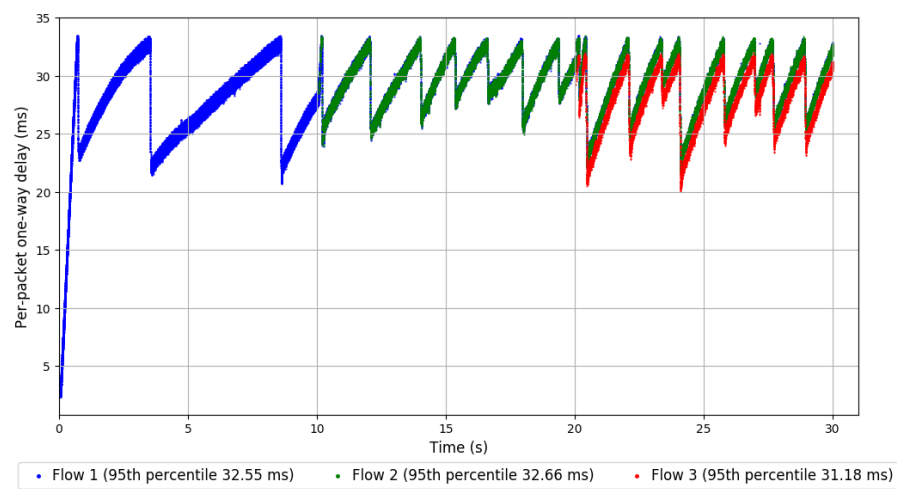
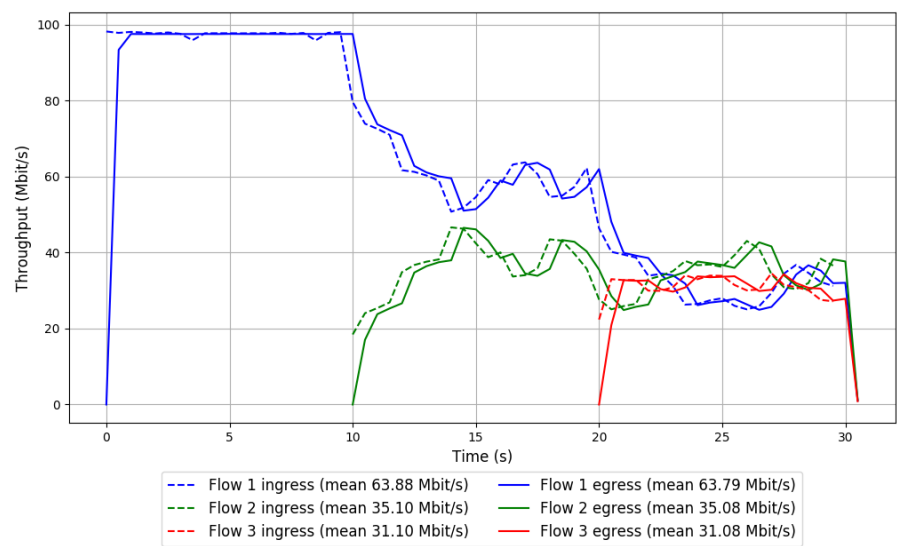
-- Flow 3:

Average throughput: 31.08 Mbit/s

95th percentile per-packet one-way delay: 31.180 ms

Loss rate: 0.03%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2019-02-11 18:52:04

End at: 2019-02-11 18:52:34

Local clock offset: -2.03 ms

Remote clock offset: 0.206 ms

# Below is generated by plot.py at 2019-02-11 19:20:30

# Datalink statistics

-- Total of 3 flows:

Average throughput: 97.47 Mbit/s

95th percentile per-packet one-way delay: 32.510 ms

Loss rate: 0.04%

-- Flow 1:

Average throughput: 61.23 Mbit/s

95th percentile per-packet one-way delay: 31.812 ms

Loss rate: 0.03%

-- Flow 2:

Average throughput: 37.41 Mbit/s

95th percentile per-packet one-way delay: 33.453 ms

Loss rate: 0.05%

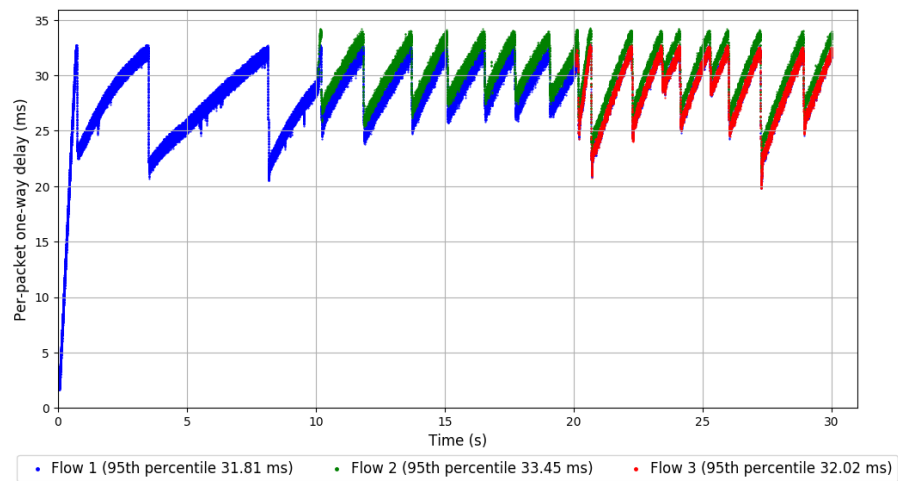
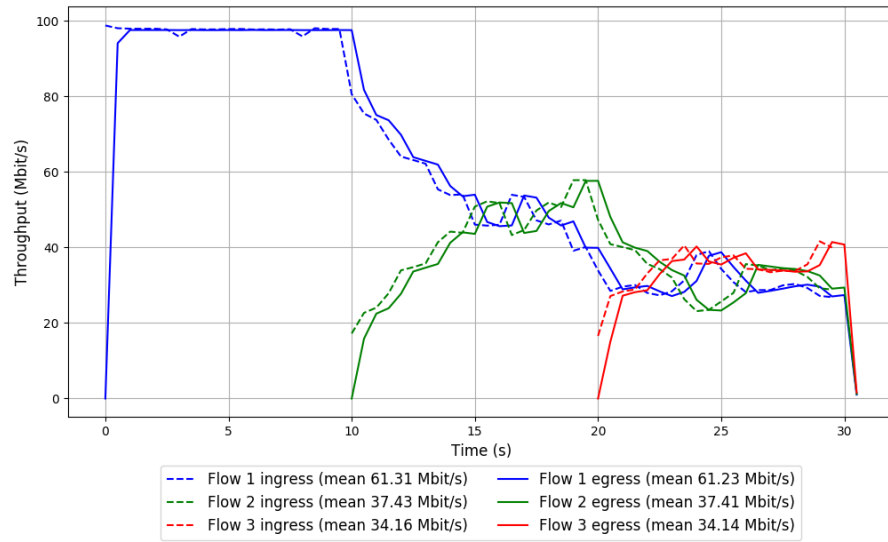
-- Flow 3:

Average throughput: 34.14 Mbit/s

95th percentile per-packet one-way delay: 32.022 ms

Loss rate: 0.03%

# Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2019-02-11 19:16:02

End at: 2019-02-11 19:16:32

Local clock offset: -2.021 ms

Remote clock offset: 0.134 ms

# Below is generated by plot.py at 2019-02-11 19:20:30

# Datalink statistics

-- Total of 3 flows:

Average throughput: 97.44 Mbit/s

95th percentile per-packet one-way delay: 33.155 ms

Loss rate: 0.05%

-- Flow 1:

Average throughput: 62.56 Mbit/s

95th percentile per-packet one-way delay: 33.167 ms

Loss rate: 0.04%

-- Flow 2:

Average throughput: 39.41 Mbit/s

95th percentile per-packet one-way delay: 33.311 ms

Loss rate: 0.06%

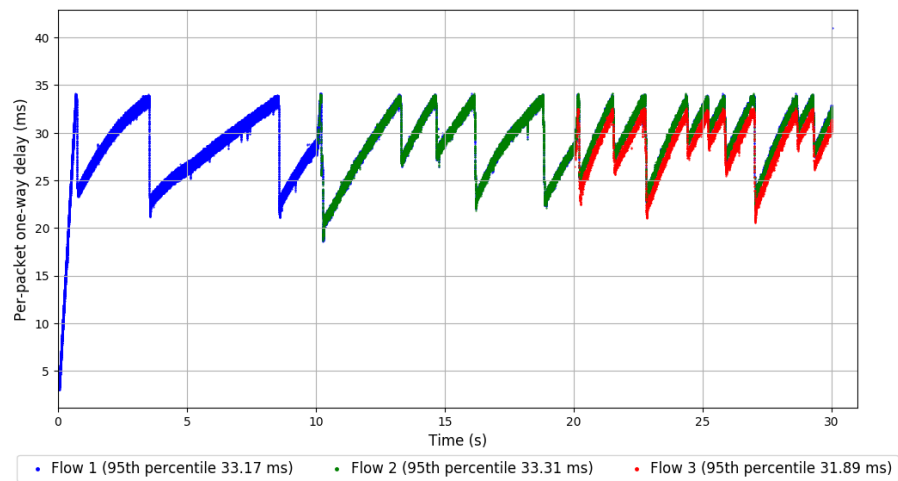
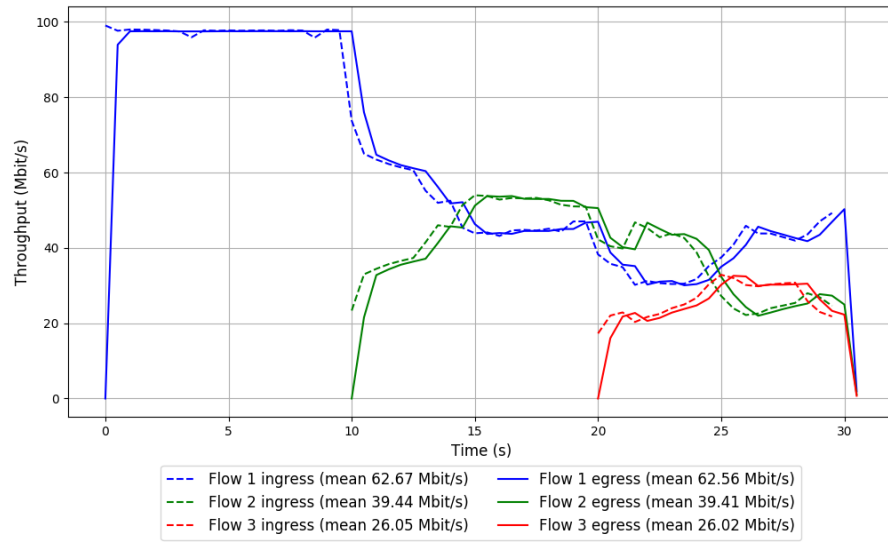
-- Flow 3:

Average throughput: 26.02 Mbit/s

95th percentile per-packet one-way delay: 31.895 ms

Loss rate: 0.06%

# Run 5: Report of TCP Cubic — Data Link

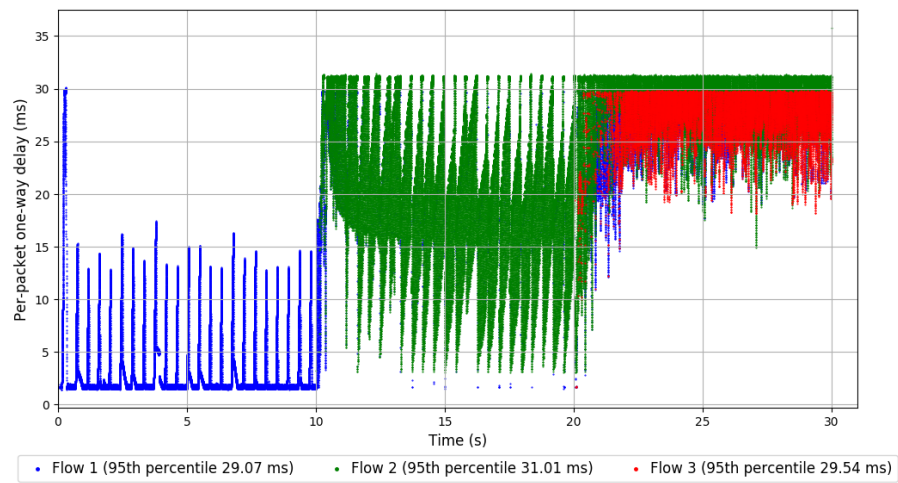
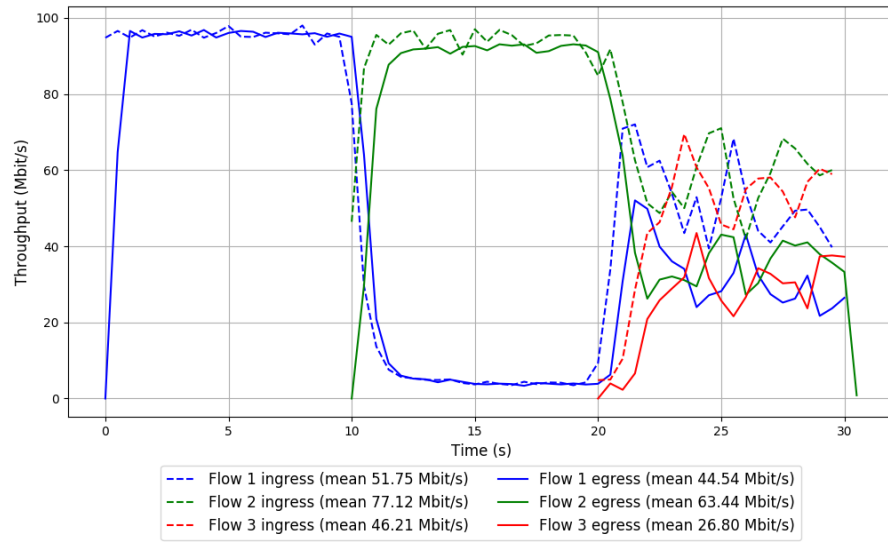


Run 1: Statistics of FillP

Start at: 2019-02-11 17:30:01  
End at: 2019-02-11 17:30:31  
Local clock offset: -0.886 ms  
Remote clock offset: -0.387 ms

# Below is generated by plot.py at 2019-02-11 19:20:55  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.65 Mbit/s  
95th percentile per-packet one-way delay: 30.807 ms  
Loss rate: 19.13%  
-- Flow 1:  
Average throughput: 44.54 Mbit/s  
95th percentile per-packet one-way delay: 29.066 ms  
Loss rate: 13.88%  
-- Flow 2:  
Average throughput: 63.44 Mbit/s  
95th percentile per-packet one-way delay: 31.006 ms  
Loss rate: 17.61%  
-- Flow 3:  
Average throughput: 26.80 Mbit/s  
95th percentile per-packet one-way delay: 29.540 ms  
Loss rate: 41.99%

# Run 1: Report of FillP — Data Link



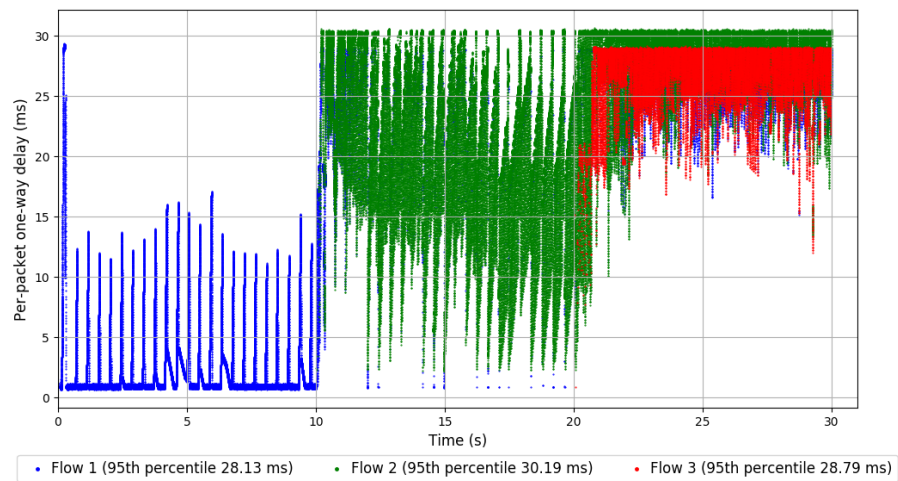
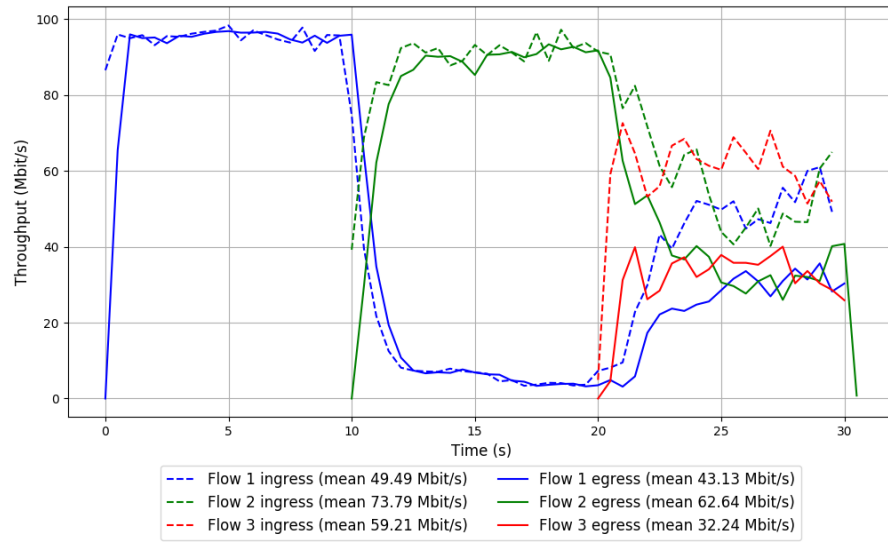


Run 2: Statistics of FillP

Start at: 2019-02-11 17:53:57  
End at: 2019-02-11 17:54:27  
Local clock offset: -0.873 ms  
Remote clock offset: -0.196 ms

# Below is generated by plot.py at 2019-02-11 19:20:55  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.53 Mbit/s  
95th percentile per-packet one-way delay: 29.782 ms  
Loss rate: 19.13%  
-- Flow 1:  
Average throughput: 43.13 Mbit/s  
95th percentile per-packet one-way delay: 28.134 ms  
Loss rate: 12.78%  
-- Flow 2:  
Average throughput: 62.64 Mbit/s  
95th percentile per-packet one-way delay: 30.194 ms  
Loss rate: 14.99%  
-- Flow 3:  
Average throughput: 32.24 Mbit/s  
95th percentile per-packet one-way delay: 28.792 ms  
Loss rate: 45.52%

## Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2019-02-11 18:17:52

End at: 2019-02-11 18:18:22

Local clock offset: -3.41 ms

Remote clock offset: 0.04 ms

# Below is generated by plot.py at 2019-02-11 19:20:56

# Datalink statistics

-- Total of 3 flows:

Average throughput: 95.81 Mbit/s

95th percentile per-packet one-way delay: 30.134 ms

Loss rate: 21.05%

-- Flow 1:

Average throughput: 42.84 Mbit/s

95th percentile per-packet one-way delay: 28.982 ms

Loss rate: 14.26%

-- Flow 2:

Average throughput: 58.38 Mbit/s

95th percentile per-packet one-way delay: 29.529 ms

Loss rate: 18.91%

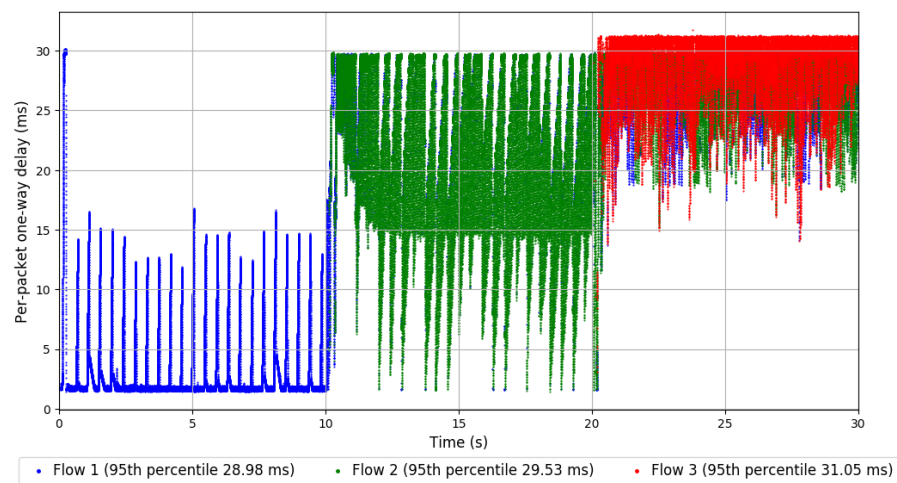
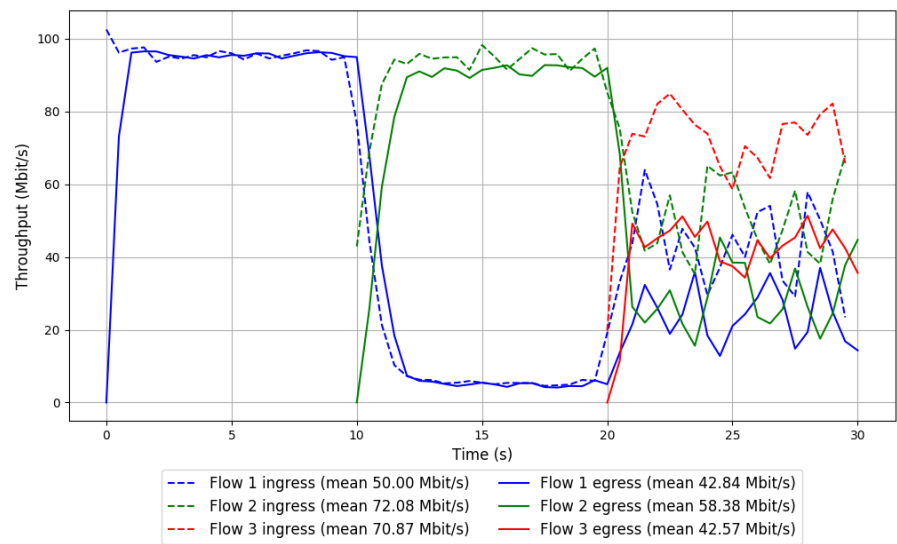
-- Flow 3:

Average throughput: 42.57 Mbit/s

95th percentile per-packet one-way delay: 31.047 ms

Loss rate: 39.92%

Run 3: Report of FillP — Data Link



Run 4: Statistics of FillP

Start at: 2019-02-11 18:41:48

End at: 2019-02-11 18:42:18

Local clock offset: -1.947 ms

Remote clock offset: 0.152 ms

# Below is generated by plot.py at 2019-02-11 19:21:06

# Datalink statistics

-- Total of 3 flows:

Average throughput: 95.58 Mbit/s

95th percentile per-packet one-way delay: 30.158 ms

Loss rate: 20.60%

-- Flow 1:

Average throughput: 49.52 Mbit/s

95th percentile per-packet one-way delay: 29.597 ms

Loss rate: 11.98%

-- Flow 2:

Average throughput: 50.61 Mbit/s

95th percentile per-packet one-way delay: 30.179 ms

Loss rate: 20.13%

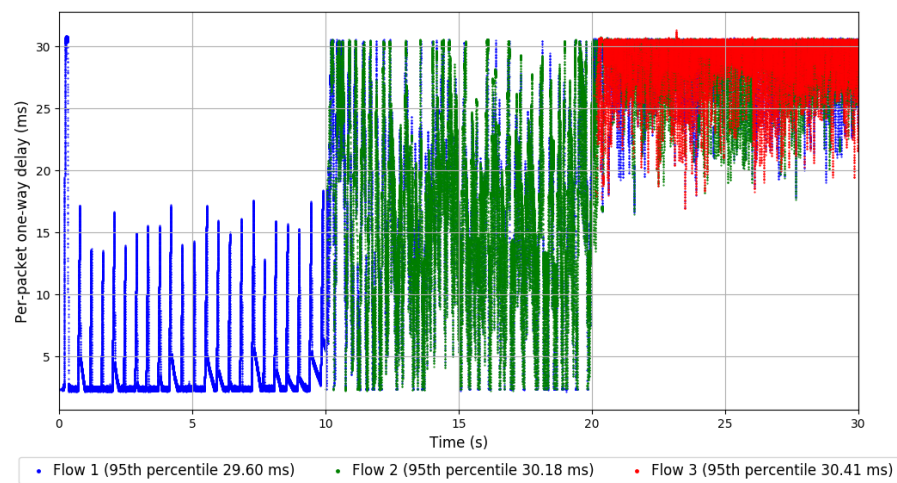
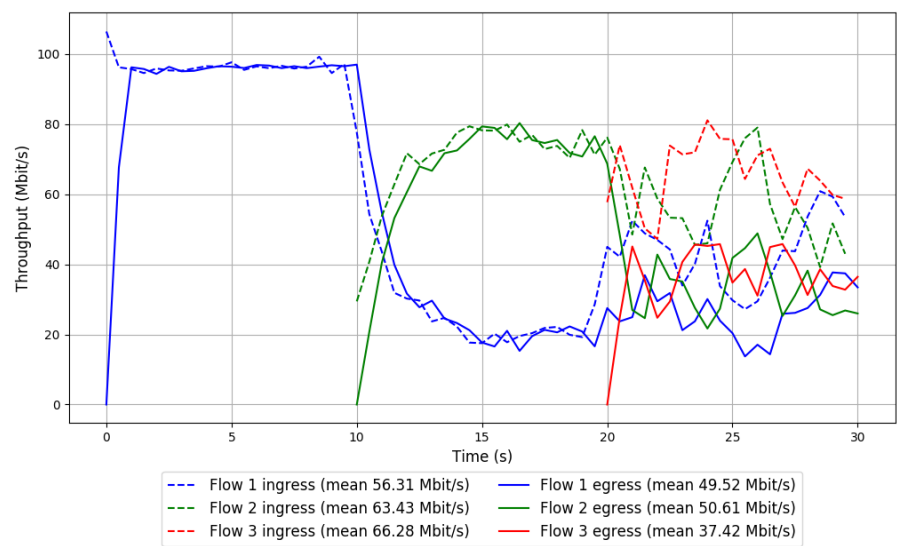
-- Flow 3:

Average throughput: 37.42 Mbit/s

95th percentile per-packet one-way delay: 30.406 ms

Loss rate: 43.53%

Run 4: Report of FillP — Data Link



Run 5: Statistics of FillP

Start at: 2019-02-11 19:05:44

End at: 2019-02-11 19:06:14

Local clock offset: -1.729 ms

Remote clock offset: 0.161 ms

# Below is generated by plot.py at 2019-02-11 19:21:15

# Datalink statistics

-- Total of 3 flows:

Average throughput: 95.59 Mbit/s

95th percentile per-packet one-way delay: 30.846 ms

Loss rate: 20.66%

-- Flow 1:

Average throughput: 41.96 Mbit/s

95th percentile per-packet one-way delay: 28.687 ms

Loss rate: 11.22%

-- Flow 2:

Average throughput: 64.23 Mbit/s

95th percentile per-packet one-way delay: 30.933 ms

Loss rate: 19.19%

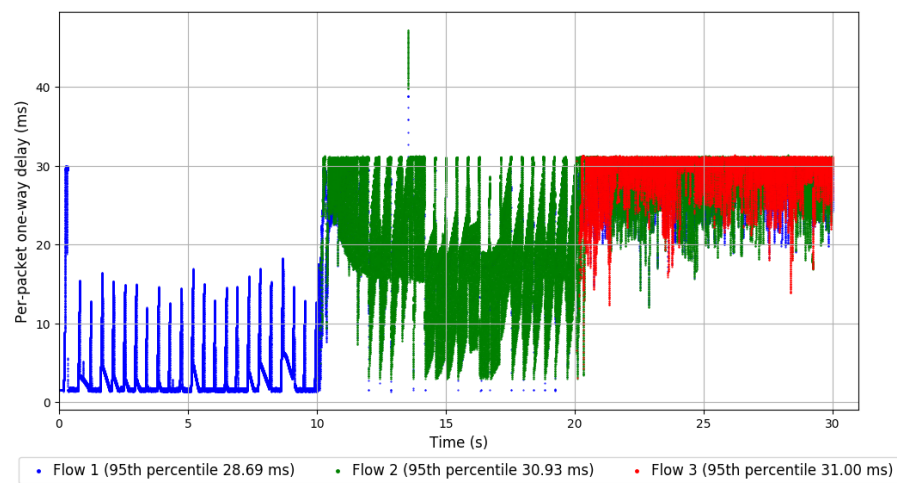
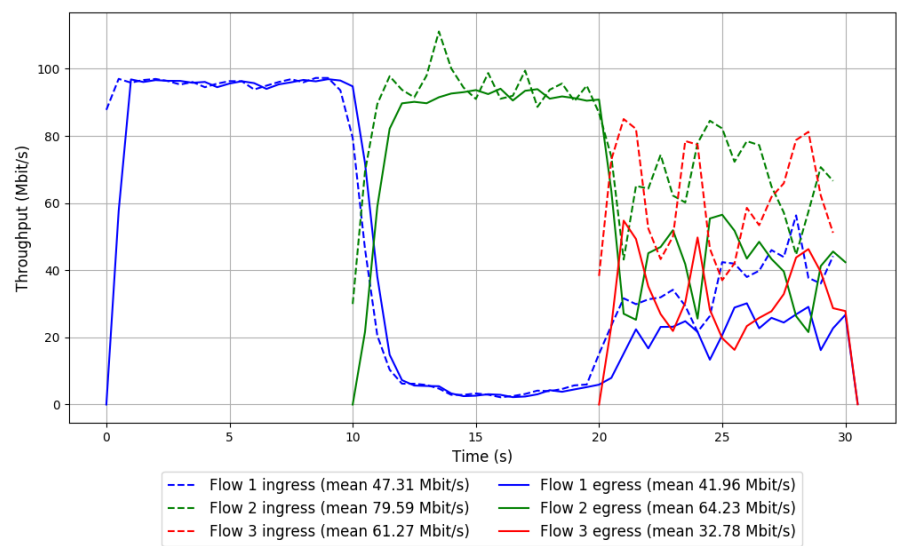
-- Flow 3:

Average throughput: 32.78 Mbit/s

95th percentile per-packet one-way delay: 31.001 ms

Loss rate: 46.50%

Run 5: Report of FillP — Data Link



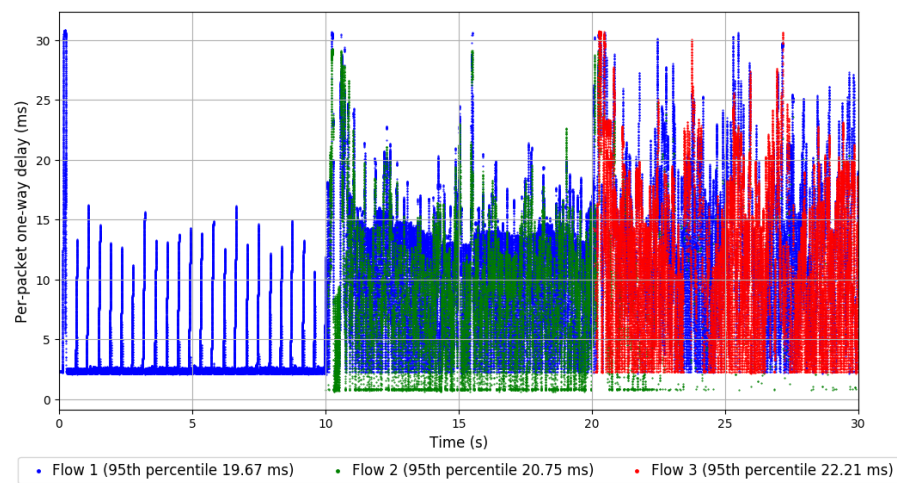
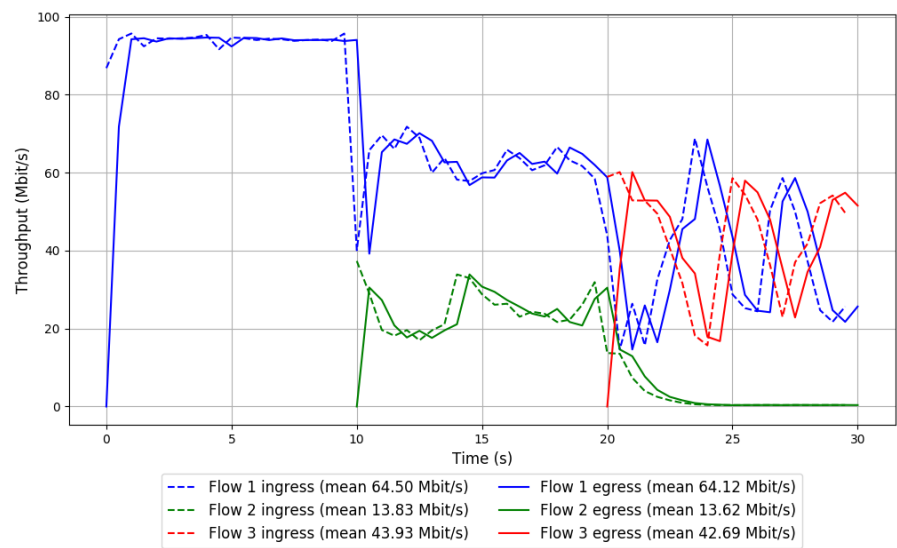


Run 1: Statistics of FillP-Sheep

Start at: 2019-02-11 17:17:32  
End at: 2019-02-11 17:18:02  
Local clock offset: -0.562 ms  
Remote clock offset: -0.474 ms

# Below is generated by plot.py at 2019-02-11 19:21:15  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 87.31 Mbit/s  
95th percentile per-packet one-way delay: 20.383 ms  
Loss rate: 1.03%  
-- Flow 1:  
Average throughput: 64.12 Mbit/s  
95th percentile per-packet one-way delay: 19.667 ms  
Loss rate: 0.56%  
-- Flow 2:  
Average throughput: 13.62 Mbit/s  
95th percentile per-packet one-way delay: 20.751 ms  
Loss rate: 1.47%  
-- Flow 3:  
Average throughput: 42.69 Mbit/s  
95th percentile per-packet one-way delay: 22.208 ms  
Loss rate: 2.81%

Run 1: Report of FillP-Sheep — Data Link

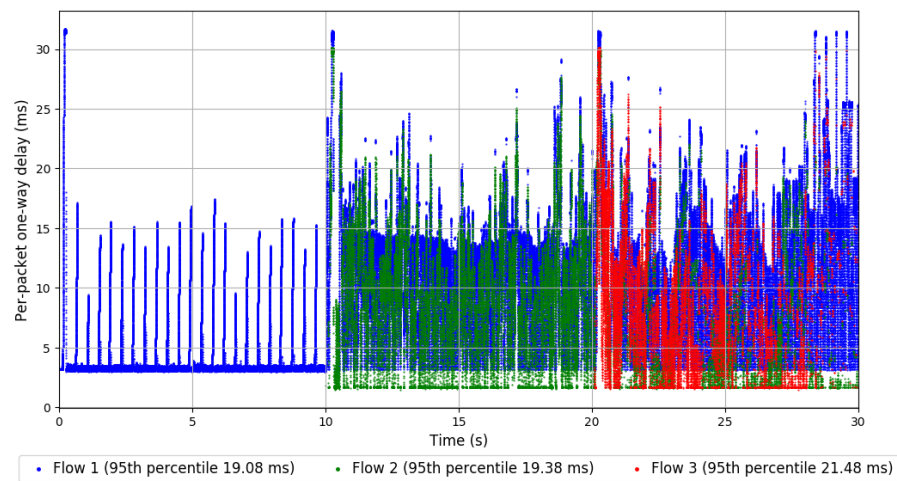
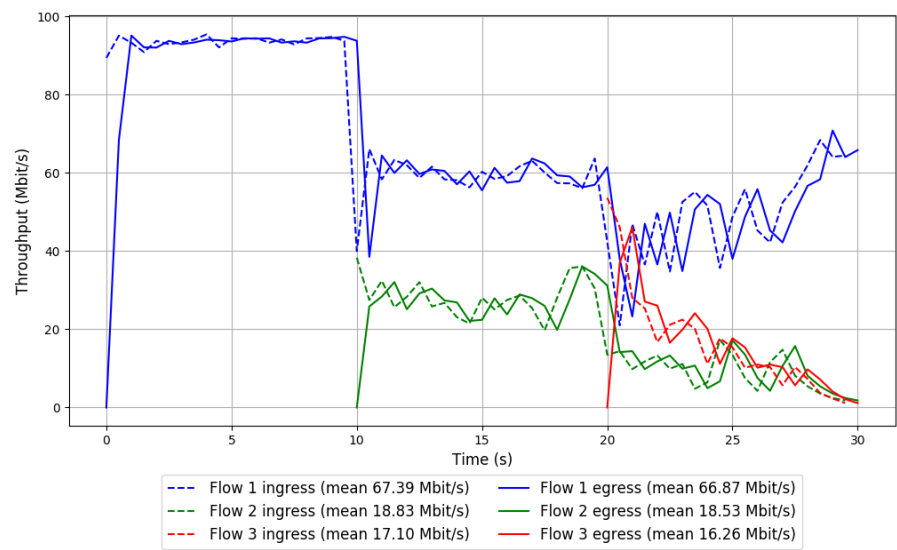


Run 2: Statistics of FillP-Sheep

Start at: 2019-02-11 17:41:28  
End at: 2019-02-11 17:41:58  
Local clock offset: -1.479 ms  
Remote clock offset: -0.256 ms

# Below is generated by plot.py at 2019-02-11 19:21:41  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 84.58 Mbit/s  
95th percentile per-packet one-way delay: 19.296 ms  
Loss rate: 1.13%  
-- Flow 1:  
Average throughput: 66.87 Mbit/s  
95th percentile per-packet one-way delay: 19.084 ms  
Loss rate: 0.71%  
-- Flow 2:  
Average throughput: 18.53 Mbit/s  
95th percentile per-packet one-way delay: 19.377 ms  
Loss rate: 1.61%  
-- Flow 3:  
Average throughput: 16.26 Mbit/s  
95th percentile per-packet one-way delay: 21.484 ms  
Loss rate: 5.05%

Run 2: Report of FillP-Sheep — Data Link



Run 3: Statistics of FillP-Sheep

Start at: 2019-02-11 18:05:23

End at: 2019-02-11 18:05:53

Local clock offset: -1.731 ms

Remote clock offset: -0.12 ms

# Below is generated by plot.py at 2019-02-11 19:21:50

# Datalink statistics

-- Total of 3 flows:

Average throughput: 91.13 Mbit/s

95th percentile per-packet one-way delay: 25.296 ms

Loss rate: 1.20%

-- Flow 1:

Average throughput: 56.97 Mbit/s

95th percentile per-packet one-way delay: 23.381 ms

Loss rate: 0.78%

-- Flow 2:

Average throughput: 40.08 Mbit/s

95th percentile per-packet one-way delay: 27.051 ms

Loss rate: 1.04%

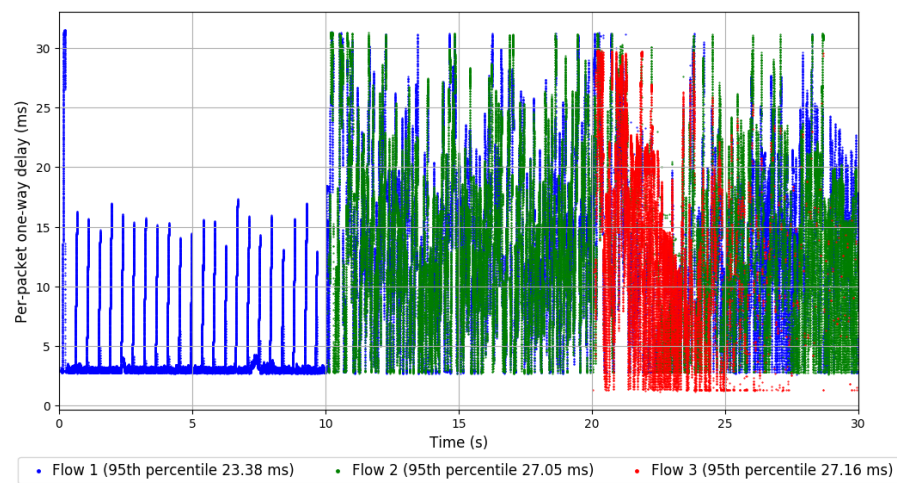
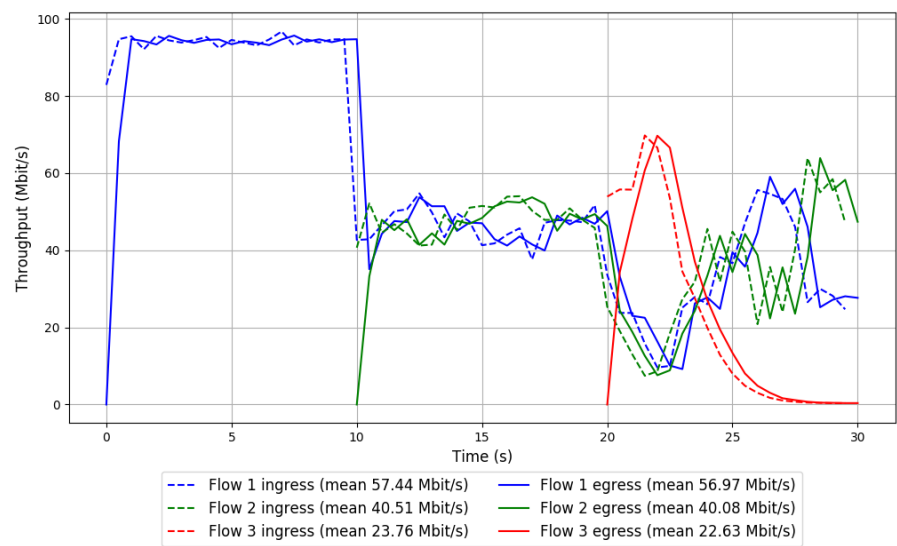
-- Flow 3:

Average throughput: 22.63 Mbit/s

95th percentile per-packet one-way delay: 27.161 ms

Loss rate: 4.82%

Run 3: Report of FillP-Sheep — Data Link



Run 4: Statistics of FillP-Sheep

Start at: 2019-02-11 18:29:19

End at: 2019-02-11 18:29:49

Local clock offset: -3.782 ms

Remote clock offset: 0.065 ms

# Below is generated by plot.py at 2019-02-11 19:22:09

# Datalink statistics

-- Total of 3 flows:

Average throughput: 86.74 Mbit/s

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

Loss rate: 0.86%

-- Flow 1:

Average throughput: 39.35 Mbit/s

95th percentile per-packet one-way delay: 15.059 ms

Loss rate: 0.90%

-- Flow 2:

Average throughput: 50.41 Mbit/s

95th percentile per-packet one-way delay: 20.112 ms

Loss rate: 0.65%

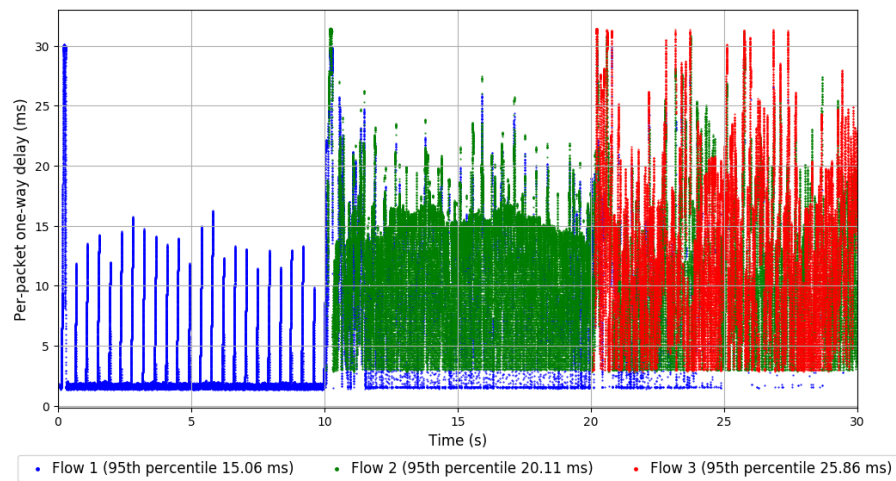
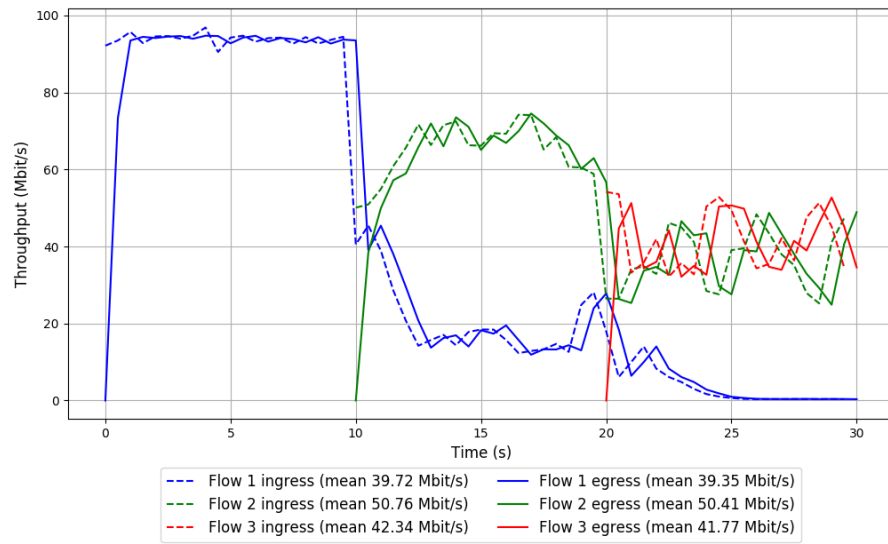
-- Flow 3:

Average throughput: 41.77 Mbit/s

95th percentile per-packet one-way delay: 25.857 ms

Loss rate: 1.22%

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



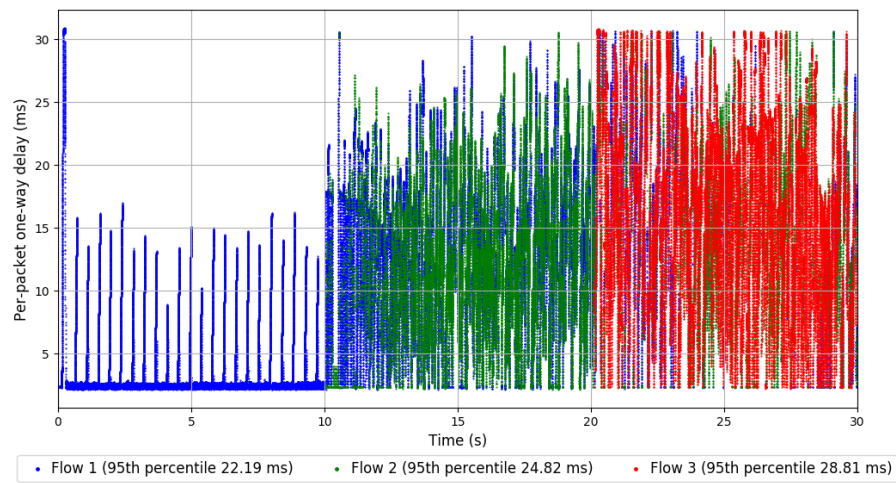
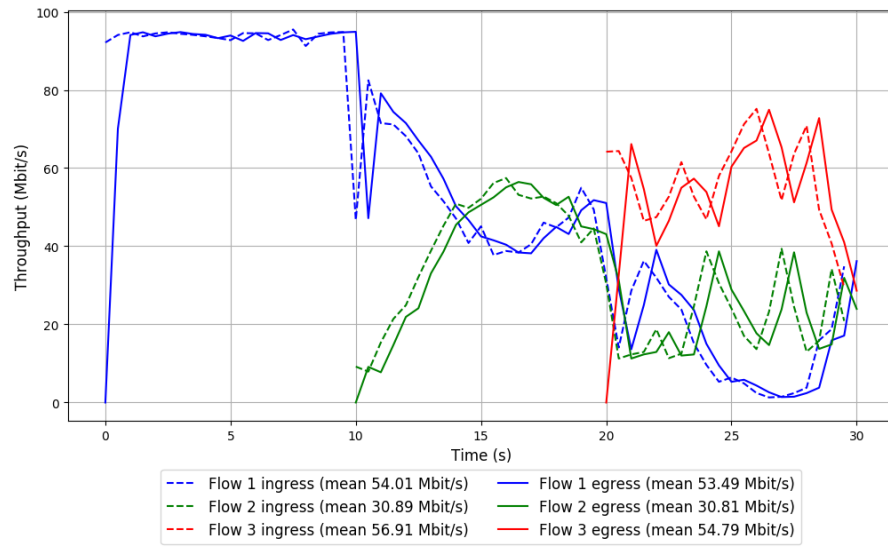


Run 5: Statistics of FillP-Sheep

Start at: 2019-02-11 18:53:14  
End at: 2019-02-11 18:53:44  
Local clock offset: -1.218 ms  
Remote clock offset: 0.136 ms

```
# Below is generated by plot.py at 2019-02-11 19:22:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.16 Mbit/s
95th percentile per-packet one-way delay: 25.234 ms
Loss rate: 1.38%
-- Flow 1:
Average throughput: 53.49 Mbit/s
95th percentile per-packet one-way delay: 22.193 ms
Loss rate: 0.96%
-- Flow 2:
Average throughput: 30.81 Mbit/s
95th percentile per-packet one-way delay: 24.825 ms
Loss rate: 0.25%
-- Flow 3:
Average throughput: 54.79 Mbit/s
95th percentile per-packet one-way delay: 28.813 ms
Loss rate: 3.84%
```

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

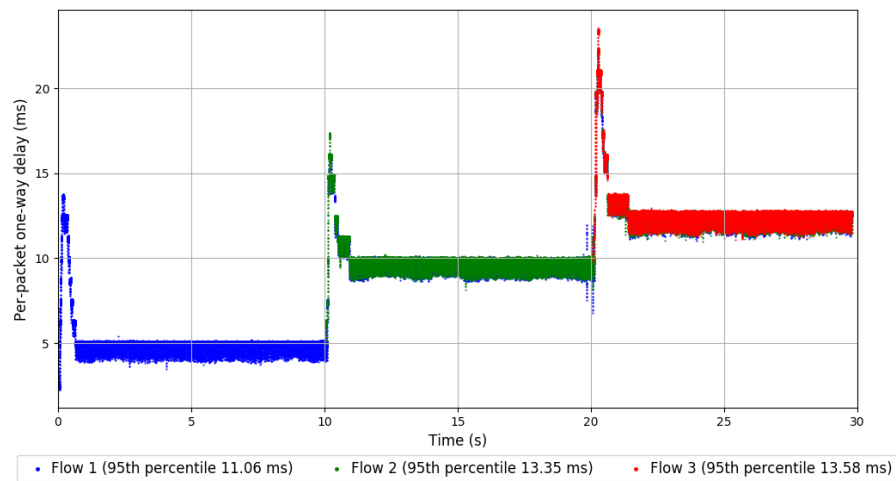
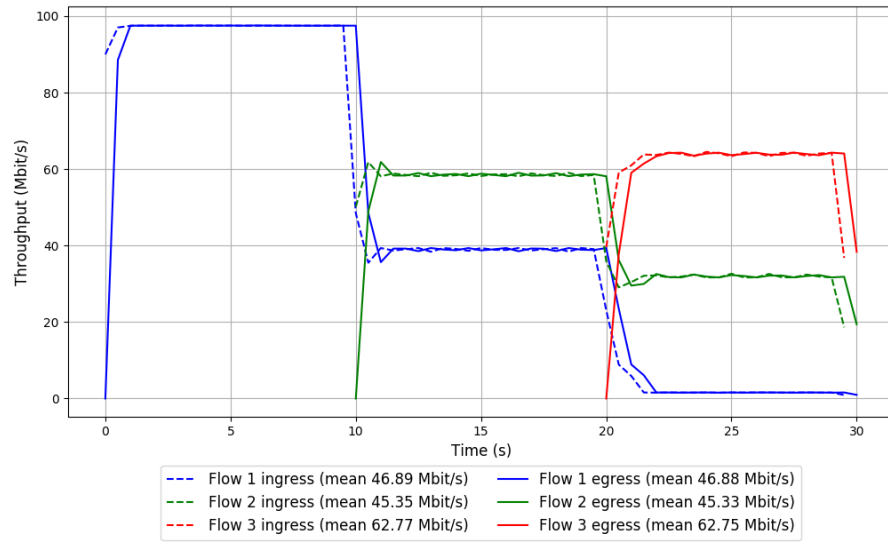


Run 1: Statistics of Indigo

Start at: 2019-02-11 17:37:57  
End at: 2019-02-11 17:38:27  
Local clock offset: -0.405 ms  
Remote clock offset: -0.328 ms

# Below is generated by plot.py at 2019-02-11 19:22:14  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 97.37 Mbit/s  
95th percentile per-packet one-way delay: 12.792 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 46.88 Mbit/s  
95th percentile per-packet one-way delay: 11.060 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 45.33 Mbit/s  
95th percentile per-packet one-way delay: 13.346 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 62.75 Mbit/s  
95th percentile per-packet one-way delay: 13.580 ms  
Loss rate: 0.00%

# Run 1: Report of Indigo — Data Link

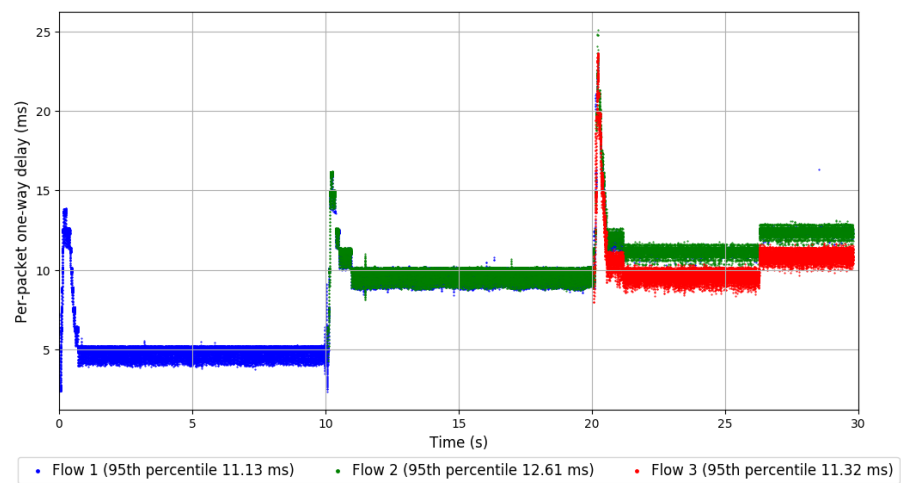
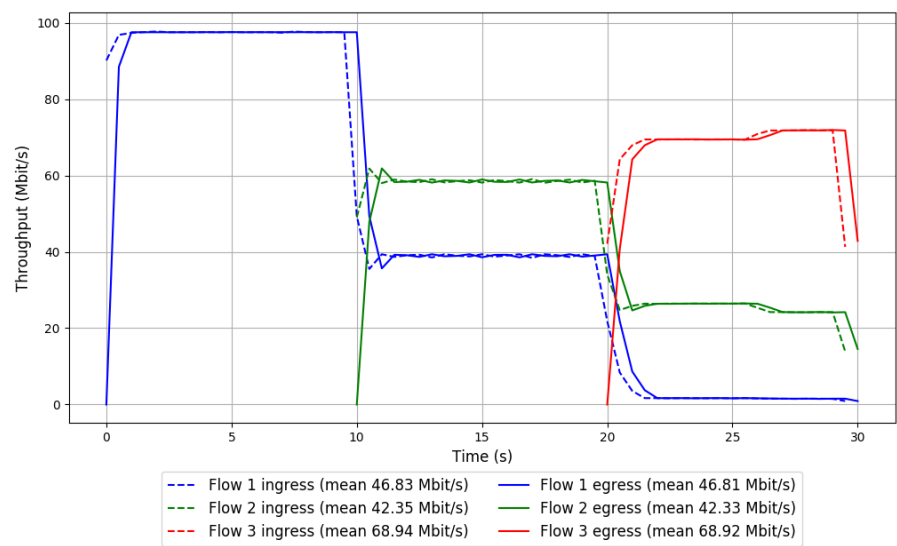


Run 2: Statistics of Indigo

Start at: 2019-02-11 18:01:53  
End at: 2019-02-11 18:02:23  
Local clock offset: -0.754 ms  
Remote clock offset: -0.057 ms

# Below is generated by plot.py at 2019-02-11 19:22:14  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 97.37 Mbit/s  
95th percentile per-packet one-way delay: 12.367 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 46.81 Mbit/s  
95th percentile per-packet one-way delay: 11.129 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 42.33 Mbit/s  
95th percentile per-packet one-way delay: 12.611 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 68.92 Mbit/s  
95th percentile per-packet one-way delay: 11.321 ms  
Loss rate: 0.00%

Run 2: Report of Indigo — Data Link



Run 3: Statistics of Indigo

Start at: 2019-02-11 18:25:48

End at: 2019-02-11 18:26:18

Local clock offset: -3.695 ms

Remote clock offset: 0.083 ms

# Below is generated by plot.py at 2019-02-11 19:22:15

# Datalink statistics

-- Total of 3 flows:

Average throughput: 97.41 Mbit/s

95th percentile per-packet one-way delay: 13.499 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 45.33 Mbit/s

95th percentile per-packet one-way delay: 12.049 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 47.55 Mbit/s

95th percentile per-packet one-way delay: 13.493 ms

Loss rate: 0.00%

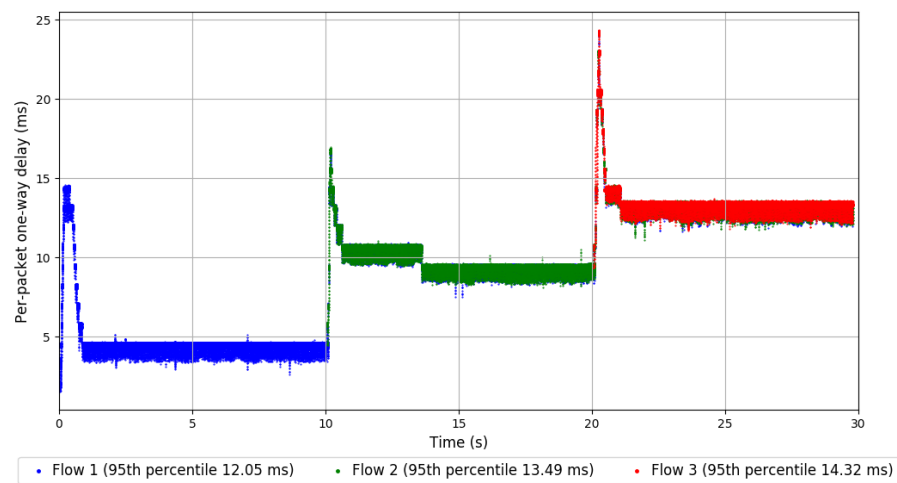
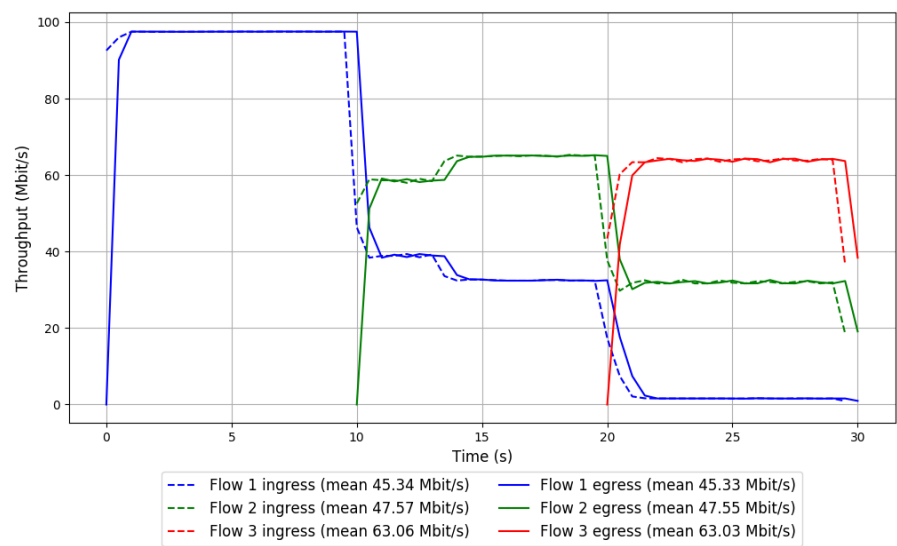
-- Flow 3:

Average throughput: 63.03 Mbit/s

95th percentile per-packet one-way delay: 14.325 ms

Loss rate: 0.00%

Run 3: Report of Indigo — Data Link





Run 4: Statistics of Indigo

Start at: 2019-02-11 18:49:43

End at: 2019-02-11 18:50:13

Local clock offset: -1.382 ms

Remote clock offset: 0.142 ms

# Below is generated by plot.py at 2019-02-11 19:22:25

# Datalink statistics

-- Total of 3 flows:

Average throughput: 97.37 Mbit/s

95th percentile per-packet one-way delay: 12.469 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 46.86 Mbit/s

95th percentile per-packet one-way delay: 11.086 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 45.61 Mbit/s

95th percentile per-packet one-way delay: 12.913 ms

Loss rate: 0.00%

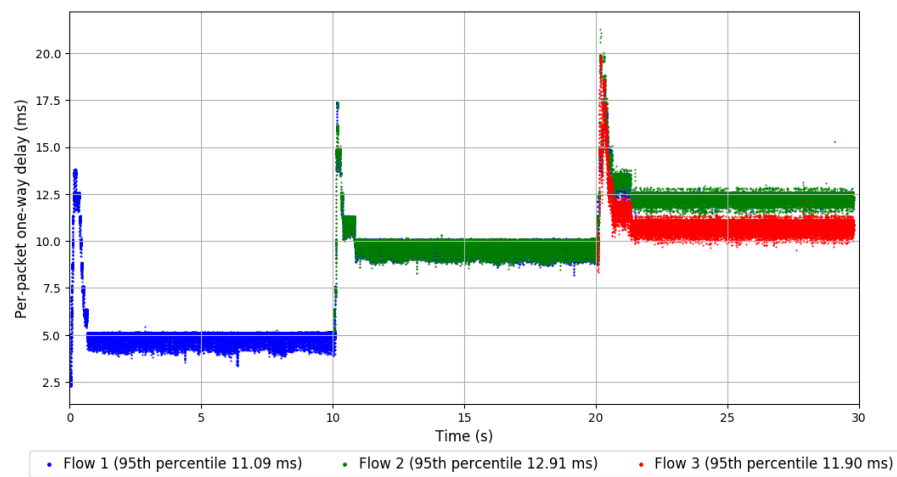
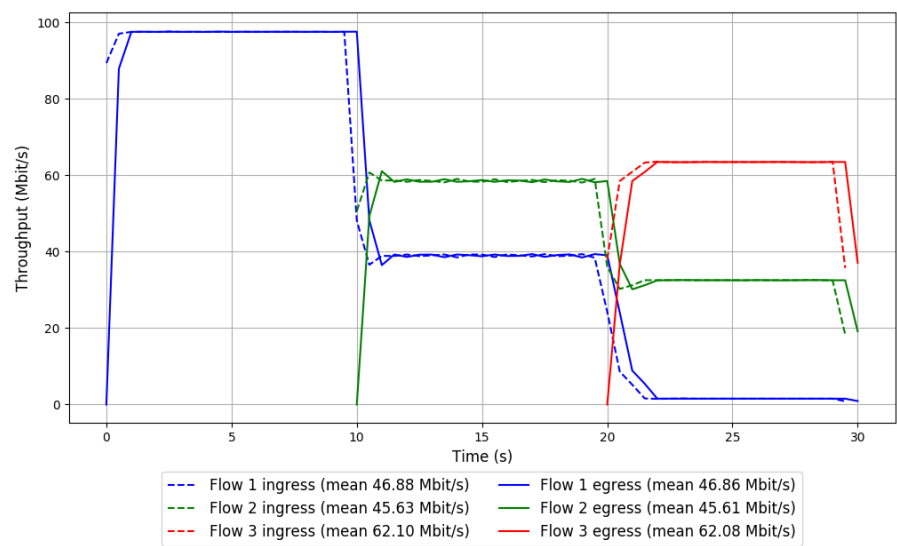
-- Flow 3:

Average throughput: 62.08 Mbit/s

95th percentile per-packet one-way delay: 11.903 ms

Loss rate: 0.00%

Run 4: Report of Indigo — Data Link



Run 5: Statistics of Indigo

Start at: 2019-02-11 19:13:41

End at: 2019-02-11 19:14:11

Local clock offset: -1.231 ms

Remote clock offset: 0.198 ms

# Below is generated by plot.py at 2019-02-11 19:22:52

# Datalink statistics

-- Total of 3 flows:

Average throughput: 97.40 Mbit/s

95th percentile per-packet one-way delay: 13.869 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 47.50 Mbit/s

95th percentile per-packet one-way delay: 11.105 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 40.12 Mbit/s

95th percentile per-packet one-way delay: 13.867 ms

Loss rate: 0.00%

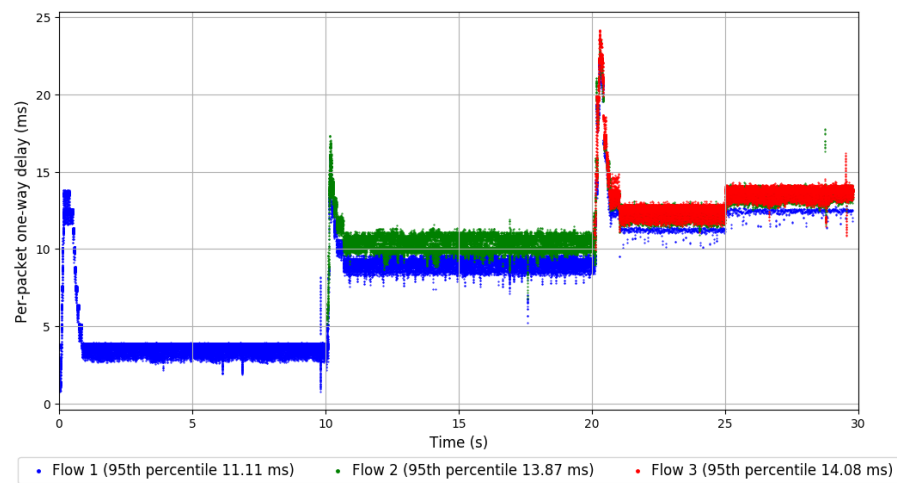
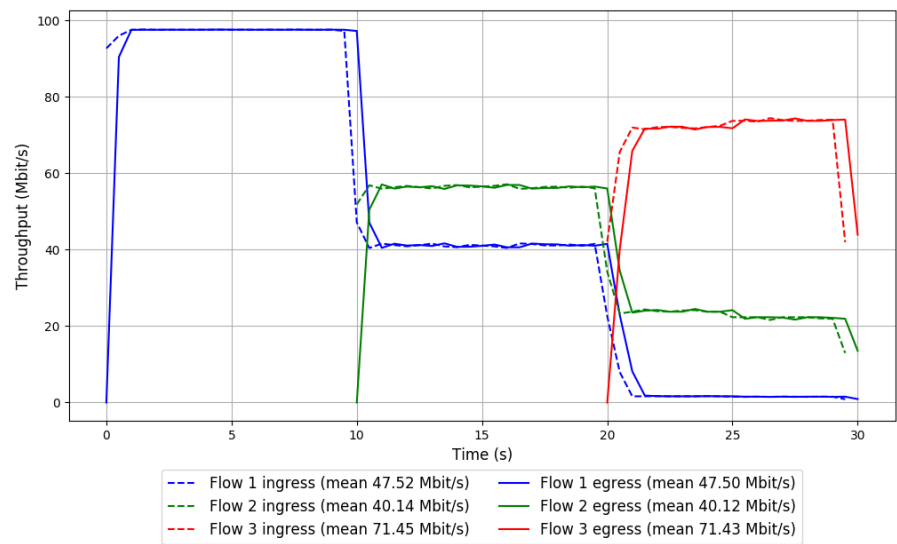
-- Flow 3:

Average throughput: 71.43 Mbit/s

95th percentile per-packet one-way delay: 14.076 ms

Loss rate: 0.00%

Run 5: Report of Indigo — Data Link



Run 1: Statistics of Indigo-MusesC3

Start at: 2019-02-11 17:28:51

End at: 2019-02-11 17:29:21

Local clock offset: -0.937 ms

Remote clock offset: -0.4 ms

# Below is generated by plot.py at 2019-02-11 19:22:58

# Datalink statistics

-- Total of 3 flows:

Average throughput: 93.66 Mbit/s

95th percentile per-packet one-way delay: 7.205 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 41.92 Mbit/s

95th percentile per-packet one-way delay: 6.851 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 70.61 Mbit/s

95th percentile per-packet one-way delay: 6.564 ms

Loss rate: 0.00%

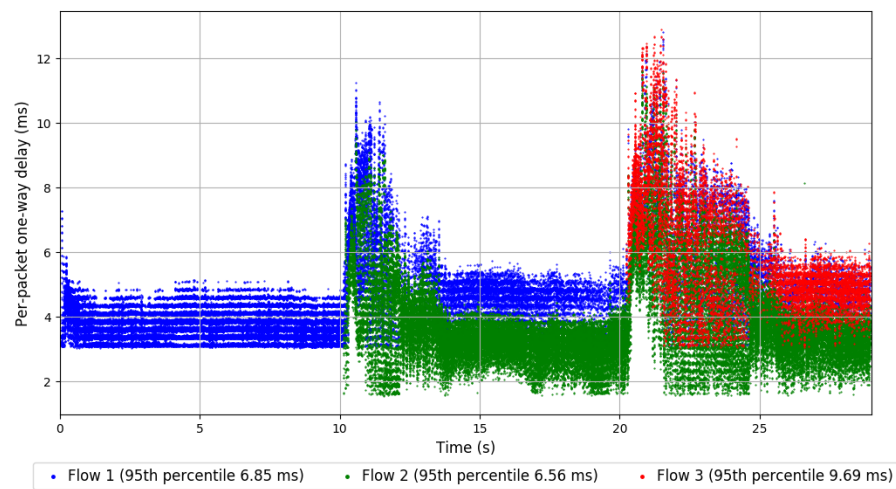
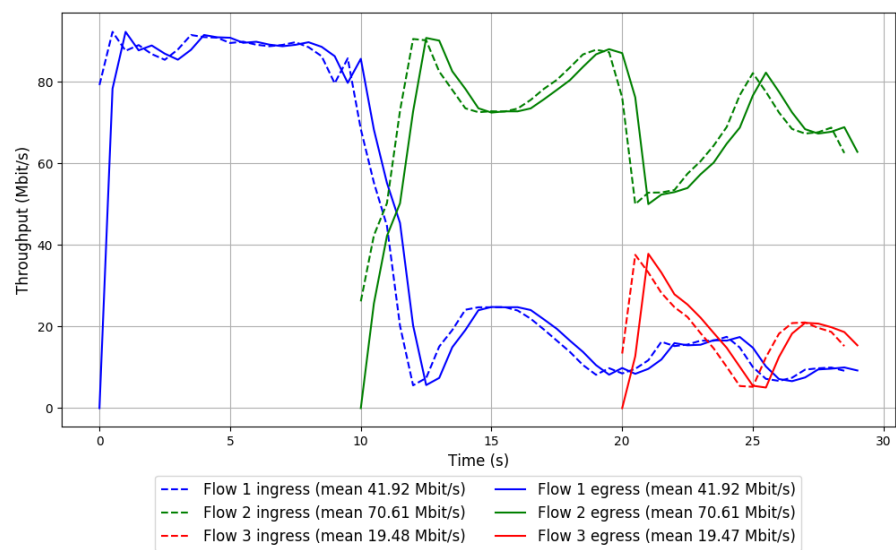
-- Flow 3:

Average throughput: 19.47 Mbit/s

95th percentile per-packet one-way delay: 9.689 ms

Loss rate: 0.00%

Run 1: Report of Indigo-MusesC3 — Data Link

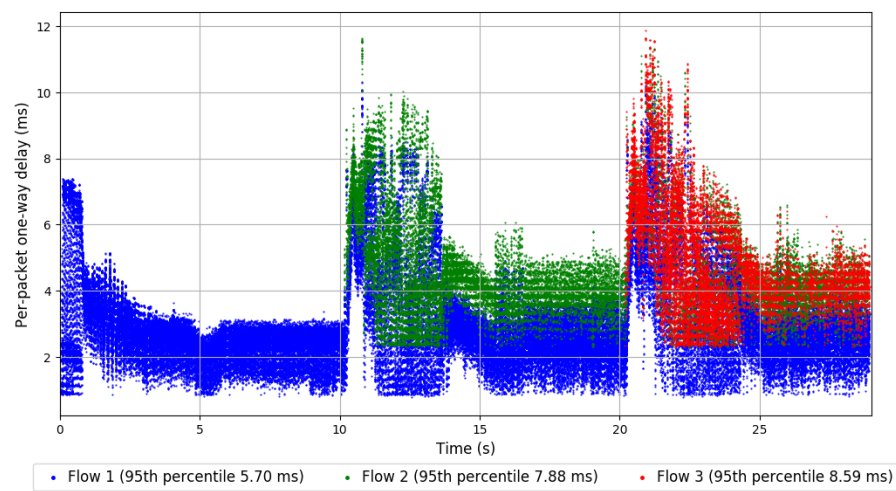
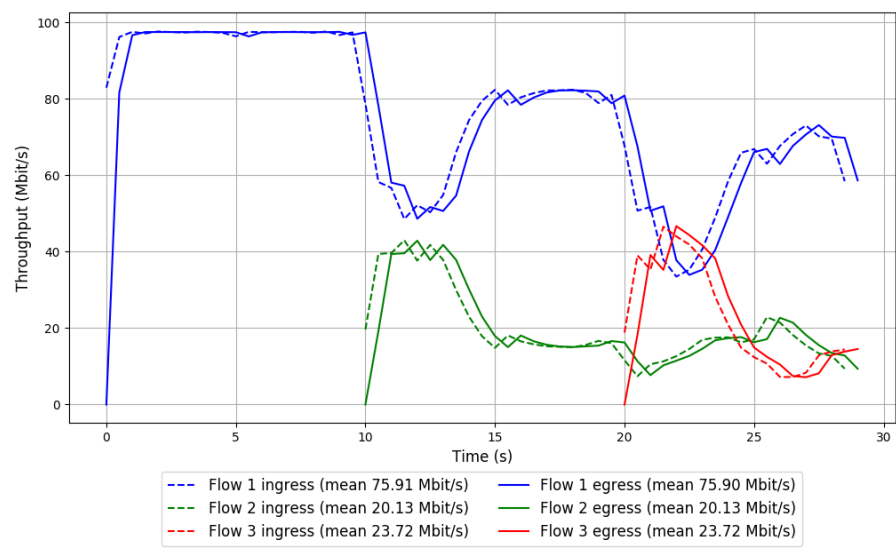


Run 2: Statistics of Indigo-MusesC3

Start at: 2019-02-11 17:52:47  
End at: 2019-02-11 17:53:17  
Local clock offset: -0.889 ms  
Remote clock offset: -0.176 ms

# Below is generated by plot.py at 2019-02-11 19:23:11  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 96.13 Mbit/s  
95th percentile per-packet one-way delay: 6.696 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 75.90 Mbit/s  
95th percentile per-packet one-way delay: 5.700 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 20.13 Mbit/s  
95th percentile per-packet one-way delay: 7.885 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 23.72 Mbit/s  
95th percentile per-packet one-way delay: 8.592 ms  
Loss rate: 0.00%

Run 2: Report of Indigo-MusesC3 — Data Link



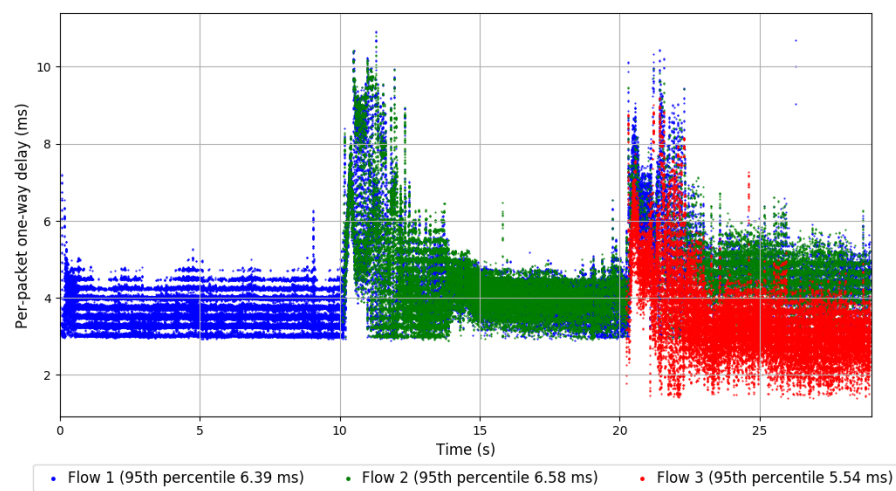
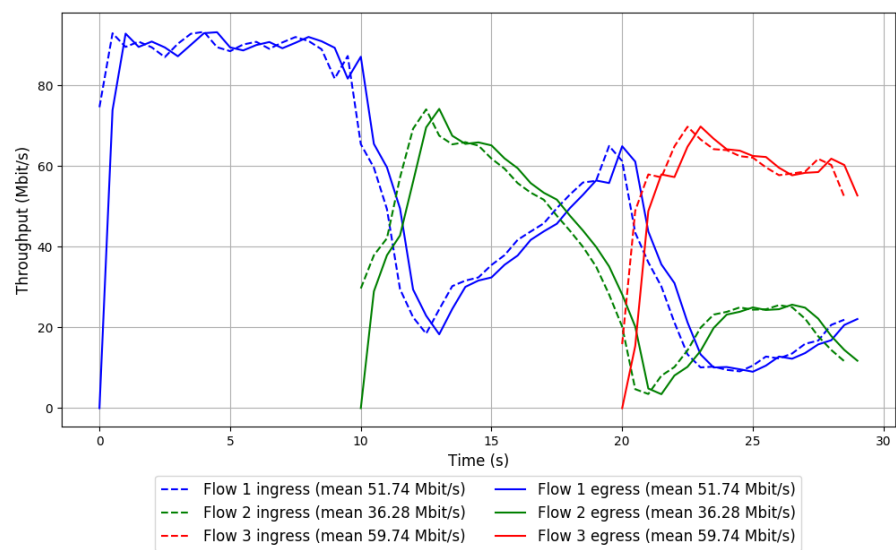


Run 3: Statistics of Indigo-MusesC3

Start at: 2019-02-11 18:16:43  
End at: 2019-02-11 18:17:13  
Local clock offset: -3.264 ms  
Remote clock offset: -0.033 ms

# Below is generated by plot.py at 2019-02-11 19:23:15  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 93.38 Mbit/s  
95th percentile per-packet one-way delay: 6.252 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 51.74 Mbit/s  
95th percentile per-packet one-way delay: 6.388 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 36.28 Mbit/s  
95th percentile per-packet one-way delay: 6.584 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 59.74 Mbit/s  
95th percentile per-packet one-way delay: 5.540 ms  
Loss rate: 0.00%

Run 3: Report of Indigo-MusesC3 — Data Link



Run 4: Statistics of Indigo-MusesC3

Start at: 2019-02-11 18:40:39

End at: 2019-02-11 18:41:09

Local clock offset: -2.833 ms

Remote clock offset: 0.079 ms

# Below is generated by plot.py at 2019-02-11 19:23:19

# Datalink statistics

-- Total of 3 flows:

Average throughput: 97.07 Mbit/s

95th percentile per-packet one-way delay: 16.884 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 76.40 Mbit/s

95th percentile per-packet one-way delay: 16.779 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 16.23 Mbit/s

95th percentile per-packet one-way delay: 16.452 ms

Loss rate: 0.00%

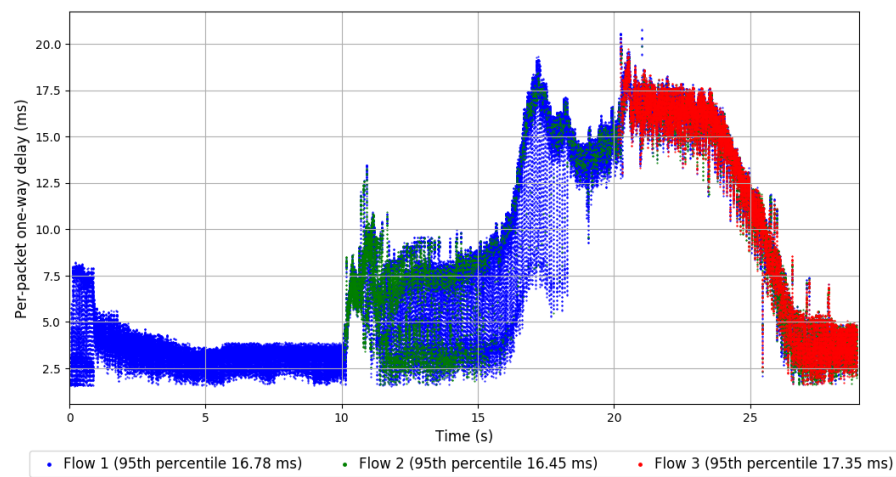
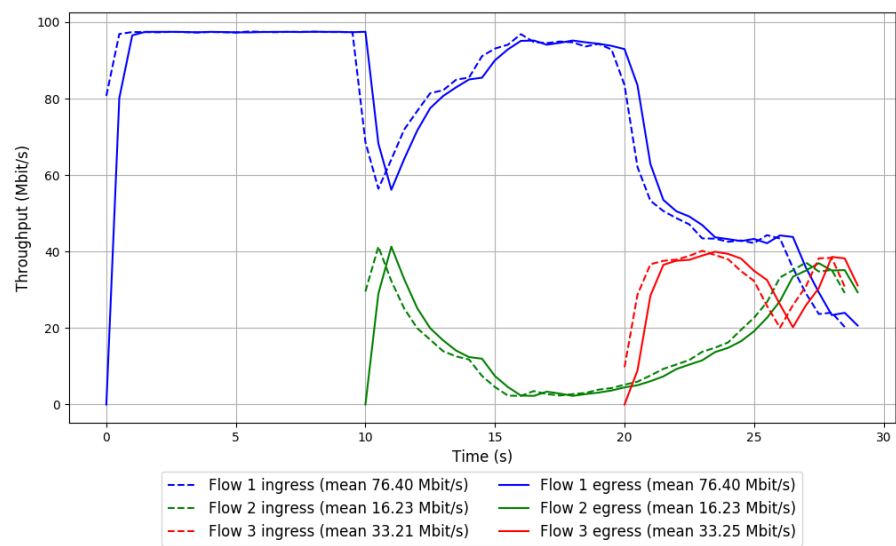
-- Flow 3:

Average throughput: 33.25 Mbit/s

95th percentile per-packet one-way delay: 17.346 ms

Loss rate: 0.00%

Run 4: Report of Indigo-MusesC3 — Data Link

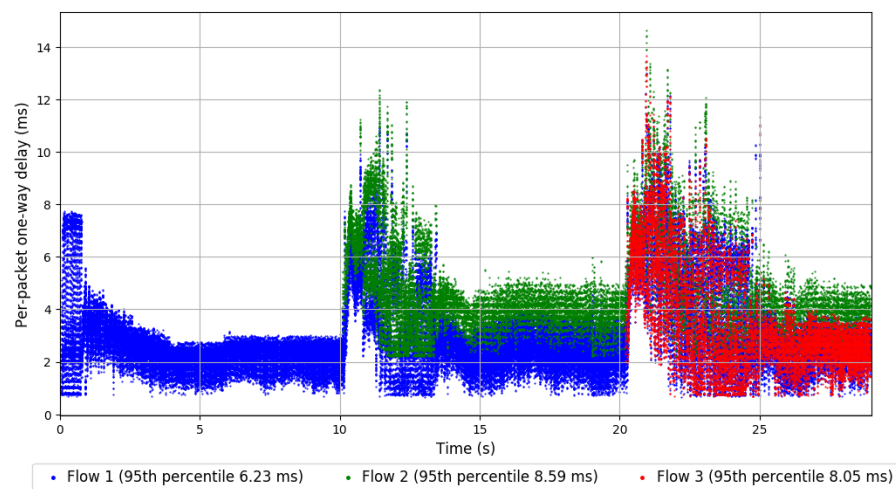
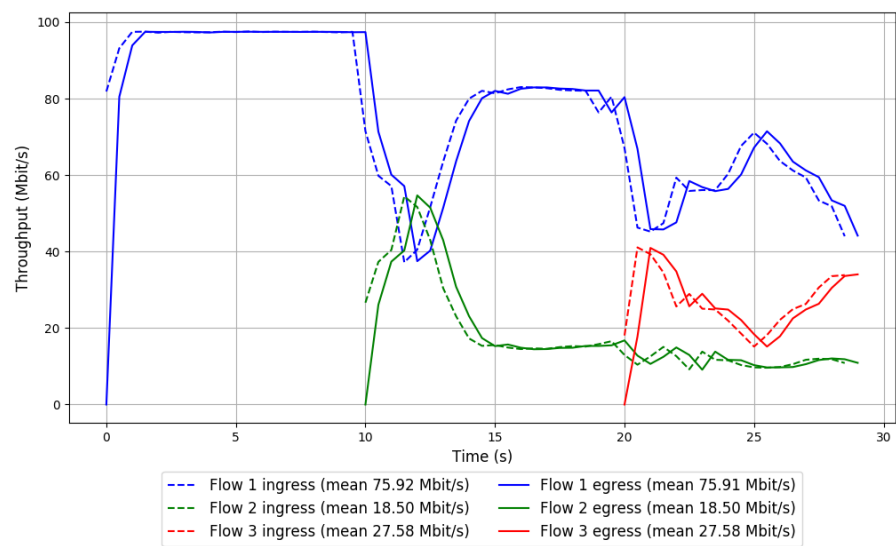


Run 5: Statistics of Indigo-MusesC3

Start at: 2019-02-11 19:04:34  
End at: 2019-02-11 19:05:04  
Local clock offset: -0.895 ms  
Remote clock offset: 0.123 ms

# Below is generated by plot.py at 2019-02-11 19:23:23  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 96.30 Mbit/s  
95th percentile per-packet one-way delay: 6.998 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 75.91 Mbit/s  
95th percentile per-packet one-way delay: 6.231 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 18.50 Mbit/s  
95th percentile per-packet one-way delay: 8.592 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 27.58 Mbit/s  
95th percentile per-packet one-way delay: 8.048 ms  
Loss rate: 0.00%

Run 5: Report of Indigo-MusesC3 — Data Link

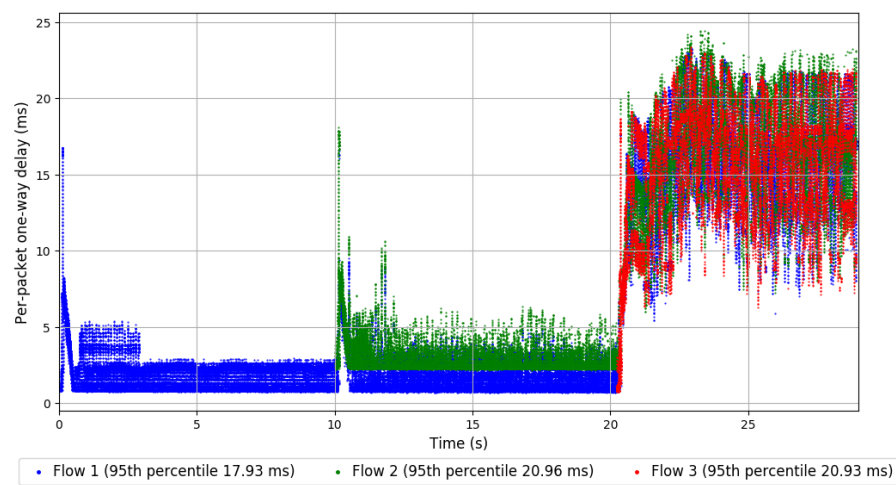
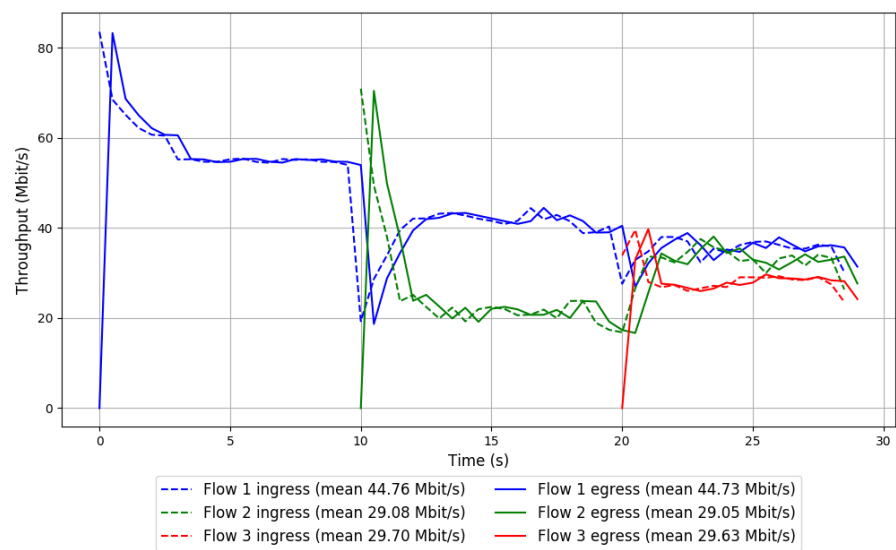


Run 1: Statistics of Indigo-MusesC5

Start at: 2019-02-11 17:34:33  
End at: 2019-02-11 17:35:03  
Local clock offset: 0.002 ms  
Remote clock offset: -0.331 ms

# Below is generated by plot.py at 2019-02-11 19:23:23  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 72.62 Mbit/s  
95th percentile per-packet one-way delay: 19.860 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 44.73 Mbit/s  
95th percentile per-packet one-way delay: 17.930 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 29.05 Mbit/s  
95th percentile per-packet one-way delay: 20.957 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 29.63 Mbit/s  
95th percentile per-packet one-way delay: 20.932 ms  
Loss rate: 0.00%

Run 1: Report of Indigo-MusesC5 — Data Link



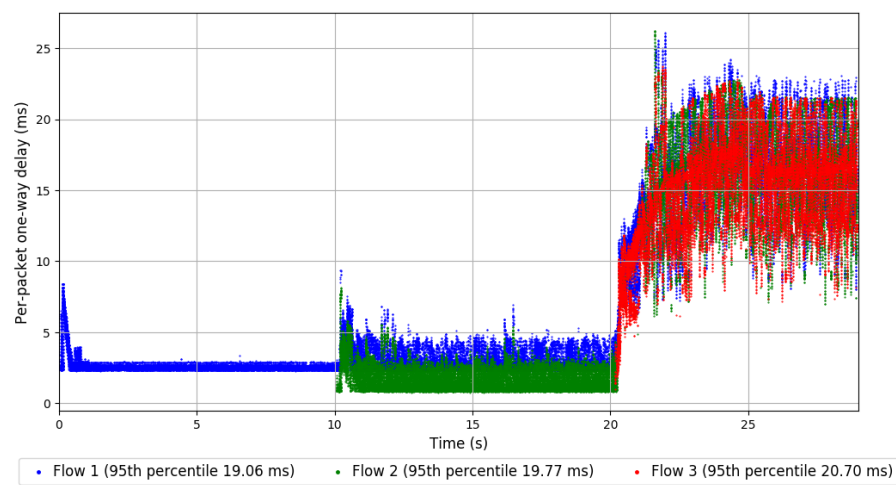
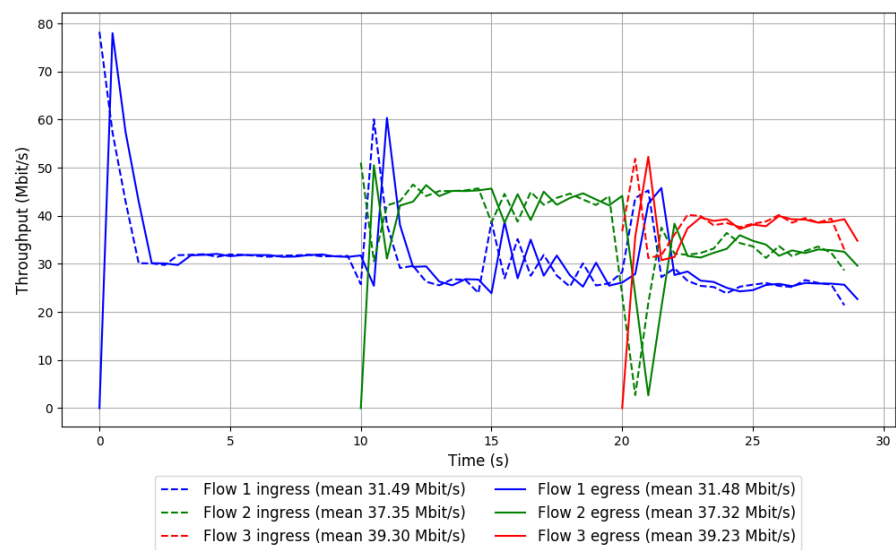


Run 2: Statistics of Indigo-MusesC5

Start at: 2019-02-11 17:58:29  
End at: 2019-02-11 17:58:59  
Local clock offset: -0.826 ms  
Remote clock offset: -0.161 ms

# Below is generated by plot.py at 2019-02-11 19:23:23  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 67.69 Mbit/s  
95th percentile per-packet one-way delay: 19.803 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 31.48 Mbit/s  
95th percentile per-packet one-way delay: 19.061 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 37.32 Mbit/s  
95th percentile per-packet one-way delay: 19.768 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 39.23 Mbit/s  
95th percentile per-packet one-way delay: 20.696 ms  
Loss rate: 0.00%

Run 2: Report of Indigo-MusesC5 — Data Link



Run 3: Statistics of Indigo-MusesC5

Start at: 2019-02-11 18:22:25

End at: 2019-02-11 18:22:55

Local clock offset: -2.816 ms

Remote clock offset: 0.065 ms

# Below is generated by plot.py at 2019-02-11 19:23:35

# Datalink statistics

-- Total of 3 flows:

Average throughput: 57.78 Mbit/s

95th percentile per-packet one-way delay: 4.510 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 32.09 Mbit/s

95th percentile per-packet one-way delay: 4.462 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 23.89 Mbit/s

95th percentile per-packet one-way delay: 5.008 ms

Loss rate: 0.00%

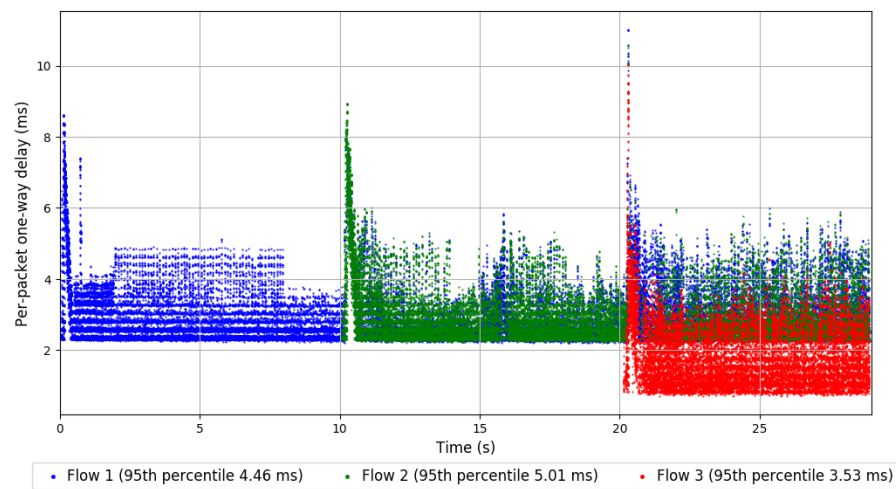
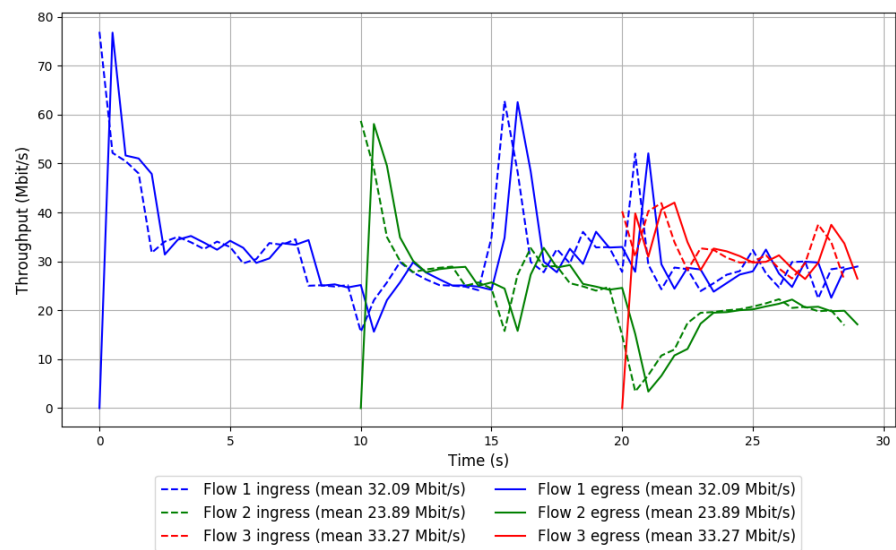
-- Flow 3:

Average throughput: 33.27 Mbit/s

95th percentile per-packet one-way delay: 3.528 ms

Loss rate: 0.00%

Run 3: Report of Indigo-MusesC5 — Data Link



Run 4: Statistics of Indigo-MusesC5

Start at: 2019-02-11 18:46:20

End at: 2019-02-11 18:46:50

Local clock offset: -1.585 ms

Remote clock offset: 0.102 ms

# Below is generated by plot.py at 2019-02-11 19:23:36

# Datalink statistics

-- Total of 3 flows:

Average throughput: 55.11 Mbit/s

95th percentile per-packet one-way delay: 4.717 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 27.49 Mbit/s

95th percentile per-packet one-way delay: 4.563 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 27.66 Mbit/s

95th percentile per-packet one-way delay: 5.128 ms

Loss rate: 0.00%

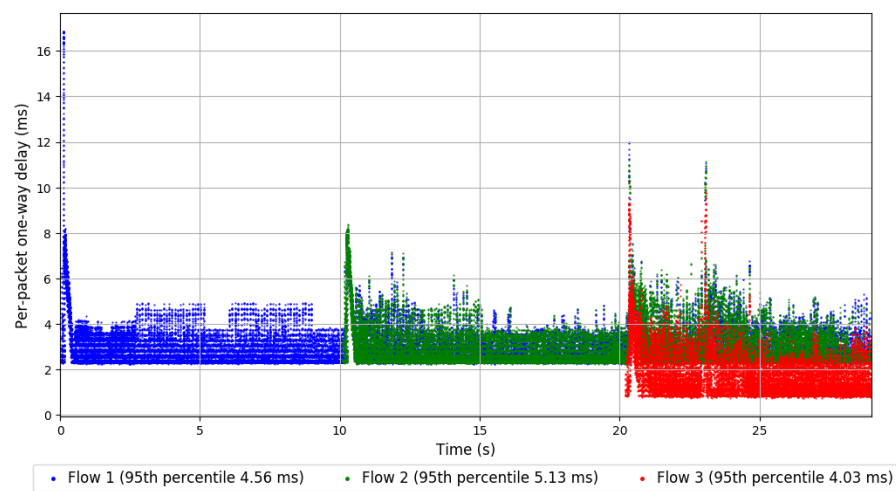
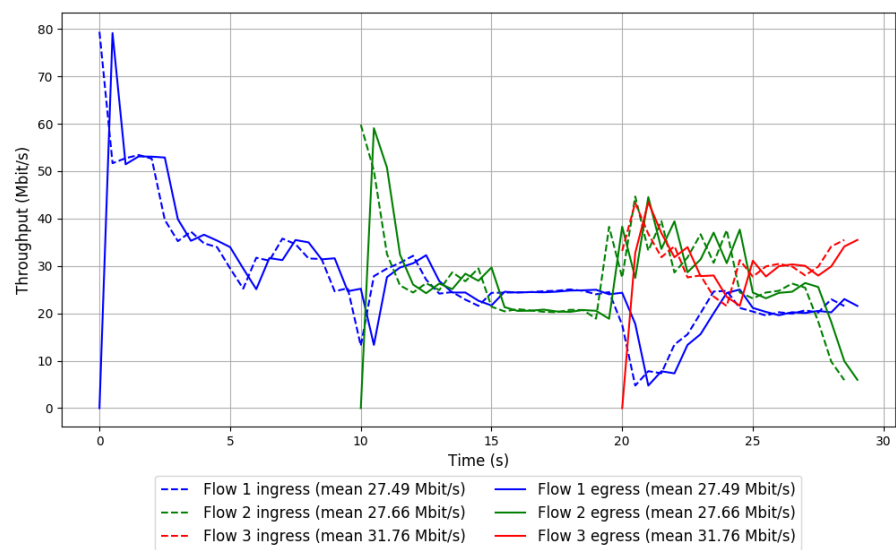
-- Flow 3:

Average throughput: 31.76 Mbit/s

95th percentile per-packet one-way delay: 4.031 ms

Loss rate: 0.00%

Run 4: Report of Indigo-MusesC5 — Data Link



Run 5: Statistics of Indigo-MusesC5

Start at: 2019-02-11 19:10:17

End at: 2019-02-11 19:10:47

Local clock offset: -1.972 ms

Remote clock offset: 0.179 ms

# Below is generated by plot.py at 2019-02-11 19:23:53

# Datalink statistics

-- Total of 3 flows:

Average throughput: 67.12 Mbit/s

95th percentile per-packet one-way delay: 28.638 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 36.36 Mbit/s

95th percentile per-packet one-way delay: 26.666 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 33.75 Mbit/s

95th percentile per-packet one-way delay: 29.437 ms

Loss rate: 0.00%

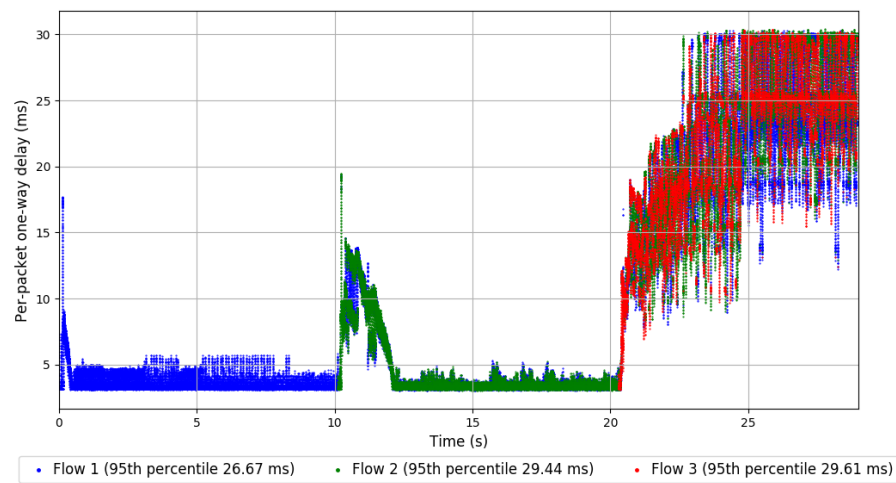
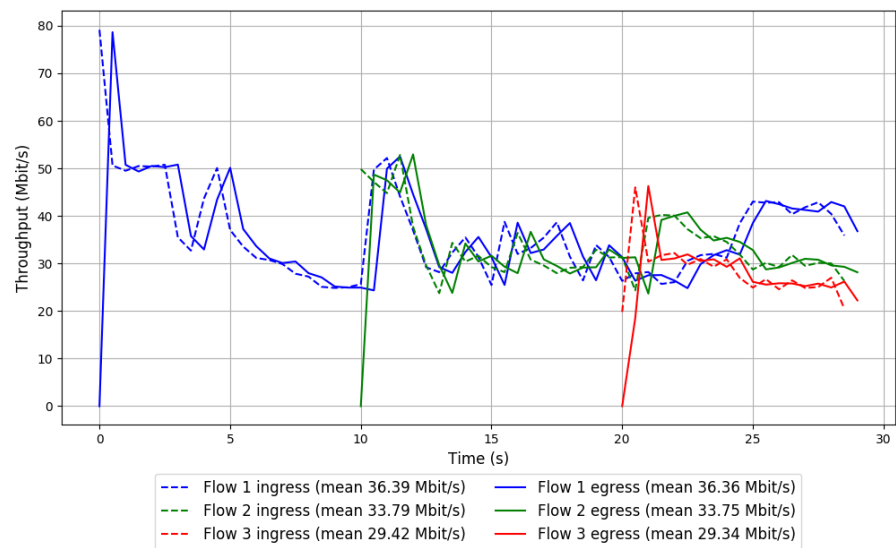
-- Flow 3:

Average throughput: 29.34 Mbit/s

95th percentile per-packet one-way delay: 29.609 ms

Loss rate: 0.00%

Run 5: Report of Indigo-MusesC5 — Data Link



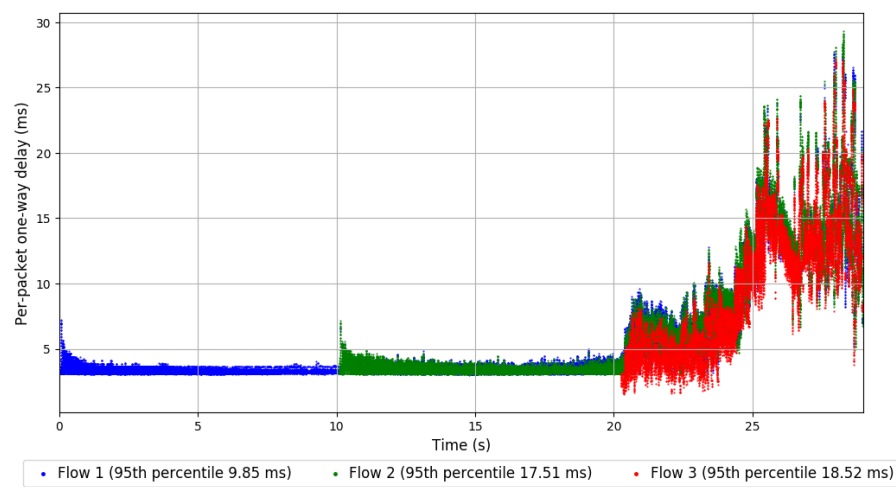
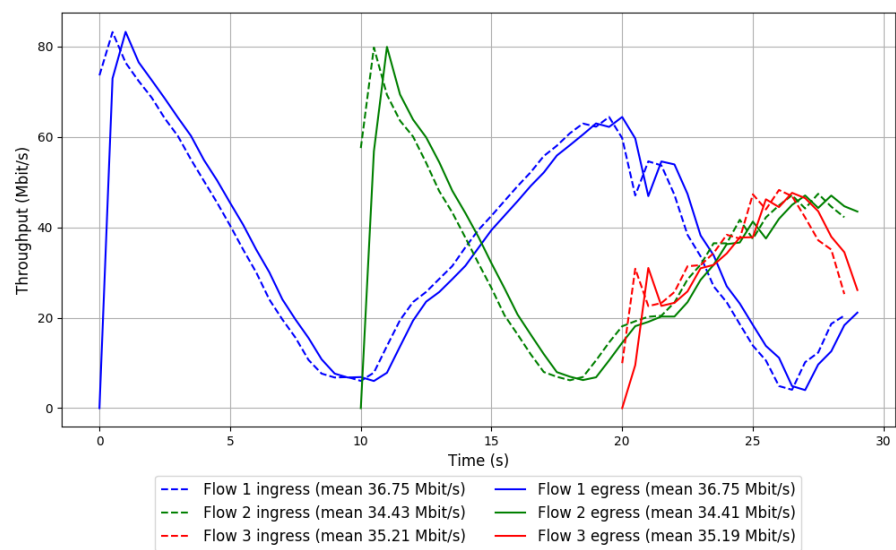


```
Run 1: Statistics of Indigo-MusesD

Start at: 2019-02-11 17:22:01
End at: 2019-02-11 17:22:31
Local clock offset: -1.172 ms
Remote clock offset: -0.392 ms

# Below is generated by plot.py at 2019-02-11 19:24:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 69.72 Mbit/s
95th percentile per-packet one-way delay: 15.839 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 36.75 Mbit/s
95th percentile per-packet one-way delay: 9.850 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 34.41 Mbit/s
95th percentile per-packet one-way delay: 17.512 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 35.19 Mbit/s
95th percentile per-packet one-way delay: 18.521 ms
Loss rate: 0.00%
```

Run 1: Report of Indigo-MusesD — Data Link

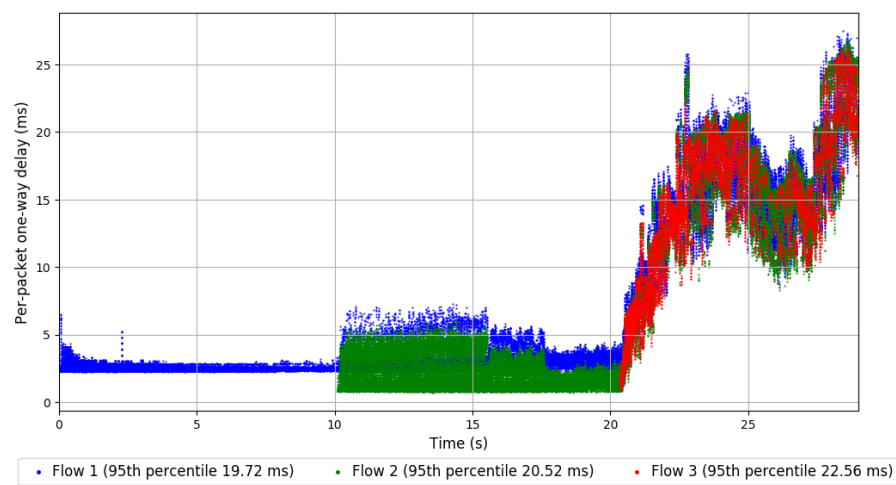
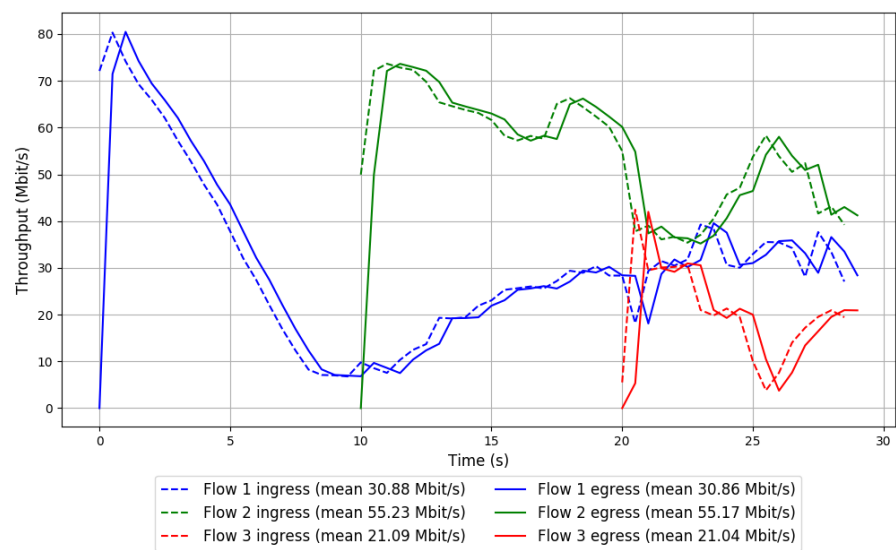


Run 2: Statistics of Indigo-MusesD

Start at: 2019-02-11 17:45:57  
End at: 2019-02-11 17:46:27  
Local clock offset: -0.831 ms  
Remote clock offset: -0.281 ms

# Below is generated by plot.py at 2019-02-11 19:24:06  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 73.05 Mbit/s  
95th percentile per-packet one-way delay: 20.472 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 30.86 Mbit/s  
95th percentile per-packet one-way delay: 19.720 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 55.17 Mbit/s  
95th percentile per-packet one-way delay: 20.522 ms  
Loss rate: 0.01%  
-- Flow 3:  
Average throughput: 21.04 Mbit/s  
95th percentile per-packet one-way delay: 22.556 ms  
Loss rate: 0.00%

Run 2: Report of Indigo-MusesD — Data Link

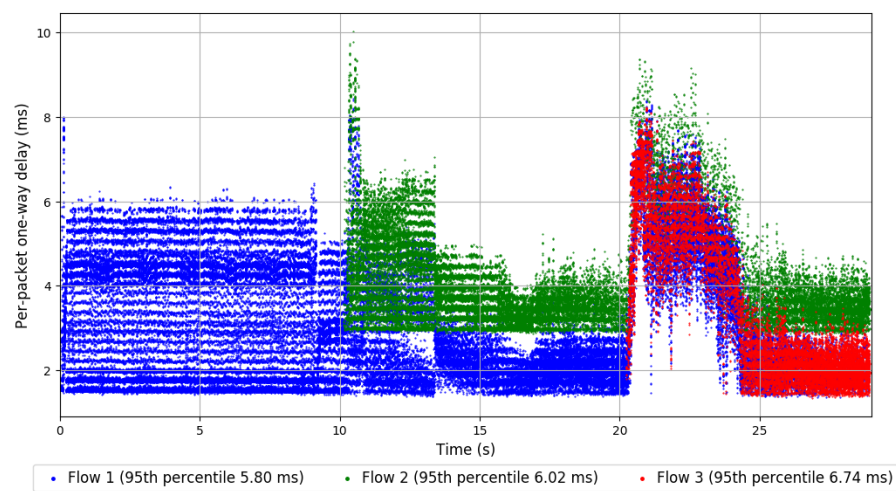
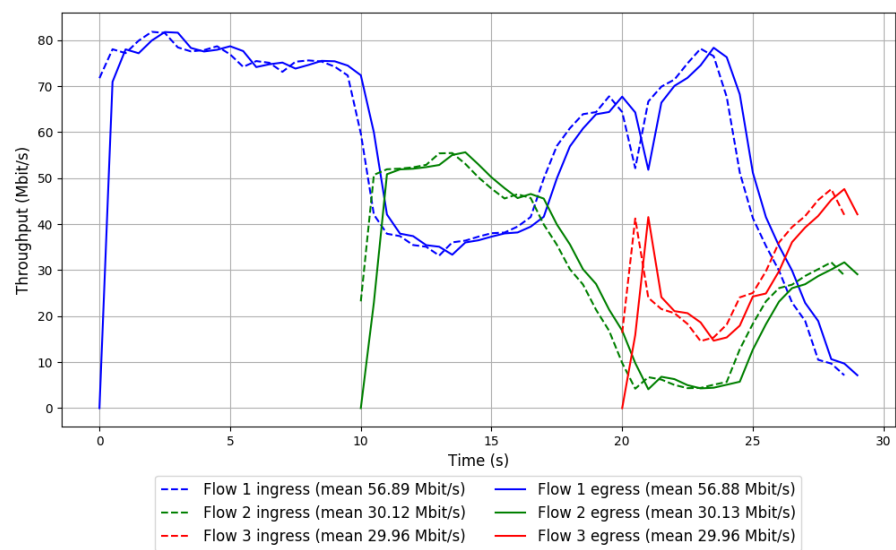


Run 3: Statistics of Indigo-MusesD

Start at: 2019-02-11 18:09:52  
End at: 2019-02-11 18:10:22  
Local clock offset: -2.565 ms  
Remote clock offset: -0.058 ms

# Below is generated by plot.py at 2019-02-11 19:24:15  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 85.45 Mbit/s  
95th percentile per-packet one-way delay: 5.988 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 56.88 Mbit/s  
95th percentile per-packet one-way delay: 5.805 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 30.13 Mbit/s  
95th percentile per-packet one-way delay: 6.020 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 29.96 Mbit/s  
95th percentile per-packet one-way delay: 6.736 ms  
Loss rate: 0.00%

Run 3: Report of Indigo-MusesD — Data Link



Run 4: Statistics of Indigo-MusesD

Start at: 2019-02-11 18:33:48

End at: 2019-02-11 18:34:18

Local clock offset: -3.194 ms

Remote clock offset: 0.087 ms

# Below is generated by plot.py at 2019-02-11 19:24:15

# Datalink statistics

-- Total of 3 flows:

Average throughput: 65.55 Mbit/s

95th percentile per-packet one-way delay: 5.353 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 39.10 Mbit/s

95th percentile per-packet one-way delay: 5.151 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 35.20 Mbit/s

95th percentile per-packet one-way delay: 4.602 ms

Loss rate: 0.00%

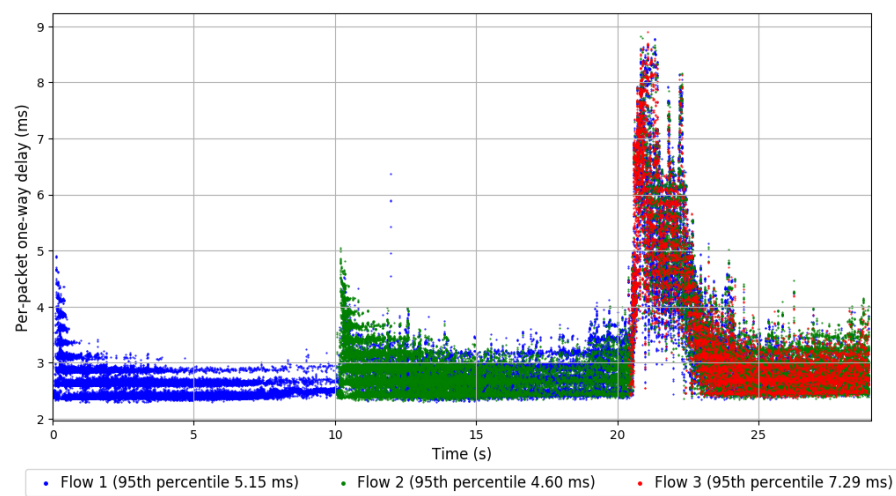
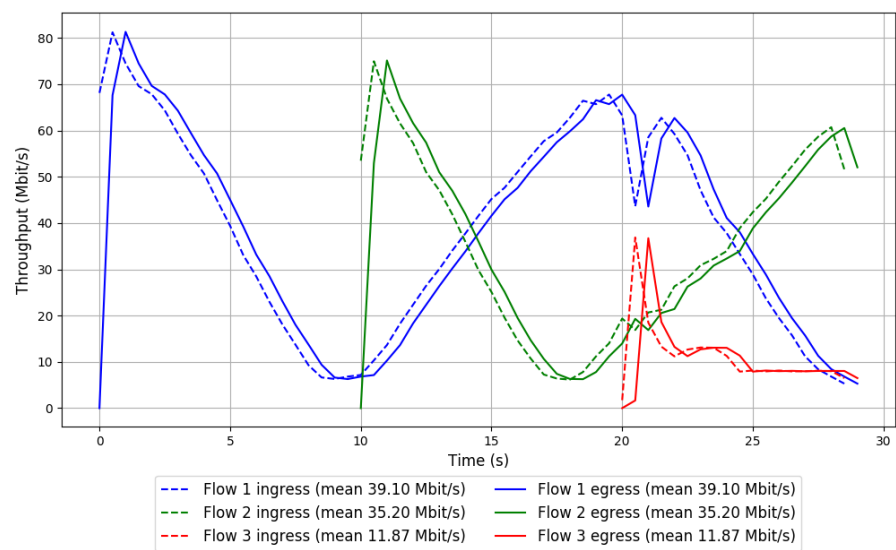
-- Flow 3:

Average throughput: 11.87 Mbit/s

95th percentile per-packet one-way delay: 7.290 ms

Loss rate: 0.00%

Run 4: Report of Indigo-MusesD — Data Link





Run 5: Statistics of Indigo-MusesD

Start at: 2019-02-11 18:57:43

End at: 2019-02-11 18:58:13

Local clock offset: -1.068 ms

Remote clock offset: 0.121 ms

# Below is generated by plot.py at 2019-02-11 19:24:26

# Datalink statistics

-- Total of 3 flows:

Average throughput: 88.35 Mbit/s

95th percentile per-packet one-way delay: 29.462 ms

Loss rate: 0.45%

-- Flow 1:

Average throughput: 66.42 Mbit/s

95th percentile per-packet one-way delay: 28.274 ms

Loss rate: 0.24%

-- Flow 2:

Average throughput: 21.32 Mbit/s

95th percentile per-packet one-way delay: 30.658 ms

Loss rate: 0.26%

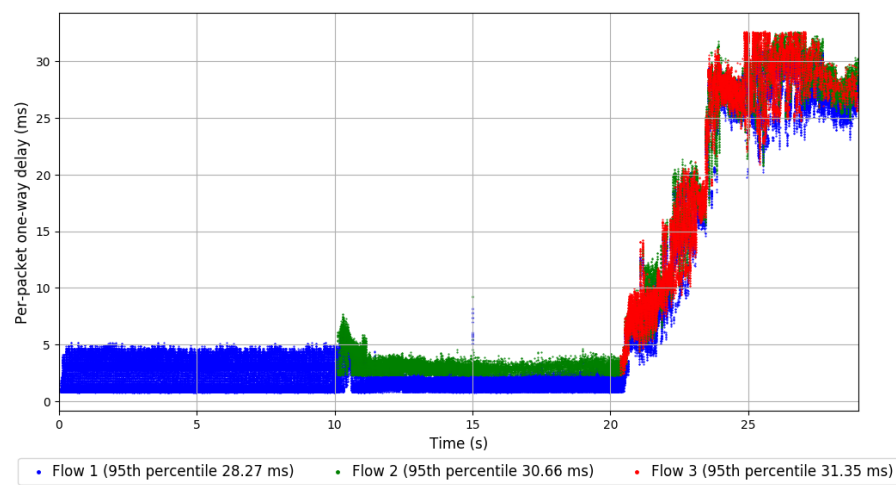
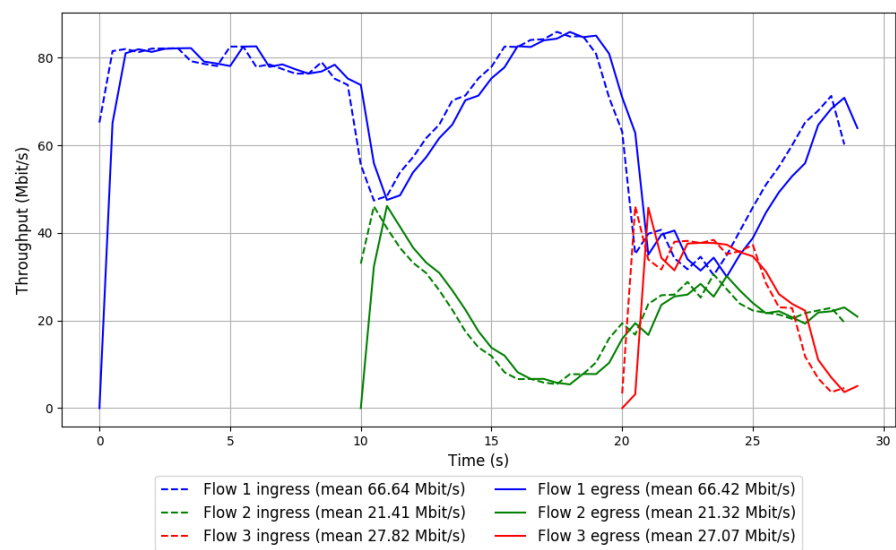
-- Flow 3:

Average throughput: 27.07 Mbit/s

95th percentile per-packet one-way delay: 31.346 ms

Loss rate: 2.40%

Run 5: Report of Indigo-MusesD — Data Link

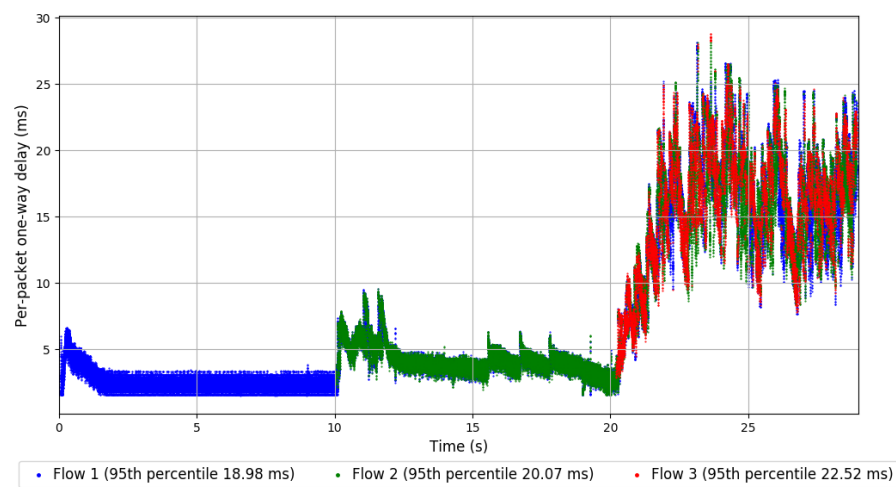
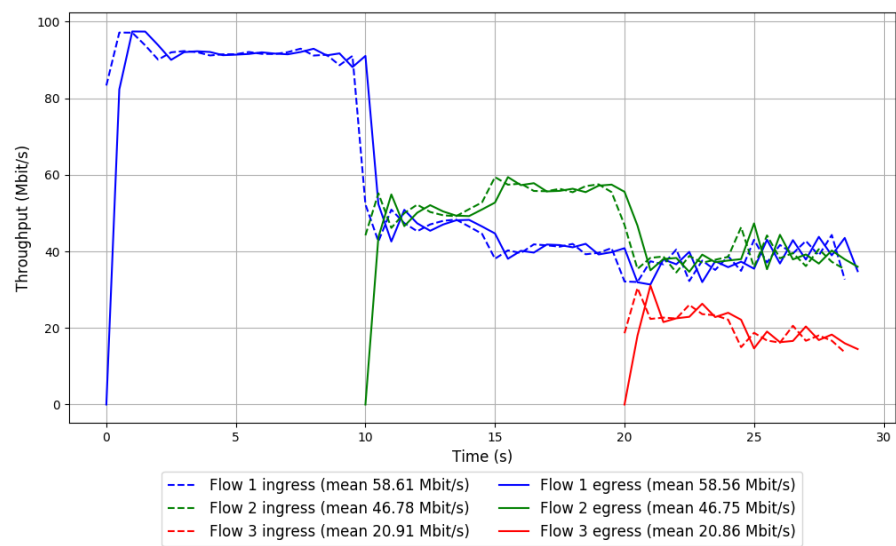


Run 1: Statistics of Indigo-MusesT

Start at: 2019-02-11 17:31:10  
End at: 2019-02-11 17:31:40  
Local clock offset: -0.811 ms  
Remote clock offset: -0.395 ms

# Below is generated by plot.py at 2019-02-11 19:24:42  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.39 Mbit/s  
95th percentile per-packet one-way delay: 19.928 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 58.56 Mbit/s  
95th percentile per-packet one-way delay: 18.978 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 46.75 Mbit/s  
95th percentile per-packet one-way delay: 20.065 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 20.86 Mbit/s  
95th percentile per-packet one-way delay: 22.518 ms  
Loss rate: 0.01%

Run 1: Report of Indigo-MusesT — Data Link

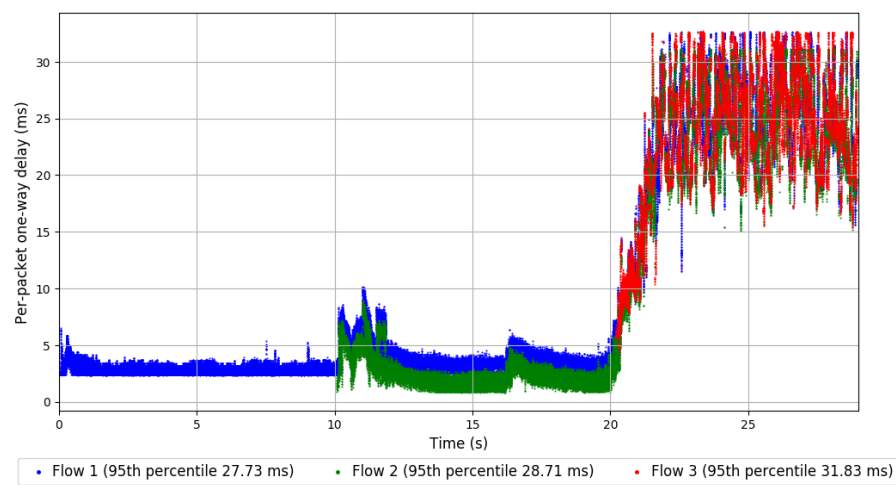
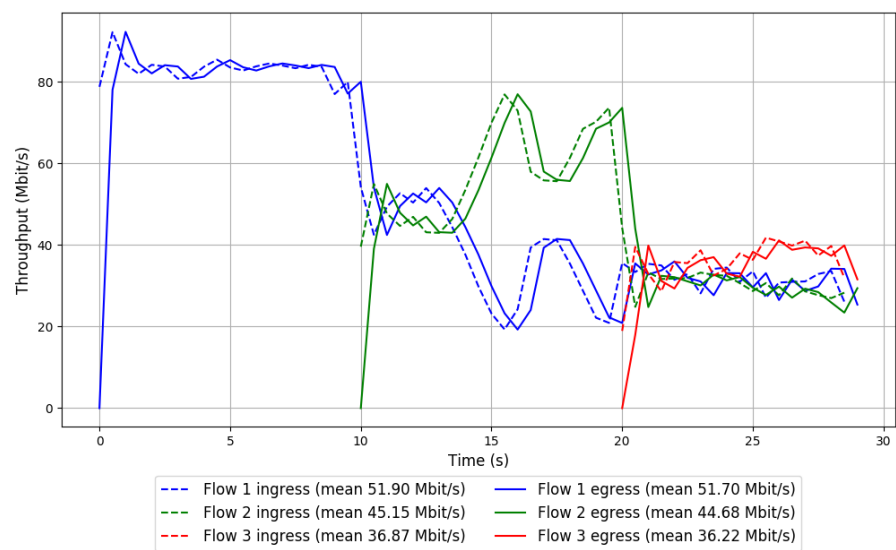


Run 2: Statistics of Indigo-MusesT

Start at: 2019-02-11 17:55:06  
End at: 2019-02-11 17:55:36  
Local clock offset: -0.872 ms  
Remote clock offset: -0.147 ms

# Below is generated by plot.py at 2019-02-11 19:24:42  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 91.77 Mbit/s  
95th percentile per-packet one-way delay: 29.323 ms  
Loss rate: 0.67%  
-- Flow 1:  
Average throughput: 51.70 Mbit/s  
95th percentile per-packet one-way delay: 27.729 ms  
Loss rate: 0.32%  
-- Flow 2:  
Average throughput: 44.68 Mbit/s  
95th percentile per-packet one-way delay: 28.713 ms  
Loss rate: 0.95%  
-- Flow 3:  
Average throughput: 36.22 Mbit/s  
95th percentile per-packet one-way delay: 31.833 ms  
Loss rate: 1.60%

Run 2: Report of Indigo-MusesT — Data Link



Run 3: Statistics of Indigo-MusesT

Start at: 2019-02-11 18:19:02

End at: 2019-02-11 18:19:32

Local clock offset: -2.642 ms

Remote clock offset: 0.044 ms

# Below is generated by plot.py at 2019-02-11 19:25:00

# Datalink statistics

-- Total of 3 flows:

Average throughput: 95.50 Mbit/s

95th percentile per-packet one-way delay: 24.898 ms

Loss rate: 0.18%

-- Flow 1:

Average throughput: 65.80 Mbit/s

95th percentile per-packet one-way delay: 21.706 ms

Loss rate: 0.07%

-- Flow 2:

Average throughput: 32.67 Mbit/s

95th percentile per-packet one-way delay: 25.943 ms

Loss rate: 0.25%

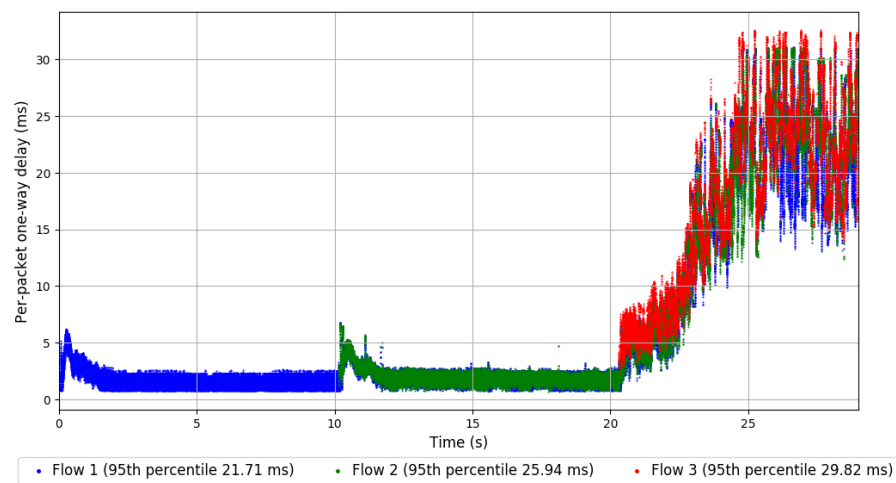
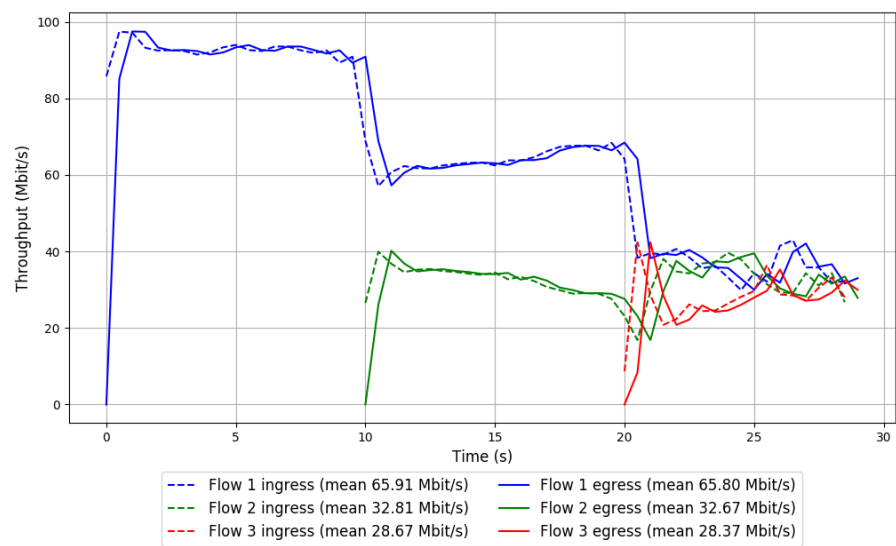
-- Flow 3:

Average throughput: 28.37 Mbit/s

95th percentile per-packet one-way delay: 29.824 ms

Loss rate: 0.79%

Run 3: Report of Indigo-MusesT — Data Link





Run 4: Statistics of Indigo-MusesT

Start at: 2019-02-11 18:42:57

End at: 2019-02-11 18:43:27

Local clock offset: -2.609 ms

Remote clock offset: 0.164 ms

# Below is generated by plot.py at 2019-02-11 19:25:02

# Datalink statistics

-- Total of 3 flows:

Average throughput: 89.89 Mbit/s

95th percentile per-packet one-way delay: 23.843 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 54.75 Mbit/s

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

Loss rate: 0.00%

-- Flow 2:

Average throughput: 43.73 Mbit/s

95th percentile per-packet one-way delay: 24.268 ms

Loss rate: 0.00%

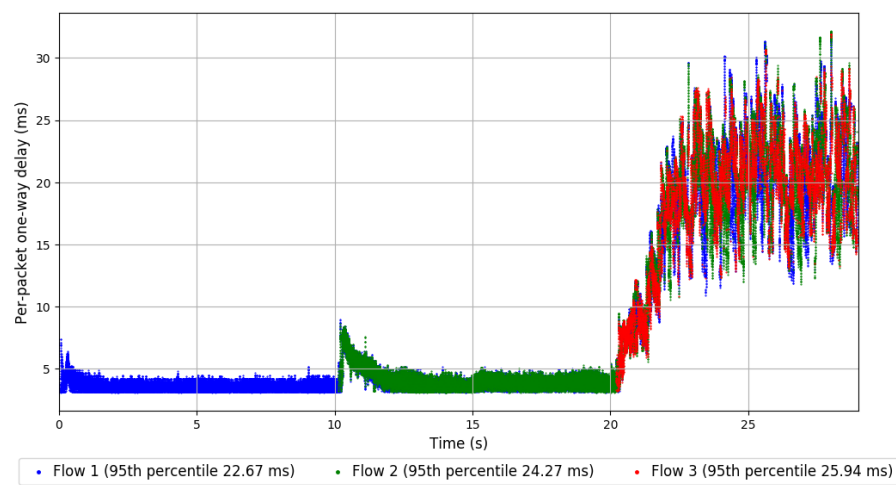
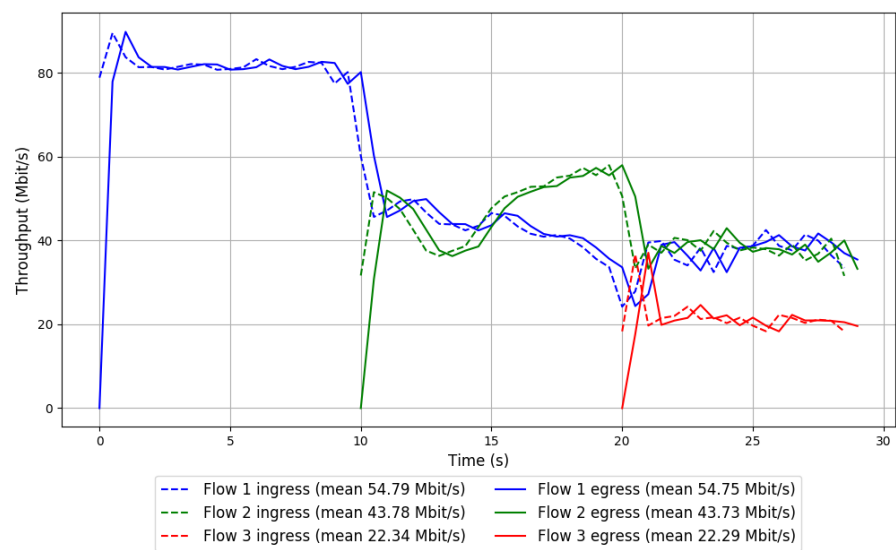
-- Flow 3:

Average throughput: 22.29 Mbit/s

95th percentile per-packet one-way delay: 25.937 ms

Loss rate: 0.00%

Run 4: Report of Indigo-MusesT — Data Link



Run 5: Statistics of Indigo-MusesT

Start at: 2019-02-11 19:06:53

End at: 2019-02-11 19:07:23

Local clock offset: -1.779 ms

Remote clock offset: 0.127 ms

# Below is generated by plot.py at 2019-02-11 19:25:04

# Datalink statistics

-- Total of 3 flows:

Average throughput: 90.02 Mbit/s

95th percentile per-packet one-way delay: 27.859 ms

Loss rate: 0.25%

-- Flow 1:

Average throughput: 59.61 Mbit/s

95th percentile per-packet one-way delay: 25.372 ms

Loss rate: 0.19%

-- Flow 2:

Average throughput: 33.82 Mbit/s

95th percentile per-packet one-way delay: 28.976 ms

Loss rate: 0.19%

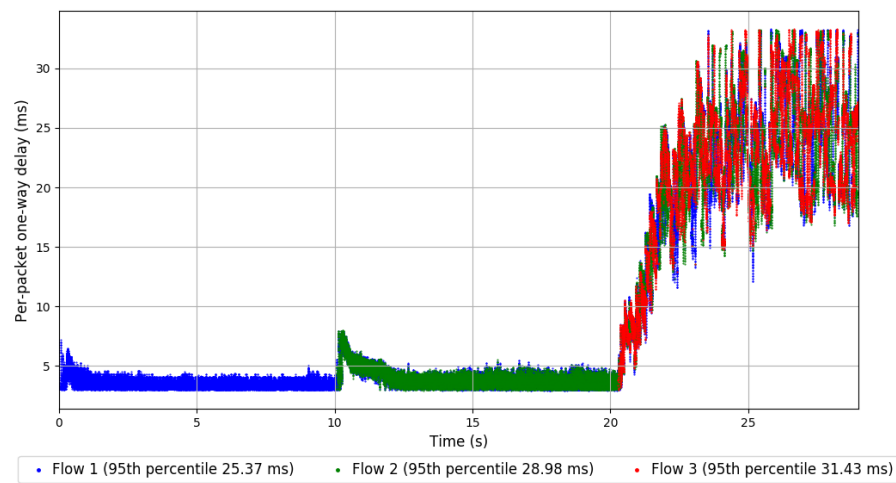
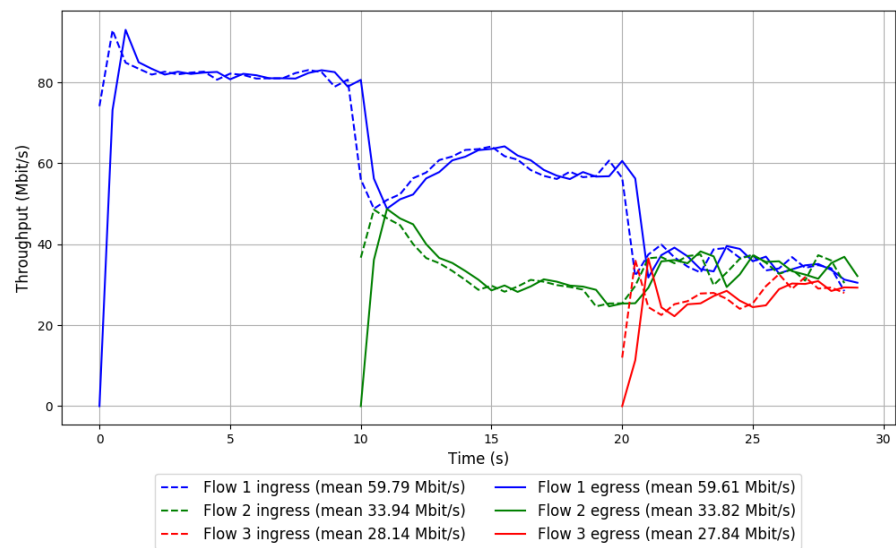
-- Flow 3:

Average throughput: 27.84 Mbit/s

95th percentile per-packet one-way delay: 31.435 ms

Loss rate: 0.82%

Run 5: Report of Indigo-MusesT — Data Link

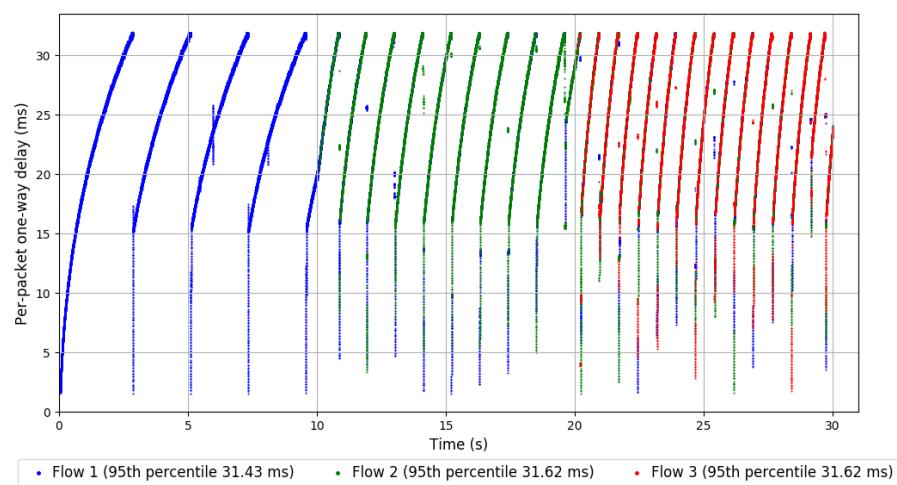
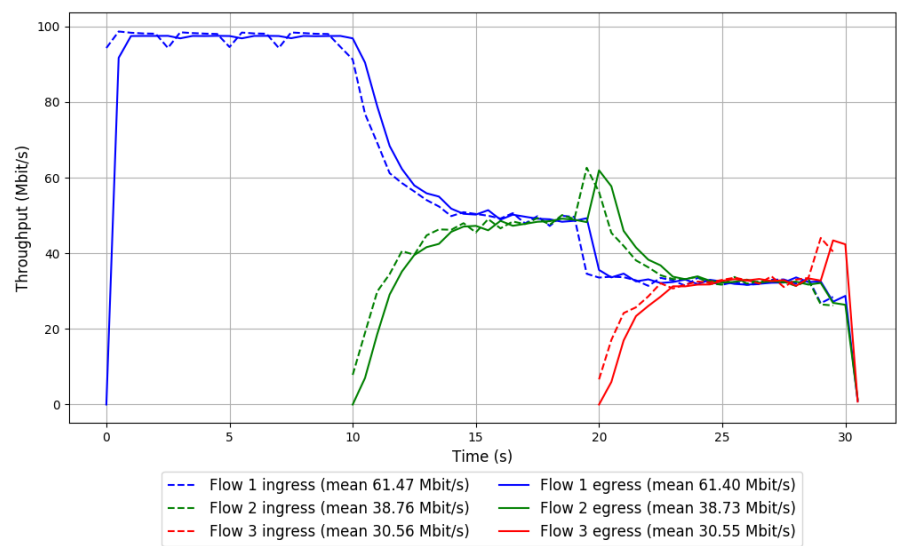


Run 1: Statistics of LEDBAT

Start at: 2019-02-11 17:39:08  
End at: 2019-02-11 17:39:38  
Local clock offset: -1.255 ms  
Remote clock offset: -0.299 ms

# Below is generated by plot.py at 2019-02-11 19:25:14  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 97.32 Mbit/s  
95th percentile per-packet one-way delay: 31.590 ms  
Loss rate: 0.05%  
-- Flow 1:  
Average throughput: 61.40 Mbit/s  
95th percentile per-packet one-way delay: 31.427 ms  
Loss rate: 0.03%  
-- Flow 2:  
Average throughput: 38.73 Mbit/s  
95th percentile per-packet one-way delay: 31.620 ms  
Loss rate: 0.06%  
-- Flow 3:  
Average throughput: 30.55 Mbit/s  
95th percentile per-packet one-way delay: 31.617 ms  
Loss rate: 0.09%

Run 1: Report of LEDBAT — Data Link

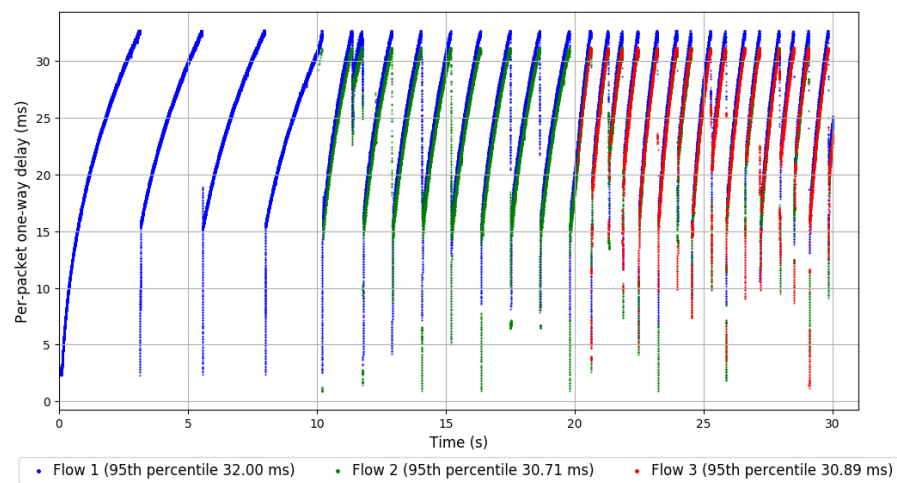
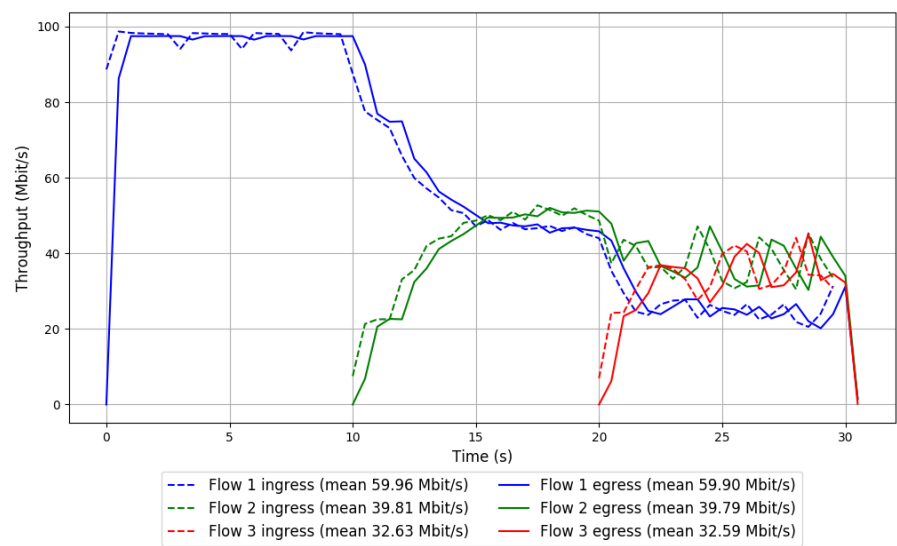


Run 2: Statistics of LEDBAT

Start at: 2019-02-11 18:03:03  
End at: 2019-02-11 18:03:33  
Local clock offset: -0.8 ms  
Remote clock offset: -0.122 ms

# Below is generated by plot.py at 2019-02-11 19:25:24  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 97.21 Mbit/s  
95th percentile per-packet one-way delay: 31.700 ms  
Loss rate: 0.05%  
-- Flow 1:  
Average throughput: 59.90 Mbit/s  
95th percentile per-packet one-way delay: 31.996 ms  
Loss rate: 0.03%  
-- Flow 2:  
Average throughput: 39.79 Mbit/s  
95th percentile per-packet one-way delay: 30.715 ms  
Loss rate: 0.07%  
-- Flow 3:  
Average throughput: 32.59 Mbit/s  
95th percentile per-packet one-way delay: 30.891 ms  
Loss rate: 0.10%

Run 2: Report of LEDBAT — Data Link





Run 3: Statistics of LEDBAT

Start at: 2019-02-11 18:26:59

End at: 2019-02-11 18:27:29

Local clock offset: -3.734 ms

Remote clock offset: 0.047 ms

# Below is generated by plot.py at 2019-02-11 19:25:35

# Datalink statistics

-- Total of 3 flows:

Average throughput: 97.09 Mbit/s

95th percentile per-packet one-way delay: 32.877 ms

Loss rate: 0.04%

-- Flow 1:

Average throughput: 54.93 Mbit/s

95th percentile per-packet one-way delay: 32.849 ms

Loss rate: 0.03%

-- Flow 2:

Average throughput: 49.08 Mbit/s

95th percentile per-packet one-way delay: 33.023 ms

Loss rate: 0.03%

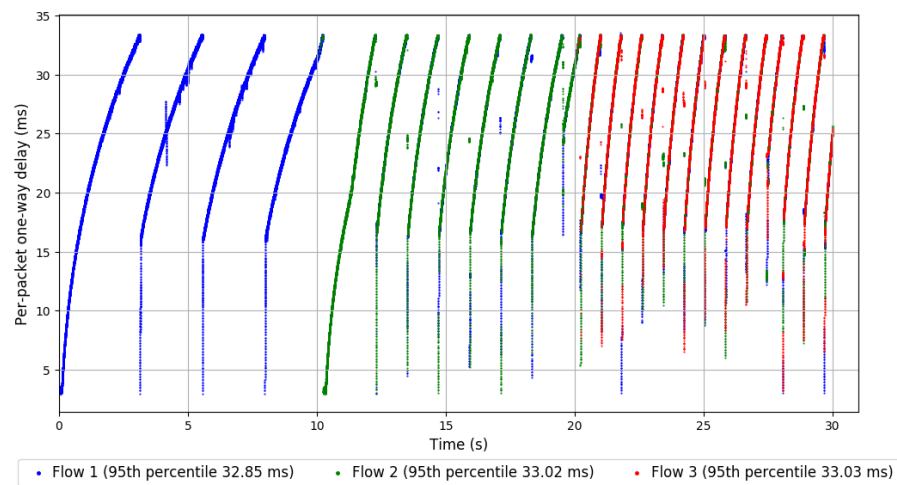
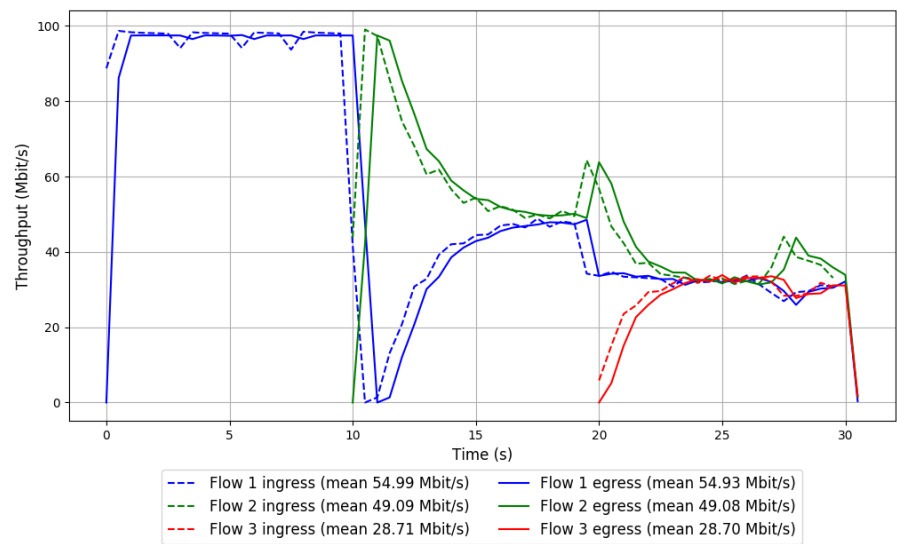
-- Flow 3:

Average throughput: 28.70 Mbit/s

95th percentile per-packet one-way delay: 33.035 ms

Loss rate: 0.09%

Run 3: Report of LEDBAT — Data Link

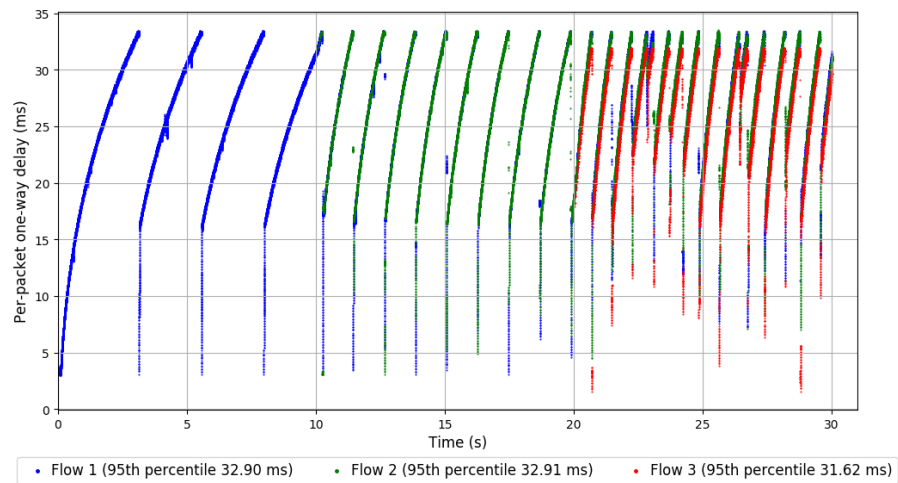
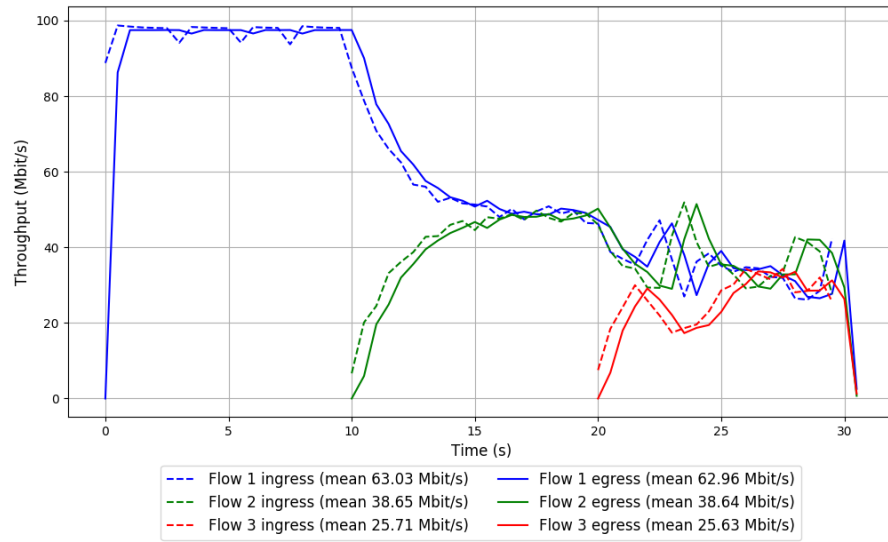


Run 4: Statistics of LEDBAT

Start at: 2019-02-11 18:50:54  
End at: 2019-02-11 18:51:24  
Local clock offset: -2.067 ms  
Remote clock offset: 0.151 ms

# Below is generated by plot.py at 2019-02-11 19:25:54  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 97.19 Mbit/s  
95th percentile per-packet one-way delay: 32.871 ms  
Loss rate: 0.05%  
-- Flow 1:  
Average throughput: 62.96 Mbit/s  
95th percentile per-packet one-way delay: 32.895 ms  
Loss rate: 0.02%  
-- Flow 2:  
Average throughput: 38.64 Mbit/s  
95th percentile per-packet one-way delay: 32.910 ms  
Loss rate: 0.05%  
-- Flow 3:  
Average throughput: 25.63 Mbit/s  
95th percentile per-packet one-way delay: 31.622 ms  
Loss rate: 0.21%

# Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2019-02-11 19:14:51

End at: 2019-02-11 19:15:21

Local clock offset: -1.243 ms

Remote clock offset: 0.175 ms

# Below is generated by plot.py at 2019-02-11 19:25:56

# Datalink statistics

-- Total of 3 flows:

Average throughput: 97.20 Mbit/s

95th percentile per-packet one-way delay: 31.636 ms

Loss rate: 0.05%

-- Flow 1:

Average throughput: 64.24 Mbit/s

95th percentile per-packet one-way delay: 31.909 ms

Loss rate: 0.02%

-- Flow 2:

Average throughput: 32.50 Mbit/s

95th percentile per-packet one-way delay: 30.620 ms

Loss rate: 0.09%

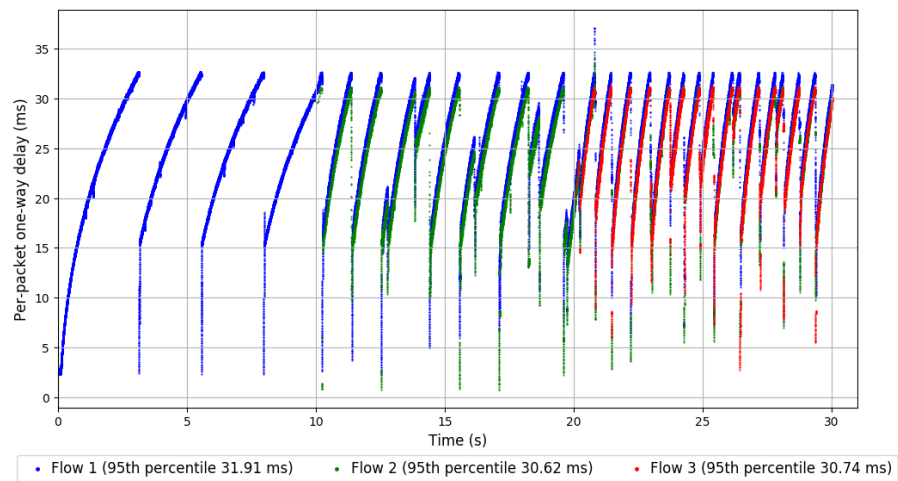
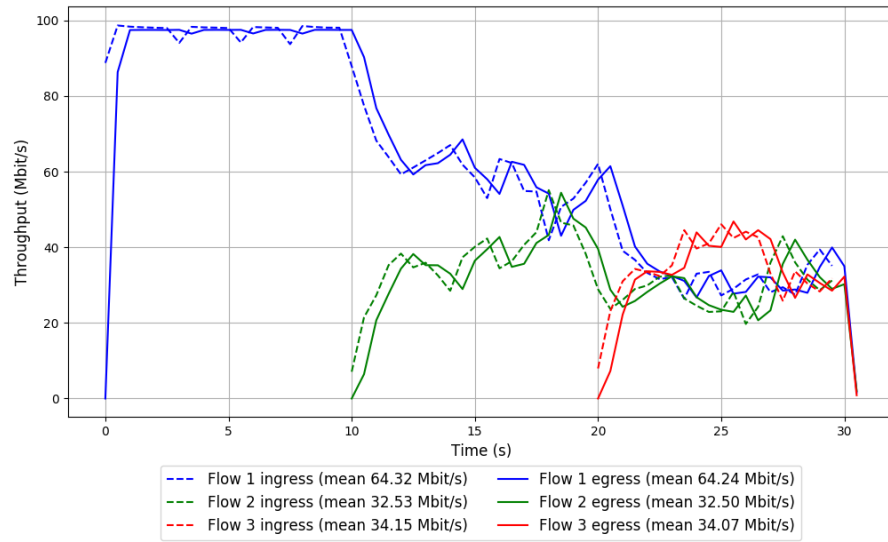
-- Flow 3:

Average throughput: 34.07 Mbit/s

95th percentile per-packet one-way delay: 30.743 ms

Loss rate: 0.11%

# Run 5: Report of LEDBAT — Data Link

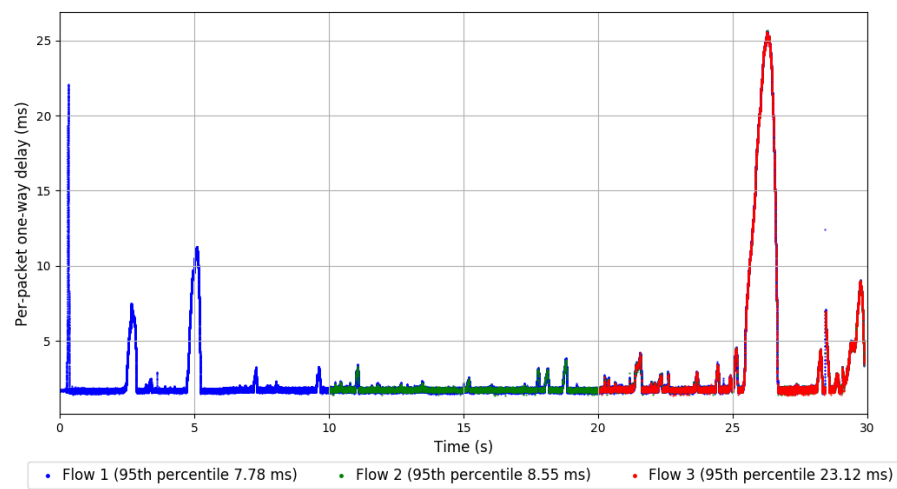
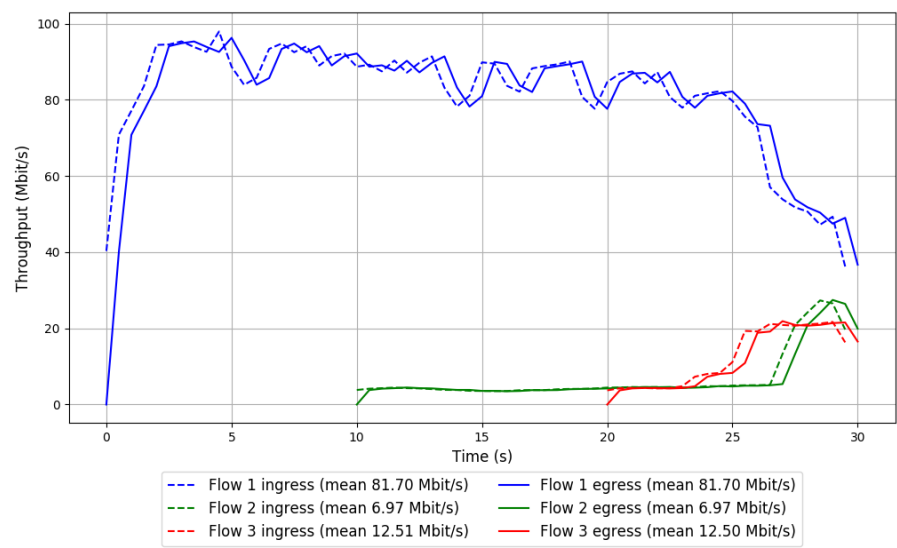


```
Run 1: Statistics of PCC-Allegro

Start at: 2019-02-11 17:33:25
End at: 2019-02-11 17:33:55
Local clock offset: -0.738 ms
Remote clock offset: -0.387 ms

# Below is generated by plot.py at 2019-02-11 19:26:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.46 Mbit/s
95th percentile per-packet one-way delay: 8.820 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 81.70 Mbit/s
95th percentile per-packet one-way delay: 7.775 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 6.97 Mbit/s
95th percentile per-packet one-way delay: 8.554 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 12.50 Mbit/s
95th percentile per-packet one-way delay: 23.117 ms
Loss rate: 0.00%
```

Run 1: Report of PCC-Allegro — Data Link



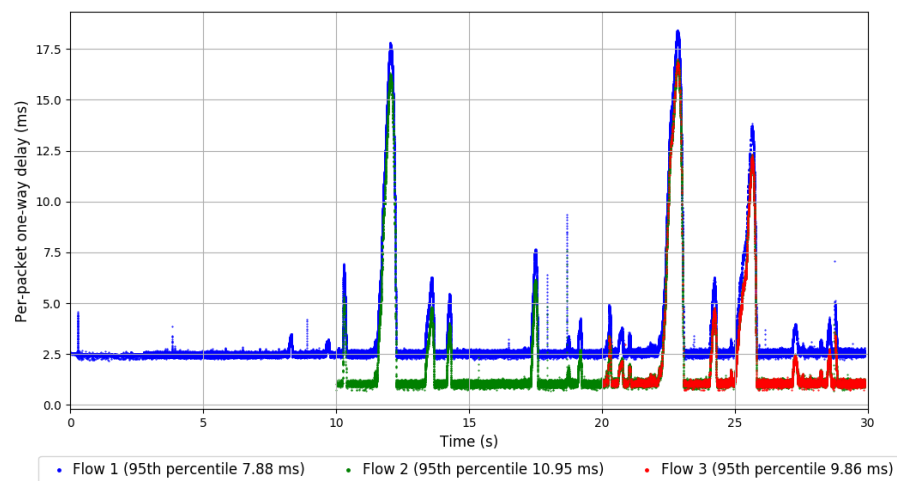
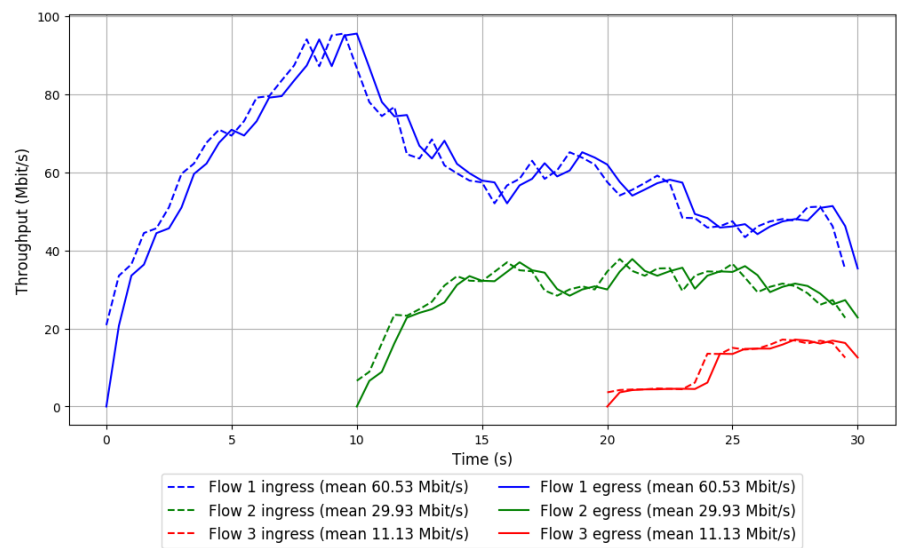


Run 2: Statistics of PCC-Allegro

Start at: 2019-02-11 17:57:21  
End at: 2019-02-11 17:57:51  
Local clock offset: -0.902 ms  
Remote clock offset: -0.169 ms

# Below is generated by plot.py at 2019-02-11 19:26:10  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 84.10 Mbit/s  
95th percentile per-packet one-way delay: 9.244 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 60.53 Mbit/s  
95th percentile per-packet one-way delay: 7.877 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 29.93 Mbit/s  
95th percentile per-packet one-way delay: 10.948 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 11.13 Mbit/s  
95th percentile per-packet one-way delay: 9.855 ms  
Loss rate: 0.00%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2019-02-11 18:21:17

End at: 2019-02-11 18:21:47

Local clock offset: -2.772 ms

Remote clock offset: 0.035 ms

# Below is generated by plot.py at 2019-02-11 19:26:10

# Datalink statistics

-- Total of 3 flows:

Average throughput: 81.69 Mbit/s

95th percentile per-packet one-way delay: 8.715 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 66.72 Mbit/s

95th percentile per-packet one-way delay: 7.124 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 14.65 Mbit/s

95th percentile per-packet one-way delay: 14.196 ms

Loss rate: 0.00%

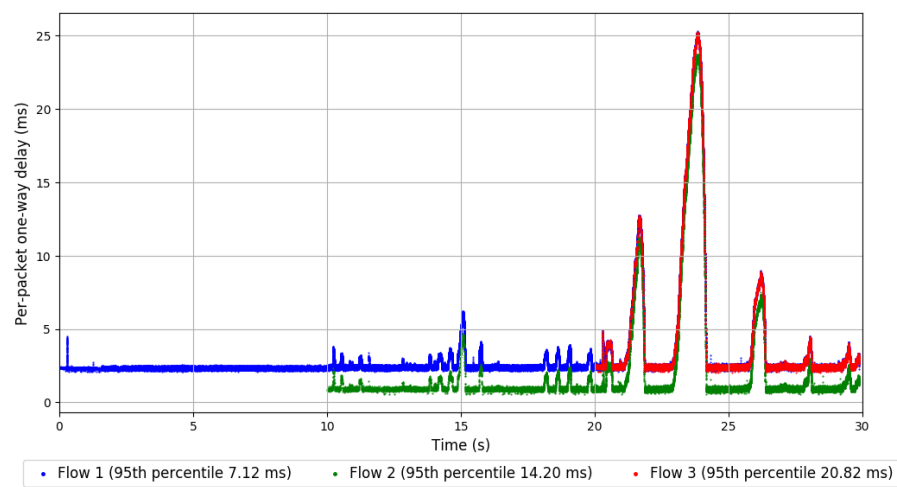
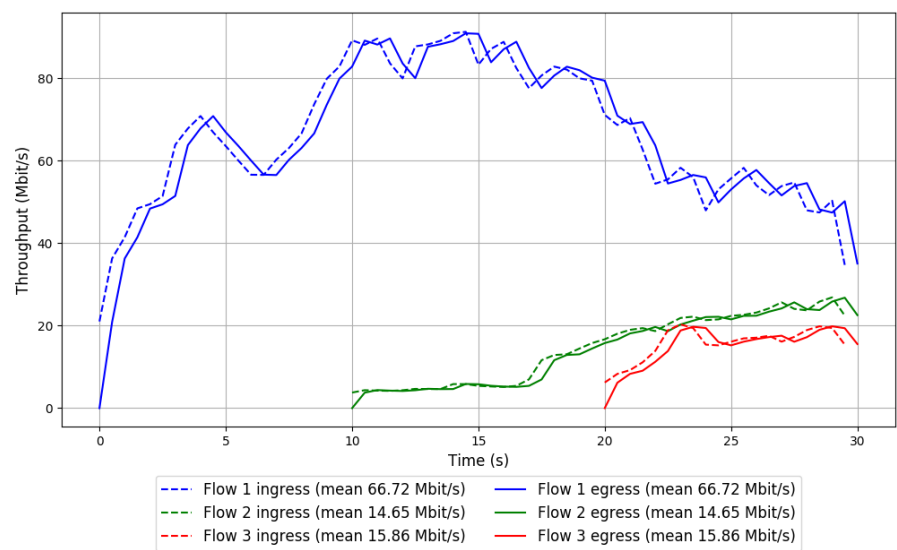
-- Flow 3:

Average throughput: 15.86 Mbit/s

95th percentile per-packet one-way delay: 20.824 ms

Loss rate: 0.00%

Run 3: Report of PCC-Allegro — Data Link



Run 4: Statistics of PCC-Allegro

Start at: 2019-02-11 18:45:12

End at: 2019-02-11 18:45:42

Local clock offset: -2.409 ms

Remote clock offset: 0.043 ms

# Below is generated by plot.py at 2019-02-11 19:26:20

# Datalink statistics

-- Total of 3 flows:

Average throughput: 77.70 Mbit/s

95th percentile per-packet one-way delay: 8.128 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 54.92 Mbit/s

95th percentile per-packet one-way delay: 6.420 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 31.31 Mbit/s

95th percentile per-packet one-way delay: 11.162 ms

Loss rate: 0.00%

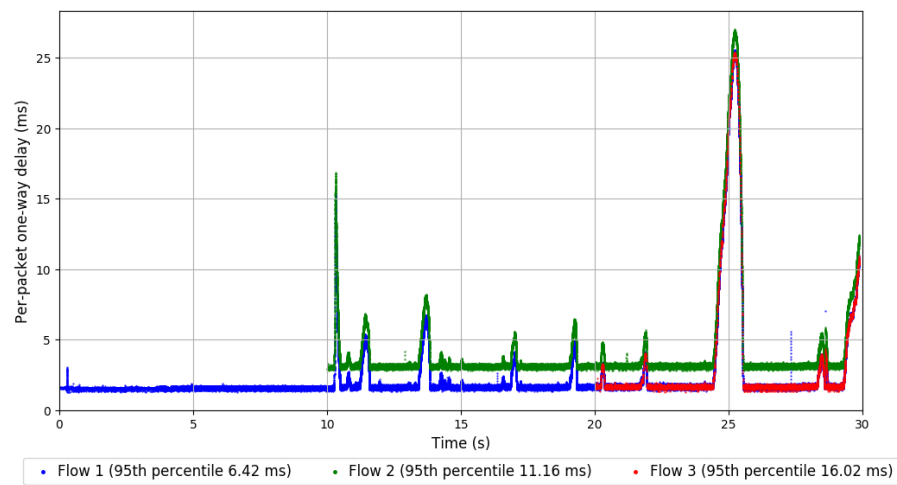
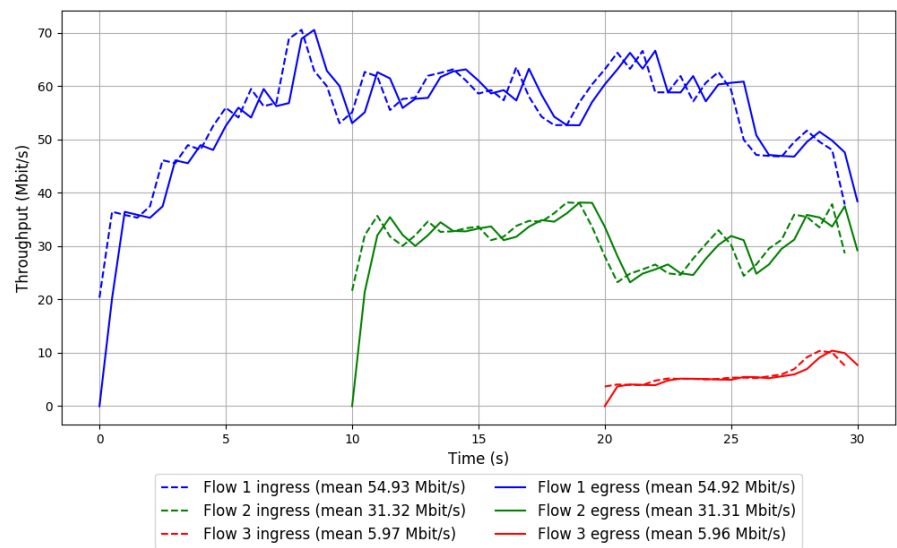
-- Flow 3:

Average throughput: 5.96 Mbit/s

95th percentile per-packet one-way delay: 16.022 ms

Loss rate: 0.00%

Run 4: Report of PCC-Allegro — Data Link



Run 5: Statistics of PCC-Allegro

Start at: 2019-02-11 19:09:09

End at: 2019-02-11 19:09:39

Local clock offset: -1.884 ms

Remote clock offset: 0.183 ms

# Below is generated by plot.py at 2019-02-11 19:26:35

# Datalink statistics

-- Total of 3 flows:

Average throughput: 90.18 Mbit/s

95th percentile per-packet one-way delay: 30.423 ms

Loss rate: 0.20%

-- Flow 1:

Average throughput: 68.09 Mbit/s

95th percentile per-packet one-way delay: 17.749 ms

Loss rate: 0.15%

-- Flow 2:

Average throughput: 31.73 Mbit/s

95th percentile per-packet one-way delay: 32.388 ms

Loss rate: 0.29%

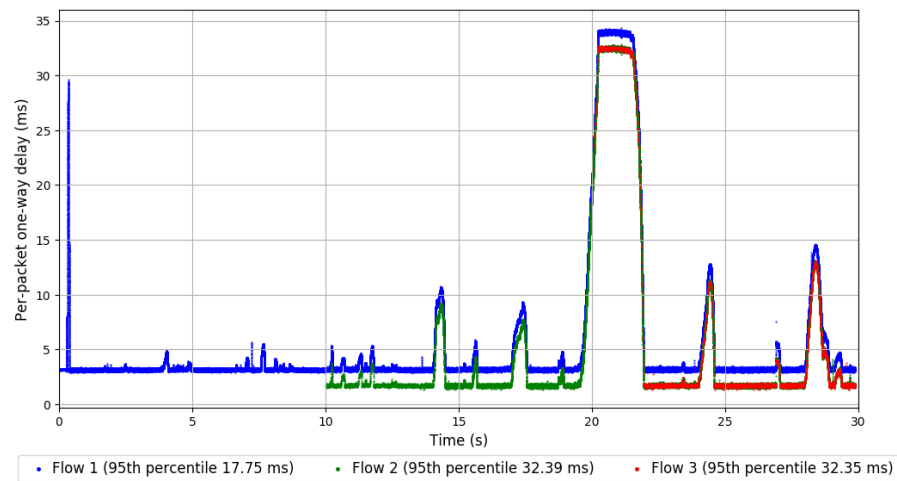
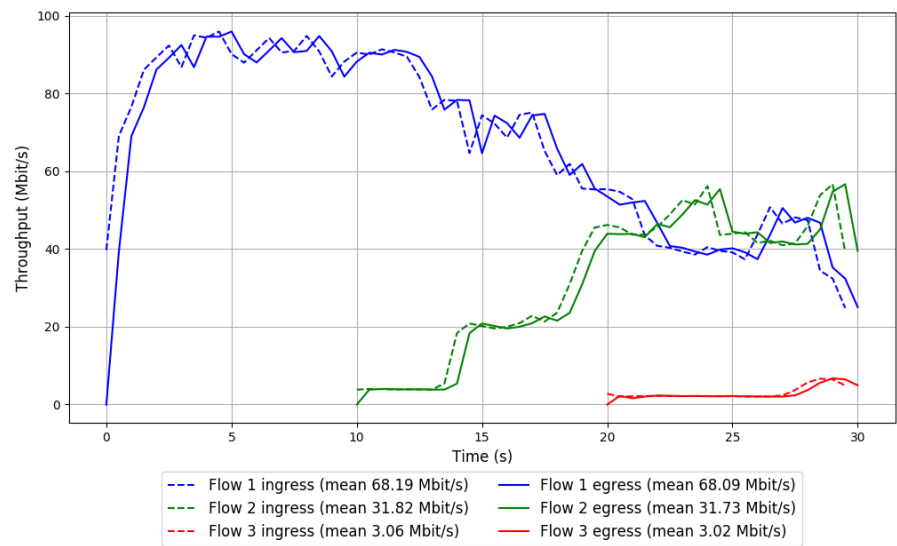
-- Flow 3:

Average throughput: 3.02 Mbit/s

95th percentile per-packet one-way delay: 32.355 ms

Loss rate: 1.50%

Run 5: Report of PCC-Allegro — Data Link



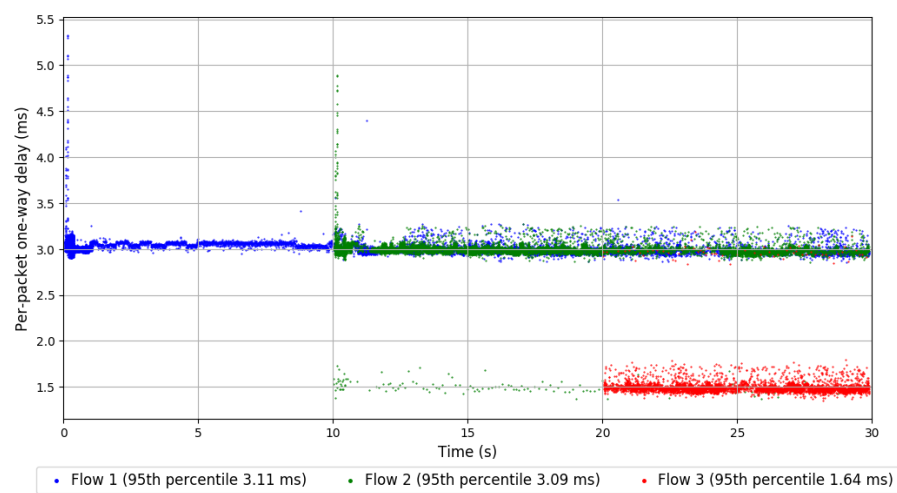
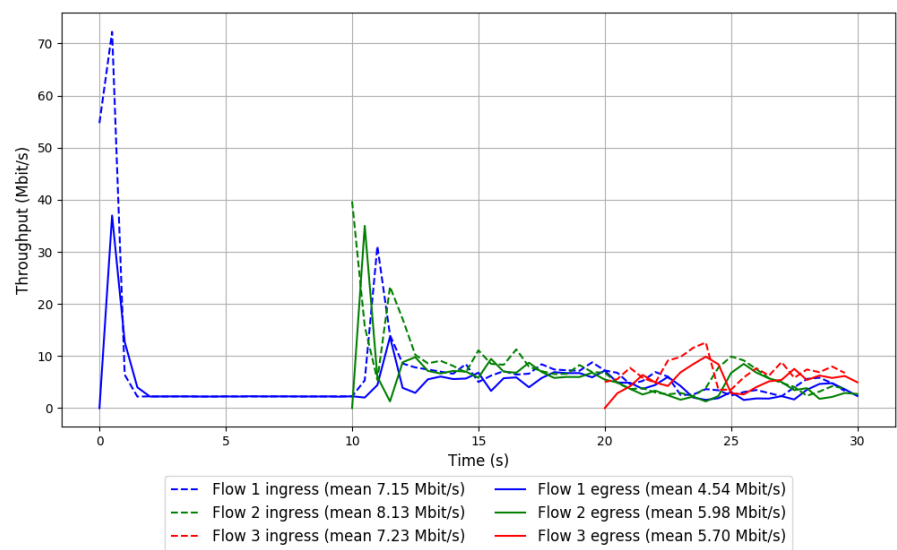


Run 1: Statistics of PCC-Expr

Start at: 2019-02-11 17:36:51  
End at: 2019-02-11 17:37:21  
Local clock offset: -1.018 ms  
Remote clock offset: -0.399 ms

# Below is generated by plot.py at 2019-02-11 19:26:35  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 10.40 Mbit/s  
95th percentile per-packet one-way delay: 3.090 ms  
Loss rate: 30.36%  
-- Flow 1:  
Average throughput: 4.54 Mbit/s  
95th percentile per-packet one-way delay: 3.113 ms  
Loss rate: 36.42%  
-- Flow 2:  
Average throughput: 5.98 Mbit/s  
95th percentile per-packet one-way delay: 3.091 ms  
Loss rate: 26.40%  
-- Flow 3:  
Average throughput: 5.70 Mbit/s  
95th percentile per-packet one-way delay: 1.642 ms  
Loss rate: 21.22%

Run 1: Report of PCC-Expr — Data Link

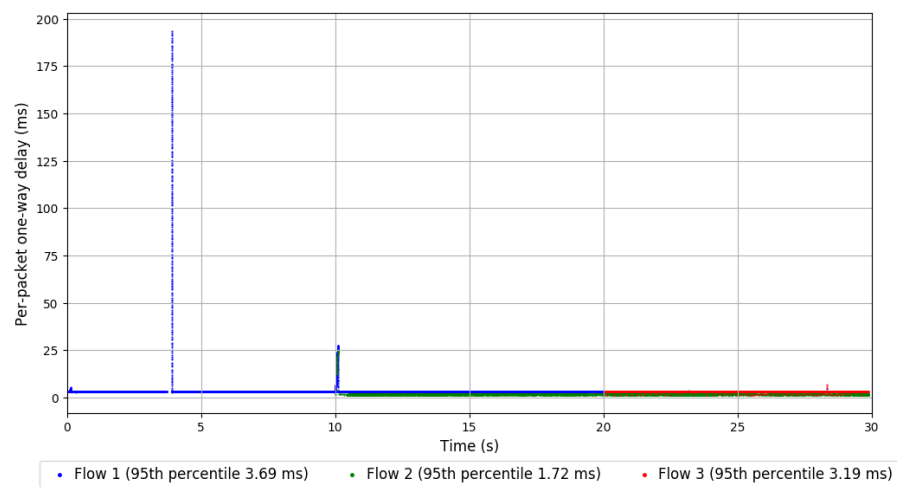
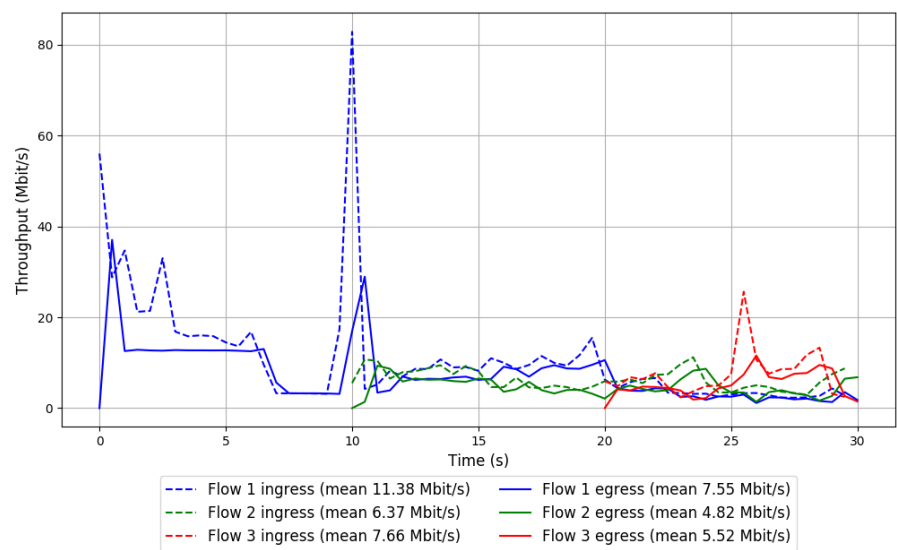


Run 2: Statistics of PCC-Expr

Start at: 2019-02-11 18:00:47  
End at: 2019-02-11 18:01:17  
Local clock offset: -1.539 ms  
Remote clock offset: -0.182 ms

# Below is generated by plot.py at 2019-02-11 19:26:35  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 12.57 Mbit/s  
95th percentile per-packet one-way delay: 3.214 ms  
Loss rate: 30.71%  
-- Flow 1:  
Average throughput: 7.55 Mbit/s  
95th percentile per-packet one-way delay: 3.695 ms  
Loss rate: 33.70%  
-- Flow 2:  
Average throughput: 4.82 Mbit/s  
95th percentile per-packet one-way delay: 1.720 ms  
Loss rate: 24.30%  
-- Flow 3:  
Average throughput: 5.52 Mbit/s  
95th percentile per-packet one-way delay: 3.187 ms  
Loss rate: 27.96%

Run 2: Report of PCC-Expr — Data Link



Run 3: Statistics of PCC-Expr

Start at: 2019-02-11 18:24:42

End at: 2019-02-11 18:25:12

Local clock offset: -3.654 ms

Remote clock offset: 0.002 ms

# Below is generated by plot.py at 2019-02-11 19:26:35

# Datalink statistics

-- Total of 3 flows:

Average throughput: 13.12 Mbit/s

95th percentile per-packet one-way delay: 3.103 ms

Loss rate: 35.04%

-- Flow 1:

Average throughput: 9.15 Mbit/s

95th percentile per-packet one-way delay: 3.102 ms

Loss rate: 36.22%

-- Flow 2:

Average throughput: 4.44 Mbit/s

95th percentile per-packet one-way delay: 3.104 ms

Loss rate: 32.87%

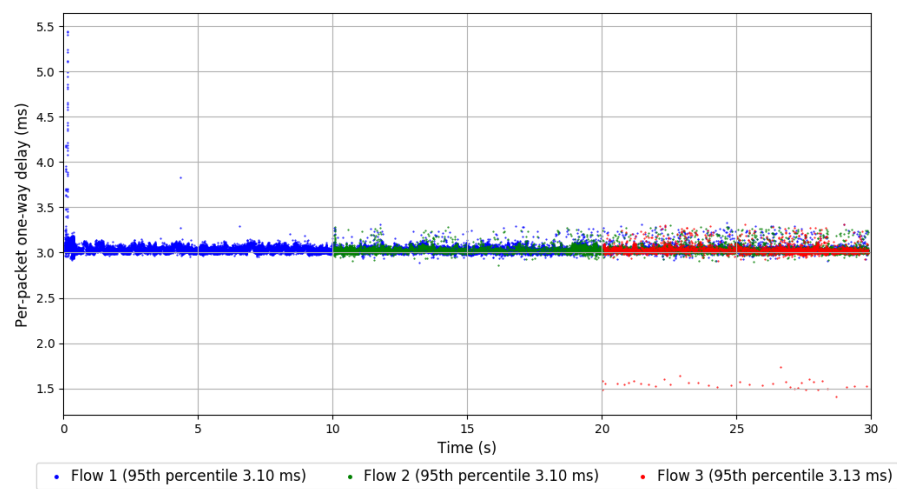
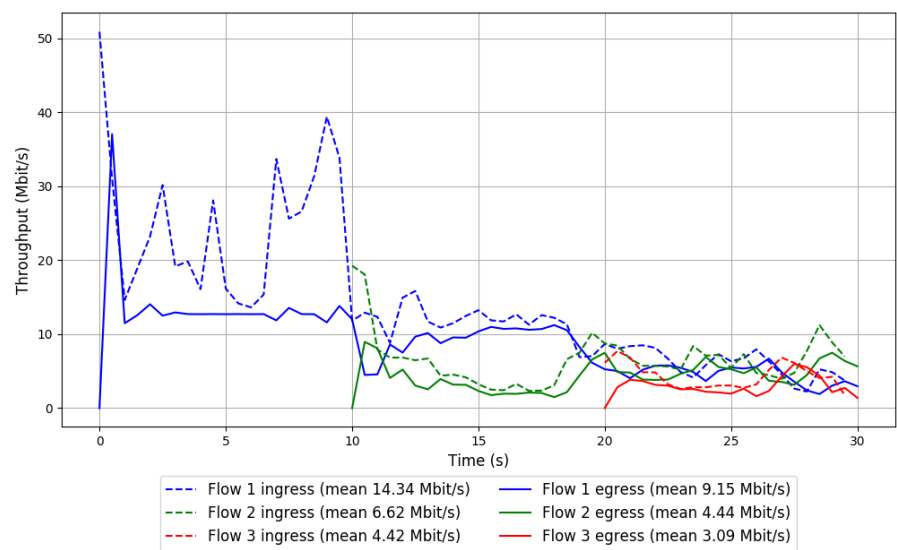
-- Flow 3:

Average throughput: 3.09 Mbit/s

95th percentile per-packet one-way delay: 3.131 ms

Loss rate: 29.99%

Run 3: Report of PCC-Expr — Data Link



Run 4: Statistics of PCC-Expr

Start at: 2019-02-11 18:48:37

End at: 2019-02-11 18:49:07

Local clock offset: -1.464 ms

Remote clock offset: 0.144 ms

# Below is generated by plot.py at 2019-02-11 19:26:36

# Datalink statistics

-- Total of 3 flows:

Average throughput: 13.12 Mbit/s

95th percentile per-packet one-way delay: 2.485 ms

Loss rate: 19.85%

-- Flow 1:

Average throughput: 7.73 Mbit/s

95th percentile per-packet one-way delay: 2.476 ms

Loss rate: 20.66%

-- Flow 2:

Average throughput: 5.77 Mbit/s

95th percentile per-packet one-way delay: 2.494 ms

Loss rate: 18.09%

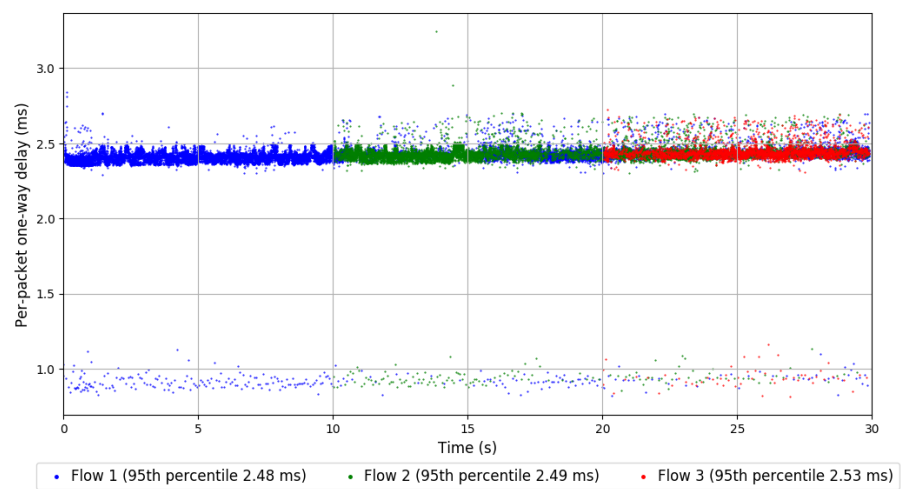
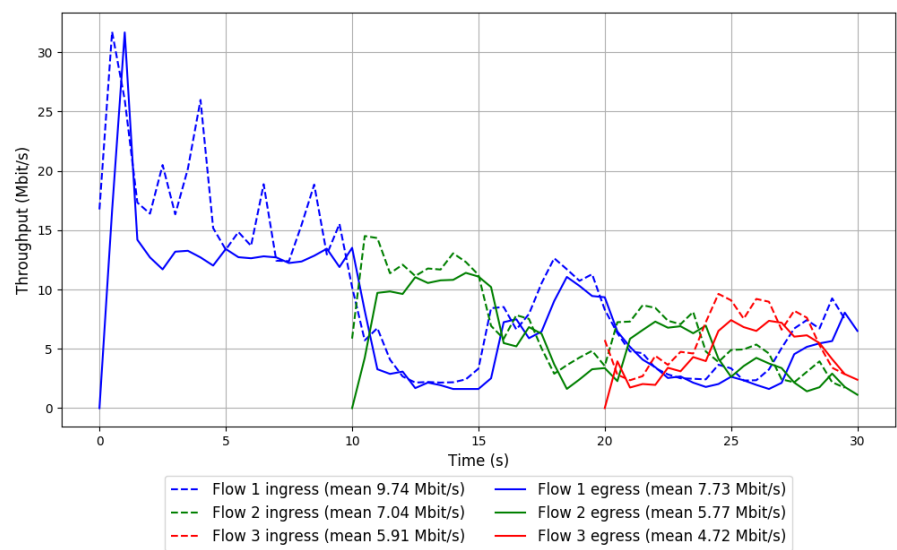
-- Flow 3:

Average throughput: 4.72 Mbit/s

95th percentile per-packet one-way delay: 2.534 ms

Loss rate: 20.05%

Run 4: Report of PCC-Expr — Data Link





Run 5: Statistics of PCC-Expr

Start at: 2019-02-11 19:12:35

End at: 2019-02-11 19:13:05

Local clock offset: -1.968 ms

Remote clock offset: 0.177 ms

# Below is generated by plot.py at 2019-02-11 19:26:36

# Datalink statistics

-- Total of 3 flows:

Average throughput: 13.12 Mbit/s

95th percentile per-packet one-way delay: 3.195 ms

Loss rate: 28.82%

-- Flow 1:

Average throughput: 7.06 Mbit/s

95th percentile per-packet one-way delay: 3.203 ms

Loss rate: 34.40%

-- Flow 2:

Average throughput: 6.64 Mbit/s

95th percentile per-packet one-way delay: 3.196 ms

Loss rate: 18.33%

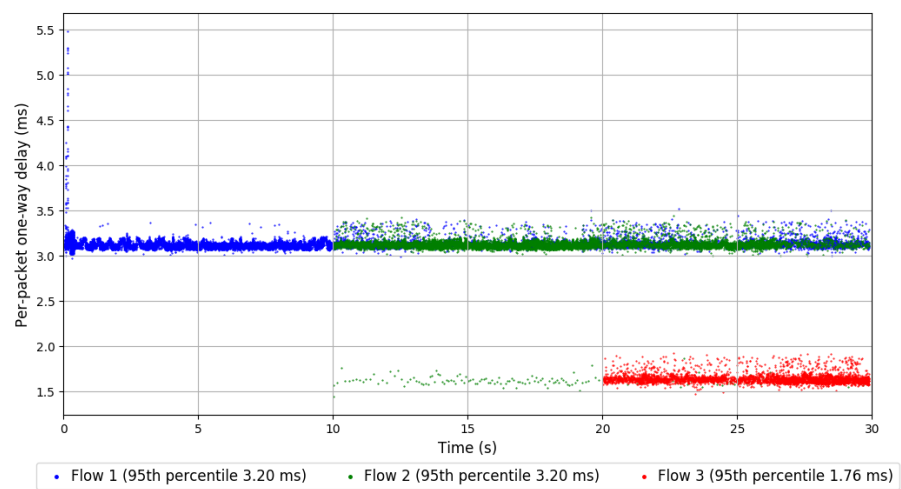
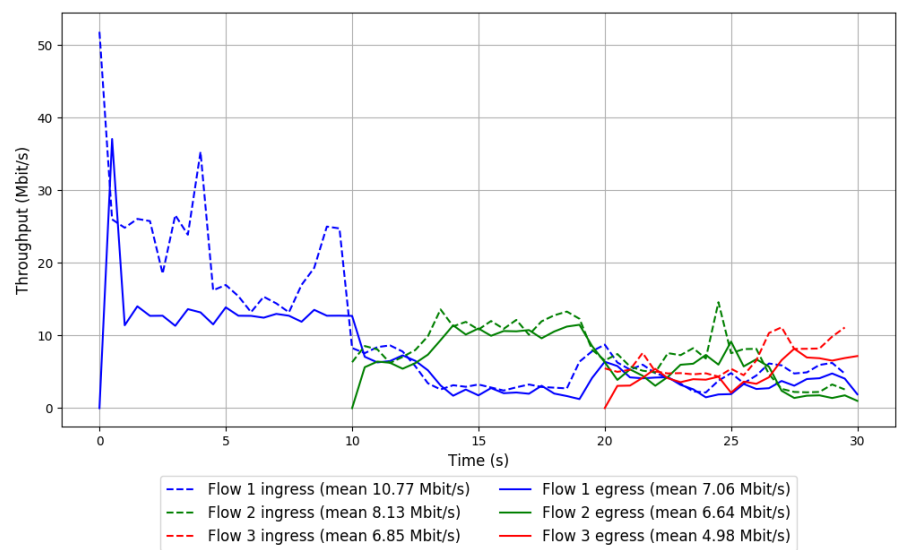
-- Flow 3:

Average throughput: 4.98 Mbit/s

95th percentile per-packet one-way delay: 1.762 ms

Loss rate: 27.33%

Run 5: Report of PCC-Expr — Data Link

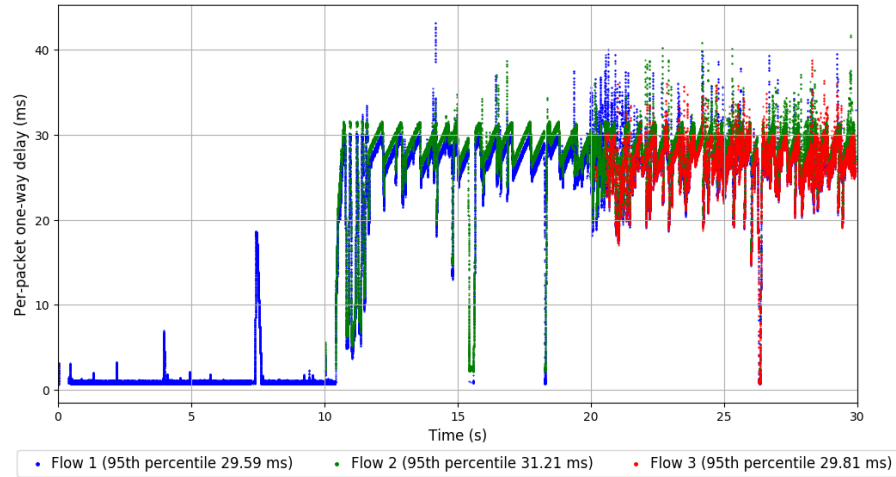
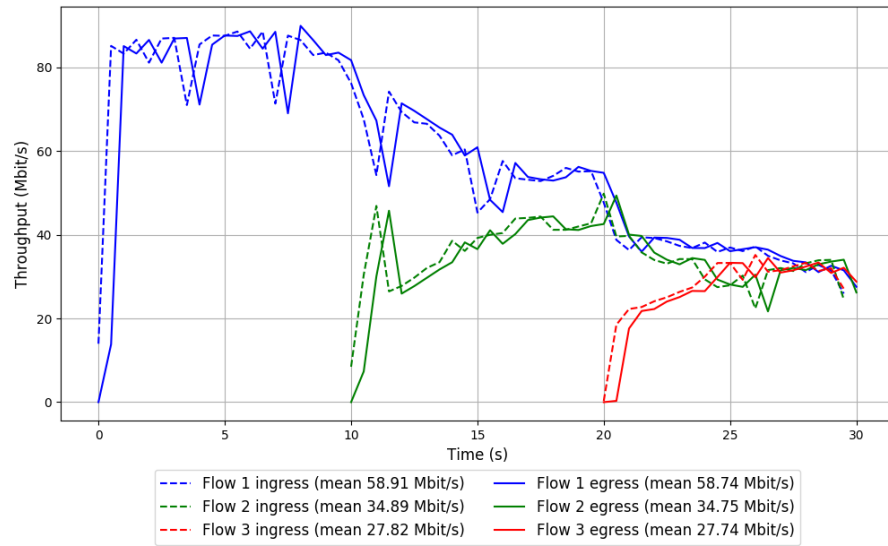


Run 1: Statistics of QUIC Cubic

Start at: 2019-02-11 17:27:42  
End at: 2019-02-11 17:28:12  
Local clock offset: -0.199 ms  
Remote clock offset: -0.441 ms

# Below is generated by plot.py at 2019-02-11 19:27:16  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 90.97 Mbit/s  
95th percentile per-packet one-way delay: 30.585 ms  
Loss rate: 0.21%  
-- Flow 1:  
Average throughput: 58.74 Mbit/s  
95th percentile per-packet one-way delay: 29.592 ms  
Loss rate: 0.18%  
-- Flow 2:  
Average throughput: 34.75 Mbit/s  
95th percentile per-packet one-way delay: 31.208 ms  
Loss rate: 0.25%  
-- Flow 3:  
Average throughput: 27.74 Mbit/s  
95th percentile per-packet one-way delay: 29.814 ms  
Loss rate: 0.29%

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

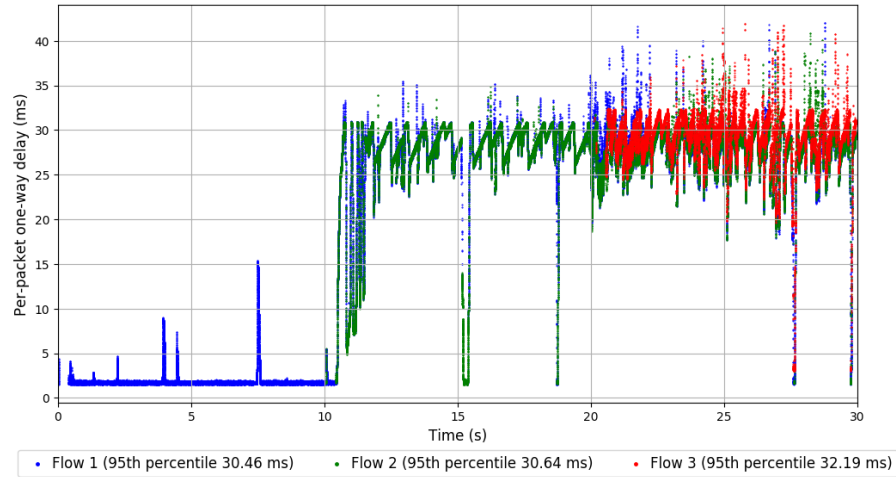
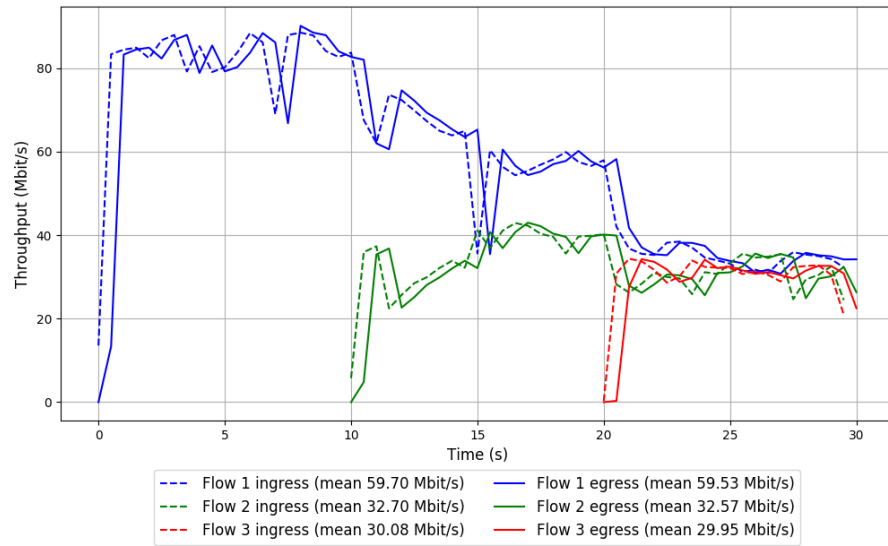


Run 2: Statistics of QUIC Cubic

Start at: 2019-02-11 17:51:38  
End at: 2019-02-11 17:52:08  
Local clock offset: -1.632 ms  
Remote clock offset: -0.206 ms

# Below is generated by plot.py at 2019-02-11 19:27:19  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 91.01 Mbit/s  
95th percentile per-packet one-way delay: 30.717 ms  
Loss rate: 0.24%  
-- Flow 1:  
Average throughput: 59.53 Mbit/s  
95th percentile per-packet one-way delay: 30.462 ms  
Loss rate: 0.20%  
-- Flow 2:  
Average throughput: 32.57 Mbit/s  
95th percentile per-packet one-way delay: 30.636 ms  
Loss rate: 0.27%  
-- Flow 3:  
Average throughput: 29.95 Mbit/s  
95th percentile per-packet one-way delay: 32.194 ms  
Loss rate: 0.42%

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

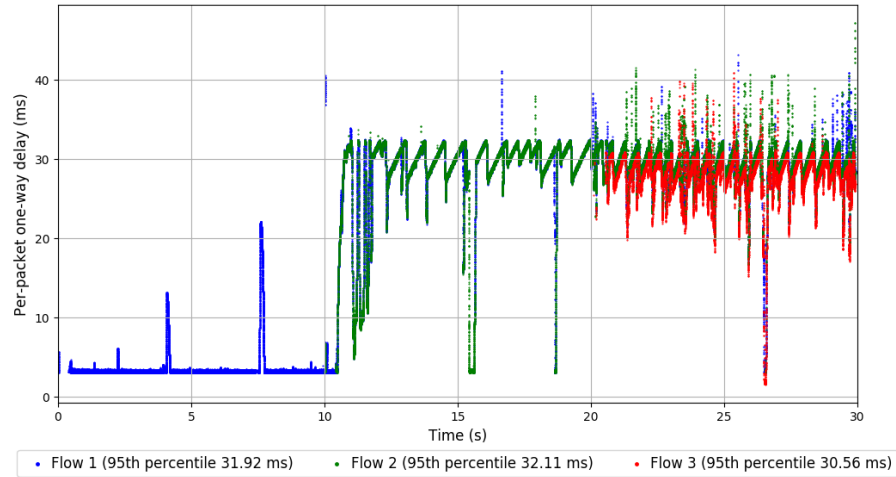
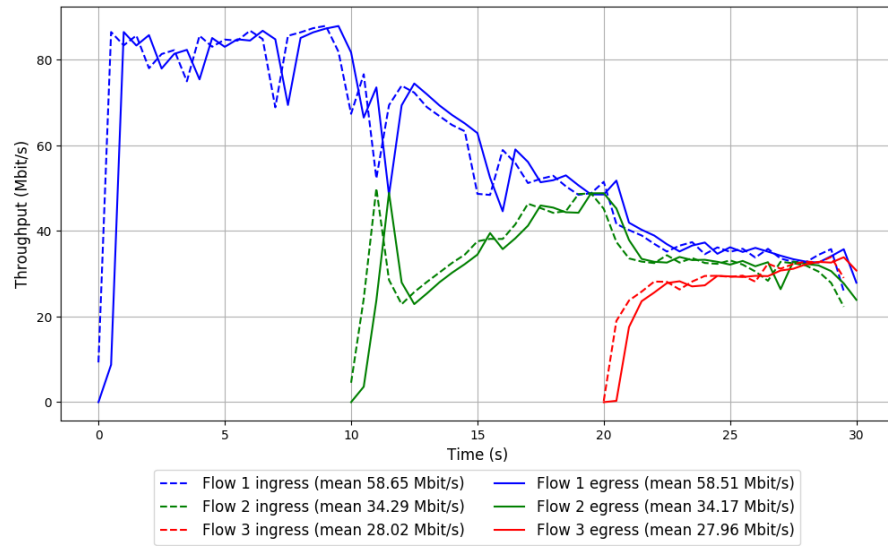


Run 3: Statistics of QUIC Cubic

Start at: 2019-02-11 18:15:34  
End at: 2019-02-11 18:16:04  
Local clock offset: -3.254 ms  
Remote clock offset: -0.012 ms

# Below is generated by plot.py at 2019-02-11 19:27:19  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 90.42 Mbit/s  
95th percentile per-packet one-way delay: 31.966 ms  
Loss rate: 0.18%  
-- Flow 1:  
Average throughput: 58.51 Mbit/s  
95th percentile per-packet one-way delay: 31.922 ms  
Loss rate: 0.16%  
-- Flow 2:  
Average throughput: 34.17 Mbit/s  
95th percentile per-packet one-way delay: 32.112 ms  
Loss rate: 0.22%  
-- Flow 3:  
Average throughput: 27.96 Mbit/s  
95th percentile per-packet one-way delay: 30.564 ms  
Loss rate: 0.21%

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





Run 4: Statistics of QUIC Cubic

Start at: 2019-02-11 18:39:29

End at: 2019-02-11 18:39:59

Local clock offset: -2.293 ms

Remote clock offset: 0.119 ms

# Below is generated by plot.py at 2019-02-11 19:27:20

# Datalink statistics

-- Total of 3 flows:

Average throughput: 90.48 Mbit/s

95th percentile per-packet one-way delay: 30.883 ms

Loss rate: 0.19%

-- Flow 1:

Average throughput: 58.22 Mbit/s

95th percentile per-packet one-way delay: 29.815 ms

Loss rate: 0.16%

-- Flow 2:

Average throughput: 34.86 Mbit/s

95th percentile per-packet one-way delay: 31.430 ms

Loss rate: 0.24%

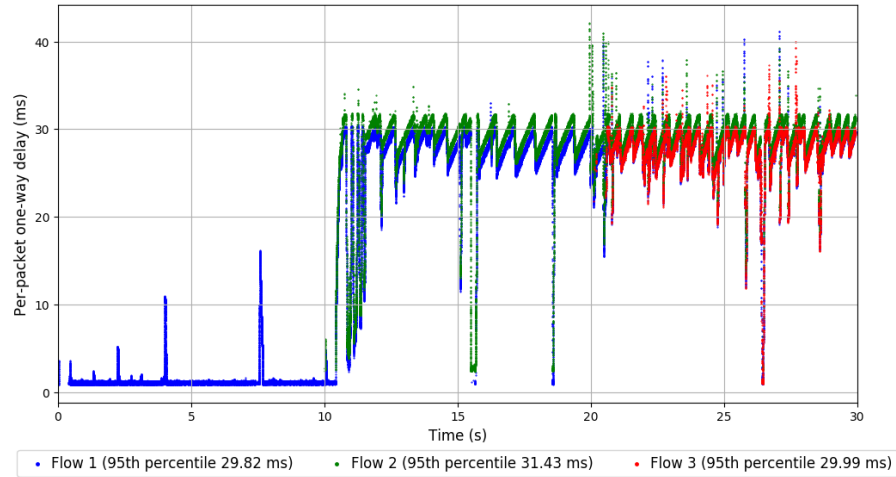
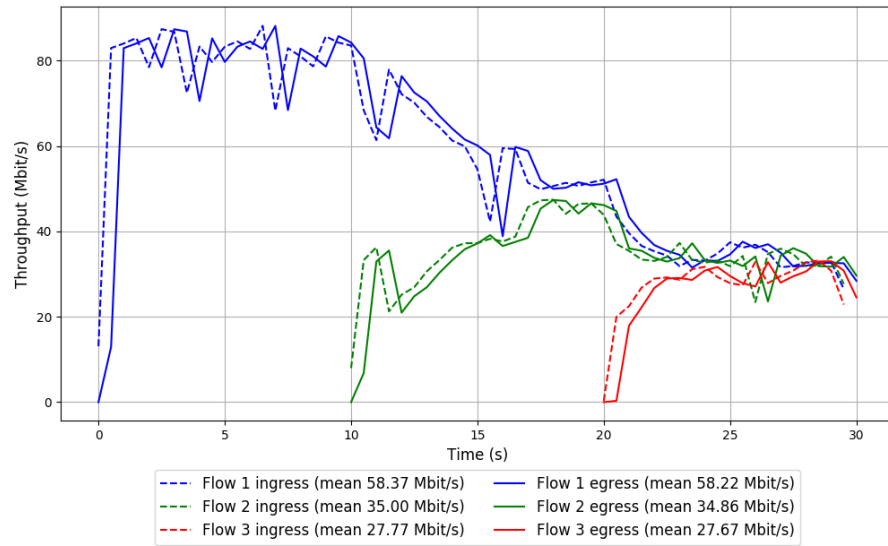
-- Flow 3:

Average throughput: 27.67 Mbit/s

95th percentile per-packet one-way delay: 29.988 ms

Loss rate: 0.28%

# Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2019-02-11 19:03:25

End at: 2019-02-11 19:03:55

Local clock offset: -1.665 ms

Remote clock offset: 0.191 ms

# Below is generated by plot.py at 2019-02-11 19:27:20

# Datalink statistics

-- Total of 3 flows:

Average throughput: 88.73 Mbit/s

95th percentile per-packet one-way delay: 30.697 ms

Loss rate: 0.13%

-- Flow 1:

Average throughput: 54.66 Mbit/s

95th percentile per-packet one-way delay: 30.463 ms

Loss rate: 0.10%

-- Flow 2:

Average throughput: 37.63 Mbit/s

95th percentile per-packet one-way delay: 30.636 ms

Loss rate: 0.15%

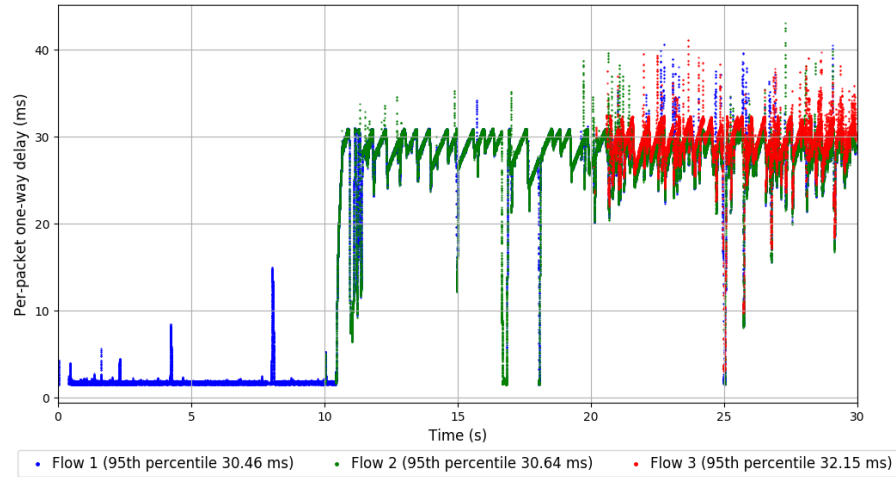
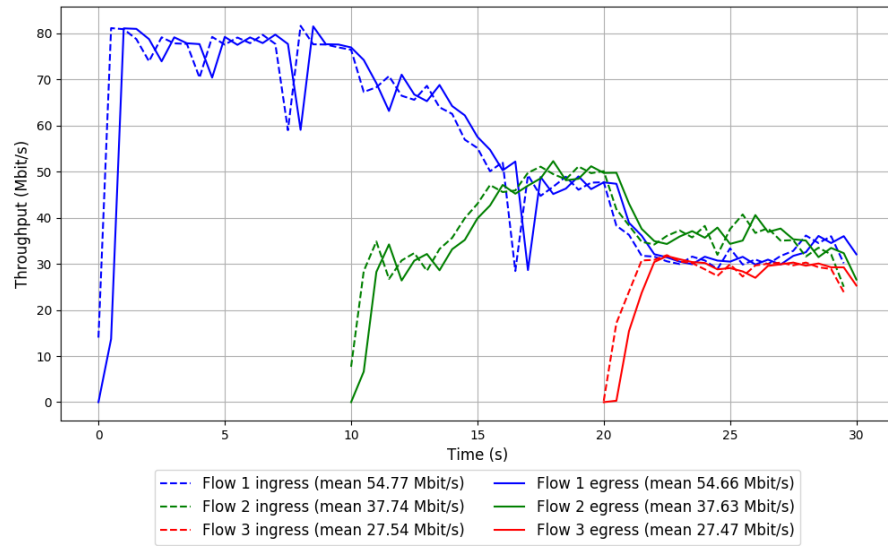
-- Flow 3:

Average throughput: 27.47 Mbit/s

95th percentile per-packet one-way delay: 32.152 ms

Loss rate: 0.24%

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

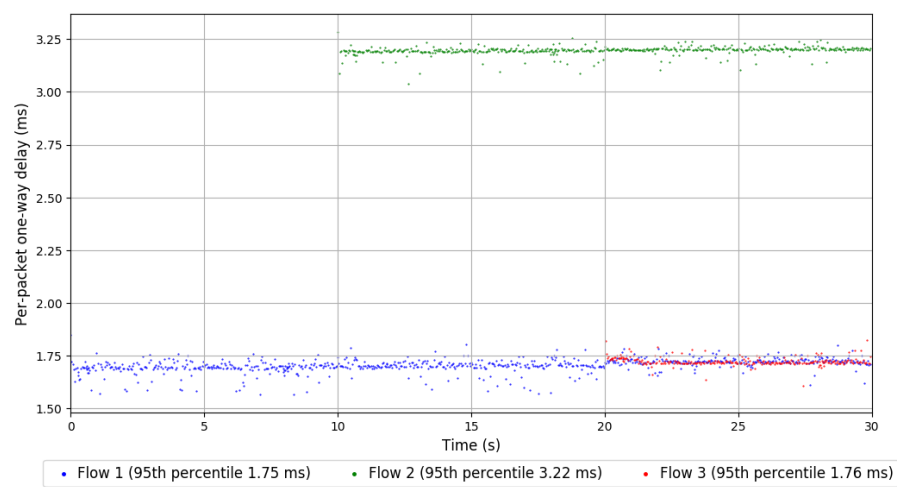
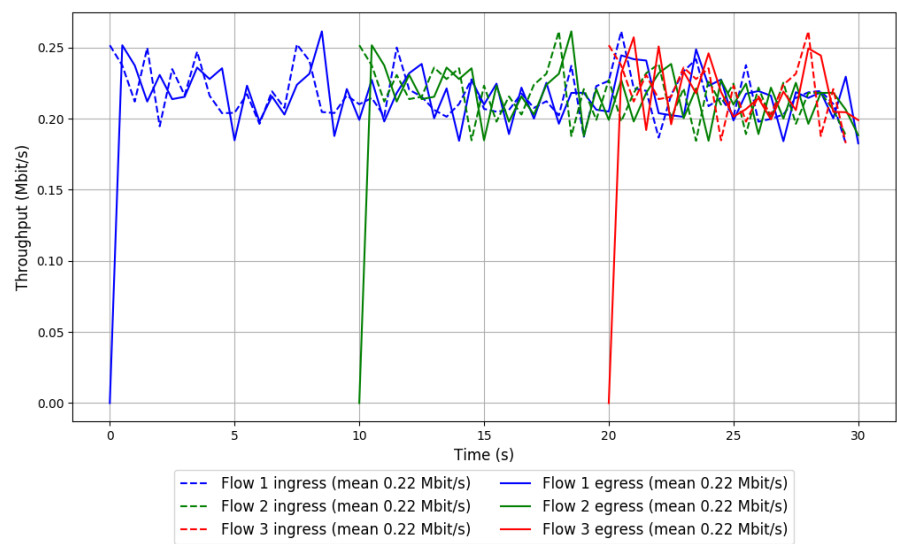


Run 1: Statistics of SReAM

Start at: 2019-02-11 17:23:09  
End at: 2019-02-11 17:23:39  
Local clock offset: -1.141 ms  
Remote clock offset: -0.395 ms

# Below is generated by plot.py at 2019-02-11 19:27:20  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.44 Mbit/s  
95th percentile per-packet one-way delay: 3.207 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 1.749 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 3.221 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 1.762 ms  
Loss rate: 0.00%

Run 1: Report of SReAM — Data Link

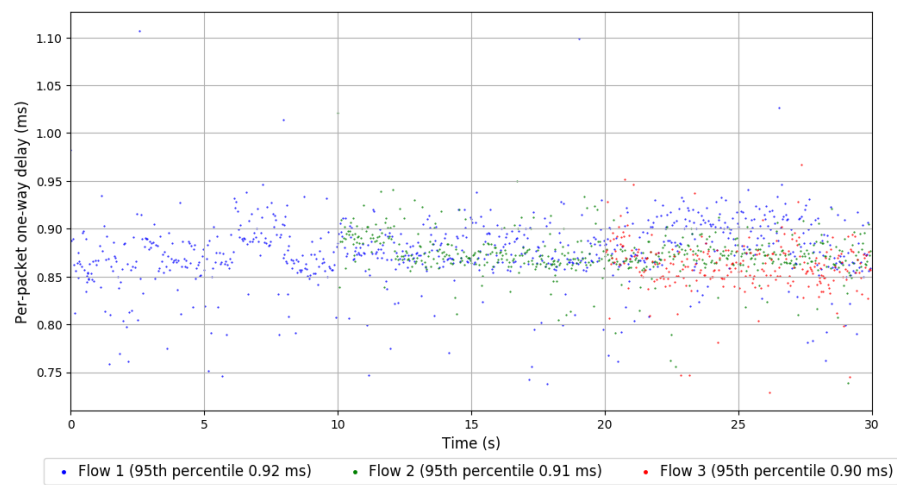
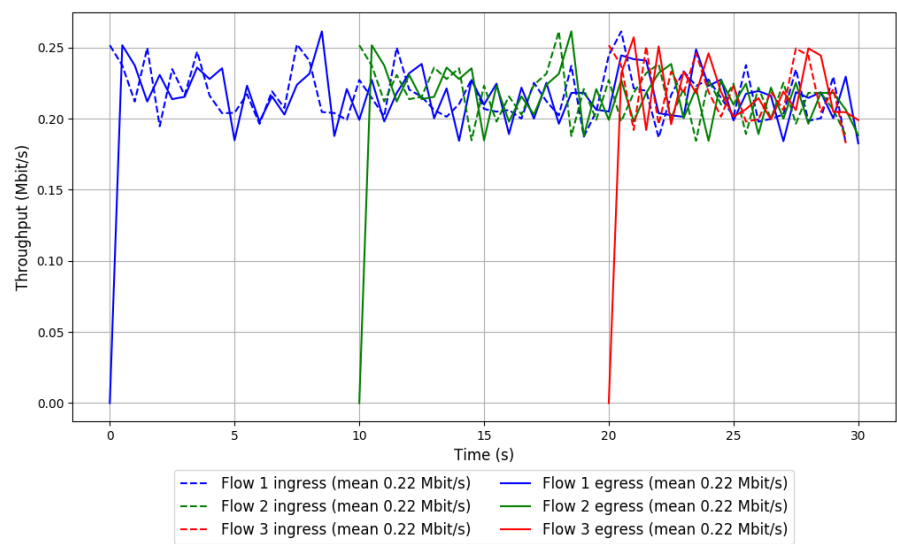


Run 2: Statistics of SReAM

Start at: 2019-02-11 17:47:05  
End at: 2019-02-11 17:47:35  
Local clock offset: -0.843 ms  
Remote clock offset: -0.295 ms

# Below is generated by plot.py at 2019-02-11 19:27:20  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.44 Mbit/s  
95th percentile per-packet one-way delay: 0.917 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 0.922 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 0.908 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 0.896 ms  
Loss rate: 0.00%

Run 2: Report of SReAM — Data Link



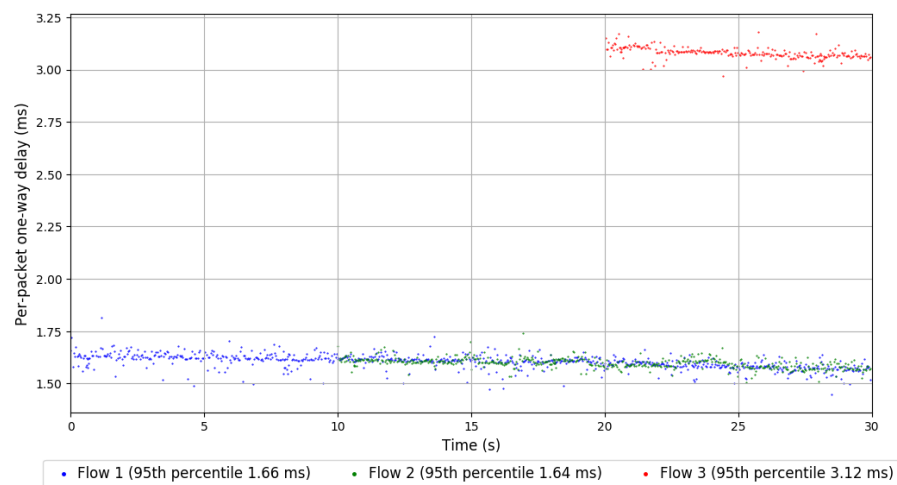
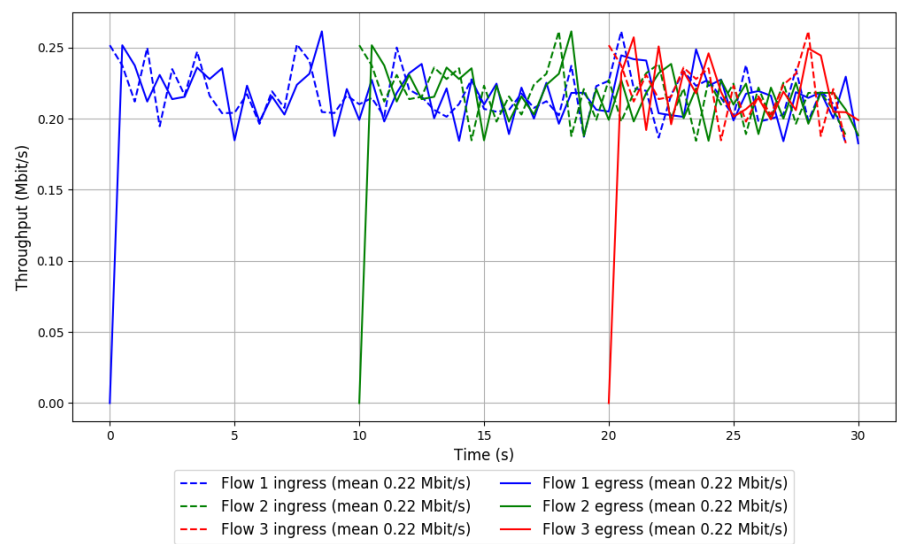


Run 3: Statistics of SReAM

Start at: 2019-02-11 18:11:01  
End at: 2019-02-11 18:11:31  
Local clock offset: -2.748 ms  
Remote clock offset: -0.037 ms

# Below is generated by plot.py at 2019-02-11 19:27:20  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.44 Mbit/s  
95th percentile per-packet one-way delay: 3.090 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 1.655 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 1.638 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 3.120 ms  
Loss rate: 0.00%

Run 3: Report of SReAM — Data Link



Run 4: Statistics of SReAM

Start at: 2019-02-11 18:34:56

End at: 2019-02-11 18:35:27

Local clock offset: -3.767 ms

Remote clock offset: 0.069 ms

# Below is generated by plot.py at 2019-02-11 19:27:20

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 3.327 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.841 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 3.340 ms

Loss rate: 0.00%

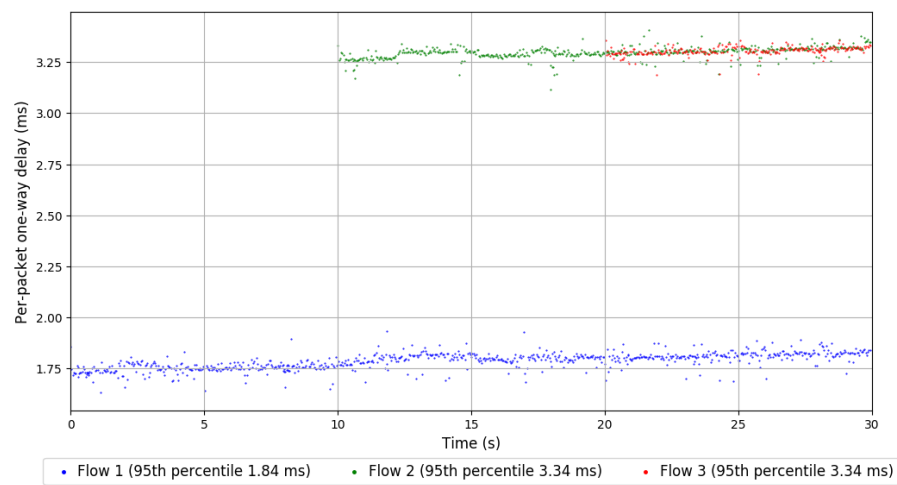
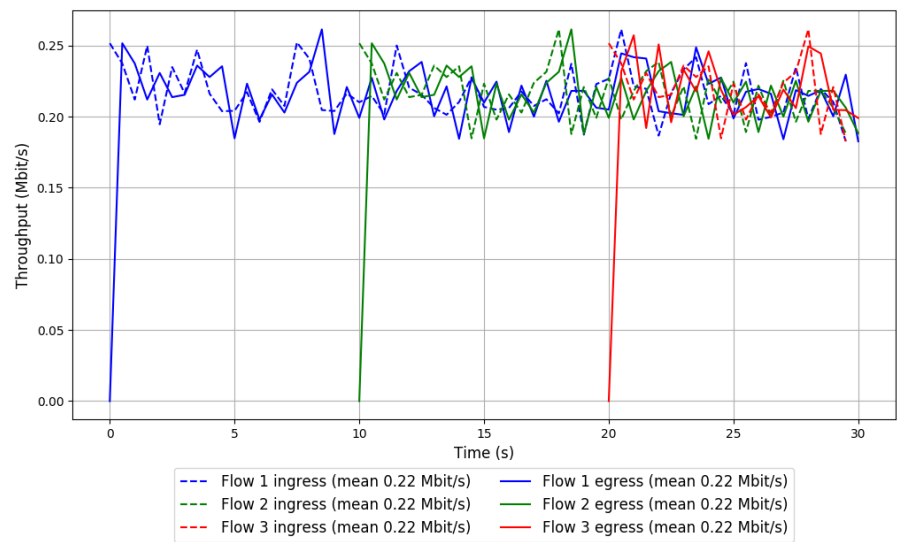
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 3.338 ms

Loss rate: 0.00%

Run 4: Report of SReAM — Data Link



Run 5: Statistics of SReAM

Start at: 2019-02-11 18:58:52

End at: 2019-02-11 18:59:22

Local clock offset: -1.793 ms

Remote clock offset: 0.077 ms

# Below is generated by plot.py at 2019-02-11 19:27:20

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 3.119 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.677 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.668 ms

Loss rate: 0.00%

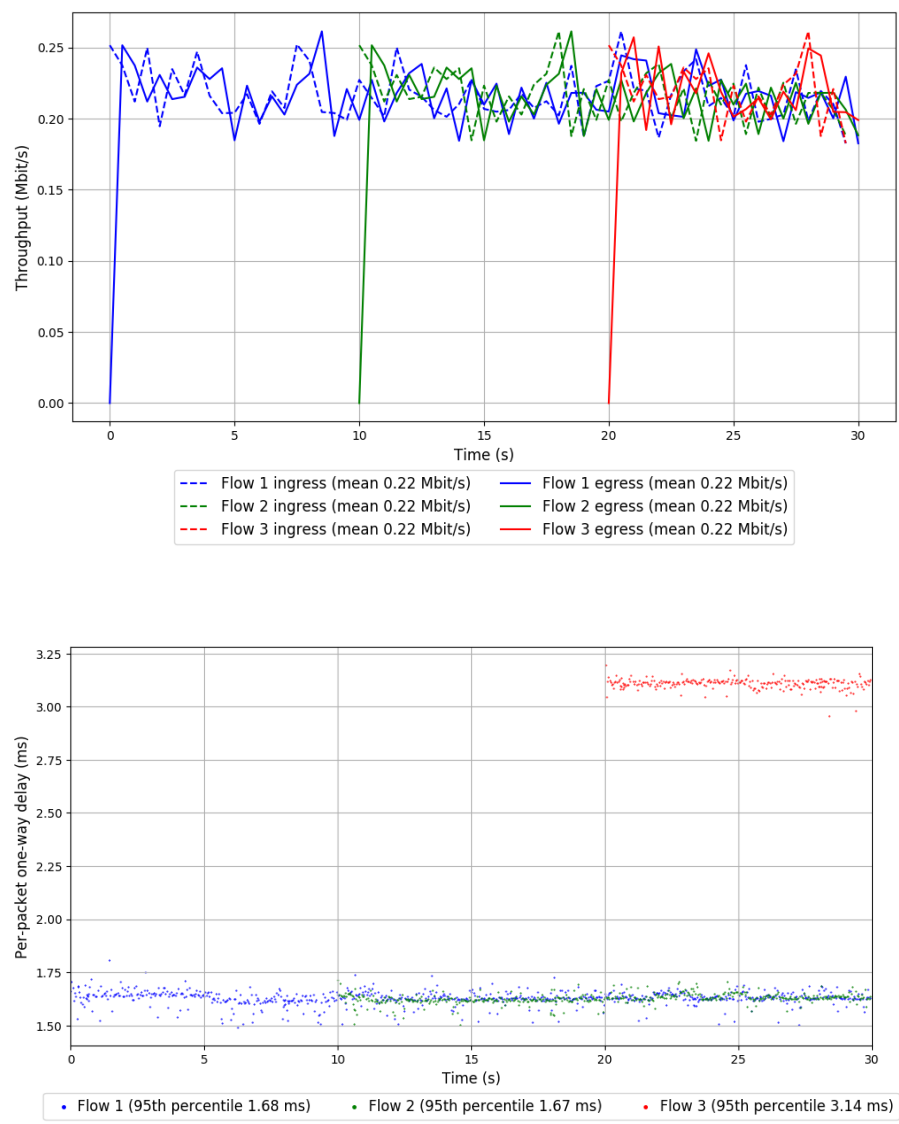
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 3.137 ms

Loss rate: 0.00%

Run 5: Report of SReAM — Data Link

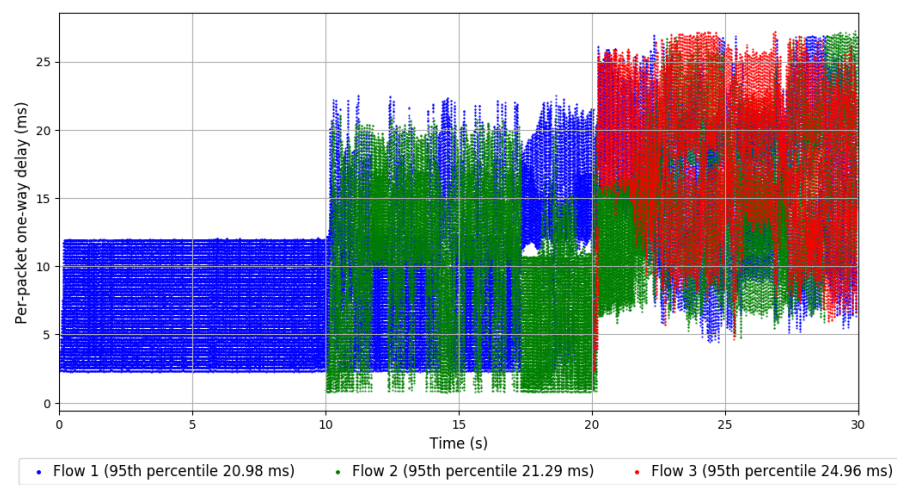
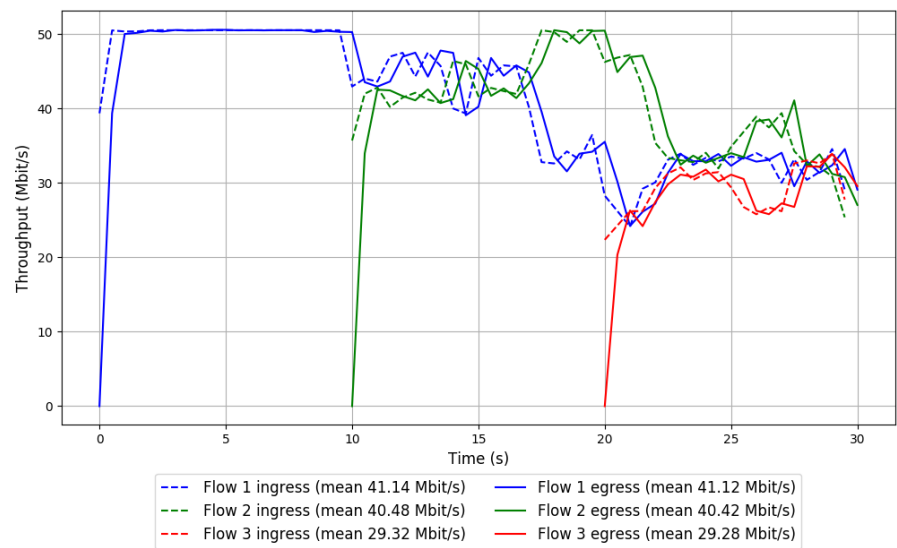


Run 1: Statistics of Sprout

Start at: 2019-02-11 17:25:25  
End at: 2019-02-11 17:25:55  
Local clock offset: -0.261 ms  
Remote clock offset: -0.394 ms

# Below is generated by plot.py at 2019-02-11 19:27:20  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 77.69 Mbit/s  
95th percentile per-packet one-way delay: 22.448 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 41.12 Mbit/s  
95th percentile per-packet one-way delay: 20.977 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 40.42 Mbit/s  
95th percentile per-packet one-way delay: 21.294 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 29.28 Mbit/s  
95th percentile per-packet one-way delay: 24.957 ms  
Loss rate: 0.00%

Run 1: Report of Sprout — Data Link



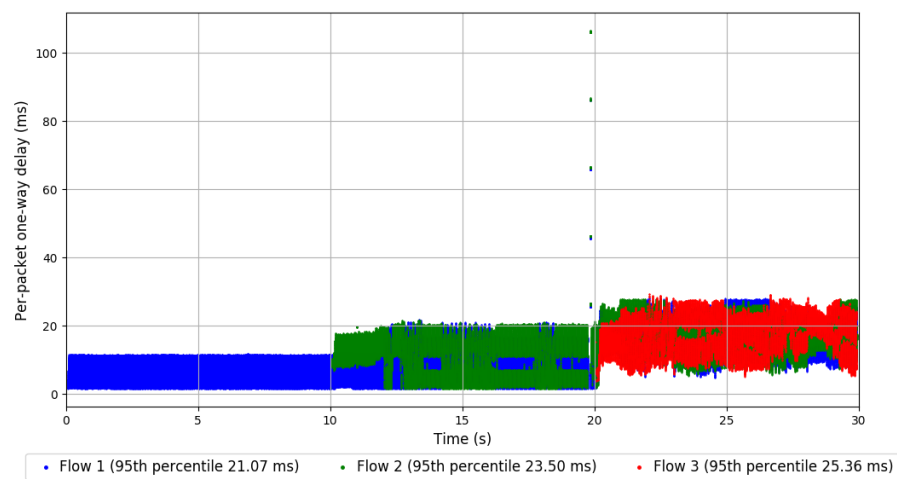
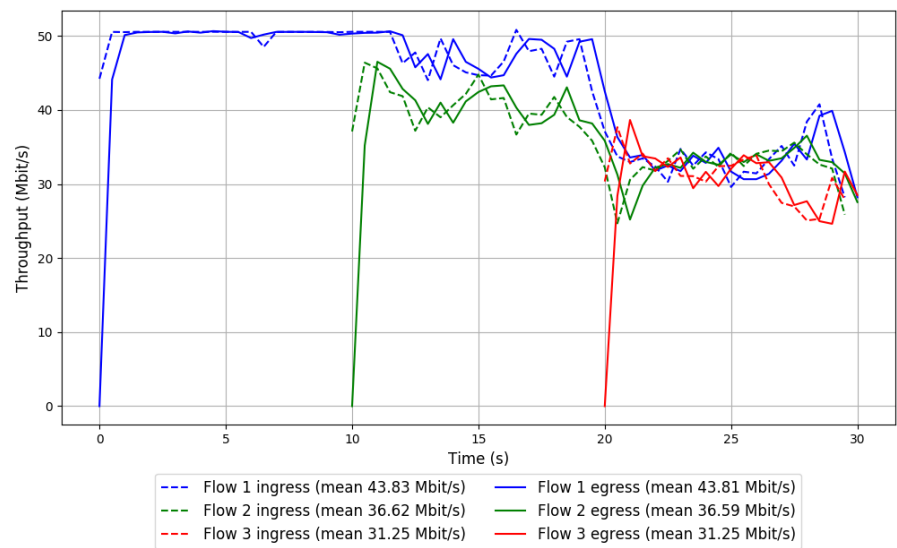


Run 2: Statistics of Sprout

Start at: 2019-02-11 17:49:21  
End at: 2019-02-11 17:49:51  
Local clock offset: -1.711 ms  
Remote clock offset: -0.324 ms

# Below is generated by plot.py at 2019-02-11 19:27:20  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 78.47 Mbit/s  
95th percentile per-packet one-way delay: 23.270 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 43.81 Mbit/s  
95th percentile per-packet one-way delay: 21.065 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 36.59 Mbit/s  
95th percentile per-packet one-way delay: 23.501 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 31.25 Mbit/s  
95th percentile per-packet one-way delay: 25.363 ms  
Loss rate: 0.00%

Run 2: Report of Sprout — Data Link

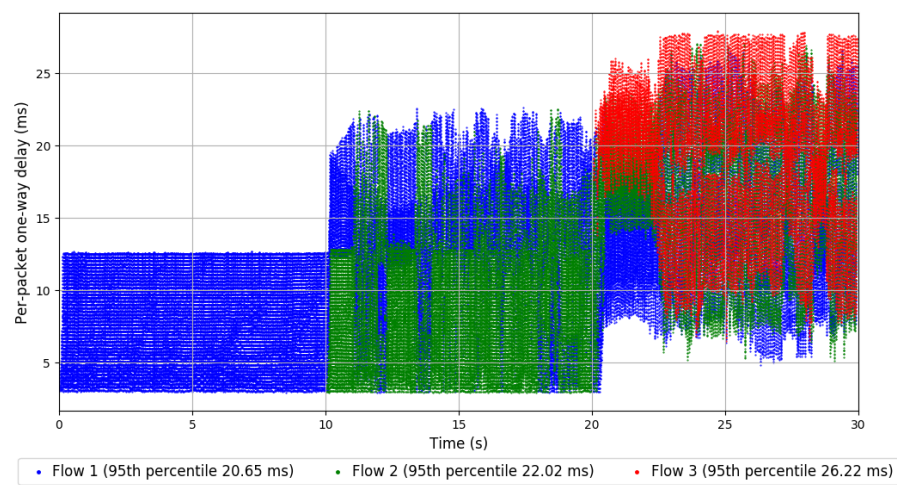
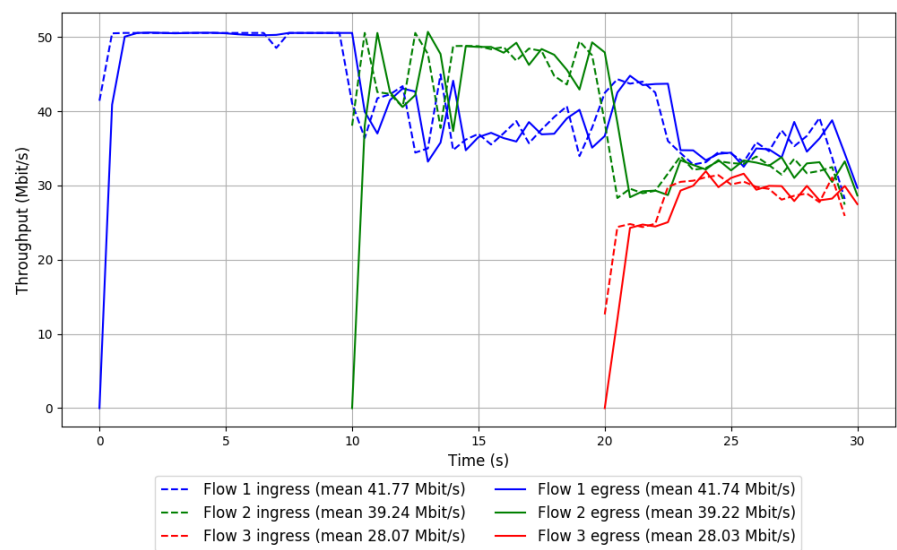


Run 3: Statistics of Sprout

Start at: 2019-02-11 18:13:17  
End at: 2019-02-11 18:13:47  
Local clock offset: -2.976 ms  
Remote clock offset: -0.07 ms

# Below is generated by plot.py at 2019-02-11 19:27:38  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 77.08 Mbit/s  
95th percentile per-packet one-way delay: 22.791 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 41.74 Mbit/s  
95th percentile per-packet one-way delay: 20.654 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 39.22 Mbit/s  
95th percentile per-packet one-way delay: 22.018 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 28.03 Mbit/s  
95th percentile per-packet one-way delay: 26.224 ms  
Loss rate: 0.00%

Run 3: Report of Sprout — Data Link



Run 4: Statistics of Sprout

Start at: 2019-02-11 18:37:12

End at: 2019-02-11 18:37:42

Local clock offset: -3.319 ms

Remote clock offset: 0.073 ms

# Below is generated by plot.py at 2019-02-11 19:28:04

# Datalink statistics

-- Total of 3 flows:

Average throughput: 77.67 Mbit/s

95th percentile per-packet one-way delay: 22.530 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 42.44 Mbit/s

95th percentile per-packet one-way delay: 20.527 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 38.29 Mbit/s

95th percentile per-packet one-way delay: 22.241 ms

Loss rate: 0.00%

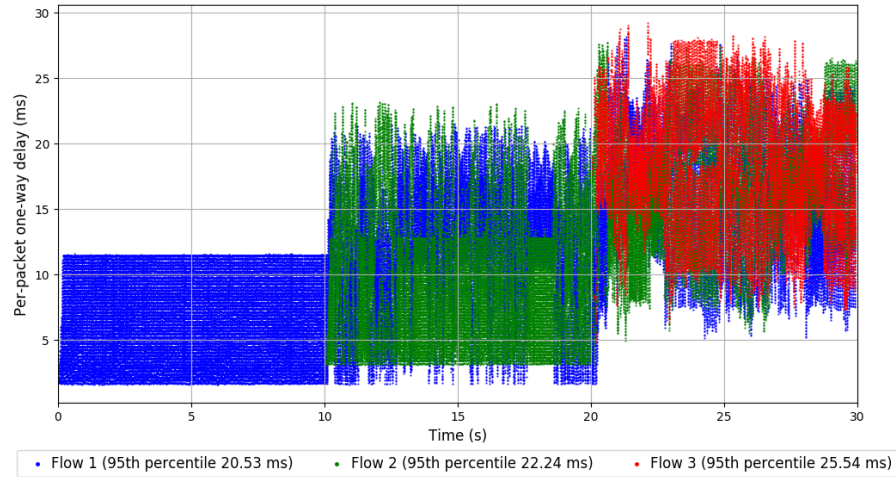
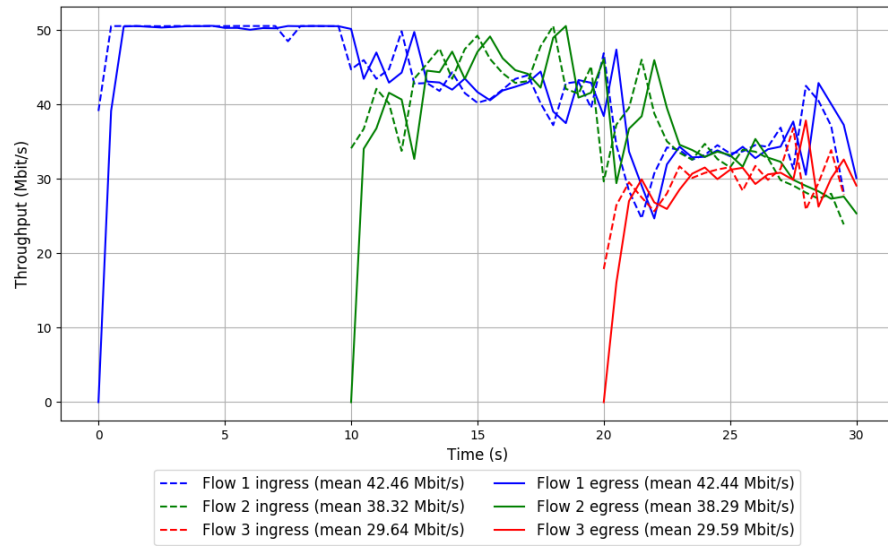
-- Flow 3:

Average throughput: 29.59 Mbit/s

95th percentile per-packet one-way delay: 25.540 ms

Loss rate: 0.00%

# Run 4: Report of Sprout — Data Link

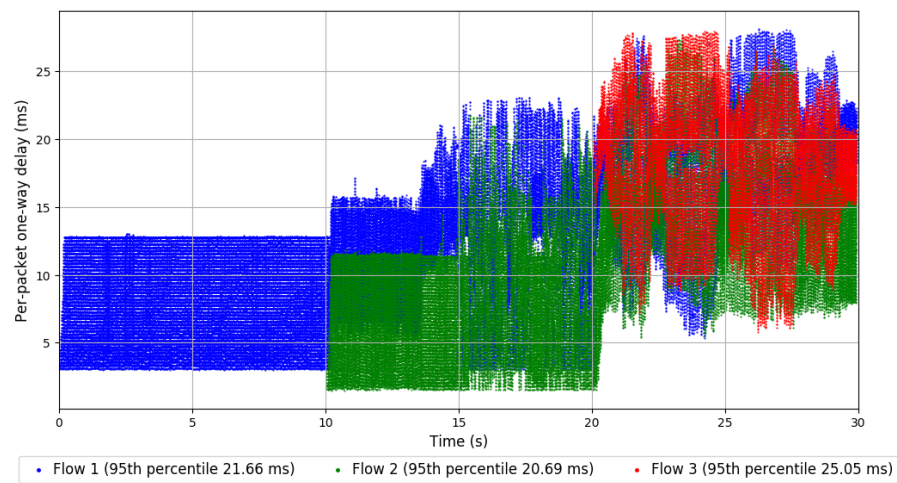
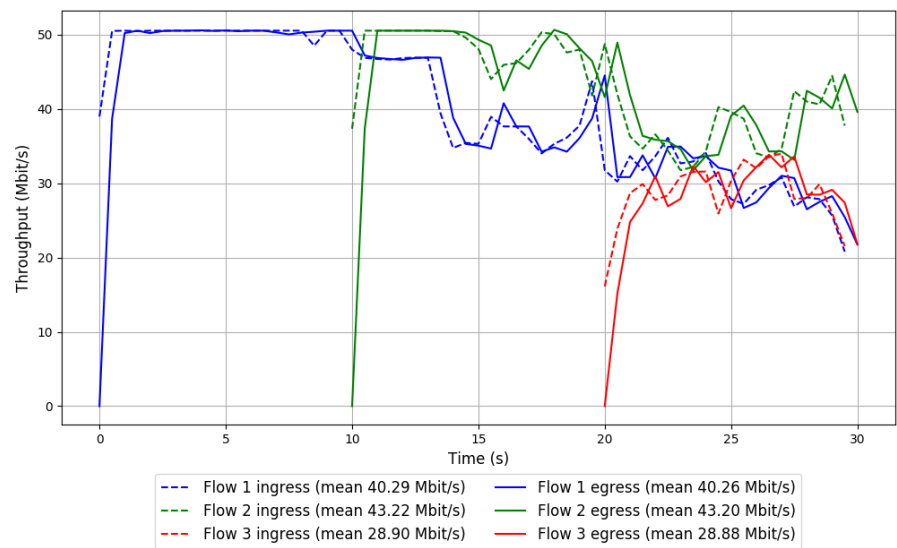


Run 5: Statistics of Sprout

Start at: 2019-02-11 19:01:08  
End at: 2019-02-11 19:01:38  
Local clock offset: -1.705 ms  
Remote clock offset: 0.121 ms

# Below is generated by plot.py at 2019-02-11 19:28:06  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 78.53 Mbit/s  
95th percentile per-packet one-way delay: 22.372 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 40.26 Mbit/s  
95th percentile per-packet one-way delay: 21.660 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 43.20 Mbit/s  
95th percentile per-packet one-way delay: 20.692 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 28.88 Mbit/s  
95th percentile per-packet one-way delay: 25.055 ms  
Loss rate: 0.00%

Run 5: Report of Sprout — Data Link



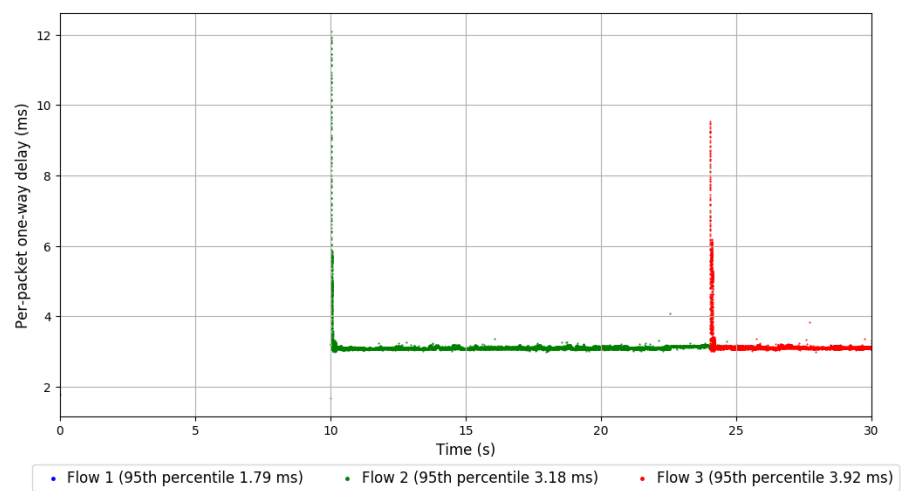
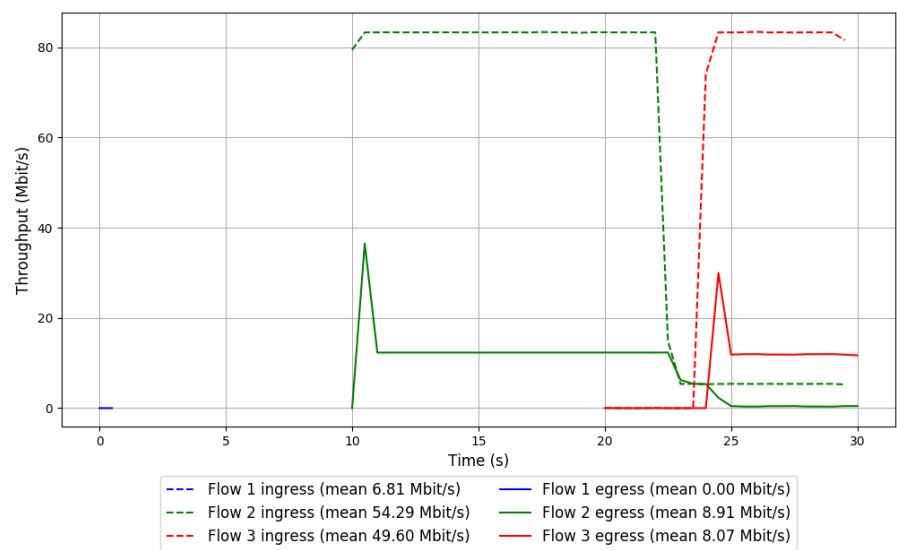


Run 1: Statistics of TaoVA-100x

Start at: 2019-02-11 17:32:19  
End at: 2019-02-11 17:32:49  
Local clock offset: -0.776 ms  
Remote clock offset: -0.406 ms

# Below is generated by plot.py at 2019-02-11 19:28:06  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 8.62 Mbit/s  
95th percentile per-packet one-way delay: 3.218 ms  
Loss rate: 83.64%  
-- Flow 1:  
Average throughput: 0.00 Mbit/s  
95th percentile per-packet one-way delay: 1.791 ms  
Loss rate: 95.92%  
-- Flow 2:  
Average throughput: 8.91 Mbit/s  
95th percentile per-packet one-way delay: 3.181 ms  
Loss rate: 83.59%  
-- Flow 3:  
Average throughput: 8.07 Mbit/s  
95th percentile per-packet one-way delay: 3.917 ms  
Loss rate: 83.74%

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

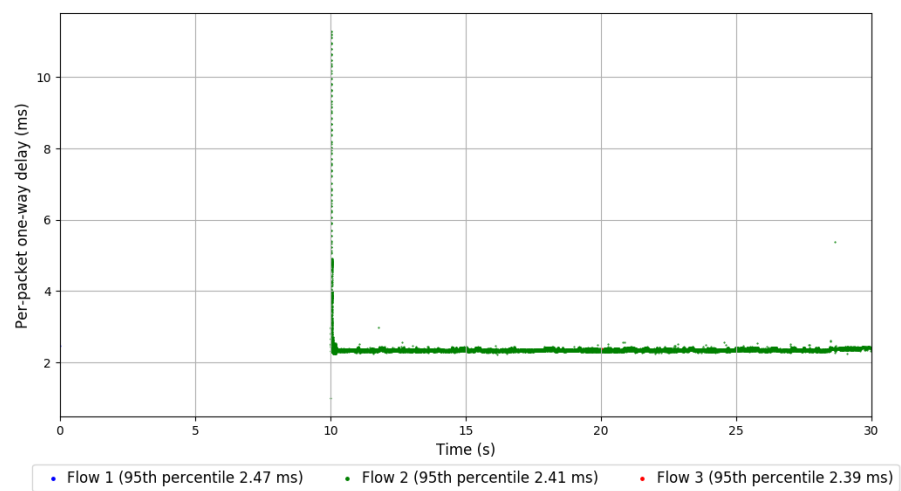
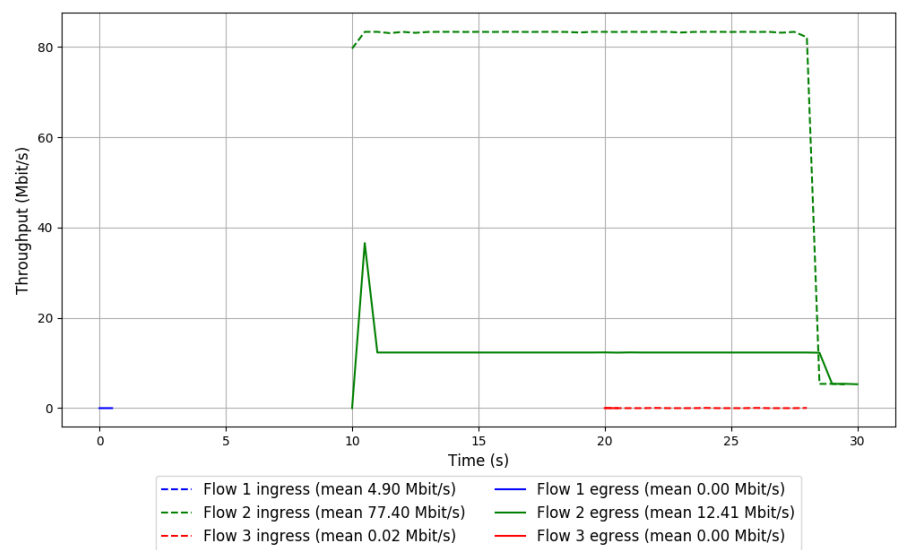


Run 2: Statistics of TaoVA-100x

Start at: 2019-02-11 17:56:15  
End at: 2019-02-11 17:56:45  
Local clock offset: -0.843 ms  
Remote clock offset: -0.199 ms

# Below is generated by plot.py at 2019-02-11 19:28:06  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 8.27 Mbit/s  
95th percentile per-packet one-way delay: 2.412 ms  
Loss rate: 83.96%  
-- Flow 1:  
Average throughput: 0.00 Mbit/s  
95th percentile per-packet one-way delay: 2.467 ms  
Loss rate: 95.92%  
-- Flow 2:  
Average throughput: 12.41 Mbit/s  
95th percentile per-packet one-way delay: 2.412 ms  
Loss rate: 83.96%  
-- Flow 3:  
Average throughput: 0.00 Mbit/s  
95th percentile per-packet one-way delay: 2.388 ms  
Loss rate: 99.16%

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



Run 3: Statistics of TaoVA-100x

Start at: 2019-02-11 18:20:11

End at: 2019-02-11 18:20:41

Local clock offset: -3.479 ms

Remote clock offset: 0.019 ms

# Below is generated by plot.py at 2019-02-11 19:28:06

# Datalink statistics

-- Total of 3 flows:

Average throughput: 8.27 Mbit/s

95th percentile per-packet one-way delay: 3.134 ms

Loss rate: 83.96%

-- Flow 1:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 3.217 ms

Loss rate: 95.92%

-- Flow 2:

Average throughput: 12.41 Mbit/s

95th percentile per-packet one-way delay: 3.134 ms

Loss rate: 83.96%

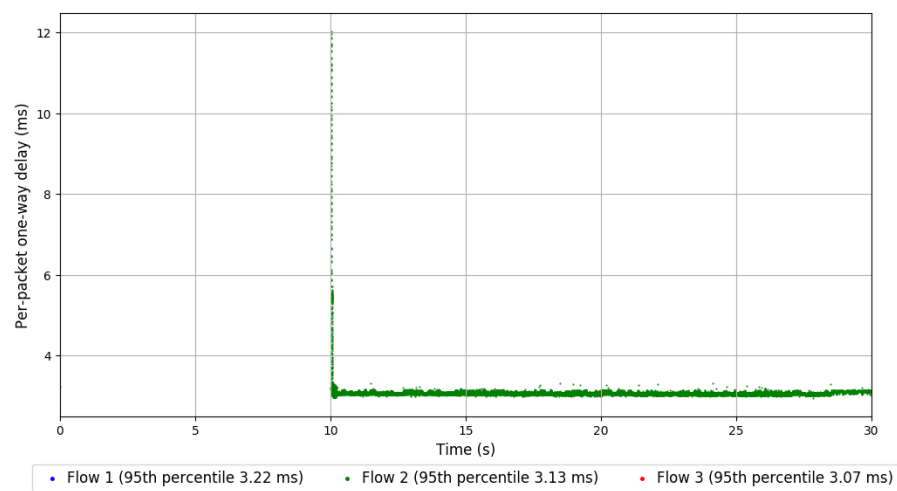
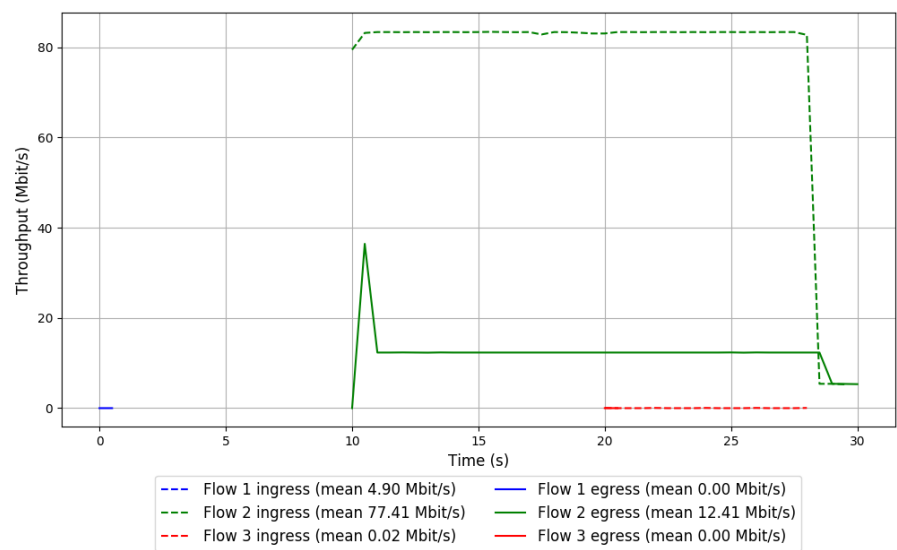
-- Flow 3:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 3.070 ms

Loss rate: 99.16%

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



Run 4: Statistics of TaoVA-100x

Start at: 2019-02-11 18:44:06

End at: 2019-02-11 18:44:36

Local clock offset: -1.743 ms

Remote clock offset: 0.078 ms

# Below is generated by plot.py at 2019-02-11 19:28:06

# Datalink statistics

-- Total of 3 flows:

Average throughput: 7.10 Mbit/s

95th percentile per-packet one-way delay: 2.495 ms

Loss rate: 80.04%

-- Flow 1:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 0.874 ms

Loss rate: 95.92%

-- Flow 2:

Average throughput: 4.14 Mbit/s

95th percentile per-packet one-way delay: 2.507 ms

Loss rate: 65.16%

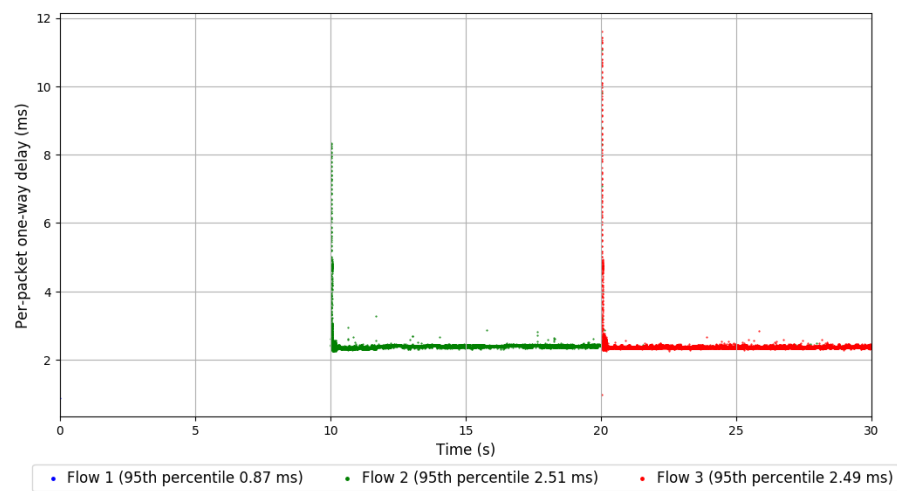
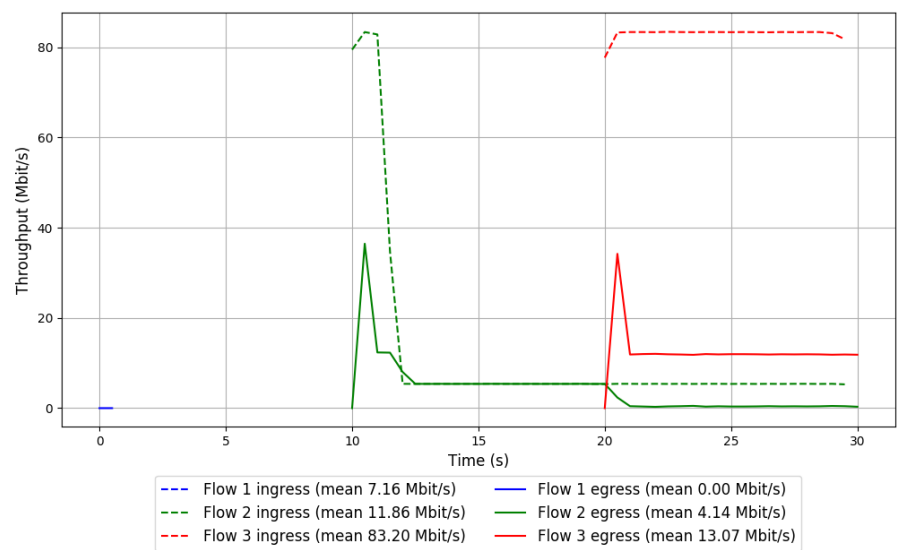
-- Flow 3:

Average throughput: 13.07 Mbit/s

95th percentile per-packet one-way delay: 2.489 ms

Loss rate: 84.29%

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





Run 5: Statistics of TaoVA-100x

Start at: 2019-02-11 19:08:02

End at: 2019-02-11 19:08:32

Local clock offset: -1.152 ms

Remote clock offset: 0.234 ms

# Below is generated by plot.py at 2019-02-11 19:28:06

# Datalink statistics

-- Total of 3 flows:

Average throughput: 8.62 Mbit/s

95th percentile per-packet one-way delay: 2.516 ms

Loss rate: 93.04%

-- Flow 1:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 2.395 ms

Loss rate: 95.92%

-- Flow 2:

Average throughput: 8.11 Mbit/s

95th percentile per-packet one-way delay: 2.535 ms

Loss rate: 90.23%

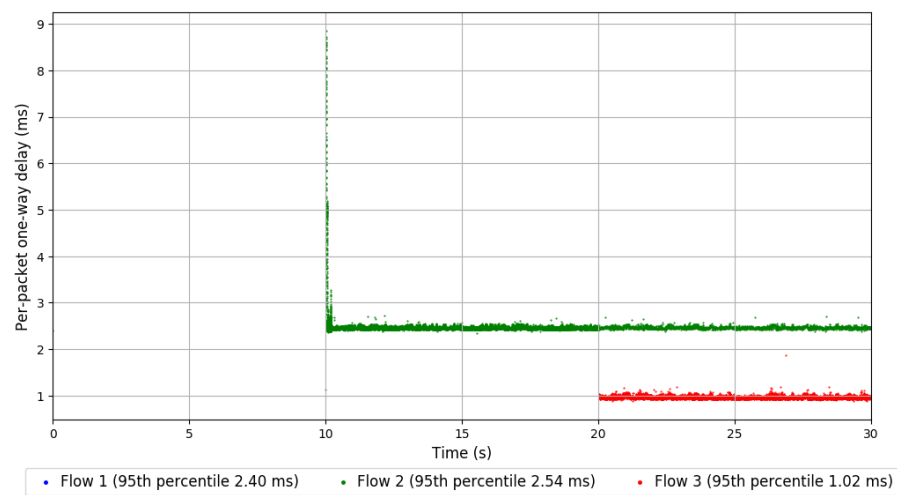
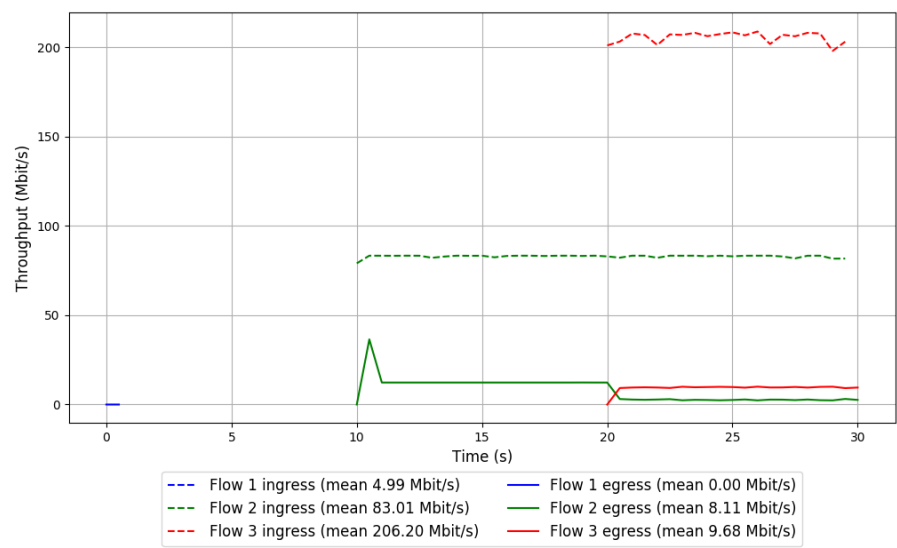
-- Flow 3:

Average throughput: 9.68 Mbit/s

95th percentile per-packet one-way delay: 1.024 ms

Loss rate: 95.31%

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

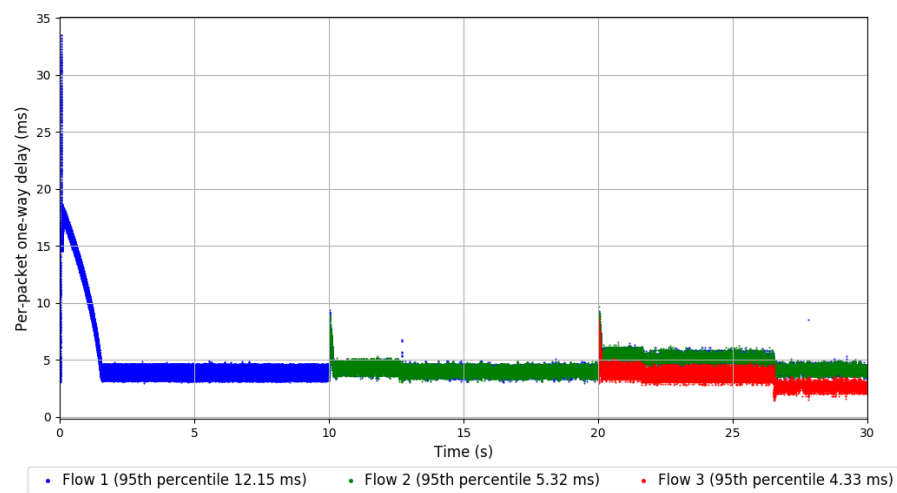
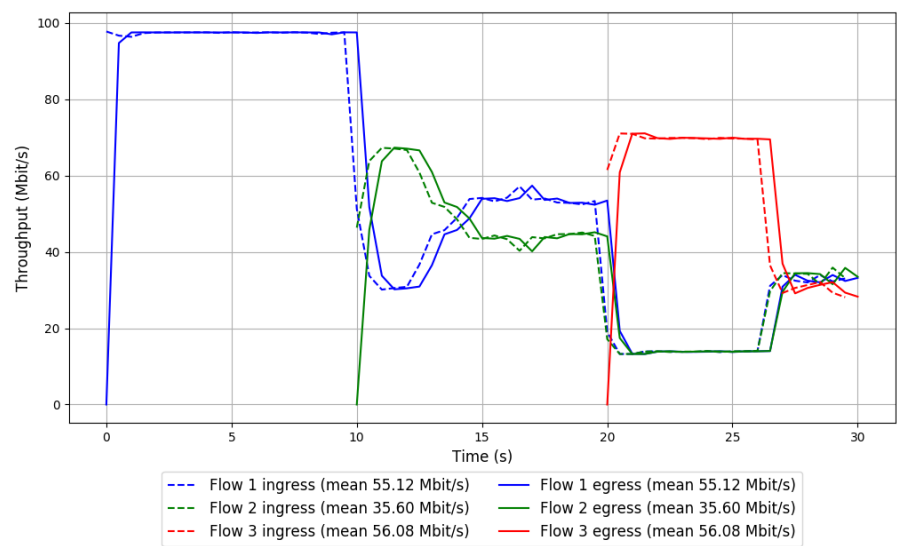


Run 1: Statistics of TCP Vegas

Start at: 2019-02-11 17:35:42  
End at: 2019-02-11 17:36:12  
Local clock offset: -0.898 ms  
Remote clock offset: -0.363 ms

# Below is generated by plot.py at 2019-02-11 19:28:37  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 97.47 Mbit/s  
95th percentile per-packet one-way delay: 6.327 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 55.12 Mbit/s  
95th percentile per-packet one-way delay: 12.150 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 35.60 Mbit/s  
95th percentile per-packet one-way delay: 5.323 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 56.08 Mbit/s  
95th percentile per-packet one-way delay: 4.331 ms  
Loss rate: 0.00%

Run 1: Report of TCP Vegas — Data Link

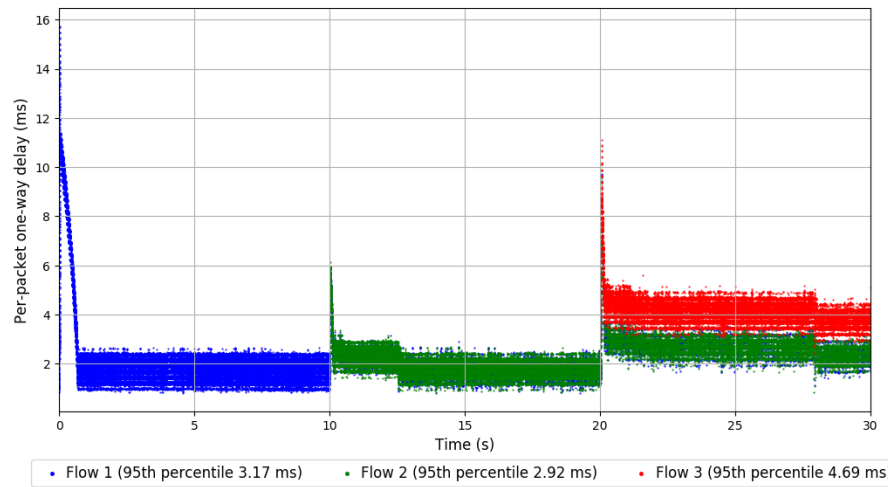
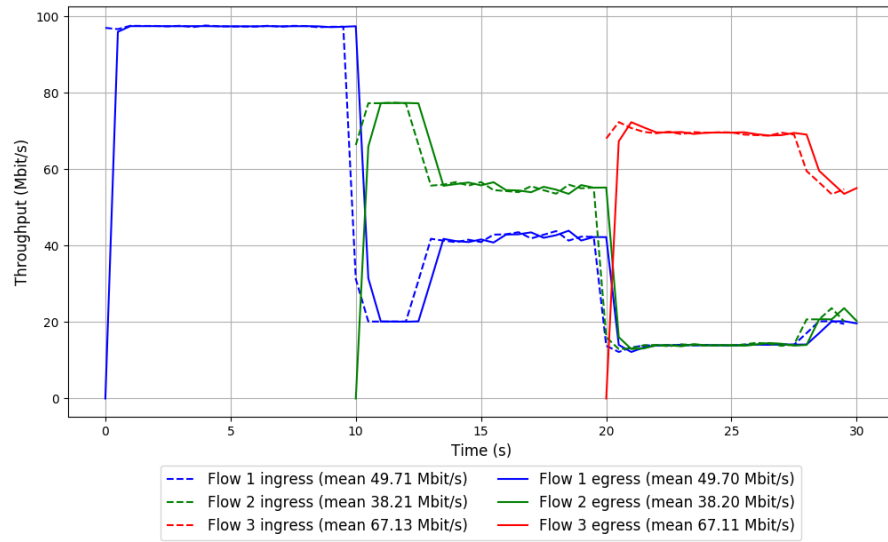


Run 2: Statistics of TCP Vegas

Start at: 2019-02-11 17:59:37  
End at: 2019-02-11 18:00:07  
Local clock offset: -0.789 ms  
Remote clock offset: -0.141 ms

# Below is generated by plot.py at 2019-02-11 19:28:40  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 97.46 Mbit/s  
95th percentile per-packet one-way delay: 4.477 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 49.70 Mbit/s  
95th percentile per-packet one-way delay: 3.169 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 38.20 Mbit/s  
95th percentile per-packet one-way delay: 2.920 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 67.11 Mbit/s  
95th percentile per-packet one-way delay: 4.689 ms  
Loss rate: 0.01%

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



Run 3: Statistics of TCP Vegas

Start at: 2019-02-11 18:23:33

End at: 2019-02-11 18:24:03

Local clock offset: -2.868 ms

Remote clock offset: 0.097 ms

# Below is generated by plot.py at 2019-02-11 19:28:40

# Datalink statistics

-- Total of 3 flows:

Average throughput: 97.41 Mbit/s

95th percentile per-packet one-way delay: 3.876 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 56.33 Mbit/s

95th percentile per-packet one-way delay: 3.926 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 40.68 Mbit/s

95th percentile per-packet one-way delay: 2.966 ms

Loss rate: 0.00%

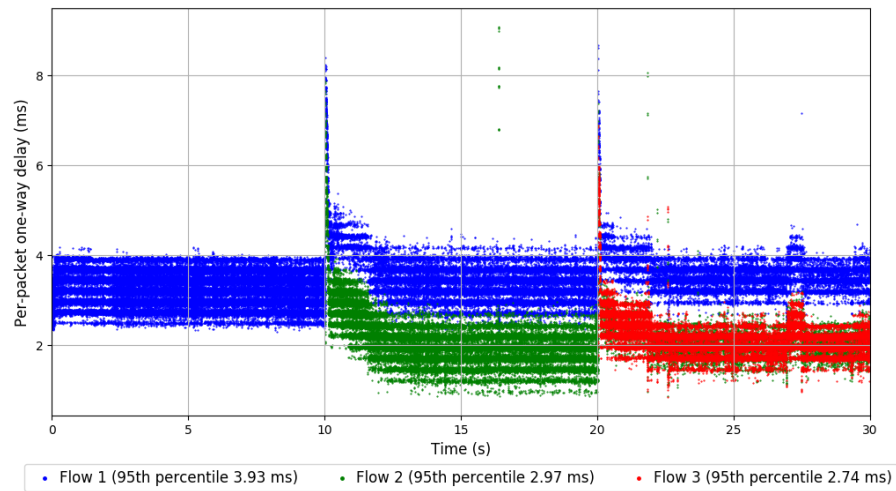
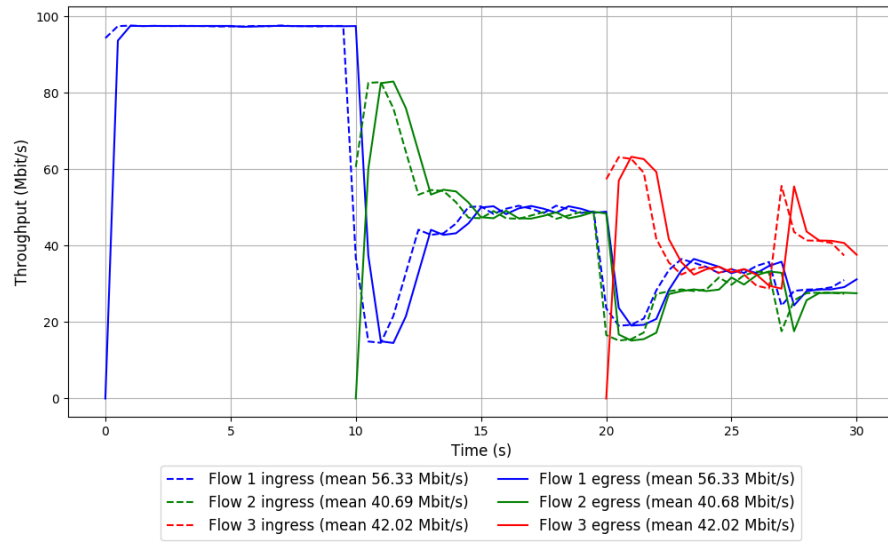
-- Flow 3:

Average throughput: 42.02 Mbit/s

95th percentile per-packet one-way delay: 2.736 ms

Loss rate: 0.00%

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





Run 4: Statistics of TCP Vegas

Start at: 2019-02-11 18:47:28

End at: 2019-02-11 18:47:58

Local clock offset: -1.563 ms

Remote clock offset: 0.047 ms

# Below is generated by plot.py at 2019-02-11 19:28:41

# Datalink statistics

-- Total of 3 flows:

Average throughput: 97.45 Mbit/s

95th percentile per-packet one-way delay: 5.973 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 55.86 Mbit/s

95th percentile per-packet one-way delay: 12.110 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 41.44 Mbit/s

95th percentile per-packet one-way delay: 3.164 ms

Loss rate: 0.00%

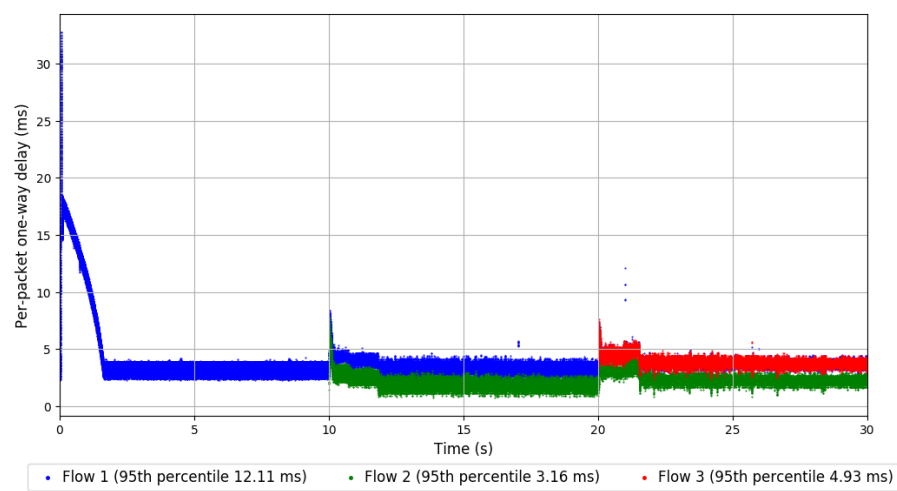
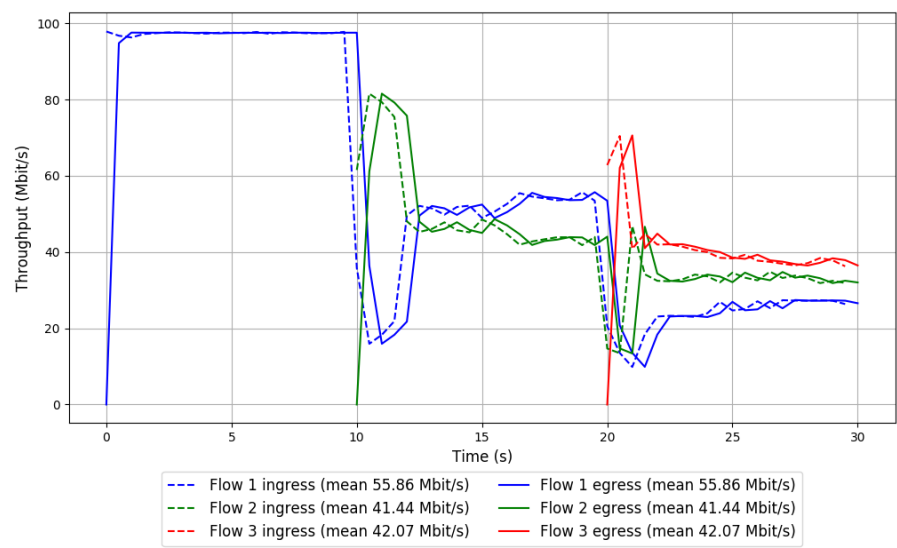
-- Flow 3:

Average throughput: 42.07 Mbit/s

95th percentile per-packet one-way delay: 4.926 ms

Loss rate: 0.00%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2019-02-11 19:11:25

End at: 2019-02-11 19:11:55

Local clock offset: -1.947 ms

Remote clock offset: 0.131 ms

# Below is generated by plot.py at 2019-02-11 19:28:46

# Datalink statistics

-- Total of 3 flows:

Average throughput: 97.41 Mbit/s

95th percentile per-packet one-way delay: 4.645 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 49.69 Mbit/s

95th percentile per-packet one-way delay: 3.127 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 47.33 Mbit/s

95th percentile per-packet one-way delay: 4.780 ms

Loss rate: 0.00%

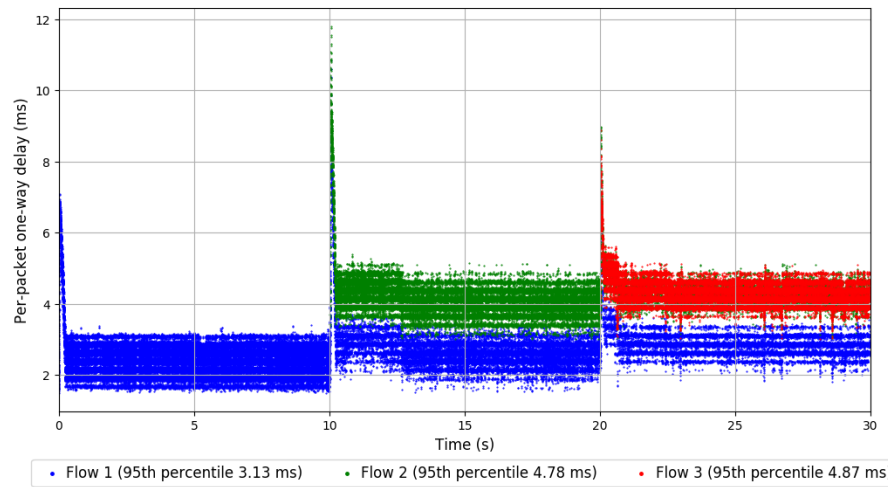
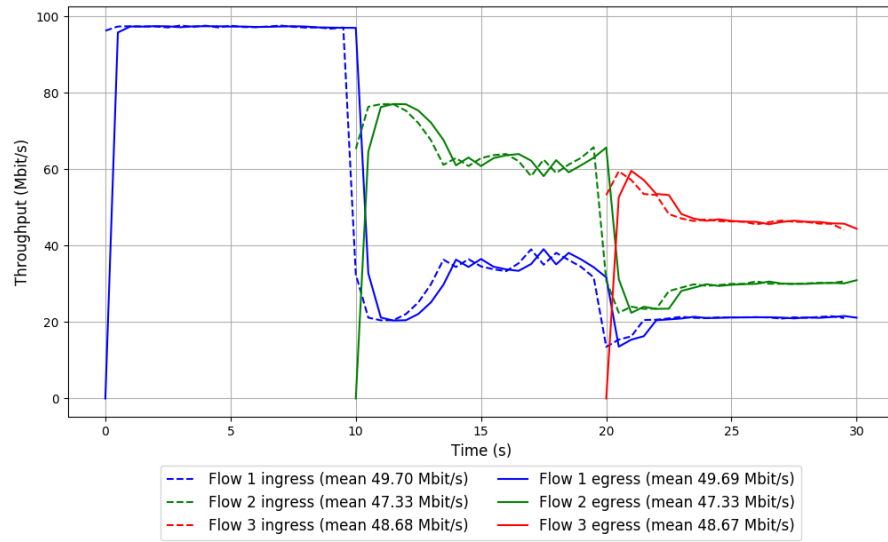
-- Flow 3:

Average throughput: 48.67 Mbit/s

95th percentile per-packet one-way delay: 4.869 ms

Loss rate: 0.00%

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

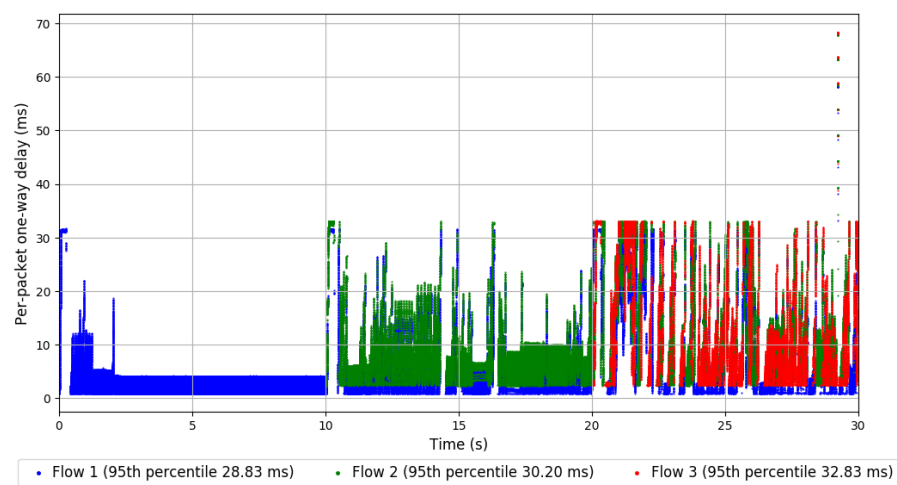
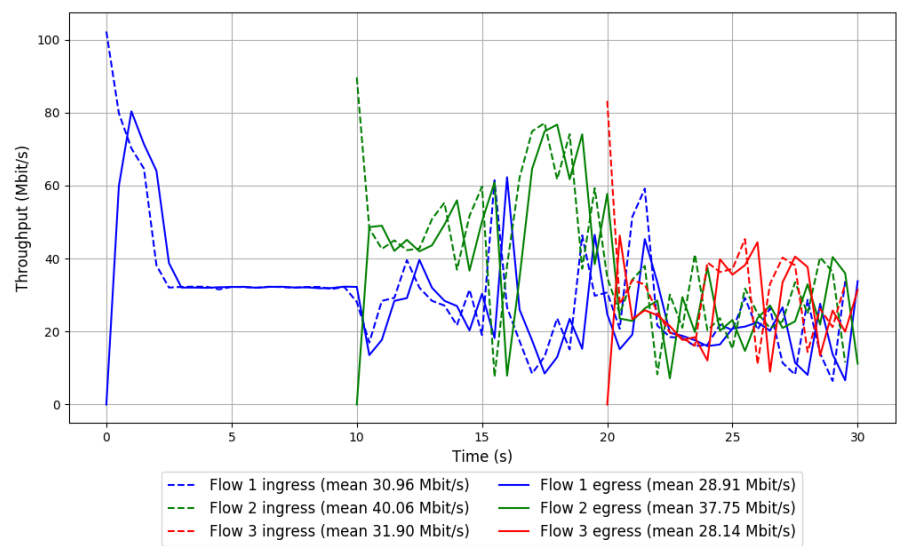


Run 1: Statistics of Verus

Start at: 2019-02-11 17:18:41  
End at: 2019-02-11 17:19:11  
Local clock offset: -0.587 ms  
Remote clock offset: -0.422 ms

# Below is generated by plot.py at 2019-02-11 19:28:46  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 63.33 Mbit/s  
95th percentile per-packet one-way delay: 30.593 ms  
Loss rate: 7.01%  
-- Flow 1:  
Average throughput: 28.91 Mbit/s  
95th percentile per-packet one-way delay: 28.828 ms  
Loss rate: 6.55%  
-- Flow 2:  
Average throughput: 37.75 Mbit/s  
95th percentile per-packet one-way delay: 30.201 ms  
Loss rate: 5.73%  
-- Flow 3:  
Average throughput: 28.14 Mbit/s  
95th percentile per-packet one-way delay: 32.832 ms  
Loss rate: 11.59%

Run 1: Report of Verus — Data Link

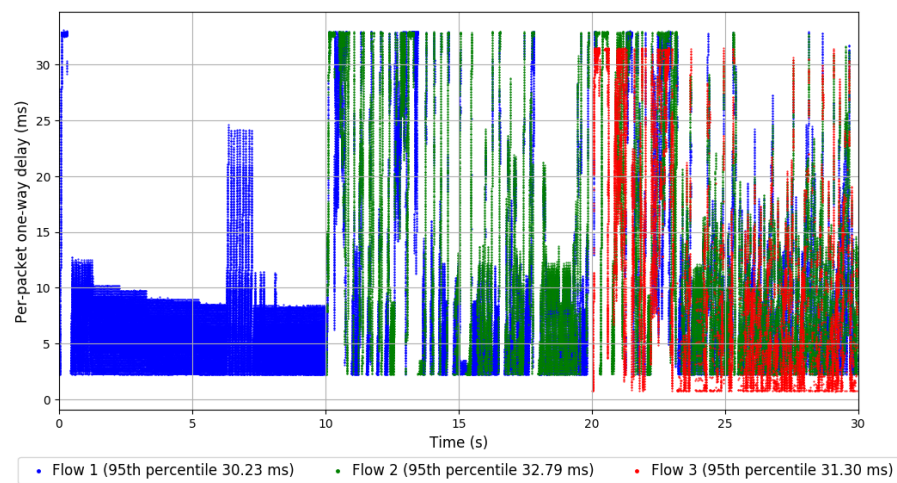
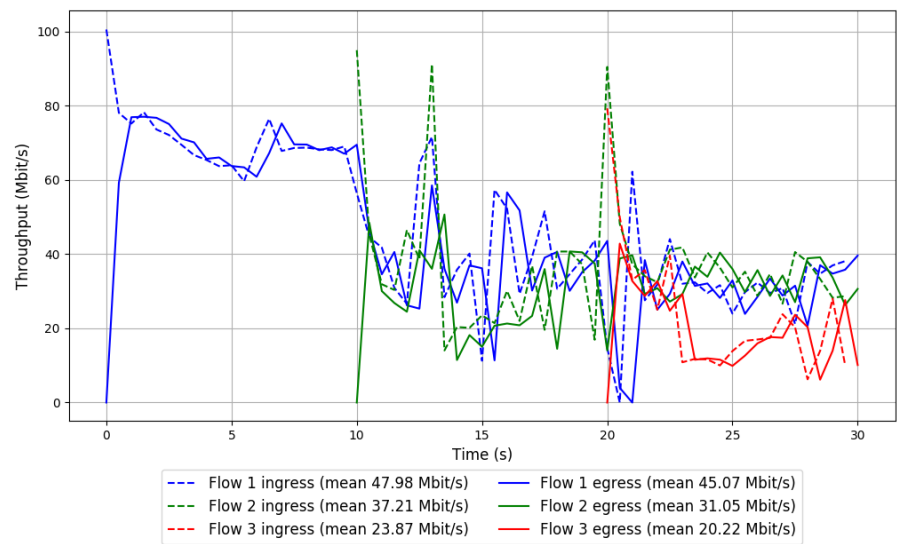


Run 2: Statistics of Verus

Start at: 2019-02-11 17:42:36  
End at: 2019-02-11 17:43:06  
Local clock offset: -0.719 ms  
Remote clock offset: -0.299 ms

# Below is generated by plot.py at 2019-02-11 19:29:02  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 72.45 Mbit/s  
95th percentile per-packet one-way delay: 32.114 ms  
Loss rate: 10.19%  
-- Flow 1:  
Average throughput: 45.07 Mbit/s  
95th percentile per-packet one-way delay: 30.234 ms  
Loss rate: 6.06%  
-- Flow 2:  
Average throughput: 31.05 Mbit/s  
95th percentile per-packet one-way delay: 32.794 ms  
Loss rate: 16.55%  
-- Flow 3:  
Average throughput: 20.22 Mbit/s  
95th percentile per-packet one-way delay: 31.298 ms  
Loss rate: 15.29%

Run 2: Report of Verus — Data Link



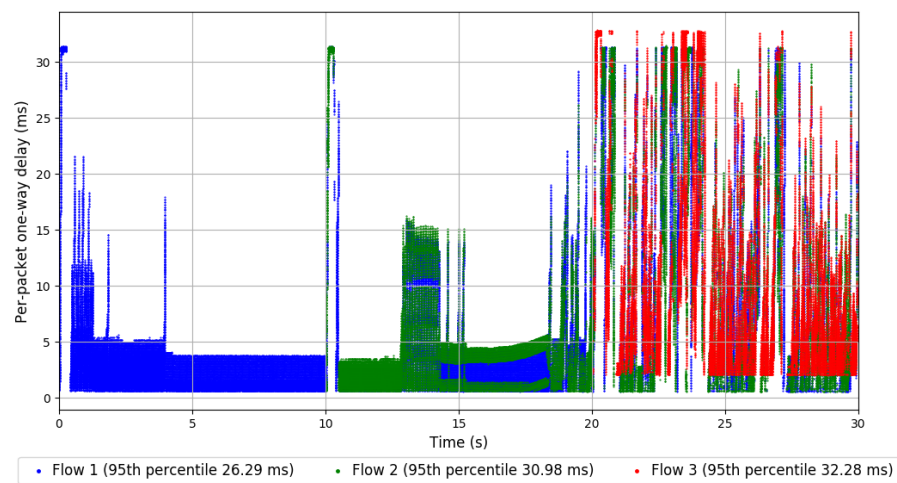
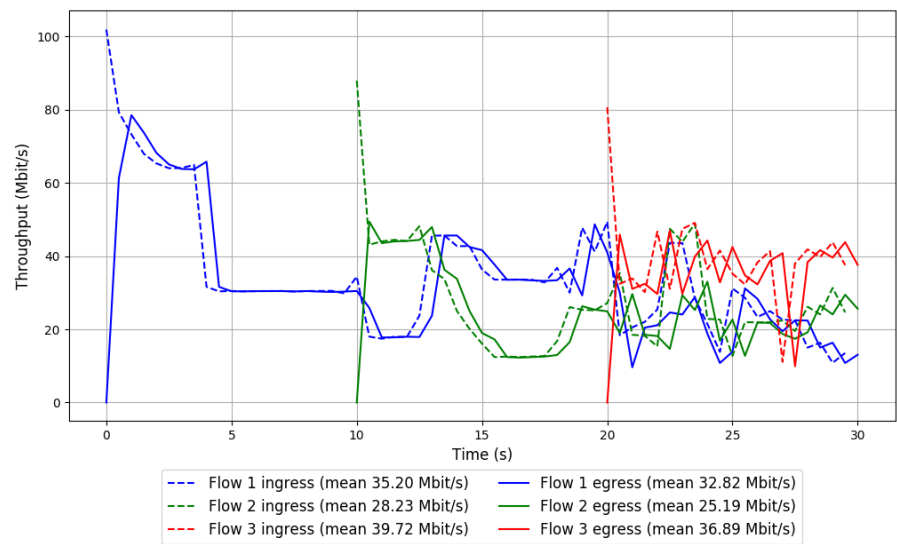


Run 3: Statistics of Verus

Start at: 2019-02-11 18:06:32  
End at: 2019-02-11 18:07:02  
Local clock offset: -1.256 ms  
Remote clock offset: -0.119 ms

# Below is generated by plot.py at 2019-02-11 19:29:02  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 61.81 Mbit/s  
95th percentile per-packet one-way delay: 30.081 ms  
Loss rate: 7.90%  
-- Flow 1:  
Average throughput: 32.82 Mbit/s  
95th percentile per-packet one-way delay: 26.288 ms  
Loss rate: 6.68%  
-- Flow 2:  
Average throughput: 25.19 Mbit/s  
95th percentile per-packet one-way delay: 30.985 ms  
Loss rate: 10.74%  
-- Flow 3:  
Average throughput: 36.89 Mbit/s  
95th percentile per-packet one-way delay: 32.285 ms  
Loss rate: 7.11%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

Start at: 2019-02-11 18:30:28

End at: 2019-02-11 18:30:58

Local clock offset: -3.053 ms

Remote clock offset: 0.139 ms

# Below is generated by plot.py at 2019-02-11 19:29:28

# Datalink statistics

-- Total of 3 flows:

Average throughput: 69.06 Mbit/s

95th percentile per-packet one-way delay: 31.400 ms

Loss rate: 25.48%

-- Flow 1:

Average throughput: 32.31 Mbit/s

95th percentile per-packet one-way delay: 31.344 ms

Loss rate: 20.83%

-- Flow 2:

Average throughput: 42.69 Mbit/s

95th percentile per-packet one-way delay: 32.811 ms

Loss rate: 22.56%

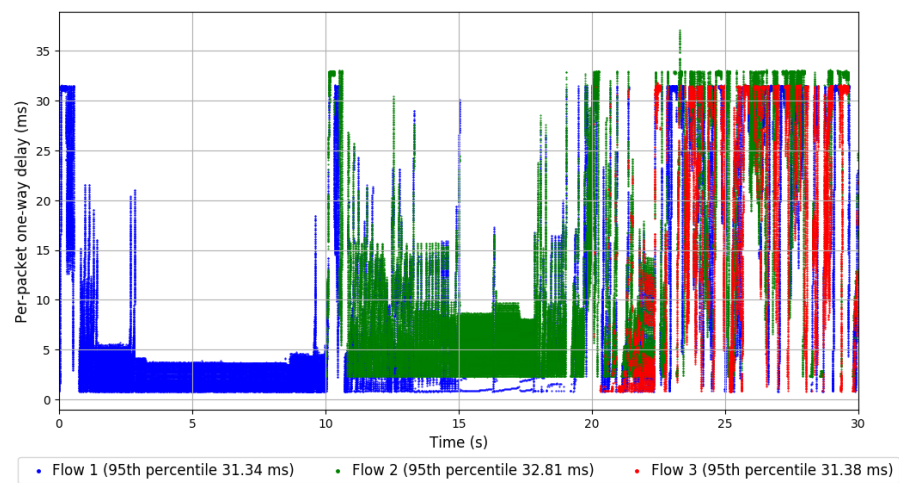
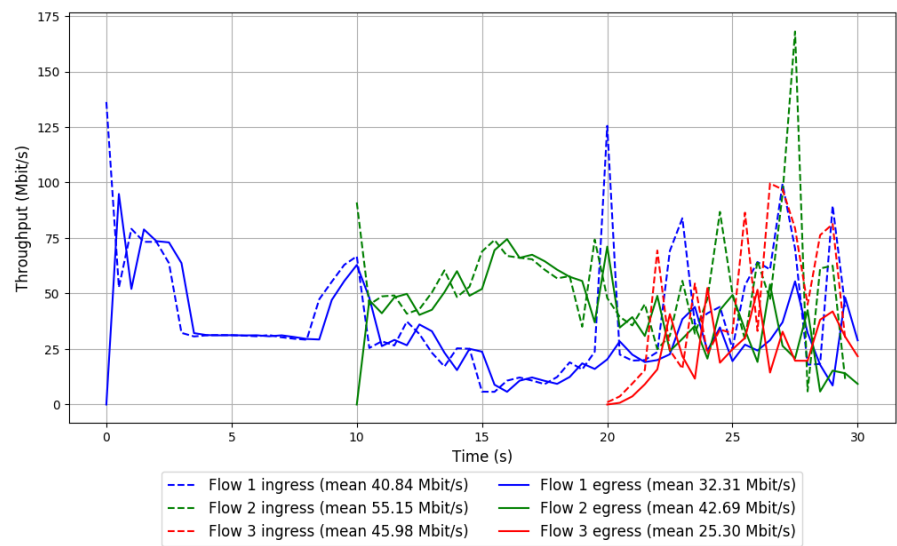
-- Flow 3:

Average throughput: 25.30 Mbit/s

95th percentile per-packet one-way delay: 31.382 ms

Loss rate: 45.02%

Run 4: Report of Verus — Data Link

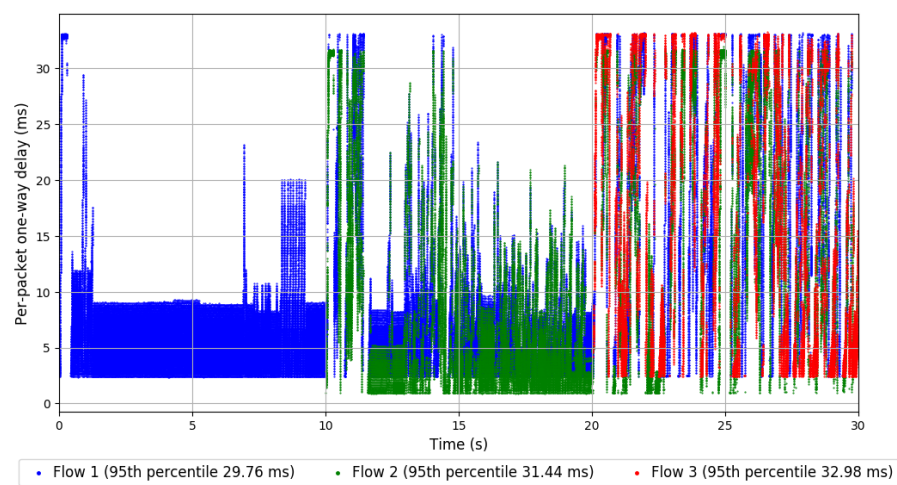
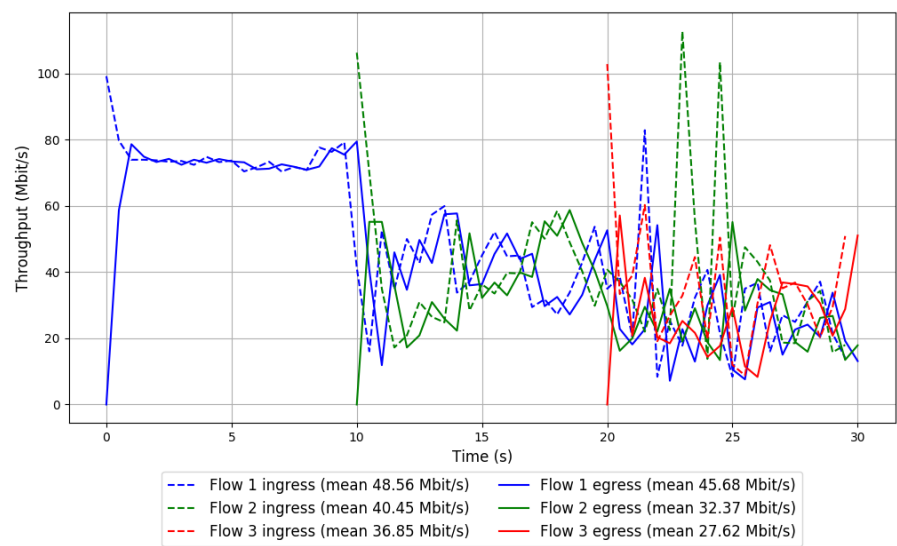


Run 5: Statistics of Verus

Start at: 2019-02-11 18:54:22  
End at: 2019-02-11 18:54:52  
Local clock offset: -1.238 ms  
Remote clock offset: 0.21 ms

# Below is generated by plot.py at 2019-02-11 19:29:32  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 76.39 Mbit/s  
95th percentile per-packet one-way delay: 31.490 ms  
Loss rate: 12.87%  
-- Flow 1:  
Average throughput: 45.68 Mbit/s  
95th percentile per-packet one-way delay: 29.756 ms  
Loss rate: 5.92%  
-- Flow 2:  
Average throughput: 32.37 Mbit/s  
95th percentile per-packet one-way delay: 31.442 ms  
Loss rate: 19.92%  
-- Flow 3:  
Average throughput: 27.62 Mbit/s  
95th percentile per-packet one-way delay: 32.979 ms  
Loss rate: 24.99%

Run 5: Report of Verus — Data Link

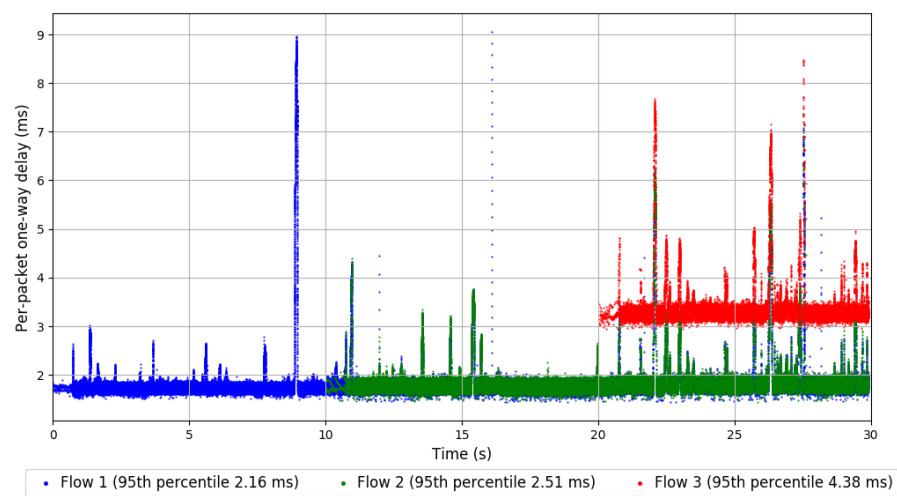
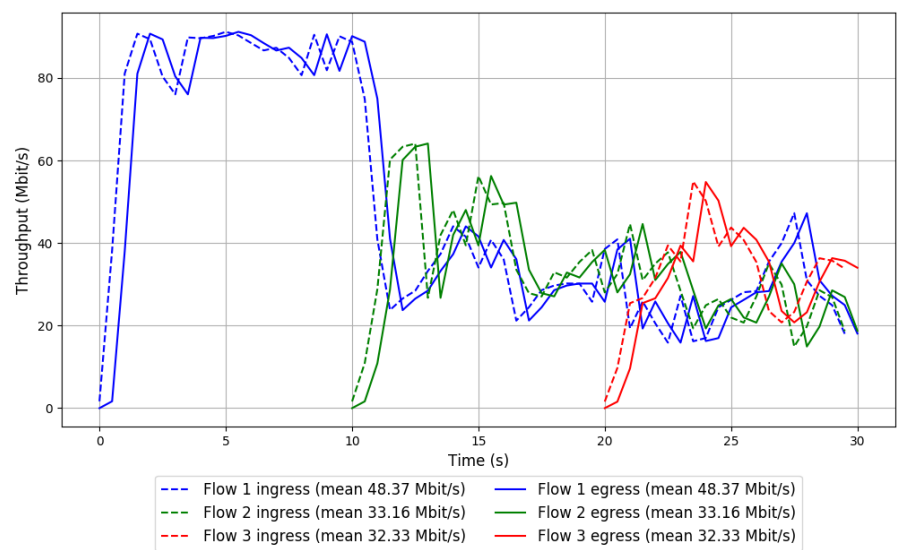


Run 1: Statistics of PCC-Vivace

Start at: 2019-02-11 17:24:15  
End at: 2019-02-11 17:24:45  
Local clock offset: -1.147 ms  
Remote clock offset: -0.409 ms

# Below is generated by plot.py at 2019-02-11 19:29:36  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 81.10 Mbit/s  
95th percentile per-packet one-way delay: 3.358 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 48.37 Mbit/s  
95th percentile per-packet one-way delay: 2.156 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 33.16 Mbit/s  
95th percentile per-packet one-way delay: 2.508 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 32.33 Mbit/s  
95th percentile per-packet one-way delay: 4.376 ms  
Loss rate: 0.00%

Run 1: Report of PCC-Vivace — Data Link



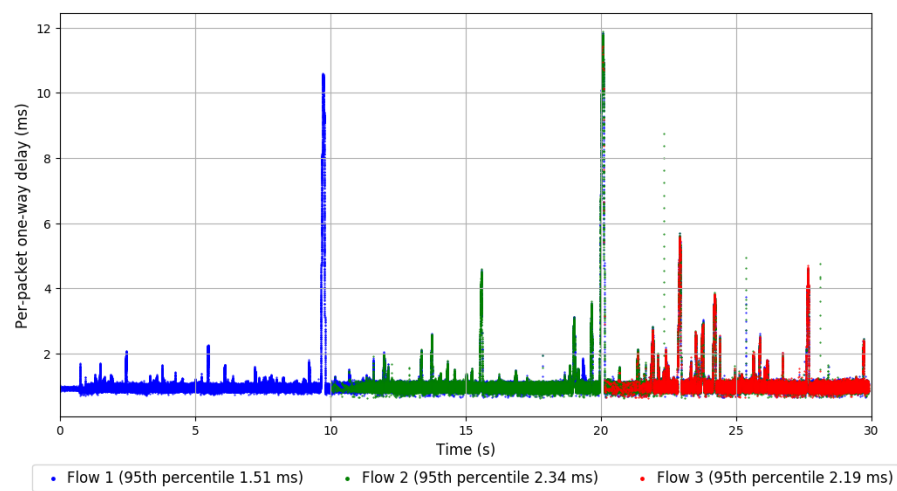
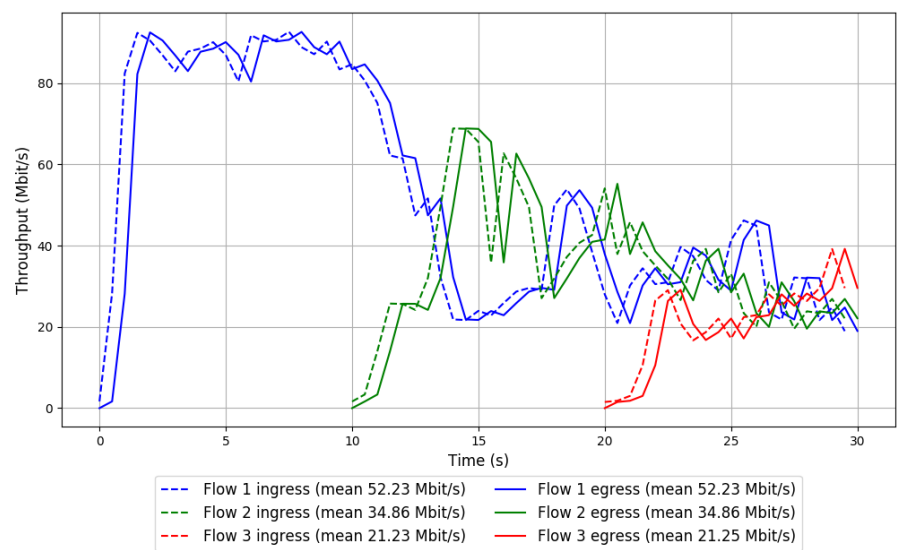


Run 2: Statistics of PCC-Vivace

Start at: 2019-02-11 17:48:11  
End at: 2019-02-11 17:48:41  
Local clock offset: -0.855 ms  
Remote clock offset: -0.196 ms

# Below is generated by plot.py at 2019-02-11 19:29:39  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 82.42 Mbit/s  
95th percentile per-packet one-way delay: 1.787 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 52.23 Mbit/s  
95th percentile per-packet one-way delay: 1.510 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 34.86 Mbit/s  
95th percentile per-packet one-way delay: 2.344 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 21.25 Mbit/s  
95th percentile per-packet one-way delay: 2.190 ms  
Loss rate: 0.00%

Run 2: Report of PCC-Vivace — Data Link

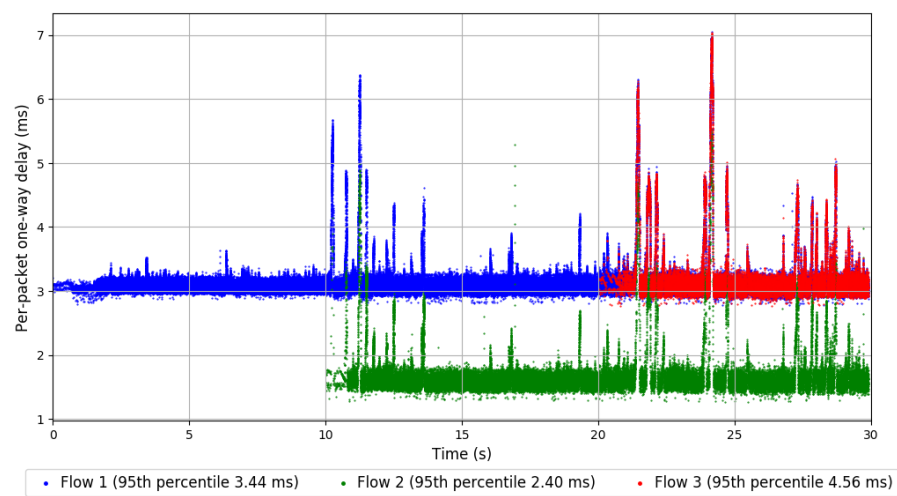
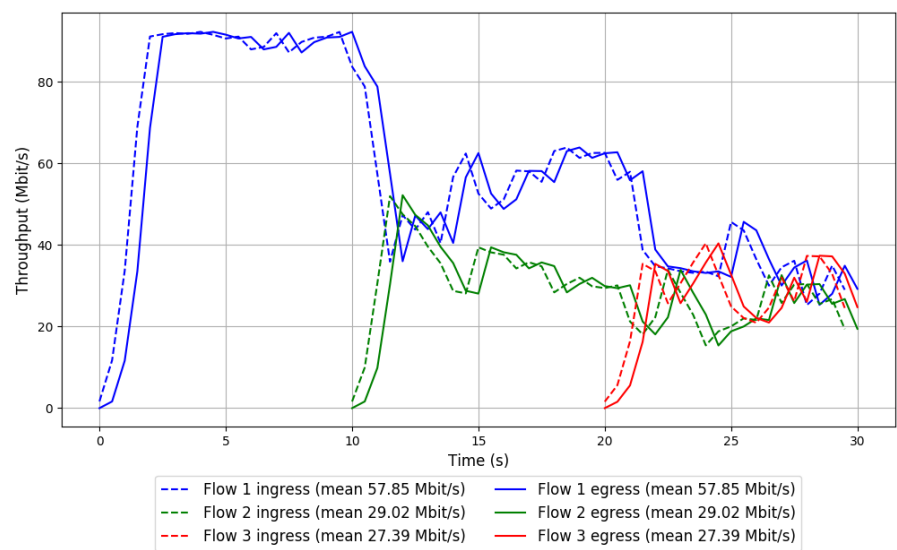


Run 3: Statistics of PCC-Vivace

Start at: 2019-02-11 18:12:07  
End at: 2019-02-11 18:12:37  
Local clock offset: -2.856 ms  
Remote clock offset: -0.033 ms

# Below is generated by plot.py at 2019-02-11 19:29:42  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 86.20 Mbit/s  
95th percentile per-packet one-way delay: 3.479 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 57.85 Mbit/s  
95th percentile per-packet one-way delay: 3.444 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 29.02 Mbit/s  
95th percentile per-packet one-way delay: 2.397 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 27.39 Mbit/s  
95th percentile per-packet one-way delay: 4.563 ms  
Loss rate: 0.00%

Run 3: Report of PCC-Vivace — Data Link



Run 4: Statistics of PCC-Vivace

Start at: 2019-02-11 18:36:02

End at: 2019-02-11 18:36:32

Local clock offset: -2.771 ms

Remote clock offset: 0.036 ms

# Below is generated by plot.py at 2019-02-11 19:29:43

# Datalink statistics

-- Total of 3 flows:

Average throughput: 85.61 Mbit/s

95th percentile per-packet one-way delay: 2.988 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 46.64 Mbit/s

95th percentile per-packet one-way delay: 1.467 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 42.67 Mbit/s

95th percentile per-packet one-way delay: 3.568 ms

Loss rate: 0.00%

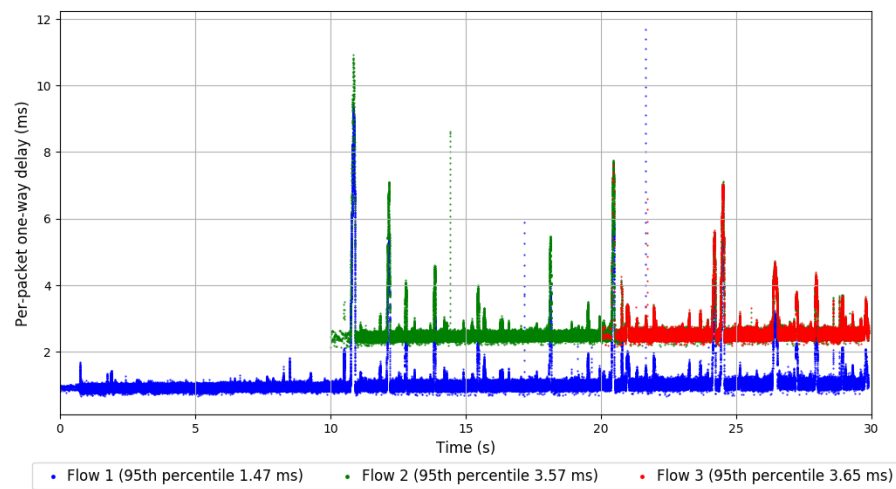
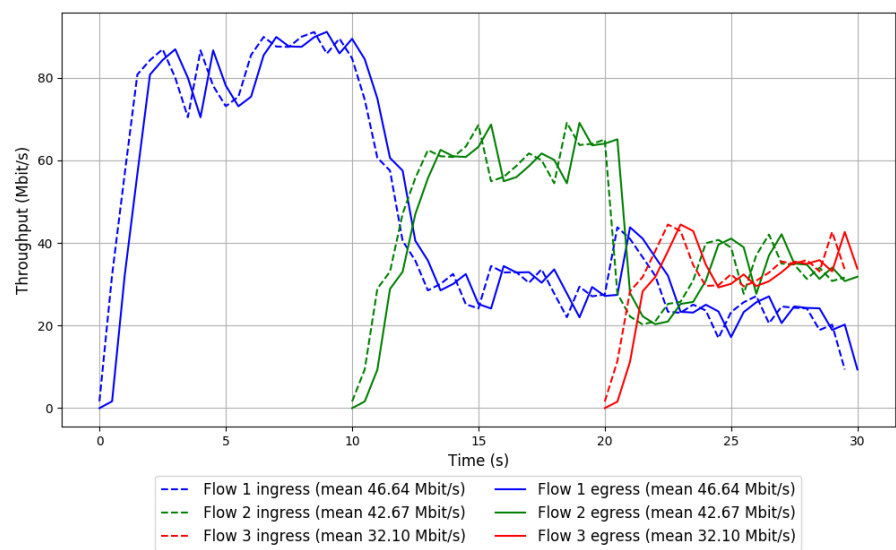
-- Flow 3:

Average throughput: 32.10 Mbit/s

95th percentile per-packet one-way delay: 3.647 ms

Loss rate: 0.00%

Run 4: Report of PCC-Vivace — Data Link



Run 5: Statistics of PCC-Vivace

Start at: 2019-02-11 18:59:58

End at: 2019-02-11 19:00:28

Local clock offset: -0.998 ms

Remote clock offset: 0.146 ms

# Below is generated by plot.py at 2019-02-11 19:29:44

# Datalink statistics

-- Total of 3 flows:

Average throughput: 88.06 Mbit/s

95th percentile per-packet one-way delay: 5.340 ms

Loss rate: 0.04%

-- Flow 1:

Average throughput: 61.26 Mbit/s

95th percentile per-packet one-way delay: 3.055 ms

Loss rate: 0.02%

-- Flow 2:

Average throughput: 26.21 Mbit/s

95th percentile per-packet one-way delay: 13.044 ms

Loss rate: 0.09%

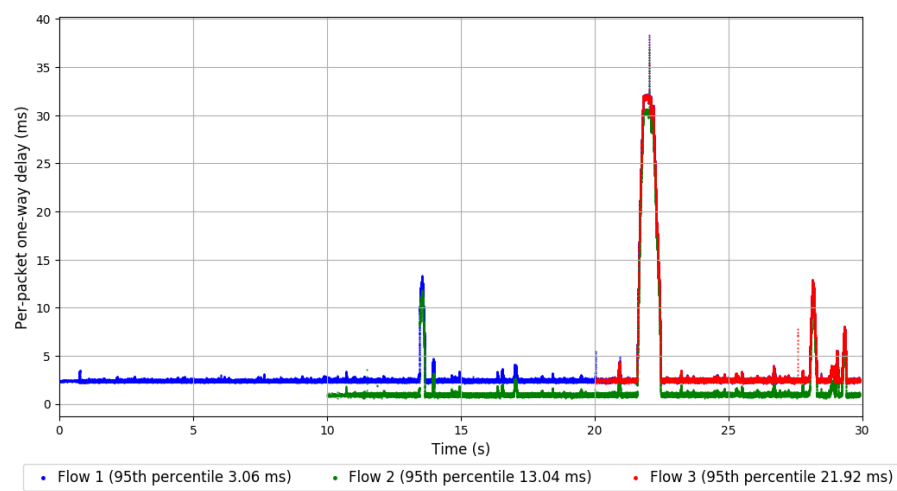
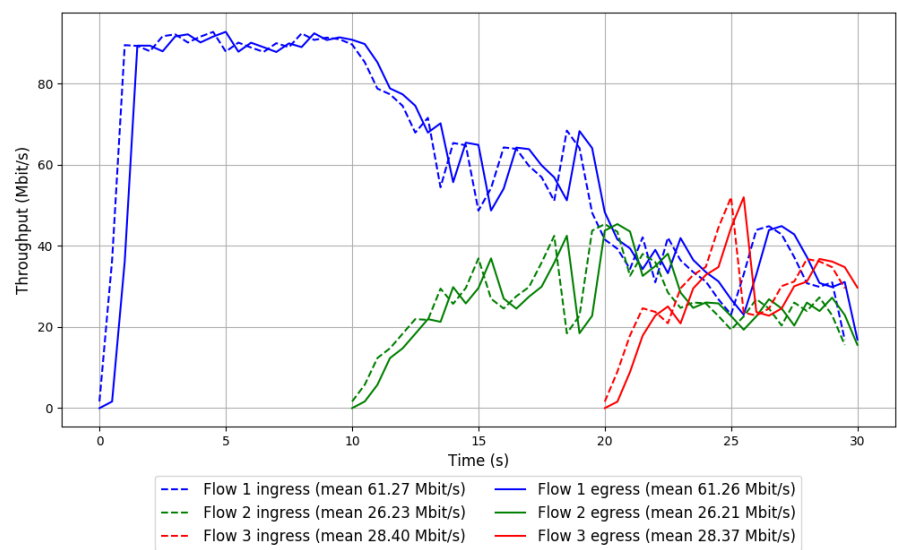
-- Flow 3:

Average throughput: 28.37 Mbit/s

95th percentile per-packet one-way delay: 21.919 ms

Loss rate: 0.09%

Run 5: Report of PCC-Vivace — Data Link



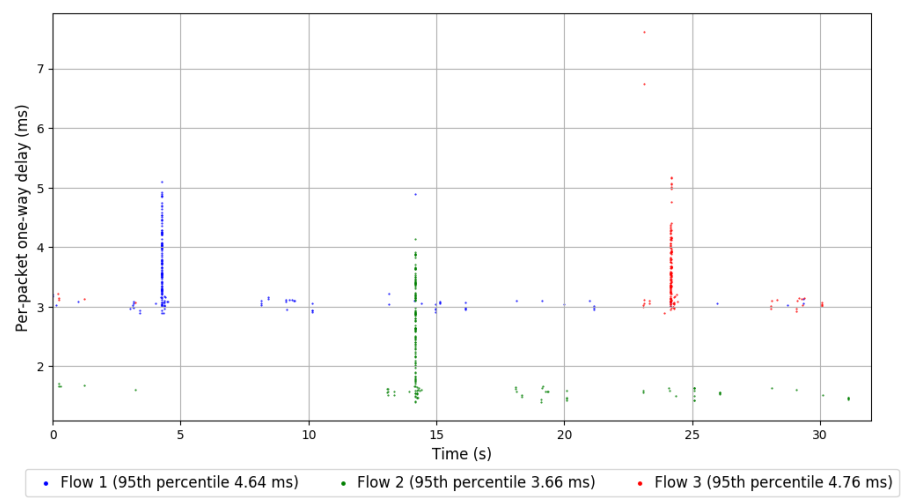
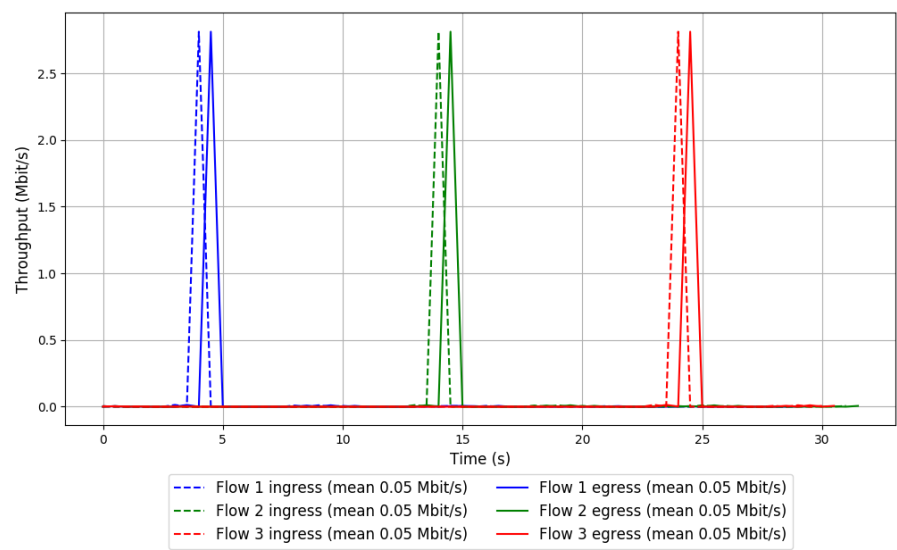


Run 1: Statistics of WebRTC media

Start at: 2019-02-11 17:19:50  
End at: 2019-02-11 17:20:20  
Local clock offset: -1.241 ms  
Remote clock offset: -0.471 ms

# Below is generated by plot.py at 2019-02-11 19:29:44  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.14 Mbit/s  
95th percentile per-packet one-way delay: 4.409 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 4.638 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 3.660 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 4.756 ms  
Loss rate: 0.00%

Run 1: Report of WebRTC media — Data Link

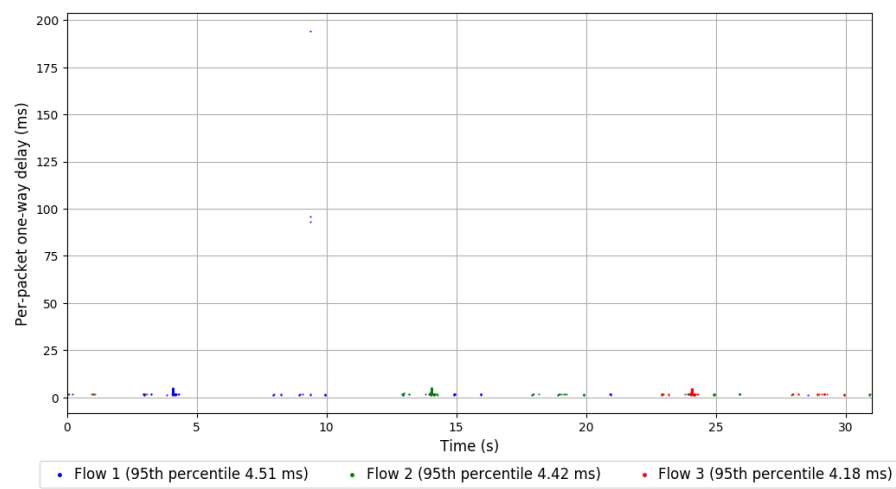
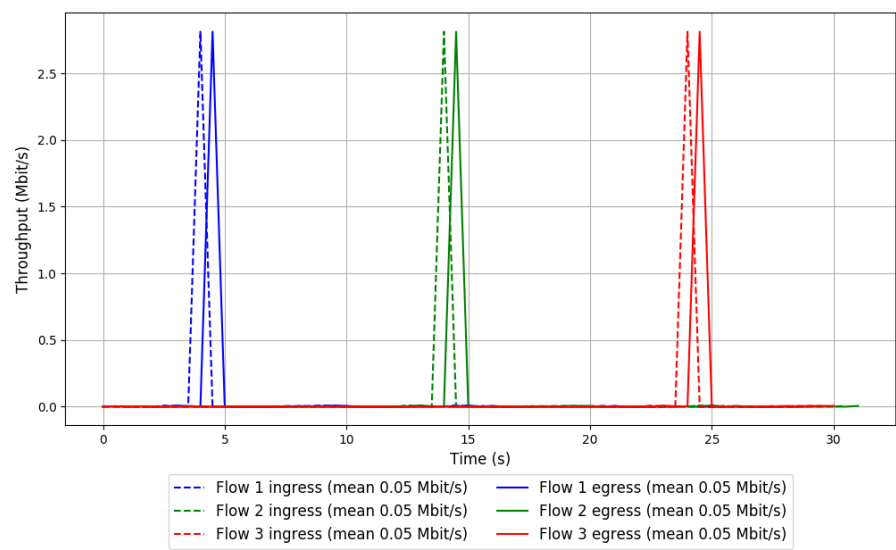


Run 2: Statistics of WebRTC media

Start at: 2019-02-11 17:43:46  
End at: 2019-02-11 17:44:16  
Local clock offset: -1.523 ms  
Remote clock offset: -0.309 ms

# Below is generated by plot.py at 2019-02-11 19:29:44  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.14 Mbit/s  
95th percentile per-packet one-way delay: 4.398 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 4.515 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 4.425 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 4.182 ms  
Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link

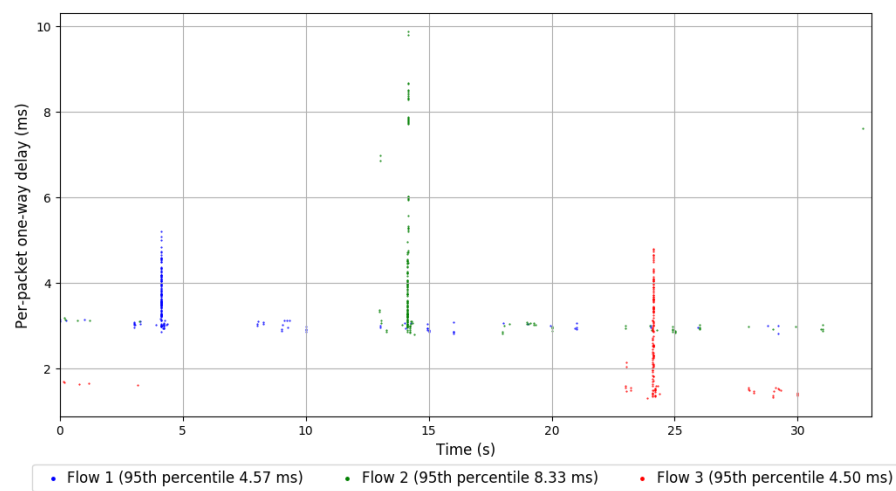
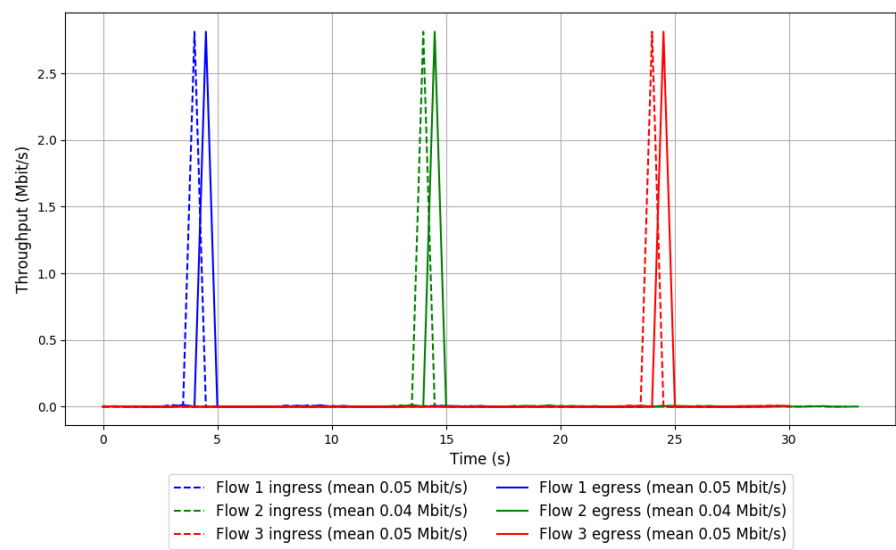


Run 3: Statistics of WebRTC media

Start at: 2019-02-11 18:07:41  
End at: 2019-02-11 18:08:11  
Local clock offset: -2.236 ms  
Remote clock offset: -0.072 ms

# Below is generated by plot.py at 2019-02-11 19:29:44  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.13 Mbit/s  
95th percentile per-packet one-way delay: 5.979 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 4.569 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.04 Mbit/s  
95th percentile per-packet one-way delay: 8.334 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 4.500 ms  
Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2019-02-11 18:31:37

End at: 2019-02-11 18:32:07

Local clock offset: -3.063 ms

Remote clock offset: 0.061 ms

# Below is generated by plot.py at 2019-02-11 19:29:44

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 3.384 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 3.362 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 2.677 ms

Loss rate: 0.00%

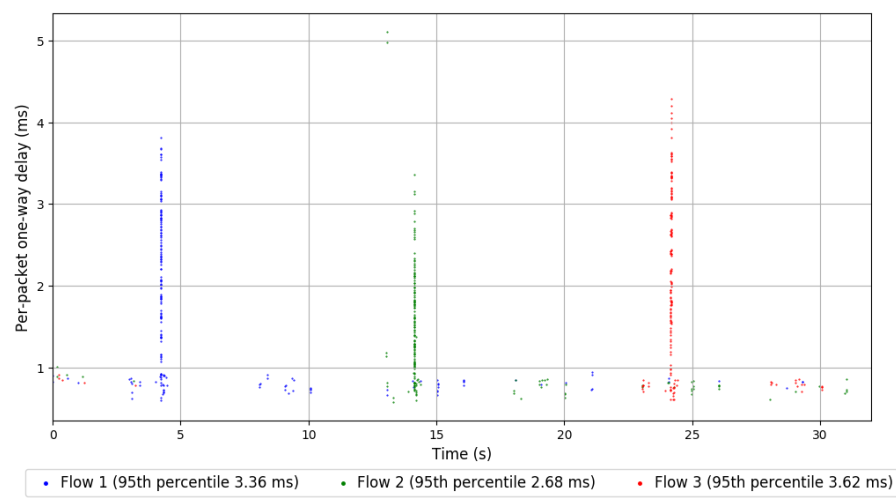
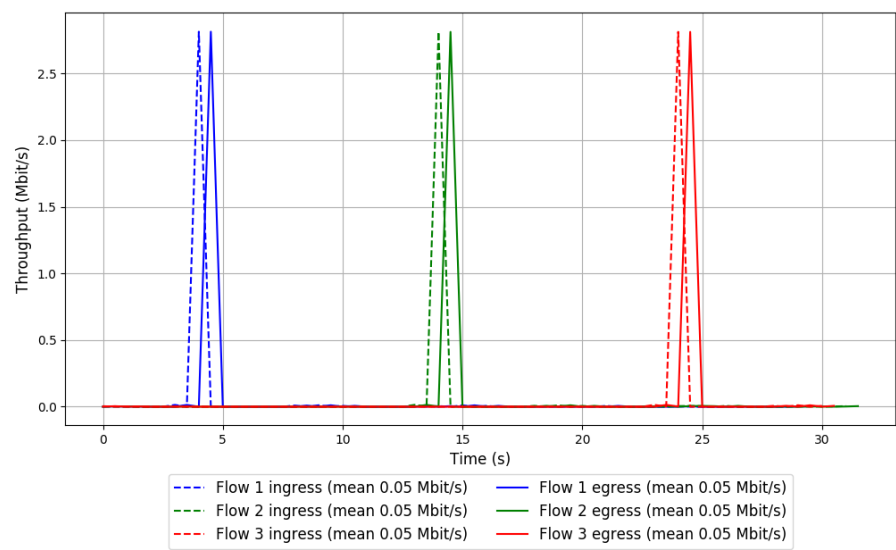
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 3.624 ms

Loss rate: 0.00%

Run 4: Report of WebRTC media — Data Link





Run 5: Statistics of WebRTC media

Start at: 2019-02-11 18:55:32

End at: 2019-02-11 18:56:02

Local clock offset: -1.898 ms

Remote clock offset: 0.149 ms

# Below is generated by plot.py at 2019-02-11 19:29:44

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 6.089 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 5.979 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 8.410 ms

Loss rate: 0.00%

-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 5.101 ms

Loss rate: 0.00%

Run 5: Report of WebRTC media — Data Link

