

Pantheon Report

Generated at 2019-03-27 14:21:38 (UTC).

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

Repeated the test of 21 congestion control schemes 5 times.

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

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

System info:

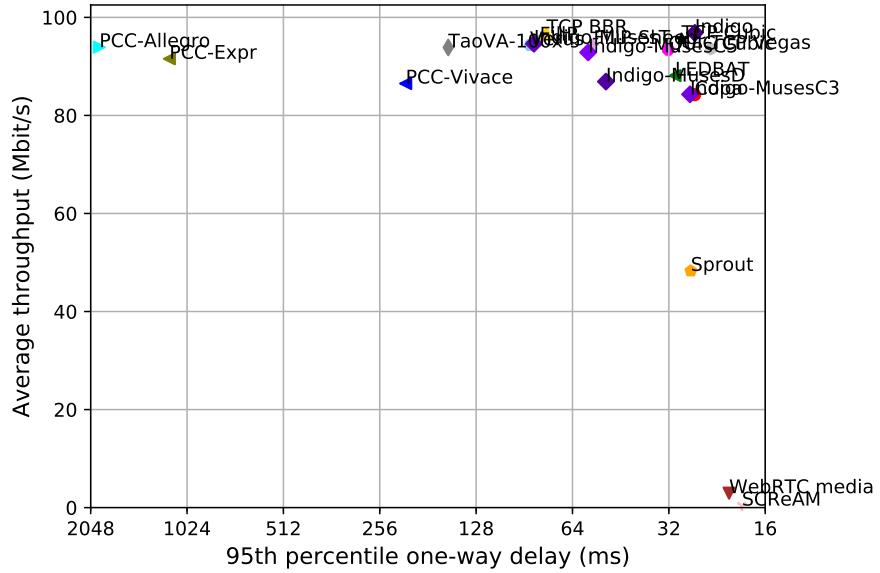
```
Linux 4.15.0-1034-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

Git summary:

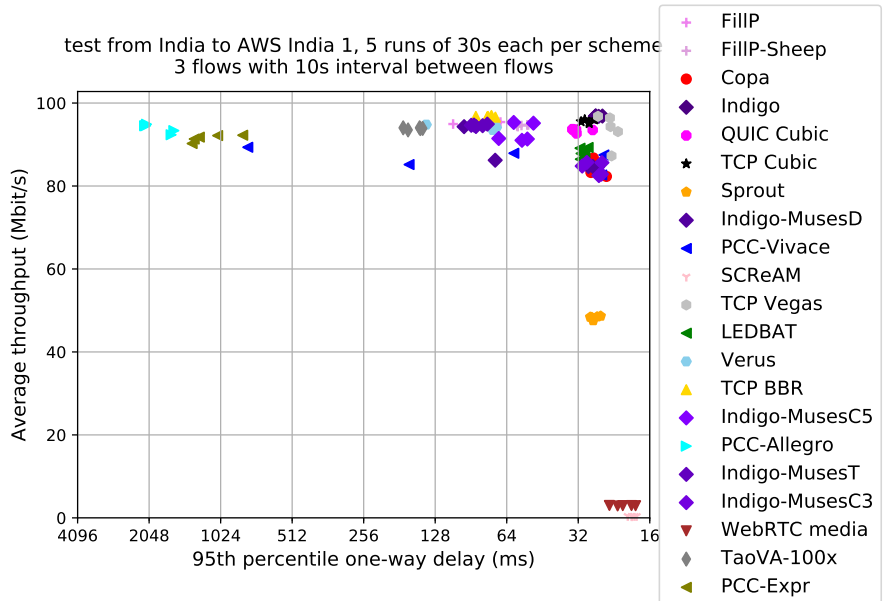
```
branch: muses @ 7a686f7c2ed0a333082c0bab1fa5c921ab47e6ee
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d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

third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851

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



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



scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	5	58.83	40.53	33.07	46.78	104.36	170.42	1.25	1.45	1.93
Copa	5	50.22	35.36	31.74	27.29	25.67	25.25	0.06	0.14	0.26
TCP Cubic	5	58.96	40.66	28.81	28.49	29.29	28.86	0.07	0.15	0.36
FillP	5	55.69	43.75	31.57	66.46	87.91	80.55	0.31	2.76	2.51
FillP-Sheep	5	58.19	40.32	28.72	50.54	57.13	73.76	0.12	0.27	0.53
Indigo	5	59.42	40.43	32.08	24.87	26.13	25.64	0.12	0.16	0.46
Indigo-MusesC3	5	55.46	35.44	22.38	26.89	27.01	27.65	0.02	0.09	0.39
Indigo-MusesC5	5	57.68	40.40	33.36	51.69	56.39	57.67	0.72	1.47	2.57
Indigo-MusesD	5	54.54	38.94	26.72	41.29	43.38	45.24	0.18	0.36	0.90
Indigo-MusesT	5	60.77	40.50	28.90	72.44	81.80	96.25	0.76	1.10	2.77
LEDBAT	5	51.22	37.97	35.05	30.65	31.13	30.52	0.08	0.14	0.43
PCC-Allegro	5	61.01	37.54	24.25	1935.52	1842.50	247.32	10.05	12.00	2.47
PCC-Expr	5	58.15	36.99	26.70	1058.38	661.02	64.39	22.70	6.22	0.49
QUIC Cubic	5	56.70	39.76	31.11	32.16	30.16	46.89	0.09	0.20	0.57
SCReAM	5	0.21	0.20	0.22	18.27	18.88	18.35	0.13	0.21	0.28
Sprout	5	24.38	24.20	23.70	26.77	27.17	28.18	0.09	0.12	0.36
TaoVA-100x	5	55.73	39.44	35.79	144.63	145.09	121.13	0.39	1.05	2.06
TCP Vegas	5	55.41	42.08	30.62	21.97	22.32	22.56	0.06	0.13	0.28
Verus	5	57.00	40.02	32.26	72.96	176.32	123.56	0.23	0.48	0.79
PCC-Vivace	5	59.11	28.85	24.92	295.33	59.95	39.22	0.99	0.26	0.58
WebRTC media	5	1.57	0.95	0.44	19.55	20.84	19.65	0.05	0.07	0.16

Run 1: Statistics of TCP BBR

Start at: 2019-03-27 12:18:03

End at: 2019-03-27 12:18:33

Local clock offset: -0.02 ms

Remote clock offset: 0.863 ms

Below is generated by plot.py at 2019-03-27 14:08:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 96.61 Mbit/s

95th percentile per-packet one-way delay: 71.420 ms

Loss rate: 1.04%

-- Flow 1:

Average throughput: 58.73 Mbit/s

95th percentile per-packet one-way delay: 39.940 ms

Loss rate: 0.89%

-- Flow 2:

Average throughput: 40.44 Mbit/s

95th percentile per-packet one-way delay: 97.863 ms

Loss rate: 1.19%

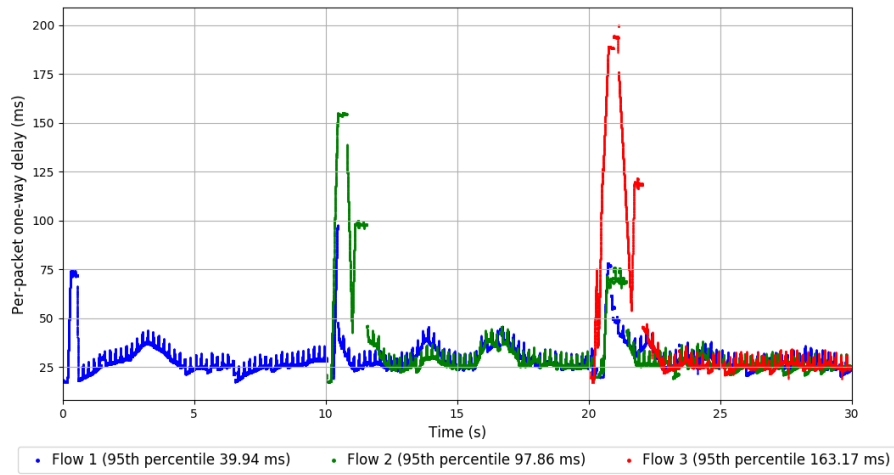
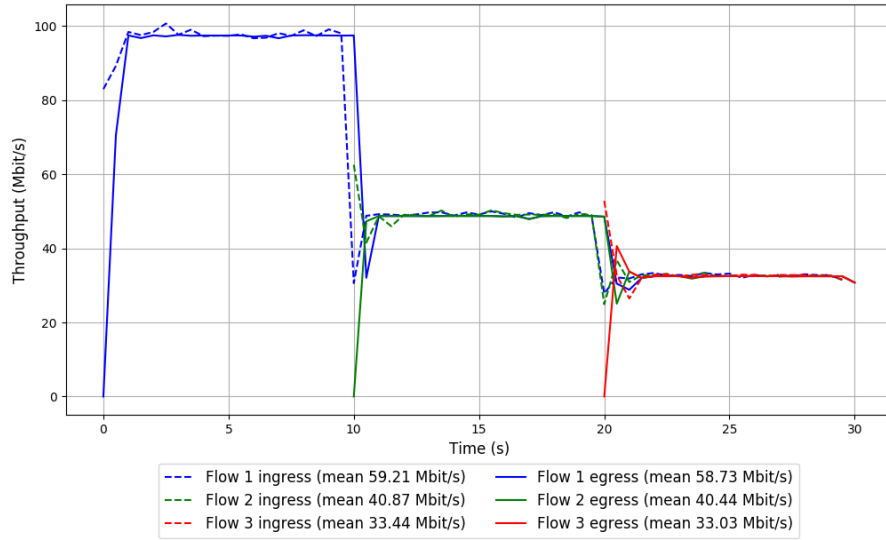
-- Flow 3:

Average throughput: 33.03 Mbit/s

95th percentile per-packet one-way delay: 163.172 ms

Loss rate: 1.51%

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2019-03-27 12:42:59

End at: 2019-03-27 12:43:29

Local clock offset: -0.467 ms

Remote clock offset: 0.208 ms

Below is generated by plot.py at 2019-03-27 14:08:40

Datalink statistics

-- Total of 3 flows:

Average throughput: 96.77 Mbit/s

95th percentile per-packet one-way delay: 76.664 ms

Loss rate: 1.30%

-- Flow 1:

Average throughput: 56.26 Mbit/s

95th percentile per-packet one-way delay: 52.210 ms

Loss rate: 1.23%

-- Flow 2:

Average throughput: 48.33 Mbit/s

95th percentile per-packet one-way delay: 97.905 ms

Loss rate: 1.32%

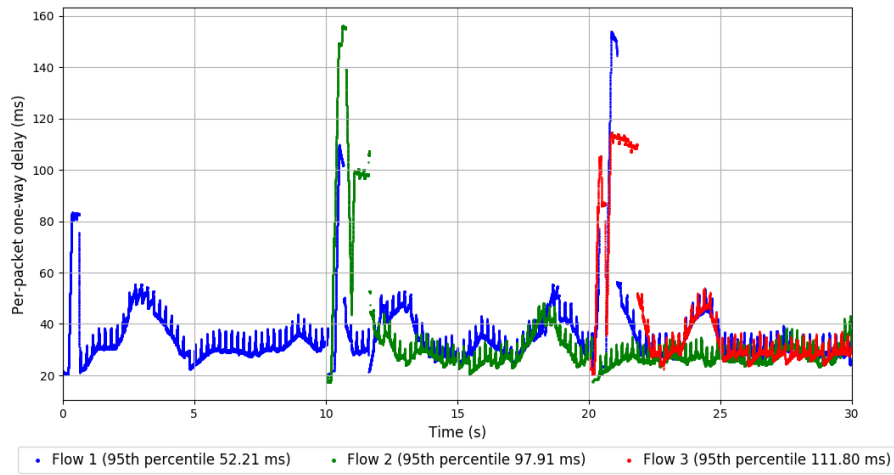
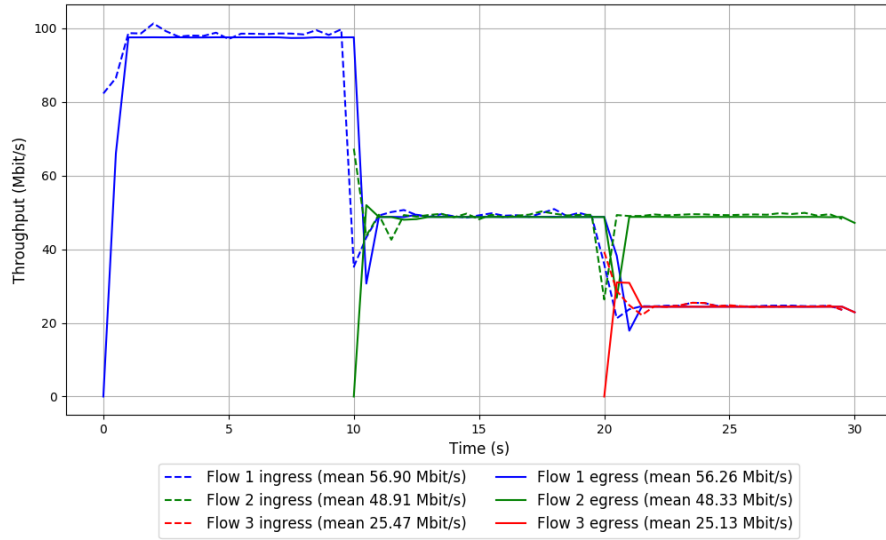
-- Flow 3:

Average throughput: 25.13 Mbit/s

95th percentile per-packet one-way delay: 111.797 ms

Loss rate: 1.71%

Run 2: Report of TCP BBR — Data Link

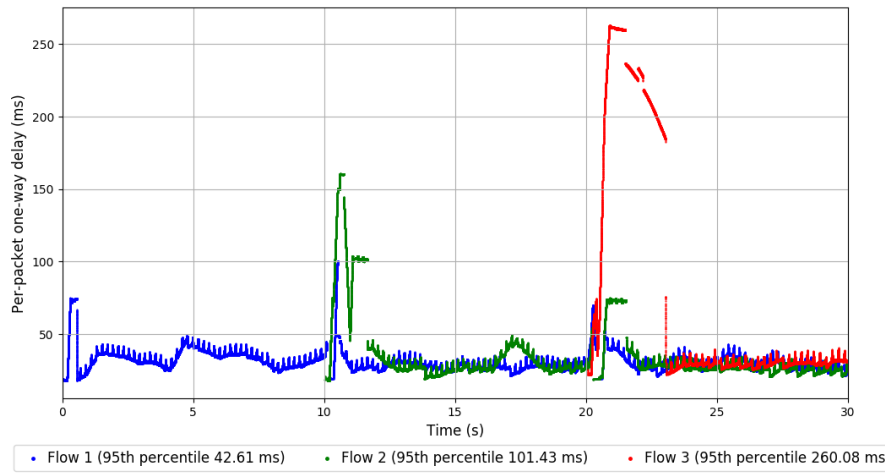
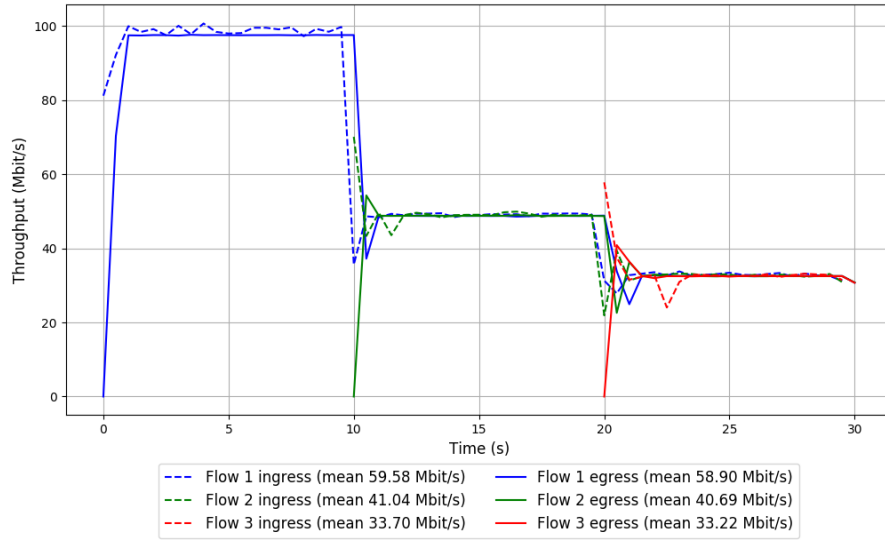


Run 3: Statistics of TCP BBR

Start at: 2019-03-27 13:08:40
End at: 2019-03-27 13:09:10
Local clock offset: -7.721 ms
Remote clock offset: -8.782 ms

```
# Below is generated by plot.py at 2019-03-27 14:08:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.01 Mbit/s
95th percentile per-packet one-way delay: 74.215 ms
Loss rate: 1.22%
-- Flow 1:
Average throughput: 58.90 Mbit/s
95th percentile per-packet one-way delay: 42.611 ms
Loss rate: 1.23%
-- Flow 2:
Average throughput: 40.69 Mbit/s
95th percentile per-packet one-way delay: 101.431 ms
Loss rate: 0.99%
-- Flow 3:
Average throughput: 33.22 Mbit/s
95th percentile per-packet one-way delay: 260.079 ms
Loss rate: 1.69%
```

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2019-03-27 13:34:04

End at: 2019-03-27 13:34:34

Local clock offset: -0.638 ms

Remote clock offset: -2.33 ms

Below is generated by plot.py at 2019-03-27 14:08:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 96.78 Mbit/s

95th percentile per-packet one-way delay: 86.322 ms

Loss rate: 1.89%

-- Flow 1:

Average throughput: 63.98 Mbit/s

95th percentile per-packet one-way delay: 52.123 ms

Loss rate: 1.75%

-- Flow 2:

Average throughput: 36.63 Mbit/s

95th percentile per-packet one-way delay: 113.094 ms

Loss rate: 2.11%

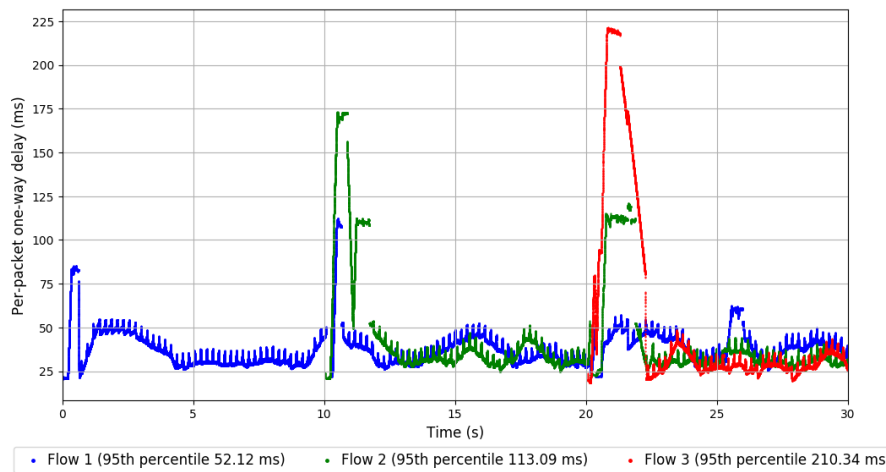
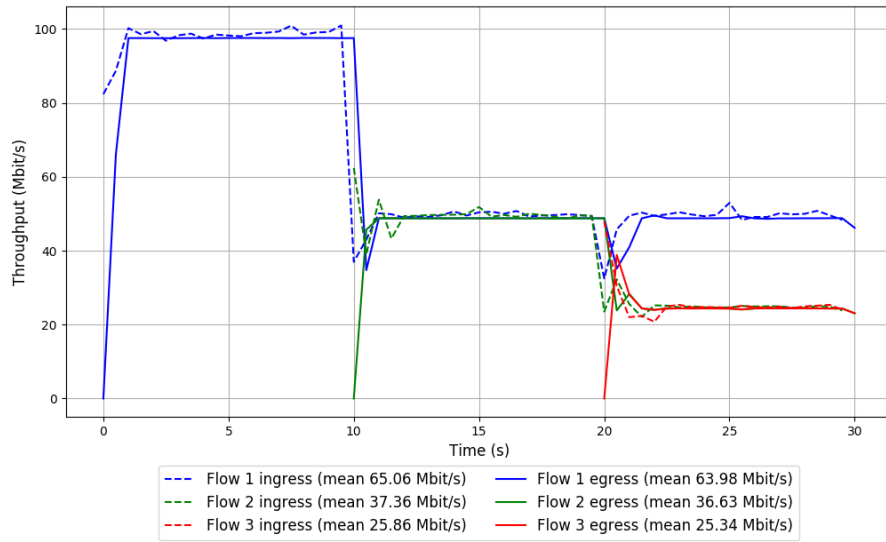
-- Flow 3:

Average throughput: 25.34 Mbit/s

95th percentile per-packet one-way delay: 210.339 ms

Loss rate: 2.32%

Run 4: Report of TCP BBR — Data Link



Run 5: Statistics of TCP BBR

Start at: 2019-03-27 13:59:41
End at: 2019-03-27 14:00:11
Local clock offset: 0.345 ms
Remote clock offset: -4.197 ms

Below is generated by plot.py at 2019-03-27 14:08:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 96.74 Mbit/s
95th percentile per-packet one-way delay: 77.207 ms
Loss rate: 1.49%

-- Flow 1:

Average throughput: 56.27 Mbit/s
95th percentile per-packet one-way delay: 47.015 ms
Loss rate: 1.16%

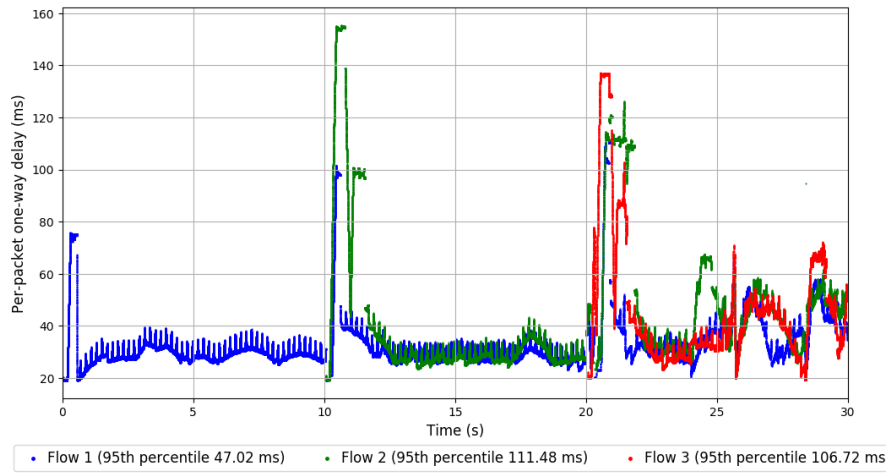
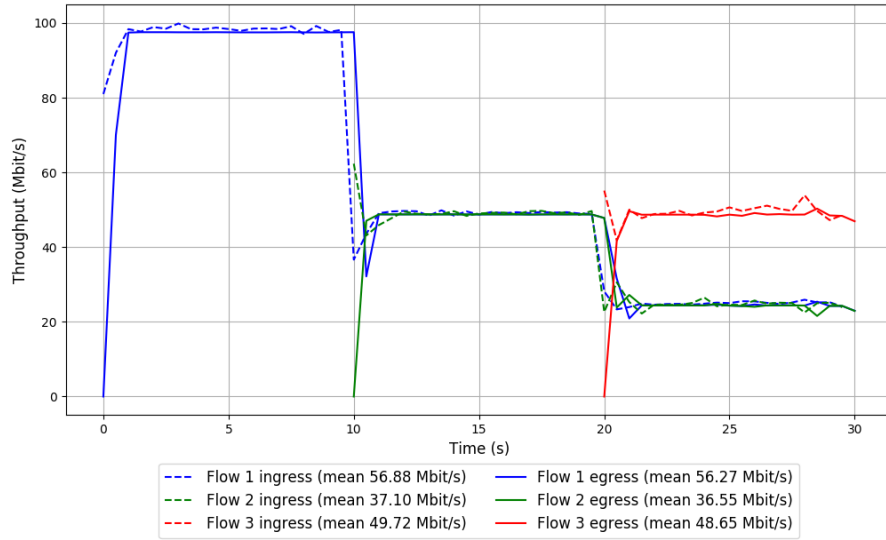
-- Flow 2:

Average throughput: 36.55 Mbit/s
95th percentile per-packet one-way delay: 111.484 ms
Loss rate: 1.62%

-- Flow 3:

Average throughput: 48.65 Mbit/s
95th percentile per-packet one-way delay: 106.717 ms
Loss rate: 2.41%

Run 5: Report of TCP BBR — Data Link



Run 1: Statistics of Copa

Start at: 2019-03-27 11:59:44
End at: 2019-03-27 12:00:14
Local clock offset: 0.012 ms
Remote clock offset: -0.863 ms

Below is generated by plot.py at 2019-03-27 14:09:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 83.36 Mbit/s
95th percentile per-packet one-way delay: 26.710 ms
Loss rate: 0.12%

-- Flow 1:

Average throughput: 45.19 Mbit/s
95th percentile per-packet one-way delay: 27.615 ms
Loss rate: 0.12%

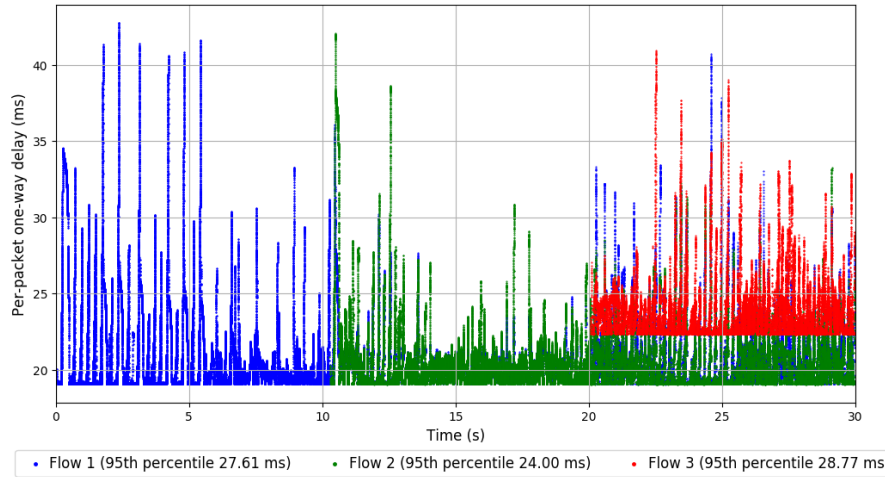
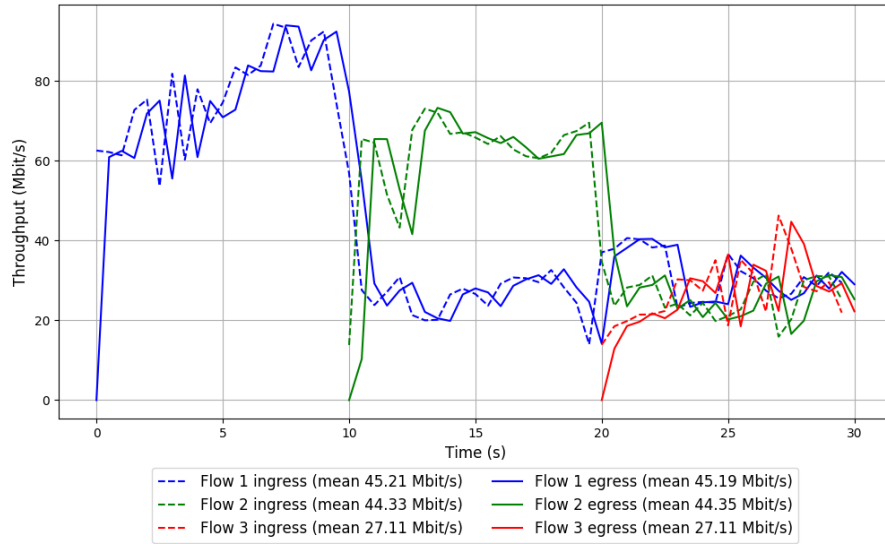
-- Flow 2:

Average throughput: 44.35 Mbit/s
95th percentile per-packet one-way delay: 23.999 ms
Loss rate: 0.09%

-- Flow 3:

Average throughput: 27.11 Mbit/s
95th percentile per-packet one-way delay: 28.767 ms
Loss rate: 0.25%

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2019-03-27 12:25:03

End at: 2019-03-27 12:25:33

Local clock offset: -0.238 ms

Remote clock offset: 0.099 ms

Below is generated by plot.py at 2019-03-27 14:09:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 85.46 Mbit/s

95th percentile per-packet one-way delay: 25.932 ms

Loss rate: 0.11%

-- Flow 1:

Average throughput: 51.62 Mbit/s

95th percentile per-packet one-way delay: 25.621 ms

Loss rate: 0.06%

-- Flow 2:

Average throughput: 36.63 Mbit/s

95th percentile per-packet one-way delay: 27.535 ms

Loss rate: 0.10%

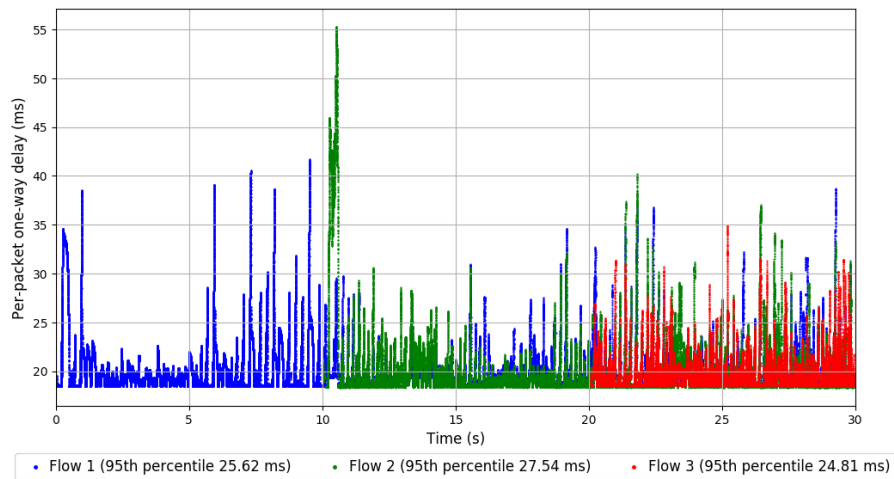
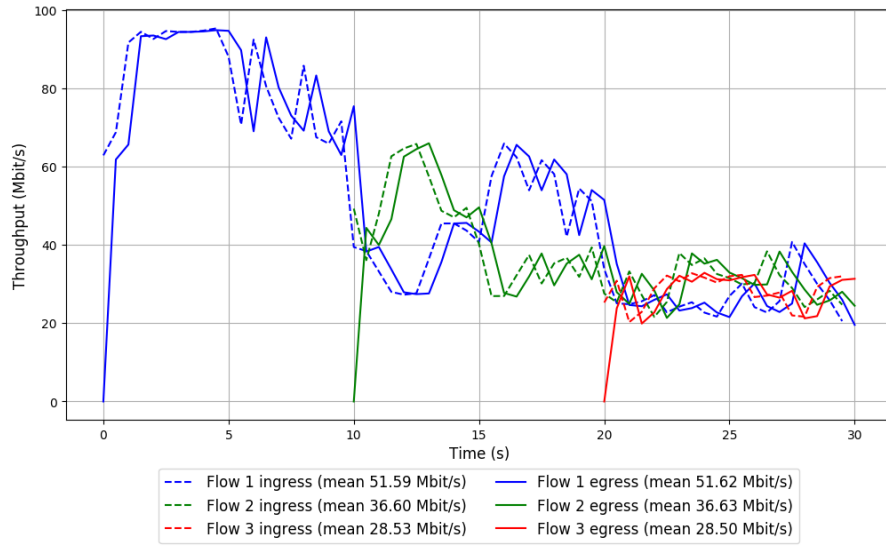
-- Flow 3:

Average throughput: 28.50 Mbit/s

95th percentile per-packet one-way delay: 24.812 ms

Loss rate: 0.39%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2019-03-27 12:50:07
End at: 2019-03-27 12:50:37
Local clock offset: -0.004 ms
Remote clock offset: -0.827 ms

Below is generated by plot.py at 2019-03-27 14:09:30

Datalink statistics

-- Total of 3 flows:

Average throughput: 86.77 Mbit/s
95th percentile per-packet one-way delay: 27.636 ms
Loss rate: 0.09%

-- Flow 1:

Average throughput: 54.82 Mbit/s
95th percentile per-packet one-way delay: 28.037 ms
Loss rate: 0.02%

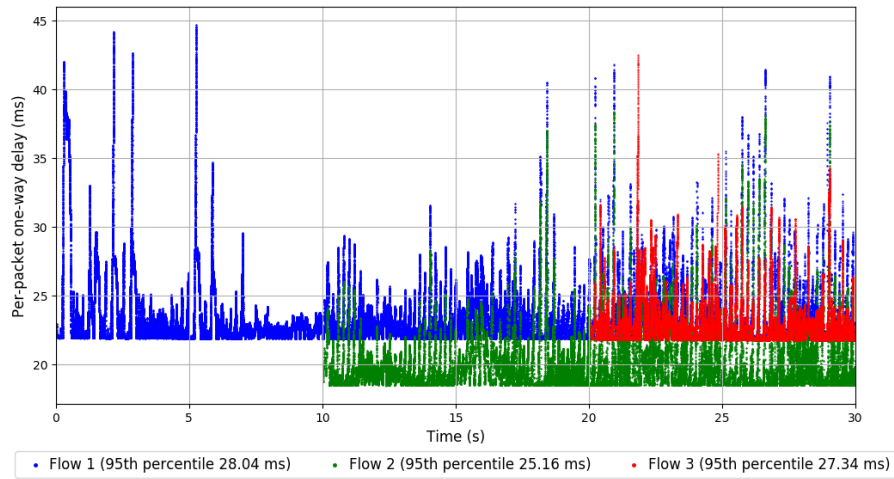
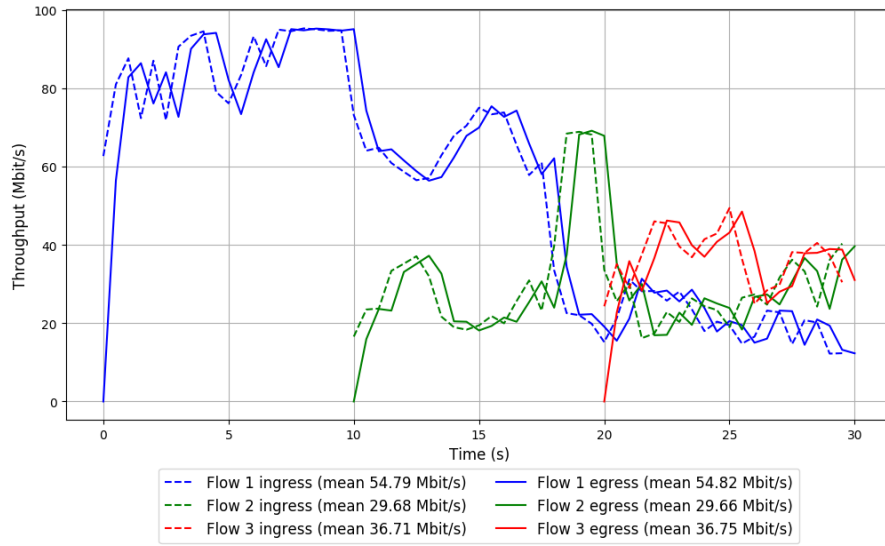
-- Flow 2:

Average throughput: 29.66 Mbit/s
95th percentile per-packet one-way delay: 25.165 ms
Loss rate: 0.21%

-- Flow 3:

Average throughput: 36.75 Mbit/s
95th percentile per-packet one-way delay: 27.345 ms
Loss rate: 0.18%

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

Start at: 2019-03-27 13:15:43
End at: 2019-03-27 13:16:13
Local clock offset: -1.231 ms
Remote clock offset: -1.302 ms

Below is generated by plot.py at 2019-03-27 14:10:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 82.31 Mbit/s
95th percentile per-packet one-way delay: 24.352 ms
Loss rate: 0.11%

-- Flow 1:

Average throughput: 47.97 Mbit/s
95th percentile per-packet one-way delay: 26.089 ms
Loss rate: 0.06%

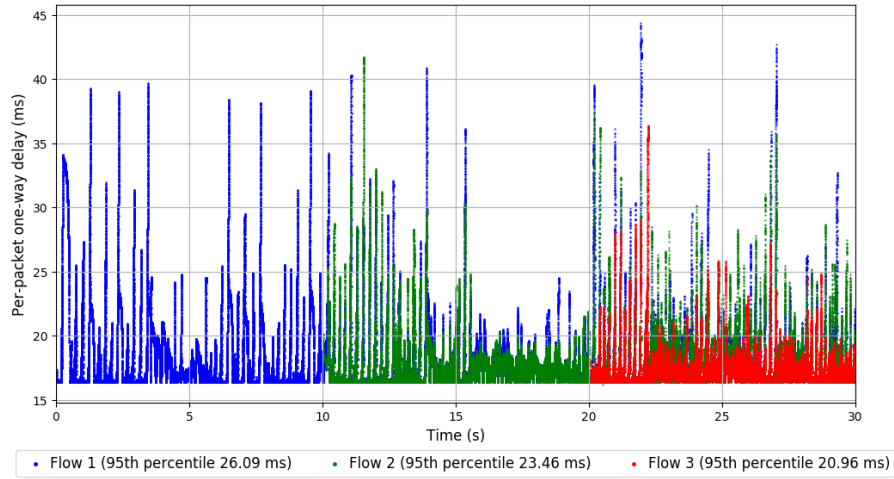
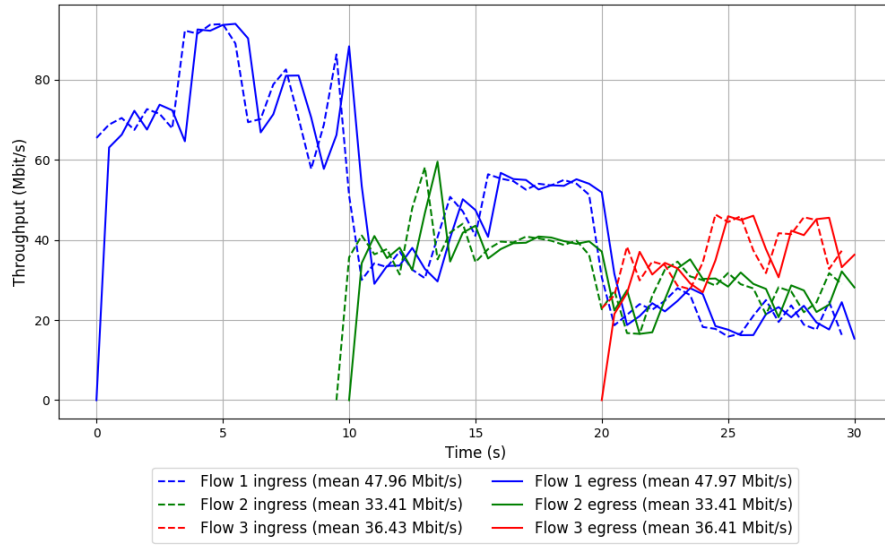
-- Flow 2:

Average throughput: 33.41 Mbit/s
95th percentile per-packet one-way delay: 23.457 ms
Loss rate: 0.13%

-- Flow 3:

Average throughput: 36.41 Mbit/s
95th percentile per-packet one-way delay: 20.957 ms
Loss rate: 0.29%

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2019-03-27 13:41:16
End at: 2019-03-27 13:41:46
Local clock offset: -0.582 ms
Remote clock offset: -4.433 ms

Below is generated by plot.py at 2019-03-27 14:10:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 83.26 Mbit/s
95th percentile per-packet one-way delay: 28.301 ms
Loss rate: 0.09%

-- Flow 1:

Average throughput: 51.51 Mbit/s
95th percentile per-packet one-way delay: 29.082 ms
Loss rate: 0.03%

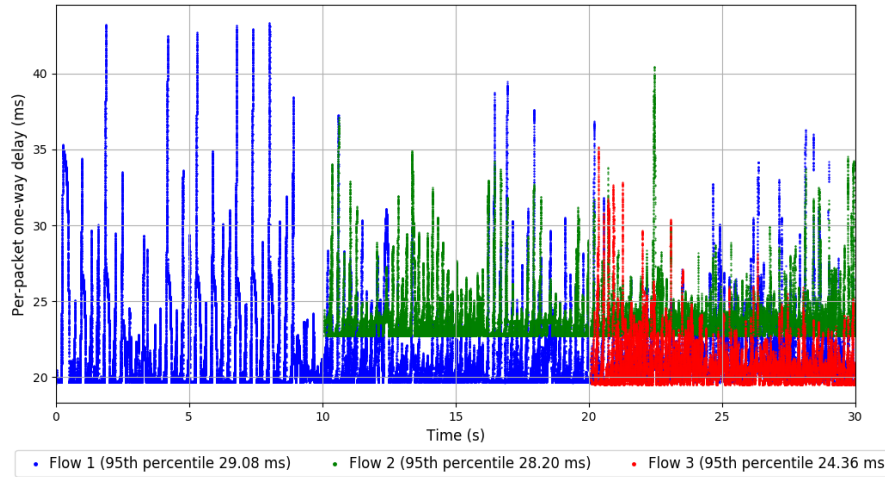
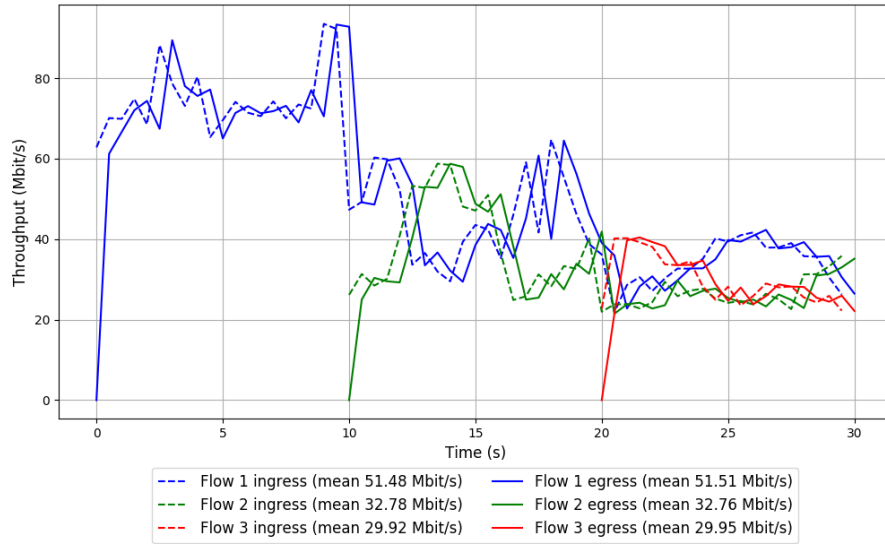
-- Flow 2:

Average throughput: 32.76 Mbit/s
95th percentile per-packet one-way delay: 28.195 ms
Loss rate: 0.19%

-- Flow 3:

Average throughput: 29.95 Mbit/s
95th percentile per-packet one-way delay: 24.361 ms
Loss rate: 0.18%

Run 5: Report of Copa — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2019-03-27 12:15:39
End at: 2019-03-27 12:16:09
Local clock offset: 0.53 ms
Remote clock offset: -1.296 ms

Below is generated by plot.py at 2019-03-27 14:10:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 95.52 Mbit/s
95th percentile per-packet one-way delay: 31.127 ms
Loss rate: 0.13%

-- Flow 1:

Average throughput: 58.97 Mbit/s
95th percentile per-packet one-way delay: 29.818 ms
Loss rate: 0.08%

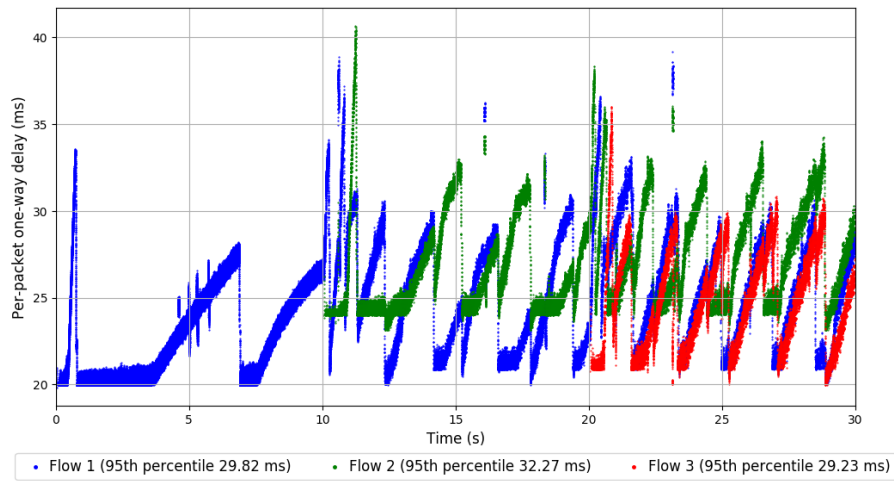
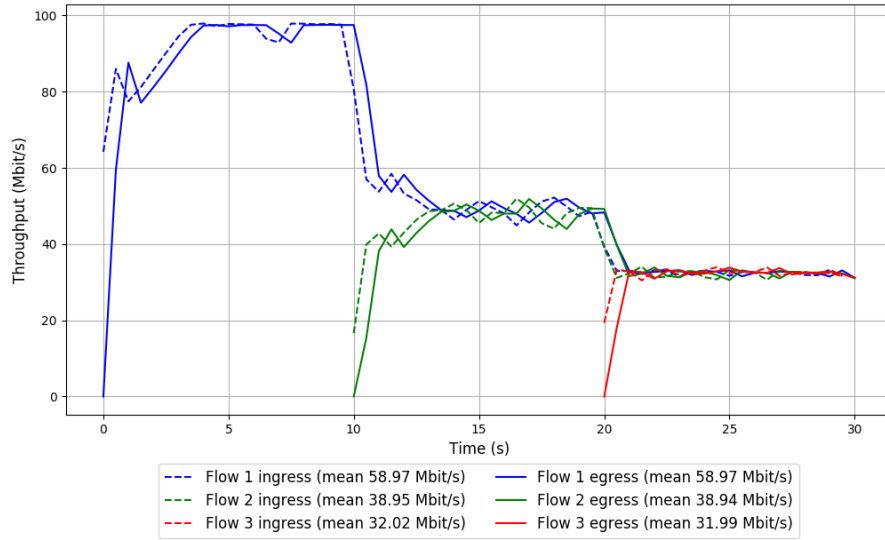
-- Flow 2:

Average throughput: 38.94 Mbit/s
95th percentile per-packet one-way delay: 32.271 ms
Loss rate: 0.16%

-- Flow 3:

Average throughput: 31.99 Mbit/s
95th percentile per-packet one-way delay: 29.233 ms
Loss rate: 0.34%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2019-03-27 12:40:35

End at: 2019-03-27 12:41:05

Local clock offset: 0.116 ms

Remote clock offset: 0.285 ms

Below is generated by plot.py at 2019-03-27 14:10:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 95.08 Mbit/s

95th percentile per-packet one-way delay: 28.778 ms

Loss rate: 0.12%

-- Flow 1:

Average throughput: 57.22 Mbit/s

95th percentile per-packet one-way delay: 29.344 ms

Loss rate: 0.07%

-- Flow 2:

Average throughput: 40.50 Mbit/s

95th percentile per-packet one-way delay: 26.634 ms

Loss rate: 0.16%

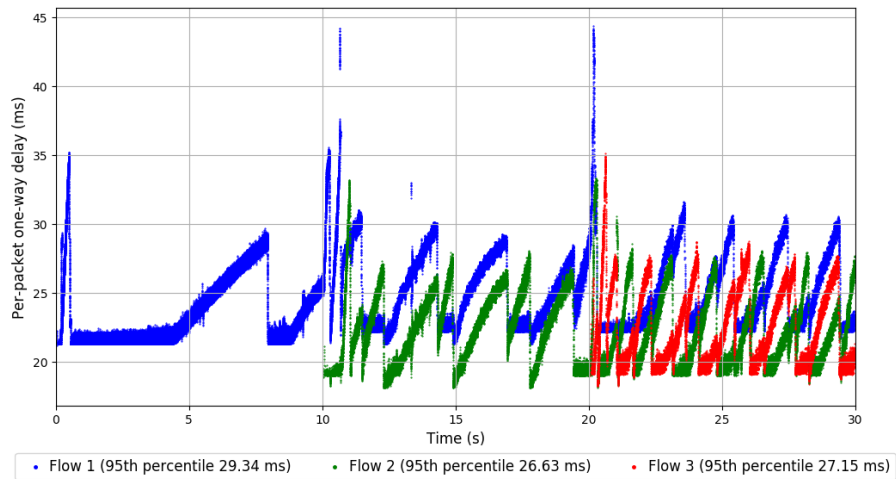
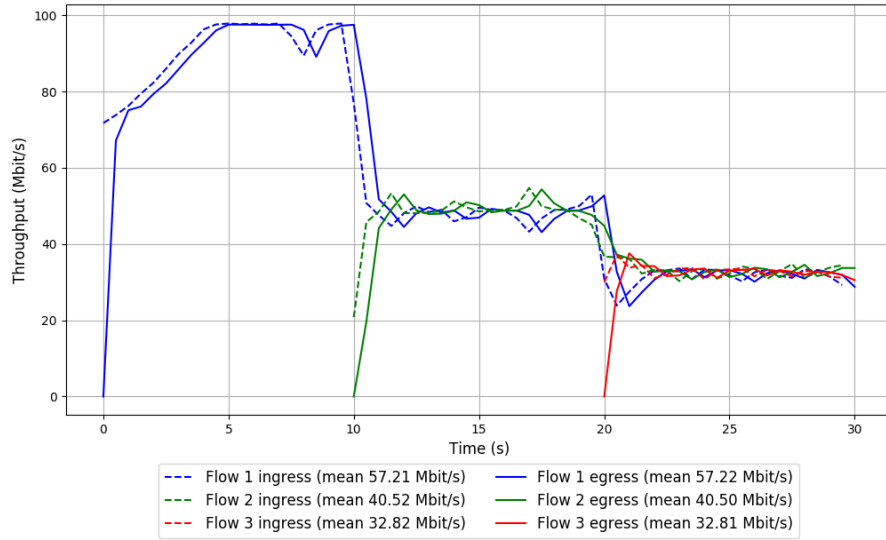
-- Flow 3:

Average throughput: 32.81 Mbit/s

95th percentile per-packet one-way delay: 27.148 ms

Loss rate: 0.30%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2019-03-27 13:06:11
End at: 2019-03-27 13:06:41
Local clock offset: -0.064 ms
Remote clock offset: -2.257 ms

Below is generated by plot.py at 2019-03-27 14:10:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 95.97 Mbit/s
95th percentile per-packet one-way delay: 27.321 ms
Loss rate: 0.11%

-- Flow 1:

Average throughput: 63.74 Mbit/s
95th percentile per-packet one-way delay: 26.881 ms
Loss rate: 0.07%

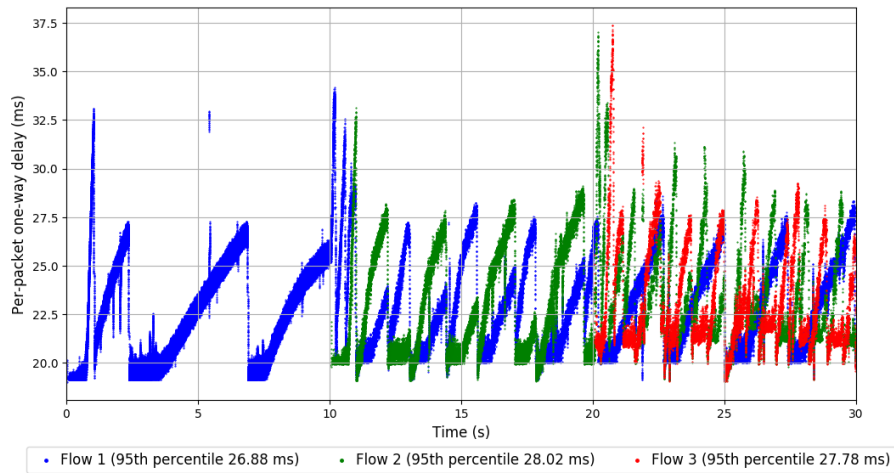
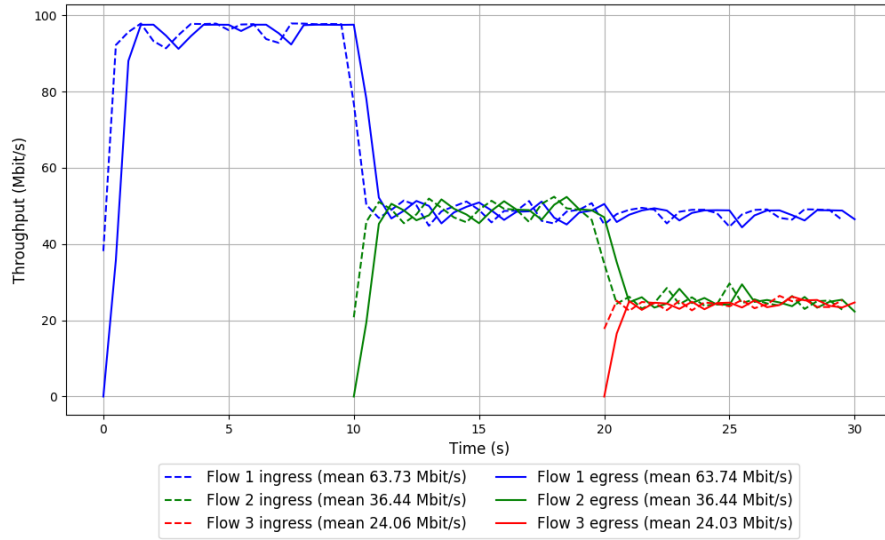
-- Flow 2:

Average throughput: 36.44 Mbit/s
95th percentile per-packet one-way delay: 28.017 ms
Loss rate: 0.12%

-- Flow 3:

Average throughput: 24.03 Mbit/s
95th percentile per-packet one-way delay: 27.784 ms
Loss rate: 0.38%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2019-03-27 13:31:37
End at: 2019-03-27 13:32:07
Local clock offset: -0.298 ms
Remote clock offset: -2.639 ms

Below is generated by plot.py at 2019-03-27 14:10:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 95.38 Mbit/s
95th percentile per-packet one-way delay: 28.822 ms
Loss rate: 0.12%

-- Flow 1:

Average throughput: 56.59 Mbit/s
95th percentile per-packet one-way delay: 26.772 ms
Loss rate: 0.06%

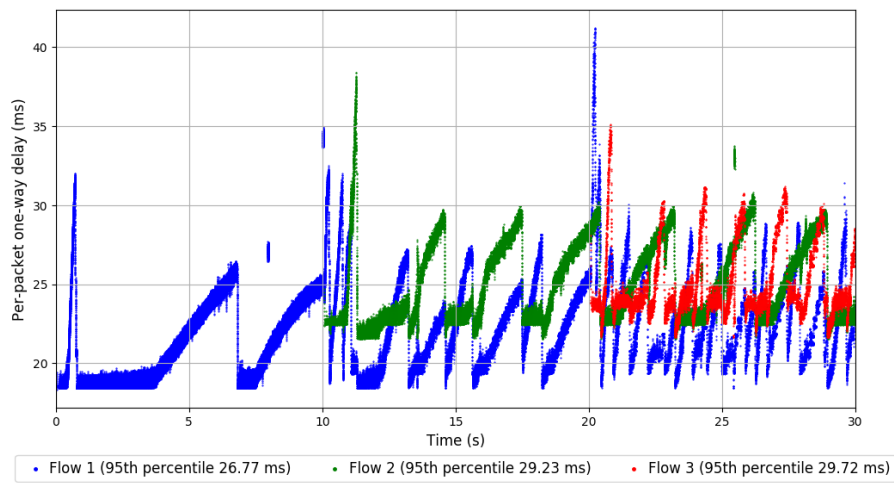
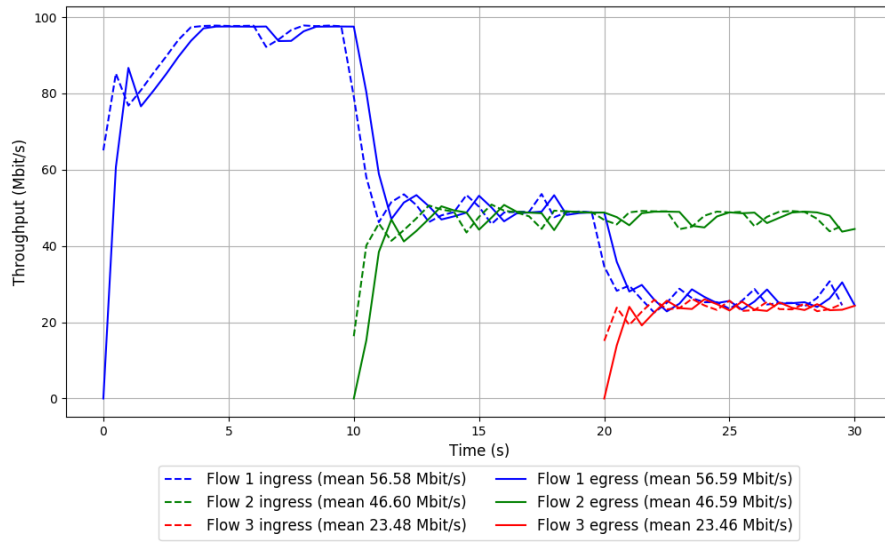
-- Flow 2:

Average throughput: 46.59 Mbit/s
95th percentile per-packet one-way delay: 29.226 ms
Loss rate: 0.16%

-- Flow 3:

Average throughput: 23.46 Mbit/s
95th percentile per-packet one-way delay: 29.724 ms
Loss rate: 0.42%

Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2019-03-27 13:57:13
End at: 2019-03-27 13:57:43
Local clock offset: 1.835 ms
Remote clock offset: -5.111 ms

Below is generated by plot.py at 2019-03-27 14:10:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 96.01 Mbit/s
95th percentile per-packet one-way delay: 30.057 ms
Loss rate: 0.12%

-- Flow 1:

Average throughput: 58.29 Mbit/s
95th percentile per-packet one-way delay: 29.622 ms
Loss rate: 0.07%

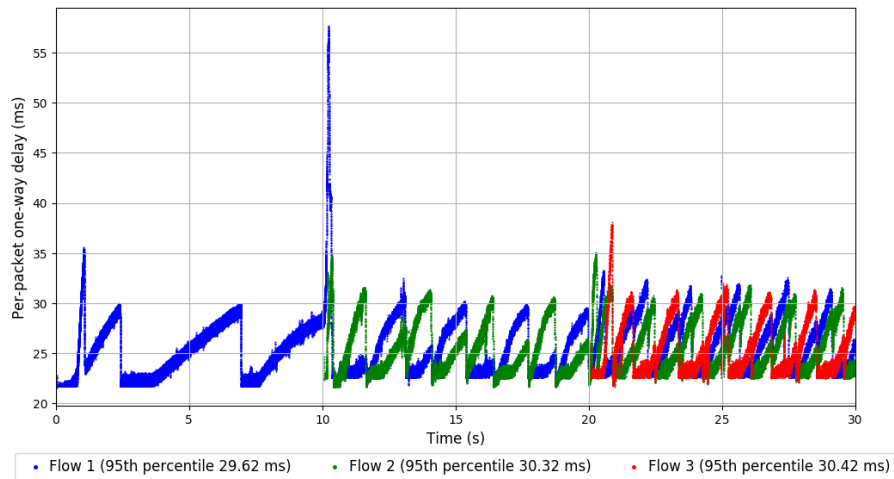
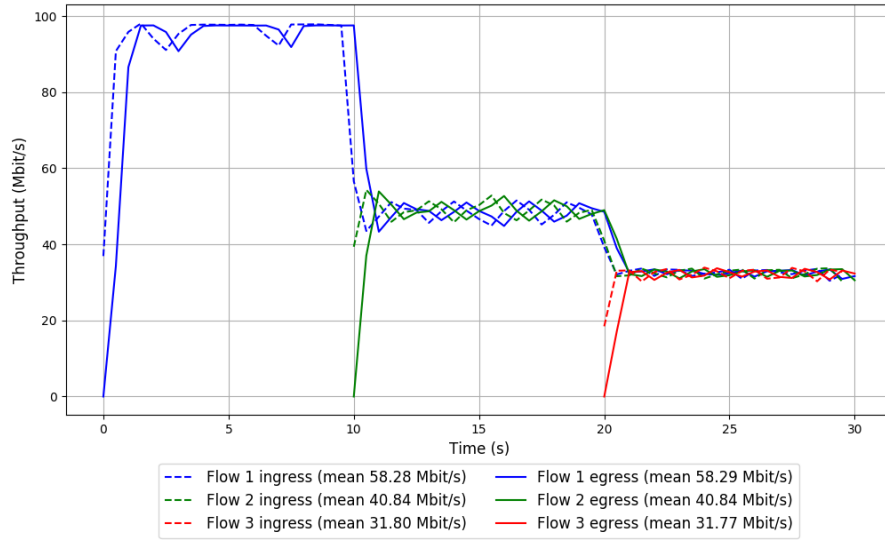
-- Flow 2:

Average throughput: 40.84 Mbit/s
95th percentile per-packet one-way delay: 30.321 ms
Loss rate: 0.13%

-- Flow 3:

Average throughput: 31.77 Mbit/s
95th percentile per-packet one-way delay: 30.423 ms
Loss rate: 0.36%

Run 5: Report of TCP Cubic — Data Link



Run 1: Statistics of FillP

Start at: 2019-03-27 12:12:11
End at: 2019-03-27 12:12:41
Local clock offset: -0.121 ms
Remote clock offset: -0.421 ms

Below is generated by plot.py at 2019-03-27 14:10:47

Datalink statistics

-- Total of 3 flows:

Average throughput: 95.35 Mbit/s
95th percentile per-packet one-way delay: 74.233 ms
Loss rate: 1.42%

-- Flow 1:

Average throughput: 54.57 Mbit/s
95th percentile per-packet one-way delay: 62.084 ms
Loss rate: 0.22%

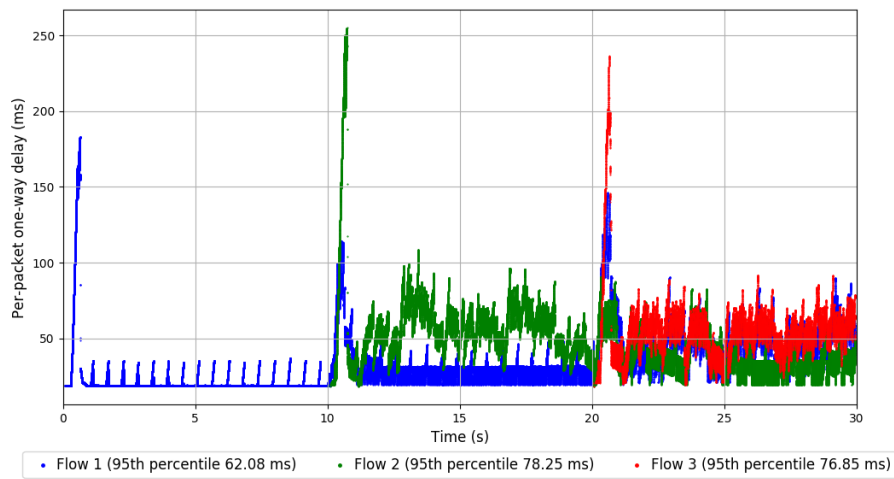
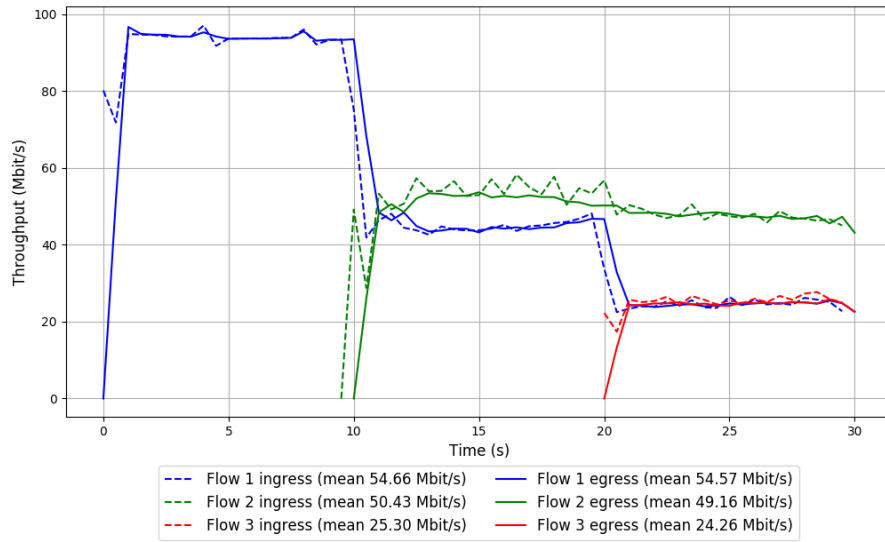
-- Flow 2:

Average throughput: 49.16 Mbit/s
95th percentile per-packet one-way delay: 78.247 ms
Loss rate: 2.65%

-- Flow 3:

Average throughput: 24.26 Mbit/s
95th percentile per-packet one-way delay: 76.848 ms
Loss rate: 4.32%

Run 1: Report of FillP — Data Link



Run 2: Statistics of FillP

Start at: 2019-03-27 12:37:07
End at: 2019-03-27 12:37:37
Local clock offset: -0.043 ms
Remote clock offset: -0.216 ms

Below is generated by plot.py at 2019-03-27 14:10:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 95.40 Mbit/s
95th percentile per-packet one-way delay: 76.586 ms
Loss rate: 1.42%

-- Flow 1:

Average throughput: 57.64 Mbit/s
95th percentile per-packet one-way delay: 53.487 ms
Loss rate: 0.15%

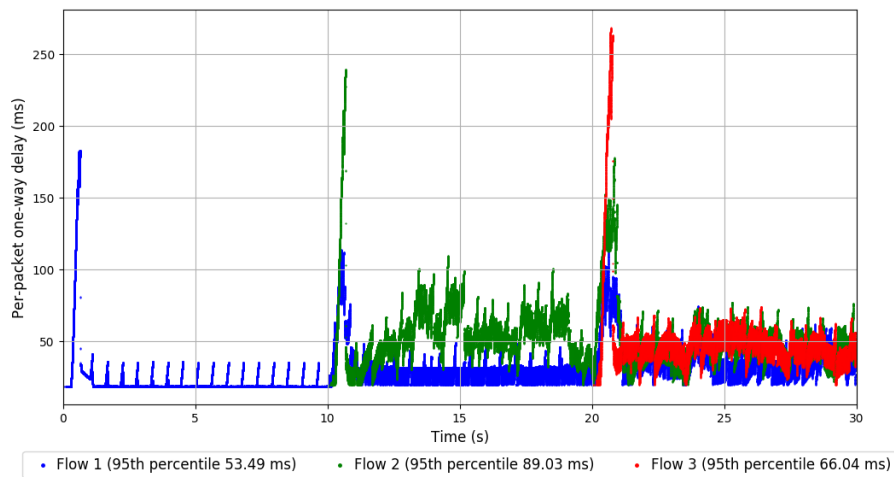
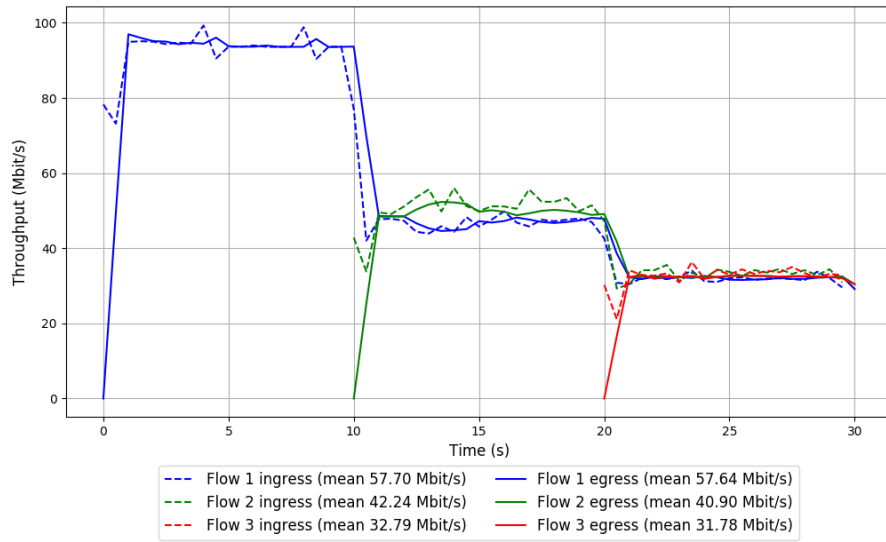
-- Flow 2:

Average throughput: 40.90 Mbit/s
95th percentile per-packet one-way delay: 89.035 ms
Loss rate: 3.29%

-- Flow 3:

Average throughput: 31.78 Mbit/s
95th percentile per-packet one-way delay: 66.037 ms
Loss rate: 3.34%

Run 2: Report of FillP — Data Link

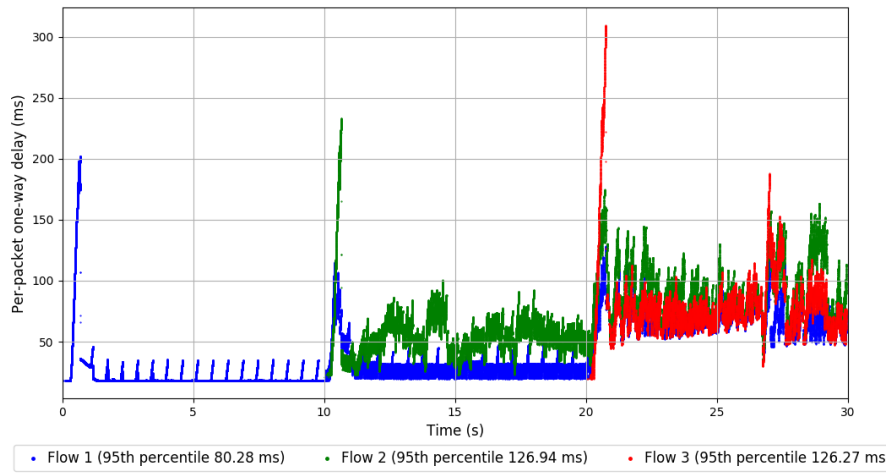
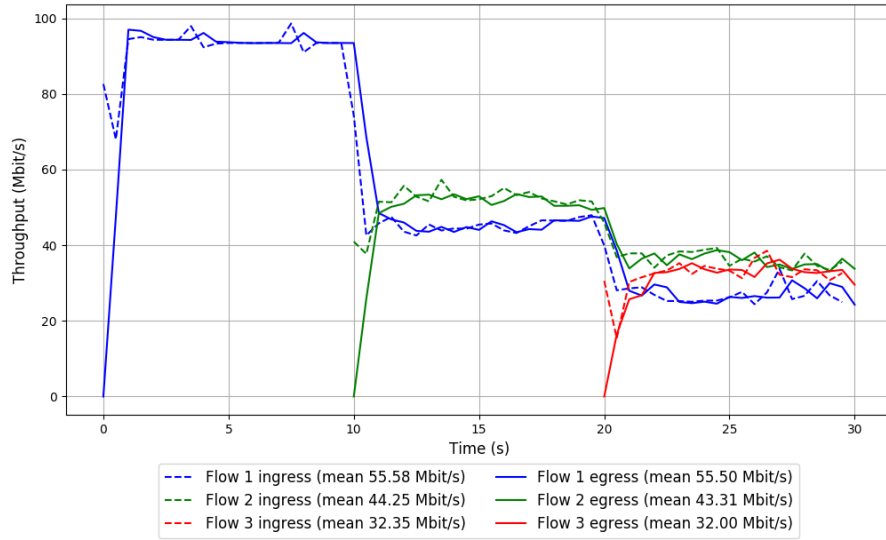


Run 3: Statistics of FillP

Start at: 2019-03-27 13:02:38
End at: 2019-03-27 13:03:08
Local clock offset: 0.325 ms
Remote clock offset: -0.337 ms

```
# Below is generated by plot.py at 2019-03-27 14:10:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.94 Mbit/s
95th percentile per-packet one-way delay: 107.599 ms
Loss rate: 0.95%
-- Flow 1:
Average throughput: 55.50 Mbit/s
95th percentile per-packet one-way delay: 80.275 ms
Loss rate: 0.19%
-- Flow 2:
Average throughput: 43.31 Mbit/s
95th percentile per-packet one-way delay: 126.936 ms
Loss rate: 2.25%
-- Flow 3:
Average throughput: 32.00 Mbit/s
95th percentile per-packet one-way delay: 126.273 ms
Loss rate: 1.27%
```

Run 3: Report of FillP — Data Link



Run 4: Statistics of FillP

Start at: 2019-03-27 13:28:07
End at: 2019-03-27 13:28:37
Local clock offset: -0.743 ms
Remote clock offset: -2.818 ms

Below is generated by plot.py at 2019-03-27 14:10:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 95.42 Mbit/s
95th percentile per-packet one-way delay: 68.008 ms
Loss rate: 0.62%

-- Flow 1:

Average throughput: 55.80 Mbit/s
95th percentile per-packet one-way delay: 67.733 ms
Loss rate: 0.31%

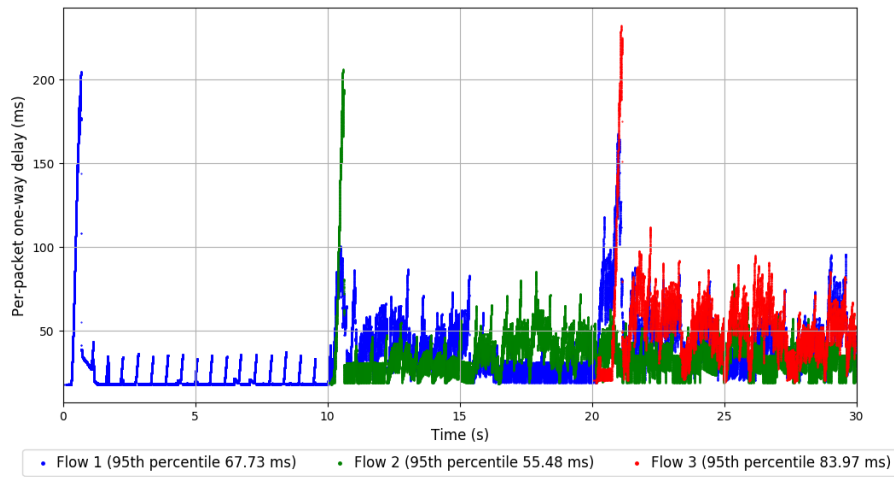
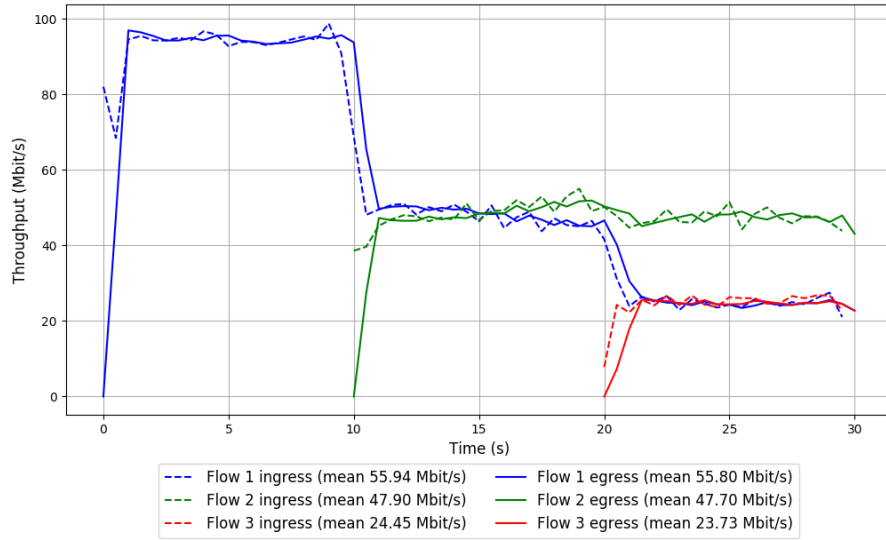
-- Flow 2:

Average throughput: 47.70 Mbit/s
95th percentile per-packet one-way delay: 55.479 ms
Loss rate: 0.50%

-- Flow 3:

Average throughput: 23.73 Mbit/s
95th percentile per-packet one-way delay: 83.974 ms
Loss rate: 3.19%

Run 4: Report of FillP — Data Link

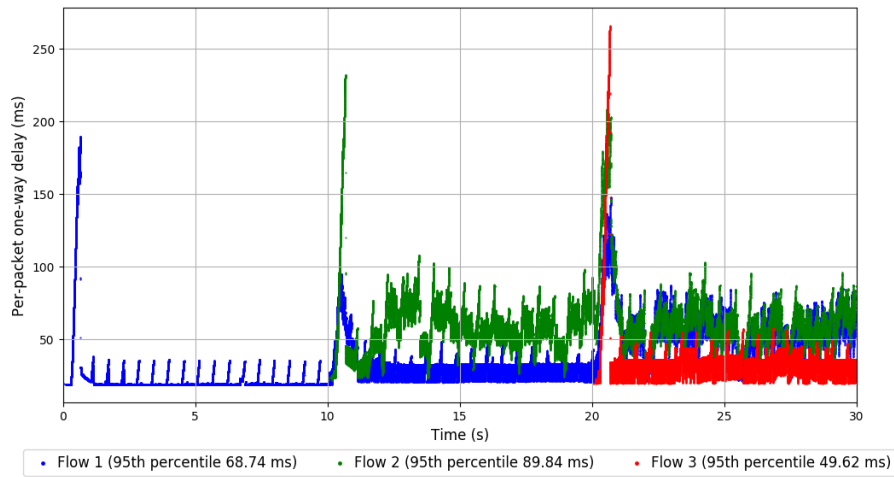
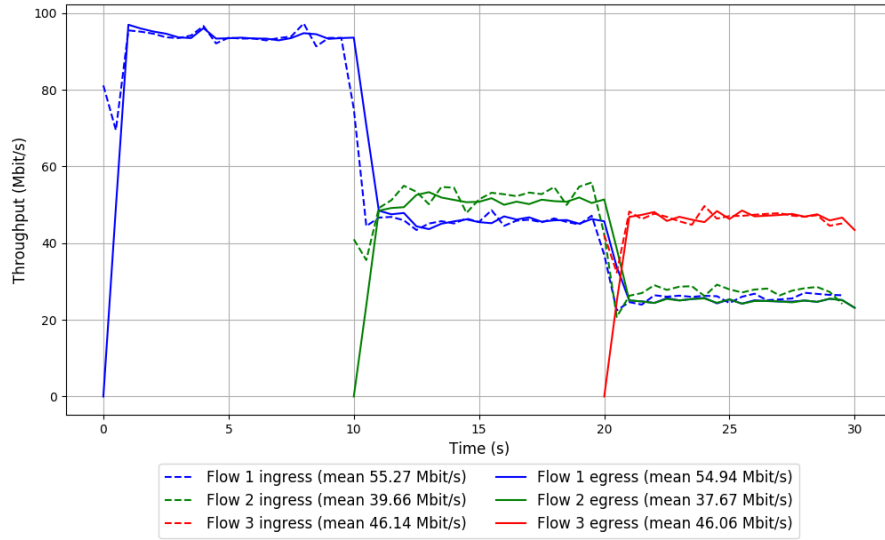


Run 5: Statistics of FillP

Start at: 2019-03-27 13:53:41
End at: 2019-03-27 13:54:11
Local clock offset: 0.059 ms
Remote clock offset: -4.061 ms

```
# Below is generated by plot.py at 2019-03-27 14:11:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.28 Mbit/s
95th percentile per-packet one-way delay: 78.706 ms
Loss rate: 1.84%
-- Flow 1:
Average throughput: 54.94 Mbit/s
95th percentile per-packet one-way delay: 68.741 ms
Loss rate: 0.67%
-- Flow 2:
Average throughput: 37.67 Mbit/s
95th percentile per-packet one-way delay: 89.843 ms
Loss rate: 5.09%
-- Flow 3:
Average throughput: 46.06 Mbit/s
95th percentile per-packet one-way delay: 49.622 ms
Loss rate: 0.44%
```

Run 5: Report of FillP — Data Link



Run 1: Statistics of FillP-Sheep

Start at: 2019-03-27 12:13:22
End at: 2019-03-27 12:13:52
Local clock offset: 0.25 ms
Remote clock offset: -0.677 ms

Below is generated by plot.py at 2019-03-27 14:11:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 94.47 Mbit/s
95th percentile per-packet one-way delay: 57.850 ms
Loss rate: 0.19%

-- Flow 1:

Average throughput: 56.02 Mbit/s
95th percentile per-packet one-way delay: 58.997 ms
Loss rate: 0.14%

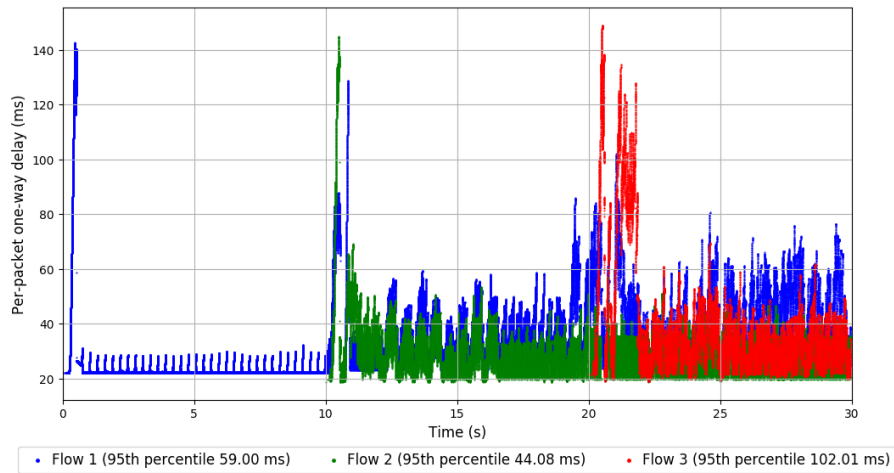
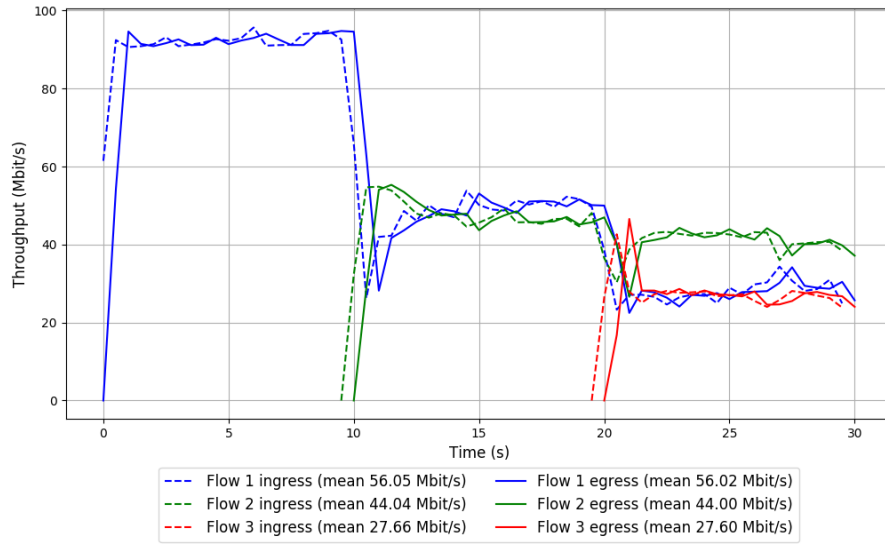
-- Flow 2:

Average throughput: 44.00 Mbit/s
95th percentile per-packet one-way delay: 44.081 ms
Loss rate: 0.22%

-- Flow 3:

Average throughput: 27.60 Mbit/s
95th percentile per-packet one-way delay: 102.008 ms
Loss rate: 0.38%

Run 1: Report of FillP-Sheep — Data Link



Run 2: Statistics of FillP-Sheep

Start at: 2019-03-27 12:38:18
End at: 2019-03-27 12:38:48
Local clock offset: -0.595 ms
Remote clock offset: -1.187 ms

Below is generated by plot.py at 2019-03-27 14:11:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 94.33 Mbit/s
95th percentile per-packet one-way delay: 57.518 ms
Loss rate: 0.23%

-- Flow 1:

Average throughput: 56.81 Mbit/s
95th percentile per-packet one-way delay: 57.092 ms
Loss rate: 0.15%

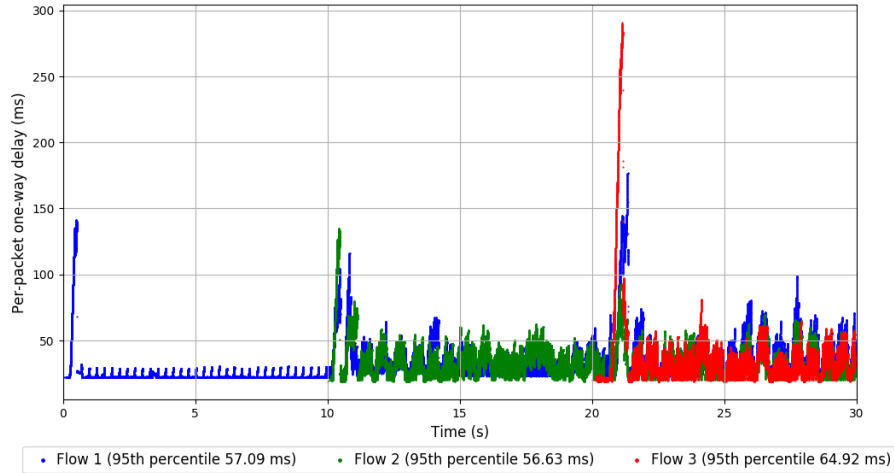
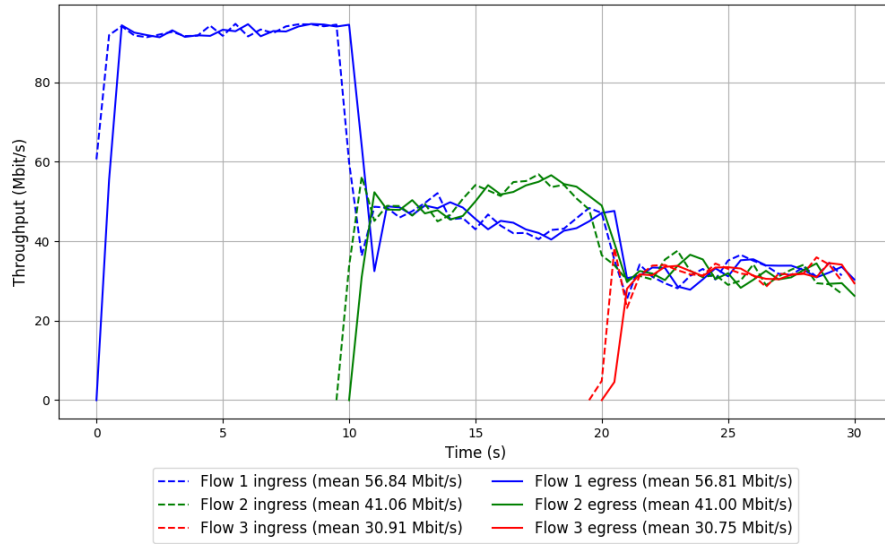
-- Flow 2:

Average throughput: 41.00 Mbit/s
95th percentile per-packet one-way delay: 56.630 ms
Loss rate: 0.21%

-- Flow 3:

Average throughput: 30.75 Mbit/s
95th percentile per-packet one-way delay: 64.925 ms
Loss rate: 0.75%

Run 2: Report of FillP-Sheep — Data Link



Run 3: Statistics of FillP-Sheep

Start at: 2019-03-27 13:03:53

End at: 2019-03-27 13:04:23

Local clock offset: 0.281 ms

Remote clock offset: -1.3 ms

Below is generated by plot.py at 2019-03-27 14:11:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 94.72 Mbit/s

95th percentile per-packet one-way delay: 51.935 ms

Loss rate: 0.18%

-- Flow 1:

Average throughput: 61.33 Mbit/s

95th percentile per-packet one-way delay: 44.249 ms

Loss rate: 0.11%

-- Flow 2:

Average throughput: 36.56 Mbit/s

95th percentile per-packet one-way delay: 59.255 ms

Loss rate: 0.23%

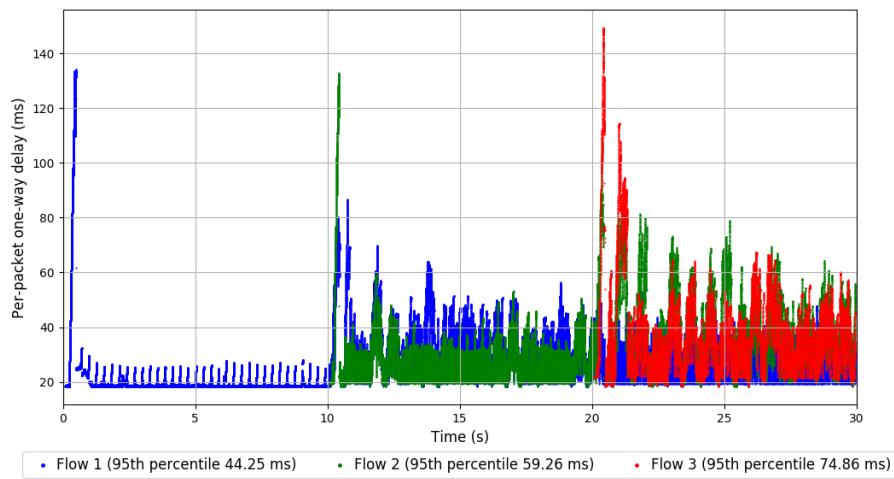
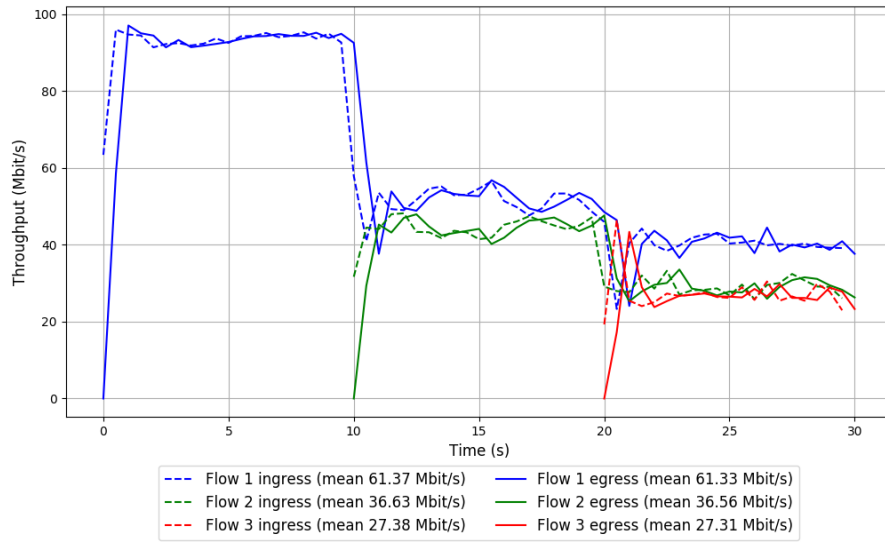
-- Flow 3:

Average throughput: 27.31 Mbit/s

95th percentile per-packet one-way delay: 74.856 ms

Loss rate: 0.50%

Run 3: Report of FillP-Sheep — Data Link



Run 4: Statistics of FillP-Sheep

Start at: 2019-03-27 13:29:18

End at: 2019-03-27 13:29:48

Local clock offset: 0.225 ms

Remote clock offset: -2.67 ms

Below is generated by plot.py at 2019-03-27 14:12:03

Datalink statistics

-- Total of 3 flows:

Average throughput: 94.60 Mbit/s

95th percentile per-packet one-way delay: 55.461 ms

Loss rate: 0.24%

-- Flow 1:

Average throughput: 56.46 Mbit/s

95th percentile per-packet one-way delay: 48.907 ms

Loss rate: 0.10%

-- Flow 2:

Average throughput: 41.66 Mbit/s

95th percentile per-packet one-way delay: 63.078 ms

Loss rate: 0.42%

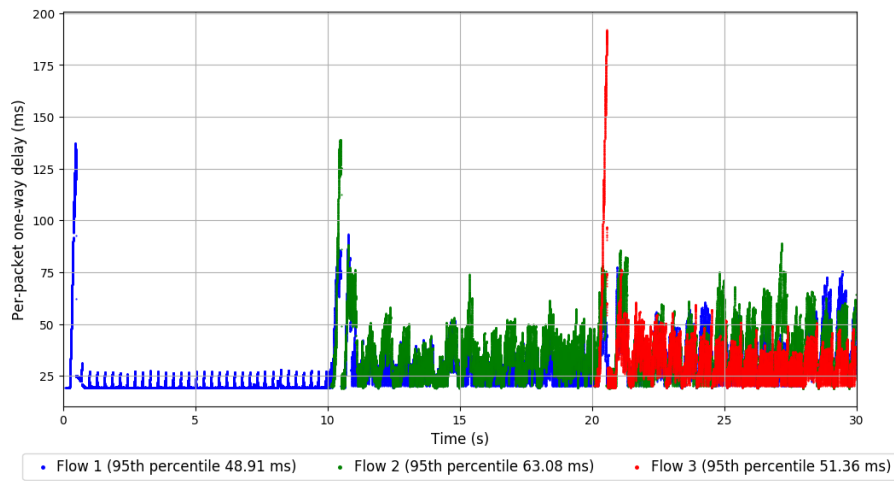
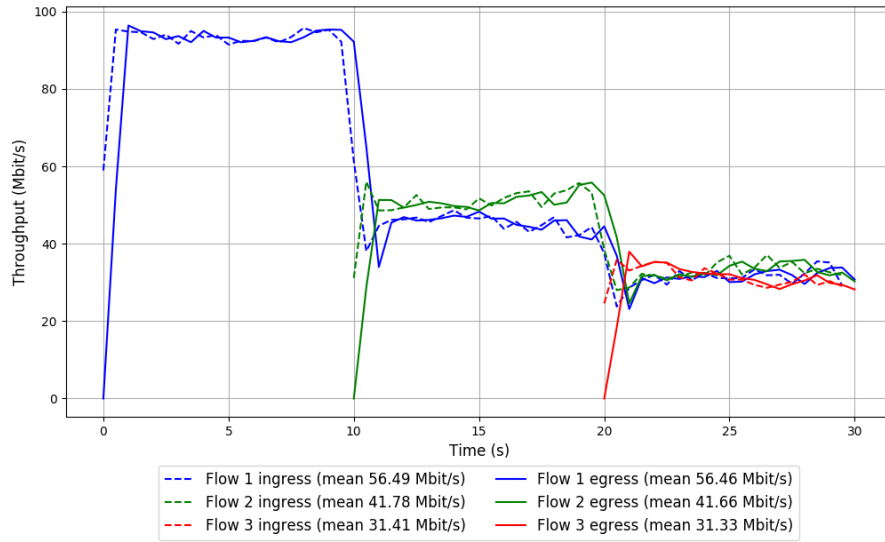
-- Flow 3:

Average throughput: 31.33 Mbit/s

95th percentile per-packet one-way delay: 51.364 ms

Loss rate: 0.50%

Run 4: Report of FillP-Sheep — Data Link



Run 5: Statistics of FillP-Sheep

Start at: 2019-03-27 13:54:53
End at: 2019-03-27 13:55:23
Local clock offset: -0.236 ms
Remote clock offset: -2.813 ms

Below is generated by plot.py at 2019-03-27 14:12:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 94.72 Mbit/s
95th percentile per-packet one-way delay: 52.481 ms
Loss rate: 0.19%

-- Flow 1:

Average throughput: 60.34 Mbit/s
95th percentile per-packet one-way delay: 43.432 ms
Loss rate: 0.09%

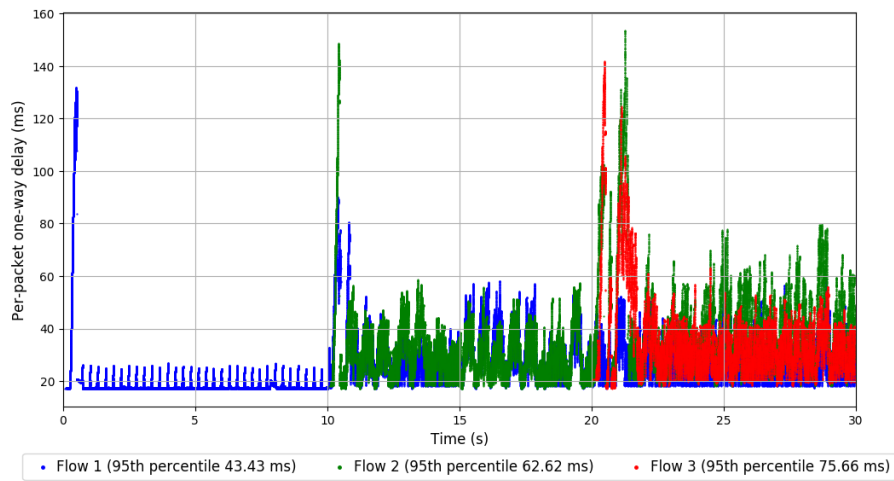
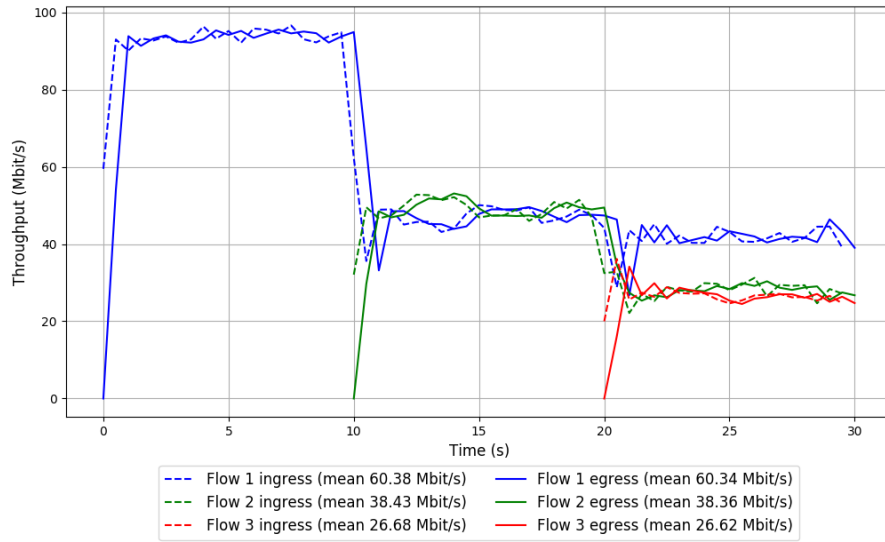
-- Flow 2:

Average throughput: 38.36 Mbit/s
95th percentile per-packet one-way delay: 62.619 ms
Loss rate: 0.29%

-- Flow 3:

Average throughput: 26.62 Mbit/s
95th percentile per-packet one-way delay: 75.660 ms
Loss rate: 0.50%

Run 5: Report of FillP-Sheep — Data Link



Run 1: Statistics of Indigo

Start at: 2019-03-27 12:04:41

End at: 2019-03-27 12:05:11

Local clock offset: -0.08 ms

Remote clock offset: 0.281 ms

Below is generated by plot.py at 2019-03-27 14:12:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 96.86 Mbit/s

95th percentile per-packet one-way delay: 27.075 ms

Loss rate: 0.18%

-- Flow 1:

Average throughput: 56.82 Mbit/s

95th percentile per-packet one-way delay: 27.169 ms

Loss rate: 0.17%

-- Flow 2:

Average throughput: 48.31 Mbit/s

95th percentile per-packet one-way delay: 24.604 ms

Loss rate: 0.15%

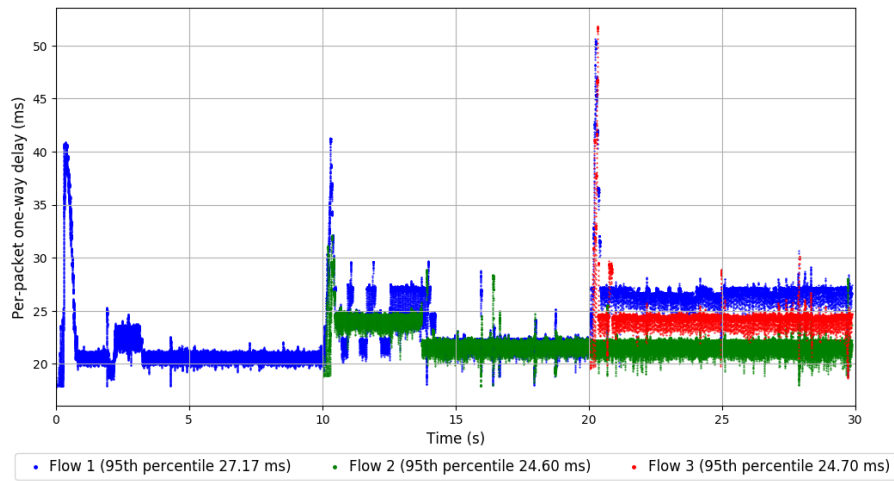
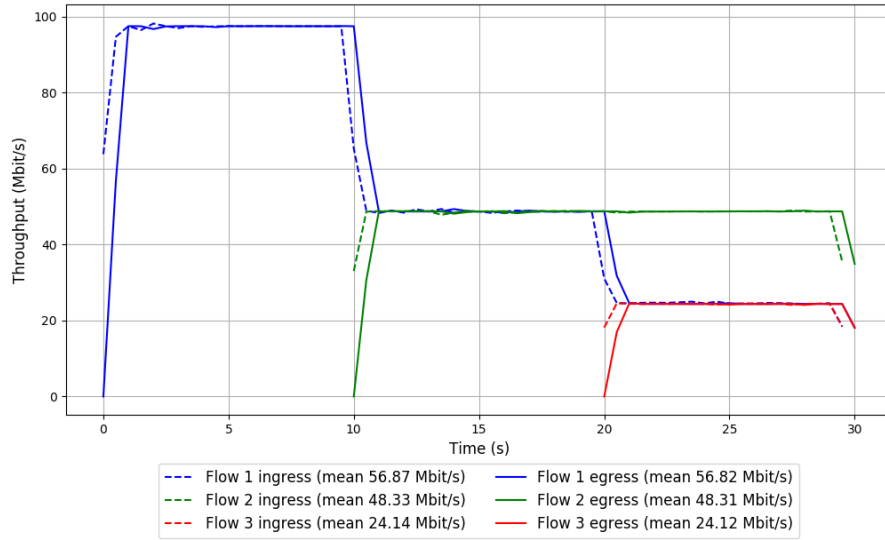
-- Flow 3:

Average throughput: 24.12 Mbit/s

95th percentile per-packet one-way delay: 24.704 ms

Loss rate: 0.33%

Run 1: Report of Indigo — Data Link



Run 2: Statistics of Indigo

Start at: 2019-03-27 12:29:50

End at: 2019-03-27 12:30:20

Local clock offset: -0.036 ms

Remote clock offset: 0.673 ms

Below is generated by plot.py at 2019-03-27 14:12:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 96.89 Mbit/s

95th percentile per-packet one-way delay: 26.990 ms

Loss rate: 0.25%

-- Flow 1:

Average throughput: 56.85 Mbit/s

95th percentile per-packet one-way delay: 26.964 ms

Loss rate: 0.22%

-- Flow 2:

Average throughput: 36.53 Mbit/s

95th percentile per-packet one-way delay: 27.076 ms

Loss rate: 0.28%

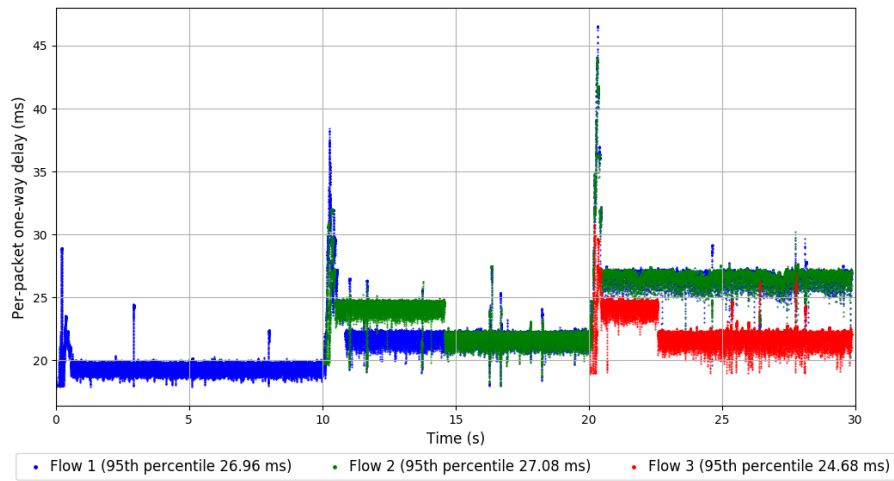
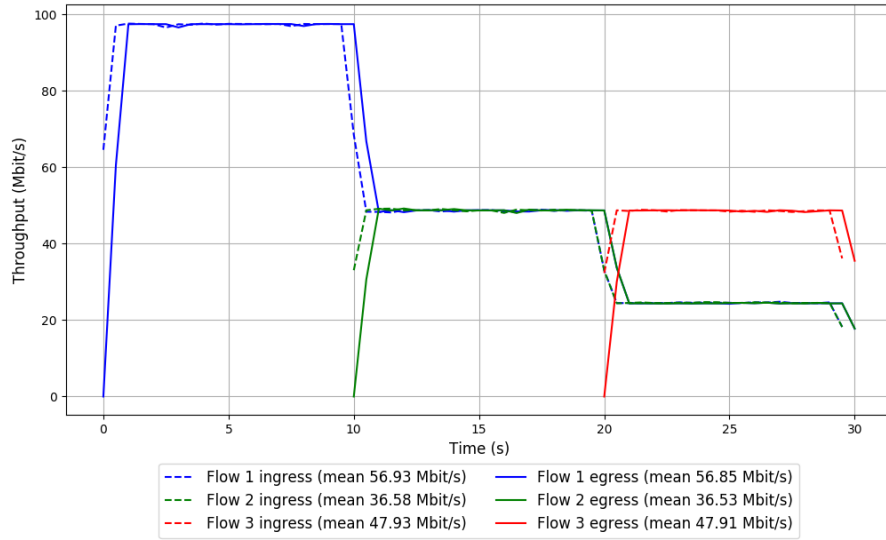
-- Flow 3:

Average throughput: 47.91 Mbit/s

95th percentile per-packet one-way delay: 24.679 ms

Loss rate: 0.29%

Run 2: Report of Indigo — Data Link



Run 3: Statistics of Indigo

Start at: 2019-03-27 12:55:06
End at: 2019-03-27 12:55:36
Local clock offset: 0.488 ms
Remote clock offset: -0.148 ms

Below is generated by plot.py at 2019-03-27 14:12:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 96.79 Mbit/s
95th percentile per-packet one-way delay: 27.107 ms
Loss rate: 0.16%

-- Flow 1:

Average throughput: 64.66 Mbit/s
95th percentile per-packet one-way delay: 22.298 ms
Loss rate: 0.08%

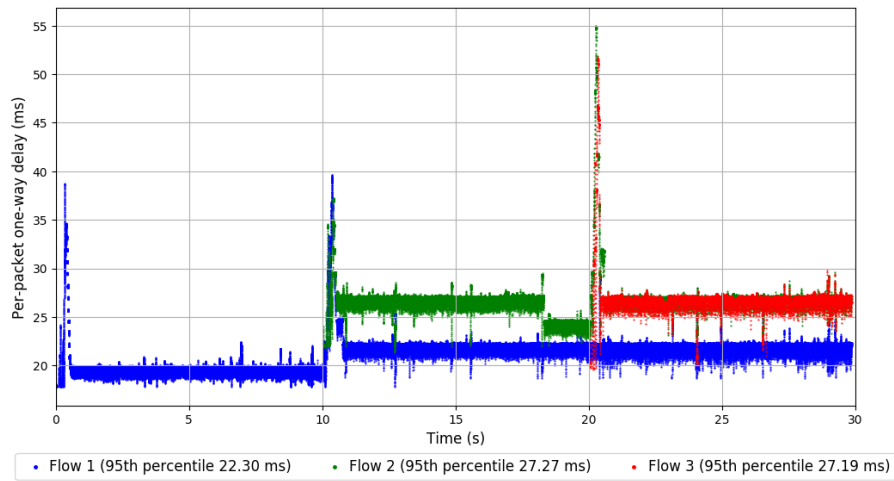
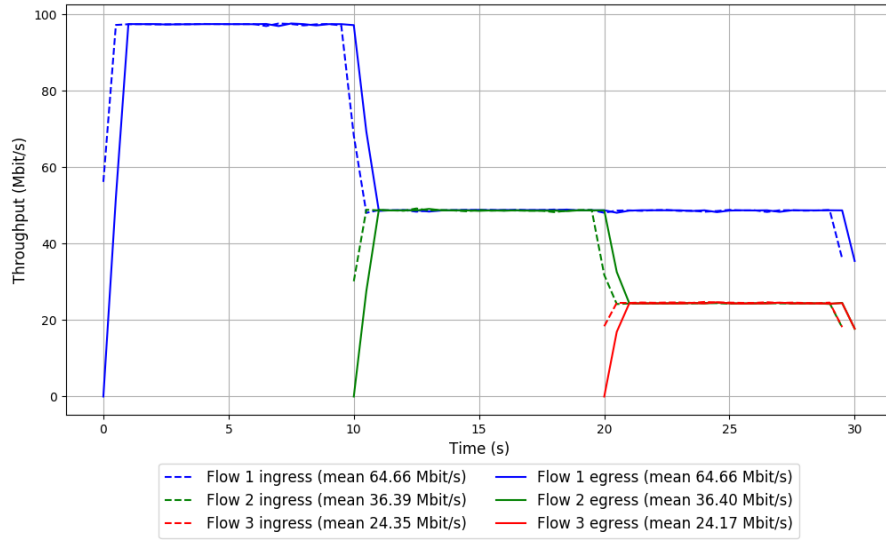
-- Flow 2:

Average throughput: 36.40 Mbit/s
95th percentile per-packet one-way delay: 27.275 ms
Loss rate: 0.12%

-- Flow 3:

Average throughput: 24.17 Mbit/s
95th percentile per-packet one-way delay: 27.187 ms
Loss rate: 0.98%

Run 3: Report of Indigo — Data Link

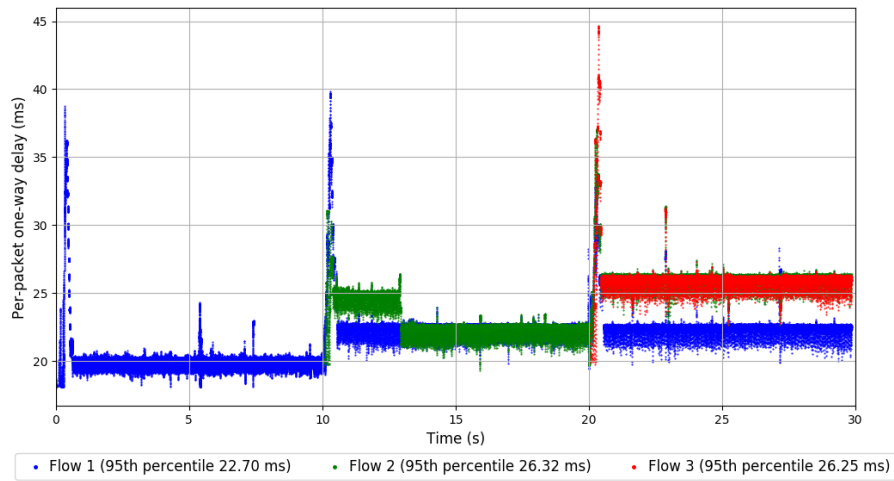
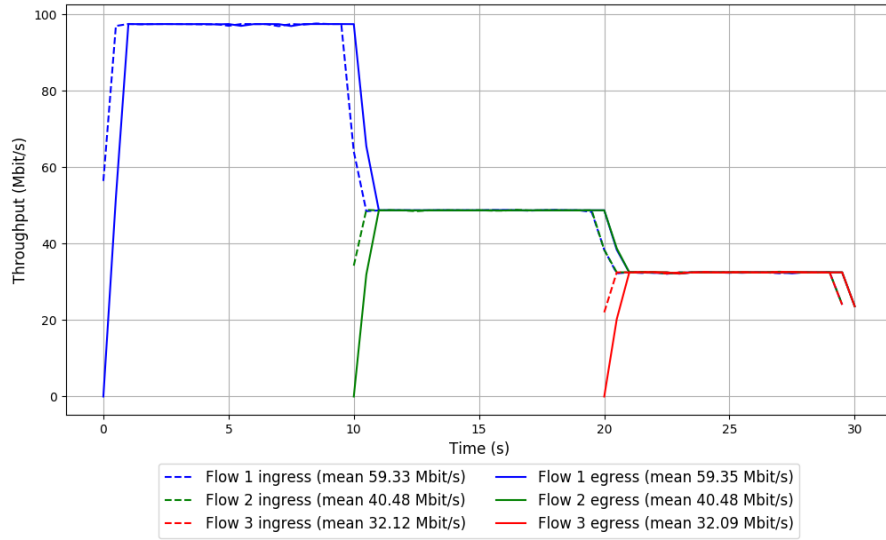


Run 4: Statistics of Indigo

Start at: 2019-03-27 13:20:38
End at: 2019-03-27 13:21:08
Local clock offset: 0.252 ms
Remote clock offset: -1.558 ms

```
# Below is generated by plot.py at 2019-03-27 14:12:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.79 Mbit/s
95th percentile per-packet one-way delay: 26.248 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 59.35 Mbit/s
95th percentile per-packet one-way delay: 22.702 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 40.48 Mbit/s
95th percentile per-packet one-way delay: 26.324 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 32.09 Mbit/s
95th percentile per-packet one-way delay: 26.251 ms
Loss rate: 0.34%
```

Run 4: Report of Indigo — Data Link

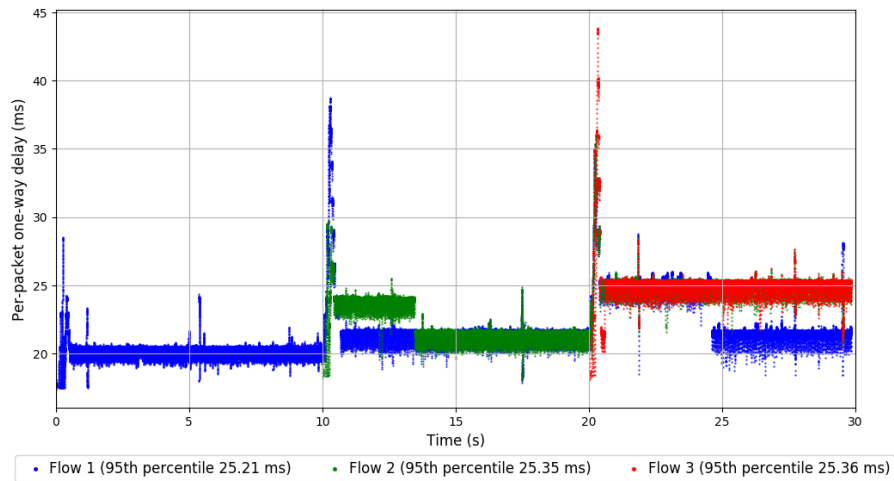
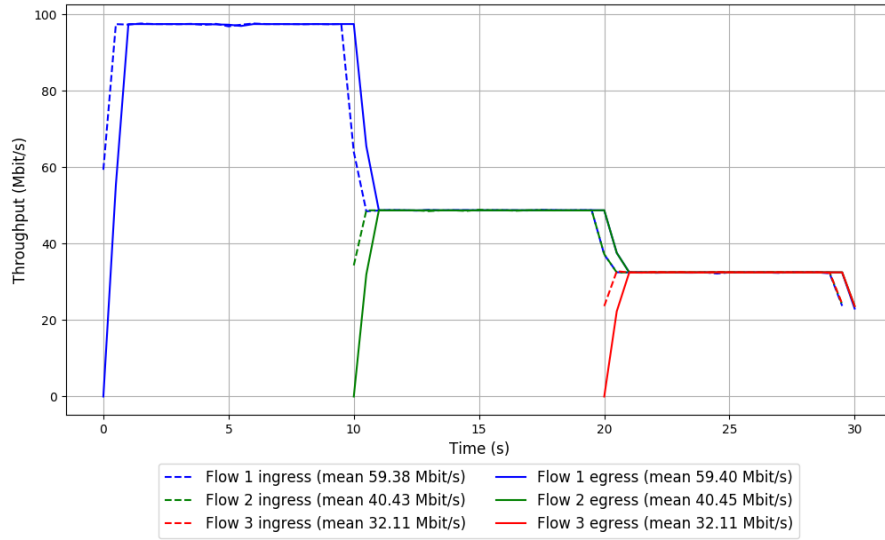


Run 5: Statistics of Indigo

Start at: 2019-03-27 13:46:18
End at: 2019-03-27 13:46:48
Local clock offset: -0.913 ms
Remote clock offset: -2.913 ms

```
# Below is generated by plot.py at 2019-03-27 14:12:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.87 Mbit/s
95th percentile per-packet one-way delay: 25.316 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 59.40 Mbit/s
95th percentile per-packet one-way delay: 25.206 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 40.45 Mbit/s
95th percentile per-packet one-way delay: 25.351 ms
Loss rate: 0.13%
-- Flow 3:
Average throughput: 32.11 Mbit/s
95th percentile per-packet one-way delay: 25.356 ms
Loss rate: 0.34%
```

Run 5: Report of Indigo — Data Link



Run 1: Statistics of Indigo-MusesC3

Start at: 2019-03-27 12:03:27
End at: 2019-03-27 12:03:57
Local clock offset: -0.172 ms
Remote clock offset: -0.871 ms

Below is generated by plot.py at 2019-03-27 14:12:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 84.81 Mbit/s
95th percentile per-packet one-way delay: 30.796 ms
Loss rate: 0.08%

-- Flow 1:

Average throughput: 56.02 Mbit/s
95th percentile per-packet one-way delay: 32.695 ms
Loss rate: 0.06%

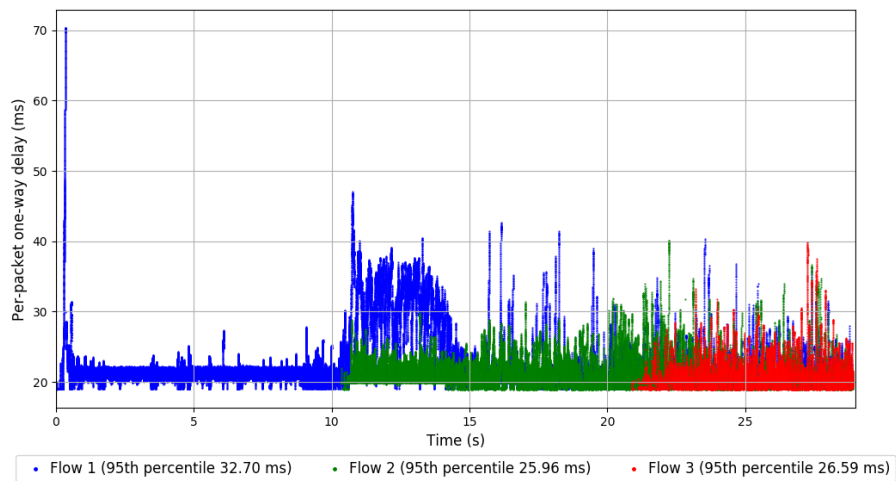
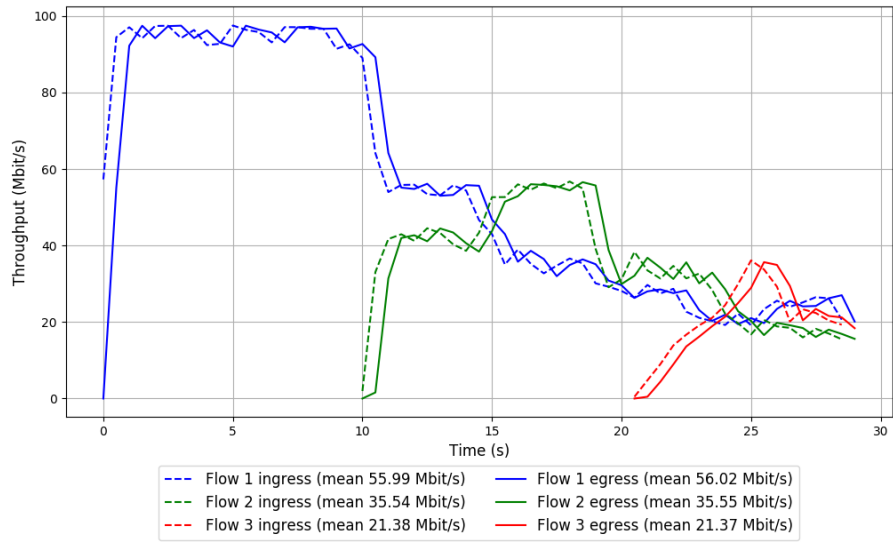
-- Flow 2:

Average throughput: 35.55 Mbit/s
95th percentile per-packet one-way delay: 25.956 ms
Loss rate: 0.06%

-- Flow 3:

Average throughput: 21.37 Mbit/s
95th percentile per-packet one-way delay: 26.590 ms
Loss rate: 0.34%

Run 1: Report of Indigo-MusesC3 — Data Link



Run 2: Statistics of Indigo-MusesC3

Start at: 2019-03-27 12:28:40

End at: 2019-03-27 12:29:10

Local clock offset: -0.573 ms

Remote clock offset: 0.566 ms

Below is generated by plot.py at 2019-03-27 14:12:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 82.52 Mbit/s

95th percentile per-packet one-way delay: 26.193 ms

Loss rate: 0.08%

-- Flow 1:

Average throughput: 55.38 Mbit/s

95th percentile per-packet one-way delay: 24.071 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 33.49 Mbit/s

95th percentile per-packet one-way delay: 27.343 ms

Loss rate: 0.12%

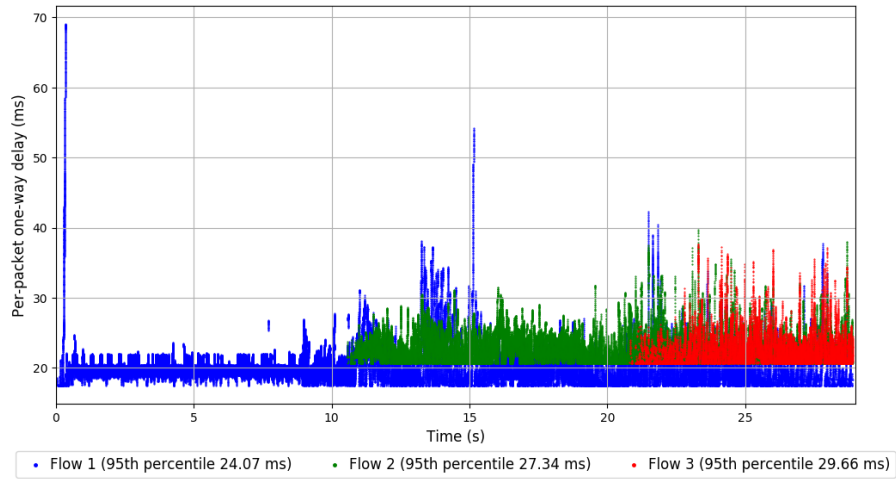
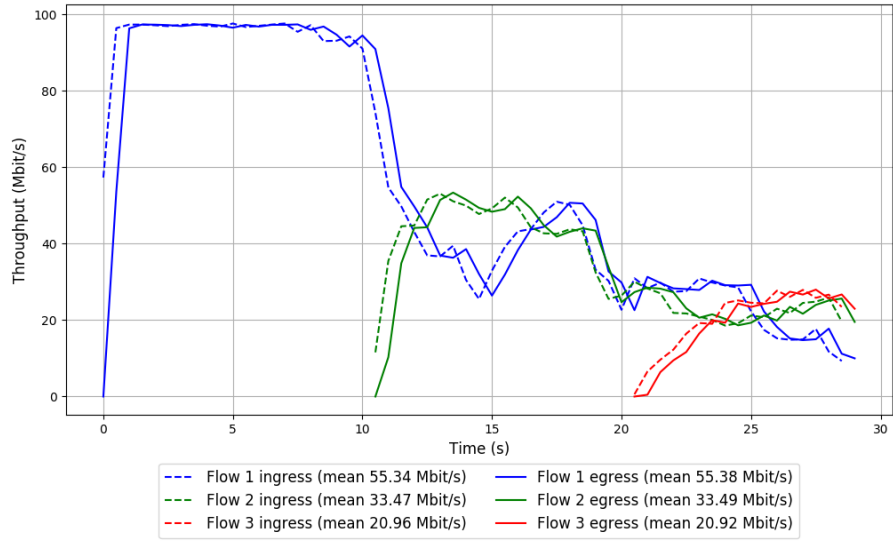
-- Flow 3:

Average throughput: 20.92 Mbit/s

95th percentile per-packet one-way delay: 29.655 ms

Loss rate: 0.56%

Run 2: Report of Indigo-MusesC3 — Data Link



Run 3: Statistics of Indigo-MusesC3

Start at: 2019-03-27 12:53:55
End at: 2019-03-27 12:54:25
Local clock offset: -0.745 ms
Remote clock offset: -0.371 ms

Below is generated by plot.py at 2019-03-27 14:12:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 82.86 Mbit/s
95th percentile per-packet one-way delay: 25.556 ms
Loss rate: 0.06%

-- Flow 1:

Average throughput: 51.32 Mbit/s
95th percentile per-packet one-way delay: 22.696 ms
Loss rate: 0.00%

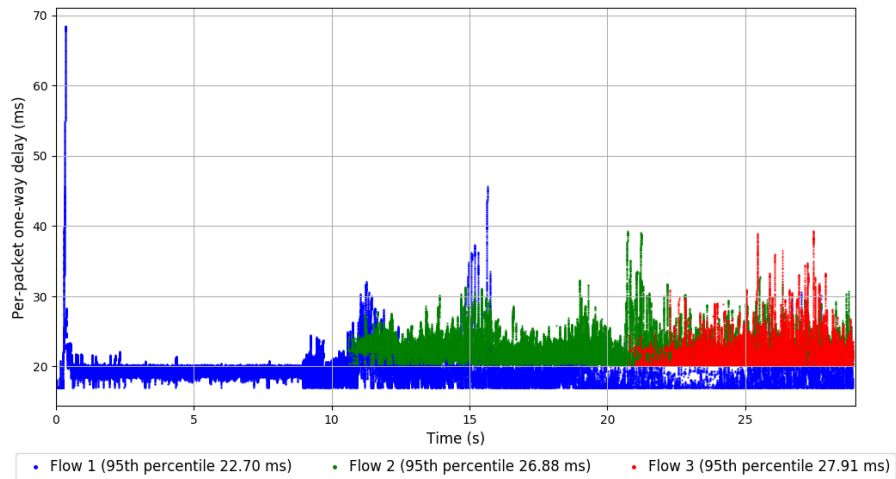
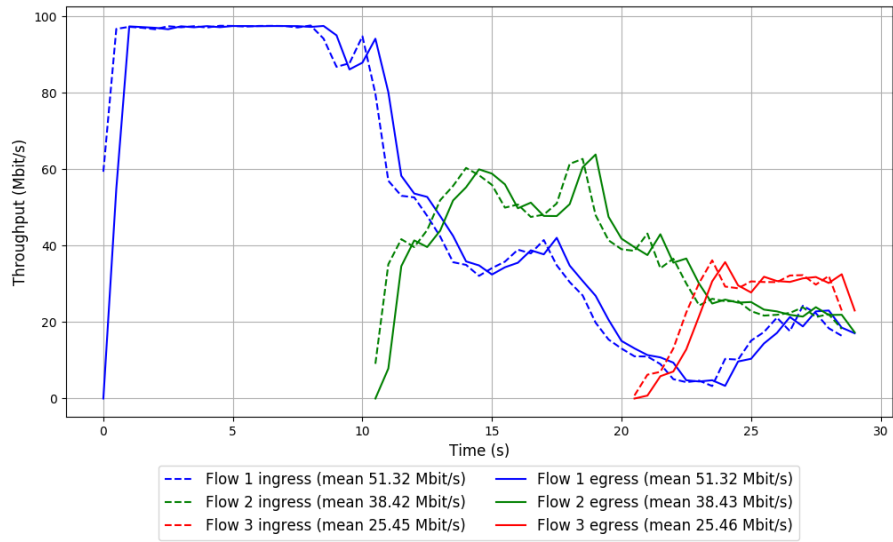
-- Flow 2:

Average throughput: 38.43 Mbit/s
95th percentile per-packet one-way delay: 26.879 ms
Loss rate: 0.13%

-- Flow 3:

Average throughput: 25.46 Mbit/s
95th percentile per-packet one-way delay: 27.914 ms
Loss rate: 0.27%

Run 3: Report of Indigo-MusesC3 — Data Link

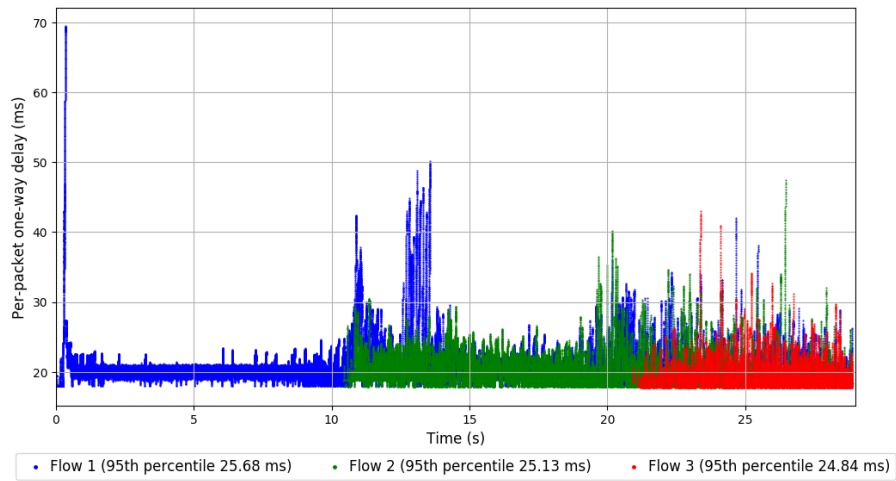
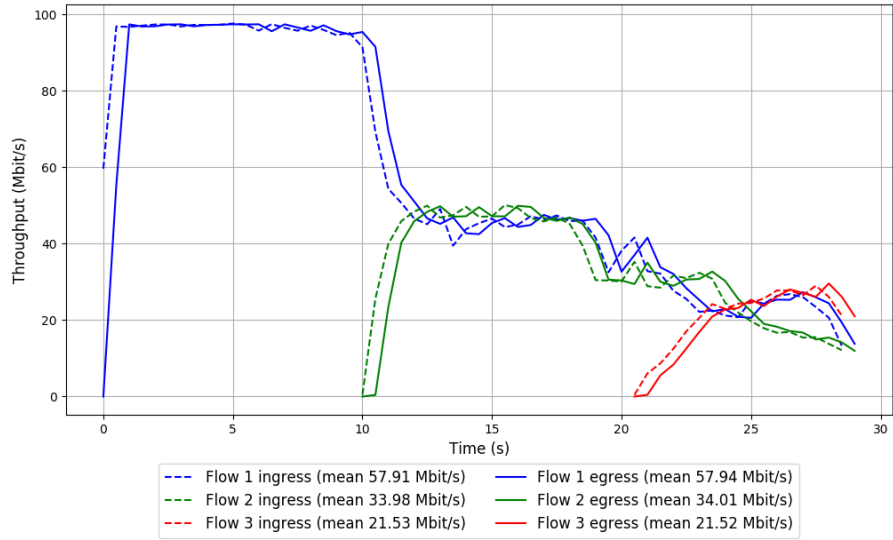


Run 4: Statistics of Indigo-MusesC3

Start at: 2019-03-27 13:19:24
End at: 2019-03-27 13:19:54
Local clock offset: -0.107 ms
Remote clock offset: -1.587 ms

```
# Below is generated by plot.py at 2019-03-27 14:13:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.63 Mbit/s
95th percentile per-packet one-way delay: 25.433 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 57.94 Mbit/s
95th percentile per-packet one-way delay: 25.683 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 34.01 Mbit/s
95th percentile per-packet one-way delay: 25.130 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 21.52 Mbit/s
95th percentile per-packet one-way delay: 24.836 ms
Loss rate: 0.41%
```

Run 4: Report of Indigo-MusesC3 — Data Link

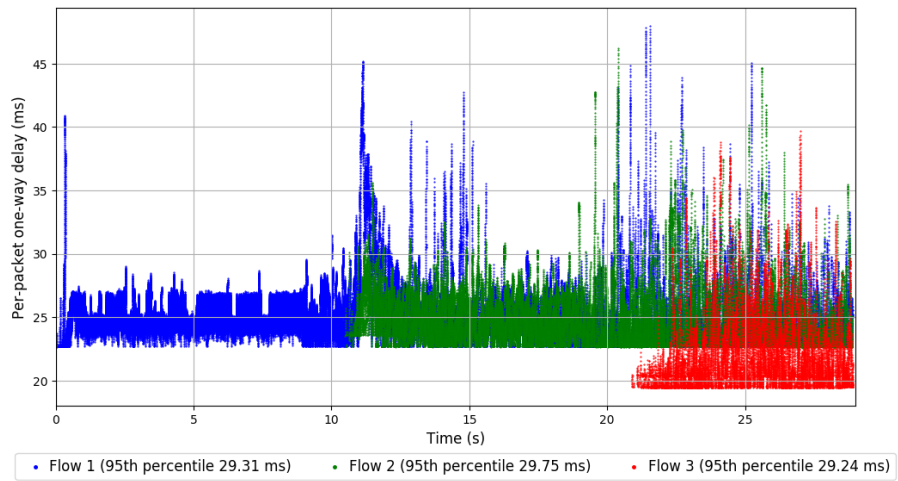
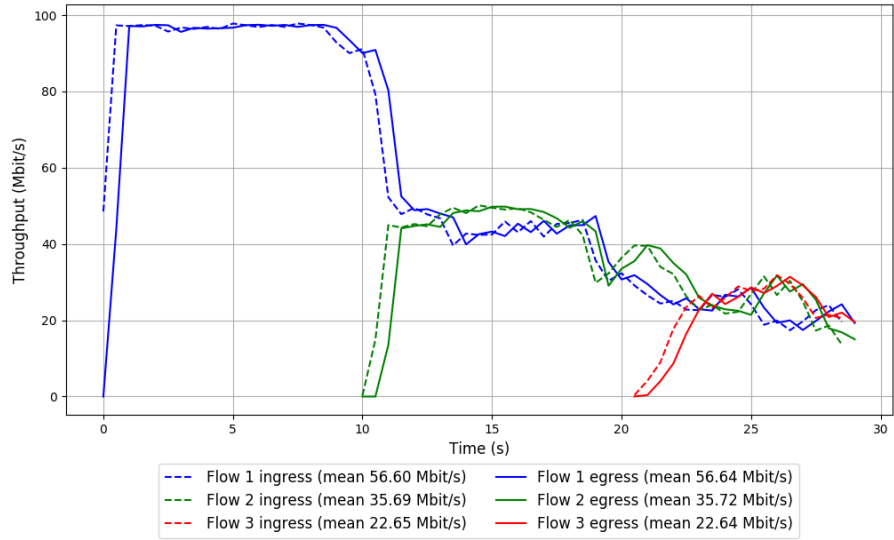


Run 5: Statistics of Indigo-MusesC3

Start at: 2019-03-27 13:45:04
End at: 2019-03-27 13:45:34
Local clock offset: -0.413 ms
Remote clock offset: -4.441 ms

```
# Below is generated by plot.py at 2019-03-27 14:13:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.70 Mbit/s
95th percentile per-packet one-way delay: 29.446 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 56.64 Mbit/s
95th percentile per-packet one-way delay: 29.306 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 35.72 Mbit/s
95th percentile per-packet one-way delay: 29.749 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 22.64 Mbit/s
95th percentile per-packet one-way delay: 29.236 ms
Loss rate: 0.36%
```

Run 5: Report of Indigo-MusesC3 — Data Link



Run 1: Statistics of Indigo-MusesC5

Start at: 2019-03-27 12:01:01

End at: 2019-03-27 12:01:31

Local clock offset: 0.859 ms

Remote clock offset: 0.913 ms

Below is generated by plot.py at 2019-03-27 14:13:38

Datalink statistics

-- Total of 3 flows:

Average throughput: 91.02 Mbit/s

95th percentile per-packet one-way delay: 55.210 ms

Loss rate: 0.85%

-- Flow 1:

Average throughput: 58.66 Mbit/s

95th percentile per-packet one-way delay: 50.393 ms

Loss rate: 0.59%

-- Flow 2:

Average throughput: 36.17 Mbit/s

95th percentile per-packet one-way delay: 42.525 ms

Loss rate: 0.24%

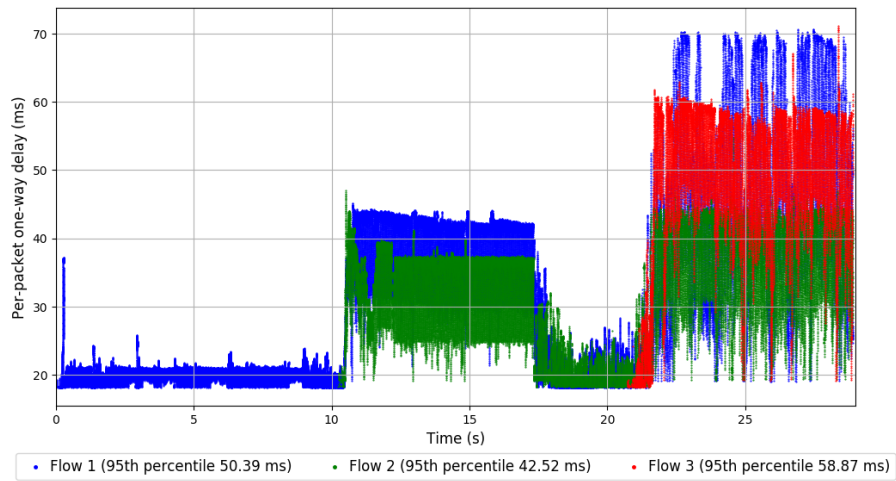
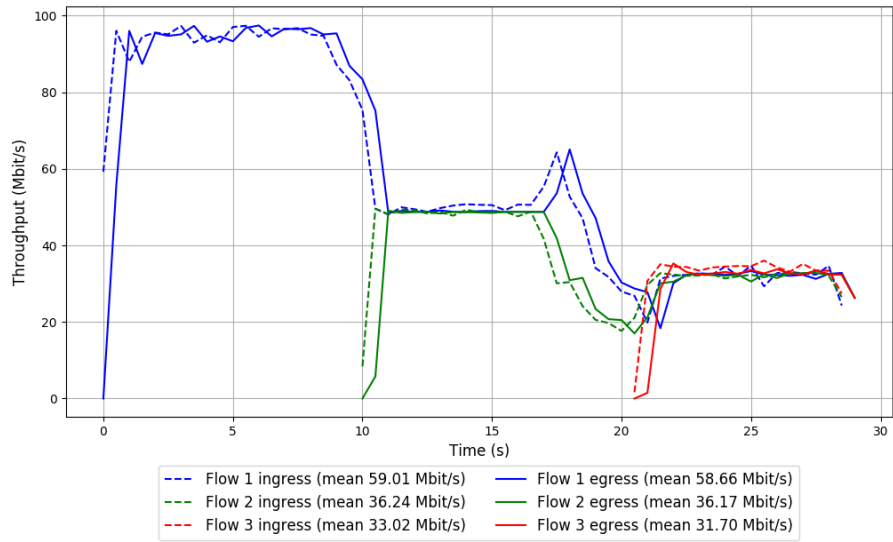
-- Flow 3:

Average throughput: 31.70 Mbit/s

95th percentile per-packet one-way delay: 58.867 ms

Loss rate: 4.00%

Run 1: Report of Indigo-MusesC5 — Data Link



Run 2: Statistics of Indigo-MusesC5

Start at: 2019-03-27 12:26:17

End at: 2019-03-27 12:26:47

Local clock offset: -0.891 ms

Remote clock offset: 0.671 ms

Below is generated by plot.py at 2019-03-27 14:13:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 91.45 Mbit/s

95th percentile per-packet one-way delay: 69.140 ms

Loss rate: 1.60%

-- Flow 1:

Average throughput: 53.37 Mbit/s

95th percentile per-packet one-way delay: 65.943 ms

Loss rate: 1.37%

-- Flow 2:

Average throughput: 45.97 Mbit/s

95th percentile per-packet one-way delay: 73.162 ms

Loss rate: 1.65%

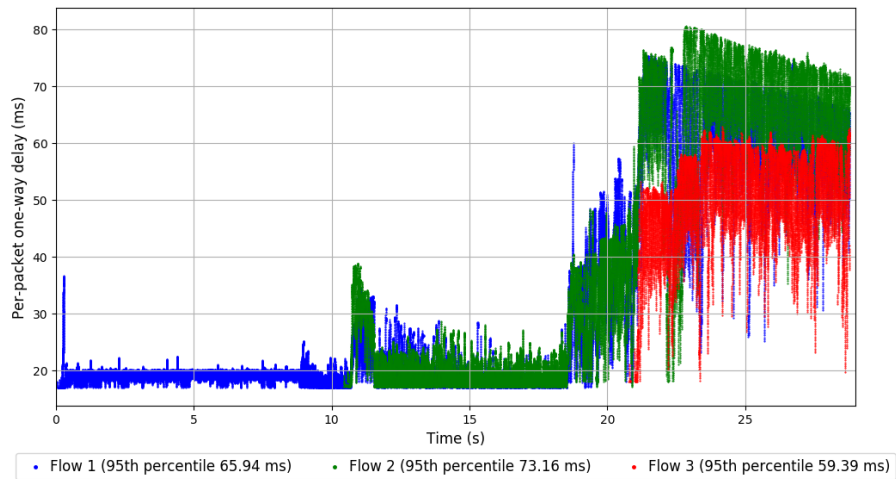
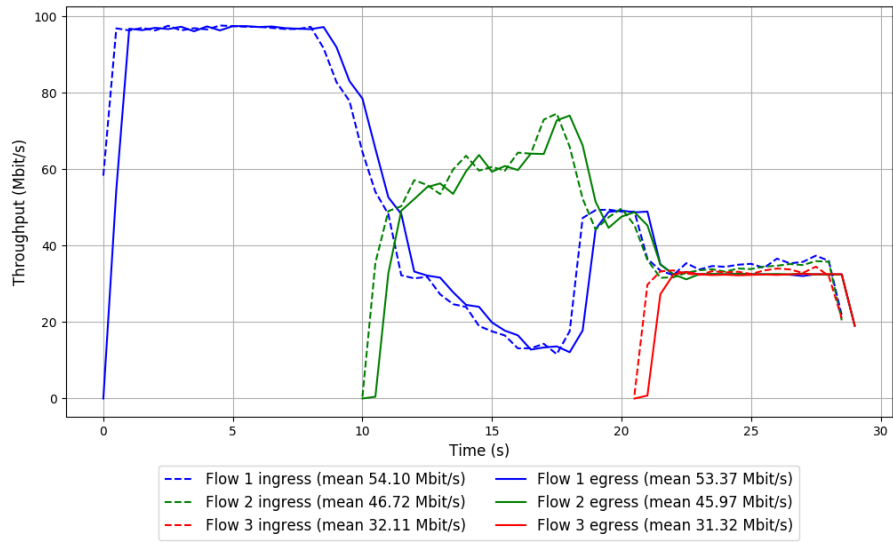
-- Flow 3:

Average throughput: 31.32 Mbit/s

95th percentile per-packet one-way delay: 59.389 ms

Loss rate: 2.80%

Run 2: Report of Indigo-MusesC5 — Data Link



Run 3: Statistics of Indigo-MusesC5

Start at: 2019-03-27 12:51:26
End at: 2019-03-27 12:51:56
Local clock offset: -0.596 ms
Remote clock offset: -0.373 ms

Below is generated by plot.py at 2019-03-27 14:13:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 95.15 Mbit/s
95th percentile per-packet one-way delay: 49.399 ms
Loss rate: 0.74%

-- Flow 1:

Average throughput: 61.38 Mbit/s
95th percentile per-packet one-way delay: 48.066 ms
Loss rate: 0.75%

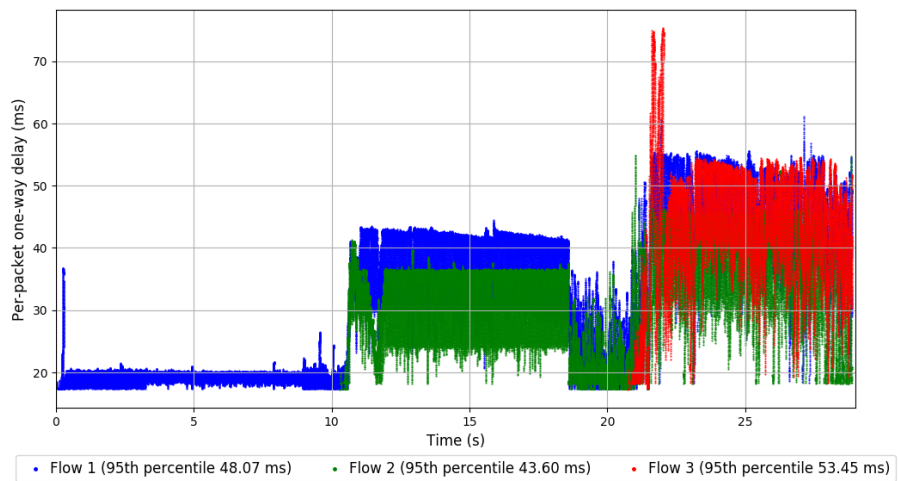
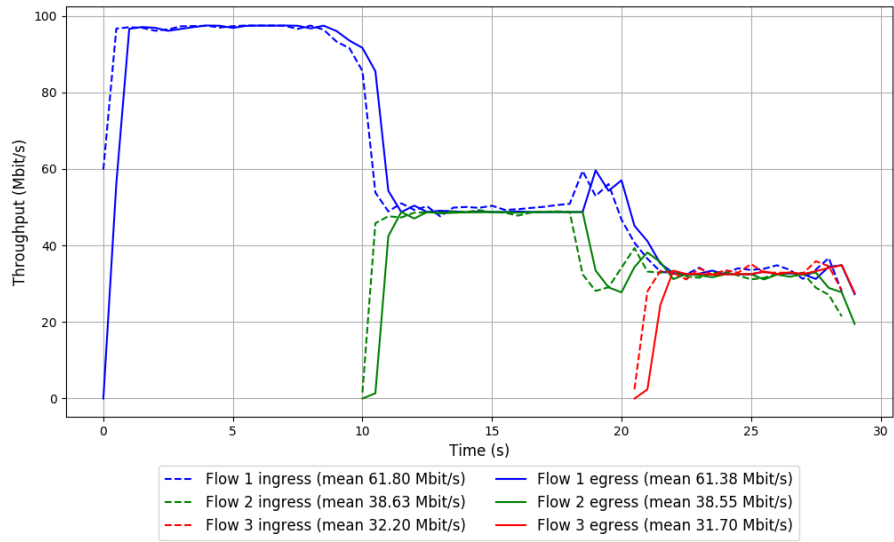
-- Flow 2:

Average throughput: 38.55 Mbit/s
95th percentile per-packet one-way delay: 43.598 ms
Loss rate: 0.32%

-- Flow 3:

Average throughput: 31.70 Mbit/s
95th percentile per-packet one-way delay: 53.451 ms
Loss rate: 1.80%

Run 3: Report of Indigo-MusesC5 — Data Link

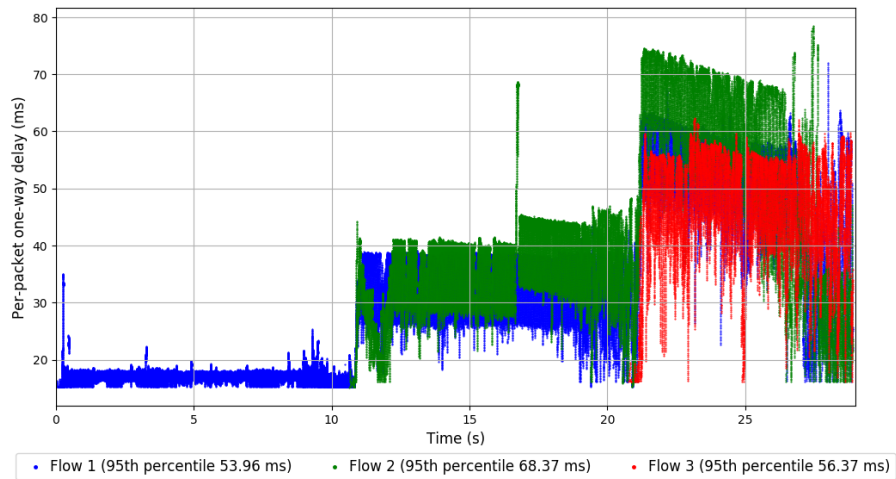
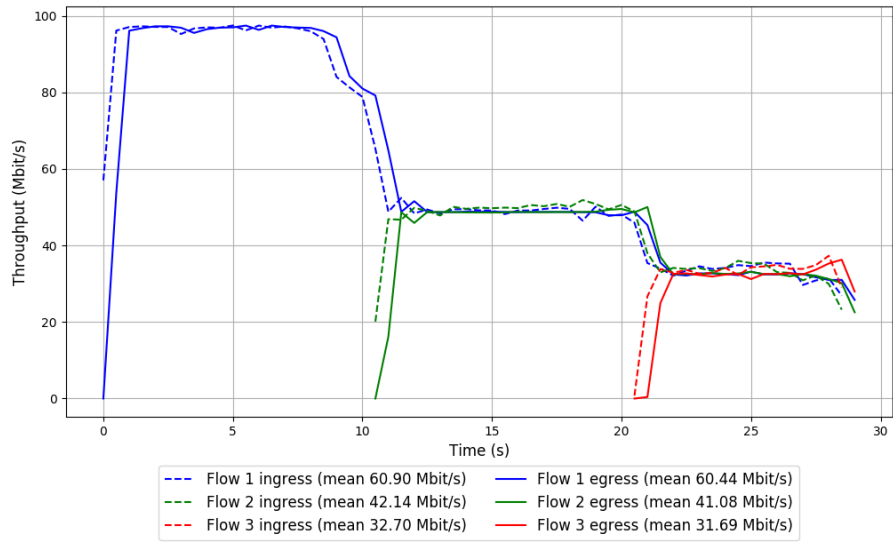


Run 4: Statistics of Indigo-MusesC5

Start at: 2019-03-27 13:16:58
End at: 2019-03-27 13:17:28
Local clock offset: -2.519 ms
Remote clock offset: -1.379 ms

```
# Below is generated by plot.py at 2019-03-27 14:13:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.32 Mbit/s
95th percentile per-packet one-way delay: 59.806 ms
Loss rate: 1.54%
-- Flow 1:
Average throughput: 60.44 Mbit/s
95th percentile per-packet one-way delay: 53.958 ms
Loss rate: 0.78%
-- Flow 2:
Average throughput: 41.08 Mbit/s
95th percentile per-packet one-way delay: 68.372 ms
Loss rate: 2.62%
-- Flow 3:
Average throughput: 31.69 Mbit/s
95th percentile per-packet one-way delay: 56.367 ms
Loss rate: 3.40%
```

Run 4: Report of Indigo-MusesC5 — Data Link



Run 5: Statistics of Indigo-MusesC5

Start at: 2019-03-27 13:42:33
End at: 2019-03-27 13:43:03
Local clock offset: 0.023 ms
Remote clock offset: -4.071 ms

Below is generated by plot.py at 2019-03-27 14:13:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 91.33 Mbit/s
95th percentile per-packet one-way delay: 52.395 ms
Loss rate: 0.87%

-- Flow 1:

Average throughput: 54.57 Mbit/s
95th percentile per-packet one-way delay: 40.097 ms
Loss rate: 0.09%

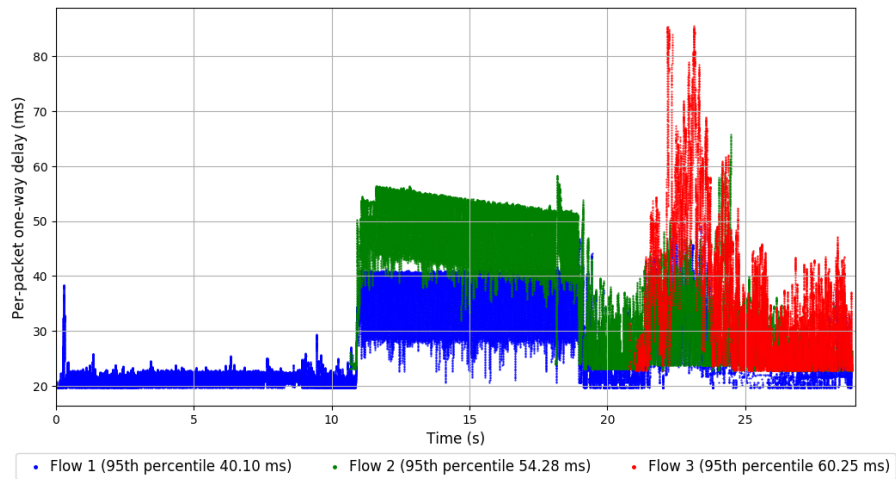
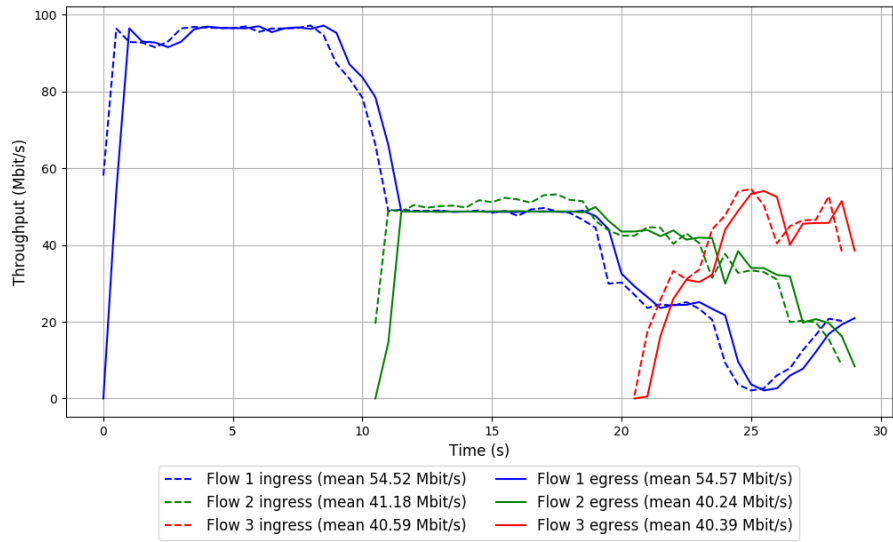
-- Flow 2:

Average throughput: 40.24 Mbit/s
95th percentile per-packet one-way delay: 54.284 ms
Loss rate: 2.50%

-- Flow 3:

Average throughput: 40.39 Mbit/s
95th percentile per-packet one-way delay: 60.252 ms
Loss rate: 0.85%

Run 5: Report of Indigo-MusesC5 — Data Link



Run 1: Statistics of Indigo-MusesD

Start at: 2019-03-27 12:11:00

End at: 2019-03-27 12:11:30

Local clock offset: 1.016 ms

Remote clock offset: 0.59 ms

Below is generated by plot.py at 2019-03-27 14:13:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 84.57 Mbit/s

95th percentile per-packet one-way delay: 26.542 ms

Loss rate: 0.10%

-- Flow 1:

Average throughput: 50.91 Mbit/s

95th percentile per-packet one-way delay: 23.541 ms

Loss rate: 0.09%

-- Flow 2:

Average throughput: 40.83 Mbit/s

95th percentile per-packet one-way delay: 27.096 ms

Loss rate: 0.00%

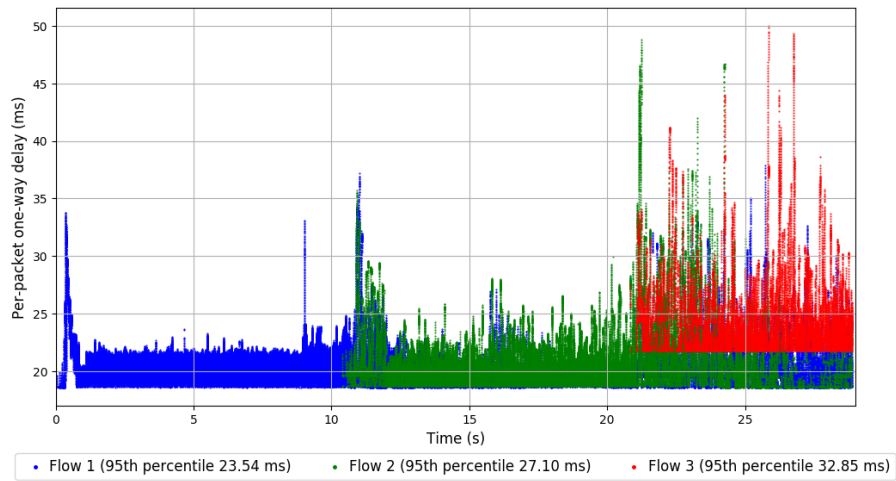
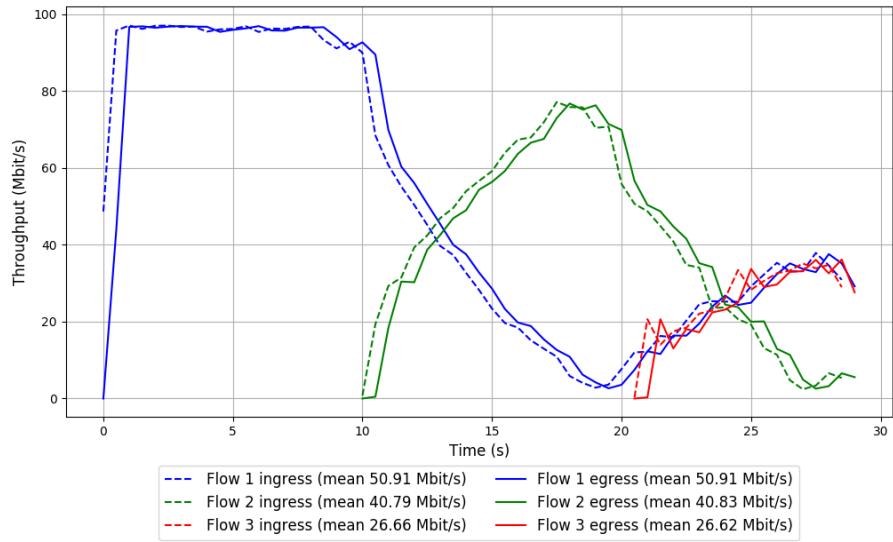
-- Flow 3:

Average throughput: 26.62 Mbit/s

95th percentile per-packet one-way delay: 32.847 ms

Loss rate: 0.51%

Run 1: Report of Indigo-MusesD — Data Link



Run 2: Statistics of Indigo-MusesD

Start at: 2019-03-27 12:35:55

End at: 2019-03-27 12:36:25

Local clock offset: -0.613 ms

Remote clock offset: 0.352 ms

Below is generated by plot.py at 2019-03-27 14:13:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 86.22 Mbit/s

95th percentile per-packet one-way delay: 71.565 ms

Loss rate: 0.72%

-- Flow 1:

Average throughput: 47.25 Mbit/s

95th percentile per-packet one-way delay: 27.314 ms

Loss rate: 0.05%

-- Flow 2:

Average throughput: 48.43 Mbit/s

95th percentile per-packet one-way delay: 93.242 ms

Loss rate: 1.33%

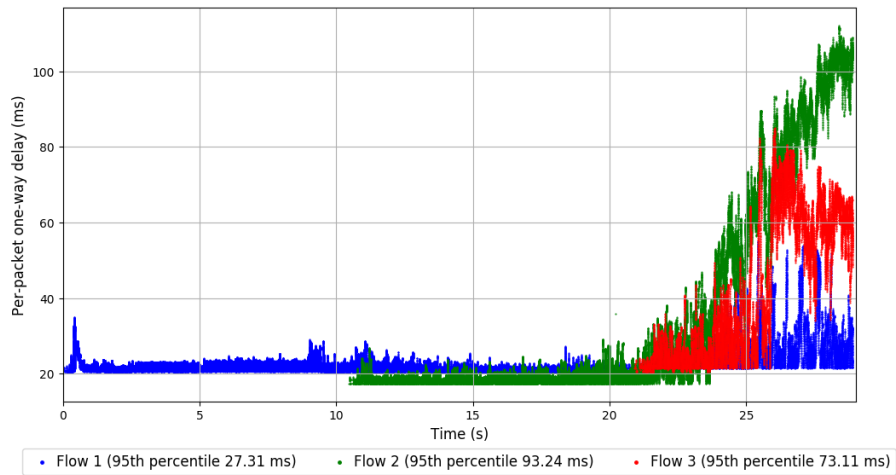
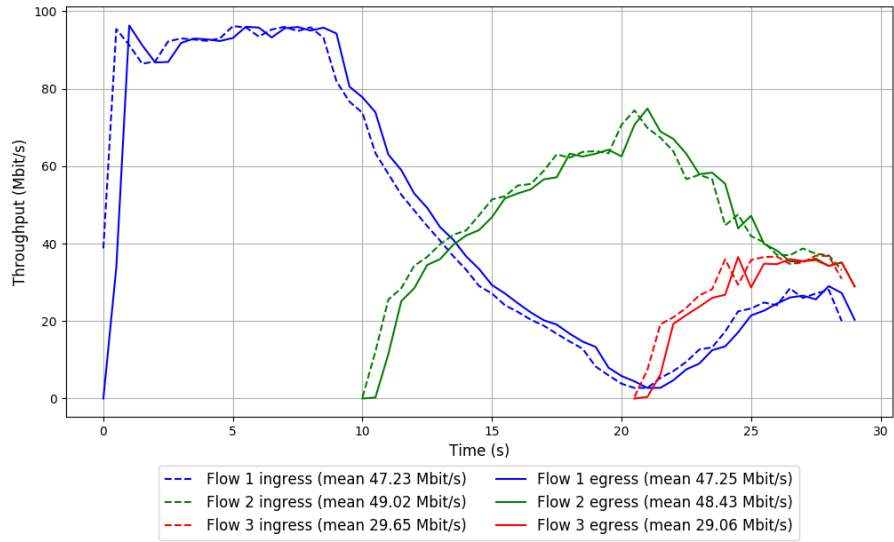
-- Flow 3:

Average throughput: 29.06 Mbit/s

95th percentile per-packet one-way delay: 73.105 ms

Loss rate: 2.28%

Run 2: Report of Indigo-MusesD — Data Link

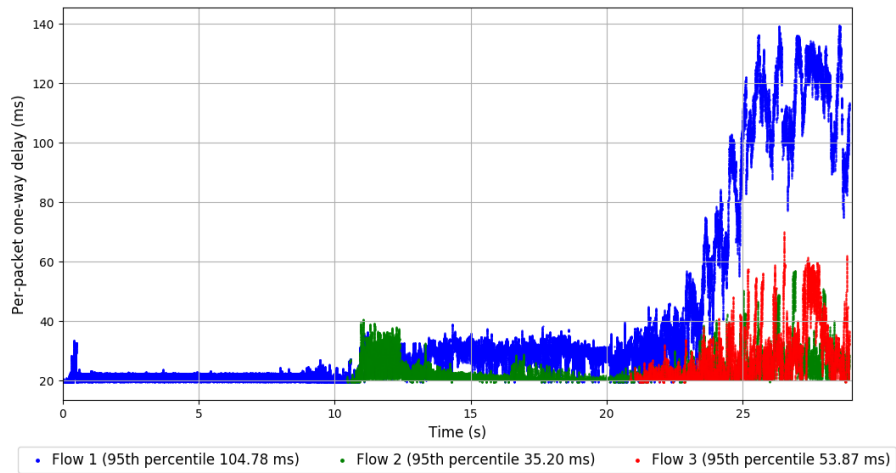
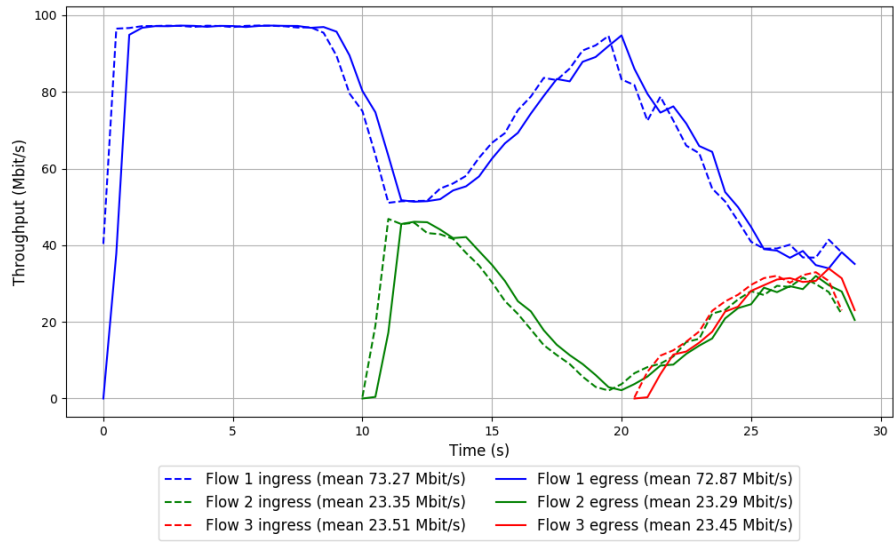


Run 3: Statistics of Indigo-MusesD

Start at: 2019-03-27 13:01:25
End at: 2019-03-27 13:01:55
Local clock offset: 0.434 ms
Remote clock offset: -2.009 ms

```
# Below is generated by plot.py at 2019-03-27 14:14:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.31 Mbit/s
95th percentile per-packet one-way delay: 96.734 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 72.87 Mbit/s
95th percentile per-packet one-way delay: 104.781 ms
Loss rate: 0.65%
-- Flow 2:
Average throughput: 23.29 Mbit/s
95th percentile per-packet one-way delay: 35.195 ms
Loss rate: 0.37%
-- Flow 3:
Average throughput: 23.45 Mbit/s
95th percentile per-packet one-way delay: 53.872 ms
Loss rate: 0.58%
```

Run 3: Report of Indigo-MusesD — Data Link

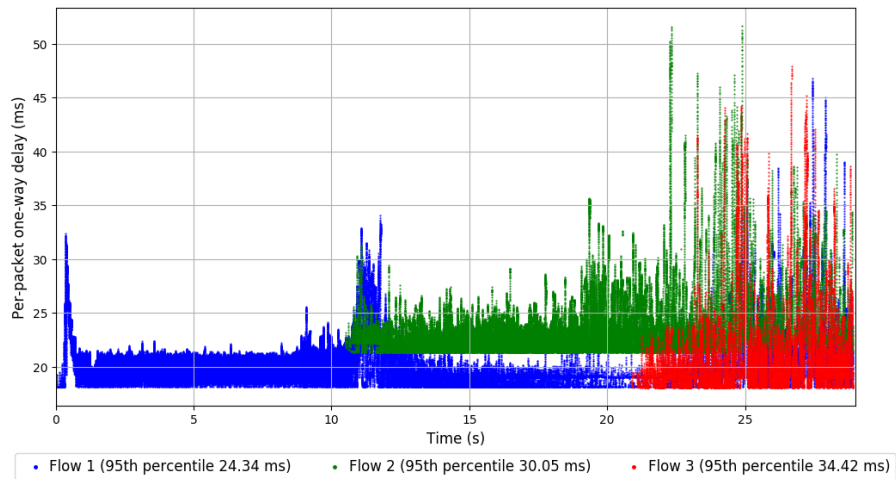
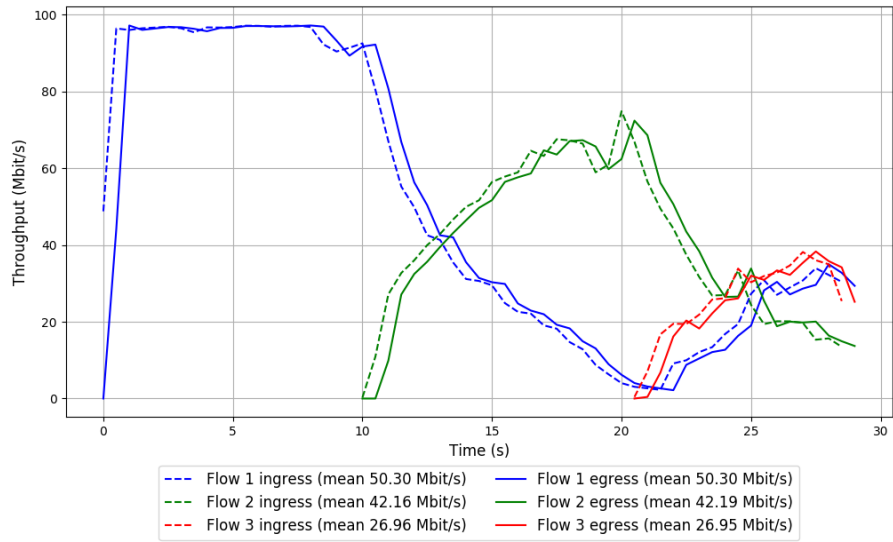


Run 4: Statistics of Indigo-MusesD

Start at: 2019-03-27 13:26:55
End at: 2019-03-27 13:27:25
Local clock offset: -0.575 ms
Remote clock offset: -2.457 ms

```
# Below is generated by plot.py at 2019-03-27 14:14:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.72 Mbit/s
95th percentile per-packet one-way delay: 27.787 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 50.30 Mbit/s
95th percentile per-packet one-way delay: 24.335 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 42.19 Mbit/s
95th percentile per-packet one-way delay: 30.046 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 26.95 Mbit/s
95th percentile per-packet one-way delay: 34.417 ms
Loss rate: 0.42%
```

Run 4: Report of Indigo-MusesD — Data Link



Run 5: Statistics of Indigo-MusesD

Start at: 2019-03-27 13:52:30
End at: 2019-03-27 13:53:00
Local clock offset: 0.17 ms
Remote clock offset: -3.223 ms

Below is generated by plot.py at 2019-03-27 14:14:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 84.71 Mbit/s
95th percentile per-packet one-way delay: 28.992 ms
Loss rate: 0.10%

-- Flow 1:

Average throughput: 51.38 Mbit/s
95th percentile per-packet one-way delay: 26.469 ms
Loss rate: 0.05%

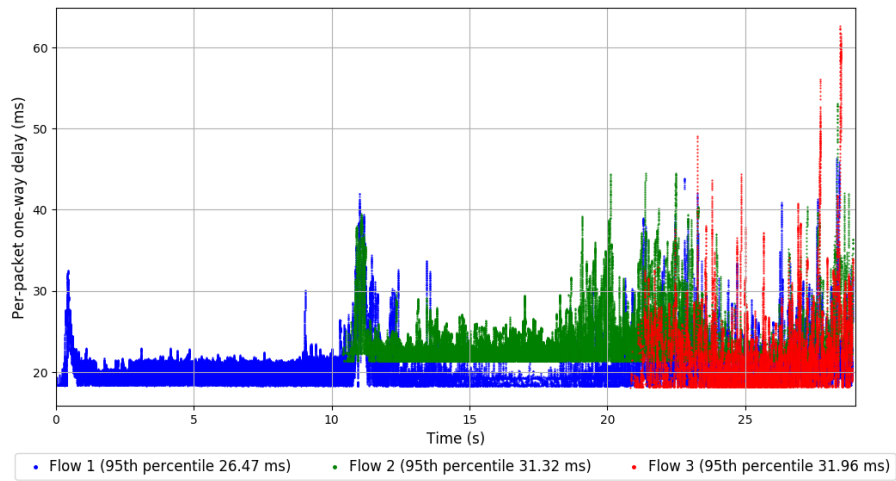
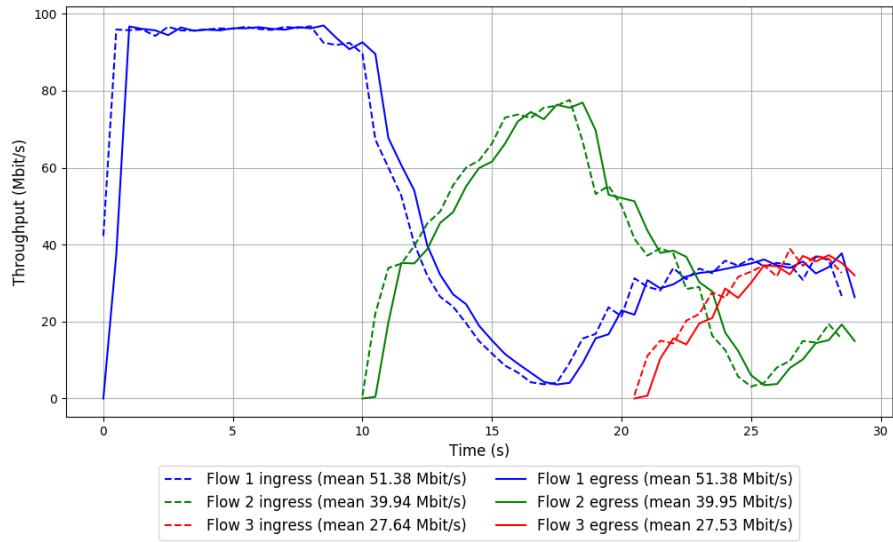
-- Flow 2:

Average throughput: 39.95 Mbit/s
95th percentile per-packet one-way delay: 31.315 ms
Loss rate: 0.04%

-- Flow 3:

Average throughput: 27.53 Mbit/s
95th percentile per-packet one-way delay: 31.964 ms
Loss rate: 0.69%

Run 5: Report of Indigo-MusesD — Data Link



Run 1: Statistics of Indigo-MuseST

Start at: 2019-03-27 12:08:27

End at: 2019-03-27 12:08:57

Local clock offset: 0.509 ms

Remote clock offset: 0.294 ms

Below is generated by plot.py at 2019-03-27 14:14:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 94.54 Mbit/s

95th percentile per-packet one-way delay: 80.846 ms

Loss rate: 0.98%

-- Flow 1:

Average throughput: 60.79 Mbit/s

95th percentile per-packet one-way delay: 63.259 ms

Loss rate: 0.66%

-- Flow 2:

Average throughput: 40.51 Mbit/s

95th percentile per-packet one-way delay: 88.815 ms

Loss rate: 1.26%

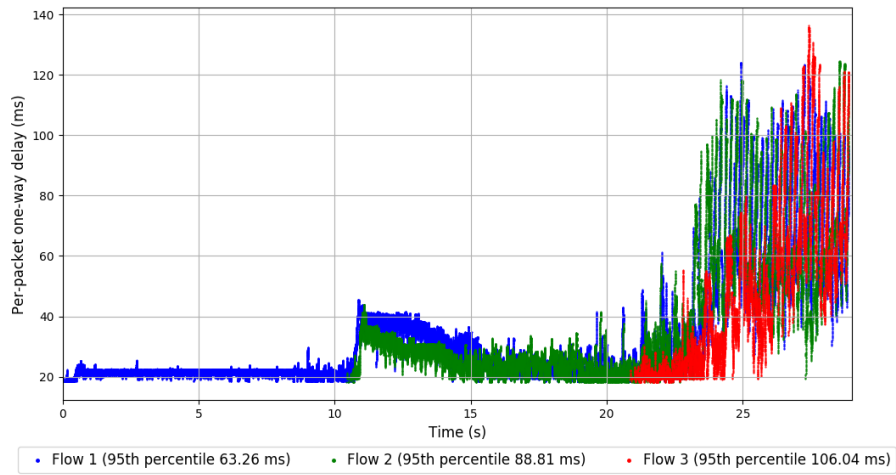
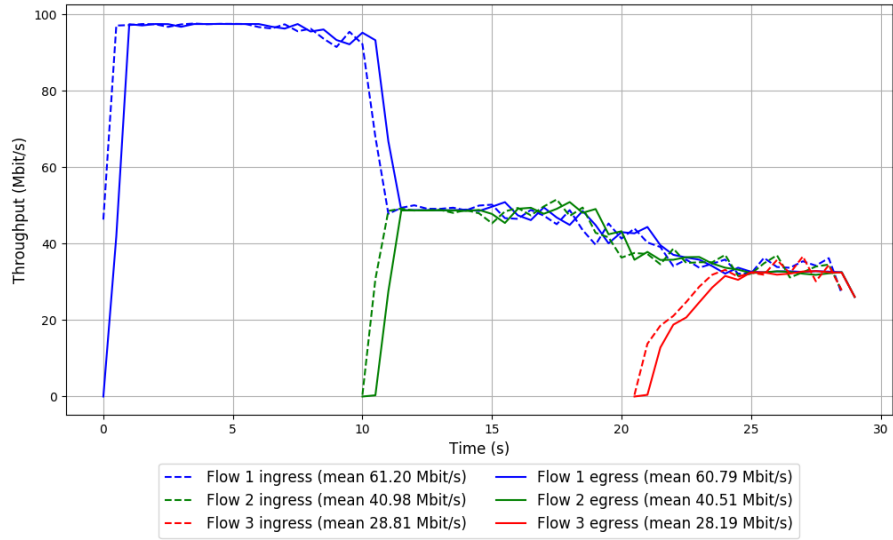
-- Flow 3:

Average throughput: 28.19 Mbit/s

95th percentile per-packet one-way delay: 106.037 ms

Loss rate: 2.44%

Run 1: Report of Indigo-MusesT — Data Link

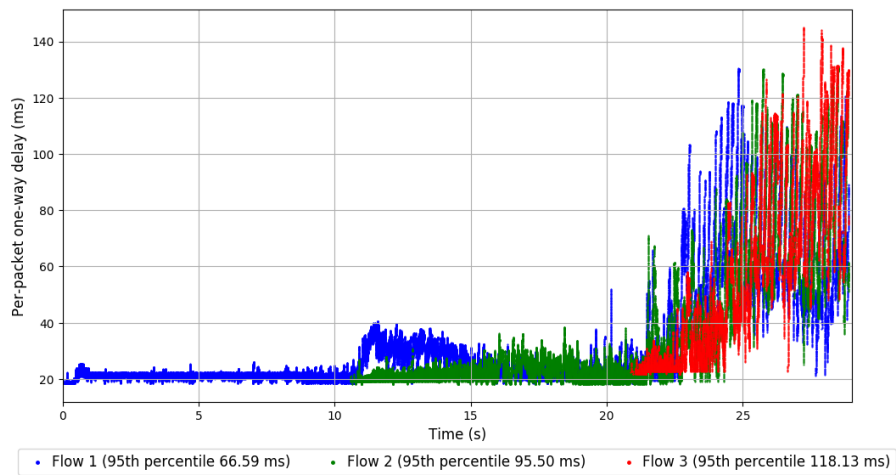
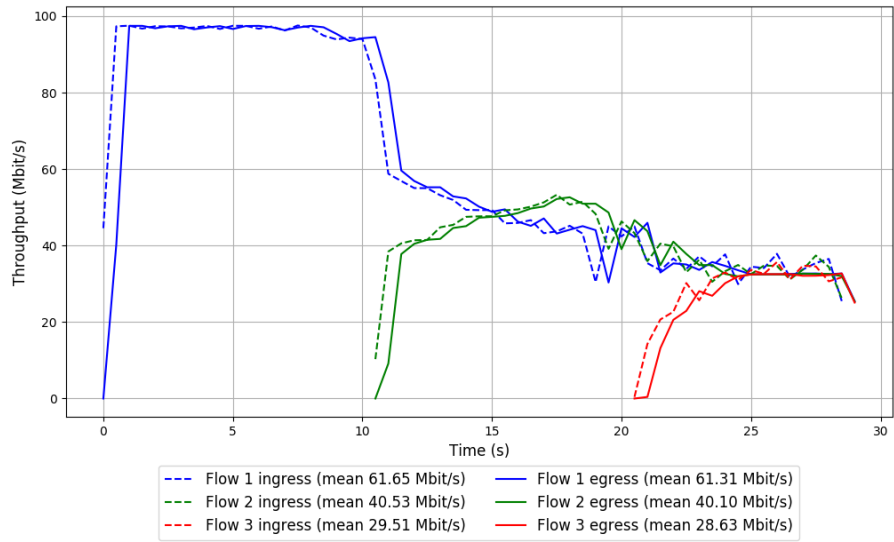


Run 2: Statistics of Indigo-MuseST

Start at: 2019-03-27 12:33:27
End at: 2019-03-27 12:33:57
Local clock offset: -0.64 ms
Remote clock offset: -0.322 ms

Below is generated by plot.py at 2019-03-27 14:14:47
Datalink statistics
-- Total of 3 flows:
Average throughput: 94.69 Mbit/s
95th percentile per-packet one-way delay: 87.844 ms
Loss rate: 1.01%
-- Flow 1:
Average throughput: 61.31 Mbit/s
95th percentile per-packet one-way delay: 66.591 ms
Loss rate: 0.63%
-- Flow 2:
Average throughput: 40.10 Mbit/s
95th percentile per-packet one-way delay: 95.498 ms
Loss rate: 1.20%
-- Flow 3:
Average throughput: 28.63 Mbit/s
95th percentile per-packet one-way delay: 118.133 ms
Loss rate: 3.29%

Run 2: Report of Indigo-MusesT — Data Link



Run 3: Statistics of Indigo-MuseST

Start at: 2019-03-27 12:58:55

End at: 2019-03-27 12:59:25

Local clock offset: 0.503 ms

Remote clock offset: -1.05 ms

Below is generated by plot.py at 2019-03-27 14:14:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 94.64 Mbit/s

95th percentile per-packet one-way delay: 90.241 ms

Loss rate: 1.29%

-- Flow 1:

Average throughput: 60.78 Mbit/s

95th percentile per-packet one-way delay: 76.554 ms

Loss rate: 0.96%

-- Flow 2:

Average throughput: 39.62 Mbit/s

95th percentile per-packet one-way delay: 91.278 ms

Loss rate: 1.29%

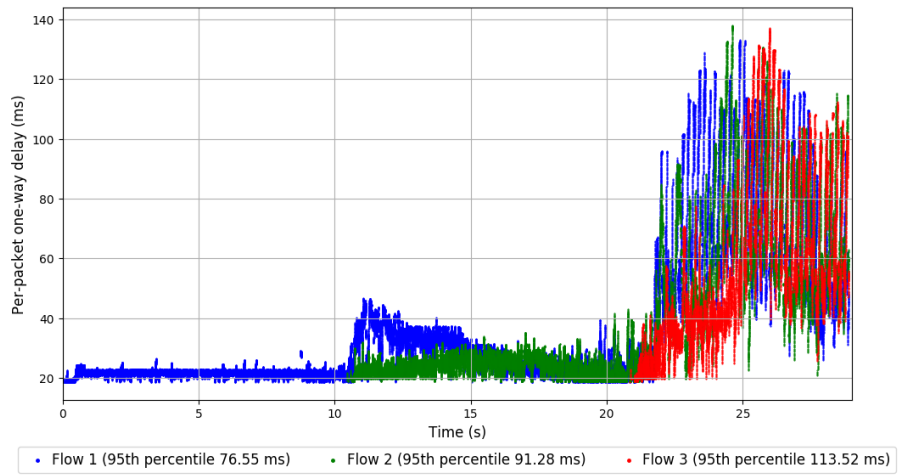
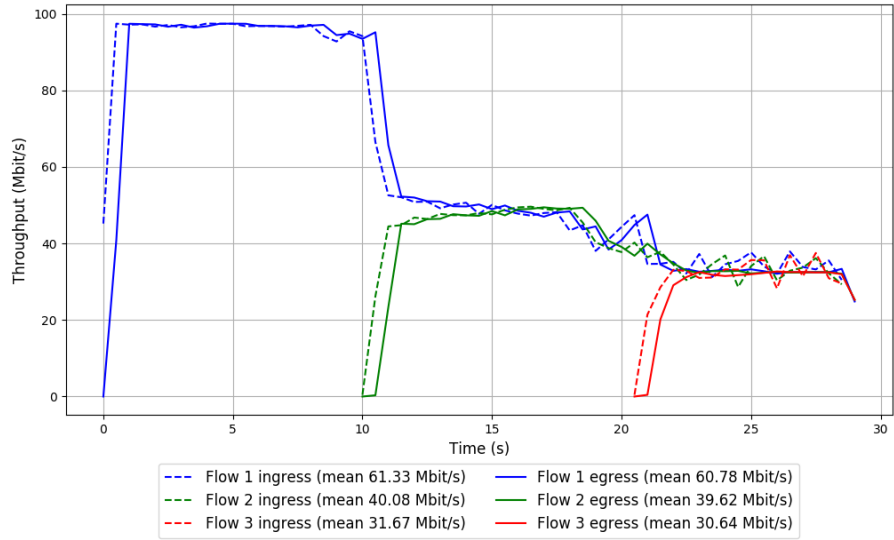
-- Flow 3:

Average throughput: 30.64 Mbit/s

95th percentile per-packet one-way delay: 113.520 ms

Loss rate: 3.55%

Run 3: Report of Indigo-MusesT — Data Link

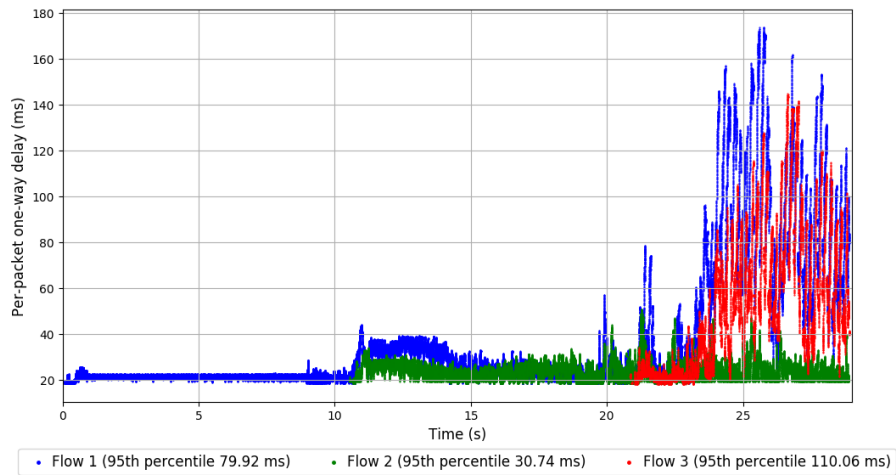
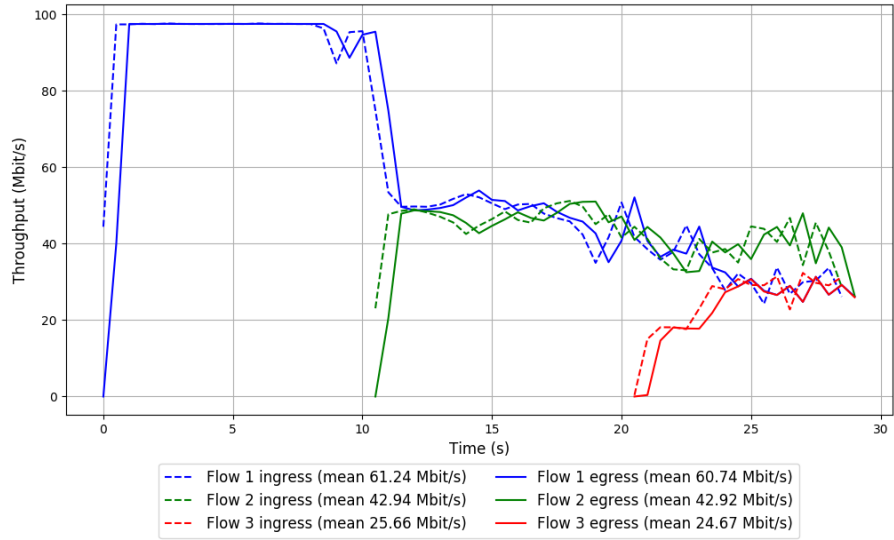


Run 4: Statistics of Indigo-MuseST

Start at: 2019-03-27 13:24:23
End at: 2019-03-27 13:24:53
Local clock offset: 0.125 ms
Remote clock offset: -2.007 ms

```
# Below is generated by plot.py at 2019-03-27 14:14:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.92 Mbit/s
95th percentile per-packet one-way delay: 77.219 ms
Loss rate: 0.87%
-- Flow 1:
Average throughput: 60.74 Mbit/s
95th percentile per-packet one-way delay: 79.922 ms
Loss rate: 0.79%
-- Flow 2:
Average throughput: 42.92 Mbit/s
95th percentile per-packet one-way delay: 30.744 ms
Loss rate: 0.23%
-- Flow 3:
Average throughput: 24.67 Mbit/s
95th percentile per-packet one-way delay: 110.058 ms
Loss rate: 4.02%
```

Run 4: Report of Indigo-MusesT — Data Link



Run 5: Statistics of Indigo-MuseST

Start at: 2019-03-27 13:50:00
End at: 2019-03-27 13:50:30
Local clock offset: -0.623 ms
Remote clock offset: -3.167 ms

Below is generated by plot.py at 2019-03-27 14:14:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 94.34 Mbit/s
95th percentile per-packet one-way delay: 86.249 ms
Loss rate: 0.96%

-- Flow 1:

Average throughput: 60.23 Mbit/s
95th percentile per-packet one-way delay: 75.873 ms
Loss rate: 0.77%

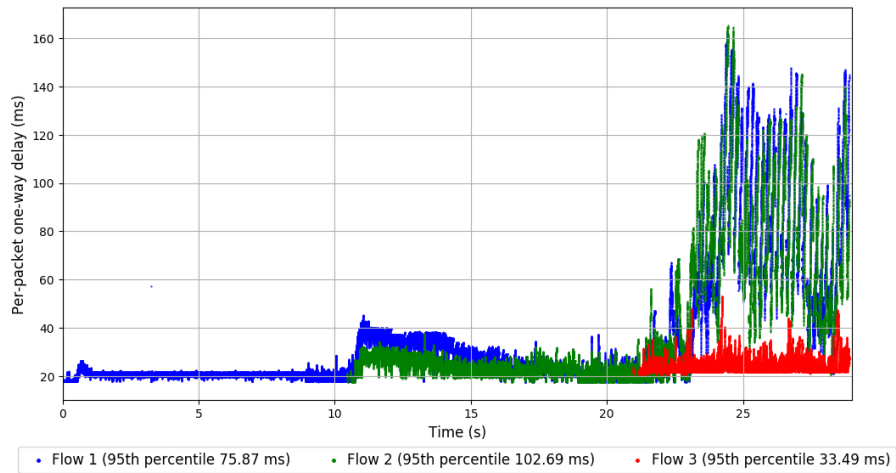
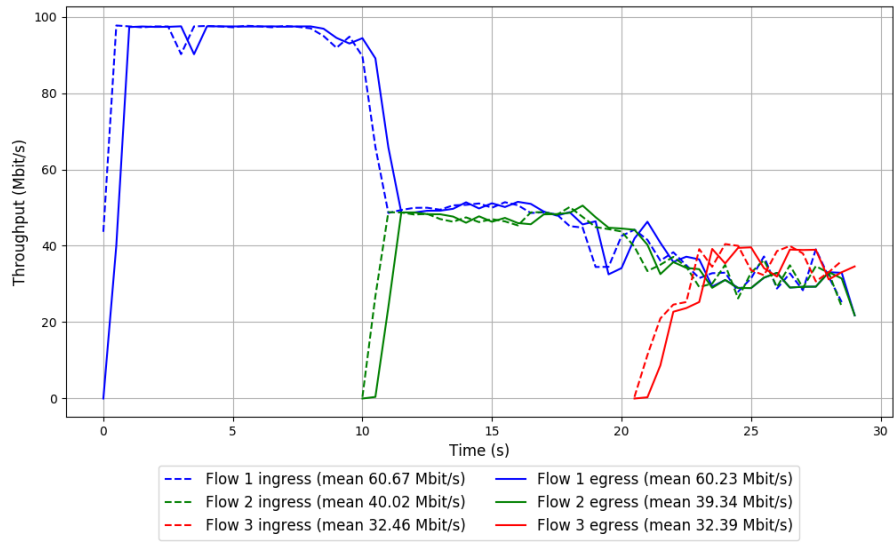
-- Flow 2:

Average throughput: 39.34 Mbit/s
95th percentile per-packet one-way delay: 102.688 ms
Loss rate: 1.54%

-- Flow 3:

Average throughput: 32.39 Mbit/s
95th percentile per-packet one-way delay: 33.492 ms
Loss rate: 0.55%

Run 5: Report of Indigo-MusesT — Data Link



Run 1: Statistics of LEDBAT

Start at: 2019-03-27 12:16:50
End at: 2019-03-27 12:17:20
Local clock offset: 0.558 ms
Remote clock offset: -1.147 ms

Below is generated by plot.py at 2019-03-27 14:15:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 89.11 Mbit/s
95th percentile per-packet one-way delay: 31.461 ms
Loss rate: 0.14%

-- Flow 1:

Average throughput: 52.53 Mbit/s
95th percentile per-packet one-way delay: 31.375 ms
Loss rate: 0.08%

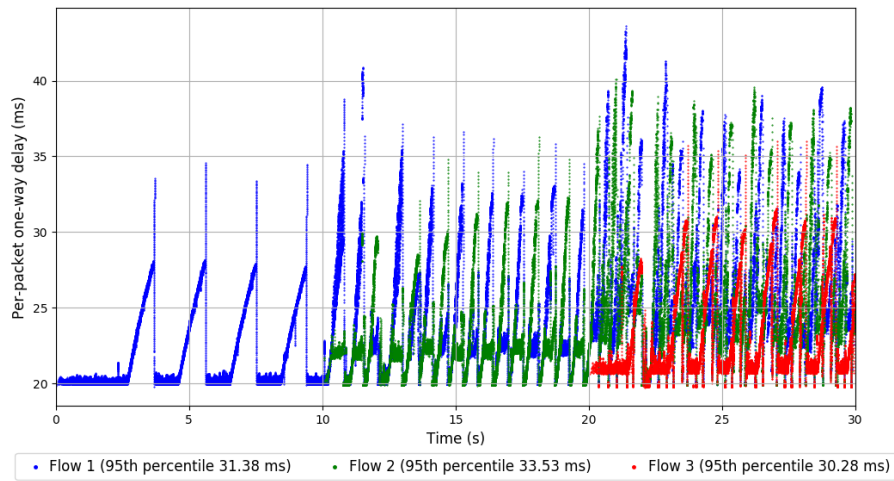
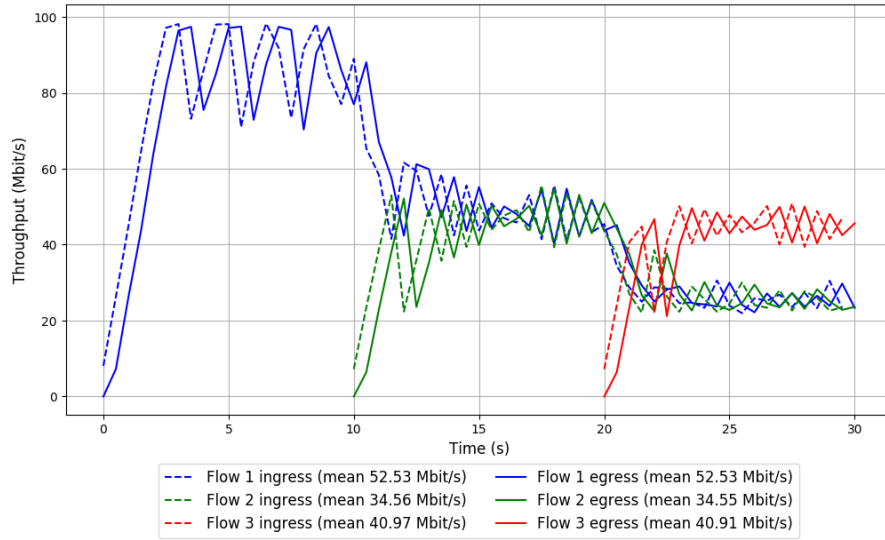
-- Flow 2:

Average throughput: 34.55 Mbit/s
95th percentile per-packet one-way delay: 33.535 ms
Loss rate: 0.14%

-- Flow 3:

Average throughput: 40.91 Mbit/s
95th percentile per-packet one-way delay: 30.283 ms
Loss rate: 0.40%

Run 1: Report of LEDBAT — Data Link



Run 2: Statistics of LEDBAT

Start at: 2019-03-27 12:41:46

End at: 2019-03-27 12:42:16

Local clock offset: -0.601 ms

Remote clock offset: 0.071 ms

Below is generated by plot.py at 2019-03-27 14:15:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 89.30 Mbit/s

95th percentile per-packet one-way delay: 29.089 ms

Loss rate: 0.13%

-- Flow 1:

Average throughput: 53.71 Mbit/s

95th percentile per-packet one-way delay: 28.405 ms

Loss rate: 0.06%

-- Flow 2:

Average throughput: 38.29 Mbit/s

95th percentile per-packet one-way delay: 29.890 ms

Loss rate: 0.15%

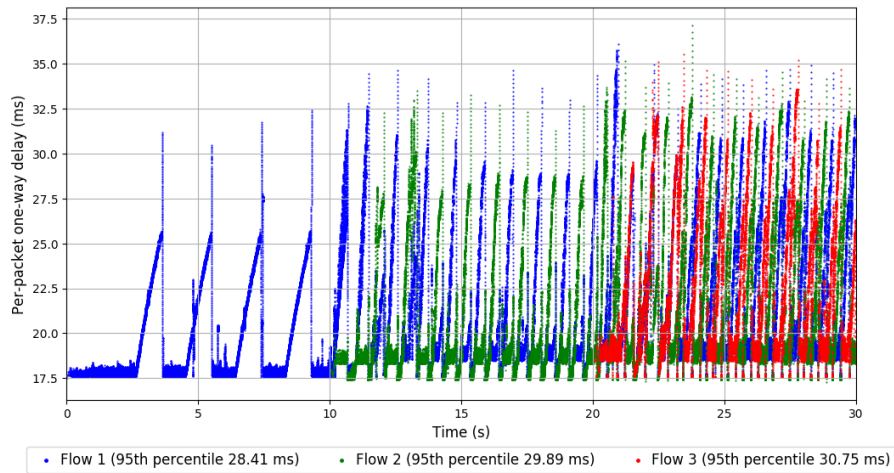
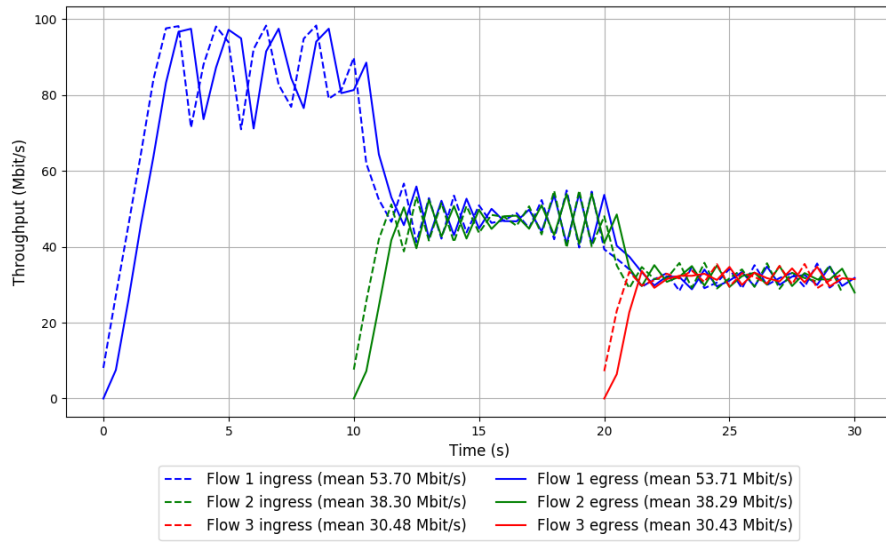
-- Flow 3:

Average throughput: 30.43 Mbit/s

95th percentile per-packet one-way delay: 30.755 ms

Loss rate: 0.41%

Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2019-03-27 13:07:26
End at: 2019-03-27 13:07:56
Local clock offset: -1.339 ms
Remote clock offset: -1.555 ms

Below is generated by plot.py at 2019-03-27 14:15:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 87.92 Mbit/s
95th percentile per-packet one-way delay: 30.013 ms
Loss rate: 0.13%

-- Flow 1:

Average throughput: 51.22 Mbit/s
95th percentile per-packet one-way delay: 30.260 ms
Loss rate: 0.08%

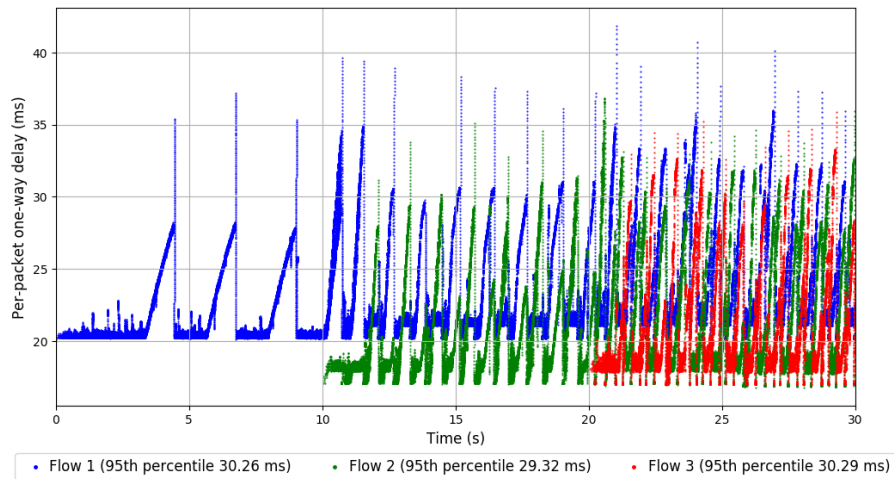
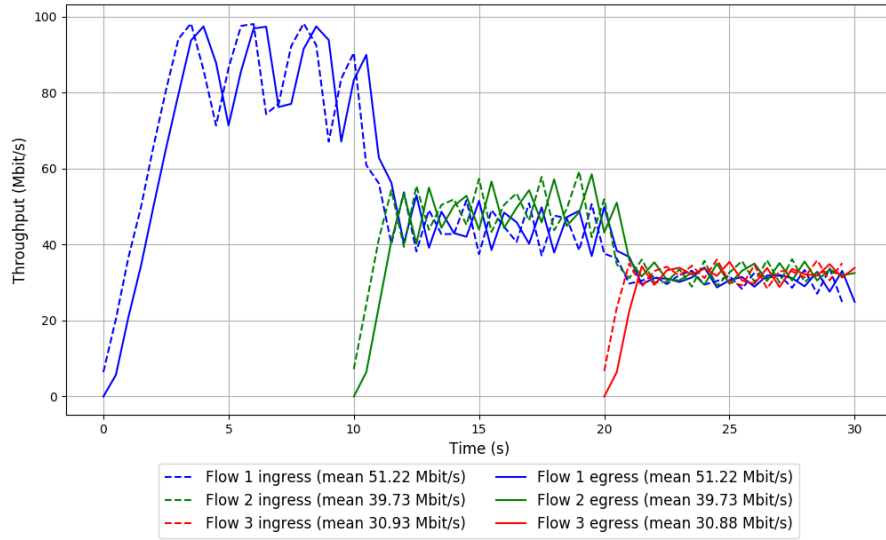
-- Flow 2:

Average throughput: 39.73 Mbit/s
95th percentile per-packet one-way delay: 29.320 ms
Loss rate: 0.12%

-- Flow 3:

Average throughput: 30.88 Mbit/s
95th percentile per-packet one-way delay: 30.294 ms
Loss rate: 0.45%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2019-03-27 13:32:50
End at: 2019-03-27 13:33:20
Local clock offset: -1.307 ms
Remote clock offset: -3.816 ms

Below is generated by plot.py at 2019-03-27 14:15:43

Datalink statistics

-- Total of 3 flows:

Average throughput: 87.84 Mbit/s
95th percentile per-packet one-way delay: 31.153 ms
Loss rate: 0.14%

-- Flow 1:

Average throughput: 50.92 Mbit/s
95th percentile per-packet one-way delay: 31.478 ms
Loss rate: 0.09%

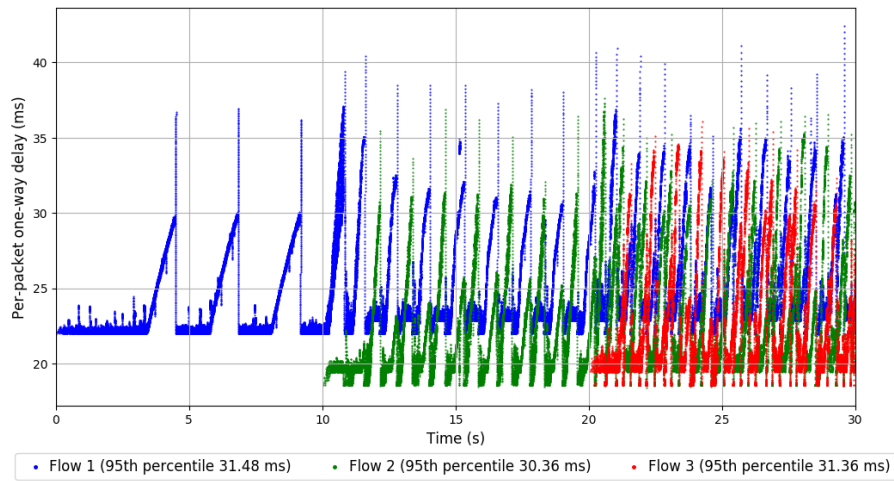
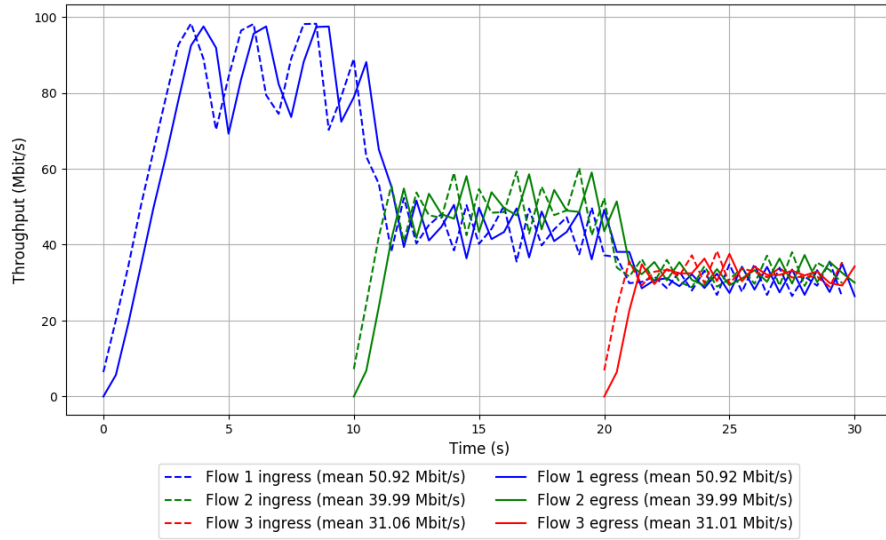
-- Flow 2:

Average throughput: 39.99 Mbit/s
95th percentile per-packet one-way delay: 30.355 ms
Loss rate: 0.13%

-- Flow 3:

Average throughput: 31.01 Mbit/s
95th percentile per-packet one-way delay: 31.356 ms
Loss rate: 0.44%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2019-03-27 13:58:27

End at: 2019-03-27 13:58:57

Local clock offset: 0.083 ms

Remote clock offset: -4.83 ms

Below is generated by plot.py at 2019-03-27 14:15:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 86.46 Mbit/s

95th percentile per-packet one-way delay: 31.369 ms

Loss rate: 0.17%

-- Flow 1:

Average throughput: 47.70 Mbit/s

95th percentile per-packet one-way delay: 31.744 ms

Loss rate: 0.08%

-- Flow 2:

Average throughput: 37.27 Mbit/s

95th percentile per-packet one-way delay: 32.526 ms

Loss rate: 0.17%

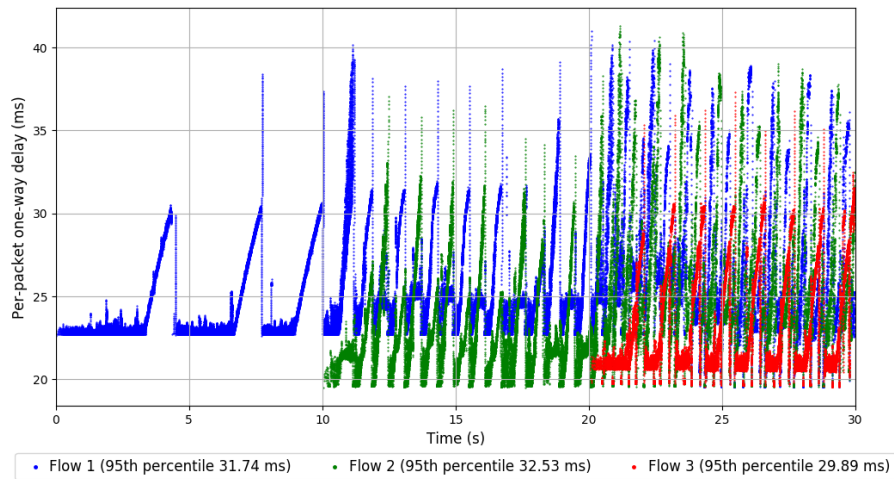
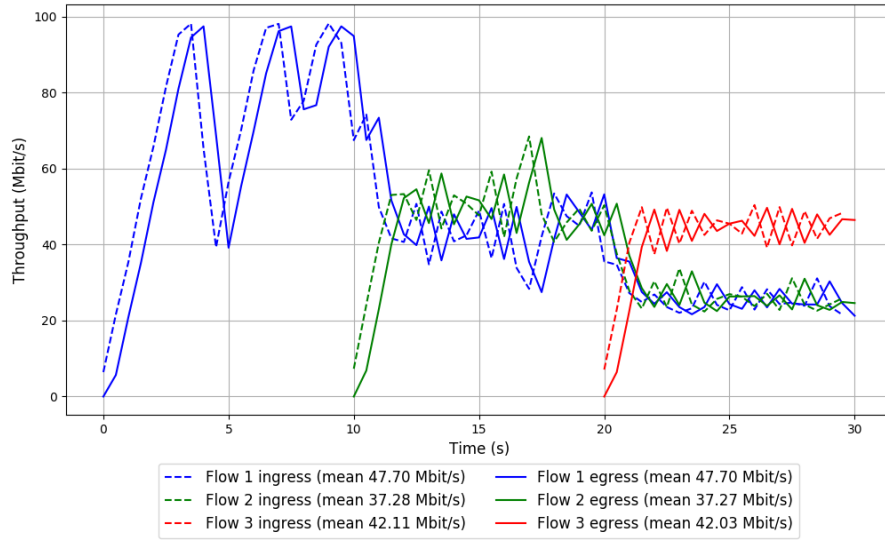
-- Flow 3:

Average throughput: 42.03 Mbit/s

95th percentile per-packet one-way delay: 29.891 ms

Loss rate: 0.45%

Run 5: Report of LEDBAT — Data Link

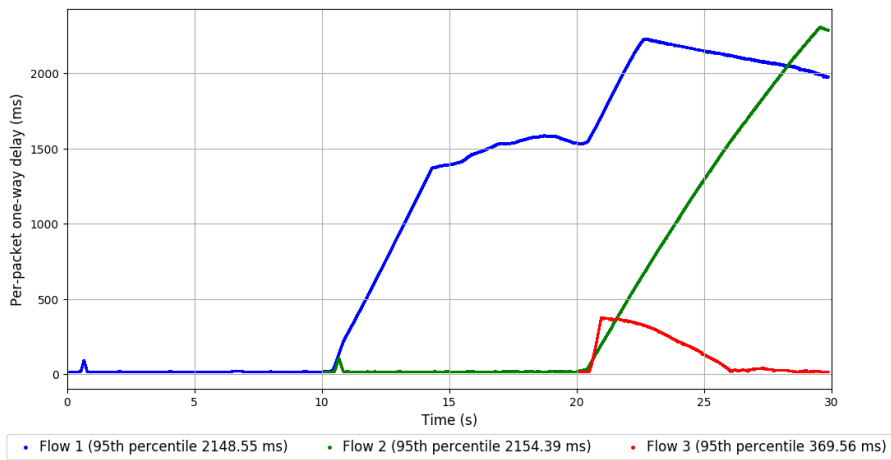
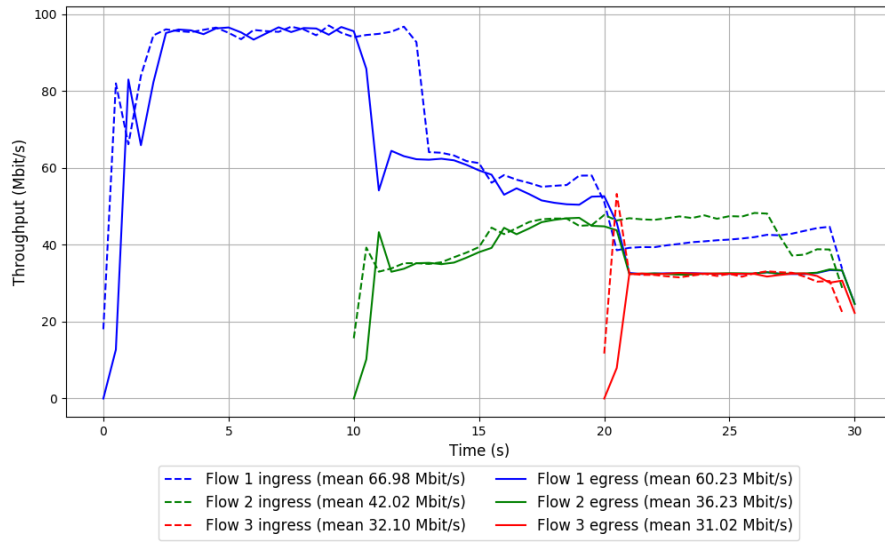


Run 1: Statistics of PCC-Allegro

Start at: 2019-03-27 12:22:44
End at: 2019-03-27 12:23:14
Local clock offset: 0.637 ms
Remote clock offset: -0.615 ms

```
# Below is generated by plot.py at 2019-03-27 14:16:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.52 Mbit/s
95th percentile per-packet one-way delay: 2138.660 ms
Loss rate: 10.47%
-- Flow 1:
Average throughput: 60.23 Mbit/s
95th percentile per-packet one-way delay: 2148.550 ms
Loss rate: 10.14%
-- Flow 2:
Average throughput: 36.23 Mbit/s
95th percentile per-packet one-way delay: 2154.393 ms
Loss rate: 13.85%
-- Flow 3:
Average throughput: 31.02 Mbit/s
95th percentile per-packet one-way delay: 369.561 ms
Loss rate: 3.62%
```

Run 1: Report of PCC-Allegro — Data Link

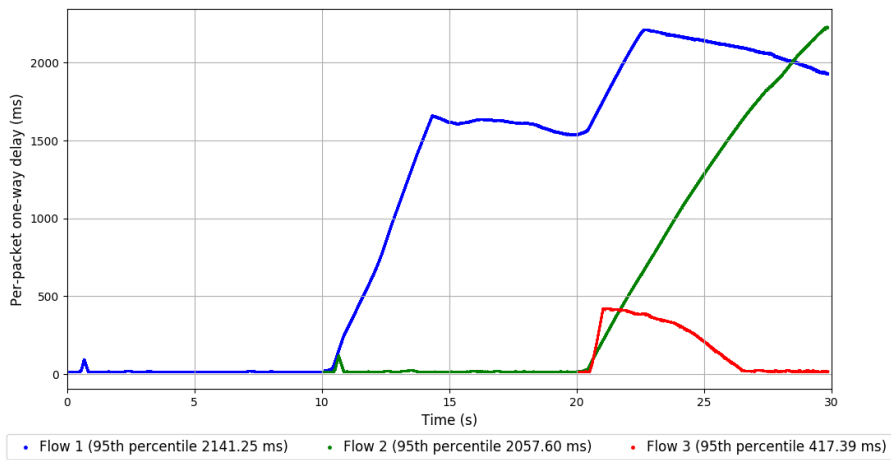
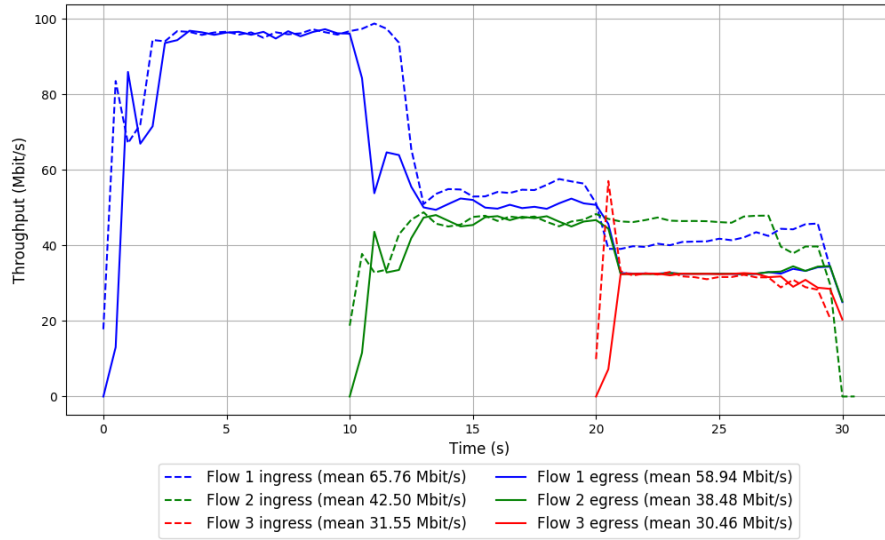


Run 2: Statistics of PCC-Allegro

Start at: 2019-03-27 12:47:45
End at: 2019-03-27 12:48:15
Local clock offset: -0.649 ms
Remote clock offset: -0.252 ms

```
# Below is generated by plot.py at 2019-03-27 14:16:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.53 Mbit/s
95th percentile per-packet one-way delay: 2118.331 ms
Loss rate: 10.52%
-- Flow 1:
Average throughput: 58.94 Mbit/s
95th percentile per-packet one-way delay: 2141.250 ms
Loss rate: 10.44%
-- Flow 2:
Average throughput: 38.48 Mbit/s
95th percentile per-packet one-way delay: 2057.600 ms
Loss rate: 13.10%
-- Flow 3:
Average throughput: 30.46 Mbit/s
95th percentile per-packet one-way delay: 417.395 ms
Loss rate: 3.72%
```

Run 2: Report of PCC-Allegro — Data Link

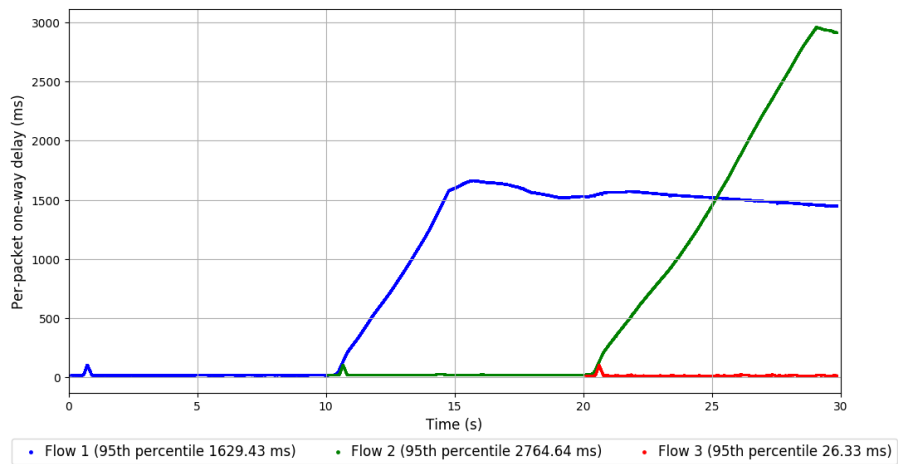
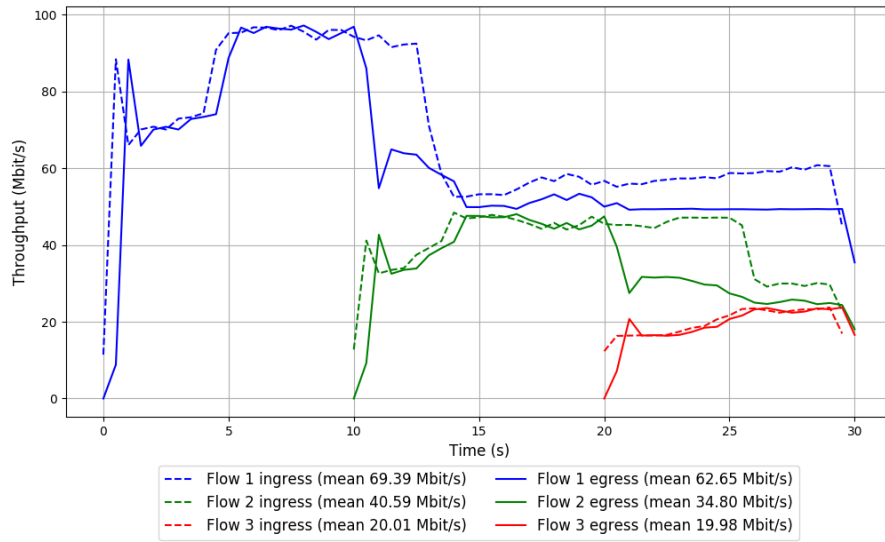


Run 3: Statistics of PCC-Allegro

Start at: 2019-03-27 13:13:23
End at: 2019-03-27 13:13:53
Local clock offset: -0.884 ms
Remote clock offset: -1.501 ms

```
# Below is generated by plot.py at 2019-03-27 14:16:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.36 Mbit/s
95th percentile per-packet one-way delay: 1654.601 ms
Loss rate: 10.39%
-- Flow 1:
Average throughput: 62.65 Mbit/s
95th percentile per-packet one-way delay: 1629.435 ms
Loss rate: 9.79%
-- Flow 2:
Average throughput: 34.80 Mbit/s
95th percentile per-packet one-way delay: 2764.639 ms
Loss rate: 14.38%
-- Flow 3:
Average throughput: 19.98 Mbit/s
95th percentile per-packet one-way delay: 26.326 ms
Loss rate: 0.36%
```

Run 3: Report of PCC-Allegro — Data Link



Run 4: Statistics of PCC-Allegro

Start at: 2019-03-27 13:38:54

End at: 2019-03-27 13:39:24

Local clock offset: 0.035 ms

Remote clock offset: -2.618 ms

Below is generated by plot.py at 2019-03-27 14:16:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 93.36 Mbit/s

95th percentile per-packet one-way delay: 1611.206 ms

Loss rate: 8.48%

-- Flow 1:

Average throughput: 63.71 Mbit/s

95th percentile per-packet one-way delay: 1615.634 ms

Loss rate: 9.62%

-- Flow 2:

Average throughput: 40.31 Mbit/s

95th percentile per-packet one-way delay: 587.001 ms

Loss rate: 6.49%

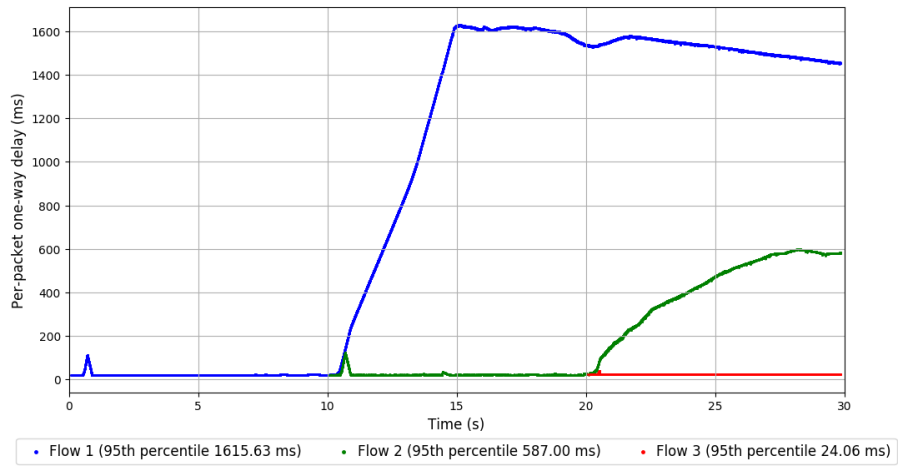
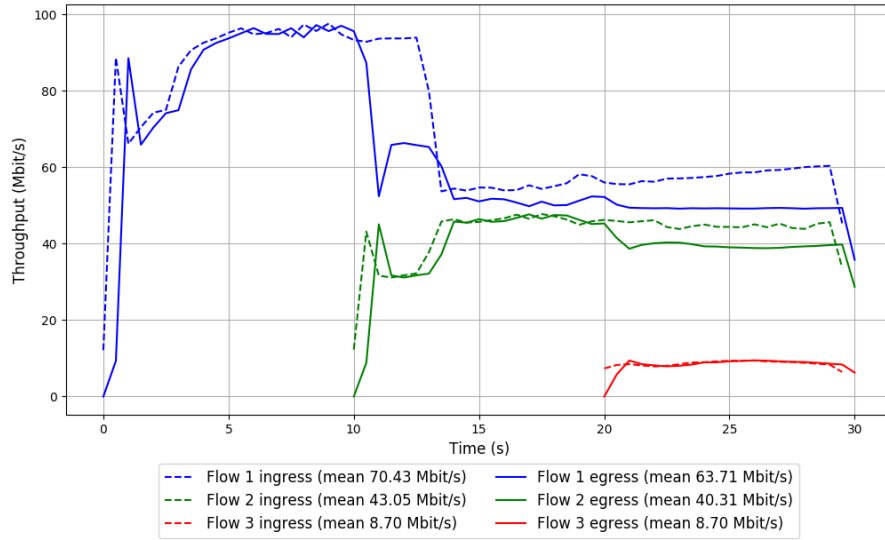
-- Flow 3:

Average throughput: 8.70 Mbit/s

95th percentile per-packet one-way delay: 24.062 ms

Loss rate: 0.32%

Run 4: Report of PCC-Allegro — Data Link



Run 5: Statistics of PCC-Allegro

Start at: 2019-03-27 14:04:46

End at: 2019-03-27 14:05:16

Local clock offset: 1.423 ms

Remote clock offset: -3.797 ms

Below is generated by plot.py at 2019-03-27 14:16:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 94.89 Mbit/s

95th percentile per-packet one-way delay: 2100.899 ms

Loss rate: 10.17%

-- Flow 1:

Average throughput: 59.51 Mbit/s

95th percentile per-packet one-way delay: 2142.717 ms

Loss rate: 10.24%

-- Flow 2:

Average throughput: 37.88 Mbit/s

95th percentile per-packet one-way delay: 1648.848 ms

Loss rate: 12.17%

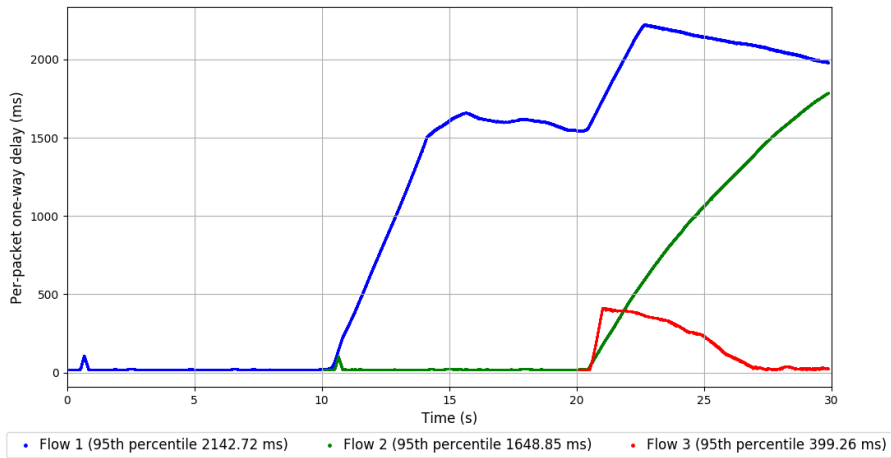
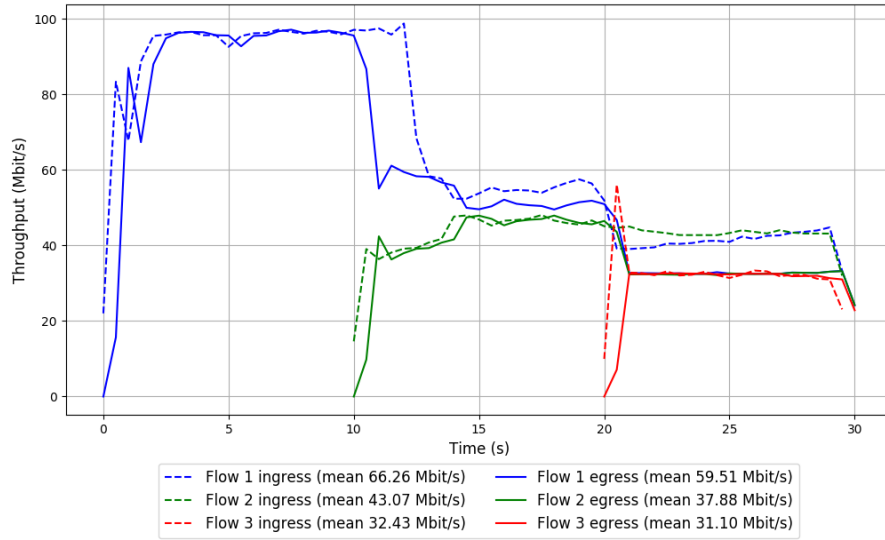
-- Flow 3:

Average throughput: 31.10 Mbit/s

95th percentile per-packet one-way delay: 399.259 ms

Loss rate: 4.35%

Run 5: Report of PCC-Allegro — Data Link



Run 1: Statistics of PCC-Expr

Start at: 2019-03-27 12:05:55

End at: 2019-03-27 12:06:25

Local clock offset: -0.992 ms

Remote clock offset: 0.46 ms

Below is generated by plot.py at 2019-03-27 14:17:32

Datalink statistics

-- Total of 3 flows:

Average throughput: 92.24 Mbit/s

95th percentile per-packet one-way delay: 826.908 ms

Loss rate: 22.56%

-- Flow 1:

Average throughput: 60.31 Mbit/s

95th percentile per-packet one-way delay: 852.060 ms

Loss rate: 30.67%

-- Flow 2:

Average throughput: 35.75 Mbit/s

95th percentile per-packet one-way delay: 178.379 ms

Loss rate: 0.56%

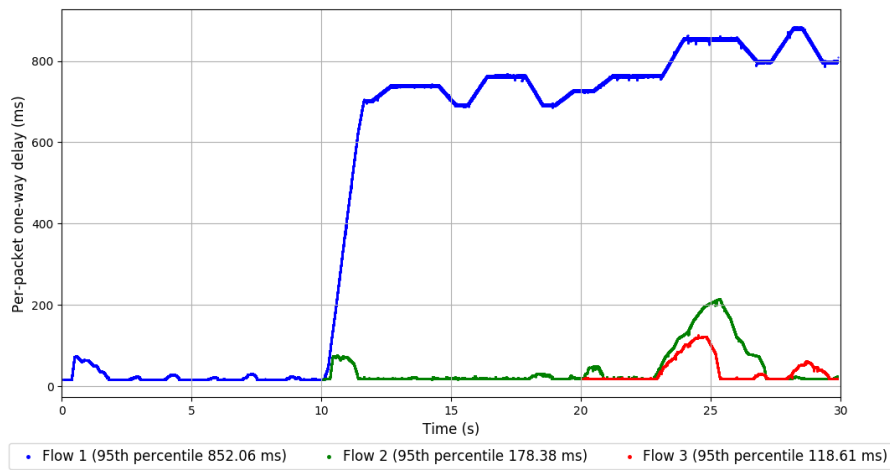
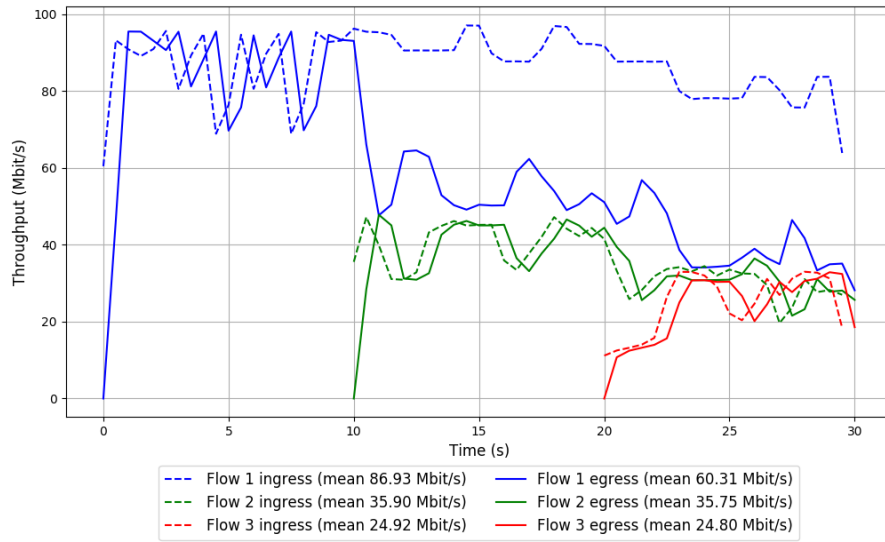
-- Flow 3:

Average throughput: 24.80 Mbit/s

95th percentile per-packet one-way delay: 118.608 ms

Loss rate: 0.75%

Run 1: Report of PCC-Expr — Data Link



Run 2: Statistics of PCC-Expr

Start at: 2019-03-27 12:31:02

End at: 2019-03-27 12:31:32

Local clock offset: -0.568 ms

Remote clock offset: 0.488 ms

Below is generated by plot.py at 2019-03-27 14:17:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 92.16 Mbit/s

95th percentile per-packet one-way delay: 1054.422 ms

Loss rate: 14.79%

-- Flow 1:

Average throughput: 56.64 Mbit/s

95th percentile per-packet one-way delay: 1104.987 ms

Loss rate: 21.87%

-- Flow 2:

Average throughput: 41.72 Mbit/s

95th percentile per-packet one-way delay: 100.407 ms

Loss rate: 0.34%

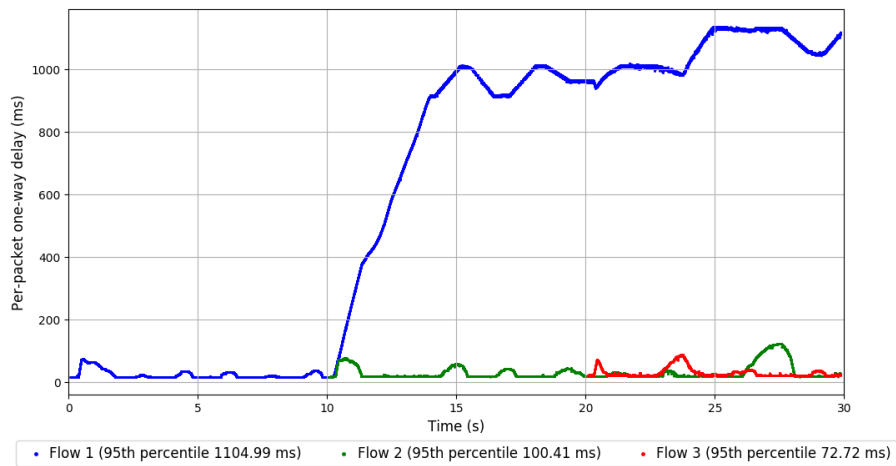
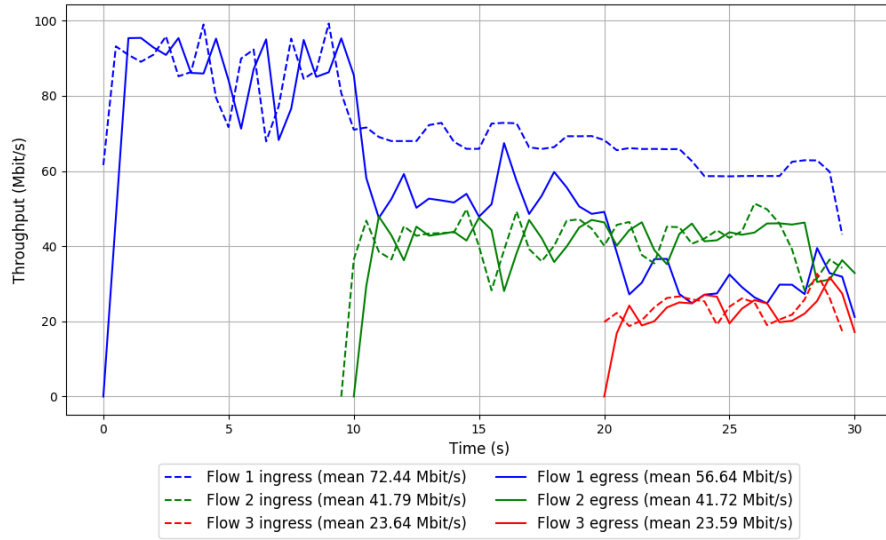
-- Flow 3:

Average throughput: 23.59 Mbit/s

95th percentile per-packet one-way delay: 72.720 ms

Loss rate: 0.50%

Run 2: Report of PCC-Expr — Data Link

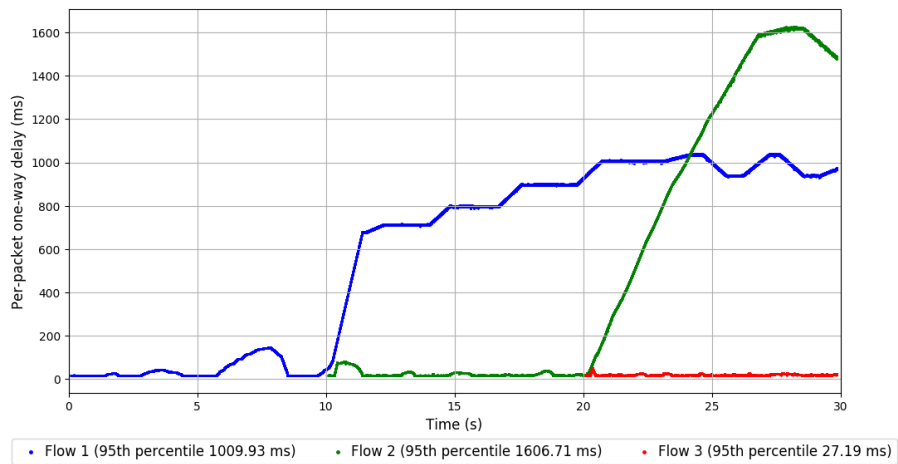
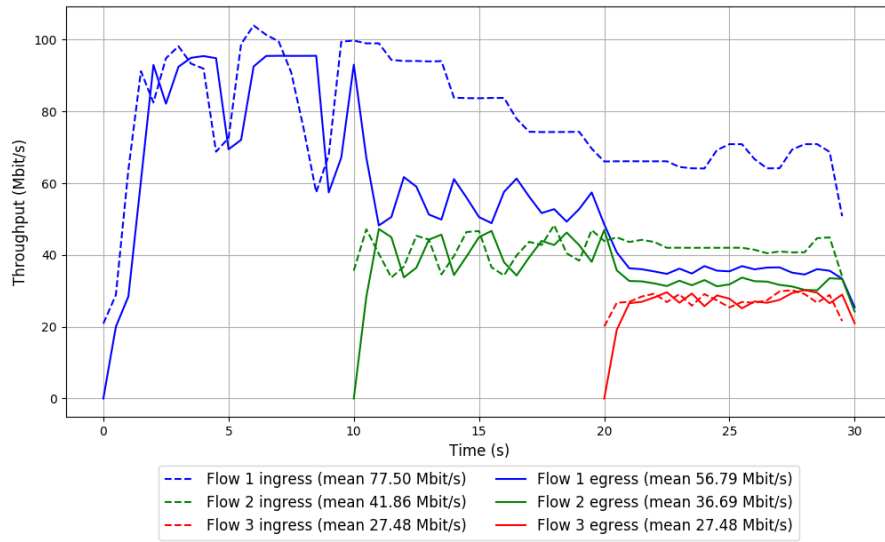


Run 3: Statistics of PCC-Expr

Start at: 2019-03-27 12:56:24
End at: 2019-03-27 12:56:54
Local clock offset: -0.196 ms
Remote clock offset: -0.709 ms

```
# Below is generated by plot.py at 2019-03-27 14:17:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.24 Mbit/s
95th percentile per-packet one-way delay: 1350.416 ms
Loss rate: 21.21%
-- Flow 1:
Average throughput: 56.79 Mbit/s
95th percentile per-packet one-way delay: 1009.932 ms
Loss rate: 26.81%
-- Flow 2:
Average throughput: 36.69 Mbit/s
95th percentile per-packet one-way delay: 1606.710 ms
Loss rate: 12.45%
-- Flow 3:
Average throughput: 27.48 Mbit/s
95th percentile per-packet one-way delay: 27.192 ms
Loss rate: 0.32%
```

Run 3: Report of PCC-Expr — Data Link

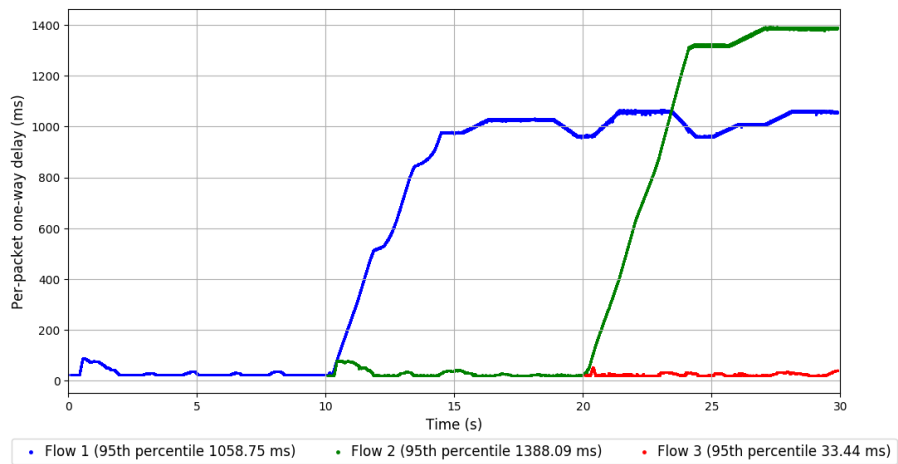
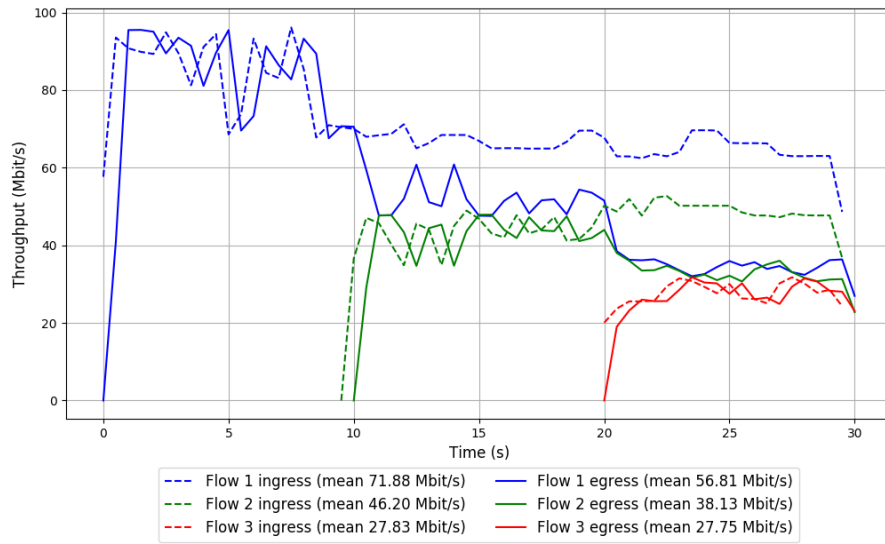


Run 4: Statistics of PCC-Expr

Start at: 2019-03-27 13:21:55
End at: 2019-03-27 13:22:25
Local clock offset: 0.331 ms
Remote clock offset: -3.112 ms

```
# Below is generated by plot.py at 2019-03-27 14:17:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.32 Mbit/s
95th percentile per-packet one-way delay: 1323.575 ms
Loss rate: 18.41%
-- Flow 1:
Average throughput: 56.81 Mbit/s
95th percentile per-packet one-way delay: 1058.750 ms
Loss rate: 21.04%
-- Flow 2:
Average throughput: 38.13 Mbit/s
95th percentile per-packet one-way delay: 1388.092 ms
Loss rate: 17.61%
-- Flow 3:
Average throughput: 27.75 Mbit/s
95th percentile per-packet one-way delay: 33.444 ms
Loss rate: 0.55%
```

Run 4: Report of PCC-Expr — Data Link

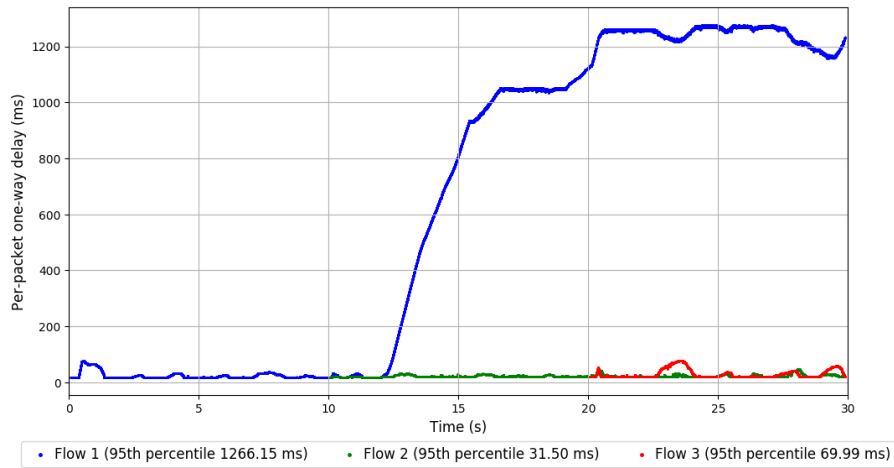
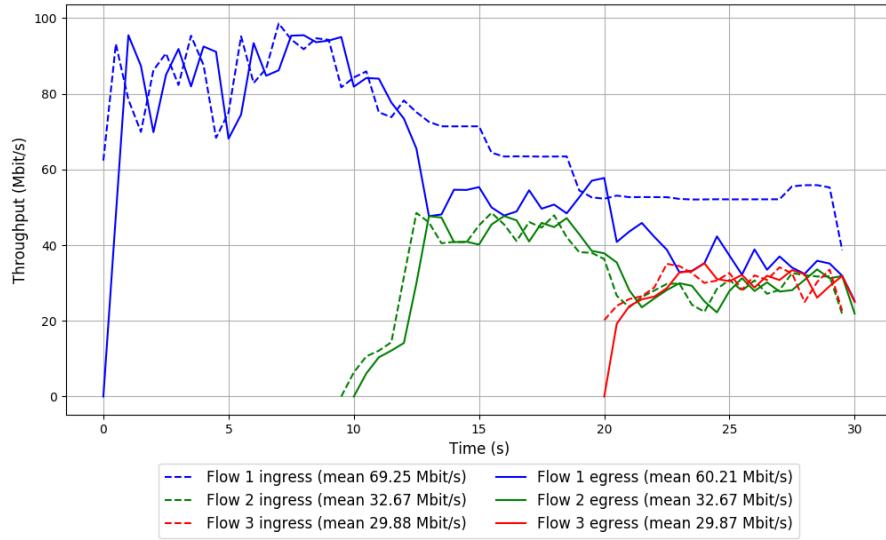


Run 5: Statistics of PCC-Expr

Start at: 2019-03-27 13:47:33
End at: 2019-03-27 13:48:03
Local clock offset: -0.825 ms
Remote clock offset: -4.055 ms

```
# Below is generated by plot.py at 2019-03-27 14:17:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.78 Mbit/s
95th percentile per-packet one-way delay: 1259.447 ms
Loss rate: 9.06%
-- Flow 1:
Average throughput: 60.21 Mbit/s
95th percentile per-packet one-way delay: 1266.146 ms
Loss rate: 13.11%
-- Flow 2:
Average throughput: 32.67 Mbit/s
95th percentile per-packet one-way delay: 31.498 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 29.87 Mbit/s
95th percentile per-packet one-way delay: 69.989 ms
Loss rate: 0.31%
```

Run 5: Report of PCC-Expr — Data Link



Run 1: Statistics of QUIC Cubic

Start at: 2019-03-27 12:19:15

End at: 2019-03-27 12:19:45

Local clock offset: 0.288 ms

Remote clock offset: 0.1 ms

Below is generated by plot.py at 2019-03-27 14:17:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 93.62 Mbit/s

95th percentile per-packet one-way delay: 32.675 ms

Loss rate: 0.16%

-- Flow 1:

Average throughput: 54.38 Mbit/s

95th percentile per-packet one-way delay: 32.817 ms

Loss rate: 0.09%

-- Flow 2:

Average throughput: 35.90 Mbit/s

95th percentile per-packet one-way delay: 32.025 ms

Loss rate: 0.19%

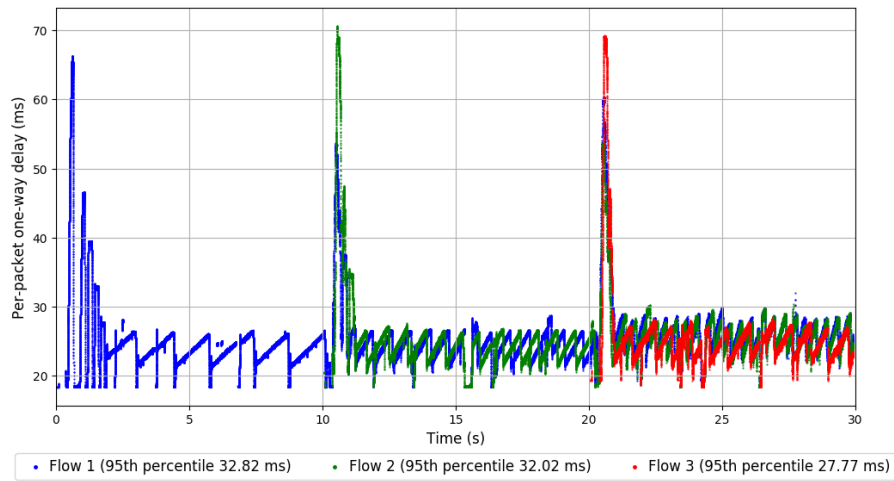
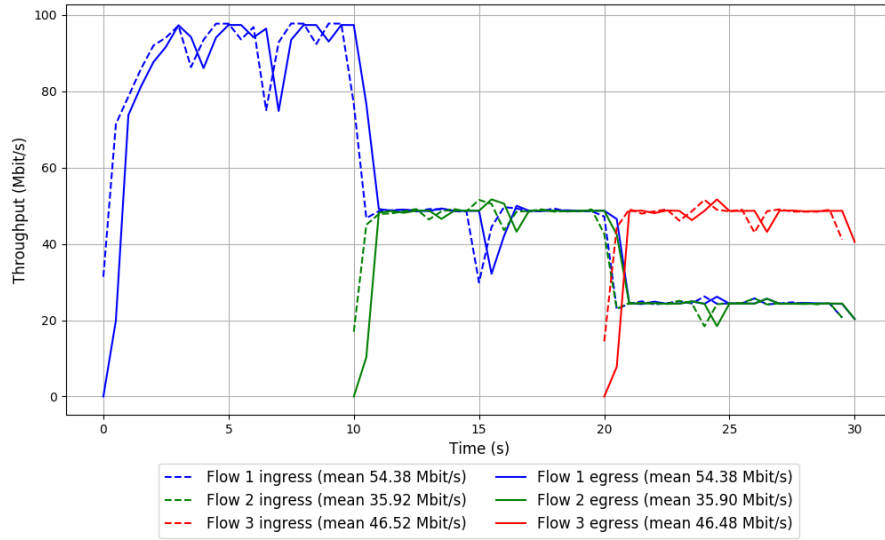
-- Flow 3:

Average throughput: 46.48 Mbit/s

95th percentile per-packet one-way delay: 27.770 ms

Loss rate: 0.36%

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2019-03-27 12:44:12
End at: 2019-03-27 12:44:42
Local clock offset: 0.053 ms
Remote clock offset: -1.621 ms

Below is generated by plot.py at 2019-03-27 14:17:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 92.66 Mbit/s
95th percentile per-packet one-way delay: 32.537 ms
Loss rate: 0.21%

-- Flow 1:

Average throughput: 61.08 Mbit/s
95th percentile per-packet one-way delay: 29.654 ms
Loss rate: 0.11%

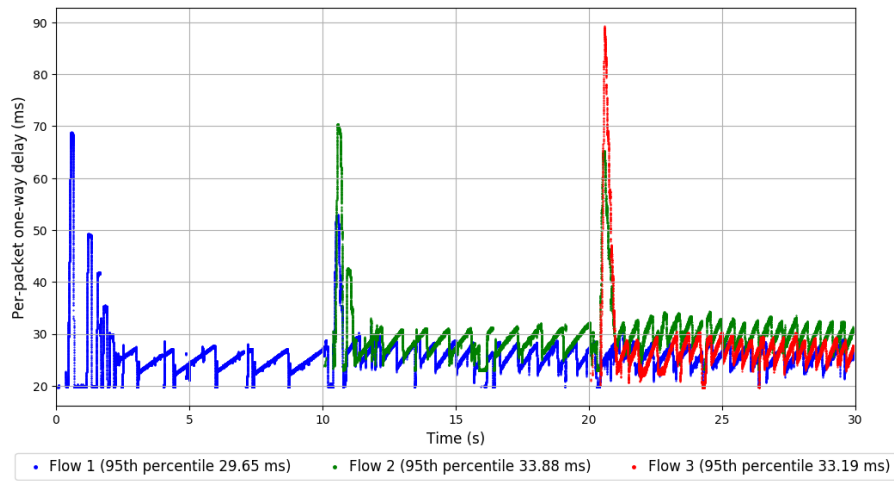
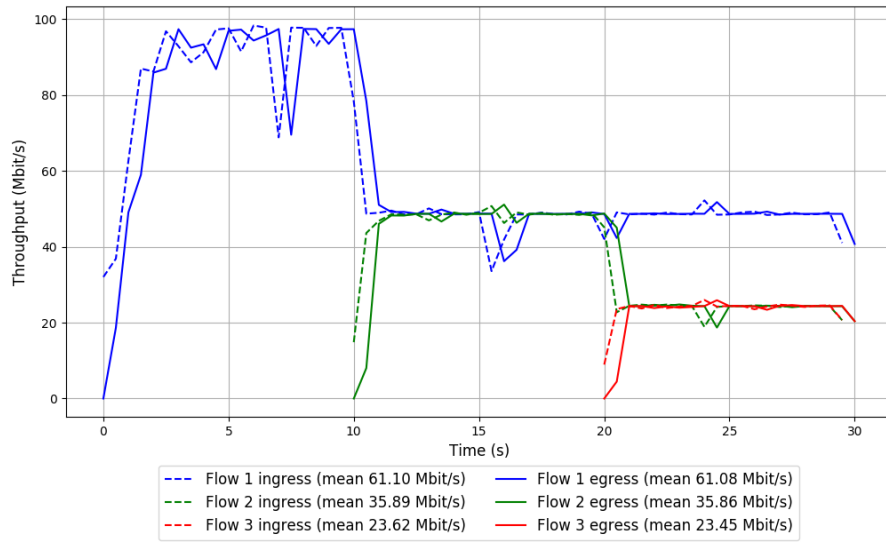
-- Flow 2:

Average throughput: 35.86 Mbit/s
95th percentile per-packet one-way delay: 33.882 ms
Loss rate: 0.22%

-- Flow 3:

Average throughput: 23.45 Mbit/s
95th percentile per-packet one-way delay: 33.192 ms
Loss rate: 1.00%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2019-03-27 13:09:52

End at: 2019-03-27 13:10:22

Local clock offset: 0.17 ms

Remote clock offset: -1.479 ms

Below is generated by plot.py at 2019-03-27 14:17:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 93.71 Mbit/s

95th percentile per-packet one-way delay: 33.836 ms

Loss rate: 0.16%

-- Flow 1:

Average throughput: 56.93 Mbit/s

95th percentile per-packet one-way delay: 33.504 ms

Loss rate: 0.09%

-- Flow 2:

Average throughput: 39.87 Mbit/s

95th percentile per-packet one-way delay: 28.286 ms

Loss rate: 0.19%

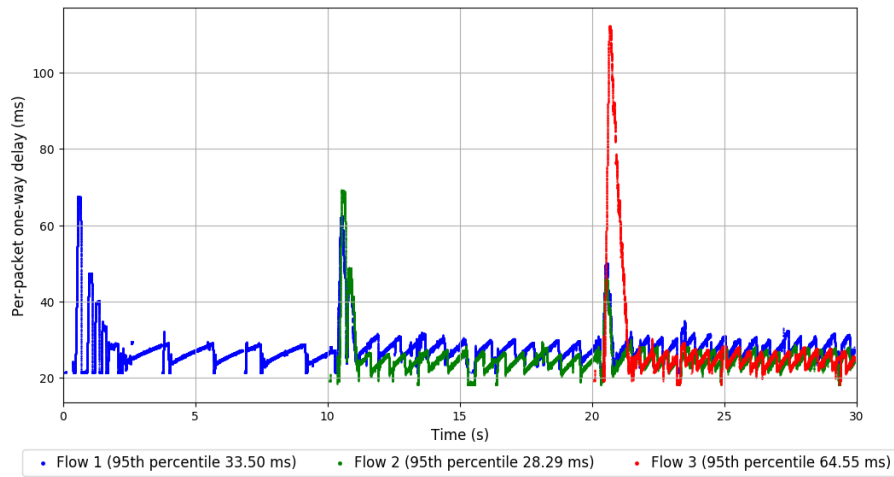
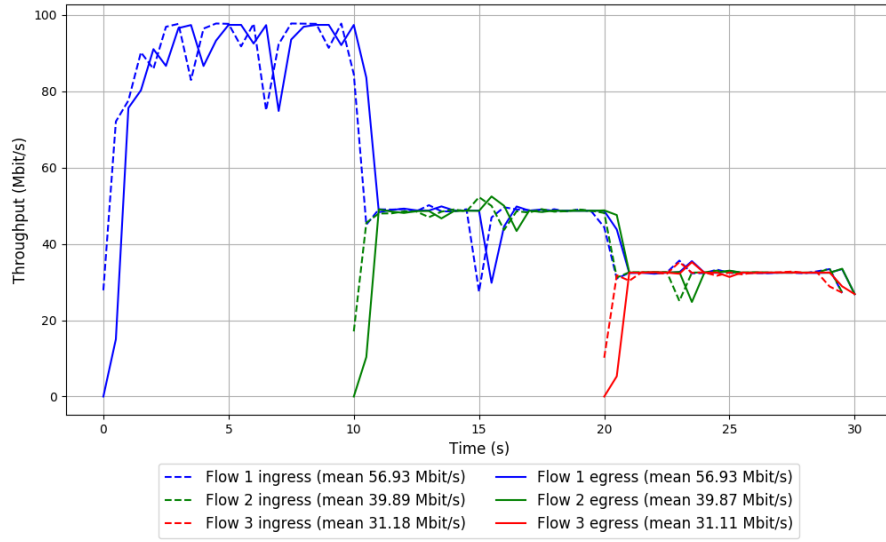
-- Flow 3:

Average throughput: 31.11 Mbit/s

95th percentile per-packet one-way delay: 64.553 ms

Loss rate: 0.48%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2019-03-27 13:35:20

End at: 2019-03-27 13:35:50

Local clock offset: 0.011 ms

Remote clock offset: -4.063 ms

Below is generated by plot.py at 2019-03-27 14:18:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 93.60 Mbit/s

95th percentile per-packet one-way delay: 33.854 ms

Loss rate: 0.16%

-- Flow 1:

Average throughput: 56.86 Mbit/s

95th percentile per-packet one-way delay: 33.022 ms

Loss rate: 0.09%

-- Flow 2:

Average throughput: 39.86 Mbit/s

95th percentile per-packet one-way delay: 31.054 ms

Loss rate: 0.19%

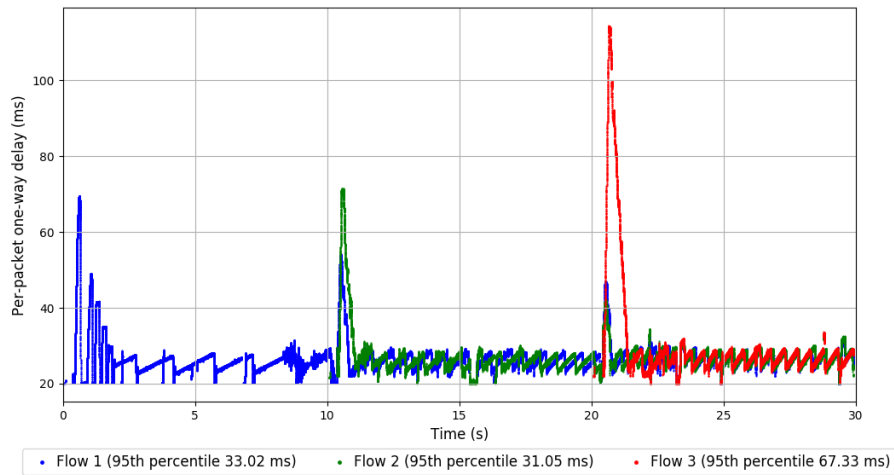
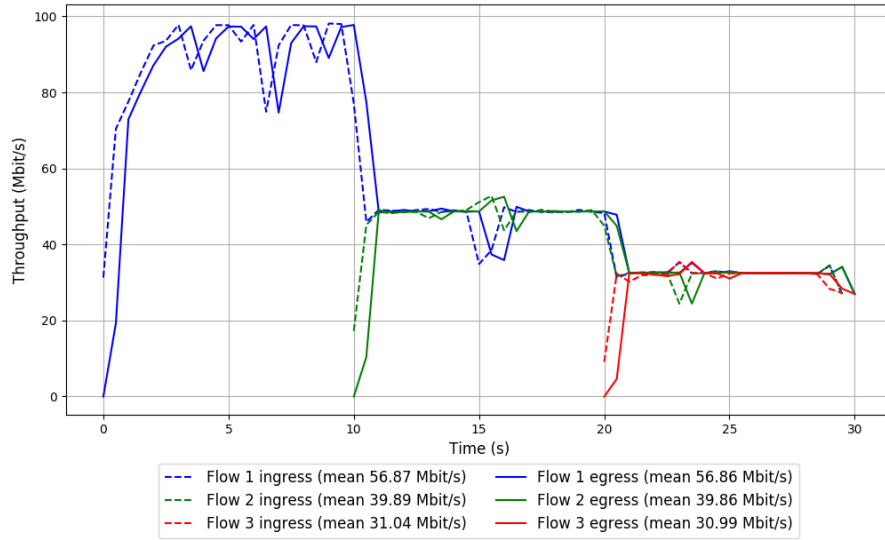
-- Flow 3:

Average throughput: 30.99 Mbit/s

95th percentile per-packet one-way delay: 67.325 ms

Loss rate: 0.46%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2019-03-27 14:01:11
End at: 2019-03-27 14:01:41
Local clock offset: -2.299 ms
Remote clock offset: -4.583 ms

Below is generated by plot.py at 2019-03-27 14:18:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 93.50 Mbit/s
95th percentile per-packet one-way delay: 27.816 ms
Loss rate: 0.16%

-- Flow 1:

Average throughput: 54.26 Mbit/s
95th percentile per-packet one-way delay: 31.812 ms
Loss rate: 0.09%

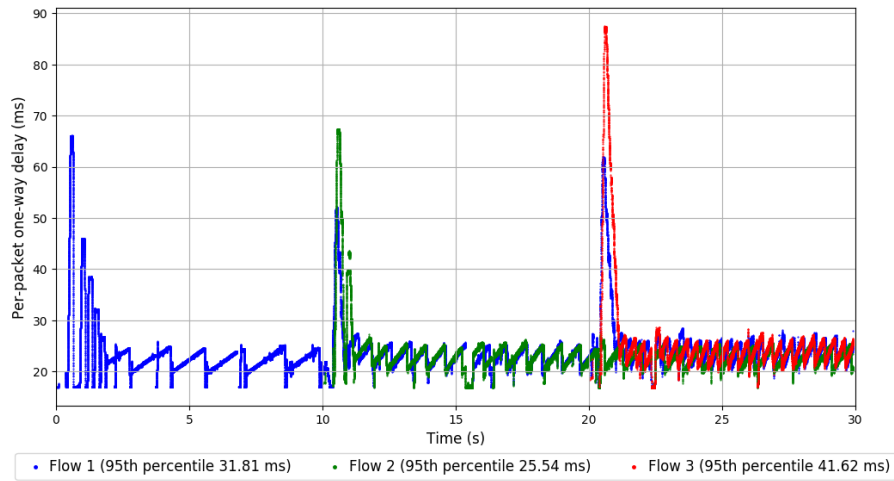
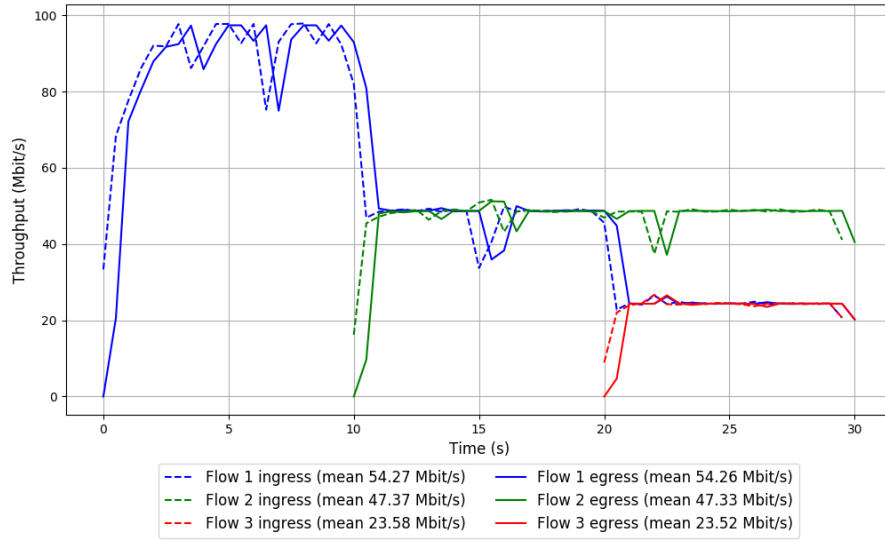
-- Flow 2:

Average throughput: 47.33 Mbit/s
95th percentile per-packet one-way delay: 25.540 ms
Loss rate: 0.19%

-- Flow 3:

Average throughput: 23.52 Mbit/s
95th percentile per-packet one-way delay: 41.615 ms
Loss rate: 0.53%

Run 5: Report of QUIC Cubic — Data Link



Run 1: Statistics of SCReAM

Start at: 2019-03-27 12:14:33

End at: 2019-03-27 12:15:03

Local clock offset: 0.013 ms

Remote clock offset: 0.131 ms

Below is generated by plot.py at 2019-03-27 14:18:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 18.169 ms

Loss rate: 0.19%

-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 18.184 ms

Loss rate: 0.13%

-- Flow 2:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 17.950 ms

Loss rate: 0.19%

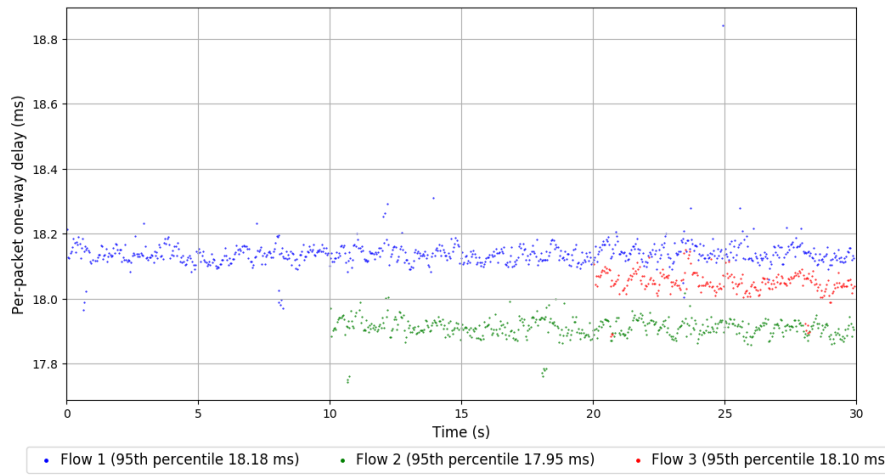
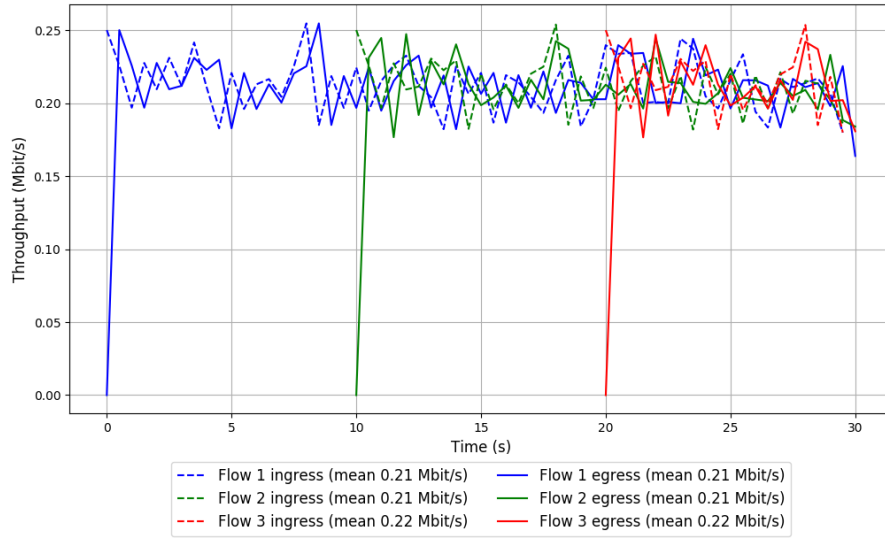
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 18.099 ms

Loss rate: 0.35%

Run 1: Report of SCReAM — Data Link



Run 2: Statistics of SCReAM

Start at: 2019-03-27 12:39:29
End at: 2019-03-27 12:39:59
Local clock offset: -0.458 ms
Remote clock offset: -1.731 ms

Below is generated by plot.py at 2019-03-27 14:18:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 19.798 ms

Loss rate: 0.13%

-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 19.797 ms

Loss rate: 0.13%

-- Flow 2:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 19.798 ms

Loss rate: 0.19%

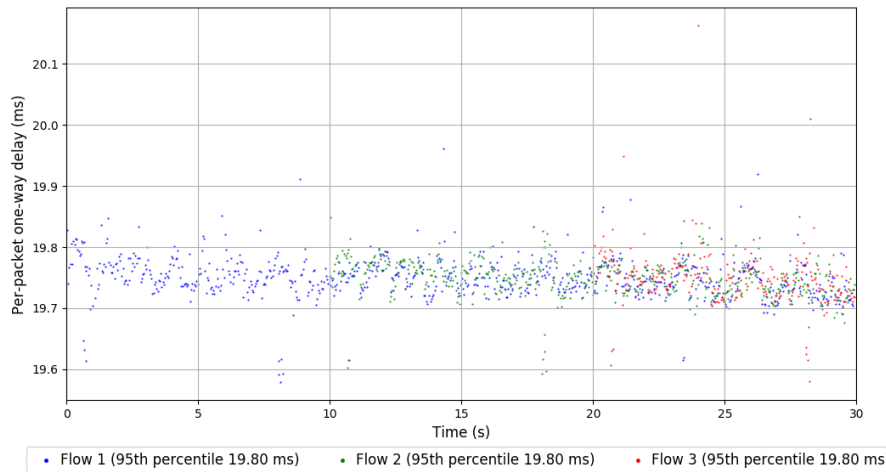
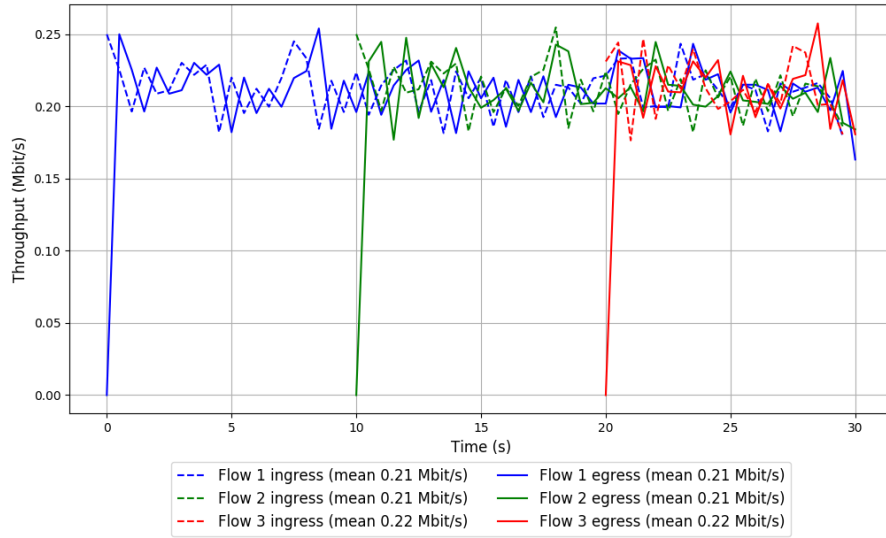
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 19.798 ms

Loss rate: 0.00%

Run 2: Report of SCReAM — Data Link



Run 3: Statistics of SCReAM

Start at: 2019-03-27 13:05:04
End at: 2019-03-27 13:05:34
Local clock offset: 0.746 ms
Remote clock offset: -0.665 ms

Below is generated by plot.py at 2019-03-27 14:18:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 18.561 ms
Loss rate: 0.19%

-- Flow 1:

Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 18.479 ms
Loss rate: 0.13%

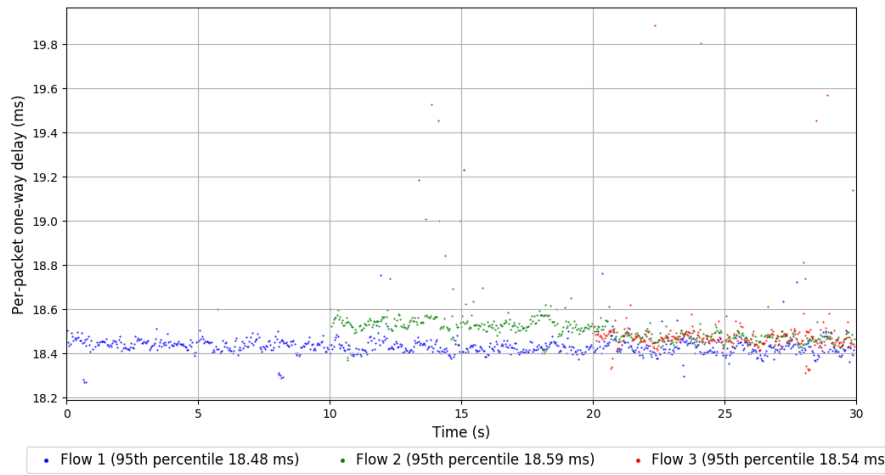
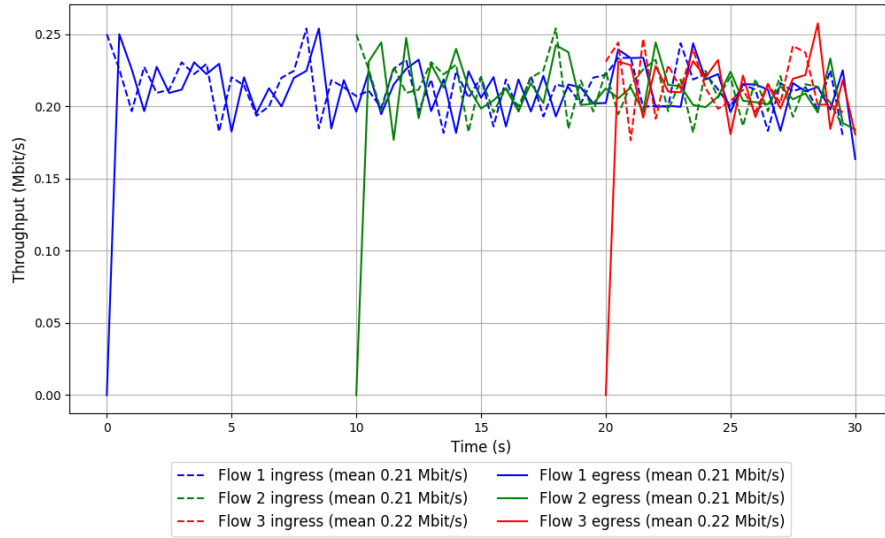
-- Flow 2:

Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 18.586 ms
Loss rate: 0.19%

-- Flow 3:

Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 18.544 ms
Loss rate: 0.35%

Run 3: Report of SCReAM — Data Link



Run 4: Statistics of SCReAM

Start at: 2019-03-27 13:30:31
End at: 2019-03-27 13:31:01
Local clock offset: -0.483 ms
Remote clock offset: -3.167 ms

Below is generated by plot.py at 2019-03-27 14:18:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 19.049 ms

Loss rate: 0.19%

-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 18.878 ms

Loss rate: 0.13%

-- Flow 2:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 18.889 ms

Loss rate: 0.19%

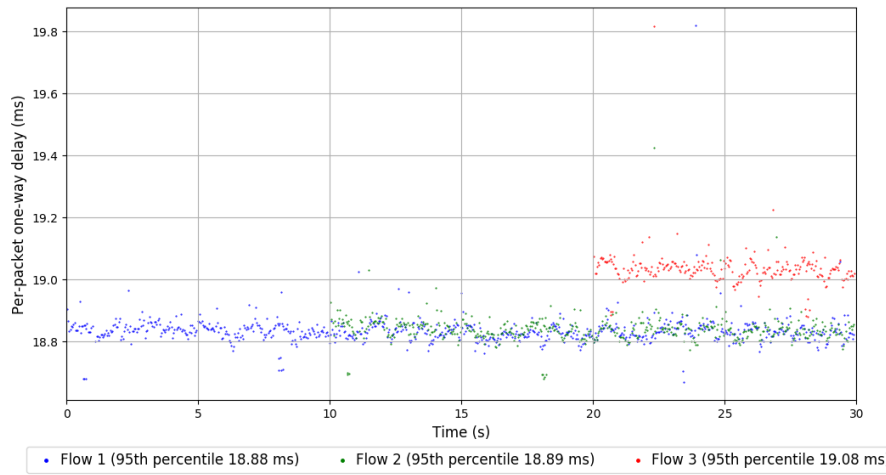
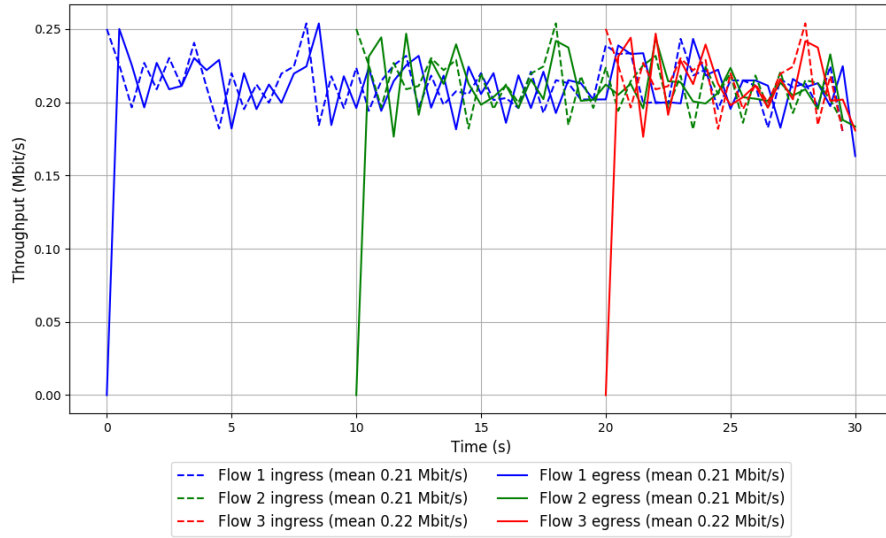
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 19.077 ms

Loss rate: 0.35%

Run 4: Report of SCReAM — Data Link



Run 5: Statistics of SCReAM

Start at: 2019-03-27 13:56:06
End at: 2019-03-27 13:56:36
Local clock offset: -2.003 ms
Remote clock offset: -3.076 ms

Below is generated by plot.py at 2019-03-27 14:18:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.37 Mbit/s

95th percentile per-packet one-way delay: 19.020 ms

Loss rate: 0.21%

-- Flow 1:

Average throughput: 0.21 Mbit/s

95th percentile per-packet one-way delay: 16.001 ms

Loss rate: 0.13%

-- Flow 2:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 19.192 ms

Loss rate: 0.28%

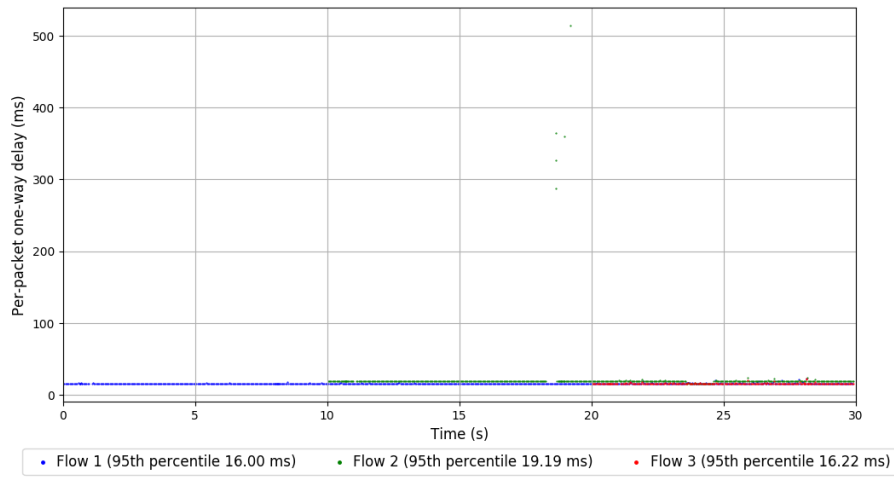
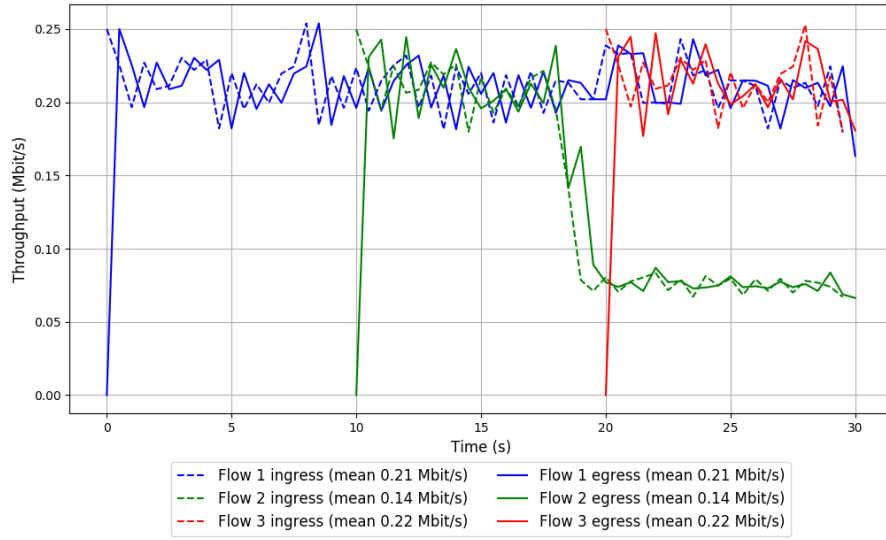
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 16.223 ms

Loss rate: 0.36%

Run 5: Report of SCReAM — Data Link



Run 1: Statistics of Sprout

Start at: 2019-03-27 11:58:34

End at: 2019-03-27 11:59:04

Local clock offset: -0.115 ms

Remote clock offset: 0.796 ms

Below is generated by plot.py at 2019-03-27 14:18:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 47.57 Mbit/s

95th percentile per-packet one-way delay: 27.683 ms

Loss rate: 0.19%

-- Flow 1:

Average throughput: 24.06 Mbit/s

95th percentile per-packet one-way delay: 27.319 ms

Loss rate: 0.11%

-- Flow 2:

Average throughput: 23.76 Mbit/s

95th percentile per-packet one-way delay: 28.147 ms

Loss rate: 0.16%

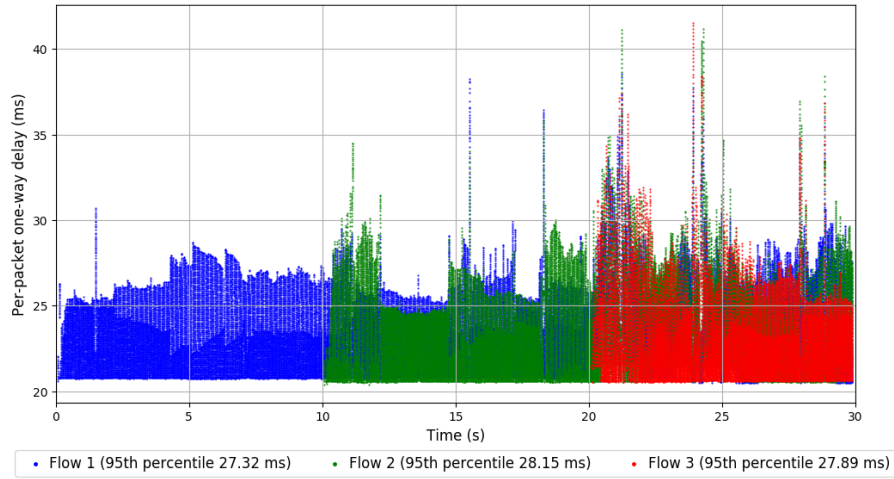
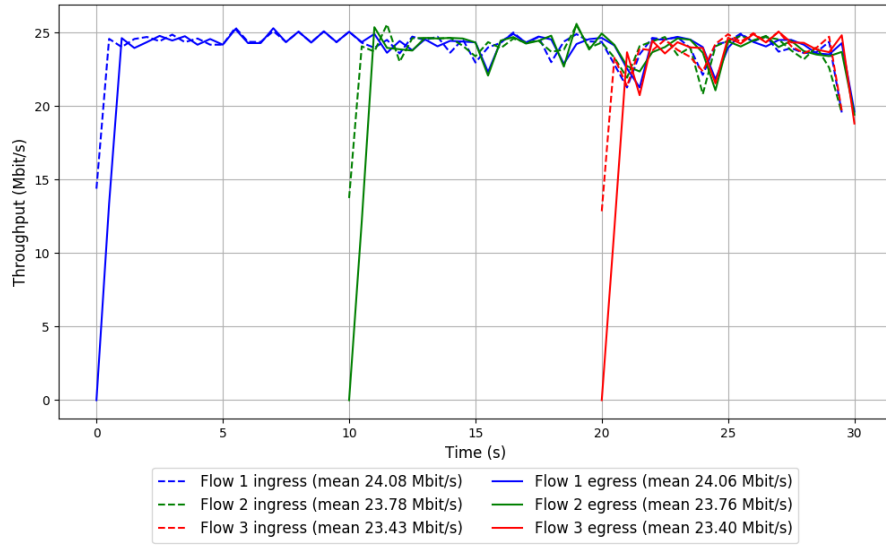
-- Flow 3:

Average throughput: 23.40 Mbit/s

95th percentile per-packet one-way delay: 27.893 ms

Loss rate: 0.49%

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2019-03-27 12:23:55

End at: 2019-03-27 12:24:25

Local clock offset: -0.46 ms

Remote clock offset: 0.766 ms

Below is generated by plot.py at 2019-03-27 14:18:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 48.65 Mbit/s

95th percentile per-packet one-way delay: 25.761 ms

Loss rate: 0.15%

-- Flow 1:

Average throughput: 24.58 Mbit/s

95th percentile per-packet one-way delay: 25.871 ms

Loss rate: 0.07%

-- Flow 2:

Average throughput: 24.31 Mbit/s

95th percentile per-packet one-way delay: 25.303 ms

Loss rate: 0.14%

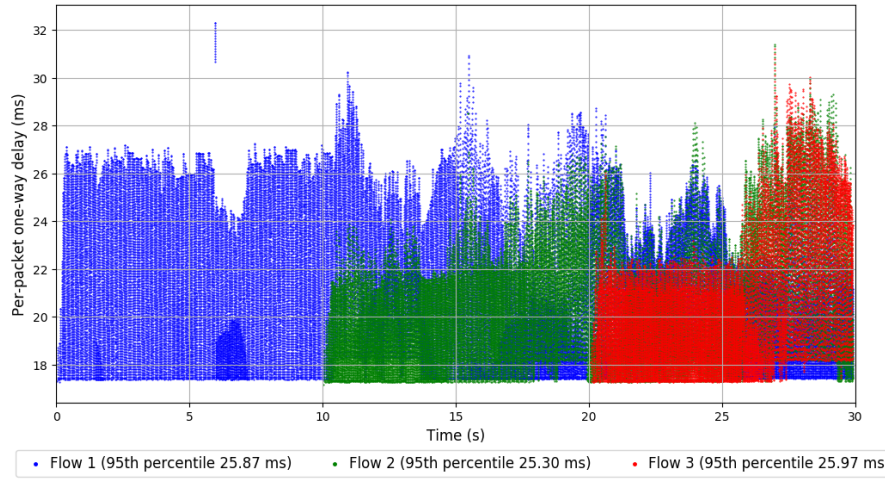
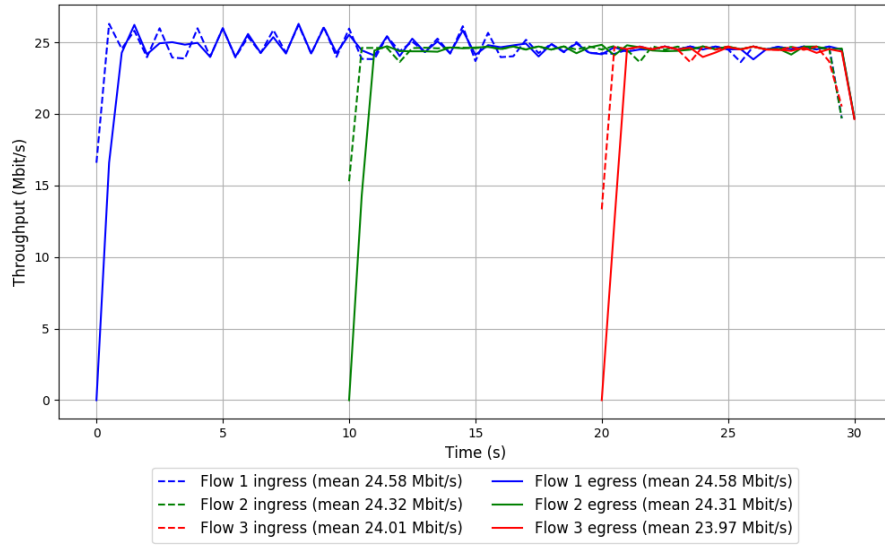
-- Flow 3:

Average throughput: 23.97 Mbit/s

95th percentile per-packet one-way delay: 25.972 ms

Loss rate: 0.38%

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2019-03-27 12:48:58

End at: 2019-03-27 12:49:28

Local clock offset: 0.394 ms

Remote clock offset: 0.12 ms

Below is generated by plot.py at 2019-03-27 14:18:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 48.34 Mbit/s

95th percentile per-packet one-way delay: 28.076 ms

Loss rate: 0.14%

-- Flow 1:

Average throughput: 24.36 Mbit/s

95th percentile per-packet one-way delay: 25.462 ms

Loss rate: 0.07%

-- Flow 2:

Average throughput: 24.38 Mbit/s

95th percentile per-packet one-way delay: 28.231 ms

Loss rate: 0.10%

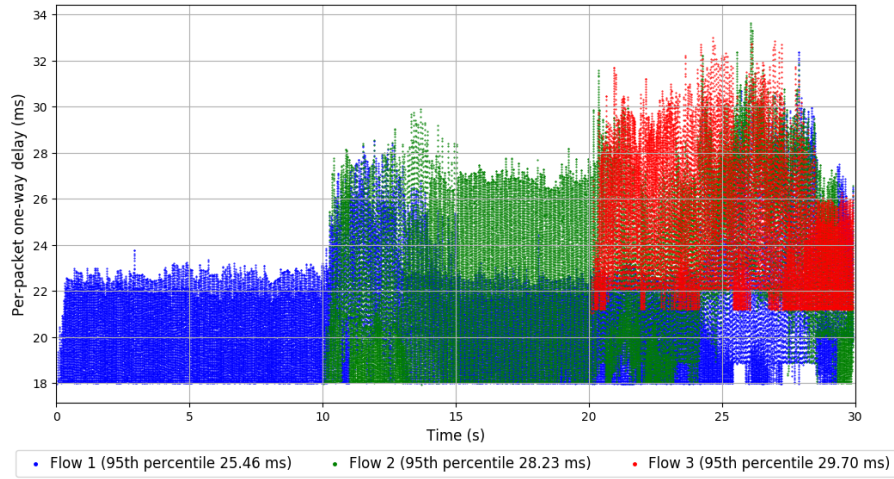
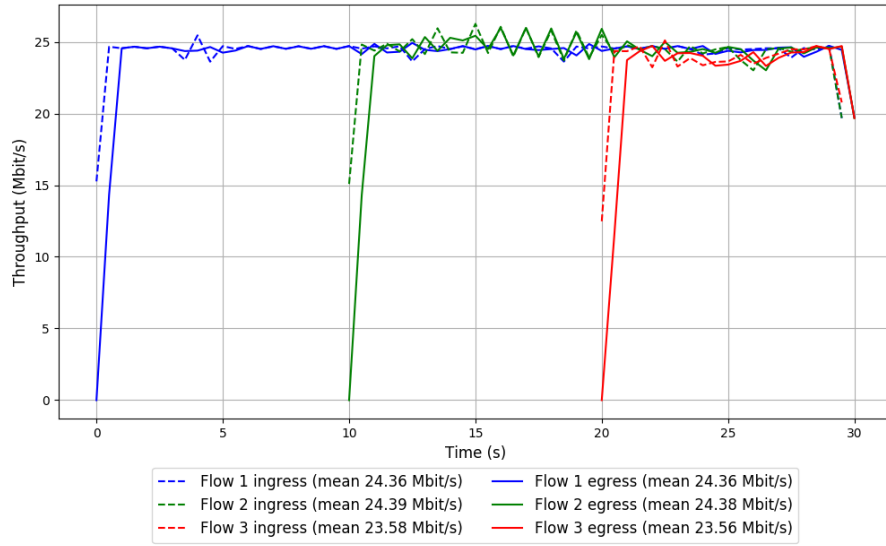
-- Flow 3:

Average throughput: 23.56 Mbit/s

95th percentile per-packet one-way delay: 29.702 ms

Loss rate: 0.42%

Run 3: Report of Sprout — Data Link



Run 4: Statistics of Sprout

Start at: 2019-03-27 13:14:34

End at: 2019-03-27 13:15:04

Local clock offset: -0.264 ms

Remote clock offset: -2.62 ms

Below is generated by plot.py at 2019-03-27 14:18:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 48.40 Mbit/s

95th percentile per-packet one-way delay: 28.474 ms

Loss rate: 0.11%

-- Flow 1:

Average throughput: 24.47 Mbit/s

95th percentile per-packet one-way delay: 28.823 ms

Loss rate: 0.07%

-- Flow 2:

Average throughput: 24.25 Mbit/s

95th percentile per-packet one-way delay: 27.510 ms

Loss rate: 0.10%

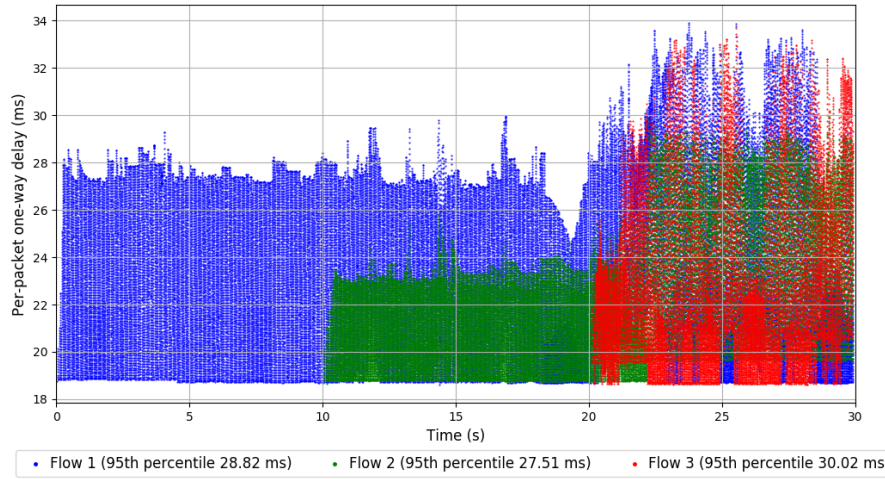
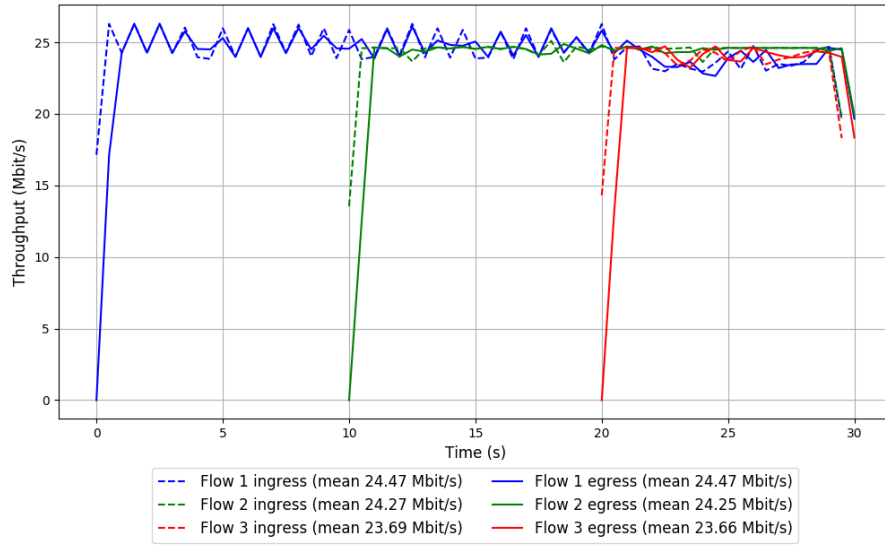
-- Flow 3:

Average throughput: 23.66 Mbit/s

95th percentile per-packet one-way delay: 30.015 ms

Loss rate: 0.26%

Run 4: Report of Sprout — Data Link



Run 5: Statistics of Sprout

Start at: 2019-03-27 13:40:06
End at: 2019-03-27 13:40:36
Local clock offset: -1.635 ms
Remote clock offset: -3.444 ms

Below is generated by plot.py at 2019-03-27 14:18:39

Datalink statistics

-- Total of 3 flows:

Average throughput: 48.49 Mbit/s
95th percentile per-packet one-way delay: 26.643 ms
Loss rate: 0.14%

-- Flow 1:

Average throughput: 24.45 Mbit/s
95th percentile per-packet one-way delay: 26.376 ms
Loss rate: 0.12%

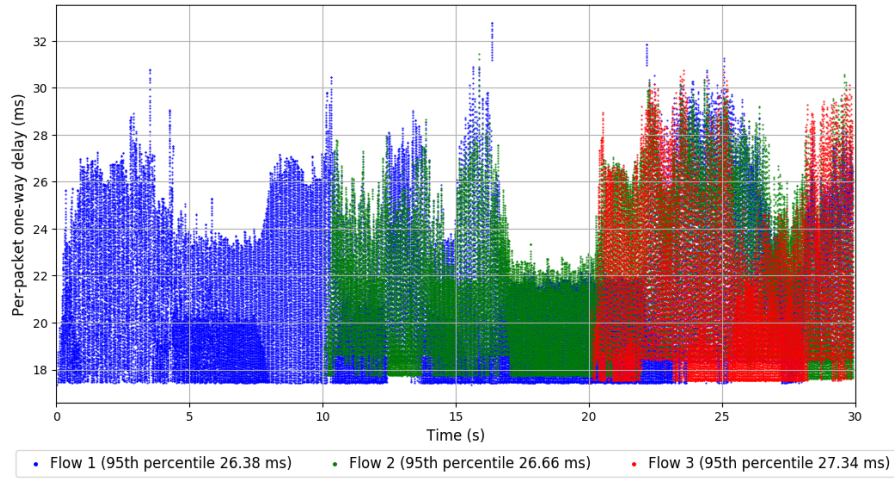
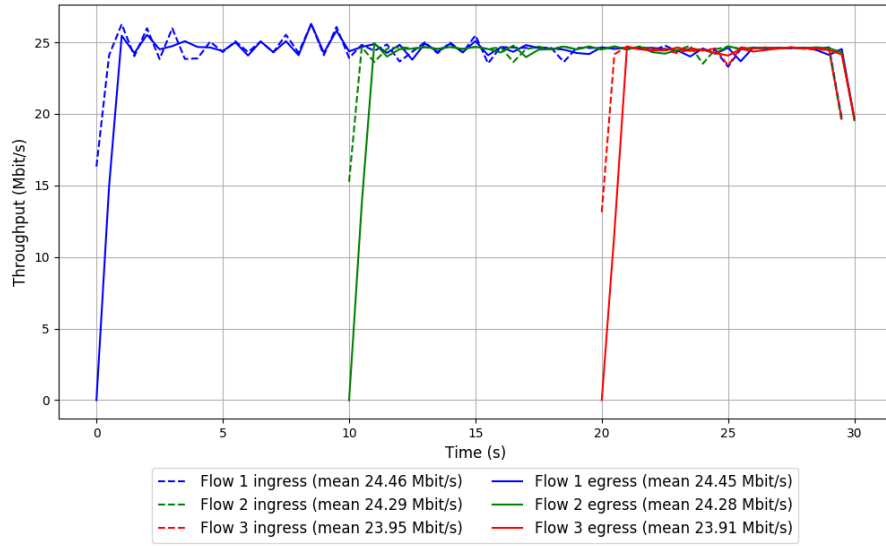
-- Flow 2:

Average throughput: 24.28 Mbit/s
95th percentile per-packet one-way delay: 26.658 ms
Loss rate: 0.10%

-- Flow 3:

Average throughput: 23.91 Mbit/s
95th percentile per-packet one-way delay: 27.341 ms
Loss rate: 0.26%

Run 5: Report of Sprout — Data Link



Run 1: Statistics of TaoVA-100x

Start at: 2019-03-27 12:09:41

End at: 2019-03-27 12:10:11

Local clock offset: -0.64 ms

Remote clock offset: 0.894 ms

Below is generated by plot.py at 2019-03-27 14:19:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 93.84 Mbit/s

95th percentile per-packet one-way delay: 147.798 ms

Loss rate: 1.09%

-- Flow 1:

Average throughput: 57.14 Mbit/s

95th percentile per-packet one-way delay: 146.868 ms

Loss rate: 0.22%

-- Flow 2:

Average throughput: 39.49 Mbit/s

95th percentile per-packet one-way delay: 148.710 ms

Loss rate: 1.73%

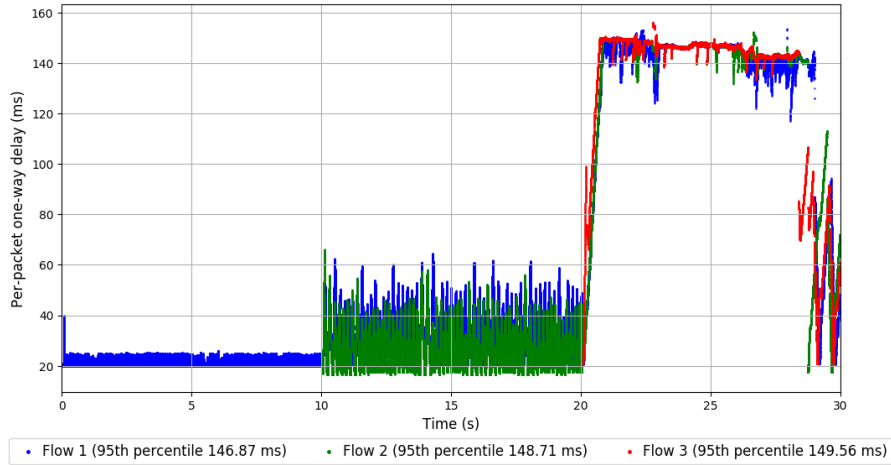
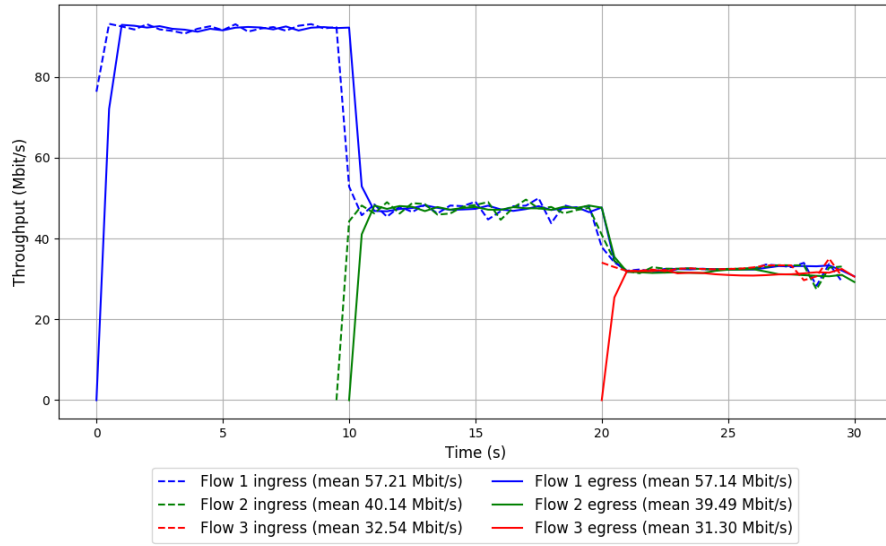
-- Flow 3:

Average throughput: 31.30 Mbit/s

95th percentile per-packet one-way delay: 149.560 ms

Loss rate: 4.09%

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



Run 2: Statistics of TaoVA-100x

Start at: 2019-03-27 12:34:37

End at: 2019-03-27 12:35:07

Local clock offset: -0.386 ms

Remote clock offset: 0.54 ms

Below is generated by plot.py at 2019-03-27 14:20:05

Datalink statistics

-- Total of 3 flows:

Average throughput: 93.88 Mbit/s

95th percentile per-packet one-way delay: 144.532 ms

Loss rate: 0.55%

-- Flow 1:

Average throughput: 54.76 Mbit/s

95th percentile per-packet one-way delay: 120.259 ms

Loss rate: 0.39%

-- Flow 2:

Average throughput: 36.04 Mbit/s

95th percentile per-packet one-way delay: 193.126 ms

Loss rate: 1.09%

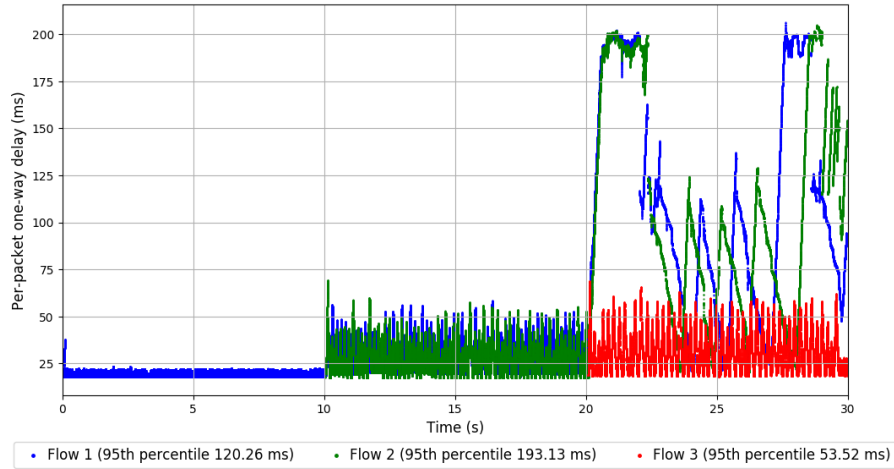
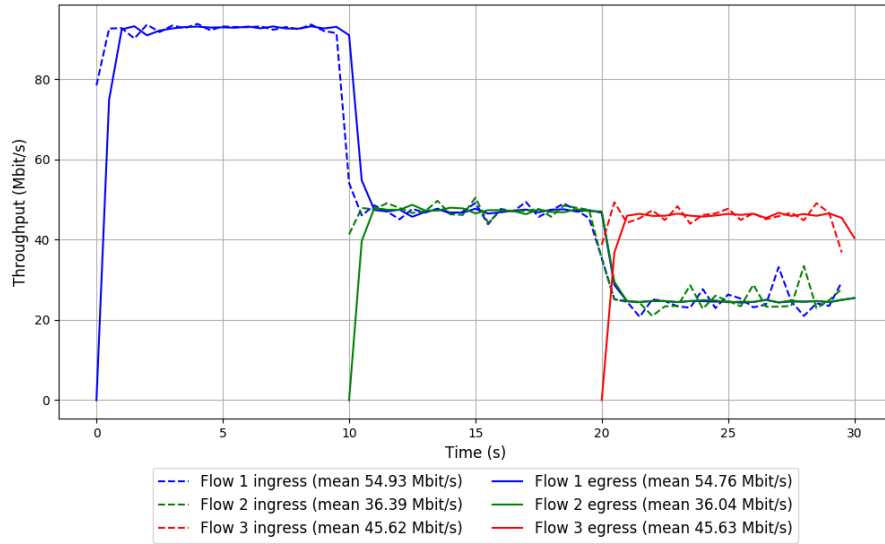
-- Flow 3:

Average throughput: 45.63 Mbit/s

95th percentile per-packet one-way delay: 53.521 ms

Loss rate: 0.22%

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



Run 3: Statistics of TaoVA-100x

Start at: 2019-03-27 13:00:07

End at: 2019-03-27 13:00:37

Local clock offset: -0.372 ms

Remote clock offset: 0.251 ms

Below is generated by plot.py at 2019-03-27 14:20:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 94.04 Mbit/s

95th percentile per-packet one-way delay: 148.885 ms

Loss rate: 1.38%

-- Flow 1:

Average throughput: 57.27 Mbit/s

95th percentile per-packet one-way delay: 147.168 ms

Loss rate: 0.71%

-- Flow 2:

Average throughput: 39.41 Mbit/s

95th percentile per-packet one-way delay: 148.969 ms

Loss rate: 1.77%

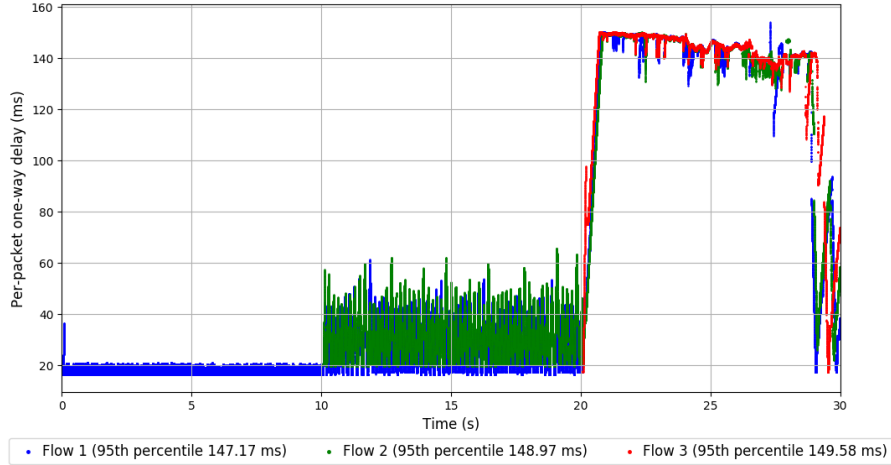
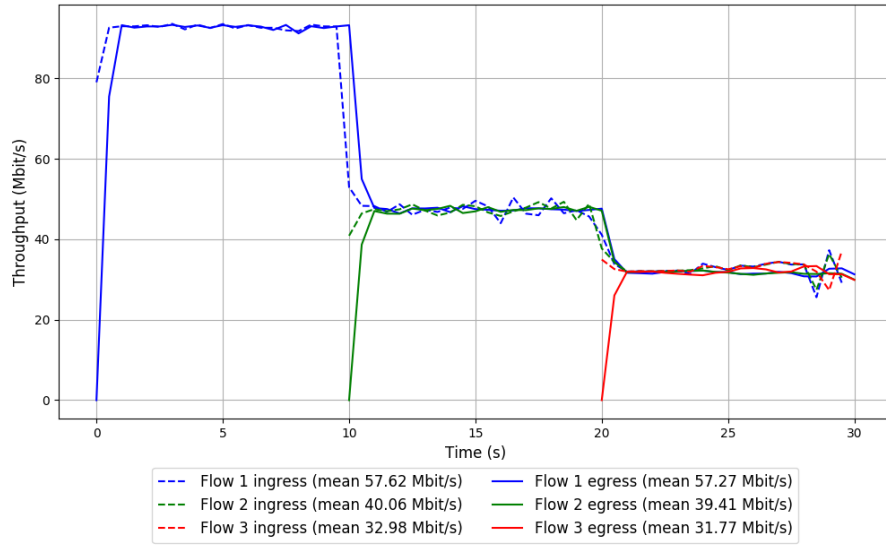
-- Flow 3:

Average throughput: 31.77 Mbit/s

95th percentile per-packet one-way delay: 149.584 ms

Loss rate: 3.91%

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



Run 4: Statistics of TaoVA-100x

Start at: 2019-03-27 13:25:36
End at: 2019-03-27 13:26:06
Local clock offset: -1.243 ms
Remote clock offset: -2.138 ms

Below is generated by plot.py at 2019-03-27 14:20:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 94.03 Mbit/s
95th percentile per-packet one-way delay: 174.510 ms
Loss rate: 0.43%

-- Flow 1:

Average throughput: 55.03 Mbit/s
95th percentile per-packet one-way delay: 130.227 ms
Loss rate: 0.38%

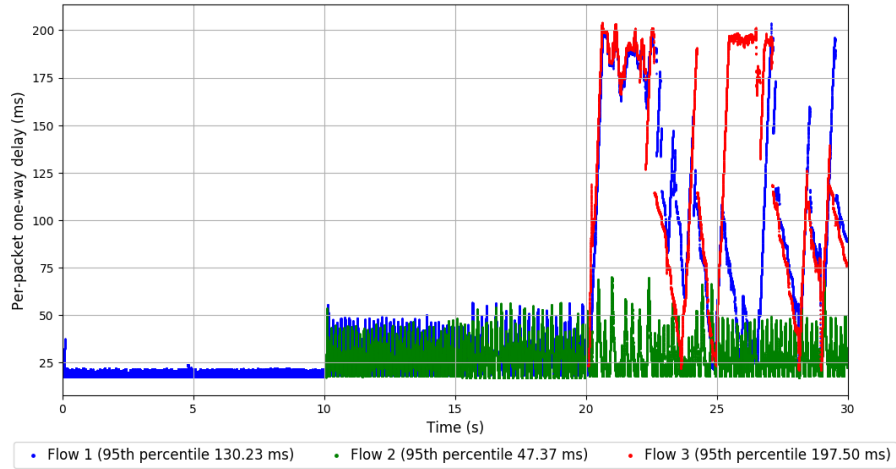
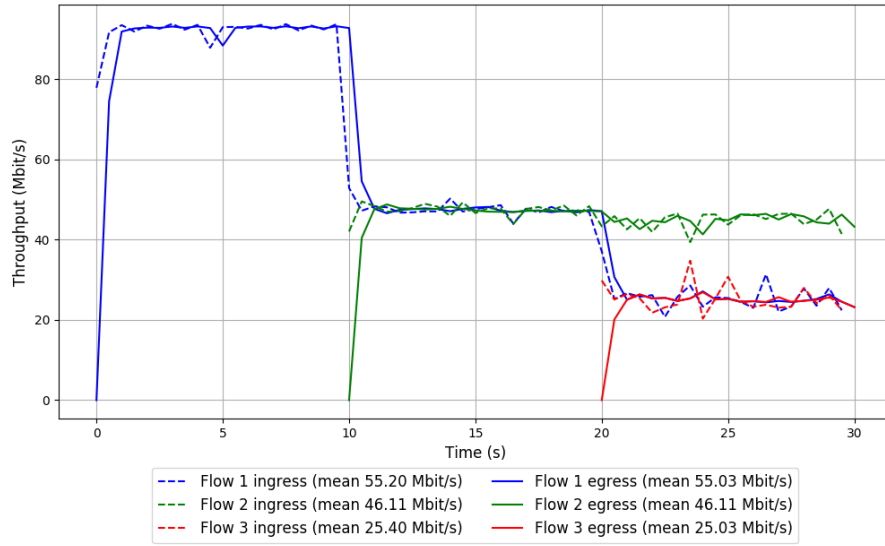
-- Flow 2:

Average throughput: 46.11 Mbit/s
95th percentile per-packet one-way delay: 47.366 ms
Loss rate: 0.15%

-- Flow 3:

Average throughput: 25.03 Mbit/s
95th percentile per-packet one-way delay: 197.503 ms
Loss rate: 1.79%

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



Run 5: Statistics of TaoVA-100x

Start at: 2019-03-27 13:51:12

End at: 2019-03-27 13:51:42

Local clock offset: 0.329 ms

Remote clock offset: -4.34 ms

Below is generated by plot.py at 2019-03-27 14:20:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 93.52 Mbit/s

95th percentile per-packet one-way delay: 166.472 ms

Loss rate: 0.33%

-- Flow 1:

Average throughput: 54.44 Mbit/s

95th percentile per-packet one-way delay: 178.646 ms

Loss rate: 0.26%

-- Flow 2:

Average throughput: 36.14 Mbit/s

95th percentile per-packet one-way delay: 187.301 ms

Loss rate: 0.52%

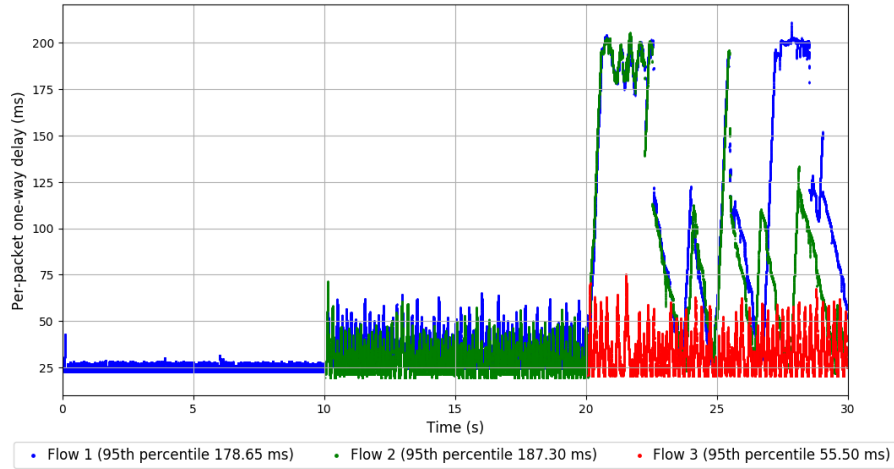
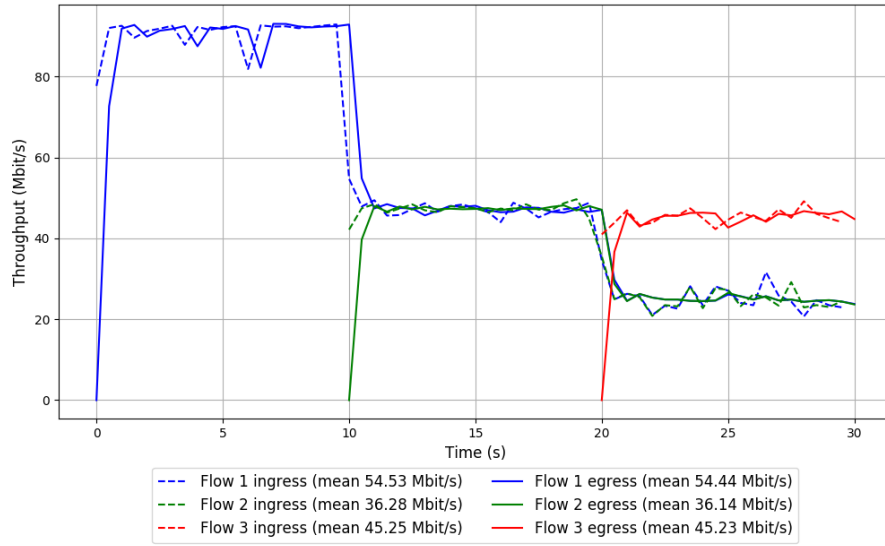
-- Flow 3:

Average throughput: 45.23 Mbit/s

95th percentile per-packet one-way delay: 55.496 ms

Loss rate: 0.30%

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



Run 1: Statistics of TCP Vegas

Start at: 2019-03-27 12:07:14

End at: 2019-03-27 12:07:44

Local clock offset: 1.039 ms

Remote clock offset: 0.795 ms

Below is generated by plot.py at 2019-03-27 14:20:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 96.41 Mbit/s

95th percentile per-packet one-way delay: 23.537 ms

Loss rate: 0.10%

-- Flow 1:

Average throughput: 59.90 Mbit/s

95th percentile per-packet one-way delay: 20.891 ms

Loss rate: 0.05%

-- Flow 2:

Average throughput: 38.25 Mbit/s

95th percentile per-packet one-way delay: 23.971 ms

Loss rate: 0.13%

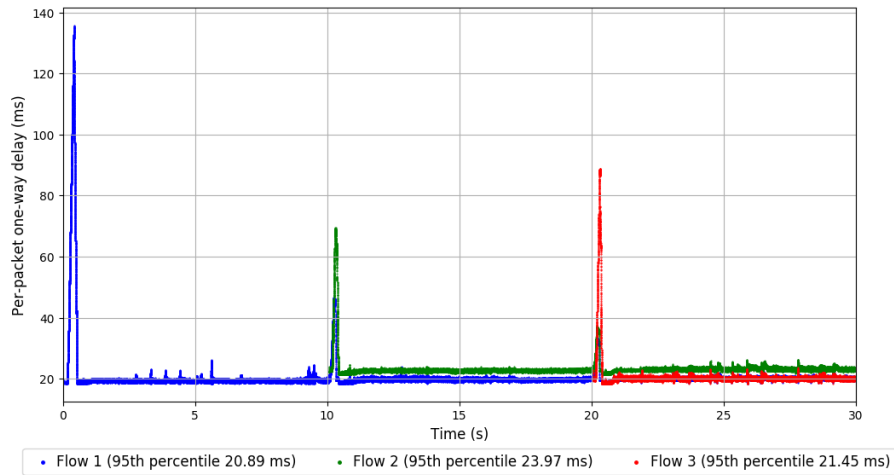
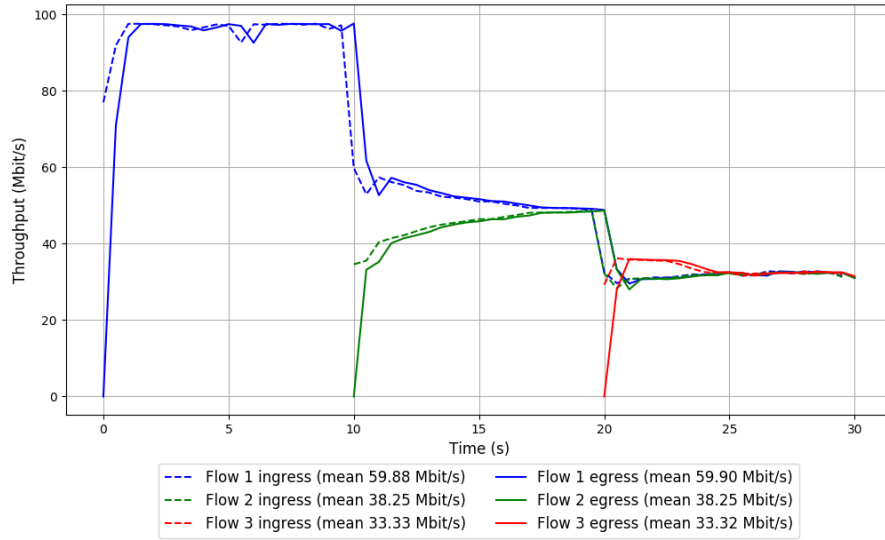
-- Flow 3:

Average throughput: 33.32 Mbit/s

95th percentile per-packet one-way delay: 21.451 ms

Loss rate: 0.28%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2019-03-27 12:32:16

End at: 2019-03-27 12:32:46

Local clock offset: 0.204 ms

Remote clock offset: 0.256 ms

Below is generated by plot.py at 2019-03-27 14:20:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 94.32 Mbit/s

95th percentile per-packet one-way delay: 23.391 ms

Loss rate: 0.12%

-- Flow 1:

Average throughput: 55.05 Mbit/s

95th percentile per-packet one-way delay: 20.828 ms

Loss rate: 0.05%

-- Flow 2:

Average throughput: 46.51 Mbit/s

95th percentile per-packet one-way delay: 23.579 ms

Loss rate: 0.21%

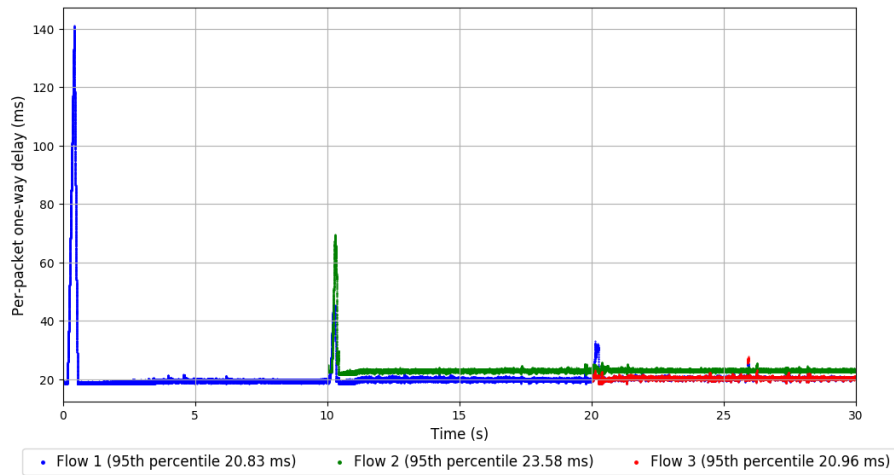
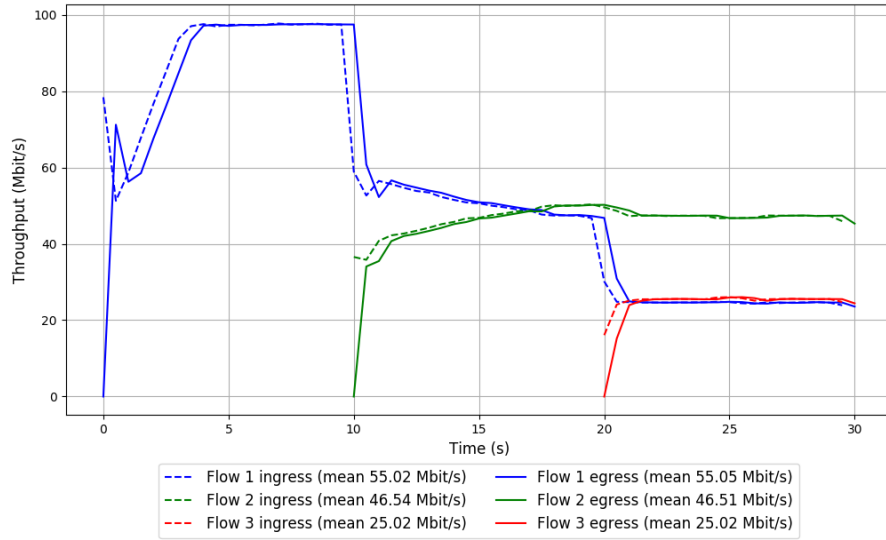
-- Flow 3:

Average throughput: 25.02 Mbit/s

95th percentile per-packet one-way delay: 20.958 ms

Loss rate: 0.28%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2019-03-27 12:57:43
End at: 2019-03-27 12:58:13
Local clock offset: -0.766 ms
Remote clock offset: -1.537 ms

Below is generated by plot.py at 2019-03-27 14:20:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 87.26 Mbit/s
95th percentile per-packet one-way delay: 23.176 ms
Loss rate: 0.11%

-- Flow 1:

Average throughput: 48.19 Mbit/s
95th percentile per-packet one-way delay: 23.432 ms
Loss rate: 0.07%

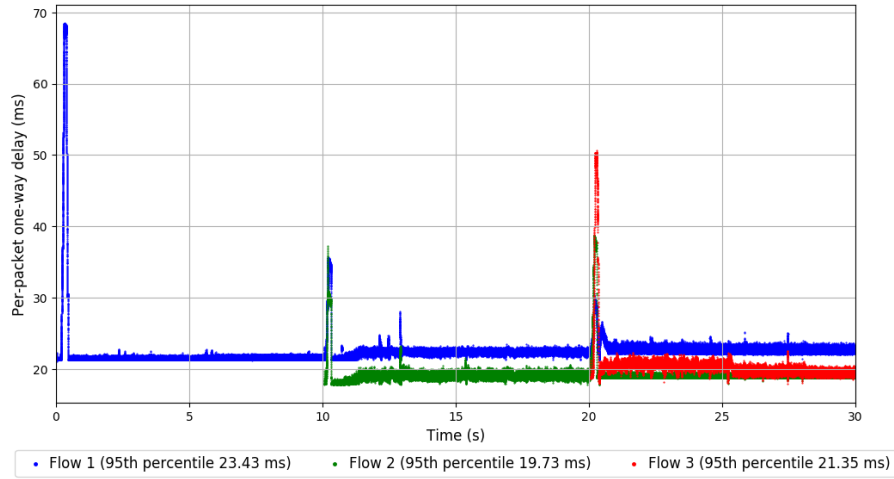
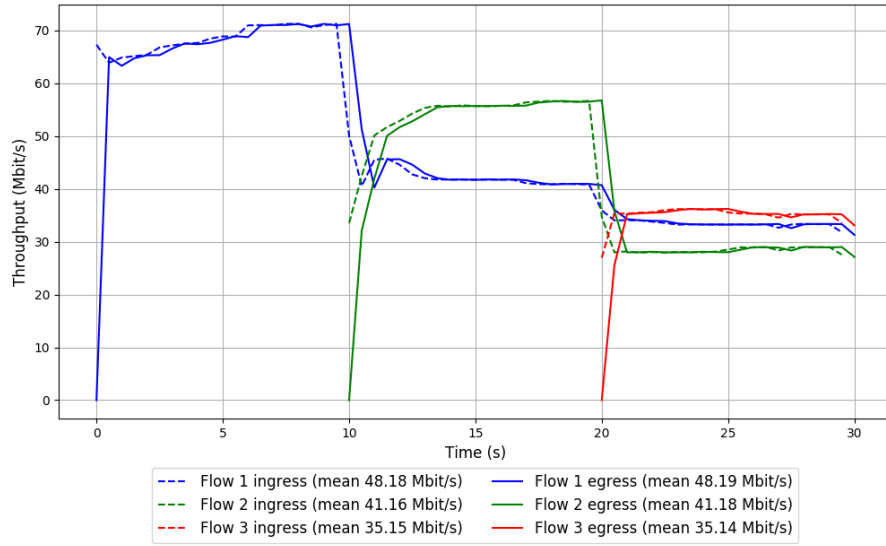
-- Flow 2:

Average throughput: 41.18 Mbit/s
95th percentile per-packet one-way delay: 19.733 ms
Loss rate: 0.09%

-- Flow 3:

Average throughput: 35.14 Mbit/s
95th percentile per-packet one-way delay: 21.351 ms
Loss rate: 0.27%

Run 3: Report of TCP Vegas — Data Link



Run 4: Statistics of TCP Vegas

Start at: 2019-03-27 13:23:12
End at: 2019-03-27 13:23:42
Local clock offset: 1.687 ms
Remote clock offset: -2.928 ms

Below is generated by plot.py at 2019-03-27 14:20:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 96.80 Mbit/s
95th percentile per-packet one-way delay: 26.422 ms
Loss rate: 0.10%

-- Flow 1:

Average throughput: 60.52 Mbit/s
95th percentile per-packet one-way delay: 22.984 ms
Loss rate: 0.05%

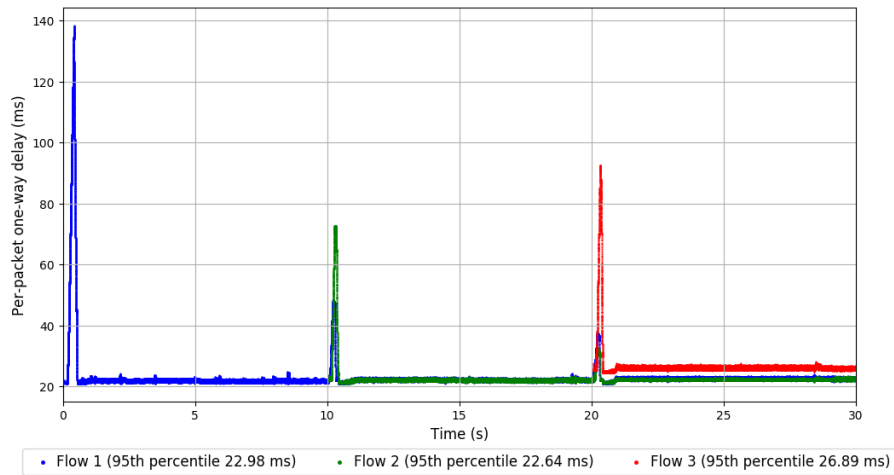
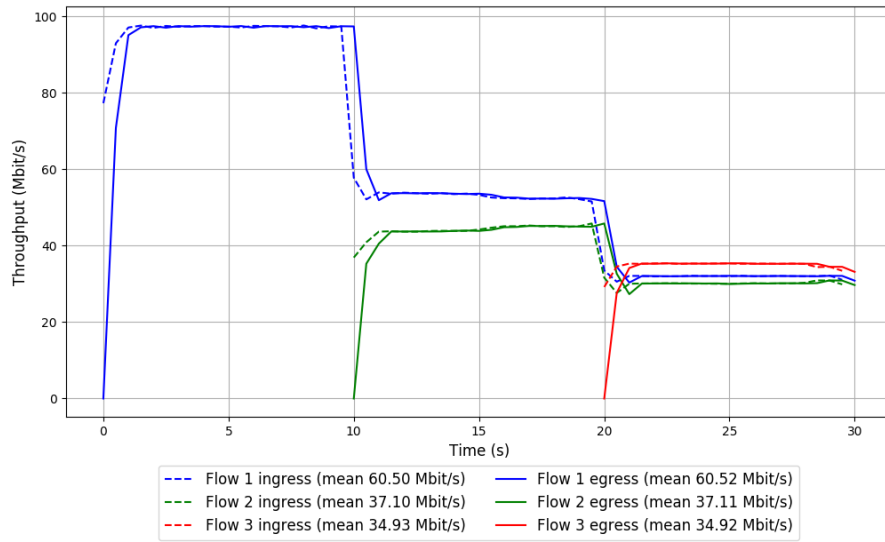
-- Flow 2:

Average throughput: 37.11 Mbit/s
95th percentile per-packet one-way delay: 22.644 ms
Loss rate: 0.11%

-- Flow 3:

Average throughput: 34.92 Mbit/s
95th percentile per-packet one-way delay: 26.887 ms
Loss rate: 0.31%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2019-03-27 13:48:48
End at: 2019-03-27 13:49:18
Local clock offset: 0.294 ms
Remote clock offset: -4.305 ms

Below is generated by plot.py at 2019-03-27 14:20:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 93.12 Mbit/s
95th percentile per-packet one-way delay: 21.776 ms
Loss rate: 0.12%

-- Flow 1:

Average throughput: 53.40 Mbit/s
95th percentile per-packet one-way delay: 21.724 ms
Loss rate: 0.08%

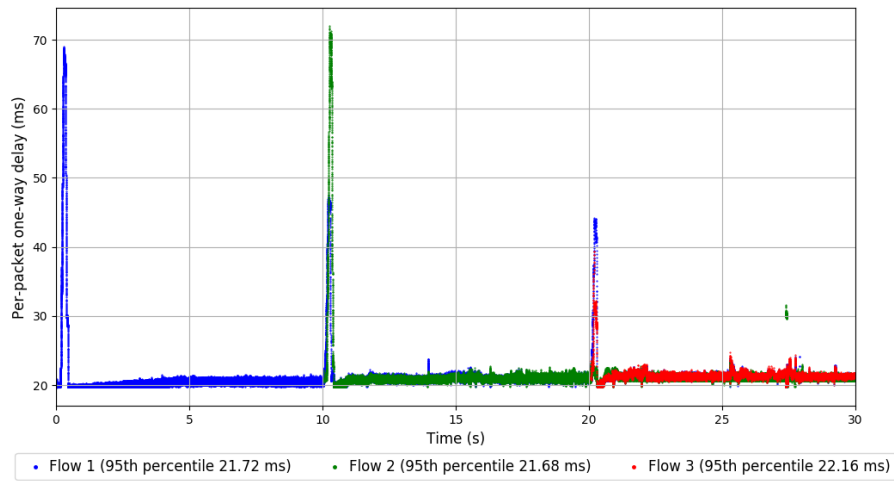
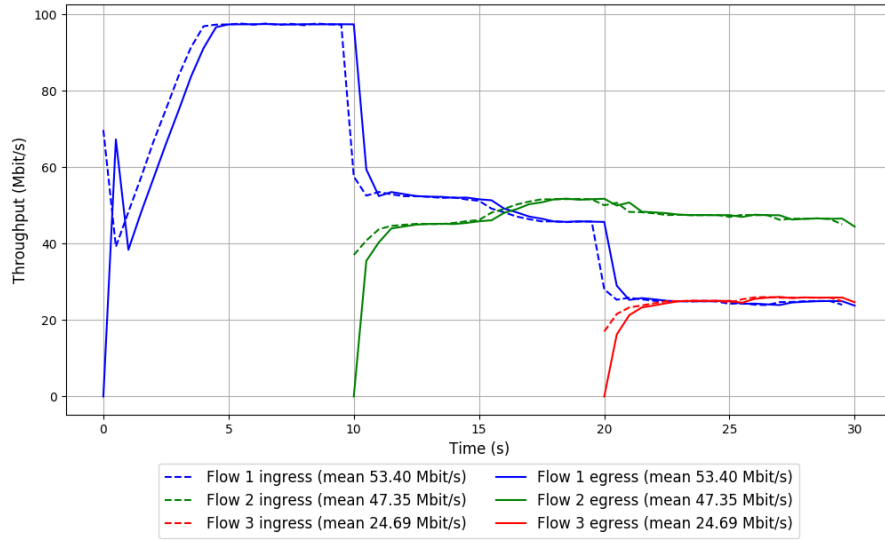
-- Flow 2:

Average throughput: 47.35 Mbit/s
95th percentile per-packet one-way delay: 21.676 ms
Loss rate: 0.13%

-- Flow 3:

Average throughput: 24.69 Mbit/s
95th percentile per-packet one-way delay: 22.163 ms
Loss rate: 0.28%

Run 5: Report of TCP Vegas — Data Link



Run 1: Statistics of Verus

Start at: 2019-03-27 12:02:13

End at: 2019-03-27 12:02:43

Local clock offset: 0.246 ms

Remote clock offset: 0.597 ms

Below is generated by plot.py at 2019-03-27 14:20:40

Datalink statistics

-- Total of 3 flows:

Average throughput: 93.50 Mbit/s

95th percentile per-packet one-way delay: 73.236 ms

Loss rate: 0.31%

-- Flow 1:

Average throughput: 56.39 Mbit/s

95th percentile per-packet one-way delay: 79.185 ms

Loss rate: 0.21%

-- Flow 2:

Average throughput: 39.60 Mbit/s

95th percentile per-packet one-way delay: 60.736 ms

Loss rate: 0.36%

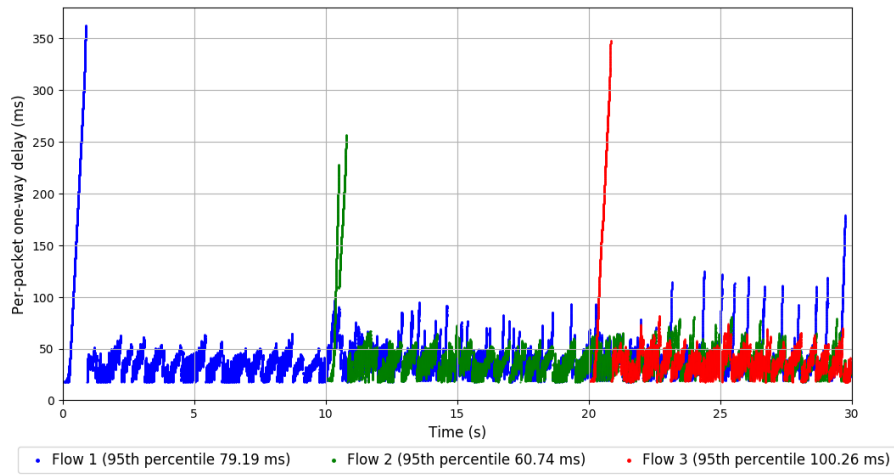
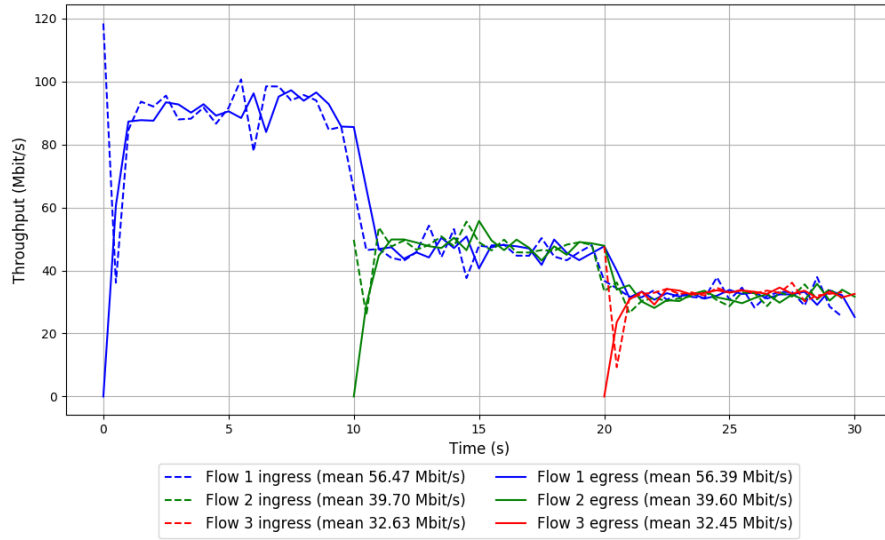
-- Flow 3:

Average throughput: 32.45 Mbit/s

95th percentile per-packet one-way delay: 100.258 ms

Loss rate: 0.72%

Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2019-03-27 12:27:27

End at: 2019-03-27 12:27:57

Local clock offset: -1.543 ms

Remote clock offset: 0.038 ms

Below is generated by plot.py at 2019-03-27 14:20:59

Datalink statistics

-- Total of 3 flows:

Average throughput: 94.70 Mbit/s

95th percentile per-packet one-way delay: 78.703 ms

Loss rate: 0.29%

-- Flow 1:

Average throughput: 57.48 Mbit/s

95th percentile per-packet one-way delay: 74.138 ms

Loss rate: 0.19%

-- Flow 2:

Average throughput: 39.87 Mbit/s

95th percentile per-packet one-way delay: 86.995 ms

Loss rate: 0.35%

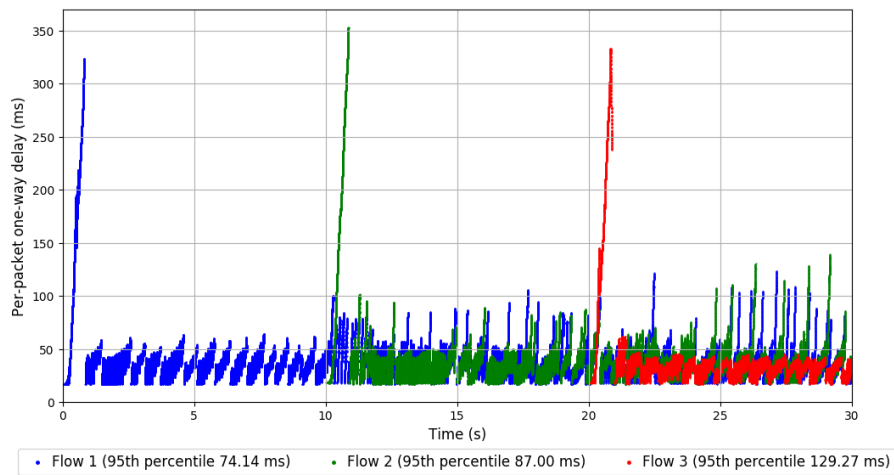
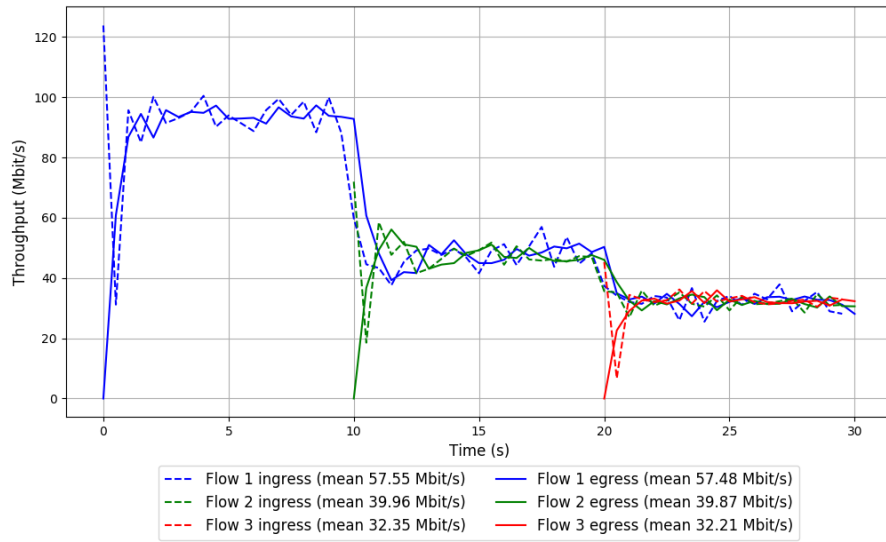
-- Flow 3:

Average throughput: 32.21 Mbit/s

95th percentile per-packet one-way delay: 129.272 ms

Loss rate: 0.68%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2019-03-27 12:52:38
End at: 2019-03-27 12:53:08
Local clock offset: -0.491 ms
Remote clock offset: -1.858 ms

Below is generated by plot.py at 2019-03-27 14:21:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 94.11 Mbit/s
95th percentile per-packet one-way delay: 70.652 ms
Loss rate: 0.42%

-- Flow 1:

Average throughput: 57.05 Mbit/s
95th percentile per-packet one-way delay: 72.929 ms
Loss rate: 0.33%

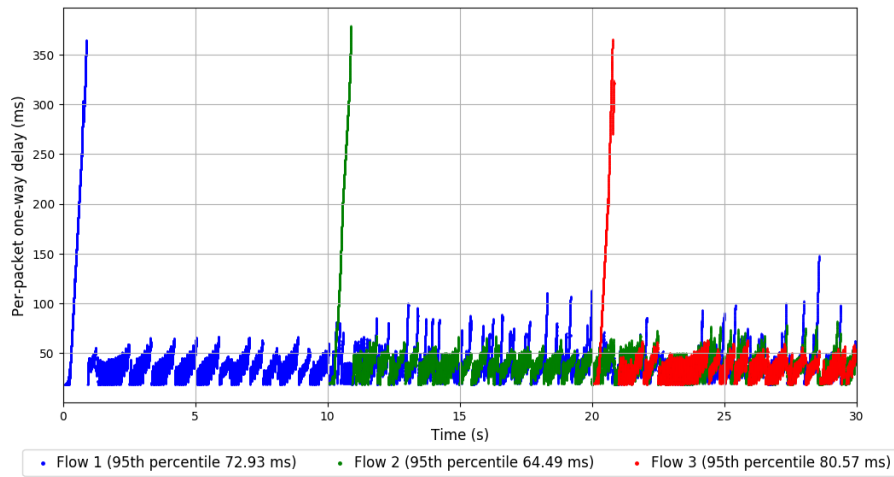
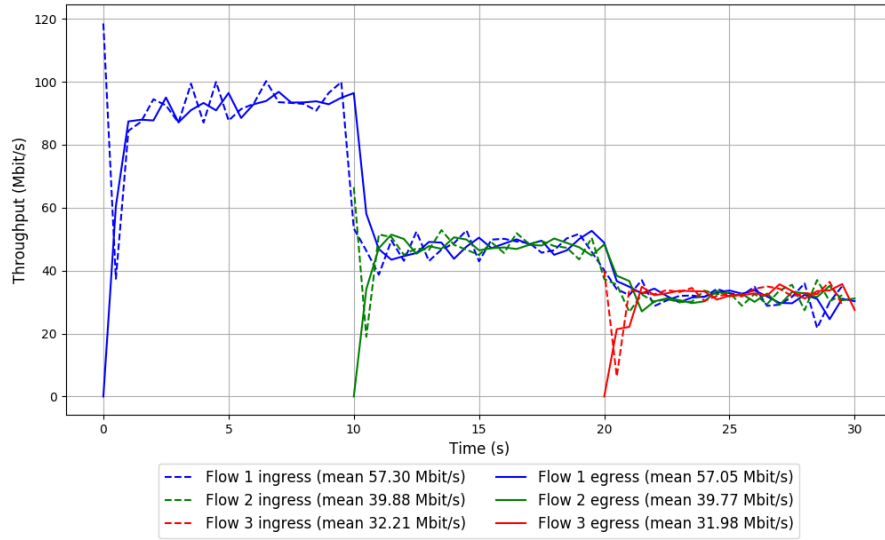
-- Flow 2:

Average throughput: 39.77 Mbit/s
95th percentile per-packet one-way delay: 64.491 ms
Loss rate: 0.41%

-- Flow 3:

Average throughput: 31.98 Mbit/s
95th percentile per-packet one-way delay: 80.574 ms
Loss rate: 0.88%

Run 3: Report of Verus — Data Link

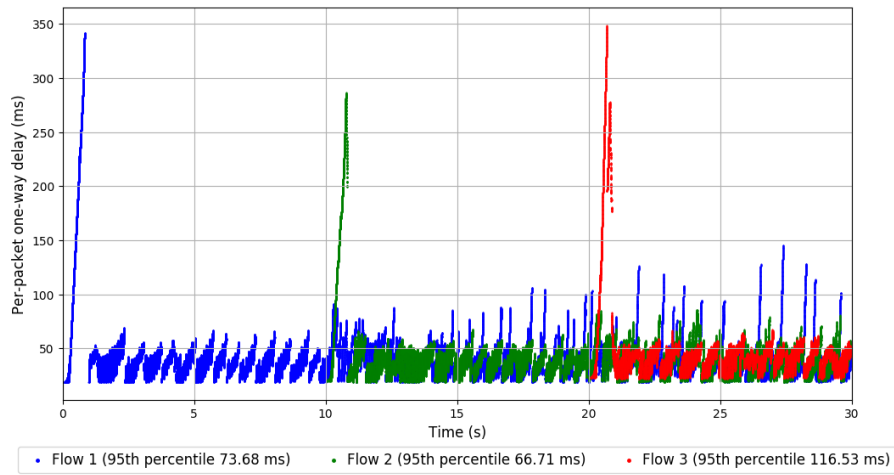
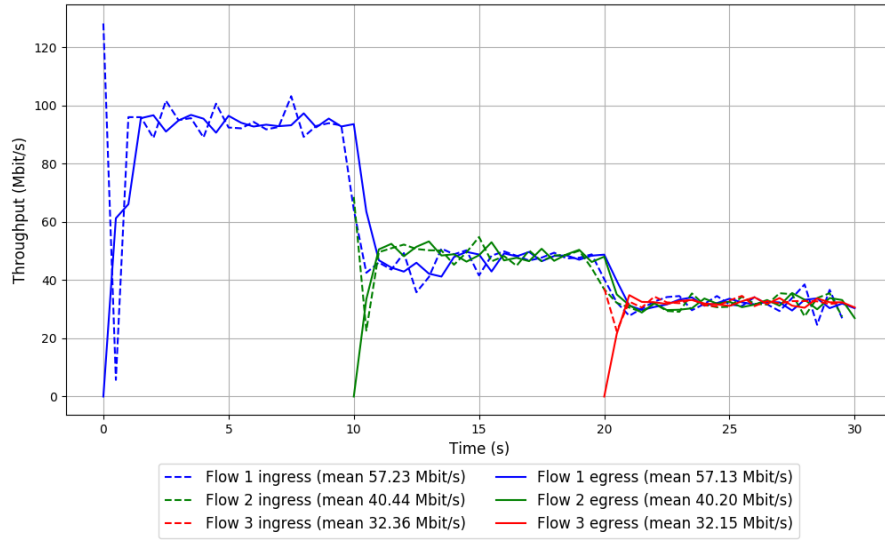


Run 4: Statistics of Verus

Start at: 2019-03-27 13:18:10
End at: 2019-03-27 13:18:40
Local clock offset: 1.389 ms
Remote clock offset: -1.075 ms

```
# Below is generated by plot.py at 2019-03-27 14:21:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.54 Mbit/s
95th percentile per-packet one-way delay: 72.361 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 57.13 Mbit/s
95th percentile per-packet one-way delay: 73.684 ms
Loss rate: 0.24%
-- Flow 2:
Average throughput: 40.20 Mbit/s
95th percentile per-packet one-way delay: 66.707 ms
Loss rate: 0.70%
-- Flow 3:
Average throughput: 32.15 Mbit/s
95th percentile per-packet one-way delay: 116.534 ms
Loss rate: 0.93%
```

Run 4: Report of Verus — Data Link

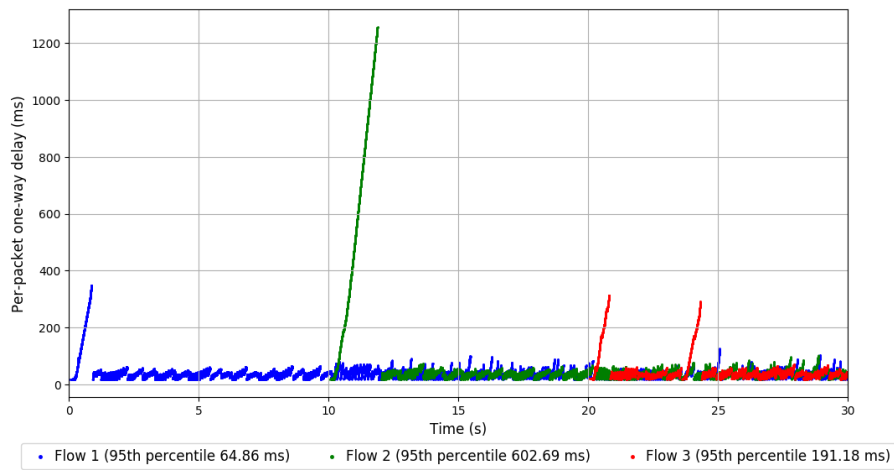
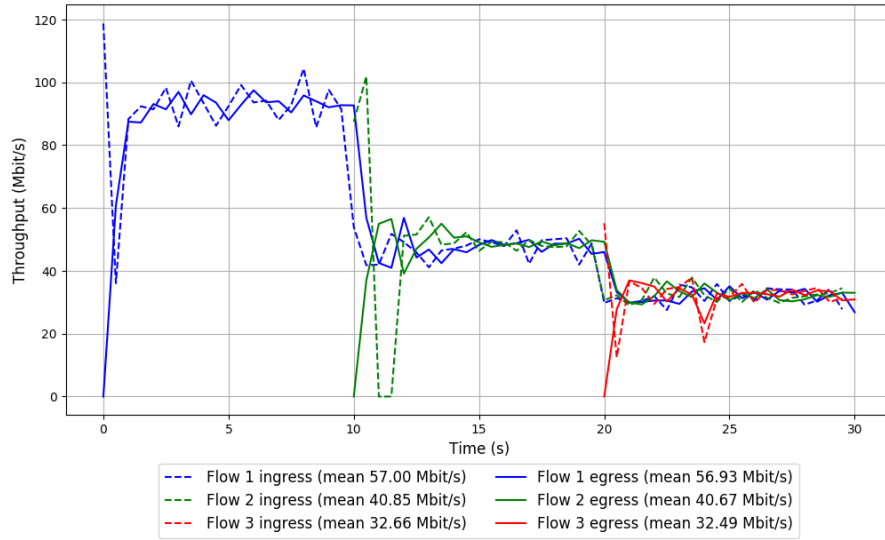


Run 5: Statistics of Verus

Start at: 2019-03-27 13:43:46
End at: 2019-03-27 13:44:16
Local clock offset: -1.539 ms
Remote clock offset: -3.868 ms

```
# Below is generated by plot.py at 2019-03-27 14:21:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.80 Mbit/s
95th percentile per-packet one-way delay: 139.489 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 56.93 Mbit/s
95th percentile per-packet one-way delay: 64.855 ms
Loss rate: 0.20%
-- Flow 2:
Average throughput: 40.67 Mbit/s
95th percentile per-packet one-way delay: 602.689 ms
Loss rate: 0.57%
-- Flow 3:
Average throughput: 32.49 Mbit/s
95th percentile per-packet one-way delay: 191.176 ms
Loss rate: 0.76%
```

Run 5: Report of Verus — Data Link



Run 1: Statistics of PCC-Vivace

Start at: 2019-03-27 12:20:26

End at: 2019-03-27 12:20:56

Local clock offset: 0.14 ms

Remote clock offset: 0.51 ms

Below is generated by plot.py at 2019-03-27 14:21:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 82.65 Mbit/s

95th percentile per-packet one-way delay: 25.494 ms

Loss rate: 0.21%

-- Flow 1:

Average throughput: 60.02 Mbit/s

95th percentile per-packet one-way delay: 24.862 ms

Loss rate: 0.10%

-- Flow 2:

Average throughput: 17.16 Mbit/s

95th percentile per-packet one-way delay: 27.156 ms

Loss rate: 0.45%

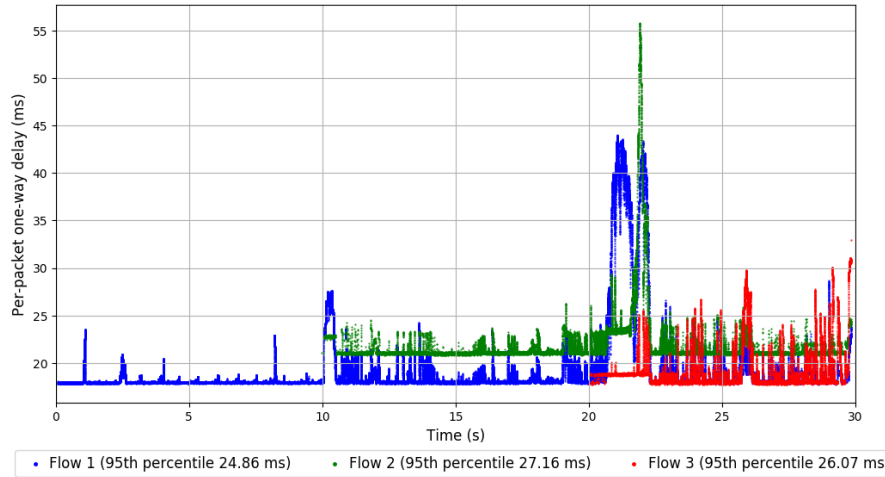
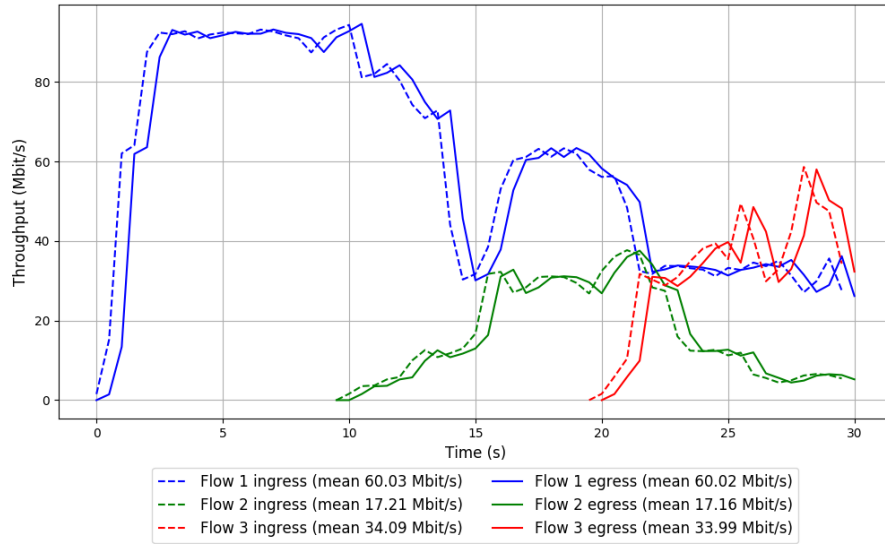
-- Flow 3:

Average throughput: 33.99 Mbit/s

95th percentile per-packet one-way delay: 26.069 ms

Loss rate: 0.54%

Run 1: Report of PCC-Vivace — Data Link



Run 2: Statistics of PCC-Vivace

Start at: 2019-03-27 12:45:23
End at: 2019-03-27 12:45:53
Local clock offset: 0.253 ms
Remote clock offset: -1.387 ms

Below is generated by plot.py at 2019-03-27 14:21:31

Datalink statistics

-- Total of 3 flows:

Average throughput: 87.89 Mbit/s
95th percentile per-packet one-way delay: 59.757 ms
Loss rate: 0.20%

-- Flow 1:

Average throughput: 58.46 Mbit/s
95th percentile per-packet one-way delay: 39.082 ms
Loss rate: 0.15%

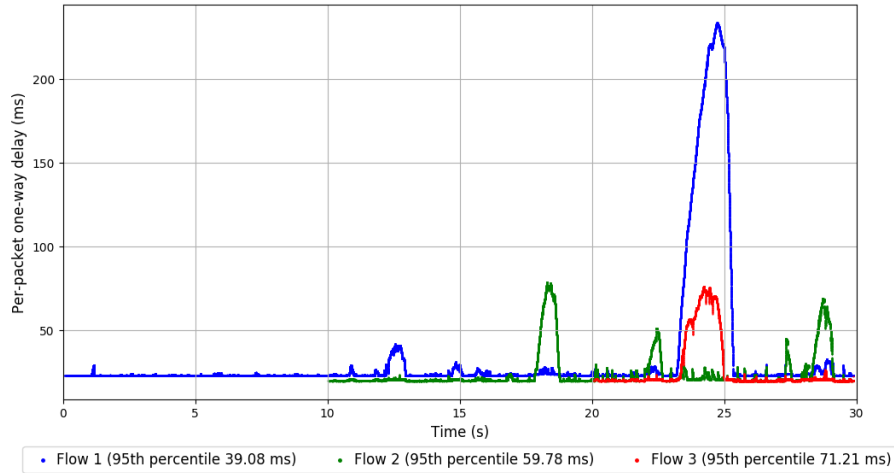
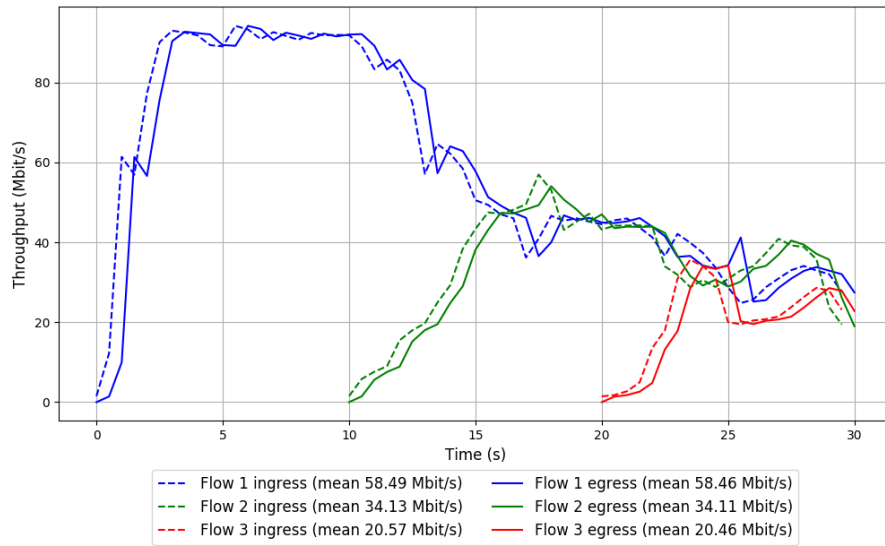
-- Flow 2:

Average throughput: 34.11 Mbit/s
95th percentile per-packet one-way delay: 59.779 ms
Loss rate: 0.18%

-- Flow 3:

Average throughput: 20.46 Mbit/s
95th percentile per-packet one-way delay: 71.207 ms
Loss rate: 0.76%

Run 2: Report of PCC-Vivace — Data Link

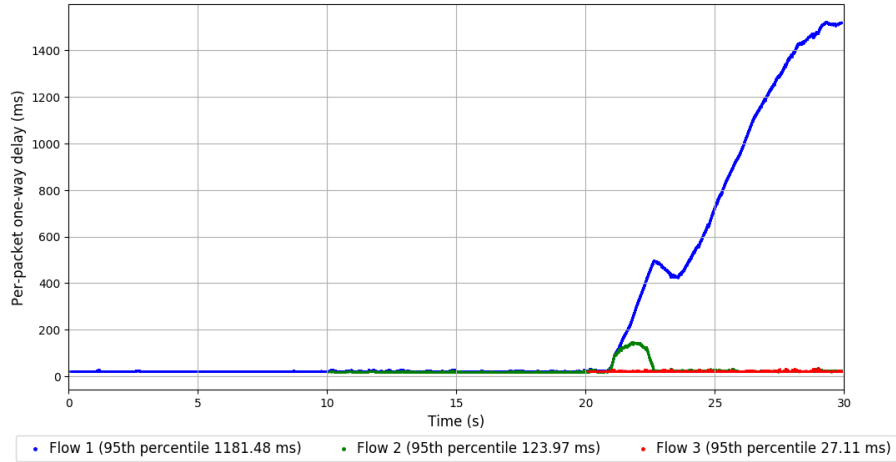
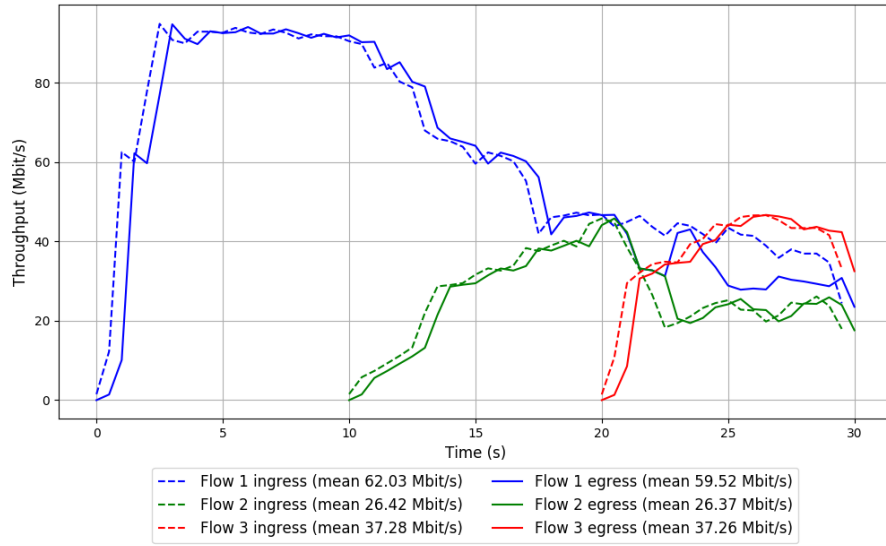


Run 3: Statistics of PCC-Vivace

Start at: 2019-03-27 13:11:03
End at: 2019-03-27 13:11:33
Local clock offset: -0.021 ms
Remote clock offset: -1.809 ms

```
# Below is generated by plot.py at 2019-03-27 14:21:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.34 Mbit/s
95th percentile per-packet one-way delay: 787.290 ms
Loss rate: 2.89%
-- Flow 1:
Average throughput: 59.52 Mbit/s
95th percentile per-packet one-way delay: 1181.477 ms
Loss rate: 4.13%
-- Flow 2:
Average throughput: 26.37 Mbit/s
95th percentile per-packet one-way delay: 123.974 ms
Loss rate: 0.30%
-- Flow 3:
Average throughput: 37.26 Mbit/s
95th percentile per-packet one-way delay: 27.115 ms
Loss rate: 0.36%
```

Run 3: Report of PCC-Vivace — Data Link

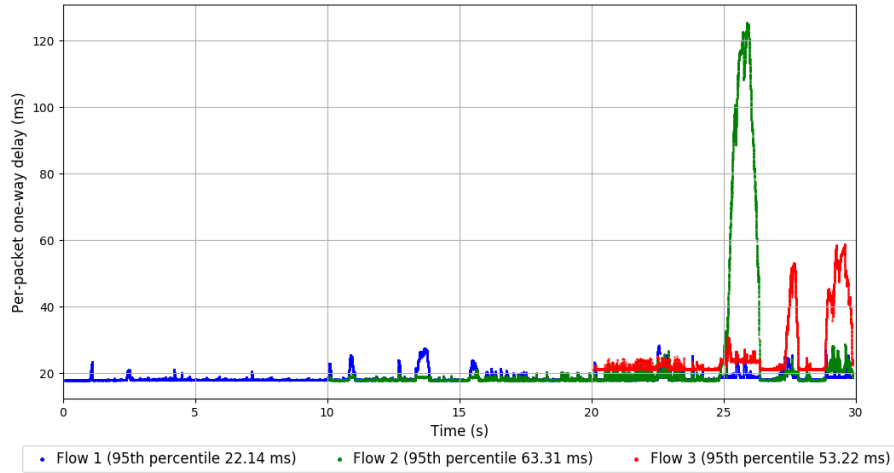
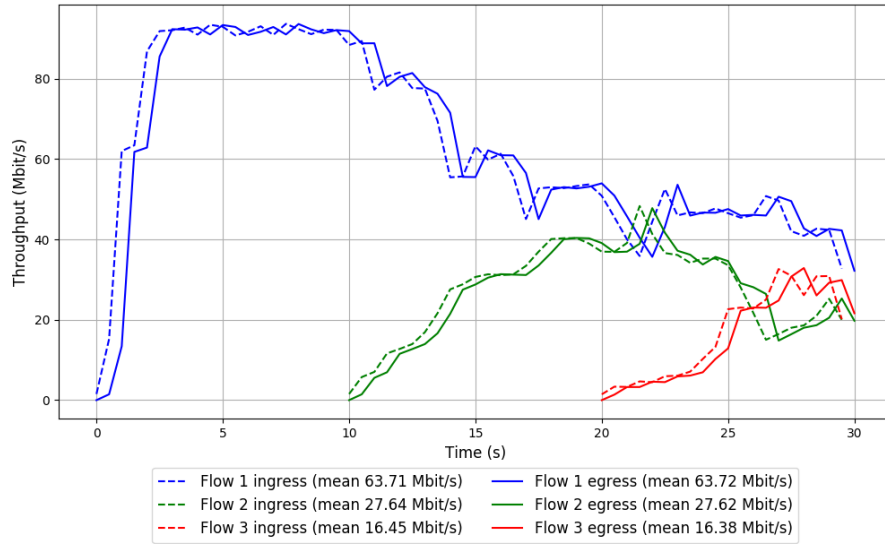


Run 4: Statistics of PCC-Vivace

Start at: 2019-03-27 13:36:33
End at: 2019-03-27 13:37:03
Local clock offset: -0.451 ms
Remote clock offset: -2.518 ms

```
# Below is generated by plot.py at 2019-03-27 14:21:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.48 Mbit/s
95th percentile per-packet one-way delay: 24.965 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 63.72 Mbit/s
95th percentile per-packet one-way delay: 22.145 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 27.62 Mbit/s
95th percentile per-packet one-way delay: 63.307 ms
Loss rate: 0.21%
-- Flow 3:
Average throughput: 16.38 Mbit/s
95th percentile per-packet one-way delay: 53.223 ms
Loss rate: 0.73%
```

Run 4: Report of PCC-Vivace — Data Link



Run 5: Statistics of PCC-Vivace

Start at: 2019-03-27 14:02:24

End at: 2019-03-27 14:02:54

Local clock offset: -2.262 ms

Remote clock offset: -3.71 ms

Below is generated by plot.py at 2019-03-27 14:21:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 85.17 Mbit/s

95th percentile per-packet one-way delay: 164.936 ms

Loss rate: 0.39%

-- Flow 1:

Average throughput: 53.81 Mbit/s

95th percentile per-packet one-way delay: 209.109 ms

Loss rate: 0.49%

-- Flow 2:

Average throughput: 38.98 Mbit/s

95th percentile per-packet one-way delay: 25.511 ms

Loss rate: 0.16%

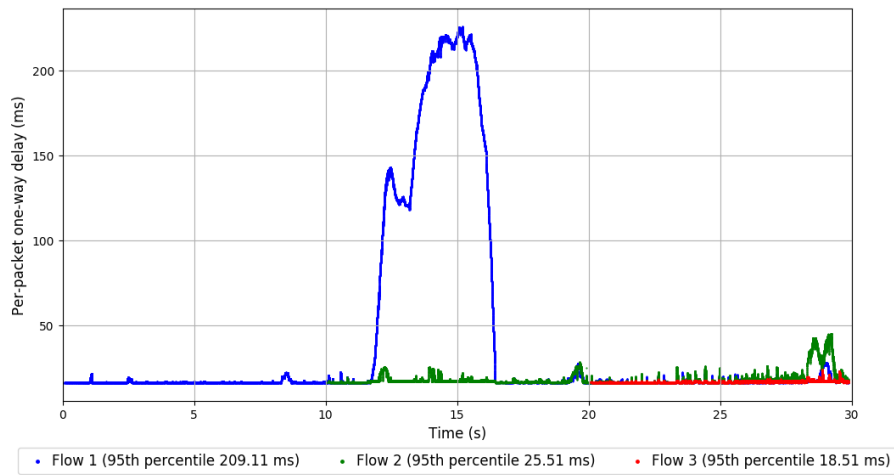
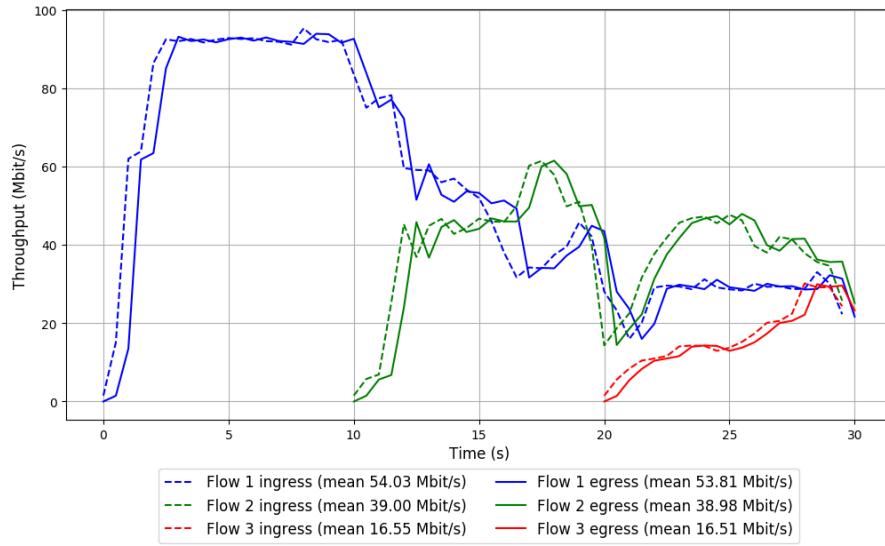
-- Flow 3:

Average throughput: 16.51 Mbit/s

95th percentile per-packet one-way delay: 18.508 ms

Loss rate: 0.49%

Run 5: Report of PCC-Vivace — Data Link



Run 1: Statistics of WebRTC media

Start at: 2019-03-27 12:21:38

End at: 2019-03-27 12:22:08

Local clock offset: -0.083 ms

Remote clock offset: 0.172 ms

Below is generated by plot.py at 2019-03-27 14:21:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 2.88 Mbit/s

95th percentile per-packet one-way delay: 21.854 ms

Loss rate: 0.07%

-- Flow 1:

Average throughput: 1.52 Mbit/s

95th percentile per-packet one-way delay: 18.860 ms

Loss rate: 0.13%

-- Flow 2:

Average throughput: 0.94 Mbit/s

95th percentile per-packet one-way delay: 22.079 ms

Loss rate: 0.00%

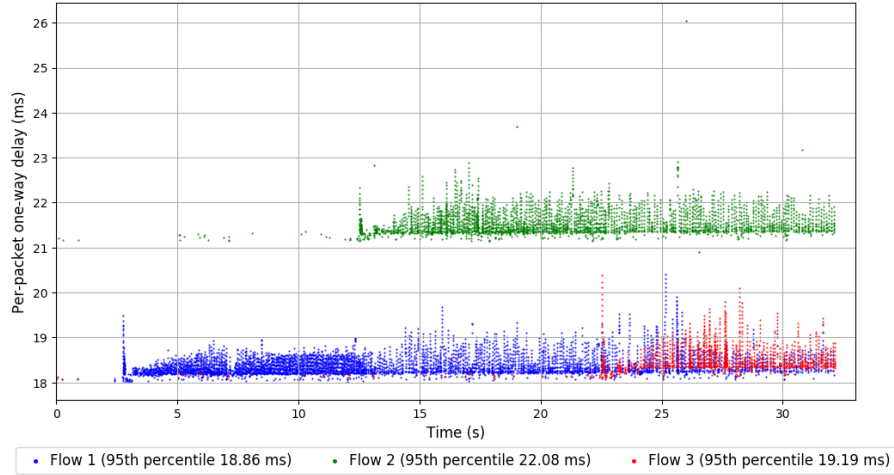
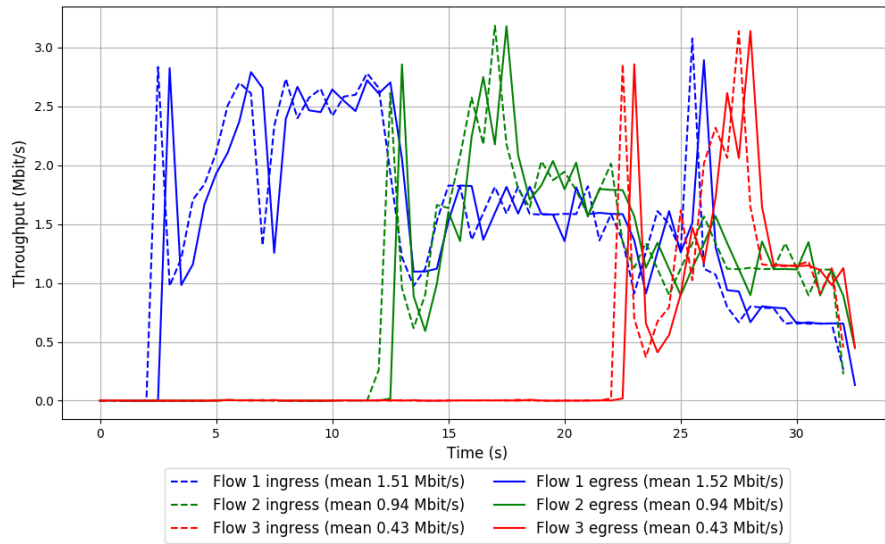
-- Flow 3:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 19.192 ms

Loss rate: 0.00%

Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2019-03-27 12:46:38
End at: 2019-03-27 12:47:08
Local clock offset: -0.451 ms
Remote clock offset: -0.115 ms

Below is generated by plot.py at 2019-03-27 14:21:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 2.93 Mbit/s

95th percentile per-packet one-way delay: 18.361 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 1.54 Mbit/s

95th percentile per-packet one-way delay: 18.402 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.98 Mbit/s

95th percentile per-packet one-way delay: 18.323 ms

Loss rate: 0.00%

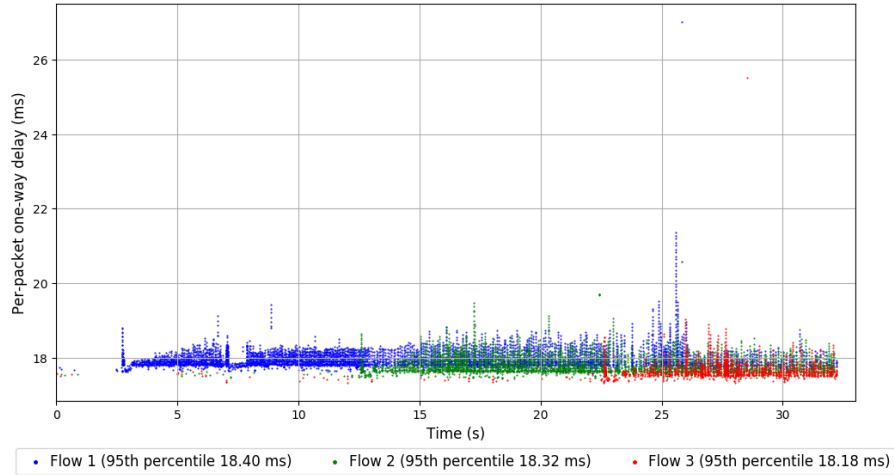
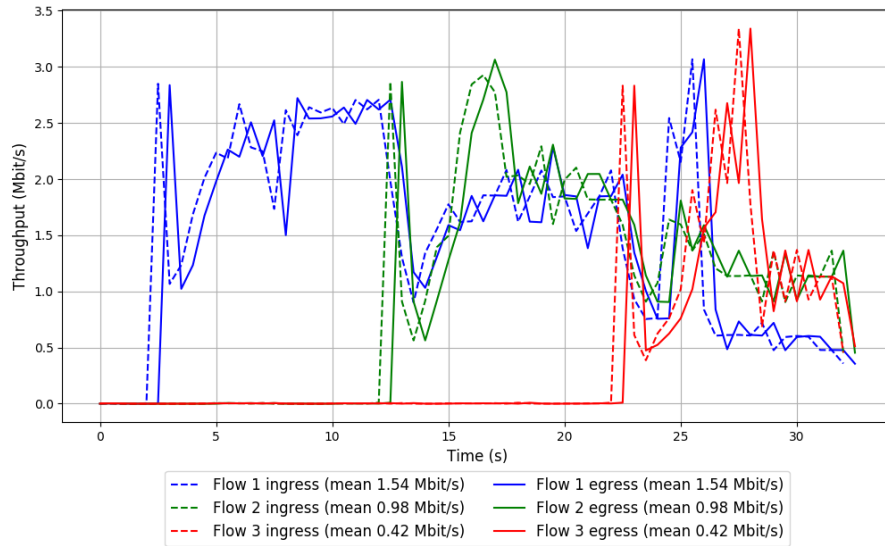
-- Flow 3:

Average throughput: 0.42 Mbit/s

95th percentile per-packet one-way delay: 18.182 ms

Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2019-03-27 13:12:17
End at: 2019-03-27 13:12:47
Local clock offset: 0.347 ms
Remote clock offset: -1.455 ms

Below is generated by plot.py at 2019-03-27 14:21:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 2.97 Mbit/s

95th percentile per-packet one-way delay: 19.100 ms

Loss rate: 0.06%

-- Flow 1:

Average throughput: 1.59 Mbit/s

95th percentile per-packet one-way delay: 19.029 ms

Loss rate: 0.11%

-- Flow 2:

Average throughput: 0.95 Mbit/s

95th percentile per-packet one-way delay: 19.166 ms

Loss rate: 0.00%

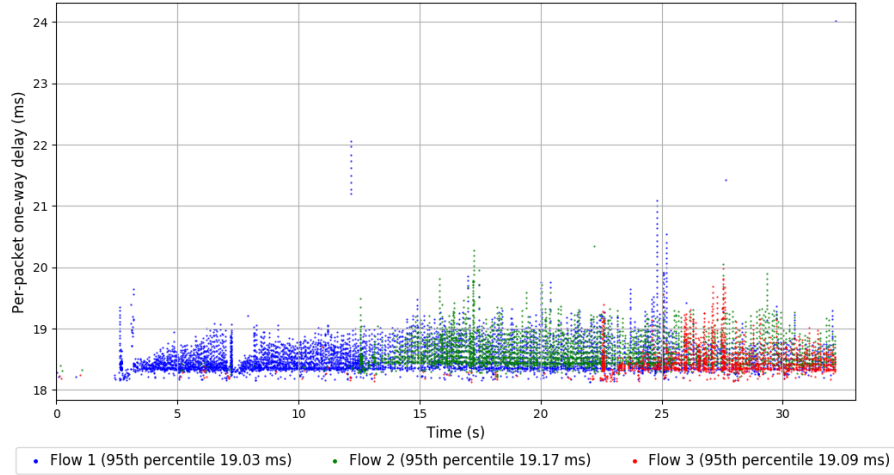
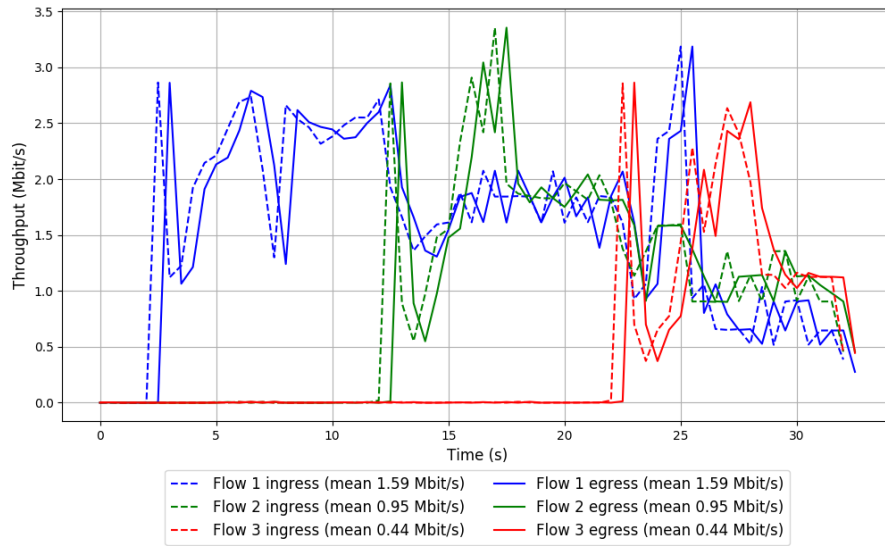
-- Flow 3:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 19.094 ms

Loss rate: 0.01%

Run 3: Report of WebRTC media — Data Link

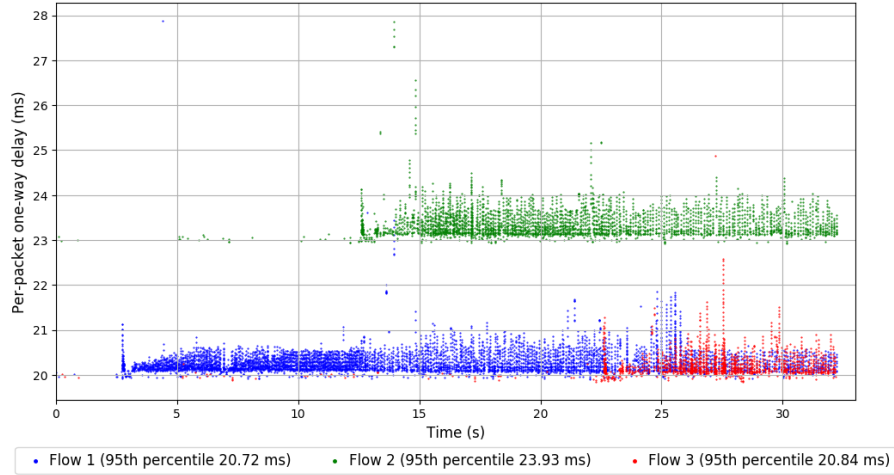
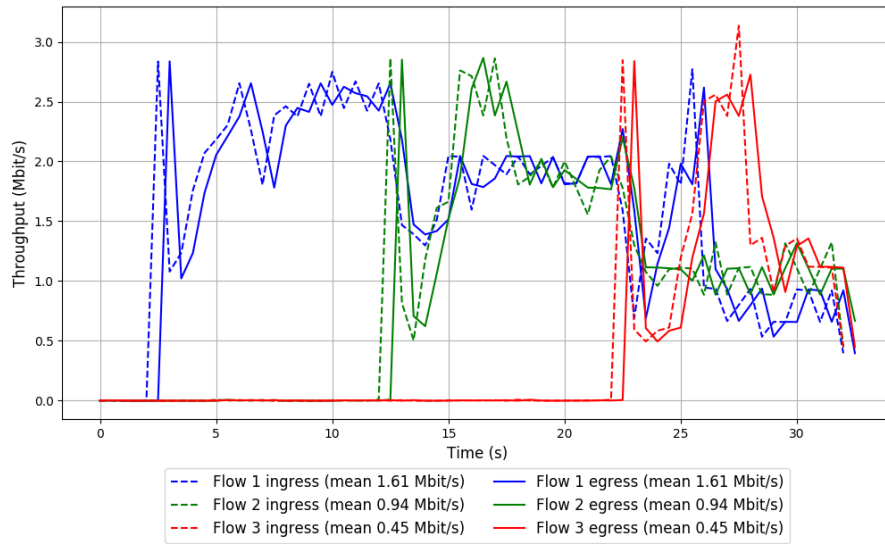


Run 4: Statistics of WebRTC media

Start at: 2019-03-27 13:37:47
End at: 2019-03-27 13:38:17
Local clock offset: 0.833 ms
Remote clock offset: -3.237 ms

```
# Below is generated by plot.py at 2019-03-27 14:21:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.99 Mbit/s
95th percentile per-packet one-way delay: 23.654 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.61 Mbit/s
95th percentile per-packet one-way delay: 20.723 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.94 Mbit/s
95th percentile per-packet one-way delay: 23.926 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.45 Mbit/s
95th percentile per-packet one-way delay: 20.839 ms
Loss rate: 0.00%
```

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2019-03-27 14:03:39
End at: 2019-03-27 14:04:09
Local clock offset: 2.109 ms
Remote clock offset: -3.313 ms

```
# Below is generated by plot.py at 2019-03-27 14:21:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.95 Mbit/s
95th percentile per-packet one-way delay: 20.783 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 1.57 Mbit/s
95th percentile per-packet one-way delay: 20.736 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.96 Mbit/s
95th percentile per-packet one-way delay: 20.730 ms
Loss rate: 0.37%
-- Flow 3:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 20.956 ms
Loss rate: 0.79%
```

Run 5: Report of WebRTC media — Data Link

