

## Pantheon Report

Generated at 2019-01-21 13:07:48 (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:

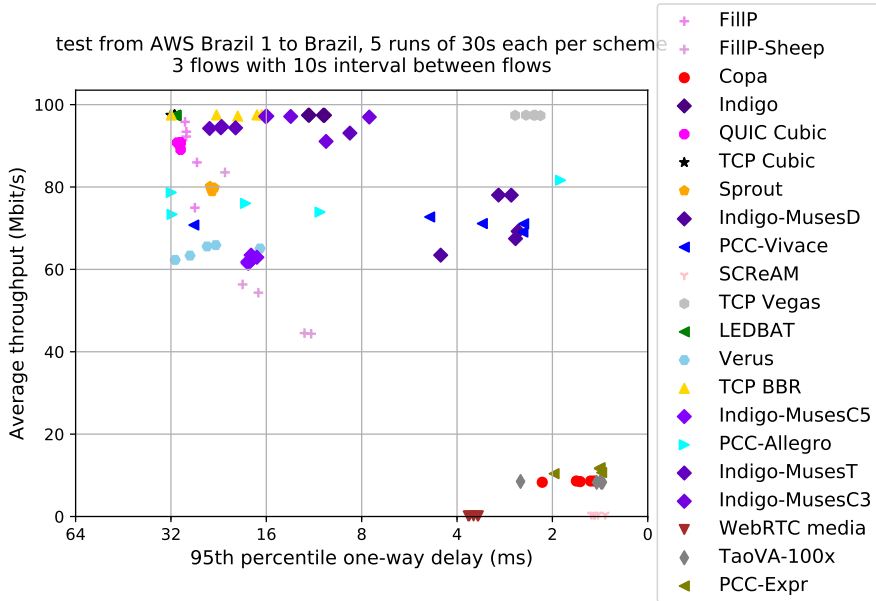
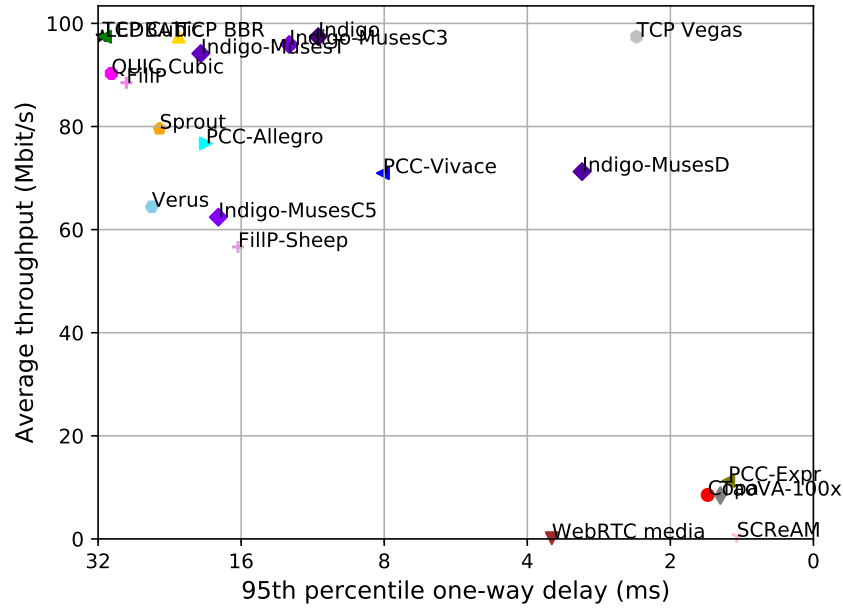
```
Linux 4.15.0-1031-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

### Git summary:

```
branch: muses @ 89d24e57783e7fbfec537a619071de937b639e38
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf5e58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecd90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 1ddcff131048c6962f123bcd22b4d166a422adde
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	71.60	32.92	11.84	21.79	20.35	22.65	0.15	0.01	0.15
Copa	5	0.00	11.23	8.28	1.11	1.62	1.24	98.38	69.13	73.49
TCP Cubic	5	63.90	36.40	28.19	31.30	31.42	31.54	0.03	0.04	0.04
FillP	5	46.43	43.42	39.66	24.89	28.22	28.79	4.76	12.59	28.12
FillP-Sheep	5	38.72	15.38	23.21	12.83	19.18	21.63	1.14	1.30	4.76
Indigo	5	43.62	46.50	70.50	10.24	10.99	11.18	0.00	0.00	0.00
Indigo-MusesC3	5	58.41	34.00	50.68	11.09	13.86	13.04	0.00	0.00	0.00
Indigo-MusesC5	5	32.34	29.57	35.34	16.82	18.16	19.21	0.00	0.00	0.00
Indigo-MusesD	5	40.07	35.28	26.94	2.93	3.08	3.33	0.00	0.00	0.00
Indigo-MusesT	5	57.42	43.97	26.61	17.87	19.76	22.42	0.02	0.02	0.06
LEDBAT	5	62.40	37.82	29.63	30.91	30.96	30.98	0.03	0.07	0.11
PCC-Allegro	5	53.77	29.47	10.18	16.20	21.65	22.59	0.12	0.26	0.85
PCC-Expr	5	5.45	6.27	4.92	1.30	1.19	1.15	56.77	70.16	76.08
QUIC Cubic	5	57.42	35.92	27.31	29.94	30.04	30.45	0.18	0.21	0.28
SCReAM	5	0.22	0.22	0.22	1.07	1.07	1.07	0.00	0.00	0.00
Sprout	5	42.67	40.45	30.30	22.38	23.21	26.03	0.00	0.00	0.00
TaoVA-100x	5	0.00	10.06	5.48	1.02	1.30	1.00	95.92	82.93	90.23
TCP Vegas	5	56.95	39.25	43.04	2.21	2.33	2.58	0.00	0.00	0.00
Verus	5	36.37	30.11	24.29	16.76	26.93	31.33	5.00	6.43	11.89
PCC-Vivace	5	40.85	31.70	27.28	2.99	9.04	9.53	0.06	0.19	0.19
WebRTC media	5	0.05	0.05	0.05	3.58	3.41	3.61	0.00	0.01	0.00



Run 1: Statistics of TCP BBR

Start at: 2019-01-21 11:11:09

End at: 2019-01-21 11:11:39

Local clock offset: -7.032 ms

Remote clock offset: 0.186 ms

# Below is generated by plot.py at 2019-01-21 12:57:54

# Datalink statistics

-- Total of 3 flows:

Average throughput: 97.22 Mbit/s

95th percentile per-packet one-way delay: 19.690 ms

Loss rate: 0.03%

-- Flow 1:

Average throughput: 69.74 Mbit/s

95th percentile per-packet one-way delay: 19.831 ms

Loss rate: 0.04%

-- Flow 2:

Average throughput: 35.82 Mbit/s

95th percentile per-packet one-way delay: 18.820 ms

Loss rate: 0.01%

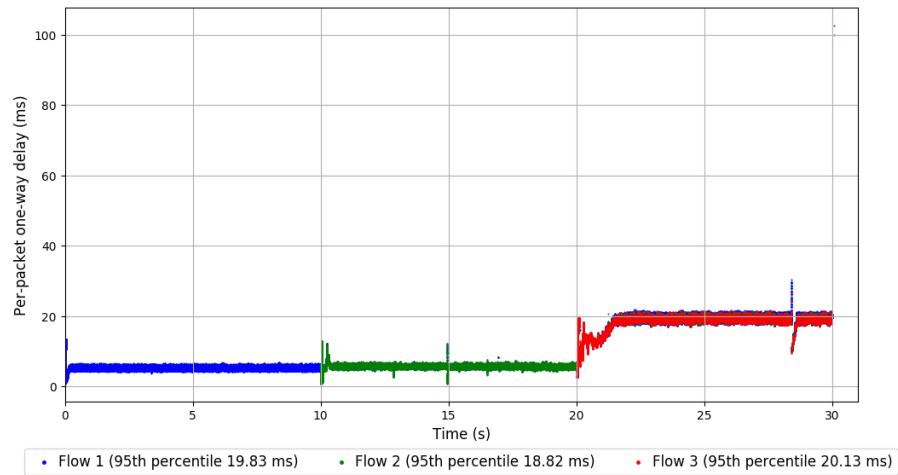
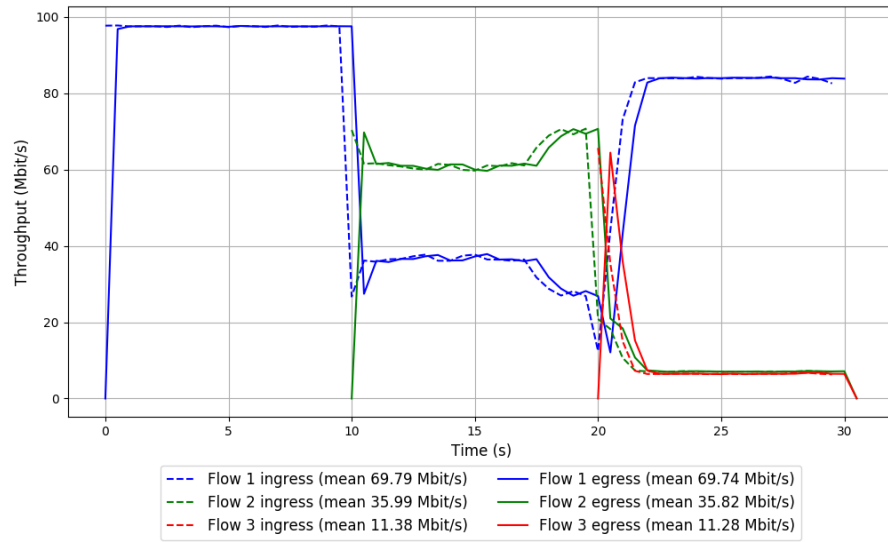
-- Flow 3:

Average throughput: 11.28 Mbit/s

95th percentile per-packet one-way delay: 20.129 ms

Loss rate: 0.03%

# Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2019-01-21 11:34:56

End at: 2019-01-21 11:35:26

Local clock offset: -8.977 ms

Remote clock offset: 0.247 ms

# Below is generated by plot.py at 2019-01-21 12:57:55

# Datalink statistics

-- Total of 3 flows:

Average throughput: 97.46 Mbit/s

95th percentile per-packet one-way delay: 31.925 ms

Loss rate: 0.56%

-- Flow 1:

Average throughput: 71.99 Mbit/s

95th percentile per-packet one-way delay: 32.309 ms

Loss rate: 0.71%

-- Flow 2:

Average throughput: 33.16 Mbit/s

95th percentile per-packet one-way delay: 28.934 ms

Loss rate: 0.05%

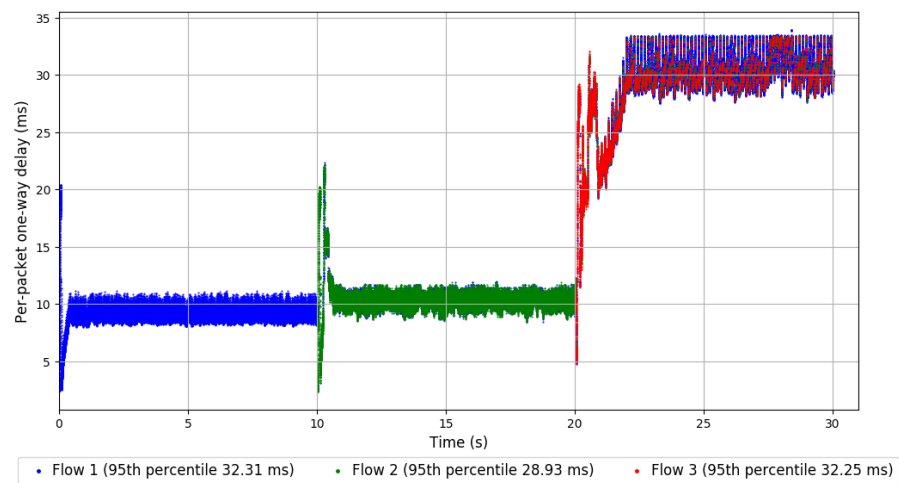
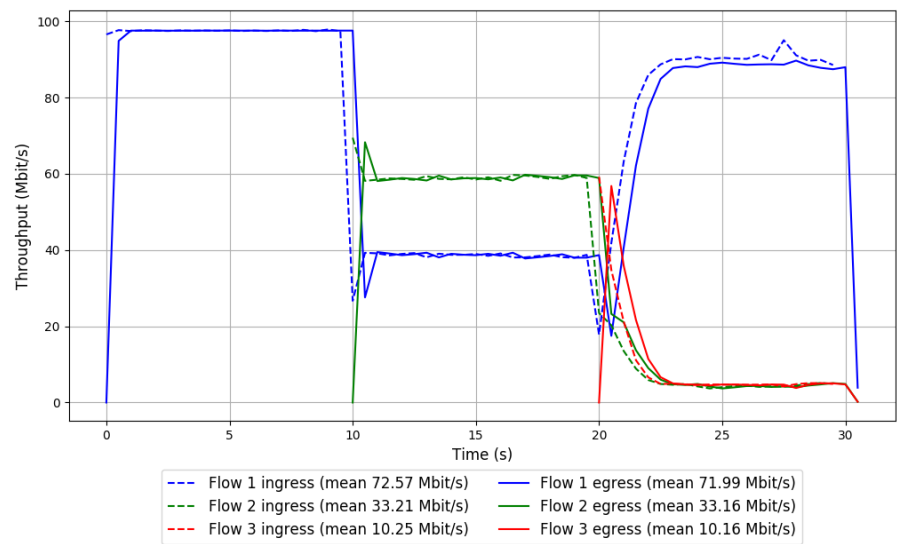
-- Flow 3:

Average throughput: 10.16 Mbit/s

95th percentile per-packet one-way delay: 32.248 ms

Loss rate: 0.72%

Run 2: Report of TCP BBR — Data Link

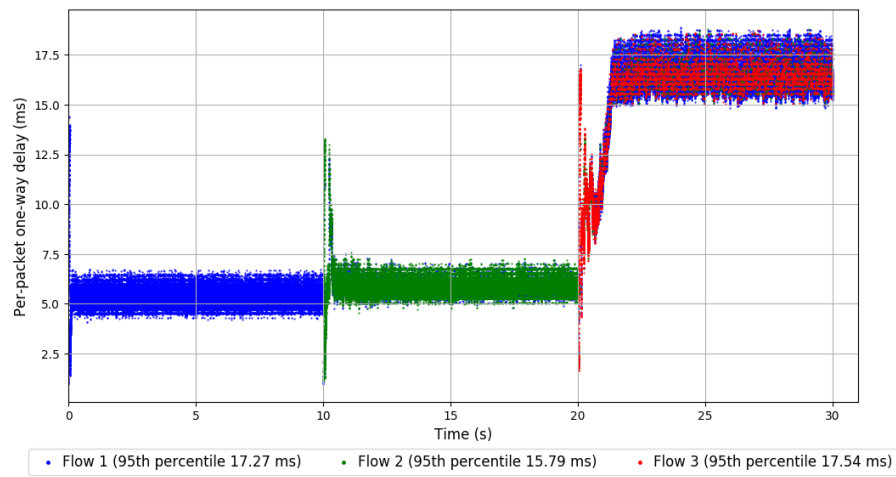
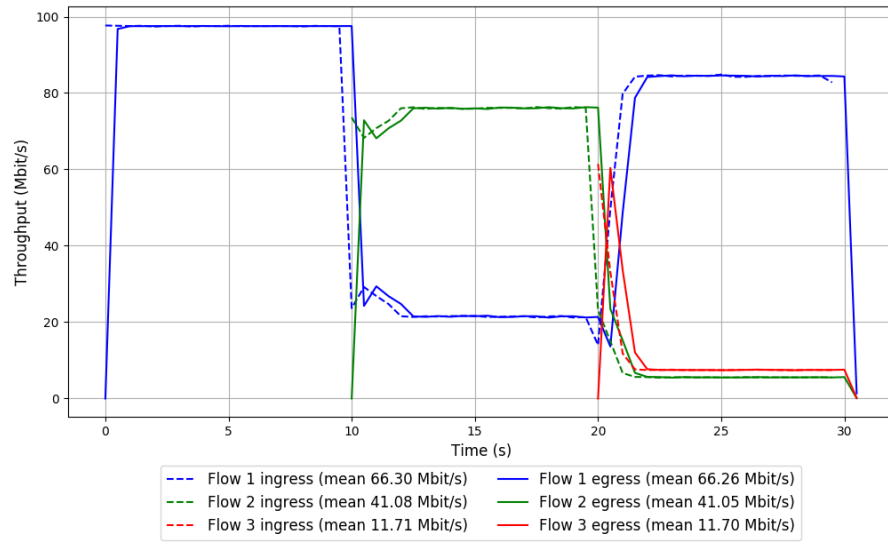


Run 3: Statistics of TCP BBR

Start at: 2019-01-21 11:58:55  
End at: 2019-01-21 11:59:25  
Local clock offset: -6.63 ms  
Remote clock offset: -0.007 ms

# Below is generated by plot.py at 2019-01-21 12:57:56  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 97.51 Mbit/s  
95th percentile per-packet one-way delay: 17.124 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 66.26 Mbit/s  
95th percentile per-packet one-way delay: 17.275 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 41.05 Mbit/s  
95th percentile per-packet one-way delay: 15.790 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 11.70 Mbit/s  
95th percentile per-packet one-way delay: 17.539 ms  
Loss rate: 0.00%

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

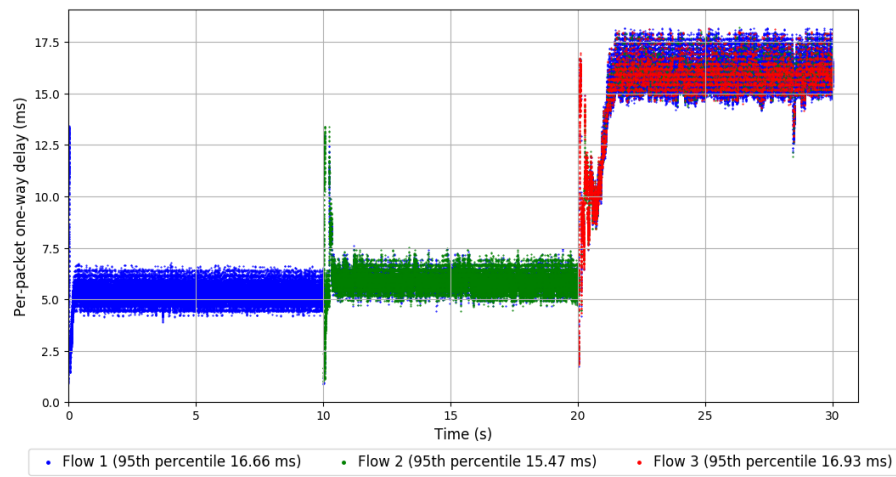
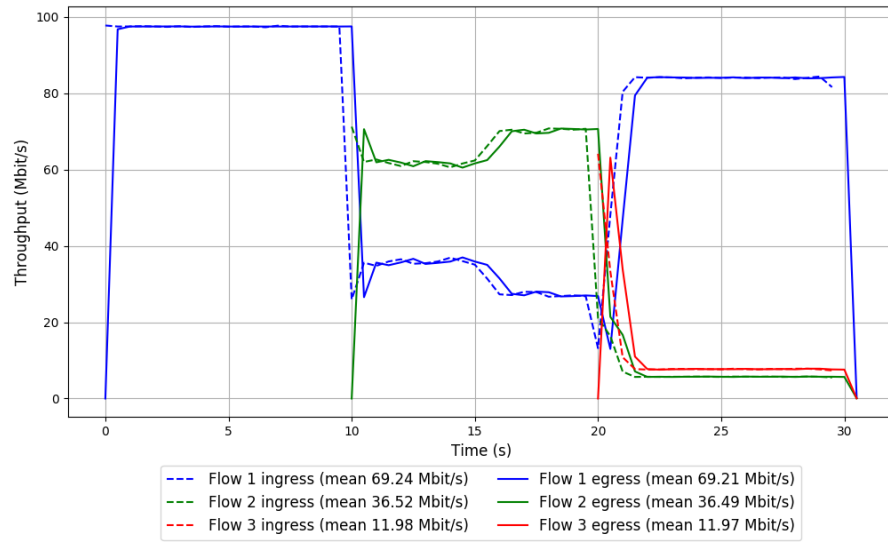


Run 4: Statistics of TCP BBR

Start at: 2019-01-21 12:22:46  
End at: 2019-01-21 12:23:16  
Local clock offset: -5.865 ms  
Remote clock offset: -0.382 ms

# Below is generated by plot.py at 2019-01-21 12:57:56  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 97.50 Mbit/s  
95th percentile per-packet one-way delay: 16.534 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 69.21 Mbit/s  
95th percentile per-packet one-way delay: 16.659 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 36.49 Mbit/s  
95th percentile per-packet one-way delay: 15.470 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 11.97 Mbit/s  
95th percentile per-packet one-way delay: 16.935 ms  
Loss rate: 0.00%

# Run 4: Report of TCP BBR — Data Link



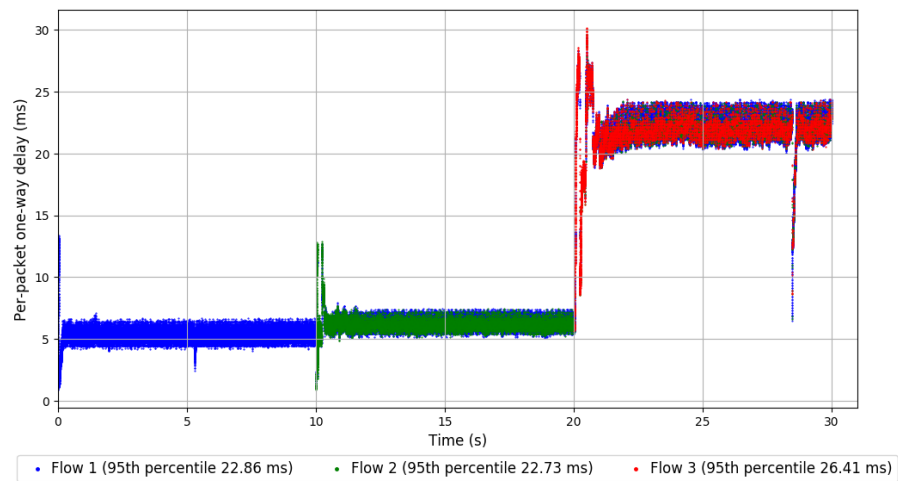
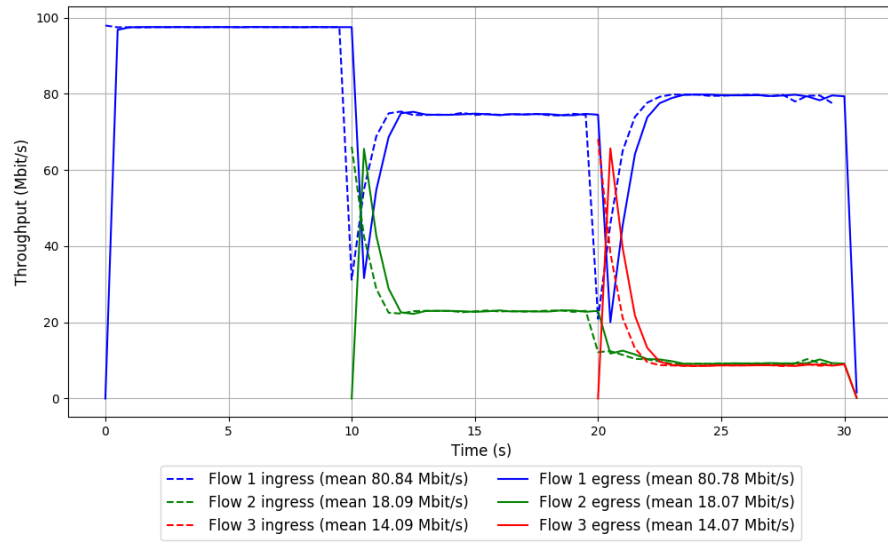


Run 5: Statistics of TCP BBR

Start at: 2019-01-21 12:46:35  
End at: 2019-01-21 12:47:05  
Local clock offset: -5.753 ms  
Remote clock offset: -0.628 ms

# Below is generated by plot.py at 2019-01-21 12:57:56  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 97.51 Mbit/s  
95th percentile per-packet one-way delay: 22.976 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 80.78 Mbit/s  
95th percentile per-packet one-way delay: 22.861 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 18.07 Mbit/s  
95th percentile per-packet one-way delay: 22.731 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 14.07 Mbit/s  
95th percentile per-packet one-way delay: 26.413 ms  
Loss rate: 0.00%

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



Run 1: Statistics of Copa

Start at: 2019-01-21 11:08:54

End at: 2019-01-21 11:09:24

Local clock offset: -6.987 ms

Remote clock offset: 0.207 ms

# Below is generated by plot.py at 2019-01-21 12:57:56

# Datalink statistics

-- Total of 3 flows:

Average throughput: 8.62 Mbit/s

95th percentile per-packet one-way delay: 1.123 ms

Loss rate: 71.68%

-- Flow 1:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 1.058 ms

Loss rate: 98.33%

-- Flow 2:

Average throughput: 13.19 Mbit/s

95th percentile per-packet one-way delay: 1.149 ms

Loss rate: 70.22%

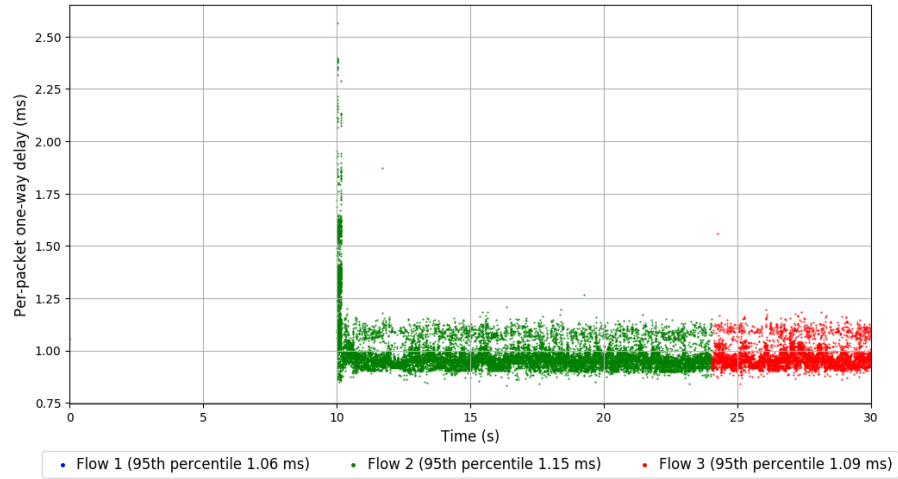
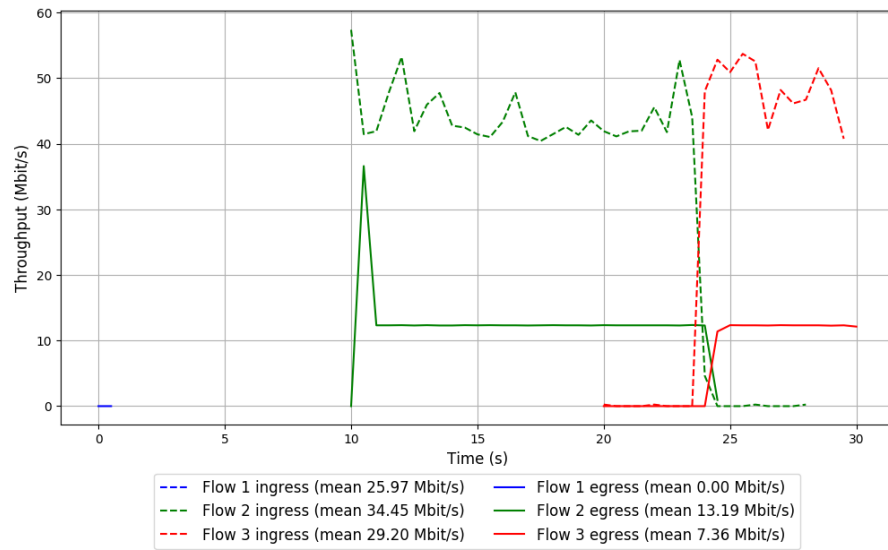
-- Flow 3:

Average throughput: 7.36 Mbit/s

95th percentile per-packet one-way delay: 1.094 ms

Loss rate: 74.80%

## Run 1: Report of Copa — Data Link

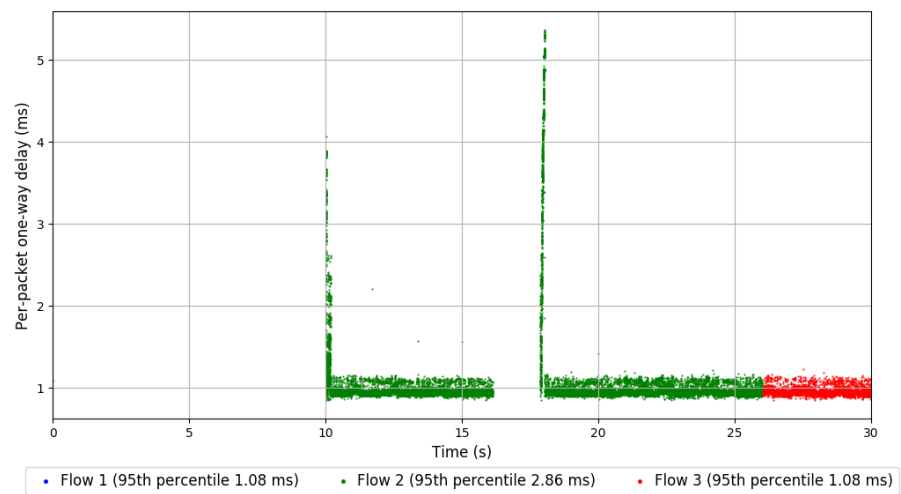
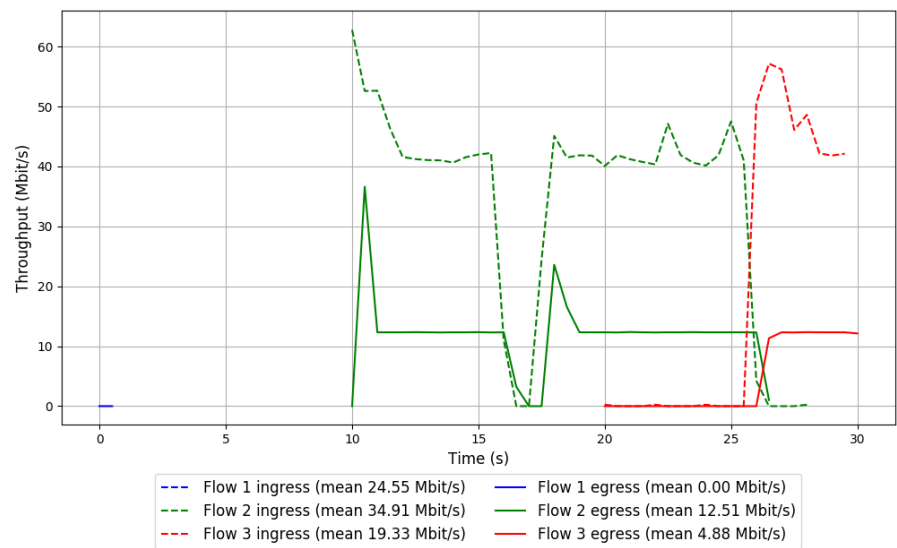


Run 2: Statistics of Copa

Start at: 2019-01-21 11:32:41  
End at: 2019-01-21 11:33:11  
Local clock offset: -7.561 ms  
Remote clock offset: 0.132 ms

# Below is generated by plot.py at 2019-01-21 12:57:56  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 8.31 Mbit/s  
95th percentile per-packet one-way delay: 2.153 ms  
Loss rate: 69.70%  
-- Flow 1:  
Average throughput: 0.00 Mbit/s  
95th percentile per-packet one-way delay: 1.085 ms  
Loss rate: 98.33%  
-- Flow 2:  
Average throughput: 12.51 Mbit/s  
95th percentile per-packet one-way delay: 2.860 ms  
Loss rate: 68.15%  
-- Flow 3:  
Average throughput: 4.88 Mbit/s  
95th percentile per-packet one-way delay: 1.084 ms  
Loss rate: 74.73%

Run 2: Report of Copa — Data Link

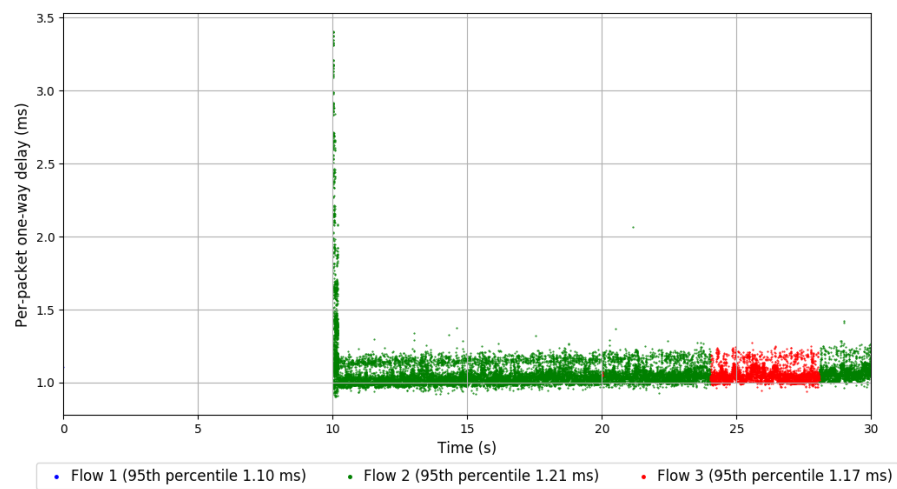
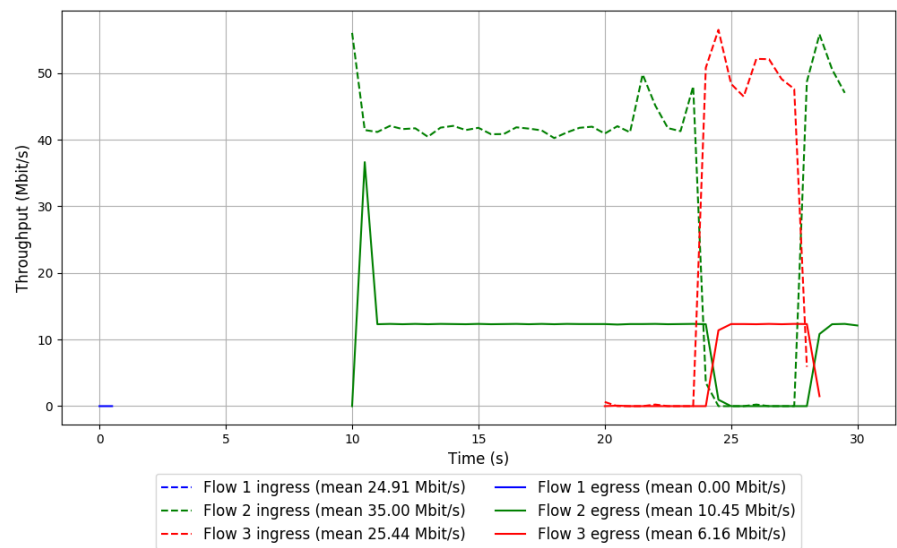


Run 3: Statistics of Copa

Start at: 2019-01-21 11:56:40  
End at: 2019-01-21 11:57:10  
Local clock offset: -6.902 ms  
Remote clock offset: -0.061 ms

# Below is generated by plot.py at 2019-01-21 12:57:56  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 8.62 Mbit/s  
95th percentile per-packet one-way delay: 1.199 ms  
Loss rate: 71.42%  
-- Flow 1:  
Average throughput: 0.00 Mbit/s  
95th percentile per-packet one-way delay: 1.102 ms  
Loss rate: 98.33%  
-- Flow 2:  
Average throughput: 10.45 Mbit/s  
95th percentile per-packet one-way delay: 1.209 ms  
Loss rate: 70.13%  
-- Flow 3:  
Average throughput: 6.16 Mbit/s  
95th percentile per-packet one-way delay: 1.174 ms  
Loss rate: 75.79%

Run 3: Report of Copa — Data Link



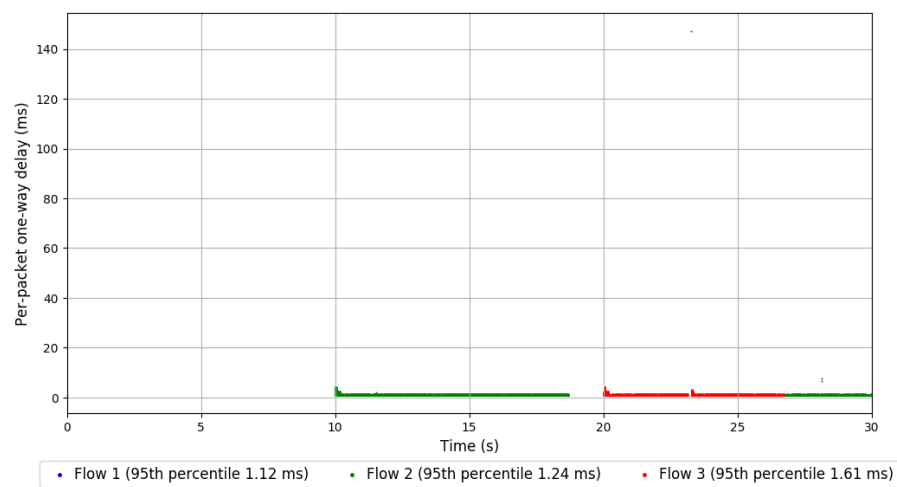
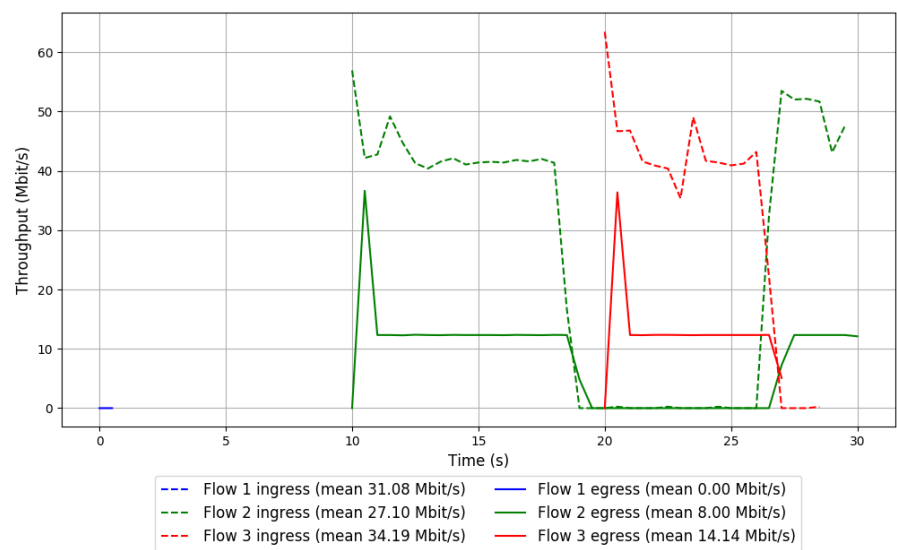


Run 4: Statistics of Copa

Start at: 2019-01-21 12:20:31  
End at: 2019-01-21 12:21:01  
Local clock offset: -5.923 ms  
Remote clock offset: -0.358 ms

# Below is generated by plot.py at 2019-01-21 12:57:56  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 8.48 Mbit/s  
95th percentile per-packet one-way delay: 1.418 ms  
Loss rate: 69.67%  
-- Flow 1:  
Average throughput: 0.00 Mbit/s  
95th percentile per-packet one-way delay: 1.118 ms  
Loss rate: 98.60%  
-- Flow 2:  
Average throughput: 8.00 Mbit/s  
95th percentile per-packet one-way delay: 1.238 ms  
Loss rate: 70.49%  
-- Flow 3:  
Average throughput: 14.14 Mbit/s  
95th percentile per-packet one-way delay: 1.609 ms  
Loss rate: 68.17%

Run 4: Report of Copa — Data Link

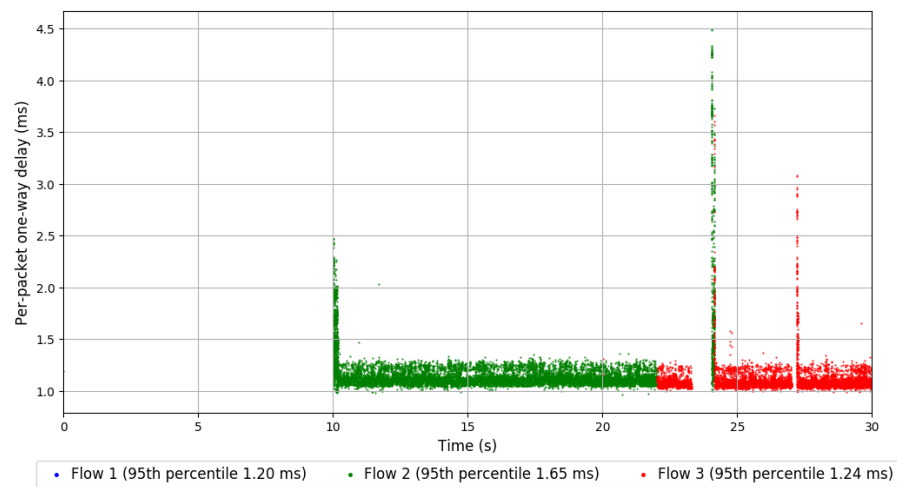
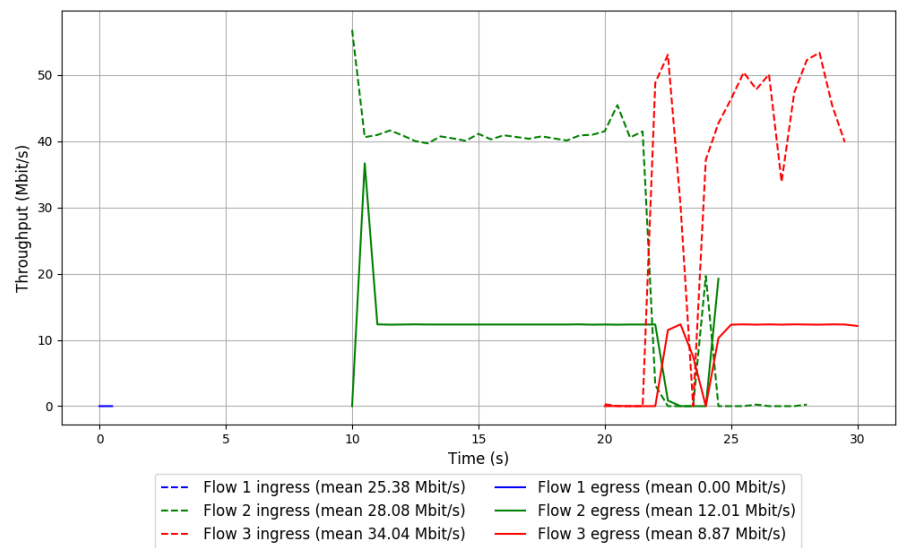


Run 5: Statistics of Copa

Start at: 2019-01-21 12:44:20  
End at: 2019-01-21 12:44:50  
Local clock offset: -5.854 ms  
Remote clock offset: -0.614 ms

# Below is generated by plot.py at 2019-01-21 12:57:56  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 8.62 Mbit/s  
95th percentile per-packet one-way delay: 1.497 ms  
Loss rate: 69.57%  
-- Flow 1:  
Average throughput: 0.00 Mbit/s  
95th percentile per-packet one-way delay: 1.195 ms  
Loss rate: 98.33%  
-- Flow 2:  
Average throughput: 12.01 Mbit/s  
95th percentile per-packet one-way delay: 1.654 ms  
Loss rate: 66.66%  
-- Flow 3:  
Average throughput: 8.87 Mbit/s  
95th percentile per-packet one-way delay: 1.241 ms  
Loss rate: 73.94%

Run 5: Report of Copa — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2019-01-21 10:58:42

End at: 2019-01-21 10:59:12

Local clock offset: -7.677 ms

Remote clock offset: 0.17 ms

# Below is generated by plot.py at 2019-01-21 12:58:08

# Datalink statistics

-- Total of 3 flows:

Average throughput: 97.47 Mbit/s

95th percentile per-packet one-way delay: 32.057 ms

Loss rate: 0.04%

-- Flow 1:

Average throughput: 60.77 Mbit/s

95th percentile per-packet one-way delay: 31.927 ms

Loss rate: 0.04%

-- Flow 2:

Average throughput: 40.31 Mbit/s

95th percentile per-packet one-way delay: 32.143 ms

Loss rate: 0.04%

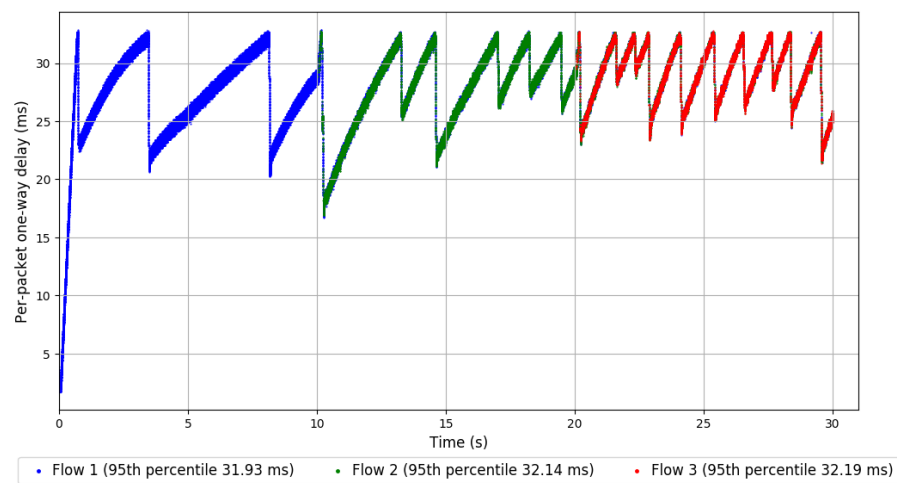
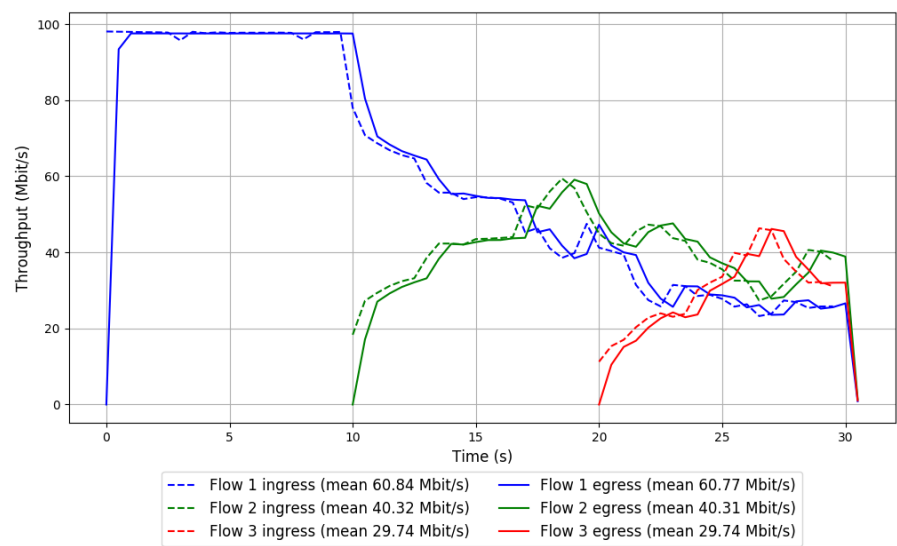
-- Flow 3:

Average throughput: 29.74 Mbit/s

95th percentile per-packet one-way delay: 32.194 ms

Loss rate: 0.04%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2019-01-21 11:22:29

End at: 2019-01-21 11:22:59

Local clock offset: -7.254 ms

Remote clock offset: 0.179 ms

# Below is generated by plot.py at 2019-01-21 12:58:16

# Datalink statistics

-- Total of 3 flows:

Average throughput: 97.51 Mbit/s

95th percentile per-packet one-way delay: 31.134 ms

Loss rate: 0.03%

-- Flow 1:

Average throughput: 67.02 Mbit/s

95th percentile per-packet one-way delay: 31.116 ms

Loss rate: 0.03%

-- Flow 2:

Average throughput: 32.69 Mbit/s

95th percentile per-packet one-way delay: 31.173 ms

Loss rate: 0.03%

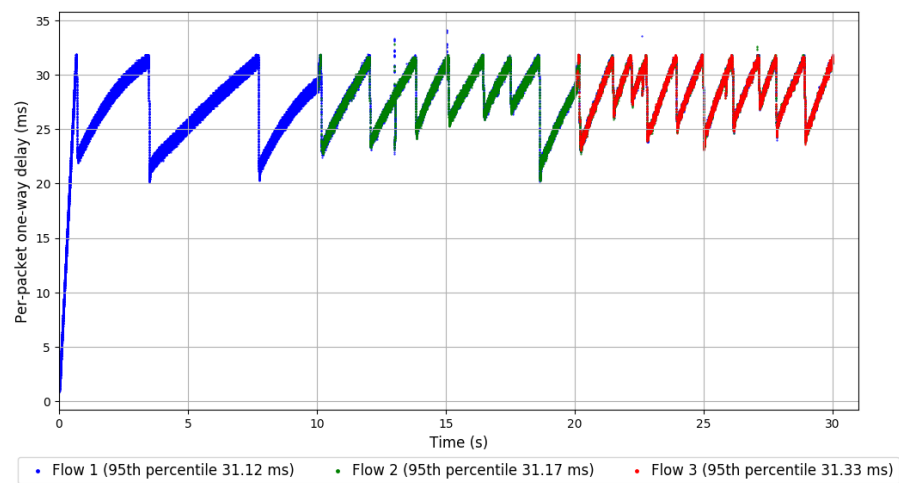
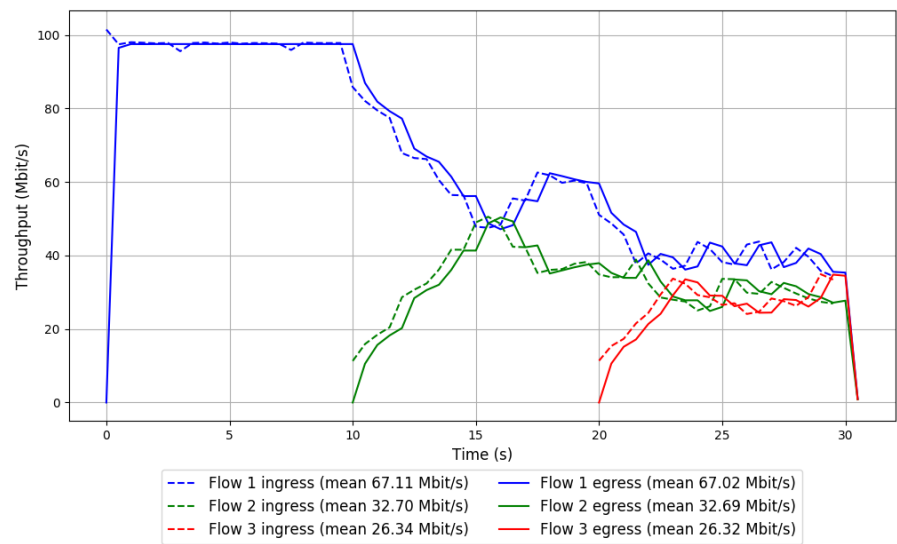
-- Flow 3:

Average throughput: 26.32 Mbit/s

95th percentile per-packet one-way delay: 31.327 ms

Loss rate: 0.04%

Run 2: Report of TCP Cubic — Data Link





Run 3: Statistics of TCP Cubic

Start at: 2019-01-21 11:46:17

End at: 2019-01-21 11:46:47

Local clock offset: -7.864 ms

Remote clock offset: 0.069 ms

# Below is generated by plot.py at 2019-01-21 12:58:18

# Datalink statistics

-- Total of 3 flows:

Average throughput: 97.51 Mbit/s

95th percentile per-packet one-way delay: 31.165 ms

Loss rate: 0.04%

-- Flow 1:

Average throughput: 63.58 Mbit/s

95th percentile per-packet one-way delay: 31.137 ms

Loss rate: 0.03%

-- Flow 2:

Average throughput: 37.02 Mbit/s

95th percentile per-packet one-way delay: 31.226 ms

Loss rate: 0.04%

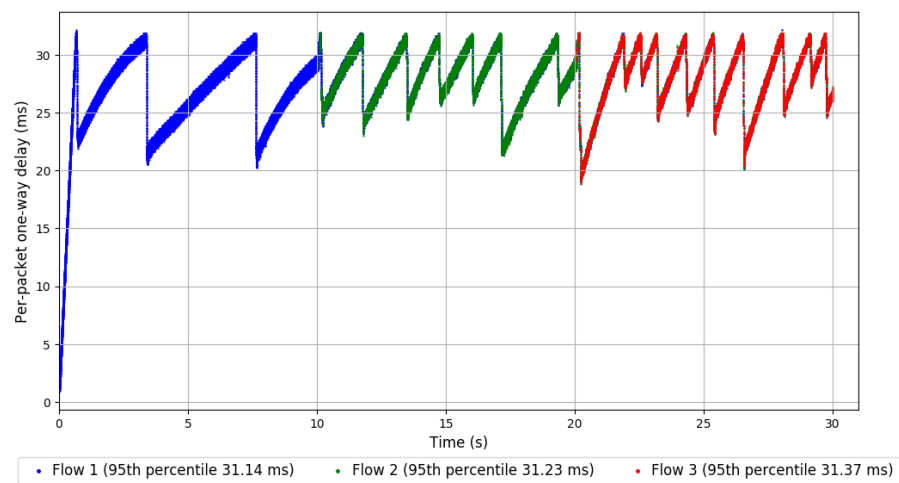
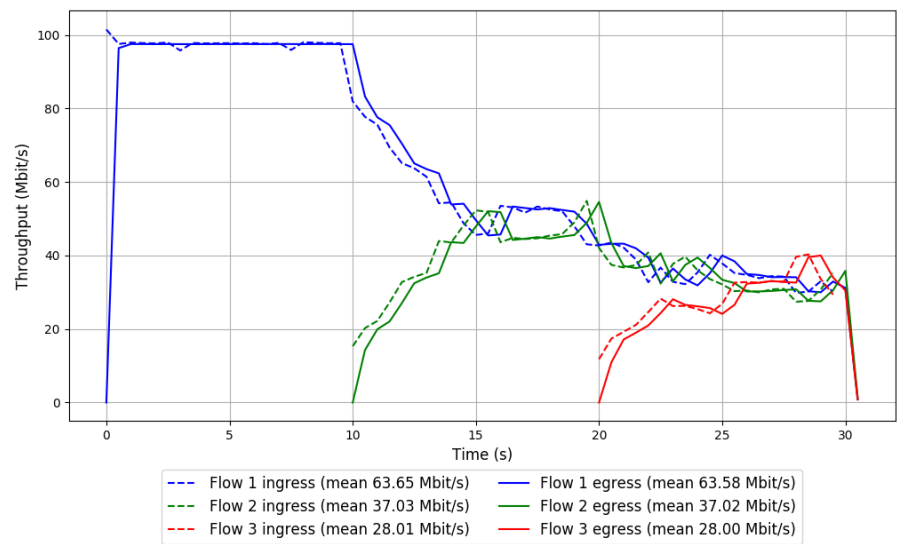
-- Flow 3:

Average throughput: 28.00 Mbit/s

95th percentile per-packet one-way delay: 31.370 ms

Loss rate: 0.06%

Run 3: Report of TCP Cubic — Data Link

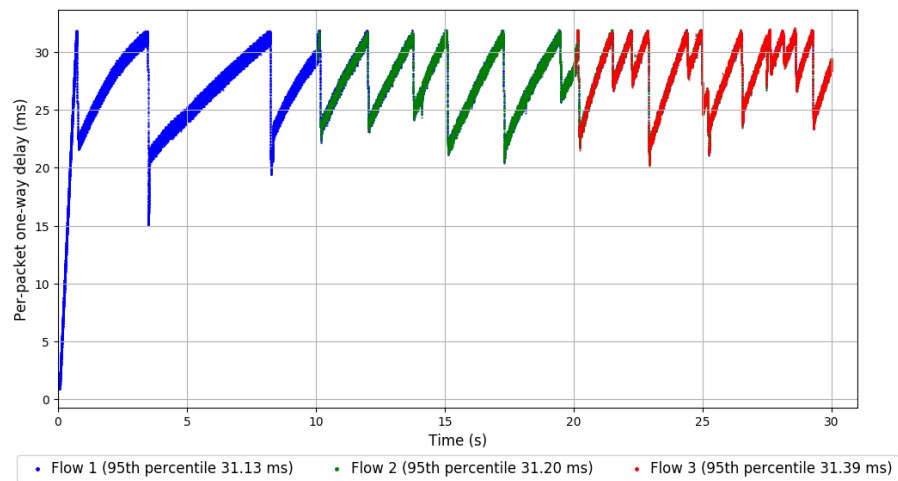
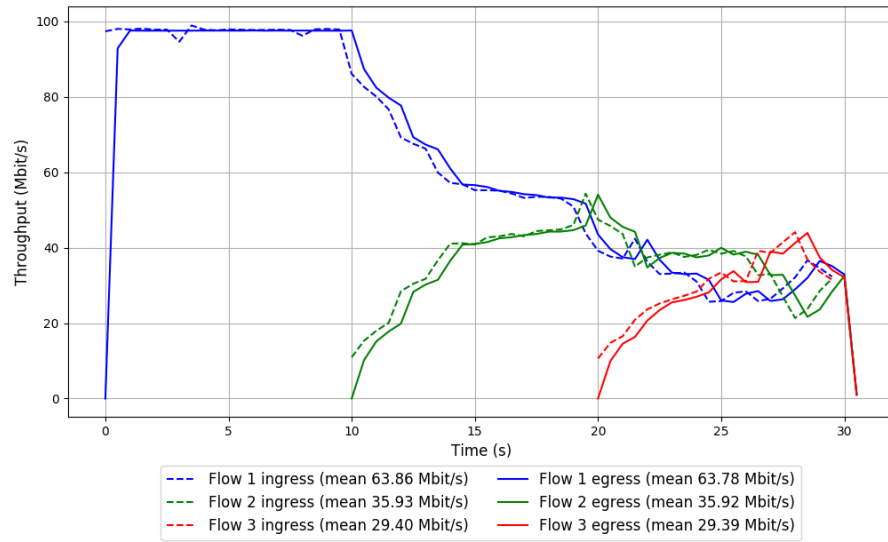


Run 4: Statistics of TCP Cubic

Start at: 2019-01-21 12:10:16  
End at: 2019-01-21 12:10:46  
Local clock offset: -5.993 ms  
Remote clock offset: -0.262 ms

# Below is generated by plot.py at 2019-01-21 12:58:59  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 97.44 Mbit/s  
95th percentile per-packet one-way delay: 31.171 ms  
Loss rate: 0.03%  
-- Flow 1:  
Average throughput: 63.78 Mbit/s  
95th percentile per-packet one-way delay: 31.133 ms  
Loss rate: 0.03%  
-- Flow 2:  
Average throughput: 35.92 Mbit/s  
95th percentile per-packet one-way delay: 31.196 ms  
Loss rate: 0.04%  
-- Flow 3:  
Average throughput: 29.39 Mbit/s  
95th percentile per-packet one-way delay: 31.388 ms  
Loss rate: 0.03%

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

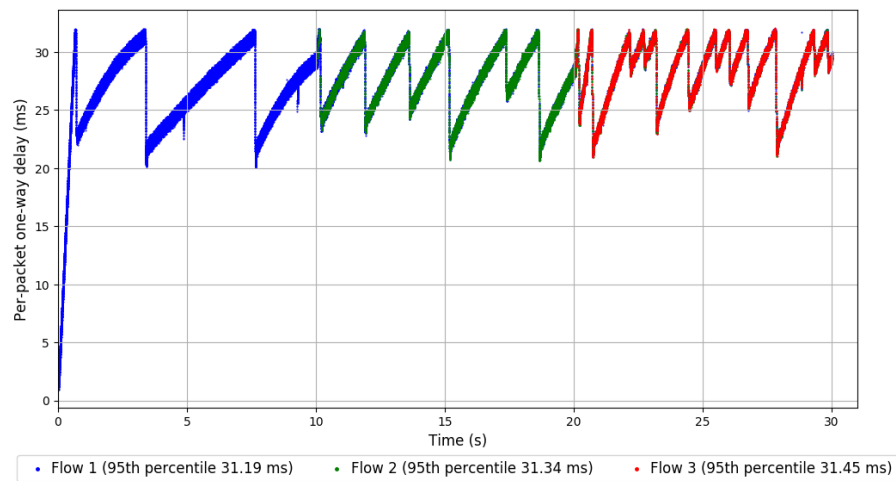
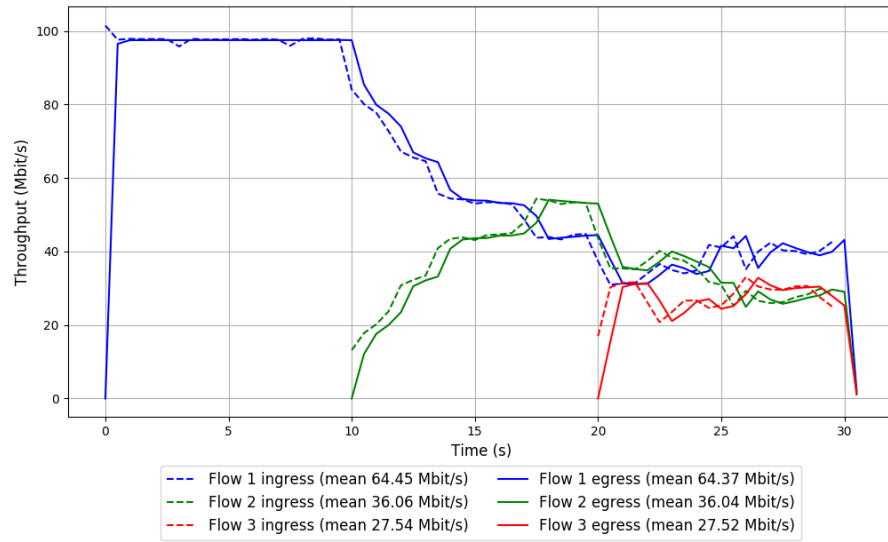


Run 5: Statistics of TCP Cubic

Start at: 2019-01-21 12:34:07  
End at: 2019-01-21 12:34:37  
Local clock offset: -5.866 ms  
Remote clock offset: -0.577 ms

# Below is generated by plot.py at 2019-01-21 12:58:59  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 97.51 Mbit/s  
95th percentile per-packet one-way delay: 31.225 ms  
Loss rate: 0.04%  
-- Flow 1:  
Average throughput: 64.37 Mbit/s  
95th percentile per-packet one-way delay: 31.188 ms  
Loss rate: 0.03%  
-- Flow 2:  
Average throughput: 36.04 Mbit/s  
95th percentile per-packet one-way delay: 31.342 ms  
Loss rate: 0.05%  
-- Flow 3:  
Average throughput: 27.52 Mbit/s  
95th percentile per-packet one-way delay: 31.445 ms  
Loss rate: 0.03%

# Run 5: Report of TCP Cubic — Data Link



Run 1: Statistics of FillP

Start at: 2019-01-21 11:03:14

End at: 2019-01-21 11:03:44

Local clock offset: -6.908 ms

Remote clock offset: 0.136 ms

# Below is generated by plot.py at 2019-01-21 12:59:17

# Datalink statistics

-- Total of 3 flows:

Average throughput: 92.25 Mbit/s

95th percentile per-packet one-way delay: 28.630 ms

Loss rate: 15.88%

-- Flow 1:

Average throughput: 47.74 Mbit/s

95th percentile per-packet one-way delay: 26.095 ms

Loss rate: 3.70%

-- Flow 2:

Average throughput: 44.98 Mbit/s

95th percentile per-packet one-way delay: 28.670 ms

Loss rate: 20.77%

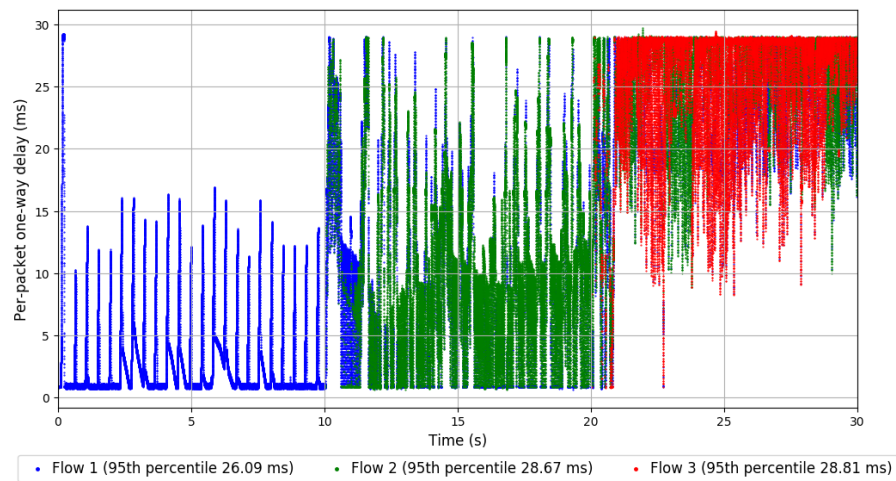
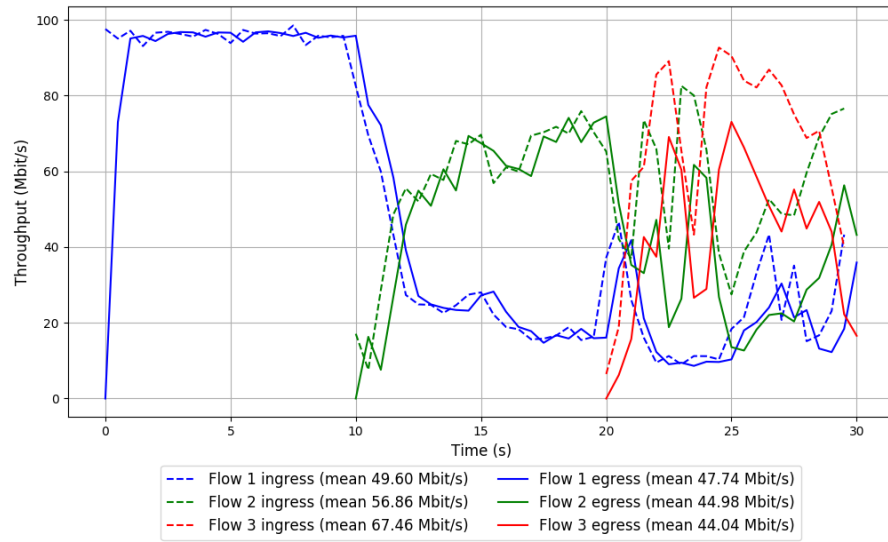
-- Flow 3:

Average throughput: 44.04 Mbit/s

95th percentile per-packet one-way delay: 28.809 ms

Loss rate: 34.61%

# Run 1: Report of FillP — Data Link





Run 2: Statistics of FillP

Start at: 2019-01-21 11:27:02

End at: 2019-01-21 11:27:32

Local clock offset: -7.424 ms

Remote clock offset: 0.153 ms

# Below is generated by plot.py at 2019-01-21 12:59:17

# Datalink statistics

-- Total of 3 flows:

Average throughput: 93.42 Mbit/s

95th percentile per-packet one-way delay: 28.615 ms

Loss rate: 13.47%

-- Flow 1:

Average throughput: 46.44 Mbit/s

95th percentile per-packet one-way delay: 25.370 ms

Loss rate: 1.95%

-- Flow 2:

Average throughput: 49.13 Mbit/s

95th percentile per-packet one-way delay: 28.646 ms

Loss rate: 13.99%

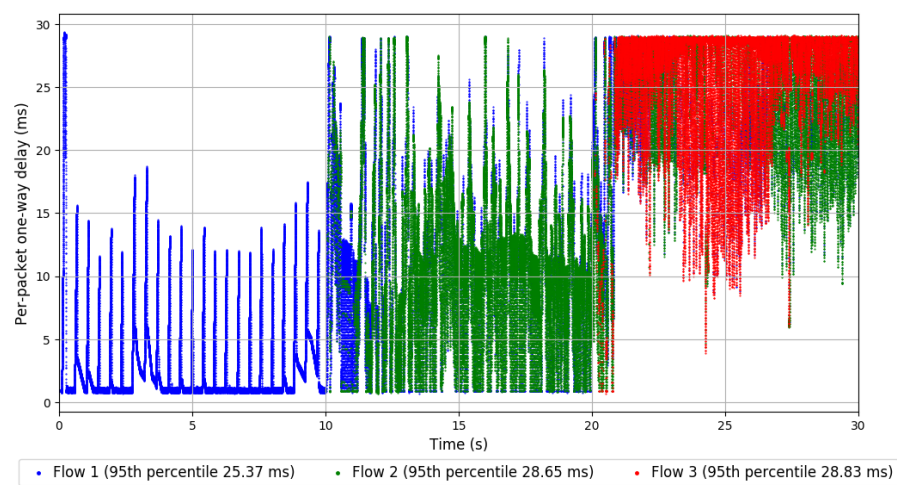
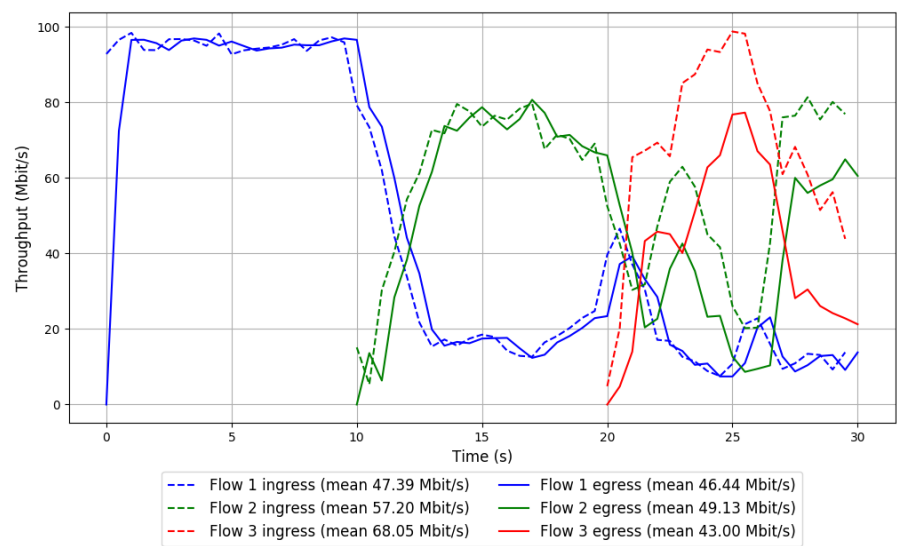
-- Flow 3:

Average throughput: 43.00 Mbit/s

95th percentile per-packet one-way delay: 28.831 ms

Loss rate: 36.73%

Run 2: Report of FillP — Data Link

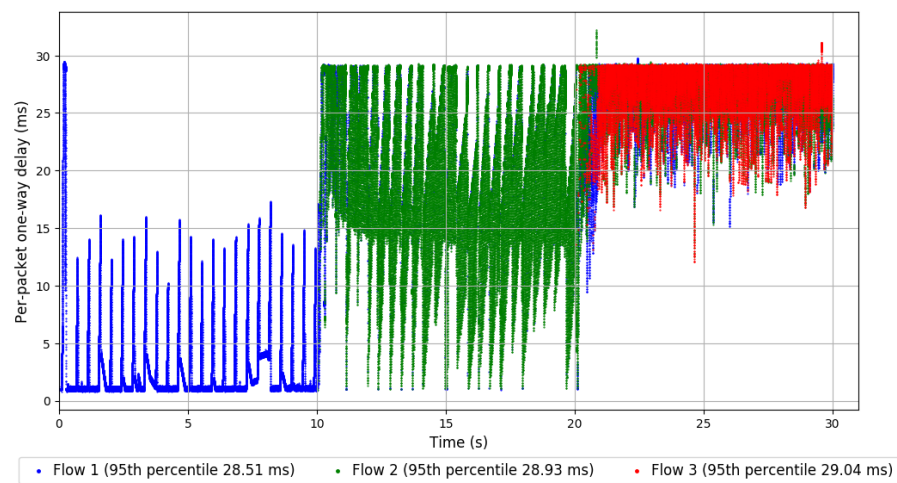
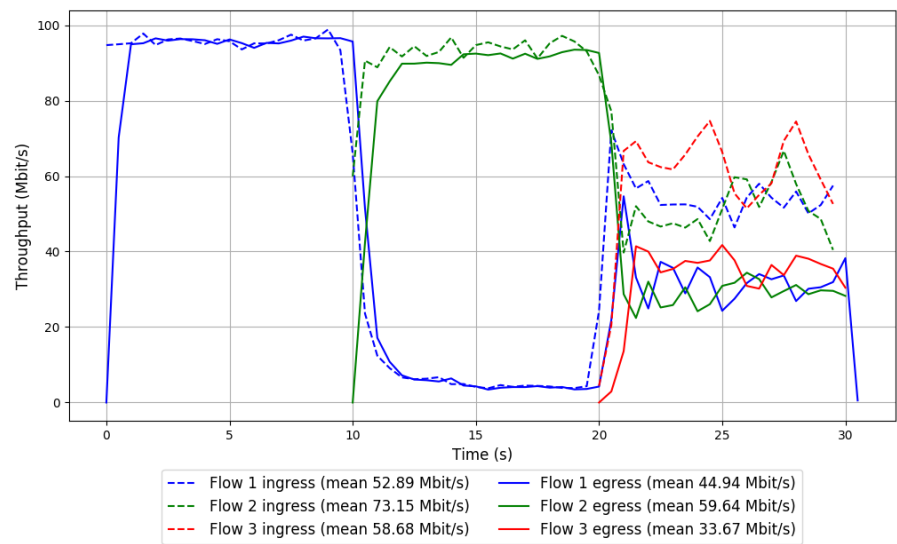


Run 3: Statistics of FillP

Start at: 2019-01-21 11:51:00  
End at: 2019-01-21 11:51:30  
Local clock offset: -7.832 ms  
Remote clock offset: 0.018 ms

# Below is generated by plot.py at 2019-01-21 12:59:23  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 95.81 Mbit/s  
95th percentile per-packet one-way delay: 28.886 ms  
Loss rate: 20.77%  
-- Flow 1:  
Average throughput: 44.94 Mbit/s  
95th percentile per-packet one-way delay: 28.511 ms  
Loss rate: 14.96%  
-- Flow 2:  
Average throughput: 59.64 Mbit/s  
95th percentile per-packet one-way delay: 28.930 ms  
Loss rate: 18.37%  
-- Flow 3:  
Average throughput: 33.67 Mbit/s  
95th percentile per-packet one-way delay: 29.037 ms  
Loss rate: 42.56%

Run 3: Report of FillP — Data Link

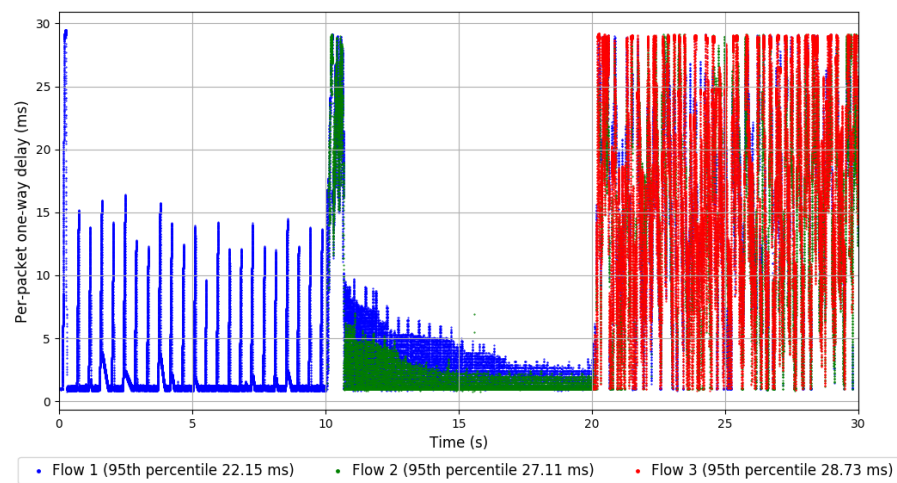
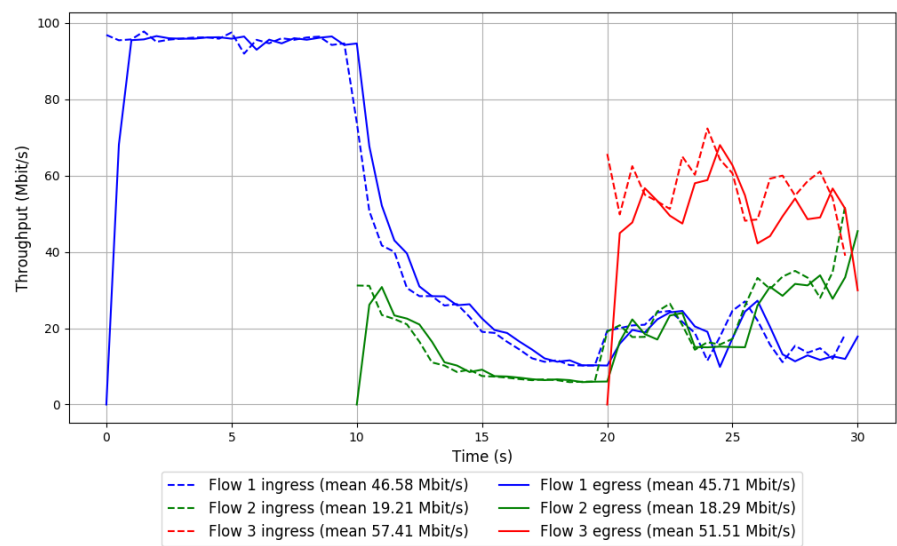


Run 4: Statistics of FillP

Start at: 2019-01-21 12:14:52  
End at: 2019-01-21 12:15:22  
Local clock offset: -5.838 ms  
Remote clock offset: -0.252 ms

# Below is generated by plot.py at 2019-01-21 12:59:23  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 74.98 Mbit/s  
95th percentile per-packet one-way delay: 26.895 ms  
Loss rate: 4.32%  
-- Flow 1:  
Average throughput: 45.71 Mbit/s  
95th percentile per-packet one-way delay: 22.150 ms  
Loss rate: 1.82%  
-- Flow 2:  
Average throughput: 18.29 Mbit/s  
95th percentile per-packet one-way delay: 27.115 ms  
Loss rate: 4.74%  
-- Flow 3:  
Average throughput: 51.51 Mbit/s  
95th percentile per-packet one-way delay: 28.728 ms  
Loss rate: 10.15%

Run 4: Report of FillP — Data Link

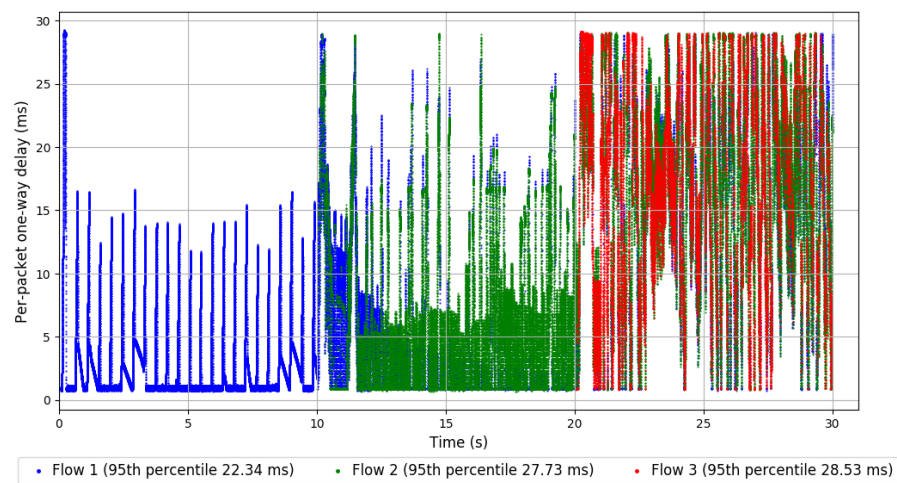
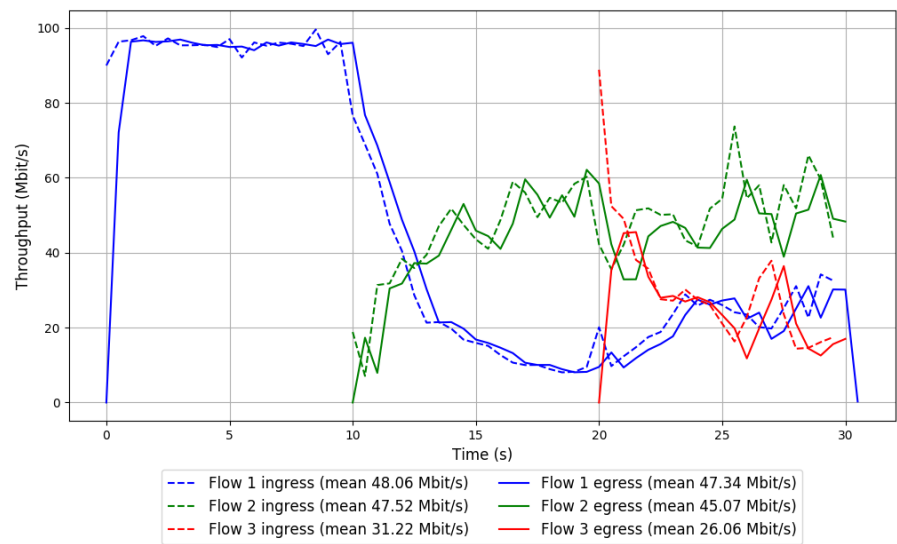


Run 5: Statistics of FillP

Start at: 2019-01-21 12:38:41  
End at: 2019-01-21 12:39:11  
Local clock offset: -5.892 ms  
Remote clock offset: -0.742 ms

# Below is generated by plot.py at 2019-01-21 12:59:31  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 85.98 Mbit/s  
95th percentile per-packet one-way delay: 26.491 ms  
Loss rate: 4.43%  
-- Flow 1:  
Average throughput: 47.34 Mbit/s  
95th percentile per-packet one-way delay: 22.343 ms  
Loss rate: 1.39%  
-- Flow 2:  
Average throughput: 45.07 Mbit/s  
95th percentile per-packet one-way delay: 27.730 ms  
Loss rate: 5.07%  
-- Flow 3:  
Average throughput: 26.06 Mbit/s  
95th percentile per-packet one-way delay: 28.532 ms  
Loss rate: 16.56%

Run 5: Report of FillP — Data Link





Run 1: Statistics of FillP-Sheep

Start at: 2019-01-21 10:57:34

End at: 2019-01-21 10:58:04

Local clock offset: -6.894 ms

Remote clock offset: 0.095 ms

# Below is generated by plot.py at 2019-01-21 12:59:31

# Datalink statistics

-- Total of 3 flows:

Average throughput: 83.55 Mbit/s

95th percentile per-packet one-way delay: 21.606 ms

Loss rate: 0.98%

-- Flow 1:

Average throughput: 46.25 Mbit/s

95th percentile per-packet one-way delay: 14.654 ms

Loss rate: 0.65%

-- Flow 2:

Average throughput: 23.70 Mbit/s

95th percentile per-packet one-way delay: 19.770 ms

Loss rate: 1.49%

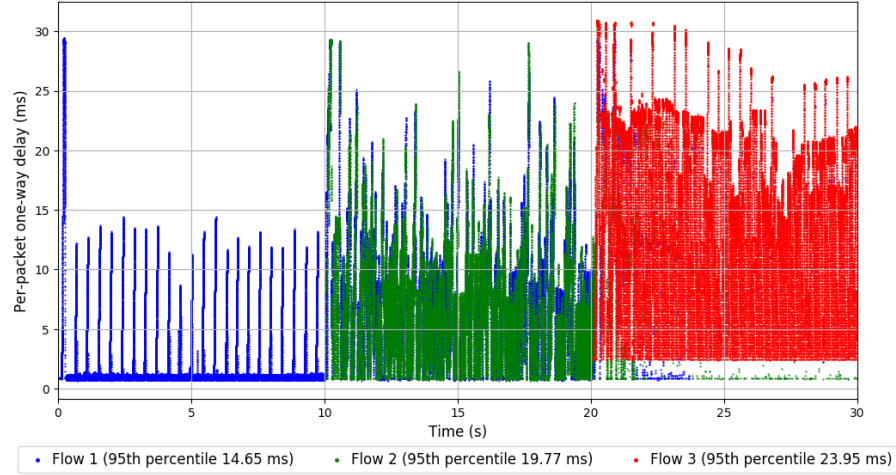
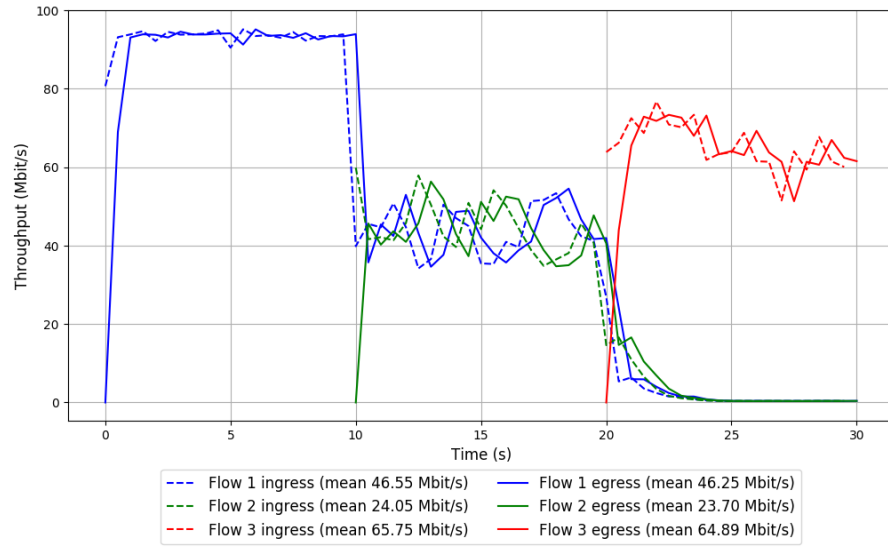
-- Flow 3:

Average throughput: 64.89 Mbit/s

95th percentile per-packet one-way delay: 23.947 ms

Loss rate: 1.30%

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



Run 2: Statistics of FillP-Sheep

Start at: 2019-01-21 11:21:23

End at: 2019-01-21 11:21:53

Local clock offset: -7.252 ms

Remote clock offset: 0.082 ms

# Below is generated by plot.py at 2019-01-21 12:59:41

# Datalink statistics

-- Total of 3 flows:

Average throughput: 44.37 Mbit/s

95th percentile per-packet one-way delay: 11.549 ms

Loss rate: 2.12%

-- Flow 1:

Average throughput: 35.07 Mbit/s

95th percentile per-packet one-way delay: 10.325 ms

Loss rate: 1.62%

-- Flow 2:

Average throughput: 7.51 Mbit/s

95th percentile per-packet one-way delay: 17.561 ms

Loss rate: 3.47%

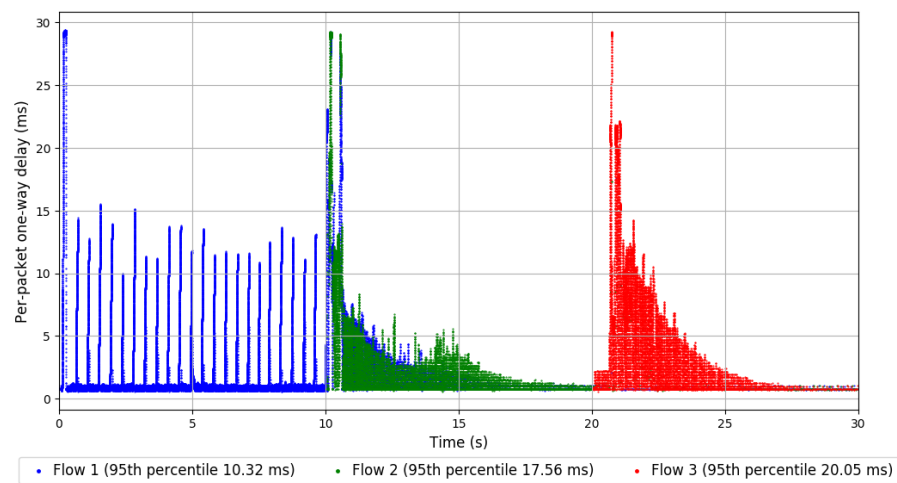
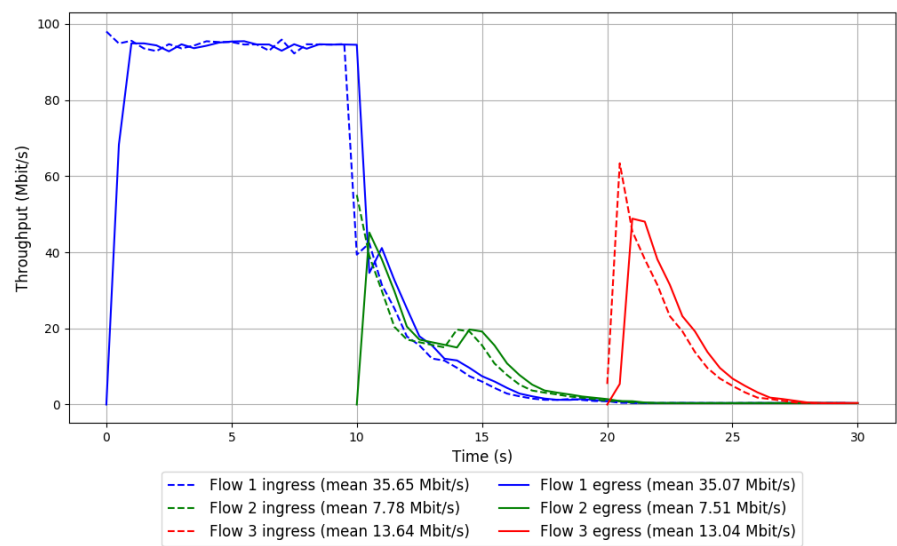
-- Flow 3:

Average throughput: 13.04 Mbit/s

95th percentile per-packet one-way delay: 20.052 ms

Loss rate: 4.44%

Run 2: Report of FillP-Sheep — Data Link

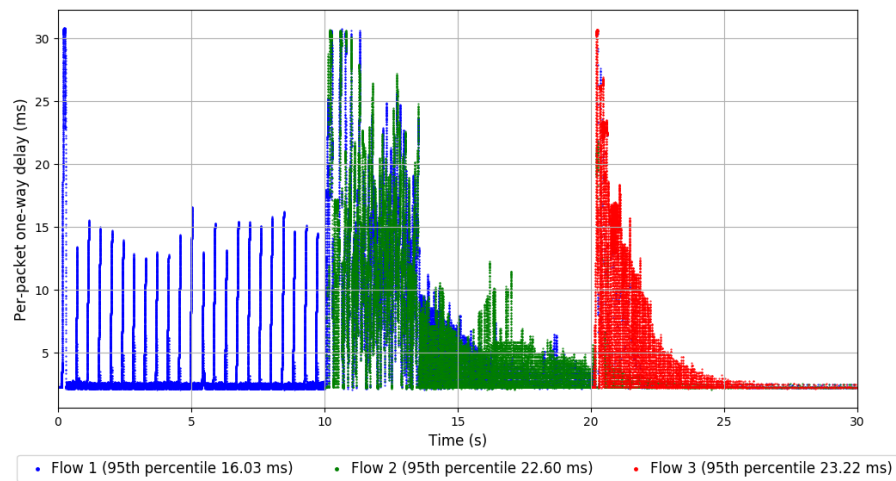
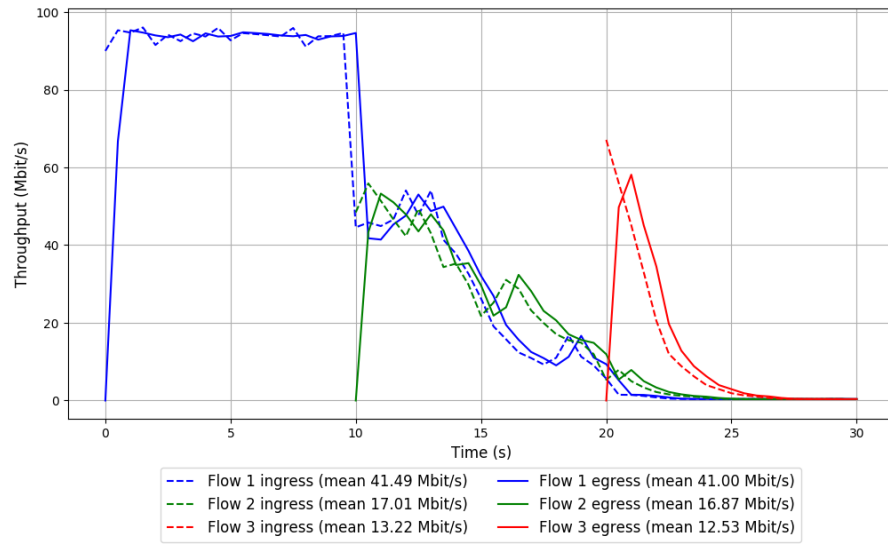


Run 3: Statistics of FillP-Sheep

Start at: 2019-01-21 11:45:10  
End at: 2019-01-21 11:45:40  
Local clock offset: -9.245 ms  
Remote clock offset: 0.035 ms

# Below is generated by plot.py at 2019-01-21 12:59:49  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 56.35 Mbit/s  
95th percentile per-packet one-way delay: 19.008 ms  
Loss rate: 1.42%  
-- Flow 1:  
Average throughput: 41.00 Mbit/s  
95th percentile per-packet one-way delay: 16.026 ms  
Loss rate: 1.18%  
-- Flow 2:  
Average throughput: 16.87 Mbit/s  
95th percentile per-packet one-way delay: 22.600 ms  
Loss rate: 0.82%  
-- Flow 3:  
Average throughput: 12.53 Mbit/s  
95th percentile per-packet one-way delay: 23.221 ms  
Loss rate: 5.20%

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

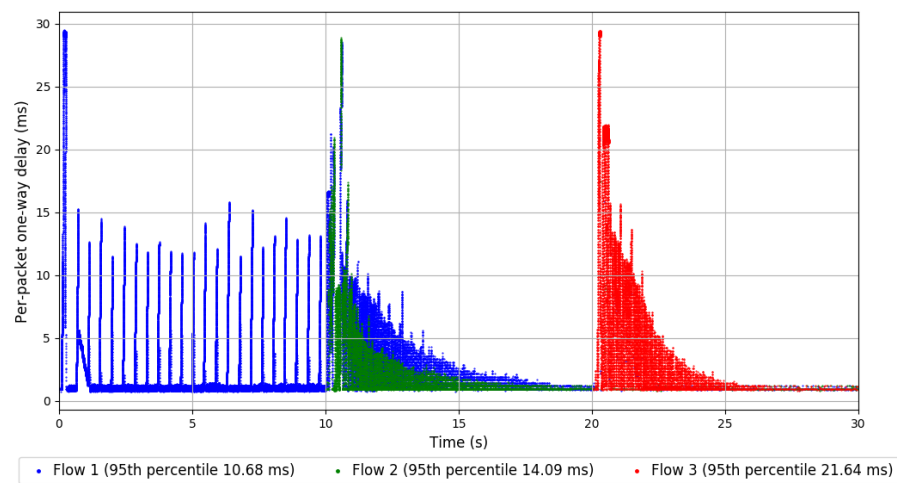
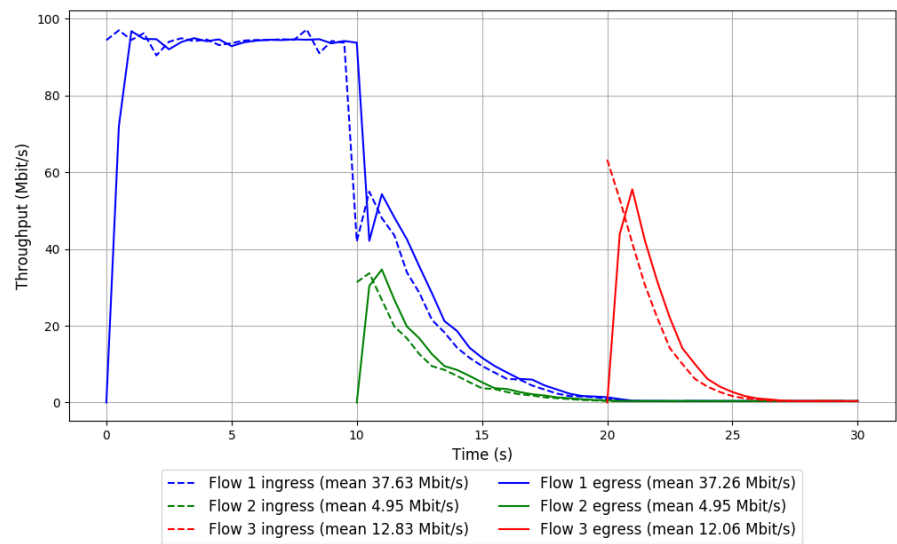


Run 4: Statistics of FillP-Sheep

Start at: 2019-01-21 12:09:09  
End at: 2019-01-21 12:09:39  
Local clock offset: -6.042 ms  
Remote clock offset: -0.209 ms

# Below is generated by plot.py at 2019-01-21 12:59:49  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 44.53 Mbit/s  
95th percentile per-packet one-way delay: 12.121 ms  
Loss rate: 1.38%  
-- Flow 1:  
Average throughput: 37.26 Mbit/s  
95th percentile per-packet one-way delay: 10.682 ms  
Loss rate: 0.99%  
-- Flow 2:  
Average throughput: 4.95 Mbit/s  
95th percentile per-packet one-way delay: 14.087 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 12.06 Mbit/s  
95th percentile per-packet one-way delay: 21.643 ms  
Loss rate: 5.98%

Run 4: Report of FillP-Sheep — Data Link



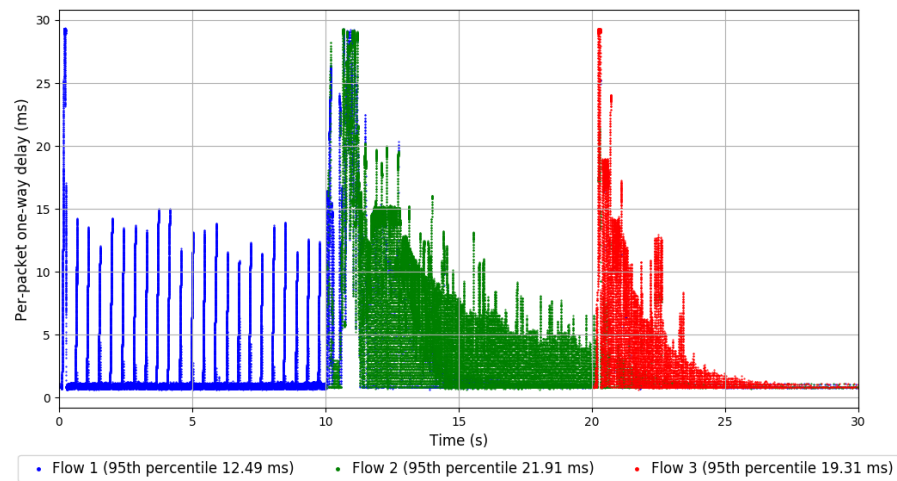
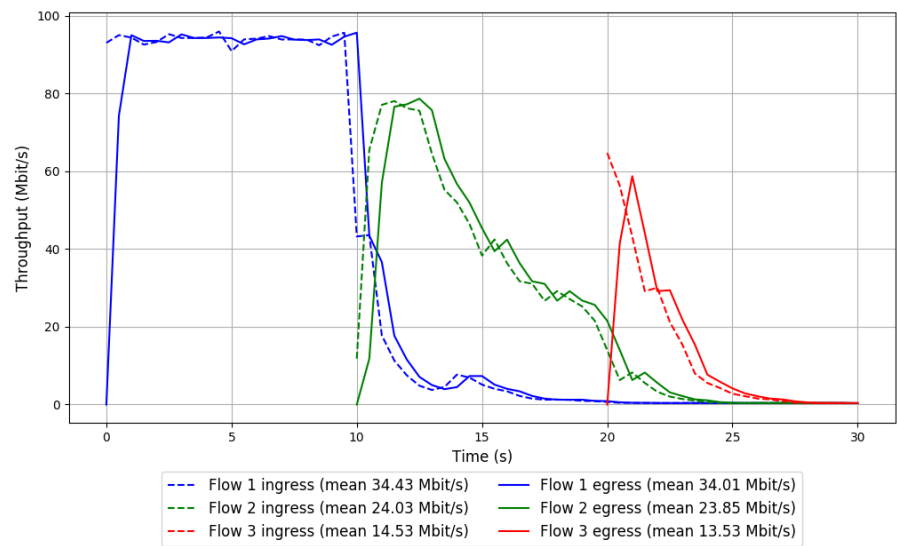


Run 5: Statistics of FillP-Sheep

Start at: 2019-01-21 12:33:00  
End at: 2019-01-21 12:33:30  
Local clock offset: -5.86 ms  
Remote clock offset: -0.652 ms

# Below is generated by plot.py at 2019-01-21 12:59:59  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 54.34 Mbit/s  
95th percentile per-packet one-way delay: 16.955 ms  
Loss rate: 1.59%  
-- Flow 1:  
Average throughput: 34.01 Mbit/s  
95th percentile per-packet one-way delay: 12.487 ms  
Loss rate: 1.24%  
-- Flow 2:  
Average throughput: 23.85 Mbit/s  
95th percentile per-packet one-way delay: 21.905 ms  
Loss rate: 0.74%  
-- Flow 3:  
Average throughput: 13.53 Mbit/s  
95th percentile per-packet one-way delay: 19.312 ms  
Loss rate: 6.90%

Run 5: Report of FillP-Sheep — Data Link



Run 1: Statistics of Indigo

Start at: 2019-01-21 11:12:18

End at: 2019-01-21 11:12:48

Local clock offset: -7.04 ms

Remote clock offset: 0.187 ms

# Below is generated by plot.py at 2019-01-21 13:00:20

# Datalink statistics

-- Total of 3 flows:

Average throughput: 97.41 Mbit/s

95th percentile per-packet one-way delay: 10.490 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 44.02 Mbit/s

95th percentile per-packet one-way delay: 9.956 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 44.46 Mbit/s

95th percentile per-packet one-way delay: 10.463 ms

Loss rate: 0.00%

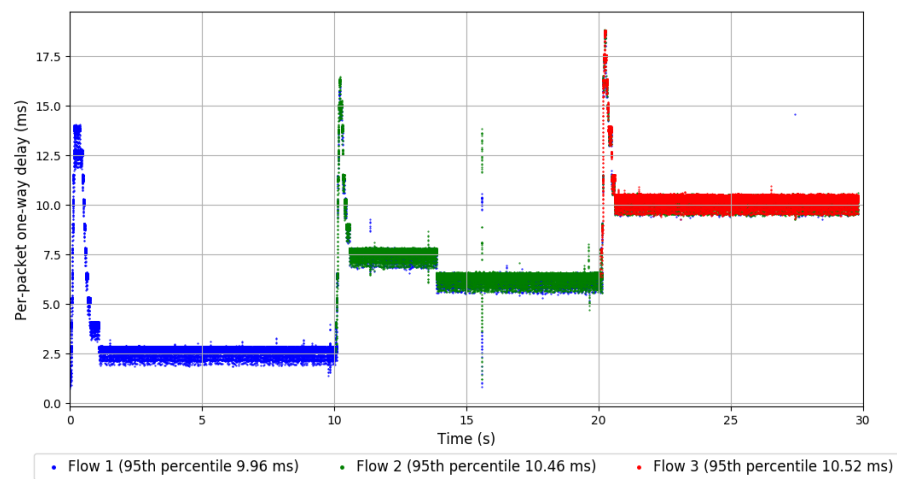
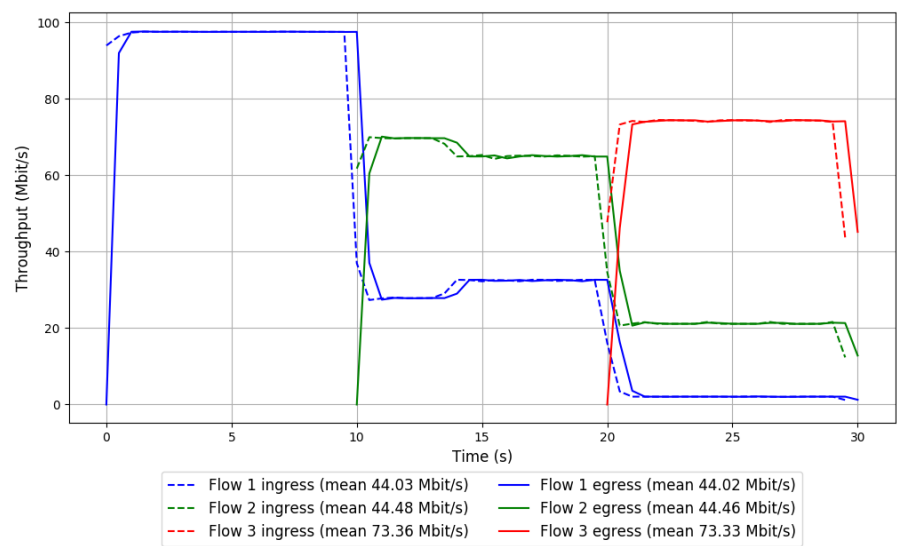
-- Flow 3:

Average throughput: 73.33 Mbit/s

95th percentile per-packet one-way delay: 10.518 ms

Loss rate: 0.00%

Run 1: Report of Indigo — Data Link

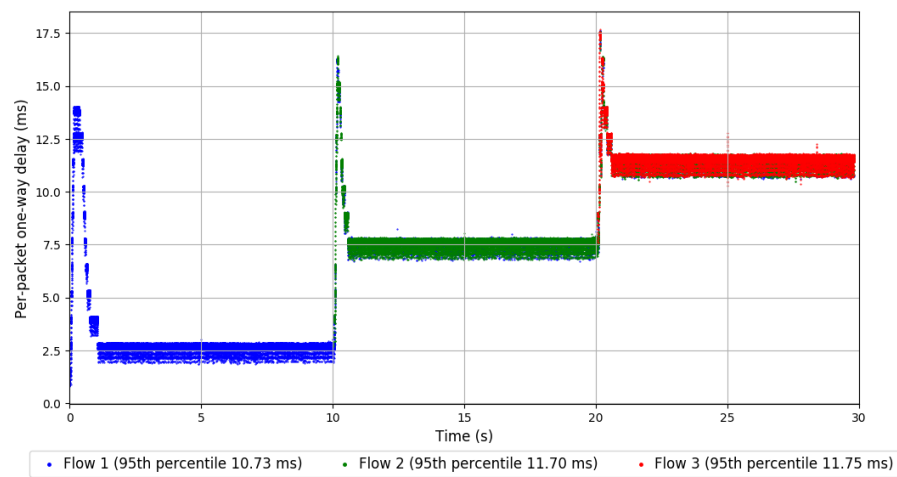
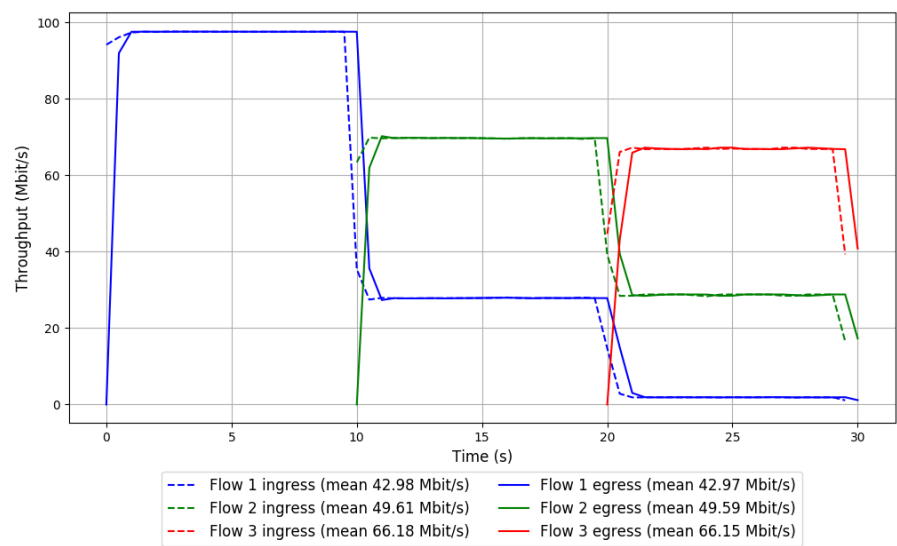


Run 2: Statistics of Indigo

Start at: 2019-01-21 11:36:05  
End at: 2019-01-21 11:36:35  
Local clock offset: -7.568 ms  
Remote clock offset: 0.15 ms

# Below is generated by plot.py at 2019-01-21 13:00:28  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 97.44 Mbit/s  
95th percentile per-packet one-way delay: 11.720 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 42.97 Mbit/s  
95th percentile per-packet one-way delay: 10.730 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 49.59 Mbit/s  
95th percentile per-packet one-way delay: 11.695 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 66.15 Mbit/s  
95th percentile per-packet one-way delay: 11.754 ms  
Loss rate: 0.00%

Run 2: Report of Indigo — Data Link

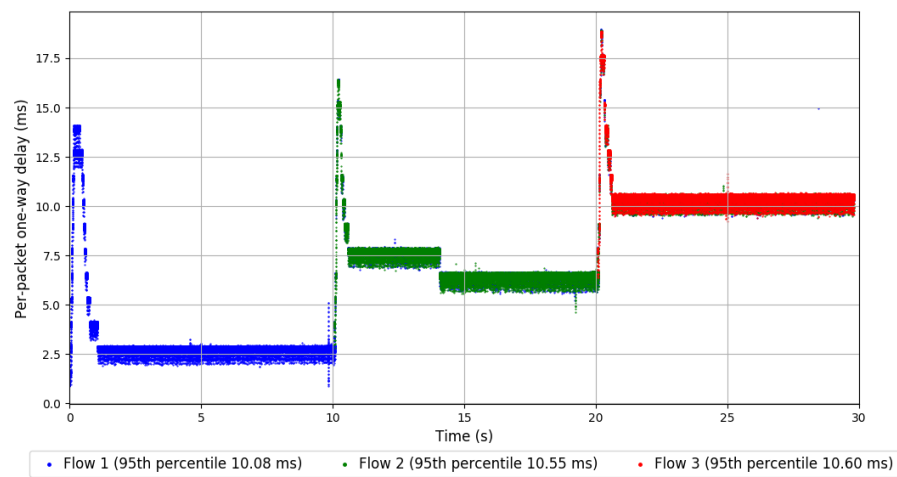
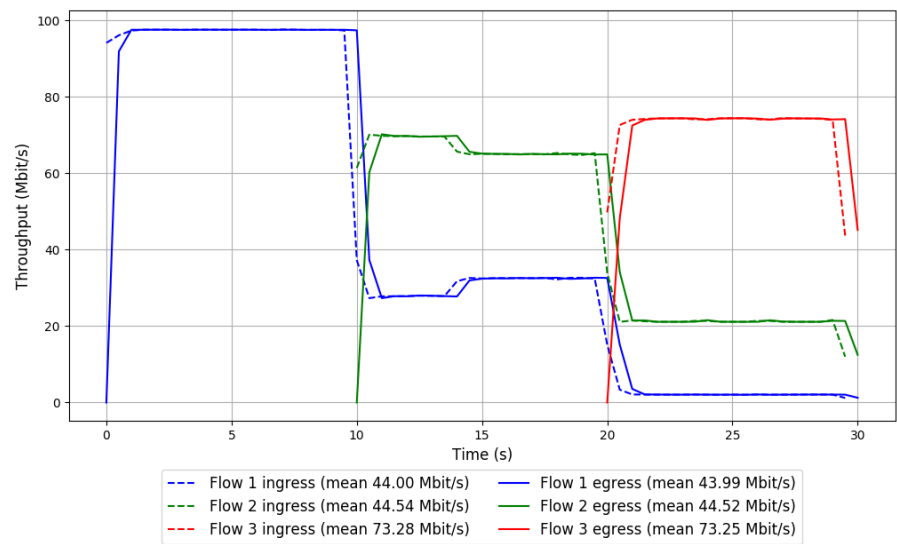


Run 3: Statistics of Indigo

Start at: 2019-01-21 12:00:04  
End at: 2019-01-21 12:00:34  
Local clock offset: -6.531 ms  
Remote clock offset: -0.092 ms

# Below is generated by plot.py at 2019-01-21 13:00:35  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 97.43 Mbit/s  
95th percentile per-packet one-way delay: 10.574 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 43.99 Mbit/s  
95th percentile per-packet one-way delay: 10.079 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 44.52 Mbit/s  
95th percentile per-packet one-way delay: 10.548 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 73.25 Mbit/s  
95th percentile per-packet one-way delay: 10.603 ms  
Loss rate: 0.00%

Run 3: Report of Indigo — Data Link



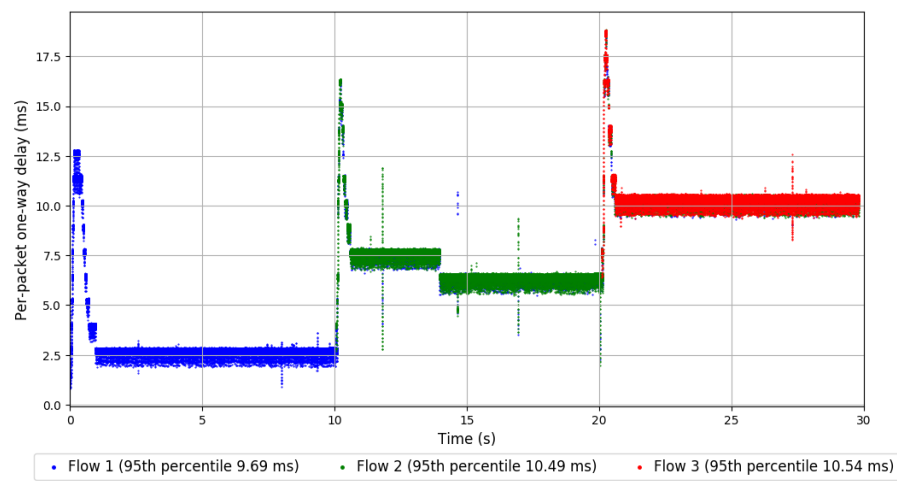
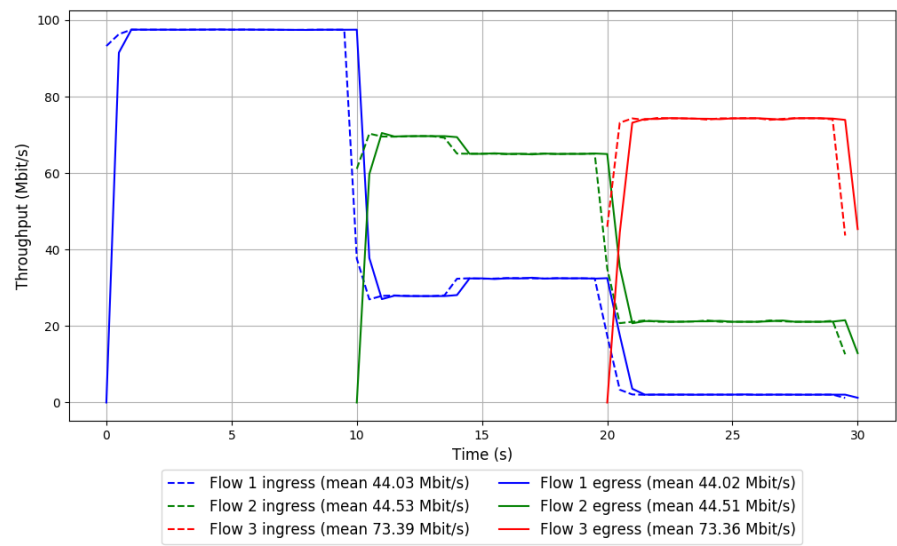


Run 4: Statistics of Indigo

Start at: 2019-01-21 12:23:55  
End at: 2019-01-21 12:24:25  
Local clock offset: -5.861 ms  
Remote clock offset: -0.441 ms

# Below is generated by plot.py at 2019-01-21 13:00:38  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 97.41 Mbit/s  
95th percentile per-packet one-way delay: 10.510 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 44.02 Mbit/s  
95th percentile per-packet one-way delay: 9.687 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 44.51 Mbit/s  
95th percentile per-packet one-way delay: 10.486 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 73.36 Mbit/s  
95th percentile per-packet one-way delay: 10.542 ms  
Loss rate: 0.00%

Run 4: Report of Indigo — Data Link

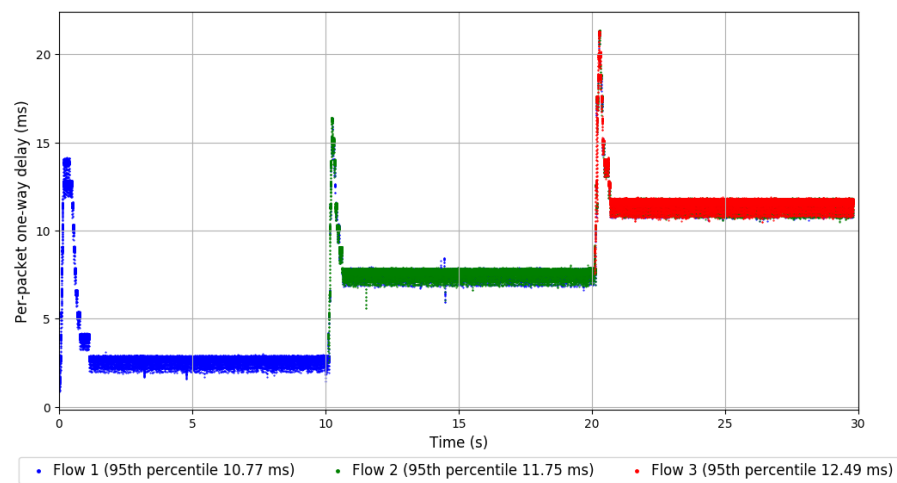
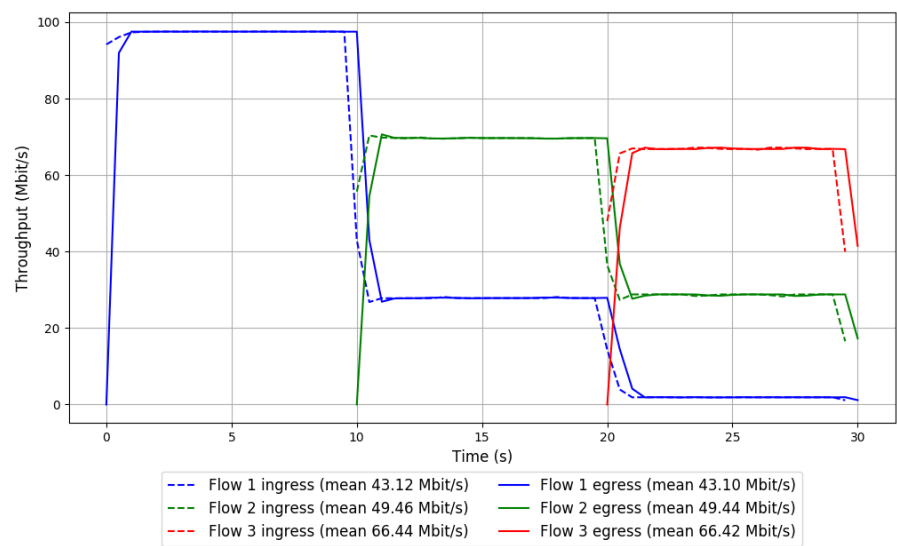


Run 5: Statistics of Indigo

Start at: 2019-01-21 12:47:44  
End at: 2019-01-21 12:48:14  
Local clock offset: -5.797 ms  
Remote clock offset: -0.632 ms

# Below is generated by plot.py at 2019-01-21 13:00:45  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 97.44 Mbit/s  
95th percentile per-packet one-way delay: 11.778 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 43.10 Mbit/s  
95th percentile per-packet one-way delay: 10.765 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 49.44 Mbit/s  
95th percentile per-packet one-way delay: 11.753 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 66.42 Mbit/s  
95th percentile per-packet one-way delay: 12.492 ms  
Loss rate: 0.00%

Run 5: Report of Indigo — Data Link



Run 1: Statistics of Indigo-MusesC3

Start at: 2019-01-21 11:10:00

End at: 2019-01-21 11:10:30

Local clock offset: -6.997 ms

Remote clock offset: 0.174 ms

# Below is generated by plot.py at 2019-01-21 13:00:54

# Datalink statistics

-- Total of 3 flows:

Average throughput: 96.99 Mbit/s

95th percentile per-packet one-way delay: 7.569 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 57.20 Mbit/s

95th percentile per-packet one-way delay: 6.242 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 40.23 Mbit/s

95th percentile per-packet one-way delay: 8.192 ms

Loss rate: 0.00%

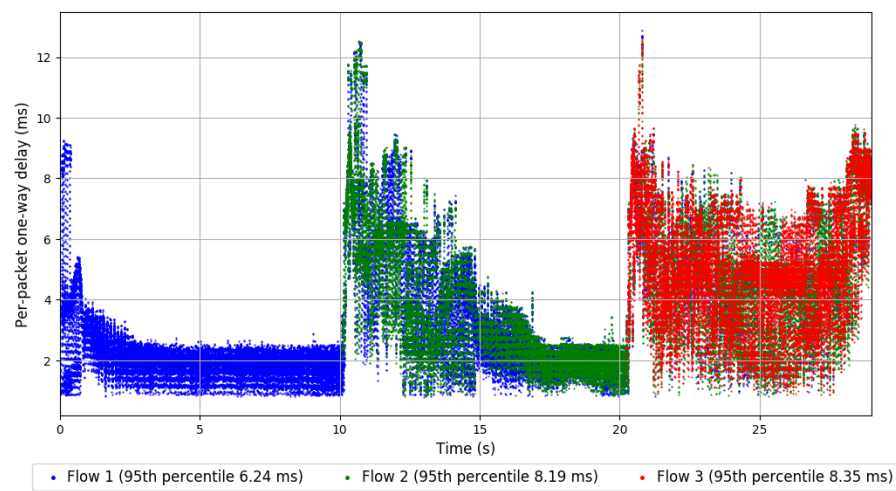
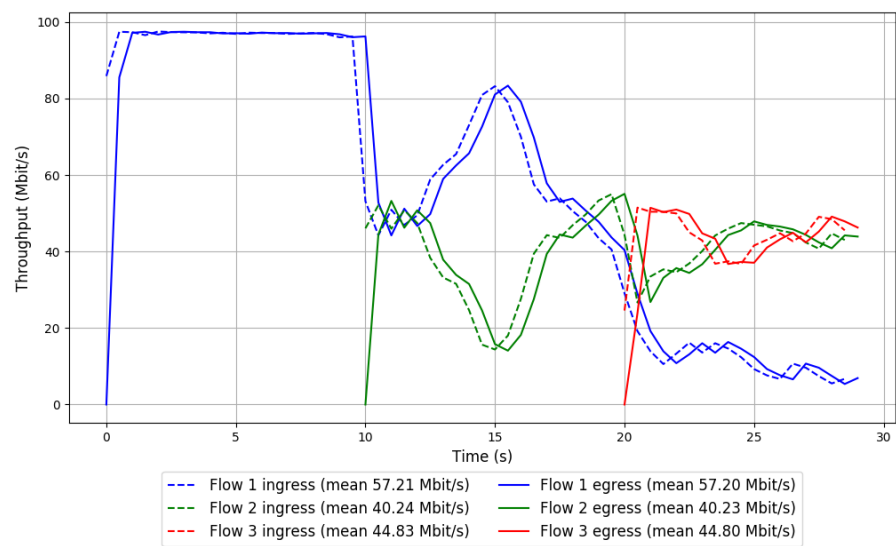
-- Flow 3:

Average throughput: 44.80 Mbit/s

95th percentile per-packet one-way delay: 8.350 ms

Loss rate: 0.00%

Run 1: Report of Indigo-MusesC3 — Data Link



Run 2: Statistics of Indigo-MusesC3

Start at: 2019-01-21 11:33:47

End at: 2019-01-21 11:34:17

Local clock offset: -7.497 ms

Remote clock offset: 0.236 ms

# Below is generated by plot.py at 2019-01-21 13:00:54

# Datalink statistics

-- Total of 3 flows:

Average throughput: 91.07 Mbit/s

95th percentile per-packet one-way delay: 10.364 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 56.81 Mbit/s

95th percentile per-packet one-way delay: 11.522 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 16.64 Mbit/s

95th percentile per-packet one-way delay: 10.515 ms

Loss rate: 0.00%

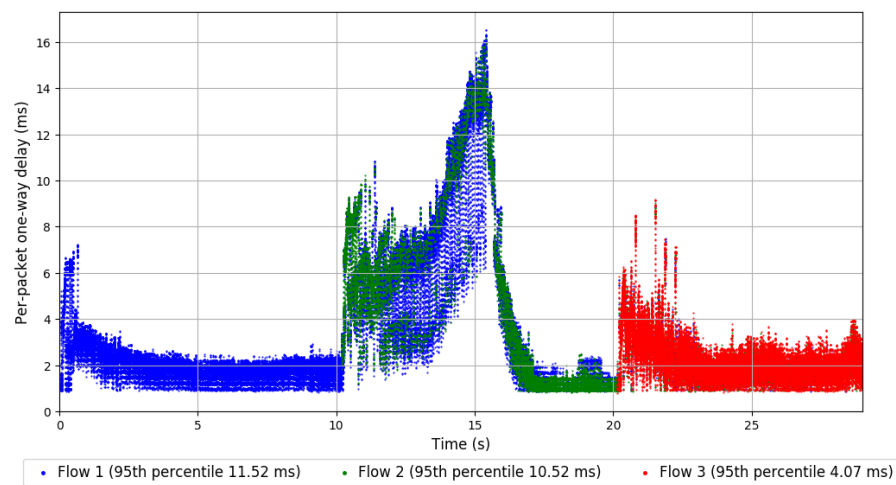
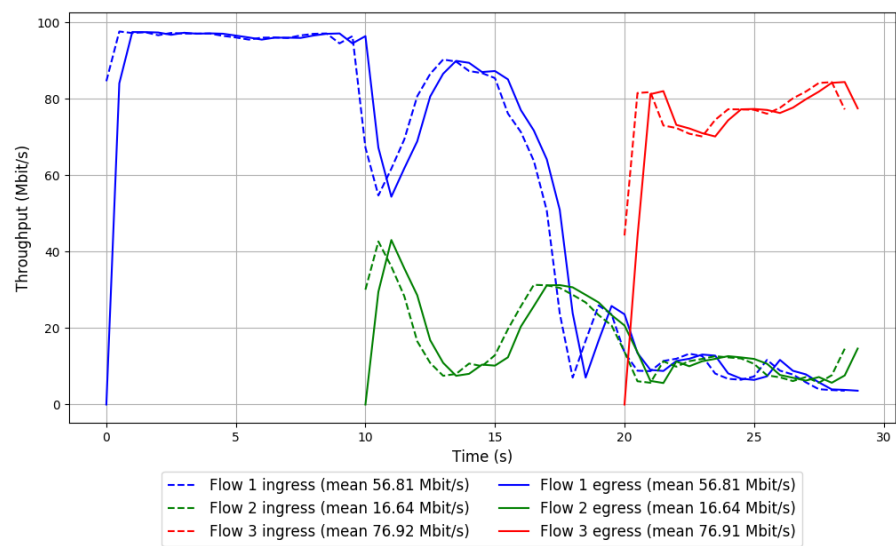
-- Flow 3:

Average throughput: 76.91 Mbit/s

95th percentile per-packet one-way delay: 4.070 ms

Loss rate: 0.00%

Run 2: Report of Indigo-MusesC3 — Data Link





Run 3: Statistics of Indigo-MusesC3

Start at: 2019-01-21 11:57:46

End at: 2019-01-21 11:58:16

Local clock offset: -6.761 ms

Remote clock offset: -0.05 ms

# Below is generated by plot.py at 2019-01-21 13:01:07

# Datalink statistics

-- Total of 3 flows:

Average throughput: 97.13 Mbit/s

95th percentile per-packet one-way delay: 16.079 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 67.02 Mbit/s

95th percentile per-packet one-way delay: 14.624 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 29.15 Mbit/s

95th percentile per-packet one-way delay: 20.883 ms

Loss rate: 0.00%

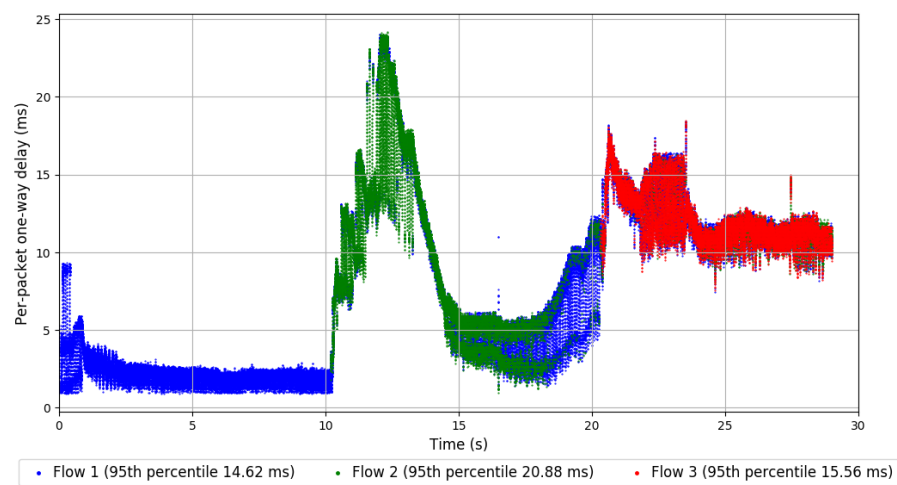
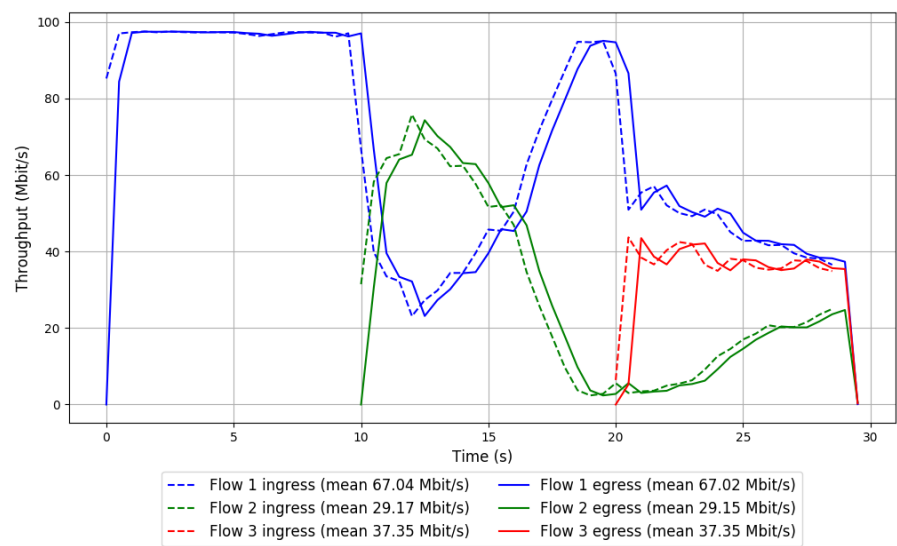
-- Flow 3:

Average throughput: 37.35 Mbit/s

95th percentile per-packet one-way delay: 15.562 ms

Loss rate: 0.00%

Run 3: Report of Indigo-MusesC3 — Data Link

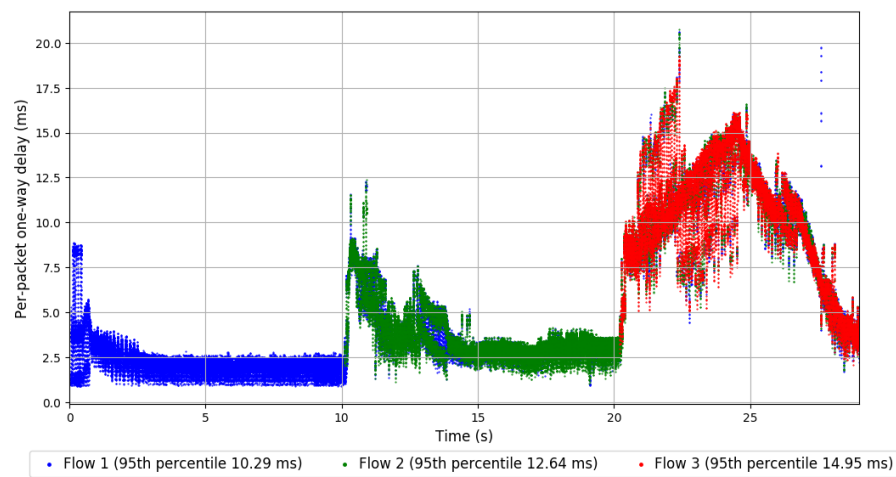
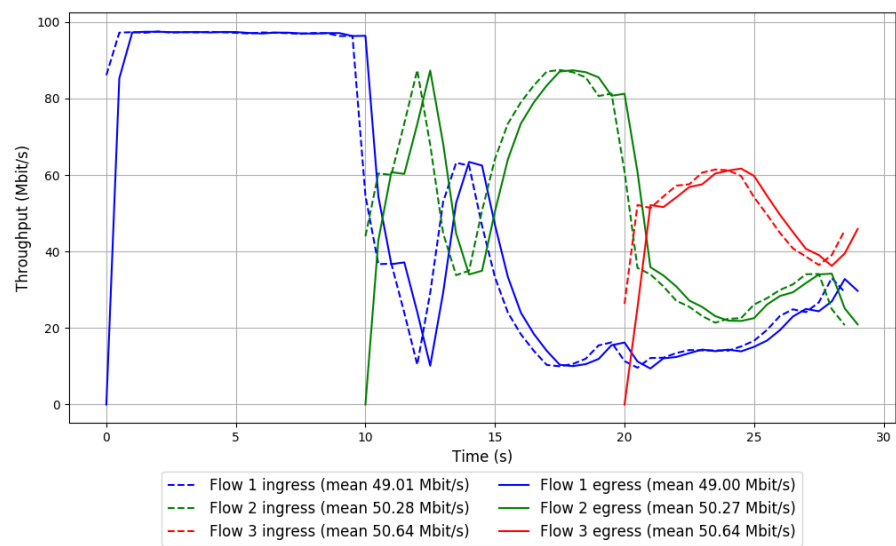


Run 4: Statistics of Indigo-MusesC3

Start at: 2019-01-21 12:21:37  
End at: 2019-01-21 12:22:07  
Local clock offset: -5.864 ms  
Remote clock offset: -0.354 ms

# Below is generated by plot.py at 2019-01-21 13:01:32  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 97.13 Mbit/s  
95th percentile per-packet one-way delay: 13.400 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 49.00 Mbit/s  
95th percentile per-packet one-way delay: 10.286 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 50.27 Mbit/s  
95th percentile per-packet one-way delay: 12.638 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 50.64 Mbit/s  
95th percentile per-packet one-way delay: 14.951 ms  
Loss rate: 0.00%

Run 4: Report of Indigo-MusesC3 — Data Link

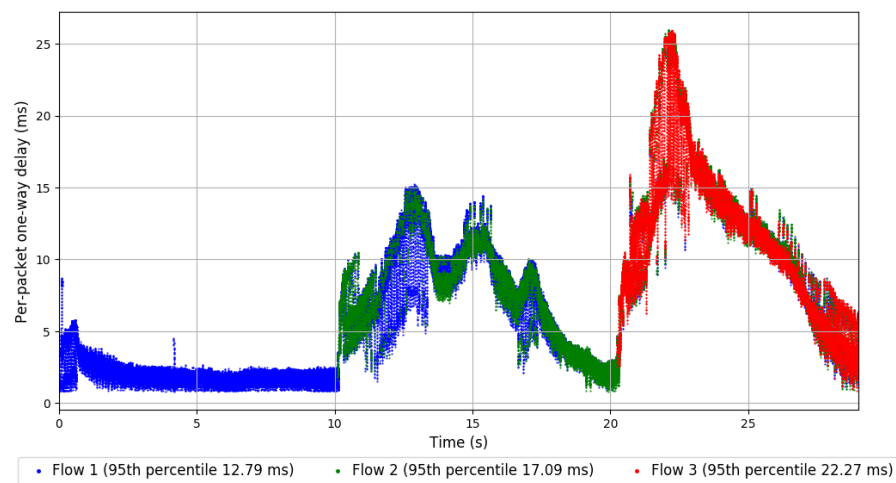
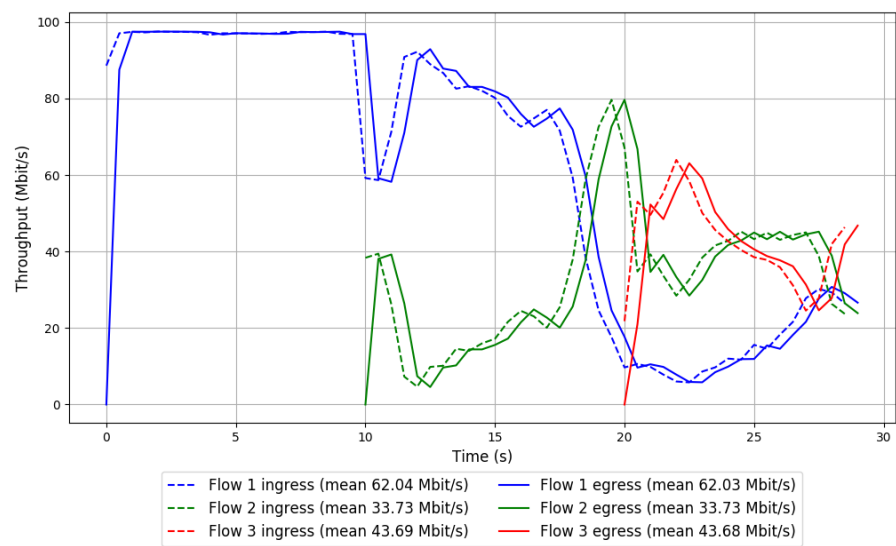


Run 5: Statistics of Indigo-MusesC3

Start at: 2019-01-21 12:45:26  
End at: 2019-01-21 12:45:56  
Local clock offset: -5.772 ms  
Remote clock offset: -0.748 ms

# Below is generated by plot.py at 2019-01-21 13:01:39  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 97.20 Mbit/s  
95th percentile per-packet one-way delay: 15.945 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 62.03 Mbit/s  
95th percentile per-packet one-way delay: 12.787 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 33.73 Mbit/s  
95th percentile per-packet one-way delay: 17.094 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 43.68 Mbit/s  
95th percentile per-packet one-way delay: 22.266 ms  
Loss rate: 0.00%

Run 5: Report of Indigo-MusesC3 — Data Link



Run 1: Statistics of Indigo-MusesC5

Start at: 2019-01-21 11:14:39

End at: 2019-01-21 11:15:09

Local clock offset: -7.145 ms

Remote clock offset: 0.118 ms

# Below is generated by plot.py at 2019-01-21 13:01:39

# Datalink statistics

-- Total of 3 flows:

Average throughput: 62.38 Mbit/s

95th percentile per-packet one-way delay: 17.786 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 29.57 Mbit/s

95th percentile per-packet one-way delay: 16.918 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 32.40 Mbit/s

95th percentile per-packet one-way delay: 18.921 ms

Loss rate: 0.00%

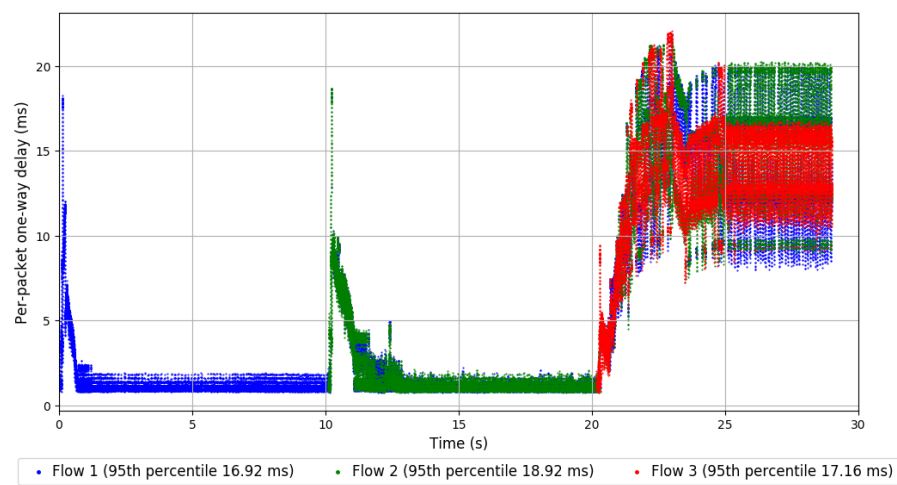
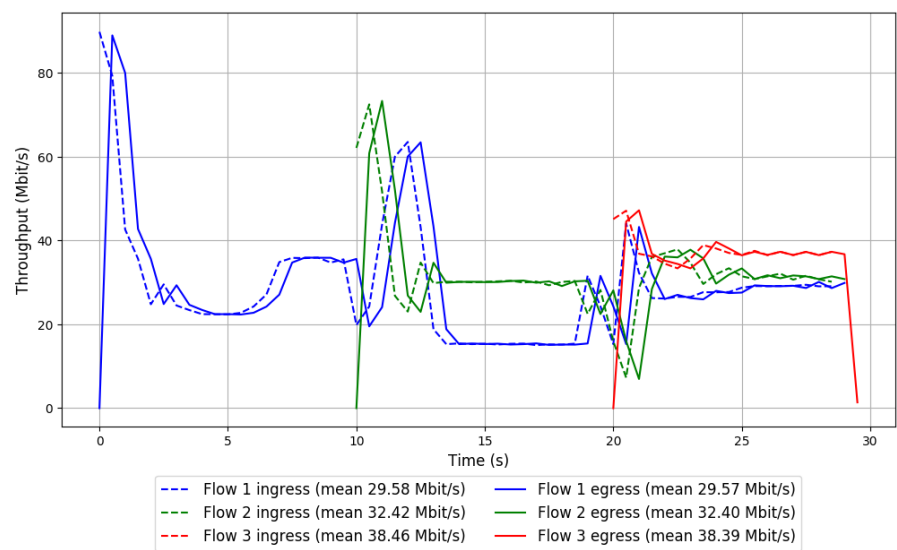
-- Flow 3:

Average throughput: 38.39 Mbit/s

95th percentile per-packet one-way delay: 17.163 ms

Loss rate: 0.00%

Run 1: Report of Indigo-MusesC5 — Data Link





Run 2: Statistics of Indigo-MusesC5

Start at: 2019-01-21 11:38:26

End at: 2019-01-21 11:38:56

Local clock offset: -7.622 ms

Remote clock offset: 0.156 ms

# Below is generated by plot.py at 2019-01-21 13:01:39

# Datalink statistics

-- Total of 3 flows:

Average throughput: 63.46 Mbit/s

95th percentile per-packet one-way delay: 17.869 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 33.23 Mbit/s

95th percentile per-packet one-way delay: 16.967 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 32.36 Mbit/s

95th percentile per-packet one-way delay: 18.051 ms

Loss rate: 0.00%

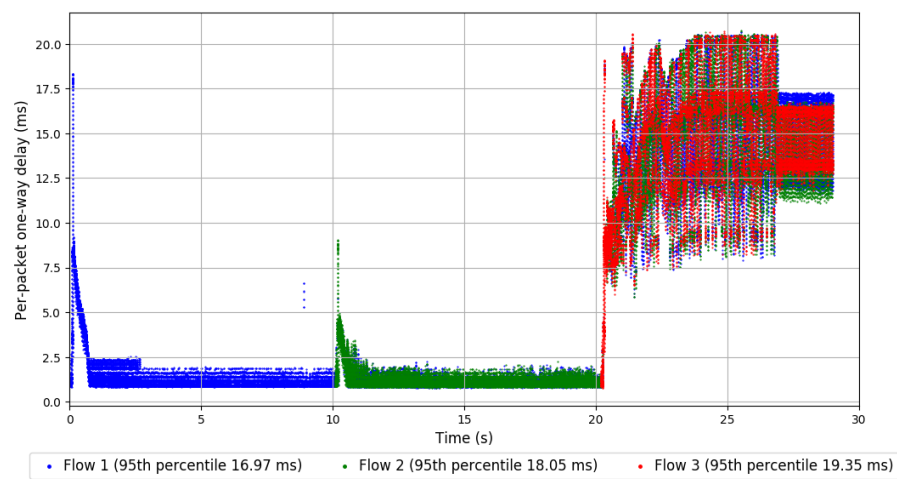
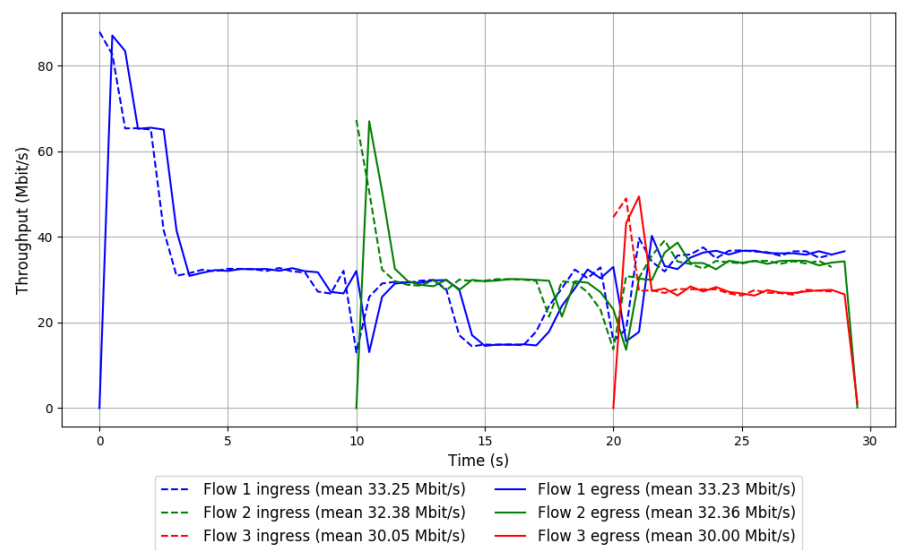
-- Flow 3:

Average throughput: 30.00 Mbit/s

95th percentile per-packet one-way delay: 19.349 ms

Loss rate: 0.00%

Run 2: Report of Indigo-MusesC5 — Data Link

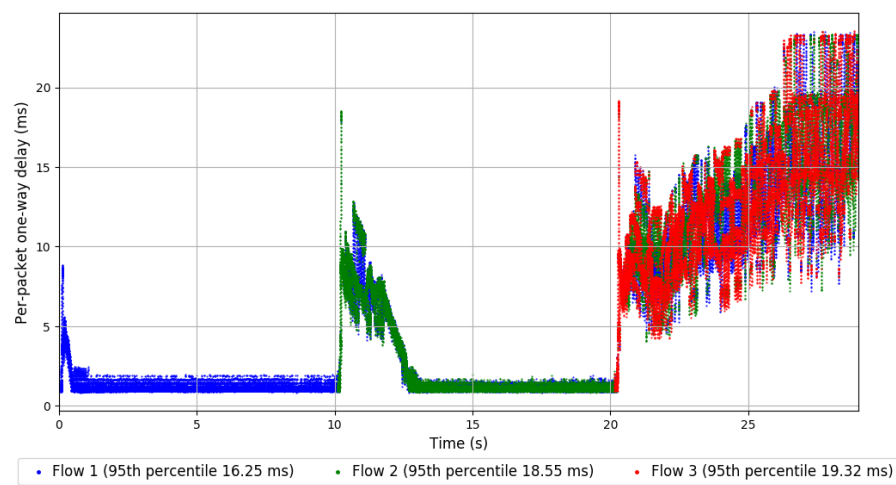
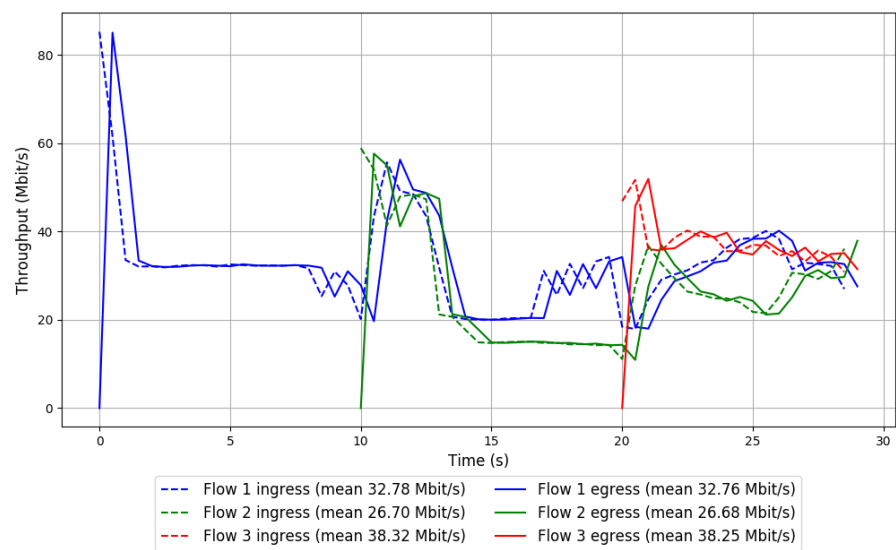


Run 3: Statistics of Indigo-MusesC5

Start at: 2019-01-21 12:02:25  
End at: 2019-01-21 12:02:55  
Local clock offset: -6.426 ms  
Remote clock offset: -0.196 ms

# Below is generated by plot.py at 2019-01-21 13:01:39  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 61.82 Mbit/s  
95th percentile per-packet one-way delay: 18.308 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 32.76 Mbit/s  
95th percentile per-packet one-way delay: 16.255 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 26.68 Mbit/s  
95th percentile per-packet one-way delay: 18.548 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 38.25 Mbit/s  
95th percentile per-packet one-way delay: 19.320 ms  
Loss rate: 0.00%

Run 3: Report of Indigo-MusesC5 — Data Link

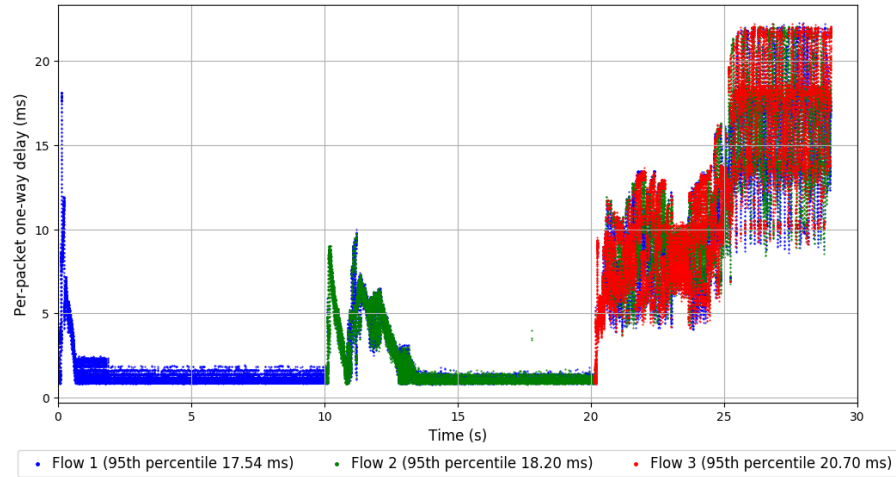
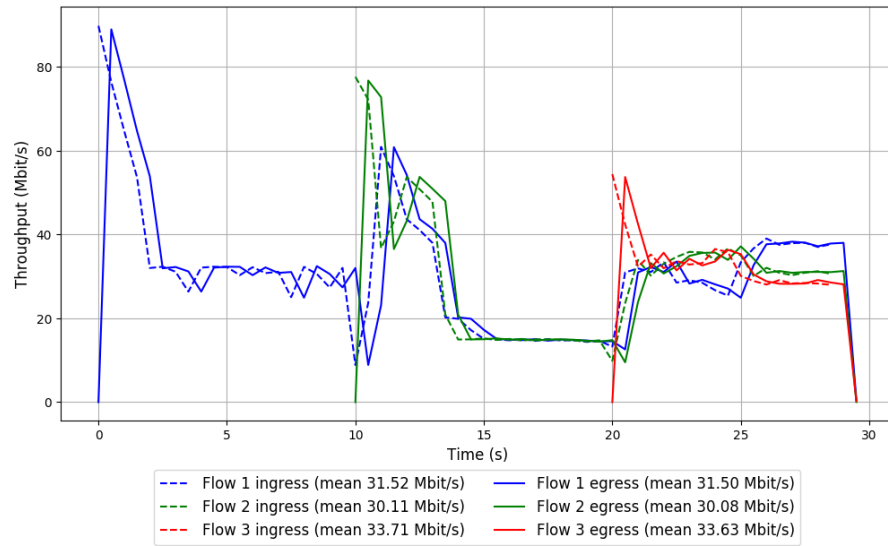


Run 4: Statistics of Indigo-MusesC5

Start at: 2019-01-21 12:26:16  
End at: 2019-01-21 12:26:46  
Local clock offset: -5.879 ms  
Remote clock offset: -0.485 ms

# Below is generated by plot.py at 2019-01-21 13:01:39  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 61.48 Mbit/s  
95th percentile per-packet one-way delay: 18.253 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 31.50 Mbit/s  
95th percentile per-packet one-way delay: 17.543 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 30.08 Mbit/s  
95th percentile per-packet one-way delay: 18.201 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 33.63 Mbit/s  
95th percentile per-packet one-way delay: 20.702 ms  
Loss rate: 0.00%

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

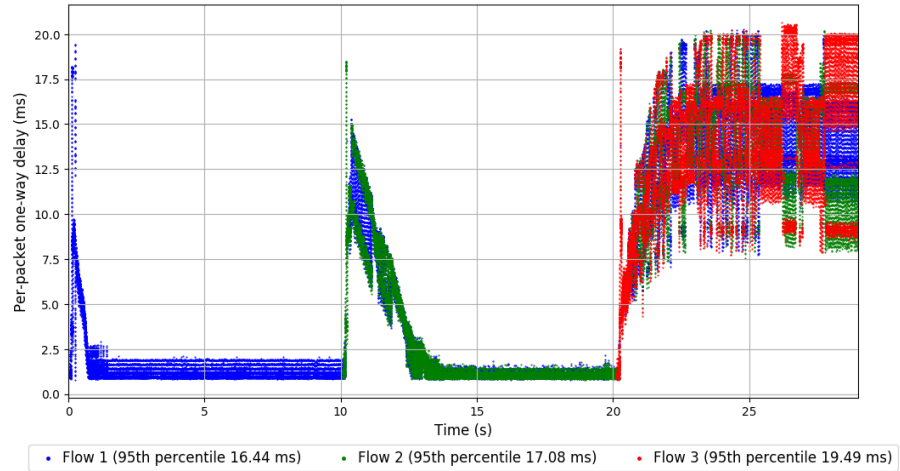
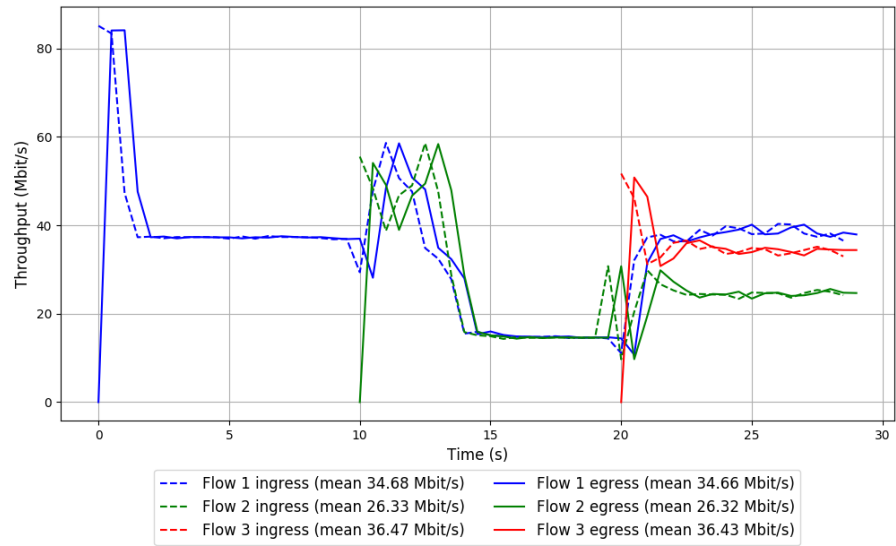


Run 5: Statistics of Indigo-MusesC5

Start at: 2019-01-21 12:50:05  
End at: 2019-01-21 12:50:35  
Local clock offset: -5.883 ms  
Remote clock offset: -0.704 ms

# Below is generated by plot.py at 2019-01-21 13:01:39  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 62.94 Mbit/s  
95th percentile per-packet one-way delay: 17.141 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 34.66 Mbit/s  
95th percentile per-packet one-way delay: 16.439 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 26.32 Mbit/s  
95th percentile per-packet one-way delay: 17.076 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 36.43 Mbit/s  
95th percentile per-packet one-way delay: 19.494 ms  
Loss rate: 0.00%

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





Run 1: Statistics of Indigo-MusesD

Start at: 2019-01-21 11:02:06

End at: 2019-01-21 11:02:36

Local clock offset: -6.906 ms

Remote clock offset: 0.087 ms

# Below is generated by plot.py at 2019-01-21 13:01:51

# Datalink statistics

-- Total of 3 flows:

Average throughput: 63.45 Mbit/s

95th percentile per-packet one-way delay: 4.505 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 38.64 Mbit/s

95th percentile per-packet one-way delay: 4.157 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 26.36 Mbit/s

95th percentile per-packet one-way delay: 4.703 ms

Loss rate: 0.00%

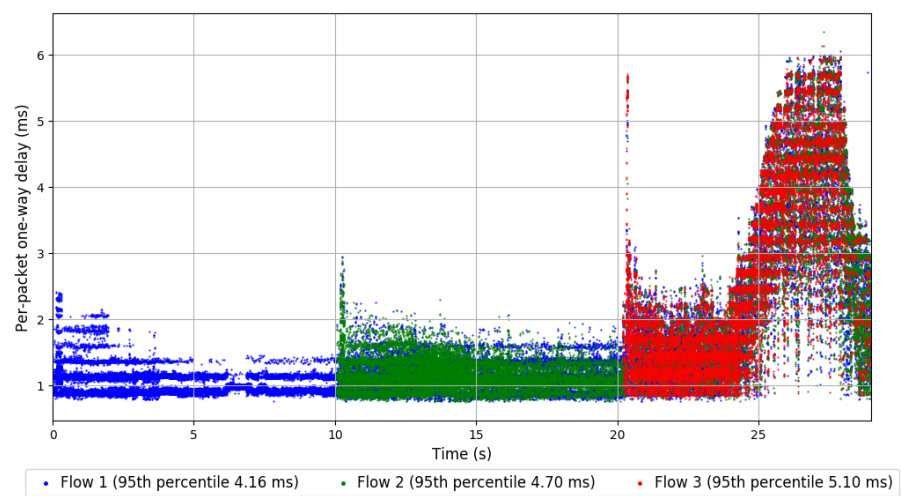
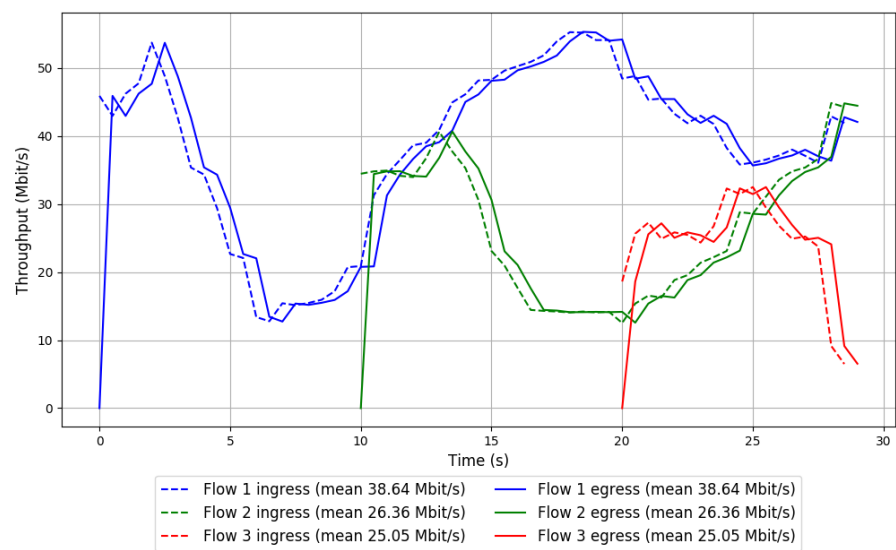
-- Flow 3:

Average throughput: 25.05 Mbit/s

95th percentile per-packet one-way delay: 5.099 ms

Loss rate: 0.00%

Run 1: Report of Indigo-MusesD — Data Link



Run 2: Statistics of Indigo-MusesD

Start at: 2019-01-21 11:25:53

End at: 2019-01-21 11:26:23

Local clock offset: -7.406 ms

Remote clock offset: 0.056 ms

# Below is generated by plot.py at 2019-01-21 13:02:12

# Datalink statistics

-- Total of 3 flows:

Average throughput: 78.02 Mbit/s

95th percentile per-packet one-way delay: 2.697 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 44.14 Mbit/s

95th percentile per-packet one-way delay: 2.624 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 37.16 Mbit/s

95th percentile per-packet one-way delay: 2.698 ms

Loss rate: 0.00%

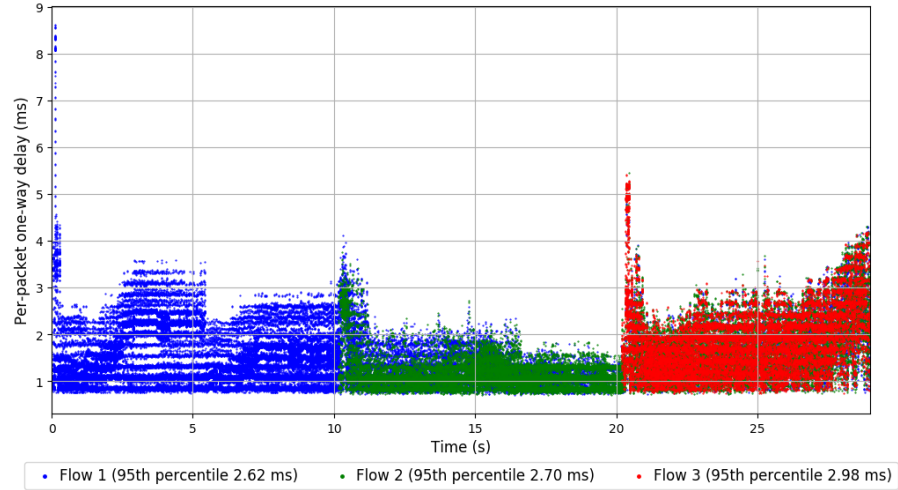
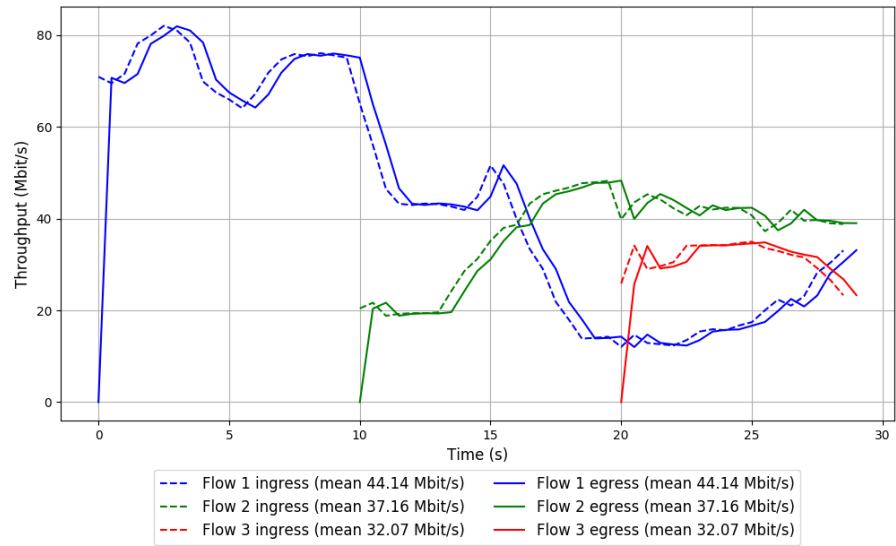
-- Flow 3:

Average throughput: 32.07 Mbit/s

95th percentile per-packet one-way delay: 2.978 ms

Loss rate: 0.00%

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



Run 3: Statistics of Indigo-MusesD

Start at: 2019-01-21 11:49:52

End at: 2019-01-21 11:50:22

Local clock offset: -7.925 ms

Remote clock offset: 0.055 ms

# Below is generated by plot.py at 2019-01-21 13:02:12

# Datalink statistics

-- Total of 3 flows:

Average throughput: 67.46 Mbit/s

95th percentile per-packet one-way delay: 2.615 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 31.57 Mbit/s

95th percentile per-packet one-way delay: 2.497 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 43.17 Mbit/s

95th percentile per-packet one-way delay: 2.730 ms

Loss rate: 0.00%

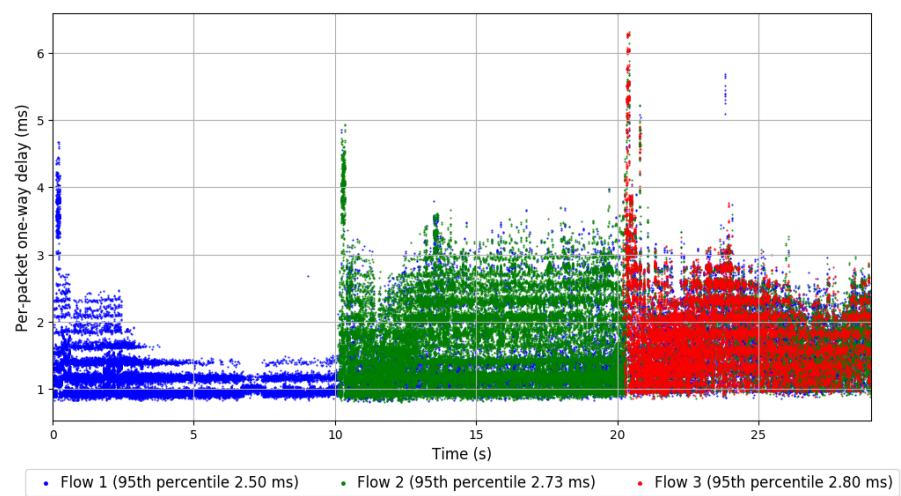
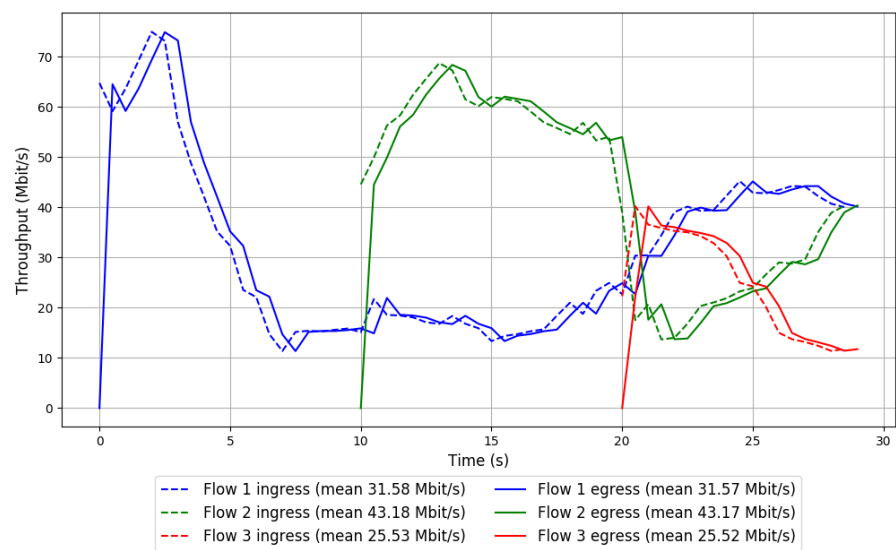
-- Flow 3:

Average throughput: 25.52 Mbit/s

95th percentile per-packet one-way delay: 2.799 ms

Loss rate: 0.01%

Run 3: Report of Indigo-MusesD — Data Link

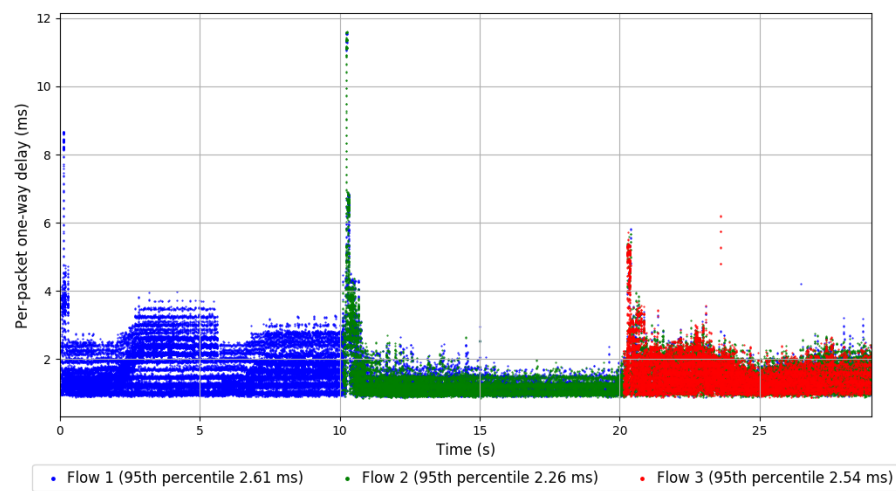
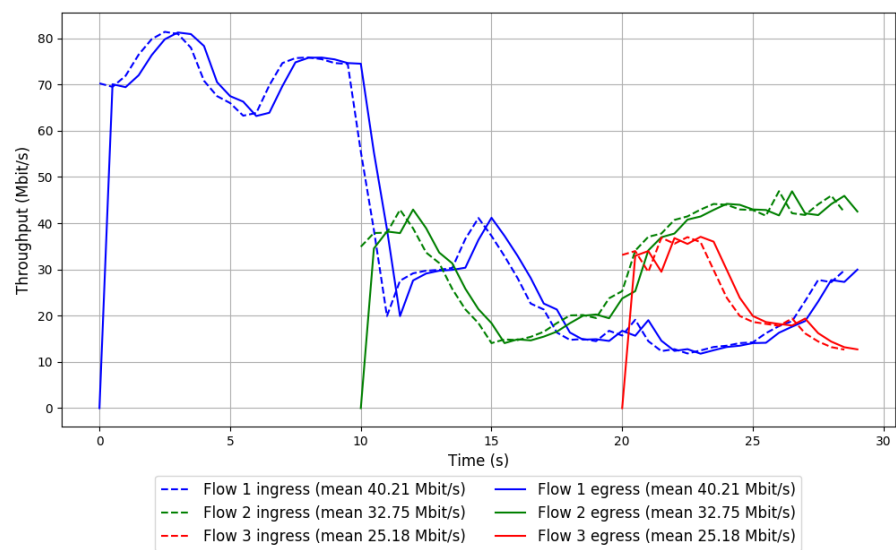


Run 4: Statistics of Indigo-MusesD

Start at: 2019-01-21 12:13:44  
End at: 2019-01-21 12:14:14  
Local clock offset: -5.877 ms  
Remote clock offset: -0.265 ms

# Below is generated by plot.py at 2019-01-21 13:02:15  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 69.26 Mbit/s  
95th percentile per-packet one-way delay: 2.565 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 40.21 Mbit/s  
95th percentile per-packet one-way delay: 2.610 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 32.75 Mbit/s  
95th percentile per-packet one-way delay: 2.258 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 25.18 Mbit/s  
95th percentile per-packet one-way delay: 2.538 ms  
Loss rate: 0.00%

Run 4: Report of Indigo-MusesD — Data Link



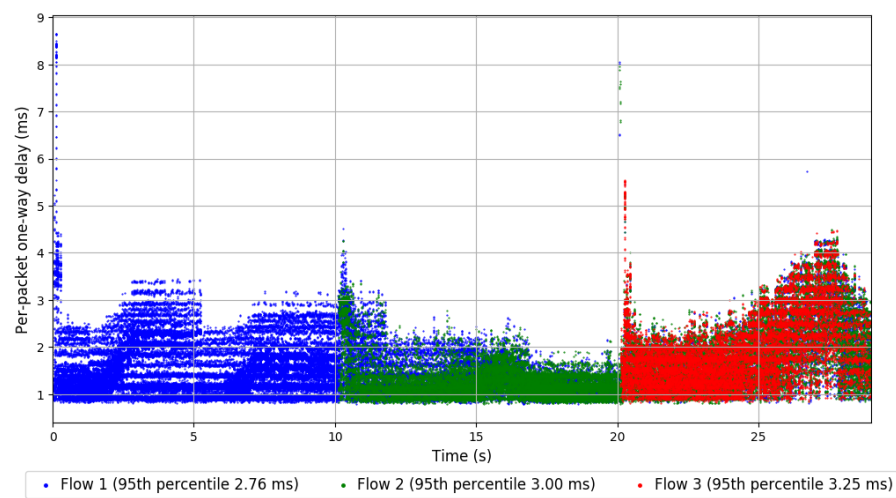
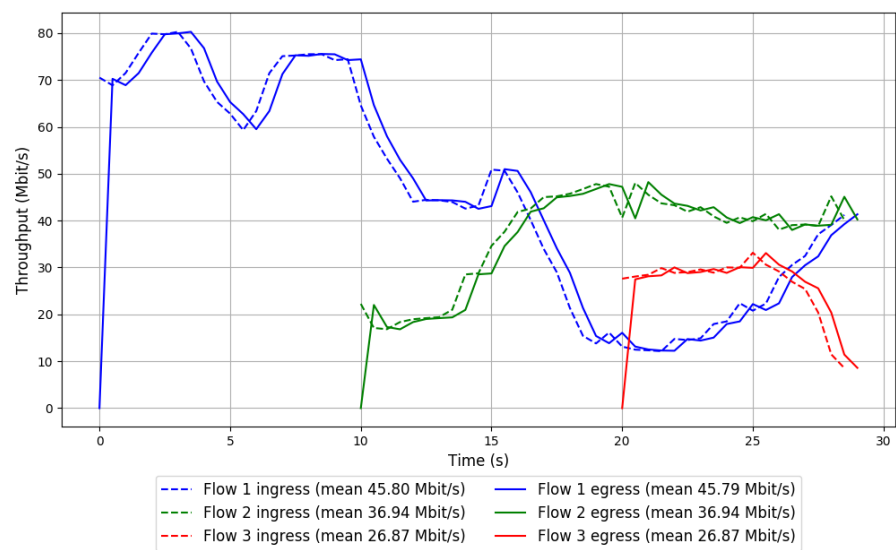


Run 5: Statistics of Indigo-MusesD

Start at: 2019-01-21 12:37:33  
End at: 2019-01-21 12:38:03  
Local clock offset: -5.891 ms  
Remote clock offset: -0.726 ms

# Below is generated by plot.py at 2019-01-21 13:02:26  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 78.05 Mbit/s  
95th percentile per-packet one-way delay: 2.958 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 45.79 Mbit/s  
95th percentile per-packet one-way delay: 2.763 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 36.94 Mbit/s  
95th percentile per-packet one-way delay: 3.001 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 26.87 Mbit/s  
95th percentile per-packet one-way delay: 3.254 ms  
Loss rate: 0.00%

Run 5: Report of Indigo-MusesD — Data Link



Run 1: Statistics of Indigo-MusesT

Start at: 2019-01-21 11:15:46

End at: 2019-01-21 11:16:16

Local clock offset: -7.168 ms

Remote clock offset: 0.235 ms

# Below is generated by plot.py at 2019-01-21 13:02:37

# Datalink statistics

-- Total of 3 flows:

Average throughput: 94.38 Mbit/s

95th percentile per-packet one-way delay: 22.265 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 56.02 Mbit/s

95th percentile per-packet one-way delay: 20.670 ms

Loss rate: 0.03%

-- Flow 2:

Average throughput: 45.18 Mbit/s

95th percentile per-packet one-way delay: 22.413 ms

Loss rate: 0.01%

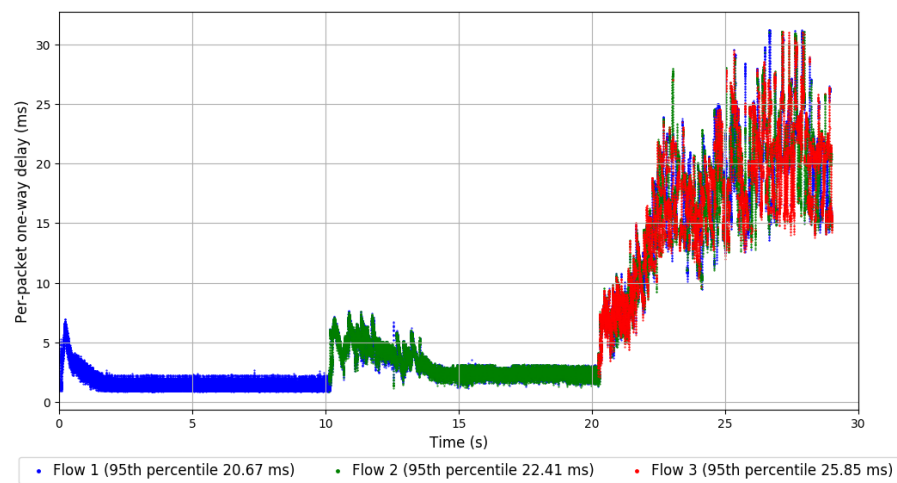
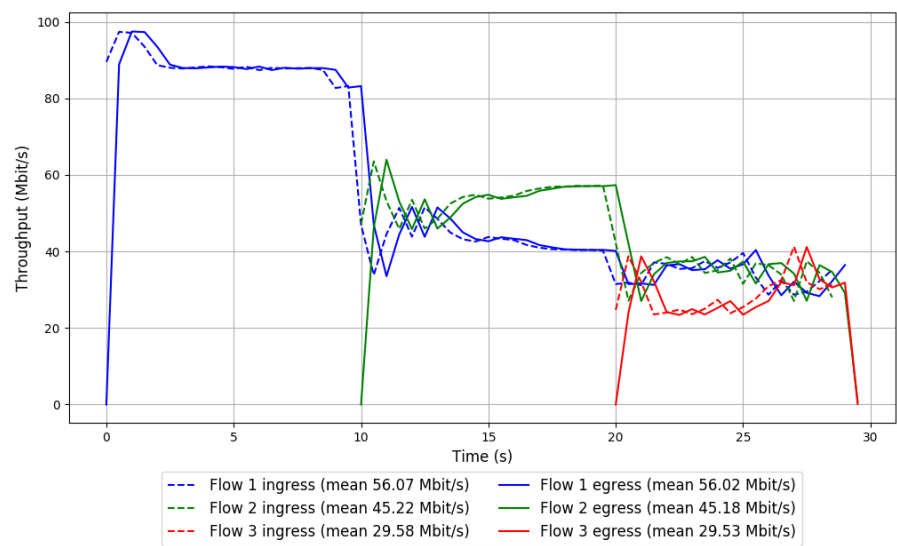
-- Flow 3:

Average throughput: 29.53 Mbit/s

95th percentile per-packet one-way delay: 25.850 ms

Loss rate: 0.03%

Run 1: Report of Indigo-MusesT — Data Link



Run 2: Statistics of Indigo-MusesT

Start at: 2019-01-21 11:39:34

End at: 2019-01-21 11:40:04

Local clock offset: -7.645 ms

Remote clock offset: 0.093 ms

# Below is generated by plot.py at 2019-01-21 13:02:43

# Datalink statistics

-- Total of 3 flows:

Average throughput: 94.68 Mbit/s

95th percentile per-packet one-way delay: 22.139 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 56.69 Mbit/s

95th percentile per-packet one-way delay: 20.028 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 44.44 Mbit/s

95th percentile per-packet one-way delay: 22.911 ms

Loss rate: 0.03%

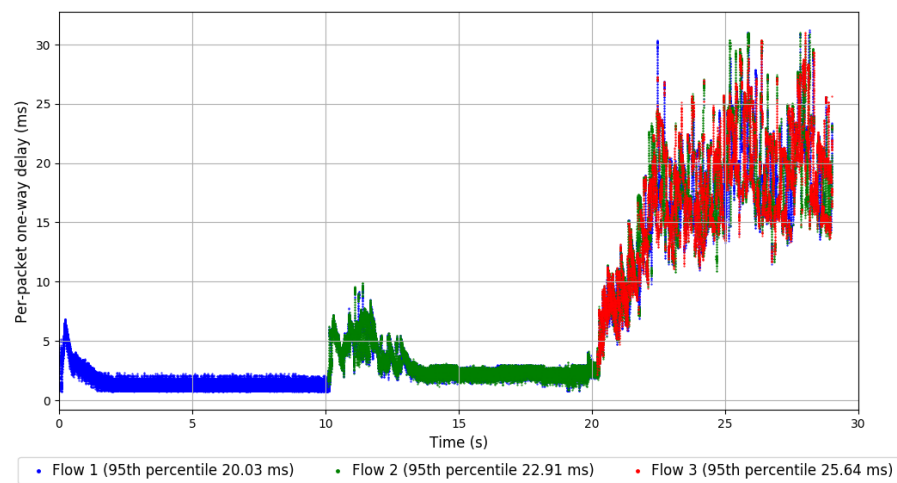
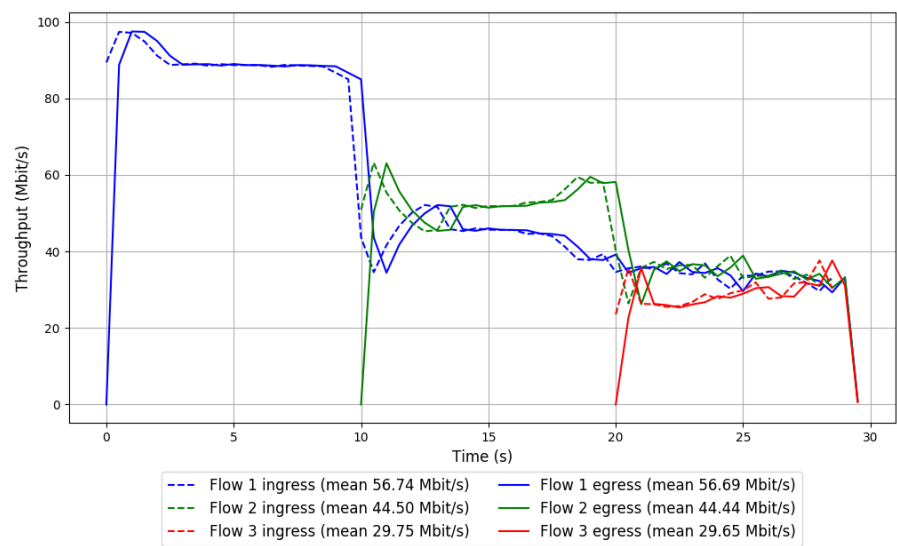
-- Flow 3:

Average throughput: 29.65 Mbit/s

95th percentile per-packet one-way delay: 25.645 ms

Loss rate: 0.08%

Run 2: Report of Indigo-MusesT — Data Link

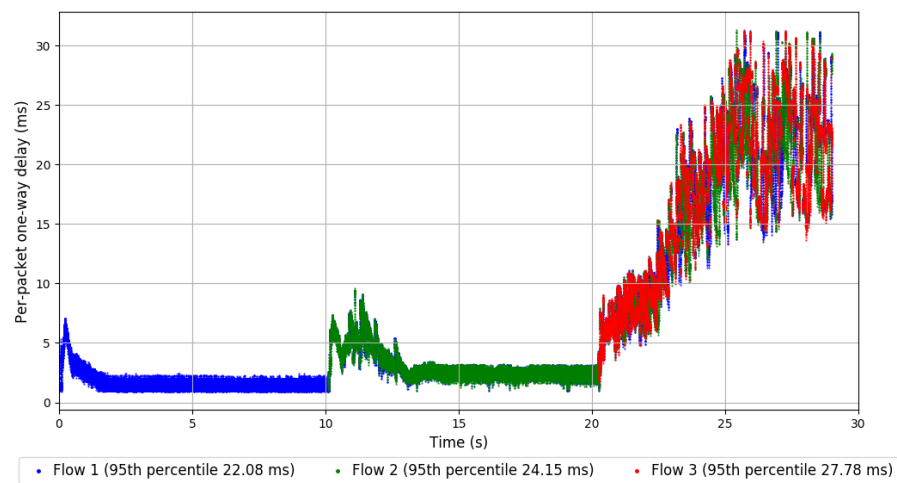
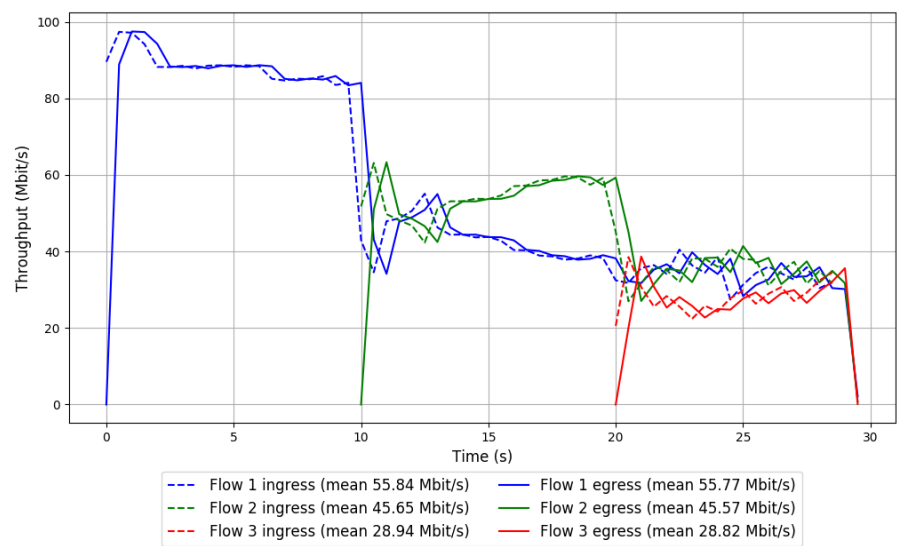


Run 3: Statistics of Indigo-MusesT

Start at: 2019-01-21 12:03:32  
End at: 2019-01-21 12:04:02  
Local clock offset: -6.303 ms  
Remote clock offset: -0.087 ms

# Below is generated by plot.py at 2019-01-21 13:02:43  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 94.23 Mbit/s  
95th percentile per-packet one-way delay: 24.164 ms  
Loss rate: 0.06%  
-- Flow 1:  
Average throughput: 55.77 Mbit/s  
95th percentile per-packet one-way delay: 22.082 ms  
Loss rate: 0.05%  
-- Flow 2:  
Average throughput: 45.57 Mbit/s  
95th percentile per-packet one-way delay: 24.152 ms  
Loss rate: 0.06%  
-- Flow 3:  
Average throughput: 28.82 Mbit/s  
95th percentile per-packet one-way delay: 27.779 ms  
Loss rate: 0.18%

Run 3: Report of Indigo-MusesT — Data Link



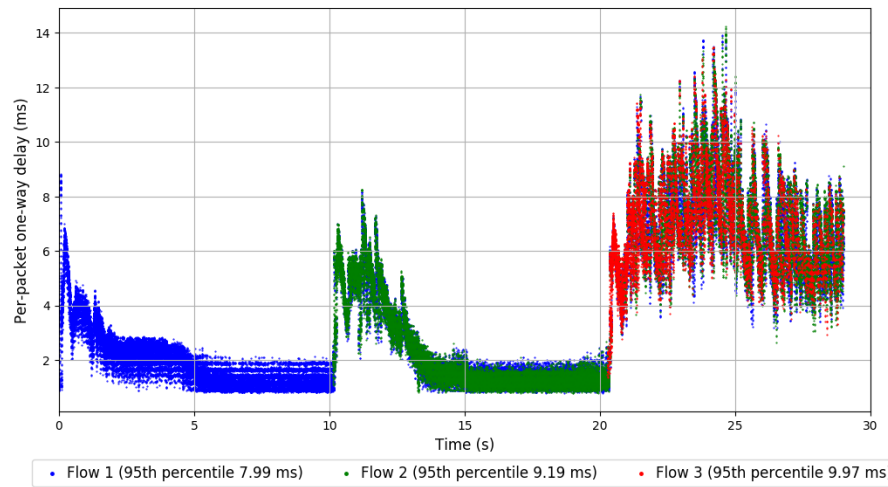
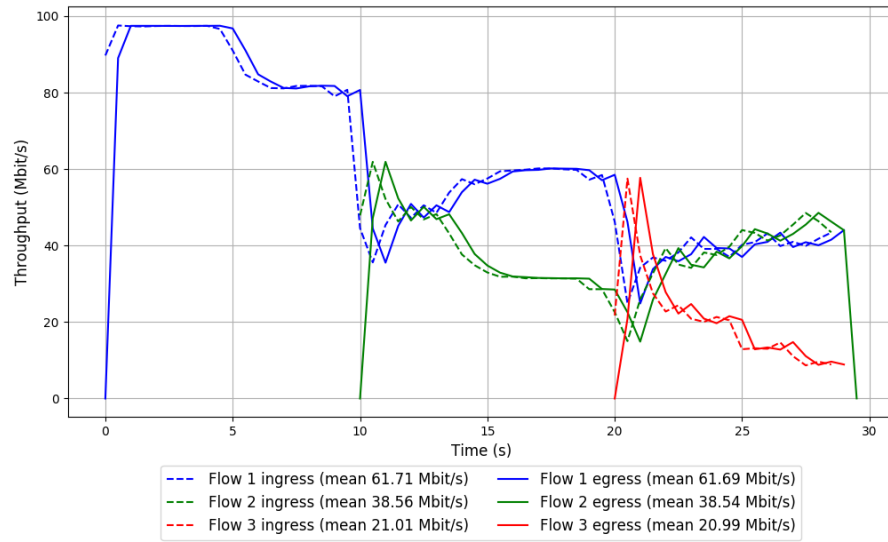


Run 4: Statistics of Indigo-MusesT

Start at: 2019-01-21 12:27:24  
End at: 2019-01-21 12:27:54  
Local clock offset: -5.877 ms  
Remote clock offset: -0.506 ms

# Below is generated by plot.py at 2019-01-21 13:02:55  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 93.10 Mbit/s  
95th percentile per-packet one-way delay: 8.716 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 61.69 Mbit/s  
95th percentile per-packet one-way delay: 7.986 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 38.54 Mbit/s  
95th percentile per-packet one-way delay: 9.188 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 20.99 Mbit/s  
95th percentile per-packet one-way delay: 9.973 ms  
Loss rate: 0.00%

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

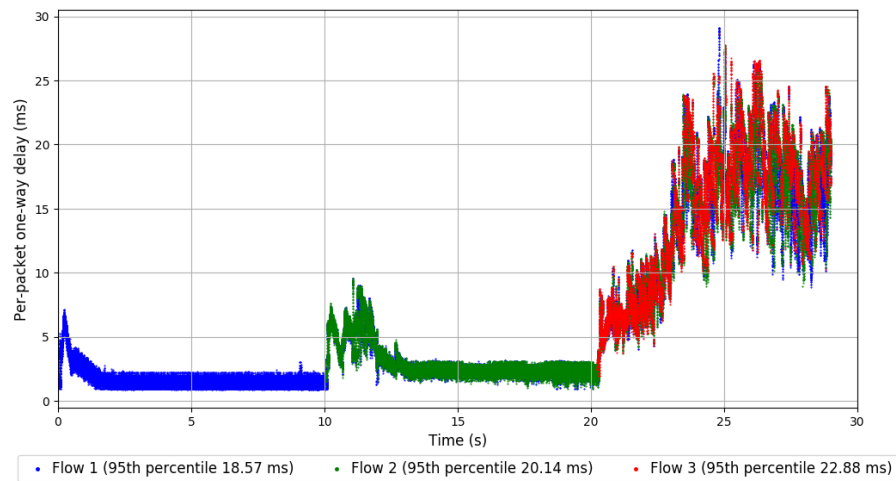
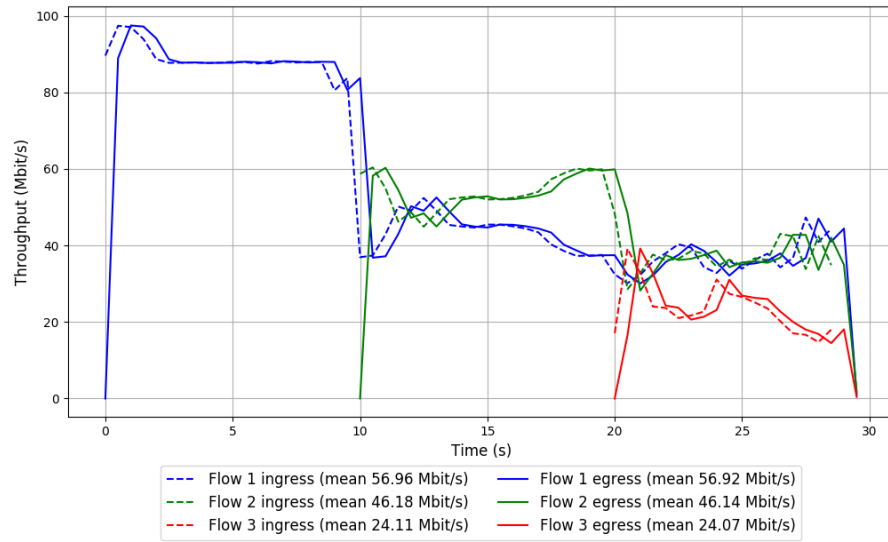


Run 5: Statistics of Indigo-MusesT

Start at: 2019-01-21 12:51:13  
End at: 2019-01-21 12:51:43  
Local clock offset: -5.955 ms  
Remote clock offset: -0.698 ms

# Below is generated by plot.py at 2019-01-21 13:03:10  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 94.36 Mbit/s  
95th percentile per-packet one-way delay: 20.008 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 56.92 Mbit/s  
95th percentile per-packet one-way delay: 18.573 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 46.14 Mbit/s  
95th percentile per-packet one-way delay: 20.137 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 24.07 Mbit/s  
95th percentile per-packet one-way delay: 22.875 ms  
Loss rate: 0.01%

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

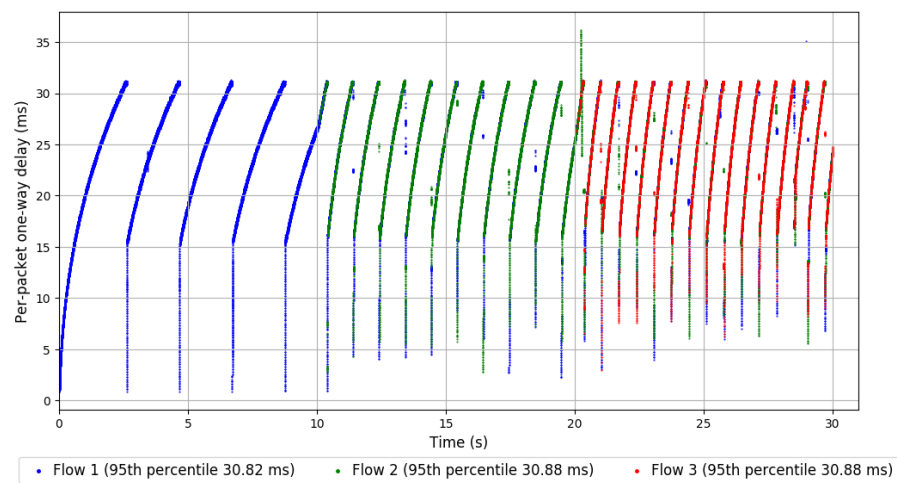
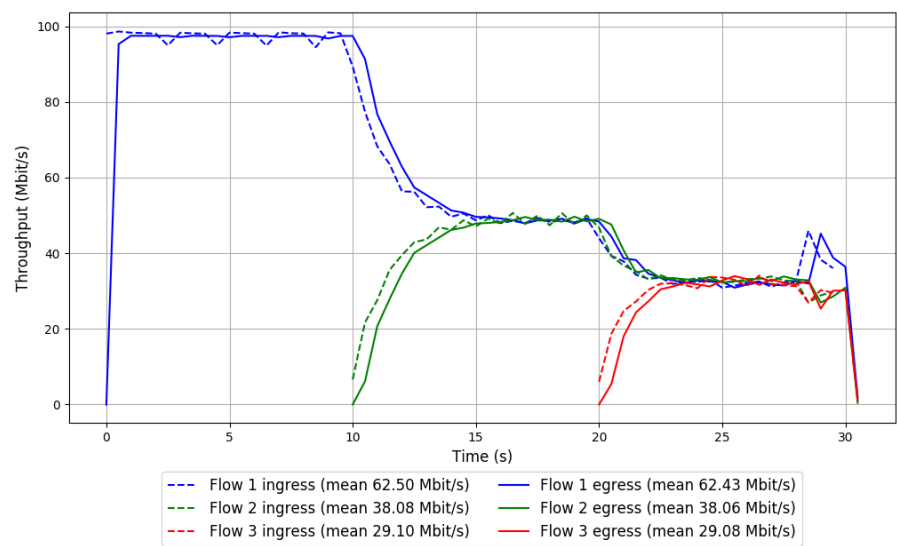


```
Run 1: Statistics of LEDBAT

Start at: 2019-01-21 11:13:28
End at: 2019-01-21 11:13:58
Local clock offset: -7.058 ms
Remote clock offset: 0.203 ms

# Below is generated by plot.py at 2019-01-21 13:03:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.40 Mbit/s
95th percentile per-packet one-way delay: 30.857 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 62.43 Mbit/s
95th percentile per-packet one-way delay: 30.823 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 38.06 Mbit/s
95th percentile per-packet one-way delay: 30.883 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 29.08 Mbit/s
95th percentile per-packet one-way delay: 30.882 ms
Loss rate: 0.11%
```

Run 1: Report of LEDBAT — Data Link



Run 2: Statistics of LEDBAT

Start at: 2019-01-21 11:37:16

End at: 2019-01-21 11:37:46

Local clock offset: -7.668 ms

Remote clock offset: 0.18 ms

# Below is generated by plot.py at 2019-01-21 13:03:25

# Datalink statistics

-- Total of 3 flows:

Average throughput: 97.41 Mbit/s

95th percentile per-packet one-way delay: 30.945 ms

Loss rate: 0.05%

-- Flow 1:

Average throughput: 62.72 Mbit/s

95th percentile per-packet one-way delay: 30.922 ms

Loss rate: 0.03%

-- Flow 2:

Average throughput: 37.05 Mbit/s

95th percentile per-packet one-way delay: 30.962 ms

Loss rate: 0.07%

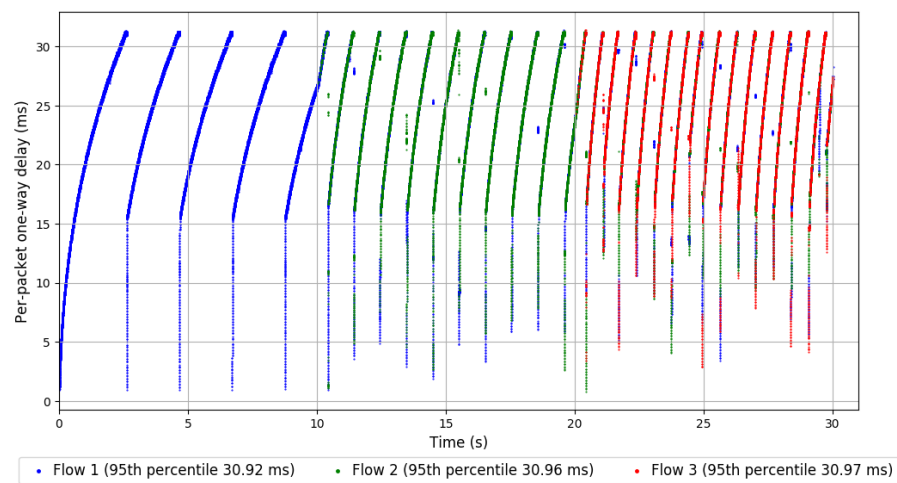
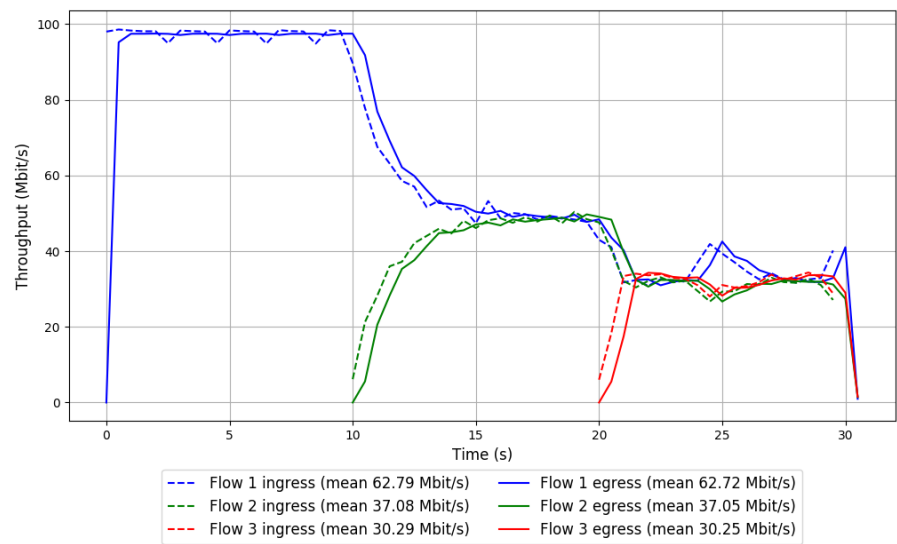
-- Flow 3:

Average throughput: 30.25 Mbit/s

95th percentile per-packet one-way delay: 30.969 ms

Loss rate: 0.11%

Run 2: Report of LEDBAT — Data Link



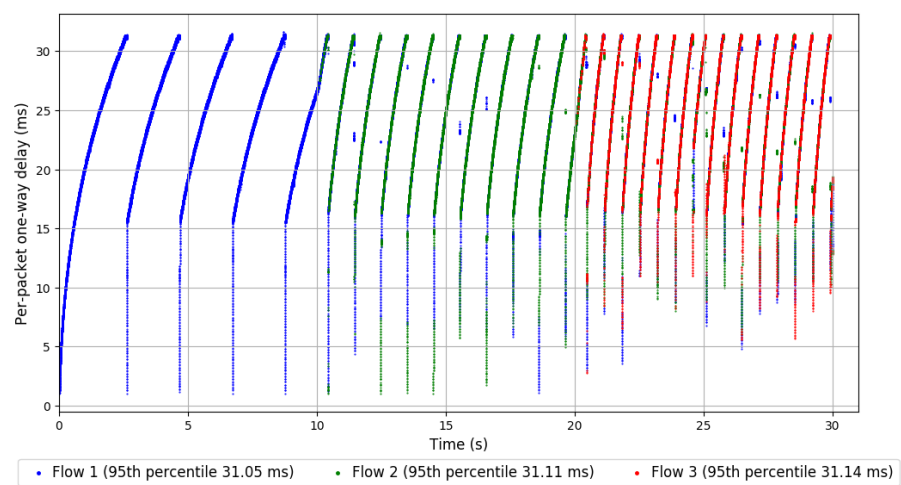
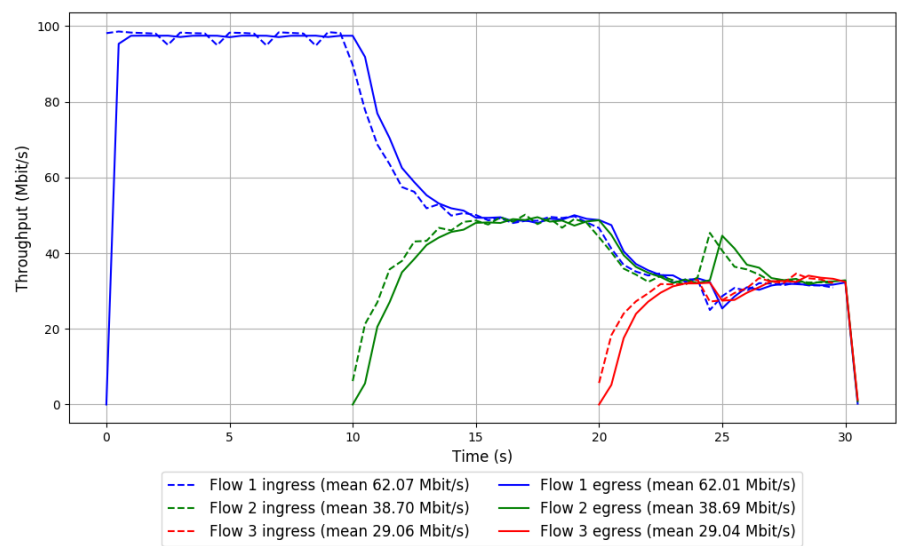


Run 3: Statistics of LEDBAT

Start at: 2019-01-21 12:01:14  
End at: 2019-01-21 12:01:44  
Local clock offset: -6.526 ms  
Remote clock offset: -0.028 ms

# Below is generated by plot.py at 2019-01-21 13:03:34  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 97.40 Mbit/s  
95th percentile per-packet one-way delay: 31.087 ms  
Loss rate: 0.05%  
-- Flow 1:  
Average throughput: 62.01 Mbit/s  
95th percentile per-packet one-way delay: 31.054 ms  
Loss rate: 0.03%  
-- Flow 2:  
Average throughput: 38.69 Mbit/s  
95th percentile per-packet one-way delay: 31.109 ms  
Loss rate: 0.06%  
-- Flow 3:  
Average throughput: 29.04 Mbit/s  
95th percentile per-packet one-way delay: 31.140 ms  
Loss rate: 0.11%

Run 3: Report of LEDBAT — Data Link

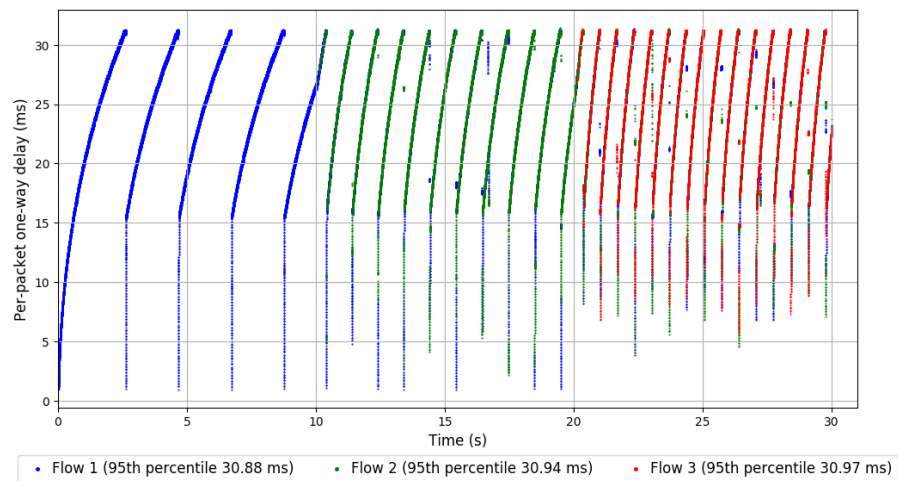
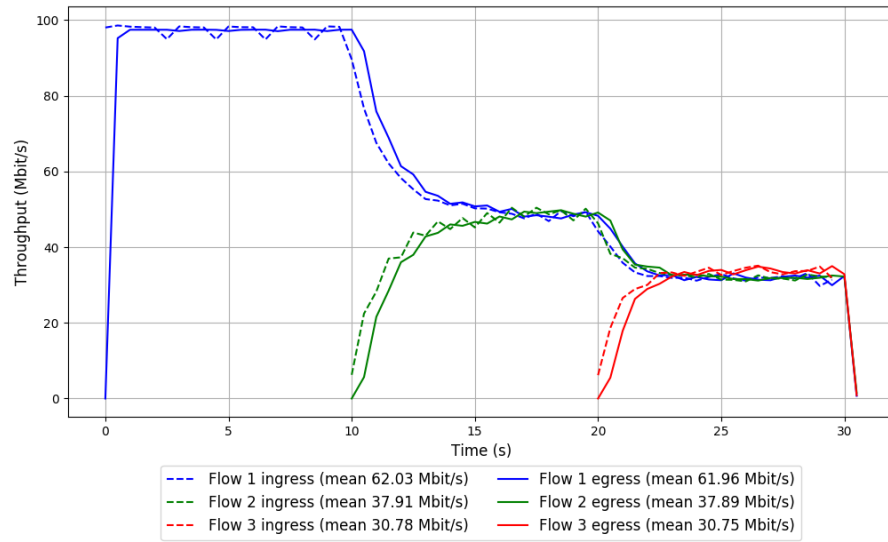


Run 4: Statistics of LEDBAT

Start at: 2019-01-21 12:25:06  
End at: 2019-01-21 12:25:36  
Local clock offset: -5.941 ms  
Remote clock offset: -0.456 ms

# Below is generated by plot.py at 2019-01-21 13:03:48  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 97.39 Mbit/s  
95th percentile per-packet one-way delay: 30.923 ms  
Loss rate: 0.05%  
-- Flow 1:  
Average throughput: 61.96 Mbit/s  
95th percentile per-packet one-way delay: 30.883 ms  
Loss rate: 0.03%  
-- Flow 2:  
Average throughput: 37.89 Mbit/s  
95th percentile per-packet one-way delay: 30.937 ms  
Loss rate: 0.07%  
-- Flow 3:  
Average throughput: 30.75 Mbit/s  
95th percentile per-packet one-way delay: 30.971 ms  
Loss rate: 0.10%

# Run 4: Report of LEDBAT — Data Link

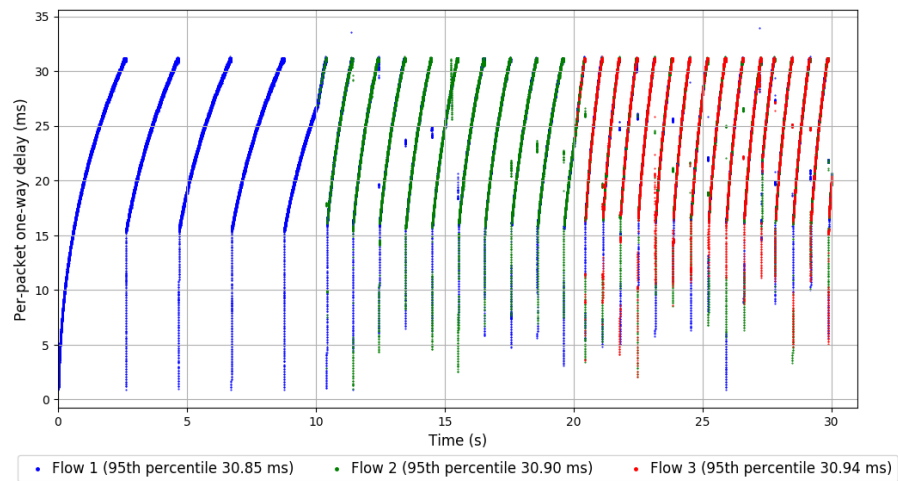
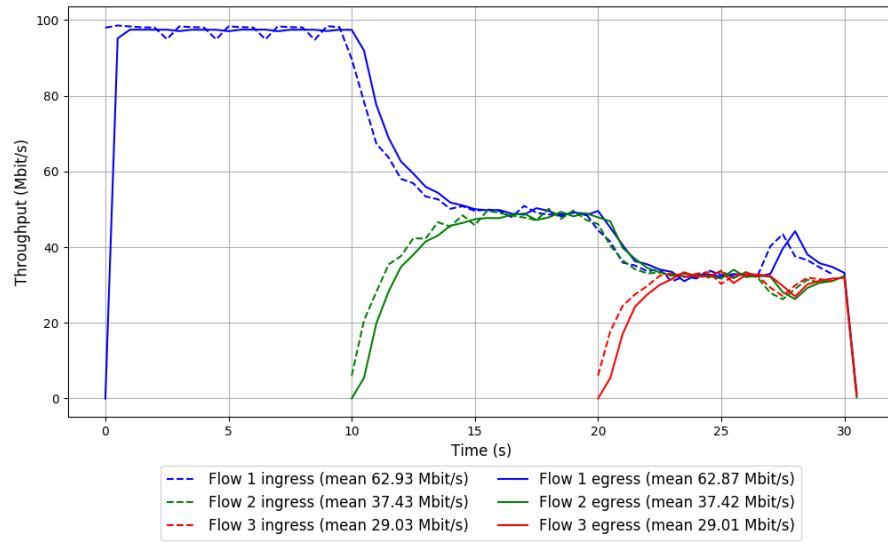


Run 5: Statistics of LEDBAT

Start at: 2019-01-21 12:48:55  
End at: 2019-01-21 12:49:25  
Local clock offset: -5.906 ms  
Remote clock offset: -0.711 ms

# Below is generated by plot.py at 2019-01-21 13:03:52  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 97.40 Mbit/s  
95th percentile per-packet one-way delay: 30.885 ms  
Loss rate: 0.05%  
-- Flow 1:  
Average throughput: 62.87 Mbit/s  
95th percentile per-packet one-way delay: 30.854 ms  
Loss rate: 0.03%  
-- Flow 2:  
Average throughput: 37.42 Mbit/s  
95th percentile per-packet one-way delay: 30.903 ms  
Loss rate: 0.07%  
-- Flow 3:  
Average throughput: 29.01 Mbit/s  
95th percentile per-packet one-way delay: 30.941 ms  
Loss rate: 0.11%

# Run 5: Report of LEDBAT — Data Link

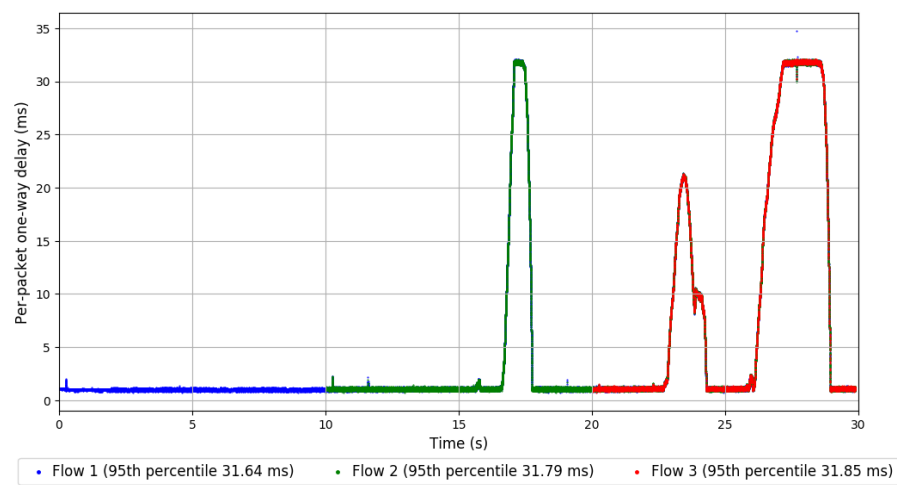
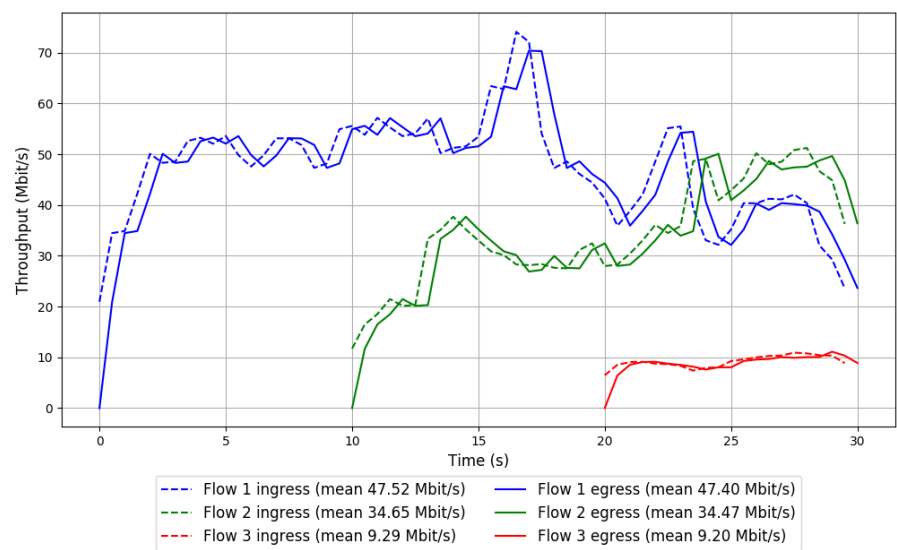


```
Run 1: Statistics of PCC-Allegro

Start at: 2019-01-21 11:07:46
End at: 2019-01-21 11:08:16
Local clock offset: -7.032 ms
Remote clock offset: 0.182 ms

# Below is generated by plot.py at 2019-01-21 13:03:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 73.35 Mbit/s
95th percentile per-packet one-way delay: 31.737 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 47.40 Mbit/s
95th percentile per-packet one-way delay: 31.644 ms
Loss rate: 0.23%
-- Flow 2:
Average throughput: 34.47 Mbit/s
95th percentile per-packet one-way delay: 31.792 ms
Loss rate: 0.53%
-- Flow 3:
Average throughput: 9.20 Mbit/s
95th percentile per-packet one-way delay: 31.848 ms
Loss rate: 1.05%
```

Run 1: Report of PCC-Allegro — Data Link





Run 2: Statistics of PCC-Allegro

Start at: 2019-01-21 11:31:34

End at: 2019-01-21 11:32:04

Local clock offset: -7.455 ms

Remote clock offset: 0.123 ms

# Below is generated by plot.py at 2019-01-21 13:03:53

# Datalink statistics

-- Total of 3 flows:

Average throughput: 76.02 Mbit/s

95th percentile per-packet one-way delay: 18.606 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 51.12 Mbit/s

95th percentile per-packet one-way delay: 12.387 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 29.59 Mbit/s

95th percentile per-packet one-way delay: 21.931 ms

Loss rate: 0.00%

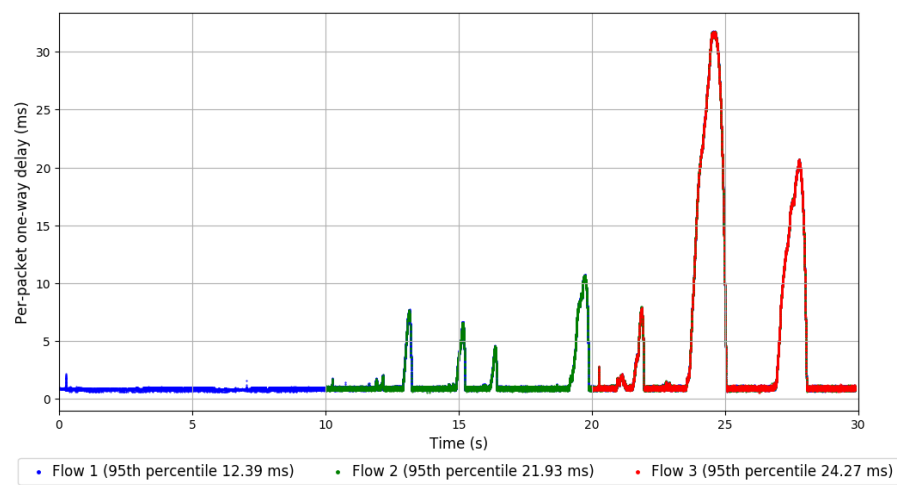
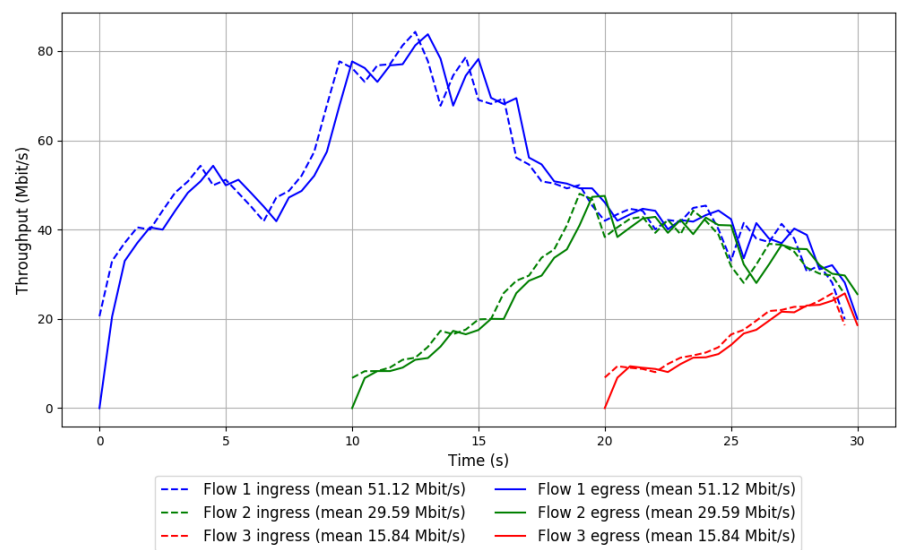
-- Flow 3:

Average throughput: 15.84 Mbit/s

95th percentile per-packet one-way delay: 24.273 ms

Loss rate: 0.01%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2019-01-21 11:55:32

End at: 2019-01-21 11:56:02

Local clock offset: -7.082 ms

Remote clock offset: 0.027 ms

# Below is generated by plot.py at 2019-01-21 13:04:11

# Datalink statistics

-- Total of 3 flows:

Average throughput: 78.67 Mbit/s

95th percentile per-packet one-way delay: 31.932 ms

Loss rate: 0.57%

-- Flow 1:

Average throughput: 54.59 Mbit/s

95th percentile per-packet one-way delay: 31.873 ms

Loss rate: 0.37%

-- Flow 2:

Average throughput: 32.32 Mbit/s

95th percentile per-packet one-way delay: 31.989 ms

Loss rate: 0.76%

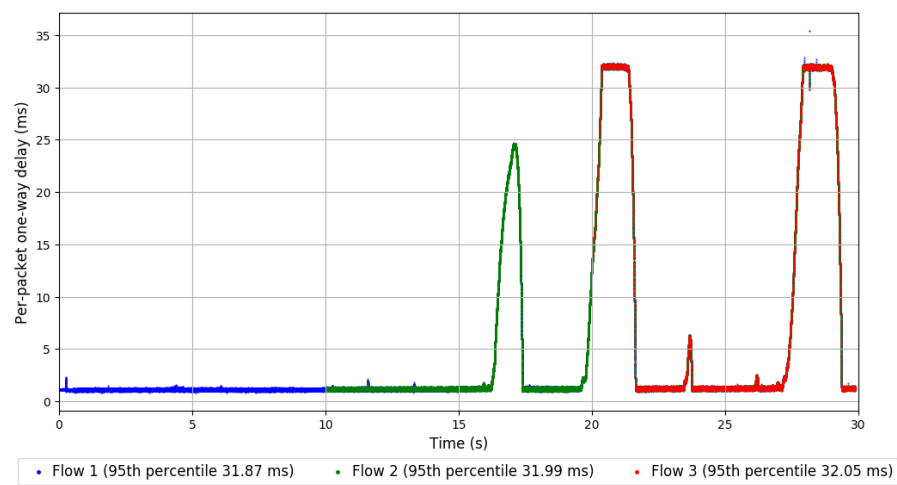
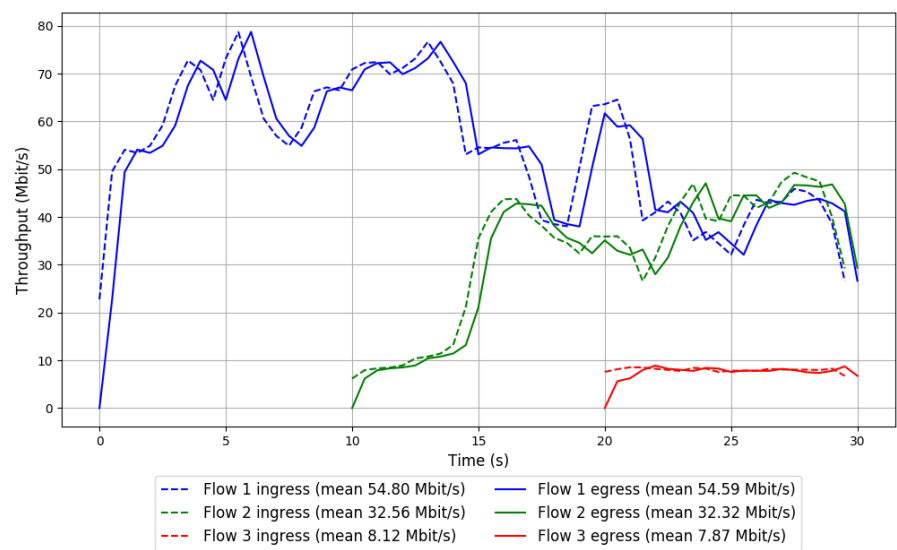
-- Flow 3:

Average throughput: 7.87 Mbit/s

95th percentile per-packet one-way delay: 32.045 ms

Loss rate: 3.18%

Run 3: Report of PCC-Allegro — Data Link

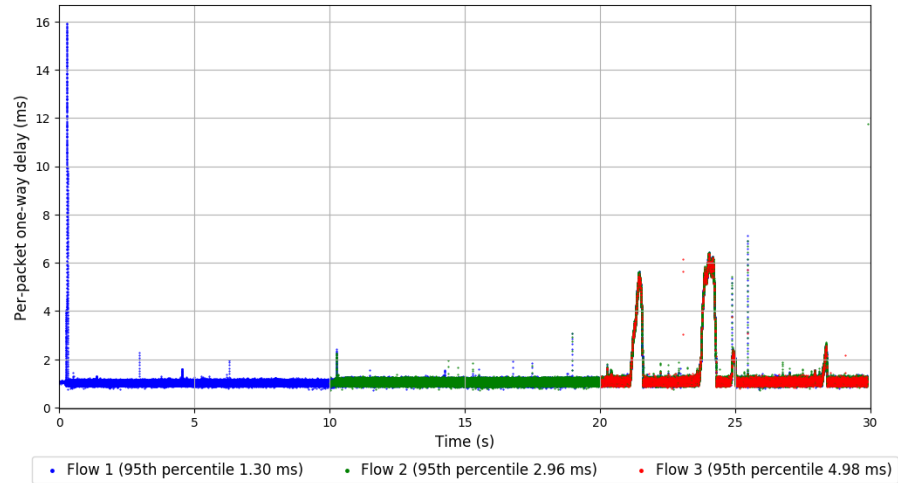
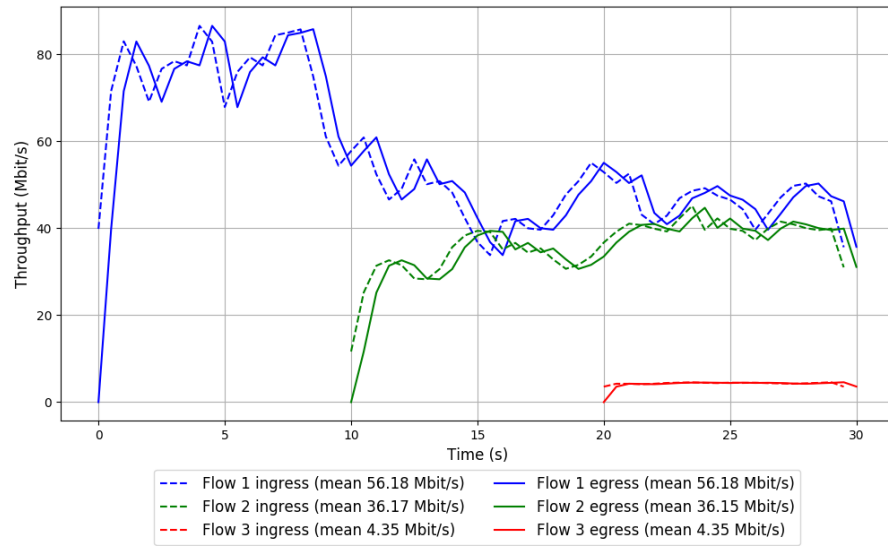


Run 4: Statistics of PCC-Allegro

Start at: 2019-01-21 12:19:24  
End at: 2019-01-21 12:19:54  
Local clock offset: -5.858 ms  
Remote clock offset: -0.312 ms

# Below is generated by plot.py at 2019-01-21 13:04:20  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 81.64 Mbit/s  
95th percentile per-packet one-way delay: 1.830 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 56.18 Mbit/s  
95th percentile per-packet one-way delay: 1.299 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 36.15 Mbit/s  
95th percentile per-packet one-way delay: 2.958 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 4.35 Mbit/s  
95th percentile per-packet one-way delay: 4.979 ms  
Loss rate: 0.00%

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

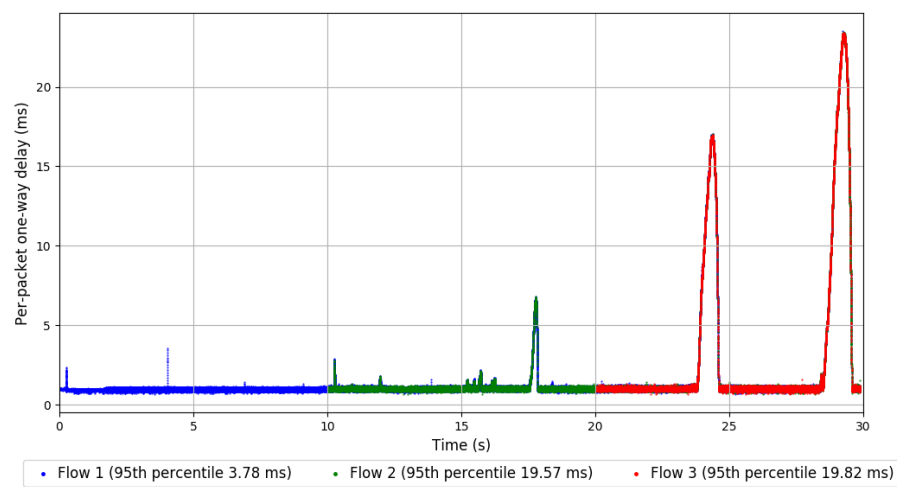
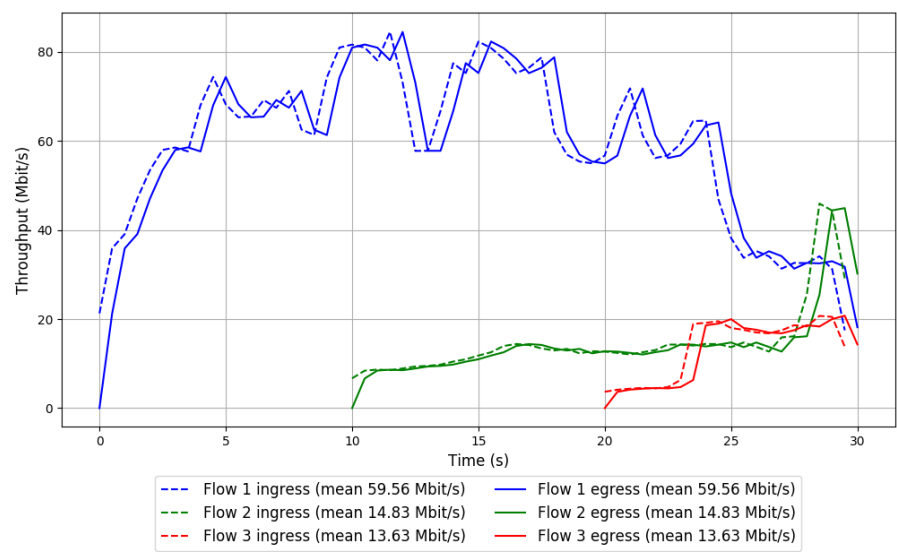


Run 5: Statistics of PCC-Allegro

Start at: 2019-01-21 12:43:13  
End at: 2019-01-21 12:43:43  
Local clock offset: -5.786 ms  
Remote clock offset: -0.676 ms

# Below is generated by plot.py at 2019-01-21 13:04:20  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 73.91 Mbit/s  
95th percentile per-packet one-way delay: 10.828 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 59.56 Mbit/s  
95th percentile per-packet one-way delay: 3.783 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 14.83 Mbit/s  
95th percentile per-packet one-way delay: 19.569 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 13.63 Mbit/s  
95th percentile per-packet one-way delay: 19.818 ms  
Loss rate: 0.00%

Run 5: Report of PCC-Allegro — Data Link



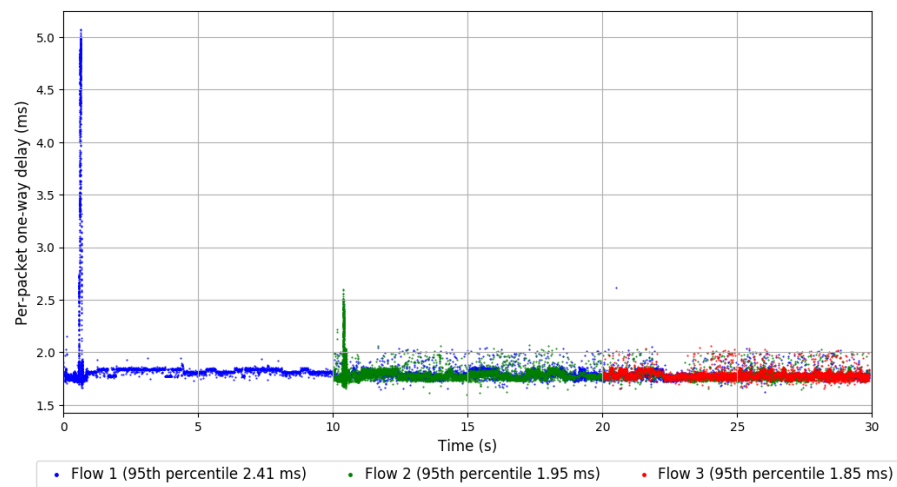
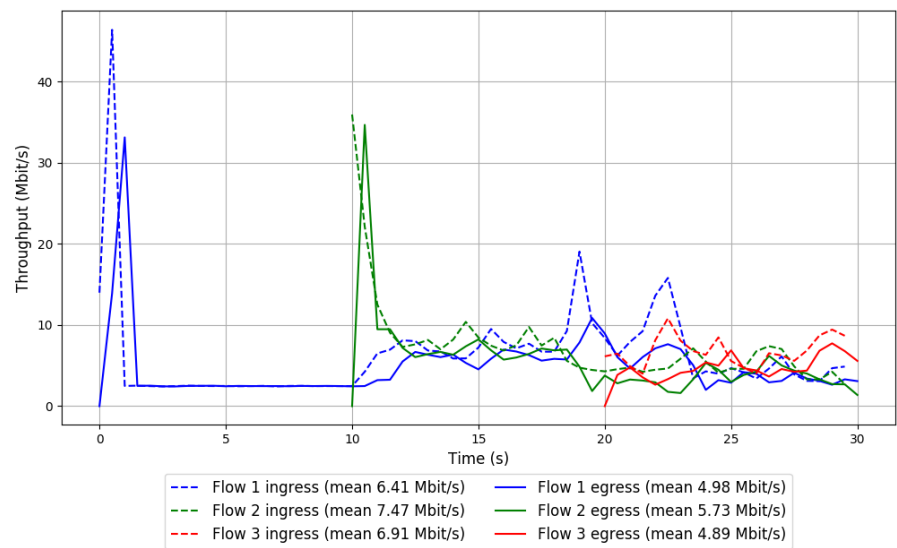


```
Run 1: Statistics of PCC-Expr

Start at: 2019-01-21 10:59:51
End at: 2019-01-21 11:00:21
Local clock offset: -7.694 ms
Remote clock offset: 0.154 ms

# Below is generated by plot.py at 2019-01-21 13:04:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 10.40 Mbit/s
95th percentile per-packet one-way delay: 1.965 ms
Loss rate: 23.88%
-- Flow 1:
Average throughput: 4.98 Mbit/s
95th percentile per-packet one-way delay: 2.406 ms
Loss rate: 22.38%
-- Flow 2:
Average throughput: 5.73 Mbit/s
95th percentile per-packet one-way delay: 1.953 ms
Loss rate: 23.38%
-- Flow 3:
Average throughput: 4.89 Mbit/s
95th percentile per-packet one-way delay: 1.853 ms
Loss rate: 29.16%
```

Run 1: Report of PCC-Expr — Data Link

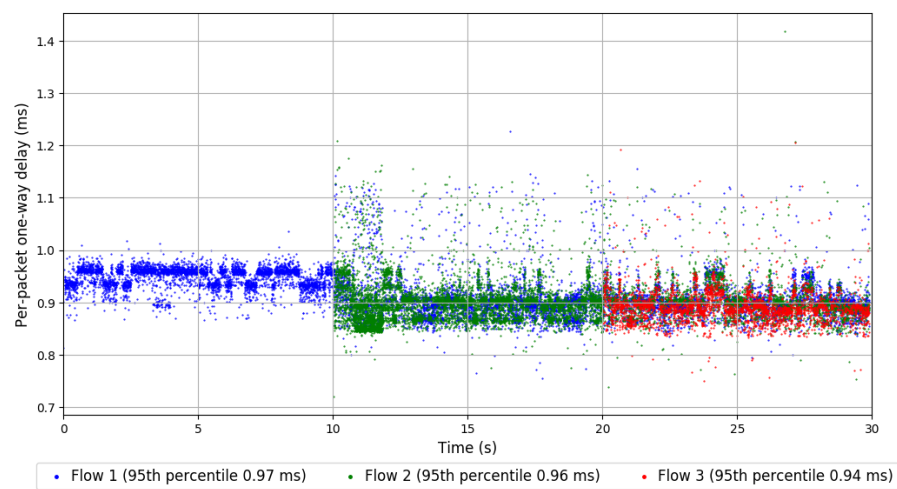
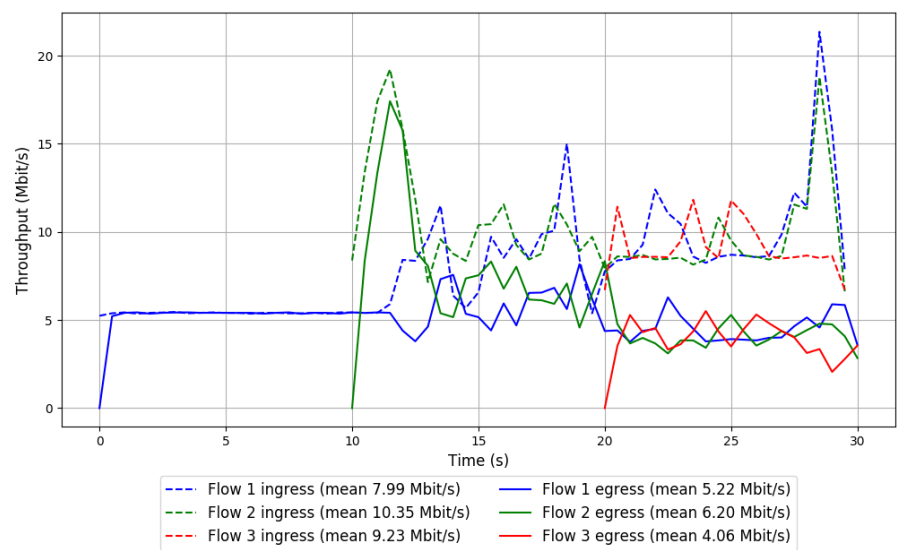


```
Run 2: Statistics of PCC-Expr

Start at: 2019-01-21 11:23:38
End at: 2019-01-21 11:24:08
Local clock offset: -7.279 ms
Remote clock offset: 0.162 ms

# Below is generated by plot.py at 2019-01-21 13:04:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 10.68 Mbit/s
95th percentile per-packet one-way delay: 0.968 ms
Loss rate: 40.43%
-- Flow 1:
Average throughput: 5.22 Mbit/s
95th percentile per-packet one-way delay: 0.971 ms
Loss rate: 34.77%
-- Flow 2:
Average throughput: 6.20 Mbit/s
95th percentile per-packet one-way delay: 0.963 ms
Loss rate: 40.12%
-- Flow 3:
Average throughput: 4.06 Mbit/s
95th percentile per-packet one-way delay: 0.942 ms
Loss rate: 55.98%
```

Run 2: Report of PCC-Expr — Data Link



Run 3: Statistics of PCC-Expr

Start at: 2019-01-21 11:47:32

End at: 2019-01-21 11:48:02

Local clock offset: -7.877 ms

Remote clock offset: 0.061 ms

# Below is generated by plot.py at 2019-01-21 13:05:23

# Datalink statistics

-- Total of 3 flows:

Average throughput: 11.61 Mbit/s

95th percentile per-packet one-way delay: 1.006 ms

Loss rate: 97.54%

-- Flow 1:

Average throughput: 6.00 Mbit/s

95th percentile per-packet one-way delay: 1.010 ms

Loss rate: 96.29%

-- Flow 2:

Average throughput: 6.14 Mbit/s

95th percentile per-packet one-way delay: 1.007 ms

Loss rate: 97.02%

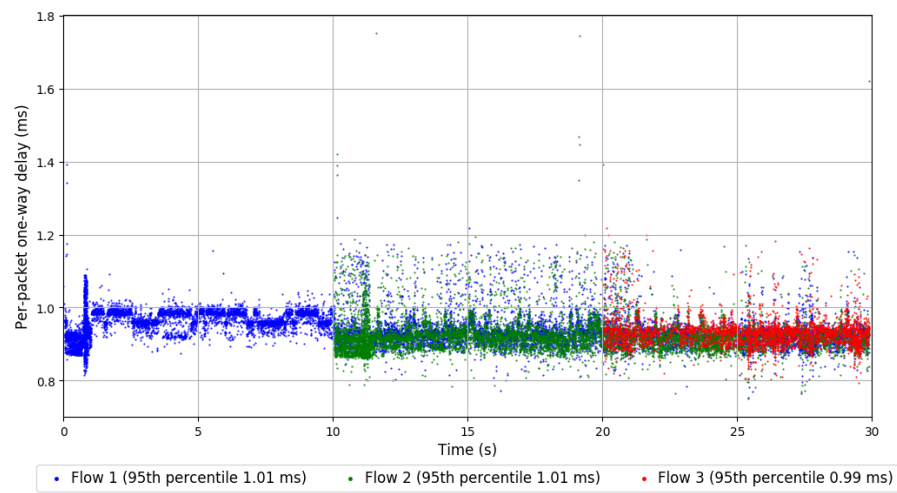
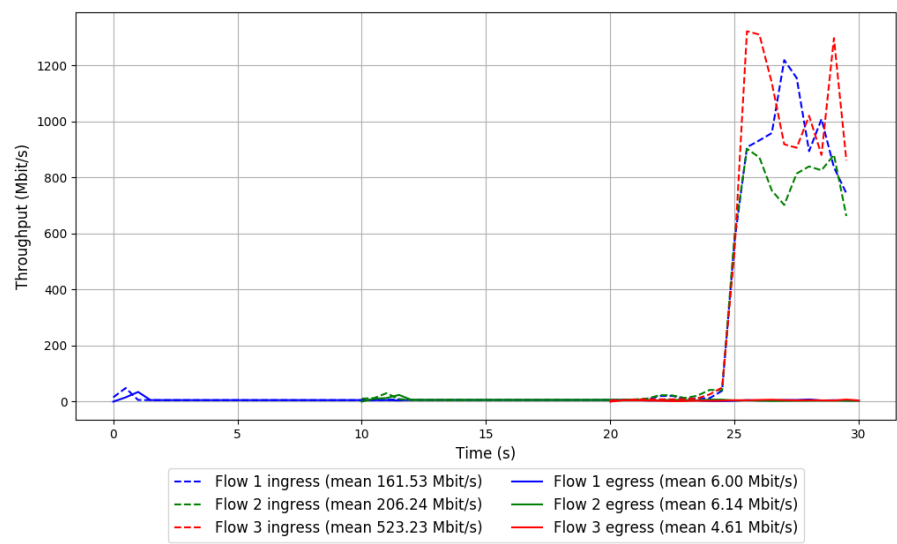
-- Flow 3:

Average throughput: 4.61 Mbit/s

95th percentile per-packet one-way delay: 0.990 ms

Loss rate: 99.12%

Run 3: Report of PCC-Expr — Data Link

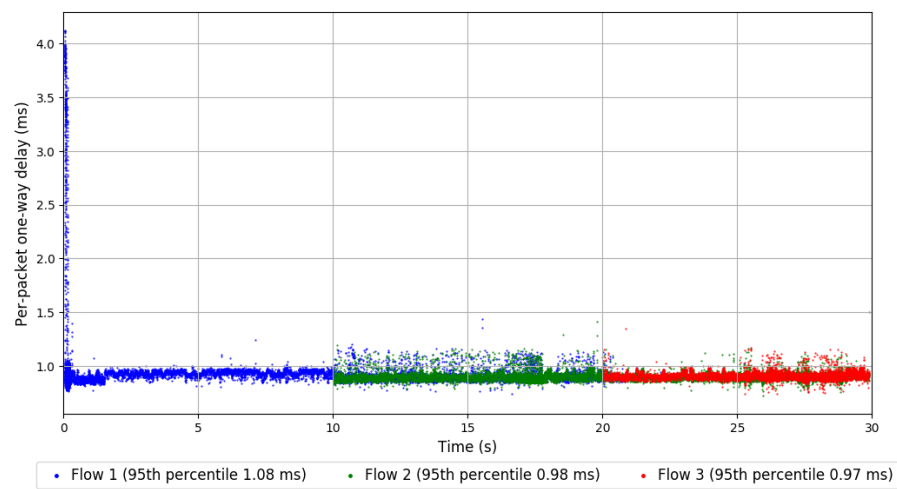
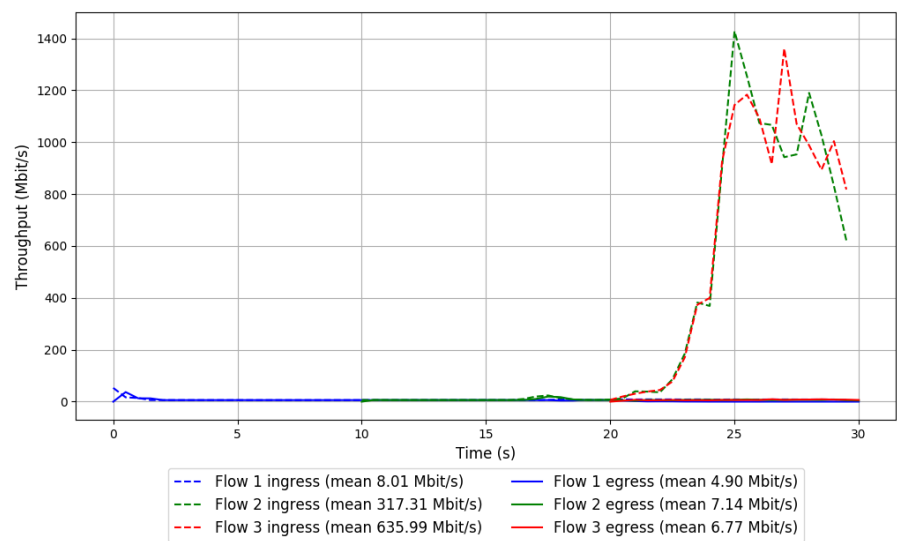


Run 4: Statistics of PCC-Expr

Start at: 2019-01-21 12:11:25  
End at: 2019-01-21 12:11:55  
Local clock offset: -5.961 ms  
Remote clock offset: -0.335 ms

# Below is generated by plot.py at 2019-01-21 13:05:23  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 11.86 Mbit/s  
95th percentile per-packet one-way delay: 1.001 ms  
Loss rate: 97.24%  
-- Flow 1:  
Average throughput: 4.90 Mbit/s  
95th percentile per-packet one-way delay: 1.080 ms  
Loss rate: 39.12%  
-- Flow 2:  
Average throughput: 7.14 Mbit/s  
95th percentile per-packet one-way delay: 0.976 ms  
Loss rate: 97.75%  
-- Flow 3:  
Average throughput: 6.77 Mbit/s  
95th percentile per-packet one-way delay: 0.972 ms  
Loss rate: 98.94%

Run 4: Report of PCC-Expr — Data Link



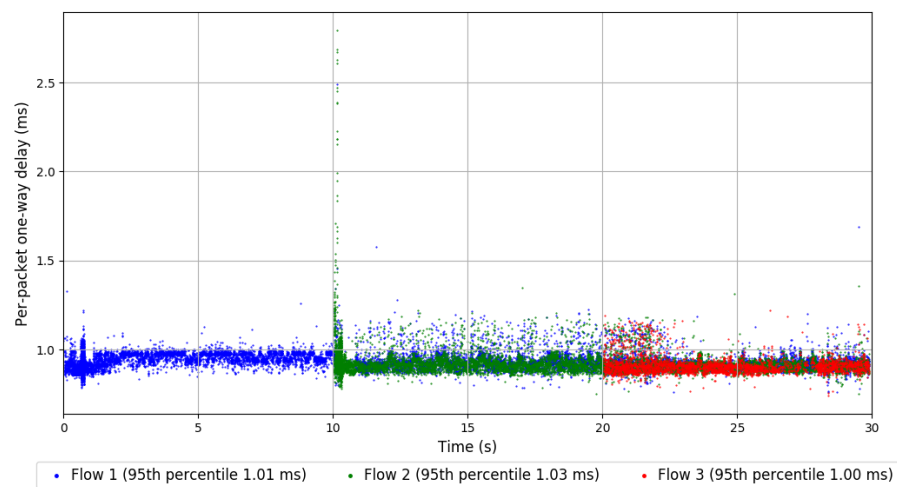
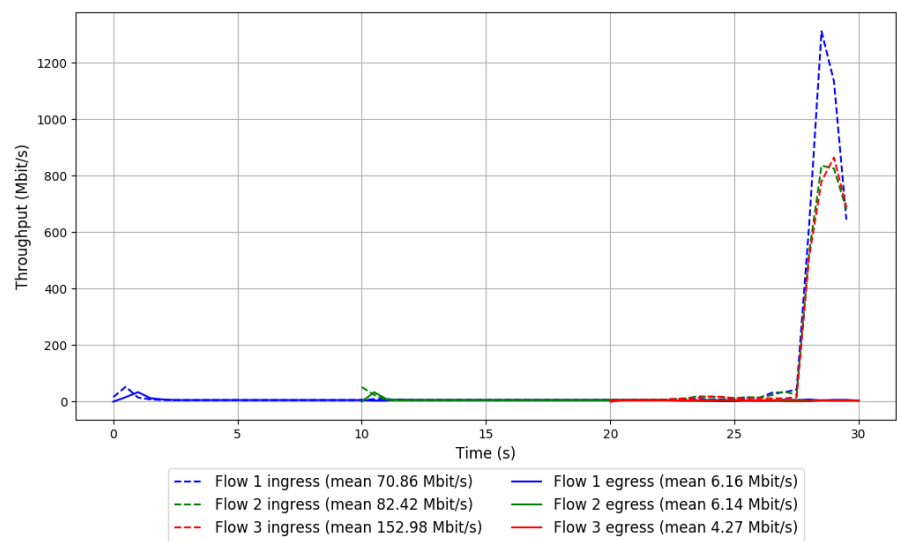


Run 5: Statistics of PCC-Expr

Start at: 2019-01-21 12:35:16  
End at: 2019-01-21 12:35:46  
Local clock offset: -5.855 ms  
Remote clock offset: -0.683 ms

# Below is generated by plot.py at 2019-01-21 13:05:23  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 11.66 Mbit/s  
95th percentile per-packet one-way delay: 1.015 ms  
Loss rate: 93.38%  
-- Flow 1:  
Average throughput: 6.16 Mbit/s  
95th percentile per-packet one-way delay: 1.008 ms  
Loss rate: 91.30%  
-- Flow 2:  
Average throughput: 6.14 Mbit/s  
95th percentile per-packet one-way delay: 1.031 ms  
Loss rate: 92.55%  
-- Flow 3:  
Average throughput: 4.27 Mbit/s  
95th percentile per-packet one-way delay: 0.996 ms  
Loss rate: 97.21%

Run 5: Report of PCC-Expr — Data Link



Run 1: Statistics of QUIC Cubic

Start at: 2019-01-21 11:00:57

End at: 2019-01-21 11:01:27

Local clock offset: -7.682 ms

Remote clock offset: 0.086 ms

# Below is generated by plot.py at 2019-01-21 13:05:23

# Datalink statistics

-- Total of 3 flows:

Average throughput: 90.78 Mbit/s

95th percentile per-packet one-way delay: 30.587 ms

Loss rate: 0.19%

-- Flow 1:

Average throughput: 59.10 Mbit/s

95th percentile per-packet one-way delay: 30.509 ms

Loss rate: 0.18%

-- Flow 2:

Average throughput: 34.32 Mbit/s

95th percentile per-packet one-way delay: 30.625 ms

Loss rate: 0.21%

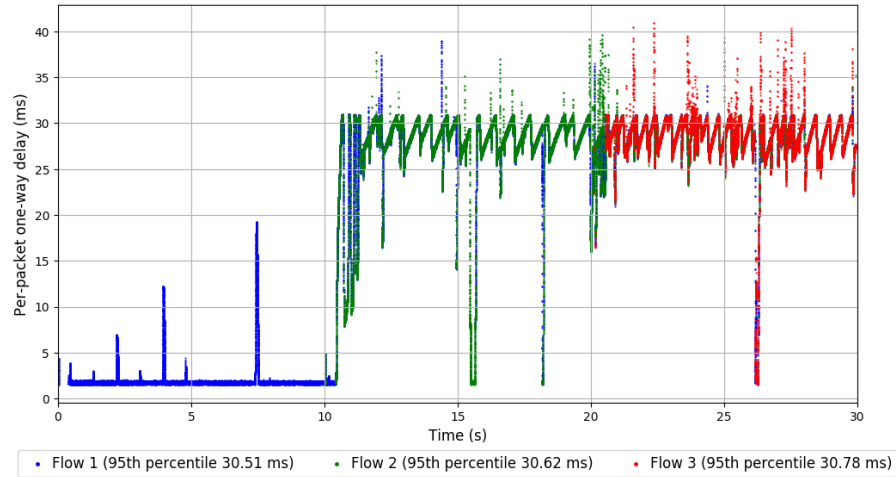
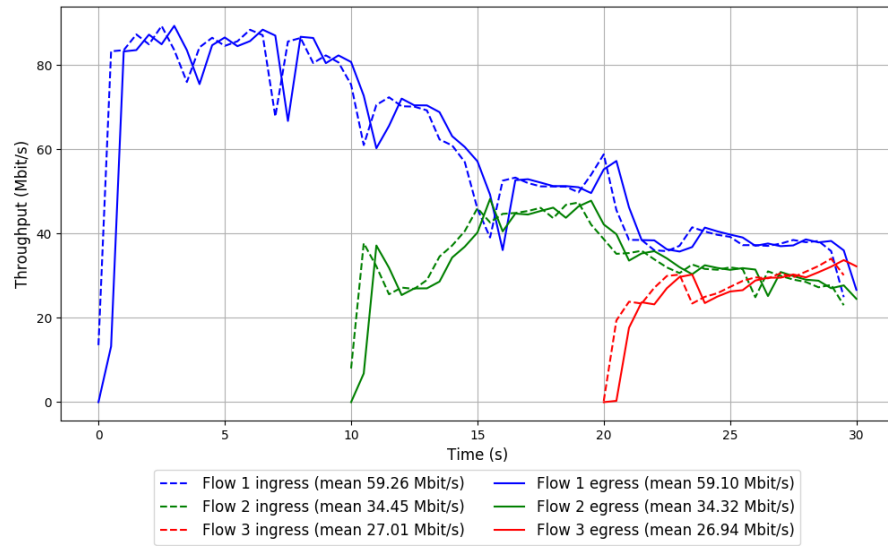
-- Flow 3:

Average throughput: 26.94 Mbit/s

95th percentile per-packet one-way delay: 30.779 ms

Loss rate: 0.23%

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



Run 2: Statistics of QUIC Cubic

Start at: 2019-01-21 11:24:44

End at: 2019-01-21 11:25:14

Local clock offset: -7.303 ms

Remote clock offset: 0.189 ms

# Below is generated by plot.py at 2019-01-21 13:05:23

# Datalink statistics

-- Total of 3 flows:

Average throughput: 90.85 Mbit/s

95th percentile per-packet one-way delay: 29.828 ms

Loss rate: 0.20%

-- Flow 1:

Average throughput: 58.68 Mbit/s

95th percentile per-packet one-way delay: 29.725 ms

Loss rate: 0.18%

-- Flow 2:

Average throughput: 36.91 Mbit/s

95th percentile per-packet one-way delay: 29.881 ms

Loss rate: 0.20%

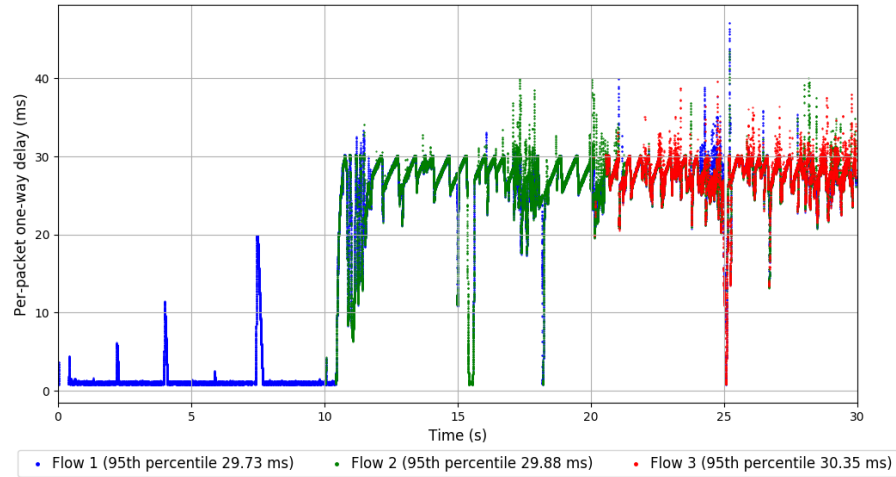
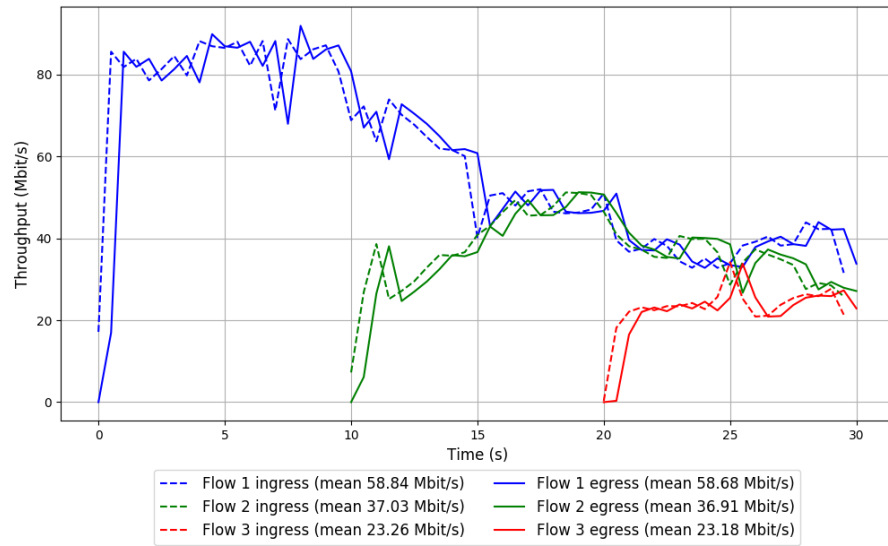
-- Flow 3:

Average throughput: 23.18 Mbit/s

95th percentile per-packet one-way delay: 30.347 ms

Loss rate: 0.37%

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



Run 3: Statistics of QUIC Cubic

Start at: 2019-01-21 11:48:43

End at: 2019-01-21 11:49:13

Local clock offset: -7.917 ms

Remote clock offset: 0.014 ms

# Below is generated by plot.py at 2019-01-21 13:05:23

# Datalink statistics

-- Total of 3 flows:

Average throughput: 89.04 Mbit/s

95th percentile per-packet one-way delay: 29.834 ms

Loss rate: 0.18%

-- Flow 1:

Average throughput: 55.95 Mbit/s

95th percentile per-packet one-way delay: 29.773 ms

Loss rate: 0.17%

-- Flow 2:

Average throughput: 36.35 Mbit/s

95th percentile per-packet one-way delay: 29.903 ms

Loss rate: 0.18%

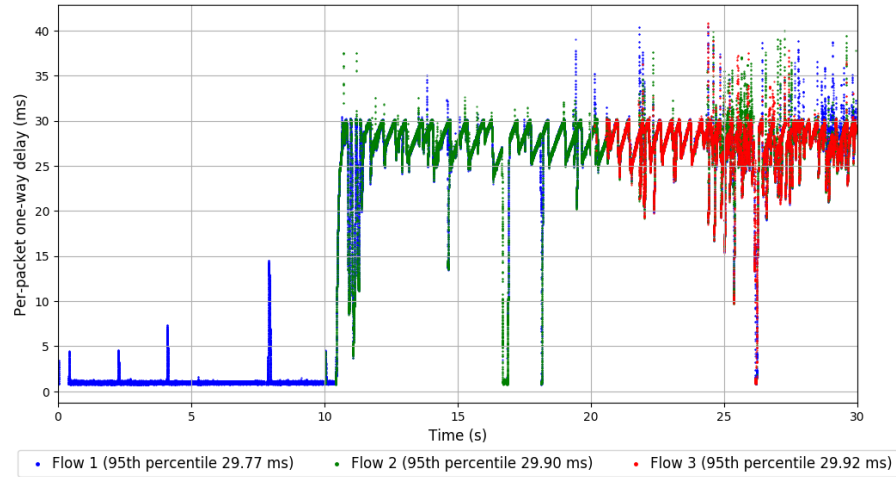
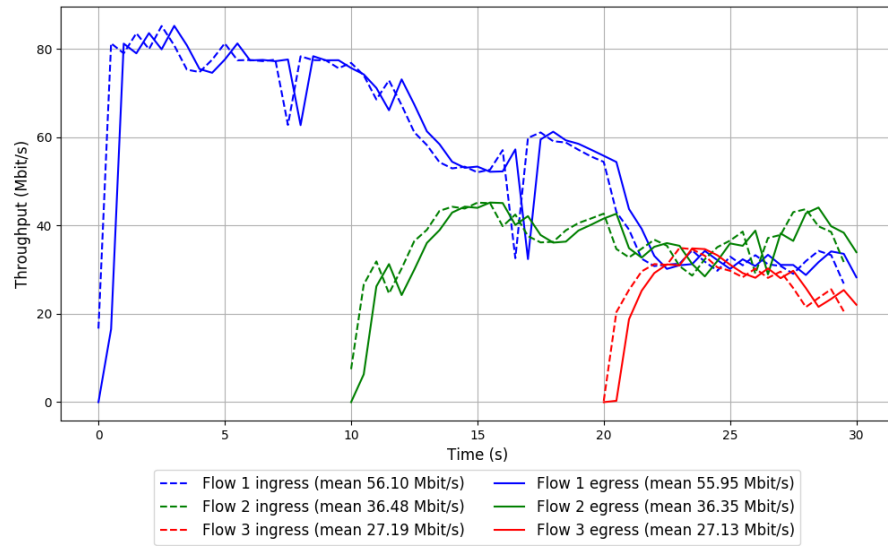
-- Flow 3:

Average throughput: 27.13 Mbit/s

95th percentile per-packet one-way delay: 29.917 ms

Loss rate: 0.21%

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



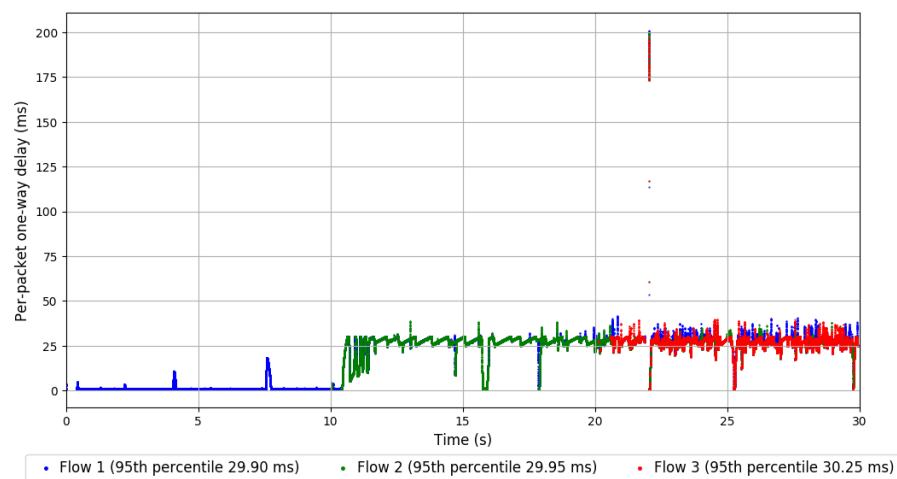
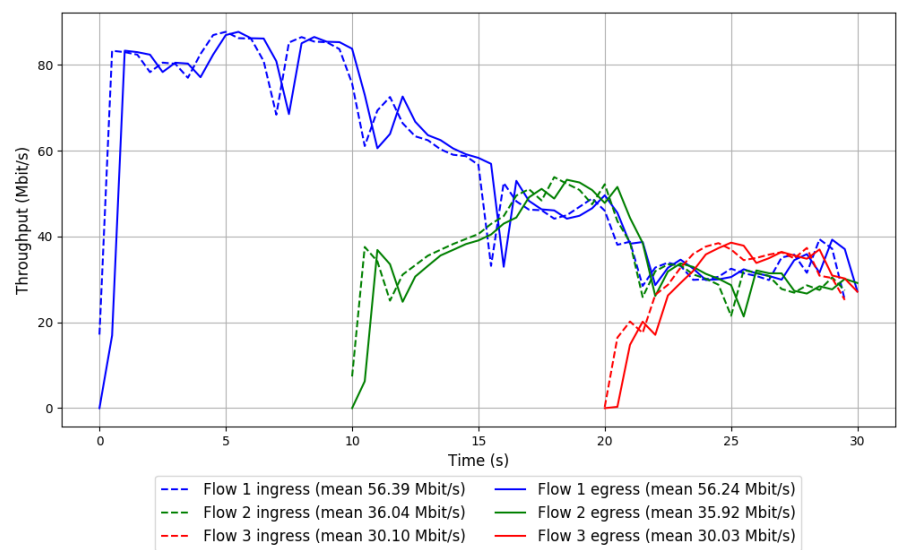


Run 4: Statistics of QUIC Cubic

Start at: 2019-01-21 12:12:35  
End at: 2019-01-21 12:13:05  
Local clock offset: -5.908 ms  
Remote clock offset: -0.245 ms

# Below is generated by plot.py at 2019-01-21 13:05:24  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 90.00 Mbit/s  
95th percentile per-packet one-way delay: 29.944 ms  
Loss rate: 0.20%  
-- Flow 1:  
Average throughput: 56.24 Mbit/s  
95th percentile per-packet one-way delay: 29.902 ms  
Loss rate: 0.18%  
-- Flow 2:  
Average throughput: 35.92 Mbit/s  
95th percentile per-packet one-way delay: 29.955 ms  
Loss rate: 0.21%  
-- Flow 3:  
Average throughput: 30.03 Mbit/s  
95th percentile per-packet one-way delay: 30.253 ms  
Loss rate: 0.27%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2019-01-21 12:36:24

End at: 2019-01-21 12:36:54

Local clock offset: -5.866 ms

Remote clock offset: -0.72 ms

# Below is generated by plot.py at 2019-01-21 13:05:27

# Datalink statistics

-- Total of 3 flows:

Average throughput: 90.78 Mbit/s

95th percentile per-packet one-way delay: 29.837 ms

Loss rate: 0.23%

-- Flow 1:

Average throughput: 57.15 Mbit/s

95th percentile per-packet one-way delay: 29.774 ms

Loss rate: 0.20%

-- Flow 2:

Average throughput: 36.10 Mbit/s

95th percentile per-packet one-way delay: 29.855 ms

Loss rate: 0.27%

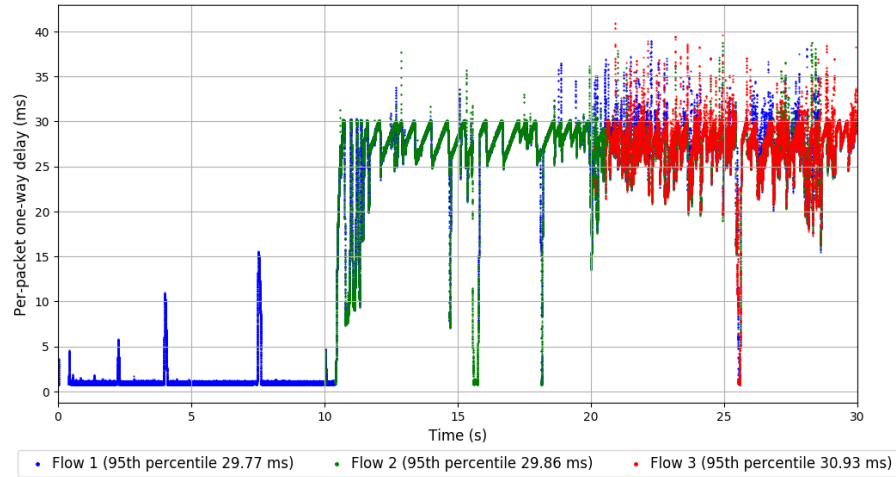
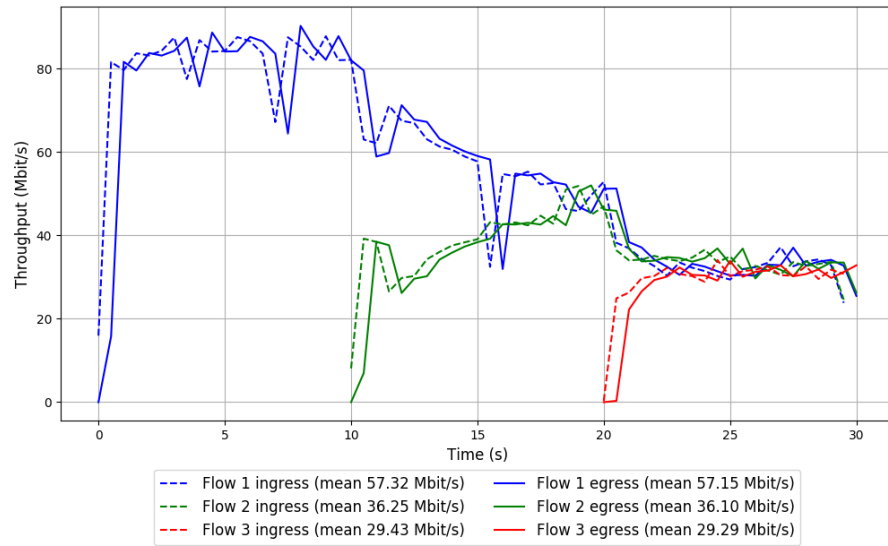
-- Flow 3:

Average throughput: 29.29 Mbit/s

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

Loss rate: 0.33%

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

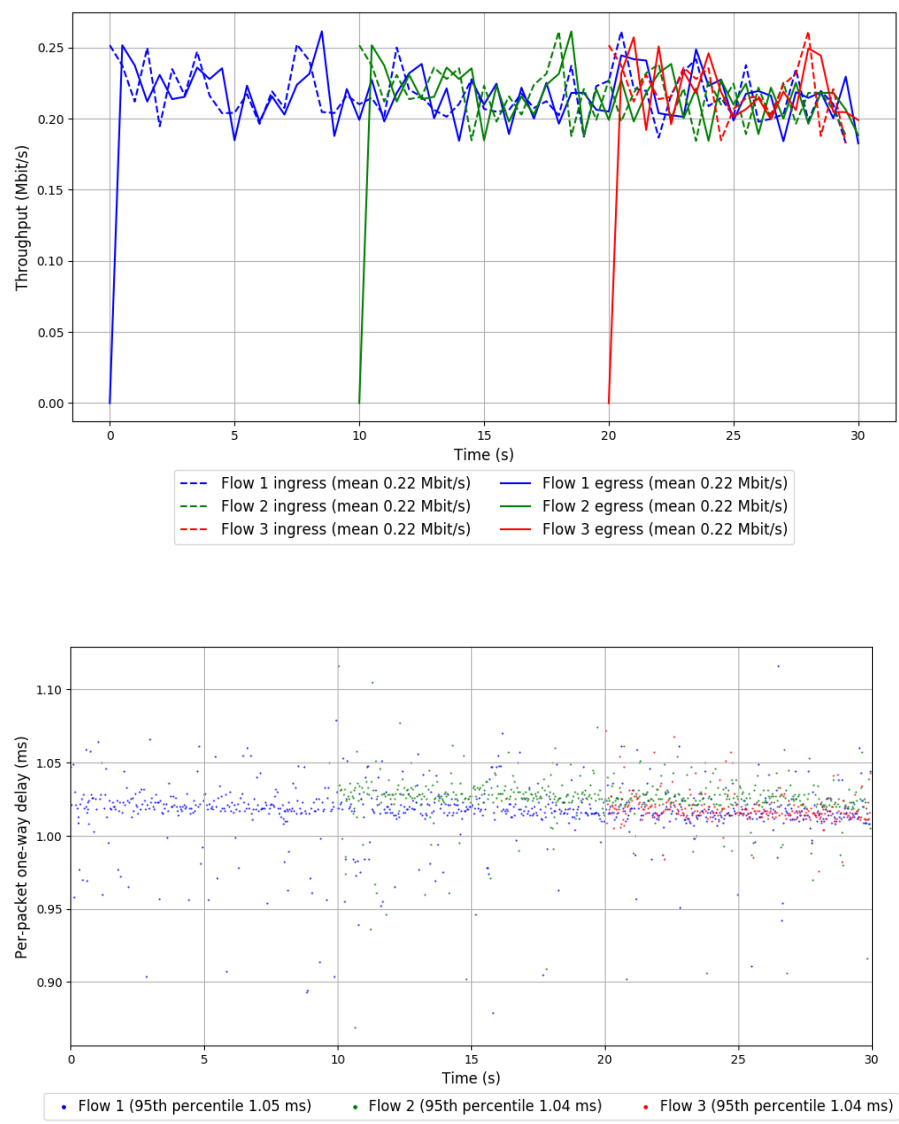


```
Run 1: Statistics of SReAM

Start at: 2019-01-21 11:05:32
End at: 2019-01-21 11:06:02
Local clock offset: -6.954 ms
Remote clock offset: 0.22 ms

# Below is generated by plot.py at 2019-01-21 13:05:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 1.044 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.047 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.045 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.037 ms
Loss rate: 0.00%
```

Run 1: Report of SReAM — Data Link

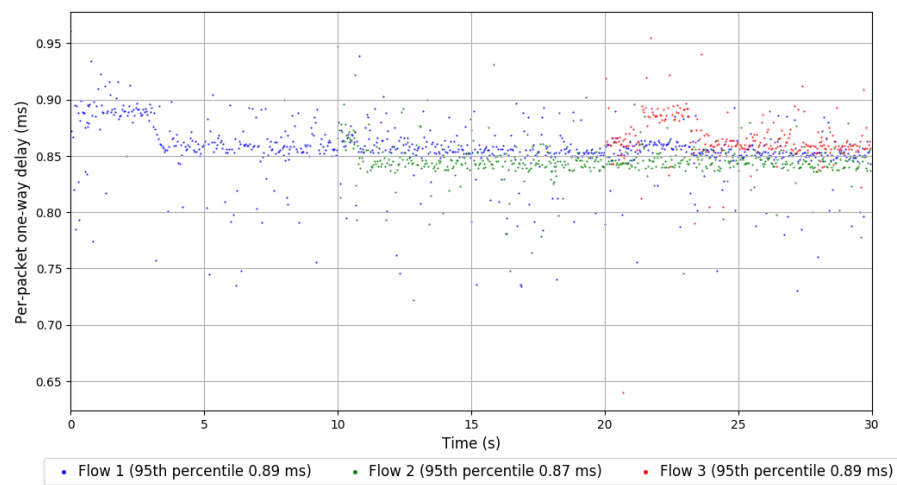
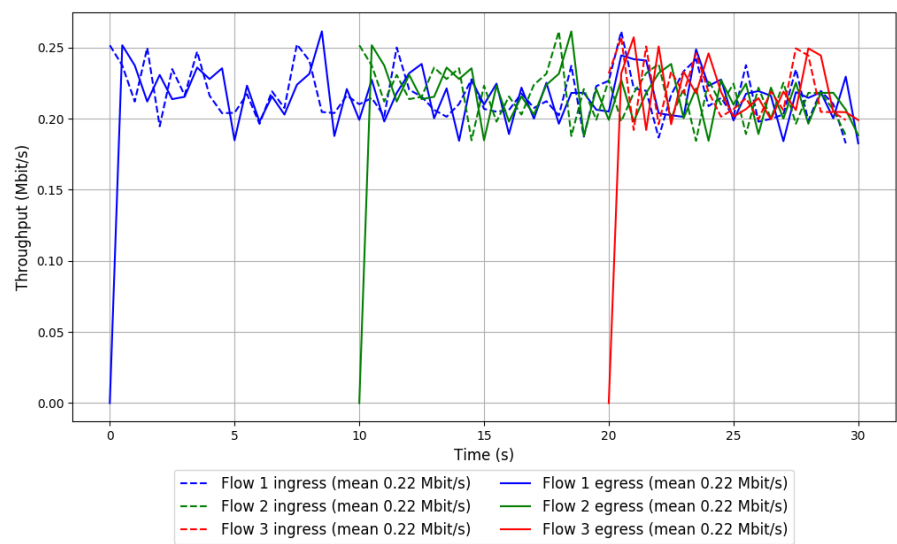


Run 2: Statistics of SReAM

Start at: 2019-01-21 11:29:20  
End at: 2019-01-21 11:29:50  
Local clock offset: -7.414 ms  
Remote clock offset: 0.098 ms

# Below is generated by plot.py at 2019-01-21 13:05:27  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.44 Mbit/s  
95th percentile per-packet one-way delay: 0.891 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 0.892 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 0.873 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 0.893 ms  
Loss rate: 0.00%

Run 2: Report of SReAM — Data Link



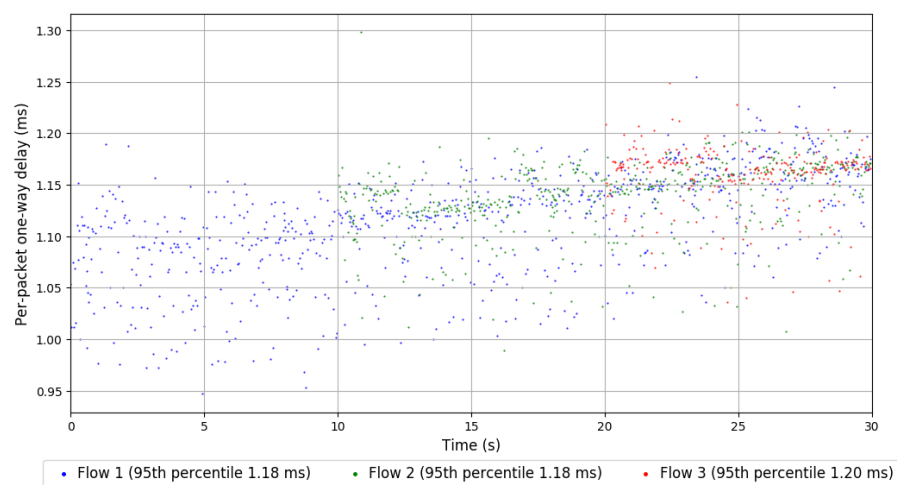
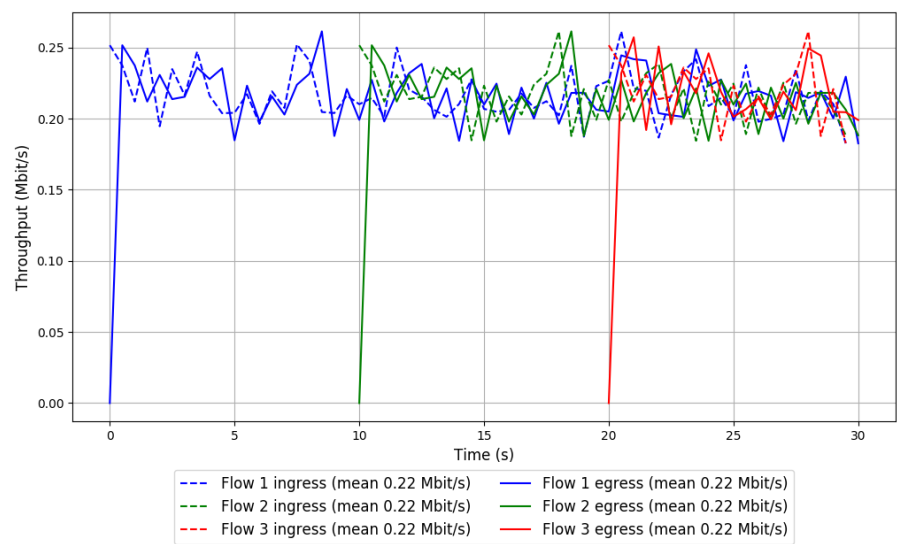


Run 3: Statistics of SReAM

Start at: 2019-01-21 11:53:18  
End at: 2019-01-21 11:53:48  
Local clock offset: -7.383 ms  
Remote clock offset: 0.034 ms

# Below is generated by plot.py at 2019-01-21 13:05:27  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.44 Mbit/s  
95th percentile per-packet one-way delay: 1.185 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 1.183 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 1.181 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 1.198 ms  
Loss rate: 0.00%

Run 3: Report of SReAM — Data Link

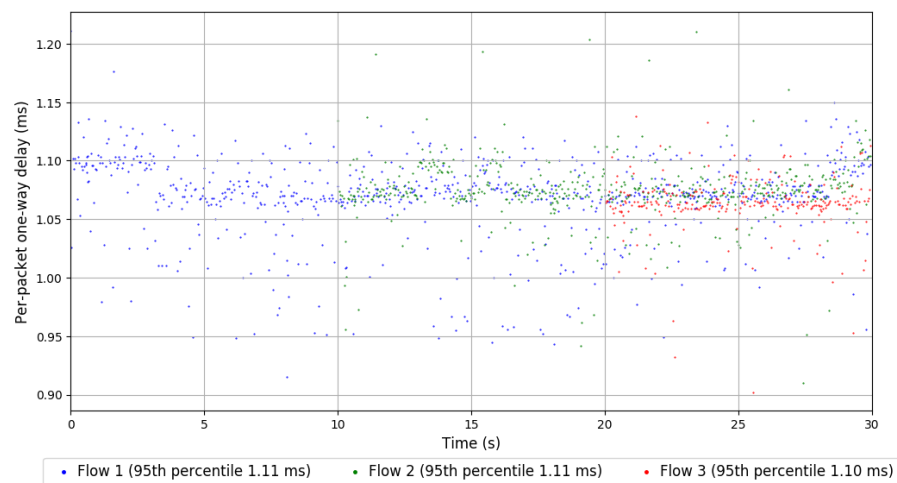
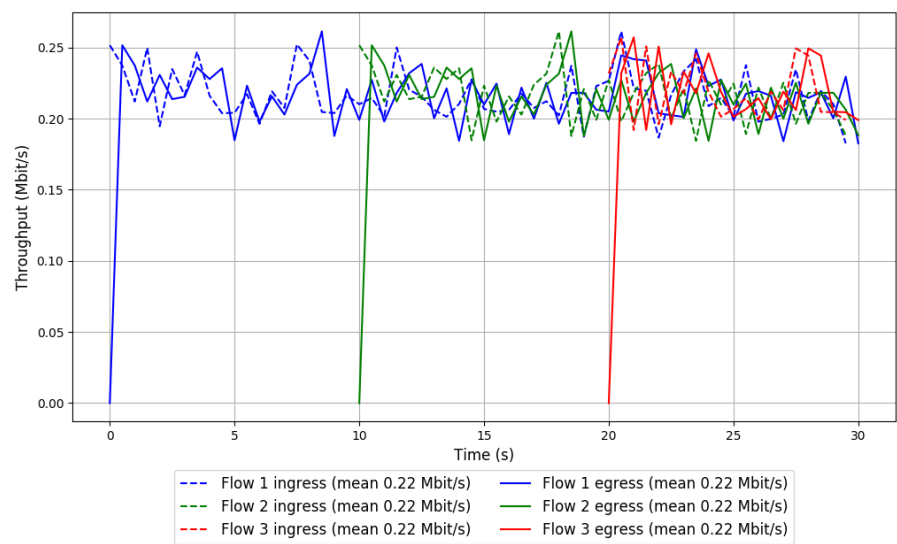


Run 4: Statistics of SReAM

Start at: 2019-01-21 12:17:09  
End at: 2019-01-21 12:17:39  
Local clock offset: -5.899 ms  
Remote clock offset: -0.3 ms

# Below is generated by plot.py at 2019-01-21 13:05:27  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.44 Mbit/s  
95th percentile per-packet one-way delay: 1.111 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 1.113 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 1.111 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 1.100 ms  
Loss rate: 0.00%

Run 4: Report of SReAM — Data Link



Run 5: Statistics of SReAM

Start at: 2019-01-21 12:40:58

End at: 2019-01-21 12:41:28

Local clock offset: -5.884 ms

Remote clock offset: -0.61 ms

# Below is generated by plot.py at 2019-01-21 13:05:27

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 1.129 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.128 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.129 ms

Loss rate: 0.00%

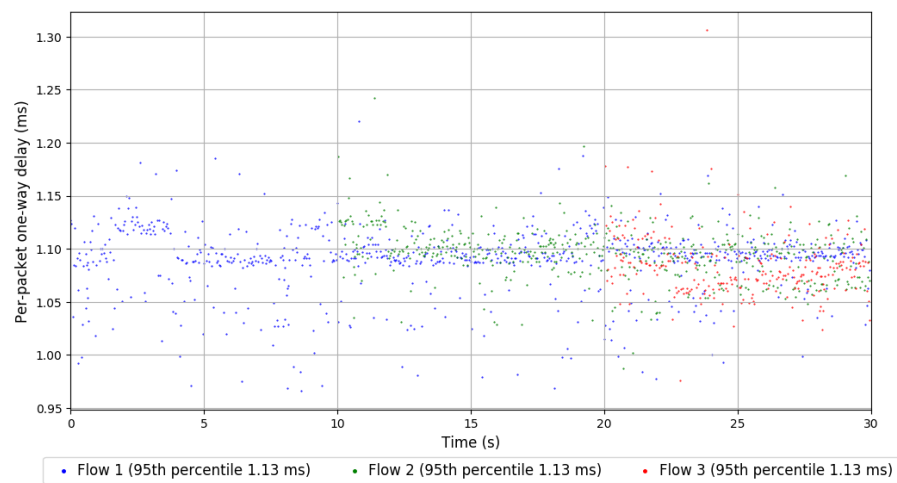
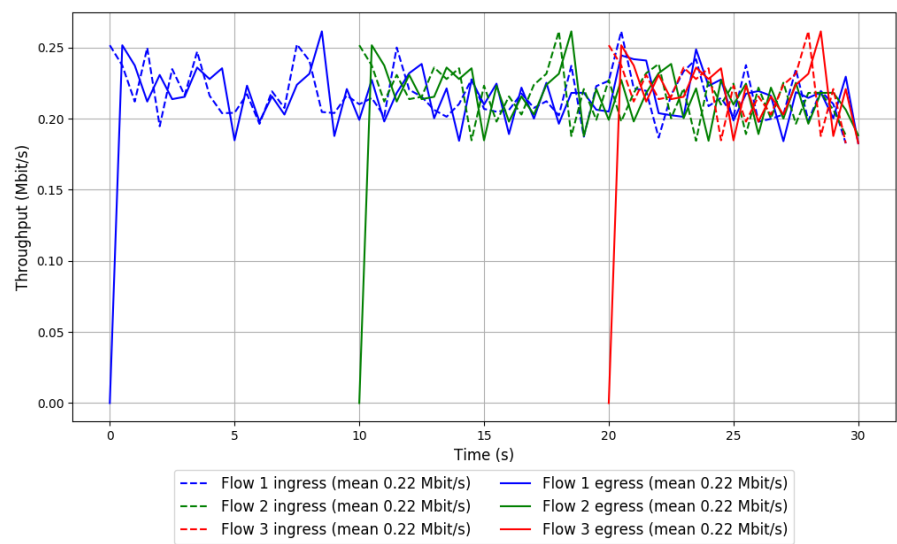
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 1.127 ms

Loss rate: 0.00%

Run 5: Report of SReAM — Data Link



Run 1: Statistics of Sprout

Start at: 2019-01-21 11:16:55

End at: 2019-01-21 11:17:25

Local clock offset: -7.146 ms

Remote clock offset: 0.198 ms

# Below is generated by plot.py at 2019-01-21 13:05:27

# Datalink statistics

-- Total of 3 flows:

Average throughput: 78.91 Mbit/s

95th percentile per-packet one-way delay: 23.729 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 43.47 Mbit/s

95th percentile per-packet one-way delay: 21.294 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 38.99 Mbit/s

95th percentile per-packet one-way delay: 23.416 ms

Loss rate: 0.00%

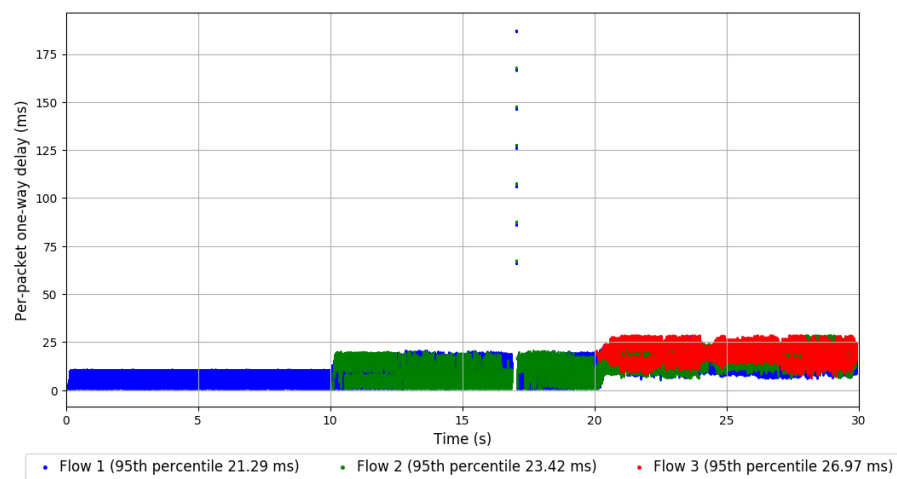
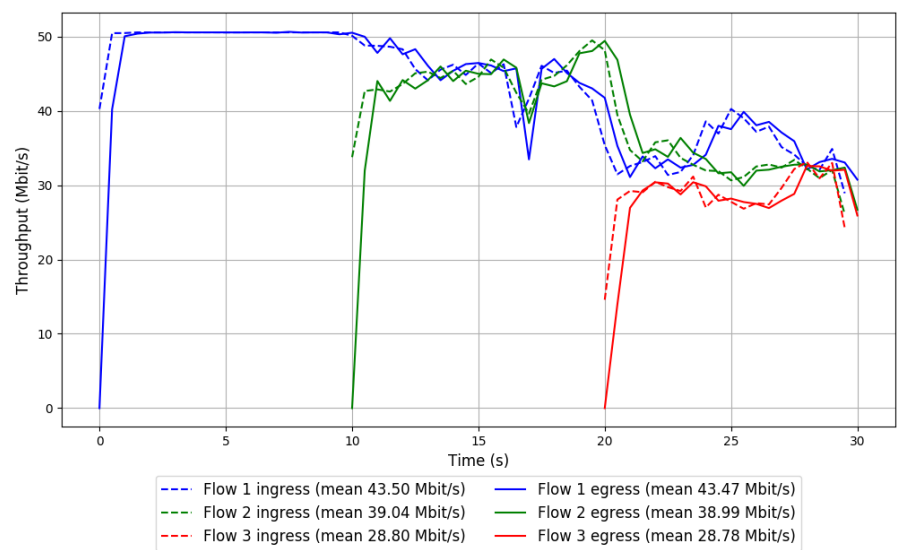
-- Flow 3:

Average throughput: 28.78 Mbit/s

95th percentile per-packet one-way delay: 26.966 ms

Loss rate: 0.00%

Run 1: Report of Sprout — Data Link



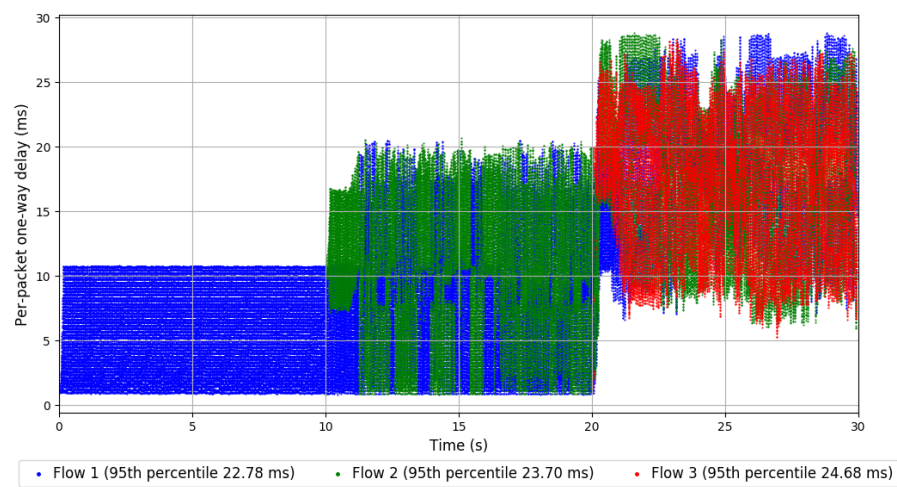
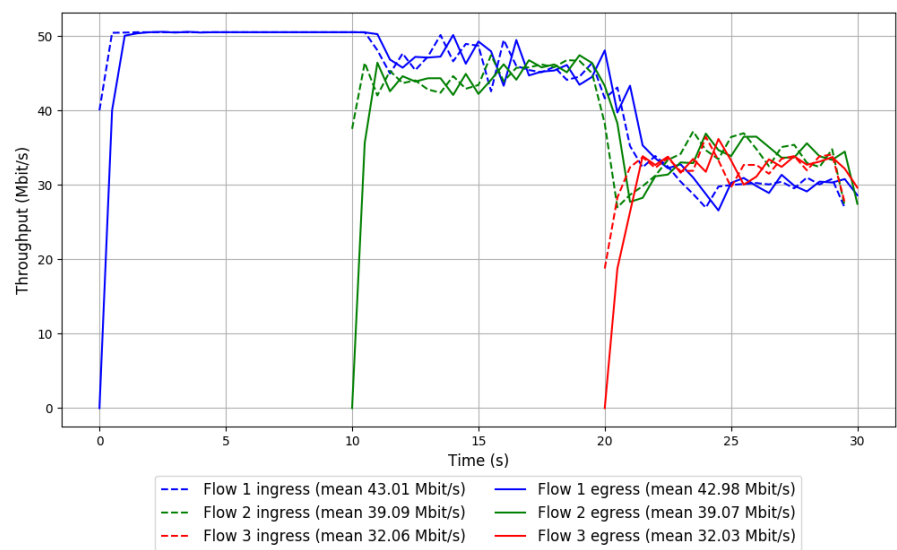


Run 2: Statistics of Sprout

Start at: 2019-01-21 11:40:43  
End at: 2019-01-21 11:41:13  
Local clock offset: -7.685 ms  
Remote clock offset: 0.149 ms

# Below is generated by plot.py at 2019-01-21 13:05:51  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 79.55 Mbit/s  
95th percentile per-packet one-way delay: 23.727 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 42.98 Mbit/s  
95th percentile per-packet one-way delay: 22.776 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 39.07 Mbit/s  
95th percentile per-packet one-way delay: 23.701 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 32.03 Mbit/s  
95th percentile per-packet one-way delay: 24.684 ms  
Loss rate: 0.00%

Run 2: Report of Sprout — Data Link

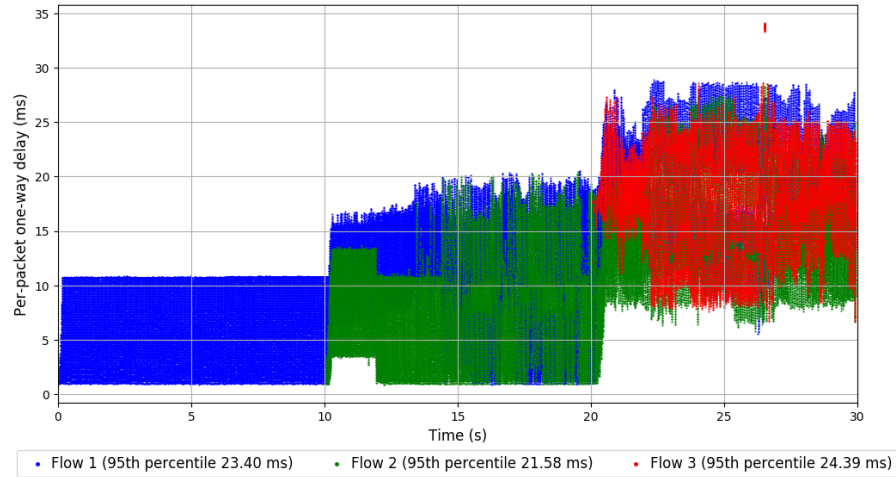
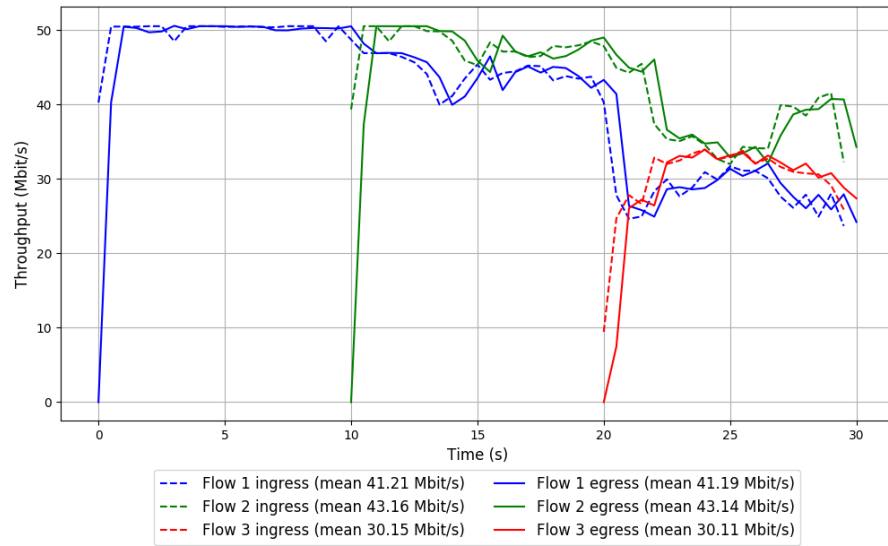


### Run 3: Statistics of Sprout

Start at: 2019-01-21 12:04:41  
End at: 2019-01-21 12:05:11  
Local clock offset: -6.222 ms  
Remote clock offset: -0.109 ms

```
# Below is generated by plot.py at 2019-01-21 13:05:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.82 Mbit/s
95th percentile per-packet one-way delay: 23.332 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 41.19 Mbit/s
95th percentile per-packet one-way delay: 23.401 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 43.14 Mbit/s
95th percentile per-packet one-way delay: 21.578 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 30.11 Mbit/s
95th percentile per-packet one-way delay: 24.388 ms
Loss rate: 0.00%
```

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

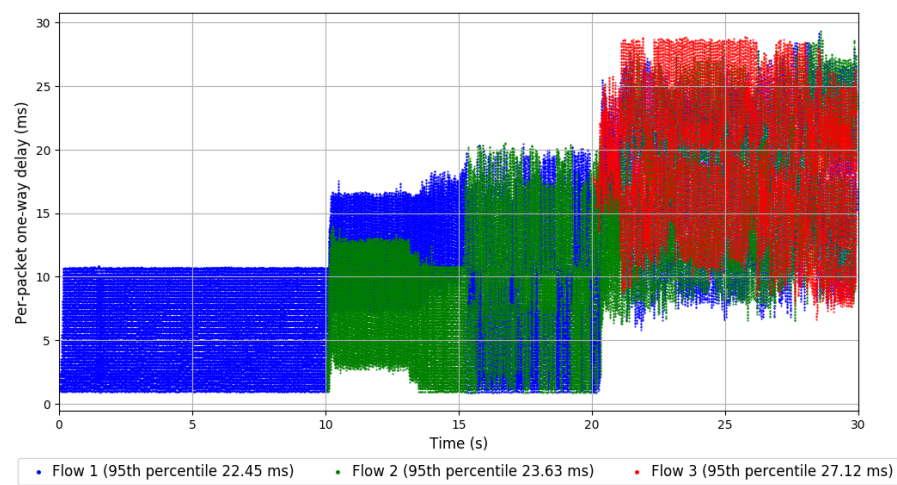
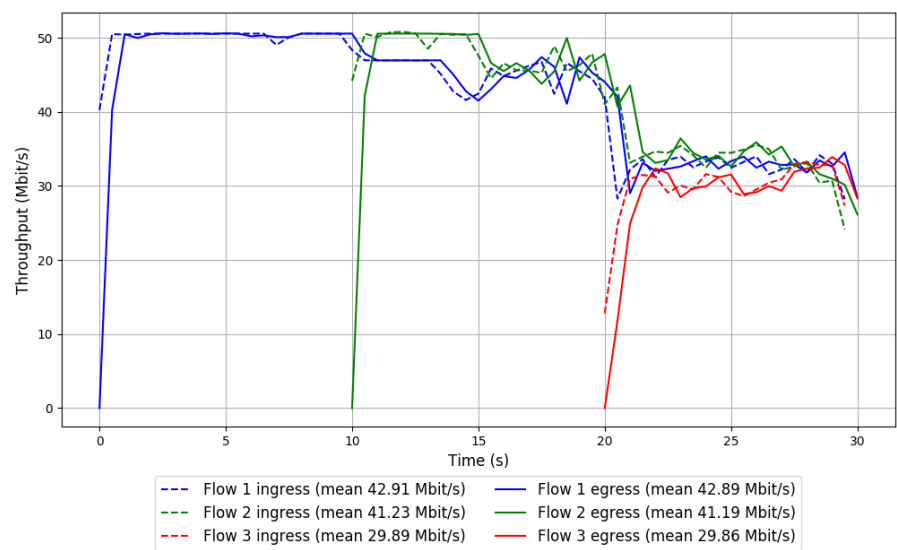


#### Run 4: Statistics of Sprout

Start at: 2019-01-21 12:28:33  
End at: 2019-01-21 12:29:03  
Local clock offset: -5.878 ms  
Remote clock offset: -0.484 ms

```
# Below is generated by plot.py at 2019-01-21 13:06:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 80.16 Mbit/s
95th percentile per-packet one-way delay: 24.091 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 42.89 Mbit/s
95th percentile per-packet one-way delay: 22.450 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 41.19 Mbit/s
95th percentile per-packet one-way delay: 23.633 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 29.86 Mbit/s
95th percentile per-packet one-way delay: 27.119 ms
Loss rate: 0.00%
```

Run 4: Report of Sprout — Data Link

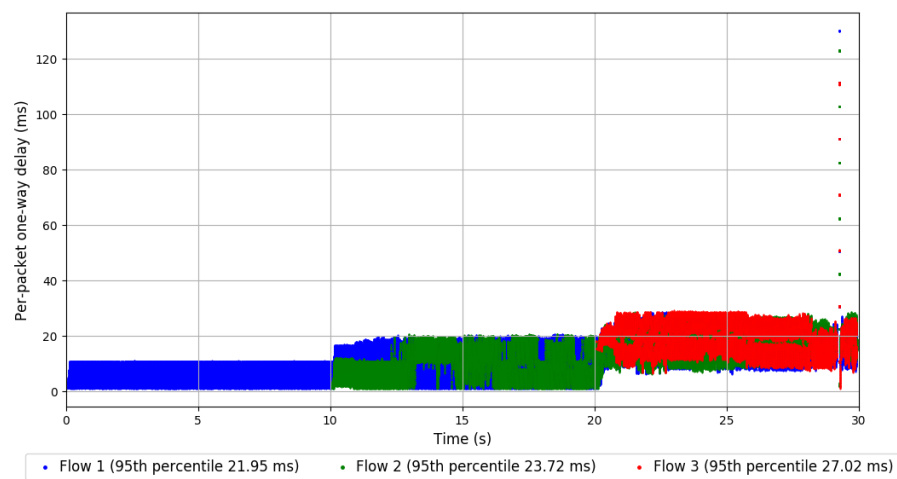
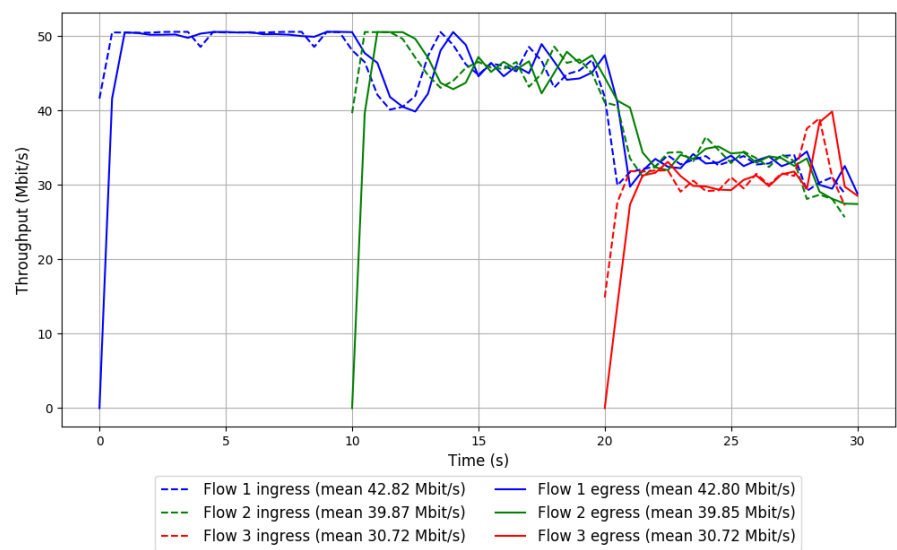


Run 5: Statistics of Sprout

Start at: 2019-01-21 12:52:22  
End at: 2019-01-21 12:52:52  
Local clock offset: -5.955 ms  
Remote clock offset: -0.691 ms

# Below is generated by plot.py at 2019-01-21 13:06:13  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 79.44 Mbit/s  
95th percentile per-packet one-way delay: 23.905 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 42.80 Mbit/s  
95th percentile per-packet one-way delay: 21.954 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 39.85 Mbit/s  
95th percentile per-packet one-way delay: 23.718 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 30.72 Mbit/s  
95th percentile per-packet one-way delay: 27.017 ms  
Loss rate: 0.00%

Run 5: Report of Sprout — Data Link





Run 1: Statistics of TaoVA-100x

Start at: 2019-01-21 10:56:28

End at: 2019-01-21 10:56:58

Local clock offset: -6.884 ms

Remote clock offset: 0.048 ms

# Below is generated by plot.py at 2019-01-21 13:06:13

# Datalink statistics

-- Total of 3 flows:

Average throughput: 8.51 Mbit/s

95th percentile per-packet one-way delay: 2.521 ms

Loss rate: 84.03%

-- Flow 1:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 0.944 ms

Loss rate: 95.92%

-- Flow 2:

Average throughput: 7.22 Mbit/s

95th percentile per-packet one-way delay: 2.549 ms

Loss rate: 82.51%

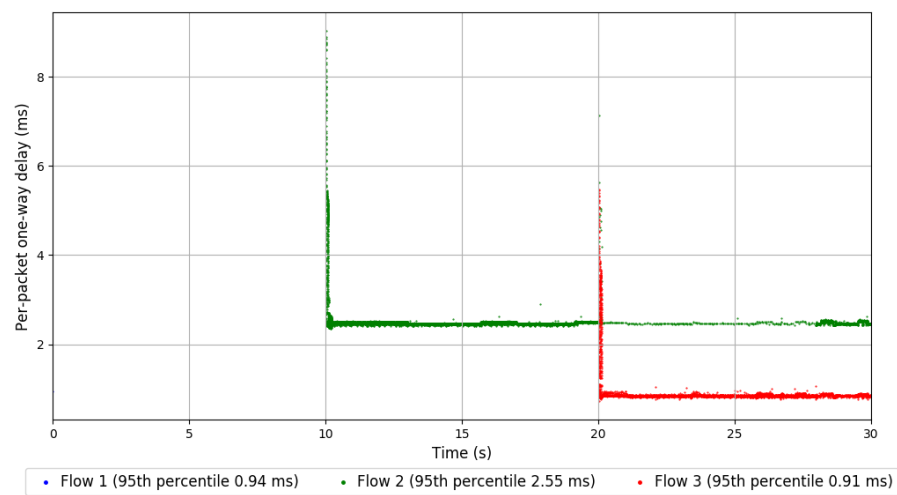
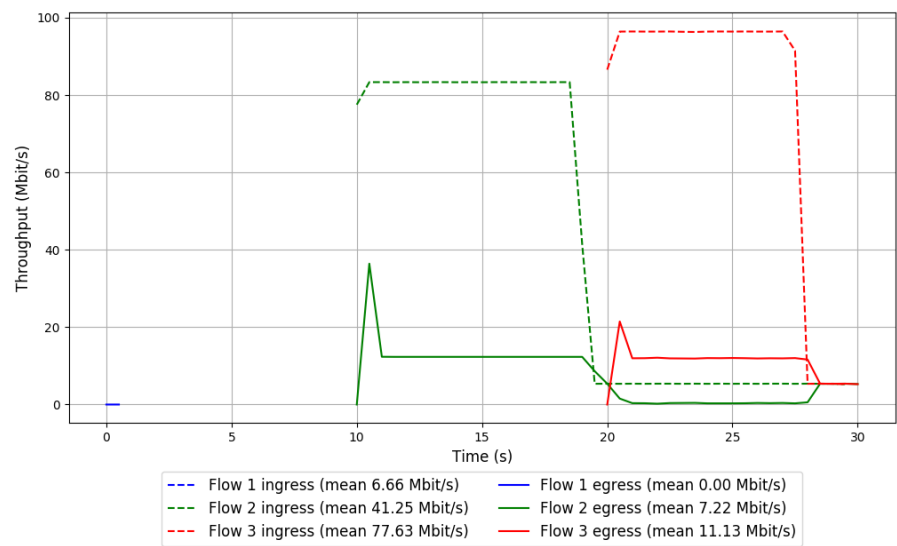
-- Flow 3:

Average throughput: 11.13 Mbit/s

95th percentile per-packet one-way delay: 0.906 ms

Loss rate: 85.66%

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



Run 2: Statistics of TaoVA-100x

Start at: 2019-01-21 11:20:16

End at: 2019-01-21 11:20:46

Local clock offset: -7.221 ms

Remote clock offset: 0.185 ms

# Below is generated by plot.py at 2019-01-21 13:06:13

# Datalink statistics

-- Total of 3 flows:

Average throughput: 8.62 Mbit/s

95th percentile per-packet one-way delay: 0.987 ms

Loss rate: 83.32%

-- Flow 1:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 1.047 ms

Loss rate: 95.92%

-- Flow 2:

Average throughput: 11.29 Mbit/s

95th percentile per-packet one-way delay: 0.978 ms

Loss rate: 83.76%

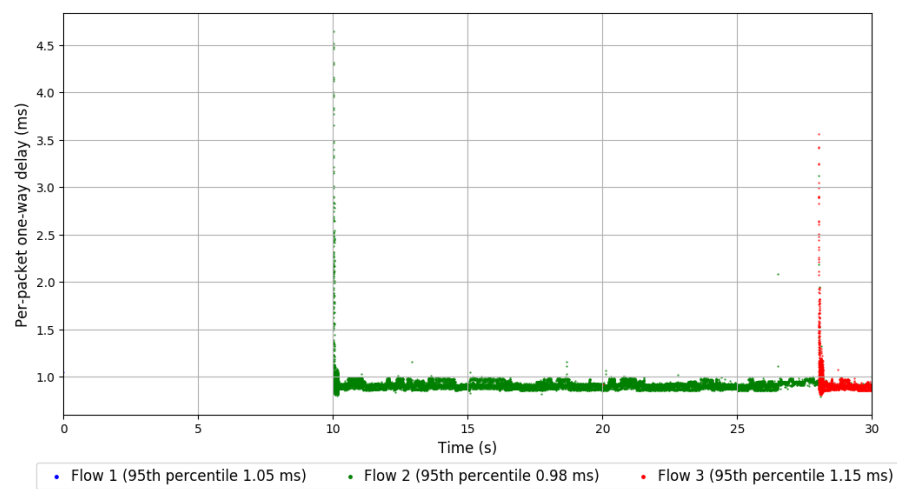
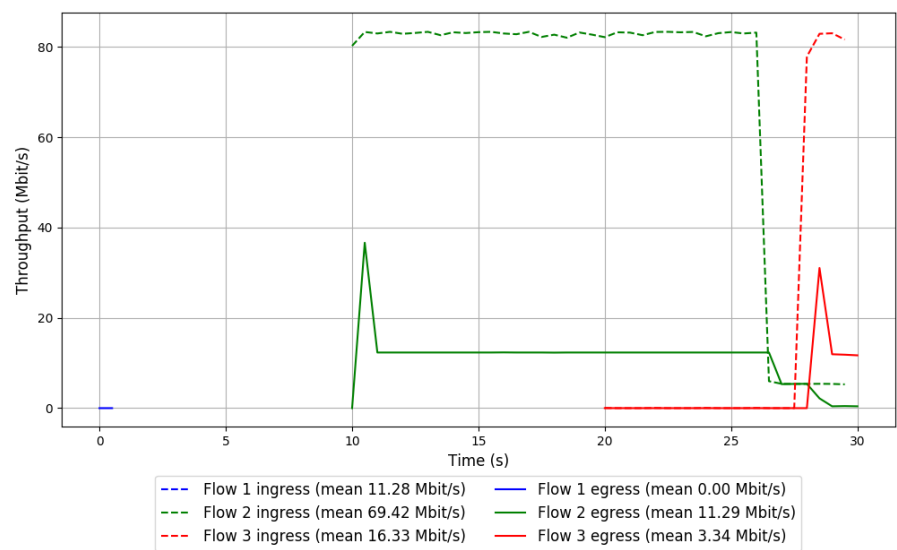
-- Flow 3:

Average throughput: 3.34 Mbit/s

95th percentile per-packet one-way delay: 1.145 ms

Loss rate: 79.57%

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



Run 3: Statistics of TaoVA-100x

Start at: 2019-01-21 11:44:04

End at: 2019-01-21 11:44:34

Local clock offset: -7.812 ms

Remote clock offset: 0.044 ms

# Below is generated by plot.py at 2019-01-21 13:06:13

# Datalink statistics

-- Total of 3 flows:

Average throughput: 8.34 Mbit/s

95th percentile per-packet one-way delay: 0.951 ms

Loss rate: 83.64%

-- Flow 1:

Average throughput: 0.00 Mbit/s

95th percentile per-packet one-way delay: 1.014 ms

Loss rate: 95.92%

-- Flow 2:

Average throughput: 9.73 Mbit/s

95th percentile per-packet one-way delay: 0.951 ms

Loss rate: 76.41%

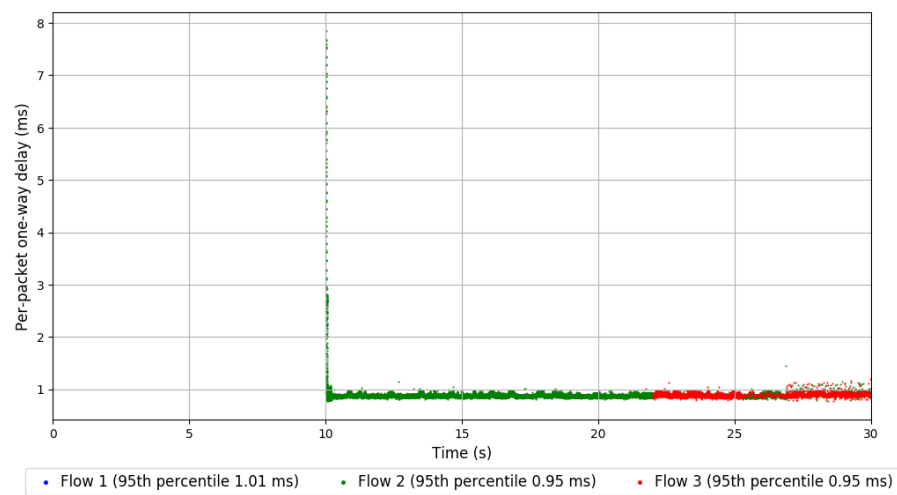
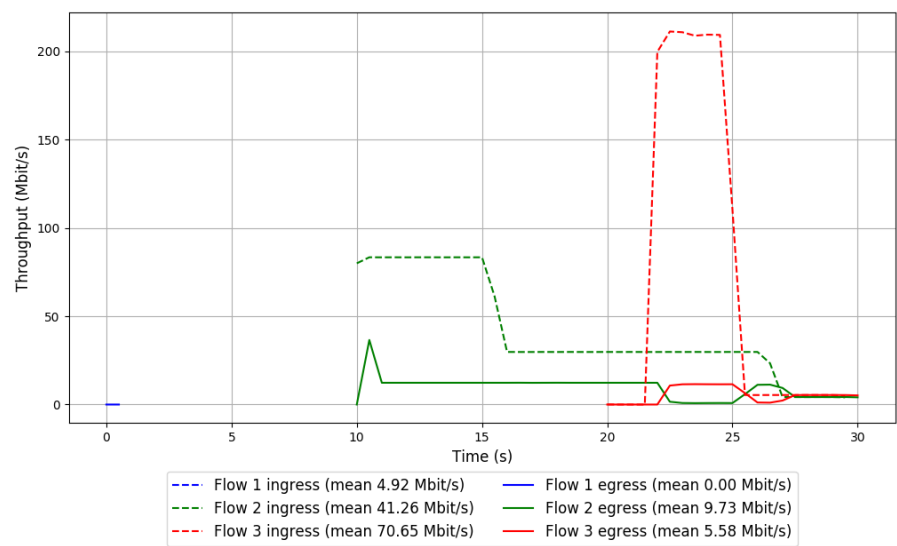
-- Flow 3:

Average throughput: 5.58 Mbit/s

95th percentile per-packet one-way delay: 0.951 ms

Loss rate: 92.10%

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

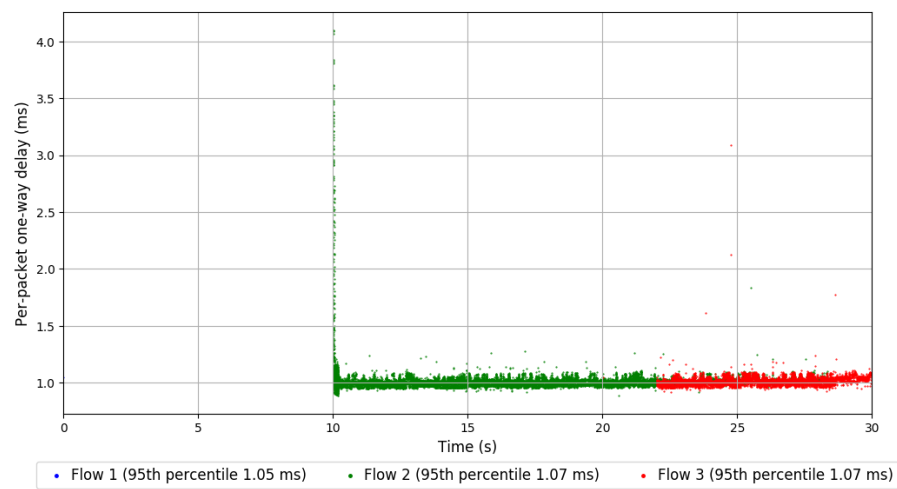
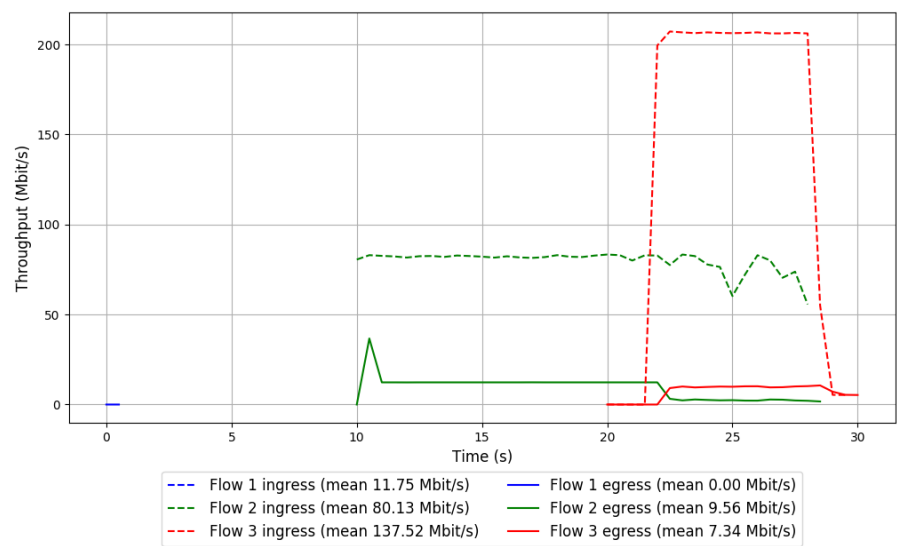


Run 4: Statistics of TaoVA-100x

Start at: 2019-01-21 12:08:02  
End at: 2019-01-21 12:08:32  
Local clock offset: -6.072 ms  
Remote clock offset: -0.168 ms

# Below is generated by plot.py at 2019-01-21 13:06:13  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 8.30 Mbit/s  
95th percentile per-packet one-way delay: 1.072 ms  
Loss rate: 91.25%  
-- Flow 1:  
Average throughput: 0.00 Mbit/s  
95th percentile per-packet one-way delay: 1.046 ms  
Loss rate: 95.92%  
-- Flow 2:  
Average throughput: 9.56 Mbit/s  
95th percentile per-packet one-way delay: 1.072 ms  
Loss rate: 88.07%  
-- Flow 3:  
Average throughput: 7.34 Mbit/s  
95th percentile per-packet one-way delay: 1.072 ms  
Loss rate: 94.66%

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



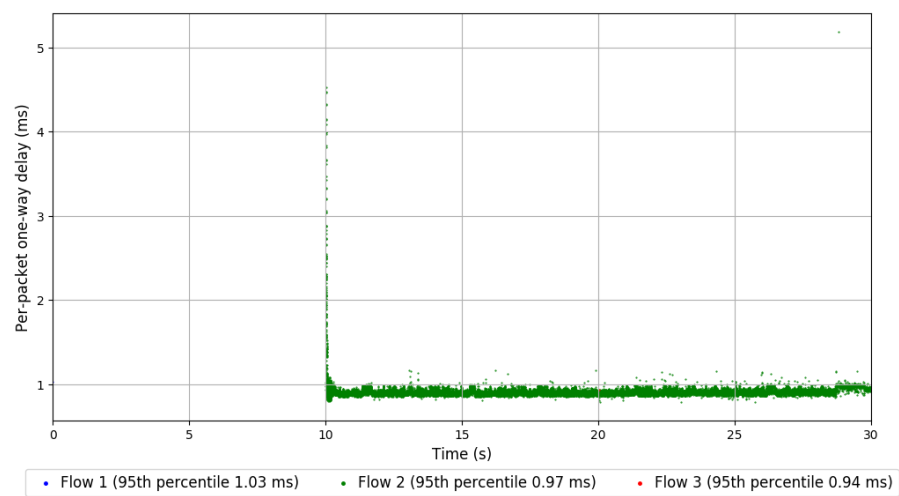
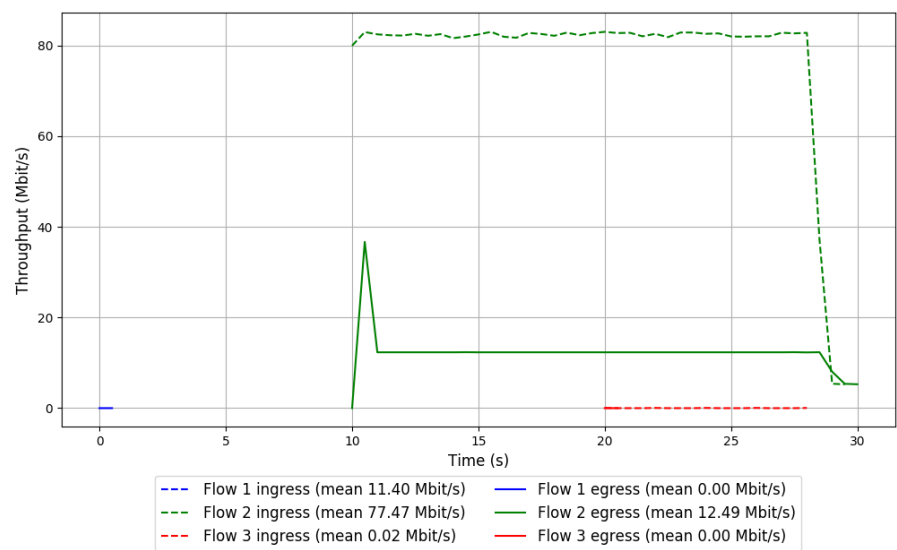


Run 5: Statistics of TaoVA-100x

Start at: 2019-01-21 12:31:54  
End at: 2019-01-21 12:32:24  
Local clock offset: -5.899 ms  
Remote clock offset: -0.638 ms

# Below is generated by plot.py at 2019-01-21 13:06:13  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 8.32 Mbit/s  
95th percentile per-packet one-way delay: 0.975 ms  
Loss rate: 83.88%  
-- Flow 1:  
Average throughput: 0.00 Mbit/s  
95th percentile per-packet one-way delay: 1.032 ms  
Loss rate: 95.92%  
-- Flow 2:  
Average throughput: 12.49 Mbit/s  
95th percentile per-packet one-way delay: 0.975 ms  
Loss rate: 83.88%  
-- Flow 3:  
Average throughput: 0.00 Mbit/s  
95th percentile per-packet one-way delay: 0.935 ms  
Loss rate: 99.16%

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



Run 1: Statistics of TCP Vegas

Start at: 2019-01-21 11:06:37

End at: 2019-01-21 11:07:07

Local clock offset: -7.026 ms

Remote clock offset: 0.163 ms

# Below is generated by plot.py at 2019-01-21 13:06:47

# Datalink statistics

-- Total of 3 flows:

Average throughput: 97.44 Mbit/s

95th percentile per-packet one-way delay: 2.422 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 58.03 Mbit/s

95th percentile per-packet one-way delay: 2.236 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 35.39 Mbit/s

95th percentile per-packet one-way delay: 2.458 ms

Loss rate: 0.01%

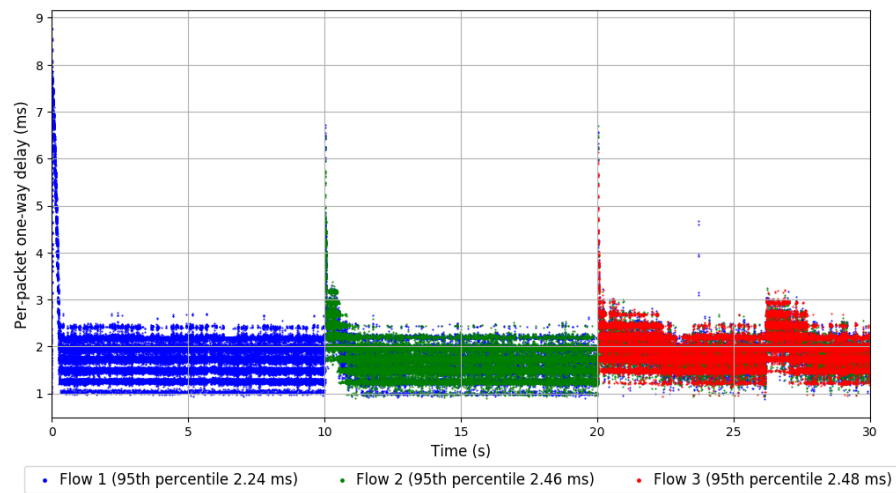
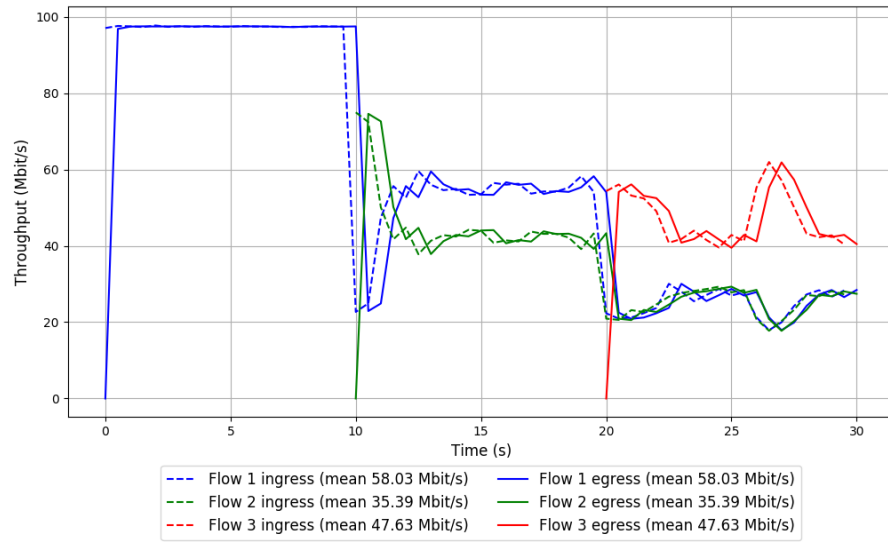
-- Flow 3:

Average throughput: 47.63 Mbit/s

95th percentile per-packet one-way delay: 2.484 ms

Loss rate: 0.00%

# Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2019-01-21 11:30:25

End at: 2019-01-21 11:30:55

Local clock offset: -7.442 ms

Remote clock offset: 0.095 ms

# Below is generated by plot.py at 2019-01-21 13:06:49

# Datalink statistics

-- Total of 3 flows:

Average throughput: 97.45 Mbit/s

95th percentile per-packet one-way delay: 2.265 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 55.00 Mbit/s

95th percentile per-packet one-way delay: 2.062 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 39.33 Mbit/s

95th percentile per-packet one-way delay: 2.106 ms

Loss rate: 0.00%

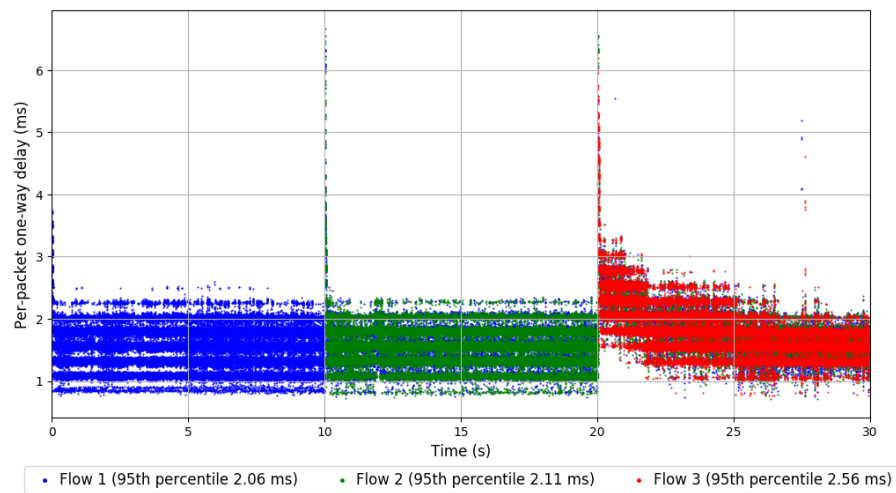
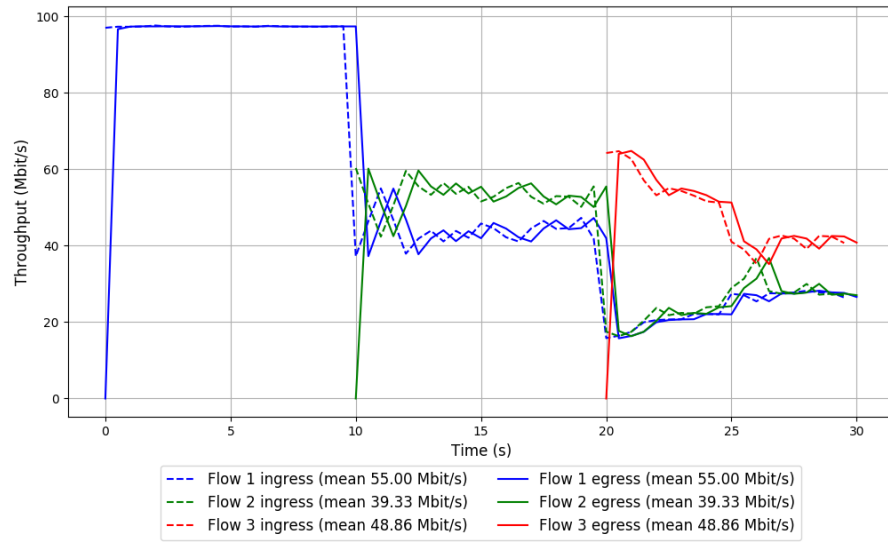
-- Flow 3:

Average throughput: 48.86 Mbit/s

95th percentile per-packet one-way delay: 2.555 ms

Loss rate: 0.00%

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



Run 3: Statistics of TCP Vegas

Start at: 2019-01-21 11:54:23

End at: 2019-01-21 11:54:53

Local clock offset: -7.183 ms

Remote clock offset: 0.002 ms

# Below is generated by plot.py at 2019-01-21 13:07:00

# Datalink statistics

-- Total of 3 flows:

Average throughput: 97.43 Mbit/s

95th percentile per-packet one-way delay: 2.293 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 58.34 Mbit/s

95th percentile per-packet one-way delay: 2.251 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 35.50 Mbit/s

95th percentile per-packet one-way delay: 2.295 ms

Loss rate: 0.00%

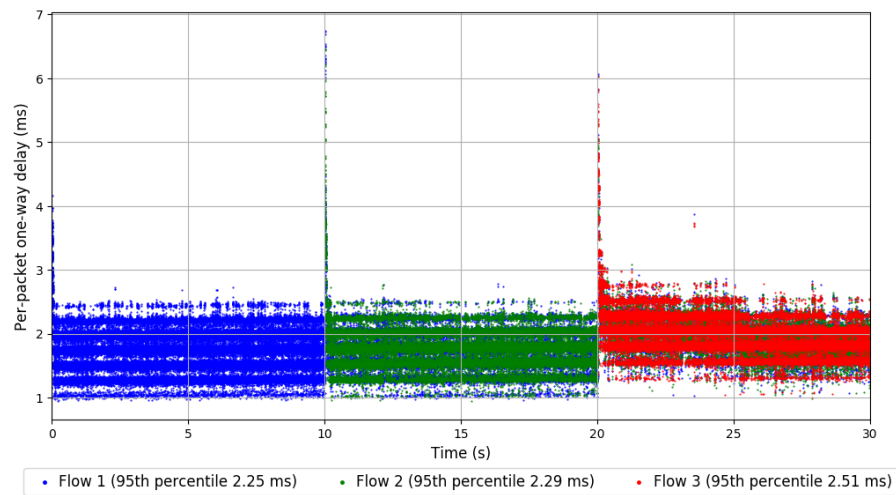
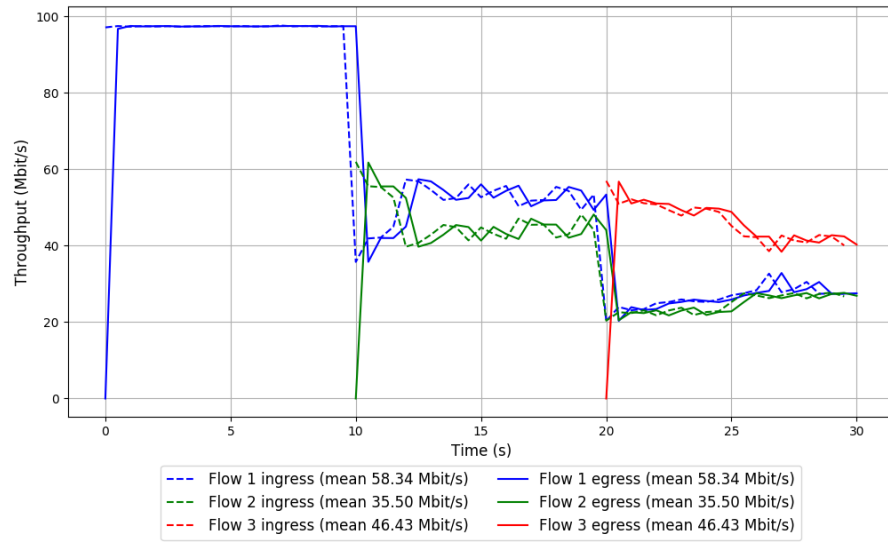
-- Flow 3:

Average throughput: 46.43 Mbit/s

95th percentile per-packet one-way delay: 2.508 ms

Loss rate: 0.00%

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



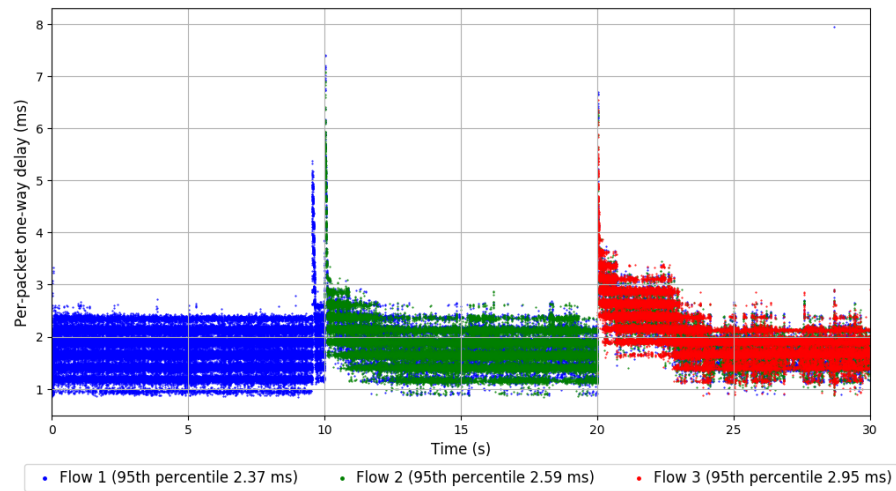
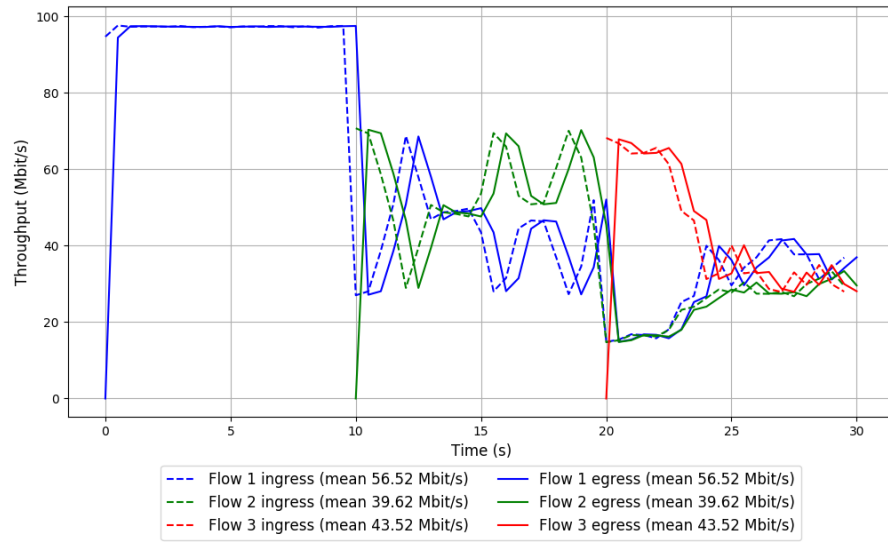


Run 4: Statistics of TCP Vegas

Start at: 2019-01-21 12:18:15  
End at: 2019-01-21 12:18:45  
Local clock offset: -5.909 ms  
Remote clock offset: -0.437 ms

# Below is generated by plot.py at 2019-01-21 13:07:00  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 97.40 Mbit/s  
95th percentile per-packet one-way delay: 2.622 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 56.52 Mbit/s  
95th percentile per-packet one-way delay: 2.368 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 39.62 Mbit/s  
95th percentile per-packet one-way delay: 2.591 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 43.52 Mbit/s  
95th percentile per-packet one-way delay: 2.949 ms  
Loss rate: 0.00%

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

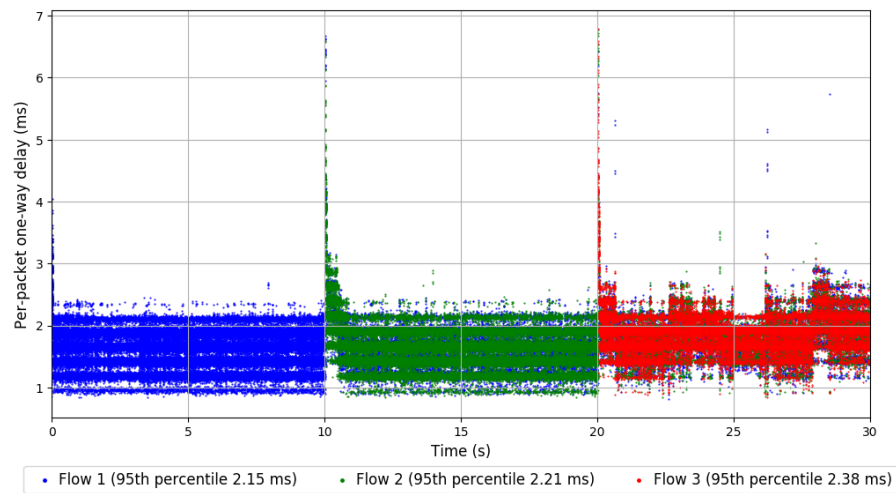
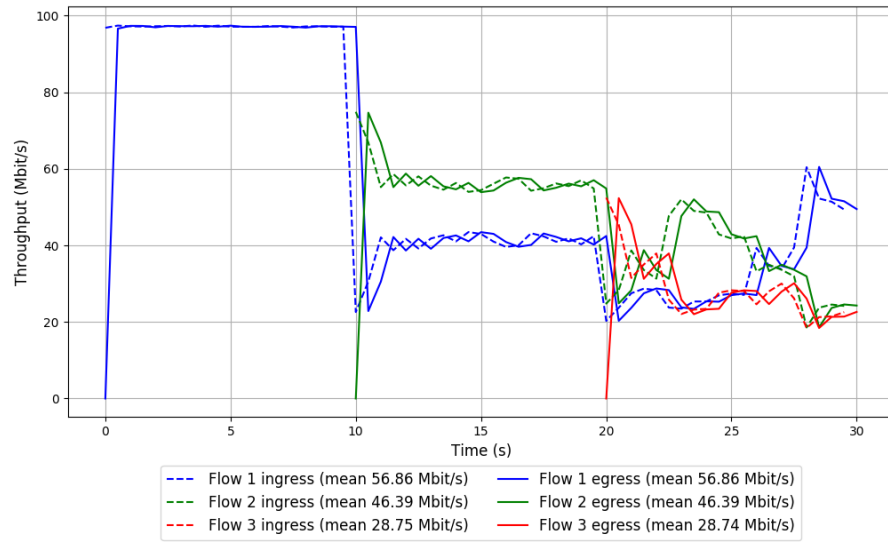


Run 5: Statistics of TCP Vegas

Start at: 2019-01-21 12:42:04  
End at: 2019-01-21 12:42:34  
Local clock offset: -5.805 ms  
Remote clock offset: -0.674 ms

```
# Below is generated by plot.py at 2019-01-21 13:07:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.33 Mbit/s
95th percentile per-packet one-way delay: 2.181 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 56.86 Mbit/s
95th percentile per-packet one-way delay: 2.154 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 46.39 Mbit/s
95th percentile per-packet one-way delay: 2.208 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 28.74 Mbit/s
95th percentile per-packet one-way delay: 2.381 ms
Loss rate: 0.00%
```

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



Run 1: Statistics of Verus

Start at: 2019-01-21 11:18:03

End at: 2019-01-21 11:18:33

Local clock offset: -7.162 ms

Remote clock offset: 0.186 ms

# Below is generated by plot.py at 2019-01-21 13:07:02

# Datalink statistics

-- Total of 3 flows:

Average throughput: 65.08 Mbit/s

95th percentile per-packet one-way delay: 16.750 ms

Loss rate: 4.09%

-- Flow 1:

Average throughput: 42.77 Mbit/s

95th percentile per-packet one-way delay: 4.933 ms

Loss rate: 2.54%

-- Flow 2:

Average throughput: 27.29 Mbit/s

95th percentile per-packet one-way delay: 23.280 ms

Loss rate: 4.87%

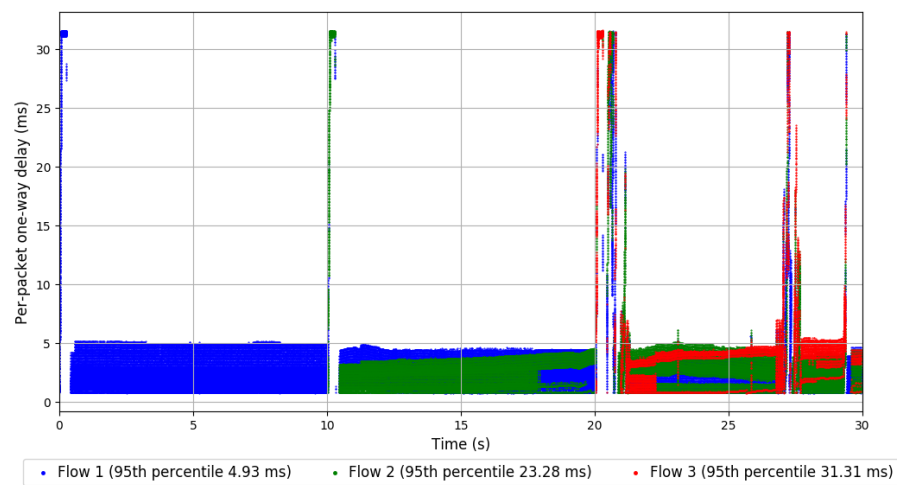
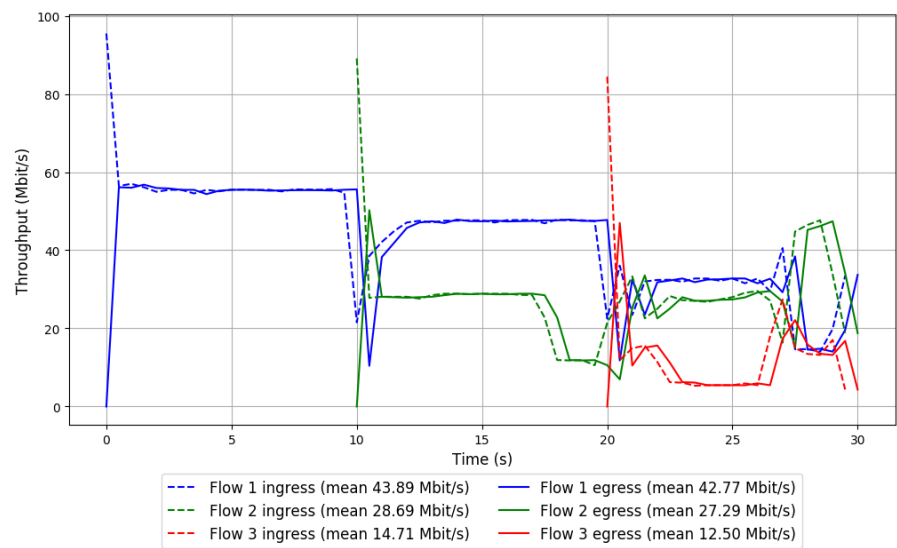
-- Flow 3:

Average throughput: 12.50 Mbit/s

95th percentile per-packet one-way delay: 31.310 ms

Loss rate: 14.99%

Run 1: Report of Verus — Data Link

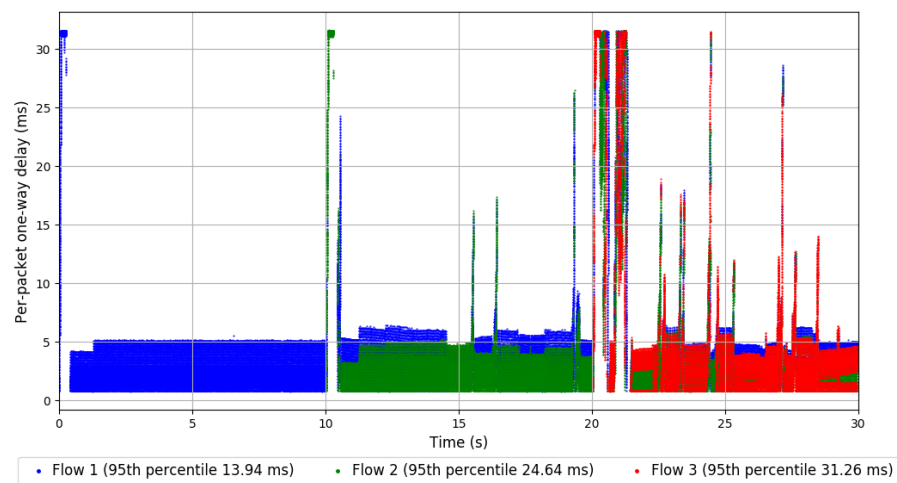
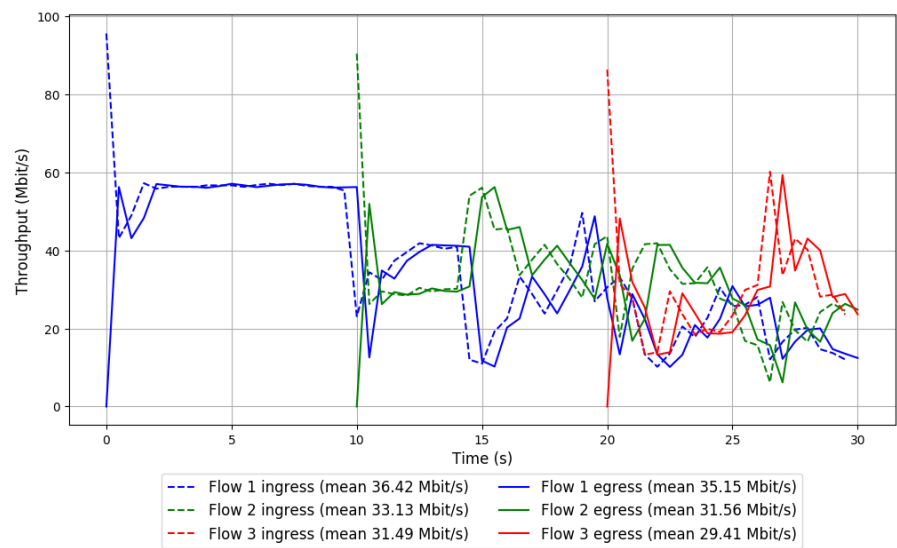


Run 2: Statistics of Verus

Start at: 2019-01-21 11:41:50  
End at: 2019-01-21 11:42:20  
Local clock offset: -7.746 ms  
Remote clock offset: 0.101 ms

# Below is generated by plot.py at 2019-01-21 13:07:02  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 65.89 Mbit/s  
95th percentile per-packet one-way delay: 23.096 ms  
Loss rate: 4.36%  
-- Flow 1:  
Average throughput: 35.15 Mbit/s  
95th percentile per-packet one-way delay: 13.943 ms  
Loss rate: 3.48%  
-- Flow 2:  
Average throughput: 31.56 Mbit/s  
95th percentile per-packet one-way delay: 24.642 ms  
Loss rate: 4.76%  
-- Flow 3:  
Average throughput: 29.41 Mbit/s  
95th percentile per-packet one-way delay: 31.257 ms  
Loss rate: 6.60%

Run 2: Report of Verus — Data Link



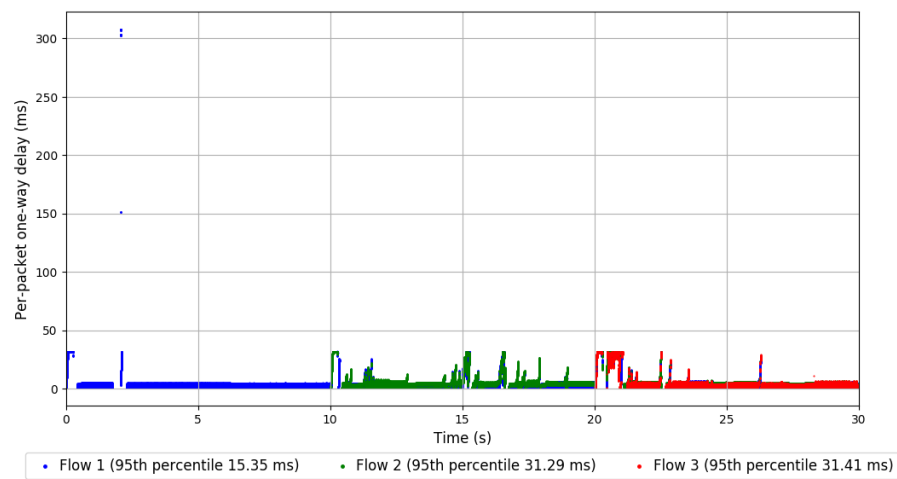
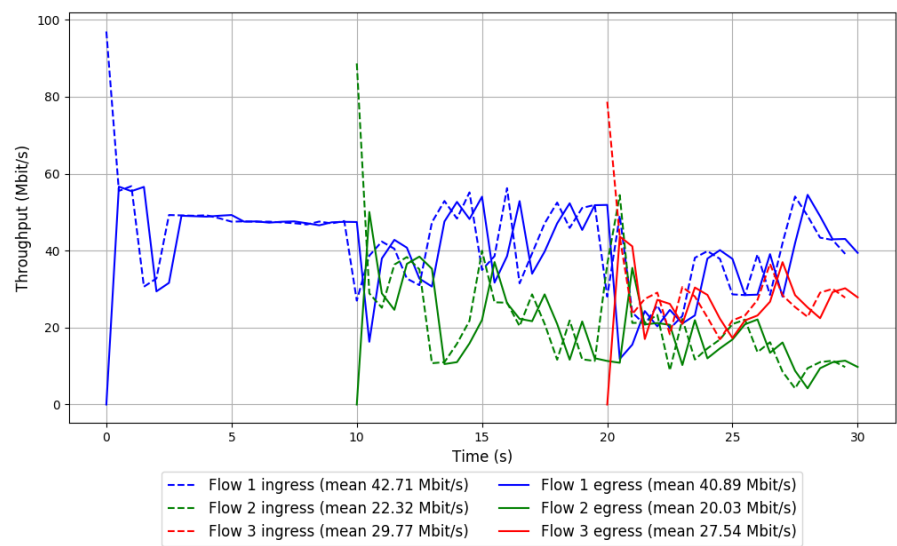


Run 3: Statistics of Verus

Start at: 2019-01-21 12:05:48  
End at: 2019-01-21 12:06:18  
Local clock offset: -6.25 ms  
Remote clock offset: -0.148 ms

# Below is generated by plot.py at 2019-01-21 13:07:03  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 63.35 Mbit/s  
95th percentile per-packet one-way delay: 27.863 ms  
Loss rate: 6.03%  
-- Flow 1:  
Average throughput: 40.89 Mbit/s  
95th percentile per-packet one-way delay: 15.351 ms  
Loss rate: 4.25%  
-- Flow 2:  
Average throughput: 20.03 Mbit/s  
95th percentile per-packet one-way delay: 31.285 ms  
Loss rate: 10.22%  
-- Flow 3:  
Average throughput: 27.54 Mbit/s  
95th percentile per-packet one-way delay: 31.415 ms  
Loss rate: 7.48%

Run 3: Report of Verus — Data Link

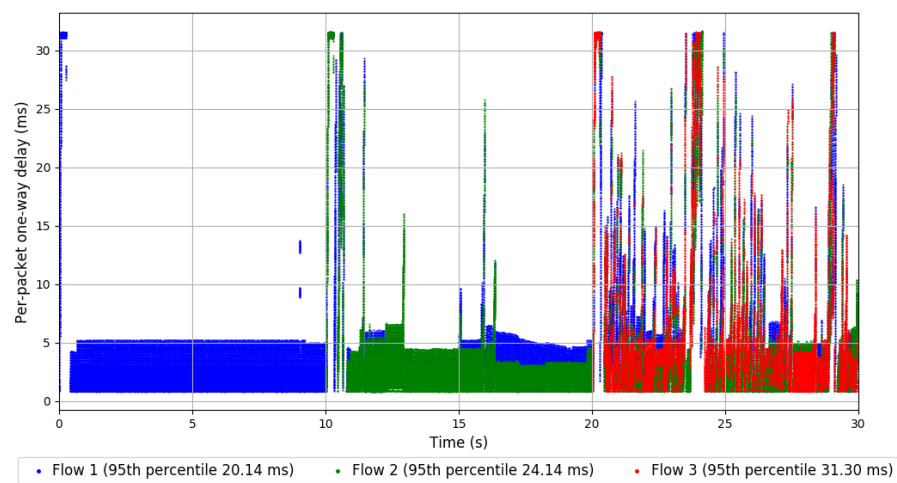
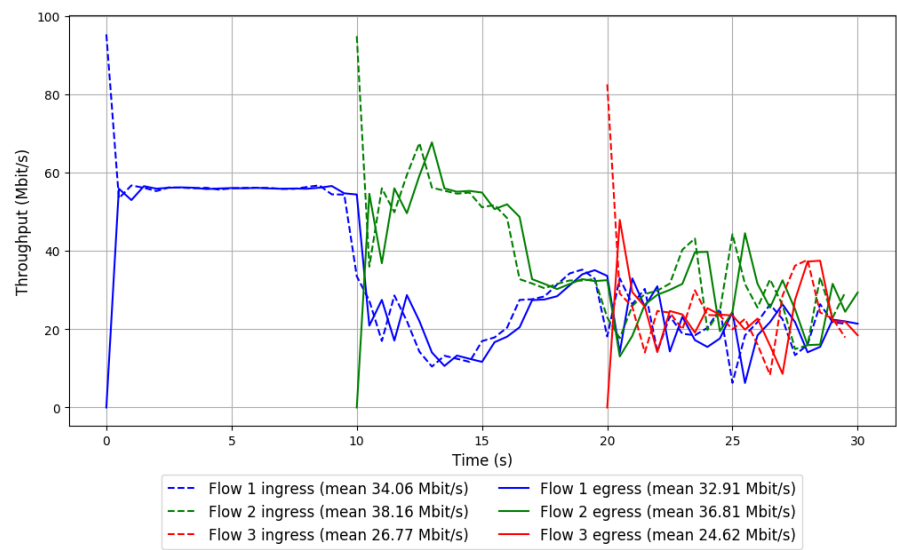


Run 4: Statistics of Verus

Start at: 2019-01-21 12:29:40  
End at: 2019-01-21 12:30:10  
Local clock offset: -5.888 ms  
Remote clock offset: -0.555 ms

# Below is generated by plot.py at 2019-01-21 13:07:26  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 65.57 Mbit/s  
95th percentile per-packet one-way delay: 24.608 ms  
Loss rate: 4.02%  
-- Flow 1:  
Average throughput: 32.91 Mbit/s  
95th percentile per-packet one-way delay: 20.143 ms  
Loss rate: 3.36%  
-- Flow 2:  
Average throughput: 36.81 Mbit/s  
95th percentile per-packet one-way delay: 24.145 ms  
Loss rate: 3.52%  
-- Flow 3:  
Average throughput: 24.62 Mbit/s  
95th percentile per-packet one-way delay: 31.295 ms  
Loss rate: 8.01%

Run 4: Report of Verus — Data Link

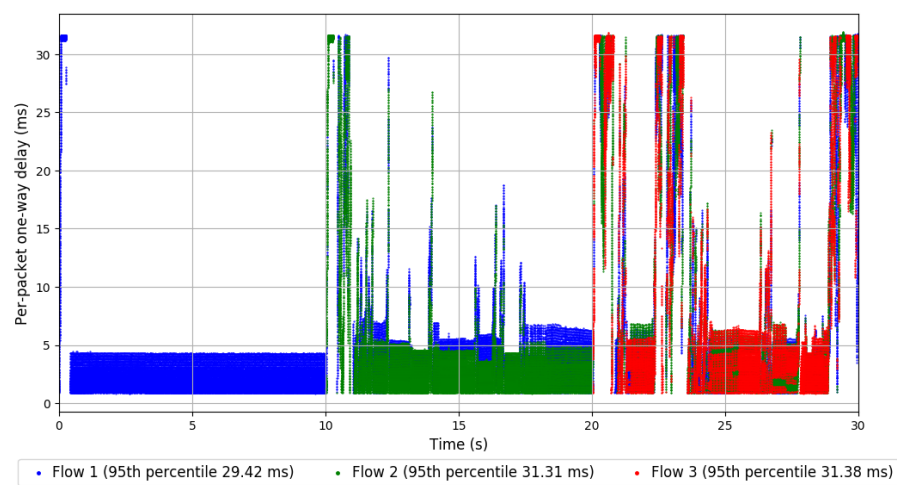
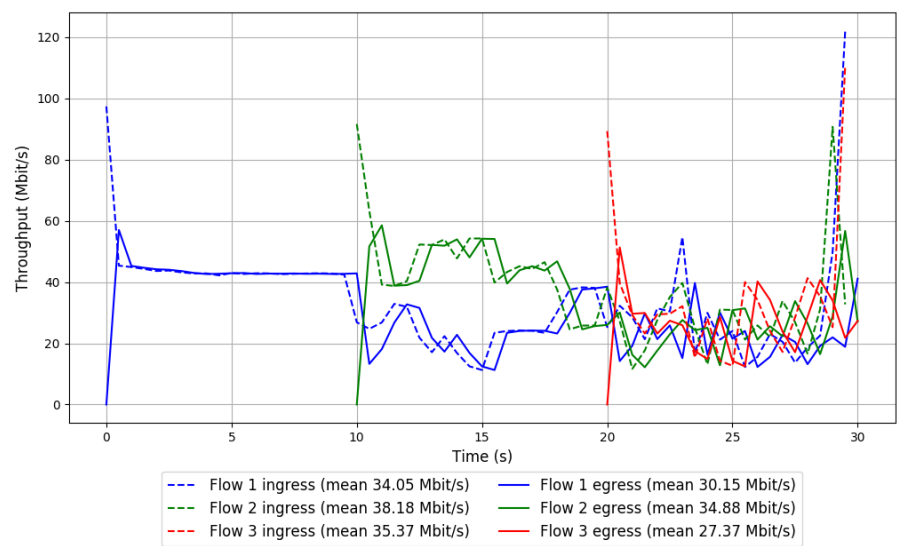


Run 5: Statistics of Verus

Start at: 2019-01-21 12:53:29  
End at: 2019-01-21 12:53:59  
Local clock offset: -5.973 ms  
Remote clock offset: -0.672 ms

# Below is generated by plot.py at 2019-01-21 13:07:30  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 62.30 Mbit/s  
95th percentile per-packet one-way delay: 31.026 ms  
Loss rate: 12.26%  
-- Flow 1:  
Average throughput: 30.15 Mbit/s  
95th percentile per-packet one-way delay: 29.420 ms  
Loss rate: 11.38%  
-- Flow 2:  
Average throughput: 34.88 Mbit/s  
95th percentile per-packet one-way delay: 31.312 ms  
Loss rate: 8.79%  
-- Flow 3:  
Average throughput: 27.37 Mbit/s  
95th percentile per-packet one-way delay: 31.378 ms  
Loss rate: 22.38%

Run 5: Report of Verus — Data Link



Run 1: Statistics of PCC-Vivace

Start at: 2019-01-21 11:04:23

End at: 2019-01-21 11:04:53

Local clock offset: -7.0 ms

Remote clock offset: 0.194 ms

# Below is generated by plot.py at 2019-01-21 13:07:39

# Datalink statistics

-- Total of 3 flows:

Average throughput: 70.76 Mbit/s

95th percentile per-packet one-way delay: 27.101 ms

Loss rate: 0.59%

-- Flow 1:

Average throughput: 40.56 Mbit/s

95th percentile per-packet one-way delay: 3.816 ms

Loss rate: 0.31%

-- Flow 2:

Average throughput: 30.90 Mbit/s

95th percentile per-packet one-way delay: 30.514 ms

Loss rate: 0.95%

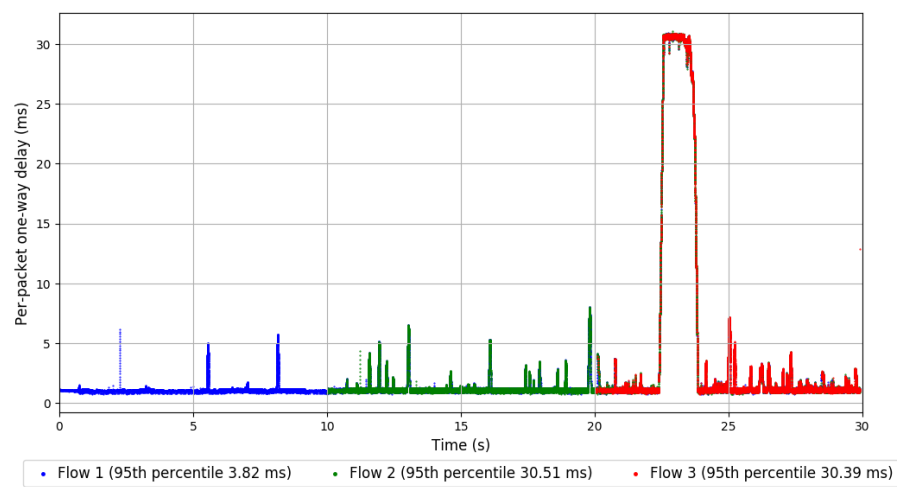
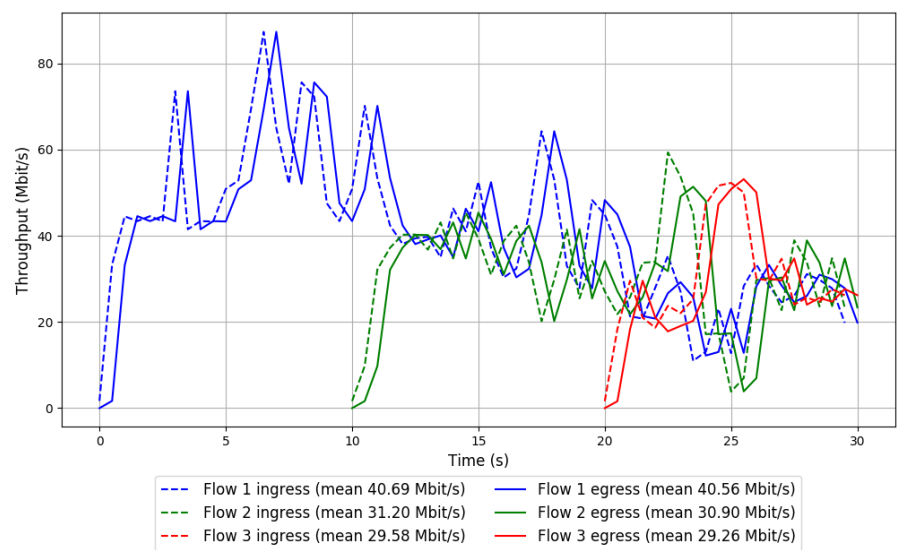
-- Flow 3:

Average throughput: 29.26 Mbit/s

95th percentile per-packet one-way delay: 30.393 ms

Loss rate: 0.97%

Run 1: Report of PCC-Vivace — Data Link





Run 2: Statistics of PCC-Vivace

Start at: 2019-01-21 11:28:10

End at: 2019-01-21 11:28:40

Local clock offset: -7.385 ms

Remote clock offset: 0.234 ms

# Below is generated by plot.py at 2019-01-21 13:07:45

# Datalink statistics

-- Total of 3 flows:

Average throughput: 72.73 Mbit/s

95th percentile per-packet one-way delay: 4.881 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 43.54 Mbit/s

95th percentile per-packet one-way delay: 3.245 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 30.59 Mbit/s

95th percentile per-packet one-way delay: 5.854 ms

Loss rate: 0.00%

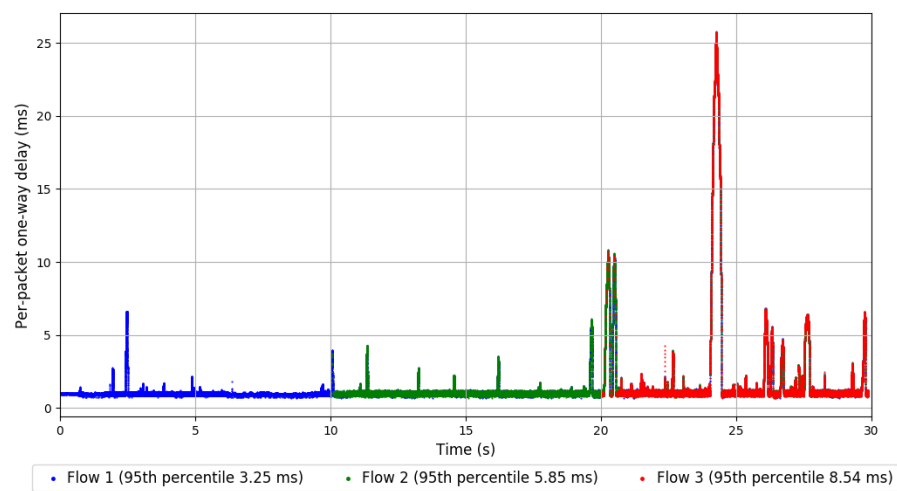
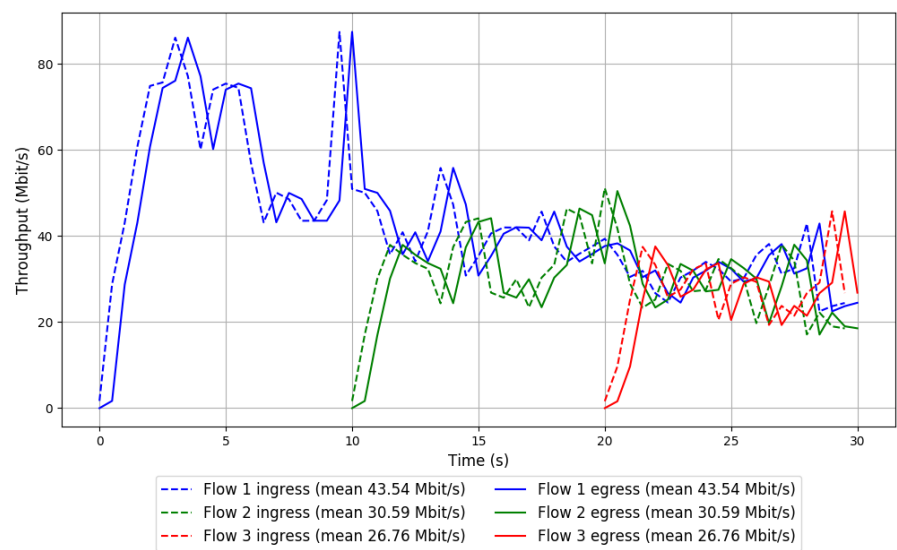
-- Flow 3:

Average throughput: 26.76 Mbit/s

95th percentile per-packet one-way delay: 8.544 ms

Loss rate: 0.00%

Run 2: Report of PCC-Vivace — Data Link



Run 3: Statistics of PCC-Vivace

Start at: 2019-01-21 11:52:09

End at: 2019-01-21 11:52:39

Local clock offset: -7.591 ms

Remote clock offset: 0.018 ms

# Below is generated by plot.py at 2019-01-21 13:07:45

# Datalink statistics

-- Total of 3 flows:

Average throughput: 71.13 Mbit/s

95th percentile per-packet one-way delay: 3.329 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 41.28 Mbit/s

95th percentile per-packet one-way delay: 3.056 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 30.62 Mbit/s

95th percentile per-packet one-way delay: 3.905 ms

Loss rate: 0.00%

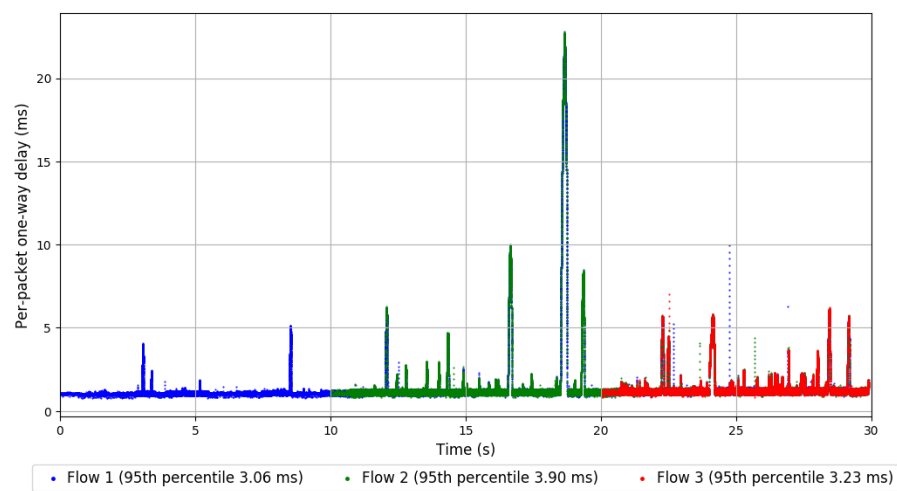
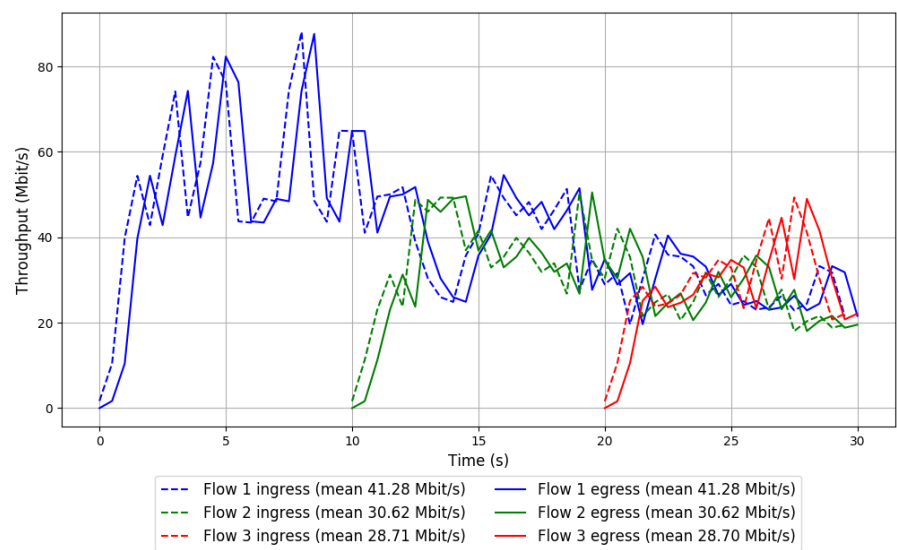
-- Flow 3:

Average throughput: 28.70 Mbit/s

95th percentile per-packet one-way delay: 3.228 ms

Loss rate: 0.00%

Run 3: Report of PCC-Vivace — Data Link

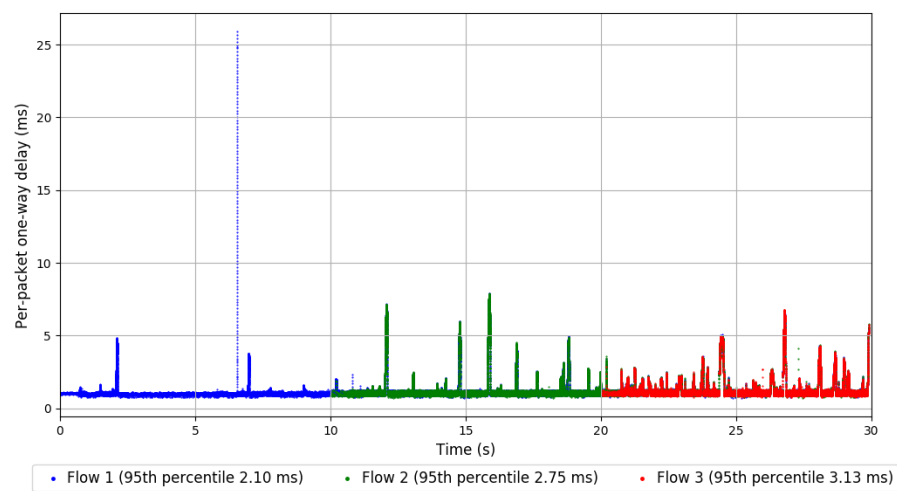
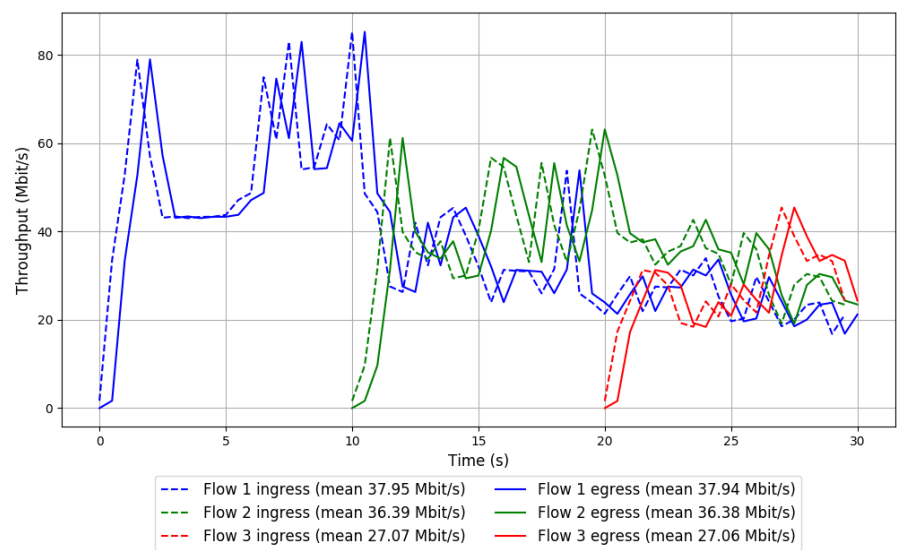


Run 4: Statistics of PCC-Vivace

Start at: 2019-01-21 12:16:00  
End at: 2019-01-21 12:16:30  
Local clock offset: -5.826 ms  
Remote clock offset: -0.276 ms

# Below is generated by plot.py at 2019-01-21 13:07:46  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 71.08 Mbit/s  
95th percentile per-packet one-way delay: 2.465 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 37.94 Mbit/s  
95th percentile per-packet one-way delay: 2.101 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 36.38 Mbit/s  
95th percentile per-packet one-way delay: 2.748 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 27.06 Mbit/s  
95th percentile per-packet one-way delay: 3.129 ms  
Loss rate: 0.00%

Run 4: Report of PCC-Vivace — Data Link

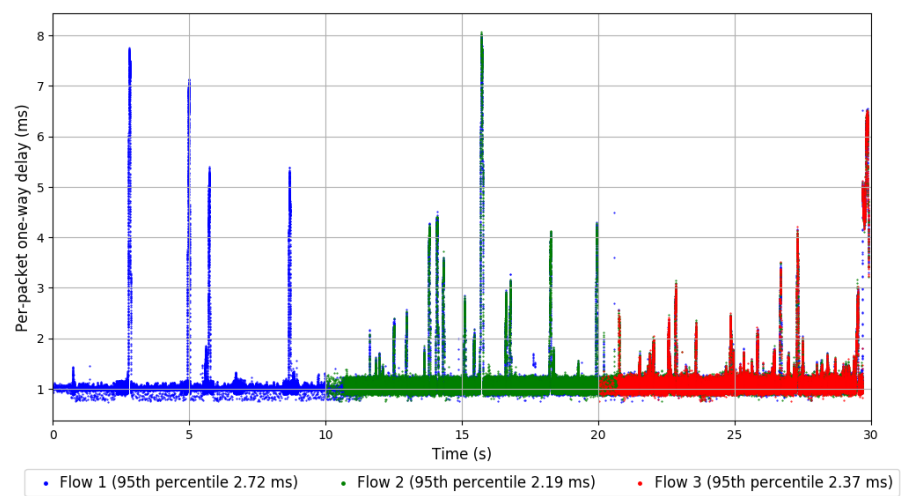
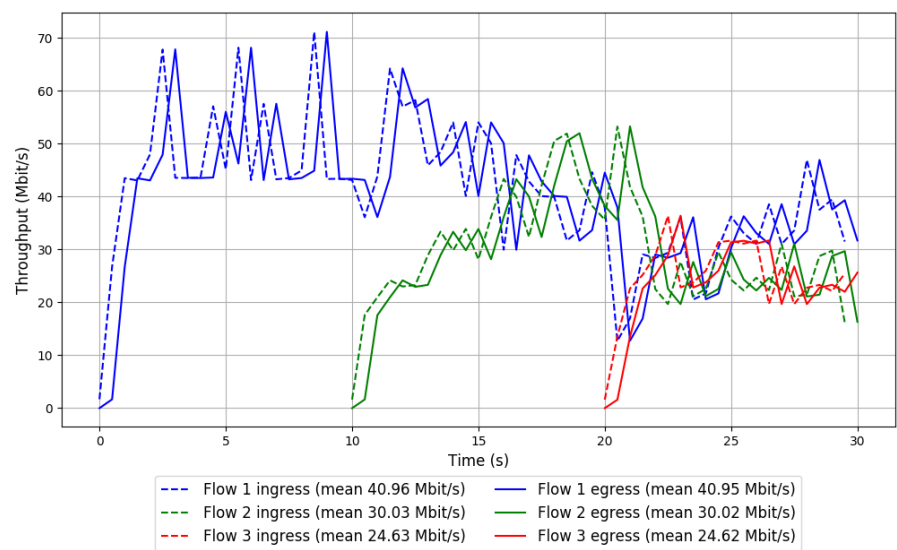


Run 5: Statistics of PCC-Vivace

Start at: 2019-01-21 12:39:49  
End at: 2019-01-21 12:40:19  
Local clock offset: -5.832 ms  
Remote clock offset: -0.606 ms

# Below is generated by plot.py at 2019-01-21 13:07:46  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 69.06 Mbit/s  
95th percentile per-packet one-way delay: 2.479 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 40.95 Mbit/s  
95th percentile per-packet one-way delay: 2.717 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 30.02 Mbit/s  
95th percentile per-packet one-way delay: 2.193 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 24.62 Mbit/s  
95th percentile per-packet one-way delay: 2.371 ms  
Loss rate: 0.00%

Run 5: Report of PCC-Vivace — Data Link





Run 1: Statistics of WebRTC media

Start at: 2019-01-21 11:19:11

End at: 2019-01-21 11:19:41

Local clock offset: -7.192 ms

Remote clock offset: 0.258 ms

# Below is generated by plot.py at 2019-01-21 13:07:46

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 3.686 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 3.700 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 3.501 ms

Loss rate: 0.00%

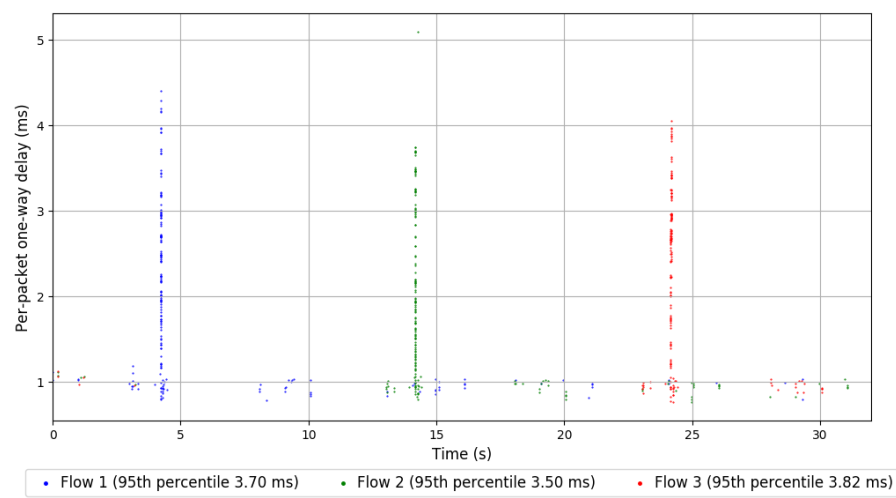
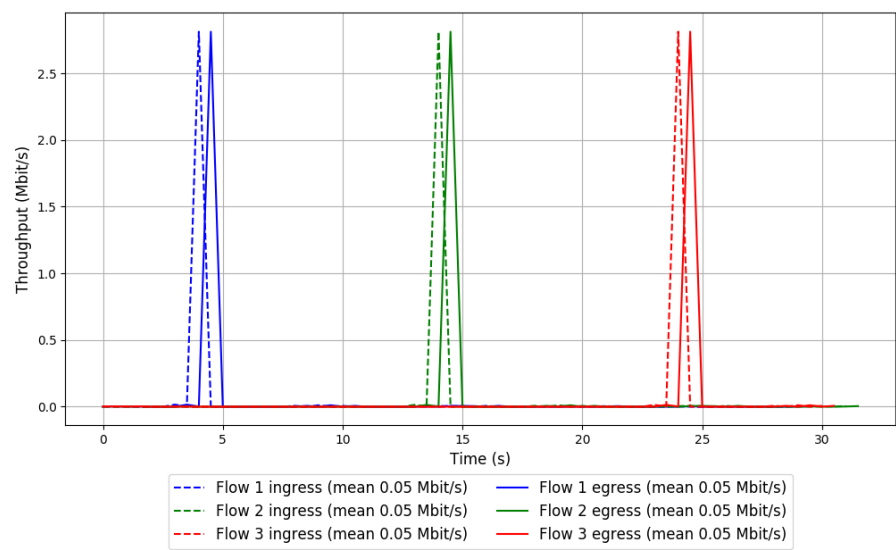
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 3.819 ms

Loss rate: 0.00%

Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2019-01-21 11:42:59

End at: 2019-01-21 11:43:29

Local clock offset: -7.781 ms

Remote clock offset: 0.126 ms

# Below is generated by plot.py at 2019-01-21 13:07:46

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 3.443 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 3.460 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 3.407 ms

Loss rate: 0.00%

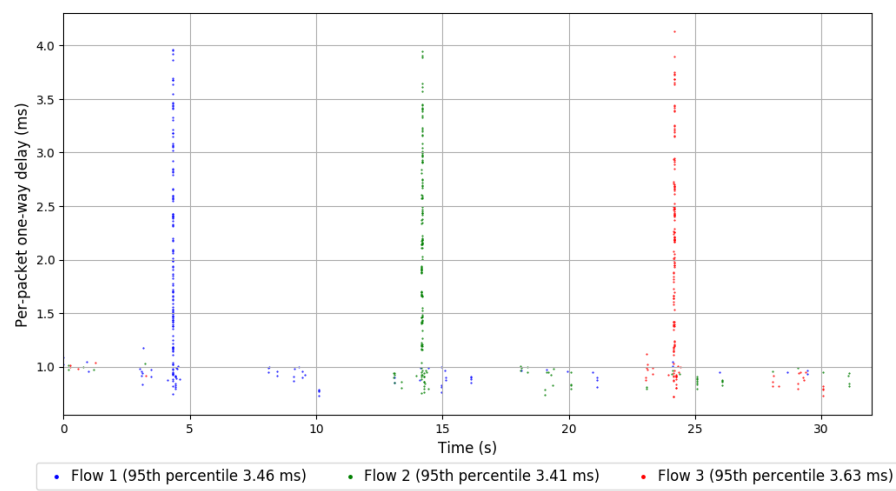
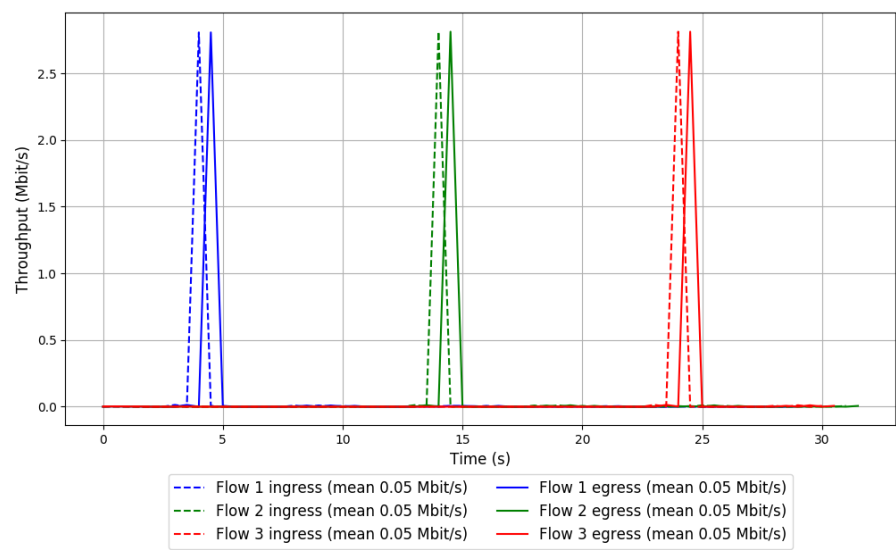
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 3.633 ms

Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link

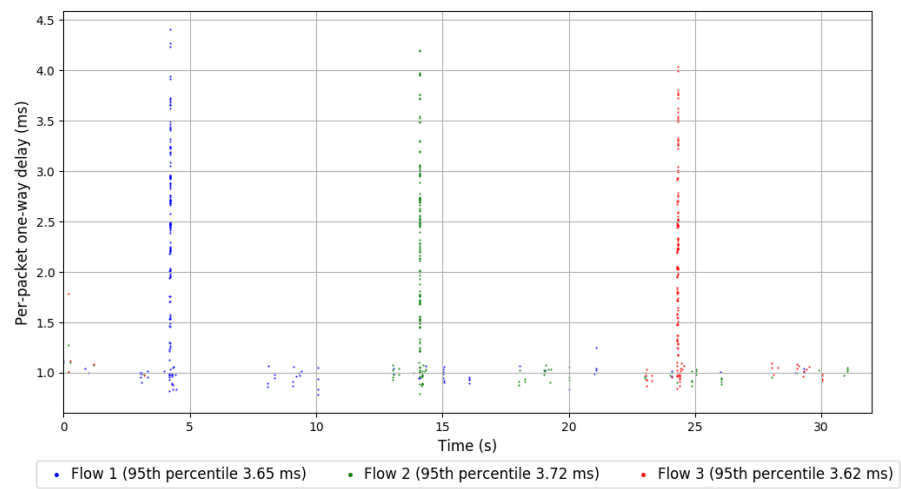
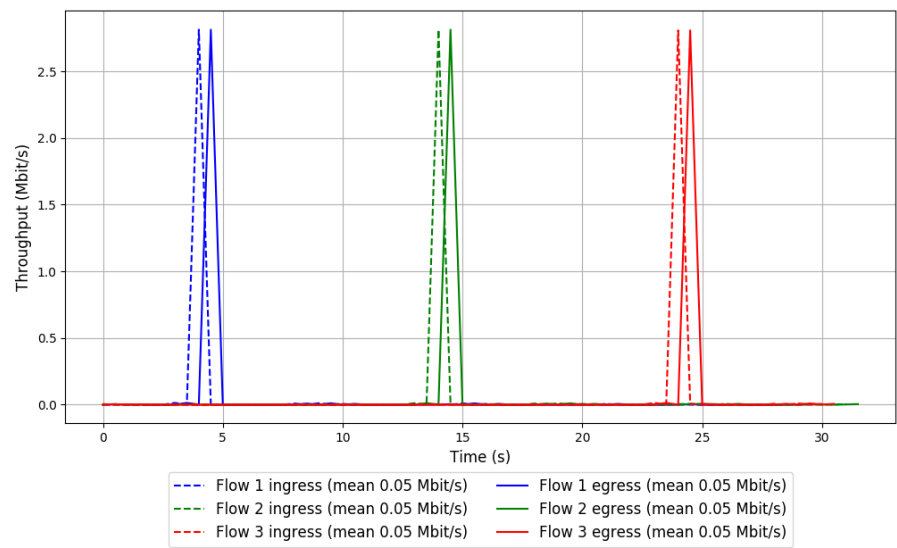


Run 3: Statistics of WebRTC media

Start at: 2019-01-21 12:06:57  
End at: 2019-01-21 12:07:27  
Local clock offset: -6.115 ms  
Remote clock offset: -0.134 ms

# Below is generated by plot.py at 2019-01-21 13:07:46  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.14 Mbit/s  
95th percentile per-packet one-way delay: 3.659 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 3.653 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 3.716 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 3.617 ms  
Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link

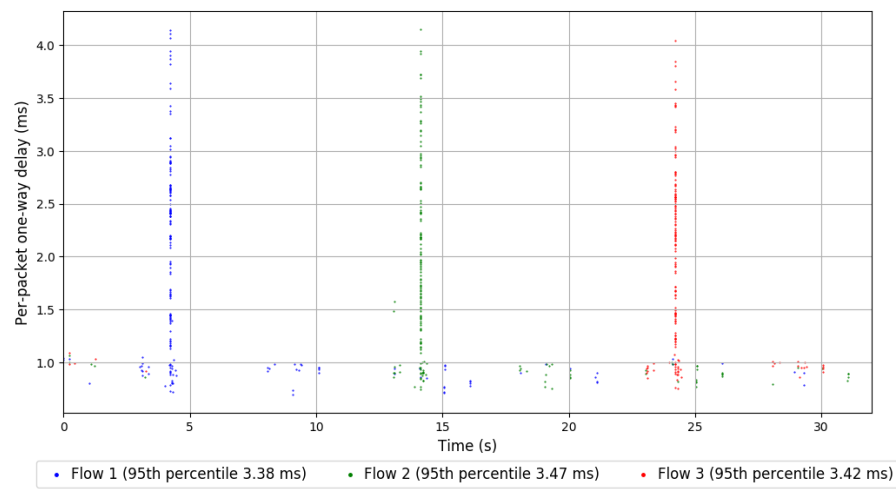
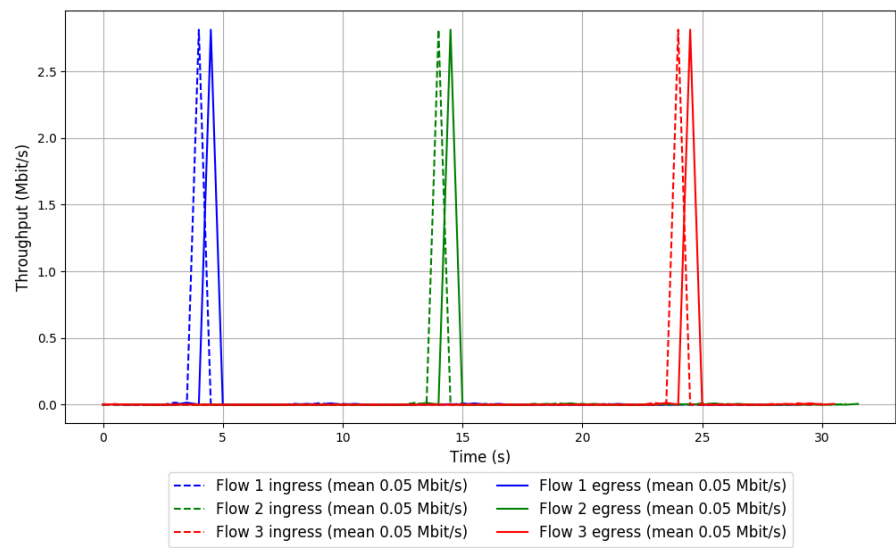


Run 4: Statistics of WebRTC media

Start at: 2019-01-21 12:30:49  
End at: 2019-01-21 12:31:19  
Local clock offset: -5.901 ms  
Remote clock offset: -0.567 ms

# Below is generated by plot.py at 2019-01-21 13:07:46  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.14 Mbit/s  
95th percentile per-packet one-way delay: 3.427 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 3.378 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 3.469 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 3.419 ms  
Loss rate: 0.00%

Run 4: Report of WebRTC media — Data Link





Run 5: Statistics of WebRTC media

Start at: 2019-01-21 12:54:38

End at: 2019-01-21 12:55:08

Local clock offset: -5.98 ms

Remote clock offset: -0.66 ms

# Below is generated by plot.py at 2019-01-21 13:07:46

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 3.548 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 3.708 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 2.951 ms

Loss rate: 0.05%

-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 3.555 ms

Loss rate: 0.00%

Run 5: Report of WebRTC media — Data Link

